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MANDATORY

SERVICE BULLETIN

DATE: December 20, 2017

Service Bulletin No. 626A (Supersedes Service Bulletin No. SB-626) Engineering Aspects are FAA Approved

SUBJECT: AVStar Flow Divider (Lycoming Fuel Manifold) Inspection

MODELS AFFECTED: Refer to Tables 1 and 2

TIME OF COMPLIANCE: 10 hours of engine operation or sooner if experiencing reduced fuel flow.

REASON FOR REVISION: Deleted from Table 2 the following Lycoming engine models that do not have

AVStar fuel flow dividers; HIO-360-D1A, HIO-360-G1A, YHIO-360-G1A,

TIO-540-A2C, TIO-540-S1AD

NOTICE: As a matter of clarification this Lycoming Engines Service Bulletin refers to AVStar fuel flow

dividers as "fuel manifolds" since that is how they are identified in associated parts catalogs.

NOTICE: Incomplete review of all the information in this document can cause errors. Read the entire

Service Bulletin to make sure you have a complete understanding of the requirements.

This Service Bulletin identifies Lycoming engine models and serial numbers in Tables 1 and 2 that have AVStar fuel flow dividers (Lycoming fuel manifolds) that either are affected or *could* be affected per the attached AVStar Service Bulletin No. AFS-SB13 dated May 20, 2016 (reprinted in its entirety in this Service Bulletin). This Service Bulletin is notification of required action with regards to specific AVStar fuel flow dividers installed on the Lycoming engine models or in your inventory.

Table 1 identifies engine models and serial numbers of Lycoming engines that are affected by AVStar Service Bulletin No. AFS-SB13. Whereas, Table 2 identifies engine models and serial numbers of Lycoming engines that *could* be affected by AVStar Service Bulletin No. AFS-SB13.

The reprint of AVStar Service Bulletin No. AFS-SB13 is current at the date of release of this Service Bulletin. However, when complying with this Service Bulletin, ensure that this reprint is still current at the time of compliance.

Required Action

Since not all Lycoming engine models and serial numbers are affected, the required action includes first identifying all affected Lycoming engines and serial numbers installed on the airframe or in your inventory.

- 1. Review the attached AVStar Service Bulletin to understand the issue.
- 2. Review Tables 1 and 2 in this Lycoming Service Bulletin. Look for your engine models and serial numbers.



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If your Lycoming engine models and serial numbers are identified in Table 1 of this Lycoming Service Bulletin 626:

- 1. Remove the fuel manifold from the affected engines per instructions in Lycoming Engines' manuals.
- 2. Do not send the fuel manifold to Lycoming Engines. It can delay corrective action.
- 3. Follow the instructions in the attached AVStar Service Bulletin No. AFS-SB13, dated May 20, 2016.
- 4. For each fuel manifold, copy and complete page 8 of the attached AVStar Service Bulletin AFS-SB13.

If your engine models and engine serial number are identified in Table 2 of this Lycoming Service Bulletin 626:

- 1. Refer to *Appendix A* in the attached AVStar Service Bulletin No. AFS-SB13 to identify whether your engines or spares inventory have the AVStar fuel manifold.
- 2. Remove the fuel manifold either from the spares inventory or the affected engines per instructions in Lycoming Engines' manuals.
- 3. **Do not send the fuel manifold to Lycoming Engines.** It can delay corrective action.
- 4. Follow the instructions in the attached AVStar Service Bulletin No. AFS-SB13, dated May 20, 2016.
- 5. For each fuel manifold, copy and complete page 8 of the attached AVStar Service Bulletin AFS-SB13.

