



# Service Kit 753-05861

Date: 3/05/2008

Subject: Service Replacement for the Left Hand (LH) Handle Bracket 687-02205

Models Affected: N/A

**Read through and understand these instructions completely before proceeding with repair.**

**PURPOSE:** This service kit supplies the new LH handle bracket, 687-02320, and new hardware to mount the handle bracket. The new handle bracket cannot use carriage bolts to mount as did the old 687-02205 which is no longer available.

**NOTE:** These materials are prepared for use by trained technicians who are experienced in the service and repair of equipment of the kind described in this publication, and are not intended for use by untrained or inexperienced individuals. Such individuals should seek the assistance of an authorized service technician or dealer.

**NOTE:** Save this Instruction Sheet. Refer to it when ordering replacement parts.

## Service Kit Contents

(See Figure 1)

ITEM NO.	PART NUMBER	QTY	DESCRIPTION
1	687-02320-0637	1	BRACKET ASSEMBLY: HANDLE: LH
2	710-3025	3	HHCS: BOLT: 5/16"-18 x .62
3	712-04063	3	NUT: FLANG LOCK : 5/16"-18: GRF: NYLON
4	712-04065	1	NUT: FLANG LOCK : 3/8"-16: GRF: NYLON
5	736-0264	2	WASHER: FLAT: .330 x .630 x .063
6	*	1	THIS INSTRUCTION SHEET

\* - Not Available Separately

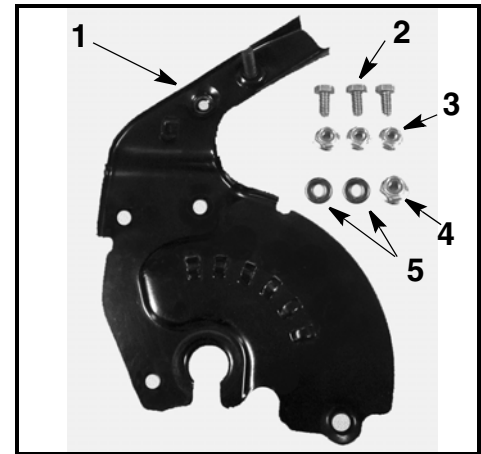


FIGURE 1

### Pre-Service Preparation:

1. Place the mower on a flat and level surface.
2. Turn off the engine and allow the engine and muffler to cool before proceeding.
3. Remove the spark plug wire from the spark plug and ground the wire to the engine block.
4. Drain the fuel tank. Optional: Remove the fuel tank cap and place a thin sheet of plastic over the open fuel fill port. Replace the fuel tank cap tightly. Ensure the oil fill port cap is tight.
5. Set the height adjuster to the highest cutting position.

### Handle Bracket Removal:

**NOTE:** Left (LH) and right (RH) are determined from the operator's position at the rear of the mower and facing forward.

**NOTE:** Refer to the Operator's Manual - Illustrated Parts List for part nomenclature and location.

6. Place the mower on it's side so that the air filter/carburetor are up towards the sky.
7. From under the mower's deck, locate the retainer ring securing the transmission support bearing to the LH

handle bracket. Using a flat blade screw drive, carefully pry the retaining ring out of the groove of the support bearing. See Figure 2.

8. Using a 1/2" box/open end wrench, remove and discard the hex flange lock nut from the handle bracket's lower mounting bolt. See Figure 2.

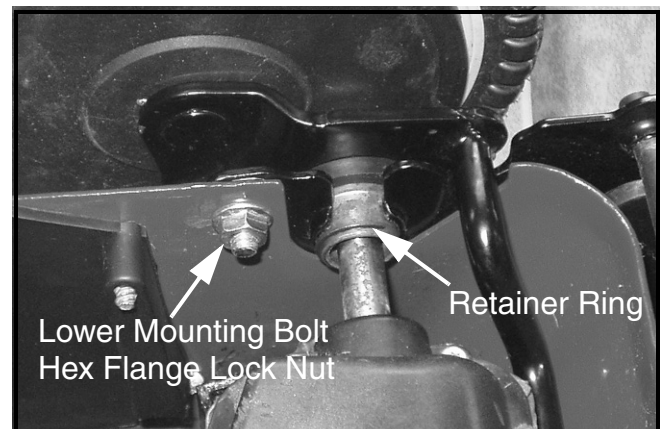


FIGURE 2

9. Return the mower to its normal upright position.
10. Place wood blocking (about 5-6" high) under the mower deck just in front of the right and left rear wheels to raise the wheels off the ground.
11. Remove the hub cap if so equipped. Using a 9/16" socket and ratchet, remove and discard the hex flange lock nut retaining the wheel to the pivot bracket assembly's axle stud. Remove the wheel.

