

SERVICE BULLETIN

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E. Time of Compliance:

- (1). Customers with affected aircraft must do this bulletin within 25 flight hours after you get this bulletin.
- (2). Customers with affected aircraft must replace main rotor pitch control rod ends, PN 369A1011, identified with vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11, installed on-aircraft, no later than 300 flight hours after you get this bulletin or within one (1) year from the date of this bulletin if the pitch control rod end turns freely.
- (3). All main rotor pitch control rod ends, PN 369A1011, identified with vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11, must be returned to MDHI within one (1) year from the date of this bulletin to get replacement parts at no cost to the operator.

F. FAA Approval:

The technical design aspects of this bulletin are FAA Approved.

G. Manpower:

Compliance with this bulletin will be approximately one half (0.5) man-hour to complete the inspection and approximately one (1) man-hour to replace each main rotor pitch control rod end.

H. Interchangeability:

None.

I. Points of Contact:

For further assistance, contact the Field Service Department at MDHI, Mesa, Arizona. Telephone 1-800-388-3378 or 480-346-6387. DATAFAX: 480-346-6813.

J. Material/Part Availability:

Contact MDHI Field Service Department.

REPLACEMENT PARTS/SUPPLIES			
Nomenclature	Part No.	Qty.	Source
Main Rotor Pitch Control Rod End	369A1011	1 (per assembly)	MDHI
Main Rotor Swash Plate Elastomer Ring	369D21012	2 (per assembly)	MDHI
Cotter Pin	MS24665-153	1 (per assembly)	Commercially Available
Lock Wire	CM702	AR	Commercially Available

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K. Warranty Policy:

Contact the MDHI Customer Service Department for prices, orders, and availability.

The MDHI Warranty and Repair Department will replace main rotor pitch control rod ends, PN 369A1011, identified with vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11, at no cost to the operator if the rod ends are returned to MDHI within one (1) year of the date of this bulletin. Completed Service and Operation Report (SOR) and Part 2 - Bulletin Completed Records must be returned with the rod ends. Main rotor pitch control rod ends that have been installed on-aircraft must be marked with the time (hours) in service to qualify for warranty replacement.

MDHI will also give operators a labor warranty (spares credit) as follows:

- One half (0.5) hours for the initial on-aircraft inspection.
- One (1) hour for the replacement of each installed main rotor pitch control rod end, PN369A1011, identified with vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11 that is returned to MDHI.

L. Disposition of Parts Removed:

Return upper main rotor pitch control rod ends, PN 369A1011, identified with vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11 to MDHI.

M. Tooling:

N/A

N. Weight and Balance:

N/A

O. Electrical Load Data:

N/A

P. Other Publications Affected:

N/A

Q. Reference Publications:

Refer to the latest revision of these publications for procedures and additional information:

- CSP-D-1 Rotorcraft Flight Manual
- CSP-E-1 Rotorcraft Flight Manual
- CSP-FF-1 Rotorcraft Flight Manual
- CSP-HE/HS-1 Rotorcraft Flight Manual
- CSP-520N-1 Rotorcraft Flight Manual
- CSP-600N-1 Rotorcraft Flight Manual

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- CSP-H-2 Basic Handbook of Maintenance Instructions (Basic HMI)
- CSP-H-7 Illustrated Parts Catalog (IPC)
- CSP-HMI-2 Basic Handbook of Maintenance Instructions - Servicing and Maintenance
- CSP-IPC-4 Illustrated Parts Catalog

2. ACCOMPLISHMENT INSTRUCTIONS

A. Examine Upper Main Rotor Pitch Control Rod Ends, PN 369A1011, for Vendor Code 5963 and a Manufacture Date Between 07-01-11 and 08-31-11

