RotorSport UK Ltd Service Bulletin

Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

This form is the response from RotorSport UK Ltd either against a problem found in the product in service requiring a containment or rectification action, or as service information for aircraft modification incorporation. For help, contact RotorSport on 44(0)1588 650769, or email info@rotorsport.org.

Reason and overview of the Service Bulletin (cause of problem if known)

Auto-Gyro aircraft manufactured for markets other than UK have the option of a 3-blade in-flight-adjustable variable pitch propeller manufactured by the American company IVOprop Corp. This propeller has now been approved for fitment to UK-registered Cavalon aircraft and offers a shorter take-off distance together with potential for improved fuel economy and reduction in noise.

Approval

The technical content of this document is approved under the authority of the UK CAA Design Organisation Approval Ref: **DAI/9917/06**

Manpower estimates

Accomplishment of this Service Bulletin requires the following personnel

(i) A3-7 Authorised engineer or other approved organisation/approved person (eg LAA) but limited to RSUK embodiment only

(ii) Second certifying signatory (e.g. other A3-7 engineer, qualified gyroplane pilot, CAA authorised inspector or other approved organisation approved person)

and estimated man-hours to complete the task as a standalone item are; 6 - 7hours

Tooling required

Hand tools to fit, calibrated inclinometer and straight-edge to check blade pitch.
Plastic drift C.WZ3020 or equivalent

Weight and Balance Effects

The IVO-prop itself is 3.5kg heavier than the standard HTC fixed-pitch propeller and this additional weight, together with that of the brush-bracket 82g, act at the rear of the aircraft. A manifold pressure gauge, rocker switch, end-position controller and LED indicators add 250g to the front of the aircraft. The electrical cables and pneumatic pipe are pre-installed in all Cavalon so add no weight. Total additional weight is 3.8kg which does have an effect on aircraft CG and is shown by an up-issued Weight and Balance Certificate (AWC)

Manuals affected

Cavalon POH RSUK0287 is raised to Iss 2
Cavalon AMM RSUK0288 is raised to Iss4
IVO-prop Maintenance Manual RSUK0325 is raised to Iss2

Previous Modifications that affect the SB

None

RotorSport UK Ltd Service Bulletin

Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

Accomplishment instructions (Action required to implement this bulletin):

Effective date of SB is 01.08.15.
There is no relevant MPD or other outside body documentation to be referenced.
As the aircraft weight and balance is affected, requiring up-issue of the AWC and modification of the Aircraft Payload Specification placard, this SB-088 may only be embodied by RSUK.

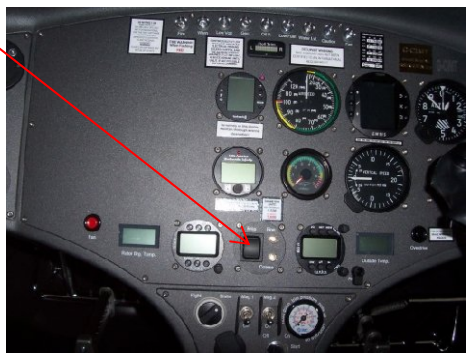
Installation of the IVO-prop is carried-out in six stages, followed by a flight test. If an air-pressure type of manifold pressure gauge is to be fitted Stages 1 and 2 may be accomplished by carefully pulling the instrument panel forwards for access. If the digital combined engine rpm/ manifold pressure gauge is to be fitted the instrument panel must be removed, this requiring a check of the barometric instruments when the panel is re-fitted (as described in Cavalon AMM RSUK0288).

1. Fitment of the rocker switch, end-position controller and LEDs

1.1. Working on the Instrument panel define the location of the sub-panel and MAP-gauge – this may be dependent on the fit of the instrument panel presented. There are five preferred locations.

At the base of the panel, to the right of the radio and transponder

At the base of the panel, between the radio and transponder



Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

In the centre of the panel, below the ASI

At the right of the panel, below the altimeter

In the centre of the panel, below the MAP gauge

The optimal location is dependent on the layout of the other instruments and the pilot's ability to reach the rocker switch (with the left-hand) without obscuring his view of the other instruments.

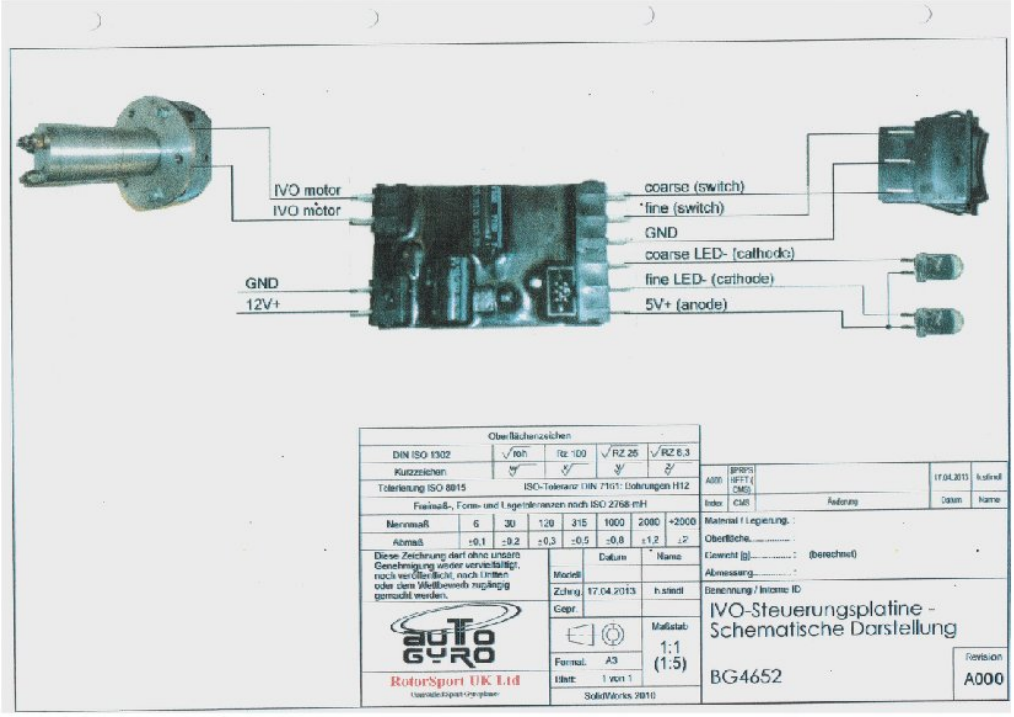
Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

