

AIRFILM
CAMERA SYSTEMS

REPORT AF-G1-007

INSTALLATION INSTRUCTIONS
G1-V2 UTILITY MOUNT
AND
OPTIONAL G2 COUNTERWEIGHT

DATE ISSUED: 12/18/2015

Airfilm Camera Systems
6245 Aerodrome Way, Hangar No. 2
PO Box 1352
Georgetown, Ca 95634

LOG OF REVISIONS

REVISION	DATE	PAGES EFFECTED	COMMENTS
N/C	12/18/2015	ALL	Original submittal
A	04/12/2016	ALL	Updated installation hardware in section 2.6 (pg. 4), updated weight and balance to include optional hardware weights (pg. 6), added new Appendix A with reference information on Sensor installation equipment, parts breakdown, & closeout panel fab (pgs. 22-28), Moved sensor qualification procedures (Prev. Appendix A) to Appendix B.
B	11/07/2017	ALL	Updated Placard on Page 6 to match RFM

1. INTRODUCTION AND DESCRIPTION:

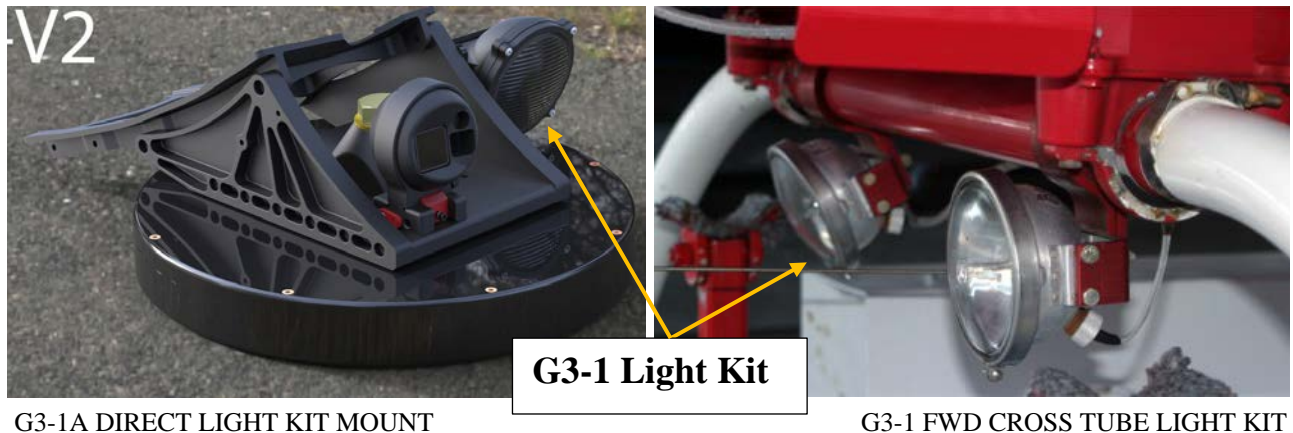


Figure 1 View Showing G1-V2-1 Installation on Bell 206

The Airfilm G1-V2 Utility Bracket Mount allows for the attachment of utility equipment such as cameras, lights, and sensor instruments to be hard mounted on the Bell Aircraft 206 A, B, & L and 407 Series helicopters. The G1-V2 attaches to the exterior of the aircraft landing light housing area. The G1-V2 can carry a maximum load of 130 lbs.

Note – Full P/N of the G1-V2 Mount is G1-V2-1 for Bell 206 and G1-V2-3 for Bell 407. The Mount assembly is generically referred to as the G1-V2 in these instructions.

The Mount can be installed and removed without any permanent aircraft modifications. The G1-V2 mount prohibits the use of the standard aircraft landing and taxi light. If night operations are required, the Airfilm G3-1 Landing Light Kit may also be installed.



G3-1A DIRECT LIGHT KIT MOUNT

G3-1 FWD CROSS TUBE LIGHT KIT

Figure 2 View Showing Optional G3-1 Light Kits

Depending on the mounted load and weight and balance requirements of each helicopter, an optional G2-1 Counter Weight Assembly kit is available (**BELL 206A/B ONLY**). This G2-1 Counterweight kit is attached to the aft cross tube and aft jacking pad. This kit does not interfere with the installation or operation of Microwave or Cargo Hook accessories.



Figure 3 View Showing Option G2-1 Counterweight Assembly

2. G1-V2 (NOSE) MOUNT BRACKET INSTALLATION

- 2.1 Remove existing landing light cover, disconnect landing lights. Retain landing light cover to use as a hole template for step 2.3.



Figure 4 View Showing Removal of Landing Light
(Bell 407 Shown- Bell 206 Similar)

- 2.2 Install modification kit G1-101 (Bell 407) or G1-201 (Bell 206) in accordance with Airfilm Drawing AF-G1-200 (Bell 407) or AF-G1-400 (Bell 206).

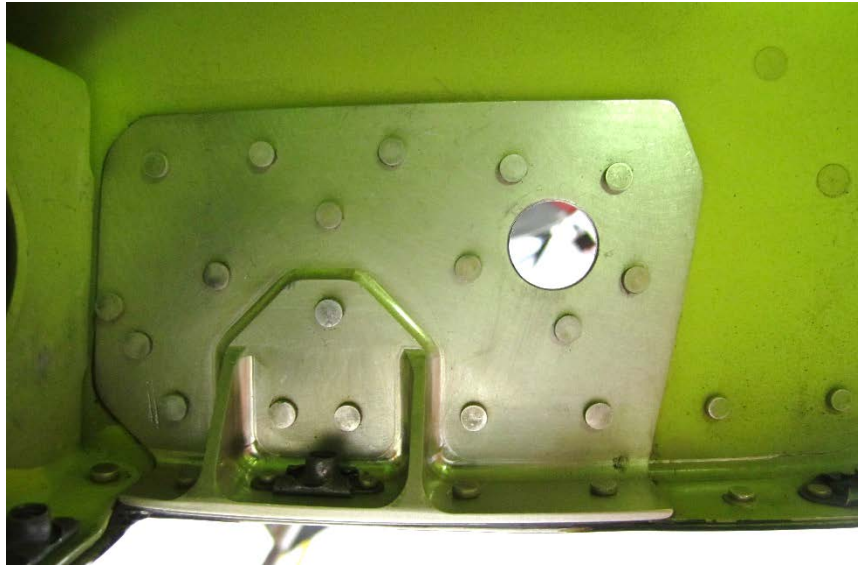


Figure 5 View Showing G1-101-001 Fitting Installed (RH Bell 407 Shown)

- 2.3 Dry Fit Close-Out Panel, G1-V2-109 (Bell 206) or G1-V2-111 (Bell 407), to nose of the aircraft. The Closeout Panel is shipped as a flat panel and will need to be formed and dilled to fit the aircraft.

