Monarch Premium Caps By: HARTWIG AIRCRAFT FUEL CELL REPAIR

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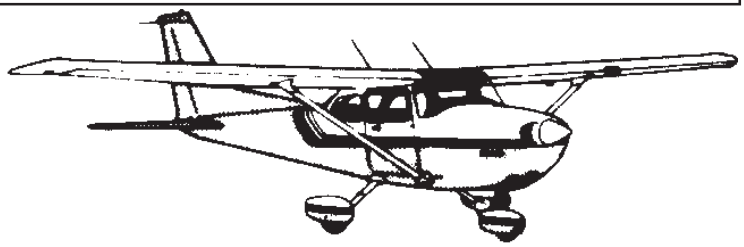
DRAWING NO. FC-100
For Bladder and Monarch Tanks

Fuel Cap & Inlet Installation



DATE:	10-25-87
REVISION:	(A)
DATE:	8-22-2000
REVISION:	(B)
Drawn By:	*G. DuBuhr*
Checked By:	*G. DuBuhr*
Approved By:	*J. B. Dwerlkotte*

REVISIONS

REVISION	DATE	DESCRIPTION
*(A)		
* CFC-008-2	11-7-88	Installation Drawing for raised neck cap and assembly
* CFC-011	11-7-88	Inlet plate with raised neck
* 875-2453	11-7-88	Stainless steel umbrella cap
* MS29513-140	11-7-88	O-ring Seal
* CFC-013	11-7-88	Assembly
* CFC-017	11-7-88	Fuel inlet neck

* Add to drawing list FC-1

REVISION		
(B)		
CFC-008-1	4-3-89	Discontinued 8 hole plate Remove all ref.

DRAWING NO.	REV.	TITLE
FC-100		Installation, fuel inlet and cap
FC-001	(A)	Aircraft cap & fuel inlet assembly
FC-002		Cap
FC-004	(A)	Valve Seat
FC-005		Flapper Valve Assembly
FC-006		Inlet Plate Cessna tank-16 hole
FC-007		Valve Spring
FC-008		Valve Seal
CFC-008-2		Installation - 16 hole

FABRICATION DWGS:

182-002	Inlet Gasket
CFC-011	Inlet Plate - 16 hole
875-2453	Cap
CFC-013	Assembly
CFC-017	Fuel Inlet Neck

Purchased Parts (vendors)

MS29513-140	“O” Ring, Federal Mogul, Downy, CA 90241

EFFECTIVITY LIST:

Airplane	Dash Number
180, 180A 182, 182A, 182B	-7
180B, C, D, E, F, G, H, J, K 182C, D, E, F, G, H J, K, L, M, N, P, Q through sn 182-66590, R82 sn R182-00002 through R182-00583	-8
185A, B, C , D, E, A185E, A185F	-8
188A, B, A188A, B, T188C	-8
206, P206, A, B, C, D, E, U206, A, B, C, D, E, F, G, TP206A, B, C, D, E, TU206A, B, C, D, E, F, G	-8
207, 207A, T207, T207A	-8
210, A, B, C, D, E, F, T210F, 210-5 (205), 210-5A	-8

PARTS LIST:

Part No.	Description	Used On Kit -7	Used On Kit -8
FC-001-1	Installation Dwg: Fuel Inlet and Cap	1 Req'd	
FC-001-2	Installation Dwg: Fuel Inlet and Cap		1 Req'd
FC-002	Cap (screw on)	2 Req'd	2 Req'd
182-002-1	Gasket	2 Req'd	2 Req'd
MS-24693C-293	Screw	As Req'd	As Req'd

FUEL CAP AND INLET INSTALLATION

The Monarch FC-006 and FC-006-7 Premium Fuel Caps can be installed on airplanes equipped with either bladder fuel cells or Monarch rigid plastic fuel tanks. If the Monarch tanks are installed at the same time as the Monarch Premium Fuel Caps, the tank installation manual should be reviewed before cap installation. For installation on planes equipped with bladder fuel cells, the nutlplate molded into the bladder needs to be held in position while installing the fuel cap plates with *pull tools* explained below. The following procedures are to be done on both wings and if the optional sealant is used, allow 2 hours or less for final cap plate installation before sealant cures as outlined in the Chemseal Technical Data Sheet included in kit. Retain or reidentify all placards and markings at the fuel inlet location.

