An Oshkosh Corporation Company

Service and Maintenance Manual

Model

1850SJ

3121619

May 27, 2019 - Rev K

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SECTION NO.	TITLE	PAGE NO.
SECTION A - INTRODUCTION - MAINTENANCE SAFETY PRECAUTIONS		
A	General	A-1
B	Hydraulic System Safety	A-1
C	Maintenance	A-1
SECTION 1 - SPECIFICATIONS		
1.1	Operating Specifications	1-1
1.2	Dimensional Data	1-1
1.3	Capacities	1-1
1.4	Tires	1-1
1.5	Engine Data	1-2
1.6	Major Component Weights	1-2
1.7	Hydraulic Oil	1-2
1.8	Maintenance and Lubrication	1-5
SECTION 2 - GENERAL		
2.1	Machine Preparation, Inspection, and Maintenance	2-1
	General	2-1
	Preparation, Inspection, and Maintenance	2-1
	Pre-Start Inspection	2-1
	Pre-Delivery Inspection and Frequent Inspection	2-1
	Annual Machine Inspection	2-1
	Preventive Maintenance	2-1
2.2	Service and Guidelines	2-2
	General	2-2
	Safety and Workmanship	2-2
	Cleanliness	2-2
	Components Removal and Installation	2-2
	Component Disassembly and Reassembly	2-3
	Pressure-Fit Parts	2-3
	Bearings	2-3
	Gaskets	2-3
	Bolt Usage and Torque Application	2-3
	Hydraulic Lines and Electrical Wiring	2-3
	Hydraulic System	2-3
	Lubrication	2-4
	Battery	2-4
	Lubrication and Servicing	2-4
2.3	Lubrication and Information	2-4
	Hydraulic System	2-4
	Hydraulic Oil	2-4
	Changing Hydraulic Oil	2-4
	Lubrication Specifications	2-4
2.4	Cylinder Drift	2-5
	Theory	2-5
	Cylinder Leakage Test	2-5
	Cylinder Thermal Drift	2-5
2.5	Pins and Composite Bearing Repair Guidelines	2-6
2.6	Welding on JLG Equipment	2-6
	Do the Following When Welding on JLG Equipment	2-6
	Do NOT Do the Following When Welding on JLG Equipment	2-6

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SECTION NO. **TITLE** **PAGE NO.**

SECTION 3 - CHASSIS & TURNTABLE

3.1 Tires and Wheels 3-1
Tire Damage 3-1
Wheel and Tire Replacement 3-1
Wheel Installation 3-1
3.2 Axle Extension System 3-2
3.3 Drive Orientation System 3-2
3.4 Steering Control System 3-3
3.5 Drive/Steering Speed Control 3-4
3.6 Traction Control System 3-4
3.7 Ground Control Keyswitch System 3-4
3.8 Jib Lift End of Stroke Dampening 3-4
3.9 Ground Control Enable System 3-4
3.10 Hydraulic System Warm Up 3-4
3.11 Function Speed Control System 3-4
3.12 Drive Assembly 3-12
3.13 Drive Hub 3-13
Disassembly 3-14
Assembly 3-17
3.14 Free Wheeling Option 3-21
Disengage Drive Motors & Brakes for Towing, etc. (Free Wheel) 3-21
Engage Drive Motors & Brakes (Normal Operation) 3-21
3.15 Gear Hub Oil Service 3-21
Check Oil Level 3-21
Change Gear Hub Oil 3-21
3.16 Drive Motor 3-23
Description 3-23
Shaft Seal Replacement 3-23
Loop Flushing Valve 3-24
Troubleshooting 3-25
Disassembly 3-26
Inspection 3-30
Assembly 3-32
Initial Start-up 3-37
3.17 Setting Swing Gear Backlash 3-37
Turntable Bearing Mounting Bolt Condition Check 3-38
3.18 Swing Bearing Torque Values 3-39
3.19 Swing Bearing Wear Tolerance 3-41
3.20 Swing Control System 3-47
3.21 Chassis Tilt Indicator System 3-47
3.22 Auxiliary Power System 3-47
3.23 Water in Fuel Sensing System (Optional) 3-48
3.24 Deutz Turbocharger Operation 3-48
Operating Practices 3-48
3.25 Diesel Exhaust Fluid (DEF) Tank 3-49
Cleaning and Flushing the Tank 3-49
3.26 Deutz Engine with Diesel Exhaust Fluid (DEF) 3-61
Engine Oil 3-61
Diesel Fuel 3-61
3.27 Selective Catalytic Reduction (SCR) - Machines Using Diesel Exhaust Fluid (DEF) 3-62
Standstill Cleaning 3-62
Maintenance Standstill Cleaning Initiation Methods 3-63
Cancelling Maintenance Standstill 3-63
Unsuccessful Cleaning Event 3-63

