



Service Update



2005 600 Series Step Through Rider Platform



MTD Products LLC - Product Training and Education Department

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Update Information on Step-through Rider Platform

Update Information on Step-through Rider Platform

1. ABOUT THIS SECTION:

1.1. The step-through platform internally referred to as the RT99 was introduced in model year 1999. It has been up-dated this year with:
See Figure 1.1.

- A new Transmission
- New 42" single-belt deck
- New dash panel structure
- A means of mowing in reverse, for customers who operate the tractor in tight quarters.



Figure 1.1

1.2. The information in this section applies to lawn tractors with 42" decks and manual PTO engagement. The tractor cited in this section is a 2005 model Troy-bilt Bronco rider, factory number: 13AJ609G766.

2. 42" DECK

2.1. The single-belt design replaces a two-belt design. See Figure 2.1.

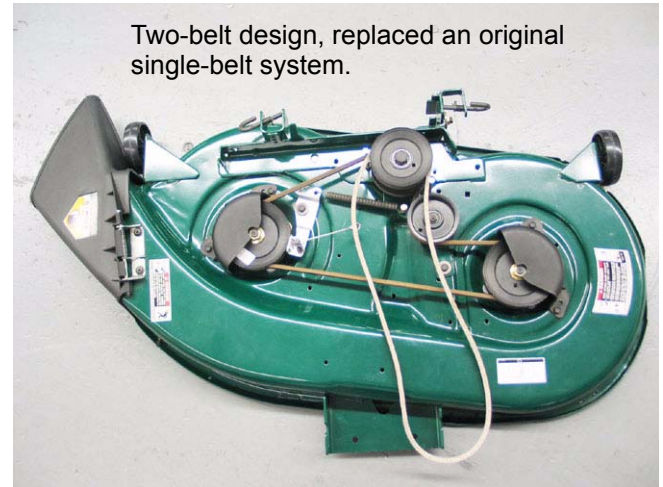


Figure 2.1

2.2. The new design features: See Figure 2.2.

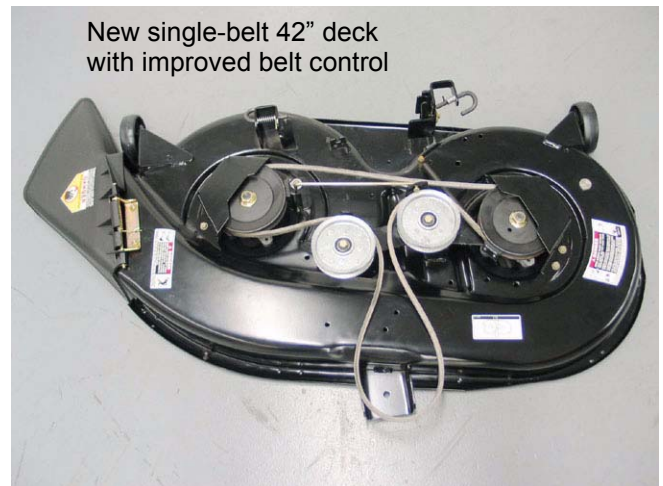


Figure 2.2

- A stationary idler pulley.
- An idler pivot bracket that mounts at the same point as the stationary idler pulley.
- A tension pulley that is operated by the movement of the idler pivot bracket.
- One spindle brake attached directly to the pivot bracket, and the other operated by a rod.

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- 2.3. The new deck uses a three-point mounting system. See Figure 2.3.