Using original cover as template, carefully mark existing 11 holes used to G1-V2 Mount (Ref Figure 4). Be sure to check all 11 hole locations for sufficient edge distance. Ensure G1-V2 Mount does not interfere with existing aircraft equipment. Drill marked holes with no. 30 drill. Cleco original cover to Mount, check for sufficient edge distance. Drill no. 30 holes to final size, no. 10 drill. Deburr holes.

- 2.4 Dry Fit Mounting Bracket, G1-V2-105 (Bell 206) or G1-V2-106 (Bell 407), to nose of the aircraft. Verify all 11 holes align within the slots.

- 2.5 Install and secure the G1-V2-105 (Bell 206) or G1-V2-106 (Bell 407) to nose of the aircraft using QTY 11 AN3-5A bolts. Use AN960-10 Washers at all 11 places. Torque the bolts 20-25 Inch Lbs. Shim any gaps larger than .032 before torquing fasteners.



Figure 6 Installation of Base Plate (-107/-109)
(Closeout Panel not shown)

- 2.6 Install the remaining G1-V2 Components (Sub Assembly) to Base Plate using QTY 2 MS20004-10 (Front) and QTY 2 MS20004-15 (AFT) Internal Wrenching Bolts with QTY 4 AN960-416 washers and QTY 4 MS21042-4 Locknuts. Torque the Locknuts 30-40 Inch Lbs.



Figure 7 Installation of G1-V2 Assembly to Mounting Plate

- 2.7 Insure G1-V2 Mount does not interfere with existing aircraft equipment.



Figure 8 G1- V2 Installed

2.8 Install camera/sensor to G1-V2 Mount using Manufactures Instructions.

NOTES:

- a) The payload package is limited to a maximum allowable frontal area of 3.06 ft² and a weight of 130 lbs at any mounting location.
- b) When Airfilm payload Disconnect Devices (QDD-1-1, QDD-1H-1, or DT-1-1) are installed, the payload can be removed and installed by crew.
- c) If camera/sensor installations require additional power or system requirements beyond the placarded OEM auxiliary power outlet, additional certification(s) may be required.
- d) Aircraft may be flown with only the Mounting Bracket installed (G1-V2-7 or -9).

2.9 Route any control wire into aircraft so as not to interfere with the operation of doors or the operation of any flight controls or systems.

2.10 Check entire G1-V2 Assembly for flight integrity. System should be secure and not have free play movement.

2.11 Revise weight and balance per the following table:

The following table presents the center of gravity location of the mount and payload sensor/camera for adjustment of the aircraft weight and CG with the mount installed.

DESCRIPTION	WEIGHT (lbs)	STATION (in)	BL (in)
G1-V2 Bracket Assy.	7.6	5.0	0.0
G1-V2-11 Bolt Holder Kit (Optional)	0.8	5.0	0.0
G1-V2-13 or -15 Spacer Kit (Optional)	0.5	5.0	0.0
PAYLOAD	Use Actual Wt MAX 130 pounds.	2.0	0.0

2.12 Attach the following Placard in full view of pilot.

**Reduce the published V_{NE} by 20 KIAS (23 MPH)
 With Camera/Sensor Installed**

2.13 Make appropriate log book entry for installation.

2.14 Return to service.

2.15 Removing G1-V2 system:

- a. Follow instructions in reverse order to remove.
- b. Remove entire G1-V2 Mount Assembly and associated hardware.
- c. Reconnect landing light wiring, if changed.
- d. Re-install original light cover with original hardware.

G2-1 COUNTER WEIGHT (NOT REQUIRED)

The G2-1 Counter Weight Installation is optional if need for maintaining the Center of Gravity limits of the helicopter.

NOTE – The G2-1 Counterweight is Applicable to the Bell 206A/B Models ONLY



Figure 9 View Showing a Typical Installation of the G2-1 Counterweight Assy.

- 3.1. Install the G2-1 Counterweight Assembly; Insure that the installation does not interfere with the operation other installed accessory kits.
- 3.2. Install the G2-1 Counterweight around the aft cross tube approximately 9 inches left of aircraft the centerline per the following photograph. Exact placement is not required at this step. Tighten fasteners only to remove slack but also allowing the kit to be adjusted.



Figure 10 View Showing the Installation of the G2-1 Cross Tube Bracket

- 3.3. Raise the G2-1 Counterweight Assembly upward so that the aft fitting (G2-2) aligns with the aircraft aft jacking pad.

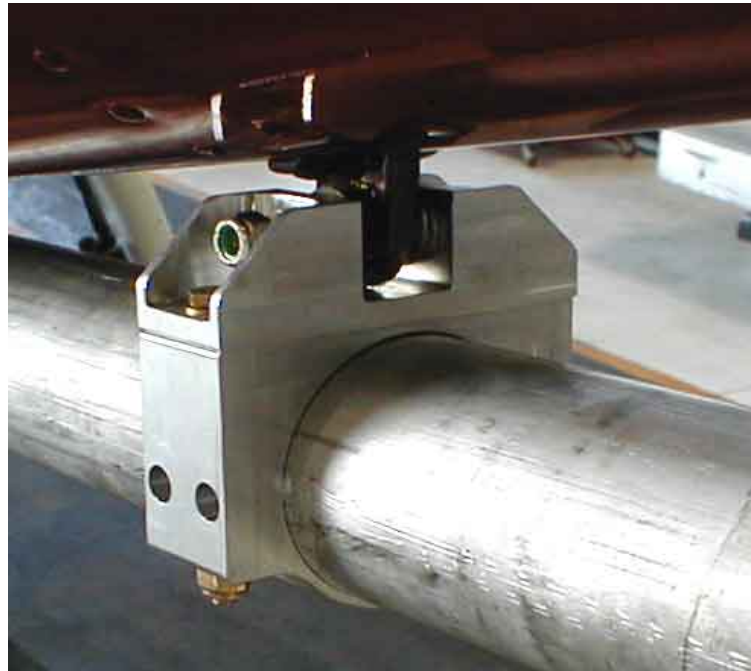


Figure 11 View Showing the G2-2 Aft Fitting Installed to the Aft Jack Pad

- 3.4. Attach using Qty 1 AN5-27A bolt, Qty 2 AN960-524 Washers, and Qty 2 G2-5 Cone Spacers. The cone spacers are installed against the jack pad to insure proper alignment and fit. Torque 100-140 Inch Lbs.

