

VAN'S RV-7

S/N 74141

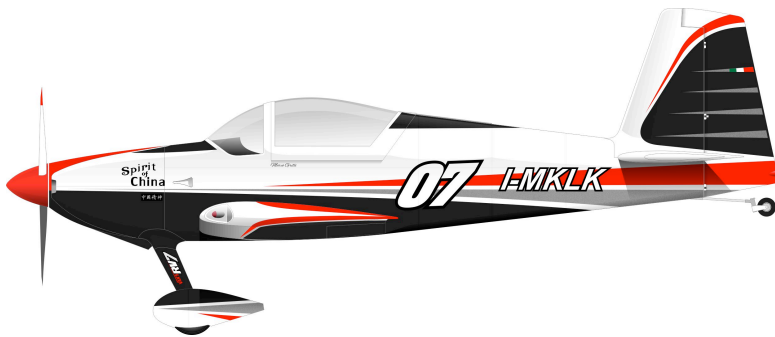
MAINTENANCE

MANUAL

REV 0.15

I-MKLLK

VAN'S AIRCRAFT RV-7 I-MKLLK



MAINTENANCE MANUAL

Make:	Van's Aircraft
Model:	RV-7 Serial
No:	74141
Registration:	I-MKLLK

The airplane must be operated in compliance with information and limitations contained in this document.

VAN'S RV-7

S/N 74141

MAINTENANCE

MANUAL

REV 0.15

I-MKLN

PAGE INTENTIONALLY
LEFT BLANK

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLLK

Foreword

I-MKLLK is a Van's aircraft (www.vansaircraft.com) RV-7 all- metal, low wing, two seat, high performance aircraft. It was built by Marco Grilli from a Van's quick-build kit during the years 2013 until 2014 under the supervision of C.A.P Club Aviazione Popolare (www.federazioneicap.it).

Disclaimer


This aircraft is classified as “experimental”. Hence certain design features may deviate from the typical “spam can” certified production aircraft. This aircraft has been built by the builder to the best of his knowledge and quality of craftsmanship. Nonetheless, operating this aircraft is at the sole risk of the pilot.

Copyright

This Maintenance Manual is not officially approved, while believed to be complete and accurate at the time of publication, may not contain ALL of the information needed. However, we suggest that any pilot intending to operate I-MKLLK should study its content and operate accordingly. By virtue of its Experimental amateur-built status, all persons entering this aircraft do so at their own risk.

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLK

Record of Revisions

Rev No	Affected Section	Affected Pages	Date	Description	Signature
0.15	All	All	26.01.2015	Original Issue	

THIS MAINTENANCE MANUAL HAS BEEN RELEASED ON FEBRUARY 26th 2015 BASED ON TEST FLIGHTS, ANY REVISION MUST BE REPORTED AND SUBMITTED.

Airframe

Refer to Van's Aircraft construction manual

Engine

Refer to Lycoming Textron user and maintenance manual

Propeller

Refer to Whirlwind user and maintenance manual

Avionics

Refer to Dynon Avionics user and maintenance manual

Refer to Garmin user and maintenance manual

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLLK

Table of contents

- 1.0 Consumables
- 1.1 Lubrication
- 1.2 Maintenance cycle
- 1.3 Torque setting
- 1.4 Daily check / Walk Around
- 1.5 50 Hours/6 Months check
- 1.6 100 Hours check
- 1.7 Annual check
- 1.8 Other maintenance and inspection requirements
- 1.9 Aircraft Handling

- Appendix A List of equipment and inventory
- Appendix B List of approved maintenance operators
Attività assegnate per settore manutentivo
- Appendix C Electric diagram
- Appendix D List of equipment current draw
- Appendix E Triangulation
- Appendix F Instruments marking

VAN'S RV-7 S/N 74141	MAINTENANCE MANUAL	REV 0.15 I-MKLLK
---------------------------------------	-------------------------------------	-----------------------------------

1.0 Consumables

Fuel	42 US Gallons
Air Filter Element	K&N
Spark Plugs	NGK Iridium
Exhaust Gasket	Vans
Main tire (2)	Aeroclassic
Brake Pads	Beringer
Tailwheel	Vans
Brake Lining	Beringer
Brake Fluid	DOT 4
Battery (2)	SuperB
ELT Battery (8)	AAA Battery
Alternator Belt	Vans
External film black	3M 1080/G212 Gloss Black Metallic
External film red	3M 1080/G13 Gloss Hotrod Red
External film gray	3M 1080/M230 Matte Grey Aluminum
External paint white	RAL 9003
External paint black	Du pont DB197 A228212

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLLK

1.1 Lubrication

Oil Change (every 50 hrs)	5 to 7 qts
Oil Filter Element	Tempest AA10848-2
Tailwheel Swivel Grease	Vans
Main Tyre Bearing Grease	Vans
Rudder Pedal Pivot Grease	Vans
Flaps Tube Pivot Grease	Vans

Accepted Oil Grade

Average Ambient Air	MIL-6082B Grades	MIL-L22851 Ashless Dispersant
All Temperature	-----	SAE 15W50 or 20W50
Above 26 C	SAE 60	SAE 60
Above 15 C	SAE 50	SAE 40 or SAE 50
0 C to 32 C	SAE 40	SAE 40
-18 C to 22 C	SAE 30	SAE 40,30 or 20W40
Below -12 C	SAE 20	SAE 30 or 20W30

Recommended Oil Grade

All Temperature	Aeroshell W 15W-50
16 C to 32 C	Aeroshell 100, W100, W100 Plus
-17 C to 21 C	Aeroshell 80, W80, W80 Plus
Running-in/Breaking-in	Aeroshell 100

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLK

1.2 Maintenance cycle

The following maintenance schedule is based on (EC) No. 2042/2003 Annex 1 (Part M) and Textron Lycoming Operator Manual.

