

RV-10 CONDITION INSPECTION

OWNER CHRISTOPHER FRENCH	A/C TYPE VAN'S RV-10	DATE
SER. NO. 42131	N NUMBER N241VP	MANUFACT. DATE 02/23/2021
TYPE INSPECTION ANNUAL CONDITION INSPECTION	TACH TIME	TOTAL A/C TIME

PROP. GROUP			<u>INSP.</u>
	1	REMOVE SPINNER, INSPECT BULKHEADS FOR DEFECTS, CRACKS, LOOSE / SMOKING RIVETS	
	2	INSPECT BLADES FOR SECURITY, NICKS, CRACKS OR OTHER DAMAGE	
	3	INSPECT PROP HUB FOR EVIDENCE OF DAMAGE, CRACKS OR CORROSION	
	4	CHECK CRANKCASE NOSE SEAL	
	5	CHECK ALL MOUNT HARWARE FOR DEFECTS AND SECURITY	
	6	CHECK ATTACH BOLTS FOR TORQUE / SAFETY WIRE	
	7	CHECK BLADES FOR TIGHTNESS IN HUB	
	8	LUBRICATE AS PER MANUAL (NYCO GN3058)	
	9	INSPECT COMPLETE ASSEMBLY	
	10	RE-INSTALL SPINNER (DeWalt torque setting #7)	
ENGINE GROUP			
	1	REMOVE / INSPECT ENGINE COWLS, INSPECT COWL PINS AND EYELETS	
	2	CLEAN ENGINE AND COWLS	
	3	COMPRESSION TEST /80 HOT _____ COLD _____ 1 _____ 2. _____ 3. _____ 4. _____ 5 _____ 6. _____	
	4	DRAIN ENGINE OIL (WARM)	
	5	REMOVE AND INSPECT OIL SUMP SCREEN FOR DEBRIS (GASKET 06E19769-1.00)	
	6	REMOVE OIL FILTER, CUT OPEN AND INSPECT FILTER FOR DEBRIS	
	7	INSTALL OIL FILTER (CHAMPION CH48110)	
	8	FILL ENGINE OIL, (PHILLIPS VICTORY 20W50 QUARTS 8 PLUS 0.5 QUART CAMGUARD)	
	9	CHECK OIL SENDER UNIT FOR LEAKS AND SECURITY	
	10	CLEAN AND CHECK OIL COOLER FOR CRACKS AND SECURITY	
	11	CHECK OIL COOLER MOUNTINGS & BAFFLES FOR CRACKS AND SECURITY	
	12	INSPECT FUEL INJECTOR LINES / NOZZELS FOR DEFECTS AND SECURITY	
	13	CHECK FUEL SYSTEM FOR EVIDENCE OF LEAKAGE, DETERIORATION, SECURITY	
	14	CHECK FUEL SERVO BOLTS	
	15	CHECK FUEL PUMP INLET/OUTLET FITTINGS ARE TIGHT AND SECURE	
	16	CHECK FUEL LINES FOR AGE, DETERIORATION, LEAKS AND SECURITY	
	17	CHECK ALL OIL LINES FOR AGE, DETERIORATION, LEAKS AND SECURITY	
	18	CLEAN / OIL K&N E-3450 AIR FILTER	
	19	INPECT AIRBOX AND ALTERNATE AIR DOOR FOR CRACKS, SECURITY	
	20	CHECK P-MAG TIMING (BEFORE REMOVAL) TC, MIN, AND MAX	
	21	REMOVE P-MAG - CHECK OIL LEAKAGE, SHAFT PLAY, AND TEMP SENSOR (500 HOUR OVERHAUL)	
	22	INSTALL P-MAG, TORQUE 17 FOOT POUNDS	
	23	CHECK PLUG WIRES (180 OHM PER FOOT), INSULATORS, AND P-LEADS	
	24	REMOVE / CHECK / CLEAN / REPLACE SPARK PLUGS IRIIDIUM 6747 BR8EIX,5K OHM (125 HOURS)	
	25	GAP / INSTALL BOTTOM SPARK PLUGS (0.031"), 21 FOOT/POUNDS, ANTISEIZE (GASKET AN4027-1, 18MM)	
	26	BORESCOPE CYLINDERS AND CAPTURE PICTURES (CYL WALL, VALVE STEMS, VALVE EDGES)	
	27	SET TIMING - TC (20 TDC) , MIN (29), AND MAX (20) TIMING	
	28	GAP / INSTALL TOP SPARK PLUGS (0.031"), 21 FOOT/POUNDS, ANTISEIZE (GASKET AN4027-1)	
	29	CHECK FUEL INJECTION INLET SCREENS	
	30	CHECK CONDITION OF ALTERNATOR, BELT GATES 7320 AND WIRING, CHECK BELT TENSION	
	31	CHECK CONDITION OF STARTER AND CONNECTIONS, LUBRICATE GEAR (DRY SILICON)	
	32	INSPECT EXHAUST SYSTEM FOR LEAKS, MOUNTS FOR SECURITY, CRACKS, TORQUE, LUBRICATE JOINTS (MOUSE MILK)	
	33	INSPECT MUFFLERS, HEAT SHROUD, SCAT TUBING	
PARTS USED		QTY 1 - GASKET 06E19769-1.00 (OIL SCREEN) QTY 8 - PHILLIPS VICTORY 20W50 QTY 1 - CHAMPION CH48110 (OIL FILTER) QTY 1 - 0.5 QUART CAMGUARD QTY 12 - GASKET AN4027-1/ M674 (18MM)	

