



Update Kit

Workman® 2100 Utility Vehicle

Part No. 104-6640

Form No. 3328-354

Installation Instructions

Position the machine on a level surface, stop the engine, remove the key, and disconnect the negative (-) battery terminal.

Caution

If you leave the key in the ignition switch, someone could accidentally start the engine and seriously injure you or other bystanders.

Remove the key from the ignition switch before you do any maintenance.

Replacing the Accelerator Pedal

1. If you have a floor mat, remove it from around the accelerator and brake pedals.
2. Remove the metal plate on the floor surrounding the pedals.
3. Disconnect the accelerator cable and spring from the accelerator pedal and discard the spring.
4. Remove the bolt securing the accelerator pedal pivot rod (front rod) and pull out and discard the rod (Fig. 1).

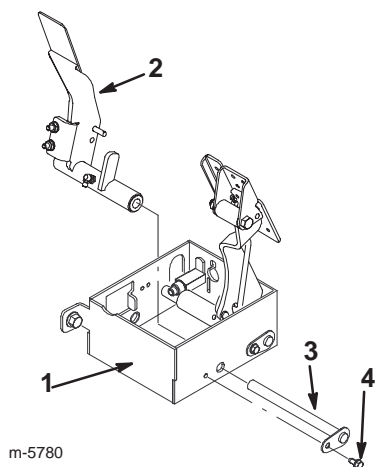


Figure 1

- | | |
|----------------------|--------------------------------|
| 1. Pedal box | 3. Accelerator pedal pivot rod |
| 2. Accelerator pedal | 4. Bolt |

5. Remove the accelerator pedal (Fig. 1).
6. Remove the brake pawl from the old accelerator pedal (Fig. 2).

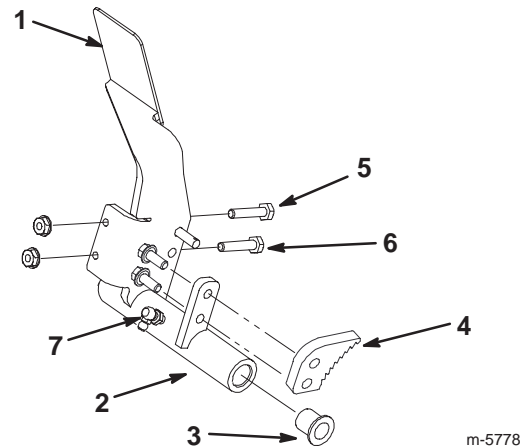


Figure 2

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|------------------------|----------------------|
| 1. Accelerator pedal | 5. Start switch bolt |
| 2. Pedal mounting tube | 6. Stop bolt |
| 3. Pivot bushing | 7. Grease fitting |
| 4. Brake pawl | |

7. Install the brake pawl on the new accelerator pedal (Fig. 2). Use red Loctite 272 or equivalent on the bolts.
 8. Measure the height of the stop bolt on the old accelerator pedal (from the back of the pedal to the top of the bolt head) and then remove it and the start switch bolt, discarding the rest of the accelerator pedal assembly (Fig. 2).
 9. Install the stop bolt and nut on the new accelerator pedal, adjusting it to the same height it was set to on the old pedal (Fig. 2), but do not tighten the jam nut.
 10. Loosely install the start switch bolt (Fig. 2), but do not tighten the jam nut.
 11. Install a new grease fitting into the accelerator pedal mounting tube (Fig. 2).
- Note:** Use only low temperature, lithium grease in this fitting (Toro part number 505-101 or equivalent).
12. Install 2 bushings into the ends of the mounting tube of the new accelerator pedal (Fig. 2).

13. Insert the accelerator pedal assembly into the pedal box and secure it into the front position using the new black pivot rod supplied with the kit and the bolt removed previously (Fig. 1).

