

SECTION/OPERATION

17

EXHAUST SYSTEM

<u>COMPONENT</u>	<u>PROCEDURE</u>	<u>PRINT #</u>	<u>TEMPLATE</u>
EXHAUST SYSTEM	Exhaust heat wraps Attach exhaust system to engine Reducer and exhaust knuckle Weld spring tabs Install muffler	E25-2000	

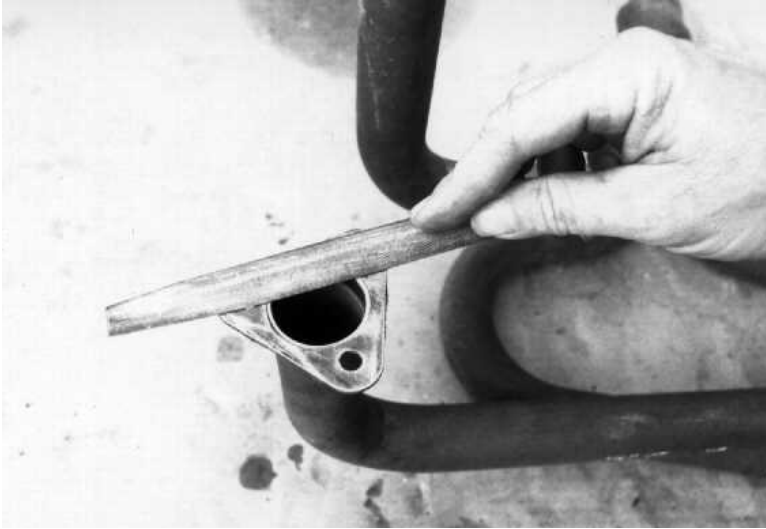
NOTES

EXHAUST SYSTEM: Check body clearance to muffler.
Drill header bolts for safety wire.

ROTORWAY

TOOLS REQUIRED FOR OPERATION 17:

Allen wrench 1/4"	
Drill bits of the following sizes:	1/8"
	3/16"
Flat file	
Grinder	
Hand drill (air or electric)	
Oil can	
Pliers	
Ratchet with sockets of the following sizes:	5/16"
	3/8"
	7/16"
	1/2"
Welding equipment	
Wrenches of the following sizes:	5/16"
	3/8"
	7/16"
	1/2"



Before installing the exhaust pipes and heat shielding, prime the oil pump. (Use an oil can to fill it with oil.)

Photo #1

Deburr and inspect the end of the exhaust pipes. File the triangle flanges flat before mounting the headers to the engine.



Photo #2

Soak the heat wrap with water. Starting at the bottom, begin wrapping tightly, overlapping 1/2". After reaching the top, go back down using the same technique. This will give a double wrap above the aluminum heat shield. Wherever the pipes are next to each other, wrap them together as shown.



Photo #3

At each end of the wrap, use a clamp to hold the wrap in place. Additional clamps may be used where needed to secure the wrap.

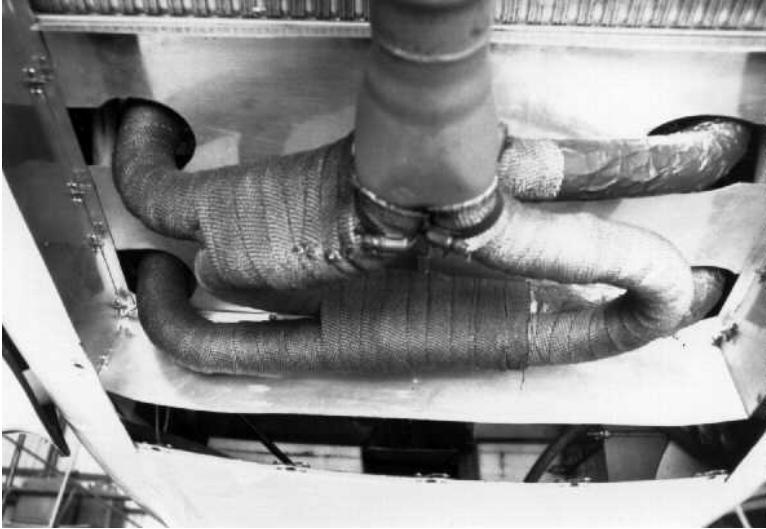


Photo #4

End of the pipes at the collector.

Note: After the heat wrap is dry, spray it with the high heat coating paint.

