

Section

04-00-00


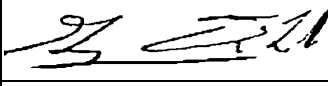


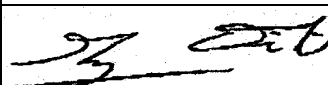
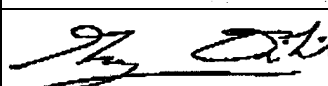
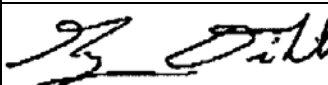



Airworthiness Limitations


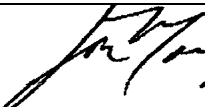

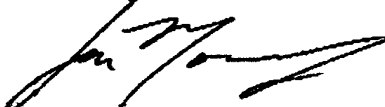
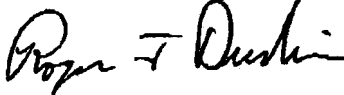
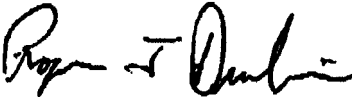
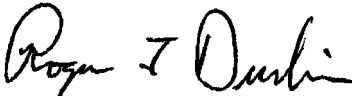
AIRWORTHINESS LIMITATIONS DESCRIPTION AND OPERATION

1. Approval of Airworthiness Limitations Section

The Airworthiness Limitations section is FAA approved and specifies maintenance required

under §§ 43.16 and [91.403] of the Federal Aviation Regulations unless an alternative program has been FAA approved.

REVISION	DATE	FAA SIGNATURE AND DATE
Original Reissue 1	18 December 1997	 18 December 1997
Revision 1	22 April 1998	 22 April 1998
Revision 2	24 July 1998	 24 July 1998
Revision 4	7 May 1999	 7 May 1999
Revision 6	23 December 1999	 23 December 1999
Revision 7	22 June 2000	 22 June 2000
TR 00-002	14 July 2000	 14 July 2000
Revision 8	10 August 2000	Section 04-00-00 Not Affected This Revision. TR 00-002 Previously Signed.
TR 00-003	13 October 2000	 13 October 2000
Revision 9	10 November 2000	Section 04-00-00 Not Affected This Revision. TR 00-003 Previously Signed.
Revision 10	21 March 2001	Section 04-00-00 Not Affected This Revision. TR 00-003 Previously Signed.
Revision 11	17 April 2001	 17 April 2001
TR 01-004	30 November 2001	 30 NOVEMBER 2001
Revision 12	18 January 2002	Section 04-00-00 Not Affected This Revision. TR 01-004 Previously Signed.

REVISION	DATE	FAA SIGNATURE AND DATE
TR 02-001	03 March 2002	 3 MARCH 2002
Revision 13	08 April 2002	Section 04-00-00 Not Affected This Revision. TR 02-001 Previously Signed.
Revision 14	26 April 2002	Section 04-00-00 Not Affected This Revision.
Revision 15	28 June 2002	Section 04-00-00 Not Affected This Revision.
Revision 16	19 August 2002	Section 04-00-00 Not Affected This Revision.
Revision 17	27 September 2002	Section 04-00-00 Not Affected This Revision.
Revision 18	23 January 2003	 23 JANUARY 2003
Revision 19	20 June 2003	Section 04-00-00 Not Affected This Revision.
TR 03-001	30 July 2003	 30 JULY 2003
Revision 20	5 September 2003	 5 SEPTEMBER 2003
Revision 21	05 December 2003	Section 04-00-00 Not Affected This Revision.
TR 04-001	09 February 2004	 09 FEBRUARY, 2004
Revision 22	10 June 2004	Section 04-00-00 Not Affected This Revision. TR 04-001 Previously Signed.
TR 04-002	09 July 2004	 09 JULY, 2004
Revision 23	23 September 2004	 23 September, 2004

