
SERVICE BULLETIN

N° 139-692

DATE: September 7, 2022

REV. : /

TITLE

ATA 21 - DRIVE PULLEY WASHER INSPECTION

REVISION LOG

First Issue.

1. PLANNING INFORMATION

A. EFFECTIVITY

VCS compressor packs P/N 3G2150V10151 (Enviro P/N 1133740-1) from S/N 424 to S/N 427, from S/N 430 thru S/N 435, S/N 437 and S/N 438 installed on AW139 helicopters or kept in stock.

B. COMPLIANCE

Within and not later than 300 flight hours or 6 months whichever occurs first after the issue of this Service Bulletin.

C. CONCURRENT REQUIREMENTS

N.A.

D. REASON

This Service Bulletin is issued in order to provide the necessary instruction on how to verify the presence of the drive pulley washer in the VCS compressor pack and to install it if needed.

E. DESCRIPTION

It was found in several in-service AW139 helicopters that the drive pulley washer was missing from the VCS compressor pack P/N 3G2150V10151. The present Service Bulletin prescribes an inspection of the compressor in order to verify the presence of the washer and, if missing, it prescribes its installation.

F. APPROVAL

The technical content of this Service Bulletin is approved under the authority of DOA nr. EASA.21.J.005. For helicopters registered under other Aviation Authorities, before applying the Service Bulletin, applicable Aviation Authority approval must be checked within Leonardo Helicopters customer portal.

EASA states mandatory compliance with inspections, modifications or technical directives and related time of compliance by means of relevant Airworthiness Directives. If an aircraft listed in the effectivity embodies a modification or repair not LHD certified and affecting the content of this Service Bulletin, it is responsibility of the Owner/Operator to obtain a formal approval by Aviation Authority having jurisdiction on the aircraft, for any adaptation necessary before incorporation of the present Service Bulletin.

G. MANPOWER

To comply with this Service Bulletin three (3) MMH are deemed necessary.
MMH are based on hands-on time and can change with personnel and facilities available.

H. WEIGHT AND BALANCE

N.A.

I. REFERENCES

1) PUBLICATIONS

Following Data Modules refer to AMP:

<u>DATA MODULE</u>	<u>DESCRIPTION</u>	<u>PART</u>
DM01 39-A-00-20-00-00A-120A-A	Helicopter on ground for a safe maintenance	-
DM02 39-A-71-11-07-00A-520A-A	Forward sliding fairing - Remove procedure	-
DM03 39-A-71-11-07-00A-720A-A	Forward sliding fairing - Install procedure	-

2) ACRONYMS & ABBREVIATIONS

AMDI	Aircraft Material Data Information
AMP	Aircraft Maintenance Publication
CB	Circuit Breaker
DM	Data Module
DOA	Design Organization Approval
EASA	European Aviation Safety Agency
IPD	Illustrated Parts Data
ITEP	Illustrated Tool and Equipment Publication
LH	Leonardo Helicopters
MMH	Maintenance Man Hours
P/N	Part Number
S/N	Serial Number
VCS	Vapor Cycle System

3) ANNEX

Annex A Service Bulletin SB 21-102 Rev. A

J. PUBLICATIONS AFFECTED

N.A.

K. SOFTWARE ACCOMPLISHMENT SUMMARY

N.A.

2. MATERIAL INFORMATION

A. REQUIRED MATERIALS

1) PARTS

#	P/N	ALTERNATIVE P/N	DESCRIPTION	Q.TY	LVL	NOTE	LOG P/N
1	1133739-12		Washer,drive pulley	1	.		-

Refer also to IPD for the spares materials required to comply with the AMP DMs referenced in the accomplishment instructions.

2) CONSUMABLES

The following consumable materials, or equivalent, are necessary to accomplish this Service Bulletin:

#	SPEC./LHD CODE NUMBER	DESCRIPTION	Q.TY	NOTE	PART
2	C10-218	Safe-T-cable .032 18" cable with ferrule	AR	(1)	-

Refer also to AMDI for the consumable materials required to comply with the AMP DM referenced in the accomplishment instructions.

3) LOGISTIC MATRIX

N.A.

NOTE

(1) As an alternative to P/N C10-218 it is possible to use P/N MS20995C32.

B. SPECIAL TOOLS

Refer also to ITEP for the special tools required to comply with the AMP DM referenced in the accomplishment instructions.

C. INDUSTRY SUPPORT INFORMATION

Owners/Operators who comply with the instructions of this Service Bulletin no later than the applicable date in the "Compliance" section will be eligible to receive REQUIRED MATERIALS on free of charge basis, except for Consumable Materials and Special Tools.

