



CUSTOM KIT

CK-AG-63

REV B: 12/18/2025

510 AIRFRAME FUEL SYSTEM UPGRADE

AIRCRAFT AFFECTED:

MODEL

S2R-T34

SERIAL NUMBERS

ALL

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LOG OF REVISIONS

NOTE: Reformatting and correction of typographical errors is not considered revision.

REV	PAGE	DESCRIPTION OF REVISION	BY
IR	ALL	New Document Initial Release	T. Surratt 06/13/2025
A	5	Revised Placard part number.	T. Surratt 10/10/2025
B	5	Relocated two parts from "7. PARTS LIST" to "7.1 AS REQUIRED".	T. Surratt 12/18/2025

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1. PURPOSE/REASON FOR PUBLICATION

The purpose of this Custom Kit is to provide certain aircraft owners/operators with the capability to upgrade their airframe fuel system with the latest S2R-T34 installation version of the airframe fuel filter and pump.

2. SCOPE/COMPLIANCE

This document will list the necessary parts and provide instructions for the successful removal of the previous airframe fuel system and installation of the new, upgraded one.

3. BY WHOM WORK WILL BE ACCOMPLISHED

The work is to be accomplished by an FAA Certified A&P or foreign equivalent.

4. APPROVAL

4-1 THRUSH AIRCRAFT, LLC

This Custom Kit is approved by the Engineering Department at Thrush Aircraft, LLC as a minor installation that does not affect flight.

4-2 FAA APPROVAL

The technical content of this Custom Kit is FAA approved.

5. MAN HOURS

Approximately 16 hours are required.

6. SPECIAL TOOLS

N/A

7. PARTS LIST

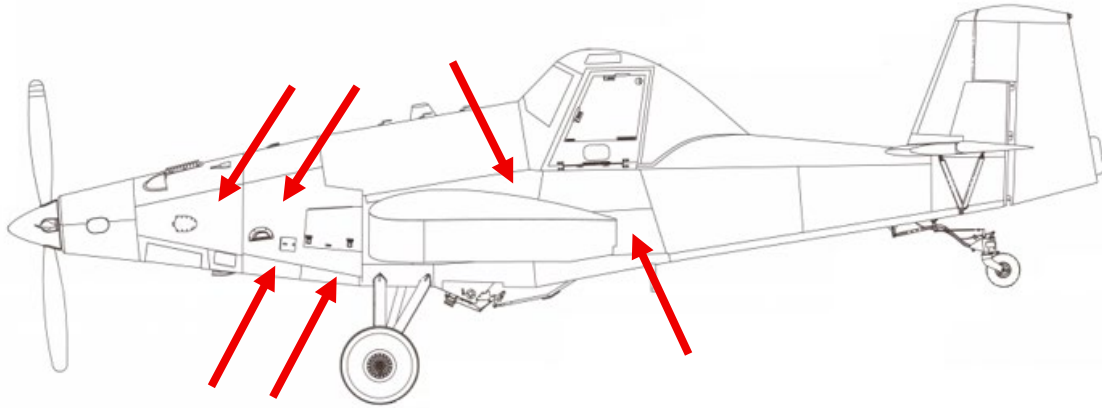
QTY	PART NUMBER	NOMENCLATURE	NOTES
1	111 417 12D0344	FUEL SYSTEM HOSE	Aux Pump to Header Tank
1	111 417 12D0840	HOSE ASSY	Aux Pump to Fuel Filter
1	111F503 12D0450	HOSE ASSY	Fwd Firewall to Eng. Drvn FP
1	21738-9	DOUBLER	Fuel Filter Instl
1	29043T918	HRSN FUEL BOOST PLG/ASSY	Aux. Pump Assy Instl
1	90317T913	PLACARD FUEL ON/OFF 228 GL	Fuel Shutoff Linkage
1	9033T007	DRAIN ASSY	Aux. Pump through Belly Skin
1	9040T019	PUMP ASSY FUEL AUX	Aux. Pump Assy Instl
1	9070T143	FUEL FILTER ASSY	Fuel Filter Instl
2	AN3 10A	BOLT	Fuel Shutoff Linkage
4	AN4 5A	BOLT	Fuel Shutoff Linkage
1	AN4 24A	BOLT	Upr Attch Pt / Aux. Pump Brkt
2	AN4 25A	BOLT	Lwr Attch Pt / Aux. Pump Brkt
4	AN526 1032 R12	SCREW	DG Clamps
1	AS5174J1210	UNION – FLARED TUBE	Filter to Eng. Drvn. Pump Instl
6	MS21044N3	NUT	DG Clamps / Fuel Shutoff Linkage
8	MS21044N4	NUT	Aux. Pump Assy Instl / Fuel Shutoff Linkage
4	MS21919DG 19	CLAMP	Around Hoses
1	MS21919WDG 20	CLAMP	Around Diagonal Fslg Tube
3	MS21919WDG 24	CLAMP	Around LH Fslg Tubes
1	MS28775 116	O RING (AN6227 14)	Filter to Eng. Drvn. Pump Instl
1	MS35489 9	GROMMET	Belly Skin / Drain Tube
1	MS35489 14	GROMMET	Fuel Shutoff Linkage
6	NAS1149F0363P	WASHER (AN960 10)	DG Clamps / Fuel Shutoff Linkage
10	NAS1149F0463P	WASHER (AN960 416)	Aux. Pump Assy Instl / Fuel Shutoff Linkage

