

CHAPTER 52 — DOORS AND WINDOWS

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DOORS AND WINDOWS

52-1. DOORS

The helicopter is equipped with four entrance/exit doors for crew and passengers, as well as a variety of hinged doors and panels, which provide access for inspection and servicing. Crew and passenger doors are located on both sides of the fuselage, and a baggage compartment door is on the left side of the helicopter (Figure 52-1).



TO PREVENT INTERNAL CORROSION OF HONEYCOMB PANELS, IMMEDIATELY REPAIR ANY DAMAGE THAT PENETRATES THE SKIN. SEAL MINOR PENETRATIONS IMMEDIATELY.

NOTE

For standard practices or repairs not mentioned in this chapter, refer to [BHT-ALL-SPM](#) and [BHT-206-SRM-1](#).

NOTE

Door seals that are loose, damaged, leaking, or deteriorated shall be replaced as specified below. Seals are made of silicone rubber. Refer to [BHT-ALL-SPM](#) for detailed non-structural bonding procedures.

52-2. GENERAL REPAIR PROCEDURES

1. For repair of doors, refer to [BHT-206-SRM-1](#).
2. Replace door seals as required (paragraph 52-3).
3. For repair of door windows, refer to [paragraph 52-56](#) and [paragraph 52-60](#).

52-3. DOOR SEAL REPLACEMENT

MATERIALS REQUIRED

Refer to [BHT-ALL-SPM](#) for specifications.

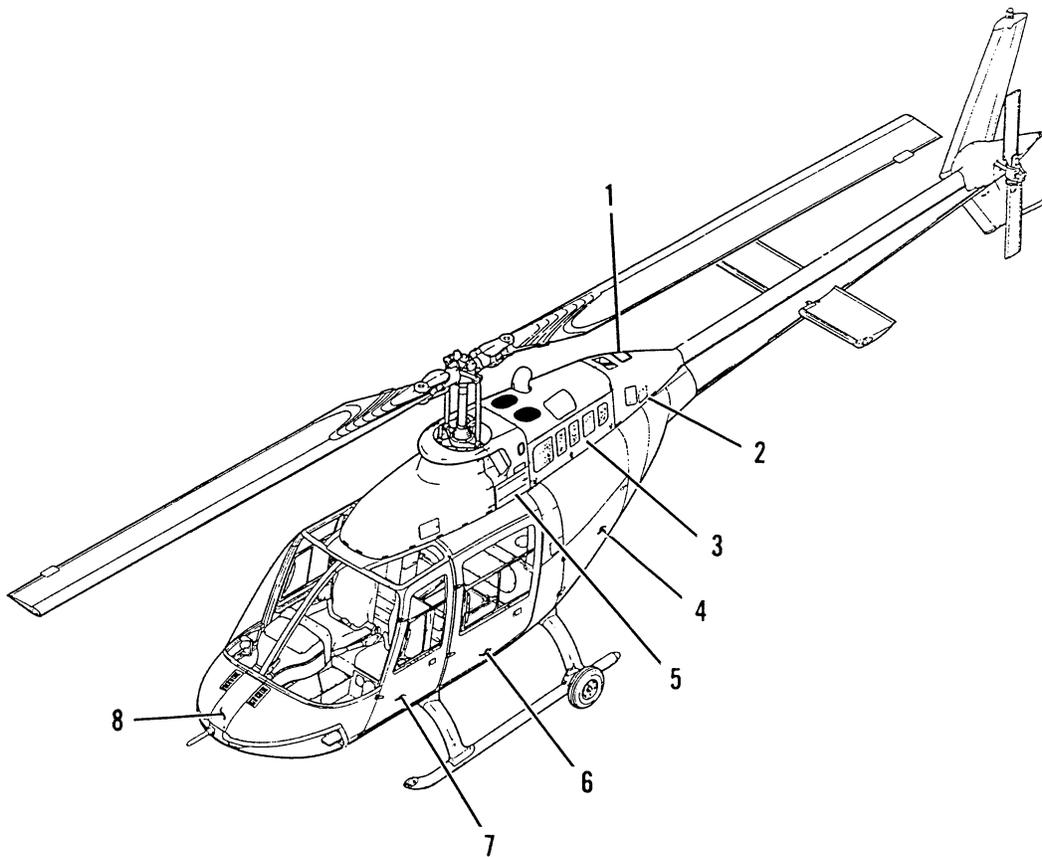
NUMBER	NOMENCLATURE
C-300	Adhesive
C-305	Aliphatic Naphtha
C-306	Toluene
C-309	MEK
C-314	Adhesive
C-337	Primer
C-347	Xylene
C-406	Abrasive Cloth

1. Inspect door seal and chafing strips for damage (Figure 52-2).
2. Replace door frame seals and chafing strips if deteriorated or damaged as follows:



TOLUENE IS FLAMMABLE AND SHOULD BE USED IN A WELL VENTILATED AREA. AVOID SKIN CONTACT.

- a. Abrade rubber seal or chafing strip with abrasive cloth (C-406). Clean abraded area with toluene (C-306) and wipe dry with a clean, dry cloth.
- b. Clean door area to be bonded by abrading surface lightly with abrasive cloth (C-406). If area is painted, remove paint (bond area only). Clean abraded area to be bonded with toluene (C-306) and wipe dry with a clean, dry cloth.



- 1. Oil reservoir access door (right side only)
- 2. Oil cooler access door (left side only)
- 3. Engine side cowling
- 4. Baggage compartment (left side only)
- 5. Air induction cowling door
- 6. Passenger door
- 7. Crew door
- 8. Battery access door
- 9. APU access door

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Figure 52-1. Door installation

c. Brush apply a thin coating of adhesive (C-300) to both surfaces. Press two coated surfaces together and apply firm pressure until cured. A curing time of 24 hours at room temperature will provide 50% of strength obtainable, while the maximum cure strength time is 4 to 7 days at room temperature.

NOTE

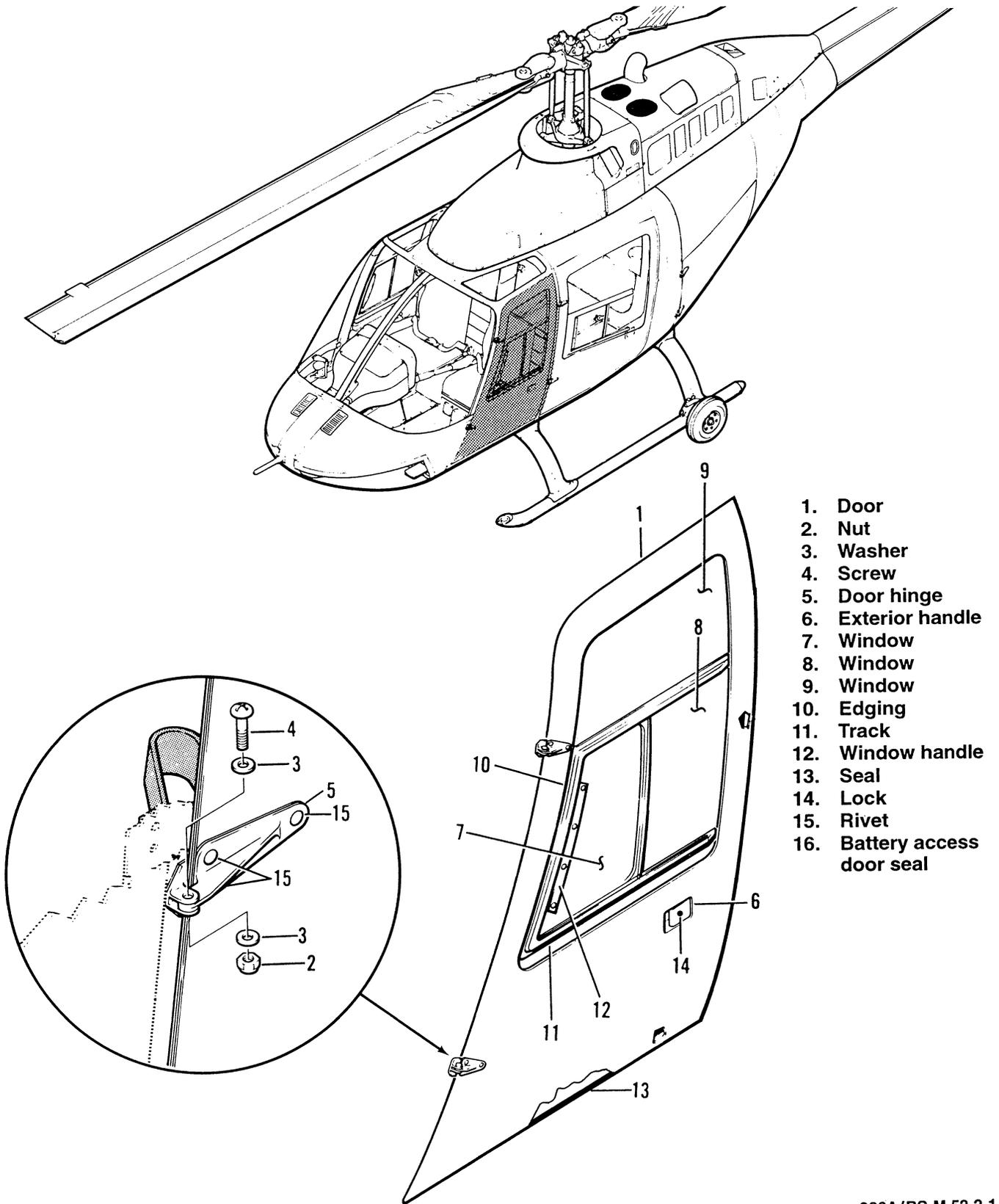
Baggage compartment door and miscellaneous access doors use pressure-sensitive chafing tapes and need not be bonded with separate adhesives.

d. Determine type of seal being replaced by cutting a small specimen from damaged seal and subjecting it to flame. Silicone seals are more rapidly affected by flame and will leave a gray ash residue.

e. Remove old seal from door. Cut a length of new seal slightly longer than required. Trim end of seal to be bonded.

f. Clean new seal with toluene (C-306), xylene (C-347), or MEK (C-309). Clean painted surfaces on door thoroughly with aliphatic naphtha (C-305).

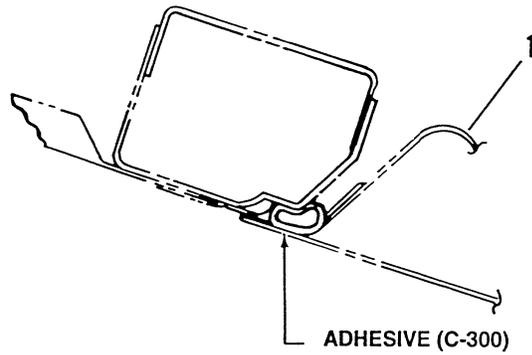
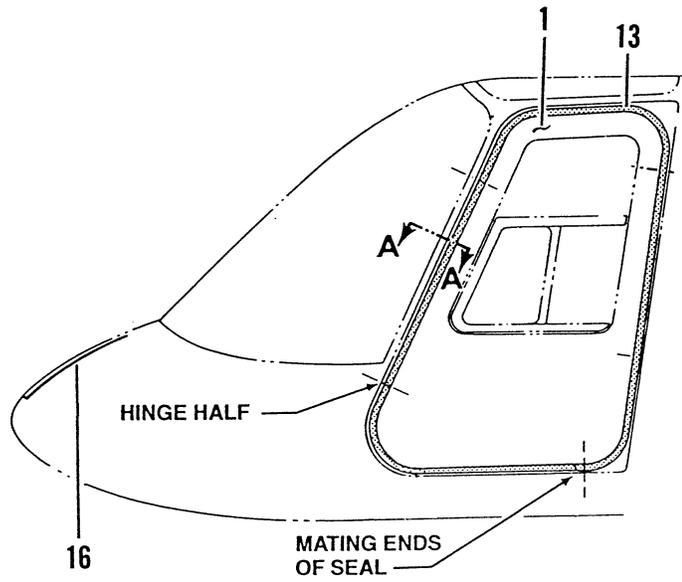
g. Sand mating surface of seal with 80 grit abrasive cloth and door with 400 grit abrasive paper.



1. Door
2. Nut
3. Washer
4. Screw
5. Door hinge
6. Exterior handle
7. Window
8. Window
9. Window
10. Edging
11. Track
12. Window handle
13. Seal
14. Lock
15. Rivet
16. Battery access door seal

206A/BS-M-52-2-1

Figure 52-2. Crew door installation and seal replacement (Sheet 1 of 2)



SECTION A-A

206A/BS-M-52-2-2

Figure 52-2. Crew door installation and seal replacement (Sheet 2)

NOTE

For maximum bond strength, remove all paint and primer from metal surface where seal is to be applied.

h. Clean sanded areas of seal and door with appropriate solvent, and dry with a clean dry cloth.

3. Bond battery access door (16, figure 52-2) silicone composition seals as follows:

a. Using a brush, apply a thin uniform coat of primer (C-337) to metallic surface of door only. Allow adhesive to air dry 30 minutes at room temperature.

b. Apply a thin, uniform coat of adhesive (C-314) to mating surfaces of seal and battery access door. Bond silicone seals on all other doors, in like manner, using adhesive (C-300).

c. Apply pressure to seal until adhesive has cured to handling strength (50 percent of maximum strength). Handling strength is obtained in 24 hours at 75°F, (24°C); maximum cure will occur in 3 to 5 days.

52-4. CREW DOORS.

A crew door is installed on each side of the forward fuselage to provide access to the crew area. Each door is equipped with a latch assembly, which may be operated from either side of the door, and a lock, installed in the exterior door handle. Each door incorporates a sliding window and a stationary window.

52-5. REMOVAL.

1. Remove nuts (2, figure 52-2), washers (3) and screws (4) from upper and lower door hinges (5).

2. Pull exterior handle (6) to unlatch door, and remove door from fuselage.

52-6. INSPECTION AND REPAIR.

1. Inspect door (1, figure 52-2) for cracks, dents, distortion, and corrosion.

NOTE

Structural damage to doors should be repaired in accordance with BHT-206-SRM-1.

2. Inspect windows (7, 8, and 9) for cracks, crazing, scratches, pits, and other obstructions to vision. Inspect window edging (10), track (11), and window handle (12) for damage and deterioration (paragraph 52-56).

3. Inspect door seal (13) for damage, deterioration, and bond separation. Replace defective seal (paragraph 52-3).

4. Inspect crew door upper and lower hinges (5) for cracks, distortion, and loose or working rivets and screws. Replace worn or damaged hinges (paragraph 52-9).

5. Inspect crew door latch assembly and strikers for proper operation and condition. Refer to paragraphs 52-18 through 52-20 for detailed repair and adjustment procedures.

6. Inspect crew door lock (14) for security. Replace defective lock (paragraph 52-18).

7. Inspect crew door latch assembly for proper operation. Refer to paragraph 52-16 for single latch assembly and paragraph 52-21 for dual latch assembly.

52-7. INSTALLATION.

DO NOT OVERTIGHTEN NUTS. DISTORTION, MISALIGNMENT, AND DAMAGE MAY OCCUR.

1. Position crew door (1, figure 52-2) to fuselage and align hinge halves on both upper and lower hinges. Install screws (4), washers (3), and nuts (2) to interlock hinge halves. Tighten nuts (2) approximately one-fourth turn beyond snug fit.

2. Check door hinges and latch mechanism for proper operation. Adjust crew door latch and striker (paragraphs 52-20 and 52-25).

52-8. CREW DOOR HINGES.

Crew door hinge halves are manufactured from steel investment castings and are riveted to the fuselage and crew doors. Shims are used under hinge halves to align doors with fuselage contour.

52-9. REPLACEMENT.

1. Remove crew door (1, figure 52-2) (paragraph 52-5).

NOTE

Replacement procedures given are for left side crew door hinges; right side is similar.

NOTE

Tag and identify serviceable hinge halves and shims as they are removed to ensure correct positioning upon installation. Shims vary in thickness and hinge halves differ in their angles.

2. Drill out rivets (15) securing door hinge(s) (5) to door (1). Remove hinge from door.
3. Position new door hinge (5) with shims (as required) to door (1) and hold in place with Cleco metal fasteners. Position door to fuselage and hold in place. Peel shims, as required, to obtain alignment of outside door surface with fuselage contour.
4. After alignment, secure door hinge (5) to crew door (1) with three rivets (15).
5. Complete installation of crew door (1) (paragraph 52-7).

52-10. PASSENGER DOORS.

A passenger door is installed on each side of the fuselage to provide access to the cabin area. Each door is equipped with a latch assembly, which may be operated from either side of the door, and a lock installed in the exterior door handle. Each door incorporates a sliding window and a stationary window.

52-11. REMOVAL.

1. Remove nuts (3, figure 52-3), washers (2), and screws (1) from upper and lower door hinge halves (13).
2. Pull exterior handle (5) to unlatch door, and remove door from fuselage.

52-12. INSPECTION AND REPAIR.

1. Inspect passenger door (4, figure 52-3) for cracks, dents, distortion, and corrosion.

NOTE

Structural damage to doors should be repaired in accordance with BHT-206-SRM-1.