1.2. Fit the sub-panel using the four M4 screws and nuts provided

1.3. Using the supplied wiring harness make the connections of the end position control module (see BG4652 below) and cable-tie the module securely to the main wiring harness.

1.4. Provide 12VDC power and ground to the end position controller by means of the pre-fitted cables from the 16A “Prop” circuit-breaker and mass-point ground.
(If there is a blank aperture then a 16A circuit-breaker must be fitted and connected to the installed sub-harness)

1.5. Identify the two spare “IVO” cables tied back to the main wiring harness, fit two crimp terminals RSD4793 and insulators RSD6385 and connect to the module (no polarity requirement)



2. Fitment and connection of the manifold pressure gauge

2.1. To fit an air-pressure type of manifold pressure gauge remove the blanking panel from the chosen location and fit the gauge in its place. There are no electrical connections to be made, see para 2.5 for the manifold pressure connection

2.2. To fit the digital combined engine rpm/manifold pressure gauge first remove the analogue engine rpm gauge then offer-up the new gauge. It may be necessary to trim the mounting hole (from nominally 2in diameter to 2.25in diameter) before the gauge can be fitted (ensuring that the gauge body will clear the adjacent hardware) and four 4.2mm holes drilled thru the panel. Secure the gauge using four M4x20 button-head socket screws and nyloc nuts. If necessary open-up the holes in the gauge body to 4.2mm diameter to accept the screws.

2.3. The electrical connections are described in the MAP-1 Operating Manual (Version English 1.04 at the time of writing). Fit male crimp terminals RSD4412 to the flying leads emanating from the supplied D-type connector. Provide 12VDC power (RED), ground (BLACK) and rpm signal (BLUE) to the gauge by means of the cable connectors removed from the original rpm gauge. While making these

Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

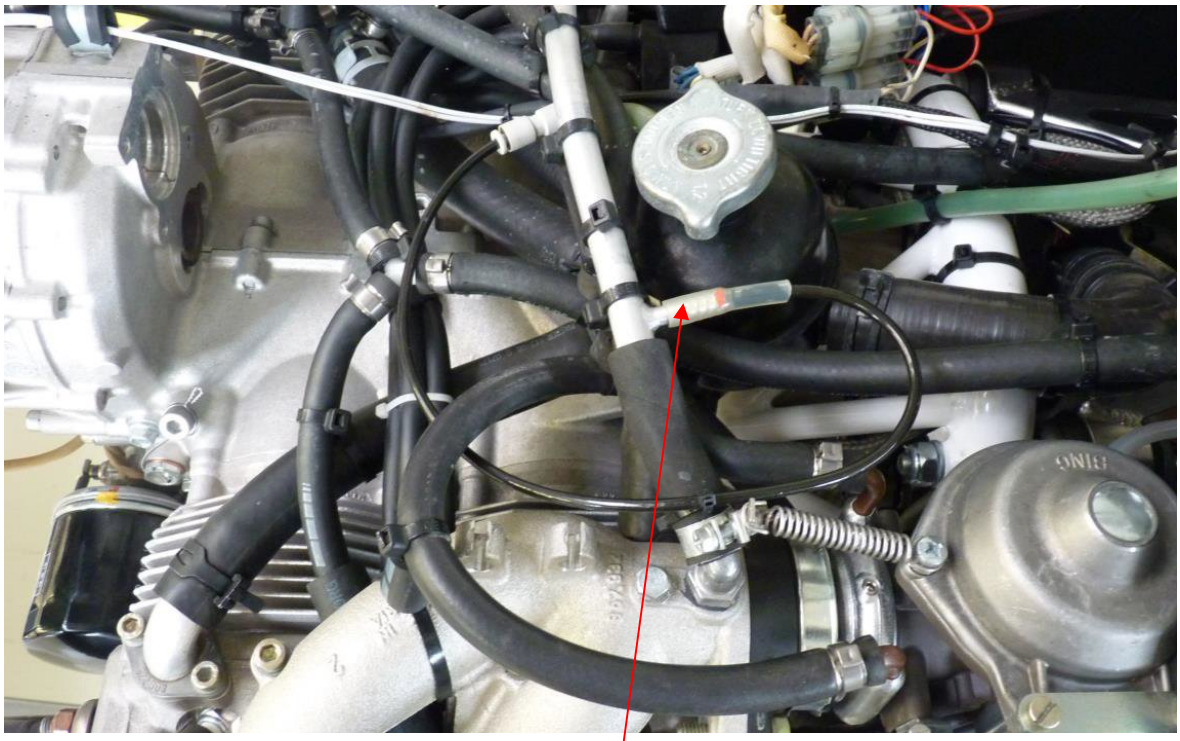
connections fit the supplied 220ohm ballast resistor across the rpm input and ground leads and protect with heat-shrink sleeving.
A supplementary fuse is not fitted, the instrument panel's circuit protection being circuit-breaker F5 (5A)

