

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

H3WE Revision 22 MDHI (HUGHES) 369 (Army YOH-6A) 369A (Army OH-6A) 369H, 369HM, 369HS, 369HE 369D, 369E, 369F, 369FF 500N, 600N October 19, 2007
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TYPE CERTIFICATION DATA SHEET NO. H3WE

This data sheet, which is part of Type Certificate No. H3WE, prescribes conditions and limitations under which the Product for which the Type Certificate was issued meets the airworthiness requirements of the Civil Air Regulations and, where specified, the Federal Aviation Regulations.

Type Certificate Holder: MD Helicopters Inc. (MDHI)
 4555 E. McDowell Road
 Mesa, Arizona 85215-9734
 USA
 Phone: (480) 346-6231, datafax -6810

Type Certificate Ownership Record: McDonnell Douglas Helicopter Systems transferred ownership of TC H3WE to MD Helicopters Inc. on February 18, 1999.

1 Model 369 (Army YOH-6A) (Normal Category Helicopter), Approved June 30, 1964

See NOTE 4a regarding modifications required for conversion of Military Models.

Engine Rolls-Royce Corporation (formerly Allison Engine Company) 250-C10 (T63-A-5)

Fuel MIL-DTL-5624, Grade JP-4, and JP-5 Aviation Fuels
 MIL-DTL-83133 Grade JP-8 Aviation Fuel
 ASTM D-1655 Jet A, A-1 or Jet B
 ASTM D-6615 Jet B
 Chinese Specification GB6537-94 Grade RP-3
 See "Rotorcraft Flight Manual" for alternate fuels.
 See "Note 6" for Anti-Icing additive.
 See "Engine TCDS E4CE Note #9" for emergency use mixtures and limits.
 Note: Fuels containing Tri-cresyl-phosphate additives shall not be used.

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Engine Limits

Ratings

	Takeoff (5 min)	Max. Continuous
Shaft Horsepower	250	212
Torque	219 ft - lb (91%)	186 ft - lb (77%)
Gas Producer rpm, N ₁	52142 (102%)	52142 (102%)
Output Shaft rpm, N ₂	6180 (103%)	6180 (103%)
Measured Gas Temp.	1360°F (738°C)	1280°F (693°C)

Transient Limits

Measured Gas Temp. (6 sec. limit)	1550°F (843°C)
Measured Gas Temp. During Start (6 sec. limit)	1700°F (927°C)
Gas Producer rpm, N ₁ (15 Sec. limit)	52654 (103%)
Output Shaft rpm, N ₂ (15 Sec. limit)	6600 (110%) at Idle to 6300 (105%) at Takeoff

Note: Adequate cooling has been demonstrated to a 117°F day. Power and torque ratings and limits are indicated values. Actual values are 2.5 hp higher.

Rotor Limits and Engine
Operating Speeds

Power Off (Rotor)	Power On (Engine)
Maximum: 514 rpm	Maximum: 103% N ₂
Minimum: 400 rpm	Minimum: 99% N ₂

Airspeed Limits

V_{NE} (Never Exceed Speed) at sea level is 128 knots (148 mph) CAS. For reduction of V_{NE} with altitude, temperature, torque, and N₂, see FAA Approved Rotorcraft Flight Manual.

Center of Gravity
(C.G.) Range

Longitudinal: Sta. 97 to 104
Lateral: 3 inches right and left of helicopter centerline

Leveling Means

Plumb bob at Sta. 92.16

Maximum Weight

2100 lb. See NOTE 1 for weight and balance report.

Number of Seats

2 at Sta. 73.5, 2 at Sta. 105

Maximum Cargo

1350 lb. at 115 lb./sq. ft., Sta. 78.5 to 125

Fuel Capacity

Fuel System	Total Tank Capacity (lbs.)	Trapped Fuel * (lbs.)	Total Unusable Fuel ** (lbs.)	Usable Fuel Capacity (lbs.)	Tank Sump Location (Sta.)
369-8100	383	0.56	3.10	380	98.2

*Fuel which cannot be drained from the tanks, through the drain provided, with the helicopter in the normal ground attitude.

**Fuel which cannot be used safely in all flight attitudes, and which must be included in the empty weight. This includes trapped fuel.

Note: Fuel capacities are total tank capacities over and above unusable fuel. Fuel weights are based on JP-4 fuel.

Oil Capacity

Engine Oil (lb. at Sta. 122.5)	Transmission Oil (lb. at Sta. 103.5)
11.25	6.94

Note: Oil capacities are total tank capacities over and above trapped oil.

Maximum Operating Altitude 20,000 ft.

Main Rotor Blade Movements Collective pitch at 0.75R (Relative to rigging position):

6.5° up and down ($\pm 5^\circ$)

Cyclic pitch (Relative to rigging position):

forward	16°	($\pm 1^\circ$)
aft	8°	($\pm 1^\circ$)
left	7.25°	($\pm .75^\circ$)
right	6.25°	($\pm .75^\circ$)

Main Rotor Blade Damper Setting Torque to move the damper shaft through the low load stage:
240 in-lb. minimum; 300 in-lb. maximum

Tail Rotor Blade Movements

Collective pitch	thrust to right	+27°
	thrust to left	-12°

Manufacturer's Serial Numbers 0011 through 0015 when modifications specified in Hughes Report No. 369-X-0007 are incorporated.

See NOTE 4 for eligibility of Military Models.
See NOTE 5 for serial number coding.

Certification Basis CAR 6 dated December 20, 1956, including Amendments 6-1 through 6-4 and Special Conditions, "Conditions Establishing Compensating Factors Providing an Equivalent Level of Safety Under Civil Air Regulations, Section 6.10, for Light Turbine Powered Helicopters," dated October 2, 1962, except Condition 15a.

Type Certificate H3WE issued June 30, 1964.

Date of Application for Type Certificate: November 13, 1961.

Equipment The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. All required equipment that must be installed as well as optional equipment installations are listed in Hughes Report No. 369-E-5001, Model 369 Equipment List.

II - Model 369A (Army OH-6A) (Normal Category Helicopter). Approved August 24, 1966

See NOTE 4b regarding modifications required for conversion of Military Models.

Engine Rolls-Royce Corporation (formerly Allison Engine Company) 250-C10B (T63-A-5A)

Fuel MIL-DTL-5624, Grade JP-4, and JP-5 Aviation Fuels
MIL-DTL-83133 Grade JP-8 Aviation Fuel
ASTM D-1655 Jet A, A-1 or Jet B
ASTM D-6615 Jet B
Chinese Specification GB6537-94 Grade RP-3
See "Rotorcraft Flight Manual" for alternate fuels.
See "Note 6" for Anti-Icing additive.
See "Engine TCDS E4CE Note #9" for emergency use mixtures and limits.
Note: Fuels containing Tri-cresyl-phosphate additives shall not be used.

Engine Limits

Ratings applicable to S/N 0001 through 1445

	Takeoff (5 min)	Max. Continuous
Shaft Horsepower*	250	212
Torque*	219 ft-lb (75 psi)	186 ft-lb (63.5 psi)
Gas Producer rpm, N ₁	53165 (104%)	53165(104%)
Output Shaft rpm, N ₂	6180 (103%)	6180 (103%)
Measured Gas Temp.	1380°F (749°C)	1280°F (693°C)

*Power and torque ratings and limits are indicated values.
Actual values are 2.5 h.p. higher.

Ratings applicable to S/N 1446 and up, or S/N 0001 through 1445 when modified per NOTE 7

	Takeoff (5 min)	Max. Continuous
Shaft Horsepower	278	243
Torque	236 ft-lb (80.3 psi)	208 ft-lb (70 psi)
Gas Producer rpm, N ₁	53165 (104%)	53165 (104%)
Output Shaft rpm, N ₂	6240 (104%)	6240 (104%)
Measured Gas Temp.	1380°F (749°C)	1280°F (693°C)

Transient Limits applicable to S/N 0001 and up

Measured Gas Temp. (6 sec. limit)	1550°F (843°C)
Measured Gas Temp. During Start (10 sec. limit)	1700°F (927°C)
Gas Producer rpm, N ₁ (15 Sec. limit)	53676 (105%)
Output Shaft rpm, N ₂ (15 Sec. limit)	6600 (110%) at Idle to 6360 (106%) at Takeoff

Note: Adequate cooling has been demonstrated to a 117°F day.

Rotor Limits and Engine
Operating Speeds

S/N 0001 through 1445

Power Off (Rotor)	Power On (Engine)
Maximum: 514 rpm	Maximum: 103% N ₂
Minimum: 400 rpm	Minimum: 100% N ₂

S/N 1446 and up, or S/N 0001 through 1445 when modified per NOTE 7

Power Off (Rotor)	Power On (Engine)
Maximum: 514 rpm	Maximum: 104% N ₂
Minimum: 400 rpm	Minimum: 103% N ₂

Airspeed Limits

For S/N 0001 through 1445, V_{NE} (Never Exceed Speed) at sea level is 124 knots (143 mph) CAS. For S/N 1446 and up, or S/N 0001 through 1445 when modified per NOTE 7, V_{NE} (Never Exceed Speed) at sea level is 130 knots (150 mph) CAS. For reduction of V_{NE} with altitude and temperature, and doors off, see FAA Approved Rotorcraft Flight Manual.

