

PSB

A 4

These pages supersede Manual
Pages D 226/350 to D 226/358
Issued April, 1951

AMERICAN BOSCH FUEL INJECTION PUMP



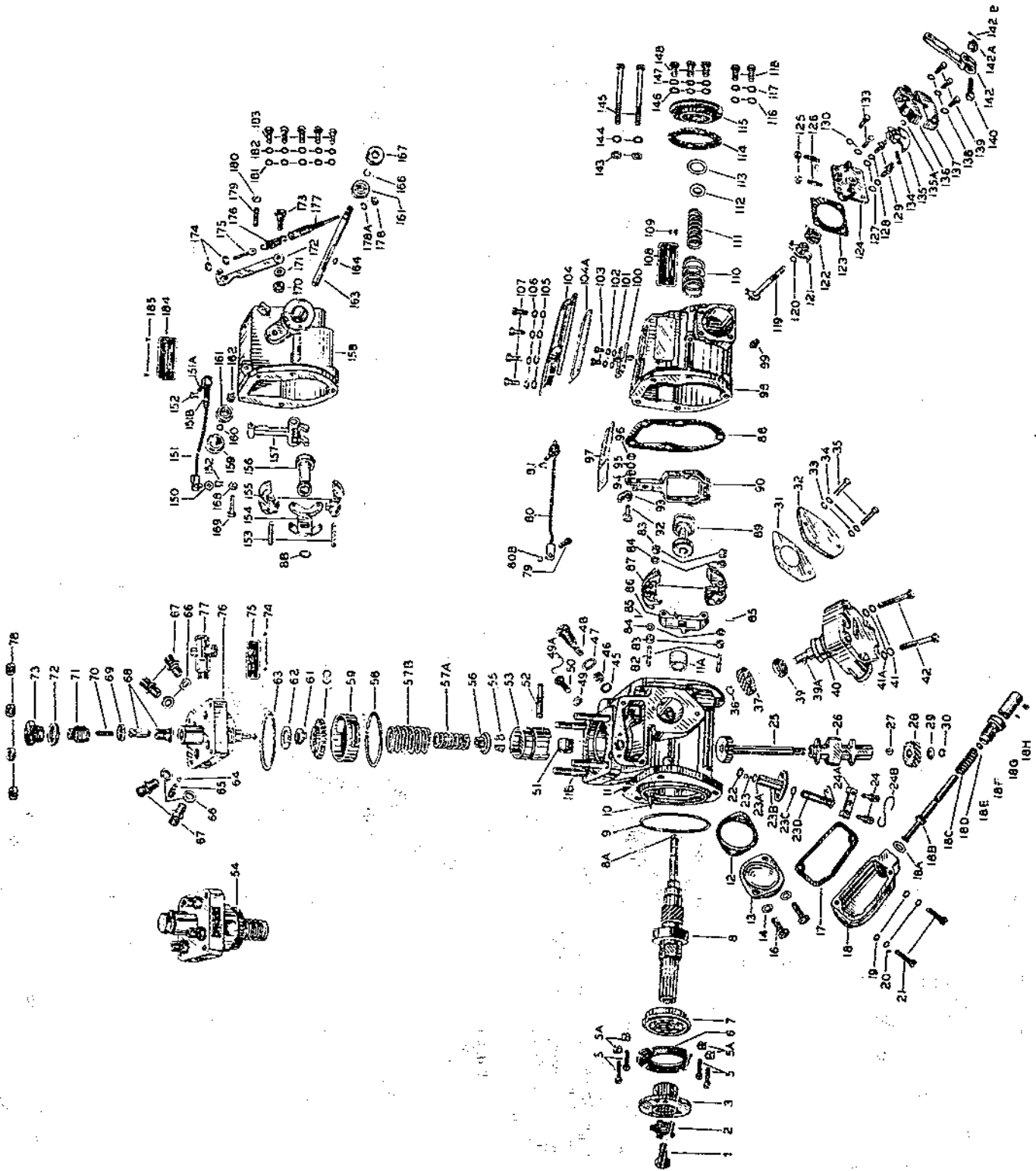
TYPES

PSB 4A 65-100 B I

and

PSB 4A 65-100 Z I

SERVICE PARTS LIST



AMERICAN BOSCH CORPORATION, SPRINGFIELD, MASS., U.S.A.

**SERVICE PARTS LIST
FOR
PSB 4A 65-100 B I**

NOTE: This pump is equipped with an internal spring type governor and is for left hand mounting.

Illustration Number	Part Number	Quantity Used	Description of Part
1	SC 908	1	SCREW, hub - camshaft - 7/16" - 20 NF 2 thread
1	SC 76107	1	SCREW, hub - camshaft - 3/8" - 16 NF 2 thread
2	WA 7623	1	WASHER, lock - hub screw
3	HB 907	1	HUB, drive
5	SC 1555	4	SCREW, fastening - ball bearing retaining plate
5A	WA 901	4	WASHER, lock - fastening screw
6	PL 907	1	PLATE, retaining - ball bearing
7	BB 1023	1	BALL BEARING - camshaft
8	SH 904A	1	CAMSHAFT - includes part 8A
8A	SC 1149	1	SCREW AND LOCKWASHER, camshaft
9	GA 76200	1	GASKET, rubber ring
10	PO 765	1	POINTER, timing
11	HG 903A	1	HOUSING, pump - includes parts 11A and 11B
11A	BG 7649	1	BUSHING, camshaft
11B	SD 903	4	STUD, housing
12	GA 904	1	GASKET - quill shaft pad
13	CV 903C	1	PAD, quill shaft - pump housing
14	GA 7616	2	GASKET, fastening screw
16	SC 1140	2	SCREW, fastening - quill shaft pad
17	GA 909	1	GASKET, timing window cover assembly
18	CV 905	1	COVER, timing window
18A	GA 1036	1	GASKET, shutoff rod
***	RD 908A	1	SHUTOFF ROD ASSEMBLY - includes parts 18B, 18C, 18D, 18E, 18F, 18G and 18H
18B	RD 903	1	ROD, shutoff
18C	SP 904	1	SPRING, shutoff rod
18D	GA 1019	1	GASKET, shutoff rod
18E	SC 904	1	SCREW, bearing
18F	FI 902	1	FITTING, shutoff
18G	PN 1026	1	PIN, shutoff rod
18H	SC 325-4 BL	1	SCREW, set
19	WA 1143	2	WASHER, plain - fastening screw
20	WA 22-3 BL	2	WASHER, lock - fastening screw
21	SC 27-18 BL	2	SCREW, fastening - timing window cover assembly
22	GA 1014	1	GASKET, ring - control unit assembly
***	CU 904A	1	CONTROL UNIT ASSEMBLY - includes parts 23, 23A, 23B, 23C and 23D
23	PN 906	1	PIN, plunger sleeve
23A	RG 1015	1	RING, spring - control shaft
23B	BG 901A	1	BUSHING, control shaft
23C	GA 76195	1	GASKET, ring - control shaft
23D	LE 9013A	1	SHAFT, control
24	SC 1689	2	SCREW, fastening - with lockwasher - control unit assembly
24A	RN 9010	1	RETAINER, control unit
24B	WI 901	1	WIRE, locking - control unit - fastening screws
***	SH 908A	1	QUILL SHAFT ASSEMBLY - includes parts 25, 26, 27, 28, 29 and 30
25	SH 909A	1	SHAFT, quill - with gear
26	BG 905	1	BUSHING, quill shaft
27	KY 1006	1	KEY, Woodruff - quill shaft
28	GE 908	1	GEAR, camshaft driven
29	WMS 2157/400X	as required	WASHER, plain - .002" thick - to eliminate shaft play
	WMS 2157/1X	as required	WASHER, plain - .004" thick - to eliminate shaft play
	WMS 2157/2X	as required	WASHER, plain - .008" thick - to eliminate shaft play
	WMS 2157/3X	as required	WASHER, plain - .020" thick - to eliminate shaft play
30	RG 1014	1	RING, spring - quill shaft

***Not shown assembled

Illustration Number	Part Number	Quantity Used	Description of Part
31	GA 903	1	GASKET, supply pump cover
32	CV 901C	1	COVER, supply pump - housing
33	WA 1143	2	WASHER, plain - fastening screw
34	WA 22-8 BL	2	WASHER, lock - fastening screw
35	SC 1140	2	SCREW, fastening - supply pump cover
36	RG 1014	1	RING, spring - supply pump shaft
37	GE 908	1	GEAR, drive - supply pump shaft
39	PK 7910	1	SEAL, oil - supply pump shaft
39A	KY 901	1	KEY, supply pump shaft
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A - for clockwise rotation pumps
40	SGB 15B2	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A - for counterclockwise rotation pumps
41	WA 22-8 BL	2	WASHER, lock - fastening screw
41A	WA 1143	2	WASHER, plain - fastening screw
42	SC 1516	2	SCREW, fastening - supply pump assembly
45	GA 1012	1	GASKET, ring filter screw
46	FE 901	1	FILTER, screen
47	GA 7965	1	GASKET, filter screw
48	SC 903	1	SCREW, filter
49	GA 7616	1	GASKET, fastening screw
49A	WI 1073	as required	WIRE, locking - fastening screw
50	SC 1140	1	SCREW, locating - quill shaft bushing
***	TP 901A	1	TAPPET ASSEMBLY - includes parts 51, 52 and 53
51	RL 902A	1	ROLLER ASSEMBLY, tappet
52	PN 904	1	PIN - tappet assembly
53	GU 901A	1	GUIDE ASSEMBLY, tappet
54	per requirement	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57B, 59 to 62 and 64 to 76 - for part number see nameplate attached to illustration 76
55	HP 902	1	LOCK, plunger - 2 piece
56	GU 904	1	SEAT, plunger spring - lower
57A	SP 901	1	SPRING, inner - plunger
57B	SP 903	1	SPRING, outer - plunger - for speeds greater than 1900 RPM
58	GA 1009	1	GASKET, ring - head assembly
59	RN 901	1	COVER, gear retainer - for left hand mounted pumps
59	RN 902	1	COVER, gear retainer - for right hand mounted pumps
60	GE 909	1	GEAR, plunger drive - for clockwise rotation - left hand mounted pumps
	GE 9010	1	GEAR, plunger drive - for counterclockwise rotation - left hand mounted pumps
	GE 901	1	GEAR, plunger drive - for clockwise rotation - right hand mounted pumps
	GE 903	1	GEAR, plunger drive - for counterclockwise rotation - right hand mounted pumps
61	GU 903	1	GUIDE, plunger
62	WA 1362	1	WASHER, thrust - plunger drive gear
63	GA 1010	1	GASKET, ring - head assembly
64	BB 1024	1	BALL, sealing - set screw
65	SC 1352	1	SCREW, set - sealing ball
66	GA 9010	4	GASKET, discharge fitting
67	FI 901	4	FITTING, discharge
68	VA 901A	1	DELIVERY VALVE ASSEMBLY
69	GA 905	1	GASKET, delivery valve holder
70	SP 7655	1	SPRING, delivery valve
71	HP 903	1	HOLDER, delivery valve
72	GA 906	1	GASKET, cap screw
73	SC 902	1	SCREW, cap - delivery valve
74	SC 150-2	2	SCREW, fastening - part number plate
75	NP 902	1	PLATE, part number - hydraulic head

***Not shown assembled

AMERICAN BOSCH CORPORATION, SPRINGFIELD 7, MASS., U.S.A.

Illustration Number	Part Number	Quantity Used	Description of Part
76	HD 901-1A	1	HEAD, hydraulic - with 6.5 mm diameter plunger and sleeve
	HD 901-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
	HD 901-3A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
	HD 901-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
	HD 901-5A	1	HEAD, hydraulic - with 8.5 mm diameter plunger and sleeve
	HD 901-6A	1	HEAD, hydraulic - with 9.0 mm diameter plunger and sleeve
	HD 901-7A	1	HEAD, hydraulic - with 9.5 mm diameter plunger and sleeve
	HD 901-8A	1	HEAD, hydraulic - with 10.0 mm diameter plunger and sleeve
77	as per order	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - for type designation see stamping on head of screw
78	NT 1127	4	NUT, fastening - hydraulic head assembly
79	PN 9010	1	PIN, control rod
80	RD 9011-1A	1	ROD, control - includes part 80B
80B	RG 901	1	RING, spring - control rod
81	PN 1122	1	HAIRPIN, control rod - governor end
***	WT 902A	1	WEIGHT AND SPIDER ASSEMBLY - includes parts 82 to 87
82	PN 905A	2	PIN, weight
83	BG 903	4	BUSHING, weight
84	WA 1378	4	WASHER, plain - weight pin
85	PN 1104	2	PIN, weight
86	HP 901	1	SPIDER, weight
87	WT 901A	2	WEIGHT - includes part 83
88	GA 907	1	GASKET, governor housing assembly
89	SV 901A	1	SLEEVE ASSEMBLY
90	LE 9025-1A	1	FULCRUM LEVER ASSEMBLY - 5% governor regulation - pivot pins assembled in lower holes
90	LE 9025-2A	1	FULCRUM LEVER ASSEMBLY - 10% governor regulation - pivot pins assembled in upper holes
92	SC 1136	1	SCREW, square head - cam
93	CA 793	1	CAM torque
94	WA 1143	1	WASHER, plain - cam screw
95	WA 22-8 BL	1	WASHER, lock - cam screw
96	NT 8-8 BL	1	NUT, cam screw
97	BA 901	1	PLATE, oil baffle
98	HG 901	1	HOUSING, governor
99	PN 901A	1	PIN, pivot - fulcrum lever
100	PL 904	1	PLATE, stop
101	WA 1143	2	WASHER, plain - fastening screw
102	WA 22-8 BL	2	WASHER, lock - fastening screw
103	SC 1140	2	SCREW, fastening - stop plate
104	CV 902C	1	COVER, top - governor housing
104A	GA 908	1	GASKET, top cover
105	WA 1143	4	WASHER, plain - fastening screw
106	WA 22-8 BL	4	WASHER, lock - fastening screw
107	SC 1110	4	SCREW, fastening - top cover
108	NP 901	1	PLATE, name
109	SC 150-2	2	SCREW, fastening - name plate
110	per requirement	1	SPRING, governor - outer - for spring see specific pump type
111	per requirement	1	SPRING, governor - inner - for spring see specific pump type
112	SR 799/1	as required	SPACER, governor spring - inner - .020" thick
112	SR 799/2	as required	SPACER, governor spring - inner - .042" thick
112	SR 799/3	as required	SPACER, governor spring - inner - .058" thick
112	SR 799/4	as required	SPACER, governor spring - inner - .083" thick

*** Not shown assembled

Illustration Number	Part Number	Quantity Used	Description of Part
113	SR 7914/1	as required	SPACER, governor spring - outer - .020" thick
113	SR 7914/2	as required	SPACER, governor spring - outer - .042" thick
113	SR 7914/3	as required	SPACER, governor spring - outer - .058" thick
113	SR 7914/4	as required	SPACER, governor spring - outer - .083" thick
114	GA 902	1	GASKET, end cap
115	CP 901C	1	CAP, end - governor housing
116	WA 1143	2	WASHER, plain - fastening screw
117	WA 22-8 BL	2	WASHER, lock - fastening screw
118	SC 1140	2	SCREW, fastening - end cap
119	SH 901A	1	SHAFT ASSEMBLY, operating
120	GA 76195	1	GASKET, ring - shaft assembly
121	PL 902A	1	PLATE ASSEMBLY, spring
122	SP 902	1	SPRING, operating lever
123	GA 901	1	GASKET, shaft bearing plate
124	BG 904	1	PLATE, shaft bearing
125	NT 6-8 BL	2	NUT, hex - stop screw
126	SC 350-16 BL	2	SCREW, stop - stop lever
127	WA 1143	2	WASHER, plain - stud
128	WA 22-8 BL	2	WASHER, lock - stud
129	SD 902	2	STUD, fastening - shaft bearing plate - lower
130	GA 7616	2	GASKET, fastening screw - upper
133	SC 1356	2	SCREW, fastening - shaft bearing plate - upper
134	SC 901	1	SCREW, clamping - stop lever
135	BL 901	1	LEVER, stop - operating shaft
135A	SP 1066	1	RING, snap - shaft assembly
136	CV 7945	1	COVER, stop lever - upper
137	CV 7946	1	COVER, stop lever - lower
138	WA 22-6 BL	3	WASHER, lock - fastening screw
139	SC 1354	3	SCREW, fastening - stop lever covers
***	LE 79117A	1	LEVER ASSEMBLY, operating - includes illustrated parts 140, 142, 142A and 142B
140	SC 7961	1	SCREW, fastening - operating lever
142	LE 79116	1	LEVER, operating
142A	NT 7919	1	NUT, hex - fastening screw
142B	PN 2-20 BL	1	PIN, cotter - fastening screw
143	WA 1143	2	WASHER, plain - fastening screw
144	WA 22-8 BL	2	WASHER, lock - fastening screw
145	SC 1351	2	SCREW, fastening - governor housing - long
146	WA 1143	3	WASHER, plain - fastening screw
147	WA 22-8 BL	3	WASHER, lock - fastening screw
148	SC 1140	3	SCREW, fastening - governor housing - short

Parts designated by illustration numbers 8B and 150 to 185 are not used in this assembly.

AMERICAN BOSCH CORPORATION, SPRINGFIELD 7, MASS., U.S.A.

**SERVICE PARTS LIST
FOR
PSB 4A 65-100 Z 1**

NOTE: This pump is equipped with an external spring type governor and is for left hand mounting.

Illustration Number	Part Number	Quantity Used	Description of Part
1	SC 908	1	SCREW, hub - camshaft - 7/16" - 20 NF 2 thread
1	SC 76107	1	SCREW, hub - camshaft - 3/8" - 16 NF 2 thread
2	WA 7623	1	WASHER, lock - hub screw
3	HB 907	1	HUB, drive
5	SC 1553	4	SCREW, fastening - ball bearing retaining plate
5A	WA 901	4	WASHER, lock - fastening screw
6	PL 907	1	PLATE, retaining - ball bearing
7	BB 1023	1	BALL BEARING - camshaft
8	SH 904A	1	CAMSHAFT - includes part 8A
8A	SC 1149	1	SCREW AND LOCKWASHER - camshaft
8B	GA 1014	1	GASKET, camshaft extension
9	GA 76200	1	GASKET, rubber ring
10	PO 765	1	POINTER, timing
11	HG 903A	1	HOUSING, pump - includes parts 11A and 11B
11A	BG 7649	1	BUSHING, camshaft
11B	SD 903	4	STUD, housing
12	GA 904	1	GASKET - quill shaft pad
13	CV 903C	1	PAD, quill shaft - pump housing
14	GA 7616	2	GASKET, fastening screw
16	SC 1140	2	SCREW, fastening - quill shaft pad
17	GA 909	1	GASKET, timing window cover assembly
18	CV 9014C	1	COVER, timing window
19	WA 1143	2	WASHER, plain - fastening screw
20	WA 22-8 BL	2	WASHER, lock - fastening screw
21	SC 1140	2	SCREW, fastening - timing window cover assembly
22	GA 1014	1	GASKET, ring - control unit assembly
***	CU 903A	1	CONTROL UNIT ASSEMBLY - includes parts 23, 23A, 23B, 23C and 23D
23	PN 906	1	PIN, plunger sleeve
23A	RG 1015	1	RING, spring - control shaft
23B	BG 901A	1	BUSHING, control shaft
23C	GA 76195	1	GASKET, ring - control shaft
23D	LE 908A	1	SHAFT, control
24	SC 1689	2	SCREW, fastening - with lockwasher - control unit assembly
24A	RN 9010	1	RETAINER, control unit
24B	WI 901	1	WIRE, locking - control unit - fastening screw
***	SH 908A	1	QUILL SHAFT ASSEMBLY - includes parts 25, 26, 27, 28, 29 and 30
25	SH 909A	1	SHAFT, quill - with gear
26	BG 905	1	BUSHING, quill shaft
27	KY 1006	1	KEY, Woodruff - quill shaft
28	GE 908	1	GEAR, camshaft driven
29	WMS 2157/400X	as required	WASHER, plain - .002" thick - to eliminate shaft play
	WMS 2157/1X	as required	WASHER, plain - .004" thick - to eliminate shaft play
	WMS 2157/2X	as required	WASHER, plain - .008" thick - to eliminate shaft play
	WMS 2157/3X	as required	WASHER, plain - .020" thick - to eliminate shaft play
30	RG 1014	1	RING, spring - quill shaft
31	GA 903	1	GASKET, supply pump cover
32	CV 901C	1	COVER, supply pump - housing
33	WA 1143	2	WASHER, plain - fastening screw
34	WA 22-8 BL	2	WASHER, lock - fastening screw
35	SC 1140	2	SCREW, fastening - supply pump cover
36	RG 1014	1	RING, spring - supply pump shaft
37	GE 908	1	GEAR, drive - supply pump shaft
39	PK 7910	1	SEAL, oil - supply pump shaft
39A	KY 901	1	KEY, supply pump shaft

***Not shown assembled

AMERICAN BOSCH CORPORATION, SPRINGFIELD 7, MASS., U.S.A.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A - for clockwise rotation pumps
40	SGB 15B2	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A - for counterclockwise rotation pumps
41	WA 22-8 BL	2	WASHER, lock - fastening screw
41A	WA 1143	2	WASHER, plain - fastening screw
42	SC 1516	2	SCREW, fastening - supply pump assembly
45	GA 1012	1	GASKET, ring - filter screw
46	FE 901	1	FILTER, screen
47	GA 7965	1	GASKET, filter screw
48	SC 903	1	SCREW, filter
49	GA 7616	1	GASKET, fastening screw
49A	WI 1073	as required	WIRE, locking - fastening screw
50	SC 1140	1	SCREW, locating - quill shaft bushing
***	TP 901A	1	TAPPET ASSEMBLY - includes parts 51, 52 and 53
51	RL 902A	1	ROLLER ASSEMBLY, tappet
52	PN 904	1	PIN - tappet assembly
53	GU 901A	1	GUIDE ASSEMBLY, tappet
54	per requirement	1	HYDRAULIC HEAD ASSEMBLY, complete - includes parts 55 to 57B, 59 to 62 and 64 to 76 - for part number see nameplate attached to illustration 76
55	HP 902	1	LOCK, plunger - 2 piece
56	GU 904	1	SEAT, plunger spring - lower
57A	SP 901	1	SPRING, inner - plunger
57B	SP 903	1	SPRING, outer - plunger - for speeds greater than 1900 RPM
58	GA 1009	1	GASKET, ring - head assembly
59	RN 902	1	COVER, gear retainer - right hand mounted pump
	RN 901	1	COVER, gear retainer - left hand mounted pump
60	GE 909	1	GEAR, plunger drive - for clockwise rotation - left hand mounted pumps
	GE 9010	1	GEAR, plunger drive - for counterclockwise rotation - left hand mounted pumps
	GE 901	1	GEAR, plunger drive - for clockwise rotation - right hand mounted pumps
	GE 903	1	GEAR, plunger drive - for counterclockwise rotation - right hand mounted pumps
61	GU 903	1	GUIDE, plunger
62	WA 1362	1	WASHER, thrust - plunger drive gear
63	GA 1010	1	GASKET, ring - head assembly
64	BB 1024	1	BALL, sealing - set screw
65	SC 1352	1	SCREW, set - sealing ball
66	GA 9010	4	GASKET, discharge fitting
67	FI 901	4	FITTING, discharge
68	VA 901A	1	DELIVERY VALVE ASSEMBLY
69	GA 905	1	GASKET, retaining screw
70	SP 7655	1	SPRING, delivery valve
71	HP 903	1	HOLDER, delivery valve
72	GA 906	1	GASKET, cap screw
73	SC 902	1	SCREW, cap - delivery valve
74	SC 150-2	2	SCREW, fastening - part number plate
75	NP 902	1	PLATE, part number - hydraulic head
76	HL 901-1A	1	HEAD, hydraulic - with 6.4 mm diameter plunger and sleeve
	HD 901-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
	HD 901-3A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
	HD 901-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
	HD 901-5A	1	HEAD, hydraulic - with 8.5 mm diameter plunger and sleeve

***Not shown assembled

AMERICAN BOSCH CORPORATION SPRINGFIELD 7, MASS. U.S.A.

Illustration Number	Part Number	Quantity Used	Description of Part
76	HD 901-6A	1	HEAD, hydraulic - with 9.0 mm diameter plunger and sleeve
	HD 901-7A	1	HEAD, hydraulic - with 9.5 mm diameter plunger and sleeve
	HD 901-8A	1	HEAD, hydraulic - with 10.0 mm diameter plunger and sleeve
77	as per order	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - for type designation see stamping on head of screw
78	NT 1127	4	NUT, fastening - hydraulic head assembly
88	GA 907	1	GASKET, governor housing
150	WA 1649	1	WASHER, plain - control rod pin
151	RD 9025A	1	ROD, control - includes parts 151A and 151B
151A	PN 9019	1	PIN, control rod - governor end
151B	SP 9014	1	SPRING, control rod - governor end
152	PN 1122	2	HAIRPIN, control rod - governor and control unit end
***	WT 903A	1	WEIGHT ASSEMBLY - includes parts 153 to 155
153	AP 10416	2	PIN, weight
154	HP 904	1	SPIDER, weight
155	CP 15258	2	WEIGHT
156	SV 904A	1	SLEEVE ASSEMBLY
157	LE 9010	1	LEVER, fulcrum
158	HG 905	1	HOUSING, governor
159	PG 901	1	PLUG, closing
160	SP 1067	1	RING, spring - fulcrum lever shaft
161	BB 1025	2	BALL BEARING - fulcrum lever shaft
162	SR 901	1	SPACER - fulcrum lever shaft
163	SH 903	1	SHAFT, fulcrum lever
164	KY 11-3	1	KEY, Woodruff - fulcrum lever shaft
166	RG 1016	1	RING, spring - fulcrum lever shaft
167	PK 901	1	SEAL, oil - fulcrum lever shaft
168	NT 6-8 BL	1	NUT, hex - stop screw
169	SC 1393	1	SCREW, stop - operating lever
170	NT 1180	1	NUT, elastic - pivot screw
171	WA 1303	1	WASHER, plain - pivot screw
172	LE 9011A	1	LEVER, operating
173	SC 905	1	SCREW, pivot - operating lever
174	NT 6-8 BL	2	NUT, hex - spring adjusting screw
175	SC 907	1	SCREW, spring adjusting
176	as required	1	SPRING, extension - operating lever - for spring see specific pump type
177	SC 906	1	SCREW, shutoff - operating lever
178	NT 6-8 BL	1	NUT, hex - shutoff screw
178A	WA 22-8 BL	1	WASHER, lock - stop nut
179	SC 1403	1	SCREW, stop - fulcrum lever
180	NT 6-8 BL	1	NUT, hex - stop screw
181	WA 1143	5	WASHER, plain - fastening screw
182	WA 22-8 BL	5	WASHER, lock - fastening screw
183	SC 1140	5	SCREW, fastening - governor housing
184	NP 901	1	PLATE, name
185	SC 150-2	2	SCREW, fastening - name plate

Parts designated by illustration numbers 18A thru 18H, 79 to 87 and 89 to 148 are not used in this assembly.

*** Not shown assembled

AMERICAN ENGINE CORPORATION SPRINGFIELD 7 MASS. U.S.A.

These pages supersede Manual Pages D 226/360 to D 226/370 issued March, 1950.

PSB 4A 80B 2384B International Harvester Co. 4-2/5" x 5-1/2" Model UD-9 2384B

Counterclockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10% Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM Governor Regulation 12% to 15% - Cam Nose to be Set Horizontal

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B2	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 57, 39 and 39A
54	HD 2559A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7918A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/4	1	SPRING, governor - inner

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80 B1

CALIBRATION: For governor setting of 450 RPM to 1500 RPM

Spring spacing adjustment - Inner - .139" - .157" gap
Outer - .039" precompressed

Average for all outlets

Set at 1500 RPM for 39cc to 40cc per 500 strokes at full load position
Set at 450 RPM for 6cc to 7cc per 500 strokes at idle position

PSB 4A 80B 2386B Continental Motors Corp. 3-7/8" x 5-1/2" Model HD 260 - Tractor 2386B

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10% Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM Governor Regulation 11% to 13% - Cam Nose to be Set Up 5° from the Horizontal Position Nose Must Be Steady on Plate at 1350 RPM - Nose Must Leave Plate at 1370 RPM

40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2554A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7933A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
100	PL 905	1	PLATE, stop
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/14	1	SPRING, governor - inner
**	FI 1148	1	FITTING, adapter - flange end
***	LE 79112A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B - (Install 180° from normal position)
142	LE 79113	1	LEVER, operating

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80 B1

CALIBRATION: For governor setting of 600 RPM to 1350 RPM

Spring spacing adjustment - Inner - .138" gap
Outer - .059" precompressed

Average for all outlets

Set at 1350 RPM for 33cc to 34cc per 500 strokes at full load position.
Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position.

**Not illustrated

***Not shown assembled

AMERICAN BOSCH CORPORATION, SPRINGFIELD, MASS., U.S.A.

2387B PSB 4A 70B 2387B Continental Motors Corp. 3-3/8" x 4-3/8" Model GD 157 Tractor

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 10% to 12% - Cam Nose to be Set Up 45° from the Horizontal Position

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2552A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
105	PL 905	1	PLATE, stop
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/7	1	SPRING, governor - inner
**	FI 1148	1	FITTING, adapter - flange end
***	LE 79112A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B - (Install 180° from normal position)
142	LE 79113	1	LEVER, operating

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70B 1

CALIBRATION: For governor setting of 600 RPM to 1500 RPM

Spring Spacing Adjustment - Inner - .157" gap
 Outer - .059" precompressed

Average for all outlets

Set at 1500 RPM for 19cc to 20cc per 500 strokes at full load position.
 Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position.

2430B PSB 4A 75B 2430B J. I. Case Co. 4" x 5" Model X-12 Tractor

Clockwise Rotation - R.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 11% to 13% - Cam Nose to be Set Up 45° from the Horizontal Position

11	HG 906A	1	HOUSING, pump - includes parts 11A and 11B
18	CV 907	1	COVER, timing window
***	CU 903A	1	CONTROL UNIT ASSEMBLY - includes parts 23, 23A, 23B, 23C and 23D
23D	LE 908A	1	SHAFT, control
***	SH 9010A	1	QUILL SHAFT ASSEMBLY - includes parts 25 thru 30
26	BG 906	1	BUSHING, quill shaft
28	GE 902	1	GEAR, camshaft driven
40	SGB 15 B2	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2560A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-3A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
77	VA 7918A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
80	RD 9011-3A	1	ROD, control - includes parts 80A and 80B
98	HG 904	1	HOUSING, governor
100	PL 905	1	PLATE, stop
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/4	1	SPRING, governor - inner

- continued -

**Not illustrated

***Not shown assembled

- Cont'd - 2430B

Omit illustrated parts 3, 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 75 B1

CALIBRATION: For governor setting of 450 RPM to 1350 RPM

Spring Spacing Adjustment - Inner - .177" gap
 Outer - .059" precompressed

Average for all outlets

Set at 1350 RPM for 25cc to 26cc per 500 strokes at full load position.
 Set at 450 RPM for 7cc to 8cc per 500 strokes at idle position.

PSB 4A 70B 2438B Waukesha Motor Co. 3-5/16" x 3-3/4" Model 180 DAB Tractor 2438B

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 11% to 13% - Cam Nose to be Set Up 45° from the Horizontal Position

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 908A	1	HUB, drive
10	PG 764	1	POINTER, timing
11	HG 902A	1	HOUSING, pump - includes parts 11A and 11B
54	HD 2552A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 58 to 62 and 64 to 76
76	HD 901-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
100	PL 905	1	PLATE, stop
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/7	1	SPRING, governor - inner

Omit illustrated parts 36 thru 42, 57B and 77

ALL OTHER PARTS SAME AS PSB 4A 70 B1

CALIBRATION: For governor setting of 450 RPM to 1600 RPM

Spring Spacing Adjustment - Inner - .157" gap
 Outer - .089" precompressed

Average for all outlets

Set at 1600 RPM for 17cc to 18cc per 500 strokes at full load position.
 Set at 450 RPM for 8cc to 9.5cc per 1000 strokes at idle position.
 Check at 1100 RPM for fuel delivery build up of approximately 110% of full load.

PSB 4A 80B 2451B Minneapolis-Moline Co. 4-1/4" x 5" Model 283-4 2451B

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 10% - Cam Nose to be Set Up 45° from the Horizontal Position

***	CU 906-3A	1	CONTROL UNIT ASSEMBLY - includes parts 23A, 23B and 23D
23B	BG 9011A	1	BUSHING, control shaft
23D	LE 9019-3A	1	SHAFT, control
24	SC 1441	1	SCREW with lockwasher, fastening - control unit assembly
**	RN 903	1	RETAINER, control unit

- continued -

**Not illustrated

***Not shown assembled

2451B - Cont'd -

Illustration Number	Part Number	Quantity Used	Description of Part
40	SG 115B 1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2554A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
100	PL 905	1	PLATE, stop
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/4	1	SPRING, governor - inner

Omit illustrated parts 23C, 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80 B1

CALIBRATION: For governor setting of 450 RPM to 1400 RPM

Spring Spacing Adjustment - Inner - .157" gap
Outer - .059" precompressed

Average for all outlets

Set at 1400 RPM for 33cc to 34cc per 500 strokes at full load position.

Set at 450 RPM for 6cc to 7cc per 500 strokes at idle position.

2493B PSB 4A 80B 2493B International Harvester Co. 3-7/8" x 5-1/4" Model M-Tractor

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10%
Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
Governor Regulation 12% to 15% - Cam Nose to be Set Down 25° from the Horizontal Position

40	SGB 15B 1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2554A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7918A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/4	1	SPRING, governor - inner

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80 B1

CALIBRATION: For governor setting of 500 RPM to 1450 RPM

Spring Spacing Adjustment - Inner - .157" gap
Outer - .059" precompressed

Average for all outlets

Set at 1450 RPM for 32cc to 33cc per 500 strokes at full load position.

Set at 500 RPM for 8cc to 9cc per 500 strokes at idle position.

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Pages D226/364 to D 226/365
Issued September, 1951

PSB 4A 70Z 2495B

2495B

PSB 4A 70Z 2495B1 Waukesha Motor Co. 3-5/16" x 3-3/4" Model 180 DAC

2495B1

PSB 4A 70Z 2495B1R

2495B1R

Clockwise Rotation -- L.H.Mounting -- Timed for Port Closing -- Governor Regulation 10% to 12%
Equipped with External Spring Type Governor -- For Speeds Up To and Including 1900 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 908A	1	HUB, drive
10	PO 764	1	POINTER, drive hub
11	MG 902A	1	HOUSING, pump -- incl. parts 11A and 11B
54	HD 2573A	1	HYDRAULIC HEAD ASSEMBLY -- complete -- includes parts 55 to 57A, 59 to 62 and 64 to 76
68	VA 902A	1	DELIVERY VALVE ASSEMBLY
76	HD 901-2A	1	HEAD, hydraulic -- with 7.0 mm diameter plunger and sleeve
176	SP 906-1	1	SPRING, extension -- operating lever
177	SC 9011	1	SCREW, shut-off -- operating lever
**	PL 9012	1	PLATE, shut-off

Omit illustrated parts 36 to 42, 57A and 77

ALL OTHER PARTS SAME AS PSB 4A 70 Z1

CALIBRATION: For governor setting of 500 RPM to 1600 RPM

Average for all outlets

Set at 1600 RPM for 17cc to 19cc per 500 strokes at full load position.

Set at 500 RPM for 6cc to 7cc per 500 strokes at idle position.

PSB 4A 80Z 2497B

2497B

Continental Motors Corp. 3-7/8" x 5-1/2" Model HD 260 Tractor

PSB 4A 80Z 2497B1

2497B1

Clockwise Rotation -- L.H.Mounting -- Timed for Port Closing -- Governor Regulation 11% to 13%
Equipped with External Spring Type Governor -- For Speeds Up To and Including 1900 RPM

40	SGB 15B 1	1	SUPPLY PUMP ASSEMBLY -- includes parts 36, 37, 39 and 39A
54	HD 2579A	1	HYDRAULIC HEAD ASSEMBLY -- complete -- includes parts 55 to 57A, 59 to 62 and 64 to 76
68	VA 902A	1	DELIVERY VALVE ASSEMBLY
76	HD 901-4A	1	HEAD, hydraulic -- with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY -- for parts see Safety Valve Section
176	SP 905-1	1	SPRING, extension -- operating lever
177	SC 9011	1	SCREW, shut-off -- operating lever
**	PL 9012	1	PLATE, shut-off

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80 Z1

CALIBRATION: For governor setting of 600 RPM to 1350 RPM

Average for all outlets

Set at 1350 RPM for 33cc to 34cc per 500 strokes at full load position.

Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position.

**Not illustrated

2533B PSB 4A 90B 2533B Continental Motors Corp. 4-1/2" x 6" Model JD 382 Tractor

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 11% to 13% - Cam Nose to be Set Up 20° from the Horizontal Position
 Nose Must Be Steady on Plate at 1350 RPM - Nose Must Leave Plate at 1370 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2556A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-6A	1	HEAD, hydraulic - with 9.0 mm diameter plunger and sleeve
77	VA 7933A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
100	PL 905	1	PLATE, stop
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/14	1	SPRING, governor - inner
**	FI 1148	1	FITTING, adapter - flange end
142	LE 79113	1	LEVER, operating
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A, 142B (Install 180° from normal position)

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 90 B1

CALIBRATION: For governor setting of 600 RPM to 1350 RPM

Spring Spacing Adjustment - Inner - .137" gap
 Outer - .059" precompressed

Average for all outlets

Set at 1350 RPM for 46cc to 47cc per 500 strokes at full load position.
 Set at 600 RPM for 14cc to 15cc per 500 strokes at idle position.

2534B PSB 4A 80B 2534B Continental Motors Corp. 3-7/8" x 5-1/2" Model HD 260 Tractor

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 11% to 13% - Cam Nose to be Set Up 45° from the Horizontal Position

40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2554A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7933A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
100	PL 905	1	PLATE, stop
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/4	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A, 142B (Install 180° from normal position)
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter - flange end

- continued -

**Not Illustrated

***Not shown assembled

- Cont'd - 2534B

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4B 90 B1

CALIBRATION: For governor setting of 600 RPM to 1475 RPM

Spring Spacing Adjustment - Inner - .177" gap
 Outer - .059" precompressed

Average for all outlets

Set at 1475 RPM for 34cc to 35cc per 500 strokes at full load position.
 Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position.

PSB 4A 80B 2545A Continental Motors Corp. 3-7/8" x 5-1/2" Model HD 260 Industrial 2545A

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 6% to 8% - Cam Nose to be Set Down 45° from the Horizontal Position

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2554A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7933A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/11	1	SPRING, governor - inner
**	FI 1148	1	FITTING, adapter - flange end
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A, 142B - (Install 180° from normal position)
142	LE 79113	1	LEVER, operating

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80B1

CALIBRATION: For governor setting of 450 RPM to 1800 RPM

Spring Spacing Adjustment - Inner - .157" gap
 Outer - .039" precompressed

Average for all outlets

Set at 1800 RPM for 34cc to 35cc per 500 strokes at full load position.
 Set at 450 RPM for 15cc to 16cc per 500 strokes at idle position.

PSB 4A 80B 2546A Continental Motors Corp. 3-7/8" x 5-1/2" Model HD 260 Industrial 2546A

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 6% to 8% - Cam Nose to be Set Down 45° from the Horizontal Position

40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2554A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve

- continued -

**Not illustrated

***Not shown assembled

AMERICAN BOSCH CORPORATION SPRINGFIELD, MASS. U.S.A.

2546A - Cont'd -

Illustration Number	Part Number	Quantity Used	Description of Part
77	VA 7933A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/7	1	SPRING, governor - inner
**	FI 1148	1	FITTING, adapter - flange end
***	LE 79112	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A, 142B -- (Install 180° from normal position)
142	LE 79113	1	LEVER, operating

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80 B1

CALIBRATION: For governor setting of 450 RPM to 1600 RPM

Spring Spacing Adjustment: - Inner - .157" gap
- Outer - .039" precompressed

Average for all outlets

Set at 1600 RPM for 33cc to 34cc per 500 strokes at full load position.

Set at 450 RPM for 15cc to 16cc per 500 strokes at idle position.

2547A PSB 4A 80B 2547A Continental Motors Corp. 3-7/8" x 5-1/2" Model HD 260 Industrial

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5%
Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
Governor Regulation 6% to 8% - Cam Nose to be Set Horizontal.

40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39, and 39A
54	HD 2554A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7933A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/4	1	SPRING, governor - inner
**	FI 1148	1	FITTING, adapter - flange end
***	LE 79112	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A, 142B (Install 180° from normal position)
142	LE 79113	1	LEVER, operating

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80 B1

CALIBRATION: For governor setting of 450 RPM to 1400 RPM

Spring Spacing Adjustment: - Inner - .157" gap
- Outer - .059" precompressed

Average for all outlets

Set at 1400 RPM for 33cc to 34cc per 500 strokes at full load position.

Set at 450 RPM for 15cc to 16cc per 500 stroke at idle position.

**Not illustrated

***Not shown assembled

AMERICAN BOSCH CORPORATION, SPRINGFIELD, MASS. U.S.A.

PSB 4A 80B 2548A Continental Motors Corp. 3-7/8" x 5-1/2" Model HD 260 Industrial 2548A

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 7% to 9% - Cam Nose to be Set Horizontal

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2554A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7933A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/13	1	SPRING, governor - inner
***	LE 79112	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A, 142B - (Install 180° from normal position)
142	LE 79113	1	LEVER, operating
**	FI 114B	1	FITTING, adapter - flange end

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80 B1

CALIBRATION: For governor setting of 450 RPM to 1200 RPM

Spring Spacing Adjustment - Inner - .137" gap
 Outer - .059" gap

Average for all outlets

Set at 1200 RPM for 34cc to 35cc per 500 strokes at full load position.
 Set at 450 RPM for 15cc to 16cc per 500 strokes at idle position.

PSB 4A 70B 2616A Continental Motors Corp. 3-3/8" x 4-3/8" Model GD 157 Industrial 2616A

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 5% to 7% - Cam Nose to be Set Down 30° from the Horizontal Position

40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2552A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/11	1	SPRING, governor - inner
**	FI 114B	1	FITTING, adapter - flange end
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A and 142B - (Install 180° from normal position)
142	LE 79113	1	LEVER, operating

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70 B1

CALIBRATION: For governor setting of 450 RPM to 1800 RPM

Spring Spacing Adjustment - Inner - .177" gap
 Outer - .059" precompressed

Average for all outlets

Set at 1800 RPM for 19cc to 20cc per 500 strokes at full load position.
 Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position

**Not illustrated

***Not shown assembled

AMERICAN BOSCH CORPORATION SPRINGFIELD 7 MASS. U.S.A.

2620A PSB 4A 70B 2620A Continental Motors Corp. 3-3/8" x 4-3/8" Model GD 157 Industrial

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5%
Equipped with Internal Spring Type Governor - For Speeds Up To and including 1900 RPM
Governor Regulation 6% to 8% - Cam Nose to be Set Horizontal

Illustration Number	Part Number	Quality Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2552A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/7	1	SPRING, governor - inner
**	FI 1148	1	FITTING, adapter - flange end
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A and 142B - (Install 180° from normal position with pin boss away from pump)
142	LE 79113	1	LEVER, operating

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70 81

CALIBRATION: For governor setting of 450 RPM to 1600 RPM

Spring Spacing Adjustment - Inner - .157" gap
Outer - .059" precompressed

Average for all outlets:

Set at 1600 RPM for 19cc to 20cc per 500 strokes at full load position.
Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position.

2621A PSB 4A 70B 2621A Continental Motors Corp. 3-3/8" x 4-3/8" Model GD 157 Industrial

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5%
Equipped with Internal Spring Type Governor - For Speeds Up To and including 1900 RPM
Governor Regulation 6% to 8% - Cam Nose to be Set Horizontal

40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2552A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/4	1	SPRING, governor - inner
**	FI 1148	1	FITTING, adapter - flange end
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A, 142B - (Install 180° from normal position)
142	LE 79113	1	LEVER, operating

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70 B1

CALIBRATION: For governor setting of 450 RPM to 1400 RPM

Spring Spacing Adjustment - Inner - .157" gap
Outer - .059" precompressed

Average for all outlets:

Set at 1400 RPM for 19cc to 20cc per 500 strokes at full load position.
Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position.

**Not illustrated

***Not shown assembled

AMERICAN BOSCH CORPORATION, SPRINGFIELD 7, MASS. U.S.A.

PSB 4A 70B 2622A Continental Motors Corp. 3-3/8" x 4-3/8" Model GD 157 Industrial 2622A

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 8% to 10% - Cam Nose to be Set Horizontal

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2552A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/13	1	SPRING, governor - inner
**	FI 1148	1	FITTING, adapter - flange end
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A, 142B - (Install 180° from normal position)
142	LE 79113	1	LEVER, operating

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70 B1

CALIBRATION: For governor setting of 450 RPM to 1200 RPM

Spring Spacing Adjustment - Inner - .157" gap
 Outer - .039" precompressed

Average for all outlets

Set at 1200 RPM for 19cc to 20cc per 500 strokes at full load position.
 Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position.

PSB 4A 70B 2623A Continental Motors Corp. 3-3/8" x 4-3/8" Model GD 157 Generator 2623A

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 3% to 5% - Cam Nose to be Set Horizontal

40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2552A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/7	1	SPRING, governor - inner
**	FI 1148	1	FITTING, adapter - flange end
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A, 142B - (Install 180° from normal position)
142	LE 79113	1	LEVER, operating

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70 B1

CALIBRATION: For governor setting of 450 RPM to 1800 RPM

Spring Spacing Adjustment - Inner - .079" gap
 Outer - .039" precompressed

Average for all outlets

Set at 1800 RPM for 19cc to 20cc per 500 strokes at full load position.
 Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position.

**Not illustrated

***Not shown assembled

AMERICAN ROSCHE CORPORATION, SPRINGFIELD 7, MASS., U.S.A.

2723A PSB 4A 70B 2723A Continental Motors Corp. 3-3/8" x 4-3/8" Model GD 157 Tractor

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 13% - Cam Nose to be Set Down 30° from the Horizontal Position

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2552A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
100	PL 905	1	PLATE, stop
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/14	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142 142A and 142B (Install 180° from normal position)
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter - flange end

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70 B1

CALIBRATION: For governor setting of 600 RPM to 1350 RPM

Spring Spacing Adjustment - Inner - .137" gap
 Outer - .059" precompressed

Average for all outlets

Set at 1350 RPM for 19cc to 20cc per 500 strokes at full load position.
 Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position.

2777A PSB 4A 70B 2777A The Buda Company 3-7/16" x 4-1/8" Model 4BD 153

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 10% to 12% - Cam Nose to be Set Horizontal

***	CU 905A	1	CONTROL UNIT ASSEMBLY - includes parts 23, 23A, 23B and 23D
23B	BG 909A	1	BUSHING, control shaft
23D	LE 9018A	1	SHAFT, control
**	PL 908A	1	PLATE, pressure - control unit
**	WA 6-5	2	WASHER, lock
**	SC 23-12	2	SCREW, fastening - control unit assembly
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2552A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-2A	1	HEAD, hydraulic - with 7 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/11	1	SPRING, governor - inner

Omit illustrated parts 23C, 24, 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70 B1

CALIBRATION: For governor setting of 450 RPM to 1650 RPM

Spring Spacing Adjustment - Inner - .197" gap
 Outer - .039" precompressed

Average for all outlets

Set at 1650 RPM for 22cc to 23cc per 500 strokes at full load position.
 Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position.

***Not illustrated

***Not shown assembled

PSB 4A 70B 2777B The Buda Company 3-7/16" x 4-1/8" Model 4BD 153

2777B

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10%
Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
Governor Regulation 10% to 12% - Cam Nose to be Set Horizontal

Illustration Number	Part Number	Quantity Used	Description of Part
***	CU 906-3A	1	CONTROL UNIT ASSEMBLY - includes parts 23A, 23B and 23D
23B	BG 9011A	1	BUSHING, control shaft
23D	LE 9019-3A	1	SHAFT, control
24	SC 1441	2	SCREW, fastening - with lockwasher - control unit assembly
**	RN 903	1	RETAINER, control unit
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2552A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
98	HG 9013	1	HOUSING, governor
***	PL 79109A	1	BRIDGE ASSEMBLY, stop plate - includes parts **a to **d
**a	PL 79110A	1	PLATE, stop
**b	NT 8-8 CA	2	NUT, jam
**c	WA 1067	2	WASHER, jam nut
**d	BK 7917	1	BRIDGE, stop plate
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/11	1	SPRING, governor - inner

Omit illustrated parts 23C, 32 to 35, 57B and 100

ALL OTHER PARTS SAME AS PSB 4A 70 B1

CALIBRATION: For governor setting of 450 RPM to 1650 RPM

Spring Spacing Adjustment - Inner - .197" gap
Outer - .039" precompressed

Average for all outlets:

Set at 1650 RPM for 22cc to 23cc per 500 strokes at full load position.
Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position.

PSB 4A 70B 2794A The Buda Company 3-7/16" x 4-1/8" Model 4BD 153

2794A

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5%
Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
Governor Regulation 3% to 5% - Cam Nose to be Set Horizontal

***	CU 905A	1	CONTROL UNIT ASSEMBLY - includes parts 23, 23A, 23B and 23D
23B	BG 909A	1	BUSHING, control shaft
23D	LE 9018A	1	SHAFT, control
**	PL 908A	1	PLATE, pressure - control unit
**	WA 6-5	1	WASHER, plain - fastening screw
**	SC 23-12	1	SCREW, fastening - control unit
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2552A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/7	1	SPRING, governor - inner

- continued -

**Not illustrated

***Not shown assembled

2794A - Cont'd -

Omit illustrated parts 23C, 24, 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70 B1

CALIBRATION: For governor setting of 450 RPM to 1800 RPM

Spring Spacing Adjustment - Inner - .079" gap
Outer - .059" precompressed

Average for all outlets

Set at 1800 RPM for 22cc to 23cc per 500 strokes at full load position.
Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position.**2794B PSB 4A 70B 2794B The Buda Company 3-7/16" x 4-1/8" Model 4BD 153**Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5%
Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
Governor Regulation 3% to 5% - Cam Nose to be Set Horizontal

Illustration Number	Part Number	Quantity Used	Description of Part
***	CU 906-3A	1	CONTROL UNIT ASSEMBLY - includes parts 23A, 23B, and 23D
23B	BG 9011A	1	BUSHING, control shaft
23D	LE 9019-3A	1	SHAFT, control
24	SC 1441	2	SCREW, fastening - with lockwasher - control unit assembly
**	RN 903	1	RETAINER, control unit
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2552A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
98	HG 9013	1	HOUSING, governor
***	PL 79109A	1	BRIDGE ASSEMBLY - stop plate - includes parts **a to **d
**a	PL 79110A	1	PLATE, stop
**b	NT 8-8 CA	2	NUT, jam
**c	WA 1067	2	WASHER, jam nut
**d	BK 7917	1	BRIDGE, stop plate
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/7	1	SPRING, governor - inner

Omit illustrated parts 23C, 32 to 35, 57B and 100

ALL OTHER PARTS SAME AS PSB 4A 70 B1

CALIBRATION: For governor setting of 450 RPM to 1800 RPM

Spring Spacing Adjustment - Inner - .079" gap
Outer - .059" precompressed

Average for all outlets

Set at 1800 RPM for 22cc to 23cc per 500 strokes at full load position.
Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position.

AMERICAN VOSCH CORPORATION SPRINGFIELD, MASS. U.S.A.

PSB 4A 70B 2801A Continental Motors Corp. 3-7/16" x 4-7/8" Model GD 181 Tractor 2801A

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 11% to 13% - Cam Nose to be Set Up 45° from the Horizontal Position

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2552A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7933A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
100	PL 905	1	PLATE, stop
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/4	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A and 142B - (Install 180° from normal position)
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter - flange end

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70 B1

CALIBRATION: For governor setting of 600 RPM to 1500 RPM

Spring Spacing Adjustment - Inner - .157" gap
 Outer - .059" precompressed

Average for all outlets

Set at 1500 RPM for 24cc to 25cc for 500 strokes at full load position.
 Set at 600 RPM for 5cc to 6cc for 500 strokes at idle position.

PSB 4A 80B 2892A Continental Motors Corp. 3-7/8" x 5-1/2" Model RD 260 Generator 2892A

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5%
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
 Governor Regulation 2-1/2% - Cam Nose to be Set Horizontal

40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2554A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-4A	1	HEAD, hydraulic - with 9.0 mm diameter plunger and sleeve
77	VA 7933A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
111	SP 7950/18	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A and 142B - (Install 180° from normal position)
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter - flange end

Omit illustrated parts 32 to 35, 57B and 110

ALL OTHER PARTS SAME AS PSB 4A 80 B1

CALIBRATION: For governor setting of 450 RPM to 1200 RPM

Spring Spacing Adjustment - Inner - .059" precompressed

Average for all outlets

Set at 1200 RPM for 34cc to 35cc per 500 strokes at full load position.
 Set at 450 RPM for 15cc to 16cc per 500 strokes at idle position

**Not illustrated

***Not shown assembled

AMERICAN BOSCH CORPORATION SPRINGFIELD 7, MASS. U.S.A.

2894A PSB 4A 75B 2894A Continental Motors Corp. 3-7/16" x 4-7/8" Model GD 181 Tractor

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10%
Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
Governor Regulation 11% to 13% - Cam Nose to be Set Up 45° from the Horizontal Position

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2553A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-3A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
77	VA 7933A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
100	PL 905	1	PLATE, stop
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A and 142B - (Install 180° from normal position)
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/4	1	SPRING, governor - inner
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter - flange end

Omit illustrated parts 32 to 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 75 B1

CALIBRATION: For governor setting of 600 RPM to 1500 RPM

Spring Spacing Adjustment - Inner - .157" gap
Outer - .059" precompressed

Average for all outlets

Set at 1500 RPM for 24cc to 25cc per 500 strokes at full load position.
Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position.

2955A PSB 4A 70B 2955A Continental Motors Corp. 3-3/8" x 4-3/8" Model GD 157 Tractor

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10%
Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM
Governor Regulation 10% - Cam Nose to be Set Upward to Form 45° angle with the Fulcrum Lever

40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2552A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 55 to 57A, 59 to 62 and 64 to 76
76	HD 901-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
100	PL 9013	1	PLATE, stop
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/2	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B - (Install 180° from normal position)
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter - flange end

Omit illustrated parts 32 through 35 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70 B1

CALIBRATION: For governor setting of 600 RPM to 1800 RPM

Spring Spacing Adjustment - Inner - .157" gap
Outer - .039" precompressed

Average for all outlets

Set at 1800 RPM for 19cc to 20cc per 500 strokes at full load position.
Set at 600 RPM for 7cc to 8cc per 500 strokes at idle position.

**Not illustrated

***Not shown assembled

AMERICAN BOSCH DIVISION

AMERICAN
BOSCH
ARMA
CORPORATION

SPRINGFIELD 7 MASS. U.S.A.

*Supersedes Manual Pages D226/500 thru /503
Issued June, 1953, D226/504 & /505 January,
1953 and D226/506 thru /508 November, 1952*

AMERICAN BOSCH



FUEL INJECTION PUMP

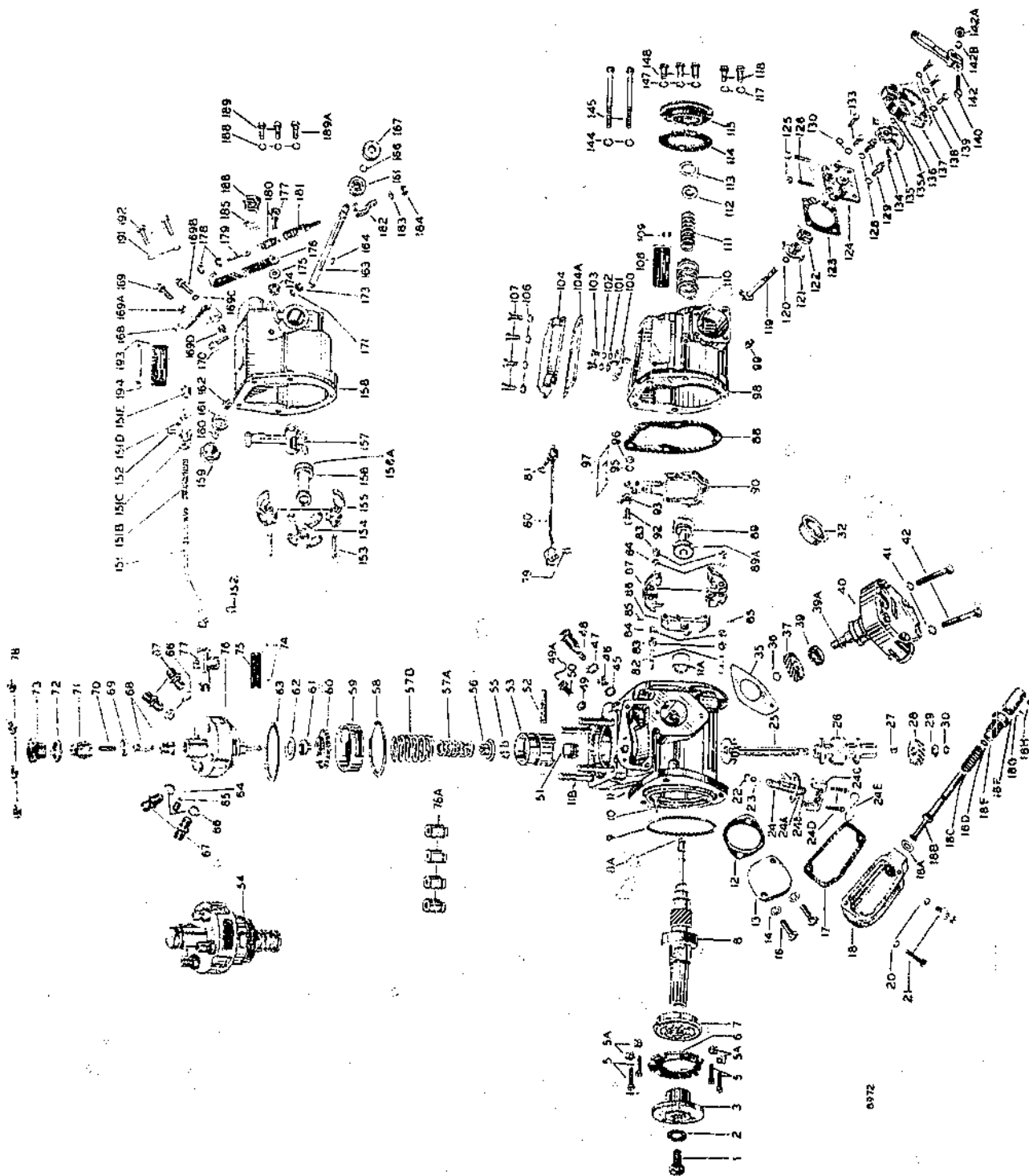
TYPES

PSB 4A 65-100 C 1

and

PSB 4A 65-100 Y 1

SERVICE PARTS LIST



0972

AMERICAN BOSCH DIVISION



SPRINGFIELD 7, MASS., U. S. A.

SERVICE PARTS LIST

PSB 4A 65 to 100 C 1

NOTE: This pump is equipped with an internal spring type governor.

Illustration Number	Part Number	Quantity Used	Description of Part
1	SC 908	1	SCREW, hub — camshaft 7/16" — 20 NF 2 thread
2	WA 7623	1	WASHER, lock — hub screw
3	HB 907	1	HUB, drive
5	SC 1555	4	SCREW, fastening — ball bearing retaining plate
5A	WA 901	4	WASHER, lock — fastening screw
6	PL 907	1	PLATE, retaining — ball bearing
7	BB 1023	1	BEARING, ball — camshaft
8	SH 9013A	1	CAMSHAFT — includes part 8A
8A	SC 1149	1	SCREW AND LOCKWASHER — camshaft
9	GA 76200	1	GASKET, rubber ring
10	PO 765	1	POINTER, timing
11	HG 9044A	1	HOUSING, pump — includes parts 10, 11A and 11B
11A	BG 7649	1	BUSHING, camshaft
11B	SD 903	4	STUD, housing
12	GA 904	1	GASKET, quill shaft pad
13	CV 9047	1	PAD, quill shaft — pump housing
14	GA 7616	2	GASKET, fastening screw
16	SC 1119	2	SCREW, fastening — quill shaft pad
17	GA 909	1	GASKET, timing window cover assembly
18	CV 9018	1	COVER, timing window
18A	GA 1036	1	GASKET, shut-off rod
***	RD 908A	1	SHUTOFF ROD ASSEMBLY — includes parts 18B through 18H
18B	RD 903	1	ROD, shut-off
18C	SP 904	1	SPRING, shut-off rod
18D	GA 1019	1	GASKET, shut-off rod
18E	SC 904	1	SCREW, bearing
18F	FI 902	1	FITTING, shut-off
18G	PN 1026	1	PIN, shut-off rod
18H	SC 325-4 BL	1	SCREW, set
20	WA 6-8 BL	2	WASHER, lock — fastening screw
21	SC 27-20BL	2	SCREW, fastening — timing window cover assembly
22	GA 1014	1	GASKET, ring — control unit assembly
23	PN 906	1	PIN, plunger sleeve
**a	RG 1015	1	RING, spring — control shaft
24	CU 906-3A	1	CONTROL UNIT ASSEMBLY — includes part **a — for left hand mounted pump — type designation stamped 6-3
24	CU 907-3A	1	CONTROL UNIT ASSEMBLY — includes part **a — for right hand mounted pump — type designation stamped 7-3
24C	RN 906	1	RETAINER, control unit
24D	SC 1689	2	SCREW WITH LOCKWASHER, fastening — control unit assembly
24E	WI 901	1	WIRE, locking — control unit fastening screw
***	SH 908A	1	QUILL SHAFT ASSEMBLY, includes parts 25 through 30
25	SH 909A	1	SHAFT, quill — with gear
26	BG 905	1	BUSHING, quill shaft
27	KY 1006	1	KEY, Woodruff — quill shaft
28	GE 908	1	GEAR, camshaft driven
29	WMS 2157/400X	as required	WASHER, plain — .002" thick — to eliminate shaft play
	WMS 2157/1X	as required	WASHER, plain — .004" thick — to eliminate shaft play
	WMS 2157/2X	as required	WASHER, plain — .008" thick — to eliminate shaft play
	WMS 2157/3X	as required	WASHER, plain — .020" thick — to eliminate shaft play
30	RG 1014	1	RING, spring — quill shaft
32	PG 902	1	PLUG, closing
35	GA 903	1	GASKET, supply pump
36	RG 1014	1	RING, spring — supply pump shaft
37	GE 908	1	GEAR, drive — supply pump shaft
39	PK 7910	1	SEAL, oil — supply pump shaft
39A	KY 901	1	KEY, supply pump shaft
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A — for clockwise rotation pumps
40	SGB 15B2	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A — for counterclockwise rotation pumps

**Not Illustrated

***Not Shown Assembled

AMERICAN BOSCH DIVISION

AMERICAN
BOSCH
ARMA
CORPORATION

SPRINGFIELD 7, MASS., U. S. A.

Illustration Number	Part Number	Quantity Used	Description of Part
41	WA 6-6BL	2	WASHER, lock — fastening screw
42	SC 1516	2	SCREW, fastening — supply pump assembly
45	GA 1012	1	GASKET, ring — filter screw
46	FE 901	1	FILTER, screen
47	GA 7965	1	GASKET, filter screw
48	SC 903	1	SCREW, filter
49	GA 7616	1	GASKET, fastening screw
49A	WI 1073	as required	WIRE, locking — fastening screw
50	SC 1140	1	SCREW, locating — quill shaft bushing
***	TP 902A	1	TAPPET ASSEMBLY — includes parts 51, 52 and 53
51	RI 903A	1	ROLLER ASSEMBLY, tappet
52	PN 9013	1	PIN, tappet roller — diameter .3745 inch
53	JU 905A	1	GUIDE ASSEMBLY, tappet
54	per requirement	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57B, 58 to 76A — for part number see nameplate attached to illustration 76.
55	HP 902	1	LOCK, plunger — 2 piece
56	GU 904	1	SEAT, plunger spring — lower
57A	SP 901	1	SPRING, inner — plunger
57B	SP 903	1	SPRING, outer — plunger — for speeds greater than 1900 RPM
58	GA 1009	1	GASKET, ring — head assembly
59	RN 9014	1	COVER, gear retainer — for left hand mounted pumps
59	RN 9015	1	COVER, gear retainer — for right hand mounted pumps
60	GE 909	1	GEAR, plunger drive — for clockwise rotation — left hand mounted pumps
60	GE 9010	1	GEAR, plunger drive — for counterclockwise rotation — left hand mounted pumps
60	GE 901	1	GEAR, plunger drive — for clockwise rotation — right hand mounted pumps
60	GE 903	1	GEAR, plunger drive — for counterclockwise rotation — right hand mounted pumps
61	GU 903	1	GUIDE, plunger
62	WA 1362	1	WASHER, thrust — plunger drive gear
63	GA 1010	1	GASKET, ring — head assembly
64	BB 1024	1	BALL, sealing — set screw
65	SC 1352	1	SCREW, set — sealing ball
66	GA 9010	4	GASKET, discharge fitting
67	FI 901	4	FITTING, discharge — no notch on hex — use gasket (GA9010)
67	FI 9012	4	FITTING, discharge — notch on hex — do not use gasket
68	VA 901 A	1	DELIVERY VALVE ASSEMBLY
69	GA 905	1	GASKET, delivery valve holder
70	SP 7655	1	SPRING, delivery valve
71	HP 903	1	HOLDER, delivery valve
72	GA 906	1	GASKET, cap screw
73	SC 902	1	SCREW, cap — delivery valve
74	SC 150-2	2	SCREW, fastening — part number plate
75	NP 902	1	PLATE, part number — hydraulic head
76	HD 9013-1A	1	HEAD, hydraulic — with 6.5 mm dia. plunger and sleeve — round
	HD 9013-2A	1	HEAD, hydraulic — with 7.0 mm dia. plunger and sleeve — round
	HD 9013-3A	1	HEAD, hydraulic — with 7.5 mm dia. plunger and sleeve — round
	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm dia. plunger and sleeve — round
	HD 9013-5A	1	HEAD, hydraulic — with 8.5 mm dia. plunger and sleeve — round
	HD 9013-6A	1	HEAD, hydraulic — with 9.0 mm dia. plunger and sleeve — round
	HD 9013-7A	1	HEAD, hydraulic — with 9.5 mm dia. plunger and sleeve — round
	HD 9013-8A	1	HEAD, hydraulic — with 10.0 mm dia. plunger and sleeve — round
76A	SV 907	4	SLEEVE, stud — hydraulic head — used with round head only
77	as per order	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — for type designation see stamping on head of screw
78	NT 1127	4	NUT, fastening — hydraulic head assembly
79	PN 1122	1	HAIR PIN, control rod
80	RD 9035-1A	1	ROD, control — left hand mounted pumps
80	RD 9035-2A	1	ROD, control — right hand mounted pumps
81	PN 1122	1	HAIR PIN, control rod — governor end
***	WT 9012A	1	WEIGHT AND SPIDER ASSEMBLY — includes parts 82 to 87 — for speeds up to 1900 RPM — See Note
***	WT 9011A	1	WEIGHT AND SPIDER ASSEMBLY — includes parts 82 to 87 — for speeds in excess of 1900 RPM — See Note
82	PN 905A	2	PIN, weight
83	BG 903	4	BUSHING, weight
84	WA 1448-1	as required	WASHER, plain — weight pin — .036" thick
84	WA 1448-2	as required	WASHER, plain — weight pin — .038" thick
84	WA 1448-3	as required	WASHER, plain — weight pin — .040" thick
84	WA 1448-4	as required	WASHER, plain — weight pin — .044" thick
84	WA 1448-5	as required	WASHER, plain — weight pin — .048" thick

*** Not Shown Assembled



Illustration Number	Part Number	Quantity Used	Description of Part
85	PN 1104	2	PIN, roll
86	HP 9012	1	SPIDER, weight
87	WT 905A	2	WEIGHT — includes part 83 — for WT 9012A
87	WT 909A	2	WEIGHT — includes part 83 — for WT 9011A
88	GA 907	1	GASKET, governor housing
89	SV 901A	1	SLEEVE ASSEMBLY
89A	BB 7910	1	BALL THRUST BEARING, sleeve assembly
90	LE 9025-1A	1	FULCRUM LEVER ASSEMBLY — 5% governor regulation — pivot pins assembled in lower holes
90	LE 9025-2A	1	FULCRUM LEVER ASSEMBLY — 10% governor regulation — pivot pins assembled in upper holes
92	SC 1136	1	SCREW, square head — cam
93	CA 793	1	CAM, torque
95	WA 6-8 BL	1	WASHER, lock — cam screw
96	NT 8-8 BL	1	NUT, cam screw
97	BA 902	1	PLATE, oil baffle
98	HG 901	1	HOUSING, governor
99	PN 901A	1	PIN, pivot — fulcrum lever
100	PL 904	1	PLATE, stop
101	WA 1143	2	WASHER, plain — fastening screw
102	WA 6-8 BL	2	WASHER, lock — fastening screw
103	SC 1404	2	SCREW, fastening — stop plate
104	CV 9032 C	1	COVER, top — governor housing
104A	GA 908	1	GASKET, top cover
106	WA 6-8 BL	4	WASHER, lock — fastening screw
107	SC 1110	4	SCREW, fastening — top cover
108	NP 904	1	PLATE, name
109	SC 150-2	2	SCREW, fastening — name plate
110	per requirement	1	SPRING, governor — outer — for spring see specific pump type
111	per requirement	1	SPRING, governor — inner — for spring see specific pump type
112	SR 799/1	as required	SPACER, governor spring — inner — .020" thick
112	SR 799/2	as required	SPACER, governor spring — inner — .042" thick
112	SR 799/3	as required	SPACER, governor spring — inner — .058" thick
112	SR 799/4	as required	SPACER, governor spring — inner — .083" thick
112	SR 799/5	as required	SPACER, governor spring — inner — .177" thick
112	SR 799/6	as required	SPACER, governor spring — inner — .276" thick
113	SR 7914/1	as required	SPACER, governor spring — outer — .020" thick
113	SR 7914/2	as required	SPACER, governor spring — outer — .042" thick
113	SR 7914/3	as required	SPACER, governor spring — outer — .058" thick
113	SR 7914/4	as required	SPACER, governor spring — outer — .083" thick
113	SR 7914/5	as required	SPACER, governor spring — outer — .156" thick
114	GA 902	1	GASKET, end cap
115	CP 901C	1	CAP, end — governor housing
117	WA 6-8 BL	2	WASHER, lock — fastening screw
118	SC 1140	2	SCREW, fastening — end cap
119	SH 901A	1	SHAFT ASSEMBLY, operating
120	GA 76195	1	GASKET, ring — shaft assembly
121	PL 902A	1	PLATE ASSEMBLY, spring
122	SP 9016	1	SPRING, operating lever
123	GA 901	1	GASKET, shaft bearing plate
124	BG 904	1	PLATE, shaft bearing
125	NT 6-8 BL	2	NUT, hex — stop screw
126	SC 350-16 BL	2	SCREW, stop — stop lever
128	WA 6-8 BL	2	WASHER, lock — stud
129	SD 902	2	STUD, fastening — shaft bearing plate — lower
130	GA 7616	2	GASKET, fastening screw — upper
133	SC 1356	2	SCREW, fastening — shaft bearing plate — upper
134	SC 901	1	SCREW, clamping — stop lever
135	BL 901	1	LEVER, stop — operating shaft
135A	SP 1066	1	RING, snap — shaft assembly
136	CV 7945	1	COVER, stop lever — upper
137	CV 7946	1	COVER, stop lever — lower
138	WA 22-6 BL	3	WASHER, lock — fastening screw
139	SC 1354	3	SCREW, fastening — stop lever covers
***	LE 79117A	1	LEVER ASSEMBLY, operating — includes illustrated parts 140, 142, 142A and 142B
140	SC 7961	1	SCREW, fastening — operating lever
142	LE 79116	1	LEVER, operating
142A	NT 8-8 BL	1	NUT, hex — fastening screw
142B	WA 6-8 BL	1	WASHER, lock — fastening screw
144	WA 6-8 BL	2	WASHER, lock — fastening screw
145	SC 1351	2	SCREW, fastening — governor housing — long
147	WA 6-8 BL	3	WASHER, lock — fastening screw
148	SC 1140	3	SCREW, fastening — governor housing — short

Parts designated by illustration numbers 24A, 24B and 151 through 194 are not used in this assembly.

NOTE: Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider.

***Not Shown Assembled

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SPRINGFIELD 7, MASS. U.S.A.

SERVICE PARTS LIST

PSB 4A 65 to 100 Y-1

NOTE: This pump is equipped with an external spring type governor.