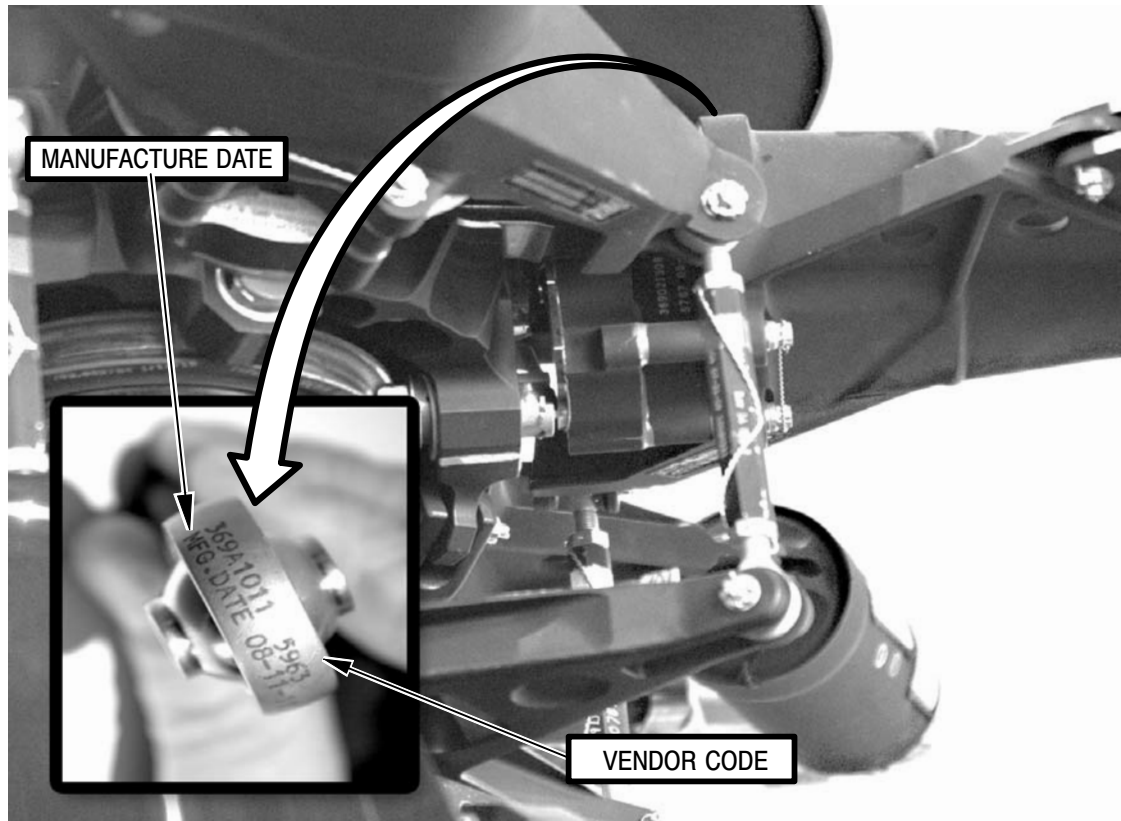
- (1). Do an on-aircraft inspection of the upper main rotor pitch control rod ends as follows:
 - (a). Get access to the upper main rotor pitch control rod assembly rod ends.
 - (b). Examine each installed upper main rotor pitch control rod end for vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11. (Ref. Figure 1).
 - (c). If any installed main rotor pitch control rod end is identified with vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11, record the quantity found on the Part 1 - Bulletin Completed Record (Ref. Step 2.F.(2).) for installed main rotor pitch control rod rod ends. Go to Step 2.B.
 - (d). If no installed main rotor pitch control rod ends are identified with vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11, record "0" quantity on the Part 1 - Bulletin Completed Record (Ref. Step 2.F.(2).) for on-aircraft main rotor pitch control rod ends. No further action on the aircraft is required.
- (2). Do a spares inventory inspection of the main rotor pitch control rod ends purchased between July 2011 and November 2012 as follows:
 - (a). Examine each main rotor pitch control rod end for vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11. (Ref. Figure 1).
 - (b). If any main rotor pitch control rod end in spares inventory is identified with vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11, record the quantity found on the Part 1 - Bulletin Completed Record (Ref. Step 2.F.(2).) for spares inventory.
 - (c). If no main rotor pitch control rod ends in spares inventory are identified with vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11, record "0" quantity on the Part 1 - Bulletin Completed Record (Ref. Step 2.F.(2).) for spares inventory. No further action with spares inventory is required.

