

Post-Paint>Fuselage>Interior>Fit flap drive motor

Objectives of this task:

To fit the flap drive motor and actuating assembly.

Materials required:

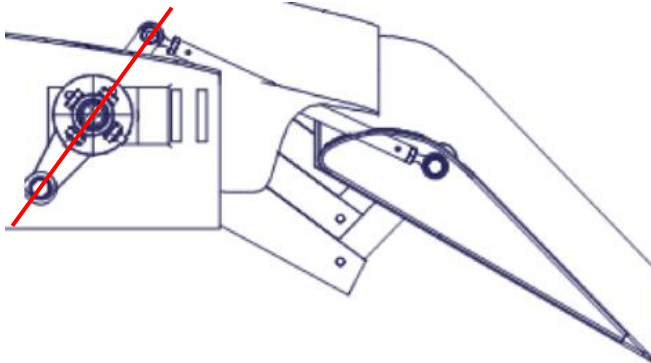
Card 16J “*Electric Flaps*”

Fit the flap shaft

Remove the inner flap drive arm from the flap drive shaft by removing the 2 x AN3 bolts and pulling the flap drive arm completely off of the shaft.

Feed the bare shaft into the cabin through the flap shaft mount in the top left of the cabin, first taking care that the bolt holes for the inner flap drive arm will end up on the right-hand side of the cabin, and slip the inner flap drive arm over the shaft before the shaft exits the cabin through the right side flap shaft mount.

Ensure that the flap drive arm will be 180° away from



the outer flap drive arms as shown above in red.

Refit the inner flap drive arm with the AN3 bolts, flat washers and Nyloc nuts and tighten the nuts to safety.

Fit the outer flap drive arms to each end of the flap shaft and secure each with an AN3 bolt and Nyloc nut as shown at right. Tighten the nuts to safety.



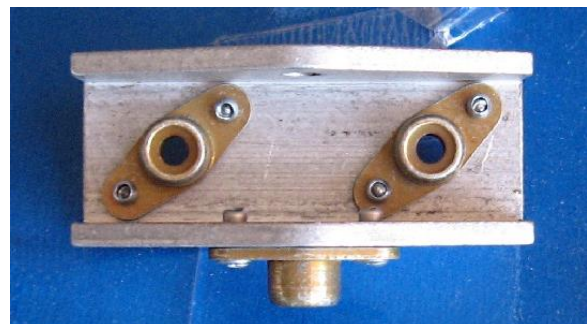
Prepare the flap drive motor assembly

Rivet the 3 captive nuts to the mounting bracket as shown below right:

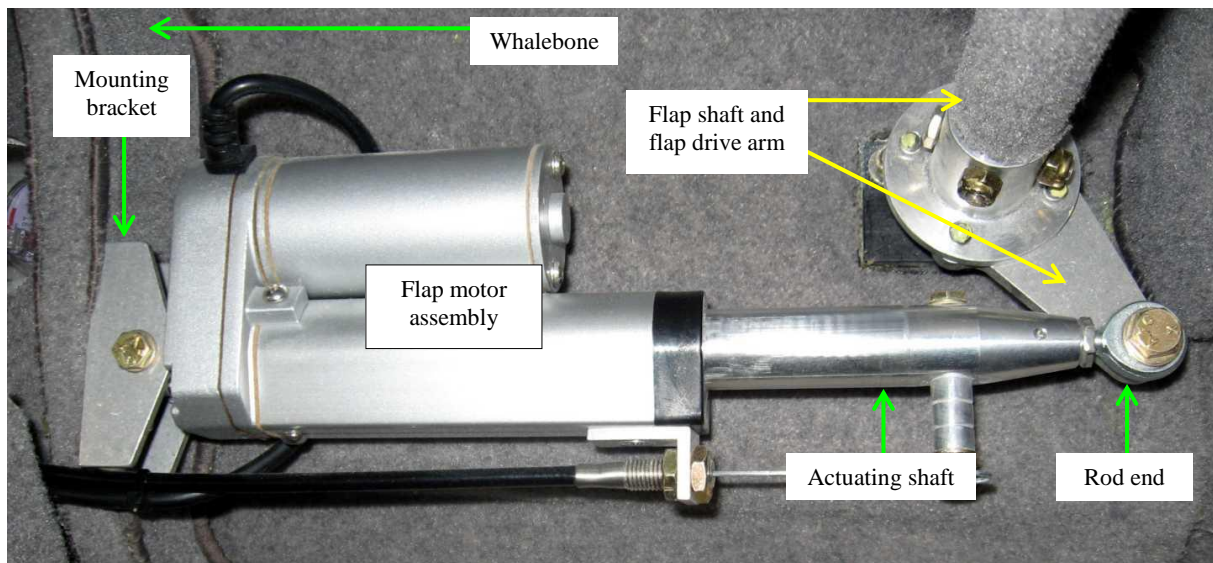
Fit the large rod end and lock nut to the end of the actuating rod on the electric flap motor and thread fully into the rod.

Bolt the mounting bracket to the post on the gear case of the flap motor assembly by placing a Bundy tube through the post and then bolting through the bracket and the post.

Refer to the photo on the next page for detail.



