An Oshkosh Corporation Company

Service and Maintenance Manual

Model

680S

SN 0300189341 to Present

3121679

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SECTION 1. SPECIFICATIONS

1.1 OPERATING SPECIFICATIONS

Table 1-1. Operating Specifications

Maximum Work Load (Capacity) Unrestricted Restricted	 500 lbs. (227 kg) Refer to Capacity Decals on machine for restricted platform capacities
Maximum Travel Grade (Gradeability)* 2WD 4WD	 30% 45%
Maximum Travel Grade (Side Slope)*	5°
Maximum Vertical Platform Height	68 ft. (20.7 m)
Maximum Horizontal Platform Reach	59 ft. (18 m)
Turning Radius (outside)	19 ft. 8 in. (6 m)
Turning Radius (inside)	12 ft. 5 in. (3.8 m)
Maximum Drive Speed	3.5 mph (5.6 kmph)
Max. Hydraulic System Pressure	4500 psi (310 Bar)
Maximum Wind Speed	28 mph (12.5 m/s)
Maximum Manual Force	400 N
Electrical System Voltage	12 Volts
Gross Machine Weight (Platform Empty)	32,675 lbs. (14,821 kg)
* With boom in stowed position	

1.2 SPECIFICATIONS AND PERFORMANCE DATA

Table 1-2. Specifications and Performance Data

Swing	360°
Tail Swing	4 ft. 8 in. (1.42 m)
Platform	48 in. x 160 in. (1.22 m x 4.06 m)
Overall Width	8 ft. 2 in. (2.5 m)
Stowed Height	9 ft. 10 in. (2.97 m)
Stowed Length	38 ft. 5 in. (11.72 m)
Wheel base	10 ft. 1 in. (3.1 m)
Ground Clearance	12.4 in. (0.31 m)
Drive Speed Stowed 2WD Stowed 4WD Elevated	 3.0 mph (5.5 kph) 3.5 mph (5.6 kph) 0.75 mph (1.2 kph)
Ground Bearing Pressure 18-625	71.5 psi (4.95 kgm/cm^2)
Max. Tire Load 18-625	18,300 lbs. (8300 kg)

1.3 CAPACITIES

Table 1-3. Capacities

Fuel Tank	Approx. 31 gallons (117 liters)
Fuel Tank (Optional)	Approx. 52.8 gallons (200 liters)
Hydraulic Tank	Approx. 21 gallons (79.5 liters)
Engine Oil Capacity Deutz D2011L04 Cooling System Crankcase Total Capacity Deutz TD 2.9L Deutz TD 2.9 L4 GUO III (GB Market Only)	 5 Quarts (4.5 L) 11 Quarts (10.5 L) w/Filter 16 Quarts (15 L) 2.4 Gallon (8.9 L) w/Filter 2.11 Gallon (8.0L)

1.4 COMPONENT DATA

Engine Data

Table 1-4. Deutz D2011L04 Specifications

Type	Liquid Cooled (Oil)
Fuel	Diesel
Oil Capacity Cooling System Crankcase Total Capacity	 5 Quarts (4.5 L) 11 Quarts (10.5 L) w/Filter 16 Quarts (15 L)
Idle RPM	1000
Low RPM	1800
High RPM	2600
Alternator	55 Amp, Belt Drive
Fuel Consumption	0.88 GPH (3.33 lph)
Battery	1000 Cold Cranking Amps, 210 minutes Reserve Capacity, 12 VDC
Horsepower	61.6 hp (46kw) @ 2600 RPM, full load