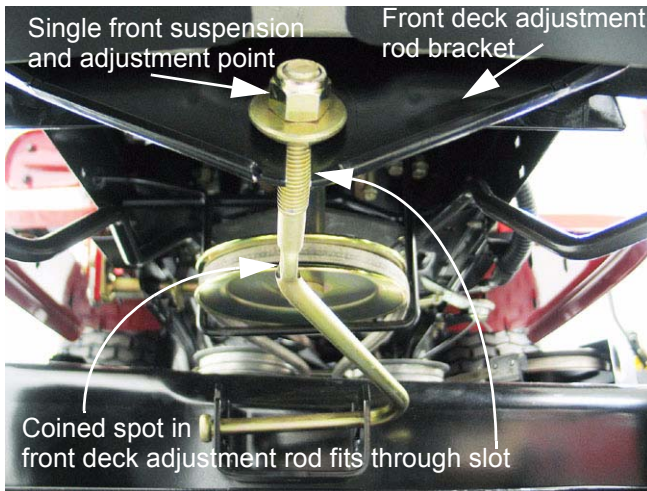


Figure 2.3

- 2.4. Fore-and-aft deck leveling can now be done by turning a single nut.
- 2.5. Side-to-side leveling is still done on the left side of the deck. See Figure 2.5.

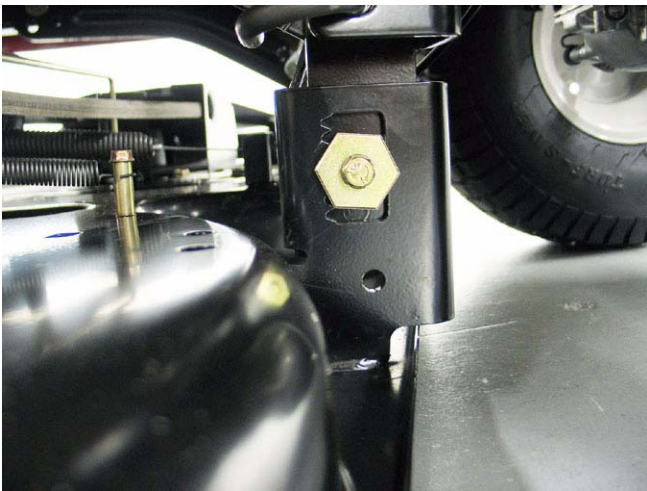


Figure 2.5

- 2.6. The deck removal procedure remains very similar: Pull the J-pins at each side of the deck, and slide the deck forward to disengage the front mounting.
- 2.7. Lower the deck before disconnecting-it, then raise the deck lift lever to pull the lift-links out of the way.

- 2.8. The belt keeper for the crankshaft pulley can be removed by taking-out a single bolt. The keeper anchors to an opening in the frame on the right side. See Figure 2.8.

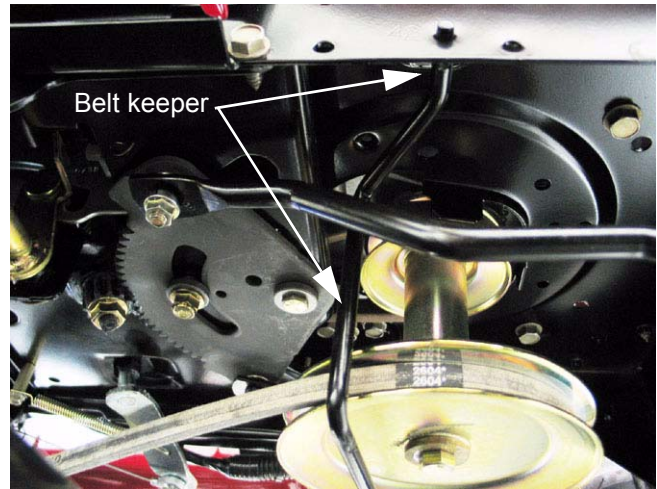


Figure 2.8

- 2.9. The belt tensioning mechanism is attached to the deck, and must be disconnected. See Figure 2.9.



Figure 2.9

- The hairpin clip must be removed from the spindle brake rod where it connects to the right side brake shoe.
- The brake rod will then swing up, still attached to the idler pivot bracket, making room to disconnect the spring on the PTO control cable.

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- 2.10. The PTO control cable can be disconnected by removing the hairpin clip that secures it to the bracket on the deck. See Figure 2.10.