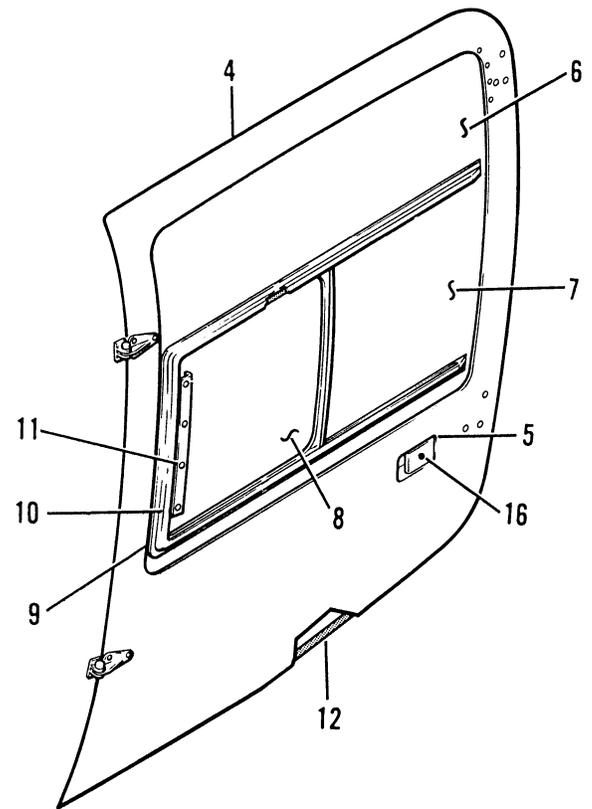
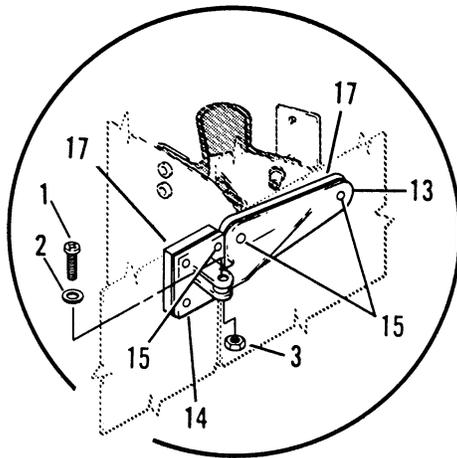
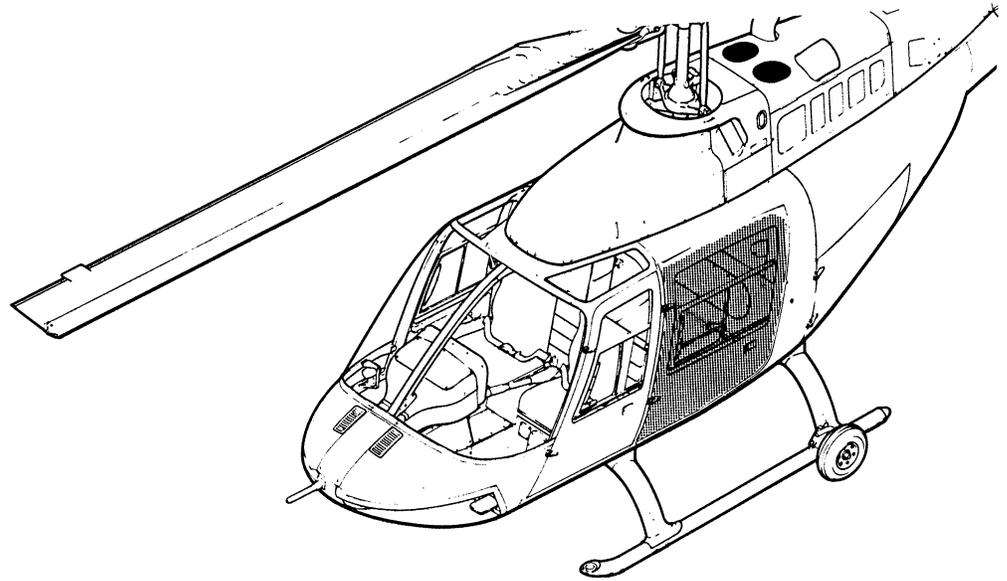
2. Inspect windows (6, 7, and 8) for cracks, crazing, scratches, pits, and other obstructions to vision. Inspect window edging (9), track (10), and window handle (11) for damage and deterioration (paragraph 52-60).
3. Inspect passenger door seal (12) for damage, deterioration, and bond separation. Replace defective seal (paragraph 52-3).
4. Inspect passenger door upper and lower hinge halves (13) for cracks, distortion, and loose or working rivets and screws. Replace worn or damaged hinges (paragraph 52-15).
5. Inspect passenger door latch assembly and strikers for proper operation and condition. Refer to paragraphs 52-18 through 52-25 for detailed repair and adjustment procedures.
6. Inspect passenger door lock (16) for security and for proper operation. Refer to paragraph 52-18 for lock replacement procedure.

52-13. INSTALLATION.



DO NOT OVERTIGHTEN NUTS. DISTORTION, MISALIGNMENT, AND DAMAGE MAY OCCUR.

1. Position passenger door (4, figure 52-3) to fuselage and align hinge halves (13 and 14) on both upper and lower hinges. Install screws (1), washers (2), and nuts (3) to interlock hinge halves. Tighten nuts (3) approximately one-fourth turn beyond snug fit.
2. Check door hinges and latch mechanism for proper operation. Adjust passenger door latch (paragraph 52-20). Adjust striker (paragraph 52-25).



- | | |
|--------------------|-------------------|
| 1. Screw | 10. Track |
| 2. Washer | 11. Window handle |
| 3. Nut | 12. Seal |
| 4. Passenger door | 13. Hinge half |
| 5. Exterior handle | 14. Hinge half |
| 6. Window | 15. Rivet |
| 7. Window | 16. Lock |
| 8. Window | 17. Shim |
| 9. Edging | |

206A/BS-M-52-3

Figure 52-3. Passenger door installation

52-14. PASSENGER DOOR HINGES.

Passenger door hinge halves are manufactured from steel investment castings and are riveted to the fuselage and passenger doors. Shims are used under hinge halves to align doors with fuselage contour.

52-15. REPLACEMENT.

1. Remove passenger door (4, figure 52-3), (paragraph 52-11).

NOTE

Replacement procedures given are for left side passenger door hinges, right side similar.

NOTE

Tag and identify serviceable hinge halves and shims as they are removed to ensure correct positioning upon installation. Shims vary in thickness and hinge halves differ in their angles.

2. Drill out rivets (15) to remove left door (4) hinge halves (13 and 14). Remove nut (3), washer (2), and screw (1). Remove hinges.
3. Position new hinge halves (13 and 14) with shims (17) (as required) to door and fuselage. Position passenger door (4) to fuselage and hold in place. Peel shims, as required, to obtain alignment of outside door surface with fuselage contour.
4. After shim (17) adjustments have been made, secure hinge half (13) and shim (17) (as required) to passenger door (4) with rivets.
5. Install hinge half (14) and shim (17) (as required) to fuselage with four rivets.
6. Complete installation of passenger doors (paragraph 52-13).

52-16. CABIN DOORS — SINGLE LATCH ASSEMBLY.



TO PREVENT WIND DAMAGE TO DOORS AND HINGES, ENSURE ALL DOORS ARE CLOSED AND LOCKED WHEN NOT IN USE.

Spring loaded, plunger-type latch assemblies are provided on all four entrance doors. The latch assemblies are identical except for a longer link employed in the two aft doors to connect the inside door handle to the latch. Refer to figure 52-4.

52-17. REMOVAL.

NOTE

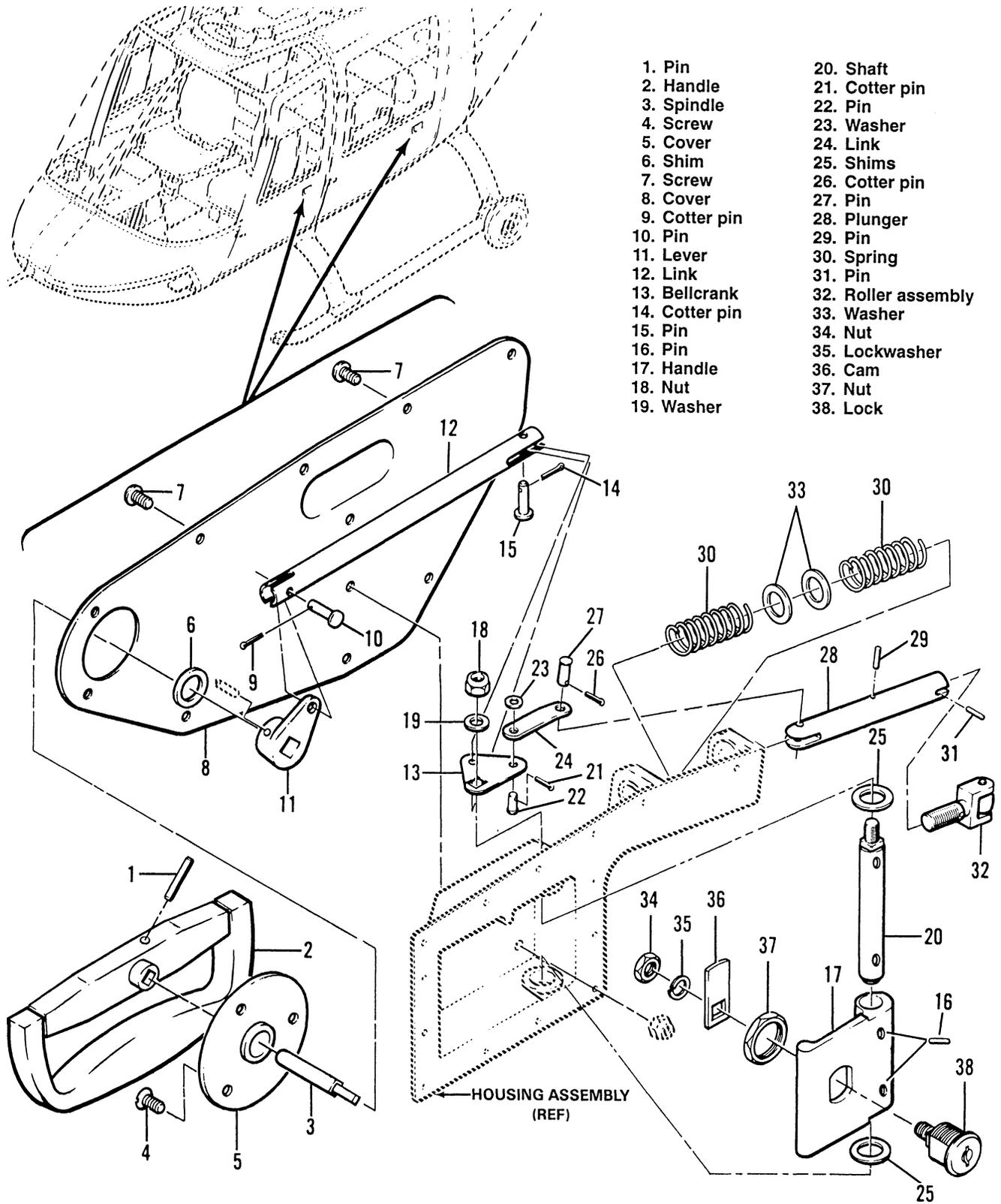
Disassemble latch only to the extent necessary for repair or replacement.

1. Remove pin (1, figure 52-4) that secures inside handle (2) to spindle (3). Remove handle.
2. Remove screws (4) from cover (5). Remove cover (5) and shim (6).
3. Remove screws (7) attaching cover (8) to door.
4. Remove cotter pin (9) and pin (10) that connects lever (11) to link (12). Disconnect link (12) from bellcrank (13) by removing cotter pin (14) and pin (15).
5. Remove pin (16) from handle (17). Remove nut (18) and washer (19) from shaft (20). Remove cotter pin (21), washer (23) and pin (22) that secures bellcrank (13), shaft (20), shims (25), and handle (17). Remove cotter pin (26) and pin (27) connecting link (24) to plunger (28).
6. Remove pin (29) located between springs (30) and remove plunger (28). Remove pin (31) from slot in plunger and unscrew roller assembly (32).

52-18. INSPECTION AND REPAIR.

Replace damaged or worn parts as required. Replace unserviceable cabin door lock as follows (figure 52-4):

1. Remove nut (34), lockwasher (35), and cam (36).
2. Remove nut (37) and remove lock (38) from handle (17).
3. Clean threads on new lock and nut (37) with aliphatic naphtha (C-305) or MEK (C-309).
4. Apply sealant (C-320), grade AV, to threads of lock in area of contact with nut (37) and insert lock through handle (17); secure with nut (37).



206A/BS-M-52-4

Figure 52-4. Cabin door — single latch assembly

BHT-206A/B-SERIES-MM-5

5. Install cam (36), lockwasher (35), and nut (34) on lock.
6. Perform functional check of lock.

52-19. INSTALLATION.

1. Screw roller assembly (32, figure 52-4) into the plunger (28).
2. Insert plunger (28) into outer face of latch housing and install two springs (30) and two washers (33) over plunger. Insert plunger through inner face of housing. Install link (24) in fork end of plunger and insert pin (27) with head up. Secure pin with cotter pin (26). Separate springs (30) and washers (33) and install pin (29) between washers (33).
3. Position handle (17) in housing and install shims (25) on both sides of handle to maintain approximately 0.03 inch (0.76 mm) clearance between handle and housing assembly. Insert shaft (20) (threaded end up) through handle and shims (25). Install bellcrank (13) over threaded end of shaft (20) and secure with washer (19) and nut (18). Align holes in link (24) and bellcrank (13) and install pin (22) (head down) and washer (23). Secure pin with cotter pin (21). Install pin (16) in outside face of handle, securing handle to shaft.
4. Install link (12) on bellcrank (13) and secure with pin (15) and cotter pin (14).
5. Install lever (11) on inside handle spindle (3) and secure with pin (if removed). Connect lever (11) and link (12) with pin (10) and cotter pin (9).
6. Position cover (8) over spindle (3) and install shim (6) and cover (5) on spindle. Install inside handle (2) and spindle. Install cover (8) on door with screws (7). Align holes of cover and install screws (4). The door handle should be positioned in a horizontal position. Check door latch for operation; if adjustment is required proceed to paragraph 52-20.

52-20. ADJUSTMENT.

1. Adjust the clearance between the roller assembly (2, figure 52-5) and the inner wall of the striker housing (1) to 0.090 to 0.140 inch (2.29 to 3.56 mm) when the latch assembly is in the closed position.
2. Adjust the peel type shim (4), between striker (3) and striker housing (1) for a smooth door operation with minimum door panel deflection, to prevent door rattle.

52-21. CABIN DOORS — DUAL LATCH ASSEMBLY. Helicopter S/N 1751 and Subsequent

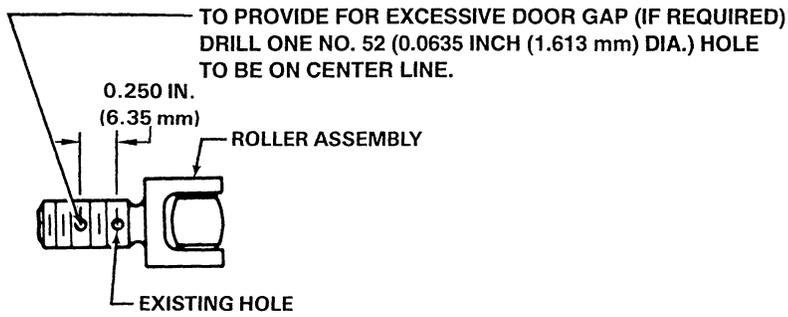
The cabin door dual latch assemblies are similar in design and operation. Each cabin door incorporates two blade-type latches with connecting linkage, flush exterior handles with provisions for door locks, and standard handles on interior of doors. Dual latch assemblies provide for a more positive air and water seal to fuselage (figure 52-6).

52-22. REMOVAL.

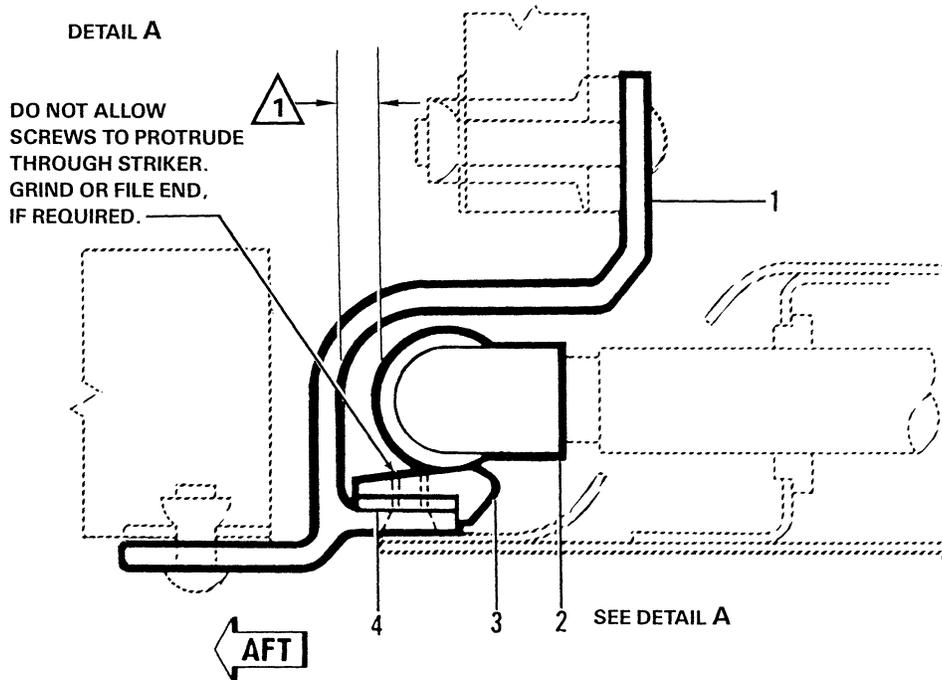
NOTE

Remove and disassemble latch assemblies only to the extent necessary for repair or replacement of parts.

