



Manual: CSP-H-4, Appendix B
Models: 369H Helicopters
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Remove Pages	Insert Pages	Remove Pages	Insert Pages
Cover/Title	Cover/Title		04-00-00
	LOEP	1 thru 10	1 thru 10
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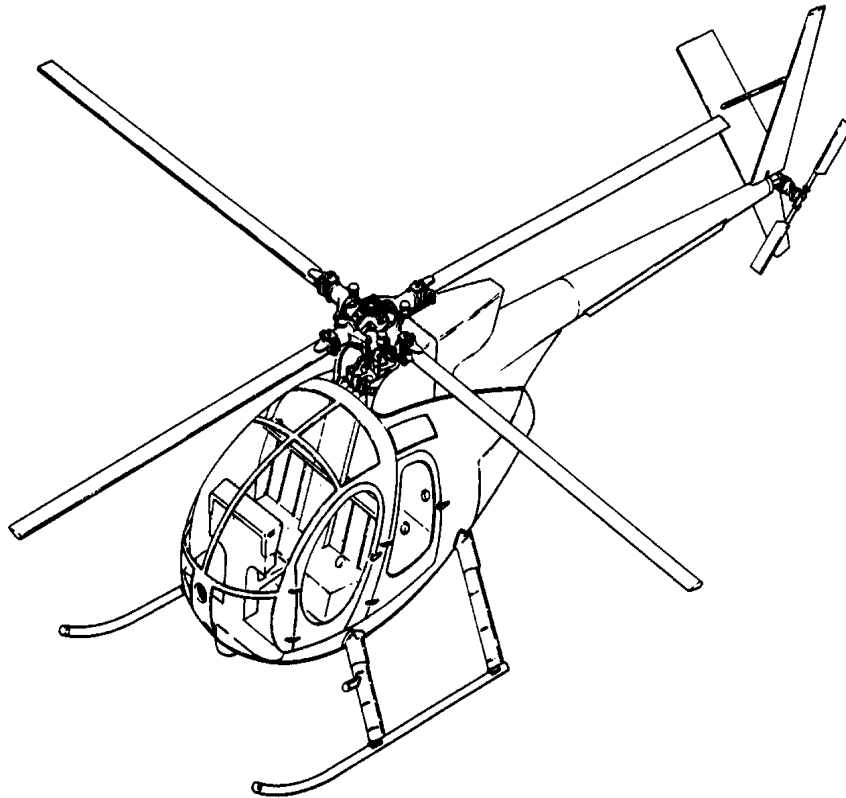
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MDHI MODEL HELICOPTERS

MODEL 369H

APPENDIX B

AIRWORTHINESS LIMITATIONS OVERHAUL AND REPLACEMENT SCHEDULES PERIODIC INSPECTIONS WEIGHT AND BALANCE PROCEDURES



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LIST OF EFFECTIVE PAGES

INSERT LATEST CHANGE PAGES, DESTROY SUPERSEDED PAGES

The highest revision number indicates pages changed, added or removed by the current change.

Date of original and revised pages are:

Original (Reissue No 5)	17 November 1999	Revision 3	25 June 2003
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Page	Revision	Page	Revision
Cover/Title	Revision 4	05-00-00	
CR		1 and 2	Revision 3
CRi/(CRii blank)	N/A	05-10-00	
TR		1 thru 4	Revision 3
1	Revision 3	05-20-00	
2	Revision 2	1 thru 7/(8 blank)	Revision 1
LOEP		05-20-10	
A	Revision 4	1 and 2	Original
B	Revision 2	05-20-15	
CONTENTS		1 and 2	Revision 2
i and ii	Revision 2	05-20-20	
CHAPTER 01		1	Revision 1
i and ii	Revision 2	2	Revision 2
01-00-00		05-50-00	
1 and 2	Original	1 thru 6	Original
3/(4 blank)	Revision 1	7 and 8	Revision 1
CHAPTER 04		CHAPTER 08	
i	Revision 3	i/(ii blank)	Original
ii	Revision 2	08-00-00	
04-00-00		201 and 202	Original
1 thru 10	Revision 4	08-10-00	
CHAPTER 05		201 thru 211/(212 blank)	Original
i and ii	Revision 3		

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AIRWORTHINESS LIMITATIONS

Type Certificate No. H3WE

FAA Approved Airworthiness Limitations for MD Helicopters, Inc., Models 369H/HE/HS/HM.

1. General

The Airworthiness Limitations Section specifies maintenance required under CFR 43.16 and 91.403 of the Code of Federal Regulations unless an alternative program has been FAA approved.

REVISION:	DATE	FAA SIGNATURE AND DATE
Original Issue:	November 17, 1999	Not FAA approved
Revision 1:	May 14, 2001	<i>Michael E. O'Neil</i> 5/14/01
TR 01-001:	9 August 2001	<i>[Signature]</i> 8/9/01
Revision 2:	30 January 2003	Section 04-00-00 Not Affected This Revision TR 01-001 Previously Signed
TR 03-001:	18 June 2003	<i>[Signature]</i> 6/13/03
Revision 3:	25 June 2003	<i>[Signature]</i> 7/25/03
Revision 4:	22 April 2004	<i>Ronald Atmore</i> 4/22/04

This document conforms to Service Life Analysis 369H/HE/HS/HM, Rev. W.

