Operational Suitability Data (OSD)
Flight Crew

R44

RTR 467

June 2025

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Contents

Abbreviations / Acronyms

AMC	Acceptable Means of Compliance
ATR	Additional Type Rating
DC	Direct Current (electrical)
FFS	Full Flight Simulator
FSTD	Flight Simulation Training Device
IFR	Instrument Flight Rules
ITR	Initial Type Rating
MDR	Master Difference Requirements
MGT	Measured gas (turbine) temperature
MTOM	Maximum Take Off Mass
N/A	Not Applicable
ODR	Operator Differences Requirements
OEB	Operational Evaluation Board
OPS	Flight Operations
RFM	Rotorcraft Flight Manual
RPM	Revolution Per Minute
SET(H)	Single Engine Turbine (Helicopter)
UK CAA	United Kingdom Civil Aviation Authority
VFR	Visual Flight Rules
VNE	Velocity Never Exceed

Part-ARA	Annex VI to Regulation (EU) No 290/2012 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018
Part-ARO	Annex II to Regulation (EU) No 965/2012 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018
Part-CAT	Annex IV to Regulation (EU) No 965/2012 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018
Part-FCL	Annex I to Regulation (EU) No 1178/2011 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018
Part-ORA	Annex VII to Regulation (EU) No 290/2012 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018
Part-ORO	Annex III to Regulation (EU) No 965/2012 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018
Part-SPA	Annex V to Regulation (EU) No 965/2012 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018

1. Introduction

This document provides the requirements for pilot training, checking, and currency specific to the R44 type rating. The requirements herein apply only when the pilot is subject to UK CAA rules.

The operational suitability data addresses:

- Aircraft Type Designation and Pilot License Endorsement
- Pilot Initial Type Rating Training “minimum syllabus” (ITR)
- Additional Type Rating Training “minimum syllabus” (ATR)
- Training areas of special emphasis (TASE)

Where references are made to requirements and where extracts of reference texts are provided, these are at the amendment state at the date of evaluation or publication of this document. Users should take account of subsequent amendments to any references, in particular concerning requirement for civil aviation aircrew and air operations.

In accordance with UK Regulation (EU) No 69/2014, the Operational Suitability Data contained in this document are identified as follows:

[M] Mandatory Operational Suitability Data, bearing the status of rule (see GM No 3 to 21A.15(d))

[AMC] Non-mandatory Operational Suitability Data, bearing the status of Acceptable Means of Compliance (see GM No 3 to 21A.15(d))

General information on the operation of the R44 is included in R44, R44 II, and R44 Cadet Pilot’s Operating Handbooks available on the Robinson web site www.robinsonheli.com.

2. Operator Difference Requirement (ODR) Tables

See Appendix 1

3. Master Difference Requirements (MDR) Tables

3.1. Difference Level Summary

Difference levels are summarized below for training, checking, and currency. This is a summary only and complete descriptions of difference levels for training, checking and currency are given in CS-FCD.

DIFFERENCE LEVEL TABLE

DIFFERENCE LEVEL	TRAINING	CHECKING	CURRENCY/ RECURRENT TRAINING
A	SELF INSTRUCTION	NOT APPLICABLE (OR INTEGRATED WITH NEXT PC)	NOT APPLICABLE
B	AIDED INSTRUCTION	TASK OR SYSTEM CHECK	SELF REVIEW
C	SYSTEMS DEVICES	PARTIAL CHECK USING DEVICE	DESIGNATED SYSTEM
D	MANEUVER DEVICES**	PARTIAL PC USING DEVICE*	DESIGNATED MANOEUVRE(S)
E	SIMULATOR C/D OR AIRCRAFT #	FULL PC USING SIMULATOR C/D OR AIRCRAFT*	AS PER REGULATIONS (TAKEOFFS & LANDINGS IN SIMULATOR C/D OR THE AIRCRAFT)

