



Maritime Helicopters

BELL 206/407 SERIES

PILOTS PREVENTIVE

MAINTENANCE

PROGRAM

**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

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**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

CONTROL PAGE

TITLE	NAME	SIGNATURE	DATE
Operator	Steven D. Slade		
FAA Inspector			

PAGE	REV. NUMBER	DATE	PAGE	REV. NUMBER	DATE
1	Orig	08/01/13	25	Orig	08/01/13
2	Orig	08/01/13	26	Orig	08/01/13
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*PILOTS
PREVENTIVE MAINTENANCE PROGRAM*

LOG OF REVISIONS

Revision Number	Pages	Date
Original	ALL	08/01/13

PILOTS
PREVENTIVE MAINTENANCE PROGRAM

HIGHLIGHTS OF CHANGES

Revision Number	Page	Description of Change	Date
Original	ALL	Initial Approval	08/01/13

**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

GENERAL

OBJECTIVE:

To properly train and authorize a company Pilot to perform certain specified preventive maintenance items when a Certified Mechanic is not immediately available in accordance with FAR 43.3 Para (h) (1)(2)(3)(4)(5) and Para (i).

REASON:

To reduce aircraft out of service times and permit continued operation of aircraft when maintenance personnel are not immediately available at the place of the malfunction. Implementation of these procedures will reduce inappropriate flight cancellations permitting the completion of missions.

JUSTIFICATION:

FAR 43.3

(h) Notwithstanding the provisions of paragraph (g) of this section, the Administrator may approve a certificate holder under Part 135 of this chapter, operating rotorcraft in a remote area, to allow a pilot to perform specific preventive maintenance items provided;

- (1) The items of preventive maintenance are a result of a known or suspected mechanical difficulty or malfunction that occurred en route to or in a remote area;
- (2) The pilot has satisfactorily completed an approved training program and is authorized in writing by the certificate holder for each item of preventive maintenance that the pilot is authorized to perform;
- (3) There is no certificated mechanic available to perform preventive maintenance;
- (4) The certificate holder has procedures to evaluate the accomplishment of a preventive maintenance item that requires a decision concerning the airworthiness of the rotorcraft; and
- (5) The items of preventive maintenance authorized by this section are those listed in paragraph (c) of FAR 43 Appendix A.

NOTE: In the case of operations associated with Maritime Helicopters rotorcraft, a Remote Area is defined as a location (airport, heliport, field site) where a mechanic is not immediately available. An example would be a location (heliport, airport, town, field site) where a Certificated Mechanic is not physically present. If a Certificated Mechanic is available, the maintenance items must be performed by a Certificated Mechanic. "Available" is defined as physically present at the base/location at the time the Preventive Maintenance action is required.

The preventive maintenance items contained in this program are listed as preventive maintenance items per FAR 43 Appendix A.

**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

GENERAL (Continued)

AUTHORIZATION:

Preventive Maintenance Items may only be performed by properly trained and **Authorized Pilots**.

Items which contain an “P” at the end of the designation number are **Preventive Maintenance items**.

RESPONSIBILITY:

- The Director of Maintenance is responsible for the overall administration of this training program.
- Instructors are responsible for the correct execution of the training and the associated documents.
- The Director of Maintenance and Chief Pilot are responsible for the disposition of the training documents into the employee's training record file for their respective employees.

MAINTENANCE ENTRIES:

FAR 43.5 states;

No person may approve for return to service any aircraft, airframe, aircraft engine, propeller, or appliance, that has undergone maintenance, preventive maintenance, rebuilding, or alteration unless;

- (a) The maintenance record entry required by **43.9** or **43.11**, as appropriate, has been made;
- (b) The repair or alteration form authorized by or furnished by the Administrator has been executed in a manner prescribed by the Administrator; and;
- (c) If a repair or an alteration results in any change in the aircraft operating limitations or flight data contained in the approved aircraft flight manual, those operating limitations or flight data are appropriately revised and set forth as prescribed in 91.9 of this chapter.

To comply with the requirements of **FAR 43.5**, instructions and examples for the completion of maintenance entries for each item are provided.

To simplify the maintenance record entry, preprinted labels are provided with the correct wording for each item. Simply place the label in the CORRECTIVE ACTION column in the maintenance log and record the date, sign in ink, listing the pilot's certificate number.

DEMONSTRATING COMPETENCY:

Competency shall be determined by the Instructor performing the initial training as follows:

Did the employee....

- Review the procedure prior to beginning the task?
- Utilize the proper safety equipment?
- Follow the procedures as listed?
- Use the proper equipment and parts as listed in the procedure?
- Perform a functional check of the task or system?
- Complete the required entry in the maintenance records? (if applicable)

If any of the items listed above were omitted during the task, the employee cannot be authorized to perform the item for that he/she is qualifying for.

Training will need to be repeated until the employee can complete the task without the aid of the Instructor.



PILOTS PREVENTIVE MAINTENANCE PROGRAM

GENERAL (Continued)

FORMS:

- Initial Training Record

INSTRUCTIONS FOR COMPLETION OF TRAINING AND DISPOSITION OF FORMS:

The Chief Inspector and Lead Mechanics will become Authorized Instructors. The Director of Maintenance may designate additional mechanics as Authorized Instructors up to 1 Instructor for each 4 aircraft. To accomplish this, all Authorized Instructors will give formal training to a line pilot while he or she is being evaluated by the Director of Maintenance. If the Director of Maintenance accepts the Authorized Instructor training presentation/process, the Director of Maintenance will document this authorization in an e-mail to the Maintenance Training Manager/Chief Inspector.

Personnel will be initially trained by a company Authorized Instructor using this program. Annual recurrent training will consist of recertification of all preventive maintenance actions and if appropriate, viewing any training videos and completing any required quiz. Recurrent Pilot training will be tracked by the Chief Pilot.