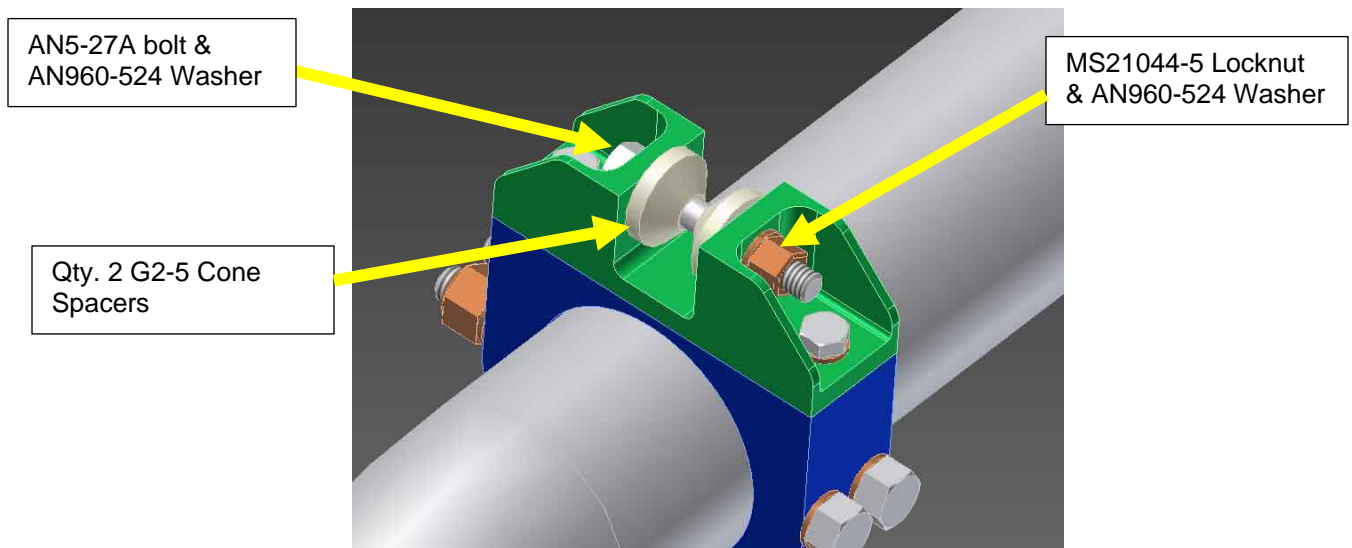


Figure 12 G2-2 Fitting Installation Details

- 3.5. After Counterweight is fully attached to the aircraft, tighten all remaining bolts to final torque. Torque 160-190 In Lbs.
- 3.6. Check entire G2-1 Assembly for flight integrity. System should be secure and not have free play movement
- 3.7. Revise weight and balance:

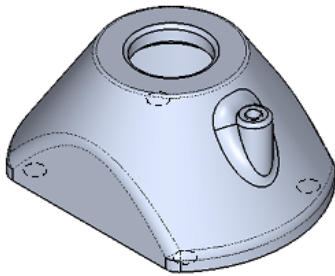
The following table presents the location of the weight/center of gravity of the mount and payload sensor/camera for adjustment of the aircraft weight and center of gravity with the G2-1 Counterweight installed.

HELICOPTER MODEL	WEIGHT (lbs)	STATION (in)	BL (in)
Bell 206 A & B	47.5	193.7	-2.5

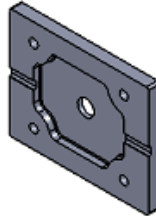
- 3.8. Make appropriate log book entry
- 3.9. Return to service
- 3.10. Removing G2-1 Assy:
 - a. Follow instructions in reverse order and remove.

APPENDIX A REFERENCE INFORMATION

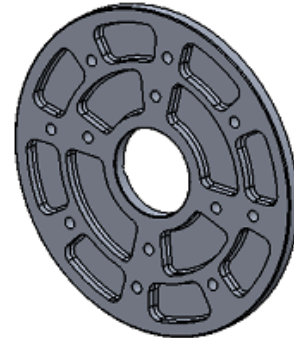
OPTIONAL SENSOR INSTALLATION EQUIPMENT:



**G1-V2-11
BOLT HOLDER
INSTALL KIT**



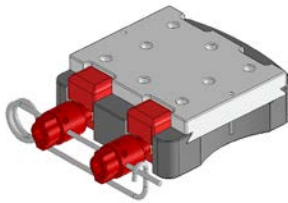
**G1-V2-13
DOVETAIL
INSTALL KIT**



**G1-V2-15
QDD & DT
INSTALL KIT**



**A705
TAPER FITTING**



**DT-1
DOVE TAIL**



**QDD-1
QUICK DISCONNECT**

P/N	DESCRIPTION	QTY	FASTENERS		USE WITH
G1-V2-11	BOLT HOLDER	4	MS24694S100	SCREWS	TAPER
G1-V2-13	DOVETAIL SPACER	4	MS20004-15	SHCS	DT-1
			AN960-416L	WASHER, THIN	
			MS21042-4	LOCKNUT	
G1-V2-15	QDD & DT SPACER	8	MS20004-15	SHCS	QDD-1 OR DT-1
			AN960-416L	WASHER, THIN	
			MS21042-4	LOCKNUT	

