

PARTS AND OPERATION MANUAL



MODEL ST-70 **Structural Concrete Pump** **(Hatz Diesel Engine)**

Revision #4 (05/29/07)

THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

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*NOTE: Specification and part number
are subject to change without notice.*

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ST-70 — SUGGESTED SPARE PARTS

ST-70 Structural Concrete Pump 1 Units

<u>Qty.</u>	<u>P/N</u>	<u>Description</u>
1	EM16462	FELT HOLDER
4	EM16463	PISTON CUP
4	EM16493	FELT RING
1	EM16461	OIL PARTS
2	EM14408	BRONZE RING
2	EM16145	BUSHING, SWING AXLE (BRONZE)
1	EM16171	WEAR RING
2	EM16816-1	ENERGIZER RING
1	EM16816-2	INSERT RING
2	EM16819	SLEEVE SEAL
1	EM25841	WEAR PLATE
2	EM97024	SWITCH, PROXIMITY
1	EM50417	CUP
1	EM20709-1	SOLENOID
2	EM97050	RELAY (IDEC)
1	EM97048	RELAY
1	EM97021	SOLENOID
1	EM97036	SWITCH, PUMP CONTROL
1	EM97045	SWITCH, OPERATION PUMP/ENG

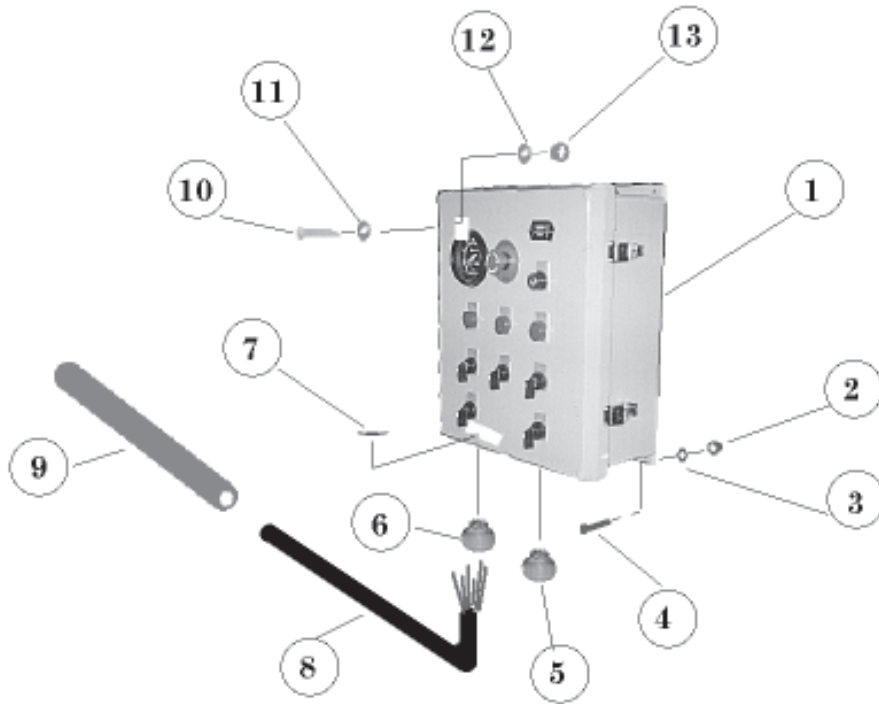
ST-70 Structural Concrete Pump 3 Units

<u>Qty.</u>	<u>P/N</u>	<u>Description</u>
1	EM16459	PIN
2	EM25801	CONCRETE CYLINDER
2	EM16462	FELT HOLDER
6	EM16463	PISTON CUP
8	EM16493	FELT RING
2	EM16461	OIL PARTS
2	EM14408	BRONZE RING
4	EM16145	BUSHING, SWING AXLE (BRONZE)
3	EM16171	WEAR RING
4	EM16816-1	ENERGIZER RING
2	EM16816-2	INSERT RING
4	EM16819	SLEEVE SEAL
2	EM25841	WEAR PLATE
4	EM97024	SWITCH, PROXIMITY
3	EM50417	CUP
2	EM20709-1	SOLENOID
4	EM97050	RELAY (IDEC)
2	EM97048	RELAY
2	EM97021	SOLENOID
2	EM97036	SWITCH, PUMP CONTROL
2	EM97045	SWITCH, OPERATION PUMP/ENG

ST- 70
DECALS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM935	DECAL, ATTENTION, MANUAL STORAGE	1	
2	EM969	DECAL, CAUTION TOWING	1	
3	EM7072	DECAL, CAUTION OPERATING INSTRUCTIONS	3	
4	EM97084	DECAL, MAINTENANCE	1	
5	EM955	DECAL, CAUTION DRY NITROGEN	1	
6	EM97083	DECAL, WARNING	1	
7	EM97071	DECAL, CAUTION MINIMUM OIL LEVEL	1	
	EM1028	DECAL, MAYCO LOGO	2	
	EM97082	DECAL, ST-70	2	
	EM97080	DECAL, EMERGENCY CYCLING	1	
	EM965	DECAL, VOLUME CONTROL	1	
	EM995	DECAL, DIESEL FUEL	1	
	EM985	DECAL, HYDRAULIC OIL	1	
	EM97070	DECAL, PRESSURE GAUGES	1	
	EM1032	DECAL, 800 MAYCO PHONE	2	
	EM98000	DECAL, CAUTION GREASE	4	
	EMDCLST70	DECAL KIT, ST70	1	INCLS. ALL ITEM ABOVE

ST-70 — CONTROL PANEL INSTALLATION

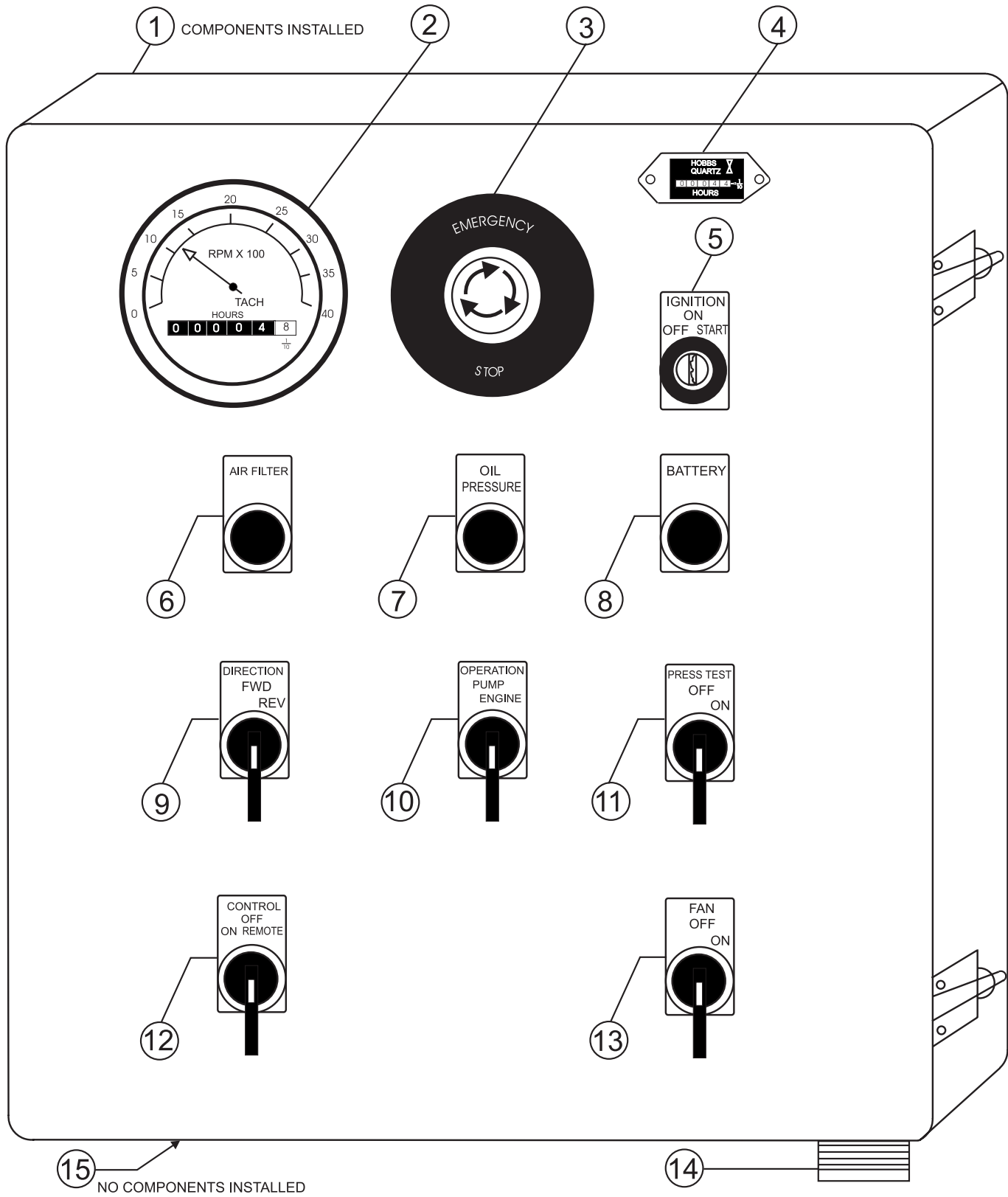


ST-70 — CONTROL PANEL INSTALLATION

ST- 70
CONTROL PANEL INTALLATION

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM97073	PANEL, CONTROL ASSY	1	
2	EM492661	NUT, 1/4"-NC HEX.	2	
3	EM492622	WASHER, 1/4" LOCK	2	
4	EM492357	BOLT, 1/4"-NC x 1" HEX.	2	
5	EM491873	CONNECTOR	1	
6	EM5015901	CONNECTOR	3	
7	EM491876	WASHER, CONNECTOR	4	
8	EM509738	CABLE 18 GA.	1	
9	EM509588	POLIFLEX	1	
10	EM503112	BOLT, 3/8"-NC x 2 3/4" HEX.	2	
11	EM923027	WASHER, 3/8"	2	
12	EM923350	WASHER, LOCK 3/8"	2	
13	EM492554	NUT 3/8"-NC HEX.	2	

