



DRB 2016-SA-76-034

MLG Drag Brace Support Brackets Cracked

SIKORSKY
AIRCRAFT

DESIGN RECORD BOOK

Record NO:

Prepared by	Kenneth Welch	DRB No:	<input type="text"/> 2016-SA-76-034
Title	<input type="text"/> MLG Drag brace support brackets cracked		
Start Date:	<input type="text"/> 9/2/16	Detail Dwg	<input type="text"/> 76204-02008
End Date:	<input type="text"/> 9/2/16	Assy Dwg	<input type="text"/>
No. Pages:	<input type="text"/>		
Model:	S-76	Related Documents:	(1) <input type="text"/> (3) <input type="text"/> (2) <input type="text"/> (4) <input type="text"/>
Keyword:	(1) <input type="text"/> MLG Brace (2) <input type="text"/> (3) <input type="text"/>	Hours:	<input type="text"/>
Supersedes:	<input type="text"/>		
Analysis Type	<input type="text"/>		
Reason for Analysis	<input type="text"/> Repair		
FEM Analysis:	<input type="text"/>		
Charge No:	<input type="text"/>		
Superseded By:	<input type="text"/>		

Description:

Customers have found brackets that are cracked on both the LH and RH side. The support brackets are cracked through lower aft bend radius; refer RH & LH Drag Brace Support.jpg attached.

Results:

The repair procedures are outlined in this DRB. For FAA purposes, this repair is considered "MAJOR".

Assigned: John Scheib

Approval:

Approve Date: 9/2/2016

PREPARED BY K. Welch

Lockheed Martin Proprietary/Export Controlled Information
CHECKED BY J. Scheib

DATE 9/2/16

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MLG Drag Brace Support Brackets Cracked**Background**

Customers have found brackets that are cracked on both the LH and RH side. The support brackets are cracked through lower aft bend radius; refer RH & LH Drag Brace Support.jpg attached.

The repair procedures are outlined in this DRB. For FAA purposes, this repair is considered "MAJOR".

**Figure 1 – L/H Side Crack Location**PREPARED BY K. WelchLockheed Martin Proprietary/Export Controlled Information
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Figure 2 – R/H Side Crack Location



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MLG Drag Brace Support Brackets Cracked**Repair Procedure:**

These repair instructions are for the repair of the L/H or R/H MLG drag brace beam.

