

**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

ENGINE GROUP			INSP.
	1	REMOVE SPINNER	
	2	REMOVE ENGINE COWLS	
	3	REMOVE SPARK PLUGS AND ADAPTERS	
	4	<b>COMPRESSION TEST</b> /80 HOT _____ COLD _____ 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____	
	5	DRAIN ENGINE OIL (WARM) – <i>O-rings for Saf-Air drain, QTY 2 MS28775-011 and QTY 1 MS28775-012</i>	
	6	REMOVE AND INSPECT OIL SUMP SCREEN FOR DEBRIS – <i>QTY1 06E19769-1.00</i>	
	7	REMOVE OIL FILTER, CUT OPEN AND INSPECT FILTER FOR DEBRIS	
	8	INSTALL OIL FILTER – <i>QTY 1 CHAMPION CH48110</i>	
	9	FILL ENGINE OIL – <i>QTY 8 PHILLIPS VICTORY 20W50 and 0.5 QUART CAMGUARD</i>	
	10	CHECK P-MAG TIMING (BEFORE REMOVAL) TC, MIN, AND MAX – <i>TRUE TDC, FEEL AIR SPARKPLUG HOLE</i> <b>TIMING (2.42° per tooth)</b> LEFT RIGHT WHITE (MAX), 29° BLUE (MIN), 23°(25°-7/8 tooth) RED/GREEN (TDC)	
	11	BORESCOPE CYLINDERS AND CAPTURE PICTURES (CYL WALL, VALVE STEMS, VALVE EDGES)	
	12	CHECK OIL SENDER UNIT FOR LEAKS AND SECURITY	
	13	CLEAN AND CHECK OIL COOLER FOR CRACKS AND SECURITY	
	14	CHECK OIL COOLER MOUNTINGS & BAFFLES FOR CRACKS AND SECURITY	
	15	INSPECT FUEL INJECTOR LINES / NOZZELS FOR DEFECTS AND SECURITY	
	16	CHECK FUEL SYSTEM FOR EVIDENCE OF LEAKAGE, DETERIORATION, SECURITY	
	17	CHECK FUEL SERVO BOLTS	
	18	CHECK FUEL PUMP INLET/OUTLET FITTINGS ARE TIGHT AND SECURE	
	19	CHECK FUEL LINES FOR AGE, DETERIORATION, LEAKS AND SECURITY	
	20	CHECK ALL OIL LINES FOR AGE, DETERIORATION, LEAKS AND SECURITY	
	21	REMOVE / CLEAN / OIL / REINSTALL ( <i>K&amp;N E-3450</i> ) AIR FILTER	
	22	INSPECT AIRBOX AND ALTERNATE AIR DOOR FOR CRACKS, SECURITY	
	23	CHECK CONDITION OF ALTERNATOR, BELT ( <i>GATES 7320</i> ) AND WIRING, CHECK BELT TENSION	
	24	CHECK CONDITION OF STARTER AND CONNECTIONS, LUBRICATE GEAR (DRY SILICON)	
	25	REMOVE P-MAG - CHECK OIL LEAKAGE, SHAFT PLAY, AND TEMP SENSOR (500 HOUR OVERHAUL)	
	26	CHECK PLUG WIRES (180 OHM PER FOOT), INSULATORS, AND P-LEADS – <i>COAT DOW 4</i>	
	27	INSTALL P-MAG, TORQUE 17 FOOT POUNDS – <i>QTY 2 LW-12681</i>	
	28	INSPECT / CLEAN OR REPLACE SPARK PLUGS (5K OHM) – <i>QTY 12 NGK BR7ES (P/N: 5122)</i> REPLACE EVERY 125 HOURS - Spark plugs last changed 290.8 / 337.8 hours ( <b>due 415.8</b> )	
	29	INSPECT / CLEAN SPARK PLUG ADAPTERS	
	30	GAP / INSTALL <b>TOP</b> SPARK PLUGS (0.031"), 21 FOOT/POUNDS, ANTISEIZE – <i>QTY 6 GASKET AN4027-1, (FLAT SIDE TO THE CYLINDER)</i>	
	31	SET TIMING - TC (TDC) , MIN (23°(25°-7/8 tooth)), AND MAX (29) TIMING – <i>TRUE TDC, FEEL AIR FIND TDC</i>	
	32	CHECK MAG SWITCH WIRES FOR GROUNDING	
	33	GAP / INSTALL <b>BOTTOM</b> SPARK PLUGS (0.031"), 21 FOOT/POUNDS, ANTISEIZE – <i>QTY 6 GASKET AN4027-1, (FLAT SIDE TO THE CYLINDER)</i>	
	34	CHECK FUEL INJECTION INLET SCREENS	
	35	CHECK CONDITION OF STARTER AND CONNECTIONS, LUBRICATE GEAR – <i>DRY SILICON</i>	
	36	INSPECT EXHAUST SYSTEM FOR LEAKS, MOUNTS FOR SECURITY, CRACKS, TORQUE, LUBRICATE JOINTS – <i>MOUSE MILK</i>	
	37	INSPECT MUFFLERS, HEAT SHROUD, SCAT TUBING	
		<i>QTY 1 - GASKET 06E19769-1.00 (OIL SCREEN) QTY 8 - PHILLIPS VICTORY 20W50</i> <i>QTY 12 - GASKET AN4027-1/ M674 (18MM) QTY 1 - 0.5 QUART CAMGUARD</i> <i>QTY 2 - LW-12681 MAG GASKET QTY 1 - CHAMPION CH48110</i>	

