snorkel

TB80
TB85J
TB86J



OPERATOR'S MANUAL

Fixed Axle
Serial number 110811047 and after

Models TB80/TB85J/TB86J/T80/T85J
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Appendix A – Glossary

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Engine Specifications

Engine	Displacement	Fuel Grade	Coolant	Operating Temperature	Oil Capacity	Oil Grade
Cummins B3.3 Diesel	199 cu. in. (3.26 liter)	**Diesel** ASTM No. 2D fuel with a minimum Cetane number of 40.[1] For operating temperatures below 32°F (0°C) use winterized No. 2D.	50% water 50% Antifreeze[2]	140°F to 212°F 60°C to 100°C	2 gal (7.5 liter) total 1.6 qt (1.5 liter) Low to High	SAE 15W-40[3] API: CH4/SG
Deutz F4L-2011F	125 cu. in. (2.0 liter)	**Diesel** • DIN 51 601 (February 1986).[1] • BS 2869: A1 and A2 (with A2 refer to Deutz manual about sulfur content)[1] • ASTM D 975-88: 1-D and 2-D • CEN EN 590 or DIN EN 590 • NATO Code F-54 and F-75 • For operating temperatures below 32°F (0°C) use winter grade diesel.	Air	172°F to 203°F 78°C to 95°C	1.59 US gal (6.0 liter)	API: CD or higher[3]
Kubota V2403-T	148.5 cu. in. (2.43 liter)	Diesel Fuel No. 2-D ASTM D975[1]	50% water 50% Antifreeze[5]	Below 212°F 100°C	2.51 gal (9.5 liter)	API: CF or higher[3]
GM 2.4	150 cu. in. (2.4 liter)	**Gasoline** • Unleaded 87 octane **LPG** • HD-5	50% Water 50% Antifreeze	176°F to 183°F 80°C to 84°C	With filter: 1.12 US gal (4.5 liter) Without filter: 1.18 US gal (4.25 liter)	ILSAC GF-4[4]

Note 1: Refer to the engine manufacturers manual for specific fuel recommendations and specifications.

Note 2: Ethylene glycol or Propylene glycol may be used. Refer to the Cummins® Operation and Maintenance Manual B3.3 Series Engines for specific coolant recommendations and specifications.

Note 3: Refer to the engine manufacturers manual for specific lubricating oil recommendations and specifications.

Note 4: API Starburst symbol on GF-4 oils reads "API Service SM."

Note 5: Refer to the engine manufacturers manual for specific coolant recommendations and specifications.

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The aerial platform is equipped with several gauges to monitor the condition of the machine before and during operation.

Hour Meter

The hour meter is located on the wiring box on the left side of the lower controls (refer to Figure 5.1). It measures the accumulated engine operating time.

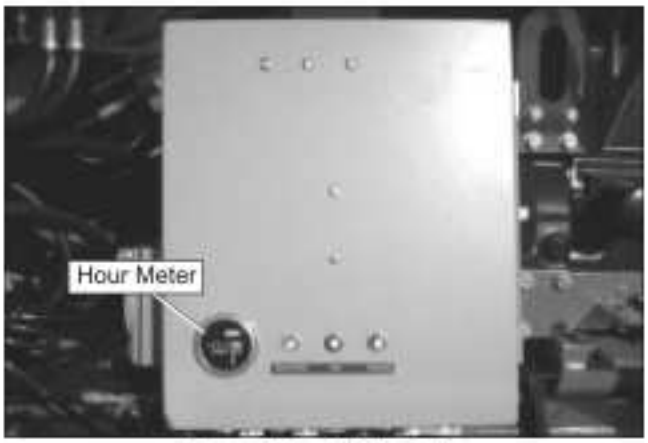


Figure 5.1 – Wiring Box

Engine Temperature Gauge

The temperature gauge is located on the lower control panel (refer to Figure 5.2).

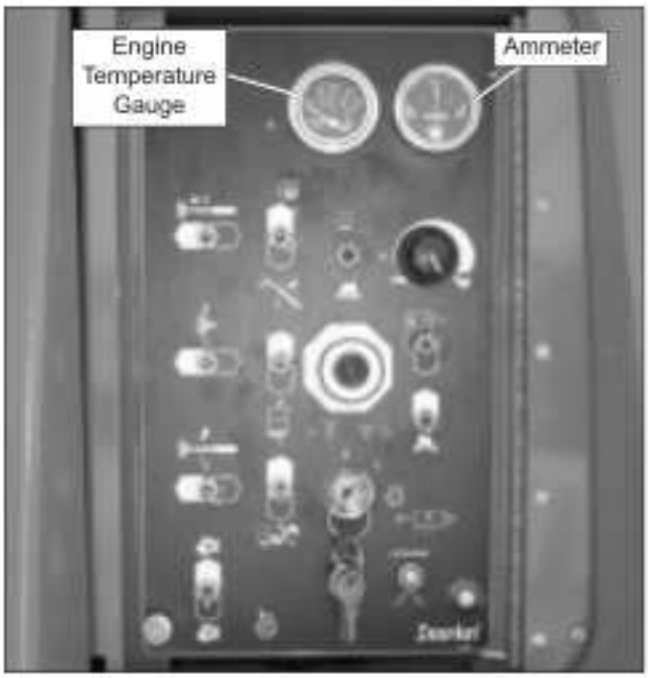


Figure 5.2 – Lower Controls

On liquid cooled engines it shows the temperature of the water and antifreeze mixture in the engine block. The gauge on air cooled engines shows the temperature of the engine oil as the oil leaves the filter.

