EN

Bobcat®

Operation & Maintenance Manual

Telescopic Handler

(TL30.70DRB) S/N B4ZT11001 & Above
(TL30.70HRB) S/N B4ZU11001 & Above

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Printed in Belgium
Original Instructions

EU S5

CONTENTS

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 _____

NOTES:

_____

_____

_____

_____

YOUR BOBCAT DEALER:

_____

ADDRESS:

_____

PHONE:

_____

CE

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

Doosan Bobcat EMEA s.r.o.
U Kodetky 1810
26312 Dobris
Czech Republic

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. **NOT USED**

22. **Longitudinal Load Moment Indicator** - (See Longitudinal Load Moment Indicator (LLMI) on Page 48.) Indicates the successive levels of machine longitudinal stability. (See Longitudinal Load Moment Controller (LLMC) on Page 124.)

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 93.)

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 94.)

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 250.)

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 250.)

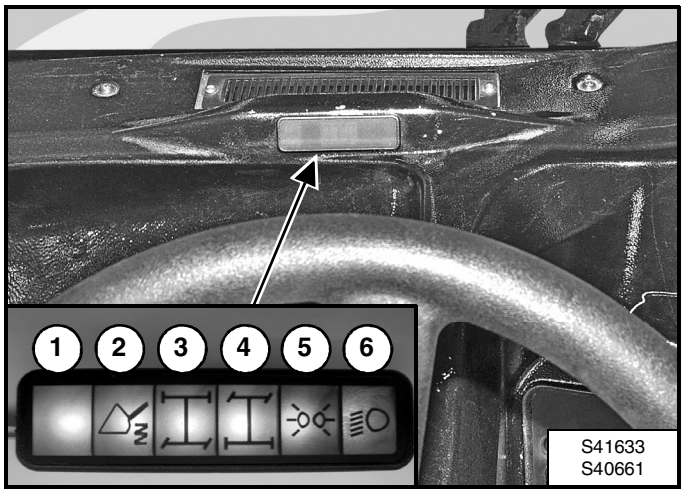
⚠ WARNING

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.**

W-2907-0211

Centre Indicator Panel

Figure 23



Centre Indicator Panel **[Figure 23]**

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 76.)
   The light will flash when there is a Boom Suspension malfunction. (See DIAGNOSTIC SERVICE CODES on Page 203.)

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).**

Longitudinal Load Moment Indicator (LLMI)

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

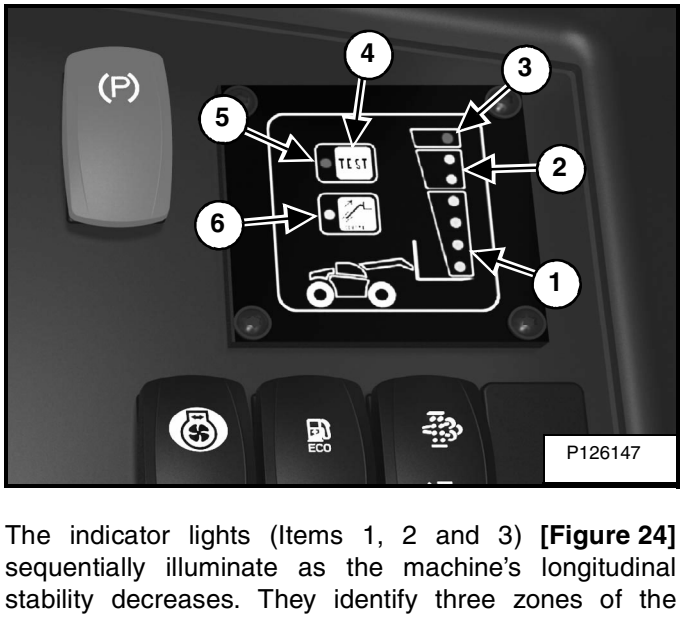
The LLMI is intended to warn for tipping over in the case of:

- 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 24



The indicator lights (Items 1, 2 and 3) **[Figure 24]** 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: 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 24]** (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 24]** (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 24]** (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 124.)

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.

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

Test Button:

The test button (Item 4) **[Figure 24 on Page 48]** has two functions:

- Testing the correct functioning of the LLMI and the LLMC. (See LLMC CALIBRATION TEST on Page 156.)
- Calibrating the LLMI / LLMC system. (See your Bobcat dealer for calibration.)

