

## **REVISION DESCRIPTION:**

### **Kit Assembly Instructions:**

**24-06 REV 2:** In Figure 1, added "DO NOT RIVET" callout to holes where F-01276 Vent Bracket will attach.

Step 3, "except as shown in Figure 1." was "as shown in Figure 1."

**30-03 REV 2** added "Step 5: Check the gap between the flaperons and fuselage skin. A minimum gap of 1/8 inch is required to allow smooth flap deployment. Use sharp metal snips or a file to remove material from the inboard edges of the Flaperon skins to achieve the 1/8 inch gap."

Step 6 was Step 5.

**32-2 REV 2:** Step 2 revised to describe FLF-00004 Male Nylon Tee installation (vice F 271-N-04X02) installation.

**32-10 REV 1:** Step 1 updated to describe shimming and clamping the flaperons prior to drilling the torque tubes.

Figure 1 updated to show shims and clamps.

**35-07 REV 1:** In Figure 2 "18-20 lbs" was "26lbs"

In Step 5 "18-20 lbs is measured as the Nose Fork Assembly pivots around the spindle." was "26lbs begins to rotate the Nose Fork Assembly around the spindle."

**51-06 REV 3:** Removed Step 3.

In Figure 1, Removed depiction of PLA-00017 BLACK or WHITE.

## Flight Training Supplement

**FTS page iii REV 1:** Added the following note to the table of contents

**"NOTE: Pages 4-7 4-9, 5-7, 5-9, 6-3 and 6-5 correspond to a particular EFIS installation. Please remove all pages that do not correspond to your EFIS. Specific EFIS type is noted next to the page number."**

**FTS 1-2 REV 1:** Added links to PS Engineering and ACK.

Combined individual Garmin & Dynon links.

Changed links from specific to general to account for ever-changing and broken links.

**FTS Page 4-1 REV 1:** Index updated to the following:

GENERAL	4-1
CABIN	4-3
LEFT MAIN LANDING GEAR	4-9
LEFT WING	4-10
FUSELAGE (LEFT SIDE)	4-13
EMPENNAGE	4-14
FUSELAGE (RIGHT SIDE)	4-16
RIGHT WING	4-18
RIGHT MAIN LANDING GEAR	4-21
NOSE SECTION	4-22

**FTS Page 4-4 REV 1:** Replaced the picture of the fuel tank window with a picture of the fuel float gauge.

Removed text "'Nudging" or rocking the aircraft slightly will cause the fuel to move in the tank making it much easier to discern level of fuel.'" "using the mechanical fuel gauge in the top of the tank" was "in transparent tank window"

Added "Fuel tank - CHECK FULL LEVEL using the mechanical fuel gauge in the top of the tank"

added "Fuel tank - Fuel Vent Hardware - SECURELY ATTACHED"

Added figures depicting Mechanical Fuel Gauge.

**FTS 4-5 D-180 REV 1:** Added "D-180" to page number.

**FTS 4-7 SKYVIEW REV 1:** Added Skyview master switch depiction.

**FTS 4-9 REV 1:** Added depiction of the ACK ELT.

**FTS Page 4-17 REV 1:** Updated Figures and procedures to depict checking the Fuel Vent Line and Fuel Vent Air Line.

Removed figures and reference to the fuel cap vent.

**FTS Page 4-20 REV 1:** "Fore" was "for".

**FTS Page: 4-25 REV 1:** "22psi (23psi maximum)" was "25psi".

**FTS Page 5-1 REV 1:** Index updated to the following:

GENERAL	5-1
SEAT POSITION ADJUSTMENT	5-2
ENTRY & EXIT TECHNIQUE	5-3
OCCUPANT RESTRAINT	5-4
HEADSET, AUDIO INPUT & AUXILIARY POWER RECEPTACLES	5-4
FLIGHT CONTROL SYSTEM	5-5
TRIM	5-7, 5-9
ENGINE CONTROLS	5-11
VENTILATION & HEATER	5-12

**FTS 5-7 D-180 REV 1:** Added "D-180" to page number.

**FTS 5-9 SKYVIEW REV 1:** Added Skyview trim switch depiction.

**FTS 6-3 D-180 REV 1:** Added "D-180" to page number.

Changed "Master Switch" to the following:

"Master switch: This switch connects the battery to the rest of the electrical system via a solenoid. With the master switch on, the avionics cooling fans, electric fuel pump, stall warning system, and pitch trim system all receive power."