Illustration Number	Part Number	Quantity Used	Description of Part
1	SC 908	1	SCREW, hub — camshaft — 7/16" — 20 NF 2 thread
2	WA 7623	1	WASHER, lock — hub screw
3	HB 907	1	HUB, drive
5	SC 1555	4	SCREW, fastening — ball bearing retaining plate
5A	WA 901	4	WASHER, lock — fastening screw
6	PL 907	1	PLATE, retaining — ball bearing
7	BB 1023	1	BALL BEARING — camshaft
8	SH 9013A	1	CAMSHAFT — includes part 8A
8A	SC 1149	1	SCREW AND LOCKWASHER — camshaft
9	GA 76200	1	GASKET, rubber ring
10	PO 765	1	POINTER, timing
11	HG 9044	1	HOUSING, pump — includes parts 10, 11A and 11B
11A	LS 7649	1	BUSHING, camshaft
11B	SD 903	4	STUD, housing
12	GA 904	1	GASKET — quill shaft pad
13	CV 9047	1	PAD, quill shaft — pump housing
14	GA 7616	2	GASKET, fastening screw
16	SC 1119	2	SCREW, fastening — quill shaft pad
17	GA 909	1	GASKET, timing window cover assembly
18	CV 9014C	1	COVER, timing window
20	WA 6-8 BL	2	WASHER, lock — fastening screw
21	SC 1140	2	SCREW, fastening — timing window cover assembly
22	GA 1014	1	GASKET, ring — control unit assembly
23	PN 9023	1	PIN, plunger sleeve
24	CU 9010A	1	CONTROL UNIT ASSEMBLY — includes parts 24A and 24B — for left hand mounted pumps — type designation stamped 10
24	CU 9011A	1	CONTROL UNIT ASSEMBLY — includes parts 24A and 24B — for right hand mounted pumps — type designation stamped 11
24A	NT 4-6	1	NUT, hex — control unit
24B	WA 1648	1	WASHER, tab — control unit
24C	RN 9011	1	RETAINER, control unit
24D	SC 1700	2	SCREW WITH LOCKWASHER — fastening — control unit assy.
24E	WI 901	1	WIRE, locking — control unit fastening screw
25	SH 908A	1	QUILL SHAFT ASSEMBLY — includes parts 25 through 30
26	SH 909A	1	SHAFT, quill — with gear
27	BG 905	1	BUSHING, quill shaft
28	KY 1006	1	KEY, Woodruff — quill shaft
28	GE 908	1	GEAR — camshaft driven
29	WMS 2157/400X	as required	WASHER, plain — .002" thick — to eliminate shaft play
	WMS 2157/1X	as required	WASHER, plain — .004" thick — to eliminate shaft play
	WMS 2157/2X	as required	WASHER, plain — .008" thick — to eliminate shaft play
	WMS 2157/3X	as required	WASHER, plain — .020" thick — to eliminate shaft play
30	RG 1014	1	RING, spring — quill shaft
32	PG 902	1	PLUG, closing
35	GA 903	1	GASKET, supply pump
36	RG 1014	1	RING, spring — supply pump shaft
37	GE 908	1	GEAR, drive — supply pump shaft
39	PK 7910	1	SEAL, oil — supply pump shaft
39A	KY 901	1	KEY, supply pump shaft
40	SOB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A — for clockwise rotation pumps
40	SGR 15B2	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A — for counterclockwise rotation pumps
41	WA 6-8 BL	2	WASHER, lock — fastening screw
42	SC 1516	2	SCREW, fastening — supply pump assembly
45	GA 1012	1	GASKET, ring — filter screw
46	FE 901	1	FILTER, screen
47	GA 7965	1	GASKET, filter screw
48	SC 903	1	SCREW, filter
49	GA 7616	1	GASKET, fastening screw
49A	WI 1073	as required	WIRE, locking — fastening screw

*** Not Shown Assembled



Illustration Number	Part Number	Quantity Used	Description of Part
50	SC 1140	1	SCREW, locating — quill shaft bushing
***	TP 902A	1	TAPPET ASSEMBLY — includes parts 51, 52 and 53
51	RL 903A	1	ROLLER ASSEMBLY, tappet
52	PN 9013	1	PIN, tappet roller — diameter .3745 inch
53	GU 905A	1	GUIDE ASSEMBLY, tappet
54	per requirement	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57B, 58 to 76A — for part number see nameplate attached to illustration 76
55	HP 902	1	LOCK, plunger — 2 piece
56	GU 904	1	SEAT, plunger spring — lower
57A	SP 901	1	SPRING, inner — plunger
57B	SP 903	1	SPRING, outer — plunger — for speeds greater than 1900 RPM
58	GA 1009	1	GASKET, ring — head assembly
59	RN 9015	1	COVER, gear retainer — right hand mounted pump
	RN 9014	1	COVER, gear retainer — left hand mounted pump
60	GE 909	1	GEAR, plunger drive — for clockwise rotation — left hand mounted pumps
	GE 9010	1	GEAR, plunger drive — for counterclockwise rotation — left hand mounted pumps
	GE 901	1	GEAR, plunger drive — for clockwise rotation — right hand mounted pumps
	GE 903	1	GEAR, plunger drive — for counterclockwise rotation — right hand mounted pumps
61	GU 903	1	GUIDE, plunger
62	WA 1362	1	WASHER, thrust — plunger drive gear
63	GA 1010	1	GASKET, ring — head assembly
64	BB 1024	1	BALL, sealing — set screw
65	SC 1352	1	SCREW, set — sealing ball
66	GA 9010	4	GASKET, discharge fitting
67	FI 901	4	FITTING, discharge — no notch on hex — use gasket (GA 9010)
67	FI 9012	4	FITTING, discharge — notch on hex — do not use gasket
68	VA 901A	1	DELIVERY VALVE ASSEMBLY
69	GA 905	1	GASKET, delivery valve holder
70	SP 7655	1	SPRING, delivery valve
71	HP 903	1	HOLDER, delivery valve
72	GA 906	1	GASKET, cap screw
73	SC 902	1	SCREW, cap — delivery valve
74	SC 150-2	2	SCREW, fastening — part number plate
75	NP 902	1	PLATE, part number — hydraulic head
76	HD 9013-1A	1	HEAD, hydraulic — with 6.5 mm dia. plunger and sleeve — round
	HD 9013-2A	1	HEAD, hydraulic — with 7.0 mm dia. plunger and sleeve — round
	HD 9013-3A	1	HEAD, hydraulic — with 7.5 mm dia. plunger and sleeve — round
	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm dia. plunger and sleeve — round
	HD 9013-5A	1	HEAD, hydraulic — with 8.5 mm dia. plunger and sleeve — round
	HD 9013-6A	1	HEAD, hydraulic — with 9.0 mm dia. plunger and sleeve — round
	HD 9013-7A	1	HEAD, hydraulic — with 9.5 mm dia. plunger and sleeve — round
	HD 9013-8A	1	HEAD, hydraulic — with 10.0 mm dia. plunger and sleeve — round
76A	SV 907	4	SLEEVE, stud — hydraulic head — used with round head only
77	as per order	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — for type designation see stamping on head of screw
78	NT 1127	4	NUT, fastening — hydraulic head assembly
88	GA 907	1	GASKET, governor housing
151	RD 9024-2A	1	CONTROL ROD — for right hand mounted pumps — includes parts 151B through 151E and one of 152
	RD 9024-1A	1	CONTROL ROD — for left hand mounted pumps — includes parts 151B through 151E and one of 152
151B	SP 9014	1	SPRING, control rod
151C	RN 908	1	CLIP, retainer — hexagon nut
151D	PN 9017	1	PIN, control rod
151E	NT 1158	1	NUT, hexagon
152	PN 1122	2	HAIRPIN, control rod — governor and control unit end
***	WT 907A	1	WEIGHT ASSEMBLY — includes parts 153 to 155
153	AP 10416	2	PIN, weight
154	HP 908	1	SPIDER, weight
155	CP 15250	2	WEIGHT
156	SV 904A	1	SLEEVE ASSEMBLY
156A	BB 1026	1	BALL THRUST BEARING, sleeve assembly
157	LE 9010	1	LEVER, fulcrum
158	HG 9012	1	HOUSING, governor
159	PG 901	1	PLUG, closing
160	SP 1067	1	RING, spring — fulcrum lever shaft
161	BB 1025	2	BALL BEARING — fulcrum lever shaft

*** Not Shown, Assembled

AMERICAN BOSCH DIVISION

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SPRINGFIELD 7, MASS., U. S. A.

Illustration Number	Part Number	Quantity Used	Description of Part
162	SR 903	1	SPACER — fulcrum lever shaft
163	SH 9016	1	SHAFT, fulcrum lever
164	KY 11-3	1	KEY, Woodruff — fulcrum lever shaft
166	RG 1016	1	RING, spring — fulcrum lever shaft
167	PK 901	1	SEAL, oil — fulcrum lever shaft
168	PL 9014	1	PLATE, stop
169	SC 9015	1	SCREW, stop — operating lever — idle
169A	NT 8-8 BL	1	NUT, hexagon — stop screw
169B	SC 9015	1	SCREW, stop — shut-off screw — use spacers to provide a clearance of .040" to .080" between shut-off screw at shut-off position
169C	SR 1033-1	as required	SPACER, stop screw — .062" thick
169C	SR 1033-2	as required	SPACER, stop screw — .125" thick
169C	SR 1033-3	as required	SPACER, stop screw — .188" thick
169C	SR 1033-4	as required	SPACER, stop screw — .031" thick
169D	NT 8-8 BL	1	NUT, hexagon — stop screw
170	SC 9015	1	SCREW, stop — full load
171	WA 6-8 BL	1	WASHER, lock — stop screw
173	NT 8-8 BL	1	NUT, jam — stop screw
174	NT 1180	1	NUT, elastic — pivot screw
175	WA 1303	1	WASHER, plain — pivot screw
176	LE 9016A	1	LEVER, operating
177	SC 9012	1	SCREW, pivot — operating lever
178	NT 1142	2	NUT, hex — spring adjusting screw
179	SC 907	1	SCREW, spring adjusting
180	SP 2013	1	SPRING, extension — operating lever
181	SC 9011	1	SCREW, shutoff — operating lever
182	PL 9012	1	PLATE, shut-off
183	WA 6-8 BL	1	LOCKWASHER — stop nut
184	NT 8-8 BL	1	NUT, hex — shut-off screw
185	WA 1071	1	WASHER, closing plug
186	PG 903	1	PLUG, closing — governor housing
188	6-8 BL	3	WASHER, lock — fastening screw
189	SC 1140	2	SCREW, fastening — governor housing
189A	SC 1140	1	SCREW, fastening — governor housing — Lower — use with governor housing without thru hole
189A	SC 1110	1	SCREW, fastening — governor housing — Lower — use with governor housing with thru hole
191	WA 6-8 BL	2	WASHER, lock — fastening screw
192	SC 1110	2	SCREW, fastening — stop plate and governor
193	NP 904	1	PLATE, name
194	SC 150-2	2	SCREW, fastening — name plate

Parts designated by illustration numbers 18A through 18H, 79 through 87 and 89 through 148 are not used in this assembly.

***Not Shown Assembled

AMERICAN BOSCH DIVISION



SPRINGFIELD, MASS., U.S.A.

These Pages Supersede Manual Pages D 226/510 to D 226/511 Issued February 1953

PSB 4A 70Y 2914A1		2914A1
PSB 4A 70Y 2914AIR	Waukasha Motor Co. 3-5/16" x 3-3/4" Model 180 DAC	2914AIR
PSB 4A 70Y 2914B1	180 DAB	2914B1
PSB 4A 70Y 2914D1		2914D1
PSB 4A 70Y 2914E1		2914E1

Clockwise Rotation - L.H. Mounting - Governor Regulation 10% to 12% - Timed for Port Closing
Equipped with External Spring Type Governor - For Speeds up to and including 1900 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 908A	1	HUB, drive
10	PO 764	1	POINTER, timing
1	HG 9016A	1	HOUSING, pump - includes parts 11A and 11B
54	HD 3204A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 902A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve

Omit illustrated parts 35 to 42, 57B and 77

ALL OTHER PARTS SAME AS PSB 4A 70Y1

CALIBRATION: For governor setting of 500 RPM to 1600 RPM

Average for all outlets

Check at 1600 RPM for minimum of 20cc per 500 strokes at full load position

Set at 1600 RPM for 17cc per 500 strokes at full load position

Set at 500 RPM for 6cc to 7cc per 500 strokes at idle position

PSB 4A 70C 2917A1		2917A1
PSB 4A 70C 2917B1	The Buda Co. 3-7/16" x 4-1/8" Model 4BD 153	2917B1
PSB 4A 70C 2917D1		2917D1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever set for 10% -
Equipped with Internal Spring Type Governor for speeds in excess of 1900 RPM - Governor
Regulation 10% - Cam Nose to be set all the way down

40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3239B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes 22, 45, 55 to 57B, 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve - see note
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm dia. plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
98	HG 9013	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY, stop plate - includes parts **a to **d
**a	PL 79110A	1	STOP PLATE ASSEMBLY
**b	BK 7917	1	BRIDGE, stop plate
**c	NT 8-8CA	2	NUT, jam
**d	WA 1067	2	WASHER, jam nut
110	SP 7951/14	1	SPRING, governor - outer
111	SP 7950/7	1	SPRING, governor - inner

** Not illustrated

continued -

2917A1 - 2917B1 - 2917D1 - Cont'd -

Omit illustrated part 32

Note to Illustrations 70 and 73: When servicing, this type of assembly requires that either the cap screw (illustration 73) or spring (illustration 70) be replaced. These parts must be checked to insure that the cap screw (part number - SC 9018A) and spring (part number - SP 9015) are used together.

SC 9018A is identified by a "V" groove on all corners of the hex.

SP 9015 is identified by a free length of 0.717" and an outside diameter of 0.349".

CALIBRATION: For governor setting of 450 RPM to 2200 RPM

Spring Spacing Adjustment - Inner - .158" gap
Outer - .039" precompressed

Average for all outlets

Set at 2200 RPM for 22cc to 23cc per 500 strokes at full load position

Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position

2919A1 PSB 4A 80C 2919A1
2919A2 PSB 4A 80C 2919A2
2919D1 PSB 4A 80C 2919D1 Continental Motors Corp. 3-7/8" x 5-1/2"
2919D2 PSB 4A 80C 2919D2 Model HD 260 Tractor
2919E1 PSB 4A 80C 2919E1 Used in Massey-Harris Model 440 Tractor
2919E2 PSB 4A 80C 2919E2

Clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 10% - Timed for Port Closing - Equipped with Internal Spring Type Governor - For speeds up to and including 1900 RPM - Governor Regulation 11% to 13% - Cam Nose to be Set Up 45° from the Horizontal position

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3104A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
76	HD 9013-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly but not furnished with pump
100	PL 905	1	PLATE, stop
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/14	1	SPRING, governor - inner - for governor settings of 600 RPM to 1350 RPM
111	SP 7950/4	1	SPRING, governor - outer - for governor settings of 600 RPM to 1475 RPM
...	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A and 142B - (Install 180° from normal position)
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed - flange end

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 80C1

CALIBRATION: PSB 4A 80C 2919A1)
PSB 4A 80C 2919D1) For governor setting of 600 RPM to 1350 RPM
PSB 4A 80C 2919E1)

** Not illustrated

- continued -

*** Not shown assembled



- Cont'd - 2919A1 - 2919A2 - 2919D1 - 2919D2 - 2919E1 - 2919E2

Spring Spacing Adjustment - Inner - .139" gap
 Outer - .059" precompressed

Average for all outlets
 Set at 1350 RPM for 32cc to 33cc per 500 strokes at full load position
 Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position
 Cam must be steady on plate at 1350 RPM
 Cam must leave plate at 1370 RPM

PSB 4A 80C 2919A2)
 PSB 4A 80C 2919D2) For governor setting of 600 RPM to 1475 RPM
 PSB 4A 80C 2919E2)

Spring Spacing Adjustment - Inner - .177" gap
 Outer - .039" precompressed

Average for all outlets
 Set at 1475 RPM for 34cc to 35cc per 500 strokes at full load position
 Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position

PSB 4A 70C 2925A1		2925A1
PSB 4A 70C 2925A2	Buda Company 3-7/16" x 4-1/8" Model 4BD 153	2925A2
PSB 4A70C 2925D1		2925D1
PSB 4A 70C 2925D2		2925D2

Clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 10% - Timed for Port Closing -
 Equipped with Internal Spring Type Governor - For speeds up to and including 1900 RPM -
 Governor Regulation 10% - Cam Nose to be Set Horizontal for governor settings of 450 RPM
 to 1300 RPM - Cam Nose to be set upward to form an angle of 45° with the fulcrum lever for
 governor settings of 450 RPM to 1650 RPM

Illustration Number	Part Number	quantity Used	Description of Part
40	SCR 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3102A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
98	HG 9013	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY, stop plate - includes parts **a to **d
**a	PL 79110A	1	STOP PLATE ASSEMBLY
**b	BK 7917	1	BRIDGE, stop plate
**c	NT 8-8CA	2	NUT, jam
**d	WA 1067	2	WASHER, jam nut
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/11	1	SPRING, governor - inner

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70C1

CALIBRATION: For governor setting of 450 RPM to 1650 RPM (PSB 4A 70C 2925A1)
 (PSB 4A 70C 2925D1)

Spring Spacing Adjustment - Inner - .197" gap
 Outer - .039" precompressed

** Not illustrated

- continued -

2925A1 - 2925A2 - 2925D1 - 2925D2 - Cont'd -

Average for all outlets

Set at 1650 RPM for 22cc to 23cc per 500 strokes at full load position.

Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position.

For governor setting of 450 RPM to 1800 RPM (PSB 4A 70C 2925A2)

(PSB 4A 70C 2925D2)

Spring Spacing Adjustment - Inner - .157" gap
 Outer - .039" precompressed

Average for all outlets

Set at 1800 RPM for 22cc to 23cc per 500 strokes at full load position.

Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position.

Special Note:

These assemblies can be converted by the following instructions from the use of heavy to light governor weights which includes a redesigned weight spider.

PSB 4A 70C 2925A1

PSB 4A 70C 2925D1

1. Install weight and spider Assembly (Illustrated parts 82 to 87 - Part Number - WT 9011A).
2. Install inner governor spring (Illustration 111 - Part Number SP 7950/13). Set spring gap of 0.079".
3. Install outer governor spring (Illustration 110 - Part Number SP 7951/11). Precompressed spring 0.079".
4. Set governor RPM and fuel quantities the same for PSB 4A 70C 2925D1.
5. Change pump type designation on name plate (Illustration 108) to "PSB 4A 70C 3380B1".

PSB 4A 70C 2925A2

PSB 4A 70C 2925D2

1. Install weight and spider Assembly (Illustrated parts 82 to 87 - Part Number - WT 9011A).
2. Install inner governor spring (Illustration 111 - Part Number SP 7950/21). Set spring gap of 0.118".
3. Install outer governor spring (Illustration 110 - Part Number - SP 7951). Precompressed 0.079".
4. Set governor RPM and fuel quantities the same as for PSB 4A 70C 2925D2.
5. Change pump type designation on name plate (Illustration 108) to "PSB 4A 70C 3380B2".



PSB 4A 80C 2940A1, D1, E1	2940A1, D1, E1
PSB 4A 80C 2940A2, D2, E2	2940A2, D2, E2
PSB 4A 80C 2940A3, D3, E3	Continental Motors Corp. 2940A3, D3, E3
PSB 4A 80C 2940A4, D4, E4	3-7/8" x 5-1/2" Model HD 260 2940A4, D4, E4
PSB 4A 80C 2940A5, D5, E5	2940A5, D5, E5
PSB 4A 80C 2940A6, D6, E6	2940A6, D6, E6

Clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 3% - Timed for Port Closing - Equipped with internal Spring Type Governor - For speeds up to and including 1900 RPM

Pump Type	Governed Speed RPM	Inner Spring Illustration Part Number	III Gap	Outer Spring Illustration Part Number	110 Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
2940A1, D1, E1	600 to 1200	SP 7950/18	.059"	None	-	Down 45°	2 1/2%
2940A2, D2, E2	600 to 1400	SP 7950/4	.158"	SP 7951/12	.059" Pre-compressed	Down 45°	5% to 8%
2940A3, D3, E3	600 to 1800	SP 7950/11	.158"	SP 7951/12	.039" Pre-compressed	Down 45°	6% to 8%
2940A4, D4, E4	600 to 1600	SP 7950/7	.158"	SP 7951/12	.039" Pre-compressed	Down 45°	6% to 8%
2940A5, D5, E5	600 to 1200	SP 7950/7	.078"	SP 7951, 11	.059" Pre-compressed	All the way down	2% to 3%
2940A6, D6, E6	600 to 1500	SP 7950/14	.039"	None	-	Down 45°	3%

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3104A	1	HYDRAULIC HEAD ASSEMBLY - complete includes parts 22, 45, 55 to 57A, 58 to 76A
76	HD 9013-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly but not furnished with pump
110	See Table		
111	See Table		
***	LE 79112A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B (Install 180° from normal position)
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed - flange end

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80C1

** Not illustrated

- continued -

*** Not shown assembled

AMERICAN BOSCH DIVISION **AMERICAN BOSCH ARMA CORPORATION** SPRINGFIELD 7, MASS. U. S. A.

2940A1, D1, E1 - 2940A3, D3, E3 - 2940A5, D5, E5 - Cont'd -
2940A2, D2, E2 - 2940A4, D4, E4 - 2940A6, D6, E6

CALIBRATION: PSB 4A 80C 2940A1
PSB 4A 80C 2940D1
PSB 4A 80C 2940E1

For governor setting of 600 RPM to 1200 RPM
Average for all outlets
Set at 1200 RPM for 34cc to 35cc per 500 strokes at full load position
Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position

PSB 4A 80C 2940A2
PSB 4A 80C 2940D2
PSB 4A 80C 2940E2

For governor setting of 600 RPM to 1400 RPM
Average for all outlets
Set at 1400 RPM for 33cc to 34cc per 500 strokes at full load position
Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position

PSB 4A 80C 2940A3
PSB 4A 80C 2940D3
PSB 4A 80C 2940E3

For governor setting of 600 RPM to 1800 RPM
Average for all outlets
Set at 1800 RPM for 34cc to 35cc per 500 strokes at full load position
Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position

PSB 4A 80C 2940A4
PSB 4A 80C 2940D4
PSB 4A 80C 2940E4

For governor setting of 600 RPM to 1600 RPM
Average for all outlets
Set at 1600 RPM for 33cc to 34cc per 500 strokes at full load position
Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position

PSB 4A 80C 2940A5
PSB 4A 80C 2940D5
PSB 4A 80C 2940E5

For governor setting of 600 RPM to 1800 RPM
Average for all outlets
Set at 1800 RPM for 34cc to 35cc per 500 strokes at full load position
Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position

PSB 4A 80C 2940A6
PSB 4A 80C 2940D6
PSB 4A 80C 2940E6

For governor setting of 600 RPM to 1500 RPM
Average for all outlets
Set at 1600 RPM for 33cc to 34cc per 500 strokes at full load position
Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position

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SPRINGFIELD 7, MASS. U.S.A.

PSB 4A 70C 2947A1		2947A1
PSB 4A 70C 2947D1	Continental Motors 3-3/8" x 4-3/8" Model GD 157	2947D1
PSB 4A 70C 2947E1		2947E1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum lever set for 10% - Equipped with Internal Spring Type Governor - For speeds up to and including 1900 RPM - Governor Regulation 10% - Cam Nose to be set upward to form an angle of 45° with fulcrum lever

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3102A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly but not furnished with pump
100	PL 9013	1	PLATE, stop
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/2	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed - flange end

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70C1

CALIBRATION: For governor setting of 600 RPM to 1800 RPM

Spring Spacing Adjustment - Inner - .157" gap
 Outer - .039" precompressed

Average for all outlets

Set at 1800 RPM for 19cc to 20cc per 500 strokes at full load position
 Set at 600 RPM for 7cc to 8cc per 500 strokes at idle position

PSB 4A 70C 2984A1, D1, E1		2984A1, D1, E1
PSB 4A 70C 2984A2, D2, E2		2984A2, D2, E2
PSB 4A 70C 2984A3, D3, E3	Continental Motors 3-3/8" x 4-3/8"	2984A3, D3, E3
PSB 4A 70C 2984A4, D4, E4	Model GD157	2984A4, D4, E4
PSB 4A 70C 2984A5, D5, E5		2984A5, D5, E5

Clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 5% - Timed for Port Closing - Equipped with Internal Spring Type Governor - For speeds up to and including 1900 RPM

**Not illustrated

- continued -

***Not shown assembled

AMERICAN BOSCH DIVISION

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SPRINGFIELD 7, MASS., U. S. A.

2984A1, D1, E1 - 2984A3, D3, E3 - 2984A5, D5, E5 - Cont'd -
 2984A2, D2, E2 - 2984A4, D4, E4

Pump Type	Governor Speed RPM	Inner Spring Illustration Part Number	Inner Spring Illustration Part Number	Inner Spring Illustration Part Number	Inner Spring Illustration Part Number	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
2984A1, D1, E1	600 to 1800	SP 7950/11	.177"	SP 7951/12	.039" Pre-compressed	All the way down	5% to 7%
2984A2, D2, E2	600 to 1600	SP 7950/7	.158"	SP 7951/12	.039" Pre-compressed	All the way down	6% to 8%
2984A3, D3, E3	600 to 1400	SP 7950/4	.197"	SP 7951/12	.059" Pre-compressed	All the way down	6% to 8%
2984A4, D4, E4	600 to 1800	SP 7950/7	.079"	SP 7951/11	.039" Pre-compressed	All the way down	3% to 5%
2984A5, D5, E5	600 to 1200	SP 7950/13	.158"	SP 7951/12	.039" Pre-compressed	All the way down	8% to 10%

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3102A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly but not furnished with pump
110	See Table		
111	See Table		
...	LE 79112A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed - flange end

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70C1

CALIBRATION: PSB 4A 70C 2984A1
 PSB 4A 70C 2984D1
 PSB 4A 70C 2984E1

For governor setting of 600 RPM to 1800 RPM
 Average for all outlets
 Set at 1800 RPM for 19cc to 20cc per 500 strokes at full load position
 Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position

PSB 4A 70C 2984A2
 PSB 4A 70C 2984D2
 PSB 4A 70C 2984E2

For governor setting of 600 RPM to 1600 RPM
 Average for all outlets
 Set at 1600 RPM for 19cc to 20cc per 500 strokes at full load position
 Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position

** Not illustrated

- continued -

*** Not shown assembled



- Cont'd - 2984A1, D1, E1 - 2984A3, D3, E3 - 2984A5, D5, E5
2984A2, D2, E2 - 2984A4, D4, E4

PSB 4A 70C 2984A3
PSB 4A 70C 2984D3
PSB 4A 70C 2984E3

For governor setting of 600 RPM to 1400 RPM
Average for all outlets
Set at 1400 RPM for 19cc to 20cc per 500 strokes at full load position
Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position

PSB 4A 70C 2984A4
PSB 4A 70C 2984D4
PSB 4A 70C 2984E4

For governor setting of 600 RPM to 1800 RPM
Average for all outlets
Set at 1800 RPM for 19cc to 20cc per 500 strokes at full load position
Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position

PSB 4A 70C 2984A5
PSB 4A 70C 2984D5
PSB 4A 70C 2984E5

For governor setting of 600 RPM to 1200 RPM
Average for all outlets
Set at 1200 RPM for 19cc to 20cc per 500 strokes at full load position
Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position

PSB 4A 75C 2992B1 Buda Company 3-3/4" x 4-1/3" Model 4 BD 182 2992B1

Clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 5% - Timed for Port Closing -
Equipped with Internal Spring Type Governor - For Speeds in excess of 1900 RPM -
Governor Regulation 6% to 5% - Cam Nose to be set all the way down

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 2576C	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57B, 58 to 76A
68	VA 904A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-3A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
98	HG 9013	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY - stop plate - includes parts **a through **d
**a	PL 79110A	1	STOP PLATE ASSEMBLY
**b	BK 7917	1	BRIDGE, stop plate
**c	NT 8-8CA	2	NUT, jam
**d	WA 1067	2	WASHER, jam nut
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/11	1	SPRING, governor - inner

Omit illustrated part 32

**Not illustrated

- continued -

299281 - Cont'd -

Note to Illustrations 70 and 73: When servicing, this type of assembly requires that either the cap screw (illustration 73) or spring (illustration 70) be replaced. These parts must be checked to insure that the cap screw (part number - SC 9018A) and spring (part number - SP 9015) are used together.

SC 9018A is identified by a "V" groove on all corners of the hex.

SP 9015 is identified by a free length of 0.717" and an outside diameter of 0.349".

ALL OTHER PARTS SAME AS PSB 4A 75C1

CALIBRATION: For governor setting of 450 RPM to 2400 RPM

Spring Spacing Adjustment - Inner - .157" gap
Outer - .039" precompressed

Average for all outlets

Set at 2400 RPM for 25cc to 26cc per 500 strokes at full load position

Set at 450 RPM for 6cc to 7cc per 500 strokes at idle position

3025A1 PSB 4A 90C 3025A1

3025D1 PSB 4A 90C 3025D1 Continental Motors 4-1/2" x 6" Model JD 382

3025E1 PSB 4A 90C 3025E1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10% - Equipped with Internal Spring Type Governor - For Speeds up to and including 1900 RPM - Governor Regulation 11% to 13% - Cam Nose to be Set Upward to form 70° Angle with Fulcrum Lever - Nose must be Steady on Plate at 1350 RPM - Nose must Leave Plate at 1370 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3106A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
76	HD 9013-6A	1	HEAD, hydraulic - with 9.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly but not furnished with pump
100	PL 905	1	PLATE, stop
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/14	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A and 142B (install 180° from normal position)
112	LE 79113	1	LEVER, operating
113	FI 904	1	FITTING, bleed - flange end

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 90C1

CALIBRATION: For governor setting of 600 RPM to 1350 RPM

Spring Spacing Adjustment - Inner - .138" gap
Outer - .059" precompressed

Average for all outlets:

Set at 1350 RPM for 46cc to 47cc per 500 strokes at full load position

Set at 600 RPM for 14cc to 15cc per 500 strokes at idle position

**Not illustrated

***Not shown assembled



PSB 4A 80C 3056A1 Continental Motors Corp. 3-7/8" x 5-1/2" Model HD 260 3056A1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Type Governor - Assemble pump as for speeds up to and including 1900 RPM - Governor Regulation 6% to 8% - Cam Nose to be set upward to form an angle of 45° with the fulcrum lever

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3289B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly but not furnished with pump
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/11	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, to 142, 142A to 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed - flange end

Omit illustrated parts 32 and 57B

Note to Illustrations 70 and 73: When servicing, this type of assembly requires that either the cap screw (illustration 73) or spring (illustration 70) be replaced. These parts must be checked to insure that the cap screw (part number - SC 9018A) and spring (part number - SP 9015) are used together.

SP 9015 is identified by a free length of 0.717" and an outside diameter of 0.349".

SC 9018A is identified by a "V" groove on all corners of the hex.

ALL OTHER PARTS SAME AS PSB 4A 80C1

CALIBRATION: For governor setting of 600 RPM to 2000 RPM

Spring Spacing Adjustment - Inner - .059" gap
Outer - .157" precompressed

Average for all outlets
Set at 2000 RPM for 34cc to 35cc per 500 strokes at full load position
Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position

**Not illustrated

***Not shown assembled

D226/521

AMERICAN BOSCH DIVISION

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SPRINGFIELD 7, MASS. U.S.A.

3082A1 PSB 4A 70C 3082A1
 3082A2 PSB 4A 70C 3082A2
 3082D1 PSB 4A 70C 3082D1 Continental Motors Corp. 3-3/8" x 4-3/8" Model GD 157
 3082D2 PSB 4A 70C 3082D2
 3082E1 PSB 4A 70C 2082E1
 3082E2 PSB 4A 70C 3082E2

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10% -
 Equipped with Internal Spring Type Governor - For speeds up to and including 1900 RPM

Pump Type	Governor Speed RPM	Inner Spring		Outer Spring		Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
		Illustration Part Number	III Gap	Illustration Part Number	IIO Gap		
3082A1, D1, E1	600 to 1500	SP 7950/7	.157"	SP 7951/12	.059" Pre-com- pressed	Up 45°	10% to 12%
3082A2, D2, E2	600 to 1350	SP 7950/14	.137"	SP 7951/12	.059" Pre-com- pressed	Down 60°	13%

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3102A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A and 56 to 76A
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly but not fur- nished with pump
100	PL 905	1	PLATE, stop
110	See Table	1	SPRING, governor - outer
111	See Table	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B (install 180° from the normal posi- tion)
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed - flange end

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70C1

CALIBRATION: PSB 4A 70C 3082A1
 PSB 4A 70C 3082D1
 PSB 4A 70C 3082E1

For governor setting of 600 RPM to 1500 RPM
 Average for all outlets
 Set at 1500 RPM for 19cc to 20cc per 500 strokes at full load position
 Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position

PSB 4A 70C 3082A2
 PSB 4A 70C 3082D2
 PSB 4A 70C 3082E2

For governor setting of 600 RPM to 1350 RPM
 Average for all outlets
 Set at 1350 RPM for 19cc to 20cc per 500 strokes at full load position
 Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position

**Not illustrated

***Not shown assembled

AMERICAN BOSCH DIVISION



SPRINGFIELD 7 MASS. U.S.A.

PSB 4A 80C 3096A1 Minneapolis Moline Co. 4-1/2" x 5" Model D283-4 3096A1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10% - Equipped with Internal Spring Type Governor - For speeds up to and including 1900 RPM - Governor Regulation 11% to 13% - Cam Nose to be set upward to form an angle of 45° with the fulcrum lever.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15R1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3104A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
76	HD 9013-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
100	PL 905	1	PLATE, stop
105	WA 1143	2	WASHER, plain - fastening screw
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/14	1	SPRING, governor - inner
**	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A and 142B - (install 180° from the normal position)
142	LE 79113	1	LEVER, operating

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80C1

CALIBRATION: For governor setting of 475 RPM to 1300 RPM

Spring Spacing Adjustment - Inner - .150" gap
Outer - .039" precompressed

Average for all outlets
Set at 1300 RPM for 33cc to 34cc per 500 strokes at full load position
Set at 475 RPM for 9cc to 10cc per 500 strokes at idle position

PSB 4A 70C 3119A1 3119A1

PSB 4A 70C 3119D1 Continental Motors Corp. 3-3/8" x 4-3/8" 3119D1
Model GD 157

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Type Governor - Assemble pump as for speeds up to and including 1900 RPM - Governor Regulation 6% - Cam Nose to be set down to form an angle of 45° with the fulcrum lever

40	SGB 15B3	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39, 39A and **a
**a	CV 9015-1A	1	COVER, supply pump - includes parts **b, **c, and **d
**b	VA 906	1	VALVE, relief
**c	SP 7960	1	SPRING, valve
**d	SC 7995U	1	SCREW, retaining
54	HD 3239B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve

**Not illustrated

- continued -

***Not shown assembled

AMERICAN BOSCH DIVISION



SPRINGFIELD 7, MASS., U.S.A.

3119A1 - Cont'd -
3119D1

Illustration Number	Part Number	Quantity Used	Description of Part
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
100	PL 9016	1	PLATE, stop
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/2	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140 to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter - flange end

Omit illustrated parts 32 and 57B

Note to Illustrations 70 and 73: When servicing, this type of assembly requires that either the cap screw (illustration 73) or spring (illustration 70) be replaced. These parts must be checked to insure that the cap screw (part number - SC 9018A) and spring (part number - SP 9015) are used together.

SC 9018A is identified by a "V" groove on all corners of the hex.

SP 9015 is identified by a free length of 0.717" and an outside diameter of 0.349".

ALL OTHER PARTS SAME AS PSB 4A 70C1

CALIBRATION: For governor setting of 450 RPM to 2000 RPM

Spring Spacing Adjustment - Inner - .137" gap
 Outer - .039" precompressed

Average for all outlets

Set at 2000 RPM for 19cc to 20cc per 500 strokes at full load position

Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position

3120A1 PSB 4A 70C 3120A1

3120D1 PSB 4A 70C 3120D1 Continental Motors Corp. 3-3/8" x 4-3/8A

3120E1 PSB 4A 70C 3120E1 Model GD 157

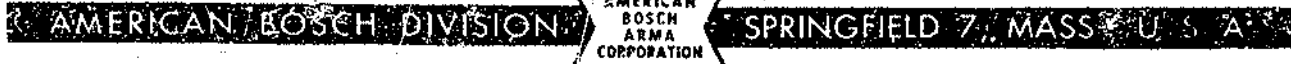
Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Type Governor - Assemble pump as for speeds up to and including 1900 RPM - Governor Regulation 7% to 10% - Cam Nose to be set all the way down

40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3239B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly but not furnished with pump
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/2	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed - flange end

***Not illustrated

- continued

***Not shown assembled



- Cont'd - 3120A1
3120D1
3120E1

Omit illustrated parts 32 and 57B

Note to Illustrations 70 and 73: When servicing, this type of assembly requires that either the cap screw (illustration 73) or spring (illustration 70) be replaced. These parts must be checked to insure that the cap screw (part number - SC 9018A) and spring (part number - SP 9015) are used together.

SC 9018A is identified by a "V" groove on all corners of the hex.

SP 9015 is identified by a free length of 0.717" and an outside diameter of 0.349".

ALL OTHER PARTS SAME AS PSB 4A 70C1

CALIBRATION: For governor setting of 600 RPM to 2000 RPM

Spring Spacing Adjustment - Inner - .137" gap
Outer - .059" precompressed

Average for all outlets

Set at 2000 RPM for 19cc to 20cc per 500 strokes at full load position

Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position

PSB 4A 70C 3164A1 Buda Company 3-7/16" x 4-1/8" Model 4 BD 153 3164A1
PSB 4A 70C 3164D1 3164D1

Clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 10% - Equipped with Internal Spring Type governor - For Speeds Up to and including 1900 RPM - Governor Regulation 3% to 5% - Cam nose to be set all the way down

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3102A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
76	HE 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
98	EG 9013	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY, stop plate - includes parts **a to **d
**a	PL 79110A	1	STOP PLATE ASSEMBLY
**b	EK 7917	1	BRIDGE, stop plate
**c	NT 8-8CA	2	NUT, jam
**d	WA 1067	2	WASHER, jam nut
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/7	1	SPRING, governor - inner

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70C1

CALIBRATION: For governor setting of 450 RPM to 1800 RPM

Spring Spacing Adjustment - Inner - .079" gap
Outer - .059" precompressed

Average for all outlets

Set at 1800 RPM for 22cc to 23cc per 500 strokes at full load position

Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position

**Not illustrated

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3219A1 PSB 4A 75C 3219A1 Continental Motors Corp. 3-5/8" x 4-7/8"
Model XD 201 F200

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10% - Equipped with Internal Spring type Governor - For speeds up to and including 1900 RPM - Governor Regulation 11% to 13% - Cam nose to be set upward to form an angle of 45° with the fulcrum lever - Cam nose must be steady on plate at 1350 RPM - Cam must leave plate at 1370 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3220A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9611	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-3A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
100	PL 905	1	PLATE, stop
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/14	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140 to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter - flange end

Omit illustrated parts 32 and 57B

Note to Illustrations 70 and 73: When servicing, this type of assembly requires that either the cap screw (illustration 73) or spring (illustration 70) be replaced. These parts must be checked to insure that the cap screw (part number - SC 9018A) and spring (part number - SP 9015) are used together.

SC 9018A is identified by a "V" groove on all corners of the hex.

SP 9015 is identified by a free length of 0.717" and an outside diameter of 0.349"

ALL OTHER PARTS SAME AS PSB 4A 75C1

CALIBRATION: For governor setting of 600 RPM to 1350 RPM

Spring Spacing Adjustment - Inner - .137" gap
Outer - .059" precompressed

Average for all outlets

Set at 1350 RPM for 25cc to 26cc per 500 strokes at full load position
Set at 600 RPM for 7cc to 8cc per 500 strokes at idle position

3299A1 PSB 4A 80C 3299A1 Continental Motors Corp. 3-7/8" x 5-1/2"
Model HD 260

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Type Governor - For speeds up to and including 1900 RPM - Governor Regulation 2% to 3% - Cam nose to be set all the way down

**Not illustrated

- continued -

***Not shown assembled



- Cont'd - 3299A1

Illustration Number	Part Number	Quantity Used	Description of part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39, 39A and **a
**a	CV 9015-1A	1	COVER, supply pump - includes parts **b, **c and **d
**b	VA 906	1	VALVE, relief
**c	SP 7960	1	SPRING, valve
**d	SC 7995U	1	SCREW, retaining
54	HD 3104A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A and 58 to 76A
76	HD 9013-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/23	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating -- includes parts 140 to 142, 142A and 142E
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter - flange end

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80C1

CALIBRATION: For governor setting of 1000 RPM to 1200 RPM

Spring Spacing Adjustment - Inner - .295" gap
 Outer - .295" precompressed

NOTE: One spacer part number SR 7914/4 (.107" thick) together with other spacers to obtain this setting.

Average for all outlets

Set at 1200 RPM for 20cc to 21cc per 500 strokes at full load position

Set at 1000 RPM for 19cc to 20cc per 500 strokes at idle position

PSB 4A 80C 3331A1 Continental Motors Corp. 3-7/8" x 5-1/2" 3331A1
 Model HD 206

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever set for 5% - Equipped with Internal Spring Type Governor - For speeds in excess of 1900 RPM - Governor Regulation 5% to 7% - Cam nose to be set down to form an angle of 45° with the fulcrum lever

40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3289B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57B and 86 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly - but not furnished with pump
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/21	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140 to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed - flange end

**Not illustrated

continued - **Not shown assembled

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3331A1 - Cont'd -

Omit illustrated part 32

Note to Illustrations 70 and 73: When servicing, this type of assembly requires that either the cap screw (illustration 73) or spring (illustration 70) be replaced. These parts must be checked to insure that the cap screw (part number - SC 9018A) and spring (part number - SP 9015) are used together.

SC 9018A is identified by a "V" groove on all corners of the hex.

SP 9015 is identified by a free length of 0.717" and an outside diameter of 0.349".

ALL OTHER PARTS SAME AS PSB 4A 80C1

CALIBRATION: For governor setting of 600 RPM to 2000 RPM

Spring Spacing Adjustment - Inner - .137" gap
Outer - .059" precompressed

Average for all outlets:

Set at 2000 RPM for 34cc to 35cc per 500 strokes at full load position

Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position

3342A1 PSB 4A 70C 3342A1 Continental Motors Corp. 3-3/8" x 4-3/8" Model GD 157

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Type Governor - For speeds up to and including 1900 RPM - Governor Regulation 6% - Cam nose to be set down to form an angle of 45° with the fulcrum lever

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B3	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39, 39A and **a
**a	CV 9015-1A	1	COVER, supply pump - includes parts **b, **c and **d
**b	VA 906	1	VALVE, relief
**c	SP 7960	1	SPRING, valve
**d	SC 7995U	1	SCREW, retaining
54	HD 3343B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, and 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-2A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
100	PL 9016	1	PLATE, stop
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/11	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter - flange end

Omit illustrated parts 32 and 57B

Note to Illustrations 70 and 73: When servicing, this type of assembly requires that either the cap screw (illustration 73) or spring (illustration 70) be replaced. These parts must be checked to insure that the cap screw (part number - SC 9018A) and spring (part number - SP 9015) are used together.

SC 9018A is identified by a "V" groove on all corners of the hex.

**Not illustrated

- continued -

**Not shown assembled



- Cont'd - 3342A1

SP 9015 is identified by a free length of 0.717" and an outside diameter of 0.349".

ALL OTHER PARTS SAME AS PSB 4A 70C1

CALIBRATION: For governor setting of 450 RPM to 1800 RPM

Spring Spacing Adjustment - Inner - .137" gap
 Outer - .039" precompressed

Average for all outlets
 Set at 1800 RPM for 19cc to 20cc per 500 strokes at full load position
 Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position

PSB 4A 80C 3344A1 Continental Motors Corp. 3-3/8" x 5-1/2" Model HD 206 3344A1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Type Governor - for speeds up to and including 1900 RPM - Governor Regulation 5% - Cam nose to be set down to form an angle of 45° with the fulcrum lever

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B3	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39, 39A and **a
**a	CV 9015-1A	1	COVER, supply pump - includes parts **b, **c, and **d
**b	VA 906	1	VALVE, relief
**c	SP 7960	1	SPRING, valve
**d	SC 7995U	1	SCREW, retaining
54	HD 3345A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-4A	1	HEAD, hydraulic, - with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
100	PL 9016	1	PLATE, stop
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/11	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140 to 142, 142A and 142B
142	LE 79115	1	LEVER, operating
**	FI 1148	1	FITTING, adapter - flange end

Omit illustrated parts 32 and 57B

Note to Illustrations 70 and 73: When servicing, this type of assembly requires that either the cap screw (illustration 73) or spring (illustration 70) be replaced. These parts must be checked to insure that the cap screw (part number - SC 9018A) and spring (part number - SP 9015) are used together.

SC 9018A is identified by a "V" groove on all corners of the hex.

SP 9015 is identified by a free length of 0.717" and an outside diameter of 0.349".

ALL OTHER PARTS SAME AS PSB 4A 80C1

CALIBRATION: For governor setting of 450 RPM to 2000 RPM

Spring Spacing Adjustment - Inner - .157" gap
 Outer - .039" precompressed

**Not illustrated

- continued -

***Not shown assembled

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3344A1 -Cont'd -

Average for all outlets

Set at 2000 RPM for 33cc to 34cc per 500 strokes at full load position

Set at 450 RPM for 15cc to 16cc per 500 strokes at idle position

3363A PSB 4A 100C 3363A Continental Motors Corp. 4-1/2" x 6" Model JD 382

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10% - Equipped with Internal Spring Type Governor - For speeds up to and including 1900 RPM - Governor Regulations 11% to 13% - Cam nose to be set upward to form an angle of 70° with the fulcrum lever - Cam nose must be steady on plate at 1350 RPM - Cam nose must leave plate at 1370 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3364A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-8A	1	HEAD, hydraulic - with 10.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly but not furnished with pump
100	PL 905	1	PLATE, stop
110	SP 7951/12	1	SPRING, governor - outer
111	SP 7950/14	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140 to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed - flange end

Omit illustrated parts 32 and 57B

Note to Illustrations 70 and 73: When servicing, this type of assembly requires that either the cap screw (illustration 73) or spring (illustration 70) be replaced. These parts must be checked to insure that the cap screw (part number - SC 9018A) and spring (part number - SP 9015) are used together.

SC 9018A is identified by a "V" groove on all corners of the hex.

SP 9015 is identified by a free length of 0.717" and an outside diameter of 0.349".

ALL OTHER PARTS SAME AS PSB 4A 100C1

CALIBRATION: For governor setting of 600 RPM to 1350 RPM

Spring Spacing Adjustment - Inner - .137" gap
Outer - .049" precompressed

Average for all outlets

Set at 1350 RPM for 46cc to 47cc per 500 strokes at full load position

Set at 600 RPM for 14cc to 15cc per 500 strokes at idle position

**Not illustrated

***Not shown assembled

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SPRINGFIELD 7, MASS. U.S.A.

PSB 4A 70C 3380B1 Buda Company 3-7/16" x 4-1/8" Model 48D 153
 PSB 4A 70C 3380B2

3380B1
 3380B2

Clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 10% - Timed for Port Closing -
 Equipped with Internal Spring Type Governor - For speeds up to and including 1900 RPM -
 Governor Regulation 10% - Cam nose to be Set Horizontal for governor settings of 450 RPM to
 1800 RPM - Cam nose to be set upward to form an angle of 45° with the fulcrum lever for
 governor setting of 450 RPM to 1650 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3102A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve section
...	WT 9011A	1	WEIGHT AND SPIDER ASSEMBLY - complete - includes parts 82 to 87 - Each weight to be shimmed to permit 0.001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider
84	WA 1448-1	As required	WASHER, plain - weight pin - .036" thick
	WA 1448-2	As required	WASHER, plain - weight pin - .038" thick
	WA 1448-3	As required	WASHER, plain - weight pin - .040" thick
	WA 1448-4	As required	WASHER, plain - weight pin - .044" thick
	WA 1448-5	As required	WASHER, plain - weight pin - .048" thick
86	HP 9012	1	SPIDER, weight
87	WT 909A	2	WEIGHT - includes part 83
98	HG 9013	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY, stop plate - includes parts **a to **d
**a	PL 79110A	1	STOP PLATE ASSEMBLY
**b	EK 7917	1	BRIDGE, stop plate
**c	NT 8-8-CA	2	NUT, jam
**d	WA 1067	2	WASHER, jam nut
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/13	1	SPRING, governor - inner - for governor settings of 450 RPM to 1650 RPM
111	SP 7950/21	1	SPRING, governor - inner - for governor settings of 450 RPM to 1800 RPM

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70C1

CALIBRATION: For governor setting of 450 RPM to 1650 RPM (PSB 4A 70C 3380B1)

Spring Spacing Adjustment - Inner - .079" gap
 Outer - .079" precompressed

Average for all outlets

Set at 1650 RPM for 22cc to 23cc per 500 strokes at full load position
 Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position

For governor setting of 450 RPM to 1800 RPM (PSB 4A 70C 3380B2)

Spring Spacing Adjustment - Inner - .118" gap
 Outer - .079" precompressed

Average for all outlets

Set at 1800 RPM for 22cc to 23cc per 500 strokes at full load position
 Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position

**Not illustrated

***Not shown assembled

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3390A1 PSB 4A 70C 3390A1 Buda Company 3-7/16" x 4-1/8" Model 4 BD 153

Clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 10% - Timed for Port Closing -
Equipped with Internal Spring Type Governor - For speeds in excess of 1900 RPM - Governor
Regulation 10% - Cam nose to be set all the way down

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3239B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57B, 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-2A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
***	WT 9011A	1	WEIGHT AND SPIDER ASSEMBLY - complete includes parts 82 to 87 - Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider
84	WA 1448-1	As required	WASHER, plain - weight pin - .036" thick
	WA 1448-2	As required	WASHER, plain - weight pin - .036" thick
	WA 1448-3	As required	WASHER, plain - weight pin - .040" thick
	WA 1448-4	As required	WASHER, plain - weight pin - .044" thick
	WA 1448-5	As required	WASHER, plain - weight pin - .048" thick
86	HP 9012	1	SPIDER, weight
87	WT 909A	2	WEIGHT - includes part 83
98	HG 9013	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY - stop plate - includes parts **a through **d
**a	PL 79110A	1	STOP PLATE ASSEMBLY
**b	BK 7917	1	BRIDGE, stop plate
**c	NT 8-8 CA	2	NUT, jam
**d	WA 1067	2	WASHER, jam nut
110	SP 7951/14	1	SPRING, governor - outer
111	SP 7950/7	1	SPRING, governor - inner

Omit illustrated part 32

Note to Illustrations 70 and 73: When servicing, this type of assembly requires that either the cap screw (illustration 73) or spring (illustration 70) be replaced. These parts must be checked to insure that the cap screw (part number - SC 9018A) and spring (part number - SP 9015) are used together.

SC 9018A is identified by a "V" groove on all corners of the hex.

SP 9015 is identified by a free length of 0.717" and an outside diameter of 0.349".

ALL OTHER PARTS SAME AS PSB 4A 70C.

CALIBRATION: For governor setting of 450 RPM to 2200 RPM

Spring Spacing Adjustment - Inner - .079" gap
Outer - .039" precompressed

Average for all outlets

Set at 2200 RPM for 22cc to 23cc per 500 strokes at full load position

Set at 450 RPM for 6cc to 7cc per 500 strokes at idle position

**Not illustrated

***Not shown assembled



These Pages Supersede Manual Pages D226/532 Issued February, 1953 and D226/534 and D226/535 Issued September, 1953.

PSB 4A 100C 3393B1	Continental Motors Corp.	4 1/2" x 6"	Model JD 382	3393B1
PSB 4A 100C 3393D1				3393D1
PSB 4A 100C 3393D2				3393D2
PSB 4A 100C 3393E1				3393E1
PSB 4A 100C 3393E2				3393E2

Clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 10% - Timed for Port Closing - Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM - Governor Regulation 10% - Cam Nose To Be Set Upward to form an angle of 70° with the Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15 B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3682A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-8A	1	HEAD, hydraulic - with 10.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly but not furnished with pump.
***	WT 9011A	1	WEIGHT AND SPIDER ASSEMBLY - complete - includes parts 82 to 87 - Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider.
84	WA 1448-1	as req'd	WASHER, plain - weight pin - .036" thick
	WA 1448-2	as req'd	WASHER, plain - weight pin - .038" thick
	WA 1448-3	as req'd	WASHER, plain - weight pin - .040" thick
	WA 1448-4	as req'd	WASHER, plain - weight pin - .044" thick
	WA 1448-5	as req'd	WASHER, plain - weight pin - .048" thick
86	HP 9012	1	SPIDER, weight
87	WT 909A	2	WEIGHT - includes part 83
100	PL 905	1	PLATE, stop
110	SP 7951/14	1	SPRING, governor - outer
111	SP 7950/24	1	SPRING, governor - inner - for governor setting of 600 RPM to 1350 RPM
111	SP 7950/18	1	SPRING, governor - inner - for governor setting of 600 RPM to 1600 RPM
122	SP 9016	1	SPRING, operating lever
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140 to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	VA 9012A	1	CHECK VALVE ASSEMBLY

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 100 C1

CALIBRATION: For governor setting of 600 RPM to 1350 RPM (PSB 4A 100C 3393B1, D1 and E1)

Spring Spacing Adjustment - Inner - .098" gap
 Outer - .098" precompressed
 Average for all outlets

Set at 1370 RPM for 46 cc to 47 cc per 500 strokes at full load position.
 Set at 600 RPM for 14 cc to 15 cc per 500 strokes at idle position:

NOTE: Name plate is stamped 1350 but full load fuel setting is made at 1370 RPM. Cam nose must be steady on plate at 1350 RPM. Cam nose must leave plate at 1370 RPM.

For governor setting of 600 RPM to 1600 RPM (PSB 4A 100C 3393B2, D2 and E2)

Spring Spacing Adjustment - Inner - .098" gap
 Outer - .098" precompressed
 Average for all outlets

Set at 1600 RPM for 49 cc to 50 cc per 500 strokes at full load position.
 Set at 600 RPM for 12 cc to 13 cc per 500 strokes at idle position.

**Not illustrated

***Not shown assembled

AMERICAN BOSCH DIVISION



SPRINGFIELD 7, MASS., U.S.A.

3415A FSB 4A 80C 3415A Continental Motors Corp. 3 7/8" x 5 1/2" Model HD 260
 3415B PSB 4A 80C 3415B

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM - Governor Regulation 3% to 5% - Cam Nose To Be Set In Horizontal Position - Adjustable Fulcrum Lever Assembly.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15 B3	1	SUPPLY PUMP ASSEMBLY - For 3415A Pump - for parts see Fuel Supply Pump Section
40	SGB 15 B5	1	SUPPLY PUMP ASSEMBLY - For 3415B Pump - for parts see Fuel Supply Pump Assembly
54	HD 3104A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A and 58 to 76A
76	HD 9013-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for 3415A Pump - for parts see Safety Valve Section
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY - for 3415B Pump - for parts see Safety Valve Section
89	SV 909A	1	SLEEVE ASSEMBLY
90	LE 9034A	1	FULCRUM LEVER ASSEMBLY - includes **a and **b (pivot pins set at bottom of holes)
**a	SC 9019	1	SCREW, adjusting
**b	PN 1116	1	PIN, locking
**	SR 904	1	SPACER - between cam and flat extension of lever
97	BA 902	1	BAFFLE, oil
110	SP 7951/16	1	SPRING, governor - outer
111	SP 7950/25	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140 to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter - flange end

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80 C1

CALIBRATION: For governor setting of 1000 RPM to 1200 RPM

Spring Spacing Adjustment - Inner - .255" gap
 Outer - .315" precompressed

NOTE: Use SR 7914-5 (.157" thick) as outer spacer
 Average for all outlets

Set at 1200 RPM for 20 cc to 21 cc per 500 strokes at full load position.
 Set at 1000 RPM for 20 cc to 21 cc per 500 strokes at idle position.

3425A1 PSB 4A 70C 3425A1 Buda Company 3 7/16" x 4 1/8" Model 4 BD 153

Clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 5% - Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM - Governor Regulation 3% to 5% - Cam Nose To Be Set All The Way Down.

40	SGB 15 B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3102A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
***	WT 9011A	1	WEIGHT AND SPIDER ASSEMBLY - complete - includes parts 82 to 87 - Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider.
84	WA 1448-1	as req'd	WASHER, plain - weight pin - .036" thick
	WA 1448-2	as req'd	WASHER, plain - weight pin - .038" thick
	WA 1448-3	as req'd	WASHER, plain - weight pin - .040" thick
	WA 1448-4	as req'd	WASHER, plain - weight pin - .044" thick
	WA 1448-5	as req'd	WASHER, plain - weight pin - .048" thick

continued

**Not illustrated

***Not shown assembled



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Cont'd 3425A1

Illustration Number	Part Number	Quantity Used	Description of Part
86	HP 9012	1	SPIDER, weight
87	WT 909A	2	WEIGHT, includes part 83
98	HG 9013	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY, - stop plate - includes parts **a to **d
**a	PL 79110A	1	STOP PLATE ASSEMBLY
**b	BK 7917	1	BRIDGE, stop plate
**c	NT 8-8 CA	2	NUT, jam
**d	WA 1067	2	WASHER, jam nut
110	SP 7951/14	1	SPRING, governor - outer
111	SP 7950/19	1	SPRING, governor - inner

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70 C1

CALIBRATION: For governor setting of 450 RPM to 1800 RPM

Spring Spacing Adjustment - Inner - .079" gap
Outer - .118" precompressed

Average for all outlets

Set at 1800 RPM for 22 cc to 23 cc per 500 strokes at full load position.
Set at 450 RPM for 5 cc to 6 cc per 500 strokes at idle position.

PSB 4A 75C 3429A1 Buda Company 3 3/4" x 4 1/8" Model 4 BD 182 3429A1

Anti-clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 5% - Timed for Port Closing - Equipped with Internal Spring Type Governor - For Speeds in Excess of 1900 RPM - Governor Regulation 6% to 8% - Cam Nose To Be Set Horizontal.

40	SGB 15B4	1	SUPPLY PUMP ASSEMBLY - For parts see Supply Pump Section
54	HD 3430A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57B, 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-3A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
98	HG 9013	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY - stop plate - includes parts **a thru **d
**a	PL 79110A	1	STOP PLATE ASSEMBLY
**b	BK 7917	1	BRIDGE, stop plate
**c	NT 8-8 CA	2	NUT, jam
**d	WA 1067	2	WASHER, jam nut
110	SP 7951/14	1	SPRING, governor - outer
111	SP 7950/4	1	SPRING, governor - inner

Omit illustrated part 32

ALL OTHER PARTS SAME AS PSB 4A 70 C1

CALIBRATION: For governor setting of 450 RPM to 2250 RPM

Spring Spacing Adjustment - Inner - .098" gap
Outer - .079" precompressed

Average for all outlets

Set at 2250 RPM for 25 cc to 26 cc per 500 strokes at full load position.
Set at 450 RPM for 6 cc to 7 cc per 500 strokes at idle position.

**Not illustrated

AMERICAN BOSCH DIVISION

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3466A1 PSB 4A 80C 3466A1 Minneapolis Moline Co. Model D 283-4
 3466A2 PSB 4A 80C 3466A2
 3466B1 PSB 4A 80C 3466B1
 3466B2 PSB 4A 80C 3466B2

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% -
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM -
 Governor Regulation 8% to 10% - Cam Nose To Be Set Upward to form an angle of 45° with
 the Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15 B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3345B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
***	WT 9011A	1	WEIGHT AND SPIDER ASSEMBLY - complete - includes parts 82 to 87 - Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider.
84	WA 1448-1	as req'd	WASHER, plain - weight pin - .036" thick
	WA 1448-2	as req'd	WASHER, plain - weight pin - .038" thick
	WA 1448-3	as req'd	WASHER, plain - weight pin - .040" thick
	WA 1448-4	as req'd	WASHER, plain - weight pin - .044" thick
	WA 1448-5	as req'd	WASHER, plain - weight pin - .048" thick
86	HP 9012	1	SPIDER, weight
87	WT 909A	2	WEIGHT, includes part 83
98	HG 9013	1	HOUSING, governor
100	PL 9022	1	PLATE, stop
110	SP 7951/15	1	SPRING GOVERNOR - outer
111	SP 7950/24	1	SPRING GOVERNOR - inner - for governor setting of 475 RPM to 1300 RPM
111	SP 7950/19	1	SPRING GOVERNOR - inner - for governor setting of 475 RPM to 1400 RPM
122	SP 9016	1	SPRING, operating lever
142	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A and 142B (Install 180° from normal position)
142	LE 79113	1	LEVER, operating

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80C 1

CALIBRATION: For governor setting of 475 RPM to 1300 RPM (PSB 4A 80C 3466A1 and B1)

Spring Spacing Adjustment - Inner - .098" gap
 Outer - .039" precompressed

Average for all outlets

Set at 1300 RPM for 33 cc to 34 cc per 500 strokes at full load position.

Set at 475 RPM for 9 cc to 10 cc per 500 strokes at idle position.

For governor setting of 475 RPM to 1400 RPM (PSB 4A 80C 3466A2 and B2)

Spring Spacing Adjustment - Inner - .098" gap
 Outer - .059" precompressed

Set at 1400 RPM for 33 cc to 34 cc per 500 strokes at full load position.

Set at 465 RPM for 9 cc to 10 cc per 500 strokes at idle position.

***Not shown assembled



PSB 4A 75Y 3473A1 Buda Company Model 4 BD 153 3473A1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Governor Regulation 7% to 9% - Equipped with External Type Governor - For Speeds Up To and Including 1900 RPM - Cam Nose To Be Set Horizontal.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15 B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3498A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-3A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
180	SP 9013-1	1	SPRING, extension - operating lever

Omit illustrated parts 32, 57B, 169 and 169A
 ALL OTHER PARTS SAME AS PSB 4A 75 Y1
 CALIBRATION: For governor setting of 650 RPM to 1650 RPM
 Set at 1650 RPM for 22 cc to 23 cc per 500 strokes at full load position.
 Check at 1100 RPM for fuel delivery equal to the full load quantity or an increase of 5% to 8%.
 Idle setting is to be made with the tractor control.
 Details can be obtained from the tractor dealer.

PSB 4A 70C 3485A1 Continental Motors 3 3/8" x 4 3/8" Model GD 157 3485A1
 PSB 4A 70C 3485A2 3485A2
 PSB 4A 70C 3485A3 3485A3
 PSB 4A 70C 3485A4 3485A4
 PSB 4A 70C 3485A5 3485A5
 PSB 4A 70C 3485A6 3485A6

Clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 5% - Timed for Port Closing - Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM.

Pump Type	Governor Speed RPM	Inner Spring Illustration Part Number	111 Gap	Outer Spring Illustration Part Number	110 Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
3485A1	600 to 1800	SP 7950/15	.098"	SP 7951/14	.078" Pre-compressed	All the way down	6% to 8%
3485A2	600 to 1600	SP 7950/18	.137"	SP 7951/14	.059" Pre-compressed	All the way down	6% to 8%
3485A3	600 to 1400					All the way down	6% to 8%
3485A4	600 to 1800	SP 7950/19	.079"	SP 7951/14	.118" Pre-compressed	All the way down	2% to 3%
3485A5	600 to 1200					All the way down	8% to 10%
3485A6	600 to 1400	SP 7950/24	.079" Pre-compressed			All the way down	2% to 4%

- continued -

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3485A1 - A2 - A3 - A4 - A5 - A6 - Cont'd

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3343B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - Used with assembly but not furnished with pump
***	WT 9011A	1	WEIGHT AND SPIDER ASSEMBLY - complete - includes parts 82 to 87 - Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider.
84	WA 1448-1	as req'd	WASHER, plain - weight pin - .036" thick
	WA 1448-2	as req'd	WASHER, plain - weight pin - .038" thick
	WA 1448-3	as req'd	WASHER, plain - weight pin - .040" thick
	WA 1448-4	as req'd	WASHER, plain - weight pin - .044" thick
	WA 1448-5	as req'd	WASHER, plain - weight pin - .048" thick
86	HP 9012	1	SPIDER, weight
87	WT 909A	2	WEIGHT - includes part 83
110	See Table		
111	See Table		
***	LE 79112A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed - flange end

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70 CI

CALIBRATION: 3485A1 Full Load Speed 1800 RPM
 3485A2 Full Load Speed 1600 RPM
 3485A3 Full Load Speed 1400 RPM
 3485A4 Full Load Speed 1800 RPM
 3485A5 Full Load Speed 1200 RPM
 3485A6 Full Load Speed 1400 RPM

Set for full load speed and full delivery of 19 cc to 20 cc per 500 strokes at full load position.

Set at 600 RPM for 5 cc to 6 cc per 500 strokes at idle position.

3540B PSB 4A 70Y 3540B Waukesha Motor Company Model 180 DLC

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Governor Regulation 6% to 8% -
 Equipped with External Spring Type Governor - For Speeds in Excess of 1900 RPM.

3	HB 908A	1	HUB, drive
10	PO 764	1	POINTER, timing
11	HG 9052A	1	HOUSING, pump - includes parts 10, 11A and 11B
23	PN 9023	1	PIN, plunger sleeve
24	CU 9010A	1	CONTROL UNIT ASSEMBLY - includes **a and **b
**a	NT 4-6	1	NUT, hex - control unit
**b	WA 1648	1	WASHER, tab - control unit hex nuts
24A	RN 9011	1	RETAINER, control unit
24B	SC 1700	2	SCREW, fastening - with lockwasher - control unit assembly
***	TP 903A	1	TAPPET ASSEMBLY - includes parts 51, 52 and 53
53	GU 9011A	1	GUIDE ASSEMBLY, tappet
54	HD 3726A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A 58 to 76A, **c and **d
55	HP 9015	1	LOCK, plunger - 2 pieces
56	GU 909	1	SEAT, plunger spring - lower
57B	SP 903	1	SPRING, outer - plunger (not furnished with head - must be ordered separately)

- continued -

**Not illustrated

***Not shown assembled



Cont'd 3540B

Illustration Number	Part Number	Quantity Used	Description of Part
59	RN 9014	1	COVER, gear retainer
60	GE 909	1	GEAR, plunger drive
68	VA 904A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLD, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9022-2A	1	HEAD, hydraulic - with 7 mm diameter plunger and sleeve
**c	BO 901	1	BOTTOM, plunger
**d	RG 902	1	RING, button retaining
180	SP 9013-3	1	SPRING, extension - operating lever
**	GU 9013	1	SEAT, upper spring seat
**	RG 903	1	RING, spring - retaining upper spring seat

Omit illustrated parts 25A, 35 to 42 and 77
 ALL OTHER PARTS SAME AS PSB 6A 70 Y1
 CALIBRATION: For governor setting of 500 RPM to 2250 RPM
 Average for all outlets

Set at 2250 RPM for 20 cc to 21 cc per 500 strokes at full load position.
 Set at 500 RPM for 5 cc to 6 cc per 500 strokes at idle position.

PSB 4A 75C 3594A J. I. Case Company Model X-17 and X-17D 3594A

Clockwise Rotation - R.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM - Governor Regulation 7% to 10% - Cam Nose To Be Set Upward to form an angle of 45° with the Fulcrum Lever.

3	HB 904	1	HUB, drive
10	PO 902	1	POINTER, timing
11	HG 9021A	1	HOUSING, pump - includes parts 10, 11A and 11B
18	CV 907	1	COVER, timing window
24	CU 907-3A	1	CONTROL UNIT ASSEMBLY - includes part 23A
***	SH 9010A	1	QUILL SHAFT ASSEMBLY - includes parts 25 through 30
26	BG 906	1	BUSHING, quill shaft
28	GE 902	1	GEAR, camshaft driven
40	SGB 15B2	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3595A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-3A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
***	WT 9011A	1	WEIGHT AND SPIDER ASSEMBLY - complete - includes parts 82 to 87 - Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider.
84	WA 1448-1	as req'd	WASHER, plain - weight pin - .036" thick
	WA 1448-2	as req'd	WASHER, plain - weight pin - .038" thick
	WA 1448-3	as req'd	WASHER, plain - weight pin - .040" thick
	WA 1448-4	as req'd	WASHER, plain - weight pin - .044" thick
	WA 1448-5	as req'd	WASHER, plain - weight pin - .048" thick
86	HP 9012	1	SPIDER, weight
87	WT 909A	2	WEIGHT - includes part 83
98	HG 904	1	HOUSING, governor
100	PL 9018	1	PLATE, stop
110	SP 7951/15	1	SPRING, governor - outer
111	SP 7950/19	1	SPRING, governor - inner
122	SP 9016	1	SPRING, operating lever
***	LE 79126A	1	LEVER ASSEMBLY, operating - includes illustrated parts 140, 142, 142A and 142B
142	LE 9033	1	LEVER, operating

Omit illustrated parts 32 and 57B

Not illustrated - continued - *Not shown assembled

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3594A Cont'd

ALL OTHER PARTS SAME AS PSB 4A 75C1

CALIBRATION: For governor setting of 600 RPM to 1450 RPM

Spring Spacing Adjustment - Inner - .137" gap
Outer - .039" precompressed

Average for all outlets

Set at 1450 RPM for 30 cc to 31 cc per 500 strokes at full load position.
Set at 600 RPM for 7 cc to 8 cc per 500 strokes at idle position.

3599A PSB 4A 70C 3599A Buda Company 3 7/16" x 4 1/8" Model 4BD 153

Clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 5% - Timed for Port Closing -
Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM -
Governor Regulation 3% to 5% - Cam Nose To Be Set All The Way Down.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3343B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
***	WT 9011A	1	WEIGHT AND SPIDER ASSEMBLY - complete - includes parts 82 to 87 - Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider.
84	WA 1448-1	as req'd	WASHER, plain - weight pin - .036" thick
	WA 1448-2	as req'd	WASHER, plain - weight pin - .038" thick
	WA 1448-3	as req'd	WASHER, plain - weight pin - .040" thick
	WA 1448-4	as req'd	WASHER, plain - weight pin - .044" thick
	WA 1448-5	as req'd	WASHER, plain - weight pin - .048" thick
86	HP 9012	1	SPIDER, weight
87	WT 909A	2	WEIGHT, includes part 83
98	HG 9013	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY, stop plate - includes parts **a to **d
**a	PL 79110A	1	STOP PLATE ASSEMBLY
**b	BK 7917	1	BRIDGE, stop plate
**c	NT 8-8 CA	2	NUT, jam
**d	WA 1067	2	WASHER, jam nut
110	Not Used	1	SPRING, governor - outer
111	SP 7950/25	1	SPRING, governor - inner - for governor setting of 450 RPM to 1650 RPM
122	SP 9016	1	SPRING, operating lever

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70C1

CALIBRATION: For governor setting of 450 RPM to 1200 RPM

Spring Spacing Adjustment - Inner - .079" precompressed

Average for all outlets:

Set at 1200 RPM for 22 cc to 23 cc per 500 strokes at full load position.
Set at 450 RPM for 5 cc to 6 cc per 500 strokes at idle position.

**Not illustrated

***Not shown assembled

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SPRINGFIELD 7, MASS. U.S.A.

PSB 4A 80C 3662A1 Continental Motors Corp. 3 7/8" x 5 1/2" Model HD 260 3662A1
 PSB 4A 80C 3662A2 3662A2

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM - Governor Regulation 3% to 5% - Cam Nose To Be Set Horizontal - Adjustable Fulcrum Lever Assembly.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15 B5	1	SUPPLY PUMP ASSEMBLY - for parts see Supply Pump Section
54	HD 310 4A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A and 58 to 76A
76	HD 90 13-4A	1	HEAD, hydraulic - with 8 mm diameter plunger and sleeve
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
89	SV 909A	1	SLEEVE ASSEMBLY
90	LE 9034A	1	FULCRUM LEVER ASSEMBLY - pivot pins set at bottom of holes - includes ** a and ** b
** a	SC 90 19	1	SCREW, adjusting
** b	PN 1116	1	PIN, locking
**	SR 904	1	SPACER, between cam and flat extension of lever
97	BA 902	1	BAFFLE, oil
104	CV 9033A	1	COVER ASSEMBLY, top - governor housing - includes parts ** c to ** k
** e	RI 61-10 CA	2	RIVET, securing - bumper spring
** f	WA 1193	2	WASHER, plain - rivet
** g	SP 9024	1	SPRING, bumper - fulcrum lever
** h	NT 3-5 CA	1	NUT, lock - adjusting screw
** i	SC 1644	1	SCREW, adjusting - bumper spring
** j	GA 1058	1	GASKET, rubber "C" ring - plug
** k	PG 1051	1	PLUG, button
110	SP 7951/16	1	SPRING, governor - outer - 3662A1 Pump
110	Not Used	1	SPRING, governor - outer - 3662A2 Pump
111	SP 7950/25	1	SPRING, governor - inner - 3662A1 Pump
111	SP 7950/19	1	SPRING, governor - inner - 3662A2 Pump
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140 to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter - flange end

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80C1

CALIBRATION: For governor setting of 1000 RPM and 1200 RPM (PSB 4A 80C 3662A1)

Spring Spacing Adjustment - Inner - .255" to .275" gap
 Outer - .275" to .295" precompressed

NOTE: Use SP 79 14-5 (0.157" thick) as outer spacer

Average for all outlets

Set at 1200 RPM for 20 cc to 21 cc per 500 strokes at full load position.
 Set at 1000 RPM for 20 cc to 21 cc per 800 strokes at normal idle position.

NOTE: Position Stop Plate to just contact cam nose at 1200 RPM setting.
 Do not reposition Stop Plate at 1000 RPM setting.

For governor setting of 1000 RPM (PSB 4A 80C 3662A2)

Spring Spacing Adjustment - Inner - .039" to .059"

Average for all outlets

Set at 1000 RPM for 20 cc to 21 cc per 500 strokes at normal idle position.

PSB 4A 80C 3666A1 Continental Motor Corp. 3 7/8" x 5 1/2" Model HD 260 3666A1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Type Governor - For Speeds in Excess of 1900 RPM - Governor Regulation 6% to 8% - Cam Nose To Be Set Upward to form an angle of 45° with the Fulcrum Lever.

- continued -

**Not illustrated

***Not shown assembled

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3666A1 Cont'd

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15 B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3289B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 75A
68	VA 968A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly but not furnished with pump.
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/14	1	SPRING, governor - inner
122	SP 9016	1	SPRING, operating - lever
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140 to 142 142A to 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed - flange end

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80C1

CALIBRATION: For governor setting of 600 RPM to 2000 RPM

Spring Spacing Adjustment - Inner - .118" gap
Outer - .059" precompressed

Average for all outlets

Set at 2000 RPM for 34 cc to 35 cc per 500 strokes at full load position.

Set at 600 RPM for 15 cc to 16 cc per 500 strokes at idle position.

3677A PSB 4A 75C 3677A Minneapolis Moline Co. Model D-206-4

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM - Governor Regulation 8% to 10% - Cam Nose To Be Set Upward to form an angle of 45° with the Fulcrum Lever.

3	HB 906A	1	HUB, drive
10	PO 764	1	POINTER, timing - pointer to extend .365" to .375" from mounting flange
11	HG 9043A	1	HOUSING, pump - includes parts 10, 11A and 11B
40	SGB 15 B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3517A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 968A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-4A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
***	WT 9011A	1	WEIGHT AND SPIDER ASSEMBLY - complete - includes parts 82 to 87 - Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider.
84	WA 1448-1	as req'd	WASHER, plain - weight pin - .036" thick
	WA 1448-2	as req'd	WASHER, plain - weight pin - .038" thick
	WA 1448-3	as req'd	WASHER, plain - weight pin - .040" thick
	WA 1448-4	as req'd	WASHER, plain - weight pin - .044" thick
	WA 1448-5	as req'd	WASHER, plain - weight pin - .048" thick
86	HP 9012	1	SPIDER, weight
87	WT 909A	2	WEIGHT, includes part 83
100	PL 905	1	PLATE, stop
110	SP 7951/15	1	SPRING GOVERNOR - outer
111	SP 7950/19	1	SPRING GOVERNOR - inner
122	SP 9016	1	SPRING, operating lever

**Not illustrated

- continued -

***Not shown assembled



Cont'd 3677A

Illustration Number	Part Number	Quantity Used	Description of Part
142	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142 142A and 142B (Install 180° from the normal position)
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter flange end

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 75C1

CALIBRATION: For governor setting of 475 RPM to 1450 RPM

Spring Spacing Adjustment - Inner - .098" gap
 Outer - .079" precompressed

Average for all outlets

Set at 1450 RPM for 28 cc to 29 cc per 500 strokes at full load position.
 Set at 475 RPM for 9 cc to 10 cc per 500 strokes at idle position.

PSB 4A 70C 3743A1 Continental Motors Corp. 3 3/8" x 4 3/8" Model GD 157 3743A1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM - Governor Regulation 2% to 3% - Cam Nose To Be Set All The Way Down.

40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 38 39A and **a
54	HD 3343B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, and 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-2A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - Used with assembly but not furnished with pump
111	SP 7950/18	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140 to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, adapter - flange end

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70C1

CALIBRATION: For governor setting of 600 RPM to 1200 RPM

Spring Spacing Adjustment - Inner - .079" gap

Average for all outlets

Set at 1200 RPM for 19 cc to 20 cc per 500 strokes at full load position.
 Set at 600 RPM for 11 cc to 12 cc per 500 strokes at idle position.

