CHAPTER 1

GENERAL

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CHAPTER 1

GENERAL

1-00 Introduction

The R66 Maintenance Manual contains instructions necessary for proper maintenance, servicing, and handling of the R66 helicopter. The R66 Instructions for Continued Airworthiness (ICA) includes the R66 Maintenance Manual (MM), R66 Illustrated Parts Catalog (IPC), R66 Service Bulletins (SB), R66 Service Letters (SL), RR300 Series Operation and Maintenance Manual (OMM), applicable Rolls-Royce technical publications, and applicable component manufacturer technical publications.

Service Bulletins are issued by Robinson Helicopter Company (RHC), Rolls-Royce, and component manufacturers. RHC Service Bulletin compliance is mandatory; comply with other applicable Service Bulletins as directed. RHC technical publications are available online at www.robinsonheli.com. Rolls-Royce technical publications are available online at https://fast.aeromanager-online.com.

Kit instructions are issued for field installation of either optional or mandatory (due to Service Bulletin or parts obsolescence) equipment upgrades, or provisions for upgrades. Kit instructions issued by RHC either implement approved type design data, or are approved as type design data.

The R66 Maintenance Manual is formatted in Air Transport Association of America Specification No. 100 (ATA-100). Style, content, and structure deviates from ATA-100 when necessary for clarity, and for logic of presentation. A list of chapters and a complete list of contents is located in the *Introduction*. Chapters are separated by tab dividers and chapter contents are listed in the chapter front pages.

CAUTION

Always read instructions completely before performing a task.

1-10 R66 Maintenance Manual Revisions

Before using the R66 Maintenance Manual, verify it consists of current effective pages. The list of effective pages is located in the Revision Log in Chapter 100. When a new manual is purchased, complete and submit the Subscription Order Form available online at www.robinsonheli.com. Subscribers receive publication revisions for a two-year period. Renew subscriptions annually. The revision status for all RHC technical publications is available online at www.robinsonheli.com.

1-20 R66 Maintenance Authorization

Only appropriately certificated mechanics who have successfully completed an R66 factory-sponsored maintenance course, or are under direct supervision of the above-stated mechanic, are authorized to perform maintenance, repairs, or inspections on the R66 helicopter. Annual inspections of U.S.-registered light helicopters must be performed by holders of an Inspection Authorization (IA) certificate or by repair stations certificated by the Federal Aviation Administration (FAA). The daily preflight and some preventive maintenance may be performed by the above-stated mechanics, or by the pilot/owner after receiving appropriate instruction in accordance with the R66 Pilot's Operating Handbook and applicable aviation regulations.

1-30 Component Maintenance Authorization

Only appropriately certificated mechanics who have successfully completed both a factory-sponsored maintenance course and component maintenance course, and who possess technical data supplied by RHC, are authorized to perform maintenance specified in the Component Maintenance Manual (CMM). Component maintenance may only be performed at an RHC-authorized Service Center that has required special tools.

1-40 Maintenance Record

The Airframe Maintenance Record is available online at www.robinsonheli.com.

Airframe Maintenance Record blank PDF forms may be used for R22-series, R44-series, and R66 Turbine helicopters. Component Record blank PDF forms may be used for life-limited or TBO components. Blank paper copies are available for purchase (P/N R8478 Airframe Maintenance Record and P/N R8479 Component Record [pack of 20]).

A Component Record is a maintenance record of the removals, installations, or maintenance performed on a life-limited or TBO component. When a life-limited or TBO component is installed in the helicopter, the Component Record card is inserted in the Airframe Maintenance Record. When a life-limited or TBO component is removed from the helicopter, remove the Component Record card and keep the card with the Component. Major assemblies may contain one or more life-limited or TBO component.

RHC encourages operators to utilize Component Record cards to assist in tracking time on interchangeable parts since service lives may be different between models.

RHC does not create Component Record cards for spares, however, operators may create their own.

RHC's Repair Station does not require a Component Record card in order to perform work on a component, unlike a Component/Return Authorization form.

RHC recommends using a toner-based laser, or a pigment-based inkjet, color printer and 65 lb white (96 bright) premium card stock for Maintenance Record or Component Record card production. Maintenance Record binders and tab sets are available separately (P/N R8656 Maintenance Record Binder and P/N R8650 Maintenance Record Tabs).

1-50 Notations

The following notations will be found throughout the manual:

NOTE

A NOTE provides emphasis or supplementary explanation.

CAUTION

Equipment damage can result if a **CAUTION** is not followed.

WARNING

Personal injury or death can result if a WARNING is not followed.

1-55 Maintenance Manual and Illustrated Parts Catalog References

Maintenance Manual and Illustrated Parts Catalog Section and Figure references are subject to relocation and renumeration. Effort will be made at the time of RHC technical document revisions to correct superseded references, however, certain documents may not otherwise require revision and superseded references may remain. A keyword or part number search in online documents (Ctrl + F [PC] or Command + F [Mac]) may help to locate applicable data.

