Builder's Log/Airframe Log

Mead®

N783RV RV-7A

Ser. 74002

6/1/2013-

9/1/2013
Calibrated the left fuel tank. Checked the fuel & oil pressure ducers for proper cal.

9/3/2013
Entered the map licence into the Dynon system. Drained the left fuel tank.
Registered the EPIRB

9/4/2013
Calibrated right fuel tank. Checked general system functionality. Left 25 gal in airplane

9/6/2013
Fuel flow test: right tank 1 gal → 1:49 (test #1) = 1.817 min
= 0.55 gpm
= 33 gph
Required 0.1 gph/hp x 180 hp = 18 gph
1.25 x 18 gph = 22.5 gph
$\frac{33 \text{ gph}}{22.5 \text{ gph}} = 1.47$ safety factor.
Test #2 1:51 → 1.85 min/gal = 0.54 gpm = 32.4 gph.

Left tank test #1 = 1:51 ✓
test #2 = 1:51 ✓
Cleaned the colator. Only a couple small aluminum particles in the base. Screen very clean! Good.
Fuel system ready for intended service!

8/11/2013 0830 - 1430
Primed front wheel pants, empennage fairing, intersection fairings (2), and cowl top flaps. Bare parts got 3 coats. Installed all parts on plane for final. Installed the rivet plates on the right gear intersection fairing. All complete. Rolled her out of hangar for some photos.

8/17/2013 1400 - 1930
Borrowed scales from Tony. Made saw horses for jacking plane. Measured gear locations.
RM = 94" LM = 94" Front = 38.75"
Weighed plane
RM = 420 LM = 417 Front = 269
Total = 1106 lbs
Tony did a general inspection.

8/18/2013
Re-mounted the prop to proper position to facilitate hand proping. Torqued all prop bolts to 60-65 ft. lbs. Closed the spinner. This install approved ready for flight.

8/18/2013

Rerouted spark plug wires. Better routing for chafe elimination. Ready for flight.
Installed electrical boots on + terminal of battery & several other prime terminals.
Enhanced hitemp RTV to seal baffle around engin

2.5
1.5

7/18/2013 0530-0800 1815-2045
Worked on fitting landing light with all mounting parts fitted. Angle adjust problem. Drilled to adjust fit. Need a new plate now that have it designed. Cut new plates & brackets. Cut spring. Finalized the light install. Left tip basically done except for wiring.

2.0

7/19/2013 1830-2030
Worked on right tip. Riveted in tip rib. Cut out for landing light and installed the position light mount. Fabbed all final bits for landing light install.

7.75
6.0
0.25

7/20/2013 0615-1400 1430-2030 2200-2245
Big day. Technically finished the build. Got entire right tip attached and lights and lines installed. Wired all tip lights & checked. OK. Fitted cowl. Completed side pin retainer clips on cowl. Caulked the firewall lower corner gaps. Put new squash washer on oil temp. Connected roll servo and checked with system... needed a fair wire lead. Easy button punch. Trimmed wheel pants wheel cutouts for better clearance. Came back late at night to check the alignment of landing lights. Looked good across the entire hangar taxiway.

9.75

7/21/2013 0845-1900
Cleaned up the hangar. Torqued the prop bolts to 60-65 ft lbs. Added spacer washers to spinner front plate. Installed truss head screws with nylon washers. Filled stall warner wing holes. Not needed.

7/25/2013 1845-2015
Did sanding on intersection fairings.

7/26/2013 0700-0730
Rolled plane out to photo graph for showing all Van's staff @ Oshkosh.

7/26/2013-8/3/2013
Went to Oshkosh for 3 days. Visiting family. Went to Minneapolis 8/4-8/6 to do some refresher transition training with Tom Bego. 3.0 hours + 13 landings. Great fun!

8/10/2013 0730-0900 1045-1900
Sanding intersection fairings. More fairing filler on intersect fairings. Sanded for final on details. Finished sanding intersection fairings. Installed nut plates for nosewheel intersection fairings. Installed nut plates on left gear intersection fairings. Will install pilot nut plates tomorrow. Pulled all intersect fairings, cowl, temp fairing, and front of wheel pants for final painting.

5.0
4.25

7/7/2013 0830-1330 1815-1830
Pulled wires into right wing. Pulled in pull strings into left wing before changing wing. Hung left wing. Installed and torqued all 10 fasteners. Pulled wires. Made final pitot heat wire terminations. Connected the push rod and checked for play. Made slight adjustments. Installed gratch strap attach on both ailerons. Made fuel and vent connections on both wings when hanging wing. Also made front attach and aft aileron attach on each wing. And made fuel level connection on each wing.

