



AU

NZ

# Bobcat®

## Operation & Maintenance Manual



### Telescopic Handler

(TL30.60DB) S/N B3G914000 - B3G915000, B3G915001 & Above  
(TL30.60HB) S/N B3GB14000 - B3GB15000, B3GB15001 & Above



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### REFERENCE INFORMATION

Write the correct information for YOUR Bobcat telescopic handler in the spaces below. Always use these numbers when referring to your Bobcat telescopic handler.

Telescopic Handler Serial Number

Engine Serial Number

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NOTES:

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YOUR BOBCAT DEALER:

ADDRESS:

PHONE:

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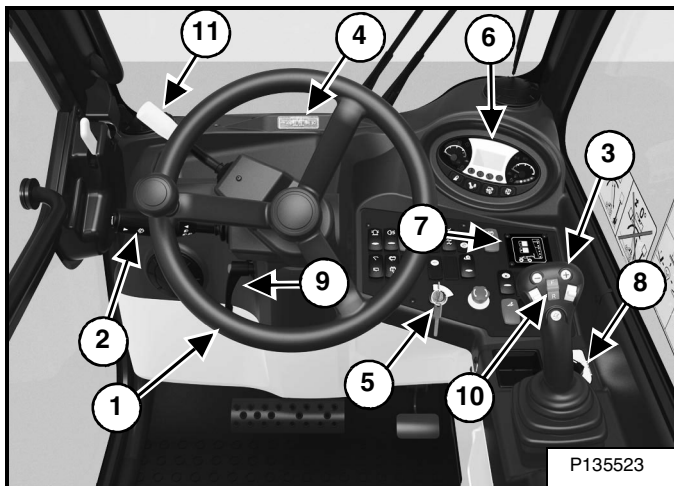
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P.O. Box 128  
Gwinner, ND 58040-0128  
UNITED STATES OF AMERICA

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## OPERATOR CONTROLS IDENTIFICATION

### Operator Components

Figure 9



Steering Wheel (Item 1) [Figure 9]. (See Steering Wheel on Page 40.)

Multi-function Lever (Item 2) [Figure 9]. (See Multi-function Lever on Page 41.)

Hydraulic Control Lever (Joystick) (Item 3) [Figure 9]. (See HYDRAULIC CONTROLS on Page 72.)

Centre Indicator Panel (Item 4) [Figure 9]. (See Centre Indicator Panel on Page 43.)

Right Instrument and Indicator Panel (Item 5) [Figure 9]. (See Right Instrument And Indicator Panel on Page 42.)

Display Panel (Item 6) [Figure 9]. (See Display Panel on Page 46.)

Longitudinal Load Moment Indicator (Item 7) [Figure 9]. (See Longitudinal Load Moment Indicator (LLMI) on Page 44.)

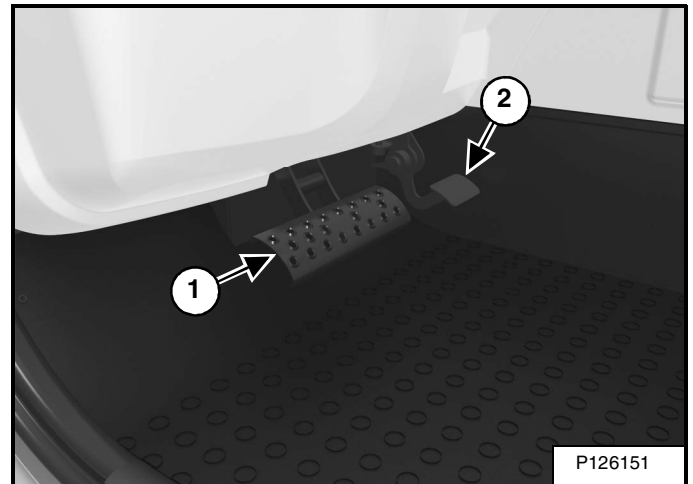
Override Switch (Item 8) [Figure 9]. (See Override Switch on Page 109.)

Steering Wheel Tilt Adjustment (if equipped) (Item 9) [Figure 9]. (See Steering Wheel Tilt Position on Page 41.)

Travel Direction Switch (Item 10) [Figure 9]. (See Travel Direction on Page 40.)

FNR Lever (Item 11) [Figure 9]. (See Travel Direction on Page 40.)

Figure 10



Brake Pedal / Inching Control (Item 1) [Figure 10]. (See Brake Pedal And Inching Control on Page 50.)

