An Oshkosh Corporation Company

Service & Maintenance Manual

Liftlux

Models
153-12
180-12

Prior to S/N 20463
except S/N 18432 & 19930

3121310

June 27, 2008

ISO9001 REGISTERED COMPANY

UKAS QUALITY MANAGEMENT 015

An Oshkosh Corporation Company

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SECTION 1. SPECIFICATIONS

1.1 OPERATING SPECIFICATIONS

Table 1-1. Operating Specifications

Description	153-12	180-12
Maximum Working Height	17.3 m (56.8 ft)	20 m (65.6 ft)
Maximum Platform Height	15.3 m (50.2 ft)	18 m (59 ft)
Turning Radius: Inside Outside	1.6 m (5.2 ft) 4.1 m (13.5 ft)	
Wheelbase	2.9 m (9.5 ft)	
Max Work Load (Capacity) - Main Platform/Platform Extension	500 kg (1100 lbs)	
Max Number of Persons	2	
Tools and Equipment	340 kg (749.6 lbs)	
Allowable Manual Force	400 N (90 lb ft)	
Tilt Sensor Setting	3°	2°
Maximum Operating Wind Speed	0 m/s (0 mph)	
Gross Machine Weight (Approximate)	7200 kg (15,873 lbs)	7700 kg (16,976 lbs)
Drive Speed (slow)	0.7 km/h (.4 mph)	
Drive Speed (fast)	2.5 km/h (1.6 mph)	
Lift Speed (platform empty)	75 sec	80 sec
Lowering Speed (platform empty)	50 sec	60 sec
Max Operating Hydraulic Pressure	185 bar (2683 psi)	195 bar (2828 psi)
Max. Ground Bearing Pressure	7.1 kg/cm² (101 psi)	8.1 kg/cm² (115 psi)
Max. Tire Load	3700 kg (8157 lbs)	3800 kg (8378 lbs)
Electrical System Voltage	48 V	
Gradeability (Machine Stowed)	20 %	

1.2 DIMENSIONAL DATA

Table 1-2. Dimensional Data

Description	153-12	180-12
Transport Height (rails down)	2.5 m (8.2 ft)	2.7 m (8.9 ft)
Platform dimensions (extension retracted)	4 x 1.2 m (13 x 4 ft)	
Platform dimensions (extension extended)	5.4m x 1.2 m (18 x 4 ft)	
Transport Dimensions	4 x 1.2 x 2.5 m (13.5 x 4 x 8.2 ft)	4 x 1.2 x 2.7 m (13.5 x 4 x 8.9 ft)

1.3 CAPACITIES

Table 1-3. Capacities

Hydraulic Tank	55 L (14.5 gal)

1.4 TIRES

Table 1-4. Tire Specifications

Description	153-12	180-12
Size	630 x 460 x 220 (solid rubber)	
Wheel Lug Nut Torque: Front Axle: Rear Axle:	480 Nm 354 lb ft) 480 Nm (354 lb ft)	
Bolt Size	M18 x 1.5	
Max Load	2.9 t	3 t

NOTE: *JLG recommends that once any locknut is removed from the machine it is discarded and replaced with a new one.*

NOTE: *When maintenance becomes necessary or a fastener has loosened, refer to Figure 1-2., Torque Chart (SAE Fasteners - Sheet 1 of 3) through Figure 1-7., Torque Chart (METRIC Fasteners - Sheet 3 of 3) to determine proper torque value.*

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Service - Voltage Reading

⚠ CAUTION

DO NOT PIERCE WIRE INSULATION TO TAKE VOLTAGE READINGS.

It has been common practice in electrical troubleshooting to probe wires by piercing the insulation with a sharp point. This practice should be discouraged when dealing with the AMPSEAL plug assembly, or any other sealed connector system. The resulting pinholes in the insulation will allow moisture to invade the system by traveling along the wire strands. This nullifies the effectiveness of the connector seals and could result in system failure.