MidWestTech | JLG 1850SJ Boom Lift Service Manual | Publication 3121619 Order the manual at mid-west-tech.com >

SECTION NO.	TITLE	PAGE NO.

SECTION 4 - BOOM & PLATFORM

4.1	Boom Systems	4-1
	Broken Cable Indicator System	4-1
	Transport Position Sensing System	4-1
	Beyond Transport - Drive Speed Cutback System	4-1
	Drive/Steer - Boom Function Interlock System (CE/AUS ONLY)	4-1
	Jib Stow System	4-1
	Envelope Control System	4-2
	Moment Control System	4-2
	Boom Control System (BCS) Functional Check (Push to Test) System	4-2
	Controlled Arc System	4-2
	Controlled Boom Angle System	4-3
	Envelope Tracking	4-3
	Slow Down System	4-3
	Dual Capacity System	4-3
	Swing Speed Proportioning	4-3
	Platform Load Sensing System	4-4
	Electronic Platform Leveling	4-4
	Boom Control Select	4-4
	Platform Control Enable System	4-5
	Boom Recovery Mode	4-5
4.2	Platform	4-7
	Platform/Support Removal	4-7
	Platform/Support Installation	4-8
4.3	Rotator	4-11
	Removal	4-11
	Installation	4-11
4.4	Boom Removal and Installation	4-13
	Removal	4-13
	Installation	4-15
4.5	Boom Assembly	4-16
	Assembly	4-16
4.6	Telescope Cylinder	4-42
	Removal	4-42
4.7	Boom Shimming Procedure	4-43
4.8	Boom Lubrication Application	4-44
4.9	Boom Cleanliness Guidelines	4-44
4.10	Hose Adjustment Procedure	4-45
4.11	Jib	4-57
	Removal	4-57
	Installation	4-58
4.12	JIB Shimming Procedures	4-58
	Jib Straight Shimming Procedure	4-58
	Stowed Jib Shimming Procedure	4-63
4.13	Wire Rope	4-64
	Inspection	4-64
	Three Month Inspection	4-64
	Additional Inspection Required If:	4-64
	12 Year or 7000 Hour Replacement	4-64
	Additional Replacement Criteria	4-64
4.14	Wire Rope Tensioning Adjustment	4-65
	Boom Preparation for Section Repositioning	4-65
	Wire Rope Tensioning Procedure	4-71
	Confirm Proper Boom Deployment Function	4-73
	Re-Assembly	4-73
	Boom Calibration	4-73

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Values for Zinc Yellow Chromate Fasteners (Ref 4150707)