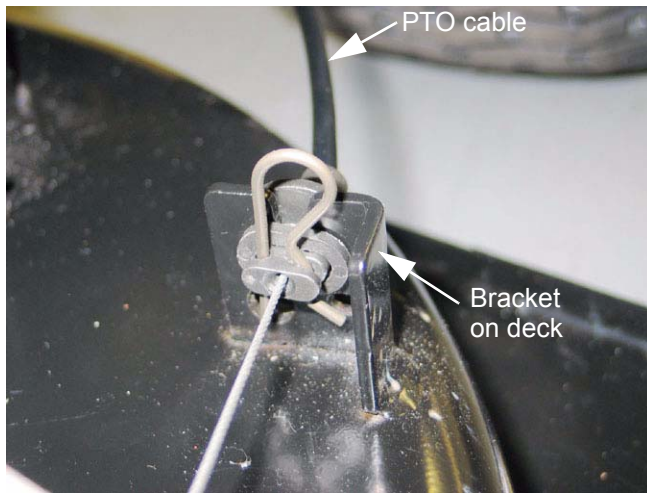


Figure 2.10

- 2.11. If the tractor is to be driven with the deck removed, it is best to remove the cable from the tractor along with the deck.
- 2.12. Remove the cable from the tractor by removing the cotter pin that holds the cable eyelet to the PTO arm, and pulling-out the hairpin clip that fastens the cable housing to the bracket on the tractor frame. See Figure 2.12.

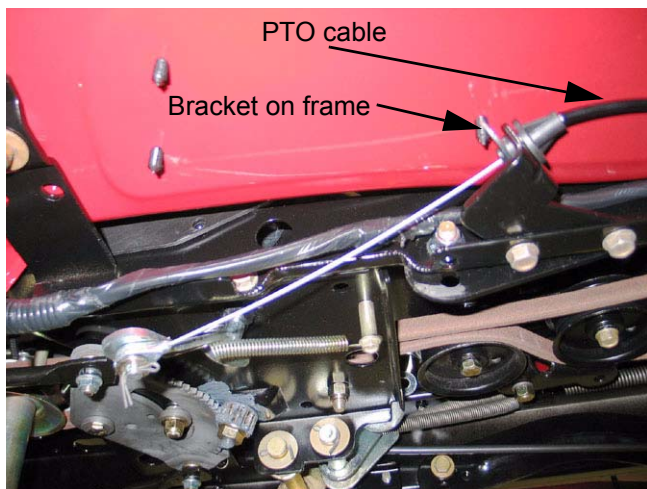


Figure 2.12

- 2.13. There are two extension springs on the cutting deck. One acts directly on the idler pivot bracket, releasing tension on the belt, and engaging the brake when the PTO is disengaged by relaxing the PTO control cable. See Figure 2.13.

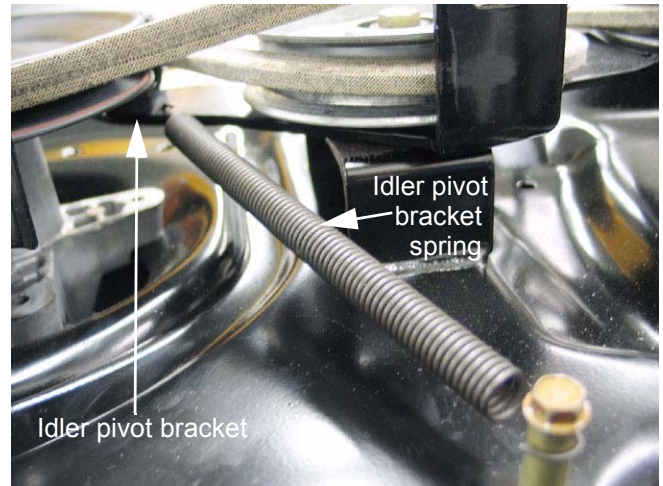


Figure 2.13

- 2.14. The second spring helps apply the brake to the second spindle when the PTO is disengaged. See Figure 2.14.



Figure 2.14

- 2.15. The new 42" cutting deck uses the same blades as it's predecessor.

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- 2.16. Decks that are not equipped with the deck-wash system will have a plug secured into the deck-wash port by a nut. See Figure 2.16.