PSB 4A 100Y 3765A1 Buda Company Model 4 DI 344 3766A1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Equipped with External Spring Type Governor - For Speeds Up To and Including 1900 RPM - Governor Regulation 7 1/2% to 10% - Cam Nose To Be Set Horizontal.

3	HB 9015	1	HUB, drive
10	PO 901	1	POINTS, timing
11	HG 9053A	1	HOUSING, pump - includes parts 10, 11A and 11B
23	PN 9023	1	PIN, plunger sleeve
24	CU 9010A	1	CONTROL UNIT ASSEMBLY - includes parts **a and **b
**a	NT 4-6	1	NUT, hex - control unit
**b	WA 1648	1	WASHER, tab - control unit hex nut
24A	RN 9011	1	RETAINER, control unit

**Not illustrated

- continued -

***Not shown assembled

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3768A1 Cont'd

Illustration Number	Part Number	Quantity Used	Description of Part
24B	SC 1700	2	SCREW, fastening - with lockwasher
40	SGB 15 B 1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3774A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A and **c to **d
55	HP 9015	1	LOCK, plunger - 2 piece
56	GU 909	1	SEAT, plunger spring - lower
59	RN 9014	1	COVER, gear retainer - for left hand mounted pump
60	GE 909	1	GEAR, plunger drive
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9022-8A	1	HEAD, hydraulic - with 10.0 mm diameter plunger and sleeve
**c	BO 901	1	BUTTON, plunger
**d	RG 902	1	RING, button retaining
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
180	SP 9013-1	1	SPRING, extension - operating lever

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 100Y1

CALIBRATION: For governor setting of 450 RPM to 1800 RPM

Average for all outlets

Set at 1800 RPM for 30 cc to 31 cc per 500 strokes at full load position.

Set at 450 RPM for 7 cc to 8 cc per 500 strokes at idle position.

3771A1 PSB 4A 100C 3771A1 Continental Motors 4 1/2" x 6" Model JD 382
 3771A2 PSB 4A 100C 3771A2

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% -
 Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM -
 Governor Regulation 3% - Cam Nose To Be Set Horizontal.

40	SGB 15 B 1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 368 2A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 and 57A, 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-8A	1	HEAD, hydraulic - with 10.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - For parts see Safety Valve Section - used with assembly but not furnished with Pump.
110	SP 7951/12	1	SPRING, governor - outer - for 377 1A1 pump
111	SP 7950/25	1	SPRING, governor - inner - for 377 1A2 pump
122	SP 9016	1	SPRING, operating lever
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A and 142B (Install 180° from normal position)
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed - flange end

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 100C1

CALIBRATION: For governor setting of 600 RPM to 1000 RPM

Spring Spacing Adjustment - Outer - .177" precompressed

No Inner Spring used

Use SR 7914-5 (.157" thick) as outer spacer

Average for all outlets

Set at 1000 RPM for 38 cc to 39 cc per 500 strokes at full load position.

Pump to shut-off at 1040 RPM to 1065 RPM.

Set idle screw in mid-position.

**Not illustrated

- continued -

***Not shown assembled



Supersedes Manual Pages D226/544 and D226/545 Issued August, 1954

Cont'd - 3771A1
3771A2

CALIBRATION: For governor setting of 600 RPM to 1200 RPM
Spring Spacing Adjustment - Inner - .079" precompressed
No Outer spring used
Average for all outlets
Set at 1200 RPM for 34 cc to 35 cc per 500 strokes at full load position.
Pump to shut-off at 1270 RPM to 1300 RPM
Adjust idle screw in mid-position.

PSB 4A 75Y 3794A Buda Company Model 4 BD 153 3794A
PSB 4A 75Y 3794B 3794B

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Governor Regulation 3% to 5% -
Equipped with External Spring Type Governor - For Speeds Up To and Including 1900 RPM -
Cam Nose To Be Set Horizontal.

Illustration Number	Part Number	Quantity Used	Description of Part
23	PN 9023	1	PIN, plunger sleeve
24	CU 9010A	1	CONTROL UNIT ASSEMBLY - includes parts **a and **b
**a	NT 4-6	1	NUT, hex - control unit
**b	WA 1648	1	WASHER, tab - control unit hex nut
24A	RN 9011	1	RETAINER, control unit
24B	SC 1700	2	SCREW, fastening - with lockwasher
40	SGB 15 B5	1	SUPPLY PUMP ASSEMBLY - for parts see Supply Pump Section
54	HD 3498A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9012-3A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section (used with 3794A only)
180	SP 9013-1	1	SPRING, extension - operating lever

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 75 Y1

CALIBRATION: For governor setting of 650 RPM to 1800 RPM
Average for all outlets
Set at 1800 RPM for 22 cc to 23 cc per 500 strokes at full load position.

PSB 4A 70Y 3797B1 thru B6 Waukesha Model 180 DAB 3-1/2" X 3-3/4" 3797B1
Model 180 DAC 3-5/16" X 3-3/4" thru
Model 180 DLB 3-5/16" X 3-3/4" 3797B6

Clockwise Rotation -- L.H. Mounting -- Timed for Port Closing -- Equipped with External Spring Type Governor -- For Speeds Up To and Including 1900 RPM.

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 908A	1	HUB, drive
10	PO 764	1	POINTER, timing
11	HG 9052A	1	HOUSING, pump -- includes parts 10, 11A and 11B
23	PN 9023	1	PIN, plunger sleeve
24	CU 9010A	1	CONTROL UNIT ASSEMBLY -- includes parts **a and **b
**a	NT 4-6	1	NUT, hex -- control unit
**b	WA 1648	1	WASHER, tab -- control unit hex nut
24A	RN 9011	1	RETAINER, control unit
24B	SC 1700	2	SCREW, with lockwasher -- fastening -- control unit
54	HD 3663A	1	HYDRAULIC HEAD ASSEMBLY -- complete -- includes parts 22, 45, 55 to 57B and 58 to 76A

**Not Illustrated

-- continued --

AMERICAN BOSCH DIVISION

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SPRINGFIELD 7, MASS. U.S.A.

3797B1 thru 3797B6 - Cont'd -

Illustration Number	Part Number	Quantity Used	Description of Part
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
180	SP 9013	1	SPRING, extension - operating lever - use with 3797B2 and 3797B5 pumps
180	SP 9013-1	1	SPRING, extension - operating lever - use with 3797B3 and 3797B6 pumps
180	SP 9013-5	1	SPRING, extension - operating lever - use with 3797B1 pump
180	SP 9013-8	1	SPRING, extension - operating lever - use with 3797B4 pump

Omit illustrated parts 23A, 35 to 42, 57B and 77

ALL OTHER PARTS SAME AS FOR PSB 4A 70Y

The fuel settings are as follows:

Type Pump	Speed	Regulation
PSB4A-70Y-3797B1 - governor setting - 500 RPM to 2000 RPM Set at full load for 17.5 cc to 18.5 cc per 500 strokes Set at low idle for 8 cc to 9 cc per 500 strokes		10-12%
PSB4A-70Y-3797B2 - governor setting - 500 RPM to 1600 RPM		10-12%
PSB4A-70Y-3797B3 - governor setting - 500 RPM to 1800 RPM		10-12%
PSB4A-70Y-3797B4 - governor setting - 500 RPM to 1200 RPM		5%
PSB4A-70Y-3797B5 - governor setting - 500 RPM to 1800 RPM		3-5%
PSB4A-70Y-3797B6 - governor setting - 500 RPM to 1800 RPM Set at full load for 15 cc to 16 cc per 500 strokes Set at low idle for 8 cc to 9 cc per 500 strokes		5%

3798A1 PSB 4A 75Y 3798A1 Buda Company Model 4 BD 153

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Governor Regulation 7% to 9% - Equipped with External Spring Type Governor - For Speeds Up To and Including 1900 RPM.

Illustration Number	Part Number	Quantity Used	Description of Part
23	PN 9023	1	PIN, plunger sleeve
24	CU 9010A	1	CONTROL UNIT ASSEMBLY - includes parts **a and **b
**a	NT 4-6	1	NUT, hex - control unit
**b	WA 1648	1	WASHER, tab - control unit hex nut
24A	RN 9011	1	RETAINER, control unit
24B	SC 1700	2	SCREW, with lockwasher - fastening - control unit
40	SGB 15 B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3844A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-3A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
180	SP 9013-1	1	SPRING, extension - opening lever

Omit illustrated parts 23A, 32, 57B, 169 and 169A

ALL OTHER PARTS SAME AS PSB 4A 75 Y1

CALIBRATION: For governor setting of 650 RPM to 1650 RPM

Set at 1650 RPM for 22 cc to 23 cc per 500 strokes at full load position.

Idle setting is to be made with the tractor control.

**Not illustrated

Details can be obtained from the tractor dealer.

AMERICAN BOSCH DIVISION



SPRINGFIELD 7, MASS. U.S.A.

PSB 4A 80Y 4011A1 — Continental Motors Corp. — 3 3/8" x 4 3/8"

4011A1

Clockwise Rotation — L.H. Mounting — Timed for Port Closing. Equipped with External Spring Type Governor — For speeds in excess of 1900 RPM — Governor Regulation 6-8%

Illustration Number	Part Number	Quantity Used	Description of Part
11	HG 9044A	1	HOUSING, Pump — includes parts 10, 11A and 11B
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
***	TP 903A	1	TAPPET ASSEMBLY — includes parts 51, 52 and 53
53	GU 9011A	1	GUIDE ASSEMBLY, tappet
54	HO 4012A	1	HYDRAULIC HEAD ASSEMBLY — complete including parts 22, 45, 55 to 57A, 58 to 76A, **a and **b
55	HP 9015	1	LOCK, plunger — 2 piece
56	GU 909	1	SEAT, plunger spring — lower
59	RN 9014	1	COVER
60	GE 909	1	GEAR, plunger drive
76	HD 9022-4A	1	HEAD, hydraulic — with 8.0 mm dia. plunger and sleeve
87B	SP 903	1	SPRING, plunger — outer
**a	BO 901	1	BUTTON, plunger
**b	RG 902	1	RING, button retaining
169	SC 9025	1	SCREW, idle
176	LE 9060A	1	LEVER, operating
**	FI 904	1	FITTING, bleed
**	GU 9013	1	SEAT, upper spring
**	RG 903	1	RING, securing upper seat
180	SP 9013-5	1	SPRING, extension — operating levers

Omit illustrated part 32

ALL OTHER PARTS SAME AS PSB 4A 80Y 1

CALIBRATION: For Governor Setting of 800 RPM to 2100 RPM

Average for all outlets

Set at 2120 RPM for 24cc to 25cc per 500 strokes at full load position.

Set at 800 RPM for 5cc to 6cc per 500 strokes at idle position

PSB 4A 75Y 4013A1 — Continental Motors Corp. — 3 1/2" x 3 3/4"

4013A1

Clockwise Rotation — L.H. Mounting — Timed for Port Closing. Equipped with External Spring Type Governor — For speeds in excess of 1900 RPM — Governor Regulation 9-10%

Illustration Number	Part Number	Quantity Used	Description of Part
11	HG 9044A	1	HOUSING, pump — includes parts 10, 11A and 11B
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
***	TP 903A	1	TAPPET ASSEMBLY — includes parts 51, 52 and 53
53	GU 9011A	1	GUIDE ASSEMBLY, tappet
54	HD 3523B	1	HYDRAULIC HEAD ASSEMBLY — complete including parts 22, 45, 55 to 57A, 58 to 76A **a and **b
55	HP 9015	1	LOCK, plunger — 2 piece
56	GU 909	1	SEAT, plunger spring — lower
59	RN 9014	1	COVER
60	GE 909	1	GEAR, plunger drive
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap — delivery valve
76	HD 9022-3A	1	HEAD, hydraulic — with 7.5 mm dia. plunger and sleeve
87B	SP 903	1	SPRING, plunger — outer
**a	BO 901	1	BUTTON, plunger
**b	RG 902	1	RING, button retaining
**	GU 9013	1	SEAT, upper spring
**	RG 903	1	RING, securing upper seat
169	SC 9025	1	SCREW, idle
180	SP 9013-5	1	SPRING, extension — operating levers
**	VA 9012A	1	CHECK VALVE ASSEMBLY

Omit illustrated part 32

ALL OTHER PARTS SAME AS PSB 4A 75Y1

TIMING: With pump set at port closing of number one cylinder scribe a line mark (and letters "PC") on housing at timing window in line with marked plunger gear tooth.

CALIBRATION: For Governor Setting of 800 RPM to 2100 RPM

Average for all outlets

Set at 2100 RPM for 19.5cc to 20.5cc per 500 strokes at full load position.

Set at 800 RPM for 19cc to 20cc per 500 strokes at idle position.

**Not Illustrated

***Not Shown Assembled

- AMERICAN BOSCH DIVISION

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SPRINGFIELD 7 MASS. U.S.A.

4023A1 to A3 PSB 4A 75Y 4023A1 to A3 — Buda Company — Model 4 BD 153

Clockwise Rotation — L.H. Mounting — Timed for Port Closing — Governor Regulation 3% to 5% — Equipped with External Type Governor — For Speeds up to and Including 1900 RPM

Pump Type	Governor Speed RPM	Extension Spring Illustration 180 Part Number
4023A1	600 to 1200	SP 9013-9
4023A2	600 to 1500	SP 9013-6
4023A3	600 to 1800	SP 9013-2

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B11	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 3498A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap — delivery valve
76	HD 9013-3A	1	HEAD, hydraulic — with 7.5 mm diameter plunger and sleeve
180	See table		SPRING, extension — operating lever

Omit illustrated parts 32, 57B, 169 and 169A

ALL OTHER PARTS SAME AS PSB 4A 75Y1

CALIBRATION: 4023A1 Full load speed 1200 RPM
 4023A2 Full load speed 1500 RPM
 4023A3 Full load speed 1800 RPM
 Set at full load speed and fuel delivery of 23cc to 24cc per 500 strokes.
 Idle setting is to be made on engine

4206A PSB 4A 80Y 4206A — Continental Motors — 3 7/8" x 5 1/2" — Model HD 260

Clockwise Rotation — L.H. Mounting — Timed for Port Closing — Governor Regulation 5% to 7% — Equipped with External Type Governor — For Speeds Up To and Including 1900 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3345B	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap — delivery valve
76	HD 9013-4A	1	HEAD, hydraulic — with 8 mm diameter plunger and sleeve
180	SP 9013-7	1	SPRING, extension — operating lever

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80Y1

CALIBRATION: For Governor Setting of 600 RPM to 1800 RPM
 Set at 1800 RPM for 34cc to 35cc per 500 strokes at full load position.
 Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position.



PSB 4A 100Y 4298A — Minneapolis-Moline Company — Model D-336-4
4 5/8" x 5"

4298A

Clockwise Rotation — L.H. Mounting — Timed for Port Closing. Equipped with External Spring Type Governor — For Speeds Up To and including 1900 RPM — Governor Regulation 5-10%

Illustration Number	Part Number	Quantity Used	Description of Part
11	HG 9050A	1	HOUSING, pump — includes parts 10, 11A and 11B
40	SGE 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 35, 37, 39 and 39A
***	TP 903A	1	TAPPET ASSEMBLY — includes parts 51, 52 and 53
53	GU 9011A	1	GUIDE ASSEMBLY, tappet
54	HD 3774A	1	HYDRAULIC HEAD ASSEMBLY — complete including parts 22, 45, 55 to 57A, 58 to 76A **a and **b
55	HP 9015	1	LOCK, plunger — 2 piece
56	GU 909	1	SEAT, plunger spring — lower
59	RN 9014	1	COVER
60	GE 909	1	GEAR, plunger drive
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap — delivery valve
76	HD 90228A	1	HEAD, hydraulic — with 10.0 mm dia. plunger and sleeve
**a	BO 901	1	BUTTON, plunger
**b	RG 902	1	RING, button retaining
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
180	SP 9013-6	1	SPRING, extension — operating levers

ALL OTHER PARTS SAME AS PSB 4A 100Y1

CALIBRATION: For Governor Setting of 600 RPM to 1400 RPM
 Average for all outlets
 Set at 1400 RPM for 42.5cc to 43.5cc per 500 strokes at full load position.
 Set at 600 RPM for 19cc to 20cc per 500 strokes at idle position.

PSB 4A 75Y 4432A1 — Allis Chalmers — Model 4 BD 153

4432A1

Clockwise Rotation — L.H. Mounting — Timed for Port Closing — Governor Regulation 7% to 9% — Equipped with External Type Governor — For Speeds Up To and Including 1900 RPM — Cam Nose To Be Set Horizontal

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B11	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 3498A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap — delivery valve
76	HD 9013-3A	1	HEAD, hydraulic — with 7.5 mm diameter plunger and sleeve
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
180	SP 9013-7	1	SPRING, extension — operating lever

Omit illustrated parts 32, 57B, 169 and 169A

ALL OTHER PARTS SAME AS PSB 4A 75Y1

CALIBRATION: For Governor Setting of 600 RPM to 1800 RPM
 Set at 1800 RPM for 23cc to 24cc per 500 strokes at full load position.
 Idle setting is to be made on engine.

**Not Illustrated

***Not Shown Assembled



*Supersedes Manual Pages D226/600
to D226/605 Issued March, 1954*

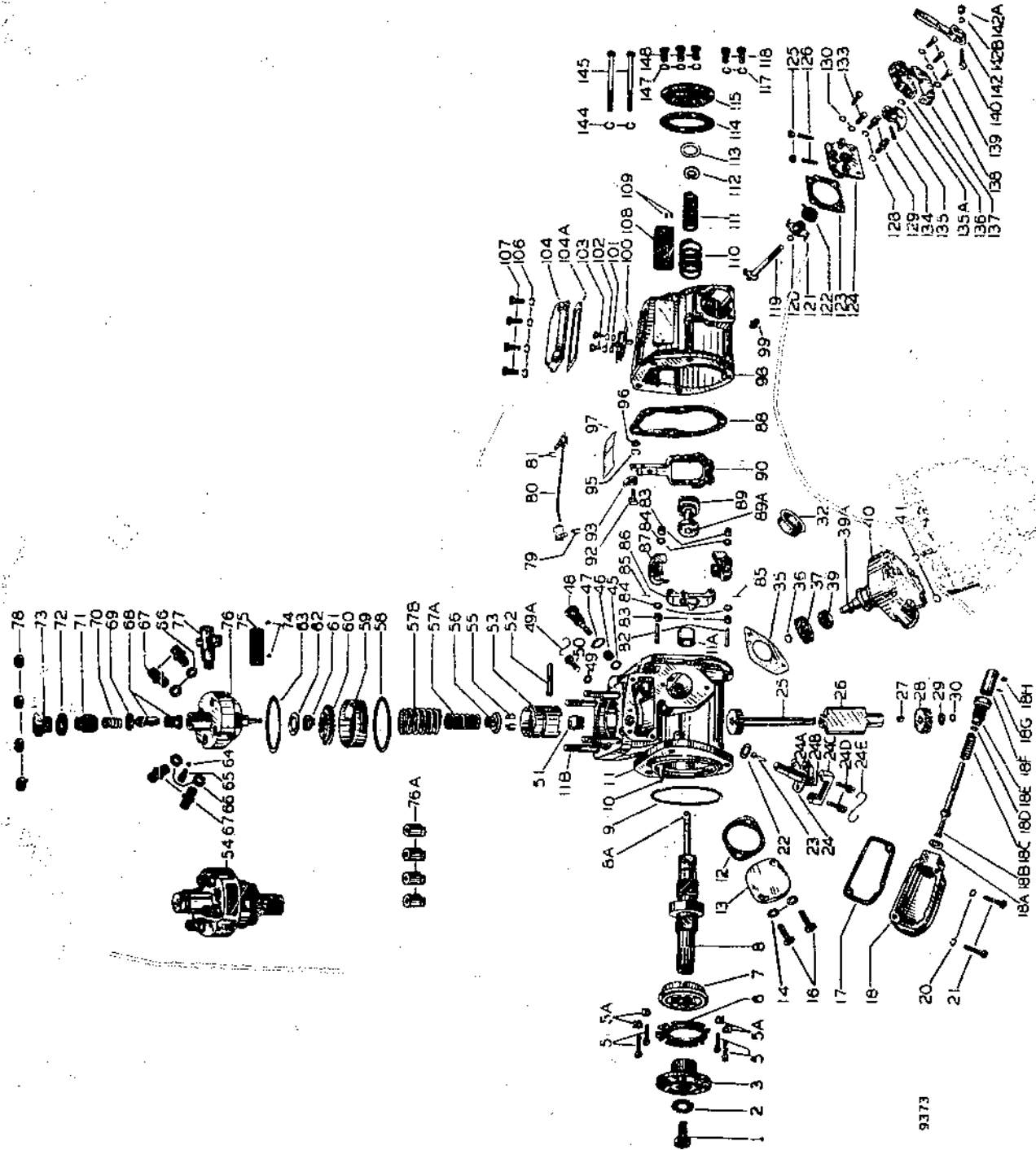
AMERICAN BOSCH FUEL INJECTION PUMP



TYPES

PSB 4A 65-100 D1

SERVICE PARTS LIST



93173



SERVICE PARTS LIST FOR PSB 4A 65 to 100 D 1

NOTE: This pump is equipped with an internal spring type governor.

Illustration Number	Part Number	Quantity Used	Description of Part
1	SC 908	1	SCREW, hub — camshaft $\frac{1}{16}$ " — 20 NF 2 thread
2	WA 7623	1	WASHER, lock — hub screw
3	HB 907	1	HUB, drive
5	SC 1555	4	SCREW, fastening — ball bearing retaining plate
5A	WA 901	4	WASHER, lock — fastening screw
6	PL 907	1	PLATE, retaining — ball bearing
7	BB 1023	1	BEARING, ball — camshaft
8	SH 9013A	1	CAMSHAFT — includes part 8A
8A	SC 1149	1	SCREW AND LOCKWASHER — camshaft
9	GA 76200	1	GASKET, rubber ring
10	PO 765	1	POINTER, timing
11	HG 9044A	1	HOUSING, pump — includes parts 10, 11A and 11B
11A	BG 7649	1	BUSHING, camshaft
11B	SD 903	4	STUD, housing
12	GA 904	1	GASKET, quill shaft pad
13	CV 9047	1	PAD, quill shaft — pump housing
14	GA 7616	2	GASKET, fastening screw
16	SC 1119	2	SCREW, fastening — quill shaft pad
17	GA 909	1	GASKET, timing window cover assembly
18	CV 9018	1	COVER, timing window
18A	GA 10 ¹⁴	1	GASKET, shut-off rod
***	RD 904A	1	SHUT-OFF ROD ASSEMBLY — includes parts 18B through 18H
18B	RD 903	1	ROD, shut-off
18C	SP 904	1	SPRING, shut-off rod
18D	GA 1019	1	GASKET, shut-off rod
18E	SC 904	1	SCREW, bearing
18F	FI 902	1	FITTING, shut-off
18G	PN 1026	1	PIN, shut-off rod
18H	SC 325-4 BL	1	SCREW, set
20	WA 6-8 BL	2	WASHER, lock — fastening screw
21	SC 27-20 BL	2	SCREW, fastening — timing window cover assembly
22	GA 1014	1	GASKET, ring — control unit assembly
23	PN 9023	1	PIN, plunger sleeve
24	CU 9011A	1	CONTROL UNIT ASSEMBLY — includes part 24A and 24B for left hand mounted pump — type designation stamped 11
24	CU 9010A	1	CONTROL UNIT ASSEMBLY — includes part 24A and 24B for right hand mounted pump — type designation stamped 10
24A	NT 4-6	1	NUT, hex — control unit
24B	WA 1648	1	WASHER, tab — control unit hex nut
24C	RN 9011	1	RETAINER, control unit
24D	SC 1700	2	SCREW WITH LOCKWASHER, fastening — control unit assembly
24E	WI 901	1	WIRE, locking — control unit fastening screw
***	SH 908A	1	QUILL SHAFT ASSEMBLY, includes parts 25 through 30
25	SH 909A	1	SHAFT, quill — with gear
26	BG 905	1	BUSHING, quill shaft
27	KY 1006	1	KEY, Woodruff — quill shaft
28	GE 908	1	GEAR, camshaft driven
29	WMS 2157/400X	as required	WASHER, plain — .002" thick — to eliminate shaft play
	WMS 2157/1X	as required	WASHER, plain — .004" thick — to eliminate shaft play
	WMS 2157/2X	as required	WASHER, plain — .008" thick — to eliminate shaft play
	WMS 2157/3X	as required	WASHER, plain — .020" thick — to eliminate shaft play
30	RG 1014	1	RING, spring — quill shaft
32	PG 902	1	PLUG, closing
35	GA 903	1	GASKET, supply pump
36	RG 1014	1	RING, spring — supply pump shaft
37	GE 908	1	GEAR, drive — supply pump shaft
39	FK 7910	1	SEAL, oil — supply pump shaft
39A	KY 901	1	KEY, supply pump shaft
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A — for clockwise rotation pumps
40	SGB 15B2	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A — for counterclockwise rotation pumps

- continued -

***Not Shown Assembled

AMERICAN BOSCH DIVISION


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SPRINGFIELD 7, MASS. U.S.A.

Illustration Number	Part Number	Quantity Used	Description of Part
41	WA 6-8 BL	2	WASHER, lock — fastening screw
42	SC 1516	2	SCREW, fastening — supply pump assembly
45	GA 1012	1	GASKET, ring — filter screw
46	FE 901	1	FILTER, screen
47	GA 7965	1	GASKET, filter screw
48	SC 903	1	SCREW, filter
49	GA 7616	1	GASKET, fastening screw
49A	WI 1073	as required	WIRE, locking — fastening screw
50	SC 1140	1	SCREW, locating — quill shaft bushing
***	TP 902A	1	TAPPET ASSEMBLY — includes parts 51, 52 and 53
51	RL 903A	1	ROLLER ASSEMBLY, tappet
52	PN 9013	1	PIN, tappet roller — diameter .3745 inch
53	GU 905A	1	GUIDE ASSEMBLY, tappet
54	per requirement	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57B, 58 to 76A — for part number see nameplate attached to illustration 76
55	HP 902	1	LOCK, plunger — 2 piece
56	GU 904	1	SEAT, plunger spring — lower
57A	SP 901	1	SPRING, inner — plunger
57B	SP 903	1	SPRING, outer — plunger — for speeds greater than 1900 RPM
58	GA 1009	1	GASKET, ring — head assembly
59	RN 9014	1	COVER, gear retainer — for left hand mounted pumps
59	RN 9015	1	COVER, gear retainer — for right hand mounted pumps
60	GE 909	1	GEAR, plunger drive — for clockwise rotation — left hand mounted pumps
60	GE 9010	1	GEAR, plunger drive — for counterclockwise rotation — left hand mounted pumps
60	GE 901	1	GEAR, plunger drive — for clockwise rotation — right hand mounted pumps
60	GE 903	1	GEAR, plunger drive — for counterclockwise rotation — right hand mounted pumps
61	GU 903	1	GUIDE, plunger
62	WA 1362	1	WASHER, thrust — plunger drive gear
63	GA 1010	1	GASKET, ring — head assembly
64	BB 1024	1	BALL, sealing — set screw
65	SC 1352	1	SCREW, set — sealing ball
66	GA 9010	4	GASKET, discharge fitting
67	FI 901	4	FITTING, discharge — No notch on hex — Use gasket (GA9010)
67	FI 9012	4	FITTING, discharge — Notch on hex — Do not use gasket
68	VA 907A	1	DELIVERY VALVE ASSEMBLY — for plunger diameter of 6.5 mm and 7.0 mm
68	VA 908A	1	DELIVERY VALVE ASSEMBLY — for plunger diameter of 7.5 mm to 9.0 mm inclusive
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY — for plunger diameter of 9.5 mm and 10.0 mm
69	GA 905	1	GASKET, delivery valve holder
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
72	GA 906	1	GASKET, cap screw
73	SC 9018A	1	SCREW, cap — delivery valve
74	SC 150-2	2	SCREW, fastening — part number plate
75	NP 902	1	PLATE, part number — hydraulic head
76	HD 9013-1A	1	HEAD, hydraulic — with 6.5 mm dia. plunger and sleeve-round
	HD 9013-2A	1	HEAD, hydraulic — with 7.0 mm dia. plunger and sleeve-round
	HD 9013-3A	1	HEAD, hydraulic — with 7.5 mm dia. plunger and sleeve-round
	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm dia. plunger and sleeve-round
	HD 9013-5A	1	HEAD, hydraulic — with 8.5 mm dia. plunger and sleeve-round
	HD 9013-6A	1	HEAD, hydraulic — with 9.0 mm dia. plunger and sleeve-round
	HD 9013-7A	1	HEAD, hydraulic — with 9.5 mm dia. plunger and sleeve-round
	HD 9013-8A	1	HEAD, hydraulic — with 10.0 mm dia. plunger and sleeve-round
76A	SV 907	4	SLEEVE, stud — hydraulic head — used with round head only
77	as per order	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — for type designation see stamping on head of screw
78	NT 1127	4	NUT, fastening — hydraulic head assembly
79	PN 1122	1	HAIRPIN — control rod
80	RD 9035-1A	1	ROD, control — left hand mounted pumps
80	RD 9035-2A	1	ROD, control — right hand mounted pumps
81	PN 1122	1	HAIRPIN, control rod — governor end
***	WT 9011A	1	WEIGHT AND SPIDER ASSEMBLY — includes parts 82 to 87 — See Note
82	PN 905A	2	PIN, weight
83	BG 903	4	BUSHING, weight
84	WA 1448-1	as required	WASHER, plain — weight pin — .036" thick
84	WA 1448-2	as required	WASHER, plain — weight pin — .038" thick

- continued -

***Not Shown Assembled



Illustration Number	Part Number	Quantity Used	Description of Part
84	WA 1448-3	as required	WASHER, plain — weight pin — .040" thick
84	WA 1448-4	as required	WASHER, plain — weight pin — .044" thick
84	WA 1448-5	as required	WASHER, plain — weight pin — .048" thick
85	PN 1104	2	PIN, roll
86	HP 9012	1	SPIDER, weight
87	WT 909A	2	WEIGHT — includes part 83 — for WT 9011A
88	GA 907	1	GASKET, governor housing
89	SV 901A	1	SLEEVE ASSEMBLY — includes part 89A
89A	BB 7910	1	BALL THRUST BEARING — sleeve assembly
90	LE 9025-1A	1	FULCRUM LEVER ASSEMBLY — 5% governor regulation — pivot pins assembled in lower holes
90	LE 9025-2A	1	FULCRUM LEVER ASSEMBLY — 10% governor regulation — pivot pins assembled in upper holes
92	SC 1136	1	SCREW, square head — cam
93	CA 793	1	CAM, torque
95	WA 6-8 BL	1	WASHER, lock — cam screw
96	NT 8-8 BL	1	NUT, cam screw
97	BA 902	1	PLATE, oil baffle
98	HG 901	1	HOUSING, governor
99	PN 901A	1	PIN, pivot — fulcrum lever
100	PL 904	1	PLATE, stop
101	WA 1143	2	WASHER, plain — fastening screw
102	WA 6-8 BL	2	WASHER, lock — fastening screw
103	SC 1404	2	SCREW, fastening — stop plate
104	CV 9032C	1	COVER, top — governor housing
104A	GA 908	1	GASKET, top cover
106	WA 6-8 BL	4	WASHER, lock — fastening screw
107	SC 1110	4	SCREW, fastening — top cover
108	NP 904	1	PLATE, name
109	SC 150-2	2	SCREW, fastening — name plate
110	per requirement	1	SPRING, governor — outer — for spring see specific pump type
111	per requirement	1	SPRING, governor — inner — for spring see specific pump type
112	SR 799/1	as required	SPACER, governor spring — inner — .020" thick
112	SR 799/2	as required	SPACER, governor spring — inner — .042" thick
112	SR 799/3	as required	SPACER, governor spring — inner — .058" thick
112	SR 799/4	as required	SPACER, governor spring — inner — .083" thick
112	SR 799/5	as required	SPACER, governor spring — inner — .177" thick
112	SR 799/6	as required	SPACER, governor spring — inner — .276" thick
113	SR 7914/1	as required	SPACER, governor spring — outer — .020" thick
113	SR 7914/2	as required	SPACER, governor spring — outer — .042" thick
113	SR 7914/3	as required	SPACER, governor spring — outer — .058" thick
113	SR 7914/4	as required	SPACER, governor spring — outer — .083" thick
113	SR 7914/5	as required	SPACER, governor spring — outer — .156" thick
114	GA 902	1	GASKET, end cap
115	CP 901C	1	CAP, end — governor housing
117	WA 6-8 BL	2	WASHER, lock — fastening screw
118	SC 1140	2	SCREW, fastening — end cap
119	SH 901A	1	SHAFT ASSEMBLY, operating
120	GA 7619S	1	GASKET, ring — shaft assembly
121	PL 902A	1	PLATE ASSEMBLY, spring
122	SP 9016	1	SPRING, operating lever
123	GA 901	1	GASKET, shaft bearing plate
124	HG 904	1	PLATE, shaft bearing
125	NT 6-8 BL	2	NUT, hex — stop screw
126	SC 350-16 BL	2	SCREW, stop — stop lever
128	WA 6-8 BL	2	WASHER, lock — stud
129	SD 902	2	STUD, fastening — shaft bearing plate — lower
130	GA 7616	2	GASKET, fastening screw — upper
133	SC 1356	2	SCREW, fastening — shaft bearing plate — upper
134	SC 901	1	SCREW, clamping — stop lever
135	BL 901	1	LEVER, stop — operating shaft
135A	SP 1066	1	RING, stop — shaft assembly
136	CV 7945	1	COVER, stop lever — upper
137	CV 7946	1	COVER, stop lever — lower
138	WA 22-6 BL	3	WASHER, lock — fastening screw
139	SC 1354	3	SCREW, fastening — stop lever covers
***	LE 79117A	1	LEVER ASSEMBLY, operating — includes illustrated parts 140, 142, 142A and 142B
140	SC 7961	1	SCREW, fastening — operating lever
142	LE 79116	1	LEVER, operating
142A	NT 8-8 BL	1	NUT, hex — fastening screw
142B	WA 6-8 BL	1	WASHER, lock — fastening screw

- continued -

***Not Shown Assembled

AMERICAN/BOSCH DIVISION


 AMERICAN
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SPRINGFIELD, MASS., U.S.A.

Illustration Number	Part Number	Quantity Used	Description of Part
144	WA 6-8 BL	2	WASHER, lock — fastening screw
145	SC 1351	2	SCREW, fastening — governor housing — long
147	WA 6-8 BL	3	WASHER, lock — fastening screw
148	SC 1140	3	SCREW, fastening — governor housing — short

NOTE: Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider.

The PSB- "D" execution is serviced the same as the PSB- "C" execution except the control unit (Illustration 24) and control rod (Illustration 80) have been redesigned as illustrated in the exploded view.

***Not Shown Assembled

AMERICAN BOSCH SALES DIVISION



SPRINGFIELD 7, MASS., U.S.A.

Supersedes Manual Pages D226/606 thru D226/609, Issued March, 1958 & D226/610 thru D226/629, Issued September, 1957

J. I. CASE COMPANY Tractor

- PSB 4A 75D 3594B1 & C1 - Models 400, 401, 402, 403, 409 and 420 Engines **3594B1 & C1**
- PSB 4A 75D 3594B2 & C2 - Models 400, 401, 402, 403, 409 and 420 Engines **3594B2 & C2**
- PSB 4A 75D 3594B3 & C3 - Model 409 Engine **3594B3 & C3**
- PSB 4A 75D 3594B4 & C4 - Model Super 400, S401, S402, S403, S405, S420 and S700 Engines **3594B4 & C4**
- PSB 4A 75D 3594B5 & C5 - Models 800, 801, 803, 805, 820, 709 and W9 Engines **3594B5 & C5**

Clockwise Rotation - R.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Governor - For Speeds Up To and Including 1900 RPM.

Pump Type	Governor Speed RPM	Inner Spring Illustration 111		Outer Spring Illustration 110		Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
		Part Number	Gap	Part Number	Gap		
3594B1 & C1	600 to 1450	SP 7950/19	.039"	SP 7951/15	.059"	Up 45°	7% to 10%
3594B2 & C2	600 to 1500	SP 7950/19	.039"	SP 7951/15	.059" Precompressed	Up 45°	7% to 10%
3594B3 & C3	600 to 1800	SP 7950/13	.098"	SP 7951/14	.039" Precompressed	Up 45°	7% to 10%
3594B4 & C4	600 to 1500	SP 7950/19	.039"	SP 7951/15	.059" Precompressed	Up 45°	9% to 11%
3594B5 & C5	600 to 1800	SP 7950/13	.039"	SP 7951/14	.039" Precompressed	Up 45°	7% to 10%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 904	1	HUB, drive
10	PO 902	1	POINTER, timing
11	HG 9021A	1	HOUSING, pump - includes parts 10, 11A and 11B
18	CV 9038C	1	COVER, timing window
21	SC 1140	2	SCREW, fastening - Timing window cover
24	CU 9016A	1	CONTROL UNIT ASSEMBLY - includes parts 24A and 24B See Note
***	SH 9010A	1	QUILL SHAFT ASSEMBLY - includes parts 25 through 30
26	BG 906	1	BUSHING, quill shaft
28	GE 902	1	GEAR, camshaft driven
40	SGB 15B2	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3595A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
76	HD 9613-3A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
98	HC 9029	1	HOUSING, governor
100	PL 9018	1	PLATE, stop
110	See Table	1	Spring, governor - outer
111	See Table	1	Spring, governor - inner
***	LE 79126A	1	LEVER ASSEMBLY, operating - includes illustrated parts 140, 142, 142A and 142B
142	LE 9033	1	LEVER, operating

Omit illustrated parts 18A to 18H, 32 and 37B and one each of 125 and 126.

ALL OTHER PARTS SAME AS PSB 4A 75D1.

Note: The 3595B pumps were supplied with control unit CU 9010A. If it is necessary to replace the control unit, use the latest type, CU 9016A.

Install stop lever (135) approximately 5° to 15° to the left instead of 15°.

CALIBRATION:

PSB 4A 75D 3594B1 & C1 - For governor setting of 600 RPM to 1450 RPM.

Average for all outlets:

Set at 1450 RPM for 32cc to 33cc per 500 strokes at full load position.

Idle setting to be made on engine.

PSB 4A 75D 3594B2 & C2 - For governor setting of 600 RPM to 1500 RPM.

PSB 4A 75D 3594B3 & C3 - For governor setting of 600 RPM to 1800 RPM.

Set at full load for 31.5cc to 32.5cc per 500 strokes at full load position.

Idle setting to be made on engine.

PSB 4A 75D 3594B1 & C1 - For governor setting of 600 RPM to 1500 RPM.

Set at 1500 RPM for 35cc to 36cc per 500 strokes at full load position.

Check at 800 RPM for 37cc minimum per 500 strokes with operating lever in full load position.

Idle setting to be made on engine.

PSB 4A 75D 3594B5 & C5 - For governor setting of 600 RPM to 1800 RPM.

Set at 1810 RPM for 31cc to 35cc per 500 strokes at full load position.

Note: Name plate is stamped 1800 RPM, but full load fuel setting is made at 1810 RPM.

Idle setting to be made on engine.

***Not Shown Assembled

AMERICAN BOSCH SALES DIVISION

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SPRINGFIELD, MASS, U.S.A.

3621B1

PSB 4A 80D 3621B1

Anti-Clockwise Rotation - R.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Governor - For Speeds Up To and Including 1900 RPM - Governor Regulation 9% to 10% - Cam Nose to Be Set Upward to Form an Angle of 45° with the Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9013	1	HUB, drive
10	PO 761	1	POINTER, timing
11	HC 9048A	1	HOUSING ASSEMBLY, pump - includes parts 10, 11A and 11B
18	CV 9019	1	COVER, timing
***	RD 9036A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B through 18H
18C	SP 9011	1	SPRING, shut-off rod
24	CU 9010A	1	CONTROL UNIT ASSEMBLY - includes parts 24A and 24B
***	SH 9010A	1	QUILL SHAFT ASSEMBLY - includes parts 25 through 30
26	BG 906	1	BUSHING, quill shaft assembly
28	GE 902	1	GEAR, camshaft driven
40	SGB 15B9	1	SUPPLY PUMP ASSEMBLY - for parts see Fuel Supply Pump Section
42	SC 1516	1	SCREW, fastening - supply pump assembly - short
42	SC 9021	1	SCREW, fastening - supply pump assembly - long
***	TP 903A	1	TAPPET ASSEMBLY - includes parts 51, 52 and 53
53	GU 9011A	1	GUIDE ASSEMBLY - tappet
54	HD 3622A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts **a, **b, 22, 45, 55 to 57A, 58 to 76A
**a	RG 902	1	RING, retaining - button
**b	HP 9015	1	BUTTON, plunger
55	HP 9015	1	LOCK, plunger - 2-piece
56	GU 909	1	SEAT, plunger spring - lower
67	FI 905	4	FITTING discharge - swager - 14 x 1.5 mm thread
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-4A	1	HEAD, hydraulic - with 8.0 mm diameter and sleeve
80	RD 9035-2A	1	ROD, control
110	SP 7951/15	1	SPRING, governor - outer - .059" precompressed
111	SP 7950/19	1	SPRING, governor - inner - .098" gap
119	SH 9033A	1	SHAFT ASSEMBLY, operating
**	WA 904	1	WASHER, split - operating shaft
**	BC 9025	1	BUSHING operating shaft
**	GA 1015	1	GASKET ring - operating shaft bushing
**	WA 908	1	WASHER, thrust - shaft bearing plate
**	WA 907	2	WASHER, wave - shaft bearing plate
**	WA 906	3	WASHER, friction - shaft bearing plate - internal tongue
**	WA 905	3	WASHER, friction - shaft bearing plate - external tongue
122	SP 902	1	SPRING, operating lever
124	BG 9024	1	PLATE, shaft bearing
126	SC 350-24BL	2	SCREW, stop - stop lever
129	SC 9028	2	SCREW, fastening - shaft bearing plate - lower
133	SC 9028	2	SCREW, fastening - shaft bearing plate - upper
142	LE 9040	1	LEVER, operating
**	BK 9011A	1	BRACKET ASSEMBLY - Bowden wire attached to top of governor - includes parts **c, **d and **e
**c	NT 4-8BL	2	NUT, hex - clamping screw
**d	WA 5-8BL	2	WASHER, lock - clamping screw
**e	SC 1761	2	SCREW, clamping - bracket assembly

Omit illustrated parts 32, 57B and 134 to 139.

ALL OTHER PARTS SAME AS PSB 4A 80D1.

CALIBRATION: For governor setting of 550 RPM to 1428 RPM.

Spring Spacing Adjustment - Inner - .098" gap.
Outer - .059" precompressed.

Average for all outlets:

Set at 1430 RPM for 22cc to 23cc per 500 strokes at full load position.

Set at 550 RPM for 7cc to 8cc per 500 strokes at idle position.

**Not illustrated

***Not Shown Assembled

AMERICAN BOSCH SALES DIVISION



SPRINGFIELD 7, MASS. U.S.A.

PSB 4A 75D 3755A1

3755A1

Clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 5% - Timed for Port Closing - Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM - Governor Regulation 9% to 13% - Cam Nose to Be Set Upward to Form an Angle of 45° with the Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
3	GE 9012A	1	DRIVE GEAR ASSEMBLY
10	PO 764	1	POINTER, timing
11	HG 9019A	1	HOUSING ASSEMBLY, pump - includes parts 10, 11A and 11B
18	CV 9014C	1	COVER, timing window
21	SC 1140	2	SCREW, fastening - timing window cover
24	CU 9011A	1	CONTROL UNIT ASSEMBLY - includes parts 24A and 24B
40	SGB 15B5	1	SUPPLY PUMP ASSEMBLY - for parts see Fuel Supply Pump Section
54	HD 3517A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-3A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve - round
77	VA 9012A	1	BLEED AND CHECK VALVE ASSEMBLY
100	PL 905	1	PLATE, stop
110	SP 7951/14	1	SPRING, governor - outer
111	SP 7950/19	1	SPRING, governor - inner
135	BL 902	1	LEVER, stop
***	LE 9070A	1	OPERATING LEVER ASSEMBLY - includes parts 140, 142 and 142B
142	LE 9071	1	LEVER, operating

Omit illustrated parts 18A to 18H, 32 and 57B and one of 126.

ALL OTHER PARTS SAME AS PSB 4A 75D1.

CALIBRATION: Governor setting 500 RPM to 1450 RPM.

Spring Spacing Adjustment - Inner - .118" gap.
Outer - .078" precompressed.

Average for all outlets:

Set at 1450 RPM for 27cc to 29cc for 500 strokes at full load position.
Set at 500 RPM for 11.5cc to 12.5cc per 500 strokes at idle position.

PSB 4A 80D 3756A1

3756A1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - For Speeds Up To and Including 1900 RPM - Equipped with Internal Spring Type Governor.

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Gap	Outer Spring Illustration IIO Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
3756A1	500 to 1400	SP 7950/24	.118"	SP 7951/14	.059" Pre-compressed	Upward 45°	9% to 13%

Illustration Number	Part Number	Quantity Used	Description of Part
3	GE 9012A	1	DRIVE HUB ASSEMBLY
10	PO 764	1	POINTER, timing
11	HG 9019A	1	HOUSING ASSEMBLY - includes parts 10, 11A and 11B
18	CV 9014C	1	COVER, timing window
21	SC 1140	2	SCREW, fastening - timing window cover
24	CU 9011A	1	CONTROL UNIT ASSEMBLY - includes parts 24A and 24B
40	SGB 15B5	1	SUPPLY PUMP ASSEMBLY - for parts see Fuel Supply Pump Section
54	HD 3345B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve - round
77	VA 9012A	1	BLEED AND CHECK VALVE ASSEMBLY
100	PL 905	1	PLATE, stop
135	BL 902	1	LEVER, stop
***	LE 7957A	1	OPERATING LEVER ASSEMBLY - includes parts 140, 142, 142A and 142B
142	LE 7958	1	LEVER, operating

Omit illustrated parts 18A to 18H, 32 and 57B and one of 125 and 126.

ALL OTHER PARTS SAME AS PSB 4A 80D1.

- continued -

***Not Shown Assembled

3756A1 - Cont'd -

CALIBRATION: Average for all outlets:

 Governor setting 500 RPM to 1400 RPM (PSB 4A 80D 3756A1).
 Set at 1400 RPM for 40cc to 42cc per 500 strokes at full load position.
 Set at 500 RPM for 11.5cc to 12.5cc per 500 strokes at idle position.
3757A1 PSB 4A 90D 3757A1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - For Speeds Up To and Including 1900 RPM - Equipped with Internal Spring Type Governor - Cam Nose to Be Set Upward to Form an Angle of 45° with the Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
3	GE 9012A	1	DRIVE HUB ASSEMBLY
10	PO 764	1	POINTER, timing
11	HG 9049A	1	HOUSING ASSEMBLY - includes parts 10, 11A and 11B
18	CV 9014C	1	COVER, timing window
21	SC 1140	2	SCREW, fastening - timing window cover
24	CU 9011A	1	CONTROL UNIT ASSEMBLY - includes parts 24A and 24B
40	SCB 15B5	1	SUPPLY PUMP ASSEMBLY - for parts see Fuel Supply Pump Section
54	HD 3791A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-6A	1	HEAD, hydraulic - with 9.0 mm diameter plunger and sleeve - round
77	VA 9012A	1	BLEED AND CHECK VALVE ASSEMBLY
100	PL 905	1	PLATE, stop
110	SP 7951/14	1	SPRING, governor - outer
111	SP 7951/24	1	SPRING, governor - inner
***	LE 795/A	1	OPERATING LEVER ASSEMBLY - includes parts 140, 142, 142A and 142B
142	LE 7958	1	LEVER, operating

Omit illustrated parts 18A to 18H, 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 90DI.

CALIBRATION: Governor setting 500 RPM to 1400 RPM.

 Spring Spacing Adjustment - Inner - .080" gap.
 Outer - Flush

Average for all outlets:

 Set at 1400 RPM for 52cc to 53cc per 500 strokes at full load position.
 Set at 500 RPM for 12cc to 13cc per 500 strokes at idle position.
3832A1 PSB 4A 80D 3832A1 - Minneapolis Moline Co. Model D283-4**3832A2 PSB 4A 80D 3832A2**

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM - Governor Regulation 8% to 10% - Cam Nose to Be Set Upward to Form an Angle of 45° with the Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
24	CU 9011A	1	CONTROL UNIT ASSEMBLY - includes parts 24A and 24B
40	SCB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3345B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
98	HG 9013	1	HOUSING, governor

- continued -

***Not Shown Assembled



- Cont'd - 3832A1 and A2

Illustration Number	Part Number	Quantity Used	Description of Part
100	PL 9022	1	PLATE, stop
110	SP 7951/15	1	SPRING, governor - outer
111	SP 7950/24	1	SPRING, governor - inner - for governor setting of 600 RPM to 1300 RPM
111	SP 7950/19	1	SPRING, governor - inner - for governor setting of 600 RPM to 1400 RPM
122	SP 9016	1	SPRING, operating lever
142	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A and 142B (Install 180° from normal position)
142	LE 79113	1	LEVER, operating

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 80D1.

CALIBRATION: For governor setting of 600 RPM to 1300 RPM (PSB 4A 80D 3832A1).

Spring Spacing Adjustment - Inner - .098" gap.
Outer - .039" precompressed.

Average for all outlets:

Set at 1300 RPM for 35.5cc to 36.5cc per 500 strokes at full load position.
Set at 600 RPM for 12.5cc to 14cc per 500 strokes at idle position.
For governor setting of 600 RPM to 1400 RPM (PSB 4A 80D 3832A2).

Spring Spacing Adjustment - Inner - .098" gap.
Outer - .059" precompressed.

Set at 1400 RPM for 35.5cc to 36.5cc per 500 strokes at full load position.
Set at 600 RPM for 12.5cc to 14cc per 500 strokes at idle position.

PSB 4A 75D 3833A1 - Minneapolis Moline Co. Model D206-4

3833A1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM - Governor Regulation 8% to 10% - Cam Nose to Be Set Upward to Form an Angle of 45° with the Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 906A	1	DRIVE HUB ASSEMBLY
10	PO 764	1	POINTER, timing - Protrudes .365" to .367" from Mounting Flange
11	HC 9043A	1	HOUSING ASSEMBLY, pump - includes parts 10, 11A and 11B
24	CU 9011A	1	CONTROL UNIT ASSEMBLY - includes parts 24A and 24B
40	SGB 15D	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 351	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 906A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-3A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
100	PL 905	1	PLATE, stop
110	SP 7951/15	1	SPRING, governor - outer
111	SP 7950/19	1	SPRING, governor - inner
142	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140, 142, 142A and 142B (Install 180° from normal position)
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter - hydraulic head

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 75D1.

CALIBRATION: For governor setting of 600 RPM to 1450 RPM.

Spring Spacing Adjustment - Inner - .098" gap.
Outer - .079" precompressed.

Average for all outlets:

Set at 1450 RPM for 28cc to 29cc per 500 strokes at full load position.
Set at 600 RPM for 9cc to 10cc per 500 strokes at idle position.

**Not Illustrated

AMERICAN BOSCH SALES DIVISION


 AMERICAN
BOSCH
ARMA
CORPORATION

SPRINGFIELD 7, M. U.

3854A1	PSB 4A 80D 3854A1
3854A2	PSB 4A 80D 3854A2
3854A3	PSB 4A 80D 3854A3
3854A4	PSB 4A 80D 3854A4 — Continental Motors Corp. Model HD 260
3854A5	PSB 4A 80D 3854A5
3854A6	PSB 4A 80D 3854A6
3854A7	PSB 4A 80D 3854A7

Clockwise Rotation — L.H. Mounting — Fulcrum Lever Set for 5% — Timed for Port Closing — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1900 RPM.

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Gap	Outer Spring Illustration IIC Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
3854A1	600 to 1200	—	—	SP 7951/11	.197" precompressed	Down 45°	2% to 3%
3854A2	600 to 1400	SP 7950/19	.098" to .118"	SP 7951/15	.138" precompressed	Down 45°	6% to 8%
3854A3	600 to 1800	SP 7950/13	.098" to .118"	SP 7951/11	.019" precompressed	Down 45°	6% to 8%
3854A4	600 to 1600	SP 7950/18	.138"	SP 7951/14	.098" precompressed	Down 45°	6% to 8%
3854A5	600 to 1800	SP 7950/18	.118" precompressed	None	—	All the way down	2% to 3%
3854A6	600 to 1500	SP 7950/24	.157" precompressed	None	—	Down 45°	3%
3854A7	600 to 1200	SP 7950/38	.138"	SP 7951/14	.019" precompressed	Down 45°	6% to 8%

Illustration Number	Part Number	Quantity Used	Description of Part
40	SCB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3345B	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — used with assembly but not furnished with pump
110	See table		
111	See table		
**	LE 79112A	1	LEVER ASSEMBLY, operating — includes parts 140, 142, 142A and 142B (Install 180° from normal position)
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed — flange end

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 80D1.

CALIBRATION: PSB 4A 80D 3854A1.

For governor setting of 600 RPM to 1200 RPM.

Average for all outlets:

Set at 1200 RPM for 34cc to 35cc per 500 strokes at full load position.
Set idle screw in mid-position.

PSB 4A 80D 3854A2.

For governor setting of 600 RPM to 1400 RPM.

Average for all outlets:

Set at 1400 RPM for 33cc to 34cc per 500 strokes at full load position.
Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position.

PSB 4A 80D 3854A3.

For governor setting of 600 RPM to 1800 RPM.

Average for all outlets:

Set at 1800 RPM for 34cc to 35cc per 500 strokes at full load position.
Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position.

**Not Illustrated

— continued —

***Not Shown Assembled

AMERICAN BOSCH SALES DIVISION



SPRINGFIELD 7 MASS U.S.A.

- Cont'd - 3854A1 to 3854A7

PSB 4A 80D 3854A1.

For governor setting of 600 RPM to 1600 RPM.

Average for all outlets:

Set at 1600 RPM for 33cc to 34cc per 500 strokes at full load position.

Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position.

PSB 4A 80D 3854A5.

For governor setting of 600 RPM to 1800 RPM.

Average for all outlets:

Set at 1800 RPM for 34cc to 35cc per 500 strokes at full load position.

Set idle screw in mid-position.

PSB 4A 80D 3854A6.

For governor setting of 600 RPM to 1500 RPM.

Average for all outlets:

Set at 1600 RPM for 33cc to 34cc per 500 strokes at full load position.

Set idle screw in mid-position.

PSB 4A 80D 3854A7.

For governor setting of 600 RPM to 1200 RPM.

Set at 1200 RPM for 33cc to 34cc per 500 strokes at full load position.

Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position.

PSB 4A 70D 3857A1

PSB 4A 70D 3857A2

PSB 4A 70D 3857A3

PSB 4A 70D 3857A4 — Continental Motors 3 3/8" x 4 3/8" Model GD 157

PSB 4A 70D 3857A5

PSB 4A 70D 3857A6

PSB 4A 70D 3857A7

PSB 4A 70D 3857A8

3857A1

3857A2

3857A3

3857A4

3857A5

3857A6

3857A7

3857A8

Clockwise Rotation — L.H. Mounting — Fulcrum Lever Set for 5% — Timed for Port Closing — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1900 RPM.

Pump Type	Governor Speed RPM	Inner Spring Illustration 111		Outer Spring Illustration 110		Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
		Part Number	Gap	Part Number	Gap		
3857A1	600 to 1800	SP 7950/13	.098"	SP 7951/14	.078"	All the way down	6% to 8%
3857A2	600 to 1600	SP 7950/18	.137"	SP 7951/14	precompressed .059"	All the way down	6% to 8%
3857A3	600 to 1400	SP 7950/24	.118"	SP 7951/14	precompressed .039"	All the way down	6% to 8%
3857A4	600 to 1800	SP 7950/19	.079" precompressed	SP 7951/14	.118" precompressed	All the way down	2% to 3%
3857A5	600 to 1200	SP 7950/28	.137"	SP 7951/14	precompressed .039"	All the way down	8% to 10%
3857A6	600 to 1400	SP 7950/24	.079" precompressed	None	None	All the way down	2% to 4%
3857A7	600 to 1200	SP 7950/25	Flush	SP 7951/11	.197" precompressed	All the way down	2% to 3%
3857A8	600 to 1500	SP 7950/24	.177" to .196" precompressed	None	—	All the way down	3%
3857A9	600 to 1700	SP 7950/18	.079" precompressed	None	—	All the way down	3%

- continued -

3857A1 to 3857A8 - Conf'd -

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3343B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly but not furnished with pump
119	See table		
111	See table		
***	LE 79112A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed - flange end

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 70D1.

CALIBRATION: 3857A1 Full Load Speed 1500 RPM.
 3857A2 Full Load Speed 1600 RPM.
 3857A3 Full Load Speed 1700 RPM.
 3857A4 Full Load Speed 1800 RPM.
 3857A5 Full Load Speed 1200 RPM.
 3857A6 Full Load Speed 1400 RPM.

Set for full load speed and fuel delivery of 19cc to 20cc per 500 strokes at full load position.

Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position.

3857A7 Full Load Speed 1200 RPM.

3857A8 Full Load Speed 1500 RPM.

3857A9 Full Load Speed 1700 RPM.

Set at Full Load for 19cc to 20cc per 500 strokes at full load position.

Set at 600 RPM for 11cc to 12cc per 500 strokes at idle position.

3873A1 PSB 4A 70D 3873A1 - Continental Motors 3 3/8" x 4 3/8" Model GD 157

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10% - Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM - Governor Regulation 8% to 10% - Carb Nose to Be Set Upward to Form an Angle of 45° with Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3343B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly but not furnished with pump
100	PL 9013	1	PLATE, stop
110	SP 7951/15	1	SPRING, governor - outer
111	SP 7950/14	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B
141	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed - flange end

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 70D1.

CALIBRATION: For governor setting of 600 RPM to 1800 RPM.

Spring Spacing Adjustment - Inner - .118" gap
 Outer - .157" precompressed.

Average for all outlets:

Set at 1800 RPM for 19cc to 20cc per 500 strokes at full load position.

Set at 600 RPM for 7cc to 8cc per 500 strokes at idle position.

**Not Illustrated

***Not Shown Assembled.

AMERICAN BOSCH SALTSDIMENSION



PSB 4A 70D 3874A1 — Continental Motors Corp. Model GD 157

3874A1

Clockwise Rotation — L.H. Mounting — Timed for Port Closing — Fulcrum Lever Set for 5% — Equipped with Internal Spring Type Governor — For Speeds in excess of 1900 RPM — Governor Regulation 3% to 7% — Cam Nose to Be Set All the Way Down

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 35 and 39A
51	HD 3239B	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, and 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-2A	1	HEAD, hydraulic — with 7.5 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — used with assembly but not furnished with pump
110	SP 7951/12	1	SPRING, governor — outer
111	SP 7950/21	1	SPRING, governor — inner
***	LE 79112A	1	LEVER ASSEMBLY — operating — includes parts 140 to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 901	1	FITTING, bleed — flange end

Omit illustrated part 32

ALL OTHER PARTS SAME AS PSB 4A 70DL

CALIBRATION: For governor setting of 600 RPM to 2000 RPM.

Spring Spacing Adjustment — Inner — .137" gap.
Outer — .059" precompressed.

Average for all outlets:

Set at 2000 RPM for 19cc to 20cc per 500 strokes at full load position.
Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position.

PSB 4A 100D 3883A1 — Continental Motors Corp. Model JD 382

3883A1

Clockwise Rotation — L.H. Mounting — Fulcrum Lever Set for 10% — Timed for Port Closing — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1900 RPM — Governor Regulation 11% to 13% — Cam Nose to Be Set Upward to Form an Angle of 70° with the Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
***	TP 903A	1	TAPPET ASSEMBLY — includes parts 51, 52 and 53
55	GU 9011A	1	GUIDE ASSEMBLY, tappet
54	HD 3884A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A, **a and **b
**a	RG 902	1	RING, retaining — button
**b	BO 901	1	BUTTON, plunger — 2 piece
55	HP 9015	1	LOCK, plunger — 2 piece
56	GU 909	1	SEAT, plunger spring — lower
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-SA	1	HEAD, hydraulic — with 10.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — used with assembly but not furnished with pump
100	PL 905	1	PLATE, stop
110	SP 7951/14	1	SPRING, governor — outer
111	SP 7950/24	1	SPRING, governor — inner
***	LE 79112A	1	LEVER ASSEMBLY — operating — includes parts 140 to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	VA 9012A	1	CHECK VALVE ASSEMBLY

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 100DL

CALIBRATION: For governor setting of 600 RPM to 1350 RPM.

Spring Spacing Adjustment — Inner — .098" gap.
Outer — .098" precompressed.

**Not Illustrated

— continued —

***Not Shown Assembled

3883A1 - Cont'd -

Average for all outlets:

Set at 1370 RPM for 46cc to 47cc per 500 strokes at full load position.

Set at 600 RPM for 14cc to 15cc per 500 strokes at idle position.

NOTE: Name plate is stamped 1350 but full load fuel setting is made at 1370 RPM. Cam nose must be steady on plate at 1350 RPM. Cam nose must leave plate at 1370 RPM.

3891A1 PSB 4A 80D 3891A1 — Continental Motors Model GD 157Clockwise Rotation — L.H. Mounting — Timed for Port Closing — Fulcrum Lever Set for 5% — Equipped with Internal Spring Type Governor — For Speeds in excess of 1900 RPM — Governor Regulation 9% to 10% — Cam Nose to Be Set Horizontal — at Low Idle, Cam Nose to Be Approximately $\frac{1}{16}$ " Away from Stop Plate.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3892A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A
76	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — used with assembly but not furnished with pump
110	SP 7951/11	1	SPRING, governor — outer
111	SP 7950/7	1	SPRING, governor — inner
***	LE 7912A	1	LEVER ASSEMBLY, operating — includes parts 140, 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	VA 9012A	1	CHECK VALVE ASSEMBLY

Omit illustrated part 32.

ALL OTHER PARTS SAME AS PSB 4A 70D1.

CALIBRATION: For governor setting of 800 RPM to 2100 RPM.

Spring Spacing Adjustment — Inner — .196" gap.
Outer — .078" precompressed.

Average for all outlets:

Set at 2100 RPM for 19.5cc to 20.5cc per 500 strokes at full load position.

Set at 800 RPM for 19cc to 20cc per 500 strokes at idle position.

3894A1 PSB 4A 70D 3894A1 — Buda Company Model 4 BD 153

Clockwise Rotation — L.H. Mounting — Fulcrum Lever Set for 5% — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1900 RPM — Governor Regulation 3% to 5% — Cam Nose to Be Set All the Way Down.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3343B	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-2A	1	HEAD, hydraulic — with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
***	WT 9012A	1	WEIGHT AND SPIDER ASSEMBLY — complete — includes parts 82 to 87 — Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider
87	WT 905A	2	WEIGHT — includes part 83
98	HC 9013	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY, stop plate — includes parts **a to **d
**a	PL 79110A	1	STOP PLATE ASSEMBLY
**b	BK 7917 7938C	1	BRIDGE, stop plate
**c	NT 8-8CA	2	NUT, jam
**d	WA 1067	2	WASHER, jam nut
103	SC 1140	3	SCREW, fastening — stop plate

**Not Illustrated.

— continued —

***Not Shown Assembled



- Cont'd - 3894A1

Illustration Number	Part Number	Quantity Used	Description of Part
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/7	1	SPRING, governor - inner
122	SP 902	1	SPRING, operating lever

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 70DI.

CALIBRATION: For governor setting of 500 RPM to 1800 RPM.

Spring Spacing Adjustment - Inner - .079" gap.
Outer - .059" precompressed.

Set at 1800 RPM for 22cc to 23cc per 500 strokes at full load position.
Set at 500 RPM for 5cc to 6cc per 500 strokes at idle position.

PSB 4A 70D 4041A1 — Continental Motors Corp. Model 3D 157

4041A1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM - Governor Regulation 5% to 7% - Cam Nose to Be Set Down to Form an Angle of 45° with Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B5	1	SUPPLY PUMP ASSEMBLY - for parts see Fuel Supply Pump Section
54	HD 3343B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
100	PL 9016	1	PLATE, stop
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/20	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY - operating - includes parts 140 to 142, 142A and 142B
142	LE 79115	1	LEVER, operating
**	FI 1148	1	FITTING, adapter - flange end

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 70DI.

CALIBRATION: For governor setting of 600 RPM to 1800 RPM.

Spring Spacing Adjustment - Inner - .098" gap.
Outer - .059" precompressed.

Average for all cutlers:
Set at 1800 RPM for 19cc to 20cc per 500 strokes at full load position.
Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position.

PSB 4A 80D 4057A1 — Continental Motors Corp. Model HD 206

4057A1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5% - Equipped with Internal Spring Type Governor - For Speeds in excess of 1900 RPM - Governor Regulation 5% to 7% - Cam Nose to Be Set Down to Form an Angle of 45° with Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
51	HD 3289B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57B and 58 to 76A

**Not Illustrated

- continued -

***Not Shown Assembled

AMERICAN
BOSCH
ARMA
CORPORATION

4057A1 - Cont'd -

Illustration Number	Part Number	Quantity Used	Description of Part
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — used with assembly but not furnished with pump
110	SP 7951/12	1	SPRING, governor — outer
111	SP 7950/21	1	SPRING, governor — inner
***	LE 79112A	1	LEVER ASSEMBLY — operating — includes parts 140 to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed — flange end

Omit illustrated part 32.

ALL OTHER PARTS SAME AS PSB 4A 80D1.

CALIBRATION: For governor setting of 600 RPM to 2000 RPM.

Spring Spacing Adjustment — Inner — .137" gap.
Outer — .059" precompressed.

Average for all outlets:

Set at 2000 RPM for 34cc to 35cc per 500 strokes at full load position.

Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position.

4102A1	PSB 4A 70D 4102A1
4102A2	PSB 4A 70D 4102A2 — Continental Motors Corp. Model GD 157
4102A3	PSB 4A 70D 4102A3
4102A4	PSB 4A 70D 4102A4

Clockwise Rotation — L.H. Mounting — Timed for Port Closing — Fulcrum Lever Set for 5% — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1900 RPM.

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Inner Spring Gap	Outer Spring Illustration 110 Part Number	Outer Spring Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4102A1	600 to 1800	SP 7950/13	.098"	SP 7951/14	.079" precompressed	All the way down	6% to 8%
4102A2	600 to 1600	SP 7950/18	.138"	SP 7951/14	.059" precompressed	All the way down	7% to 9%
4102A3	600 to 1200	SP 7950/26	.079" precompressed	None	—	All the way down	3% to 5%
4102A4	600 to 1400	SP 7950/24	.118"	SP 7951/14	.039" precompressed	All the way down	5% to 7%

Illustration Number	Part Number	Quantity Used	Description of Part
8	SH 9062	1	CAMSHAFT
40	SCB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3343B	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-2A	1	HEAD, hydraulic — with 7.0 mm diameter plunger and sleeve
110	See table	1	SPRING, governor — outer
111	See table	1	SPRING, governor — inner
115	CP 902A	1	CAP. end — governor housing
**	CO 904A	1	TACHOMETER DRIVE ASSEMBLY
***	LE 79112A	1	LEVER ASSEMBLY, operating — includes parts 140, 142, 142A and 142B (install 180° from the normal position)
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed — flange end

Omit illustrated parts 8A, 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 70D1.

TIMING: With pump set at port closing of number one cylinder scribe a landmark (and letters "PC") on housing at timing window in line with marked plunger gear tooth.

**Not Illustrated

— continued —

***Not Shown Assembled



- Cont'd - 4102A1 to 4102A4

CALIBRATION: PSB 4A 70D 4102A1 - for governor setting 600 RPM to 1800 RPM.
 PSB 4A 70D 4102A2 - for governor setting 600 RPM to 1600 RPM.
 PSB 4A 70D 4102A4 - for governor setting 600 RPM to 1400 RPM.

Average for all outlets:
 Set at full load speed for 19cc to 20cc per 500 strokes at full load position.
 Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position.

PSB 4A 70D 4102A3 - for governor setting 600 RPM to 1200 RPM.

Average for all outlets:
 Set at 1200 RPM for 19cc to 20cc per 500 strokes at full load position.
 Set at 600 RPM for 11cc to 12cc per 500 strokes at idle position.

PSB 4A 70D 4103A1 - Continental Motors Corp. Model GD 157
 PSB 4A 70D 4103A2

4103A1
 4103A2

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 10% - Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM.

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4103A1	600 to 1500	SP 7950/13	.118"	SP 7951/15	.137"	Up 45°	10% to 12%
4103A2	600 to 1350	SP 7950/19	.098"	SP 7951/15	precompressed .137" precompressed	Down 60°	13%

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3343B	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly but not furnished with pump
100	PL 905	1	PLATE, stop
110	See table	1	SPRING, governor - outer
111	See table	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B (install 180° from the normal position)
142	LE 79113	1	LEVER, operating
**	F1 904	1	FITTING, bleed - flange end

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 70D1.

TIMING: With pump set at port closing of number one cylinder scribe a linemark (and letters "PC") on housing at timing window.

CALIBRATION: PSB 4A 70D 4103A1.

For governor setting of 600 RPM to 1500 RPM.

Average for all outlets:
 Set at 1500 RPM for 19cc to 20cc per 500 strokes at full load position.
 Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position.

PSB 4A 70D 4103A2.

For governor setting of 600 RPM to 1350 RPM.

Average for all outlets:
 Set at 1350 RPM for 19cc to 20cc per 500 strokes at full load position.
 Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position.

**Not Illustrated

***Not Shown Assembled


4112A1 PSB 4A 70D 4112A1 — Buda Company Model 48D 153

Clockwise Rotation—L.H. Mounting—Fulcrum Lever Set for 5%—Timed for Port Closing—Equipped with Internal Spring Type Governor—For Speeds Up To and Including 1900 RPM—Governor Regulation 3% to 5%—Cam Nose to Be Set all the Way Down.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3343B	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-2A	1	HEAD, hydraulic — with 7.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
98	HG 9013	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY, stop plate — includes parts **a to **c
**a	PL 79110A	1	STOP PLATE ASSEMBLY
**b	BK 7938C	1	BRIDGE, stop plate
**c	NT 8-8CA	2	NUT, jam
103	SC 1140	1	SCREW, fastening — stop plate
110	None	1	SPRING, governor — outer
111	SP 7950/25	1	SPRING, governor — inner

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 70D1.

CALIBRATION: For governor setting of 600 RPM to 1200 RPM.

Spring Spacing Adjustment — Inner — .087" precompressed.

Average for all outlets:

Set at 1200 RPM for 22cc to 23cc per 500 strokes at full load position.

Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position.

4165A1 PSB 4A 70D 4165A1 — Continental Motors Corporation Model GD 157

Clockwise Rotation — L.H. Mounting — Timed for Port Closing — Fulcrum Lever Set for 5% — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1900 RPM.

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4165A1	600 to 1000	None		SP 7951/12	.177" precompressed	All the way down	2% to 4%

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3343B	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-2A	1	HEAD, hydraulic — with 7.0 mm diameter plunger and sleeve
***	WT 9012A	1	WEIGHT AND SPIDER ASSEMBLY — complete — includes parts 82 to 87 — Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider
87	WT 905A	2	WEIGHT — includes part 83
110	See table	1	SPRING, governor — outer
111	See table	1	SPRING, governor — inner
***	LE 79112A	1	LEVER ASSEMBLY, operating — includes parts 140, 142, 142A and 142B (install 180° from the normal position)
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, biced — flange end

**Not Illustrated

- continued -

***Not Shown Assembled

AMERICAN BOSCH SALES DIVISION



MINNEAPOLIS-MOLINE

- Cont'd 4165A1

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 70D1.

TIMING: With pump set at port closing of number one cylinder scribe a linemark (and letters "PC") on housing at timing window in line with marked plunger gear tooth.

CALIBRATION: For governor setting of 600 RPM to 1000 RPM.
Set at 1000 RPM for 19cc to 20cc per 500 strokes at full load position.
Set at 600 RPM for 11cc to 12cc per 500 strokes at idle position.

PSB 4A 80D 4194A1 — Continental Motors Corporation Model HD 260

4194A1

Clockwise Rotation — L.H. Mounting — Timed for Port Closing — Fulcrum Lever Set for 5% — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1900 RPM — Governor Regulation 5% to 7% — Cam Nose to Be Set Down to Form an Angle of 45° with Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B5	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 3345B	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm diameter plunger and sleeve
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
100	PL 9016	1	PLATE, stop
110	SP 7951/11	1	SPRING, governor — outer
111	SP 7950/13	1	SPRING, governor — inner
***	LE 79112A	1	LEVER ASSEMBLY — operating — includes parts 140 to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter — flange end

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 80D1.

CALIBRATION: For governor setting of 600 RPM to 1800 RPM.

Spring Spacing Adjustment — inner — .098" to .118" gap.
Outer — .020" precompressed.

Average for all outlets:

Set at 1800 RPM for 33cc to 34cc per 500 strokes at full load position.
Set at 600 RPM for 15cc to 16cc per 500 strokes at idle position.

PSB 4A 90D 4271A1 — Minneapolis-Moline Model D 336-4

4271A1

Clockwise Rotation — L.H. Mounting — Timed for Port Closing — Fulcrum Lever Set for 5% — Equipped with Internal Spring Type Governor — Governor Regulation 8% to 10% — Cam Nose to Be Set Upward to Form an Angle of 45° with the Fulcrum Lever — For Speeds Up To and Including 1900 RPM.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
51	HD 4567A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-6A	1	HEAD, hydraulic — with 9.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
90	LE 9074-1A	1	FULCRUM LEVER ASSEMBLY, with spring loaded control rod. For parts see manual page D3001/602A

**Not Illustrated

- continued -

***Not Shown Assembled

4271A1 - Cont'd -

Illustration Number	Part Number	Quantity Used	Description of Part
100	PL 905	1	PLATE, stop
110	SP 7951/15	1	SPRING, governor - outer
111	SP 7950/19	1	SPRING, governor - inner
***	LE 79112A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 112B
142	LE 79113	1	LEVER, operating

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 90D1.

NOTE: Nameplate is stamped 1400 RPM but full load setting is made at 1430 RPM.

CALIBRATION: For governor setting of 600 RPM to 1400 RPM.

Spring Spacing Adjustment - Inner - .098" gap.
Outer - .059" precompressed.

Average for all outlets:

Set at 1430 RPM for 41cc to 42cc per 500 strokes at full load position.

Set at 600 RPM for 7cc to 8cc per 500 strokes at idle position.

4349A1 PSB 4A 75D 4349A1 - Allis Chalmers Model 4 BD 182**4349A2 PSB 4A 75D 4349A2**

Clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 5% - Timed for Port Closing - Equipped with Internal Spring Type Governor - For Speeds Up To and Including 1900 RPM.

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Gap	Outer Spring Illustration IIO Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4349A1	600 to 1650	SP 7950/19	.098" to .118"	SP 7951/14	.059" to .079"	All the way down	6% to 8%
4349A2	600 to 1500	SP 7950/19	.078"	SP 7951/15	.059" precompressed	All the way down	6% to 8%

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3517A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-3A	1	HEAD, hydraulic - with 7.5 mm diameter plunger and sleeve
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
98	HG 9013	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY, stop plate - includes parts **a to **d
**a	PL 79110A	1	STOP PLATE ASSEMBLY
**b	BK 7917	1	BRIDGE, stop plate
**c	NT 8-8CA	2	NUT, jam
**d	WA 1067	2	WASHER, jam nut
103	SC 1140	2	SCREW, fastening - stop plate
119	See table	1	SPRING, governor - outer
111	See table	1	SPRING, governor - inner

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 75D1.