Center of Gravity (C.G.) Range

Longitudinal: Sta. 97 to 104
Lateral: 3 inches right and left of helicopter centerline

Leveling Means

Plumb bob at Sta. 92.64

Maximum Weight

S/N 0001 through 1445: 2400-lb.
S/N 1446 and up: 2550 lb.
S/N 0001 through 1445 when modified per NOTE 7: 2550 lb.
See NOTE 1 for weight and balance report.

Number of Seats

2 at Sta. 73.5, 2 at Sta. 105

Maximum Cargo

950 lb. at 115 lb./sq. ft., Sta. 78.5 to 124

Fuel Capacity

Fuel System	Total Tank Capacity (lbs)	Trapped Fuel* * (lbs)	Total Unusable Fuel *** (lbs)	Usable Fuel Capacity (lbs)	Tank Sump Location (Sta)
369A8100	402	0.16	1.50	400	98.2
M30273 (Gravity filled)	359	0.73	2.91	356	98.3
M30273 (Pressure filled.)*	329	0.73	2.91	326	98.0

* Pressure refueling not permitted on civil helicopters

**Fuel, which cannot be drained from the tank through the drain, provided - with the helicopter in the normal ground attitude.

***Fuel which cannot be used safely in all flight attitudes, and which must be included in the empty weight. This includes trapped fuel.

Note: Fuel capacities are total tank capacities over and above unusable fuel. Fuel weights are based on JP-4 fuel.

Oil Capacity

Engine Oil (lb. at Sta. 138.2)	Transmission Oil (lb. at Sta. 105.5)
5.90	7.00

Note: Oil capacities are total tank capacities over and above trapped oil.

Maximum Operating Altitude See Rotorcraft Flight Manual.

Main Rotor Blade Movements Collective pitch (Relative to rigging position):

15.5° (±1.25°)

Cyclic pitch (Relative to rigging position):

forward	16°	(±1°)
aft	8.5°	(±.5°)
left	8.25°	(±1.25°)
right	6.25°	(±.75°)

Note: Collective low pitch stop to be established in accordance with RFM or HMI to obtain proper autorotation rpm.

Main Rotor Blade Damper Setting Torque to move the damper shaft through the low load stage:
265 in-lb., minimum; 325 in-lb. maximum

Tail Rotor Blade Movements

Collective pitch:	thrust to right	+28°	(+2°, -0°)
	thrust to left	-13°	(±1°)

Manufacturer's Serial Numbers 0001 and up

Model 369A helicopters serial numbers 1100 through 1445 and 1079A through 1080A have been manufactured under the Delegation Option Authorization provisions of FAR 21. Acting as Delegation Option Manufacturer Number WE-1, Hughes Tool Company, Aircraft Division, was authorized to issue Airworthiness Certificates for serial numbers noted above under the Delegation Option Authorization provisions of FAR 21.

See NOTE 5 for serial number coding.

Certification Basis

CAR 6 dated December 20, 1956, including Amendments 6-1 through 6-4 and Special Conditions, "Conditions Establishing Compensating Factors Providing an Equivalent Level of Safety Under Civil Air Regulations, Section 6.10, for Light Turbine Powered Helicopters," dated October 2, 1962, as revised February 8, 1966.

Type Certificate H3WE amended August 24, 1966.

Date of Application for Amended Type Certificate: August 19, 1965.

Equipment The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. All required equipment that must be installed as well as optional equipment installations are listed in Hughes Report No. 369-E-5002, Model 369A Equipment List.

- III - Model 369H (Normal Category Helicopter), Approved November 15, 1966
- Model 369HM (Normal Category Helicopter), Approved April 8, 1968
- Model 369HS (Normal Category Helicopter), Approved January 3, 1969
- Model 369HE (Normal Category Helicopter), Approved May 21, 1969

Engine Rolls-Royce Corporation (formerly Allison Engine Company) 250-C18A or 250-C18C
Alternate engine: Rolls-Royce Corporation (formerly Allison Engine Company) 250-C20

Note: Model 369HM, 369HS, and 369HE helicopters, S/N 0101 and up, are eligible for installation of the alternate engine when modified in accordance with Hughes Drawing M50031, Revision A, or later approved revision, including M50033.

Fuel MIL-DTL-5624, Grade JP-4, and JP-5 Aviation Fuels
MIL-DTL-83133 Grade JP-8 Aviation Fuel
ASTM D-1655 Jet A, A-1 or Jet B
ASTM D-6615 Jet B
Chinese Specification GB6537-94 Grade RP-3
See "Rotorcraft Flight Manual" for alternate fuels.
See "Note 6" for Anti-Icing additive.
See "Engine TCDS E4CE Note #9" for emergency use mixtures and limits.
Note: Fuels containing Tri-cresyl-phosphate additives shall not be used.

Engine Limits Ratings for 250-C18A or 250-C18C

	Takeoff (5 min)	Max. Continuous
Shaft Horsepower	278	243
Torque	236 ft-lb (80.3 psi)	208 ft-lb (70 psi)
Gas Producer rpm, N ₁	53165 (104%)	53165 (104%)
Output Shaft rpm, N ₂	6240 (104%)	6240 (104%)
Measured Gas Temp.	1380°F (749°C)	1280°F (693°C)

Transient Limits for 250-C18 or 250 C18C

Measured Gas Temp. (6 sec. limit)	1550°F (843°C)
Measured Gas Temp. During Start (10 sec. limit)	1700°F (927°C)
Gas Producer rpm, N ₁ (15 Sec. limit)	53676 (105%)
Output Shaft rpm, N ₂ (15 Sec. limit)	6600 (110%) at Idle to 6340 (105.7%) at Takeoff
Torque:	90 psi for 10 sec.
	100 psi for 3 sec.

Ratings for 250-C20

	Takeoff (5 min)	Max. Continuous
Shaft Horsepower	278	243
Torque	236 ft-lb (64.5 psi)	208 ft-lb (56 psi)
Gas Producer rpm, N ₁	53000 (104%)	53000 (104%)
Output Shaft rpm, N ₂	6240 (104%)	6240 (104%)
Measured Gas Temp.	1460°F (793°C)	1358°F (737°C)

Transient Limits for 250-C20

Measured Gas Temp. (6 sec. limit)	1550°F (843°C)
Measured Gas Temp. During Start (10 sec. limit)	1700°F (927°C)
Gas Producer rpm, N ₁ (15 Sec. limit)	53518 (105%)
Output Shaft rpm, N ₂ (15 Sec. limit)	6798 (113%) at Idle to 6497 (108.7%) at Takeoff
Torque	72 psi for 10 sec.
	80 psi for 3 sec.

Rotor Limits and Engine Operating Speeds

Limits and Speeds for 250-C18A or 250-C18C

Power Off (Rotor)	Power On (Engine)
Maximum: 514 rpm	Maximum: 104% N ₂
Minimum: 400 rpm	Minimum: 103% N ₂

Limits and Speeds for 250-C20

Power Off (Rotor)	Power On (Engine)
Maximum: 523 rpm	Maximum: 104% N ₂
Minimum: 400 rpm	Minimum: 103% N ₂

Airspeed Limits

V_{NE} (Never Exceed Speed) at sea level is 130 knots (150 mph) CAS. For reduction of V_{NE} with altitude, and temperature, see Rotorcraft Flight Manual.

Center of Gravity
(C.G.) Range

369H, 369HM, and 369HS; S/N 0001 through 0100

Longitudinal: Sta. 97 to 104

Lateral: 3 inches right and left of helicopter centerline

369HM, 369HS and 369HE; S/N 0101 and up

	Longitudinal		Lateral	
Gross Weight (lb.)	Forward (Sta.)	Aft (Sta.)	Left (in.)	Right (in.)
2401 to 2550	99	104	-3	+3
2201 to 2400	97	104	-3	+3
2001 to 2200	97	104	-3	+4
2001 to 2200	97	105	-1	+3
2000 or Below	97	104	-3	+5
2000 or Below	97	106	-1	+3

Note: Facing forward, + indicates right, and - indicates left of helicopter centerline.

Leveling Means

Plumb bob at Sta. 92.64

Maximum weight

369H, 369HM, and 369HS; S/N 0001 through 0100: 2400 lb.
369HM, 369HS, and 369HE; S/N 0101 and up: 2550 lb.

See NOTE 1 for weight and balance report.
See NOTE 8 for external cargo information.

Number of Seats

369H, 369HS, and 369HE: 1 at Sta. 71.5, 2 at Sta. 73.5, 2 at Sta. 105.
369HM: 2 at Sta. 73.5, 2 at Sta. 105.

Maximum Cargo

50 lb. evenly distributed in utility storage compartment at Sta. 55.

369H, 369HM, and 369HS; S/N 0001 through 0100:
950 lb. at 115 lb./sq. ft., Sta. 78.5 to 124

369HM, 369HS, and 369HE; S/N 0101 and up:
1300 lb. at 115 lb./sq. ft., Sta. 78.5 to 124

Fuel Capacity

Model and Applicable Serial Numbers	Total Tank Capacity (lbs.)	Trapped Fuel * (lbs.)	Total Unusable Fuel ** (lbs.)	Usable Fuel Capacity (lbs.)
369H - All S/Ns	416	1.40	3.40	413
369HM 0001 thru 0100M	402	0.16	1.50	400
0101M and up	402	0.16	2.50	399
369HS 0001S thru 0100S	416	1.40	3.40	413
0101S and up	416	1.40	3.70	412
369HE 0101E and up	416	1.40	3.70	412

*Fuel which cannot be drained from the tank through the drain provided - with the helicopter in the normal ground attitude

**Fuel which cannot be used safely in all flight attitudes, and which cannot be included in the empty weight. This includes trapped fuel.

