COACHSTEP TRIPLE STEP RECALL REPAIR INSTRUCTIONS
RECALL# 15E-078 LABOR FLAT RATE: 0.5 HOURS

Purpose

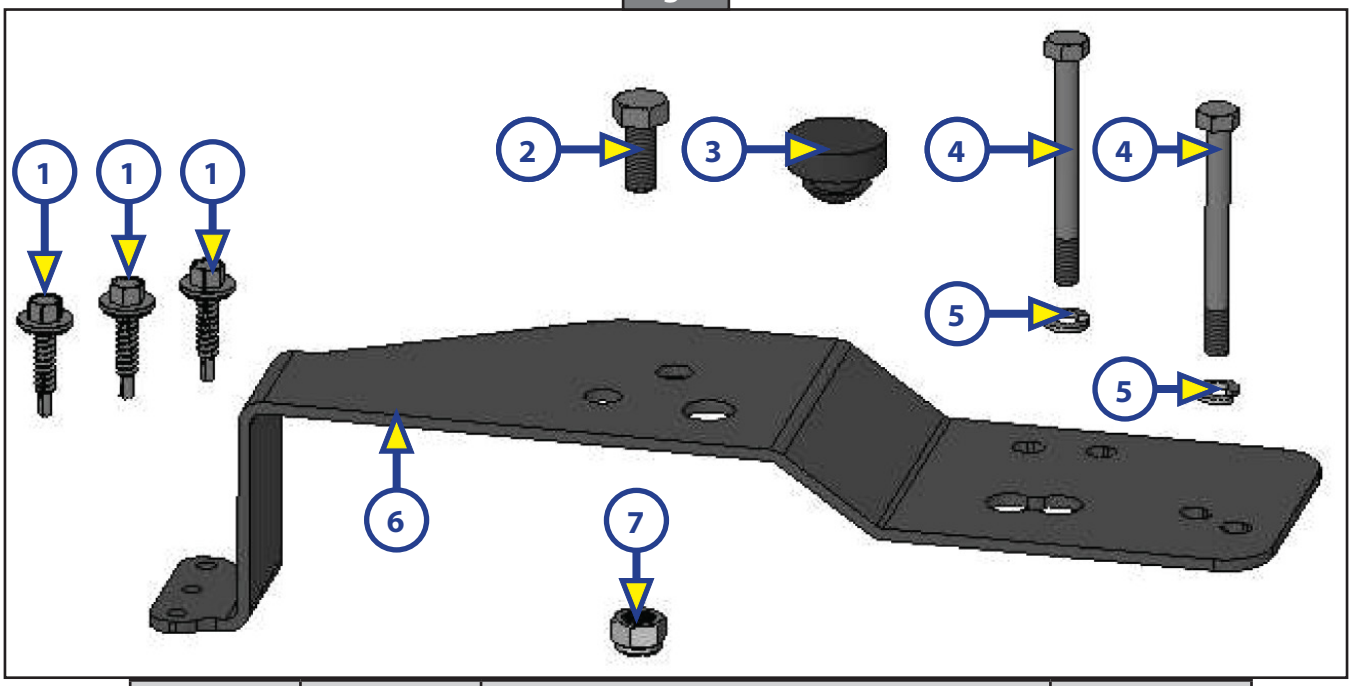
The intent of this document is to provide instructions for the replacement of the Coachstep Linkage Assembly and the installation of the Coachstep retainer bracket on triple step assemblies.

