

**WEIGHT &  
BALANCE  
CALCULATIONS**

**RV-8 N405ST  
SER#83615**

# RV-8 WEIGHT AND BALANCE CALCULATIONS

aircraft weighed in a level attitude with oil

A/C registration N4055T Date 03-05-2021 Performed by Scott Anderson

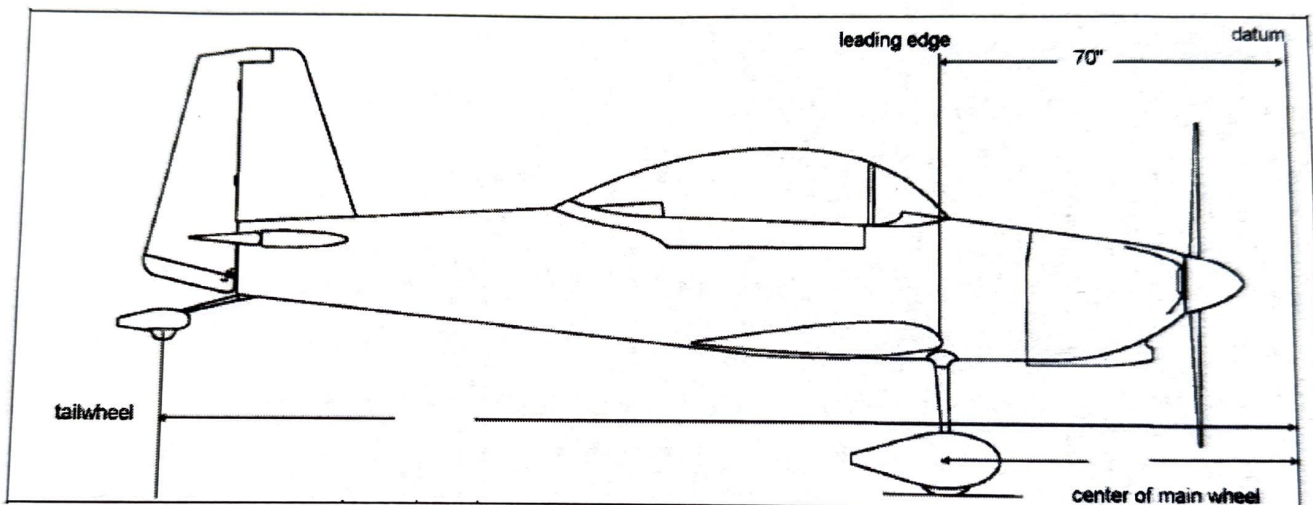
**DATUM** (70 inches forward of leading edge)

**CG RANGE** 78.70 inches aft of datum

86.82 inches aft of datum

**ARMS**

FWD BAGGAGE	58.51	inches
FUEL	80.00	inches
PILOT	91.78	inches
PASSENGER	119.12	inches
AFT BAGGAGE FLOOR	138.00	inches
AFT BAGGAGE SHELF	152.91	inches



EMPTY AIRCRAFT	WEIGHT	ARM	MOMENT
RIGHT WHEEL	540.0	68.76	37130.40
LEFT WHEEL	548.0	68.76	37267.92
TAILWHEEL	51.0	251.25	12813.75
TOTAL	1133.0		87212.07
CG	76.97		

CG = MOMENT DIVIDED BY WEIGHT

## SAMPLE 1: TYPICAL LOADING, STD PILOT WEIGHT

	WEIGHT	ARM	MOMENT
EMPTY AIRCRAFT			
FWD BAGGAGE		58.51	
FUEL		80.00	
PILOT		91.78	
PASSENGER		119.12	
AFT BAGGAGE FLOOR		138.00	
AFT BAGGAGE SHELF		152.91	
TOTAL			
CG			

CG = MOMENT DIVIDED BY WEIGHT

**RV-8 WEIGHT AND BALANCE CALCULATIONS**

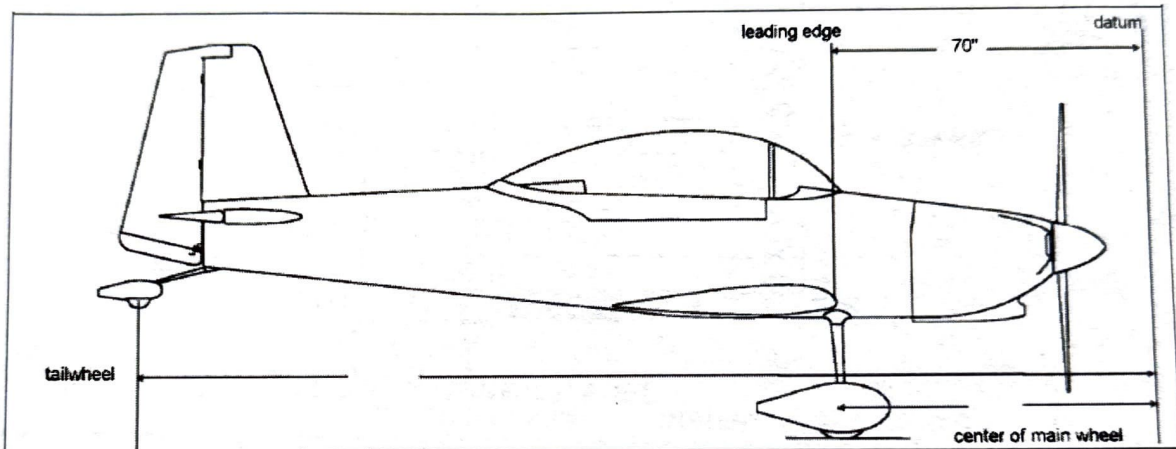
aircraft weighed in a level attitude with oil

A/C registration N405ST Date 02-07-19 Performed by SCOTT ANDERSON**DATUM** (70 inches forward of leading edge)**CG RANGE** 78.70 inches aft of datum

86.82 inches aft of datum

**ARMS**

FWD BAGGAGE	58.51	inches
FUEL	80.00	inches
PILOT	91.78	inches
PASSENGER	119.12	inches
AFT BAGGAGE FLOOR	138.00	inches
AFT BAGGAGE SHELF	152.91	inches



EMPTY AIRCRAFT	WEIGHT	ARM	MOMENT
RIGHT WHEEL	537.0	68.76	36924.12
LEFT WHEEL	538.0	68.76	36992.88
TAILWHEEL	52.0	251.25	13065.00
TOTAL	1127.0		86992.00
CG	77.19		CG = MOMENT DIVIDED BY WEIGHT

**SAMPLE 1: TYPICAL LOADING, STD PILOT WEIGHT**

	WEIGHT	ARM	MOMENT
EMPTY AIRCRAFT	1127.0	77.19	86993.13
FWD BAGGAGE	0	58.51	0
FUEL	252.0	80.00	20160.00
PILOT	210.0	91.78	19273.80
PASSENGER	0	119.12	0
AFT BAGGAGE FLOOR	0	138.00	0
AFT BAGGAGE SHELF	0	152.91	0
TOTAL	1589.0		126426.93
CG	79.56		CG = MOMENT DIVIDED BY WEIGHT

