

Series 1000 and 1500

19. BRAKE ADJUSTMENT: CVT

- 19.1. On CVT-driven lawn and garden tractors, most of the braking force is generated within the transaxle: when the drive pedal is released, the drive ratio changes, slowing the tractor. The brake brings the tractor to a complete stop, and functions as a parking brake.
- 19.2. When properly adjusted, the brake should do two things: it should stop and hold the tractor when applied, and it should not drag when released.
- 19.3. To check that the brakes hold the tractor:
- Place the gear selector in Neutral.
 - Set the parking brake.
 - Attempt to push the tractor.
 - The wheels should skid without rotating.
 - If the brakes do not hold the tractor, the brake needs to be adjusted or repaired.
- 19.4. To check that the brakes do not drag:
- Place the gear selector in Neutral.
 - Release the parking brake.
 - Attempt to push the tractor - it should move with less than 20 lbs. of force. More force indicates drag.
 - If the brakes drag, they need to be adjusted or repaired.
- 19.5. There is no linkage adjustment. All adjustment is done at the brake caliper.
- 19.6. To reach the brake caliper, lift and safely support the right rear corner of the tractor.
- 19.7. Remove the right rear wheel of the tractor using a 3/4" socket.

- 19.8. CVT-driven transaxles use a self locking nut on the brake adjustment. See Figure 19.8.

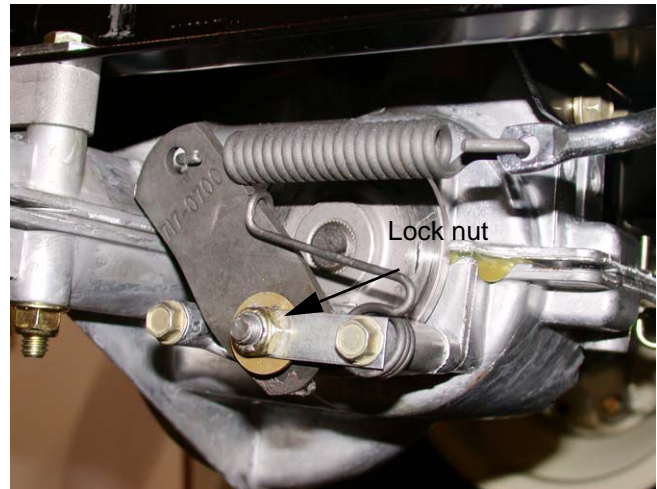


Figure 19.8

- 19.9. Insert a .013" feeler gauge between the brake rotor and the outer brake pad. There should be slight drag on the feeler gauge.
- 19.10. If the feeler gauge is too loose, or will not go in, brake caliper adjustment is necessary.
- 19.11. A 1/2" wrench will turn the adjustment nut. See Figure 19.11.

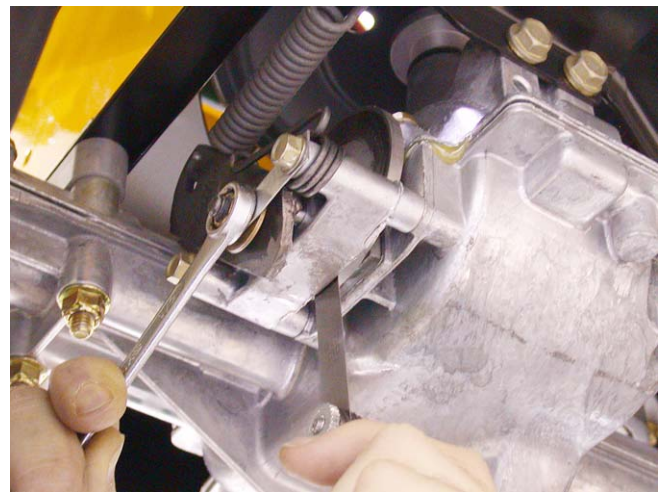


Figure 19.11

- 19.12. Tighten the nut to reduce the clearance. Loosen the nut to increase the clearance.

19.13. Check the movement of the brake arm:

- The brake arm should move forward as the brake is applied.
- The return spring should draw the brake arm back against the spacer when the brakes are released.

19.14. Visually check the thickness of the brake pads: they are visible within the caliper.

19.15. Check the brake rotor:

- Confirm that the brake rotor floats on the splined shaft by sliding it in and out with light finger pressure.
- If it binds on the shaft it may cause brake drag and reduced holding performance.
- A rotor that has been dragging will frequently be discolored by the heat (blue).

19.16. If the brakes are dragging or worn, or if the rotor needs to be removed from the shaft, remove the two bolts that hold the caliper to the transaxle using a 3/8" wrench. See Figure 19.16.