Main Checks

Daily Check / Walk Around	At first flight / Prior every flight
50 Hours Check	At 50 Hours or 6 Months
100 Hours Check	At 100 Hours
Annual Check	Every 12 months
1000 Hours Check	At 1000 Hours (see End List)
2000 Hours Check	At 2000 Hours (see End List)

Permitted Variations

50 Hours & 100 Hours Check	10%
6 Months heck	1 Month
Annual Check	None

A Final Check, including the items below, must be performed after every main check except daily.

- | |
|--|
| <ul style="list-style-type: none"> - Carry out an engine ground run up - Check power plant for any liquids or gas system leaks - Following run up, secure all cowlings and panels - Fill properly Engine and Airframe&Propeller logbooks |
|--|

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLK

1.3 Torque setting

ENGINE RECOMMENDED TORQUE SETTING	
1/4 Inch fastener	8 lbf*ft / 96 lbf*in
5/16 inch fastener	17 lbf*ft / 204 lbf*in
Oil Filter	18 lbf*ft
Spark Plugs	35 lbf*ft / 420 lbf*in
Rocker cover screw	4 lbf*ft / 50 lbf*in
Engine mount bolts	3,3 lbf*ft / 40 lbf*in
Propeller Bolts	65 / 47 lbf*ft (1/2"-7/16 Hardware)

GENERAL TORQUE SETTING FOR STEEL BOLTS	
AN3 (3/16 in)	1,6-2 lbf*ft / 20-25 lbf*in
AN4 (1/4 in)	4,2-5'8 lbf*ft / 50-70 lbf*in
AN5 (5/16 in)	8,3-11,6 lbf*ft / 100-140 lbf*in
AN6 (3/8 in)	13-15,8 lbf*ft / 160-190 lbf*in
AN8 (1/2 in)	40-57,5 lbf*ft / 480-690 lbf*in

GENERAL TORQUE SETTING FOR ALUMINUM ALLOY BOLTS/SCREW	
3/16	5-6 lbf*in
1/4	8-10 lbf*in
5/16	19-22 lbf*in

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLK

1.4 Daily Check / Walk Around

The Daily Check must be performed before the first flight of the day, without moving the aircraft before fuel drainage is completed. The Walk Around must be performed prior each flight. The **Daily Check** includes **Cabin Check** and **Exterior Check**. The items marked with astrisk refer to Walk Around only.

CABIN CHECK		
All aircraft covers / Pitot tube cover	*	REMOVE
Cowl inlet Plugs		REMOVE
Canopy locker	*	REMOVE
Battery chargers		DISCONNECT
QRH/AFM		ON BOARD
Required charts/Nav aid		ON BOARD
ALL Switches	*	OFF
Primary Flight Display		ON (Check B/UP Batt Ops) VPX page displayed
Battery 1	*	ON/CHECK VOLTAGE
Flaps	*	FULL DOWN
Battery 1	*	OFF
Battery 2	*	ON/CHECK VOLTAGE/OFF

WARNING

When turning propeller by hand, always treat as if the ignition system is on. Do not stand or allow others to stand within the propeller arc.

VAN'S RV-7 S/N 74141	MAINTENANCE MANUAL	REV 0.15 I-MKLLK
---------------------------------------	-------------------------------------	-----------------------------------

EXTERIOR CHECK			
1	Left Flap	*	CHECK SECURITY / ACTUATOR ROD
2	Left Aileron	*	CHECK FREEDOM OF MOVEMENT
3	Left Nav/Strobe lights	*	CHECK CONDITION
4	Pitot Tube	*	CHECK CONDITION
5	Left Wing/Leading Edge	*	CHECK CONDITION
6	Left Fuel Quantity/Cap	*	CHECK/SECURE
7	Left Fuel Drain		DRAIN / CHECK FOR SPILLAGE
8	Left Gear/Tire	*	CHECK CONDITION/INFLATION
9	Left Fuel Vent Port	*	CHECK CLEAR
10	Upper Cowl		CHECK CONDITION / REMOVE
11	Engine Plenum		CHECK CONDITION / REMOVE
12	Left Engine compartment		CHECK ELECTRICAL AND MECHANICAL CONNECTION
13	Air intake Filter	*	CHECK CLEAR
14	Propeller	*	CHECK FOR DAMAGE / CRACKS
15	Spinner	*	CHECK FOR DAMAGE / CRACKS
16	Right Engine Compartment		CHECK ELECTRICAL AND MECHANICAL CONNECTION
17	Oil Quantity	*	CHECK (6 QTS MINIMUM)
18	Engine Plenum		SECURE