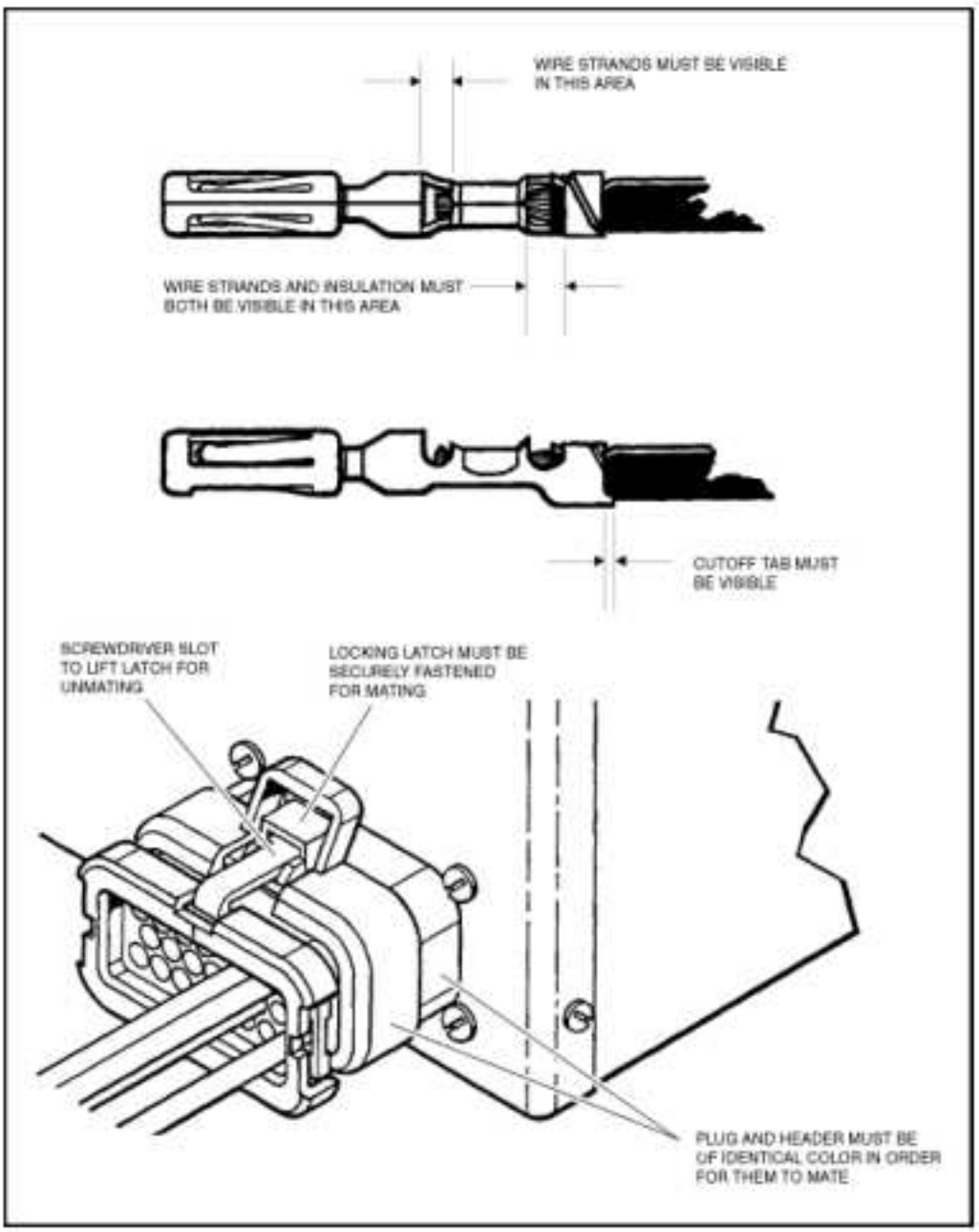


Figure 6-11. Connector Installation

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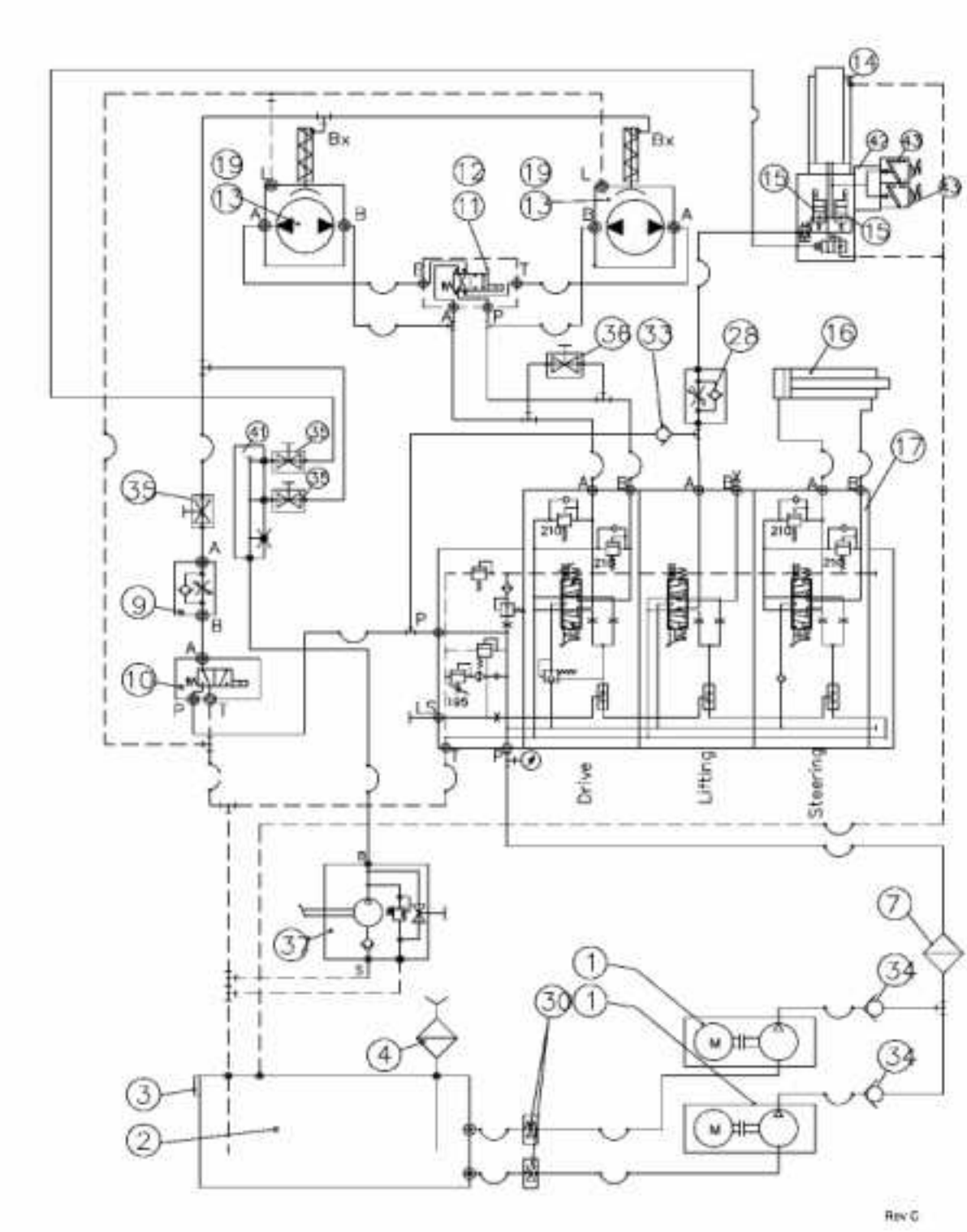


Figure 6-29. Hydraulic Schematic - 180-12

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2.4 OPERATOR MAINTENANCE

⚠ WARNING

TO AVOID PERSONAL INJURY, USE SAFETY PROP FOR ALL MAINTENANCE REQUIRING PLATFORM TO BE ELEVATED.

NOTE: *Be sure to lubricate like item on each side.*

NOTE: *Recommended lubricating intervals are based on machine operations under normal conditions. For machines used in multi-shift operations and/or exposed to hostile environments or conditions, lubrication frequencies must be increased accordingly.*

Operate hydraulic functions through one complete cycle before checking hydraulic oil level in tank. Oil should be visible in ADD sight window on hydraulic tank. If oil is not visible, add oil until oil is visible in both ADD and FULL sight windows on tank. Do not overfill tank.



