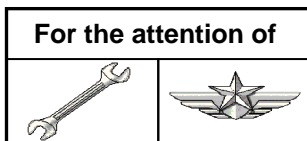


SAFETY INFORMATION NOTICE

SUBJECT: EQUIPMENT AND FURNISHINGS

Good practices to prevent hoist incidents



AIRCRAFT CONCERNED	Version(s)	
	Civil	Military
AS350	B, BA, BB, B1, B2, B3, D	L1
AS550		A2, C2, C3, U2
AS355	E, F, F1, F2, N, NP	
AS555		AF, AN, SN, UF, UN, AP
SA365 / AS365	C1, C2, C3, N, N1, N2, N3	F, Fs, Fi, K, K2
AS565		MA, MB, SA, SB, UB, MBe
EC155	B, B1	
SA330	J	Ba, L, Sm
EC225	LP	
EC725		AP
AS332	C, C1, L, L1, L2	B, B1, F1, M, M1
AS532		A2, U2, AC, AL, SC, UE, UL
MBB-BK117	A-3, A-4, B-1, B-2, C-1	

Airbus Helicopters is currently taking part in an investigation following an event that occurred during a hoisting operation, using a hoist in family 763XX manufactured by Goodrich Actuation Systems - Hoist and Winch Division, France, referred as a CLASS II hoist.

A hoist cable broke a few meters from the helicopter fuselage when the hoisted person was descending.

A complete expertise will be performed soon within the scope of this event to identify the root causes that led to the cable rupture.

Without predicting the conclusions of the ongoing investigation, Airbus Helicopters reminds all customers who use hoists of the good practices to be implemented: if the hoist cable jams or is incorrectly reeled, stop any action involving the reeling or unreeling of the cable and focus on the securing of the hoisted persons.

No. 4035-S-25

As reminder, Airbus Helicopters has issued several publications in recent years for maintenance staff and also for flight crews:

- In addition to the maintenance specified in the AMM, also Refer to Collins Aerospace - Service Information Letter 763XX-25-T for the list of CMMs and applicable Service Bulletins issued by Airbus Helicopters.
- Service Information Letter **763XX-25-0R** from Goodrich Actuation Systems - Hoist and Winch division "Inform operators about good practices to follow in maintenance and operation of rescue hoists".
- Safety Information Notice No. **3529-S-25** - "**Measures to be taken if the hoist jams in operation**" rev 1 issued 30-06-2020 by Airbus Helicopters.
- Safety Promotion Notice No. **3195-P-00** "**ESPN-R Host Task force recommendations & Airbus Helicopters additional notes**" Rev 1 issued 07-07-2020 by Airbus Helicopters.

Moreover, on its Website, Airbus Helicopters provides its customers with a host safety interactive booklet.

<https://www.airbus.com/en/safety/safety-in-operations/helicopters-safety-in-operations/safety-multimedia-e-learning/hoist>

SERVICE INFORMATION LETTER

EQUIPMENT / FURNISHING: Rescue hoists.

SUBJECT:

Goodrich currently participates in an investigation following an event that occurred during a hoisting operation with a 600 lbs hoist of family 763XX where the hoist cable fractured.

EFFECTIVITY:

This Service Information Letter applies to all types of hoists manufactured by Goodrich Actuation Systems (FA3T1): families 76360, 76363, 76365, 76368, 76370, 76375 and 76378.

GOOD PRACTICES DURING HOIST MAINTENANCE AND HOIST MISSION:

Without predicting the conclusions of the investigation to be performed on the hoist involved leading to the cable fracture, Goodrich reminds customers that the maintenance and daily checks of the hoists should be performed in accordance with the applicable CMM and additional applicable SB at their latest revisions.

During the mission, in flight, it is important to respect the good safety practices:

- In case of hoist blockage or observance of an incorrect cable winding on the drum (See SIN 3529-S-25 from Airbus Helicopters)
- If the cable does not move whereas an order is given on the control pendant

Then stop any action involving the reeling or unreeling of the cable and focus on the securing of the hoisted persons.