2.4. The other leads emanating from the D-connector are not used. Fold back and insulate with heat-shrink sleeving (+5VDCoutput (BROWN), Alarm lamp (WHITE)

2.5. With either the analogue gauge or the digital gauge a manifold pressure connection must be made. Identify the pre-existing air pipe attached to the instrument panel wiring loom, fit this with a short length of silicone tubing and connect to the gauge port.

2.6. Fit the manifold pressure placard(s) appropriate to engine type, as shown in CPMA005 Iss4

2.7. Working at the rear of the aircraft identify the pre-existing air pipe attached to the wiring loom. Remove the blanking screw fitted into the spigot of the carburettor balance pipe and using a short length of silicone tubing connect the air pipe to this spigot.
Secure the pipe with cable-ties.



Balance pipe pressure connection

2.8. The instrument panel should now be refitted and baro instruments tested as required.

Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

2.9. When the instrument panel is installed the MAP-1 gauge must be programmed to have the correct display format (Dual Pressure and RPM) and parameters;
Turn aircraft power on.
Press button once to activate the menu. Turning the knob scrolls down the main menu. 'Done' returns to main menu from a detail menu. 'Exit' exits the main menu.
Scroll to Hobbs. Turn off warnings.
Scroll to RPM. Set lower warning off, upper warning at 5700. Set Pul/rev at 1.0.
Scroll to Pressure setup. Change units to "Hg

Full instructions are provided in the Operating Manual Section 4 Menu System.

3. Removal of the HTC propeller

3.1. Remove the engine cowlings in accordance with Cavalon AMM RSUK0288.

3.2. Remove the spinner (if fitted) by releasing the button-head socket screws
Progressively release the six M8 capscrews retaining the propeller hub
Lift-off the propeller complete
Store either flat on the floor or suspended by the hub. Do not place the weight on the blade tips.
Thoroughly clean the engine's propeller mounting flange and threaded bushes of surplus Loctite

Propeller mounting flange

Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

4. Assembly and fitment of the IVO-prop

4.1. Place the steel thrust washers on the actuator motor's lead-screw as shown in the photograph, selecting for engine fitment:

• 912ULS engine:

2 x out of C.KU37 rear (total 2.5mm)

3 x out of C.KU37 front (total 1.9mm)

or

• 914UL engine:

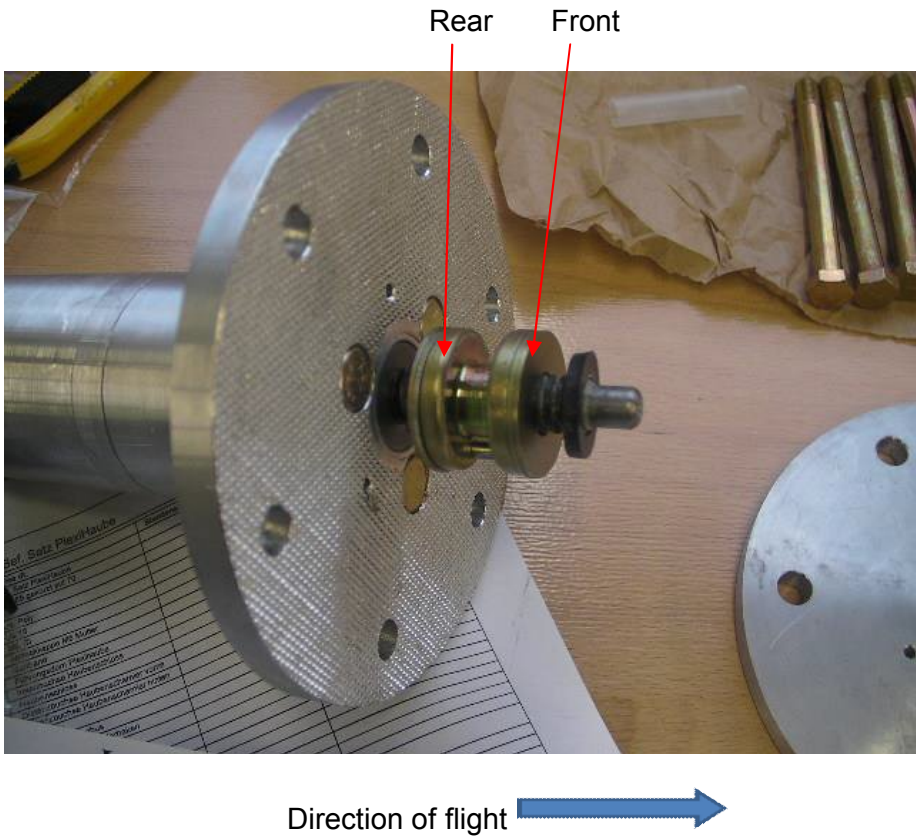
1 x out of C.MO14 rear (total 0.8mm)

4 x out of C.MO14 front (total 4.2mm)

Ensure that the two rubber cushion washers are in place.