Note: Fuel capacities are total tank capacities over and above unusable fuel. Fuel weights are based on JP-4 fuel.

Oil Capacity

Engine Oil (lb. at Sta. 138.2)	Transmission Oil (lb. at Sta. 105.0)
5.90	7.00

Note: Oil capacities are total tank capacities over and above trapped oil.

Maximum Operating Altitude See Rotorcraft Flight Manual.

Main Rotor Blade Movements Collective pitch (Relative to rigging position):

15.5° (± 1.25°)

Cyclic pitch (Relative to rigging position):

forward	16°	(±1°)
aft	8.5°	(±.5°)
left	8.25°	(±1.25°)
right	6.25°	(±.75°)

Note: Collective low pitch stop to be established in accordance with RFM or HMI to obtain proper autorotation rpm.

Main Rotor Blade
Damper Setting

Torque to move the damper shaft through the low load stage:

P/N	Minimum Torque (in - lb)	Maximum Torque (in - lb)
369A1400	265	325
369A1417	190	200
369ASK1939	190	200
369A1423	190	200

Tail Rotor Blade Movements

369A1620 Tail Rotor Assy. (aluminum blades)

Collective pitch	thrust to right	+27°	(±1°)
	thrust to left	-15°	(±1°)

369A1600 Tail Rotor Assy. (fiberglass blades)

Collective pitch	thrust to right	+28°	(+2°, -0°)
	thrust to left	-13°	(±1°)

Manufacturer's Serial Numbers

369H	0001 through 0005
369HM	0001 through 0004, 0005M and up
369HS	0001S and up
369HE	0001E and up

The following helicopters have been manufactured under Delegation Option Authorization provisions of FAR 21. Acting as Delegation Option Manufacturer Number WE-1, Hughes Tool Company, Aircraft Division, was authorized to issue Airworthiness Certificates for the following helicopters under the Delegation Option Authorization provisions of FAR 21.

369H	0001 through 0005	369HS:	0001S through 0002S
			0101S through 0130S
			0201S through 0289S
369HM	0001 through 0004	369HE	0101E through 0110E
	0005M through 0021M		0201E through 0215E
	0030M through 0054M 0201M through 0204M		

See NOTE 5 for serial number coding.

Certification Basis

CAR 6 dated December 20, 1956, including Amendments 6-1 through 6-4 and Special Conditions, "Conditions Establishing Compensating Factors Providing an Equivalent Level of Safety Under Civil Air Regulations, Section 6.10, for Light Turbine Powered Helicopters," dated October 2, 1962, as revised February 8, 1966.

Models 369H, 369HM, 369HS, and 369HE were approved under the Delegation Option Authorization provisions of FAR 21.

Type Certificate H3WE Amended:

368H	November 15, 1966	369HS	January 3, 1969
368HM	April 8, 1968	369HE	May 21, 1969

Dates of Application for Amended Type Certificate:

368H	September 8, 1965	369HS	August 12, 1968
368HM	February 16, 1968	369HE	August 12, 1968

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. All required equipment that must be installed as well as optional equipment installations are listed in the following Hughes Reports.

369H	369-E-5003	Model 369H Equipment List
369HM	369-E-5005	Model 369HM Equipment List

(S/N 0001 through 0004)

Engine Limits

Ratings for 250-C20B

	Takeoff (5 min)	Max. Continuous
Shaft Horsepower	375	350
Torque	318 ft. - lb. (87.2 psi)	297 ft. - lb.(81.3 psi)
Gas Producer rpm, N ₁	53519 (105%)	53519 (105%)
Output Shaft rpm, N ₂	6196 (103%)	6196 (103%)
Measured Gas Temp.	1490°F (810°C)	1360°F (738°C)

Ratings for 250-C20 R/2

	Takeoff (5 min)	Max. Continuous
Shaft Horsepower	375	350
Torque	318 ft. - lb. (87.2 psi)	297 ft.- lb. (81.3 psi)
Gas Producer rpm, N ₁	53519 (105%)	53519 (105%)
Output Shaft rpm, N ₂	6196 (103%)	6196 (103%)
Measured Gas Temp.	1490°F (810°C)	1385°F (752°C)

Transient Limits for 250-C20B or 250-20R/2

Measured Gas Temp. (6 sec. limit)	1490°F (810°C) 1550°F (843°C) - C20B only 1650°F (899°C) - C20R/2 only
Measured Gas Temp. During Start (10 sec. limit)	1490°F (810°C) to 1700°F (927°C) (1 Sec. 1700°F)
Gas Producer rpm, N ₁ (15 Sec. limit)	54028 (106%)
Output Shaft rpm, N ₂ (15 Sec. limit)	6798 (113%) at Idle to 6316 (105%) at Takeoff

Rotor Limits and Engine
Operating Speeds

Limits and Speeds for 250-C20B or 250-C20R/2

Power Off (Rotor)	Power Off (Rotor)
Maximum: 523 rpm	Maximum: 492 rpm/103 % N ₂
Minimum: 410 rpm*	Minimum: 487 rpm / 102% N ₂

*Minimum with 4-bladed tail rotor installed: 415 rpm

Airspeed Limits

V_{NE} (Never Exceed Speed) at sea level is 152 knots (175 mph) CAS. For reduction of V_{NE} with altitude and temperature:

The 369D autorotation V_{NE} at sea level is 127 knots (146 mph) CAS.

The 369E autorotation V_{NE} at sea level is 130 knots (150 mph) CAS.

Center of Gravity (C.G.) Range

	Longitudinal		Lateral	
	Forward (Sta.)	Aft* (Sta.)	Left (in.)	Right (in.)
Gross Weight (lb.)				
3000	99	103	-3	+3
1538	99	107.4	-3	+3

*Varies linearly between points shown.

NOTE: Facing forward, + indicates right, and - indicates left of helicopter centerline.

Leveling Means

Plumb bob at Sta. 92.64

Maximum weight

3000 lb. See NOTE 1 for weight and balance report.

See NOTE 8 for maximum weight of 369D (Restricted Category Helicopter).

Number of Seats

1 at Sta. 71.5, 2 at Sta. 73.5, 2 at Sta. 105 for basic configuration Only.

Maximum Cargo

1300 lb. at 115 lb./sq. ft., Sta. 78.5 to 124.

See NOTE 8 for external cargo information.

Fuel Capacity

Fuel System	Total Tank Capacity (lbs.)	Trapped Fuel * (lbs.)	Total Unusable Fuel ** (lbs.)	Usable Fuel Capacity (lbs.)
369A8100	416	0	12.5	403
369H90029 (self sealing)	402	0	12.5	389

*Fuel which cannot be drained from the tanks through the drain provided - with the helicopter in the normal ground attitude.

**Fuel which cannot be used safely in all flight attitudes, and which must be included in the empty weight. This includes trapped fuel.

Note: Fuel capacities are total tank capacities over and above unusable fuel. Fuel weights are based on JP-4 fuel.

Oil Capacity

Engine Oil (lb. at Sta. 133.3)	Transmission Oil (lb. at Sta. 105.0)
6.00	11.60

Note: Oil capacities are total tank capacities over and above trapped oil.

Maximum Operating Altitude

16,000 ft. density altitude.

Main Rotor Blade Movements

Collective pitch (Relative to rigging position):

up and down 14.25° to 18.0°

Cyclic pitch (Relative to rigging position):

forward	17° to 18.5°
aft	7° to 9.3°
left	7° to 9.3°
right	5.5° to 8.5°

Tail Rotor Blade Movements

369D21600 Tail Rotor Assembly (2-bladed)

Collective pitch	thrust to right	27° to 27°
	thrust to left	-13° to -15°

369D21610 Tail Rotor Assembly (4-bladed)

Collective pitch	thrust to right	31° to 32°
	thrust to left	-13° to -15°

Horizontal Stabilizer Incidence

8.92° to 9.42° measured relative to a line perpendicular to the main rotor mast centerline.

Manufacturer's Serial Numbers

369D	0003 and up
369E	0001 and up

See NOTE 4c for serial numbers not eligible.

See NOTE 5 for serial number coding.

Certification Basis

CAR 6 dated December 20, 1956, including Amendments 6-1 through 6-4 and Special Conditions, "Conditions Establishing Compensating Factors Providing an Equivalent Level of Safety Under Civil Air Regulations, Section 6.10, for Light Turbine Powered Helicopters," dated October 2, 1962, as revised February 8, 1966.

Type Certificate H3WE amended:

369D	December 8, 1976
369D	(Restricted Category): November 28, 1979
369E	December 15, 1982

Dates of Application for amended Type Certificate:

369D	May 30, 1974
369D	(Restricted Category): November 26, 1979
369E	December 10, 1982

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. All required equipment that must be installed as well as optional equipment installations are listed in Hughes Reports:

369D	369-E-5008	Model 369D Equipment List
369E	369-E-5009	Model 369E Equipment List

FAA Approved Rotorcraft Flight Manuals

369D	dated December 8, 1976
369E	dated November 23, 1982

V - Model 369F (Normal Category Helicopter), Approved July 29, 1983
Model 369FF (Normal Category Helicopter), Approved July 11, 1985

See NOTE 11 for conversion of 369F to 369FF.
See NOTE 14 for noise characteristics.
See NOTE 15 for conversion of Model 369E to Model 369FF.