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SERVICE INFORMATION LETTER

REMINDER OF RECENTLY APPLICABLE SERVICE BULLETINS AND CMM:

For 76360 and 76363 families:

- CMM of hoists 76360-210-XX family: 25-62-21 Rev 5
- CMM of hoists 76363 family: 25-64-96 Rev 3

SB	Rev	Description
76360-25-06	1	Traction drive system check during the daily check

For 76370 hoist family:

- CMM of hoists 76370 family:
 - 25-64-97 Rev 4 for French Language
 - 25-64-97 Rev 3 for English Language

SB	Rev	Description
763XX-25-09	0	Traction drive system check during the daily check
76370-25-11	1	Traction drive system adjustment
76370-25-09	0	Level wind screw verification (one time)
76370-25-10	0	Level wind screw verification (regular inspection)

For 76365 and 76368 hoist families:

- CMM of hoists 76368 family:
 - 25-64-98 Rev 5 for French Language
 - 25-64-98 Rev 3 for English Language

SB	Rev	Description
763XX-25-08	0	Level wind screw verification (one time)
763XX-25-12	0	Level wind screw verification (regular inspection)
763XX-25-09	0	Traction drive system check during the daily check
76368-25-14	-	Cable verification during the daily check

For 76375 and 76378 hoist families:

- CMM of hoists 76368 family:
 - 25-64-99 Rev 4 for French Language
 - 25-64-99 Rev 3 for English Language
- CMM of hoists 76378-200: IMM 712763 in association with SB 76378-300-25-03

SB	Rev	Description
763XX-25-08	0	Level wind screw verification (one time)
763XX-25-12	0	Level wind screw verification (regular inspection)
763XX-25-09	0	Traction drive system check during the daily check
76378-25-13	-	Cable verification during the daily check

SERVICE INFORMATION LETTER

Purpose

Inform operators about good practices to follow in maintenance and operation of Rescue Hoists.

1. Applicability

This Service Information Letter (SIL) applies to below hoists:

- Electric 300lbs:
 - 76370-130
 - 76370-130-D
 - 76370-140-D
- Hydraulics 600lbs:
 - 76360-210-00
 - 76360-210-01
 - 76360-210-0D
 - 76360-210-1D
- Hydraulics 600lbs:
 - 76363-300
- Hydraulics 600lbs:
 - 76368-240
 - 76368-240-D
- Electric 600lbs:
 - 76378-260
 - 76378-260-D
 - 76378-360

GOODRICH ACTUATION SYSTEMS - A SIMPLIFIED JOINT STOCK COMPANY WITH CAPITAL OF 8 000 000 € - 443 177 233 R.C.S. EVREUX REGISTERED
OFFICE: 43 RUE DES PRES 27950 SAINT-MARCEL

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SERVICE INFORMATION LETTER

2. DESCRIPTION

This SIL provides information on:

- Hoist operation
- Actions to be taken under certain conditions occurring during flight or maintenance.
- Best practices to prevent avoidable breakdowns.

Main purpose of this SIL is to enable users to get better understanding on how hoists work, keep it in the service and not return it to repair for certain faults that are not faults at all, or for certain faults that can be avoided, or repaired by the users.

Unless otherwise specified, the information provided in this SIL are applicable to all the hoists listed in paragraph 1, even if the figures used to illustrate the instructions represent one hoist family.

3. REFERENCES

The 2nd level maintenance manuals:

- Component Maintenance Manual (CMM) 25-62-21 for hoist systems 76360-210 family.
- Component Maintenance Manual (CMM) 25-64-96 for hoist systems 76363 family.
- Component Maintenance Manual (CMM) 25-64-97 for hoist systems 76370 family.
- Component Maintenance Manual (CMM) 25-64-98 for hoist systems 76368 family.
- Component Maintenance Manual (CMM) 25-64-99 for hoist systems 76378 family.

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SERVICE INFORMATION LETTER

4. Information

A. Correct cable winding

(1) Cable penetration

It is reminded that, during loading, it is possible for the cable to penetrate into the lower layers. This phenomenon occurs more, if an unloaded winding is performed previously, as the lower layers are wound on the drum with less tension.