ST-70 — CONTROL PANEL FRONT



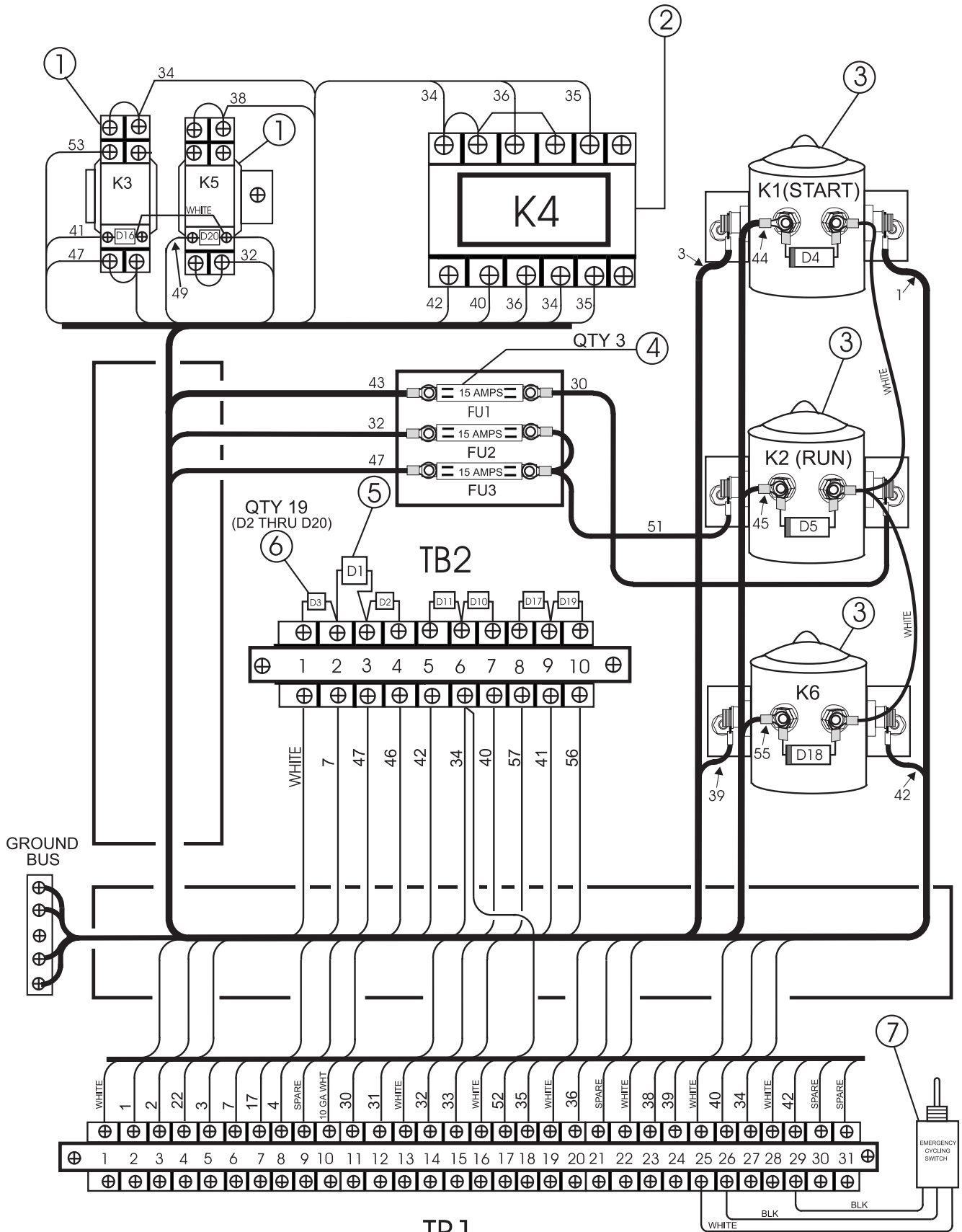
ST-70 — CONTROL PANEL FRONT

ST- 70
CONTROL PANEL FRONT

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM97073	CONTROL PANEL ASSY	1	(INCLS. SWITCHES AND INTERIOR ITEMS AS SHOWN ON PAGES 32 & 33).
2	EM25704	TACHOMETER	1	
3	EM97063	SWITCH, EMERGENCY STOP	1	
	EM97064	NAME PLATE, EMERGENCY STOP	1	
4	EM97062	HOUR METER	1	
5	EM97028	SWITCH, IGNITION	1	
	EM97028K	KEY, IGNITION SWITCH	1	
	EM97029	NAME PLATE, IGNITION	1	
6	EM97039	PILOT LIGHT, AIR FILTER	1	
	EM90741	CONTACT BLOCK	1	
	EM97043	NAME PLATE, AIR FILTER	1	
7	EM97039	PILOT LIGHT, OIL PRESSURE	1	
	EM97041	CONTACT BLOCK	1	
	EM97044	NAME PLATE, OIL PRESSURE	1	
8	EM97039	PILOT LIGHT, BATTERY	1	
	EM97041	CONTACT BLOCK	1	
	EM97042	NAME PLATE, BATTERY	1	
9	EM97030	SWITCH, DIRECTIONAL CONTROL	1	
	EM97031	NAME PLATE, DIRECTIONAL FWD/REV.	1	
10	EM97045	SWITCH, OPERATION PUMP/ENGINE	1	
	EM97035	NAME PLATE, OPER. PUMP/ENGINE	1	
11	EM97032	SWITCH, TEST FUNCTION	1	
	EM97034	NAME PLATE, TEST ON/OFF	1	
12	EM97036	SWITCH, PUMP CONTROL	1	
	EM97038	NAME PLATE, CONTROL/REMOTE	1	
13	EM97032	SWITCH, FAN CONTROL	1	
	EM97033	NAME PLATE, FAN ON/OFF	1	
14	EM97068	RECEPTACLE, REMOTE CONTROL	1	
15	EM97046	CASE, CONTROL PANEL (NO COMPONENTS)	1	
X	EM97099	REMOTE CONTROL CABLE	1	
X	EM26793	CORD CABEL ADAPTOR	1	
X	EM23713R	OPTIONAL — RADIO REMOTE CONTROL ASSY	1	

X NOT ILLUSTRATED

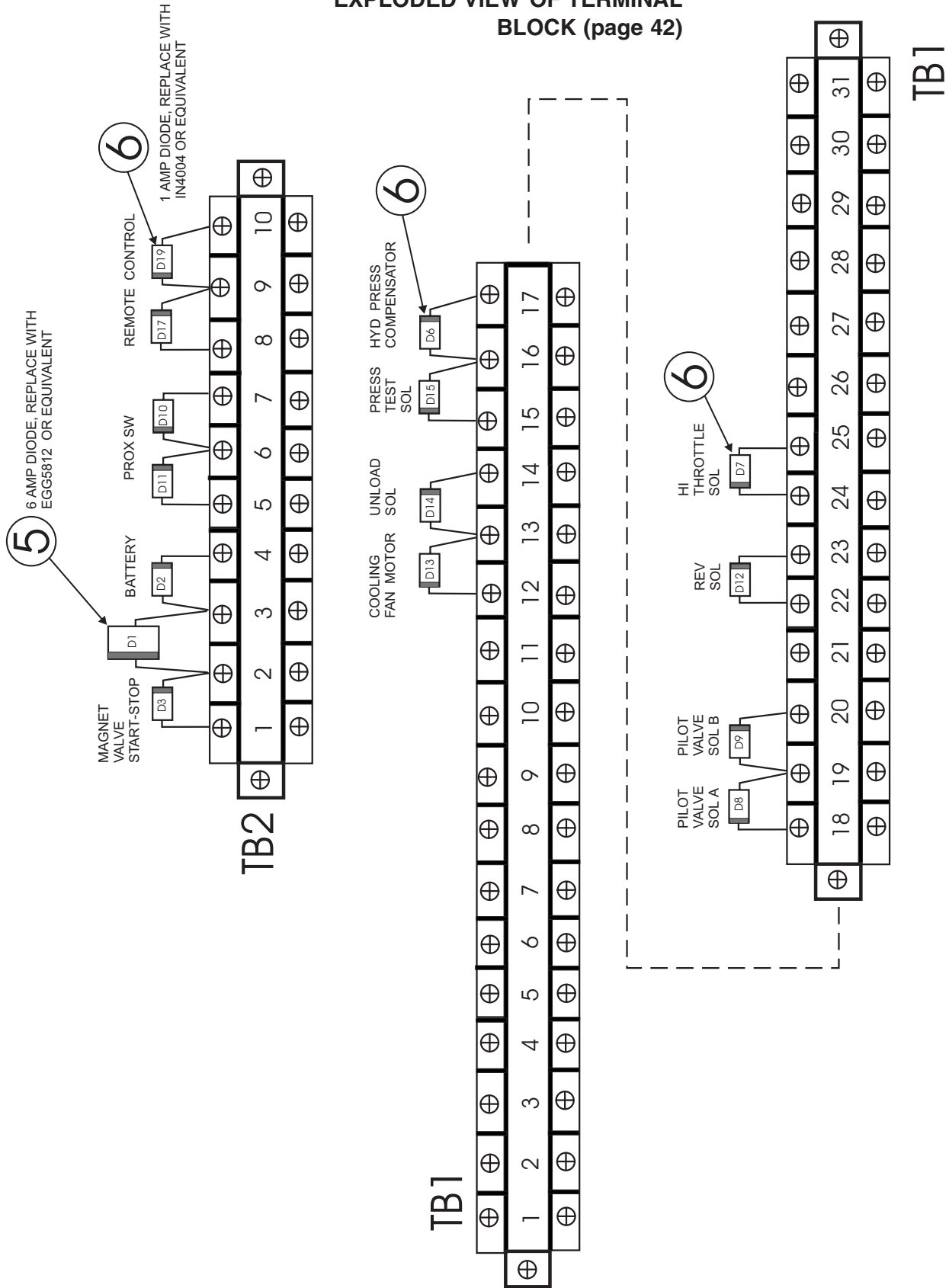
ST-70 — CONTROL PANEL INTERIOR



SEE NEXT PAGE FOR DETAIL OF TB1, TB2, RELAYS K3 AND K5

TB1

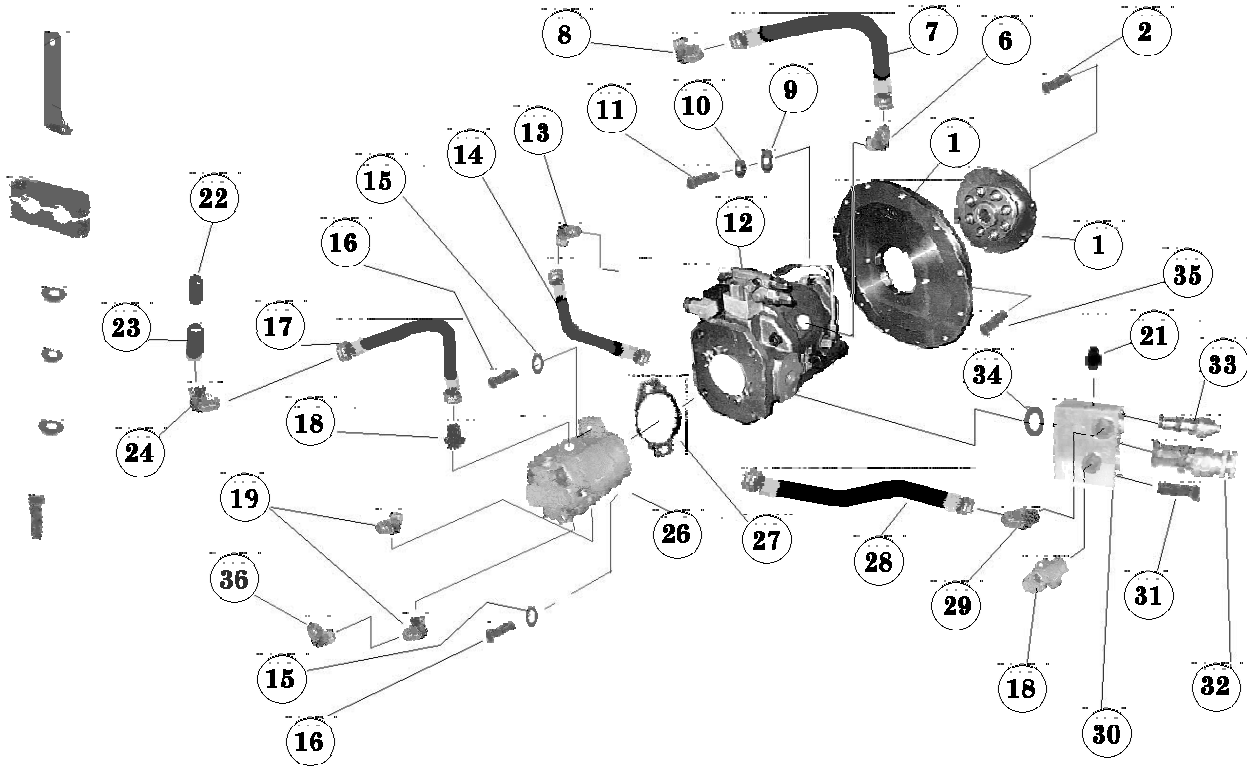
EXPLODED VIEW OF TERMINAL BLOCK (page 42)



ST-70 — CONTROL PANEL INTERIOR

ST- 70
CONTROL PANEL INTERIOR

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM97050	RELAY (IDEC)	2	
2	EM97048	RELAY	1	
3	EM97027	SOLENOID	3	
4	EM97078	FUSE, 15 AMP	3	
5	EM98001	DIODE, 6 AMP	1	
6	EM98002	DIODE, 1 AMP	19	
7	EM40711	SWITCH, ITL1-1	1	

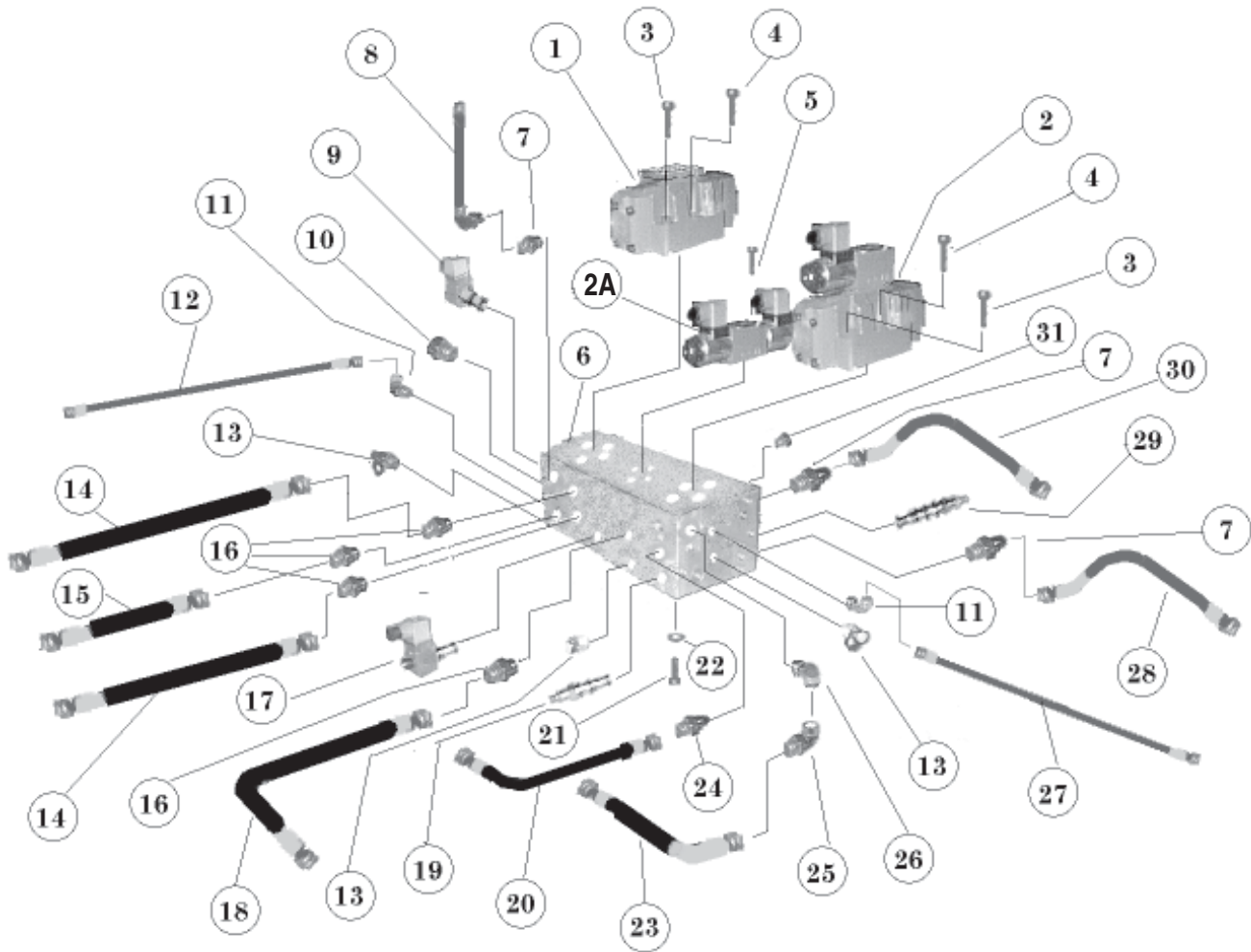


ST-70 — MAIN DRIVE PUMPS

ST-45 MAIN DRIVE PUMPS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM 97088	COUPLING ASSY, ENGINE	1	
2	EM 506611	SOCKET HD. M12 x 20	6	
3				
4				
5				
6	EM 25459	ELBOW 90 DEG.		
7	EM 509777	HOSE, CASE DRAIN LINE		
8	EM 509784	ELBOW 90 DEG.		
9	EM 505882	WILLIAM WASHER 5/8"	2	
10	EM 492627	WASHER, LOCK 5/8"	2	
11	EM 503982	BOLT, HEX. HD 5/8"-NC x 2"	2	
12	EM 97086	PUMP, PISTON	1	
13	EM 25429	ELBOW 90 DEG.	1	
14	EM 509937	HOSE, COMPENSATOR	1	
15	EM 492624	WASHER, LOCK 3/8"	2	
16	EM 492375	BOLT, HEX. HD 3/8"-NC x 1"	2	
17	EM 609783	HOSE, SUCTION GEAR PUMP	1	
18	EM 609796	ADAPTER	1	
19	EM 16524	ELBOW, 90 DEG.	2	
20	EM 492375	BOLT, HEX. HD 3/8"-NC x 1"	1	
21	EM 25511	ADAPTER	1	
22	EM 509793	NIPPLE	1	
23	EM 509794	COUPLE	1	
24	EM 509795	ELBOW 90 DEG,	1	
26	EM 509774	PUMP, DUAL GEAR	1	
27	EM 16190	GASKET	1	
28	EM 509787	HOSE, RETURN LINE (HEAT EXHAUST)	1	
29	EM 25497	ELBOW 90 DEG.	1	
30		BLOCK, MANIFOLD	1	
31	EM 499799	SOCKET HD. 1/2"-NC x 5 1/2"	4	
32	EM98005	VALVE, NEEDLE	1	
33	EM98004	VALVE, RELIEF	1	
34	*	O-RING	1	
35	EM 162	SOCKET HD. M10 x 25	10	
36	EM 506195	ELBOW, 90 DEG,	1	

