

Series 1000 and 1500

16.19. Pivot the subframe down. Be careful of the spacer on the bolt and the hex flange bushing for the steering shaft, they will fall out.

16.20. You now have access to the cruise linkage and cam lock. You also have access the park brake linkage and locking plate. See Figure 16.20.

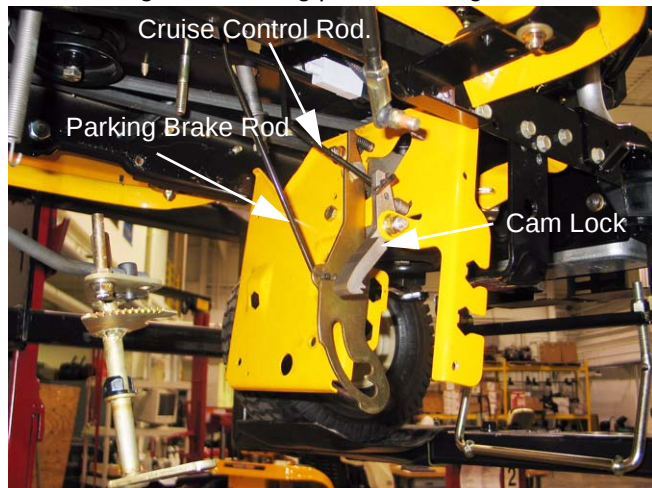


Figure 16.20

16.21. Remove the hair pin clips on the linkages. Remove the linkages.

16.22. Remove the nut and bolt holding the cruise cam and/or the park brake locking plate.

16.23. Reassemble in reverse order.

CAUTION: Make sure the linkage rods are routed properly before you swing the subframe

17. TRACTION DRIVE BELT REPLACEMENT: CVT

NOTE: There are two drive belts in the CVT system. Because they work together on the variable speed pulley, wear to one belt effects the performance of the other belt. It is strongly recommended that the belts be replaced as a set.

17.1. Remove the cutting deck from the tractor.

17.2. Tilt-up the seat and disconnect the battery cables (ground cable first) using a 7/16" wrench.

17.3. Remove the battery hold-down, remove the battery and the battery tray. See Figure 17.3.

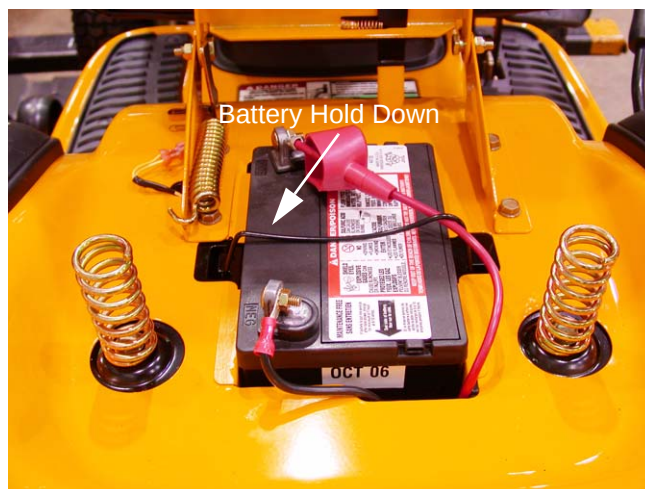


Figure 17.3

17.4. Pull the upper drive belt tensioner pulley rearwards to provide slack in the belt, and roll the belt off of the tensioner pulley. See Figure 17.4.

