TO: ALL HOLDERS OF PILOT NO. 1 WINDSHIELD ASSEMBLY COMPONENT MAINTENANCE MANUAL 56-11-02

REVISION NO. 10 DATED JUL 01/05

HIGHLIGHTS

All data formerly in manual 56-11-01 is included in this manual 56-11-02. Pages which have been added or revised are outlined below together with the highlights of the revision. Remove and insert the affected pages as listed and enter Revision No. and date on the Record of Revision Sheet.

CHAPTER/SECTION AND PAGE NO.	DESCRIPTION OF CHANGE
TR & SB RECORD 1	Added 757 PRR 54530-265S to the list, for the 757 applicability of the windshield assemblies 141T4801-57 thru -60 with changed window heat power terminals we added earlier per PRR B12901-56S.
DESCRIPTION & OPERATION 1	Added clarifications and updated callouts.
REPAIR-GEN 601 701	

COMPONENT
MAINTENANCE MANUAL

PILOT NO. 1 WINDSHIELD ASSEMBLY

PART NUMBERS 141T4800-13,-14,-49,-50
141T4801-1,-2,-19,-20,-49,
-50,-57 THRU -60

COMPONENT MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST

2770

BOEING
COMPONENT
MAINTENANCE MANUAL

REVISION RECORD

- Retain this record in front of manual. On receipt of revision, insert revised pages in the manual, and enter revision number, date inserted and initial.

REVISION NUMBER	REVISION DATE	DATE FILED	BY	REVISION NUMBER	REVISION DATE	DATE FILED	BY

COMPONENT
MAINTENANCE MANUAL

TEMPORARY REVISION AND SERVICE BULLETIN RECORD

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVE	DATE OF INCORPORATION INTO MANUAL
767-30-0020R1		PRR B10456 PRR N52272 PRR B12525 PRR B12901-56S PRR 54530-265S	JAN 10/81 OCT 10/84 JAN 01/94 MAR 01/95 NOV 01/04 JUL 01/05

PAGE	DATE	CODE
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TITLE PAGE		
1	NOV 01/04	01.1
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2	BLANK	
TR & SB RECORD		
*1	JUL 01/05	01.1
2	BLANK	
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*1	JUL 01/05	01
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1	JAN 01/94	01.1
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*1	JUL 01/05	01.1
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1010	NOV 01/04	01.1

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* = REVISED, ADDED OR DELETED

TABLE OF CONTENTS

INTRODUCTION

The instructions in this manual provide the information necessary to perform maintenance functions ranging from simple checks and replacement to complete shop-type repair.

This manual is divided into separate sections:

1. Title Page
2. Record of Revisions
3. Temporary Revision & Service Bulletin Record
4. List of Effective Pages
5. Table of Contents
6. Introduction
7. Procedures

Refer to the Table of Contents for the page location of applicable sections. An asterisked flagnote *[ ] in place of the page number indicates that no special instructions are provided since the function can be performed using standard industry practices.

The beginning of the REPAIR section includes a list of the separate repairs, a list of applicable standard Boeing practices, and an explanation of the True Position Dimensioning symbols used.

An explanation of the use of the Illustrated Parts List is provided in the Introduction to that section.

All weights and measurements used in the manual are in English units, unless otherwise stated. When metric equivalents are given they will be in parentheses following the English units.

Design changes, optional parts, configuration differences and Service Bulletin modifications create alternate part numbers. These are identified in the Illustrated Parts List (IPL) by adding an alphabetical character to the basic item number. The resulting item number is called an alpha-variant. Throughout the manual, IPL basic item number references also apply to alpha-variants unless otherwise indicated.

PILOT AND COPILOT NUMBER 1 WINDOW ASSEMBLY

DESCRIPTION AND OPERATION

1. Description and Operation

A. The number 1 window assembly is of laminated construction of three plies with plasticized, vinyl interlayers between the plies. The outer ply (face ply) is a thin sheet of tempered glass. Its inner surface is covered with a conductive coating, which is part of the anti-fogging and anti-icing system. The two interior plies are also tempered glass, and are each twice as thick as the face ply. Bus bars in the window adjacent to the conductive coating connect to power terminals near the edges of the pane. Two temperature control sensors (one is a spare) are also in the top of the window pane. The laminated glass and plastic panel is bolted between an aluminum retaining ring and fabric-reinforced-epoxy-resin edge member. A pre-molded moisture seal is bonded to the retaining ring, and a pre-molded pressure seal is bonded to the edge member.

2. Leading Particulars (approximate)

Length -- 48 inches
Width -- 33 inches
Thickness -- 2 inches
Weight -- 106 pounds

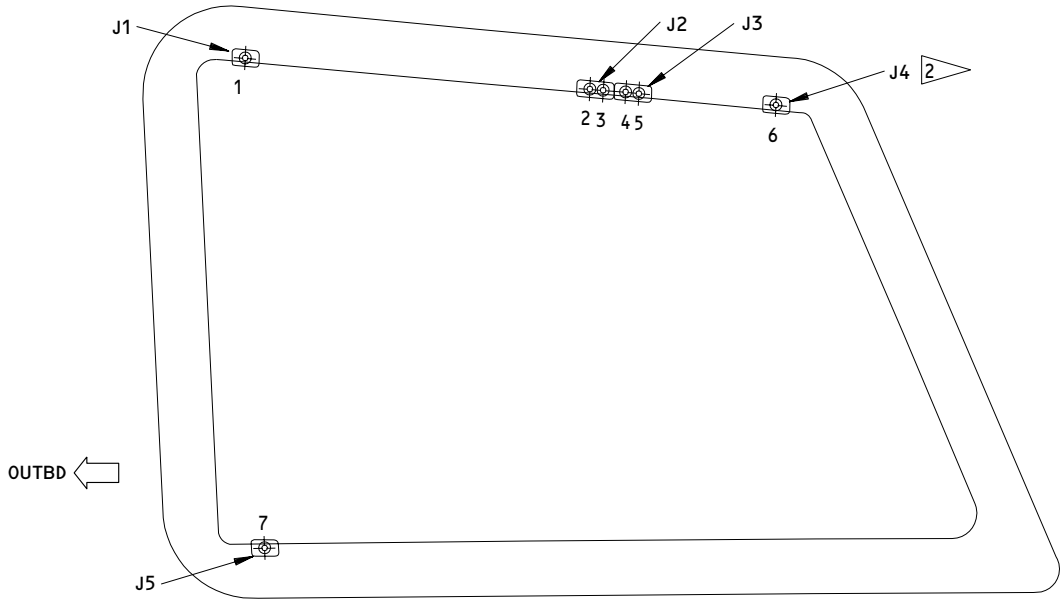
Verification:

Testing Jul 01/90

TESTING AND TROUBLE SHOOTING

1. Resistance Checks (1, 5)

A. Make checks of the bus-to-bus and sensor resistance at specified terminal locations as shown in Fig. 101.



TERMINAL	TERMINAL LOCATION	RESISTANCE (OHMS)	
		MIN	MAX
J1–J5 J4–J5	1–7 6–7	9.12	11.15
J2	2–3	1	1
J3	4–5	1	1

TABLE 1–1

J1, J4, J5: POWER TERMINALS
J2, J3: SENSOR TERMINALS

1 SEE TABLE 1–2 FOR RESISTANCE LIMITS
2 NOT ON 142T4801–57 THRU –60

No. 1 Window Resistance Values
Figure 101 (Sheet 1)

179948

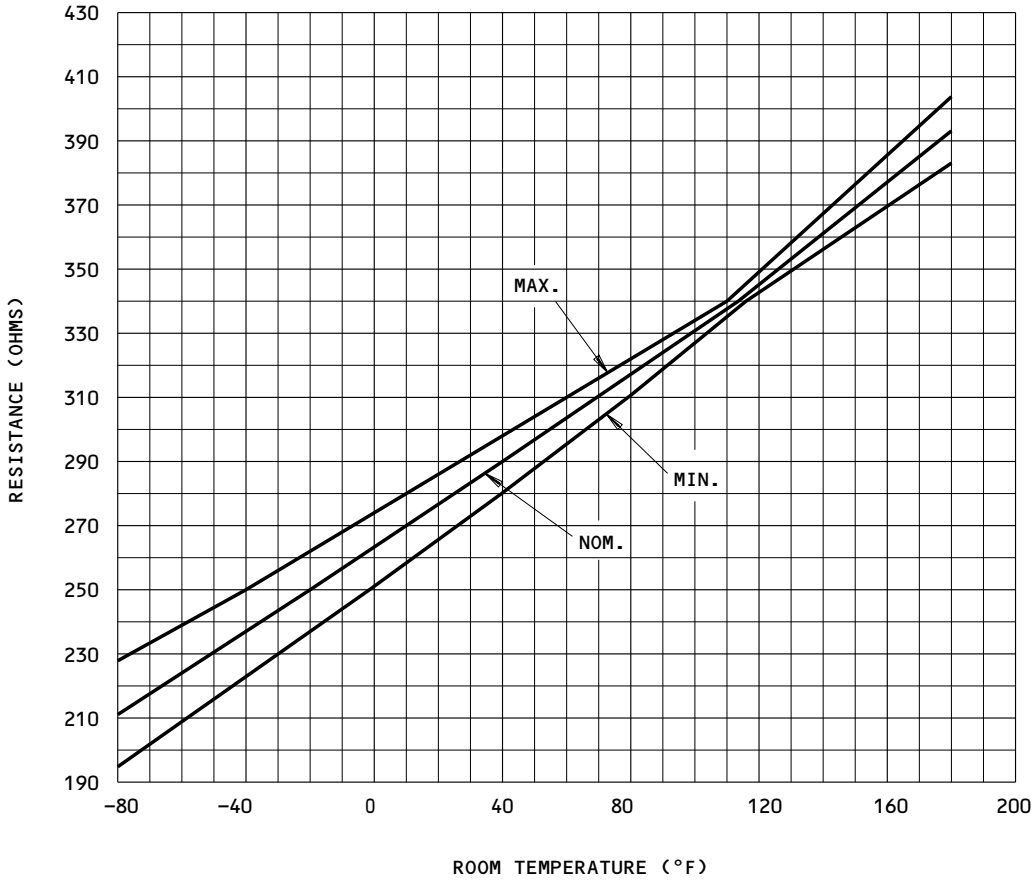


TABLE 1-2

NOTE: CHARACTERISTICS SHOWN EQUIVALENT
TO WESTINGHOUSE AVK 1160.