Engine

Rolls-Royce Corporation (formerly Allison Engine Company) 250-C30

Fuel

MIL-DTL-5624, Grade JP-4, and JP-5 Aviation Fuels
MIL-DTL-83133 Grade JP-8 Aviation Fuel
ASTM D-1655 Jet A, A-1 or Jet B
ASTM D-6615 Jet B
Chinese Specification GB6537-94 Grade RP-3
See "Rotorcraft Flight Manual" for alternate fuels.
See "Note 6" for Anti-Icing additive.
See Engine TCDS E1GL Note #10 for emergency use mixtures and limits.
Note: Fuels containing Tri-cresyl-phosphate additives shall not be used.

Engine Limits

Ratings for 369F

	Takeoff (5 min)	Max. Continuous
Shaft Horsepower	375	350
Torque	327.4 ft. - lb. (52.5 psi)	305.6 ft. - lb. (48.9 psi)
Gas Producer rpm, N ₁	53550 (105%)	53550 (105%)
Output Shaft rpm, N ₂	6016 (100%)	6016 (100%)
Measured Gas Temp.	1414°F (768°C)	1281°F (694°C)

Ratings for 369FF

	Takeoff (5 min)	Max. Continuous
Shaft Horsepower	425*	350
Torque	321.0 ft. - lb.* (59.6 psi)	305.6 ft. - lb. (48.9 psi)
Gas Producer rpm, N ₁	53550 (105%)	53550 (105%)
Output Shaft rpm, N ₂	6016 (100%)	6016 (100%)

Measured Gas Temp.	1414°F (768°C)	1281°F (694°C)
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*0 to 50 KIAS

Transient Limits for 369F and 369FF

Measured Gas Temp. During Start and shutdown (10 sec. limit)	1518°F (826°C) to 1700°F (927°C) (1 sec. at 1700 F)
During Power Change in Flight	1518°F (826°C) to 1625°F (885°C)
Gas Producer rpm, N ₁ (10 sec. limit)	54060 (106%)
Output Shaft rpm, N ₂ (10 sec. limit)	6377 (106%)

Rotor Limits and Engine Operating Speeds

Power Off (Rotor)	Power On (Engine)
Maximum: 508 rpm	Maximum: 477 rpm / 100% N ₂
Minimum: 410 rpm	Minimum: 473 rpm / 99% N ₂

Airspeed Limits

V_{NE} (Never Exceed Speed) at sea level is 152 knots (175 mph) CAS. For reduction of V_{NE} with altitude, and temperatures Rotorcraft Flight Manual. Autorotation V_{NE} at sea level is 127 knots (146) CAS.

Center of Gravity (C.G.) Range

	Longitudinal			Lateral	
Gross Weight (lb.)	Forward *(Sta.)	Aft** (Sta.)	Gross Weight (lb.)	Left *** (in.)	Right *** (in.)
3100	99	103.3	3100	-3	+3
2600	99	104.8	2000	-3	+3
1700	101.7	107.5	1700	-1.7	+1.7

*Varies linearly between 2600 lb. and 1700 lbs.

**Varies linearly between 3100 lb. and 1700 lbs.

***Varies linearly between 2000 lb. and 1700 lbs.

Note: Facing forward, + indicates right, and - indicates left of helicopter centerline.

Leveling Means

Plumb bob at Sta. 92.64

Maximum Weight

3100 lb. See NOTE 1 for weight and balance report.

Number of Seats

1 at Sta. 71.5, 2 at Sta. 73.5, 2 at Sta. 105 for basic configuration only.

Maximum Cargo

1300 lb. at 115 lb./sq. ft., Sta. 78.5 to 124

See NOTE 8 for external cargo information.

Fuel Capacity

Fuel System	Total Tank Capacity (lb.)	Trapped Fuel * (lb.)	Total Unusable Fuel ** (lb.)	Usable Fuel Capacity (lb.)
369A8100	416	0	12.5	403
369H90029 (self sealing)	402	0	12.5	389

*Fuel, which cannot be drained from the tanks, through the drain, provided, with the helicopter in the normal ground attitude.

**Fuel which cannot be used safely in all flight attitudes, and which must be included in the empty weight. This includes trapped fuel.

Note: Fuel capacities are total tank capacities over and above unusable fuel. Fuel weights are based on JP-4 fuel.

Oil Capacity

Engine Oil (lb. at Sta. 133.3)	Transmission Oil (lb. at Sta. 105.0)
6.00	11.60

Note: Oil capacities are total tank capacities over and above trapped oil.

Maximum Operating Altitude 16,000 ft. density altitude.

Main Rotor Blade Movements Collective pitch (Relative to rigging position):

up and down 14.25° to 18.0°

Cyclic pitch (Relative to rigging position):

forward	17° to 18.5°
aft	7° to 9.3°
left	7° to 9.3°
right	5.5° to 8.5°

Tail Rotor Blade Movements 369D21600 Tail Rotor Assembly (2-blades)

Collective pitch	thrust to the right	27° to 29°
	thrust to the left	-13° to -15°

Horizontal Stabilizer Incidence 7.50° to 8.00° measured relative to a line perpendicular to the main rotor mast centerline.

Manufacturer's Serial Numbers

369F	0003 and up
369FF	0001 thru 0599 0600 thru 0699 (369E conversion with pre-generic wiring) 0700 and up (369E conversion with generic wiring)

See NOTE 4c for serial numbers not eligible.

See NOTE 5 for serial number coding.

Certification Basis

CAR 6 dated December 20, 1956, including Amendments 6-1 through 6-4 and Special Conditions, "Conditions Establishing Compensating Factors Providing an Equivalent Level of Safety Under Civil Air Regulations, Section 6.10, for Light Turbine Powered Helicopters," dated October 2, 1962, as revised February 8, 1966, and FAR 21.21 providing for equivalent level of safety in lieu of CAR 6.412.

Type Certificate H3WE amended

369F	July 26, 1983
369FF	July 11, 1985

Dates of Application for amended Type Certificate

369F	January 7, 1983
369FF	June 6, 1985

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. All required equipment that must be installed as well as optional equipment installations are listed in Hughes Reports:

369F	369-E-5010	Model 369F Equipment List
369FF	369-E-5011	Model 369FF Equipment List

FAA Approved Rotorcraft Flight Manuals

369F	dated July 29, 1983	
369FF	dated July 11, 1985	reissued October 25, 1985

VI - Model 500N (Normal Category Helicopter), Approved September 12, 1991

See NOTE 14 for noise characteristics.

Engine

Rolls-Royce Corporation (formerly Allison Engine Company) 250-C20R/2

Fuel

MIL-DTL-5624, Grade JP-4, and JP-5 Aviation Fuels
MIL-DTL-83133 Grade JP-8 Aviation Fuel
ASTM D-1655 Jet A, A-1 or Jet B
ASTM D-6615 Jet B
Chinese Specification GB6537-94 Grade RP-3
See "Rotorcraft Flight Manual" for alternate fuels.
See "Note 6" for Anti-Icing additive.
See "Engine TCDS E4CE Note #9" for emergency use mixtures and limits.
Note: Fuels containing Tri-cresyl-phosphate additives shall not be used.

Engine Limits

Ratings

	Takeoff (5 min)	Max. Continuous
Shaft Horsepower	425	375
Torque	371.0 ft. - lb. (101.8 psi)	327.4 ft. - lb. (89.8 psi)
Gas Producer rpm, N ₁	53519 (105%)	53519 (105%)
Output Shaft rpm, N ₂	6016 (100%)	6016 (100%)
Measured Gas Temp.	1490°F (810°C)	1385°F (752°C)

Transient Limits for 250-C20B or 250-C20R/2

Measured Gas Temp. (6 sec. limit)	1490°F (810°C) to 1650°F (899°C)
Measured Gas Temp. During Start (10 sec. limit)	1490°F (810°C) to 1700°F (927°C) (1 Sec. 1700°F)
Gas Producer rpm, N ₁ (15 Sec. limit)	55028 (106%)
Output Shaft rpm, N ₂ (15 Sec. limit)	6798 (113%) at Idle to 6316 (105%) at Takeoff

Rotor Limits and Engine
Operating Speeds

Power Off (Rotor)	Power On (Engine)
Maximum: 508 rpm	Maximum: 477 rpm / 100% N ₂
Minimum: 410 rpm	Minimum: 473 rpm / 99% N ₂

Airspeed Limits

V_{NE} (Never Exceed Speed) at sea level is 152 knots (175 mph) CAS. For reduction of V_{NE} with altitude, and temperature see Rotorcraft Flight Manual.

Autorotation V_{NE} at sea level is 130 knots (149 mph) CAS.

Center of Gravity (C.G.) Range

Longitudinal			Lateral		
	Forward * (Sta.)	Aft** (Sta.)		Gross Weight Weight	left*** (in.)
3350	99	105.5	3350	-3	+3
2600	99	107.8	2000	-3	+3
1796	101.4	110.3	1796	-2.2	+2.2

*Varies linearly between 2600 lbs. and 1796 lbs.

