

**FAA APPROVED
ROTORCRAFT FLIGHT MANUAL SUPPLEMENT
for the
EUROCOPTER EC130 B4
EQUIPPED WITH INTEC ENGINE FILTER SYSTEM**

REG. NO. _____
SERIAL NO. _____

This supplement must be attached to the FAA Approved Rotorcraft Flight Manual (RFM), when the INTEC Engine Filter System is installed in accordance with STC SR01373SE.

The information contained herein supplements information of the basic Flight Manual. For Limitations, Procedures, and Performance Data not contained in this supplement, consult the basic Rotorcraft Flight Manual.

FAA APPROVED: 
for Manager
Seattle Aircraft Certification Office

DATE: 3/17/05

LOG OF PAGES

Pages	Rev.	Revision	FAA Approval
1-7	IR	Initial Release	Jan. 23, 2004
All	A	Removed Limitations for operations in falling and blowing snow.	

SECTION 1 - GENERAL

This supplement provides the changes in the limitations, operating procedures and performance unique to the EC130 B4 rotorcraft with the INTEC Engine Filter System installed. The Engine Filter System consists of a filter element, duct, alternate air doors, low inlet pressure annunciator/push button switch assembly, Engine Alternate Air power fuse and hardware required to complete the installation.

For applicable performance effects due to the filter system installation, see Section 5 of this supplement.

NOTE: For the EC130 B4, the FADEC data page does not reflect the installation of the filter system.

For all operations not covered in this supplement (including operation in falling snow) refer to the basic Rotorcraft Flight Manual.

SECTION 2 - LIMITATIONS

GENERAL

Life Limit of the filter element is 1500 hours of engine operation.

TYPE OF OPERATIONS

- Operation of the bypass doors in falling snow is prohibited.

The limitations laid out in the basic flight manual remain applicable with exception of the following specific limitation:

- Flight under falling snow is permitted.

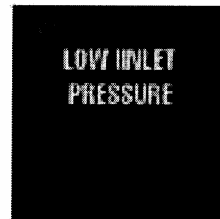
TAKEOFF

Takeoff with LOW INLET PRESSURE annunciator light illuminated..... **PROHIBITED**

SECTION 3 - EMERGENCY PROCEDURES

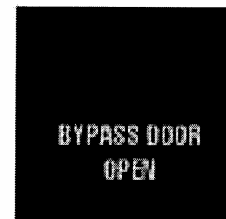
CAUTION LIGHT (AMBER)

LOW INLET PRESSURE annunciator **ON** and/or unexplained increase in Engine TOT.



FAULT: FILTER DIRTY/BLOCKED

ACTION: ENGINE ALTERNATE AIR PUSH BUTTON SWITCH - **ACTUATE**
(BYPASS DOOR OPEN annunciator will illuminate)



- a. If Low Inlet Pressure light goes out, continue mission and service filter prior to next flight. Likely fault is a partially blocked filter.
- b. If Low Inlet Pressure light remains **ON**, monitor engine instruments to assure full power can be attained within engine limits (red lines). If power can be achieved within the red lines and level flight can be maintained, land as soon as practicable and inspect filter element for blockage. If filter is not blocked, mission can be continued. Service filter as required and conduct a power assurance check on the next flight.
- c. If Low Inlet Pressure light remains **ON**, monitor engine instruments and if power cannot be maintained within the red lines for level flight at or below 70 knots, reduce airspeed and land as soon as possible. Service filter and conduct a power assurance check on the next flight. If LOW INLET PRESSURE annunciator still illuminates or if power check is 'incorrect', refer to engine maintenance manual for corrective action.

SECTION 3 - EMERGENCY PROCEDURES (continued)**OPERATION IN FALLING OR BLOWING SNOW**

LOW INLET PRESSURE annunciator **ON** and/or unexplained increase in Engine TOT.

NOTE

Operation of the bypass doors in falling and blowing snow is prohibited.

ACTION: Reduce engine power

- a. If Low Inlet Pressure light goes out, land as soon as practicable .
- b. If Low Inlet Pressure light remains **ON**, monitor engine instruments and land as soon as possible.

CAUTION

Inspect and/or service the filter prior to next flight. Possible cause of low inlet pressure indication is accumulation of snow and/or ice on the filter. If ice is found, verify rotor blades are free of ice accumulation.

SECTION 4 - NORMAL PROCEDURES

4.2.1 EXTERIOR CHECK (First flight of the operational day)

Station 5:

Add to MGB Cowl check:

Thoroughly check the filter surface and bypass door system for damage and security. These surfaces, surrounding areas and bypass screens, duct and doors must be free of accumulated debris, snow, ice, slush, etc., before each flight. Verify filter material is in good condition. Verify filter bypass doors are closed and sealed. Open engine cowling and check that the air intake is free of snow, ice or water, particularly under filter.

4.3.1 ENGINE PRESTART CHECK (First flight of the operational day)

Engine Alternate Air push button.....**Push**

Verify door motor operation and "BYPASS DOOR OPEN" annunciator illuminates

Engine Alternate Air push button.....**Push**

Verify door motor operation and "BYPASS DOOR OPEN" annunciator extinguishes.