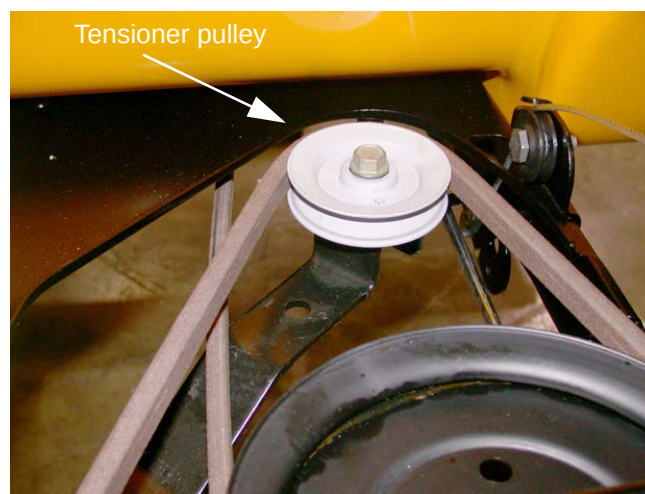


Figure 17.4

17.5. Carefully release the tensioner pulley.

- 17.6. Using the slack created by taking the belt off the tensioner pulley, slip the belt off of the transaxle input pulley and the upper sheave of the variable speed pulley and remove the belt from the tractor. You may need to remove the transmission input pulley to get enough clearance to remove the belt. See Figure 17.6.

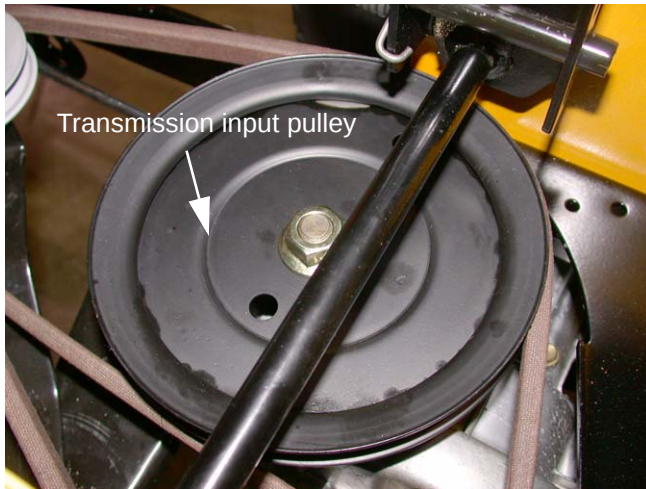


Figure 17.6

- 17.7. Loosen but do not remove the bracket that supports the variable speed pulley using a 1/2" wrench. See Figure 17.7.

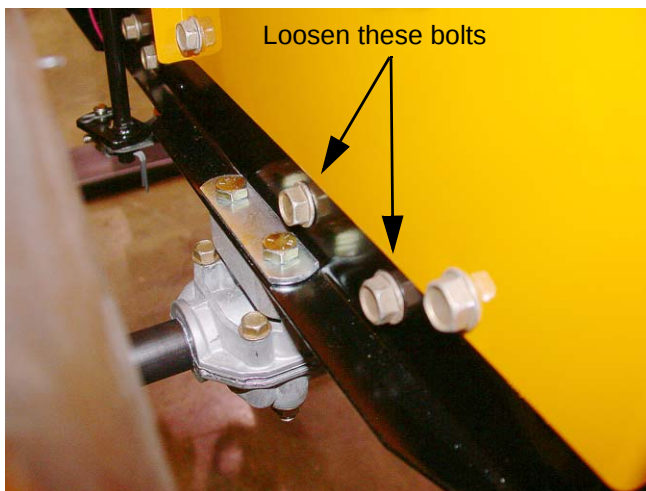
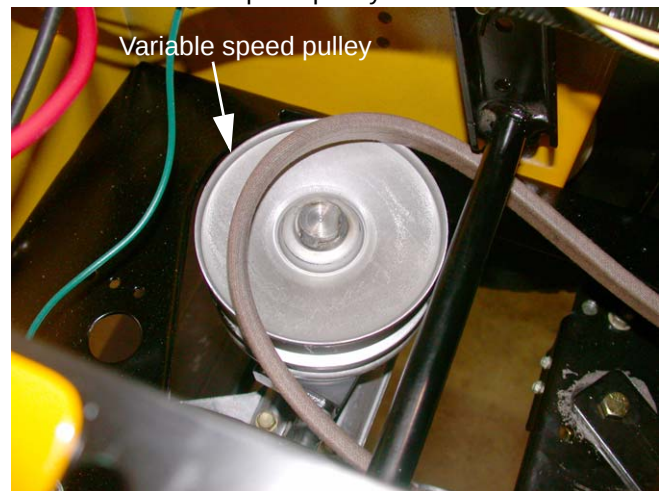