*IOE/SLF/LIFUS/line MAY BE REQUIRED ACCORDING TO REGULATIONS PC = PROFICIENCY CHECK

**FFS or aircraft may be used to accomplish specific manoeuvres

3.2. Training, Checking, and Recurrent Training difference requirements

		From Helicopter		
	Models	**R44**	**R44 CADET**	**R44 II**
To Helicopter	**R44**		A / A / A	A / A / A
	R44 CADET	A / A / A		A / A / A
	R44 II	A / A / A	A / A / A	

4. Type Rating List and License Endorsement List [M]

4.1. Type Rating List

OSD updates the Type Rating List as follows:

- Type Rating List (Helicopters)

Manufacturer	Helicopter Model / Name	Differences	License Endorsement	Complex	OSD FCD available	Remarks
Robinson - SE Piston -	R44 R44 II		R44		X	OSD FC Data available @ TC holder website: www.robinsonheli.com

5. Specification for Training

5.1. General

The Type Rating Training courses proposed by Robinson Manufacturer fulfilled the minimum requirements of UK CAA Air Crew Part-FCL. The assessment was based on the R44, Pilot Initial Type Rating Training syllabi.

The OSD defines pilot type rating training courses are divided into the following phases for approval in Approved Training Organizations (ATO) and also for operator specific training, provided the operator specific documentation is used throughout the course.

- Prerequisites for entry onto the specific course,
- Theoretical knowledge instruction syllabus and test summary,
- Helicopter flight training courses,
- Skill test.

5.2. Course pre-entry requirements

All candidates must fulfil the requirements of Part-FCL.725 for the issue of class and type ratings.

These Specifications for Training only apply to Type Ratings defined under Part-FCL, Subpart H. These specifications do not affect the LAPL requirements under Part-FCL Subpart B and there is no restriction on the use of the R44 for initial pilot training.

5.3. Licensing requirements

All students must fulfil the requirements of Part-FCL Appendix 9, Flight instruction and skill test.

The requirement of the issue of class and type rating for the R44 is defined as follows:

- for an Initial issue of a SEP(H), an approved flight instruction of at least:

Helicopter types	In Helicopter	In Helicopter and FSTD associated training Credits
SEP(H)	5 hrs	Using FFS level C/D: At least 2 hrs helicopter and at least 6 hrs total Using FTD level 2/3: At least 4 hrs helicopter and at least 6 hrs total

- for an additional issue of a SEP (H), an approved flight instruction of at least:

Helicopter types	In Helicopter	In Helicopter and FSTD associated training Credits
SEP(H) to SEP(H)	5 hrs	Using FFS level C/D: At least 2 hrs helicopter and at least 6 hrs total Using FTD level 2/3: At least 4 hrs helicopter and at least 5 hrs total

Note:

These requirements have to be considered as the bare minimum, additional training could be necessary depending on:

- Complexity of the aircraft type, handling characteristics, level of technology;
- Category of helicopter (SEP or SET helicopter, multi-engine turbine and multi pilot helicopter);
- Previous experience of the applicant.

5.4. Type Rating Training Program Summary

QUALIFICATION HELD	ITR	ATR
Single-Engine Piston→		√
Single-Engine Turbine →	√	
Multi-Engine Turbine →	√	
Total of theoretical knowledge instruction and test	9 hrs	7.5 hrs
Flight training	5 hrs	5 hrs

5.5. Theoretical knowledge syllabus and test summary [AMC]

Theoretical instruction should be provided in accordance with Part FCL Subpart H – Section 1 –FCL.725

The following sections present a summary of the material that an Initial and Additional Type Rating training program should consider. Training providers should ensure their type specific courses cover the pertinent material.