1. Remove pin (3, figure 52-6) that secures interior handle (1) to spindle (8). Remove handle.
2. Remove screws (2) from cover (4) on cabin door. Remove cover, bushing (5), and shim (9).
3. Remove screws (6) attaching cover (7) to cabin door. Remove cover and lift spindle (8), lever (10), and link or rod (14) out of receptacle (11). Disconnect link or rod from lever by removing cotter pin (60), washer (61), and pin (13).
4. Remove spring (23) attached to hook portion of bellcrank (18) and to lower latch (35) at rod end (50).
5. Disconnect bellcrank (47) by removing nut (48), thin aluminum washer (49), and bolt (43) and removing bolt (17) and thin aluminum washers (36) at housing (16).
6. Remove cover (29) over upper latch (31) by removing screws (30).
7. Remove four screws (25 and 28) and thin aluminum washers (26) from upper and lower latches (31 and 35) to cabin door. Thin washers may be used for shimming at latches; retain for reinstallation.
8. Shift both the upper and lower latches (31 and 35) up in hat section of cabin doorframe and disconnect rod (27) from upper latch by removing cotter pin (60), washer (61), and pin (32).



DETAIL A



- 1. Striker housing
- 2. Roller assembly
- 3. Striker
- 4. Shim

NOTE

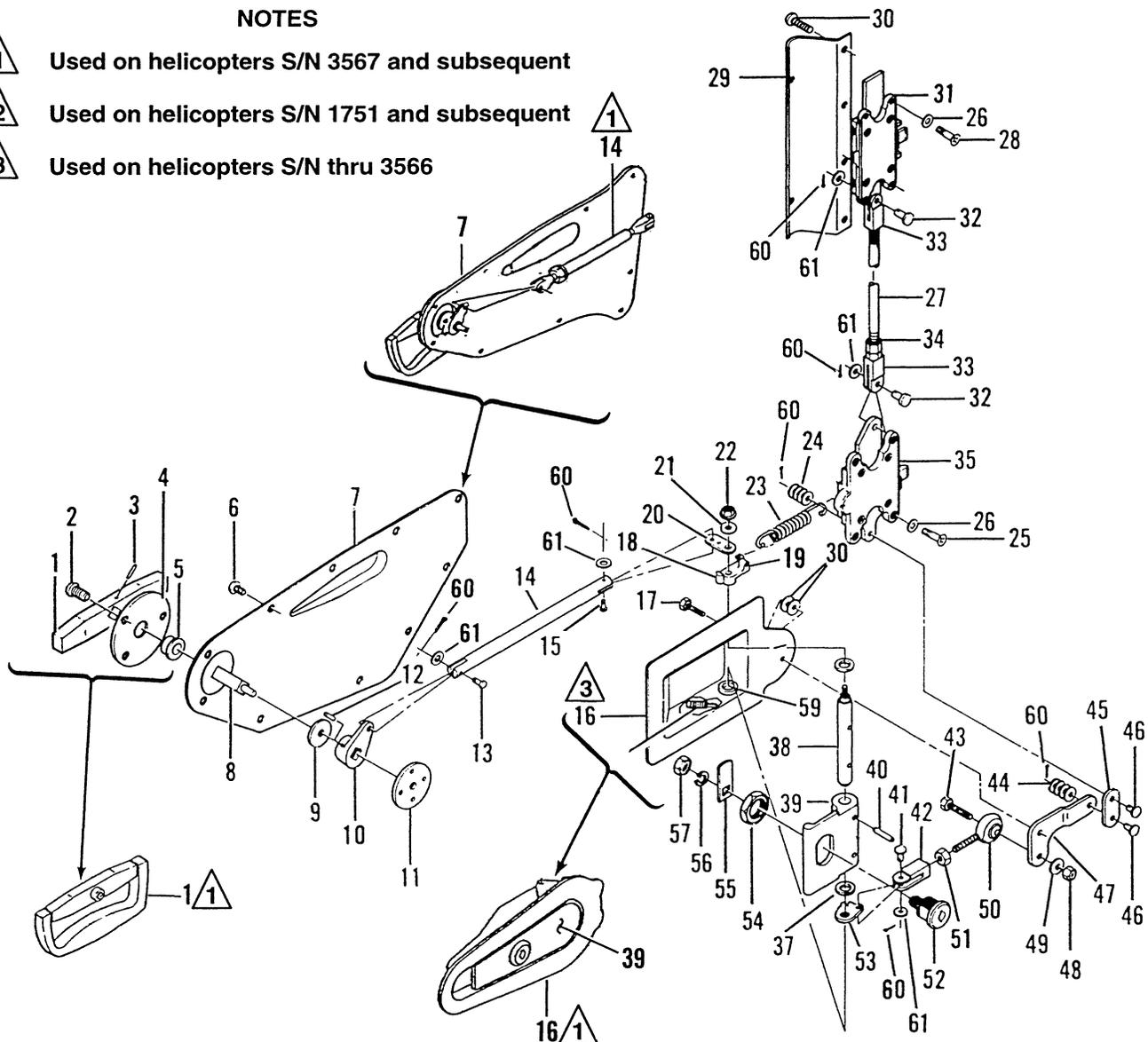
1 0.09 to 0.14 inch (2.29 to 3.56 mm) clearance.

206A/BS-M-52-5

Figure 52-5. Adjustment — single latch assembly

NOTES

- 1 Used on helicopters S/N 3567 and subsequent
- 2 Used on helicopters S/N 1751 and subsequent
- 3 Used on helicopters S/N thru 3566



- | | | | |
|--------------------|--------------------------|--------------------------|--------------------------|
| 1. Interior handle | 18. Bellcrank | 33. Clevis | 47. Bellcrank |
| 2. Screw | 19. Setscrew | 34. Nut | 48. Nut |
| 3. Pin | 20. Bellcrank link | 35. Lower latch | 49. Thin aluminum washer |
| 4. Cover | 21. Washer | 36. Thin aluminum washer | 50. Rod end |
| 5. Bushing | 22. Nut | 37. Shim | 51. Nut |
| 6. Screw | 23. Spring | 38. Shaft | 52. Lock |
| 7. Cover | 24. Thin aluminum washer | 39. Exterior handle | 53. Cam |
| 8. Spindle | 25. Screw | 40. Pin | 54. Nut |
| 9. Shim | 26. Thin aluminum washer | 41. Pin | 55. Cam |
| 10. Lever | 27. Rod | 42. Clevis | 56. Lockwasher |
| 11. Receptacle | 28. Screw | 43. Bolt | 57. Nut |
| 12. Pin | 29. Cover | 44. Thin aluminum washer | 58. Plunger |
| 13. Pin | 30. Screw | 45. Link | 59. Bushing |
| 14. Link or Rod | 31. Upper latch | 46. Pin | 60. Cotter pin |
| 15. Pin | 32. Pin | | 61. Washer |
| 16. Housing | | | |
| 17. Bolt | | | |

206A/BS-M-52-6

Figure 52-6. Cabin door — dual latch assembly

9. Shift lower latch (35) and rod (27) down in hat section of cabin doorframe and disconnect rod from lower latch by removing cotter pin (60), washer (61), and pin (32). Remove lower latch. Remove clevis (33) and nut (34) from lower end of rod. Pull rod (27) through opening for upper latch.

10. Only when replacement of parts is required should exterior handle (39) and housing (16) be removed. Remove housing as a complete assembly as follows:

NOTE

For Helicopters S/N 1751 through 3566: To replace exterior handle (39), shims (37), bushings (59), and shaft (38) with cam (53), it will be necessary to remove housing (16) from cabin door.

NOTE

Helicopters S/N 3567 and subsequent: It is not recommended that exterior handle (39) be disassembled, order entire unit.

a. Bellcrank (47) may be removed if required by removing cotter pin (60), thin aluminum washers (44) and pin (46).

b. Remove nut (22) and washer (21) from threaded end of shaft (38) and lift bellcrank link (20) and bellcrank (18) from end of shaft.

c. Helicopter S/N 3567 and subsequent: Remove nut (22) and washer (21) from threaded end of shaft (38) and lift bellcrank link (20) and bellcrank (18) from end of shaft. Remove clevis (42) by removing cotter pin (60), washer (61), and pin (41).

d. From handle side of housing (16), remove two pins (40) securing exterior handle (39) to shaft (38). Pilot holes are provided in base of housing for driving out pins. Remove clevis (42) by removing cotter pin (60), washer (61), and pin (41). Back off plunger (58).

e. Work shaft (38) out of housing (16), separating exterior handle (39). Separate parts and retain shims (37) between handle and housing for reinstallation.

NOTE

Cam (53) is fitted to shaft (38); do not remove.

11. If required, remove lock (52) from exterior handle (39) by removing nut (57), lockwasher (56), cam (55), and nut (54). Remove lock from handle.

52-23. INSPECTION AND REPAIR.

1. Inspect dual latch assembly for proper adjustment with the latch handles in the locked position. Press firmly against both the upper and lower latch blades to verify they are locked in position. The travel of the latch slider from the open to the locked position must be 1.06 inches (26.92 mm) as shown in figure 52-7. In addition, check latch engagement in strikers: minimum must be 0.100 inch (2.54 mm) upper and 0.200 inch (5.08 mm) lower. Latches that do not meet these conditions will require adjustment in accordance with paragraph 52-25.

2. Check latch mechanism using the interior and exterior handles (1 and 39, figure 52-6) separately; look for proper response and ease of operation, and ensure that exterior handle is flush to door.

3. Whenever covers (4, 7, and 29) are removed, inspect dual latch mechanism and linkage for liberal coating of corrosion preventive compound (C-104).

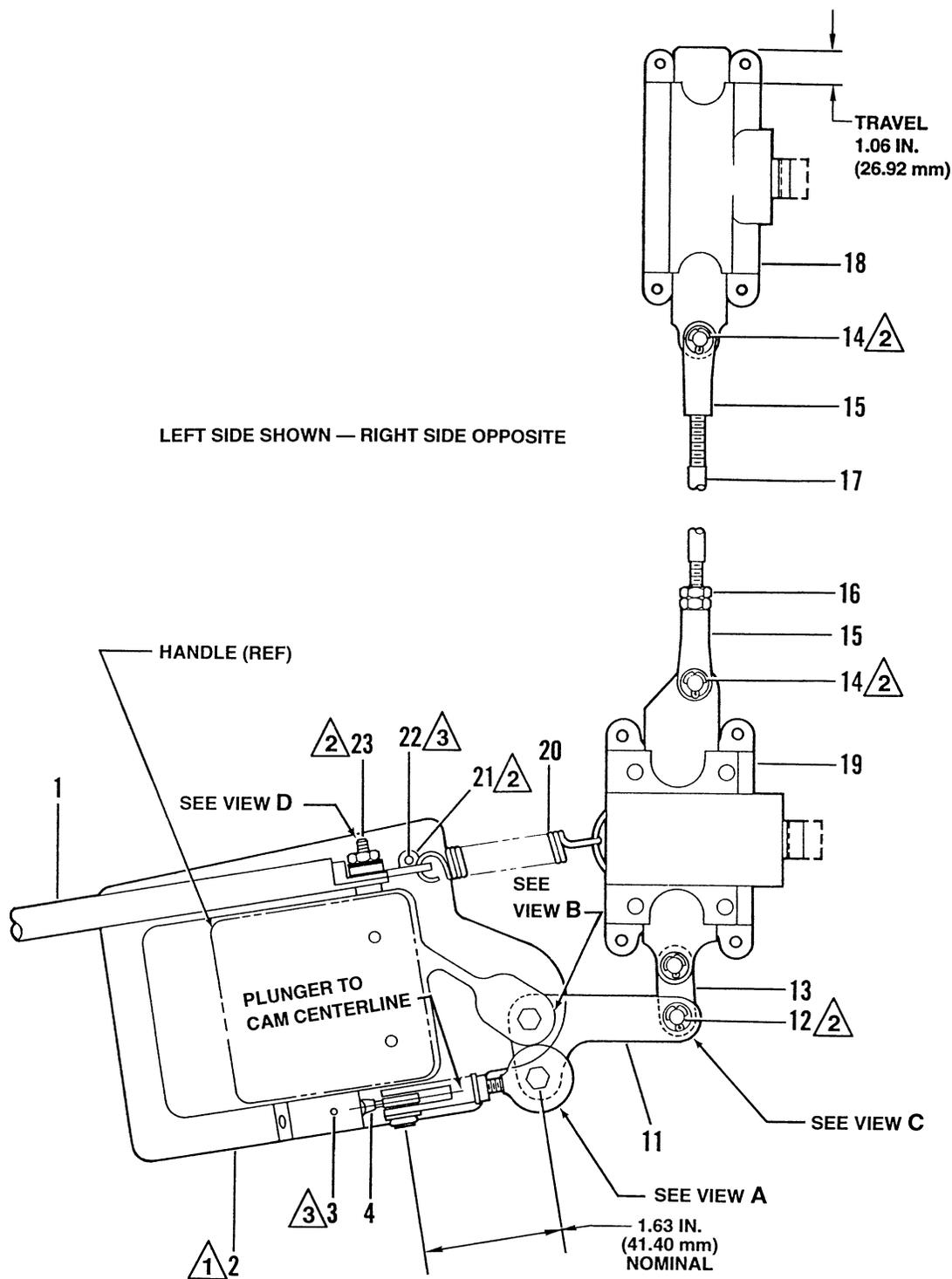
52-24. INSTALLATION.

1. Install exterior handle (39, figure 52-6) as follows:

a. Install clevis (42) and nut (51) on rod end (50) and to cam (53), and secure with pin (41), washers (61), and cotter pin (60). Install pin so that head will be inboard to housing (16) when assembled.

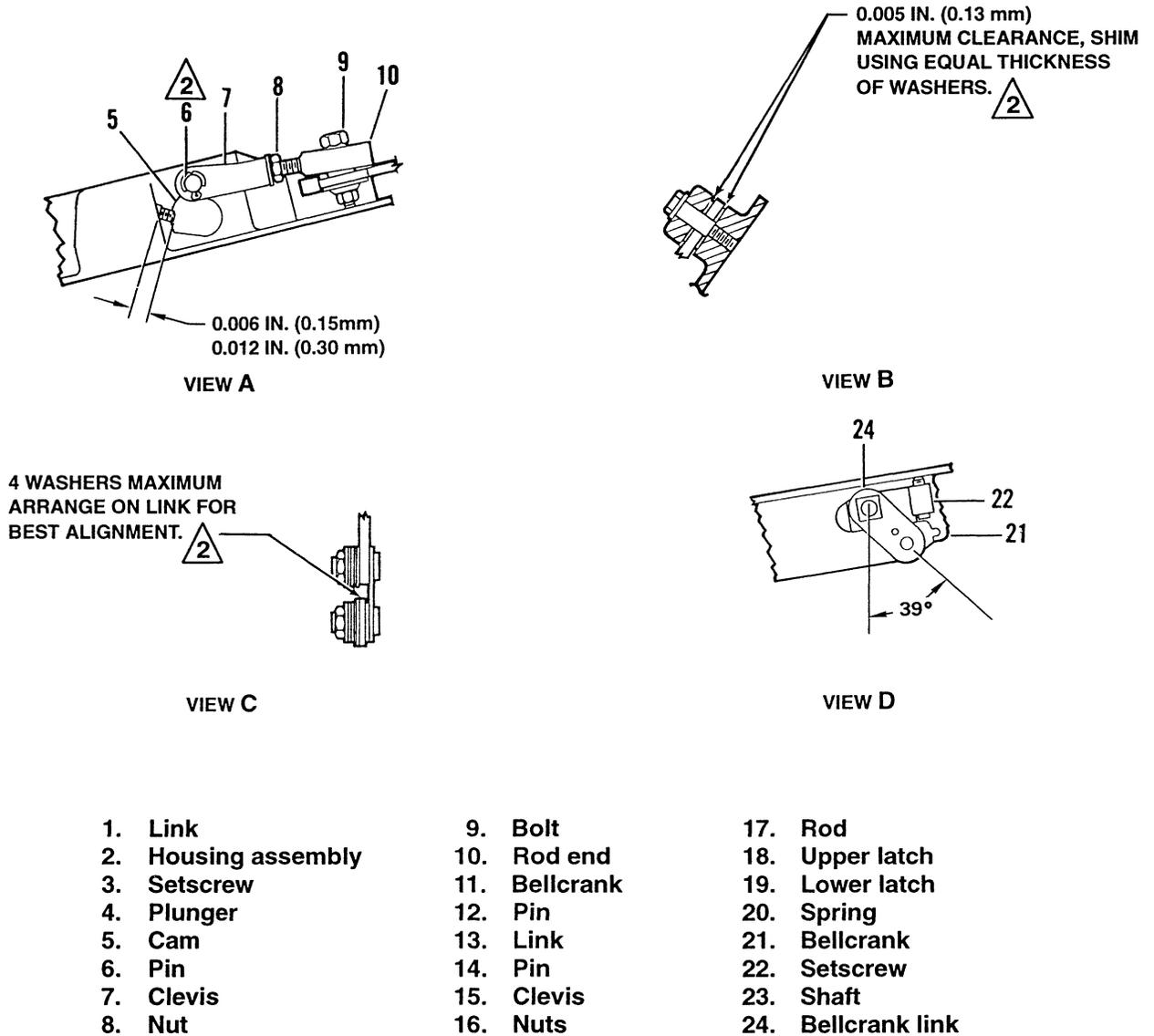
b. For helicopters S/N 1751 through 3566: Insert exterior handle (39) in housing (16) and install shaft (38) through housing from plunger (58) side. Temporarily install two pins (40) in handle and shaft.

c. Install bellcrank (47) to housing (16) with bolt (17) and thin aluminum washers (36) as shown in figure 52-6. Refer to figure 52-7, view B for shimming of short arm. Short arm of bellcrank is to be installed to rod end (50, figure 52-6). Adjust rod end to a nominal dimension of 1.63 inches (41.40 mm) (figure 52-7) and connect to bellcrank with bolt (43, figure 52-6), thin aluminum washer (49), and nut (48).



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Figure 52-7. Cabin doors — dual latch assembly adjustment (Sheet 1 of 2)



NOTES

- △1 Apply a light film of sealing compound (C-360) to flange of housing as a water seal prior to installation.
- △2 Apply coating of corrosion preventive compound (C-104) at all movable points.
- △3 Apply a drop of sealant (C-320) grade CV to head or exposed threads of setscrews.