Cable penetration during loading is a normal and unavoidable phenomenon on all hoists. This can lead to gaps between the turns and cable slamming, as illustrated in Figure 1, left.

Gaps between the coils can be eliminated by carrying out a loaded winding (pre-tensioning or conditioning), as illustrated in Figure 1, right.

This is why, **to determine if a hoist is correctly wound, it is necessary to perform a loaded winding before making any decisions** (see paragraph 4.D regarding pre-tensioning and conditioning).



Figure 1 : On the left, example of a winding showing gaps following cable penetration. On the right the same hoist wound with a load to tighten the turns of the lower layers.

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(2) Unacceptable winding faults

After a loaded winding (see paragraph 4.D), the remaining unacceptable faults are.

– Gaps between the turns:

- On uncovered layer greater than 1 drum winding pitch (approximately 5mm* for 600lbs hoists, and about 4mm* for 300lbs hoists)
- On covered layer greater than 1/2 drum winding pitch (approximately 2.5mm* for 600lbs hoists and 2mm* for 300lbs hoists)

– Overlap between the cable turns.

NOTE: Lengths marked with * are given as an indication only, to provide an order of magnitude. These lengths are not control dimensions, as the winding pitch may vary according to layers, cable diameter, and drum machining tolerances.

If the above faults are still present after a loaded winding, check if cable replacement has been performed previously, and whether the cable-fastening position has been shifted during this operation. If this is the case, repeat the cable installation procedure, checking that the cable-fastening position is correct.

On the other hand, after loaded winding (see paragraph 4.D) if there is no cable anarchic winding (see paragraph 4.B) or cable guide being out of synchronization with the drum, then winding presents no risk and the hoist can remain in service.

On the other hand, in the event of anarchic winding, it is important not to attempt unwinding or winding the hoist cable (whether in flight or on the ground). More details in paragraph 4.B.

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(3) Acceptable winding faults

On the other hand, even after loaded winding, defects (purely cosmetic) may be present in the cable guide reversal zones (layer change zone). As these defects are acceptable, the hoist should not be returned for winding faults. Figure 2 shows examples of acceptable reversal defects.

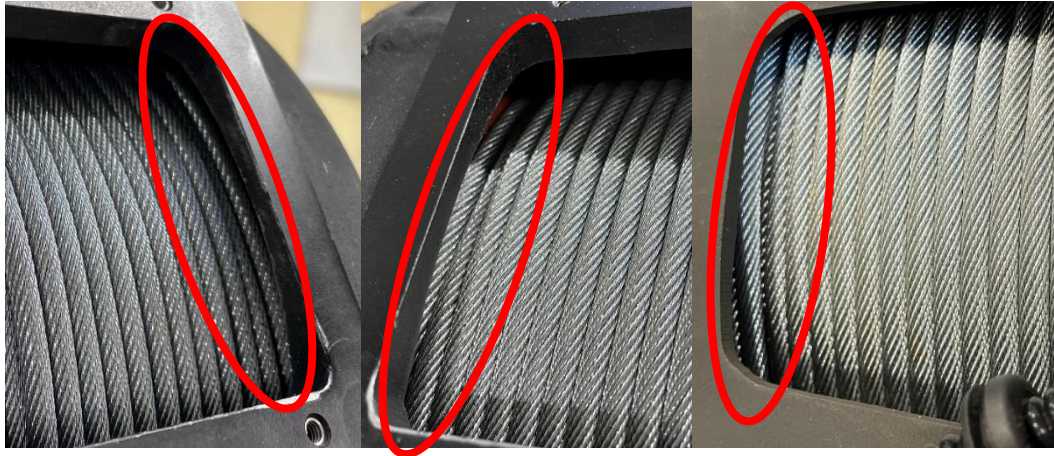


Figure 2: Examples of acceptable defects at reversal zones (Layer changes).