Information: the large stack of washers originally fitted to the front is to limit the pitch to meet German noise regulations. It is the front washer stack that influences the FINE pitch setting

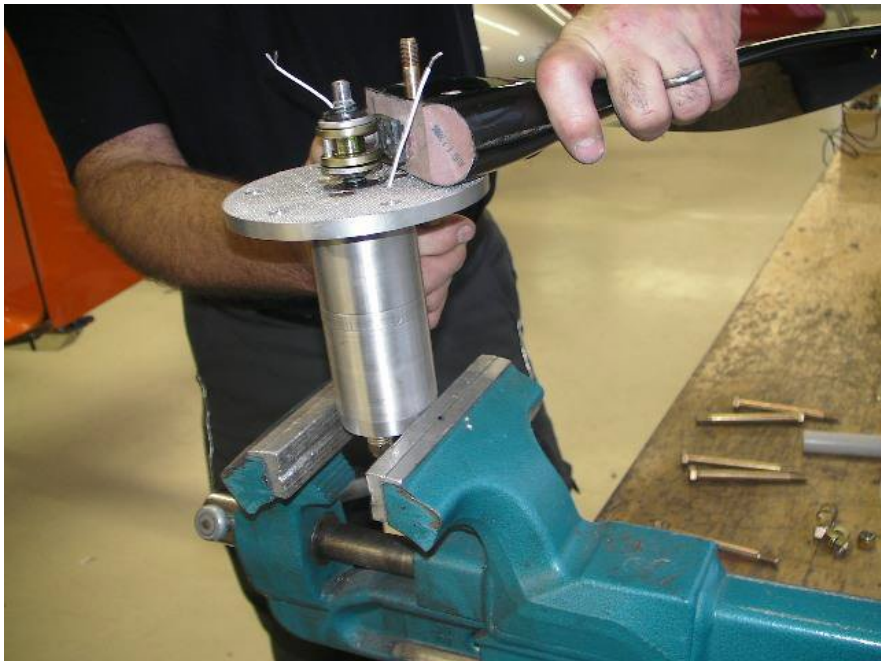
Record (at the end of this document) the height of each washer stack fitted



Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

4.2. Before proceeding to fit the blades visually examine for any faults, bulges or nicks. If satisfactory then record (at the end of this document) all blade codes, date stamps, serial numbers embossed (in reverse – rub through a piece of paper over the embossed area and look at the reverse paper side to see the code) and ink-marked on the root end of each blade:

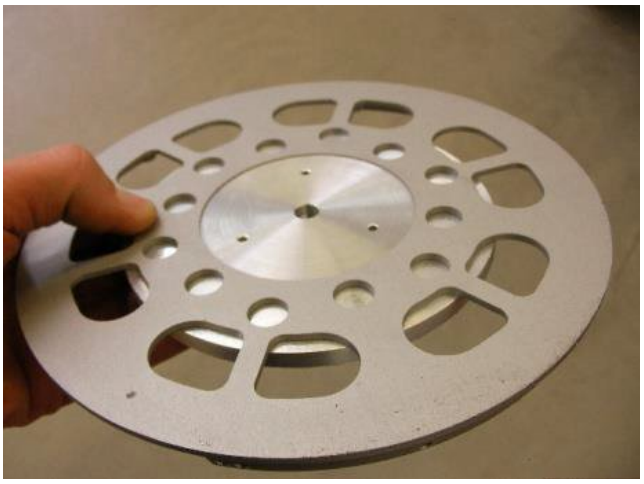
4.3. Clamp the actuator motor vertically in a vice (use soft-jaws) and using the 3/8” AN bolts and washers fit the three blades. Ensure that the two cables are free.

