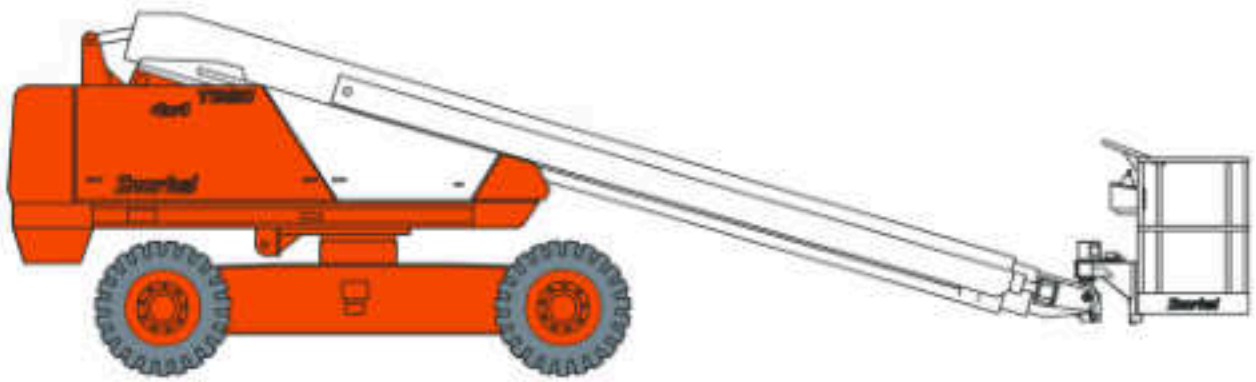
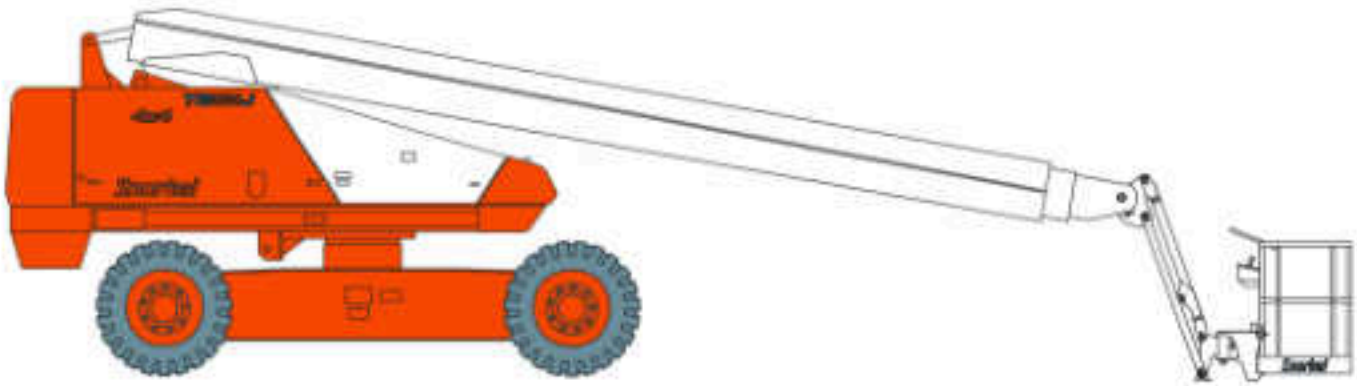
Operator's Manual



TB80



TB85J

Part Number 0112477
February 2001 – Revised October, 2005

Snorkel
INTERNATIONAL

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Appendix A – Glossary

Limited Warranty

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Engine Specifications

Engine	CID	Fuel Grade	Coolant	Operating Temperature	Oil Capacity	Oil Grade
Cummins B3.3	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
Cummins 4B3.9	239 cu. in. (3.9 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	140°F to 212°F 60°C to 100°C	2.5 gal (9.4 liter)	SAE 5W-30[3] API: CE/SF CD/SF
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]
Deutz F4L-1011	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]

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.

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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.

