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Headliner Installation and O2 Bottle Relocation Instructions

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EFFECTIVITY

Cessna Aircraft Types: 182S, 182T and T182T

REVISION HISTORY

REVISION	DESCRIPTION	DATE
A	See ECN 13-024	4/30/2014
B	See ECN 17-013	6/29/2017
C	See ECN 18-020	10/2/2018

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PURPOSE

For installation of the headliner in the 182S, 182T and T182T and relocation of the oxygen bottle in the T182T.

OVERVIEW

The Cessna 182S, 182T and T182T kits come with a headliner. The T182T kit requires the relocation of the oxygen bottle.

O2 BOTTLE RELOCATION (T182T ONLY)

WARNING: Do not let oil, grease, or other lubricants near high pressure oxygen because it can cause a fire. Do not smoke or have an open flame in or near the airplane while you work on the oxygen system.

A. The O2 bottle will need to be relocated due to its location and where the condenser plenum assembly is installed.
B. Utilize Chapter 35 of the Cessna 182T/T182 Maintenance Manual for removal of oxygen components.
C. Remove oxygen system Tee fitting AN824-5D located in the overhead depicted in Detail A of Figure 201 Cessna MM 35-01-00 page 203 Jul 3/2006 and immediately cap the lines leading to the front outlet ports with clean caps. Remove all of the oxygen supply lines aft of the removed Tee fitting. Save hardware for later use (bottle clamps and brackets, line clamps, fill line, etc.). See Figure 1.

Figure 1 - Oxygen Components to be Removed

D. If aircraft is T18208150 and on remove the 2 forward brackets that the O2 bottle clamps loop through. Two of these will be reused later in the bottle relocation. See Figure 2.

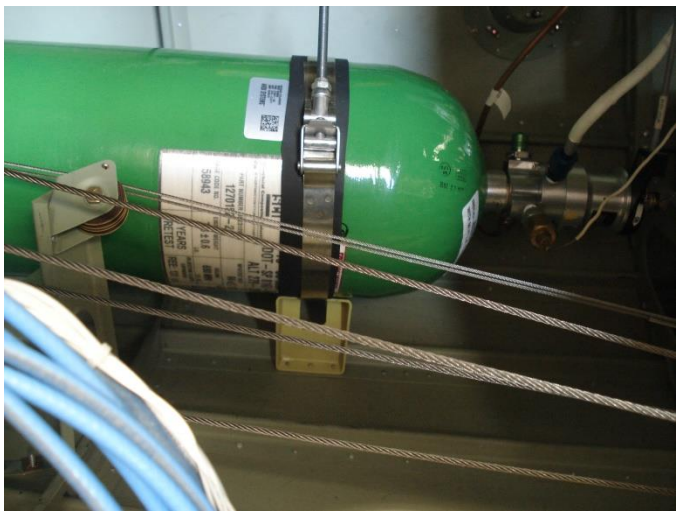


Figure 2 - O2 Bottle Clamp Bracket, 1 of 4

E. If aircraft is T18208001 thru T18208149 you will need to order the brackets detailed above.
F. See Cessna 182/T182 IPC 35-20-00 Figure 1 (Sheet 2) Page 2 Jul 1/2007
G. See drawings AC-00149 and AC-00168 for overall installation illustration. Install new flexible oxygen supply lines and fittings using AC-00168 as a guide, routing to the oxygen supply ports as required.
H. Forward and aft edges of the AC-00952 Mounting Bracket box will be aligned with FS 92.0 and FS 124.0 respectively. FS 110.0 will also be an attach point and will be located on the flange of the bracket.
I. Between FS 92.0 and FS 110.0 the two brackets removed from the tail cone or ordered previously will be riveted in using existing rivet locations along the fuselage. Reference AC-00144.
J. Bracket supplied with the kit will be located aft of FS 110.0 and fit as required. The Black Delrin block may be modified to allow for a better fit of bracket to bottle. (Reliefs in the bottom of the block may be required as well to clear rivets.) Bracket is secured with 2 AN4-11A bolts and 2 AN970-4 large area washers under the baggage floor with MS21044N4 lock nut. Reference AC-00144 & AC-00167.
K. Some small adjustments may be required on individual installations to include but not limited to, routing oxygen lines for best fit, clamping lines and final oxygen bottle and box cover locations. Secure fittings and tubes with zip ties where required. Reference AC-00168 and Figure 3.