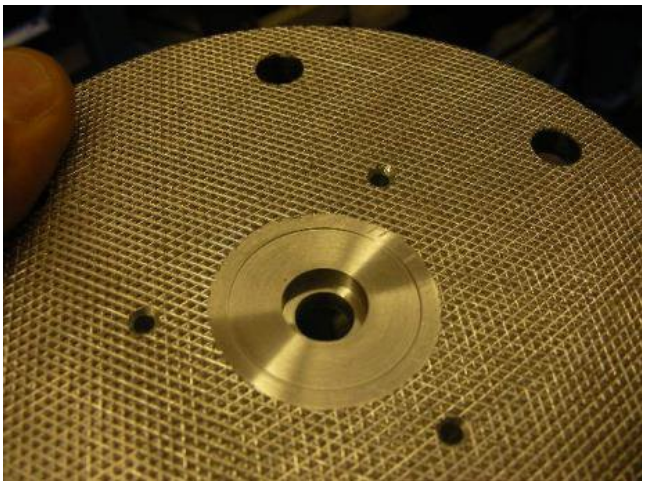


Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

4.4. Fit the knurled clamping plate over the six protruding bolts, carefully pulling the two cables through the plate.

4.5. If a spinner is to be fitted use the alternate knurled clamping plate and spinner backing plate.

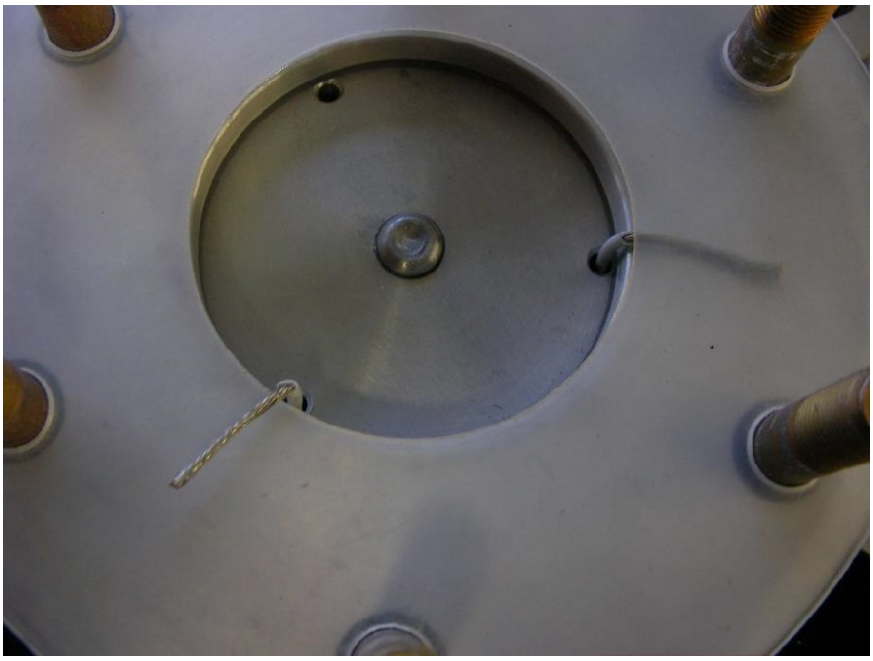




Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

4.6. Assemble the insulators and spacing plates in the order shown below

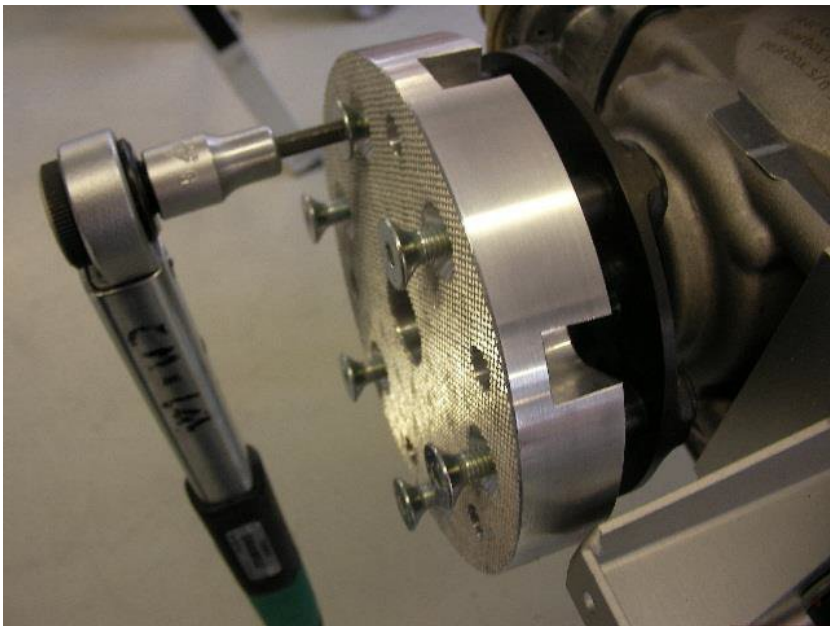
4.7. Fold over each of the cables so that one electrical cable connects to each plate:
NB: there is no solder or welding, electrical contact is made by the clamping pressure.



Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

4.8. Make sure that the insulator bushes are in the correct position, if they have moved out push them back into place with tool C.WZ3020

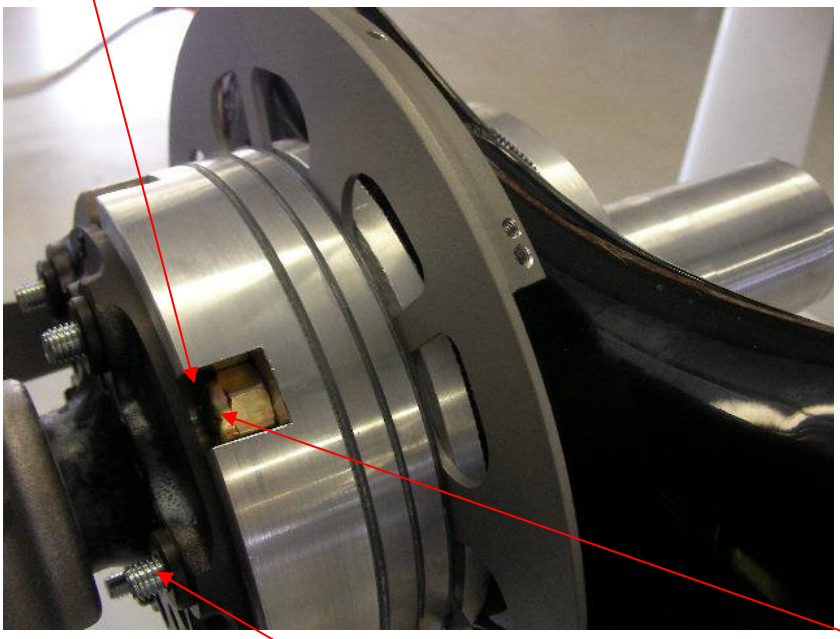
4.9. Install the adaptor plate on the engine using the M8 countersunk socket screws, Loctite 243 and torque (progressively) to 25Nm



Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

4.10 Attach the whole prop unit to the adaptor plate using the 3/8 AN5 hex-head bolts and nyloc nuts positioned in the recesses. Tighten the main prop bolts (progressively) to 40Nm.
When everything is correctly located and the bolts tightened use a scalpel to trim any protruding insulator flush with the outer diameter of the aluminium spacers.
Note: Before fully tightening the bolts assess whether the nyloc nuts are “in safety” (i.e. minimum two visible threads protruding). If not so, then replace the six bolts with longer items RSD6401.