**SAMPLE 2: AS ABOVE, BUT WITH REDUCED FUEL (END OF TRIP)**

	WEIGHT	ARM	MOMENT	
EMPTY AIRCRAFT	1127.0	77.19	86993.13	
FWD BAGGAGE	0	58.51	0	
FUEL	126.0	80.00	10080.0	21 GALS
PILOT	210.0	91.78	19273.8	
PASSENGER	0	119.12	0	
AFT BAGGAGE FLOOR	0	138.00	0	
AFT BAGGAGE SHELF	0	152.91	0	
TOTAL	1463.0		116346.93	
CG	79.52			

**SAMPLE 3: GROSS WEIGHT W/ HEAVY PILOT, REDUCED FUEL**

	WEIGHT	ARM	MOMENT	
EMPTY AIRCRAFT	1127	77.19	86993.13	
FWD BAGGAGE	0	58.51	0	
FUEL	126	80.00	10080.0	21 GALS
PILOT	275	91.78	25239.5	
PASSENGER	0	119.12	0	
AFT BAGGAGE FLOOR	0	138.00	0	
AFT BAGGAGE SHELF	0	152.91	0	
TOTAL	1528		122312.63	
CG	80.04			

**SAMPLE 4: AS ABOVE BUT W/ MINIMUM FUEL**

	WEIGHT	ARM	MOMENT	
EMPTY AIRCRAFT	1127	77.19	86993.13	
FWD BAGGAGE	0	58.51	0	
FUEL	60	80.00	4800.0	10 GALS
PILOT	275	91.78	25239.5	
PASSENGER	0	119.12	0	
AFT BAGGAGE FLOOR	0	138.00	0	
AFT BAGGAGE SHELF	0	152.91	0	
TOTAL	1462		117,032.63	
CG	80.04			

**SAMPLE 5: BIG PEOPLE, and FORWARD BAGGAGE**

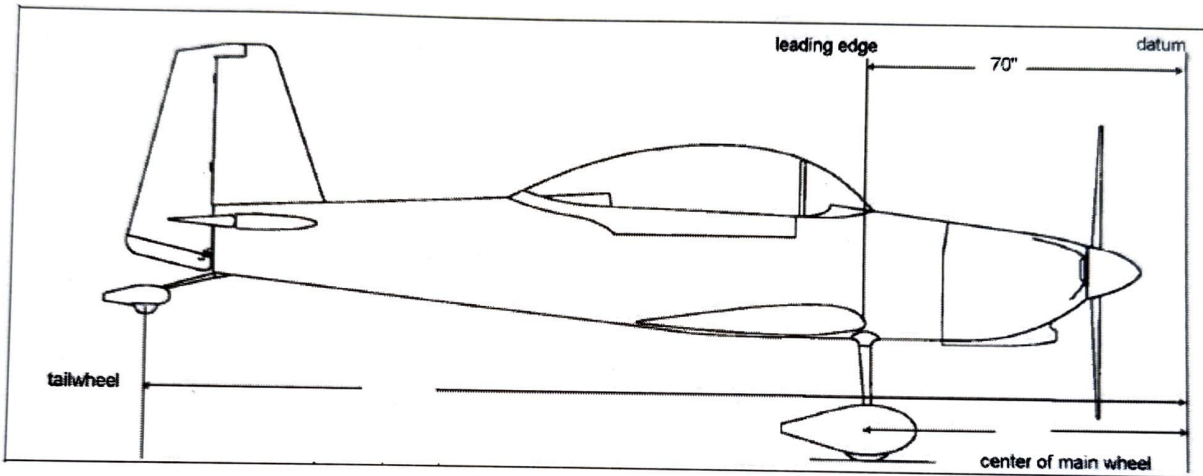
	WEIGHT	ARM	MOMENT	
EMPTY AIRCRAFT	1127	77.19	86993.13	
FWD BAGGAGE	25.0	58.51	1462.75	
FUEL	144.0	80.00	11520.0	24 GALS
PILOT	250	91.78	22945.0	
PASSENGER	250	119.12	29780.0	
AFT BAGGAGE FLOOR	0	138.00	0	
AFT BAGGAGE SHELF	0	152.91	0	
TOTAL	1796		152700.88	
CG	85.02			

# RV-8 WEIGHT AND BALANCE CALCULATIONS

aircraft weighed in a level attitude with oil

A/C registration \_\_\_\_\_ Date \_\_\_\_\_ Performed by \_\_\_\_\_

- DATUM** (70 inches forward of leading edge)  
**CG RANGE** 78.70 inches aft of datum  
 86.82 inches aft of datum
- ARMS**
- FWD BAGGAGE 58.51 inches
  - FUEL 80.00 inches
  - PILOT 91.78 inches
  - PASSENGER 119.12 inches
  - AFT BAGGAGE FLOOR 138.00 inches
  - AFT BAGGAGE SHELF 152.91 inches



EMPTY AIRCRAFT	WEIGHT	ARM	MOMENT
RIGHT WHEEL	537.0		
LEFT WHEEL	538.0		
TAILWHEEL			
TOTAL			
CG			

CG = MOMENT DIVIDED BY WEIGHT

**SAMPLE 1: TYPICAL LOADING, STD PILOT WEIGHT**

	WEIGHT	ARM	MOMENT
EMPTY AIRCRAFT	1127	77.19	86,993.13
SMOKE TANK → FWD BAGGAGE	43.0	58.51	2515.93
FUEL	252.0	80.00	20160.00
PILOT	225.0	91.78	20650.50
PASSENGER		119.12	0
AFT BAGGAGE FLOOR	0	138.00	0
(ELT) AFT BAGGAGE SHELF	2.0	152.91	305.82
TOTAL	1824		109974.88
CG	77.22		

CG = MOMENT DIVIDED BY WEIGHT

*Smoke Tank calculations*

*Empty tank - 16 lbs*  
*Full tank - 60 lbs*  
*Smoke oil. 8.8 lbs per gal.*

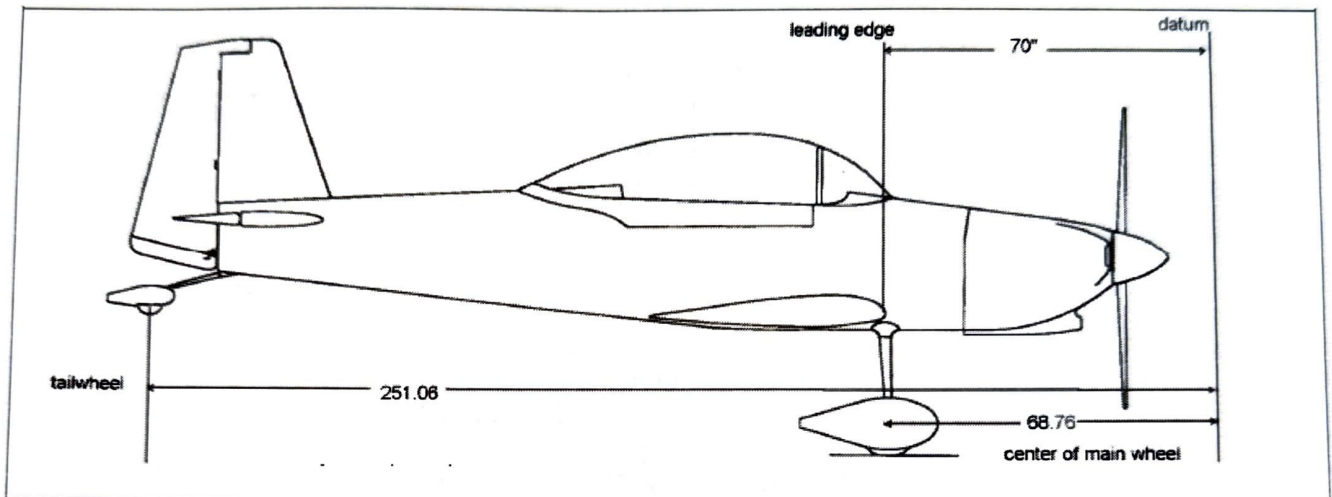
*( 376 lbs useable Available )  
 load to 1800 gross*