The Instructor performing the initial training shall insure that the employee has reviewed the appropriate training material, complete a quiz on the topic, then observe the Employee performing the item them self. The Instructor performing the initial training will approve the employee for the item only after the Employee has passed the quiz and demonstrated competency in performing the related item. If, in the opinion of the Instructor, the Employee has not demonstrated competency, training will be repeated until competency is achieved.

Upon successful completion of this initial and recurrent training, the Instructor performing the training will complete the Training Record.

The Employee may not perform any of these preventive maintenance items listed until he/she completes the required initial training for the applicable item for which he/she operates and the proper documentation has been completed as listed in the following steps;

The completed Training Record and Quiz shall be forwarded by the Authorized Instructor, to the Director of Maintenance. The Director of Maintenance will log/track the training, and forward the completed documents to the Chief Pilot for disposition into the Employee's training records.

Upon receipt of the Training Record and Quiz, the Chief Pilot will enter the Training Record into the employees training record and shall enter the approval and date of approval on the employee's Record of Training.

A copy of this Manual shall be maintained in each aircraft as applicable for future reference.



**PILOTS
PREVENTIVE MAINTENANCE PROGRAM
GENERAL (Continued)**

ITEMS CONTAINED IN THIS PROGRAM

ROTOR CRAFT

BELL 206/407- 1P	Replacing aft position light bulb.
BELL 206/407- 2P	Replacing side position light bulb.
BELL 206/407- 3P	Replacing anti-collision light bulb.
BELL 206 - 4P	Replacing landing light bulb.
BELL 407 - 5P	Replacing landing light bulb.
BELL 206 - 6P	Perform 50 hour lubrication.
BELL 407 - 7P	Perform 50 hour lubrication.
BELL 407 - 8P	Checking magnetic chip detector.
BELL 206 - 9P	Cleaning of M/R & T/R Hub and Blades.

PILOTS
PREVENTIVE MAINTENANCE PROGRAM

ROTOR CRAFT ITEM Bell 206/407-1P

Replacing aft tail position light bulb.

JUSTIFICATION:

Tail position lamps may fail when maintenance personnel are not immediately available. Replacing the lamp is a preventive maintenance item as listed in FAR 43 Appendix A, (c) (17). This procedure does not involve complex assembly operations:

TOOLS/SUPPLIES REQUIRED:

Ladder/work stand, shop rag, aerosol electrical contact cleaner, #1 Phillips Screwdriver.

PARTS REQUIRED:

Light bulb, MS35478-1683

INSTRUCTIONS:

- Aircraft engines and electrical power off. Push **POS LIGHTS** switch to “OFF” position and pull **POS LIGHT** circuit breaker
- Position ladder/work stand for stability.
- Remove top and bottom screws and light assembly in rubber mounting using a #1 Phillips screwdriver.
- Pull lens and rubber mounting out from tail cone, being careful not to stress the wiring harness.
- Remove the lamp by pushing inward against the spring pressure and turning counter clockwise to release locating pins, then pull straight out.
- Broken or burned filaments or contact points indicates that the bulb is defective. Inspect socket for cleanliness, damage, burned contacts and general condition.
- If socket has presence of oil, water, or other contamination, clean with electrical contact cleaner.
- Replace with a new lamp P/N MS35478-1683.
- To install the bulb, align the pins on the bulb with the slots in the socket, gently depress bulb, while simultaneously turning in a clock wise direction approximately 20 degrees until bulb is seated.
- Once inserted wipe away any grease, oil or other contaminations with shop rag.
- Reassemble in reverse of disassembly procedures.
- Start screws by hand in a clockwise direction to prevent stripping threads. Finish tightening screws with #1 Philips screwdriver until snug. Do not over tighten.
- Check for security. Insure lamp assembly is tight by touch.
- Remove ladder/work stand, shop rag, aerosol electrical contact cleaner, #1 Phillips screwdriver and old bulb from area of aircraft.

FUNCTIONAL CHECK:

Turn Battery Master Switch to “On” position. Push in **POS LIGHT** circuit breaker. Push **POS LIGHT** switch to “ON” position. Push **POS LIGHT** switch to the “OFF” position. Push battery master switch to “OFF” position. If light is not operational, cross check with aircraft MEL for aircraft airworthiness and contact Base Mechanic or Director of Maintenance.

ADDITIONAL REFERENCES:

Maritime Helicopters FAA approved Bell 206/407 MEL.



**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

ROTOR CRAFT ITEM BELL 206/407 -1P (Continued)

MAINTENANCE RECORD ENTRY:

Example:

DATE: _____

Removed aft tail position light bulb, installed new bulb P/N MS35478-1683 in accordance with Maritime Helicopters Pilots Preventive Maintenance Program. Functional checked. Operation normal. Aircraft is approved for return to service.

SIGNATURE: _____

CERTIFICATE # _____ **TYPE (Circle One)** A, P, A&P, ATP, COMM, Other _____

REMARKS:

Maritime Helicopters BELL 206 FAA approved M.E.L. permits flights with position lights inoperative for day operations only.

**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

ROTORCRAFT ITEM BELL 206/407 -2P

Replacing side position light bulbs.

JUSTIFICATION:

Tail position lamps may fail when maintenance personnel are not immediately available. Replacing the lamp is a preventive maintenance item as listed in FAR 43 Appendix A, Para (c) item (17). This procedure does not involve complex assembly operations:

TOOLS/SUPPLIES REQUIRED:

#2 Phillips head screwdriver, shop rags, aerosol electrical contact cleaner

PARTS REQUIRED:

Bulb P/N M6363/2-2

INSTRUCTIONS:

The position lighting system includes the horizontal stabilizer left and right side and lower cabin left and right side position lights.