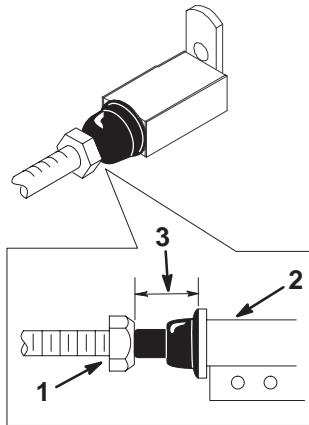
14. Connect the accelerator cable and the new spring to the accelerator pedal.

Adjusting the Stop Bolt

1. Press the brake in as far as possible and set the parking brake.
2. Turn out the stop bolt until it contacts the pedal box.
3. Set the jam nut on the stop bolt to secure it.

Checking and Adjusting the Start Switch Bolt

1. Release the parking brake.
2. Check and/or set the distance between the head of the start switch bolt and the body of the start switch to 5/8 inch (1.6 cm) (Fig. 3).



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Figure 3

1. Start switch bolt
2. Start switch
3. 5/8 inch (1.6 cm)

Important The engine should not turn over when you are setting the parking brake. If it does, check the start switch bolt adjustment and adjust it as needed by reducing the distance from the bolt to the switch body. **Do not** bottom out the bolt head against the switch body.

Completing the Installation

1. Install the metal plate surrounding the pedals.
2. Install the floor mat if necessary.

Replacing the Governor Cable

Installing the New Governor Cable

1. Drill out the rivet securing the security bracket and remove it (Fig. 4).

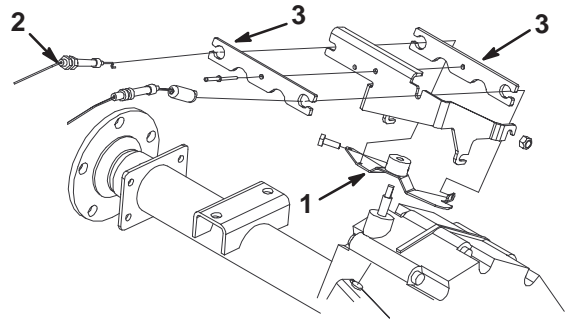


Figure 4

1. Governor bracket
2. Governor cable
3. Security bracket

2. Cut the cable tie securing the governor, throttle, and choke cables to the cable bracket (Fig. 5).
3. Remove and discard the governor cable (cable running from the carburetor to the governor bracket) (Fig. 4).
4. Install the new governor cable, routing it as illustrated in Figures 4 and 5.

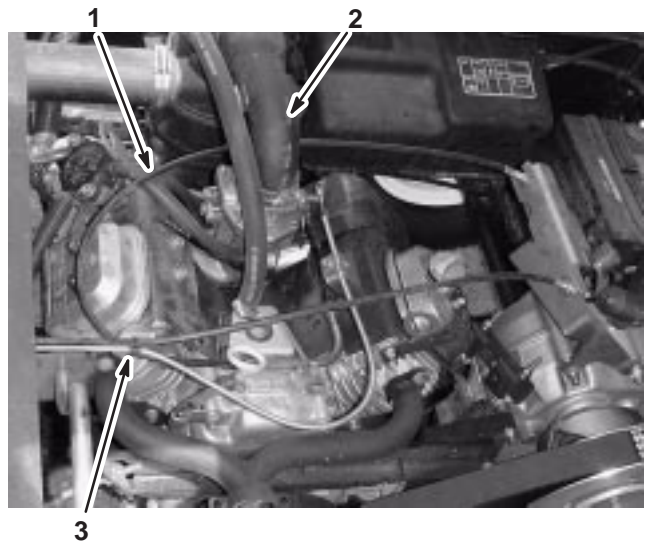


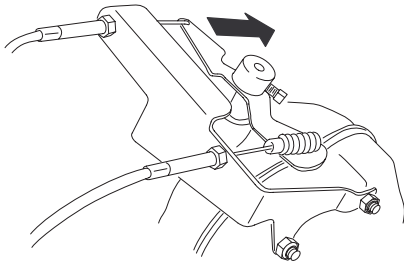
Figure 5

1. Governor cable
2. Route the governor cable under the air cleaner and breather hoses.
3. Cable bracket with cables and cable tie attached.

