

SECTION/OPERATION

14

MAIN ACCESSORY BELTS

<u>COMPONENT</u>	<u>PROCEDURE</u>	<u>PRINT #</u>	<u>TEMPLATE</u>
FAN DRIVE COUNTERSHAFT (E31-2000)	Install	E31-2000	
WATER PUMP (E29-2000)	Install	E31-2000	
ALTERNATOR (E42-2000)	Install	E31-2000	
VOLTAGE REGULATOR	Install	E31-2000	

NOTES

FAN DRIVE
COUNTERSHAFT: Tension fan drive belts. Check pulleys for alignment.

WATER PUMP AND
ALTERNATOR: Hold alignment between the alternator and water pump pulleys.

ROTORWAY

TOOLS REQUIRED FOR OPERATION 14:

Allen wrench	
Band saw or hacksaw	
Drift punch	
Drill bits of the following sizes:	3/16"
	1/4"
	5/16"
Letter "D"	
Hammer	
Hand drill (air or electric)	
Ratchet with sockets of the following sizes:	3/8"
	7/16"
	1/2"
Screwdriver	
Straight edge	
Welding equipment	
Wrenches of the following sizes:	3/8"
	7/16"
	1/2"

FAN DRIVE COUNTERSHAFT

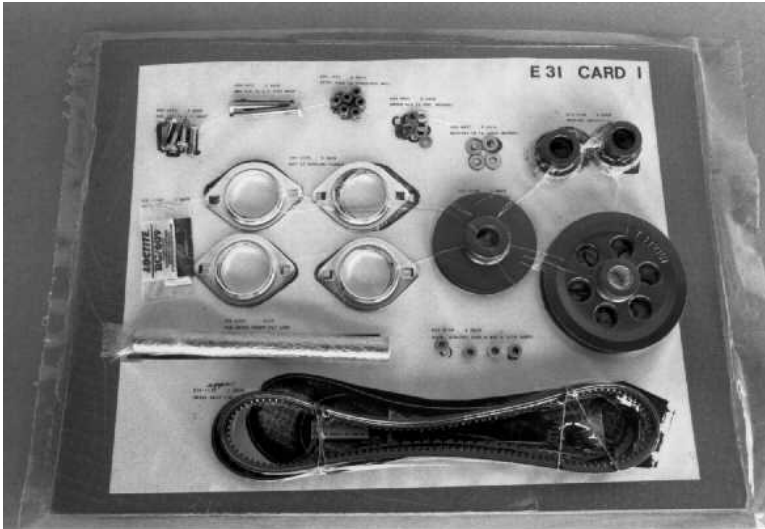


Photo #1

Parts as received for the fan drive countershaft. Refer to print E31-2000.



Photo #2

Install the pulleys and bearings on the shaft. The large pulley should be even with the end of the shaft. Place the small pulley on the shaft at the correct distance from the large pulley.



Photo #3

Using a letter "D" drill bit, drill the holes for the bolts that hold the pulleys to the shaft. Then install the bolts. This must be a tight fit.



Photo #4

Mount the assembly on the airframe brackets and install the belts. The assembly may be moved up or down in the bearings for best alignment.



Photo #5

On final assembly, loctite both pulleys and bearings to the shaft. Set the lock rings with a hammer and punch.

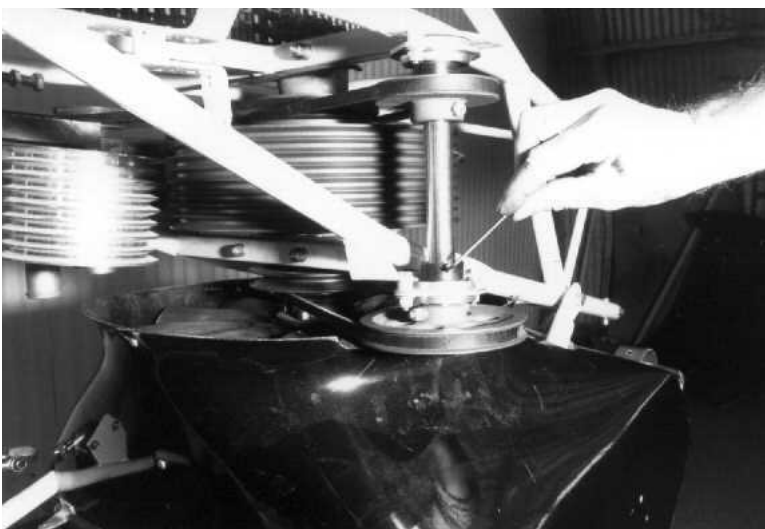


Photo #6

Tighten the set screws on both lock rings.



