



369/500/600 Series Temporary Revision

Manual: CSP-HMI-2, Handbook of Maintenance Instructions
Models: 369D/E/FF – 500/600N Helicopters
Issued: 31 October 1990
Revision 41: 03 March 2008
TR 08-001: 14 March 2008

FILING INSTRUCTIONS:

- (1) Before inserting this change, ensure the manual is current.
Check the existing List of Effective Pages in the manual to ensure all prior revisions are inserted.
(Do not insert this revision if prior revisions are not inserted).
- (2) Insert this page in front of Page A of the List of Effective Pages (LOEP).
- (3) Incorporate this change by removing old pages and inserting new pages as indicated below.

Temporary Revision Number / Date	Section	Page	Page Revision
*TR 08-001 / 14 March 2008	04-00-00	1 thru 16	TR 08-001
	64-25-30	403 and 404	TR 08-001

* Signifies latest Temporary Revision.

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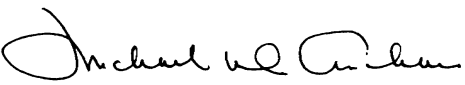

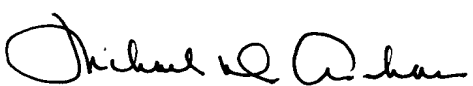
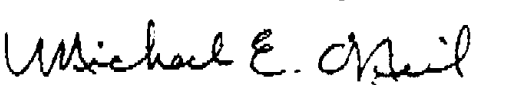
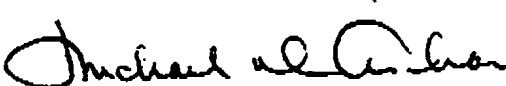
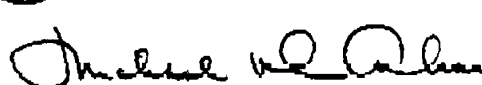


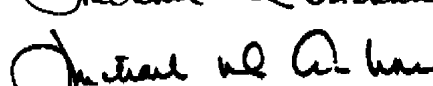
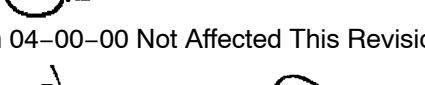


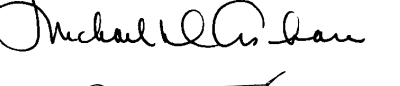
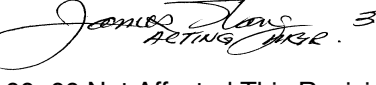
AIRWORTHINESS LIMITATIONS

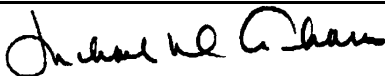
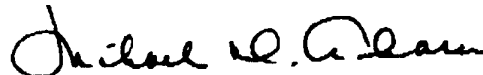
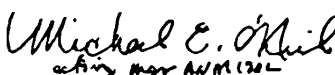

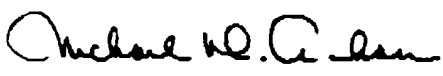
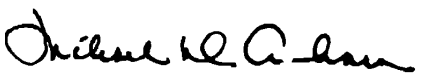
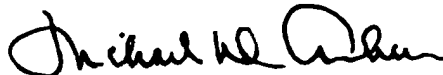
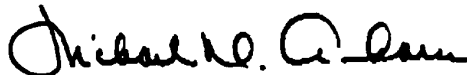



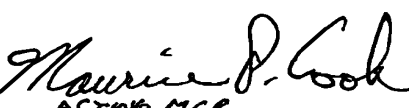
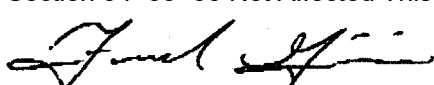
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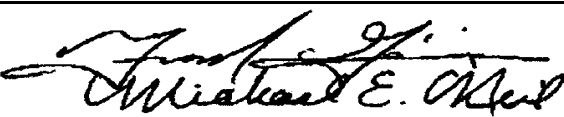





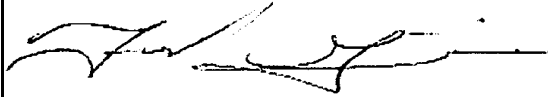


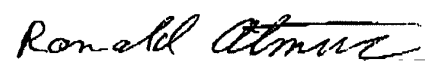


FAA Approved Airworthiness Limitations for MD Helicopters, Inc., Models 369D/E/F/FF and 500/600N.

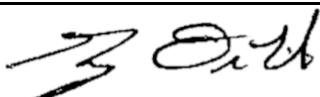


1. General

The Airworthiness Limitations section is FAA approved and specifies maintenance required under Code of Federal Regulations (CFR), Title 14, Federal Aviation Regulation (FAR), Part 43.16 and 91.403 unless an alternative program has been FAA approved.