7.1 AS REQUIRED

QTY	PART NUMBER	NOMENCLATURE	NOTES
1	56122T005	FUEL VALVE BRACKET ASSY	Fuel Shutoff Linkage
1	700	FIREWALL SEALANT	Relocation of Lwr Hose
3	90065T200	BUSHING	Aux. Pump Assy Instl
1	60159T001	HANDLE S / ASSY	Fuel Shutoff Linkage
1	60191T010	TORQUE TUBE ASSY	Fuel Shutoff Linkage

8. REMOVAL INSTRUCTIONS

1. Defuel aircraft following best practices.
2. Remove engine cowlings (upper and lower) and other side panels as required.



3. Remove firewall to pump hose and cap.
4. Remove pump to engine hose and cap.
5. Remove existing pump and motor assembly, mounting brackets and plug all fuel connections.
6. Remove existing drain tube and plug hole.
7. Relocate windshield washer reservoir (if installed on the firewall) to prevent interference with the new filter installation.
8. Remove air separator line (if installed) below existing fuel hose on firewall.
9. Inspect and replace fuel hose (111 417 12D0840) from shutoff valve to the firewall as needed.
10. Remove hose between shutoff valve and header tank and plug or cap all open hoses and fittings.
11. Disconnect linkage rod from fuel shutoff valve. May be reinstalled or replaced later as required.
12. Relocate wiring harness from engine compartment to underneath cockpit.

9. INSTALLATION INSTRUCTIONS

1. Locate Pump Assy to airframe and loose-install hardware in lower attach points.
(Reference Figures 1 & 2)

NOTE: Inspect fuselage for bushings used to install auxiliary pump and motor assembly. If absent, contact Thrush Support.