	34	CHECK ENGINE BAFFLES AND BAFFLE ATTACHMENTS	
	35	CHECK BREATHER TUBE FOR OBSTRUCTIONS, SECURITY	
	36	CHECK CRANKCASE FOR LEAKS, CRACKS, LOOSE FASTENERS, ETC.	
	37	CHECK ENGINE MOUNTS FOR SECURITY, CHECK TORQUE ON FIREWALL ATTACHMENT NUTS/BOLTS	
	38	CHECK ENGINE MOUNT BUSHINGS FOR DETERIORATION	
	39	CHECK FIREWALL PENETRATION	
	40	CHECK THROTTLE, MIXTURE, ALTERNATE AIR, PROP CONTROLS FOR SECURITY AND PROPER OPERATION (FULL/CUTOFF), INSPECT ALL ATTACH HARDWARE FOR SECURITY (LPS#2)	
	41	CHECK ALL INLET CLAMPS, GASKETS AND INLET TUBE BOLT TORQUE	
	42	LUBRICATE ENGINE CONTROLS (DROP OR TWO OF OIL ON FUEL SERVO SHAFTS) CALIFORNIA PUSH/PULL DOES NOT RECOMMEND LUBRICATING CABLES	
	43	CHECK ENGINE GROUND CABLES FOR ATTACHMENT AND SECURITY	
	44	CHECK WIRE BUNDLES FOR CHAFFING AND SECURITY	
CABIN GROUP			
	1	INSPECT DOOR HINGES, STRUTS, LATCHES, LOCKING MECHANISM, OPERATION	
	2	LUBRICATE DOOR HINGE MOUNTS (LPS#2)	
	3	INSPECT GLASS INSTALLATION	
	4	REMOVE SEATS, UNDER-SEAT INSPECTION PANELS, CENTER CONSOLE, TUNNEL COVER, FLAP TORQUE TUBE COVER PANELS	
	5	INSPECT GEAR ATTACH BOLTS	
	6	CHECK FUEL ON-OFF VALVE FOR PROPER OPERATION AND MARKING	
	7	CHECK FUEL SYSTEM LINES, PUMP, B-NUTS FOR SECURITY, CHAFING, LEAKS	
	8	REMOVE FUEL FILTER AND CLEAN	
	9	CHECK FOR FUEL LEAKS (PUMP ON)	
	10	CHECK CONTROL STICKS, BEARINGS, BOLTS, JAM NUTS, PUSHRODS, TORQUE TUBES FOR PROPER INSTALLTION AND SECURITY. LUBRICATE BEARINGS AND BUSHINGS (LPS #2)	
	11	INSPECT LANDING GEAR WELDMENT (SL-00033)	
	12	CHECK ELEVATOR BELL CRANKS AND HORNS. LUBRICATE BEARINGS AND BUSHINGS (LPS #2)	
	13	CHECK ELEVATOR AND AILERON TRIM OPERATION	
	14	CHECK FLAP ACTUATOR ROD END AND JAM NUT	
	15	CHECK RUDDER PEDALS, CABLES, CHECK TUBES AND PEDALS FOR CRACKS, SECURITY	
	16	CHECK MASTER CYLINDERS FOR PROPER INSTALLATION, LEAKS, SECURITY	
	17	CHECK INSTRUMENTS, LINES, WIRES FOR PROPER INSTALLATION AND SECURITY	
	18	CHECK FUSE BLOCK AND ESS OPERATION	
	19	CHECK ALTIMETER / TRANSPONDER CERTIFICATION DATE	
	20	INSTALL SEATS, UNDER-SEAT INSPECTION PANELS, CENTER CONSOLE, TUNNEL COVER, FLAP TORQUE TUBE COVER PANELS	
	21	CHECK OPERATION OF INTERIOR LIGHTING	
	22	CHECK SEAT, SEAT BELTS, ATTACHMENTS AND BOLTS	
FUSELAGE GROUP			
	1	REMOVE ALL INSPECTION PANELS AND TAIL FAIRINGS	
	2	CHECK GENERAL CONDITION OF SKIN	
	3	REMOVE BAGGAGE COMPARTMENT COVERS AND BULKHEADS	
	4	SWAP BATTERIES	
	5	CHECK BATTERY TERMINALS ARE TIGHT, CLEAN. CABLES FOR DAMAGE, SECURITY	
	6	CHECK WIRING FOR DAMAGE AND SECURITY	
	7	CHECK ANTENNAS, WIRES AND CONNECTIONS	
	8	CHECK AND SERVICE E.L.T. BATTERY GOOD UNTIL _____	
	9	CHECK PITOT STATIC AND TRANSPONDER CERTIFICATION GOOD UNTIL _____	
	10	CHECK BULKHEADS AND STRINGERS FOR DAMAGE	
	11	CHECK EMPENNAGE SURFACES FOR DAMAGE	
	12	CHECK STATIC PORTS	
	13	CHECK VERTICAL FIN ATTACHMENT BOLTS TORQUE	
	14	CHECK HORIZONTAL STABILIZER ATTACHMENT BOLTS TORQUE	
	15	CHECK RUDDER CONTROL STOPS AND BRACKET FOR CRACKS	
	16	CHECK RUDDER HINGES, HORN, ATTACHMENTS, CABLE, AND COTTER PINS	
	17	LUBRICATE RUDDER ROD END BEARINGS (LPS #2) AND TORQUE BOLTS	
	18	CHECK ELEVATOR CONTROL STOPS	
	19	CHECK ELEVATOR HINGES, HORN, COUNTERBALANCE WEIGHTS, AND ATTACHMENTS	
	20	LUBRICATE ELEVATOR ROD END BEARINGS (LPS #2) AND TORQUE BOLTS	
PARTS USED			