Initial and Additional Type Rating theoretical knowledge syllabus	ITR	ATR
Helicopter structure, engine, transmissions, electrical, fuel, rotors and equipment, normal and abnormal operation of the systems	4h00	3h30
Limitations (*)	0h30	0h30
Performance, flight planning and monitoring (*)	0h30	0h15
Weight and balance	0h30	0h15
Emergency procedures (*)	0h30	0h30
Awareness Training: low-G hazards (loss of control, mast bumping); and rotor RPM decay (energy management, blade stall).	1h00	1h00
Pilots pre-flight walk around, ground handling, equipment installation removal, pilots servicing (**)	1h00	0h30
Optional equipment	Additional	Additional
Total Theoretical Knowledge Syllabus	8h00	6h30
Theoretical examination session	1h00	1h00
TOTAL (HOURS)	9h00	7h30

Note:

(*) Theoretical instruction elements that can be covered during the ground training course and/or during flight training briefing phase.

(**) Instruction elements that can be covered during ground training course and/or during flight training briefing phase

5.6. Flight training course summary [AMC]

The following table indicates the minimum flight training required with and without regards to previous SEP experience. Each helicopter flight session could be extended or reduced at the discretion of the instructor, but the total minimum flight time is unchanged. Additional flight could be necessary at the discretion of the instructor if the trainee has not successfully demonstrated the ability to perform all maneuvers with a high degree of proficiency.

Type Rating Flight Training Syllabus	SEP ITR	ATR
Helicopter exterior visual inspection, cockpit inspection, starting procedures, pre-take off /landing procedures, taxiing, air taxiing, general handling, climbing/descending / turns, circuits.	1h15	1h15
Take off / landing various profiles including simulated maximum take-off mass, sloping ground / crosswind take off and landings.	1h15	1h15
Basic and advanced autorotations, recognition and recovery from low RPM, steep turns.	1h30	1h30
Abnormal & emergency procedures, hydraulics-off, governor-off, simulated instrument flight.	1h00	1h00
Total Flight Time	5h00	5h00
Skill Test	As required	As required

5.7. Training Areas of special emphasis (TASE) [M]

The following training procedures require special attention and should be read in conjunction with the R44 POH, Robinson Safety Notices(1) and the R22 Maneuver Manual found with the R22/R44 Flight Training Guide.

Training providers must comply with the following elements:

5.7.1. TASE / Training Methodology for Pilots and Instructors

- **Liftoff**
    - To avoid dynamic rollover, a two-step liftoff technique should always be used with just enough collective pulled to be light on the skids and equilibrium felt before the helicopter is then gently lifted into the air.
- **Hovering**
    - Hovering exercises should not be practiced close to the ground or obstacles, and maintaining a skid height of at least 1.5 m (5 feet) above the ground when practicing sideward or rearward flight.
- **Autorotation / Autorotative landings**
    - Autorotation training as detailed in Section 4 of the POH shall be conducted within gliding distance of a suitable landing area.
    - Autorotation training shall be performed with a trainee and an instructor only.
    - For the R44, when conditions conducive to carburetor icing are suspected, full carburetor heat must be applied prior to entry to an autorotation regardless of the carburetor air temperature gauge indication.
    - Practice autorotation entry
        - Collective lever should be lowered to the down stop and the throttle adjusted to give a small tachometer needle split. The throttle is then held fully closed to override the governor (inactive below 80%). To avoid inadvertent engine stoppage, the throttle should not be “chopped” and the engine must be recovered immediately if the engine is running roughly or the engine RPM continues to decrease.
        - To initiate the autorotation above 4000 ft in the R44, and 6000 ft in the R44 II, the throttle should be reduced slightly before lowering the collective to prevent engine overspeed.
        - Recommended airspeed of 60-70kts should be maintained with the RPM in the green.