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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). 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 500 Series – Basic HMI.

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.
- (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 pre-

vious 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 item 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 369H), 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). An “N/A” entered in a column in Table 1 means that the component is not certified in that particular configuration helicopter.
- (7). 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. 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 TEs.

5. External Lift and Torque Event (TE) Requirements

The 369H/HS/HE/HM Model 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.

CAUTION 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)	Part No. (2) (3)	Models 369H/HM/HS (S/N 0001 To 0100)	Model 369HM/HS/HE (S/N 0101 & up) with 250-C18 engine, unless otherwise noted	Model 369H/HM/HS/HE (S/N 0101 & up) with 250-C20 engine, unless otherwise noted	Mandatory Inspection Hours
Main Rotor System					
Blade, main rotor	369A1100-501	1655 (7)	1570 (7)	1570 (7)	25 (14)(18)
		2440 (8)	2440 (8)	2440 (8)	25 (14)(18)
	369A1100-503	2440 (8)	2440 (8)	2440 (8)	25 (14)(18)
	369A1100-505	2440 (8)	2440 (8)	2440 (8)	25 (14)(18)
	369A1100-507	1750 (19)	1750 (19)	1750 (19)	25 (20)
	369A1100-507	2440	2440	2440	100 (18)
	369D21123-501 (23)	2440	2440	2440	100 (18)
	369D21123-503 (23)	2440	2440	2440	100 (18)
369A1100-511	3500	3500	3500	100 (18)	
Main rotor folding pin	369A1004	5760	5760	5760	
Hub sub-assy, main rotor	369A1201 (9)	8900	8900	8900	
	369A1201-615	8900	8900	8900	
	369A1201-619 (11)	8900	8900	8900	
Pitch housing, main rotor	369A1300	6200	6200	6200	
	369D21300	6200	6200	6200	
Retention straps, main rotor	369A1210	2774	2774	2774	300 (4)
Vertical hinge pin, main rotor	369A1220	5490	4220	4220	
	369D21220	5490	4220	4220	
Lead lag links, main rotor	369A1234	2860	2650	2650	25 (21)
	369H1203-BSC	6396	6396	6396	25 (21)
	369H1203-21	6396	6396	6396	25 (21)
	369H1203-31	6396	6396	6396	25 (14)
	369H1203-51	10600	10600	10600	
	369H1203-61	10600	10600	10600	
Drive shaft, main rotor	369A5500	6500	3960	3960	
	369A5520	1900	1740	1300	
Mast assy, main rotor	369A2014 (9)	5710	5710	5710	
	369A2014-501	5710	5710	5710	
	369A2014-601	5710	5710	5710	
	369A2014-603	5710	5710	5710	
	369D22014	5710	5710	5710	

Table 1. Airworthiness Limitations Schedule (Cont.)

Component (1)	Part No. (2) (3)	Models 369H/HM/HS (S/N 0001 To 0100)	Model 369HM/HS/HE (S/N 0101 & up) with 250-C18 engine, unless otherwise noted	Model 369H/HM/HS/HE (S/N 0101 & up) with 250-C20 engine, unless otherwise noted	Mandatory Inspection Hours
Drive Shafts, Couplings and Clutches					
Engine drive shaft (Bendix only)	369A5510	3700	3700	3700	
Sprag assy, overrunning clutch	369A5364	(6)	(6)	(6)	300 (13)
	369D25351	(6)	(6)	(6)	300 (13)
Drive shaft, tail rotor	369A5518	8730	8730	8730	
Coupling, tail rotor drive shaft, (Bendix only) (15)	369A5501 (5)	7080	7080	7080	
	369H92564 (5)	N/A	7080	7080	
Anti-Torque System					
Gearshaft assy, tail rotor input (10)	369A5425	1800	1800	1800	
	369A5425-3	1800	1800	1800	
	369A5425-5	Unlimited	Unlimited	Unlimited	
Gearset, tail rotor Input (10)	369A5406	1800	1800	1800	
	Output (10)	369A5406	2940	2940	2940
Blade assy, tail rotor (fiberglass) (fiberglass) (aluminum) (aluminum) (aluminum) (aluminum)	369A1607	2861	2861	N/A	100 (16)
	369A1710	2861	2861	N/A	100 (16)
	369A1613 (17)	5600	5600	5600	
	369D21643-501 (24)	400	400	400	
	369D21643-503 (24)	5600	5600	5600	
	369D21643-505 (24)	5600	5600	5600	
Retention strap assy, tail rotor	369A1706 (12)	5100	5100	5100	
Tailboom					
Bolts, tailboom attach For model 369HS and 369HE For model 369HM For all models with 369A1620 (aluminum blade) tail rotor installed	MS21250-05014 (alt. NAS625-14)	2600	2500	N/A	
		2600	2400	N/A	
		2400	2400	2400	

Table 1. Airworthiness Limitations Schedule (Cont.)

