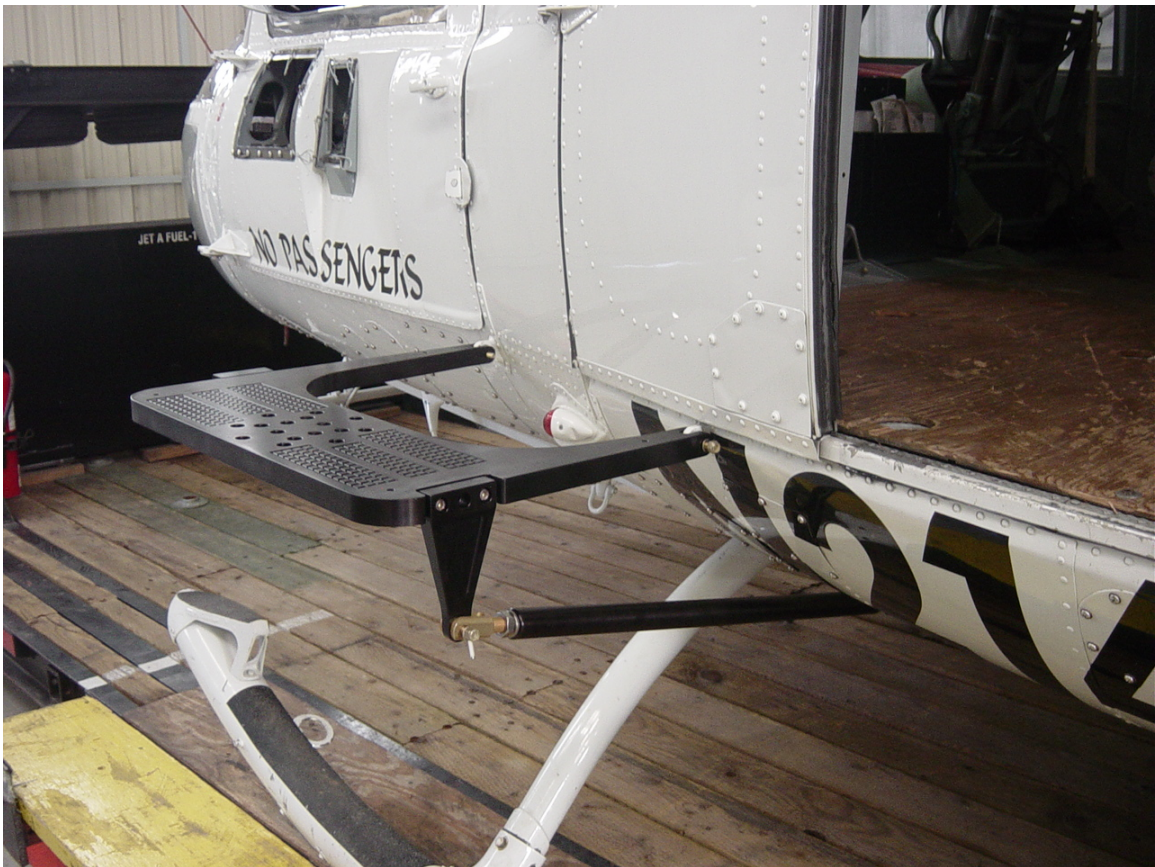


**INSTALLATION INSTRUCTIONS**

**AFM-205SM-1 SIDE MOUNT**  
**FOR THE**  
**BELL MODEL: UH-1 SERIES, 205 SERIES, 212, 412, 412EP AND**  
**412CF**  
**AND**  
**AGUSTA BELL MODEL AB212 AND AB412 ROTORCRAFT**



**AIRFILM CAMERA SYSTEMS**  
**6245 AERODROME WAY**  
**HANGAR NO. 2**  
**GEORGETOWN, CA**

**RECORD OF REVISIONS**

<b>Rev.</b>	<b>Pages</b>	<b>Date</b>	<b>Description</b>	
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## **1.1 INTRODUCTION:**

This manual presents the installation instructions for the Airfilm Camera Systems model AFM-205SM-1 Side-Utility Mount for the Bell: UH-1 Series, 205 Series, 212, 412 Series, AB 212/412 series of Rotorcraft. The mount is designed to facilitate the attachment of equipment such as FLIR cameras, video cameras, searchlights, microwave downlinks, etc.

The side-mount installs directly to the existing airframe hard points

Camera / searchlights/ sensor payloads are attached to nose-mount either direct or with the use of MADT-1 (dovetail), QDD-1 (quick disconnect) or other factory approved adaptor hardware configurations. Payloads can also be attached directly to the mount.

- Side-mount can be installed and flown with or without payloads installed.
- Compatible with, high, mid and low gear configurations depending on payload height.
- The nose-mount installation is compatible with hoist.
- Crew can install and remove payloads via DT-1 Dovetail or QDD-1 quick disconnect device after initial install

### **For all helicopters:**

The installation is assumed to have a self-contained power supply or connected to the aircraft through a previously approved electrical connection. If modification to the ship's system is necessary to support this installation, additional minor modifications with appropriate approval is necessary.

## **1.2 GENERAL**

These instructions cover the AirFilm AFM-205SM-1 side-mount

Precautions:

- All precautions will be in **bold face**

Referenced publications

- (AC) 43.13-2 and (AC)43.13-1B

Referenced drawing

- AFM-205SM-1

Distribution:

- Installation instructions shall accompany the maintenance manuals of aircraft on which the mount is installed.