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SERVICE INFORMATION LETTER

B. Hoist jamming and/or anarchic winding of the cable

In the event of hoist jamming or anarchic cable winding, stop any action that results in cable winding or unwinding, and prioritize the safety of hoisted personnel.

If the hoist is not stopped, there is a risk of damage to the hoist and/or cable breakage.

If the hoist is found jammed or with an anarchic winding, it must be returned for repair.



Figure 3: Example of an anarchic winding

Possible causes of an anarchic winding:

- If a load is attached to cable, anarchic winding may occur on following case:
 - Loss of synchronization of the cable guide with the drum (damaged winding screw or guiding fork, or shift of synchronization during the cable replacement operation).
- If the cable is unloaded, anarchic winding may occur on following cases:
 - Also, through loss of cable guide synchronization
 - Or loss of cable extraction function (rollers or extraction bar not functioning).

NOTE: In the event of a component blocking the translation of the cable guide, the guiding system (winding screw and guiding fork) may be damaged, potentially leading to anarchic winding and complete jamming of the hoist.

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For hoists 76360-210 or 76363 families, pay more attention to the cable cut tube, which can become twisted because of mishandling or impact. Once twisted, the tube may jam on the housing when the cable guide is moving, leading to damage on the guiding system.

For hoists 76370 family, pay attention to the orientation of the screws securing the hoist to the boom. If mounted upside down, the screws may block the translation of the cable guide, resulting in damage to the guiding system. Screws must be installed with the head up and the nut down.

C. Cable slamming

There are several types of cable slamming.

- (1) When the cable penetrates the lower layer:

See paragraph 4.A(1) for more details on cable penetration.

Slamming will be of moderate amplitude and tends to occur on a regular basis.

This type of jerks can be reduced or even eliminated by pre-tensioning or conditioning the cable (see paragraph 4.D).

This type of jerks is normal and not a reason for non-conformity.

- (2) When the cable guide passes through the "reversal" zone:

As the cable passes from one layer to the next, it's possible to feel some jerks in the cable.

These jerks are moderate, and generally there are one or two per reversal.

This type of jerks is normal and not a reason for non-conformity.

- (3) When anarchic winding occurs:

Large, random jerks can be felt in the cable.

These jerks are much more intense than the previous two.

In this case, it's essential to stop any action that causes the cable to wind or unwind and prioritize the safety of the people being hoisted. (See paragraph 4.B for more details).

In the event of anarchic winding, the hoist should be returned for repair.

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SERVICE INFORMATION LETTER

D. Pre-tensioning and conditioning

Loaded windings ensure that the lower layers of cable are properly tensioned on the drum, ensuring proper cable winding.

This minimizes or eliminates the risk of the cable penetrating the lower layers when wound under load. This improves the comfort of personnel being hoisted, since jerks are minimized.

The cable's service life is often optimized by regularly winding under loaded condition.

(1) The two types of loaded winding:

- **Pre-tensioning**: Winding the cable on all its layers with a minimum load, ensuring the cable is correctly wound. This reduces wear on the cable and extends its service life. In addition, it enhances the hoisting experience, by limiting jerks caused by the penetration of an upper cable layer into a lower one.
- **Conditioning**: Application of a tension on the entire length of the cable to re-balance the inner and outer strands, so as to eliminate the risk of a birdcage.

The difference between conditioning and pre-tensioning is as follows:

- In the case of conditioning, the entire length of the cable must be tensioned with a load between 250 and 270 kg.
- In the case of pre-tensioning, it is also possible to wind the cable on a slave drum to provide tension. Use pre-tensioning load between 100 and 270 kg. In this case, the cable is tensioned only between the slave drum and the hoist.

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(2) Conditions for Pre-tensioning and Conditioning

Pre-tensioning is to be applied under the following conditions.

- Optional: Recommended after periodic maintenance (50 cycles).
- Optional: In the event of repeated hoisting missions leading to no-load windings, it is recommended to adjust the frequency of pre-tensioning.
- Mandatory: After laying a new cable.
- Mandatory: if there is any doubt as to whether the cable is wound correctly. In this case, a loaded winding is necessary before deciding.