Fit the flap drive motor assembly

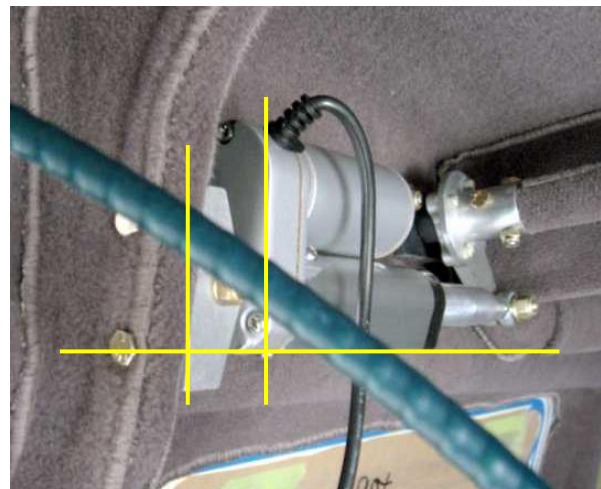


With the flap shaft in place and all interior trim fitted, move the flap shaft to the fully retracted position (flap drive arm back). Apply power (12v) to the flap motor to fully extend the actuating shaft. Bolt the rod end of the flap drive motor assembly to the flap drive arm with an AN4-10A bolt through an AN960-516 flat washer, the rod end, an AN960-416 flat washer, the drive arm, an AN960-416 flat washer and a Nyloc nut. Tighten the nut to safety and then swing the motor assembly forwards and up until the mounting bracket sits against the whalebone as shown above.

The alignment requires that the motor assembly be horizontal and the mounting bracket be fixed at the inboard edge of the whalebone as shown by the yellow lines in the photo above.

Viewed from the front the motor should be vertical. When this position has been reached, drill through the bottom hole of the mounting bracket and fix in place, then mark the top hole, swing the motor assembly out of the way and drill the top hole.

Bolt the bracket into place with 2 x AN3 bolts with a flat washer under the head of each bolt and tighten each bolt firmly.

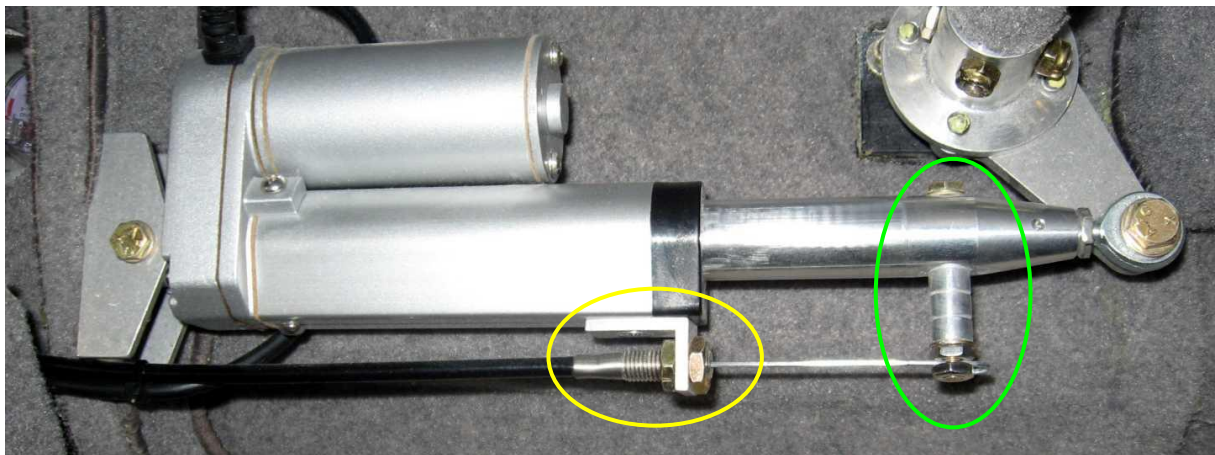


Fit the flap indicator



Assemble the flap indicator: paint the outside of the indicator washer red and mark the 3 flap positions in a dark colour. Push the inner cable through the indicator body and through the indicator washer then all the way into the long end of the indicator body.

Slide the washer to the long end of the indicator body as circled above and crimp it to the



inner cable. Using the supplied crimping tool, crimp the indicator body to the outer cable.

Screw the “L” shaped bracket to the bottom of the motor assembly with a countersunk screw (circled in yellow above), then drop the AN3-16A bolt down through the actuating shaft and add the 3 spacers and the 2 retaining nuts (circled in green above).

Position the flap indicator on the right-hand windscreen pillar so that the cable follows the line of the door opening and remains clear of the opening and screw the flap indicator and cable into place with the supplied nylon clips as shown at right.

Check the outer cable for length and trim as required then crimp the threaded end in place. Fit the threaded cable end to the “L” bracket on the motor with 2 thin nuts and fit the inner cable to the long bolt through the actuating shaft, all as shown in the photo above.



Check that all bolts and nuts are tightened, route the power lead behind the motor assembly and down behind the door opening for later connection in the [Post-Paint>Fuselage>Interior>Install electrical wiring](#) task. Adjustment of the flap motor and indicator will be done in the [Post-Paint>Wings>Fit flaps](#) task.

This completes the [Post-Paint>Fuselage>Interior>Fit flap drive motor](#) task.