1A. Old fuel inlet plate removal, -8 installation (8 perimeter hole plates)

a. Drain all fuel from both tanks as per the Cessna Service Manual. To reduce risk of fuel vapor ignition, the airplane shall be grounded and air powered tools used. The use of electrical powered tools is not approved.

b. Remove the existing fuel inlet plate from airplane tank by removing the screws in both the inner and outer hole patterns.

c. Remove the old gaskets and clean the mating surface of recessed inlet plate shoulder of the wing opening to prepare it as described in Chemseal Technical Data Sheet included in kit. Do not let old sealant or paint enter into fuel tank. Use a compressed air vacuum if necessary to remove any contaminants in the fuel tanks. Do not use a shop vacuum.

1B. Old fuel inlet plate removal, -7 installation (7 perimeter holes)

a. Drain all fuel from both tanks as per the Cessna Service Manual. To reduce risk of fuel vapor ignition, the airplane shall be grounded and air powered tools used. The use of electrical powered tools is not approved.

b. Remove all of Cessna inlet assembly and drain tube as shown in Figure 2.

c. Remove the old gaskets and clean the mating surface of recessed inlet plate shoulder of the wing opening to prepare it as described in Chemseal Technical Data Sheet included in kit. Do not let old sealant or paint enter into fuel tank. Use a compressed air vacuum if necessary to remove any contaminants in the fuel tanks. Do not use a shop vacuum.

2. Monarch fuel inlet plate installation

a. Verify fit of cap plates: rotate plate until hinge of flapper valve is located forward and place on the wing opening. Verify that all perimeter holes line up with existing fasteners in the wing. Remove cap plate.

