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FAA APPROVED
ROTORCRAFT FLIGHT MANUAL SUPPLEMENT

Onboard Systems
Suspension System
with Keeperless Cargo Hook

Agusta Helicopter Models
A109E, A119, AW119 MkII

R/N _____ S/N _____

FAA Approved: _____
FOR Manager, Seattle Aircraft Certification Office

Date: 8 July, 2011

Revised:

Introduction

This supplement must be attached to the appropriate FAA approved Agusta Rotorcraft Flight Manual when an Onboard Systems P/N 200-355-00, 200-356-00, 200-357-00 or 200-369-00 kit (see descriptions below) is installed in accordance with Supplemental Type Certificate (STC) NO. SR02139SE. The information contained herein supplements or supersedes the basic manual only in those areas listed herein. For limitations, procedures and performance information not contained in this supplement, consult the basic Rotorcraft Flight Manual and Rotorcraft Flight Manual Supplement – Cargo Hook issued by Agusta.

P/N 200-355-00 (for the A109E) and 200-369-00 (for the A119 and AW119 MkII) are cargo hook fixed provisions kits. They include the internal electrical release harnesses, the internal section of the backup hydraulic manual release system including the release lever on the cyclic, hard points mounted to the belly of the helicopter and miscellaneous supporting brackets.

The P/N 200-356-00 cargo hook suspension kit includes the cargo hook and suspension assembly. The suspension assembly spans the four hard points on the belly of the helicopter and supports the cargo hook and allows it to align itself with a load. In addition the kit includes the external sections of the backup hydraulic manual release system and electrical harness. These items interface with the fixed provisions kit on the rotorcraft.

The 200-357-00 kit is a load weigh system. The load weigh system consists of a cockpit-mounted indicator, a load cell above the cargo hook, and the interconnecting wiring harness. It is an optional system which can be used with the P/N 200-356-00 cargo hook suspension kit.

Section 1 – Limitations

Operating Limitations

The basic Flight Manual and Cargo Hook Flight Manual Supplement issued by Agusta remain applicable.

With a load attached to the cargo hook, operation shall be conducted in accordance with the respective national operational requirements. For U.S. operators FAR Part 133 is applicable.

These cargo hook kits are approved for class B, non-human external cargo.

The load weigh indicator (included with kit P/N 200-357-00), whose purpose is to display the weight of the load carried on the cargo hook, shall be operated in accordance with Owner's Manual 120-141-00.

The rotorcraft may also be operated with the suspension removed and the fixed provisions kit (P/N 200-355-00 or 200-369-00) installed only. The fixed provisions include hard point fittings, internal manual release system and electric release harnesses, and cargo hook related equipment in the cockpit.

Airspeed Limitations

Consult the Agusta Flight Manual Supplement for your particular rotorcraft model for airspeed limits when an external load is attached.

Maximum operational air speed with external loads is dependent upon the load configuration and sling length. It is the responsibility of the operator to establish the maximum operational speed for each specific configuration.

Section 1 – Limitations continued

Weight Limitations

Consult the Agusta Flight Manual Supplement for your particular rotorcraft model for maximum gross weight with external loads attached to cargo hook.

External Load Limitations

The cargo hook load limit is the lesser of that specified by the Agusta Cargo Hook Flight Manual Supplement for your particular rotorcraft model or 3086 lbs (1400 kg).

Center of Gravity Limitations

Consult the Agusta Flight Manual Supplement for your particular rotorcraft model for Longitudinal and Lateral CG limits when carrying external loads.

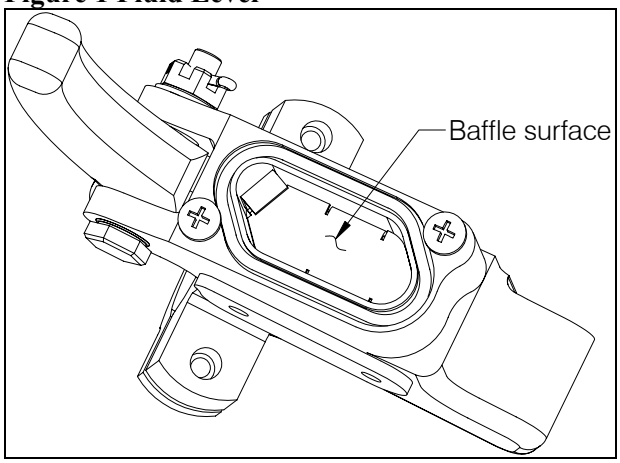
Section 2 – Normal Procedures

Pre-flight Check

Prior to a flight involving external load operations, perform the following procedures.