CALIBRATION: PSB 4A 75D 4349A1.

For governor setting of 600 RPM to 1650 RPM PSB 4A 75D 4349A2.

For governor setting of 600 RPM to 1500 RPM.

Average for all outlets:

Set at full load speed for 25cc to 26cc per 500 strokes at full load position.

Set at 600 RPM for 6cc to 7cc per 500 strokes at idle position.

**Not Illustrated

***Not Shown Assembled



PSB 4A 75D 4370A1 — Allis Chalmers Model 4 BD 153

4370A1

Clockwise Rotation — L.H. Mounting — Fulcrum Lever Set for 5% — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1900 RPM — Governor Regulation 3% to 5% — Cam Nose to Be Set all the Way Down.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SCB 15B11	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 3517A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-3A	1	HEAD, hydraulic — with 7.5 mm diameter plunger and sleeve
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
98	HG 9013	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY stop plate — includes parts **a to **d
**a	PL 79110A	1	STOP PLATE ASSEMBLY
**b	BK 7917	1	BRIDGE, stop plate
**c	NT 8-802A	2	NUT, jam
**d	WA 1007	2	WASHER, jam nut
110	None	1	SPRING, governor — outer
111	SP 7950/24	1	SPRING, governor — inner

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 75D1.

Note to illustration 135 — The stop lever is to be set downward in mid-position plus or minus 5°.

CALIBRATION: For governor setting of 600 RPM to 1200 RPM.

Spring Spacing Adjustment — Inner — .059" gap.

Average for all outlets:

Set at 1200 RPM for 22cc to 23cc per 500 strokes at full load position.

Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position.

PSB 4A 80D 4374A1 — Continental Motors Corporation 3 7/8" x 5 1/2" Model HD 260

4374A1

Clockwise Rotation — L.H. Mounting — Timed for Port Closing — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1500 RPM — Governor Regulation 3% to 5% — Cam Nose to Be Set in Horizontal Position — Adjustable Fulcrum Lever Assembly.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SCB 15B5	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 3315B	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm diameter plunger and sleeve
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY — for 3415B Pump — for parts see Safety Valve Section
***	WT 9012A	1	WEIGHT AND SPIDER ASSEMBLY — complete — includes parts 82 to 87 — Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider
87	WT 905A	2	WEIGHT — includes part 83
89	SV 909A	1	SLEEVE ASSEMBLY
90	LE 9034A	1	FULCRUM LEVER ASSEMBLY — includes **a and **b (pivot pins set at bottom of holes)
**a	SC 9019	1	SCREW, adjusting
**b	PN 1116	1	PIN, locking
**	SR 904	1	SPACER — between cam and flat extension of lever
97	BA 902	1	BAFFLE, oil
98	HG 9030	1	HOUSING, governor
**	SC 1774	1	PLUG, closing — governor housing
**	GA 7980	1	GASKET, closing plug
110	SP 7951/16	1	SPRING, governor — outer
111	SP 7950/25	1	SPRING, governor — inner
***	LE 79112A	1	LEVER ASSEMBLY — operating — includes parts 140 to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter — flange end

**Not Illustrated

continued

***Not Shown Assembled

4374A1 - Cont'd -

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 80D1.

CALIBRATION: For governor setting of 1000 RPM to 1200 RPM.

Spring Spacing Adjustment — Inner — .275" to .295" gap.
 Outer — .295" to .315" precompressed.

NOTE: Use SR 7914-5 (.157" thick) as outer spacer.

Average for all outlets:

Set at 1200 RPM for 20cc to 21cc per 500 strokes at full load position.

Fuel delivery must stop between 1250 to 1275 RPM.

Set at 1000 RPM for 20cc to 21cc per 500 strokes at idle position.

Do not move stop plate.

Reduce speed to 950 RPM and cam nose on fulcrum lever must move toward stop plate.

Fuel delivery must stop between 1050 RPM to 1100 RPM with operating lever in idle position.

4380A1 PSB 4A 80D 4380A1 — Continental Motors Corporation Model HD 260

Clockwise Rotation — L.H. Mounting — Fulcrum Lever Set for 5% — Timed for Port Closing — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1900 RPM.

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Gap	Outer Spring Illustration III Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4380A1	600 to 1500	SP 7950/24	.158" precompressed	None		All the way down	3% to 5%

Illustration Number	Part Number	Quantity Used	Description of Part
8	SH 9062	1	CAMSHAFT
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 33-15B	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 56A, 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
110	See table		
111	See table		
115	CP 902A	1	CAP, end — governor housing
**	CO 904A	1	TACHOMETER DRIVE COUPLING ASSEMBLY
***	LE 79112A	1	LEVER ASSEMBLY, operating — includes parts 140, 142, 142A and 142B (Install 180° from normal position)
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, bleed — flange end

Omit illustrated parts 8A, 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 80D1.

CALIBRATION: Governor setting 600 RPM to 1500 RPM.

Average for all outlets:

Set at 1500 RPM for 33cc to 34cc per 500 strokes at full load position.

Set idle screw in the mid-position.

AMERICAN BOSCH SALES DIVISION



SPRINGFIELD, MASS.

PSB 4A 80D 4385A1 — International Harvester Model TD6 and TD6A

4385A1

Clockwise Rotation — L.H. Mounting — Fulcrum Lever Set for 5% — Timed for Port Closing — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1900 RPM — Governor Regulation 9% to 13% — Cam Nose to Be Set Upward to Form an Angle of 45° with the Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
3	GE 9012A	1	DRIVE GEAR ASSEMBLY
10	PO 764	1	POINTER, timing
11	HG 9049A	1	HOUSING ASSEMBLY, pump — includes parts 10, 11A and 11B
18	CV 9014C	1	COVER, timing window
21	SC 1140	2	SCREW, fastening — timing window cover
40	SGB 15B5	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 3345B	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm diameter plunger and sleeve — round
77	VA 9012A	1	BLEED AND CHECK VALVE ASSEMBLY
100	PL 905	1	PLATE, stop
110	SP 7951/14	1	SPRING, governor — outer
111	SP 7950/19	1	SPRING, governor — inner
135	BL 902	1	LEVER, stop
•••	LE 9070A	1	OPERATING LEVER ASSEMBLY — includes parts 140, 142, 142A and 142B
142	LE 9071	1	LEVER, operating

Omit illustrated parts 18A to 18H, 32, 57B and 1 of 126.

ALL OTHER PARTS SAME AS PSB 4A 80D1.

CALIBRATION: Governor setting 500 RPM to 1450 RPM.

Spring Spacing Adjustment — Inner — .118" gap.
Outer — .079" precompressed.

Average for all outlets:
Set at 1450 RPM for 29cc to 30cc for 500 strokes at full load position.

PSB 4A 90D 4386A1 — International Harvester Models TD9, TD9A, UD264 Super MD, Super WD

4386A1

Clockwise Rotation — L.H. Mounting — Fulcrum Lever Set for 5% — Timed for Port Closing — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1900 RPM — Governor Regulation 9% to 13% — Cam Nose to Be Set Upward to Form an Angle of 45° with the Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
3	GE 9012A	1	DRIVE GEAR ASSEMBLY
10	PO 764	1	POINTER, timing
11	HG 9049A	1	HOUSING ASSEMBLY, pump — includes parts 10, 11A and 11B
18	CV 9014C	1	COVER, timing window
21	SC 1140	2	SCREW, fastening — timing window cover
40	SGB 15B5	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 3791A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 56A, 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-6A	1	HEAD, hydraulic — with 9.0 mm diameter plunger and sleeve — round
77	VA 9012A	1	BLEED AND CHECK VALVE ASSEMBLY
100	PL 905	1	PLATE, stop
110	SP 7951/14	1	SPRING, governor — outer
111	SP 7950/19	1	SPRING, governor — inner
135	BL 902	1	LEVER, stop
•••	LE 9070A	1	OPERATING LEVER ASSEMBLY — includes parts 140, 142, 142A and 142B
142	LE 9071	1	LEVER, operating

- continued -

***Not Shown Assembled

**4386A1 - Cont'd -**

Omit illustrated parts 18A to 18H, 32, 57B and 1 of 116.

ALL OTHER PARTS SAME AS PSB 4A 90DI.

CALIBRATION: Governor setting 500 RPM to 1400 RPM.

Spring Spacing Adjustment -- Inner -- .157" gap.
Outer -- .059" precompressed.

Average for all outlets:

Set at 1400 RPM for 42cc to 43cc for 500 strokes at full load position.

4387A1 PSB 4A 100D 4387A1 — International Harvester Models TD14, TD14A, Super WD9

Clockwise Rotation — L.H. Mounting — Fulcrum Lever Set for 5% — Timed for Port Closing — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1900 RPM — Governor Regulation 9% to 13% — Cam Nose to Be Set Upward to Form an Angle of 45° with the Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
3	GE 9012A	1	DRIVE GEAR ASSEMBLY
10	PO 764	1	POINTER, timing
11	HG 9049A	1	HOUSING ASSEMBLY, pump — includes parts 10, 11A and 11B
18	CV 9014C	1	COVER, timing window
21	SC 1140	2	SCREW, fastening — timing window cover
40	SGB 15B5	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 3682A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-8A	1	HEAD, hydraulic — with 10.0 mm diameter plunger and sleeve — round
77	VA 9012A	1	BLEED AND CHECK VALVE ASSEMBLY
100	PL 905	1	PLATE, stop
110	SP 7951/14	1	SPRING, governor — outer
111	SP 7950/24	1	SPRING, governor — inner
135	BL 902	1	LEVER, stop
***	LE 9070A	1	OPERATING LEVER ASSEMBLY — includes parts 140, 142, 142A and 142B
142	LE 9071	1	LEVER, operating

Omit illustrated parts 18A to 18H, 32, 57B and 1 of 116.

ALL OTHER PARTS SAME AS PSB 4A 100DI.

Note to illustration 135: The stop lever is to be set downward in mid-position plus or minus 5°.

CALIBRATION: Governor setting 500 RPM to 1400 RPM.

Spring Spacing Adjustment -- Inner -- .137" gap.
Outer -- .039" precompressed.

Average for all outlets:

Set at 1400 RPM for 52cc to 53cc for 500 strokes at full load position.

4389A1 PSB 4A 70D 4389A1 — Continental Motors Corporation Model GD 157**4389B1 PSB 4A 70D 4389B1**

Clockwise Rotation — L.H. Mounting — Timed for Port Closing — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1900 RPM.

4389A1 — Fulcrum lever set for 5%.

4389B1 — Adjustable fulcrum lever assembly.

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Inner Spring Gap	Outer Spring Illustration 110 Part Number	Outer Spring Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4389A1	600 to 1200	SP 7950/26	.079" precompressed	None		All the way down	3% to 5%
4389B1	600 to 1200	SP 7950/25	Flush	SP 7951/16	.157" to .177" precompressed	All the way down	3% to 5%

- continued -

***Not Shown Assembled

AMERICAN BOSCH SALES DIVISION



SPRINGFIELD, MASSACHUSETTS

- Cont'd - 4389A1 and 4389B1

Illustration Number	Part Number	Quantity Used	Description of Part
8	SH 9062	1	CAMSHAFT
40	SGB 15B7	1	SUPPLY PUMP ASSEMBLY -- for parts see Fuel Supply Pump Section
42	SC 1516	1	SCREW, fastening -- supply pump assembly -- short
42	SC 9021	1	SCREW, fastening -- supply pump assembly -- long
54	HD 3343B	1	HYDRAULIC HEAD ASSEMBLY -- complete -- includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-2A	1	HEAD, hydraulic -- with 7.0 mm diameter plunger and sleeve
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY -- for parts see Safety Valve Section
**A	WT 9011A	1	WEIGHT AND SPIDER ASSEMBLY -- complete -- includes parts 82 to 87 -- for 4389A1 pump
***	WT 9012A	1	WEIGHT AND SPIDER ASSEMBLY -- complete -- includes parts 82 to 87 -- each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider -- for 4389B1 pump
87	WT 905A	2	WEIGHT -- includes part 83 -- for 4389B1 pump
89	SV 901A	1	SLEEVE ASSEMBLY -- includes part 89A -- for 4389A1 pump
89	SV 909A	1	SLEEVE ASSEMBLY -- includes part 89A -- for 4389B1 pump
90	SV 909A	1	FULCRUM LEVER ASSEMBLY -- for 4389A1 pump
90	LE 9034A	1	FULCRUM LEVER ASSEMBLY, adjustable -- includes parts **c and **d -- for 4389B1 pump
**c	SC 9019	1	SCREW, adjusting -- fulcrum lever
**d	PN 1116	1	PIN, lock -- adjusting screw
**	SR 904	1	SPACER, between cam and flat extension of fulcrum lever
97	BA 902	1	PLATE, oil baffle
98	HG 9030	1	HOUSING, governor
**	NT 7917	1	CAP, adjusting screw -- bumper spring
**	CA 7980	2	GASKET, adjusting screw -- bumper spring
**	NT 6-10BL	1	NUT, lock-adjusting screw -- bumper spring
**	SC 1134	1	SCREW, adjusting -- bumper spring
**	SP 9025	1	SPRING, bumper -- governor housing
**	SC 25-4CA	1	SCREW, fastening -- bumper spring
**	WA 6-6CA	1	WASHER, lock, bumper spring fastening screw
104	CV 9046	1	COVER, top -- governor housing
**	PG 1051	1	PLUG, governor housing top cover
**	GA 1058	1	GASKET, top cover plug
110	See Table	1	SPRING, governor -- outer
111	See Table	1	SPRING, governor -- inner
115	CP 902A	1	CAP, end -- governor housing
122	SP 902	1	SPRING, operating lever
**	CO 904A	1	TACHOMETER DRIVE ASSEMBLY

Omit illustrated parts 32, 57B and one each of 125 and 126.

ALL OTHER PARTS SAME AS PSB 4A 70D1.

Note to illustration 135 -- The stop lever (135) is to be set at 5° to 15° for the 4389B1 pump. Set at standard position of 10° to 20° for 4389A1 pump.

CALIBRATION: Governor setting 600 RPM to 1200 RPM average for all outlets. Set at 1200 RPM for 19cc to 20cc per 500 strokes at full load position.

PSB 4A 70D 4409A1 -- Allis Chalmers Model 4BD 153

4409A1

Clockwise Rotation -- L.H. Mounting -- Fulcrum Lever Set for 10% -- Timed for Port Closing -- Equipped with Internal Spring Type Governor -- For Speeds in excess of 1900 RPM -- Governor Regulation 10% to 12% -- Cam Nose to Be Set All the Way Down

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY -- includes parts 36, 37, 39 and 39A
54	HD 3239B	1	HYDRAULIC HEAD ASSEMBLY -- complete -- includes parts 22, 45, 55 to 57B and 58 to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-2A	1	HEAD, hydraulic -- with 7.0 mm diameter plunger and sleeve
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY -- for parts see Safety Valve Section

**Not Illustrated

- continued -

***Not Shown Assembled

4409A1 - Cont'd -

Illustration Number	Part Number	Quantity Used	Description of Part
98	HG 9013	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY, stop plate — includes parts **a to **d
**a	PL 79110A	1	STOP PLATE ASSEMBLY
**b	BK 7917	1	BRIDGE, stop plate
**c	NT 8-8CA	2	NUT, jam
**d	WA 1067	2	WASHER, jam nut
110	SP 7951/14	1	SPRING, governor — outer
111	SP 7950/7	1	SPRING, governor — inner

Omit illustrated part 32.

ALL OTHER PARTS SAME AS PSB 4A 70D1.

CALIBRATION: For governor setting of 450 RPM to 1200 RPM.

Spring Spacing Adjustment — Inner — .079" gap.
Outer — .039" precompressed.

Average for all outlets:

Set at 1200 RPM for 22cc to 23cc per 500 strokes at full load position.
Set at 450 RPM for 5cc to 6cc per 500 strokes at idle position.**4473A1 PSB 4A 70D 4473A1 — Oliver Corporation Model 180 DLC**

Clockwise Rotation — L.H. Mounting — Timed for Port Closing — Equipped with Internal Spring Type Governor — For Speeds Up To 1900 RPM.

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Inner Spring Gap	Outer Spring Illustration 110 Part Number	Outer Spring Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4473A1	600 to 1800	SP 7950/18	.118" precompressed	None		Up 45°	1% to 3%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 908A	1	HUB, drive
10	PO 764	1	POINTER, timing
11	HG 9027A	1	HOUSING, pump — includes parts 10, 11A and 11B
23	PN 906	1	PIN, plunger sleeve
24	CU 9013A	1	CONTROL UNIT ASSEMBLY — includes parts 24A and 24B
40	SGB 15E11	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 3663A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-2A	1	HEAD, hydraulic — with 7.0 mm diameter plunger and sleeve
89	SV 909A	1	SLEEVE ASSEMBLY — includes part 89A
90	LE 9034A	1	FULCRUM LEVER ASSEMBLY, adjustable — includes parts **c and **d
**c	SC 9019	1	SCREW, adjusting — fulcrum lever
**d	PN 1116	1	PIN, lock — adjusting screw
**	SR 904	1	SPACER, between cam and flat extension of fulcrum lever
97	BA 902	1	PLATE, oil baffle

Omit illustrated parts 32 and 37B.

ALL OTHER PARTS SAME AS PSB 4A 70D1.

Note to illustration 135: The stop lever is to be set downward in mid-position plus or minus 5°.

CALIBRATION: Average for all outlets:

For governor setting of 600 RPM to 1800 RPM.

Set at 1800 RPM for 20cc to 21cc per 500 strokes at full load position.

Increase speed to fuel shutoff which must fall below 1870 RPM.

AMERICAN BOSCH DIVISION



SPRINGFIELD, MASS.

PSB 4A 80D 4491A1 — Continental Motors Corporation Model HD 260

4491A1

Clockwise Rotation — L.H. Mounting — Fulcrum Lever Set for 5% — Timed for Port Closing — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1900 RPM.

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4491A1	600 to 1000	None		SP 7951/12	.177" precompressed	Down 45°	3%

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3345B	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 90EA	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm diameter plunger and sleeve
***	WT 9012A	1	WEIGHT AND SPIDER ASSEMBLY — complete — includes parts 82 to 87 — Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider
87	WF 905A	2	WEIGHT — includes part 83
110	See table		
111	See table		
122	SP 902	1	SPRING, operating lever
***	LE 79112A	1	LEVER ASSEMBLY, operating — includes parts 140, 142, 142A and 142B (Install 180° from normal position)
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed — flange end

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 80D1.

CALIBRATION: Governor setting, 600 RPM to 1000 RPM average for all outlets.

Set at 1000 RPM for 33cc to 34cc per 500 strokes at full lead position.
Set idle screw in mid-position.

PSB 4A 90D 4610A — Minneapolis Moline — Model D 336-4

4610A

Clockwise Rotation — L.H. Mounting — Timed for Port Closing — Fulcrum Lever Assembly Set for 5% — Equipped with Internal Spring Type Governor.

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4610A	600 to 1800	SP 7950/20	.059" to .079"	SP 7951/14	.079" precompressed	Down 45°	8% to 10%

Illustration Number	Part Number	Quantity Used	Description of Part
35	GA 903	1	GASKET, supply pump
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY
41	WA 6-8 BL	2	WASHER, supply pump lock
42	SC 1516	2	SCREW, supply pump fastening
54	HD 4567A	1	HYDRAULIC HEAD ASSEMBLY
77	VA 7928	1	VALVE, overflow — L.H. End
93	CA 794	1	CAM, torque
***	LE 9074-1A	1	LEVER, control rod and fulcrum lever assembly 5%
***	LE 79112A	1	LEVER, operating
100	PL 9016	1	PLATE, stop

ALL OTHER PARTS SAME AS PSB 4A 90 D 1 ON MANUAL PAGES D226/602 thru D226/604.

CALIBRATION: Set at 1835 RPM for 42 cc to 43 cc per 500 strokes. Also at low idle for 8 cc to 9 cc per 500 strokes. Check at 150 RPM for 34 cc min./500 strokes.

**Not Illustrated

***Not Shown Assembled

4611A1 PSB 4A 75D 4611A1 — Allis Chalmers Model 4BD 153

Clockwise Rotation — L.H. Mounting — Timed for Port Closing — Equipped with Internal Spring Type Governor — For Speeds Up To and Including 1900 RPM — Governor Regulation 3% to 5% — Cam Nose to Be Set All the Way Down — Adjustable Fulcrum Lever Assembly.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B11	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 3517A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A and 58 to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-3A	1	HEAD, hydraulic — with 7.5 mm diameter plunger and sleeve
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
89	SV 909A	1	SLEEVE ASSEMBLY
90	LE 9034A	1	FULCRUM LEVER ASSEMBLY — pivot pins set at bottom of holes — includes **a and **b
**a	SC 9019	1	SCREW, adjusting
**b	PN 1116	1	PIN, locking
**	SR 904	1	SPACER — between cam and flat extension of lever
97	BA 902	1	BAFFLE, oil
98	HG 9030	1	HOUSING, governor
**	NT 7917	1	CAP, adjusting screw — bumper spring
**	GA 7990	2	GASKET, adjusting screw — bumper spring
**	NT 6-10BL	1	NUT, lock-adjusting screw — bumper spring
**	SC 1134	1	SCREW, adjusting — bumper spring
**	SP 9025	1	SPRING, bumper — governor housing
**	SC 25-4CA	1	SCREW, fastening — bumper spring
**	WA 6-6CA	1	WASHER, lock — bumper spring fastening screw
104	CV 9046	1	COVER, top — governor housing
**	PG 1051	1	PLUG, governor housing top cover
**	GA 1058	1	GASKET, top cover plug
110	None		SPRING, governor — outer
111	SP 7950/18	1	SPRING, governor — inner
122	SP 902	1	SPRING, operating lever shaft
***	LE 79112A	1	LEVER ASSEMBLY — operating — includes parts 140 to 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 1148	1	FITTING, adapter — ilange end

Omit illustrated parts 32 and 57B.

ALL OTHER PARTS SAME AS PSB 4A 75D1.

CALIBRATION: For governor setting of 600 RPM to 1800 RPM.

Spring Spacing Adjustment — Inner — .118" precompressed.

Average for all outlets:

Set at 1800 RPM for 22cc to 23cc per 500 strokes at full load position.

Fuel delivery must stop before 1870 RPM.

Set idle screw in the mid-position.

4664A PSB 4A 85D 4664A — J. I. Case — 3-7/8" x 4 1/2" — 4 1/4" x 4 1/4" — Models G 200 D G 241 D

Clockwise Rotation — R. H. Mounting — Timed for Port Closing — Fulcrum Lever Set for 5%.

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4664A	600 to 2000	SP 7950/14	.079"	SP 7951/14	.059" precompressed	Upward 45°	8% to 10%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 904	1	HUB, drive
11	HG 9021A	1	HOUSING, pump
18	CV 9038C	1	COVER, timing window

**Not Illustrated

- continued -

***Not Shown Assembled

AMERICAN BOSCH SALES DIVISION



Illustration Number	Part Number	Quantity Used	Description of Part
21	SC 1140	2	SCREW, timing cover
24	CU 9010A	1	CONTROL UNIT
26	BG 906	1	BUSHING, quill shaft
28	GE 902	1	GEAR, quill shaft assembly
35	GA 903	1	GASKET, supply pump
40	SGB 15 B12	1	FUEL SUPPLY PUMP ASSEMBLY
41	WA 6-8 BL	2	WASHER, supply pump lock
42	SC 1516	2	SCREW, supply pump fastening
54	HD 4665 A	1	HYDRAULIC HEAD ASSEMBLY
77	VA 7938A	1	VALVE, overflow
**	FI 1148	1	FITTING, adapter
80	RD 9035-2A	1	ROD, control
98	HG 5029	1	HOUSING, governor
100	PL 9018	1	PLATE, stop

ALL OTHER PARTS SAME AS PSB 4A 85D1 MANUAL PAGES D226/602 AND D226/604.

NOTE: Set operating lever (142) $35^{\circ} \pm 5^{\circ}$ from top centerline toward mounting flange at full load position.

CALIBRATION was not available at time of this printing. If you require calibration figures, contact American Bosch Sales Division, Service Department.

PSB 4A 80 D 4706A1 - Minneapolis Moline - 4-5/8" x 5" - Model D 336-4

4706A1

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5%.

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Inner Spring Gap	Outer Spring Illustration IIO Part Number	Outer Spring Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4706A1	600 to 1400	SP 7950/24	.039"	SP 7951/15	.118" precompressed	upward 45°	7% to 10%

Illustration Number	Part Number	Quantity Used	Description of Part
24	CU 9011A	1	CONTROL UNIT ASSEMBLY
40	SGB 15 B1	1	SUPPLY PUMP ASSEMBLY
54	HD 3345B	1	HYDRAULIC HEAD ASSEMBLY
77	VA 7928A	1	VALVE, overflow
98	HG 9013	1	HOUSING, governor
142	LE 79112A	1	LEVER ASSEMBLY

ALL OTHER PARTS SAME AS PSB 4A 80D1 MANUAL PAGE D226/602.

CALIBRATION: Set at 1430 RPM for 41 cc to 42 cc per 500 strokes. Also at low idle for 7 cc to 8 cc per 500 strokes.

PSB 4A 80D 4708A1 & A2 - Continental Motor Corp. - 3-7/8" x 5-1/2" Model HD 260

4708A1

4708A2

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - Fulcrum Lever Set for 5%.

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Inner Spring Gap	Outer Spring Illustration IIO Part Number	Outer Spring Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4708A1	1000/1200	SP 7950/25	.256" to .276"	SP 7951/16	.276" to .295" precompressed	Horizontal	3% to 5%
4708A2	--- /1000	SP 7950/19	.039" to .059"	None		Horizontal	3% to 5%

Illustration Number	Part Number	Quantity Used	Description of Part
35	GA 903	1	GASKET, supply pump
40	SGB 15B-5	1	SUPPLY PUMP ASSEMBLY
41	WA 6-8 BL	2	WASHER, supply pump lock

**Not Illustrated

- continued -

***Not Shown Assembled

Illustration Number	Part Number	Quantity Used	Description of Part
42	SC 1516	2	SCREW, supply pump fastening
54	HD 3345B	1	HEAD ASSEMBLY
**	FI 1148	1	FITTING, adapter
77	VA 7938A	1	VALVE, overflow
***	LE 79112A	1	LEVER ASSEMBLY, operating
***	LE 9034A	1	FULCRUM LEVER, adjustable
**	SR 904	1	SPACER, cam & lever
87	WT 905A	2	WEIGHT ASSEMBLY
89	SV 909A	1	SLEEVE ASSEMBLY
98	HG 9030	1	HOUSING, governor
**	SC 1134	1	SCREW, set
**	GA 7980	1	GASKET
**	NT 7917	1	NUT, cap
**	S ⁷ 9025	1	SPRING, bumper
**	NT 6-10 BL	1	NUT
**	SC 25-4 CA	1	SCREW
**	WA 6-6 CA	1	WASHER,
104	CV 9046	1	COVER, governor top
**	PG 1051	1	PLUG, governor cover
**	GA 1058	1	GASKET, governor cover
122	SP 9016	1	SPRING, operating lever torsion

ALL OTHER PARTS SAME AS PSB 4A 80D1 MANUAL PAGE D226/602.

CALIBRATION was not available at time of this printing. If you require calibration figures, contact American Bosch Sales Division, Service Department.

4736A

PSB 4A 80D 4736A - Model DA

Counter-Clockwise Rotation - R. H. Mounting - Timed for Port Closing - Fulcrum Lever Assembly Set for 5%.

Pump Type	Governor	Inner Spring	Outer Spring		Cam Nose Angle	Governor Regulation
	Speed RPM	Illustration 111 Part Number	Gap	Illustration 110 Part Number	Gap	
4736A	450 to 2000	SP 7950/2	.138"	SP 7951/11	.059" precompressed	Down 45° 7% to 10%

Illustration Number	Part Number	Quantity Used	Description of Part
11	HG 9062A	1	HOUSING, pump - includes parts 10, 11A and 11B
18	CV 9019	1	COVER, timing window
24	CU 9010A	1	CONTROL UNIT ASSEMBLY
26	BG 906	1	BUSHING, quill shaft
28	GE 902	1	GEAR, camshaft driven
40	SGB 15 B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36 thru 39A
54	HD 4737A	1	HYDRAULIC HEAD ASSEMBLY - includes parts 22, 45, 55 thru 57B and 58 thru 76A
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - For parts See Safety Valve Section
80	RD 9035-2A	1	ROD, control
37	WT 905A	2	WEIGHT ASSEMBLY
98	HG 9029	1	HOUSING, governor
122	SP 902	1	SPRING, operating

ALL OTHER PARTS SAME AS PSB 4A 80D1 MANUAL PAGE D226/602.

CALIBRATION was not available at time of this printing. If you require calibration figures, contact American Bosch Sales Division, Service Department.



PSB 4A 75D 4799A - Allis Chalmers - 3-7/16" x 4-1/8" - Model ABD-153

4799A

Clockwise Rotation - L. H. Mounting - Timed for Port Closing - Adjustable Fulcrum Lever Assembly 5%.

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4799A	600 to 1200	SP 7950/24	.118" to .138" precompressed	SP 7951/11	.197" to .217" precompressed	All the way down	3% to 5%

Illustration Number	Part Number	Quantity Used	Description of Part
13	CV 903C	1	PAD, quill shaft
16	SC 1140	2	SCREW, fastening quill shaft pad
40	SGB 15B11	1	SUPPLY PUMP ASSEMBLY
**	SC 1516	2	SCREW, supply pump fastening
**	GA 903	1	GASKET, supply pump
**	WA 6-8 BL	2	WASHER, supply pump
54	HD 3517A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 thru 57A and 58 thru 76A
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY - For parts See Safety Valve Section
87	WT 905A	2	WEIGHTS - includes part 83
89	SV 909A	1	SLEEVE ASSEMBLY
90	LE 9034A	1	FULCRUM LEVER ASSEMBLY - includes parts **A and **B
**A	SC 9019	1	SCREW, adjusting
**B	PN 1116	1	PIN, locking
**	SR 904	1	SPACER, between cam and flat extension of lever
98	HG 9030	1	HOUSING, governor
**	SC 1774	1	SCREW, cap
**	GA 7980	1	GASKET
104	CV 9046	1	COVER, top - governor housing
**	PG 1051	1	PLUG, governor housing top - cover
**	GA 1058	1	GASKET, top cover plug
110	SP 7951/11	1	SPRING, governor - outer
111	SP 7950/24	1	SPRING, governor - inner
122	SP 902	1	SPRING, operating lever

ALL OTHER PARTS SAME AS PSB 4A 75D1 MANUAL PAGE D226/602.

CALIBRATION was not available at time of this printing. If you require calibration figures, contact American Bosch Sales Division, Service Department.

**Not Illustrated

Obsolete Demands only Shelf

7/6/72 RMKilcourse

Fuel Injection Equipment Manual Page D 226/800

AMERICAN BOSCH DIVISION

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SPRINGFIELD 7, MASS. U. S. A.

AMERICAN BOSCH FUEL INJECTION PUMP

TYPES

PSB 4A 65-100 DH I

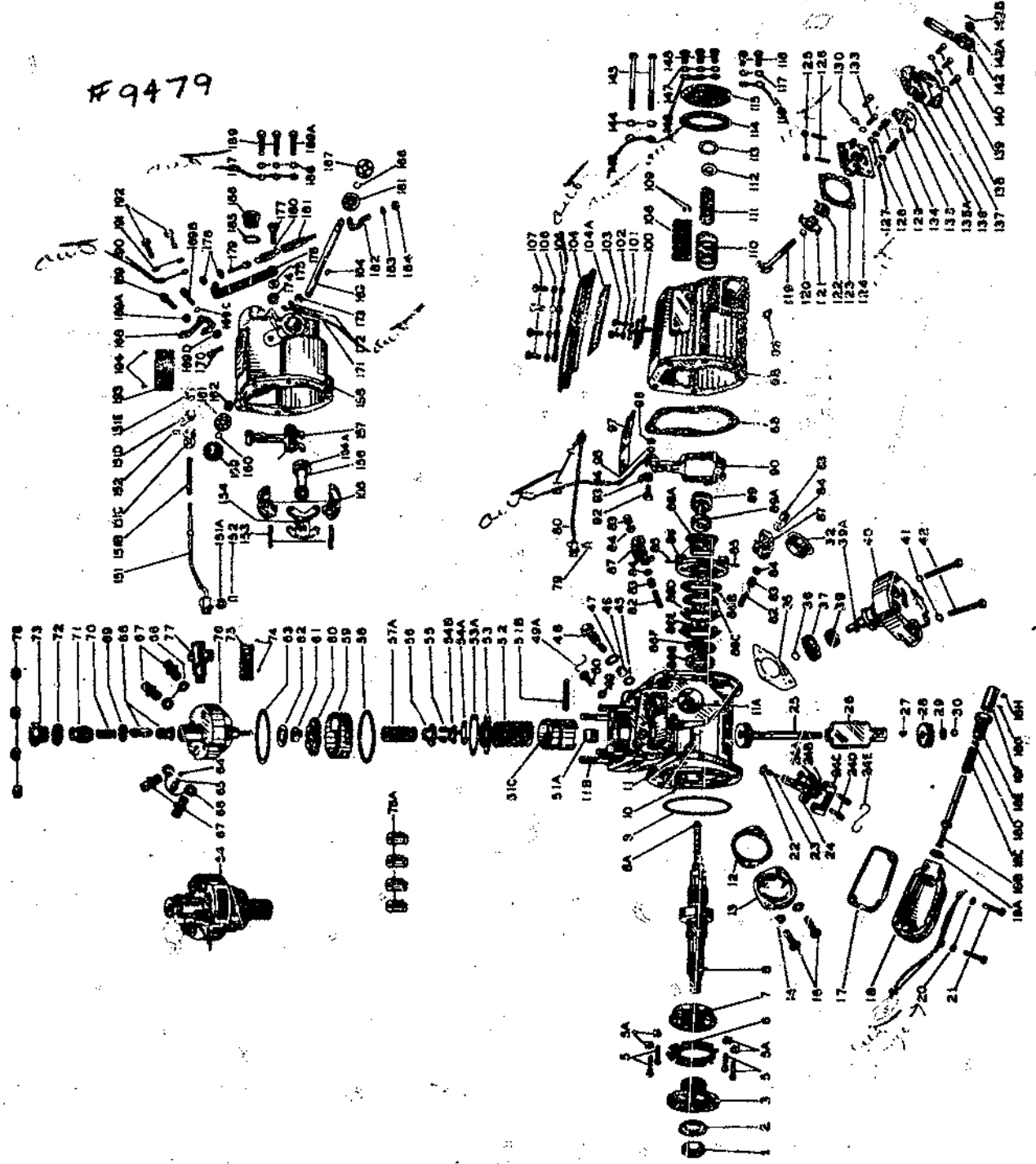
and

PSB 4A 65-100 YH I

SERVICE PARTS LIST

*change type of lock washers
under the tongue screws*

#9479





SERVICE PARTS LIST
FOR
PSB 4A 65-100 DM 1

NOTE: This pump is equipped with an internal spring type governor with friction clutch.

Illustration Number	Part Number	Quantity Used	Description of Part
1	NT 1201	1	NUT, hub—camshaft
2	WA 7623	1	WASHER, lock—hub screw
3	HB 9012	1	HUB, drive
5	SC 1555	4	SCREW, fastening—ball bearing retaining plate
5A	WA 901	4	WASHER, lock—fastening screw
6	PL 907	1	PLATE, retaining—ball bearing
7	BB 1023	1	BEARING, ball—camshaft
8	SH 9026A	1	CAMSHAFT—includes part 8A
8A	SC 1149	1	SCREW AND LOCKWASHER—camshaft
9	GA 76200	1	GASKET, rubber ring
10	PO 765	1	POINTER, timing
11	HG 9044A	1	HOUSING, pump—includes parts 10, 11A, and 11B
11A	BG 7649	1	BUSHING, camshaft
11B	SD 903	4	STUD, housing
12	GA 904	1	GASKET, quill shaft pad
13	CV 9086-9047	1	PAD, quill shaft—pump housing
14	GA 7616	2	GASKET, fastening screw
16	SC H40 1119	2	SCREW, fastening—quill shaft pad
17	GA 909 9026 9H 92074	1	GASKET, timing window cover assembly
18	CV 9018	1	COVER, timing window
18A	GA 1036	1	GASKET, shut-off rod
***	RD 908A	1	SHUT-OFF ROD ASSEMBLY—includes parts 18B through 18H
18B	RD 903	1	ROD, shut-off
18C	SP 904	1	SPRING, shut-off rod
18D	GA 1019	1	GASKET, shut-off rod
18E	SC 904	1	SCREW, bearing
18F	FI 902	1	FITTING, shut-off
18G	PN 1026	1	PIN, shut-off rod
18H	SC 325-4 BL	1	SCREW, set
19	WA 1143	2	WASHER, plain—fastening screw
20	WA 22-8 BL 6-8	2	WASHER, lock—fastening screw
21	SC 27-20 BL	2	SCREW, fastening—timing window cover assembly
22	GA 1014	1	GASKET, ring—control unit assembly
23	PN 9023	1	PIN, plunger sleeve
24	CU 9011A	1	CONTROL UNIT ASSEMBLY—includes parts 24A and 24B for left-hand mounted pump—type designation stamped 11
24	CU 9010A	1	CONTROL UNIT ASSEMBLY—includes part 24A and 24B for right-hand mounted pump—type designation stamped 10
24A	NT 4-6	1	NUT, hex—control unit
24B	WA 1648	1	WASHER, tab—control unit hex nut
24C	RN 9011	1	RETAINER, control unit
24D	SC 1700	2	SCREW WITH LOCKWASHER, fastening—control unit assembly
24E	WI 901	1	WIRE, locking—control unit fastening screw
***	SH 908A	1	QUILL SHAFT ASSEMBLY, includes parts 25 through 30
25	SH 909A	1	SHAFT, quill—with gear

*** Not shown assembled.

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Illustration Number	Part Number	Quantity Used	Description of Part
26	BG 905	1	BUSHING, quill shaft
27	KY 1006	1	KEY, Woodruff—quill shaft
28	GE 908	1	GEAR, camshaft driven
29	WMS 2157/400X	as required	WASHER, plain—.002" thick—to eliminate shaft play
	WMS 2157/1X	as required	WASHER, plain—.004" thick—to eliminate shaft play
	WMS 2157/2X	as required	WASHER, plain—.008" thick—to eliminate shaft play
	WMS 2157/3X	as required	WASHER, plain—.020" thick—to eliminate shaft play
30	RG 1014	1	RING, spring—quill shaft
32	PG 902	1	PLUG, closing
35	GA 903	1	GASKET, supply pump
36	RG 1014	1	RING, spring—supply pump shaft
37	GE 908	1	GEAR, drive—supply pump shaft
39	PK 7910	1	SEAL, oil—supply pump shaft
39A	KY 901	1	KEY, supply pump shaft
40	SGB 15 B1	1	SUPPLY PUMP ASSEMBLY—includes 36, 37, 39 and 39A—for clockwise rotation pumps
40	SGB 15 B2	1	SUPPLY PUMP ASSEMBLY—includes parts 36, 37, 39 and 39A—for counterclockwise rotation pumps
41	WA 22-8 BL	2	WASHER, lock—fastening screw
42	SC 1516	2	SCREW, fastening—supply pump assembly
45	GA 1012	1	GASKET, ring—filter screw
46	FE 901	1	FILTER, screen
47	GA 7965	1	GASKET, filter screw
48	SC 903	1	SCREW, filter
49	GA 7616	1	GASKET, fastening screw
50A	WI 1073	as required	WIRE, locking—fastening
51	SC 1140	1	SCREW, locating—quill shaft bushing
52	TP 993A	1	TAPPET ASSEMBLY—includes parts 51A to 51C
51A	RL 903A	1	ROLLER ASSEMBLY, tappet
51B	PN 9013	1	PIN, tappet roller—diameter .3745 inch
51C	GU 9011A	1	GUIDE ASSEMBLY, tappet
52	SP 903	1	SPRING, plunger—outer
53	GU 9013	1	SEAT, spring—upper
53A	RG 903	1	RING, spring—upper spring seat
54	per requirement	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A through 76A—for part number see nameplate attached to illustration 76
54A	RG 902	1	RING, retaining—button
54B	BO 901	1	BUTTON, plunger
55	HP 9015	1	LOCK, plunger—2 piece
56	GU 909	1	SEAT, plunger spring—lower
57A	SP 901	1	SPRING, inner—plunger
58	GA 1009	1	GASKET, ring—head assembly
59	RN 9014	1	COVER, gear retainer—for left-hand mounted pumps
59	RN 9015	1	COVER, gear retainer—for right-hand mounted pumps
60	GE 909	1	GEAR, plunger drive—for clockwise rotation—left-hand mounted pumps
60	GE 9010	1	GEAR, plunger drive—for counterclockwise rotation—left-hand mounted pumps
60	GE 901	1	GEAR, plunger drive—for clockwise rotation—right-hand mounted pumps
60	GE 903	1	GEAR, plunger drive—for counterclockwise rotation—right-hand mounted pumps
61	GU 903	1	GUIDE, plunger
62	WA 1362	1	WASHER, thrust—plunger drive gear
63	GA 1010	1	GASKET, ring—head assembly
64	BB 1024	1	BALL, sealing—set screw
65	SC 1352	1	SCREW, set—sealing ball

Not shown assembled.

AMERICAN BOSCH DIVISION



SPRINGFIELD 7, MASS. U.S.A.

CIN
16764

Illustration Number	Part Number	Quantity Used	Description of Part
66	FI 9012 GA 9010	4	<i>Fitting, discharge</i> GASKET, discharge fitting
67	FI 901 FI 901	4	<i>discharge</i> FITTING, discharge
68	VA 907A	1	DELIVERY VALVE ASSEMBLY — for plunger dia. of 6.5 mm and 7.0 mm
68	VA 908A	1	DELIVERY VALVE ASSEMBLY — for plunger dia. of 7.5 mm to 9.0 mm inclusive
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY — for plunger dia. of 9.5 mm and 10.0 mm
69	GA 905	1	GASKET, delivery valve holder
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
72	GA 906	1	GASKET, cap screw
73	SC 9018A	1	SCREW, cap—delivery valve
74	SC 150-2	2	SCREW, fastening—part number plate
75	NP 900 900	1	PLATE, part number—hydraulic head
76	HD 9022-1A	1	HEAD, hydraulic—with 6.5 mm dia. plunger and sleeve-round
	HD 9022-2A	1	HEAD, hydraulic—with 7.0 mm dia. plunger and sleeve-round
	HD 9022-3A	1	HEAD, hydraulic—with 7.5 mm dia. plunger and sleeve-round
	HD 9022-4A	1	HEAD, hydraulic—with 8.0 mm dia. plunger and sleeve-round
76	HD 9022-5A	1	HEAD, hydraulic—with 8.5 mm dia. plunger and sleeve-round
	HD 9022-6A	1	HEAD, hydraulic—with 9.0 mm dia. plunger and sleeve-round
	HD 9022-7A	1	HEAD, hydraulic—with 9.5 mm dia. plunger and sleeve-round
	HD 9022-8A	1	HEAD, hydraulic—with 10.0 mm dia. plunger and sleeve-round
76A	SV 907	4	SLEEVE, stud—hydraulic head—used with round head only
77	as per order	1	OVERFLOW VALVE ASSEMBLY—for parts see Safety Valve Section — for type designation see stamping on head of screw
78	NT 1127	4	NUT, fastening—hydraulic head assembly
79	PN 1122	1	HAIRPIN—control rod
80	RD 9032-1A	1	ROD, control—left-hand mounted pumps
80	RD 9032-2A	1	ROD, control—right-hand mounted pumps
81	PN 1122	1	HAIRPIN, control rod—governor end
***	WT 9013A	1	WEIGHT AND SPIDER ASSEMBLY—friction clutch includes parts 82 through 87—See Note 1
82	PN 905A	2	PIN, weight
83	BG 903	4	BUSHING, weight
84	WA 1448-1	as required	WASHER, plain—weight pin—.036" thick
84	WA 1448-2	as required	WASHER, plain—weight pin—.038" thick
84	WA 1448-3	as required	WASHER, plain—weight pin—.040" thick
84	WA 1448-4	as required	WASHER, plain—weight pin—.044" thick
84	WA 1448-5	as required	WASHER, plain—weight pin—.048" thick
85	PN 1104	2	PIN, roll
86	HP 9016A	1	SPIDER, weight
86A	HB 909	1	HUB, friction drive
86B	RN 9013	1	RETAINER, hub
86C	SR 794-1	as required	SPACER, adjusting—spider—.035" thick
86C	SR 794-2	as required	SPACER, adjusting—spider—.049" thick
86C	SR 794-3	as required	SPACER, adjusting—spider—.065" thick
86C	SR 794-4	as required	SPACER, adjusting—spider—.020" thick

*** Not shown assembled.

AMERICAN BOSCH DIVISION



SPRINGFIELD 7, MASS., U. S. A.

Illustration Number	Part Number	Quantity Used	Description of Part
86C	SR 794-5	as required	SPACER, adjusting—spider—.015" thick
86C	SR 794-6	as required	SPACER, adjusting—spider—.010" thick
86D	DC 796	1	DISC, spring—inner
86E	DC 797	1	DISC, spring—outer
86F	WA 7918	1	WASHER, lock—nut
86G	NT 795	1	NUT, adjusting—hub
87	WT 909A	2	WEIGHT—includes part 83
88	GA 907	1	GALLET, governor housing
89	SV 901A	1	SLEEVE ASSEMBLY—includes part 89A—See Note 2
89A	BB 7910	1	BALL THRUST BEARING—sleeve assembly
90	LE 9025-1A	1	FULCRUM LEVER ASSEMBLY—5% governor regulation—pivot pins assembled in lower holes
90	LE 9025-2A	1	FULCRUM LEVER ASSEMBLY—10% governor regulation—pivot pins assembled in upper holes
92	SC 1136	1	SCREW, square head—cam
93	CA 793	1	CAM, torque
94	WA 1143	1	WASHER, plain—cam screw
95	WA 22-8 BL 6-8	1	WASHER, lock—cam screw
96	NT 8-8 BL	1	NUT, cam screw
97	BA 903	1	PLATE, oil baffle
98	HG 9025 9036	1	HOUSING, governor
99	PN 901A	1	PIN, pivot—fulcrum lever
100	PL 904	1	PLATE, stop
101	WA 1143	2	WASHER, plain—fastening screw
102	WA 22-8 BL 6-8	2	WASHER, lock—fastening screw
103	SC 1404	2	SCREW, fastening—stop plate
104	CV 9032C	1	COVER, top—governor housing
104A	GA 908	1	GASKET, top cover
105	WA 1143	1	WASHER, plain—fastening screw
106	WA 22-8 BL 6-8	4	WASHER, lock—fastening screw
107	SC 1110	4	SCREW, fastening—top cover
108	NP 904	1	PLATE, name
109	SC 150-2	2	SCREW, fastening—name plate
110	per requirement	1	SPRING, governor—outer—for spring see specific pump type
111	per requirement	1	SPRING, governor—inner—for spring see specific pump type
112	SR 799/1	as required	SPACER, governor spring—inner—.020" thick
112	SR 799/2	as required	SPACER, governor spring—inner—.042" thick
112	SR 799/3	as required	SPACER, governor spring—inner—.058" thick
112	SR 799/4	as required	SPACER, governor spring—inner—.083" thick
113	SR 7914/1	as required	SPACER, governor spring—outer—.020" thick
113	SR 7914/2	as required	SPACER, governor spring—outer—.042" thick
113	SR 7914/3	as required	SPACER, governor spring—outer—.058" thick
113	SR 7914/4	as required	SPACER, governor spring—outer—.083" thick
114	GA 902	1	GASKET, end cap
115	CP 901C	1	CAP, end—governor housing
116	WA 1143	2	WASHER, plain—fastening screw
117	WA 22-8 BL 6-8	2	WASHER, lock—fastening screw
118	SC 1140	2	SCREW, fastening—end cap
119	SH 901A	1	SHAFT ASSEMBLY, operating
120	GA 76195	1	GASKET, ring—shaft assembly
121	PL 902A	1	PLATE ASSEMBLY, spring
122	SP 9016	1	SPRING, operating lever
123	GA 901	1	GASKET, shaft bearing plate
124	BG 904	1	PLATE, shaft bearing
125	NT 6-8 BL	2	NUT, hex—stop screw
126	SC 350-16 BL	2	SCREW, stop—stop lever
127	WA 1143	2	WASHER, plain—stud



Illustration Number	Part Number	Quantity Used	Description of Part
128	WA 22-8 BL	2	WASHER, lock—stud
129	SD 902	2	STUD, fastening—shaft bearing plate—lower
130	GA 7616	2	GASKET, fastening screw—upper
133	SC 1356	2	SCREW, fastening—shaft bearing plate—upper
134	SC 901	1	SCREW, clamping—stop lever
135	BL 901	1	LEVER, stop—operating shaft
135A	SP 1066	1	RING, snap—shaft assembly
136	CV 7945	1	COVER, stop lever—upper
137	CV 7946	1	COVER, stop lever—lower
138	WA 22-6 BL	3	WASHER, lock—fastening screw
139	SC 1354	3	SCREW, fastening—stop lever covers
***	LE 79117A	1	LEVER ASSEMBLY, operating—includes illustrated parts 140, 142, 142A and 142B
140	SC 7961	1	SCREW, fastening—operating lever
142	LE 79116	1	LEVER, operating
142A	NT 7919 9-8BL	1	NUT, hex—fastening screw
142B	PN 2-20 BL WA6-8BL	1	WASHER, plain—fastening screw
143	WA 1143	2	WASHER, plain—fastening screw
144	WA 22-8 BL 6-8	2	WASHER, lock—fastening screw
145	SC 1738	2	SCREW, fastening—governor housing—long
146	WA 1143	3	WASHER, plain—fastening screw
147	WA 22-8 BL 6-8	3	WASHER, lock—fastening screw
148	SC 1140	3	SCREW, fastening—governor housing—short

NOTE 1: Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider.

Check friction clutch slippage for ^{3.0} 4.0 to ^{5.25} 6.5 foot pounds. Replacement of spring discs (86D and 86E) or friction drive hub (86A) requires that the clutch slippage be adjusted for ^{4.25 to 5.25} 4.5 to 5.5 foot pounds. Always apply lubricating oil to the face of the friction drive hub (86A) at point of contact with the fingers of the spring discs (86D) and (86E) prior to checking clutch slippage.

NOTE 2: IMPORTANT — Check governor sleeve for a minimum travel of 16 mm (.630") from the location of the weights completely collapsed to the position of completely expanded.

SGB 15D1 - for CW rotation, L. H. mount and CCW rotation, R. H. mount pumps.

SGB 15D2 - for CCW rotation, L. H. mount and CW, R. H. mount

*** Not shown assembled.

AMERICAN BOSCH DIVISION

AMERICAN
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ARMA
CORPORATION

SPRINGFIELD 7, MASS. U. S. A.

SERVICE PARTS LIST

FOR

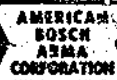
PSB 4A 65-100 YH 1

NOTE: This pump is equipped with an external spring type governor.

Illustration Number	Part Number	Quantity Used	Description of Part
1	NT 1201	1	NUT, hub—camshaft
2	WA 7623	1	WASHER, lock—hub screw
3	HB 9012	1	HUB, drive
5	SC 1555	4	SCREW, fastening—ball bearing retaining plate
5A	WA 901	4	WASHER, lock—fastening screw
6	PL 907	1	PLATE, retaining—ball bearing
7	BB 1023	1	BALL BEARING—camshaft
8	SH 9024A	1	CAMSHAFT—includes part 8A
8A	SC 1149	1	SCREW AND LOCKWASHER—camshaft
9	GA 76200	1	GASKET, rubber ring
10	PO 765	1	POINTER, timing
11	HG 9044A	1	HOUSING, pump—includes parts 10, 11A and 11B
11A	BG 7649	1	BUSHING, camshaft
11B	SD 903	4	STUD, housing
12	GA 904	1	GASKET—quill shaft pad
13	CV 9036 <i>9047</i>	1	PAD, quill shaft—pump housing
14	GA 7616	2	GASKET, fastening screw
16	SC 1140 <i>1119</i>	2	SCREW, fastening—quill shaft pad
17	GA 908 <i>9026 9N42074</i>	1	GASKET, timing window cover
18	CV 9014C	1	COVER, timing window
19	WA 1149	2	WASHER, plain—fastening screw
20	WA 32-8 BL 6-8	2	WASHER, lock—fastening screw
21	SC 1140	2	SCREW, fastening—timing window cover
22	GA 1014	1	GASKET, ring—control unit assembly
23	PN 9023	1	PIN, plunger sleeve
24	CU 9010A	1	CONTROL UNIT ASSEMBLY—includes parts 24A and 24B—for left-hand mounted pumps—type designation stamped 10
24	CU 9011A	1	CONTROL UNIT ASSEMBLY—includes parts 24A and 24B—for right-hand mounted pumps—type designation stamped 11
24A	NT 4-6	1	NUT, hex—control unit
24B	WA 1648	1	WASHER, tab—control unit hex nut
24C	RN 9011	1	RETAINER, control unit
24D	SC 1700	2	SCREW, fastening—with lockwasher—control unit assembly
24E	WI 901	1	WIRE, locking—control unit fastening screw
***	SH 908A	1	QUILL SHAFT ASSEMBLY—includes parts 25 through 30
25	SH 909A	1	SHAFT, quill—with gear
26	BG 905	1	BUSHING, quill shaft
27	KY 1006	1	KEY, Woodruff—quill shaft
28	GE 908	1	GEAR—camshaft driven
29	WMS 2157/400X	as required	WASHER, plain—.002" thick—to eliminate shaft play
	WMS 2157/1X	as required	WASHER, plain—.004" thick—to eliminate shaft play
	WMS 2157/2X	as required	WASHER, plain—.006" thick—to eliminate shaft play
	WMS 2157/3X	as required	WASHER, plain—.020" thick—to eliminate shaft play
30	RG 1014	1	RING, spring—quill shaft
32	PG 902	1	PLUG, closing

*** Not shown assembled.

AMERICAN BOSCH DIVISION



SPRINGFIELD, MASS. U.S.A.

Illustration Number	Part Number	Quantity Used	Description of Part
35	GA 903	1	GASKET, supply pump
36	RG 1014	1	RING, spring—supply pump shaft
37	GE 908	1	GEAR, drive—supply pump shaft
39	PK 7910	1	SEAL, oil—supply pump shaft
39A	KY 901	1	KEY, supply pump shaft
40	SGB 15 B1	1	SUPPLY PUMP ASSEMBLY—includes parts 36, 37, 39 and 39A—for clockwise rotation pumps
40	SGB 15 B2	1	SUPPLY PUMP ASSEMBLY—includes parts 36, 37, 39 and 39A—for counterclockwise rotation pumps
41	WA 22-8	2	WASHER, lock—fastening screw
42	SC 1516	2	SCREW, fastening—supply pump assembly
45	GA 1012	1	GASKET, ring—filter screw
46	FE 901	1	FILTER, screen
47	GA 7965	1	GASKET, filter screw
48	SC 903	1	SCREW, filter
49	GA 7616	1	GASKET, fastening screw
49A	WI 1073	as required	WIRE, locking—fastening screw
50	SC 1140	1	SCREW, locating—quill shaft bushing
***	TP 903A	1	TAPPET ASSEMBLY—includes parts 51A to 51C
51A	RL 903A	1	ROLLER ASSEMBLY, tappet
51B	PN 9013	1	PIN, tappet roller—diameter .3745 inch
51C	GU 9011A	1	GUIDE ASSEMBLY, tappet
52	SP 903	1	SPRING, plunger—outer
53	GU 9013	1	SEAT, spring—upper
53A	RG 903	1	RING, spring—upper spring seat
54	per requirement	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A through 76A—for part number see nameplate attached to illustration 76
54A	RG 902	1	RING, retaining—button
54B	BO 901	1	BUTTON, plunger
55	HP 9015	1	LOCK, plunger—2 piece
56	GU 909	1	SEAT, plunger spring—lower
57A	SP 901	1	SPRING, inner—plunger
58	GA 1009	1	GASKET, ring—head assembly
59	RN 9015	1	COVER, gear retainer—right-hand mounted pump
	RN 9014	1	COVER, gear retainer—left-hand mounted pump
60	GE 909	1	GEAR, plunger drive—for clockwise rotation—left-hand mounted pumps
	GE 9010	1	GEAR, plunger drive—for counterclockwise rotation—left-hand mounted pumps
	GE 901	1	GEAR, plunger drive—for clockwise rotation—right-hand mounted pumps
	GE 903	1	GEAR, plunger drive—for counterclockwise rotation—right-hand mounted pumps
61	GU 903	1	GUIDE, plunger
62	WA 1362	1	WASHER, thrust—plunger drive gear
63	GA 1010	1	GASKET, ring—head assembly
64	BB 1024	1	BALL, sealing—set screw
65	SC 1352	1	SCREW, set—sealing ball
66	GA 9010	4	GASKET, discharge fitting
67	FI 901	4	FITTING, discharge
68	VA 907A	1	DELIVERY VALVE ASSEMBLY — for plunger dia. of 6.5 mm and 7.0 mm
68	VA 908A	1	DELIVERY VALVE ASSEMBLY — for plunger dia. of 7.5 mm to 9.0 mm inclusive
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY — for plunger dia. of 9.5 mm and 10.0 mm
69	GA 905	1	GASKET, delivery valve holder

*** Not shown assembled.

AMERICAN BOSCH DIVISION

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SPRINGFIELD 7, MASS. U.S.A.

Illustration Number	Part Number	Quantity Used	Description of Part
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
72	GA 906	1	GASKET, cap screw
73	SC 9018A	1	SCREW, cap—delivery valve
74	SC 150-2	2	SCREW, fastening—part number plate
75	NP 902	1	PLATE, part number—hydraulic head
76	HD 9022-1A	1	HEAD, hydraulic—with 6.5 mm dia. plunger and sleeve-round
	HD 9022-2A	1	HEAD, hydraulic—with 7.0 mm dia. plunger and sleeve-round
	HD 9022-3A	1	HEAD, hydraulic—with 7.5 mm dia. plunger and sleeve-round
	HD 9022-4A	1	HEAD, hydraulic—with 8.0 mm dia. plunger and sleeve-round
	HD 9022-5A	1	HEAD, hydraulic—with 8.5 mm dia. plunger and sleeve-round
	HD-9022-6A	1	HEAD, hydraulic—with 9.0 mm dia. plunger and sleeve-round
	HD 9022-7A	1	HEAD, hydraulic—with 9.5 mm dia. plunger and sleeve-round
	HD 9022-8A	1	HEAD, hydraulic—with 10.0 mm dia. plunger and sleeve-round
76A	SV 907	4	SLEEVE, stud—hydraulic head—stud used with round head only
77	as per order	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section—for type designation see stamping on head of screw
78	NT 1127	4	NUT, fastening—hydraulic head assembly
88	GA 907	1	GASKET, governor housing
151	RD 9024-1A	1	CONTROL ROD — for left-hand mounted pumps — includes parts 151B through 151E
151	RD 2024-2A	1	CONTROL ROD — for right-hand mounted pumps — includes parts 151B through 151E
151A	WA 1049	1	WASHER, plain—control rod pin
151B	SP 9014	1	SPRING, control rod
151C	RN 908	1	CLIP, retainer—hexagon nut
151D	PN 9017	1	PIN, control rod
151E	NT 1158	1	NUT, hexagon
152	PN 1122	2	HAIRPIN, control rod—governor and control unit end
***	WT 907A	1	WEIGHT ASSEMBLY—includes parts 153 to 155
153	AP 10416	2	PIN, weight
154	HP 908	1	SPIDER, weight
155	CP 15258	2	WEIGHT
156	SV 904A	1	SLEEVE ASSEMBLY—includes part 156A
156A	BB 1026	1	BALL THRUST BEARING—sleeve assembly
157	LE 9010	1	LEVER, fulcrum
158	HG 9012	1	HOUSING, governor
159	PG 901	1	PLUG, closing
160	SP 1067	1	RING, spring—fulcrum lever shaft
161	BB 1025	2	BALL BEARING—fulcrum lever shaft
162	SR 903	1	SPACER—fulcrum lever shaft
163	SH 9016	1	SHAFT, fulcrum lever
164	KY 11-3	1	KEY, Woodruff—fulcrum lever shaft
166	RG 1016	1	RING, spring—fulcrum lever shaft
167	PK 901	1	SEAL, oil—fulcrum lever shaft
168	PL 9014	1	PLATE, stop
169	SC 9015	1	SCREW, stop—operating lever—idle
169A	NT 63-5L 8-SCA	1	NUT, hexagon—stop screw

*** Not shown assembled.

AMERICAN BOSCH DIVISION



SPRINGFIELD 7, MASS., U. S. A.

Illustration Number	Part Number	Quantity Used	Description of Part
169B	SC 9015	1	SCREW, stop—shut-off screw—use spacers to provide a clearance of .040" to .080" between shut-off screw at shut off position
169C	SR 1033-1	as required	SPACER, stop screw—.062" thick
	SR 1033-2	as required	SPACER, stop screw—.125" thick
	SR 1033-3	as required	SPACER, stop screw—.188" thick
	SR 1033-4	as required	SPACER, stop screw—.031" thick
169D	NT 6-8 BL 8-9CA	1	NUT, hexagon—stop screw
170	SC 9015	1	SCREW, stop—full load
171	WA 22-8 BL 6-8	1	WASHER, lock—stop screw
172	WA 1143	1	WASHER, plain—stop screw
173	NT 6-8 BL 8-8CA	1	NUT, jam—stop screw
174	NT 1180	1	NUT, elastic—pivot screw
175	WA 1303	1	WASHER, plain—pivot screw
176	LE 9016A	1	LEVER, operating
177	SC 9012	1	SCREW, pivot—operating lever
178	NT 1142	2	NUT, hex—spring adjusting screw
179	SC 907	1	SCREW, spring adjusting
180	SP 9013	1	SPRING, extension—operating lever
181	SC 9011	1	SCREW, shut-off—operating lever
182	PL 9012	1	PLATE, shut-off
183	WA 22-8 BL	1	LOCKWASHER—stop nut
184	NT 6-8 BL 8-8CA	1	NUT, hex—shut-off screw
185	WA 1071	1	WASHER, closing plug
186	PG 903	1	PLUG, closing—governor housing
187	WA 1143	3	WASHER, plain—fastening screw
188	WA 22-8 BL 6-8	3	WASHER, lock—fastening screw
189	SC 1140	3	SCREW, fastening—governor housing
189A	SC 1110	1	SCREW, fastening—governor housing—lower
190	WA 1143	2	WASHER, plain—fastening screw
191	WA 22-8 BL 6-8	2	WASHER, lock—fastening screw
192	SC 1110	2	SCREW, fastening—stop plate and governor
193	NP 904	1	PLATE, name
194	SC 150-2	2	SCREW, fastening—name plate

Parts designated by illustration numbers 18A through 18H, 79 through 87 and 89 through 148 are not used in this assembly.

SC 15D1 - for CW rotation, L. H. mount and CCW rotation, R. H. mount pumps.

SC 15D2 - for CCW rotation, L. H. mount and CW, R. H. mount pumps.



These Pages supersede Manual Pages D 226/812 and D 226/813
Issued August, 1954

PSB 4A 100DH 3686A1 — Continental Model JD 382	3686A1
PSB 4A 100DH 3686B1 — Continental Model JD 382	3686B1
PSB 4A 100DH 3686A2 — Continental Model JD 382	3686A2
PSB 4A 100DH 3686B2 — Continental Model JD 382	3686B2

Clockwise Rotation — R.H. Mounting — Fulcrum Lever Set for 5%
Timed for Port Closing — Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Part Number	Inner Spring Illustration III Gap	Outer Spring Part Number	Outer Spring Illustration III Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
3686A1 3686B1	600 to 1350	SP 7950/24	.098"	SP 7951/14	.098" precompressed	Upward 70°	11% to 13%
3686A2 3686B2	600 to 1600	SP 7950/19	.118" to .137"	SP 7951/11	.039" precompressed	Upward 70°	6% to 8%

Illustration Number	Part Number	Quantity Used	Description of Part
11	HG 9050A	1	HOUSING, pump — includes parts 10, 11A and 11B
40	SGB 15B 1	1	SUPPLY PUMP ASSEMBLY — complete — includes parts 36, 37, 39, and 39A
54	HD 3527A	1	HYDRAULIC HEAD ASSEMBLY — complete includes parts 22, 45, 54A to 76A
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-8A	1	HEAD, hydraulic — with 10 mm diameter plunger and sleeve
100	PL 905	1	PLATE, stop
110	See Table	1	SPRING, governor — outer
111	See Table	1	SPRING, governor — inner
***	LE 79112A	1	LEVER ASSEMBLY, operating — includes parts 140, 142, 142A 142B
142	LE 79113	1	LEVER, operating
**	VA 9012A	1	CHECK VALVE ASSEMBLY — located at hydraulic head outlet

Omit illustrated part 32, 52, 53 and 53A (Large Plunger Spring not used)

ALL OTHER PARTS SAME AS PSB 4A 100DHI

NOTE: Pump type 3686A was manufactured with a camshaft (8) which did not provide a press fit with the drive hub (3). The camshaft in the 3686B type provides a press fit, between the camshaft and the drive hub. A replacement camshaft for the 3686A pump will result in the drive hub being a press fit.

CALIBRATION: For governor setting PSB 4A 100DH 3686A1 — 600 RPM 1350 RPM
PSB 4A 100DH 3686B1

Set at 1370 RPM for 46cc to 47cc per 500 strokes at full load position.
Set at 600 RPM for 14cc to 15cc per 500 strokes at idle position.

Cam nose must be steady on stop plate at 1350 RPM and leave stop plate at 1370 RPM

For governor setting: PSB 4A 100 DH 3686A2 — 600 RPM to 1600 RPM
PSB 4A 100DH 3686B2

Set at 1600 RPM for 49cc to 50cc per 500 strokes at full load position.
Set at 600 RPM for 12cc to 13cc per 500 strokes at idle position.

PSB 4A 70DH 3725A1 — Waukesha — Model 180 DLC	3725A1
PSB 4A 70DH 3725B1 — Waukesha — Model 180 DLC	3725B1

Clockwise Rotation — L.H. Mounting — Fulcrum Lever Set for 6% — Timed for Port Closing — Equipped with Internal Spring Type Governor — Cam nose to be set downward to form an angle of 45° with the fulcrum lever — Governor regulation 8% to 10%

Illustration Number	Part Number	Quantity Used	Description of Part
1	NT 908	1	NUT, hex — drive hub — 3725B pump only
**	PN 4-32BL	1	PIN, center — drive hub nut — 3725B pump only
3	HB 9010A	1	HUB, drive — see Note 1

- continued -

**Not Illustrated

***Not Shown Assembled



3725A1 - Cont'd - 3725B1

Illustration Number	Part Number	Quantity Used	Description of Part
8	SH 9038A	1	CAMSHAFT — 3725B pump only
10	PO 764	1	POINTER, timing
11	HG 9052A	1	HOUSING, pump — includes parts 10, 11A and 11B
40	SGB 15C7	1	SUPPLY PUMP ASSEMBLY — for parts see Supply Pump Section
42	SC 1516	1	SCREW, fastening — supply pump assembly — short
42	SC 9021	1	SCREW, fastening — supply pump assembly — long
54	HD 3726A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A to 76A
68	VA 904A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-2A	1	HEAD, hydraulic — with 7mm diameter plunger and sleeve
110	SP 7951/14	1	SPRING, governor — outer — .059" pre-compressed
111	SP 7950/14	1	SPRING, governor — inner — .079" gap
**	WI 763	as required	WIRE, locking — quill shaft cover screws

Omit illustrated part 32

ALL OTHER PARTS SAME AS PSB 4A 70DH 1

NOTE: 1: The 3725A pump was manufactured without a press fit between the camshaft and drive hub. The 3725B pump was manufactured with a camshaft which provides for the drive hub being a press fit.

CALIBRATION: For governor setting 500 RPM to 2000 RPM

Set at 2000 RPM for 17cc to 18cc per 500 strokes at full load position.
Set at 600 RPM for 6cc to 7cc per 500 strokes at idle position.

3742A1 PSB 4A 100DH 3742A1 — Continental — Model JD 382

3742B1 PSB 4A 100DH 3742B1 — Continental — Model JD 382

3742A2 PSB 4A 100DH 3742A2 — Continental — Model JD 382

3742B2 PSB 4A 100DH 3742B2 — Continental — Model JD 382

Clockwise Rotation — Fulcrum Lever Set for 5% — Timed for Port Closing — Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Inner Spring Gap	Outer Spring Illustration 110 Part Number	Outer Spring Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
3742A1 3742B1	600 to 1200	SP 7950/28	.138"	SP 7951/14	.039" precompressed	Horizontal	6% to 8%
3742A2 3742B2	600 to 1400	SP 7950/19	.138"	SP 7951/15	.138" precompressed	Horizontal	6% to 8%

Illustration Number	Part Number	Quantity Used	Description of Part
11	HG 9050A	1	HOUSING, pump — includes parts 10, 11A and 11B
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3527A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A to 76A
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-8A	1	HEAD, hydraulic — includes 10mm diameter plunger and sleeve
110	See Table	1	SPRING, governor — outer
111	See Table	1	SPRING, governor — inner
***	LE 79112A	1	LEVER ASSEMBLY, operating — includes parts 140, 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed hydraulic head

Omit illustrated parts 32, 52, 53 and 53A (large plunger spring not used)

ALL OTHER PARTS SAME AS PSB 4A 100DH 1

NOTE: Pump type 3742A was manufactured with a camshaft (8) which did not provide a press fit with the drive hub (3). The camshaft in the 3742B type provides a press fit between the camshaft and the drive hub. A replacement camshaft for the 3742A pump will result in the drive hub being a press fit.

- continued -

**Not Illustrated

***Not Shown Assembled



- Cont'd - 3742A1 to 3742B2

CALIBRATION: For governor setting PSB 4A 100DH 3742A1 |
 PSB 4A 100DH 3742B1 | 600 RPM to 1200 RPM
 PSB 4A 100DH 3742A2 |
 PSB 4A 100DH 3742B2 | 600 RPM to 1400 RPM

Set at full load RPM for 46cc to 47cc per 500 strokes at full load position.
 Set at 600 RPM for 14cc to 15cc per 500 strokes at idle position.

PSB 4A 70DH 3792A1 — Continental — Model GD 157

3792A1

Clockwise Rotation - L.H. Mounting — Fulcrum Lever Set for 5% — Timed for Port Closing — Equipped with Internal Spring Type Governor — Cam Nose to be Set all the Way Down — Governor Regulation 6% to 8%.

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3793A	1	HYDRAULIC HEAD ASSEMBLY — includes parts 22, 45, 54A to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-2A	1	HEAD, hydraulic — includes 7mm diameter plunger and sleeve
110	SP 7951/11	1	SPRING, governor — outer — .039" precompressed
111	SP 7950/7	1	SPRING, governor — inner — .118" gap
***	LE 79112A	1	LEVER ASSEMBLY, operating — includes parts 140, 142, 142A and 142B
142	LE 79113	1	LEVER, operating

Omit illustrated part 52

ALL OTHER PARTS SAME AS PSB 4A 70DH 1

NOTE: Drive hub (3) is a press fit to camshaft (8)

CALIBRATION: For governor setting 600 RPM to 2400 RPM
 Set at 2400 RPM for 19cc to 20cc per 500 strokes at full load position.
 Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position.

PSB 4A 100DH 3813A1 — Continental — Model JD 382

3813A1

PSB 4A 100DH 3813A2 — Continental — Model JD 382

3813A2

Clockwise Rotation — L.H. Mounting — Fulcrum Lever Set for 5% — Timed for Port Closing — Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
3813A1	600 to 1000	None	—	SP 7951/12	.177" precompressed	Horizontal	3%
3813A2	600 to 1200	SP 7950/13	Flush	None	—	Horizontal	3%

Illustration Number	Part Number	Quantity Used	Description of Part
10	HC 9050A	1	HOUSING, pump — includes parts 10, 11A and 11B
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3527A	1	HYDRAULIC HEAD ASSEMBLY — complete includes parts 22, 45, 54A to 76A
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-8A	1	HEAD, hydraulic — includes 10 mm diameter plunger and sleeve
110	Sec Table	1	SPRING, governor — outer
111	Sec Table	1	SPRING, governor — inner
***	WT 9014A	1	WEIGHT AND SPIDER ASSEMBLY — friction clutch — includes parts 82 thru 87
87	WT 905A	2	WEIGHT — includes part 83
122	SP 902	1	SPRING, operating lever
***	LE 79112A	1	LEVER ASSEMBLY, operating — includes parts 140, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed — hydraulic head

- continued -

**Not Illustrated

***Not Shown Assembled

3813A1 - Cont'd - 3813A2

Omit illustrated parts 32, 52, 53 and 53A (large plunger spring not used)

ALL OTHER PARTS SAME AS PSB 4A 100DH 1

CALIBRATION: For governor setting PSB 4A 100DH 3813A1 — 600 RPM to 1000 RPM

Set at 1000 RPM for 38cc to 39cc per 500 strokes at full load position. Pump to shut-off between 1040 RPM and 1065 RPM — adjust idle screw to the mid-position.

Governor setting PSB 4A 3813A2 — 600 RPM to 1200 RPM

Set at 1200 RPM for 34cc to 35cc per 500 strokes at full load position. Pump to shut-off between 1270 RPM and 1300 RPM — adjust idle screw to the mid-position.

3837A1 PSB 4A 90YH 3837A1 — Buda — Models 4DI 344 and 4DIC 344

Clockwise Rotation — L.H. Mounting — Governor Regulation 7 1/2% to 10% — Timed for Port Closing — Equipped with External Spring Type Governor

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9016	1	HUB, drive — press fit to camshaft
10	PO 901	1	POINTER, timing — to protrude .715" from mounting flange
11	HG 9053A	1	HOUSING, pump — includes parts 10, 11A and 11B
40	SGB 15B11	1	FUEL SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 3773A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 36, 37, 39 and 39A
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-6A	1	HEAD, hydraulic — with 9.0 mm diameter plunger and sieve
180	SP 9013-2	1	SPRING, extension — operating lever

Omit illustrated part 32, 52, 53 and 53A (Large Plunger Spring Not Used).

ALL OTHER PARTS SAME AS PSB 4A 90YH 1

CALIBRATION: For governor setting 600 RPM to 1800 RPM

Set at 1800 RPM for 30cc to 31cc per 500 strokes at full load position.

Set at 600 RPM for 7cc to 8cc per 500 strokes at idle position.