5. Secure the cables to the cable bracket as illustrated in Figure 5 with the new cable tie.

Adjusting the Governor Cable

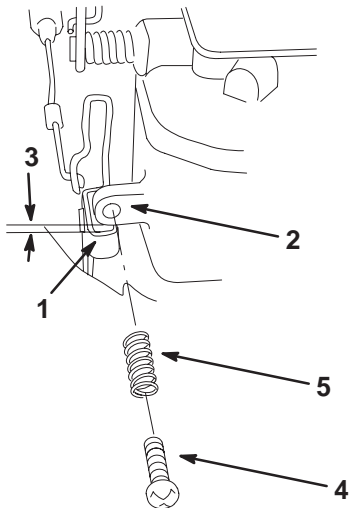
1. Turn the governor bracket clockwise as far as possible and hold it. (Fig. 6).



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Figure 6

2. While holding the governor bracket, ensure that there is 0.01 to 0.15 inch (0.2 to 3.5 mm) gap between the input lever and the high idle stop (Fig. 7). If not, adjust the governor cable.



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Figure 7

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|--------------------------------------|---------------|
| 1. Carburetor input lever | 4. Stop screw |
| 2. Idle stop | 5. Spring |
| 3. 0.01 to 0.15 inch (0.2 to 3.5 mm) | |

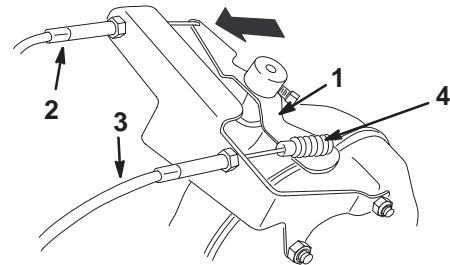
3. Remove the stop screw and spring from the idle stop on the carburetor, discarding the screw (Fig. 7).
4. Install a new stop screw with green patch lock on it and the spring removed previously into the idle stop (Fig. 7). Thread the screw in until it contacts the carburetor input lever, then turn it in an additional 1/16 to 1/8 turn.

Warning

If you thread the screw in further than 1/8 turn, the engine may not stop when the accelerator pedal is released and the machine may continue to run, possibly injuring the operator or bystanders.

Do not turn the screw in more than 1/8 turn and test the vehicle to ensure proper operation.

5. Turn the governor bracket counterclockwise as far as possible and hold it (Fig. 8).

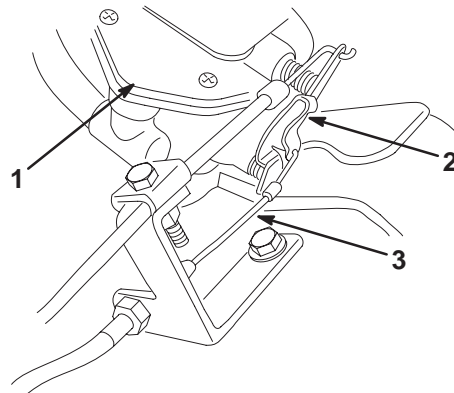


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Figure 8

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|---------------------|--------------------------|
| 1. Governor bracket | 3. Throttle cable |
| 2. Governor cable | 4. Throttle cable spring |

6. Check the cable at the carburetor (Fig. 9). There should be slight slack in the cable and it should not be pulling on the carburetor input lever (Fig. 9). If there is no slack in the cable, adjust the governor cable.



