

Oct. 26, 1981

Mr. Michael Kusenda  
3375 Henderson Rd.  
Cleveland Hts., Ohio 44112

Dear Mike,

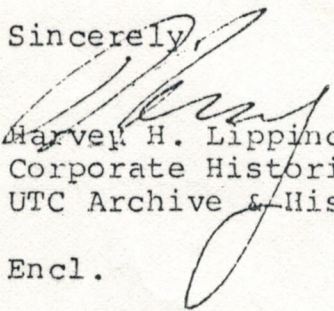
In reply to the questions in your letter of Oct. 22, 1981, although we do not have the records to prove it, it appears logical that the s/n 4820 P&WA Wasp was the same T3D1 model as s/n 4819 and that both engines could have generated 730 h.p. at 2,300 r.p.m.

The s/n 4820 engine was on consignment to the Springfield Aircraft Company, Inc. Therefore, P&WA remained the owner of the engine. After the race, it would have been returned to the factory and completely overhauled, checked for damaged and worn parts, and modified parts -- such as carburetor and pistons -- replaced with production model parts. It would then get a new designation and a new data plate. Again, we do not have the records to prove it, but it is possible that s/n 4820, redesignated S3D1, could have been purchased by Mrs. Guggenheim for the Lockheed Vega.

By the way, Mr. Fales first name is Herbert, not Harvey.

I'm enclosing xerox copies of the installation reports for the V-1 "Bulldog." I do not believe you have them.

Sincerely,



Harvey H. Lippincott  
Corporate Historian & Archivist  
UTC Archive & Historic Resource Center

Encl.

HHL:lgj

Address: 400 Main St.  
Airport Office Annex  
East Hartford, CT 06108

SHIP V-2 MR 2111 MAKER Springfield Aircr. LOCATION Agavam, Mass.  
 TYPE Racer OWNER K. W. Thaw LOCATION Roosevelt Field, L.  
 NO. ENGINES 1 TYPE Vasp Racer ARRANGEMENT Nose Tractor  
 MPGR. NOS. 4820 POSITION Nose REMARKS \_\_\_\_\_  
 OF \_\_\_\_\_ ENGINES \_\_\_\_\_

This report describes the installation of \_\_\_\_\_ Engine No. \_\_\_\_\_  
 DIA. MOUNTING RING 24 1/8 CONSTRUCTION St. Tube BOLT SUPPORTS Wrap Lugs  
 TYPE OF SUPPORT St. Tube SIZE OF MEMBERS 1 1/2 NO. \_\_\_\_\_  
 REMARKS \_\_\_\_\_

PROPELLER H-S Controllable DIA. 8 1/2 MATERIAL Al. DWG. NO. \_\_\_\_\_  
 NO. OF BLADES 2 PITCH \_\_\_\_\_ LEVEL FLIGHT R.P.M. 2300 BLADE END NO. \_\_\_\_\_

REMARKS \_\_\_\_\_  
 FUEL SYSTEM: TYPE Press. KIND OF TUBING Copper CONNECTIONS Hose  
 TYPE FUEL PUMP Evans RELIEF VALVE Int. BY-PASS VALVE Int.  
 SIZES OF LINES: MAIN FEED 1/2 RELIEF RETURN 1/2 PRESSURE 1/4 PRIMER 1/8  
 TYPE OF PRIMER Lunk. SHUT OFF Int. INTAKE FROM \_\_\_\_\_ DISCHARGES Cyls.  
 FUEL CAPACITY 210 gals. LOCATION OF TANKS Fuselage STATIC HEAD \_\_\_\_\_

REMARKS \_\_\_\_\_  
 OIL SYSTEM: CAPACITY 1 gals. EXPANSION SPACE \_\_\_\_\_ gals. HEAD +4" to +15"  
 SIZES OF LINES 1" MATERIAL Std. Tube CONNECTIONS Hose  
 VENT PIPE SIZE 3/4 VENT LOCATION Top Tank WHERE VENTED Engines  
 STRAINER REMOVAL OK DRAIN At oil inlet TEMP. GAGE LOCATION P & W inlet well  
 COOLING Oil Reg.

REMARKS \_\_\_\_\_  
 INDUCTION SYSTEM: CARBURETOR TYPE NAY-8E TYPE AIR SCOOP Bottom DRAIN Bottom scoop  
 INDUCTION SYSTEM AREA: COLD AIR P & W HOT AIR 2 - 2 1/2 TYPE PREHEATER P & W

REMARKS \_\_\_\_\_  
 EXHAUST SYSTEM Short stack through NACA BACK PRESSURES \_\_\_\_\_  
 TYPE HOT SPOT P & W EXHAUST TO HOT SPOT 7 & 8 WHERE DISCHARGED out  
 TYPE HOT SPOT VALVE None PIPING OK INSULATION Al. tube

REMARKS \_\_\_\_\_  
 IGNITION SYSTEM: TYPE HARNESS Unshielded SPARK PLUGS 4B2  
 SHIELDING None SPARK RETARD Yes WIRING TO SWITCH OK BOOSTER Ex.Coil

