

RV-14A

N59ER

Checklist

Revision 2.0



WEIGHTS

Maximum Takeoff	2,050 lbs
Maximum Ramp	2,050 lbs
Maximum Landing	2,050 lbs
Maximum Baggage Compartment	100 lbs
Empty	1,280 lbs
Gross	2,050 lbs

AIRSPEDS FOR SAFE OPERATION

Airspeed	
Stall – Full Flaps (V_{S0})	51 KIAS
Stall – No Flaps (V_{S1})	62 KIAS
Best Glide (V_{GL})	95 KIAS
Take-off	
Lift-off (V_{LOF})	58 KIAS
Maximum Climb	
Best Angle (V_X)	70 KIAS
Best Rate (V_Y)	95 KIAS
Cruise Climb (V_{CC})	120 KIAS
Maneuvering Speed (V_A) @2,050 lbs	130 KIAS
Maneuvering Speed (V_A) @1,900 lbs	147 KIAS
Max "G"	+ 6.0 to -3.0
Structural Cruising (V_{NO})	156 KIAS
<i>Do Not Exceed (V_{NE})</i>	<i>200 KTAS</i>
Pattern Speed	100 KIAS
Flaps Extended (V_{FE})	100 KIAS
Landing Approach	
Full Flaps	65 KIAS
No Flaps	80 KIAS
Max Demonstrated Crosswind	20 KIAS

POWER PLANT DATA

Lycoming	YIO-390-C
Type	4 CYL / FUEL INJECTED
Horsepower	215
Maximum Speed	2,700 RPM
Fuel Requirement	100 LL
Fuel Capacity	50.8 U.S Gallons
Useable	50.7 U.S Gallons

PREFLIGHT INSPECTION

COCKPIT CHECK

Control Lock	REMOVE
All Switches	OFF
Key	OFF and REMOVE
Fuel Selector	OFF

EXTERIOR CHECK

NOSE SECTION

Left Cowl	SECURE
Induction Air Intake	CLEAR
Propeller	CHECK
Tire and Nose Gear	CHECK
Chocks	REMOVE
Engine Oil	CHECK
Cap & Dipstick	SECURE
Right Cowl	SECURE
Windshield	CLEAN

RIGHT FUSELAGE

Static Air Port	CLEAR
NACA Vents	CLEAR
All Antennas	CHECK

RIGHT LANDING GEAR

Tire and Brake	CHECK
Chocks	REMOVE
Fuel Sump	DRAIN

RIGHT WING TRAILING EDGE

Flap	CHECK
Aileron	CHECK

RIGHT WING LEADING EDGE

Pitot Tube	CHECK (Remove Cover)
Tie Down	REMOVE
Wing Tip.	...CHECK
Fuel Tank	CHECK QUANTITY & SECURE
Position Light	CHECK
Fuel Vent Line	UNOBSTRUCTED

TAIL

Elevators	CHECK
Stabilizers	SECURE
Tie Down	REMOVE
Position Light	CHECK
Elevator Trim	CHECK
Antenna	CHECK

LEFT WING LEADING EDGE

Pitot Tube	CHECK (Remove Cover)
Tie Down	REMOVE
Wing Tip	CHECK
Fuel Tank	CHECK QUANTITY & SECURE
Position Light	CHECK
Fuel Vent Line	UNOBSTRUCTED
Pitot Heat.....	CHECK

LEFT FUSELAGE

Static Air Port	CLEAR
NACA Vents	CLEAR
All Antennas	CHECK

LEFT WING TRAILING EDGE

Aileron	CHECK
Flap	CHECK

LEFT LANDING GEAR

Tire and Brake	CHECK
Chocks	REMOVE
Fuel Sump	DRAIN

BEFORE STARTING

Seats.	..POSITION AND LOCK
All Panel Switches	OFF
Master	ON
Fuses	CHECK
Set Fuel in EIS	CHECK

STARTING

Seat Belts	CHECK
Fuel Selector	LEFT or RIGHT

COLD START

Mixture	FULL RICH
Throttle	OPEN
Fuel Boost Pump	ON (1 - 3 sec. then OFF)
Start Switch	START
Mixture	FULL RICH (on start)
Throttle	IDLE SPEED