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Figure 52-7. Cabin doors — dual latch assembly adjustment (Sheet 2)



WHEN SHIMMING EXTERIOR HANDLE (39) AND SHAFT (38) FOR AXIAL MOVEMENT, IT IS MANDATORY THAT CAM (53) BE ALIGNED WITH PLUNGER (58) CENTERLINE.

d. Check axial movement of shaft (38), exterior handle (39), and the displacement of cam (53) from plunger (58) centerline. Add shims (37), as required, between bushings (59) and handle on shaft to allow 0.010 inch (0.25 mm) plus or minus 0.005 inch (0.13 mm) axial movement and alignment of cam to a centerline through plunger.

e. After shimming is completed visually check to ensure that cam (53) will align with a centerline through plunger (58) while actuating bellcrank (47) back and forth (figure 52-6).

f. Install bellcrank (18) and bellcrank link (20) and square end of shaft (38). Secure with washer (21) and nut (22) to position bellcrank (figure 52-7, view D).

NOTE

Bellcrank link (20) is not symmetrical. Locate punch mark on bellcrank link and position mark up for left side housing assemblies. Position punch mark down for right side housing assemblies.

2. Loosen setscrew (3) using an allen wrench. Rotate plunger (4) with blade screwdriver; if plunger is stiff to turn or the hex plunger tip cannot be moved with thumb pressure, remove and lubricate as follows:

a. Using an allen wrench remove setscrew (3) and small brass plug underneath. Do not misplace plug. Some latches do not have a brass plug.

b. Using an allen wrench and open end wrench remove plunger (4). Unthread allen-head screw in end of plunger and remove spring and hex tip.

NOTE

When removing allen-head screw from plunger count the number of turns to remove allen-head screw; reinstall with the same number of turns to maintain correct spring tension.

c. Coat internal and external threads of plunger, spring, and hex tip with corrosion preventive compound (C-104). Reassemble and install in housing.

d. Insert small brass plug in opening for setscrew (3) and loosely install setscrew.

3. Adjust plunger housing to clear cam by 0.006 to 0.012 inch (0.15 to 0.30 mm) (figure 52-7, view A).

NOTE

With the plunger (58, figure 52-6) engaged in the V-slot of cam (53) the exterior handle (39) will be set to the 'slammable position' detent.

4. With the exterior handle (39) set in the slammable position and plunger (58) engaged in V-slot of cam (53), adjust setscrew (19) in bellcrank (18) using an allen wrench until setscrew just touches inner face of housing (16).

5. Adjust and install rod (27) as follows:

a. Fabricate a workaid from a 3-foot (914.40 mm) length of 0.25 inch (6.35 mm) outside diameter soft aluminum tubing. Tap one end to number 10-32UNF-2B threads, 1-inch (25.40 mm) deep.

b. Install one clevis (33) to mid-thread point. This is now the upper end of the rod and will be attached to the lower latch (35). Locate mid-thread point on opposite end of rod and reference mark with ink, dye, or paint.

c. Slide threaded end of the fabricated workaid tube through opening in cabin door for the upper latch (31). Bend tube as required to follow hat section and contour of cabin door.

d. At cabin door opening for lower latch (35), thread rod (27) into threaded end of fabricated workaid tube. Grasp exposed portion of tube at opening for upper latch (31) and pull down on tube. When rod (27) reaches opening for lower door latch, unthread tube from rod and attach upper clevis (33) and two nuts (34) to reference mark at mid-thread point.

6. Position lower latch (35) in opening in cabin door and attach lower clevis (33) to slide plate of latch with pin (32), washer (61), and cotter pin (60). Install pin with head outboard and undercut on clevis mating with pin head.

7. Shift lower latch (35) and rod (27) up in hat section of cabin door. Position upper latch (31) to upper clevis (33) and install pin (32), washer (61), and cotter pin (60). Install pin with head outboard and undercut on clevis mating with pin head.

8. Position upper and lower latches (31 and 35) to mounting point in cabin doorframe and secure each with four screws (25 and 28) and thin aluminum washers (26).

9. Temporarily position assembled housing (16) to inside skin of cabin doorframe. Connect bellcrank (47) to link (45) with pins (46), thin aluminum washers (24 and 44), and cotter pins (60).

a. Align housing (16) to cutout in cabin door and to lower latch (35). As required, drill 0.096 or 0.128 inch (2.44 or 3.25 mm) rivet holes in housing, using existing holes in cabin door skin for pattern.

b. Disconnect bellcrank (47) from link (45) by removing one of the pins (46). Remove housing (16) from cabin door.

c. Locate rivet hole in corner of housing (16) that is adjacent to surface that will be contacted by setscrew (19) in bellcrank (18). Lightly countersink rivet hole on inboard-flange face. Deburr all rivet holes and remove drill shavings from all surfaces.

NOTE

Housing rivet located below setscrew (19) must be flush to prevent improper spring force adjustment.

d. Clean flange face of housing (16) and interior edge surface of cabin door skin at cutout with aliphatic naphtha (C-305). Wipe surface dry before aliphatic naphtha evaporates.

e. Apply a light film of sealing compound (C-360) to flange face of housing (16) and to mating surface on interior of cabin door.

f. Position housing (16) inside cabin door and secure with ten MS20470AD3 or AD4 rivets, as required. Ensure that bucked head of rivet below setscrew (19) is flush with flange face of housing. Trim sealing compound on exterior of housing to remove excess and to ensure all voids are sealed between housing and cabin door skin.

g. Connect bellcrank (47) to link (45) with pin (46) and thin aluminum washers (24 or 44). Arrange washers, as required, for best alignment, not to exceed a maximum of four on each pin (figure 52-7, view C).

10. Install square cut end of link (14, figure 52-6) to bellcrank link (20) and secure with pin (15) and cotter pin

(60). Link (14) is to be installed with bevel-cut end forward and up for crew doors, and half-moon cut forward for passenger doors. Install pin with head toward housing

11. Install spring (23) to cut out on back of lower latch (35) and to hook portion of bellcrank (18).

12. Install interior handle (1) as follows:

a. Install lever (10) on spindle (8) and secure with pin (12). Connect lever to link (14) with pin (13) and cotter pin (60).

b. Apply a coating of corrosion preventive compound (C-104) to bushing (5) in receptacle (11). Insert spindle (8) into receptacle.

NOTE

Lever (10) shall be installed on spindle (8) at an angle of 45 degrees aft of a vertical center when interior handle (1) is horizontal.

c. Position shim (9) on spindle (8) with cover (4) and temporarily install interior handle (1) in horizontal position.

d. Adjustment of shim (9) and final installation of covers (4, 7, and 29) will be accomplished after adjustment of latches (paragraph 52-25).

52-25. ADJUSTMENT.

1. If not previously accomplished, perform these steps to gain access to dual latch mechanism:

a. Remove pin (3, figure 52-6) that secures interior handle (1) to spindle (8). Remove screws (2), cover (4), and cover (7) from cabin door. Leave spindle, lever (10), and link or rod (14) installed in receptacle (11). Temporarily reinstall handle.

b. Remove cover (29) from upper latch (31) by removing screws (30).

2. Check upper latch (18, figure 52-7) for correct cam plate or slider travel and proper adjustment of rod end (10) and rod (17) as follows:

a. Remove bolt (9) from rod end (10) and bellcrank (11) using a box end wrench bent to a 45-degree angle. Disconnect spring (20) from bellcrank (21) and lower latch (19).

b. Using bellcrank (11) as a lever, actuate upper and lower latches (18 and 19) through full range of

travel. Check cam plate or slider of upper latch for 1.06 ± 0.02 inches (26.92 ± 0.51 mm) of travel while actuating bellcrank through full travel range. Refer to figure 52-7 for measuring points on upper latch.

c. Check both upper and lower latches (18 and 19), pins (14), and clevises (15) for possible binding or contact with cabin doorframe. This may be accomplished by actuating bellcrank (11) by hand through full travel range, using a piece of paper to check for binding or contact with cabin doorframe, pins, and clevises.

d. If binding is evident install thin aluminum washers between latch and cabin doorframe as required, using washers equally. As an example, if upper latch pin or clevis is binding, add washers between latch and doorframe at two lower mounting screws.

NOTE

Rod (17) travel of 1.06 ± 0.02 inches (26.92 ± 0.51 mm), and corresponding movement of upper and lower latches (18 and 19) of cam plate are mandatory for proper latch operation.

e. If 1.06 ± 0.02 inches (26.92 ± 0.51 mm), of rod (17) travel is not available, remove screws securing upper latch (18) to cabin door and remove pin (14). Adjust upper clevis (15) as required to obtain required travel.

3. Check axial play of handle in housing assembly (2). If axial handle motion is not within 0.010 ± 0.005 inch (0.25 ± 0.13 mm), housing will require reshimming. Refer to paragraph 52-22, step 10. for removal and paragraph 52-24, step 1. for installation.

4. Position exterior handle to slammable position. Move handle until tip of plunger (4) engages V-slot in cam (5); this is the slammable position. Check plunger (4) for correct adjustment as follows:

a. Visually check that plunger (4) contacts V-slot of cam (5). If dimension is not correct, proceed with the following steps:

b. Partially loosen setscrew (3); do not remove.

c. Using screwdriver blade adjust plunger housing to clear cam 0.006 to 0.012 inch (0.15 to 0.30 mm).

NOTE

Visually check that tip of plunger (4) is in line with centerline through cam (5), if not, repeat step 3.

d. Tighten setscrew (3) to secure plunger (4) in housing assembly (2).

5. Adjust rod end (10) to a nominal dimension of 1.63 inches (41.40 mm). Check to ensure that handle is in closed position, and upper and lower latch sliders are in up (lock) position.

a. Position rod end (10) to bellcrank (11). Adjust rod end as required to align bolt holes for bolt (9).

b. Install bolt (9) and secure with washer and nut.

6. Install spring (20) between lower latch (19) and hook on bellcrank (21).

7. With exterior handle (39, figure 52-6) and lower latch (19, figure 52-7) in slammable position, initially adjust setscrew (22) until it just contacts inside flange surface of housing assembly (2). Final adjustment of setscrew will be accomplished after applying corrosion preventive compound and locking setscrews.

8. Apply a liberal coating of corrosion preventive compound (C-104) with small brush to the following parts as a corrosion preventive and lubricant:

a. Hex end of plunger (4) and cam (5).

b. Pin (6) and washers.

c. Two pins (12) and washers in link (13).

d. Two pins (14) and washers in clevises (15).

e. Both ends of link (1) at pins.

9. Check exterior door handle and plunger (4) for over-travel of cam (5) rectangular slot by flipping handle in and out of slam position several times. If cam over-travels plunger each time handle is flipped, adjust setscrew (22) as required until plunger engages V-slot of cam. Do not ride handle while making this adjustment. Recheck adjustments using interior handle.

10. Check that exterior handle is flush with housing assembly (2). If handle will not close completely, the length of rod end (10) will require readjustment by lengthening rod end in one-half turn increments until free play is eliminated. Align clevis (7) and rod end to attaching parts by adjusting nut (8). Repeat step 9. to ensure setscrew (22) does not require further adjustment.

11. Apply a drop of sealant (C-320), grade CV, to head or exposed threaded portions of setscrews (3 and 22) to prevent movement of setscrews during normal operation.

12. Check that all pins (6, 12, and 14) attaching link (1) are properly cotter-pinned. Check washer arrangement on link (13) to minimize freeplay. Misalignment of one thin washer (0.015 inch (0.38 mm)) is permitted. Refer to figure 52-7, view C.

13. Install covers (4 and 7, figure 52-6) with screws (2 and 6). Temporarily install handle (1).

a. Check handle for smooth operation with minimum deflection of covers and handle.

b. If smooth operation, remove handle (1), cover (4), and apply a film of corrosion preventive compound (C-104) to shims and inside diameter of bushing (5) in cover.

c. Install cover (4) and secure with screws (2). Close cabin door and position exterior handle (39) to locked position. Install interior handle (1) on spindle (8) in horizontal position and secure with pin (3).

d. Check cabin door latch mechanism for proper operation using both the exterior and interior handles (1 and 39).

e. If binding is present, remove interior handle (1) and cover (4).

f. Insert full shim (9) on spindle (8) and position cover (4) and interior handle (1) on spindle. Peel shim, as required, to permit smooth door handle operation with minimum deflection of covers and handle.

g. After adjustment of shim (9), remove interior handle (1) and cover (4). Apply a film of corrosion preventive compound (C-104) to shims and inside diameter of bushing (5) in cover.

h. Install cover (4) and secure with screws (2). Close cabin door and position exterior handle (39) to locked position. Install interior handle (1) on spindle (8) in horizontal position and secure with pin (3).

i. Check cabin door latch mechanism for proper operation using both the exterior and interior handles (1 and 39).

52-26. CARGO AND MAINTENANCE PLATFORMS.

A dual purpose cargo and maintenance platform is provided as optional equipment. When used as an interior cargo platform, the rear seats are removed and two panels of flooring are installed in the rear compartment. The platforms consist of bonded honeycomb panels; these panels may be installed on either side of the helicopter to provide airframe attachment points and cargo tiedown rings. When not in use as a cargo or work platform, the panels are stowed in the baggage compartment.

52-27. BAGGAGE COMPARTMENT DOOR.

A hinged baggage compartment access door is located on the left side of the helicopter. The 16 cubic feet (0.45 m³) baggage compartment constructed of aluminum alloy and honeycomb paneling also provides access to heater and electrical compartment access panel. Procedure for lock replacement is the same as for cabin door locks, except that a spacer is used in the baggage door. Refer to paragraph 52-18 for repair of latch assembly and to BHT-206-SRM-1 for repair of honeycomb compartment floor.

52-28. REMOVAL.

1. Remove cotter pin (1, figure 52-8), nuts (2), thin aluminum washers (3), and bolts (4) from upper and lower clevises (5 and 7).

2. Depress pushbutton latches (17) and remove baggage compartment door (10 or 11) from fuselage.

52-29. INSPECTION AND REPAIR.

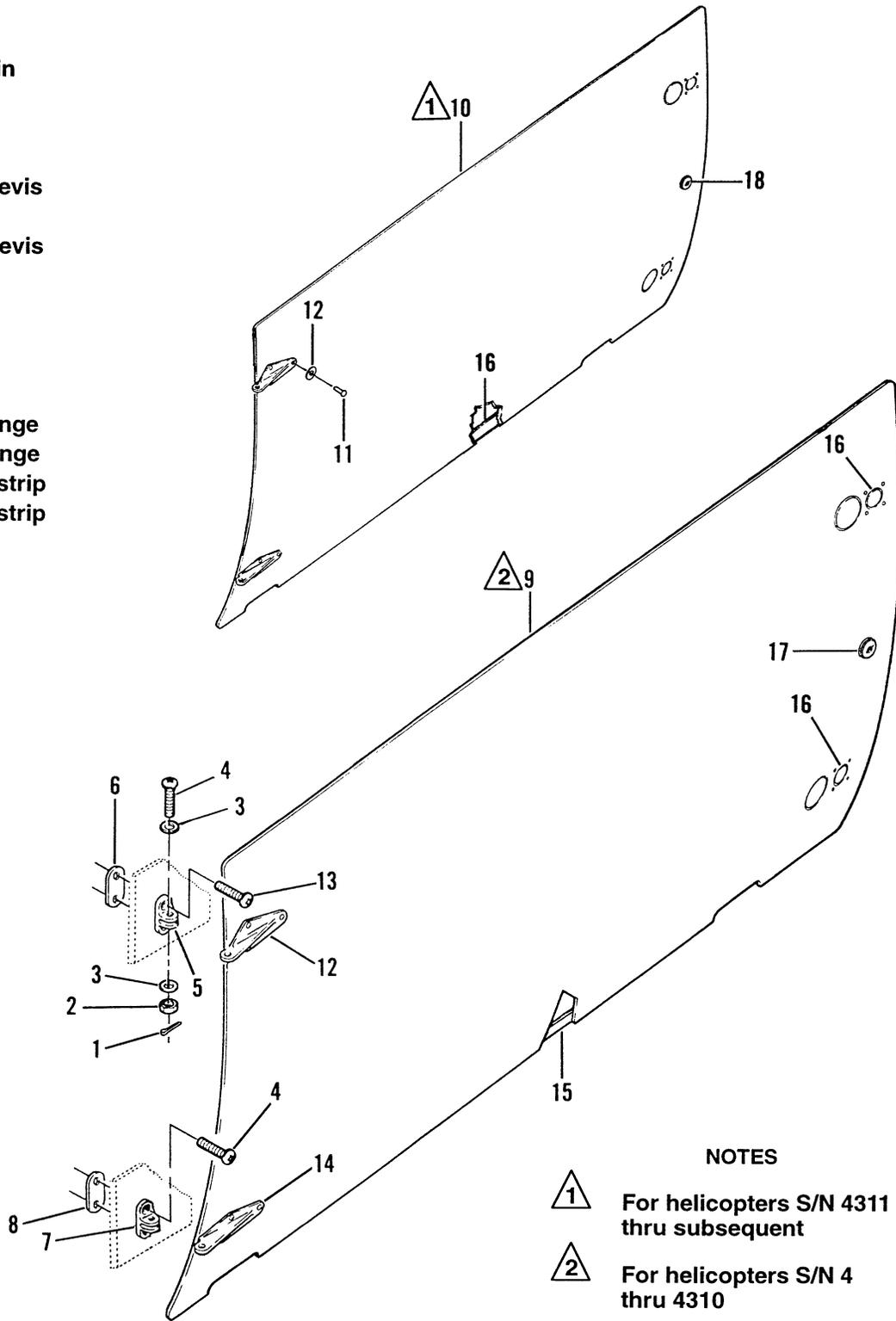
1. Inspect baggage compartment door (10 and 11, figure 52-8) for cracks, dents, distortion, and corrosion.