Photo #7

Another view of the assembled fan drive. Make sure the belt 3VX-335 is on the top pulley.

WATER PUMP

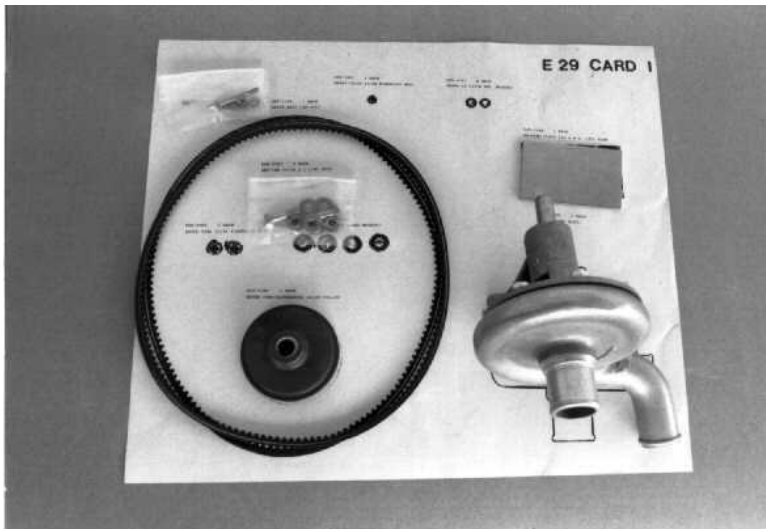


Photo #8

Use print E31-2000 when constructing this assembly. Parts as received from RotorWay International for the water pump.

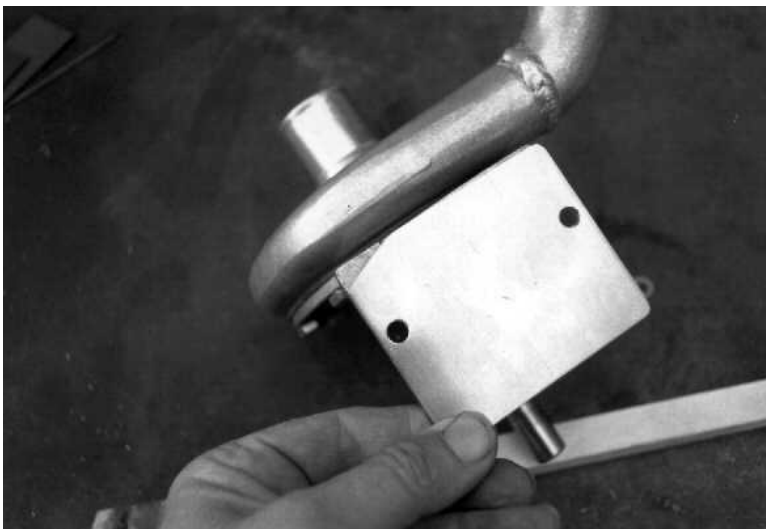


Photo #9

Lay out and drill the 5/16" holes in the backing plate. Cut off the corner if necessary to clear the airframe tube when the water pump is at the end of its travel.



Photo #10

Bolt the water pump on the airframe and position the pulley on the shaft for the correct belt alignment. Do not drive the pulley on shaft with a hammer as this will damage the seal.

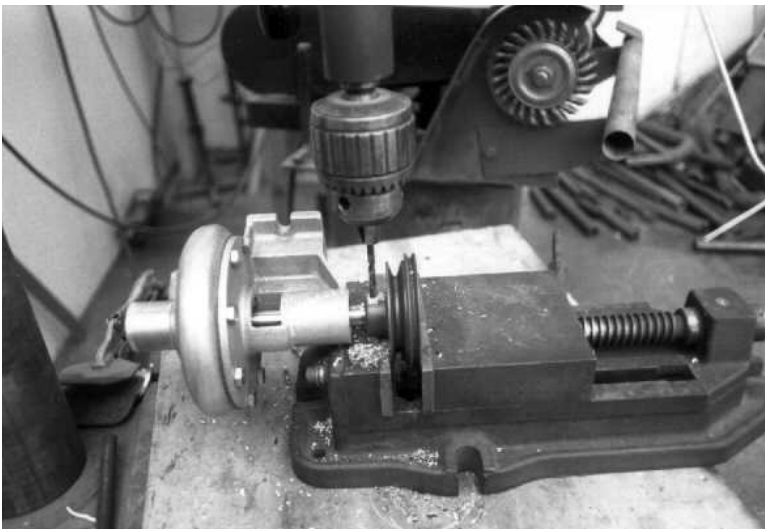


Photo #11

Remove the water pump and drill the 3/16" hole through the pulley and shaft.