ENGINE INSTRUMENTS

Oil Pressure	CHECK
Warm-up	1,000 to 1,200 RPM
Alternator	ON & CHECK

HOT START

Mixture	OFF
Throttle	FAST IDLE
Start Switch	ENGAGE
Mixture	ADVANCE SLOWLY (until engine starts running smoothly)
Fuel pump	ON (if rough)

FLOODED ENGINE

Mixture	OFF
Throttle	FULL OPEN
Starter Switch	ENGAGE
When engine starts	
Throttle	IDLE
Mixture	ADVANCE SLOWLY
Fuel pump	ON (if rough)

AFTER STARTING AND BEFORE TAXI

Avionics Master	BOTH ON
Trim Power	ON
Nav Lights	ON
Autopilot Servos Power	ON
Landing/Taxi Lights....	.AS REQUIRED
Trim	CHECK & SET
Flaps	RETRACT
Oil Pressure	25 psi (30 seconds)
Fuel Pressure	14 PSI min
EFIS	CHARTS & AUDIO AVAILABLE
Heading	CHECK
Altimeters	SET ALL ($\pm 75'$) (EFIS, Horis and Winter ALTs)
Brakes	CHECK

BEFORE TAKEOFF

Canopy	CLOSED & LATCHED
Annunciators	CHECK
Seat Belts	CHECK
Flight Controls	CHECK FREE & CORRECT
Autopilot Disconnect	CHECK
Avionics	CHECK
Transponder	ALT/SQUAWK
Nav & Strobe Lights	ON
Landing/Taxi Lights....	.AS REQUIRED
Pitot Heat	AS REQUIRED
Throttle	1,800 RPM
Prop	CYCLE
Magnetos	CHECK LEFT AND RIGHT
Mixture	CHECK
Engine Instruments	.CHECK
Throttle	IDLE
Elevator Trim	CHECK AND SET
Flaps....	.AS REQUIRED
Fuel Pump	...ON
Camera(s)	AS REQUIRED

IN FLIGHT

TAKEOFF

Mixture	FULL RICH (or as required)
Takeoff & Climb	FULL THROTTLE
Rotate	58 KIAS
Climb	95 KIAS
Best Angle	70 KIAS
Flaps	RETRACT

CLIMB

Fuel Pump	OFF (> 1,000 AGL)
CHT	$\leq 435^{\circ}$
Oil Temp	$\leq 230^{\circ}$

CRUISE

Fuel Pump	CHECK OFF
Power	SET
Mixture	LEAN
Navigational Aids	IDENTIFY
Landing/Taxi Lights....	.AS REQUIRED
Fuel Quantity	CHECK
Altimeters	SET
Oil Temp	165° to 200°
Camera(s)	AS REQUIRED

IN FLIGHT

DESCENT

Altimeters	SET
Power	AS REQUIRED
Mixture	RICHEN AS REQUIRED
Landing/Taxi Lights....	.AS REQUIRED

BEFORE LANDING

Seat Belts	SECURE
Fuel Pump	ON
Fuel Selector	CHECK / SET FULLEST TANK
Mixture	FULL RICH (as required)
Landing and Taxi Lights	AS REQUIRED
Flaps	DOWN
Airspeed	75 – 80 KIAS
Camera(s)	AS REQUIRED

GO-AROUND

Mixture	FULL RICH (or as required)
Prop	MAX RPM
Power	FULL THROTTLE or 2700 RPM
Airspeed	95 KIAS
Flaps	UP

EMERGENCY LANDING

AIRSPPEED	SLOWEST PRACTICAL
THROTTLE	IDLE
FUEL SELECTOR	OFF
MIXTURE	OFF
FLAPS	AS REQUIRED
ALL PANEL SWITCHES	OFF
SEAT BELTS	SECURE
CANOPY	UNLATCH OR JETTISON
	(prior to landing, as appropriate)

AFTER LANDING

Fuel Pump	OFF
Strobe Lights	OFF
Landing/Taxi Lights	AS REQUIRED
Flaps	FULL DOWN
Pitot Heat	OFF
Pitch Trim	SET AS REQUIRED