Airfilm Camera Systems
G1 UTILITY MOUNT INSTALLATION INSTRUCTIONS

AF-G1-007
Rev. B

ITEM NO.	QTY REQD.								MATERIALS LIST	
	-1	-3	-5	-7	-9	-11	-13	-15	PART NUMBER	DESCRIPTION
1	-								G1-V2-1	206 UTILITY BRACKET ASSY
2		-							G1-V2-3	407 UTILITY BRACKET ASSY
3	1	1	-						G1-V2-5	BASIC UTILITY BRACKET ASSY
4	1			-					G1-V2-7	206 CONFIGURATION KIT
5		1			-				G1-V2-9	407 CONFIGURATION KIT
6	1	1				-			G1-V2-11	BOLT HOLDER INSTALLATION KIT
7	1	1					-		G1-V2-13	DOVE TAIL INSTALLATION KIT
8	1	1						-	G1-V2-15	QDD & DT INSTALLATION KIT
9			1						G1-V2-101	LH SIDE RAIL
10			1						G1-V2-102	RH SIDE RAIL
11			1						G1-V2-103	BASE PLATE
12				1					G1-V2-105	MOUNTING BRACKET, 206
13					1				G1-V2-106	MOUNTING BRACKET, 407
14						1			G1-V2-107	BOLT HOLDER
15				1					G1-V2-109	CLOSEOUT PANEL 206
16					1				G1-V2-111	CLOSEOUT PANEL 407
17							1		G1-V2-113	DOVE TAIL SPACER
18								1	G1-V2-115	QDD & DT SPACER
19			4				4	8	MS21042-4	METAL STOP NUT
20						4			MS24694S100	MACHINE SCREW
21						1			NAS1351C3H6	SHCS #10-32 X 3/8
22			12						NAS1351-3-14P	SHCS #10-32 X 7/8
23			2						MS20004-10	IWB 1/4-28 X 1 1/8
24			2				4	8	MS20004-15	IWB 1/4-28 X 1 7/16
25				11	11				AN3-5A	HEX BOLT
26			4					8	AN960-416	WASHER
27			12						AN960-10	WASHER
28						1			NAS620C10	WASHER
29			14			1			3591-3CN285	LOCKING HELICOIL
30			3						3591-4CN250	LOCKING HELICOIL
31						4			3591-4CN375	LOCKING HELICOIL
32				11	11				AN960-10	WASHER
33							4	4	AN960-416L	WASHER, THIN

Figure 13 G1-V2 Parts List for Figures 14 thru 16

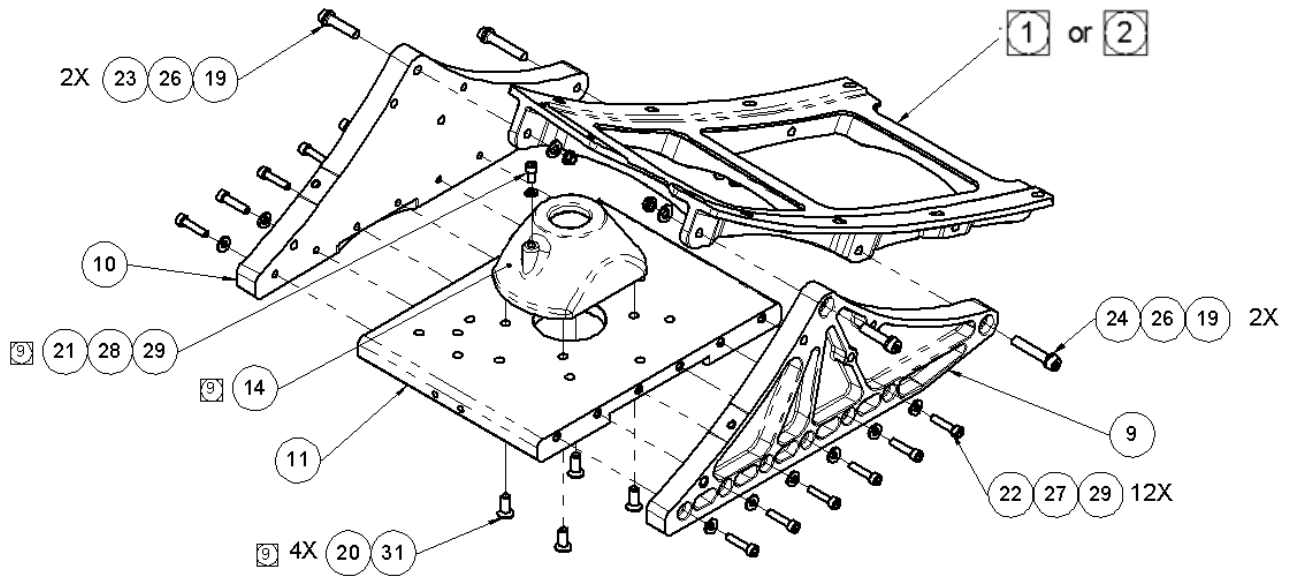


Figure 14 Bolt Holder Installation (G1-V2-11) with G1-V2 Assembly (Exploded View)