Changed "Avionics Switch" to the following:

"Avionics switch: This switch controls power to the EFIS, GPS, comm radio, transponder and intercom."

Removed "Cover all the switches. Ignition A, Ignition B, Avionics, Nav & Stribe, Landing Light, Autopilot, Trim"

**FTS 6-5 SKYVIEW REV 1:** Added Skyview Electrical Switch descriptions.

**FTS Page: 8-1 REV 1:** Under "TAKE-OFF (Normal)" added "Control Stick – Held half way between neutral and full aft"

"Throttle – smoothly apply FULL THROTTLE" was "Throttle – smoothly FULL 5800 rpm Max"

after Engine Instruments "Stabilator Control – RAISE NOSE just clear of ground, release backpressure on stick as required" was "Stabilator Control – RAISE NOSE to takeoff attitude"

removed "Engine Instruments - CHECK"

Under "**TAKE-OFF (Obstacle)**" added after Flaps "Hold Brakes – until application of full power"

Under "**TAKE-OFF (Soft Field)**" "Stabilator Control" was "Elevator Control"

Removed "Climb Airspeed – ..."

Under "**TAKE-OFF (Crosswind)**" added "When taking off with a left crosswind and full power, right rudder is a limiting factor. Advance the throttle more slowly and raise the nose wheel as soon as possible as the rudder authority is greater with the nose wheel off the ground."

**FTS Page 9-1:** "MAX rpm" was "5800 rpm" in 3 places.

**FTS Page: 13-2 REV 1:** Under the "**NOTE**" under "**BALKED LANDING**", "**Upon full application of power, expect to hold right rudder to account for p-factor and forward pressure...**" was "Upon full application of power, expect to hold forward pressure..."

**FTS Page 15-6 REV 1:** "trim fuse" was "2A trim fuse"

**FTS:** Revision Levels Changed:

SECTION	REVISION	DATE
COVER PAGE	1	08/12/13
1	1	07/09/09
2	1	07/09/09
3	0	07/09/09
4	1	08/12/13
5	1	08/12/13
6	1	08/12/13
7	0	07/09/09
8	1	08/12/13
9	1	08/12/13
10	0	07/09/09
11	0	07/09/09
12	0	07/09/09
13	1	08/12/13
14	0	07/09/09
15	1	08/12/13
16	0	07/09/09
FRONT COVER	1	08/12/13
REAR COVER	1	08/12/13

## **Pilot Operating Handbook**

**All POH Pages:** Changed footer to "RV-12 PILOT OPERATING HANDBOOK".

Changed photos on front and rear cover to distinguish new POH.

**POH Page: iv REV 7:** Under "**TAKEOFF (NORMAL)**" removed "Engine Instruments – CHECK"

Under "**TAKEOFF (NORMAL)**" "Stabilator Control – RAISE NOSE just clear of ground" was "Stabilator Control – RAISE NOSE to takeoff attitude"

**POH Page: vii REV 7:** Add the following note to the bottom of the table of contents

**"NOTE: Pages 2-6,2-7, 4-2 & 6-5 correspond to a particular EFIS installation. Please remove all pages that do not correspond to your EFIS. Specific EFIS type is noted next to the page number."**

**POH Page: 2-2 REV 3:** Below "Capacity", added Unusable Fuel information.

**POH Page: 2-7 thru 2-8 REV 3:** Added pages from D-180. Added "D-180" after page number. Added "SkyView" after existing SkyView page numbers.