1-60 Definitions and Abbreviations

Refer to R66 Pilot's Operating Handbook (POH) Section 1 for additional definitions and abbreviations.

A. Definitions

14 CFR § 27.602 Critical Part: F016-2 main rotor blades & F029-1 tail rotor blades are critical parts as defined by 14 CFR § 27.602 and are subject to special inspection requirements & reporting described in Chapters 62 & 64. Contact RHC Technical Support if questions arise concerning special inspection or reporting requirements.

12 years: With respect to a 12 year inspection or life-limit, 12 years means 12 years from the date of the:

- factory-issued airworthiness certificate,
- factory-issued authorized release certificate (FAA Form 8130-3, Airworthiness Approval Tag), factory-issued invoice, or
- last 12-year inspection.

15 years: With respect to a 15 year inspection or life-limit, 15 years means 15 years from the date of the:

- factory-issued airworthiness certificate,
- factory-issued authorized release certificate (FAA Form 8130-3, Airworthiness Approval Tag), factory-issued invoice, or
- last 15-year inspection (or last 12-year inspection).

Annually: With respect to an annual inspection, annually means within the preceding 12 calendar months.

Datum: An imaginary vertical plane from which all horizontal measurements are taken for balance purposes with the aircraft in level flight attitude. Refer to § 6-20 for R66 datum location.

Empty Weight: Standard empty weight of a standard helicopter including unusable fuel, full operating fluids, and full engine oil. Basic empty weight is standard empty weight plus weight of installed optional equipment. Refer to R66 Type Certificate Data Sheet (TCDS) R00015LA at: https://drs.faa.gov. Refer to helicopter's Equipment List/Weight and Balance Data Sheet (RF 134) and Weight and Balance Record in R66 POH Section 6 for installed equipment.

Life-Limited Part: Refer to § 4-10.

Time in Service: With respect to maintenance time records, time in service means the time from the moment an aircraft leaves the surface of the earth until it touches it at the next point of landing.

1-60 Definitions and Abbreviations (continued)

B. Abbreviations

14 CFR:	Title 14 of the Code of Federal Regulations. The Federal Aviation Regulations (FARs) are part of the CFR.
AOG:	Aircraft on Ground
Assy:	Assembly (component consisting of more than two parts)
ATA-100:	Air Transport Association of America Specification No. 100
BL:	Butt Line Station locations
CRA:	Component Return/Authorization
ELT:	Emergency Locator Transmitter
EMU:	Engine Monitoring Unit
FCU:	Fuel Control Unit
FS:	Fuselage Station locations
GCU:	Generator Control Unit
HID:	High Intensity Discharge
HS:	Horizontal Stabilizer Station locations
ICA:	Instructions for Continued Airworthiness
LBL:	Left Butt Line Station locations
LED:	Light Emitting Diode
LH:	Left-hand
LRU:	Line-Replaceable Unit
MR:	Main Rotor
MRB:	Main Rotor Blade
MRDS:	Main Rotor Drive Shaft
MRGB or MGB:	Main Rotor Gearbox or Main Gearbox
OEM:	Original Equipment Manufacturer
PTG:	Power Turbine Governor
R66 IPC:	R66 Illustrated Parts Catalog
R66 MM:	R66 Maintenance Manual
R66 POH:	R66 Pilot's Operating Handbook
RBL:	Right Butt Line Station locations
RH:	Right-hand
RHC:	Robinson Helicopter Company
RR300 Series OMM:	Rolls-Royce RR300 Series Operation and Maintenance Manual
RS:	Rotor Station locations
SB:	Service Bulletin
SDS:	Safety Data Sheet
SL:	Service Letter
TBO:	Time Between Overhaul
TCDS:	Type Certificate Data Sheet
TIR:	Total Indicator Reading
TR:	Tail Rotor
TRB:	Tail Rotor Blade
TRDS:	Tail Rotor Drive Shaft
TRGB or TGB:	Tail Rotor Gearbox or Tail Gearbox
TS:	Tailcone Station locations
TSN:	Time Since New
TSO:	Time Since Overhaul
WL:	Water Line Station locations

1-70 Service Information

1-71 Part Designation

RHC parts are designated with an alphanumeric part number beginning with letter “A”, “B”, “C”, etc., followed by three digits and a dash number.

A revision letter or letters follow(s) the stamped or ink-marked part number. Revision progression is A thru Z, followed by AA thru AZ, followed by BA thru BZ, etc. Unless otherwise specified, any revision of the same part number is interchangeable, such as “A101-1 A” and “A101-1 D”.

A change in dash number indicates a change in form, fit, and/or function (e.g. part number C339-1 is not interchangeable with part number C339-10 even though both are jackshaft weldments for [hydraulic] R44s). Similarly, part numbers F049-6 and F049-06 are not interchangeable because the dash numbers are different.

1-72 Returning Parts

All parts shipped to RHC must include a signed Component Return/Authorization (CRA) Form available online at https://robinsonheli.com.