Preparation

Tools and Hardware Required

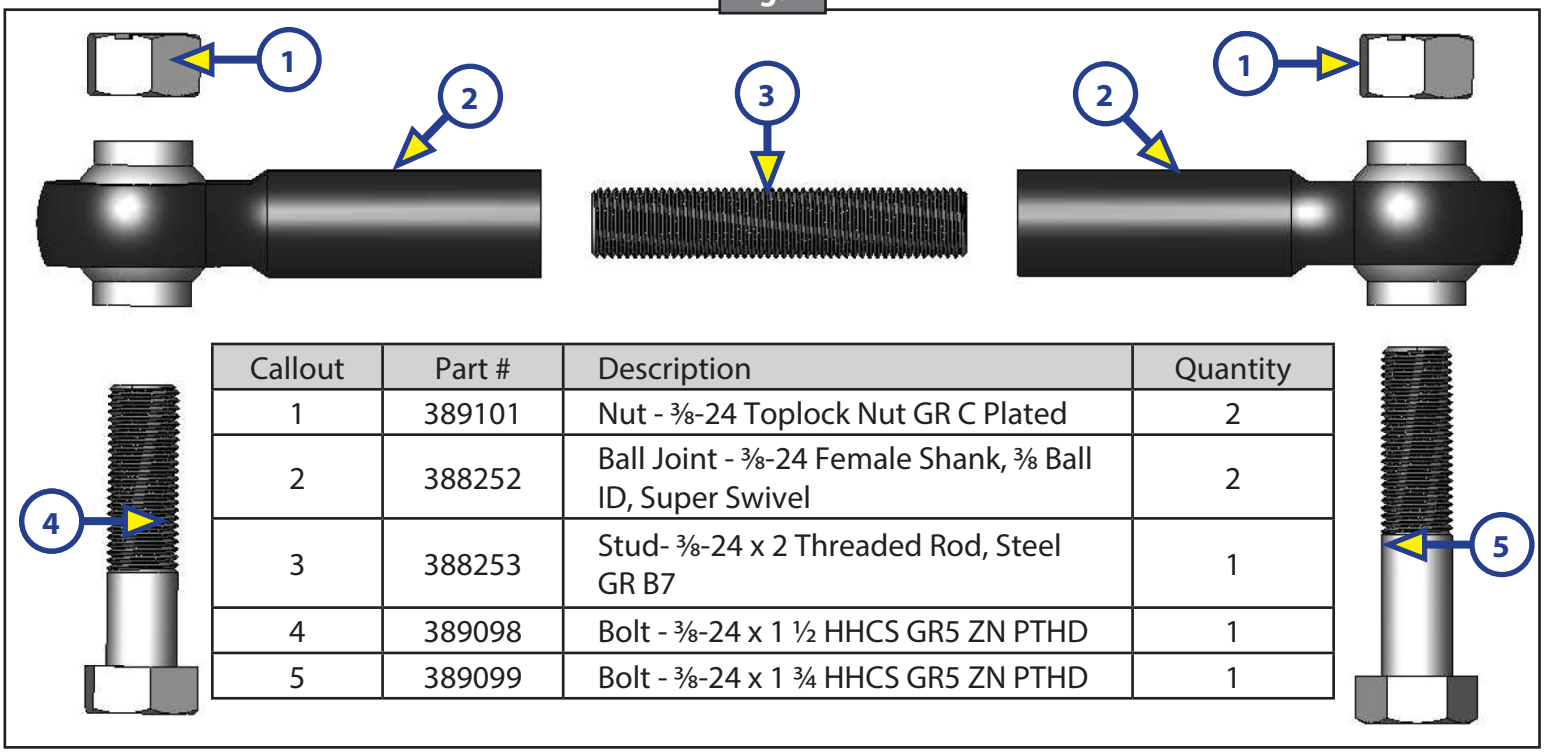
- Cordless or Power Drill or Impact Wrench
- ⅛" Metal Drill Bit
- 5⁄16" Nut Driver Bit or Socket
- 10mm Wrench or Socket
- Reversing Rocker Switch
- Jack Stand
- 12 Volt Power Supply
- 2 x ½" Wrench or 1 x ½" Wrench and 1 x ½" Socket
- 2 x 9⁄16" Wrench or 1 x 9⁄16" Wrench and 1 x 9⁄16" Socket
- Torque Wrench
- Coachstep Triple Step Recall Parts Kit - P/N 389152 (Figs. 1 & 2)