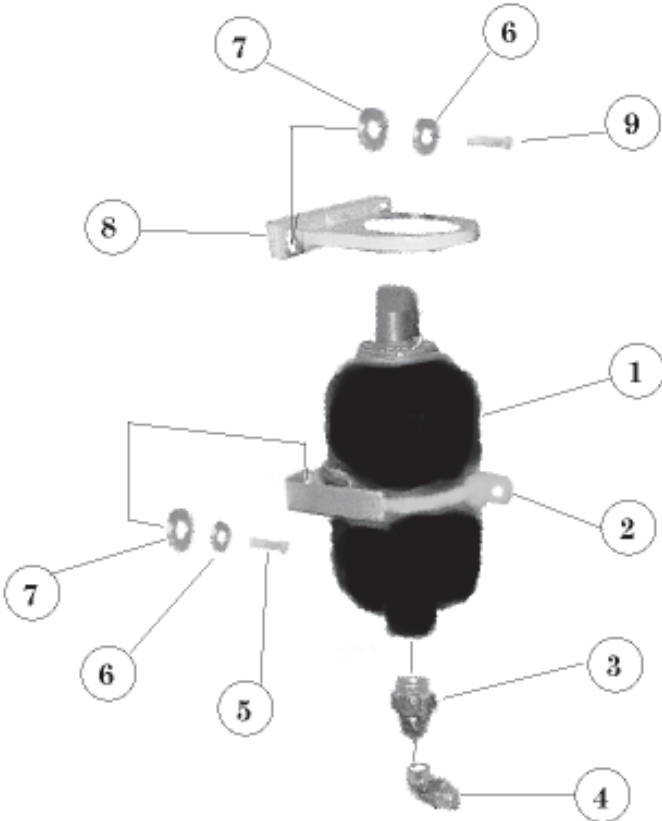
*CONTACT FACTORY



ST-70 — MANIFOLD CONTROL

ST-70 MANIFOLD CONTROL

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM97011	DIRECTIONAL CONTROL VALVE, HYDRAULIC CYLINDER	1	
2	EM97013	DIRECTIONAL CONTROL VALVE, SHUTTLE CYLINDER	1	
2A	EM97002	PILOT VALVE		
3	EM509342	SOCKET HEAD, 3/8"-NC x 2-1/2"	8	
4	EM196	SOCKET HEAD, 1/4"-NC x 2-1/4"	4	
5	EM508804	SOCKET HEAD, 10-NC x 2"	4	
6	EM52500176	MANIFOLD BLOCK	1	
7	EM25462	ADAPTER	3	
8	EM509375	HOSE, CHECK VALVE TO TANK	1	
9	EM97003	CARTRIDGE, MAXIMUM PRESSURE TEST	1	
10	EM98006	PLUG	1	
11	EM25429	ELBOW 90 DEG.	2	
12	EM509517	HOSE, PUMP PRESSURE GAUGE	1	
13	EM98007	FITTING	3	
14	EM509511	HOSE, MAIN PRESSURE LINE	2	
15	EM509374	HOSE, PRESSURE LINE TO CYLINDER	1	
16	EM25498	ADAPTER	4	
17	EM97005	CARTRIDGE, BLEED OFF	1	
18	EM509400	HOSE, TANK	1	
19	EM97010	CARTRIDGE, PILOT RELIEF	1	
20	EM509367	HOSE, ACCUMULATOR CIRCUIT	1	
21	EM492376	BOLT, HEX. 3/8"-NC x 1 1/4"	4	
22	EM492624	WASHER, LOCK 3/8"	4	
23	EM509581	HOSE, ACCUMULATOR TO MANIFOLD	1	
24	EM509398	ADAPTER	1	
25	EM509353	ELBOW 90 DEG.	1	
26	EM509352	ELBOW 90 DEG.	1	
27	EM509516	HOSE, PRESSURE GAUGE, ACCUMULATOR	1	
28	EM509372	HOSE, ACCUMULATOR CYLINDER	1	
29	EM97008	CARTRIDGE, UN-LOADING VALVE	1	
30	EM509373	HOSE, ACCUMULATOR CYLINDER	1	
31	EM25539	PLUG	2	

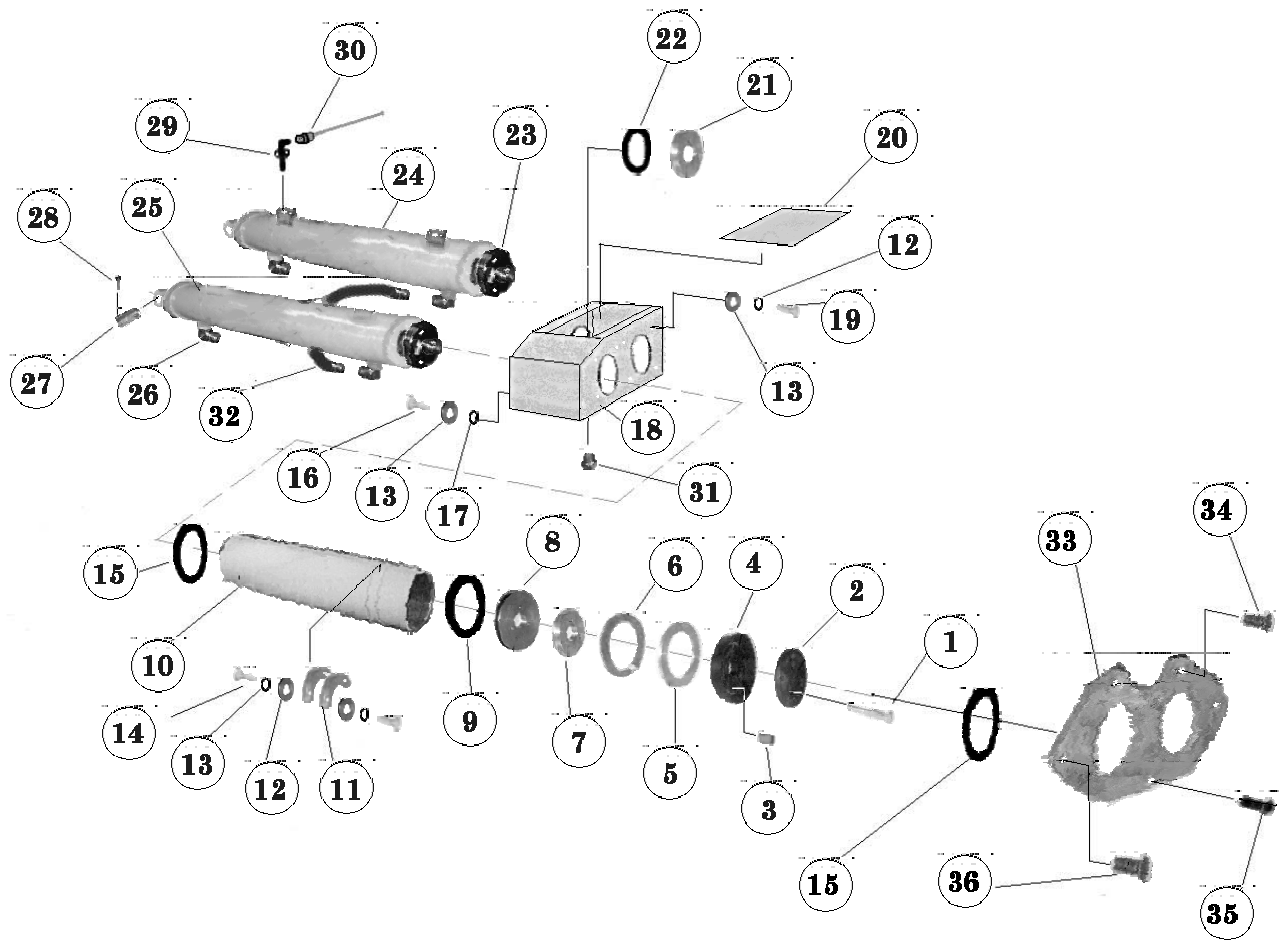


ST-70
ACCUMULATOR

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM97015	ACCUMULATOR	1	
2	EM97016	CLAMP	1	
3	EM509425	ADAPTER	1	
4	EM509353	ELBOW 90 DEG.	1	
5	EM509562	BOLT, HEX. HD 3/8"-NC x 5/8"	2	
6	EM492624	WASHER, LOCK 3/8"-NC	2	
7	EM492598	WASHER, 3/8"	2	
8	EM509444	BRACKET	1	
9	EM492373	BOLT, HEX. HD 3/8"-NC x 3/4"	2	
*	EM98099	ACCUMULATOR REPAIR KIT	1	

