An Oshkosh Corporation Company

Service and Maintenance Manual

Models

E600
E600J
E600JP
M600
M600J
M600JP

SN 0300219230 to Present

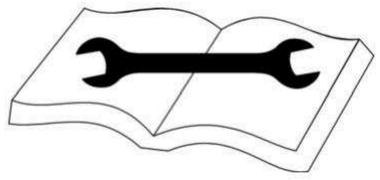
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SECTION 1. SPECIFICATIONS

1.1 OPERATING SPECIFICATIONS

Table 1-1. Operating Specifications

Maximum Work Load (Capacity) ANSI Markets Unrestricted:	 500 lbs. (227 kg)
Maximum Work Load (Capacity) CE & Australia Markets Unrestricted:	 500 lbs. (230 kg)
Maximum Travel Grade (Gradeability) with Boom retracted and approximately horizontal. Tower Boom fully lowered.)	30%
Maximum Travel Grade (Side Slope) with Boom retracted and approximately horizontal. Tower Boom fully lowered.	5°
Tilt Alarm Setting (See Section 3) ANSI, CSA CE E/M600 & E/M600J CE E/M600JP	 5° 4° 3°
Maximum Vertical Platform Height:	60 ft. (18.29 m)
Maximum Horizontal Platform Reach E600 E600J	 43 ft. (13.11 m) 42 ft. 9 in. (13.11 m)
Machine Width 2WD 4WD	 7.94 ft. (2.42 m) 7.94 ft. (2.42 m)
Machine Length E/M600 E/M600J E/M600JP	 30.94 ft. (9.43 m) 30.74 ft. (9.37 m) 33.3 ft. (10.15 m)
Turning Radius (outside)	15.26 ft. (4.65 m)
Turning Radius (inside)	4 ft. (1.23 m)
Maximum Tire Load:	7700 lbs (3493 kg)
Maximum Ground Bearing Pressure E600J/M600J E600JP/M600JP	 52 psi (3.7 kg/cm^2) 51 psi (3.6 kg/cm^2)
Maximum Drive Speed:	4.0 mph (1.79 m/s)
Electrical System Voltage	48 volts
Maximum Hydraulic System Pressure	3200 psi (221 Bar)
Maximum Wind Speed	28 mph (12.5 m/s)
Maximum Manual Force	400N
Gross Machine Weight (Platform Empty) E600J/M600J E600JP/M600JP	 16,710 lbs. (7,580 kg) 17,210 lbs. (7,806 kg)

1.2 CAPACITIES

Table 1-2. Capacities

Generator Fuel Tank (M Models Only)	13 gal. (49.2L)
Hydraulic Tank	15.9 gal. (60.2 L) 12.4 gal. (46.9L) to full mark
Drive Hub	0.4 gal. (1.5 liters)

1.3 TIRES

Table 1-3. Tire Specifications

Size	Type	Pressure
36/14LL-22.5	pneumatic	55 psi (4.0 Bar)
36/14LL-22.5	foam filled	N/A

1.4 FUNCTION SPEED

Table 1-4. Function Speeds

Function	Speed (In Seconds)
Main Lift Up & Down	55-61
Swing Right & Left	72-84
Main Telescope In & Out	46-50
Jib Lift Up	25-27
Jib Lift Down	21-23
Jib Swing Right & Left (E/M600JP)	30-40
Platform Rotate Right & Left	12-16
Drive Below Elevation FWD	34-39
Drive Reduced/Reverse Below Elevation	65-70
Drive Above Elevation (ANSI-E/M600J/JP) & (CE-E/M600J)	65-71
Drive Above Elevation (CE) (E/M600JP)	112 min.

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Diagnostics & Troubleshooting

If SkyGuard does not function when the sensor is engaged, first verify the configuration under the MACHINE SETUP: SKYGUARD OPTION menu using the handheld Analyzer. Ensure the selected configuration matches the actual system installed on the machine. If not, select the correct configuration, then verify operation.

Additionally, use the handheld analyzer to navigate to the DIAGNOSTICS: FEATURES → SKYGUARD INPUTS menu to determine additional SkyGuard fault information.

Engage the SkyGuard sensor and observe the Analyzer to determine if the switch/relay closes.

If the status of the switch/relay remains OPEN while the SkyGuard sensor is actively engaged, it is possible the sensor has failed and should be replaced immediately.

If the status of the switch/relay remains CLOSED while the SkyGuard sensor is actively engaged, a power or ground wire may not be making good contact or may be loose or broken. Additionally, there is a low probability that both relays may have failed.

If the switch/relay status is in disagreement, then one may have failed or is not installed correctly. In this case, the machine will be inoperable.