	21	CHECK ELEVATOR TRIM TAB, ARM, ACTUATOR ARM AND COTTER PINS	
	22	CHECK ELEVATOR TRAVEL IS WITHIN LIMITS UP 30 DEGREES DOWN 25 DEGREES	
	23	CHECK ELEVATOR TRIM FOR INSTALLATION, SECURITY AND OPERATION	
	24	CHECK F-1010 REENFORCEMENT	
	25	CHECK AUTOPILOT SERVO INSTALLATION	
	26	RE-INSTALL PANELS AND TAIL FAIRING	
	27	VERIFY SERVICE BULLETINS COMPLIANCE	
WING GROUP			
	1	REMOVE INSPECTION PLATES AND WING ROOT FAIRINGS	
	2	CHECK WING SKINS FOR DAMAGE, DISTORTION, SMOKING OR LOOSE RIVETS	
	3	CHECK WING SPAR ATTACH BOLTS (MAIN AND AFT SPAR) FOR PROPER TORQUE	
	4	INSPECT TANK ATTACH ANGLES (SL-00003)	
	5	CHECK FOR LEAKS AT FUEL TANK ACCESS PLATES, FUEL LEVEL SENSORS	
	6	CHECK FUEL SENDER WIRES AND FUEL VENT LINES	
	7	CHECK FLAP SYSTEM FOR SLOP	
	8	CHECK FLAP CONDITION AND SECURITY, LUBRICATE HINGES AND BEARINGS (LPS #2)	
	9	CHECK FLAP BOLTS AND COTTER PINS	
	10	CHECK FLAP OPERATION FOR BINDING	
	11	CHECK AILERON HINGES, BELLCRANKS, PUSHRODS FOR OPERATION, LUBRICATE HINGES AND BEARINGS (LPS #2)	
	12	CHECK AILERON BOLTS AND COTTER PINS	
	13	CHECK AUTOPILOT INSTALLATION FOR SECURITY & PROPER INSTALLATION	
	14	CHECK PITOT TUBE AND LINES FOR DAMAGE AND SECURITY	
	15	CHECK OAT PROBE	
	16	CHECK WINGTIPS FOR DAMAGE AND SECURITY	
	17	CHECK OPERATION OF LANDING LIGHTS	
	18	CHECK OPERATION OF STROBE LIGHTS	
	19	CHECK OPERATION OF POSITION LIGHTS	
	20	RE-INSTALL INSPECTION PANELS AND FAIRINGS	
	21	INSPECT FUEL TANK INTERNALLY	
	22	CHECK CONDITION OF FUEL CAPS, O RINGS, AND SUMP DRAINS	
	23	RE-INSTALL INSPECTION PLATES AND FAIRINGS	
LANDING GEAR			
	1	PLACE AIRCRAFT ON JACKS	
	2	REMOVE WHEEL PANTS AND GEAR FAIRINGS	
	3	CHECK TIRES FOR WEAR AND DAMAGE	
	4	REMOVE MAIN WHEELS INSPECT FOR CRACKS, CORROSION, GENERAL CONDITION	
	5	CLEAN WHEEL/BRAKE ASSEMBLY WITH BRAKE CLEANER	
	6	CHECK BRAKE LININGS AND DISCS FOR WEAR	
	7	CHECK BRAKE LINES, CALIPERS FOR LEAKS, SECURITY AND CONDITION	
	8	CHECK WHEEL FAIRINGS AND MOUNTING PLATES FOR CRACKS AND SECURITY, CHECK ALL BOLTS FOR PROPER SECURITY/TORQUE.	
	9	CLEAN / REPACK MAIN WHEEL BEARINGS AND BUSHINGS	
	10	RE-INSTALL WHEELS, BRAKES, WHEEL SHAFT NUTS 18-26 FOOT POUNDS, BEARING MUST NOT SPIN (REPLACE COTTER PINS, MS24665-292)	
	11	REMOVE AIRCRAFT FROM JACKS	
	12	PLACE 50 POUNDS OF SAND ON EACH SIDE OF HORIZONTAL STAB	
	13	USE RATCHET STRAP TO RAISE NOSE WHEEL OFF GROUND	
	14	CLEAN NOSE GEAR/WHEEL WITH BRAKE CLEANER	
	15	CLEAN / REPACK NOSE WHEEL BEARINGS AND BUSHINGS	
	16	INSPECT / LUBRICATE NOSE WHEEL SWIVEL	
	17	CHECK NOSE WHEEL BOLT, BRACKETS, BREAKOUT FORCE 26 FOOT POUNDS, STOP ORIENTATION	
	18	INSPECT / ADJUST ELASTOMER PAD GAP (NONE), ADD U-00022 ELASTOMER SPACERS (MAX 3)	
	19	CHECK ALL LANDING GEAR UPPER RETAINING BOLTS FOR PROPER TORQUE	
	20	LOWER NOSE GEAR AND REMOVE SAND BAGS	
	21	CHECK BRAKE FLUID LEVEL (CITGO ATF)	
	22	INSPECT WHEEL PAINT ATTACH POINTS AND INSTALL WHEEL PANTS AND GEAR FAIRINGS	
	23	CHECK TIRE PRESSURES (45PSI) LEFT _____ NOSE _____ RIGHT _____	
PARTS USED			