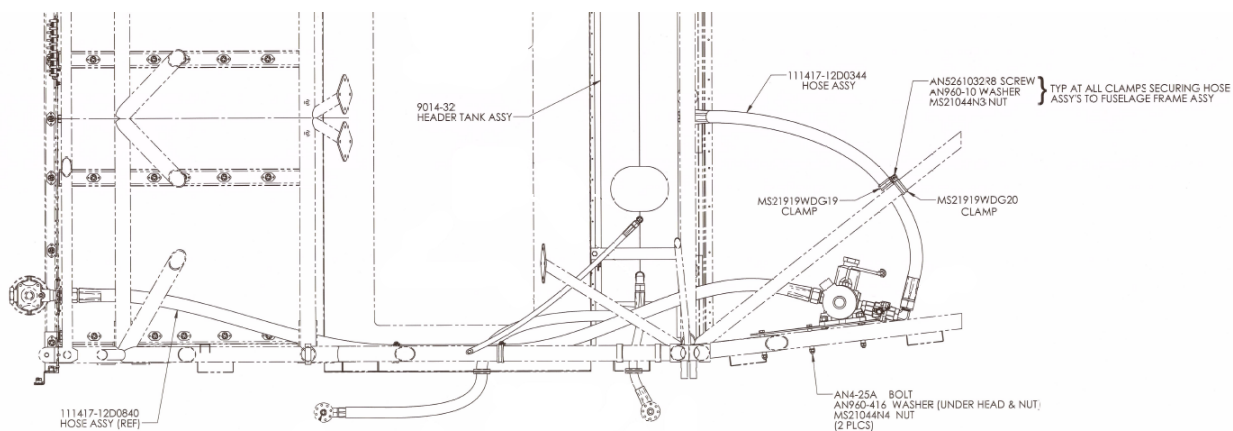


Figure 1

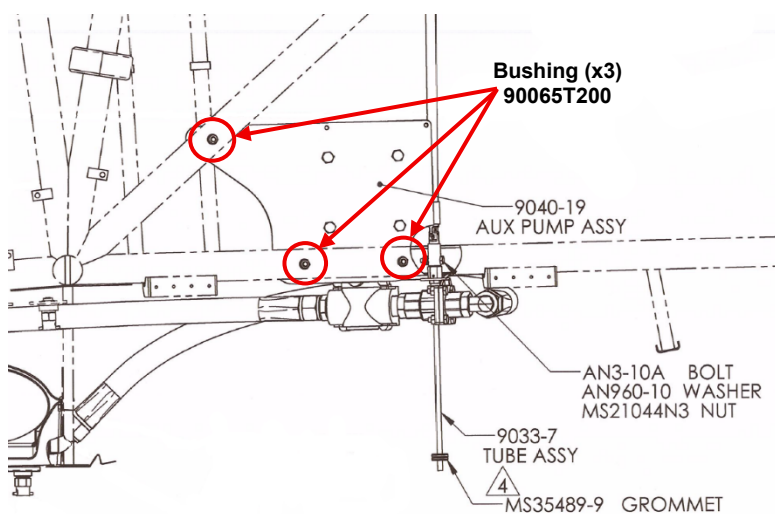


Figure 2

2. Clamp Bracket to airframe and drill 0.25" (6.35mm) hole through upper attach point then deburr. (Reference Figure 2)
3. Loose-install hardware in upper attach point. (Reference Figure 2)

4. Tighten hardware.
5. Install hose between pump and header tank. (Reference Figure 1)
NOTE: Pump and Motor Assy may need to be loosened and rotated to ensure hose does not contact belly skin. Once accomplished (if required), tighten hardware to secure Pump and Motor Assy.
6. Locate drain tube to ensure it is oriented straight up and down, not at a slant or diagonal. (Reference Figure 2)
7. Mark location then set drain tube aside.
8. Drill pilot hole into belly skin at marked location.
9. Increase hole size (approximately 0.55" (13.97mm) to 0.6" (15.24mm)) as required to fit grommet following best practices.
10. Deburr belly skin.
11. Install grommet. (Reference Figure 2)
12. Install drain tube. (Reference Figure 2)
13. Install hose to pump and route forward towards firewall. (Reference Figure 3)
14. Drill new shut off valve to existing control linkage or replace as required.

