



A Textron Company

ALERT SERVICE BULLETIN

429-16-29

PSL 1841

31 May 2015

Revision A 7 June 2016

Revision B 25 March 2024

Revision C 27 March 2024

MODEL AFFECTED: 429

SUBJECT: FWD CENTER FIREWALL WELDED ASSEMBLY 429-069-501-101/-109/-113 AND AFT CENTER FIREWALL WELDED ASSEMBLY 429-069-504-101/-103/-105/-107, INSPECTION AND REPAIR OF

HELICOPTERS AFFECTED: Serial numbers 57001 and subsequent.

COMPLIANCE: **Part I:** Within 25 flight hours following the release of this bulletin and every 100 hours thereafter.
Part II: Within 50 flight hours, if required by **Part I**.

DESCRIPTION:

Bell Helicopter has received reports of premature cracks on the FWD (429-069-501-101/-109/-113) and AFT (429-069-504-101/-103/-105) center firewall welded assemblies. **Part I** of this bulletin mandates an initial and recurring inspection for cracks and condition of the affected firewalls. **Part II** of this bulletin provides the instructions to repair cracked firewalls. Due to the level of difficulty involved in the repairs of the thin material firewalls, it is recommended to send the helicopter to your local Customer Support Facility (CSF) to perform **Part II** of this ASB.

Revision A of this bulletin incorporates changes to the **COMPLIANCE** section, as well as clarification to the inspection and repair procedures of **Part I** and **Part II**.

Owners/operators that already complied with **Part I** of this ASB at the initial release, will only require compliance with the recurring inspection requirements of **Part I** every 100 flight hours.

Revision B of this bulletin addresses the 429-069-501-147 FWD Center Firewall and the 429-069-504-107 AFT Center Firewall which were introduced at helicopter serial numbers 57340 and subsequent. While the 429-069-501-147 FWD Center Firewall has proven to be reliable, the 429-069-504-107 Aft Center Firewall continues to see cracking at the extremities of the vertical stiffeners.

Consequently, the 429-069-501-147 FWD Center Firewall is not affected by this bulletin and does not need to be inspected every 100 hours and shall be inspected in accordance with the scheduled inspection requirements in Chapter 5 of the Maintenance Planning Information manual (429-MPI).

The 429-069-504-107 AFT center Firewalls that have not already been reworked per a Bell approved repair or revision B of this bulletin will need to be inspected and repaired in accordance with **Parts I and II**. Once repaired the 429-069-504-107 AFT Center Firewall no longer needs to be inspected every 100 hours per Part I of this bulletin and can be inspected in accordance with the scheduled inspection requirements in Chapter 5 of the Maintenance Planning Information manual (429-MPI).

Therefore, installing the 429-069-501-147 FWD Center Firewall and Repairing the 429-069-501-107 AFT Center Firewall constitute the terminating action to this ASB.

Operators with 429-069-501-101/109/-113 FWD Center Firewalls and 429-069-504-101/-103/-105 AFT Center Firewalls installed in their helicopters, who have already complied with the intent of the previous revisions only need to continue inspecting every 100 hours per **Part I** of this bulletin.

The following sections have been changed as part of this revision:

- **MANPOWER** section: Added manpower estimate for **Part II – D**.
- **WARRANTY** section: Warranty coverage added for **Part II – D** only.
- **MATERIALS** section: Added Material for **Part II – D**.
- **REFERENCES** section: Added the Maintenance Planning Information manual.
- **PUBLICATIONS AFFECTED** section: Added the Illustrated Parts Breakdown manual.
- **ACCOMPLISHMENT INSTRUCTIONS** section: Changes to **Parts I and II** to add information on the 429-069-504-107 AFT Center Firewall. Figures for the **Part II – D** repair and for firewall part number identification have also been added.

Revision C corrects the typo in the PSL number and replaces the reference to kit CA-429-16-29-3 by “**PART II-D**” in the **WEIGHT AND BALANCE** section.

Applicability of this bulletin to any spare part shall be determined prior to its installation on an affected helicopter.

APPROVAL:

The engineering design aspects of this bulletin are Transport Canada Civil Aviation (TCCA) approved.

CONTACT INFO:

For any questions regarding this bulletin, please contact:

Bell Product Support Engineering
Tel: 1-450-437-2862 / 1-800-363-8023 / productsupport@bellflight.com

MANPOWER:

Approximately 1 man-hour is required to complete **Part I** of this bulletin. Approximately 16 man-hours for **Part II - A** or **Part II - B** and 8 man-hours for **Part II - C** or **Part II - D** are required to complete this bulletin. This estimate is based on hands-on time and may vary with personnel and facilities available.

WARRANTY:

Owners / Operators of Bell Helicopters who comply with the instructions in PART II D this bulletin will be eligible to receive replacement parts and labor as applicable, listed in the bulletin. The www.mybell.com portal allocates specific warranty entitlement for an aircraft by serial number. The Product Service Letter (PSL) number which will be listed below the bulletin number on the introduction page. This is going to be a required field when submitting a claim on the Bulletins Tab for replacement parts, labor, and/or freight. If you receive an ASB or TB that does not have a PSL number, then there is no warranty entitlement for that bulletin.

Labor entitlement: Yes, One Time Only Repair for **Part II - D** \$880.0 USD. This is valid for three years from date of issuance of Rev B of this Bulletin.

To receive parts, labor, under warranty:

- Comply with the instructions contained in this Bulletin no later than the applicable date in the “compliance section”.
- If there is a PSL number identified in the bulletin you will be required to enter this PSL number which will validate warranty entitlement for the selected aircraft. Please ensure that you use the Bulletin tab on the warranty section on www.mybell.com portal to file your claim.

MATERIAL:

Required Material:

The following material is required for the accomplishment of this bulletin and may be obtained through your Bell Supply Center.

The following material is required for Part II - A or Part II - B and can be purchased as a kit under part number CA-429-16-29-1.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Qty (Notes)</u>
150-021-31C1-2	Repair Sheet, 0.012 inch (0.30 mm)	1(2)
150-021-35C1-1	Repair Sheet, 0.025 inch (0.64 mm)	1(2)
MS20470T3-3	Solid Rivet	71(1)
MS20470T3-4	Solid Rivet	10(1)
50-008RF2C	Receptacle	5

The following material is required for Part II - C and can be purchased as a kit under part number CA-429-16-29-2.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Qty (Notes)</u>
150-021-34C1-2	Repair Sheet, 0.020 inch (0.51 mm)	1(2)
MS20470T3-3	Solid Rivet	59(1)
429-069-504-119	Gasket	1(3)
50-007W12C	Stud	6
50-007W18C	Stud	2
50-009C2	Grommet	8

The following material is required for Part II - D and may be obtained through your Bell Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Qty (Notes)</u>
150-021-35C1-2	Repair Sheet, 0.025 inch (0.63 mm)	1(2,4)
MS20470T3-3	Solid Rivet	32(1,5)

NOTES:

1. Solid rivets may be purchased locally through any commercial distributor.
2. The following may be purchased locally through any commercial distributor and can be used as a substitution for the 150-021-xxC repair sheets:
 - a. Titanium Type I, Composition B per MIL-T-9046
 - b. Commercially Pure Titanium 70 ksi yield strength sheet per AMS4901
 - c. CP-1 Commercially pure titanium sheet per MIL-T-9046
 - d. CP-1 Commercially pure titanium sheet per AMS-T-9046
 - e. CP-2 Commercially pure titanium sheet per AMS4900
3. Gasket 429-069-504-119 is made from glass fiber 0.057 inch (1.45 mm) THK – 151-008E material and may be ordered using part number 2510-99995-00.
4. The following part numbers can be purchased from Bell as alternates to 150-021-35C1-2 repair sheet:
 - a. 1700-00255-00 CP-2 commercially pure titanium sheet per AMS4900, 0.025" (0.63 mm) Thick.
 - b. 1700-00217-00 CP-1 commercially pure titanium sheet per AMS4901, 0.025" (0.63 mm) Thick.
5. It is acceptable to use MS20613-3C or MS20615-3M rivets as alternates to the MS20470T3 rivets.

Consumable Material:

The following material is required to accomplish this bulletin, but may not require ordering, depending on the operator's consumable material stock levels. This material may be obtained through your Bell Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Qty</u>	<u>Reference *</u>
2110-00010-00	Aliphatic Naphtha	1 gallon	C-305
2110-06227-00	Toluene	1 gallon	C-306
2110-06257-00	Methyl-Ethyl-Ketone	1 gallon	C-309
2100-00061-00	Acetone	1 gallon	C-316
2000-01034-00	Bonding Adhesive	2 ounce	C-325
2010-05919-01	Firewall Sealant	6 ounce	C-353
2100-06673-00	Isopropyl Alcohol	1 gallon	C-385

* C-XXX numbers refer to the consumables list in the BHT-ALL-SPM, Standard Practices Manual

SPECIAL TOOLS:

None required.

WEIGHT AND BALANCE:

Kit # CA-429-16-29-1

<u>Weight</u>	<u>Longitudinal</u>		<u>Lateral*</u>	
	<u>Arm</u>	<u>Moment</u>	<u>Arm</u>	<u>Moment</u>
+0.5 pounds	259.2 inches	+130 inch-pounds	0.0 inches	0.0 inch-pounds
+0.23 kg	6584 mm	+1514 kg x mm/100	0.0 mm	0.0 kg x mm/100

Kit # CA-429-16-29-2

<u>Weight</u>	<u>Longitudinal</u>		<u>Lateral*</u>	
	<u>Arm</u>	<u>Moment</u>	<u>Arm</u>	<u>Moment</u>
+0.7 pounds	288.1 inches	+202 inch-pounds	0.0 inches	0.0 inch-pounds
+0.32 kg	7318 mm	+2342 kg x mm/100	0.0 mm	0.0 kg x mm/100

PART II - D

<u>Weight</u>	<u>Longitudinal</u>		<u>Lateral*</u>	
	<u>Arm</u>	<u>Moment</u>	<u>Arm</u>	<u>Moment</u>
+0.1 pounds	286.1 inches	+29 inch-pounds	0.1 inches	0.01 inch-pounds
+0.04 kg	7267 mm	+291 kg x mm/100	2.5 mm	0.1 kg x mm/100

* In lateral calculations, - is left and + is right.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

429-IPB, Illustrated Parts Breakdown
429-MM, Maintenance Manual
429-MPI, Maintenance Planning Information Manual
ALL-SRM, Structural Repair Manual

PUBLICATIONS AFFECTED:

429-IPB, Illustrated Parts Breakdown.

ACCOMPLISHMENT INSTRUCTIONS:

Part I: Inspection for cracks of the FWD and AFT center firewalls.

1. Prepare the helicopter for maintenance.

2. Gain access to the affected firewalls as follows:
 - a. Remove the transmission cowl assemblies 600EL and 600ER ([DMC-429-A-53-00-00-46A-520A-A](#)).
 - b. Remove the aft engine cowl assemblies 600CL and 600CR ([DMC-429-A-53-00-00-49A-520A-A](#)).
3. Inspect the FWD center firewall welded assembly and the AFT center firewall welded assembly for any cracks (Figure 1) ([DMC-429-A-71-30-00-03A-310A-A](#)). Also applicable to previous Bell approved and repaired firewalls in the affected areas.
4. Identify the part number of the installed firewall assemblies.

-NOTE-

If the part numbers are no longer legible, refer to Figures 6 and 7 to correctly identify which firewalls are installed.

- a. If the inspection did not reveal any discrepancies, go to step 5.

-NOTE-

Part II - A is applicable to firewall assembly 429-069-501-101/-109. **Part II - B** is applicable to firewall assembly 429-069-501-113.

- b. If cracks are detected on the FWD center firewall welded assembly 429-069-501-101/-109, comply with **Part II - A** (Figure 2), if not previously accomplished.
 - (1) If **Part II - A** has previously been accomplished, or a Bell Helicopter approved structural repair has previously been accomplished, remove and replace the cracked FWD center firewall.
- c. If cracks are detected on the FWD center firewall welded assembly 429-069-501-113, comply with **Part II - B** (Figure 3), if not previously accomplished.
 - (1) If **Part II - B** has previously been accomplished, or a Bell Helicopter approved structural repair has previously been accomplished, remove and replace the cracked FWD center firewall.

-NOTE-

Damage to the firewall assemblies 429-069-504-101/-103 will be evaluated on a case-by-case basis by Bell. **Part II - C** is applicable to firewall assembly 429-069-504-105 only. **Part II - D** is applicable to firewall assembly 429-069-504-107 only.