REMARKS \_\_\_\_\_  
 COWLING: NOSE PIECE DIAMETER None CONSTRUCTION \_\_\_\_\_ SHUTTERS \_\_\_\_\_  
 SHUTTER CONTROL \_\_\_\_\_ COWLING CLEARANCES \_\_\_\_\_  
 AIR FLOW: OVER HEADS OK OVER BELS. OK OVER FRONT CRANKCASE OK  
 OVER MAIN CRANKCASE OK OVER REAR SECTION Fair OIL TANK Fair  
 TYPE SPEED COWL NACA 30" chord VISIBILITY Fair DEFLECTORS Yes P & W  
 ACCESSIBILITY: PUSH RODS OK ROCKER BOXES Remove Ring CYLINDERS Remove Ring  
 ACCESSORIES \_\_\_\_\_ CYLINDER TEMPERATURES: HEADS \_\_\_\_\_ °F BASES \_\_\_\_\_ °F

REMARKS \_\_\_\_\_  
 ACCESSORIES (ALL INFORMATION) GENERATOR None REGULATOR None  
 BATTERY Hot Spot STARTER None BOOSTER Ext. Coil  
 EXTRAS Thermocouple 1h-6h-1b-6b Vacuum pump - G.E. Tachometer Supercharger gauge

REMARKS \_\_\_\_\_  
 CONTROLS: THROTTLE OK MIXTURE OK SPARK OK PRIMER \_\_\_\_\_  
 WABBLE PUMP OK FUEL VALVES OK NOSE SHUTTERS \_\_\_\_\_ PREHEATER Yes  
 HOT SPOT None OIL COOLER Yes AIR SCOOPS None

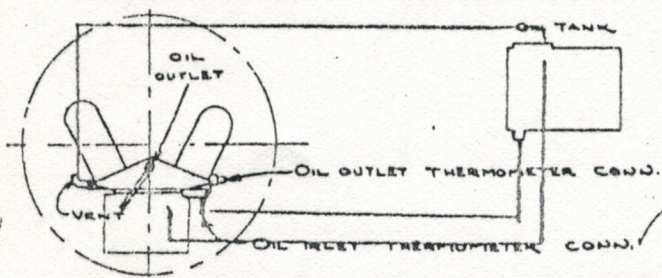
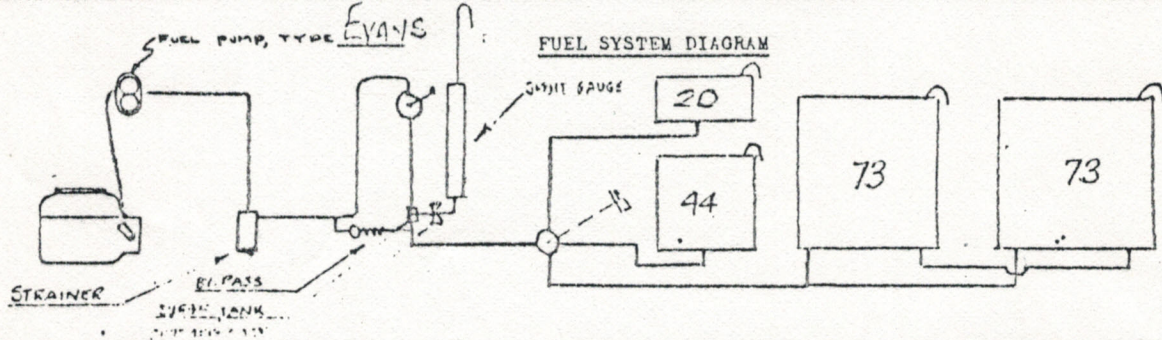
REMARKS \_\_\_\_\_  
 ENGINEERING DATA: INSTALLATION DRAWINGS \_\_\_\_\_ COWLING DRWS \_\_\_\_\_  
 DIAGRAMS: FUEL SYSTEM \_\_\_\_\_ OIL SYSTEM \_\_\_\_\_ IGNITION SYSTEM \_\_\_\_\_  
 PHOTOS: COWLING ON \_\_\_\_\_ COWLING OFF \_\_\_\_\_ SIDE VIEW PLANE 1/4 FRONT PLANE \_\_\_\_\_  
 WEIGHTS: EMPTY 1750 USEFUL \_\_\_\_\_ GROSS 3250 TOP SPEED 285 ?