1-73 Ordering and Shipping

Procure parts from any R66 Dealer or Service Center, or order directly from assigned RHC Customer Service Representative via email, fax, or phone.

1-74 Warranty Claims

Complete CRA Form (refer to § 1-72) and, in the Warranty Claim section, indicate if rotorcraft or component is under warranty. If claim is for parts or for labor allowance due to a Service Bulletin issued against rotorcraft or component, write in “per SB-XX” adjacent to requested warranty action.

1-75 Customer Support

Please visit https://robinsonheli.com for Customer Support contact information.

1-80 Assembly Instructions for R66 Helicopter Crated for Export

NOTE

Aircraft assembly to be performed by a certificated mechanic.

1. Remove top of cabin assembly crate. Remove wall marked "A" by removing lag bolts painted black. Remove empennage assembly. Remove remaining walls. Remove all parts, except cabin assembly, from crate base. Open crate containing blades, skid tubes, and tailcone.

2. Refer to R66 Illustrated Parts Catalog (IPC) Figure 32-1. Install hardware securing forward and aft strut assemblies (cross tubes installed) onto skid tubes. Standard torque bolts per Section 20-32 and torque stripe per Figure 5-1.

3. Remove tailcone cowling per Section 53-23. Remove engine cowling per Section 53-21.

4. Remove shipping supports (ty-raps, foam, tape, etc.) from main rotor gearbox compartment, but leave cannon plugs taped and fluid line dust caps installed. Remove engine air intake cover by opening air filter bypass door and pulling string and cover through the door. Remove main rotor gearbox mounting hardware, nylon spacers, and upper frame strut assemblies.

5. Remove top of main rotor gearbox crate and position crate so gearbox is upright. Refer to Section 7-20. Install hoisting equipment and lifting fixture or nylon rope on main rotor hub. Remove hoist slack to support gearbox, remove lag bolts securing gearbox to wooden divider, and carefully hoist gearbox from crate (do not damage pitot tube).

6. Install main rotor gearbox per Section 63-20 steps 1 thru 9, but do not remove hoisting equipment and lifting fixture or nylon rope.

7. Perform (engine driveline) forward flex plate shimming per Section 63-11.

8. Refer to Section 7-20. Remove hoist slack to support cabin assembly, remove lag and carriage bolts securing metal angles to crate, and hoist cabin & attached metal angles off of crate base.

CAUTION

Do not lift helicopter and attached crate using main rotor hub; damage to main rotor gearbox and frames could result.