Conditioning must be done under below condition:

- Optional: If a cable has slight or moderate loosening of its outer strands (birdcage). Otherwise, replace the cable.

If cable still has a birdcage even after conditioning, replace the cable.

(3) Cable Pre-tensioning or Conditioning procedure

Note: This procedure can also be performed during normal hoisting or training operations, as long as the load and winding length criteria are ensured.

- During helicopter hovering flight (or on the ground with appropriate tools).
- Unwind loaded or unloaded cable until it reaches bottom limit switch.
- Then load the cable.
- Wind the cable with the load until close to the upper slow zone (or whatever is most convenient as long as the cable is wound on its last winding layer).
- Unload the cable.

E. Maintenance Tools (Ground Support Equipment (GSE))

Please note that the use of maintenance tools (GSE) not recommended by Goodrich can cause risk of damage to hoists. Goodrich has observed that certain GSEs can lead to poor winding or premature wear on cables.

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SERVICE INFORMATION LETTER

F. Manual cable traction

- (1) For hydraulic hoists 76360, 76363, 76368 families:

When unwinding from the storage position, at the end of the upper travel, it is necessary to apply tension manually on the hoist hook before initiating the unwinding action, to ensure correct cable extraction. This tension must be applied to the first 50 cm of cable, whether during maintenance or in flight.

Failure to comply with this instruction may result in damage to the cable with an S-bend, that may lead to anarchic winding of the hoist.

In fact, following an unloaded winding operation, the cable may be trapped in the lower layers when stopping at up travel limit (due to important tension in cable at up travel limit).

Hoist extraction function may then not be sufficient to release the cable, it may stay stuck inside lower layers during unwinding, causing kinking and sometimes even anarchic winding.

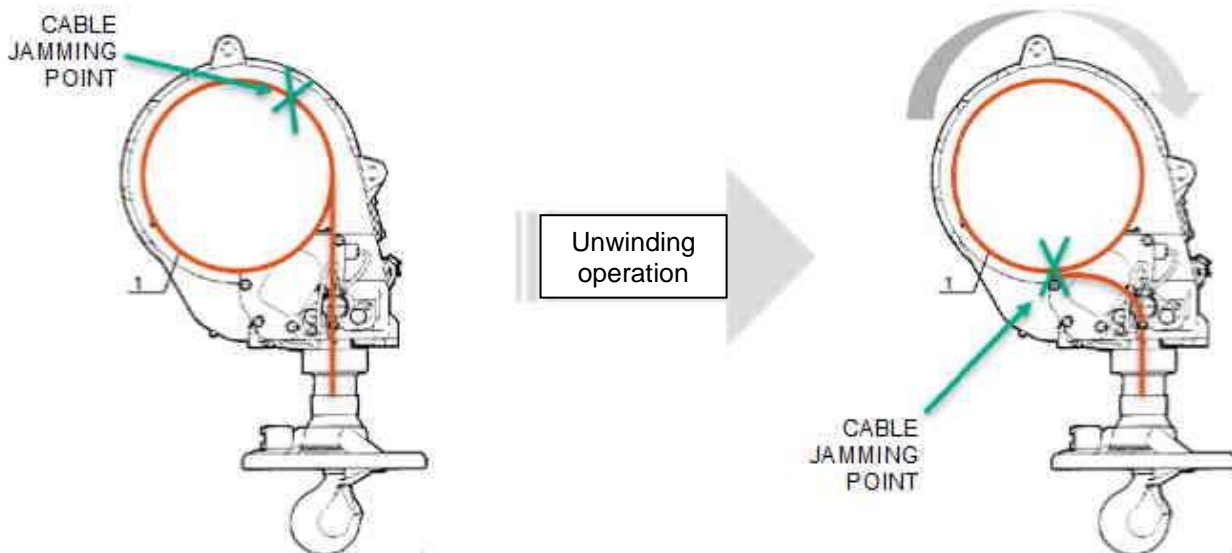


Figure 4: Cable jamming if manual tensioning procedure is not followed



Figure 5: "S"-shaped bend in the cable following failure to apply manual tension to the first 50 cm of cable