No. 1 Window Resistance Values
Figure 101 (Sheet 2)

118127

CLEANING

1. Materials

NOTE: Equivalent substitutes can be used.

A. Soap -- Castile, source optional

B. Solvent -- Aliphatic Naphtha TT-N-95 (SOPM 20-60-01)

2. Cleaning (IPL Fig. 1)

A. Clean all parts by standard industry practices and these steps.

B. Clean windowpanes (100) with lukewarm water and castile soap. Go over the window only with your bare hand to find and remove dirt that could scratch the surface. Wash the window with a clean, soft cloth. Dry with a clean, dry chamois.

C. Clean seals (35, 40, 75, 80, Fig. 1; 35, 40, Fig. 2) and retaining rings (45, 50, Fig. 1 and 2) with aliphatic naphtha applied with clean, oil-free absorbent materials. Wipe off the solvent before it dries, with a clean, oil and lint-free cloth. Clean again with clean solvent if necessary.

CHECK

1. Check all parts for obvious defects in accordance with standard industry practices.

2. Check pressure seal (75, 80, IPL Fig. 1; 70, 75, IPL Fig. 2) for gaps, voids or fraying.

3. Check moisture seal (35, 40, IPL Fig. 1 and 2) for cracks, erosion and lack of adhesion to retaining ring or signs of leakage.

   NOTE: Water in internal separators or small bubbles adjacent to separators indicate seal leakage.

4. Damage definitions for window panes (100 Fig. 1 and 2) are as follows:

   A. Crack: A fissure which has visible width when viewed parallel to the faces of the fissure. A crack may propagate at any angle to pane surface, depending on direction of the driving force. A crack will propagate from a stress riser such as a scratch.

   B. Scratch: The removal or displacement of material from the surface of a pane. The ratio of depth to width is usually quite small.

   C. Chips:

      (1) Spall (shell type) chips have circular or curved periphery with many fine hairlines or ridges that follow the outline of the outer edge, and degenerate toward the center or deepest point of chip (similar to a clamshell).

      (2) Vee-shaped chips have a sharp narrow "V" shape, and appear to propagate toward the interior of the pane.

   D. Delamination: A separation of a glass ply from a vinyl interlayer. Delamination is difficult to detect unless viewed at an angle with indirect light. When so viewed, delamination appears as a shiny, flat bubble.

5. Check window panel (100 Fig. 1 and 2) from cracks, scratches, chips, and delamination as follows:

   A. Cracks in glass plies -- not allowed.

      NOTE: Cracks in the outer vinyl interlayer (the ply between the middle glass ply and outer glass ply) are structurally acceptable. Replace window only if visibility is impaired.

B. Cracks in the inner vinyl interlayer (the ply between the middle glass ply and the outer glass ply) -- not allowed.

C. Scratches

(1) Outer glass ply -- allowed only if visibility is not impaired.

(2) Inner glass ply:

(a) Triplex windshield: The tempered glass inner ply is load bearing. Scratches may not exceed 0.002 inch in depth.

D. Chips in main glass plies -- not allowed. Chips in the outer (thinner) glass ply are allowed only if visibility is not impaired.

E. Delamination -- allowed only if visibility is not impaired.

NOTE: Care should be taken not to confuse a delamination with the parting medium edge. The parting medium is a clear plastic tape sandwiched within the vinyl interlayer and outer glass ply around the window periphery.

REPAIR - GENERAL

1. Content

A. Repair, refinish and replacement procedures are included in separate repair sections as follows:

P/N	NAME	REPAIR
141T4803	PRESSURE SEAL	1-1
141T4808	PRESSURE SEAL	1-1
141T4804	MOISTURE SEAL	2-1
141T4809	MOISTURE SEAL	2-1
- -	MISCELLANEOUS PARTS REFINISH	3-1
141T4800	WINDOW ASSEMBLY	4-1
141T4801	WINDOW ASSEMBLY	4-1

2. Standard Practices

A. Refer to the following standard practices as applicable, for details of procedures in individual repairs:

20-30-02 Stripping of Protective Finishes
20-30-03 General Cleaning Procedure
20-41-01 Decoding Table for Boeing Finish Codes
20-41-04 Application and Repair of Interior Decorative Finishes
20-43-01 Chromic Acid Anodizing
20-50-12 Application of Adhesives
20-60-01 Cleaning Materials
20-60-02 Finishing Materials
20-60-04 Miscellaneous Materials

3. Materials

NOTE: Equivalent substitutes can be used.

A. Adhesive -- RTV 77 (SOPM 20-60-04)

B. Adhesive -- Type 60 (SOPM 20-50-12)

C. Aliphatic Naphtha -- TT-N-95 (SOPM 20-60-01)

D. Decorative Finish -- BMS 10-55, flat water emulsion (SOPM 20-60-02)

E. Sealant (SOPM 20-60-04)

(1) Dow Corning 93-006-6 (Replaces BMS 5-54)

(2) PR 1425 B-1/2 or PR 1425 B-2

(3) Pro Seal 860, Class B

PRESSURE SEAL - REPAIR 1-1

141T4803-3, -4
141T4808-1, -2

NOTE: Refer to REPAIR - GENERAL for a list of applicable standard practices.

1. Pressure Seal Replacement (75, 80, IPL Fig. 1; 45, 50, IPL Fig. 2)

CAUTION: BE VERY CAREFUL WHEN YOU SCRAPE THE EDGE OF THE GLASS, BECAUSE IT WILL CHIP EASILY.

A. Remove the old pressure seal. Use a wood or plastic scraper if necessary.

B. Remove the old bonding adhesive from the edge member.

C. Bond a replacement pressure seal to the edge member. Use GE RTV 77 adhesive for 141T4803-series seals or use Type 60 (SOPM 20-50-12) for 141T4808-series seals.

MOISTURE SEAL - REPAIR 2-1

141T4804-1, -2
141T4809-1, -2

NOTE: Refer to REPAIR - GENERAL for a list of applicable standard practices.

1. Moisture Seal Repair (35, 40, IPL Fig. 1 and 2)

   A. Remove the damaged section of seal.

   B. Make a seal contour mold tool (Fig. 601) sufficiently wide to cover damaged section of seal.

      WARNING: BE CAREFUL WHEN YOU USE ALIPHATIC NAPHTHA BECAUSE IT IS FLAMMABLE.

   C. Clean the repair area with aliphatic naphtha. Use a clean cheesecloth to apply the naphtha. Wipe off the naphtha with clean cheesecloth before it dries.

   D. Mask the repair area (Fig. 602).

   E. Brush a thin layer of Dow Corning 93-006-6 sealant onto the faying surface.

   F. Install the molding tool on the edge member or retainer (55, 60; IPL Fig. 1 and 2) and attach it in position.

   G. Inject Dow Corning 93-006-6 sealant into the gap under the tool (Fig. 603).

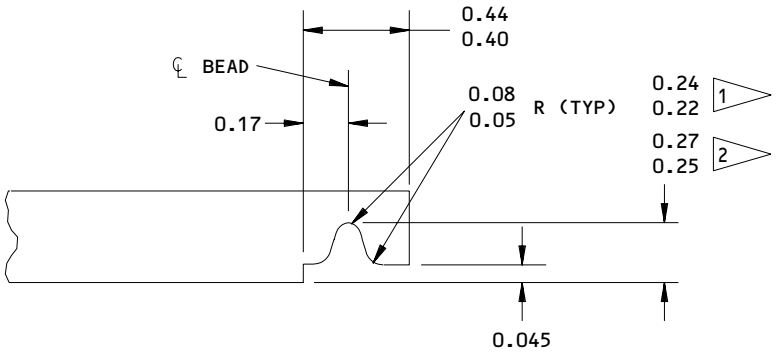
   CAUTION: TEMPERATURES ABOVE 120°F CAN DAMAGE THE WINDOW.

   H. After the sealant is cured to a rubbery state, 8 hours at 70°F or 4 hours at 120°F, remove the molding tool.

   I. If there are void areas, apply more sealant. Smooth over with fingers wet with naphtha, and then install the molding tool again.