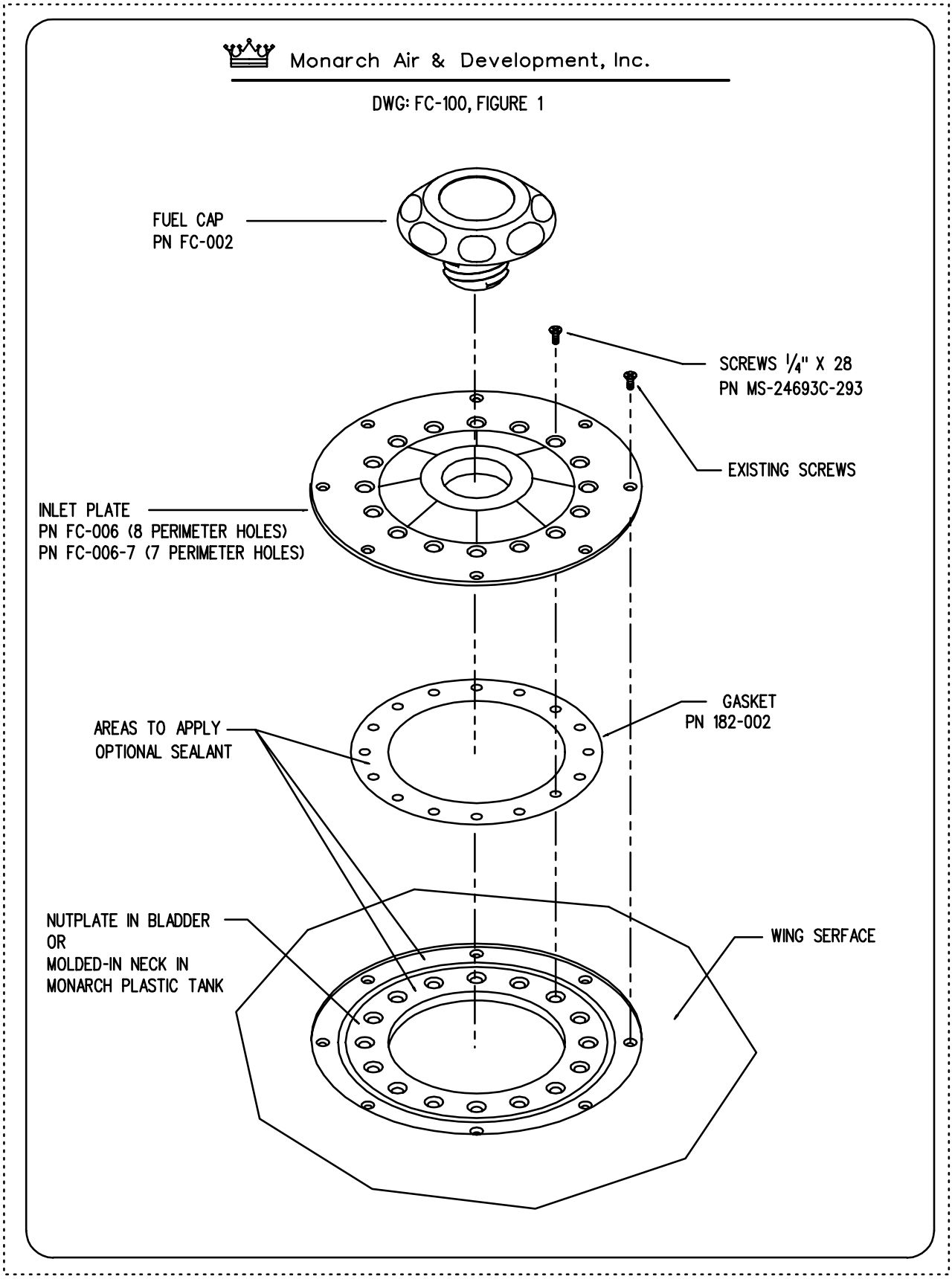
b. Optional sealant: using Sealpak CS-3330 sealant apply a thin, ($^{1}/_{8}^{th}$ inch) bead on the tank surface (bladder nutplate or monarch molded-in neck). Apply using a figure eight pattern around the existing fasteners (holes). Place the gasket in place, then apply a bead around the inner edge of the gasket and smooth with your finger while holding the gasket in place. Repeat the figure eight pattern around the holes on top of the gasket. Then apply a thin, ($^{1}/_{8}^{th}$ inch) bead around the recessed inlet plate shoulder of the wing opening.