REVISION:	DATE	FAA SIGNATURE AND DATE
Original Issue:	October 31, 1990	Not FAA approved
Revision 1:	March 29, 1991	Not FAA approved this revision
Revision 2:	May 10, 1991	 6/20/91
TR 91-001	August 12, 1991	 8/14/91
Revision 3:	September 9, 1991	 9/12/91
TR 91-002	November 5, 1991	 11/7/91
Revision 4:	January 20, 1992	 01/16/92
TR 92-004	May 20, 1992	 5/27/92
Revision 5:	August 24, 1992	 08/19/92
TR 92-005	November 20, 1992	 11/12/92
Revision 6:	December 21, 1992	 12/4/92
Revision 7:	June 1, 1993	Section 04-00-00 Not Affected This Revision
TR 93-002	May 27, 1993	 5/27/93
Revision 8:	July 23, 1993	 7/13/93
TR 94-001	January 21, 1994	 02/09/94
Revision 9:	April 22, 1994	 3-23-94
Revision 10:	September 26, 1994	Section 04-00-00 Not Affected This Revision
TR 94-002	October 24, 1994	 10/24/94

REVISION:	DATE	FAA SIGNATURE AND DATE
Revision 11:	January 18, 1995	 01/23/95
Revision 12:	October 6, 1995	Section 04-00-00 Not Affected This Revision
TR 96-002:	April 24, 1996	 04/24/96
Revision 13:	May 31, 1996	 6/12/96 <small>ACTING MGR. AWM (30)</small>
Revision 14:	September 13, 1996	 09/09/96
Revision 15:	November 15, 1996	Section 04-00-00 Not Affected This Revision
Revision 16:	January 6, 1997	Section 04-00-00 Not Affected This Revision
Revision 17:	February 24, 1997	 02/20/97
TR 97-001:	July 2, 1997	 07/02/97
TR 97-002:	August 19, 1997	 08/19/97
Revision 18:	October 17, 1997	Section 04-00-00 Not Affected This Revision T/R 97-001 and 97-002 Previously Signed
Revision 19:	December 16, 1997	 12/19/97
TR 98-001:	March 25, 1998	 03/25/98
Revision 20:	June 1, 1998	Section 04-00-00 Not Affected This Revision T/R 98-001 Previously Signed
TR 98-002:	June 22, 1998	 7/10/98 <small>ACTING MGR.</small>
TR 98-003:	3 August 1998	 8/3/98
Revision 21:	24 August 1998	Section 04-00-00 Not Affected This Revision T/R 98-002 and 98-003 Previously Signed
Revision 22:	10 March 1999	Section 04-00-00 Not Affected This Revision
Revision 23:	1 June 1999	Section 04-00-00 Not Affected This Revision
Revision 24:	7 December 1999	 12/30/99 <small>ACTING MGR.</small>
Revision 25:	28 April 2000	Section 04-00-00 Not Affected This Revision
Revision 26:	17 August 2000	 8/11/00
Revision 27:	9 October 2000	Section 04-00-00 Not Affected This Revision
Revision 28:	30 November 2000	Section 04-00-00 Not Affected This Revision

REVISION:	DATE	FAA SIGNATURE AND DATE
Revision 29:	11 May 2001	 5/4/01 5/14/01
Revision 30:	11 July 2001	Section 04-00-00 Not Affected This Revision
TR 01-001:	10 August 2001	 8/9/01
Revision 31:	5 November 2001	Section 04-00-00 Not Affected This Revision T/R 01-001 Previously Signed
TR 02-002:	30 January 2002	 1/23/02
Revision 32:	18 March 2002	 3/15/02
Revision 33:	24 June 2002	 6/11/02
TR 03-001:	18 June 2003	 6/13/03
TR 03-002:	25 June 2003	 7/2/03
Revision 34:	21 August 2003	Section 04-00-00 Not Affected This Revision T/R 03-001 and 03-002 Previously Signed
TR 03-003:	30 September 2003	 12/3/03
TR 03-004:	17 December 2003	 1/7/04
Revision 35:	20 May 2004	Section 04-00-00 Not Affected This Revision T/R 03-003 and 03-004 Previously Signed
TR 04-001:	28 May 2004	 6/7/04
Revision 36:	11 November 2004	 11/3/04
Revision 37:	13 December 2005	Section 04-00-00 Not Affected This Revision
TR 05-002:	16 December 2005	 12/29/05 12/29/05
Revision 38:	25 April 2006	Section 04-00-00 Not Affected This Revision T/R 05-002 Previously Signed

REVISION:	DATE	FAA SIGNATURE AND DATE
TR 06-001:	05 July 2006	 7/17/06
Revision 39:	10 April 2007	Section 04-00-00 Not Affected This Revision
TR 07-001:	11 April 2007	Section 04-00-00 Not Affected This Revision
Revision 41:	03 March 2008	 2/29/08
TR 08-001	14 March 2008	 3/14/08

AIRWORTHINESS LIMITATIONS

2. Component Mandatory Replacement

The Airworthiness Limitation Replacement Schedule specifies the mandatory replacement time, structural inspection interval and related structural inspection procedures approved per the certificate basis of the Type Certificate Data Sheet No. H3WE and CAR 6 (6.250, 6.251) and CFR 27.571 for models 500/600N unique components only. At the listed finite-life, components or assemblies must be removed from the helicopter and permanently retired from service. At the listed inspection interval, the components or assemblies must be inspected in accordance with the Handbook of Maintenance Instructions (HMI). The title of the task and section of the HMI are referred to which provide the inspection procedures and criteria.

NOTE: Refer to CFR Part 43.10 for latest requirements for the removal, installation, storage and disposition of life-limited parts.