- Aircraft engines and electrical power off.
- Position ladder/work stand for stability for horizontal stabilizer lights.
- Being careful not to let the colored lens and round gasket fall. Remove position light lens attachment screw from lamp assembly by turning counter-clockwise until screw disengages from threads of bracket. Be careful that you do not drop the lens as you remove the screw.
- Recover the lens, the metal fairing and the rubber lens seal.
- Remove the lamp by pushing inward against the spring pressure and turning counter-clockwise about 20 degrees to release the locating pins, then pull straight out.
- Inspect filament of bulb for broken or burned elements and inspect base of bulb for burning or worn connections points.
- Broken or burned filaments and/or contact points indicate that the bulb is defective. Inspect socket for cleanliness, damage, burned contacts and general condition. If socket has presence of oil, water, or other contamination, clean with electrical contact cleaner.
- Replace the lamp with a new lamp P/N M6363/2-2.
- Install bulb by aligning pins on bulb base with grooves in socket. Gently depress bulb, while simultaneously turning in a clockwise direction approximately 20 degrees until bulb is seated.
- Once inserted wipe away any grease, oil or other contaminations with a shop rag.
- Inspect installation to insure that the rounded edge of the bulb is facing forward. Install round gasket and colored lens onto the bracket assembly in the same position prior to removal by carefully placing round gasket and colored lens in socket. If unsure of correct position, check for correct positioning by inspecting opposite side position light assembly.
- Install screw by inserting into screw hole and turning clockwise until screw seats. Do not over tighten.
- Inspect installation for security.
- Check to be sure the lens and the metal fairing are tight by touch.

FUNCTIONAL CHECK:

Function check maintenance by energizing aircraft main electrical power and position light switch. Once complete, ensure position lights and battery is selected back to the off position. If light is not operational, cross check with aircraft MEL for aircraft airworthiness and notify your Base Mechanic or Director of Maintenance.



PILOTS PREVENTIVE MAINTENANCE PROGRAM

ROTORCRAFT ITEM BELL 206 -2P (Continued)

ADDITIONAL REFERENCES:

Maritime Helicopters FAA approved BELL 206/407 M.E.L

MAINTENANCE RECORD ENTRY:

Example:

DATE: _____

Removed (RH) (LH) (Stabilizer) (Fuselage) position light bulb, installed new bulb P/N M6363/2-2 in accordance with Maritime Helicopters Pilots Preventive Maintenance Program. Functional checked. Operation normal. Aircraft is approved for return to service.

SIGNATURE: _____

CERTIFICATE # _____ **TYPE (Circle One)** A, P, A&P, ATP, COMM, Other _____

REMARKS:

Maritime Helicopters BELL 206 FAA approved M.E.L. permits flights with position lights inoperative for day operations only.

**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

ROTOR CRAFT ITEM Bell 206/407-3P

Removing and replacing anti-collision light flash tube.

JUSTIFICATION:

The anti-collision lamp may fail when maintenance personnel are not immediately available. Replacing the lamp is a preventive maintenance item as listed in FAR 43 Appendix A, (c) (17). This procedure does not involve complex assembly operations:

TOOLS/SUPPLIES REQUIRED:

Ladder/work stand, shop rag, aerosol electrical contact cleaner, #2 Phillips Screwdriver.

PARTS REQUIRED:

Light bulb, MS35478-1683

INSTRUCTIONS:

- Aircraft engines and electrical power off. Push **AntiColl LT** switch to “OFF” position and pull **AntiColl LT** circuit breaker
- Position ladder/work stand for stability.
- Remove the metal retaining ring holding the light assembly with a #2 phillips screwdriver.
- Remove the lens being careful not drop the lens.
- Remove the flash by carefully pulling flash tube from socket.
- Broken or burned filaments or contact points indicates that the bulb is defective. Inspect socket for cleanliness, damage, burned contacts and general condition.
- If socket has presence of oil, water, or other contamination, clean with electrical contact cleaner.

CAUTION

When installing flash tube avoid touching the glass portion of the tube with fingers as oil from fingers will shorten life of tube.

- Replace with a new lamp P/N MS35478-1683.
- Carefully insert flash tube into socket.
- Once inserted wipe away any grease, oil or other contaminations with shop rag.
- Reassemble in reverse of disassembly procedures.
- Position anti-collision support plate back in base.
- Install lens on top of base with red half of lens facing forward.
- Secure lens to base and support plate with retaining ring.
- Start screw in retaining ring by hand in a clockwise direction. Finish tightening screw with #2 Phillips screwdriver until snug. Do not over tighten.
- Check for security. Insure lamp assembly is tight by touch
- Remove ladder/work stand, shop rag, aerosol electrical contact cleaner, and #2 Phillips screwdriver, and ratchet from area of aircraft.

FUNCTIONAL CHECK:

Turn Battery Master Switch to “On” position. Push in **AntiColl LT** circuit breaker. Push **AntiColl LT** switch to “ON” position. Check light. Then; Push **AntiColl LT** switch to the “OFF” position. Push battery master switch to “OFF” position. If light is not operational, cross check with aircraft MEL for aircraft airworthiness and contact your Base Mechanic or Director of Maintenance.

ADDITIONAL REFERENCES:

Maritime Helicopters FAA approved Bell 206 MEL



**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

ROTOR CRAFT ITEM BELL 206/407 -3P (Continued)

MAINTENANCE RECORD ENTRY:

Example:

DATE: _____

Removed anti-collision light, installed new flash tube P/N MS35478-1683 in accordance with Maritime Helicopters Pilots Preventive Maintenance Program. Functional checked. Operation normal. Aircraft is approved for return to service.