9. Remove metal angles from cabin assembly landing gear attach points. Install landing gear assembly per Section 32-10.

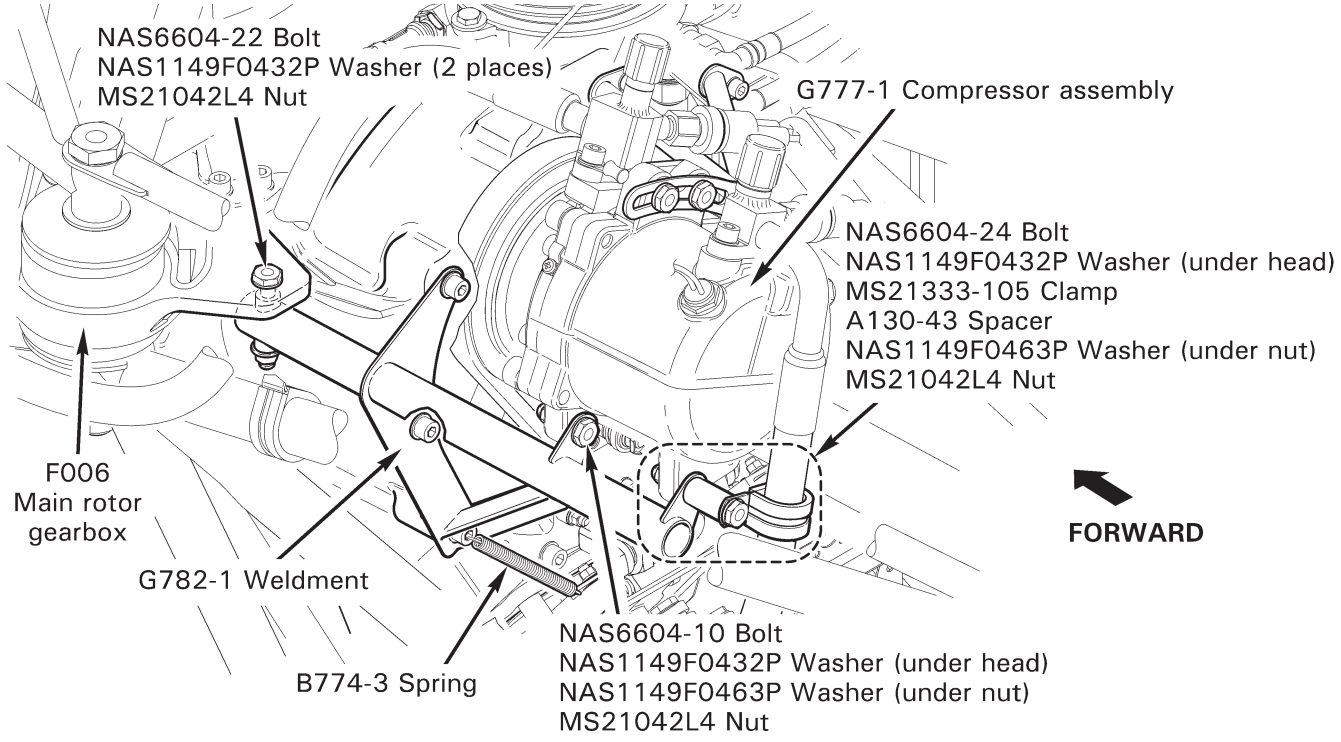


FIGURE 1-1 ASSEMBLY INSTRUCTIONS FOR R66 HELICOPTER CRATED FOR EXPORT

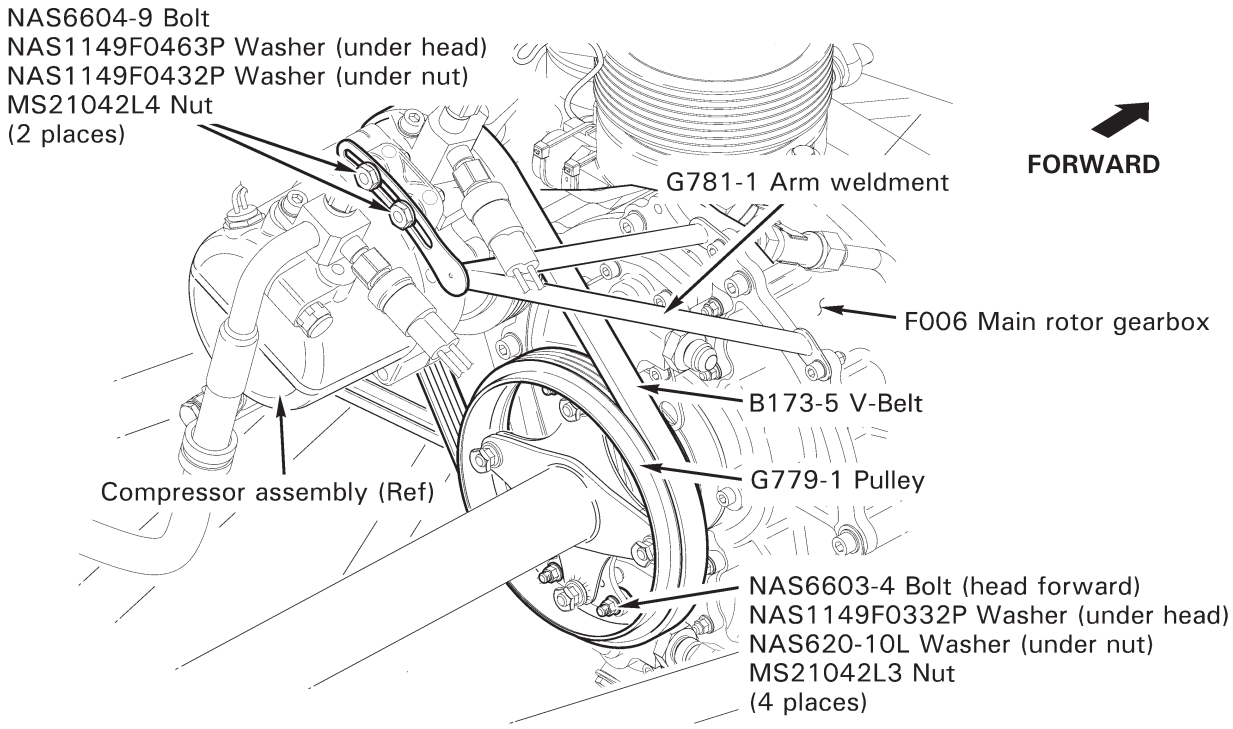


FIGURE 1-2 ASSEMBLY INSTRUCTIONS FOR R66 HELICOPTER CRATED FOR EXPORT

1-80 Assembly Instructions for R66 Helicopter Crated for Export (continued)

10. For air-conditioned ships:

    a. Refer to Figure 1-1. Remove shipping supports (ty-raps, foam, tape, etc.) from G777-1 compressor assembly. Install hardware securing G782-1 mount weldment to main rotor gearbox. Standard torque hardware per § 20-32 and torque stripe per Figure 5-1. Hook B774-3 spring in drilled hole of NAS1352-4H14 screw. Verify security.

    b. Refer to Figures 1-1 and 1-2. Verify B173-5 V-belt is in good condition. Fit belt around G779-1 pulley and compressor pulley, and install hardware securing compressor to G782-1 mount weldment. Standard torque bolts per § 20-32.

    c. Refer to Figure 1-2. Install hardware securing compressor to G781-1 arm weldment. Rotate compressor up and outboard to tension belt, then tighten hardware securing compressor to weldment. Verify belt is properly aligned on both pulleys. Adjust belt tension until 4.5-5.5 lb of force applied mid-span deflects belt 0.16-inch. Standard torque bolts per § 20-32.

    d. Connect compressor assembly wiring to airframe harness at connectors and install ty-raps as required. Cinch ty-raps until snug without over-tightening, and trim tips flush with heads.