SHUTDOWN

Engine	IDLE TO COOL DOWN
Lights	OFF
EFIS Data Recording	STOP
Avionics 2	OFF
Avionics 1	OFF
Alternator	OFF
Prop	MAX RPM
Throttle	IDLE
Mixture	FULL LEAN
Master	OFF (after engine stop)
Key	OFF & REMOVE
Fuel Selector	OFF
Control Lock	INSTALL
Aircraft	TIE DOWN
Canopy Lock	PLACE AND LATCH
Canopy Cover	AS REQUIRED
Pitot Covers	AS REQUIRED
NACA Vent Covers	AS REQUIRED
Equipment/Aircraft issues	LOGGED

PASSENGER BRIEFING

Restraint system

- Engaging and verifying
- Tightening and loosening
- Releasing

Canopy operation

- Lock/Unlock
- Opening
- Jettison function

Controls

- Remaining clear
- Flight controls
 - Stick functions
 - Pedal functions
- PIC
- Positive transfer of flight controls
- Engine controls functions
- Fuel selector

Avionics

- Stick buttons operation
- Panel PTT operation
 - When it's okay to speak
- Headset operation
- Intercom operation
- Radio operation
 - Including emergency usage
- EFIS functions
- ELT emergency usage
- Transponder emergency usage

Environmental

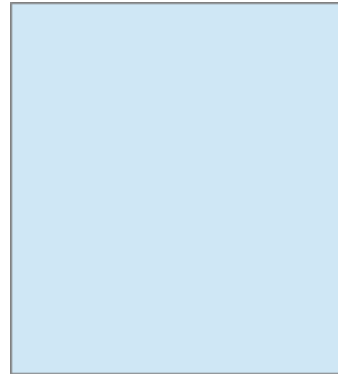
- Heater operation
- Air vent operation
- Airsickness bag location

Fire extinguisher locations and use

Checklist and POH location

Smoking prohibited

Questions?



--- EMERGENCY PROCEDURES ---

SPIN RECOVERY

CONTROLS RELEASE

If Spin Continues

THROTTLE IDLE

STICK CENTER

RUDDER .FULL OPPOSITE SPIN

RECOVER FROM DIVE

EMERGENCY DESCENT

Throttle IDLE

Airspeed ESTABLISH 175 KTAS
(*slower for rough air*)

MAXIMUM GLIDE CONFIGURATION

Flaps RETRACTED

Airspeed 95 KIAS

EMERGENCY AIRSPEEDS

Emergency descent 175 KTAS

Best glide 95 KIAS

Emergency approach 75 KIAS

NOTE

Glide distance at 95 KIAS (in no wind conditions) is
approximately **1.7 NM per 1,000 feet** of altitude

ENGINE DISCREPANCY CHECKS

ROUGH RUNNING ENGINE

Fuel pump	ON
Mixture	FULL RICH, then LEAN as req'd
Magneto switch	CHECK LEFT, RIGHT, then BOTH

LOSS OF ENGINE POWER

Fuel flow/pressure	CHECK
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If fuel flow is abnormally low:

Mixture	FULL RICH
Fuel pump	ON, LEAN as req'd
Fuel quantity	CHECK TANK

If tank being used is empty:

Fuel selector	SELECT OTHER TANK (feel for detent and check visually)
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ENGINE FIRE

ON GROUND

Magneto/starter switch	OFF
Fuel selector	OFF
Throttle	OFF
Mixture	OFF
All switches	OFF

Exit aircraft and deploy fire extinguisher

IN FLIGHT

Fuel selector	OFF
Mixture	OFF
Throttle	IDLE
Cabin heat	.PUSH OFF
Outside air	.AS REQUIRED
Alternator	OFF
Master	OFF
Magneto switch	OFF

Land as soon as possible, emergency descent if required.

Do not attempt to restart engine.

ENGINE FAILURE

ENGINE FAILURE ON TAKEOFF (NOT AIRBORNE)

Throttle	CLOSED
Brakes	MAXIMUM

If unable to land on runway

LAND STRAIGHT AHEAD (45° MAX TURN)

Airspeed	85 – 95 KIAS
All switches	OFF (<i>PRIOR TO LAND</i>)
Start switch	OFF
Fuel selector	OFF
Mixture	OFF

ENGINE FAILURE IN FLIGHT

Airspeed	85 – 95 KIAS
Fuel pump	ON
Fuel selector	SELECT OTHER TANK (<i>Check to feel detent and check visually</i>)
Mixture	FULL RICH
Throttle	FAST IDLE
Magneto switch	BOTH (<i>START if prop stopped</i>)

IF NO RESTART

MAYDAY CALL & SQUAWK 7700

Max range glide speed	95 KIAS
Throttle	IDLE
Fuel selector	OFF
Mixture	OFF
Magneto switch	OFF
Fuel pump	OFF

When certain of reaching the selected landing site:

Airspeed	95 KIAS
Flaps	AS REQUIRED
All switches	OFF

NOTE

When engine starts, adjust throttle & mixture controls.

