

IN-FLIGHT MOVABLE (ROLL- UP) DOOR - MAINTENANCE PRACTICES

1. Description

- A. The inflight movable (roll-up) door is located on the left side of the fuselage, between fuselage station 234.00 and 284.00. The inflight movable (roll-up) door consists of an upper and lower door assembly, forward track, aft track, forward fairing, aft fairing, center fairing, sprockets, chains, chain covers, drive motor, limit switch, torque tube assembly and door jamb.

2. Operation

- A. The lower door is opened and closed using a chain and sprocket system, driven by an electrical motor; however, if required the door may operated manually. The upper door is opened and closed by movement of the lower door to the open or closed position. Manual operation of doors is accomplished by removing the center fairing and dust cap from the aft fairing. Reach through the hole, pull the pin locking the motor to the torque tube, then rotate torque tube by hand to open or close the doors.

3. Upper and Lower Door Removal/Installation

- A. Remove Upper and Lower Door (Refer to Figure 201 and Figure 202).
- (1) Disconnect electrical power from the airplane.
 - (2) Remove forward fairing, center fairing, and aft fairing.
 - (3) Remove electrical switch from aft track assembly.
 - (4) Remove chain from sprocket on torque tube.
 - (5) Remove bolts securing torque tube to forward track and aft track. Remove torque tube.
 - (6) Pull lower door and upper door inboard out of the forward track and aft track to remove.
- B. Install Upper and Lower Door (Refer to Figure 201 and Figure 202).
- (1) Align lower door and upper door in forward track and aft track, pull down on lower door until both the upper and lower doors are completely installed in tracks.
 - (2) Position torque tube on forward track and secure with bolts.
 - (3) Install chain on torque tube sprocket.
 - (a) Rig chain at both forward and aft tracks so that the same number of links are established between door/chain attach point link and the first chain engagement tooth on bottom side of the sprocket which is common to torque tube assembly.
 - (b) Apply highlight yellow paint to common sprocket tooth and chain link to maintain chain timing consistency during future system rigging operations.
 - (4) Install electrical switch on aft track assembly.
 - (5) Install forward, center and aft fairings.
 - (6) Connect electrical power to airplane.
 - (7) Make sure that the doors open and close smoothly.
 - (a) Adjust the doors as necessary until they operate correctly.

4. Upper and Lower Door Adjustment/Test

- A. Adjust Upper and Lower Door.
- (1) Adjust chain tension to ensure tooth engagement at all sprocket locations throughout chain loop.
 - (2) Optimize tension to minimize wear between chain and track race. Lubricate chain/track with MIL-PRF-81322 grease.

5. Side-Mounted Drive Assembly Removal/Installation

- A. Remove the Side-Mounted Drive Assembly (Refer to Figure 202).
- (1) Remove electrical power from airplane.
 - (2) Disconnect electrical connector from motor.
 - (3) Remove bolts securing drive motor assembly to attach fitting.
 - (4) Remove drive motor assembly from airplane.
- B. Install the Side-Mounted Drive Assembly (Refer to Figure 202).
- (1) Position drive motor assembly to attach fitting and secure with bolts.

- (2) Connect electrical connector to motor.
- (3) Verify door opens and closes smoothly.

6. Bottom-Mounted Drive Assembly Removal/Installation

- A. Remove the Bottom-Mounted Drive Assembly (Refer to Figure 202).
 - (1) Remove the electrical power from the airplane.
 - (2) Disconnect the motor electrical connector.
 - (3) Remove the safety wire from the bolts that attach the drive assembly to the fitting.
 - (4) Remove the bolts that attach the drive assembly and chain tension plate to the fitting.
 - (5) Remove drive assembly from airplane.
- B. Install the Bottom-Mounted Drive Assembly (Refer to Figure 202).
 - (1) Put the drive assembly and chain tension plate in position to the fitting and chain.
 - (a) Loosely install the bolts that attach the drive assembly to the fitting.
 - (2) Use hand pressure to move the drive assembly forward to tighten the chain.
 - (a) Tighten the bolts that attach the drive assembly to the fitting.
 - (b) Install safety wire on the bolts. Refer to Chapter 20, Safetying - Maintenance Practices.
 - (3) Connect the motor electrical connector.
 - (4) Apply electrical power to the airplane.
 - (5) Make sure the doors open and close smoothly.
 - (a) Adjust the doors as necessary until they operate correctly.