**Varies linearly between 3350 lbs. and 1796 lbs.

***Varies linearly between 2000 lbs. and 1796 lbs.

Note: Facing forward, + indicates right, and - indicates left of helicopter centerline.

Leveling Means

Plumb bob at Sta. 92.64

Maximum weight

3350 lb. See NOTE 1 for weight and balance report.

Number of seats 1 at Sta. 71.5, 2 at Sta. 73.5, 2 at Sta. 105.

Maximum Cargo 1300 lb. at 115 lb./sq. ft., Sta. 78.5 to 124.
See NOTE 8 for external cargo information.

Fuel Capacity

Fuel System	Total Tank Capacity (lb.)	Trapped Fuel* (lb.)	Total Unusable Fuel** (lb.)	Usable Fuel Capacity (lb.)
369A8100	416	0	12.5	403
369H90029 (self sealing)	402	0	12.5	389

* Fuel which cannot be drained from the tanks, through the drain provided, with the helicopter in the normal ground attitude.

** Fuel which cannot be used safely in all flight attitudes and which must be included in the empty weight. This includes trapped fuel.

Note: Fuel capacities are total tank capacities over and above usable fuel. Fuel weights are based on JP-4 fuel.

Oil Capacity

Engine Oil (lb. at Sta. 133.3)	Transmission Oil (lb. at Sta. 105.0)
6.00	11.60

Note: Oil capacities are total tank capacities over and above trapped oil.

Maximum Operating Altitude 20,000 ft. density

Main Rotor Blade Movements Collective pitch (Relative to rigging position):

up and down 14.25° to 18.0°

Cyclic pitch (Relative to rigging position):

forward	17° to 18.5°
aft	7° to 9.3°
left	7° to 9.3°
right	5.5° to 8.5°

Fan Blade Movements

500N5010 NOTAR Fan Installation

Minimum	26° ±1° (Rig Position)
Full Right Pedal	52° ±2°
Full Left Pedal	71° ±2°

Horizontal Stabilizer Incidence -1.9° nose down with respect to waterline plane

Vertical Stabilizer Movements

	Left Vertical*	Right Vertical**
Leading Edge Left***	-6.5° ± 0.5°	-4.0° ± 0.5°
Leading Edge Right***	+22.5° ± 0.5°	+8.0° ± 0.5°
Travel, minimum linear in. at trailing edge	6.46	2.70

*Connected to directional control system.

**Connected to yaw SAS.

***Relative to rigging position.

Manufacturer's Serial Numbers LN001 and up

See NOTE 5 for serial number coding.

Certification Basis

CAR 6 dated December 20, 1956, including Amendments 6-1 through 6-4 and Special Conditions, "Conditions Establishing Compensating Factors Providing an Equivalent Level of Safety Under Civil Air Regulations, Section 6.10, for Light Turbine Powered Helicopters," dated October 2, 1962, as revised February 8, 1966. In addition, height velocity testing is required to 7000 feet, in accordance with paragraphs 6.111 and 6.116, as amended by Amendment 6-7, issued October 8, 1963.

FAR 27 sections listed below are applicable to the NOTAR system

Regulations	Amendments
27.143* (a), (b), (c), (d), (e)	27-21
27.399	27-1
27.571	27-18
27.605 (b)	27-16
27.672**	27-21
27.927 (b)	27-12
27.1529	27-18

*Replaces CAR 6.121 (a), (b), (c), (e)

**Applicable to the yaw stability augmentation system.

FAR 36, through Amendment 36-18.

Type Certificate H3WE amended September 12, 1991.

Date of Application for amended Type Certificate: July 11, 1988

Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. All required equipment that must be installed as well as optional equipment installations are listed in MDHC Report No. 500N-CE-0059, Model 500N Basic Weight Checklist.

FAA Approved Rotorcraft Flight Manual - 500N, dated September 12, 1991

VII. Model 600N (Normal Category Helicopter) Approved May 15, 1997

Aircraft Type Designator (FAA & ICAO) HU60

Engine Rolls-Royce Corporation (formerly Allison Engine Company) 250-C47M

Fuel MIL-DTL-5624, Grade JP-4, and JP-5 Aviation Fuels
MIL-DTL-83133 Grade JP-8 Aviation Fuel
ASTM D-1655 Jet A, A-1 or Jet B
ASTM D-6615 Jet B
Chinese Specification GB6537-94 Grade RP-3
See "Rotorcraft Flight Manual" for alternate fuels.
See "Note 6" for Anti-Icing additive.
See "Engine TCDS E1GL Note #10" for emergency use mixtures and limits.
Note: Fuels containing Tri-cresyl-phosphate additives shall not be used.

Engine Oil Engine oil conforming to MIL-PRE-7808G or MIL-PRE-23699 and subsequent revisions are authorized for use. See Rolls-Royce Corporation (formerly Allison Engine Company) Operation and Maintenance Manual, CSP21004 (latest revision), for approved oil manufacturers.

Engine Limits Ratings

	Takeoff (5 min.)	Max. Continuous
Shaft Horsepower	600 shp	530 shp
Torque	524 ft-lb. (600 Q ⁽³⁾)	463 ft-lb. (530 Q ⁽³⁾)
Gas Producer rpm (N1)	53,550 (105%)	53,550 (105%)
Output Shaft and Power Turbine rpm (N2)	(Same as Continuous.)	6858 rpm output shaft, 34,941 rpm power turbine (114%) ⁽²⁾ at autorotation torque varying linearly to 6443 rpm output shaft, 32,826 rpm power turbine (107.1%) at 590 ⁽¹⁾ ft-lbs torque.
Turbine Outlet Temp.	1435°F (779°C)	1340°F (727°C) less than 10,000 ft. pressure altitude. 1256°F (680°C) 10,000 ft. pressure altitude or greater.

Transient Limits

Condition	Time Limit	Parameter Limit
Torque	10 seconds	576 ft-lbs (660 Q ⁽³⁾)

Turbine Outlet Temp (TOT)

Start and Shutdown	10 seconds	1550°F (843°C) to but not including 1700°F (927°C)
Start and Shutdown	1 second	1700°F (927°C)
During Power Change in Flight	12 seconds	1435°F (779°C) to 1662°F (905°C)
Gas Producer rpm, N1	10 seconds	54060 rpm, 106 %
Output Shaft and Power Turbine rpm, N2	15 seconds	7159 rpm output shaft, 36,474 rpm power turbine (119%) ⁽²⁾ at autorotation torque varying linearly to 6557 rpm output shaft, 33,409 rpm power turbine (109%) at 590 ⁽¹⁾ ft-lbs torque.

⁽¹⁾Note: Aircraft torque limit is 524 ft-lbs.

⁽²⁾Note: Aircraft Rotor RPM limit is 106.4%.

⁽³⁾Note: Torque Unit.

Rotor Limits and Engine Operating Speeds

Power Off (Rotor/Engine)	Power On (Rotor/Engine)
Maximum - 506 rpm (106.4%)	Maximum - 480.1 rpm/101% ⁽³⁾ N ₂
Minimum - 428 rpm (90%)	Minimum - 470.6 rpm/99% ⁽³⁾ N ₂

⁽³⁾Note: ECU Governs Rotor RPM between 99.25% and 100.75%

Airspeed Limits

V_{NE} (Never Exceed Speed) power-on at sea level is 155 knots (178 mph) IAS for 3600 lbs. or less internal gross weight; 145 knots (167 mph) IAS for 3601 lbs. to 3800 lbs. internal gross weight; 135 knots (156 mph) IAS for 3801 lbs or more internal gross weight. V_{NE} power-off (autorotation) at sea level is 115 knots (132 mph) IAS. For reduction of V_{NE} with altitude and temperature, see FAA approved Rotorcraft Flight Manual.

Center of Gravity

See FAA approved Rotorcraft Flight Manual for variation of CG limit with gross weight, nominal limits are 91.0 to 100.0 longitudinal, -5.0 to +5.0 lateral.

Leveling Means

Plumb bob at sta. 81.54

Maximum Weight

4,100 lbs. (1860 kg) at sea level. See RFM for variation of maximum weight with density altitude. See NOTE 16 for weight and balance report.

Minimum Crew

1 (pilot)

Maximum Occupants

8 (includes crew)

Maximum Cargo

1350 lbs. at 115 lb. / sq. ft., sta. 48.5 to 124.0
612 kg at 561.5 kg / sq. meter, sta 48.5 to 124.0

Outside Air Temp. Limits -40° to + 51.9° C (-40° to +125°F)
(OAT at Sea Level See RFM for variation at altitude)

Engine Cold Start Limits -40°C (-40°F)

Fluid Capacity

		Liters	Imp. Gals	U.S. Gals
Fuel	Usable	433.8	95.5	114.6
	Unusable	6.1	1.3	1.6
	Total	439.9	96.8	116.2
Main Trans. Oil	Total	6.62	1.46	1.75
Hydraulic Fluid (Rotor Brake)	Total	0.118	0.026	0.031
Engine Oil	Total	2.95	0.65	0.78

Maximum Operating Altitude 20,000-ft. density altitude, 18,700 ft. pressure altitude with JP-4 or Jet B, or 20,000 ft. pressure altitude with Jet A, Jet A-1, JP-5, or JP-8 whichever is lower.