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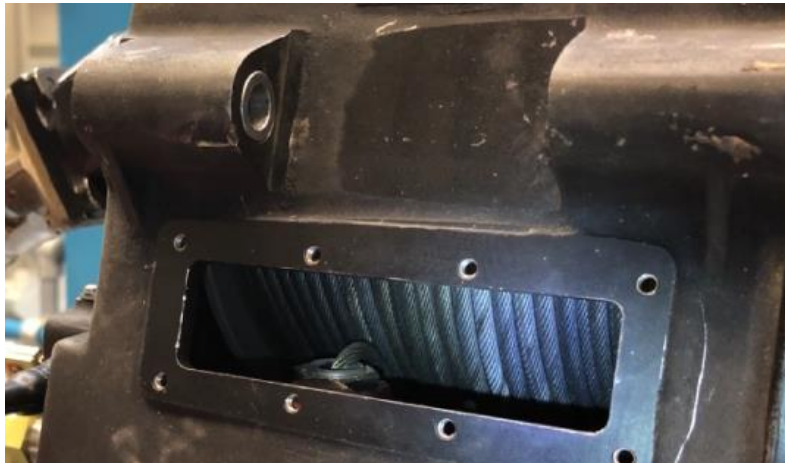


Figure 6 : Example of a cable reversed in the opposite direction because it was jammed in the drum after the first 50 cm of cable not tensioned by hand

On the other hand, it is not necessary to apply a permanent manual tension on the cable during the rest of the unwinding (apart from the first 50cm unwound), or during the rewinding operation, whether in maintenance or in flight.

Note that in case the first 50cm are not pulled by hand, if:

- The cable is anarchically wound and is blocking the hoist: send the hoist for repair.
- The cable is bent in an "S" shape, but manages to get out of the hoist: replace the cable before putting the hoist back into service, and remind operators of the manual pulling instruction for the first 50 cm.

(2) For electric hoists 76370, 76378 families:

There's no need to apply manual tension to the first few cm or to the rest of the cable, either during maintenance or in flight.

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SERVICE INFORMATION LETTER

G. Compression hook

Never perform hook compression (hook storage position) with load attached to the cable end. The hook compression may not work properly with load attached and there will be a risk of damaging the cable.

On the other hand, during hoisting cycles, it is not forbidden to move the load up to up travel limit switch. When the hoisting mission is completed, the cable must be completely reeled in, without load, until it stops automatically at the up-travel limit, so that the hook assembly is firmly immobilized in the storage position. So, it is important to ensure that the hook remains firmly immobilized in the end-of-travel position during all flights, even on non-hoisting missions. If hoisting missions are not frequent, it's important to re-perform hook compression on a regular basis.

This is to avoid wear induced by helicopter vibrations and hook swinging during flights. These vibrations and swinging could cause fatigue stresses in the cable at cable guide exit, resulting in premature damage and the risk of cable breakage.

On the other hand, when removing and storing the hoist, it is recommended to unwind around 50 cm of cable to prevent applying a force with lever on the hook during handling and shipping (which would cause excessive stress on the cable and hook).

Note: To immobilize hook in flight, use only the hook compression function. It is not recommended to secure the hook with an external device like a bungee cord (or similar means). This type of device may create a permanent lateral force on the hook, which could cause damage to the cable.

On the other hand, on some installations, the hook may rotate on itself in flight due to aerodynamic forces. In such cases, it is advisable to stop the rotation of the hook by using a cord (or any other means). The cord should be secured so as to prevent rotation without applying lateral tension to the hook.

H. Friction and damage to the cable

A damaged cable (see cable discard criteria in the CMM CHECK section) can lead to:

- Incorrect unwinding/winding of the cable, and hoist jamming.
- Risk of cable damage.