7. Bottom-Mounted Drive Assembly Motor Removal/Installation

- A. Remove the Bottom-Mounted Drive Assembly Motor (Refer to Figure 202).
 - (1) Remove the bottom-mounted drive assembly. Refer to Bottom-Mounted Drive Assembly Removal/Installation.
 - (2) Remove the nuts that attach the motor to the drive assembly.
 - (3) Remove the motor from the drive assembly.
 - (a) Keep the coupling for installation.
- B. Install the Bottom-Mounted Drive Assembly Motor (Refer to Figure 202).
 - (1) Put the motor and coupling in position to the drive assembly.
 - (2) Install the nuts that attach the motor to the drive assembly.
 - (3) Install the bottom-mounted drive assembly. Refer to Bottom-Mounted Drive Assembly Removal/Installation.

Figure 201 : Sheet 1 : Roll-Up Door Installation

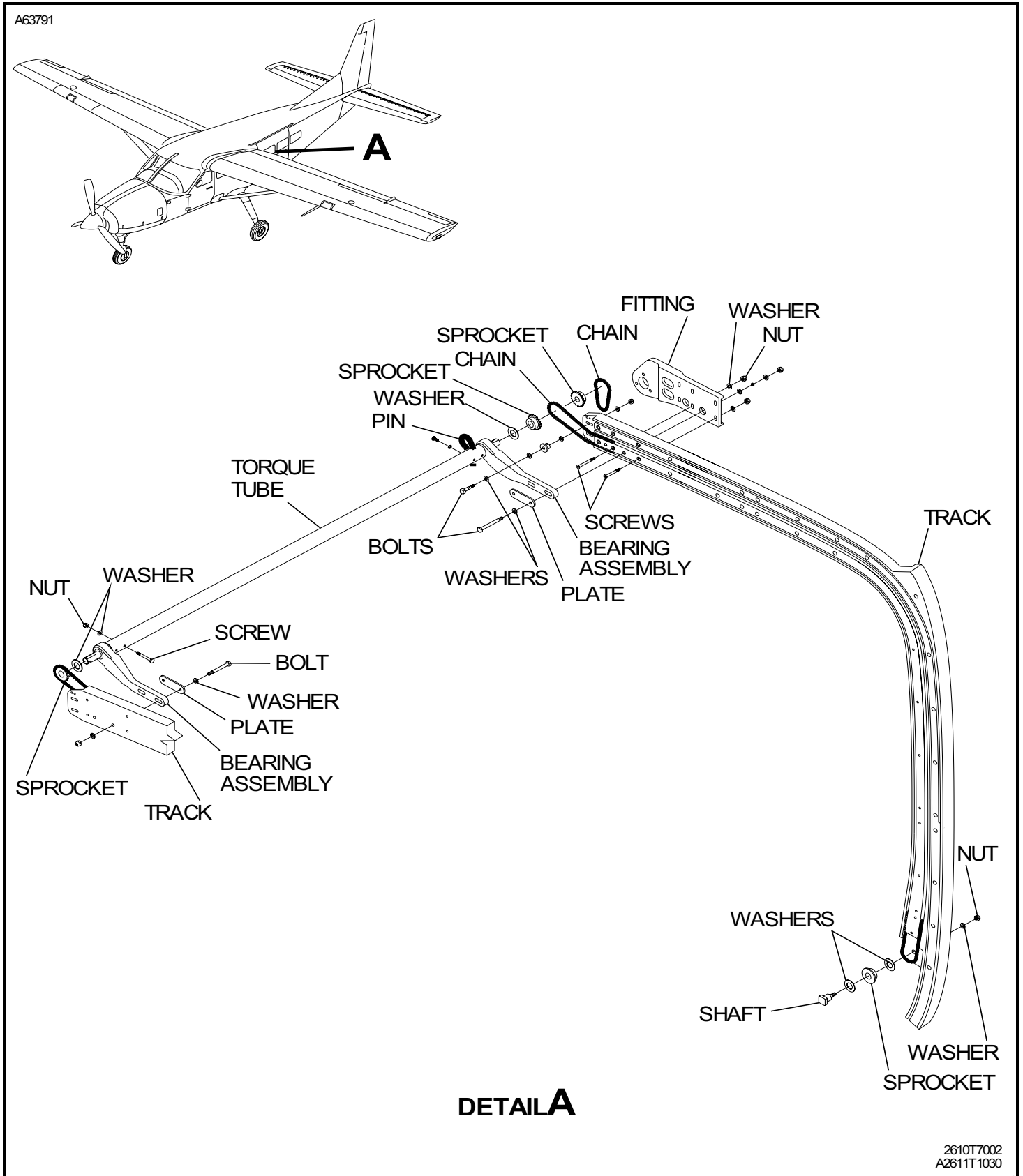
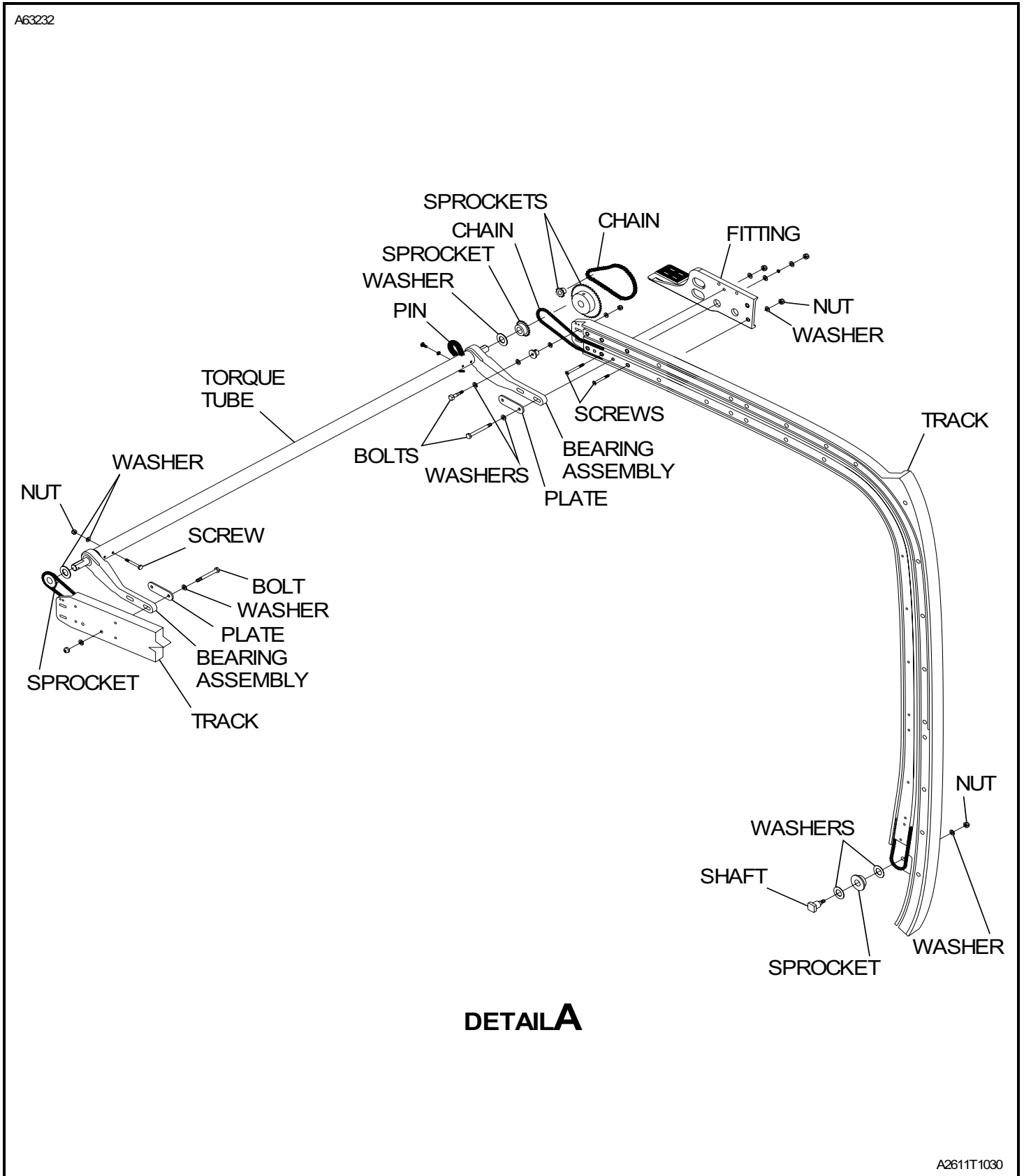


Figure 201 : Sheet 2 : Roll-Up Door Installation



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Figure 202 : Sheet 1 : Drive Assembly Installation