NOTE: Customers who fail to comply with the instructions in this Service Bulletin before the compliance date are not eligible for the aforementioned special policy.

Please Issue relevant MMIR form to your Warranty Administration Dpt.

3. ACCOMPLISHMENT INSTRUCTIONS

GENERAL NOTES

- a) Place an identification tag on all components that are re-usable, including the attaching hardware that has been removed to gain access to the modification area and adequately protect them until their later re-use.
- b) During the installation of bonding braids or components requiring grounding, clean the surface structure in order to obtain a good ground contact.
- c) Exposed thread surface and nut must be protected using a layer of tectyl according to MIL-C-16173 grade I.
- d) All lengths are in mm.

PART I

NOTE

The following steps 1 and 2 are not applicable to components kept in stock.

1. In accordance with AMP DM 39-A-00-20-00-00A-120A-A, prepare the helicopter on ground for a safe maintenance. Disconnect the battery, all electrical power sources and/or the external power supply.
2. In accordance to AMP DM 39-A-71-11-07-00A-520A-A remove the forward sliding fairing and get access to the VCS compressor pack P/N 3G2150V10151.

NOTE

If damages are found in the drive belts of the VCS compressor pack P/N 3G2150V10151 contact the Product Support Engineering (engineering.support.lhd@leonardo.com).

3. Perform the drive pulley washer inspection as described in step 4 of the Enviro Service Bulletin SB 21-102 Rev. A in Annex A.
4. If, according to the inspection as for the previous step, the washer is missing, immediately perform the drive pulley washer installation as described in step 6 of the of the Enviro Service Bulletin SB 21-102 Rev. A in Annex A.

NOTE

The following steps 5 thru 7 are not applicable to components kept in stock.

5. In accordance to AMP DM 39-A-71-11-07-00A-720A-A reinstall the forward sliding fairing.
6. Return the helicopter to flight configuration and record for compliance with this Service Bulletin on the helicopter logbook.
7. Send the attached compliance form to the following mail box:
engineering.support.lhd@leonardo.com

As an alternative, gain access to My Communications section on Leonardo WebPortal and compile the "Service Bulletin Application Communication".


ANNEX A

ENVIRO SERVICE BULLETIN

SB 21-102 REV. A

VCS COMPRESSOR PACK – AW139

DRIVE PULLEY WASHER INSPECTION

 Enviro Systems, Inc.	Service Bulletin VCS Compressor Pack – AW139 Drive Pulley Washer Inspection	
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1. PURPOSE

This Service Bulletin provides inspection guidance to verify installation of Drive Pulley Washer (item 38 in figure below). If not installed, this condition may result in axial movement of Drive Pulley and cause damage to the belt.

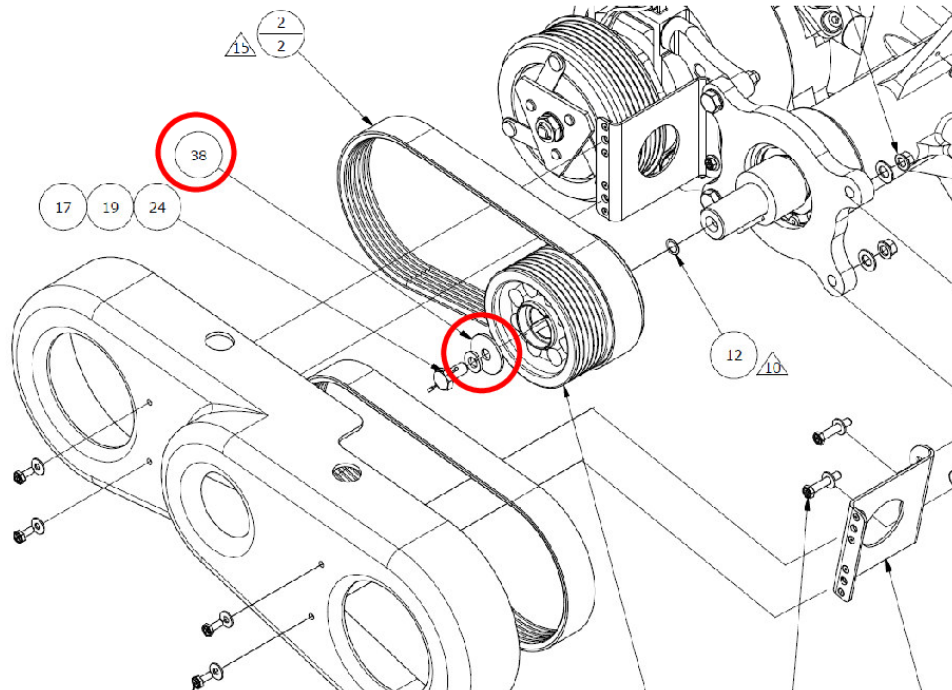


Figure 1: Drive Pulley Washer Location

2. SCOPE


This Service Bulletin outlines the inspection process to verify installation of Drive Pulley Washer. The process is applicable to the following part numbers.