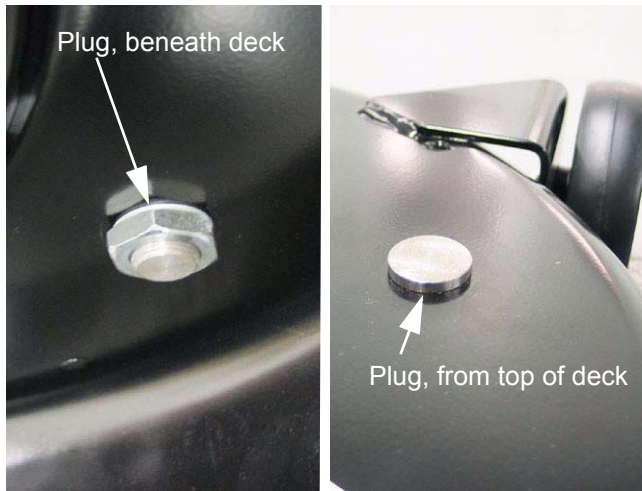


Figure 2.16

- 2.17. Deck installation tip: place a length of 4 X4 dimensional lumber (or a similar item) beneath the front mounting point to make it easier to connect the deck hanger brackets at the rear. See Figure 2.17.

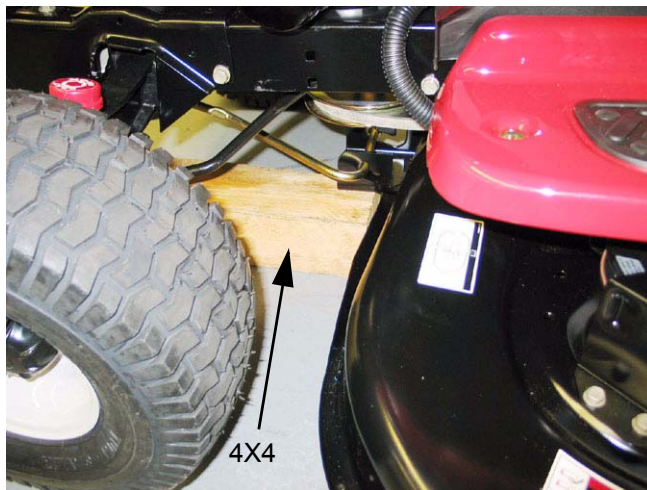


Figure 2.17

3. NEW TRANSAXLE

- 3.1. The variable speed pulley is mounted directly to the housing of the previous transaxle (P/N: 618-0307D). See Figure 3.1.

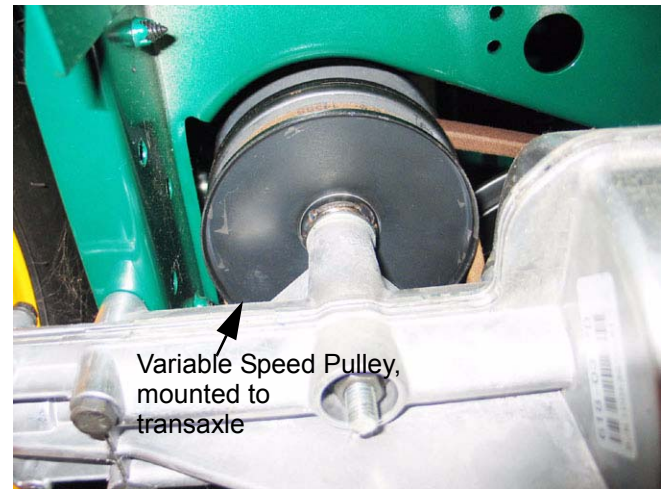


Figure 3.1

- 3.2. The new transaxle (P/N: 618-04133A) requires a separate bracket for the variable speed pulley. See Figure 3.2.