OPERATION CHECK			
	1	CHECK BOOST PUMP PRESSURE	
	2	CHECK ALTERNATOR OUTPUT	
	3	CHECK AVIONIC EQUIPMENT OPERATION	
	4	CHECK OIL PRESSURE	
	5	CHECK MANIFOLD PRESSURE	
	6	CHECK PROPELLER OPERATION AND SMOOTHNESS	
	7	CHECK MAG DROP AT 2100 RPM LEFT _____ RIGHT _____	
	8	CHECK STATIC R.P.M	
	9	CHECK IDLE R.P.M.	
	10	CHECK MAG SWITCH WIRES FOR GROUNDING	
	11	CHECK THROTTLE AND MIXTURE CONTROL OPERATION	
	12	CHECK IDLE MIXTURE	
	13	LEAK CHECK ENGINE	
	14	RE-INSTALL ENGINE COWLS	
	15	CHECK FLIGHT CONTROL OPERATION (AILERON, ELEVATOR, RUDDER, TRIM)	
GENERAL			
	1	FINAL CHECK FOR CLEANLINESS, TOOLS REMOVED, ETC.	
	2	TEST G5 BACKUP BATTERY	
	3	AIRCRAFT PAPERS IN PROPER ORDER	A. REGISTRATION
			B. AIRWORTHINESS
			C. OPERATING LIMITS
			D. WEIGHT & BALANCE
NOTES			