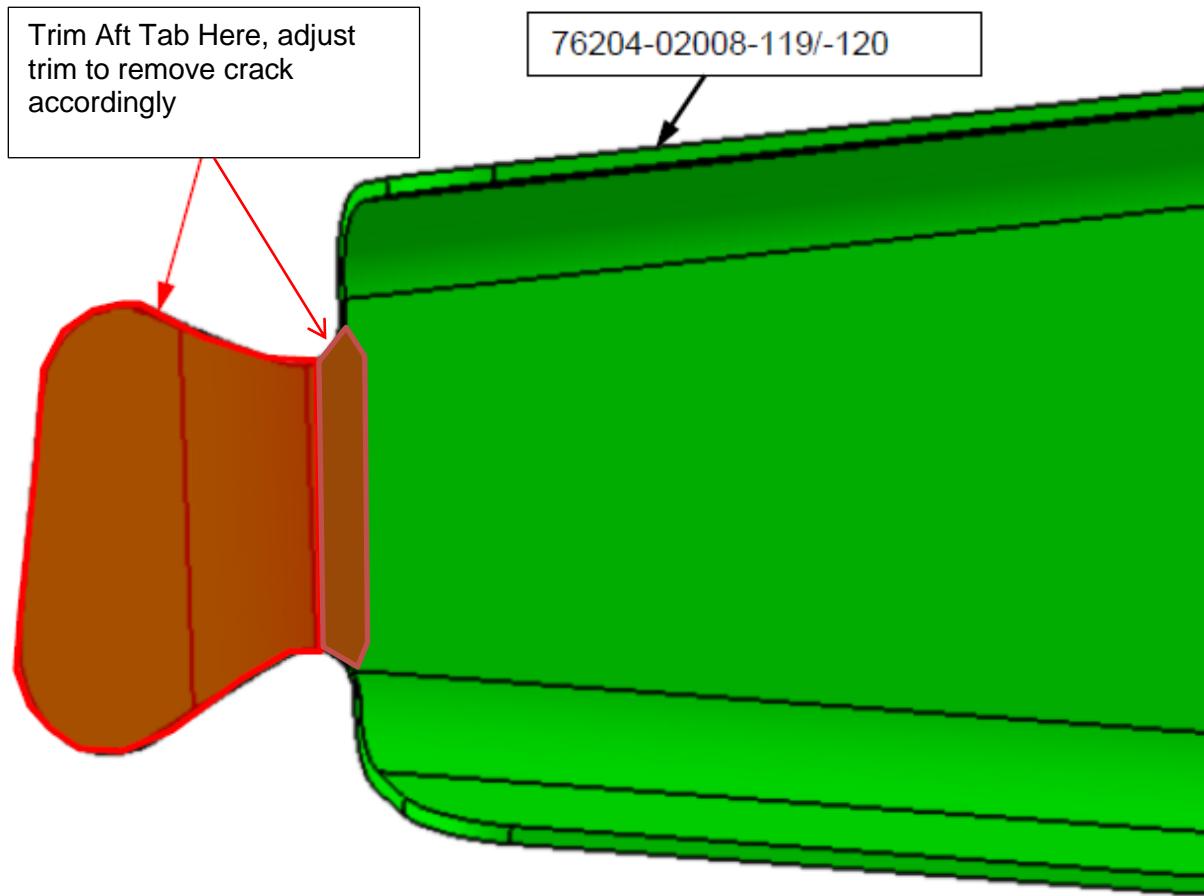
1. Prepare the ship for ground maintenance per the Maintenance Manual.
2. Disassemble as required.
3. Trim the aft tab of the 76204-02008-119 (LHS)/-120 (RHS) drag brace beam as shown in Figure 3. Break sharp edges.
4. Degrease the 76204-02008-119 (LHS)/ -120 (RHS) drag brace beam and interfacing structure repair area by wiping with a low-lint cleaning cloth (conforming to A-A-59323, Type II) using acetone (conforming to ASTM D329) or ethyl alcohol (conforming to A-A-51693). Wash with clean water to a water-break free condition.
5. Inspect for cracks using FPI per MM procedures at the holes that interface with the 76204-02008-134/ -135 strap common to the 76204-02008—119/-120 drag brace beam and the 76204-02004 channel. Inspect holes to verify no signs of wear, working fasteners, or elongation. If any discrepancies found report to Sikorsky for further instructions.
6. Again degrease the 76204-02008-119/-120 drag brace beam and interfacing structure repair area per step 4.
7. Fabricate a channel doubler repair from 7075-T6 material 0.063" thick. Nest repair channel into the drag brace beam. Pick up fastener locations as shown in Figure 6. Use 0.250" min bend radius. Use a min of 0.160" inner corner radii and a min of 0.250" outer corner radii. Break sharp edges.
8. Locate the repair channel doubler to the drag brace beam. If satisfied with the fit, match-drill the holes for the repair rivet locations into the drag brace beam and aircraft structure, see Figure 6 for fastener pattern. Maintain an edge margin of at least 2D and 4-6D fastener spacing.
9. Disassemble the repair parts and deburr the holes. Vacuum the area to remove any loose particles.
10. Degrease all repair parts and the repair area by wiping with a low-lint cleaning cloth (conforming to A-A- 59323, Type II) using acetone (conforming to ASTM D329) or ethyl alcohol (conforming to A-A-51693). Wash with clean water to a water-break free condition.
11. Preferred: Brush anodize (chromic or phosphoric acid anodize, ref. MIL-A-8625) all aluminum repair parts. If brush anodize is not available, use alodine 1200S (MIL-C-81309, Class 1A). Again degrease by wiping areas using acetone or ethyl alcohol to a water-break free condition. Wash with clean water.
12. Allow repair parts to dry.
13. Apply two coats of MIL-P-23377 epoxy primer to the repair area and allow curing.
14. Apply a layer of MIL-S-8802 sealant to the bonding surfaces of the repair parts and the existing drag brace beam and aircraft structure. Position the repair parts as shown in Figure 6 on the drag brace beam / aircraft structure and line up fastener holes. Wet install fasteners as shown in Figure