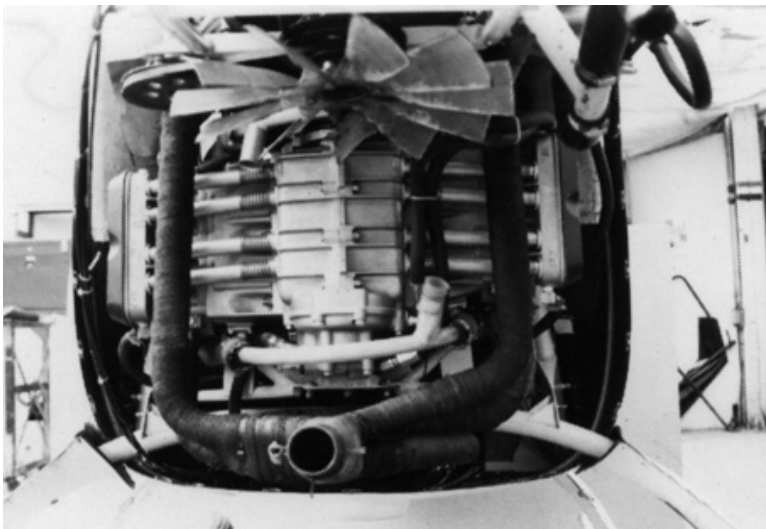


Photo #5

Attach the exhaust system to the engine as shown, using gaskets at the flanges. Drill the bolt heads for safety wire before installation. Torque bolts to 10 ft.lbs. on final assembly, then safety wire the bolts.



Photo #6

The exhaust pipe reducer must be fitted in the knuckle and the muffler.



Photo #7

Grind a 45 degree chamfer on the inside diameter of the exhaust pipe reducer that goes into the knuckle as shown.

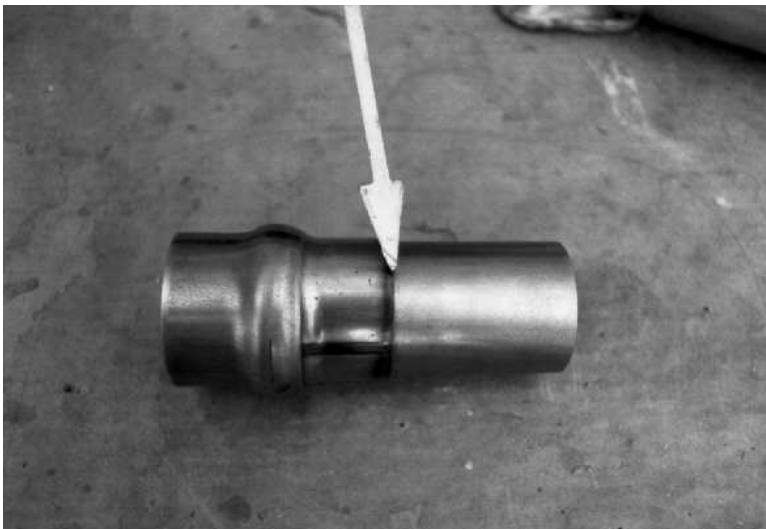


Photo #8

Install the exhaust pipe reducer into the knuckle as far as it will go and still have the sharp edge against the side wall of the knuckle. The outside of the reducer may need to be filed or sanded to fit into the knuckle and the muffler. Weld the reducer to the knuckle as indicated by the arrow.



Photo #9

File the weld seam on the muffler pipe.



Photo #10

Slide the exhaust pipe reducer into the muffler.

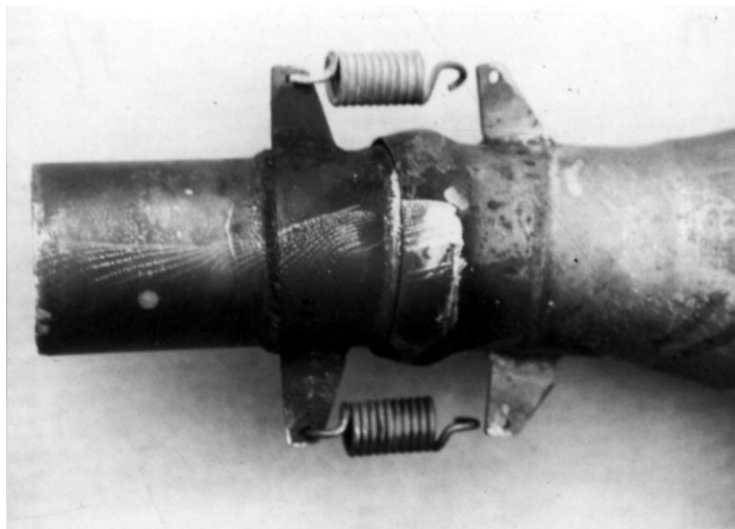


Photo #11

Weld two tabs on each side of the knuckle for the springs that hold them together as shown. Also weld another tab on the knuckle at 90° to the other 4 and one to the muffler to hold these two parts together - see print for clarity.