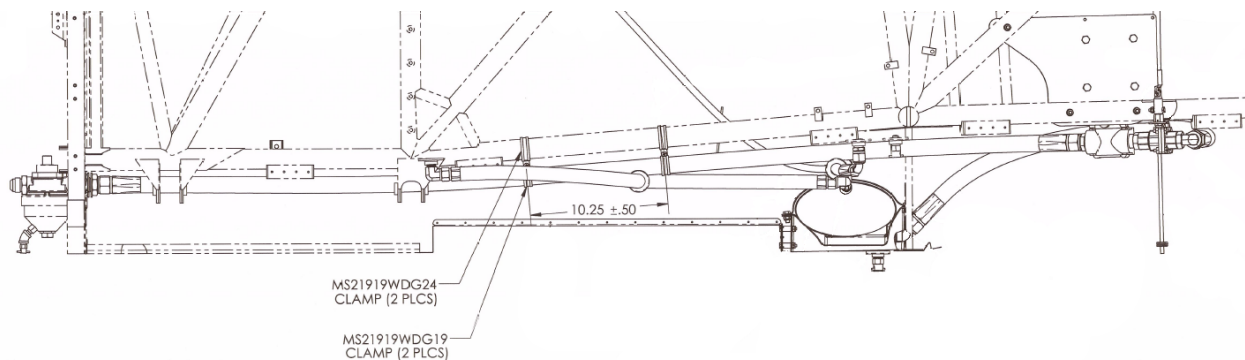


Figure 3

15. Secure hoses to fuselage using clamps. (Reference Figure 3)

16. Install doubler to lower firewall using appropriate fasteners. (Reference Figure 4)

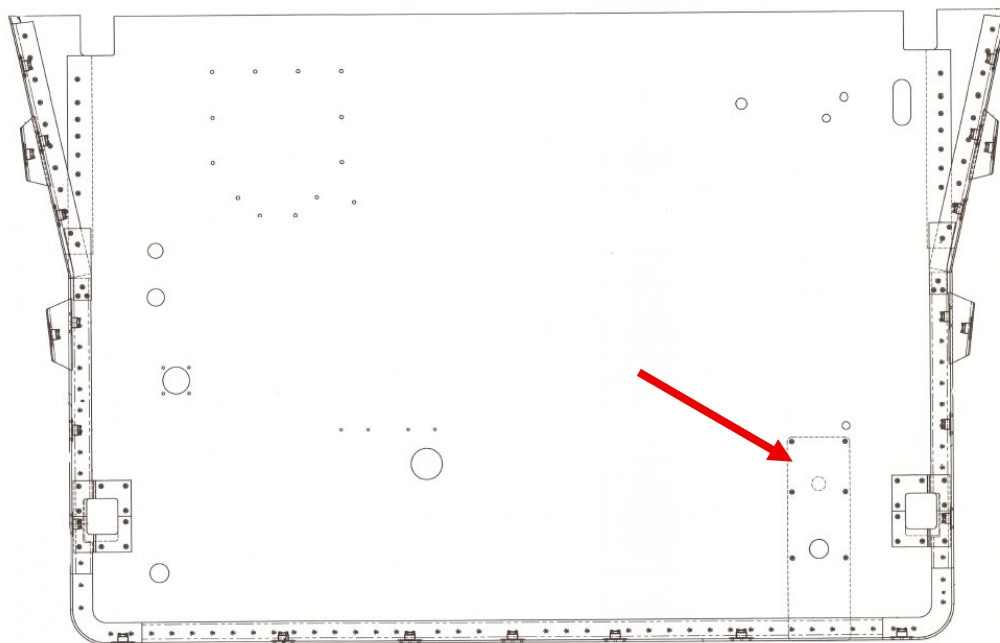


Figure 4

17. Install fuel filter assembly to aft firewall. (Reference Figure 5)