	38	CHECK ENGINE BAFFLES AND BAFFLE ATTACHMENTS	
	39	CHECK BREATHER TUBE FOR OBSTRUCTIONS, SECURITY	
	40	CHECK CRANKCASE FOR LEAKS, CRACKS, LOOSE FASTENERS, ETC.	
	41	CHECK ENGINE MOUNTS FOR SECURITY, CHECK TORQUE ON FIREWALL ATTACHMENT NUTS/BOLTS	
	42	CHECK ENGINE MOUNT BUSHINGS FOR DETERIORATION	
	43	CHECK FIREWALL PENETRATION	
	44	CHECK THROTTLE, MIXTURE, ALTERNATE AIR, PROP CONTROLS FOR SECURITY AND PROPER OPERATION (FULL/CUTOFF), INSPECT ALL ATTACH HARDWARE FOR SECURITY – LPS#2	
	45	CHECK ALL INLET CLAMPS, GASKETS AND INLET TUBE BOLT TORQUE	
	46	LUBRICATE ENGINE CONTROLS (DROP OR TWO OF OIL ON FUEL SERVO SHAFTS) CALIFORNIA PUSH/PULL DOES NOT RECOMMEND LUBRICATING CABLES	
	47	CHECK ENGINE GROUND CABLES FOR ATTACHMENT AND SECURITY	
	48	CHECK WIRE BUNDLES FOR CHAFFING AND SECURITY	
	49	CLEAN ENGINE	
	50	INSPECT ENGINE COWLS, INSPECT COWL PINS AND EYELETS	
<b>PROPELLOR GROUP</b>			
	1	INSPECT BULKHEAD FOR DEFECTS, CRACKS, LOOSE / SMOKING RIVETS	
	2	CHECK BLADE MOVEMENT - FORE/AFTER PLAY, IN/OUT PLAY, END PLAY, TWIST	
	3	INSPECT BLADES FOR SECURITY, NICKS, CRACKS OR OTHER DAMAGE ( <i>INSTRUCTIONS BELOW</i> )	
	4	INSPECT PROP HUB FOR EVIDENCE OF DAMAGE, CRACKS OR CORROSION	
	5	CHECK CRANKCASE NOSE SEAL	
	6	CHECK ALL MOUNT HARWARE FOR DEFECTS AND SECURITY	
	7	CHECK ATTACH BOLTS FOR TORQUE / SAFETY WIRE	
	8	LUBRICATE AS PER MANUAL – NYCO GN3058, USE SAFETY WIRE TO CLEAR GREASE HOLE	
	9	INSPECT COMPLETE ASSEMBLY	
<b>CABIN GROUP</b>			
	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 AND UPPER RETAINING BOLTS FOR PROPER TORQUE	
	6	INSPECT LANDING GEAR WELDMENT (SL-00033)	
	7	CHECK FUEL ON-OFF VALVE FOR PROPER OPERATION AND MARKING	
	8	CHECK FUEL SYSTEM LINES, PUMP, B-NUTS FOR SECURITY, CHAFING, LEAKS	
	9	REMOVE FUEL FILTER, INSPECT, CLEAN ND REINSTALL	
