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FAA APPROVED ROTORCRAFT FLIGHT MANUAL SUPPLEMENT

Cargo Hook Kits with Talon LC Hydraulic Cargo Hook

for the

Airbus Helicopters Deutschland GmbH Models BO-105S and BO-105LS A-3

STC SR01694SE

R/N _____ S/N _____

FAA Approved: _____

Manager, Seattle Aircraft Certification Office
Federal Aviation Administration
Renton, Washington

Date: 2/13/2017

Record of Revisions

Rev.	Date	Page(s)	Reason for Revision
0	Aug 15, 2006	All	Initial Release.
1	June 22, 2007	All	Updated part numbers and figures to reflect new master cylinder design.
2	Jan. 13, 2012	All	Added kit P/N 200-387-00 and 200-388-00 and BO-105LS A-3 model.
3	March 1, 2012	All	Updated rated load for kits 200-387-00 and 200-388-00 to 3000 lbs. Changed to smaller page size to reflect OEM RFM page size.
4	February 13, 2017	All	Added instructions for optional Cargo Hook with Surefire Release. Updated Limitation section. Updated Cargo Hook Rigging section.

INTRODUCTION

This supplement must be attached to the appropriate Airbus Helicopters Rotorcraft Flight Manual when an Onboard Systems P/N 200-302-00, 200-302-10, 200-303-00, 200-303-10, 200-387-00, 200-387-10, 200-388-00 or 200-388-10 Cargo Hook Kit is installed in accordance with Supplemental Type Certificate (STC) NO. SR01694SE. 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 for the Cargo Hook issued by Airbus Helicopters.

The Cargo Hook Kits utilize the rotorcraft's existing cable type suspension system and internal electrical wiring including the electrical release switch. These kits replace the cargo hook, an adapter link assembly, the mechanical release cable system and the external electrical release wire harness. The mechanical release cable system is replaced by a hydraulic release system as the cargo hook's secondary load release system.

The P/N 200-303-00, 200-303-10, 200-388-00, 200-388-10 kits are the same as the 200-302-00, 200-302-10, 200-387-00, and 200-387-10 kits respectively except these kits include a Load Weigh System. The Load Weigh System includes a load cell above the cargo hook, a cockpit mounted load weigh indicator, and the interconnecting wire harness. This system provides the pilot with an indication of the weight of the external load.

Cargo Hook Kit P/N's ending in -10 include a cargo hook (P/N 528-028-02) with a delay circuit to help protect against inadvertent load release as a result of accidental contact with the Cargo Release switch or inadvertently pressing this switch. This delay circuit requires that the release switch be held for approximately ½ second in order to release the cargo hook load. This feature is referred to as Surefire Release.

1. LIMITATIONS

A. Weight

Consult the applicable Airbus Helicopters Rotorcraft Flight Manual Supplement for maximum weight of the rotorcraft–load combination.

B. CG Limits

Consult the applicable Airbus Helicopters Rotorcraft Flight Manual Supplement for CG limits.

C. Airspeed Limits

Consult the applicable Airbus Helicopters Rotorcraft Flight Manual Supplement for airspeed limits when an external load is attached.

D. Operation

Cargo Hook Kits 200-302-00, 200-302-10, 200-303-00, and 200-303-10 are rated for 2,645 lbs. (1200 kgs) and Cargo Hook Kits 200-387-00, 200-387-10, 200-388-00, and 200-388-10 are rated for 3000 lbs (1360 kgs).

⚠ CAUTION

Load capacities given are for the equipment described only. Loading limits for your particular helicopter model still apply. Consult the Airbus Helicopters basic flight manual and the rotorcraft flight manual supplement for the Cargo Hook.

With a load attached to the cargo hook, operation shall be conducted in accordance with the respective national operational requirements.

1. LIMITATIONS

D. Operation continued

The cargo hook kit configurations (as installed per this STC SR01694SE) 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.

The load weigh indicator (included with kit P/N 200-303-00, 200-303-10, 200-388-00, and 200-388-10), whose purpose is to display the weight of the load carried on the cargo hook, shall be operated in accordance with Owner's Manual 120-039-00.

1. LIMITATIONS continued

E. Placards

The Cargo Hook Kits utilize the rotorcraft's existing cable type suspension system, including its placards. Consult the Airbus Helicopters Rotorcraft Flight Manual Supplement for applicable placards.

The following placards are included with kits which include Cargo Hook P/N 528-028-02 with Surefire Release.

- Adhered on the solenoid housing of cargo hook P/N 528-028-02:

- Adhered adjacent to the cockpit cargo release switch:

Additionally, the P/N 200-303-00, 200-303-10, 200-388-00 and 200-388-10 Cargo Hook Kits with Load Weigh include the following placards.

