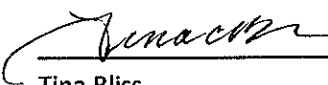





## SERVICE LETTER

Service Letter Number	Simplex Model	Issue Date	Revision	Revision Date
SL2009-012	210 & 310	March 17, 2010	I/R	March 17, 2010

**Written By:**  
Tina Bliss  
Engineering**Approved By:**  
Stan Franz  
Director of Engineering**Subject:** Tank Attachment Inspection**Applicability:** This service letter is applicable to Simplex Manufacturing Model 210 Spray Systems and Model 310 Fire Attack Systems installed on Eurocopter AS350 and AS355 series rotorcraft.**References:** Reference Eurocopter Maintenance Manual (MM) or Instructions for Continued Airworthiness (ICA) Simplex Model 210 and 310 Maintenance Manual (MM) Documents Number 210-102005-001 and 310-102005-001 and Installation Manual Documents Number 210-102002-001 and 310-102002-001. Follow instructions in manuals where applicable to avoid damage to system while performing procedures in this Service Letter.**NOTE:** *The information contained in this document is for reference only and does not supersede the service instructions contained in the Model 210 or 310 Maintenance Manual Documents Number 210-102005-001 or 310-102005-001.***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**

<b>Tank Attachment Replacement Parts by Model</b>			
<b>Model</b>	<b>Part Number</b>	<b>Description</b>	<b>Quantity</b>
210,310	310-302020-001	Hard Point Installation Kit	1
210	300-302004-001	Forward Hardpoint, Right	1
210	300-302004-002	Forward Hardpoint, Left	1
310	300-302004-003	Forward Hardpoint, Right	1
310	300-302004-004	Forward Hardpoint, Left	1
210,310	000-110020-000	Bolt	4
210,310	000-112040-000	Washer	4
210,310	000-111180-000	Nut	4
210,310	310-302027-001	Plate	1
210,310	000-114075-000	Eyebolt	2
210	000-112120-000	Washer	2
310	000-112459-000	Washer	2
210,310	000-111075-000	Nut	2
210,310	310-302023-001	Hardpoint Bracket	2
210,310	310-302021-001	Hardpoint Backup Plate	2
210,310	000-110172-000	Bolt	12
210,310	000-112080-000	Washer	12
210,310	000-111045-000	Nut	12
210,310	000-159100-000	Sealant, 732	A/R