	10	CHECK FOR FUEL LEAKS (PUMP ON FOR 15 SECONDS)	
	11	CHECK CONTROL STICKS, BEARINGS, BOLTS, JAM NUTS, PUSHRODS, TORQUE TUBES FOR PROPER INSTALLTION AND SECURITY. LUBRICATE BEARINGS AND BUSHINGS – LPS#2	
	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	
<b>FUSELAGE GROUP</b>			
	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. ( <i>SELF TEST INSTRUCTIONS BELOW</i> ) BATTERY GOOD UNTIL <b>April 2027</b>	
	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	TORQUE BOLTS AND LUBRICATE RUDDER ROD END BEARINGS	
	18	CHECK ELEVATOR CONTROL STOPS	
	19	CHECK ELEVATOR HINGES, HORN, COUNTERBALANCE WEIGHTS, AND ATTACHMENTS	
	20	TORQUE BOLTS AND LUBRICATE ELEVATOR ROD END BEARINGS – LPS#2	
	21	CHECK ELEVATOR HINGE BRACKET SPAR INSPECTION (SB-00036)	
	22	CHECK ELEVATOR SKIN CRACKS (SB-00043)	
	23	CHECK ELEVATOR TRIM TAB, ARM, ACTUATOR ARM AND COTTER PINS	
	24	CHECK ELEVATOR TRAVEL IS WITHIN LIMITS - UP 30 DEGREES DOWN 25 DEGREES	
	25	CHECK ELEVATOR TRIM FOR INSTALLATION, SECURITY AND OPERATION	
	26	CHECK PITCH AND YAW AUTOPILOT SERVO INSTALLATION	
	27	RE-INSTALL PANELS AND TAIL FAIRING	
<b>WING GROUP</b>			
	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 ROLL 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	
<b>LANDING GEAR</b>			
	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	CHECK BRAKE CALIPER PINS, TIGHTEN IF NEEDED	
	11	USE Q-TIP/ACETONE TO CLEAN CALIPER PINS AND RECEPTICALS	
	12	RE-INSTALL WHEELS, BRAKES, WHEEL SHAFT NUTS 18-26 FOOT POUNDS, BEARING MUST NOT SPIN - REPLACE COTTER PINS, QTY 2 MS24665-292 – USE 2 5/16-24X4” BOLTS TO ALIGN BRAKE PADS	
	13	REMOVE AIRCRAFT FROM JACKS	
	14	PLACE 50 POUNDS OF SAND ON EACH SIDE OF HORIZONTAL STAB	
	15	USE RATCHET STRAP TO RAISE NOSE WHEEL OFF GROUND	
	16	CLEAN NOSE GEAR/WHEEL WITH BRAKE CLEANER	



