

Section 19

Heat Shielding and Muffler

Procedures covered in this section:

Construct, fit and install heat shielding; fabricate muffler straps and install muffler.

Cards used in this section:

HARDWARE CARD	E24 CARD 3F	E42 CARD 1F
E24 CARD 1F	E30 CARD 1F	

Prints used in this section:

E25-2000	E30-2000
----------	----------

Templates used in this section:

E24-1	E30-2
-------	-------

Tools required for this section:

Air or electric drill	Metal cutting snips	Scissors
Cleco	Pliers	
Cleco pliers	Pop rivet gun	

Drill bits of the following sizes: 3/32", 1/8", 3/16", #19, #40

Notes:

1. **HEAT SHIELDING:** Before fitting the heat shielding, it may be helpful to cut out sample pieces from light cardboard using the templates provided. These will give you a better understanding of how the pieces fit together and will enable you to check for accuracy. All of the shielding should fit tightly and have a minimum of air gaps between the fuselage, radiator and exhaust pipes. However, leave 1/8" to 3/16" around the exhaust pipes to allow for movement during operation.

The aluminum heat shielding and the fiberglass shroud are long on the bottom and must be trimmed to match the contour of the lower body panels. To achieve the proper fit, hang each panel by installing a cleco through the upper front hole and through the matching hole in the tub. Then hang the rear of the panel from the tail boom. Mark the points of contact along the shielding and shroud. After the initial rough cut, trim a little at a time, gradually adjusting the rear of the panel closer to the tail boom.

Overview of the exhaust heat shielding, after cutting and bending (top) and fully assembled (bottom). See templates E24-1 and E30-2. Locate the fasteners as shown. Screws should be installed in the direction shown for easier access after the assembly is complete.

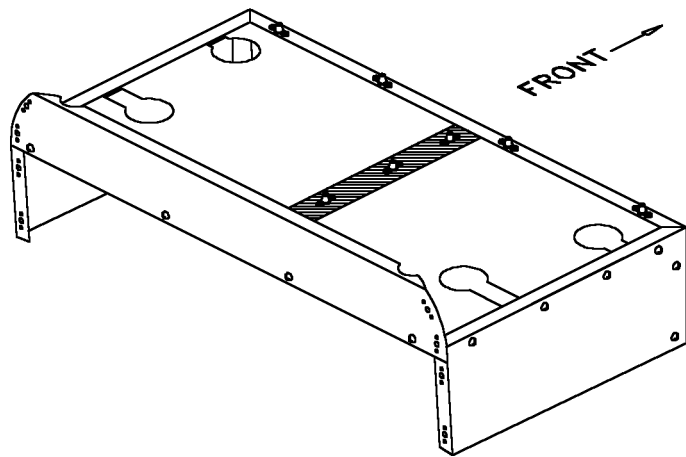
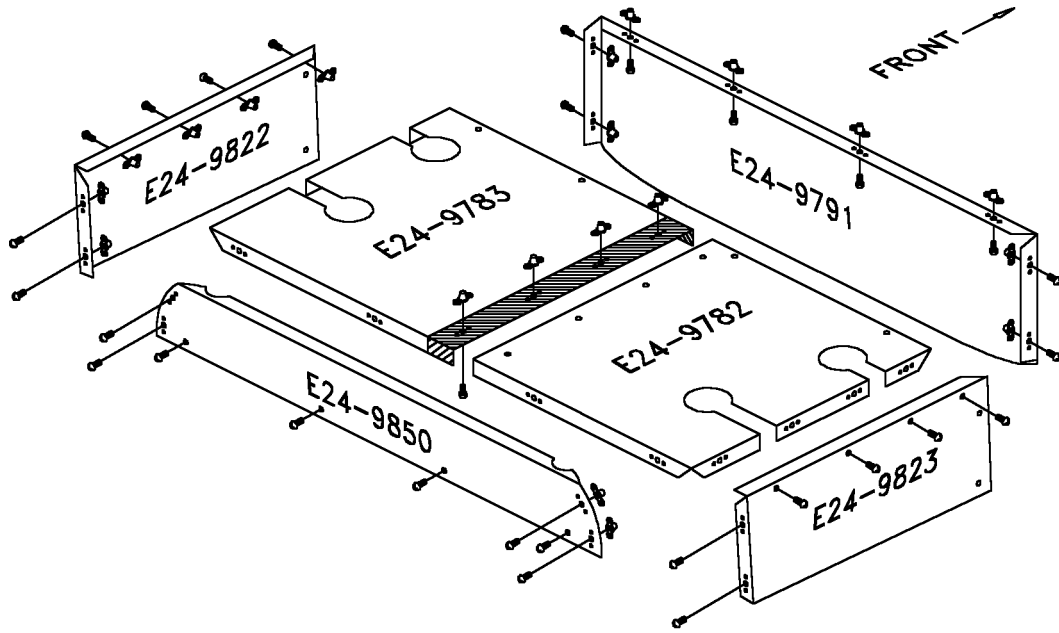


Photo #1

The front panel of the exhaust heat shield should be flush with an imaginary line extended from the fiberglass tub.



