

**AirFilm Camera System**  
6245 Aerodrome Way  
Georgetown, CA 95634

*Supplement No. AFM-505-205*

**FAA APPROVED  
ROTORCRAFT FLIGHT MANUAL SUPPLEMENT**

**TO THE**

**BELL HELICOPTERS 505 SERIES**

**WHEN EQUIPPED WITH THE  
AFM-505 UTILITY MOUNT**

Aircraft Serial Number #: \_\_\_\_\_ Aircraft Reg. Number #: \_\_\_\_\_

This supplement must be attached to the FM Approved Rotorcraft Flight Manual, when the aircraft is modified by the installation of the Airfilm Model AFM-505 Utility Mount in accordance with:

**STC No. SR02804LA**

The information contained herein supplements or supersedes the basic manual only in those areas listed herein. For limitations, emergency procedures, normal procedures, and performance information not contained in this supplement, consult the basic Rotorcraft Flight Manual.

FAA Approved

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Northwest Flight Test Section, AIR-715  
Federal Aviation Administration  
Seattle, WA.

Date: 6 March 2023

### LOG OF REVISIONS

Rev	Pg	Date	Description	FAA Approval
N/C	1-7 (FAA approval as shown in page footers)	6 March 2023	Complete Supplement - AFM-505 Utility Mount	<p>_____</p> <p>Northwest Flight Test Section,          AIR-715          Federal Aviation Administration          Seattle, WA.</p> <p>Date: 6 March 2023</p> <p>_____</p>

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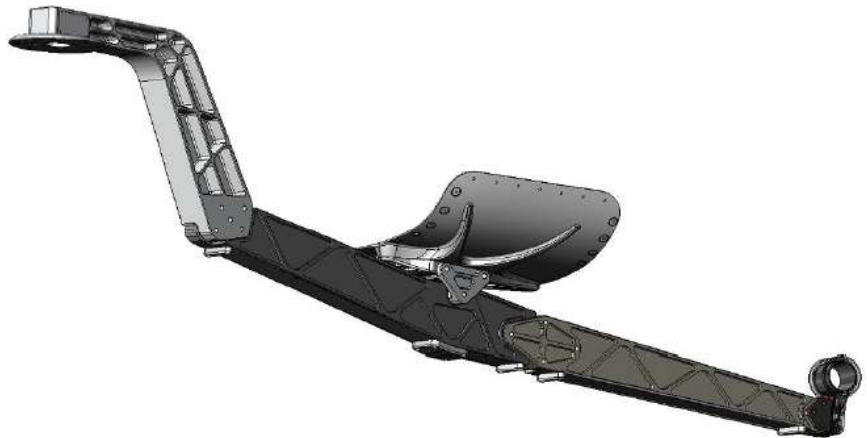
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## **GENERAL INFORMATION**

The Airfilm AFM-505-1 Beam Utility Mount consists of a billet machined aluminum beam assembly that attaches to the bottom of the helicopter and provides means to attach a Camera or Sensor near aircraft nose.



**Figure 1 – AFM-505-1 Utility Mount, LH Beam Configuration**

The AFM-505-3 Downpost Utility Mount consists of a billet machined aluminum assembly that attaches to the bottom skin of the helicopter and provides means to attach a small Camera or Sensor to the bottom left side.

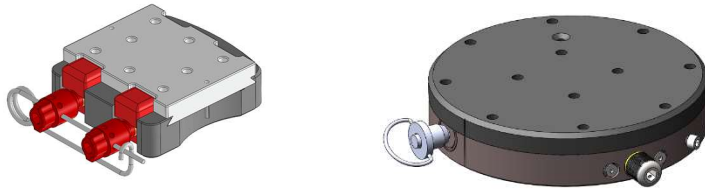


**Figure 2 – AFM-505-3 Utility Mount, LH Downpost Configuration**

## **GENERAL INFORMATION (Continued)**

### Payload Quick Disconnect Devices

The payload may be installed and removed by the pilot when the payload uses the Airfilm “Dovetail” (P/N DT-1-1) or “QDD” (P/N QDD-1-1 or QDD-1H-1) mounts. These optional mounts require no tools for the installation of the payload.



**Figure 3 – DT-1-1 & DT-1H-1 Dovetail & QDD-1-1 Quick Disconnect**

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## **SECTION 1 LIMITATIONS**

### **1-3 TYPES OF OPERATION**

#### **Payload Weight & Size**

For the Beam Mount Configuration AFM-505-1, The camera/sensor package is limited to a maximum allowable frontal area of 2.22 sq. ft., and a weight of 125 lbs.