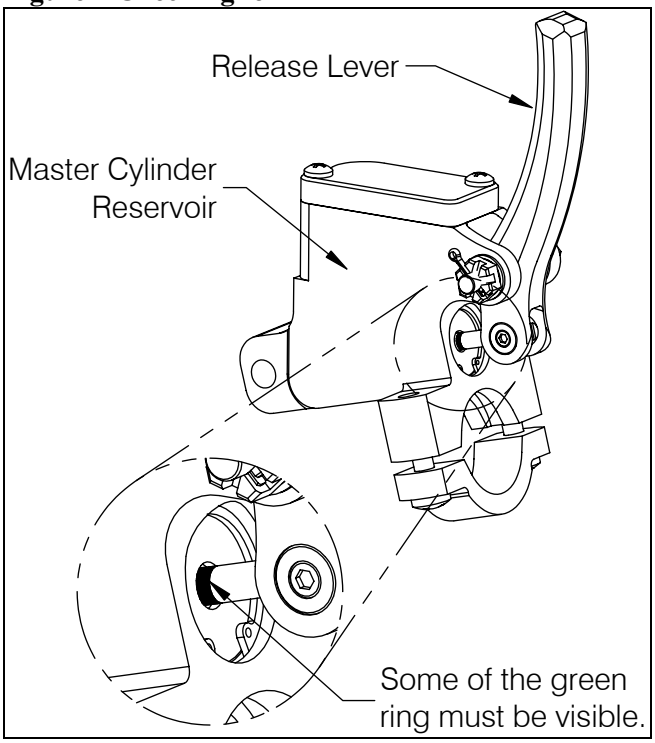
1. Visually check the cargo hook electrical and hydraulic connections for damage and security.
2. Visually check the cargo hook exterior and suspension frame for damage.
3. Swing the cargo hook to its full extremes to verify that it does not reach the limit of the hydraulic hose or electrical harness range of motion.
4. Check the fluid level in the master cylinder reservoir on the cyclic. The master cylinder reservoir features a transparent lid through which the fluid level can be checked. Hydraulic fluid must be visible over the baffle surface.

Figure 1 Fluid Level



5. Check the hydraulic release system for excess air in the lines by pulling the release lever on the cyclic firmly until it bottoms out. Check the push rod position (see Figure 2). If some of the green ring on the push rod is visible, the system is ready for use. If none of the green ring is visible, the system needs to be bled. Refer to applicable Owner's Manual or ICA for bleed instructions.

Figure 2 Checking for Air



Pre-flight Check continued

6. Cycle the cargo hook's primary electrical release system to ensure proper operation. Pressing the CARGO HOOK switch on the cyclic should cause the cargo hook's load beam to open. The cargo hook may be returned to the locked position by manually pushing up on the load beam. The load beam should snap shut. Verify that the hook lock indicator on the side of the hook returns to the fully locked position. In the fully locked position the hook lock indicator should align with the lines on the cover (see Figure 3). The cargo hook may be flown in the open position to facilitate loading by a ground crew.

NOTICE

The cargo hook kit uses the OEM electrical release switch located on the cyclic. Refer to the Agusta Rotorcraft Flight Manual Supplement for operational information for the rotorcraft's cargo hook electrical release system.

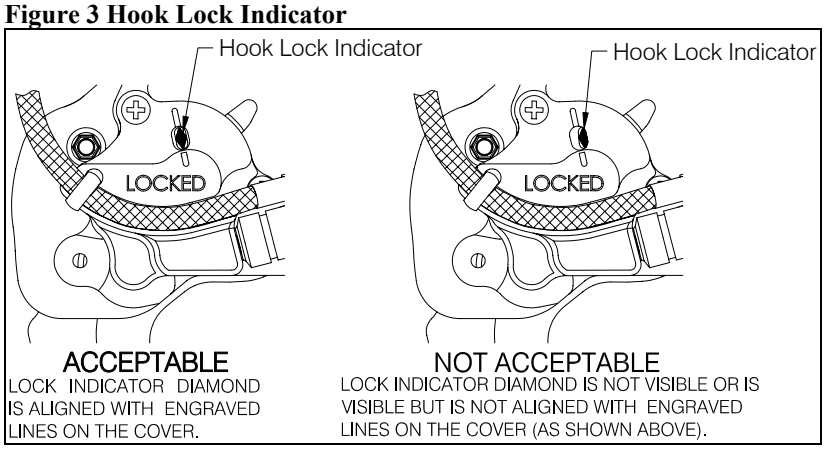
NOTICE

The cargo hook included with this kit does not include a "hook open" switch as referenced in the Agusta Flight Manual Supplement.