11. Refer to IPC Figure 79-1. Remove F237-1 tailcone frame weldment and F305-5 (aft) inlet. Install tail rotor drive fan shaft (fanwheel installed) through scroll assembly. Install hardware securing aft inlet to scroll assembly. Verify security.

12. Refer to IPC Figure 65-1. Install hardware securing C947-3 plate assembly to F908-1 yoke and tail rotor drive fan shaft. Standard torque bolts and stamped nuts per § 20-32 and torque stripe per Figure 5-1.

13. Remove shipping supports (ty-raps, foam, tape, etc.) from tailcone assembly, and install tailcone per § 53-40 steps 1 thru 7. Install strobe light. Install communication and GPS antennas (if equipped).

14. Install empennage assembly per § 53-70. Install horizontal stabilizer assemblies per §§ 53-60 & 53-80.

15. Service tail rotor gearbox per § 12-21. Service main rotor gearbox per § 12-11.

16. Remove hydraulic reservoir shipping plug. Install D487-3 vent assembly, special torque vent to 100 in.-lb, and torque stripe per Figure 5-1 (do not safety wire).

17. Install tail rotor assembly per § 64-10. Match color-coded markings on blades with pitch links.

18. Install main rotor blades per § 62-10. Match color-coded markings on blades with markings on hub and pitch links.

19. Inside engine compartment, remove anti-ice valve cap, starter-generator cap, inducer bleed hose cover, exhaust pipe cover and desiccant, and combustion case drain valve cap. Connect inducer bleed hose to box assembly and tighten clamp. Verify security.

1-80 Assembly Instructions for R66 Helicopter Crated for Export (continued)

20. If ship is equipped with attitude horizon, directional gyro, turn coordinator, and/or vertical card magnetic compass:

A. Attitude Horizon, Directional Gyro, and Turn Coordinator Installation

> **CAUTION**
>
> Directional gyro mount screws must not exceed 1-inch in length.

1. Place a piece of foam under instrument face. Remove (6) screws securing face to console and gently pull face forward. Remove hardware securing instrument hole covers to face and remove covers. Install instruments and secure to face with hardware provided.
2. Connect straight connector(s) to directional gyro and/or turn coordinator. Connect angle connector to attitude horizon, ensuring strain relief points down. Ensure connectors lock. Ty-rap excess wiring. Install screws securing instrument face to console.

B. Vertical Card Magnetic Compass Installation

1. Locate airframe wiring (in windshield center bow), install 2-inch length of B158-3 heat shrink over wiring, and connect compass pins to airframe sockets (polarity is not critical). Slide heat shrink over connection and apply heat. Install (4) screws securing compass to mount, securing wiring atop compass.

21. Connect battery per § 96-10.

> NOTE
>
> Check battery open circuit voltage and perform boost charging or capacity tests as required per Concorde Battery Instructions for Continued Airworthiness.

22. Perform pitot-static leak check per § 95-30.
23. Install Emergency Locator Transmitter (ELT) per § 25-61, as required. Install tailcone cowling assembly per § 53-23.
24. Install fire extinguisher per § 25-62, as required.
25. Fuel helicopter per § 12-41.
26. Verify all shipping supports (ty-raps, foam, tape etc.) have been removed from helicopter. Refer to § 6-70. Secure access panels and inspection doors.

> NOTE
>
> Flight checks to be performed by a qualified pilot and certificated mechanic.

27. Perform ground check per § 5-41.

1-80 Assembly Instructions for R66 Helicopter Crated for Export (continued)

28. Depreserve the engine after storage per RR300 Series Operation and Maintenance Manual (OMM). Install starter-generator cooling hose. Install engine cowling per § 53-21.
29. Install tail rotor dynamic balance equipment per § 18-21.
30. Perform run-up per § 5-42 steps 2 thru 16.
31. Perform tail rotor dynamic balance per § 18-20.
32. Remove tail rotor dynamic balance equipment. Install main rotor balance equipment per § 18-11.

CAUTION

Mast fairing, cowlings, and panels must be installed for flight.

33. Perform hover checks per § 5-43 step 1. DO NOT proceed into forward flight.
34. Track and balance main rotor per § 18-12.
35. While climbing at maximum continuous torque, 60 KIAS:
    a. Evaluate vibration level and controllability.
    b. Perform momentary 30° left yaw to check for adequate directional control.
36. Level flight at typical cruise altitude (deviate as required for weather and terrain), maximum continuous torque:
    a. Evaluate longitudinal and lateral cyclic control forces.
    b. Evaluate collective control forces.
37. Evaluate vibration level at maximum continuous torque and straight-and-level flight.
38. During autorotation at 50 KIAS and 90% rotor RPM, perform momentary 30° right yaw to check for adequate directional control.
39. Check all instruments, gages, and avionics for proper operation.