- **Power recovery procedure**
  - At approximately 40ft AGL a cyclic flare should be commenced to reduce forward speed and rate of descent, and smoothly roll throttle full on to recover engine power.
  - At 8 feet AGL the aircraft should be levelled and collective applied to control descent.
- **Autorotative landing**
  - Practice autorotative landings to the ground should be performed in the same manner as a power recovery except the throttle should be kept closed throughout the maneuver. Always contact the ground heading straight ahead with skids level.
- **Simulated Power Failure**
  - Before simulating a power failure, it is critical that communication and understanding are established between instructor and student. To prevent the students from being surprised, they should be given a few minutes advance notice that a power failure will be simulated. The power failure should be loudly announced as the throttle is rolled off. The manifold pressure should be less than 21 inches and the throttle rolled off smoothly, never “chopped”.
- **Simulated Hydraulic failure**
  - A switch located on the top of the pilot's cyclic grip is used to simulate a loss of hydraulic system pressure. Use care not to switch hydraulics off inadvertently.
  - If switched off, hydraulics should always be re-engaged with a relaxed grip on the controls to prevent over-control. Avoid re-engaging hydraulics between hover and 100 ft AGL
  - Hydraulics-off hovering can be challenging. A landing site where a run-on landing can be made should be available.
- **Low "G" Mast Bumping**
  - Low-G cyclic pushovers are prohibited. Excessive rotor flapping can be caused by low-G Conditions leading to catastrophic rotor hub impact with mast, or blade impact with airframe.
  - Never attempt to demonstrate or experiment with low-G maneuvers regardless of pilot skill or experience level.
  - Avoid abrupt forward cyclic movements and initiate descent with collective.
  - In the event of inadvertent low-G condition, recover thrust by aft cyclic (to reload the disks) rather than lateral cyclic roll, then correct laterally.
  - Ensure smooth input on controls; not abrupt, full range, un-coordinated input.
  - Do not exceed 110 KIAS except in smooth air, and then only with caution. If turbulence is expected, reduce power and use a slower than normal cruise speed.(60-70 KIAS) Mast bumping is less likely at lower airspeeds. Firmly rest right forearm on right leg to prevent unintended control inputs. Allow aircraft to go with the turbulence then restore level flight with smooth, gentle control inputs.
- **Low RPM Recognition and Recovery**
  - Low RPM warning horn and light activates when RPM decays below 97%.

- The recovery technique for low RPM condition is simultaneous lowering of the collective and rolling-on of the throttle.
- In forward flight, aft cyclic may also be used to recover RPM

- **Use of Carburetor Heat (R44 only)**
  - When conditions conducive to carburetor icing are suspected, carburetor heat shall be applied. Carburetor ice can occur at OATs as high as 30°C. Even in generally dry air, local conditions such as a nearby body of water can be conducive to carburetor ice. When in doubt, assume conditions are conducive to carburetor ice and apply carburetor heat as required.
  - On aircraft equipped with the carb heat assist system, the control knob should be left unlatched unless it is obvious that conditions are not conducive to carburetor ice.

- **Governor-off Flight**
  - In normal operation, rotor speed is controlled through an engine governor. The governor senses engine RPM changes and applied corrective inputs to the throttle.
  - In the event of a governor failure, the pilot must monitor rotor speed and adjust the throttle as necessary to maintain the nominal rotor speed.
  - A “correlator” applies throttle changes to compensate for changes in collective control input and thereby reduces the amount of throttle adjustment necessary for the pilot to maintain the nominal rotor speed.
  - Note that governor-off flight is prohibited except for in-flight system malfunction or emergency procedures training.

- **Initial Training Flights**
  - Before allowing someone to manipulate the controls they should be fully briefed about the extreme sensitivity of the controls. They must be instructed to never make large or sudden control movement of the controls. The instructor must be prepared to instantly grip the controls should the student start to make a wrong move.

- **High Winds or Turbulence Encounters**
  - In accordance with Safety Notice SN-32, when encountering high winds or turbulence reduce power and fly at a slower than normal cruise speed (60-70 KIAS), avoid over control, and avoid flying on the downwind side of hills, ridges or tall buildings.

Notes: **[M]**

(1)An in-depth study of **all safety tips and safety notices** listed in the R44, R44 II, and R44 Cadet Pilot’s Operating Handbook is required.

6. Specification for Testing, Checking, Currency & Recent Experience

6.1. Skill test

As required by Part-FCL.725 (c).