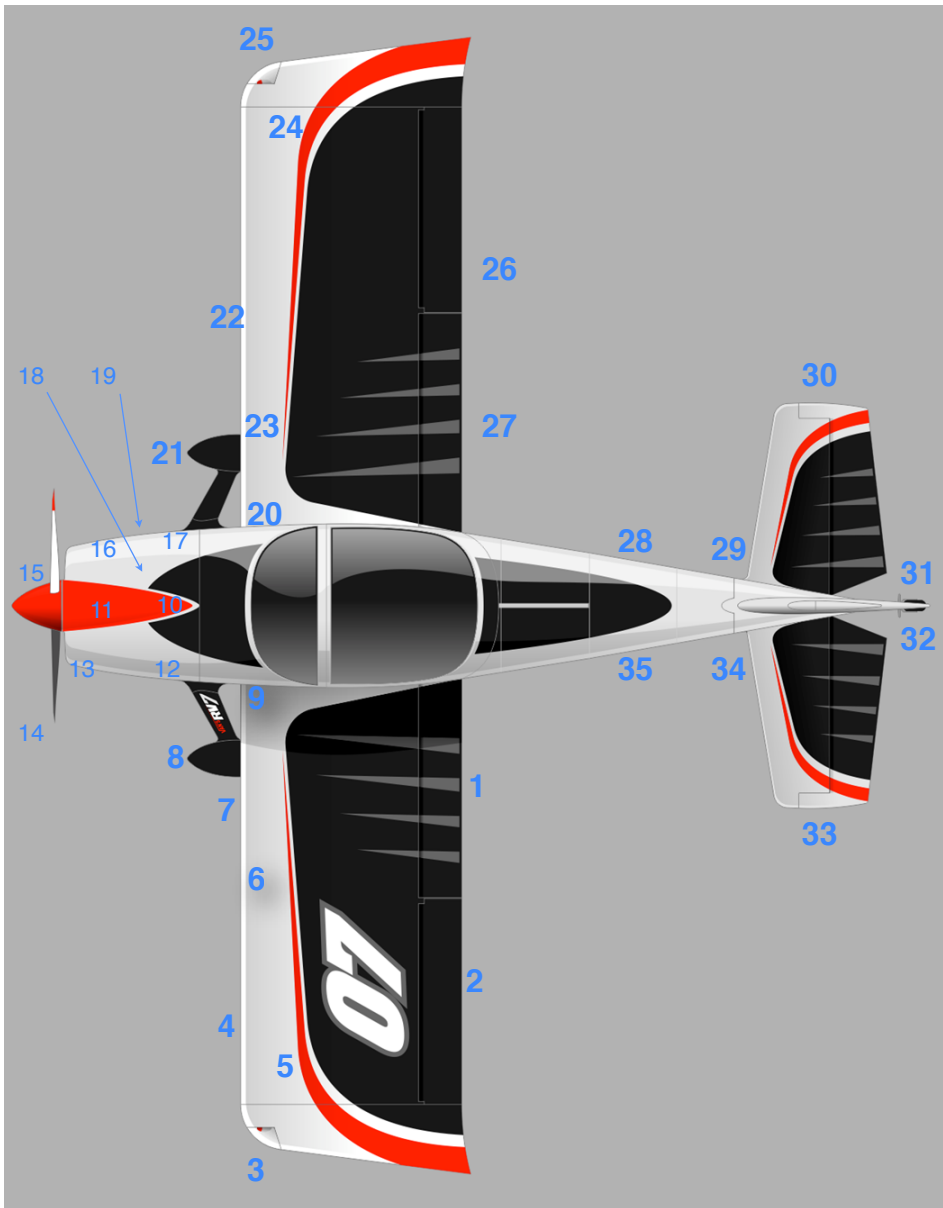
VAN'S RV-7 S/N 74141	MAINTENANCE MANUAL	REV 0.15 I-MKLLK
---------------------------------------	-------------------------------------	-----------------------------------

19	Upper Cowl/Oil/Access Door	*	SECURE
20	Right Fuel Vent Port	*	CHECK CLEAR
21	Right Gear / Tire	*	CHECK CONDITION / INFLATION
22	Right Fuel Drain		
23	Right Fuel Quantity/ Cap	*	CHECK / SECURE
24	Right Wing / Leading Edge	*	CHECK CONDITION / INFLATION
25	Right Nav / Strobe lights	*	CHECK/SECURE
26	Right Aileron	*	CHECK FREEDOM OF MOVEMENT
27	Right Flap	*	CHECK SECURITY / ACTUATOR ROD
28	Right Static Port	*	CHECK CLEAR
29	Right Rudder / Cable / Spring	*	CHECK CONDITION
30	Right Stabilizer / Elevator	*	CHECK CONDITION/FREEDOM OF MOVEMENT
31	Tailwheel	*	CHECK CONDITION/FREEDOM OF MOVEMENT
32	Tail Nav/Strobe Light	*	CHECK CONDITION
33	Left Stabilizer / Elevator	*	CHECK CONDITION/FREEDOM OF MOVEMENT
34	Left Rudder / Cable / Spring	*	CHECK CONDITION
35	Left Static Port	*	CHECK CLEAR

NOTE

Daily Check includes all the items specified in External Walk Around, as a consequence External Walk around has not be performed until next flight.

<p>VAN'S RV-7 S/N 74141</p>	<p>MAINTENANCE MANUAL</p>	<p>REV 0.15 I-MKLLK</p>
---	---	---



1.5 50 Hours / 6 Months Check

This check must be performed every 50 flying hours or 6 months whichever comes sooner.

MAINTENANCE SCHEDULE WORK CARD 50 HRS / 6 MONTHS			
DATE: ___/___/___ HRS: _____ PERFORMED BY: _____			
Structural Zones			
Task	I	Action Taken	Signature
Inspect the external surface of fuselage, empennage, cowlings, flaps and control surfaces.			
Check and inspect canopy fit, operation and condition including satisfactory operation of latching and locking mechanism			
Check protective treatments, drain holes free from obstruction and access panels secure			
Landing Gear			
Remove fairings and inspect for damage			
Inspect landing gear legs and fixed fairings for damage and integrity			
Check brake system for leaks			
Inspect brake pads and disks for condition and wear			
Check brake fluid reservoirs (fill as required)			
Check tires condition and pressure (24 psi not greater than 27 psi)			
Flight Controls			
Check flight controls for full and free movement in the correct direction			
Check correct operation of trim mechanism and those indicators agree with surface and movement			

VAN'S RV-7 S/N 74141	MAINTENANCE MANUAL	REV 0.15 I-MKLLK
---------------------------------------	-------------------------------------	-----------------------------------