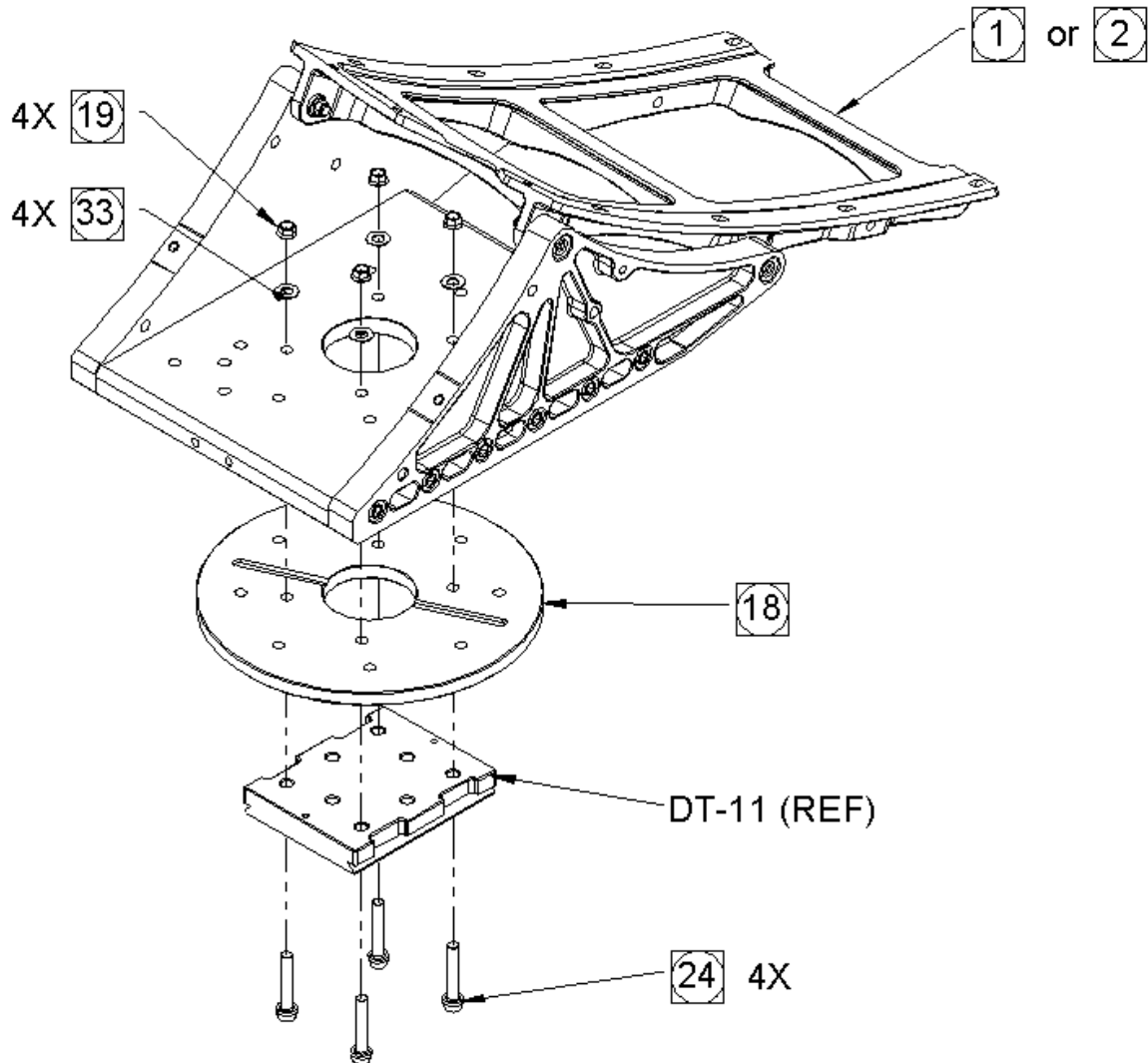


Figure 15 Dove Tail, DT-1, Installation View (G1-V2-13)

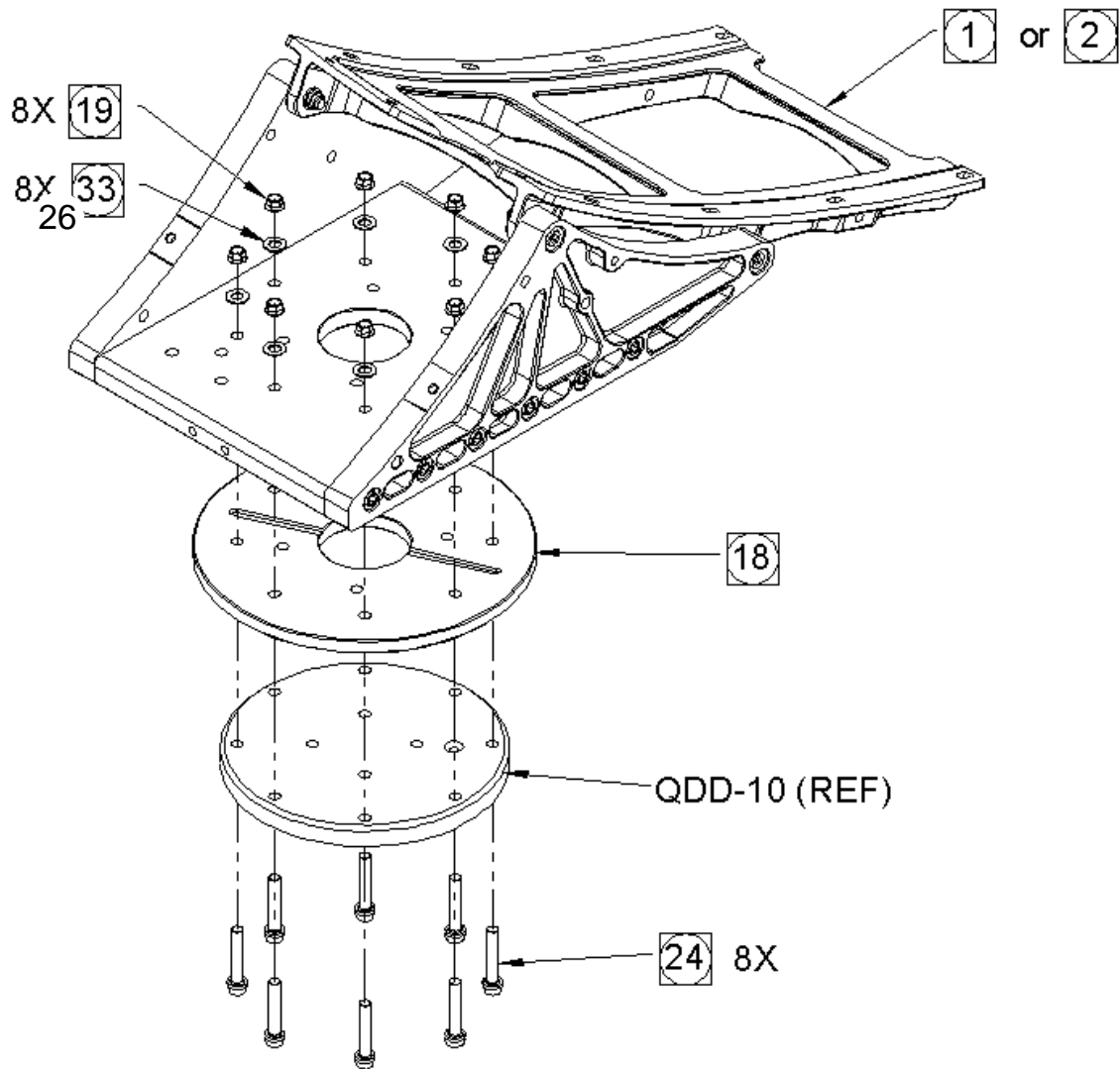


Figure 16 Quick Disconnect, QDD-1, Installation View (G1-V2-15)