Size	TPI	Bolt Dia	Tensile Stress Area	Clamp Load	Torque (Dry)		Torque Lubricated		Torque (Loctite® 242™ or 271™ OR Vibra-TITE™ 111 or 140)		Torque (Loctite® 262™ or Vibra-TITE™ 131)		Clamp Load	Torque (Dry or Loctite® 262™) K = 0.20		Torque (Loctite® 242™ or 271™ OR Vibra-TITE™ 111 or 140) K = 0.18		Torque (Loctite® 262™ or Vibra-TITE™ 131) K = 0.16	
		in	Sq in	LB	IN-LB	[N-m]	IN-LB	[N-m]	IN-LB	[N-m]	IN-LB	[N-m]	LB	IN-LB	[N-m]	IN-LB	[N-m]	IN-LB	[N-m]
4	40	0.1120	0.00604	380	8	0.9	6	0.7											
	48	0.1120	0.00661	420	9	1.0	7	0.8											
5	32	0.1380	0.00909	580	16	1.8	12	1.4											
	40	0.1380	0.01015	610	18	2.0	13	1.5											
6	32	0.1640	0.01285	800	30	3.4	22	2.5											
	36	0.1640	0.01474	940	31	3.5	23	2.6											
10	24	0.1900	0.01755	1120	43	4.8	32	3.6											
	32	0.1900	0.02000	1280	54	6.5	36	4											
1/4	20	0.2500	0.0318	2030	96	10.8	75	9	105	12									
	28	0.2500	0.0364	2320	120	13.5	85	10	135	15									
		in	Sq in	LB	FT-LB	[N-m]	FT-LB	[N-m]	FT-LB	[N-m]	FT-LB	[N-m]	LB	FT-LB	[N-m]	FT-LB	[N-m]	FT-LB	[N-m]
5/16	18	0.3125	0.0524	3340	17	23	13	18	18	25	16	22	4720	25	35	20	25	22	25
	24	0.3125	0.0580	3700	19	26	14	19	21	29	17	23	5220	28	38	23	28	25	28
3/8	16	0.3750	0.0775	4940	30	41	23	31	35	48	26	36	7000	45	60	40	55	35	50
	24	0.3750	0.0878	5970	35	47	25	34	40	54	30	43	8450	50	75	45	60	40	55
7/16	14	0.4375	0.1063	6803	50	68	35	47	55	75	45	61	9650	75	95	65	85	55	75
	20	0.4375	0.1187	7560	55	75	40	54	60	82	50	68	10700	85	110	70	95	60	85
1/2	13	0.5000	0.1419	9050	75	102	55	75	85	115	65	95	12700	105	145	95	130	85	110
	20	0.5000	0.1599	10700	90	122	65	88	100	136	80	108	14400	120	165	110	150	90	120
9/16	12	0.5625	0.1820	11600	110	149	80	108	120	163	95	133	16400	155	210	140	190	115	155
	18	0.5625	0.2030	12940	125	163	90	122	135	184	105	144	18200	170	230	155	210	130	175
5/8	11	0.6250	0.2260	14400	155	203	110	149	165	224	135	183	20350	210	285	190	260	160	220
	18	0.6250	0.2560	16300	175	230	130	176	190	258	150	207	23000	240	325	215	290	180	245
3/4	10	0.7500	0.3340	21200	260	353	200	271	285	388	210	285	29100	375	510	345	460	280	380
	16	0.7500	0.3730	23800	305	407	220	298	330	449	260	353	33600	430	510	395	515	315	430
7/8	9	0.8750	0.4620	29400	435	592	320	434	475	646	380	517	41600	605	825	545	740	455	620
	14	0.8750	0.5090	32400	470	637	350	475	520	707	420	574	45800	670	910	605	815	500	680
1	8	1.0000	0.6060	38600	645	888	480	651	575	918	579	785	51500	950	1175	775	1045	645	875
	12	1.0000	0.6630	42200	705	946	530	719	705	1000	831	958	56700	995	1355	895	1215	745	1015
1 1/8	7	1.1250	0.7630	48600	800	1085	600	813	840	1142	714	968	65000	1290	1755	1160	1580	965	1310
	12	1.1250	0.8560	54500	895	1213	670	905	925	1254	832	1067	73000	1445	1965	1300	1770	1085	1475
1 1/4	7	1.2500	0.9690	61700	1120	1519	840	1139	1175	1593	1066	1366	82500	1811	2475	1630	2225	1355	1855
	12	1.2500	1.0730	68300	1240	1681	920	1247	1300	1768	1118	1516	91300	2015	2740	1810	2460	1510	2055
1 3/8	6	1.3750	1.1560	64100	1460	1979	1100	1491	1535	2074	1322	1792	104000	2385	3245	2145	2915	1785	2430
	12	1.3750	1.3150	74900	1660	2274	1250	1695	1755	2380	1506	2042	118400	2705	3685	2435	3315	2030	2765
1 1/2	6	1.5000	1.4050	78000	1940	2630	1460	1979	2025	2754	1705	2310	128500	3165	4305	2845	3870	2370	3225
	12	1.5000	1.5800	87700	2200	2983	1650	2224	2325	3151	1974	2676	142200	3555	4835	3200	4345	2665	3625