SIGNATURE OF INSPECTOR \_\_\_\_\_

CERTIFICATE NUMBER \_\_\_\_\_

DATE OF SIGN-OFF \_\_\_\_\_

**Necessary Consumables**

<i>Consumable</i>	<i>QTY</i>	<i>Part Number</i>
Oil Screen Gasket	1	06E19769-1.00
Oil Filter	1	Champion CH48110
Oil	8	Phillips 66 Victory AW 20W/50
Oil Additive	1	Canguard 08-07096
Magneto Gasket	2	LW-12681
Spark Plug Washers	12	AN4027-1/ M674 (18MM)
Main Gear Wheel Cotter Pin	2	MS24665-292
Nose Wheel Cotter Pin	1	MS24665-360
Electrical Dielectric	1	Dow 4
General Lubricant	1	LPS #2
Anti-seize Lubricant	1	Permatex Copper Anti-Seize
Propeller Grease	1	Nyc0 GN3058
Wheel Bearing Grease	1	AeroShell 22
Nose Wheel Pivot Grease	1	Mobile1 Synth

**On-Condition Consumables**

<i>Consumable</i>	<i>QTY</i>	<i>Part Number</i>
O-rings for Saf-Air drain	2	MS28775-011
O-rings for Saf-Air drain	1	MS28775-012
Spark Plugs	12	NGK BR7ES (P/N: 5122)
Air Filter	1	K&N E-3450
Alternator Belt	1	Gates 7320
Elastomer Spacers	3	U-00022
Brake Fluid	1	CITGO ATF

## Savvy Cylinder Borescope Inspection

1. Top of piston (watch piston to bottom)
2. Exhaust valve head
3. Intake valve head
4. Exhaust valve seat (piston mid stroke)
5. Exhaust valve guide (rock crankshaft to full open valve)
6. Intake valve seat (piston mid stroke)
7. Intake valve guide (rock crankshaft to full open valve)
8. 12'clock Cylinder wall (piston bottom of stroke)
9. 3'clock Cylinder wall (piston bottom of stroke)
10. 6'clock Cylinder wall (piston bottom of stroke)
11. 9'clock Cylinder wall (piston bottom of stroke)

### Notes:

Cord towards intake valve  
Push the scope into the cylinder, as it is bent around towards the seat

## Champion Oil Filter

1. Inspect magnet, normally has grey sludge and NO chunks of metal
2. Inspect filter pleats, look for major changes amount or type of debris
3. Check the housing for debris
4. Using an aerosol brake cleaner and spray from the **inside** the filter element to flush the debris off of the filter element
5. Spray at an angle from the **outside** of the filter element (from the top) to wash the debris off
6. Spray the **bottom** and **top** of the filter
7. Spray at an angle from the **outside** of the filter element (from the bottom) to wash the debris off
8. Give one more quick spray from the **inside** the filter element to flush
9. Spray soapy water to saturate the **inside** and **outside** of filter element
10. Rinse with a strong flow of water (hose) from the **inside** of the element
11. Use compressed air to blow at an angle from the **inside** of the element
12. Use compressed air to blow at an angle from the **outside** of the element wiggling as each pleat is blown off
13. IF there is still stuck debris, use a soft tooth brush to loosen the debris and repeat steps 5-13
14. Clean the housing and reinstall the O-ring
15. Install the filter element retaining spring
16. Install the element, pushing down and rotating clockwise into the locked position
17. Lube the O-ring with a light coating of oil
18. Tighten filter by hand
19. Tighten an additional  $\frac{1}{4}$  turn with a wrench

## Airflow Performance Fuel Filter Cleaning

1. Un-screw the end cap of the filter assembly with a 1  $\frac{1}{2}$ " wrench while holding the other side of the housing with a vise.
2. The filter element can be removed from the filter cap and cleaned in mineral spirits then blown dry with compressed air.
3. Inspect the seal O-rings. These may be re-used if in satisfactory condition.
4. Re-assemble the filter using some engine oil on the O-rings.