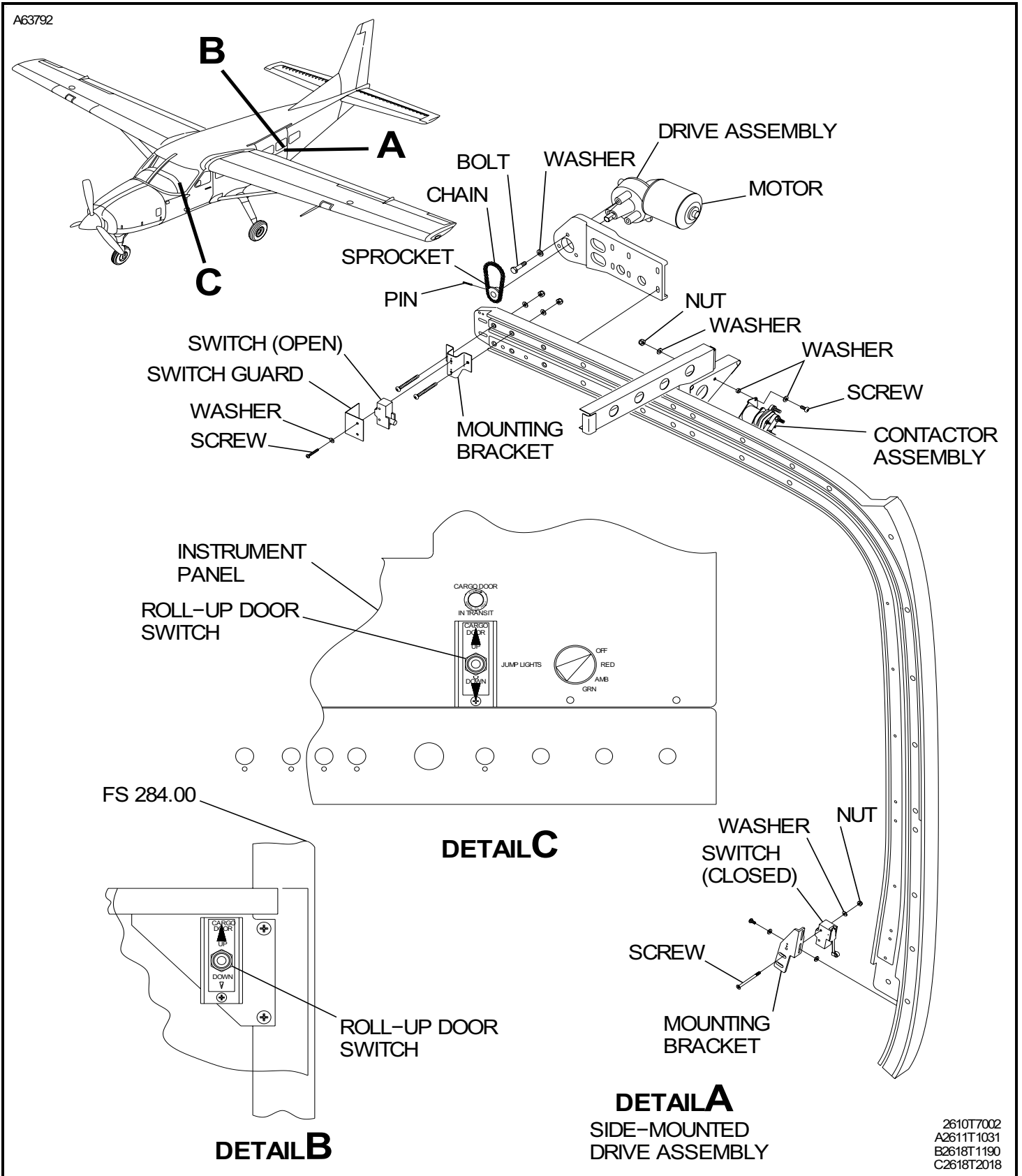
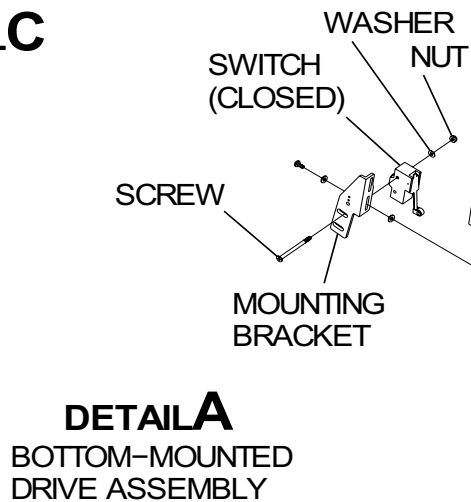
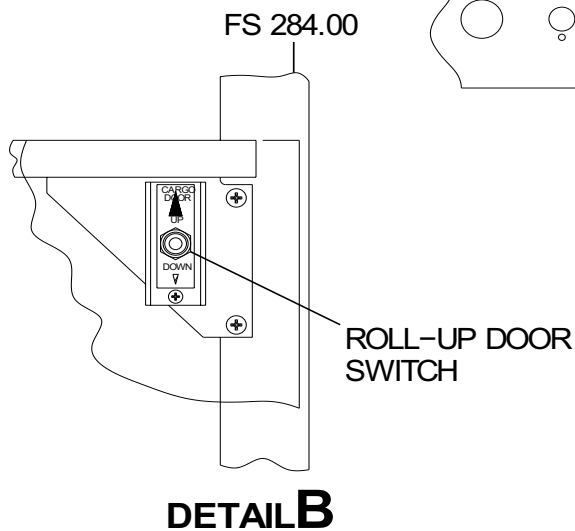
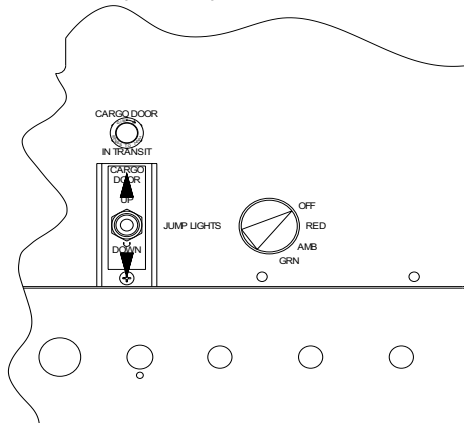