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Figure 9

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|---------------------------|-------------------------------------|
| 1. Carburetor | 3. Governor cable with slight slack |
| 2. Carburetor input lever | |

7. Still holding the governor bracket counterclockwise, ensure that there is free-play at the throttle cable spring (the cable must not be pulling on the spring) (Fig. 8). If not, adjust the throttle cable.

Note: If you adjust the throttle cable, check the ground speed and adjust it as necessary. Refer to the *Service Manual* for instructions.

8. Install the security brackets using a new pop rivet (Fig. 4).

Removing the Engine Air Valve

1. Disconnect the air valve wires from the wiring harness (Fig. 10).

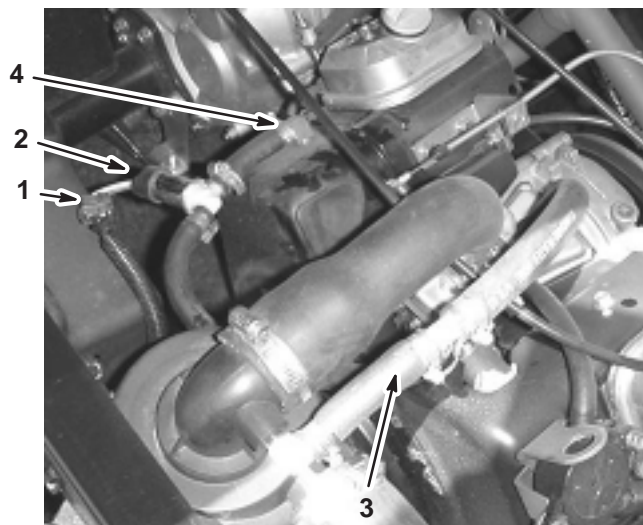


Figure 10

1. Disconnect wiring here
2. Air valve and tubing
3. Breather hose
4. Remove this fitting

2. Remove the breather hose, air valve, and fitting illustrated in Figure 10.
3. Install a new pipe plug into the hole in the back of the engine shroud from which you removed the fitting (Fig. 11).

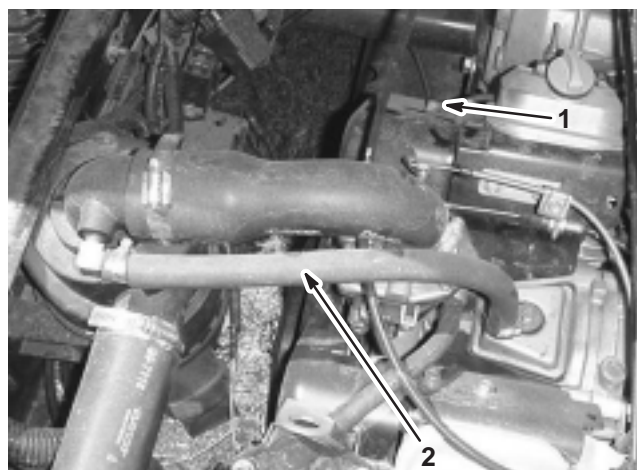


Figure 11

1. Pipe plug
2. New breather hose

4. Connect the new breather hose from the air cleaner to the breather fitting on the center of the engine crankcase (Fig. 11).

Replacing the Exhaust System

1. Remove the exhaust system, including the muffler and manifold.
2. Measure 12 inches (30.5 cm) from the front, left corner of the frame.
 - If the prop rod U-bracket is installed in this position, remove the bolt securing the prop rod and enlarge the hole in the prop rod bracket and frame to 15/32 inch dia (Fig. 12).
 - If there is no hole in this location, drill a 15/32 inch dia. hole through the frame.
3. Drill a 15/32 inch dia hole through the frame at the location (4) illustrated in Figure 12.