**RV-8 WEIGHT AND BALANCE SAMPLE CALCULATIONS**

aircraft weighed in a level attitude with oil

**DATUM** (70 inches forward of leading edge)**CG RANGE** Forward limit: 78.70 inches aft of datum  
Aft limit: 86.82 inches aft of datum**ARMS**

FWD BAGGAGE	58.51 inches
FUEL	80.00 inches
PILOT	91.78 inches
PASSENGER	119.12 inches
AFT BAGGAGE FLOOR	138.00 inches
AFT BAGGAGE SHELF	152.91 inches



<b>EMPTY AIRCRAFT</b>	<b>WEIGHT</b>	<b>ARM</b>	<b>MOMENT</b>
RIGHT WHEEL	509.00	68.76	34998.84
LEFT WHEEL	516.00	68.76	35480.16
TAILWHEEL	44.00	251.06	11046.64
<b>TOTAL</b>	<b>1069.00</b>		<b>81525.64</b>
<b>CG</b>	<b>76.26</b>	<b>CG = MOMENT DIVIDED BY WEIGHT</b>	

**SAMPLE 1: TYPICAL LOADING, STD PILOT WEIGHT**

	<b>WEIGHT</b>	<b>ARM</b>	<b>MOMENT</b>
EMPTY AIRCRAFT	1069.00	76.26	81521.94
FWD BAGGAGE	00.00	58.51	00.00
FUEL (42 US gal.)	252.00	80.00	20160.00
PILOT	170.00	91.78	15602.60
PASSENGER	170.00	119.12	20250.40
AFT BAGGAGE FLOOR	20.00	138.00	2760.00
AFT BAGGAGE SHELF	10.00	152.91	1529.10
<b>TOTAL</b>	<b>1691.00</b>		<b>141824.04</b>
<b>CG</b>	<b>83.87</b>	<b>CG WITHIN LIMITS</b>	

VAN' S AIRCRAFT  
SERVICE BULLETINS  
LETTERS AND NOTICES

# SERVICE BULLETINS ISSUED BY VAN'S AIRCRAFT

Current As of: ~~2/6/2017~~  
02-26-2021





**VAN'S AIRCRAFT**  
TOTAL PERFORMANCE

14401 Keil Road NE, Aurora, Oregon, USA 97002  
PHONE 503-678-6545 • FAX 503-678-6560  
www.vansaircraft.com • info@vansaircraft.com

## SERVICE BULLETIN 00036 - REV 3

**Date Released:** February 28, 2023 (Revision 3 – Corrections made)  
February 25, 2023 (Revision 2 – New parts and method of compliance)  
February 2, 2023 (Revision 1)  
January 23, 2023 (Initial release)

**Date Effective:** January 23, 2023

**Subject:** Cracking in horizontal stabilizer rear spar at outboard elevator hinge brackets

**Affected Models:** RV-3, RV-4, RV-6/6A, RV-9/9A, RV-10, RV-14/14A

RV-7/7A and RV-8/8A Empennage Kits shipped prior to November 2022

**Required Action:** Inspect the rear spar web at the outboard elevator hinge bracket for cracks. If cracks are present in the spar web, replace the spar or stop drill the cracks, install doublers, and replace the elevator hinge brackets with updated parts.

**Time of Compliance:** Inspect within 25 flight hours or at the next annual inspection, whichever is earlier.

If cracks are not present, you may continue to comply with this Service Bulletin via the prescribed inspection no less than every 12 months, or you may complete the modifications described in this service bulletin for aircraft without cracks.

If cracks are present, the modifications required by this Service Bulletin must be completed before further flight.

**Supersedes Notice:** N/A

**Labor Required / SLSA Warranty Allowance:** N/A

**Level of Certification:** Check the rules of the local controlling agency and the operating limitations for your aircraft

**RV8 N405**  
**CONDITIONAL**  
**INSPECTION CHECKLIST**  
**RECORDS & OIL REPORTS**



**1ST FLIGHT - PRE FLIGHT INSPECTION**

OWNER <b>Scott Anderson</b>	A/C TYPE <b>Vans Aircraft RV8</b>	DATE <b>FEB 02 2019</b>
SER. NO. <b>83615</b>	N NUMBER <b>N405ST</b>	MANUFACT. DATE <b>FEB 19 -2019</b>
TYPE INSPECTION <b>1ST FLIGHT INSPECTION</b>	TACH TIME <b>0.9</b>	TOTAL A/C TIME <b>0.9</b>