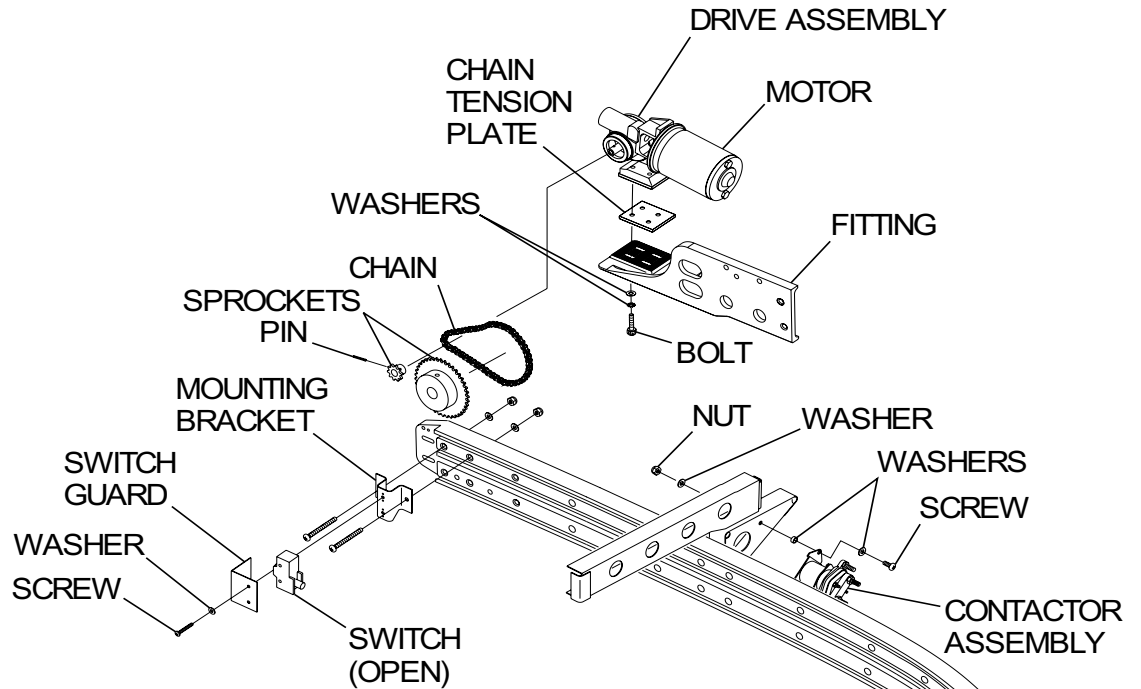


Figure 202 : Sheet 2 : Drive Assembly Installation

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