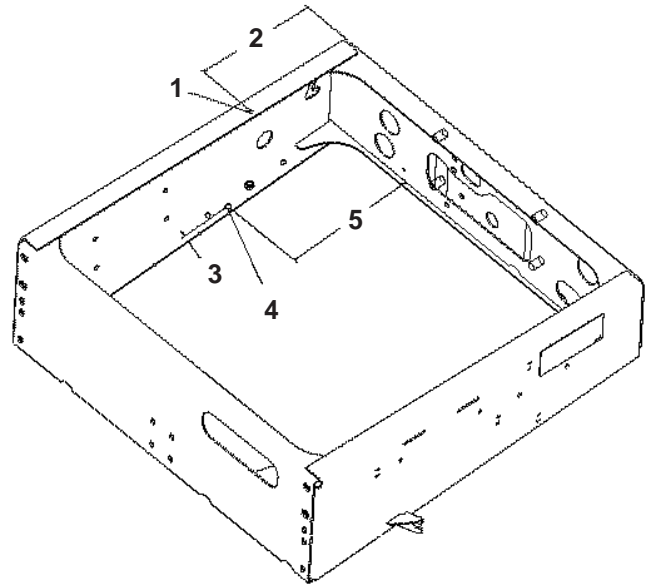


Figure 12

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|-----------------------|--------------------------|
| 1. 15/32 inch dia | 4. 15/32 inch dia |
| 2. 12 inch (30.5 cm) | 5. 10-21/32 inch (27 cm) |
| 3. 1/2 inch (1.25 cm) | |

4. Install the new exhaust manifold, exhaust coupler, springs, and muffler, ensuring that you align the exhaust manifold gaskets correctly (Fig. 13).

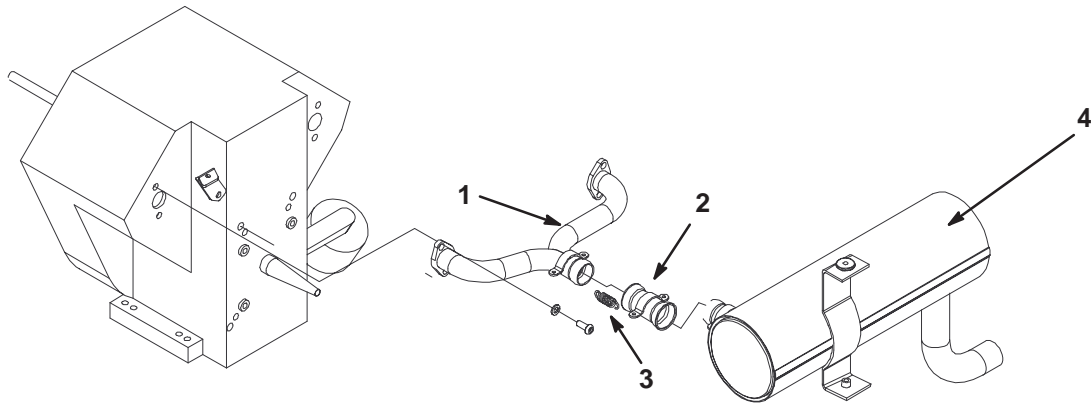


Figure 13

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|---------------------|--------------------|-----------------------------|------------|
| 1. Exhaust manifold | 2. Exhaust coupler | 3. Springs (only one shown) | 4. Muffler |
|---------------------|--------------------|-----------------------------|------------|

Upgrading the Electrical System

1. Disconnect the brown connector from the old module near the right side of the frame (Fig. 14).

2. Insert the dead connector from the kit into the brown connector to seal it off (Fig. 14).

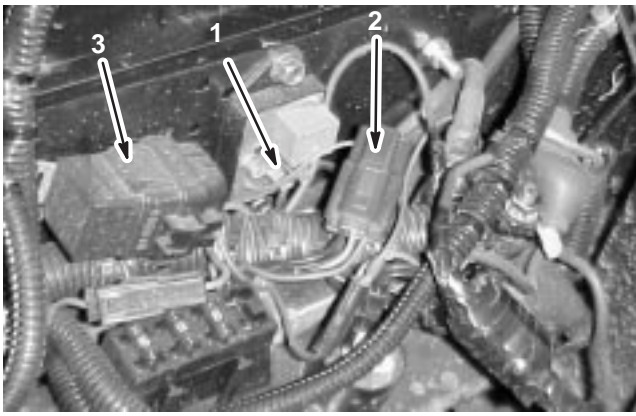


Figure 14

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|--|----------|
| 1. Old module | 3. Relay |
| 2. Brown connector with dead connector installed | |