Accelerator Pedal (Item 2) [Figure 10]. (See Accelerator Pedal on Page 50.)



## WARNING

Operate only from operator's seat with seat belt securely fastened. Never carry riders or use attachments, other than an approved man platform, as a man lift or work platform. Keep bystanders away from the work area.

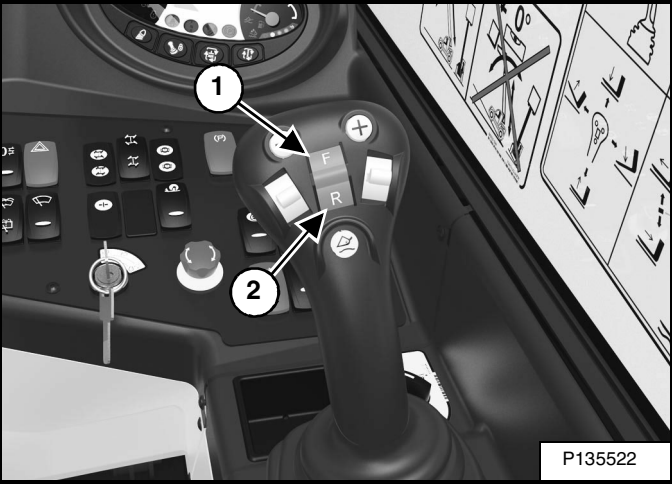
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OPERATOR CONTROLS IDENTIFICATION (CONT'D)

Travel Direction

*Travel Direction Switch (If Equipped)*

Figure 11



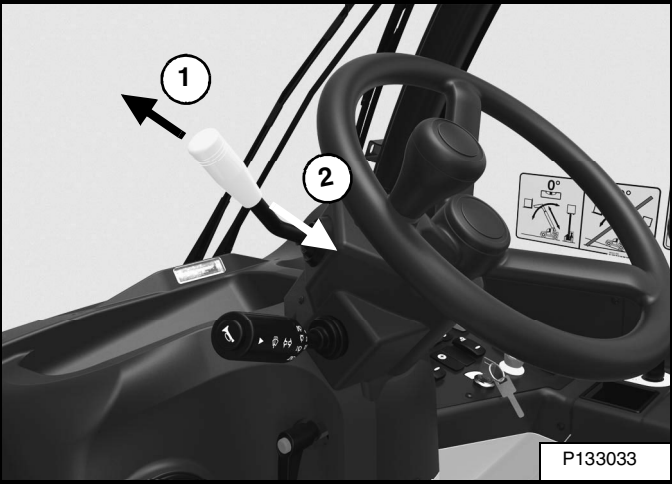
Press the top of the switch (Item 1) for forward travel; the bottom of the switch (Item 2) [Figure 11] for reverse travel.

(See DUAL FNR on Page 77.) for more information.

The back-up alarm will sound when the switch is in the reverse position.

*Travel Direction Lever (If Equipped)*

Figure 12



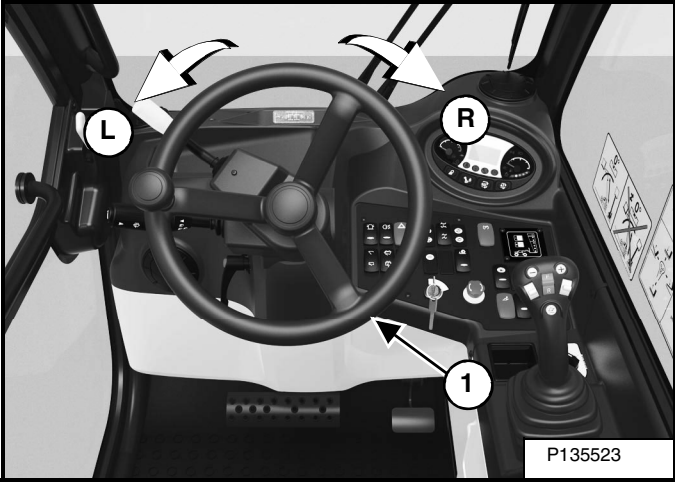
Move the lever forward (Item 1) for forward travel; backward (Item 2) [Figure 12] for reverse travel.

(See DUAL FNR on Page 77.) for more information.

The back-up alarm will sound when the lever is in the reverse position.