3898A1 PSB 4A 90DH 3898A1 — Buda — Model 4DI 344

3898B1 PSB 4A 90DH 3898B1 — Buda — Model 4DI 344

3898C1 PSB 4A 90DH 3898C1 — Buda — Model 4DI 344

Clockwise Rotation — L.H. Mounting — Fulcrum Lever Set for 10% for 3898A1 and 3898B1 pumps and for 5% for 3898C1 pump — Timed for Port Closing — Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111		Outer Spring Illustration 110		Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
		Part Number	Gap	Part Number	Gap		
3898A1	600 to 1800	SP 7950/13	.118"	SP 7951/14	.059"	Horizontal	9% to 11%
3898B1					precompressed		
3898C1	600 to 1800	SP 7950/21	.138"	SP 7951/14	.059"	Horizontal	9% to 11%
					precompressed		

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9016	1	HUB, drive — see note
10	PO 901	1	POINTER, timing
11	HG 9058A	1	HOUSING, pump — includes parts 10, 11A and 11B
40	SGB 15B11	1	SUPPLY PUMP ASSEMBLY — for parts see Supply Pump Section
54	HD 3899A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-6A	1	HEAD, hydraulic — includes 9mm diameter plunger and sleeve

- continued -

**Not Illustrated



- Cont'd - 3898A1 to 3898C1

Illustration Number	Part Number	Quantity Used	Description of Part
98	HG 9055	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY, stop plate — includes parts **a to **d
**a	PL 79110A	1	STOP PLATE ASSEMBLY
**b	BK 7917	1	BRIDGE, stop plate
**c	NT 8-8CA	1	NUT, jam
**d	WA 1067	1	WASHER, jam nut
110	See Table	1	SPRING, governor — outer
111	See Table	1	SPRING, governor — inner

Omit illustrated part 32.

ALL OTHER PARTS SAME AS PSB 4A 90DH 1

NOTE: Pump type 3898A was manufactured with a camshaft (8) which did not provide for a press fit of the drive hub (3). Pump types 3898B and 3898C were manufactured with camshaft (8) which provides a press fit with the drive hub (3). A replacement camshaft for the 3898A pump will result in the drive hub being a press fit.

CALIBRATION: For governor setting 600 RPM to 1800 RPM
 Set at 1800 RPM for 34cc to 35cc per 500 strokes at full load position.
 Set at 600 RPM for 6cc to 7cc per 500 strokes at idle position.

PSB 4A 100DH 4021A1 — Continental — Model JD 332 4021A1

Clockwise Rotation — L.H. Mounting — Fulcrum Lever Set for 5% — Timed for Port Closing — Equipped with Internal Spring Type Governor Governor Regulation 7% to 9%

Illustration Number	Part Number	Quantity Used	Description of Part
11	HG 9050A	1	HOUSING, pump — includes parts 10, 11A and 11B
40	SGB 151	1	FUEL SUPPLY PUMP ASSEMBLY — includes parts 36, 47, 39 and 39A
54	HD 3884A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-8A	1	HEAD, hydraulic — includes 10mm diameter plunger and sleeve
100	PL 9016	1	PLATE, stop
110	SP 7951/11	1	SPRING, governor — outer — .039" precompressed
111	SP 7950/19	1	SPRING, governor — inner — .098" gap
***	LE 79112A	1	LEVER ASSEMBLY — operating — includes parts 140, 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed — hydraulic head

Omit illustrated parts 32, 52, 53 and 53A (large plunger spring not used)

ALL OTHER PARTS SAME AS PSB 4A 100DH 1

NOTE: Drive hub (3) is a press fit to camshaft (8)

CALIBRATION: For governor setting 600 RPM to 1600 RPM
 Set at 1600 RPM for 38cc to 39cc per 500 strokes at full load position.
 Set at 600 RPM for 8cc to 9cc per 500 strokes at idle position.

PSB 4A 80DH 4054A1 — Continental — Model HD 260 4054A1

PSB 4A 80DH 4054A2 — Continental — Model HD 260 4054A2

PSB 4A 80DH 4054A3 — Continental — Model HD 260 4054A3

Clockwise Rotation — L.H. Mounting — Fulcrum Lever Set for 5% — Timed for Port Closing — Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111		Outer Spring Illustration 110		Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
		Part Number	Gap	Part Number	Gap		
4054A1	600 to 2400	SP 7950/4	.059"	SP 7951/11	.098" precompressed	Horizontal	6% to 8%
4054A2	600 to 2200	SP 7950/14	.059"	SP 7951/11	.059" precompressed	Horizontal	6% to 8%
4054A3	600 to 2000	SP 7950/21	.158"	SP 7951/11	.059" precompressed	Horizontal	6% to 8%

**Not Illustrated

- continued -

***Not Shown Assembled



4054A1 to 4054A3 - Cont'd -

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	FUEL SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3880A	1	HYDRAULIC HEAD ASSEMBLY — complete includes parts 22, 45, 45A, to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-4A	1	HEAD, hydraulic — includes 8mm diameter plunger and sleeve
110	See Table	1	SPRING, governor — outer
111	See Table	1	SPRING, governor — inner
***	LE 79112A	1	LEVER ASSEMBLY — operating — includes parts 140, 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed — hydraulic head

Omit illustrated part 32

ALL OTHER PARTS SAME AS PSB 4A 80DH 1

NOTE: Drive hub (3) is a press fit to camshaft (8)

CALIBRATION: For governor setting PSB 4A 80DH 4054A1 — 600 RPM to 2400 RPM
 PSB 4A 80DH 4054A2 — 600 RPM to 2200 RPM
 PSB 4A 80DH 4054A3 — 600 RPM to 2000 RPM

Set at full load RPM for 33cc to 34cc per 500 strokes at full position.
 Set at 600 RPM for 6cc to 7cc per 500 strokes at idle position.

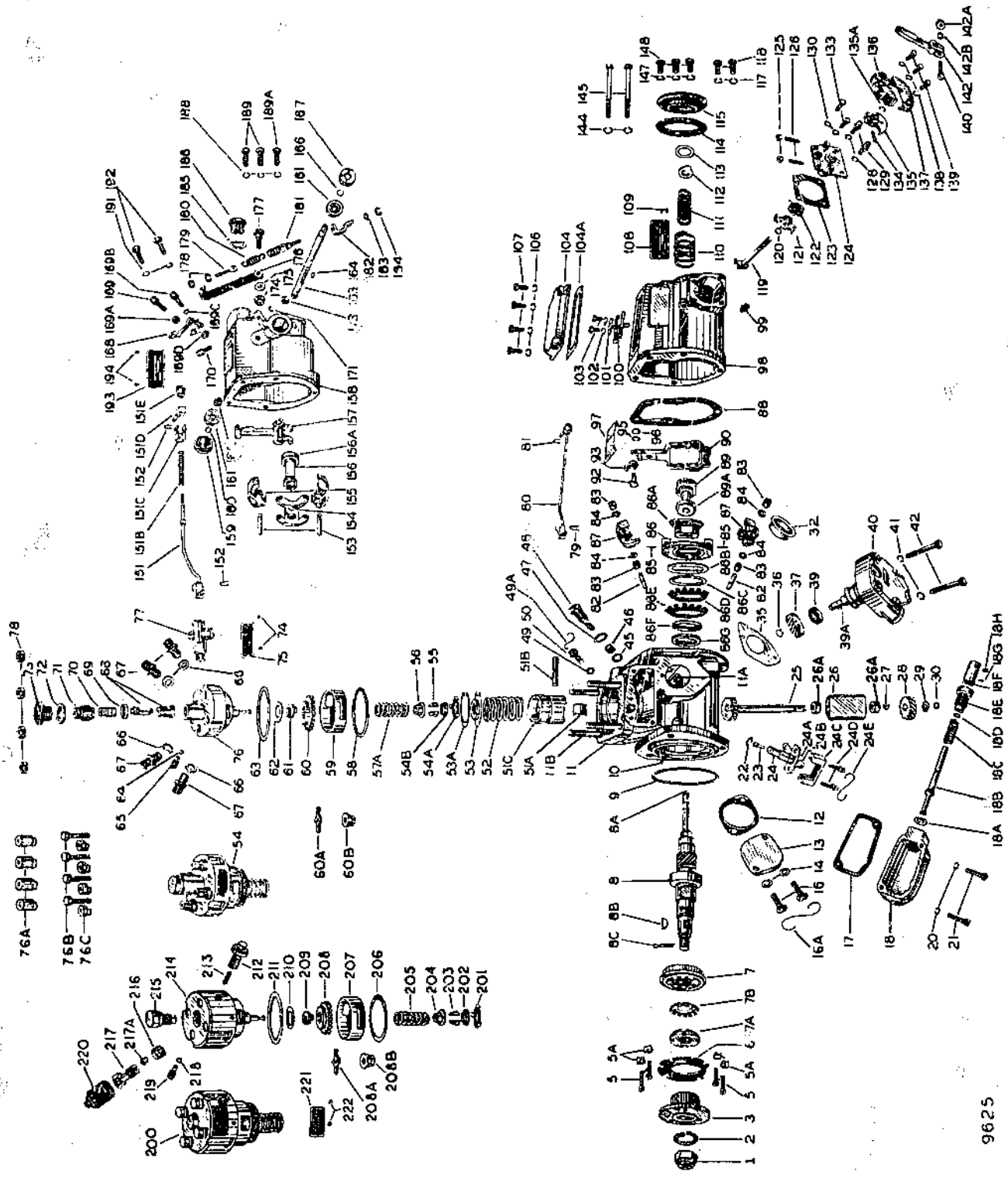
AMERICAN BOSCH
SERVICE PARTS LIST
For
FUEL INJECTION PUMPS

PSB 4A 65-100 EH 1

And

PSB 4A 65-100 WH 1





9625

PSB 4A 65-100 EH 1

NOTE: This pump is equipped with an internal spring type governor with friction clutch.

The part or parts affected by this reissue is indicated by a vertical line in the margin of the page.

Illustration Number	Part Number	Quantity Used	Description of Part
1	NT 909	1	NUT, hub — camshaft (Tighten to a torque of 45-55 ft. lbs.)
2	NMS 423/1X	1	WASHER, lock — hub screw
3	HB 9019	1	HUB, drive-Tapered
5	SC 1555	4	SCREW, fastening — ball bearing retaining plate
5A	WA 901	4	WASHER, lock — fastening screw
6	PL 907	1	PLATE, retaining — ball bearing
7	BB 1054	1	BEARING, ball — camshaft
7A	NT 905	1	NUT, round — camshaft ball bearing
7B	WA 1720	1	WASHER, lock — camshaft ball bearing
8	SH 9056A	1	CAMSHAFT — includes part 8A — Tapered Drive End
8A	SC 1149	1	SCREW AND LOCKWASHER — camshaft
8B	NKE 5/2X	1	KEY, Woodruff — camshaft
8C	PN 4-32BL	1	PIN, cotter — camshaft nut
9	GA 76200	1	GASKET, rubber ring
10	PO 765	1	POINTER, timing
11	HG 9023A	1	HOUSING, pump — includes parts 10, 11A and 11B
11A	BG 7649	1	BUSHING, camshaft
11B	SD 903	4	STUD, housing
12	GA 904	1	GASKET, quill shaft pad
13	CV 9047	1	PAD, quill shaft — pump housing
14	GA 7616	2	GASKET, fastening screw
16	SC 1119	2	SCREW, fastening — quill shaft pad
16A	WI 901	as required	WIRE LOCKING — quill shaft fastening screws
17	GA 9026	1	GASKET, timing window cover assembly
18	CV 9018	1	COVER, timing window
18A	GA 1036	1	GASKET, shut-off rod
***	RD 908A	1	SHUT-OFF ROD ASSEMBLY — includes parts 18B through 18H
18B	RD 903	1	ROD, shut-off
18C	SP 904	1	SPRING, shut-off rod
18D	GA 1019	1	GASKET, shut-off rod
18E	SC 904	1	SCREW, bearing
18F	FI 902	1	FITTING, shut-off
18G	PN 1026	1	PIN, shut-off rod
18H	SC 325-4BL	1	SCREW, set
20	WA 6-8BL	2	WASHER, lock — fastening screw
21	SC 27-20BL	2	SCREW, fastening — timing window assembly
22	GA 1014	1	GASKET, ring — control unit assembly
23	PN 9023	1	PIN, plunger sleeve
24	CU 9011A	1	CONTROL UNIT ASSEMBLY — includes parts 24A and 24B for left hand mounted pump — type designation stamped 11
24	CU 9010A	1	CONTROL UNIT ASSEMBLY — includes part 24A and 24B for right hand mounted pump — type designation stamped 10
24A	NT 4-6	1	NUT, hex — control unit
24B	WA 1648	1	WASHER, tab — control unit hex nut
24C	RN 9011	1	RETAINER, control unit
24D	SC 1700	2	SCREW WITH LOCKWASHER, fastening — control unit assembly
24E	WI 901	1	WIRE, locking — control unit fastening screw
***	SH 9071A	1	QUILL SHAFT ASSEMBLY, includes parts 25 thru 30
25	SH 909A	1	SHAFT, quill — with gear
26	BG 9032	1	BUSHING, quill shaft
26A	SR 9012	2	SPACER, quill shaft
27	KY 1006	1	KEY, Woodruff — quill shaft
28	GE 908	1	GEAR, camshaft driven
29	WMS 2157/4C0X	as required	WASHER, plain — .002" thick — to eliminate shaft play
	WMS 2157/1X	as required	WASHER, plain — .004" thick — to eliminate shaft play
	WMS 2157/2X	as required	WASHER, plain — .008" thick — to eliminate shaft play
	WMS 2157/3X	as required	WASHER, plain — .020" thick — to eliminate shaft play
30	RG 1014	1	RING, spring — quill shaft
32	PG 902	1	PLUG, closing
35	GA 903	1	GASKET, supply pump
36	RG 1014	1	RING, spring — supply pump shaft
37	GE 908	1	GEAR, drive — supply pump shaft
39	PK 7910	1	SEAL, oil — supply pump shaft
39A	KY 901	1	KEY, supply pump shaft
40	SGB 15 B1	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section — for clockwise rotation pumps
40	SGB 15 B2	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section for counterclockwise rotation pumps

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*** Not Shown Assembled

Illustration Number	Part Number	Quantity Used	Description of Part
41	WA 6-8 BL	2	WASHER, lock — fastening screw
42	SC 1516	2	SCREW, fastening — supply pump assembly
45	GA 1012	1	GASKET, ring — filter screw
46	FE 901	1	FILTER, screen
47	GA 7965	1	GASKET, filter screw
48	SC 903	1	SCREW, filter
49	GA 7616	1	GASKET, fastening screw
49A	WI 1073	as required	WIRE, locking — fastening
50	SC 1140	1	SCREW, locating — quill shaft bushing
***	TP 903A	1	TAPPET ASSEMBLY — includes parts 51A to 51C
51A	RL 903A	1	ROLLER ASSEMBLY, tappet
51B	PN 9013	1	PIN, tappet roller — diameter .3745 inch
51C	GU 9011A	1	GUIDE ASSEMBLY, tappet
52	SP 903	1	SPRING, plunger — outer
53	GU 9013	1	SEAT, spring — upper
53A	RG 903	1	RING, spring — upper spring seat
54	per requirement	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A through 76A — for part number see name-plate
54A	RG 902	1	RING, retaining — button
54B	BO 901	1	BUTTON, plunger
55	HP 9015	1	LOCK, plunger — 2 piece
56	GU 909	1	SEAT, plunger spring — lower
57A	SP 901	1	SPRING, inner — plunger
58	GA 1009	1	GASKET, ring — head assembly
59	RN 9014	1	COVER, gear retainer — for left hand mounted pumps
59	RN 9015	1	COVER, gear retainer — for right hand mounted pumps
60	GE 909	1	GEAR, plunger drive — for clockwise rotation — left hand mounted pumps
60	GE 9010	1	GEAR, plunger drive for counterclockwise rotation — left hand mounted pumps
60	GE 901	1	GEAR, plunger drive — for clockwise rotation — right hand mounted pumps
60	GE 903	1	GEAR, plunger drive — for counterclockwise rotation — right hand mounted pumps
61	GU 903	1	GUIDE, plunger
62	WA 1362	1	WASHER, thrust — plunger drive gear
63	GA 1119	1	GASKET, ring — head assembly
64	BB 1024	1	BALL, sealing — set screw
65	SC 1352	1	SCREW, set — sealing ball
66	GA 9010	4	GASKET, discharge fittings
67	FI 901	4	FITTING, discharge — No notch on hex — Use with gasket (GA 9010)
67	FI 9012	4	FITTING, discharge — Notch on hex — Do not use gasket
68	VA 907A	1	DELIVERY VALVE ASSEMBLY — for plunger dia. of 6.5mm and 7.0mm
68	VA 908A	1	DELIVERY VALVE ASSEMBLY — for plunger dia. of 7.5mm to 9.0mm inclusive
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY — for plunger dia. of 9.5mm and 10.0mm
69	GA 905	1	GASKET, delivery valve holder
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
72	GA 906	1	GASKET, cap screw
73	SC 9018A	1	SCREW, cap — delivery valve
74	SC 150-2	2	SCREW, fastening — part number plate
75	NP 902	1	PLATE, part number — hydraulic head
76	Per Pump Specification		SEE NOTE 3
76A	SV 907	4	SLEEVE stud — hydraulic head — used with round head only
76B	SC 1862	4	SCREW, cap fastening hydraulic head — use with round heads only in place of studs
76C	SV 9018	4	SLEEVE, cap screw — hydraulic head — use with SC 1862 only
77	as per order	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — for type designation see stamping on head of screw
78	NT 1127	4	NUT, fastening — hydraulic head assembly
79	PN 1122	1	HAIRPIN — control rod
80	RD 9032-1A	1	ROD, control — left hand mounted pumps
80	RD 9032-2A	1	ROD, control — right hand mounted pumps

- continued -

*** Not Shown Assembled



Illustration Number	Part Number	Quantity Used	Description of Part
81	PN 1122	1	HAIRPIN, control rod — governor end
***	WT 9013A	1	WEIGHT AND SPIDER ASSEMBLY — friction clutch includes parts 82 through 87 — See Note 1
82	PN 905A	2	PIN, weight
83	BG 903	4	BUSHING, weight
84	WA 1448-1	as required	WASHER, plain — weight pin — .036" thick
84	WA 1448-2	as required	WASHER, plain — weight pin — .038" thick
84	WA 1448-3	as required	WASHER, plain — weight pin — .040" thick
84	WA 1448-4	as required	WASHER, plain — weight pin — .044" thick
84	WA 1448-5	as required	WASHER, plain — weight pin — .048" thick
85	PN 1105	2	PIN, roll
86	HP 9014	1	SPIDER, weight
86A	HB 909	1	HUB, friction drive
86B	RN 9013	1	RETAINER, hub
86C	SR 794-1	as required	SPACER, adjusting — spider — .035" thick
86C	SR 794-2	as required	SPACER, adjusting — spider — .049" thick
86C	SR 794-3	as required	SPACER, adjusting — spider — .065" thick
86C	SR 794-4	as required	SPACER, adjusting — spider — .020" thick
86C	SR 794-5	as required	SPACER, adjusting — spider — .015" thick
86C	SR 794-6	as required	SPACER, adjusting — spider — .010" thick
86C	SR 794-7	as required	SPACER, adjusting — spider — .005" thick
86D	DC 796	1	DISC, spring — inner
86E	DC 797	1	DISC, spring — outer
86F	WA 7918	1	WASHER, lock — nut
86G	NT 795	1	NUT, adjusting — hub
87	WT 9016A	2	WEIGHT — includes part 83
88	GA 907	1	GASKET, governor housing
89	SV 901A	1	SLEEVE ASSEMBLY — includes part 89A — See Note 2
89A	BB 7910	1	BALL THRUST BEARING — sleeve assembly
90	LE 9025-1A	1	FULCRUM LEVER ASSEMBLY — 5% governor regulation — pivot pins assembled in lower holes
90	LE 9025-2A	1	FULCRUM LEVER ASSEMBLY — 10% governor regulation — pivot pins assembled in upper holes
92	SC 1136	1	SCREW, square head — cam
93	CA 793	1	CAM, torque
95	WA 6-8 BL	1	WASHER, lock — cam screw
96	NT 8-8 BL	1	NUT, cam screw
97	BA 904	1	PLATE, oil baffle
98	HG 9036	1	HOUSING, governor
99	PN 901A	1	PIN, pivot — fulcrum lever
100	PL 904	1	PLATE, stop
101	WA 1143	2	WASHER, plain — fastening screw
102	WA 6-8 BL	2	WASHER, lock — fastening screw
103	SC 1404	2	SCREW, fastening — stop plate
104	CV 9032C	1	COVER, top — governor housing
104A	GA 908	1	GASKET, top cover
106	WA 6-8 BL	4	WASHER, lock — fastening screw
107	SC 1110	4	SCREW, fastening — top cover
108	NP 904	1	PLATE, name
109	SC 150-2	2	SCREW, fastening — name plate
110	per requirement	1	SPRING, governor — outer — for spring see specific pump type
111	per requirement	1	SPRING, governor — inner — for spring see specific pump type
112	SR 799/1	as required	SPACER, governor spring — inner — .020" thick
112	SR 799/2	as required	SPACER, governor spring — inner — .042" thick
112	SR 799/3	as required	SPACER, governor spring — inner — .058" thick
112	SR 799/4	as required	SPACER, governor spring — inner — .083" thick
112	SR 799/5	as required	SPACER, governor spring — inner — .177" thick
112	SR 799/6	as required	SPACER, governor spring — inner — .276" thick
113	SR 7914/1	as required	SPACER, governor spring — outer — .020" thick
113	SR 7914/2	as required	SPACER, governor spring — outer — .042" thick
113	SR 7914/3	as required	SPACER, governor spring — outer — .058" thick
113	SR 7914/4	as required	SPACER, governor spring — outer — .083" thick
113	SR 7914/5	as required	SPACER, governor spring — outer — .156" thick
114	GA 902	1	GASKET, end cap
115	CP 901C	1	CAP, end — governor housing
117	WA 6-8 BL	2	WASHER, lock — fastening screw
118	SC 1140	2	SCREW, fastening — end cap
119	SH 901A	1	SHAFT ASSEMBLY, operating
120	GA 76195	1	GASKET, ring — shaft assembly
121	PL 902A	1	PLATE ASSEMBLY, spring
122	SP 9016	1	SPRING, operating lever
123	GA 901	1	GASKET, shaft bearing plate
124	BG 904	1	PLATE, shaft bearing
125	NT 6-8 BL	2	NUT, hex — stop screw
126	SC 350-16 BL	2	SCREW, stop — stop lever
128	WA 6-8 BL	2	WASHER, lock — stud

- continued -

*** Not Shown Assembled

Illustration Number	Part Number	Quantity Used	Description of Part
129	SD 902	2	STUD, fastening — shaft bearing plate — lower
130	GA 7616	2	GASKET, fastening screw — upper
133	SC 1356	2	SCREW, fastening — shaft bearing plate — upper
134	SC 901	1	SCREW, clamping — stop lever
135	BL 901	1	LEVER, stop — operating shaft
135A	SP 1066	1	RING, snap — shaft assembly
136	CV 7945	1	COVER, stop lever — upper
137	CV 7946	1	COVER, stop lever — lower
138	WA 22-6 BL	3	WASHER, lock — fastening screw
139	SC 1354	3	SCREW, fastening — stop lever covers
***	LE 79117A	1	LEVER ASSEMBLY, operating — includes illustrated parts 140, 142, 142A and 142B
140	SC 7961	1	SCREW, fastening — operating lever
142	LE 79116	1	LEVER, operating
142A	NI 8-8 BL	1	NUT, hex — fastening screw
142B	WA 6-8 BL	1	WASHER, lock — fastening screw
144	WA 6-8 BL	2	WASHER, lock — fastening screw
145	SC 1738	2	SCREW, fastening — governor housing — long
147	WA 6-8 BL	3	WASHER, lock — fastening screw
148	SC 1140	3	SCREW, fastening — governor housing — short
200	per requirement	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 201 thru 216, 218, 219, 221 and 222. For part number see nameplate
201	RG 902	1	RING, button retaining
202	BO 901	1	BUTTON, plunger
203	HP 9015	2	LOCK, plunger
204	GU 909	1	SEAT, plunger spring — lower
205	SP 901	1	SPRING, plunger — inner
206	GA 1009	1	GASKET, ring — head assembly
207	RN 9014	1	COVER, gear retainer — for L.H. mounted pump
207	RN 9015	1	COVER, gear retainer — for R.H. mounted pump
208	GE 909	1	GEAR, plunger drive — for clockwise rotation left hand mounted pump
208	GE 903	1	GEAR, plunger drive — for counterclockwise rotation right hand mounted pump
208	GE 9010	1	GEAR, plunger drive — for counterclockwise rotation left hand mounted pump
208	GE 901	1	GEAR, plunger drive — for clockwise rotation right hand mounted pump
209	GU 903	1	GUIDE, plunger
210	WA 1362	1	WASHER, thrust — plunger drive gear
211	GA 1119	1	GASKET, ring — head assembly
212	SC 9035	1	SCREW, delivery valve
213	SP 9036	1	SPRING, delivery valve
214	Per Pump Specification		SEE NOTE 3
215	SC 9036	1	SCREW, cap — plunger bore
216	SV 9019	4	SLEEVE — cap retaining
217	FI 9022	4	FITTING — discharge — must be purchased separately
217A	SV 7922	4	SLEEVE — discharge fitting — must be purchased separately
218	BB 1070	4	BALL, sealing
219	SC 1867	4	SCREW, set — sealing ball
220	CP 904	4	CAP, protection — discharge fitting — must be purchased separately
221	NP 906	1	NAME PLATE
232	SC 150-2	2	SCREW, fastening — name plate

NOTE: 1 Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider.

Check friction clutch slippage for 3.0 to 5.25 foot pounds. Replacement of spring discs (86D and 86E) or friction drive hub (86A) requires that the clutch slippage be adjusted for 4.0 to 5.0 foot pounds. Always apply lubricating oil to the face of the friction drive hub (86A) at point of contact with the fingers of the spring discs (86D) and (86E) prior to checking clutch slippage.

NOTE: 2 IMPORTANT—Check governor sleeve for a minimum travel of 16mm (.630") from the location of the weights completely collapsed to the position of completely expanded.

NOTE: 3 When replacing head, order a complete new or rebuilt Hydraulic Head Assembly.

*** Not Shown Assembled

PSB 4A 65-100 WH 1

NOTE: This pump is equipped with an external spring type governor.

Illustration Number	Part Number	Quantity Used	Description of Part
1	NT 909	1	NUT, hub — camshaft (Tighten to a torque of 45-55 ft lbs.)
2	NMS 423/1X	1	WASHER, lock — hub screw
3	HB 9019	1	HUB, drive — tapered
5	SC 1555	4	SCREW, fastening — ball bearing retaining plate
5A	WA 901	4	WASHER, lock — fastening screw
6	PL 907	1	PLATE, retaining — ball bearing
7	BB 1054	1	BALL BEARING — camshaft
7A	NT 905	1	NUT, round — camshaft ball bearing
7B	WA 1720	1	WASHER, lock — camshaft ball bearing
8	SH 9057A	1	CAMSHAFT — includes part 8A — tapered at drive end
8A	SC 1149	1	SCREW AND LOCKWASHER — camshaft
8B	NKE 5/2X	1	KEY, Woodruff — camshaft
8C	FN 4-32 BL	1	PIN, cotter — camshaft nut
9	GA 76200	1	GASKET, rubber ring
10	PO 765	1	POINTER, timing
11	HG 9023A	1	HOUSING, pump — includes parts 10, 11A and 11B
11A	BG 7649	1	BUSHING, camshaft
11B	SD 903	4	STUD, housing
12	GA 904	1	GASKET, quill shaft pad
13	CV 9047	1	PAD, quill shaft — pump housing
14	GA 7616	2	GASKET, fastening screw
16	SC 1119	2	SCREW, fastening — quill shaft pad
16A	WI 901	1	WIRE, locking — quill shaft fastening screws
17	GA 9026	1	GASKET, timing window cover
18	CV 9014C	1	COVER, timing window
20	WA 6-8 BL	2	WASHER, lock — fastening screw
21	SC 1140	2	SCREW, fastening — timing window cover
22	GA 1014	1	GASKET, ring — control unit assembly
23	PN 9023	1	PIN, plunger sleeve
24	CU 9010A	1	CONTROL UNIT ASSEMBLY — includes parts 24A and 24B — for left hand mounted pumps — type designation stamped 10
24	CU 9011A	1	CONTROL UNIT ASSEMBLY — includes parts 24A and 24B — for right hand mounted pumps — type designation stamped 11
24A	NT 4-6	1	NUT, hex — control unit
24B	WA 1648	1	WASHER, tab — control unit hex nut
24C	RN 9011	1	RETAINER, control unit
24D	SC 1700	2	SCREW, fastening — with lockwasher — control unit assembly
24E	WI 901	1	WIRE, locking — control unit fastening screw
***	SH 9071A	1	QUILL SHAFT ASSEMBLY — includes parts 25 thru 30
25	SH 909A	1	SHAFT, quill — with gear
26	BG 9032	1	BUSHING, quill shaft
26A	SR 9012	2	SPACER — quill shaft
27	KY 1006	1	KEY, Woodruff — quill shaft
28	GE 908	1	GEAR — camshaft driven
29	WMS 2157/400X	as required	WASHER, plain — .002" thick — to eliminate shaft play
	WMS 2157/1X	as required	WASHER, plain — .004" thick — to eliminate shaft play
	WMS 2157/2X	as required	WASHER, plain — .008" thick — to eliminate shaft play
	WMS 2157/3X	as required	WASHER, plain — .020" thick — to eliminate shaft play
30	RG 1014	1	RING, spring — quill shaft
32	PG 902	1	PLUG, closing
35	GA 903	1	GASKET, supply pump
36	RG 1014	1	RING, spring supply pump shaft
37	GE 908	1	GEAR, drive — supply pump shaft
39	PK 7910	1	SEAL, oil — supply pump shaft
39A	KY 901	1	KEY, supply pump shaft
40	SGB 15 B1	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section for clockwise rotation pumps
40	SGB 15 B2	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section for counterclockwise rotation pumps
41	WA 6-8 BL	2	WASHER, lock — fastening screw
42	SC 1516	2	SCREW, fastening — supply pump assembly
45	GA 1012	1	GASKET, ring — filter screw
46	FE 901	1	FILTER, screen
47	GA 7965	1	GASKET, filter screw
48	SC 903	1	SCREW, filter
49	GA 7616	1	GASKET, fastening screw

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*** Not Shown Assembled

Illustration Number	Part Number	Quantity Used	Description of Part
49A	WI 1073	as required	WIRE, locking — fastening screw
50	SC 1140	1	SCREW, locating — quill shaft bushing
---	TP 903A	1	TAPPET ASSEMBLY, includes parts 51A to 51C
51A	RL 903A	1	ROLLER ASSEMBLY, tappet
51B	PN 9013	1	PIN, tappet roller — diameter .3745 inch
51C	GU 9011A	1	GUIDE ASSEMBLY, tappet
52	SP 903	1	SPRING, plunger — outer
53	GU 9013	1	SEAT, spring — upper
53A	RG 903	1	RING, spring — upper spring seat
54	per requirement	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A through 76A — for part number see name-plate
54A	RG 902	1	RING, retaining — button
54B	BO 901	1	BUTTON, plunger
55	HP 9015	1	LOCK, plunger — 2 piece
56	GU 909	1	SEAT, plunger spring — lower
57A	SP 901	1	SPRING, inner — plunger
58	GA 1009	1	GASKET, ring — head assembly
59	RN 9015	1	COVER, gear retainer — right hand mounted pump
	RN 9014	1	COVER, gear retainer — left hand mounted pump
60	GE 909	1	GEAR, plunger drive — for clockwise rotation — left hand mounted pumps
	GE 6010	1	GEAR, plunger drive — for counter clockwise rotation — left hand mounted pumps
	GE 901	1	GEAR, plunger drive — for clockwise rotation — right hand mounted pumps
	GE 903	1	GEAR, plunger drive — for counterclockwise rotation — right hand mounted pumps
61	GU 903	1	GUIDE, plunger
62	WA 1352	1	WASHER, thrust — plunger drive gear
63	GA 1113	1	GASKET, ring — head assembly
64	BB 1024	1	BALL, sealing — set screw
65	SC 1352	1	SCREW, set — sealing ball
66	GA 9010	4	GASKET, discharge fitting
67	FI 901	4	FITTING, discharge — No notch on hex — Use with gasket (GA9010)
67	FI 9012	4	FITTING, discharge — Notch on hex — Do not use gasket
68	VA 907A	1	DELIVERY VALVE ASSEMBLY — for plunger dia. of 6.5mm and 7.0mm
68	VA 908A	1	DELIVERY VALVE ASSEMBLY — for plunger dia. of 7.5mm to 9.0mm inclusive
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY — for plunger dia. of 9.5mm and 10.0mm
69	GA 905	1	GASKET, delivery valve holder
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
72	GA 906	1	GASKET, cap screw
73	SC 9018A	1	SCREW, cap — delivery valve
74	SC 150-2	2	SCREW, fastening — part number plate
75	NP 902	1	PLATE, part number — hydraulic head
76	Per Pump Specification		SEE NOTE
76A	SV 907	4	SLEEVE, stud — hydraulic head — stud used with round head only
76B	SC 1862	4	SCREW, cap fastening — hydraulic head — use with round heads only in place of studs
76C	SV 9018	4	SLEEVE, cap screw — hydraulic head — use with SL 1862 only
77	as per order	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — for type designation see stamping on head screw
78	NT 1127	4	NUT, fastening — hydraulic head assembly
88	GA 907	1	GASKET, governor housing
151	RD 2024-1A	1	CONTROL ROD — for left hand mounted pumps — includes parts 151B through 151E and one of 152
151	RD 2024-2A	1	CONTROL ROD — for right hand mounted pumps — includes parts 151B through 151E and one of 152
151B	SP 9014	1	SPRING, control rod
151C	RN 908	1	CLIP, retainer — hexagon nut

- continued -

*** Not Shown Assembled



Illustration Number	Part Number	Quantity Used	Description of Part
151D	PN 9017	1	PIN, control rod
151E	NT 1158	1	NUT, hexagon
152	PN 1122	2	HAIRPIN, control rod — governor and control unit end
***	WT 907A	1	WEIGHT ASSEMBLY — includes parts 153 to 155
153	AP 10416	1	PIN, weight
154	HP 908	1	SPIDER, weight
155	CP 15258	2	WEIGHT
156	SV 904A	1	SLEEVE ASSEMBLY — includes part 156A
156A	BB 1026	1	BALL THRUST BEARING — sleeve assembly
157	LE 9010	1	LEVER, fulcrum
158	HG 9012	1	HOUSING, governor
159	PG 901	1	PLUG, closing
160	SP 1067	1	RING, spring — fulcrum lever shaft
161	BB 1025	2	BALL BEARING — fulcrum lever shaft
162	SR 903	1	SPACER — fulcrum lever shaft
163	SH 9016	1	SHAFT, fulcrum lever
164	KY 11-3	1	KEY, Woodruff — fulcrum lever shaft
166	RG 1016	1	RING, spring — fulcrum lever shaft
167	PK 901	1	SEAL, oil — fulcrum lever shaft
168	PL 9014	1	PLATE, stop
169	SC 9015	1	SCREW, stop — operating lever — idle
169A	NT 8-8 BL	1	NUT, hexagon — stop screw
169B	SC 9015	1	SCREW, stop — shut-off screw — use spacers to provide a clearance of .040" to .080" between shut-off screw at shut-off position
169C	SR 1033-1	as required	SPACER, stop screw — .062" thick
	SR 1033-2	as required	SPACER, stop screw — .125" thick
	SR 1033-3	as required	SPACER, stop screw — .188" thick
	SR 1033-4	as required	SPACER, stop screw — .031" thick
169D	NT 8-8 BL	1	NUT, hexagon — stop screw
170	SC 9015	1	SCREW, stop — full load
171	WA 6-8 BL	1	WASHER, lock — stop screw
173	NT 8-8 BL	1	NUT, jam — stop screw
174	NT 1180	1	NUT, elastic — pivot screw
175	WA 1303	1	WASHER, plain — pivot screw
176	LE 9016A	1	LEVER, operating
177	SC 9012	1	SCREW, pivot — operating lever
178	NT 1142	2	NUT, hex — spring adjusting screw
179	SC 907	1	SCREW, spring adjusting
180	SP 9013	1	SPRING, extension — operating lever
181	SC 9011	1	SCREW, shut-off — operating lever
182	PL 9012	1	PLATE, shut-off
183	WA 22-8 BL	1	LOCKWASHER — stop nut
184	NT 6-8 BL	1	NUT, hex — shut-off screw
185	WA 1071	1	WASHER, closing plug
186	PG 903	1	PLUG, closing — governor housing
188	WA 6-8 BL	3	WASHER, lock — fastening screw
189	SC 1140	2	SCREW, fastening — governor housing
189A	SC 1110	1	SCREW, fastening — governor housing — lower
191	WA 6-8 BL	2	WASHER, lock — fastening screw
192	SC 1110	2	SCREW, fastening — stop plate and governor
193	NP 904	1	Plate, name
194	SC 150-2	2	SCREW, fastening — name plate
200	per requirement	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 201 thru 216, 218, 219, 221, and 222. For part number see nameplate
201	RG 902	1	RING, button retaining
202	BO 901	1	BUTTON, plunger
203	HP 9015	2	LOCK, plunger
204	GU 909	1	SEAT, plunger spring — lower
205	SP 901	1	SPRING, plunger — inner
206	GA 1009	1	GASKET, ring — head assembly
207	RN 9014	1	COVER, gear retainer — for L.H. mounted pump
207	RN 9015	1	COVER, gear retainer — for R.H. mounted pump
208	GE 909	1	GEAR, plunger drive — for clockwise rotation left hand mounted pump
208	GE 903	1	GEAR, plunger drive — for counterclockwise rotation right hand mounted pump
208	GE 9010	1	GEAR, plunger drive — for counterclockwise rotation left hand mounted pump
208	GE 901	1	GEAR, plunger drive — for clockwise rotation right hand mounted pump
209	GU 903	1	GUIDE, plunger

- continued -

*** Not Shown Assembled

Illustration Number	Part Number	Quantity Used	Description of Part
210	WA 1362	1	WASHER, thrust — plunger drive gear
211	GA 1119	1	GASKET, ring — head assembly
212	SC 9035	1	SCREW, delivery valve
213	SP 9036	1	SPRING, delivery valve
214	Per Pump Specification		SEE NOTE
215	SC 9036	1	SCREW, cap — plunger bore
216	SV 9019	4	SLEEVE — cap retaining
217	FI 9022	4	FITTING — discharge — must be purchased separately
217A	SV 7922	4	SLEEVE — discharge fitting — must be purchased separately
218	BB 1070	4	BALL, sealing
219	SC 1867	4	SCREW, set — sealing ball
220	CP 904	4	CAP, protection — discharge fitting — must be purchased separately
221	NP 906	1	NAME PLATE
222	SC 150-2	2	SCREW, fastening — name plate

Parts designated by illustration numbers 18A through 18H, 79 through 87 and 89 through 148 are not used in this assembly.

NOTE: When replacing head, order a complete new or rebuilt Hydraulic Head Assembly.

AMERICAN BOSCH DIVISION



SPRINGFIELD 7, MASS., U. S. A.

These Pages Supersede Manual Pages D226/862 thru D226/865 Issued January, 1957 and D226/866 thru D226/872 Issued October, 1956

PSB 4A 70EH 4073A1 — Waukesha — Model 180DLC

4073A1

Clockwise Rotation — L. H. Mounting — Fulcrum Lever Set for 5% Timed for Port Closing — Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Gap	Outer Spring Illustration IIO Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4073A1	600 to 2000	SP 7950/14	.079"	SP 7951/14	.059" precompressed	Down 45°	8% to 10%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9018	1	HUB, drive
10	PO 764	1	POINTER, timing
11	HG 9052A	1	HOUSING, pump includes parts 10, 11A and 11B
40	SGB 15C7	1	SUPPLY PUMP ASSEMBLY, for parts see Supply Pump Section
42	SC 1516	1	SCREW, fastening — supply pump assembly — short
42	SC 9021	1	SCREW, fastening — supply pump assembly — long
54	HD 3726A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A, to 76A
68	VA 904A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-2A	1	HEAD, hydraulic — includes 7 mm diameter plunger and sleeve
110	See Table	1	SPRING, governor — outer
111	See Table	1	SPRING, governor — inner
**	WI 763	as required	WIRE, locking — quill shaft cover screws — specify 1 length

Omit illustrated part 32

ALL OTHER PARTS SAME AS PSB 4A 70EH 1

CALIBRATION: For Governor Setting 600 RPM to 2000 RPM
Average for all outlets:
Set at 2000 RPM for 17 cc to 18 cc per 500 strokes at full load position.
Set at 600 RPM for 6cc to 7cc per 500 strokes at idle position.

PSB 4A 90WH 4076A1 — Buda — Models 4DI344 and 4DIC344

4076A1

Clockwise Rotation — L. H. Mounting — Governor Regulation 7 1/2% to 10% Timed for Port Closing — Equipped with External Spring Type Governor

Illustration Number	Part Number	Quantity Used	Description of Part
3	HE 9021	1	HUB, drive — See Note
10	PO 901	1	POINTER, timing — to project .719" from mounting flange
11	HG 9058A	1	HOUSING, pump — includes parts 10, 11A and 11B
40	SGB 15B11	1	SUPPLY PUMP ASSEMBLY — for parts see Supply Pump Section
54	HD 3773A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A to 76A
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-6A	1	HEAD, hydraulic — includes 9 mm diameter plunger and sleeve
180	SP 9013-2	1	SPRING, extension — operating lever

Omit illustrated parts 32, 52, 53 and 53A (Large plunger spring not used)

ALL OTHER PARTS SAME AS PSB 4A 90WH 1

NOTE to Illustration 3: After scribing port closing line mark on drive hub (3) add two additional (but lighter) line marks on each side of port closing line mark at 3° intervals.

CALIBRATION: For Governor Setting 600 RPM to 1800 RPM
Average for all outlets:
Set at 1800 RPM for 30cc to 31cc per 500 strokes at full load position.
Set at 600 RPM for 7cc to 8cc per 500 strokes at idle position.

**Not Illustrated

AMERICAN BOSCH DIVISION

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SPRINGFIELD 7, MASS., U.S.A.

4081A1-A4 PSB 4A 90EH 4081A1-A4
4081B1-B4 PSB 4A 90EH 4081B1-B4
4081C1-C4 PSB 4A 90EH 4081C1-C4 Model 4DI 344
4081D1-D4 PSB 4A 90EH 4081D1-D4 — Buda — Model HD 344
4081E1-E4 PSB 4A 90EH 4081E1-E4 Model HD 344G
4081F1-F4 PSB 4A 90EH 4081F1-F4
4081G1-G4 PSB 4A 90EH 4081G1-G4

Clockwise Rotation — L. H. Mounting — Fulcrum Lever set for 5%
 Timed for Port Closing — Equipped with Internal spring type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4081A1 thru 4081E1		(Refer to Special Instructions under Calibration on Page D226/864)					
4081A2 thru 4081G2	600 to 1600	SP 7950/19	.079"	SP 7951/14	.079" precompressed	Down 80°	9% to 11%
4081A3 thru 4081G3	600 to 1800	SP 7950/13	.098"	SP 7951/14	.079" precompressed	Up 55°	9% to 11%
4081A4 thru 4081G4	600 to 1800	SP 7950/13	.098"	SP 7951/14	.079" precompressed	Up 40°	9% to 11%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9024	1	HUB, drive — camshaft
10	PO 903	1	POINTER, timing
11	HG 9047A	1	HOUSING, pump — includes parts 10, 11A and 11B — use with 4081A thru 4081F pumps
11	HG 9063A	1	HOUSING, pump — includes parts 10, 11A and 11B — use with 4081G pump
18	CV 9018	1	COVER, timing window — use with 4081A thru 4081F pumps
18	CV 9048A	1	COVER, timing window — includes dowel pins — use with 4081G pumps
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY — includes parts 18B thru 18G
18F	FI 9010	1	FITTING, shut-off
40	SGB 15311	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 3899A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45 and 54A thru 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-6A	1	HEAD, hydraulic — with 9.0 mm diameter plunger and sleeve
80	RD 9032-1A	1	ROD, control — use with 4081A thru 4081E pumps
80	RD 9042-3A	1	ROD, control — use with 4081F and 4081G pumps
***	LE 9074-5A	1	FULCRUM LEVER ASSEMBLY — includes parts 80, 90 and **a thru **c — See Note 2 — use with 4081F and 4081G pumps
90	LE 9025-1A	1	FULCRUM LEVER ASSEMBLY — use with 4081A thru 4081E pumps
90	LE 9080-1A	1	FULCRUM LEVER ASSEMBLY — use with 4081F and 4081G pumps
**a	WA 1771	1	WASHER, tab
**b	WA 1770	1	WASHER, spring seat
**c	SP 9055	1	SPRING, adjusting — tension
**d	NT 1228	1	NUT, adjusting
**e	PN 1054	1	PIN, cotter — locking
98	HG 9055	1	HOUSING, governor
100	PL 7958-1A	1	BRIDGE ASSEMBLY, stop plate — includes parts **f thru **h
**f	PL 7957A	1	PLATE, stop
**g	BK 7938C	1	BRIDGE, stop plate
**h	NT 8-8CA	2	NUT, jam
103	SC 1140	2	SCREW, fastening — bridge assembly
110	See Table	1	SPRING, governor — outer
111	See Table	1	SPRING, governor — inner

- continued -

**Not Illustrated

***Not Shown Assembled



**- Cont'd - 4081A1
thru
4081G4**

Omit illustrated part 32

NOTE 1: These pumps were originally supplied with a droop screw which was threaded into the fulcrum lever and contacted the stop plate. When required to service one of these pumps, this droop screw must be eliminated. Always check cam nose setting.

NOTE 2: See Manual Page D3001/602H for assembly and servicing.

NOTE 3: Install stop lever (135) approximately 0° to 10° to the left instead of 15°.

NOTE 4: These pumps were originally supplied with a tamper proof governor top cover (104). If it is necessary to replace this cover, use the basic cover CV 9032C.

CALIBRATION: Average for all outlets:
PSB 4A 90EH 4081A1, B1, C1, D1, E1.

Ascertain whether this pump is to be used with the HD6A, HD6B or HD6G model tractor.

If it is to be used with the HD6A or HD6B tractor the pump is to be converted to and fuel set the same as the PSB 4A 90EH 4081E3.

If it is to be used with the HD6G tractor the pump is to be converted to and fuel set the same as the PSB 4A90EH 4081E4. These conversions involve the repositioning of the cam nose and fuel setting only. Be sure to change the type designation on the name plate after the conversion has been made.

PSB 4A 90EH 4081A2, B2, C2, D2, E2, F2, G2
Governor Setting 600 RPM to 1600 RPM
Set at 1600 RPM for 33 cc to 34 cc per 500 strokes at full load position.
Set at 600 RPM for 11 cc to 12 cc per 500 strokes at idle position.

PSB 4A 90EH 4081A3, B3, C3, D3, E3, F3, G3
Governor setting 600 RPM to 1800 RPM
Set at 1800 RPM for 37.5 cc to 38.5 cc per 500 strokes at full load position.
Cam nose to leave stop plate at 1825 RPM.
Set at 600 RPM for 11 cc to 12 cc per 500 strokes at idle position.

PSB 4A 90EH 4081A4, B4, C4, D4, E4, F4, G4.
Set at 1800 RPM for 40 cc to 41 cc per 500 strokes at full load position.
Cam nose to leave stop plate at 1825 RPM.
Set at 600 RPM for 11 cc to 12 cc per 500 strokes at idle position.

PSB 4A 100EH 4099A1 — Minneapolis-Moline — Model 4

4099A1

Clockwise Rotation — L. H. Mounting — Fulcrum Lever Set for 5%
Timed for Part Closing — Equipped with Intereal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Gap	Outer Spring Illustration I 10 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4099A1	600 to 1300	SP 7950/24	.098"	SP 7951/15	.039" precompressed	Up 45°	8% to 10%

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGD 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3527A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A to 76A
58	VA 9010A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-8A	1	HEAD, hydraulic — includes 10mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
98	HG 9055	1	HOUSING, governor
100	PL 9022	1	PLATE, stop
110	See Table	1	SPRING, governor — outer
111	See Table	1	SPRING, governor — inner
***	LE 79112A	1	LEVER ASSEMBLY, operating — includes parts 140, 142, 142A and 142B
142	LE 79113	1	LEVER, operating

- continued -

***Not Shown Assembled

AMERICAN BOSCH DIVISION



SPRINGFIELD 7, MASS., U.S.A.

4099A1 - Cont'd -

Omit illustrated part 32, 52, 53 and 53A (large plunger spring not used).

ALL OTHER PARTS SAME AS PSB 4A 100EH 1

CALIBRATION: For Governor Setting 600 RPM to 1300 RPM

Average for all outlets:

Set at 1300 RPM for 44cc to 45cc per 500 strokes at full load position.

Set at 600 RPM for 11cc to 12cc per 500 strokes at idle position.

4117A1-A3 PSB 4A 80EH 4117A1-A3 — Continental — Model HD 260Clockwise Rotation — L. H. Mounting — Fulcrum Lever Set for 5%
Timed for Port Closing — Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration III		Outer Spring Illustration IIO		Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
		Part Number	Gap	Part Number	Gap		
4117A1	600 to 2400	SP 7950/4	.059"	SP 7951/11	.098"	Horizontal	6% to 8%
4117A2	600 to 2200	SP 7950/14	.059"	SP 7951/11	precompressed .059"	Horizontal	6% to 8%
4117A3	600 to 2000	SP 7950/21	.157"	SP 7951/11	precompressed .059"	Horizontal	6% to 8%

Illustration Number	Part Number	Quantity Used	Description of Part
54	HD 3886A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-4A	1	HEAD, hydraulic — with 8mm diameter plunger and sleeve
110	See Table	1	SPRING, governor — outer
111	See Table	1	SPRING, governor — inner
***	LE 79112A	1	LEVER ASSEMBLY, operating — includes 140, 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed — hydraulic head

Omit illustrated part 32.

ALL OTHER PARTS SAME AS PSB 4A 80EH 1

CALIBRATION: For Governor Setting

PSB 4A 80EH 4117A1 — 600 RPM to 2400 RPM

PSB 4A 80EH 4117A2 — 600 RPM to 2200 RPM

PSB 4A 80EH 4117A3 — 600 RPM to 2000 RPM

Average for all outlets:

Set at full load RPM for 33cc to 34cc per 500 strokes at full load position.

Set at 600 RPM for 6cc to 7cc per 500 strokes at idle position.

4118A1 PSB 4A 100EH 4118A1 — Continental — Model JD 382Clockwise Rotation — L. H. Mounting — Fulcrum Lever Set for 5%
Timed for Port Closing — Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration III		Outer Spring Illustration IIO		Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
		Part Number	Gap	Part Number	Gap		
4118A1	600 to 1600	SP 7950/19	.098"	SP 8051/11	.039" precompressed	All the way down	7% to 8%

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	FUEL SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 38 and 39A
54	HD 3884A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A to 76A

- continued -

**Not Illustrated

***Not Shown Assembled



- Cont'd - 4118A1

Illustration Number	Part Number	Quantity Used	Description of Part
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-8A	1	HEAD, hydraulic — includes 10mm diameter plunger and sleeve
100	PL 9016	1	PLATE, stop
110	See Table	1	SPRING, governor — outer
111	See Table	1	SPRING, governor — inner
***	LE 79112A	1	LEVER ASSEMBLY, operating — includes parts 140, 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed — hydraulic head

Omit illustrated parts 32, 52, 53, and 53A (large plunger spring not used)

ALL OTHER PARTS SAME AS PSB 4A 100EH 1

CALIBRATION: For Governor Setting 600 RPM to 1600 RPM
 Average for all outlets:
 Set at 1600 RPM for 41cc to 42cc per 500 strokes at full load position.
 Set at 600 RPM for 7cc to 8cc per 500 strokes at idle position.

NOTE: Install stop lever (135) approximately 0° to 10° to the left instead of 15°.

PSB 4A 100EH 4119A1-A2 — Continental — Model JD 382

4119A1-A2

Clockwise Rotation — L. H. Mounting — Fulcrum Lever Set for 5%
 Timed for Port Closing — Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4119A1	600 to 1000	None	—	SP 7951/12	.177" precompressed	Horizontal	3%
4119A2	600 to 1200	SP 7950/13	Flush	None	—	Horizontal	3%

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	FUEL SUPPLY ASSEMBLY — includes parts 36, 37, 39 and 39A
50	HD 3527A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A to 56A
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-8A	1	HEAD, hydraulic — includes 10mm diameter plunger and sleeve
***	WT 9014A	1	WEIGHT AND SPIDER ASSEMBLY — friction clutch — includes parts 82 thru 87
87	WT 905A	1	WEIGHT — includes part 83
110	See Table	1	SPRING, governor — outer
111	See Table	1	SPRING, governor — inner
122	SP 902	1	SPRING, operating lever
***	LE 79112A	1	LEVER ASSEMBLY, operating — includes parts 140, 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed

Omit illustrated parts, 32, 52, 53 and 53A (large plunger spring not used)

ALL OTHER PARTS SAME AS PSB 4A 100EH 1

NOTE: Install stop lever (135) approximately 5° to 15° to the left instead of 15°

CALIBRATION: For Governor Setting PSB 4A 100EH 4119A1 — 600 RPM to 1000 RPM

Average for all outlets:
 Set at 1000 RPM for 38cc to 39cc per 500 strokes at full load position. Fuel delivery must stop between 1040 RPM and 1065 RPM. Set idle screw in mid-position.

For Governor Setting PSB 4A100EH 4119A2 — 600 RPM to 1200 RPM. Set at 1200 RPM for 34cc to 35cc per 500 strokes at full load position. Fuel delivery must stop between 1270 RPM to 1300 RPM. Set idle screw in mid-position.

**Not Illustrated

***Not Shown Assembled

4121A2-A6 PSB 4A 100EH 4121A2-A6 — Continental — Model JD 382

Clockwise Rotation — L. H. Mounting — Fulcrum Lever Set for 5%
Timed for Port Closing — Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Gap	Outer Spring Illustration IIO Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4121A2	600 to 1600	SP 7950/19	.118" to .137"	SP 7951/11	.039" precompressed	Up 70°	6% to 8%
4121A3	600 to 1500	SP 7950/19	.098"	—	—	Up 70°	3% to 5%
4121A4	600 to 1200	SP 7950/28	.138"	SP 7951/14	.039" precompressed	Horizontal	6% to 8%
4121A5	600 to 1400	SP 7950/19	.138"	SP 7951/15	.138" precompressed	Horizontal	6% to 8%
4121A6	600 to 1700	SP 7950/13	.138"	SP 7951/14	.078" precompressed	Horizontal	6% to 8%

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY, includes parts 36, 37, 39 and 39A
54	HD 3527A	1	HYDRAULIC HEAD ASSEMBLY, complete — includes parts 22, 45, 54A to 76A
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-8A	1	HEAD, hydraulic — includes 10mm diameter plunger and sleeve
100	PL 905	1	PLATE, stop
110	See Table	1	SPRING, governor — outer
111	See Table	1	SPRING, governor — inner
***	LE 79112A	1	LEVER ASSEMBLY, operating — includes parts 140, 142, 142A and 142B
142	LE 79113	1	LEVER, operating
**	FI 904	1	FITTING, bleed — hydraulic head

Omit illustrated parts 32, 52, 53 and 53A (large plunger spring not used)

ALL OTHER PARTS SAME AS PSB 4A 100EH 1

NOTE: Install stop lever (135) approximately 0° to 10° to the left instead of 15°.

CALIBRATION: Average for all outlets:

PSB 4A 100EH 4121A2 — governor setting — 600 RPM to 1600 RPM
Set at 1600 RPM for 49cc to 50cc per 500 strokes at full load position.
Set at 600 RPM for 12cc to 13cc per 500 strokes at idle position.

PSB 4A 100EH 4121A3 — governor setting — 600 RPM to 1500 RPM
Set at 1500 RPM for 40cc to 41cc per 500 strokes at full load position
Set idle screw in mid-position.

PSB 4A 100EH 4121A4 — governor setting — 600 RPM to 1200 RPM
PSB 4A 100EH 4121A5 — governor setting — 600 RPM to 1400 RPM
PSB 4A 100EH 4121A6 — governor setting — 600 RPM to 1700 RPM
Set at full load RPM for 46cc to 47cc per 500 strokes at full load position.
Set at 600 RPM for 14cc to 15cc per 500 strokes at idle position.

4129A1 PSB 4A 80EH 4129A1 — Continental — Model GD 157

Clockwise Rotation — L. H. Mounting — Fulcrum Lever Set for 5%
Timed for Port Closing — Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Gap	Outer Spring Illustration IIO Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4129A1	600 to 2260	SP 7950/7	.118" to .138"	SP 7951/11	.059" precompressed	Up 45°	10% to 12%

- continued -

**Not Illustrated

***Not Shown Assembled



- Cont'd - 4129A1

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3880A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54b to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-4A	1	HEAD, hydraulic — includes 8mm diameter plunger and sleeve
93	CA 794	1	CAM, torque
110	See Table	1	SPRING, governor — outer
111	See Table	1	SPRING, governor — inner
***	LE 9066A	1	LEVER ASSEMBLY, operating — includes parts 140, 142, 142A and 142B
142	LE 9065	1	LEVER, operating
**	FI 904	1	FITTING, bleed — hydraulic head

Omit illustrated part 32

NOTE: Stop lever (Illustration Number 135) to be set at 0° ± 5° instead of 15°

ALL OTHER PARTS SAME AS PSB 4A 80EH 1

CALIBRATION: For governor setting 600 RPM to 2260 RPM
 Average for all outlets:
 Set at 2260 RPM for 19cc to 20cc per 500 strokes at full load position.
 Set at 600 RPM for 5cc to 6cc per 500 strokes at idle position.

PSB 4A 75EH 4152A1 thru A3

4152A1-A3

PSB 4A 75EH 4152B1 thru B3 — Buda — 3 - 7/16" x 4 1/8" — Model 4DA153

4152B1-B3

Clockwise Rotation — L. H. Mounting — Fulcrum Lever set for 10%
 Timed for Port Closing — Equipped with Internal spring type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4152A1	500 to 1950	SP 7950/4	.118"	SP 7951/14	.020" to .039" precompressed	Down 50°	9% to 11%
4152B1							
4152A2	600 to 1800	SP 7950/14	.118"	SP 7951/14	.039" precompressed	Down 50°	9% to 11%
4152B2							
4152A3	450 to 2400	SP 7950/7	.078"	SP 7951/11	.059" precompressed	Up 60°	9% to 11%
4152B3							

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B11	1	FUEL SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 4155A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45 and 54A to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-3A	1	HEAD, hydraulic — with 7.5 mm diameter plunger and sleeve
77	VA 938A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
80	RD 9032-1A	1	ROD, control — use with 4152A pumps
80	RD 9042-3A	1	ROD, control — use with 4152B pumps
***	LE 9074-6A	1	FULCRUM LEVER ASSEMBLY — includes parts 80, 90 and **a thru **e — use with 4152B pumps — See Note 1
90	LE 9025-2A	1	FULCRUM LEVER ASSEMBLY — use with 4152A pumps
90	LE 9080-2A	1	FULCRUM LEVER ASSEMBLY — use with 4152B pumps
**a	WA 1771	1	WASHER, tab
**b	WA 1770	1	WASHER, spring seat
**c	SP 9035	1	SPRING, adjusting — tension
**d	NT 9228	1	NUT, adjusting

- continued -

**Not Illustrated

***Not Shown Assembled

4152A1-A3 - Cont'd - 4152B1-B3

Illustration Number	Part Number	Quantity Used	Description of Part
**c	PN 1024	1	PIN, cotter — locking
98	HG 9055	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY — stop plate — includes parts **f thru **h
**f	PL 79110A	1	PLATE, stop
**g	EK 7938C	1	BRIDGE, stop plate
**h	NT 8-8CA	2	NUT, jam
103	SC 1140	2	SCREW, fastening — bridge assembly
110	See Table	per requirement	SPRING, governor — outer
111	See Table	per requirement	SPRING, governor — inner

Omit illustrated part 32

ALL OTHER PARTS SAME AS FOR PSB 4A 75EH 1

NOTE 1: See Manual Page D3001/602H for assembly and servicing

NOTE 2: Install stop lever (135) approximately 0° to 10° to the left instead of 15°.

CALIBRATION: Average for all outlets:

PSB 4A 75EH 4152A1 — governor setting — 500 RPM to 1950 RPM

PSB 4A 75EH 4152B1

PSB 4A 75EH 4152A2 — governor setting — 600 RPM to 1800 RPM

PSB 4A 75EH 4152B2

PSB 4A 75EH 4152A3 — governor setting — 450 RPM to 2400 RPM

PSB 4A 75EH 4152B3

Set at full load RPM for 22 cc to 23 cc per 500 strokes at full load position

Set at idle RPM for 5 cc to 6 cc per 500 strokes at idle position.

4162A1 PSB 4A 80EH 4162A1 — Continental — Model HD 260

Clockwise Rotation — L. H. Mounting — Fulcrum Lever Set for 5%
Timed for Port Closing — Equipped with Internal Spring Type Governor

Pump Type	Governor	Inner Spring		Outer Spring		Cam Nose Angle Related to Fulcrum Lever	Governor Regulation		
	Speed RPM	Illustration	Part Number	Gap	Illustration			Part Number	Gap
4162A1	600 to 2260	SP 7950/7		.118"		SP 7951/11	.039" precompressed	All the way down	10% to 12%

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3880A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54b to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-4A	1	HEAD, hydraulic — includes 8mm diameter plunger and sieve
110	See Table	1	SPRING, governor — outer
111	See Table	1	SPRING, governor — inner
***	LE 9066A	1	LEVER ASSEMBLY, operating — includes parts 140, 142, 142A and 142B
142	LE 9065	1	LEVER, operating
**	FI 904	1	FITTING, bleed — hydraulic head

Omit illustrated part 32

Install stop lever (135) approximately 5° to 15° to the left instead of 15°

ALL OTHER PARTS SAME AS PSB 4A 80EH 1

CALIBRATION: For governor setting 600 RPM to 2260 RPM

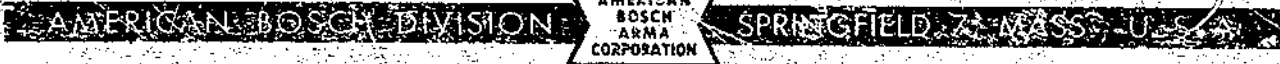
Average for all outlets:

Set at 2260 RPM for 33cc to 34cc per 500 strokes at full load position.

Set at 600 RPM for 6cc to 7cc per 500 strokes at idle position

**Not Illustrated

***Not Shown Assembled



PSB 4A 75EH 4170B1 — Buda 3 3/4" x 4 1/8" — Model 4BD182
 PSB 4A 75EH 4170C1

4170B1
4170C1

Clockwise Rotation — L. H. Mounting — Fulcrum Lever set for 5%
 Timed for Port Closing — Equipped with Internal spring type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Gap	Outer Spring Illustration I10 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4170B1 4170C1	600 to 2400	SP 7950/11	157"	SP 7951/11	.039" precompressed	All the way down	6% to 8%

Illustration Number	Part Number	Quantity Used	Description of Part
80	PN 9025	1	PIN, cotter
40	SGB 15B11	1	FUEL SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 4155A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, and 54A thru 76A
66	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-5A	1	HEAD, hydraulic — with 7.5mm diameter plunger and sleeve
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
80	RD 9032-1A	1	ROD, control — use with 4170B pump
80	RD 9042-3A	1	ROD, control — use with 4170C pump
**a	LE 9074-5A	1	FULCRUM LEVER ASSEMBLY — includes parts 80, 90 and **a thru **c — use with 4170C pump — See Note 1
90	LE 9025-1A	1	FULCRUM LEVER ASSEMBLY — use with 4170B pump
90	LE 9080-1A	1	FULCRUM LEVER ASSEMBLY — use with 4170C pump
**a	WA 1771	1	WASHER, tab
**b	WA 1770	1	WASHER, spring seat
**c	SP 9035	1	SPRING, adjusting — tension
**d	NT 1228	1	NUT, adjusting
**e	PN 1024	1	PIN, cotter — locking
98	HG 9055	1	HOUSING, governor
100	PL 79109A	1	BRIDGE ASSEMBLY, stop plate — includes parts **f thru **h
**f	PL 79110A	1	PLATE, stop
**g	BK 7938C	1	BRIDGE, stop plate
**i	NT 8-8CA	2	NUT, jam
103	SC 1140	2	SCREW, fastening — bridge assembly
110	See Table	1	SPRING, governor — outer
111	See Table	1	SPRING, governor — inner

Omit illustrated part 32

ALL OTHER PARTS SAME AS FOR PSB 4A 75EH 1

NOTE 1: See Manual Page D3001/602H for assembly and servicing

CALIBRATION: Average for all outlets:

PSB 4A 75EH 4170B1 — governor setting — 600 RPM to 2400 RPM

PSB 4A 75EH 4170C1 — governor setting — 600 RPM to 2400 RPM

Set at full speed for 25cc to 26cc per 500 strokes at full load position.

Set at idle speed for 6cc to 7cc per 500 strokes at idle position.

PSB 4A 100EH 4241A1 — International Harvester —
 Models: TD14, TD14A and Super WD 9

4241A1

Clockwise Rotation — L. H. Mounting — Timed for Port Closing — Fulcrum Lever Set for 5%
 Equipped with Internal Spring Type Governor — Cam Nose to be Set Upward to Form an Angle of 45° with the Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
3	GE 9014	1	GEAR, drive
10	PO 764	1	POINTER, timing
11	HG 9049A	1	HOUSING ASSEMBLY — includes parts 10, 11A and 11B
18	CV 9014C	1	COVER, timing window
21	SC 1140	2	SCREW, fastening — timing window cover
24	CU 9011A	1	CONTROL UNIT ASSEMBLY — includes parts 24A and 24B

**Not Illustrated

- continued -

***Not Shown Assembled

4271A1 - Cont'd -

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B5	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 3527A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-8A	1	HEAD, hydraulic — with 10.0mm diameter plunger and sleeve — round
77	VA 9012A	1	BLEED AND CHECK VALVE ASSEMBLY
100	PL 905	1	PLATE, stop
110	SP 7951/14	1	SPRING, governor — outer
111	SP 7950/24	1	SPRING, governor — inner
135	BL 902	1	LEVER, stop — operating lever
142	LE 9071	1	LEVER, operating

Omit illustrated parts 18A to 18H, 32, 52, 53, 53A, 1 of 125 and 1 of 126 (large plunger spring not used)

NOTE: Install stop lever (135) in mid-position = 5° instead of 15° to the left

ALL OTHER PARTS SAME AS PSB 4A 100EH 1

CALIBRATION: Governor setting 500 RPM to 1400 RPM

Spring Spacing Adjustment — Inner .137" gap
Outer .049" precompressed

Average for all outlets:

Set at 1400 RPM for 52cc to 53cc per 500 strokes at full load position.

Idle setting to be made on engine.

4271A1 PSB 4A 90EH 4271A1 — Minneapolis-Moline Co. — Model D336-4

Clockwise Rotation — L. H. Mounting — Timed for Port Closing — Fulcrum Lever Set for 5% — Equipped with Internal Spring Type Governor — For speeds up to and including 1900 RPM — Governor Regulation 8% to 10% — Cam Nose to be Set Upward to Form an Angle of 45° with the Fulcrum Lever.

Illustration Number	Part Number	Quantity Used	Description of Part
24	CU 9011A	1	CONTROL UNIT ASSEMBLY — includes parts 24A and 24B
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3899A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A to 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-6A	1	HEAD, hydraulic — with 9.0mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
100	PL 9022	1	PLATE, stop
110	SP 7951/15	1	SPRING, governor — outer
111	SP 7950/19	1	SPRING, governor — inner
142	LE 79112A	1	LEVER ASSEMBLY — operating — includes parts 140, 142, 142A and 142B (Install 180° from normal position)
142	LE 79113	1	LEVER, operating

Omit illustrated parts 32, 52, 53 and 53A (large plunger spring not used)

ALL OTHER PARTS SAME AS PSB 4A 90EH 1

CALIBRATION: For governor setting of 600 RPM to 1400 RPM

Spring Spacing Adjustment — Inner .098" gap
Outer .059" precompressed

Set at 1400 RPM for 42.5 to 43.5 cc per 500 strokes at full load position.

Set at 600 RPM for 19 to 20 cc per 500 strokes at idle position.



PSB 4A 75WH 4354A1 — Buda — Models 4DA153 and 4DA182

4354A1

Clockwise Rotation — L. H. Mounting — Governor Regulation 4% to 6%
 Timed for Port Closing — Equipped with External Spring Type Governor

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B11	1	SUPPLY PUMP ASSEMBLY — for parts see Supply Pump Section
54	HD 4352A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes part 22, 45, 54A to 76A
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-3A	1	HEAD, hydraulic — includes 7.5mm diameter plunger and sleeve
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
126	SC 9025	1	SCREW, adjusting — idle
180	SP 9013-4	1	SPRING, extension — operating lever
182	PL 9027	1	PLATE, shut-off

Omit illustrated part 32

ALL OTHER PARTS SAME AS PSB 4A 75WH 1

CALIBRATION: For Governor Setting 600 RPM to 2400 RPM

Average for all outlets:
 Set at 2400 RPM for 23.5cc to 24.5cc per 500 strokes at full load position.
 Set at 600 RPM for 12cc to 13cc per 500 strokes at idle position.

PSB 4A 100EH 4448A1 — Buda — Model HD 344
PSB 4A 100EH 4448B1

4448A1
4448B1

Clockwise Rotation — L. H. Mounting — Fulcrum Lever set for 5%
 Timed for Port Closing — Equipped with Internal spring type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4448A	600 to 2000	SP 7950/14	.079"	SP 7951/14	.059"	Down 84°	9% to 11%
4448B	600 to 2000	SP 7950/14	.079"	SP 7951/14	.059" precompressed	Down 84°	9% to 11%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9024	1	HUB, drive — camshaft
10	PO 903	1	POINTER, timing
11	HG 9047A	1	HOUSING, pump — includes parts 10, 11A and 11B
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY — includes parts 18B thru 18G
18F	FI 9010	1	FITTING, shut-off
40	SGB 15B11	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 3527A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A thru 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9021-8A	1	HEAD, hydraulic — with 10.0mm diameter plunger and sleeve
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
80	RD 9032-1A	1	ROD, control — use with 4448A pump
80	RD 9042-3A	1	ROD, control — use with 4448B pump
***	LE 9074-5A	1	FULCRUM LEVER ASSEMBLY — includes parts 80, 90 and **a thru **e — use with 4448B pump — See Note 2
90	LE 9025-1A	1	FULCRUM LEVER ASSEMBLY — use with 4448A pump
90	LE 9080-1A	1	FULCRUM LEVER ASSEMBLY — use with 4448B pump

- continued -

***Not Shown Assembled

4448A1 - Cont'd - 4448B1

Illustration Number	Part Number	Quantity Used	Description of Part
**a	WA 1771	1	WASHER, tab
**b	WA 1770	1	WASHER, spring seat
**c	SP 9035	1	SPRING, adjusting — tension
**d	NT 1228	1	NUT, adjusting
**e	PN 1054	1	PIN, cotter — locking
98	HG 9055	1	HOUSING, governor
100	PL 7958-1A	1	BRIDGE ASSEMBLY, stop plate — includes parts **f thru **h
**f	PL 7937A	1	PLATE, stop
**g	BK 7938C	1	BRIDGE, stop plate
**h	NT 8-8CA	2	NUT, jam
103	SC 1140	2	SCREW, fastening — bridge assembly
110	See Table	1	SPRING, governor — outer
111	See Table	1	SPRING, governor — inner

Omit illustrated part 32

ALL OTHER PARTS SAME AS FOR PSB 4A 100EH 1

NOTE 1: Install stop lever (135) approximately 0° to 10° to the left instead of 15°.

NOTE 2: See Manual Page D3001/602H for assembly and service.

CALIBRATION: Average for all outlets:

PSB 4A 100EH 4448A1 — governor setting — 600 RPM to 2000 RPM

PSB 4A 100EH 4448B1 — governor setting — 600 RPM to 2000 RPM

Set at full speed for 33cc to 34cc per 500 strokes at full load position.

Set at idle speed for 11cc to 12cc per 500 strokes at idle position.

4620A1-A5 PSB 4A 80WH 4620A1 thru A5 — Hercules Motor Corp. — Model DD198

Clockwise Rotation — L. H. Mounting — Timed for Port Closing
 Equipped with External Spring Type Governor — Governor Regulation 9% to 11%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9034	1	HUB, drive — camshaft
10	PO 904	1	POINTER, timing
11	HG 9066A	1	HOUSING, pump — includes parts 10, 11A and 11B
**	WI 763	1	WIRE, locking — quill shaft cover fastening screw
40	SGB, 15B5	1	SUPPLY PUMP ASSEMBLY — for parts see Fuel Supply Pump Section
54	HD 4690A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A thru 76A and **a
54B	BO 902	1	BUTTON, plunger
67	FI 9020	4	FITTING, discharge — gasketless
68	VA 9025-4A	1	DELIVERY VALVE ASSEMBLY
70	SP 9036	1	SPRING, delivery valve
71	HP 9023	1	HOLDER, delivery valve
73	SC 9034	1	SCREW, cap — delivery valve — See Note
76	HD 9047-4A	1	HEAD, hydraulic — with 8.0mm diameter plunger and sleeve
**a	PN 1184	1	PIN, locating — delivery valve assembly and holder
77	VA 7938A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section
169	SC 9025	1	SCREW, adjusting — idle
180	SP 9013-1	1	SPRING, extension — operating lever — use with 4620A2 and 4620A5 pumps
180	SP 9013-2	1	SPRING, extension — operating lever — use with 4620A3 pump

continued . . .

**Not Illustrated



- Cont'd - 4620A1-A5

Illustration Number	Part Number	Quantity Used	Description of Part
180	SP 9013-3	1	SPRING, extension — operating lever — use with 4620A4 pump
180	SP 9013-5	1	SPRING, extension — operating lever — use with 4620A1 pump
182	PL 9040	1	PLATE, shut-off

Omit illustrated parts 32, 66, 69, 72

ALL OTHER PARTS SAME AS FOR PSB 4A 80WH 1

NOTE: Pretorque delivery valve cap screw twice to 50-55 ft. lbs. Loosen and retorque to 50-55 ft. lbs.

CALIBRATION: Average for all outlets:

PSB 4A 80WH 4620A1 — governor setting — 500 RPM to 2000 RPM
 PSB 4A 80WH 4620A2 — governor setting — 500 RPM to 1600 RPM
 PSB 4A 80WH 4620A3 — governor setting — 500 RPM to 1700 RPM
 PSB 4A 80WH 4620A4 — governor setting — 500 RPM to 2200 RPM
 Set at full speed for 30cc to 31cc per 500 strokes at full load position.
 Set at idle speed for 5cc to 6cc per 500 strokes at idle position.

PSB 4A 80WH 4620A5 — governor setting — 650 RPM to 1650 RPM
 Set at full speed for 27cc to 28cc per 500 strokes at full load position.
 Set at idle speed for 5cc to 6cc per 500 strokes at idle position.



Supersedes Pgs D226/876 thru D226/899. Issued Dec. 1963, D226/891 (5281) Issued Aug. 1967, & D226/899 (5355 - supplement). Issued Feb. 1970.