Figure 3 - Oxygen Tube Routing

L. Trim existing carpet as required, place end piece on the box, if it isn't already there. Trim existing plastic sidewall as required; cover with AC-00145 Carpet Cover. See Figure 4.

Figure 4 - Trim Existing Carpet and Plastic Sidewall

M. Relocate tow bar bracket as shown in Figure 5. The strap remains in the same location. Place AC-00145 Carpet over box.

Figure 5 - Tow Bar Relocation

N. Locate placard AC-00134 on the aircraft wall in the baggage compartment above the new oxygen cover box.
O. The oxygen bottle fill port will now be located in the baggage compartment. The fill port in the rear empennage will no longer be operational. The fill port hole will be an air intake for the air conditioning.
P. The rear seat oxygen mask ports will now be located on the oxygen bottle cover in the baggage compartment. They are no longer located in the headliner.
Q. After Installation of new oxygen lines and bottle, perform Oxygen System Functional Testing and System Leak Test as per Chapter 35 of the Cessna 182T/T182 Maintenance manual.

HEADLINER INSTALLATION 182S, 182T and T182T

A. For the 182S, 182T and T182T optional upgrade, the old headliner will be replaced with a new headliner and internal ducting. Installation of headliner typically occurs after all other tasks have been accomplished and system is serviced but prior to the rest of the cabin interior reinstallation.

B. Remove the right and left rear window molding (reuse) and the headliner; remove the two inspection covers (182T and T182T only) and placard from the headliner to reuse. See Figure 6. All existing trim out pieces from old headliner and overhead console will be reused.

Rear Window Molding – Save for later

Headliner Removal

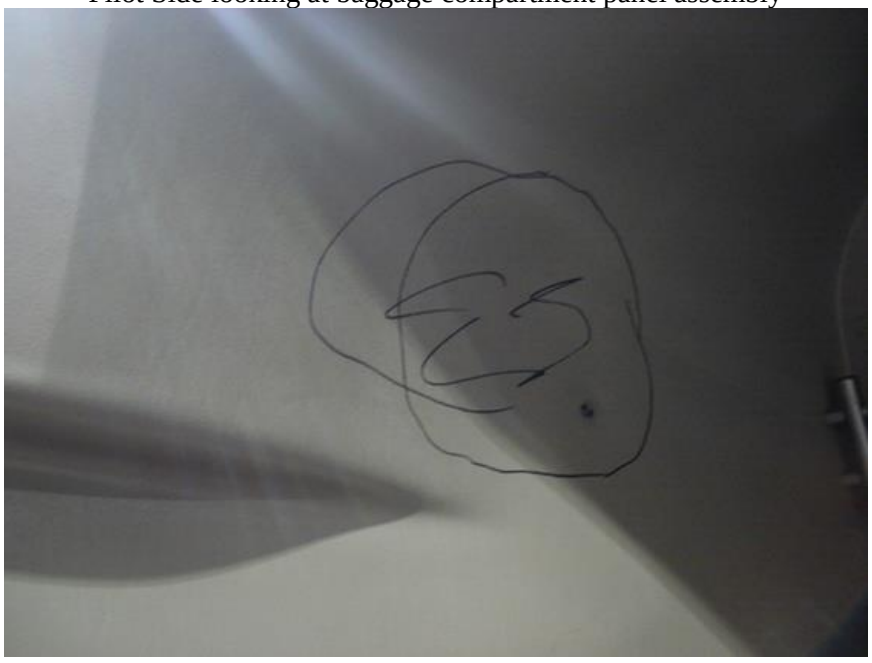
182T & T182T Inspection Panels – Save for later

Placard – Save for later

Figure 6 - Existing Headliner Removal

C. Referencing Figure 7 and Figure 8; mark two approximately 4" x 6 ½" slots approximately about 8" behind the front edge of the panel to the edge of the slot. Remove the baggage compartment panel assembly from the aircraft.