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Figure 1. Installed Main Rotor Pitch Control Rod Assembly

B. Make Sure Installed Upper Main Rotor Pitch Control Rod Ends, PN 369A1011, Identified with Vendor Code 5963 and a Manufacture Date Between 07-01-11 and 08-31-11 Turn Freely

NOTE: If upper main rotor pitch control rod ends with vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11 are installed and rotate freely, there are two maintenance alternatives. The main rotor pitch control rod ends can be replaced immediately or replacement can be postponed for a period of up to, but no later than, 300 flight hours or one year, whichever occurs first. A mandatory Daily Pre-Flight Check is required if main rotor pitch control rod end replacement is postponed. MDHI recommends replacement of identified rod ends as soon as possible.

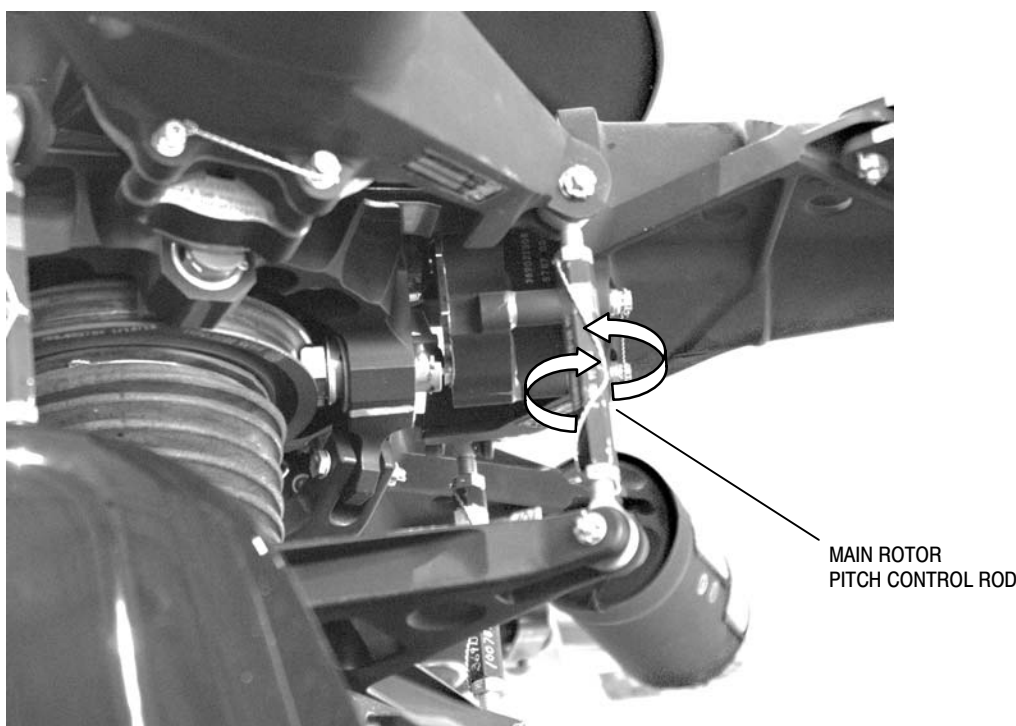
- (1). Turn the main rotor pitch control rod assembly with a back and forth movement. (Ref. Figure 2).
- (2). If the main rotor pitch control rod assembly does not turn back and forth freely, do Step 2.C. before the next flight.

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- (3). If the main rotor pitch control rod assembly turns back and forth freely, do one of the following steps:
 - (a). Do Step 2.C. for immediate replacement, or.
 - (b). Do Step 2.E. for replacement of the main rotor pitch control rod end at a later date. Replacement can be postponed for a period of up to, but no later than, 300 flight hours or one year, whichever occurs first.
- (4). Do Step 2.B.(1)., Step 2.B.(2)., and Step 2.B.(3). again for each main rotor pitch control rod assembly.