The test indicator light (RED) (Item 5) **[Figure 24 on Page 48]** 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 24 on Page 48]** 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 124.)

Display Panel

Figure 25

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 97.)

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 97.)

6. **Engine Temperature Gauge** - Shows the engine coolant temperature.

7. **Display Screen** - Displays information. (See Display Screen on Page 52.)

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 44.)

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 67.) 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 45.)

13. **NOT USED**

14. **Fuel Level (Red Light)** - The light comes on when the fuel level is low.

* See SYSTEM SETUP AND ANALYSIS for Service Code description. (See DIAGNOSTIC SERVICE CODES on Page 203.)

Display Panel (Cont'd)

15. **Hydraulic System Malfunction (Red Light)** - The light comes on when there is a hydraulic malfunction or failure or if the hydraulic / hydrostatic fluid temperature is high or if the hydraulic filter is plugged. The light will flash if the hydraulic / hydrostatic fluid temperature is extremely high. (See Service Codes*.)

16. **Fuel Level Gauge** - Shows the amount of fuel in the tank.

17. **Hot Exhaust System Temperature (Yellow Light)** - The light comes on when the exhaust reaches high temperatures suitable for active Diesel Particulate Filter (DPF) regeneration. (See DPF Icons on Page 63.)

18. **DPF Soot Load Level** - Shows the amount of soot in the Diesel Particulate Filter (DPF). (See DPF Icons on Page 63.)

19. **Work Lights** (Without Blue Work Lights Option) - Press once to turn front and rear work lights ON (left green LED will be on). Press a second time to turn work lights OFF (left green LED will be off).

    Work Lights (With Blue Work Lights Option) - Press once to turn blue work lights ON (right green LED will be on). Press a second time (within 3 seconds of activating the blue work lights) to turn blue work lights OFF and to turn front and rear work lights ON (right green LED will be off and left green LED will be on). Press a second time (after more than 3 seconds of activating the blue lights) to turn blue work lights OFF (right green LED will be off) and skip the work lights. Press a third time to turn work lights OFF (left green LED will be off).

NOTE: (Blue) Work Lights can only be activated when parking lights are ON. (See Multi-function Lever on Page 45.)

20. **Hydraulic Control Lockout** - Press once to deactivate all hydraulic functions of the boom. Press a second time to enable the hydraulic functions. Use to deactivate all functions of the Hydraulic Control Lever (Joystick) when travelling on a road.

21. **Continuous Flow Auxiliary Hydraulics** - For continuous operation of the auxiliary hydraulics, press this button once to activate the continuous flow auxiliary hydraulics system (left green LED will light) and then press the joystick front button (Item 9) **[Figure 78 on Page 80]**. Press a second time to deactivate the system.

    Auxiliary Hydraulics At Startup - For auxiliary hydraulics at startup, press this button for three seconds to show the auxiliary hydraulics default mode at startup. (See Auxiliary Hydraulics At Startup on Page 81.)

22. **Information** - Press to cycle through the display screen menus. (See Display Screen on Page 52.)

*See SYSTEM SETUP AND ANALYSIS for Service Code description. (See DIAGNOSTIC SERVICE CODES on Page 203.)

IMPORTANT

AVOID ENGINE DAMAGE

Continuing to operate the machine when a service code has been recorded can cause serious engine damage. A service code will not cause the engine to shut down automatically.

If a service code is observed:
- **Park the machine in a safe location.**
- **Stop the engine immediately.**
- **Maintain or repair the machine as required.**

I-2353-0112

Display Screen

Figure 26

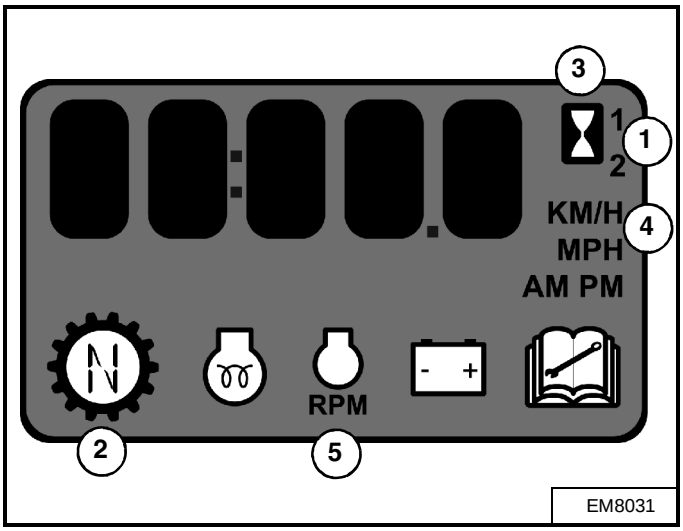


Figure 27

The display screen **[Figure 26]** is located on the display panel. (See Display Panel on Page 50.)