Pilot Side looking at baggage compartment panel assembly



Passenger Side looking at baggage compartment panel assembly

Figure 7 - Mark Hole Location

D. Cut two slots as shown in Figure 8.

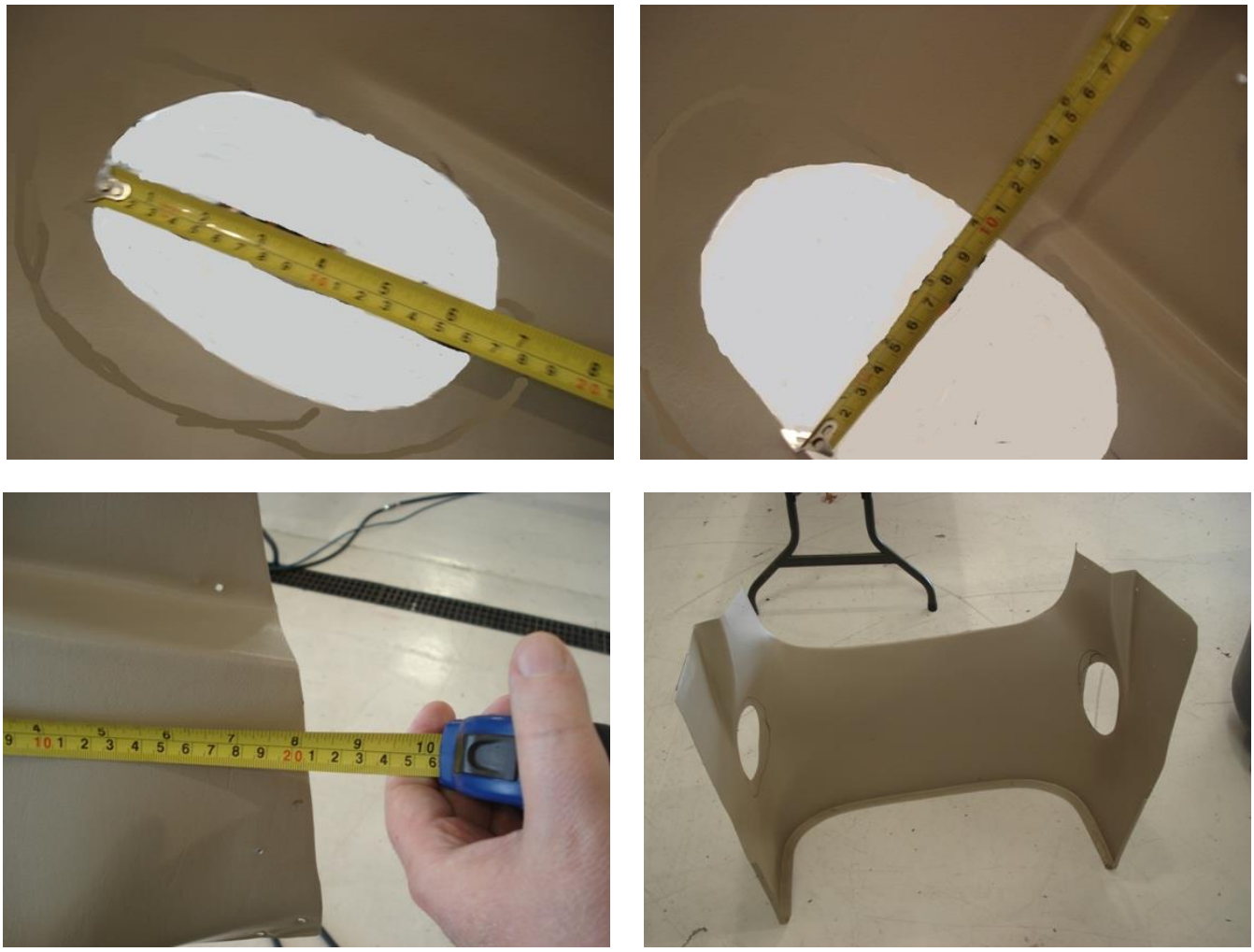


Figure 8 - Slot Cutting

E. Make the interior modifications as shown on Figure 9 (T182T ONLY).

Trim off the inboard side of the bracket shown to leave (2) angles secured to the aircraft. Leave no more than 1.0" of material and break the corners when trimming. Finish the bare material with Alodine or equivalent.