SIGNATURE: _____

CERTIFICATE # _____ **TYPE (Circle One) A, P, A&P, ATP, COMM, Other** _____

REMARKS:

Maritime Helicopters BELL 206 FAA approved M.E.L. permits flights with the anti-collision light inoperative for day operations only.

PILOTS
PREVENTIVE MAINTENANCE PROGRAM

ROTORCRAFT ITEM BELL 206L only - 4P

Removing and replacing landing/pulse light lamp(s).

JUSTIFICATION:

Tail position lamps may fail when maintenance personnel are not immediately available. Replacing the lamp is a preventive maintenance item as listed in FAR 43 Appendix A, para (c) item (17). This procedure does not involve complex assembly operations:

TOOLS/SUPPLIES REQUIRED:

#2 Phillips head screwdriver, shop rags, aerosol electrical contact cleaner

PARTS REQUIRED:

Bulb P/N 4596 or Q5596

INSTRUCTIONS:

- Aircraft engines and electrical power off.
- Ensure landing and pulse light switches are in the off position.
- Using a #2 Philips screw driver, turning counter clockwise remove the 4 attachment screws and washers that hold the landing light and retainer to the aircraft of inoperative lamp assembly.
- Gently pull out landing light assembly including black gasket to access two terminals attached to the back of the lamp. Using a #2 standard screwdriver hold the lamp in one hand and remove both terminals from back of bulb by turning each screw counter clockwise until wire terminals detach from bulb..
- Remove and inspect filament of bulb for broken or burned elements and inspect back of bulb for burning or worn connections points.
- Replace the lamp with a new lamp P/N 4596 or Q5596.
- Holding the new lamp, attach wires one at a time finger tight to the two terminals on the back of the lamp. Then using a #2 standard screwdriver, further tighten the screws until they are snug on the back of the lamp. Do not over tighten. It does not make a difference to where each particular wire terminal attaches to the lamp.
- While holding new lamp assembly and gasket place up in position on aircraft, reinstall the 4 attachment screws and washers finger tight that hold the retainer and lamp to the aircraft. Use a #2 Philips to further tighten retainer and lamp until snug. Do not over tighten. Gently try to move the assembly back and forth to check it is secure. Further tighten if required.

FUNCTIONAL CHECK:

Function check maintenance by energizing aircraft main electrical power and position light switch. If light is not operational, cross check with aircraft MEL for aircraft airworthiness and notify your base Mechanic or Director of maintenance.

ADDITIONAL REFERENCES:

Maritime Helicopters FAA approved BELL 206/407 M.E.L.



**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

ROTORCRAFT ITEM BELL 206L only - 4P (Continued)

MAINTENANCE RECORD ENTRY:

Example:

DATE: _____

Removed (FWD) (AFT) landing light bulb, installed new bulb P/N 206-075-303-001 in accordance with Maritime Helicopters Pilots Preventive Maintenance Program. Functional checked. Operation normal. Aircraft is approved for return to service.

SIGNATURE: _____

CERTIFICATE # _____ **TYPE (Circle One)** A, P, A&P, ATP, COMM, Other _____

REMARKS:

Maritime Helicopters BELL 206/407 FAA approved M.E.L. permits flights with landing light inoperative for **day operations only**.

**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

ROTORCRAFT ITEM BELL 407 only - 5P

Removing and replacing landing/pulse light lamp(s).

JUSTIFICATION:

Landing light lamps may fail when maintenance personnel are not immediately available. Replacing the lamp is a preventive maintenance item as listed in FAR 43 Appendix A, Para (c) item (17). This procedure does not involve complex assembly operations:

TOOLS/SUPPLIES REQUIRED:

#2 Phillips head screwdriver, #2 standard head screwdriver, shop rags, aerosol electrical contact cleaner

PARTS REQUIRED:

Bulb P/N 4596 or Q5596

INSTRUCTIONS:

- Aircraft engines and electrical power off.
- Ensure landing and pulse light switches are in the off position.
- Using a #2 Philips screw driver Remove the 13 attachment screws that hold the landing light access panel onto the bottom nose of the aircraft. Allow panel to lower down slowly until back of bulbs and wires are accessible.
- Remove bad lamp from base by unscrewing lamp retainer with a #2 Philip screwdriver. Using a #2 standard screwdriver hold the lamp in one hand and remove both terminals from back of bulb by turning each screw counter clockwise until wire terminals detach from bulb..
- Remove and inspect filament of bulb for broken or burned elements and inspect back of bulb for burning or worn connections points.
- Replace the lamp with a new lamp P/N 4596 or Q5596.
- Holding the new lamp, attach wires one at a time finger tight to the two terminals on the back of the lamp. Then using a #2 standard screwdriver, further tighten the screws until they are snug on the back of the lamp. Do not over tighten. It does not make a difference to where each particular wire terminal attaches to the lamp.
- Place new lamp back on base and secure with retainer. Finger tighten retainer holding lamp to base then use a #2 Philips to further tighten retainer and lamp until snug. Do not over tighten. Gently move assembly back and forth to check it is secure.
- Check for any tools, parts or rags before putting panel back up in place. Finger tighten all screws first securing panel to bottom nose of aircraft.
- Using a #2 Philips screw driver, reinstall the 13 attachment screws that hold the landing light access panel onto the bottom nose of the aircraft. Use a #2 Philips to further tighten panel until snug. Do not over tighten.

FUNCTIONAL CHECK:

Function check maintenance by energizing aircraft main electrical power and landing or pulse light switch. If light is not operational, cross check with aircraft MEL for aircraft airworthiness and notify Base Mechanic or Director of Maintenance.

ADDITIONAL REFERENCES:

Maritime Helicopters FAA approved BELL 206/407 M.E.L.