***NOT ILLUSTRATED**

ST-70 — HYDRAULIC/CONCRETE CYLINDERS

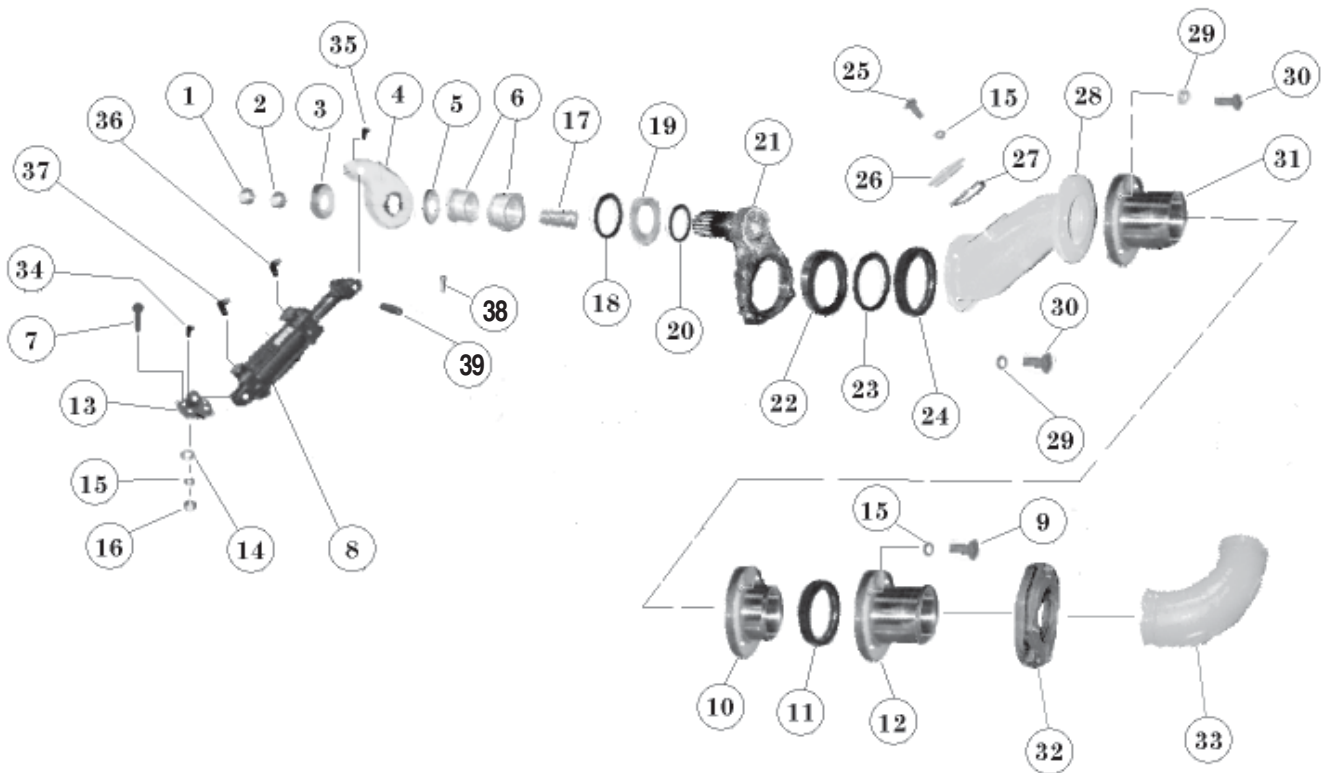


ST-70 — HYDRAULIC/CONCRETE CYLINDERS

ST-70
HYDRAULIC / CONCRETE CYLINDERS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM510265	BOLT, HEX. HD. 3/8"-NC x 3 1/4"	6	
2	EM16464	PLATE, FACE	2	
3	EM16465	SPACER	6	
4	EM16463	PISTON CUP	2	
5	EM14408	RING, BRONCE	2	
6	EM16493	RING, FELT	2	
7	EM16462	FELT HOLDER	4	
8	EM16461	PLATE, OILER	2	
9	EM14407	O-RING	2	
10	EM25801	CYLINDER, CONCRETE	2	
11	EM25110	RETAINER, CYLINDER	4	
12	EM492624	WASHER, LOCK 3/8"	14	
13	EM492598	WASHER, 3/8"	22	
14	EM492375	BOLT, HEX. HD. 3/8"-NC x 1"	8	
15	EM16174	O-RING	2	
16	EM492451	BOLT, HEX. HD. 3/8"-NF x 1"	8	
17	EM50443	SEAL, OIL	8	
18	EM509417	TANK, LUBE	1	
19	EM492378	BOLT, HEX. HD. 3/8"-NC x 1 3/4"	1	
20	EM508517	COVER, TANK	1	
21	EM50425	FLANGE	2	
22	EM27435-1	SEAL	2	
23	EM16460	ADAPTER	2	
24	EM97076	CYLINDER HYDRAULIC	1	
25	EM97077	CYLINDER HYDRAULIC	1	
26	EM25497	ELBOW	4	
27	EM16454	CLEVIS PIN	2	
28	EM505723	COTTER PIN 5/32" x 1-1/2"	4	
29	EM97024	SWITCH, PROXIMITY	2	
30	EM97025	CONDUCTOR, CYLINDER SWITCH	2	
31	EM18447	PLUG PIPE 3/4"	1	
32	EM25474	HOSE	1	
33	EM25843	PLATE, WEAR	1	
34	EM265	BOLT, FLAT SOCKET HD. 5/8"-NC	2	
35	EM264	BOLT, FLAT SOCKET HD. 1/2"-NC	1	
36	EM295	BOLT, FLAT SOCKET HD. 3/4"-NC	2	

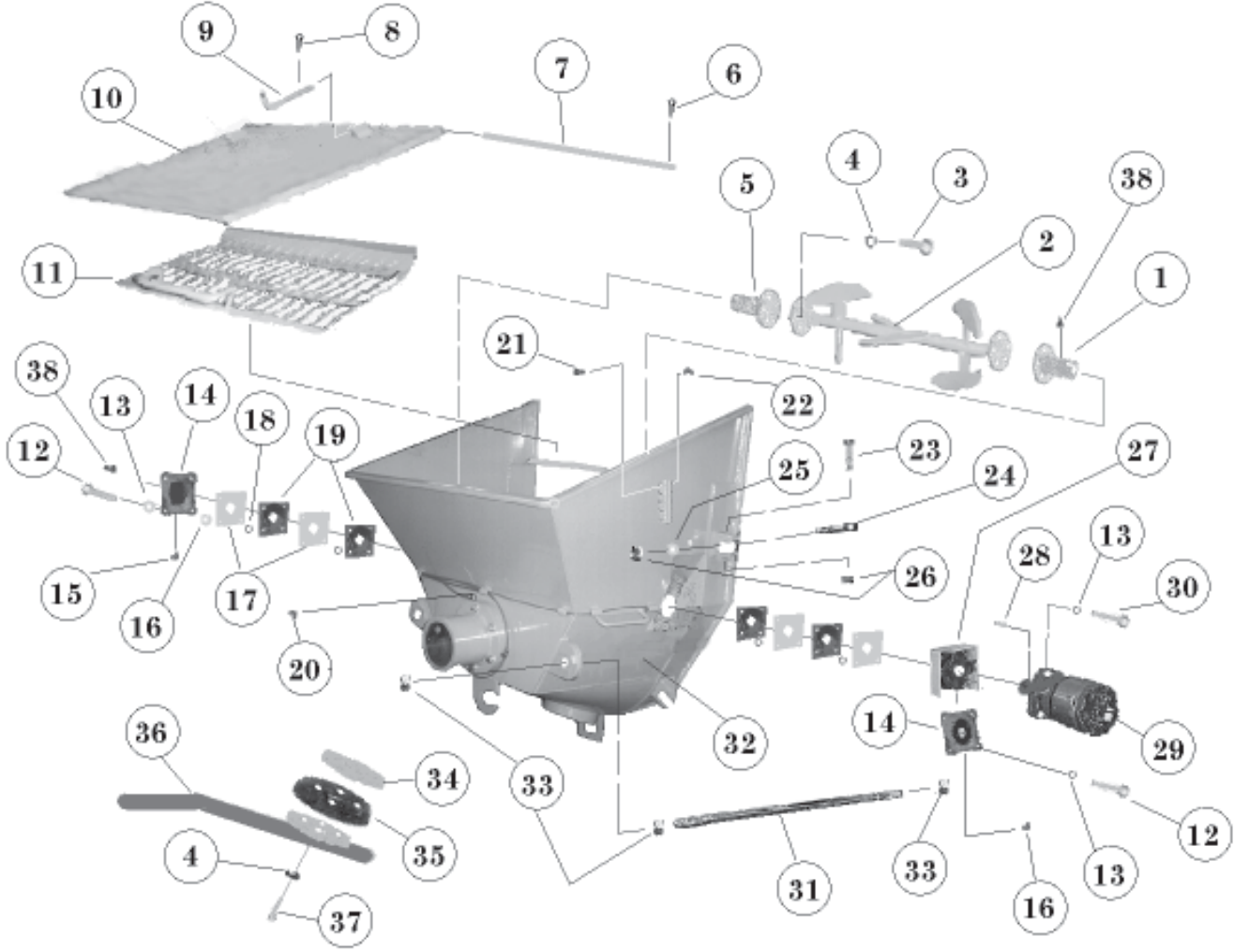
ST-70 — SHUTTLE TUBE ASSY



ST-70 — SHUTTLE TUBE ASSY

ST-70
SHUTTLE TUBE ASSY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM417	NUT, LOCK 1"-14 NS	1	
2	EM509221	NUT, HEX1"-14 NS	1	
3	EM16814	TENSIONER	1	
4	EM25236	AXLE, CRANK	1	
5	EM16169	WASHER, THRUST	1	
6	EM16145	BUSHING, BRONZE	2	
7	EM492397	BOLT, HEX 1/2"-NC x 2-1/2"	4	
8	EM25454	CYLINDER, SHUTTLE	1	
9	EM210	BOLT, HEX. HD 1/2"-NC x 3-1/4"	6	
10	EM25803	BEARING, DISCHARGE NIPPLE	1	
11	EM16819	SEAL	1	
12	EM25836	NIPPLE, DISCHARGE	1	
13	EM25454-9	BASE, CYLINDER	1	
14	EM621	WILLIAM WASHER, 1/2"	4	
15	EM492626	WASHER, LOCK 1/2"	4	
16	EM492584	NUT, LOCK 1/2"	1	
17	EM284	STUD, 1"-14 NS	1	
18	EM16175	O-RING	1	
19	EM16170	RING, SEAL	1	
20	EM16176	O-RING	1	
21	EM25843	NUN PLATE	1	
22	EM16171	RING, WEAR	1	
23	EM16816-2	RING, INSERT	1	
24	EM16816-1	RING, ENERGIZER	1	
25	EM492393	BOLT, HEX. HD 1/2"-NC x 1-1/4"	4	
26	EM16802	PLATE, INSPECTION	1	
27	EM20816	O-RING	1	
28	EM16811	SHUTTLE TUBE	1	
29	EM492627	WASHER, LOCK 5/8"	8	
30	EM503982	BOLT, HEX. HD 5/8"-NC x 2"	8	
31	EM25836	NIPPLE, DISCHARGE	1	
32	EM28906	COUPLING 5", OPTIONAL	1	
33	EM25837	ELBOW, REDUCING, 5" x 4", OPTIONAL	1	
34	EM25568	GREASE FITTING	1	
35	EM16426	GREASE FITTING	1	
36	EM25500	ELBOW 45 DEG.	1	
37	EM25459	ELBOW 90 DEG.	1	
38	EM717	PIN, COTTER	1	
39	EM26126	PIN, CLEVIS	1	



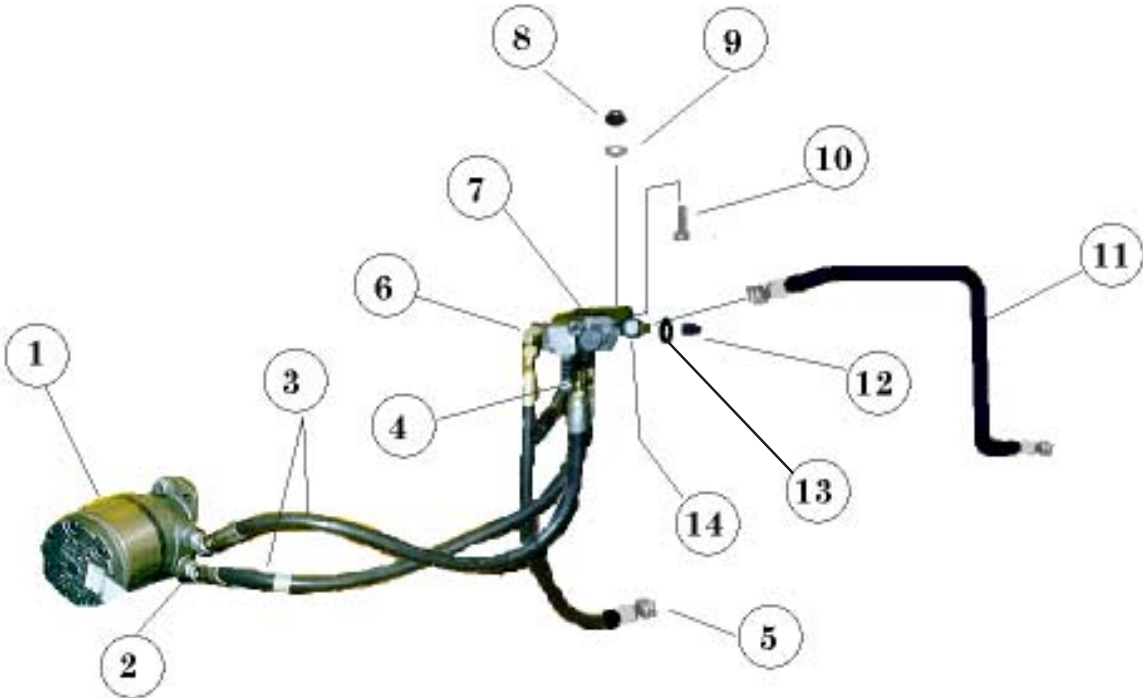
ST-70 — HOPPER ASSY

ST-70
HOPPER ASSY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM25301	SHAFT DRIVE END	1	
2	EM25863	REMIXER	1	
3	EM492375	BOLT, HEX HD 3/8"-NC x 1"	8	
4*	EM492624	WASHER, LOCK 3/8"	12	
5	EM23305	SHAFT, DRIVE END	1	
6	EM491686	COTTER PIN 1/8" x 1-3/4"	2	
7	EM16159	PIN, HINGE	1	
8	EM505723	COTTER PIN 5/32" x 1-1/2"	1	
9	EM70134-2	PIN, SPLASH	1	
10	EM70134	PLATE, SPLASH	1	
11	EM16188	SCREEN, HOPPER	1	
12	EM492397	BOLT, HEX HD 1/2"-NC x 2-1/2"	8	
13	EM492626	WASHER, LOCK 1/2"	10	
14	EM18135	BEARING, FLANGE	2	
15	EM25568	FITTING LUBE, 45 DEG.	2	
16	EM22250	SPACER	4	
17	EM18136	PLATE, SPACER	8	
18	EM18138	SPACER, SEAL	16	
19	EM18137	SEAL, SHAFT	4	
20	EM16426	FITTING, LUBE, 90 DEG.	3	
21	EM508812	FITTING, LUBE	5	
22	EM491701	FITTING, GREASE	5	
23	EM505121	BOLT, HEX HD 3/4"-NC x3"	4	
24	EM14165	EYE BOLT	4	
25	EM619	WILLIAM WASHER 3/4"	4	
26	EM492558	NUT 3/4"-NC	8	
27	EM50141	BRACKET, MOTOR MTG.	1	
28	EM505719	KEY	1	
29	EM25425	MOTOR, REMIXER	1	
30	EM492394	BOLT, HEX HD 1/2"-NC x 1-1/2"	2	
31	EM16166	TIE ROD	2	
32	EM25174	HOPPER	1	
33	EM505728	NUT, HEX. 1"-NC	6	
	EM70860	HOPPER CLEAN OUT PLUG, ASSY	1 INCLS. ITEMS W/*
34*	EM70860-1	PLATE, TOP	1	
35*	EM50417	CUP	1	
36*	EM508830	HANDLE	1	
37*	EM492378	BOLT, HEX HD 3/8"-NC x 1-3/4"	4	
38	EM491698	FITTING, GREASE	2	
*	16184	HOPPER SEAL	1	