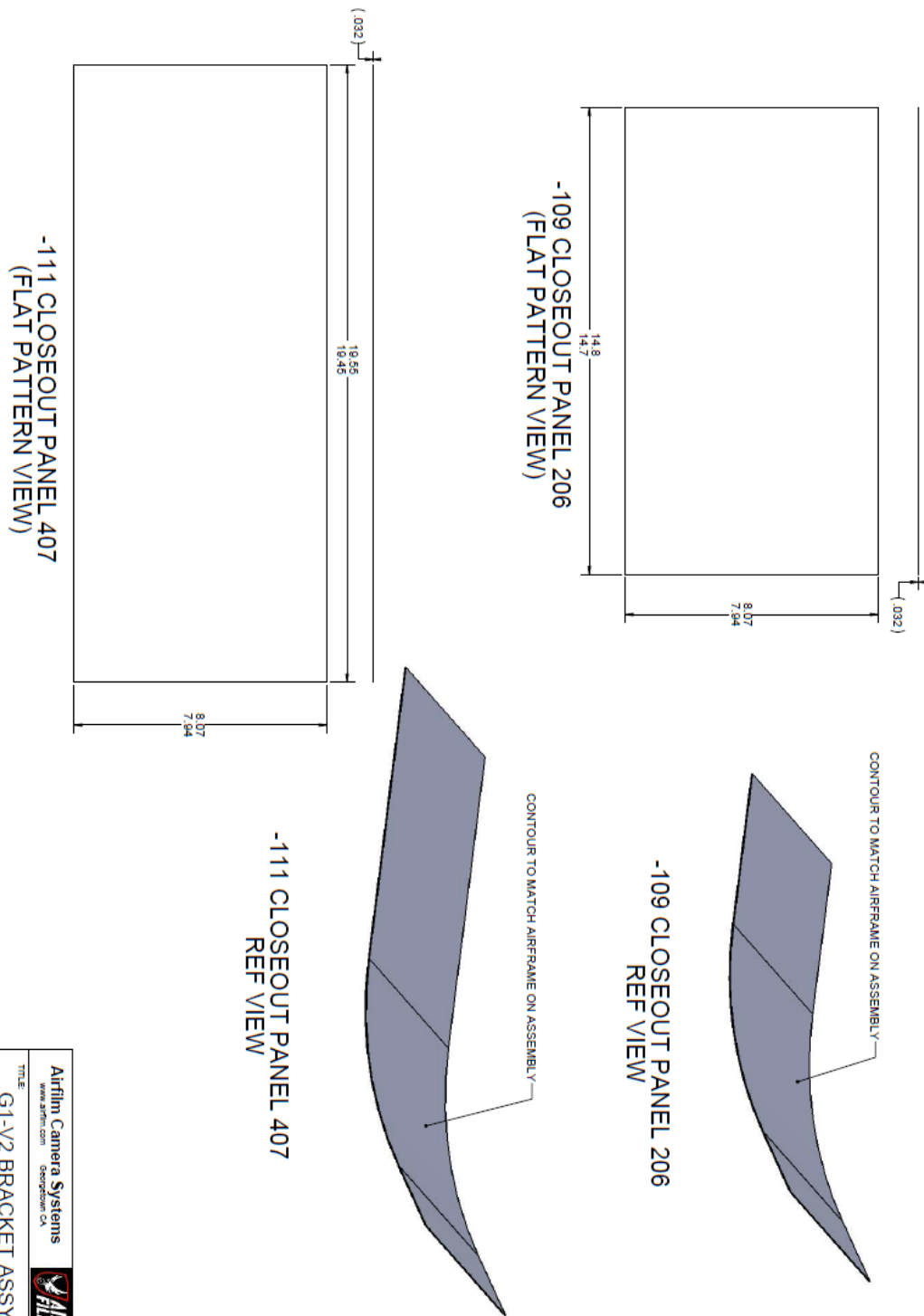



Figure 17 Closeout Panel Fabrication Information

PART NUMBER	DESCRIPTION	MATERIAL	MATERIAL SPEC	FINISH	FINISH SPEC
G1-V2-109	CLOSEOUT PANEL 206	6061-T6 (.032 THK)	AMS 4026	CHEM FILM (ALODINE)	MIL-C-5541 CL 1A
G1-V2-111	CLOSEOUT PANEL 407	6061-T6 (.032 THK)	AMS 4026	CHEM FILM (ALODINE)	MIL-C-5541 CL 1A


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 www.airfilm.com Goleta, CA
 TITLE: G1-V2 BRACKET ASSY

APPENDIX B – METHOD OF ADDING ADDITIONAL SENSOR /CAMERA / PAYLOADS

A.1. Overview

This Appendix provides the requirements necessary to qualify sensor / camera / light payloads – IF NEEDED.

It may also be used as a check list for previously approved sensor /cameras / light payloads if desired.

The STC flight testing was conducted and the STC approved with the largest and heaviest payload expected for use with this mount. The specific sensor/cameras/light not listed in the installation manual of equal or lesser than the limit case are accepted with this follow-on test plan.

A.2. Sensor/ Camera/ payload

Make & Model _____

A.3. Test Team

A.3.1. Pilot(s)

Print Name

A.3.2. Mechanic and/or Engineer and/or Camera Operator

Print Name

A.4. Test Aircraft Configuration and Location

A.4.1. Aircraft Model, Registration & Serial Number

_____ Model _____ Registration Number _____ Serial Number

A.4.2. Test Configurations

Empty weight with appropriate fuel and camera system installed
Takeoff Gross weight with crew

Configuration	Gross Weight	Longitudinal CG	Lateral CG
Empty Wt			
Takeoff Wt			

A.4.3. Test Location

_____ Airport or Test Site

A.5. Test Conditions

Date: _____

Weather: Ceiling _____ Visibility _____ Winds _____

Altimeter _____ Field Elevation _____

Flight Time: Engine Start _____ Shut Down _____ Flt Time _____

A.6. Flight Test

A.6.1. Overview

Applicable regulations demonstrated for compliance are indicated with the following symbol ➔. The testing required for the compliance findings of this installation will be made by as a subject/qualitative evaluation. Although the most critical CG is considered to be at the aft limit for most tests this configuration is mounted forward of the mast should not approach the aft limits. This also depends on crew loading. The test team conducts the following tests and evaluations and mark initial the box at the end of each section if the configuration successfully passes the requirements.

A.6.2. FAR § 27.51 Takeoff

A.6.2.1. Applicable Regulation

➔(a) The takeoff data required by Secs. 29.53, 29.55, 29.59, 29.60, 29.61, 29.62, 29.63, and 29.67 must be determined--

- (1) At each weight, altitude, and temperature selected by the applicant; and
- (2) With the operating engines within approved operating limitations.