REPORTED BY ERIC J. OFMAN

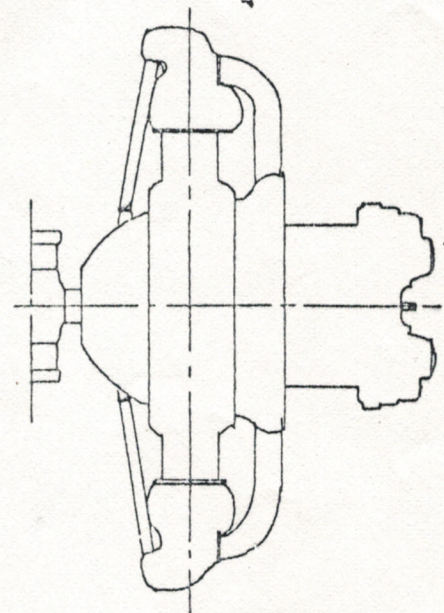
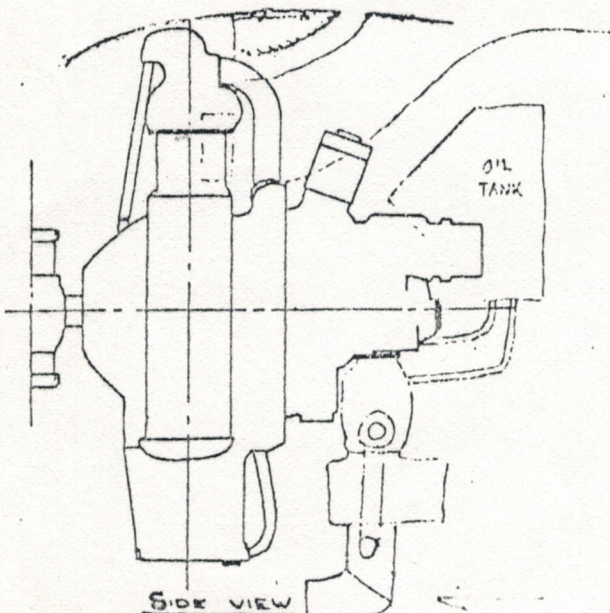
REMOVABILITY OF PUSH RODS \_\_\_\_\_ SHUTTER OPERATION \_\_\_\_\_  
 EXHAUST MANIFOLD BACK PRESSURES: FULL THROTTLE \_\_\_\_\_ PART THROTTLE \_\_\_\_\_  
 CARBURETOR INTAKE SCOOP PRESSURE \_\_\_\_\_ MANIFOLD PRESSURE \_\_\_\_\_  
 CYLINDER TEMPERATURES:

	F.T.LEVEL	F.T.CLIMB	CRUISING	CYL.NO	R.P.M.	AIR SPEED
AVERAGE BASE		295				
" HEAD	4090	510				
MAXIMUM BASE						
" HEAD						

MAX. OIL TEMP: INLET 50°C OUTLET \_\_\_\_\_ CRUISING TEMP. INLET \_\_\_\_\_ OUTLET \_\_\_\_\_



SKETCH OF COWLING ARRANGEMENT



SHOW INDUCTION SYSTEM  
 (E.G. HOTSPOT, CARBURETOR, OIL REGULATOR,  
 SCOOP, PREHEATER, ETC. & HOT  
 SPOT CONNECTIONS.)

INSTALLATION ENGINEERING DAILY REPORT

Company Visited Springfield Aircraft Co Date July 13, 15 1932  
 Location Bowles Airport Agawam Mass Nature of Work Installation inspection  
~~Called on Mr. Robert Hall~~  
 Plane Racer Engine Type Wasp-Racing No. of Engines 1  
 Location of Engines Nose of fuselage Cowling Design Naca

SUMMARY OF WORK DONE - CONCLUSIONS - ESSENTIAL RESULTS

Fuselage, wing and engine mount structure completed. Fuselage is a very heavy looking steel tube structure. The wings are of wood construction fabric covered. Two solid spars about four inches thick - ribs on about 3" stations and compression members about 152 apart. Wing area to be 80 sq ft which gives a wing loading of 40.2 lbs/sq ft. Est net weight is 1750 lbs Gross 3250 lbs Fuel, 203 gals. The plane resembles Lynch's plane (Wasp Jr) also built by Hall in appearance.

Hall wants to know if it might be more advisable to run his exhausts out well forward on the NACA cowl in order to obtain some scavenging effect. He wished to know what kind of fuel pump we expect to furnish with the engine. I informed him that it would be a high-lift pump, probably an Evans pump. Hall also wished to use the standard P&W preheater instead of a large size preheater. I told him that the use of the small preheater would restrict his air intake causing a loss of power with the preheater on. He said he would risk such a loss rather than try to install a 5" dia preheater pipe in his already crowded installation.

The fuel system as laid out has lines running from all tanks to a selector cock under the pilot's seat then to the wobble pump on the top longeron in the cockpit then down and forward to the strainer and fuel pump. I recommended that 5/8" fuel lines be used instead of the 3/4" lines as shown. I also urged that the wobble pump be installed in the engine compartment if possible and that the shut off cock be installed so that a minimum length of fuel lines be used and that as few bends as possible occur as a flow of nearly 90 gal/hr was to be expected.

The NACA cowl was connected to the exhaust stacks as shown in the accompanying sketch



Erik Hofman

FROM UNITED TECHNOLOGIES ARCHIVE