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- 6 with MIL-S-8802 sealant. Remove sealant squeeze out with spatula. Allow the sealant to cure per the manufacturer's instructions.
15. Apply fillet seal to all repair edges with MIL-S-8802 sealant and allow curing.
16. Match paint the repair area per MM procedures.
17. Re-assemble the ship as necessary per the Maintenance Manual.

**Figure 3 - Trim Aft Tab, Opp. RH side**



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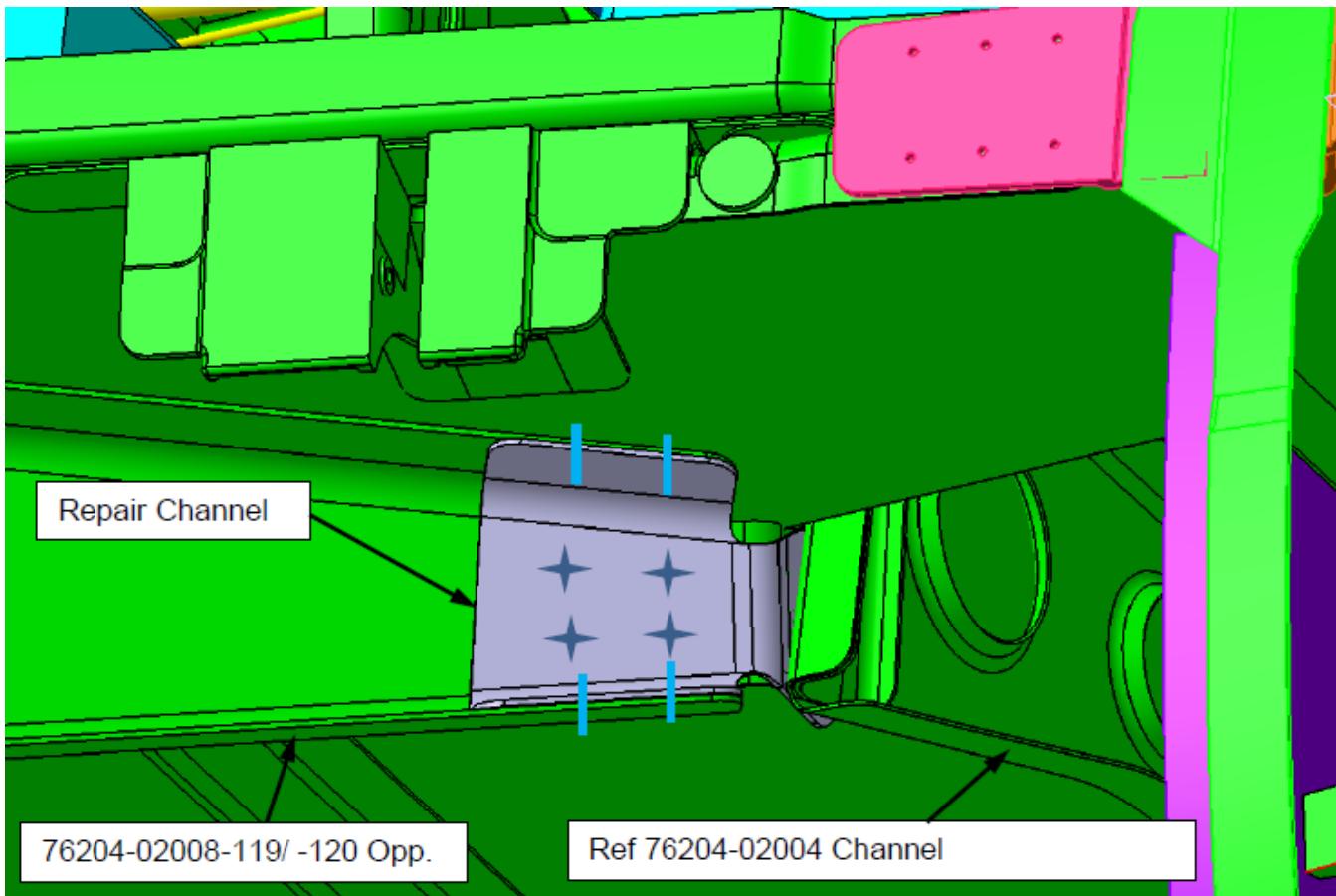