1. Arm Pins
2. Lower Slide Pads
3. Upper Slide Pads
4. Hydraulic Oil Tank
5. Lift Cylinder Pin
6. Tie Rod Ends
7. Spindles

Figure 2-1. Lubrication Diagram

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SECTION 5. JLG CONTROL SYSTEM

5.1 OPERATION AND TECHNICAL DATA ON CONTROL CARD COMPLEX 2

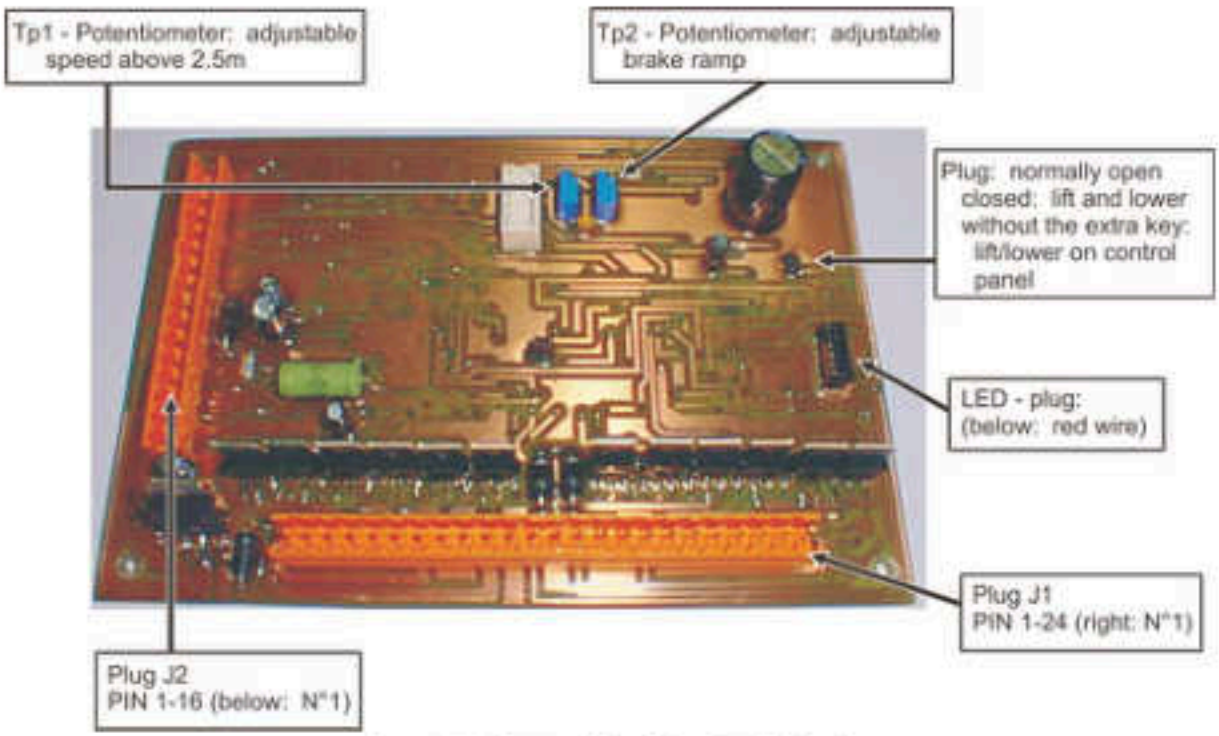


Figure 5-1. Control Card Complex 2 Board

General Description of Components and Functions

- The system is designed solely for the use and control of Scissor Lifts with electrically powered multiple hydraulic pumps, as well as for the following functions without limits to the working height.
- The control system is based on the control card "Complex 2", which is fitted in the main terminal box in the side compartment. The safest location for operating the machine is on the platform. However, the control panel can also be plugged into the lower control station in the hydraulic compartment in case of an emergency.
- An **emergency stop** is positioned on the platform control console (**red button**). At ground level, an emergency stop switch is located on the ground control panel. When activated, the signals of the control board will be cut off instantly and all functions will be stopped, except the functions; emergency descent and emergency lifting (at ground level). The **Battery Isolator Switch** on the ground control panel acts as an isolator switch for the batteries and cuts off the power supply.
- The machine is equipped with a powerful horn to attract attention. The horn can be activated from the control panel. While driving, a constant acoustic signal - digisound - is activated as an additional motion alarm.
- The safe use of the Elevating Work Platform (EWP) is influenced by certain limits. To guarantee adherance to these limits various limits, limit switches are fitted to the machine which will cut off the functions when reaching the critical marks:

  a. **Tilt Switch** - cuts off lifting, driving, and steering once the platform is raised above 2.5 m (8 ft) and the critical mark (3° inclination for the 153-12 and 2° for the 180-12) is reached. Only lowering will then be possible. When the platform is completely lowered, the machine can perfom at any incline level in order to make the loading/unloading and drive of the machine possible. (**S 2.5 m limit switch**).

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