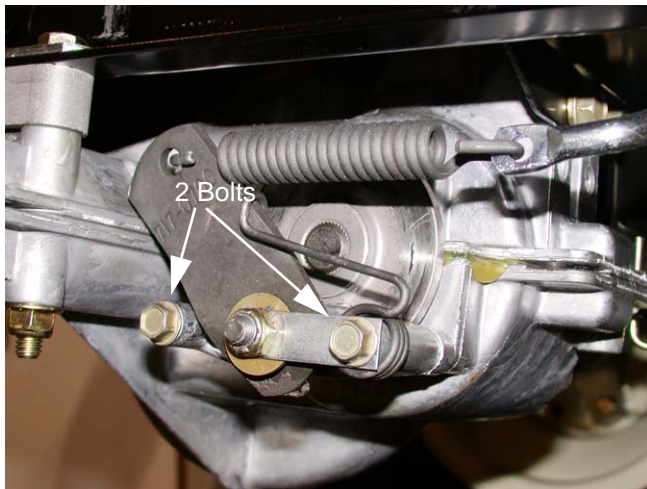


Figure 19.16

19.17. Remove the caliper from the transaxle. The brake actuator arm can now be unhooked from the spring that connects it to the linkage. See Figure 19.17.

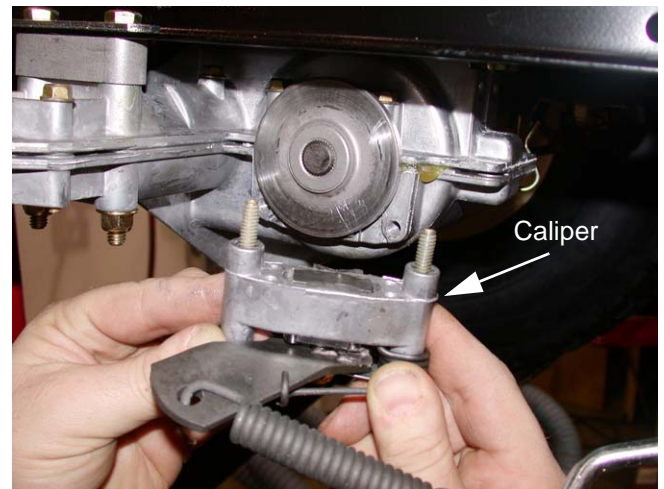


Figure 19.17

19.18. The rotor should slip-off of the splined shaft, providing access to the fixed brake pad. See Figure 19.18.



Figure 19.18

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19.19. A crease in the brake arm acts as a cam. At rest, the ends of the two pins ride in the peak of the crease: See Figure 19.19.



Figure 19.19

- The brake arm pivots on a square-headed stud.
- The two pins are forced against the backing plate when force is applied to the arm.
- The backing plate rides between the pins and the pad, to prevent the pins from damaging the brake pad.

19.20. Replace the pads if they are worn. They frequently last many years unless the brakes have been dragging.

19.21. Be sure the pin bores are clear of dirt and corrosion: either may cause the pins to bind and the brakes to drag.

19.22. On assembly, apply a small amount of dry graphite lubricant to the pins and the spots on the brake arm that they contact. Do not allow any lubricant to get on the brake pad.

19.23. Install the brake caliper, tightening the two nuts to 7 to 10 ft.-lbs., then check and adjust the pad-to-rotor clearance.

19.24. Install the rear wheel, tightening the lug nuts to a torque of 350 to 500 In.-lbs. Lower the tractor to the ground.

19.25. After any brake service is performed, test the brakes as described in steps 24.2 through 24.4, then test-drive the tractor in a safe area that is free of hazards, obstacles, and by-standers before returning the tractor to service.

20. SERVICING THE BRAKE PEDAL SHAFT BUSHINGS:

- If there is insufficient travel in the linkage to fully apply the brakes, a simple visual inspection should identify the cause.

20.1. Confirm that the brake pedal is firmly attached to the pedal shaft. See Figure 20.1.

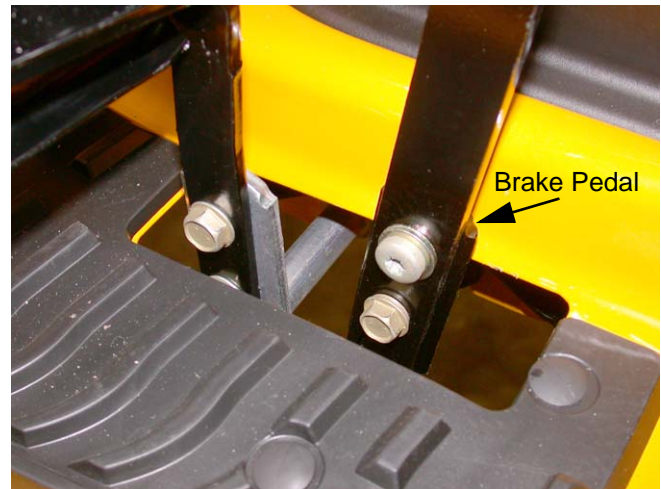


Figure 20.1

20.2. Remove the cutting deck to reach the brake pedal shaft, bushings, and bracket.

20.3. Check for excessive play in the bushings. Replace them if they are worn.

NOTE: It is suggested that if any of these bushings need to be replaced, replace all of the pedal shaft bushings at this time. The speed control pedal shaft bushings are replaced in a similar manner.