Steering Wheel

Figure 13

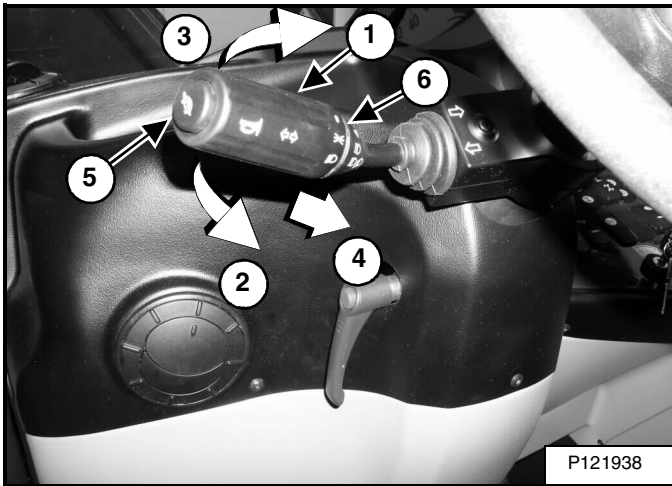


Turn the steering wheel (Item 1) [Figure 13] clockwise (R) to turn right; anticlockwise (L) to turn left. (See DRIVING AND STEERING THE TELESCOPIC HANDLER on Page 61.)

## OPERATOR CONTROLS IDENTIFICATION (CONT'D)

### Multi-function Lever

Figure 14



This lever (Item 1) [Figure 14] has four functions:

- Direction signal
- Horn
- Travel speed
- Parking lights and head lights.

#### Direction Signal

Move the lever backward (Item 2) for left direction signal; forward (Item 3) [Figure 14] for right direction signal.

**NOTE: Be sure to turn the direction signals off after you have completed the turn.**

#### Horn

Push the lever in (Item 4) [Figure 14] to sound the horn.

#### Two-Speed Control

Press the button (Item 5) [Figure 14] at the end of the lever to toggle between high and low speed. This can be done without stopping first.

When low speed is activated, the low speed light is ON. (See Display Panel on Page 46.)

**NOTE: The speed status (low or high) is kept in memory at the end of each run. The same previous status will be active at the next run.**

### Headlights And Rear Lights

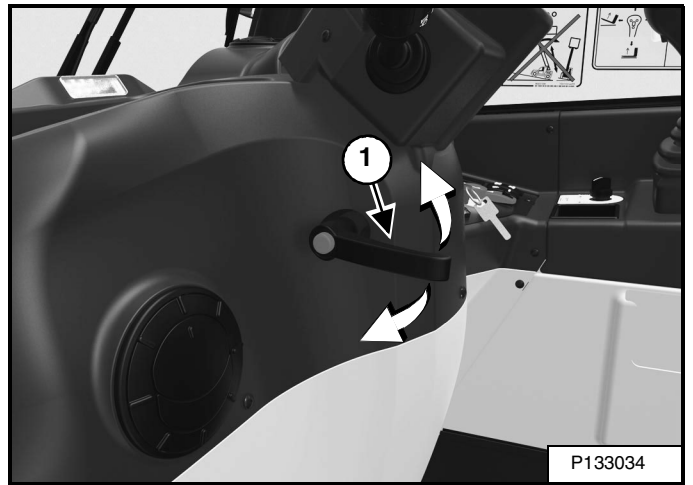
The lever also includes the lights switch (Item 6) [Figure 14] which has three positions. Rotate the lever to select front lights:

- OFF
- Parking lights and rear lights
- Headlights and rear lights

When the headlights are ON: Push the lever away from the steering wheel and release it to change from high to low or low to high beam headlights.

### Steering Wheel Tilt Position

Figure 15



Turn the lever (if equipped) (Item 1) [Figure 15] anticlockwise to loosen the steering wheel tilt mechanism.

When the steering wheel is in the desired position, turn the lever (Item 1) [Figure 15] clockwise. Tighten firmly to lock position.

**NOTE: Always keep the steering wheel tilt mechanism in the lock position when operating the machine.**

## OPERATOR CONTROLS IDENTIFICATION (CONT'D)

### Right Instrument And Indicator Panel

Figure 16



Figure 17



Right Instrument And Indicator Panel [Figure 16] and [Figure 17]