**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. Acetone

**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.*

3. Mark position of aft attachment clamps on rotorcraft cross tube (Figure 2).

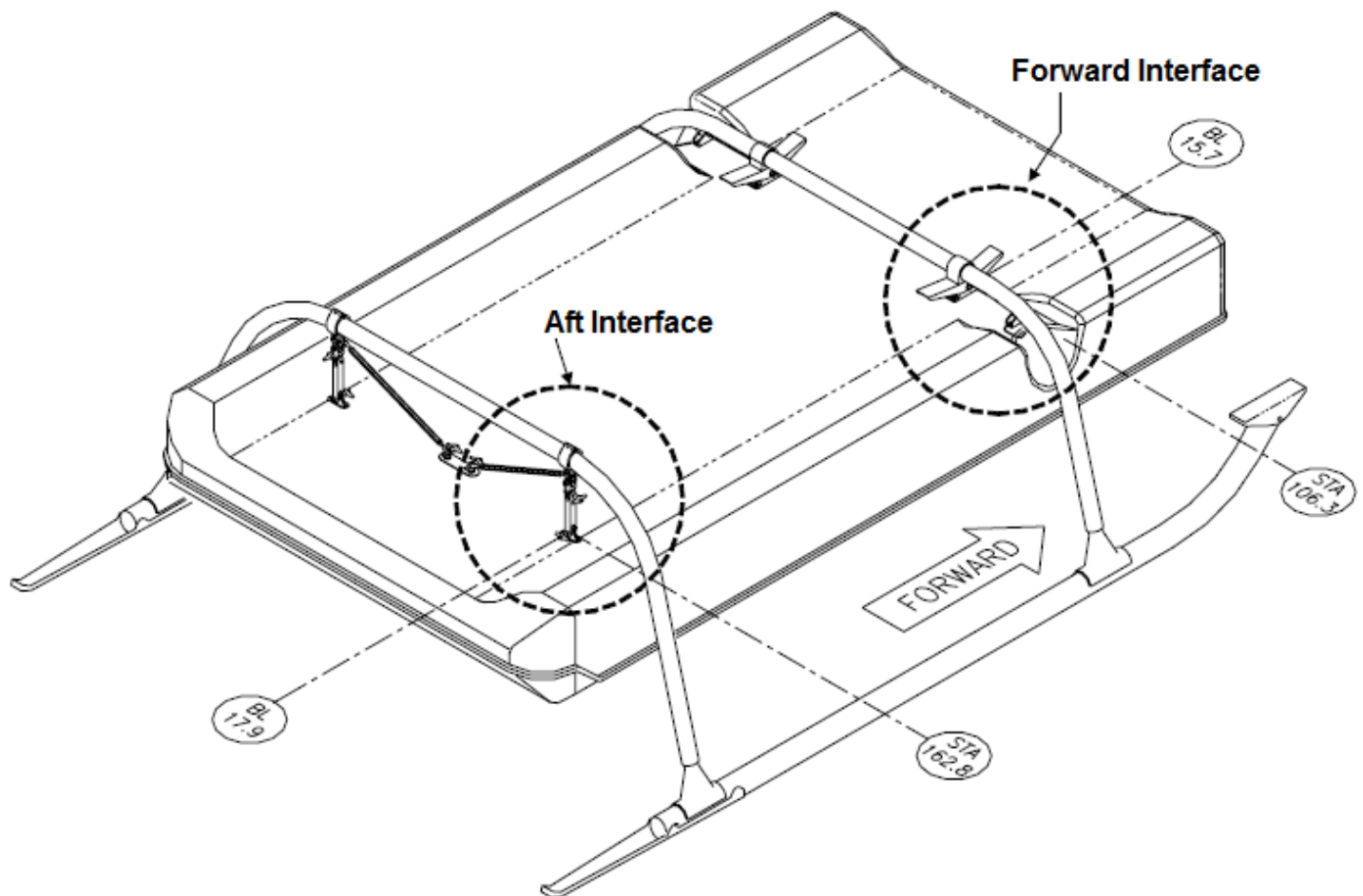


Figure 1: Tank to Rotorcraft Interface (Typical)

