PLEASE CHECK WEB SITE AT WWW.ONBOARDSYSTEMS.COM FOR THE LATEST REVISION OF THIS MANUAL

FAA APPROVED ROTORCRAFT FLIGHT MANUAL SUPPLEMENT

STC SR01165SE

Onboard Systems Cargo Hook Sling Suspension System

Airbus Helicopters AS350 Series

R/N _____ S/N _____

FAA Approved: _____
for Manager, Seattle Aircraft Certification Office
Federal Aviation Administration
Renton, Washington

Date: AUG 12 2015

Record of Revisions

Rev.	Date	Page(s)	Reason for Revision
0	Jan. 14, 2003	All	Initial Release
1	Aug. 12, 2015	All	Complete re-write and re-format.

1 GENERAL

This supplement must be attached to the appropriate FAA approved Rotorcraft Flight Manual when an Onboard Systems P/N 200-282-00 Cargo Hook Sling Suspension System is installed in accordance with Supplemental Type Certificate (STC) NO. SR01165SE. In addition, it is necessary to obtain Airbus Helicopters' EXTERNAL LOAD TRANSPORT "CARGO SLING" Flight Manual Supplement for your particular AS350 model helicopter.

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 Airbus Helicopters' Flight Manual Supplement.

The 200-282-00 Cargo Hook Sling Suspension System is comprised of:

- A gimbaled suspension with load cell that attaches to the rotorcraft's hard point and supports the cargo hook.
- An electrical release system that provides means for release by pilot actuation of the push-button on the control console and a switch on the cyclic. The 200-282-00 system uses the type certificate installation of the push-button and switch.
- A manual release system, which provides an additional means of releasing a cargo hook load. It is actuated by a lever mounted to the collective stick.
- A load weigh system, which is comprised of an Indicator mounted to the RH door pillar within the cockpit and a load cell at the cargo hook.

2 LIMITATIONS

The limitations specified in the basic flight manual and the Airbus Helicopters' "Cargo Sling" flight manual supplement remain applicable and are completed or modified by the following.

Operating Limitations

With a load attached to the cargo hook, operation shall be conducted in accordance with the respective national operational requirements. For US operators 14 CFR part 133 is applicable.

The cargo hook kit configurations (as installed per this STC SR01165SE) do not meet the 14 CFR part 27 certification requirements for Human External Cargo (HEC).

NOTICE

The cargo hook kit equipment certification approval does not constitute operational approval; operational approval for external load operations must be granted by the local Aviation Authority.

⚠ WARNING

The suspension is designed to allow the cargo hook to pivot and align with the external load in all directions with limits to protect the electrical and mechanical release cables from damage. Take precautions to prevent external load angles which exceed the limits of rotation provided by the suspension as the load may not be releasable in this position.

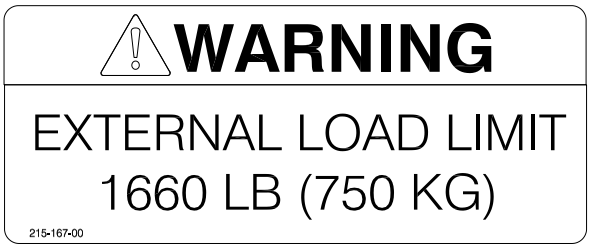
Cargo hook maximum load

The maximum load to be carried on the cargo sling is the lesser of that specified by the Airbus Helicopters' Cargo Sling Flight Manual Supplement or 1660 lbs (750 kg).

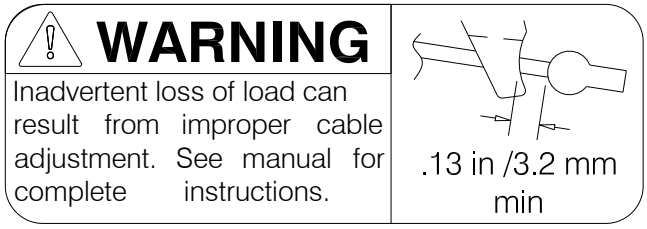
Placards

The following placards are included with the 200-282-00 Cargo Hook Sling Suspension System.

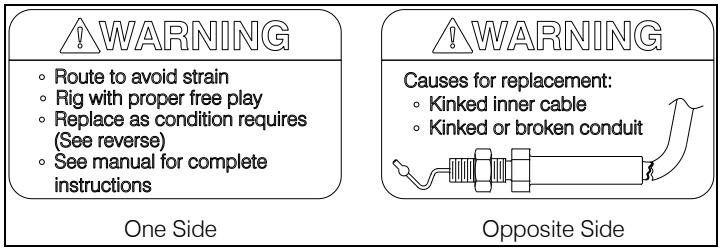
Mounted near to the cargo hook and in clear view of ground crew:



Adhered on the underside of the cargo hook electrical housing:



Attached around the manual release cable:



3 EMERGENCY PROCEDURES

In the event of engine failure in flight while transporting external load:

1. Establish auto-rotational flight.
2. Release external load immediately.

In the event of engine failure while ground crew is attaching the external load:

1. Move the rotorcraft to the right.
2. Ground crew is to be instructed to move to the left of the rotorcraft.

In the event that the cargo hook fails to release electrically proceed as follows:

1. Maintain tension on the long line.
2. Pull the mechanical release lever on the collective to release the external load.

4 NORMAL PROCEDURES

The normal procedures specified in the basic flight manual remain applicable and are complemented by the following.

Pre-Flight Check

Before a flight involving external load operations perform the following procedures. If the procedures are not successful do not use the equipment until the problem has been corrected.