1. **Rotating Beacon (Green Light) (If Equipped)** - Press the bottom of the switch to turn the rotating beacon (if equipped) ON; press the top to turn OFF.
2. **Rear Fog Lights (Orange Light)** - Press bottom of the switch to turn rear fog lights ON; press top to turn OFF.
3. **Hazard Lights (Red Light)** - Press the bottom of the switch to turn the Hazard Lights ON; press the top to turn OFF. Switch light flashes when Hazard Lights are ON.
4. **Roof Wiper / Rear Wiper (Green Light)** - Press the top of the switch to turn the roof wiper (if equipped) ON. Press the bottom of the switch to turn the rear wiper (if equipped) ON. Move switch to the center position to turn both wipers OFF.
5. **Washer** - Press and hold the top of the switch to turn the front washer and the top washer ON; press and hold the bottom to turn the rear washer ON.
6. **Front Wiper (Green Light)** - Press the bottom of the switch to turn the front wiper ON; press the top to turn OFF.
7. **Steering Mode Indicator (Orange Light)** - Indicates the active steering mode.
8. **Steering Mode Switch** - To change steering modes (4-Wheel, 2-Wheel, Crab). (See STEERING MODE SELECTION on Page 54.)
9. **Brake Pressure Indicator (Red / Orange Light) (If Equipped)** - Red light comes ON when brake pressure is too low. Orange light comes ON when there is a braking system malfunction.
10. **Travel Direction Signal Indicator (Green Light)** - The light flashes when the trailer direction indications are activated.
11. **NOT USED**
12. **Speed Management (Yellow Light)** - (See SPEED MANAGEMENT on Page 69.)
13. **Parking Brake** - Press the bottom of the switch to engage or disengage the Parking Brake. (See PARKING BRAKE on Page 59.)
14. **Auto Reverse Cooling Fan Switch (White Light) (If Equipped)** - Press bottom of the switch once to clean debris from radiator. Fan resumes normal operation after 80 seconds.
15. **NOT USED**
16. **NOT USED**
17. **NOT USED**
18. **Hydraulic Quick-Tach Switch (If Equipped)** - Press and hold the top of the switch to unlock the quick-tach. When released, the quick-tach pins will automatically lock at a slow speed. Press and hold the bottom of the switch to speed up locking of the quick-tach.
19. **Smart Handling System (SHS)** - Press the bottom of the switch to reduce the boom movements; press the top to turn OFF. (See Operation on Page 76.)

## OPERATOR CONTROLS IDENTIFICATION (CONT'D)

### Right Instrument And Indicator Panel (Cont'd)

20. **Rear Auxiliary Switch and Rear Hook Switch (If Equipped)** - Press top of the switch to activate the rear auxiliary Up valve. Press bottom of the switch to activate the rear auxiliary Down valve. The switch controls the rear hook when it is plugged into the rear auxiliary hydraulics. Move switch to centre position to disable the functions.
21. **Automatic Boom Suspension** - Press the bottom of the switch to enable automatic boom suspension. Press the top to turn OFF. (See AUTOMATIC BOOM SUSPENSION on Page 68.)
22. **Longitudinal Load Moment Indicator** - (See Longitudinal Load Moment Indicator (LLMI) on Page 44.) Indicates the successive levels of machine longitudinal stability. (See Longitudinal Load Moment Controller (LLMC) on Page 109.)
23. **Emergency Stop** - Push to immediately shut down the engine and its fuel supply. The display screen shows "STOP". Pull to unlock from pressed position.
24. **Key Switch (If Equipped)** - Used to turn the electrical system on and off, and to start and stop the engine. (See Standard Key Panel on Page 85.)
25. **Start Switch (Keyless) (If Equipped)** - Used to turn the electrical system on and off, and to start and stop the engine. (See Keypad Panel (If Equipped) on Page 86.)
26. **Keypad (Keys 0 through 9) (If Equipped)** - Used to enter a number code (password) to allow starting the engine. An asterisk will show in the display screen for each key press.
27. **LOCK Key (If Equipped)** - Used to lock keypad. The lock key will display a red light to indicate a password is required to start the telescopic handler. (See Password Lockout Feature on Page 200.)
28. **UNLOCK Key (If Equipped)** - Used to unlock keypad. The unlock key will display a green light to indicate the telescopic handler can be started without a password. (See Password Lockout Feature on Page 200.)