### Note:

Make sure the conical spring is installed as per the picture  
The filter assembly is installed back in the fuel system in the correct flow direction as designated by the arrows on the filter housing

## 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. <b>Continue hold until LED turns BLUE</b> - then release.	LED will start blinking BLUE/GREEN
4. Press/hold Config Button for <b>6 seconds</b> , 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 (to TDC Cyl 1)	
2. Check 28 degrees (max)	WHITE LED
3. Check 23 degrees (min)	BLUE LED
4. Check TDC	YELLOW LED with tone

Change Min/Max settings

1. Position engine at Min or Max ( <b>setting Min resets Max</b> )	Confirm BLUE or WHITE LED ( <b>NOT GREEN LED</b> )
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

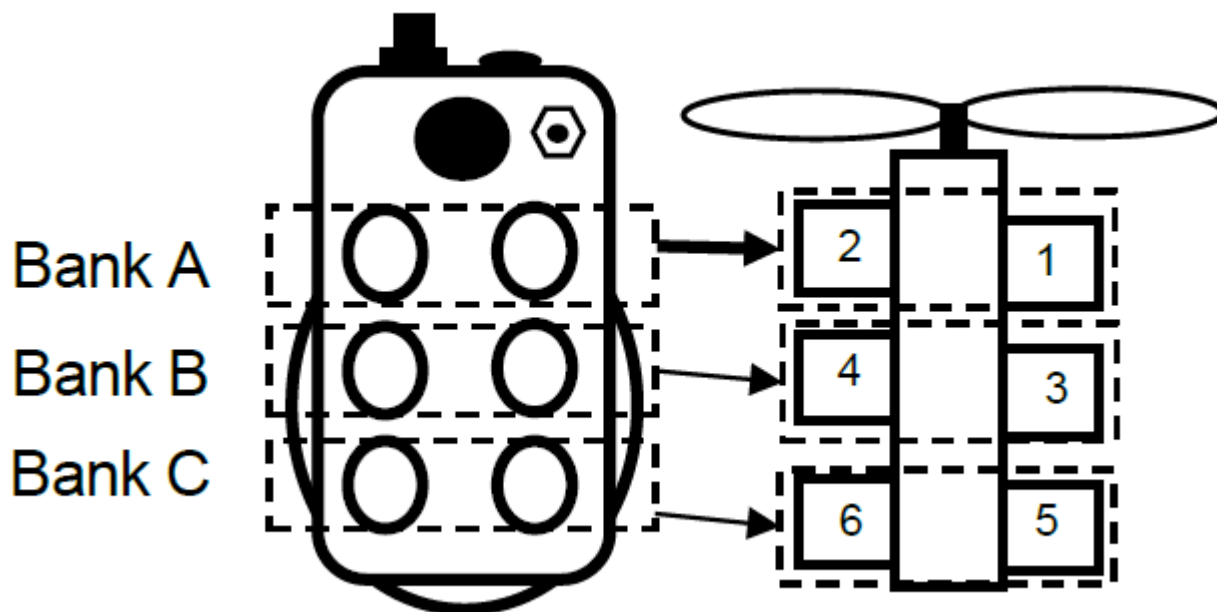
On Power up	LED will provide a Color-Burst (in the first ½ second) consisting of WHITE Followed by either RED or GREEN (indicating DIR setting)
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Change Engine Direction

1. Position Engine at TDC	YELLOW LED and Tone
2. Press and hold the Config Button for <b>6 seconds</b> , 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	

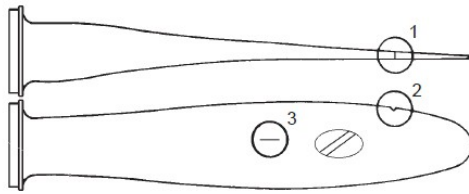
Lycoming – RED Direction LED (Not GREEN LED)