4. Remove aft tank support rods by pulling quick release pins and set aside.



5. Remove bolts, eyebolt, washers and nuts shown in Figure 2 securing clamp to rotorcraft and discard.

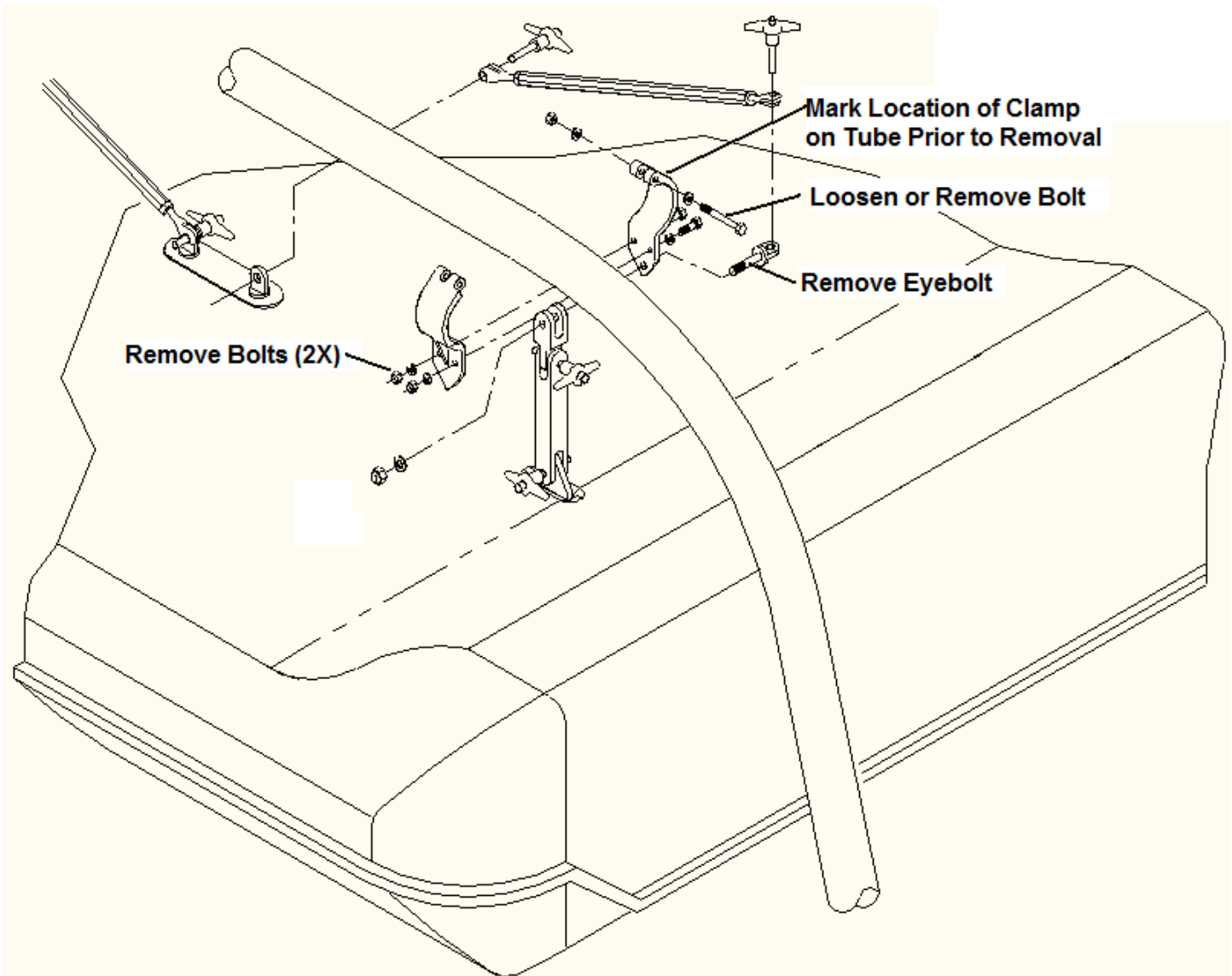


Figure 2: Aft Tank Attachment Details (Typical)

6. Clean and inspect rotorcraft landing gear tube at interface with tank support clamp in accordance with Eurocopter MM or ICA as appropriate.
7. Install new 310-302010-001 clamp assembly with hardware included in kit in the previous clamp location marked in Step 3.



8. Slip aft support rod (310-302024-001) over clamp so that holes align and install 000-114080-000 eyebolt with 000-112120-000 washer and 000-111075-000 nut (from kit) through clevis fitting to secure rod to rotorcraft. Eyebolt will be tightened at a later step.
9. Thoroughly clean tank, inside and out.
10. Flush system with fresh water.
11. Inspect system for signs of corrosion, leaks, loose or missing hardware and other signs of damage.
12. Remove center aft tank attachment bracket (310-302027-001) identified in Figure 3 as Detail B and shown exploded in Figure 4 by removing two (2) 000-114075-000 eyebolts, washers and nuts. Discard hardware and bracket.

