An Oshkosh Corporation Company

Service and Maintenance Manual

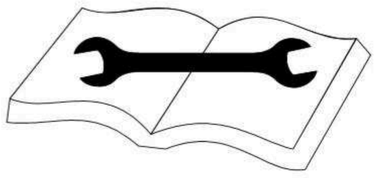
Model

18RS
18RSJ

3121284

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ANSI



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SECTION 1. SPECIFICATIONS

1.1 OPERATING SPECIFICATIONS

Operating Specifications

Table 1-1. Operating Specifications

Capacity: Unrestricted:	500 lbs. (227 kg)
Maximum Travel Grade, stowed Position (Gradeability)	45%
Maximum Travel Grade, stowed Position (Side Slope)	5°
Drive Speed - Stowed	2.6 mph (4.1 kph)
Elevated Drive Speed	0.75 mph (1.2 kph)
Gross Machine Weight - Approximate	16100 lbs. (7303 TBD kg)
Ground Bearing Pressure	76 psi (5.34 kg/cm^2)
System Voltage	12VDC
Maximum Main Relief Hyd. Pressure	3000 psi (207 Bar)

Dimensional Data

Table 1-2. Dimensional Data

Turning Radius (Inside)	11' 8" (3.56 m)
Turning Radius (Outside)	21' 5" (6.56 m)
Machine Height (stowed)	8' 2" (2.5 m)
Machine Height (storage)	8' 2.5" (2.5 m)
Machine Length (stowed)	30' 10" (9.4 m)
Machine Length (storage)	30' 10" (9.4 m)
Horizontal Reach	43' (13.1 m)
Machine Width (Normal Operation)	8' 2.5" (2.5 m)
Machine Width (Shipping)	7' 5" (2.3 m)
Wheel Base	9' (2.7 m)
Platform Height	60' 5" (18.34 m)
Ground Clearance	9" (0.24 m)

Capacities

Table 1-3. Capacities

Hydraulic Oil Tank (to Full Level)	32.5 Gal. (136.3 L)
Drive Hub*	20.5 oz. (0.6 L)
*Drive hubs should be one half full of lubricant.	

Tires

Table 1-4. Tires

Size	31S/55D20
Maximum Tire Load	9,650 lbs. (4377 kg)
Type	Foam Filled

Engine Data

Table 1-5. Deutz D2011

Type	Diesel
Number of Cylinders	4
Bore	3.7 in. (94 mm)
Stroke	4.4 in. (112 mm)
Total Displacement	189.6 cu. in. (3.1 L)
Compression Ratio	19.0:1
Firing Order	1-3-4-2
Output	36.4 hp (48.8 kW)
Low Idle RPM	1200 ± 50
High Idle RPM	2500 ± 50
Average Fuel Consumption	0.52 gph (1.97 Lph)

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Table 6-6. Fault Code Troubleshooting Information