During hoisting operations, make sure that the hoist cable never comes in contact with anything external to the hoist (especially metallic), such as any part of the helicopter, an obstacle or even the ground. This may cause local damage to the cable, with breakage of wires, strands or marked folds, and the risk of cable damage. In such cases, hoisting must be stopped, and the affected area of the cable must be checked for integrity.

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SERVICE INFORMATION LETTER

I. Overloading / shocks of the cable

Avoid overloading / shock on the cable.

- When lowering the load, it is recommended to reel in to apply tension before the hoisted person(s) or load exit the helicopter cabin. Otherwise, the load/person(s) may fall due to lack of cable tension. This may cause excessive stresses (shocks) and damage the cable and lead to its breakage.
- Also ensure tension in the cable when lifting a load, in particular when hoisting on a marine mission.
- Avoid applying high acceleration to the load during hoisting, which induces significant forces in the cable.

If such phenomena (Overloading / shocks) are observed, the hoisting must be stopped and the cable must be checked to ensure its integrity (refer cable check criteria in the CHECK chapter of CMM), before resuming the normal course of operations or replace the cable, if necessary.

J. Maintaining the stability of the hoisted load

It is the hoist operator's responsibility to maintain the stability of the hoisted load, by using the hoist controls, conversing with the pilot via the intercom, physically controlling the cable (by hand and foot) or by any other appropriate means.

In the event of slight oscillations (linear or circular swaying), stop the hoist and manually apply force to the cable in the opposite direction to the oscillation.

In the event of larger oscillations, stop the hoist, then, if possible, start unwinding the cable and ask the pilot to lower the machine until the load is back on ground. Then start hoisting again, taking greater care. A gradual, vertical take-off of the load can prevent the start of oscillations.

If the instability is not stopped quickly, it could become unmanageable. Continuing to raise an unstable load can only increase the movement. In addition, strong oscillations cause the cable to rub heavily on the hoist's cable guide bush, resulting in premature wear.

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SERVICE INFORMATION LETTER

K. Number of consecutive cycles during a mission

(1) For Hoists 76360-210, 76363, 76368 and 76378 families:

The number of successive hoists is not limited.

(2) For 76370 Hoists family:

The maximum number of successive hoists is defined as follows:

- 6 cycles as defined in the table below:

With a minimum 45 minutes pause between two series if the cycles are performed in a row.

Or,

If there are pauses between each cycle, so that a maximum of 6 cycles are performed over a period of 1 hour (including 45 min cumulative pause + 15 min hoist operating time).

- Summary table of operational limitations:

Downward Motion			Upward Motion
Load (Mass limit)	Length (Cable Unwind)	No. of Downwards (Permitted load according to load limit)	No. of Upwards (Permitted load up to maximum load of 136 kg)
0 kg	≤ 40 m	6 unloaded	6 loaded or unloaded, independent of the unwound cable length
≤ 100 kg	≤ 10 m	6 loaded or unloaded	
	≤ 20 m	3 loaded + 3 unloaded (*)	
	> 20 m	1 loaded + 5 unloaded (*)	
> 100 kg, up to a maximum weight of 136kg	≤ 10 m	4 loaded + 2 unloaded (*)	
	≤ 20 m	2 loaded + 4 unloaded (*)	
	> 20 m	1 loaded + 5 unloaded (*)	
(*) including one authorized downward motion with a load less than 20 kg (empty stretcher, light load, etc.).			

If the number of consecutive cycles is not followed, there is a risk of brake overheating and jamming. In this case, there is no risk of load loss due to brake jamming, but the hoist may respond erratically while unwinding (jerking on the cable) due to brake jam.

In addition, make sure not more than 5 starts (actions on the control pendant) performed during each cycle, as this can lead to premature damage to the hoist's electronic components (switches open and close each time the hoist starts/stops). Once the switches are damaged, it can cause the hoist to respond erratically (jerking on the cable), whether winding or unwinding, due to untimely closure of the switches, despite the command to winding or unwinding.

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SERVICE INFORMATION LETTER

L. Warranty seals

Warranty seals / opening seals are attached on various parts of the equipment.

Some are attached on sub-assemblies that do not have to be removed by users for the second-level maintenance, and act as warranty seals.