**INSPECTION PRIOR TO DAR INSPECTION & AIRWORTHY CERTIFICATION**

PROP. GROUP			INSP.
	1	REMOVE SPINNER, INSPECT BULKHEADS FOR DEFECTS, CRACKS, LOOSE / SMOKING RIVETS	NEW SA
	2	INSPECT BLADES FOR SECURITY, NICKS, CRACKS OR OTHER DAMAGE	NEW SA
	3	INSPECT PROP HUB FOR EVIDENCE OF DAMAGE, CRACKS OR CORROSION	SA
	4	CHECK ALL MOUNT HARWARE FOR DEFECTS AND SECURITY	SA
	5	CHECK ATTACH BOLTS FOR TORQUE / SAFETY WIRE	SA
	6	CONSTANT SPEED	
		CHECK BLADES FOR TIGHTNESS IN HUB	SA
		REMOVE PROP, REMOVE SLUDGE (IF REQUIRED)	SA
		LUBRICATE AS PER MANUAL	SA
		INSPECT COMPLETE ASSEMBLY	SA
	7	RE-INSTALL SPINNER	SA
ENGINE GROUP			
	1	REMOVE ENGINE COWLS	SA
	2	CLEAN ENGINE AND COWLS	SA
	3	COMPRESSION TEST /80 HOT _____ COLD <input checked="" type="checkbox"/> 180/80 2.80/80 3.80/80 4.80/80	SA
	4	DRAIN ENGINE OIL (WARM) <i>NEW MINERAL OIL</i>	SA
	5	REMOVE AND INSPECT OIL SUMP SCREEN FOR DEBRIS	SA
	6	REPLACE OIL FILTER, CUT OPEN AND INSPECT FILTER FOR DEBRIS	SA
	7	CHECK OIL SENDER UNIT FOR LEAKS AND SECURITY	SA
	8	CLEAN AND CHECK OIL COOLER FOR CRACKS AND SECURITY	SA
	9	CHECK OIL COOLER MOUNTINGS & BAFFLES FOR CRACKS AND SECURITY	SA
	10	CHECK AND CLEAN FUEL FILTER, GASCOLATOR, OR SCREENS	SA
	11	INSPECT FUEL INJECTOR LINES / NOZZELS FOR DEFECTS AND SECURITY	SA
	12	CHECK FUEL SYSTEM FOR EVIDENCE OF LEAKAGE, DETERIORATION, SECURITY	SA
	13	CHECK FUEL PUMP INLET/OUTLET FITTINGS ARE TIGHT AND SECURE	SA
	14	CHECK FUEL LINES FOR AGE, DETERIORATION, LEAKS AND SECURITY	SA
	15	CHECK ALL OIL LINES FOR AGE, DETERIORATION, LEAKS AND SECURITY	SA
	16	SERVICE / REPLACE AIR FILTER, INPECT AIRBOX FOR CRACKS, SECURITY	SA
	17	CHECK CARB HEAT AND CONTROLS FOR PROPER OPERATION AND SECURITY	SA
	18	CHECK MAGS FOR PROPER INSTALLATION, SECURITY AND OIL LEAKAGE	SA
	19	REMOVE / INSTALL MAG FOR 500 HR CHECK IF REQUIRED	SA
	20	CHECK CARB / FUEL INJECTION INLET SCREENS, DRAIN CARB BOWL	NA
	21	CHECK / ADJUST MAG TIMING LEFT _____ RIGHT _____ P-MAGS NEW (NOT REQUIRED)	SA
	22	CHECK IGNITION HARNESS AND INSULATORS, P-LEADS FOR SECURITY	SA
	23	SERVICE OR REPLACE SPARK PLUGS	SA
	24	CHECK CONDITION OF ALTERNATOR, BELT AND WIRING, CHECK BELT TENSION	SA
	25	CHECK CONDITION OF STARTER AND CONNECTIONS	SA
	26	INSPECT EXHAUST SYSTEM FOR LEAKS, MOUNTS FOR SECURITY, CRACKS, TORQUE	SA
	27	INSPECT MUFFLERS, HEAT SHROUD, SCAT TUBING	SA
	28	CHECK ENGINE BAFFLES AND BAFFLE ATTACHMENTS	SA
	29	CHECK BREATHER TUBE FOR OBSTRUCTIONS, SECURITY	SA
	30	CHECK CRANKCASE FOR LEAKS, CRACKS, LOOSE FASTENERS, ETC.	SA
	31	CHECK ENGINE MOUNTS FOR SECURITY, CHECK FIREWALL ATTACHMENT NUTS/BOLTS	SA
	32	CHECK ENGINE MOUNT BUSHINGS FOR DETERIORATION	SA
	33	CHECK FIREWALL SEALS	SA
	34	CHECK THROTTLE, MIXTURE, ALTERNATE AIR, PROP CONTROLS FOR SECURITY AND PROPER OPERATION. INSPECT ALL ATTACH HARDWARE FOR SECURITY	SA
	35	CHECK ALL INLET CLAMPS, GASKETS AND INLET TUBE BOLT TORQUE	SA
	36	FILL ENGINE OIL..TYPE <b>MINERAL OIL</b> QUARTS <b>7 QTS</b> <b>NEW ENGINE INITIAL RUN FEB 08 2019 TT 0.9</b>	SA
	38	LUBRICATE ENGINE CONTROLS	SA

CONDORRE / Pre Flight  
 FEB 2020 Inspection  
 CONDORRE / Pre Flight  
 FEB 2021  
 MAR 2022  
 MARCH 2023

CABIN GROUP	39	CHECK BATTERY TERMINALS ARE TIGHT, CLEAN. CABLES FOR DAMAGE, SECURITY	SA
	40	CHECK PUSHROD SHROUNDS - ECI PUSHROD RETAINER CLIPS - REPLACE IF NEC	SA
	41	PERFORM FUEL FLOW TEST AS REQUIRED (30 GPH / 200HP)	SA
	42	CHECK ENGINE GROUND CABLES FOR ATTACHMENT AND SECURITY	SA
FUSELAGE GROUP	1.	INSPECT CANOPY HINGES, STRUTS, LATCHES, LOCKING MECHANISM, OPERATION	SA
	2.	INSPECT CANOPY FRAME AND GLASS FOR GENERAL CONDITON	SA
	3.	CHECK SEAT, SEAT BELTS, ATTACHMENTS AND BOLTS	SA
	4.	CHECK ELEVATOR AND AILERON TRIM OPERATION	SA
	5.	CHECK FUEL ON-OFF VALVE FOR PROPER OPERATION AND MARKING	SA
	6.	CHECK FUEL SYSTEM LINES, PUMP, B-NUTS FOR SECURITY, CHAFING, LEAKS. REMOVE FUEL FILTER AND CLEAN. CHECK FOR LEAKS (PUMP ON)	SA
	7.	CHECK OPERATION OF INTERIOR LIGHTING	SA
	8.	CHECK RUDDER PEDALS, CABLES, CHECK TUBES AND PEDALS FOR CRACKS, SECURITY	SA
	9.	CHECK CONTROL STICK, BEARINGS, PUSHRODS FOR OPERATION AND SECURITY	SA
	10	CHECK INSTRUMENTS, LINES, WIRES FOR PROPER INSTALLATION AND SECURITY	SA
	11	CHECK ALTIMETER / TRANSPONDER CERTIFICATION DATE	SA
	12	CHECK MASTER CYLINDERS FOR PROPER INSTALLATION, LEAKS, SECURITY	SA
	13	CHECK CONTROL STICKS, BOLTS, JAM NUTS, TORQUE TUBES FOR PROPER INSTALLTION AND SECURITY. LUBRICATE ALL BEARINGS AND BUSHINGS.	SA
WING GROUP	1.	REMOVE ALL INSPECTION PANELS INCLUDING TAIL FAIRINGS	SA
	2.	CHECK GENERAL CONDITION OF SKIN	SA
	3.	REMOVE BAGGAGE COMPARTMENT COVERS AND BULKHEADS	SA
	4.	CHECK WIRING, HOSES, ETC. FOR DAMAGE AND SECURITY	SA
	5.	CHECK ANTENNA WIRES AND CONNECTIONS	SA
	6.	CHECK AND SERVICE E.L.T. BATTERY GOOD UNTIL <u>NEW BATTERY</u>	SA
	7.	CHECK BULKHEADS AND STRINGERS FOR DAMAGE	SA
	8.	CHECK WING SPAR ATTACH BOLTS (MAIN AND AFT SPAR) FOR PROPER TORQUE	SA
	9.	CHECK EMPENNAGE SURFACES FOR DAMAGE	SA
	10	CHECK RUDDER HINGES, HORN, AND ATTACHMENTS	SA
	11	CHECK VERTICAL FIN ATTACHMENTS	SA
	12	CHECK ELEVATOR HINGES, HORN AND ATTACHMENTS	SA
	13	CHECK THAT ELEVATOR TRAVEL IS WITHIN LIMITS <u>UP STD DOWN STD PER MANUAL</u>	SA
	14	CHECK HORIZONTAL STABILIZER ATTACHMENTS	SA
	15	CHECK HORIZONTAL TRIM FOR INSTALLATION, SECURITY AND OPERATION. CHECK RV10 SERVO PIVOT BOLT SAFETY.	SA
	16	CHECK AUTOPILOT SERVO INSTALLATION & TT SERVO ARM RETAINER SB	SA
	17	RE-INSTALL PANELS AND TAIL FAIRING	SA
	18	VERIFY SERVICE BULLETINS COMPLIANCE	SA
WING GROUP	1.	REMOVE INSPECTION PLATES AND FAIRINGS	SA
	2.	CHECK WING SKINS FOR DAMAGE, DISTORTION, SMOKING OR LOOSE RIVETS, ETC.	SA
	3.	CHECK AILERON HINGES, PUSHRODS FOR OPERATION	SA
	4.	CHECK AUTOPILOT INSTALLATION FOR SECURITY & PROPER INSTALLATION	SA
	5.	CHECK FLAP CONDITION AND SECURITY, LUBRICATE HINGES AND BEARINGS	SA
	6.	CHECK FLAP OPERATION, INSPEC AND CHECK FLAP ACTUATOR AND SAFETY	SA
	7.	CHECK FOR LEAKS AT FUEL TANK ACCESS PLATES, FUEL LEVEL SENSORS	SA
	8.	CHECK SECURITY OF ACTUATOR ROD AND BEARING AT FLAP ATTACH POINT	SA
	9.	CHECK PITOT TUBE AND LINES FOR DAMAGE AND SECURITY	SA
	10	CHECK WINGTIPS FOR DAMAGE AND SECURITY	SA
	11	CHECK OPERATION OF LANDING LIGHTS	SA
	12	CHECK OPERATION OF STROBE LIGHTS	SA
	13	CHECK OPERATION OF POSITION LIGHTS	SA
	14	RE-INSTALL INSPECTION PANELS AND FAIRINGS	SA
	15	INSPECT FUEL TANK INTERNALLY FOR PEELING SEALANT (SLOSH)	SA
	16	CHECK CONDITION OF FUEL CAPS, O RINGS, AND SUMP DRAINS.	SA
	18	RE-INSTALL INSPECTION PLATES AND FAIRINGS	SA