**POH Page: 2-7 SKYVIEW REV 3:** Added ELT power to schematic. Changed fuse value supplying radio to 7.5A. "Radio Radio/Intercom" was "Radio".

**POH Page 2-9 REV 3:** Updated figure to depict Fuel Vent.

**POH Page: 03-05 REV 1:** Added a fuel pressure section for using pump 893110 or 893114: Normal Range 2.2 to 7.2 psi and a Maximum (red line) 7.2 psi. Made existing fuel pressure section for all pumps other than stated above.

**POH Page: 4-2 REV 1:** Added pages from D-180 POH to SkyView POH. Added "D-180" after page number. Added "SkyView" after existing SkyView page number.

**POH Page: 4-2 SKYVIEW REV 1:** Changed Item Description "ACK 406" was "ARTEX ME-406", Removed "FLIGHTCOM FC 403", Added "GARMIN GTR200" "54.13", Removed "GARMIN SL-40" "53.58", Removed "SL-40 TRAY", Added "ADSB" "54.29"

**POH Page: 6-5 D-180 REV 2:** Added page from D-180 POH. Added "D-180" after page number. Added "SkyView" after existing SkyView page number.

**"WARNING** Electrical fuel pump operation depends upon sufficient battery power. Monitor the fuel pressure provided by the mechanical engine driven pump if the electrical pump has been shut off using the master switch or fuel pump fuse." was **"WARNING** Engine operation depends upon there being battery power sufficient to run the ignition system and fuel pump."

"12.0 volts" was "13.2 volts"

**POH Page: 6-5 SKYVIEW REV 2:** **"WARNING** Electrical fuel pump operation depends upon sufficient battery power. Monitor the fuel pressure provided by the mechanical engine driven pump if the electrical pump has been shut off using the master switch or fuel pump fuse." was **"WARNING** Engine operation depends upon there being battery power sufficient to run the ignition system and fuel pump."

"12.0 volts" was "13.2 volts"

Removed in 2 places, "The avionics switch should be switched off and the EFIS and GPS will continue to operate on their internal batteries."

"as the battery and EFIS backup battery will furnish" was "as the battery will furnish"

**POH Page 6-6 REV 2:** Updated "If airborne and sufficient runway remains" should be "If airborne and insufficient runway remains"

**POH 6-10 REV 2:** "Maximum gliding distance airspeed - "63 kts" was "86 kts"

"Minimum rate of descent airspeed - "55 kts" was "60 kts"

**POH Page: 7-7 REV 4:** Under "**TAKE-OFF (Normal)**" added the following to start of list "Control Stick – Half way between neutral and aft"

"Throttle – smoothly FULL OPEN" was "Throttle – smoothly FULL 5800 rpm Max"  
removed "Engine Instruments - CHECK"

“Stabilator Control – RAISE NOSE just clear of ground, release stick backpressure as required” was “Stabilator Control – RAISE NOSE to takeoff attitude”

Under “**TAKE-OFF (Normal)**” added “When taking off with a left crosswind and full power, right rudder is a limiting factor.”

Under “**TAKE-OFF (Obstacle)**” added after Flaps “Hold Brakes – until application of full power”.

**POH Page: 07-08 REV 4:** Under “**TAKE-OFF (Soft Field)**” removed Climb Airspeed information.

**POH Page: 8-2 REV 2:** “91 AKI” was “92 AKI”

**POH:** Revision Levels Changed:

SECTION	REVISION	DATE
COVER PAGE & ABBREVIATED CHECKLIST	7	08/12/13
1	1	08/12/13
2	3	08/12/13
3	1	08/12/13
4	1	08/12/13
5	1	08/12/13
6	2	08/12/13
7	4	08/12/13
8	2	08/12/13
9	1	08/12/13
10	1	08/12/13
FRONT COVER	7	08/12/13
REAR COVER	7	08/12/13

## **Maintenance Manual**

**MM vi REV 3:** Added Substitute Parts section to Table of Contents.

**MM Page vii REV 3:** Added the following note to the bottom of the table of contents

**"NOTE: Pages 18-23 and 18-21 correspond to a particular EFIS installation. Please remove all pages that do not correspond to your EFIS. Specific EFIS type is noted next to the page number."**