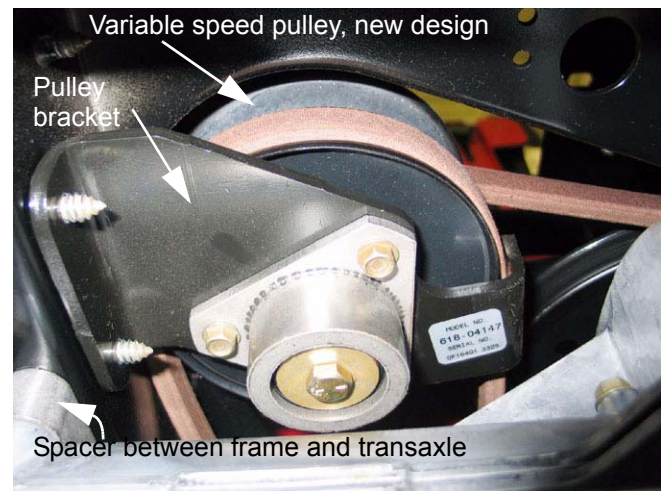


Figure 3.2

- 3.3. The new transaxle is mounted with spacers between the axle horns and the bottom flange of the tractor frame. Reinforcement plates go beneath the heads of the mounting bolts, above the flange.

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- 3.4. The new transaxle also uses a different torque bracket. See Figure 3.4.

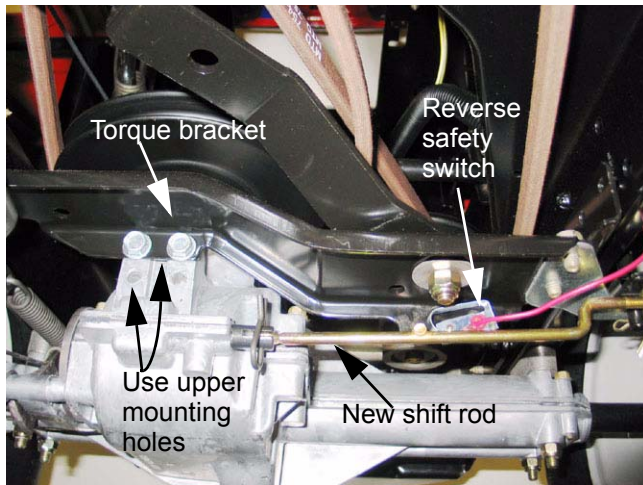


Figure 3.4

- 3.5. The reverse safety switch is relocated on the new torque bracket, and the shift rod has changed as well.

4. DETAIL CHANGES

- 4.1. Grass collectors and rear-mounted attachments will attach to new mounting lugs that replace the old shoulder bolts. See Figure 4.1.



Figure 4.1

- 4.2. The seat bracket allows for easy adjustment of the seat position and removal of the seat by loosening or removing knobs. See Figure 4.2.

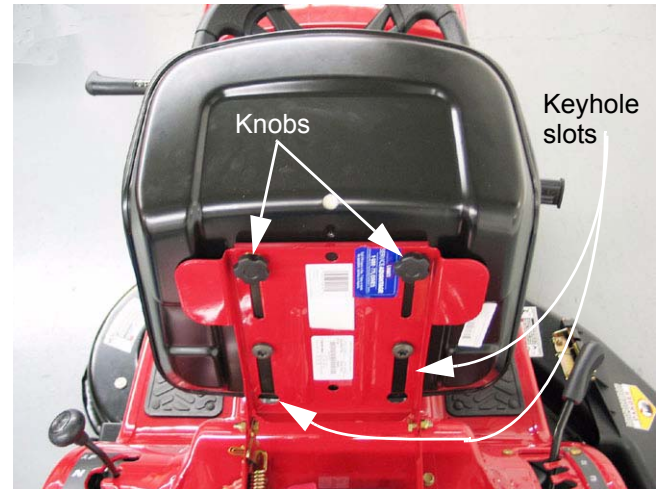


Figure 4.2

- 4.3. The fuel tank is now secured by a pair of fuel tank support rods, rather than a single rod. See Figure 4.3.