CONDITIONS / FEB 2020

CONDITIONS / FEB 2021

REPORTS

CONDITIONS / MAR 2022

MINACH 2023



RV CONDITION INSPECTION #4

OWNER	Scott Anderson	A/C TYPE	Vans Aircraft RV8	DATE	MAR 29 -2023
SER. NO.	83615	N NUMBER	N405ST	MANUFACT. DATE	FEB 19 -2019
TYPE INSPECTION	Conditional	TACH TIME	351.6	TOTAL A/C TIME	351.6

PROP. GROUP			INSP.
	1	REMOVE SPINNER, INSPECT BULKHEADS FOR DEFECTS, CRACKS, LOOSE / SMOKING RIVETS	SA
	2	INSPECT BLADES FOR SECURITY, NICKS, CRACKS OR OTHER DAMAGE	SA
	3	INSPECT PROP HUB FOR EVIDENCE OF DAMAGE, CRACKS OR CORROSION	SA
	4	CHECK ALL MOUNT HARDWARE FOR DEFECTS AND SECURITY	SA
	5	CHECK ATTACH BOLTS FOR TORQUE / SAFETY WIRE	SA
	6	CONSTANT SPEED	SA
		CHECK BLADES FOR TIGHTNESS IN HUB 65 FT LBS	
		REMOVE PROP, REMOVE SLUDGE (IF REQUIRED) COMPLETED 3/23/22	SA
		LUBRICATE AS PER MANUAL COMPLETED 3/23/22	SA
		INSPECT COMPLETE ASSEMBLY	SA
	7	RE-INSTALL SPINNER	SA
ENGINE GROUP			
	1	REMOVE ENGINE COWLS	SA
	2	CLEAN ENGINE AND COWLS	SA
	3	COMPRESSION TEST	
		/80 HOT <u>X</u> COLD 178/80 2. 78/80 3. 78/80 4. 78/80 LAST	
		CURRENT 1. 78/80 2. 78/80 3. 79/80	
		4. 79/80	
	4	DRAIN ENGINE OIL (WARM)	SA
	5	REMOVE AND INSPECT OIL SUMP SCREEN FOR DEBRIS	SA
	6	REPLACE OIL FILTER, CUT OPEN AND INSPECT FILTER FOR DEBRIS	SA
	7	CHECK OIL SENDER UNIT FOR LEAKS AND SECURITY	SA
	8	CLEAN AND CHECK OIL COOLER FOR CRACKS AND SECURITY	SA
	9	CHECK OIL COOLER MOUNTINGS & BAFFLES FOR CRACKS AND SECURITY	SA
	10	CHECK AND CLEAN FUEL FILTER, GASCOLATOR, OR SCREENS	SA
	11	INSPECT FUEL INJECTOR LINES / NOZZELS FOR DEFECTS AND SECURITY	SA
	12	CHECK FUEL SYSTEM FOR EVIDENCE OF LEAKAGE, DETERIORATION, SECURITY	SA
	13	CHECK FUEL PUMP INLET/OUTLET FITTINGS ARE TIGHT AND SECURE	SA
	14	CHECK FUEL LINES FOR AGE, DETERIORATION, LEAKS AND SECURITY	SA
	15	CHECK ALL OIL LINES FOR AGE, DETERIORATION, LEAKS AND SECURITY	SA
	16	SERVICE / REPLACE AIR FILTER, INPECT AIRBOX FOR CRACKS, SECURITY	SA
	17	CHECK CARB HEAT AND CONTROLS FOR PROPER OPERATION AND SECURITY	SA
	18	CHECK MAGS FOR PROPER INSTALLATION, SECURITY AND OIL LEAKAGE	SA
	19	REMOVE / INSTALL MAG FOR 500 HR CHECK IF REQUIRED P-MAGS	N/A
	20	CHECK CARB / FUEL INJECTION INLET SCREENS, DRAIN CARB BOWL	SA
	21	CHECK / ADJUST MAG TIMING LEFT RIGHT P-MAGS	N/A
	22	CHECK IGNITION HARNESS AND INSULATORS, P-LEADS FOR SECURITY	SA
	23	SERVICE OR REPLACE SPARK PLUGS	SA
	24	CHECK CONDITION OF ALTERNATOR, BELT AND WIRING, CHECK BELT TENSION	SA
	25	CHECK CONDITION OF STARTER AND CONNECTIONS	SA
	26	INSPECT EXHAUST SYSTEM FOR LEAKS, MOUNTS FOR SECURITY, CRACKS, TORQUE	SA
	27	INSPECT MUFFLERS, HEAT SHROUD, SCAT TUBING	SA
	28	CHECK ENGINE BAFFLES AND BAFFLE ATTACHMENTS	SA
	29	CHECK BREATHER TUBE FOR OBSTRUCTIONS, SECURITY	SA
	30	CHECK CRANKCASE FOR LEAKS, CRACKS, LOOSE FASTENERS, ETC.	SA
	31	CHECK ENGINE MOUNTS FOR SECURITY, CHECK FIREWALL ATTACHMENT NUTS/BOLTS	SA
	32	CHECK ENGINE MOUNT BUSHINGS FOR DETERIORATION	SA
	33	CHECK FIREWALL SEALS	SA
	34	CHECK THROTTLE, MIXTURE, ALTERNATE AIR, PROP CONTROLS FOR SECURITY AND PROPER OPERATION. INSPECT ALL ATTACH HARDWARE FOR SECURITY	SA
	35	CHECK ALL INLET CLAMPS, GASKETS AND INLET TUBE BOLT TORQUE	SA
	36	FILL ENGINE OIL..TYPE PHILLIPS XC-25100 QUARTS 7 QTS	SA
	38	LUBRICATE ENGINE CONTROLS 20/50 11/12 CHAM GUARD	SA