ALTERNATOR

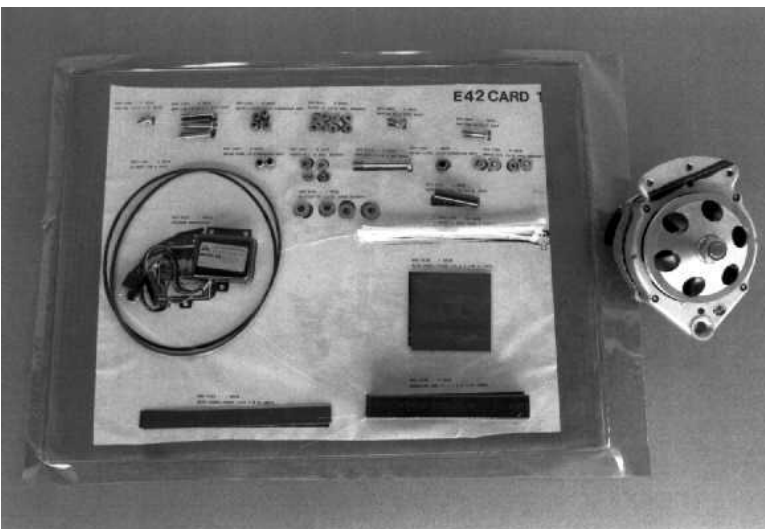


Photo #12

Use Print E31-2000 when constructing this assembly. Parts as received from RotorWay International for the alternator.

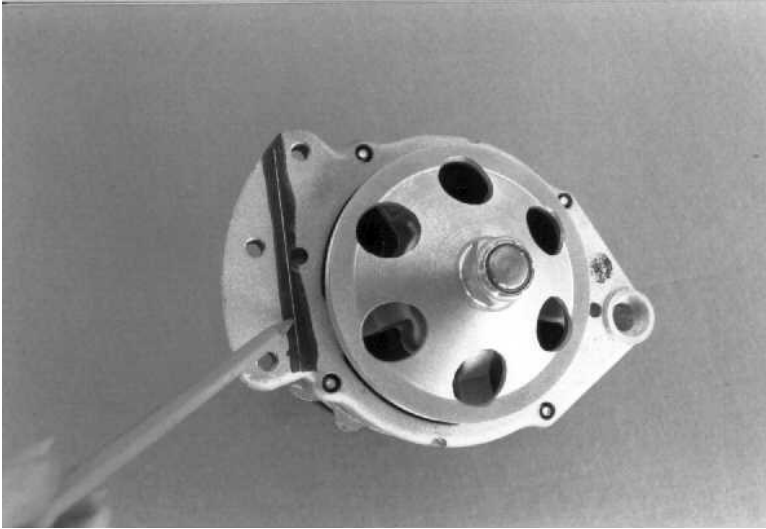


Photo #13

Cut off the excess on the scribe line to provide clearance when the body is installed.



Photo #14

Excess removed.

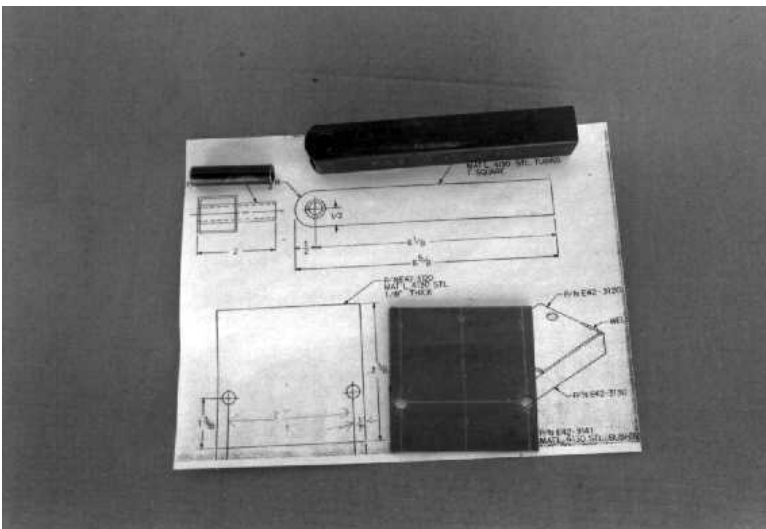


Photo #15

Lay out and drill the holes to the dimensions on the print.