1. Check all mounting fasteners to ensure that they are tight.
2. Check the electrical connectors for damage and security.
3. Check the cargo hook and suspension components for cracks and damage.
4. Swing the hook and the suspension assembly to their full extremes to verify that they do not reach the limit of the manual release cable and electrical harness range of motion.
5. Visually check the manual release cable for damage and security. Pay close attention to the flexible conduit at the area of transition to the cargo hook end fitting. Check for kinked, broken, or splitting of the heat shrink and outer black conduit in this area and separation of the conduit from the steel end fitting.
6. Cycle the manual release mechanism to ensure proper operation. Pull the manual release lever on the collective and the cargo hook load beam should 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. The cargo hook may be flown in the open position to facilitate loading by a ground crew.

Pre-Flight Check continued

7. Cycle the electrical release mechanism to ensure proper operation. Press the CARGO RELEASE switch on the cyclic and the cargo hook load beam should open. The cargo hook may be returned to the locked position by manually pushing up on the load beam. The cargo hook load beam should snap shut. The cargo hook may be flown in the open position to facilitate loading by a ground crew.

NOTICE

The Cargo Hook Sling Suspension interfaces with the SLING armed push-button switch and the CARGO RELEASE switch as installed per the type certificate. Consult the Airbus Helicopters' FMS for operation of these components.

8. Power on the hook 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 until the symbol "0 in" is displayed, then press the right button. Remove any weight that is not to be zeroed out and press either button to complete the procedure.

Cargo Hook Rigging

Prior to attaching an external load, instruct the ground crew to ensure that the helicopter has been electrically grounded to discharge static electricity. If possible, maintain ground contact until hook up is completed.

Extreme care must be exercised in rigging a load to the Cargo Hook. The following illustration shows the recommended rigging configuration and rigging to avoid.

WARNING

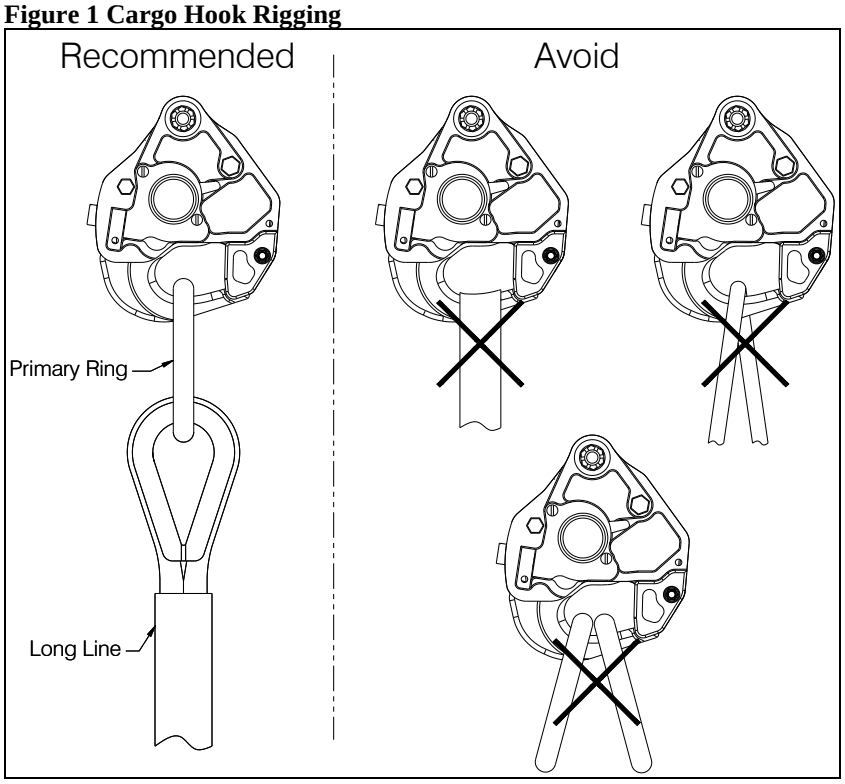
The examples shown are not intended to represent all possibilities. It is the responsibility of the operator to ensure the hook will function properly with the rigging.

WARNING

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 1.

Cargo Hook Rigging continued

Figure 1 Cargo Hook Rigging



Take-off

1. Following attachment of the external load, slowly increase the collective pitch and ascend vertically, maintaining the rotorcraft directly above the load. When the slack in the long line is removed dwell briefly before lifting the load from the surface.
2. Check torque required to hover with the external load.
3. Check for adequate directional control.
4. Take off into the wind, if possible, and ensure clearance of the external load over obstacles.

Maneuvers

Make all control movements gently with gradual acceleration and deceleration and only slightly banked turns.

NOTICE

Control movements should be made gently and kept to a minimum to prevent oscillation of the load and to maintain the external load angle within the limits of rotation of the cargo hook.

Approach and Release of External Load

1. Perform the approach at minimum rate of descent.
2. Execute the approach to hover with sufficient height to prevent the load from hitting obstacles on or being dragged along the ground and then slowly descend vertically to set the load on the ground.
3. Press the CARGO RELEASE switch on the cyclic to release the external load from the cargo hook.
4. The manual release lever on the collective is intended as a backup release in the event of an inability to release the load with the CARGO RELEASE switch but may be used to release the external load in normal circumstances.
5. Visually check to ensure that the external load has been released.

Verify that the external load and long line has dropped free from the rotorcraft before departing the drop-site.

5 PERFORMANCE

The basic Flight Manual remains applicable when there is no external load attached.

When there is an external load, performance will be reduced depending on its size, weight and shape.

The Load Weigh System is designed and installed as a means of MONITORING the load (weight) suspended from the Cargo Hook. Functional and performance characteristics have not been determined on the basis of Load Cell indication or display. Therefore, this instrument shall NOT be used as a primary indication of performance and flight operation must NOT be predicated on its use