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Figure 2. Main Rotor Pitch Control Rod Assembly Movement Check

C. Main Rotor Pitch Control Rod End Replacement

- (1). Remove the main rotor pitch control rod assembly. (Ref. CSP-HMI-2, Section 62-30-00 or 62-30-60 or CSP-H-2, Section 7).

NOTE: If any installed main rotor pitch control rod ends, PN 369A1011, identified with vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11 are unserviceable, MDHI recommends changing all installed main rotor pitch control rod ends, PN 369A1011, identified with vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11 at the same time if possible.

- (2). Measure and record the length of the removed main rotor pitch control rod. Nominal length may have been changed at the previous track and balance.

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- (3). Remove and discard the lockwire from the main rotor pitch control rod assembly.
- (4). Loosen the jam nut and remove the upper main rotor pitch control rod end and the jam nut.
- (5). Remove the jam nut from the main rotor pitch control rod end.
- (6). Identify or tag the removed main rotor pitch control rod end with the time (hours) in service.
- (7). Install the jam nut on the new main rotor pitch control rod end.
- (8). Install the new main rotor pitch control rod end and the jam nut in the main rotor pitch control rod assembly.
- (9). Adjust the length of the main rotor pitch control rod assembly to the dimension recorded in Step 2.C.(2).
- (10). Hold the main rotor pitch control rod and torque the jam nut to 95 – 100 inch-pounds (10.73 – 11.30Nm).

NOTE: Clock main rotor pitch control rod assembly ends to allow for maximum movement when installed on aircraft.

- (11). Safety the jam nuts with lockwire.
- (12). Examine the main rotor hub pitch control housing assembly pitch control rod mounting clevis for damage. Go to Step 2.D.
- (13). Install the main rotor pitch control rod assembly. (Ref. CSP-HMI-2, Section 62-30-00 or 62-30-60 or CSP-H-2, Section 7).
- (14). Record the quantity of main rotor pitch control rod rod ends removed from the aircraft, and the flight time for each rod end on the Part 2 – Bulletin Completed Record (Ref. Step 2.F.(3).) for installed main rotor pitch control rod rod ends.
- (15). Perform a main rotor track and balance procedure if required. (Ref. CSP-HMI-2, Section 18-10-00 or 18-10-60 or CSP-H-2, Section 7).

D. Do a Main Rotor Hub Pitch Control Housing Assembly Pitch Control Rod Mounting Clevis Inspection

- (1). Examine the main rotor hub pitch control housing assembly pitch control rod mounting clevis bushing for wear and looseness. None allowed.
- (2). Examine the main rotor hub pitch control housing assembly pitch control rod mounting clevis outboard hole for elongation and other obvious damage. The diameter of the outboard hole must not exceed 0.3135 inch (7.9629 mm).
- (3). If damage is found, contact MDHI Field Service Department.
- (4). If no damage is found, go to Step 2.C.(13).

E. Mandatory Daily Pre-Flight Check and Postponed Main Rotor Pitch Control Rod End Replacement

- (1). One at a time, turn each main rotor pitch control rod assembly in a back and forth movement. (Ref. Figure 2).

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- (2). If all main rotor pitch control rod assemblies turns back and forth freely, the main rotor pitch control rod assembly rod ends are serviceable and flight operations can resume for the day.
- (3). If any one of the main rotor pitch control rod assemblies does not turn back and forth freely, the main rotor pitch control rod end is not serviceable. Do Step 2.C. before the next flight.

NOTE: MDHI recommends changing all installed main rotor pitch control rod ends, PN369A1011, identified with vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11 at the same time if any main rotor pitch control rod end is not serviceable.

F. Compliance Record

- (1). Record compliance to this Service Bulletin in the Compliance Record section of the Rotorcraft Log Book.
- (2). Complete Part 1 - Bulletin Completed Record form (attached) after inspection and FAX or e-mail to MDHI Field Service Department.
- (3). Complete Part 2 - Bulletin Completed Record form (attached) and include with the returned main rotor pitch control rod ends when shipped to MDHI.

