An Oshkosh Corporation Company

Service & Maintenance Manual

Models

1930ES
2030ES
2630ES
2646ES
3246ES

3121166

October 3, 2012

ANSI

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1.5 CYLINDER SPECIFICATIONS

Table 1-15. Cylinder Specifications

Description	1930ES	2030ES	2630ES	2646ES	3246ES
Lift Cylinder Bore	2.8 in (7.1 cm)	3.1 in (7.9 cm)	3.1 in (7.9 cm)	3.9 in (9.9 cm)	3.9 in (9.9 cm)
Lift Cylinder Stroke	43.2 in (108 cm)	48 in (122 cm)	48 in (122 cm)	44.9 in (114 cm)	56.8 in (144 cm)
Lift Cylinder Rod Diameter	1.8 in (4.5 cm)	2.1 in (5.5 cm)	2.1 in (5.5 cm)	2.4 in (6 cm)	2.4 in (6 cm)
Steer Cylinder (Stroke)	6.3 in (16 cm)	6.3 in (16 cm)	6.3 in (16 cm)	6.1 in (15.6 cm)	6.1 in (15.6 cm)

1.6 MAJOR COMPONENT WEIGHTS

Table 1-16. Major Component Weights

Component	1930ES	2030ES	2630ES	2646ES	3246ES
Platform	100 lbs (45 kg)	133 lbs (61 kg)		176 lbs (80 kg)	
Manual Platform Extension	45 lbs (20 kg)				
Arm Assembly - (Includes Lift Cylinder)	620 lbs (281 kg)	939 lbs (426 kg)	1,213 lbs (550 kg)	1,645 lbs (746 kg)	
Chassis w/Wheel/Tire and Drive Assembly	1,067 lbs (484 kg)	1,764 lbs (800 kg)		1,554 lbs (705 kg)	

1.7 CRITICAL STABILITY WEIGHTS

⚠ WARNING

DO NOT REPLACE ITEMS CRITICAL TO STABILITY, SUCH AS BATTERIES OR SOLID TIRES, WITH ITEMS OF DIFFERENT-WEIGHT OR SPECIFICATION. DO NOT MODIFY UNIT IN ANY WAY TO AFFECT STABILITY.

Table 1-17. Critical Stability Weights

Component	1930 ES	2030ES	2630ES	2646ES	3246ES
Counterweight(s) (CE, AUS)	582 lbs (264 kg)	721 lbs (327 kg)		1592 lbs (722 kg)	1956 lbs (887 kg)
Counterweight (ANSI, CSA, JPN)	N/A	N/A	721 lbs (327 kg)	589 lbs (267 kg)	
Wheel and Tire Assembly (each)	22 lbs (9.8 kg)	42 lbs (19 kg)			
Wheel/Tire and Drive Assembly (each)	117 lbs (53 kg)	162 lbs (73.4 kg)			
Lift Cylinder	176 lbs (80 kg)	205 lbs (93 kg)		263 lbs (119 kg)	283 lbs (128 kg)
Batteries: (each) 220 Amp 220 Amp (used with Inverter/Charger) 245 Amp	 60 lbs (27 kg) 66 lbs (30 kg) N/A	 60 lbs (27 kg) 66 lbs (30 kg) 70 lbs (32 kg)			

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Table 5-2. Flash Code Listing

FLASH CODE	HELP MESSAGE	CAUSE	POSSIBLE RESOLVE
9 3	LSS HAS NOT BEEN CALIBRATED	9-3 Flash Code The Load Sensing System's Calibration EEPROM for Empty Platform Load is set to Never Set (signature implanted by the In-Circuit Test Fixture) AND [Machine Setup's LOAD is set to 1=CUTOUT PLT OR 2=CUTOUT ALL]. Retained until Calibration EEPROM is over-written by a valid calibration. Vehicle assumed to be Overloaded.	Calibrate the Load Sensing System using the calibration procedure to clear the message.
9 9	LSS INTERNAL ERROR – PIN EXCITATION	The Excitation Voltage for the Load Sensors < 4.25V. 9-9 Flash Code LSS Module Message – Status Message (0x81) is reporting "INTERNAL ERROR – PIN EXCITATION < 4.25V" AND [Machine Setup's LOAD is set to 1=CUTOUT PLT OR 2=CUTOUT ALL]. Retained until power is re-cycled. Vehicle assumed to be Overloaded.	The sensors may be excessively loading the Excitation Supply due to wiring damage, or the Load Sensing System Module may have hardware difficulty.
9 9	LSS INTERNAL ERROR – DRDY MISSING FROM A/D	The DRDY Interrupt from the Load Sensing System Module's A/D Converter is missing. 9-9 Flash Code LSS Module Message – Status Message (0x81) is reporting "INTERNAL ERROR – DRDY INTERRUPT FROM A/D" AND [Machine Setup's LOAD is set to 1=CUTOUT PLT OR 2=CUTOUT ALL]. Retained until power is re-cycled. Vehicle assumed to be Overloaded.	This may indicate Load Sensing System Module hardware difficulty.
9 9	POWER MODULE FAILURE: PERSONALITY RANGE ERROR	The Power Module detected an out-of-range or corrupt personality setting. 9-9 Flash Code The Power Module is reporting a "Configuration Range" Fault Code (11d) OR a "Configuration CRC" Fault Code (12d) OR a "Motor Setup" Fault Code (13d). Retained until power is re-cycled.	Reset control system Personalities to default settings to clear difficulty.
9 9	POWER MODULE FAILURE: INTERNAL ERROR	The Power Module detected an internal error via self-test. 9-9 Flash Code The Power Module is reporting a "Two Direction" Fault Code (4d) OR a "Sequence" Fault Code (5d) OR a "CAN-bus Input" Fault Code (6d) OR a "12V Supply Detection" Fault Code (18d) OR a "System Monitor Activated" Fault Code (24d). Retained until power is re-cycled.	Re-cycle power to clear difficulty.
9 9	POWER MODULE FAILURE: CHECK POWER CIRCUITS OR MOSFET SHORT CIRCUIT	The Power Module detected an error in the Power Wiring for the Drive or Pump. Alternately, the Power Module has failed a self-test. 9-9 Flash Code The Power Module is reporting an "Armature MOSFET Short Circuit" Fault Code (17d) OR an "Armature MOSFET's Off" Fault Code (19d) OR an "Armature MOSFET's On" Fault Code (20d) OR an "Armature Pullup MOSFET Short Circuit" Fault Code (21d). Retained until power is re-cycled.	Check wiring and motors or replace the Power Module. Re-cycle power to clear difficulty.