NOTES:
1. THESE TORQUE VALUES DO NOT APPLY TO CADMIUM PLATED FASTENERS.
2. ALL TORQUE VALUES ARE STATIC TORQUE MEASURED PER STANDARD AUDIT METHODS TOLERANCE = ±10%
3. * ASSEMBLY USES HARDENED WASHER

SAE GRADE 5 BOLTS & GRADE 2 NUTS

SAE GRADE 8 (HEX HD) BOLTS & GRADE 8 NUTS*

NO. 9999579 REV. K

REFERENCE JLG THREAD LOCKING COMPOUND

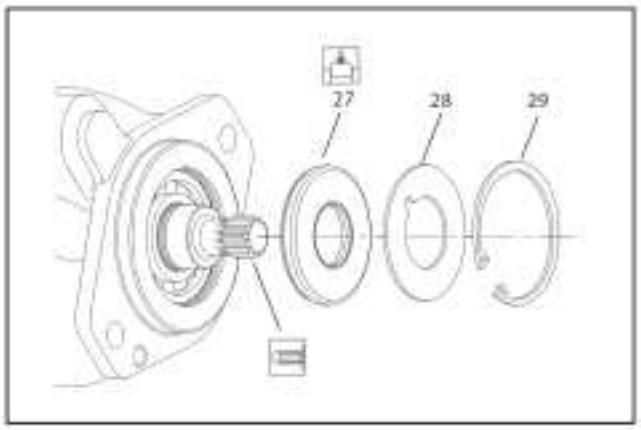
JLG P/N	Loctite® P/N	NO Industries P/N	Description
01000011	242™	Vibra-TITE™ 121	Medium Strength (Blue)
01000019	271™	Vibra-TITE™ 140	High Strength (Red)
01000071	262™	Vibra-TITE™ 131	Medium - High Strength (Red)

Figure 1-2. Torque Chart - Sheet 1 of 5 - (SAE Fasteners)

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18. Cover shaft splines with an installation sleeve. Install a new shaft seal (27) with cup side facing motor. Press seal in housing until it bottoms out. Press evenly to avoid binding and damaging seal. Install seal support washer (28) and snap ring (29).



27. Shaft Seal
28. Seal Support Washer
29. Snap Ring

Figure 3-34. Shaft Seal

19. Install remaining plugs and fittings to housing. Refer to drawing below for wrench sizes and installation torques.

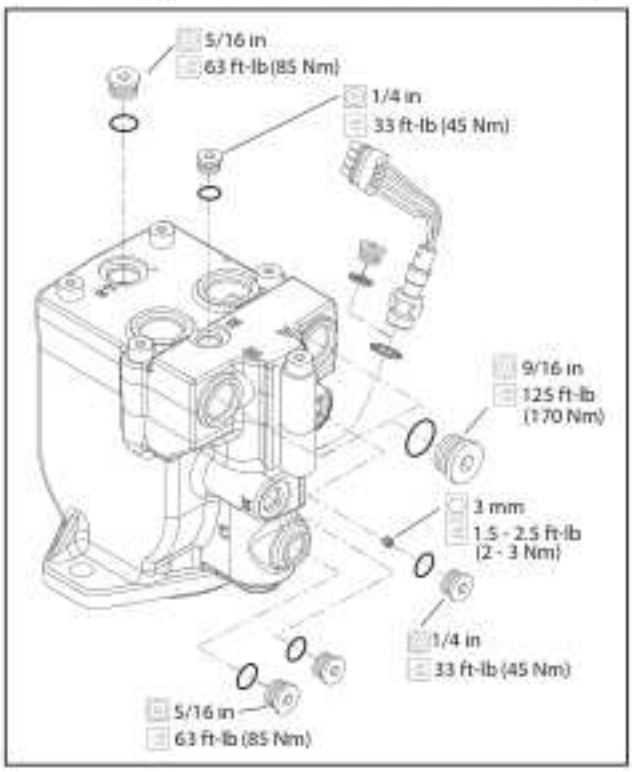
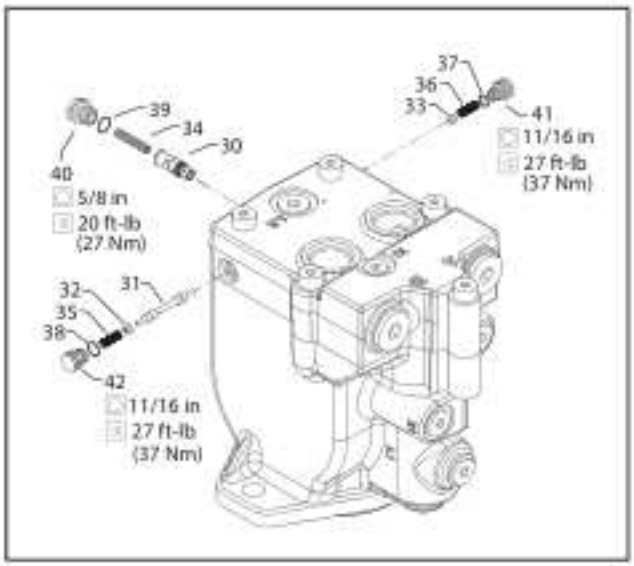