- (1). A “life-limited” part is a physical component of the helicopter to which a maximum number of allowable operating hours or cycles are assigned. Certain assemblies and components on the helicopter have a limited life established by MDHI and approved by FAA Engineering. For example, a part with an assigned limit of 1000 hours, may accumulate 1000 hours of operation in service. Upon completion of the 1000 hours of operation, useful life of the part is ended. The finite-life assigned to different parts varies according to engineering fatigue tests, part experience, etc. The parts listed in this section must be removed from the helicopter at the finite-life indicated and identified as to its expired life (Ref, Table 1, Note (1)).
- (2). All parts not having an assigned life or stated to be of unlimited life, have a life of not less than 20,000 hours.
- (3). When a life-limited part or an assembly that incorporates a life-limited part is installed on a new or used helicopter, the nomenclature, part number, serial

number, component time and current helicopter hours are recorded in the Log Book and component log for the helicopter. Whether the life-limited part is new or used, the remaining number of useful life hours and previous inspection time, if applicable, for the part is added to the existing helicopter time. The total helicopter hours obtained then denotes the subsequent time at which the part must be removed from the helicopter or inspected.

- (4). If a life-limited part, is part of an assembly, the assembly must be removed from the helicopter when the time expires. The assembly may be overhauled and restored to maximum number of hours of useful life by installing new life-limited parts plus all other parts specified in the overhaul instructions (Refer to Component Overhaul Manual).
- (5). If interchanged between different model helicopters (for instance, Model 369D to 369FF or vice versa), any component having a limited life or overhaul schedule must be restricted to the lowest service life or TBO schedule indicated for the helicopter models and serial numbers affected.
- (6). Refer to the appropriate Allison Operation and Maintenance Manual for engine component replacement requirements.

3. Component Mandatory Inspections

Some components with mandatory inspection intervals require inspections to be completed in accordance with procedures detailed in other sections of this maintenance manual. The appropriate inspection procedures are referenced in the **Notes** flagged to each component to be inspected. All maintenance manual procedures which are referenced in the FAA Approved Airworthiness Limitations Component Mandatory Replacement Schedule are FAA approved procedures which cannot be changed without FAA review and approval of the proposed changes.

4. Retirement Index Number (RIN)

- (1). A Retirement Index Number (RIN) is a number that accounts for different usage spectra in assigning the retirement time for a component.

The RIN is calculated as the sum of an adjustment factor times flight hours plus another adjustment factor times Torque Events.

When a component reaches 1,000,000 RIN's, it has reached it's maximum life and is to be scrapped.

5. Torque Event (TE)

A Torque Event (TE) is defined as:

The transition to a hover from forward flight.

Any external lift operation.

NOTE: An external lift can either be on the cargo hook, external hoist or in external baskets.

For external lift operators, an external load is recorded as two (2) TE's (pick-up and drop-off).

Hover taxi with no external load will typically result in no TE's.

6. External Lift and Torque Event (TE) Requirements

The 369D/E/F/FF - 500/600N helicopters are multi-use helicopters. If the helicopter is used primarily for external lifts or training flights (high TE flights), there may be a reduction in inspection intervals of some components.



For safe operation of the helicopter, TE's must be recorded in the Rotorcraft Log Book. Each external lift will be recorded as two (2) TE's.

- (1). Determine the number of TE's and external lifts the helicopter accumulates per hour of flight time.
- (2). Record all TE's in Rotorcraft Log Book and continue to record all TE's.
- (3). Perform required TE inspections.

Table 1. Airworthiness Limitations Schedule

Component (1)	Model	Part Number (2)	Finite Life Hours (1)	Mandatory Inspection Hours
Main Rotor System				
Blade assembly, main rotor	369D/E (5)(6)	369D21100	3530 (37)	25 (11)(20)
		369D21100-516	3530 (37)	100 (20)
		369D21100-517	2500 (31)	25 (22)
		369D21100-517	3530 (37)	100 (20)
		369D21100-523	4000 (37)	100 (20)
		369D21120-501	3530 (37)	100 (20)
		369D21120-503	3530 (37)	100 (20)
	369F/FF (6)	369D21102	3430 (37)	25 (11)(20)
		369D21102-503	3430 (37)	100 (20)
		369D21102-517	2500 (31)	25 (22)
		369D21102-517	3430 (37)	100 (20)
		369D21102-523	4000 (37)	100 (20)
		369D21121-501	3430 (37)	100 (20)
		369D21121-503	3430 (37)	100 (20)
	500N (6)	369D21102-503	3430 (37)	100 (20)
		369D21102-517	2500 (31)	25 (22)
		369D21102-517	3430 (37)	100 (20)
		369D21102-523	4000 (37)	100 (20)
		369D21121-501	3430 (37)	100 (20)
		369D21121-503	3430 (37)	100 (20)
	600N (6)	369D21102-517 (21)	1900 (32)(37)	100 (20)
		369D21102-523	3200 (33)(37)	100 (20)
		369D21121-501	3200 (33)(37)	100 (20)
		369D21121-503	3200 (33)(37)	100 (20)
Folding pin, main rotor blade attach	369D/E/F/FF	369A1004	2850	
		369A1004-3	2850	
		369A1004-5	7600	
	500/600N	369A1004-5	7600	
Hub subassembly, main rotor	369D/E/F/FF 500N	369D21201	8900	
Pitch housing assembly, main rotor hub	369D	369D21300	9100	
		369D21300-501	9100	
	369E/F/FF 500N	369D21300-501	9100	

Table 1. Airworthiness Limitations Schedule (Cont.)