Fig. 1



Callout	Part #	Description	Quantity
1	181351	Screw - #12 x 1 Hex Head Washer Tek Screw w/ B/S Washer, Zinc Plated	3
2	125557	Bolt - 5⁄16 - 18 x ¾	1
3	163492	Rubber Bumper .70 x 1	1
4	183925	Bolt - 6mm - #10 x 63.5mm Hex Cap Screw GR5 Zinc	2
5	165216	Lock Washer - 6mm Zinc	2
6	386819	Retainer Bracket 11 Gauge	1
7	118043	Nut - 5⁄16 - 18 Nylock ZN ST	1

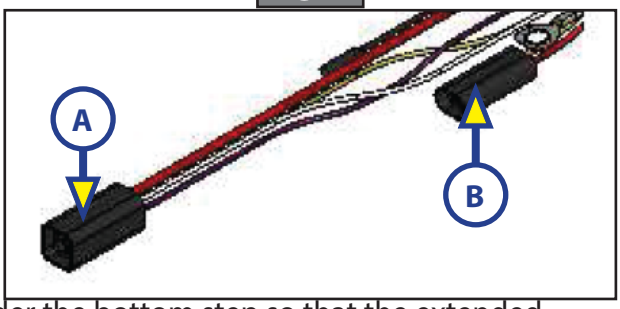
Fig. 2



Callout	Part #	Description	Quantity
1	389101	Nut - ⅜-24 Toplock Nut GR C Plated	2
2	388252	Ball Joint - ⅜-24 Female Shank, ⅜ Ball ID, Super Swivel	2
3	388253	Stud- ⅜-24 x 2 Threaded Rod, Steel GR B7	1
4	389098	Bolt - ⅜-24 x 1 ½ HHCS GR5 ZN PTHD	1
5	389099	Bolt - ⅜-24 x 1 ¾ HHCS GR5 ZN PTHD	1

Linkage Replacement Procedure

Fig. 3



1. Fully extend the step (until the motor stops).
2. Disconnect the power supply (4-prong connector) (Fig. 3A) and the motor-to-control connector (2-prong connector) (Fig. 3B) after extending.
3. Position a jack stand (or equivalent support mechanism) under the bottom step so that the extended steps will be supported after the linkage assembly is removed (Fig. 4A).
4. Connect the motor (2-prong male connector) (Fig. 5A) directly to a 12 volt power supply (Fig. 5C) with a reversing rocker switch (Fig. 5B).

Fig. 4

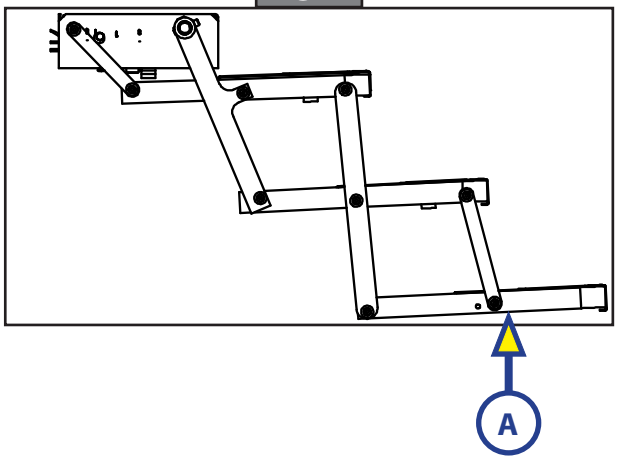
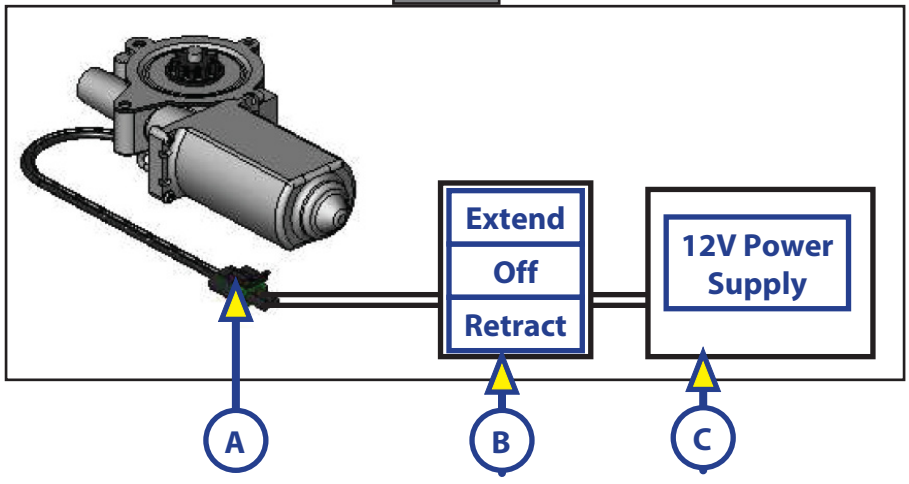