REVISION	DATE	FAA SIGNATURE AND DATE
TR 04-004	03 November 2004	<i>Roger J. Durbin 02 November, 2004</i>
Revision 24	04 November 2004	Section 04-00-00 Not Affected This Revision. TR 04-004 Previously Signed.
Revision 25	16 April 2005	<i>Roger J. Durbin 24 February, 2005</i>
Revision 26	07 September 2005	<i>Roger J. Durbin 07 September, 2005</i>
TR 05-001	23 January 2006	<i>Roger J. Durbin 20 January, 2006</i>
Revision 27	25 April 2006	Section 04-00-00 Not Affected This Revision. TR 05-001 Previously Signed.
TR06-003	26 June 2006	<i>Roger J. Durbin 26 June, 2006</i>
Revision 28	14 September 2006	Section 04-00-00 Not Affected This Revision. TR 06-003 Previously Signed.
Revision 29	02 February 2007	Section 04-00-00 Not Affected This Revision.
Revision 30	06 April 2007	<i>Roger J. Durbin 06 April, 2007</i>
TR07-001	29 August 2007	<i>Roger J. Durbin 29 August, 2007</i>
Revision 31	27 February 2008	<i>Roger J. Durbin 20 February, 2008</i>
TR08-002	14 March 2008	<i>Roger J. Durbin 14 March, 2008</i>

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AIRWORTHINESS LIMITATIONS MAINTENANCE PRACTICES

1. General

The Airworthiness Limitations Schedule specifies the mandatory replacement times for life limited components on the MDHI Model 900 helicopters.

At the listed life limit hours, 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 Rotorcraft Maintenance Manual (RMM) or applicable manufacturers' maintenance manual.

2. Mandatory Replacement Time

The mandatory replacement time or life limit of a component of the helicopter is the assigned maximum number of allowable operating hours. Certain assemblies and components on the helicopter have a hourly life limit established by MDHI and approved by FAA. The number of hours assigned to different components varies according to engineering fatigue tests, part experience, etc. For example, a component with an assigned life of 1000 hours, may accumulate 1000 hours of operation in service. Upon completion of the 1000 hours of operation, useful life of the component is ended. The components listed in this section must be removed from the helicopter at the number of hours indicated.

When a component with a life limit or an assembly that incorporates a component with a life limit is installed on a new or used helicopter, the nomenclature, part number,

serial number and current helicopter hours must be recorded in the Log Book for the helicopter. The remaining number of useful life hours for the component with the life limit denotes the subsequent time at which the item must be removed from the helicopter.

If a component with a life limit is part of an assembly, the assembly must be removed from the helicopter when the remaining number of useful life hours for the component with the life limit expires. The assembly may be overhauled and restored to maximum number of hours of useful life by installing new life limited components plus all other parts specified in the overhaul instructions (Refer to Component Maintenance Manual).

Components with a life limit removed at retirement are to be destroyed or conspicuously marked to prevent inadvertent return to service.

3. Airworthiness Limitations Schedule

The schedule contained on the following pages tabulates the mandatory replacement requirements.

The first column of the schedule denotes to which model of helicopter the mandatory replacement is applicable.

The second column contains the component description.

The third column denotes the associated component part number.

The fourth column denotes the applicable life limit of the component.

Table 1. AIRWORTHINESS LIMITATIONS SCHEDULE

Model	Component	Part Number	Life Limit (1)(3) Hours
Landing Gear			
900	Damper Assembly, Landing Gear	900F3361040-103	2,250
		900F3361040-105	900
		900F3361040-107	5,000 (12)
Airframe			
900	Main Fuselage Assembly	900F1305600-105	On Condition (14)
		900F1305600-107	On Condition (14)
		900F1305600-109	On Condition (14)
		900F1305600-111	On Condition (14)
		900F1305600-113	On Condition (14)
		900F1305600-115	On Condition (14)
		900F1305600-117	On Condition (14)
		900F1305600-119	On Condition (14)
		900F1305600-121	On Condition (14)
		900F1305600-123	On Condition (14)
900	Tailboom Assembly	900F2318021-103	On Condition (14)
		900F5318022-107	On Condition (14)
900	Spring Damping, Elastomeric	900F3318201-103	2,000 (9)
900	Bellcrank - Empennage	900F2341712-101	2700
		900FP341712-103	2700
900	Cartridge, Fire Extinguisher, Primary	900P3690001-101	10 Years (13)
900	Cartridge, Fire Extinguisher, Secondary	900P3690002-101	10 Years (13)

