An Oshkosh Corporation Company

Service and Maintenance Manual

Model

10MSP
Vertical Lift

3121228

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ANSI

AS/NZS

An Oshkosh Truck Corporation Company

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1.1 CAPACITIES

System Voltage

- 24 V DC

Hydraulic System

- 5 qts U.S. (4.7 L)

Drive Motor Torque Hub (Gear Oil)

- 10 oz (296 cc)

1.2 COMPONENT DATA

Hydraulic Pump/Pump Motor Assembly

- **Pump Motor** - 24 V DC motor, Standard Duty
- **Pump Displacement** - 0.098 cu. in./rev. (1.6cc/rev.)
- **Pump Output** (Max.) - 2.25 gpm @ 1400 psi @ 24 V and 105 A @ 43 centistrokes (200 SSU)
- **Reservoir Capacity** - 1 gal (3.78 L)

Rear Wheel Drive Motors

- **Drive Motors** - 24 Volt DC, Variable
- **Torque Hub** - 3500 in.lb. (395.5 Nm) - Continuous Output
  7000 in.lb. (791 Nm) - Intermittent Output
  30.68:1 Gear Ratio
- **Brakes** - Friction Disk - Spring Applied - Electrically Released

Batteries/Battery Charger

- **Batteries** - 6 V DC (4 in series @ 24 V)
  12 V DC (2 in series @ 24 V) (if equipped)
- **Nominal Capacity** - 12 V - 100 Amp Hour @ 20 Hour
  6 V - 210 Amp Hour @ 20 Hour
- **Type** - M2 Marine Combination (AGM)/Valve Regulated/ Leak Proof/NonCorrosive/Maintenance Free
- **Weight** - 12V - 65.7 lb (29.8 kg) per battery
  6V - 64 lb (29 kg) per battery

NOTICE

JLG MACHINES EQUIPPED WITH DELTA Q BATTERY CHARGERS ARE DESIGNED FOR THE BEST PERFORMANCE WITH OEM FACTORY APPROVED BATTERIES. APPROVED JLG REPLACEMENT BATTERIES ARE AVAILABLE THROUGH JLG' S AFTERMARKET PARTS DISTRIBUTION CENTERS OR JLG' S AFTERMARKET PROGRAMS. FOR ASSISTANCE WITH PROPER BATTERY REPLACEMENT, PLEASE CONTACT YOUR LOCAL JLG SUPPORT OFFICE.

BATTERIES APPROVED BY JLG HAVE BEEN TESTED FOR COMPATIBILITY WITH THE ALGORITHM PROGRAMMING OF THE DELTA Q BATTERY CHARGER TO OPTIMIZE BATTERY LIFE AND MACHINE CYCLE TIMES. THE USE OF NON APPROVED BATTERIES IN YOUR JLG EQUIPMENT MAY RESULT IN PERFORMANCE ISSUES OR BATTERY CHARGER FAULT CODES. JLG ASSUMES NO RESPONSIBILITY FOR SERVICE OR PERFORMANCE ISSUES ARISING FROM THE USE OF NON APPROVED BATTERIES.

- **Battery Charger** -
  Microprocessor Controlled/SCR Circuit Monitor
  120/240 Volt A.C. Selectable / 50/60 Hz input
  24 volt, 20 amp output - with 2 amp finish
  Reset Circuit Breaker
  Automatic Charge Circuit
  Plug Interlock Circuit

NOTE: *These batteries require approximately five hours to fully charge when drained to 80% discharge (only the RED LEDS on platform console lit).*

1.3 PERFORMANCE DATA

Platform Capacity

Table 1-2. Platform Maximum Capacity

SPECIFICATION	MAXIMUM CAPACITY				MAX. WIND SPEED
	Platform	Manual Material Tray	Powered Material Tray	CarryDeck	
ANSI/CSA	350 lb (160 kg)	250 lb (115 kg)	200 lb (90 kg)	250 lb (115 kg)	28 mph (12 m/s)
CE (Indoor Use Only)					0 m/s
AUS (Indoor Use Only)					0 m/s

NOTE: *Distribute weight evenly in platform and material tray when loading. Reference the capacity decal located on the machines mast cover in the operators platform.*

Maximum Horizontal Manual Side Force

Platform fully extended with maximum load

- **ANSI/CSA**: 100 lb (445 N)
- **CE/AUS/JPN**: 45 lb (200 N)