PSB 4A 80WH 4781A1 thru A5 - HERCULES
Model DD 198 Open Chamber

4781A1-A5

Clockwise Rotation - Governor Regulation 9 to 11%
Timed for Port Closing - L. H. Mounting - Equipped with External Spring Type Governor

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9034	1	HUB, drive - camshaft
10	PO 904	1	POINTER, timing (15° clockwise from vertical, to extend .625 - .635" from mounting flange)
11	HG 9066A	1	HOUSING, pump - includes parts 10, 11A
**	WI 763	1	WIRE LOCKING - quill shaft
40	SGB 15B5	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section
169	SC 9025	1	SCREW, adjusting idle
169B	SC 9025	1	SCREW, stop - shut-off screw - use spacers to provide a clearance of .040" - .080" between shut-off screw at shut-off position
180	SP 9013-5	1	SPRING EXTENSION - operating lever - use with 4781A1 pump
	SP 9013-1	1	SPRING EXTENSION - operating lever - use with 4781A2, 4781A5 pumps
	SP 9013-2	1	SPRING EXTENSION - operating lever - use with 4781A3 pump
	SP 9013-3	1	SPRING EXTENSION - operating lever - use with 4781A4 pump
182	PL 9040	1	PLATE, stop
200	HD 4763A (New) HD 4763AR (Rebuilt)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 76B, 76C, 201 thru 216, 218, 219, 221 and 222
220	CP 881	4	CAP PROTECTION (Silicone Rubber)

ALL OTHER REQUIRED PARTS SAME AS PSB 4A 80WH-1 - MANUAL PAGE D226/850

NOTE: Pretorque delivery valve cap screw and plunger bore closing screw twice to 50-55 ft. lbs. Loosen and retorque to 50-55 ft. lbs.

CALIBRATION: Average for all outlets.

PSB 4A 80WH 4781A1 - governor setting - 500 RPM to 2000 RPM

PSB 4A 80WH 4781A2 - governor setting - 500 RPM to 1600 RPM

PSB 4A 80WH 4781A3 - governor setting - 500 RPM to 1700 RPM

PSB 4A 80WH 4781A4 - governor setting - 500 RPM to 2200 RPM

Set at full load speed for 30-31 cc per 500 strokes.

Set at idle speed for 5-6 cc per 500 strokes.

PSB 4A 80WH 4781A5 - governor setting - 650 RPM to 1650 RPM

Set at full load speed for 27-28 cc per 500 strokes.

Set at idle speed for 5-6 cc per 600 strokes.

Use ADN 12SD 12C Nozzles and TSE 4500-121 High Pressure Fuel Lines.

Reference: Latest Engine Models Incorporate PSB 4A 80WH 5212A.

4789A1-A4

PSB 4A 90EH 4789A1 thru A4 - ALLIS-CHALMERS
Model HD 344 Model HD 344G

Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 5%
Timed for Port Closing - Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111		Outer Spring Illustration 110		Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
		Part Number	Gap	Part Number	Gap		
4789A1	600 to 1800	SP 7950/13	.098"	SP 7951/14	.079" precompressed	Down 80°	9% to 11%
4789A2	600 to 1600	SP 7950/19	.079"	SP 7951/14	.079" precompressed	Down 80°	9% to 11%
4789A3	600 to 1800	SP 7950/13	.098"	SP 7951/14	.079" precompressed	Up 55°	9% to 11%
4789A4	600 to 1800	SP 7950/13	.098"	SP 7951/14	.079" precompressed	Up 40°	9% to 11%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9023A	1	HUB, drive - camshaft
8C	WA 9011	1	WASHER, serrated
10	PO 903	1	POINTER, timing
11	HG 9063A	1	HOUSING, pump - includes parts 10 and 11A
13	CV 903C	1	PAD, quill shaft - pump housing
16	SC 1140	2	SCREW, fastening - quill shaft pad
18	CV 9048A	1	COVER, timing window - includes dowel pins **i
**i	PN 1026	2	PN, dowel (to extend .188" from cover)
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G
18F	FI 9010	1	FITTING, shut-off
40	SGB 15B11	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section
54	HD 3899A (New) HD 3899AR (Rebuilt)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45 and 54A thru 76, 76B and 76C
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
80	RD 9042-3A	1	ROD, control
***	LE 9074-5A	1	FULCRUM LEVER ASSEMBLY - includes parts 80, 90 and **a thru **c - See Note 1
90	LE 9080-1A	1	FULCRUM LEVER ASSEMBLY
**a	WA 1771	1	WASHER, tab
**b	WA 1770	1	WASHER, spring seat
**c	SP 9035	1	SPRING, adjusting - tension
**d	NT 1228	1	NUT, adjusting
**e	PN 1054	1	PIN, cotter - locking
98	HG 9055	1	HOUSING, governor
100	PL 7958-1A	1	BRIDGE ASSEMBLY, stop plate - includes parts **f thru **h
**f	PL 7957A	1	PLATE, stop
**g	BK 7938C	1	BRIDGE, stop plate
**h	NT 8-8CA	2	NUT, jam
103	SC 1140	2	SCREW, fastening - bridge assembly

Omit illustrated part 32.

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 90EH-1 - MANUAL PAGE D226/850

NOTE 1: See Manual Page D3001/602H for assembly and servicing.

NOTE 2: Install stop lever (135) approximately 5° ± 5° to the left instead of 15°.

CALIBRATION: Average for all outlets.

PSB 4A 90EH 4789A1 - governor setting - 600 RPM to 1800 RPM
Set at 1800 RPM for 33-34 cc per 500 strokes at full load position.
Set at 600 RPM for 11-12 cc per 500 strokes at idle position.

- continued -

CALIBRATION: (cont'd)

PSB 4A 90EH 4789A2 - governor setting - 600 RPM to 1600 RPM
Set at 1600 RPM for 33-34 cc per 500 strokes at full load position.
Set at 600 RPM for 11-12 cc per 500 strokes at idle position.

PSB 4A 90EH 4789A3 - governor setting - 600 RPM to 1800 RPM
Set at 1800 RPM for 37.5-38.5 cc per 500 strokes at full load position.
Cam nose to leave stop plate at 1825 RPM.
Set at 600 RPM for 11-12 cc per 500 strokes at idle position.

PSB 4A 90EH 4789A4 - governor setting - 600 RPM to 1800 RPM
Set at 1800 RPM for 40-41 cc per 500 strokes at full load position.
Cam nose to leave stop plate at 1825 RPM.
Set at 600 for 11-12 cc per 500 strokes at idle position.

Reference: Latest Engine Models Incorporate PSB 4A 90EH 5208A.

PSB 4A 90EH 4835A1 thru A4 - ALLIS-CHALMERS
Model HD 6 Model HD 344 Model HD 344G

4835A1-A4

Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 5%
Timed for Port Closing - Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4835A1	600 to 1800	SP 7950/13	.098"	SP 7951/14	.079"	Down 80°	9% to 11%
4835A2	600 to 1600	SP 7950/19	.079"	SP 7951/14	.079"	Down 80°	9% to 11%
4835A3	600 to 1800	SP 7950/13	.092"	SP 7951/14	.079"	Up 55°	9% to 11%
4835A4	600 to 1800	SP 7950/13	.098"	SP 7951/14	.079"	Up 40°	9% to 11%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9023A	1	HUB, drive - camshaft
10	PO 902	1	POINTER, timing
11	HG 9063A	1	HOUSING, pump - includes parts 10 and 11A
13	CV 903C	1	PAD, quill shaft - pump housing
16	SC 1140	2	SCREW, fastening - quill shaft pad
18	CV 9048A	1	COVER, timing window - includes dowel pins
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G
18F	FI 9010	1	FITTING, shut-off
40	SGB 15BL1	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section
54	HD 4836A (New)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 54A thru 45 and 66 thru 76, 76B and 76C
	HD 4836AR (Rebuilt)		
60	GE 9015	1	GEAR, plunger drive
61	GU 901E	1	GUIDE, plunger
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
80	RD 9042-3A	1	ROD, control
***	LE 9074-5A	1	FULCRUM LEVER ASSEMBLY - includes parts 80, 90 and **a thru **c - See Note 1
90	LE 9080-1A	1	FULCRUM LEVER ASSEMBLY
**a	WA 1771	1	WASHER, tab
**b	WA 1770	1	WASHER, spring seat

** Not Illustrated

- continued -

*** Not Shown/Assembled

Illustration Number	Part Number	Quantity Used	Description of Part
**c	SP 9035	1	SPRING, adjusting - tension
**d	NT 1228	1	NUT, adjusting
**e	PN 1034	1	PIN, cotter - locking
98	HG 9055	1	HOUSING, governor
100	PL 7958-1A	1	BRIDGE ASSEMBLY, stop plate - includes parts **f thru **h
**f	PL 7957A	1	PLATE, stop
**g	BK 7938C	1	BRIDGE, stop plate
**h	NT 8-8CA	2	NUT, jam
103	SC 1140	2	SCREW, fastening - bridge assembly
142	LE 79146	1	LEVER, operating

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 90EH-1 - MANUAL PAGE D226/850

NOTE 1: See Manual Page D3001/602H for assembling and testing.

NOTE 2: Install stop lever (135) approximately $5^{\circ} \pm 5^{\circ}$ to the left instead of 15° .

CALIBRATION: Average for all outlets.

PSB 4A 90EH 4835A1 - governor setting - 600 RPM to 1800 RPM.
Set at 1800 RPM for 33-34 cc per 500 strokes at full load position.
Set at 600 RPM for 11-12 cc per 500 strokes at idle position.

PSB 4A 90EH 4835A2 - governor setting - 600 RPM to 1600 RPM
Set at 1600 RPM for 33-34 cc per 500 strokes at full load position.
Set at 600 RPM for 11-12 cc per 500 strokes at idle position.

PSB 4A 90EH 4835A3 - governor setting - 600 RPM to 1800 RPM
Set at 1800 RPM for 37.5-38.5 cc per 500 strokes at full load position.
Cam nose to leave stop plate at 1825 RPM.
Set at 600 RPM for 11-12 cc per 500 strokes at idle position.

PSB 4A 90EH 4835A4 - governor setting - 600 RPM to 1800 RPM
Set at 1800 RPM for 41-42 cc per 500 strokes at full load position.
Cam nose to leave stop plate at 1825 RPM.
Set at 600 RPM for 11-12 cc per 500 strokes at idle position.

Reference: Latest Engine Models Incorporate PSB 4A 90EH 5208A.

4927A

PSB 4A 90EH 4927A - ALLIS-CHALMERS Model HD 344 Model HD 344G

Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 10%
Timed for Port Closing - Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4927A1	600 to 1800	SP 7950/14	.137" to .157"	SP 7951/11	.020" Precompressed	Up 40°	16% to 18%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9023A	1	HUB, drive - camshaft
8C	WA 9011	1	WASHER, serrated
10	PO 903	1	POINTER, timing
11	HG 9063A	1	HOUSING, pump - includes parts 10 and 11A
13	CV 903C	1	PAD, quill shaft - pump housing

- continued -

**Not Illustrated

**Not Shown Assembled



Illustration Number	Part Number	Quantity Used	Description of Part
16	SC 1140	2	SCREW, fastening - quill shaft pad
18	CV 9048A	1	COVER, timing window - includes dowel pins **i
**i	PN 1026	2	PIN, dowel (to extend .188" from cover)
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G
18F	FI 9010	1	FITTING, shut-off
40	SGB 15B11	1	SUPPLY PUMP ASSEMBLY - for parts; see Fuel Supply Pump Section
54	HD 4836A (New) HD 4836AR (Rebuilt)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 46 and 54A thru 76, 76B and 76C
60	GE 9015	1	GEAR
60A	GU 9016	1	GUIDE - plunger
60B	GU 9017	1	SEAT - upper spring
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
80	RD 9042-3A	1	ROD, control
***	LE 9071-6A	1	FULCRUM LEVER ASSEMBLY - includes parts 80, 90 and **a thru **c - See Note 1
90	LE 9080-2A	1	FULCRUM LEVER ASSEMBLY
**a	WA 1771	1	WASHER, tab
**b	WA 1770	1	WASHER, spring seat
**c	SP 9035	1	SPRING, adjusting - tension
**d	NT 1228	1	NUT, adjusting
**e	PN 1054	1	PIN, cotter - locking
96	HG 9055	1	HOUSING, governor
100	PL 7958-1A	1	BRIDGE ASSEMBLY, stop plate - includes parts **f thru **h
**f	PL 7957A	1	PLATE, stop
**g	BK 7938C	1	BRIDGE, stop plate
**h	NT 8-8CA	2	NUT, jam
103	SC 1140	2	SCREW, fastening - bridge assembly

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 90EH-1 - MANUAL PAGE D226/850

NOTE 1: See Manual Page D3001/602H for assembly and servicing.

NOTE 2: Install stop lever (135) approximately 5° to the left instead of 15°.

CALIBRATION: Average for all outlets.

PSB 4A 90EH 4927A - governor setting - 600 RPM to 1800 RPM

Set at 1800 RPM for 41-42 cc per 500 strokes at full load position.

Set at 600 RPM for 11-12 cc per 500 strokes at idle position.

Reference: Latest Engine Models Incorporate PSB 4A 90EH 5210A.

**PSB 4A 100EH 4965A1 and A3 - ALLIS-CHALMERS
Model 6000 N.A. (345)**

4965A1, & A3

Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 5°
Timed for Port Closing - Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
4965A1	600 to 1800	SP 7950/18	.079"	SP 7951/14	.079"	Down 50°	8% to 10%
4965A3	600 to 1800	SP 7950/4	.157"	SP 7951/14	Flush	Up 75°	15% to 18%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9023A	1	HUB, drive - camshaft
8	SH 9075A	1	CAMSHAFT

continued -

** Not Illustrated

*** Not Shown Assembled

Illustration Number	Part Number	Quantity Used	Description of Part
8C	WA 9011	1	WASHER - serrated
10	PO 903	1	POINTER, timing
11	HG 9069A	1	HOUSING, pump includes parts 10 and 11A
13	CV 903C	1	PAD, quill shaft - pump housing
16	SC 1140	2	SCREW, fastening - quill shaft pad
18	CV 9048A	1	COVER, timing window - includes part **a
**a	PN 1026	2	PIN, dowel - timing window cover
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G
18F	FI 9010	1	FITTING, shut-off
40	SGB 15B13	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section
***	TP 904A	1	TAPPET ASSEMBLY - includes parts 51A thru 51C
51A	RL 768A	1	ROLLER ASSEMBLY, tappet
51B	PN 9039	1	PIN, tappet roller
51C	GU 9021A	1	GUIDE ASSEMBLY, tappet
52	SP 9038	1	SPRING, plunger - outer
53	GU 9020	1	SEAT, spring - upper
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts, see Safety Valve Section
80	RD 9042-3A	1	ROD, control
***	LE 9074-5A	1	FULCRUM LEVER ASSEMBLY - includes parts 80, 90 and **f - See Note 1
90	LE 9080-1A	1	FULCRUM LEVER ASSEMBLY
**b	WA 1771	1	WASHER, tab
**c	WA 1770	1	WASHER, spring seat
**d	SP 9035	1	SPRING, adjusting - tension
**e	NT 1228	1	NUT, adjusting
**f	PN 1054	1	PIN, cotter - locking
98	HG 9055	1	HOUSING, governor
100	PL 7958-1A	1	BRIDGE ASSEMBLY, stop plate - includes parts **g thru **h
**g	PL 7957A	1	PLATE, stop
**h	BK 7938C	1	BRIDGE, stop plate
103	SC 1140	2	SCREW, fastening - bridge assembly
142	LE 79146	1	LEVER, operating
200	HD 4966A (New)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 76B, 76C, 201 thru 216, 218, 219, 221 and 222
	HD 4966AR (Rebuild)		
202	BO 903	1	BUTTON, plunger
205	SP 9037	1	SPRING, inner plunger
207	RN 9025	1	COVER, gear retainer
208	GE 9015	1	GEAR, plunger drive - Oldham
208A	GU 9016	1	GUIDE, plunger - Oldham
208B	GU 9023	1	SEAT, plunger spring - upper

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 100EH-1 - MANUAL PAGE D226/850

NOTE 1: See Manual Page D3001/602H for assembling and servicing.

NOTE 2: Install stop lever (135) approximately $5^{\circ} \pm 5^{\circ}$ instead of 15° .

NOTE 3: Pretorque delivery valve cap screw (73) and plunger bore cap screw (215) to 50-55 ft. lbs. Loosen and retorque to 50-55 ft. lbs.

NOTE 4: Replacement BO 903 buttons must be lapped to mating surface of plunger to provide maximum seating surface. CAUTION: Do not damage plunger surface.

CALIBRATION: Average for all outlets.

PSB 4A 100EH 4965A1 - governor setting - 600 RPM to 1800 RPM

Set at full load speed for 39-40 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 1825-1830 RPM.

PSB 4A 100EH 4965A3 - governor setting - 600 RPM to 1800 RPM

Set at full load speed for 42-43 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 1825-1830 RPM.

Reference: Latest Engine Models Incorporate PSB 4A 100EH 5007A1 or 5238A

** Not Illustrated

*** Not Shown Assembled



PSB 4A 100EH 5007A1 and A2 - ALLIS-CHALMERS
Model 6000 N.A. (345)

5007A1 & A2

Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 5%
Timed for Port Closing - Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Gap	Outer Spring Illustration IIO Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
5007A1	600 to 2200	SP 7950/4	.079" to .098"	SP 7951/14	.079"	Down 35°	7% to 10%
5007A2	600 to 1800	SP 7950/4	.157"	SP 7951/14	Flush precompressed	Up 75°	15% to 18%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9024	1	HUB, drive - camshaft
8	SH 9075A	1	CAMSHAFT
8C	WA 9011	1	WASHER, serrated
10	PO 903	1	POINTER, timing
11	HG 9069A	1	HOUSING, pump includes part 10 and 11A
13	CV 903C	1	PAD, quill shaft - pump housing
16	SC 1140	2	SCREW, fastening - quill shaft pad
18	CV 9048A	1	COVER, timing window - includes part **a
**a	PN 1026	2	PIN, dowel - timing window cover
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G
18F	FI 9010	1	FITTING, shut-off
40	SGB 15B13	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section
***	TP 904A	1	TAPPET ASSEMBLY - includes parts 51A thru 51C
51A	RL 768A	1	ROLLER ASSEMBLY, tappet
51B	PN 9039	1	PIN, tappet roller
51C	GU 9021A	1	GUIDE ASSEMBLY, tappet
52	SP 9038	1	SPRING, plunger - outer
53	GU 9020	1	SEAT, spring - upper
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts, see Safety Valve Section
80	RD 9041A	1	ROD, control
***	LE 9074-5A	1	FULCRUM LEVER ASSEMBLY - includes parts 80, 90 and **b thru **f - See Note 1
90	LE 9080-1A	1	FULCRUM LEVER ASSEMBLY
**b	WA 1771	1	WASHER, tab
**c	WA 1770	1	WASHER, spring seat
**d	SP 9035	1	SPRING, adjusting - tension
**e	NT 1228	1	NUT, adjusting
**f	PN 1054	1	PIN, cotter - locking
98	HG 9055	1	HOUSING, governor
100	PL 79118A	1	BRIDGE ASSEMBLY, stop plate - includes parts **g thru **j
**g	PL 7957A	1	PLATE, stop
**h	BK 7938C	1	BRIDGE, stop plate
**i	WA 6-8	2	WASHER, lock - stop plate
**j	NT 8-8CA	2	NUT, jam - stop plate
103	SC 1140	2	SCREW, fastening - bridge assembly
142	LE 79147A	1	LEVER, operating
200	HD 4966A (New) HD 4966AR (Rebuilt)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 76B, 76C, 201 thru 216, 218, 219, 221 and 222
201	RG 902	1	RING, button retainer
202	BO 903	1	BUTTON, plunger
205	SP 9037	1	SPRING, inner plunger
207	RN 9025	1	COVER, gear retainer
208	GE 9015	1	GEAR, plunger drive - Oldham
208A	GU 9016	1	GUIDE, plunger - Oldham
208B	GU 9023	1	SEAT, plunger spring - upper

- continued -

** Not Illustrated

*** Not Shown Assembled

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 100EH-1 - MANUAL PAGE D226/850

NOTE 1: See Manual Page D3001/602H for assembling and servicing.

NOTE 2: Install stop lever (136) approximately $5^{\circ} \pm 5^{\circ}$ instead of 15° .

NOTE 3: Pretorque delivery valve cap screw (73) and plunger bore cap screw (215) to 50-55 ft. lbs. Loosen and retorque to 50-55 ft. lbs.

NOTE 4: Replacement BO 903 buttons must be lapped to mating surface of plunger to provide maximum seating surface. CAUTION: Do not damage plunger surface.

CALIBRATION: Average for all outlets.

PSB 4A 100EH 5007A1 - governor setting - 600 RPM to 2200 RPM

Set at full load speed for 47-48 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 2225-2230 RPM.

PSB 4A 100EH 5007A2 - governor setting - 600 RPM to 1800 RPM

Set at full load speed for 42-43 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 1825-1830 RPM.

Reference: Latest Engine Models Incorporate PSB 4A 100EH 5239A.

5207A1-A4

PSB 4A 70WH 5207A1 thru A4 - WAUKESHA Model 180 DLB, 180 DLC & 180 DKB

Clockwise Rotation - L. H. Mounting

Timed for Port Closing - Equipped with External Spring Governor

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9018	1	HUB, drive
10	PO 754	1	POINTER, timing
11	HG 9052A	1	HOUSING, pump - includes parts 10 and 11A
54	HD 5191A (New) HD 5191AR (Rebuilt)	1	HYDRAULIC HEAD ASSEMBLY, - complete - includes parts 22, 45, 54A thru 75 and 76B. For part number, see nameplate.
68	VA 9026A	1	DELIVERY VALVE ASSEMBLY
180	SP 9013-5	1	SPRING, extension - operating lever - use with 5207A1
180	SP 9013-1	1	SPRING, extension - operating lever - use with 5207A2 and 5207A4
180	SP 9013-9	1	SPRING, extension - operating lever - use with 5207A3

Omit illustrated parts 32, 52, 59 and 53A (large plunger spring not used)

ALL OTHER PARTS SAME AS PSB 4A 70WH-1 - MANUAL PAGE D226/856

CALIBRATION: Average for all outlets.

PSB 4A 70WH 5207A1 - governor setting - 500 RPM to 2000 RPM

PSB 4A 70WH 5207A2 - governor setting - 500 RPM to 1800 RPM

PSB 4A 70WH 5207A3 - governor setting - 500 RPM to 1250 RPM

PSB 4A 70WH 5207A4 - governor setting - 500 RPM to 1800 RPM

Set at full load speed for 15-16 cc per 500 strokes.

Set at idle speed for 8-9 cc per 500 strokes



PSB 4A 70WH 5223A1 thru A9 - WAUKESHA
Models 180DLC, 180L & 180DAB

5223A1-A9

Clockwise Rotation - L. H. Mounting
Timed for Port Closing - Equipped with External Spring Type Governor

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9018	1	HUB, drive - camshaft
10	PO 764	1	POINTER, timer
11	HG 9052A	1	HOUSING, pump - includes parts 10 and 11A
11A	BG 7657	1	BUSHING, camshaft
54	HD 5185A (New)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 54A thru 76A
	HD 5185AR (Rebuilt)		
60	GE 9015	1	GEAR, plunger drive
60A	GU 9019	1	GUIDE, plunger
60B	GU 9017	1	SEAT, upper spring
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
180	SP 9013-5	1	SPRING, extension - operating lever - use on 5223A1 pump only
180	SP 9013	1	SPRING, extension - operating lever - use on 5223A2 and 5223A5 pumps only
180	SP 9013-1	1	SPRING, extension - operating lever - use on 5223A3, 5223A6 and 5223A9 pumps only
180	SP 9013-8	1	SPRING, extension - operating lever - use on 5223A4 pump only
180	SP 9013-6	1	SPRING, extension - operating lever - use on 5223A8 pump only

Omit illustration parts 32, 52, 53 and 53A.

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 70WH-1 - MANUAL PAGE D226/856

CALIBRATION: Average for all outlets.

PUMP TYPE	GOVERNOR SETTING	GOVERNOR REGULATION
PSB 4A 70WH 5223A1	500 RPM to 2000 RPM	10% to 12%
PSB 4A 70WH 5223A2	500 RPM to 1600 RPM	10% to 12%
PSB 4A 70WH 5223A3	500 RPM to 1800 RPM	10% to 12%
PSB 4A 70WH 5223A4	500 RPM to 1200 RPM	4% to 6%
PSB 4A 70WH 5223A5	500 RPM to 1800 RPM	3% to 5%
PSB 4A 70WH 5223A6	500 RPM to 1800 RPM	5%
PSB 4A 70WH 5223A8	500 RPM to 1500 RPM	
PSB 4A 70WH 5223A9	500 RPM to 1800 RPM	4% to 6%

Set at full load speed for 15-16 cc per 500 strokes at full load position.
Set at idle speed for 8-9 cc per 500 strokes at idle position.

5238A1,
A3-A5PSB 4A 100EH 5238A1, A3, A4 & A5 - ALLIS-CHALMERS
Models 6000 N.A. (343) & 7000

✓ Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 5%
Timed for Port Closing - Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111		Outer Spring Illustration 110		Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
		Part Number	Gap	Part Number	Gap		
5238A1	600 to 1800	SP 7950/13	.079"	SP 7951/14	.079"	Down 90°	8% to 19%
5238A3	600 to 1800	SP 7950/4	.157"	SP 7951/14	Flush	Up 75°	15% to 18%
5238A4	600 to 1800	SP 7950/13	.079"	SP 7951/15	.079"	Up 75°	7% to 10%
5238A5	600 to 1800	SP 7950/14	.098"	SP 7961/11	.039"	Down 55°	7% to 9%
					precompressed		

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9023A	1	HUB, drive - camshaft
8	SH 9075A	1	CAMSHAFT
9C	WA 9011	1	WASHER - serrated
10	PO 903	1	POINTER, timing
11	HG 9069A	1	HOUSING, pump - includes parts 10 and 11A
13	CV 903C	1	PAD, quill shaft - pump housing
16	SC 1140	2	SCREW, fastening - quill shaft pad
18	CV 9048A	1	COVER, timing window - includes part **a
**a	PN 1026	2	PIN, dowel - timing window cover
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G
18F	FI 9010	1	FITTING, shut-off
40	SGB 15B13	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section
***	TP 904A	1	TAPPET ASSEMBLY - includes parts 51A thru 51G
51A	RL 768A	1	ROLLER ASSEMBLY, tappet
51B	PN 9039	1	PIN, tappet roller
51C	GU 9021A	1	GUIDE ASSEMBLY, tappet
52	SP 9038	1	SPRING, plunger - outer
53	GU 9020	1	SEAT, spring - upper
80	RD 9042-3A	1	ROD, control
***	LE 9074-5A	1	FULCRUM LEVER ASSEMBLY - includes parts 80, 90 and **b thru **f - See Note 1
90	LE 9080-1A	1	FULCRUM LEVER ASSEMBLY
**b	WA 1771	1	WASHER, tab
**c	WA 1770	1	WASHER, spring seat
**d	SP 9035	1	SPRING, adjusting - tension
**e	NT 1228	1	NUT, adjusting
**f	PN 1054	1	PIN, cotter - locking
98	HG 9055	1	HOUSING, governor
100	PL 7958-1A	1	BRIDGE ASSEMBLY, stop plate - includes parts **g thru **i
**g	PL 7957A	1	PLATE, stop
**h	BK 7938C	1	BRIDGE, stop plate
103	SC 1140	2	SCREW, fastening - bridge assembly
142	LE 79147A	1	LEVER, operating
200	HD 4966A (New) HD 4966AR (Rebuilt)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 76B, 76C, 201 thru 216, 218, 219, 221 and 222
201	RG 902	1	RING, button retainer
202	BO 903	1	BUTTON, plunger
205	SP 9037	1	SPRING, inner plunger
207	RN 9025	1	COVER, gear retainer
208	GE 9015	1	GEAR, plunger drive - Oldham
208A	GU 9016	1	GUIDE, plunger - Oldham
208B	GU 9023	1	SEAT, plunger spring - upper

- continued -

** Not Illustrated

*** Not Shown Assembled



ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 100EH-1 - MANUAL PAGE D226/852

NOTE 1: See Manual Page D3001/602H for assembling and servicing.

NOTE 2: Install stop lever (135) approximately $5^{\circ} \pm 5^{\circ}$ instead of 15° .

NOTE 3: Pretorque delivery valve cap screw (73) and plunger bore cap screw (215) to 50-55 ft. lbs. Loosen and retorque to 50-55 ft. lbs.

NOTE 4: Replacement BO 903 buttons must be lapped to mating surface of plunger to provide maximum seating surface. **CAUTION:** Do not damage plunger surface.

CALIBRATION: Average for all outlets.

PSB 4A 100EH 5238A1 - governor setting - 600 RPM to 1800 RPM

Set at full load speed for 41.5-42.5 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 1825-1830 RPM.

PSB 4A 100EH 5238A3 - governor setting - 600 RPM to 1800 RPM

Set at full load speed for 48.5-49.5 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 1825-1830 RPM.

PSB 4A 100EH 5238A4 - governor setting - 600 RPM to 1800 RPM

PSB 4A 100EH 5238A5 - governor setting - 600 RPM to 1800 RPM

Set at full load speed for 39-40 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 1825-1830 RPM.

Reference: Latest Engine Models Incorporate PSB 4A 100EH 5270A.

PSB 4A 100EH 5239A1 - ALLIS-CHALMERS
Model 6000 N.A. (345)

5239A1

Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 5%
Timed for Port Closing - Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Gap	Outer Spring Illustration III Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
5239A1	600 to 2200	SP 7950/4	.079" to .098"	SP 7951/14	.079" Precompressed	Down 35°	7% to 10%
Illustration Number	Part Number	Quantity Used	Description of Part				
3	HB 9024	1	HUB, drive - camshaft				
8	SH 9075A	1	CAMSHAFT				
8C	WA 9011	1	WASHER, serrated				
10	PO 903	1	POINTER, timing				
11	HG 9069A	1	HOUSING, pump includes parts 10 and 11A				
13	CV 903C	1	PAD, quill shaft - pump housing				
16	SC 1140	2	SCREW, fastening - quill shaft pad				
18	CV 9048A	1	COVER, timing window - includes part **a				
**a	PN 1026	2	PIN, dowel - timing window cover				
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G				
18F	FI 9010	1	FITTING, shut-off				
40	SGB 15B13	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section				
***	TP 904A	1	TAPPET ASSEMBLY - includes parts 51A thru 51C				
51A	RL 768A	1	ROLLER ASSEMBLY, tappet				
51B	PN 9039	1	PIN, tappet roller				
51C	GU 9021A	1	GUIDE ASSEMBLY, tappet				

- continued -

** Not Illustrated

*** Not Shown Assembled

Illustration Number	Part Number	Quantity Used	Description of Part
52	SP 9038	1	SPRING, plunger - outer
53	GU 9020	1	SEAT, spring - upper
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts, see Safety Valve Section
80	RD 9042-3A	1	ROD, control
***	LE 9074-5A	1	FULCRUM LEVER ASSEMBLY - includes parts 80, 90 and **b thru **f - See Note 1
90	LE 9080-1A	1	FULCRUM LEVER ASSEMBLY
**b	WA 1771	1	WASHER, tab
**c	WA 1770	1	WASHER, spring seat
**d	SP 9035	1	SPRING, adjusting - tension
**e	NT 1228	1	NUT, adjusting
**f	PN 1054	1	PIN, cotter - locking
98	HG 9055	1	HOUSING, governor
100	PL 7958-1A	1	BRIDGE ASSEMBLY, stop plate - includes parts **g thru **h
**g	PL 7957A	1	PLATE, stop
**h	BK 7938C	1	BRIDGE, stop plate
103	SC 1140	2	SCREW, fastening - bridge assembly
142	LE 79147A	1	LEVER, operating
200	HD 4966A (New) HD 4966AR (Rebuilt)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 76B, 76C, 201 thru 216, 218, 219, 221 and 222
201	RG 902	1	RING, button retainer
202	BO 903	1	BUTTON, plunger
205	SP 9037	1	SPRING, inner plunger
207	RN 9025	1	COVER, gear retainer
208	GE 9015	1	GEAR, plunger drive - Oldham
208A	GU 9016	1	GUIDE, plunger - Oldham
208B	GU 9023	1	SEAT, plunger spring - upper

ALL OTHER REQUIRED PARTS SAME AS PSB 4A 100EH-1 - MANUAL PAGE D226/850

NOTE 1: See Manual Page D3001/602H for assembling and servicing.

NOTE 2: Install stop lever (135) approximately $5^\circ \pm 5^\circ$ instead of 15° .

NOTE 3: Pretorque delivery valve cap screw (73) and plunger bore cap screw (215) to 50-55 ft. lbs. Loosen and retorque to 50-55 ft. lbs.

NOTE 4: Replacement BO 903 buttons must be lapped to mating surface of plunger to provide maximum seating surface. CAUTION: Do not damage plunger surface.

CALIBRATION: Average for all outlets.

PSB 4A 100EH 5239A1 - governor setting - 600 RPM to 2200 RPM

Set at full load speed for 41-42 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 2225-2230 RPM.

Reference: Latest Engine Models Incorporate PSB 4A 100EH 5248A1 or 5283A1.

5262A1

PSB 4A 100EH 5262A1 - ALLIS-CHALMERS Model 7000 - (4-7/16" x 5-9/16")

Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 5%
Timed for Port Closing - Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration III		Outer Spring Illustration IIO		Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
		Part Number	Gap	Part Number	Gap		
5262A1	600 to 1950	SP 7950/14	.098"	SP 7951/11	.039"	Down 55°	7% to 9%

Precompressed

- continued -

** Not Illustrated

*** Not Shown Assembled

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9023A	1	HUB, drive - camshaft
8	SH 9075A	1	CAMSHAFT
8C	WA 9011	1	WASHER, serrated
10	PO 903	1	POINTER, timing
11	HG 9069A	1	HOUSING, pump - includes parts 10 and 11A
13	CV 903C	1	COVER, quill shaft - pump housing
16	SC 1140	2	SCREW, fastening - quill shaft cover
18	CV 9048A	1	COVER, timing window - includes part **a
**a	PN 1026	2	PIN, dowell - timing window cover
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G
18F	FI 9010	1	FITTING, shut-off
40	SGB 15B 13	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section
***	TP 904A	1	TAPPET ASSEMBLY - includes parts 51A thru 51C
51A	RL 768A	1	ROLLER ASSEMBLY, tappet
51B	PN 9039	1	PIN, tappet roller
51C	GU 9021A	1	GUIDE ASSEMBLY, tappet
52	SP 9038,	1	SPRING, plunger - outer
53	GU 9020	1	SEAT, spring - upper
80	RD 9042-3A	1	ROD, control
***	LE 9074-5A	1	FULCRUM LEVER ASSEMBLY - includes parts 80, 90 and **b thru **f
90	LE 9080-1A	1	FULCRUM LEVER
**b	WA 1771	1	WASHER, tab
**c	WA 1770	1	WASHER, spring seat
**d	SP 9035	1	SPRING, adjusting - tension
**e	NT 1228	1	NUT, adjusting
**f	PN 1054	1	PIN, cotter - locking
98	HG 9055	1	HOUSING, governor
103	SC 1140	2	SCREW, fastening - bridge assembly
***	LE 79147A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B
142	LE 79146	1	LEVER, operating
200	HD 4966A (New) HD 4966AR (Rebuilt)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 201 thru 213, 215 thru 222
202	BO 903	1	BUTTON, plunger
205	SP 9037	1	SPRING, inner plunger
207	RN 9025	1	COVER, gear retainer
208	GE 9015	1	GEAR, plunger drive - Oldham
208A	GU 9016	1	GUIDE, plunger - Oldham
208B	GU 9023	1	SEAT, plunger spring - upper

Omit PL 904 (100) not used in this application.

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 100EH-1 - MANUAL PAGE D226/850

NOTE 1: See Manual Page D3001/802H for assembling and servicing.

NOTE 2: Install stop lever (135) approximately $5^{\circ} \pm 5^{\circ}$ instead of 15° .

NOTE 3: Pretorque delivery valve cap screw (73) and plunger bore cap screw (215) to 50-55 ft. lbs. Loosen and retorque to 50-55 ft. lbs.

NOTE 4: Replacement BO 903 (203) buttons must be lapped to mating surface of plunger to provide maximum seating surface. CAUTION: Do not damage plunger surface.

CALIBRATION: Average for all outlets.

PSB 4A 100EH 5262A1 - governor setting - 600 RPM to 1950 RPM

Set at full speed load for 63.5-64.5 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle position.

Reference: Latest Engine Models Incorporate PSB 4A 100EH 5281A.

**Not Illustrated

***Not Shown Assembled

**5270A1,
A3-A5**

**PSB 4A 100EH 5270A1, A3, A4 & A5 - ALLIS-CHALMERS
Models 6000 & 7000**

Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 5%
Timed for Port Closing - Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111		Outer Spring Illustration 110		Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
		Part Number	Gap	Part Number	Gap		
5270A1	600 to 1800	SP 7950/13	.079"	SP 7951/14	.079"	Horizontal	8% to 10%
5270A3	600 to 1800	SP 7950/4	.157"	SP 7951/14	Flush	Up 75°	15% to 18%
5270A4	600 to 1800	SP 7950/13	.079"	SP 7951/15	.079"	Up 75°	7% to 10%
5270A5	600 to 1800	SP 7950/14	.098"	SP 7951/11	.039"	Down 55°	7% to 9%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9023A	1	HUB, drive - camshaft
8	SH 3075A	1	CAMSHAFT
8C	WA 9011	1	WASHER - serrated
10	PO 903	1	POINTER, timing
11	HG 9069A	1	HOUSING, pump - includes parts 10 and 11A
13	CV 903C	1	PAD, quill shaft - pump housing
16	SC 1140	2	SCREW, fastening - quill shaft pad
18	CV 9048A	1	COVER, timing window - includes part **a
**a	PN 1026	2	PIN, dowel - timing window cover
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G
18F	FI 9010	1	FITTING, shut-off
40	SGB 15B13	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section
***	TP 904A	1	TAPPET ASSEMBLY - includes parts 51A thru 51C
51A	RL 768A	1	ROLLER ASSEMBLY, tappet
51B	PN 9039	1	PIN, tappet roller
51C	GU 9021A	1	GUIDE ASSEMBLY, tappet
52	SP 9038	1	SPRING, plunger - outer
53	GU 9020	1	SEAT, spring - upper
80	RD 9042-3A	1	ROD, control
***	LE 9074-5A	1	FULCRUM LEVER ASSEMBLY - includes parts 80, 90 and **b thru **f - See Note 1
90	LE 9080-1A	1	FULCRUM LEVER ASSEMBLY
**b	WA 1771	1	WASHER, tab
**c	WA 1770	1	WASHER, spring seat
**d	SP 9035	1	SPRING, adjusting - tension
**e	NT 1228	1	NUT, adjusting
**f	PN 1054	1	PIN, cotter - locking
98	HG 9055	1	HOUSING, governor
100	PL 7958-1A	1	BRIDGE ASSEMBLY, stop plate - includes parts **g thru **i
**g	PL 7957A	1	PLATE, stop
**h	BK 7938C	1	BRIDGE, stop plate
103	SC 1140	2	SCREW, fastening - bridge assembly
***	LE 79147A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B
142	LE 79146	1	LEVER, operating
200	HD 5154A (New) HD 5154AR (Rebuilt)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 201 thru 213 215 thru 219, 221 and 222
201	RG 902	1	RING, button retainer
202	BO 903	1	BUTTON, plunger
205	SP 9037	1	SPRING, inner plunger
207	RN 9025	1	COVER, gear retainer
208	GE 9015	1	GEAR, plunger drive - Oldham

- continued -

** Not Illustrated

*** Not Shown Assembled

Illustration Number	Part Number	Quantity Used	Description of Part
208A	GU 9016	1	GUIDE, plunger - Oldham
208B	GU 9023	1	SEAT, plunger spring - upper
217	FI 9023	1	FITTING, discharge
217A	SV 9021	1	SLEEVE, discharge fitting

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 100EH-1 - MANUAL PAGE D226/850

NOTE 1: See Manual Page D3001/602H for assembling and servicing.

NOTE 2: Install stop lever (135) approximately 5° to 5° instead of 15°.

NOTE 3: Pretorque delivery valve cap screw (73) and plunger bore cap screw (215) to 50-55 ft. lbs. Loosen and retorque to 50-55 ft. lbs.

NOTE 4: Replacement BO 903 buttons must be lapped to mating surface of plunger to provide maximum seating surface. CAUTION: Do not damage plunger surface.

CALIBRATION: Average for all outlets.

PSB 4A 100EH 5270A1 - governor setting - 600 RPM to 1800 RPM

Set at full load speed for 41.5-42.5 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 1825-1830 RPM.

PSB 4A 100EH 5270A3 - governor setting - 600 RPM to 1800 RPM

PSB 4A 100EH 5270A4 - governor setting - 600 RPM to 1800 RPM

Set at full load speed for 48.5-49.5 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 1825-1830 RPM.

PSB 4A 100EH 5270A5 - governor setting - 600 RPM to 1800 RPM

Set at full load speed for 63.5-64.5 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 1825-1830 RPM.

Reference: Latest Engine Models Incorporate PSB 4A 100EH 5299A.

PSB 4A 100EH 5276A1 - ALLIS-CHALMERS
Models 6000 & 7000

5276A1

Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 5%
Timed for Port Closing - Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
5276A1	600 to 1800	SP 7950/13	.079"	SP 7951/14	.039"	Up 75° Precompressed	7% to 9%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9024	1	HUB, drive - camshaft
8	SH 9075A	1	CAMSHAFT
8C	WA 9011	1	WASHER, serrated
10	PO 903	1	POINTER, timing
11	HG 9069A	1	HOUSING, pump - includes parts 10 and 11A
13	CV 903C	1	COVER, quill shaft - pump housing
16	SC 1140	2	SCREW, fastening - quill shaft cover
18	CV 9048A	1	COVER, timing window - includes part **a
**a	PN 1026	2	PIN, dowel - timing window cover
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G
18F	FI 9010	1	FITTING, shut-off
23	PN 906	1	PIN, plunger sleeve
24	CU 9021A (Supds CU 9019A) 1	1	CONTROL UNIT ASSEMBLY - includes parts 24A and 24B

** Not Illustrated

- continued -

*** Not Shown Assembled

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B13	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section
***	TP 904A	1	TAPPET ASSEMBLY - includes parts 51A thru 51C
51A	RL 768A	1	ROLLER ASSEMBLY, tappet
51B	PN 9039	1	PIN, tappet roller
51C	GU 9021A	1	GUIDE ASSEMBLY, tappet
52	SP 9038	1	SPRING, plunger - outer
53	GU 9020	1	SEAT, spring - upper
80	RD 9046A	1	ROD, control
***	LE 9090-1A	1	FULCRUM LEVER ASSEMBLY - includes parts 80, 90 and **b thru **f - See Note 1
90	LE 9080-1A	1	FULCRUM LEVER ASSEMBLY
**b	WA 1771	1	WASHER, tab
**c	WA 1770	1	WASHER, spring seat
**d	SP 9035	1	SPRING, adjusting - tension
**e	NT 1228	1	NUT, adjusting
**f	PN 1054	1	PIN, cotter - locking
98	HG 9055	1	HOUSING, governor
100	PL 7958-1A	1	BRIDGE ASSEMBLY, stop plate - includes parts **g thru **i
**g	PL 7957A	1	PLATE, stop
**h	BK 7938C	1	BRIDGE, stop plate
103	SC 1140	2	SCREW, fastening - bridge assembly
***	LE 79147A	1	LEVER ASSEMBLY, operating - includes parts 140, 142A and 142B
142	LE 79146	1	LEVER, operating
200	HD 5154A (New)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 201 thru 213, 215 thru 219, 221 and 222
	HD 5154AR (Rebuilt)		
201	RG 902	1	RING, button retainer
202	BO 903	1	BUTTON, plunger
205	SP 9037	1	SPRING, inner plunger
207	RN 9025	1	COVER, gear retainer
208	GE 9015	1	GEAR, plunger drive - Oldham
208A	GU 9016	1	GUIDE, plunger - Oldham
208B	GU 9023	1	SEAT, plunger spring - upper
217	FI 9023	4	FITTING, discharge
217A	SV 9021	4	SLEEVE, discharge fitting

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 100EH-1 - MANUAL PAGE D226/850

NOTE 1: See Manual Page D3001/602H for assembling and servicing.

NOTE 2: Install stop lever (135) approximately $5^{\circ} \pm 5^{\circ}$ instead of 15° .

NOTE 3: Pretorque delivery valve cap screw (73) and plunger bore cap screw (215) to 50-55 ft. lbs. Loosen and retorque to 50-55 ft. lbs.

NOTE 4: Replacement BO 903 buttons must be lapped to mating surface of plunger to provide maximum seating surface. CAUTION: Do not damage plunger surface.

CALIBRATION: Average for all outlets.

PSB 4A 100EH 5276A1 - governor setting - 600 RPM to 1800 RPM

Set at full speed load for 64-65 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 1825-1830 RPM.

Reference: Latest Engine Models Incorporate PSB 4A 100EH 5311A.



PSB 4A 100EH 5281A1 - ALLIS - CHALMERS Model 700

5281A1

Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 5
Timed for Port Closing - Equipped with Internal Spring Type Govern.

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle related to Fulcrum Lever	Governor Regulation
5281A1	600 to 1800	SP 7950/14	.088"	SP 7951/11	.039"	Down 55° Precompressed	7% to 9%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9023A	1	HUB, drive - camshaft
8	SH 9075A	1	CAMSHAFT
8C	WA 9011	1	WASHER, serrated
10	PO 903	1	POINTING, timing
11	HG 9069A	1	HOUSING, pump - includes parts 10 and 11A
13	CV 903C	1	PAD, quill shaft - pump housing
16	SC 1140	2	SCREW, fastening - quill shaft pad
18	CV 9048A	1	COVER, timing window - includes part **a
**a	PN 1026	2	PIN, dowel - timing window cover
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G
18F	FI 9010	1	FITTING, shut-off
40	SGB 15B 13	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section
***	TP 904A	1	TAPPET ASSEMBLY - includes parts 51A thru 51C
51A	RL 768A	1	ROLLER ASSEMBLY, tappet
51B	PN 9039	1	PIN, tappet roller
51C	GU 9021A	1	GUIDE ASSEMBLY, tappet
52	SP 9038	1	SPRING, plunger - outer
53	GU 9020	1	SEAT, spring - upper
80	RD 9042-3A	1	ROD, control
***	LE 9074-5A	1	FULCRUM LEVER ASSEMBLY - includes parts 80, 90 and **b thru **f - See Note 1
90	LE 9080-1A	1	FULCRUM LEVER ASSEMBLY
**b	WA 1771	1	WASHER, tab
**c	WA 1770	1	WASHER, spring seat
**d	SP 9035	1	SPRING, adjusting - tension
**e	NT 1228	1	NUT, adjusting
**f	PN 1054	1	PIN, cotter - locking
98	HG 9055	1	HOUSING, governor
103	SC 1140	2	SCREW, fastening - bridge assembly
***	LE 79147A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B
142	LE 79146	1	LEVER, operating
200	HD 5154A (New)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 201 thru 213, 215 thru 219, 221 and 222
	HD 5154AR (Rebuilt)	1	
201	RG 902	1	RING, button retainer
202	BO 903	1	BUTTON, plunger
205	SP 9037	1	SPRING, inner plunger
207	RN 9025	1	COVER, gear retainer
208	GE 9015	1	GEAR, plunger drive - Oldham
208A	GU 9016	1	GUIDE, plunger - Oldham
208B	GU 9023	1	SEAT, plunger spring - upper
217	FI 9023	1	FITTING, discharge
217A	SV 9021	1	SLEEVE, discharge fitting

Omit illustrated parts 100, 104 and two of 107

** Not Illustrated

continued

*** Not Shown Assembled

PSB 4A 100EH 5281A1 - continued

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 100EH-1 - MANUAL PAGE D226/850

NOTE 1: See Manual Page D3001/602H for assembling and servicing.

NOTE 2: Install stop lever (135) approximately $5^{\circ} \pm 5^{\circ}$ instead of 15° .

NOTE 3: Pretorque delivery valve cap screw (73) and plunger bore cap screw (215) to 50-55 ft. lbs. Loosen and retorque to 50-55 ft. lbs.

NOTE 4: Replacement BO 903 buttons must be lapped to mating surface of plunger to provide maximum seating surface. CAUTION: Do not damage plunger surface.

CALIBRATION: Average for all outlets.

PSB 4A 100EH 5281A - governor setting - 600 RPM to 1950 RPM

Set at full load speed for 39-40 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed

Use AKB 50SD 150 Nozzle Holders and ADN 12SD 12C Nozzles

NOTE: POWER BOOST ASSEMBLY IS USED IN PLACE OF STOP PLATE ASSEMBLY ILLUSTRATION (100) AND IS ALLIS - CHALMERS PART NUMBER 4380684 AND IS SUPPLIED BY THEM ONLY.



PSB 4A 100EH 5283A1 - ALLIS-CHALMERS Model 7000

5283A1

Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 5%
Timed for Port Closing - Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Gap	Outer Spring Illustration IIO Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
5283A1	600 to 2200	SP 7950/4	.059"	SF 7951/15	.079" Precompressed	Down 35°	7% to 10%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9024	1	HUB, drive - camshaft
8	SH 9075A	1	CAMSHAFT
8C	WA 9011	1	WASHER, serrated
10	PO 903	1	POINTER, timing
11	HG 9069A	1	HOUSING, pump - includes parts 10 and 11A
13	CV 903C	1	COVER, quill shaft - pump housing
16	SC 1140	2	SCREW, fastening - quill shaft cover
18	CV 9048A	1	COVER, timing window - includes part **a
**a	PN 1026	2	PIN, dowel - timing window cover
18B	RD903	1	ROD, shut-off
18D	GA 1019	1	GASKET, shut-off rod
18E	SC 904	1	SCREW, bearing
18F	FI 9010	1	FITTING, shut-off
18G	PN 1026	1	PIN, shut-off rod
23	PN 906	1	PIN, plunger sleeve
24	CU 9013A	1	CONTROL UNIT ASSEMBLY - includes parts 24A and 24B
40	SG5 15B13	1	SUPPLY PUMP ASSEMBLY - for parts see Fuel Supply Pump Section
***	TP 904A	1	TAPPET ASSEMBLY - includes parts 51A thru 51C
51A	RL 768A	1	ROLLER ASSEMBLY, tappet
51B	PN 9039	1	PIN, tappet roller
51C	GU 9021A	1	GUIDE ASSEMBLY, tappet
52	SP 9038	1	SPRING, plunger - outer
53	GU 9020	1	SEAT, spring - upper
80	RD 9042-3A	1	ROD, control
***	LE 9074-5A	1	FULCRUM LEVER ASSEMBLY, - includes parts 80, 90 and **b thru **f - See Note 1
90	LE 9030-1A	1	FULCRUM LEVER ASSEMBLY
**b	WA 1771	1	WASHER, tab
**c	WA 1770	1	WASHER, spring seat
**d	SP 9035	1	SPRING, adjusting - tension
**e	NT 1228	1	NUT, adjusting
**f	PN 1054	1	PIN, cotter - locking
93	CA 794	1	CAM, torque
98	HG 9055	1	HOUSING, governor
100	PL 7958-1A	1	BRIDGE ASSEMBLY, stop plate - includes parts **g thru **h
**g	PL 7957A	1	PLATE, stop
**h	BK 7938C	1	BRIDGE, stop plate
103	SC 1140	2	SCREW, fastening - bridge assembly
***	LE 79147A	1	LEVER ASSEMBLY, operating - includes parts 140, 142A and 142B
142	LE 79146	1	LEVER, operating
200	HD 4966A (New) HD 4966AR (Rebuilt)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 201 thru 213, 215 thru 222
201	RG 902	1	RING, button retainer
202	BO 903	1	BUTTON, plunger
205	SP 9037	1	SPRING, inner plunger
207	RN 9025	1	COVER, gear retainer
208	GE 9015	1	GEAR, plunger drive - Oldham

* continued *

** Not Illustrated

*** Not Shown Assembled

Illustration Number	Part Number	Quantity Used	Description of Part
208A	GU 9016	1	GUIDE, plunger - Oldham
208B	GU 9023	1	SEAT, plunger spring - upper

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 100EH-1 - MANUAL PAGE D226/850

NOTE 1: See Manual Page D3001/602H for assembling and servicing.

NOTE 2: Install stop lever (135) approximately $5^\circ \pm 5^\circ$ instead of 15° .

NOTE 3: Pretorque delivery valve cap screw (73) and plunger bore cap screw (215) to 50-55 ft. lbs. Loosen and retorque to 50-55 ft. lbs.

NOTE 4: Replacement BO 903 buttons must be lapped to mating surface of plunger to provide maximum seating surface. CAUTION: Do not damage plunger surface.

CALIBRATION: Average for all outlets.

PSB 4A 100EH 5283A1 - governor setting - 600 RPM to 2200 RPM

Set at full load speed for 51-52 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 2225-2230 RPM.

Reference: Latest Engine Models Incorporate PSB 4A 100EH 5291A.

5299A1, A3-A5

PSB 4A 100EH 5299A1, A3 thru A5 - ALLIS-CHALMERS Models 6000 & 7000

Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 5%
Timed for Port Closing - Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Gap	Outer Spring Illustration III Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
5299A1	600 to 1800	SP 7950/21	.079"	SP 7951/11	.079"	Up 75°	7% to 10%
5299A3	600 to 1800	SP 7950/7	.079"	SP 7951/11	.079"	Up 75°	15% to 18%
5299A4	600 to 1800	SP 7950/21	.079"	SP 7951/11	.079"	Up 75°	7% to 10%
5299A5	600 to 1800	SP 7950/4	.118"	SP 7951/12	.039"	Down 55°	15% to 18%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9023A	1	HUB, drive - camshaft
8	SH 9075A	1	CAMSHAFT
8C	WA 9011	1	WASHER, serrated
10	PO 903	1	POINTER, timing
11	HG 9069A	1	HOUSING, pump - includes parts 10 and 11A
13	CV 903C	1	COVER, quill shaft - pump housing
16	SC 1140	2	SCREW, fastening - quill shaft cover
18	CV 9048A	2	COVER, timing window - includes ***a
***a	PN 1026	1	PIN, dowel - timing window
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G
18F	FI 9010	1	FITTING, shut-off
23	PN 906	1	PIN, plunger sleeve
24	CU 9021A (Supds CU 8019A) See Note 6-Pg D226/901)	1	CONTROL UNIT ASSEMBLY
40	SGB 15B13	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section
***	TP 904A	1	TAPPET ASSEMBLY - includes parts 51A thru 51C

- continued -

**Not Illustrated

***Not Shown Assembled



Illustration Number	Part Number	Quantity Used	Description of Part
51A	RL 763A	1	ROLLER ASSEMBLY - tappet
51B	PN 9039	1	PIN, tappet roller
51C	GU 9021A	1	GUIDE ASSEMBLY - tappet
52	SP 9038	1	SPRING, plunger - outer
53	GU 9020	1	SEAT, spring - upper
90	RD 9043A	1	ROD, control
***	LE 9091-3A	1	FULCRUM LEVER ASSEMBLY, spring loaded - includes parts 80, 90 and **b thru **e
90	LE 9095-1A	1	FULCRUM LEVER ASSEMBLY
**b	SC 9037	1	SCREW, control rod
**c	See Note 1	1	WASHER, spring seat
**d	SP 9039	1	SPRING, adjusting - tension
**e	NT 1239	1	NUT, elastic
98	HG 9055	1	HOUSING, governor
100	PL 7958-1A	1	BRIDGE ASSEMBLY, stop plate - includes parts **g thru **i
**g	PL 7957A	1	PLATE, stop
**h	BK 7938C	1	BRIDGE, stop plate
**i	NT 8-8CA	2	NUT, jam
103	SC 1140	2	SCREW, fastening - bridge assembly
126	SC 350-20CA	2	SCREW, stop lever
***	LE 79147A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A, 142B
142	LE 79146	1	LEVER, operating
200	HD 5154A (New) HD 5154AR (Rebuilt)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 201 thru 213, 215 thru 219, 221 and 222
201	RG 902	1	RING, button retainer
202	BO 903	1	BUTTON, plunger - See Note 4
205	SP 9037	1	SPRING, inner plunger
207	RN 9025	1	COVER, gear retainer
208	GE 9015	1	GEAR, plunger drive - Oldham
208A	GU 9016	1	GUIDE, plunger - Oldham
208B	GU 9023	1	SEAT, plunger spring - upper
217	FI 9023	1	FITTING - discharge
217A	SV 9021	1	SLEEVE - discharge fitting

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 100EH-1 - MANUAL PAGE D226/850

NOTE 1: Use WA 1807 and/or WA 1808 as required to permit control rod to drop of its own weight when fulcrum lever is in vertical position.

NOTE 2: Install stop lever (135) approximately 5° ± 5° instead of 15° to left.

NOTE 3: Pretorque delivery cap screw (212) and plunger bore cap screw (215) to 50-55 ft. lbs. Loosen and retorque to 50-55 ft. lbs.

NOTE 4: Replacement BO 903 buttons must be lapped to mating surface of plunger to provide maximum seating surface. CAUTION: Do not damage lapped plunger surface during this operation.

CALIBRATION: Average for all outlets.

PSB 4A 100EH 5299A1 - governor setting - 600 RPM to 1800 RPM

Set at full load speed for 41.5-42.5 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 1825-1830 RPM.

PSB 4A 100EH 5299A3 - governor setting - 600 RPM to 1800 RPM

PSB 4A 100EH 5299A4 - governor setting - 600 RPM to 1800 RPM

Set at full load speed for 43.5-49.5 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle position.

Cam nose to leave stop plate at 1825-1830 RPM

PSB 4A 100EH 5299A5 - governor setting - 600 RPM to 1800 RPM

Set at full load speed for 63.5-64.5 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 1825-1830 RPM.

**Not Illustrated

***Not Shown Assembled

5301A1

PSB 4A 100EH 5301A1 - ALLIS-CHALMERS
Models 6000 & 7000

Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 5%
 Timed for Port Closing - Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Gap	Outer Spring Illustration III Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
5301A1	600 to 1800	SP 7950/21	.079"	SP 7951/11	.079"	Up 75°	7% to 9%

precompressed

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9024	1	HUB, drive - camshaft
8	SH 9075A	1	CAMSHAFT
8C	WA 9011	1	WASHER - serrated
10	PO 903	1	POINTER, timing
11	HG 9069A	1	HOUSING, pump - includes parts 10 and 11A
13	CV 903C	1	PAD, quill shaft - pump housing
16	SC 1140	2	SCREW, fastening - quill shaft pad
18	CV 9048A	1	COVER, timing window - includes part **a
**a	PN 1026	2	PIN, dowel - timing window cover
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G
18F	FI 9010	1	FITTING, shut-off
23	PN 906	1	PIN, plunger sleeve
24	CU 9021A (Supds CU9039A) See Note 6-Pg D226/901)	1	CONTROL UNIT ASSEMBLY - includes parts 24A and 24B
40	SGB 15B13	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section
***	TP 904A	1	TAPPET ASSEMBLY - includes parts 51A thru 51C
51A	RL 768A	1	ROLLER ASSEMBLY, tappet
51B	PN 9039	1	PIN, tappet roller
51C	GU 9021A	1	GUIDE ASSEMBLY, tappet
52	SP 9038	1	SPRING, plunger - outer
55	GU 9020	1	SEAT, spring - upper
80	RD 9049-3A	1	ROD, control
***	LE 9074-5A	1	FULCRUM LEVER ASSEMBLY - includes parts 80, 90 and **b thru **f - See Note 1
90	LE 9080-1A	1	FULCRUM LEVER ASSEMBLY
**b	W 1771	1	WASHER, tab
**c	WA 1770	1	WASHER, spring seat
**d	SP 9035	1	SPRING, adjusting - tension
**e	NT 1228	1	NUT, adjusting
**f	PN 1054	1	PIN, cotter - locking
98	HG 9055	1	HOUSING, governor
100	PL 7958-1A	1	BRIDGE ASSEMBLY, stop plate - includes parts **g thru **n
**g	PL 7957A	1	PLATE, stop
***	BK 7938C	1	BRIDGE, stop plate
103	SC 1140	2	SCREW, fastening - bridge assembly
***	LE 79147A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B
142	LE 79146	1	LEVER, operating
200	HD 5154A (New) HD 5154AP (Rebuilt)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 201 thru 213, 215 thru 219, 221 and 222
201	RG-902	1	RING, button retainer
202	BO 903	1	BUTTON, plunger
205	SP 9037	1	SPRING, inner plunger
207	RN 9025	1	COVER, gear retainer

- continued -

** Not Illustrated

*** Not Shown Assembled



Illustration Number	Part Number	Quantity Used	Description of Part
208	GE 9015	1	GEAR, plunger drive - Oldham
208A	GU 9016	1	GUIDE, plunger - Oldham
208B	GU 9023	1	SEAT, plunger spring - upper
217	FI 9023	1	FITTING - discharge
217A	SV 9021	1	SLEEVE - discharge fitting

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 100EH-1 - MANUAL PAGE D226/850

NOTE 1: See Manual Page D300/602H for assembling and servicing.

NOTE 2: Install stop lever (135) approximately 5° ± 5° instead of 15°.

NOTE 3: Pretorque delivery valve cap screw (73) and plunger bore cap screw (215) to 50-55 ft. lbs. Loosen and retorque to 50-55 ft. lbs.

NOTE 4: Replacement BO 903 buttons must be lapped to mating surface of plunger to provide maximum seating surface. CAUTION: Do not damage plunger surface.

CALIBRATION: Average for all outlets.

PSB 4A 100EH 5301A1 - governor setting - 600 RPM to 1800 RPM

Set at full load speed for 48.5-49.5 cc per 500 strokes at full load position.

Set at idle speed for 11-12 cc per 500 strokes at idle speed.

Cam nose to leave stop plate at 1825-1830 RPM.

PSB 4A 100EH 5308A1 & A2 - ALLIS-CHALMERS
 PSB 4A 100EH 5308B1 & B2 Model 7000

5308A1-A2
 5308B1-B2

Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 5%
 Timed for Port Closing - Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration III Part Number	Gap	Outer Spring Illustration III Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
5308A1 5308A2 5308B1 5308B2	600 to 2200	SP 7950/4	.059"	SP 7951/11	.039" Precompressed	Down 35°	9% to 11%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9024	1	HUB, drive - camshaft
8	SH 9075A	1	CAMSHAFT
10	PO 903	1	POINTER, timing
11	HG 9069A	1	HOUSING, pump - includes parts 10 and 11A
13	CV 903C	1	PAD, quill shaft - pump housing
16	SC 1130	2	SCREW, fastening - quill shaft pad
18	CV 9043A	1	COVER, timing window - includes part **a
**a	PN 1026	2	PIN, dowel - timing window cover
***	RD 9041A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G - used on 5308A1 and A2 pumps only
***	RD 9043A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G - used on 5308B1 and B2 pumps only
15C	SP 9011	1	SPRING, shut-off rod - used on 5308B1 and B2 pumps only
18F	FI 9010	1	FITTING, shut-off rod
23	PN 906	1	PIN, plunger sleeve
24	CU 9021A (Supds CU 9019A) Sec Note 6 Pg D226/901	1	CONTROL UNIT ASSEMBLY - includes parts 24A and 24B
40	SGB 15B13	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section
***	TP 904A	1	TAPPET ASSEMBLY - includes parts 51A thru 51C

- continued -

**Not Illustrated

***Not Shown Assembled

Illustration Number	Part Number	Quantity Used	Description of Part
51A	RL 762A	1	ROLLER ASSEMBLY, tappet
51B	PN 9039	1	PIN, tappet roller
51C	GU 9021A	1	GUIDE ASSEMBLY, tappet
52	SP 9038	1	SPRING, plunger - outer
53	GU 9020	1	SEAT, spring - upper
80	RD 9043A	1	ROD, control
***	LE 9091-1A	1	FULCRUM LEVER ASSEMBLY, spring loaded - includes parts 80, 90 and **b thru **e
90	LE 9095-1A	1	FULCRUM LEVER ASSEMBLY
**b	SC 9037	1	SCREW, control rod
**c	See Note 1	1	WASHER, spring seat
**d	SP 9039	1	SPRING, adjusting - tension
**e	NT 1239	1	NUT, elastic stop
93	CA 794	1	CAM, torque
98	HG 9055	1	HOUSING, governor
100	PL 7958-1A	1	BRIDGE ASSEMBLY, stop plate - includes parts **g thru **i
**g	PL 7957A	1	PLATE, stop
**h	BK 7938C	1	BRIDGE, stop plate
**i	NT 8-8CA	2	NUT, jam
103	SC 1140	2	SCREW, fastening - bridge assembly
126	SC 350-20BL	2	SCREW, stop - stop lever
***	LE 46147A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B
142	LE 79146	1	LEVER, operating
200	HD 5154A (New) HD 5154AR (Rebuilt)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 201 thru 213, 215 thru 219, 221 and 222
202	BO 903	1	BUTTON, plunger - See Note 4
205	SP 9037	1	SPRING, plunger - inner
207	RN 9025	1	COVER, gear retainer
208	GE 9015	1	GEAR, plunger drive - Oldham
208A	GU 9016	1	GUIDE, plunger - Oldham
208B	GU 9023	1	SEAT, spring - upper
217	FI 9023	1	FITTING, discharge
217A	SV 9021	1	SLEEVE, discharge fitting

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 100EH-1 - MANUAL PAGE D226/850

NOTE 1: Use WA 1807 and/or WA 180S as required to permit control rod to drop of its own weight when fulcrum lever is in vertical position.

NOTE 2: Install stop lever (135) approximately $5^{\circ} \pm 5^{\circ}$ instead of 15° to left.

NOTE 3: Pretorque delivery cap screw (212) and plunger bore cap screw (215) to 50-55 ft. lbs. Loosen and retorque to 50-55 ft. lbs.

NOTE 4: Replacement BO 903 buttons must be lapped to mating surface of plunger to provide maximum seating surface. CAUTION: Do not damage lapped plunger surface during this operation.

CALIBRATION: Average for all outlets.

PSB 4A 100EH 5308A1 & B1 - governor setting - 600 RPM to 2200 RPM
Set at full speed for 64-65 cc per 500 strokes at full speed position.
Set at idle speed for 8-9 cc per 500 strokes at idle position.

PSB 4A 100EH 5308A2 & B2 - governor setting - 600 RPM to 2200 RPM
Set at full speed for 71-72 cc per 500 strokes at full speed position.
Set at idle speed for 8-9 cc per 500 strokes at idle position.

Reference: Latest Engine Models Incorporate PSB 4A 100EH 5356.

** Not Illustrated

*** Not Shown Assembled



PSB 4A 100EH 5356A1 - ALLIS-CHALMERS Model 7000

5356A1

Clockwise Rotation - L. H. Mounting - Fulcrum Lever Set for 5%
Timed for Port Closing - Equipped with Internal Spring Type Governor

Pump Type	Governor Speed RPM	Inner Spring Illustration 111 Part Number	Gap	Outer Spring Illustration 110 Part Number	Gap	Cam Nose Angle Related to Fulcrum Lever	Governor Regulation
5356A1	600 to 2200	SP 7950/4	.059"	SP 7951/11	.039"	Down 35°	9% to 11%

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9024	1	HUB, drive - camshaft
8	SH 9075A	1	CAMSHAFT
10	PO 903	1	POINTER, timing
11	HG 9069A	1	HOUSING, pump - includes parts 10 and 11A
13	CV 903C	1	COVER, quill shaft - pump housing
16	SC 1140	2	SCREW, fastening - quill shaft cover
18	CV 9048A	1	COVER, timing window - includes part **a
**a	PN 1026	2	PIN, dowel - timing window cover
***	RD 9048A	1	SHUT-OFF ROD ASSEMBLY - includes parts 188 thru 18G
18C	SP 9011	1	SPRING, shut-off
18F	FI 9010	1	FITTING, shut-off rod
23	PN 906	1	PIN, plunger sleeve
24	CU 9021A (Supds CU 9019A) See Note 6-Pg D226/901)	1	CONTROL UNIT ASSEMBLY - includes parts 24A and 24B
40	SGB 15B13	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section
***	TP 904A	1	TAPPET ASSEMBLY - includes parts 51A thru 51C
51A	RL 768A	1	ROLLER ASSEMBLY, tappet
51B	PN 9039	1	PIN, tappet roller
51C	GU 9021A	1	GUIDE ASSEMBLY, tappet
52	SP 9038	1	SPRING, plunger - outer
53	GU 9020	1	SEAT, spring - upper
80	RD 9043A	1	ROD, control
***	LE 9091-1A	1	FULCRUM LEVER ASSEMBLY, spring loaded - includes parts 80, 90 and **b thru **e
90	LE 9095-1A	1	FULCRUM LEVER ASSEMBLY
**b	SC 9037	1	SCREW, control rod
**c	See Note 1	1	WASHER, spring seat
**d	SP 9039	1	SPRING, adjusting - tension
**e	NT 1239	1	NUT, elastic stop
93	CA 794	1	CAM, torque
98	HG 9055	1	HOUSING, governor
100	PL 7958-1A	1	BRIDGE ASSEMBLY, stop plate - includes parts **g thru **i
**g	PL 7957A	1	PLATE, stop
**h	BK 7938C	1	BRIDGE, stop plate
**i	NT 8-8CA	2	NUT, jam
103	SC 1140	2	SCREW, fastening - bridge assembly
***	LE 79147A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B
142	LE 79146	1	LEVER, operating
200	HD 5154A (New) HD 5154AR (Rebuilt)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 201 thru 213, 215 thru 219, 221 and 222
202	BO 903	1	BUTTON, plunger - See Note 4
205	SP 9037	1	SPRING, plunger - inner
207	RN 9025	1	COVER, gear retainer
208	GE 9015	1	GEAR, plunger drive - Oldham
208A	GU 9016	1	GUIDE, plunger - Oldham
208B	GU 9023	1	SEAT, spring - upper
217	FI 9023	1	FITTING, discharge
217A	SV 9021	1	SLEEVE, discharge fitting

- continued -

** Not Illustrated

*** Not Shown Assembled

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 100EH-1 - MANUAL PAGE D226/850

NOTE 1: Use WA 1807 and/or WA 1808 as required to permit control rod to drop of its own weight when fulcrum lever is in a vertical position.

NOTE 2: Install stop lever (135) approximately $5^\circ \pm 5^\circ$ instead of 15° .

NOTE 3: Pretorque delivery cap screw (212) and plunger bore cap screw (215) to 50-55 ft. lbs. Loosen and retorqued to 50-55 ft. lbs.

NOTE 4: Replacement BO 903 (202) buttons must be lapped to mating surface of plunger to provide maximum seating surface.

CAUTION: Do not damage lapped plunger surface during this operation.

NOTE 5: Install operating lever (142) 110° clockwise from top vertical at idle position.

CALIBRATION: Average for all outlets.

PSB 4A 100 EH 5356A1 - governor setting - 600 RPM to 2200 RPM.

Set at full load speed for 71-72cc per 500 strokes at full load position.

Check at 150 RPM for 48cc min. delivery per 500 strokes.

Set at idle speed for 8-9cc per 500 strokes at idle position.

Cam nose to leave stop plate at 2215 - 2225 RPM.

NOTE 6: The following is applicable to control units for PSB 100EH type pumps used on Allis-Chalmers engines:

- Control unit, CU 9019A was superseded by CU 9021A, which requires an increased diameter control unit-plunger sleeve pin (see Fig. 1). CU 9019A, with smaller diameter control unit-plunger sleeve pin, must be replaced with CU 9021A since the smaller pins have broken in these applications.

- Hydraulic heads were supplied with two different plunger sleeve slot widths and corresponding plunger sleeve pin head sizes.

When replacing a CU 9019A unit with the CU 9021A, use plunger sleeve pin PN 9023.

Later PSB 100EH pumps used on A-C engines were furnished with increased width slots in the plunger sleeve. Control unit CU 9021A and plunger sleeve pin PN 9049 were furnished as original components with these pumps.

The fit of the plunger sleeve pin must be checked in the plunger sleeve slot before installing a new control unit. Make certain that the correct pin (large head - .1350" or small head - .1000") is applied to assure a close fit in the plunger sleeve slot.

Refer to Fig. 1 for pin identification.

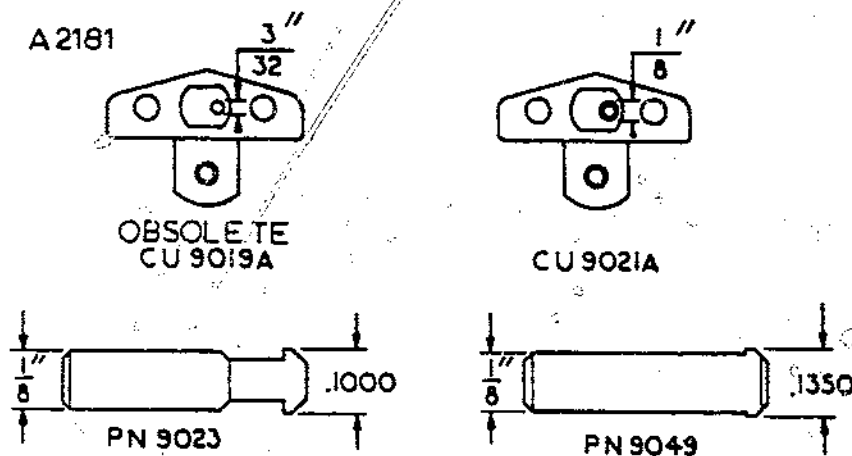


Figure 1



PSB 4A 100EH 5355A1 and B1 - Allis-Chalmers Models 6000 and 7000 A-C #4337826

Clockwise Rotation - L.H. Mounting - Fulcrum Lever Set for 5% - Timed for Port Closing - Equipped with Internal Spring Type Governor

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9024	1	HUB, drive - camshaft
8	SH 9075 A	1	CAMSHAFT
10	PO 903	1	POINTER, timing
11	HG 9069 A	1	HOUSING, pump - includes parts 10 and 11A
13	CV 903 C	1	COVER, quill shaft - pump housing
16	SC 1140	2	SCREW, fastening - quill shaft cover
18	CV 9048 A	1	COVER, timing window - includes **a
**a	PN 1026	2	PIN, dowel - timing window
***	RD 9041 A	1	SHUT-OFF ROD ASSEMBLY - includes parts 18B thru 18G
18F	FI 9010	1	FITTING, shut-off
23	PN 9023	1	PIN, plunger sleeve
24	CU 9021 A	1	CONTROL UNIT ASSEMBLY
40	SGB 15B13	1	SUPPLY PUMP ASSEMBLY - for parts, see Fuel Supply Pump Section
***	TP 904 A	1	TAPPET ASSEMBLY - includes parts 51A thru 51C
51A	RL 768 A	1	ROLLER ASSEMBLY - tappet
51B	PN 9039	1	PIN, tappet roller
51C	GU 9021 A	1	GUIDE ASSEMBLY - tappet
52	SP 9038	1	SPRING, plunger - outer
53	GU 9020	1	SEAT, spring - upper
80	RD 9043 A	1	ROD, control
***	LE 9091-3 A	1	FULCRUM LEVER ASSEMBLY, spring loaded - includes parts 80, 90 and **b thru **e
90	LE 9095-1 A	1	FULCRUM LEVER ASSEMBLY
**b	SC 9037	1	SCREW, control rod
**c	See Note 1	1	WASHER, spring seat
**d	SP 9039	1	SPRING, adjusting - tension
**e	NT 1239	1	NUT, elastic
98	HG 9055	1	HOUSING, governor
100	PL 7958-1 A	1	BRIDGE ASSEMBLY, stop plate - includes parts **g thru **i
**g	PL 7957 A	1	PLATE, stop
**h	BK 7938 C	1	BRIDGE, stop plate
**i	NT 8-8CA	2	NUT, jam
103	SC 1140	2	SCREW, fastening - bridge assembly
126	SC 350-20CA	2	SCREW, stop lever
***	LE 79147 A	1	LEVER ASSEMBLY, operating - includes parts 140, 142, 142A and 142B
142	LE 79146	1	LEVER, operating
200	HD 5154 A (New)	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 201 thru 213, 215 thru, 219, 221 and 222
201	RG 902	1	RING, button retainer
202	BO 903	1	BUTTON, plunger - See Note 4
205	SP 9037	1	SPRING, inner plunger

** Not Illustrated
 *** Not Shown Assembled

PSB 4A 100EH 5355A1 and B1 - (Cont'd)

Illustration Number	Part Number	Quantity Used	Description of Part
207	RN 9025	1	COVER, gear retainer
208	GE 9015	1	GEAR, plunger drive - Oldham
208A	GU 9016	1	GUIDE, plunger - Oldham
208B	GU 9023	1	SEAT, plunger spring - upper
217	FI 9023	6	FITTING - discharge
217A	SV 9021	6	SLEEVE - discharge fitting

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 100EH-1 - MANUAL PAGE D 226/850

NOTE 1: Use WA 1807 and/or WA 1808 as required to permit control rod to drop of its own weight when fulcrum lever is in vertical position.