Component (1)	Model	Part Number (2)	Finite Life Hours (1)	Mandatory Inspection Hours
Retention strap assembly, main rotor hub	369D	369D21210	2770	100 (4)
		369D21210-501	2770	100 (4)
	369E/F/FF	369D21210-501	2770	100 (4)
	500/600N	369D21210-501	2770	100 (4)
Bolt – lead-lag hub, main rotor	369D	369A1220	6120	
	369D/E/F/FF 500N	369D21220	6120	
	600N	369D21220	5400 (34)	
Link assembly – lead lag hub, main rotor	369D/E	369H1203-BSC (39)	5762	25 (23)
		369H1203-21 (39)	5762	25 (23)
		369H1203-31 (39)	5762	25 (11)
		369H1203-51 (39)	11080	
		369H1203-53 (40)	11080	
		369H1203-61 (39)	11080	
	369F/FF	369H1203-21 (39)	5762	25 (23)
		369H1203-31 (39)	5762	25 (11)
		369H1203-51 (39)	11080	
		369H1203-53 (40)	11080	
		369H1203-61 (39)	11080	
	500N	369H1203-51 (39)	11080	
		369H1203-53 (40)	11080	
		369H1203-61 (39)	11080	
	600N	369H1203-51 (39)	11080	
		369H1203-53 (40)	11080	
Lead lag damper – main rotor	369D	369D21400-501 M50452	6060 On Cond.	(16)
		369D21400-503	On Cond.	(16)
	369D/E/F/FF 500/600N			
Drive shaft, main rotor	369D/E	369D25510	5020	300 (8)
	369F/FF	369D25510	3675	300 (8)
	500N	369D25510-21	3260	300 (15)
	369D/E	369F5510	(42)	
	369F/FF	369F5510	(42)	
	500N	369F5510	(42)	
	600N	600N5510	14000 (35)	
Mast assembly, main rotor	369D/E/F/FF 500N	369D22014	10450	
	600N	369D22014	3500	

Table 1. Airworthiness Limitations Schedule (Cont.)

Component (1)	Model	Part Number (2)	Finite Life Hours (1)	Mandatory Inspection Hours
Drive Shafts, Couplings and Clutches				
Drive shaft, main rotor transmission	369D/E/F	369A5510	3790	
Coupling, main transmission drive shaft	369D/E/F/FF	369H5660	4300	
	500N	369H5660	3200	
Overrunning clutch assembly	369D/E/F/FF 500/600N	369F5450-501	On Cond.	100 (24)
Sprag assembly, overrunning clutch	369D/E/F/FF	369A5364 369D25351	(3)	300 (10)
	500N	369D25351	(3)	300 (10)
	369D/E/F/FF 500/600N	369F5456	(3)	300 (17)
Drive shaft, fan	500N	500N5200	2620	
	600N	500N5200	1200 (36)	
Drive shaft, tail rotor	369D/E	369D25518	13900	
	369F/FF	369DSK152-11 369D25518-503	13900 14610	
Coupling – tail rotor drive shaft (Bendix) (NOTE: Not certified on 369FF Model) (9)	369D/E/F	369A5501	4980	
		369H92564 (7)	4980	
Anti-Torque System				
Gearshaft assembly, tail rotor input	369D/E	369D25434	12000	
	369F/FF	369D25434	3365	
Gearshaft, tail rotor output pinion	369D/E/F/FF	369D25430	7290	
Blade assembly, tail rotor	369D/E	369D21613	5200	
		369D21613-11	5140	
		369D21613-31	5140	
		369D21613-41	5140	
		369D21613-51	5140	
		369D21613-61	5140	
		369D21613-71	5140	
		369D21640-501 (38)	400	
		369D21640-503 (38)	5140	
		369D21640-505 (38)	5140	
		369D21640-507 (38)	5140	
	369F/FF	369D21606	5140	
		369D21642-501 (38)	400	
		369D21642-503 (38)	5140	
		369D21642-505 (38)	5140	
		369D21642-507 (38)	5140	

Table 1. Airworthiness Limitations Schedule (Cont.)