4.3.3 RUN-UP CHECK

During engine run up, assure "LOW INLET PRESSURE" light does not illuminate.

4.9.2 COLD WEATHER OPERATION

OPERATION IN FALLING OR BLOWING SNOW

Operations in falling and blowing snow have been demonstrated in one-quarter mile or greater visibility conditions when the helicopter engine induction system is equipped with the INTEC Engine Inlet Filter. Minimize exposure time in ground and IGE hover operations. Snow accumulations on airframe and filter are more probable in these conditions. Exercise caution when operating in snow. Maintain visual contact with ground and any obstacles at all times.

NOTE

Operation of the bypass doors in falling and blowing snow is prohibited.

SECTION 5 – PERFORMANCE DATA

Helicopter performance is slightly reduced with the INTEC Engine Filter System installed. This reduction in performance increases as the filter becomes contaminated. For simplicity, performance increments assume the filter is blocked for “Low Inlet Pressure” annunciator illumination.

5.3.2 In Flight

For EC130 B4 rotorcraft apply the following corrections to the VEMD calculated torque and T4 margins displayed on the "Engine Power Check" page:

- Filter Torque margin correction..... +1.6%
- Filter T4 margin correction..... +19°C

NOTE

Indicated torque margins will decrease as the filter element collects dirt even if engine conditions remains constant. With a VEMD corrected torque margin of less than 0%, clean filter element and repeat check. If a positive corrected torque margin cannot be maintained with a clean filter element, refer to appropriate rotorcraft or engine maintenance manual to determine the cause of low power condition.

5.3.3 Manual Engine Check

Engine power check procedures are the same as for the basic helicopter. Use the graphs published in the basic Rotorcraft Flight Manual to determine the torque and temperature margins using the normal procedure. Apply the following corrections when using the basic RFM charts to account for the filter system:

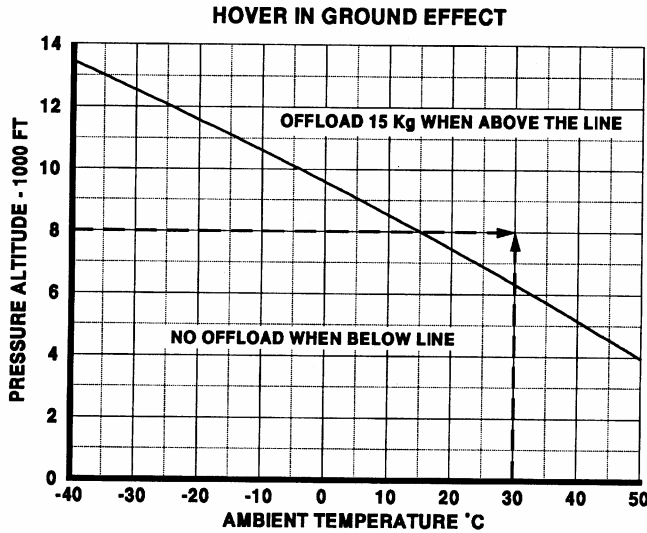
- Torque: Increase OAT 2°C when using the charts to determine acceptability of the power check and condition of the engine.
- T4: Increase indicated T4 by 16°C prior to entering the chart.

For performance refer to the applicable performance data presented in the basic rotorcraft flight manual and apply the corrections given below:

5.6 Hover in Ground Effect

IGE Hover Ceiling charts:

Check chart below for possible reduction in hover ceiling gross weight with filter installed.



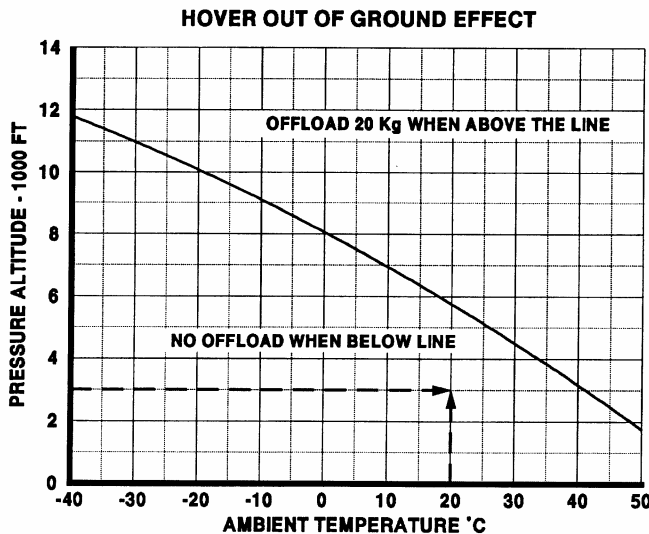
Example:
OAT = 30°C
Pressure Altitude = 8000 ft

Reduce IGE Hover ceiling gross weight by 15 kg.

5.7 Hover Out of Ground Effect

OGE Hover Ceiling charts:

Check chart below for possible reduction in hover ceiling gross weight with filter installed.



Example:
OAT = 20°C
Pressure Altitude = 3000 ft

No reduction in OGE Hover ceiling gross weight required.

5.9 Rate of Climb

Reduce Rate of Climb determined from basic RFM chart by 70 ft/min with bypass doors closed and 140 ft/min with bypass doors open.