➔ (b) Takeoff data must--

- (1) Be determined on a smooth, dry, hard surface; and
 - (2) Be corrected to assume a level takeoff surface.
- (c) No takeoff made to determine the data required by this section may require exceptional piloting skill or alertness, or exceptionally favorable conditions.

A.6.2.2. Method of Compliance

The recommended takeoff procedure must be demonstrated to remain clear of the HV "avoid" areas without requiring exceptional piloting skill or exceptionally favorable conditions.

A qualitative evaluation of the ability to safely land at any point along the flight path will be made using judgment and experience with the basic aircraft. No engine failure testing at low altitude will be conducted.

The normal takeoff procedures will be used for the sensor/camera/light payload and mount installation.

A.6.2.3. Findings

Satisfactory _____

A.6.3. FAR § 27.71 Glide Performance

A.6.3.1. Applicable Regulation

➔For each category B helicopter, except multiengine helicopters meeting the requirements of Sec. 29.67(b) and the powerplant installation requirements of category A, the steady angle of glide must be determined in autorotation--

(a) At the forward speed for minimum rate of descent as selected by the applicant;

➔ (b) At the forward speed for best glide angle;

(c) At maximum weight; and

➔ (d) At the rotor speed or speeds selected by the applicant

A.6.3.2. Method of Compliance

(1) Performance capabilities during stabilized autorotative descent are useful pilot tools to assist in the management of a Category B rotorcraft when all engines fail. This information is also useful in determining the suitability of available landing areas along a given route segment.

(2) Two speeds are of particular importance, the speed for minimum rate of descent and the speed for best angle of glide. These speeds along with glide distance information are required as flight manual entries per FAR § 29.1587. The recommended speed for autorotation is usually optimized to assure an effective flare capability and yet be slow enough to allow a controlled, relatively slow touchdown condition. Recommended autorotation speed is ordinarily between the minimum rate of descent and maximum glide angle speeds.

An autorotative descent starting at least 1000 feet above the ground and at the speed published in the RFM, 100% RPM value will be demonstrated. Small turns will be conducted in the descent. The maneuver will be terminated with power at a safe altitude.

The aircraft should be easily controllable and the difference between the mount and camera/sensor/light payload and the clean configuration is the evaluation point.

A.6.3.3. Findings

Satisfactory _____ Altitude Band HP _____ Fuel Gage Reading _____

A.6.4. FAR § 27.143 Controllability and Maneuverability

A.6.4.1. Applicable Regulation

➔(a) The rotorcraft must be safely controllable and maneuverable -

➔ (1) During steady flight; and

➔(2) During any maneuver appropriate to the type, including -

➔ (i) Takeoff;

➔ (ii) Climb;

➔ (iii) Level flight;

➔ (iv) Turning flight;

➔ (v) Glide

➔ (vi) Landing (power on and power off);

➔(b) The margin of cyclic control must allow satisfactory roll and pitch control at VNE with -

(1) Critical weight;

(2) Critical center of gravity;

(3) Critical rotor rpm; and

(4) Power off (except for helicopters demonstrating compliance with paragraph (f) of this section) and power on.

(c) A wind velocity of not less than 17 knots must be established in which the rotorcraft can be operated without loss of control on or near the ground in any maneuver appropriate to the type (such as crosswind takeoffs, sideward flight, and rearward flight), with -

- (1) Critical weight;
- (2) Critical center of gravity;
- (3) Critical rotor rpm; and
- (4) Altitude, from standard sea level conditions to the maximum altitude capability of the rotorcraft or 7,000 feet, whichever is less.

(d) The rotorcraft, after failure of one engine in the case of multiengine rotorcraft that meet Transport Category A engine isolation requirements, or complete engine failure in the case of other rotorcraft, must be controllable over the range of speeds and altitudes for which certification is requested when such power failure occurs with maximum continuous power and critical weight. No corrective action time delay for any condition following power failure may be less than -

- (1) For the cruise condition, one second, or normal pilot reaction time (whichever is greater); and
- (2) For any other condition, normal pilot reaction time.

(e) For helicopters for which a VNE (power off) is established under § 29.1505(c), compliance must be demonstrated with the following requirements with critical weight, critical center of gravity, and critical rotor rpm:

(1) The helicopter must be safely slowed to VNE (power off), without exceptional pilot skill, after the last operating engine is made inoperative at power on VNE.

(2) At a speed of 1.1 VNE (power off), the margin of cyclic control must allow satisfactory roll and pitch control with power off.

A.6.4.2. Method of Compliance

The general requirements for control and for maneuverability are summarized in section (a) of the AC, which is largely self-explanatory.

Section (b) specifies flight at V_{NE} with critical weight, center of gravity (CG), rotor RPM, and power. Adequate cyclic authority must remain at V_{NE} for nose down pitching of the rotorcraft and for adequate roll control.

The helicopter will be flown between 1000 and 3000 feet above ground. The test altitude will be dependent on traffic and terrain and conditions close to sea level pressure are desirable. V_{NE} will be the value stated in the RFM for the test density altitude.

Qualitative measurement techniques (pilot opinion) will be used. The tests will include:

Takeoff

Climbing flight

Forward flight to V_{NE} , not more than the published RFM limit at MCP (maybe less than MCP)

Left & right 30 degree bank turns at V_{NE} and at MCP (maybe less than MCP)

Take-off & Landings (Power **on** only).

The aircraft should be easily controllable and adequate cyclic margins should exist throughout the flight test points. The difference between the mount and sensor / camera / light payload and the clean configuration is the evaluation point.

A.6.4.3. Findings

Satisfactory _____ Cruise Altitude HP _____ Fuel Gage Reading _____

A.6.5. FAR § 27.171 Stability: General

A.6.5.1. Applicable Regulation

➔The rotorcraft must be able to be flown, without undue pilot fatigue or strain, in any normal maneuver for a period of time as long as that expected in normal operation. At least three landings and takeoffs must be made during this demonstration.

A.6.5.2. Method of Compliance

Compliance with the requirements of this section can often be obtained for the VFR condition without any specific or designated flight testing. Demonstrate that the aircraft can be satisfactorily flown throughout the maximum endurance capabilities of the rotorcraft including night and turbulence conditions if those are critical. This test should be conducted with minimum required systems in the aircraft and with minimum flight crew.