TABLE 1 SCHEDULED MAINTENANCE, DEFAULT*** Consult latest revision of listed publications for specific applicability.	First 100 Hours*	100 Hours**	200 Hours**	300 Hours**	400 Hours**	600 Hours**	1000 Hours**	2000 Hours**	12 Months**	24 Months**	5 Years**	6 Years**	15 Years**	3000 Cycles**
Replace main gearbox oil filter per § 12-12.	●					●								
Perform 100-hour / annual inspection per § 5-45.		●							●					
Perform main rotor blade tip maintenance per § 62-60.		●												
As required by RR300 Series Operation and Maintenance Manual (OMM), perform maintenance and inspection.			●		●			●	●					●
Service inlet barrier filter per § 71-21.				●					●					
Weigh B381-1 or -4 fire extinguisher per § 25-62A.									●					
Replace both 9v back-up batteries under LH front seat (ships with Lithium-ion main battery only).									●					
Replace main gearbox oil per § 12-11.						●								
Drain and flush tail rotor gearbox per § 12-23.						●								
Replace hydraulic filter per § 12-32.						●								
Clean gearbox chip detectors per § 12-13 & 12-22.						●			●					
Service 528-029-00 cargo hook per § 25-73 Part D.							●				●			
Lubricate swashplate bearings per § 12-90.							●					●		
Perform 2000-hour/15-year inspection per § 5-50.								●					●	
Perform main gearbox internal visual inspection per § 5-74.									●					
Perform pop-out float leak check per § 32-64 Part A.									●					
Replace cockpit camera battery per § 96-120 Part C.									●					
Test and inspect transponder per 14 CFR § 91.413. (U.S.-registered helicopters only).										●				
Perform pop-out float inflation check per § 32-64 Part B.											●			
Perform pop-out float pressure cylinder hydrostatic test (per U.S. DOT-SP 10915).											●			
Pop-out float pressure cylinder maximum life.													●	

* One-time maintenance after new or overhauled main rotor gearbox is installed.

** Recurring inspection.

*** Helicopters on a Part 91 Approved Inspection Program (AIP), a Part 135 Approved Aircraft Inspection Program (AAIP), or an equivalent foreign-approved inspection program, must refer to & comply with that program. Refer to current revisions of FAA Advisory Circulars 91-90 & 135-10.

1-90 Helicopter Servicing

1-91 Scheduled Maintenance and Inspections

Required maintenance and inspection intervals are given in Table 1. Publications listed are subject to revision.

Also consult the following for specific applicability, as some aircraft may require maintenance and inspections in addition to the requirements in Table 1:

- Aircraft maintenance records
- Manufacturers' Service Bulletins (SBs)
- Aviation regulations
- Airworthiness Limitations
- Airworthiness Directives (ADs)

Preventive maintenance is required between scheduled inspections. Fluid leaks, discoloration, fretting, galling, chafing, nicks, scratches, dents, cracks, and corrosion all warrant further investigation. Unairworthy items must be replaced or repaired as allowed by RHC.

1-92 Additional Component Maintenance

NOTE

RHC-manufactured parts not listed in § 1-92 as requiring additional component maintenance, or replacement per § 4-30, are "on condition".

A. 15 YEARS

Remove the following components when they have accumulated 15 years time in service and less than 2000 hours time in service since new, since last 2000-hour maintenance, or since last 12-year maintenance, and perform action indicated:

Part Number	Description	Action
A120-5	Bellcrank – Aft	Replace with new.
A215-015	O-Ring (rollover valves)	Replace with new.
A462-4	Fitting Attachments	Comply with R66 Service Letter SL-38.
A785-36	Hose (engine gearbox vent; earlier ships)	Install KI-258 Firewall Drain Tube Upgrade Kit.
B173-5	V-Belt – Compressor Drive (cabin air conditioning option)	Replace with new.
B361-2	Bearing-Elastomeric (TR)	Replace with new.
C005-4	Main Rotor Hub (C154-1) & Bearing Assembly	Perform inspection and repair per § 62-22, return to RHC for inspection and repair.
C005-13	Main Rotor Blade and Spindle Assembly	Submit to RHC-authorized component maintenance facility for compliance with Airworthiness Limitations for MRBs, or replace with new or overhaul exchange. 15-year maintenance includes blade replacement, boot and O-ring replacement, spindle bearing replacement (as required), pitch horn screw replacement (as required), and inspection.
C008-10	Tail Rotor Assembly	Disassemble. Inspect hub per § 64-42. Comply with Airworthiness Limitations for TRBs.
C017-6	Swashplate Assembly	Perform detail inspection per § 5-52.
C021-1	Tail Rotor Gearbox Assembly	Replace input seal & O-ring, and output seal & O-ring, per § 65-40. During seal replacement, visually inspect exposed portion of bearings for corrosion; replace gearbox if corrosion is evident.
C031-1	Tail Rotor Pitch Control	Replace.
C258-1	Main Rotor Pitch Link Assembly	Replace with C258-5 or -8 link assembly.
C258-5 & -8	Main Rotor Pitch Link Assembly	Perform inspection per § 5-51.
C343-8	Tube (aft servo input)	Disassemble and visually inspect exterior and interior. Verify no corrosion.
D211-3	Hydraulic Reservoir Assembly	Perform detail inspection per § 5-54.