Main Rotor Blade Movements

Collective Pitch (relative to rigging position):

up to down	17.1° to 21.6°
------------	----------------

Cyclic (relative to rigging position):

forward	18.2° to 19.7°
aft	11.5° to 13.5°
left	7.6° to 9.6°
right	5.2° to 7.2°

Fan Blade Movements

Minimum	26° ± 1°
Full Right Pedal	54° ± 2°
Full Left Pedal	73° ± 2°

Horizontal Stabilizer Incidence -1.9° nose down with respect to waterline plane.

Vertical Stabilizer Movements

Vertical Stabilizers (relative to rigging position):

	Left	Right
Leading Edge Left	-10.5° ± .5°	-14.5° ± .5°
Leading Edge Right	+23.5° ± 1°	+19.5° ± 1°
Travel, minimum linear inches at trailing edge	7.1 inches	7.1 inches

Certification Basis

FAR 27, dated October 2, 1964, through Amendment 27-30 with the following deviations:

27.562 and 27.863 excluded (earlier models did not have these requirements);
 27.561 at Amendment 27-24;
 27.607 at Amendment 27-3;
 27.785 at Amendment 27-20;
 27.1325 at Amendment 27-12.

High Intensity Electromagnetic Radiation Fields (H.I.R.F.) protection, Special Condition per FAR 21.16 effective January 29, 1997, as published in the Federal Register FR 66, Page No. 4134, dated January 29, 1997. FAR 36, Appendix J, Amendment 36-21. Equivalent safety finding for compliance to 27.1549(b) for the N1 gage.

Manufacturer's Serial Numbers

S/N RN003 and subsequent
 See "Note 5" for serial number coding.

Required Equipment

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the helicopter for certification. In addition, the following items of equipment are required:

Approved Flight Manual CSP-600NRFM-1 or latest FAA approved revision

Approved Publications

Approved Flight Manual CSP-600NRFM-1 or latest FAA approved revision.

Airworthiness Limitation Section (ALS) Section 04-00-00 of the MDHI Model Helicopters Model 600N Basic Handbook of Maintenance Instructions (CSP-600HMI-2)

Data Pertinent to all Models

Datum

100 inches forward of main rotor centerline.

Other Operating Limitations

See Rotorcraft Flight Manual.
 See NOTE 2 for required placards.

Service Life Limits

See NOTE 3 for list of life limited components for 369, 369A, 369H, 369HM, 369HS, 369HE, 369D, 369E, 369F, and 369FF aircraft manufactured on or before June 20, 1991.

See Airworthiness Limitations Section of HMI for the life limited components for 369D, 369E, 369F, and 369FF aircraft manufactured after June 20, 1991.

See Airworthiness Limitations Section of HMI for the life-limited components for 500N and 600N aircraft.

Production Basis

Production Certificate No. 410NM was utilized through February 18, 1999 for the 369, 369A, 369H, 369HM, 369HS, 369HE, 369D, 369E, 369F, 369FF, 500N, and 600N helicopters.

Effective February 18, 1999 the Type Certificate (TC) No. H3WE was transferred to MD Helicopters Inc. (MDHI), the new TC holder. MDHI has licensed back to McDonnell Douglas Helicopter Company (MDHC) to build the 369E, 369FF, 500N, and 600N helicopters under a new Production Certificate No. 714NM. Effective February 19, 1999 the following serial number helicopters were built under PC 714NM.

369E	0542 and 0543
369FF	0134 through 0137
500N	LN086 through LN089
600N	RN047, RN052 and RN054

On November 5, 1999 MD Helicopters, Inc. received Production Certificate PC 715NM under which MDHI was authorized to manufacture the 369E, 369FF, 500N and 600N helicopters. Effective November 5, 1999 the following serial number helicopters and subsequent will be built under PC715NM.

369E	0544 and subsequent
369FF	0138 and subsequent
500N	LN090 and subsequent
600N	RN053, RN055 and subsequent

NOTE 1.

A current weight and balance report, including a list of equipment included in certificated empty weight and loading instructions, must be provided for each helicopter at the time of original airworthiness certification and at all times thereafter, except in the case of operators having an approved weight control system.

NOTE 2.

The following placard must be installed in clear view of the pilot:

"This Helicopter must be operated in compliance with the operating limitations specified in the Rotorcraft Flight Manual."

For additional placards, see Rotorcraft Flight Manual.

NOTE 3.

Information essential to the proper maintenance of these helicopters is contained in the Manufacturer's Handbook of Maintenance Instructions (HMI) which is provided with each helicopter. These handbooks specify that Service Life Limited parts are retired according to an FAA approved schedule. These values of retirement or service life cannot be increased without approval by FAA engineering.

For Models 369D, 369E, 369F, and 369FF aircraft manufactured after June 20, 1991, see the Airworthiness Limitations Section of the HMI for the Limited Life Schedule.

For Model 500N and 600N aircraft see the Airworthiness Limitations Section of the HMI for the Limited Life Schedule.

Model Applicability Codes for Aircraft Manufactured on or Prior to June 20, 1991

- A - Model 369
For a list of critical parts and life limits contact:
Federal Aviation Administration
Manager Los Angeles Aircraft Certification Office
3960 Paramount Boulevard
Lakewood, California 90712-4137
- B - Model 369A; S/N 0001 through 1445 without M30242 Kit; and Models 369H, 369HM, 369HS; S/N 0001 through 0100 with Rolls-Royce Corporation (formerly Allison Engine Company) 250-C18A or 250-C18C engine.
- C - Model 369A; S/N 1446 and up or S/N 0001 through 1445 with M30242 Kit; and Models 369HM, 369HS, and 369HE; S/N 0001 and up with Rolls-Royce Corporation (formerly Allison Engine Company) 250-C18A or 250-C18C engine, unless otherwise noted.
- D - Model 369H, 369HM, 369HS; S/N 0101 and up with Rolls-Royce Corporation (formerly Allison Engine Company) 250-C20 engine, unless otherwise noted.
- E - Model 369D; S/N 003 and up, Model 369E S/N 0001 and up, Model 369F S/N 0003 and up and Model 369FF S/N 0001 and up, unless otherwise noted.

Limited Life Schedule

Applicability: <u>Component</u> see Note (1)	B, C, D Part Number (5)	B Hours /TE (11)	C Hours /TE (11)	D Hours /TE (11)	E Part Number (5)	E Hours /TE (11)
Folding pin, main rotor	369A1004	5760	5760	5760	369A1004-BSC 369A1004-3 369A1004-5	2850 2850 7600
Blade, main rotor(7) S/N 0001 to 3499	369A1100-501	1655	1570	1570		
S/N 3500 & Sub A000 & Sub	369A1100-501	2440	2440	2440		
S/N 3500 & Sub A000 & Sub	369A1100-503	2440	2440	2440		
S/N 3500 & Sub A000 & Sub	369A1100-505	2440	2440	2440		
S/N D139 thru D203, D209 thru D223	369A1100-507	1,750 /10,600 TE (11) 2440	1,750 /10,600 TE (11) 2440	1,750 /10,600 TE (11) 2440		
S/N 3500 & Sub	369A1100-511	3500	3500	3500		
Blade, main rotor 369D & 369E blades except listed below:					369D21100	3530
S/N H664, H665, H667, H669, H671, H672, H674, H676, H679, H680, H683, thru H724, H726 thru H999 & J000 thru J039, J041 thru J055					369D21100-517	2,500 /15,000 TE (11)
Blade, main rotor 369F & 369FF except blades listed below					369D21102	3430
S/N 1976 thru 2100, 2106 thru 2115					369D21102-517	2500 /15,000 TE (11)
Hub sub-assy., main rotor	369A1201	8900	8900	8900	369D21201	8,900
Pitch housing, main rotor	369A1300	6200	6200	6200	369D21300	9100
369A (Military use only)	369D21300- 501	6200	6200			
Retention straps, main rotor(2)	369A1210	2774(2)	2774(2)	2774(2)	369D21210(2)	2770(2)
Vertical hinge pin, main rotor	369A1220 369D21220	5490 5490	4220 4220	4220 4220	369A1220 369D21220	6120 6120
Vertical hinge links, main rotor	369A1234	2860	2650	2650		
	369H1203- BSC, -21, and - 31	6396	6396	6396	369H1203-BSC, - 21, and -31	5762
	369H1203-51, and -61	10600	10600	10600	369H1203-51, and -61	11080
Mast assy., main rotor	369A2014 369D22014	5710 5710	5710 5710	5710 5710	369D22014	10450

