

P-TIER 4WDL



Key Feature Identification

A: Automatic Transmission Switch

B: Automatic Differential Lock Switch

C: Spin Control Switch

D: Ride Control Switch (if equipped)

E: Lockup Torque Converter Switch

F: Clutch Cut-Off Switch



A: AUTOMATIC TRANSMISSION (STANDARD)

FUNCTION STATE BY NUMBER OF LIGHTS

- i. No LED Lights – MANUAL mode. Transmission operates in selected gear.
- ii. 1 LED Light – AUTO 1-D mode. Transmission will start in second gear when initially shifted from neutral. After initial shift from neutral, transmission will shift to first gear if a high load is encountered. Transmission will upshift or downshift as ground speed dictates but will only upshift to highest gear selected.
- iii. 2 LED Lights – AUTO 2-D mode. Transmission will start in second gear and will shift to highest gear selected as ground speed increases or will downshift to second gear as ground speed decreases. Transmission will never shift to first gear. In this setting, first gear can only be obtained by actuating the transmission quick shift button.

RECOMMENDATION

Typically, an operator will have sufficient power for load and carry operations using the AUTO 2-D mode. AUTO 1-D is best utilized when the material pile is very dense, when the loader is climbing a steep ramp, or if the loader is being used to push material like a dozer. Caution should be used in AUTO 1-D as this mode may spin tires, increasing O&O costs. AUTO 2-D mode can reduce the number of transmission shifts which in turn can enhance the life of the components.

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B: AUTOMATIC DIFFERENTIAL LOCK (OPTIONAL):

*** Differential lock is activated any time the differential lock switch is pressed, regardless of whether automatic differential lock system is enabled or not.**

FUNCTION STATE BY NUMBER OF LIGHTS

- i. No LED Lights – AUTO Differential Lock Disabled
- ii. 1 LED Light – AUTO Differential Lock Enabled (The automatic differential lock system locks the axles so that the left and right wheels turn together when wheel slip is detected, and machine speed is below 7.5 mph)

RECOMMENDATION

Auto Differential Lock should be enabled on most surfaces, which allows maximum traction and productivity on the jobsite. On hard packed surfaces, or dry asphalt/ concrete, this feature should be disabled to prevent the differential from locking during sharp turns, which could potentially accelerate powertrain and tire wear.

C: SPIN CONTROL (OPTIONAL):

*** Spin control operates in first gear forward to reduce rim pull by reducing engine RPM when loading the bucket.**

FUNCTION STATE BY NUMBER OF LIGHTS

- i. 1 LED Light – Minimum Engine RPM Decrease
- ii. 2 LED Lights – Moderate Engine RPM Decrease
- iii. 3 LED Lights – Elevated Engine RPM Decrease
- iv. 4 LED Lights – Maximum Engine RPM Decrease

RECOMMENDATION

Spin Control should be used when the floor conditions allow the tires to spin under heavy load in first gear. When floor conditions allow maximum traction and tire spinning is not observed, the number of lights may be reduced, to completely off. As floor conditions change and the tires begin to slip while loading, additional lights should be illuminated, one at a time, until no further tire spin is observed. Proper use of this button can enhance tire life, increase productivity, and reduce fuel burn. Beginning a demo or rental with 2 or 3 LEDs illuminated is typically a good place to start and work with the operator preference/ deck condition from that point forward.

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D: RIDE CONTROL (OPTIONAL)

FUNCTION STATE BY NUMBER OF LIGHTS

- i. No LED Lights – Ride Control OFF
- ii. 1 LED Light – Ride Control ON (All the time)
- iii. 2 LED Lights – AUTO (active when ground speed is greater than the set point; Default set point is approximately 3.5 mph)

RECOMMENDATION

Applications that utilize a bucket on the front of the loader will benefit from the AUTO setting (2 LED Lights), as this feature was designed to optimize the point that ride control turns on and off. By having AUTO mode enabled, the operator can expect to get max bucket fill in the pile and minimum material spill during the carry. While this feature improves fuel economy of the loader, it can also improve the life of the ride control components. If the machine is outfitted with forks, an operator may experience a more consistent operation by turning ride control ON (1 LED Light), especially in very low speed, poor underfoot applications.

E: LOCK-UP TORQUE CONVERTER (OPTIONAL)

*** The Lock-Up Torque Converter (LUTC) feature cannot be turned off.**

FUNCTION STATE BY NUMBER OF LIGHTS

- i. No LED Lights – Lock-Up Torque Converter Disabled (LUTC will lock up in gears 4-5)
- ii. 1 LED Light – Lock-Up Torque Converter Enabled (LUTC will engage in gears 2 and up or 3 and up, based on the PDU - Machine Setup - Drivetrain settings)

RECOMMENDATION

The Lock-Up Torque Converter should be used on jobsites where frequent hill climbing is required as well as any time the machine travels at high speed for more than half a mile in a single trip. Enabling this button will allow the torque converter to lock up in lower gears which will help more effectively put power to the ground, increasing productivity, as well as reducing fuel use. This feature should be disabled when the machine is used in short V-Pattern loading applications to provide a more consistent loading cycle.

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F: CLUTCH CUT-OFF (CCO) (STANDARD):

* This switch has two or four settings depending on whether clutch cut-off (CCO) or adaptive clutch cut-off (ACCO) has been enabled in the PDU. ACCO is only available in automatic transmission mode. CCO is available in both automatic and manual transmission modes.

ACCO FUNCTION STATE BY NUMBER OF LIGHTS

- i. No LED Lights – ACCO OFF
- ii. 3 LED Lights – ACCO ON

CCO FUNCTION STATE BY NUMBER OF LIGHTS

- i. No LED Lights – CCO OFF
- ii. LEFT LED Light – Level Ground Mode
- iii. MIDDLE LED Light – Slight Slope Mode
- iv. RIGHT LED Light – Steep Slope Mode

RECOMMENDATION

Set the Clutch Cut-Off based on the slope of the loading area and desired braking disengagement feel of the operator. For instance, when “Level Ground Mode” is enabled, a very light brake pedal application will disengage the transmission and allow the operator to use the accelerator pedal to increase the hydraulic speed of the boom/bucket. For “Steep Slope Mode,” it takes a stronger brake application to disengage the transmission from the hydraulics. When the Clutch Cut-Off feature is set properly for the site, application, and operator, the benefit will be enhanced brake life and reduced fuel consumption.