Component (1)	Model	Part Number (2)	Finite Life Hours (1)	Mandatory Inspection Hours
Blade assembly, tail rotor (optional 4-blade)	369D/E	369D21615	10000	
		369D21641-501 (38)	400	
		369D21641-503 (38)	10000	
		369D21641-505 (38)	10000	
		369D21641-507 (38)	10000	
Hub, tail rotor	369D/E/F/FF	369A1725	3450	
Retention strap assembly, tail rotor	369D/E/F	369A1706	5100	
	369FF	369A1706-507	5100	
		369A1706-509	5100	
Blade assembly, NOTAR fan	500N	500N5310-15	7500	
		500N5310-19	7500	
	600N	500N5310-19	12500	
Hub, fan	500N	500N5352-7	7500	
		500N5352-9	7500	
	600N	500N5352-9	7500	
Tension-Torsion Strap, NOTAR®	500N	500N5311-5	(43)(44)	
	600N			
Shaft, NOTAR fan support	600N	500N5357-13	4000	
Pitch plate assembly	500/600N	500N5363-7	7500	
Tube assembly, fan pitch	500N	500N7113-3	600 (18)	
Rotating cone assembly	500N	500N3740-1	10000	
		500N3740-41	10000	
	600N	500N3740-61	10000	
Tailboom				
Bolts, tailboom attach	369D/E/F/FF	MS21250-06014	21950	
Tailboom assembly	369D/E	369D23500	10300	
	369F/FF	369D23500-507	10300	
	500N	500N3500-19	10000	100 (14)
		500N3500-29	10000	
		500N3500-501	10000	
		500N3600-501	10000	
	600N	600N3500-503	2500 (25)	
		600N3500-505	5900	
		600N3500-507	1000	
		600N3500-509	6000 (19)	
		600N3500-511	6000 (19)	
		600N3500-513	2500 (25)	
		600N3500-515	5900	
		600N3500-517	1000	
Empennage fittings	600N	500N3530-7/8	On Cond.	100 (26)
		500N3530-9/10	On Cond.	100 (26)

Table 1. Airworthiness Limitations Schedule (Cont.)

Component (1)	Model	Part Number (2)	Finite Life Hours (1)	Mandatory Inspection Hours
Vertical stabilizer assembly	369D/E	369D23600	12700	
	369F/FF	369D23600-505	3388	
Torque tube, horizontal stabilizer	500N	500N3950-5	5000	
	600N	500N3950-7 600N3950	3000 1000 (19)	
Horizontal stabilizer assembly	369D (12)	369D23601	7700	
	369E (12)	421-087-505	7700	
		421-087-905 (13)	7700	
	369F/FF (12)	421-087-503	7700	
		421-087-903	7700	
	600N	500N3910-25 500N3910-27	10000 (19) 10000 (19)	
Controls				
Longitudinal idler bellcrank assembly	369D	369A7301	6500	
		369A7301-501	6500	
	369E/F/FF	369A7301-501	6500	
	500N	369A7301-501	2870	
Idler assembly, longitudinal pitch mixer	369D/E/F/FF	369A7603	13600	
	500N	369A7603	6050	
Longitudinal control rod	500N	369A7011-13	7740	
		369A7011-15	7740	
Socket, cyclic stick	600N	369A7141	1000	8 (27)
Cyclic tube assembly	600N	369D27132-503	1200	8 (27)
Housing, collective stick	600N	369A7347	450	
Tube, collective pitch control	600N	369A7348	400	
Tube assembly, collective pitch (pilot)	600N	369H7354-3	600	
Socket, cyclic stick	600N	369A7802	1000	8 (27)
Tube, collective pitch (co-pilot)	600N	369A7809	1800	
Housing, collective stick	600N	369A7820	450	
Housing, collective stick	600N	369H7837	450	
Tube assembly, collective pitch (co-pilot)	600N	369H7838-3	1000	
Fuselage Sta. 75 controls support bracket	600N	369N2608-11	6000 (41)	
		600N2608-9	Unlimited	
Airframe				
Landing gear brace	600N	600N6010-17/19	5900 (28)	
Landing gear strut	600N	600N6022-7/8	696 (29)	
Landing gear foot	600N	600N6043-3	3900 (30)	

Table 1. Airworthiness Limitations Schedule (Cont.)

Component (1)	Model	Part Number (2)	Finite Life Hours (1)	Mandatory Inspection Hours
Floats				
Squib cartridge, used on Emergency float kit 369D292473-5, -6, -9, -10, -11, -12 NOTE: Life is based from original date of manufacture.	369D/E/F/FF 500N	12552-1 (Holex, Inc.)	5 years	
		281993 (Walter Kidde)	5 years	
		12754-1 (Holex, Inc.)	5 years	
		5003527 (Tavco)	5 years	
Stabilizer support, utility float	369D/E	369D292036	3190	
		369DSK66	3190	

NOTES:

- (1) Life-limited components interchanged between models or configurations must be restricted to the lowest service life indicated for the models or configurations affected. Life-limited components removed at retirement are to be mutilated/destroyed or conspicuously marked to prevent inadvertent return to service. Parts are applicable only on models under which a service life is listed. Life-limited components cannot be altered or permanently marked in any manner without compromising the part integrity. Part tagging or other record keeping system is required. Related component records must be updated each time component is removed from service.
- (2) Service life shown for the basic (no dash number) part numbers apply to all dash numbered versions unless otherwise indicated.
- (3) With no cargo hook attached: – No retirement life assigned (Ref. Sec. 05-10-00, Component Overhaul or Recommended Replacement Schedule).
With cargo hook attached and no separate log: – 1800 hours.
With cargo hook attached and with separate log: – 1800 hours of external load operating time when logged separately.
 (For 369D/E/F/FF helicopters with 369A5364 or 369D25351 sprag assembly, Refer to AD 90-19-02.)
- (4) Inspect in accordance with Main Rotor Strap Pack Lamination Inspection at 100-hour intervals, or 25-hour intervals if 2 laminates (369D/E/F/FF – 500N) or 1 laminate (600N) have failed in any one leg or tongue area of any strap assembly. A single cracked laminate between the shoes at the outboard end of a strap pack is cause for rejection of the hub assembly
 369D/E/F/FF – 500N: (Ref. Sec. 62-20-00, Main Rotor Strap Pack Lamination Inspection).
 600N: (Ref. Sec. 62-20-60, Main Rotor Strap Pack Lamination Inspection).
 (For 369D/E/F/FF helicopters, refer to AD 89-02-01.)
- (5) The 369D21100-513, -515, 516, 517 and -523 main rotor blades are not interchangeable with any earlier configuration blades (Basic, -505 or -509); however, the -505 and -509 blades are interchangeable and the -513 and -515 blades are interchangeable. The -505 and -509 configuration blades may be modified to the -513M configuration, which is fully compatible with the -513 blade. (For information concerning modification, contact MDHI Customer Service Department.)
- (6) For the 369D/E helicopters, the 369D21120-501, -503 main rotor blade has all the same inspections and interchangeability as the 369D21100-517 main rotor blade.
 For the 369F/FF – 500N helicopters, the 369D21121-501, -503 main rotor blade has all the same inspections and interchangeability as the 369D21102-517 main rotor blade.
 For the 600N helicopters, the 369D21121-501, -503 main rotor blade has all the same inspections and interchangeability as the 369D21102-523 main rotor blade.
- (7) Used with 369H90123 Rotor Brake Kit.