3. Route the module wire harness (supplied with the kit) under and behind the air cleaner so that the end with the red connector is near the front of the engine.
4. Install the new gray module and the black ground wire of the module wiring harness on the side of the engine towards the front of the engine compartment as illustrated in Figure 15. The ring terminal on the black ground wire of the wiring harness should be installed between the module and the module retaining bolt.

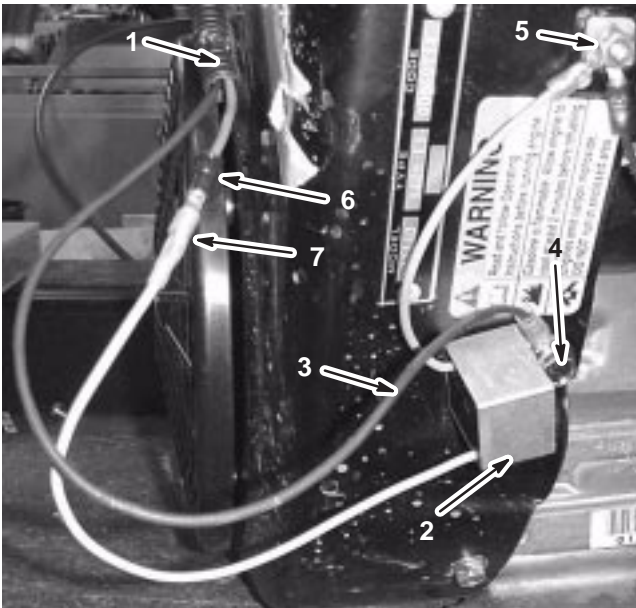


Figure 15

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|---|--|
| 1. Module wiring harness | 5. Gray lead with ring terminal connected to the ignition kill magneto |
| 2. New module | 6. Red connector on the wiring harness |
| 3. Black ground wire with ring terminal | 7. Module connector |
| 4. Module retaining bolt | |

5. Connect the red connector from the wiring harness to the connector coming from the module (Fig. 15).
6. Connect the wire with the ring terminal on the module to the magneto kill terminal on top of the brown wire already there (Fig. 15).
7. Unplug the relay connector from the relay (Fig. 16).

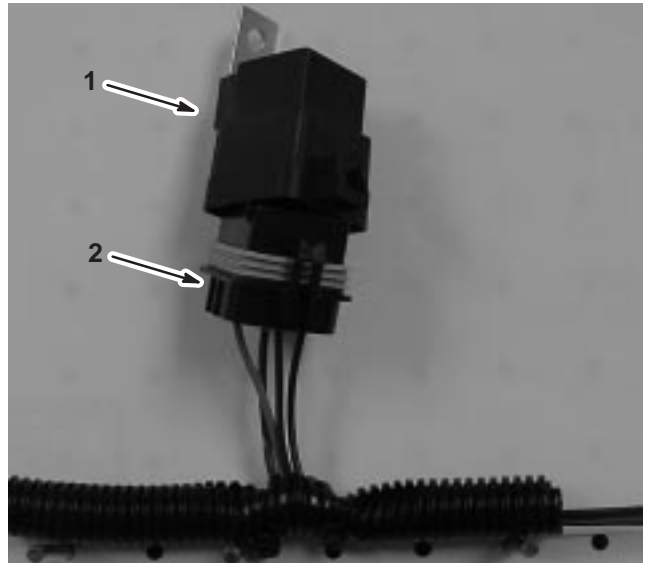


Figure 16

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|----------|--------------------|
| 1. Relay | 2. Relay connector |
|----------|--------------------|

8. Cut and strip the brown wire with the white stripe from the bottom of the relay connector (Fig. 17).



Figure 17

- Splice the brown wire with the white stripe to the splice connector on the module wiring harness, using a heat shrink tube to seal them together (Fig. 18).