LH P/N: 3G2150V10151 / Enviro P/N: 1133740-1 S/N 424 thru 438

The components are installed on the Leonardo Helicopter model AW139.

3. EQUIPMENT & PARTS

No special equipment required.

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4. INSPECTION PROCEDURE

- 4.1 Gain access to the VCS Compressor Pack to view the center of the Compressor Drive Pulley (Center Pulley). Remove of the Belt Cover is not required to perform the inspection.
- 4.2 Inspect to verify installation of drive pulley washer. In Figure 2 below, the Drive Pulley Washer is not present. When the washer is not present, note that the pulley's keyway is visible. In Figure 3, the Drive Pulley Washer is shown installed.

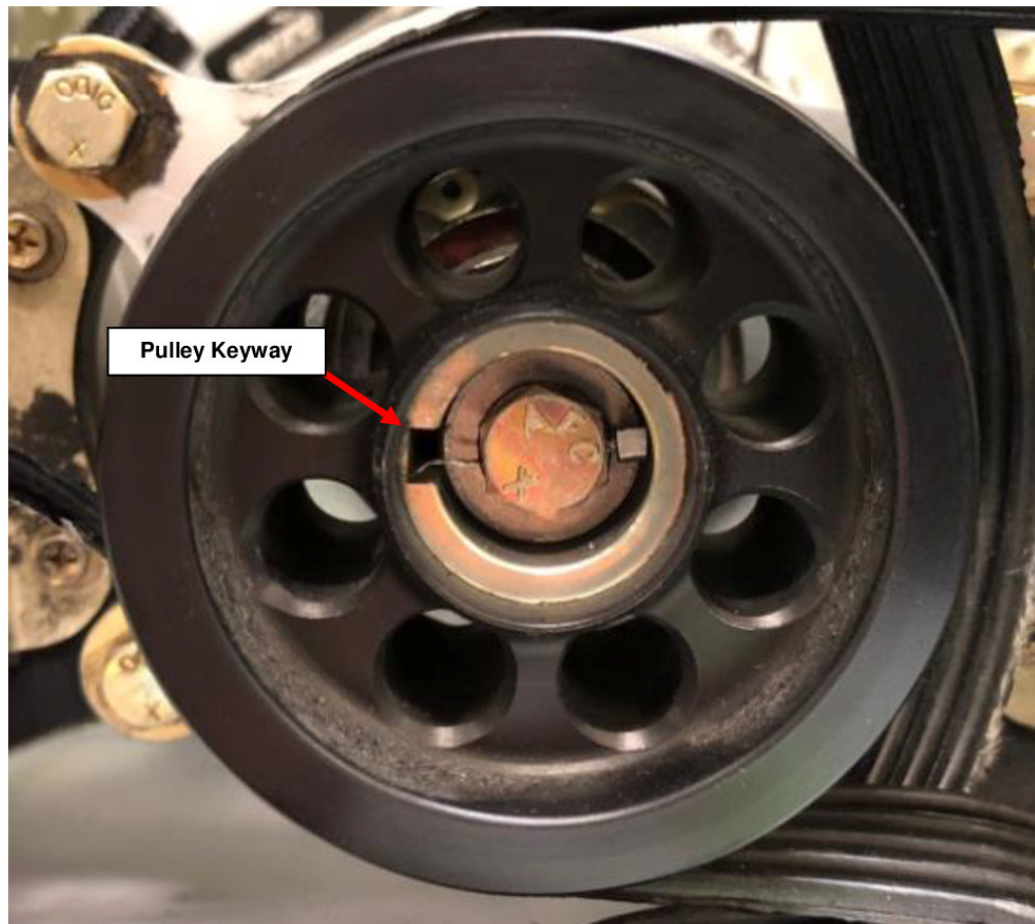


Figure 2: Drive Pulley Washer Not Present (Belt Cover Removed)



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Figure 3: Drive Pulley Washer Installed