NOTE 2: Install stop lever (135) approximately $5^{\circ} \pm 5^{\circ}$ instead of 15° to left.

NOTE 3: Pretorque delivery cap screw (212) and plunger bore cap screw (215) to 50 - 55 ft. lbs. Loosen and retorque to 50 - 55 ft. lbs.

NOTE 4: Replacement BO 903 buttons must be lapped to mating surface of plunger to provide maximum seating surface.

CAUTION: Do not damage lapped plunger surface during this operation.

CALIBRATION: Average for all outlets.

PSB 4A 100EH 5355A1 and B1

Governor speed 600 to 1800 RPM.

Inner spring (Ill. 111) SP 7950/13 - Gap .079"

Outer spring (Ill. 110) SP 7951/14 - Precompressed .039"

Set cam to form 105° angle with fulcrum lever.

Set at full load speed for 64 - 65 cc/500 strokes.

Set at idle speed for 11 - 12 cc/500 strokes.

Cam to leave stop plate at 1815 - 1825 RPM.

COMMERCIAL SALES DIVISION

AMERICAN
BOSCH
ARMA
CORPORATION

SPRINGFIELD 7, MASS. U.S.A.

*Supersedes Manual Pages D226/900
thru D226/908, Issued January, 1958*

AMERICAN BOSCH FUEL INJECTION PUMP



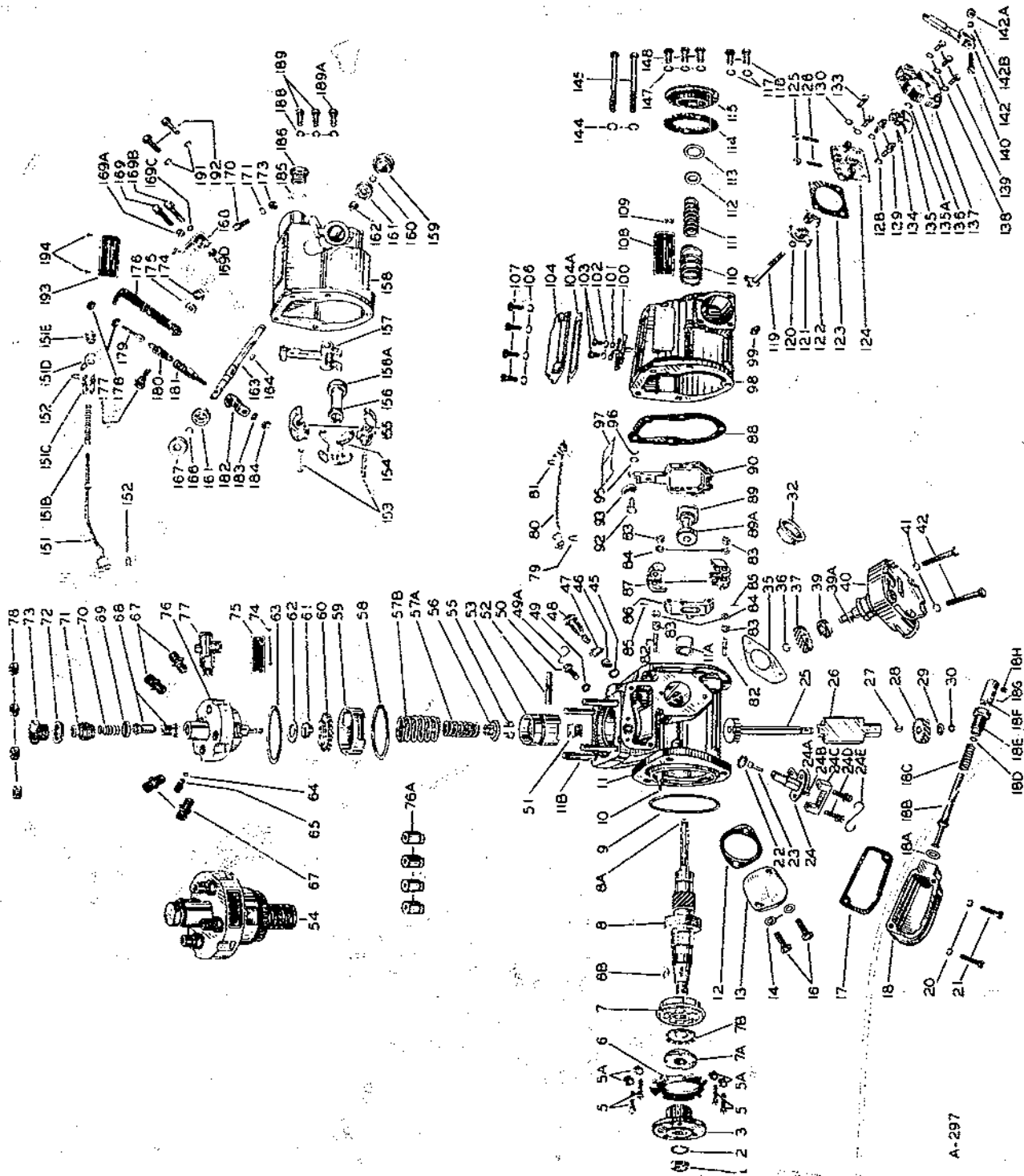
TYPES

PSB 4A 70-100 F-1

PSB 4A 70-100 V-1

SERVICE PARTS LIST

COMMERCIAL SALES DIVISION AMERICAN BOSCH ARMA CORPORATION SPRINGFIELD 7 MASS U.S.A.



A-287



SERVICE PARTS LIST
For
PSB 4A 70-100 F-1

NOTE: This pump is equipped with an internal spring type governor.

Illustration Number	Part Number	Quantity Used	Description of Part
1	NT 1230	1	NUT, hub — camshaft — 3/16" — 18 UNF 2B thread
2	NMS 423/1X	1	WASHER, lock — hub nut
3	HB 9019	1	HUB, drive — tapered
5	SC 1555	4	SCREW, fastening — ball bearing retaining plate
5A	WA 901	4	WASHER, lock — fastening screw
6	PL 907	1	PLATE, retaining — ball bearing
7	BB 1054	1	BALL BEARING, camshaft
7A	NT 905	1	NUT, round — camshaft ball bearing
7B	WA 1720	1	WASHER, lock — camshaft ball bearing
8	SH 9057A	1	CAMSHAFT, includes part 8A — tapered at drive end
8A	SC 1149	1	SCREW AND LOCKWASHER, camshaft
8B	NKE 5/2X	1	KEY, Woodruff — camshaft
9	GA 76200	1	GASKET, rubber ring
10	PO 765	1	POINTER, timing
11	HG 9044A	1	HOUSING, pump — includes parts 10, 11A and 11B
11A	BG 7649	1	BUSHING, camshaft
11B	SD 903	4	STUD, housing
12	GA 904	1	GASKET, quill shaft pad
13	CV 9047	1	PAD, quill shaft — pump housing
14	GA 7616	2	GASKET, fastening screw
16	SC 1119	2	SCREW, fastening — quill shaft pad
17	GA 9026	1	GASKET, timing window cover assembly
18	CV 9018	1	COVER, timing window
18A	GA 1036	1	GASKET, shut-off rod
***	RD 908A	1	SHUT-OFF ROD ASSEMBLY, includes parts 18B thru 18H
18B	RD 903	1	ROD, shut-off
18C	SP 904	1	SPRING, shut-off rod
18D	GA 1019	1	GASKET, shut-off rod
18E	SC 904	1	SCREW, bearing
18F	FI 902	1	FITTING, shut-off
18G	PN 1026	1	PIN, shut-off rod
18H	SC 325-4BL	1	SCREW, set
20	WA 6-8BL	2	WASHER, lock — fastening screw
21	SC 27-20BL	2	SCREW, fastening — timing window cover assembly
22	GA 1014	1	GASKET, ring — control unit assembly
23	PN 9023	1	PIN, plunger sleeve
24	CU 9011A	1	CONTROL UNIT ASSEMBLY — includes parts 24A and 24B — for left hand mounted pumps — type designation stamped 11
24	CU 9010A	1	CONTROL UNIT ASSEMBLY — includes parts 24A and 24B — for right hand mounted pumps — type designation stamped 10
24A	NT 4-6	1	NUT, hex — control unit
24B	WA 1648	1	WASHER, tab — control unit hex nut
24C	RN 9011	1	RETAINER, control unit
24D	SC 1700	2	SCREW WITH LOCKWASHER, fastening — control unit assembly
24E	WI 901	1	WIRE, locking — control unit fastening screw
***	SH 9071A	1	QUILL SHAFT ASSEMBLY, includes parts 25 thru 30
25	SH 909A	1	SHAFT, quill — with gear
26	BG 9032	1	BUSHING, quill shaft
27	KY 1006	1	KEY, Woodruff — quill shaft
28	GE 908	1	GEAR, camshaft driven
29	WMS 2157/400X	as required	WASHER, plain — .002" thick — to eliminate shaft play
29	WMS 2157/1X	as required	WASHER, plain — .004" thick — to eliminate shaft play
29	WMS 2157/2X	as required	WASHER, plain — .008" thick — to eliminate shaft play
29	WMS 2157/3X	as required	WASHER, plain — .020" thick — to eliminate shaft play
30	RG 1014	1	RING, spring — quill shaft
32	PG 902	1	PLUG, closing
35	GA 903	1	GASKET, supply pump
36	RG 1014	1	RING, spring — supply pump shaft
37	GE 908	1	GEAR, drive — supply pump shaft
39	PK 7910	1	SEAL, oil — supply pump shaft
39A	KY 901	1	KEY, supply pump shaft
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY, includes parts 36, 37, 39 and 39A — for clockwise rotation pumps
40	SGB 15 B2	1	SUPPLY PUMP ASSEMBLY, includes parts 36, 37, 39 and 39A — for counter-clockwise rotation pumps
**	SR 9012	2	SPACER, Quill Shaft

**Not Illustrated

- continued -

***Not Shown Assembled

COMMERCIAL SALES DIVISION

AMERICAN
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SPRINGFIELD 7, MASS. U.S.A.

Illustration Number	Part Number	Quantity Used	Description of Part
41	WA 6-8BL	2	WASHER, lock — fastening screw
42	SC 1516	2	SCREW, fastening — supply pump
45	GA 1012	1	GASKET, ring — filter screw
46	FE 901	1	FILTER, screen
47	GA 7965	1	GASKET, filter screw
48	SC 903	1	SCREW, filter
49	GA 7616	1	GASKET, fastening screw
49A	WI 1073	as required	WIRE, locking — fastening screw
50	SC 1140	1	SCREW, locking — quill shaft bushing
***	TP 902A	1	TAPPET ASSEMBLY, includes parts 51 thru 53
51	RL 903A	1	ROLLER ASSEMBLY, tappet
52	PN 9013	1	PIN, tappet roller
53	GU 905A	1	GUIDE ASSEMBLY, tappet
54	per requirement	1	HYDRAULIC HEAD ASSEMBLY, complete — includes parts 22, 45 and 55 thru 76A — for part number see name plate attached to illustration 76
55	HP 902	1	LOCK, plunger — 2 piece
56	GU 904	1	SEAT, plunger spring — lower
57A	SP 901	1	SPRING, plunger — inner
57B	SP 903	1	SPRING, plunger — outer — for speeds greater than 1900 RPM
58	GA 1009	1	GASKET, ring — head assembly
59	RN 9014	1	COVER, gear retainer — for left hand mounted pumps
59	RN 9015	1	COVER, gear retainer — for right hand mounted pumps
60	GE 909	1	GEAR, plunger drive — for clockwise rotation — left hand mounted pump
60	GE 9010	1	GEAR, plunger drive — for counter-clockwise rotation — left hand mounted pump
60	GE 901	1	GEAR, plunger drive — for clockwise rotation — right hand mounted pump
60	GE 903	1	GEAR, plunger drive — for counter-clockwise rotation — right hand mounted pump
61	GU 903	1	GUIDE, plunger
62	WA 1362	1	WASHER, thrust — plunger drive gear
63	GA 1010	1	GASKET, ring-head assembly
64	BB 1024	1	BALL, sealing — set screw
65	SC 1352	1	SCREW, set — sealing ball
67	FI 9012	4	FITTING, discharge
68	VA 907A	1	DELIVERY VALVE ASSEMBLY — for plunger diameter of 7.0 mm
68	VA 908A	1	DELIVERY VALVE ASSEMBLY — for plunger diameter of 7.5 mm to 9.0 mm inclusive
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY — for plunger diameter of 9.5 mm and 10.0 mm
69	GA 905	1	GASKET, delivery valve holder
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
72	GA 906	1	GASKET, cap screw
73	SC 9018A	1	SCREW, cap — delivery valve
74	SC 150-2	2	SCREW, fastening — part number plate
75	NP 902	1	PLATE, part number — hydraulic head
76	HD 9013-2A	1	HEAD, hydraulic — with 7.0 mm diameter plunger and sleeve — round
76	HD 9013-3A	1	HEAD, hydraulic — with 7.5 mm diameter plunger and sleeve — round
76	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm diameter plunger and sleeve — round
76	HD 9013-5A	1	HEAD, hydraulic — with 8.5 mm diameter plunger and sleeve — round
76	HD 9013-6A	1	HEAD, hydraulic — with 9.0 mm diameter plunger and sleeve — round
76	HD 9013-7A	1	HEAD, hydraulic — with 9.5 mm diameter plunger and sleeve — round
76	HD 9013-8A	1	HEAD, hydraulic — with 10.0 mm diameter plunger and sleeve — round
76A	SV 907	4	SLEEVE, stud — hydraulic head
77	per requirement	1	OVERFLOW VALVE ASSEMBLY, for parts see Safety Valve Section — for type designation see stamping on head of screw
78	NT 1127	4	NUT, fastening — hydraulic head assembly
79	PN 1122	1	HAIRPIN, control rod
80	RD 9035-1A	1	ROD, control — for left hand mounted pumps
80	RD 9035-2A	1	ROD, control — for right hand mounted pumps
81	PN 1122	1	HAIRPIN, control rod — governor end
***	WT 9011A	1	WEIGHT AND SPIDER ASSEMBLY, includes parts 82 thru 87 — See Note
82	PN 905A	2	PIN, weight

*** Not Shown Assembled

- continued -

Illustration Number	Part Number	Quantity Used	Description of Part
83	BG 903	4	BUSHING, weight
84	WA 1448-1	as required	WASHER, plain — weight pin — .036" thick
84	WA 1448-2	as required	WASHER, plain — weight pin — .038" thick
84	WA 1448-3	as required	WASHER, plain — weight pin — .040" thick
84	WA 1448-4	as required	WASHER, plain — weight pin — .044" thick
84	WA 1448-5	as required	WASHER, plain — weight pin — .048" thick
85	PN 1104	2	PIN, roll
86	HP 9012	1	SPIDER, weight
87	WT 909A	2	WEIGHT, includes part 83 — for WT 9011A
88	GA 907	1	GASKET, governor housing assembly
89	SV 901A	1	SLEEVE ASSEMBLY — includes parts 89A
89A	BB 7910	1	BALL THRUST BEARING, sleeve assembly
90	LE 9025-1A	1	FULCRUM LEVER ASSEMBLY, 5% governor regulation — pivot pins assembled in lower holes
90	LE 9025-2A	1	FULCRUM LEVER ASSEMBLY, 10% governor regulation — pivot pins assembled in upper holes
92	SC 1136	1	SCREW, square head — cam
93	CA 793	1	CAM, torque
95	WA 6-8BL	1	WASHER, lock — cam screw
96	NT 8-8BL	1	NUT, cam screw
97	BA 902	1	PLATE, oil baffle
98	HG 901	1	HOUSING, governor
99	PN 901A	1	PIN, pivot — fulcrum lever
100	PL 904	1	PLATE, stop
101	WA 1143	2	WASHER, plain — fastening screw
102	WA 6-8BL	2	WASHER, lock — fastening screw
103	SC 1404	2	SCREW, fastening — stop plate
104	CV 9032C	1	COVER, top — governor housing
104A	GA 908	1	GASKET, top cover
106	WA 6-8BL	4	WASHER, lock — fastening screw
107	SC 1110	4	SCREW, fastening — top cover
108	NP 904	1	PLATE, name
109	SC 150-2	2	SCREW, fastening — name plate
110	per requirement	1	SPRING, governor — outer — for spring see specific pump type
111	per requirement	1	SPRING, governor — inner — for spring see specific pump type
112	SR 799/1	as required	SPACER, governor spring — inner — .020" thick
112	SR 799/2	as required	SPACER, governor spring — inner — .042" thick
112	SR 799/3	as required	SPACER, governor spring — inner — .058" thick
112	SR 799/4	as required	SPACER, governor spring — inner — .083" thick
112	SR 799/5	as required	SPACER, governor spring — inner — .177" thick
112	SR 799/6	as required	SPACER, governor spring — inner — .276" thick
112	SR 799/7	as required	SPACER, governor spring — inner — .030" thick
113	SR 7914/1	as required	SPACER, governor spring — outer — .020" thick
113	SR 7914/2	as required	SPACER, governor spring — outer — .042" thick
113	SR 7914/3	as required	SPACER, governor spring — outer — .058" thick
113	SR 7914/4	as required	SPACER, governor spring — outer — .083" thick
113	SR 7914/5	as required	SPACER, governor spring — outer — .156" thick
113	SR 7914/6	as required	SPACER, governor spring — outer — .030" thick
114	GA 902	1	GASKET, end cap
115	CP 901C	1	CAP, end — governor housing
117	WA 6-8BL	2	WASHER, lock — fastening screw
118	SC 1140	2	SCREW, fastening — end cap
119	SH 901A	1	SHAFT ASSEMBLY, operating
120	GA 76195	1	GASKET, ring — shaft assembly
121	PL 902A	1	PLATE ASSEMBLY, spring
122	SP 9016	1	SPRING, operating lever
123	GA 901	1	GASKET, shaft bearing plate
124	BG 904	1	PLATE, shaft bearing
125	NT 6-8BL	2	NUT, hex — stop screw
126	SC 350-16BL	2	SCREW, stop — stop lever
128	WA 6-8BL	2	WASHER, lock — stud
129	SD 902	2	STUD, fastening — shaft bearing plate — lower
130	GA 7616	2	GASKET, fastening screw — upper
133	SC 1356	2	SCREW, fastening — shaft bearing plate — upper
134	SC 901	1	SCREW, clamping — stop lever
135	BL 901	1	LEVER, stop — operating shaft
135A	SP 1066	1	RING, snap — shaft assembly
136	CV 7945	1	COVER, stop lever — upper
137	CV 7946	1	COVER, stop lever — lower
138	WA 22-6BL	3	WASHER, lock — fastening screw
139	SC 1354	3	SCREW, fastening — stop lever covers
***	LE 79117A	1	LEVER ASSEMBLY, operating — includes illustrated parts 140, 142, 142A and 142B

***Not Shown Assembled

- continued -

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Illustration Number	Part Number	Quantity Used	Description of Part
140	SC 7961	1	SCREW, fastening — operating lever
142	LE 79116	1	LEVER, operating
142A	NT 8-8BL	1	NUT, hex — fastening screw
142B	WA 6-8BL	1	WASHER, lock — fastening screw
144	WA 6-8BL	2	WASHER, lock — fastening screw
145	SC 1351	2	SCREW, fastening — governor housing — long
147	WA 6-8BL	3	WASHER, lock — fastening screw
148	SC 1140	3	SCREW, fastening — governor housing — short

Parts designated by illustration numbers 151 thru 194 are not used in this assembly.

NOTE 1: Each weight to be shimmed to permit .001" to .004" movement when assembled to the spider and without interference between the weight finger and the spider.

NOTE 2: IMPORTANT — Check governor sleeve for a minimum travel of 16 mm (.630") from the location of the weights completely collapsed to the position of completely expanded.

SERVICE PARTS LIST

For
PSB 4A 70 to 100 V-1

NOTE: This pump is equipped with an external spring type governor.

Illustration Number	Part Number	Quantity Used	Description of Part
1	NT 1230	1	NUT, hub — camshaft — 3/16" — 16 UNF 2B thread
2	NMS 423/1X	1	WASHER, lock — hub nut
3	HB 9019	1	HUB, drive — tapered
5	SC 1555	4	SCREW, fastening — ball bearing retaining plate
5A	WA 901	4	WASHER, lock — fastening screw
6	PL 907	1	PLATE, retaining — ball bearing
7	BB 1054	1	BALL BEARING, camshaft
7A	NT 905	1	NUT, round — camshaft ball bearing
7B	WA 1720	1	WASHER, lock — camshaft ball bearing
8	SH 9057A	1	CAMSHAFT, includes part 8A — tapered at drive end
8A	SC 1149	1	SCREW AND LOCKWASHER, camshaft
8B	NKE 5/2X	1	KEY, Woodruff — camshaft
9	GA 76200	1	GASKET, rubber ring
10	PO 765	1	POINTER, timing
11	HG 9044A	1	HOUSING, pump — includes parts 10, 11A and 11B
11A	BG 7649	1	BUSHING, camshaft
11B	SD 903	4	STUD, housing
12	GA 904	1	GASKET, quill shaft pad
13	CV 9047	1	PAD, quill shaft — pump housing
14	GA 7616	2	GASKET, fastening screw
16	SC 1119	2	SCREW, fastening — quill shaft pad
17	GA 9026	1	GASKET, timing window cover
18	CV 9014C	1	COVER, timing window
20	WA 6-8BL	2	WASHER, lock — fastening screw
21	SC 1140	2	SCREW, fastening — timing window cover
22	GA 1014	1	GASKET, ring — control unit assembly
23	PN 9023	1	PIN, plunger sleeve
24	CU 9019A	1	CONTROL UNIT ASSEMBLY — includes parts 24A and 24B — for left hand mounted pumps — type designation stamped 10
24	CU 9011A	1	CONTROL UNIT ASSEMBLY — includes parts 24A and 24B — for right hand mounted pumps — type designation stamped 11
24A	NT 4-6	1	NUT, hex — control unit
24B	WA 1648	1	WASHER, tab — control unit hex nut
24C	RN 9011	1	RETAINER, control unit
24D	SC 1700	2	SCREW WITH LOCKWASHER — fastening — control unit assembly
24E	WI 901	1	WIRE, locking — control unit fastening screw
***	SH 9071A	1	QUILL SHAFT ASSEMBLY — includes parts 25 thru 30
25	SH 909A	1	SHAFT, quill — with gear
26	BG 9032	1	BUSHING, quill shaft
27	KY 1006	1	KEY, Woodruff — quill shaft
28	GE 908	1	GEAR, camshaft driven
29	WMS 2157/400X	as required	WASHER, plain — .002" thick — to eliminate shaft play
29	WMS 2157/1X	as required	WASHER, plain — .004" thick — to eliminate shaft play
29	WMS 2157/2X	as required	WASHER, plain — .008" thick — to eliminate shaft play
29	WMS 2157/3X	as required	WASHER, plain — .020" thick — to eliminate shaft play
30	RG 1014	1	RING, spring — quill shaft
32	PG 902	1	PLUG, closing
35	GA 903	1	GASKET, supply pump
36	RG 1014	1	RING, spring — supply pump shaft
37	GE 908	1	GEAR, drive — supply pump shaft
39	PK 7910	1	SEAL, oil — supply pump shaft
39A	KY 901	1	KEY, supply pump shaft
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY, includes parts 36, 37, 39 and 39A for clockwise rotation pumps
40	SGB 15B2	1	SUPPLY PUMP ASSEMBLY, includes parts 36, 37, 39 and 39A for counter-clockwise rotation pumps
41	WA 6-8BL	2	WASHER, lock — fastening screw
42	SC 1516	2	SCREW, fastening — supply pump assembly
45	GA 1012	1	GASKET, ring — filter screw
46	FE 901	1	FILTER, screen
47	GA 7965	1	GASKET, filter screw
48	SC 903	1	SCREW, filter
49	GA 7616	1	GASKET, fastening screw
49A	WI 1073	as required	WIRE, locking — fastening screw
50	SC 1140	1	SCREW, locating — quill shaft bushing
**	SR 9012	2	SPACER, Quill Shaft

**Not Illustrated

- continued -

***Not Shown Assembled

Illustration Number	Part Number	Quantity Used	Description of Part
***	TP 902A	1	TAPPET ASSEMBLY — includes parts 51 thru 53
51	RL 903A	1	ROLLER ASSEMBLY, tappet
52	PN 9013	1	PIN, tappet roller
53	GU 905A	1	GUIDE ASSEMBLY, tappet
54	per requirement	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45 and 55 to 76A — for part number see name plate attached to illustration 76
55	HP 902	1	LOCK, plunger — 2 piece
56	GU 904	1	SEAT, plunger spring — lower
57A	SP 901	1	SPRING, plunger — inner
57B	SP 903	1	SPRING, plunger — outer — for speeds greater than 1900 RPM
58	GA 1009	1	GASKET, ring — head assembly
59	RN 9014	1	COVER, gear retainer — for left hand mounted pumps
59	RN 9015	1	COVER, gear retainer — for right hand mounted pumps
60	GE 909	1	GEAR, plunger drive — for clockwise rotation — left hand mounted pumps
60	GE 9010	1	GEAR, plunger drive — for counter-clockwise rotation — left hand mounted pumps
60	GE 901	1	GEAR, plunger drive — for clockwise rotation — right hand mounted pumps
60	GE 903	1	GEAR, plunger drive — for counter-clockwise rotation — right hand mounted pumps
61	GU 903	1	GUIDE, plunger
62	WA 1362	1	WASHER, thrust — plunger drive gear
63	GA 1010	1	GASKET, ring — head assembly
64	BB 1024	1	BALL, sealing — set screw
65	SC 1352	1	SCREW, set — sealing ball
67	FI 9012	4	FITTING, discharge
68	VA 907A	1	DELIVERY VALVE ASSEMBLY, for plunger diameter of 7.0 mm
68	VA 908A	1	DELIVERY VALVE ASSEMBLY, for plunger diameter of 7.5 mm to 9.0 mm inclusive
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY, for plunger diameter of 9.5 mm and 10.0 mm
69	GA 905	1	GASKET, delivery valve holder
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
72	GA 906	1	GASKET, cap screw
73	SC 9018A	1	SCREW, cap — delivery valve
74	SC 150-2	2	SCREW, fastening — part number plate
75	NP 902	1	PLATE, part number — hydraulic head
76	HD 9013-2A	1	HEAD, hydraulic — with 7.0 mm dia. plunger and sleeve — round
76	HD 9013-3A	1	HEAD, hydraulic — with 7.5 mm dia. plunger and sleeve — round
76	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm dia. plunger and sleeve — round
76	HD 9013-5A	1	HEAD, hydraulic — with 8.5 mm dia. plunger and sleeve — round
76	HD 9013-6A	1	HEAD, hydraulic — with 9.0 mm dia. plunger and sleeve — round
76	HD 9013-7A	1	HEAD, hydraulic — with 9.5 mm dia. plunger and sleeve — round
76	HD 9013-8A	1	HEAD, hydraulic — with 10.0 mm dia. plunger and sleeve — round
76A	SV 907	4	SLEEVE, stud — hydraulic head
77	per requirement	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — for type designation see stamping on head of screw
78	NT 1127	4	NUT, fastening — hydraulic head assembly
88	GA 907	1	GASKET, governor housing
151	RD 9024-1A	1	CONTROL ROD — for left hand mounted pumps — includes part 151B thru 151E and one of 152
151	RD 9024-2A	1	CONTROL ROD — for right hand mounted pumps — includes parts 151B thru 151E and one of 152
151B	SP 9014	1	SPRING, control rod
151C	RN 908	1	CLIP, retainer — hex nut
151D	PN 9017	1	PIN, control rod
151E	NT 1158	1	NUT, hex
152	PN 1122	2	HAIRPIN, control rod
***	WT 907A	1	WEIGHT ASSEMBLY, includes parts 153 thru 155
153	AP 10416	2	PIN, weight
154	HP 908	1	SPIDER, weight
155	CP 15258	2	WEIGHT
156	SV 904A	1	SLEEVE ASSEMBLY, includes part 156A
156A	BB 1026	1	BALL THRUST BEARING, sleeve assembly

*** Not Shown Assembled

- continued -



Illustration Number	Part Number	Quantity Used	Description of Part
157	LE 9010	1	LEVER, fulcrum
158	HG 9039	1	HOUSING, governor
159	PG 901	1	PLUG, closing
160	SP 1067	1	RING, spring -- fulcrum lever shaft
161	BB 1025	2	BALL BEARING, fulcrum lever shaft
162	SR 903	1	SPACER, fulcrum lever
163	SH 9014	1	SHAFT, fulcrum lever
164	KY 11-3	1	KEY, Woodruff -- fulcrum lever shaft
166	RG 1016	1	RING, spring -- fulcrum lever shaft
167	PK 901	1	SEAL, oil -- fulcrum lever shaft
168	PL 9015	1	PLATE, stop
169	SC 9015	1	SCREW, stop -- operating lever -- idle
169A	NT 8-8BL	1	NUT, hex -- stop screw
169B	SC 9015	1	SCREW, stop -- shut-off -- use spacers to provide a clearance of .040" to .080" between shut-off screw and head of stop screw at shut-off position
169C	SR 1033-1	as required	SPACER, stop screw -- .062" thick
169C	SR 1033-2	as required	SPACER, stop screw -- .125" thick
169C	SR 1033-3	as required	SPACER, stop screw -- .188" thick
169C	SR 1033-4	as required	SPACER, stop screw -- .031" thick
169D	NT 8-8BL	1	NUT, hex -- stop screw
170	SC 9015	1	SCREW, stop -- full load
171	WA 6-8BL	1	WASHER, lock -- stop screw
173	NT 8-8BL	1	NUT, lock -- stop screw
174	NT 1180	1	NUT, elastic -- pivot screw
175	WA 1003	1	WASHER, plain -- pivot screw
176	LE 9016A	1	LEVER, operating
177	SC 9012	1	SCREW, pivot-operating lever
178	NT 1142	2	NUT, hex -- spring adjusting screw
179	SC 907	1	SCREW, spring adjusting
180	SP 9013	1	SPRING, extension -- operating lever
181	SC 9011	1	SCREW, shut-off -- operating lever
182	PL 9037	1	PLATE, shut-off
183	WA 6-8BL	1	WASHER, lock -- stop nut
184	NT 8-8BL	1	NUT, hex -- shut-off screw
185	WA 1071	1	WASHER, closing plug
186	PG 903	1	PLUG, closing -- governor housing
188	WA 6-8BL	3	WASHER, lock -- fastening screw
189	SC 1140	2	SCREW, fastening -- governor housing
189A	SC 1110	1	SCREW, fastening -- governor housing -- lower
191	WA 6-8BL	2	WASHER, lock -- fastening screw
192	SC 1110	2	SCREW, fastening -- stop plate and governor
193	NP 904	1	PLATE, name
194	SC 150-2	2	SCREW, fastening -- name plate

Parts designated by illustration numbers 18A thru 18H, 79 thru 87 and 89 thru 146 are not used in this assembly.

AMERICAN BOSCH DIVISION



SPRINGFIELD 7, MASS. U.S.A.

PSB 4A 70V S4527A1 thru A6 — Waukesha Motor Co.

S4527A1 thru A6

Model 180 DLC 3-1/2" x 3-3/4"

Model 180 DAC 3-6/16" x 3-3/4"

Model 180 DAB 3-5/16" x 3-3/4"

Clockwise Rotation — L.H. Mounting — Timed for Port Closing — Equipped with External Spring Type Governor

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9018	1	HUB, drive — camshaft
10	PO 764	1	POINTER, timing
11	HG 9052A	1	HOUSING, pump — includes parts 10, 11A and 11B
54	HD 3663A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57B and 58 thru 76A
55	VA 909A	1	DELIVERY VALVE ASSEMBLY
58	HG 9012	1	HOUSING, governor
15	SH 9016	1	SHAFT, fulcrum lever
16A	PL 9014	1	PLATE, stop
180	SP 9013	1	SPRING, extension — operating lever — use with S4527A2 and S4527A5 pumps
180	SP 9013-1	1	SPRING, extension — operating lever — use with S4527A3 and S4527A6 pumps
180	SP 9013-5	1	SPRING, extension — operating lever — use with S4527A1 pump
180	SP 9013-8	1	SPRING, extension — operating lever — use with S4527A4 pump

Omit illustrated part 57B

ALL OTHER PARTS SAME, AS FOR PSB4A 70V 1

The fuel setting: (average for all outlets)

PUMP TYPE	SPEED	REGULATION
PSB 4A-70V-S4527A1 — governor setting	500 RPM to 2000 RPM	10% to 12%
Set at full speed for 17.5cc to 18.5cc per 500 strokes. Set at low idle for 8cc to 9cc per 500 strokes.		
PSB 4A-70V-S4527A2 — governor setting	500 RPM to 1600 RPM	10% to 12%
PSB 4A-70V-S4527A3 — governor setting	500 RPM to 1800 RPM	10% to 12%
PSB 4A-70V-S4527A4 — governor setting	500 RPM to 1200 RPM	4% to 6%
PSB 4A-70V-S4527A5 — governor setting	500 RPM to 1800 RPM	3% to 5%
PSB 4A-70V-S4527A6 — governor setting	500 RPM to 1800 RPM	5%

Set at full speed for 15cc to 16cc per 500 strokes.

Set at low idle for 8cc to 9cc per 500 strokes.

USE ADN 12SD12 nozzle. Set opening pressure at 2500 p.s.i.



PSB 4A 70V S4801A1 — Waukesha Motor Co. — Model 180 DLB
 Model 180 DLC — 3 5/8" x 3 3/4" S4801A1
 Model 180 DKB

Clockwise rotation — L.H. Mounting — Timed for Port Closing — Equipped with External Spring Type Governor.

Illustration Number	Part Number	Quantity Used	Description of Part
3	HB 9018	1	HUB, drive — camshaft
10	PO 764	1	POINTER, timing
11	HG 9052A	1	HOUSING, pump — includes parts 10, 11A and 11B
54	HD 4742A	1	HYDRAULIC HEAD ASSEMBLY — COMPLETE — includes parts 22, 45, 55 to 57B and 58 thru 76A
68	VA 9026A	1	DELIVERY VALVE ASSEMBLY
158	HG 9012	1	HOUSING, governor
163	SH 9016	1	SHAFT, fulcrum lever
168	PL 9014	1	PLATE, stop
180	SP 9013-5	1	SPRING, extension — operating lever

ALL OTHER REQUIRED PARTS SAME AS FOR PSB 4A 70V 1

The fuel setting: (average for all outlets)

Set at 2000 RPM for 15 cc to 16 cc per 500 strokes at full load position
 Set at 500 RPM for 8 cc to 9 cc per 500 strokes at idle position.

AMERICAN BOSCH MARKETING DIVISION



INDUSTRIES INC.

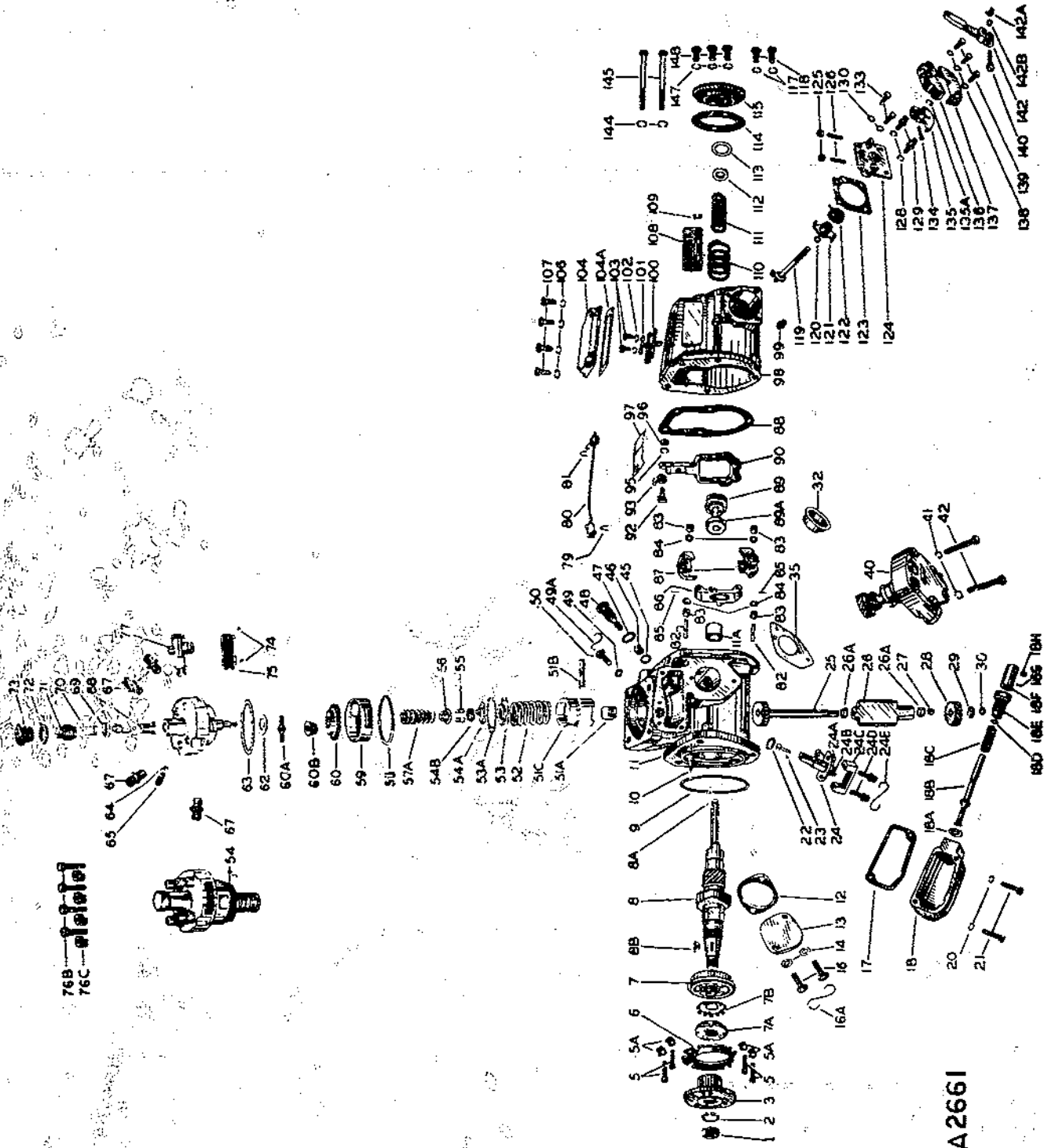
SPRINGFIELD, MASS. 01107

SERVICE PARTS LIST
For
AMERICAN BOSCH
PSB 4A 70-100 FH. . .
FUEL INJECTION PUMPS



SYMBOLS

- | | |
|---------------------------------------|---|
| • - New Part | .. - Not Illustrated |
| † - Discontinued with no replacement. | ... - Not Shown Assembled |
| • - Parts included in listed kit. | - Text or listing opposite has been revised or changed. |



A2661

Figure 1

AMERICAN BOSCH MARKETING DIVISION**AMBAC**

INDUSTRIES INC.

SPRINGFIELD, MASS. 01107

NOTE: (1) Unless otherwise indicated in parenthesis () following description of part, quantity used is one - applicable to all lists. (2) For explanation of abbreviations, refer to Section D10/20. (3) The first digit of an "Ill. No." identifies the illustration proper; the number (s) following the dash (-) refer to the parts of the illustration proper.

BASIC PARTS LIST

For

PSB 4A 70-100 FH 1

FUEL INJECTION PUMPS

Timed for Port Closing - Internal Spring Type Governor

Ill. No.	Part No.	Description	Ill. No.	Part No.	Description
1-1	NT 1230	NUT, hub	1-24	CU 9011A	CONTROL UNIT ASSY. - incl 24A & 24B (for L.H. mtng pump - I.D. stamp # 11)
1-2	NMS 423/1X	WASHER, lock		CU 9010A	CONTROL UNIT ASSY. - incl 24A & 24B (for R.H. mtng pump - I.D. stamp # 10)
1-3	HB 9019	HUB, dv	1-24A	NT 1264	NUT, c.u.
1-5	SC 1555	SCREW, retng pl (4)	1-24B	WA 1648	WASHER, tab - c.u.
1-5A	WA 901	WASHER, lock (4)	1-24C	RN 9011	RETAINER, c.u.
1-6	PL 907	PLATE, retng	1-24D	SC 1700	SCREW, c.u. - incl l'wa (2)
1-7	BB 1054	BEARING, ball	1-24E	WI 901	WIRE, leng (ar)
1-7A	NT 905	NUT, retng	***	SH 9071A	SHAFT ASSY.; quill - incl 25-30
1-7B	WA 1720	WASHER, lock	1-25	SH 909A	SHAFT ASSY. - incl ge
1-8	SH 9057A	CAMSHAFT - incl 8A	1-26	BG 9032	BUSHING, sh
1-8A	SC 1149	SCREW - incl l'wa	1-26A	SR 9012	SPACER, sh (2)
1-8B	NKE 5/2X	KEY, wdf	1-27	KY 1006	KEY, wdf
1-9	* GA 76200	GASKET, rubr	1-28	GE 908	GEAR, sh
1-10	PO 765	POINTER, tmng	1-29	WMS 2157/400X	WASHER - .002" (ar)
1-11	HG 9044A	HOUSING - incl 10 & 11A		WMS 2157/1X	WASHER - .004" (ar)
1-11A	BG 7649	BUSHING, cmsh		WMS 2157/2X	WASHER - .008" (ar)
1-12	GA 904	GASKET, cv		WMS 2157/3X	WASHER - .020" (ar)
1-13	CV 9047	COVER, quill sh	1-30	RG 1014	RING, retng
1-14	GA 7616	GASKET, sc (2)	1-32	PG 902	PLUG
1-16	SC 1119	SCREW, cv (2)	1-35	* GA 903	GASKET, supy pump
1-16A	WI 901	WIRE, leng (ar)	1-40	SGB 15 D 1	PUMP ASSY., supy - for CW rot., l.h. mount pumps - for parts, see D268
1-17	* GA 9026	GASKET, cv		SGB 15 D 2	PUMP ASSY., supy - for CCW rot., r.h. mount pumps - for parts see D268
1-18	CV 9018	COVER, wn	1-41	WA 6-8 BL	WASHER, lock
1-18A	* GA 1036	GASKET, rod	1-42	SC 1516	SCREW, supy pump (2)
***a	RD 908A	ROD ASSY., shut-off - incl 18B - 18H			
1-18B	RD 903	ROD, shut-off			
1-18C	SP 904	SPRING, tension			
1-18D	* GA 1019	GASKET, rod			
1-18E	SC 904	SCREW, suprt - shut-off rod			
1-18F	FI 902	FITTING, rod			
1-18G	PN 1026	PIN, rod			
1-18H	SC 325-4 BL	SCREW, set			
1-20	WA 6-8 BL	WASHER, lock (2)			
1-21	SC 27-20 BL	SCREW, cv (2)			
1-22	* GA 1014	GASKET, c.u.			
1-23	PN 9023	PIN, plngr siv			

* Denotes part included in gasket repair kit, KT 76279.

AMERICAN BOSCH MARKETING DIVISION**AMBAC**
INDUSTRIES INC.**SPRINGFIELD, MASS. 01107**

Ill. No.	Part No.	Description	Ill. No.	Part No.	Description
1-45	* GA 1012	GASKET, fltr	1-74	SC 150-2	SCREW, np (2)
1-46	FE 901	FILTER, screen	1-75	NP 906	NAMEPLATE
1-47	* GA 7965	GASKET, fltr sc	1-76 B	SC 1862	SCREW, hyd hd - for round hd only - in place of studs (4)
1-48	SC 903	SCREW, fltr	1-76 C	SV 9018	SLEEVE, hd fstng sc (4)
1-49	* GA 7616	GASKET, sc	1-77	See Var.	VALVE ASSY., ovflo
1-49 A	WI 763	WIRE, icng	1-79	PN 1122	PIN, cntl rod
1-50	SC 1140	SCREW, quill sh bg	1-80	RD 9035-1A	ROD, cntl - for l.h. mtd pumps
***	TP 903 A	TAPPET ASSY. - incl 51A - 51C		RD 9035-2A	ROD, cntl - for r.h. mtd pumps
1-51 A	RL 903 A	ROLLER ASSY., tp	1-81	PN 1122	PIN, cntl rod
1-51 B	PN 9013	PIN, tp rolr - .3745" dia.	***	WT 9011 A	WEIGHT ASSY. - incl 82-87 - see note 1
1-51 C	GU 9011 A	GUIDE ASSY., tp	1-82	PN 905 A	PIN, wt (2)
1-52	SP 903	SPRING, plngr - outer	1-83	BG 903	BUSHING, wt (4)
1-53	GU 9013	GUIDE, sp - upr	1-84	WA 1448-1	WASHER, wt spng - .036" (ar)
1-53 A	RG 903	RING, sp - upr sp gu		WA 1448-2	WASHER, wt spng - .038" (ar)
1-54	See Var.	HEAD ASSY., hyd - incl 22, 45, 54A - 75 & 76 C		WA 1448-3	WASHER, wt spng - .040" (ar)
1-54 A	RG 902	RING, retng - bo		WA 1448-4	WASHER, wt spng - .044" (ar)
1-54 B	BO 901	BUTTON, plngr		WA 1448-5	WASHER, wt spng - .048" (ar)
1-55	HP 9015	LOCK, plngr - two piece	1-85	PN 1185	PIN, roll (2)
1-56	GU 909	GUIDE, plngr sp - lwr	1-86	HP 9012	SPIDER, wt
1-57 A	SP 901	SPRING, plngr - int	1-87	WT 909 A	WEIGHT ASSY. - incl 53 - used on WT 9011 A (2)
1-58	* GA 1009	GASKET, "O" ring	1-88	GA 907	GASKET, gov
1-59	RN 9014	RETAINER, ge - for l. h. mtd pump	1-89	SV 901 A	SLEEVE ASSY. - incl 89A - see note 2
	RN 9015	RETAINER, ge - for r. h. mtd pump	1-89 A	BB 7910	BEARING, ball - thrst
1-60	GE 9015	GEAR, plngr dv - for CW rot., l.h. mtd pumps	1-90	LE 9025-1A	LEVER ASSY., flem
	GE 9016	GEAR, plngr dv - for CCW rot., l.h. mtd pumps	1-92	SC 1136	SCREW, cam fstng
	GE 9017	GEAR, plngr dv - for CCW rot., r.h. mtd pumps	1-93	CA 793	CAM, torque
	GE 9018	GEAR, plngr dv - for CW rot., mtd pumps	1-95	WA 6-8 BL	WASHER, lock
1-60 A	GU 9019	GUIDE, plngr	1-96	NT 8-8 BL	NUT, hex
1-60 B	GU 9017	GUIDE, sp - upr	1-97	BA 902	BAFFLE, oil
1-62	WA 1362	WASHER, thst - plngr dv ge	1-98	HG 901	HOUSING, gov
1-63	* GA 1119	GASKET, "O" ring	1-99	PN 901 A	PIN, pivot - flem le
1-64	BB 1024	BALL, seng	1-100	PL 904	PLATE, stop
1-65	SC 1352	SCREW, set	1-101	WA 1143	WASHER, flat (2)
1-67	FI 9012	FITTING, dischg (4)	1-102	WA 6-9 BL	WASHER, lock (2)
1-68	VA 907 A	VALVE ASSY., dely - for pumps with 6.5 - 7.0 mm plngr dia.	1-103	SC 1404	SCREW, stop pl (2)
	VA 908 A	VALVE ASSY., dely - for pumps with 7.5 - 9.0 mm plngr dia.	1-104	CV 9032 C	COVER, gov
	VA 9010 A	VALVE ASSY., dely - for pumps with 9.5 - 10 mm plngr dia.	1-104 A	* GA 908	GASKET, c
1-69	* GA 905	GASKET, dely va hldr	1-106	WA 6-8 BL	WASHER, lock (4)
1-70	SP 9015	SPRING, dely va	1-107	SC 1110	SCREW, cv (4)
1-71	HP 9011	HOLDER, dely va	1-108	NP 904	NAMEPLATE
1-72	* GA 906	GASKET, cap sc	1-109	SC 150-2	SCREW, np
1-73	SC 9018 A	SCREW, cap - dely va	1-110	See Var.	SPRING, gov - outer
			1-111	See Var.	SPRING, gov - inner
			1-112	SR 799/1	SPACER, sp - inner - .020" (ar)

* Denotes part included in gasket repair kit, KT 76279.

AMERICAN BOSCH MARKETING DIVISION**AMBAC**

INDUSTRIES INC.

SPRINGFIELD, MASS. 01107

Ill. No.	Part No.	Description	Ill. No.	Part No.	Description
1-112	SR 799/2	SPACER, sp - inner -	1-119	SH 901A	SHAFT ASSY., oprtng
cont'd		.042" (ar)	1-120	* GA 76195	GASKET, "O" ring
	SR 799/3	SPACER, sp - inner -	1-121	PL 902A	PLATE ASSY., sp
		.058" (ar)	1-122	SP 9016	SPRING, oprtng le
	SR 799/4	SPACER, sp - inner -	1-123	* GA 901	GASKET, sh bn pl
		.083" (ar)	1-124	BG 904	BEARING, oprtng sh - pl
	SR 799/5	SPACER, sp - inner -	1-125	NT 6-8 BL	NUT, lock (2)
		.177" (ar)	1-126	SC 350-16 BL	SCREW, adjng (2)
	SR 799/6	SPACER, sp - inner -	1-128	WA 6-8 BL	WASHER, lock (2)
		.276" (ar)	1-129	SD 902	STUD, bn pl (2)
	SR 799/7	SPACER, sp - inner -	1-130	* GA 7616	GASKET, upr sc (2)
		.030" (ar)	1-133	SC 1356	SCREW, bn pl (2)
1-113	SR 7914/1	SPACER, sp - outer -	1-134	SC 901	SCREW, stop le
		.020" (ar)	1-135	BL 901	LEVER, stop
	SR 7914/2	SPACER, sp - outer -	1-135A	SP 1066	RING, retng
		.042" (ar)	1-136	CV 7945	COVER, stop le
	SR 7914/3	SPACER, sp - outer -	1-137	CV 7946	COVER, stop le
		.058" (ar)	1-138	WA 22-6 BL	WASHER, lock (3)
	SR 7914/4	SPACER, sp - outer -	1-139	SC 1354	SCREW, cv (3)
		.083" (ar)	***	LE 90101A	LEVER ASSY., oprtng -
	SR 7914/5	SPACER, sp - outer -			incl 140, 142, 142A
		.156" (ar)			& 142B
	SR 7914/6	SPACER, sp - outer -	1-140	SC 7961	SCREW, oprtng le
		.030" (ar)	1-142	LE 90102	LEVER, oprtng
	SR 7914/7	SPACER, sp - outer -	1-142A	NT 8-8 BL	NUT, hex
		.010" (ar)	1-142B	WA 6-8 BL	WASHER, lock
1-114	* GA 902	GASKET, end cap	1-144	WA 6-8 BL	WASHER, lock (2)
1-115	CP 901	CAP, end	1-145	SC 1351	SCREW, gov hg (2)
1-117	WA 6-8 BL	WASHER, lock (2)	1-147	WA 6-8 BL	WASHER, lock (3)
1-118	SC 1140	SCREW, end cap (2)	1-148	SC 1140	SCREW, gov hg (3)

NOTE 1: Shim each weight to permit .001 - .004" movement when assembled to the spider. Be certain that there is sufficient clearance between the weight fingers and the spider.

NOTE 2: Check the governor sleeve for a minimum travel of 16 mm (.630") from the position of the weights completely collapsed to completely extended.

* Denotes part included in gasket repair kit, KT 76279.

VARIATIONS

5202

NOTE: The following parts lists itemize particular parts and/or quantities that apply to variations of the basic pump.

PSB 4A 90FH 5202A
Minneapolis-Moline Co.

Rotation: CW
Mounting: L. H. Timed for: Port Closing

Ill. No.	Part No.	Description
1-52	Omit	SPRING, plngr - outer
1-53	Omit	GUIDE, sp - upr
1-53 A	Omit	RING, sp - upr sp gu
1-54	HD 5199	HEAD ASSY., hyd - incl 22, 45, 54A - 75 & 76 C
1-60 A	GU 9016	GUIDE, plngr
1-68	VA 909A	VALVE ASSY., dely.
1-77	VA 7957-2A	VALVE ASSY., ovflo - for parts, see D275
1-80	RD 9042-1A	ROD ASSY., cntl
1-90	LE 9080-1A	LEVER ASSY., flcm (sp loaded)
**	WA 1771	WASHER, tab - flcm le
**	WA 1770	WASHER, flat - flcm le
**	SP 9035	SPRING, flcm le
**	NT 1228	NUT, hex - cntl rod
**	PN 1054	PIN, cot - flcm le
1-100	PL 905	PLATE, stop
1-110	See Table 1	SPRING, gov - outer
1-111	See Table 1	SPRING, gov - inner
***	LE 79140A	LEVER ASSY., oprtng - incl 140, 142, 142A & 142B
1-142	LE 79141	LEVER, oprtng

TABLE 1

Pump	Ill. # 1-110, Outer	Ill. # 1-111, Inner
------	---------------------	---------------------

GOVERNOR SPRINGS

5202A1-A5	SP 7951/15	SP 7950/19
-----------	------------	------------

SPRING ADJUSTMENT

	Precompressed	Gap
5202A1	1.5 mm (.059")	3 mm (.113")
5202A2	3 mm (.118")	3.5 mm (.138")
5202A3, A4	1.5 mm (.059")	2 mm (.079")
5202A5	1.5 - 2 mm (.059" - .079")	2 - 2.5 mm (.079" - .098")

Refer to basic list, section D226/915, for all other required parts.

CALIBRATION DATA

Average for all outlets.

NOTE: Refer to section D223/3100 for calibration instructions.

PSB 4A 90FH 5202A1

Speed: 600-1400 rpm.

Cam angle with fulcrum lever: 135°.

SETTING	RPM	FUEL DELIVERY
Full speed	1430	41-42 cc
Idle speed	600	7-8 cc
Cam to leave stop plate	1440	

PSB 4A 90FH 5202A2

Speed: 600-1450 rpm.

Cam angle with fulcrum lever: 90°.

SETTING	RPM	FUEL DELIVERY
Full speed	1450	41-42 cc
Idle speed	600	9-10 cc

PSB 4A 90FH 5202A4

Minneapolis - Moline # 11A 14978

Speed: 600-1500 rpm.

Cam angle with fulcrum lever: 135°.

SETTING	RPM	FUEL DELIVERY
Full speed	1500	30-31 cc
Idle speed	600	10-11 cc

PSB 4A 90FH 5202A5

Minneapolis - Moline # 10A 10258

Speed: 600-1500 rpm.

Cam angle with fulcrum lever: 45°.

SETTING	RPM	FUEL DELIVERY
Full speed	1500	46-47 cc
Idle speed	600	12-13 cc

AMERICAN BOSCH MARKETING DIVISION



SPRINGFIELD, MASS. 01107

5214

PSB 4A 75FH 5214A
J. I. Case Co.

Rotation: CW
Mounting: R. H. Timed for: Port Closing

Ill. No.	Part No.	Description
1-1	NT 1229	NUT, hub
1-3	HB 9033	HUB, dv
1-10	PO 902	POINTER, tmng
1-11	HG 9021A	HOUSING - incl 10 & 11A
1-18	CV 9038 C	COVER, tmng wn
1-18 B	Omit	ROD, shut-off
1-18 C	Omit	SPRING, tension
1-18 D	Omit	GASKET, rod
1-18 E	Omit	SCREW, suprt - shut-off rod
1-18 F	Omit	FITTING, rod
1-18 G	Omit	PIN, rod
1-18 H	Omit	SCREW, set
1-21	SC 1140	SCREW, cv (2)
***	SH 9070 A	SHAFT ASSY., quill - incl 25-30
1-28	GE 902	GEAR, sh
1-52	Omit	SPRING, plngr - outer
1-53	Omit	GUIDE, sp - upr
1-53 A	Omit	RING, sp - upr sp gu
1-54	HD 5198	HEAD ASSY., hyd - incl 22, 25, 54A - 75 & 76 C
1-98	HG 9029	HOUSING, gov
1-100	PL 9018	PLATE, stop
1-110	See Table 1	SPRING, gov - outer
1-111	See Table 1	SPRING, gov - inner
1-125	NT 6-2BL	NUT, lock - full speed sc
1-126	SC 350-16BL	SCREW, adjng - full speed
***	LE 79126 A	LEVER ASSY., oprtng - incl 140, 142, 142A & 142B
1-142	LE 9033	LEVER, oprtng

TABLE 1

Pump Ill. # 1-110, Outer Ill. # 1-111, Inner

GOVERNOR SPRINGS

Pump	Ill. # 1-110, Outer	Ill. # 1-111, Inner
5214 A1, A2	SP 7951/15	SP 7950/19
5214 A3	SP 7951/14	SP 7950/13
5214 A4	SP 7951/15	SP 7950/19
5214 A5	SP 7951/14	SP 7950/13

SPRING ADJUSTMENT

	Precompressed	Gap
5214 A1, A2	1.5 mm (.059")	1 mm (.039")
5214 A3	1 mm (.039")	2.5 mm (.098")

SPRING ADJUSTMENT - Cont'd

Pump	Ill. # 1-110, Outer	Ill. # 1-111, Inner
	Precompressed	Gap
5214 A4	1.5 mm (.059")	1 mm (.039")
5214 A5	1 mm (.039")	1 mm (.039")

Refer to basic list, section D 226/915, for all required parts.

CALIBRATION DATA

Average for all outlets.

NOTE: Refer to section D 223/3100 for calibration instructions.

PSB 4A 75FH 5214A1
J. I. Case # 010711AB

Speed: 600-1450 rpm.
Cam angle with fulcrum lever: 135°.

SETTING	RPM	FUEL DELIVERY
Full speed	1450	32-33 cc

PSB 4A 75FH 5214A2
J. I. Case # A 9546

Speed: 600-1500 rpm.
Cam angle with fulcrum lever: 135°.

SETTING	RPM	FUEL DELIVERY
Full speed	1500	31.5-32.5 cc

PSB 4A 75FH 5214A3
J. I. Case # A10135

Speed: 600-1800 rpm.
Cam angle with fulcrum lever: 135°.

SETTING	RPM	FUEL DELIVERY
Full speed	1800	31.5-32.5 cc

- Continued -

AMERICAN BOSCH MARKETING DIVISION



INDUSTRIES INC.

SPRINGFIELD, MASS. 01107

**5214 5220
5224**

PSB 4A 75FH 5214A4
J. I. Case # A11740

Speed: 600-1500 rpm.
Cam angle with fulcrum lever: 135°.

SETTING	RPM	FUEL DELIVERY
Full speed	1500	35-36 cc

PSB 4A 75FH 5214A5
J. I. Case # A11980

Speed: 600-1800 rpm.
Cam angle with fulcrum lever: 135°.

SETTING	RPM	FUEL DELIVERY
Full speed	1810	34-35 cc

PSB 4A 80FH 5220A
C. M. C. Engine Model HD 260

Rotation: CW
Mounting: L. H. Timed for: Port Closing

Ill. No.	Part No.	Description
1-40	SGB 15 D 5	PUMP ASSEMBLY, supply - for parts, see D268
1-52	Omit	SPRING, plunger - outer
1-53	Omit	GUIDE, spring - upper
1-53 A	Omit	RING, spring - upper spring guide
1-54	HD 5192	HEAD ASSEMBLY, hydraulic - includes 22, 45, 54 A thru 75 & 76 C
**	FI 1148	FITTING, outlet - hydraulic head - assemble 40° from drive end of pump
1-77	VA 7957-1 A	VALVE ASSEMBLY, overflow - for parts see D275
***	WT 9012 A	WEIGHT ASSEMBLY - includes 82-87 - see note 1, page 5, basic parts list
1-87	WT 905 A	WEIGHT ASSEMBLY - includes 83 (2)
1-89	SV 909 A	SLEEVE ASSEMBLY - includes 89 A
1-90	LE 9034 A	LEVER ASSEMBLY, fulcrum adjustable - includes ** a & ** b
** a	† SC 9019	SCREW, adjusting - fulcrum lever
** b	PN 1116	PIN, locking - adjusting screw

Ill. No.	Part No.	Description
**	SR 904	SPACER, cam - fulcrum lever
1-98	HG 9030	HOUSING, governor
**	SC 1774	SCREW, cap - rear of governor housing
**	GA 7980	GASKET, cap screw
1-110	See Table 1	SPRING, governor - outer
1-111	See Table 1	SPRING, governor - inner
1-122	SP 902	SPRING, operating lever
***	LE 79112 A	LEVER ASSEMBLY, operating - includes 140, 142, 142 A, and 142 B
1-142	LE 79113	LEVER, operating

TABLE 1

Pump Ill. # 1-110, Outer Ill. # 1-111, Inner

GOVERNOR SPRINGS

Pump	Ill. # 1-110, Outer	Ill. # 1-111, Inner
5220 A1	SP 7951/16	SP 7950/25

SPRING ADJUSTMENT

	Precompressed	Gap
5220 A1	7.5-8 mm (.296-.315")	7-7.5 mm (.276-.296")

Refer to basic list, section D226/915, for all other required parts.

NOTE: Calibration data for this pump must be obtained from the engine manufacturer.

PSB 4A 70FH 5224A
C. M. C. Engine Model GD 157

Rotation: CW
Mounting: L. H. Timed for: Port Closing

Ill. No.	Part No.	Description
1-52	Omit	SPRING, plunger - outer
1-53	Omit	GUIDE, spring - upper
1-53 A	Omit	RING, spring - upper spring guide
1-54	HD 5184	HEAD ASSEMBLY, hydraulic - includes 22, 45, 54 A - 75 & 76 C
1-68	VA 908 A	VALVE ASSEMBLY, delivery
**	FI 904	FITTING, hydraulic head

- Continued -

AMERICAN BOSCH MARKETING DIVISION



SPRINGFIELD, MASS. 01107

INDUSTRIES INC.

5224
5275

Ill. No.	Part No.	Description
1-110	See Table 1	SPRING, governor - outer
1-111	See Table 1	SPRING, governor - inner
***	LE 79112A	LEVER ASSEMBLY, operating - includes 140, 142, 142A & 142B
1-142	LE 79113	LEVER, operating

TABLE 1

Pump	Ill. # 1-110, Outer	Ill. # 1-111, Inner
<u>GOVERNOR SPRINGS</u>		
5224 A1	SP 7951/14	SP 7950/13
5224 A2	SP 7951/14	SP 7950/18
5224 A3	SP 7951/14	SP 7950/24
5224 A4	SP 7951/14	SP 7950/19
5224 A5	SP 7951/14	SP 7950/28
5224 A6	none	SP 7950/24
5224 A7	SP 7951/11	none
5224 A8	none	SP 7950/24
5224 A9	none	SP 7950/18
5224 A10	SP 7951/12	SP 7950/21

SPRING ADJUSTMENT

Pump	Precompressed	Gap
5224 A1	2 mm (.079")	2.5 mm (.098")
5224 A2	1.5 mm (.059")	3.5 mm (.138")
5224 A3	1 mm (.039")	3 mm (.118")
5224 A4	3 mm (.118")	2 mm (.079")*
5224 A5	1 mm (.039")	3.5 mm (.138")
5224 A6	—	2 mm (.079")
5224 A7	5 mm (.197")	—
5224 A8	—	4.5-5 mm (.178-.197")*
5224 A9	—	2 mm (.079")*
5224 A10	1.5 mm (.059")	3.5 mm (.138")

* Precompressed

Refer to basic list, section D 226/915, for all other required parts.

NOTE: Calibration data for this pump must be obtained from the engine manufacturer.

PSB 4A 80FH 5275A
C.M.C. Engine Model HD 260

Rotation: CW

Mounting: L. H. Timed for: Port Closing

Ill. No.	Part No.	Description
1-54	HD 5192	HEAD ASSEMBLY, hydraulic - includes 22, 45, 54A - 75 & 76C
**	VA 9012A	VALVE ASSEMBLY, check - hydraulic head
1-90	LE 9025-2A	LEVER ASSEMBLY, fulcrum
1-100	PL 905	PLATE, stop
1-110	See Table 1	SPRING, governor - outer
4-111	See Table 1	SPRING, governor - inner
***	LE 79112A	LEVER ASSEMBLY, operating - includes 140, 142, 142A & 142B
1-142	LE 79113	LEVER, operating

TABLE 1

Pump	Ill. # 1-110, Outer	Ill. # 1-111, Inner
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GOVERNOR SPRINGS

5275 A1	SP 7951/15	SP 7950/19
5275 A2	SP 7951/14	SP 7950/13
5275 A3	SP 7951/15	SP 7950/13

SPRING ADJUSTMENT

	Precompressed	Gap
5275 A1	3.5 mm (.138")	2.5 mm (.098")
5275 A2	1 mm (.039")	3.5 mm (.138")
5275 A3	3.5 mm (.138")	3 mm (.118")

Refer to basic list, section D 226/915, for all other required parts.

NOTE: Calibration data for this pump must be obtained from the engine manufacturer.

AMERICAN BOSCH MARKETING DIVISION**AMBAC**

INDUSTRIES INC.

SPRINGFIELD, MASS. 01107**5304
5314**

PSB 4A 80FH 5304A

C.M.C. Engine Model HD 260

Rotation: CW

Mounting: L. H. Timed for: Port Closing

Ill. No.	Part No.	Description
1-52	Omit	SPRING, plunger - outer
1-53	Omit	GUIDE, spring - upper
1-53 A	Omit	RING, spring - upper spring guide
1-54	HD 5192	HEAD ASSEMBLY, hydraulic - includes 22, 45, 54A - 75 & 76C
**	FI 904	FITTING, hydraulic head
1-110	See Table 1	SPRING, governor - outer
1-111	See Table 1	SPRING, governor - inner
***	LE 79112A	LEVER ASSEMBLY, operating - includes 140, 142, 142A & 142B
1-142	LE 79113	LEVER, operating

TABLE 1

Pump	Ill. # 1-110, Outer	Ill. # 1-111, Inner
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GOVERNOR SPRINGS

Pump	Ill. # 1-110, Outer	Ill. # 1-111, Inner
5304 A1	SP 7951/11	none
5304 A2	SP 7951/15	SP 7950/19
5304 A3	SP 7951/11	SP 7950/13
5304 A4	SP 7951/14	SP 7950/18
5304 A5	none	SP 7950/18
5304 A6	none	SP 7950/24
5304 A7	SP 7951/14	SP 7950/28
5304 A8	SP 7951/12	SP 7950/21

SPRING ADJUSTMENT

Pump	Precompressed	Gap
5304 A1	6 mm (.236")	
5304 A2	3.5 mm (.138")	2.5-3 mm (.098-.118")
5304 A3	0.5 mm (.020")	3 mm (.118")
5304 A4	2.5 mm (.098")	3.5 mm (.138")
5304 A5	—	3 mm (.118") *
5304 A6	—	4 mm (.158") *
5304 A7	0.5 mm (.020")	3.5 mm (.138")
5304 A8	1.5 mm (.059")	3.5 mm (.138")

* Precompressed

Refer to basic list; section D 226/915, for all other required parts.

NOTE: Calibration data for this pump must be obtained from the engine manufacturer.

PSB 4A 80FH 5314A

C.M.C. Engine Model HD 260

Rotation: CW

Mounting: L. H. Timed for: Port Closing

Ill. No.	Part No.	Description
1-40	SGB 15 D 5	PUMP ASSEMBLY, supply - for parts, see D 268
1-54	HD 5192	HEAD ASSEMBLY, hydraulic - includes 22, 45, 54A - 75 & 76C
**	FI 1148	FITTING, hydraulic head
1-77	VA 7957-1A	VALVE ASSEMBLY, overflow - for parts, see D 275
***	WT 9012A	WEIGHT ASSEMBLY - includes 82-87 - See note 1, Page 5, basic parts list
1-87	WT 905 A	WEIGHT ASSEMBLY - includes 83 (2)
1-89	SV 909A	SLEEVE ASSEMBLY - includes 89A - See note 2, page 5, basic parts list
1-90	LE 9034A	LEVER ASSEMBLY, fulcrum - includes **a & **b
**a	SC 9019	SCREW, adjusting - fulcrum lever
**b	PN 1116	PIN, locating - fulcrum lever screw
**	SR 904	SPACER, cam
1-98	HG 9030	HOUSING, governor
**	SC 1134	SCREW, adjusting - bumper spring
**	GA 7980	GASKET, bumper spring screw (2)
**	NT 7917	NUT, cap - adjusting screw
**	NT 6-10 BL	NUT, locking - adjusting screw
**	SP 9025	SPRING, bumper
**	SC 25-4 CA	SCREW, fastening - bumper spring
**	WA 6-6 C1	WASHER, lock - fastening screw
1-104	CV 9046	COVER, governor
**	PG 1051	PLUG, governor cover
**	GA 1058	GASKET, plug - governor cover
1-110	See Table 1	SPRING, governor - outer
1-111	See Table 1	SPRING, governor - inner
1-122	SP 902	SPRING, operating lever
***	LE 79112A	LEVER ASSEMBLY, operating - includes 140, 142, 142A & 142B
1-142	LE 79113	LEVER, operating

Continued -

AMERICAN BOSCH MARKETING DIVISION



SPRINGFIELD, MASS. 01107

INDUSTRIES INC.

**5314
5318**

TABLE 1

Pump	Ill. # 1-110, Outer	Ill. # 1-111, Inner
<u>GOVERNOR SPRINGS</u>		
5314A1	SP 7951/16	SP 7950/25
5314A2	none	SP 7950/19
<u>SPRING ADJUSTMENT</u>		
	Precompressed	Gap
5314A1	7-7.5 mm (.275 - .295")	6.5-7 mm (.255 - .275")
5314A2	—	1-1.5 mm* (.039 - .059")

* Precompressed

Refer to basic list, section D226/915, for all other required parts.

NOTE: Calibration data for this pump must be obtained from the engine manufacturer.

PSB 4A 70FH 5318A

C.M.C. Engine Model GD 157

Rotation: CW

Mounting: L. H. Timed for: Port Closing

Ill. No.	Part No.	Description
1-8	SH 9070	CAMSHAFT
1-40	SGB 15 D 7	PUMP ASSEMBLY, supply - for parts, see D 268
1-42	SC 1516	SCREW, lower - supply pump
	SC 9021	SCREW, upper - supply pump
1-52	Omit	SPRING, plunger - outer
1-53	Omit	GUIDE, spring - upper
1-53 A	Omit	RING, spring - upper spring guide
1-54	HD 5184	HEAD ASSEMBLY, hydraulic - includes 22, 45, 54 A - 75 & 76 C
**	FI 1148	FITTING, hydraulic head
1-68	VA 908 A	VALVE ASSEMBLY, delivery
1-77	VA 7957-1 A	VALVE ASSEMBLY, overflow - for parts, see D 275
1-80	RD 9035-3 A	ROD, control
***	WT 9012 A	WEIGHT ASSEMBLY - includes 82-87 - see note 1, Page 5, basic parts list
1-87	WT 905 A	WEIGHT ASSEMBLY - includes 83 (2)

Ill. No.	Part No.	Description
1-89	SV 909 A	SLEEVE ASSEMBLY, governor - includes 89 A - see note 2, Page 5, basic parts list
1-90	LE 9034 A	LEVER ASSEMBLY, fulcrum - includes **a & **b
**a	SC 9019	SCREW, adjusting - fulcrum lever
**b	PN 1116	PIN, locking - fulcrum lever screw
**	SR 904	SPACER, cam
1-98	HG 9030	HOUSING, governor
**	SC 1134	SCREW, adjusting - bumper spring
**	GA 7980	WASHER, bumper spring screw (2)
**	NT 7917	NUT, cap - adjusting screw
**	NT 6-10 BL	NUT, locking - adjusting screw
**	SP 7953	SPRING, bumper
**	SC 25-4 CA	SCREW, fastening - bumper spring
**	WA 6-6 CA	WASHER, lock - bumper spring screw
1-104	CV 9046	COVER, governor
**	PG 1051	PLUG, governor cover
**	GA 1058	GASKET, plug - governor cover
1-110	See Table 1	SPRING, governor - outer
1-111	See Table 1	SPRING, governor - inner
1-115	CP 902 A	CAP, erd
1-122	SP 902	SPRING, operating lever
1-125	NT 6-8 BL	NUT, lock - full speed screw
1-126	SC 350-6 BL	SCREW, adjusting - full speed
**	CO 904 A	COUPLING ASSEMBLY, tachometer drive
***	LE 79112 A	LEVER ASSEMBLY, operating - includes 140, 142, 142A & 142 B
1-142	LE 79113	LEVER, operating

TABLE 1

Pump	Ill. # 1-110, Outer	Ill. # 1-111, Inner
<u>GOVERNOR SPRINGS</u>		
5318A1	SP 7951/16	SP 7950/25
<u>SPRING ADJUSTMENT</u>		
	Precompressed	Flush
5318A1	4-4.5 mm (.158 - .177")	

Refer to basic list, section D226/915, for all other required parts.

- Continued -

AMERICAN BOSCH MARKETING DIVISION



INDUSTRIES INC.

SPRINGFIELD, MASS. 01107

**5318 5323
5364**

NOTE: Calibration data for this pump must be obtained from the engine manufacturer.