NOTE

Structural damage to doors should be repaired in accordance with BHT-206-SRM-1.

2. Inspect chafing strip (16) for damage, deterioration, and bond separation. Replace strip, if necessary, with chafing tape (C-455). Chafing strip (16) is 130.0 inches (3302.0 mm) long overall; it may be applied in sections with butt-joints at the corners.

1. Cotter pin
2. Nut
3. Washer
4. Screw
5. Upper clevis
6. Shim
7. Lower clevis
8. Shim
9. Door
10. Door
11. Rivet
12. Washer
13. Upper hinge
14. Lower hinge
15. Chafing strip
16. Chafing strip
17. Lock



NOTES

- 1 For helicopters S/N 4311 thru subsequent
- 2 For helicopters S/N 4 thru 4310

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Figure 52-8. Baggage compartment door

3. Inspect upper and lower hinge halves (14) and clevises (15) for cracks, distortion, and loose or working rivets, and screws. Replace worn or damaged hinges (paragraph 52-31).

4. Inspect pushbutton latches (17) for proper operation and condition. To replace latch, drill out rivets and remove latch from baggage compartment door. Secure new pushbutton latch to door with four MS20470AD4 rivets.

5. Inspect baggage compartment door lock (18) for security and for proper operation. Replace defective lock (paragraph 52-18).

6. Inspect fiberglass door and floor of baggage compartment for holes, voids, and corrosion.

7. Refer to BHT-206-SRM for repair of fiberglass and honeycomb panels.

52-30. INSTALLATION.

1. Align hinge halves (14 or 15, figure 52-8) on baggage compartment door (10 and 11) with upper and lower clevises (5 and 7) on fuselage. Install bolts (4), thin aluminum washers (3), and nuts (2). Tighten nuts (2) fingertight only, and secure with cotter pins (1).

2. Close baggage compartment door (10 or 11), and secure with pushbutton latches (17).

52-31. BAGGAGE COMPARTMENT DOOR HINGES.

Baggage compartment door hinge halves (14, 15, figure 52-8) are manufactured from aluminum alloy investment castings, and are secured to the door and fuselage with rivets and screws. Shims are used under forward hinge halves to align door with fuselage contour.

52-32. DOOR HINGE REPLACEMENT.

NOTE

Tag and identify serviceable hinge halves, clevises, and shims as they are removed to ensure correct positioning upon installation.

Shims vary in thickness, and hinge halves and clevises differ in their angles.

1. Drill out rivets to remove hinge halves (14 and 15, figure 64-8) from baggage compartment door (9, 10). Install new hinge halves (14 and 15) and secure to baggage compartment door with three rivets.

2. Remove screws (4) and remove clevis (5 and 7) and shim (6, 8) from fuselage. Install new upper and lower clevis (5 and 7) with full thickness shim (6 and 8). Position baggage compartment door (9, 10) to fuselage and hold in place. Peel shims (6 and 8) as required to align outside door surface with fuselage contour. After alignment, apply a film of sealant (C-320), grade CV blue, to threads of screws (4) and install screws to secure clevis (5 and 7) and shim (6 and 8) to fuselage.

3. Complete installation of baggage compartment doors (9 or 10) (paragraph 52-30).

52-33. BATTERY ACCESS DOOR.

The battery access door (2, figure 52-9) is located on the nose of the helicopter and provides access to the battery, battery relay, and the hourmeter and circuit breaker. The battery access door is hinged aft. Two camloc fasteners secure the forward edge of the door to the fuselage.

52-34. REMOVAL.

1. Unlock fasteners (1, figure 52-9) at forward edge of door (2).

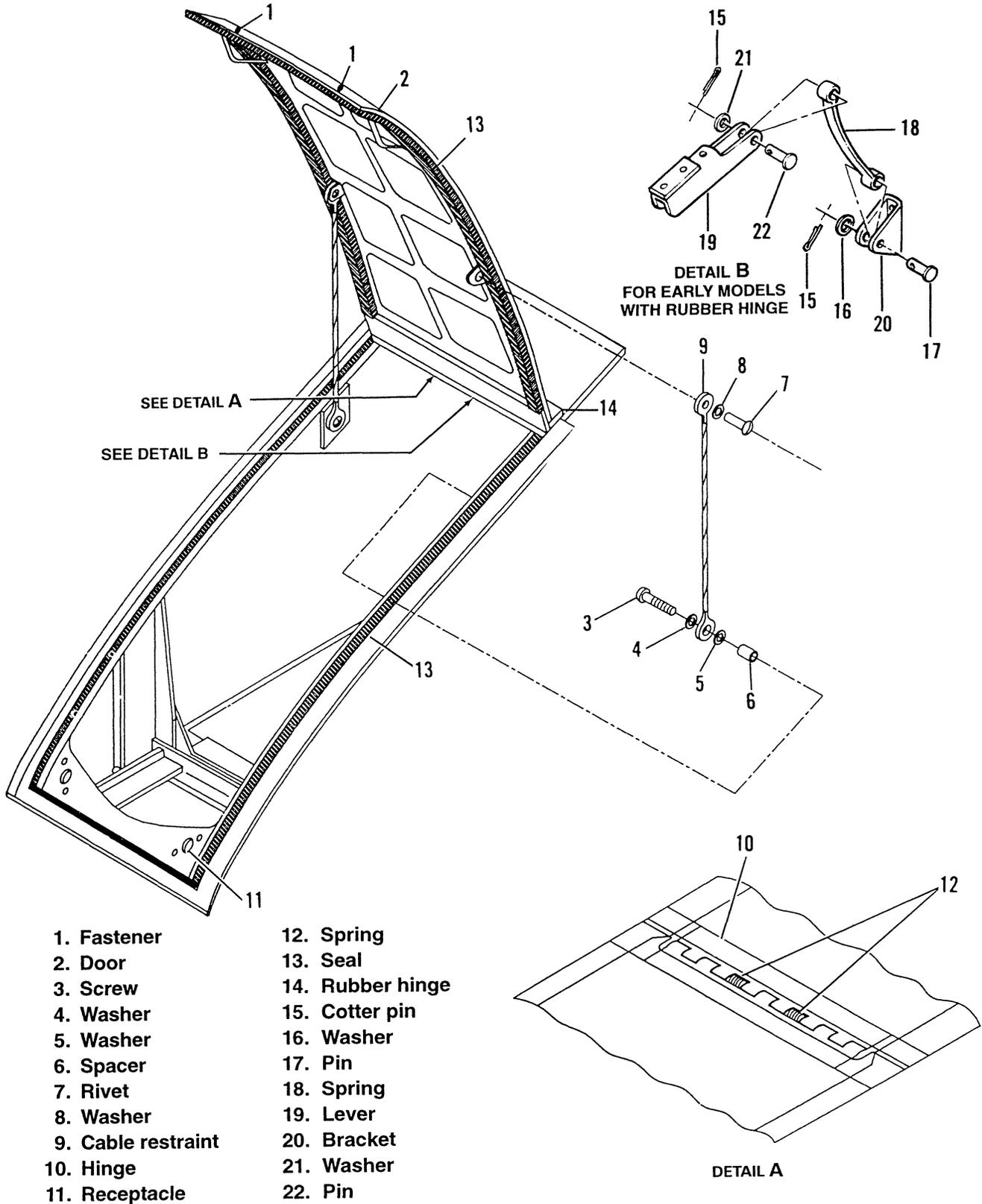
2. Raise door (2), remove screws (3), washers (4 and 5) and spacers (6) securing cable restraint (9) to fuselage.

3. Drill out existing rivets securing hinge (10) to fuselage, and remove door (2) from fuselage.

4. For helicopter with rubber hinge battery door, unlock two fasteners (1) at forward edge of door (2).

5. Raise door (2), remove cotter pin (15), washer (16), and pin (17).

6. Drill out existing rivets securing rubber hinge (14) to fuselage, and remove door (2) from fuselage.



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Figure 52-9. Battery access door

52-35. INSPECTION AND REPAIR.

1. Inspect door (2, figure 52-9) for cracks, dents, distortion, and corrosion.

NOTE

Structural damage to doors should be repaired in accordance with BHT-206-SRM-1.

2. Inspect seal (13) on door (2) and seal (13) on adjacent fuselage for damage, deterioration, and bond separation. Cut required length of new seal and bond to door or adjacent fuselage (paragraph 52-3, step 3). Seals should be butt-jointed at corners.

3. Inspect fasteners (1) on forward edge of door (2) for condition and proper operation. If required, replace fastener (1) and drill out rivets to remove receptacle (11). Secure new receptacle to fuselage with two MS20426AD3 rivets.

4. Inspect hinge (10) for condition.

5. Inspect springs (12) and brackets for condition and proper operation.

6. Inspect rubber hinge (14) for condition.

7. Inspect spring stay (18) for condition, and replace if damage.

8. Inspect lever (19) for condition.

9. Replace lever (19) by removing cotter pin (19), washer (21), and pin (22).

52-36. INSTALLATION.

1. Position door (2, figure 52-9) to fuselage and secure with two fasteners (1) to hold door in correct alignment with fuselage.

2. Match-drill through rivet holes in fuselage and through hinge (10) to ensure proper hole alignment, securing hinge placement with Cleco metal fasteners.

3. Remove door (2) and apply a film of sealing compound (C-360) to mating surfaces of hinge (10) and fuselage. Install door and secure hinge to fuselage with eight MS20470AD4 rivets. Remove excess sealing compound from hinge and fuselage.

4. Secure cable restraint (9) to fuselage using screws (3), washers (4 and 5), and spacers (6).

5. Position rubber hinge and match drill through rive holes in fuselage and through rubber hinge (14) to ensure proper hole alignment; secure hinge to fuselage by installing rivets.

6. Install spring (18) with bracket (20) and install pin (17), washer (16), and secure with cotter pin (15).

7. Install lever (19) to spring (18) and secure with pin (22), washer (21), and cotter pin 915).

8. Close door (2) and secure two fasteners (1).

52-37. MISCELLANEOUS ACCESS DOORS.

Doors and panels are provided at various locations in the cowling and fairings for servicing and inspection of interior areas. Oil reservoir access door (1, figure 52-1), and oil cooler access door (2) are located on aft fairing. Engine side cowling (3) has side panels which are hinged for easy access, and air induction cowling doors (5) are located on both sides for inspection of transmission area. All miscellaneous access doors open on piano hinges and are secured with flush-type latches and/or wing-head stud fasteners.

52-38. INSPECTION AND REPAIR.

1. Inspect miscellaneous access doors (1, 2, 3, and 5, figure 52-1) for cracks, dents, distortion, and corrosion.

NOTE

Structural damage to doors should be repaired in accordance with BHT-206-SRM-1.

2. Inspect chafing tape around inside edges of each access door for damage, deterioration, and bond separation. Replace tape, if necessary, with vinyl tape (C-456).

3. Inspect access door hinge for condition and security of mounting. To remove hinge halves, remove hinge pin and drill out existing rivets. Secure new hinge halves to air induction cowling door (5) with MS20470AD3 rivets. Use MS20470AD4 rivets on engine side cowling (3), and use MS20426AD3 rivets on oil reservoir access door (1) and oil cooler access door (2). Position door to cowling and install hinge pins. To

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secure pins, crimp hinge ends, or bend protruding ends of hinge pins 15 degrees.

4. Inspect access door latches and wing-head stud fasteners for proper operation and condition. To replace latches and fasteners, drill out existing rivets. Secure new latches to air induction cowling door (5) with MS20470AD3 rivets, and to engine side cowling with MS20470AD4 rivets. Secure wing-head stud fasteners

to oil reservoir access door (1) and to oil cooler access door (2) with grommets provided, and secure stud fastener receptacles to aft fairing with MS20426AD3 rivets.

5. Check miscellaneous access doors for proper operation, then close doors and secure to cowling with latches and fasteners.

WINDOWS

52-39. WINDOWS

Windshield (1, [Figure 52-10](#)), lower windows (5), and passenger and crew windows (3 and 4) are blue-tinted acrylic plastic. Roof windows (2) are tinted polycarbonate plastic or plex 55. There are two methods of securing windows to helicopter. One method is to secure retainer or edging to structure with rivets. The other method is to mount window on rubber bead and secure to structure or door with seals and adhesive. Refer to [paragraph 52-62](#) for rubber bead procedure.



DO NOT BEND OR DISTORT RETAINER STRIPS. DISTORTED RETAINER STRIPS WILL NOT FIT HELICOPTER. USE FINE STEEL WOOL FOR REMOVAL OF SEALANT FROM BETWEEN RETAINER STRIPS AND WINDOW FAYING SURFACE.

52-40. WINDSHIELD AND WINDOWS — CLEANING

MATERIALS REQUIRED

Refer to [BHT-ALL-SPM](#) for specifications.

NUMBER	NOMENCLATURE
C-330	Cleaner

Windshields (1, [Figure 52-10](#)) and windows (2, 3, 4 and 5) should be cleaned with acrylic plastic cleaner ([C-330](#)) according to standard practices for cleaning acrylic and/or polycarbonate plastics ([Chapter 12](#)).

52-41. WINDSHIELD

The windshields are fabricated of blue-tinted acrylic plastic, MIL-P-5425, supported by formed aluminum alloy sections. Water-tight sealant is applied to the faying surfaces of the windshield.

52-42. WINDSHIELD — REMOVAL

MATERIALS REQUIRED

Refer to [BHT-ALL-SPM](#) for specifications.

NUMBER	NOMENCLATURE
C-305	Aliphatic Naphtha

NOTE

Rivets securing the retainer strips are the blind type.

1. Remove rivets from retainer strips ([Figure 52-11](#)).
2. Remove retainer strips and windshield.
3. Scrape adhesive from faying surfaces of supports and retainer strip and clean surfaces with aliphatic naphtha ([C-305](#)).

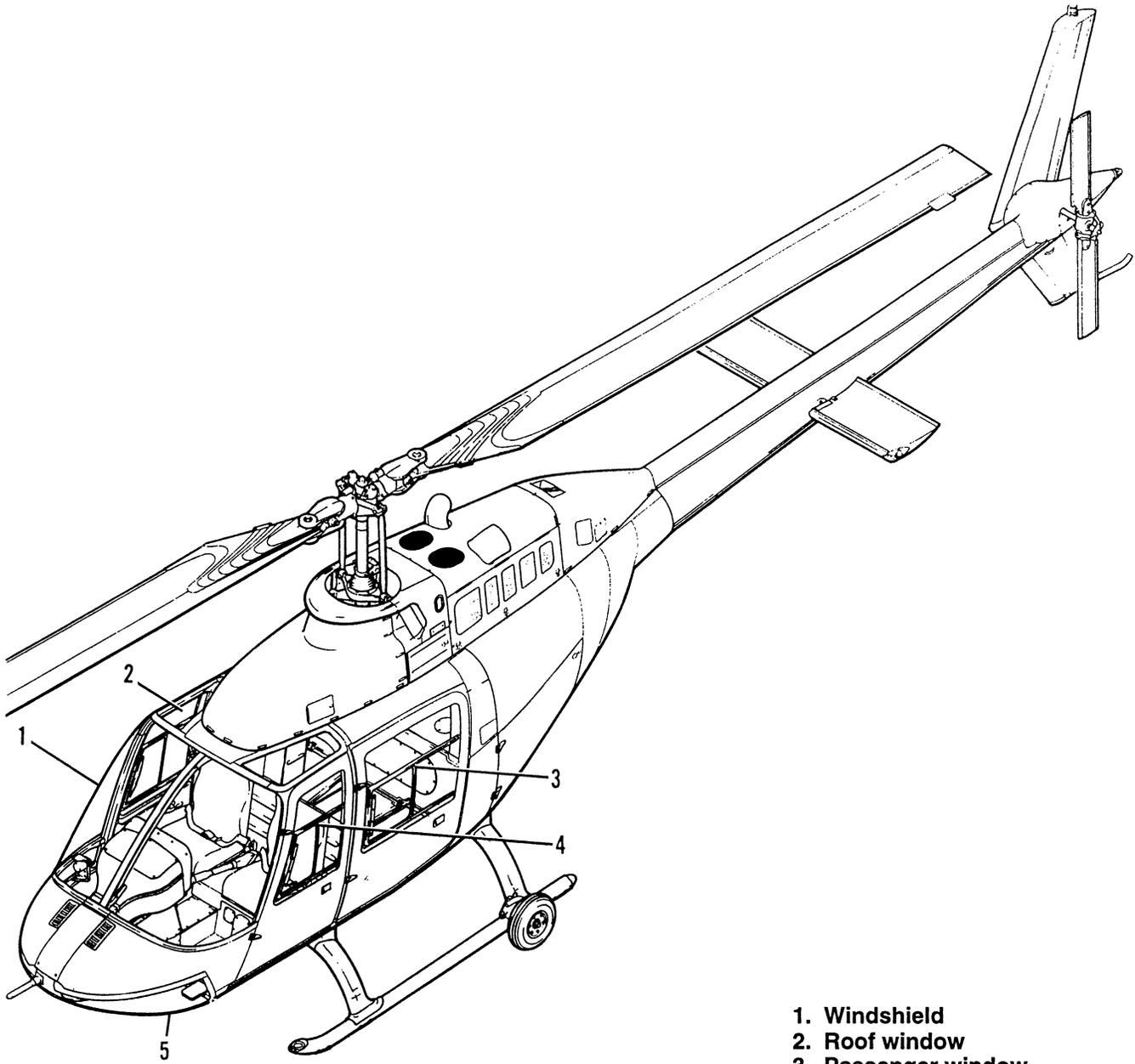
52-43. WINDSHIELD — INSPECTION AND REPAIR

MATERIALS REQUIRED

Refer to [BHT-ALL-SPM](#) for specifications.