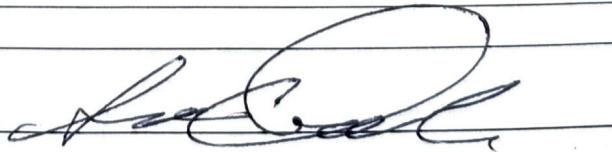
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	39	CHECK BATTERY TERMINALS ARE TIGHT, CLEAN. CABLES FOR DAMAGE, SECURITY	SA
	40	CHECK PUSHROD SHROUNDS - ECI PUSHROD RETAINER CLIPS - REPLACE IF NEC	SA
	41	PERFORM FUEL FLOW TEST AS REQUIRED (30 GPH / 200HP)	N/A
	42	CHECK ENGINE GROUND CABLES FOR ATTACHMENT AND SECURITY	SA
CABIN GROUP		BATTERY REPAIRED ON 03-05-21 CONDITIONAL #3	SA
			SA
	1.	INSPECT CANOPY HINGES, STRUTS, LATCHES, LOCKING MECHANISM, OPERATION LPS ADDED	SA
	2.	INSPECT CANOPY FRAME AND GLASS FOR GENERAL CONDITON	SA
	3.	CHECK SEAT, SEAT BELTS, ATTACHMENTS AND BOLTS	SA
	4.	CHECK ELEVATOR AND AILERON TRIM OPERATION	SA
	5.	CHECK FUEL ON-OFF VALVE FOR PROPER OPERATION AND MARKING	SA
	6.	CHECK FUEL SYSTEM LINES, PUMP, B-NUTS FOR SECURITY, CHAFING, LEAKS. REMOVE FUEL FILTER AND CLEAN. CHECK FOR LEAKS (PUMP ON)	SA
	7.	CHECK OPERATION OF INTERIOR LIGHTING	SA
	8.	CHECK RUDDER PEDALS, CABLES, CHECK TUBES AND PEDALS FOR CRACKS, SECURITY	SA
	9.	CHECK CONTROL STICK, BEARINGS, PUSHRODS FOR OPERATION AND SECURITY	SA
	10.	CHECK INSTRUMENTS, LINES, WIRES FOR PROPER INSTALLATION AND SECURITY	SA
	11.	CHECK ALTIMETER / TRANSPONDER CERTIFICATION DATE <u>GOOD TILL 03-2026</u>	SA
	12.	CHECK MASTER CYLINDERS FOR PROPER INSTALLATION, LEAKS, SECURITY	SA
13.	CHECK CONTROL STICKS, BOLTS, JAM NUTS, TORQUE TUBES FOR PROPER INSTALLTION AND SECURITY. LUBRICATE ALL BEARINGS AND BUSHINGS.	SA	
FUSELAGE GROUP			SA
	1.	REMOVE ALL INSPECTION PANELS INCLUDING TAIL FAIRINGS	SA
	2.	CHECK GENERAL CONDITION OF SKIN	SA
	3.	REMOVE BAGGAGE COMPARTMENT COVERS AND BULKHEADS	SA
	4.	CHECK WIRING, HOSES, ETC. FOR DAMAGE AND SECURITY	SA
	5.	CHECK ANTENNA WIRES AND CONNECTIONS	SA
	6.	CHECK AND SERVICE E.L.T. BATTERY GOOD UNTIL <u>NOV 2024 JUN 2029</u>	SA
	7.	CHECK BULKHEADS AND STRINGERS FOR DAMAGE	SA
	8.	CHECK WING SPAR ATTACH BOLTS (MAIN AND AFT SPAR) FOR PROPER TORQUE	SA
	9.	CHECK EMPENNAGE SURFACES FOR DAMAGE	SA
	10.	CHECK RUDDER HINGES, HORN, AND ATTACHMENTS	SA
	11.	CHECK VERTICAL FIN ATTACHMENTS	SA
	12.	CHECK ELEVATOR HINGES, HORN AND ATTACHMENTS	SA
	13.	CHECK THAT ELEVATOR TRAVEL IS WITHIN LIMITS UP STD DOWN STD PER MANUAL	SA
	14.	CHECK HORIZONTAL STABILIZER ATTACHMENTS	SA
	15.	CHECK HORIZONTAL TRIM FOR INSTALLATION, SECURITY AND OPERATION. CHECK RV10 SERVO PIVOT BOLT SAFETY.	SA
	16.	CHECK AUTOPILOT SERVO INSTALLATION & TT SERVO ARM RETAINER SB	SA
	17.	RE-INSTALL PANELS AND TAIL FAIRING	SA
18.	VERIFY SERVICE BULLETINS COMPLIANCE	SA	
WING GROUP			SA
	1.	REMOVE INSPECTION PLATES AND FAIRINGS	SA
	2.	CHECK WING SKINS FOR DAMAGE, DISTORTION, SMOKING OR LOOSE RIVETS, ETC.	SA
	3.	CHECK AILERON HINGES, PUSHRODS FOR OPERATION	SA
	4.	CHECK AUTOPILOT INSTALLATION FOR SECURITY & PROPER INSTALLATION	SA
	5.	CHECK FLAP CONDITION AND SECURITY, LUBRICATE HINGES AND BEARINGS	SA
	6.	CHECK FLAP OPERATION, INSPEC AND CHECK FLAP ACTUATOR AND SAFETY	SA
	7.	CHECK FOR LEAKS AT FUEL TANK ACCESS PLATES, FUEL LEVEL SENSORS	SA
	8.	CHECK SECURITY OF ACTUATOR ROD AND BEARING AT FLAP ATTACH POINT	SA
	9.	CHECK PITOT TUBE AND LINES FOR DAMAGE AND SECURITY	SA
	10.	CHECK WINGTIPS FOR DAMAGE AND SECURITY	SA
	11.	CHECK OPERATION OF LANDING LIGHTS	SA
	12.	CHECK OPERATION OF STROBE LIGHTS	SA
	13.	CHECK OPERATION OF POSITION LIGHTS	SA
	14.	RE-INSTALL INSPECTION PANELS AND FAIRINGS	SA
	15.	INSPECT FUEL TANK INTERNALLY FOR PEELING SEALANT (SLOSH)	SA
	16.	CHECK CONDITION OF FUEL CAPS, O RINGS, AND SUMP DRAINS.	SA
	18.	RE-INSTALL INSPECTION PLATES AND FAIRINGS	SA

