PitotShield V2™ Detaining Bridle Instructions

CAUTION: The PitotShield V2™ SmartCover™ (PSV2), as all pitot covers, must be **REMOVED BEFORE FLIGHT OR APPLICATION OF PITOT HEAT.**

CAUTION: Never touch a pitot tube (probe) or other heated probes and ports without confirming that the corresponding heat has been deactivated for a minimum of 30 minutes. Failure to do so can result in severe burns to the areas of the body contacted.

OVERVIEW OF THE PSV2™ DETAINING BRIDLE

The PitotShield V2™ SmartCover™, unlike all other pitot tube covers, releases from the pitot tube upon application of pitot heat, preventing pitot tube damage and thereby maintaining normal Air Data System (ADS) function. Some operators request that, to avoid FOD, PitotShield V2s employed during maintenance have a detaining device that maintains attachment of the pitot cover components to the pitot tube after a thermal ejection.

DeGroff Aviation Technologies has designed such a device, the PitotShield V2™ Detaining Bridle (p/n 77-DBU1). Made of high-temperature silicone elastomer, the Detaining Bridle is a simple one-piece design with no metal. It achieves a universal fit for various shapes and sizes of pitot tubes and secures the PSV2 components to the pitot tube following a thermal release.

NOTE: The PitotShield V2™ with the Detaining Bridle option must be installed and removed by hand. **DO NOT ATTEMPT TO REMOVE BY PULLING ON THE PitotShield V2™ PITOT COVER BODY OR THE REMOVE BEFORE FLIGHT STREAMER**. **DOING SO CAN RESULT IN BRIDLE FAILURE.** Additionally, the Bridle is not compatible with the PSV2 Telescopic Install/Remove Device (DAT P/N 77-7801CK).

Scan for a Video Demonstration of PSV2 Placement/Removal with Bridle

The following illustrate Install/Removal of a PSV2 with the Bridle Option.

CAUTION: TO AVOID POSSIBLE SEVERE BURNS, CONFIRM THAT THE PROBE HEAT HAS BEEN OFF FOR AT LEAST 30 MINUTES AND THE PROBE IS COOL PRIOR TO INSTALLING OR REMOVING THE PITOTSHIELD V2™ and Bridle.

STEP 1. SIZING THE BRIDLE

Figure 1 shows the Detaining Bridle option in place on a PitotShield V2™ Body.

Place the bridle head up to the pitot tube (Fig 2) to determine which hole most closely measures approximately 1/16" to 1/8" smaller than the pitot tube diameter at approximately three inches back from the tip.

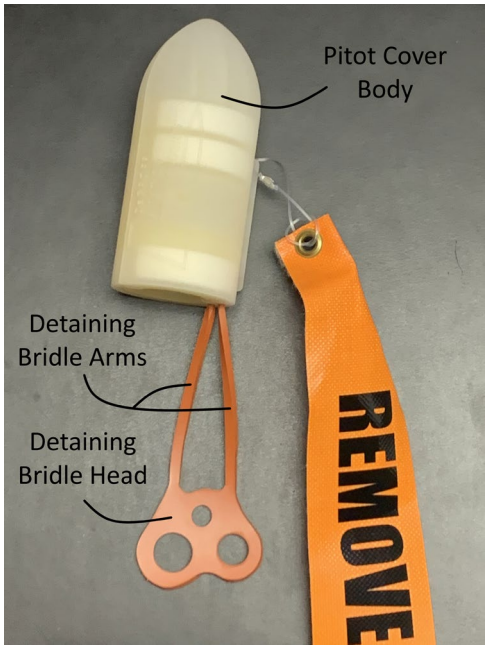

Fig. 1

Fig 2

STEP 2. PLACING THE BRIDLE

Using both hands, grasp the head of the bridle on either side of the appropriate hole, with the PitotShield body oriented as shown in fig 2. Slide the bridle onto the pitot tube (Fig 3) to about 3 ½ inches from the pitot tube tip (fig 4). The bridle should slide onto the pitot tube with slightly firm resistance.