NUMBER	NOMENCLATURE
C-308	Sealant

1. Inspect for abrasions, scratches, cracks, holes, or other damage ([Figure 52-12](#)).
2. Stop water leaks by applying a small bead of sealant ([C-308](#)) to the affected area.
3. Inspect and repair windshield within the limits specified in [Figure 52-12](#). Cracks, holes, or other damage may be temporarily repaired by stop-drilling, patching or other standard, approved methods for acrylic plastics.

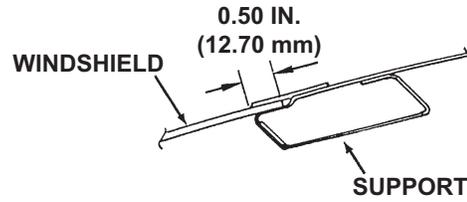
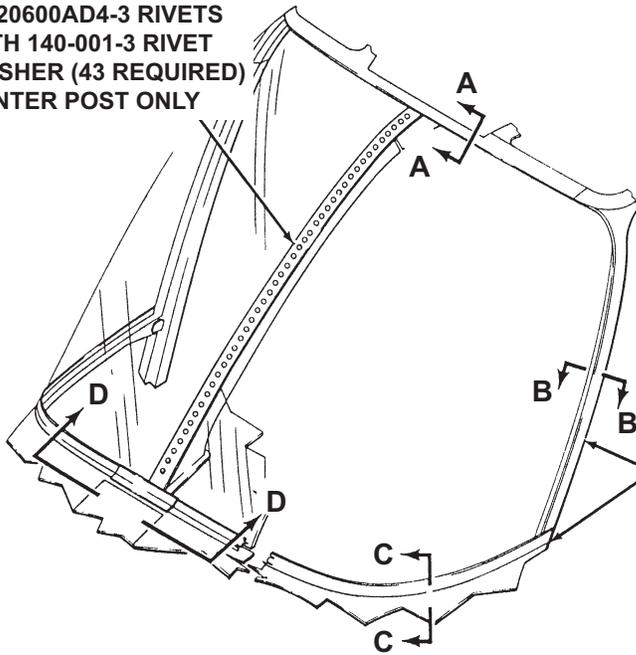


- 1. Windshield
- 2. Roof window
- 3. Passenger window
- 4. Crew window
- 5. Lower window

206A/BS-M-52-10

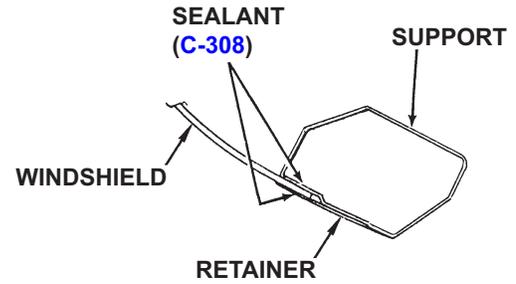
Figure 52-10. Windows

MS20600AD4-3 RIVETS
WITH 140-001-3 RIVET
WASHER (43 REQUIRED)
CENTER POST ONLY

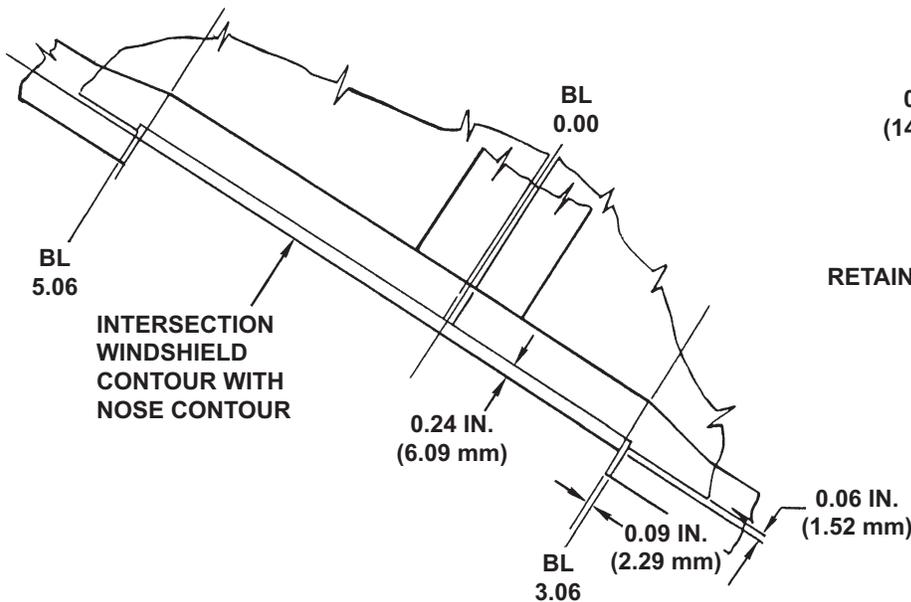


SECTION A-A

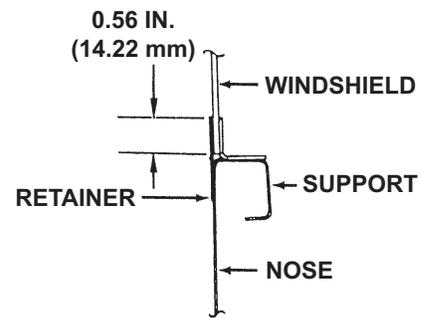
MS20600AD4-1 RIVETS,
TYPICAL ALL LOCATIONS,
EXCEPT CENTER POST



SECTION B-B



SECTION D-D



SECTION C-C

206AB_MM_52_0011

Figure 52-11. Windshield Installation

52-44. WINDSHIELD — INSTALLATION**MATERIALS REQUIRED**

Refer to [BHT-ALL-SPM](#) for specifications.

NUMBER	NOMENCLATURE
C-308	Sealant

1. Trim windshield to fit, leaving expansion gap of 0.06 inch (1.52 mm) (Section D-D, [Figure 52-11](#)).
2. Install windshield and check fit. Remove protective coating from windshield and apply a bead of sealant (C-308) to faying surfaces of the retainer strips and support.
3. Install windshield, align retainer strips and holes, and install rivets with rivet washers ([Figure 52-11](#)).
4. Trim sealant (C-308) squeeze-out with a sharpened piece of acrylic plastic.
5. Paint rivets to original finish ([BHT-ALL-SPM](#)).
6. Clean windshield ([paragraph 52-40](#)).

52-45. LOWER WINDOWS

Lower windows are located in the lower cabin nose section. Sealant is applied to mating areas of window panels and nose structure, providing a water-tight seal.

52-46. LOWER WINDOWS — REMOVAL

1. Remove rivets from retainer strips ([Figure 52-13](#)).
2. Remove retainer strips and lower window.
3. Clean sealant from faying surfaces of supports and retainer strip by using a plastic scraper.

52-47. LOWER WINDOWS — INSPECTION AND REPAIR**MATERIALS REQUIRED**

Refer to [BHT-ALL-SPM](#) for specifications.

NUMBER	NOMENCLATURE
C-308	Sealant

1. Inspect for abrasions, scratches, cracks, holes, or other damage ([Figure 52-12](#)).
2. Stop water leaks by applying a small bead of sealant (C-308) to the affected area.
3. Repair cabin door and lower windows within the limits specified in [Figure 52-12](#). Cracks, holes, or other damage may be temporarily repaired in accordance with [BHT-ALL-SPM](#).

52-48. LOWER WINDOWS — INSTALLATION**MATERIALS REQUIRED**

Refer to [BHT-ALL-SPM](#) for specifications.

NUMBER	NOMENCLATURE
C-308	Sealant

1. Trim window (1, [Figure 52-13](#)) to fit. Refer to [Figure 52-13](#), Sections A-A, B-B, and C-C for clearances.
2. Apply a thin, even coat of sealant (C-308) (4) to faying surfaces of nose skin (3) and support (5).
3. Position window (1) on support (5). Fill void areas in and between edges of window and support with sealant (C-308) (4).
4. Secure window in place using retainer strip (2) and rivets.

NOTE

Only five MS20600AD4-4 rivets are used on each lower window at station 36.22 at bottom. Remainder of rivets are -3.

5. Remove excess sealant (C-308) (4) squeeze-out with sharpened piece of plastic.
6. Paint rivets to original finish (BHT-ALL-SPM).
7. Clean window (paragraph 52-40).

52-49. ROOF WINDOWS

Two roof windows (skylights) (2, Figure 52-14) constructed of tinted polycarbonate plastic are provided in the roof of the forward compartment. Windows are supported by formed aluminum alloy sections and secured with aluminum alloy retainer strips. Sealant is applied to the faying surfaces of the retainer strips and support to provide a water-tight seal.

52-50. ROOF WINDOWS — REMOVAL

Remove rivets from retainer strips (Figure 52-14) that secure the window to roof.

52-51. ROOF WINDOWS — INSPECTION AND REPAIR

MATERIALS REQUIRED

Refer to BHT-ALL-SPM for specifications.

NUMBER	NOMENCLATURE
C-308	Sealant

1. Inspect for abrasions, scratches, cracks, holes, or other damage (Figure 52-12).
2. Stop water leaks by applying a small bead of sealant (C-308) to the affected area.
3. Inspect and repair roof windows within the limits specified in Figure 52-12. Cracks, holes, or other

damage may be temporarily repaired in accordance with BHT-ALL-SPM.

52-52. ROOF WINDOWS — INSTALLATION

MATERIALS REQUIRED

Refer to BHT-ALL-SPM for specifications.

NUMBER	NOMENCLATURE
C-305	Aliphatic Naphtha
C-308	Sealant

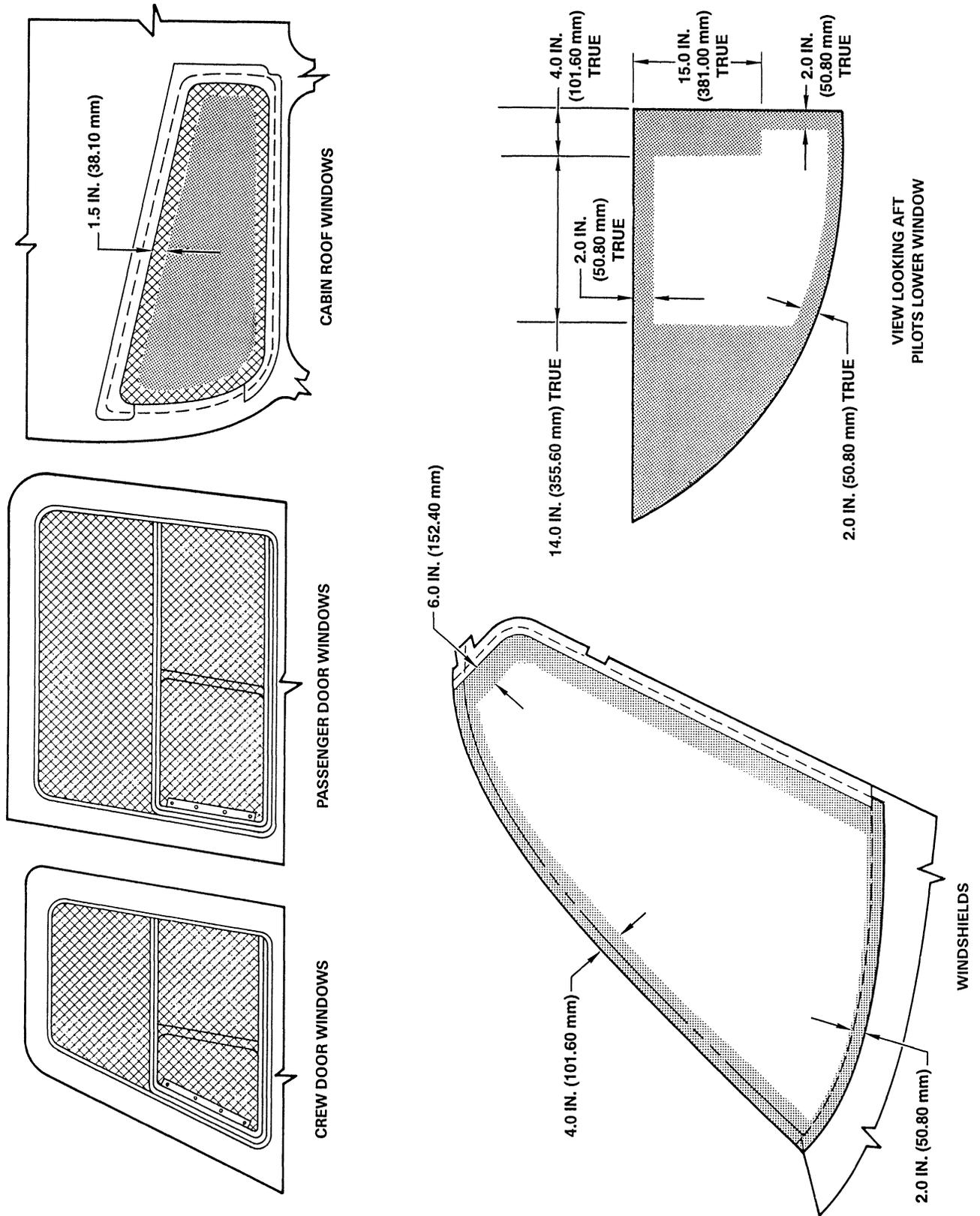
1. Scrape the old sealant from the retainer strip and roof. Clean the mating surfaces with aliphatic naphtha (C-305). Do not use solvent on polycarbonate for cleaning: crazing will occur.

NOTE

Do not trim window panel to final size until all mounting holes have been drilled. Retainer strip should overlap the window a minimum of 0.50 inch (12.70 mm) and rivet edge distance should equal twice the rivet diameter minimum (Figure 52-14).

2. Center window and retainer strip over the roof opening and drill two 0.128 inch (3.25 mm) holes in inboard and outboard edge using the retainer strip as a template. Install screws or fasteners as necessary to secure window in position and complete drilling operation.
3. Remove retainer and window and clean up drilling area.
4. Apply a bead of sealant (C-308) to roof mounting flange and retainer strip (Figure 52-14 and BHT-ALL-SPM). Install the window and retainer strip, align holes and install MS20600AD3, AD4, and B4 rivets.

5. Trim sealant squeeze-out with a sharpened piece of acrylic plastic.



206A/BS-M-52-12-1

Figure 52-12. Windows — critical areas and repair limits (Sheet 1 of 2)

AREA "A":



Scratches and pits may be polished out to the extent that vision is not distorted. Distortion of vision is cause for replacement. Cracks, holes, or other damage may be temporarily repaired, if vision of crew members will not be impaired, by stop drilling, patching or other approved methods, but window must be replaced at the earliest opportunity.

AREA "B":



Scratches and pits are permitted in this area provided they are not so numerous or form such a pattern as to be objectionable to the viewer. Cracks, holes, or other damage may be temporarily repaired, by stop drilling, patching or other approved methods, but window must be replaced at the earliest opportunity.

AREA "C":



Scratches and pits are permitted in this area, providing the integrity of the window is not impaired. Cracks, holes, or other damage may be repaired by stop drilling, patching or other approved methods provided structural integrity is not impaired.

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Figure 52-12. Windows — critical areas and repair limits (Sheet 2)

- 6. Clean window (paragraph 52-40).
- 7. Alternate methods for installation of roof windows are as follows:
 - a. Windows with two rows of rivets (one through window) in retainer: countersink inboard row of holes in structure under window and install blind rivets.
 - b. Install windows as in preceding steps 1. through 6., except that an outboard row of rivets in retainer is required.

NOTE

Replace retainer or fill rivet holes that are not used

- 8. In late-model helicopters that have only one row of rivets in the retainer, install roof window as stated in steps 7a. and b.
- 9. Paint rivets to original finish (BHT-ALL-SPM).

52-53. CABIN DOOR — WINDOWS.

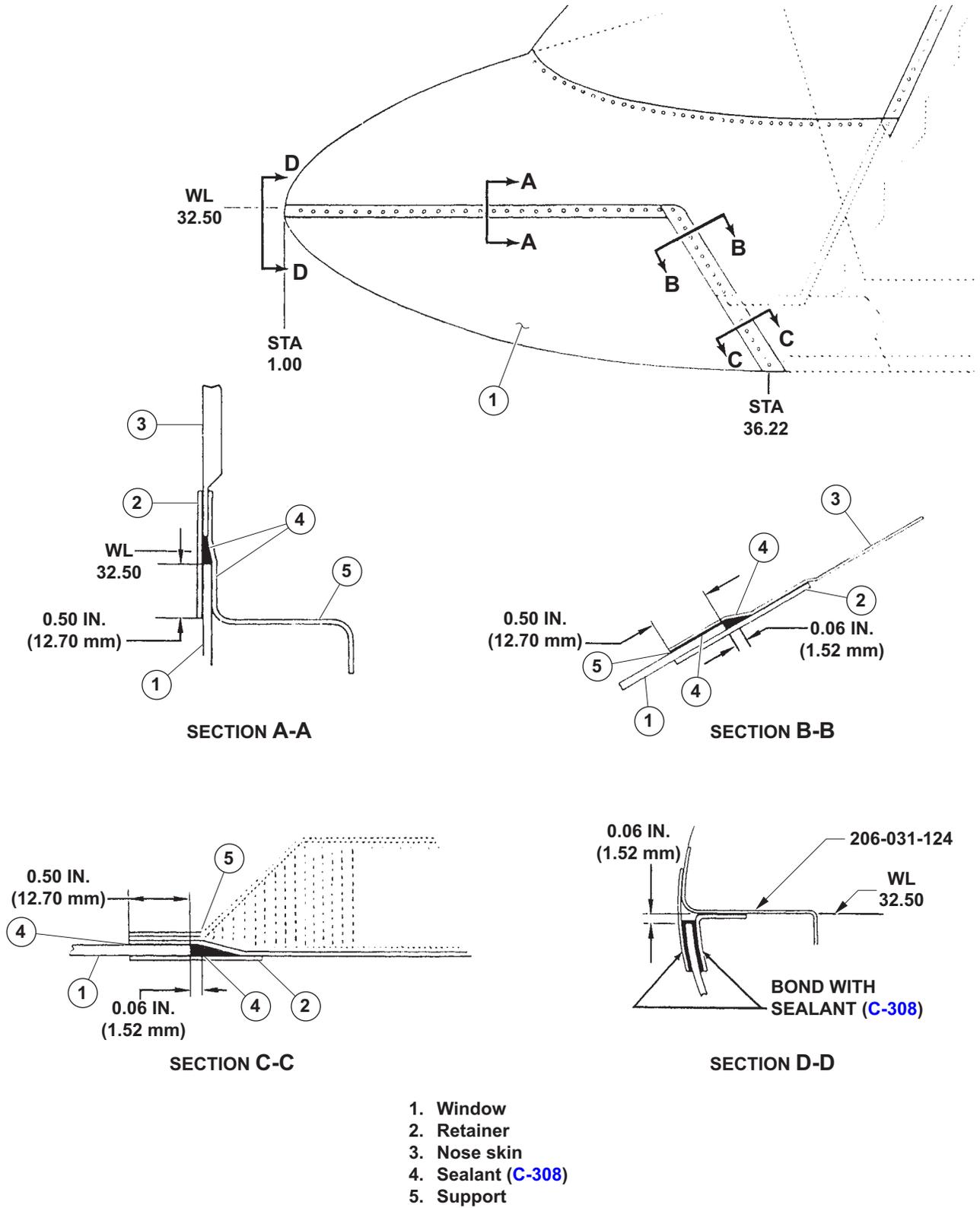
The cabin door windows are fabricated of tinted acrylic plastic and secured to the door assembly with rivets. Sliding windows constructed of acrylic plastic are provided for ventilation. Each window is installed with water-tight sealing compound of polysulfide rubber applied to the faying surfaces of the window and door. Refer to paragraph 52-40 for cleaning instructions. Helicopters S/N 4 through 3566 have passenger door windows faired to contour. Helicopter S/N 3567 and subsequent have bulged windows in passenger doors to allow more room for passengers.