Figure 3-35. Plugs and Fittings Installation

20. Install orifice poppet (30).



30. Orifice Poppet
31. Shift Spool
32. Spring
33. Spring
34. Spring
35. Spring
36. Spring
37. O-ring
38. O-ring
39. O-ring
40. Plug
41. Plug
42. Plug

Figure 3-36. Loop Flushing Spool

21. Install shift spool (31).

22. Install spring retaining washers on springs (32 and 33).

23. Carefully install centering springs (34, 35, and 36).

24. Install new O-rings (37, 38, and 39).

25. Using a 5/8 in wrench torque plug (40) to 20 ft-lb (27 Nm).

26. Using a 11/16 in wrench, torque plugs (41 and 42) to 27 ft-lb (37 Nm).

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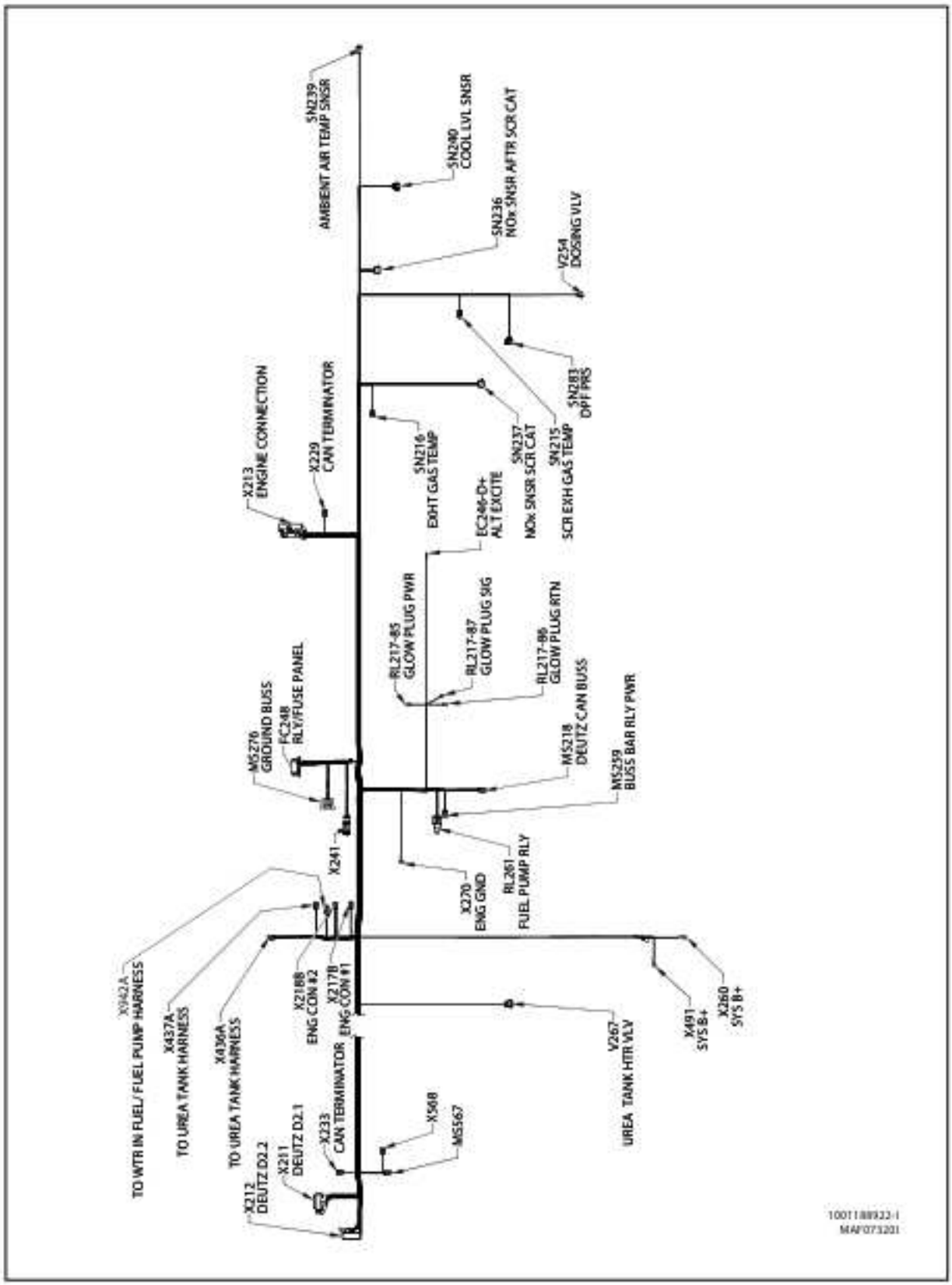


