




## SERVICE LETTER SL2010-002

Rev.	Date	Description of Revision	Prepared By	Approved
I/R	Mar 17, 2010	Initial Release	T. Bliss	S.F.
A	Aug 4, 2010	Revised Revision Block on Page 1 of 7	C. Hathaway	

**Subject:** Tank Attachment Inspection

**Applicability:** This service letter is applicable to Simplex Manufacturing Model 304 Fire Attack Systems installed on Bell 205A-1, 205B, 212, 412, AB412, 412EP and UH-1 series rotorcraft.

**NOTE:** *The information contained in this document is for reference only and does not supersede the service instructions contained in the Model 304 Maintenance Documents referenced below.*

**References:** Follow instructions in the following manuals where applicable to avoid damage to system while performing procedures in this service letter.

- Bell Maintenance Manual (MM) or Instructions for Continued Airworthiness (ICA).
- Simplex Model 304 Maintenance Manual (MM) Document Number 304-102005-001.
- Simplex Model 304 Installation Manual Document Number 304-102002-001.

**Purpose:** This document was drafted as a major inspection guide to ensure system performance and safety is not diminished by age or extended use in a highly corrosive and cyclic environment. Performing the recommended inspections will improve service life of the system and reduce unscheduled maintenance during peak usage.

**Compliance:** Compliance of this service letter is recommended prior to heavy seasonal use on systems that have 3000 hours time in service or 5 years since new and every 3000 hours or 5 years thereafter, whichever comes first.



**Weight and Balance:**

No effect.

**Electrical Loads:**

No effect.

**Parts:**

Parts required to comply with this service letter are listed in Table 1. Replacement parts and service kits may be ordered through your local authorized Simplex Representative or directly from Simplex Manufacturing.

**Table 1: Parts**

Tank Attachment Replacement Parts			
Part Number	Description	Quantity	
		304-000000-000 (2-Door)	304-000000-001 (3-Door)
304-302012-001	Hard Point Bracket Assembly, Corner	4	4
304-302017-002	Hard Point Bracket, Upper, Aft	2	2
304-302018-001	Hard Point Install Kit, Upper Forward	1	1
304-302019-001	Spacer, Plate, Hardpoint	4	4
304-302001-001	Forward Support Rod Assembly	2	-
304-302001-003	Forward Support Rod Assembly	-	2
304-302002-001	Aft Support Rod Assembly	2	-
304-302002-003	Aft Support Rod Assembly	-	2
000-110190-000	Bolt	8	8
000-110172-000	Bolt	24	24
000-110291-000	Bolt	4	4
000-112080-000	Washer	40	40
000-112362-000	Washer	32	32
000-111045-000	Nut	36	36

**Equipment:**

1. Typical mechanics tool kit
2. Suitable ground handling equipment
3. Indelible ink pen or other suitable tool for marking interface locations

**Consumables:**

1. Water
2. Acetone



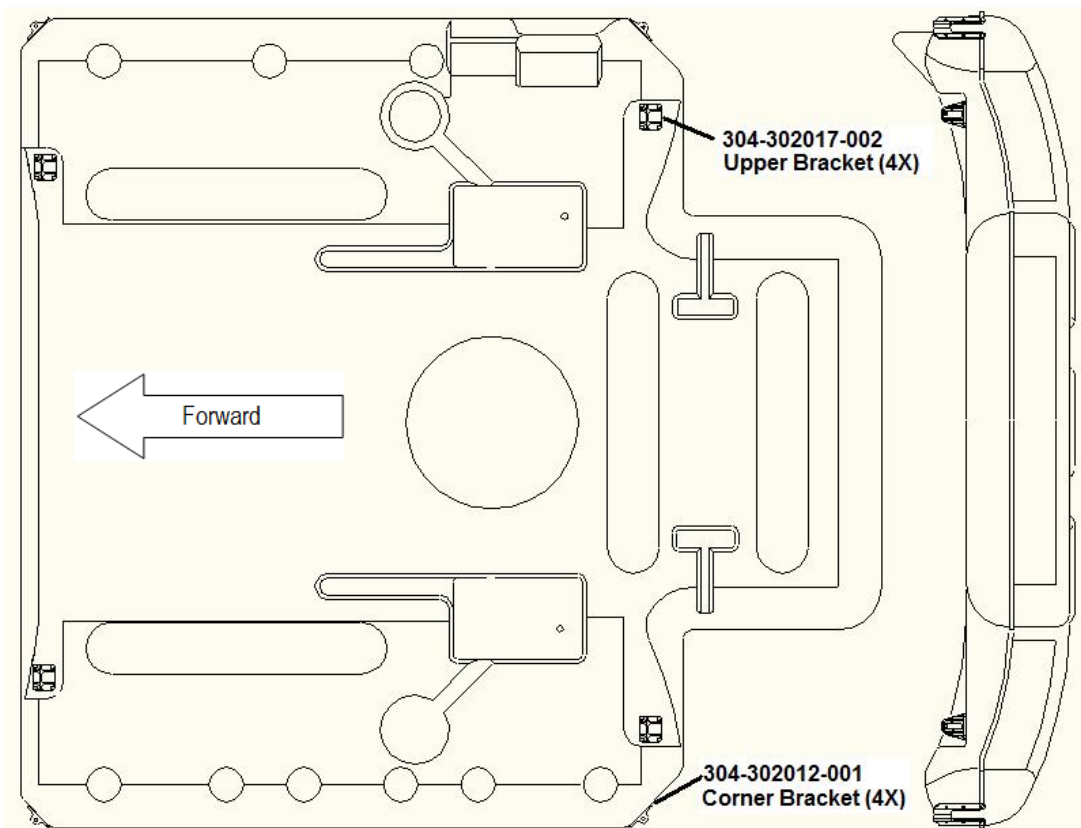
3. 000-153085-000 Sealant, 732
4. MS20995C040 Safety wire