SIGNATURE OF INSPECTOR _____

CERTIFICATE NUMBER _____

DATE OF SIGN-OFF _____

General Torque Settings

AN Bolt Size	Bolt Size- Threads Per Inch	Standard Nuts AN310, AN315, AN365		Self Locking Nut MS21042-3, MS21042-4	
		INCH POUNDS	FOOT POUNDS	INCH POUNDS	FOOT POUNDS
AN3	#10-32	20-25	1.6-2.0	28	2.3
AN4	1/4-28	50-70	4.2-5.8	85	7.0
AN5	5/16-24	100-140	8.3-11.6		
AN6	3/8-24	160-190	13.3-15.8		
AN7	7/16-20	450-500	37.5-41.7		
AN8	1/2-20	480-690	40.0-57.5		
AN9	9/16-18	800-1000	66.6-83.3		
AN10	5/8-18	1100-1500	91.6-125.0		
MS21042-3	10-32	28	2.3		
MS21042-4	1/4-28	85	7.0		

Wheel Assembly Torque Settings

Component	Torque
Bolts using NL1/4 NordLoc Washer	100 in-lb
Bolts using NL8 NordLoc Washer	120 in-lb
AN363-528	120 in-lb
.25-20CRLOCK Nut	100 in-lb

Engine Torque Settings

Rocker boxes 50 in/lbs
Spark Plugs 21 foot/pounds
P-Mag Rotor 16 foot/pounds
Exhaust Stack 140 in/lbs

Lycoming Recommendations:

1/4 in. 8 ft/lbs 96 in/lbs
 5/16 in 17 ft/lbs 204 in/lbs
 Plugs 30 to 35 ft/lbs
 Engine Mount bolts 40 in/lbs
 Magneto Nuts (STD-1410) 17 ft/lbs

General Torque settings STEEL (fine threads):

AN3 (3/16 in) 30-40 in/lbs
 AN4 (1/4 in) 50-60 in/lbs
 AN5 (5/16 in) 100-140 in/lbs
 AN6 (3/8 in) 160-190 in/lbs

General Torque settings ALUMINIUM ALLOY (coarse threads lower setting):

3/16 in 5-6 in/lbs
 1/4 in 8-10 in/lbs
 5/16 in 19 -22 in/lbs

Timing Mags

TDC Setpoint: - see Setup

1. Move engine to flywheel TC mark	
2. Press/hold the Config Button while you turn bus power ON	
3. Continue hold until LED turns BLUE - then release.	LED will start blinking BLUE/GREEN
4. Press/hold Config Button for 6 seconds , until LED turns WHITE – then release	
5. TC is now stored. Ignition will reboot in normal mode and settle at YELLOW (Blue/Green cycling) LED with tone	

Check Mag Firing Positions

1. Rotate engine 1 or 2 turns	
2. Check 29 degrees (max)	BLUE LED
3. Check 20 degrees (min)	WHITE LED
4. Check TDC	YELLOW LED with tone

Change Min/Max settings

1. Position engine at Min or Max (setting Min resets Max)	Confirm BLUE or WHITE LED (NOT GREEN LED)
2. Press and hold the Config Button	Rotate Engine to new Min or Max position
3. Release Config Button	Recheck Set Points