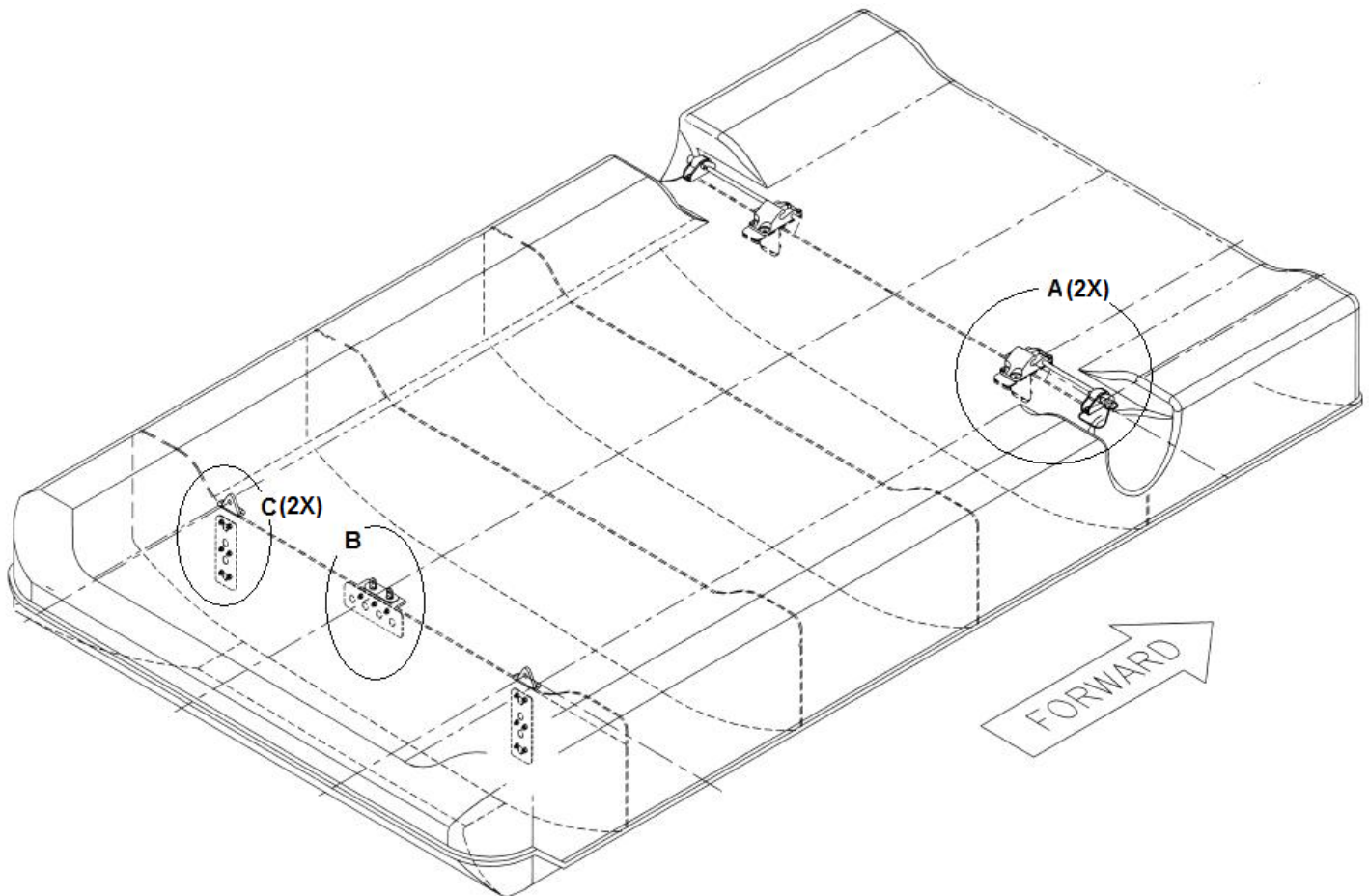
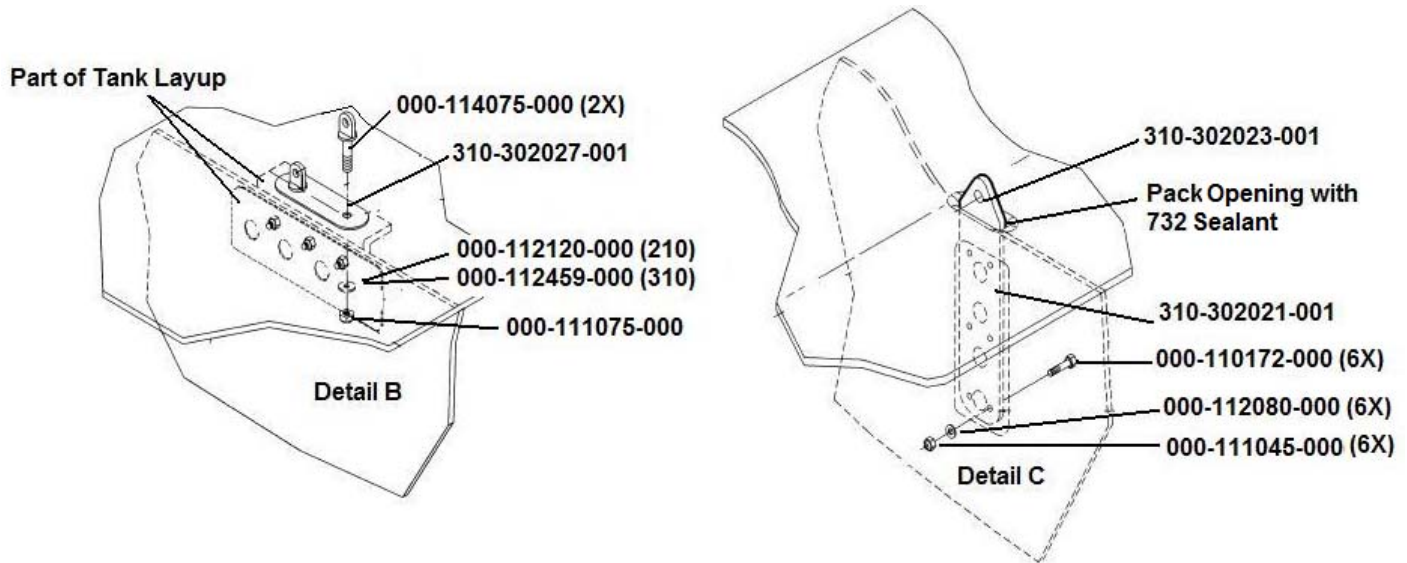