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

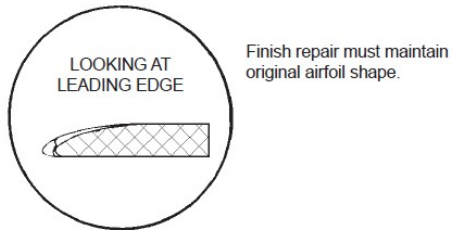




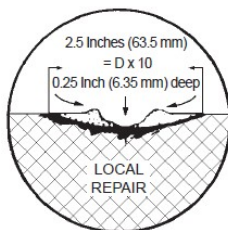
## Hartzell Propellor Inspection



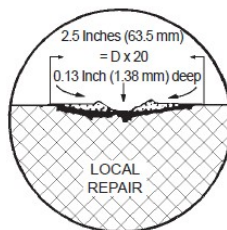
Example 1



Example 2  
LEADING EDGE



Example 3  
FACE/CAMBER



1. Blade damage repair
  - (a) Wash with solvent followed by a soap/water mixture
  - (b) Repair damage (leading or trailing edge) by removing material from the bottom of the damaged area. Remove material from this point out to both sides of the damage to form a smooth, blended depression that maintains the original shape of the blade airfoil.
  - (c) Repair damage (blade face or camber side) by removing material from the bottom of the damaged area. Remove material from this point out to both sides of the damage to form a smooth, blended depression that maintains the original shape of the blade airfoil.

**Note: Repairs that form a continuous line across the blade section (chordwise) are not permitted.**
2. After filing or sanding of the damaged area, use emery cloth to polish the area, then remove any file marks using crocus cloth.
3. Inspect the repaired area with a 10X magnifying glass.
4. Sand area to remove paint
5. Apply Alodine 1201 to unpainted area
6. Apply Sherwin Williams paint

## Constant Speed Low Pitch Blade Stop and Governor adjustments

Check Low Pitch Blade Stop:

1. Run to full throttle (flaps up and stick full back)
2. Move propellor control back, IF immediately decrease in RPM indicates governor is controlling max RPM and an adjustment is required

Adjust Low Pitch Blade Stop:

1. Cut safety wire on governor adjustment screw
2. **Mark location of governor adjustment screw**
3. Loosen governor adjustment screw lock nut
4. Back out governor adjustment screw to ensure governor isn't controlling the propellor
5. To set propellor low pitch blade angle:
  - a. Loosen Low Pitch Stop Jam Nut (clockwise to loosen)
  - b. Felt pin to mark starting location on hub and hex Low Pitch Stop thread
  - c. Make minor adjustment (each turn (IN) of the Low Pitch Stop thread is a 200RPM decrease)
  - d. Tighten Low Pitch Stop Jam Nut
  - e. Test run engine at full power
  - f. Repeat A – E until full power produces 2,650 to 2,700 RPM

Adjust Governor Stop:

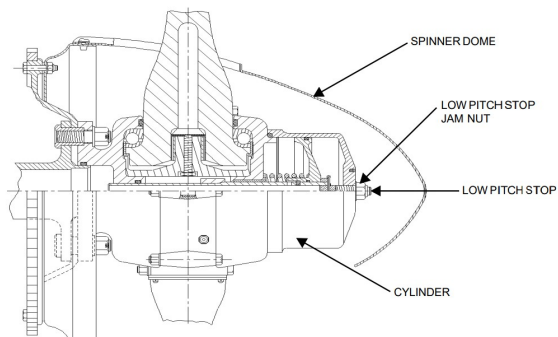
*When breaking ground on take off should see 2,690 to 2,700 RPM*

1. Loosen governor adjustment screw lock nut
2. Adjust governor adjustment screw
3. Tighten governor adjustment screw lock nut
4. Safety wire governor adjustment screw
5. Repeat 1-4 until 2,690 to 2,700 RPM is seen when breaking ground on take off)

### **NOTE:**

*If RPM is **too low**, loosen governor adjustment screw and **back out** the screw*

*If RPM is **too high**, loosen governor adjustment screw and **turn in** the screw*



## Artex 345 Self Testing

The self-test checks certain critical functions in the beacon. Results of the test are displayed by a series of indications (flash codes), where the status LED, remote switch LED and buzzer(s) activate for ½ second ON, followed by ½ second OFF.

Multiple flash codes are separated by periods of 1.0 second. If no errors are present, a 2 second flash is presented as a “system ok” indication. This is suppressed if errors are present.

The self-test also emits a 121.5 MHz 2 cycle burst which can be monitored by an AM radio

NOTE: There are four distinct indications that 406 MHz and 121.5 MHz RF power emitted and a single indication that RF power was not emitted. This is confirmed by observing the sequence of local LED pulse, remote light or horn.