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Troubleshooting

Table 4-1. Troubleshooting

Problem	Cause	Solution
1. Shaft rotates slowly or not at all	a. Insufficient torque output	a. Verify correct operating pressure. Do not exceed OEM's pressure specifications. Load may be above maximum capacity of the actuator.
	b. Low rate of fluid flow	b. Inspect ports for obstructions and hydraulic lines for restrictions and leaks.
	c. Control or counterbalance valve has internal leak	c. Disconnect hydraulic lines and bypass valve. Leave valve ports open and operate the actuator through housing ports (do not exceed OEM's operating pressure). The valve must be replaced if a steady flow of fluid is seen coming from the valve ports.
	d. Piston and/or shaft seal leak	d. Remove the plug and the housing's valve ports. Operate the actuator through the housing ports. Conduct the internal leakage test as described in the Section , Testing the Actuator for Internal Leakage.
	e. Corrosion build-up on the thrust surfaces	e. Re-build the actuator. Remove all rust then polish. Replacement parts may be needed.
	f. Swollen seals and composite bearings caused by incompatible hydraulic fluid	f. Re-build the actuator. Use fluid that is compatible with seals and bearings.
2. Operation is erratic or not responsive	a. Air in actuator	a. Purge air from actuator. See bleeding procedures.
3. Shaft will not fully rotate	a. Twisted or chipped gear teeth overload conditions	a. Check for gear binding. Actuator may or may not be able to be re-built and may need to be replaced.
	b. Port fittings are obstructing the piston during stroke	b. Check thread length of port fittings. Fittings should not reach inside the housing bore.
4. Selected position cannot be maintained	a. Control or counterbalance valve has internal leak	a. Disconnect hydraulic lines and bypass valve. Leave valve ports open and operate the actuator through housing ports (do not exceed OEM's operating pressure). The valve must be replaced if a steady flow of fluid is seen coming from the valve ports.
	b. Piston and/or shaft seal leak	b. Remove the plug and the housing's valve ports. Operate the actuator through the housing ports. Conduct the internal leakage test as described in the Testing section of this manual.
	c. Air in actuator	c. Purge air from actuator. See bleeding procedures

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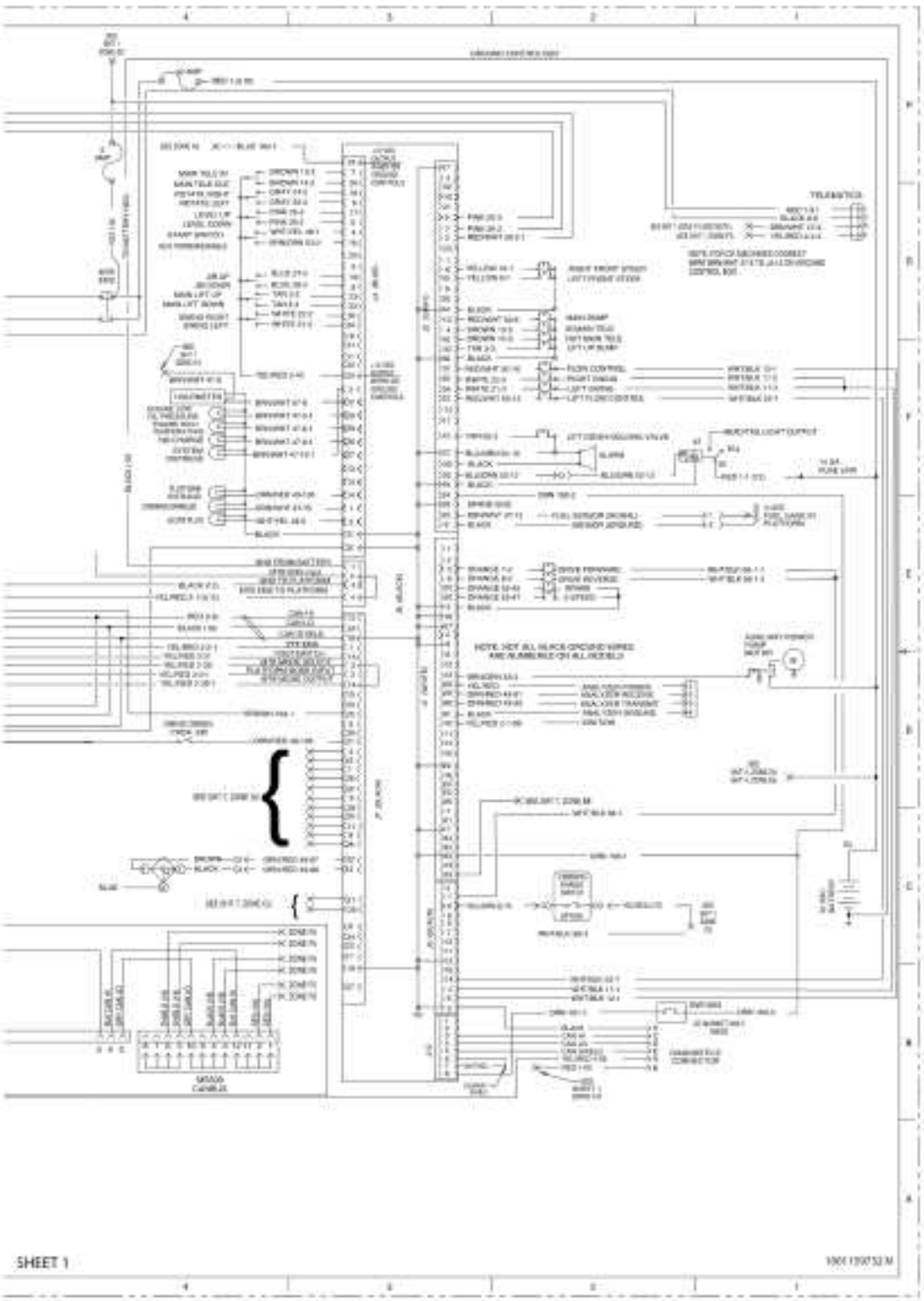
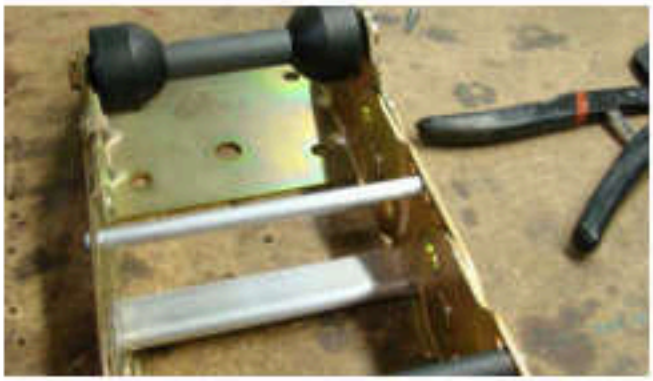


