TEREX®

Service Manual

AL5
AL5 with Tier 4
AL5000

Part No. 116476
Rev B
April 2015

Specifications

Machine Specifications

Total lighting wattage	4 x 1000 watts
Fuel capacities	
Single tank	30 gallons 114 liters
Large tank (option)	60 gallons 227 liters
Tires and wheels	
Tire size	ST205/75D15
Load range	C
Lug nut torque, dry	90 ft-lbs 122 Nm
Lug nut torque, lubricated	67.5 ft-lbs 91.5 Nm

Performance Specifications

Tongue weight, maximum	
With fuel (single tank)	150 lbs 68 kg
With fuel (large tank)	130 lbs 59 kg
Run time	
Single tank	50 hours
Large tank	100 hours

For operational specifications, refer to the Operator's Manual.

Continuous improvement of our products is a Genie policy. Product specifications are subject to change without notice or obligation.

Generator Options

Marathon 8 kW 201CSA5412	
Generator rpm @ full load	60Hz, 1800 rpm
Temperature, ambient maximum	104° F 40° C
Power	8 kW
Marathon 8 kW 201CSA5420	
Generator rpm @ full load	60 Hz, 1800 rpm
Temperature, ambient maximum	104° F 40° C
Power	8 kW
Marathon 12 kW 281CSL1513	
Generator rpm @ full load	60 Hz, 1800 rpm
Temperature, ambient maximum	104° F 40° C
Power	12 kW
Marathon 20 kW 334CSA3028	
Generator rpm @ full load	60 Hz, 1800 rpm
Temperature, ambient maximum	104° F 40° C
Power	20 kW

For operational specifications, refer to the Operator's Manual.

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Scheduled Maintenance Procedures

Maintenance Symbols Legend

Note: The following symbols have been used in this manual to help communicate the intent of the instructions. When one or more of the symbols appear at the beginning of a maintenance procedure, it conveys the meaning below.

Indicates that tools will be required to perform this procedure.

Indicates that new parts will be required to perform this procedure.

Indicates that dealer service will be required to perform this procedure.

Indicates that a cold engine will be required to perform this procedure.

Indicates that a warm engine will be required to perform this procedure.

Pre-delivery Preparation Report

The pre-delivery preparation report contains checklists for each type of scheduled inspection.

Make copies for each inspection. Store completed forms as required.

Maintenance Schedule

The *Scheduled Maintenance Procedures* section and the *Maintenance Inspection Report* have been divided into subsections. Use the following chart to determine which group(s) of procedures are required to perform a scheduled inspection.

Inspection	Checklist
Daily or every 8 hours	A
Quarterly or every 250 hours	A + B
Semi-annually or every 500 hours	A + B + C
Annually or every 1000 hours	A + B + C + D
Two-year or every 2000 hours	A + B + C + D + E

Maintenance Inspection Report

The maintenance inspection report contains checklists for each type of scheduled inspection.

Make copies of the *Maintenance Inspection Repor*t to use for each inspection. Maintain completed forms for a minimum of 4 years or in compliance with your employer, jobsite and governmental regulations and requirements.

A-11
Perform Engine Maintenance - Kubota

Engine specifications require that this procedure be performed every 100 hours.

- Check fuel lines and clamps

Required maintenance procedures and additional engine information is available in the Kubota D1105-E and V1505-E Operator's Manual (Kubota 16683-89169 part number)

Kubota D-1105 and V-1505 Operator's Manual	
Genie part number	893020

A-12
Perform Engine Maintenance - Kubota

Engine specifications require that this procedure be performed every 200 hours.

- Change engine oil
- Replace oil filter

Required maintenance procedures and additional engine information is available in the Kubota D1105-E and V1505-E Operator's Manual (Kubota 16683-89169 part number)

Kubota D-1105 and V-1505 Operator's Manual	
Genie part number	893020

Checklist B Procedures

B-7
Lubricate the T-bolt

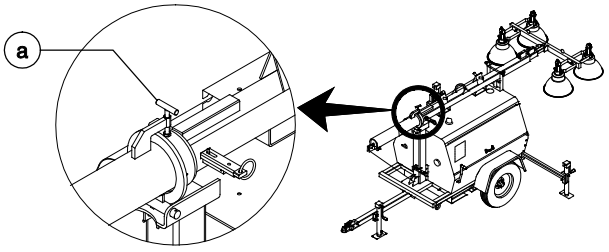
Terex specifications require that this procedure be performed every 250 hours or quarterly, whichever comes first.

Maintaining the T-bolt is essential to good machine performance and safe operation. An unsafe working condition exists if the T-bolt has excessive wear and/or does not operate smoothly, free of hesitation and binding.

1 Using the illustration as a guide, locate the T-bolt at the bottom of the mast assembly. Remove the T-bolt from the mast.

2 Remove all dust, dirt and copper anti-seize from the threaded surfaces of the T-bolt, and apply a few drops of light oil or copper anti-seize lubricant onto the threaded surfaces.

3 Fully install the T-bolt into the mast.



a T-bolt

B-8
Inspect and Adjust the Brakes (if equipped)

Axle specifications require that this procedure be performed every 3000 miles or quarterly, whichever comes first.

Maintaining the axle brakes in good condition is essential to safe operation and good performance. Brakes which are out of adjustment can result in longer stopping distances and excessive brake wear on the towing vehicle. Component damage may also result if problems are not discovered and repaired in a timely fashion.

Note: Perform this procedure with the machine on a firm, level surface with the machine in the stowed position.