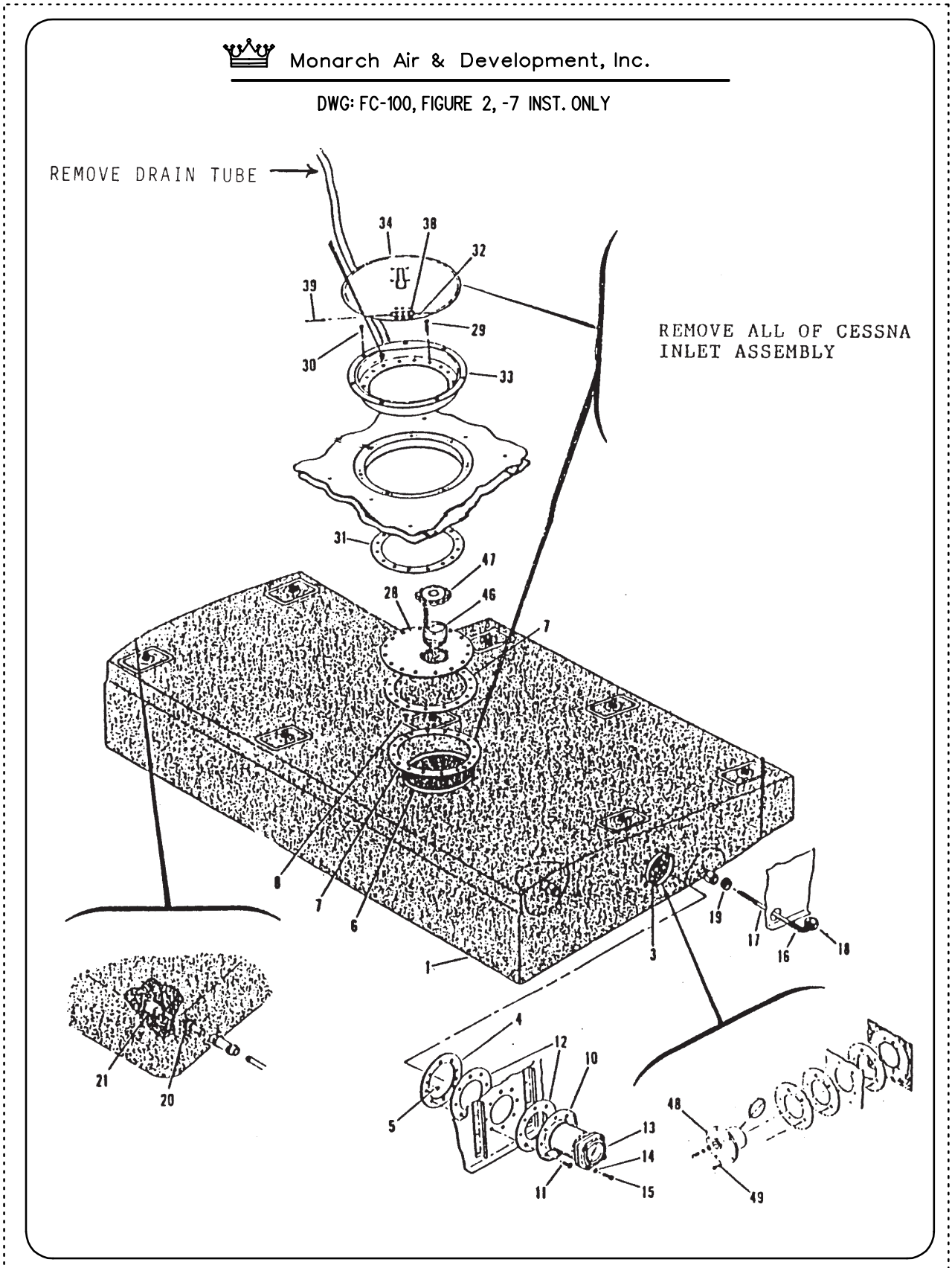
c. For bladder tank installation only: cut the heads off two ¼-28 by 3 inch bolts to use for *pull tools*. Screw in the *pull tools* into the bladder cell nutplate on two opposing positions. Place cap plate in position over the *pull tools.* Pull the tank up into position and start both sets of cap plate screws. (both inner and outer hole patterns). Torque to specifications in Cessna Service Manual.

d. Remove any residual sealant from around seams. Allow proper time for sealant to cure as listed in Chemseal Technical Data Sheet included in kit.

e. Retain or reidentify all placards and markings at the fuel inlet location.

f. There is no change to the weight and balance as the difference is negligible.


Monarch Air & Development, Inc.
DWG: FC-100, FIGURE 1
FUEL CAP
PN FC-002
SCREWS 1/4" X 28
PN MS-24693C-293
EXISTING SCREWS
INLET PLATE
PN FC-006 (8 PERIMETER HOLES)
PN FC-006-7 (7 PERIMETER HOLES)
GASKET
PN 182-002
AREAS TO APPLY
OPTIONAL SEALANT
NUTPLATE IN BLADDER
OR
MOLDED-IN NECK IN
MONARCH PLASTIC TANK
WING SERFACE


Monarch Air & Development, Inc.
DWG: FC-100, FIGURE 2, -7 INST. ONLY
REMOVE DRAIN TUBE
REMOVE ALL OF CESSNA
INLET ASSEMBLY
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