Table 1
Engines Affected by AVStar Service Bulletin No. AFS-SB13

Engine Model	Engine S/N	Engine Model	Engine S/N	Engine Model	Engine S/N
IO-360-A1A	L-17198-51E	IO-360-L2A	RL-25872-51E	IO-540-K1G5	RL-15431-48E
IO-360-A1B6	L-17193-51E	IO-360-L2A	RL-26277-51E	IO-540-K1G5	RL-1326-48E
IO-360-A1B6	L-36843-51E	IO-360-L2A	RL-27170-51E	IO-540-K1G5D	RL-13914-48E
IO-360-A1B6	L-36847-51E	IO-360-L2A	RL-27348-51E	IO-540-K1G5D	RL-20203-48E
IO-360-A3B6	L-27966-51E	IO-360-M1A	L-36870-51E	IO-540-K2A5	L-36521-48E
IO-360-A3B6	RL-11790-51E	IO-360-M1A	L-36877-51E	IO-540-V4A5	L-36532-48E
IO-360-A3B6	RL-25814-51E	IO-360-M1A	RL-23880-51E	TIO-540-AE2A	RL-3184-61A
IO-360-A3B6	RL-26723-51E	IO-360-M1A	RL-28220-51E	TIO-540-AE2A	RL-10736-61A
IO-360-C1C	RL-26924-51E	AEIO-360-A1B6	RL-12373-51E	TIO-540-AE2A	RL-11053-61A
IO-360-C1C6	RL-23679-51E	AEIO-360-H1B	L-36788-51E	TIO-540-AH1A	L-11241-61A
IO-360-C1C6	RL-28289-51E	TIO-360-C1A6D	L-245-64A	TIO-540-AH1A	RL-10554-61A
IO-360-L2A	L-18526-51E	YIO-360-M1B	EL-36849-51E	TIO-540-AH1A	RL-10793-61A
IO-360-L2A	L-20180-51E	IO-540-AB1A5	L-15990-48E	TIO-540-AJ1A	L-14248-61E
IO-360-L2A	L-26243-51E	IO-540-AB1A5	L-36514-48E	TIO-540-AJ1A	RL-1135-61E
IO-360-L2A	L-36865-51E	IO-540-AB1A5	L-36526-48E	TIO-540-AJ1A	RL-1654-61E
IO-360-L2A	L-36866-51E	IO-540-AB1A5	RL-10303-48E	TIO-540-AJ1A	RL-1898-61E
IO-360-L2A	L-36876-51E	IO-540-AB1A5	RL-20985-48E	TIO-540-AJ1A	RL-10396-61E
IO-360-L2A	L-36881-51E	IO-540-AC1A5	RL-17689-48E	TIO-540-AJ1A	RL-12121-61E
IO-360-L2A	RL-2060-51E	IO-540-AC1A5	RL-27225-48E	TIO-540-AJ1A	RL-12327-61E
IO-360-L2A	RL-19432-51E	IO-540-AE1A5	L-36537-48E	IO-580-B1A	RL-465-79E
IO-360-L2A	RL-22235-51E	IO-540-C4D5D	L-15234-48E	AEIO-580-B1A	L-267-79E
IO-360-L2A	RL-23967-51E	IO-540-C4D5D	RL-18258-48E	AEIO-580-B1A	L-463-79E
IO-360-L2A	RL-24117-51E	IO-540-D4B5	L-36538-48E	AEIO-580-B1A	L-466-79E
IO-360-L2A	RL-24497-51E	IO-540-K1A5	RL-19715-48E	AEIO-580-B1A	L-467-79E
IO-360-L2A	RL-24860-51E	IO-540-K1B5	L-36520-48E	AEIO-580-B1A	L-468-79E
IO-360-L2A	RL-25607-51E				

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Table 2
Engines Model Numbers and Serial Numbers
that Could be Affected by AVStar Service Bulletin No. AFS-SB13

		•			
Engine Model	Engine S/N	Engine Model	Engine S/N	Engine Model	Engine S/N
IO-360-A1A	RL-22149-51E	HIO-360-F1AD	L-36801-51A	TIO-540-AE2A	RL-10498-61A
IO-360-A1B6	RL-35779-51E	YIO-390-EXP16	EL-476-80E	TIO-540-AH1A	L-14249-61A
IO-360-C1C6	L-36762-51E	IO-540-M1C5	L-20070-48E	TIO-540-AJ1A	L-14224-61E
IO-360-L2A	L-36811-51E	IO-540-M1C5	RL-28007-48E	TIO-540-AJ1A	RL-10018-61E
IO-360-L2A	L-36844-51E	IO-540-W1A5	RL-19941-48E	TIO-540-AJ1A	RL-10797-61E
IO-360-L2A	RL-29961-51E	TIO-540-AE2A	RL-3184-61A	YIO-540-K1J5	EL-36482-48E
HIO-360-F1AD	L-36780-51A				

Warranty Instructions for Engines/Parts Affected by Lycoming Service Bulletin 626

Upon completion of instructions in the attached AVStar Service Bulletin AFS-SB13, Section 5.0 <u>Warranty</u> <u>Part Replacement/Inspection Procedures</u> and the reinstallation of the AVStar fuel flow divider (fuel manifold), contact an Authorized Lycoming Distributor and file a warranty claim for:

- 1. Associated Freight.
- 2. Removal and Reinstallation Labor in accordance with the current applicable Lycoming Warranty Policy and latest revision of Lycoming's SSP-875 *Removal and Installation Labor Allowance Guidebook*.