- d. If cracks are detected on the AFT center firewall welded assembly 429-069-504-101/-103, submit the details to Product Support Engineering (PSE) for a possible Bell Helicopter approved repair.
 - e. If cracks are detected on the AFT center firewall welded assembly 429-069-504-105, comply with **Part II - C** (Figure 4), if not previously accomplished.
 - (1) If **Part II - C** has previously been accomplished, or a Bell approved structural repair has previously been accomplished, remove and replace the cracked AFT center firewall.
 - f. If cracks are detected on the AFT center firewall welded assembly 429-069-504-107, comply with **Part II - D** (Figure 5).
5. Reinstall the transmission cowl assemblies 600EL and 600ER ([DMC-429-A-53-00-00-44A-720A-A](#)) and the aft engine cowl assemblies ([DMC-429-A-53-00-00-47A-720A-A](#)).
 6. Make an entry in the helicopter logbook and historical service records indicating findings and compliance with **Part I** this ASB.
 7. Repeat the inspection requirements of **Part I** every 100 flight hours.

Part II - A: Repair of the FWD center welded assembly firewall 429-069-501-101/-109.

1. Remove the FWD center firewall welded assembly (1) from the helicopter (Figure 2) ([DMC-429-A-71-30-00-03A-520A-A](#)).
2. Remove and retain the receptacles (2) from the FWD center firewall welded assembly (1). Discard and replace if any are damaged.

CAUTION

Take care not to damage underlying structures during the cutting and removal operation.

3. Cut out and remove the damaged portion of the FWD center firewall welded assembly (1) and doublers. Cutout to be as per dimensions shown in Detail B.

4. Inspect the exposed areas of the FWD center firewall welded assembly (1) and the surrounding structure for corrosion, cracks, chafing, or damage. Make sure the spot welds adjacent to the cutline are intact (Detail B). If any such damage exists, submit to PSE with details describing the extent of the damage.
5. Fabricate the doubler (4) using the repair sheet 150-021-31C1-2 and dimensions shown in Detail C.
6. Chamfer the doubler (4), as shown in Section E-E.
7. Fabricate the doubler (5) using the repair sheet 150-021-35C1-1 and dimensions shown in Detail C.
8. Locate the access door panel (9) on the FWD center firewall welded assembly (1).
9. Locate the doubler (5) in position on the FWD center firewall welded assembly (1) and trim to make sure it does not interfere with the access door panel (9) (Detail C, Detail D, and Section E-E).
10. Remove the access door panel (9).
11. Fabricate the filler (6) using the repair sheet 150-021-31C1-2 and dimensions shown in Detail B and Detail C to fit the cutout area in the FWD center firewall welded assembly (1).
12. Locate all of the repair parts (4, 5, and 6) in position and drill to accommodate the new fastener locations (Detail D). Make sure proper edge distance and spacing is achieved. Refer to [Table 3-28 of ALL-SRM](#) for the appropriate fastener hole sizes.
13. Transfer the five 0.458 to 0.468 inch (11.63 to 11.89 mm) diameter holes into the doubler (4) and the filler (6) (Detail D).
14. Locate the access door panel (9) in position and mark the position of the added fastener holes common to the gasket (10) (Detail D, Section E-E). Make sure proper edge distance is achieved.

CAUTION

Take care not to damage the access door panel (9) during the routing process.

15. Remove the access door panel (9). Rout a 0.25 inch (6.4 mm) diameter hole on the gasket (10) at the added fastener hole locations (Detail D).

-NOTE-

Deburr not to exceed 0.005 inch (0.13 mm) in depth.

16. Remove all repair parts (4, 5, and 6). Deburr all holes and edges. Remove debris and loose material.

-NOTE-

Wet install all fasteners with firewall sealant (C-353). All fasteners are to be installed using a rivet squeezer in order to protect the FWD center firewall welded assembly (1).

17. Locate and secure all of the repair parts (4, 5, and 6) using fasteners (12), as shown in Detail D.
18. Fill the area between the bead stiffeners (7) and the doubler (4) with firewall sealant (C-353).
19. Locate and secure the receptacles (2) using fasteners (8).
20. Seal all edges of the repair area on the FWD center firewall welded assembly (1) with firewall sealant (C-353). Make sure the edges of the doublers (4 and 5) and the filler (6) are sealed and that the rivet heads and shop heads are overcoated with firewall sealant (Section E-E).
21. Reinstall the repaired FWD center firewall welded assembly (1) on the helicopter ([DMC-429-A-71-30-00-03A-720A-A](#)).
22. Make an entry in the helicopter logbook and historical service records indicating compliance with **Part II – A** of this ASB.
23. Repeat the inspection requirements of **Part I** every 100 flight hours.

Part II - B: Repair of the FWD center firewall welded assembly 429-069-501-113.

1. Remove the FWD center firewall welded assembly (1) from the helicopter (Figure 3) ([DMC-429-A-71-30-00-03A-520A-A](#)).
2. Remove and retain the receptacles (2) from the FWD center firewall welded assembly (1). Discard and replace if any are damaged.

CAUTION

Take care not to damage underlying structures during the cutting and removal operations.

3. Cut out and remove the damaged portion of the FWD center firewall welded assembly (1) and doublers. Cutout to be as per the dimensions shown in Detail B.

4. Inspect the exposed areas of the FWD center firewall welded assembly (1) and the surrounding structure for corrosion, cracks, chafing, or damage. Make sure the spot welds adjacent to the cutline are intact (Detail B). If any such damage exists, submit to PSE with details describing the extent of the damage.
5. Fabricate the doubler (4) using the repair sheet 150-021-31C1-2 and dimensions shown in Detail C.
6. Chamfer the doubler (4), as shown in Section E-E.
7. Fabricate the doubler (5) using the repair sheet 150-021-35C1-1 and dimensions shown in Detail C.
8. Locate the access door panel (8) on the FWD center firewall welded assembly (1).
9. Locate the doubler (5) in position on the FWD center firewall welded assembly (1) and trim to make sure it does not interfere with the access door panel (8) (Detail C, Detail D, and Section E-E).
10. Remove the access door panel (8).
11. Fabricate the filler (6) using the repair sheet 150-021-31C1-2 and dimensions shown in Detail B and Detail C to fit the cutout area in FWD center firewall welded assembly (1).
12. Locate all of the repair parts (4, 5, and 6) in position and drill to accommodate the new fastener locations (Detail D). Make sure proper edge distance and spacing is achieved. Refer to [Table 3-28 of ALL-SRM](#) for the appropriate fastener hole sizes.
13. Transfer the five 0.458 to 0.468 inch (11.63 to 11.89 mm) diameter holes into the doubler (4) and filler (6) (Detail D).
14. Locate the access door panel (8) in position and mark the position of the added fastener holes common to the access door gasket (10) (Detail D, Section E-E). Make sure proper edge distance is achieved.

CAUTION

Take care not to damage the access door during the routing process.

15. Remove the access door panel (8). Rout a 0.25 inch (6.4 mm) diameter hole on the gasket (10) at the added fastener hole locations (Detail D).

-NOTE-

Deburr not to exceed 0.005 inch (0.13 mm) in depth.

16. Remove all repair parts (4, 5, and 6). Deburr all holes and edges. Remove debris and loose material.

-NOTE-

Wet install all fasteners with firewall sealant (C353). All fasteners are to be installed using a rivet squeezer in order to protect the FWD center firewall welded assembly (1).

17. Locate and secure all repair parts (4, 5, and 6) using fasteners (12), as shown in Detail D.

18. Locate and secure the receptacles (2) using fasteners (9) (Detail D).

19. Seal all edges of the repair area on the FWD center firewall welded assembly (1) with firewall sealant (C-353). Make sure the edges of the doublers (4 and 5) and the filler (6) are sealed and that the rivet heads and shop heads are overcoated with firewall sealant (Section E-E).

20. Reinstall the repaired FWD center firewall welded assembly (1) on the helicopter ([DMC-429-A-71-30-00-03A-720A-A](#)).

21. Make an entry in the helicopter logbook and historical service records indicating compliance with **Part II – B** of this ASB.

22. Repeat the inspection requirements of **Part I** every 100 flight hours.

Part II - C: Repair of the AFT center firewall welded assembly 429-069-504-105.

1. Remove the AFT center firewall welded assembly (1) from the helicopter (Figure 4) ([DMC-429-A-71-30-00-03A-520A-A](#)).

2. Remove and retain the gasket (2), grommets (3), and studs (4) from the AFT center firewall welded assembly (1). Discard and replace if any are damaged.

-NOTE-

Do not remove more material than required. Only remove the damaged portion of the web while respecting the dimensions shown in Detail A.

CAUTION

Take care not to damage underlying structures during the cutting and removal operations.

3. Remove the existing fasteners on the end of each stiffener (5) (Detail A).
4. Drill through spot welds using a No. 40 drill bit to detach the AFT center firewall welded assembly (1) from the stiffeners (5) (Detail A).
5. Cut out and remove the damaged portion of the AFT center firewall welded assembly (1). Cutout to be as per the dimensions shown in Detail A.
6. Inspect the exposed area of the AFT center firewall welded assembly (1) and the surrounding structure for corrosion, chafing, cracks, or damage. Make sure the spot welds adjacent to the cutlines are intact (Detail A). If any such damage exists, submit to PSE with details describing the extent of the damage.
7. Fabricate the web (6) using the repair sheet 150-021-34C1-2 and dimensions shown in Detail B and Detail C. The web must be a replicate of the AFT center firewall welded assembly (1). Make sure the web overlaps the AFT center firewall welded assembly cutout by a minimum of 1.70 inches (43.2 mm) (Detail C).
8. Locate the web (6) in position and drill to accommodate the new fastener locations (Detail C). Make sure proper edge distance and spacing is achieved. Refer to [Table 3-28 of ALL-SRM](#) for appropriate fastener hole sizes.
9. Transfer the existing fastener holes on the end of each stiffener (5) into the web (6) while also maintaining the same hole diameter as the originals (Detail C).
10. Transfer the eight 0.220 to 0.225 inch (5.59 mm to 5.72 mm) diameter holes into the web (6) (Detail C).

-NOTE-

Deburr not to exceed 0.005 inch (0.13 mm) in depth.

11. Remove the web (6). Deburr all the holes and edges. Remove debris and loose material.

-NOTE-

Wet install all fasteners with firewall sealant (C-353). All fasteners are to be installed using a rivet squeezer in order to protect the AFT center firewall welded assembly (1).

12. Locate and secure the web (6) using fasteners (10), as shown in Detail C.

-NOTE-

If removed gasket (2) was damaged requiring replacement, use gasket material 429-069-504-119 provided to manufacture new part. The removed gasket or contour of AFT firewall web may be used as a template for dimensions required. Make sure the same width is replicated from the removed part.

13. Reinstall the gasket (2) using bonding adhesive (C-325) as per the BHT-ALL-SPM, Section 7-5.
14. Reinstall the grommets (7) and the studs (8 and 9) on the AFT center firewall welded assembly (1) (Detail C).
15. Overcoat all the grommets (7) in the gasket cavity with firewall sealant (C-353) to prevent further chafing. Allow to dry.
16. Rotate the studs (8 and 9) to ensure proper installation in the receptacles.
17. Seal all edges of the repair area on the AFT firewall welded assembly (1) with firewall sealant (C-353). Make sure the AFT firewall welded assembly and the web (6) are sealed and that the rivet heads and the shop heads are overcoated with firewall sealant (Detail C).
18. Reinstall the repaired AFT center firewall welded assembly (1) on the helicopter ([DMC-429-A-71-30-00-03A-720A-A](#)).
19. Make an entry in the helicopter logbook and historical service records indicating compliance with **Part II – C** of this ASB.
20. Repeat the inspection requirements of **Part I** every 100 flight hours.

Part II – D: Repair of the AFT center firewall welded assembly 429-069-504-107

1. Remove the AFT center firewall welded assembly (1, Figure 5) from the helicopter ([DMC-429-A-71-30-00-03A-520A-A](#))

CAUTION

When removing the stiffeners (2), be careful not to damage the web (4). Drill through the spotwelds using a #40 drill bit to detach the stiffeners from the web and doubler. It may be necessary to carefully grind what remains of the spotwelds on the stiffeners (2) after drilling to successfully remove them.

2. Remove the 429-069-506-127 vertical stiffeners from the welded assembly (1).

3. Inspect the exposed areas of the welded assembly (1) for corrosion, cracks, or damage. If the welded assembly (1) is damaged, submit a structural repair request to productsupport@bellflight.com ([IL GEN-22-154](#)).
4. Fabricate two stiffeners (2) as shown in Detail A, View B and Section C-C, using repair material 150-021-35C1-2. Make sure to maintain a 0.06 inch (1.52 mm) minimum bend radius.
5. Position the two stiffeners (2) on the welded assembly (1). Locate and drill holes using the drilled-out spotweld holes in the welded assembly. Maintain proper edge distance and spacing. Refer to [Table 3-28 of ALL-SRM](#) for the appropriate fastener hole size.