The following icons are always displayed:

- The displayed numbers (Item 1) **[Figure 26]** are not used.
- **FORWARD - NEUTRAL - REVERSE (F-N-R)** - The displayed character (Item 2) **[Figure 26]** indicates the selected travel mode. (See Travel Direction on Page 44.)

The display screen can display the following information:

- **Engine Hours** - Shows total time the engine ever ran (hours). When this menu is activated, the hourglass icon (Item 3) **[Figure 26]** will light. The Engine Hours menu will show by default upon startup.
- **Machine Speed** - Shows the machine speed (km/h or mph) as soon the engine is started (only for high speed machines equipped with a travel speed sensor) (Item 4) **[Figure 26]**.
- **Engine Speed** - Shows the actual engine revolutions per minute (rpm). When this menu is activated, the rpm icon (Item 5) **[Figure 26]** will light.
- **Job Hours** - Shows the total time the engine ran during the job (hours). When this menu is activated, the hourglass icon (Item 3) **[Figure 26]** will light. Press the information button (Item 1) **[Figure 27]** for 3 seconds to reset the job hours.
- **Maintenance Clock** - Shows when the next service interval is due (if enabled). When this menu is activated, the hourglass icon (Item 3) **[Figure 26]** and Service icon (Item 4) **[Figure 28]** will light. (See MAINTENANCE CLOCK on Page 251.)
- **Boom Angle** - Shows the inclination angle of the telescopic boom (degrees). When this menu is activated, the degree symbol (°) will be displayed on the right side of the display screen.
- **Speed Management (Creep)** - Shows the Speed Management value (%). When this menu is activated, **[C]** followed by the Speed Management value will be displayed on the left side of the display screen if the Speed Management is enabled, **[C OFF]** if the Speed Management is disabled. (See SPEED MANAGEMENT on Page 77.)
- **Smart Handling System (Reduced Mode)** - Shows the boom reduction value (%). When this menu is activated, **[B]** followed by the boom reduction value will be displayed on the left side of the display screen. (See SMART HANDLING SYSTEM (SHS) on Page 84.)
- **Auxiliary Hydraulics** - Shows which percentage (%) of the auxiliary hydraulics flow is available. When this menu is activated, **[A]** followed by the maximum available percentage will be displayed on the left side of the display screen. (See Changing The Maximum Auxiliary Flow on Page 81.)
- **Auto Reverse Cooling Fan (If Equipped)** - Shows the reverse cooling fan interval (minutes). When this menu is activated, **[I]** followed by the reverse cooling fan interval will be displayed on the left side of the display screen. (See AUTO REVERSE COOLING FAN on Page 83.)

Use the information button (Item 1) **[Figure 27]** to cycle through the different information.

Display Screen (Cont'd)