Table 1. AIRWORTHINESS LIMITATIONS SCHEDULE (Cont.)			
Model	Component	Part Number	Life Limit (1)(3) Hours
Main Rotor			
900	Blade, Main Rotor, Assembly	900R1150001-107	600
		900R1150001-109	600
		900R1150001-111	11,460
		900R1150001-113	11,460
		900R1150001-115	11,460
		900R1150002	11,460 (17)
900	Blade, Main Rotor, Assembly	900R1150003	11,460 (17)
900	Blade Retention Bolt	900R3100001-101	9,500
		900R3100001-103	10,750
900	Flexbeam Assembly	900R1103002-101 (18)	On Condition (5)
		900R1103003-101 (18)	On Condition (5)
		900R1103004-101 (18)	On Condition (5)
		900R1103005-101 (18)	10,000 (5)
		900R1103000-105	On Condition (5)
		900R1103000-107	On Condition (5)
		900R1103000-109	On Condition (5)
		900R1103000-111	On Condition (5)
900	Centering Bearing Assembly, Main Rotor	900R3101001-105	On Condition (15)
		900R3101001-107	On Condition (15)
900	Damper Cap, Upper, Main Rotor Hub	900R2100005-105	10,000
900	Damper Cap Assembly, Lower, Main Rotor Hub	900R2100006-103	10,000 (7)
900	Damper, Main Rotor	900R3100002-105	4,095

Table 1. AIRWORTHINESS LIMITATIONS SCHEDULE (Cont.)

Model	Component	Part Number	Life Limit (1)(3) Hours
Main Rotor (continued)			
900	Retention Nut, Main Rotor Hub	900R2100003-101	10,000
900	Hub Assembly		
	Liner, Main Rotor Hub	900R2101004-101	20,000
	Upper Hub Assembly, Main Rotor	900R2101006-101	1,730 (6)
	Upper Hub Assembly, Main Rotor	900R2101006-103	1,730 (6)
	Upper Hub Assembly, Main Rotor	900R2101006-105	10,000 (16)
	Upper Hub Assembly, Main Rotor	900R2101006-107	(16) (20)
	Lower Hub Assembly, Main Rotor	900R2101008-103	1,730
	Lower Hub Assembly, Main Rotor	900R2101008-105	1,730
	Lower Hub Assembly, Main Rotor	900R2101008-107	10,750
	Hub Plate, Main Rotor	900R2101018-103	1,730
	Hub Plate, Main Rotor	900R2101018-105	10,000
900	Striker Plate, Droop Stop	900R2101012-103	10,000 (21)
900	Support, Droop Stop	900R2100001-101	1,580 (10)
		900R2100001-103	1,580 (10)
900	Swashplate Assembly – Rotating	900C2010188-105	7,285 (23)
		900C2010188-107	7,285 (23)
900	Swashplate Assembly, Non-Rotating	900C2010192-105	1,800
		900C2010192-107	1,800
		900C2010192-109	1,800
		900C2010192-111	1,800
		900C2010192-113	1,800
900	Lateral Mixer, Bellcrank	900C2010203-105	13,000
900	Link Assembly, Collective Drive	900C2010207-101	3,307
900	Link Assembly, Collective Drive, Adjustable	900C2010233-103	Not to be used in service
		900C2010233-105	
900	Drive Ring (Main Rotor Drive link Attachment)	900R2100007-101	2,890
		900R2100007-103	2,890

Table 1. AIRWORTHINESS LIMITATIONS SCHEDULE (Cont.)			
Model	Component	Part Number	Life Limit (1)(3) Hours
Main Rotor (continued)			
900	Bearing, Plain, Self-Aligning, Spherical/Slider, M/R	900C3010042-103	700
		900C3010042-105	12,807
Transmission and Drive System			
900	Drive Shaft, Main Rotor	900D2436528-101	1,450
		900D6400004-101	1,450
		900DF436026-101	1,450
		900DF400100-101	1,450
900	Impeller, Blower	900D3448004-103	6,885
		900D6448004-103	6,885
900	Strut Assembly, Mid-Aft Truss - LH	900F2401300-101	21,532
		900F2401300-103	24,158
900	Deck Fitting Assembly, Aft Truss, LH	900F2401600-103	19,990
900	Deck Fitting Assembly, Aft Truss, RH	900F2401600-104	19,990
Anti-Torque Assembly			
900	Blade Assembly, Fan, NOTAR®	900R2442012-101	3,800
		900R2442012-103	3,800
		900R2442012-105	3,800
900	Tension-Torsion Strap, NOTAR®	900R3442009-101	2,500 (19) (22)
		900R3442009-103	2,500 (19) (22)
		900R6442009-103	2,500 (19) (22)
		500N5311-5	2,500 (8) (19) (22)
900	Hub, Fan, NOTAR®	900R2441013-105	1,825
		900R2441013-107	1,825
		900R2441013-109	5,000
900	Pitch Plate, NOTAR®	900R2443000-105	3,527
900	Support Assembly, Fan - NOTAR®	900R1441003-103	10,000
		900R1441004-101	10,000
900	Coupling, Fan Shaft - NOTAR®	900R2444002-101	10,000
		900R2444003-101	10,000

Table 1. AIRWORTHINESS LIMITATIONS SCHEDULE (Cont.)