Fig. 5



5. Uninstall and remove the linkage assembly (Fig. 6A) using a 9/16" wrench or socket and a ½" wrench.

⚠CAUTION

Ensure that the jack stand(s) is securely placed under the bottom step prior to removing the linkage. The steps will be able to rotate freely after linkage removal which could cause serious personal injury or damage to the coach.

NOTE: If the linkage cannot be fully removed from the assembly, adjust the jack stand(s) to allow a minimal amount of retraction and then extend and retract the motor controls as necessary to help free the linkage.

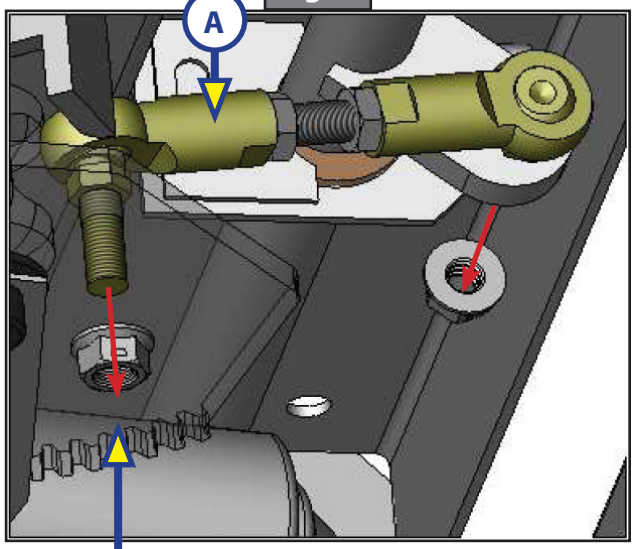
6. Once the linkage is removed, run the motor to full extension.

7. Adjust the jack stand(s) if necessary to ensure that the steps remain fully extended until the new linkage is installed.

8. Install the new linkage (Fig. 7B) to the fan gear first with a 1 ½" bolt (Fig. 7C) and toplock nut (Fig. 7A).

9. Adjust the linkage length as necessary until the 1 ¾" bolt can be inserted through both the linkage end and the shaft leaf. (Fig. 8).

Fig. 6



Fan gear shown transparent to show detail.

Fig. 7

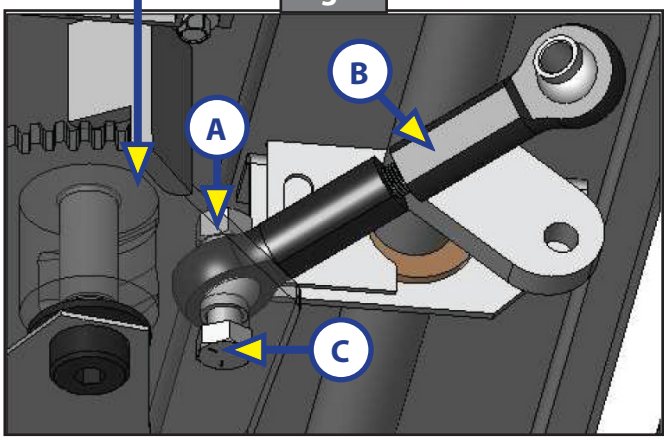
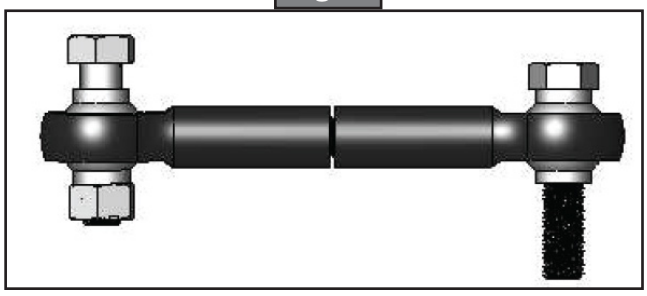