**MM Page 1-11 REV 3:** "Aeroshell 22 or Equivalent" was "Aeroshell 22 or Equivelent"

"Thread lube | Loctite 567 or equivalent" was "Locktite 567 or Equivalent"

"Anti-seize compound, High temp | Loctite Anti-Seize or equivalent" was "Loctite Anti-Seize"

"Fuel tank sealant | MC-236-B1/2 or MC-236-B2" was "MC-236-B1/2"

"Primer | Any protective primer suitable for use on aluminum and/or steel as appropriate" was "aluminum and/or steel as appropriate Any protective primer suitable for use on"

"Hydraulic fluid | MIL-H-5606A or MIL-PRF-83282" was "MIL-H-5606A"

**MM Page 1-13 REV 4:** "Use Mil Spec 5606A or MIL-PRF-83282" was "Use Mil Spec 5606A"

**MM Page 1-15 REV 4:** "Oil Filter | Contact + 3/4 turn or as specified" was "Hand Tighten"

**MM 8-6 REV 2:** Added Skyview Fuse Panel figure

**MM 9-1 REV 3:** Added Skyview Depiction to Figure

**MM 9-2 REV 3:** Added ", GTR-200 or GTR-225" to Components.

**MM Page 12-1 REV 3:** Repaginated Table of Contents to reflect added service procedures.

**MM 12-3 REV 3** "Electrode Gap: See Rotax Documentation" was "7-.8 mm/.028-.032 in."

**MM Page 12-5 REV 4:** "Spark plug replacement or re-installation" was "Spark plug replacement"

"Expendable | Heat conduction compound" was "None"

Added Oil Filter Replacement or Reinstallation. Subsequent pages repaginated.

**MM Page 12-6 REV 3:** Under Engine oil level check, "Expendable | None" was "Engine oil, oil filter"

**MM 12-11 REV 3,** Under "10.", "15 (minimum) to 20 (absolute maximum) in-pounds." was "35 in-pounds."

**MM: Page 13-1 REV 4:** Updated figure to depict Fuel Vent.

**MM: 13-3 REV 4:** Updated Figure to Depict Overflow & Vent Lines.

**MM Page: 5-25 REV 3:** Under **"NOSE FORK PIVOT TENSION AND LUBRICATION"** Item 6, "18-20lbs" was "26lbs".

**MM 17-2 REV 2:** Added Substitute Parts section.

**MM 18-3 REV 5:** Added to service schedule, "Propeller Hub Clamping Bolts | Torque | 25 Hours | 11-3"

**MM Page: 18-21 REV 5:** Added "D-180" to page number.

**MM Page 18-23 REV 5:** Added Skyview electrical schematic.

**MM INDEX REV 3:** RV-12 3-View is now on page 18-25. Index Updated.

**MM:** Revision Levels Changed:

<b>CHAPTER</b>	<b>REVISION</b>	<b>DATE</b>
COVER PAGE	7	08/12/13
ii	7	08/12/13
iii-viii	3	08/12/13
1	3	08/12/13
2	1	04/16/10
3	2	09/19/12
4	1	04/16/10
5	3	08/12/13
6	2	02/18/11
7	1	04/16/10
8	2	08/12/13
9	3	08/12/13
10	1	04/16/10
11	2	04/16/10
12	3	08/12/13
13	4	08/12/13
14	1	04/16/10
15	1	04/16/10
16	1	04/16/10
17	2	08/12/13
18	5	08/12/13
19	1	04/16/10
20	3	08/12/13

## Production Acceptance Procedures

**PAP G2-2 REV 2:** Flaperon trailing edge position test rewritten to better describe the procedure.

**PAP G2-3 REV 2:** Added to the flaperon check section in two places, "and a minimum of 1/8 inch gap between the flaperon and the fuselage when the flaperon is deflected to its highest up position. If the flaperon gap is below minimum, use aluminum shears and a file to trim the excess."