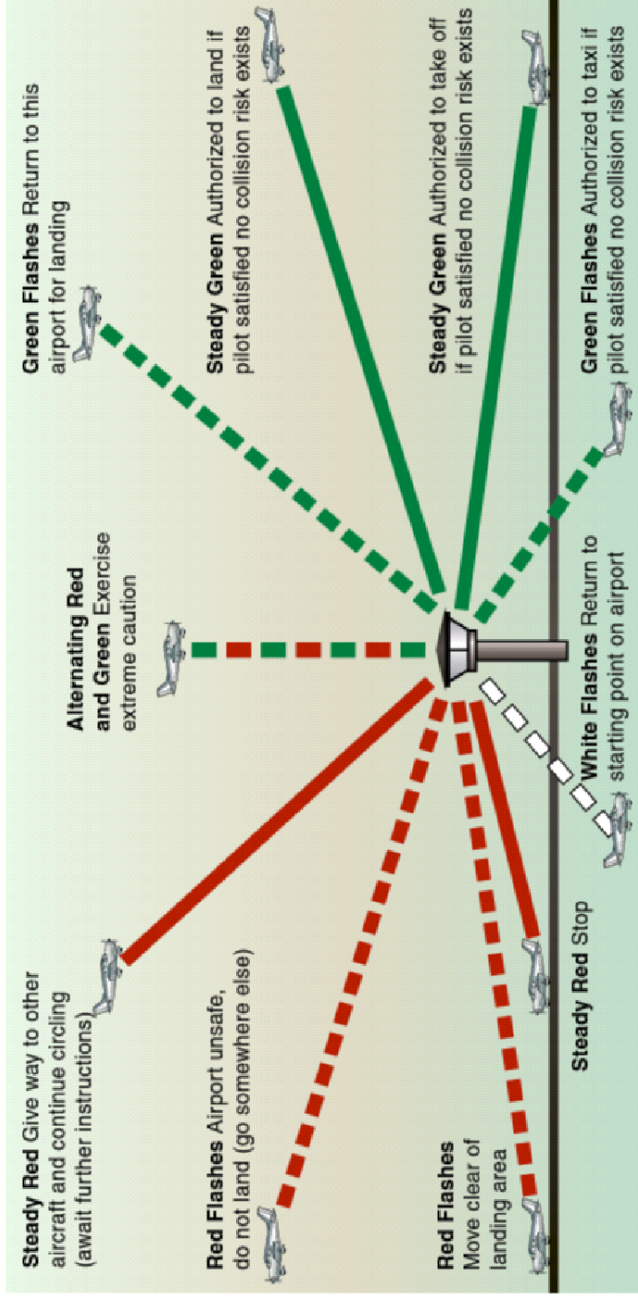
The most probable cause of engine failure would be loss of fuel flow or improper functioning of the ignition system.

ELECTRICAL MALFUNCTIONS

Do not replace fuses or reset alternator breaker in flight. Ensure situational awareness and if necessary, switch off offending bus.

Fuse Legend							
10	Hobbs+ELT	1	Fuel Pump	5	Tail Nav/Strobe	5	10
9	LEMO	1	EIS+MAP	5	Wing Nav/Strobe	7.5	9
8	Autopilot Servos	3	Stratux	3	Landing Right	20	8
7	Navigator Comm	10	Backup EFIS	1	Landing Left	20	7
6	Navigator Nav/GPS	7.5	Transponder	5	Flaps	5	6
5	USB Canopy+Tail	3	Transceiver	7.5	Trim	1	5
4	EFIS Right	3	EFIS Left	3	Dimmer+Defrost	1	4
3	Capacitive Fuel	1	Intercom	5	Pitot Heat	10	3
2	USB Console	5	CO+Fuel Guardian	2	Alternator Field	5	2
1	AHRS 2	1	AHRS 1+GPS	1	Start	3	1
Avionics 2		Avionics 1		Master			