Figure 7-50. T4F Engine Harness - Sheet 1 of 7

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HV107 SWG LFT					
CONN POS	WIREC OLOR	WIRELABEL	GAUGE	JACKET	TO
1	WHT	55-11 LFT PLT	18 AWG	GXL	C002-J2 (10)
2	BLK	0-10-1	18AWG	GXL	S154 (2)

HV105 LIFT DN AUX					
CONN POS	WIREC OLOR	WIRELABEL	GAUGE	JACKET	TO
1	WHT	55-10 LFT DN AUX	18 AWG	GXL	C002-J2 (12)
2	BLK	0-6-3	18AWG	GXL	S155 (2)

SN438					
CONN POS	WIREC OLOR	WIRELABEL	GAUGE	JACKET	TO
1	BRN	49-77 P C PWR	20 AWG	CABLE	X440A (2)
2					
3	BLU	49-75 PRS CHK	20 AWG	CABLE	X440A (4)
4	BLK	49-76 P C GND	20 AWG	CABLE	X440A (3)
SHLD	SHLD	P CHK SN	20 AWG	CABLE	S455 (2)

HV99 SWG RHT					
CONN POS	WIREC OLOR	WIRELABEL	GAUGE	JACKET	TO
1	WHT	22-1 SWG RHT	18 AWG	GXL	C002-J2 (32)
2	BLK	0-30-2	18 AWG	GXL	S153 (2)

HV106 MAIN LIFT UP					
CONN POS	WIREC OLOR	WIRELABEL	GAUGE	JACKET	TO
1	WHT	3-2 MLIFT UP	18 AWG	GXL	C002-J2 (32)
2	BLK	0-6-1	18 AWG	GXL	S155 (2)

HV103 MAIN TELE OUT					
CONN POS	WIREC OLOR	WIRELABEL	GAUGE	JACKET	TO
1	WHT	13-3 MTELE OUT	18 AWG	GXL	C002-J2 (16)
2	BLK	0-11-2	18 AWG	GXL	S156 (2)

HV104 MAIN DUMP					
CONN POS	WIREC OLOR	WIRELABEL	GAUGE	JACKET	TO
1	WHT	50-1 MAIN DUMP	18 AWG	GXL	C002-J2 (13)
2	BLK	0-10-2	18 AWG	GXL	S154 (2)