Pre-flight Check continued

7. Cycle the backup hydraulic release system to ensure proper operation. Pulling the release lever on the cyclic should cause the cargo hook to open. The cargo hook may be returned to the locked position by manually pushing up on the load beam. The load beam should snap shut. Verify that the hook lock indicator on the side of the hook returns to the fully locked position. In the fully locked position the hook lock indicator should align with the lines on the cover (see Figure 3).

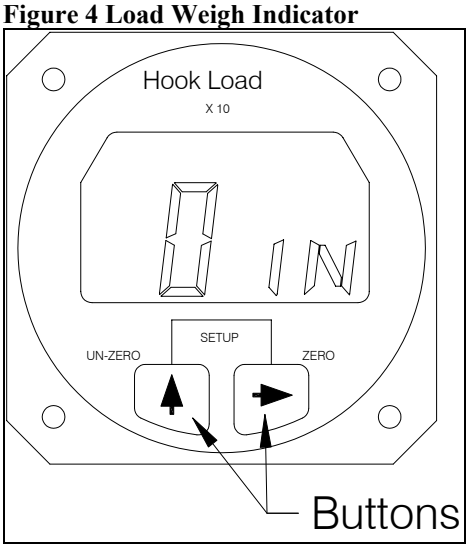
Figure 3 Hook Lock Indicator



Step 8 only applies if the optional load weigh system (kit P/N 200-357-00) is installed.

8. Initialize the Load Indicator per the following:
   Power on the Load Indicator and allow it to warm up for 5 minutes (with no load on the hook). Press both Indicator buttons at the same time to go to the setup mode. Scroll through the menu, using the left button, until "0 in" is displayed (see Figure 4), then press the right button. Remove any weight from the cargo hook that is not to be zeroed out and press either button to complete the procedure.

Figure 4 Load Weigh Indicator



Cargo Hook Rigging

Extreme care must be exercised in rigging a load to the Cargo Hook. The following illustration (Figure 5) shows the recommended rigging configuration.

⚠ CAUTION

The example shown is not intended to represent all possibilities. It is the responsibility of the operator to assure the cargo hook will function properly with the rigging. Some combinations of small primary rings and large secondary rings could cause fouling during release.