52-54. CREW DOOR WINDOWS.

Crew door windows are riveted and sealed to doorframe. Refer to figure 52-12 for critical areas and repair limits.

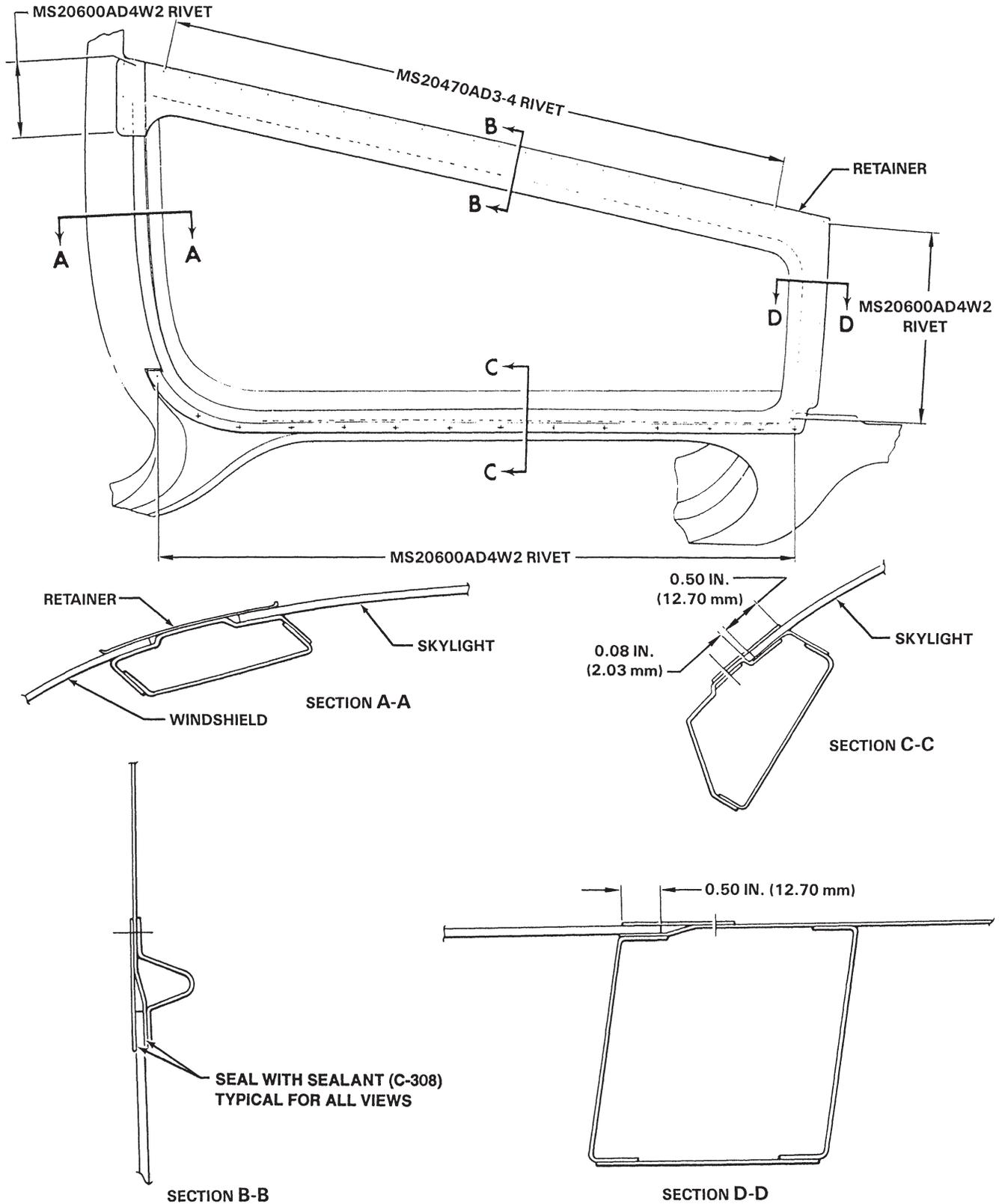
52-55. REMOVAL.

- 1. Remove rivets securing window to crew doorframe (figure 52-15).



206AB_MM_52_0013

Figure 52-13. Lower Window Replacement



206AB_MM_52_0014

Figure 52-14. Roof Window Replacement

2. Apply dry ice to chill and embrittle sealing compound at mating surfaces of window and doorframe.



WORK CAREFULLY TO PREVENT
DAMAGE TO DOORFRAME.

3. Using a suitable edged tool at the bond line, break the bond all around mating surface.

4. Clean sealing compound from faying surfaces of passenger door with a plastic scraper. Prime bare spots with epoxy polyamide primer (C-204).

5. Remove sliding window by removing handle, four screws, thin aluminum washers, and nuts. Carefully slide window out of tracks.

52-56. INSPECTION AND REPAIR.

1. Inspect for abrasions, scratches, cracks, holes, and obstructions to vision (figure 52-12).

2. Inspect edging and seal to ensure that it has no cracks, holes or deterioration which would allow water entry.

3. Stop water leaks by applying a small bead of sealing compound (C-360) to the affected area.

4. Inspect and repair crew door window within the limits specified in figure 52-12.

52-57. INSTALLATION.



DO NOT EXPOSE WINDOW ASSEMBLY
TO SOLVENT. PROTECT POLISHED
SURFACES FROM ABRASION AND
MARRING.

1. Install door assembly on helicopter to maintain contour.

2. Locate window on doorframe and check for equal faying surface overlap on all sides. Minimum overlap is 0.50 inch (12.70 mm) (figure 52-15).

NOTE

Mark trim of door cutout on window edging but trim only as required for fit.

3. Progressively drill and Cleco-fasten while maintaining minimum overlap of joint. Pick up existing holes in doorframe except at hinge location. Notch window edging 0.25 inch (6.35 mm) to clear this attachment.

NOTE

Maintain contour of door assembly as window is drilled to match.

4. Coat mating surfaces between door and window edging with sealing compound (C-328).

5. Reinstall window, align, and Cleco-fasten in place.

a. Install every fifth rivet with door on helicopter to maintain contour. Use rivets and Bell Standard 140-001-11 washers.

b. Install all remaining rivets.

NOTE

Riveting must be completed within eight hours after sealing compound (C-328) is installed.

6. Trim sealing compound (C-328) squeeze-out from window with a plastic scraper.

7. Paint rivets to original finish (BHT-ALL-SPM).

8. Carefully install sliding window into track. Install handle to face of sliding window with four screws, thin aluminum washers and nuts.

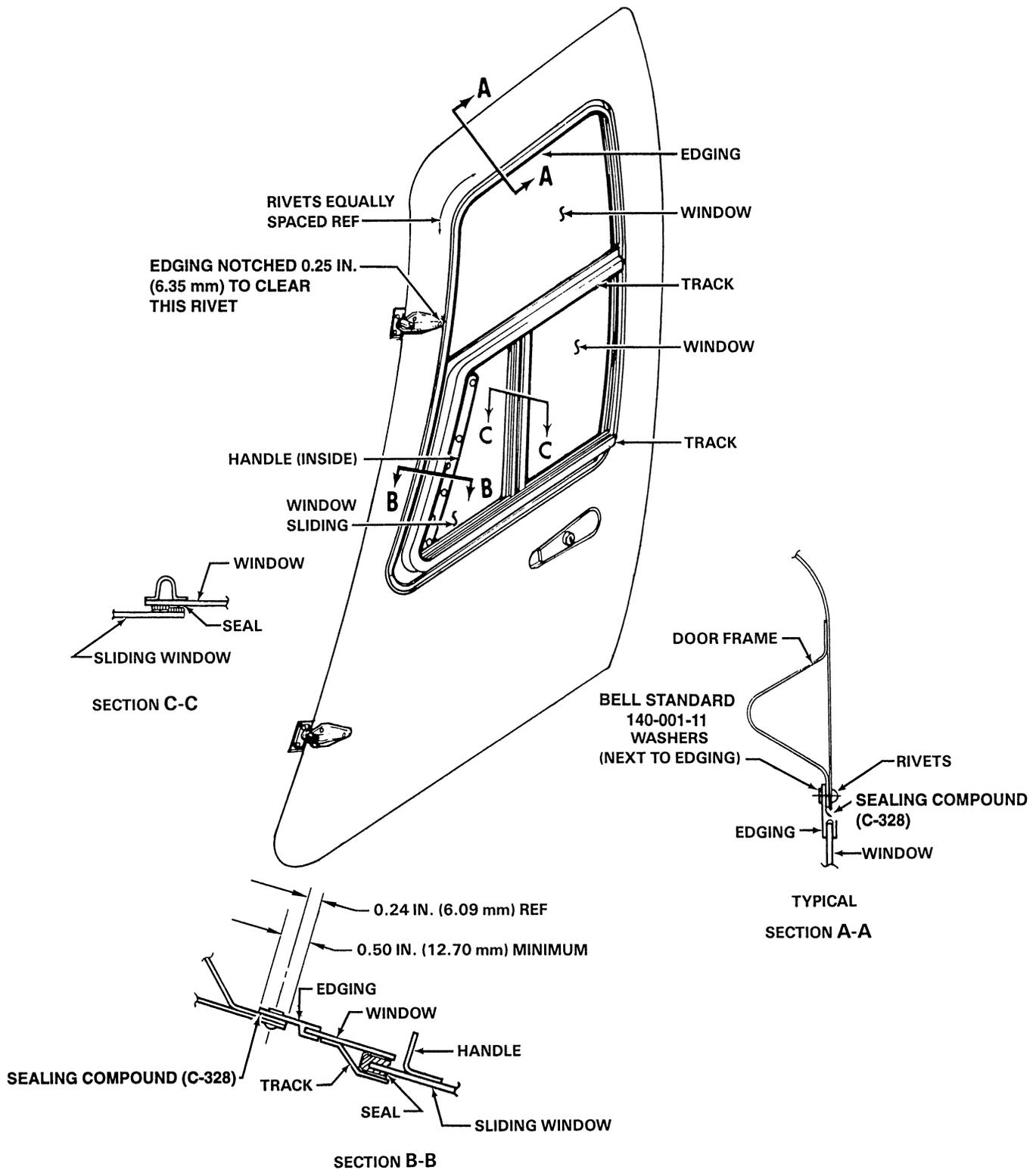
9. Clean passenger door window (paragraph 52-40).

52-58. PASSENGER DOOR WINDOWS.

Passenger door windows are tinted plastic. The sliding window is adjustable and moves in a track. The sliding window handle also functions as a retainer, keeping the window from sliding out of the track.

52-59. REMOVAL.

1. Remove rivets securing passenger door window to doorframe (figure 52-16).



206A/BS-M-52-15

Figure 52-15. Crew door window installation

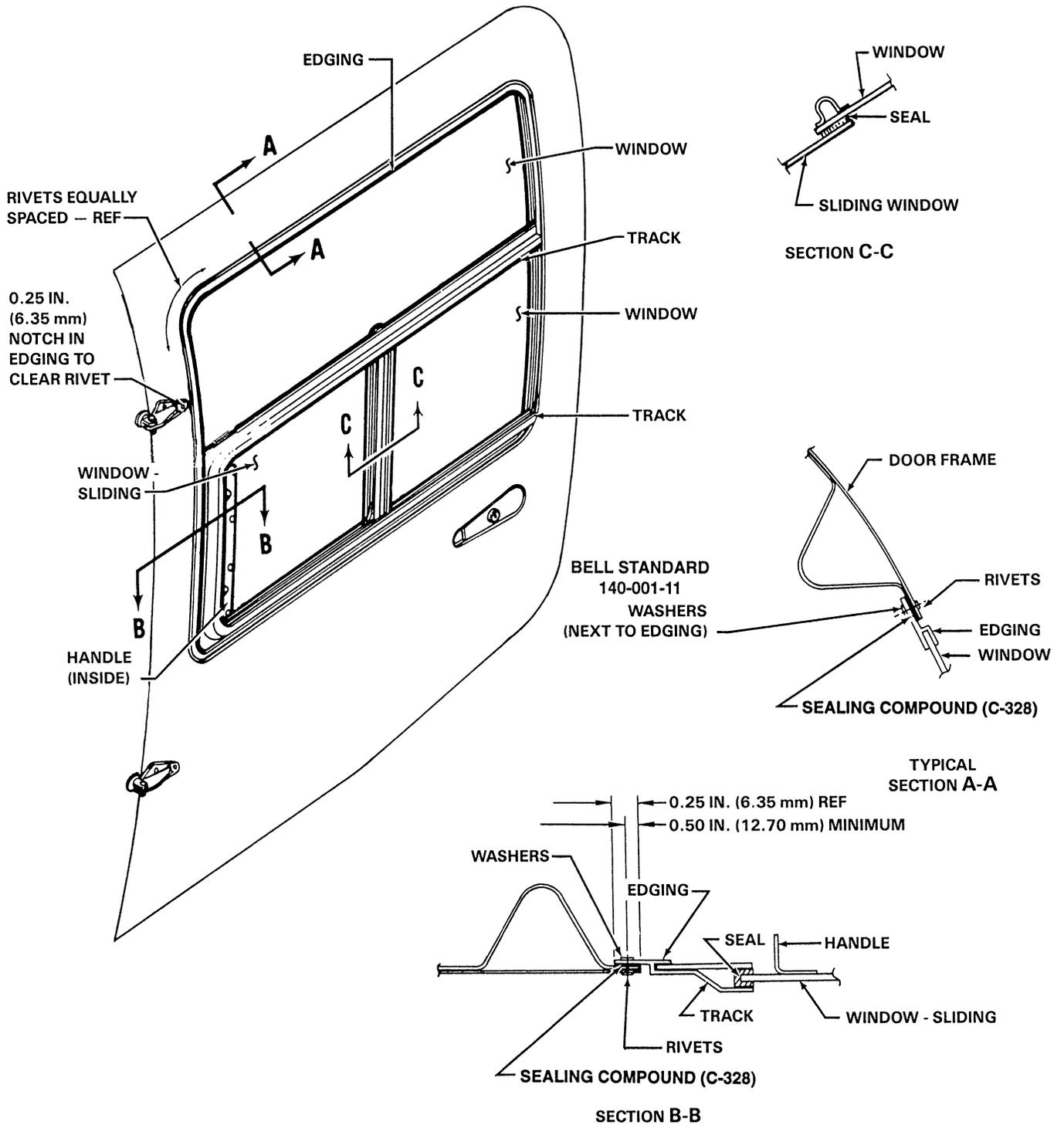


Figure 52-16. Passenger door window installation

2. Apply dry ice to chill and embrittle sealing compound at mating surface of window and doorframe.



WORK CAREFULLY TO PREVENT DAMAGE TO DOORFRAME.

3. Using a suitable edge tool at the bond line, separate the bond all around mating surface.

4. Clean sealing compound (C-328) from faying surfaces of passenger door with a plastic scraper. Prime bare spots with primer (C-204).

5. Remove sliding window by removing handle, four screws, thin aluminum washers, and nuts. Carefully slide window out of track.

52-60. INSPECTION AND REPAIR.

1. Inspect passenger door windows for abrasions, scratches, cracks, holes, and obstructions to vision.

2. Inspect edging and seal to ensure it has no cracks, holes or deterioration which would allow water entry.

3. Stop water leaks by applying a small bead of sealing compound (C-360) to the affected area.

4. Inspect and repair passenger door windows that are within the limits specified in figure 52-12. Refer to BHT-206-SRM-1 for repair methods.

52-61. INSTALLATION.



DO NOT EXPOSE WINDOW ASSEMBLY TO SOLVENTS. PROTECT POLISHED SURFACES FROM ABRASION AND MARRING.

1. Install door assembly on helicopter to maintain contour.

2. Locate window on doorframe and check for equal faying surface overlap on all sides. Minimum overlap is 0.50 inch (12.70 mm) (figure 52-16).