**Procedure:**

1. Review rotorcraft log books and determine date of initial installation, hours in service, and time in service of system.
2. At 3000 hours or 5 years since new, remove tank from rotorcraft in accordance with the MM.

**NOTE:**

*Failure to follow tank removal and installation instructions from the MM could result in damage to system or rotorcraft.*



**Figure 1: Tank Hard Points**

3. Remove four (4) hardpoint links from rotorcraft brackets by removing bolts, washers and nuts (Figure 2). Discard.



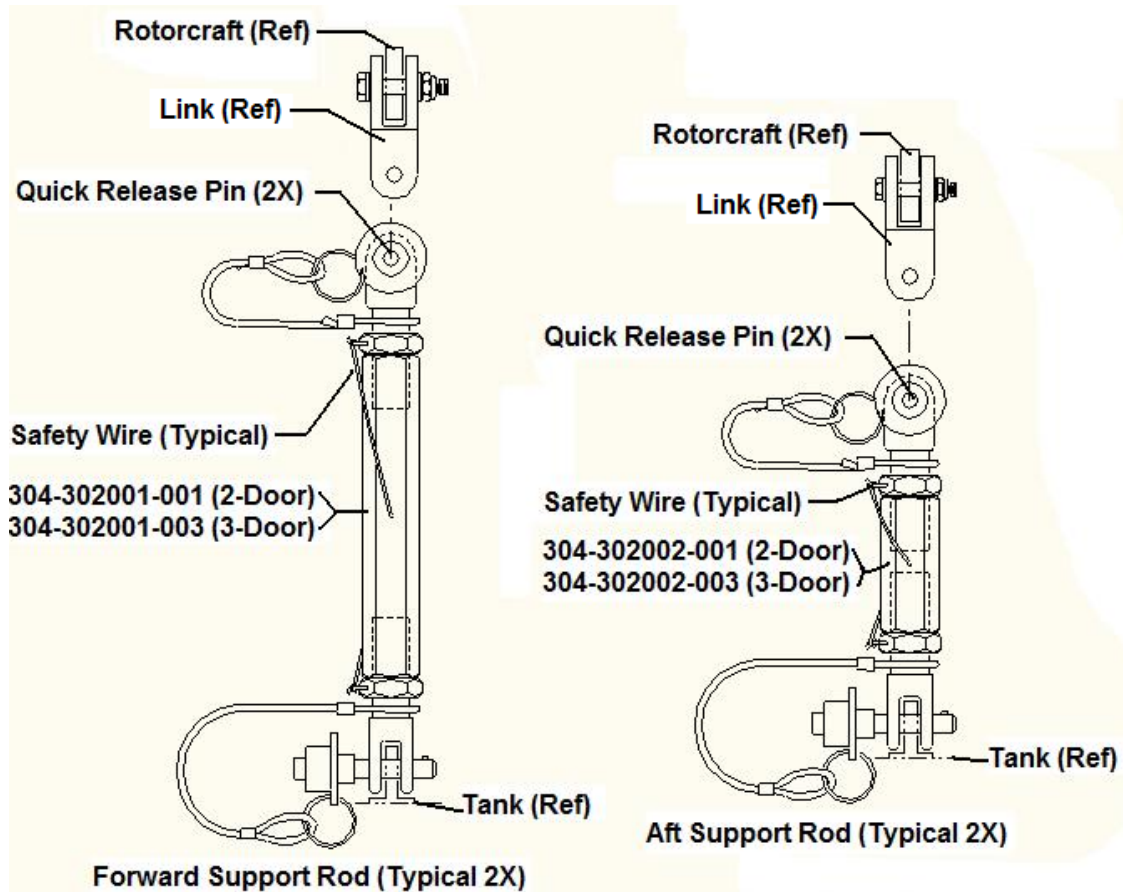


Figure 2: Support Rod Details

4. Mark tank location of each tank support rod with indelible ink.
5. Remove tank support rods from corner brackets (Figure 2) by pulling quick release pins from tank brackets.
6. Compare tank support rods removed in Step 5 to replacement rods and adjust new rods to match. Set aside.
7. Clean and inspect rotorcraft at interface with tank support rods in accordance with Bell MM or ICA as appropriate.
8. Thoroughly clean tank, inside and out.
