

**FAA APPROVED  
ROTORCRAFT FLIGHT MANUAL SUPPLEMENT  
for the  
MD HELICOPTER MODELS 369HM, HS, HE, D, E, F, FF**

REG. NO. \_\_\_\_\_  
SERIAL NO. \_\_\_\_\_

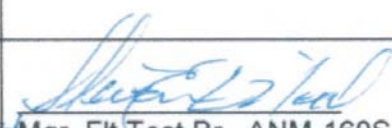
This supplement must be attached to the FAA Approved Rotorcraft Flight Manual (RFM) appropriate to the specific model, when the FDC/aerofilter Inlet Barrier Filter System is installed in accordance with STC SR00877SE.

The information contained herein supplements information of the basic Flight Manual. For Limitations, Emergency and Malfunction Procedures, Normal Procedures and Performance Data not contained in this supplement, refer the basic Flight Manual.

FAA APPROVED:   
Manager, Flight Test Branch, ANM-160S  
FAA Seattle Aircraft Certification Office

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**LOG OF REVISIONS**

Pages	Rev.	Revision	FAA Approval
ALL	IR	INITIAL RELEASE.	Adriano Pasion for Mgr. Flt Test Br., ANM-160S FAA Seattle ACO Transport Airplane Directorate Date: 02/23/2001
ALL	A	<ul style="list-style-type: none"> <li>• §1: REVISED GENERAL.</li> <li>• §2: IS: 1500 HR WAS: 1000 HR                ADDED OPERATION IN SNOW</li> <li>• §3: ADDED OPERATION IN SNOW</li> <li>• §4: REVISED PROCEDURES                DELETED OPERATION IN SNOW</li> <li>• §5: REVISED PERFORMANCE                LIMITATIONS AND POWER                ASSURANCE CHECK                INSTRUCTIONS</li> </ul>	Adriano Pasion for Mgr. Flt Test Br., ANM-160S FAA Seattle ACO Transport Airplane Directorate Date: 06/04/2003
ALL	B	<ul style="list-style-type: none"> <li>• REVISED HEADER</li> <li>• ADDED LOG OF REVISIONS</li> <li>• §2: DELETED "GENERAL" SUB-SECTION</li> </ul>	 Mgr. Flt Test Br., ANM-160S FAA Seattle ACO Transport Airplane Directorate Date: <u>13 Sep 2011</u>

**SECTION 1 - GENERAL**

This supplement provides the changes in the limitations, procedures and performance unique to the MD Helicopters, Inc. Model 369 series rotorcraft with the FDC/aerofilter Engine Filter System installed. The Engine Filter System consists of two filter elements, a housing assembly, alternate air door system, an Engine Alternate Air switch, a cockpit Low Inlet Pressure annunciator light, an Engine Alternate Air circuit breaker and hardware required to complete the installation.

For all operations not covered in this supplement (including cold weather operations) refer to the basic Rotorcraft Flight Manual. Incorporation of the Filter System does not relieve basic rotorcraft limitations for operation in icing and/or falling and blowing snow.

**SECTION 2 - LIMITATIONS****TAKEOFF**

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

**OPERATION IN FALLING AND/OR BLOWING SNOW**

Observe the following limitations:

- Visibility is greater than 5000ft (0.81 NM):  
Flight in falling/blowing snow is authorized.
- Visibility is 2500 to 5000ft (0.43 to 0.81 NM):  
Flight time in continuous falling/blowing snow is limited to 10 minutes. After this time, the helicopter must be landed and the filter system checked for snow accumulation prior to next flight.
- Visibility is less than 2500ft (0.43 NM):  
Flight in falling/blowing snow is prohibited.

## **SECTION 3 - EMERGENCY & MALFUNCTION PROCEDURES**

### **CAUTION LIGHT (AMBER)**

#### **NORMAL OPERATIONS**

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

PROBABLE FAULTS: FILTERS CONTAMINATED, ENGINE BLEED VALVE FAILURE,  
LOW EFFICIENCY ENGINE POWER TURBINE.

ACTION: ENGINE ALTERNATE AIR SWITCH - **OPEN**

- a. If Low Inlet Pressure light goes out, continue mission and service filters prior to next flight. Likely fault is partially blocked filters.
- 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, continue the mission. Service the filters and conduct a power assurance check on the next flight. Likely cause of the caution is a leaking bleed valve or low efficiency power turbine. Repair as required.
- c. If Low Inlet Pressure light remains **ON**, monitor engine instruments and if power cannot be maintained within the red lines, land as soon as practical. Service the filters and conduct a power assurance check on the next flight. Likely cause of the caution is a low efficiency power turbine. Repair as required.

#### **OPERATION IN FALLING AND/OR BLOWING SNOW**

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

PROBABLE FAULTS: BUILD UP OF SNOW ON FILTER ELEMENT.

ACTION: LAND AS SOON AS PRACTICAL

Clean snow accumulation from filter elements prior to next flight.

#### **CAUTION**

Do not open bypass system if  
snow contamination is suspected.

**SECTION 4 - NORMAL PROCEDURES**

**EXTERIOR CHECK**

Thoroughly check the filter surfaces and system for damage and security. The surface and surrounding area must be free of accumulated debris, snow, ice, slush, etc., before each flight. Verify filter material is in good condition. Prior to starting engine verify filter bypass system is closed.

**INTERIOR & ENGINE PRESTART CHECK**

Engine Alternate Air circuit breaker..... **SET**  
Engine Alternate Air push button.....**CLOSED** (lights OFF)

**ENGINE RUNUP**

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

## **SECTION 5 - PERFORMANCE**

Helicopter performance is slightly reduced with the Inlet Barrier Filter System installed compared to no inlet protection. As the filters become contaminated, this reduction in performance increases. However, performance with the filter system installed is always equal to or better than that with the Particle Separator as presented in the basic Flight Manual. Therefore, refer to performance charts in the basic Flight Manual as applicable for the Engine Air Particle Separator Filter (Bleeds OFF) when operating with the Inlet Engine Filters System installed.

Perform periodic power assurance check as specified in basic flight manual to monitor engine performance. Select the Power Check Chart with the Particle Separator Inlet (Mist Eliminator not installed) when operating with the Inlet Barrier Filter System. Increase observed TOT by 6°C. Compare the specification TOT from the chart with the TOT observed during flight.

- a. If corrected observed TOT is lower than the specification TOT, then engine power equals or exceeds minimum performance specification and performance data contained in the Basic Flight Manual applicable for the Air Particle Separator Filter can be achieved.
- b. If the corrected observed TOT is higher than the specification TOT, then engine power is less than minimum specification and performance data contained in the Basic Flight Manual applicable for the Air Particle Separator Filter may not be achieved. Clean filter elements and repeat power assurance check. If engine power cannot be achieved with clean filters, refer to appropriate rotorcraft maintenance manual to determine cause of low power.