**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

ROTORCRAFT ITEM BELL 407 only - 5P (Continued)

Removing and replacing landing/pulse light lamp.

MAINTENANCE RECORD ENTRY:

Example:

DATE: _____

Removed (FWD) (AFT) landing light bulb, installed new bulb P/N (4596) or (Q5596) in accordance with Maritime Helicopters Pilots Preventive Maintenance Program. Functional checked. Operation normal. Aircraft is approved for return to service.

SIGNATURE: _____

CERTIFICATE # _____ **TYPE (Circle One)** A, P, A&P, ATP, COMM, Other _____

REMARKS:

Maritime Helicopters BELL 206/407 FAA approved M.E.L. permits flights with landing lights inoperative. Check M.E.L. for any restrictions.

**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

ROTORCRAFT ITEM BELL 206 B& L models - 6P

Perform 50 hour lubrication.

JUSTIFICATION:

Lubrication of the aircraft is permitted to be performed by trained and authorized Pilots FAR 43 Appendix A, Para (c) item (6). This procedure does not involve complex assembly operations:

TOOLS/SUPPLIES REQUIRED:

Grease Gun, MIL-PRF-81322 (C-001), 7/16 wrench, Rags

PARTS REQUIRED:

N/A

INSTRUCTIONS:

General

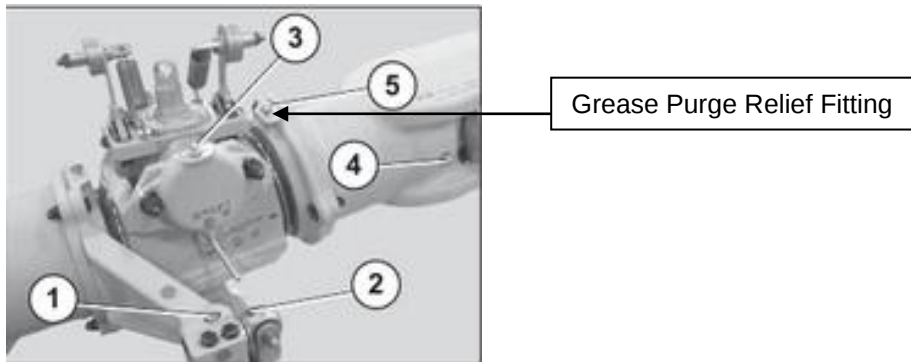
- Inject grease slowly. Excessively rapid injection could cause pressurization of the grease cavities and may result in forcing grease past grip excluder seal, popping or pushing out of seals, damaging seals or other undesirable effects.
- After each day of operation in rain showers or after washing main rotor hub, purge lubricate all exposed control bearings to remove trapped moisture and ensure a lube film is applied to susceptible surface.

Lubrication Items

Main Rotor Pitch Horn Trunnion & Trunnion Bearing (four places) – Items #1 & #2

Main Rotor Pillow Block/Trunnion bearing (two places) – Items #3

Main Rotor Grip Bearings – Item #4



Swashplate Duplex Bearing – Item #7



**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

ROTORCRAFT ITEM BELL 206B&L models - 6P (Continued)

Specific

50 Hour Lubrication the following:

1. M/R Grip Pitch Horn Trunnion (Both Blades)

- a. Place tip of grease gun over grease fitting on pitch horn – Item #1
- b. Slowly purge pump grease into pitch horn until fresh grease is seen around bearing.
- c. Clean off excess grease with rag.
- d. Repeat process on other blade pitch horn.

2. M/R Grip Pitch Horn Trunnion Bearings (Both Blades)

- a. Place tip of grease gun over grease fitting on pitch horn trunnion bearing – Item #2.
- b. Purge pump grease into trunnion bearing until fresh grease is seen around bearing.
- c. Clean off excess grease with rag.
- d. Repeat process on other blade grip pitch horn trunnion bearing.

3. M/R Hub Pillow Block (Both Sides)

- a. Place tip of grease gun over grease fitting on pillow block – Item # 3.
- b. Slowly purge pump grease into pillow block until fresh grease comes out.
- c. Clean off excess grease with rag.
- d. Repeat process on opposite side of pillow block.

4. M/R Grip (Both Blades)

- a. Using a 7/16 wrench, remove Grease Purge Relief Fitting from grip prior to lubrication – Item #5.
- b. Place tip of grease gun over grease fitting on side of M/R blade grip – Item #4.
- c. Purge pump grease into blade grip until fresh grease is seen coming out of relief valve orifice. Remove excess grease around purge hole, install and tighten relieve valve ½ slat turn past finger tight.
- d. Clean off any grease with rag.
- e. Start again from “a.” and repeat process on opposite blade grip.

5. Swashplate Duplex Bearing

- a. Place tip of grease gun over grease fitting on Swashplate – Item #7
- b. Purge pump lubricate until only new grease is expelled under Swashplate.
- c. Rotate main rotor system 90° and purge lubricate again as above.
- d. Repeat every 90° until full turn is made.
- e. Clean off excess grease with rag.

NOTE:

FUNCTIONAL CHECK:

N/A

ADDITIONAL REFERENCES:

N/A



***PILOTS
PREVENTIVE MAINTENANCE PROGRAM***

ROTORCRAFT ITEM BELL 206B&L models - 6P (Continued)

MAINTENANCE RECORD ENTRY:

Example:

DATE: _____

Performed 50 hour aircraft lubrication in accordance with Maritime Helicopters Pilots Preventive Maintenance Program.
Aircraft is approved for return to service.

SIGNATURE: _____

CERTIFICATE # _____ **TYPE (Circle One) A, P, A&P, ATP, COMM, Other** _____

REMARKS:

N/A

**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

ROTORCRAFT ITEM BELL 407 - 7P

Perform 50 hour lubrication.