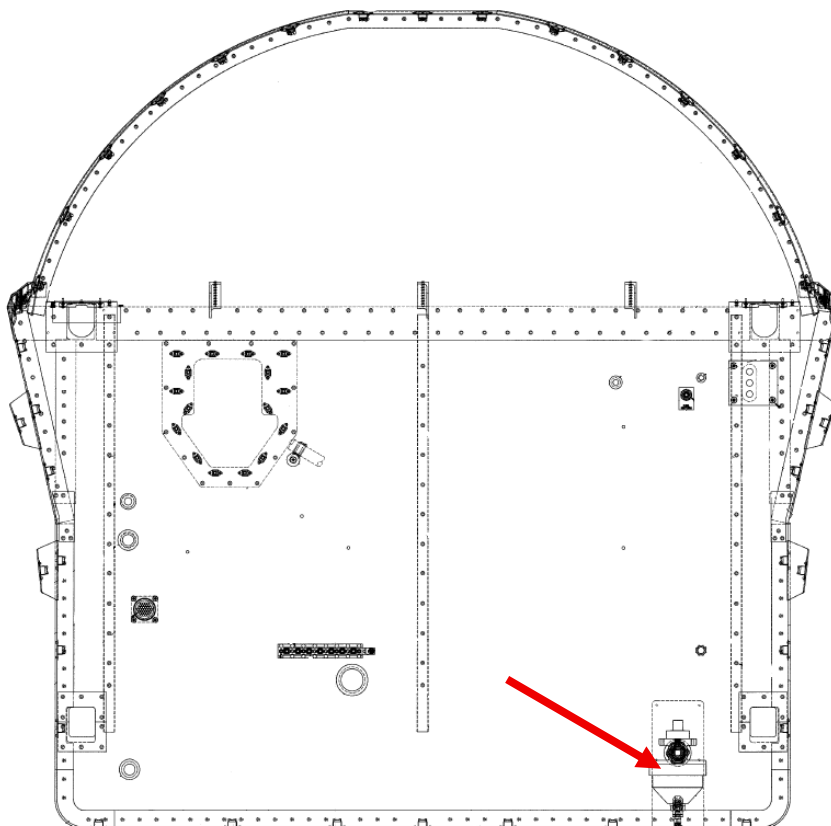


Figure 5

18. Connect fuel hose from auxiliary fuel pump to bulkhead fitting on aft firewall.
(Reference Figures 1 & 3)
19. Connect hose from fuel filter assembly then route and connect to engine driven fuel pump. (Reference Figure 6)

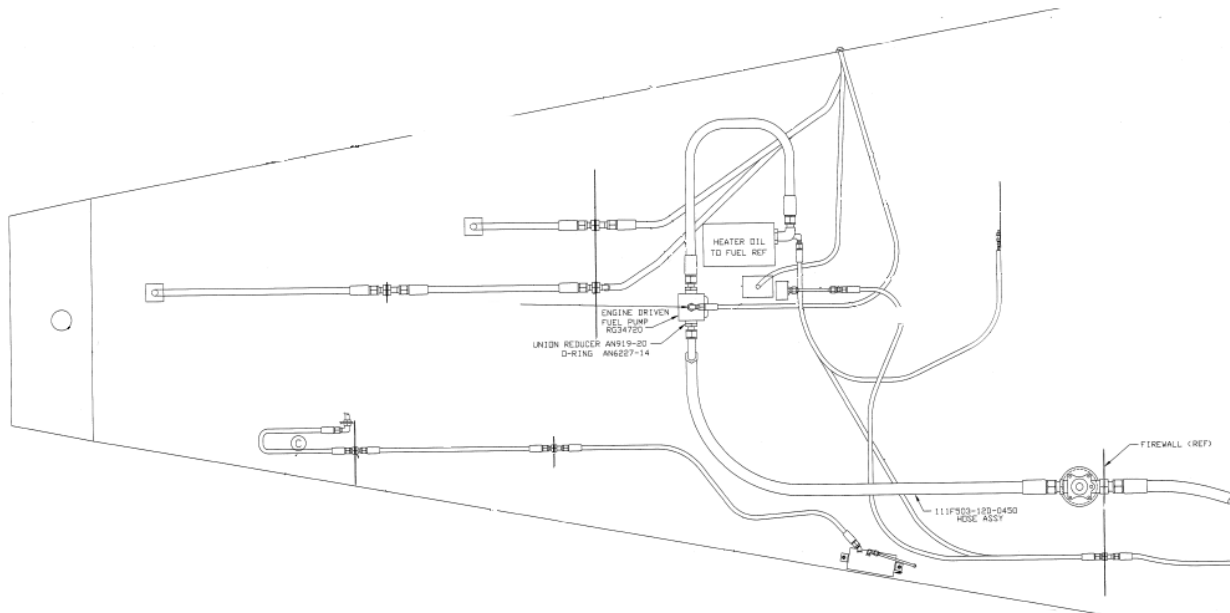
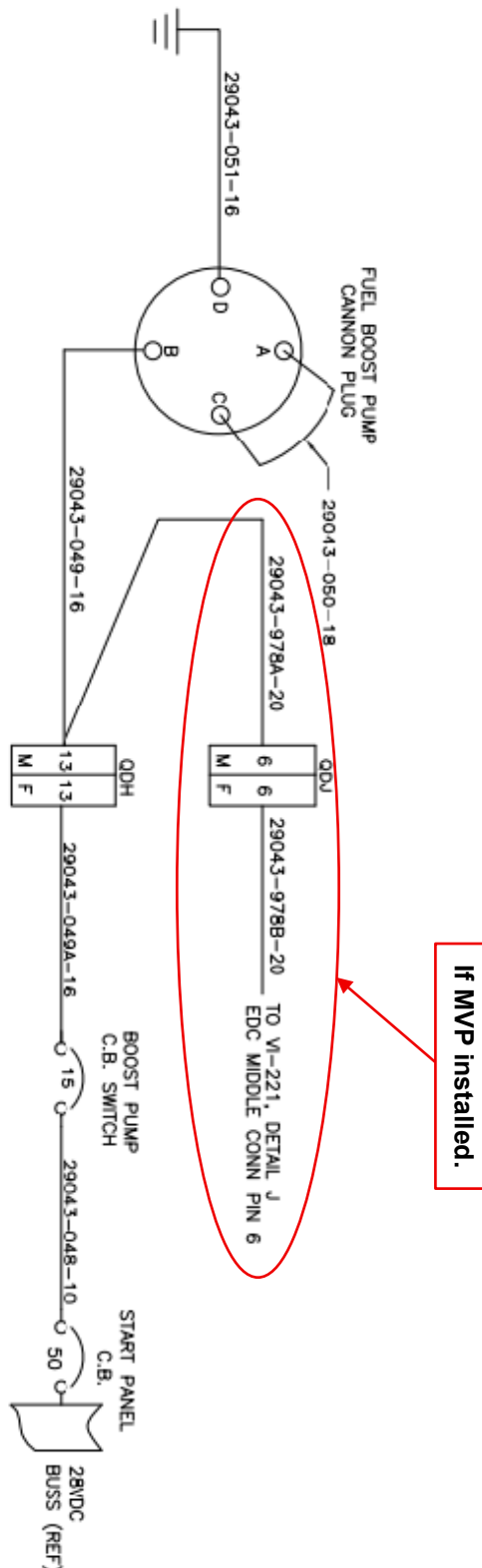