9
7/10/2013 1900-2015 1.25
Cleaned up wing install. Reading how to do tips & prep.

10
7/11/2013 1800-2015 2.25
More work on wheel pants finish.

12
7/15/2013 1915-2030 1.25
Wing tip prep work

13
7/16/2013 0715-1330 1400-2000 5.75
6.0
Cleaned up left cowl inlet... sanded aft end flush. Hung flaps & tore apart cockpit aft to connect flaps. Connected. Checked, Right PAX control going backwards. Need to check wire. Flipped the stick wires at the mill connector. Cleaned up and reinstalled baggage area. Reinstalled cockpit including all carpet hold disks. Installed wing root fairing strips. Installed the flap rods. Started hanging the wing tips. Got left then right hang tips. Laid in the tip ribs. Positioned and drilled the left tip rib.

3.5
6.75
7/17/2013 0830-1200 1230-1915
Finished tip rib install right tip. Completed match drilling both tip ribs. Prepped ribs for prime. Primed tip ribs. Continued with full left tip install. All plate nuts installed. Install check good. Changed out 2 tip screws and plates for #8 from #6. Counter sinks too big. Cut light lense in half. Fitted and trimmed left lens. Installed #4 plate nuts for lense. Lens on left is complete. Next to install pos lights and invent a landing light install.

2.0
7/16/2013 1815-2015
Worked on positioning the position light on left tip. Made drilling template. Drilled & fitted.

1.5
7/17/2013 1900-2030
Cut tip for landing light install. Came up with template design for tip. Fabbed mounting plate. Started to mount plate nuts for light plate.

6/25/2013 1900-2015 1.25
Fabbed a new gusset for the oil cooler bracket upper left to allow trimming the baffle to fit inside the cowl. Drilled and deburred. Need to rivet.

6/27/2013 1915-2030 1.25
Riveted the cooler bracket mod in place and riveted the #1 cylinder baffle parts together. Installed all baffle parts. Worked fittings on to the oil cooler & started the install of the cooler. Installed the oil cooler lines on the engine side.

6/29/2013 0700-1245 1445-1845 5.75 4.0
6/30/2013 0830-1345 1745-1930 5.25 1.75
Worked on the baffles & air seal cloth around the entire baffling.

7/1/2013 1815-2015 2.0
Wire routed on the spark plugs.

7/2/2013 1830-2100 (-0.5 for dinner) 2.5
Finished routing spark plug wires. Installed the mag blast tubes. Installed the CHT sensors.

7/4/2013 0800-1300 1400-1900 5.0 5.0
Did finish sanding on cowl inlets. Fabbed & installed the oil access door. Sanded some of the top cowl to prep for more filler coats. Helped Jackie mix many batches of filler coat for cowl. What the fuck is it with the bubbles. Installed oil temp probe. Need squash washer. Installed carb temp probe. Wires fell out! WTF? Need to order bolts. Positioned drilled and installed the EGT probes. Worked on running wire around engine. Got the right top plug wires situated. Routed the carb heat cable clamps.

7/5/2013 0800-2030 -0.5 for lunch 12.0
Sanded part of top cowl mostly as a test to see how it will go for Jackie. Got all the major power wire on the engine. Start, alt, gnd. Wired all the engine instruments except for carb temps (on order). Wired mag P-leads to both mags. Put some red RTV on a couple of the small hole locations in the baffles. Finished sanding on half of the top cowl. Did the wheel pant joint o'lap fiberglass work. 3 layers of 9oz glass. 6.0 4.0

7/6/2013 0730-1330 1400-1800
Prepared to hang right wing. Got all parts ready and hung it. Installed all 10 fasteners and torqued per Van's spec sheets. Connected the push rod for aileron. Started the morning early by putting fairing filler on the wheel pant o'lap fiberglass work. Jackie arrived in the middle of epoxy work. Jackie

6/16/2013 0800-1230 1315-1545 4.5 2.5
Put fairing on all the cowl locations that needed to build or fill holes. Cured in sun. Worked on #3, #2 & #1 baffles. Got it all built and working final fit.

6/17/2013 1915-2015 1.0
Flew sim for IFR currency. Then came to the hangar to study the drawings for the rest of baffle build

6/18/2013 1745-2000 2.25
Jackie sanded some of the fairing on the top & bottom cowl. Worked the trim of #4 baffle and attached. Attached #1 & #2 baffle. Built #1 & #2 ramps. Final drilled, deburred and cleaned and then attached.