Figure 17.7

NOTE: On 2004 and earlier CVT models, the variable speed pulley was mounted directly to the transaxle housing. On those tractors, remove the variable speed pulley from the tractor using a pair of 9/16" wrenches.

- 17.8. Lift the sliding center partition of the variable speed pulley as far as it will go. This should provide enough clearance to slip the lower belt off of the variable speed pulley.



- 17.9. Locate the double idler pulley bracket beneath the tractor. See Figure 17.9.

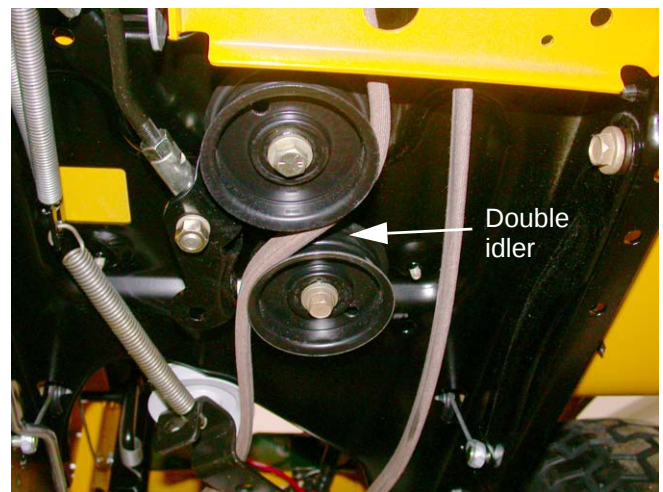


Figure 17.9

NOTE: This is the pair of pulleys that moves in reaction to drive pedal input from the operator. The further the pedal is depressed, the further the bracket pivots, applying more tension to the belt.

- 17.10. Slip the lower drive belt off of the pulleys.

NOTE: On some 2004 and earlier models, it may be necessary to loosen but not remove the rear-most of the two pulleys (riding against the flat side of the belt) to provide clearance to remove the belt.

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- 17.11. Disconnect the plug for the PTO clutch wire. It is located on the right side of the tractor, just above the opening in the frame that the wire passes through to reach the PTO clutch. See Figure 17.11.

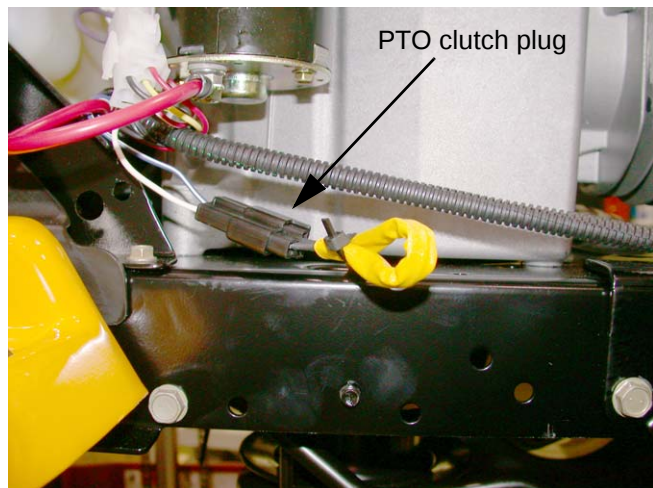


Figure 17.11

- 17.12. Remove the bolt that holds the PTO clutch to the crankshaft using a 5/8" wrench. See Figure 17.12.