Figure 3: Tank Attachment Locations





**Figure 4: Aft Tank Attachment Details B & C**

13. Remove aft attachment fittings (310-302023-001) and backup plate (310-302021-001) shown as Detail C in Figure 3 and exploded in Figure 4 by removing six (6) 000-110172-000 bolts, washers and nuts. Pull brackets and backup plates free of sealant from inside the tank and discard.
14. Remove front attachment fittings 300-302004 Detail A in Figure 3 shown exploded in Figure 5 by removing the bolts, washers and nuts securing the brackets to the tank. Discard.
15. Clean tank pass through locations with acetone to remove old sealant.

**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 MM, tank repair procedures.

**NOTE:** *Cracks within 2" of any tank attachment point are not field repairable. Contact Simplex Manufacturing for direction if a crack is found in the vicinity of an attachment fitting (Ref MM 210-102005-001 and 310-102005-001).*





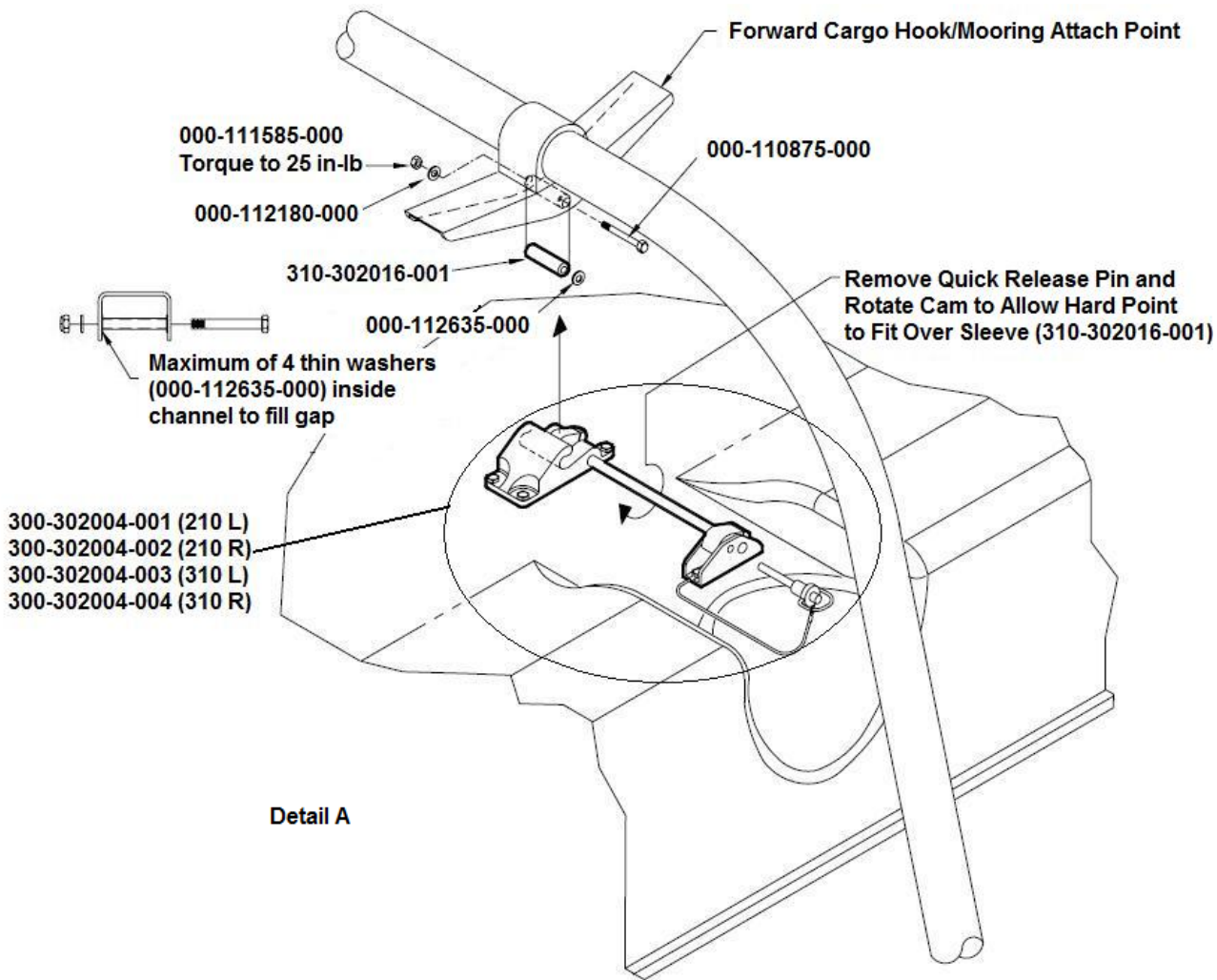


Figure 5: Forward Tank Attachment Detail A

17. Remove bolt and spacer (310-302016-001) combination from rotorcraft attachment as shown in Figure 5 and discard.
18. Inspect rotorcraft fitting in accordance with Eurocopter MM or ICA as appropriate.
19. Install new bolt and spacer combination from hard point kit as shown in Figure 5.
20. Torque 000-110875-000 bolts to 25 in-lbs to avoid damage to the rotorcraft fitting.

**NOTE:** *Ensure all tank pass-throughs are sealed with 732 Sealant.*

21. Position replacement forward tank attachment brackets from kit as shown in Figure 4.
22. Install each 310-302017-001 bracket with two (2) 000-110020-000 bolts, 000-112040-000 washers and 000-111180-000 nuts.
23. Install each 310-302014-001 with four (4) bolts, 000-112080-000 washers and 000-111045-000 nuts supplied with installation kit. Choose proper bolt length from kit for installation in accordance with standard practices in MM.