Liquid, Pneumatic, and Gas Systems			
Task	I	Action Taken	Signature
Inspect pitot/static system vents and line. Check pitot head, drains clear and alignment. Check pitot heater operation.			
Equipment and Environmental			
Check first aid kit items, fulfillment and expiry date.			
Check seat belts / harnesses for condition and locking/ releasing mechanism			
Check seat belts / harnesses mounting points and brackets			
Check fire extinguisher for leakage and charge level			
Check Carbon Monoxide detector for condition and expiry date			
Airplane Lubrication			
Lubricate rod end and hinges as appropriate			
Powerplant installation			
Engine cowls, clean and inspect for damage, cracking, distortion. Check locking fasteners			
Operation check for engine controls for full and free travel. Check throttle, propeller pitch, alternate air			
Inspect spark plug cable leads, ignition harness and ceramics for damage, corrosion and deposits			
Check ignition harness for security of mounting clamps and ensure connections are tight at spark plugs and coil			
Inspect rocker box covers for evidence of oil leaks, if found replace gasket, torque cover screws at 50 in lb.			
Cooling system. Check cowling and plenum for damage and secure anchorage			
Inspect air intake seals, ducting and clamps			
Inspect vent lines for evidence of fuel or oil			
Inspect all wiring connections to engine and access			

Air Induction

Task		Action Taken	Signature
Inspect air filter, intake and induction system			
Remove and clean air filter (KN kit)			

Exhaust System

Check attaching flanges at exhaust ports on cylinder			
Check lock plate anchorage of exhaust collector			
Examine exhaust manifolds for general condition			

Engine Lubrication

Drain oil sump through drain valve, check for presence of metal particle			
Change oil filter, cut and inspect			
Inspect oil lines and fittings for leaks, security, damage			
Refill engine with oil			
Inspect all wiring connections to engine and access.			

Fuel System

Check Fuel lines for leaks			
Drain samples from drain points and check from water, alcohol, foreign matter and correct color			
Check tanks vents clear and unobstructed			

Propeller

Inspect propeller blades for damage			
Inspect spinner and back plate (attachment screws)			

Electrical System

Check and inspect battery installation			
Check operation of all electrical circuits			
Inspect alternator belt tension and condition			
Check all controls and switches labeled correctly			

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLLK

Radio, Nav Aids			
Task	I	Action Taken	Signature
Inspect arial, insulators, instruments and display			
Check placards and marking legible			
Carry out a VHF ground function check			
Inspect cables, terminals and antennas			
Instrument System			
Inspect displays for damage, legibility and associated markings			
Pass through display pages and check for correct displaying brightness and functions			

VAN'S RV-7

S/N 74141

MAINTENANCE

MANUAL

REV 0.15

I-MKLK

**PAGE INTENTIONALLY
LEFT BLANK**

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLLK

1.6 100 Hours/ 6 Months Check

This check must be performed every 100 flying hours, includes all the items as per 50 hours check plus the following.

MAINTENANCE SCHEDULE WORK CARD 100 HRS As 50 hrs and in addition the following			
DATE: ___/___/___		HRS: _____	PERFORMED BY: _____
Structural Zones			
Task	I	Action Taken	Signature
Remove all the inspection panels, rear cabin bulkhead, internal flap mechanism inspection panels and floor panels over control stick mechanism. Remove fairing over empennage			
Inspect internal structure of fuselage, wing and empennage revealed by removal of items above. Check for corrosion protection, drain holes and path			
Landing Gear			
Inspect structural members and attachment fittings			
Inspect and check all brake hydraulic pipes, flexible hoses, connections, master cylinders for correct operation			
Inspect wheels for alignment			
Support the weight off the wheels and check bearings. Check landing gear mounting bolts			
Inspect wheels for cracks, corrosion and broken bolts. If required lubricate wheel bearings			

Flight Controls			
Task		Action Taken	Signature
Inspect all control surface hinges, hinge bolts, brackets, push-pull rods, stops, control horns and balance weights. Check associated turnbuckles/locking systems			
Inspect rudder control cable, fairleads and cable guides. Inspect rudder pedals and pedal mechanism			
Check flaps operation, mechanism and actuating system			
Check and inspect ailerons and rudder trim for correct operation			
Liquid, Pneumatic and Gas System			
Inspect tanks, filler caps, valves, pipelines and hoses			
Equipment and Environmental			
Operational check and inspect cabin air system			
Check cabin heating system controls, hoses and ducts			
Check and inspect cabin heat exchanger for signs of exhaust gas leakage			
Check fire extinguisher by pressure			

VAN'S RV-7 S/N 74141	MAINTENANCE MANUAL	REV 0.15 I-MKLLK
---------------------------------------	-------------------------------------	-----------------------------------

Powerplant installation			
Task	I	Action Taken	Signature
Inspect accessory housings, cylinder assemblies, bulkhead/ firewall and sealing; plenum, cowls and items in engine bay for mutual interference			
Inspect breather tube for obstructions and security			
Inspect crankcase for cracks, leaks and security of seam bolts			
Inspect engine mounts / bushing for deterioration/cracks and loos mounting (replace as required)			
Check and record in engine logbook cylinder compression and leakage			
Inspect vent lines for evidence of fuel or oil			
inspect all wiring connections to engine and access			
Inspect vent lines for evidence of fuel or oil			
inspect all wiring connections to engine and access			
Ignition System			
Inspect ignition coil harness leads			
Carry out high-tension leakage and continuity test			
Inspect and check operation of rpm pick-up			
Carry out an engine timing check			
Check spark plug condition, clean and adjust the gap as per Lycoming service instruction). If fouling of plugs is apparent, switch bottom with upper plugs			
Exhaust System			
Inspect exhaust stacks, connections and gasket and replace if required			
Inspect muffler, cabin heat exchanger and tubes			

Engine Lubrication			
Task	I	Action Taken	Signatur
Clean and inspect oil radiator cooling fins			
Inspect sump, oil hoses pipes and vent			
Inspect oil sender connections and pipe for leaks and security			
Inspect engine mounts / bushing for deterioration/cracks and loos mounting (replace as required)			
Fuel System			
Inspect condition of flexible fuel lines, fuel pumps			
Check operation of fuel selector valve			
Replace fuel filters (every 2 check/200 hrs)			
Propeller			
Remove spinner, inspect complete propeller and spinner assembly for security and damage wear			
Inspect propeller mounting bolts and safety. Check torque if safety wire is broken)			
Electrical System			
Inspect components, wiring, terminals and connectors			
Check correct type and rating of fuses and circuit breakers. Check VPX operation			
Check lamps and lights			
Check starter brushes and alternator belt tension/drive			
Inspect condition of alternators and starter			
Ensure voltage regulator operating correctly			
Instrument System			
Check displays and instruments: panel, mounts, pipes hoses, ADAHRS wiring and hoses.			
Check pitot and static system for leaks			

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLLK

1.7 Annual Check

This check must be performed every 12 months, includes all the items as per 50 & 100 hours check plus the following.

