U.S. Department of Transportation

Federal Aviation Administration

Airworthiness Concern Sheet

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Reply to:
Name: Jacob Fitch
Title: Continued Operational Safety, Program Manager
Office: Operational Safety Branch
Street Address: 10101 Hillwood Parkway
City, State, ZIP: Fort Worth, TX 76177
Telephone: 817-222-4130
Electronic Mail: Jacob.Fitch@faa.gov

Make: Leonardo S.p.A.
Model / Series: AW139
Serial Numbers: All
Reason for Airworthiness Concern: Cracked Main Rotor Tension Links

Federal Aviation Administration (FAA) Description of Airworthiness Concern

The FAA recently received three separate Service Difficulty Reports (SDRs) from a U.S. repair station regarding cracked main rotor tension links on the Leonardo AW139. There are five tension links on the AW139, one for each main rotor blade. The inboard end of each tension link is attached to the main rotor hub while the outboard end is attached to the main rotor blade, as depicted in Figure 1.

Additional data provided by the same U.S. repair station showed 34 different main rotor tension links found cracked in the past six years (April 2020 – March 2026). The cracked tension links occurred to 15 different serial numbered AW139s and involved 15 different operators, covering a variety of operations The data revealed that some AW139s had a single cracked tension link, while others had four out of five tension links cracked on the same rotorcraft. Of the AW139s where a cracked tension link was discovered, 50% of the rotorcraft had less than 400 hours, 71% of the rotorcraft had less than 900 hours, and the lowest time rotorcraft with cracked tension links had 103 hours. Of the 34 cracked main rotor tension links occurring since April 2020, the repair station discovered 50% of them in the last 13 months (March 2025 – March 2026). There were two different part numbers applicable for the tension links found cracked on the various AW139s: 3G6220A00531 and 3G6220A00532.

Figure 2 depicts an example of one of the cracked tension links that were associated with the SDRs the FAA received in March 2026. The repair station provided pictures of other cracked tension links from recent SDRs. Each had cracks in similar locations. Figure 3 provides an example of one of the SDRs received.

The European Union Aviation Safety Agency (EASA) is the State of Design (SoD) for the AW139 and has primary regulatory oversight responsibility for the Continued Operational Safety (COS) of the rotorcraft. The FAA informed EASA of the recently received reports. EASA was aware of previous AW139 tension links that experienced cracks in service. EASA's investigation into the prior reported cracks determined the cracks were not critical (not an unsafe condition). The recent cracks to tension links reported to the FAA seem to be in a similar location to cracks previously investigated by EASA. It is unknown at this time whether the recent cracks reported to the FAA are of the same severity as those previously investigated by EASA.

There is an existing Leonardo detailed inspection every 50 hours for the tension link (39-A-62-22-00-00A-31AK-A). This visual inspection applies to both the composite portion of the tension link and the aluminum alloy portion of the tension link (also referred to as the droop stop support). The tension link is not a life limited part.

A combination of factors contributed to the FAA's current concern regarding this issue.

1. The tension link serves as the critical connecting component between the main rotor hub and main rotor blade on the

AW139.

2. The FAA is working with EASA to determine if the recently reported tension link cracks by a U.S. repair station are consistent with the tension link cracks that EASA previously investigated and determined not critical.
3. Based on the data provided by the U.S. repair station, the FAA is trying to assess **if:**
   a. The cracked main rotor tension links are occurring consistently throughout the broader U.S. AW139 fleet.
   b. The rate of cracked tension links has accelerated, resulting in more cracked tension links in the AW139 fleet occurring now as compared to in the past.
   c. The cracks to main rotor tension links are now consistently occurring to rotorcraft with minimal time in service.

Request for Information

The FAA is interested in the aviation community's experience with cracked main rotor tension links on the Leonardo AW139. The following questions are specific areas of interest, but we welcome any additional information you may have that you think would help characterize what you've observed when a cracked AW139 tension link has occurred.

1. If you have observed cracked main rotor tension links on an AW139, please provide:
   a. The registration and serial number of the AW139.
   b. The day/month/year the cracks were discovered.
   c. The aircraft total time when the cracks were discovered.
   d. The total time on the tension link when the cracks were discovered.
   e. If multiple cracked tension links were discovered on the same rotorcraft. If so, please share how many and if the time in service was the same for each cracked tension link discovered.
   f. The part number of the tension link found cracked.
   g. The part serial number of the tension link found cracked.
   h. How the cracks were discovered (e.g., during the 50 hour Leonardo detailed inspection, during pre-flight, or some other way).

2. If cracks occurred to the tension link, please provide a detailed description of the location or a picture that shows the location in comparison to the overall tension link.

3. For cracks that occurred to the composite portion of the tension link, please describe whether the cracks were limited to the paint or if they penetrated the carbon fiber.

4. For cracks that occurred to the composite portion of the tension link, please describe how many plies of the composite were cracked. If able, describe whether it was an inner laminar failure or a through ply failure.

5. If known, please provide the dimensions of the cracks to the tension link. If there were multiple cracks in the same area, please provide dimensions of the most severe crack. If you have zoomed in pictures of the cracks, please provide them.

This Airworthiness Concern Sheet (ACS) is intended as a means for FAA Aviation Safety Engineers to coordinate airworthiness concerns with aircraft owners/operators through associations and type clubs. At this time, the FAA has not made a determination on what type of corrective action (if any) should be taken. The resolution of this airworthiness concern could involve Airworthiness Directive (AD) action or a Special Airworthiness Information Bulletin (SAIB), or the FAA could determine that no action is needed at this time. The FAA's final determination will depend in part on the information received in response to this ACS.