Nylon Type Straps or Rope

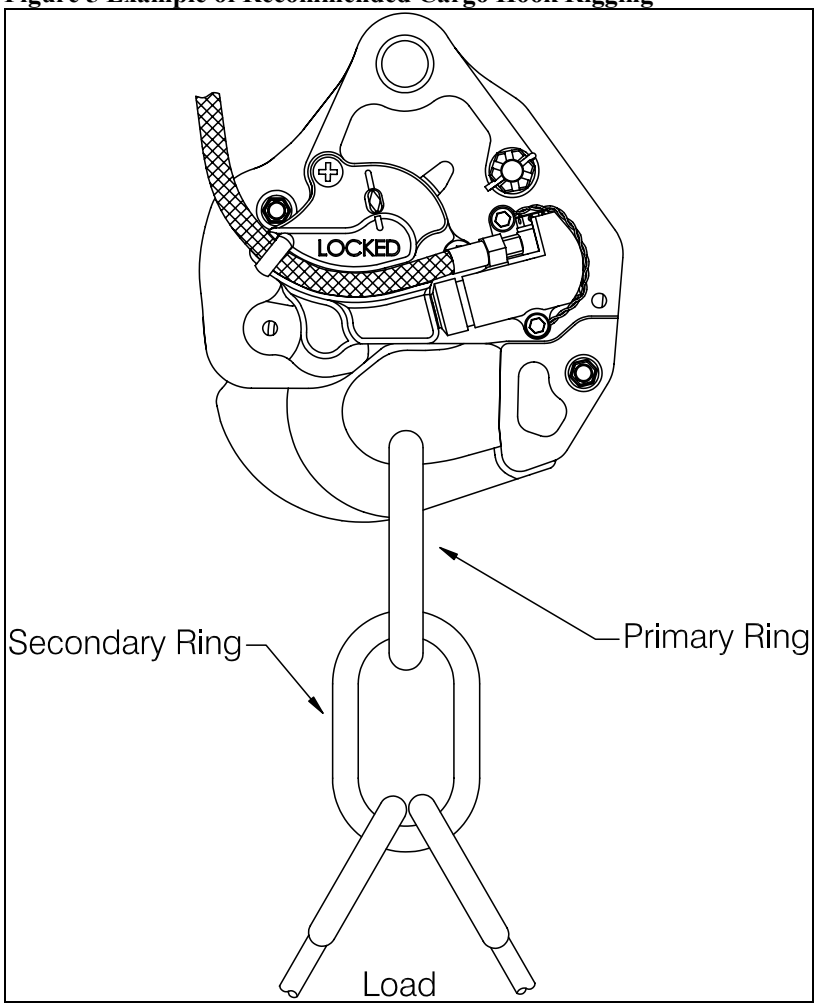
⚠ CAUTION

Nylon type straps (or similar material) or rope must not be used directly on the cargo hook load beam. If nylon straps or rope must be used they should be first attached to a steel primary ring. Verify that the ring will freely slide off the load beam when it is opened. Only the primary ring should be in contact with the cargo hook load beam. See Figure 5.

Section 2 – Normal Procedures continued

Cargo Hook Rigging continued

Figure 5 Example of Recommended Cargo Hook Rigging



Take-off

Consult the Agusta Flight Manual Supplement for your particular rotorcraft model for take-off procedures.

NOTICE

The cargo hook included with this kit does not include a "hook open" switch as referenced in the Agusta Flight Manual Supplement.

In Flight

Consult the Agusta Flight Manual Supplement for your particular rotorcraft model for in flight procedures.

Approach and Landing

Consult the Agusta Flight Manual Supplement for your particular rotorcraft model for approach and landing procedures.

NOTICE

The cargo hook included with this kit is designed to release with no load attached to it.

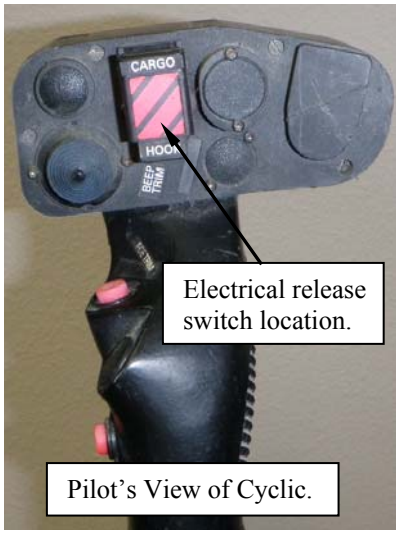
Section 3 – Emergency Procedures

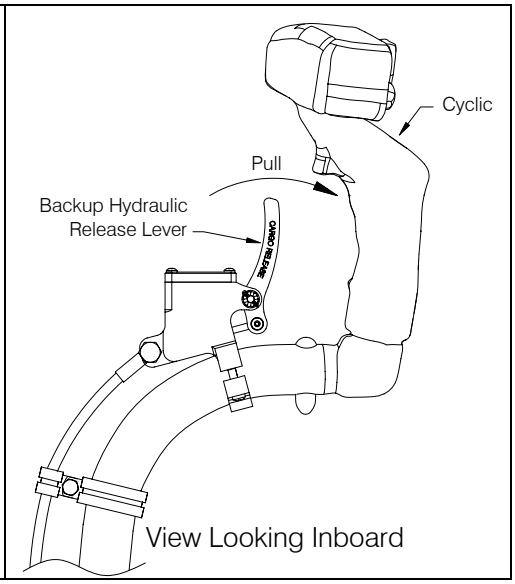
Emergency Cargo Release

In the event of an emergency which requires release of the external load, operate the cargo hook's electrical release system using the pushbutton switch on the cyclic (refer to the Agusta Rotorcraft Flight Manual Supplement for operational information for the rotorcraft's cargo hook electrical release system).

If the primary electrical release system on the cyclic fails to operate, pull the backup hydraulic release lever located on the cyclic (see Figure 6).

Figure 6 Cargo Release Means





Section 4 – Performance Data

Consult the Agusta Flight Manual Supplement for your particular rotorcraft model for performance data with external loads attached to cargo hook.

Section 5 – Weight and Balance Data

Consult the Agusta Flight Manual Supplement for your particular rotorcraft model for cargo hook station data.