6/19/2013 1830-2015 1.75
Worked on fitting baffles to engine. Then sanded the bottom cowl lower firewall end to fit. Worked on starting to trim the front left baffle ramp.

6/20/2013 1730-2000 2.5
Worked on fitting the left inlet ramp. Trimming, bending, drilling, etc. What a PITA!

6/21/2013 1930-2100 1.5
More trimming, fitting and riveting the left front air ramp on lower cowl. Trimmed 1/4" out of front gear leg cutout to make it easier to fit lower cowl.

6/22/2013 0700-1400 1630-2000 7.0 3.5
Continued making baffle parts. Made ramps gussets. Got all the left ramps done. Working on assembly of right ramp. Lunch was Subway & errands to Home Depot for tap & die, then to Radio Shack for new keyboard for HTPC. The Dell keyboard died. Quit to go fly and get some night.

6/23/2013 0730-1400 1430-2000 6.5 5.5
Finished assembling the right ramp. Installed the ramp gussets. Got some paper clips to start the baffle trimming. Wow! Trimming is tedious. Got all done except for finish deburring. But... need to make a mod to relieve some interference on the oil cooler bracket. Lucky I did not rivet this part of the baffle together yet. Looks like a couple more days on the baffle yet.

6/24/2013 2000-2015 0.25
Eyeballed the fit at the oil cooler support bracket. Inserted left cowl pin. My idea looks like it will work to modify.

6/9/2013 (cont) 1330-1945 6.25
Trimmed & fit test carb induction scoop lower cowl. More trimming. Good fit. A little high but will have to do. Fit flap seal on FAB. Had to use some material from baffle kit. Good fit. Added fillet piece of fiberglass on inside of cowl to improve strength of induction extension. Strong! Coated the scoop for finish quality. Probably should coat one more time. Made all the supports for exhaust. Installed pipes. Check cowl. Too close to pipes at bottom of cowl. Loosen everything and twist. Better angle out for pipe. Tighten everything. Fit check cowl. Nice! Need to order some cowl heat shield material.

6/10/2013 1915-2015 1.0
Removed lower cowl. Fit still looks good. Took apart right exhaust tail pipe bracket to install the heat muff. Reinstalled. Looks good. Revised breather tube bends to drip onto left exhaust pipe. Trimmed tube to proper length. Reinstalled. Put lower cowl back on for storage. Looks good.

6/11/2013 1915-2015 1.0
Did fiberglass first stab @ left front of lower cowl.

6/12/2013 1945-2030 0.75
Trimmed initial left front lower cowl body work to fix the join line.

6/13/2013 1915-2015 1.0
Began ~~trimming out~~ forming the lower cowl repair of the right front. Got the glass layers added.

6/14/2013 1815-2000 1.75
Trimmed right front lower cowl fill. Got it very close on first cut. Used fairing filler on both sides of front lower cowl. Ready for sanding tomorrow. Got the elevator trim tab hinge pin changed out for new and bent so it can be wire tied shut. All good.

6/15/2013 0745-1230 1345-1945 4.75 6.0
Did grinding & shaping of lower cowl body work to get cowl halfs to fit together. Fit is good. Made side hinge pins for each side with proper bends. Had Jackie do the rest of the sanding on the cowl. Worked on baffle for #4 + oil cooler. Got it cut and mostly assembled. Lots of details on #4 with the oil cooler fitment. Got the fiberglass build ups done all over the cowl including the bottom corners on the lower aft.

4.75
3.0

6/1/2013 & 7301215 1515-1815
Drilled the top plate of the FAB. Cut length of FAB & top plate. Bent plate to fit rectangle. Put retainer clips in after fabbing. Drilled & clecoed top plate to FAB. Cut and bent front of box. Drilled & clecoed front of FAB. Checked fit.

6/2/2013 0830-1230 4.0
Finished fabbing the carb heat door & hinge assembly. Need to still add the lever arm. Still need to glass the box bend & trim the box.

6/7/2013 2030-2130 1.0
Studied the baffle drawings & instructions.

6/8/2013 0800-1115 1300-1900 3.25 6.0
FAB: finished cut & dimple on rear. Riveted. Got carb heat control installed.
Top cowl: ground inlet. More filling with epoxy filler.
Got the cowl bottom support riveted.
Installed the basic exhaust pipes. Need to add new nuts & lock washers.
Got cowl bottom scoop prepped for induction scoop glass work. Need run to Home Depot.

6/9/2013 0845-1215 3.5
Formed, shaped, and fabbed fiberglass induction carb inlet extension.