Figure 28

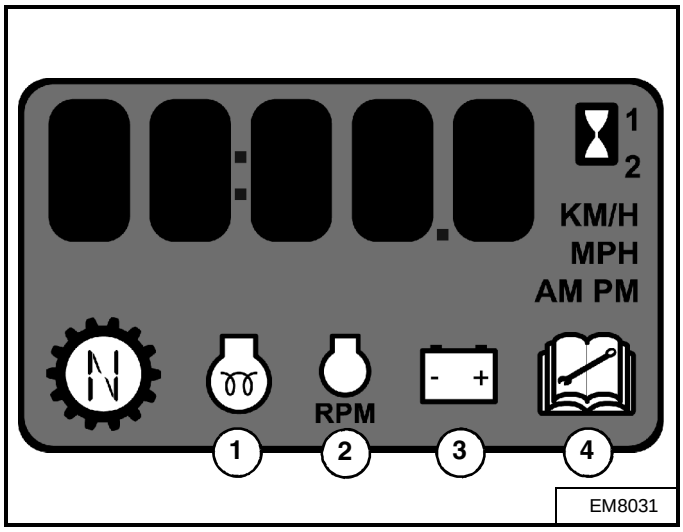
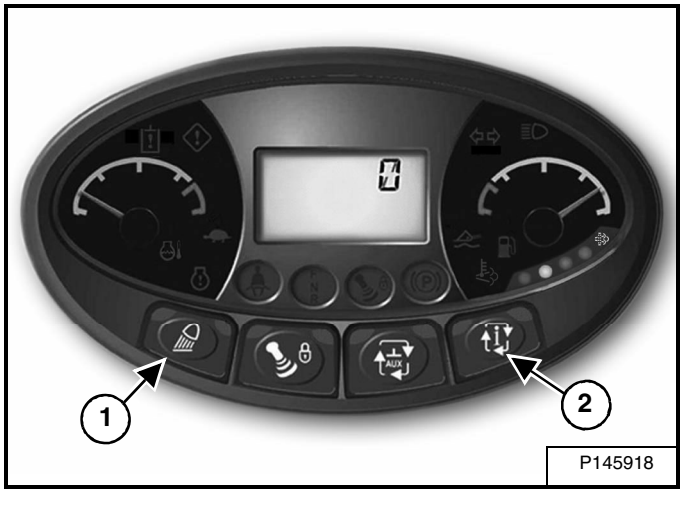


Figure 29



The following information can be displayed on the display screen **[Figure 28]**:

- **Engine Preheat** - **[WAIT]** is displayed automatically during the preheating of the engine (See STARTING THE ENGINE on Page 93.) When this menu is activated, the engine preheat icon (Item 1) **[Figure 28]** will light.

- **Steering Mode Change Management** - Shows the active steering mode change management. (See Steering Mode Management on Page 59.) When this menu is activated, the rpm icon (Item 2) **[Figure 28]** will light.

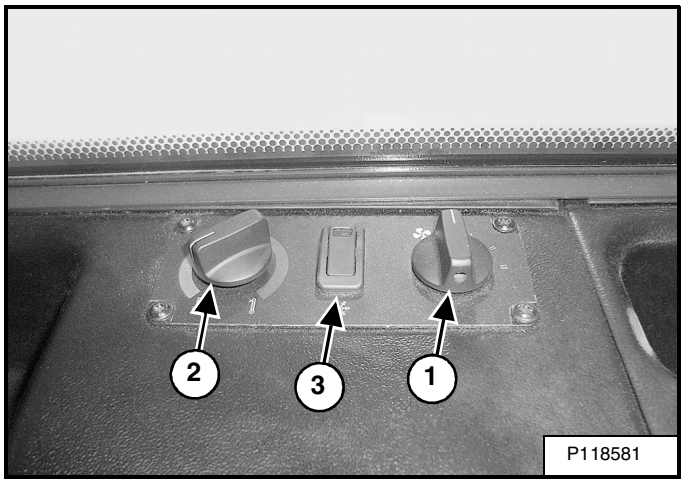
- **Battery / Charging Voltage** - Shows the battery voltage. To activate this menu, press the work lights button (Item 1) **[Figure 29]** for three seconds while in the engine hours menu. When the battery voltage menu is activated, the battery voltage icon (Item 3) **[Figure 28]** will light. Press the information button (Item 2) **[Figure 29]** once to return to the engine hour menu. In combination with general warning icon (see Item 2 "Display Panel" on Page 50) it shows a battery voltage error.

- **Hydraulic Fluid Temperature** - Shows hydraulic fluid temperature. To activate this menu, press the work lights button (Item 1) for three seconds while in the boom angle menu. Press the information button (Item 2) **[Figure 29]** once to return to the boom angle menu.

- **Service Codes** - Shows the active Service Codes. (See Viewing Service Codes on Page 203.) When this menu is activated, the Service icon (Item 4) **[Figure 28]** will light.