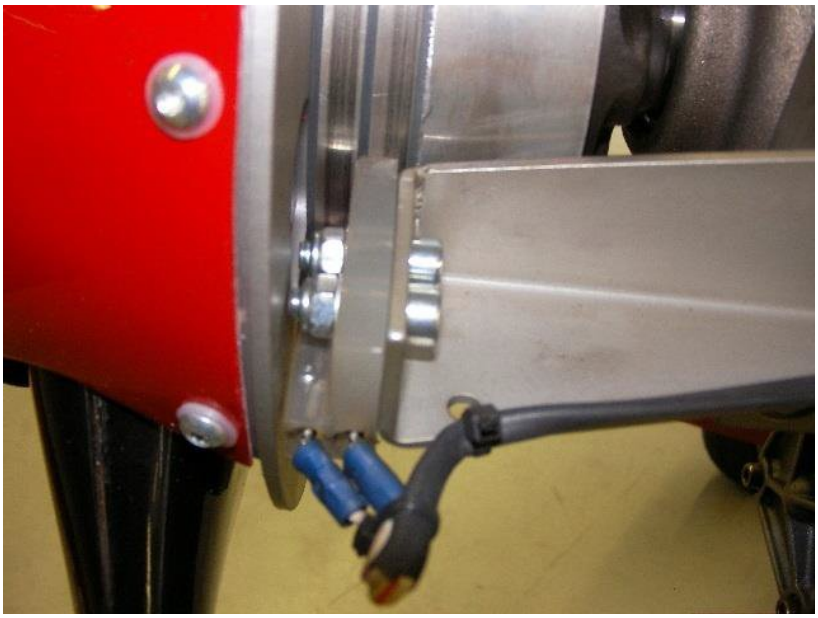
Check that there is adequate clearance between the end of each 3/8” bolt and the engine’s propeller flange (minimum 0.5mm)



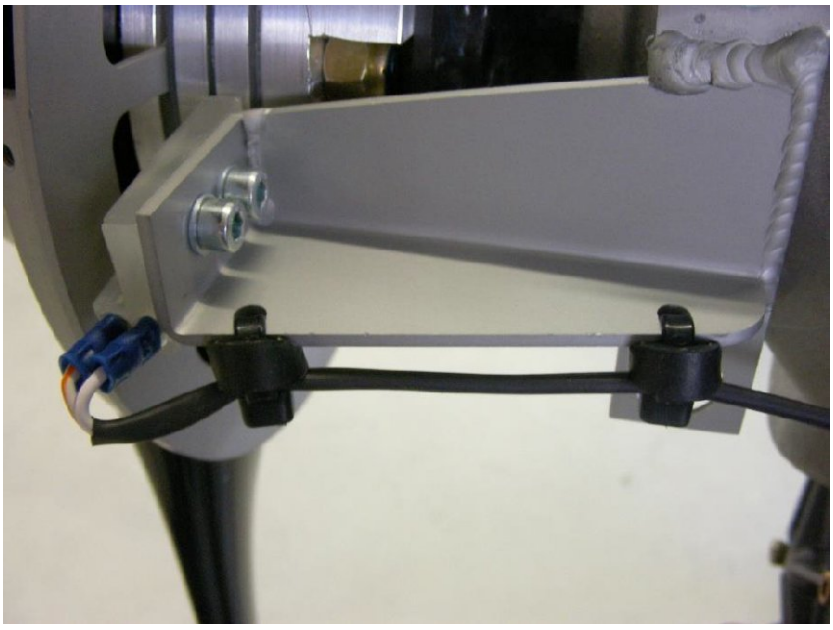
Paint stripe between M8 c/sunk screw and propeller flange, and between nut and bolt end, 6pls ea.

Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

4.11. Install the brush holder as shown. Make sure that the brush housing has 0.5mm clearance to the contact discs/spacers



4.12. Identify the two spare cables tied-back above the engine and using 3/16” crimp terminals (male) RSD4817 or RSD4818 connect the two cables to the brush terminals.
Use cable ties and spacers (made from scrap fuel hose) to secure the cable as shown.
Check for correct direction of propeller movement in relation to the rocker switch/LEDs. If reversed swap the two connectors. Leave the propeller set in the full-FINE condition.



Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

4.13. Temporarily fit the spinner using the button-head socket screws and nylon washers. Mark the spinner/backing plate relationship.

4.14. Refit the engine cowlings in accordance with Cavalon AMM RSUK0288.

4.15. Arrange the issue of a revised AWC which shows additional weight 3.8kg. Complete the aircraft's weight and balance placard accordingly.