G. Return All Upper Main Rotor Pitch Control Rod Ends, PN 369A1011, with Vendor Code 5963 and a Manufacture Date Between 07-01-11 and 08-31-11

- (1). Fax or e-mail a copy of the completed Service and Operation Report (SOR) to MDHI Field Service Department prior to shipment.

NOTE: Main rotor pitch control rod ends that have been installed on-aircraft must be marked with the time (hours) in service to qualify for warranty replacement.

- (2). Complete the Part 2 - Bulletin Completed Record with the total quantity of main rotor pitch control rod assembly rod ends removed from aircraft or spares inventory that are being returned to MDHI. Include a copy of the SOR with the Part 2 - Bulletin Completed Record.
- (3). Package the main rotor pitch control rod assembly rod ends for shipment. Include a copy of the SOR and the Part 2 - Bulletin Completed Record.
- (4). Ship package to:

**MD Helicopters, Inc.
Field Service Department
4555 E. McDowell Road
Mesa, AZ 85215-9734**

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SB369H-253R1 SB369D-211R1
 SB369E-106R1 SB369F-092R1
 SB500N-048R1 SB600N-056R1

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Bulletin Completed Record

**Part 1 – Inspection for Main Rotor Pitch Control Rod Ends,
 PN 369A1011, identified with Vendor Code 5963 and a Manufacture
 Date Between 07-01-11 and 08-31-11**

MD Helicopters, Inc.
 Field Service Department
 4555 E. McDowell Road
 Mesa, AZ 85215-9734

800-388-3378 Phone (U.S. and Canada)
 480-346-6387 Phone (International)
 480-346-6813 Fax

FAX this form to MDHI 480-346-6813 or E-mail to ServiceEngineering@mdhelicopters.com

Owner /Operator: _____	Helicopter Serial No: _____
Address: _____ _____ _____	Helicopter Total Time: _____
	Date Complete: _____
Phone: _____	Location: _____
E-mail: _____	

An inspection for upper main rotor pitch control rod ends, PN 369A1011, identified with vendor code 5963 and a manufacture date between 07-01-11 and 08-31-11 has been performed on this operators fleet and spares inventory with the following results:

Installed (On-Aircraft) Quantity _____
 Spares Inventory Quantity _____
 Total Quantity _____

NOTE: If the Total Quantity above is "0", record "0" on the Part 2 - Bulletin Completed Record. FAX both forms, to MDHI 480-346-6813 or E-mail to ServiceEngineering@mdhelicopters.com, and there is no further action is required for this Service Bulletin.

Part 1 of this bulletin is complete: _____
 (Signature)

 (Print Name)

 (Title)

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Bulletin Completed Record

Part 2 – Main Rotor Pitch Control Rod Ends, PN 369A1011, identified with Vendor Code 5963 and a Manufacture Date Between 07-01-11 and 08-31-11 Being Returned to MDHI

MD Helicopters, Inc.
 Field Service Department
 4555 E. McDowell Road
 Mesa, AZ 85215-9734

800-388-3378 Phone (U.S. and Canada)
 480-346-6387 Phone (International)
 480-346-6813 Fax

Return this form with shipment.

Owner /Operator: _____	Helicopter Serial No: _____
Address: _____	Helicopter Total Time: _____
_____	Date Complete: _____
_____	Location: _____
Phone: _____	
E-mail: _____	

Upper main rotor pitch control rod ends, PN 369A1011, with vendor code 5963 and a manufacture date of 07-01-11 and 08-31-11 are being returned to MDHI for replacement. The quantity of rod ends being returned is as follows:

Installed (On Aircraft) Quantity _____ Flight Time _____
 Spares Inventory Quantity _____
 Total Quantity _____

Part 2 of this bulletin is complete: _____
 (Signature)

 (Print Name)

 (Title)

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