LIGHTGUN SIGNALS



TRANSPONDER CODES

Cod e	Meaning
770 0	Emergency
760 0	Radio failure
750 0	Hostage
120 0	VFR

VISIBILITY RESTRICTIONS

						G				
				E		<1200 AGL		>1200AGL, <10kMSL		>1200AGL, >10kMSL
	B	C	D	<10k	>10k	Day	Night	Day	Night	
Visibility	3 SM	3 SM	3 SM	3 SM	5 SM	1 SM	3 SM	1 SM	3 SM	5 SM
Clouds	Clear					Clear				
Below		500	500	500	1000		500	500	500	1000
Above		1000	1000	1000	1000		1000	1000	1000	1000
Horizontal		2000	2000	2000	1 SM		2000	2000	2000	1 SM

INSTRUMENT FLIGHT CHECKLIST

Prior to IAF

Approach	Load and brief
Weather	Obtain
Pitot heat	As needed
Barometer	Set
Chart date	Verify
DA/MAP	Set
Missed altitude	Set
Altitude hold	On
Autopilot	Arm, Lat/Vert set
WAAS	Verify
ILS/LOC frequency	Verify and set
	Verify Morse code
Comm frequency	Verify and set
Inbound LOC course	Verify and set
CDI	VOR/GPS
PFD screen, right knob	ARM/GPSV/ILS
Autopilot modes	Verify lateral & vertical
Prop	2350
Airspeed	
120 kts:	18 MAP
100 kts:	14 MAP

Post IAF

Autopilot	Execute
Navigator flight phase	Verify
Airport lights	Turn on
Flaps	Down
Heading bug	Approach course
Fuel pump	On
Prop	Full
Mixture	Full
Airspeed	90 kts
Level	12.5 MAP
Descent	10.5 MAP

Glideslope Intercept

Airspeed	70 kts
	10 MAP, descent
Heading bug	Missed heading
Clock	Start

Missed

Autopilot	Missed
Garmin	Missed
Flaps	Up
Flight plan	Verify
Autopilot setup	Verify
NAV freq	Verify
OBS	Verify
CDI	Verify GPS/VLOC
Fuel pump	Off

Landed

Garmin	Suspend
Flight plan	Close

--- IFR EMERGENCY PROCEDURES ---

LOST COMMUNICATIONS

TRANSPONDER	SQUAWK 7600
VFR?	Continue VFR
ALTITUDE	Highest of MEA, Expected, Assigned
ROUTE	Assigned > Vectored > Expected > Filed
AT CLEARANCE LIMIT	At or to approach?
Yes	Start approach at EFC or ETA
No	At EFC or clearance limit proceed to IAF and start approach

Required Reports Under IFR

- Missed approach
- Airspeed greater of ± 10 kts or 5% change of filed
- Reaching holding fix (report time and altitude)
- VFR on top when altitude changes made
- ETA changed ± 2 minutes
- Leaving holding fix
- Outer marker/fix if not in radar
- Unforecasted weather
- Safety of flight
- Vacating an altitude
- FAF if not in radar
- Radio/nav equipment failure
- Required reporting points if not in radar
- Unable to climb/descend 500 fpm

CLIMB/ DESCENT ANGLE (degrees and tenths)	ft/NM	GROUND SPEED (knots)										
		60	90	120	150	180	210	240	270	300	330	360
2.7	287	287	430	574	717	860	1003	1147	1290	1433	1576	1720
2.8	297	297	446	595	743	892	1041	1189	1338	1486	1635	1783
2.9	308	308	462	616	770	924	1078	1232	1386	1539	1693	1847
3.0	318	318	478	637	797	956	1115	1274	1433	1593	1752	1911
3.1	329	329	494	659	823	988	1152	1317	1481	1646	1810	1975
3.2	340	340	510	680	850	1020	1189	1359	1529	1699	1869	2039
3.3	350	350	526	701	876	1052	1227	1402	1577	1752	1927	2103
3.4	361	361	542	722	903	1083	1264	1444	1625	1805	1986	2166
VERTICAL PATH ANGLE												