Component (1)	Part No. (2) (3)	Models 369H/HM/HS (S/N 0001 To 0100)	Model 369HM/HS/HE (S/N 0101 & up) with 250-C18 engine, unless otherwise noted	Model 369H/HM/HS/HE (S/N 0101 & up) with 250-C20 engine, unless otherwise noted	Mandatory Inspection Hours
Tailboom 369HS and 369HE 369HM For model 369HS and 369HE with 369A1620 (aluminum blade) tail rotor installed For model 369HM with 369A1620 (aluminum blade) tail rotor installed	369A3500-503	2674	2450	N/A	
		2674	2177	N/A	
		2030	2030	2030	
		1880	1880	1880	
	369A3500-505	Same as 369A3500-503			
Upper vertical stabilizer For model 369HM, 369HS, and 369HE For model 369HS and 369HE with 369A1620 (aluminum blade) tail rotor installed For model 369HM with 369A1620 (aluminum blade) tail rotor installed	369A3625	3840	3840	N/A	
		3840	3840	3840	
		3280	3280	3280	
Horizontal stabilizer For model 369HM, 369HS and 369HE For model 369HS and 369HE with 369A1620 (aluminum blade) tail rotor installed For model 369HM with 369A1620 (aluminum blade) tail rotor installed	369A3600	3150	3050	N/A	
		3450	3450	3450	
		3050	3050	3050	
Floats					
Emergency float kit squib cartridge	12552-1 (Holex, Inc.)	5 years	5 years	5 years	
	281993 (Walter Kidde)	5 years	5 years	5 years	
	12754-1 (Holex, Inc.)	5 years	5 years	5 years	
	5003527 (Tavco)	5 years	5 years	5 years	

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) Applicable to all 369H models and configurations, except as noted.
- (4) Inspect in accordance with Main Rotor Strap Pack Lamination Inspection Procedure, at 300-hour intervals, or at 100-hour intervals if 2 laminates 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.
- (5) Used with 369H90123 Rotor Brake Kit.
- (6) With no cargo hook attached: – No retirement life assigned, refer to Section 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 per CFR 91.417 (Reference AD 90-19-02).
- (7) Applicable only to blade serial numbers 0001 thru 3499.
- (8) Applicable only to blade serial numbers 3500 and subsequent; and blade serial numbers A000 and subsequent.
- (9) Not used on Model 369HE.
- (10) Input and output gearshafts of 369A5406 tail rotor gearset are individually replaceable.
- (11) Used with 369H1200 main rotor hub assembly.
- (12) 3250-hours on all 369H, HE, HM and HS series helicopters which have a 369A1706 (BSC) tail rotor strap pack assembly installed in conjunction with fiberglass tail rotor blades, P/N 369A1710 (BSC), -9, -11, -13 and 369A1607 (BSC) or if strap assembly has ever been installed in conjunction with fiberglass tail rotor blades (Reference AD 89-11-05).
- (13) For helicopters equipped with a cargo hook, inspect overrunning clutch sprag assembly P/N 369A5364 or 369D25351, clutch inner race P/N 369A5353 and outer race 369A5352 every 300 hours in accordance with 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 (Reference AD 90-19-02).
- (14) Inspect main rotor blade root fittings and lead-lag link assemblies every 25 hours in accordance with HN-211.4 (Reference AD 95-03-13) (Ref. Sec. 7, Main Rotor Blade Upper and Lower Root Fitting Attach Lug and Lead-Lag Link Inspection (25 Hour) and Main Rotor Blade Upper and Lower Root Fitting, Attach Lug and Lead-Lag Link Inspection (100 Hour)).
- (15) Failsafe devise, P/N 369D25530 bolt and 369D25531 socket, must be used at both end of the tail rotor drive shaft in accordance with Installation of Tail Rotor Drive Shaft with Bendix Couplings Installed (Reference AD 86-20-07).
- (16) Inspect interior of blade spar for obvious corrosion penetrating the zinc primer as per HN-88 (Reference AD 75-22-04).
- (17) The 369A1613-7, -9 and -11 tail rotor blades are for military use only (OH-6A) and are not FAA certified for use on the Model 369H Series Helicopters.
- (18) 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. 7) (For main rotor blades 369A1100-501 thru -507, Reference AD 96-10-09).

- (19) The following main rotor blades have a finite life of 1,750 hours or 10,600 torque events*, whichever occurs first;
P/N 369A1100-507 with S/N D139 thru D203, D209 thru D223.
* TORQUE EVENT (TE) – A TE is recorded for every transition from forward flight to a hover (Reference Service Bulletin SB369H-243R3).
- (20) 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 Bulletin SB369H-243R3) (Reference AD 98-15-26).
- (21) Inspect main rotor lead-lag links in accordance with 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) until retirement of 369A1234, 369H1203-BSC and -21 Lead-Lag Link Assembly. (Reference AD 95-03-13).
- (22) Deleted
- (23) The 369D21123-501, -503 main rotor blade has all the same inspections and interchangeability as the 369A1100-507 main rotor blade.
- (24) The 369D21643-501, -503, -505 tail rotor blades are two-way interchangeable with the 369A1613 tail rotor blades in sets of two only.

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