

November 19, 2014

Carburetor Examination, Avstar, Jupiter, Florida

Accident: Piper PA-28-161, N706GS, Buffalo, New York, 8-14-2014

NTSB Accident Number ERA14LA388

Carburetor: Avstar MA-4SPA, P/N AV105217, S/N AV17142153

NTSB Representative Jeff Kennedy

Avstar Representatives Dale Ballenger and Henry Hildebrandt

Pre-test Inspection

Fuel inlet fitting removed. The fitting was tested for obstruction and none was found. The fitting flowed 705 lbs/hour of test fluid on the flow bench.

Factory seal on bowl screw intact.

No impact damage.

Float Test

Float shuts off at normal level.

Float operated normally with no evidence of sticking.

Fuel flow noted when throttle opened.

Accelerator pump operated normally.

Bench Test

Carburetor installed on test flow bench.

Carburetor operated within acceptable limits. Operated a little rich at idle.

No evidence of malfunction.

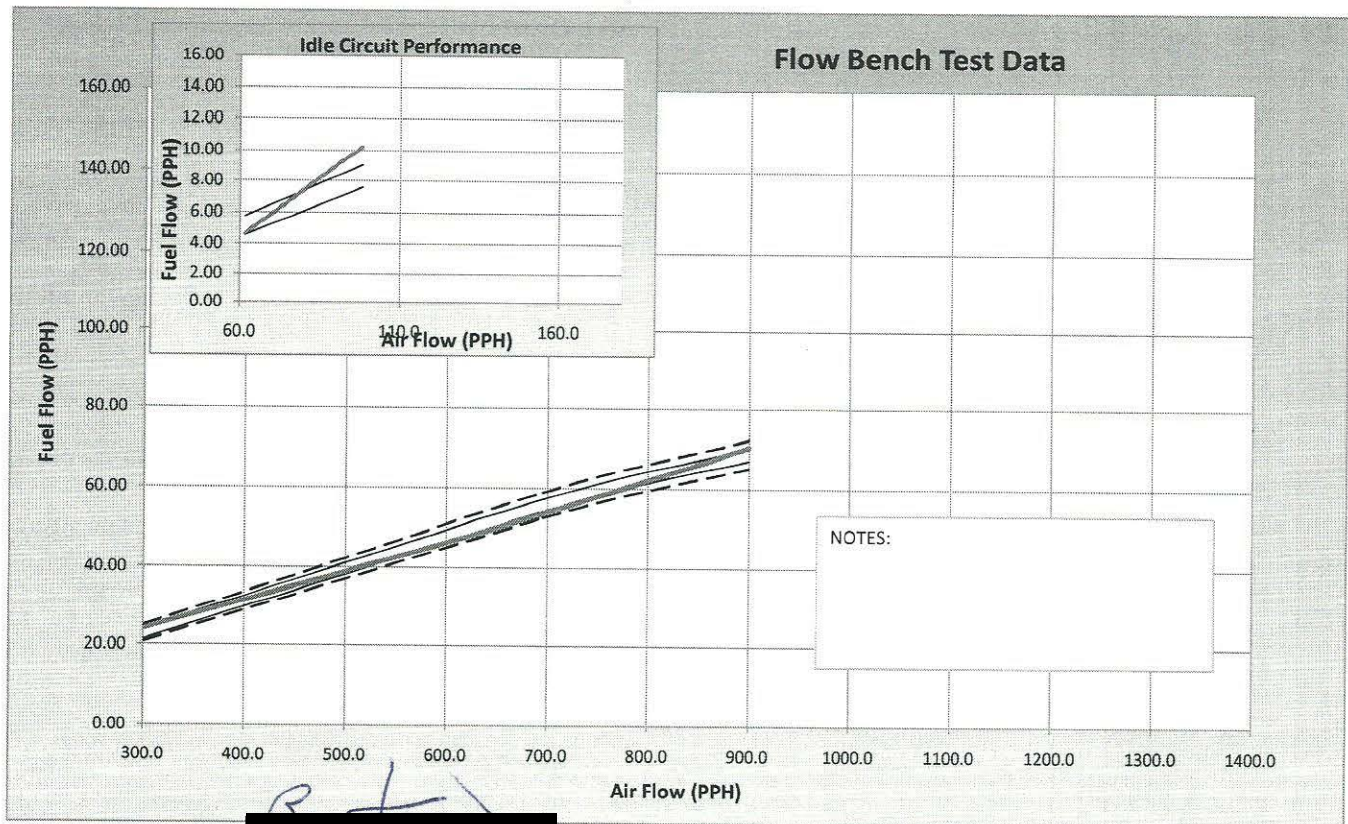
Disassembly

Reverse torque on 2 top to bowl bolts at the mixture control lever were 45 inch pounds, which is within torque limits. The reverse torque on the 2 bolts on the throttle lever and accelerator pump side were 47 inch pounds, within limits. Bolts are torqued to 40 inch pounds during installation and then tightened slightly to allow the locking devices to engage.