JUSTIFICATION:

Lubrication of the aircraft is permitted to be performed by trained and authorized Pilots FAR 43 Appendix A, Para (c) item (6). This procedure does not involve complex assembly operations:

TOOLS/SUPPLIES REQUIRED:

Grease Gun, MIL-PRF-81322 (C-001), Rags

PARTS REQUIRED:

N/A

INSTRUCTIONS:

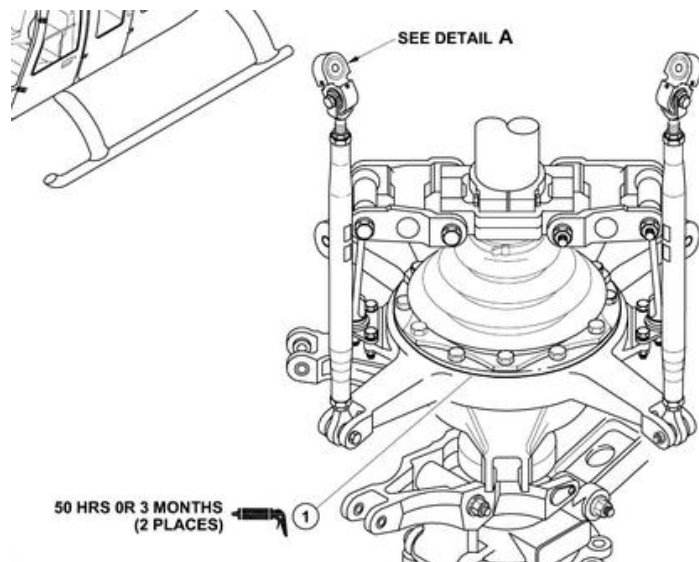
General

- Inject grease slowly. Excessively rapid injection could cause pressurization of the grease cavities and may result in forcing grease past grip excluder seal, popping or pushing out of seals, damaging seals or other undesirable effects.
- After each day of operation in rain showers or after washing main rotor hub, purge lubricate all exposed control bearings to remove trapped moisture and ensure a lube film is applied to susceptible surface.

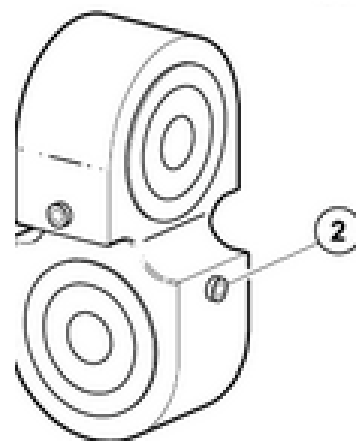
Lubrication Items

Main Rotor Pitch Change Link Bearings - two places on each bearing, 4 total – DETAIL A, Item #2

Swashplate Duplex Bearing – two places, Item #1



Swashplate Duplex Bearing



DETAIL A

Pitch Change Link Bearings



PILOTS PREVENTIVE MAINTENANCE PROGRAM

Revision: Orig

23

Date: 08/01/13

ROTORCRAFT ITEM BELL 407- 7P (Continued)

Perform 50 hour lubrication.

Specific

50 Hour Lubrication the following:

1. Swashplate Duplex Bearing – 2 places

- a. Place tip of grease gun 90° into grease fitting on Swashplate – Item #1
- b. While applying slight pressure, purge pump lubricate until only new grease is expelled under Swashplate.
- c. Rotate main rotor system 90° and purge lubricate again as above.
- d. Repeat every 90° until full turn is made.
- e. Remove all excess purged grease from the inner & outer ring with rag.

2. M/R Pitch Change Link Rod Ends - 1 rod end per each pitch change link

- a. On rod end link, place tip of grease gun 90° into grease fitting – Item #2
- b. While applying slight pressure, slowly purge pump grease into rod end link until fresh grease is seen coming out around bearing
- c. Service points as needed until grease is seen purging 360° from top and bottom bearings.
- d. Clean off excess grease with rag.
- e. Repeat process on other 3 blades pitch change link rod ends.

NOTE:

FUNCTIONAL CHECK:

N/A

ADDITIONAL REFERENCES:

N/A

MAINTENANCE RECORD ENTRY:

Example:

DATE: _____

Performed 50 hour aircraft lubrication in accordance with Maritime Helicopters Pilots Preventive Maintenance Program.
Aircraft is approved for return to service.

SIGNATURE: _____

CERTIFICATE # _____ **TYPE (Circle One) A, P, A&P, ATP, COMM, Other** _____

REMARKS:

N/A

**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

ROTORCRAFT BELL 407 Only ITEM- 8P

Removal, checking and reinstalling magnetic chip detectors

JUSTIFICATION:

Engine chip detectors system may display a warning indication when maintenance personnel are not immediately available. Removing, checking and reinstalling chip detectors is a preventive maintenance item listed in FAR 43 Appendix A, (c) (29). This procedure does not involve complex assembly operations:

TOOLS/SUPPLIES REQUIRED:

None

PARTS REQUIRED:

None

INSTRUCTIONS:

- Land aircraft I/A/W the Rotorcraft Flight Manual (RFM) appropriate procedure.
- Open left and right hand engine cowlings.
- The bottom engine chip plug is best accessed from the left side of the engine. The upper chip plug from the right hand side of the engine.
- To remove plug, push in and turn plug counter-clockwise.
- Pull plug away from mount point adapter and inspect for metal particles..
- If plug is covered in a "paste" and/or has only one (1) *small* flake or less than 4 *small* "slivers" of metal is observed, proceed as follows:

NOTE:

Small is defined as a "flake" or "slivered" piece of metal less than the size of the rolling tip of a ball point pen

1. Check plug for any other evidence of metal contamination.
2. Check wiring is properly attached with no evidence of chaffing.
3. Wipe off chip detector with clean rag and aerosol electrical contact cleaner.
4. Reinstall chip plug by inserting it back into the chip plug receptacle, pushing the plug as far in as it will go, then turning clockwise until it stops. Once plug cannot go any further clockwise, pull the chip plug back out. It should stop and not be able to be pulled out any further. To check if plug is properly seated, while pulling outward, turn plug slightly left and right to check it will not go either way and that plug will not come out any further from the receptacle.
5. Perform a 30 minute ground penalty run at full power while monitoring operating limits and warning lights.
6. If no further lights, shut down and check both plugs. If no other chip light illuminated or no further chips are observed, write up chip indication and sign off as referenced in **MAINTENANCE RECORD ENTRY** of this section.