MAINTENANCE SCHEDULE WORK CARD ANNUAL As 50 & 100 hrs and in addition the following			
DATE: ___/___/___		HRS: _____	
		PERFORMED BY: _____	
Flight Control			
Task	I	Action Taken	Signature
Inspection and operation of electric flaps actuating sys			
Electrical System			
Consider battery capacity check			
Radio			
Consider a ramp test for VHF radio, VOR receiver, ELT and transponder			
Fuel System			
Replace fuel filters (every 2 Check)			
Ignition System			
Replace spark plugs			

VAN'S RV-7 S/N 74141	MAINTENANCE MANUAL	REV 0.15 I-MKLK
---------------------------------------	-------------------------------------	----------------------------------

1.8 Other maintenance & inspection requirements

Flight Hours	Maintenance requirements
200 HRS	Replace both fuel filters
500 HRS	Inspect distributor block for cracks, burnt areas or corrosion and height of contact spring
500 HRS	Remove and flush oil radiator
650 HRS/5 YRS	Propeller tear down inspection
1000 HRS	Remove rocker box covers. Check for freedom of valve rockers when valves are in closed position. Look for evidence of abnormal wear or broken parts in the area of the valve tips, valve keeper, springs and spring seat. Any damage requires removal, including pistons and connecting rod assembly
1000 HRS	Replace flexible fuel lines
1000 HRS	Replace flexible oil lines
1000 HRS	Replace or overhaul fuel pumps
1000 HRS	Replace ignition/spark plugs harnesses
2000 Hrs	Consider propeller overhaul or replacement
2000 Hrs	Engine overhaul or replacement
5 YRS	Weight & balance check

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLLK

1.9 Aircraft Handling and Care

Ground Handling

When taxiing the aircraft ensure that the taxi path and propeller back blast areas are clear. In the first few feet of taxi apply the brakes to check for effectiveness. Do not operate the engine at high RPM, taxi with care - the RV-7 can take off at throttle settings no higher than those needed for engine run up.

Ground Handling with Towbar

A towbar can be temporarily attached on the tail wheel fork. While the aircraft can be pushed/pulled easily on the propeller, be careful about inadvertent turning/snapping of the propeller or damaging the propeller.

Ground Handling without Towbar

The aircraft can be pushed back on the wing leading edge, horizontal stabilizer or the propeller. Pulling on the propeller and/or pushing on the footsteps from behind works best for forward motion. Be careful when pushing the aircraft back.

Parking

Chocks should be placed on main wheels since the aircraft is not equipped with parking brake. Also, consider installing the lightweight canopy cover, pitot tube protection and air inlet covers .

Mooring

There are provisions for 3 removable tie-down rings. One below each wing and one below the tail bulkhead. The tie-down rings can be stored in the baggage compartment sidewalls.

Cleaning and Care

Clean all frontal surfaces (wing leading edges, propeller, cowling etc...) with water and a sponge, then dry it with a buckskin after every flight.

Clean the canopy with water and paper towels. Polish the airplane when the clear coat starts to wear out.

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLLK

Appendix A - Equipment list and inventory

Description	Manufacturer	Type
Powerplant & accessories		
Engine, 8 parallel valves	Aero Sport Power	IO-375-M1B
Plenum	RV Bits	Carbon fiber
Baffling	Van's Aircraft	New Style baffling kit
Air filter	K&N	33-2060
Starter	Hartzell	SRZ-9021
Primary alternator	Plane Power	AL12-EI70
Alternator belt	Dayco	Top Cog 15355 11A0900
S/by Alternator	Plane Power	FS1-14
Propeller C/S 72" diameter	Whirlwind	RV200
Governor	Jihostroj	P920-028
Exhaust stainless steel	Aeropower AWI	4 into 1
Heat exchanger	Aeropower AWI	Rv 7
Oil cooler	Stewart Warner	SW 9022 R
Ignition system	Flyefii	Electronic Ignition
Air induction/oil sump	ECI Superior	Cold air induction
Fuel Injection system	Flyefii	Electronic Fuel Injection
Fuel flow meter	AFS	Red cube
Fuel Hoses	Aeroquip	Rubber/steel AE-701
Fuel /Air ratio	PLX/Bosch	DM6 Combo

VAN'S RV-7 S/N 74141	MAINTENANCE MANUAL	REV 0.15 I-MKLLK
---------------------------------------	-------------------------------------	-----------------------------------

Description	Manufacturer	Type
Landing gear & accessories		
Main gear	Van's Aircraft	
Main wheel	Beringer	5 x 5.00
Main wheel fairings	Van's Aircraft	Finishing kit
Brake disks	Beringer	Rv7 kit
Electrical system		
System management	Vertical Power	VP-X Pro
Battery 1	SuperB	SB12V15P-DC
Battery 2	SuperB	SB12V10P-DC
Battery relay 1	White Rodger	60 A
Battery relay 2	White Rodger	60 A
Starter relay		
Flap electric servo	Van's Aircraft	
Aileron trim servo	Ray Allen	T2-10A
Elevator trim servo	Ray allen	T2-10A
Nav/Strobe/landing light	Aeroled	Rv7 Kit#3
Map light		
Dimmer kit		