**NOTE: Use caution in the next step. The front pivot axle is spring loaded. This spring load is carried to the rear pivot axle through the cross bracket (front to rear height adjuster rod). Therefore, the cross rod must be held tightly or the front axle's pivot rod secured from rotating in some similar manner as shown in Figure 3.**

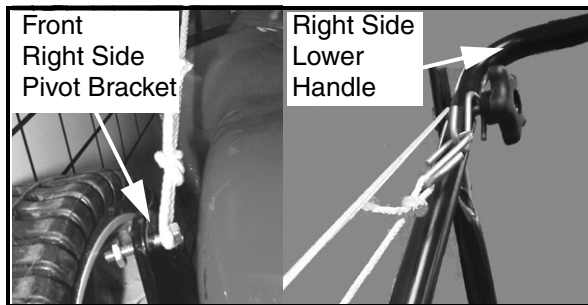


FIGURE 3

12. Using a 3/8" socket and ratchet, remove the self-tapping screw and spacer securing the cross bracket (front to rear height adjusted rod) to the pivot bracket assembly. See Figure 4.

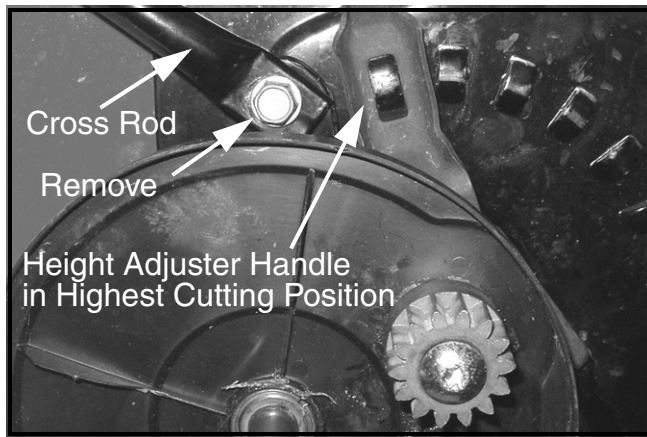


FIGURE 4

13. Using a pair of vise grip pliers, securely clamp onto the transmission's drive axle as shown in Figure 5.

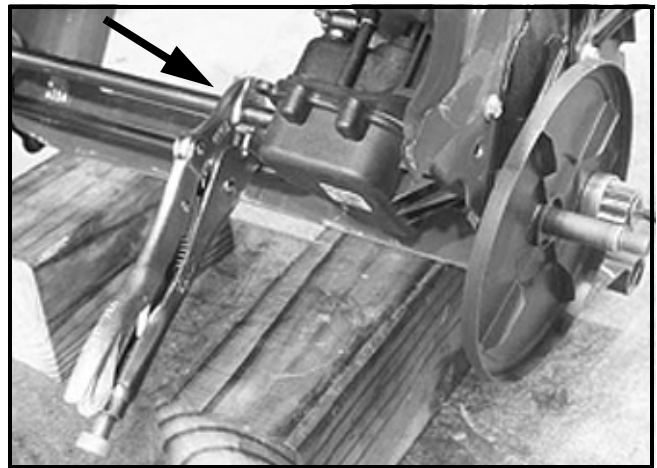


FIGURE 5

14. Using a T30 Torx bit and ratchet and holding the vise grip pliers to keep the transmission axle from rotating, remove the Torx head screw retaining the spur gear to the transmission's output shaft. Note the assembly sequence as you remove the spur gear, dowel pin, flat washer and wheel dust cover. See Figure 6.

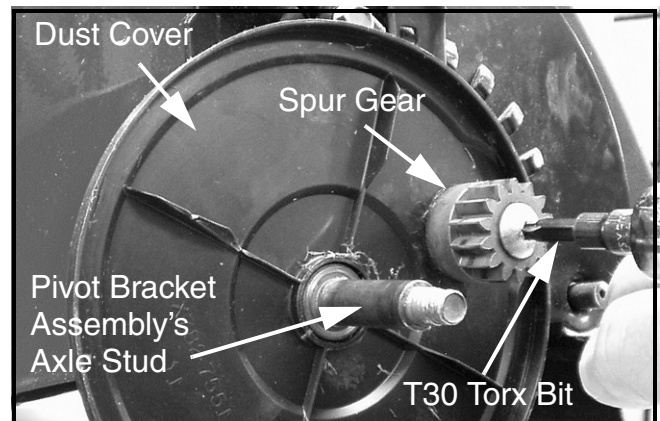


FIGURE 6

15. Slide the transmission support bearing off of the transmission's output shaft, remove the height adjuster spring lever and the plastic spacer clip. See Figure 7.