Model	Component	Part Number	Life Limit (1)(3) Hours
Flight Controls			
900	Spring Assembly – Gradient, Longitudinal	900CF010039-105	260
		900C6010039-107	800
		900C3010081-101	10,000
900	Spring Assembly – Gradient, Lateral	900CF010040-105	260
		900C6010040-107	800
		900C3010082-101	10,000
900	Trim Actuator Assembly	900C3010004-105	Unlimited Life
		900C3010004-107	10,000 (11)
		900C3010004-109	Unlimited Life
		900C3010004-113	Conditional
		900C3010004-115	1,000 (3)
Powerplant			
900	Engine	(4)	(4)
900	Starter/Generator	(4)	(4)

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 either overhauled, or placed in controlled storage until the life is extended, or destroyed or conspicuously marked to prevent inadvertent return to service. Parts are applicable only on models under which a service life is listed.
- (2) Hours listed are flight hours unless otherwise noted.
- (3) Interim life; life extension in progress (Ref. FAA life limit data, Rev. AU).
- (4) Refer to related manufacturers' publications for mandatory component replacement requirements.
- (5) Special inspections required at 50-hour and 100-hour intervals. Refer to MDHI Service Bulletin No. SB 900-001R5 or later, and to Section 05-20-10 for inspection requirements.
- (6) Special inspections required at 100-hour and 1000-hour intervals. Ref. Section 05-20-10.
- (7) Special inspection required every 500-hours. Ref. Section 05-20-10.
- (8) 500N5311-5 Tension-Torsion Straps previously installed on MD900 helicopters are life limited to 2,500 hours when installed on MD500N series helicopters.
- (9) After 2,000 hours, the life of the Elastomeric Damping Spring is "On Condition" but requires performance of a Special inspection every 100 hours thereafter until deterioration is sufficient to retire assembly. Ref. Section 05-20-10.
- (10) Special inspection required every 1,000-hours or 6 months, whichever comes first. Ref. Section 05-20-10.
- (11) Aircraft Equipped with Autopilots
The 900C3010004-107 trim actuator assembly must be overhauled every 5000 hours.
Aircraft not Equipped with Autopilots
The trim actuator assembly is not considered flight critical.
- (12) Life of damper may use 30,000 landings instead of 5,000 hours if aircraft logs landings. Operators who have not logged landings can apply 6 landings per hour to determine life of part.
- (13) Life limit is from date of manufacture stamped on the cartridge.
- (14) Inspection required at 5,000 hours and at each subsequent 2,500 hours. Ref. Section 05-20-10.
- (15) Special inspection required every 50-hours. Ref. Section 05-20-10.
- (16) Special inspections required at 100-hour and 300-hour intervals. Ref. Section 05-20-10.
- (17) Service life shown for the basic (no dash number) part numbers apply to all dash numbered versions unless otherwise indicated.
- (18) Part number 900R1103002-101 is part of 900R1103001-109.
Part number 900R1103003-101 is part of 900R1103001-111.
Part number 900R1103004-101 is part of 900R1103001-113.
Part number 900R1103005-101 is part of 900R1103001-115.
- (19) Special inspections required at 1200-hour and 300-hour intervals. Ref. Section 05-20-10.
- (20) Life limit of Main Rotor Upper Hub Assembly part number 900R2101006-107 is 10,000 hours; except for serial numbers 5009-0001 through 5009-9999 which have an interim life of 1,200 hours.
- (21) Special inspection required every 1,000-hours. Ref. Section 05-20-10.
- (22) The tension-torsion straps have a 5 year calendar life that starts the day the package is opened (Ref. Sect 64-30-00). 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 MD900 helicopters serial numbers 900-00008 thru 900-00123, the initial calendar replacement is based on the cure date on the strap. Refer to Table 2 to find the expiration date.

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

- (23) Accelerated Life Limit: For all aircraft S/N 900-00008 thru 00124 that have incorporated Service Bulletin SB900-105 and all aircraft S/N 900-00125 thru subsequent, time in service is accumulated at an accelerated rate. To calculate the accelerated time in service, take the actual flight hours of the rotating swashplate and multiply by 1.07 to determine hours toward 7,285 life limit.

Example: 6,808 actual flight hours x 1.07 accelerated life factor equals 7,285 hours.