5. Ground test of the finished installation

5.1. Turn on the master switch and confirm that the MAP-1 is operative

5.2. Without starting the engine, use the selector (rocker) switch to cycle the propeller to full-COARSE then back to full-FINE. Verify visually that the two indicator LED's function correctly, and audibly and visually that the propeller blades have changed pitch with no untoward noises. Whilst at the FINE and COARSE limits measure the pitch angle of each blade, which should be:

912ULS installation – Fine 13.0deg Coarse 20.0deg
914UL installation – Fine 14.0deg Coarse 21deg
Maximum variation blade-to-blade 1.5deg.

The pitch angle is relative to the propeller hub and is measured just inboard of each propeller tip with the blade leading-edge set horizontal.

Finally, set the propeller to the full-FINE position

The logic table for operation of the propeller controller is:

Both LEDS off	Propeller is not at an end position and no pitch change command active
Upper LED blinking	Propeller changing pitch to FINE
Lower LED blinking	Propeller changing pitch to COARSE
Upper LED steady ON	End position FINE reached and electronic pitch inhibit FINE activated*
Lower LED steady ON	End position COARSE reached and electronic pitch change inhibit COARSE activated*
Both LEDS flashing fast	Actuating motor does not work despite rocker switch activation. Possible defects, e.g. brushes worn, cable break.**

*Electronic pitch change inhibit is deactivated after selecting pitch change in opposite direction for at least 1 second

**Indication can only be reset by switching the master switch temporarily to OFF and then back to ON. In order to avoid pilot distraction, indication of a possible defect is retriggered after another activation of the rocker switch

Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

5.3. Following safe practice position and tie-down the aircraft in a suitable location for engine run-up. A qualified gyroplane pilot in the front seat should start and warm-up the engine.
At an engine speed about 3000rpm cycle the propeller manually from fine to coarse stops and verify an audible change in engine note / rpm change, and correct sense of rocker switch.
With the prop set at the fine limit apply full power and verify that the maximum engine speed is 5,500rpm.

NOTE! If the rpm is over 5600 or less than 5400 then the fine pitch washer stack must be decreased or increased to suit. Record any changes in the document worksheet.

5.4. If the engine rpm indication is erratic adjust the sensitivity of the MAP-1 gauge as described in the Operating Manual Section 9.2

6. Propeller balancing

6.1. If desired, balance the propeller by means of adhesive weights attached to the inside of the spinner backing plate. When the spinner is refitted after balancing, use a small amount of Loctite 243 on the socket-screw threads.

Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

7. Flight-test of the installation

The pilot must first ensure they are familiar with the operational instructions contained with POH RSUK0287 issue 2.

With the propeller set to full-FINE the pilot should take-off then climb to a cruise condition.
Ensure that the engine rpm does not exceed 5,800 rpm in the climb at full power and full fine pitch.
In cruise verify that the propeller functions correctly and that manifold pressure/rpm indications are consistent with the appropriate table below:

ROTAX 912 ULS

Power setting	Engine RPM	MAP	Fuel flow [ltr/h]
Max. TOP	5800	27.5	27
Max. MCP	5500	27	26
75% MCP	5000	26	20
65% MCP	4800	26	18
55% MCP	4300	24	14

ROTAX 914 UL

Power setting	Engine RPM	MAP	Fuel flow [ltr/h]
Max. TOP	5800	39.9	33
Max. MCP	5500	35.4	26
75% MCP	5000	31	20
65% MCP	4800	29	17.5
55% MCP	4300	28	12.5

MCP – Maximum Continuous Power
TOP – Take-Off Power
MAP – Manifold Absolute Pressure
MAP limits do not apply at engine speeds above 5100 RPM.

7.2. If operation is incorrect (particularly maximum rpm greater than 5,800rpm when climbing at full power in FINE pitch) then the pilot should return the aircraft for adjustment of the thrust washers.

7.3 Time to climb, std ISA conditions at 500kg or 560kg MTOW (as applicable to aircraft).
The time to climb in full coarse must not be less that 250fpm (1000ft in 4mins).
The time to climb in full fine must exceed 700fpm.

RotorSport UK Ltd Service Bulletin

Title: Retro-fit IVO-prop to Cavalon

SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~

Applicability

Aircraft type & model:	**Aircraft serial Nos. affected:**
Cavalon	**All**

Material information (Parts required to be made to implement this service bulletin):

The only parts manufactured during embodiment of this SB are two small stand-off spacers made from scrap 6mm fuel hose.

List of components (with purchasable part nos)

Parts required to perform process – *list batch or s/n for parts used*							
Part no.	Iss	Description	Qty	Torque	Loctite	Special instructions/marking/locking	Batch no/serial
V.KU503 (BG535)	ND	Propeller assembly (including brush carrier)	1				
CV.MO09 (BG967)	ND	Propeller mounting kit (including BG968 fabricated brush bracket)	1				
V.KU214 (BG2743)	A000	Spinner	1				
V.MO07 (BG1483)	ND	Spinner installation kit	1				
V.EL301 (BG4759)	ND	End-position controller kit	1				
S.EL44 (BG1420)	ND	Analogue manifold pressure gauge for 912ULS engine, or					
S.EL43 (BG1419)	ND	Analogue manifold pressure gauges for 914UL engine, or					
RSD4806	ND	MAP-1 RPM/MAP gauge	1				
RSD6221	ND	M4 x 20 button head socket screw	4				
RSD6007	ND	M4 nyloc nut	4				
RSD4817	ND	Crimp terminal, male (red)				Alternatively RSD4818 crimp terminal, male (blue)	
RSD4656	ND	Heat-shrink sleeving (small)	a/r				
RSD4593	ND	Heat-shrink sleeving (large)	a/r				
RSD4438	ND	Silicone tubing	a/r				
None	ND	Stand-off spacers manufactured from 6mm fuel hose	a/r				
RSD6401	ND	3/8-24 AN6-40A hex-head bolt	6			If required for safe installation	

Interchangeability

Complete propellers are interchangeable, individual blades may be interchanged on a single propeller subject to availability and balancing limitations as per IVOProp instructions.