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5. REQUIRED ACTIONS

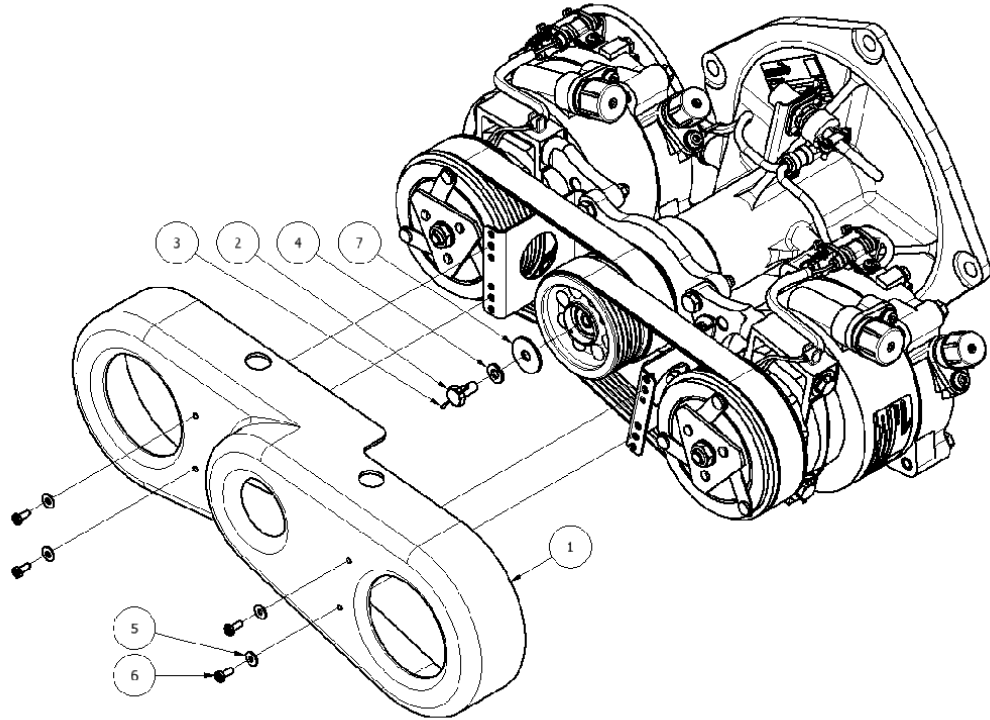
- 5.1 If VCS Compressor Pack is identified to contain the Drive Pulley Washer, no further action is required.
- 5.2 If VCS Compressor Pack is identified to **NOT** contain the Drive Pulley Washer, return 3G2150V10151 (1133740-1) VCS Compressor Pack to Enviro Systems, Inc. for repair or following instructions below to install the missing washer.

6. DRIVE PULLEY WASHER INSTALLATION

- 6.1 Cut and remove Safety Cable (Item 3) installed through Drive Pulley Bolt (Item 2).
- 6.2 Remove Bolt and Lock Washer (Item 4).
- 6.3 Install 1133739-12, Drive Pulley Washer (Item 7) as shown.
- 6.4 Reinstall Bolt (Item 2) and Lock Washer (Item 4) and torque to 135-185 in-lbs.
- 6.5 Install Safety Cable (Item 3) or safety wire through holes in Bolt and Drive Pulley.


Note: If better access is needed to perform replacement, Belt Cover may be removed. Refer to System Description and Operation Manual 21-00-50 for removal/installation procedures.

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1	7	1133739-12	WASHER, DRIVE PULLEY		REQUIRED
4	6	NAS1801-06-6	SCREW, 6-32 X .375 HEX HEAD		REUSED
8	5	NAS1149FN632P	WASHER, FLAT, #6 X .032 THK, STEEL, CAD	OR AN960 6	REUSED
1	4	MS35338-44	WASHER, LOCK-SPRING, 1/4 X .062 THK, CAD		REUSED
3	3	C10-218	SAFE-T-CABLE .032 18" CABLE WITH FERRULE	(OR MS20995C32)	REQUIRED
1	2	AN4H4A	BOLT, MACHINE 1/4-28 UNF x .531		REUSED
1	1	1133749-10	COVER, BELT		REUSED
QTY	ITEM	PART NUMBER	DESCRIPTION	REMARKS	USAGE
LIST OF MATERIALS					

Note: Items marked REUSED are to be reused when washer is installed. These part numbers are provided for reference in case items are damaged or lost during the installation process.

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7. REFERENCES

- Enviro Systems, Inc. CAR 1253

8. REVISION HISTORY

Release Date	Revision	Description of Change	Author
12/20/2021	–	Initial Release	E. Galleciez
3/9/2022	A	Added LH part numbers. Added procedure for replacement of washer if needed.	E. Galleciez

9. APPROVALS

Date	Title	Signature
12/20/2021	Manager, Sustaining Engineering	E. Galleciez
3/9/2022	Manager, Sustaining Engineering	E. Galleciez