- (8) Inspect main rotor drive shaft every 300 hours (Ref. Sec. 63-10-00, Main Rotor Drive Shaft Inspection (300 Hour)) (Reference AD 81-26-01).
- (9) Failsafe device, P/N 369D25530 bolt and 369D25531 socket, must be used at both ends of tail rotor driveshaft in accordance with Tail Rotor Drive Shaft Installation with Bendix Couplings (Reference AD 86-20-07).
- (10) For helicopters equipped with a cargo hook, inspect overrunning clutch sprag assembly P/N 369D25351, clutch inner race P/N 369A5353 and outer race 369A5352 every 300 hours (Ref. C.O.M., Sec. 63-10-10, Overrunning Clutch Sprag Inspection (300 Hour)). To establish time in service, either clutch total time with hook attached or a separate and permanent log of external load operating time per CFR 91.417, may be used.
(For 369D/E/F/FF helicopters with 369A5364 or 369D25351 sprag assembly, Refer to AD 90-19-02.)
- (11) Inspect main rotor blade root fittings and main rotor lead-lag link assemblies every 25 hours in accordance with Main Rotor Blade Upper and Lower Root Fitting Attach Lug and Lead-Lag Link Attach Lug Inspection (25 Hour) and every 100 hours in accordance with Main Rotor Blade Upper and Lower Root, Fitting Attach Lug and Lead-Lag Link Attach Lug Inspection (100 Hour) (Ref. Sec. 62-10-00) (Reference AD 95-03-13).
- (12) Tip plates, tip weights (where applicable) and attaching hardware have no retirement life and may be reused on replacement horizontal stabilizers.
- (13) 421-087-903 and -905 require addition of tip plates, tip weights and attaching hardware before installation.
- (14) Inspect the three upper slot bridges for cracks (Ref. Sec. 05-20-00).
- (15) Inspect main rotor drive shaft every 300 hours (Ref. Sec. 63-10-00, Main Rotor Drive Shaft Inspection (300 Hour)).
- (16) Inspect for deterioration every 600 hours up to a total time of 4200 hours and every 300 hours thereafter until deterioration is sufficient to retire assembly
369D/E/FF - 500N: (Ref. Sec. 62-20-00, Main Rotor Damper and Attachments Inspection)
600N: (Ref. Sec. 62-20-60, Main Rotor Damper and Attachments Inspection).
- (17) For helicopters equipped with a cargo hook, inspect overrunning clutch sprag assembly P/N 369F5456, clutch inner race P/N 369F5455 and outer race 369F5453 every 300 hours. To establish time in service, either clutch total time with hook attached or a separate and permanent log of external load operating time may be used.
- (18) 500N7113-11 tube assembly, fan pitch is an On-Condition part and replaces the 500N7113-3 tube assembly.
- (19) Interim hours: life extension testing in progress.
- (20) Inspect upper and lower blade root fittings every 100 hours in accordance with Main Rotor Blade Upper and Lower Root, Fitting Attach Lug and Lead-Lag Link Attach Lug Inspection (100 Hour) (Ref. Sec. 62-10-00)
(For 369D/E/F/FF - 500N helicopters, Reference AD 96-10-09).
- (21) Main rotor blades, P/N 369D21102-517 with S/N 1976 thru 2100, 2106 thru 2115 are not to be installed on 600N helicopter (Reference Service Bulletin SB600N-007R2) (Reference AD 98-15-26).
- (22) Inspect main rotor blades with 600 or more hours of operation every 25 hours of helicopter operation with a 10X magnifying glass for cracking of the lower surface of the blade emanating from the root fitting and doubler at the inboard end of the blade and to detect debonding between the blade root end fitting and doubler if missing or cracked adhesive or paint is observed. (Reference Service Bulletins SB369D-195R3, SB369E-088R3, SB369F-075R3, SB500N-015R3) (Reference AD 98-15-26).
- (23) Perform Main Rotor Blade Upper and Lower Root, Fitting Attach Lug and Lead-Lag Link Attach Lug Inspection (25 Hour) up to a total time of 500 hours and every 15 hours thereafter and every 100 hours in accordance with Main Rotor Blade Upper and Lower Root Fitting, Attach Lug and Lead-Lag Link Attach Lug Inspection (100 Hour) (Ref. Sec. 62-10-00) until retirement of 369H1203-BSC and -21 Lead-Lag Link Assembly. (Reference AD 95-03-13).
- (24) Inspect clutch retainer and bearing carrier for evidence of spinning and/or wear (Ref. Sec. 05-20-20).