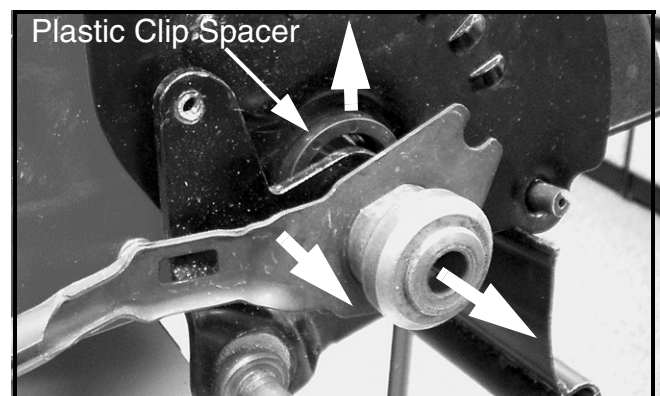


FIGURE 7

16. Remove the left side lower star knob securing the lower handle to the handle bracket.

17. Refer to Figure 8. Using two thin flat blade screw drivers, unhook the left side rear door torsion spring leg from the handle bracket slot.

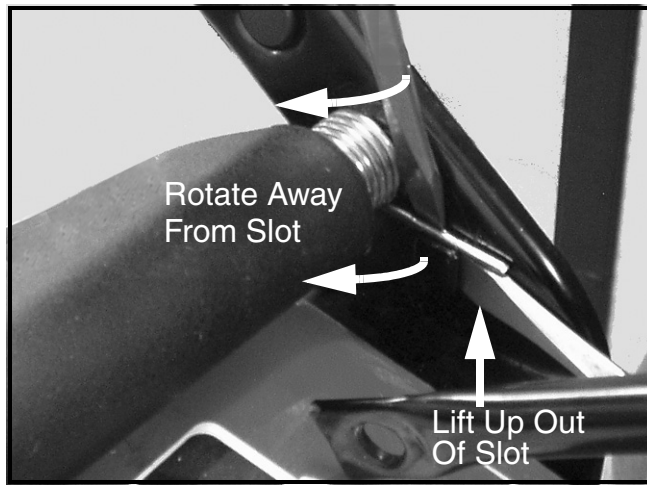


FIGURE 8

18. Using a 3/8" socket and ratchet, remove the left side screw securing the rear door pivot rod to the handle bracket. See Figure 9.

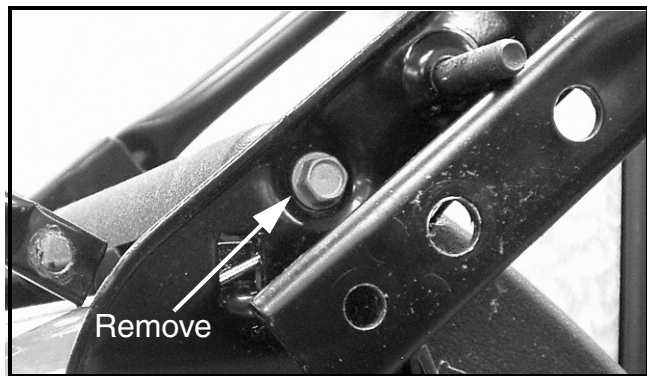


FIGURE 9

19. Rotate the rear pivot rod assembly clockwise, around the transmission's output shaft, moving it to the rear to provide clearance and remove and discard the lower handle bracket mounting carriage bolt. See Figure 10.

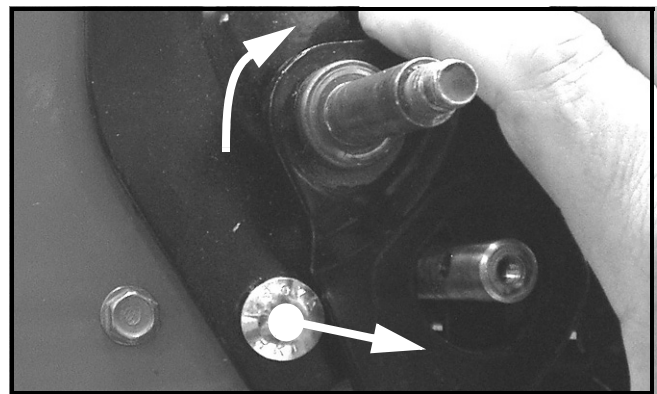


FIGURE 10

20. The ends of the trail shield may be attached to the handle bracket with screws. Carefully remove the hardware for reuse later.

