

1050 P-TIER CRAWLER



Key Feature Identification

- A: Pitch Select Switch
- B: Dual Tilt Switch
- C: Neutral Rotate Mode Switch
- D: Decelerator Mode Switch
- E: Reverse Ratio Switch
- F: Economy (ECO) Mode Switch



A: PITCH SELECT (OPTIONAL):

- * Allows the operator to select the optimal pitch and mode for the return-to-pitch feature when the pitch select button on RH joystick is pressed. Presets can be adjusted between 0-100%.

FUNCTION STATE BY NUMBER OF LIGHTS

- i. No LED Lights – Return to Pitch Mode Turned OFF
- ii. 1st LED Light – Returns blade to pitch position one (factory default 20% of stroke)
- iii. 2nd LED Light – Returns blade to pitch position two (factory default 50% of stroke)
- iv. 3rd LED Light – Returns blade to pitch position three (factory default 80% of stroke)
- v. All LED Lights – Return-to-pitch cycle (cycles through each preset pitch position)

RECOMMENDATION

Power Pitch is very effective in repetitive dozing applications to increase ground penetration, material retention, carrying capacity and to reduce carry-back. When using the joystick proportional roller to manually adjust blade pitch, the pitch recall button will return the blade to the corresponding preset. In most cases, operators will set the blade pitch for increased penetration at the start of the cut. After filling the blade, they will cycle the pitch to a carry position by pressing the joystick button to increase carrying capacity. At the end of the push, the blade is cycled to a forward position to aide with shedding the material and reduce carry back.

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B: SINGLE VS DUAL-TILT (OPTIONAL) *If you have the Pitch Select feature, you have Single/Dual Tilt)*

* This switch allows the operator to select single or dual tilt mode. When this light is on, both tilt cylinders will move equally while tilting the blade. With the light off, only one cylinder will provide tilt.

FUNCTION STATE BY NUMBER OF LIGHTS

- i. No LED Lights – Single Tilt Mode
- ii. 1 LED Light – Dual Tilt mode

RECOMMENDATION

Dual Tilt mode provides equal tilt in both directions, regardless of blade pitch and is commonly used for most applications. This provides the most consistent grading behavior of the machine. With Single Tilt turned on, one cylinder will provide tilt function, and the opposite cylinder will provide pitch. In this configuration, blade tilt may be limited or biased to one side, but it may provide a steeper tilt angle to be achieved. Single Tilt Mode is used for very aggressive transitions in cut from flat to steep. (Example: Switchbacks or Fore slope → Back slope & vice versa)

C: NEUTRAL ROTATE MODE (STANDARD):

* Allows the operator to turn the machine in place without moving in forward or reverse.

FUNCTION STATE BY NUMBER OF LIGHTS

- i. LED Lights Off – Neutral Rotate Mode OFF
- ii. 1 LED Light – Neutral Rotate Mode ON

RECOMMENDATION

Neutral Rotate is commonly used to wind winch cable uniformly across the spool. Additionally, it should be used when making slight steering corrections when positioning the machine on a trailer or placing a side boom. This feature requires the park brake to be released and the engine to be above low idle speed.

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D: DECELERATOR MODE (STANDARD):

FUNCTION STATE BY NUMBER OF LIGHTS

- i. No LED Light – “ENGINE MODE”: When the decelerator/brake pedal is applied, both the engine and transmission speed are decreased, which effectively decreases ground speed and all corresponding machine functions.
- ii. 1 LED Light – “TRANSMISSION MODE”: When the decelerator/brake pedal is applied, the transmission speed decreases but the engine speed remains constant. Hydraulic functions to continue to perform at the associated engine speed.

RECOMMENDATION

Historically, John Deere crawlers have operated in “Engine Mode,” and therefore operators commonly prefer this setting due to its familiarity. Engine mode is best used to slow the ground speed and all hydraulic functions in very tight/precise applications. This will also reduce power to the tracks which can limit slip and has some fuel consumption benefits. Transmission mode is commonly used when increased hydraulic flow is needed for blade or attachment performance. Examples include, creating transitions in grade (flats to slopes, swales, ditches), running automatic grade control in confined areas or around obstacles, using high flow attachments like winches, or low speed tools such as vibratory plows.

E: REVERSE RATIO (STANDARD)

FUNCTION STATE BY NUMBER OF LIGHTS

- i. No LED Lights – Used for setting forward and reverse speeds independently (Machine remembers the last speed in either F or R direction when shifting)
- ii. 1 LED Light – Reverse speed ratio of 100% of forward speed
- iii. 2 LED Lights – Reverse speed ratio of 115% of forward speed
- iv. 3 LED Lights – Reverse speed ratio of 130% of forward speed

RECOMMENDATION

John Deere suggests that no LED lights are set for Reverse Ratio, requiring an operator to choose independent forward and reverse speeds that best accommodate the job and site conditions. Higher reverse speeds can have a negative impact on undercarriage life and should be minimized when possible. A lower reverse speed setting is best for track life, but this comes with the potential cost of lower production.

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F: ECONOMY (ECO) MODE (STANDARD)

* ECO mode can be force enabled/disabled through the primary display unit (PDU). A display message appears on the PDU unit if disabled and the function does not change with the SSM.

FUNCTION STATE BY NUMBER OF LIGHTS

- i. No LED Lights – ECO Mode OFF
- ii. 1 LED Light – ECO Mode ON: automatically lowers engine speed to reduce fuel consumption when the engine is not under load

RECOMMENDATION

John Deere recommends ECO mode “ON” for most applications. The most common environments that an operator would want this feature turned off is one of an inconsistent material, or slope work. These conditions can result in engine surging, where the engine is looking for the optimal run speed. Eco Mode works much like an overdrive transmission, where the engine is idled down to run the most efficient speed providing peak power and torque while the hydrostatic transmission is up-shifted to maintain travel speeds. When additional load is encountered, the transmission will automatically downshift while the engine speed is increased until the load is reduced. ECO Mode also provides improved grade control performance by running the hydraulics at the engine speed the grade system is calibrated at. This also reduces the noise of the engine and smooths out the power to the tracks providing increased traction in loose materials.