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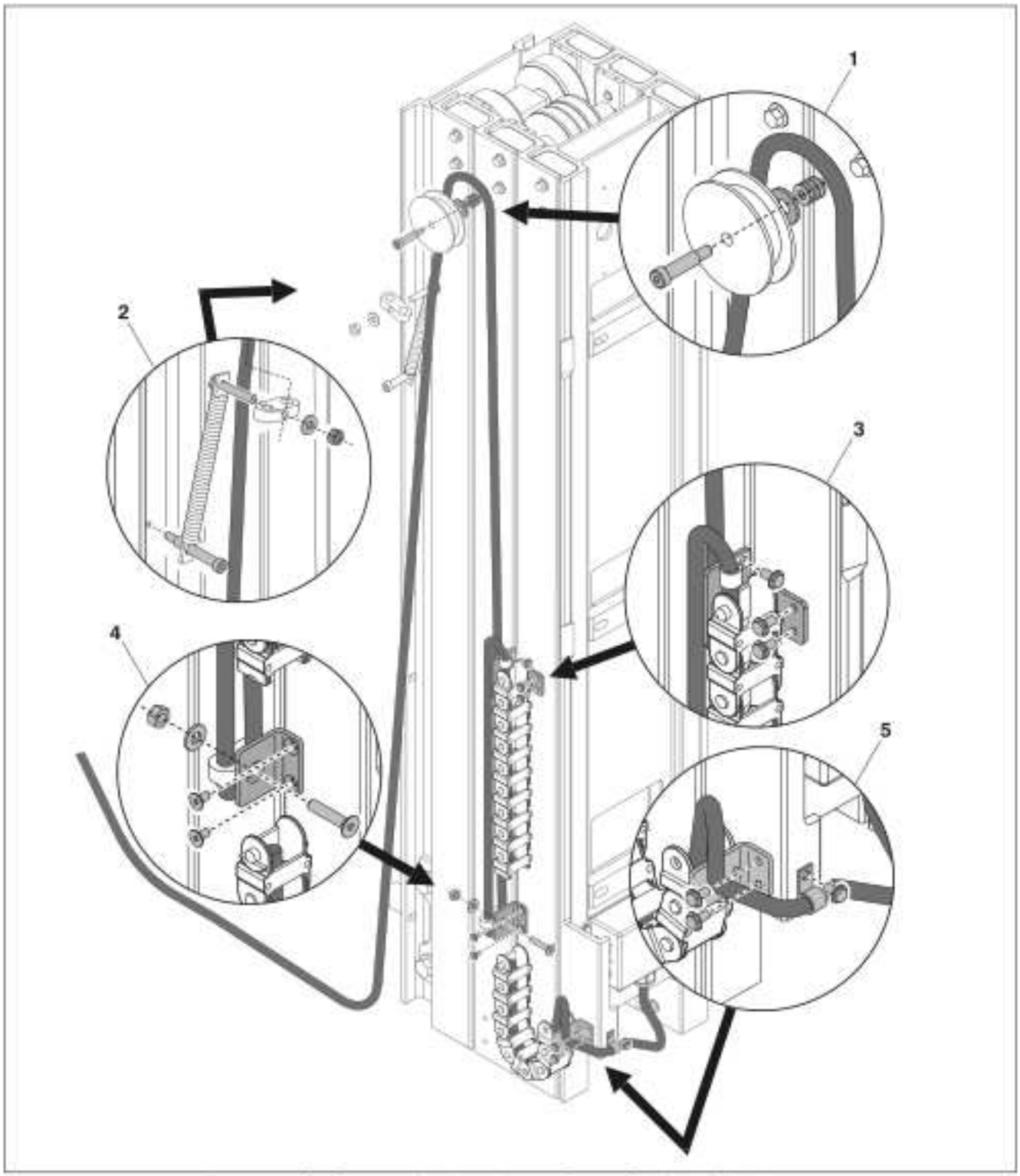


Figure 5-8. Platform Junction Box to Ground Control Station Wiring Harness

1. Harness Sheave Wheel
2. Harness Spring Tensioner
3. Upper Powertrak Bracket
4. Mid Powertrak Bracket (Powertrak Shown Cut-away)
5. Lower Powertrak Bracket

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6.13 HYDRAULIC LEAK TROUBLESHOOTING

Miscellaneous Hydraulic Leak Troubleshooting

Overview of Procedure

This series of steps gives remedies for various areas of the machine where leaks could occur.

Table 6-47. Hydraulic Leak Troubleshooting

STEP	ACTION	SPEC	YES	NO
1.	Oil leaking around the lift cylinder rod.	—	Replace the Seal at the end of the Piston and Cylinder Barrel	—
2.	Oil leaking around the cylinder extend or return line fittings.	—	Tighten or Replace Fittings	—
3.	Oil leaking around the hydraulic lines.	—	Tighten or Replace Hydraulic Lines	—
4.	Oil leaking around the lift down valve.	—	Tighten Cartridge in Pump Case	—
5.	Oil leaking around the (Red) manual descent valve.	—	Replace Lift Down Valve	—
6.	Oil leaking around the material Power Tray (if equipped).	—	Tighten/replace components as required	—
NOTE:	*Do not overtighten the nut on the solenoid in step 5.*			

6.14 BASE FRAME COMPONENTS TROUBLESHOOTING

Caster Wheels Not Operating Freely

Check for These Obvious Conditions First:

- Is machine operating on a smooth, level surface?