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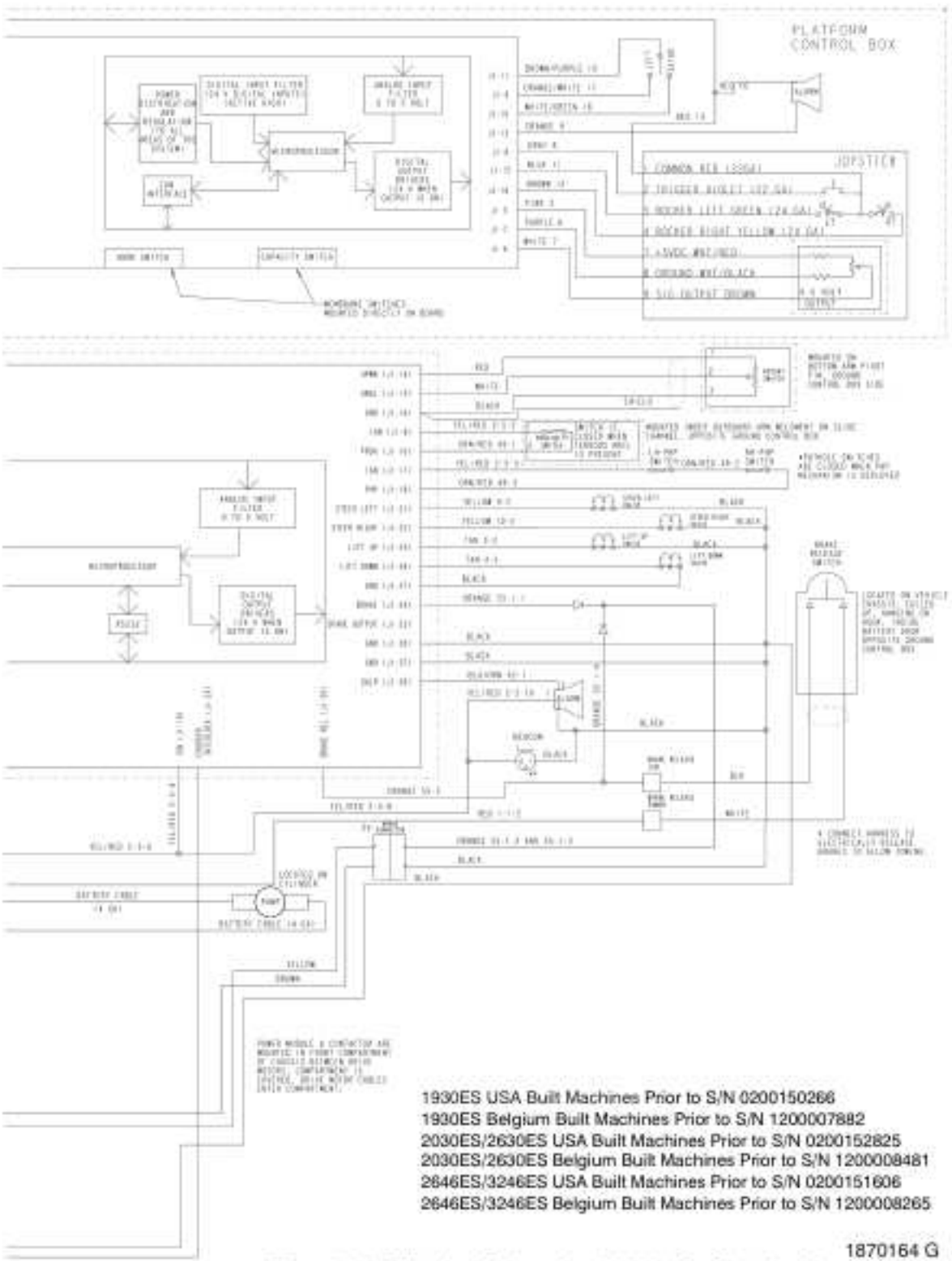