- *Four pulses of ½ second of the local LED, remote light, and horn indicate RF was not emitted.*
- *A single 2 second or five, six or seven pulses of ½ second of the local LED remote light, and horn indicate RF was emitted.*

Perform the self-test using the following step:

***Testing allowed at the top of the hour until 5 minutes past the hour***

Push switch lever to “SELF-TEST” position for approximately 1 second, until LED blinks one time, then release. Error codes will begin to display after about 1 second.

*Note: Regardless of how long the ELT has been in the active state, no self-test is performed at turn off using the 2-wire switch.*

Number of Flash(es) / Beep(s)

- 1 System OK (one pulse two seconds long of the status LED, remote light, and buzzer.)
- 2 Not used
- 3 Not used
- 4 Low transmit power
- 5 No position data (possible inside of hanger)
- 6 G-switch loop missing
- 7 Battery issue
- 8 ELT programming issue

*NOTE: Note the LED activity on the cockpit remote switch. If the ELT is working properly, the LED will stay on for approximately 1 second and then turn OFF.*

*NOTE: This test also completes the requirement to check ELT controls by verifying operation of the remote switch.*

SB Number	Issue Date	Description	Compliance
<b>SB that do not apply</b>			
<a href="#">SB 02-12-1</a>	12/1/2002	Inspect Hoses	Does not apply - Used TS Flightline Hoses
<a href="#">SB 06-9-20</a>	9/20/2006	Trim Cable Anchor	Does not apply - Used iflyrv10 billet brackets
<a href="#">SB 10-1-4</a>	1/4/2010	Install Door Safety Latch	Does not apply - Used PlaneAround 3rd Door Latch
<a href="#">SB 11-9-13</a>	9/13/2011	Fuel Tank Slosh Inspection	Does not apply, only Proseal used on tanks
<a href="#">SB 14-8-29</a>	8/29/2014	Engine Mount Elastomer Plate	Does not apply, only applies to pre-8/13/2014 kits
<a href="#">SL-00047</a>	8/15/2022	Brake Caliper O-Ring Improvement	Does not apply, Matco brakes installed
<a href="#">SL-00060</a>	9/6/2022	Control Stick Cover	Choose to not address
<a href="#">SL-00062</a>	9/6/2022	Non-Standard Design Changes	Does not apply, no design changes
<a href="#">SB-00066</a>	10/21/2022	Andair fuel pump warning of no ethanol	Warning Only
<a href="#">SB-0001</a>	6/12/2023	Airflow Systems Oil Cooler Inspection	Does not apply, SN K20-4550-20 (outside of SB range)
<a href="#">SB-00090</a>	11/6/2023	Dynon Panel Runaway Trim	Does not apply, Garmin panel
<a href="#">SB-00080</a>	2/13/2024	Oil Cooler Inspection	Does not apply, SN K20-4550-20 (outside of SB range)

**SB that were addressed**

<a href="#">SB 96-10-1</a>	10/1/1996	Filtered Airbox	Included with kit, completed 1/26/2021
<a href="#">SB 04-2-1</a>	2/1/2004	Inspect Fuel Tanks	Inspected 2/23/2021
<a href="#">SB 06-2-3</a>	2/3/2006	RV-10 Vertical Stabilizer	Included with kit, completed 11/10/2020
<a href="#">SB 07-4-12</a>	4/12/2007	Securing flap motor rod end bearing	Completed 1/31/2021
<a href="#">SB 08-6-1</a>	6/1/2008	F-1010 bulkhead reinforcement	Included with kit, completed 11/4/2020
<a href="#">SB 14-12-22</a>	12/22/2014	Nose Stop Flange Installation (before further flight)	Inspected, installed correctly 11/21/2020
<a href="#">SB 16-03-28</a>	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
<a href="#">SB 18-03-30</a>	3/30/2018	Elevator control stop inspection	Completed 12/4/2020
<a href="#">SB 18-05-21</a>	5/21/2018	Proper installation of gauge plug in fuel spider	Installed, 1/29/2021
<a href="#">SB 19-09-09</a>	2/26/2020	RV-10 updated nose gear leg	Included with kit, completed 11/21/2020
<a href="#">SB-00006</a>	5/6/2020	Potential leaking of Kavlico pressure sensors (Garmin SB 2069 Rev A)	Replaced Oil and Fuel Pressure Sensors with Kavlico P255-150G-E4A 08/01/2023
<a href="#">SB-00002</a>	11/5/2020	Change to RV-10 bottom rudder hinge bracket	Included with kit, completed 11/16/2020