If you have any questions, contact Lycoming Field Service by phone at 570-327-7222 or 877-839-7878.

NOTICE: Warranty consideration is available for 12 months from the date of issue of this Service Bulletin.

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AVStar Fuel Systems, Inc. 1365 Park Lane South Jupiter, FL 33458 561-575-1560 Toll free 1-866-982-7287 www.avstardirect.com FAA Repair Station V1RR580Y

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FLOW DIVIDER - MANUFACTURING DEFECT

1.0 **APPLICABILITY**

This Service Bulletin applies to all AVStar manufactured fuel system Flow Dividers (AV 2524232-2, AV 2576624-1, AV 2576564-1 and AVX3015004-1) manufactured between the dates of October 1, 2015 and March 23, 2016, per the serial numbers listed in Appendix A.

REASON FOR PUBLICATION 2.0

During the manufacturing process, a metal shaving may have been generated and stay lodged between the internal components and the Flow Divider body. The location were the shaving may have been generated is at the back of the Fuel Inlet Port. The shaving could become dislodged and flow further downstream through the Flow Divider and towards or into a fuel nozzle, causing a reduction in fuel flow. The Flow Divider assemblies being investigated are limited to those of AVStar parts numbers manufactured between the dates of October 1st, 2015 to March 23, 2016 and further limited to the serial numbers shown in Appendix A.

Note:

Flow Dividers with applicable serial numbers that have been inspected by AVStar and cleared of any metal shavings will be marked with an "F" following the serial number.

3.0 POSSIBLE ENGINE SYMPTOMS WITH CLOGGED NOZZLE

There are no reports of this condition taking place before the publishing of this service bulletin or data supporting how likely this condition is to occur.

Caution

Failure to compiling with this service bulletin can result in an unsafe condition that has the potential to reduce engine performance.

Any questions regarding Service Bulletin are to be directed to AVStar Fuel Systems, Inc. at www.avstardirect.com, or call (561) 575-1560

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AVStar Fuel Systems, Inc. 1365 Park Lane South		ISSUED: May 20, 2016
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If a metal shaving was to separate, it could reduce fuel flow to a cylinder by becoming lodged in either the Flow Divider or a Fuel Nozzle. If fuel flow is reduced to a cylinder the operator could experience one or more of the following conditions.

- 1. Rough running engine, especially at lower engine speeds.
- 2. Higher than normal engine vibration.
- 3. Poor idle quality. Idle mixture rise during shut down may become excessive or non-existent depending on the severity of the clog.
- 4. Engine may back-fire or pop.
- 5. Engine may experience a higher than normal magneto drop when checked during runup.
- 6. (If a pressure-style fuel flow gauge is installed) Higher than normal flow will be indicated. Flow restriction through the clogged nozzle will produce higher pressure giving an erroneous high fuel flow indication.
- 7. Higher than normal TIT indication (For turbo-charged engines).

If any of the above symptoms are experienced during the pre-flight run-up, discontinue the flight and have an appropriately rated powerplant mechanic comply with section 4.0 of this service bulletin before further flight.

If any of the above symptoms are experienced during the flight, consult the approved pilot's operating handbook and land at the nearest available safe airport. Have an appropriately rated powerplant mechanic comply with section 4.0 of this service bulletin before further flight.

4.0 TIMING AND INSTRUCTIONS FOR COMPLIANCE

IMMEDIATELY – If part of the scope in Appendix A and a significant degradation in flow performance to one or more cylinders has been observed, have an appropriately rated powerplant mechanic perform the following:

- 4.1.1 Remove all fuel nozzles, inspect and clean for possible contamination.
- 4.1.2 If a clogged nozzle is found, the engine and cylinder should be inspected for evidence of over temperature damage.