24. Position replacement aft tank attachment brackets (310-3020223-001) and backup plates (310-302021-001) and install each set with six (6) 000-110172-000 bolts, 000-112080-000 washers and 000-111045-000 nuts as shown in Figure 5.
25. Position replacement center plate (310-302027-001) and install with two (2) 000-114075-000 eyebolts, 000-112120-000 washers and 000-111075-000 nuts as shown in Figure 4 Detail B.
26. Ensure eyebolts are aligned with eyebolt in upper clamp shown in Figure 2 prior to sealing.
27. Adjust replacement aft support rods from 310-302020-001 install kit to match length of rods removed in Step 4. Discard old supports.
28. Position eyebolt in aft support rod to line up with center eyebolts.

**NOTE:**

*Torque all hardware in accordance with MM **except** where the sleeve is held in the channel as shown in Figure 5, the two (2) 000-110875-000 bolts (one (1) per side) are torqued to **25 in-lbs** to prevent crushing of the cargo hook / mirror channel.*

29. Allow a minimum of 24 hours for 732 Sealant to dry prior to filling tank with liquid.
30. Leak check tank prior to reinstallation.
31. Reinstall tank as required per MM 210-102005-001 or 310-102005-001.
32. Adjust aft support rod turnbuckles so that the clevis ends line up with the eyebolts and the quick release pins can be installed as shown in Figure 1. Ensure thread engagement through witness hole in turnbuckle, both ends. If adjustment cannot be made to assembly in order to have threads visible in witness hole, contact Simplex Manufacturing for resolution.
33. It is permissible to loosen and rotate upper eyebolt as required for turnbuckle installation. Ensure proper eyebolt torque if adjustments are made.
34. Tighten jam nut on turnbuckle to lock position.
35. Make the appropriate logbook entries and return rotorcraft to service.