LANDING GEAR		DESCRIPTION	STATUS
	1	PLACE AIRCRAFT ON JACKS <i>ENGINE NOISE</i>	SA
	2	REMOVE WHEEL PANTS AND GEAR FAIRINGS	SA
	3	CHECK TIRES FOR WEAR AND DAMAGE <i>LOW WEAR</i> <b>NEW TIRES INSTALLED</b>	SA
	4	REMOVE WHEELS INSPECT FOR CRACKS, CORROSION, GENERAL CONDITION <i>(NO)</i>	SA
	5	CHECK TIRE PRESSURES LEFT 50 psi NOSE RIGHT 50psi	SA
	6	CHECK BRAKE LININGS AND DISCS FOR WEAR <i>WEAR 6000</i> <b>NEW BRAKE PADS INSTALLED</b>	SA
	7	CHECK BRAKE LINES, CALIPERS FOR LEAKS, SECURITY AND CONDITION <i>(NO)</i>	SA
	8	CHECK WHEEL FAIRINGS AND MOUNTING PLATES FOR CRACKS AND SECURITY, CHECK ALL BOLTS FOR PROPER SECURITY/TORQUE.	SA
	9	CLEAN AND LUBRICATE MAIN / NLG / TAIL WHEEL BEARINGS AND BUSHINGS	SA
	10	RE-INSTALL WHEELS, BRAKES	SA
	11	REMOVE TAIL WHEEL AND FORK, CLEAN AND LUBRICATE BUSHING / PIN, CHECK LOCKING MECHANISM.	SA
	12	CHECK NOSE WHEEL BOLTS, BRACKETS, BREAKOUT FORCE, STOP ORIENTATION	NA
	13	CHECK ALL LANDING GEAR UPPER RETAINING BOLTS FOR PROPER TORQUE	SA
	14	CHECK BRAKE FLUID LEVEL. TYPE OF FLUID BEING USED <b>CHECKED FULL</b>	SA
	15	INSTALL WHEEL PANTS AND GEAR FAIRINGS	SA
	16	REMOVE AIRCRAFT FROM JACKS <i>ENGINE NOISE</i>	SA
<b>OPERATION CHECK</b>			
	1.	CHECK BOOST PUMP PRESSURE <b>FROM PANEL READ 31</b>	SA
	2.	CHECK ALTERNATOR OUTPUT	SA
	3.	CHECK AVIONIC EQUIPMENT OPERATION <b>FROM PANEL 12.9</b>	SA
	4.	CHECK OIL PRESSURE	SA
	5.	CHECK MANIFOLD PRESSURE	SA
	6.	CHECK PROPELLER OPERATION AND SMOOTHNESS	SA
	7.	CHECK MAG DROP AT 1800 RPM LEFT <del>100</del> RIGHT <del>100</del> <i>90 LT 90 RT</i>	SA
	8.	CHECK STATIC R.P.M	SA
	9.	CHECK IDLE R.P.M.	SA
	10.	CHECK MAG SWITCH WIRES FOR GROUNDING	SA
	11.	CHECK THROTTLE AND MIXTURE CONTROL OPERATION	SA
	12.	CHECK IDLE MIXTURE	SA
	13.	LEAK CHECK ENGINE	SA
	14.	RE-INSTALL ENGINE COWLS	SA
	15.	CHECK FLIGHT CONTROL OPERATION (AILERON, ELEVATOR, RUDDER, TRIM)	SA
<b>GENERAL</b>		<b>LUBED ALL CONTROL SURFACE HINGE AREAS WITH LPS</b>	
	1.	FINAL CHECK FOR CLEANLINESS, TOOLS REMOVED, ETC.	SA
	2.	AIRCRAFT PAPERS IN PROPER ORDER A. REGISTRATION	SA
		B. AIRWORTHINESS	SA
		C. OPERATING LIMITS	SA
<b>NOTES</b>		<b>NO CHANGES MADE TO AIRCRAFT AND NO ADDITIONAL ITEMS ADDED, NO ADDITIONAL CALCULATIONS MADE TO WEIGHT &amp; BALANCE</b>	SA
		<i>(47H)</i> <del>407</del> <b>CONDITIONAL INSPECTION OF AIRCRAFT SINCE AIRWORTHY CERTIFICATION ISSUED.</b>	SA

SIGNATURE OF INSPECTOR **SCOTT ANDERSON**



CERTIFICATE NUMBER **REPARIMANS CERTIFICATE # 4305033**

DATE OF SIGN-OFF **MAR 29 -2023**

Reports

# AF-5000 Pilot's Guide



**Experimental instrument limited to use in experimental aircraft.  
Not approved for use in aircraft with FAA type certificates.  
Patents 6,271,769 B1 and 6,940,425**



Registration  
Prop/ELT  
Transponder Cert  
N405ST

#83615

# FUEL FLOW TEST RESULTS

## FUEL FLOW VERIFICATION

Aircraft Builder: SCOTT A. ANDERSON  
Aircraft Model: WING RV-B

Aircraft  
Engine  
Hours

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## U.S. Department of Transportation Federal Aviation Administration ADS-B Performance Monitor

### Public ADS-B Performance Report

Broadcast ICAO: A4C0D6 (51140326)      Tail Number: N405ST      Flight Id: N405ST  
Period: 01-26-2020 18:39:40 to 01-26-2020 19:11:25

#### Operation Analysis Overview

- Airborne 1090  Analysis
- Surface 1090
- Surface RWY/Taxi 1090
- Airborne UAT
- Surface UAT

Apex Aviation

### ATC TRANSPONDER AND MODE S INSPECTION 14 CFR PART 43, APPENDIX F

DATE: 2-18-19 W/O # 4153 REG. # N1405ST S/N 83615  
Inspection(s) in Accordance With 14 CFR Part 43, Appendix F

Transponder #1

Mfg. Raytheon

Model SV-XPDR-261

P/N 00745-00-3 S/N 06307

Radio Reply Frequency 1087 to 1093 MHz   
Mode S 1089 TO 1091

Peak Output Power > 125 and < 500 Watts

Mode S TX Power > 125 and < 500 Watts

SLS 0 db  1% < Reply Rate

Reply Rate (-9db)  90% > Reply

Receiver Sensitivity -66 to -77 dbm   
Mode 3/A

Receiver Sensitivity -66 to -77 dbm   
Mode C

Difference ≤ 1 dbm

Receiver Sensitivity   
Mode S -68 TO -77 dbm 90% Reply

Mode S Diversity Transmission Channel Isolation  
[ ] > 20db (May require Antenna Isolation)

Mode S Address A4C0D6

[ ] Correct Reply

Mode S UF=0 [x] UF=16 [ ] UF=21 [ ]

Formats UF=4 [x] UF=20 [ ] UF=24 [ ]

UF=5 [x] UF=11 [ ] DF=11 [ ]

Mode S All Call PASS  FAIL

Antennas Secure & In Good Condition

\*SYSTEM PASSES

Note #1: Peak Output Power Radiated Class 1A Min 125 Watts  
Class 1B Min 70 Watts

Note #2: Receiver Sensitivity Includes Additional -3dbm Allowed for Radiated Signals

THE ABOVE INSPECTION(S) PERFORMED WITH THE TRANSPONDER(S) INSTALLED IN THE AIRCRAFT.