## WARNING

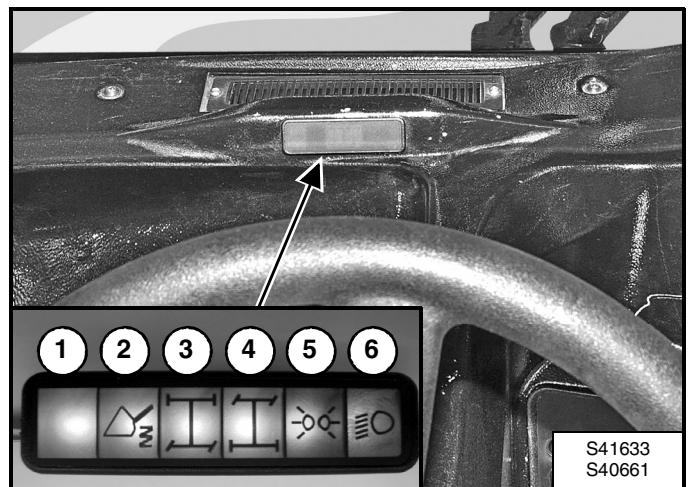
**Before you exit the operator's position:**

- **Put the Travel Direction Control and the Joystick in neutral.**
- **Engage the parking brake.**
- **Retract and lower the boom and attachment flat on the ground.**
- **Stop the engine.**

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### Centre Indicator Panel

Figure 18



Centre Indicator Panel [Figure 18]

1. **NOT USED**
2. **Boom Suspension Indicator (Blue Light) (If Equipped)** - The light comes ON when Boom Suspension is activated. (See BOOM SUSPENSION on Page 67.) or (See AUTOMATIC BOOM SUSPENSION on Page 68.)  
The light will flash when there is a Boom Suspension malfunction. (See DIAGNOSTIC SERVICE CODES on Page 187.)
3. **Front Wheel Alignment Indicator (Orange Light).**
4. **Rear Wheel Alignment Indicator (Orange Light).**
5. **Parking Light Indicator (Green Light).**
6. **Low Beam Headlights Indicator (Green Light).**

## OPERATOR CONTROLS IDENTIFICATION (CONT'D)

### Longitudinal Load Moment Indicator (LLMI)

The LLMI warns the operator about inadequate stability in the longitudinal plane (forward direction).

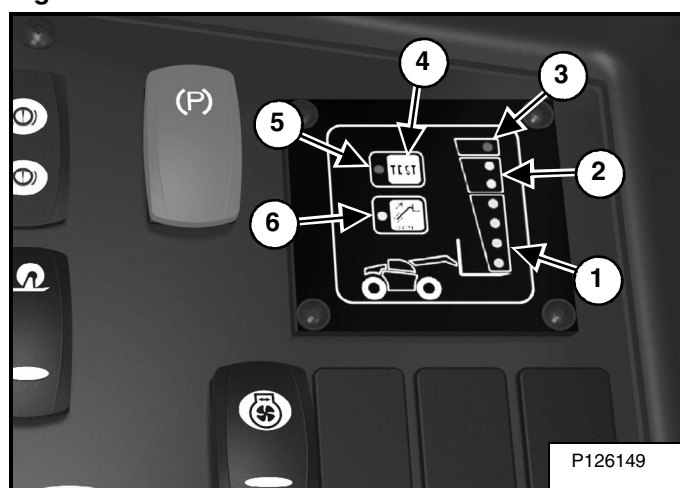
The LLMI is intended to warn for tipping over in the case of:

- The machine is stationary on solid, stable and level ground
- The machine is performing load picking, carrying, loading and unloading
- The telescopic boom is not fully retracted.

The LLMI is not intended to warn for tipping over in the case of:

- A sudden overload
- Travelling with a lifted load
- Travelling on rough terrain or on grounds with obstacles and holes
- Travelling across a slope or turning on a slope
- Turning corners too fast or too sharp.

Figure 19



The indicator lights (Items 1, 2 and 3) [Figure 19] sequentially illuminate as the machine's longitudinal stability decreases. They identify three zones of the machine's longitudinal stability level:

**NOTE: All hydraulic movements are functional if the boom is fully retracted, regardless of the machine's stability level.**

**NOTE: For New Zealand and Australian machines, the LLMI / LLMC system setting is different. All hydraulic movement are functional if the boom is fully retracted and the boom angle below 5°, regardless of the machine's stability level.**

**NOTE: When the longitudinal stability level reaches a critical level (Critical zone) with the boom not fully retracted and the boom angle below 5°, only hazardous movements are disabled (tilt and boom lowering are reduced in speed). It is still possible to retract and lift the boom.**

#### Secure Zone:

Green indicator lights (Item 1) [Figure 19] (four lights). The operator works in a secure zone.

In this zone, the following machine functions are progressively reduced in speed as the machine's longitudinal stability decreases:

- Boom lowering
- Boom extend
- Tilting of attachment
- Auxiliary hydraulic functions.

#### Warning Zone:

Orange indicator lights (Item 2) [Figure 19] (two lights). The longitudinal stability level gets close to the critical zone.