HV314 CHASSIS ENABLE					
CONN POS	WIREC OLOR	WIRELABEL	GAUGE	JACKET	TO
1	WHT	55-31 CHS ENABLE	18 AWG	GXL	C002-J2 (02)
2	BLK	0-36	18 AWG	GXL	C002-J2 (17)

X158 HEAD & TAIL LIGHTS					
CONN POS	WIREC OLOR	WIRELABEL	GAUGE	JACKET	TO
1	WHT	52-7 H&T LT SIG	18 AWG	GXL	C002-J2 (26)

SN114 FUEL SENDING UNIT					
CONN POS	WIREC OLOR	WIRELABEL	GAUGE	JACKET	TO
1	WHT	47-10 FUL SEN	18 AWG	GXL	C002-J2 (25)
2	BLK	0-14-3	18 AWG	GXL	S157 (2)

AH318 GROUND ALARM					
CONN POS	WIRE COLOR	WIRE LABEL	GAUGE	JACKET	TO
A	WHT	52-8 ALRM PWR	18 AWG	GXL	C002-J3 (7)
B	WHT	52-6 MOT ALRM	18 AWG	GXL	C002-J2 (27)
C	BLK	0-14-2	18 AWG	GXL	S157 (2)

HV316 WARM UP VLV					
CONN POS	WIRE COLOR	WIRE LABEL	GAUGE	JACKET	TO
1	WHT	55-33 WARM UP	18 AWG	GXL	C002-J2 (33)
2	WHT	60-6 WARM UP RTN	18 AWG	GXL	C002-J3 (5)

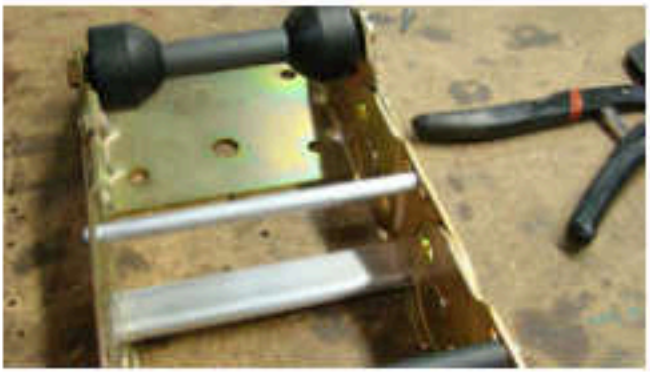
HV348 SWG FLOW CNTRL					
CONN POS	WIRE COLOR	WIRE LABEL	GAUGE	JACKET	TO
1	WHT	55-32 SWG F.C.	18 AWG	GXL	C002-J2 (35)
2	WHT	60-3 SWG RTN	18 AWG	GXL	C002-J3 (4)

HV108 TELE FLOW CNTRL					
CONN POS	WIRE COLOR	WIRE LABEL	GAUGE	JACKET	TO
1	WHT	55-12 TELE FCNTRL	18 AWG	GXL	C002-J2 (9)
2	WHT	60-2 TFCNTRL RTN	18 AWG	GXL	C002-J3 (2)

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5. Slide the poly roller off of the round bar.





6. Hold the round bar to remove the other screw.

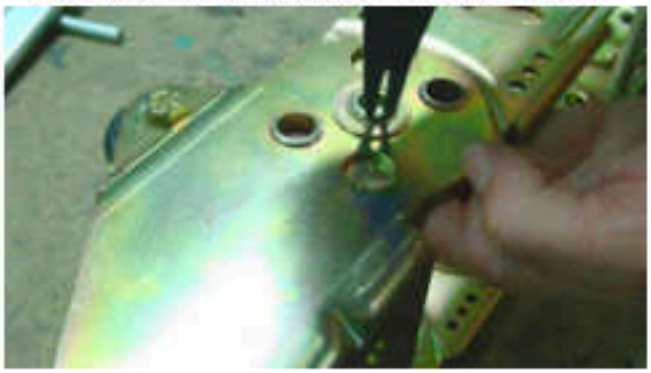


7. Slide the flat bar out.





8. Remove the snap ring from one side of the bracket.



9. Remove the snap ring from the other side of the bracket.



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