PSB 4A 70FH 5323A

A - C Engine Model 4 BD - 153 (Buda)

Rotation: CW

Mounting: L. H. Timed for: Port Closing

Ill. No.	Part No.	Description
1-13	CV 903	COVER, quill shaft
1-16	SC 1140	SCREW, cover (2)
1-54	HD 5184	HEAD ASSEMBLY, hydraulic - includes 22, 45, 54A-75 & 76C
1-68	VA 908A	VALVE ASSEMBLY, delivery
1-77	VA 7957-1A	VALVE ASSEMBLY, over-flow - for parts, see D275
1-90	LE 9025-2A	LEVER ASSEMBLY, fulcrum
1-98	HG 9013	HOUSING, governor
1-100	FL 79110A	PLATE ASSEMBLY, stop
**	BK 7938C	BRACKET, stop plate
**	WA 6-8	WASHER, lock - stop plate (2)
**	NT 8-8CA	NUT, lock - stop plate (2)
1-103	SC 1140	SCREW, fastening - stop plate bracket (2)
1-110	See Table 1	SPRING, governor - outer
1-111	See Table 1	SPRING, governor - inner
***	LE 79147A	LEVER ASSEMBLY, operating - includes 140, 142, 142A & 142B
1-142	LE 79146	LEVER, operating

TABLE 1

Pump Ill. # 1-110, Outer Ill. # 1-111, Inner

GOVERNOR SPRINGS

5323 A1	SP 7951/14	SP 7950/7
5323 A2	SP 7951/11	SP 7950/13
5323 A3	SP 7951/11	SP 7950/21

SPRING ADJUSTMENT

	Precompressed	Gap
5323 A1	1 mm (.039")	2 mm (.079")
5323 A2	2 mm (.079")	2 mm (.079")
5323 A3	2 mm (.079")	3 mm (.118")

Refer to basic list, section D226/915, for all other required parts.

NOTE: Calibration data for this pump must be obtained from the engine manufacturer.

PSB 4A 80FH 5364A

International Harvester Co.

Rotation: CW

Mounting: L. H. Timed for: Port Closing

Ill. No.	Part No.	Description
1-3	† GE 9014	GEAR, drive
1-10	PO 764	POINTER, timing
1-16	CV 9014C	COVER, timing window
1-18B	Omit	ROD, shut-off
1-18C	Omit	SPRING, tension
1-18D	Omit	GASKET, rod
1-18E	Omit	SCREW, support - shut-off rod
1-18F	Omit	FITTING, rod
1-18G	Omit	PIN, rod
1-18H	Omit	SCREW, set
1-21	SC 1140	SCREW, cover (2)
1-40	SGB 15 D 5	PUMP ASSEMBLY, supply - for parts, see D268
1-52	Omit	SPRING, plunger - outer
1-53	Omit	GUIDE, spring - upper
1-53A	Omit	RING, spring - upper spring guide
1-54	HD 5192	HEAD ASSEMBLY, hydraulic - includes 22, 45, 54A - 75 & 76C
**	VA 9012A	VALVE ASSEMBLY, check - hydraulic head
1-100	PL 905	PLATE, stop
1-110	See Table 1	SPRING, governor - outer
1-111	See Table 1	SPRING, governor - inner
1-125	NT 6-8 BL	NUT, lock - full speed screw
1-126	SC 350-36 BL	SCREW, full speed
1-135	BL 902	LEVER, stop
***	LE 9070A	LEVER ASSEMBLY, operating - includes 140, 142, 142A & 142B
1-142	LE 9073	LEVER, operating

TABLE 1

Pump Ill. # 1-110, Outer Ill. # 1-111, Inner

GOVERNOR SPRINGS

5364A1	SP 7951/14	SP 7950/19
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SPRING ADJUSTMENT

	Precompressed	Gap
5364A1	2 mm (.079")	3 mm (.118")

Refer to basic list, section D226/915, for all other required parts.

- Continued -

AMERICAN BOSCH MARKETING DIVISION



SPRINGFIELD, MASS. 01107

INDUSTRIES, INC.

5364 5365
5366

NOTE: Calibration data for this pump must be obtained from the engine manufacturer.

PSB 4A 90FH 5365A
International Harvester Co.

Rotation: CW

Mounting: L. H. Timed for: Port Closing

Ill. No.	Part No.	Description
1-3	† GE 9014	GEAR, drive
1-10	PO 764	POINTER, timing
1-18	CV 9014 C	COVER, timing window
1-18 B	Omit	ROD, shut-off
1-18 C	Omit	SPRING, tension
1-18 D	Omit	GASKET, rod
1-18 E	Omit	SCREW, support - shut-off rod
1-18 F	Omit	FITTING, rod
1-18 G	Omit	PIN, rod
1-18 H	Omit	SCREW, set
1-21	SC 1140	SCREW, timing window (2)
1-40	SGB 15 D 5	PUMP ASSEMBLY, supply - for parts, see D 268
1-52	Omit	SPRING, plunger - outer
1-53	Omit	GUIDE, spring - upper
1-53 A	Omit	RING, spring - upper spring guide
1-54	HD 4836	HEAD ASSEMBLY, hydraulic - includes 22, 45, 54A - 75 & 76 C
1-60 A	GU 9016	GUIDE, plunger
**	VA 9012 A	VALVE ASSEMBLY, check - hydraulic head
1-100	PL 905	PLATE, stop
1-110	See Table 1	SPRING, governor - outer
1-111	See Table 1	SPRING, governor - inner
1-125	NT 6-8 BL	NUT, lock - full speed screw
1-126	SC 350-16 BL	SCREW, full speed
1-135	BL 902	LEVER, stop
***	LE 9070 A	LEVER ASSEMBLY, operating - includes 140, 142, 142 A & 142 B
1-142	LE 9071	LEVER, operating

TABLE 1

Pump Ill. # 1-110, Outer Ill. # 1-111, Inner

GOVERNOR SPRINGS

5365 A1 SP 7951/14 SP 7950/19

SPRING ADJUSTMENT

Precompressed	Gap
5365 A1 1.5 mm (.059")	4 mm (.158")

Refer to basic list, section D 226/915, for all other required parts.

NOTE: Calibration data for this pump must be obtained from the engine manufacturer.

PSB 4A 100FH 5366A
International Harvester Co.

Rotation: CW

Mounting: L. H. Timed for: Port Closing

Ill. No.	Part No.	Description
1-3	† GE 9014	GEAR, drive
1-10	PO 764	POINTER, timing
1-18	CV 9014 C	COVER, timing window
1-18 B	Omit	ROD, shut-off
1-18 C	Omit	SPRING, tension
1-18 D	Omit	GASKET, rod
1-18 E	Omit	SCREW, support - shut-off rod
1-18 F	Omit	FITTING, rod
1-18 G	Omit	PIN, rod
1-18 H	Omit	SCREW, set
1-21	SC 1140	SCREW, timing window
1-40	SGD 15 D 5	PUMP ASSEMBLY, supply - for parts, see D 268
1-52	Omit	SPRING, plunger - outer
1-53	Omit	GUIDE, spring - upper
1-53 A	Omit	RING, spring - upper spring guide
1-54	HD 5141	HEAD ASSEMBLY, hydraulic - includes 22, 45, 54 A - 75 & 76 C
1-60 A	GU 9016	GUIDE, plunger
**	VA 9012 A	VALVE ASSEMBLY, check - hydraulic head
1-100	PL 905	PLATE, stop
1-110	See Table 1	SPRING, governor - outer
1-111	See Table 1	SPRING, governor - inner
1-125	NT 6-8 BL	NUT, lock - full speed screw
1-126	SC 350-16 BL	SCREW, full speed
1-135	BL 902	LEVER, stop
***	LE 9070 A	LEVER ASSEMBLY, operating - includes 140, 142, 142 A & 142 B
1-142	LE 9071	LEVER, operating

- Continued -

**5366 5919
5936**

TABLE 1

Pump	Ill. # 1-110, Outer	Ill. # 1-111, Inner
<u>GOVERNOR SPRINGS</u>		
5366A1	SP 7951/14	SP 7950/24
<u>SPRING ADJUSTMENT</u>		
	Precompressed	Gap
5366A1	1-2 mm (.039 - .079")	3.5 mm (.138")

Refer to basic list, section D 226/915, for all other required parts.

NOTE: Calibration data for this pump must be obtained from the engine manufacturer.

TABLE 1

Pump	Ill. # 1-110, Outer	Ill. # 1-111, Inner
<u>GOVERNOR SPRINGS</u>		
5919A1	none	SP 7950/24
<u>SPRING ADJUSTMENT</u>		
		Precompressed
5919A1	—	1.5 mm (.059")

Refer to basic list, section D 226/915, for all other required parts.

NOTE: Calibration data for this pump must be obtained from the engine manufacturer.

PSB 4A 75FH 5919A
A - C Engine Model 4 BD - 153

Rotation: CW

Mounting: L. H. Timed for: Port Closing

Ill. No.	Part No.	Description
1-13	CV 903	COVER, quill shaft
1-16	SC 1140	SCREW, cover (2)
1-40	SGB 15 D 11	PUMP ASSEMBLY, supply - for parts, see D268
1-54	HD 5181	HEAD ASSEMBLY, hydraulic - includes 22, 45, 54A - 75 & 76C
1-77	VA 7957-1A	VALVE ASSEMBLY, over- flow - for parts, see D275
1-98	HG 9013	HOUSING, governor
1-100	PL 79110A	PLATE ASSEMBLY, stop
**	NT 8-8 CA	NUT, fastening - stop plate (2)
**	WA 6-8	WASHER, lock - fastening nut (2)
**	BR 7938 C	BRACKET, stop plate
1-103	SC 1140	SCREW, fastening - bracket (2)
1-110	See Table 1	SPRING, governor - outer
1-111	See Table 1	SPRING, governor - inner
***	LE 79147A	LEVER ASSEMBLY, opera- ting - includes 140, 142, 142A & 142B
1-142	LE 79146	LEVER, operating

PSB 4A 70FH 5936A
C. M. C. Engine Model GD 157

Rotation: CW

Mounting: L. H. Timed for: Port Closing

Ill. No.	Part No.	Description
1-52	Omit	SPRING, plunger - outer
1-53	Omit	GUIDE, spring - upper
1-53A	Omit	RING, spring - upper spring guide
1-54	HD 5184	HEAD ASSEMBLY, hydraulic - includes 22, 45, 54A - 75 & 76C
1-68	VA 908A	VALVE ASSEMBLY, delivery
**	FI 904	FITTING, bleed - hydraulic head
***	WT 9012A	WEIGHT ASSEMBLY - in- cludes 82-87 - see note 1, Page 5, basic parts list
1-87	WT 903A	WEIGHT ASSEMBLY - in- cludes 83
1-110	See Table 1	SPRING, governor - outer
1-111	See Table 1	SPRING, governor - inner
***	LE 79112A	LEVER ASSEMBLY, opera- ting - includes 140, 142, 142A & 142B
1-142	LE 79113	LEVER, operating

Continued -

5936

TABLE 1

Pump	Ill. #1-110, Outer	Ill. #1-111, Inner
<u>GOVERNOR SPRINGS</u>		
5936 A1	SP 7951/12	none
<u>SPRING ADJUSTMENT</u>		
Precompressed		
5936 A1	4.5 mm (/177")	—

Refer to basic list, section D226/915, for all other required parts.

NOTE: Calibration data for this pump must be obtained from the engine manufacturer.

AMERICAN BOSCH CORPORATION, SPRINGFIELD 7, MASS., U. S. A.

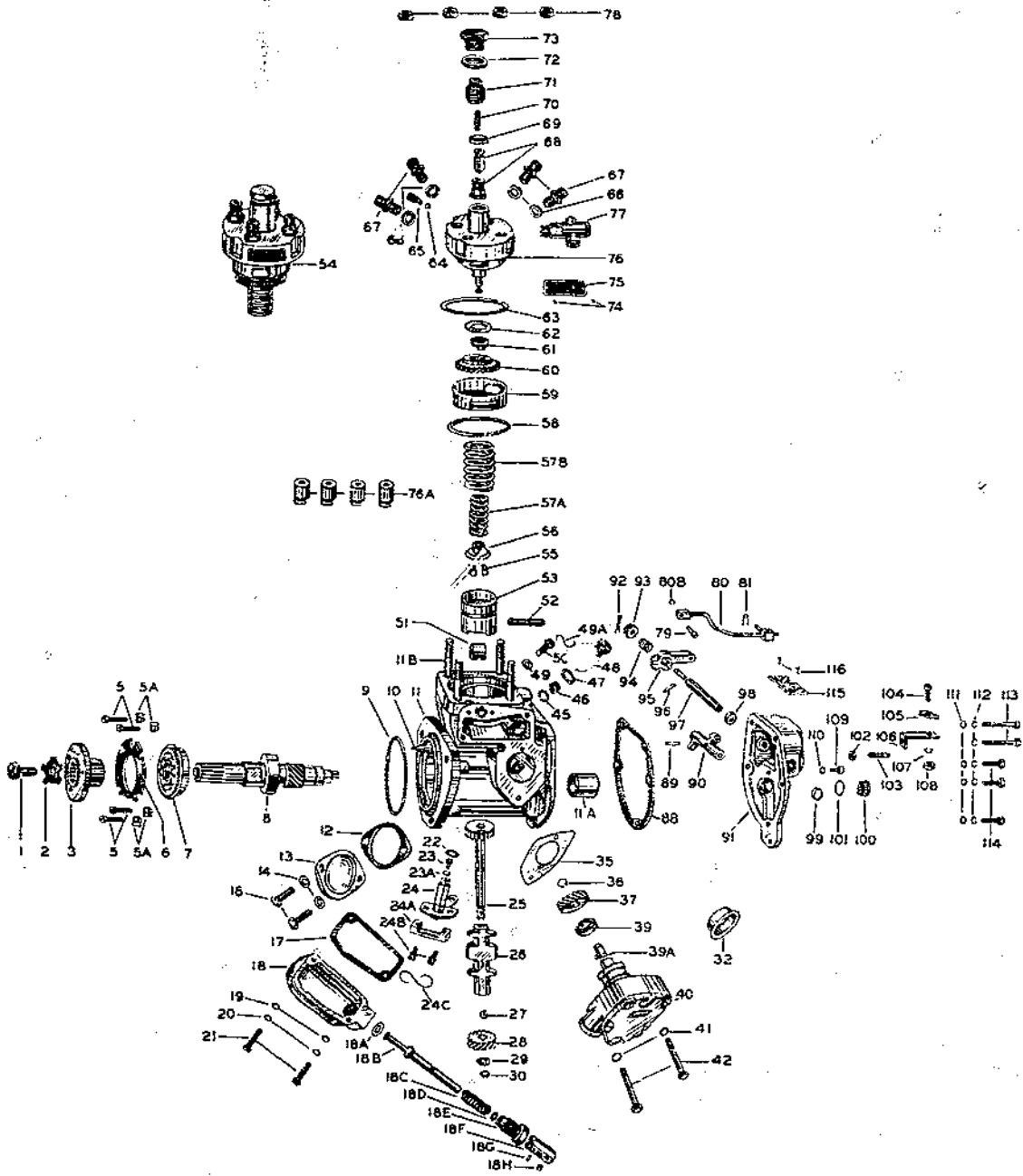
AMERICAN BOSCH FUEL INJECTION PUMP



Type

PSB 4A65-100K1

SERVICE PARTS LIST



AMERICAN BOSCH CORPORATION, SPRINGFIELD 7, MASS., U. S. A.

**SERVICE PARTS LIST
FOR
PSB 4A 65 to 100 K1**

NOTE: This type pump is not equipped with governor.

Illustration Number	Part Number	Quantity Used	Description of Part
1	SC 908	1	SCREW, hub - camshaft 7/16"-20 NF 2 thread
2	WA 7623	1	WASHER, lock - hub screw
3	HB 907	1	HUB, drive
5	SC 1555	4	SCREW, fastening - ball bearing retaining plate
5A	WA 901	4	WASHER, lock - fastening screw
6	PL 907	1	PLATE, retaining - ball bearing
7	BB 1023	1	BEARING, ball - camshaft
8	SH 9019	1	CAMSHAFT - includes part 8A
9	GA 76200	1	GASKET, rubber ring
10	PO 765	1	POINTER, timing
11	HG 9015A	1	HOUSING, pump - includes parts 11A and 11B
11A	BG 7649	1	BUSHING, camshaft
11B	SD 903	4	STUD, housing
12	GA 904	1	GASKET, quill shaft
13	CV 903C	1	PAD, quill shaft - pump housing
14	GA 7616	2	GASKET, fastening screw
16	SC 1140	2	SCREW, fastening - quill shaft pad
17	GA 909	1	GASKET, timing window cover assembly
18	CV 905	1	COVER, timing window
18A	GA 1036	1	GASKET, shut-off rod
***	RD 908A	1	SHUTOFF ROD ASSEMBLY - includes parts 18B through 18H
18B	RD 903	1	ROD, shut-off
18C	SP 904	1	SPRING, shut-off rod
18D	GA 1019	1	GASKET, shut-off rod
18E	SC 904	1	SCREW, bearing
18F	FI 902	1	FITTING, shut-off
18G	PN 1026	1	PIN, shut-off rod
18H	SC 325-4 BL	1	SCREW, set
19	WA 1143	2	WASHER, plain - fastening screw
20	WA 22-8 BL	2	WASHER, lock - fastening screw
21	SC 27-20 BL	2	SCREW, fastening - timing window cover assembly
22	GA 1014	1	GASKET, ring - control unit assembly
23	PN 906	1	PIN, plunger sleeve
23A	RG 1015	1	RING, spring - control shaft
24	CU 906-3A	1	CONTROL UNIT ASSEMBLY - includes part 23A - for left hand mounted pump - type designation stamped 6-3
24	CU 907-3A	1	CONTROL UNIT ASSEMBLY - includes part 23A - for right hand mounted pump - type designation stamped 7-3
24A	RN 906	1	RETAINER, control unit
24B	SC 1689	2	SCREW WITH LOCKWASHER, fastening - control unit assembly
24C	WI 901	1	WIRE, locking - control unit fastening screw
***	SH 908A	1	QUILL SHAFT ASSEMBLY, includes parts 25 through 30
25	SH 909A	1	SHAFT, quill - with gear
26	BG 905	1	BUSHING, quill shaft
27	KY 1006	1	KEY, Woodruff - quill shaft
28	GE 908	1	GEAR, camshaft driven
29	WMS 2157/400X	as required	WASHER, plain - .002" thick - to eliminate shaft play
	WMS 2157/1X	as required	WASHER, plain - .004" thick - to eliminate shaft play
	WMS 2157/2X	as required	WASHER, plain - .008" thick - to eliminate shaft play
	WMS 2157/3X	as required	WASHER, plain - .020" thick - to eliminate shaft play
30	RG 1014	1	RING, spring - quill shaft
32	PG 902	1	PLUG, closing
35	GA 903	1	GASKET, supply pump
36	RG 1014	1	RING, spring - supply pump shaft
37	GE 908	1	GEAR, drive - supply pump shaft

***Not shown assembled

AMERICAN BOSCH CORPORATION, SPRINGFIELD 7, MASS., U.S.A.

Illustration Number	Part Number	Quantity Used	Description of Part
39	PK 7910	1	SEAL, oil - supply pump shaft
39A	KY 901	1	KEY, supply pump shaft
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A - for clockwise rotation pumps
40	SGB 15B2	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A - for counterclockwise rotation pumps
41	WA 22-8 BL	2	WASHER, lock - fastening screw
42	SC 1516	2	SCREW, fastening - supply pump assembly
45	GA 1012	1	GASKET, ring - filter screw
46	FE 901	1	FILTER, screen
47	GA 7965	1	GASKET, filter screw
48	SC 903	1	SCREW, filter
49	GA 7616	1	GASKET, fastening screw
49A	W1 1073	as required	WIRE, locking - fastening screw
50	SC 1140	1	SCREW, locating - quill shaft bushing
***	TP 902A	1	TAPPET ASSEMBLY - includes parts 51, 52 and 53
51	RL 903A	1	ROLLER ASSEMBLY, tappet
52	PN 9013	1	PIN, tappet roller - diameter .3745 inch
53	GU 905A	1	GUIDE ASSEMBLY, tappet
54	per requirement	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57B, 58 to 76A - for part number see nameplate attached to illustration 76a
55	HP 902	1	LOCK, plunger - 2 piece
56	GU 904	1	SEAT, plunger spring - lower
57A	SP 901	1	SPRING, inner - plunger
57B	SP 903	1	SPRING, outer - plunger - for speeds greater than 1900 RPM
58	GA 1009	1	GASKET, ring - head assembly
59	RN 9014	1	COVER, gear retainer - for left hand mounted pumps
59	RN 9015	1	COVER, gear retainer - for right hand mounted pumps
60	GE 909	1	GEAR, plunger drive - for clockwise rotation - left hand mounted pumps
60	GE 9010	1	GEAR, plunger drive - for counterclockwise rotation - left hand mounted pumps
60	GE 901	1	GEAR, plunger drive - for clockwise rotation - right hand mounted pumps
60	GE 903	1	GEAR, plunger drive - for counterclockwise rotation - right hand mounted pumps
61	GU 903	1	GUIDE, plunger
62	WA 1362	1	WASHER, thrust - plunger drive gear
63	GA 1010	1	GASKET, ring - head assembly
64	BB 1024	1	BALL, sealing - set screw
65	SC 1352	1	SCREW, set - sealing ball
66	GA 9010	4	GASKET, discharge fitting
67	FI 901	4	FITTING, discharge
68	VA 901 A	1	DELIVERY VALVE ASSEMBLY
69	GA 905	1	GASKET, delivery valve holder
70	SP 7655	1	SPRING, delivery valve
71	HP 903	1	HOLDER, delivery valve
72	GA 906	1	GASKET, cap screw
73	SC 902	1	SCREW, cap - delivery valve
74	SC 150-2	2	SCREW, fastening - part number plate
75	NP 90 2	1	PLATE, part number - hydraulic head
76	HD 9013-1A	1	HEAD, hydraulic - with 6.5 mm dia. plunger and sleeve - round
	HD 9013-2A	1	HEAD, hydraulic - with 7.0 mm dia. plunger and sleeve - round
	HD 9013-3A	1	HEAD, hydraulic - with 7.5 mm dia. plunger and sleeve - round
	HD 9013-4A	1	HEAD, hydraulic - with 8.0 mm dia. plunger and sleeve - round
	HD 9013-5A	1	HEAD, hydraulic - with 8.5 mm dia. plunger and sleeve - round
	HD 9013-6A	1	HEAD, hydraulic - with 9.0 mm dia. plunger and sleeve - round
	HD 9013-7A	1	HEAD, hydraulic - with 9.5 mm dia. plunger and sleeve - round
	HD 9013-8A	1	HEAD, hydraulic - with 10.0 mm dia. plunger and sleeve - round
76A	SV 907	4	SLEEVE, stud - hydraulic head - used with round head only
77	as per order	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - for type designation see stamping on head of screw
78	NT 1127	4	NUT, fastening - hydraulic head assembly
79	PN 9010	1	PIN, control rod
80	RD 9031A	1	ROD, control - left hand mounted pumps - includes part 80B

***Not shown assembled

AMERICAN BOSCH CORPORATION, SPRINGFIELD 7, MASS., U.S.A.

Illustration Number	Part Number	Quantity Used	Description of Part
80B	RG 901	1	RING, spring - control rod
81	PN 1122	1	HAIRPIN, control rod
88	GA 907	1	GASKET, end cover
89	PN 1127	1	PIN, roll - securing lever to operating shaft
90	LE 9030	1	LEVER, operating shaft
91	HG 9020	1	COVER, end
92	PN 2-24 CA	1	PIN, cotter - operating shaft
93	RN 9012	1	RETAINER, spring
94	SP 9017	1	SPRING, operating lever
95	LE 9031A	1	OPERATING LEVER ASSEMBLY
96	PN 9020	1	PIN, dowel - operating lever assembly
97	SH 9020	1	SHAFT, operating
98	PK 902	1	SEAL, oil - operating shaft
99	PG 1057	1	PLUG, expansion - end cover
100	PG 1051	1	PLUG, button - end cover
101	GA 1058	1	GASKET, rubber "O" ring - button plug
102	NT 6-8 BL	1	NUT, lock - sec screw
103	SC 1715	1	SCREW, set
***	BK 905A	1	BRACKET ASSEMBLY - Bowden wire includes parts 104 to 108
104	SC 7954	1	SCREW, clamping - clamp
105	BK 906	1	CLAMP, Bowden
106	BK 904	1	BRACKET
107	WA 5-8 BL	1	WASHER, lock - clamping screw
108	NT 4-8 BL	1	NUT, hex - clamping screw
109	SC 27-6	1	PLUG, screw
110	GA 7697	1	GASKET, screw plug
111	WA 1143	4	WASHER, plain - fastening screw
112	WA 22-8 BL	5	WASHER, lock - fastening screw
113	SC 1705	2	SCREW, fastening - long - end cover
114	SC 1140	3	SCREW, fastening - short - end cover
115	NP 901	1	PLATE, name
116	SC 150-2	2	SCREW, fastening - name plate

***Not shown assembled

AMERICAN BOSCH CORPORATION SPRINGFIELD 7, MASS. U.S.A.

PSB 4A 80K 3357A

Continental Motors Corp. 3 7/8" x 5 1/2"

3357A

PSB 4A 80K 3357B

Model HD 260 Engine

3357B

Used in Massey-Harris Model 44D Tractor

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - For Speeds up to and including 1900 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3494A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly, but not furnished with pump
**	VA 9012A	1	FITTING, bleed - flange end

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80 K1 ON PAGES D126/1002 to D126/1004

CALIBRATION: Set at 1500 RPM for 31 cc to 32 cc per 500 strokes at full load position.
Check at 400 RPM for an equal or increased fuel delivery at the full load position.

NOTE: Full load fuel setting is made by the set screw (Illustration 103)

NOTE: This pump is to be serviced the same as the PSB - "C" execution except that it is not equipped with a governor.

PSB 4A 80K 3514A

Continental Motors Corp. 3 5/8" x 4 7/8"

3514A

Model ED 201 Engine

Used in Massey-Harris Model 33D Tractor

Clockwise Rotation - L.H. Mounting - Timed for Port Closing - For Speeds up to and including 1900 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37, 39 and 39A
54	HD 3494A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
76	HD 9013-4A	1	HEAD, hydraulic - with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section - used with assembly, but not furnished with pump
**	VA 9012A	1	FITTING, bleed - flange end
95	LE 9042A	1	OPERATING LEVER ASSEMBLY

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80 K1 ON PAGES D126/1002 to D126/1004

CALIBRATION: Set at 1500 RPM for 27 cc to 28 cc per 500 strokes at full load position.
Check at 400 RPM for an equal or increased fuel delivery at the full load position.

NOTE: Full load fuel setting is made by the set screw (Illustration 103)

NOTE: This pump is to be serviced the same as the PSB - "C" execution except that it is not equipped with a governor.

** Not Illustrated

AMERICAN BOSCH DIVISION



SPRINGFIELD 7, MASS., U. S. A.

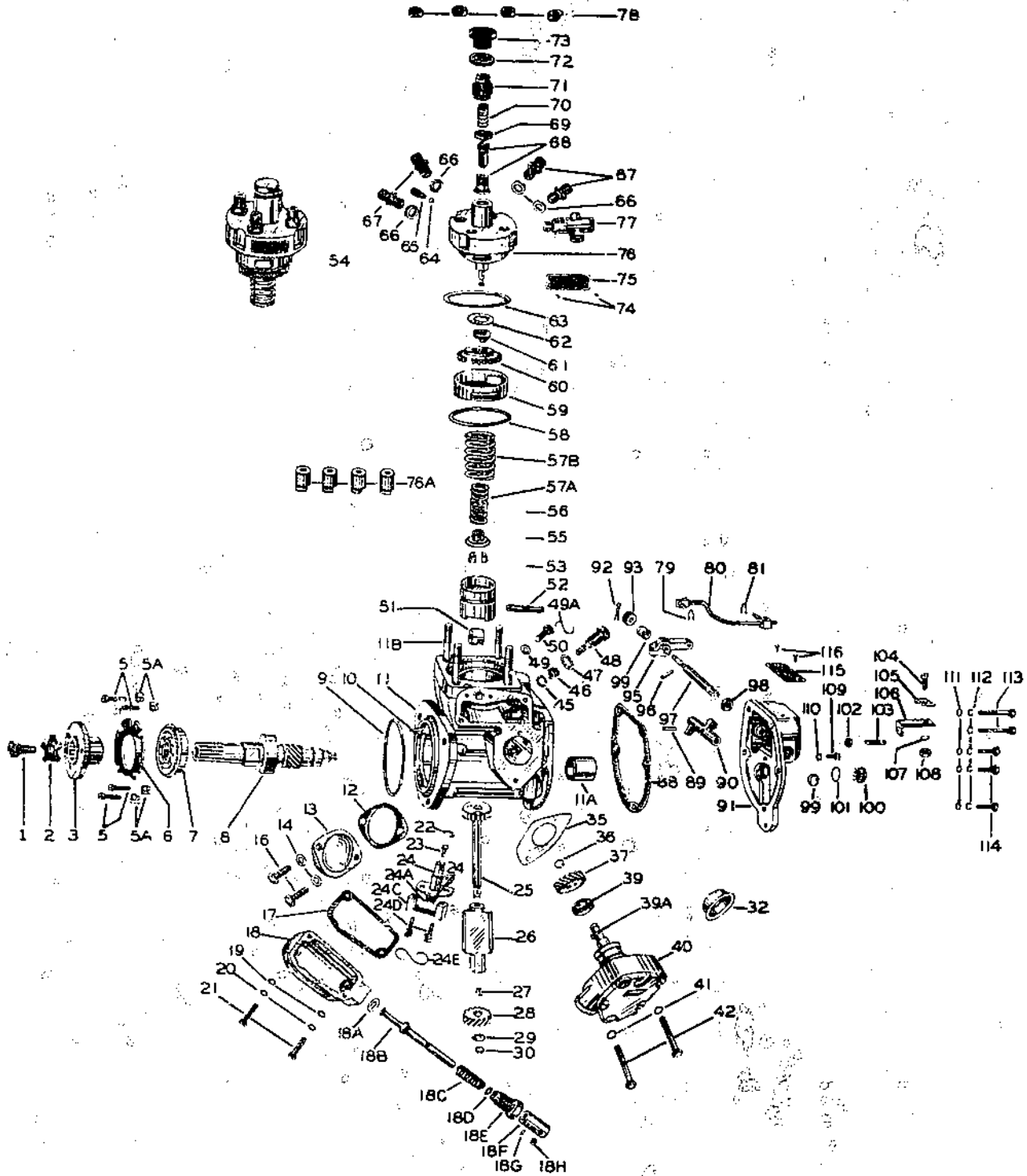
AMERICAN BOSCH FUEL INJECTION PUMP



TYPE

PSB 4A 65-100 L1

SERVICE PARTS LIST



AMERICAN BOSCH DIVISION



SPRINGFIELD 7, MASS. U.S.A.

SERVICE PARTS LIST
FOR
PSB 4A 65 to 100 LI

NOT: This type pump is not equipped with governor

Illustration Number	Part Number	Quantity Used	Description of Part
1	SC 908	1	SCREW, hub — camshaft 7/16"-20 NF 2 thread
2	WA 7623	1	WASHER, lock — hub screw
3	HB 907	1	HUB, drive
5	SC 1555	4	SCREW, fastening — ball bearing retaining plate
5A	WA 901	4	WASHER, lock — fastening screw
6	PL 907	1	PLATE, retaining — ball bearing
7	BB 1023	1	BEARING, ball — camshaft
8	SH 9019	1	CAMSHAFT — includes part 8A
9	GA 76200	1	GASKET, rubber ring
10	PO 765	1	POINTER, timing
11	HG 9050A	1	HOUSING, pump — includes parts 10, 11A and 11B
11A	BG 7649	1	BUSHING, camshaft
11B	SD 903	4	STUD, housing
12	GA 904	1	GASKET, quill shaft pad
13	CV 903C	1	PAD, quill shaft — pump housing
14	GA 7616	2	GASKET, fastening screw
16	SC 1140	2	SCREW, fastening — quill shaft pad
17	GA 909	1	GASKET, timing window cover assembly
18	CV 9018	1	COVER, timing window
18A	GA 1036	1	GASKET, shut-off rod
***	RD 908A	1	SHUT-OFF ROD ASSEMBLY — includes parts 18B through 18H
18B	RD 903	1	ROD, shut-off
18C	SP 904	1	SPRING, shut-off rod
18D	GA 1019	1	GASKET, shut-off rod
18E	SC 904	1	SCREW, bearing
18F	FI 902	1	FITTING, shut-off
18G	PN 1026	1	PIN, shut-off rod
18H	SC 325-4 BL	1	SCREW, set
19	WA 1143	2	WASHER, plain — fastening screw
20	WA 22-8 BL	2	WASHER, lock — fastening screw
21	SC 27-20 BL	2	SCREW, fastening — timing window cover assembly
22	GA 1014	1	GASKET, ring — control unit assembly
23	PN 9023	1	PIN, plunger sleeve
24	CU 9011A	1	CONTROL UNIT ASSEMBLY — includes part 24A and 24B — for left hand mounted pump — type designation stamped 11
24	CU 9010A	1	CONTROL UNIT ASSEMBLY — includes part 24A and 24B — for right hand mounted pump — type designation stamped 10
24A	NT 4-6	1	NUT, hex — control unit
24B	WA 1648	1	WASHER, tab — control unit hex nut
24C	RN 9011	1	RETAINER, control unit
24D	SC 1700	2	SCREW WITH LOCKWASHER, fastening — control unit assembly
24E	WI 901	1	WIRE, locking — control unit fastening screw
***	SH 908A	1	QUILL SHAFT ASSEMBLY, includes parts 25 through 30
25	SH 909A	1	SHAFT, quill — with gear
26	BG 905	1	BUSHING, quill shaft
27	KY 1006	1	KEY, Woodruff — quill shaft
28	GE 908	1	GEAR, camshaft driven
29	WMS 2157/400X	as required	WASHER, plain — .002" thick — to eliminate shaft play
	WMS 2157/1X	as required	WASHER, plain — .004" thick — to eliminate shaft play
	WMS 2157/2X	as required	WASHER, plain — .008" thick — to eliminate shaft play
	WMS 2157/3X	as required	WASHER, plain — .020" thick — to eliminate shaft play
30	RG 1014	1	RING, spring — quill shaft
32	PG 902	1	PLUG, closing
35	GA 903	1	GASKET, supply pump
36	RG 1014	1	RING, spring — supply pump shaft
37	GE 908	1	GEAR, drive — supply pump shaft
39	PK 7910	1	SEAL, oil — supply pump shaft
39A	KY 901	1	KEY, supply pump shaft
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A — for clockwise rotation pumps
40	SGB 15B2	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A — for counterclockwise rotation pumps
41	WA 22-8 BL	2	WASHER, lock — fastening screw
42	SC 1516	2	SCREW, fastening — supply pump assembly
45	GA 1012	1	GASKET, ring — filter screw
46	FE 901	1	FILTER, screen
47	GA 7965	1	GASKET, filter screw
48	SC 903	1	SCREW, filter

***Not shown assembled

AMERICAN BOSCH DIVISION

AMERICAN
BOSCH
ARMA
CORPORATION

SPRINGFIELD 7, MASS. U. S. A.

Illustration Number	Part Number	Quantity Used	Description of Part
49	GA 7616	1	GASKET, fastening screw
49A	WI 1073	as required	WIRE, locking — fastening screw
50	SC 1140	1	SCREW, locating — quill shaft bushing
---	TP 902A	1	TAPPET ASSEMBLY — includes parts 51, 52 and 53
51	RL 903A	1	ROLLER ASSEMBLY, tappet
52	PN 9013	1	PIN, tappet roller — diameter .3745 inch
53	GU 905A	1	GUIDE ASSEMBLY, tappet
54	per requirement		HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57B, 58 to 76A — for part number see nameplate attached to illustration 76
55	HF 902	1	LOCK, plunger — 2 piece
56	GU 904	1	SEAT, plunger spring — lower
57A	SP 901	1	SPRING, inner — plunger
57B	SP 903	1	SPRING, outer — plunger — for speeds greater than 1900 RPM
58	GA 1009	1	GASKET, ring — head assembly
59	RN 9014	1	COVER, gear retainer — for left hand mounted pumps
59	RN 9015	1	COVER, gear retainer — for right hand mounted pumps
60	GE 909	1	GEAR, plunger drive — for clockwise rotation — left hand mounted pumps
60	GE 9010	1	GEAR, plunger drive — for counterclockwise rotation — left hand mounted pumps
60	GE 901	1	GEAR, plunger drive — for clockwise rotation — right hand mounted pumps
60	GE 903	1	GEAR, plunger drive — for counterclockwise rotation — right hand mounted pumps
61	GU 903	1	GUIDE, plunger
62	WA 1362	1	WASHER, thrust — plunger drive gear
63	GA 1010	1	GASKET, ring — head assembly
64	BB 1024	1	BALL, sealing — set screw
65	SC 1352	1	SCREW, set — sealing ball
66	GA 9010	4	GASKET, discharge fitting
67	FI 901	4	FITTING, discharge
68	VA 907A	1	DELIVERY VALVE ASSEMBLY — for plunger diameter of 6.5 mm and 7.0 mm
68	VA 908A	1	DELIVERY VALVE ASSEMBLY — for plunger diameter of 7.5 mm to 9.0 mm inclusive
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY — for plunger diameter of 9.5 mm and 10.0 mm
69	GA 905	1	GASKET, delivery valve holder
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
72	GA 906	1	GASKET, cap screw
73	SC 9018A	1	SCREW, cap — delivery valve
74	SC 150-2	2	SCREW, fastening — part number plate
75	NP 902	1	PLATE, part number — hydraulic head
76	HD 9013-1A	1	HEAD, hydraulic — with 6.5 mm dia. plunger and sleeve — round
	HD 9013-2A	1	HEAD, hydraulic — with 7.0 mm dia. plunger and sleeve — round
	HD 9013-3A	1	HEAD, hydraulic — with 7.5 mm dia. plunger and sleeve — round
	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm dia. plunger and sleeve — round
	HD 9013-5A	1	HEAD, hydraulic — with 8.5 mm dia. plunger and sleeve — round
	HD 9013-6A	1	HEAD, hydraulic — with 9.0 mm dia. plunger and sleeve — round
	HD 9013-7A	1	HEAD, hydraulic — with 9.5 mm dia. plunger and sleeve — round
	HD 9013-8A	1	HEAD, hydraulic — with 10.0 mm dia. plunger and sleeve — round
76A	SV 907	4	SLEEVE, stud — hydraulic head — used with round head only
77	as per order	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — for type designation see stamping on head of screw
78	NT 1127	4	NUT, fastening — hydraulic head assembly
79	PN 1122	1	HAIRPIN, control rod
80	RD 9040-1A	1	ROD, control — left hand mounted pumps
81	PN 1122	1	HAIRPIN, control rod
88	GA 907	1	GASKET, end cover
89	PN 1127	1	PIN, roll — securing lever to operating shaft
90	LE 9030	1	LEVER, operating shaft
91	HG 9020	1	COVER, end
92	PN 2-24, CA	1	PIN, cotter — operating shaft
93	RN 9012	1	RETAINER, spring
94	SP 9017	1	SPRING, operating lever
95	LE 9031A	1	OPERATING LEVER ASSEMBLY
96	PN 9020	1	PIN, dowel — operating lever assembly
97	SH 9020	1	SHAFT, operating
98	PK 902	1	SEAL, oil — operating shaft
99	PG 1057	1	PLUG, expansion — end cover
100	PC 1051	1	PLUG, button — end cover
101	GA 1058	1	GASKET, rubber "O" ring — button plug
102	NT 6-8 BL	1	NUT, lock — set screw

***Not shown assembled

AMERICAN BOSCH DIVISION

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CORPORATION

SPRINGFIELD, MASS. U. S. A.

<u>Illustration Number</u>	<u>Part Number</u>	<u>Quantity Used</u>	<u>Description of Part</u>
103	SC 1715	1	SCREW, set
109	SC 27-6	1	PLUG, screw
110	GA 7697	1	GASKET, screw plug
111	WA 1143	4	WASHER, plain — fastening screw
112	WA 22-8 BL.	5	WASHER, lock — fastening screw
113	SC 1705	2	SCREW, fastening — long — end cover
114	SC 1140	3	SCREW, fastening — short — end cover
115	NP 904	1	PLATE, name
116	SC 150-2	2	SCREW, fastening — nameplate

AMERICAN BOSCH DIVISION



SPRINGFIELD 7, MASS., U.S.A.

PSB 4A 80L 3870A Continental Motors Corp. 3 7/8" x 5 1/2" Model HD 260 3870A

USED IN MASSEY-HARRIS MODEL 44D TRACTOR

Clockwise Rotation — L. H. Mounting — Timed for Port Closing — For Speeds Up to and Including 1900 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3494A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap — delivery valve
76	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — used with assembly, but not furnished with pump
104	SC 7954	1	SCREW, clamping
106	BK 904	1	BRACKET
107	WA 5-8BL	1	WASHER, lock — hex nut
108	NT 4-8BL	1	NUT, hex — clamping screw
**	VA 9012A	1	FITTING, bleed — flange end

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80L1 ON PAGES D 226/1052 TO D 226/1054

CALIBRATION: Set at 1500 RPM for 31 cc to 32 cc per 500 strokes at full load position

Check at 400 RPM for an equal or increased fuel delivery at the full load position

NOTE: Full load fuel setting is made by the set screw (Illustration 103)

NOTE: This pump is to be serviced the same as the PSB — "C" execution except that it is not equipped with a governor

PSB 4A 80L 3871A Continental Motors Corp. 3 5/8" x 4 7/8" Model ED 201 3871A

USED IN MASSEY-HARRIS MODEL 33D TRACTOR

Clockwise Rotation — L. H. Mounting — Timed for Port Closing — For Speeds Up to and Including 1900 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3494A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap — delivery valve
76	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — used with assembly, but not furnished with pump
**	VA 9012A	1	FITTING, bleed — flange end
95	LE 9042A	1	OPERATING LEVER ASSEMBLY
104	SC 7954	1	SCREW, clamping
106	BK 904	1	BRACKET
107	WA 5-8BL	1	WASHER, lock — hex nut
108	NT 4-8BL	1	NUT, hex — clamping screw

Omit illustrated parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80L1 ON PAGES D 226/1052 TO D 226/1054

CALIBRATION: Set at 1500 RPM for 25 cc to 26 cc per 500 strokes at the full load position

Check at 400 RPM for an equal or increased fuel delivery at full load position

NOTE: Full load fuel setting is made by the set screw (Illustration 103)

NOTE: This pump is to be serviced the same as the PSB — "C" execution except that it is not equipped with a governor

**Not Illustrated

AMERICAN BOSCH DIVISION

AMERICAN
BOSCH
ARMA
CORPORATION

SPRINGFIELD 7, MASS., U. S. A.

PSB 4A 80L 3875A Continental Motors Corp. 3 $\frac{3}{8}$ " x 4 $\frac{3}{8}$ "

Model GD 157 3875A

Clockwise Rotation — L. H. Mounting — Timed for Port Closing — For Speeds Up to and Including 1900 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
54	HD 3494A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap — delivery valve
76	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm diameter plunger and sleeve
77	VA 7928A	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — used with assembly, but not furnished with pump
**	FI 904	1	FITTING, bleed — flange end
95	LE 9042A	1	OPERATING LEVER ASSEMBLY
103	SC 1780	1	SCREW, set
104	SC 7954	1	SCREW, clamping
106	BK 904	1	BRACKET
107	WA 5-8BL	1	WASHER, lock — hex nut
108	NT 4-8BL	1	NUT, hex — clamping screw

Omit illustrated parts 35 through 42 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80L1 ON PAGES D 226/1052 TO D 226/1054

CALIBRATION: Set at 1800 RPM for 19 cc to 20 cc per 500 strokes at full load position

Check at 400 RPM for an equal or increased fuel delivery at the full load position

NOTE: Full load fuel setting is made by the set screw (Illustration 103)

NOTE: This pump is to be serviced the same as the PSB — "C" execution except that it is not equipped with a governor

PSB 4A 80L 3879A Continental Motors Corp. 3 $\frac{7}{8}$ " x 5 $\frac{1}{2}$ "

Model HD 260 3879A

Clockwise Rotation — L. H. Mounting — Timed for Port Closing — For Speeds in Excess of 1900 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
11	HG 9044A	1	HOUSING, pump — includes parts 10, 11A and 11B
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
***	TP 903A	1	TAPPET ASSEMBLY — includes parts 51, 52 and 53
53	GU 9011A	1	GUIDE ASSEMBLY, tappet
54	HD 3880A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A, **a and **b
55	HP 9015	1	LOCK, plunger — 2 piece
56	GU 909	1	SEAT, plunger spring — lower
**a	BO 901	1	BUTTON, plunger
**b	RG 902	1	RING, button retaining
57B	SP 903	1	SPRING, plunger — outer
76	HD 9022-4A	1	HEAD, hydraulic — with 8.0 mm diameter plunger and sleeve
104	SC 7954	1	SCREW, clamping
106	BK 904	1	BRACKET
107	WA 5-8BL	1	WASHER, lock — hex nut
108	NT 4-8BL	1	NUT, hex — clamping screw
**	FI 904	1	FITTING, bleed — flange end
**	GU 9013	1	SEAT, spring — upper
**	RG 903	1	RING, retaining — spring seat

Omit illustrated part 32

ALL OTHER PARTS SAME AS PSB 4A 80L ON PAGES D 226/1052 AND D 226/1054

CALIBRATION: Set at 2500 RPM for 31 cc to 32 cc per 500 strokes at full load position

Check at 400 RPM for an equal or increased fuel delivery at full load position

NOTE: Full load fuel setting is made by the set screw (Illustration 103)

NOTE: This pump is to be serviced the same as the PSB — "C" execution except that it is not equipped with a governor

**Not Illustrated

***Not shown assembled

AMERICAN BOSCH DIVISION

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BOSCH
ARMA
CORPORATION

SPRINGFIELD 7, MASS., U. S. A.

PSB 4A 70L 3881A

Continental Motors Corp. 3 3/8" x 4 3/8"

Model GD 157, 3881A

Clockwise Rotation — L. H. Mounting — Timed for Port Closing — For Speeds in Excess of 1900 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
11	HG 9044A	1	HOUSING, pump — includes parts 10, 11A and 11B
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
***	TP 903A	1	TAPPET ASSEMBLY — includes parts 51, 52 and 53
53	GU 9011A	1	GUIDE ASSEMBLY, tappet
54	HD 3792A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A, **a and **b
55	HP 9015	1	LOCK, plunger — 2 piece
56	GU 909	1	SEAT, plunger spring — lower
**a	BO 901	1	BUTTON, plunger
**b	RG 902	1	RING, button retaining
76	HD 9022-2A	1	HEAD, hydraulic — with 7.0 mm sleeve and plunger
57B	SP 903	1	SPRING, plunger — outer
**	GU 9013	1	SEAT, spring — upper
**	RG 903	1	RING, retaining — spring seat
**	FI 904	1	FITTING, bleed — flange end
104	SC 7954	1	SCREW, clamping
103	BK 904	1	BRACKET
107	WA 5-8BL	1	WASHER, lock — hex nut
108	NT 4-8BL	1	NUT, hex — clamping screw

Omit illustration part 32

ALL OTHER PARTS SAME AS PSB 4A 70L ON PAGES D 226/1052 AND D 226/1054

CALIBRATION: Set at 2500 RPM for 19 cc to 20 cc per 500 strokes at full load position

Check at 400 RPM for an equal or increased fuel delivery at full load position

NOTE: Full load fuel setting is made by the set screw (Illustration 103)

NOTE: This pump is to be serviced the same as the PSB — "C" execution except that it is not equipped with a governor

**Not Illustrated

***Not shown assembled

ISSUED OCTOBER, 1954



PSB 4A 80L 4205A — Continental Motors — 3 7/8" x 5 1/2" — Model HD 260 **4205A**
 PSB 4A 80L 4207A — Continental Motors — 3 5/8" x 4 7/8" — Model ED 201 **4207A**

Clockwise Rotation — L. H. Mounting — Timed for Port Closing
 For speeds up to and including 1900 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
54	HD 3494A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm diameter plunger and sleeve

Omit illustrated parts 35 to 42 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80L1 ON PAGES D 226/1052 TO D 226/1054

CALIBRATION: For PSB 4A 80L 4205A
 Set at 1500 RPM for 31cc to 32cc per 500 strokes at full load position.
 Check at 400 RPM for an equal or increased fuel delivery at full load position.

For PSB 4A 80L 4207A
 Set at 1500 RPM for 25cc to 26cc per 500 strokes at full load position.
 Check at 400 RPM for an equal or increased fuel delivery at full load position.

NOTE: Full load setting is made by the set screw (illustration 103).

NOTE: These pumps are to be serviced the same as the PSB — "C" execution except that they are not equipped with a governor.

PSB 4A 80L 4235A1 — Continental Motors — Model HD 277 — 4" x 5 1/2" **4235A1**
 PSB 4A 80L 4236A1 — Continental Motors — Model ED 208 **4236A1**
 PSB 4A 80L 4236A2 — Continental Motors — Model HD 277 **4236A2**

Clockwise Rotation — L. H. Mounting — Timed for Port Closing
 For speeds up to and including 1900 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
54	HD 3494A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
76	HD 9013-4A	1	HEAD, hydraulic — with 8.0 mm diameter plunger and sleeve
95	LE 9042A	1	OPERATING LEVER ASSEMBLY
104	SC 7954	1	SCREW, clamping
106	BK 904	1	BRACKET
107	WA 5-8 BL	1	WASHER, lock — hex nut
108	NT 4-8 BL	1	NUT, hex — clamping screw

Omit illustrated Parts 35 to 42 and 57B

ALL OTHER PARTS SAME AS PSB 4A 80L1 ON PAGES D 226/1052 TO D 226/1054

CALIBRATION: For PSB 4A 80L 4235A1 and PSB4A 80L 4236A2.
 Set at 1500 RPM for 37.5cc to 38.5cc per 500 strokes at full load position.
 Check at 400 RPM for an equal or increased fuel delivery at full load position.

For PSB 4A 80L 4236A1
 Set at 1500 RPM for 28.5cc to 29.5cc per 500 strokes at full load position.
 Check at 400 RPM for an equal or increased fuel delivery at full load position.

NOTE: Full load setting is made by the set screw (illustration 103).

NOTE: These pumps are to be serviced the same as the PSB — "C" execution except that they are not equipped with governor.

4237A PSB 4A 100 L 4237A — Continental Motors — 4 1/2" x 6" — Model JD 38?

Clockwise Rotation — L. H. Mounting — Timed for Port Closing
For speeds up to and including 1900 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
***	TP 903A	1	TAPPET ASSEMBLY — includes parts 51, 52 and 53
53	GU 9011A	1	GUIDE ASSEMBLY, tappet
54	HD 4270A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 55 to 57A, 58 to 76A **a and **b
55	HP 9015	1	LOCK, plunger — 2 piece
56	GU 909	1	SEAT, plunger spring — lower
**a	BO 901	1	BUTTON, plunger
**b	RG 902	1	RING, button retaining
76	HD 9022-8A	1	HEAD, hydraulic — with 10.00 mm diameter plunger and sleeve
77	VA 9022A	1	DELIVERY VALVE ASSEMBLY
95	LE 9042A	1	OPERATING LEVER ASSEMBLY
**	VA 9012A	1	FITTING, bleed — Flange end
104	SC 7954	1	SCREW, clamping
106	BK 904	1	BRACKET
107	WA 5-8 BL	1	WASHER, lock — hex nut
108	NT 4-8 BL	1	NUT, hex — clamping screw

Omit illustrated Parts 32 and 57B

ALL OTHER PARTS SAME AS PSB 4A 100 L1 ON PAGES D 226/1052 AND D 226/1054

CALIBRATION: Set at 1350 RPM for 51.5 cc to 52.5 cc per 500 strokes at full load position.
Check at 400 RPM for an equal or increased fuel delivery at full load position.

NOTE: Full load fuel setting is made by the set screw (illustration 103).

NOTE: This pump is to be serviced the same as the PSB — "C" execution except that it is not equipped with a governor.

PSB 4A 100L 4237B - Continental Motors - $4\frac{1}{2}$ " x 6" - Model JD 382

Clockwise Rotation - L. H. Mounting Timed for Port Closing
For speeds up to and including 1900 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15BL	1	SUPPLY PUMP ASSEMBLY - includes parts 36, 37 39 and 39A - for other parts See Supply Pump Section.
54	HD 4394A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 75 and 76A
56	GU 9015	1	SEAT, plunger spring - lower
67	FI 9012	4	FITTING, discharge
76A	SV 9018	4	SLEEVE, stud
77	VA 9022A	1	DELIVERY VALVE ASSEMBLY
95	IE 9042A	1	OPERATING LEVER ASSEMBLY
**	VA 9012A	1	FITTING, bleed - flange end
104	SC 7954	1	SCREW, clamping
106	BK 904	1	BRACKET
107	WA 5-8 BL	1	WASHER, lock - hex nut
108	NT 4-8 BL	1	NUT, hex - clamping screw

Omit illustrated Part 32

ALL OTHER PARTS SAME AS PSB 4A 100 L 1 - MANUAL PAGE D 226/1052

CALIBRATION: Set at 1350 RPM for 51-52 cc per 500 strokes at full load position.
Check at 150 RPM for 61 cc min. per 500 strokes with operating lever in full speed position.

NOTE: Full load fuel setting is made by the set screw (illustration 103)

NOTE: This pump is to be serviced the same as the PSB - "C" execution except that it is not equipped with a governor.

** Not Illustrated

ISSUED APRIL, 1963

PSB LA 80L 4728A1 & A2 Continental Motors Corp. 3-3/8" X 4-3/8" MODEL GD 157

Clockwise Rotation - Left Hand Mounting - Timed for Port Closing -
For Speeds up to and including 1900 RPM

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B 11	1	SUPPLY PUMP ASSEMBLY - for parts see Fuel Supply Pump Section (D268)
41	WA 6-8BL	2	LOCKWASHER, supply pump mounting
54	HD 3494A	1	HYDRAULIC HEAD ASSEMBLY - complete - includes parts 22, 45, 55 to 57A, 58 to 75 and 76A
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
73	SC 9018A	1	SCREW, cap - delivery valve
77	VA 9012A	1	OVERFLOW VALVE ASSEMBLY - for parts see Safety Valve Section
95	LE 9042A	1	OPERATING LEVER ASSEMBLY
103	SC 1780	1	SCREW, set
104	SC 7954	1	SCREW, clamping
106	BK 904	1	BRACKET
107	WA 5-8BL	1	WASHER, lock - hex nut
108	NT 4-8BL	1	NUT, hex - clamping

ALL OTHER PARTS SAME AS PSB LA 80L 1 - MANUAL PAGES D226/1052 to D226/1054

CALIBRATION: Average for all Outlets

PSB LA 80L 4728A1 - Set at 1800 RPM for 19-20 cc per 500 strokes at full load

PSB LA 80L 4728A2 - Set at 1900 RPM for 19-20 cc per 500 strokes at full load

Check at 400 RPM for an equal or increased fuel delivery at full load.

NOTE: Full load fuel setting is made by the set screw (illustration 103)

NOTE: This pump is to be serviced the same as the PSE-C execution except that it is not equipped with a governor

ISSUED JANUARY, 1964

AMERICAN BOSCH DIVISION



SPRINGFIELD 7 MASS. U.S.A.

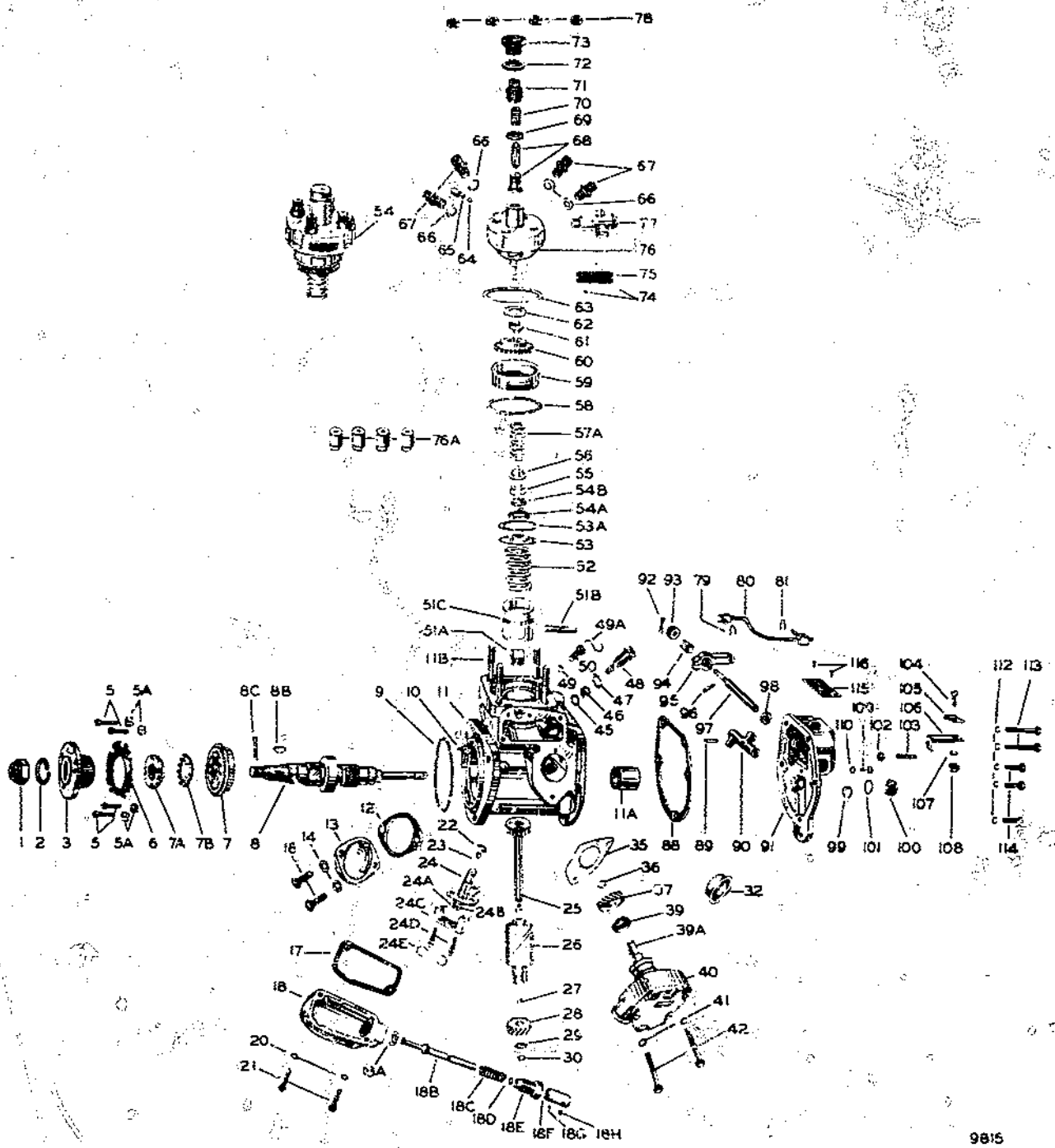
AMERICAN BOSCH FUEL INJECTION PUMP



TYPE
PSB 4A 65-100 LH 1

SERVICE PARTS LIST

AMERICAN BOSCH DIVISION AMERICAN BOSCH ARMA CORPORATION SPRINGFIELD 7, MASS. U.S.A.





SERVICE PARTS LIST FOR PSB 4A 65-100 LH 1

NOTE: This type pump is not equipped with a governor

Illustration Number	Part Number	Quantity Used	Description of Part
1	NT 909	1	NUT, hub — camshaft (Torque to 45-55 ft. lbs.)
2	NMS 423/1X	1	WASHER, lock — hub screw
3	HB 9019	1	HUB, drive — Tapered
5	SC 1555	4	SCREW, fastening — ball bearing retaining plate
5A	WA 901	4	WASHER, lock — fastening screw
6	PL 907	1	PLATE, retaining — ball bearing
7	BB 1054	1	BEARING, ball — camshaft
7A	NT 905	1	NUT, round — camshaft ball bearing
7B	WA 1720	1	WASHER, lock — camshaft ball bearing
8	SH 9061	1	CAMSHAFT — Tapered Drive End
8B	NKE 5/2X	1	KEY, Woodruff — camshaft
8C	PN 4-32 BL	1	PIN, cotter — camshaft nut
9	GA 76200	1	GASKET, rubber ring
10	PO 765	1	POINTER, timing
11	HG 9044A	1	HOUSING, pump — includes parts 10, 11A and 11B
11A	BG 7649	1	BUSHING, camshaft
11B	SD 903	1	STUD, housing
12	GA 904	1	GASKET, quill shaft pad
13	CV 903C	1	PAD, quill shaft — pump housing
14	GA 7616	2	GASKET, fastening screw
16	SC 1140	2	SCREW, fastening — quill shaft pad
17	GA 909	1	GASKET, timing window cover assembly
18	CV 9018	1	COVER, timing window
18A	GA 1036	1	GASKET, shut-off rod
***	RD 908A	1	SHUT-OFF ROD ASSEMBLY — includes parts 18B through 18H
18B	RD 903	1	ROD, shut-off
18C	SP 904	1	SPRING, shut-off rod
18D	GA 1019	1	GASKET, shut-off rod
18E	SC 904	1	SCREW, bearing
18F	FI 902	1	FITTING, shut-off
18G	PN 1026	1	PIN, shut-off rod
18H	SC 325-4 BL	1	SCREW, set
20	WA 6-8 BL	2	WASHER, lock — fastening screw
21	SC 27-20 BL	2	SCREW, fastening — timing window assembly
22	GA 1014	1	GASKET, ring — control unit assembly
23	PN 9023	1	PIN, plunger sleeve
24	CU 9011A	1	CONTROL UNIT ASSEMBLY — includes parts 24A and 24B for left hand mounted pump — type designation stamped 11
24	CU 9010A	1	CONTROL UNIT ASSEMBLY — includes part 24A and 24B for right hand mounted pump — type designation stamped 10
24A	NT 4-6	1	NUT, hex — control unit
24B	WA 1648	1	WASHER, tab — control unit hex nut
24C	RN 9011	1	RETAINER, control unit
24D	SC 1700	2	SCREW WITH LOCKWASHER, fastening — control unit assembly
24E	WI 901	1	WIRE, locking — control unit fastening screw
***	SH 908A	1	QUILL SHAFT ASSEMBLY, includes parts 25 thru 30
25	SH 909A	1	SHAFT, quill — with gear
26	BG 905	1	BUSHING, quill shaft
27	KY 1006	1	KEY, Woodruff — quill shaft
28	GE 908	1	Gear, camshaft driven
29	WMS 2157/400X	as required	WASHER, plain — .002" thick — to eliminate shaft play
	WMS 2157/1X	as required	WASHER, plain — .004" thick — to eliminate shaft play
	WMS 2157/2X	as required	WASHER, plain — .008" thick — to eliminate shaft play
	WMS 2157/3X	as required	WASHER, plain — .020" thick — to eliminate shaft play
30	RG 1014	1	RING, spring — quill shaft
32	PG 902	1	PLUG, closing
35	GA 903	1	GASKET, supply pump
36	RG 1014	1	RING, spring — supply pump shaft
37	GE 908	1	GEAR, drive — supply pump shaft
39	PK 7910	1	SEAL, oil — supply pump shaft
39A	KY 901	1	KEY, supply pump shaft
40	SGB 15 B1	1	SUPPLY PUMP ASSEMBLY — includes 36, 37, 39 and 39A — for clockwise rotation pumps

***Not shown assembled

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15 B2	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A for counter-clockwise rotation pumps
41	WA 6-8 BL	2	WASHER, lock — fastening screw
42	SC 1516	2	SCREW, fastening — supply pump assembly
45	GA 1012	1	GASKET, ring — filter screw
46	FE 901	1	FILTER, screen
47	GA 7965	1	GASKET, filter screw
48	SC 903	1	SCREW, filter
49	GA 7616	1	GASKET, fastening screw
49A	WI 1073	as required	WIRE, locking — fastening
50	SC 1140	1	SCREW, locating — quill shaft bushing
51A	TP 903A	1	TAPPET ASSEMBLY — includes parts 51A to 51C
51B	RL 903A	1	ROLLER ASSEMBLY, tappet
51C	PN 9013	1	PIN, tappet roller — diameter .3745"
52	GU 9011A	1	GUIDE ASSEMBLY, tappet
53	SP 903	1	SPRING, plunger — outer
53A	GU 9013	1	SEAT, spring — upper
54	RG 903	1	RING, spring — upper spring seat
54A	per requirement	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A through 76A — for part number see nameplate attached to illustration 76
54B	RG 902	1	RING, retaining — button
55	BO 901	1	BUTTON, plunger
56	HP 9015	1	LOCK, plunger — 2 piece
57A	GU 909	1	SEAT, plunger spring — lower
58	SP 901	1	SPRING, inner — plunger
59	GA 1009	1	GASKET, ring — head assembly
60	RN 9014	1	COVER, gear retainer — for left hand mounted pumps
60	RN 9015	1	COVER, gear retainer — for right hand mounted pumps
60	CE 909	1	GEAR, plunger drive — for clockwise rotation — left hand mounted pumps
60	GE 9010	1	GEAR, plunger drive — for counter-clockwise rotation — left hand mounted pumps
60	GE 901	1	GEAR, plunger drive — for clockwise rotation — right hand mounted pumps
60	GE 903	1	GEAR, plunger drive — for counter-clockwise rotation — right hand mounted pumps
61	GU 903	1	GUIDE, plunger
62	WA 1362	1	WASHER, thrust — plunger drive gear
63	GA 1010	1	GASKET, ring — head assembly
64	BB 1024	1	BALL, sealing — set screw
65	SC 1352	1	SCREW, set — sealing ball
66	GA 9010	4	GASKET, discharge fitting
67	FI 901	4	FITTING, discharge — No notch on hex — Use with gasket (GA 9010)
67	FI 9012	4	FITTING, discharge — Notch on hex — Do not use gasket
68	VA 907A	1	DELIVERY VALVE ASSEMBLY — for plunger dia. of 6.5 mm and 7.0 mm
68	VA 908A	1	DELIVERY VALVE ASSEMBLY — for plunger dia. of 7.5 mm to 9.0 mm inclusive
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY — for plunger dia. of 9.5 mm and 10.0 mm
69	GA 905	1	GASKET, delivery valve holder
70	SP 9015	1	SPRING, delivery valve
71	HP 9011	1	HOLDER, delivery valve
72	GA 906	1	GASKET, cap screw
73	SC 9018A	1	SCREW, cap — delivery valve
74	SC 150-2	2	SCREW, fastening — part number plate
75	NP 902	1	PLATE, part number — hydraulic head
76	HD 9022-1A	1	HEAD, hydraulic — with 6.5 mm dia. plunger and sleeve-round
	HD 9022-2A	1	HEAD, hydraulic — with 7.0 mm dia. plunger and sleeve-round
	HD 9022-3A	1	HEAD, hydraulic — with 7.5 mm dia. plunger and sleeve-round
	HD 9022-4A	1	HEAD, hydraulic — with 8.0 mm dia. plunger and sleeve-round
	HD 9022-5A	1	HEAD, hydraulic — with 8.5 mm dia. plunger and sleeve-round
	HD 9022-6A	1	HEAD, hydraulic — with 9.0 mm dia. plunger and sleeve-round
	HD 9022-7A	1	HEAD, hydraulic — with 9.5 mm dia. plunger and sleeve-round
	HD 9022-8A	1	HEAD, hydraulic — with 10.0 mm dia. plunger and sleeve-round
76A	SV 907	4	SLEEVE, stud — hydraulic head — used with round head only
77	as per order	1	OVERFLOW VALVE ASSEMBLY — for parts see Safety Valve Section — for type designation see stamping on head of screw
78	NT 1127	4	NUT, fastening — hydraulic head assembly
79	PN 1122	1	HAIRPIN, control rod
80	RD 9040-1A	1	ROD, control — left hand mounted pumps
81	PN 1122	1	HAIRPIN, control rod

***Not shown assembled

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SPRINGFIELD 7, MASS. U.S.A.

Illustration Number	Part Number	Quantity Used	Description of Part
88	GA 907	1	GASKET, end cover
89	PN 1127	1	PIN, roll — securing lever to operating shaft
90	LE 9030	1	LEVER, operating shaft
91	HG 9020	1	COVER, end
92	PN 2-24CA	1	PIN, cotter — operating shaft
93	RN 9012	1	RETAINER, spring
94	SP 9017	1	SPRING, operating lever
95	LE 9031A	1	OPERATING LEVER ASSEMBLY
96	PN 9020	1	PIN, dowel — operating lever assembly
97	SH 9020	1	SHAFT, operating
98	PK 902	1	SEAL, oil — operating shaft
99	PG 1057	1	PLUG, expansion — end cover
100	PG 1051	1	PLUG, button — end cover
101	GA 1058	1	GASKET, rubber "O" ring — button plug
102	NT 6-8 BL	1	NUT, lock — set screw
103	SC 1715	1	SCREW, set
109	SC 27-6	1	PLUG, screw
110	GA 7697	1	GASKET, screw plug
112	WA 6-8 BL	5	WASHER, lock — fastening screw
113	SC 1705	2	SCREW, fastening — long — end cover
114	SC 1140	3	SCREW, fastening — short — end cover
115	NP 904	1	PLATE, name
116	SC 150-2	2	SCREW, fastening — nameplate

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SPRINGFIELD 7, MASS., U. S. A.

PSB 4A 100 LH 4208A1—Continental 4 1/2" x 5"—Model JD 382
4208A1

Clockwise Rotation — L. H. Mounting — Timed for Port Closing

Illustration Number	Part Number	Quantity Used	Description of Part
11	HG 9050A	1	HOUSING, pump — includes parts 10, 11A and 11B
54	HD 3527A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A through 76A — for part number see name plate attached to illustration 76
68	VA 9010A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-8A	1	HEAD, hydraulic — with 10.0 mm dia. plunger and sleeve

Omit illustrated parts 36, to 42, 52, 53, 53A (Large plunger spring not used)

ALL OTHER PARTS SAME AS PSB 4A 100 LH 1

CALIBRATION: Set at 1350 RPM for 46 cc to 47 cc per 500 strokes at full load position. Check at 400 RPM for an equal or increased fuel delivery at the full load position.

NOTE: Full load fuel setting is made by the set screw (Illustration 103).

NOTE: This pump is to be serviced the same as the PSB - "EH" execution except that it is not equipped with a governor.

PSB 4A 80 LH 4209A1—Continental 3 7/8" x 4 3/8"—Model GD 157
4209A1

Clockwise Rotation — L. H. Mounting — Timed for Port Closing

54	HD 4210A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45 and 54A to 76A
68	VA 909A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-4A	1	HEAD, hydraulic — includes 8.0 mm diameter plunger and sleeve
95	LE 9042A	1	OPERATING LEVER ASSEMBLY
103	SC 1780	1	SCREW, adjusting — full load
104	SC 7954	1	SCREW, clamping
105	BK 906	1	CLAMP
106	BK 904	1	BRACKET
107	WA 5-8 BL	1	WASHER, lock — hex nut
108	NT 4-8 BL	1	NUT, hex — clamping screw

Omit illustrated parts 35 to 42

ALL OTHER PARTS SAME AS PSB 4A 80 LH 1

CALIBRATION: Set at 2250 RPM for 19 cc to 20 cc per 500 strokes at full load position. Check at 400 RPM for an equal or increased fuel delivery at full load position.

NOTE: Full load fuel setting is made by the set screw (Illustration 103).

NOTE: This pump is to be serviced the same as the PSB - "EH" execution except that it is not equipped with a governor.

PSB 4A 80 LH 4216A—Continental Motors Corp. 3 7/8" x 5 1/2"—Model HD 260
4216A

Clockwise Rotation — L. H. Mounting — Timed for Port Closing

40	SGR 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3886A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A through 76A
68	VA 908A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-4A	1	HEAD, hydraulic — with 8.0 mm dia. plunger and sleeve
104	SC 7954	1	SCREW, clamping
105	BK 906	1	CLAMP
106	BK 904	1	BRACKET
107	WA 5-8BL	1	WASHER, lock — hex nut
108	NT 4-8BL	1	NUT, hex — clamping screw
**	FI 904	1	FITTING, bleed — flange end

Omit illustrated part 32

ALL OTHER PARTS SAME AS PSB 4A 80 LH 1

CALIBRATION: Set at 2500 RPM for 31 cc to 32 cc per 500 strokes at full load position. Check at 400 RPM for an equal or increased fuel delivery at the full load position.

NOTE: Full load fuel setting is made by the set screw (Illustration 103).

NOTE: This pump is to be serviced the same as the PSB — "EH" execution except that it is not equipped with a governor.

****Not Illustrated**

AMERICAN BOSCH DIVISION


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SPRINGFIELD 7, MASS. U. S. A.

4217A PSB 4A 70 LH 4217A—Continental 3 3/8" x 4 3/8"—Model GD 157

Clockwise Rotation — L. H. Mounting — Timed for Port Closing

Illustration Number	Part Number	Quantity Used	Description of Part
40	SGB 15B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 3793A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45 and 54A to 76A
68	VA 907A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-2A	1	HEAD, hydraulic — includes 7.0 mm dia. plunger and sleeve
**	FI 904	1	FITTING, bleed — flange end
104	SC 7954	1	SCREW, clamping
105	BK 906	1	CLAMP
106	BK 904	1	BRACKET
107	WA 5-8BL	1	WASHER, lock — hex nut
108	NT 4-8BL	1	NUT, hex — clamping screw

Omit illustrated part 32

ALL OTHER PARTS SAME AS PSB 4A 70 LH 1

CALIBRATION: Set at 2500 RPM for 19 cc to 20 cc per 500 strokes at full load position. Check at 400 RPM for an equal or increased fuel delivery at full load position.

NOTE: Full load fuel setting is made by the set screw (Illustration 103).

NOTE: This pump is to be serviced the same as the PSB — "EH" execution except that it is not equipped with a governor.

4287A PSB 4A 100 LH 4287A—Continental 4 1/2" x 6"—Model JD 382

Clockwise Rotation — L. H. Mounting — Timed for Port Closing

11	HG 9050A	1	HOUSING, pump — includes parts 10, 11A and 11B
40	SGB 15 B1	1	SUPPLY PUMP ASSEMBLY — includes parts 36, 37, 39 and 39A
54	HD 4270A	1	HYDRAULIC HEAD ASSEMBLY — complete — includes parts 22, 45, 54A to 76A
68	VA 9022A	1	DELIVERY VALVE ASSEMBLY
76	HD 9022-8A	1	HEAD, hydraulic — includes 10.0 mm diameter plunger and sleeve
95	LE 9042A	1	OPERATING LEVER ASSEMBLY
104	SC 7954	1	SCREW, clamping
106	BK 904	1	BRACKET
107	WA 5-8BL	1	WASHER, lock — hex nut
108	NT 4-8BL	1	NUT, hex — clamping screw
**	VA 9012A	1	FITTING, bleed — flange end

Omit illustrated parts 32, 52, 53, 53A (Large Plunger spring not used)

ALL OTHER PARTS SAME AS PSB 4A 100 LH 1

CALIBRATION: Set at 1350 RPM for 46 cc to 47 cc per 500 strokes at full load position. Check at 400 RPM for an equal or increased fuel delivery at full load position.

NOTE: Full load fuel setting is made by the set screw (Illustration 103).

NOTE: This pump is to be serviced the same as the PSB — "EH" execution except that it is not equipped with a governor.