Carburetor split and top side with float was installed in a float fit check device. The float was fitted properly and did not contact any surfaces within the bowl. The float was tight and did not have any unusual play. The float height was proper. The float drop was proper. The cotter pin on the float was in place. The float was removed and placed in 180 degree F. water. No leaks from the metal float chambers were noted. The float weighed .8 ounces before and after the hot water test.

	VACUUM FLOW BENCH TEST REPORT		DOC: AFS900-F	REV: 9
	REVIEWED BY:		APPROVED BY:	Dale Ballenger Engineering July 24, 2014

DATE / TIME	11/19/14 7:48 AM		INLET PRESSURE	4.5	psi															
OPERATOR	Brian K.		MAIN NOZZLE FLOW		cc/m															
SETTING NO.	10-5217		IDLE TUBE FLOW		cc/m															
SERIAL NO.	AV17142153		IDLE MIXTURE SCREW	5/8	turns															
Air Flow (PPH)	<table border="1"> <thead> <tr> <th colspan="3">Fluid Flow (PPH)</th> </tr> <tr> <th>Low Limit</th> <th>Value</th> <th>High Limit</th> </tr> </thead> <tbody> <tr> <td>60</td> <td>1.0421</td> <td>61.6</td> </tr> <tr> <td>Pass</td> <td>4.52</td> <td>5.76</td> </tr> <tr> <td></td> <td colspan="2">0.11</td> </tr> </tbody> </table>				Fluid Flow (PPH)			Low Limit	Value	High Limit	60	1.0421	61.6	Pass	4.52	5.76		0.11		AS RETURNED Pressure ("Hg) 11
Fluid Flow (PPH)																				
Low Limit	Value	High Limit																		
60	1.0421	61.6																		
Pass	4.52	5.76																		
	0.11																			
100	1.0958	98.3		11																
Fail	7.60	10.21	9.02																	
1.19																				
300	1.2286	300.5		10																
Pass	21.36	24.02	24.17																	
	2.67																			
700	1.5134	695.4		5.5																
Review	54.18	53.64	57.22																	
-0.54																				
900	1.678	900		4.5																
Review	67.42	70.76	70.38																	
0.38																				
N/A																				



JOB TRAVELER

COPY

11/19/2014

Job: 206301

Part: AV10-5217-OH

Rev:

PO#:

Description: LVC-5-4PA

Serial AV17142153

Asm: 0

For Stock 0.00	For Order 1.00	Total 1.00	Start:	Required By: 11/19/2014
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SHIPPING SCHEDULE:

Date	SO	Line	Rel	Order Qty	Qty from Job	Qty from Stock	Whse	Ship Via	Ship To
11/19/2014	20630	1	1	1.00	1.00	0.00		Pick Up	NTSB

OPERATIONS

Seq No.	WkCtr	Oper.	Description	Oper.Qty
10	801	801	IRAN	1.00

Customer: NTSB

20	05	05	Additional Parts	1.00
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Part Number	Lot #	Description	Qty
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30	05	05	Additional Parts	1.00
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Part Number	Lot #	Description	Qty
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40	820	820	Technician's Evaluation	1.00
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JOB TRAVELER

COPY

2

11/19/2014

Job: 206301

Part: AV10-5217-OH

Rev:

PO#:

Description: LVC-5-4PA

Serial AV17142153

Asm: 0

Technician's Evaluation:

Float test - pass
 Flow Curve - pass pump discharge - pass
 Reverse - torque - pass
 Visual inspection (float contamination) - pass

50 830 830 Corrective Action

1.00

Corrective Action:

No issues found

55 T0001 T0001 Technician Signature

1.00

1. Identify and Assemble the unit by following the manufacturer's FSM. Attach the Tag to the unit as described in the FSM.

Technician

Date

60 840 840 Pre-Closure Check

1.00

Pre-closure check: FAA Certified Repairman visually checks float installation is correct, float height setting is correct, and cutter pin is in float shaft.

Initials:

1.00

70 850 850 Certification

Code:

AVStar Engineering:

Return Valid

Return Not Valid

Engineer Signature:

Date:

80 871 871 Documentation - IRAN

1.00

Customer Documents

AFS Job Traveler AFS702-F2

AFS Service Tag YELLOW TAG

Test Report AFS824-F2 or AFS824-F6

90 70 70 Pack and Ship

1.00

Create packing slip. No metal to metal contact.

100 60 60 Close Job Traveler

1.00

Close Job Traveler