Remove bracket and plastic cover on both sides

Figure 9 - Modification to Interior

F. Connect the scat tubing to the new headliner as shown in Figure 10 with hose clamps. The first four feet, from the ducts, of the scat tubing should be collapsed for ease of installation.

Figure 10 - Headliner Subassembly

G. With two people, push the headline in up under the lip where the sun visors are. Make sure the headliner is straight by mounting the overhead console. Make sure the coat hanger is straight and centered in the headliner. Work the headliner from front to back. See Figure 11.

Figure 11 - Main Headliner Mounting

H. Run scat tubing through the holes added to the baggage compartment panel and cut tubing to length and connect to the evaporator outlets with hose clamps as shown in Figure 12.

Figure 12 - SCAT Tubing Installation

I. Push up the new headliner and reinstall the outer trim pieces using the existing holes. For the 182T and T182T, reinstall inspection covers from the old headliner. For 182S, use either AC-01869 and AC-01870 OR 0719088-7 and 0719088-8 Inspection Covers; painted to match as required. Modify the window trim to flow with the contour lines of the new headliner. Pilot side shown, same process required for passenger side. See Figure 13.

Modified window trim

Figure 13 - Trimming Details

J. After the headliner is worked back to the rear window on both sides, mount the baggage window trim pieces over the new headliner using existing holes. Some trimming may be required. See Figure 14.

Figure 14 - Rear Window Trimming

K. Install left and right hose covers. Install a minimum of four evaporator blockoff brackets using a straightedge so the blockoff is flush with the bottom blockoff. Add two sheet metal screws per bracket. See Figure 15.