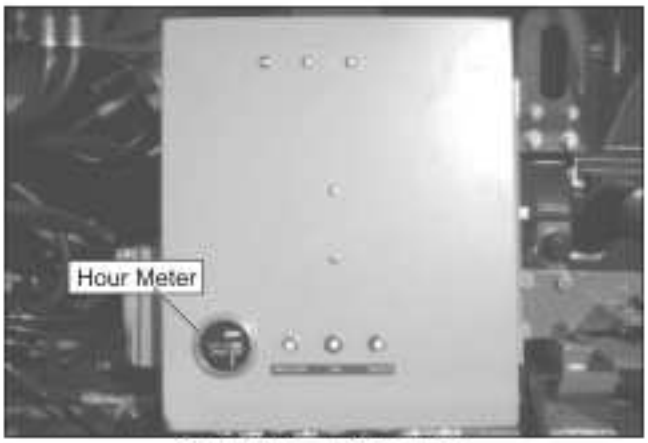


Figure 5.1 – Wiring Box

Engine Temperature Gauge

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

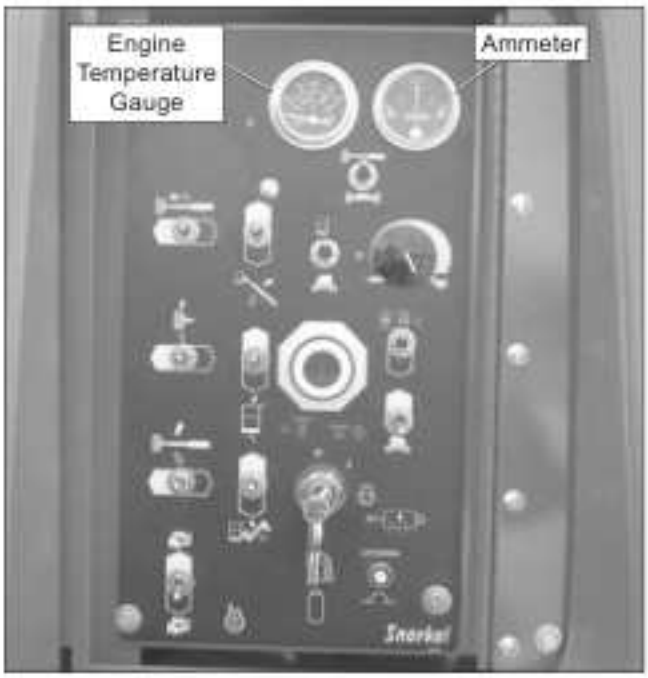


Figure 5.2 – Lower Controls

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. On older machines the fuel tank is behind the cowling door on the right side of the machine. These tanks have a gauge on top of them that measure the amount of fuel in the tank.

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Emergency Stop Button
The emergency stop is a two-position, red push button on the top of the upper control panel (refer to Figure 6.6). Push the button in to disconnect power to all control circuits at the upper controls. Pull the button out to restore power.

Note
The lower controls override the upper controls. If the upper control emergency stop button is engaged the lower controls can still be used to operate the aerial platform.

Push the emergency stop button in when the upper controls are not in use to protect against unintentional operation.

Boom Joystick
The boom joystick is used to raise and lower the main boom and to rotate the turntable. The boom and turntable functions may be operated simultaneously.

Note
The distance the joystick is moved is proportional to the speed of the function.

Hold the joystick forward to raise the main boom and backward to lower the boom.

Hold the joystick to the right to rotate the turntable counterclockwise and to the left to rotate the turntable clockwise.

Drive Joystick
The drive joystick is used to control forward and reverse motion of the aerial platform. It is also used to steer the machine. The steering and drive functions may be operated simultaneously.

Note
The distance the joystick is moved is proportional to the speed of the function.

Hold the joystick forward to move the aerial platform forward and backward to move in reverse as indicated by the directional arrows on the chassis.

Hold the joystick to the right to steer the aerial platform to the right and to the left to steer to the left as indicated by the directional arrows on the chassis.

Note
The steering wheels are not self-centering. Set the steering wheels straight ahead after completing a turn.

Drive Range Switch
The drive range switch has two positions to select drive wheel operation:

- HI – high speed and low torque operation.
- LO – low speed and high torque operation.

Jib Articulation Switch – TB85J Only
The jib switch is used to raise or lower the jib. The switch is spring returned to the center off position.

Hold the switch up to raise the jib. Hold the switch down to lower the jib.

Platform Level Switch
The level switch is used to level the platform floor with respect to the ground. The switch is spring returned to the center off position.

Hold the switch up to tilt the platform floor upward or away from the ground. Hold the switch down to tilt the platform floor downward or toward the ground.

Platform Rotate Switch
The platform rotate switch is used to rotate the platform relative to the end of the tip boom. The switch is spring returned to the center off position.

Hold the switch to the right to rotate the turntable counterclockwise. Hold the switch to the left to rotate the turntable clockwise.

Boom Extend/Retract Joystick
The boom extend/retract joystick is used to extend or retract the booms. The joystick is spring returned to the center off position.

Hold the joystick forward to retract the booms and backward to extend the booms.

Engine/Emergency Power Switch
The engine/emergency power switch is spring returned to the engine position for aerial platform engine operation.

Hold the switch in the emergency power position to operate aerial platform functions using the emergency power system.

Note
The emergency power system is for lowering the platform during an emergency and is not intended for normal machine operation.

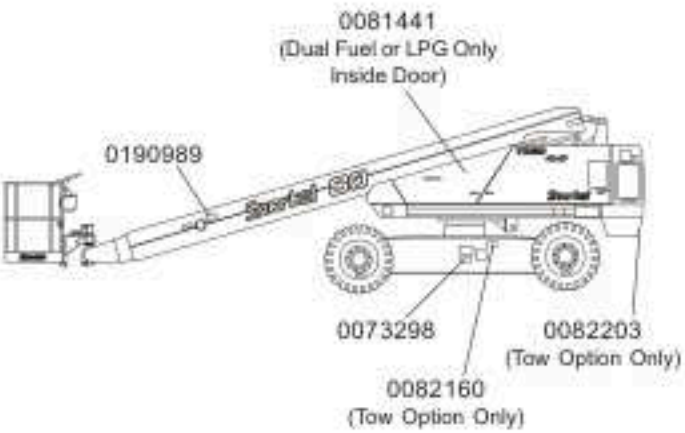
If the engine is running, it will stop when the switch is placed in the emergency power position.

Throttle Switch
The throttle switch is used to set the engine throttle speed to either low or high idle.

Place the switch in the low position for normal machine operation and in high to drive at maximum speed.

Cummins engines have a three speed throttle operation from the upper controls. Independent of the throttle switch, the platform foot switch, when depressed, increases the engine speed from low to mid-range.

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Right Side



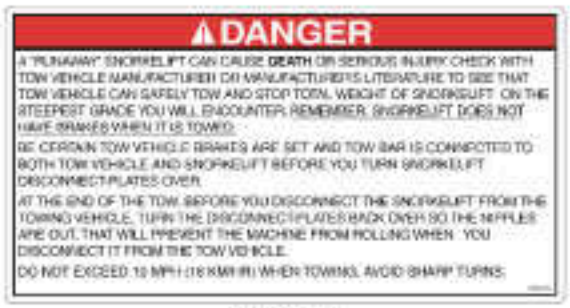
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