Figure 4 - Repair Channel Installation- Opp. RH side

NOTE: See page 8 for fastener callouts.



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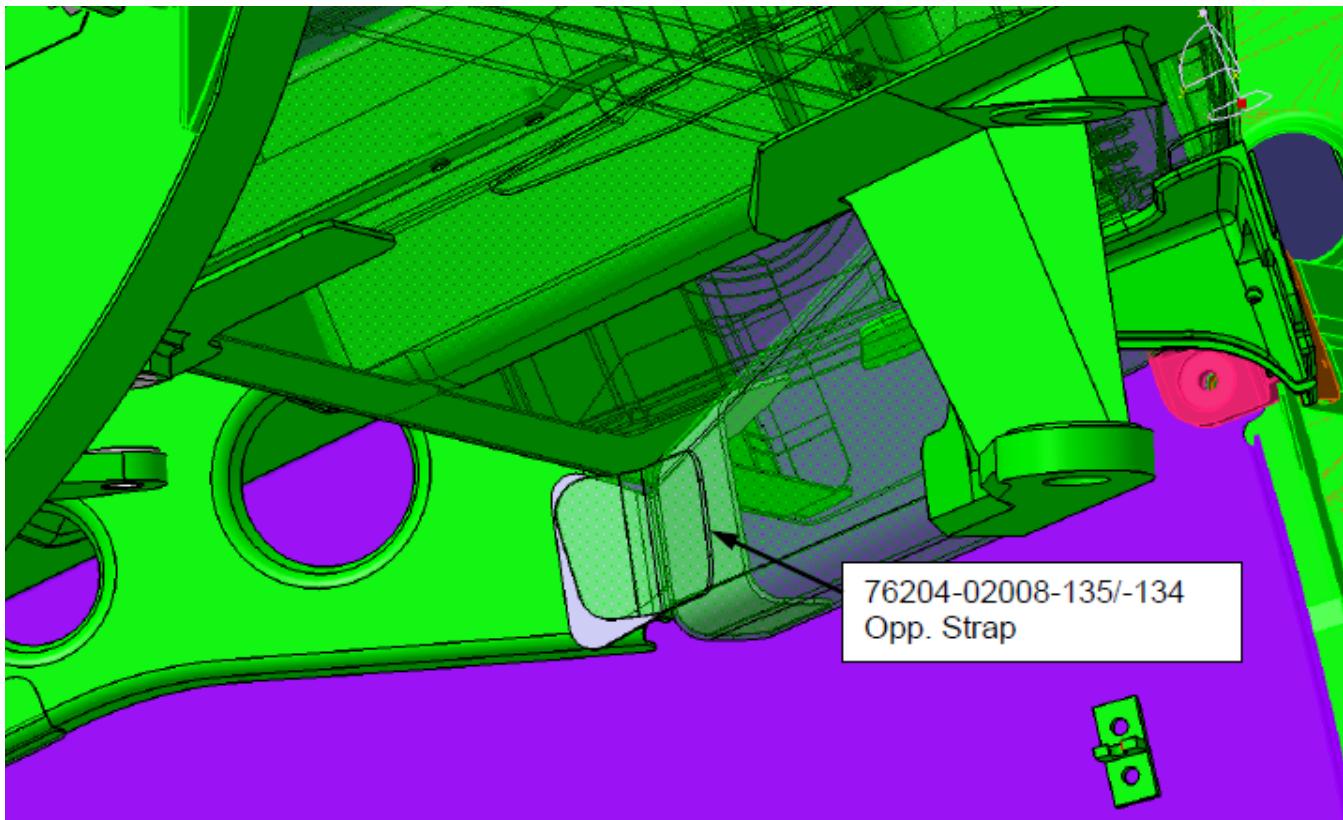
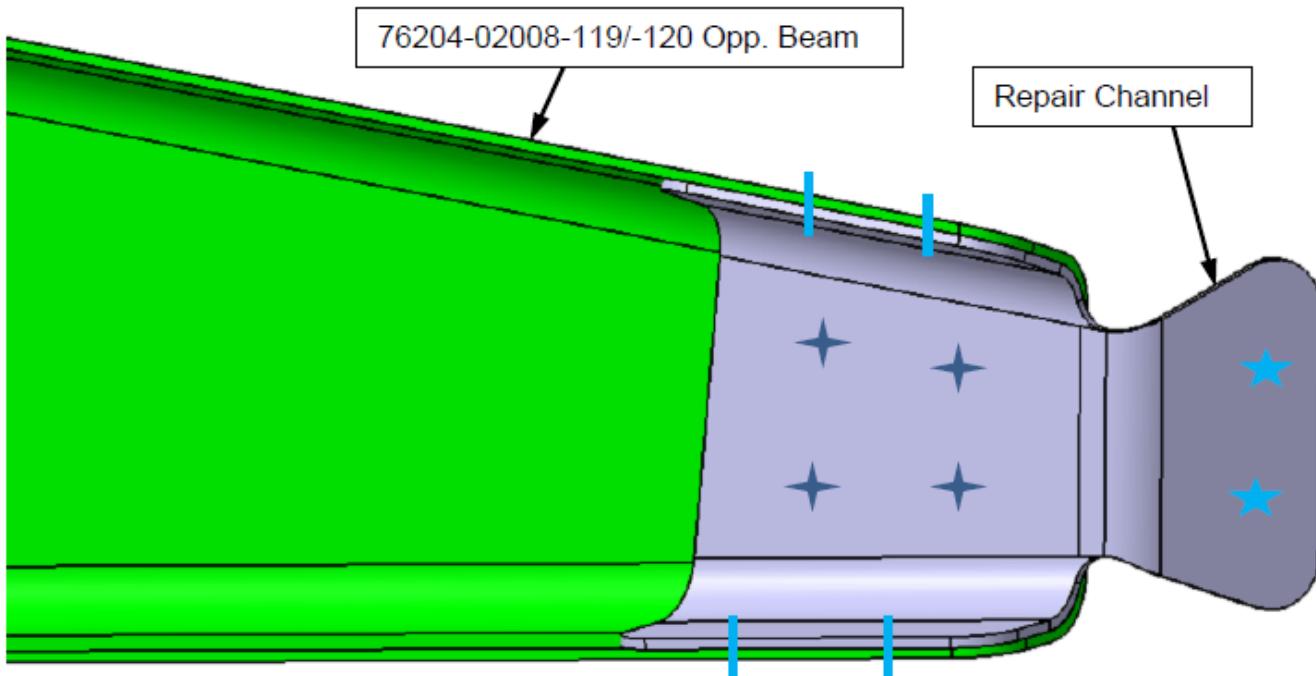


Figure 5 - Repair Channel Installation -Opp. RH side



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Fastener Callouts:

- = MS20470AD6
- = HL20-5 pins with HL75, HL86, or HL87 collar. If oversized holes use HL64-5 pins with HL75 or 87 collar