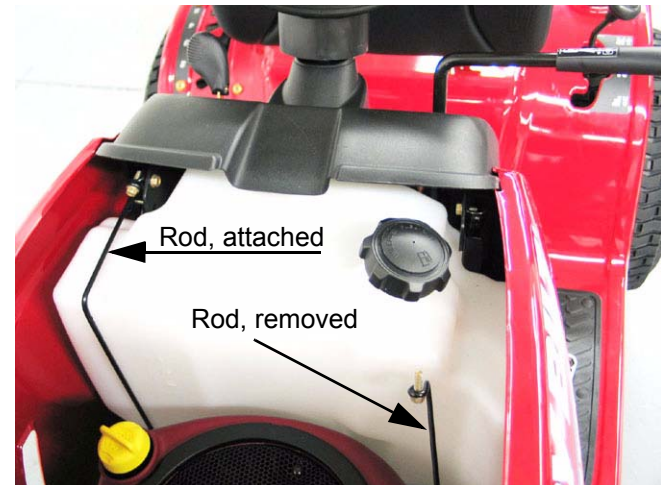


Figure 4.3

- 4.4. Each rod is secured at the top by a screw. the bottom of each rod hooks into the dash panel support.

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- 4.5. The (empty) fuel tank on this model can now be removed without taking-off the side panels. See Figure 4.5.



Figure 4.5

- 4.6. The previous dash support was made of a single tube. The new one consists of a pair of brackets. See Figure 4.6.

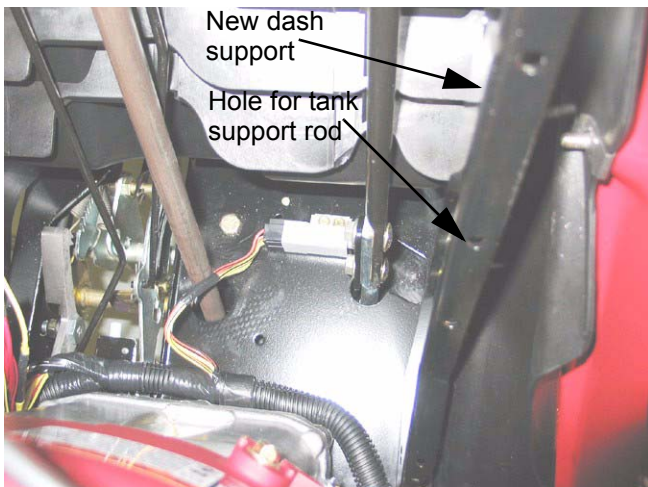


Figure 4.6

- 4.7. The hook on the bottom of each tank support rod fits into a hole in one of the dash brackets.

5. NEW SAFETY CIRCUITS (RMC / OCR)

- 5.1. With the fuel tank removed, the RMC module and the key switch can be removed from the dashboard. See Figure 5.1.



Figure 5.1

- 5.2. Squeeze the four tabs on the side of the housing that contains the RMS module and the key switch to pop it out of the dash panel. See Figure 5.2.

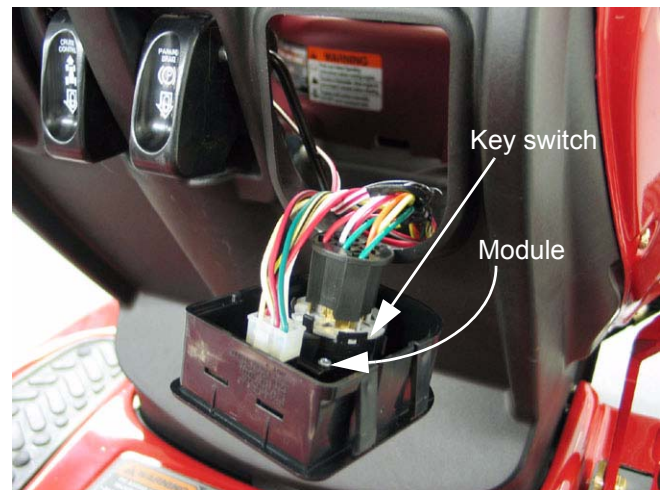


Figure 5.2

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- 5.3. The key switch can be easily removed from the housing. See Figure 5.3.