Fig. 8

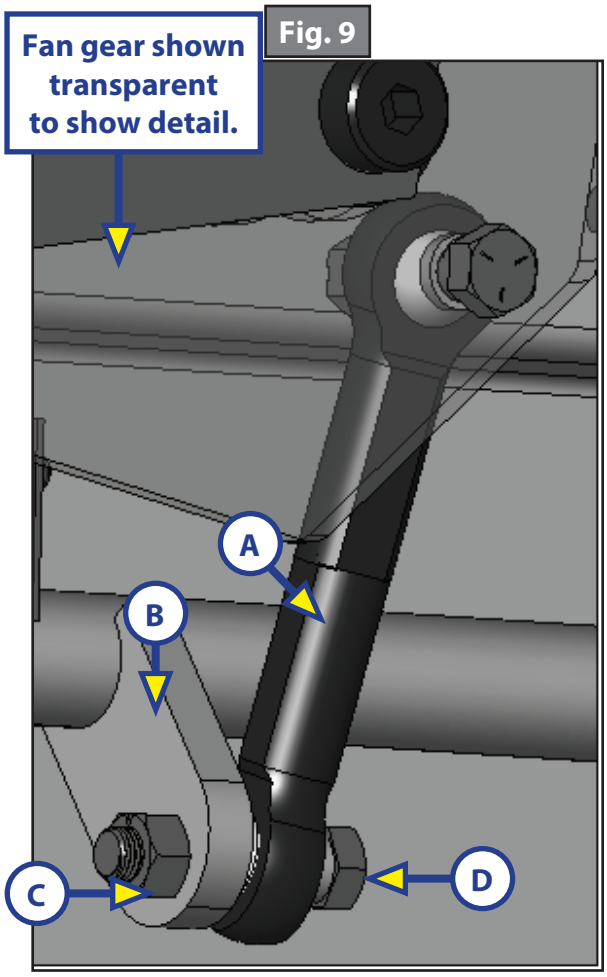


10. Install the other half of the linkage (Fig. 9A) to the shaft leaf (Fig. 9B) with the 1 ¾" bolt (Fig. 9D) and toplock nut (Fig. 9C).

NOTE: Manually extend or retract the fan gear as needed to align the linkage end with the shaft leaf through-hole. Steps should remain at full extension while supported by the jack stand(s).

11. Tighten the nuts on both linkage ends to 26 ft-lbs of torque.
12. After moving safely away from underneath the motorized steps, remove the jack stand(s) and test the assembly for proper extension and retraction, using the reversing rocker switch. Replace the jack stand(s) under the bottom step once the testing is complete.
13. Disconnect the 2-prong motor connector from the manual 12 volt power supply and reconnect to the motor control box.
14. Reconnect the 4-prong connector from the motor control box to the coach power supply. Ensure that jacks stand(s) is placed appropriately to stop any potential attempt for automatic retraction.
15. After moving safely away from underneath the motorized steps, remove the jack stand(s) and test the steps for full operation via the standard operation of the coach.