1-92 Additional Component Maintenance (continued)

A. 15 YEARS (continued)

Part Number	Description	Action
D212-5, -6	Hydraulic Servo Assembly	Perform inspection per § 29-30 Part C.
D224-4, or D224-3 with B900-11 Mod	Shaft Assembly – Tail Rotor Drive	Replace C041-11 bearing assembly, or replace C041-12 damper assembly, or replace D224-4 TR drive shaft assembly. Inspect exterior and interior. Verify no corrosion and no obvious damage.
D224-5	Yoke Assy (with D224-6 bearing assy)	Replace with new.
F006-1, -6	Main Rotor Gearbox Assembly	Submit to RHC for 15-year maintenance, or replace with new or overhaul exchange. 15-year maintenance includes seal replacement, O-ring replacement, sealed bearing replacement, rubber mount replacement, R66 SL-11 upgrade (as applicable), and inspection.
F014	Landing Gear Assembly	Perform detail inspection per § 5-53.
F018-1	Clutch Assembly (Revision C & prior)	Replace with Revision D or subsequent.
F018-1	Clutch Assembly (Revision D & subsequent)	Submit to RHC for 15-year maintenance, or replace with new or overhaul exchange. 15-year maintenance includes seal replacement, O-ring replacement, and inspection.
F101-4	Rod End – Elastomeric	Replace with new.
F121-3, -5, -7, & -11	Push-Pull Tube Assembly	Record length. Disassemble and visually inspect exterior and interior. Verify no corrosion.
F174-1	Support Weldment – Center Engine Mount	Visually inspect exterior and interior. Verify no obvious damage and no corrosion.
F642-1 or -6	Engine Output Shaft Weldment, non-circular flange	Replace with F642-7 Output Shaft Assy.
F642-7	Engine Output Shaft Assy, circular flange	Clean interior and exterior. Verify no corrosion and no obvious damage.
F650-1, -2	Main Gearbox Mounting Bolts	Visually inspect exterior and interior. Verify no corrosion.
F771-1	Filter – Engine Air Intake (foam, standard filter only)	Replace with new.
F771-4	Filter – Starter-Generator (cooling air)	Replace with new.
F771-7	Filter – G918-1 (Rev D & on Box Assy (R66 S/N 0173 & subsequent)	Replace with new.
F792-1	Dual Tachometer	Perform accuracy check per § 95-43 Part D.
F792-2	Dual Tachometer	Replace with Revision O or subsequent.
G201-1	Frame, Servo Support	Remove B163-2 rod end. Visually inspect exterior and interior. Verify no corrosion.
NAS557-32A	Grommet-Firewall (surrounds F642-7 engine output shaft assy)	Replace with new.

1-92 Additional Component Maintenance (continued)

B. 2000 HOURS

Remove the following components when they have accumulated 2000 hours time in service since new or since last overhaul, and perform action indicated:

Part Number	Description	Action
A120-5	Bellcrank – Aft	Replace with new.
A130-48	Spacer (at A462-4 fittings)	Replace with new.
A215-015	O-Ring (rollover valves)	Replace with new.
A462-4	Fitting – Control Cable	Replace with new.
A522-10	Control Cable (FCU fuel cutoff)	Replace with new, or replace inner wire.
A522-11	Control Cable (fuel valve)	Replace with new, or replace inner wire.
A522-14	Control Cable (heater valve)	Replace with new, or replace inner wire.
A729-68	Tube (black, earlier ships; used with G727-1 engine gearbox vent tube)	Replace with new.
A785-36	Hose (engine gearbox vent; earlier ships)	Install KI-258 Firewall Drain Tube Upgrade Kit.
A785-37	Hose (inducer bleed)	Replace with new.
A785-38	Hose (starter-generator)	Replace with new.
A918-1 thru -8, -19, or -20	Elastic Cord Assembly	Replace with new. Dash number is selected during flight test evaluation.
A947-2	Flex Plate Assembly (engine driveline)	Replace with new.
B173-5	V-Belt – Compressor Drive (cabin air conditioning)	Replace with new.
B277-32	Clamp (inducer bleed hose, at engine)	Replace with new.
B297-5 or MS26574-5	AUTOPILOT FCS (5 amp) circuit breaker (Garmin FCS installation only)	Replace with new B297-5 Revision G or subsequent, or MS26574-5 circuit breaker.
C005-4	Main Rotor Hub (C154-1) & Bearing Assembly	Replace with new.
C005-13	Main Rotor Blade and Spindle Assembly	Replace with new or overhaul exchange C005-13 main rotor blade and spindle assembly.
C008-10	Tail Rotor Assembly	Replace with new.
C017-6	Swashplate Assembly	Replace with new or overhaul exchange C017-6 swashplate assembly.
C021-1	Tail Rotor Gearbox Assembly	Replace with new or overhaul exchange tail rotor gearbox assembly.
C031-1	Tail Rotor Pitch Control	Replace with new.
C119-2	Bumper – Tail Rotor	Replace with new.
C258-1	Main Rotor Pitch Link Assembly	Replace with new C258-5 or -8 link assembly.