1 Select a wheel. Chock the front and rear of the tire at the opposite side of the machine.

2 Loosen the wheel lug nuts. Do not remove them.

3 Place a lifting jack under the axle near the wheel to be removed. Lift the axle until the wheel is off the ground and place a jack stand under the axle. Lower the axle onto the jack stand and remove the wheel.

4 Remove the dust cap from the hub. Remove the cotter pin from the castle nut.

5 Remove the castle nut and washer.

6 Pull the hub off of the spindle. The washer and outer bearing should fall loose from the hub.

D-3
Perform Coupler Maintenance

Coupler specifications require that this procedure be performed annually.

Maintaining the coupler in good condition is essential to safe operation and good performance. Coupler failure could result in a machine tip-over during transport, and component damage may also result if problems are not discovered and repaired in a timely fashion.

1 Check coupler welds and mounting bolt torque. Torque the fasteners to 35 ft-lbs / 48 Nm.

⊙ Result: 1.5 full threads of the locking bolt must be exposed beyond the lock nut after the adjustment.

2 Apply automotive grease to the coupler ball pocket.

3 Oil coupler pivot points using SAE 30 motor oil.

2-2
How to Disassemble the Mast Assembly

1 Remove the mast assembly. See 2-1, How to Remove the Mast Assembly.

2 Remove the T-bolt from the 6 inch / 15 cm round tube assembly.

3 Remove the nut from the bottom of the mast. Gently twist and pull the 6 inch / 15 cm round tube assembly from the mast while pulling the cable free.

⚠ CAUTION Bodily injury hazard. Cables can fray. Always wear adequate hand protection when handling the cable.

NOTICE Component damage hazard. Cables can be damaged if they are kinked or pinched.

Remove the large round plastic bushing from the bottom of the 4 inch / 10 cm mast section.

4 Remove the 2.5 inch / 6 cm washer from the bottom of the mast assembly.

5 Pull the mast lock handle fully away from the mast, then immediately secure the mast lock in position using locking pliers or a clamp on the lock handle to restrain it in position.

6 Remove the fasteners securing the pulley and mast lock to the 4 inch / 10 cm mast section. Set the components to the side.

7 Working at the top of the 4 inch / 10 cm and 3 inch / 7.5 cm sections, use a drill to remove the rivets securing the wear pads in position.

NOTICE Component damage hazard. The mast can be damaged if the drill bit used is too large. Select a drill bit only large enough to remove the mandrel from the center of the rivet.

8 Remove the fasteners securing the pulley and shim to the 3 inch / 7.5 cm mast section. Set the components to the side.

9 Remove the 2 inch / 5 cm mast section from the 3 inch / 7.5 cm mast section.

10 Remove the 3 inch / 7.5 cm mast section from the 4 inch / 10 cm mast section.

Note: For ease of assembly, note the location where each wear pad is removed.

Note: To ensure that the mast extends properly after assembly, carefully measure the cable to confirm that the new cable is the same length as the old one.

Note: During assembly, carefully install the mast cable. Refer to the illustration on the following page for cable routing.

7-2
How to Check a Generator Capacitor

⚠ DANGER High voltage. Exposure to electrical wires or electrical current will result in death or serious injury. Turn off all power when not needed for testing. Use extreme caution when working with high voltage electrical components.

⚠ DANGER Electrocution/burn hazard. Attempting to service the machine before the capacitor is fully discharged will result in death or serious injury.

Note: Be sure the engine has been turned off for at least 15 minutes before servicing the machine. Use a voltmeter to confirm there is no residual voltage in the capacitor.

1 Remove the generator capacitor cover.

2 Using an insulated conductor or a screwdriver with an insulated handle, discharge the capacitor by shorting across the capacitor terminals. Repeat for the second capacitor, if equipped.

⚠ DANGER High voltage. Exposure to electrical wires or electrical current will result in death or serious injury. Use extreme caution when working with high voltage electrical components.

3 Tag and disconnect the wires attached to the capacitor(s).

4 With an ohmmeter set to its highest resistance scale, connect the ohmmeter leads to the capacitor terminals and observe the reading on the meter. Then, reverse the connections and observe the reading on the meter.

⊙ Result: The meter indicates a very low resistance which then gradually increases AND a very high resistance which then gradually decreases. The capacitor is working.

⊠ Result: The meter indicates a very high resistance which does not decrease. The capacitor is faulty and should be replaced.

Result: The meter indicates a very low resistance which does not increase. The capacitor is faulty and should be replaced.

Diagnostic Charts

Generator produces full voltage at no load or voltage drops at full load	Loose or broken lead wires	Inspect lead wires and connections for broken wires and loose connections.
	Rotor open or shorted	Measure resistance between leads..
	Stator grounded or shorted	Contact the Genie Service Department.
Generator voltage too high	HIgh engine speed	Adjust the rpm Refer to Section 2, Specifications
Generator produces no voltage at no load or at full load	Faulty surge suppressor	Disconnect suppressor from circuit. If there is an obvious increase in voltage, replace the suppressor.
	Faulty capacitor	Replace capacitor.
	Loss of residual magnetism	Flash the rotor.
	Open winding	Replace the generator.
Generator will not hold voltage (loss of residual magnetism)	Machine has been unused for a significant length of time	Flash the rotor.
	Rotor shorting out when the unit gets hot	Inspect rotor windings for broken and/or burned wires.
	Pinched leads	Inspect and repair as needed.
	Faulty capacitor	Replace the capacitor.
	Faulty diode	Replace the diode.
	Faulty surge suppressor	Replace the surge suppressor.