Lead-Lag Damper					369D21400-501	6060
					369D21400-503	(9)
					M50452	(9)
369A (Military use only) *With 369D21300-501 pitch housing	369D21400-503	*(9)	(9)			
Long. Idler bellcrank					369A7301	6500
Long. mixer bellcrank					369A7603	13600
Driveshaft, main rotor	369A5500 369A5520	6500 1990	3960 1740	3960 1300		
369D & 369E					369D25510	5020
369F & 369FF					369D25510	3675
Driveshaft, Main trans. (Bendix)	369A5510	3700	3700	3700	369A5510	3790
Driveshaft coupling, main trans.					369H5660	4300
Blade, tail rotor (fiberglass)	369A1710 369A1607	2861 2861	2861 2861			
Blade, tail rotor (Aluminum) (10)	369A1613- BSC, -3, -501, -503, -505, - 507, and -509	5600	5600	5600		
369D & 369E					369D21613	5200
					369D21613-11 -31, -41, & -51	5140
369F & 369FF					369D21606	5140
Blade, tail rotor (4-blade). 369D & 369E only					369D21615	10000
Driveshaft, tail rotor 369F & 369FF	369A5518	8730	8730	8730	369D25518 369DSK152-11 369D25518-503	13900 13900 14610
Gearshaft, tail rotor input assy.(1)	369A5406	1800	1800	1800		
Gearshaft, tail rotor output assy.(1)	369A5406	2940	2940	2940		
Input Gearshaft assembly, tail rotor(1) 369F, 369FF	369A5425* *Except 369A5425-5, which is replaced "on condition".	1800	1800	1800	369D25434 369D25434	12000 3365
Output Gearshaft assembly, tail rotor					369D25430	7290
Strap assembly tail rotor *When installed with fiberglass tail rotor blades, P/N 369A1710- BSC, -9, -11, -13, or 369A1607-BSC	369A1706 369A1706*	5100 3250	5100 3250	5100 3250	369A1706	5100
Hub assy., tail rotor					369A1725	3450

Tailboom(6)	369A3500	2674	2450		369D3500	10300
369A & 369HM		2674	2177			
Except: 369A & 369HM with 369A1620 tail rotor		1800	1800	1800		
369HS & 369HE with 369A1620 tail rotor		2030	2030	2030		
369H, 369H, 369HM, 369HS, & 369HE	369A3500-619	1880	1880	1880		
Tailboom attach bolts(6) 369A & 369HM Except: 369A, 369HM, 369HS, & 369A1620 tail rotor	NAS625-14 MS21250-05014	2598 2598 2598 2400	2504 2504 2400 2400	2400	MS21250-06014	21950
Horizontal Stab.(6) 369A, 369H, 369HE, 369HM, 369HS Except: 369A & 369HM with 369A1620 aluminum tail rotor 369H, 369HE & 369HS with 369A1620 aluminum tail rotor 369D 369E 369F & 369FF	369A3600	3,150 3,050 3,450	3,050 3,050 3,450	3,050 3,450	369D23601 421-087-505 421-087-905 421-087-503 421-087-903	7,700 7,700 7,700 7,700 7,700
Vertical Stab. 369D & 369E 369F & 369FF					369D23600 369D23600-505	12,700 3,300
Upper Vertical Stab.(6) 369A , 369H, 369HE, 369HM, 369HS except: 369A & 369HM with 369A1620 aluminum tail rotor 369H, 369HS & 369HE with 369A1620 aluminum tail rotor	369A3625	3,840 3,280 3,840	3,840 3,280 3,840	3,280 3,840		
Coupling, tail rotor shaft	369A5501 369H925643	7080	7080 7080	7080 7080	369A5501 369H925643	4980 4980
Damper assy.,Landing Gear	369A6300	(4)	(4)			
For 369A (only)	369A6350	(4)				
Emergency Float (Option) 369H, 369HM, 369HS & 369HE, 369D, 369E, 369F, & 369FF	369H90121	(8)	(8)	(8)	369D292473-5 -6, -9, -10, -11, and -12	(8)
Utility Float Kit					369DSK66	3190
Kit (Option), Stabilizer Support 369D/E only					369D292036	3190

Footnotes to the limited Life Schedule

- (1) Life limited components interchanged between models or configurations, including Model 369 series where applicable, must be restricted in the lowest service life indicated for the models or configurations affected. Life limited components removed at retirement are to be destroyed or conspicuously marked to prevent inadvertent return to service. Parts are applicable only on models under which a service is listed.
- (2) The service life for the strap retention system is a calculated maximum. In actual fact, the strap retention system is an on-condition replacement in accordance with MDHI Service Bulletin HN-214/DN-154/EN-44/FN-33.
- (3) Used with 369H90123 Rotor Brake Kit. (Not applicable on Model 369A).
- (4) Must be overhauled at 1200 hour intervals per manufacturer's instructions.
- (5) Service life shown for basic part number applies to all dash-numbered versions unless otherwise indicated.
- (6) Applicable to all models and configurations except as noted.
- (7) Blade serialization sequence as follows:
0001 - 9999, A001 - Z999, AA01 - ZZ99
- (8) A life limit of five (5) years from date of manufacture has been established for the Horex, Inc., P/N 12552-1 (Walter Kidde P/N 281993) and Horex, Inc., P/N12754-1 (TAVCO P/N 5003527) SQUIB CARTRIDGES.
- (9) The 369D21400-503 and 50452 damper assemblies are to continue being inspected 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. Allowable deterioration is denoted in the Handbooks of Maintenance Instructions for the Model 369D, 369E, 369F, and 369FF helicopters.
- (10) The 369A1613-7, -9, and -11 tail rotor blades are for military use only (OH-6A) and are not FAA certified for Model 369H series helicopters.
- (11) These Blades are Subject Flight Hour Factoring. See applicable Service Bulletin SB369H-243R3, SB369D-195R3, SB369E-088R3 or SB369F-075R3, SB500N-015R3, SB600N-007R2 dated July 13, 1998 and FAA AD 98-15-26. TE = Torque Events is defined as the transition to a hover from forward flight. For this definition of TE, Forward Flight is considered to be flight at any airspeed after attaining transitional lift.

- NOTE 4. a) Prior to issuance of FAA Certificate of Airworthiness for Military Model YOH-6A (Hughes Model 369) Helicopters, conformance with the FAA Approved Type Design Data must be established including modification in accordance with Hughes Report No. 369-X-0008, "Government Furnished Parts Not Included in Certificated Hughes Model 369 Helicopters." In addition, an engine-out warning system (aural and visual) and an OAT gage must be installed.
- b) Prior to issuance of FAA Certificate of Airworthiness for Military Model OH-6A (Hughes Model 369A) Helicopters, conformance with the FAA Approved Type Design Data must be established including elimination of the dimming feature from the position light system and installation of FAA approved engine-out warning system (aural and visual) and an OAT gage. In addition, all deviations listed on the "Conformity Certificate - Military Aircraft." FAA Form 8130-2 (or prior FAA Form 970), for the particular serial number helicopter must be removed and replaced by FAA approved installations. T/R Gearshaft, P/N 369A5406 Input assy., Input Gearshaft assemblies, P/N 369A5425,

and 369A5425-3, having accumulated any Military time in service must be limited to a total service life of 530 hours.

- c) The following list of aircraft serial numbers are those used for foreign military helicopters and/or special production, and are not eligible for an FAA Certificate of Airworthiness.

369D Derivative Serial Numbers Not Eligible

0026	0325	0426	0550	0618	0687	0804	1093	1248
0046	0340	0427	0551	0620	0712	0805	1107	1249
0056	0366	0428	0552	0642	0713	0948	1116	1250
0186	0367	0430	0553	0643	0722	0956	1222	1251
0914	0368	0435	0569	0644	0723	0965	1235	1252
0202	0369	0443	0570	0645	0740	0977	1236	1253
0210	0402	0468	0571	0666	0741	0989	1237	1256
0278	0407	0469	0597	0667	0760	1001	1241	1257
0279	0408	0470	0598	0668	0761	1005	1242	1266
0280	0409	0504	0599	0669	0781	1047	1243	1267
0281	0410	0508	0608	0682	0782	1056	1244	1276
0322	0411	0511	0615	0684	0783	1061	1245	1277
0323	0418	0520	0616	0685	0802	1071	1246	1287
0324	0425	0523	0617	0686	0803	1081	1247	1288

369E Derivative Serial Numbers Not Eligible

0081	0137	0162	0184	0265	0283	0297
0102	0138	0163	0185	0269	0284	0298
0103	0139	0164	0186	0270	0285	0299
0104	0142	0171	0212	0271	0286	0300
0112	0153	0172	0213	0273	0289	0305
0113	0154	0173	0214	0274	0290	0306
0114	0158	0174	0254	0275	0291	0307
0124	0159	0175	0257	0277	0294	0308
0125	0160	0176	0263	0278	0295	
0132	0161	0183	0264	0279	0296	

369F & 369FF Derivative Serial Numbers Not Eligible

0007	0022	0031	0039	0055	0074	0703
0008	0024	0032	0040	0057	0084	0704
0016	0025	0033	0043	0059	0085	0705
0017	0026	0034	0045	0069	0090	0706
0018	0027	0035	0047	0070	0091	0707
0019	0028	0036	0048	0071	0700	0708
0020	0029	0037	0053	0072	0701	
0021	0030	0038	0054	0073	0702	

NOTE 5. Aircraft serial numbers are coded to show the month and year of manufacture in that sequence.

Examples: 640103, 1150015E

6 11	4 5	0103 0015	E
Month of Manufacture 6 - June 11 - November	Year of Manufacture 4 - 1964 5 - 1965	Serial Number in Consecutive order from 0001 for each model (this is the number used for S/N applicability requirements)	Additional designation as noted below

Model 369A helicopters, S/N 1079 through 1099, utilize an alpha numeric serialization system. The letters used are A, B, C, D, E, F, G, J, K, L, N, P, R, T, U, W, and Y. First aircraft of the block is S/N 1079A, the second is 1079B, etc.