Table 6-48. Caster Wheels Not Operating Freely

STEP	ACTION	SPEC	YES	NO
1.	Is the caster rotating freely?	—	Go to Step 2	Lubricate or Replace Caster Housing
2.	Is the wheel spinning freely?	—	Go to Step 3	Lubricate or Replace Wheel
3.	Is debris stuck in the rubber wheel?	—	Remove Debris or Replace Wheel	—

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Voltage Measurement

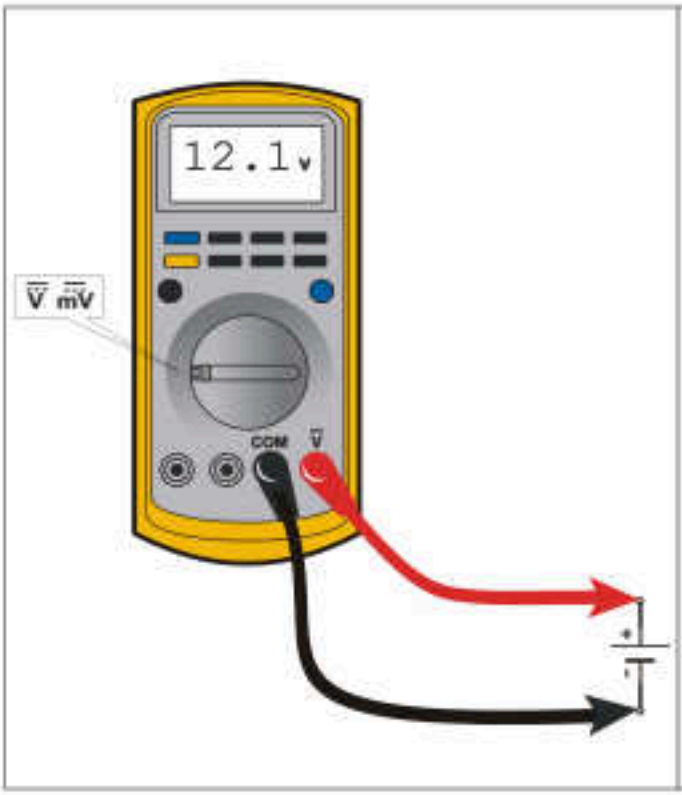


Figure 6-1. Voltage Measurement (DC)

- If meter is not auto ranging, set it to the correct range (see multimeter's operation manual)
- Use firm contact with meter leads

Resistance Measurement

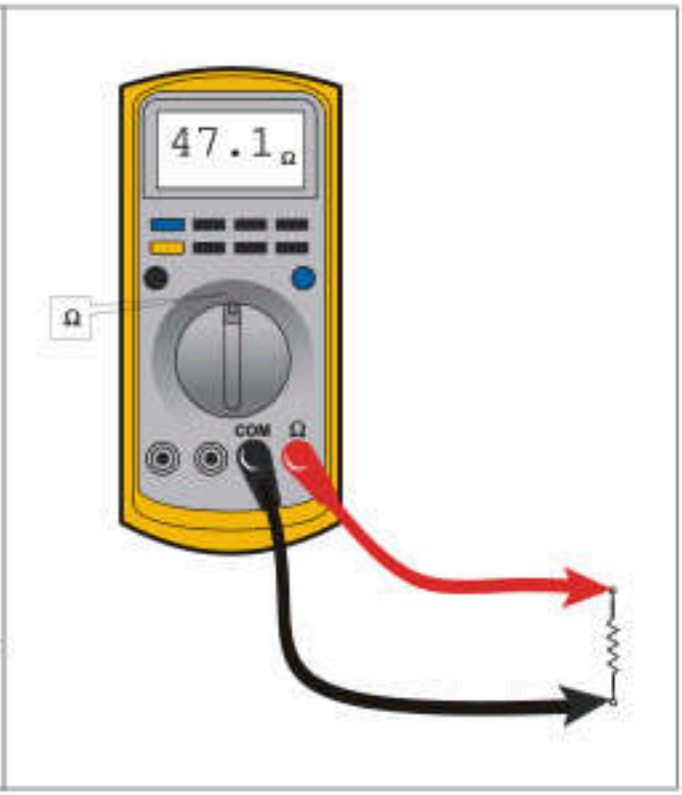


Figure 6-2. Resistance Measurement

- First test meter and leads by touching leads together. Resistance should read a short circuit (very low resistance)
- Circuit power must be turned OFF before testing resistance
- Disconnect component from circuit before testing
- If meter is not auto ranging, set it to the correct range (See multimeter's operation manual)
- Use firm contact with meter leads

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