   J. Remove the masking tape. Remove unwanted wet sealant with a cheesecloth wet with aliphatic naphtha.

   K. Let the sealant cure to the shop handling state as in step H.

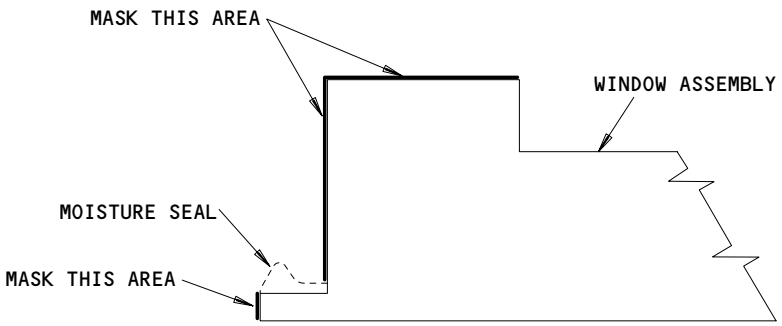


1 SEAL 141T4804
2 SEAL 141T4809

MATERIAL: TEFLON
ALL DIMENSIONS ARE IN INCHES

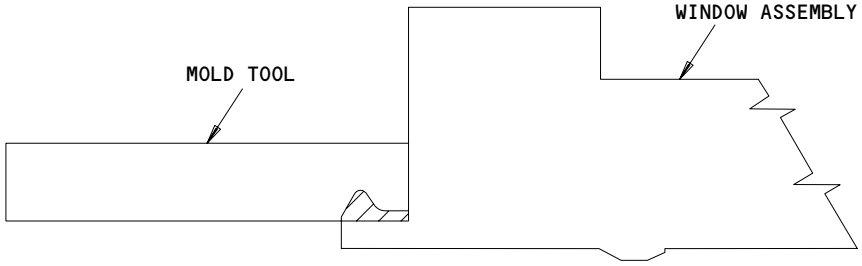
Mold Tool Details
Figure 601

D10687



Window Masking
Figure 602

D10684



Sealant Application
Figure 603

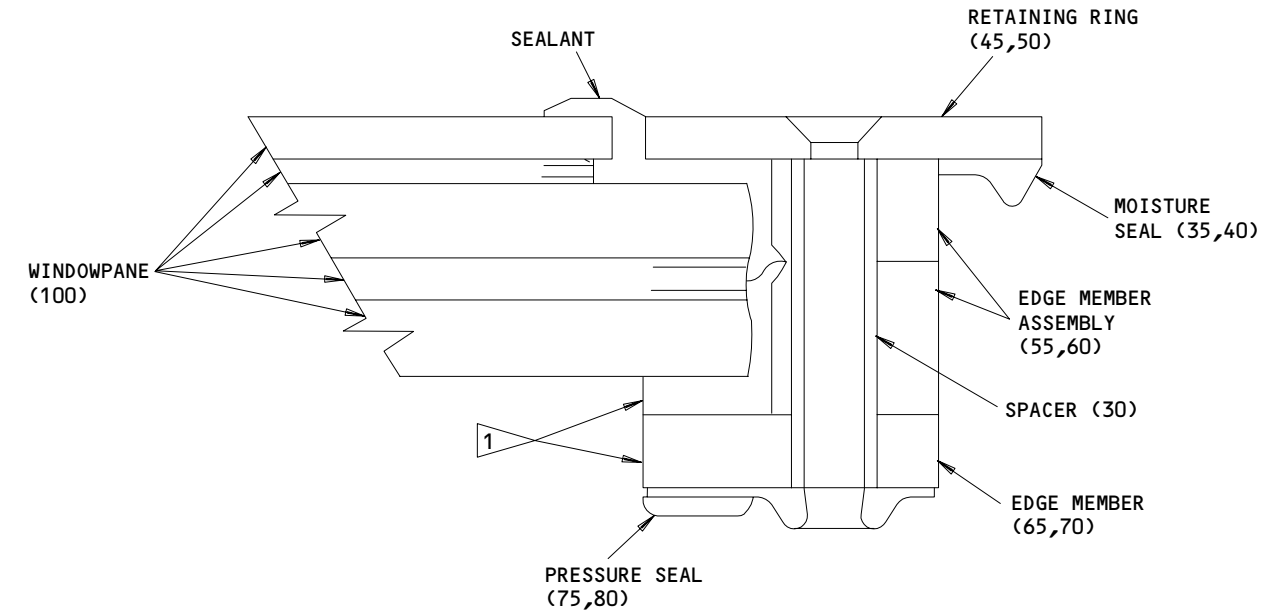
3768

MISCELLANEOUS PARTS REFINISH - REPAIR 3-1

1. Repair of these parts is only replacement of the original finish. Refer to REPAIR - GENERAL for a list of applicable standard practices.

NAME	MATERIAL	FINISH
Fig. 1 and 2 Retaining rings (45, 50)	Al alloy	Chromic acid anodize (F-17.02).
Windshield assembly (1,5)	- -	Apply BMS 10-55, flat water emulsion paint, BAC8925 beige (F-14.942-8925) per Fig. 602.

Refinish Details
Figure 601



141T4800-13,-14
Windshield Assembly Refinish
Figure 602

144255

WINDOW ASSEMBLY - REPAIR 4-1

141T4800-13, -14, -49, -50
141T4801-1, -2, -19, -20, -49, -50, -57 thru -60

NOTE: Refer to REPAIR - GENERAL for a list of applicable standard practices.

1. Sealant Repair (Fig. 601, Fig. 602)

A. Remove the damaged section of sealant with a plastic chisel per Fig. 601.

WARNING: BE CAREFUL WHEN YOU USE ALIPHATIC NAPHTHA BECAUSE IT IS FLAMMABLE.

B. Clean the repair area with aliphatic naphtha. Use a clean cheesecloth to apply the naphtha. Wipe off naphtha with clean cheesecloth before it dries.

C. Mask window (100, IPL Fig. 1 and 2) retainer and ring (45, 50, IPL Fig. 1 and 2) for protection from unwanted sealant.

D. Lay a bead of PR 1425 B-2 sealant over the old sealant with a flow gun. Option: You can use quick cure PR 1425 B-1/2 sealant or slow cure PR 1425 B-2 sealant. Use Pro Seal 860 Class B sealant for a faster seal cure.

NOTE: Pro Seal 860 has a 20-minute application time, and a 75-minute cure time to shop handling state at 77°F.

CAUTION: TEMPERATURES ABOVE 120°F CAN DAMAGE THE WINDOW.

E. Cure PR 1425 B-2 sealant for 48 hours at 70°F or apply heat up to 120°F for a faster cure. Refer to Fig. 605 for PR 1425 B-1/2, PR 1425 B-2, and Pro Seal 860 Class B sealant cure times.

F. Fill in void areas of the fillet with a spatula. Smooth over with fingers wet with naphtha.

G. Remove masking tape and remove unwanted wet sealant with cheesecloth wet with aliphatic naphtha.

H. Let the sealant cure to shop handling state as in step E. See Fig. 602 for cure times.

2. Terminal Block and Temperature Sensor Replacement (85, 90, 95, IPL Fig. 1; 80, 85, 90, IPL Fig. 2)

A. Remove the old sealant with a plastic chisel.

WARNING: BE CAREFUL WHEN YOU USE ALIPHATIC NAPHTHA BECAUSE IT IS FLAMMABLE.

B. Clean the faying surfaces with aliphatic naphtha, or soap and water followed by aliphatic naphtha.

C. Fully dry the surface.

D. Apply the masking tape to the window. Keep a minimum of 1 inch from the bond area and within 0.031 inch of the bond area.

E. Mix the PR 1425 sealant as specified by the manufacturer's instructions.

F. Apply a thin smooth layer of PR 1425 sealant to the faying surfaces.

CAUTION: APPLY ONLY SUFFICIENT PRESSURE TO THE SPRING CLAMPS OR THE WEIGHTS TO HOLD THE SURFACES TOGETHER. TOO MUCH PRESSURE CAN PUSH THE SEALANT OUT OF THE BOND AREA.

G. Put the terminal block on the window immediately after you apply the sealant. Apply pressure during the cure time.

H. Let the sealant dry as specified by the manufacturer's instruction.

3. Terminal Block Replacement (87, IPL Fig. 1; 120, IPL Fig. 2) (Fig. 603)

A. Carefully remove the cap of the terminal block and dig out the sealant inside to expose and free the braid wires that go to the heating element. Loosen the screws and disconnect the braid wires from the terminal block.

B. Carefully remove the old terminal block from the window surface. It is bonded with PR 1425 sealant. Keep the old terminal to help you identify the location of the J1 or J5 marking to be added to the replacement terminal block.

C. If necessary, replace the terminal lugs attached to the ends of the braid wires. Crimp the replacement lugs on the wire ends with Tyco crimp tool 46447. Use the 22-16 crimping chamber. Make sure the braid extends to the ring tongue terminal side of the crimp barrel.

D. Solvent clean (SOPM 20-30-03) the bonding surfaces of the window surface where the terminal goes. Apply Betaseal 43532 primer to the bonding surfaces of the terminal block. Bond the terminal block to the window surface with PR 1425 sealant. After the sealant is cured, the terminal block must stay in position against a pull, push, or shear test load of 15-25 pounds in any direction.

E. Connect the terminal lugs of the braid wires to the screw terminals in the terminal block. Use the same location as on the old terminal block.