Fig. 9

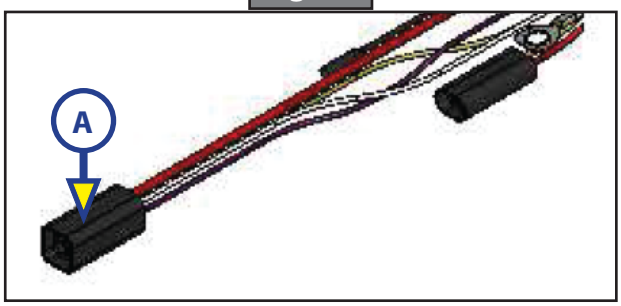


Retainer Bracket Installation

1. Fully extend the steps (until the motor stops).
2. Place a jack stand under the bottom step to prevent any potential attempt for automatic retraction.
3. Disconnect the power supply (4-prong connector- Fig. 10A) after extending.

NOTE: Jack stand may be removed once power supply is disconnected.

Fig. 10



4. Remove the two motor housing bolts and lock washers (Fig. 11A). The lock washers are shown on the motor housing bolts in the images.

Fig. 11 - Detail

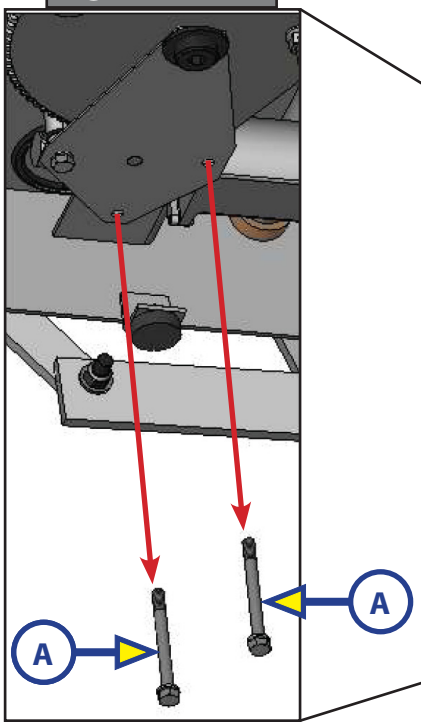
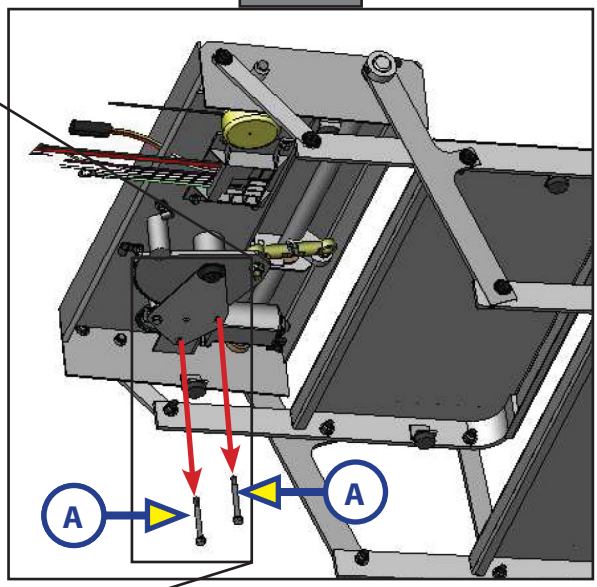