1-92 Additional Component Maintenance (continued)

B. 2000 HOURS (continued)

Part Number	Description	Action
C258-5 & -8	Main Rotor Pitch Link Assembly	Perform inspection per § 5-51 and magnetic particle inspect barrel.
C522-10	Control Cable (FCU throttle)	Replace with new.
C522-11	Control Cable (PTG)	Replace with new.
C649-4	Oil Cooler (main rotor gearbox oil)	Replace with new, or overhaul oil cooler.
C947-3	Flex Plate Assembly (tail rotor driveline)	Replace with new.
D082-1	Tube Assembly (tail rotor guard mount)	Magnetic particle inspect or replace with new.
D211-3	Hydraulic Reservoir Assembly	Replace with new or overhaul exchange reservoir assembly.
D212-5	Hydraulic Servo Assembly	Replace with new or overhaul exchange servo assembly.
D212-6	Hydraulic Servo Assembly	Replace with new or overhaul exchange servo assembly.
D224-3 and -4	Tail Rotor Drive Shaft (D196-1) Assembly	Refer to § 4-30. Replace with new D224-4 tail rotor drive shaft assembly, if required.
D333-13	Fitting (PTG)	Replace with new.
D500-2	Hydraulic Pump Assembly	Replace with new or overhaul exchange pump assembly.
D500-3	Main Rotor Gearbox Oil Pump Assembly	Replace with new or overhaul exchange pump assembly.
D918-1	Elastic Cord – Longitudinal (cyclic pivot)	Replace with new.
D918-2	Elastic Cord – Lateral (cyclic pivot)	Replace with new.
D918-3	Elastic Cord – (collective)	Replace with new.
D930-2	Spring – Safety (FCU throttle input)	Replace with new.
F006-1, -6	Main Rotor Gearbox Assembly	Refer to § 4-30. Replace with new or overhaul exchange F006-1 or F006-6 gearbox assembly, as required.
F018-1	Clutch Assembly	Replace with new or overhaul exchange clutch assembly.
F101-4	Rod End, Elastomeric	Replace with new.
F170-1, -2	Fitting (engine gearbox vent)	Replace with new F170-2 fitting.
F173-1	Strut (exhaust weldment support)	Replace with new.
F453-5	Retainer (at firewall seal)	Replace with new.
F579-1	Engine Air Bellmouth	Replace with new.
F597-1	Seal – Firewall	Replace with new.
F642-1, -6	Engine Shaft Weldment	Replace with new F642-7 weldment.
F649-1	Oil Cooler (engine oil)	Replace with new, or overhaul oil cooler.
F651-2	Element – Main Gearbox Filter	Replace with new.

1-92 Additional Component Maintenance (continued)

B. 2000 HOURS (continued)

Part Number	Description	Action
F651-3	Seal Kit – Main Gearbox Filter	Replace with new.
F771-1	Filter – Engine Air Intake (foam, standard)	Replace with new.
F771-4	Filter – Starter-Generator (cooling air)	Replace with new.
F771-7	Filter – G918-1 Box Assembly	Replace with new.
F792-1 or -2	Dual Tachometer	Replace with new.
G732-2	Cap (with C130-62 spacer)	Replace with G732-3 cap.
A880-908 or AN815-8D	Union – Engine Oil Outlet (replaces CV26-77 check valve on helicopter S/N 0222 and prior)	Replace with new.
A880-908 or AN815-8D	Union – Oil Tank Vent (at engine)	Replace with new.
A880-910 or AN815-10D	Union – Engine Oil Inlet	Replace with new.
MS16562-4	Spring Pin (at D333-13 fitting on PTG lever)	Replace with new.
MS29512-10	Packing (left rollover valve)	Replace with new.
NAS1149E0363R	Washer (at A462-4 fittings)	Replace with new.
NAS557-32A	Grommet – Firewall (engine drive shaft weldment)	Replace with new.
NAS6604-67 or G732-4	Bolt (clutch assembly)	Replace with new G732-4 bolt.

1-92 Additional Component Maintenance (continued)

C. Engine Maintenance

Refer to RR300 Operation and Maintenance Manual (OMM) for engine maintenance. Prepare engine for Rolls-Royce maintenance facility per § 71-11 as required.

D. Airframe and Engine Accessory Maintenance

Refer to accessory manufacturer's instructions for continued airworthiness for accessory maintenance. Remove accessories per R66 Maintenance Manual or RR300 Operation and Maintenance Manual (OMM) as applicable.

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