-NOTE-

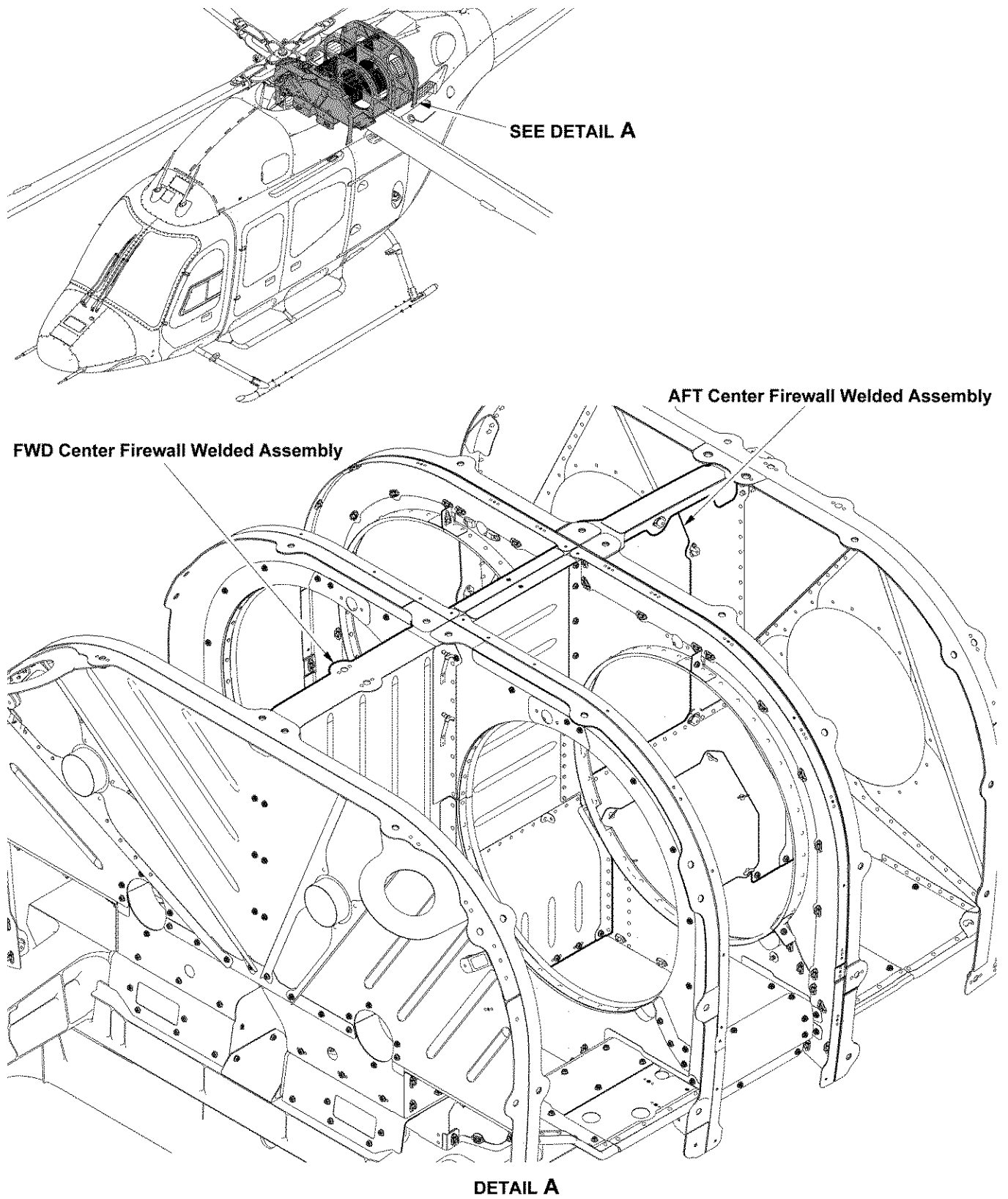
Deburr shall not exceed 0.005 inch (0.13 mm).

6. Remove the two stiffeners (2) and deburr all the holes and edges. Remove debris and loose material.

-NOTE-

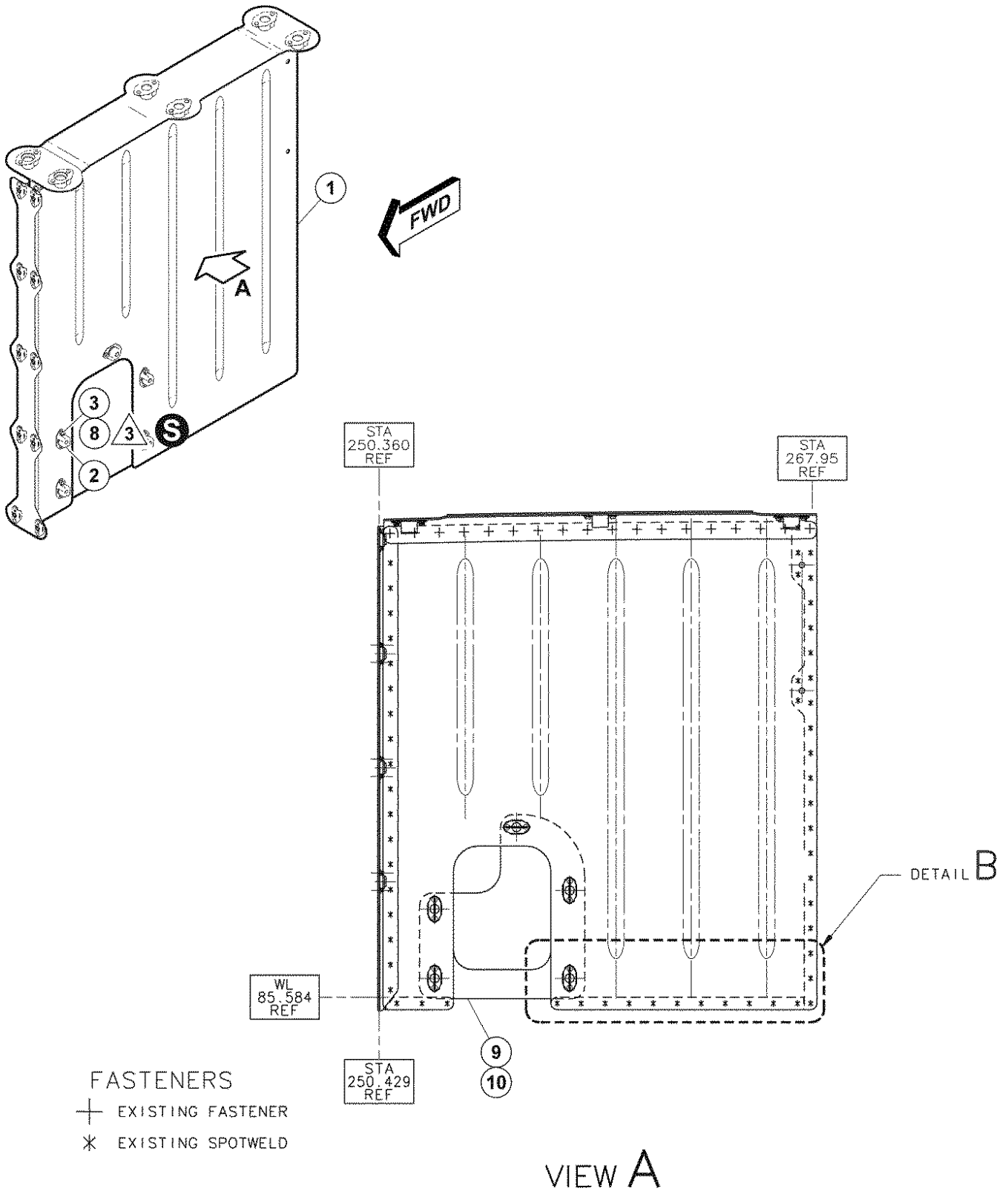
Wet install all fasteners with firewall sealant (C-353). All fasteners are to be installed using a rivet squeezer in order to protect the AFT center firewall welded assembly (1).

7. Locate and secure the stiffeners (2) using fasteners (3), as shown in Detail A.
8. Seal all edges of both stiffeners (2) on the AFT firewall welded assembly (1) with firewall sealant (C-353). Make sure the AFT center firewall welded assembly (1) and the web (4) are sealed and that the rivet heads and the shop heads are overcoated with firewall sealant (Detail A).
9. Install the repaired Aft center firewall welded assembly (1) on the helicopter ([DMC-429-A-71-30-00-03A-720A-A](#)).
10. Make an entry in the helicopter logbook and historical service records indicating compliance with **Part II – D** of this ASB.



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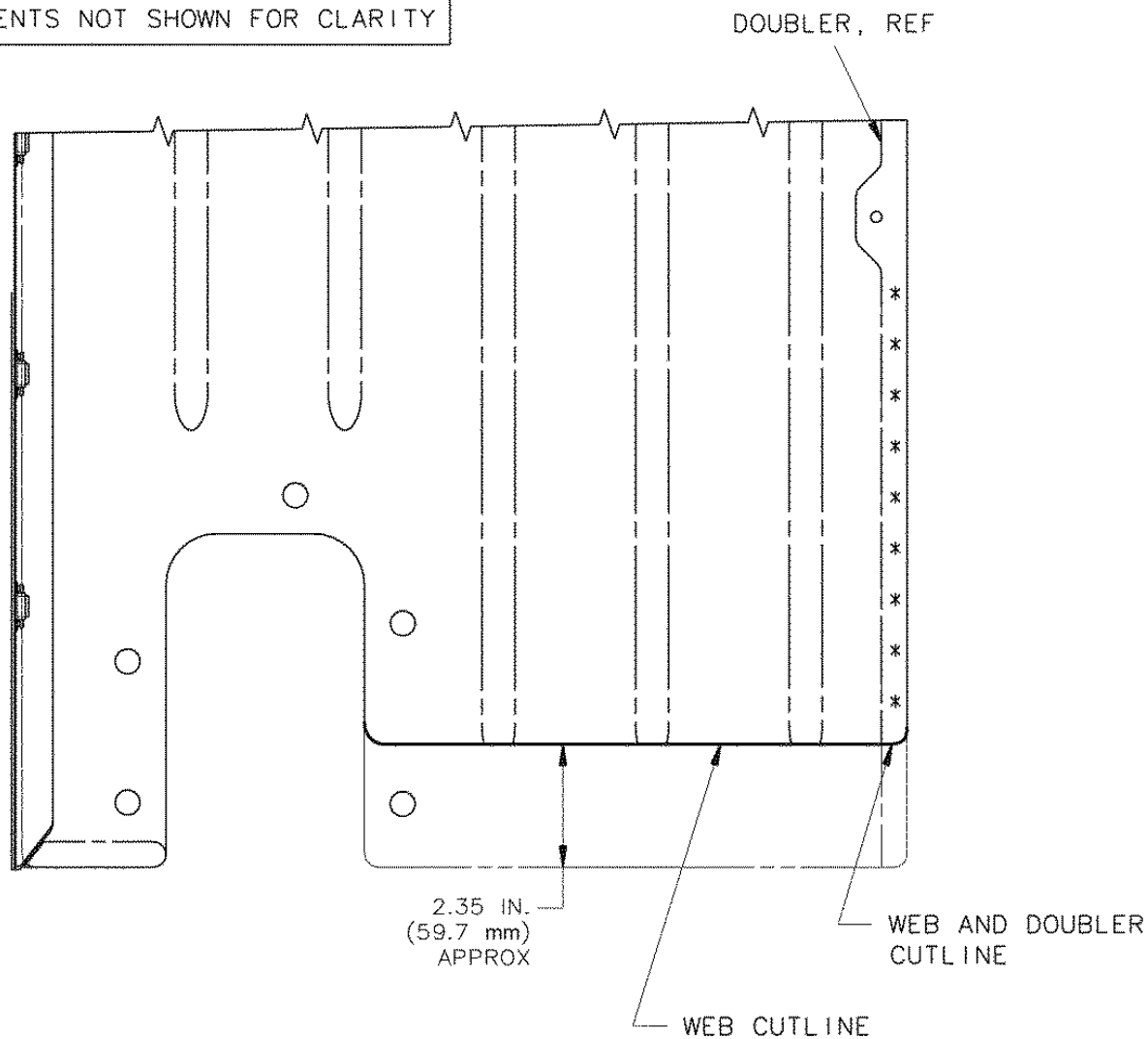
Figure 1 – Typical Firewall Installation