*NOT ILLUSTRATED

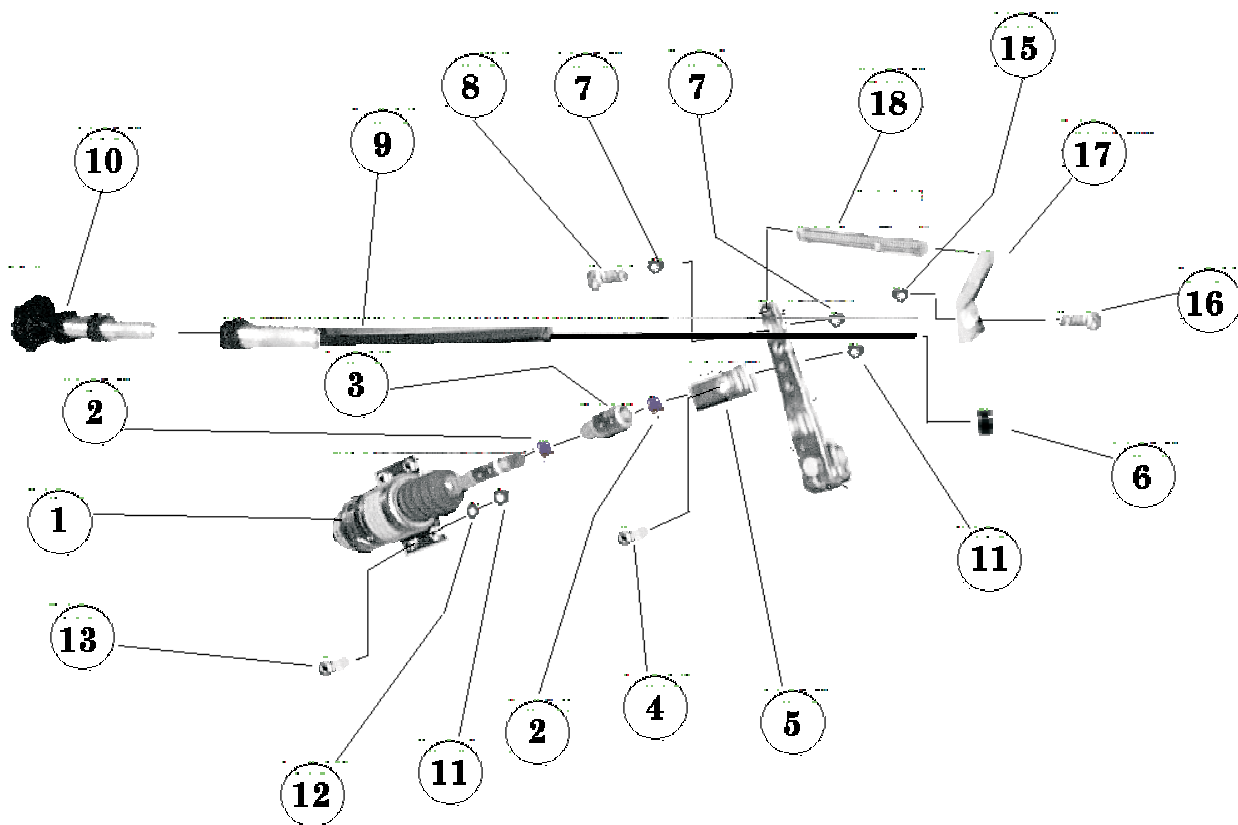
ST-70 — REMIXER CONTROL ASSY



ST-70 — REMIXER CONTROL ASSY

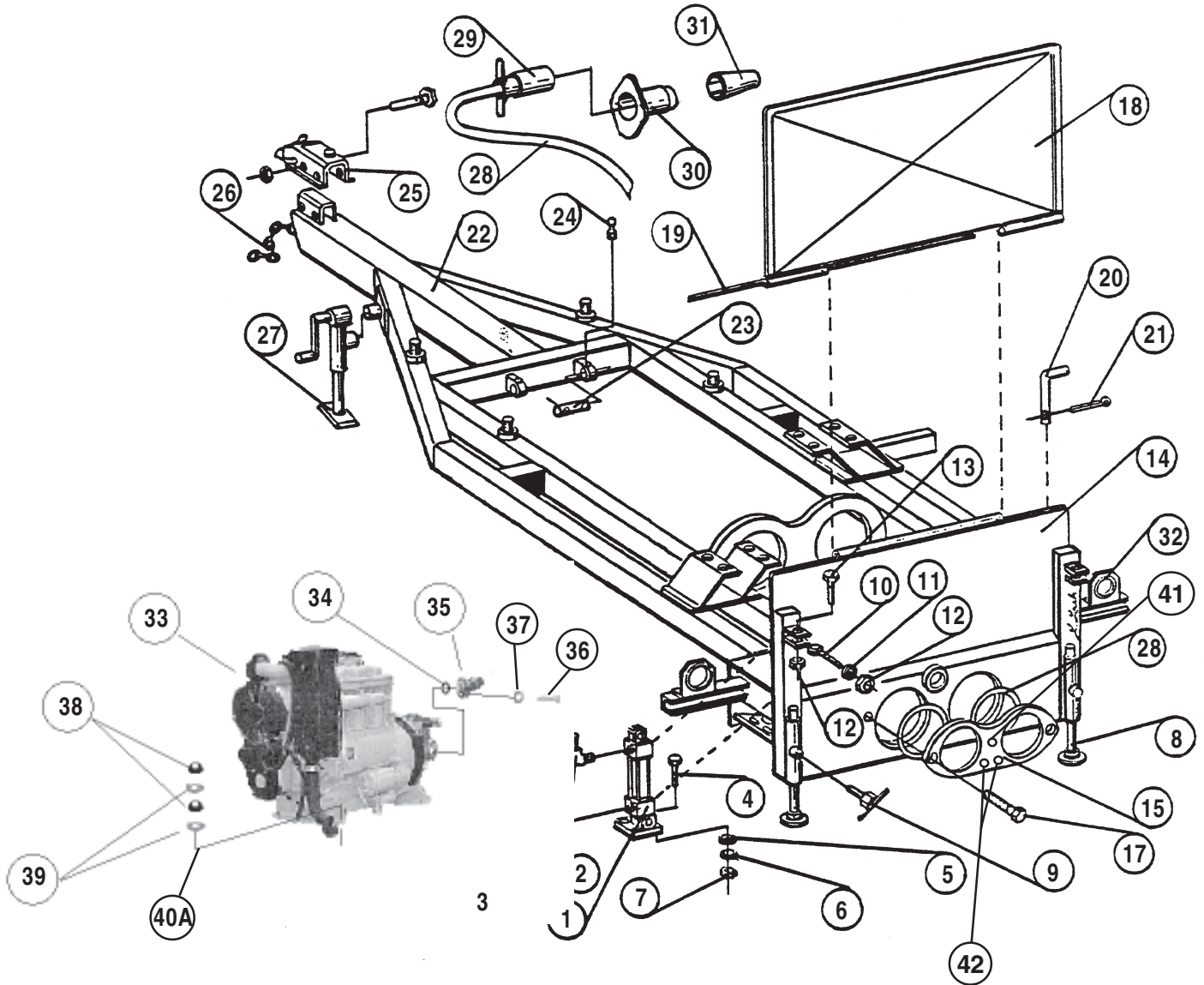
ST-70
REMIXER CONTROL ASSY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM25425	MOTOR, REMIXER	1	
2	EM25508	ELBOW, 45 DEG.	2	
3	EM25483	HOSE, MOTOR TO VALVE	2	
4	EM25509	ADAPTER	2	
5	EM509378	HOSE, RETURN TO HEAT EXCHANGER	1	
6	EM25507	ELBOW, 90 DEG.	1	
7	EM25495	VALVE, REMIXER	1	
8	EM492553	NUT, HEX. 5/16"-NC	2	
9	EM492623	WASHER, LOCK 5/16"	2	
10	EM218	BOLT, HEX. HD 5/16"-NC x 2 1/2"	2	
11	EM509370	HOSE, TO BEAR PUMP	1	
12	EM98014	TEST PORT	1	
13	EM98015	ADAPTOR	1	
14	EM25563	TEE	1	



ST-70
THROTTLE ASSY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM20709-1	SOLENOID	1	
2	EM400	NUT, HEX. 1/4"-NF	2	
3	EM26315	ADAPTER	1	
4	EM492357	BOLT, HEX. HD. 1/4"-NC x 1"	1	
5	EM959119	CLEVIS	1	
6	EM722	STOP NUT	1	
7	EM492598	NUT, LOCK 5/16"-NC	2	
8	EM492364	BOLT, HEX. HD. 5/16"-NC x 1"	1	
9	EM16740-2	CABLE, THROTTLE	1	
10	EM16740-1	HANDLE, THROTTLE	1	
11	EM492581	NUT, LOCK 1/4"-NC	5	
12	EM492622	WASHER, LOCK 1/4"	4	
13	EM508821	BOLT, HEX. HD. 1/4"-NC x 3/4"	4	
14				
15	EM492558	NUT, LOCK 3/8"-NC	1	
16	EM503623	BOLT, HEX. HD. 3/8"-NC	1	
17	EM509414	BRACKET	1	
18	EM509510	SPRING	1	