Checking Engine Direction

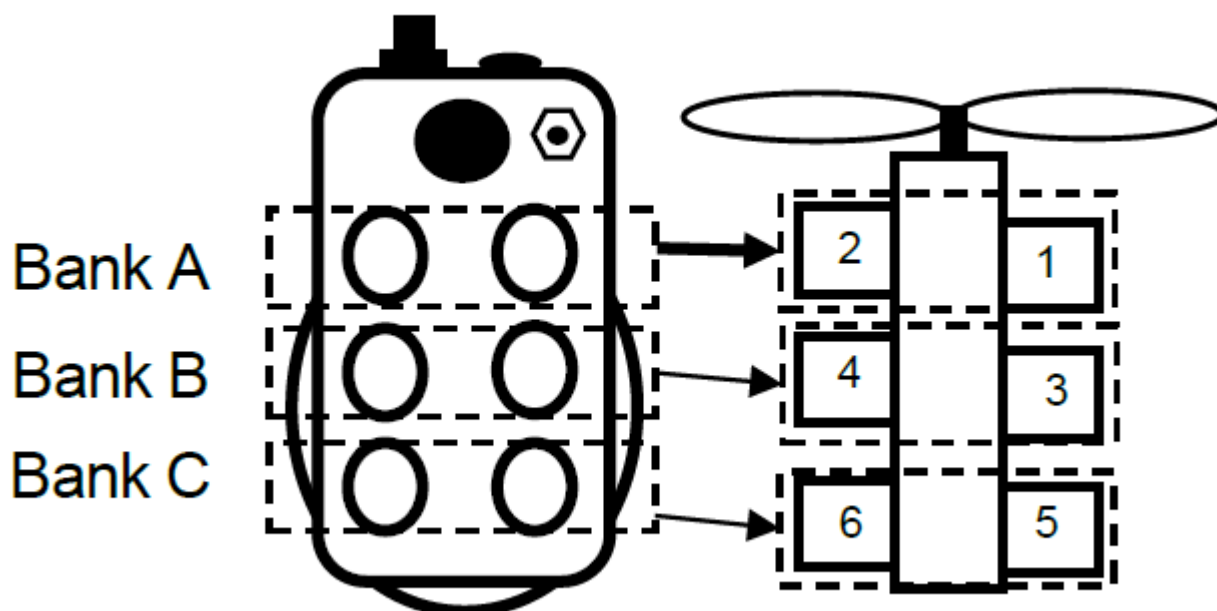
On Power up	LED will provide a Color-Burst (in the first ½ second) consisting of WHITE Followed by either RED or GREEN (indicating DIR setting)
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Change Engine Direction

1. Position Engine at TDC	YELLOW LED and Tone
2. Press and hold the Config Button for 6 seconds , LED will flash RED during the hold, then turn WHITE – then release	After release, with WHITE then RED or WHITE then GREEN depending on DIR setting (Lycoming is RED)
3. Set TDC and check set points	

Lycoming – RED Direction LED (Not GREEN LED)

Note: Changing ignition DIR (DIR change erases all other settings - factory default)



SB Number	Issue Date	Description	Compliance
SB 96-10-1	10/1/1996	Filtered Airbox	Included with kit, completed 1/26/2021
SB 02-12-1	12/1/2002	Inspect Hoses	Does not apply - Used TS Flightline Hoses
SB 04-2-1	2/1/2004	Inspect Fuel Tanks	Inspected 2/23/2021
SB 06-2-3	2/3/2006	RV-10 Vertical Stabilizer	Included with kit, completed 11/10/2020
SB 06-9-20	9/20/2006	Trim Cable Anchor	Does not apply - Used iflyrv10 billet brackets
SB 07-4-12	4/12/2007	Securing flap motor rod end bearing	Completed 1/31/2021
SB 08-6-1	6/1/2008	F-1010 bulkhead reinforcement	Included with kit, completed 11/4/2020
SB 10-1-4	1/4/2010	Install Door Safety Latch	Does not apply - Used PlaneAround 3rd Door Latch
SB 11-9-13	9/13/2011	Fuel Tank Slosh Inspection	Does not apply, only Proseal used on tanks
SB 14-8-29	8/29/2014	Engine Mount Elastomer Plate	Does not apply, only applies to pre-8/13/2014 kits
SB 14-12-22	12/22/2014	Nose Stop Flange Installation (before further flight)	Inspected, installed correctly 11/21/2020
SB 16-03-28	3/28/2016	Cracking of wing aft spar web at the inboard aileron hinge bracket attach rivets.	Included with QB kit, completed 10/1/2020
SB 18-03-30	3/30/2018	Elevator control stop inspection	Completed 12/4/2020
SB 18-05-21	5/21/2018	Proper installation of gauge plug in fuel spider	Installed, 1/29/2021
SB 19-09-09	2/26/2020	RV-10 updated nose gear leg	Included with kit, completed 11/21/2020
SB-00006	5/6/2020	Potential leaking of Kavlico pressure sensors (Garmin SB 2069 Rev A)	Restrictors installed, inspected 3/11/2022
SB-00002	11/5/2020	Change to RV-10 bottom rudder hinge bracket	Included with kit, completed 11/16/2020
SL-00033	2/4/2021	Inspection Landing Gear Bracket	Inspected 3/11/2022
SL-00003	2/4/2021	Inspection (possible removal) Tank Attach Bracket (optional)	Inspected 3/11/2022