1. LIMITATIONS continued

E. Placards continued

- Mounted adjacent to the Onboard Systems digital/analog indicator in view of the pilot and co-pilot.

TURN THE WEIGHING SYSTEM OFF WHEN NAVIGATION EQUIPMENT IS IN USE. NO AIRCRAFT OPERATION SHOULD BE PREDICATED ON THE READING OF THE ONBOARD WEIGHING SYSTEM.

- Mounted adjacent to both the power switch and the circuit breaker in view of the pilot and co-pilot.

ELECTRONIC WEIGHING SYSTEM

All kit P/Ns include the following placard.

- Adhered over the hook advisory light of the type certificate cargo hook installation.

INOP

2. NORMAL PROCEDURES

A. 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.

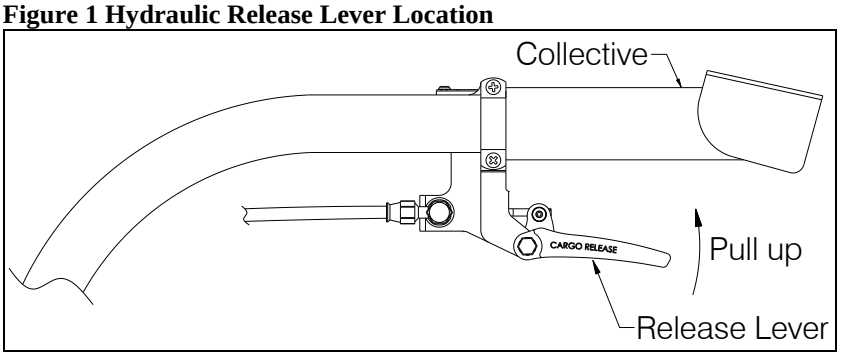
Exterior Check

1. Check all mounting fasteners to ensure that they are tight.
2. Check the electrical harness and its connection on the cargo hook for security and damage.
3. Check the hydraulic hose and slave cylinder on cargo hook for signs of fluid leakage.

Interior Check

1. Check the operation of the cargo hook's backup quick release system. Pull the release lever located on the collective and the cargo hook load beam should open.

Figure 1 Hydraulic Release Lever Location

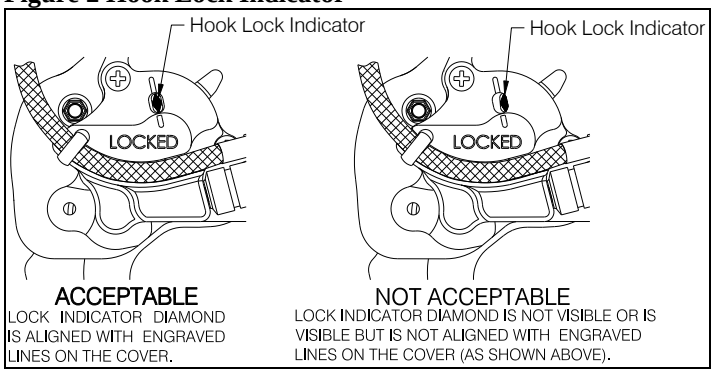


Load beam may be returned to the locked position by manually pushing up on it. The load beam should snap shut. Verify that the hook lock indicator on the side of the hook returns to the fully locked position. In the fully locked position the hook lock indicator should align with the lines on the cover (see Figure 2).

2. NORMAL PROCEDURES continued

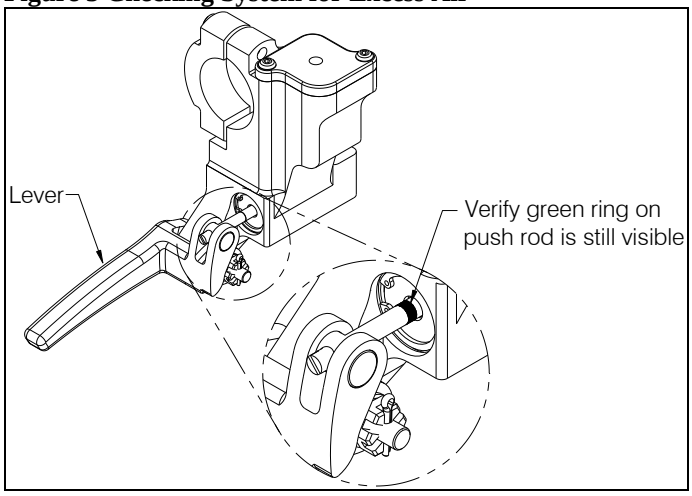
A. Pre-Flight Check continued

Figure 2 Hook Lock Indicator



2. Check the hydraulic release system for excess air in the lines by pulling the release lever firmly until it bottoms out. Check the push rod position (see Figure 3). 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 3 Checking System for Excess Air