If any of the following items are present or occur:

- Metal flakes or slivers larger than the tip of a pen are present,
- Two or more metal flakes regardless of size,
- 4 or more slivers regardless of size,
- A chip light illumination during the penalty run or,
- Chip light reoccurs during flight after ground run but before reaching maintenance. Then;

Aircraft is grounded and further disposition must be determined by company A&P mechanic before any flights are authorized. If in flight; land I/A/W RFM.

**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

ROTORCRAFT ITEM BELL 407 only - 8P (Continued)

FUNCTIONAL CHECK:

Turn on battery and ensure all chip warning lights are extinguished. If aircraft airworthiness is in doubt, contact your base Mechanic or Director of Maintenance for guidance.

ADDITIONAL REFERENCES:

N/A

MAINTENANCE RECORD ENTRY:

Make a logbook entry using the following or similarly worded statement:

Date: _____ **Aircraft TT:** _____ **Time of Day** _____

Removed, cleaned and inspected engine upper and lower chip detectors. Performed 30 minute ground penalty run with no further warning lights. Removed and rechecked both plugs, no further contamination noted; operation normal. All work done in accordance with Maritime Helicopters Pilot's Maintenance & Servicing Procedures. Aircraft returned to service.

SIGNATURE: _____ Employee # _____

CERTIFICATE # _____ TYPE (circle one) A, P, A&P, ATP, COMM, Other _____

**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

ROTORCRAFT ITEM BELL 206 series - 9P

Cleaning of M/R & T/R Hub and Blades.

JUSTIFICATION:

Main and Tail Rotor blades and hub may need to be cleaned when maintenance personnel are not immediately available. Cleaning hub and blades is a preventive maintenance item as listed in FAR 43 Appendix A, Para (c) item (30) and is designated by the manufacture as a Preventative Maintenance action. This procedure does not involve complex assembly operations:

TOOLS/SUPPLIES REQUIRED:

Hose or bucket, Ladder, rags, C-125(Light Preservative Oil), C- 304(Dry-cleaning Solvent i.e. PD680), C-318(Alkaline Base Cleaning Compound)

PARTS REQUIRED:

N/A

INSTRUCTIONS:

NOTE

The following procedures shall be accomplished as frequently as deemed necessary when operating in rain, corrosive salt laden air, or other adverse environmental conditions.

The following preventive maintenance procedures for the main rotor hub and blades and tail rotor hub and blades are recommended to prevent corrosion and extend their life;

- Wipe hub and blades with dry cleaning solvent, degreaser (C-304).
- Wash hub and blades with cleaning compound (C-318).
- Rinse with water and dry with clean cloths.
- Check hub and blades for evidence of corrosion.
- Apply a light coat of preservative oil (C-125) to all hub and blade surfaces. Flood areas between main rotor hub grip tangs and blades, latch bolts to grips, and yoke fillet areas just inboard of pitch horn to ensure complete coverage.

NOTE

Do not allow preservative oil (C-125) to contact tail rotor blade bearings.

FUNCTIONAL CHECK:

N/A

ADDITIONAL REFERENCES:

N/A.

**PILOTS
PREVENTIVE MAINTENANCE PROGRAM**

ROTORCRAFT ITEM BELL 206 series - 9P (Continued)

MAINTENANCE RECORD ENTRY:

Example:

DATE: _____

Performed Preventative Maintenance cleaning on M/R & T/R hub and blades in accordance with Maritime Helicopters Pilots Preventive Maintenance Program. Aircraft is approved for return to service.

SIGNATURE: _____

CERTIFICATE # _____ **TYPE (Circle One) A, P, A&P, ATP, COMM, Other** _____

REMARKS:

N/A



PILOTS PREVENTIVE MAINTENANCE PROGRAM

TRAINING RECORD - ROTORCRAFT PILOT

NAME _____ TITLE _____
(Printed Name) (Print)

ITEM NUMBER	DESCRIPTION	INSTRUCTOR SIGNATURE CERTIFICATE & TYPE	HOURS	DATE
BELL 206/407-1P	Replacing aft position light bulb			
BELL 206/407- 2P	Replacing side position light bulbs			
BELL 206/407-3P	Replacing anti-collision light bulb			
BELL 206 - 4P	Replacing landing light bulbs-206L			
BELL 407- 5P	Replacing landing light bulbs-407			
BELL 206 - 6P	Perform 50 hour lubrication - 206 B & L			
BELL 407- 7P	Perform 50 hour lubrication - 407			
BELL 207 - 8P	Checking magnetic plugs - 407 only			
BELL 206 - 9P	M/R & T/R hub and blades cleaning 206B & L			
No Item Number Assigned	Maintenance Log Procedures			
Maritime Helicopters MEL Policy	Minimum Equipment List Procedures			
RFM	Aircraft Airworthiness Check (Daily)			
RFM	Installing & Removing Dual Controls			

Instructors Name: Print _____ Signature _____

Certificate Number & Type _____ Total Hours of Training _____



PILOTS PREVENTIVE MAINTENANCE PROGRAM

Preventive Maintenance Quiz

Instructions: Read questions thoroughly, choose the most correct answer.