- (25) The 600N3500-503 tailboom may be reworked to a 600N3500-505 tailboom, and the 600N3500-513 tailboom may be reworked to a 600N3500-515 tailboom by modifying the attachment fittings to all-steel fittings.
- (26) (Ref. Sec. 05-20-00) Using a flashlight and 10X magnifying glass, inspect horizontal stabilizer mounting brackets for cracks (pay particular attention to the forward inboard legs) (Ref. Tailboom Inspection).
- (27) Sockets must be inspected for cracks every eight hours after the initial 100 hour inspection.
- (28) Log all landings: Brace life is limited to 35400 logged landings or 5900 hours flight time if landing are not logged (assumed six landings per one hour of flight time).
- (29) Log all landings: Strut life is limited to 4170 logged landings or 696 hours flight time if landing are not logged (assumed six landings per one hour of flight time).
- (30) Log all landings: Foot life is limited to 23780 logged landings or 3900 hours flight time if landing are not logged (assumed six landings per one hour of flight time).
- (31) The following main rotor blades have a finite life of 2,500 hours or 15,000 torque events*, whichever occurs first;
P/N 369D21100-517 with S/N H664, H665, H667, H669, H671, H672, H674, H676, H679, H680, H683 thru H724, H726 thru H999 and J000 thru J039, J041 thru J055 and
P/N 369D21102-517 with S/N 1976 thru 2100, 2106 thru 2115.
* TORQUE EVENT (TE) – A TE is recorded for every transition from forward flight to a hover (Reference Service Bulletins SB369D-195R3, SB369E-088R3, SB369F-075R3, SB500N-015R3).
- (32) $RIN = (200 \times Hrs.) + (52 \times TE)$.
- (33) $RIN = (160 \times Hrs.) + (24 \times TE)$.
- (34) $RIN = (153 \times Hrs.) + (3 \times TE)$.
- (35) $RIN = (50 \times Hrs.) + (3 \times TE)$.
- (36) $RIN = (768 \times Hrs.) + (11 \times TE)$.
- (37) After accumulation of 750 flight hours and 13,720 TE, perform Main Rotor Blade Torque Event Inspection (Ref. Sec. 62-10-00) every 35 flight hours or 200 TE's (whichever occurs first).
- (38) The 369D21640-501, -503, -505, -507 tail rotor blades are two-way interchangeable with the 369D21613 tail rotor blades in sets of two only.
The 369D21641-501, -503, -505, -507 tail rotor blades are two-way interchangeable with the 369D21615 tail rotor blades in sets of two only (installed on the same inboard or outboard hub).
The 369D21642-501, -503, -505, -507 tail rotor blades are two-way interchangeable with the 369D21606 tail rotor blades in sets of two only.
- (39) The 369H1203-BSC, -11, -21, -31, -51 and -61 lead lag link assemblies can only be installed using the 369H1235-BSC bearing.
- (40) The 369H1203-53 lead lag link assembly can only be installed using the 369H1235-1 bearing.
- (41) The 369N2608-11 Control Support Bracket must be removed from 600N helicopters equipped with YSAS (Ref. SB600N-040).
- (42) $RIN = (29 \times Hrs.) + (1 \times TE)$.
- (43) The tension-torsion straps have a 5 year calendar life that starts the day the package is opened (Ref. Sect 64-25-30). If the date the package was opened is unknown, the 5 year calendar life is based on the manufacturing cure date.

For straps installed before 06 March 2008 on model 500N helicopters serial numbers LN-001 thru LN-105 and Model 600N helicopters serial numbers RN003 thru RN074, the initial calendar replacement is based on the cure date on the strap. Refer to Table 2 to find the expiration date.
- (44) 500N5311-5 straps previously installed on MD900 helicopters are life limited to 2,500 hours when installed on 500N and 600N series helicopters.

Table 2. Tension-Torsion Strap Expiration Date	
Manufacturers Cure Date	Expiration Date
Before 03/1999	09/2008
03/1999 thru 02/2001	03/2009
03/2001 thru 02/2005	03/2010
03/2005 thru 02/2008	Cure Date Plus 5 Years

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- (2). Install pin, washer and cotter pin.
- (3). Reinstall anti-torque fan in helicopter (Ref. Anti-Torque Fan Installation).
- (4). Perform fan balance check (Ref. Sec. 18-20-30, Fan Balance Check).

Consumable Materials
(Ref. Section 91-00-00)

<u>Item</u>	<u>Nomenclature</u>
CM312	Ink stamp, permanent

4. Fan Blade Strap and Pitch Horn Replacement

(Ref. Figure 401) Remove and install the pitch horn and strap assembly using the following procedures.

NOTE:

- The following procedure covers the individual removal of one strap assembly and pitch horn. If disassembly of all is required, use the following steps for each one requiring removal.
- When strap is replaced, replace related bolt, washer, and nut.