Any questions regarding Service Bulletin are to be directed to AVStar Fuel Systems, Inc. at www.avstardirect.com, or call (561) 575-1560

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- 4.1.3 Contact AVStar and comply with one of procedures in section 5.0 of this Service Bulletin.
- 4.2 Within the next 10 hours of engine operation.
 - 4.2.1 Contact AVStar and comply with one of procedures in section 5.0 of this Service Bulletin.

5.0 WARRANTY PART REPLACEMENT / INSPECTION PROCEDURES

Contact AVStar and one of the following procedures can be performed:

- 5.1 For removal of the Flow Divider refer to the latest revision of Lycoming Engines Service Bulletin SB-626, "AVStar Fuel Manifold (Flow Divider) Inspection" and return to AVStar, or an AVStar approved Service Center. Include an attached Warranty form (Appendix B), in order to have the Flow Divider Assembly inspected and/or replaced. A credit will be issued with the returned assembly. For installation of the returned Flow Divider see section 6.0 of this service bulletin.
- 5.2 Upon contact, AVStar will issue Flow Divider Work Instruction AFS-WI-X1. When AVStar receive a written confirmation that the Work Instruction has been complied with, AVStar will provide a credit.

6.0 <u>INSTALLATION OF RETURNED FLOW DIVIDER</u>

For installation of the Flow Divider refer to the latest revision of Lycoming Engines Service Bulletin SB-626, "AVStar Fuel Manifold (Flow Divider) Inspection"

Any questions regarding Service Bulletin are to be directed to AVStar Fuel Systems, Inc. at www.avstardirect.com, or call (561) 575-1560

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7.0 APPENDIX A

1 4111	Part Number AV2524232-2					
Serial Number						
AV207971582	AV2274882					
AV207971583	AV2274883					
AV207971584	AV2274885					
AV207971585	AV2274886					
AV207971587	AV2274887					
AV207971589	AV2274888					
AV207971590	AV2274894					
AV207971591	AV2274895					
AV2274862	AV2274896					
AV2274863	AV2274897					
AV2274864	AV2274899					
AV2274865	AV22748100					
AV2274866	AV22748101					
AV2274867	AV22748102					
AV2274869	AV22748103					
AV2274870	AV22748105					
AV2274872	AV22748112					
AV2274873	AV22748135					
AV2274874	AV22748161					
AV2274875	AV22748163					
AV2274876	AV22748164					
AV2274877	AV22748165					
AV2274878	AV22748166					
AV2274879	AV22748135					
AV2274880	AV22748200					

Part Num AVX30150	ALCOHOLD CO.
Serial Number	
AV034225	AV033347
AV034226	AV033349
AV034229	

6 7000 50	umber 6624-1
Serial Number	
AV207971779	AV207971959
AV207971780	AV207971960
AV207971786	AV207971961
AV207971788	AV207971962
AV207971891	AV207971971
AV207971892	AV22748120
AV207971893	AV22748122
AV207971894	AV22748123

Part Num AV25765	
Serial Number	
AV207971844	AV207971949
AV207971846	AV207971987
AV207971850	AV207971989
AV207971931	AV207971979
AV207971933	AV207971981
AV207971936	AV207971984
AV207971937	AV207971986
AV207971938	AV22748117
AV207971939	AV22748177
AV207971771	AV207971827
AV207971812	AV207971830
AV207971813	AV207971832
AV207971814	AV207971887
AV207971823	AV207971889

Any questions regarding Service Bulletin are to be directed to AVStar Fuel Systems, Inc. at www.avstardirect.com, or call (561) 575-1560

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8.0 APPENDIX B

AVStar Fuel Systems, Inc. 1365 Park Lane South Jupiter, FL 33458 Tel (561) 575-1560, Fax (561) 575-0795 E-mail: afsi@avstardirect.com FAA Approved Repair Station V1RR580Y



In order to process your warranty claim, please completely fill out this Warranty Information Sheet and return with your unit. Also, please include a copy of your 8130 with your unit.

Owner's Information			
Name and Address	8		
	*		
Phone #	4		_
Email Address (send tracking # upon shipment)	<u>**</u>		
Unit Information			
P/N:		Date of Occurrence	e:
S/N:		Date in Service:	
Engine Model & Serial N	Number:		
Total time on unit since	e installation (hr	s):	<u></u>
Complaint (Check box	x)		
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