Photo #16

The mounting arm completed.



Photo #17

The mounting arm detailed and painted.

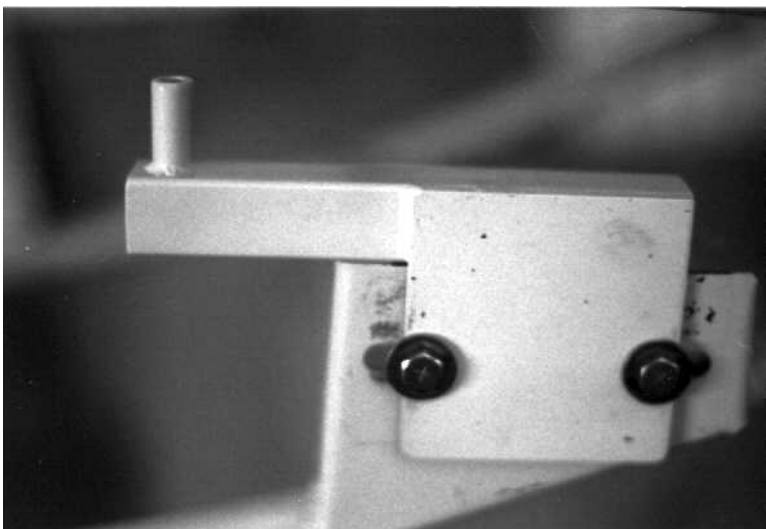


Photo #18

The mounting arm bolted to the water pump bracket.

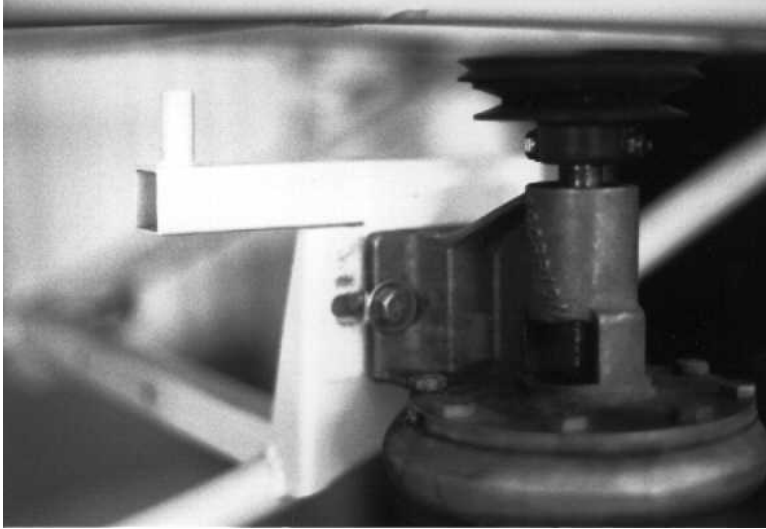


Photo #19

The mounting arm and water pump mounted to the water pump bracket.

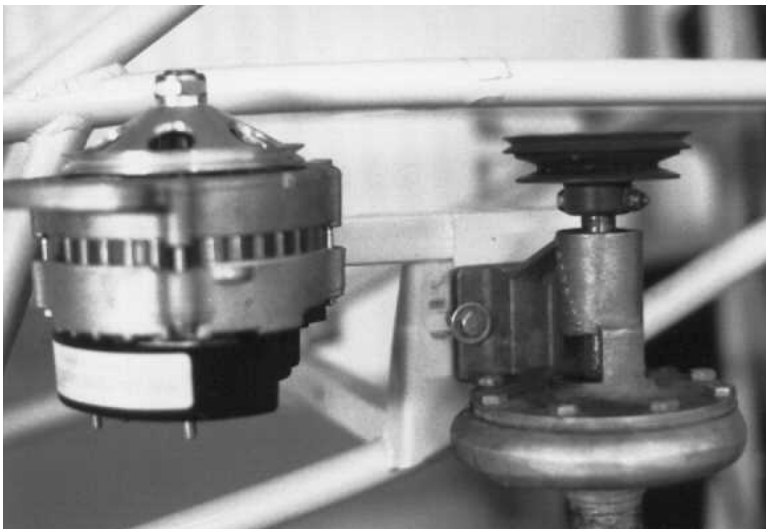


Photo #20

The alternator sitting on the mounting arm.