FAULT CODES

Refer to Table 6-15 for more fault code information

- **0039** - SkyGuard switch activation fault
- **2563** - SkyGuard switch disagreement fault

Table 4-2. SkyGuard Function Table

Drive Forward	Drive Reverse	Steer	Swing	Boom Lift Up	Boom Lift Down	Boom Tele Out	Boom Tele In	Jib Lift	Jib Swing	Basket Level	Basket Rotate
R*/C**	R	C	R	R	C	R	C	C	C	C	C
R = Indicates Reversal is Activated											
C = Indicates Cutout is Activated											
*DOS (Drive Orientation System) Enabled											
**DOS Not Enabled, Machine is driving straight without steering, and any other hydraulic function is active											

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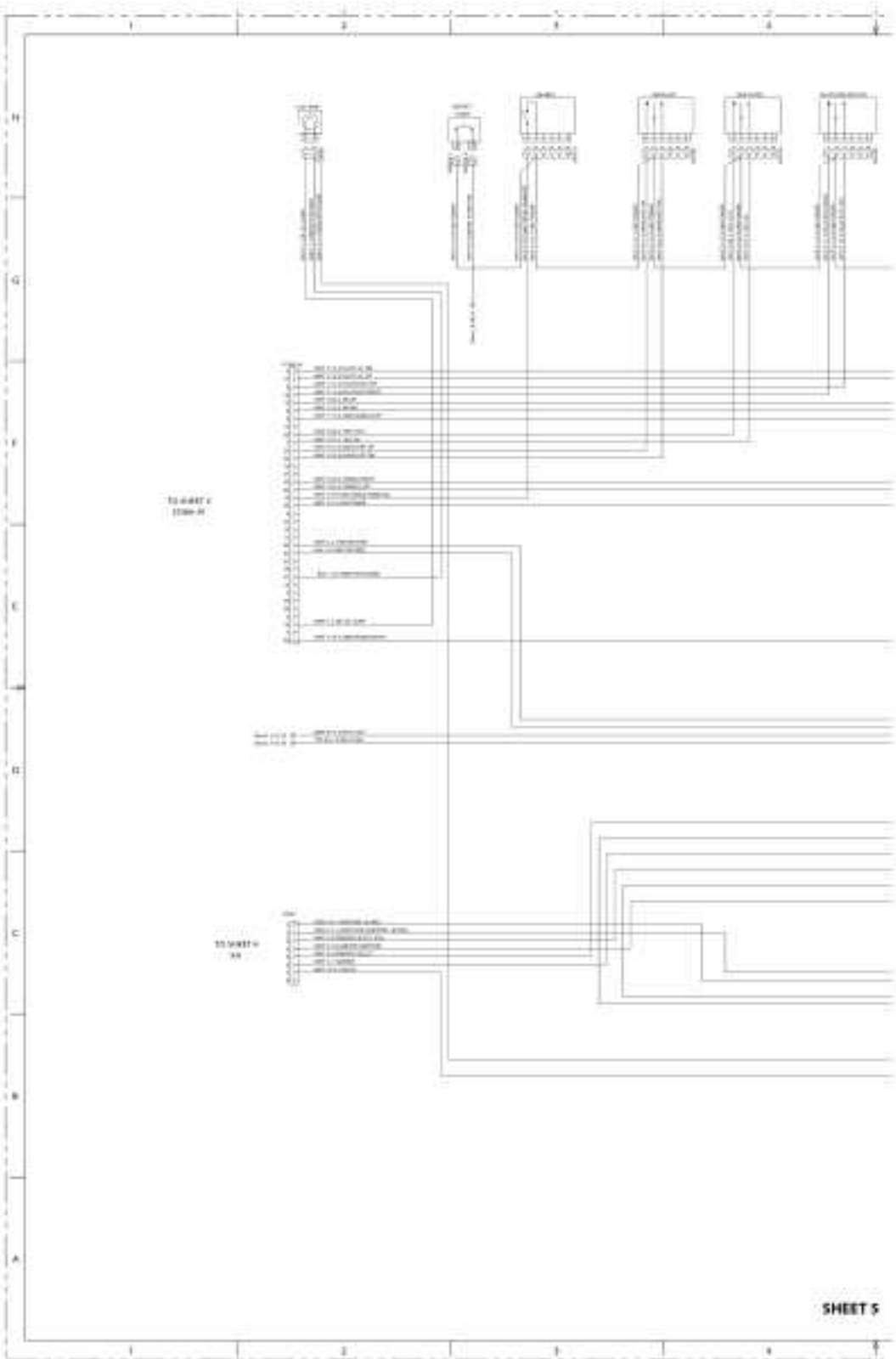


Figure 7-71. Electrical Schematic - Sheet 7 of 16

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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 1250AJP Rotary Angle Sensors are examples of components with the M12 connector system.





AMP JUNIOR TIMER

This type of connector uses back-seals for 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 EMR2 engine control module from Deutz employs this connector system (for example).



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SECTION 5. BASIC HYDRAULIC INFORMATION & SCHEMATICS

5.1 LUBRICATING O-RINGS IN THE HYDRAULIC SYSTEM

When assembling connectors in the hydraulic that use o-ring fittings, it is necessary to lubricate all fittings with hydraulic oil prior to assembly. To lubricate the fittings, use one of the following procedures.

NOTE: *All o-ring fittings must be pre-lubricated with hydraulic oil prior to assembly.*

Cup and Brush

The following is needed to correctly oil the o-ring in this manner:

- A small container for hydraulic oil
- Small paint brush



1. Hold the fitting in one hand while using the brush with the other hand to dip into the container. Remove excess hydraulic oil from the brush so an even film of oil is applied on the o-ring.



2. Holding the fitting over the hydraulic oil container, brush an even film of oil around the entire o-ring in the fitting, making sure the entire o-ring is completely saturated.



3. Turn the o-ring on the other side of the fitting and repeat the previous step, ensuring the entire o-ring is coated with hydraulic oil.



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