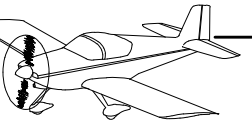
**PAP G4-1 REV 2:** Changed Gascolator Testing to the following:

- "Gascolator Testing
- ☐ Add 4 gallons of fuel to tank.
  - ☐ Turn master switch "ON". Verify no fuel leaks. Turn master switch "OFF".
  - ☐ Disconnect fuel line at gascolator outlet.  
Slide a piece of 5/16 inch inside diameter rubber hose over the gascolator outlet fitting and feed into a bucket at waist height.
  - ☐ Charge battery to full. Voltage should read at least 12.7v.
  - ☐ Turn master switch "ON", reduce load on the electrical system by turning off strobes and nav lights, dimming screens, etc. Turn fuel valve "ON".
  - ☐ Time from the fuel valve opening until 1 gallon has emptied into bucket: \_\_\_\_\_  
(Max Time: 180 seconds)
  - ☐ Re-connect fuel line at gascolator outlet.
  - ☐ Filter fuel and put back into the fuel tank."

**PAP:** Revision Levels Changed:

SECTION	REVISION	DATE
COVER PAGE	5	08/12/13
G1	1	07/18/11
G2	2	08/12/13
G3	1	07/18/11
G4	2	08/12/13
G5	1	07/18/11
G6	2	07/18/11
G7	1	07/18/11
G8	1	04/16/13
G9	2	04/16/13
G10	1	07/18/11
W&B WKSHT	0	07/10/09
T1	2	07/18/11
F0	1	07/18/11
F1	1	07/18/11
F2	1	07/18/11
F3	1	07/18/11
F4	1	07/18/11
F5	2	09/19/12
G11	0	09/19/12





**NOTE:** If the wing skins interfere with sliding the wings into place, they may be carefully filed/trimmed until the fuselage pins will engage the wing spar. If the stub spar interferes with installation of the wing the stub spar may require local dressing with a file. The stub spars are to be coated with a multipurpose anti-seize paste to prevent fretting/wear (delay until after painting).

**Step 1:** Align the stub spars in the forward and aft stub spar receptacles as shown in Figure 1. Apply a light coating of general purpose wheel bearing grease to the WD-1217 Fuselage Pins then insert through the bushings in the F-1204 Bulkhead Assembly and into the bushings in the left wing spar, but not protruding aft of the aft surface of the left spar. The fit will be snug. Turning the fuselage pin from side to side while applying pressure will make installation easier.