Photo #2

The bottom edge of the heat shielding and the fan shroud should fit within 1/8" of the body panels when trimmed properly.

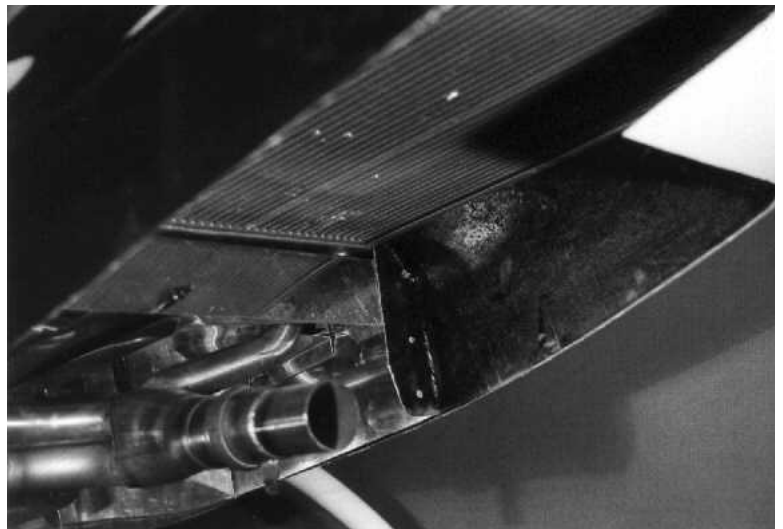
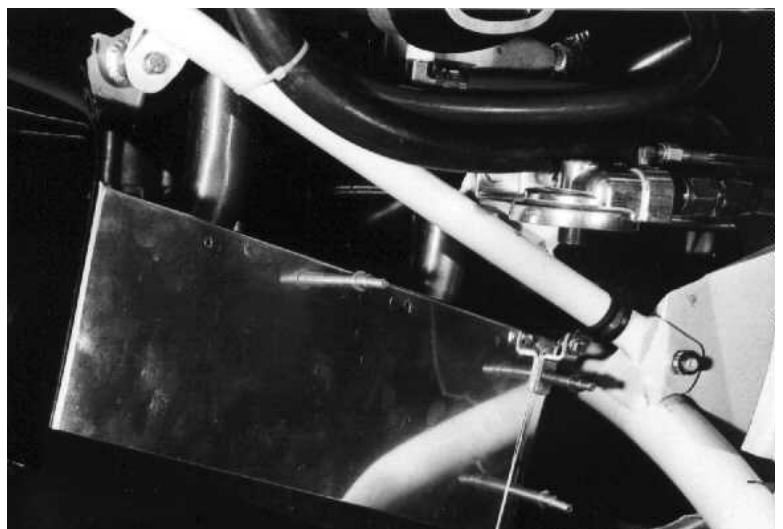


Photo #3

Attach the rear of the heat shielding to the front of the shroud with screws. Attach the front of the heat shield to the tail boom support tubes with the aluminum straps and 1" cushioned loop clamps.



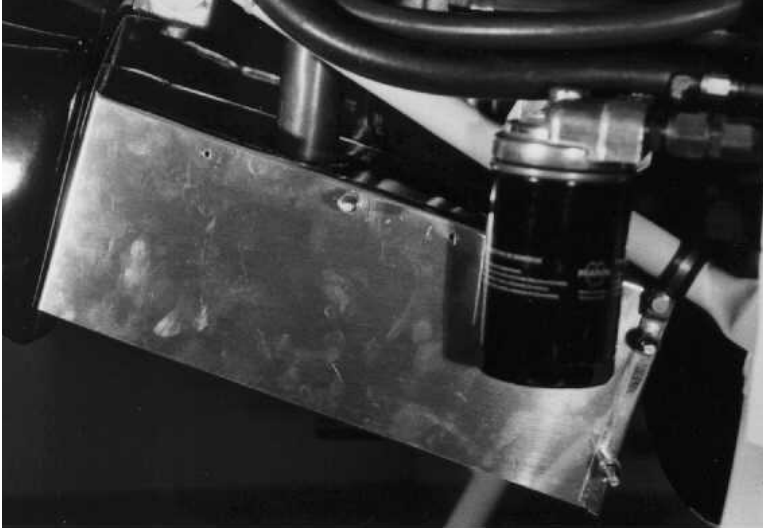


Photo #4

On the passenger side heat shield, insert the screws from this side.