For the Downpost Mount Configuration AFM-505-3, The camera/sensor package is limited to a maximum allowable frontal area of 1.00 sq. ft., and a weight of 50 lbs.

Payloads with concave frontal surfaces are prohibited.



**Figure 4 - Image Showing Max Payload for Each Configuration  
(-1 Beam Mount Left, -3 Downpost Mount Right)**

## **1-7 AIRSPEED**

Any never exceed speed (Vne) from the Basic RFM is reduced by 13 KIAS When payload is installed on the AFM-505 Mount

No airspeed reduction with the AFM-505 Utility Mount only installed (i.e., no payload).

## **1-20 PLACARDS**

Install the following placard on the instrument panel in full view of pilot:

**Any never exceed speed (Vne) from the Basic RFM is reduced by 13 KIAS When payload is installed on the AFM-505 Mount**

**Figure 5 Placards and Markings**



## **SECTION 2 NORMAL PROCEDURES**

### **2-3 PREFLIGHT CHECK**

#### **2-3-B-8 EXTERNAL CHECK - FUSELAGE FRONT**

##### Utility Mount

Prior to the first flight each day the pilot shall visually inspect the following:

- All AFM-505 Utility Mount hardware and attachment points for cracks, damage and security.
- All AFM-505 Utility Mount payloads and attachment points for damage and security.

#### **2-7 BEFORE TAKEOFF CHECK**

##### **CAUTION**

Nose ground clearance is reduced with utility mount and payload installed.

#### **2-9 IN-FLIGHT OPERATIONS**

1. AIRSPEED - As desired (not to exceed  $V_{NE}$  with payload installed)

#### **2-10 DECENT AND LANDING**

##### **CAUTION**

Nose ground clearance is reduced with utility mount and payload installed.

## **SECTION 3    EMERGENCY PROCEDURES**

No change from the basic Rotorcraft Flight Manual.

## **SECTION 4    PERFORMANCE DATA**

### **4-5 HOVER PERFORMANCE**

No change from the basic Rotorcraft Flight Manual

### **4-7 CLIMBS AND DESCENTS**

Climb performance – Reduce predicted published climb performance by 100 ft/min when payload is installed on the AFM-505-1 Beam Utility Mount or AFM-505-3 Downpost Utility Mount.

## SECTION 5 WEIGHT & BALANCE

### The AFM-505 Utility Mount Weight and CG Stations

The charts below provide the pilot weight and balance information for installing, removing, or changing the external payload (sensor, camera, etc.) attached to the Utility Mount.

<b>BELL 505 WEIGHT AND STATIONS - LH BEAM INSTALLATION</b>			
<b>FOR CAMERA / SENSOR SYSTEMS</b>			
<i>BELL MODEL 505</i>			
ITEM DESCRIPTION	WEIGHT LBS	LONGITUDINAL ARM INCHES	LATERAL ARM INCHES
<b>PAYLOAD LOCATION --USE CAMERA WEIGHT (125 lb max)*</b>		45.24	-29.00
<b>AFM-505-1 - Mount Assembly</b>	55.00	80.90	-18.00
<b>OPTIONAL QUICK DISCONNECT DEVICE (SELECT ONE OF THE FOLLOWING)</b>			
DT-1-1	2.40	45.24	-29.00
TAPER FITTING ASSEMBLY (CF-10)	1.80	45.24	-29.00
<b>*USE ACTUAL WEIGHT OF INSTALLED EQUIPMENT</b>			

**Figure 6 - Weight and Balance - Beam Mount Configuration AFM-505-1**

<b>BELL 505 WEIGHT AND STATIONS - LH DOWN POST</b>			
<b>FOR CAMERA / SENSOR SYSTEMS</b>			
<i>BELL MODEL 505</i>			
ITEM DESCRIPTION	WEIGHT LBS	LONGITUDINAL ARM INCHES	LATERAL ARM INCHES
<b>AFM-505-3 PAYLOAD LOCATION -USE CAMERA WEIGHT (50 lb max)*</b>		85.90	-18.00
<b>AFM-505-3 - LH DOWN POST ASSEMBLY</b>	10.50	85.90	-18.00
<b>OPTIONAL QUICK DISCONNECT DEVICE (SELECT ONE OF THE FOLLOWING)</b>			
DT-1-1	2.40	85.90	-18.00
<b>*USE ACTUAL WEIGHT OF INSTALLED EQUIPMENT</b>			

**Figure 7 - Weight and Balance - Downpost Configuration - AFM-505-3**