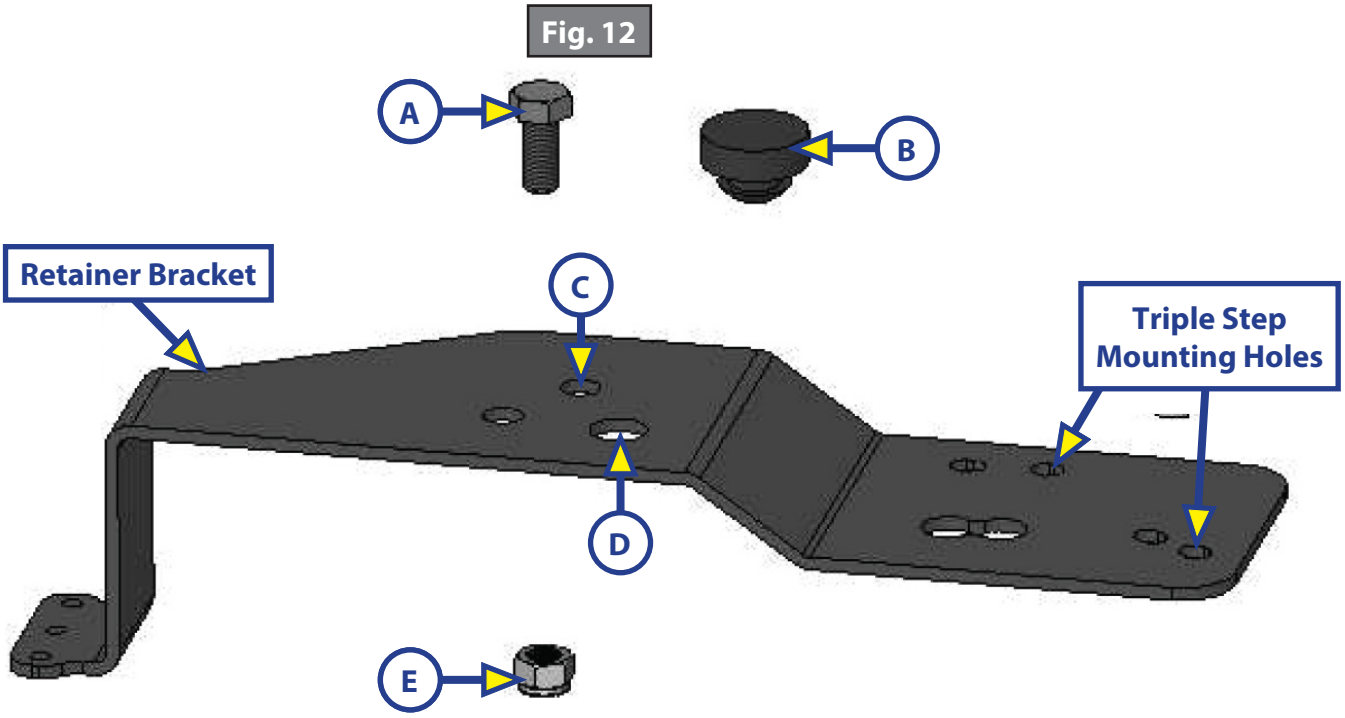
Fig. 11



Assembling the Retainer Bracket

1. Install the 5⁄16 - 18 x ¾" bolt (Fig. 12A) into the appropriate hole in the retainer bracket (Fig. 12C).
2. Tighten the lock nut (Fig. 12E) onto the bolt (Fig. 12A) until the lock nut contacts the retainer bracket.
3. Install the rubber bumper (Fig. 12B) into the hole in the retainer bracket (Fig. 12D).

Fig. 12



Installing the Retainer Bracket Assembly

1. Clean any dirt or debris from the hex socket on the fan gear shoulder bolt (if necessary) (Fig. 13G).
2. Ensure that all the motor mount spacers (6 total - Fig. 13H) are still in place.
3. Insert the 5⁄16 - 18 x ¾" bolt (Fig. 13D) into the hex socket of the fan gear shoulder bolt (Fig. 13G).
4. Install the 6mm - 10 x 63.5 mm bolts and 6 mm lock washers (Fig. 13E) through the appropriate mounting holes in the retainer bracket and into the motor housing.

NOTE: If alignment issues for the mounting bolts arise, loosen the lock nut on the 5⁄16 - 18 x ¾" bolt (Fig. 13D) to allow the bolt to slide within its oversized hole. Once the mounting bolts are properly aligned, re-tighten the lock nut.