Model 369HM helicopters carry the letter M following the serial number. This was effective with Ship S/N 0004M.

Model 369HE helicopters carry the letter E following the serial number. This was effective with Ship S/N 0101E.

The helicopters listed below have been or will be delivered without the manufacturing date coding as part of the serial number:

369D	S/N 1068, 1087, 1095; S/N 1100 and subsequent.
369E	S/N 0001 and subsequent
369F	S/N 0003 and subsequent
369FF	S/N 0001 and subsequent
500N	S/N LN001 and subsequent
600N	S/N RN003 and subsequent

NOTE 6. For all operations below 40° F ambient temperature all fuel, except MIL-G-5572 (Aviation Gasoline), must contain anti-icing additive conforming to MIL-I-27686 in concentrations of 0.035 per cent by volume minimum 0.15 percent by volume maximum. See Rotorcraft Flight Manual for checking concentrations and blending.

NOTE 7. For Model 369A the maximum weight may be increased 2550 pounds when the M30242 "OH-6A revised operating limits-kit, modification" is incorporated. For additional limitations when this kit is installed see Fuel, Engine Limits, Transient Limits, Rotor Limits, and Engine Operating Speeds, and NOTE 3.

NOTE 8. Model 369H Series aircraft, Serial No. 0101 and up, with the 369H90065 or 369H90072 Cargo Hook installed meet the structural and design requirements of the certification basis provided the weight in excess of the normal category gross weight is not imposed on the landing gear, when operated at 3000 pounds gross weight in accordance with the limits of the approved Rotorcraft Flight Manual Supplement for the cargo hook. The retirement times listed in NOTE 3 are not changed.

Model 369D Series aircraft, Serial No. 003 and up, and Model 369E Series aircraft, Serial No. 0001 and up, with 369H90072 Cargo Hook installed, meet the structural and design requirements of the certification basis, provided the weight in excess of the normal category gross weight is not imposed on the landing gear, when operated at 3550 pounds gross weight in accordance with the limits of the approved Rotorcraft Flight Manual Supplement for the Cargo Hook. The retirement times listed in NOTE 3 are not changed.

Model 369D Series Aircraft operated in the Restricted Category with the 429-4537 Jettisonable Load Kit installed meet the structural and design requirements of the certification basis, provided the weight in excess of 3000 pounds must be external jettisonable. Maximum takeoff and power-on landing gross weight is 3550 pounds. The retirement times listed in NOTE 3 are not changed.

Model 369F Series aircraft, Serial No. 0003 and up, and Model 369FF Series aircraft, Serial No. 0001 and up, with Cargo Hook installed, meet the structural design requirements of the certification basis, provided the weight in excess of the normal category gross weight is not imposed on the landing gear, when the Model 369F is operated at 3550 pounds gross weight or when Model 369FF is operated at 3750 pounds gross weight in accordance with the limits of the approved Rotorcraft Flight Manual Supplement (as applicable to the Model 369F or 369FF) for Cargo Hook. The retirement times listed in NOTE 3 are not changed.

Model 500N aircraft, Serial No. LN0001 and up, with Cargo Hook installed, meet the structural design requirements of the certification basis, provided the weight in excess of the normal category gross weight is not imposed on the landing gear, when the Model 500N is operated at 3850 pounds gross weight in accordance with the limits of the approved Rotorcraft Flight Manual. The retirement times listed in the Airworthiness Limitations Section of the HMI are not changed.

- NOTE 9. Inspect the P/N 369A5364 Sprag Assembly, 369A5352 Outer Race, and 369A5353 Inner Race of P/N 369A5350-603 Overrunning Clutch Assembly in Model 369E, 369F, and 369FF helicopters for wear in the cages and sprags of the sprag assembly, inner and outer race every 300 hours and replace the sprag assembly every 1800 hours of total service time in accordance with MDHI Service Bulletin EN-3 or FN- 3, as appropriate.
- NOTE 10. Inspect the main rotor drive shaft, P/N 369D25510, in Model 369E, 369F, and 369FF for cracks and damage every 300 hours in accordance with MDHI Service Bulletin EN-4 or FN-4, as appropriate.
- NOTE 11. The Model 369F Series aircraft may be converted to a Model 369FF Series aircraft with the installation of those parts called out on Drawing 369D290100.
- NOTE 12. (Blank – Intentional)
- NOTE 13. Models 369D and 369E with alternate engine (Rolls-Royce Corporation - formerly Allison Engine Company) 250-C20R/2) are approved with the kits/options identified on 369D290000, Revision G, or later approved revisions and Kit Compatibility Substantiation Report No. 369-CE-195, dated March 28, 1989, or latest approved revision.
- NOTE 14. NOISE CHARACTERISTICS. Model 369D and 369E helicopters with the Rolls-Royce Corporation (formerly Allison Engine Company) 250-C20B engine installed have not been tested for noise in accordance with the requirements of FAR Part 36. Therefore, they are Stage 1 helicopters. Substitution of Rolls-Royce Corporation 250-C20R/2 engine results in no acoustic change. Thus, Model 369D and 369E aircraft with the 250-C20R/2 engine installed are also Stage 1 helicopters. Model 369FF helicopter with the Rolls-Royce Corporation 250-C30 engine has not been tested for noise in accordance with the requirements of FAR Part 36, therefore, the Model 369FF is a Stage 1 helicopter.
- The Model 500N has demonstrated compliance with FAR Part 36, Appendix H, through Amendment 36-18, for Stage 2 helicopters
- The Model 600N has demonstrated compliance with FAR part 36, Appendix J, through Amendment 36-21.
- NOTE 15. The Model 369E helicopter may be converted to Model 369FF helicopter with the installation of those parts called out on Drawing 369D292202, Revision A, dated 7/29/94, or later FAA approved revision,

and in accordance with MDHS Report No. 369-CE-293, "E-FF Conversion Report", Revision N/C, dated 9/94, or later FAA approved revision.

The following is a list of 369Es converted to 369FFs:

369E to 369FF Conversion Record

369E S/N	Converted to 369FF S/N	Date of Certificate of Airworthiness
0292	0075	April 29, 1993
BT890001*	0700	*
0422	0701	*
0392	0702	*
0228	0600	January 31, 1996
0287E	0601	May 1, 1998
0128E	0602	October 8, 1998
0052E	0703FF	*
00942E	0704FF	*
0468E	0705FF	*
0381E	0706FF	*
0391E	0707FF	*
0355E	0708FF	*

*These helicopters were built for foreign military and as such are not eligible for an FAA Certificate of Airworthiness (See NOTE 4).

- NOTE 16. For Model 600N, a current Weight and Balance Report (MDHS' Basic Weight and Balance Record) listing the helicopter certificated empty (basic) weight and loading instructions including a List of Equipment (MDHS' MD-600N Required/Optional Equipment List is provided as a separate document) must be provided for each helicopter at the time the helicopter's original airworthiness certification is issued. This Basic Weight and Balance Record shall be kept current as the configuration, affecting the helicopter's weight and balance, is changed. The MDHS Basic Weights Checklist Record (Chart A) and Basic Weight Checklist Supplement for the Model 600N contains needed reference data for the Weight and Balance Record. A copy of the current MDHS Basic Weight and Balance Record shall be kept in the helicopter. The certificated basic weight and corresponding center of gravity locations includes all transmission, hydraulic and engine oil/fluids as well as trapped/unusable fuel.
- Note 17. The model 600N rotorcraft employs electronic engine controls, commonly named Full Authority Digital Engine Controls (FADEC) and is recognized to be more susceptible to Electromagnetic Interference (EMI) than rotorcraft that have only manual (non-electronic) controls. (EMI may be the result of radiated or conducted interference.) For this reason modifications that add or change systems that have the potential for EMI, must either be qualified to an FAA acceptable standard or tested at the time of installation for interference to the FADEC. This type of testing must employ the particular FADEC's diagnostic techniques and external diagnostic techniques. The test procedure must be FAA approved.
- Note 18. Extension of the basic fuel capacity over 148.1 US gal. (Main Fuel Tank – 114.6 US Gal, plus Aux Fuel Tank - 33.5 US Gal) for the Model 600N may require reevaluation of the FADEC control system reliability due to time limited exposure determinations made during certification.

- Note 19. The Model 600N is prohibited from flying in falling or blowing snow with the standard engine inlet screen installed.
- Note 20. Any alteration to the type design requires instructions for continued airworthiness. These instructions must be submitted and accepted by the Fort Worth Aircraft Evaluation Group prior to approval for return to service.
- Note 21. Any changes to the type design of this helicopter by means of an amended type certificate (TC), supplemental type certificate (STC), or amended STC, requiring instructions for continued airworthiness (ICA) must be submitted through the project aircraft certification office (ACO) for review and acceptance by the Fort Worth -Aircraft Evaluation Group (FTW-AEG) Flight Standards District Office (FSDO) prior to the aircraft delivery, or upon issuance of the first standard airworthiness certificate for the affected aircraft, whichever occurs later as prescribed by Title 14 CFR 21.50. Type design changes (major repairs or alterations) by means of a FAA Form 337 (field approval) that require ICA's must have those ICA's reviewed by the field approving FSDO.

-END-