In this zone, the following machine functions are progressively reduced in speed as the machine's longitudinal stability decreases:

- Boom lowering
- Boom extend
- Tilting of attachment
- Auxiliary hydraulic functions.

#### Critical Zone:

Red indicator light (Item 3) [Figure 19] (one light). The machine's longitudinal stability reaches a critical level. A warning horn is activated along with the red indicator light.

In this zone, the following machine functions are reduced in speed or disabled:

- Boom lowering (disabled with boom angle above 5°, reduced in speed when below 5°)
- Boom extend (disabled)
- Tilt (reduced in speed)
- Auxiliary hydraulic functions (reduced in speed)

Use the remaining active functions to bring the machine back to a safe level of stability. If necessary, activate the LLMC override mode to enable a disabled function such that the machine can be brought back to a safe level of stability. (See Override Switch on Page 109.)

**NOTE: The LLMC override mode should only be activated when necessary and is automatically deactivated after a running period of 60 seconds.**

**NOTE: The warning horn cannot be deactivated.**



## OPERATOR CONTROLS IDENTIFICATION (CONT'D)

### Longitudinal Load Moment Indicator (LLMI) (Cont'd)

#### *Test Button:*

The test button (Item 4) **[Figure 19 on Page 44]** has two functions:

- Testing the correct functioning of the LLMI and the LLMC. (See LLMC CALIBRATION TEST on Page 142.)
- Calibrating the LLMI / LLMC system. (See your Bobcat dealer for calibration.)

The test indicator light (RED) (Item 5) **[Figure 19 on Page 44]** is used for the test procedure and the LLMI / LLMC system calibration. The light flashes when the LLMC is in fault mode.

The control indicator light (ORANGE) (Item 6) **[Figure 19 on Page 44]** indicates that the machine is under control of the LLMC. The light flashes when the LLMC override switch is activated. (See Override Switch on Page 109.)

## OPERATOR CONTROLS IDENTIFICATION (CONT'D)

### Display Panel

Figure 20



1. **Direction Signal (Green Light)** - The light will flash when a direction signal is activated or when the hazard lights are activated.
2. **General Warning (Red Light)** - The light comes on when a general error is present. (See Service Codes\* and "MONITORING THE DISPLAY PANEL" on Page 89.)
3. **Low Speed (Yellow Light)** - The light comes on when low speed is activated.
4. **Engine Coolant Temperature (Red Light)** - The light comes on if the engine coolant temperature is high. The light will flash if the engine coolant temperature is extremely high.
5. **Engine Malfunction (Red Light)** - The light comes on when there is an engine malfunction or failure. (See Service Codes\* and "MONITORING THE DISPLAY PANEL" on Page 89.)
6. **Engine Temperature Gauge** - Shows the engine coolant temperature.
7. **Display Screen** - Displays information. (See Display Screen on Page 48.)
8. **Seat Belt (Red Light)** - Instructs operator to fasten seat belt. Remains lit for 45 seconds.
9. **FORWARD - NEUTRAL - REVERSE - F-N-R (Yellow Light)** - The light will flash when attempting to start the engine when the Travel Direction Control (Travel Direction Switch and / or Lever) is not in NEUTRAL position. (See Travel Direction on Page 40.)
10. **Joystick Lockout (Red Light)** - The light comes on when the joystick lockout is activated. The light will flash when there is a joystick malfunction or failure. (See Service Codes\*.)
11. **Parking Brake And Operator Position (Red Light)** - The light comes on when the parking brake is engaged. (See PARKING BRAKE on Page 59.) The light will flash and a warning horn is activated when the parking brake pressure is too low OR when the operator leaves the operator seat while the parking brake is not engaged.
12. **Headlights High Beam (Blue Light)** - The light comes on when high beam is activated. (See Multi-function Lever on Page 41.)
13. **NOT USED**
14. **Fuel Level (Red Light)** - The light comes on when the fuel level is low.
15. **NOT USED**
16. **Engine Temperature Gauge** - Shows the engine coolant temperature.
17. **NOT USED**
18. **NOT USED**
19. **Headlights Low Beam** - The light comes on when low beam is activated.
20. **Joystick Lockout** - The light comes on when the joystick lockout is activated.
21. **Travel Direction Control** - The light comes on when the travel direction control is activated.
22. **Travel Direction Control** - The light comes on when the travel direction control is activated.

\* See SYSTEM SETUP AND ANALYSIS for Service Code description. (See DIAGNOSTIC SERVICE CODES on Page 187.)