

**FAA APPROVED
ROTORCRAFT FLIGHT MANUAL SUPPLEMENT
for the
BELL 206L-1, L-3, L-4
EQUIPPED WITH FDC/aerofilter ENGINE BARRIER FILTER SYSTEM**

REG. NO. _____
SERIAL NO. _____

This supplement must be attached to the FAA Approved Rotorcraft Flight Manual (RFM) appropriate to the specific model, when the FDC/aerofilter Engine Filter System is installed in accordance with STC SR00180SE.

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 Flight Manual.

FAA APPROVED: 
FOR Manager
Seattle Aircraft Certification Office

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LOG OF PAGES

Pages	Rev.	Revision	FAA Approval
ALL	IR	Initial Release	11/04/99
ALL	A	<ul style="list-style-type: none">Added models 206L-1, modified per STC SH5695SW or STC SH296NM to list of applicable helicopters.Revised Performance Section to cover all models.	04/05/02
ALL	B	<ul style="list-style-type: none">Updated formatSection 1, revised filter element life limit to 1500 hrs (was: 1000 hrs) in accordance with Instructions for Continued Airworthiness Doc No. 1206-SERIES-ICA-1Section 1, Added Static Port Relocation Kit informationSection 3, Replaced "Warning Light (Red)" with "Caution Light (Amber)"	(Internal Release Only)
ALL	C	<ul style="list-style-type: none">Section 1: Deleted 'General' sub-sectionSection 3: Completely revisedSection 4, b: Corrected typographical error	03/14/11

INTRODUCTION

This supplement provides the changes in the normal operating procedures unique to the Bell 206L-1, L-3, L-4 rotorcraft with the FDC/aerofilter P/N 1206IN2-2600 Engine Filter System installed. The Engine Filter System consists of a filter element, duct, alternate air door, low inlet pressure warning system, and hardware required to complete the installation.

Eligible Bell 206L models for the installation of the Filter System:

Model	Engine	Installation
206L-1	Allison 250-C28B	Factory
206L-1	Allison 250-C30P	STC SH5695SW
206L-1	Allison 250-C30P	STC SH296NM
206L-3	Allison 250-C30P	Factory
206L-4	Allison 250-C30P	Factory

For applicable performance affects due to the filter system installation, reference the applicable Bell Rotorcraft Flight Manual Supplements as listed below and refer to Section 4 of this Supplement.

Model	Particle Separator RFMS	Snow Deflector RFMS
206L-1	Refer to Basic RFM No. BHT-206L1-FM-1	BHT-206L1-FMS-4
206L-1 per STC SH5695SW	Refer to PHI ^[1] RFM No. 206L-1/C30P and allow for the reductions indicated in Section 4 of this Supplement.	BHT-206L1 Supplement for Snow Deflector Kit No. 206-706-208
206L-1 per STC SH296NM	Refer to ASI ^[2] RFMS No. ASI-206L-C30P-FMS-3	Refer to ASI ^[2] RFMS No. ASI-206L-30P-FMS-7
206L-3	BHT-206L3-FMS-3	BHT-206L3-FMS-7
206L-4	BHT-206L4-FMS-3	BHT-206L4-FMS-7

^[1] STC SH5695SW: Petroleum Helicopters, Inc. Lafayette, Louisiana

^[2] STC SH296NM: Air Services International, Inc. Scottsdale, Arizona

SECTION 1 – OPERATING LIMITATIONS

TYPE OF OPERATION

The Engine Snow Deflector Kit (Bell Kit No. 206-706-208) shall be installed in conjunction with the Engine Filter System (FDC/aerofilter P/N 1206IN2-2600) and Static Port Relocation Kit (FDC/aerofilter P/N 1206K1-1) when conducting flight operations in **falling and/or blowing snow**. Refer to Snow Deflector Kit RFMS for specific limitations when installed.

TAKEOFF

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

SECTION 2 - NORMAL PROCEDURES**EXTERIOR CHECK**

Thoroughly check the air plenum chamber and filter system through the inlet. The area must be free of accumulated debris, snow, ice, slush, etc., before each flight. Verify filter material is in good condition. Verify filter bypass door is closed.

INTERIOR AND ENGINE PRE-START CHECK

Engine Alternate Air switch in the **CLOSE** position.

ENGINE RUN-UP

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

SECTION 3 - EMERGENCY PROCEDURES**LOW INLET PRESSURE ANNUNCIATOR (AMBER)**

Symptom: LOW INLET PRESSURE annunciator **ILLUMINATED** and/or unexplained increase in engine TOT.

Fault: Filter dirty/blocked.

Action: Engine Alternate Air Switch - **OPEN**

- a. If LOW INLET PRESSURE annunciator extinguishes, continue mission and service filter prior to next flight. Likely fault is a partially blocked filter element(s).
- b. If LOW INLET PRESSURE annunciator remains **ILLUMINATED**, 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 elements as required and conduct a power assurance check on the next flight.
- c. If LOW INLET PRESSURE annunciator remains **ILLUMINATED**, monitor engine instruments and if power cannot be maintained within the red lines, land as soon as possible. Service the filter and conduct a power assurance check on the next flight. If LOW INLET PRESSURE annunciator still illuminates or if engine performance is less than minimum specification, refer to engine maintenance manual for corrective action.

SECTION 4 – PERFORMANCE INFORMATION

Helicopter performance is slightly reduced with the FDC/aerofilter Engine Filter System installed. This reduction in performance increases as the filter becomes contaminated.

- For helicopter models 206L-1, 206L-3, 206L-4 and 206L-1 modified per STC SH296NM, refer to Particle Separator Flight Manual Supplement ^[3] (Purge ON) for applicable Hover Ceiling and Rate of Climb performance charts.
- For helicopter model 206L-1 modified per STC SH5695SW, refer to the applicable performance data presented in the basic flight manual and allow for the reductions indicated below:

I GE and OGE Hover Ceiling charts:

- When operating in AREA A, no reduction necessary.
- When operating in AREA B, reduce allowable Gross Weight by 150 lbs (68 kg).

Rate of Climb charts:

- Reduce Rate of Climb chart data by 100 ft/min.

^[3] For 206L-1, refer to basic flight manual.

SECTION 4 – PERFORMANCE INFORMATION (continued)

Engine Power Check (all models)

Perform periodic power assurance check as specified in basic flight manual to monitor engine performance. From torque derived from this chart, subtract a constant 5% torque when operating with the FDC/aerofilter Engine Filter System installed.

NOTE

Clean filter elements prior to performing power assurance check.

- a. If actual torque indication is the same or greater than the required chart torque (reduced by 5% constant torque), then engine power equals or exceeds minimum performance specification and performance data presented can be achieved.
- b. If actual torque indication is less than the required chart torque (reduced by 5% constant torque), then engine power is less than minimum specification and performance data presented cannot be achieved.

If power assurance torque cannot be achieved with a clean filter, refer to appropriate rotorcraft maintenance manual to determine cause of low power.