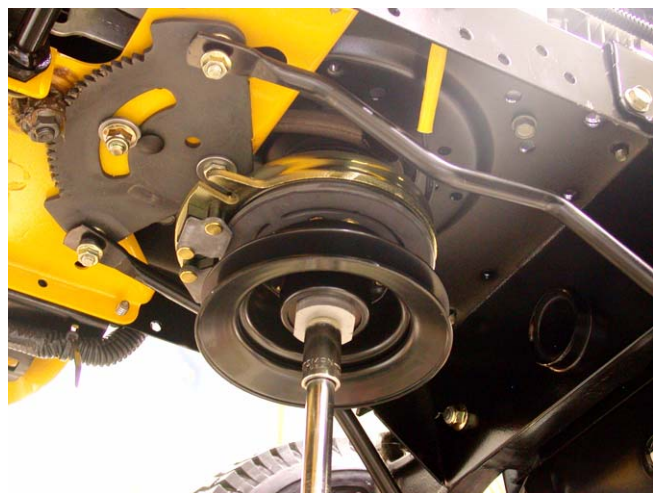


Figure 17.12

NOTE: If an impact wrench is unavailable it may be necessary to use an improvised piston stop or to hold the flywheel.

NOTE: On some models you may have to remove the belt guide on the engine. Remove the 1/2" bolt securing the belt guide to the frame on the left hand side and slide the guide out of the hole on the right hand side. See Figure 17.12.

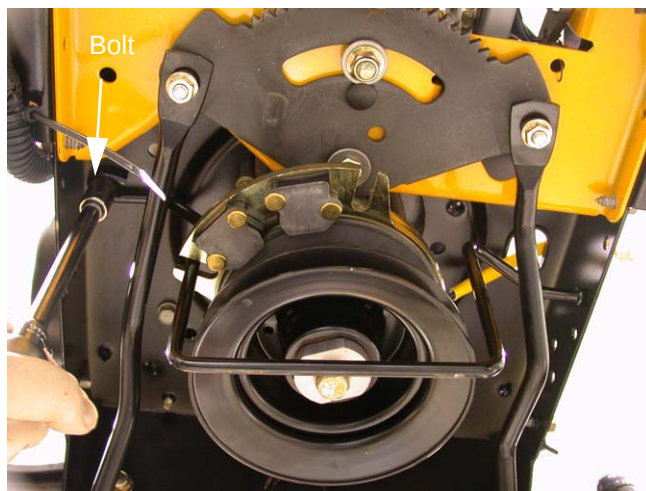


Figure 17.12

- 17.13. Carefully lower the PTO clutch and any associated hardware off of the crankshaft.

- 17.14. Lower the drive pulley far enough to allow the belt to slip past the keepers that are stamped into the frame. Slip the belt off of the pulley and remove the pulley. See Figure 17.14.

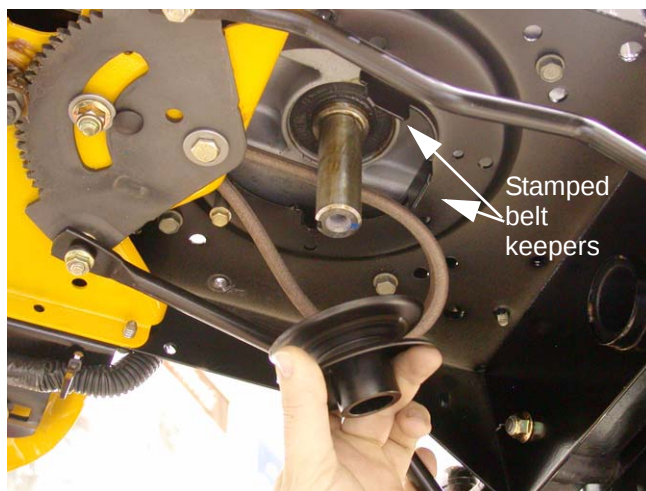


Figure 17.14

NOTE: Keep track of the position of any spacers or washers that accompany the PTO clutch and crankshaft pulley. Several different configurations have been used.