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Figure 2 – Part II - A (Sheet 1 of 5)

NOTE: SOME COMPONENTS NOT SHOWN FOR CLARITY



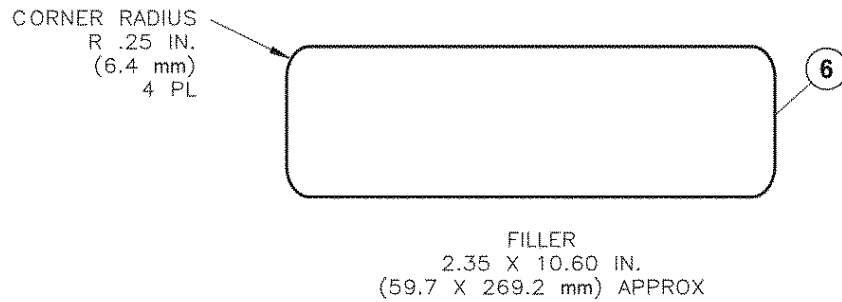
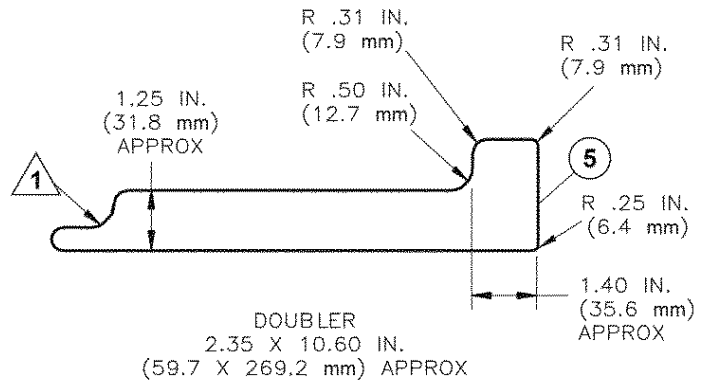
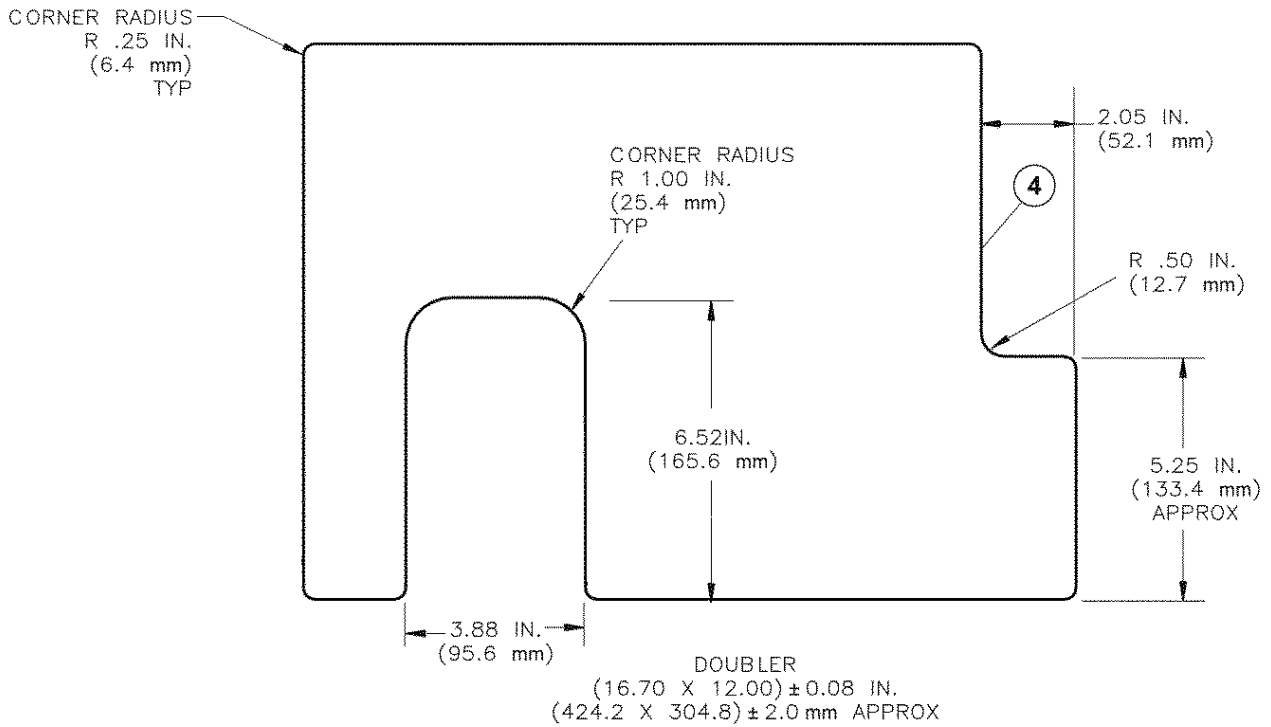
DETAIL B
VIEW LKG INBD LHS

FASTENERS

* EXISTING SPOTWELD

16663_002b

Figure 2 – Part II - A (Sheet 2 of 5)

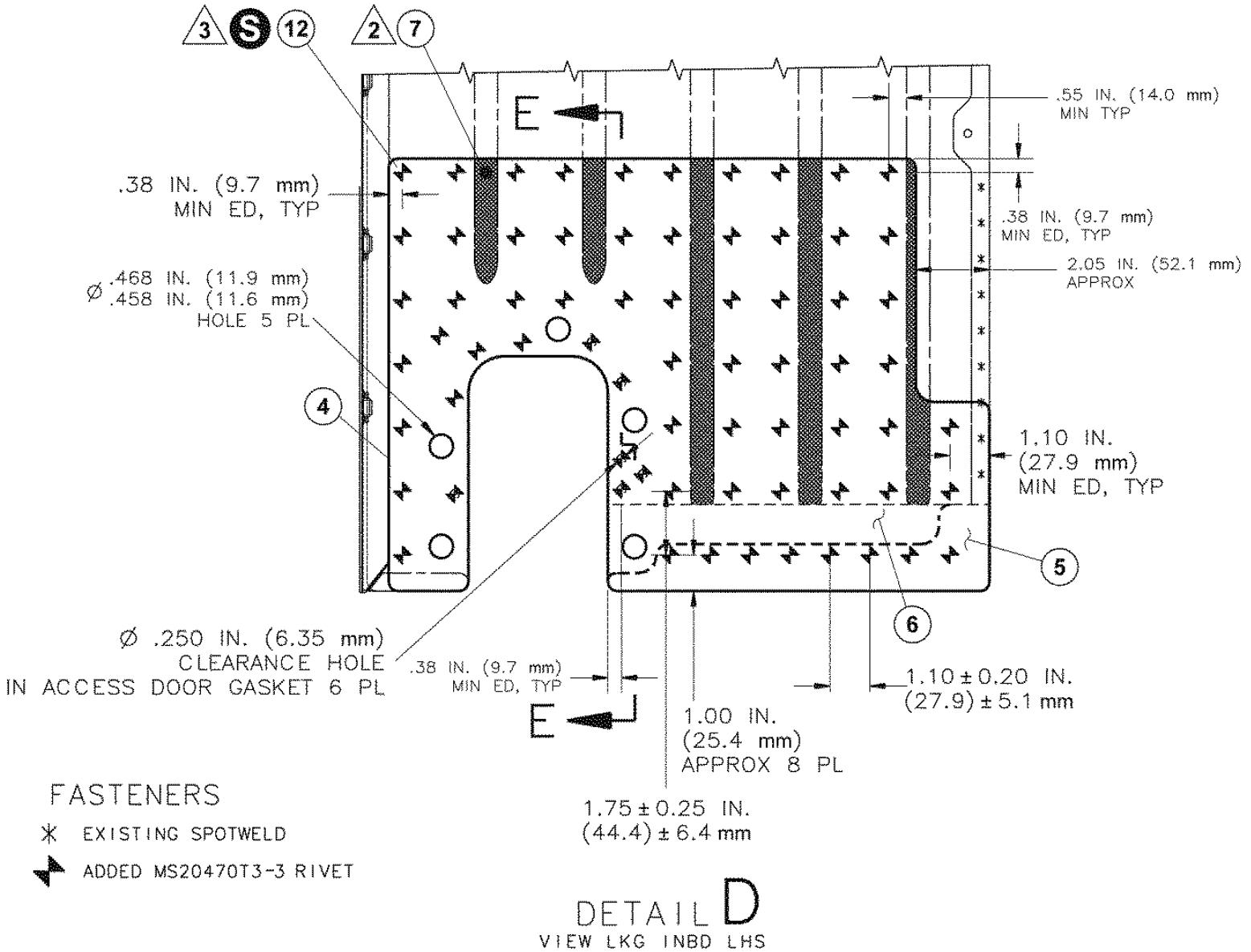


DETAIL C

16663_002c

Figure 2 – Part II - A (Sheet 3 of 5)

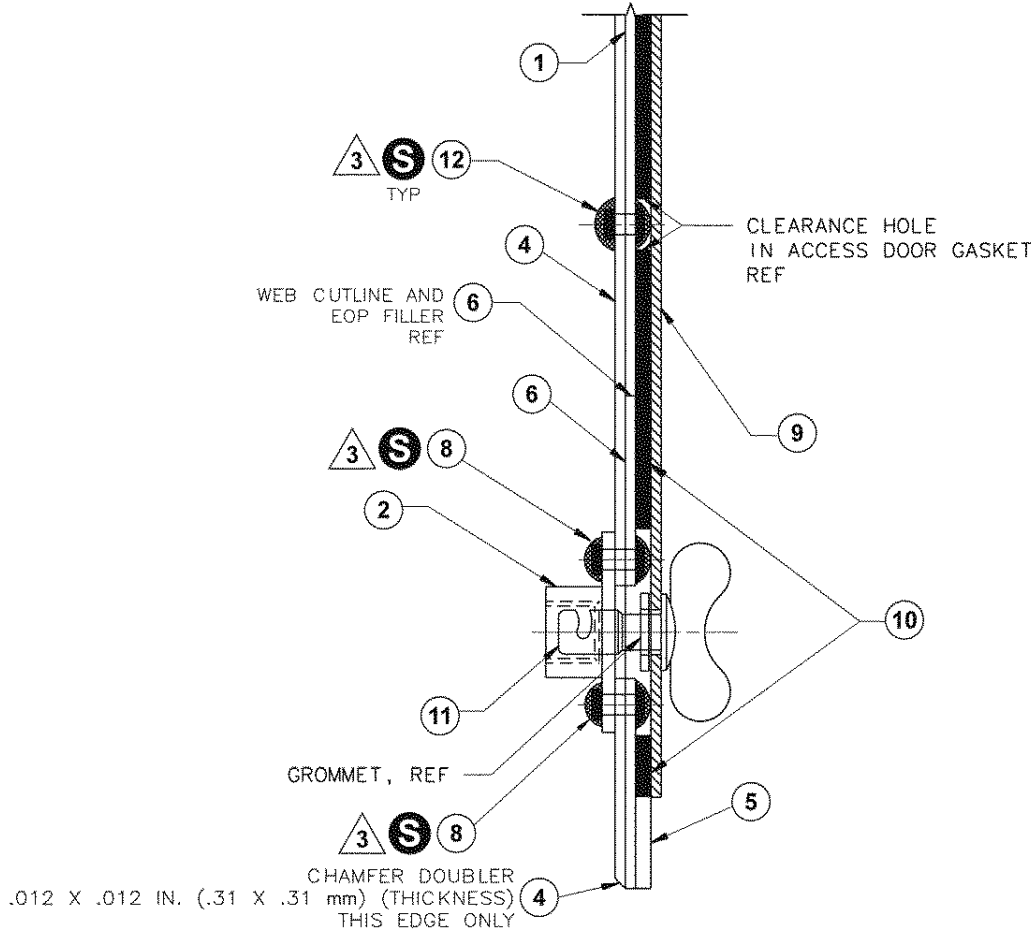
NOTE: SOME COMPONENTS NOT SHOWN FOR CLARITY



16663_002d

Figure 2 – Part II - A (Sheet 4 of 5)