Compliance for this requirement will be evaluated throughout the test program.

A.6.5.3. Findings

Satisfactory _____

A.6.6. FAR § 27.251 Vibration

A.6.6.1. Applicable Regulation

➔Each part of the rotorcraft must be free from excessive vibration under each appropriate speed and power condition.

A.6.6.2. Method of Compliance

This flight requirement may be both a qualitative and quantitative flight evaluation. Section 29.571(a) contains the flight load survey requirement that results in accumulation of vibration quantitative data. Section 29.629 generally requires quantitative data to show freedom from flutter for each part of the rotorcraft including control or stabilizing surfaces and rotors.

The aircraft should have a good track & balance for this evaluation. The airspeed should be evaluated at 20 kt increments out to the RFM VNE speed. Variations in rotor RPM expected in normal flight should be evaluated. Changes in vibration are best sensed in the cyclic and pedal controls. The stability of the camera/sensor image will be a good indicator.

The pilot will make a subjective evaluation of the difference between the mount and sensor / camera/ light payload and the clean configuration is the evaluation point.

Compliance with this requirement will be evaluated during testing of FAR §29.143 Controllability and Maneuverability.

A.6.6.3. Findings

Satisfactory _____

A.6.7. FAR § 27.773 Pilot Compartment View

A.6.7.1. Applicable Regulation

(a) Nonprecipitation conditions. For nonprecipitation conditions, the following apply:

➔ (1) Each pilot compartment must be arranged to give the pilots a sufficiently extensive, clear, and undistorted view for safe operation.

➔ (2) Each pilot compartment must be free of glare and reflection that could interfere with the pilot's view. If certification for night operation is requested, this must be shown by night flight tests.

(b) Precipitation conditions. For precipitation conditions, the following apply:

(1) Each pilot must have a sufficiently extensive view for safe operation—

(i) In heavy rain at forward speeds up to VH; and

(ii) In the most severe icing condition for which certification is requested.

(2) The pilots must have a window that—

(i) Is openable under the conditions prescribed in subparagraph (1) of this paragraph; and

(ii) Provides the view prescribed in that subparagraph.

A.6.7.2. Method of Compliance

The section outlines requirements for pilot view in fairly general terms. The aircraft was approved with the installed glareshield and instrument panel that meet the rules. Any additional equipment/monitors must be positioned so as not to limit or obstruct the pilot's field of view. There will be some cases where the installation will be temporary and for a unique mission and consideration should be given for these limited cases and time.

If night operations are expected with an operational system, a "dark cockpit" or night evaluation will be necessary to insure the glare/reflection will not interfere with the pilot duties. A limitation to the use at night is an option.

A.6.7.3. Findings

Satisfactory _____

A.6.8. FAR § 27.787 Cargo & Baggage Compartment

A.6.8.1. Applicable Regulation

Cargo and baggage compartments.

(a) Each cargo and baggage compartment must be designed for its placarded maximum weight of contents and for the critical load distributions at the appropriate maximum load factors corresponding to the specified flight and ground load conditions, except the emergency landing conditions of Sec. 29.561.

(b) There must be means to prevent the contents of any compartment from becoming a hazard by shifting under the loads specified in paragraph (a) of this section.

➔ [(c) Under the emergency landing conditions of Sec. 29.561, cargo and baggage compartments must--

(1) Be positioned so that if the contents break loose they are unlikely to cause injury to the occupants or restrict any of the escape facilities provided for use after an emergency landing; or

(2) Have sufficient strength to withstand the conditions specified in Sec. 29.561 including the means of restraint, and their attachments, required for the maximum authorized weight of cargo and baggage at the critical loading distribution.]

(d) If cargo compartment lamps are installed, each lamp must be installed so as to prevent contact between lamp bulb and cargo.

A.6.8.2. Method of Compliance

Amendment 29-31 adds two subparagraphs to § 29.787(c) which clarifies that cargo and baggage compartments should be designed to protect occupants from injury by the compartment contents during emergency landings. This may be done by location or by retention provisions.

The sensor/camera/light controllers and power supply must be located and secured in a position that will not endanger occupants in an emergency landing impact.

Consideration should be given to stowage and egress when filming in hovering flight. In some cases this might not be possible.

A.6.8.3. Findings

Comment: _____

Satisfactory _____

A.6.9. FAR § 27.1301 Function and Installation.

A.6.9.1. Applicable Regulation

Each item of installed equipment must--

- ➔ (a) Be of a kind and design appropriate to its intended function
- (b) Be labeled as to its identification, function, or operating limitations, or any applicable combination of these factors;
- (c) Be installed according to limitations specified for that equipment; and
- ➔ (d) Function properly when installed.

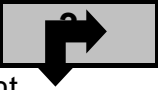
A.6.9.2. Method of Compliance

For optional equipment, the emphasis on functioning is rather limited compared to that for required equipment. The conditions under which the optional equipment is evaluated should be recorded in the report. The major emphasis for this type of equipment should be to ensure it does not interfere with the operation of systems that are required for safe operation of the rotorcraft, and that the failure modes are acceptable and do not create any hazards.

During flight operations, operate all avionics and electrical systems. Complete the matrix below. The matrix is laid out with the newly installed equipment listed at the top of the page and all aircraft systems listed down the left side of the page. Note any EMI or RFI either TO or FROM the installed equipment. Note any anomalies or EMI/RFI interference to other instruments or indications during all testing phases of flight.

Each item must be checked. Check off each block if no interference is noted. If interference is present during the test, **DO NOT CHECK THE BOX** and explain in Comments section at end of section. If applicable, note relevant conditions (i.e. frequencies, OBI selection, function modes) under which the interference occurred.

A.6.9.3. Findings

Interference?		Camera/Sensor/Light	Position Controller
Camera/Sensor/Light			
Position Controller			
VHF Comm 1			
VHF Comm 2			
VHF Comm 3			
VHF NAV 1			
VHF NAV 2			
ADF 1			
XPONDER 1			
Other Radios			
Audio 1			
Audio 2			
Standby Compass			
Engine Inst			
Fuel Gage			
Clock			
Voltmeter			
Ammeter			
Other			

EMI / RFI Comments:

Satisfactory _____

Signatures

General test findings _____

Pilot Signature _____

Mechanic/ Engineer _____

Other Flt Personnel Signature & Function