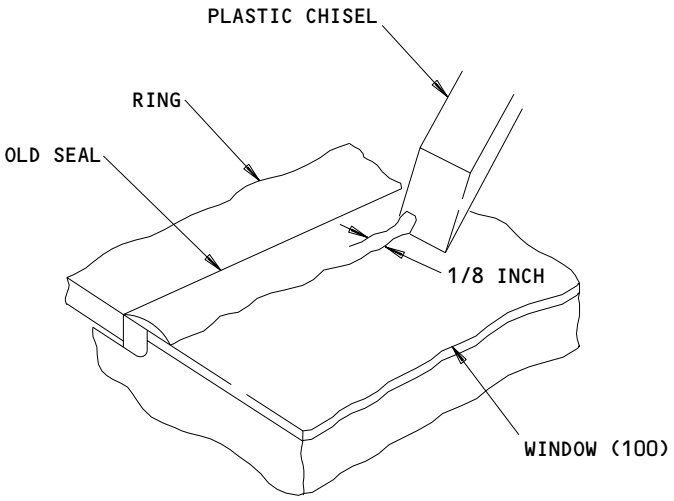
F. Install a replacement plug in the hole of the other terminal location. If necessary, cut off the plug to within 0.1 inch of the terminal grommet.

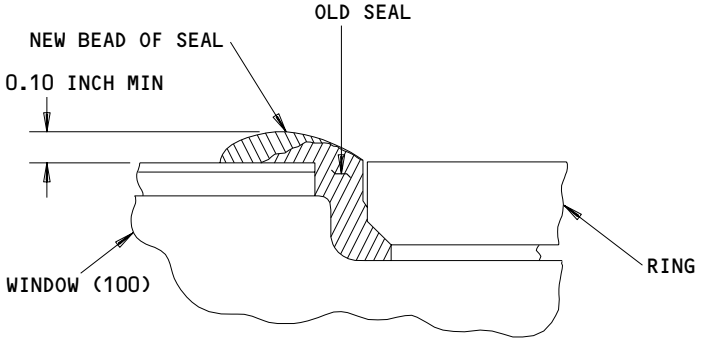
G. Apply the J1 or J5 marking at the terminal hole that goes to the wiring, to agree with the old terminal block. You can use any Type M procedure (SOPM 20-50-10).

H. Fill the interior of the terminal block with Sylgard 170 or Sylgard 567 sealant. If you use Sylgard 170 sealant, apply Dow Corning 1200 primer to the electrical surfaces first. It is not necessary to completely fill the terminal cavity with sealant. Be sure the sealant is fully cured before you install the cap.

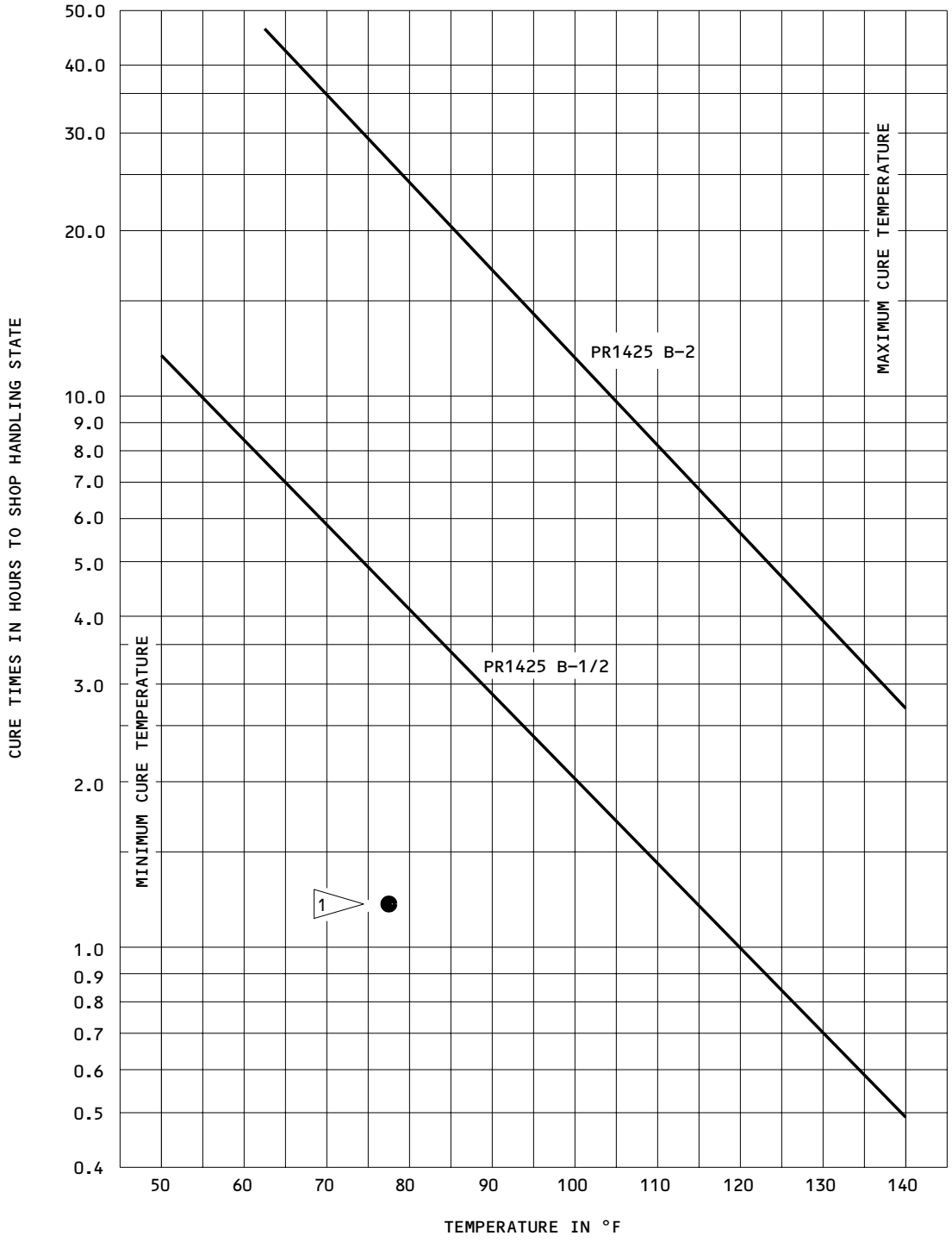
I. Solvent clean (SOPM 20-30-03) the bonding surfaces of the terminal and its cap. Apply Betaseal 43532 primer to these surfaces. Bond the cap on the terminal with PR 1425 sealant.