Others are present on sub-assemblies that need to be removed by users to carry out second-level maintenance, and therefore act as opening seals. These opening seals can be removed without affecting the component warranty. The opening seals indicates that maintenance has been done by the users.

Note that all operations described in the 2nd level CMMs (see paragraph 3 of this SIL), can or must (depending on what is required by the CMM) be performed by users in service (provided they have been trained to do so).

M. Microswitch settings for slow down and end positions

- (1) For hoists families 76360-210, 76363, 76368 and 76378:

When setting the Microswitches for end of travel, stop -4m and / or slow down:

Please note that these adjustments should only be made after unwinding and winding of the cable at no load.

Following these adjustments, when winding the cable under load, you may notice some adjustment shift due to load-induced cable stretching (approximately 1% stretching at full load, i.e. approximately 1m for 90m of cable). This is completely normal.

For example, it's possible for a slowdown speed that starts at 2m during no-load settings to start at 3m during a load cycle.

On the other hand, if the settings are incorrectly made after a loaded cycle and the slow down speed is set at 2m, the next time a cycle without load is performed, the slow down speed will be set at 1m. This creates a risk, as the slow down range will be reduced, which is undesirable. For this reason, adjustments should be made after a no-load winding only.

- (2) For hoist family 76370

Microswitch settings are not available in the 2nd Maintenance Level, so this paragraph does not apply.

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SERVICE INFORMATION LETTER

N. Extraction bar

- (1) For hoists families 76360-210, 76363 and 76370:

The extraction bar (which drives the rollers) must:

- Rotate when hoist is unwinding cable.
- Stop when hoist is winding cable.

For hoists families 76360-210 and 76363, if any of these conditions are not met, the hoist must be returned for repair.

On the other hand, in the case of 76370 family, if the extraction bar rotates when the cable is wound, it is possible to adjust it according to its CMM. However, if the extraction bar does not turn when lowering, no adjustment is possible at the 2nd maintenance level, and the hoist must be returned for repair.

- (2) For hoists families 76368 and 76378

When unwinding, the operation is identical: The extraction bar must rotate.

During winding, operation is identical, except that the extraction bar is fitted with an extraction system using friction discs to limit extraction effort and wear on the rollers.

The extraction system is initially set so that:

- Extraction bar does not rotate during winding when no load is applied to the cable.
- Extraction bar rotates during winding when a load is applied to the cable.

After a few cycles, the discs may wear in a normal way, so the extraction bar may also rotate during unloaded cycles. In this situation, enough friction remains in the discs to ensure sufficient extraction force.

On the other hand, during 50-cycles maintenance, it is required to carry out the initial adjustment again, to even out the wear on the friction discs.

The hoist should only be returned for repair if:

- Extraction bar does not rotate when unwinding the cable.
- Problems are encountered in re-adjusting the discs during the 50-cycles maintenance, even after changing the extraction system parts as described by the CMMs.

NOTE: A cable in poor condition (corrosion, spikes, etc.) may affect the setting of the extraction bar. See cable rejection criteria in the CMM CHECK chapter. Make sure the cable is in good condition, and replace if necessary, before adjusting extraction system.

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SERVICE INFORMATION LETTER

O. Hoist mechanical stop

- (1) For hoists families 76360-210, 76363 and 76370:

The locking roller (or mechanical stop) is a safety system that ensures redundancy of the low limit function. In the event of failure of the electric limit switch, the locking roller engages in the drum, blocking the hoist from unwinding.

It is essential to ensure that the mechanical stop does not engage when operating beyond the electrical limit switches (e.g. when changing cables). If the mechanical stop is engaged, even with a crank handle, the gear ratio of the mechanical chain is such that very high forces could be applied to the internal mechanical parts and the stop itself. The hoist should then be returned for repair.

Similarly, if the mechanical stop is engaged during operation (electric limit switch inactive), the hoist must be returned for repair.

- (2) For hoists families 76368 and 76378:

These hoists do not have a mechanical stop, so this paragraph does not apply.

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