Figure 7-23. Electrical Schematic - Sheet 2 of 14

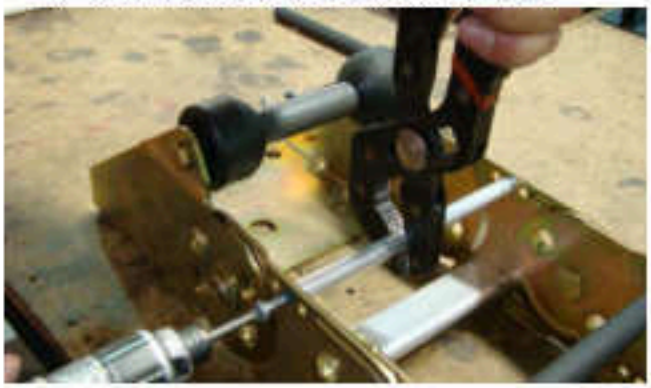
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5. Slide the poly roller off of the round bar.



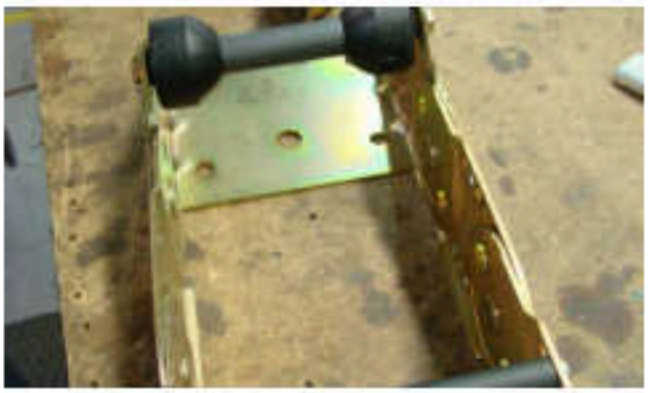


6. Hold the round bar to remove the other screw.



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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BRAD HARRISON / PHOENIX CONTACT M12

The connector uses gold contact material to resist corrosion and an o-ring seal for moisture integrity. If dielectric grease is mistakenly applied to this connector system, the low-force contacts cannot displace the grease to achieve electrical contact. Once contaminated, there is no practical way to remove the dielectric grease (replacement of female contacts required). The JLG Load Sensing System and Rotary Angle Sensors are examples of components with the M12 connector system.



Figure 7-7. Brad-Harrison M12



Figure 7-8. Phoenix Contact M12

ENGINE CONTROL UNIT CONNECTORS

moisture integrity. However, the low-force contacts cannot displace dielectric grease and create electrical contact. It is possible to use solvents (i.e. contact cleaner or mineral spirits) for the removal of improperly applied dielectric grease. The EMR4 engine control module from Deutz employs this connector system (for example).



SEALED ENCLOSURES

Application of dielectric grease is not required in properly sealed enclosures. To meet criteria, the enclosure must be rated to at least IP66 (dust tight; protected from powerful jets of water). The enclosure must be fitted with a high quality, continuous gasket and all wiring must pass through cable entrances.



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