Help Message	DTC	Condition Producing DTC	Control System Response or Machine Condition	Corrective Action/ Operational Requirement for Function Movement and/or to Clear Fault
EVERYTHING OK or GROUND MODE OK	001[1]	The platform station (EVERYTHING OK) or ground station (GROUND MODE OK) is selected and the system detects no problems exist.	No response required.	-
RUNNING AT CUTBACK – OUT OF TRANSPORT POSITION	0010[1]	Boom Elevation Switch #1 shows boom elevated out of transport position or Boom Elevation Switch #2 shows boom elevated out of transport position	Machine is considered Out Of Transport Position	Lower boom into transport position
FSW OPEN	0011[1]	Machine is in Platform Mode Drive/Steer or Boom function control is activated when Footswitch not engaged	Machine is not allowed to enter the Machine Enabled state	Release controls, Engage Footswitch and reactivate Drive/Steer and/or Boom function control
RUNNING AT CREEP - CREEP SWITCH OPEN	0012[1]	Machine is in Platform Mode Platform creep switch is turned on	Creep Mode is active	Turn Platform creep switch off
RUNNING AT CREEP - TILTED AND ABOVE ELEVATION	0013[1]	Fault RUNNING AT CREEP - CREEP SWITCH OPEN (DTC 0012) is not active Machine is Out Of Transport Position Machine chassis is considered Tilted	Creep Mode is active	Lower Machine and place on firm, level surface
RUNNING AT CREEP – PLATFORM STOWED	0030[1]	Platform is in Stowed Position	Lift Down and Level Down function speed maximums are limited to Ground Creep	Raise Platform from Stowed Position
APU ACTIVE	0035	Emergency Descent Mode is active	Operation specified in Emergency Descent Mode section	Stop using Emergency Descent Mode
KEYSWITCH FAULTY	212	Both Ground and Platform Keyswitches are energized at the same time	The Control System assumes a station selection of Ground	On Analyzer under DIAGNOSTICS-->SYSTEM-->PLATFORM SELECT (and GROUND SELECT), activate Platform and Ground keyswitches to determine fault location; then troubleshoot wiring and/or keyswitch.
FSW FAULTY	213	The ground footswitch input and platform footswitch input have been both engaged or disengaged for a time period greater than or equal to 1 second	Machine does not allow any functions	Use the Emergency Stop Switch to cycle power
FUNCTION PROBLEM - STEER LEFT PERMANENTLY SELECTED	224	The machine is in Platform mode and the Steer Left switch is energized at startup	Machine enters Creep Mode and Steer Left and Right are prohibited	Enable machine and on Analyzer under DIAGNOSTICS-->DRIVE/STEER-->STEER DEMAND, observe Steer Left and Right commands; open Platform box and troubleshoot wiring or replace joystick.

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7.4 ELECTRICAL SCHEMATICS

ELECTRICAL SCHEMATIC

SHEET 2: PLATFORM BOX

CONSOLE BOX HARNESS WITHOUT SKYGUARD
RS SERIES L.S.S HARNESS

SHEET 3: PLATFORM & BOOM COMPONENTS

RS SERIES L.S.S PWR HARNESS
LIFT DUMP CABLE
UPPER BOOM CABLE
LOWER BOOM CABLE
A/C UPPER BOOM CABLE
A/C LOWER BOOM CABLE
8/5 UPPER BOOM CABLE
8/5 LOWER BOOM CABLE
TELESCOPE PROX CABLE

SHEET 4: TURNTABLE COMPONENTS

TURNTABLE HARNESS
BECON HARNESS
TELE LIMIT SWITCH CABLE LOWER
TELE LIMIT SWITCH CABLE UPPER

SHEET 5: GROUND PANEL AND CONTROL VALVE

GROUND PANEL HARNESS
VALVE BANK HARNESS
JIB VALVE HARNESS
CHASSIS HARNESS
CHASSIS HARNESS

SHEET 6: ENGINE (DEUTZ DIESEL)

ENGINE HARNESS

SHEET 7: PLATFORM BOX

CONSOLE BOX HARNESS WITH SKYGUARD AND 1 CELL LSS
SKYGUARD SENSOR HARNESS

SHEET 8: SKYGUARD W/ BEACON

1001129236-F
MAF03120

Figure 7-23. Electrical Schematic - Sheet 1 of 14

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Exclusions

A limited number of connectors do not benefit from dielectric grease, or may be permanently damaged by application. Dielectric grease may not be required in properly sealed enclosures.

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

AMP Junior Timer

These connectors use 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 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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3.17 COUNTERWEIGHT

If the counterweight has been removed, ensure the retaining bolts are torqued to the proper value as shown in Figure 3-29., Counterweight Bolt Torque.