Mfg. N/A

Model N/A

P/N N/A S/N N/A

Radio Reply Frequency 1087 to 1093 MHz   
Mode S 1089 TO 1091

Peak Output Power > and < 500 Watts

Mode S TX Power > 125 and < 500 Watts

SLS 0 db  1% < Reply Rate

Reply Rate (-9db)  90% > Reply

Receiver Sensitivity -66 to -77 dbm   
Mode 3/A

Receiver Sensitivity -66 to -77 dbm   
Mode C

Difference ≤ 1 dbm

Receiver Sensitivity   
Mode S -68 TO -77 dbm 90% Reply

Mode S Diversity Transmission Channel Isolation  
[ ] > 20db (May require Antenna Isolation)

Mode S Address N/A

[ ] Correct Reply

Mode S UF=0 [ ] UF=16 [ ] UF=21 [ ]

Formats UF=4 [ ] UF=20 [ ] UF=24 [ ]

UF=5 [ ] UF=11 [ ] DF=11 [ ]

Mode S All Call PASS  FAIL

Antennas Secure & In Good Condition

\*SYSTEM PASSES

Robert Pabs 002  
TESTED BY

\*NOTE: CHECK IN BOX INDICATES PASS, BLANK BOX TEST N/A

Tester - ID # AVI 99  
CRS# 9VNR950B



Access your beacon registration online 24/7 at [www.beaconregistration.noaa.gov](http://www.beaconregistration.noaa.gov)

# Official 406 MHz ELT Registration Confirmation

## ELT Information

<b>Beacon Hex ID</b>	<b>Checksum</b>	<b>Serial No.</b>	<b>Manufacturer</b>	<b>Model</b>
2DC88 5B7C0 FFBFF		375202-018	ARTEX	ELT 345

**Registration Expiration Date**  
December 29, 2024

## Owner/Operator Information

<b>Name and Address</b>	<b>Telephone</b>	<b>Home/Work/Cell</b>
SCOTT ANDERSON SR. 116 W. MAGNOLIA CIRCLE	+1 210-563-9344	<input type="checkbox"/> H <input type="checkbox"/> W <input checked="" type="checkbox"/> C
		<input type="checkbox"/> H <input type="checkbox"/> W <input type="checkbox"/> C
		<input type="checkbox"/> H <input type="checkbox"/> W <input type="checkbox"/> C
		<input type="checkbox"/> H <input type="checkbox"/> W <input type="checkbox"/> C

LA VERNIA  
TX 78121 USA

E-mail [rvpilot66@gmail.com](mailto:rvpilot66@gmail.com)

## Aircraft Information

Registration (Tail) No. N405ST

USAGE:  Private/Non-Commercial  Commercial  Government Military  Government Non-Military

TYPE:  Single-engine propeller  Single-engine jet  Multi-engine propeller  Multi-engine jet  Helicopter  Other \_\_\_\_\_

Aircraft Manufacturer Van's Aircraft Model RV-8 Color Orange/White/Black Seating Capacity 2

Radio Equipment (check all that apply):  VHF  MF  HF  SSB  Other \_\_\_\_\_

Survival Equipment (Describe and List Quantity): Deployable 0 Fixed 0

Principal Airport (Name or Code) TE86 City New Berlin State TX

Additional Data (Flight Plans, etc.):

## Emergency Contact Information

Name of Primary 24-Hour Emergency Contact: <u>Robin Anderson</u>		Name of Alternate 24-Hour Emergency Contact: <u>Kasey Pipitt</u>	
<b>Telephone</b>	<b>Home/Work/Cell</b>	<b>Telephone</b>	<b>Home/Work/Cell</b>
<u>+1 210-563-8558</u>	<input type="checkbox"/> H <input type="checkbox"/> W <input checked="" type="checkbox"/> C	<u>+1 702-981-3503</u>	<input type="checkbox"/> H <input type="checkbox"/> W <input checked="" type="checkbox"/> C
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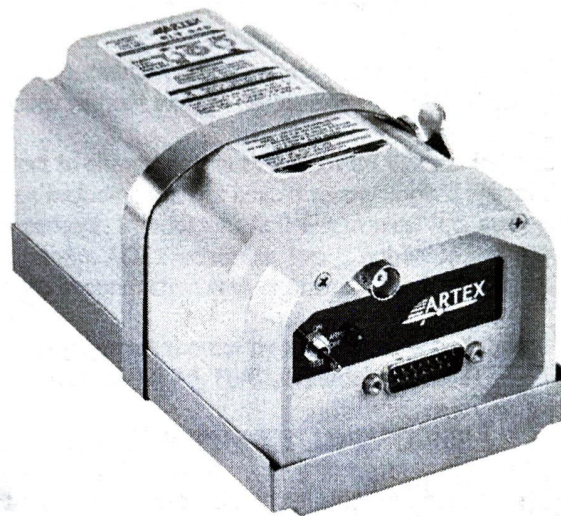
OMB Auth. (0648-0295) Expires: 30SEP2025  
Rev. 09/2022

If you have any questions about this form or beacon registration in general, please call 1.888.212.SAVE (7283) or 301.817.4515  
For information on the U.S. Search & Rescue Satellite-Aided Tracking system (SARSAT), please visit [www.sarsat.noaa.gov](http://www.sarsat.noaa.gov)

**Mail or fax correspondence to SARSAT Beacon Registration, NOAA, NSOF, E/SPO53, 1315 East West Highway, Silver Spring, MD 20910**  
**Fax No. 301.817.4565**



## **ARTEX ELT 345 Emergency Locator Transmitter**



**Description, Operation, Installation and Maintenance Manual  
Y1-03-0282 Rev. H**

Page 1 of 57

**ARTEX PRODUCTS / ACR ELECTRONICS, INC.**  
5757 Ravenswood Rd, Ft. Lauderdale, FL 33312  
[www.acrartex.com](http://www.acrartex.com)

W 4

mt-propeller

The Standard  
ENGINE LOG

The Standard  
AIRCRAFT LOG  
ASA-SA-1

WEIGHT &  
BALANCE  
CALCULATIONS

N405ST WEIGHT / BALANCE

CONDITIONAL <sup>N405ST</sup> INSPECT CHECKLIST

N405ST - REG - PROP - ELT - TRANSPONDER

A F 5 0 0 0  
G U I D E