Definitions / Abbreviations:

- FLIR: forward looking infrared
- IAW: in accordance with

Standards of measurement:

- all measurements in 100ths of an inch
- all weights in US pounds
- all torques in inch pounds

Tools Required

- support stand
- ¼ socket set, with ½ deep sockets
- ½ box end wrench, 2 ea.
- 15/16<sup>th</sup> open end wrench
- Spirit level
- Torque seal

### **1.3 CONTROL, OPERATIONAL INFORMATION**

Special procedures / precautions:

- **Maximum forward mount payload 135 lbs (61.2 kg) , or 2.6 square feet (2415 sq cm) surface area, whichever is higher**
- **Installation of mount must not interfere with any existing installed equipment**

### **2.0 INSTALLATION INFORMATION:**

- Reference drawing AFM-205SM-1
- Remove mount from shipping crate
- Install threaded clevises, “jam” nut and lock washers on all tubes, 4 places per mount, do not tighten hardware. (Install “wet “with Teflon lubricant or similar). See figure 1.
- Install -6 short tab bracket onto side of mount as per drawing: AFM-205SM-1(note: the mount can be installed on either left or right side. The position of both -6 and -7 brackets will determine if either left or right side). Use AN5-13A / AN960-516L washer, 3 places.
- Install -7 long tab ear into “notch” area on side of mount, use AN5-11 / AN960-516L, three places. See figure 2

(Continued)

- Support -1 main plate and align with aircraft hard points. See figure 3
- Install AN5-17A / AN960-516 thick washers; on base plate clevis and airframe hard points. Do not install AN365-524A nuts. See figure 4
- Install -10 tube assembly short and -20 tube assembly long, onto mount, use AN5-12 / AN960L. Do not tighten. See figure 5.
- Adjust clevis fitting on long and short tubes, using a spirit level, position the plate flat.
- Tighten “jam” nuts on -10 and -20 tubes with 15/16<sup>th</sup> open end wrench
- Remove any “free play” in -10 and -20 tube clevises by install AN960-516L washers between inside face of clevises and airframe hard points. See figure 4.
- Tighten all hardware; do not exceed 100 inch pounds on any hardware.
- Mark all hardware with torque seal.
- Calculate weight and balance of actual aircraft, mount and payload



Figure 1



Figure 2



Figure 3

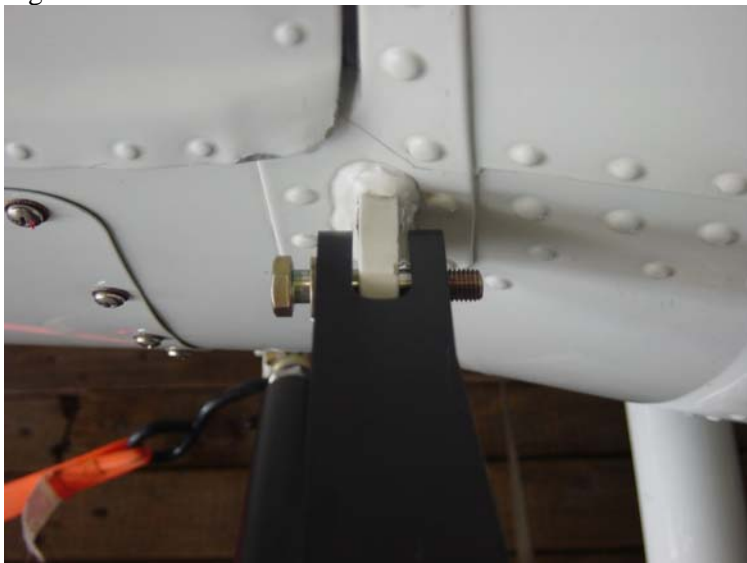


Figure 4



Figure



**3.0 REMOVAL INFORMATION:**

- Remove hardware from main plate and upper airframe hard points.
- Remove hardware from lower clevis fitting and lower hard points
- Remove mount

**4.0 WEIGHT AND BALANCE INFORMATION TYPICAL  
 (SHOWN FOR 212 ONLY)**

**Table 4.1: AFM-205SM-1 ASSEMBLY COMPONENT WEIGHTS**

<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>WEIGHT (LBS) (Kg)</b>	<b>STATION (in) (mm)</b>	<b>BL (in) (mm)</b>
AFM-205SM-1	Base Plate Bracket Assembly	26 lbs 11.8 kg	74.30 in 1856.25mm	55 in 1375 mm

**Table 4.2 PAYLOAD LOCATIONS,(STATION LOCATIONS FOR 212 ONLY)**

<b>DESCRIPTION</b>	<b>MAX WEIGHT (POUNDS) (Kg)</b>	<b>MAX AREA (FT<sup>2</sup>) (sq cm)</b>	<b>STATION (in) (mm)</b>	<b>BL (in) (mm)</b>
Sensor Payload	135 lbs 61.2 Kg	2.6 sq ft 2415 sq cm	74.30 in 1856.25 mm	55 in. 1375 mm

**Table 4.3 PAYLOAD WEIGHTS**

<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>WEIGHT (LBS) (kg)</b>
V1725-1	Vibration Reducer	17.2 lbs 7.8 kg
DT-11	Dovetail	2.0 lbs .91 kg
QDD	Quick Disconnect	3.5 lbs 1.6 kg