NOTE: THICKNESS OF PARTS PICTORIALLY INCREMENTED FOR CLARITY



SECTION E-E

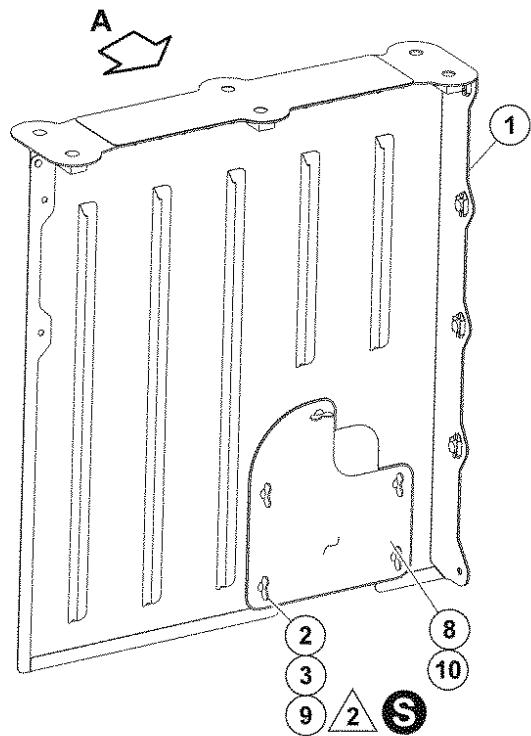
1. FWD CENTER FIREWALL WELDED ASSEMBLY (REF)
2. RECEPTACLES (REF)
3. RIVETS (REF)
4. DOUBLER (LOCALLY MANUFACTURED)
5. DOUBLER (LOCALLY MANUFACTURED)
6. FILLER (LOCALLY MANUFACTURED)
7. BEAD STIFFENER (REF)
8. RIVET (MS20470T3-4) 10 REQD
9. PANEL/ACCESS DOOR (REF)
10. GASKET (REF)
11. STUD (REF)
12. RIVETS (MS20470T3-3) 69 REQD

NOTE

- 1 ENSURE THE DOUBLER DOES NOT INTERFERE WITH THE PANEL (9).
- 2 FILL BEAD WITH FIREWALL SEALANT (C-353).
- 3 OVERCOAT RIVET HEAD AND SHOP HEAD WITH FIREWALL SEALANT (C-353).
- S FIREWALL SEALANT (C-353).

16663_002e

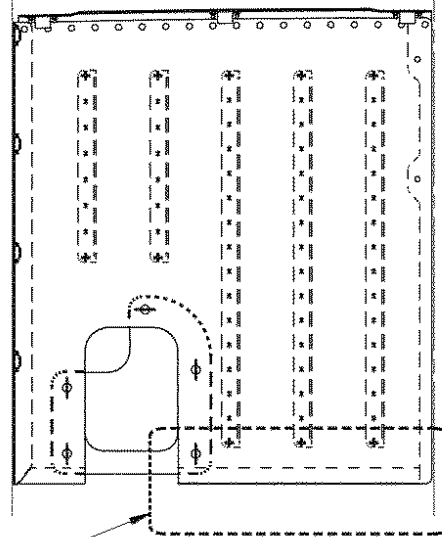
Figure 2 – Part II - A (Sheet 5 of 5)



FWD

STA
250.360
REF

STA
267.950
REF



DETAIL B

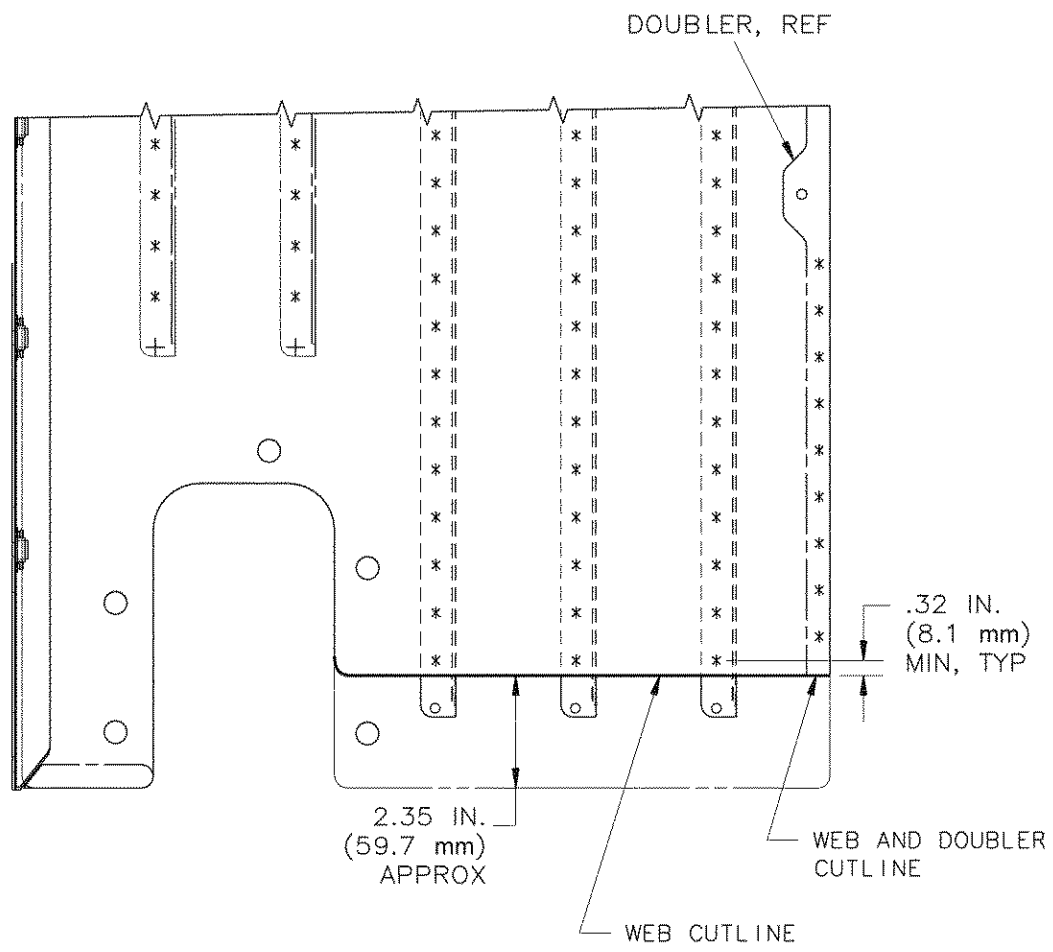
VIEW A

FASTENERS
 + EXISTING FASTENER
 * EXISTING SPOTWELD

16663_003a

Figure 3 – Part II - B (Sheet 1 of 5)

NOTE: SOME COMPONENTS NOT SHOWN FOR CLARITY

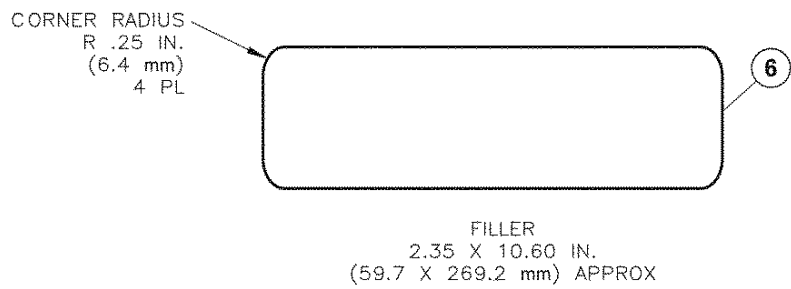
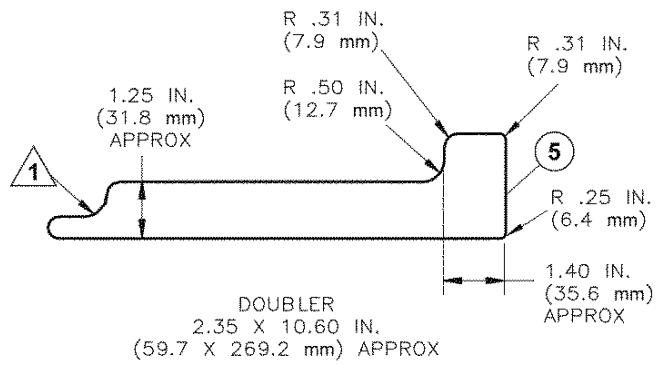
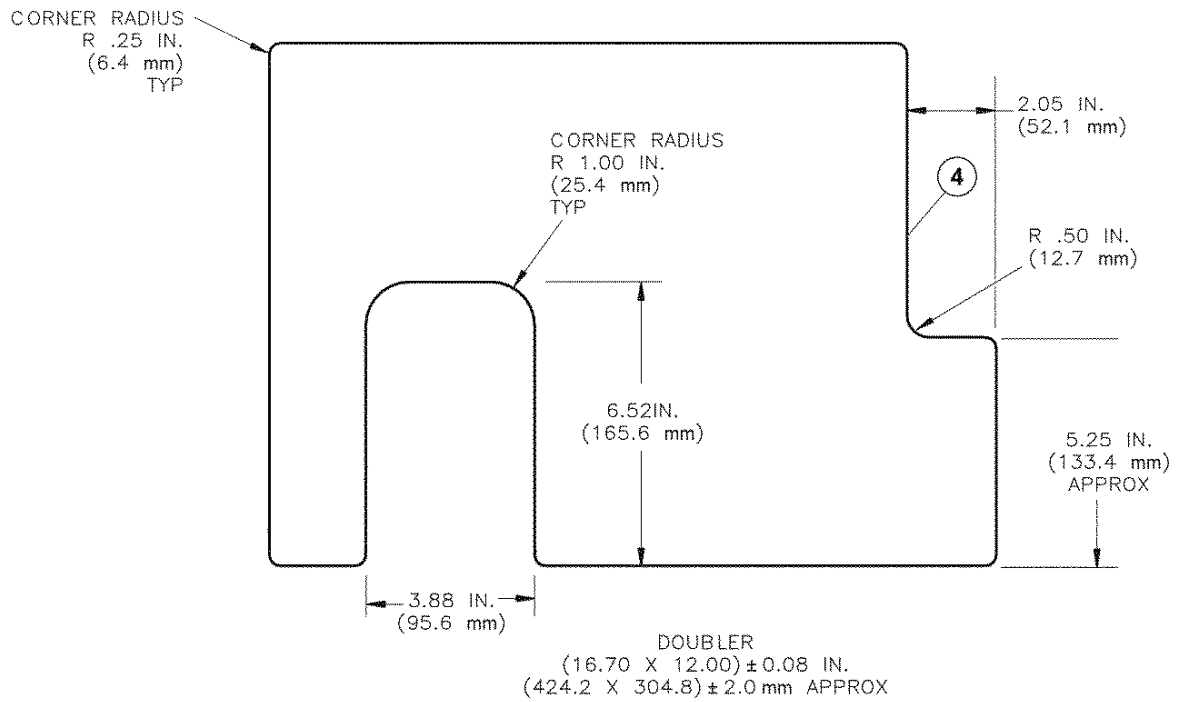


DETAIL B
VIEW LKG INBD LHS

- FASTENERS
- + EXISTING FASTENER
 - X EXISTING SPOTWELD

16663_003b

Figure 3 – Part II - B (Sheet 2 of 5)

