

The Quick Flap

Rans S7 – Installation Guide

Before installing or removing any previous flap system, read the installation guide, check inventory, confirm all parts are in stock and ready for installation.

Begin by setting flaps to 0° and record the flap position of both wing flaps using an angle finder. Repeat the process at the 1st notch of flaps and the full flap position. This can be done with the tail on the ground as this is only a reference number to ensure the flaps are rigged symmetrically and returned to the original *Flaps Up* location. If done with the tail on the ground, this will not be the actual flap deployment angle. To find the actual deployment angle, this should be done with the tail up and in the level flight position. Once the quick flap system is installed, repeat the measurement process and record the results and make any necessary adjustments to the flap cable heim joint cable ends to ensure a symmetrical deployment of the flaps.

Original Flap Angle

Left Wing		Right Wing:
Full Up Position :	_____ °	_____ °
1 st Notch of Flaps:	_____ °	_____ °
2 nd Notch of Flaps:	_____ °	_____ °
	(← Final Factory Flap Position→)	
3 rd Notch of Flaps:	____ XXXX _____ °	____ XXXX _____ °
	(← Not available on factory flaps →)	

New Flap Angle

Left Wing		Right Wing:
Full Up Position :	_____ °	_____ °
1 st Notch of Flaps:	_____ °	_____ °
2 nd Notch of Flaps:	_____ °	_____ °
3 rd Notch of Flaps:	_____ °	_____ °
	(← New Full Flap Position →)	

When all measurements have been documented, begin installation with the flap handle in the Full Flap position (last detent slot towards the pilot) (Fig 1). Loosely clamp the detent into position as far left as possible near the bracket for riveting the windshield down. The Cable end of the flap handle should be just about to touch the skylight (Fig 1). Once the handle is in position, snug the 2 clamp bolts down. Pull the trigger and push the flap handle to the 0° flap position (First Detent Position, Full Forward) (Fig 2). Ensure the handle clears the panel glare shield and does not rub on the center diagonal support bar. Once the position is confirmed, torque the clamp bolts to 72-76 In/Lbs (6 - 6.3 ft/lbs).



Fig. 1

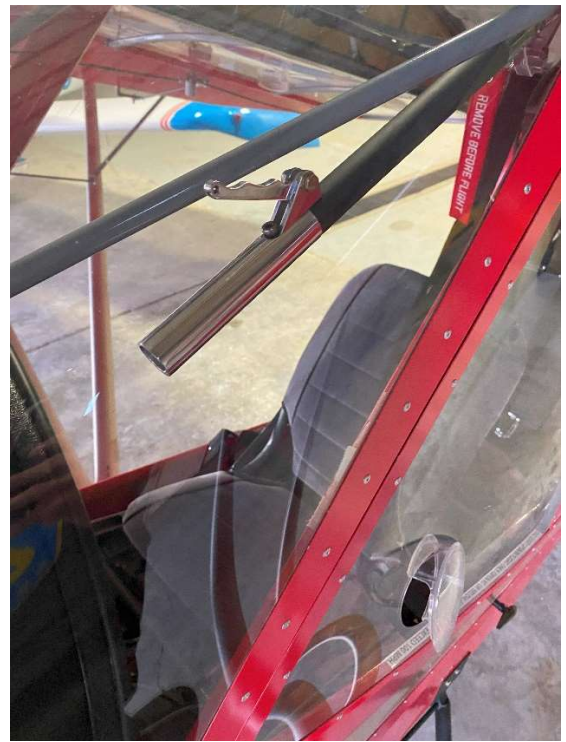


Fig. 2

Next install the overhead cable bracket. With the clamp loosely bolted together, place the clamp on the top tubing and slide until the clamp radiuses fit snug against the tubing. Torque bolts to 72 – 76 In/Lbs (6 – 6.3 ft/lbs) (Fig. 3)



Fig. 3

If installing the QuickFlap using the factory flap cables, the cables will remain connected at the wings. In the cabin re-route the flap cables from the lower portion of the cockpit to the upper portion of the cockpit. The excess length from the factory cables can be re-routed in the wing or above the baggage area. When routing ensure there are no sharp bends in the routing of the cable and there is no interference with other controls, wiring or fuel lines.

If installing the QuickFlap w/new cables, route the cables into the wings and out of the wing exit, thru the fairing, and attach to the flap attach point. The amount of cable needed in the cabin will be approx 36" for the left wing and 52" for the right wing. This will vary depending on how the cables are routed. When routing ensure there are no sharp bends in the routing of the cable and there is no interference with other controls, wiring or fuel lines.

Once the cables have been routed, clamp the cables to the Upper Cable Bracket with the clamps either supplied in your kit or from the original factory flap system. Ensure the groove on the cable is properly indexed with clamp locking ridge before tightening the clamp. Next install the rod ends to the cable ends adjusted to an equal length with the lock nuts loose for final adjustments. Align the flap handle shank (top) hole with the rod ends on the flap cables and install the supplied AN3-12 bolt and nut. Leave cotter key out until after final adjustments. The Clamp bolts and the cable end bolt should both be torqued to 19 - 24 in/lbs (1.6 – 2 ft/lbs) (Fig. 4)



Fig. 4

Cycle the flaps from 0° to full flap and ensure all parts are working properly, smoothly, and without any interference. Using an angle finder, check both flaps in the same location as initial flap angle measurements, make any adjustments necessary and record the results.

With flaps adjusted to their final position, clean up the cables with zip ties and ensure they do not rub any other equipment such as wiring, fuel lines, pitot lines, and aileron rigging. Install the cotter key to the flap cable rod end bolt. Torque the cable end jam nuts. Cycle the flaps again and confirm cables remain in position and everything functions properly.

If The Pull forces are found to be higher than desired after initial flight testing, the flap cable rod ends can be moved to the hole 1" below the top hole on the flap handle shank. Moving the cable attach point from the top hole to the 2nd hole will decrease the pull force needed. Flap angles should be re documented after moving to the 2nd hole.

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