VAN'S RV-7 S/N 74141	MAINTENANCE MANUAL	REV 0.15 I-MKLLK
---------------------------------------	-------------------------------------	-----------------------------------

Description	Manufacturer	Type
Instruments, Avionics, Autopilot		
Compass	Sirs	NV2c-2400-12v
Primary Flight Display	Dynon Avionic	Skyview 10'
Engine Monitor Display	Dynon Avionic	Skyview 10'
EFIS control panel	Dynon Avionic	SV-AP-PANEL
Autopilot knob panel	Dynon Avionic	SV-KNOB-PANEL
S/by instrument system	Dynon Avionic	D6
Heated Angle of attack	Dynon Avionic	100667-000
PFD b/up battery	Dynon Avionic	SV-BAT-320
GPS Unit	Dynon Avionic	SV-GPS-250
Transponder Mode S	Dynon Avionic	SV-XPNDR-26X
GPS portable unit	Garmin	Aera 795
Audio Panel	PS Engineering	PMA 8000 BT
ELT 406 MHz	ACK	E04
Nav/Com 1	Garmin	GNC225
Com 2	Dynon Avionic	SV-COM-C25
Autopilot pitch servo	Dynon Avionic	SV32
Autopilot roll servo	Dynon Avionic	SV32
Com 1 Antenna	RAMI	AV-10
Com 2 Antenna	RAMI	AV-74
Transponder Antenna	RAMI	AV-74
VOR receiver Antenna	Comant	CI-259E

VAN'S RV-7 S/N 74141	MAINTENANCE MANUAL	REV 0.15 I-MKLLK
---------------------------------------	-------------------------------------	-----------------------------------

Description	Manufacturer	Type
Fuel System		
Main tank left	Van's Aircraft	Aluminum / QB
Main tank right	Van's Aircraft	Aluminum / QB
Fuel selector	Andair	FS-2020D2-M
Fuel filter	Flyefii	100 micron
Fuel filter	Flyefii	10 micron
Fuel pumps	Flyefii	Hi Pressure
Fuel level sender	Van's Aircraft	
Fuel Hoses	Aeroquip	Rubber/steel AE-701
Cabin Accommodation		
Pilot seats	Classic Aero design	Aviator Rv-03011-701
Seat belts/Harness	Hooker Harness	5 points
Cabin heat assembly	Van's Aircraft	Heat exchanger
Air Vents	Stenair	Eyeball AV-1.625C
Throttle Bracket	ExperimentalAir	EA-0003
Auxiliary Equipment		
CO Detector	Quantum Eye	AS#09-35601
Portable PLB	Kannad	XS4 / AS#11-09324
Sunshade	Koger	Super Rv AS#11-09324
Pilot headset	Lightspeed	Zulu 2
Co-Pilot headset	Lightspeed	Zulu1

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLLK

Appendix B - List of approved maintenance operators

Definitions

IST - Incaricato Sorveglianza tecnica -

Person in charge of technical surveillance of the project

Minor maintenance

Minor maintenance procedures and services by the end of which evaluation and assessment of the system and its installation are not required.

Maintenance

Maintenance procedures and services by the end of which evaluation and assessment of the system and its installation are required.

Minor structural repair

Minor structural reconditioning procedures and services by the end of which evaluation and assessment of the project are not required.

Structural repair

Structural reconditioning procedures and services by the end of which evaluation and assessment of the project are required. Evaluation must be conducted by meaning of project plans and pictures. Approval from IST has to be obtained in advance. It's IST responsibility to survey the execution and to log them as required.

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLLK

Maintenance Sector	Minor Maintenance	Maintenance	Minor structural repair	Structural repair
Airframe	Builder	Builder	Builder	Builder/IST
Fuel System	Builder	Builder	Builder	Builder/IST
Electrical System	Builder	Builder	Builder	North Air/IST
Pneumatic System	Builder	Builder	Builder	North Air/IST
Avionic/ Instrument	Builder	Builder	Builder	North Air/IST
Hydraulic/ Gear	Builder	Builder	Builder	Builder/IST
Propeller	Builder	Builder	Whirlwind-Gt Propeller	Whirlwind
Engine	Builder	Builder	Builder	David Motori

Operators

North Air - Qualified in designing and realizing electrical and avionic systems.

Whirlwind - Qualified propeller manufacturer and maintenance organization

David Motori - Qualified and certified engine maintenance organization

Gt Propeller - Certified propeller manufacturer and maintenance organization

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLLK

FEDERAZIONE CLUB AVIAZIONE POPOLARE

Attività assegnate per settore manutentivo

Attività Ispettiva

Ispezioni a vista : Tutte eccetto: **Ispezioni speciali**
 Costruttore amatore Sig Grilli Marco :Tipo: nessuna

Saldature strutturali : L'aeromobile non prevede impiego di saldature.

Applicazioni Bollettini Tecnici o simili (Quelli connessi alle sottostanti attribuzioni):

Struttura

Costruttore amatore Sig. Grilli Marco
 Attribuzioni: piccola manutenzione, manutenzione e piccole riparazioni.

Le riparazioni strutturali, soggette alla valutazione preventiva dell'IST, dovranno essere effettuate in conformità a quanto previsto dalla casa costruttrice VAN's.

Impianto Carburante

Costruttore amatore Sig. Grilli Marco
 Attribuzioni: piccola manutenzione, manutenzione e piccole riparazioni dell'impianto di alimentazione, rubinetti, tubazioni e drenaggi.

Eventuali riparazioni dei serbatoi, soggetti alla valutazione preventiva dell' IST, saranno effettuate in conformità a quanto previsto dalla casa costruttrice VAN's.