17.15. Remove the belt from the tractor.

NOTE: There were a small number of tractors made using a CVT drive and a 2-speed (L-H-N-R) GT transaxle. The belt must pass over the center mounted gear selector on these models for removal. Remove the knob from the gear selector, and remove the shift gait from the fender assembly to provide clearance.

17.16. Assembly notes:

- Install the belts by reversing the order of the removal process.
- The engine drive pulley is installed on the drive shaft with the key side facing down.
- Line up the key on the PTO clutch during assembly.
- There is a large flat washer that goes on top of the PTO clutch during assembly.
- Torque the PTO clutch bolt during assembly.
- When installing the belt guide, make sure that it passes through the cutout in the PTO clutch. this acts as a anti-rotation bracket. See Figure 17.16.

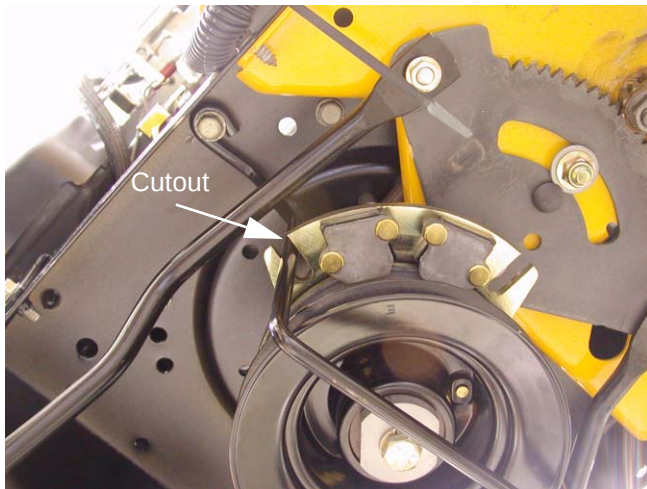


Figure 17.16

18. DRIVE SYSTEM ADJUSTMENT: CVT

18.1. Make an **operational test** of the tractor:

- The tractor should not “creep” when the transmission is in gear and the drive pedal is not depressed.
- On level ground, with the brake released, the gear selector should slip smoothly into gear. It is normal for gear engagement to be more difficult on a grade, or with the brakes applied because it is more difficult for the drive dogs to engage under load or bind.

- The tractor's forward ground speed should vary smoothly between 0 and 5.2 MPH when the drive pedal is depressed progressively to the end of it's travel.
- It is normal for the cruise control to hold a mowing speed that is about 10% less than the 5.2 MPH transport speed.
- If the tractor performs as described, no adjustment is required.

18.2. **Diagnosis:** If the tractor does not move at all, and the engine does not seem to be laboring as the pedal is depressed, the issue may be in the CVT belt system, the shift linkage leading to the transaxle, or within the transaxle itself.

18.3. To isolate the CVT belt system:

- Turn-off the engine.
- Release the parking brake.
- Place the gear selector in any motion gear.
- Attempt to push the tractor.
- If the tractor rolls, examine the shift linkage.
- If the wheels lock when a gear is engaged, the transaxle and shift linkage are not likely to be the problem.

18.4. If the tractor does not move at all, and the engine seems to be laboring as the pedal is depressed, the issue may be in the brake, or within the transaxle itself:

- Turn-off the engine.
- Release the parking brake.
- Place the gear selector in Neutral.
- Attempt to push the tractor.
- If the tractor rolls with difficulty, examine the brakes as described in the “BRAKE ADJUSTMENT: CVT” section of this manual.

18.5. If the problem can be isolated to CVT belt drive system, make a visual inspection of the CVT belt drive system:

- Turn the engine off, and allow it to cool before starting to work on the tractor.
- Remove the cutting deck.
- Lift the seat.
- Disconnect the battery cables, negative cable first, using a 7/16” wrench
- Remove the battery hold-down.