Temperature Control Panel

Figure 30



Right Rear Console **[Figure 30]**

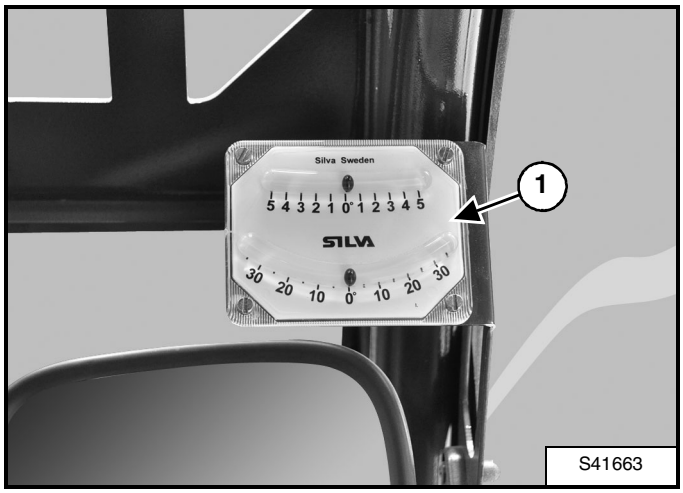
1. **Fan Switch** - Turn switch clockwise to increase fan speed. "O" - Off, "I" - Low, "II" - Medium, "III" - Fast

2. **Temperature Control** - Turn clockwise to increase cab temperature; anticlockwise to decrease.

3. **Air Conditioning Switch (If Equipped)** - Press the top of the switch to turn the Air Conditioning ON - Press the bottom of the switch to turn the Air Conditioning OFF.

Sight Level Gauge

Figure 31

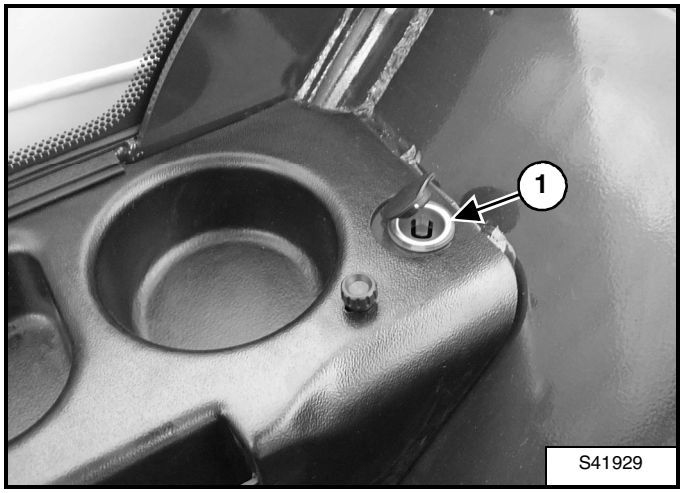


The sight level gauge (Item 1) **[Figure 31]** indicates position of the frame to the horizontal plane.

When carrying out load handling work, carefully monitor this sight level gauge and take the necessary measures.

Auxiliary Power Outlet

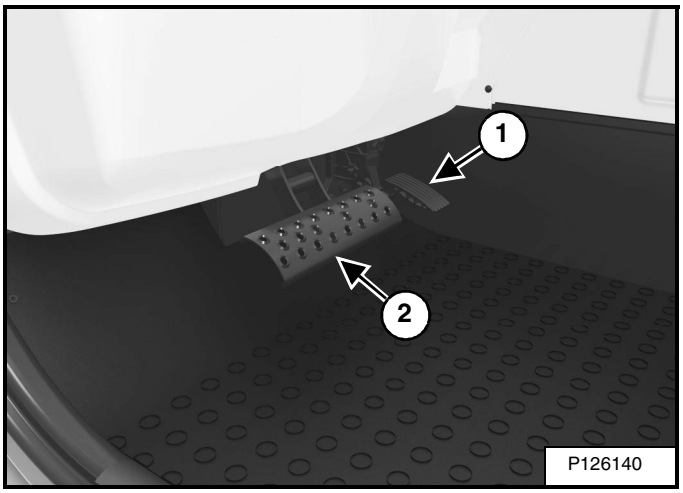
Figure 32



The Auxiliary Power Outlet (Item 1) **[Figure 32]** is a 12 volt receptacle for accessories.

Accelerator Pedal

Figure 33



The accelerator pedal (Item 1) **[Figure 33]** is at the right side of the steering console.

Press the accelerator pedal down to increase engine speed. Release foot pressure to decrease engine speed.

Service Brake Pedal And Inching Control

The service brake pedal (Item 2) **[Figure 33]** is at the left of the accelerator pedal.

Press the brake pedal a small amount to decrease travel speed and control inching (gradual travel of the machine). Press down to stop travel of the machine.

NOTE: Approximately the first half of the total brake pedal travel is for INCHING CONTROL.