Figure 7-19. Electrical Schematic - 1870164 G - Sheet 2 of 2

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Pothole Switch Replacement (Service Kit - 1001109345)

NOTE: *Omit step 1 following if switches are the outboard of frame rails design.*

1. Mount the new switches to the new mounting plates using the supplied screws, nuts and washers. Tighten switch securely to the mounting plate. **Note there is a right side and left side mounting plate, the plate mounting holes will mount towards the center of the machine on both sides.**

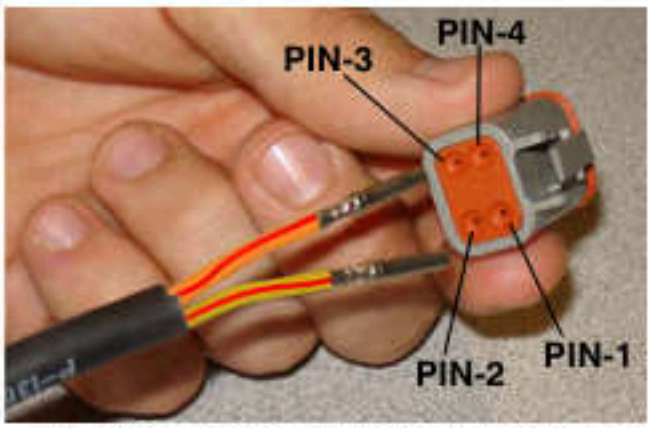


2. Strip approximately 1/4" of insulation off of the wires of the existing wire harness. Using a crimping tool install a new socket terminal onto each of the stripped ends of the existing wiring harness wires.



3. Remove the wedge lock (orange) from the front end of the new connector, then load the socket terminals into the back of the connector.

NOTE: *Reference the chart below for proper pin loading.*

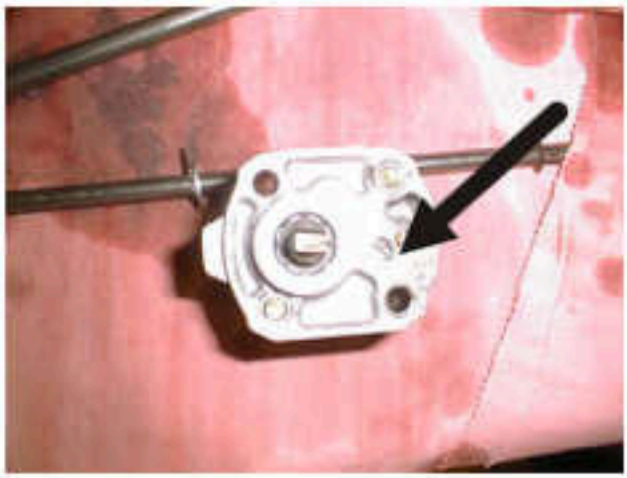


4. With the socket terminals properly installed, re-insert the wedge lock (orange) back into the socket to lock the socket terminals in place.

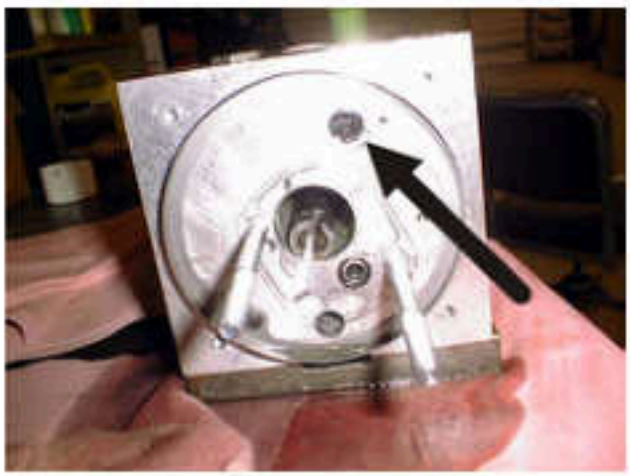


	EXISTING SWITCH			NEW SWITCH
	TELEMECHANIQUE	HONEYWELL		TELEMECHANIQUE
IF EXISTING SWITCH IS WIRED TO PINS:	13 & 14	3 & 4	NEW CONNECTOR SHOULD BE LOADED TO PINS:	1 & 4
	21 & 22	1 & 2		2 & 3

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NOTE: *Be sure to remove and discard the plastic plug at the oil inlet on the new pump before installing.*



14. Check oring on valve block and replace if necessary before installing the new pump.

Motor Removal



1. Remove the four bolts attaching the motor to the valve.



2. Pull motor from valve.
3. Once all maintenance is performed and lift cylinder assembly is reinstalled on the machine, remove fill plug and refill tank with proper grade of oil by using a funnel. Fill until oil weeps out of opening.
4. Replace plug and torque to 40 ft. lbs.

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