Figure 6 - Repair Channel Installation -Opp. RH side



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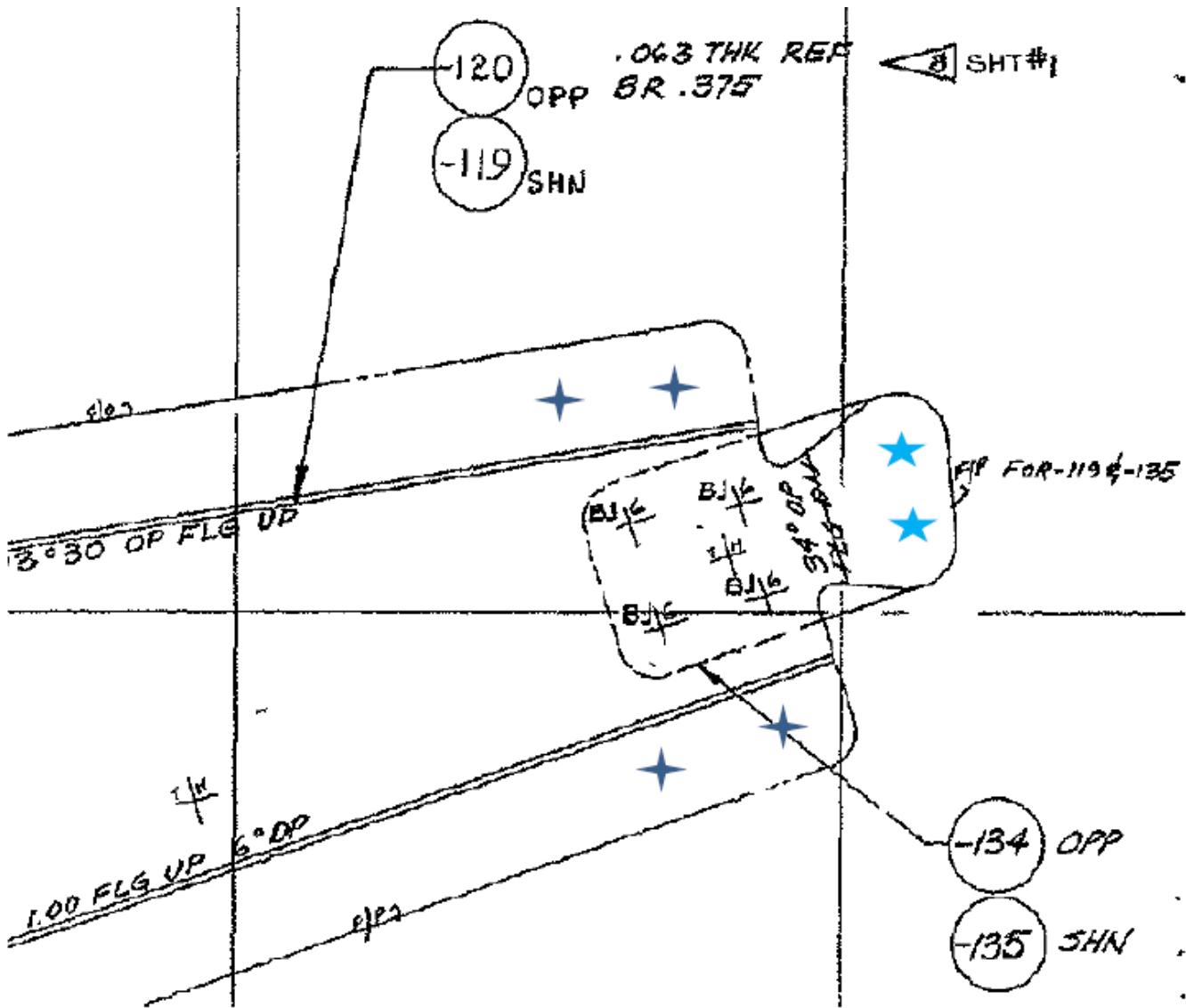


Figure 7 - Ref 76204-02008, Sht 3 (LHS shown)

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