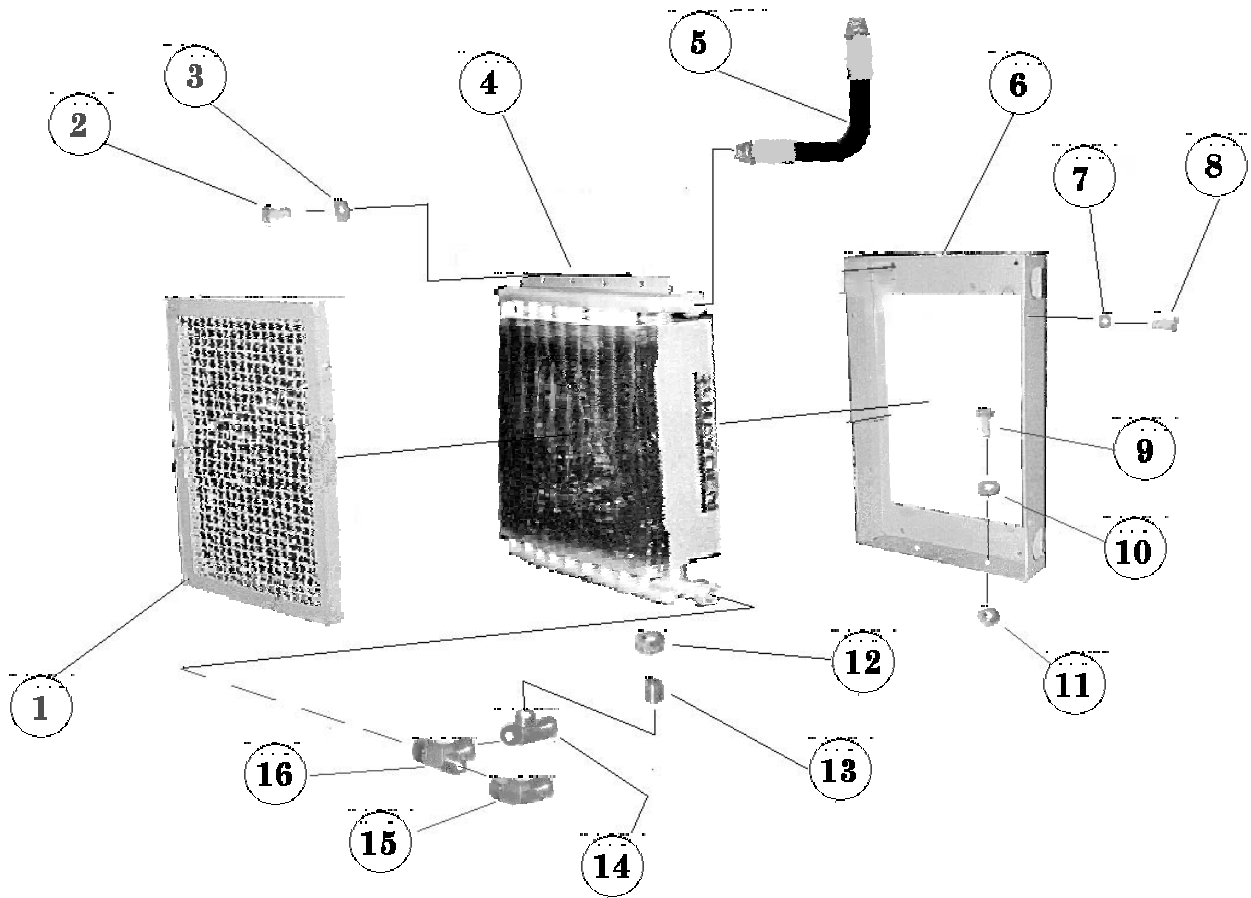


ST-70 — ENGINE AND FRAME

ST-70 ENGINE AND FRAME

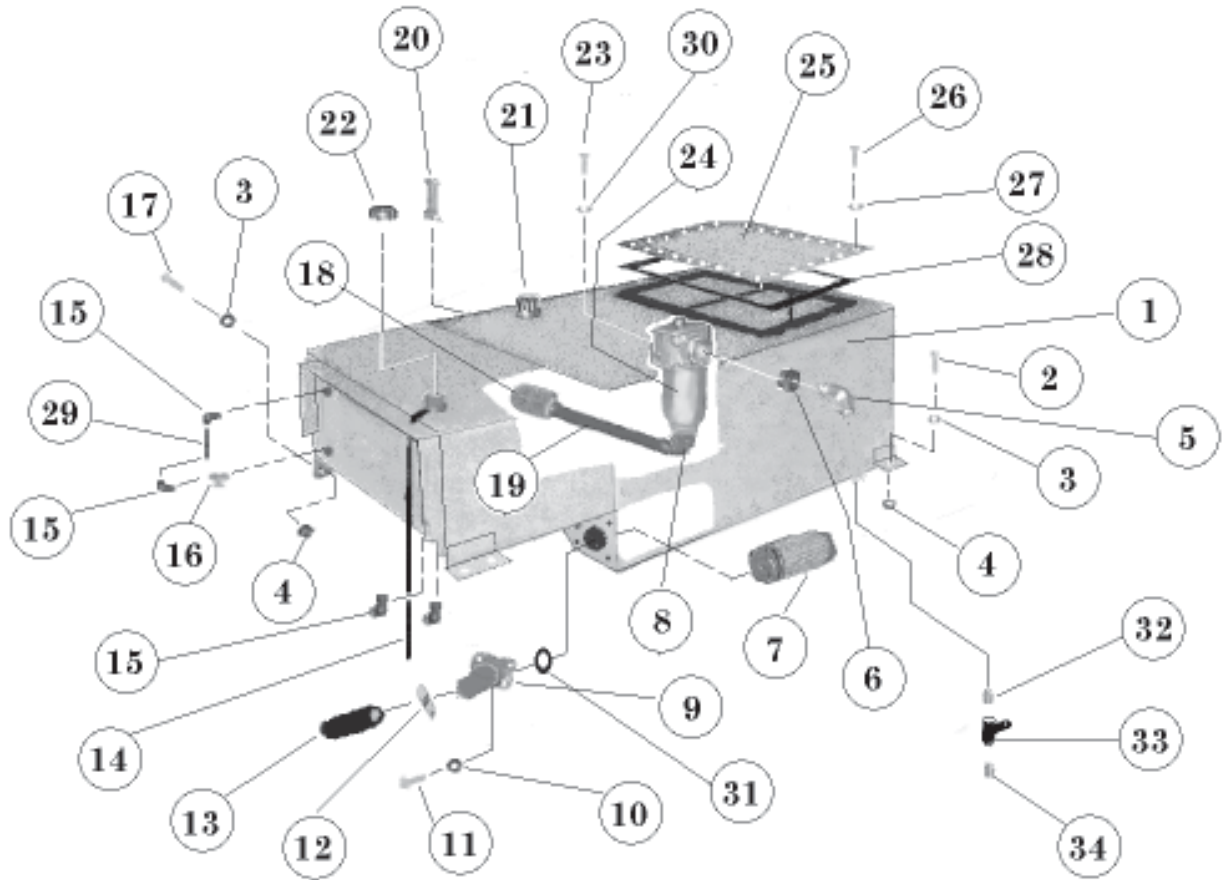
<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM25454	CYLINDER, SHUTTLE	1	
2	EM25459	ELBOW, 3/4" x 90°	1	
3	EM25500	ELBOW, 3/4" x 45°	1	
4	EM132	BOLT, HEX HD, 1/2-13 x 2"	4	
5	EM621	WILLIAM WASHER, 1/2"	4	
6	EM606	WASHER, LOCK, 1/2"	4	
7	EM404	NUT, HEX, 1/2"-13	4	
8	EM25160	STAND, REAR STABILIZER	2	
9	EM14138	HANDLE, TEE	2	
10	EM14165	BOLT, EYE	4	
11	EM619	WILLIAM WASHER, 3/4"	4	
12	EM407	NUT, HEX, 3/4-10	8	
13	EM119	BOLT, HEX, 3/4-10 x 3"	4	
14	EM26112	PLATE ASSY, REAR	1	
15	EM25841	PLATE, WEAR	1	
16	EM16174	O-RING, WAER PLATE	2	
17	EM295	BOLT, HEX HD	2	
18	EM70134	PLATE, SPLASH	1	
19	EM16159	PIN, HINGE, SPLASH PLATE	1	
20	EM70134-2	PIN, SPLASH PLATE	1	
21	EM717	PIN, COTTER	1	
22	EM80101	FRAME ASSY	1	
23	EM16459	PIN, CLEVIS	2	
24	EM14169	GREASE FITTING	2	
25	EM16602	2" HYDRAULIC SURGE BRAKE ASSY	1	
26	EM25610	JACK STAND, SWIVEL	1	
27	EM20135	CHAIN, SAFETY	1	
28	EM25608	WIRE, #16/5 x 18'	1	
29	EM25607-1	PLUG, MALE #16/5	1	
30	EM25607-2	SOCKET, FEMALE #16/5	1	
31	EM25607-3	BOOT	1	
32	EM26536	LIGHT, TAIL	2	
33	EM25711	ENGINE, DIESEL HATZ 4M40L	1	
34	EM509436	O-RING	1	
35	EM527442	ELBOW 45°	1	
36	EM492394	BOLT, HEX HD, 1/2"-NC x 1-1/2"	4	
37	EM635	WASHER, LOCK 1/2"	4	
38	020310080	NUT	2	
39	030210250	WASHER	2	
40	EM01060100	SHOCK ABSORBER	4	
40A	EM03642900	STUD, SHOCK ABSORBER	8	
41	EM264	BOLT 1/2" x 13 x 3"	1	
42	EM265	BOLT 5/8" x 11 x 3"	2	
*	510269	ENGINE HOOD	1	

*NOT ILLUSTRATED



ST-70
OIL COOLER ASSY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM509805	GUARD, COOLER	1	
2	EM492364	BOLT, HEX. HD. 5/16"-NC x 1"	4	
3	EM923023	WASHER, 5/16"	4	
4	EM509791	COOLER	1	
5	EM509779	HOSE	1	
6	EM509802	SHROUD, COOLER	1	
7	EM492622	WASHER, LOCK 1/4"	4	
8	EM492356	BOLT, HEX. HD. 1/4"-NC x 3/4"	4	
9	EM492376	BOLT, HEX. HD. 3/8"-NC x 1"	2	
10	EM492598	WASHER, 3/8"	2	
11	EM492583	NUT, LOCK 3/8"-NC	2	
12	EM509402	NUT	1	
13	EM509345	FITTING	1	
14	EM509344	TEE	1	
15	EM509401	ELBOW, 90 DEG.	1	
16	EM509343	TEE	1	

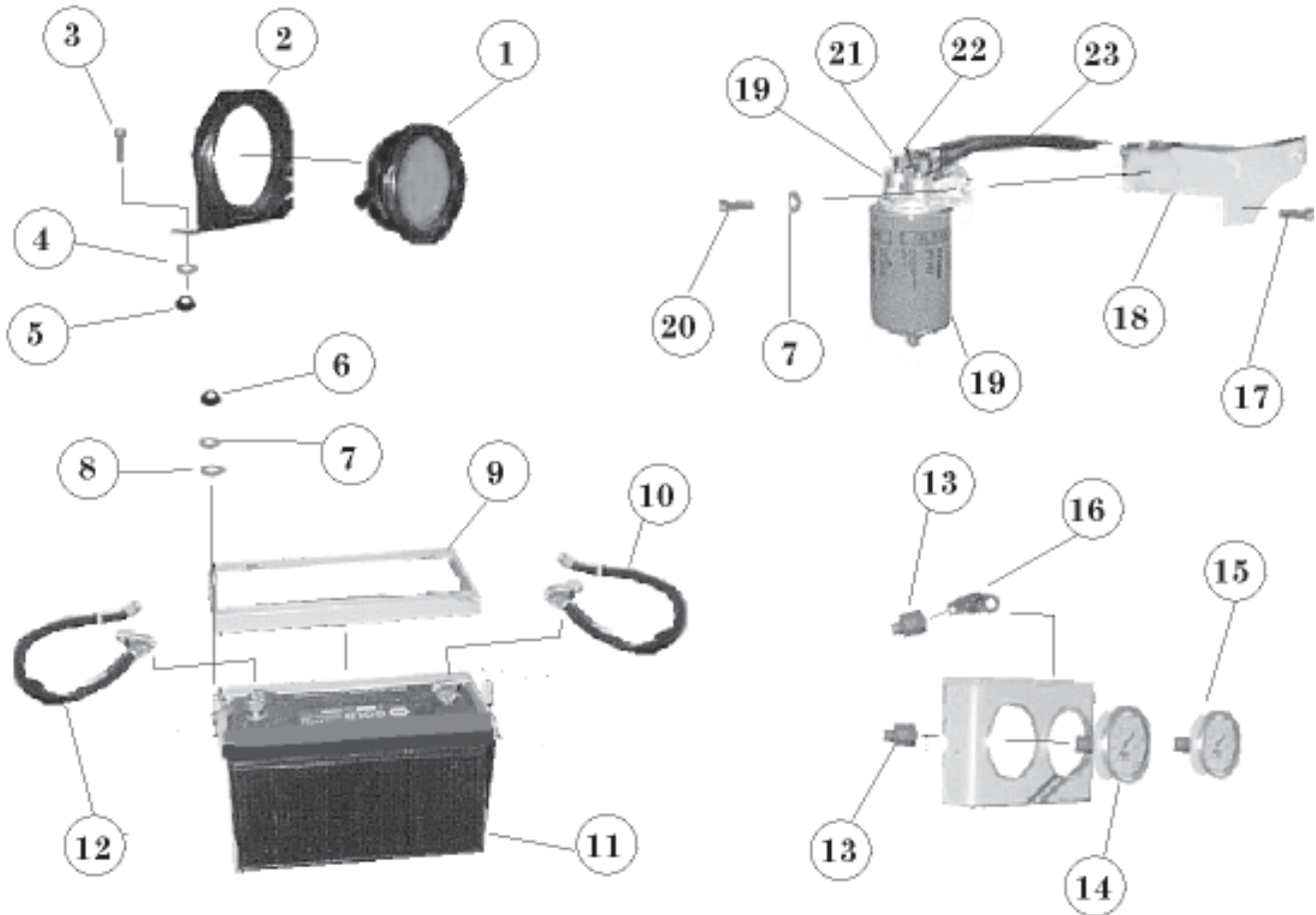


ST-70 — FUEL AND HYDRAULIC TANK

ST-70 FUEL AND HYDRAULIC TANK

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM509406	TANK, FUEL & HYDRAULIC	1	
2	EM175	BOLT, HEX 3/8"-NC x 1 1/4"	4	
3	EM492598	WASHER 3/8"	5	
4	EM492583	NUT, LOCK 3/8"	5	
5	EM18436	ELBOW	1	
6	EM16517	REDUCER	1	
7	EM50424	STRAINER	1	
8	EM16433	ELBOW	1	
9	EM27441	ELBOW	1	
10	EM635	WASHER, HI-COLLAR 1/2"	4	
11	EM492455	BOLT, HEX 1/2"-NF x 1-1/2"	4	
12	EM26471	CLAMP	1	
13	EM509437	HOSE	1	
14	EM508826	TUBE, PLASTIC	1	
15	EM20426	ELBOW	4	
16	EM20421	VALVE	1	
17	EM503117	BOLT, HEX 3/8"-NC x 3"	1	
18	EM16513	DEFUSER	1	
19	EM16516	PIPE	1	
20	EM16478	GAUGE, LEVEL-TEMP.	1	
21	EM16477	FILL CAP ASSY.	1	
22	EM25217	CAP, GAS	1	
23	EM492375	BOLT, HEX 3/8"-NC x 1"	4	
24	EM16512	FILTER	1	
25	EM25119-1	COVER	1	
26	EM492374	BOLT, HEX 5/16"-NC x 1"	20	
27	EM492623	WASHER, LOCK 5/16"	20	
28	EM25184	GASKET	1	
29	EM508827	TUBE, PLASTIC	1	
30	EM492624	WASHER 3/8"	1	
31	EM50466	O-RING	1	
32	EM509369	ADAPTER	1	
33	EM491237	VALVE	1	
34	EM506094	PLUG	1	