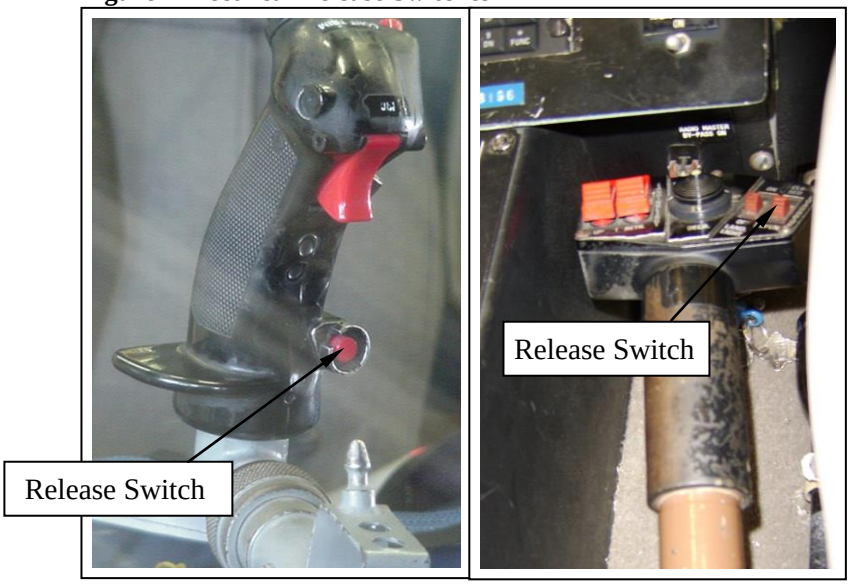


2. NORMAL PROCEDURES continued

A. Pre-Flight Check continued

3. Check the fluid level in the master cylinder reservoir. 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.
4. Check the operation of the cargo hook's primary quick release system. The cargo hook kits use the OEM electrical release switch located on the cyclic (see Figure 4) or collective pitch lever (lower right) depending on configuration. Refer to the Airbus Helicopters Flight Manual Supplement for operational information of the electrical release system and verification of configuration.

Figure 4 Electrical Release Switches



2. NORMAL PROCEDURES continued

A. Pre-Flight Check continued

The following instructions are applicable to cargo hook P/N 528-028-00.

NOTICE

If Cargo Hook with Surefire Release (P/N 528-028-02) is installed, the electrical release includes a ½ second time delay. See specific procedures in this step for this cargo hook model.

- Press the Cargo Release switch, the load beam should open.
- Push up on the load beam and verify that it latches and the hook lock indicator is aligned with the engraved line on the manual release cover (see Figure 2).

The following instructions are applicable to the optional cargo hook P/N 528-028-02. In addition to the P/N, this cargo hook can also be identified by its gold color solenoid cover (see Figure 5).

2. NORMAL PROCEDURES continued

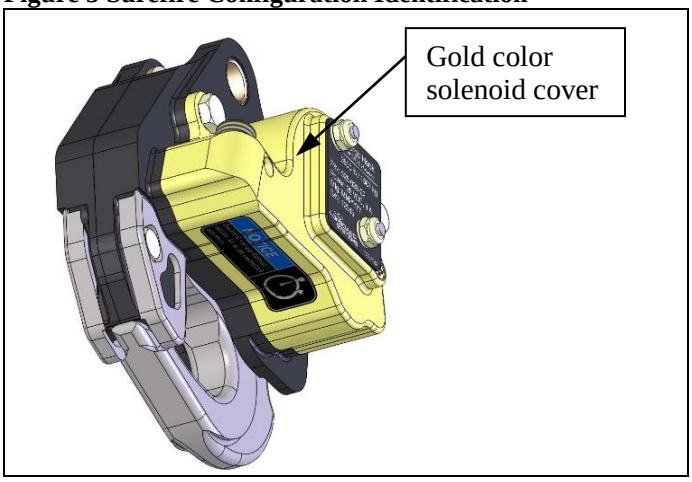
A. Pre-Flight Check continued

- *Very* briefly press the Cargo Release switch, the cargo hook should not actuate and the load beam should remain closed.
- Press and hold the Cargo Release switch for several seconds, the load beam should fall to the open position and the cargo hook solenoid should continue to cycle repeatedly.
- Push up on the load beam and verify that it latches and the hook lock indicator is aligned with the engraved line on the manual release cover (see Figure 2).

NOTICE

By design (to help protect against inadvertent load release) cargo hook P/N 528-028-02 requires that the Cargo Release switch be held for at least ½ second to release the load.