**SB requiring on-going inspection**

<a href="#">SL-00033</a>	2/4/2021	Inspection Landing Gear Bracket	Inspected 5/13/24
<a href="#">SL-00003</a>	2/4/2021	Inspection (optional removal) Tank Attach Bracket	Inspected 5/13/24
<a href="#">SB-00036</a>	2/28/2023	Outboard Elevator Hinge Bracket Spar Inspection	Inspected 5/13/24
<a href="#">SB-00043</a>	9/6/2023	Elevator Skin Cracks	Inspected 5/13/24

E-Mag		Description	Compliance
<a href="#">10/28/2020</a>		Replacement of gear with non-lubricated type	Replaced by Emag 6/20/2021
<a href="#">5/18/2021</a>		Sense gear, shaft key issue	Replaced by Emag 6/20/2021
5/21/2021		Periods of roughness, corrected with new firmware (V54)	Running FW 58, updated 2/2/2023
<a href="#">8/21/2021</a>		Ignition drive rotor loosened, check for 16ft/lbs torque	Checked by Emag 2/2/2023
<a href="#">7/6/2022</a>		Gold anodized inner nose column failure, return for replacement	Does not apply, black anodized
<a href="#">5/1/2023</a>		PCB Soldering Issue HW 40.04B	Does not apply, HW 40.02

## 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

**Fuel Injectors** Injector Body 40-60 in/lbs (Tighten to 40, then turn until "A" is down, tolerance one flat, and not more than, anti-seize on the NPT threads into engine  
Nozzle line B-nut 20-25 in/lbs (or seat the B-nut finger tight then tighten an additional one-half flat)

**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

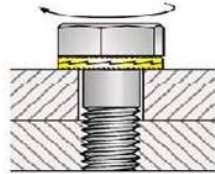
### General Torque settings ALUMINIUM ALLOY (coarse threads lower setting):

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

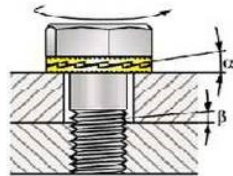
## Nord-Lock Washers



NORD-LOCK is a pair of washers with a wedge-locking action meeting DIN 25201 which is a unique method using tension instead of friction. The rise of the cams between the NORD-LOCK washers is greater than the pitch of the bolt. In addition, there are radial teeth on the opposite side. The washers are installed in pairs, cam face to cam face.



When the bolt and/or nut is tightened the teeth grip and seat the mating surfaces. The NORD-LOCK washer is locked in place, allowing movement only across the face of the cams. Any attempt from the bolt/nut to rotate loose is blocked by the wedge effect of the cams.



Here you see what happens when a bolt is untightened with a wrench. The pair of washers expand more than the corresponding pitch of the thread allows the bolt/nut to rise.

NORD-LOCK washers positively lock the fastener in a joint which is subjected to any kind of vibration or dynamic loads.

REPLACE the NORD-LOCK washers if the cam surface is worn and corners are rounded or if the pair does not seat cleanly against each other

### NORDLOCK TORQUE VALUES

MSCNL5	#10	80 in-lb	MSCNL1/4	1/4" Shoulder	100 in-lb
MSCNLX6	1/4" All-Thread	100 in-lb	MSCNL8	5/16"	120 in-lb

**Verify bolt bottoms against surface before installing NordLock**