9. Flush system with fresh water.
10. Inspect system for signs of corrosion, leaks, loose or missing hardware and other signs of damage.

11. Remove four (4) 304-302015-002 forward upper tank attachment brackets identified in Figure 1 and shown exploded in Figure 3 by removing four (4) 000-110202-000 bolts, washers, nuts and spacers on each bracket. Make a note of the spacer count removed.

**NOTE:** A minimum of two (2) and a maximum of three (3) spacers may be used at the forward location.

12. Remove four (4) 304-302017-002 aft upper tank attachment brackets identified in Figure 1 and shown exploded in Figure 3 by removing four (4) 000-110190-000 bolts, washers, nuts and two (2) spacers on each aft bracket.

**NOTE:** Discard hardware and brackets.

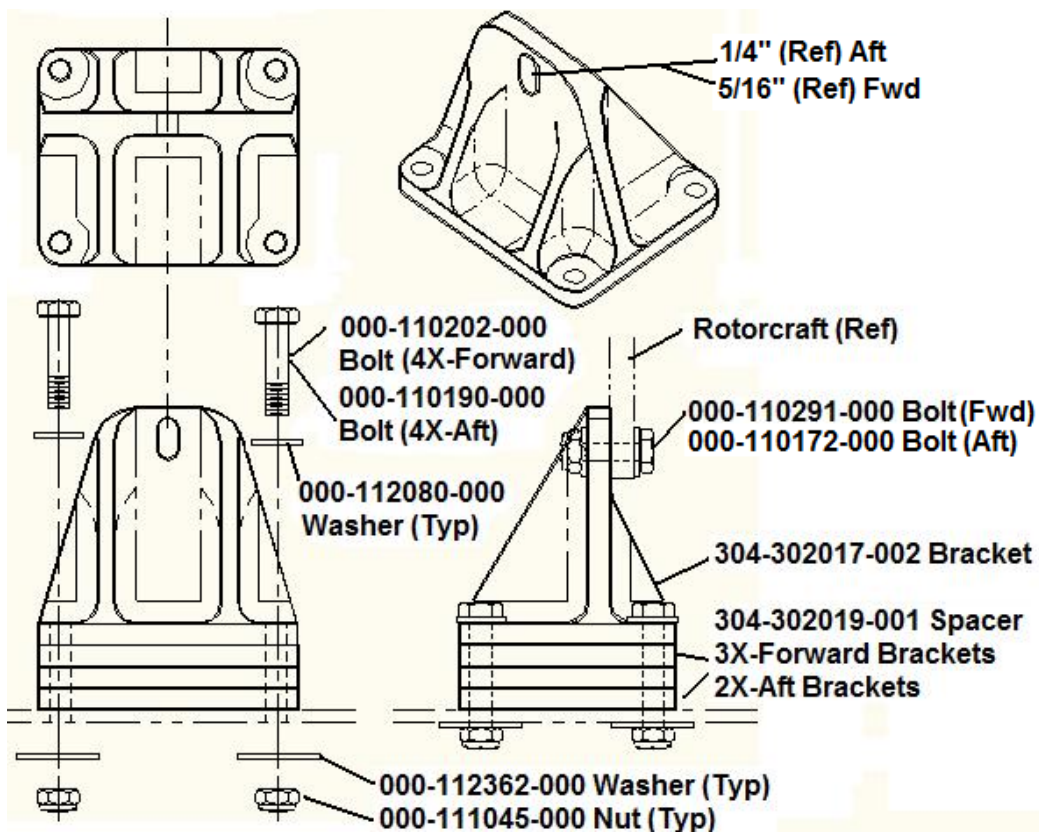


Figure 3: Upper Tank Brackets

13. Remove four (4) 304-302012-001 corner attachment fittings shown in Figure 1 and exploded in Figure 4 by removing the bolts, washers and nuts securing the brackets to the tank. Discard brackets and hardware.