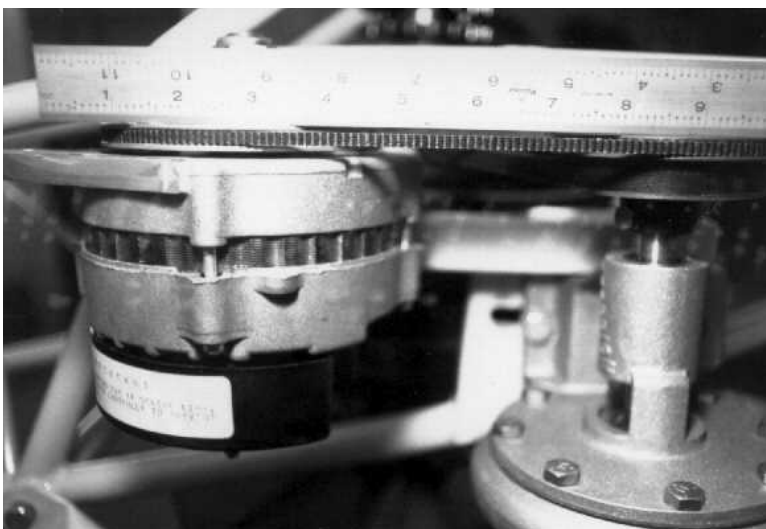


Photo #21

Use a straight edge and shim the alternator to achieve the best alignment of the pulleys. The alignment should be as near perfect as possible.

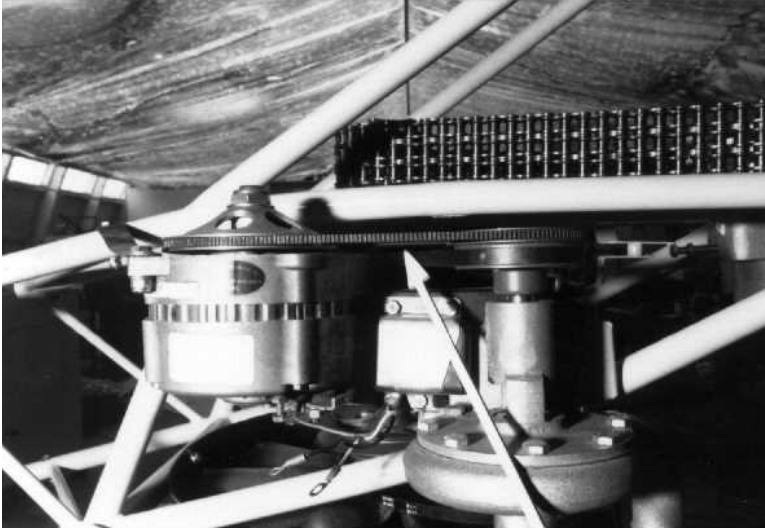


Photo #22

Check to make sure there is clearance between the water pump and alternator belts.

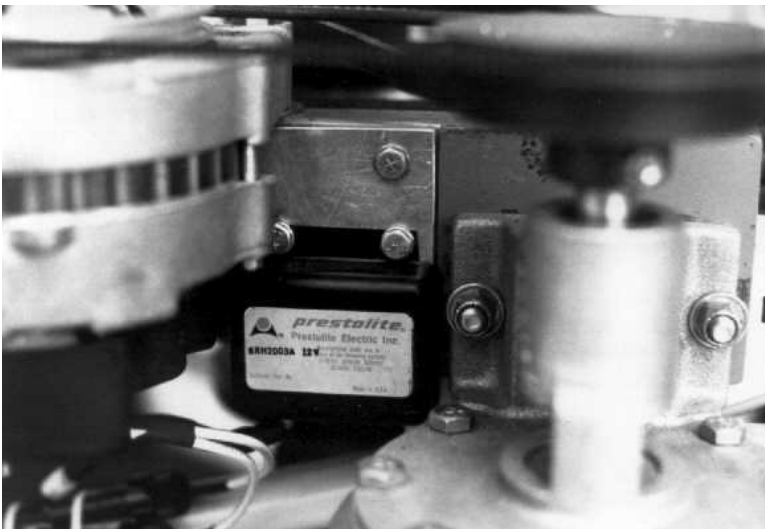


Photo #23

Mount the voltage regulator on the alternator mounting arm.



Photo #24

Make the belt adjusting strap and bolt it into place. The belt should be snug enough so that you are just able to turn the alternator pulley by hand.



Photo #25

Connect the wires between the voltage regulator and the alternator.



Photo #26

View of the water pump and the alternator installed.