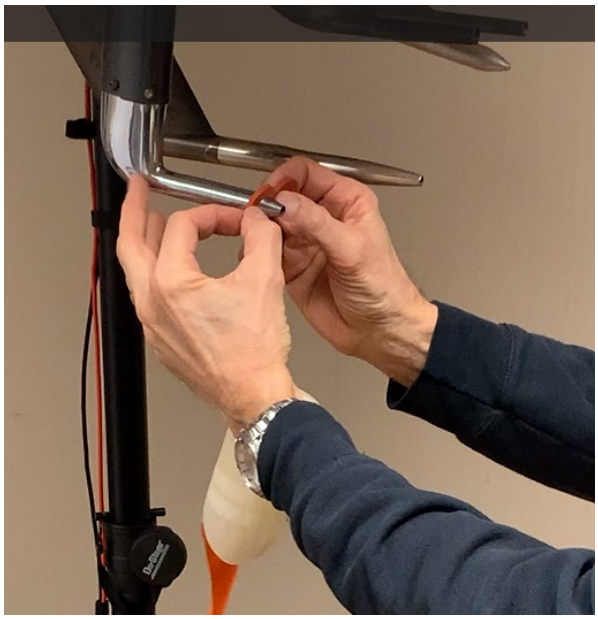

Fig. 3

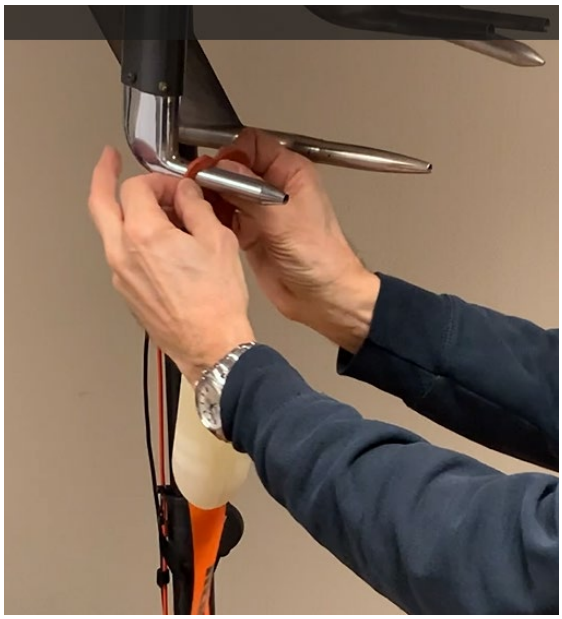

Fig. 4

STEP 3. PLACING THE PITOTSHIELD V2™

Grasp the PitotShield with the RBF Streamer oriented down, assuring the Bridle Arms are not crossed, and slide the PitotShield V2™ onto the pitot tube until a hard stop is felt (Fig. 5). Your pitot tube is now protected.

Fig. 5

Fig. 6

REMOVING THE PITOTSHIELD V2™ AND DETAINING BRIDLE

IMPORTANT NOTE: WHEN REMOVING THE PITOT COVER AND DETAINING BRIDLE, **DO NOT ATTEMPT TO PULL THE BRIDLE OFF THE PITOT TUBE BY PULLING ON THE PITOT COVER BODY OR RBF STREAMER. DOING SO MAY RESULT IN BRIDLE FAILURE.** ONLY REMOVE THE BRIDLE USING THE TECHNIQUE ILLUSTRATED BELOW.

After confirming the pitot heat is off and the pitot tube is cool, grasp the PitotShield body (Fig 6) and pull straight forward, off the pitot tube just until the back of the cover is clear of the pitot tube tip. Then, allowing the pitot cover body to hang by the Bridle Arms, using two hands (Fig 4), slide the bridle forward and off the pitot tube.

If the pitot heat has been activated and the PitotShield V2 has deployed and hanging by the Bridle (Fig 7), confirm pitot heat is off and the pitot tube is cool. The Bridle can then be carefully removed using two hands as described above.

Note that some pitot heat systems are such that their pitot tube temperatures are sufficient to degrade the bridle surface contacting the pitot tube. Crystallization or powdering and/or splits may appear on the bridle hole edges, indicating that its tensile strength will be compromised, particularly while the silicone is hot. This indicates a possibility of the bridle tearing at the hole with further use. Thus, after a thermal ejection, inspect the bridle and replace with new (DAT P/N 77-DBU1) if degradation is observed.

Fig. 7

Scan this QR for a video of Bridle Replacement.