RotorSport UK Ltd Service Bulletin

Title: Retro-fit IVO-prop to Cavalon		
SB No.: 088 Iss1	**Related documents** MC No:294 CCAR No.: None	**Compliance Category:** **OPTIONAL** or ~~**RECOMMENDED or MANDATORY**~~
Applicability		
Aircraft type & model: **Cavalon**	**Aircraft serial Nos. affected:** **All**	

Parts disposition

a) Disposal requirements – the fixed-pitch HTC propeller (and spinner, if fitted) removed from the aircraft are retained by RSUK as part of the cost of change.
b) Environmental hazards of parts containing hazardous materials – if handling the stainless-steel foil leading edge protection be cautious of sharp edges
c) Scrap requirements – when the fixed pitch HTC propeller is removed if any blades are found damaged beyond approved limits, they should be destroyed.

Documentation (Service Bulletin Completion action)

a) Entries within the aircraft logbooks, eg CAA BCAR A3-7 Authorised Person (or equivalent) to certify that the work is completed by writing *'SB-088 IVO-prop.incorporated'* in the aircraft logbook white pages, and record the action in the pink pages entitled 'Aircraft Modifications'. Both entries must be signed by the CAA Authorised Person or equivalent) together with their CAA (or equivalent) Authorisation number.

b) Completion of the SB worksheet attached, This must contain the PMR statement, and a final check item that no tools or equipment have been left within the aircraft

c) Completion of a Permit Flight Release form.

d) the testing pilot to annotate the aircraft logbook that the test flight has been completed to his/her satisfaction, with their pilots licence no.

e) Permit change application document. This is required as the SB will affect the permit limitations in respect of the propeller installation and empty weight, and enables the owner to request the permit change required.

Document approval signatures			
Engineering Manager	**CVE (as required)**	**Chief Test Pilot (if flight performance or safety effect)**	**Head of Airworthiness**
	Not required, modification MC-294 already approved.	**Not required, modification MC-294 already approved.**	Andy Lyons Aug 11 2015 8:01 PM cosign

Service Bulletin implementation Worksheet

Aircraft type:	**Serial no:**	**G-**
Worksheet completed by:		**Document ref:**
Worksheet cross-checked by (if applicable):		**SB-088 Iss1**

Purpose – record service bulletin implementation actions taken to inspect aircraft and return to service.

Maintenance manual referred-to and issue level/date:	Cavalon - RSUK0288 Iss 4 of 08.06.15

Note: attach SB sheets to this document

Task	Notes	Eng'r check/date	Inspector check/date
Record embossed serial number on blades:	Blade A Blade B Blade C		
Record date code on blade ends:	Blade A Blade B Blade C		
Other codes on blade ends:	Blade A Blade B Blade C		
Record serial number of MAP gauge			
Record serial number of end-position controller			
Fit manifold pressure gauge, rocker switch , LEDs and end-position controller to instrument panel			
If panel removed then verify correct function of barometric instruments when refitted	See RSUK0288 for method		
Remove engine cowlings	Inspect for cosmetic or structural damage. Report any found.		
Connect MAP gauge pipework			
Remove HTC prop (and spinner if fitted)	Describe disposal		
Assemble and fit IVO-prop	Rear washer set thickness Front washer set thickness		
Fit brush box assembly and connect			
Test prop function and verify correct sense of switch and LED's			
Measure achieved pitch angles	Blade A Blade B Blade C Hub angle		
Balance propeller/fit IVO-spinner			
Refit engine cowlings			
Amend Payload Specification placard			
Flight test	Time to climb – coarse Time to climb – fine Max rpm in climb		

Customer acceptance:	
Name: Signature/date:	Aircraft hobbs meter reading: Confirm logbooks annotated:
Permit Maintenance Release: ***'The work recorded above has been completed to my satisfaction and in that respect the aircraft is considered fit for flight. I confirm that no tools, equipment or debris have been left in the aircraft'***	
Engineer signature and date: CAA Authorisation code :	Location where work completed

Permit Change Application

The purpose of this document is to provide sufficient information to the CAA to allow a change of the Permit to Fly to incorporate a specific aircraft modification or upgrade.

Aircraft reg no **G-**	Aircraft serial No. RSUK/
AAN that has been incorporated: AAN29345 Addendum 2	Service Bulletin number incorporated: SB-088 IVO-prop fitment to Cavalon

Owners name and address

Daytime telephone number

Email

Summary of change required: (cross out as required)

IVO-prop variable pitch propeller fitted, as approved by AAN29345 Addendum 2

Documents to be included with this application:
Photocopy of aircraft and/or engine logbook pages with certifying signatures from the A3-7 authorised person that confirm embodiment of the service bulletin and Permit Maintenance Release certification.
Existing CAA Permit to Fly.
Application fee as specified in the CAA Scheme of Charges paragraph 6.1
(http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=list&type=subcat&id=1)

Send to:
CAA Applications and Approvals
Aviation House
Gatwick Airport South
West Sussex
England
RH6 0YR