



CUSTOMER REPORT

Date: September 25, 2024

To: National Transportation Safety Board
[REDACTED] Air Safety Investigator
32125 32nd Avenue South
Suite 140
Federal way, WA 98001
(253) 835-5385

From: Airflow Performance
[REDACTED]

Subject: Airflow test of Bendix Pressure Carburetor
Model: PS-5B S/N: 860723R P/L: Special

Description: The carburetor was inspected, and air flow tested in the presence of [REDACTED] and [REDACTED] of the Columbia, South Carolina FAA, Flight Standards District Office. Initial inspection of the carburetor showed all lock wire in place, the discharge nozzle and enrichment valve adjustment screws had their lock wire in place. A non-standard mixture control lever had been fabricated. This did not affect carburetor operation. All diaphragms and gaskets were of the new fluorosilicone material. (see Appendix A). The carburetor was installed on the air box to test full throttle operation. The throttle was locked in the fully open position while running the wide-open throttle fuel curve.

Wide Open Throttle Air Flow Test

Airflow PPH	0	200	400	600	800	1000	1200	1400	1600
Fuel Flow PPH	29.4	31.9	40	58	77	101	127	150	175
Idle Fuel Flow	19.9 PPH @ .006 Throttle Opening								

Data shows the carburetor functioning properly and responding to air flow changes. Fuel flow calibration seems to be set rich for a naturally aspirated IO-540 (normally at 1400 PPH airflow the fuel flow would be in the 125-135 range). But based on the data tag P/L specifying "Special" a different calibration may have been requested by the customer. Idle mixture was also set rich. Normal idle flow for a six-cylinder Lycoming is typically in the 9 -14 PPH range.

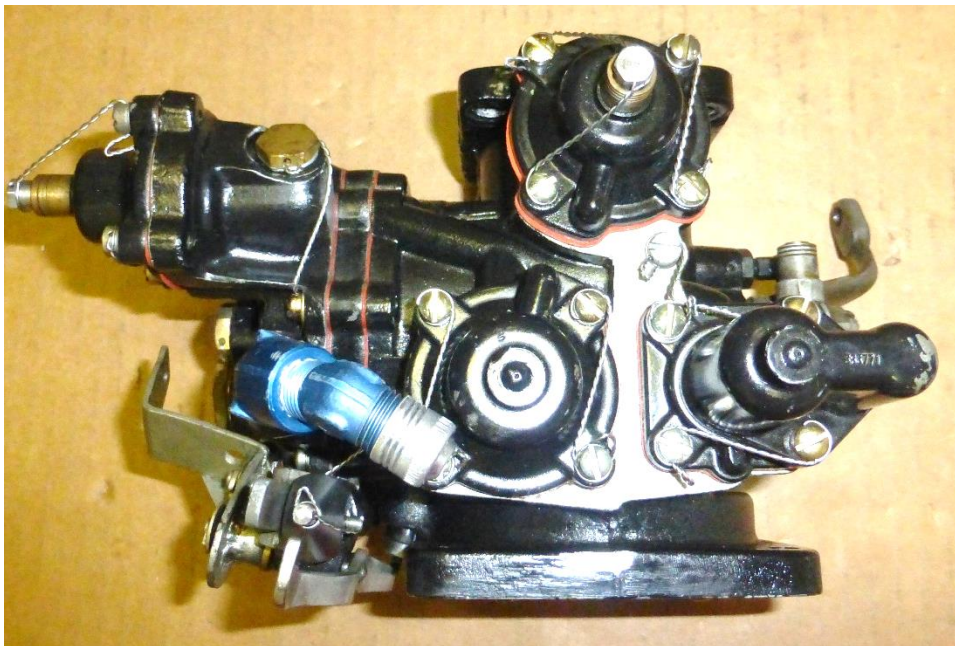
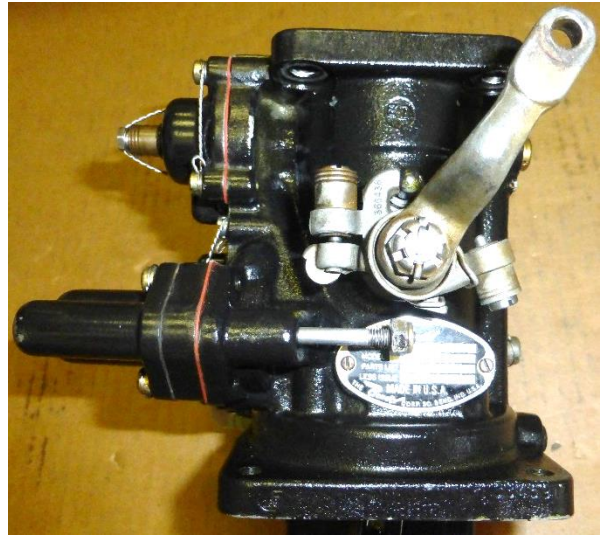
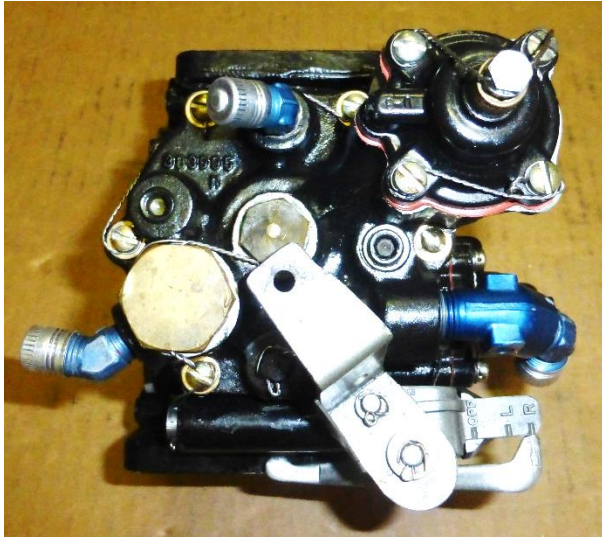
Airflow Performance LLC.

Fuel Metering
For Hi-Performance Engines

Overhaul And Calibration
Airflow Work
Custom Fabrication

111 Airflow Drive
Spartanburg, SC 29306
864-576-4512

APPENDIX A



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APPENDIX A