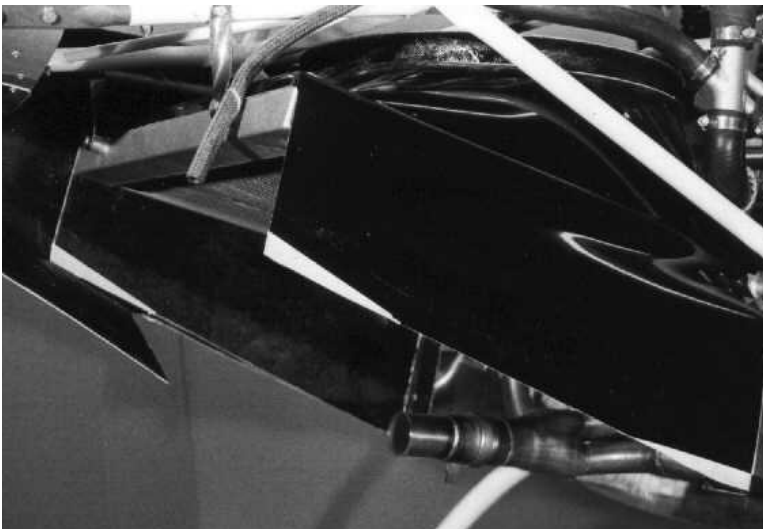


Photo #5

Tape indicates the areas that require the most trim work to match the lower panels.

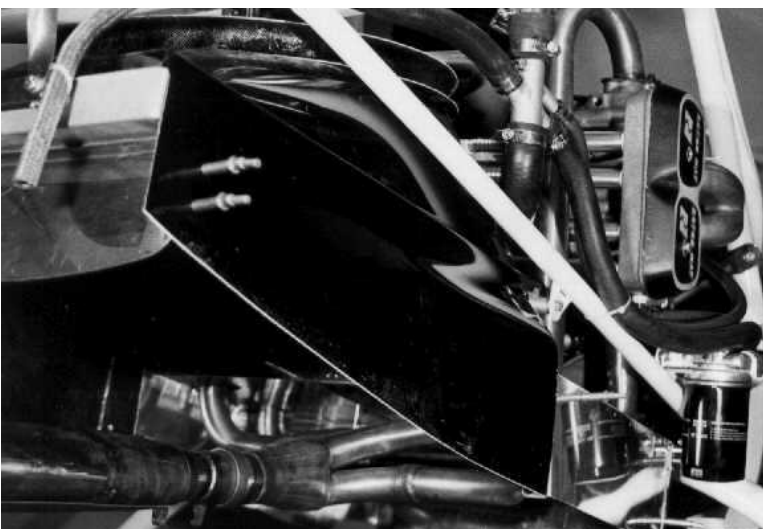


Photo #6

View of trimmed and fitted heat shield and shroud.
(The radiator rear shield is shown held by clecos.)

Photo #7

Make and install the heat shields that fit between the top of the exhaust pipes and the fuel tanks. (See template E24-1.)



Photo #8

Fabricate the muffler straps as shown on print E25-2000. Use rubber straps between the upper and lower steel straps. Bolt the upper straps to the back of the radiator.



Photo #9

Install the bolts, springs and nuts on the exhaust swivel. Secure the nuts with cotter pins.

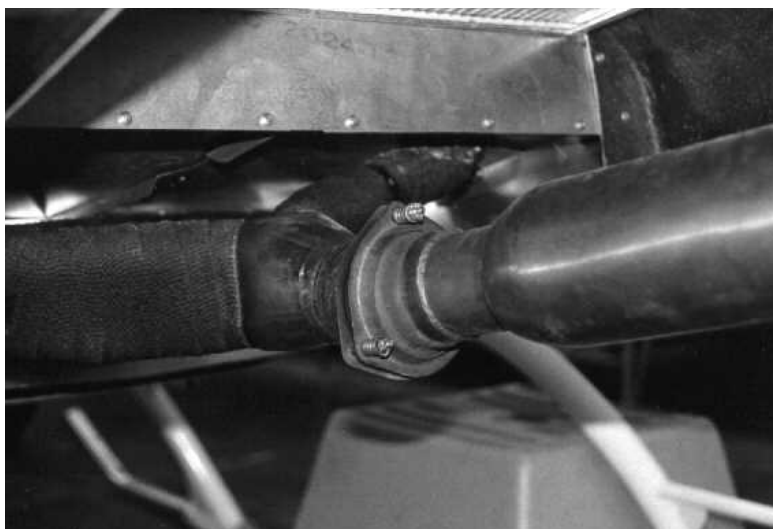




Photo #10

Trim the lower body panels for clearance around the muffler straps.