J. Let all of the sealant cure before you move the window or try to test the quality of the bond.



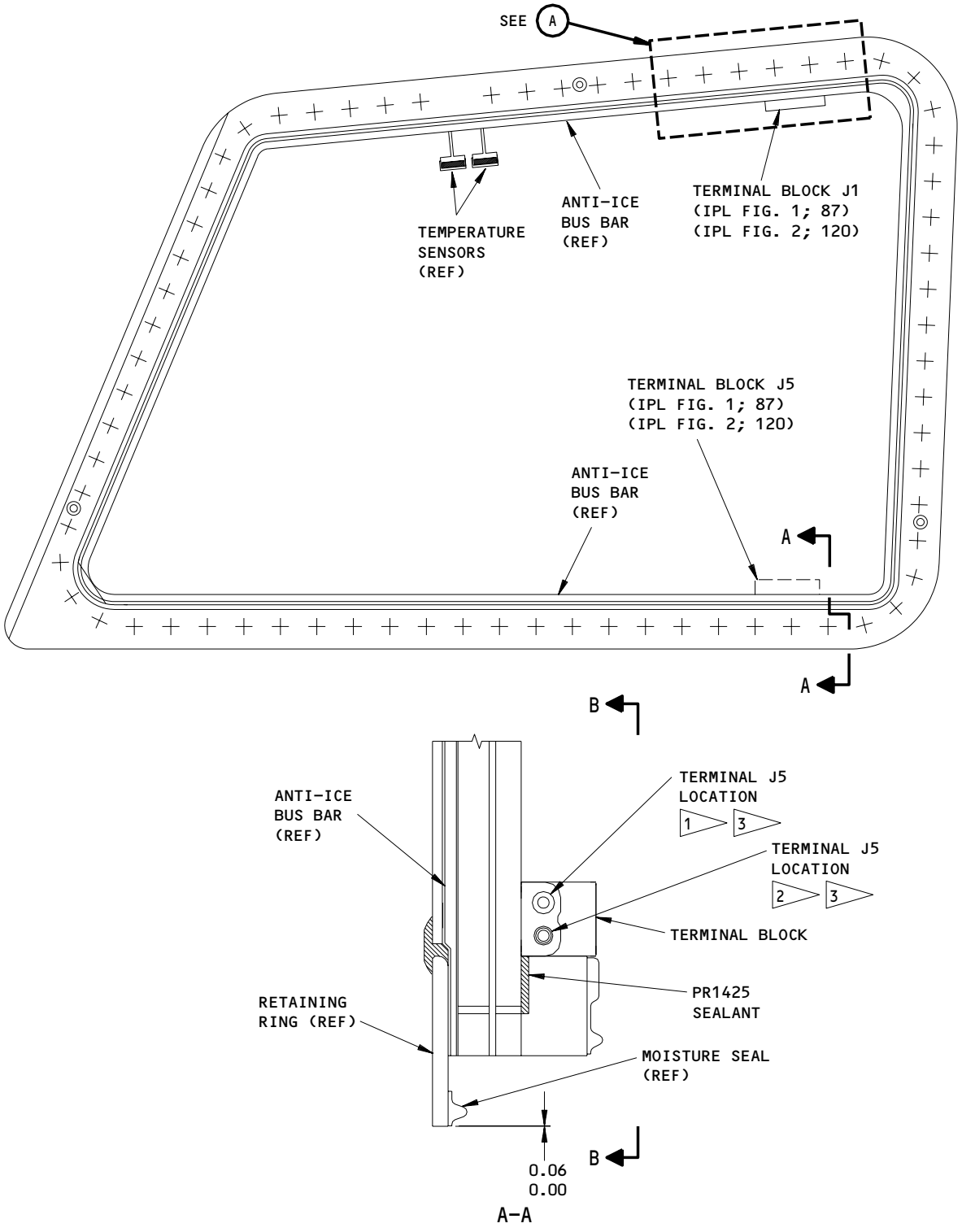


Sealant Repair
Figure 601



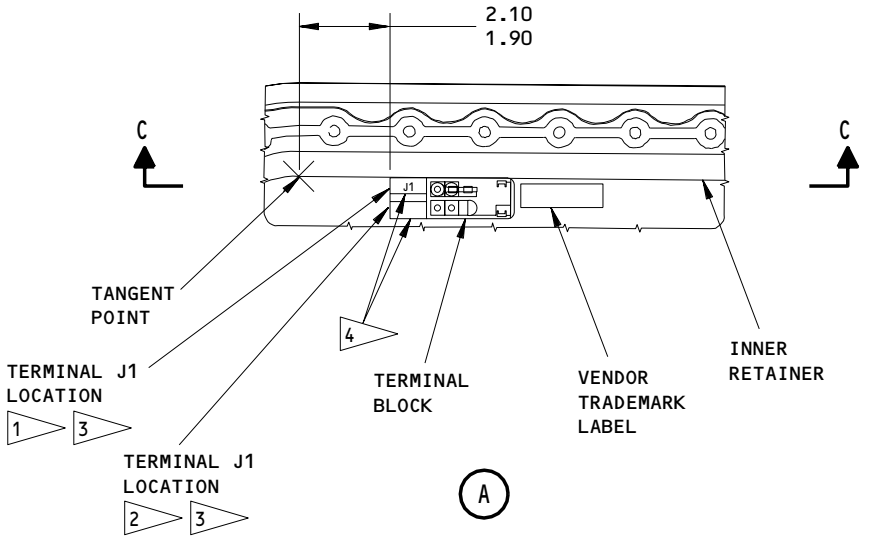
1 CURE TIME FOR PRO SEAL 860 CLASS B

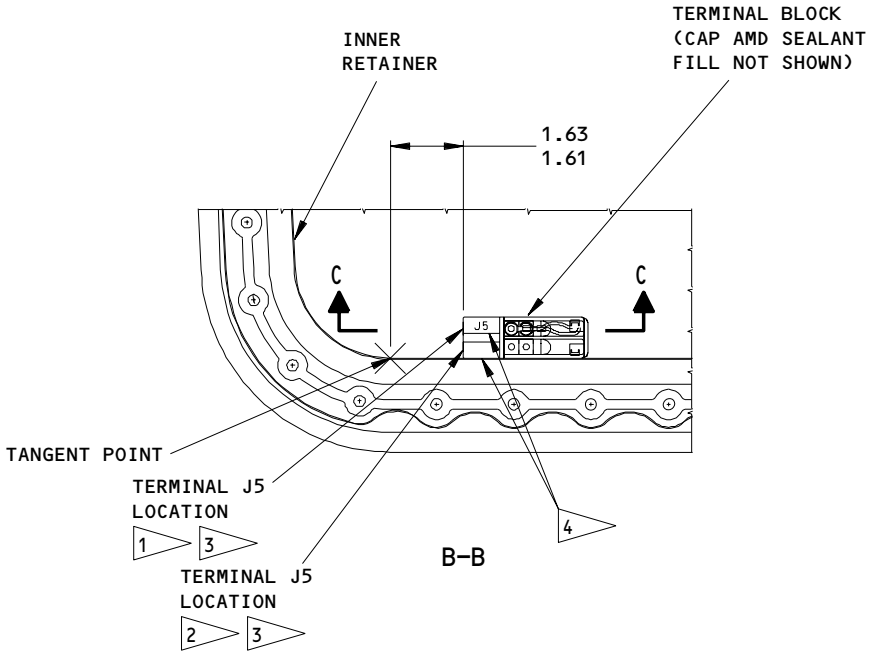
Sealant Repair
Figure 602



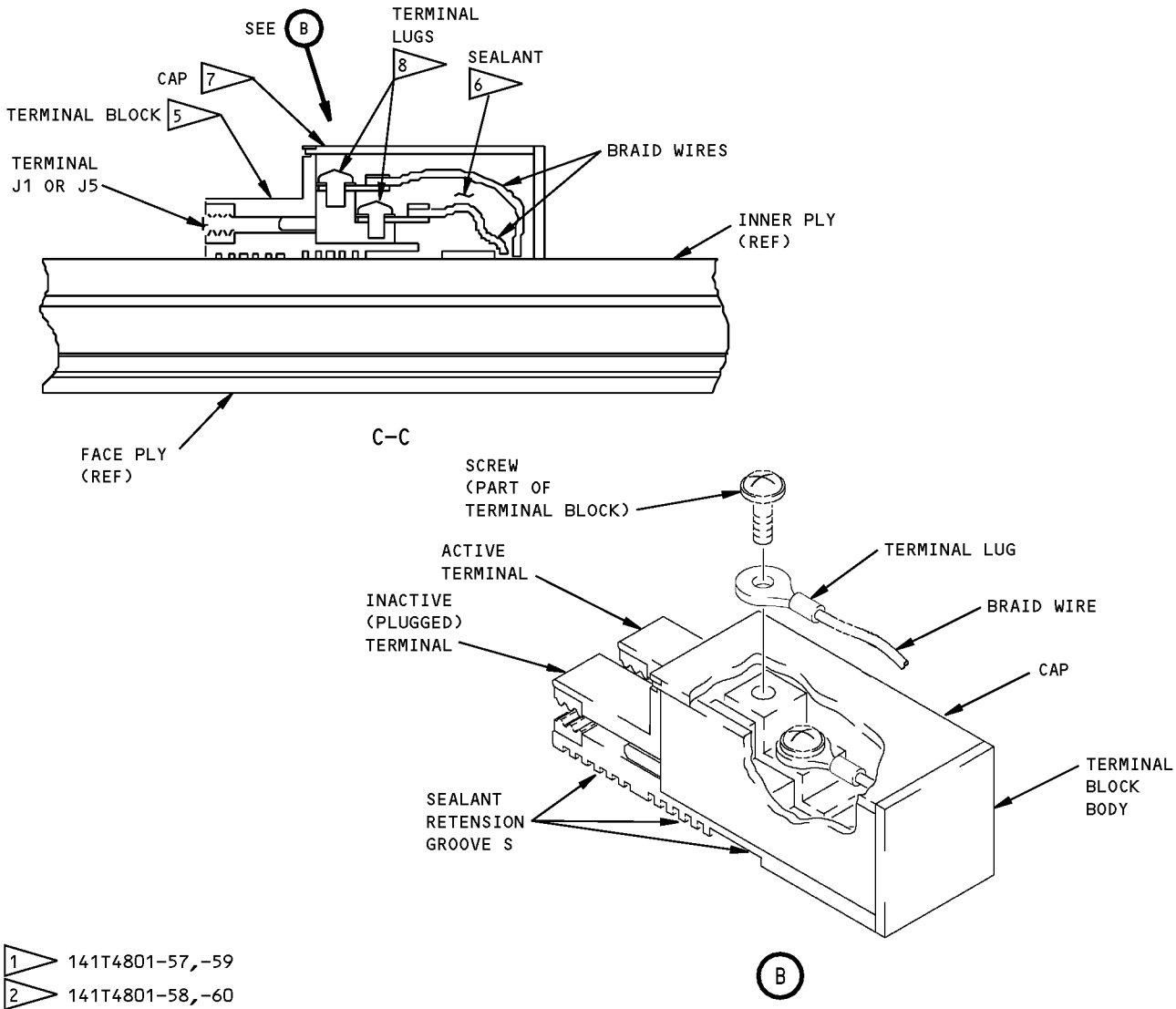
141T4801-57 Thru -60
Terminal Block Replacement
Figure 603 (Sheet 1)

466923





141T4801-57 Thru -60
Terminal Block Replacement
Figure 603 (Sheet 2)



1. 141T4801-57,-59
2. 141T4801-58,-60
3. CONNECT THE BRAID WIRES TO THIS TERMINAL. SEAL THE OTHER TERMINAL LOCATION WITH AN MS27488-16-1 PLUG
4. APPLY THE J1 OR J5 MARKING (AS APPLICABLE) AT THE ACTIVE TERMINAL
5. BOND THE TERMINAL BLOCK IN POSITION WITH PR1425 SEALANT
6. AFTER YOU CONNECT THE WIRES, COMPLETELY FILL THE BLOCK WITH SEALANT TO ENCAPSULATE ALL ELECTRICAL COMPONENTS
7. AFTER THE SEALANT INSIDE THE TERMINAL BLOCK IS CURED, BOND THE CAP ON TOP WITH SEALANT
8. CRIMP THE BRAID WIRE TO THE TERMINAL LUG

141T4801-57 Thru -60
Terminal Block Replacement
Figure 603 (Sheet 3)

466996

ASSEMBLY

CAUTION: DO NOT TIGHTEN SCREWS NAS1802-3-10 OR NAS1802-6-10 OTHER THAN AT THE TIME OF WIRE BUNDLE INSTALLATION. DAMAGE TO TEMPERATURE SENSOR 2791 COULD OCCUR BECAUSE OF INCORRECTLY TIGHTENED SCREWS.

