CABIN COMFORT



<u>Photo #72</u>

Cabin comfort parts as received from RotorWay International.



<u>Photo #73</u>

Use sandpaper to smooth the inside of the three way collector inlets where the two butterflies will be installed. (The inlets are directly across from each other. The outlet is the hole that is 90 degrees from the two inlets.)



<u>Photo #74</u>

To layout the butterflies, hold the three way collector on the aluminum and trace the outside diameter.



<u>Photo #75</u>

Cut out the butterflies and fit them into the openings.



<u>Photo #76</u>

Bend the butterfly shafts 90 degrees, 3-1/4" from one end. The shafts may be heated to make bending easier.



<u>Photo #77</u>

Measure 1" from each end of the collector and drill a 1/4" hole in each location for the butterfly shafts. The holes must be parallel to the 90 degree outlet hole (see photo #79).



<u>Photo #78</u>

For proper open and closed location of the butterfly, install the shaft in the hole and rotate the rod until there is 1/2" between the rod and the outlet collector hole as shown. Hold the shaft at this location and make a mark on the shaft inside the collector. This will indicate an open position for the butterfly when installed.



<u>Photo #79</u>

Place a piece of tape on the shaft. Move the shaft to full open and full closed positions. This will verify that the butterflies will be mounted correctly before drilling the attachment holes.



<u>Photo #80</u>

Remove the shaft and drill two 1/8" holes, 3/4" from each side of the opening, for the butterfly.

Note: Use the previous marks to locate these holes at the proper angle. The butterfly must be in the open position when the arm is at the angle shown in photo #78.



<u>Photo #81</u>

Measure 3/4" from the edge of the butterfly and drill a 1/8" hole.



<u>Photo #82</u>

Install the shaft and butterfly in the three way collector with one cleco and mark each side of the shaft.



<u>Photo #83</u>

Remove the shaft and butterfly. Cleco them together, align the shaft with the marks and drill the second hole.



<u>Photo #84</u>

Install the butterflies in the collector and file them to fit if necessary.



<u>Photo #85</u>

Remove the shaft and measure 1-1/8" from the bend. With a #53 drill, drill a hole parallel to the butterfly shaft and cut off the excess shaft material. This hole is where the control cable will be attached.



<u>Photo #86</u>

Cleco the butterflies in place. Remove one cleco and install the pop rivet, then install the second pop rivet.



Photo #87

Final installation of the butterflies on the shafts.



Photo #88

Locate and mount the collector to the floor pan in front of the passenger foot pedals. Two nut plates are placed on the collector for mounting to the floor pan.



Photo #89

Place the cabin fresh air scoop in the tub so it is centered and 20-1/2" from the front edge of the tub (just in front of the engine fresh air intake scoop). Use the scoop as a pattern to cut the hole in the tub. Attach the scoop to the tub with pop rivets and silicone. (This view is of the inside of the tub.)



<u>Photo #90</u>

A view of the fresh air scoop from the outside of the tub. Note that the shape and size of the opening are the same as the scoop design.



<u>Photo #91</u>

Use masking tape to lay out the cabin air inlet slots. There will be four slots, two on each side. Find the center of the pod and measure 4" to the left and 4" to the right. This will be the starting point of the slots. Each slot will be 3-1/2" long and 3/8" wide, with 3-1/2" between. The front edge of all slots will be 3/4" from the windscreen edge of the pod.



Photo #92

Drill a 3/8" hole at each end of the slots.



Photo #93

After the holes are drilled, use a cutting wheel on a small grinder to cut the slot openings between the holes.



<u>Photo #94</u>

Remove the tape and deburr the slots with a file and sandpaper.



<u>Photo #95</u>

Use fiberglass mat and resin to bond the plenum (curved fiberglass part) to the underside of the floor pan/ instrument pod. Hold it in place with clamps while the bond is curing. Be sure that the plenum is correctly aligned under the slots.

Note: Paint the exterior of the plenum black prior to final assembly. This will make it less visible from above.



<u>Photo #96</u>

Mount the push/pull cables on the center console equal distances from each side of the instrument panel opening. Route them so that there is no interference with any moving parts.



<u>Photo #97</u>

Connect the hoses and control cables to the three way collector. Use care not to damage the collector by over tightening the clamps.



<u>Photo #98</u>

Using template E30-2, cut out the radiator collector. If you do not have a sheetmetal brake, you can use a vise and wood as shown to bend the part.



<u>Photo #99</u>

Another view of bending the collector in a vise.



<u>Photo #100</u>

Bend the sides of the radiator collector first.



Photo #101 Shape and bend the end.



<u>Photo #102</u>

Drill and install the pop rivets to hold the collector's shape. Install four 8-32 nut plates in each corner as shown to fasten the collector to the fiberglass radiator fan shroud.

Note: The radiator collector cannot be fitted until after the cooling system has been installed, though it can be fabricated here.



<u>Photo #103</u>

Use the template to cut out and shape the collector collar, bending every other ear at a 90 degree angle as shown.



<u>Photo #104</u>

Insert the collar in the hole of the radiator collector and bend the other ears 90 degrees on the inside of the collector. Trim any points of the ears that extend beyond the edges.



<u>Photo #105</u>

Glue the weather stripping to the radiator collector where it contacts the oil cooler.



<u>Photo #106</u>

Make a cardboard template of the end of the radiator collector, then hold the collector under the oil cooler on the passenger side as far forward as possible.



<u>Photo #107</u>

Position the template on the outside of the shroud and scribe the holes to be drilled and cut. Note the space from the edge of the fan shroud to help locate the template on the outside of the shroud.



<u>Photo #108</u>

Mount the radiator collector into the opening and secure it with the 8-32 screws. Secure the rear of the collector by safety wiring it to the oil cooler.

DOORS



<u>Photo #109</u>

Parts as received from RotorWay International for the doors. Use print E41-2000 and templates E41-1 and E41-2 when constructing this assembly.



<u>Photo #110</u>

Cut several pieces of 3/16" thick cardboard into 1" wide strips and tape them to the inside openings of the doors.



<u>Photo #111</u>

Overview of cardboard in the door opening. The cardboard will provide the clearance needed between the door stiffener and the body opening when opening and closing the door.



<u>Photo #112</u>

Fit the door stiffener tight against the cardboard. It may be necessary to cut the stiffener to make it fit.



<u>Photo #113</u>

If necessary, remove a section of the stiffener so that when it is butted together there is a tight fit between the stiffener and cardboard. Use masking tape to hold in place.



<u>Photo #114</u>

Hold the door against the stiffener so that it extends beyond the stiffener all the way around the door. Use masking tape to hold it in place.



<u>Photo #115</u>

Drill a 1/8" hole through the plexiglass door and stiffener with a hand drill, and install a cleco.



<u>Photo #116</u>

Place a thin piece of wood or metal between the stiffener and the body panel when drilling to prevent damage to the body panel.