ST-70 — BATTERY, TAIL LIGHTS, WATER SEPARATOR, GAUGES

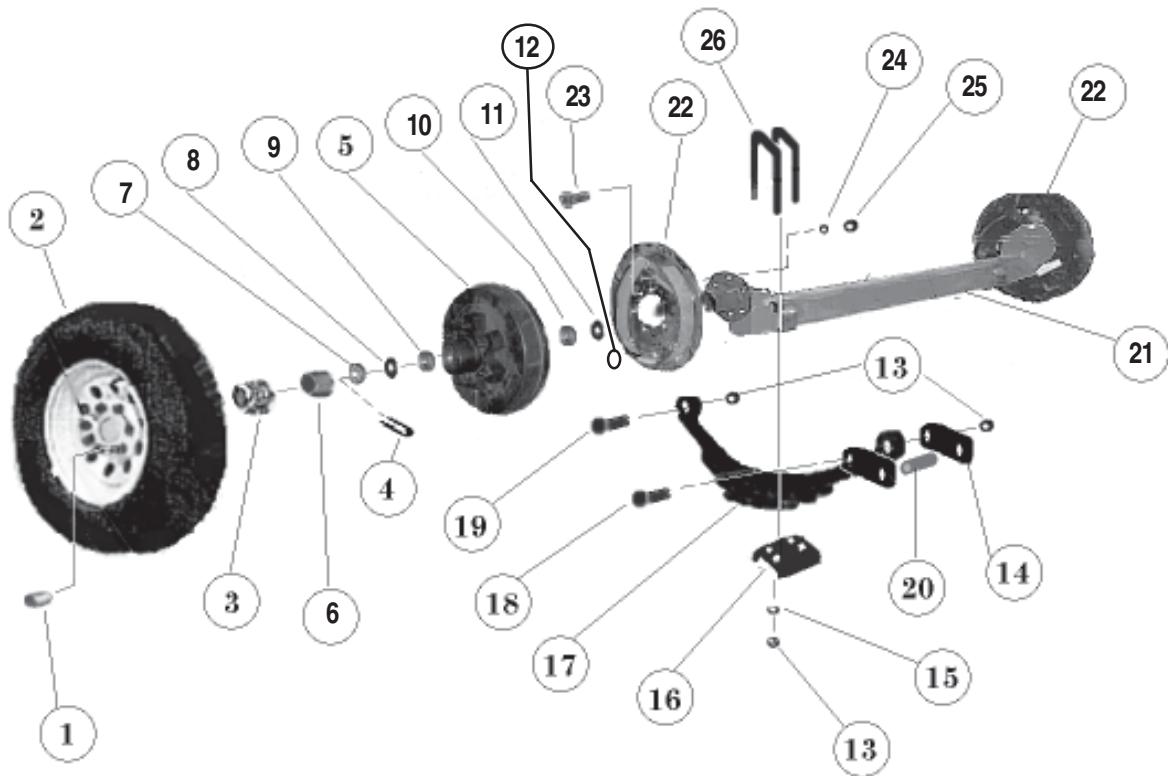


ST-70 — BATTERY, TAIL LIGHTS, WATER SEPARATOR, GAUGES

ST-70

BATTERY, TAIL LIGHTS, WATER SEPARATOR, GAUGES

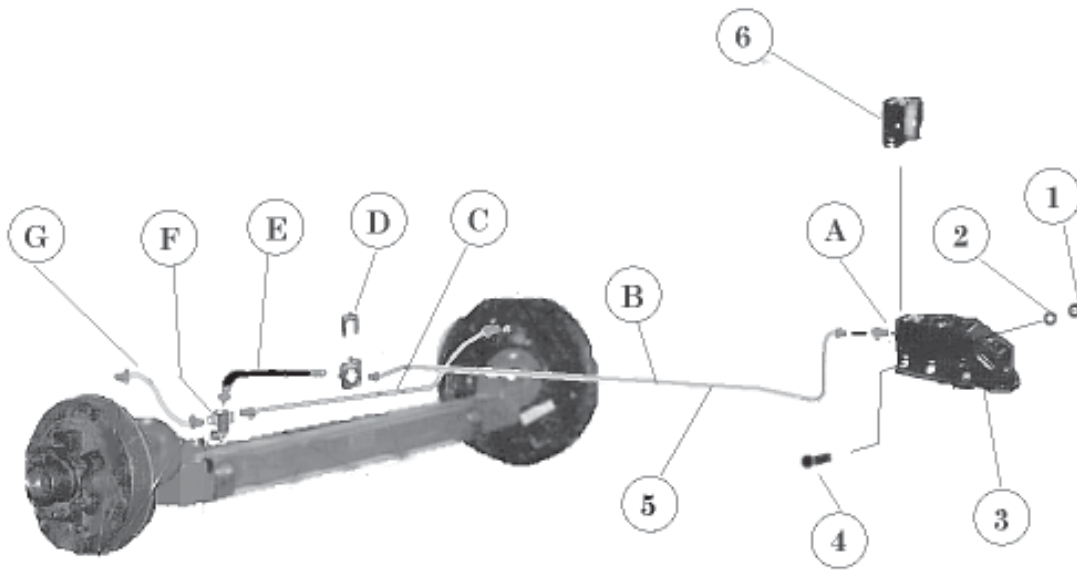
<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM26536	LIGHT, TAIL	2	
2	EM26536-1	BRACKET, TAIL LIGHT	2	
3	EM492364	BOLT, HEX. 5/16"-NC x 1"	4	
4	EM492623	WASHER, LOCK 5/16"	4	
5	EM492553	NUT, HEX. 5/16"-NC	4	
6	EM492561	NUT, HEX. 1/4"-NC	2	
7	EM492622	WASHER, LOCK 1/4"	5	
8	EM492596	WASHER 1/4"	2	
9	EM25708	FRAME	1	
10	EM509105	CABLE, BATTERY GROUND	1	
11	EM16738	BATTERY, 12 VOLT	1	
12	EM16707	CABLE, BATTERY POSITIVE	1	
13	EM25523	ADAPTER	2	
14	EM97066	GAUGE, ACCUMULATOR PRESSURE	1	
15	EM97067	GAUGE, MAIN	1	
16	EM491396	ELBOW	1	
17	EM269	SOCKET HEAD, M10 x 30	2	
18	EM509449	BRACKET, WATER SEPERATOR FILTER	1	
19	EM16747	FILTER ASSY., WATER SEPERATOR	1	
19A	EM26465	ELEMENT, FILTER	1	
20	EM492356	BOLT, HEX. HD 1/4"-NC x 3/4"	3	
21	EM20426	ELBOW, 90 DEG.	2	
22	EM716	CLAMP, HOSE	2	
23	EM20427	HOSE	1	



ST-70
AXLE AND BRAKES

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM26519	NUT, CHROME	12	
2	EM26615	TIRE AND WHEEL	2	
3	EM26520	CAP, HUB	2	
4	EM491690	PIN, COTTER 5/32" x 2"	2	
5	EM16610	DRUM, BRAKE	2	
6	EM26601	CAP, GREASE	2	
7	EM26113	NUT, CASTLE	2	
8	EM26111	RACE, OUTER BEARING	2	
9	EM26112	BEARING, OUTER	2	
10	EM26110	RACE, INNER BEARING	2	
11	EM26108	BEARING, INNER	2	
12	EM26109	SEAL, GREASE	2	
13	EM16612	LOCK NUT, HEX9/16"-NF	14	
14	EM16609	LINK, REAR SHACKLE	4	
15	EM508846	WASHER, LOCK 9/16"	8	
16	EM16607	SADDLE, SPRING	2	
17	EM16608	SPRING, LEAF	2	
18	EM966259	SHACKLE BOLT 9/16"-NF	4	
19	EM16611	SHACKLE BOLT 9/16"-NF	2	
20	EM16608-1	BUSHING, PLASTIC	2	
21	EM25611	AXLE	1	
22	EM16614	BRAKE ASSY	2	
23	EM492451	BOLT, HEX 3/8"-NF	10	
24	EM492624	WASHER, 3/8"	10	
25	EM492574	NUT, HEX 3/8"/NF	10	
26	EM16605	U-BOLT	4	

ST-70 — HYDRAULIC SURGE BRAKE AND HITCH



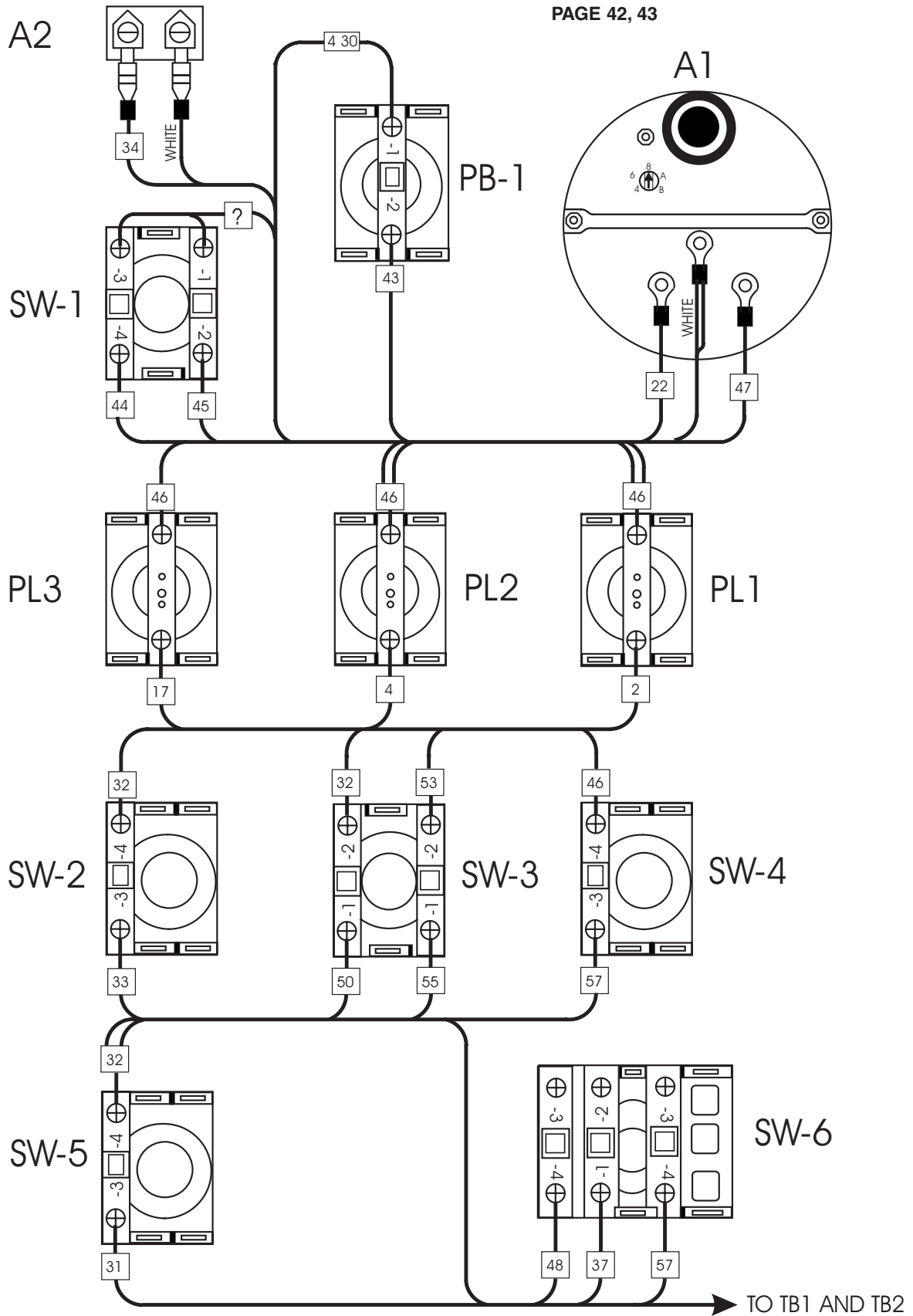
ST-70 — HYDRAULIC SURGE BRAKE AND HITCH

ST-70
HYDRAULIC SURGE BRAKE AND HITCH

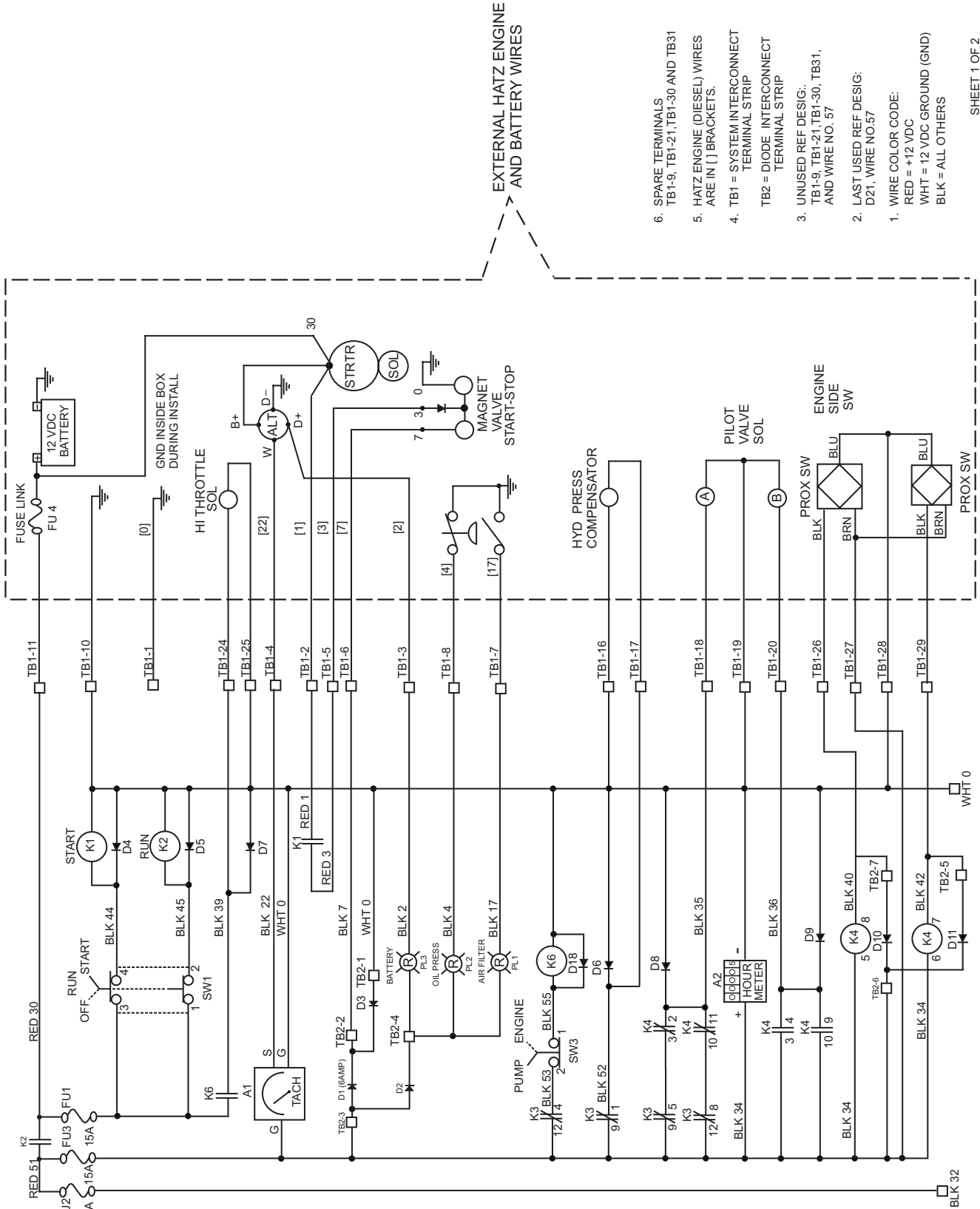
<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	EM492584	NUT 1/2"-NC HEX.	2	
2	EM492626	WASHER, LOCK 1/2"	2	
3	EM16602	2" HYDRAULIC SURGE BRAKE ASSY	1	FOR COMPONENTS: CONTACT YOUR LOCAL ATWOOD DEALER.
4	EM492401	BOLT, HEX. 1/2"-NC x 4"	2	
5	EM16116	KIT, BRAKE	1	INCLS. (A, B, C, D, E, F, G) FOR THESE COMPONENTS. CONTACT YOUR MAYCO PARTS DEPT.
6	EM16602-1	COVER	1	

ST-70 — INTERIOR CONTROL PANEL (Inside Door)