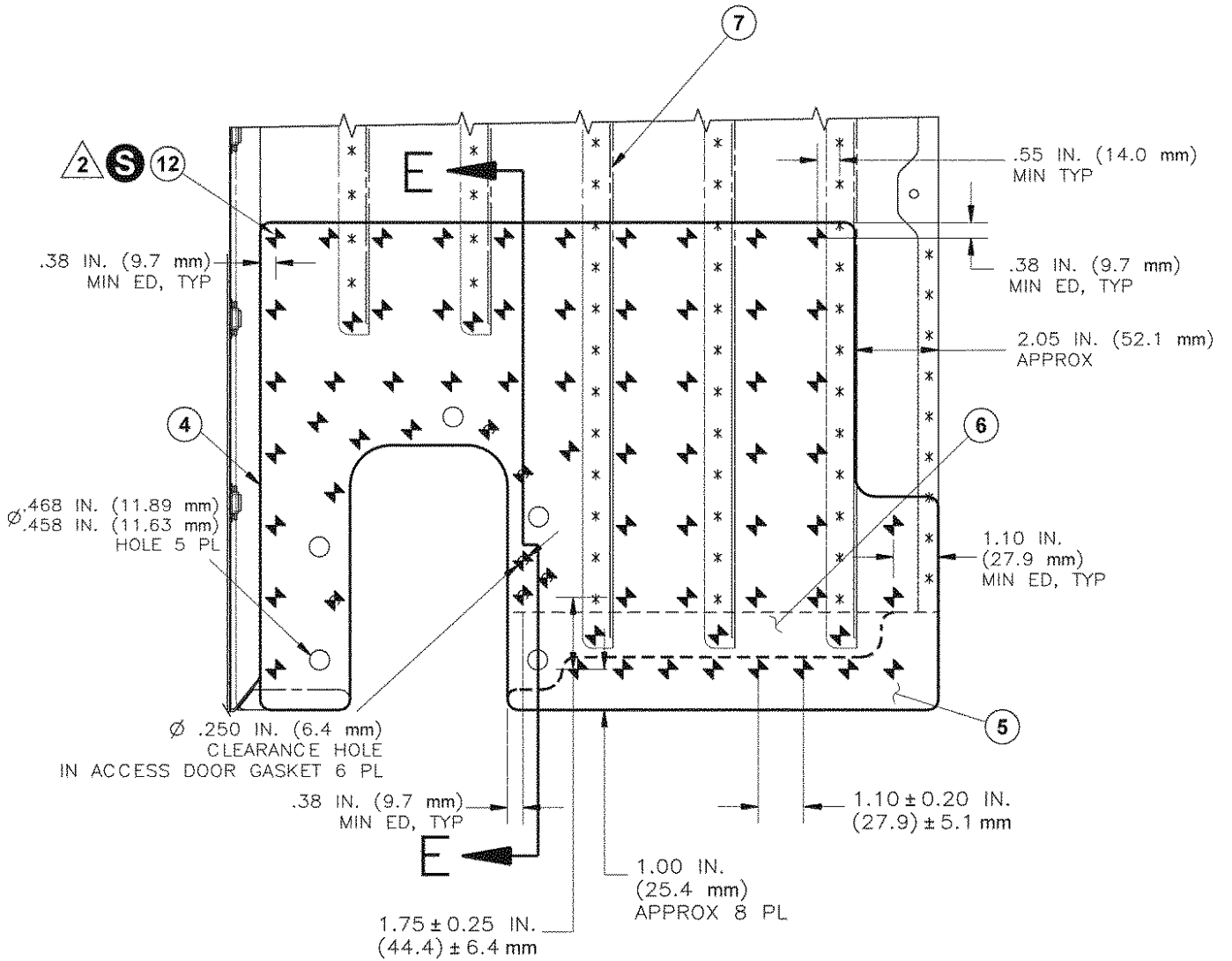


DETAIL C

16663_003c

Figure 3 – Part II - B (Sheet 3 of 5)

NOTE: SOME COMPONENTS NOT SHOWN FOR CLARITY



FASTENERS

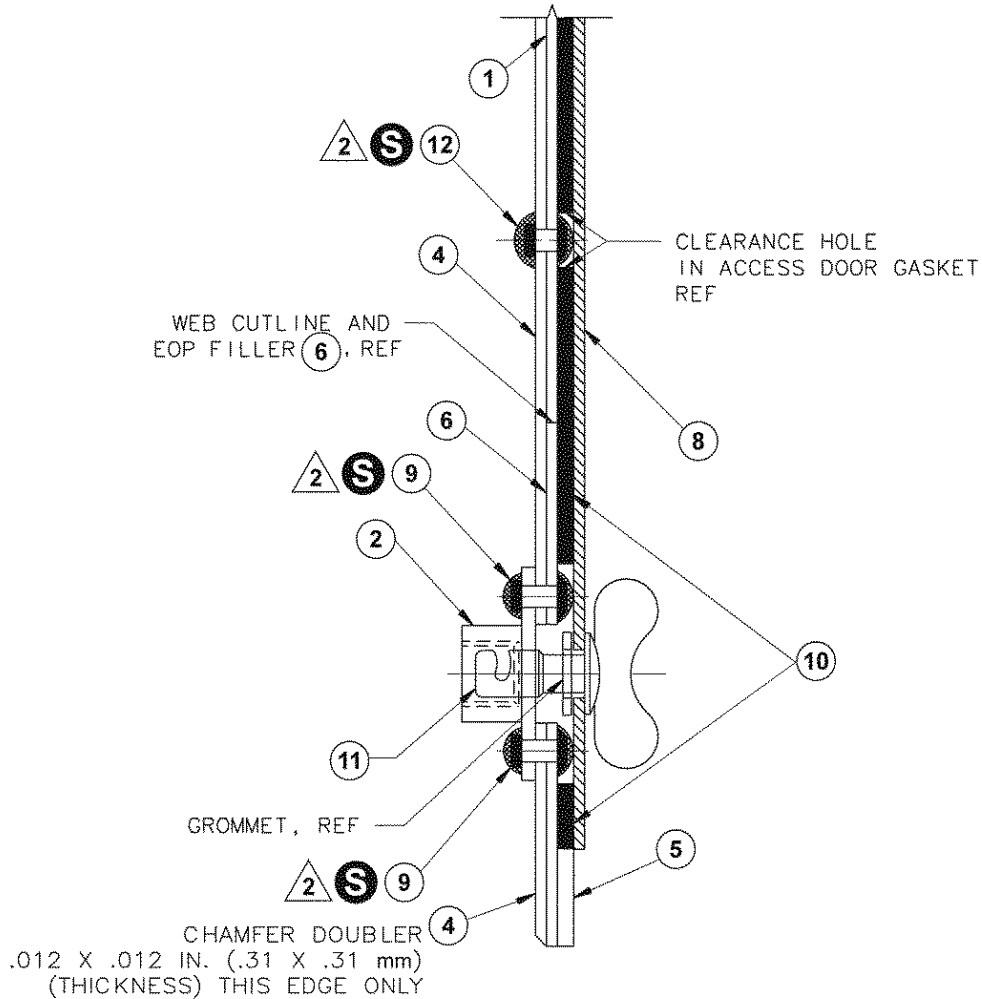
- * EXISTING SPOTWELD
- ▲ ADDED MS20470T3-3 RIVET 2

DETAIL D
VIEW LKG INBD LHS

16663_003d

Figure 3 – Part II - B (Sheet 4 of 5)

NOTE: THICKNESS OF PARTS PICTORIALLY INCREMENTED FOR CLARITY



SECTION E—E

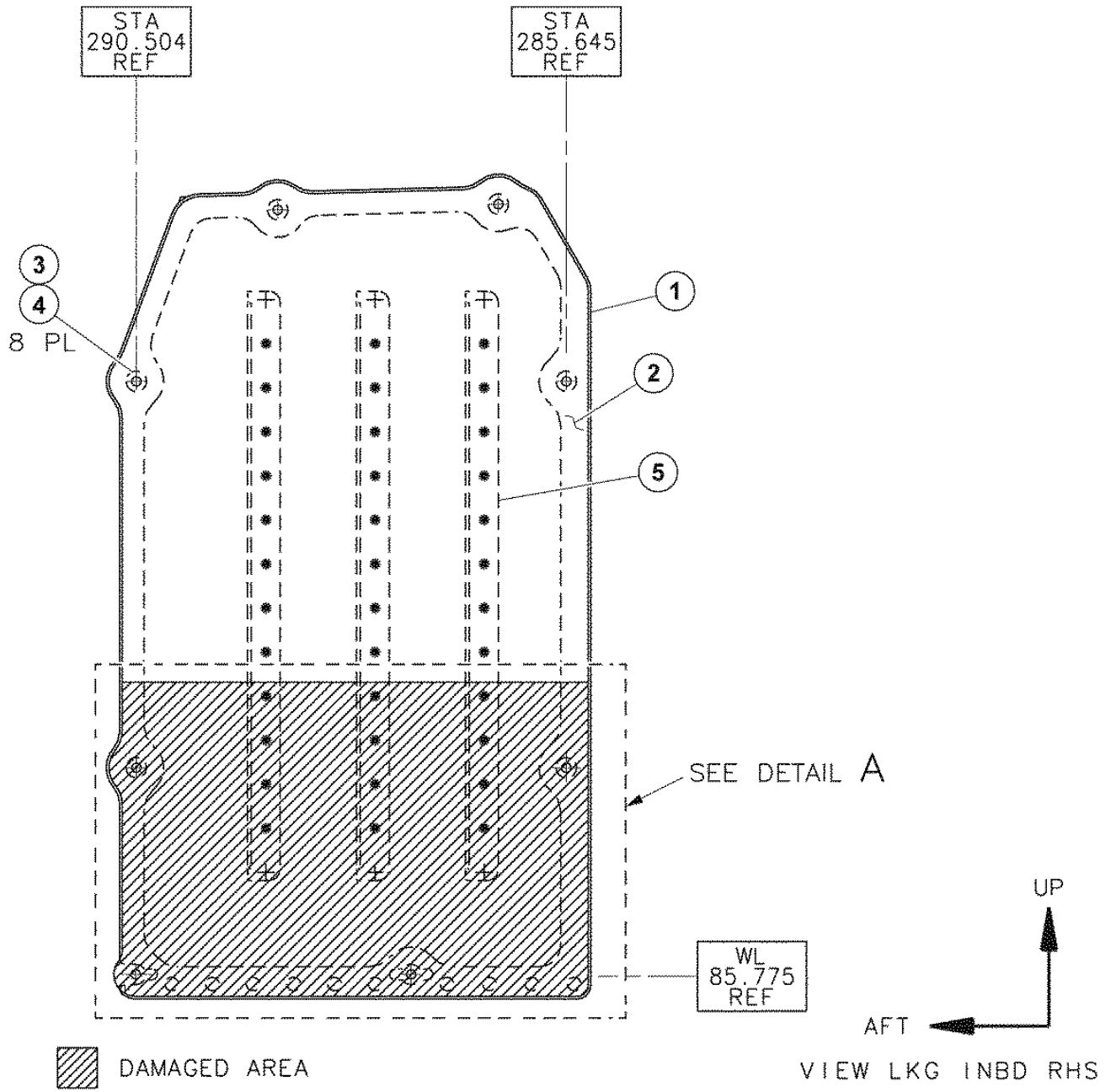
1. FWD CENTER FIREWALL WELDED ASSEMBLY (REF)
2. RECEPTACLES (REF)
3. RIVET (REF)
4. DOUBLER (LOCALLY MANUFACTURED)
5. DOUBLER (LOCALLY MANUFACTURED)
6. FILLER (LOCALLY MANUFACTURED)
7. STIFFENER (REF)
8. PANEL/ACCESS DOOR (REF)
9. RIVET (MS20470T3-4) 10 REQD
10. GASKET (REF)
11. STUD (REF)
12. RIVET (MS20470T3-3) 71 REQD

NOTE

- △ 1 ENSURE THE DOUBLER DOES NOT INTERFERE WITH THE PANEL (8).
- △ 2 OVERCOAT RIVET HEAD AND SHOP HEAD WITH FIREWALL SEALANT (C-353).
- Ⓢ FIREWALL SEALANT (C-353).