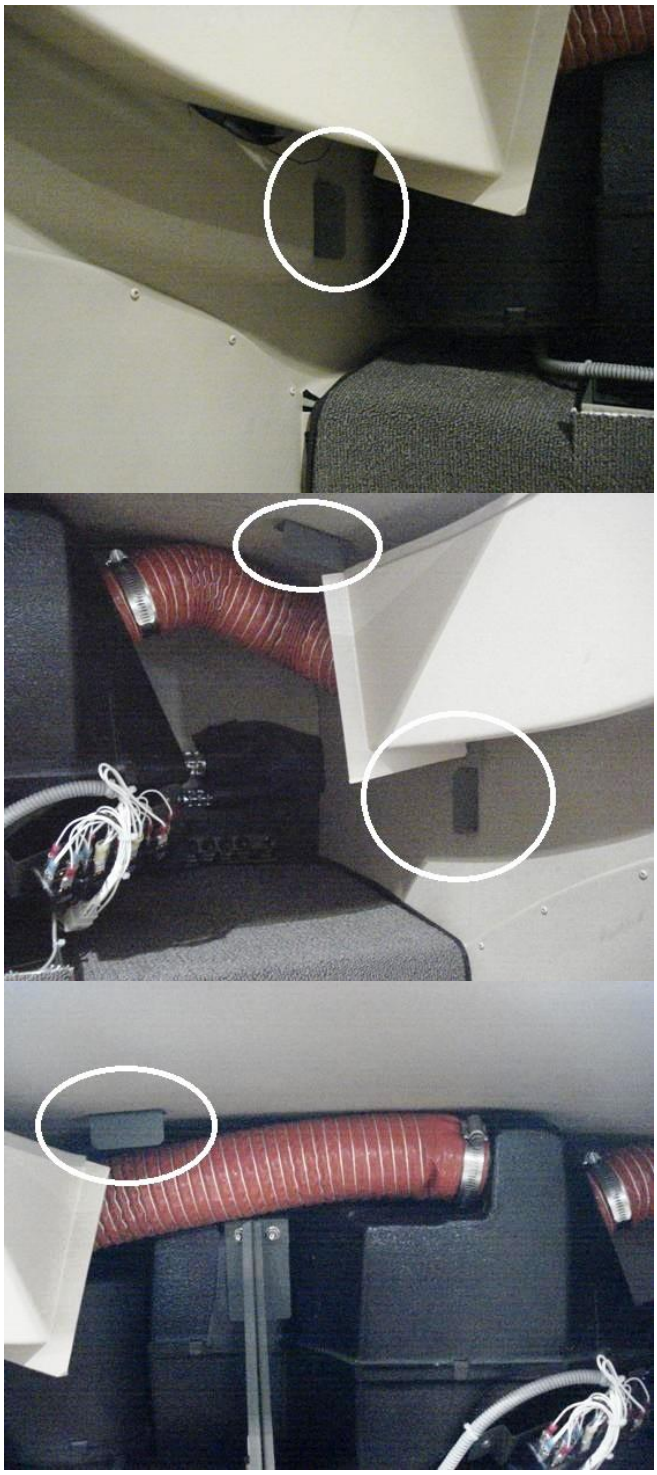


Figure 15 - Evaporator Blockoff Brackets

L. Cut block off carpet to fit around evaporator tray as it lies on hat rack. Mount blockoff assembly to brackets installed using Velcro and 1 sheet metal screw per bracket. Re-attach ELT placard to blockoff. See Figure 16.

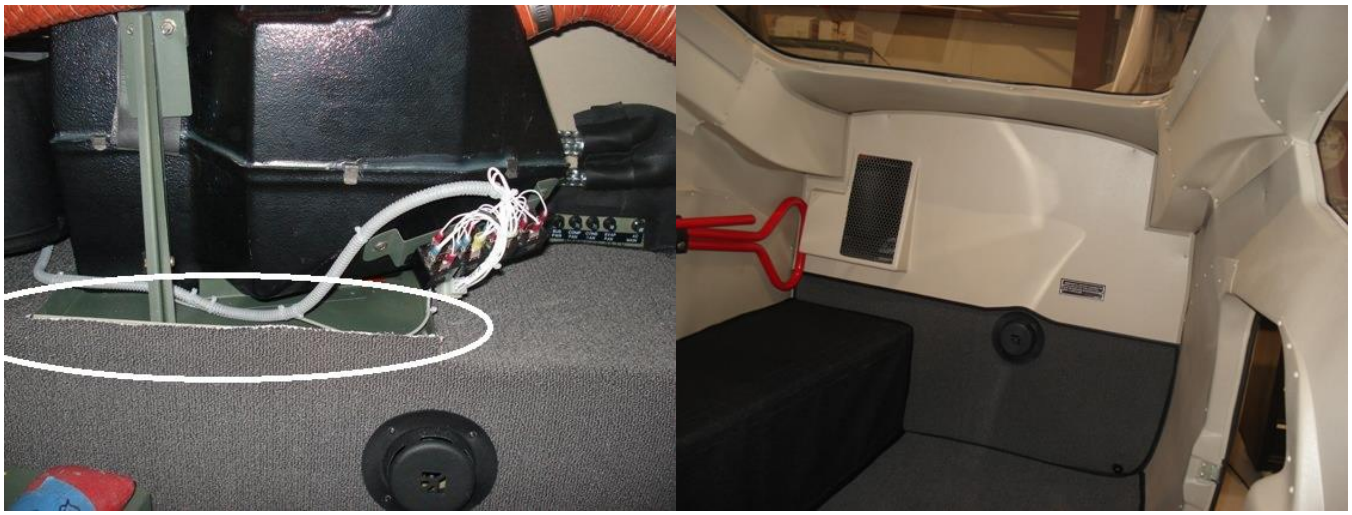


Figure 16 - Hat Rack Carpet Modification and Blockoff Installation

M. Install plugs into existing holes where oxygen ports were previously as shown in Figure 17 (T18T ONLY).

Figure 17 - Oxygen Port Plug

N. Re-install headliner placard. See Figure 18.

Figure 18 - Headliner Placard