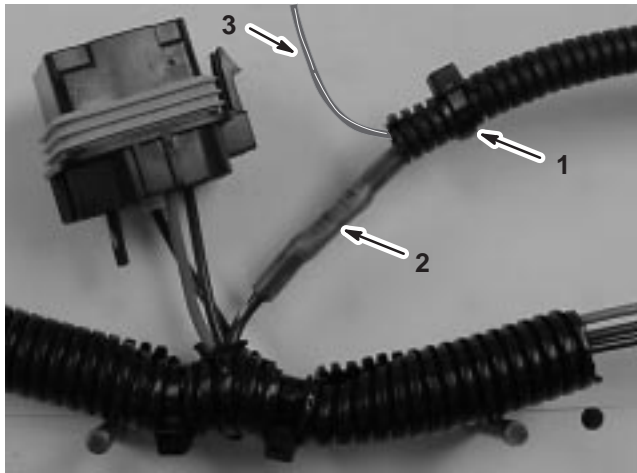


Figure 18

- Module wire harness
- Heat-shrink connection
- Black ground wire to solenoid

- Plug the relay connector into the relay.

- Remove the nuts from the small terminals on top of the start solenoid, located near the battery (Fig. 19).

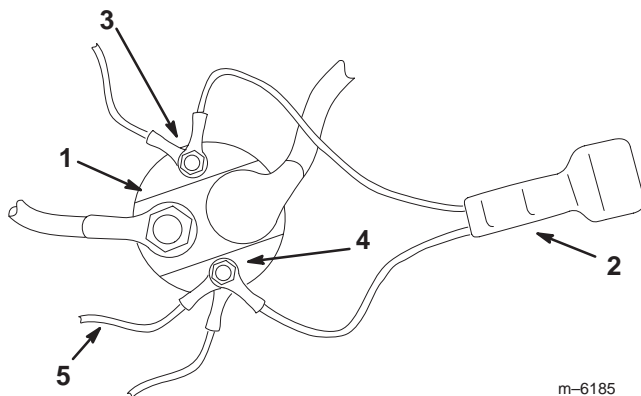


Figure 19

- Start solenoid
- Diode
- Small terminal with blue wires
- Small terminal with black wires (ground)
- Black ground wire from the wiring harness

- Connect the diode across the terminals (Fig. 19) with the blue wire going to the terminal that already contains blue wires and the black wire going to the terminal containing black wires.

Important It is very important that you connect the blue wire to the terminal with blue wires and the black wire to the terminal with black wires. If you install it wrong, it will cause a short and the engine will not start.

- Connect the ring terminal on the black wire of the module wiring harness to the terminal on the solenoid containing black wires (Fig 19).

- Secure the wires to the solenoid terminals using the nuts removed previously.

- Secure any loose cables or wires with cable ties.

Replacing the Steering Pitman Arm Retaining Bolt

- Remove the existing retaining bolt and washer (located under the dash) and discard them (Fig. 20).
- Install a new flange-head bolt with blue patch lock and a step washer with the step pointing down into the steering pitman arm (Fig. 20).

Important Never reuse a steering pitman arm retaining bolt once you have removed it.

- Torque the bolt to 30 ft-lb (41 N·m).