1. Storage

   A. Keep the protective covering on the window. If complete or partial covering removal occurs, examine the surface for contamination or unwanted matter, then replace the covering.

   B. Give protection to the window and put it away by standard industry practices and the instructions in SOPM 20-44-02 and 20-70-01.

ILLUSTRATED PARTS LIST

1. This section lists and illustrates replaceable or repairable component parts. The Illustrated Parts Catalog contains a complete explanation of the Boeing part numbering system.

2. Indentures show parts relationships as follows:

    Assembly
      Detail Parts for Assembly
      Subassembly
      Attaching Parts for Subassembly
        Detail Parts for Subassembly

    Detail Installation Parts (Included only if installation parts may be returned to shop as part of assembly)

3. One use code letter (A, B, C, etc.) is assigned in the EFF CODE column for each variation of top assembly. All listed parts are used on all top assemblies except when limitations are shown by use code letter opposite individual part entries.

4. Letter suffixes (alpha-variants) are added to item numbers for optional parts, Service Bulletin modification parts, configuration differences (except left- and right-hand parts), product improvement parts, and parts added between two sequential item numbers. The alpha-variant is not shown on illustrations when appearance and location of all variants of the part is the same.

5. Service Bulletin modifications are shown by the notations PRE SB XXXX and POST SB XXXX.

    A. When a new top assembly part number is assigned by Service Bulletin, the notations appear at the top assembly level only. The configuration differences at detail part level are then shown by use code letter.

    B. When the top assembly part number is not changed by the Service Bulletin, the notations appear at the detail part level.

6. Parts Interchangeability

Optional (OPT)	The parts are optional to and interchangeable with other parts having the same item number.
Supersedes, Superseded By (SUPSDS, SUPSD BY)	The part supersedes and is not interchangeable with the original part.
Replaces, Replaced By (REPLS, REPLD BY)	The part replaces and is interchangeable with, or is an alternate to, the original part.

VENDORS

U1610 TRIPLEX AIRCRAFT AND SPECIAL PRODUCTS
KINGS NORTON, BIRMINGHAM B38 8SR, ENGLAND

06710 VALLEY-TODECO INCORPORATED
12975 BRADLEY AVENUE
SYLMAR, CALIFORNIA 91342-3830

06725 AIR INDUSTRIES CORPORATION
12570 KNOTT STREET
GARDEN GROVE, CALIFORNIA 92641-3932

06950 SCREWCORP VSI CORP AEROSPACE PRODUCTS DIV FAIRCHILD IND INC
13001 EAST TEMPLE AVE. PO BOX 730
CITY OF INDUSTRY, CALIFORNIA 91746-1417

08524 DEUTSCH FASTENER CORP SEE CODE V97928

17943 FEDERAL MANUFACTURING CORPORATION
6910 FARMDALE AVENUE
NORTH HOLLYWOOD, CALIFORNIA 91605-6210

27624 PAUL R BRILES INC P.B. FASTENER DIV
1700 WEST 132ND STREET PO BOX 1157
GARDENA, CALIFORNIA 90249-2008

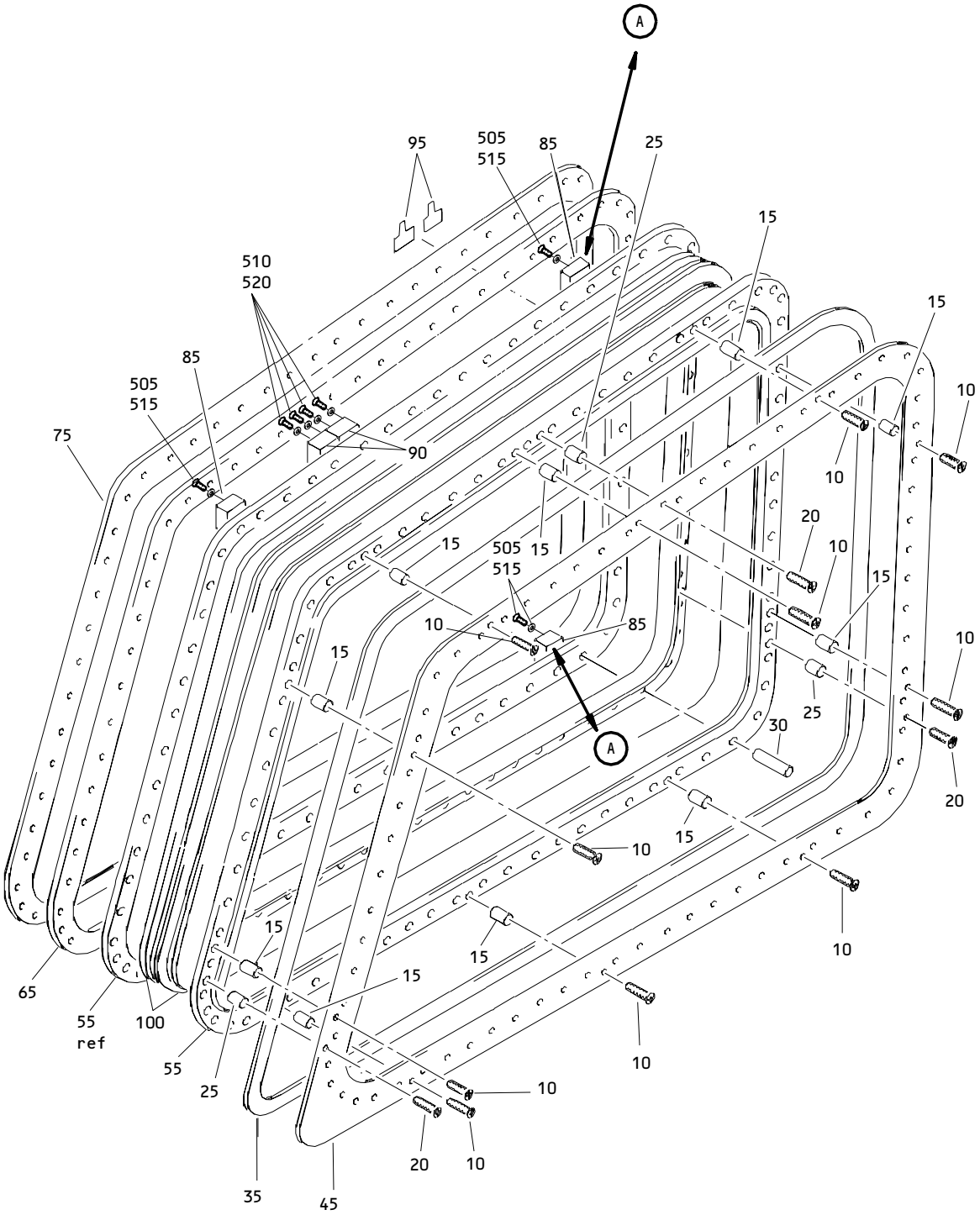
80539 SPS TECHNOLOGIES INC AEROSPACE PRODUCTS DIV
2701 SOUTH HARBOR BOULEVARD PO BOX 1259
SANTA ANA, CALIFORNIA 92702-1259

92215 VOI-SHAN DIV OF VSI CORP SUB OF FAIRCHILD INDUSTRIAL INC
8463 HIGUERA STREET
CULVER CITY, CALIFORNIA 90230

97928 DEUTSCH FASTENER CORP
3969 PARAMONT BOULEVARD
LAKEWOOD, CALIFORNIA 90712-4193

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
[1]		2	100	
[2]		1	100	
		2	105	
[3]		1	105	
[4]		1	100A	
[5]		1	105A	
BACB30LR3-3		1	10	10
MS21209F1-15P		1	15	10
MS24693CB117		1	20	3
		2	20	3
MS27488-16-1		1	88	2
		2	125	2
MS35338-41		1	520	4
MS35338-43		1	515	3
NAS1802-06-10		1	510	4
NAS1802-06-9		1	510A	4
NAS1802-3-10		1	505	3
NAS1802-3-9		1	505A	3
NAS43DD5-109		1	30A	71
PSE2-1		1	95B	2
		2	90	2
SID330000		1	87	2
		2	120	2
S10175-1		1	95A	2
141T4800-11		1	65	1
141T4800-12		1	70	1
141T4800-13		1	1	RF
141T4800-14		1	5	RF
141T4800-49		1	1D	RF
141T4800-50		1	5D	RF
141T4801-1		1	1A	RF
141T4801-17		2	65	1
141T4801-19		1	1B	RF
		2	10	1
141T4801-2		1	5A	RF
141T4801-20		1	5B	RF
		2	15	1
141T4801-41		2	55	1
141T4801-42		2	60	1
141T4801-49		1	1C	RF
		2	1	RF
141T4801-50		1	5C	RF
		2	5	RF
141T4801-57		1	1E	RF
		2	10A	1
141T4801-58		1	5E	RF
		2	15A	1