NOTE

Trim of door cutout may be marked on window edging to check overlap. Trim window only as required for fit.

3. Progressively drill and Cleco-fasten while maintaining minimum overlap of joint. Pick up existing holes in doorframe except at hinge location. Notch window edging 0.25 inch (6.35 mm) to clear this attachment.

NOTE

Maintain contour of door assembly as window is drilled to match.

4. Coat mating surfaces between door and window edging with sealing compound (C-328).

5. Reinstall window, align, and Cleco-fasten in place.

NOTE

Riveting must be completed within eight hours after sealing compound (C-328) is installed.

a. Install every fifth rivet. Use rivets and Bell Standard 140-001-11 washers (figure 52-16).

b. Install all remaining rivets.

6. Trim sealing compound (C-328) squeeze-out from window with a plastic scraper.

7. Paint rivets to original finish (BHT-ALL-SPM).

8. Carefully install sliding window into track. Install handle to face of sliding window with four screws, thin aluminum washers and nuts.

9. Clean passenger door window (paragraph 52-40).

52-62. REMOVAL (WINDOW MOUNTED ON RUBBER BEAD).



A PERSON SHALL BE POSITIONED INSIDE HELICOPTER TO SUPPORT CREW DOOR WINDOW DURING REMOVAL. WITHOUT SUPPORT, WINDOW WILL FALL AND MAY BE DAMAGED.

1. Starting at upper corner, push crew door window in until seal (figure 52-17) releases from doorframe.
2. Continue pressing around edge of window in a clockwise direction until window is fully freed.
3. If window and seal are serviceable, use aliphatic naphtha (C-305) to remove old adhesive from seal grooves, window, and door surfaces.
4. Remove sliding window by removing handle, four screws, washers, and nuts. Carefully slide window out of tracks.

52-63. INSPECTION AND REPAIR.

1. Inspect crew door window for abrasions, scratches, cracks, holes, and obstructions to vision.
2. Inspect edging and seal to ensure there are no cracks, holes or deterioration which would allow water entry.
3. Stop water leaks at seal by injecting adhesive (C-399) in groove(s) (figure 52-17).
4. Inspect and repair crew door windows within the limits specified in figure 52-12. Repair crew door windows as necessary to restore them to service.

52-64. INSTALLATION (WINDOW MOUNTED ON RUBBER BEAD).

1. Apply adhesive (C-399) to contact surfaces of inner groove of seal (figure 52-17) and crew door window as follows:
 - a. Using aliphatic naphtha (C-305), thoroughly clean surfaces to be bonded.
 - b. Fill interior pocket of seal with adhesive (C-399).
2. Place seal on window. Seal splice shall face aft on window in installed position.
3. Press seal in place forcing excess adhesive out.
4. Using aliphatic naphtha (C-305) or isopropyl alcohol, remove excess squeeze-out.
5. Prepare a mixture of mild liquid detergent and water, and apply to outer groove of seal. Wrap nylon cord (C-497) around outer groove of seal. Both ends of

nylon cord should meet at either front, top, or back of window.

6. With the help of a person stationed inside helicopter, hold window against crew door opening.
7. Set lower portion of groove of seal over crew door opening.
8. With person still holding window against crew door opening, pull one end of nylon cord outward to force seal over crew door opening.
9. Remove excess detergent and water solution from seal and crew door. Dry using lint-free cloths.
10. Inject adhesive (C-399) under groove in seal to bond window to crew door as follows:
 - a. Using aliphatic naphtha (C-305), thoroughly clean surfaces to be bonded.
 - b. Coat exterior pocket of seal with adhesive (C-399).
11. Press seal in place forcing excess adhesive out.
12. Using aliphatic naphtha (C-305) or isopropyl alcohol, remove excess squeeze-out.
13. Clean crew door window (Chapter 12).

52-65. PASSENGER DOOR WINDOWS.

The passenger door windows have an edging installed and are secured to the door assembly by rivets. Sliding windows provide ventilation. Each window is equipped with a water-tight seal applied to the faying surface of the window and door. The sliding window handle functions as a retainer keeping the window from sliding out of the track. Passenger door windows are of a wedge shape design and provide more elbow room.

52-66. REMOVAL (WINDOW MOUNTED ON RUBBER BEAD).



A PERSON SHALL BE POSITIONED INSIDE HELICOPTER TO SUPPORT CREW DOOR WINDOW DURING REMOVAL. WITHOUT SUPPORT, WINDOW WILL FALL AND MAY BE DAMAGED.

1. Starting at upper corner, push passenger door window in until seal (figure 52-18) releases from doorframe.

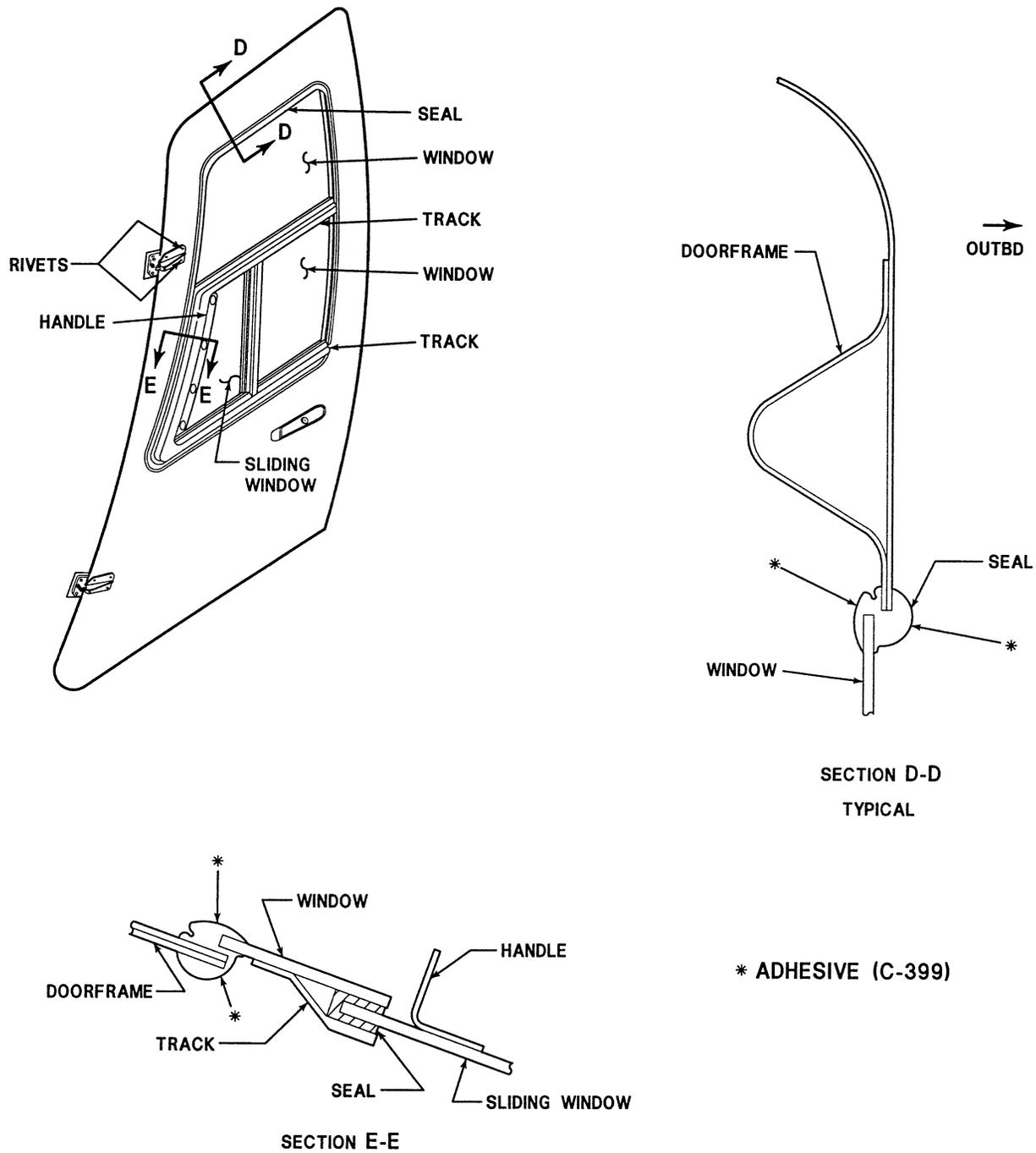
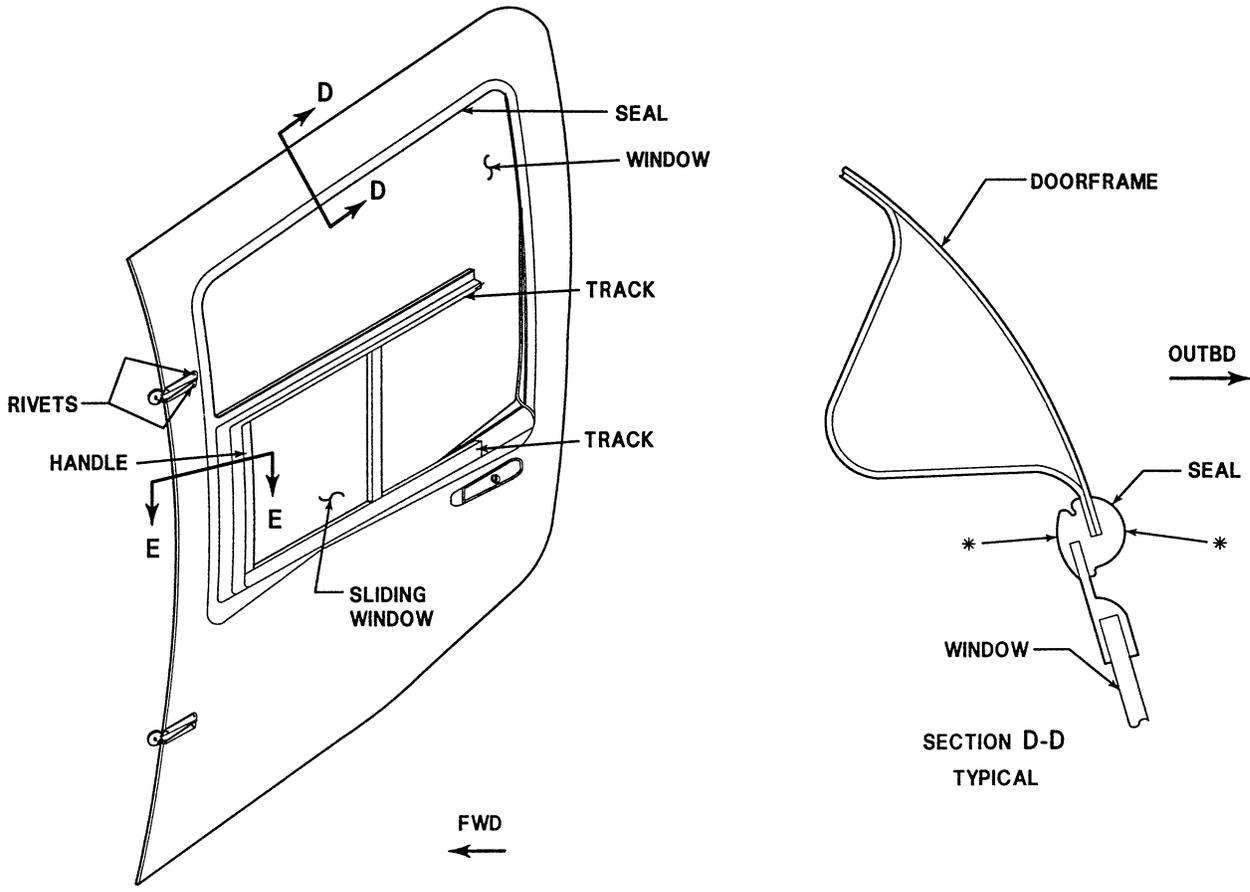
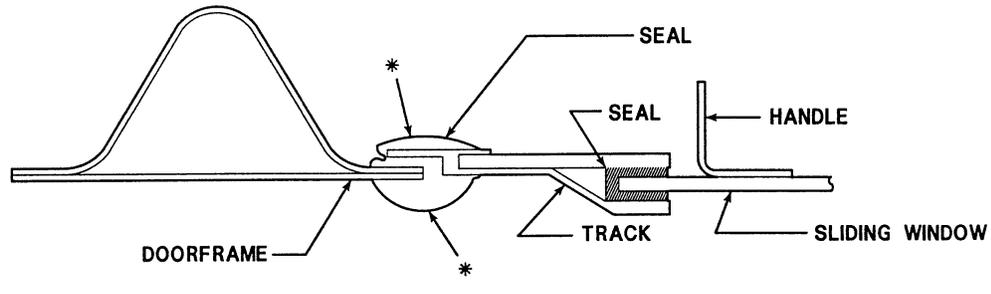


Figure 52-17. Crew door window installation (beaded)



SECTION D-D
TYPICAL



SECTION E-E

* ADHESIVE (C-399)

206A/BS-M-52-18

Figure 52-18. Passenger door window installation (beaded)

BHT-206A/B-SERIES-MM-5

2. Continue pressing around edge of window in a clockwise direction until window is fully freed.
3. If window and seal are serviceable, use aliphatic naphtha (C-305) to remove old adhesive from seal grooves, window, and door surfaces.
4. Remove sliding window by removing handle, four screws, washers, and nuts. Carefully slide window out of tracks.

52-67. INSPECTION AND REPAIR.

1. Inspect passenger door windows for abrasions, scratches, cracks, holes, and obstruction to vision.
2. Inspect edging and seal to ensure it has no cracks, holes or deterioration which would allow water entry.
3. Stop water leaks at seal by injecting adhesive (C-399) in groove(s) (figure 52-18).
4. Inspect and repair passenger door windows within the limits specified in figure 52-12. Repair passenger door windows as necessary to restore them to service.

52-68. INSTALLATION (WINDOW MOUNTED ON RUBBER BEAD).

1. Apply adhesive (C-399) to contact surfaces of inner groove of seal (figure 52-18) and passenger window as follows:
 - a. Using aliphatic naphtha (C-305), thoroughly clean surfaces to be bonded.
 - b. Coat interior pocket of seal with adhesive (C-399).
2. Place seal on window. Seal splice shall face aft on window in installed position.
3. Press seal in place forcing excess adhesive out.

4. Using aliphatic naphtha (C-305) or isopropyl alcohol, remove excess squeeze-out.
5. Prepare a mixture of mild liquid detergent and water, and apply to outer groove of seal. Wrap nylon cord (C-497) around outer groove of seal. Both ends of nylon cord should meet at either front, top, or back of window.

52-69. LANDING LIGHT WINDOW.

The landing light window (1, figure 52-19) is fabricated of polycarbonate plastic and is located in the forward end of the console access door. The window protects and provides access to the landing light.

52-70. REMOVAL.

Remove screws (2, figure 52-19), washers (3), and remove landing light window (1).



SOLVENTS WILL DAMAGE
POLYCARBONATE PLASTIC.

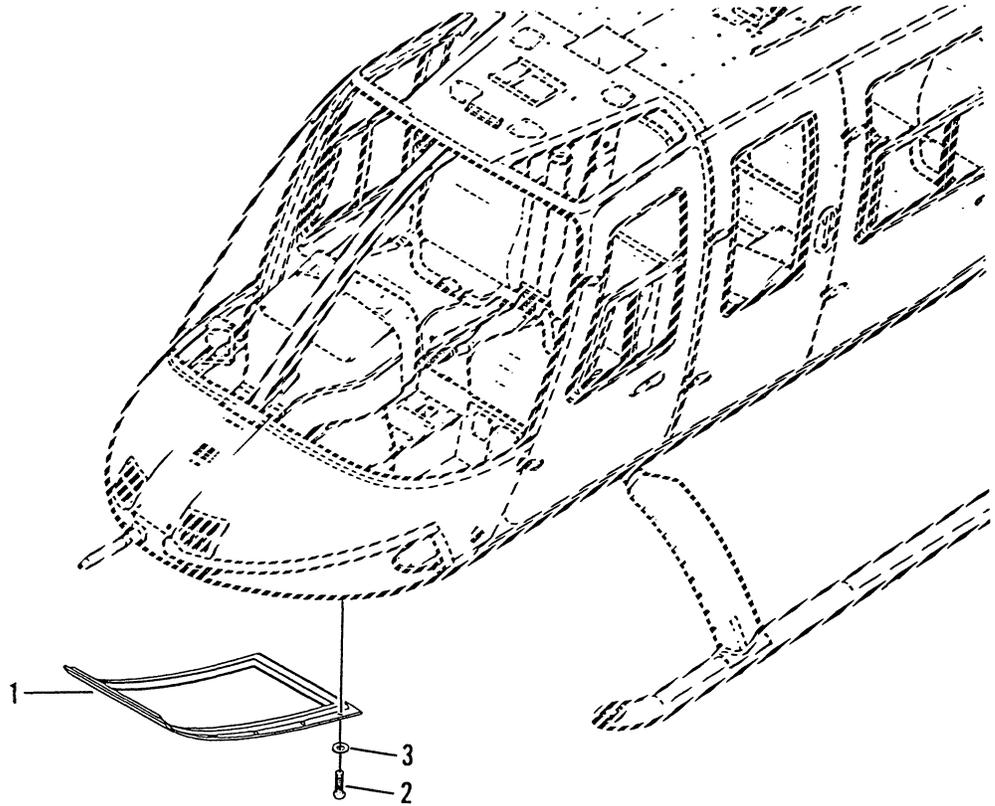
52-71. INSPECTION AND REPAIR.

1. Inspect window for abrasions, scratches, cracks, holes, and deterioration.
2. Inspect frame and attaching rivets and washers. Repair as necessary to restore to service.

52-72. INSTALLATION.

Install window (1, figure 52-19) with screws (2) and washers (3).

- 1. Window
- 2. Screw
- 3. Washer



206A/BS-M-52-19

Figure 52-19. Landing light window