NOTE: ADDITIONAL ILLUSTRATIONS
PAGE 42, 43



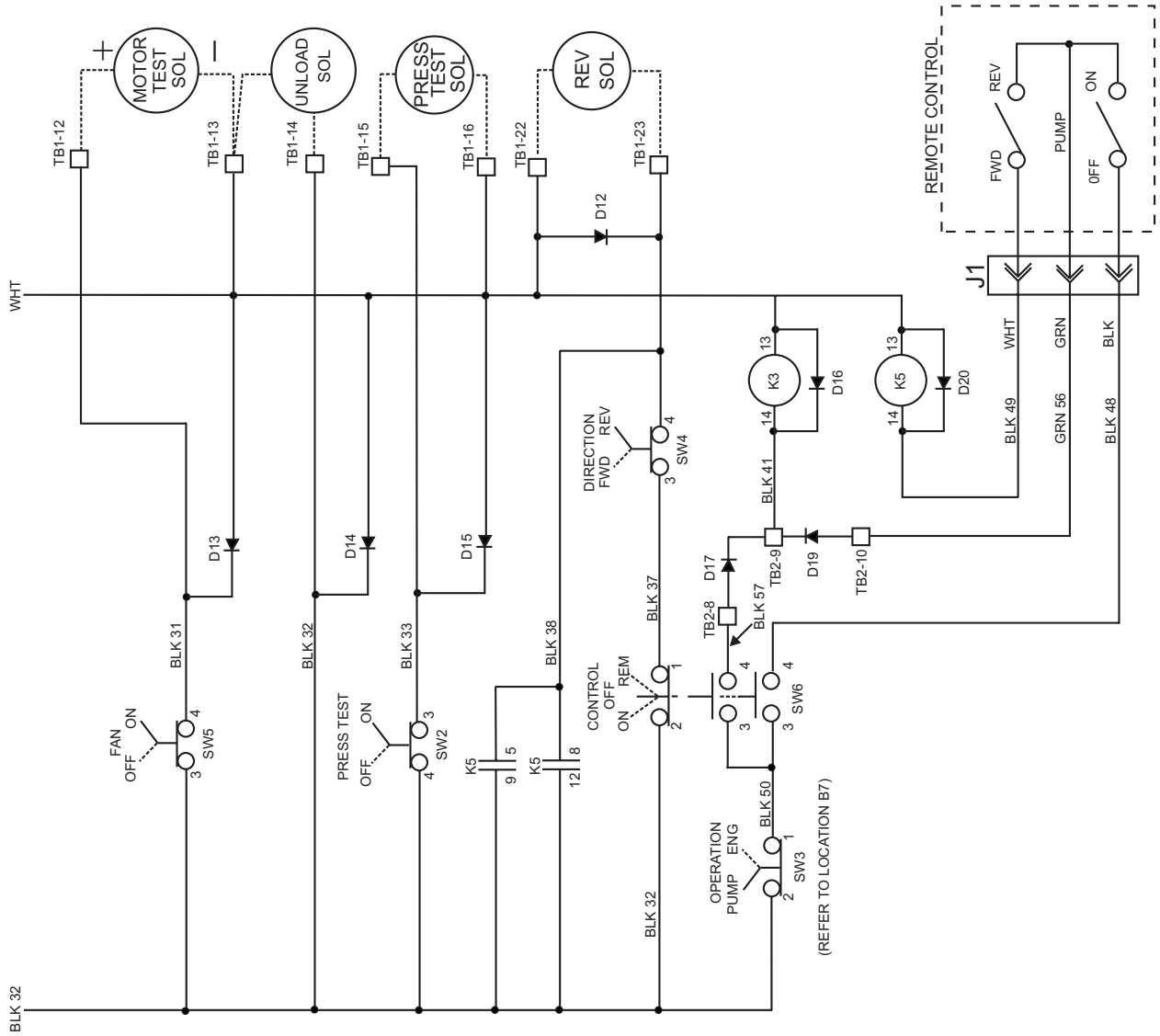
ST-70 — SCHEMATIC ELECTRICAL CONTROL BOX



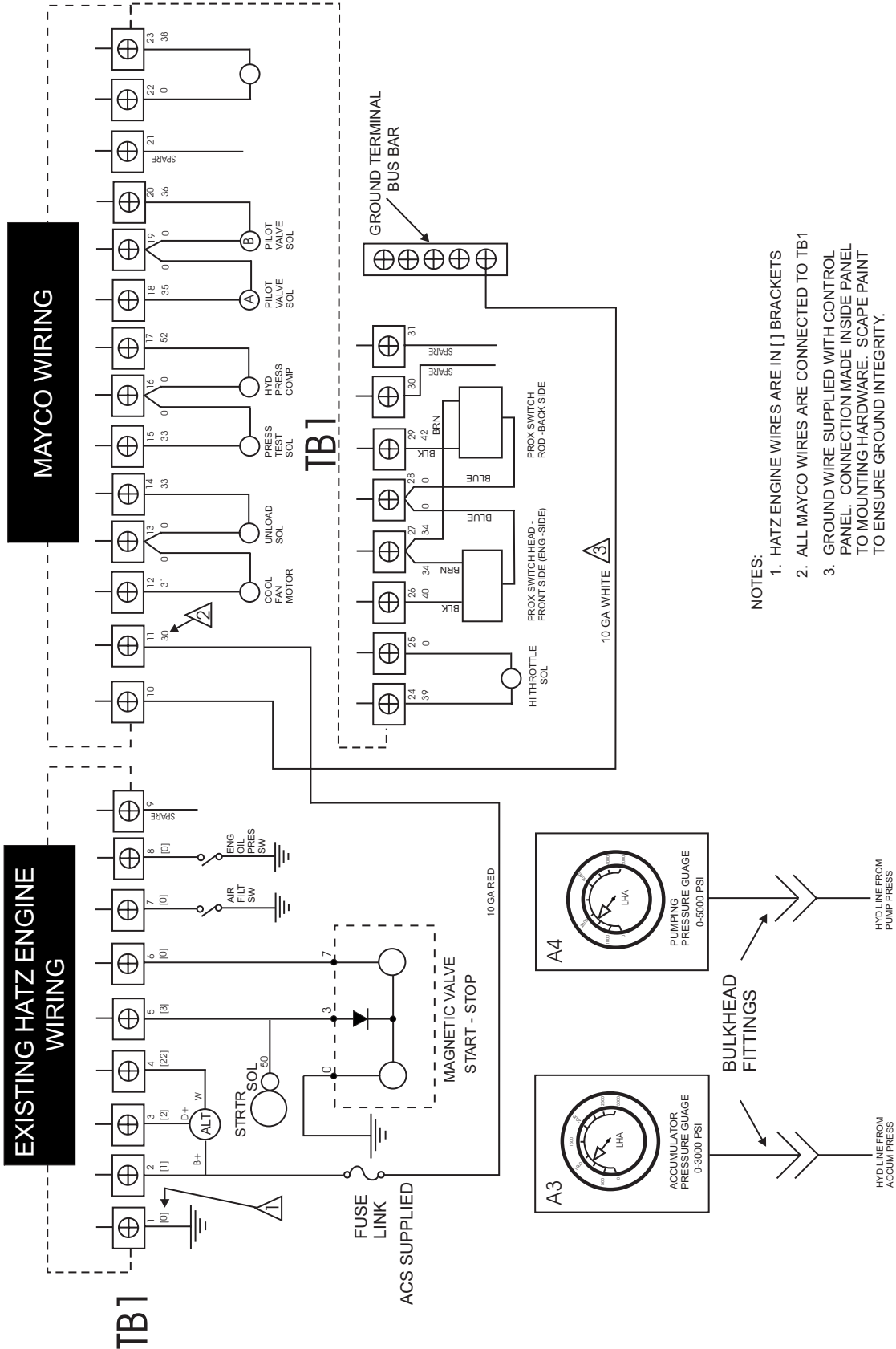
EXTERNAL HATZ ENGINE
AND BATTERY WIRES

6. SPARE TERMINALS
TB1-9, TB1-21, TB1-30 AND TB31
5. HATZ ENGINE (DIESEL) WIRES
ARE IN [] BRACKETS.
4. TB1 = SYSTEM INTERCONNECT
TERMINAL STRIP
TB2 = DIODE INTERCONNECT
TERMINAL STRIP
3. UNUSED REF DESIG:
TB1-9, TB1-21, TB1-30, TB31,
AND WIRE NO. 57
2. LAST USED REF DESIG:
D21, WIRE NO. 57
1. WIRE COLOR CODE:
RED = +12 VDC
WHT = 12 VDC GROUND (GND)
BLK = ALL OTHERS

SHEET 1 OF 2

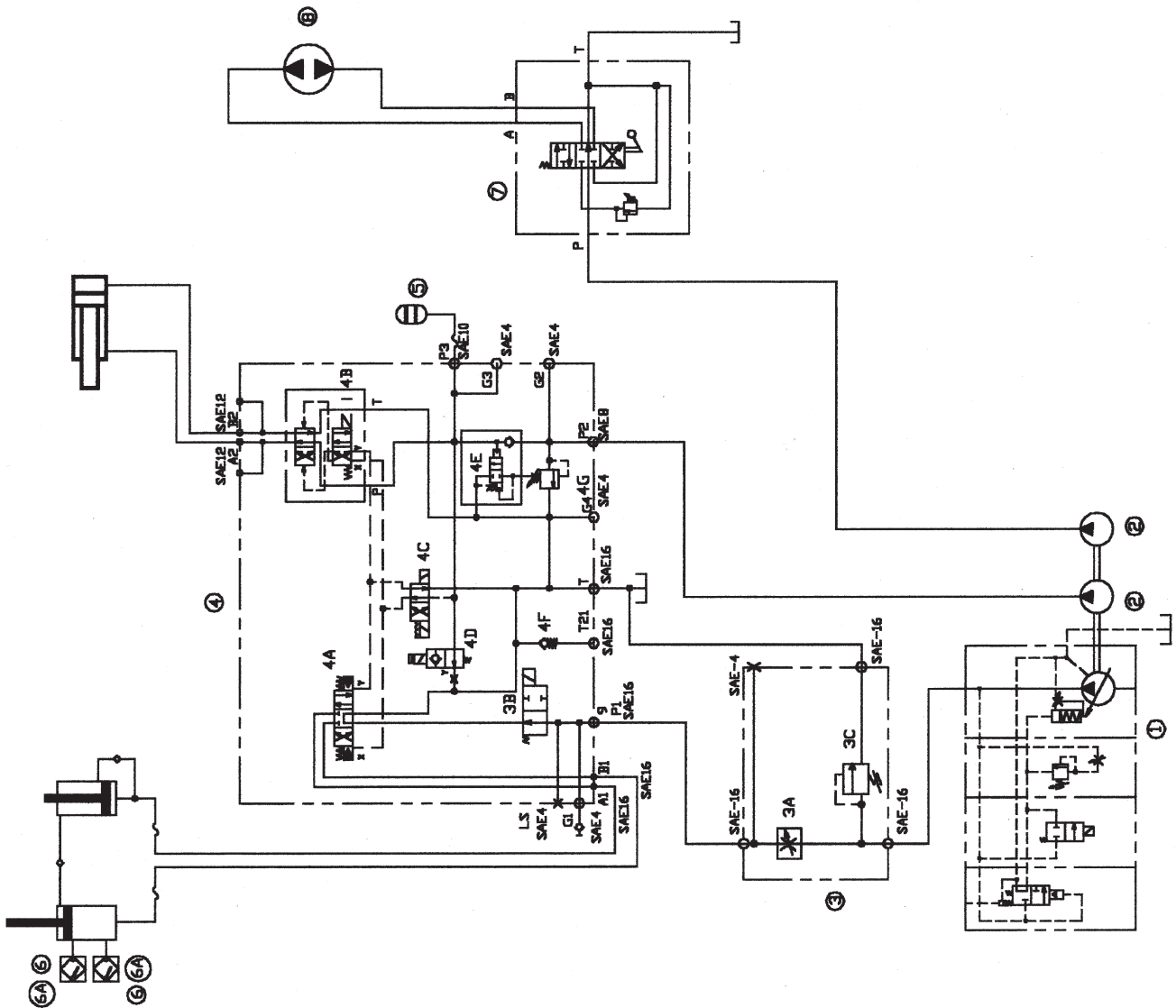


ST-70 — INTERCONNECT HYDRAULIC CONTROL BOX



- NOTES:
1. HATZ ENGINE WIRES ARE IN [] BRACKETS
 2. ALL MAYCO WIRES ARE CONNECTED TO TB1
 3. GROUND WIRE SUPPLIED WITH CONTROL PANEL. CONNECTION MADE INSIDE PANEL TO MOUNTING HARDWARE. SCAPE PAINT TO ENSURE GROUND INTEGRITY.

ST-70 — HYDRAULIC DIAGRAM



Port I.D. Description

Part Number

1	Main Pump (3000psi) 50hp/2550	EM97026
2	Remix Pump	EM97002
2A	Accumulator Pump	
3	Main Pump Manifold	
3A	Volume Control w/Alum Knob	EM98005
3B	Test Valve	
3C	Relief Adjustable	EM98004
4	Main Manifold	
4A	Main Valve	EM97011
4B	Shuttle Valve	EM97013
4C	Pilot Valve	EM97012
4D	Acc. Circuit dump Valve	EM97006
4E	Unloading Valve	EM97008
4F	Check Valve	EM97009
5	Accumulator Charged (1300 psi)	EM97015
5a	Accumulator Reducer Fittings	
6	Sensor	EM97024
6A	Conductor Wire	EM97025
7	Remix Control Valve	EM97017
8	White Motor	EM25425
		EM25454
A1	Shuttle Cylinder	
B1	1" Front Port w SAE O ring JIC	
P1	1" Front Port w SAE O ring JIC	
T	1" Front Port w SAE O ring JIC	
P2	1/2" Front Port w SAE O ring JIC	
T21	1" Front Port w SAE O ring JIC	
B1	3/4" Front Port w SAE O ring JIC	