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLLK

Impianto Elettrico

Costruttore amatore Sig. Grilli Marco

attribuzioni: piccola manutenzione, manutenzione, riparazioni, verifica cablaggi, interruttori, breaker e batterie

Impianto Anemometrico

Costruttore amatore Sig. Grilli Marco

attribuzioni: piccola manutenzione, manutenzione tubazioni, raccordi e tubo di pitot.

Noth Air Aviation attribuzioni: controllo periodico strumenti anemometrici e verifica della tenuta statica e dinamica degli impianti e strumenti.

Esplicitare la qualifica: azienda di manutenzione, installazione e vendita di strumenti avionici per velivoli LSA, Ultralight e Experimental.

Installazione radio-navigazione- strumenti

Costruttore amatore Sig. Grilli Marco

attribuzioni: manutenzione e controllo funzionalità.

North Air Aviation attribuzioni: Operational test radio, transponder e sistemi di navigazione degli strumenti installati a bordo.

Esplicitare la qualifica: azienda di manutenzione, installazione e vendita di strumenti avionici per velivoli LSA, Ultralight e Experimental.

Impianto Idraulico - Carrello

Costruttore amatore Sig. Grilli Marco

Attribuzioni: manutenzioni carrello ed impianto idraulico freni.

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLN

Elica

Costruttore amatore Sig. Grilli Marco

Attribuzioni: piccola manutenzione: verifica e controllo pale, mozzo ed ogiva per presenza di danni, cricche, o altri inconvenienti minori.

Whirlwind oppure GT Propeller

Attribuzioni: sostituzione per danni maggiori che possono compromettere la capacità di funzionamento dell'elica.

Esplicitare la qualifica : Whirlwind azienda aeronautica casa costruttrice delle pale dell'elica installata sull'aeromobile.

Esplicitare la qualifica : GT Propeller : officina aeronautica autorizzata per la manutenzione e revisione dell'elica.

Applicazione di A.D. e S.B.

Se non rientranti nelle capacità del costruttore amatoriale il costruttore si rivolgerà alla casa costruttrice dell'elica.

Motore

Costruttore amatore Sig. Grilli Marco

Attribuzioni: piccola manutenzione, manutenzione, controllo e sostituzione impianto iniezione, olio, filtro, verifica compressioni, verifica e controllo accensione.

Officine Aeronautiche David

Attribuzioni: revisione motore, applicazione A.D. e S.B. per le quali il costruttore non ha adeguate capacità e/o attrezzature idonee.

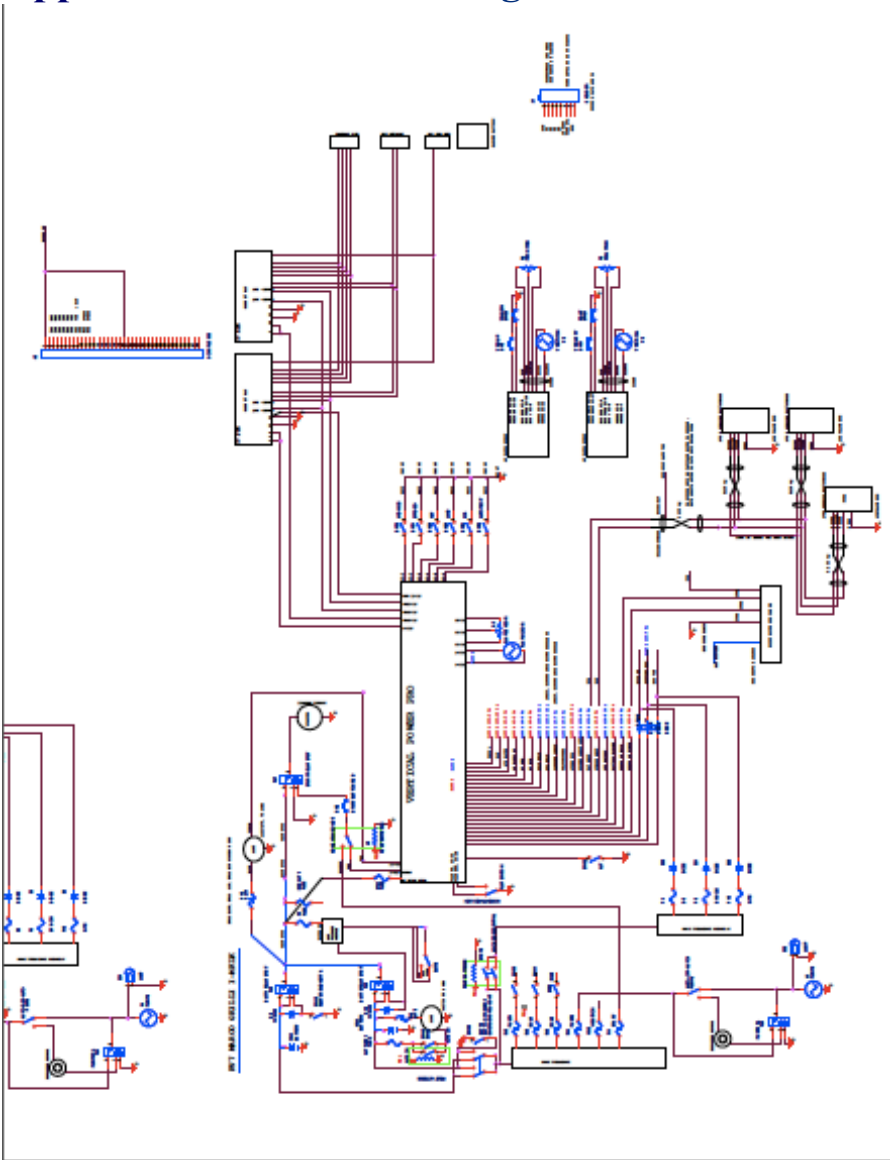
Esplicitare la qualifica: officina autorizzata manutenzione e revisione motori aeronautici

data, 22/02/2015

"Incaricato di Sorveglianza"
ing. Emanuele Lo Tenero

<p>VAN'S RV-7 S/N 74141</p>	<p>MAINTENANCE MANUAL</p>	<p>REV 0.15 I-MKLLK</p>
---------------------------------	-------------------------------	-----------------------------