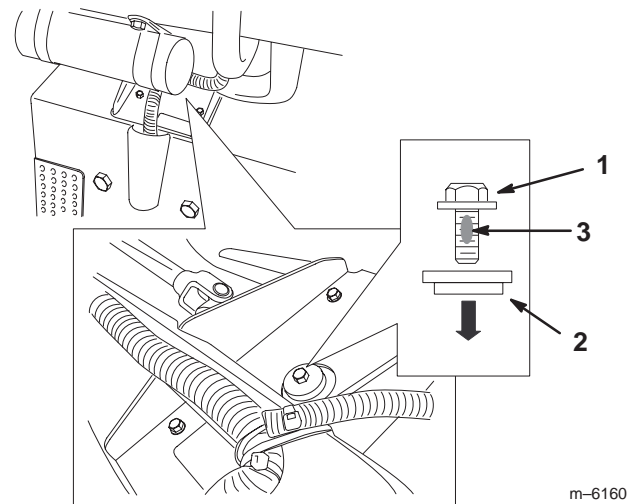


Figure 20

- Flange-head bolt
- Step washer
- Blue patch lock

Checking and Adjusting Neutral

If the vehicle has a neutral position on the shift lever, which controls the neutral in the transaxle, take the following steps to ensure that the neutral shift lever operates the transaxle neutral correctly:

- Set the shift lever into the Neutral position.

2. Ensure that the neutral bracket is in the neutral position (level) by turning the drive clutch (Fig. 21). The vehicle should not roll back and forth. If it does, manually move the neutral bracket to the neutral position.

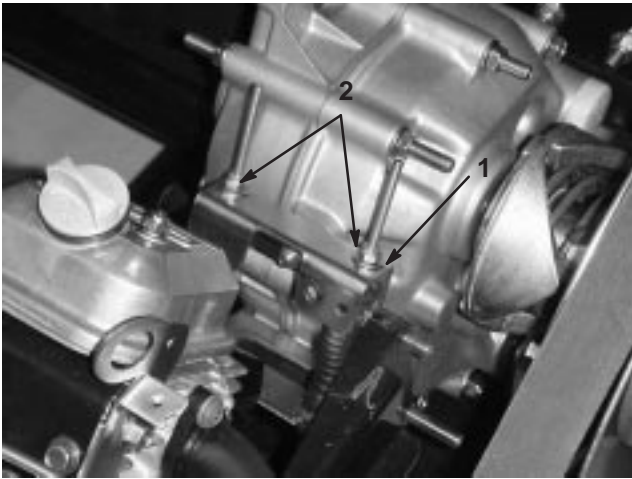


Figure 21

1. Neutral bracket
2. Locknuts

3. Tighten one of the locknuts (Fig. 21) just enough to take the slack out of the shift cable.

Note: You must hold the threaded shaft below the bracket to tighten the locknut on top.

4. Tighten the other locknut just enough to take the slack out of the other shift cable.
5. Pull up on each shift cable and ensure that there is no gap between the nut/washer and the neutral bracket (Fig. 22). If there is a gap, tighten the nut.

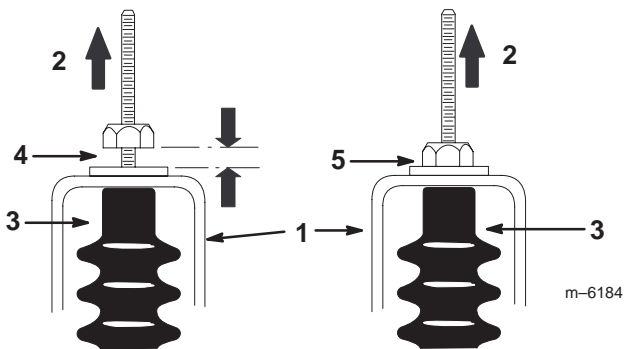


Figure 22

1. Neutral bracket
2. Pull up
3. Cable boot
4. Wrong, must tighten the nut
5. Correct adjustment

6. Start the engine and shift into Forward, Reverse, and Neutral several times to ensure that the neutral bracket is operating properly.