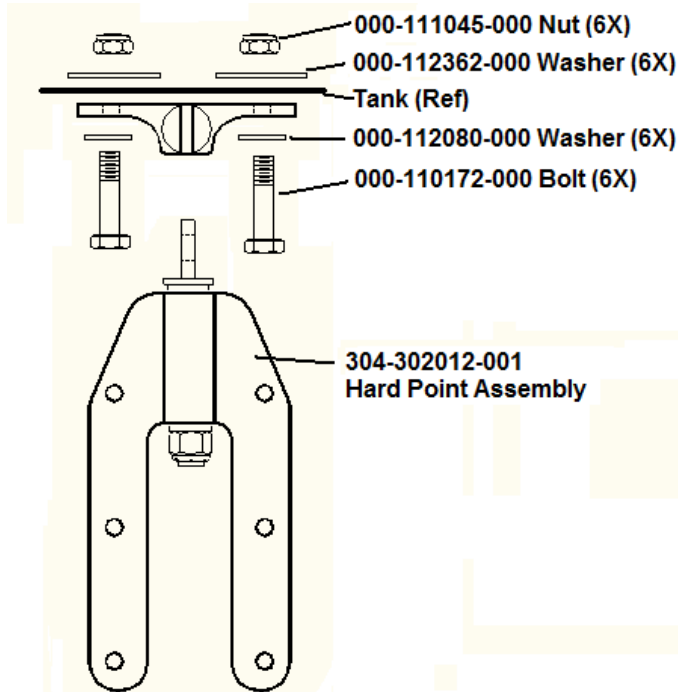


Figure 4: Tank Attachment Details

14. Clean tank pass through locations and remove old sealant.
15. Wipe area and pass throughs with acetone.

**NOTE:** *Surfaces and pass throughs must be free of all sealant and adhesive residue prior to installing new components.*

16. Inspect composite tank structure for damage and repair in accordance with 304-102005-001 MM, tank repair procedures.

**NOTE:** *Cracks within 2" of any tank attachment point are not customer repairable. Contact Simplex Manufacturing for direction if a crack is found in the vicinity of an attachment fitting (Ref MM 304-102005-001).*

**NOTE:** *Ensure all tank pass-throughs are sealed with 732 Sealant when installing new brackets and hardware. Spread Sealant on all mating surfaces prior to installation and wipe off excess when all fasteners are installed and tightened in accordance with System MM 304-102005-001.*

17. Position replacement hard point assemblies, 304-302012-001 on each corner of the tank and install each with 732 Sealant and six (6) 000-110172-000 bolts, 000-112080-000 washers, 000-112362-000 washers and 000-111045-000 nuts as shown in Figure 4.



18. Torque all hardware evenly in accordance with MM.
19. Position each aft upper tank attachment bracket, 304-302017-001 (1/4" slot) with two (2) 304-302019-001 spacers on tank as shown in Figure 3. Install with 732 Sealant, four (4) 000-110190-000 bolts, 000-112080-000 washers, 000-112362-000 washers and 000-111045-000 nuts.
20. Torque all hardware evenly in accordance with MM.
21. The following parts are provided in the 304-302018-001 install kit:

Position each forward upper tank attachment bracket, 304-302015-002 (5/16" slot) with the same quantity of 304-302019-001 spacers removed in Step 12 on tank as shown in Figure 3. Install with 732 Sealant, four (4) 000-110202-000 bolts, 000-112080-000 washers, 000-112362-000 washers and 000-111045-000 nuts.
22. Torque all hardware evenly in accordance with MM.

**NOTE:**

*Allow a minimum of 24 hours for 732 Sealant to dry prior to filling tank with liquid.*

23. Leak check tank prior to reinstallation.
24. Remove hard point links from replacement support rods by pulling quick release pins.
25. Install forward hardpoint links in rotorcraft fittings with 000-110300-000 bolt, 000-112120-000 washers and 000-111075-000 nuts from 304-302018-001 install kit.
26. Position links vertical and torque in accordance with System MM.
27. Install support rods marked in Step 4 in the positions noted, with quick release pins attached to the assemblies.
28. Reinstall tank as required per MM 304-102005-001.
29. Adjust support rod turnbuckles as necessary to remove any slack and to hold the tank centered on the rotorcraft.
30. Tighten jam nut on turnbuckle to lock position. Torque to 120 in-lbs and safety wire.
31. Make the appropriate logbook entries and return rotorcraft to service.