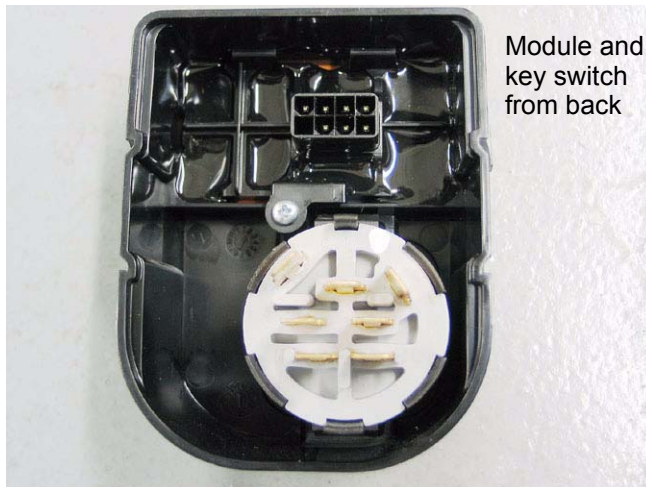


Figure 5.3

- 5.4. Other than starter solenoids, all relays have been eliminated from the step-through rider electrical systems.
- 5.5. Functions- manual PTO clutch:
- With the key in either "run" position (NORMAL MOWING or REVERSE CAUTION), the tractor starts as it always has: The PTO must be in the off position and the brake must be applied. The seat need not be occupied.
 - With the key in either "run" position (NORMAL MOWING or REVERSE CAUTION), the safety features will work as they always have: If the operator leaves the seat and the parking brake is not set, the engine will turn-off. If the operator puts the tractor in Reverse gear with the blades (PTO) engaged, the engine will turn-off. If the operator leaves the seat and the blades are engaged, the engine will turn-off.
 - If the key is in the REVERSE CAUTION position, AND the orange triangular button is depressed, all of the above conditions will still be true BUT the tractor will mow in reverse.
 - If the key is subsequently moved to any other position, the tractor will no longer mow in reverse unless the key is returned to the REVERSE CAUTION range, AND the orange button is depressed again.
 - Depressing the orange button a second time will not turn-off the mow in reverse capability.
 - Whenever the red LED on the module is illuminated, the tractor will mow in reverse.

- When the red LED on the module is not illuminated, the tractor will not mow in reverse.
- If the operator leaves the seat while the red LED is illuminated, with the brake either applied or released, the LED will turn-off. If the the brake is not applied, the engine will turn-off as well.

NOTE: It may take several seconds for the LED to go out.

- If the LED turns off, the key switch must be turned to another position (NORMAL MOWING), then returned to REVERSE CAUTION before pressing the orange button will cause the LED to illuminate and enable the mow in reverse feature.

- 5.6. For units with an electric PTO clutch:

- With the key in either "run" position (NORMAL MOWING or REVERSE CAUTION), the tractor starts as it always has: The PTO must be in the off position and the brake must be applied. The seat need not be occupied.
- With the key in either "run" position (NORMAL MOWING or REVERSE CAUTION), the safety features will work as they always have: If the operator leaves the seat and the parking brake is not set, the engine will turn-off. If the operator puts the tractor in Reverse gear with the blades (PTO) are engaged, the PTO will turn-off. If the operator leaves the seat and the blades are engaged, the engine will turn-off.
- If the key is in the REVERSE CAUTION position, AND the orange triangular button is depressed, all of the above conditions will still be true BUT the tractor will mow in reverse.
- If the key is subsequently moved to any other position, the tractor will no longer mow in reverse unless the key is returned to the REVERSE CAUTION range, AND the orange button is depressed again.
- Depressing the orange button a second time will not turn-off the mow in reverse capability.
- Whenever the red LED on the module is illuminated, the tractor will mow in reverse.
- When the red LED on the module is not illuminated, the tractor will not mow in reverse.

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- If the operator leaves the seat while the red LED is illuminated, with the brake either applied or released, the LED will turn-off. If the the brake is not applied, the engine will turn-off as well.

NOTE: It may take several seconds for the LED to go out.

- If the LED turns off, the key switch must be turned to another position (NORMAL MOWING), then returned to REVERSE CAUTION before pressing the orange button will cause the LED to illuminate and enable the mow in reverse feature.

NOTE: The preceding sections describe the correct operation of the mow in reverse feature