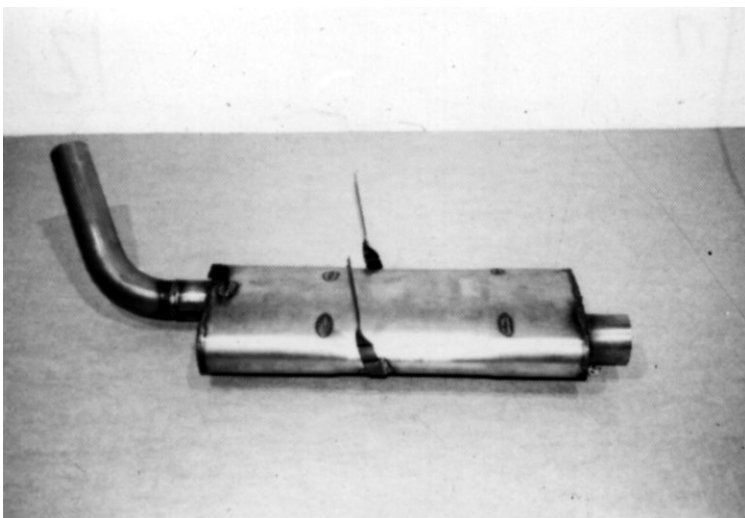


Photo #12

Weld a strap around the muffler as shown. This is to attach it to the radiator rear heat shield, which will be fitted in section 18 after the cooling system has been installed. Cut and weld the tail pipe to the muffler; it should point up and away from the tail boom.

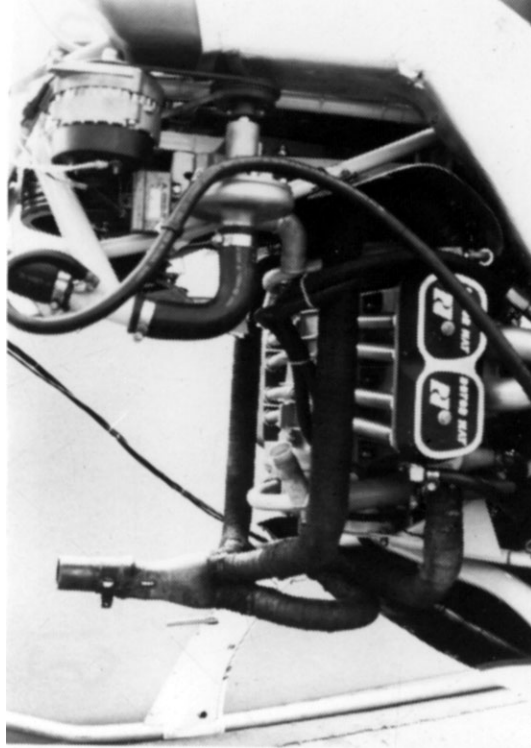


Photo #13

View from the passenger side.
(Ignore the fuel tanks, these
will be fitted in section 20.)

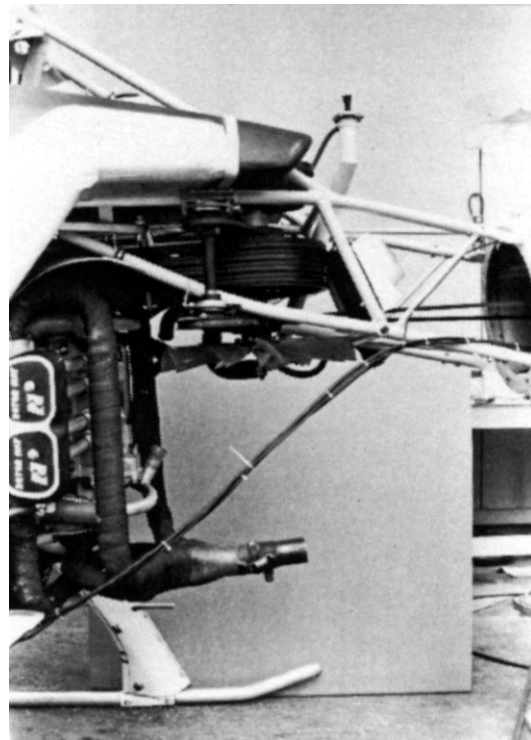


Photo #14

View from the pilot's side.