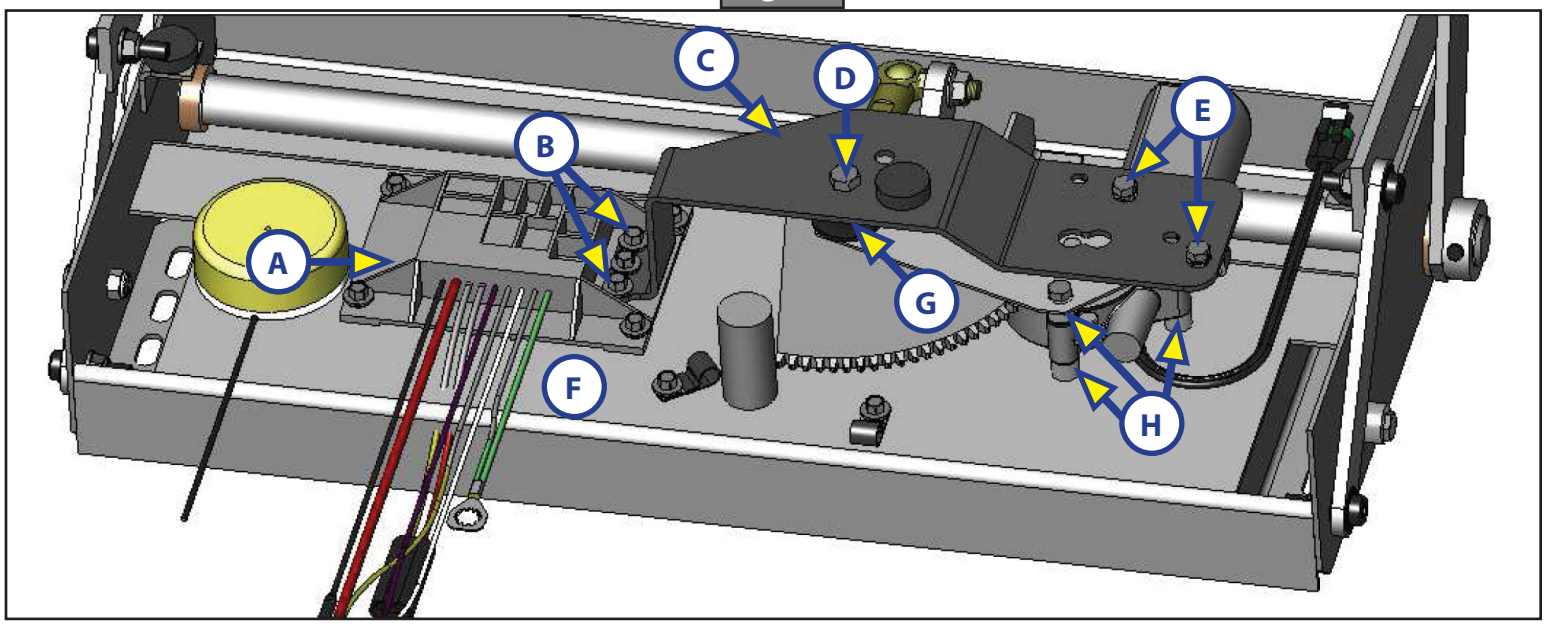
5. Install 3 tek screws (Fig. 13B) through the retainer bracket (Fig. 13C) and control box flange (Fig. 13A), and into the step housing (Fig. 13F) to secure that end of the retainer bracket.

NOTE: Pre-drilling ⅛" pilot holes prior to installing the tek screws may help simplify the installation.

6. Tighten the screw until the retainer bracket is flush with the control box flange and the foam washers on the tek screws begin to compress.

NOTE: Be sure to apply proper pressure and drill rotation speed on the drill to avoid stripping the self-drilling threads on the tek screws.

Fig. 13



7. Place a jack stand under the bottom step to prevent any potential attempt for automatic retraction.
8. Reconnect the 4-prong connector from the motor control box (Fig. 10A) to the coach power supply. Ensure that jacks stand(s) is placed appropriately to stop any potential attempt for automatic retraction.
9. After moving safely away from underneath the motorized steps, remove the jack stand(s) and test the steps for full operation via the standard operation of the coach.