18863_003e

Figure 3 – Part II - B (Sheet 5 of 5)



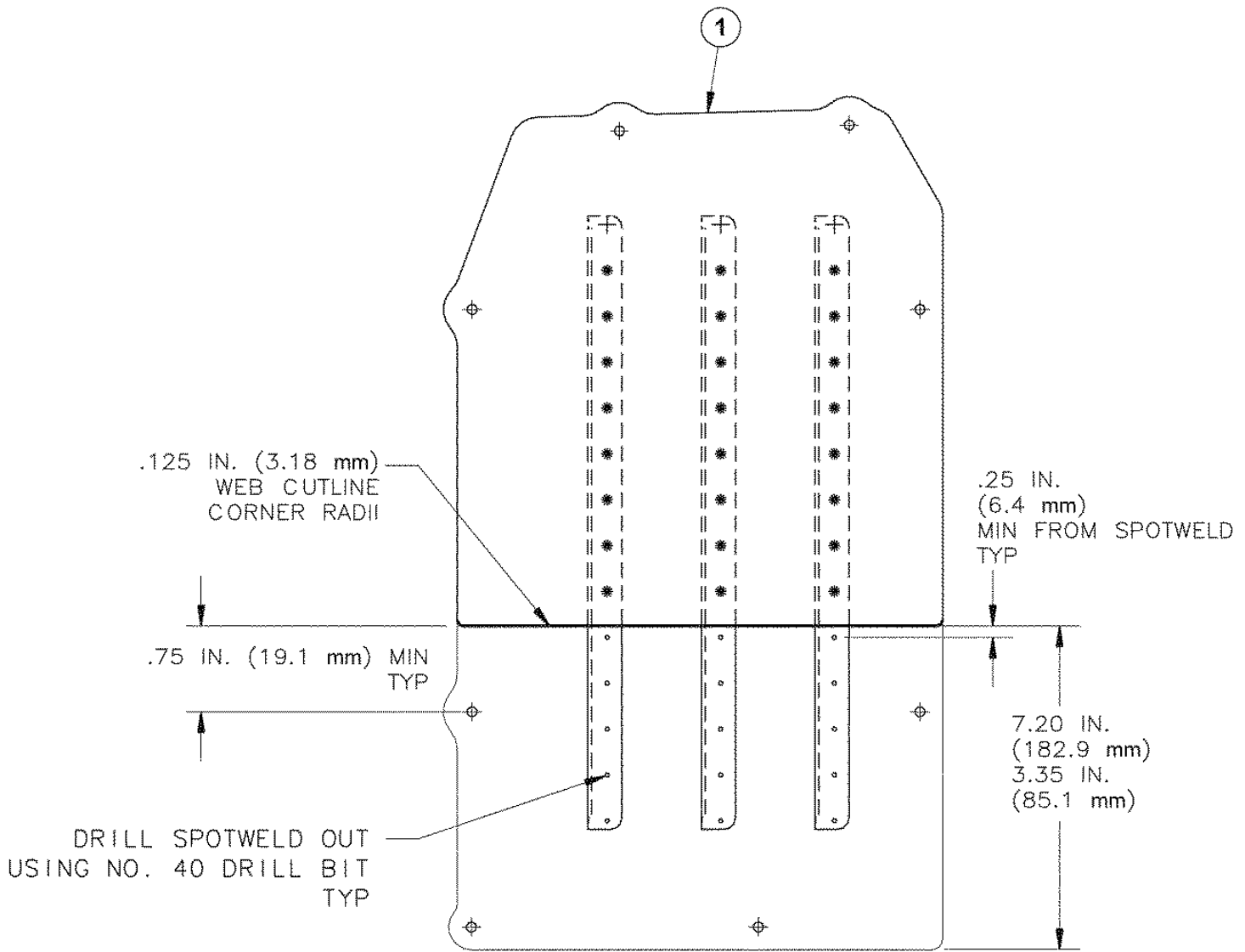
FASTENERS

+ EXISTING FASTENER

* EXISTING SPOTWELD

16663_004a

Figure 4 – Part II - C (Sheet 1 of 5)



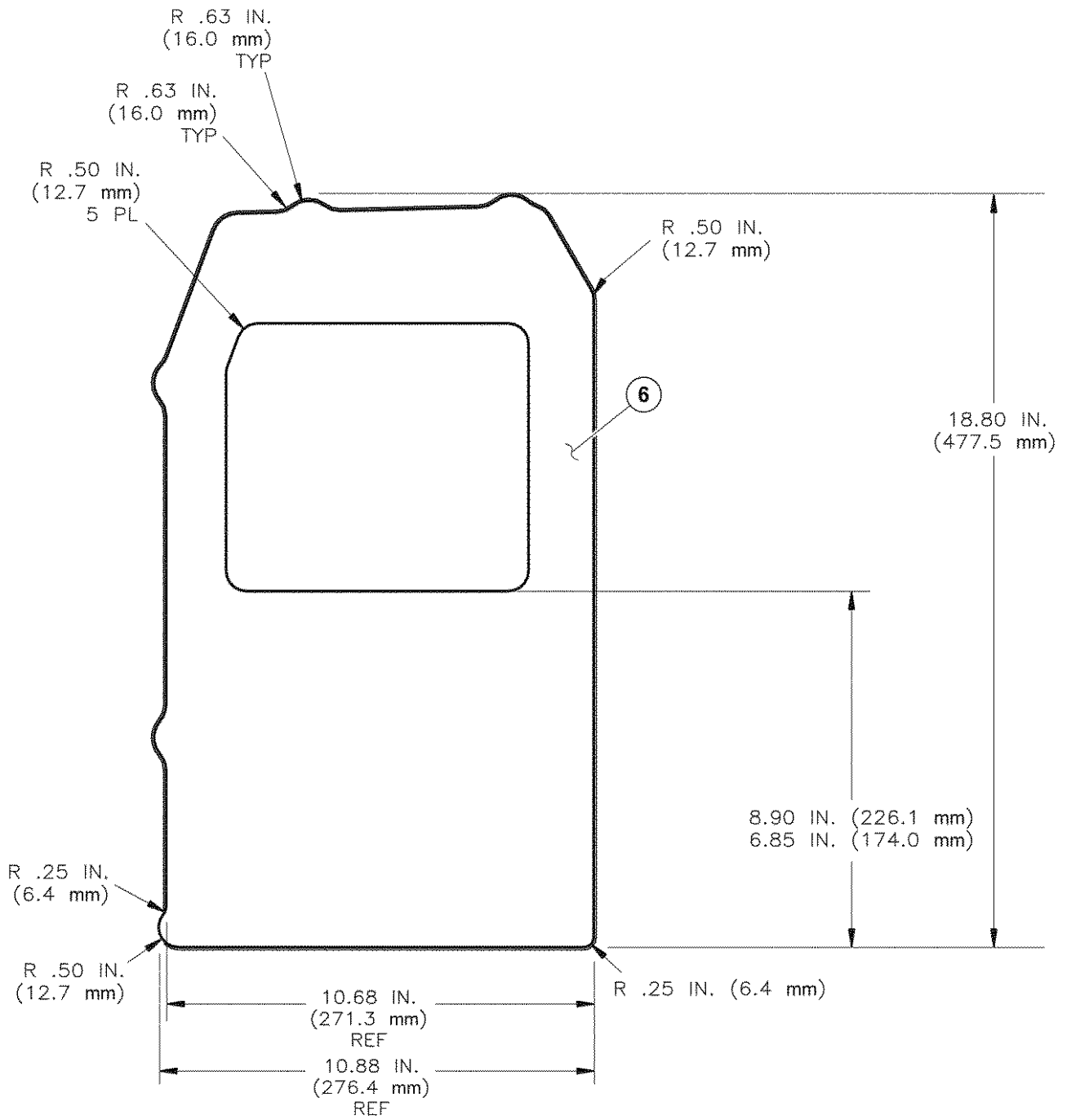
FASTENERS

- ⊕ EXISTING FASTENER
- * EXISTING SPOTWELD

DETAIL A

16663_004b

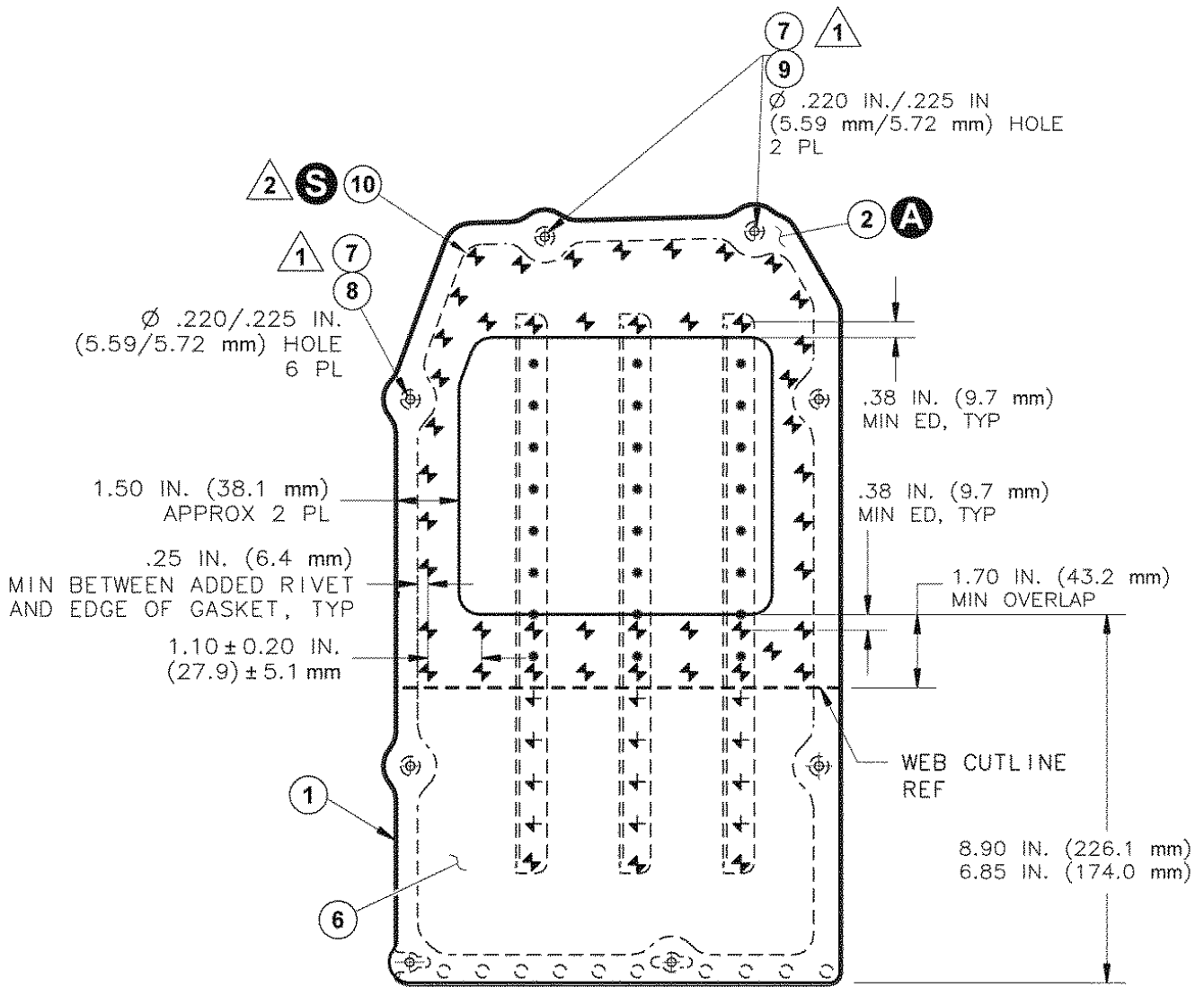
Figure 4 – Part II - C (Sheet 2 of 5)



DETAIL B

16663_004c

Figure 4 – Part II - C (Sheet 3 of 5)



DETAIL C

FASTENERS

- * EXISTING SPOTWELD
- ⚡ ADDED MS20470T3-3 RIVET 2
- ⚡ ADDED MS20470T3-3 RIVET AT EXISTING SPOTWELD LOCATION 2

16663_004d

Figure 4 – Part II - C (Sheet 4 of 5)

1. AFT CENTER FIREWALL WELDED ASSEMBLY (REF)
2. GASKET (429-069-504-119) (MAKE FROM 151-008E) (REF)
3. GROMMET (REF)
4. STUD (REF)
5. STIFFENER (REF)
6. WEB (REF)
7. GROMMET (50-009C2) FAR SIDE 8 REQD
8. STUD (50-007W12C) NEAR SIDE 6 REQD
9. STUD (50-007W18C) NEAR SIDE 2 REQD
10. RIVET (MS20470T3-3) 59 REQD

NOTE

- ① OVERCOAT GROMMET WITH FIREWALL SEALANT (C-353) TO PREVENT FURTHER CHAFFING.
- ② OVERCOAT RIVET HEAD AND SHOP HEAD WITH FIREWALL SEALANT (C-353).
- 3 SEAL ALL EDGES OF THE REPAIR (C-353).
- Ⓐ ADHESIVE (C-325).
- Ⓘ FIREWALL SEALANT (C-353).