Appendix C - Electrical diagram

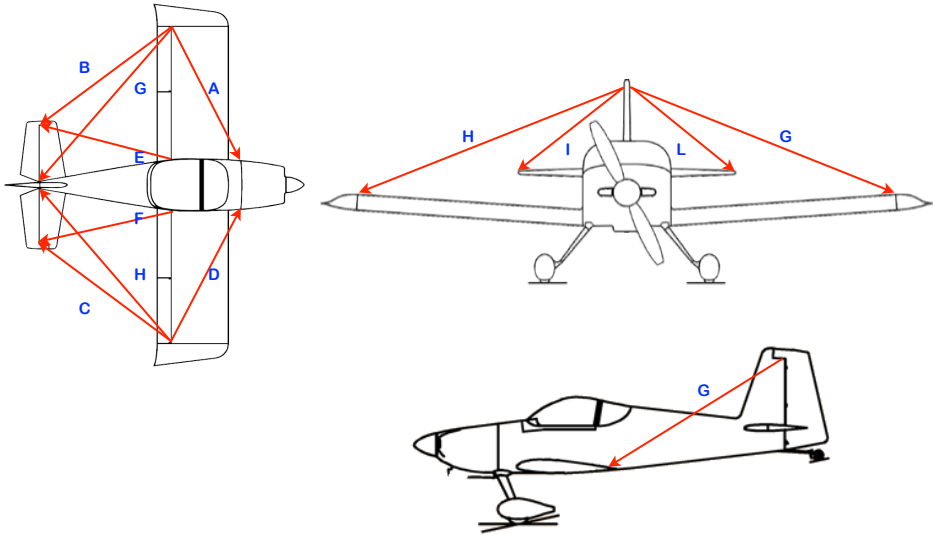


Appendix D - List of equipment current draw

EQUIPMENT	PEAK DRAW A	CONTINUOUS DRAW A	BUS	NOTES
* MONITOR DX	5	3	VPX BANK A J8-6	INTERNAL B/U
* MONITOR SX	5	3	VPX BANK A J8-4	
* GPS 795	3	2	AVIONIC ESS/VPX ?	INTERNAL B/U
* AUTOPILOT	5	5	VPX	
* COM/NAV 1	7	2	VPX BANK A J8-4	
* COM 2 DYNON	3	1	AVIONIC ESS/VPX ?	
* AUDIO PANEL	1	0,5	VPX BANK A J12-10	
* TRANSPONDER	2	1	VPX BANK B J8-8	
* DYNON D6	2	2	AVIONIC ESS/VPX	
* AFR UNIT	1	1	VPX BANK A J1-1	
* ECU 1	1,5	1	ESSENTIAL BUS	
* ECU 2	1,5	1	ESSENTIAL BUS	
* FUEL PUMP 1	5	4,5	ESSENTIAL BUS	
FUEL PUMP 2	5	4,5	ESSENTIAL BUS	
* INJECTORS	3,5	3	ESSENTIAL BUS	
STROBE LIGHT	2	0,5	VPX BANK A J8-5	
LANDING LIGHT	0,5	0,5	VPX BANK B J8-7	
* NAV LIGHT	0,5	0,5	VPX BANK B J10-2	
DIMMER	2	1	VPX BANK B J10-4	
* VERTICAL POWER	2	2	Main Bus	
* ELEV TRIM SERVO	0,40	0,15	VPX BANK A J12-8	
* AILERONS TRIM SERVO	0,40	0,15	VPX BANK B J10-8	
* FLAPS SERVO	4	3,5	VPX BANK B J12-5/6	
PITOT HEATER	7	6,5	VPX BANK B J10-6	
SEAT HEATER	10	7	VPX BANK B J10-3	
TOTAL	79,3	56,3		
*TOTAL WITH EQUIPMENT USUALLY ON	52,8	36,3		

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLLK

Appendix E - Triangulation -



A.....3095 mm	F.....2886 mm
B.....3467 mm	G.....4500 mm
C.....3467 mm	H.....4501 mm
D.....3095 mm	I.....1584 mm
E.....2885 mm	L.....1584 mm

VAN'S RV-7	MAINTENANCE	REV 0.15
S/N 74141	MANUAL	I-MKLLK

Appendix F - Instruments Marking -

Airspeed Indicator

Marking	(IAS)
Bottom of white arc (VS0)	50 kts
Top end of white arc (VF40)	87 kts
Bottom of green arc (VS1)	55 kts
Top end of green arc (VNO)	167 kts
Blue Line (VA)	123 kts
Yellow arc (VNO – VNE)	167-200 kts
Red Line (VNE)	200 kts

Powerplant

Indication	Lower red arc/bar	Yellow arc/bar caution range	Green arc band	Yellow arc/bar caution range	Red arc/band upper range
MAP			13-30 inHG		
RPM		2050-2300	500-2700	2600-2700	2700
Oil Pressure	< 25 psi	25 - 55 psi	55 - 95	95 - 115 psi	> 115 psi
Oil Temp	< 104 F	104-140 F	104-212 F	212-244 F	> 244 F
CHT		149-245 F	245-460 F	460 - 500 F	> 500 F
EGT			990-1500 F	1500-1640 F	> 1640 F
Fuel Press	< 25 psi	25 - 30 psi	30 - 40 psi	40 - 45 psi	> 45 psi
Fuel flow			3,5-68 lt/h		> 68 lt/h

VAN'S RV-7 S/N 74141	MAINTENANCE MANUAL	REV 0.15 I-MKLK
---------------------------------------	-------------------------------------	----------------------------------

PAGE INTENTIONALLY
LEFT BLANK