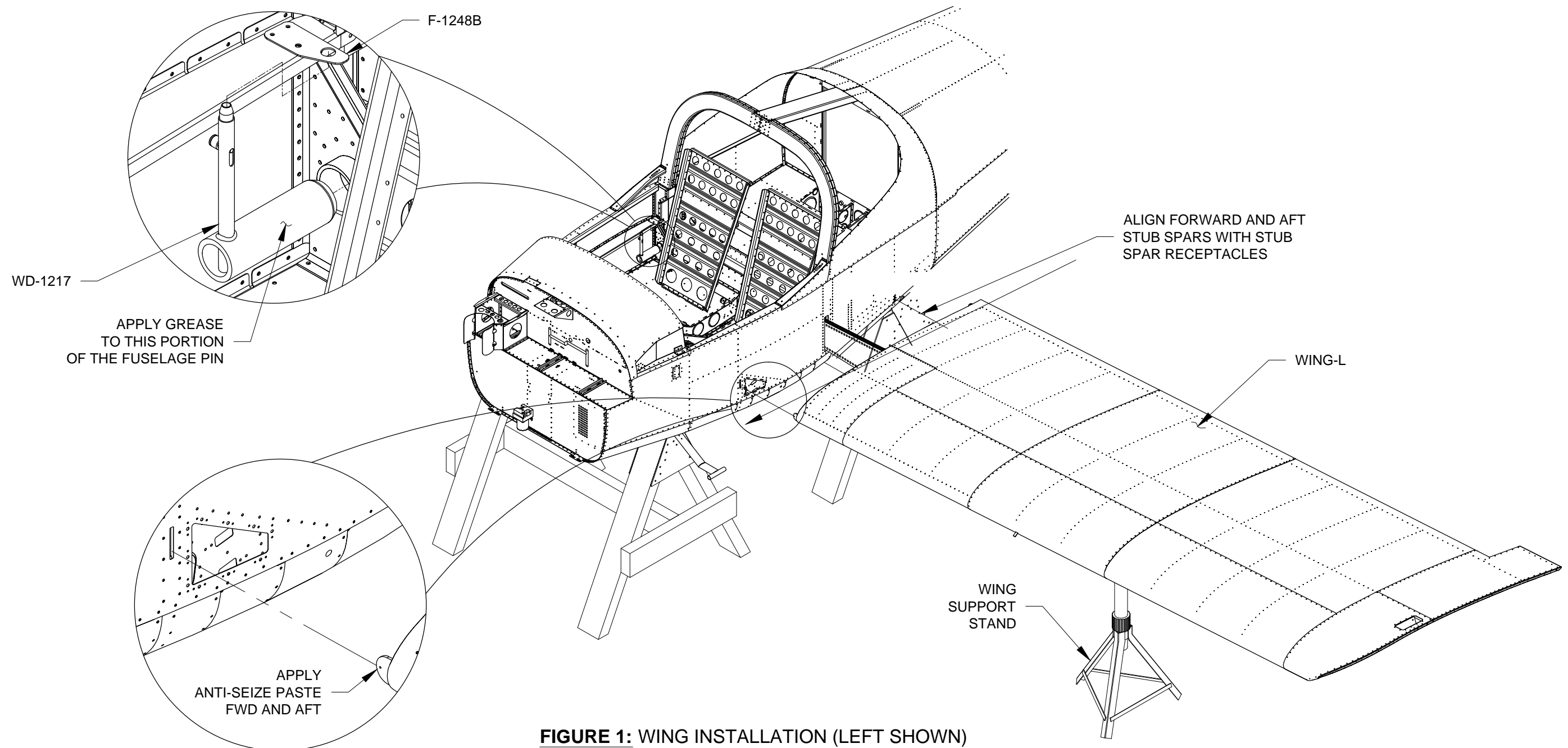
**Step 2:** Place the remaining support under the left wing as shown in Figure 1. Take care that the support is aligned with the wing ribs (not between them) to avoid denting the wing skins. The support may alternately be positioned under the optional eye bolt tie-down ring (eye bolts are not included in the kit, but are available from our accessories catalog and other sources).

**Step 3:** With one person on each end of the right wing, slide the right wing spar over the F-1204M Roller and under the F-1204R Retainer Block on the opposite side. See Page 30-02 Figure 5. Slide the WD-1217 Fuselage Pins through the bushings in both wing spars and latch to the F-1248B Fuselage Pin Latch with the retaining screws facing outboard. The retaining screws should be positioned outboard to prevent them from being depressed accidentally. See Figure 1.

**Step 4:** Check the gap between the wing skins and the fuselage. A minimum gap of 1/8 inch is required to allow for the VA-204 Seal Strips (installed in Section 33 page 04). Use a file to remove additional material from the wing skins to achieve the 1/8 inch gap.

**Step 5:** Check the gap between the flaperons and fuselage skin. A minimum gap of 1/8 inch is required to allow smooth flap deployment. Use sharp metal snips or a file to remove material from the inboard edges of the Flaperon skins to achieve the 1/8 inch gap at full up deflection.

**Step 6:** With the support stand positioned under the left wing, and a helper holding the right wing tip, slip the WD-1217 Fuselage Pins out (the F-1204R-L and -R Retainer Blocks will hold the wings in place while removing the fuselage pins) and remove the right wing. Remove the left wing.



**FIGURE 1: WING INSTALLATION (LEFT SHOWN)**