PART NUMBER	AIRLINE PART NO.	FIG.	ITEM	TTL REQ
141T4801-59		1	1F	RF
		2	1A	RF
141T4801-60		1	5F	RF
		2	5A	RF
141T4803-3		1	75	1
141T4803-4		1	80	1
141T4804-1		1	35	1
		2	35	1
141T4804-2		1	40	1
		2	40	1
141T4805-1		1	45	1
141T4805-2		1	50	1
141T4806-1		1	25	3
		2	25	3
141T4807-1		1	45A	1
141T4807-2		1	50A	1
141T4808-1		1	75A	1
141T4808-2		1	80A	1
141T4809-1		1	35A	1
141T4809-2		1	40A	1
22-08-1605		1	30B	71
		2	30	71
22-1274-291		1	75B	1
		2	70	1
22-1274-292		1	80B	1
		2	75	1
22-1317-291		1	45B	1
		2	45	1
22-1317-292		1	50B	1
		2	50	1
22-17-1384		1	90A	2
		2	85	2
22-17-1385		1	85A	3
		2	80	3
22-17-1386		1	53	1
2791		1	95	2
2886		1	55	1
2887		1	60	1
2909		1	30	71
2915		1	85	3
2916		1	90	2
322799		1	82	4
		2	115	4



Pilot No. 1 Windshield Assembly
Figure 1 (Sheet 1)

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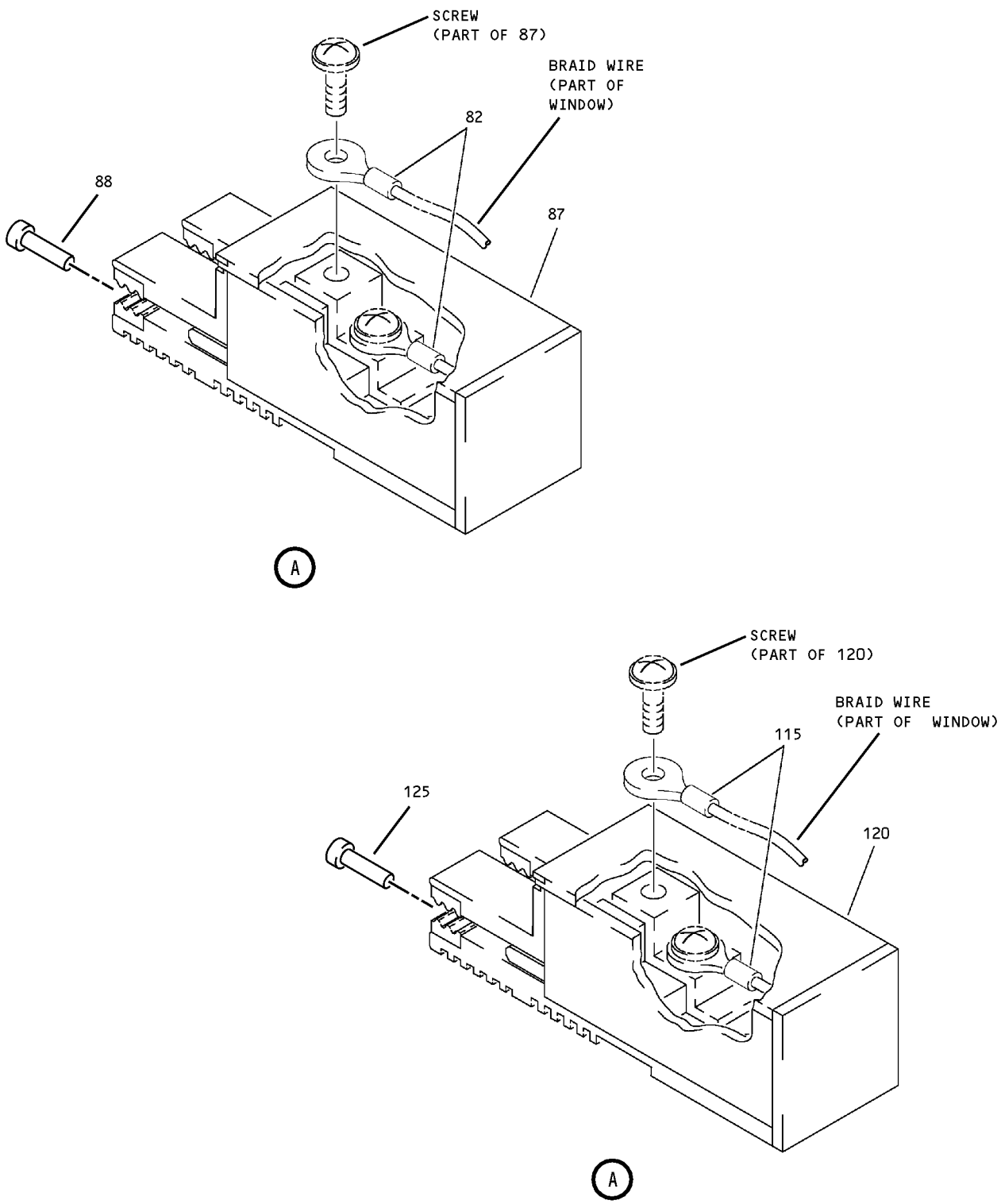


Pilot No. 1 Windshield Assembly
Figure 1 (Sheet 2)

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-1	141T4800-13		WINDSHIELD ASSY-PILOT NO. 1 (LH)	A	RF
-1A	141T4801-1		WINDSHIELD ASSY-PILOT NO. 1 (LH)	C	RF
-1B	141T4801-19		WINDSHIELD ASSY-PILOT NO. 1 (LH)	D	RF
-1C	141T4801-49		WINDSHIELD ASSY-PILOT NO. 1 (LH) (FOR DETAILS SEE FIG. 2)	G	RF
-1D	141T4800-49		WINDSHIELD ASSY-PILOT NO. 1 (LH)	J	RF
-1E	141T4801-57		WINDSHIELD ASSY-PILOT NO. 1 (LH)	L	RF
-1F	141T4801-59		WINDSHIELD ASSY-PILOT NO. 1 (LH) (FOR DETAILS SEE FIG. 2)	N	RF
-5	141T4800-14		WINDSHIELD ASSY-COPILOT NO. 1 (RH)	B	RF
-5A	141T4801-2		WINDSHIELD ASSY-COPILOT NO. 1 (RH)	E	RF
-5B	141T4801-20		WINDSHIELD ASSY-COPILOT NO. 1 (RH)	F	RF
-5C	141T4801-50		WINDSHIELD ASSY-COPILOT NO. 1 (RH) (FOR DETAILS SEE FIG. 2)	H	RF
-5D	141T4800-50		WINDSHIELD ASSY-COPILOT NO. 1 (RH)	K	RF

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-5E	141T4801-58		WINDSHIELD ASSY-COPILOT NO. 1 (RH)	M	RF
-5F	141T4801-60		WINDSHIELD ASSY-COPILOT NO. 1 (RH) (FOR DETAILS SEE FIG. 2)	P	RF
10	BACB30LR3-3		.BOLT-	ABJK	10
15	MS21209F1-15P		.INSERT	ABJK	10
20	MS24693CB117		.SCREW	A-FLM	3
25	141T4806-1		.INSERT-HOIST POINT	A-FLM	3
30	2909		.SPACER- (VU1610)	ABJK	71
-30A	NAS43DD5-109		.SPACER	CE	71
-30B	22-08-1605		.SPACER (V53117)	DFLM	71
35	141T4804-1		.SEAL-MOISTURE	ADJL	1
-35A	141T4809-1		.SEAL-MOISTURE	C	1
-40	141T4804-2		.SEAL-MOISTURE	BFKM	1
-40A	141T4809-2		.SEAL-MOISTURE	E	1
45	141T4805-1		.RING-RETAINING	AJ	1
-45A	141T4807-1		.RING-RETAINING	C	1
-45B	22-1317-291		.RING-RETAINING (V53117)	DL	1
-50	141T4805-2		.RING-RETAINING	BK	1
-50A	141T4807-2		.RING-RETAINING	E	1
-50B	22-1317-292		.RING-RETAINING	FM	1
53	22-17-1386		.INSERT	CE	1
55	2886		.EDGE MEMBER ASSY- (VU1610)	AJ	1
-60	2887		.EDGE MEMBER ASSY- (VU1610)	BK	1
65	141T4800-11		.EDGE MEMBER	AJ	1
-70	141T4800-12		.EDGE MEMBER	BK	1
75	141T4803-3		.SEAL-PRESSURE	AJ	1
-75A	141T4808-1		.SEAL-PRESSURE	C	1
-75B	22-1274-291		.SEAL-PRESSURE (V53117)	DL	1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
-80	141T4803-4		.SEAL-PRESSURE	BK	1
-80A	141T4808-2		.SEAL-PRESSURE	E	1
-80B	22-1274-292		.SEAL-PRESSURE (V53117)	FM	1
82	322799		.LUG-TERMINAL	LM	4
85	2915		.BLOCK-TERMINAL *[1] (VU1610)	ABJK	3
-85A	22-17-1385		.BLOCK-TERMINAL (V53117)	C-F	3
87	SID330000		.BLOCK-TERMINAL	LM	2
88	MS27488-16-1		.PLUG	LM	2
90	2916		.BLOCK-TERMINAL *[1] (VU1610)	ABJK	2
-90A	22-17-1384		.BLOCK-TERMINAL (V53117)	C-F	2
95	2791		.SENSOR-TEMP *[1] (VU1610)	ABJK	2
-95A	S10175-1		.SENSOR-TEMP (V09359)	CE	2
-95B	PSE2-1		.SENSOR-TEMP (V53117)	DF	2
100	[2]			C	
-100A	[4]			DL	
-105	[3]			E	
-105A	[5]			FM	
			INSTALLATION PARTS		
505	NAS1802-3-10		SCREW (PRE SB 767-30-0020)		3
505A	NAS1802-3-9		SCREW (POST SB 767-30-0020)		3