16663_004e

Figure 4 – Part II - C (Sheet 5 of 5)

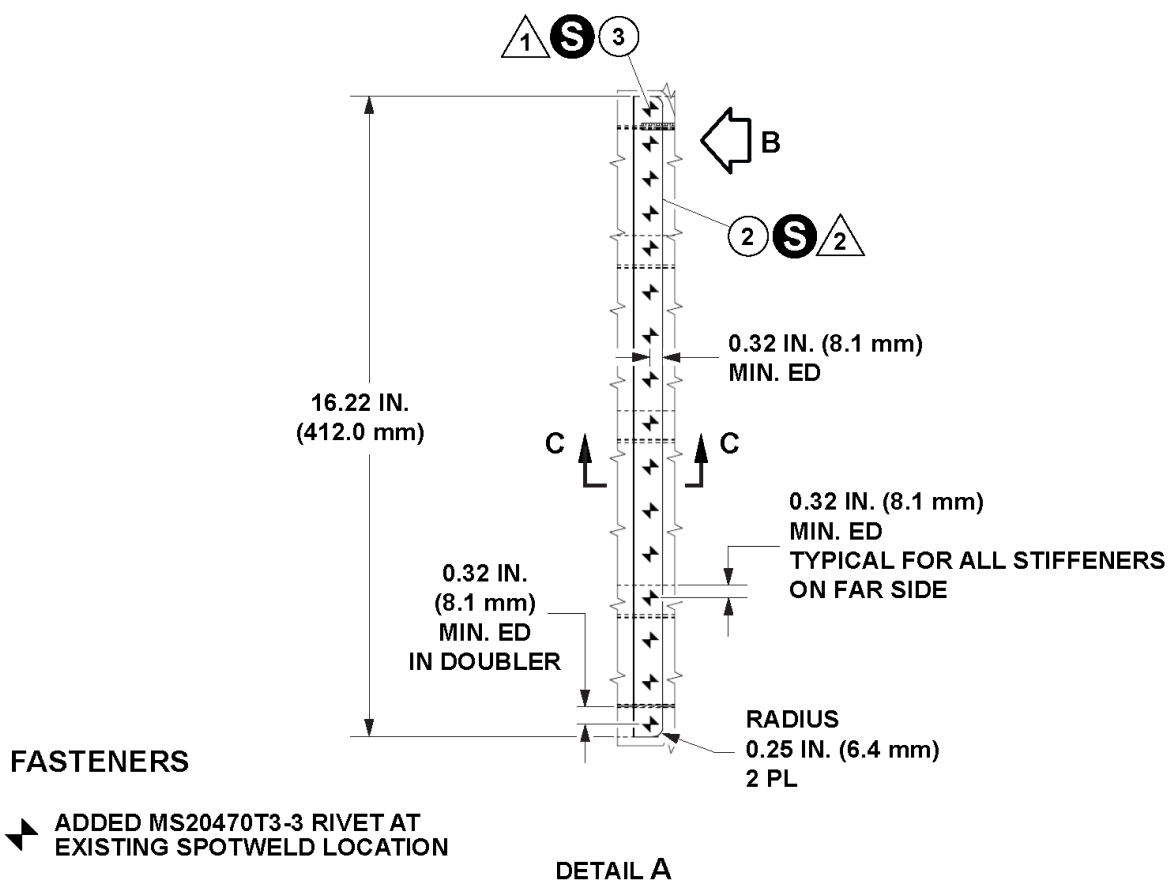
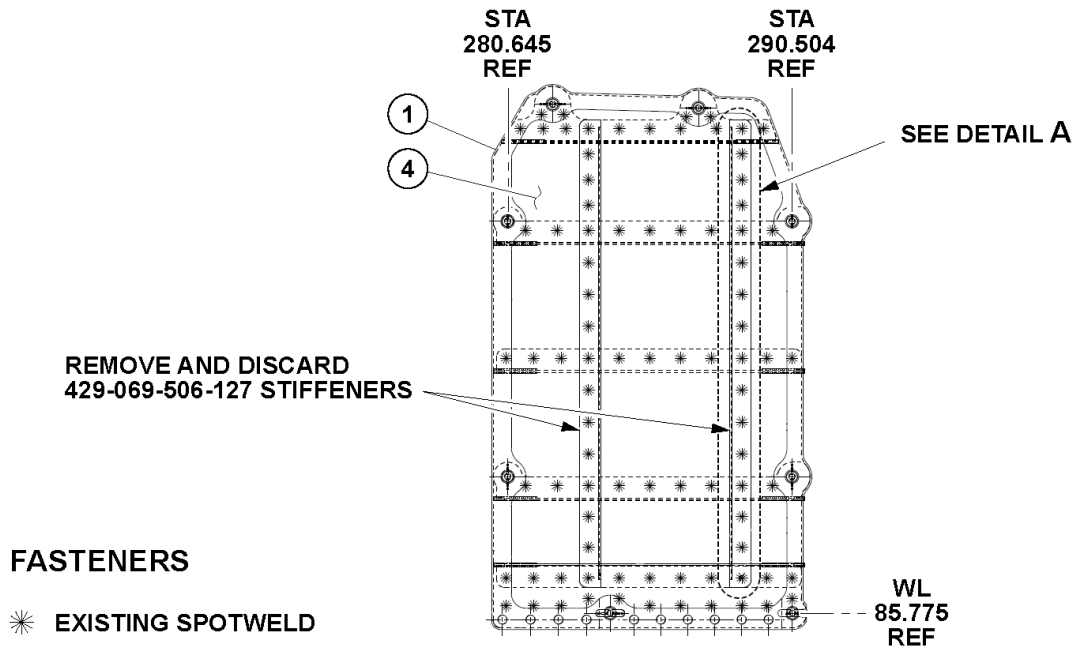
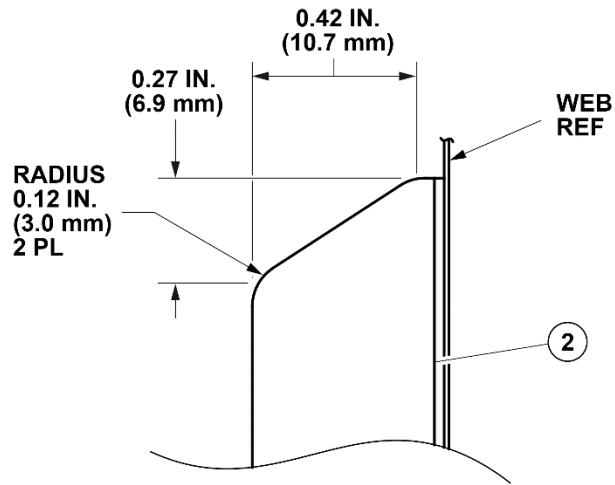
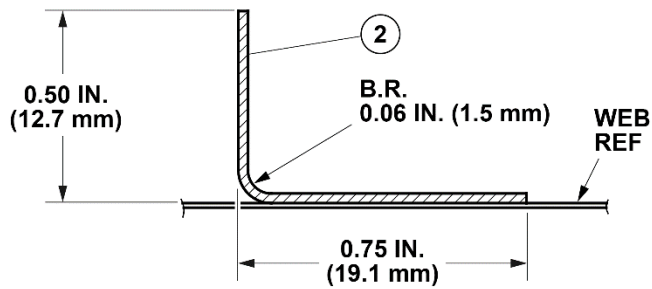


Figure 5 – Part II - D (Sheet 1 of 2)



VIEW B



SECTION C-C

- 1. AFT center firewall welded assembly
- 2. Stiffener
- 3. MS20470T3-3 Rivet
- 4. Web

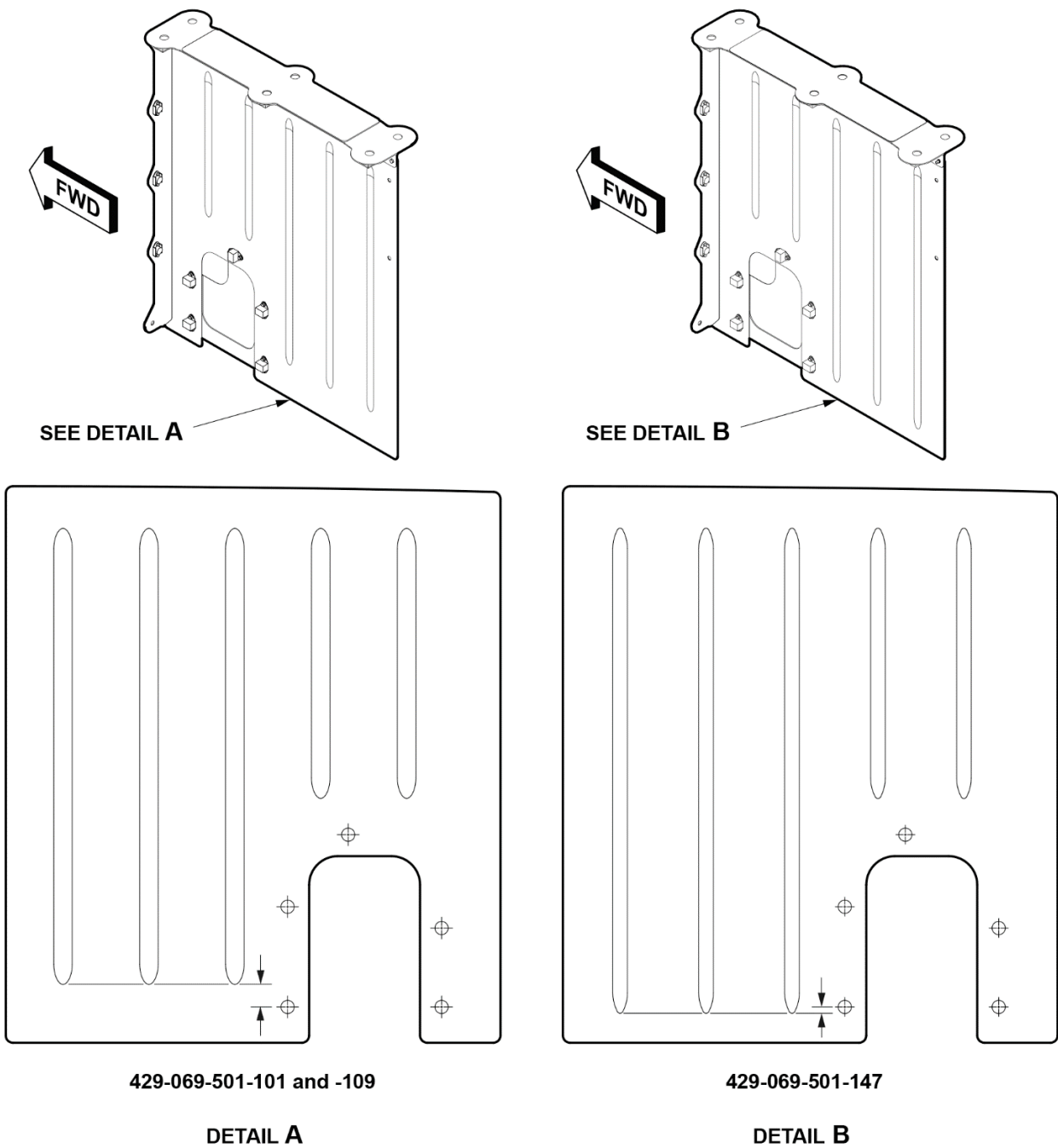
S SEALANT (C-353)

NOTE

- 1 Overcoat rivet head and shop head with firewall sealant (C-353).
- 2 Seal the edges of the stiffeners with firewall sealant (C-353).

23538_002b

Figure 5 – Part II - D (Sheet 2 of 2)

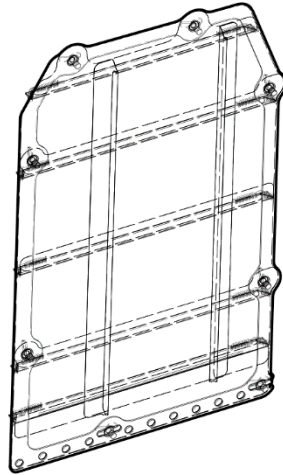


NOTES

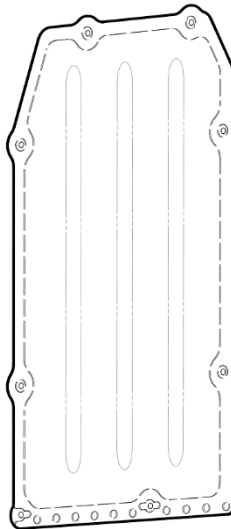
1. The 429-069-501-147 FWD Center Firewall can be differentiated from the 429-069-501-101 and -109 by the length of the beads as shown above.
2. The 429-069-501-113 FWD Center Firewall has stiffeners instead of beads.

23538_001a

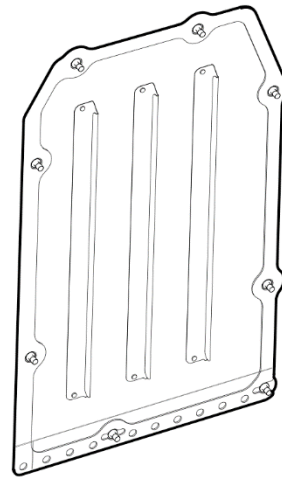
Figure 6 – FWD Center Firewall Part Number Identification



429-069-504-107



429-069-504-101 and -103



429-069-504-105

NOTES

1. The 429-069-504-101 and -103 AFT Center Firewalls have vertical beads.
2. The 429-069-504-105 AFT Center Firewalls has vertical stiffeners only.
3. The 429-069-504-107 AFT Center Firewalls has vertical stiffeners on one side and horizontal stiffeners on the other side.

23538_001b

Figure 7 – AFT Center Firewall Part Number Identification