NOTE: *The left counterweight weighs approximately 1118 lbs (507 kg) and the right counterweight weighs approximately 1118 lbs (507 kg). Actual weight is stamped on the counterweight.*

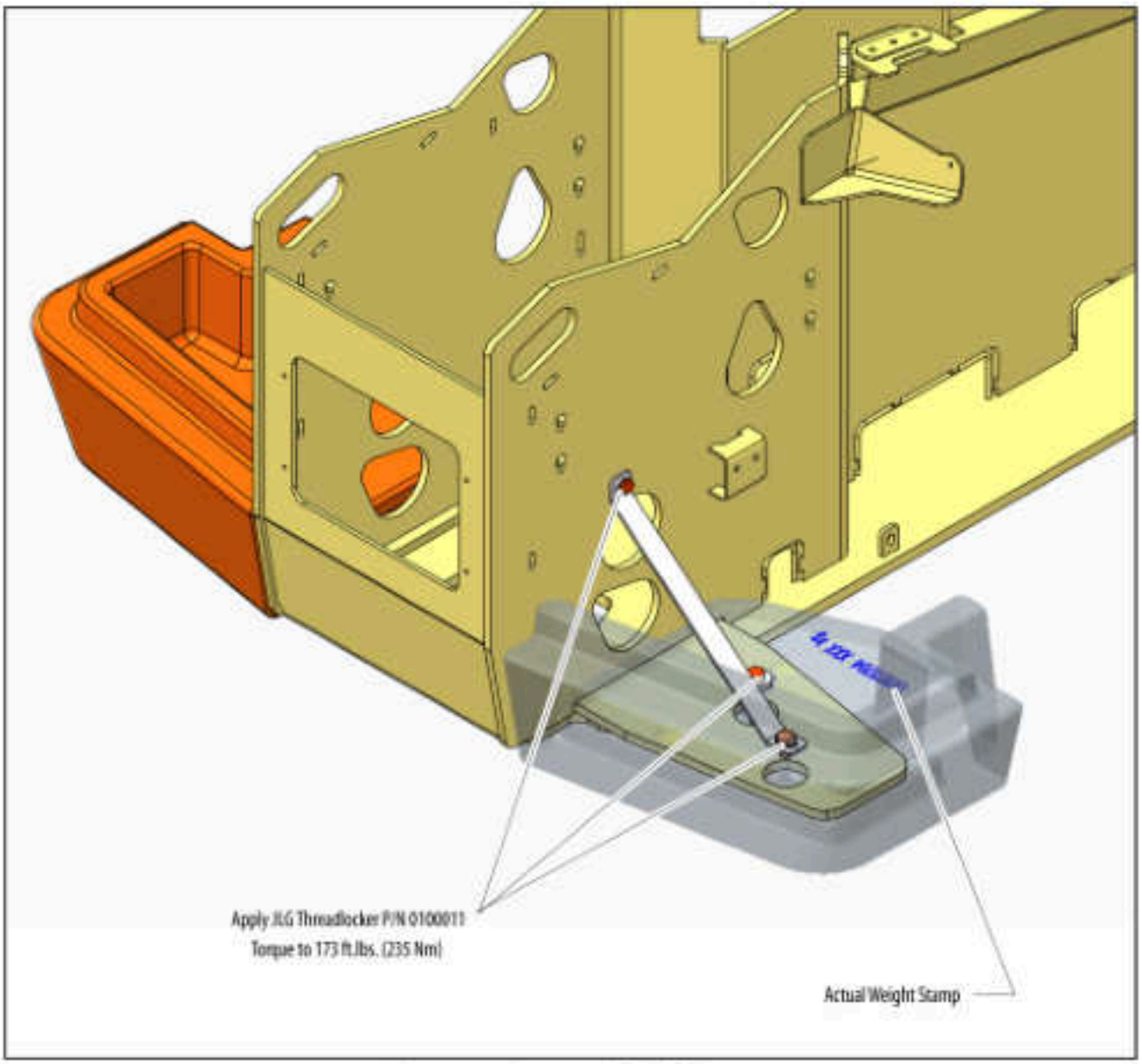


Figure 3-29. Counterweight Bolt Torque

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