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
01-					
510	NAS1802-06-10		SCREW (PRE SB 767-30-0020)		4
-510A	NAS1802-06-9		SCREW (POST SB 767-30-0020)		4
515	MS35338-43		WASHER		3
520	MS35338-41		WASHER		4

*[1] FOR REFERENCE ONLY - NOT INDIVIDUALLY REPLACEABLE

*[2] DO NOT DISASSEMBLE THIS UNIT. SOME PARTS ARE ILLUSTRATED FOR CLARITY. THIS UNIT (USED ON 141T4801-1) CONSISTS OF THE FOLLOWING PARTS:

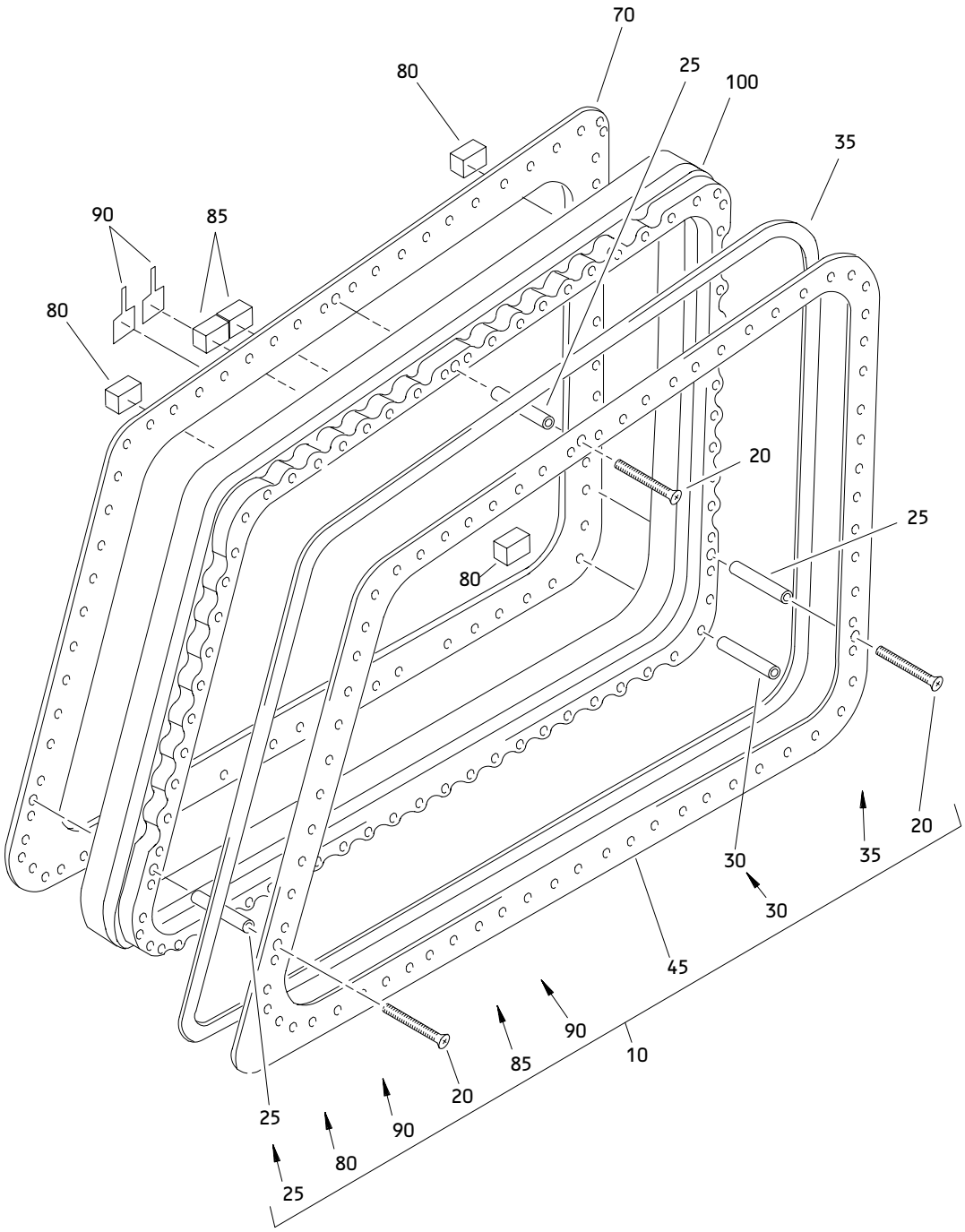
1 FACE PLY	141T4801-3
1 MAIN PLY	141T4801-5
1 INTERLAYER	141T4801-7
1 INTERLAYER	141T4801-9
1 INNER PLY	141T4801-11

*[3] DO NOT DISASSEMBLE THIS UNIT. SOME PARTS ARE ILLUSTRATED FOR CLARITY. THIS UNIT (USED ON 141T4801-2) CONSISTS OF THE FOLLOWING PARTS:

1 FACE PLY	141T4801-4
1 MAIN PLY	141T4801-6
1 INTERLAYER	141T4801-8
1 INTERLAYER	141T4801-10
1 INNER PLY	141T4801-12
1 INSERT	141T4801-17
1 INSERT	22-17-1386 (V53117)
1 EDGE MEMBER	141T4801-14
1 INNER RETAINER	141T4801-16

*[4] SEE [1] OF FIG. 2.

*[5] SEE [2] OF FIG. 2.



Pilot No. 1 Windshield Assembly
Figure 2

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
02-					
-1	141T4801-49		WINDSHIELD ASSY-PILOT NO. 1 (LH)	G	RF
-1A	141T4801-59		WINDSHIELD ASSY-PILOT NO. 1 (LH)	N	RF
-5	141T4801-50		WINDSHIELD ASSY-COPILOT NO. 1 (RH)	H	RF
-5A	141T4801-60		WINDSHIELD ASSY-COPILOT NO. 1 (RH)	P	RF
10	141T4801-19		.WINDSHIELD ASSY-LIGHTWEIGHT	G	1
-10A	141T4801-57		.WINDSHIELD ASSY-LIGHTWEIGHT	N	1
-15	141T4801-20		.WINDSHIELD ASSY-LIGHTWEIGHT	H	1
-15A	141T4801-58		.WINDSHIELD ASSY-LIGHTWEIGHT	P	1
20	MS24693CB117		..SCREW	GHNP	3
25	141T4806-1		..INSERT-HOIST POINT	GHNP	3
30	22-08-1605		..SPACER (V53117)	GHNP	71
35	141T4804-1		..SEAL-MOISTURE	GN	1
-40	141T4804-2		..SEAL-MOISTURE	HP	1
45	22-1317-291		..RING-RETAINING (V53117)	GN	1
-50	22-1317-292		..RING-RETAINING (V53117)	HP	1
55	141T4801-41		..RETAINER-INNER	GN	1
-60	141T4801-42		..RETAINER-INNER	HP	1
65	141T4801-17		..INSERT	GHNP	1
70	22-1274-291		..SEAL-PRESSURE (V53117)	GN	1
-75	22-1274-292		..SEAL-PRESSURE (V53117)	HP	1

FIG. & ITEM	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1234567	EFF CODE	QTY PER ASSY
02-					
80	22-17-1385		..BLOCK-TERMINAL (V53117)	GH	3
85	22-17-1384		..BLOCK-TERMINAL (V53117)	GHNP	2
90	PSE2-1		..SENSOR-TEMP (V53117)	GHNP	2
100	[1]			GN	
-105	[2]			HP	
115	322799		..LUG-TERMINAL	NP	4
120	SID330000		..BLOCK-TERMINAL	NP	2
125	MS27488-16-1		..PLUG	NP	2

*[1] DO NOT DISASSEMBLE THIS UNIT. SOME PARTS ARE ILLUSTRATED FOR CLARITY. THIS UNIT (USED ON 141T4801-19, -57) HAS THESE PARTS:

1 PLY FACE	141T4801-23
1 PLY CORE	141T4801-25
1 INNER PLY	141T4801-27
1 INTERLAYER	141T4801-29
1 OUTER INTERLAYER	141T4801-31
1 INTERPLAYER	141T4801-33
1 INNER INTERLAYER	141T4801-35
1 FILLER	141T4801-37
1 FILLER	141T4801-39
1 INNER RETAINER	141T4801-41

*[2] DO NOT DISASSEMBLE THIS UNIT. SOME PARTS ARE ILLUSTRATED FOR CLARITY. THIS UNIT (USED ON 141T4801-20, -58) HAS THESE PARTS:

1 PLY FACE	141T4801-24
1 PLY CORE	141T4801-26
1 INNER PLY	141T4801-28
1 INTERLAYER	141T4801-29
1 OUTER INTERLAYER	141T4801-31
1 INTERPLAYER	141T4801-33
1 INNER INTERLAYER	141T4801-35
1 FILLER	141T4801-38
1 FILLER	141T4801-40
1 INNER RETAINER	141T4801-42