Figure 5 Surefire Configuration Identification

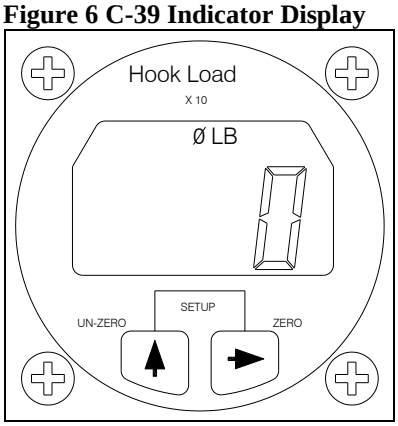


2. NORMAL PROCEDURES continued

A. Pre-Flight Check continued

5. If the Load Weigh System is installed, power on the C-39 Load Indicator. After a brief self-diagnostic routine is complete the indicator display should indicate “0” as shown below (with no load on the cargo hook):

Figure 6 C-39 Indicator Display



NOTICE

Refer to Owner’s Manual 120-039-00 for setup instructions including changing the units, changing the calibration code, zeroing the display, changing the dampening level, etc.

2. NORMAL PROCEDURES continued

B. Operation

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. Some combinations of small primary rings and large secondary rings could cause fouling during release.

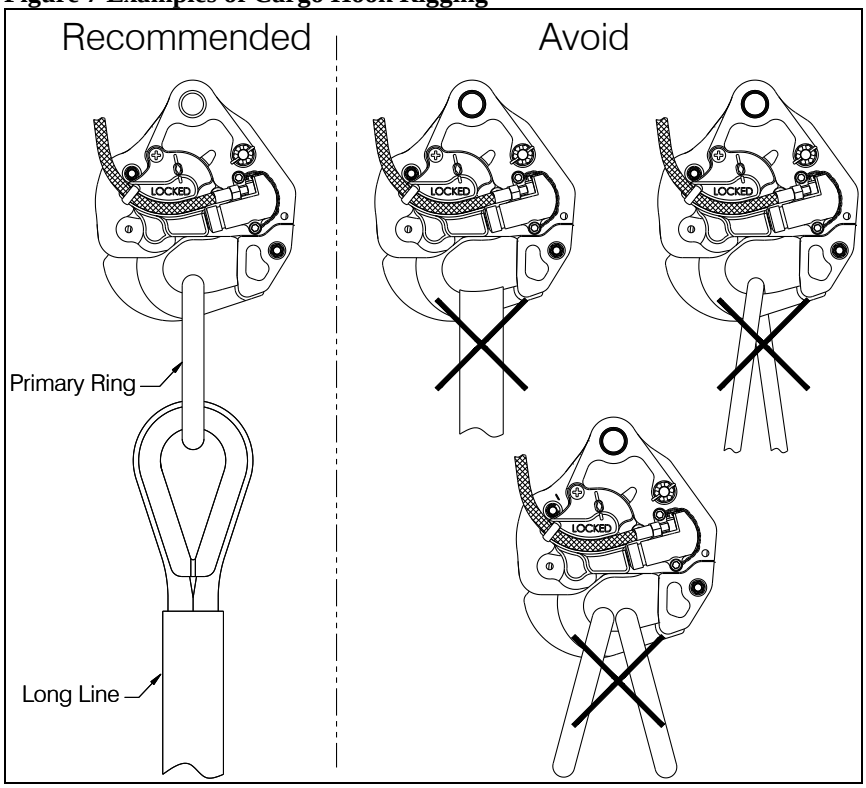
⚠ WARNING

Nylon type straps 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 7.

2. NORMAL PROCEDURES continued

B. Operation continued

Figure 7 Examples of Cargo Hook Rigging



2. NORMAL PROCEDURES continued

B. Operation continued

Consult the Airbus Helicopters Rotorcraft Flight Manual Supplement for the Cargo Hook Suspension System for additional operational procedures.

NOTICE

The hook advisory light is no longer functional with this Cargo Hook Kit.

3. EMERGENCY PROCEDURES

⚠ DANGER

In an emergency such as snagged load or engine failure, the manual release system should be the first option for release of the external load as this system provides greater load release authority in an overload condition. If the manual release option fails, NEXT try the electrical release.

In the event of a failure of the electrical release system, the external load may be mechanically released by pulling up on the hydraulic release lever located on the collective (see Figure 1).

Consult the Airbus Helicopters Rotorcraft Flight Manual Supplement for additional emergency procedures.

4. PERFORMANCE

The basic Flight Manual and Rotorcraft Flight Manual Supplement for the Cargo Hook issued by Airbus Helicopters remain applicable.

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

When a Cargo Hook Kit with Load Weigh System is installed the following applies:

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 the 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.