Figure 6

20. Incorporate auxiliary pump connector wires into main wire harness. (Reference Figure 7)
21. Relocate air separator line to inboard of new filter doubler.
22. Create 2" (50.8mm) hole in the lower cowling skin below the filter drain assembly.

23. Reference wiring diagram to properly route and terminate, following best practices for wiring installation. (Reference Figure 7)



10. RECORD OF COMPLIANCE

Make appropriate entry in airplane maintenance records as follows:

"Thrush Custom Kit CK-AG-63 B complied with at _____ total hours on aircraft."

Modification accomplished by:

Name & Certificate #	Date
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11. RESPONSE CARD

The final step in compliance with this Custom Kit is to complete and return the compliance card on the next page. It may be mailed, faxed, or scanned and e-mailed.

Fax:	Thrush Support	229-317-8225
Email:	Thrush Support	support@thrushaircraft.com



12. CUSTOM KIT CK-AG-63 B COMPLIANCE REPORT

Aircraft S/N:	Aircraft Owner:
Aircraft Registration #:	Address of Owner:
Airframe Total Time:	City & State:
Engine Total Time:	Physical Location:
Complied With By:	Date of Compliance:
Signature:	Certificate #:

PLEASE RETURN THIS REPORT ONLY AFTER MODIFICATION IS MADE

This response card may be mailed, faxed to (229) 317-8225, or emailed to support@thrushaircraft.com.

Fold, Tape, & Mail (Do Not Staple)

Return Address:

Thrush Aircraft, LLC.
Attn: Customer Assurance and Support
300 Old Pretoria Road
Albany, GA 31721