A. Fan Blade Strap and Pitch Horn Disassembly

- (1). Remove anti-torque fan from helicopter (Ref. Anti-Torque Fan Removal).
- (2). Remove fan blade(s) (Ref. Anti-Torque Fan Blade Replacement).
- (3). Remove bolt and washer retaining bottom half of strap assembly between two retention plates.
- (4). Remove strap assembly thru top hole of fan hub.
- (5). Remove pitch horn from fan hub.

B. Fan Blade Strap and Pitch Horn Reassembly

NOTE: Counterweights on pitch arms are set by the factory; do not attempt to adjust.

- (1). Install pitch horn in fan assembly. Ensure ball on lower side of pitch horn is inserted in bushing of pitch plate.

NOTE: Inspect strap assembly for condition and expiration date. Pay particular attention to area around the two spools. Inspect for cracks in the polyurethane coating. If any cuts or breaks are found that exceed 0.020 inch (0.508 mm) in depth or 0.25 inch (6.35 mm) in length, replace the strap.

- Tension-torsion straps have a life limit that starts when their package is opened. If the date the package was opened is unknown, the 5 year calendar life is based on the manufacturing cure date.
- Tension-torsion straps can be put back in their package, and life limit not started, if no out of the package more than five days.

- (2). If tension-torsion strap is removed from package for no more than five days, do the steps that follow:

- (a). Replace desiccant in package, use desiccant (CM826).

NOTE: If you can not seal package; put, tension-torsion strap, package, and desiccant (CM826) in new plastic bag.

- (b). Put tension-torsion strap in package and seal package opening with tape.
- (c). Put package in box and seal box with tape.
- (3). If replacement strap is new, remove from package and write the words **EXPIRATION DATE** on the strap face and date five years after the package is opened. Use permanent ink (CM312).
- (4). Make an item component record card for each tension-torsion strap.

NOTE: Install tension-torsion straps so that the cure date is in view when fan is assembled.

- (5). Insert strap assembly thru top of fan hub and pitch horn until lower (smaller diameter) hole is aligned between holes of two retention plates.
- (6). Install blade and align spar before torquing inboard nut, this ensures proper alignment of strap with blade.
- (7). Install new bolt, washers (countersunk washer against bolt-head), and nut thru holes of retention plates and of strap assembly.
- (8). Install fan blade(s) and torque bolts to **100 inch-pounds (11.30 Nm)** (Ref. Anti-Torque Fan Blade Installation).

- (9). Reinstall anti-torque fan in helicopter (Ref. Anti-Torque Fan Replacement).
- (10). Perform fan balance (Ref. Sec. 18-20-30, Fan Balance Check).

5. Retention Plate and Pitch Plate Replacement

(Ref. Figure 401) Remove and install the retention strap and pitch plate using the following procedures.

A. Retention Plate and Pitch Plate Disassembly

- (1). Remove anti-torque fan from helicopter (Ref. Anti-Torque Fan Removal).
- (2). Remove fan blades (Ref. Anti-Torque Fan Blade Replacement).
- (3). Remove strap assemblies and pitch horns.
- (4). Remove pitch plate and retention plates from fan hub.

B. Retention Plate and Pitch Plate Reassembly

- (1). Position retention plates in fan hub.

NOTE: Install tension-torsion straps so that the cure date is in view when fan is assembled.

- (2). Install pitch horn and strap assemblies (Ref. Strap and Pitch Horn Reassembly).
- (3). Place pitch plate over retention plates within fan hub.
- (4). Install fan blades (Ref. Anti-Torque Fan Blade Installation).
- (5). Reinstall anti-torque fan in helicopter (Ref. Anti-Torque Fan Installation).

6. Support Shaft Replacement

(Ref. Figure 402) Remove and install the support shaft using the following procedures.

NOTE: When replacing pitch plate and/or support shaft bearings, do not use 900R bearings in the 500/600N helicopters.

A. Support Shaft Disassembly

- (1). Remove anti-torque fan from helicopter (Ref. Anti-Torque Fan Removal).
- (2). Remove fan pitch control tube (Ref. Sec. 67-20-30).
- (3). Remove fan interconnect driveshaft (Ref. Sec. 63-15-30).
- (4). Remove fan interconnect shaft coupling from support shaft (Ref. Sec. 63-15-30).
- (5). Remove support shaft and fan hub housing from fan support assembly by removing four cotter pins, nuts, washers and bolts.
- (6). Remove hub spacer from shaft.
- (7). Remove bearing retainer from support housing.
- (8). Press shaft and fan support bearing out of support housing.

NOTE: Removal of bearing seal at disassembly is not required unless seals need replacement.

- (9). Remove bearing seal from support housing and bearing retainer.
- (10). Press bearing off support shaft using removal ring.

B. Support Shaft Reassembly

Consumable Materials (Ref. Section 91-00-00)

Item	Nomenclature
CM111	Grease, aircraft
CM425	Sealing compound

- (1). Install removal ring on support shaft until firmly seated against shoulder of support shaft.
- (2). Install support bearing on support shaft.
- (3). Install bearing seal in support housing and bearing retainer using sealant (CM425).
- (4). Fill seal cavity with 3.3-4.0 CCs of grease (CM111).