The FAA endorses dissemination of this technical information to all manufacturers and requests association and type club comments.

Attachments:	**Transmittal:**	**Response Requested By:**
☒ Service Difficulty Report		☐ Emergency (10 days)
☐ Accident/Incident Data System	☒ Federal Aviation Administration	☒ Alert (30 days)
☐ Service Letter / Bulletin	☒ Airplane Owners and Pilots Association	☐ Information
☐ Special Airworthiness Information Bulletin	☐ Experimental Aircraft Association	

☐ Federal Aviation Administration or National Transportation Safety Board Safety Recommendation ☐ Airworthiness Directive ☐ Alternate Means of Compliance ☐ Risk Analysis	☐ Type Club ☒ Type Certificate Holder ☒ Other: Vertical Aviation International, Air Medical Operators Association, Helicopter Safety Advisory Conference, Airborne Public Safety Association	(90 days)

Figure 1. Leonardo AW139, Cracked Main Rotor Tension Link (side view)
Cracked areas are within the red boxes.

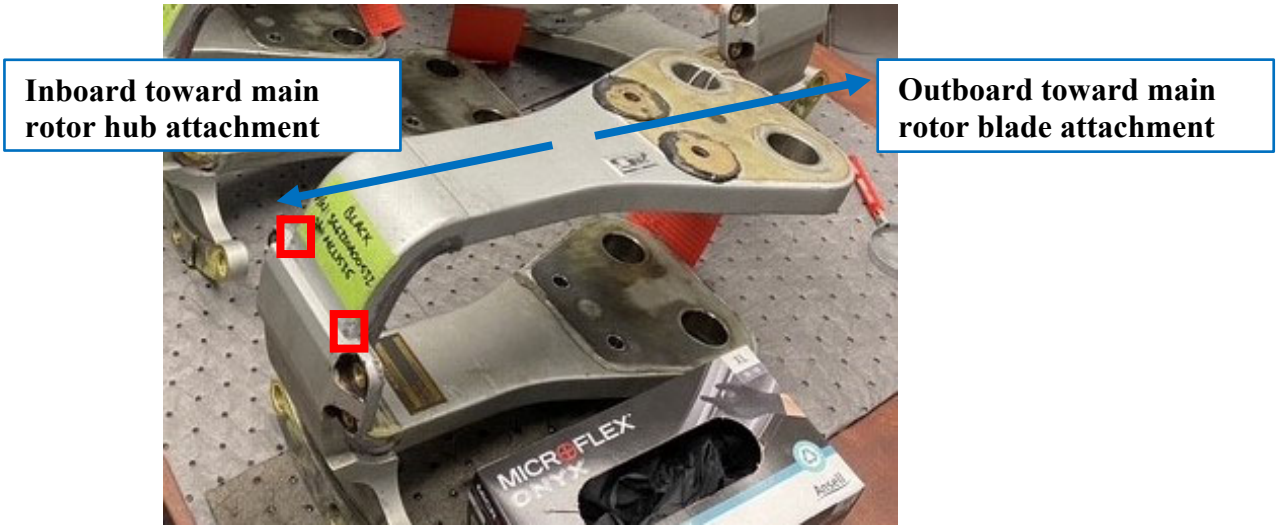

Figure 2. Leonardo AW139, Cracked Main Rotor Tension Link
Cracked areas are within the red boxes.

Figure 3. Example of Service Difficulty Report (SDR) submitted to the FAA for Leonardo AW139 cracked main rotor tension links

Service Difficulty Report

1. Submitter Information

(a) Unique Control #: PN1R202603190001 (b) Difficulty Date: 03/19/2026
(c) Registration # : 614CJ (d) Submitter Type : B - REPAIR STATION PART 145
(e) Submitter Designator: PN1R (f) Submission Date: 3/19/2026 8:21:21 AM

2. Codes

(a) Operator Designator : (b) Operator Type : General Aviation
(c) JASC/ATA Code : 6200
(d) Stage of Operation : IN - INSP/MAINT
(e) How Discovered : V - Visual
(f) Nature of Condition : O - OTHER
(g) Precautionary Procedures: K - NONE
(h) FAA Region : EA (i) District Office : 17

3. Major Equipment Identity

	Manufacturer	Model	Serial Number	Total Time	Total Cycles
(a) Aircraft	AGUSTA	AW139	32041	233	
(b) Engine					
(c) Propeller					

4. Problem Description

DURING INSPECTION FOUND WHITE, YELLOW, AND BLACK MAIN ROTOR TENSION LINKS CRACKED.

5. Specific Part or Structure Causing Difficulty

(a) Part Name : LINK (b) Manufacturer's Name : AGUSTA
(c) Part Number : 3G6220A00532 (d) Serial Number :
(e) Part Condition: CRACKED (f) Part/Defect Location:
(g) Total Time : (h) Total Cycles :
(i) Time Since :

6. Component/Assembly That Includes Defective Part

(a) Component Name: (b) Manufacturer's Name :
(c) Part Number : (d) Serial Number :
(e) Model Number : (f) Location :
(g) Total Time : (h) Total Cycles :
(i) Time Since :

7. Structure Causing Difficulty

(a) Body or Fuselage Station - From/At: To:
(b) Water Line - From/At: To:
(c) Crack Length : (d) Number of Cracks:
(e) Stringer - From/At: To:
(f) Butt Line - From/At: To:
(g) Wing Station - From/At: To:
(h) Structural Other: (i) Corrosion Level :

End Of Report