Ammeter

The ammeter is located on the lower control panel (refer to Figure 5.2). The ammeter displays the level of current flow from the alternator to the batteries.

After the engine has been running for a few minutes under normal operating conditions, the ammeter gauge indicator should read "0."

Engine Air Filter Gauge

The air filter gauge (refer to Figure 5.3) is located above the lower control panel. The gauge measures the air pressure between the intake manifold and the air filter.



Figure 5.3 – Air Filter Gauge

The yellow indicator disk inside the sight glass stays at its highest level when the engine is turned off.

When the yellow indicator disk reaches the red area, it's time to change the filter element. After changing the filter, press the reset button to reset the indicator disk to the bottom of the sight glass.

Fuel

The fuel tank is translucent. The amount of fuel in the tank can be gauged by raising the door on the right rear of the machine (refer to Figure 5.4) and looking at the tank.

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Operating Controls
Use the following procedure to operate the machine from the lower controls.

1. Turn the battery disconnect switch on.
2. At the lower controls, pull the emergency stop button outward. Place the control selector switch in the lower control position.
3. Insert the key into the master switch and turn the switch to start until the engine starts, then release.
4. Let the engine warm to operating temperature.
5. Hold the ground operation switch upward.

⚠Danger

Pinch points may exist between moving components. Death or serious injury can result from becoming trapped between components, buildings, structures, or other obstacles. Make sure all personnel stand clear of the aerial platform while performing the prestart inspection.

6. Test the operation of each function in both directions.

Note
When checking the turntable rotation function in the clockwise direction, the turntable will rotate toward you.

Emergency Stop
Push the emergency stop button inward to turn off the engine. The lower control functions should not operate with the emergency stop in this position.

Emergency Power
Place the battery disconnect switch, the emergency stop switch, and the master switch in the on position.

Hold the engine/emergency power switch down and the ground operation switch upward to operate the aerial platform from the lower controls using the emergency power system.

Emergency Lowering

The main boom can be lowered in an emergency using the emergency lowering knob. The emergency lowering knob is at the base of the main boom lift cylinder.

Use the following procedure to test the emergency lowering system.

1. Use the lower controls to raise the main boom.
2. Turn the engine off.

⚠Danger

Pinch points may exist between moving components. Death or serious injury can result from becoming trapped between components. Stand clear of moving components while test operating the machine.

3. Slowly turn the knob (refer to Figure 7.13) counterclockwise to open the bleed down valve. The boom should slowly lower by gravity.

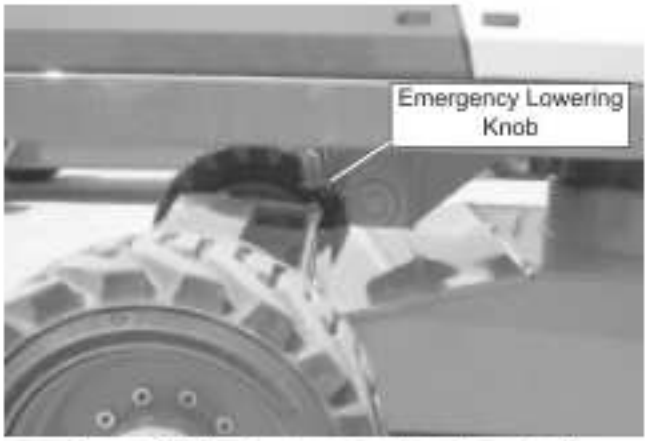


Figure 7.13 – Emergency Lowering Knob

⚠Warning

The potential for an accident increases when safety devices do not function properly. Death or serious injury can result from such accidents. Fully close the emergency lowering knob before operating the aerial platform.

4. Turn the knob clockwise to close the cylinder bleed down valve.

Level Sensor

Use the following procedure to test the level sensor.

1. Position the aerial platform on a smooth, flat, level surface.
2. Remove all persons and materials from the platform.
3. Start the engine and raise the main boom just above horizontal.
4. Open the rear door on the left side of the machine to access the level sensor (refer to Figure 7.14).

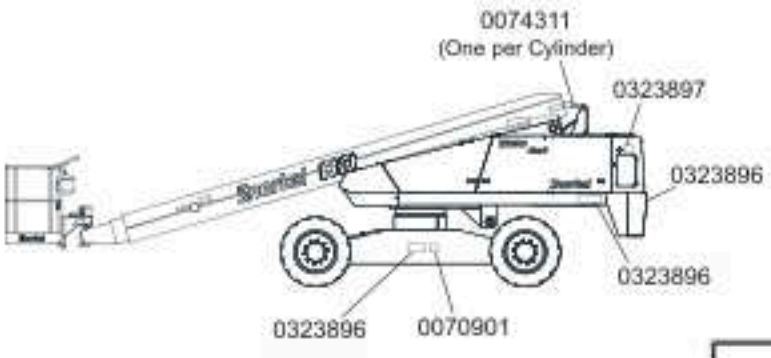
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Right Side



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