NAME _____

DATE _____

1. Grease must be purged:
 - a. Every 50 hour or 3 months, whichever occurs first
 - b. Whenever the pilot feels it is necessary
 - c. After operating in rain showers
 - d. Both a. & b.
2. You should have power on whenever changing light bulbs to ensure everything worked ok throughout the process
 - a. True
 - b. False
 - c. Not Applicable
3. What is the proper way to remove a position light bulb;
 - a. Pilots are not allowed to change position light bulbs
 - b. Pull bulb straight out with a quick tug
 - c. Push in, turn 20° left, then pull straight out
 - d. Push in, turn 20° right, then pull straight out
4. How many pieces of metal flake(s) are you allowed less than a pen ball tip size:
 - a. 1
 - b. Up to 4
 - c. No more than 2
 - d. Depends on their size. The smaller, the more flakes you can have and still fly.
5. After performing a 30 min penalty run and plug inspection following a chip warning, you take off and get another chip warning. You should
 - a. Continue flight as it is probably just another small piece of metal
 - b. Land and repeat process, then fly back to base.
 - c. Contact maintenance while airborne and get further instructions.
 - d. Land, aircraft is grounded and maintenance must be contacted for any further flight.
6. Does a pilot have to be officially trained by this manual to be able to accomplish maintenance items:
 - a. No, as long as he has this manual for reference with him
 - b. No, but is highly recommended
 - c. Yes, but only if personally required by the Chief Pilot
 - d. All pilots who are authorized to complete preventative maintenance must be trained and documented under this program.
7. If a pilot is trained and it is documented under this program, may he/she complete other minor preventative maintenance tasks not listed in this document?
 - a. Yes
 - b. No
 - c. Yes if cleared to do so by the Director of Maintenance.
 - d. Both b. and c.
8. Which FAR governs what preventative maintenance items non A&P certificated pilots may perform.
 - a. Part 135 Appendix C
 - b. Part 27
 - c. Part 43 Appendix A
 - d. Part 145 Appendix D
9. If after replacing a light bulb and it still does not work, then;
 - a. Aircraft is grounded
 - b. Aircraft may complete a "one-time" flight to nearest base where there is a MHI mechanic.
 - c. Aircraft can be operated under the appropriate MEL item.
 - d. No MEL relief is allowed if a pilot cannot fix it.



PILOTS PREVENTIVE MAINTENANCE AND SERVICING

Preventive Maintenance Quiz (Continued)

10. During completion of preventative items, you notice something else usual with the aircraft. You should;
 - a. Continue with what you are doing but point it out to one of the mechanics when you see them.
 - b. If it seems easy, attempt to fix it also.
 - c. Fly and keep an eye on it.
 - d. Contact maintenance before proceeding any further.
11. Is a maintenance entry required for preventive maintenance items completed by a pilot?
 - a. Only if the maintenance completed required the use of tools.
 - b. No
 - c. Yes
 - d. Maintenance entries can only be entered by a mechanic.
12. When replacing a defective anti-collision flash bulb, one thing you should avoid is;
 - a. Touching the new bulb with your fingers.
 - b. Replacing bulb with the aircraft running faster than flight idle.
 - c. Dropping the anti-collision light lens.
 - d. Both a. & c.
 - e. b. only
13. How do you know when the 407's pitch change link bearings are properly grease purged.
 - a. You can't get any more grease into the bearings.
 - b. There is really no way of knowing for sure.
 - c. You will see a full circle of grease coming out the ends of the top and bottom bearings.
 - d. Actual purging the grease can only be accomplished by an A&P mechanic.
14. If do not feel comfortable or have concerns with any of the preventative procedures you should;
 - a. Continue with the procedure knowing you were properly trained.
 - b. Stop, call maintenance for further help or to answer questions.
 - c. Fly and keep an eye on things until you are back at base.
 - d. Call the Chief Pilot and complain to him that you did not sign up to be a mechanic.
15. If a certified mechanic is present, can you still accomplish a preventative maintenance procedure.
 - a. Yes if the mechanic needs to go to lunch.
 - b. No. The certified mechanic must be the one to perform the corrective action.
 - c. Yes, it is ok to keep in practice performing these items.
 - d. Yes if you feel more comfortable with yourself working on aircraft.



PILOTS PREVENTIVE MAINTENANCE AND SERVICING

ANSWERS

- 1) Grease must be purged:
a.
- 2) You should have power on whenever changing light bulbs to ensure everything worked ok throughout the process;
b.
- 3) What is the proper way to remove a position light bulb;
c.
- 4) How many pieces of metal flake(s) are you allowed less than a pen ball tip size:
a.
- 5) After performing a 30 min penalty run and plug inspection following a chip warning, you take off and get another chip warning. You should
d.
- 6) Does a pilot have to be officially trained by this manual to be able to accomplish maintenance items:
d.
- 7) If a pilot is trained and documented under this program, may he/she complete other minor preventative maintenance tasks not listed in this document;
b.
- 8) Which FAR governs what preventative maintenance items non A&P certificated pilots may perform.
c.
- 9) If after replacing a light bulb and it still does not work, then;
c.
- 10) During completion of preventative items, you notice something else usual with the aircraft. You should;
d.
- 11) Is a maintenance entry required for preventive maintenance items completed by a pilot.
c.
- 12) If after replacing a light bulb and it still does not work, then;
a.
- 13) During completion of preventative items, you notice something else usual with the aircraft. You should;
c.
- 14) Is a maintenance entry required for preventive maintenance items completed by a pilot.
b.
- 15) If after replacing a light bulb and it still does not work, then;
b.