21. Using a 1/2" socket and ratchet, remove and discard the last two hex flange lock nuts and carriage bolts securing the handle bracket to the deck.

**NOTE:** To facilitate holding the carriage bolt in the deck's square hole as the nut is removed, use a thin flat blade screw driver between the hex nut and handle bracket and pry outward to keep the bolt retained in the deck's square hole.

22. Lift the handle bracket up and rotate clockwise to remove the handle bracket from between the deck and pivot rod assembly. Discard the handle bracket.

#### Installing the New Handle Bracket:

**Read all reassembly instructions and NOTES before proceeding. This section does not provide complete step by step reassembly instruction. It does provide important NOTES that apply at different steps throughout the reassembly process.**

23. Ensure that the trail shield is re-installed onto the handle bracket before positioning the handle bracket in the next step.

24. Insert the new handle bracket in the reverse motion that you removed the old bracket in Step 22.

25. Place a Flat Washer, Item 5, onto a new HHCS 5/16"-18 Bolt, Item 2. Align the new handle bracket with the holes in the deck. From the bracket side, insert the bolt/washer assembly in one of the upper mounting holes.

26. Repeat Step 25 for the remaining upper mounting hole.

27. From the bracket side, insert a HHCS 5/16"-18 Bolt, Item 2, (**without** a flat washer) in the bottom mounting hole.

**NOTE:** All three handle bracket mounting bolts are now in place aligning the bracket with the deck.

28. Using a long (9") 1/2" box wrench, place a new Hex Flange Lock Nut, Item 3, in the box end and secure with tape as shown in Figure 11. Guide the wrench, with the nut, up inside the deck and align with the rear upper handle bracket mounting hole in the deck. Hand start the bolt/washer assembly onto the nut. Tighten hardware.

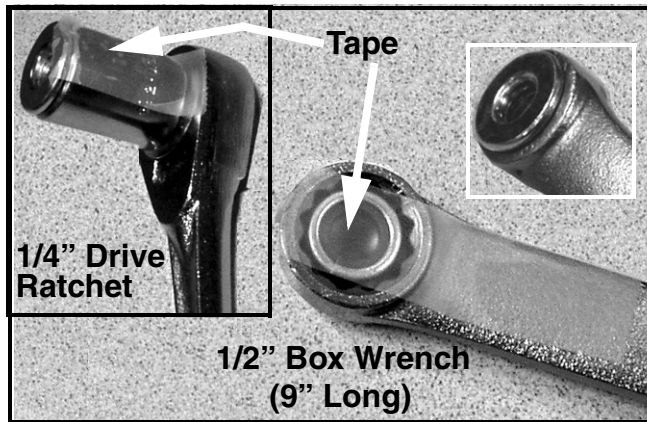


FIGURE 11

29. Configure a 1/2" socket and small ratchet with a new Hex Flange Lock Nut, Item 3, as shown in Figure 11. Guide the ratchet, with the nut, up inside the deck and align with the forward upper handle bracket mounting hole in the deck. Hand start the bolt/washer assembly onto the nut. Tighten hardware.

30. Repeat Step 29 for the bolt in the lower mounting hole.

31. Proceed to reassemble the left side components and hardware by reversing the removal procedure outlined above.

**NOTE:** Ensure that the end of the transmission's output shaft and transmission support bearing are clean and free of dirt and debris.

**NOTE:** Using a light weight lithium or silicone base grease, lubricate the end of the transmission's output shaft where the transmission support bearing will set.

**NOTE:** Using a light weight lithium or silicone base grease, lubricate the dowel pin prior to inserting it into the transmission's output shaft.

**NOTE:** Before installing the spur gear, clean off the old locking compound from the spur gear retaining Torx head screw. Apply Loctite 242 (Blue) or 246 (Red) or equivalent to the clean threads. Install the spur gear with the Loctite treated Torx screw.

**NOTE:** Use the new 3/8"-16 Hex Flange Lock Nut, Item 4, when installing the wheel.

**NOTE:** Remove the vise grip pliers from the transmission axle shaft.

**NOTE:** Remove the front axle restraint hardware.

**NOTE:** Remove the plastic sheet from under the fuel tank cap (if applicable).

This completes this service kit installation.