6.2. Proficiency Checks

As required per FCL.740 and AMC FCL740(H)(a)(3)

6.3. Specification for Recent Experience

As required by Part FCL.060

6.4. Pre-Solo Requirement [M]

A person who does not hold a helicopter licence must have had a minimum of 20 hours of dual instruction in a Robinson R22 or R44 helicopter prior to operating it in solo flight. In addition, the person must obtain an endorsement from a flight instructor that the individual is proficient to solo a Robinson R44. This endorsement is valid for a period of 90 days. The dual instruction must include the following abnormal and emergency procedures flight training:

(i) Enhanced training in autorotation procedures,

(ii) RPM control without the use of the governor, and

(iii) Low rotor RPM recognition and recovery.

6.5. Flight Instructor Pre-Requites [M]

A flight instructor may provide instruction in a Robinson R44 only if that instructor--

(i) Has completed all of the training in paragraph 5.5;

(ii) Has the following minimum flight hours:

At least 200 flight hours in helicopters including --

At least 50 flight hours in the R22, R44, or a combination thereof; or

At least 50 flight hours in Robinson helicopters at least 15 of which are in the R44;

(iii) Has completed flight training in a Robinson R44 on the following abnormal and emergency procedures--

(a) Enhanced training in autorotation procedures;

(b) RPM control without the use of the governor; and

(c) Low rotor RPM recognition and recovery.

7. Optional Specific Equipment

The following optional equipment installations require additional training:

- Fixed Floats
- Pop-out Floats
- Police Version
- ENG Version

Training materials for these options have not been evaluated by UK CAA as operational suitability data. Robinson recommends familiarization with these options and other optional equipment such as avionics and the autopilot through self-study of manuals or online training material.

8. Appendices

Appendix 1: ODR tables

ODR Tables

Definitions used in the ODR Tables:
X = Flight Manual/Pilot's Operating Handbook and/or FM Supplement
AI = Aided Instruction
CBT = Computer Based Training
ICBT = Interactive Computer Based Training
FTD = Flight Training Device (Level 1 to 7)
FBS = Fixed Base Simulator (Level 5 to 7)
FFS = Full Flight Simulator (Level A, B, C, D)

OPERATOR DIFFERENCE REQUIRMENTS TABLE						
Difference Helicopter: R44 II Base Helicopter: R44				Compliance Method		
Design Feature	Remarks	Flight Characteristics	Procedures Change	Training	Checking	Currency
Engine	Fuel injected engine replaces carbureted.	None	Minor: Starting procedures.	Level A: Self-instruction	N/A	N/A
Maximum Gross Weight	Increase from 1098 kg to 1134 kg	None	Minor: Weight & Balance	Level A: Self-instruction	N/A	N/A
Engine Power	Takeoff (5-min) increased from 225 hp to 245 hp	None	Minor: Limitations	Level A: Self-instruction	N/A	N/A
Difference Helicopter: R44 Cadet Base Helicopter: R44				Compliance Method		
Design Feature	Remarks	Flight Characteristics	Procedures Change	Training	Checking	Currency
Maximum Gross Weight	Decrease from 1098 kg to 998 kg	None	Minor: Weight & Balance	Level A: Self-instruction	N/A	N/A
Engine Power	Max continuous decreased from 205 hp to 185 hp	None	Minor: Limitations	Level A: Self-instruction	N/A	N/A
	Takeoff (5-min) decreased from 225 hp to 210 hp	None	Minor: Limitations	Level A: Self-instruction	N/A	N/A

OPERATOR DIFFERENCE REQUIRMENTS TABLE, CONTINUED						
Difference Helicopter: R44 or R44 II with symmetric horizontal stabilizer* Base Helicopter: R44 or R44 II with asymmetric horizontal stabilizer				Compliance Method		
Design Feature	Remarks	Flight Characteristics	Procedures Change	Training	Checking	Currency
Horizontal stabilizer	Symmetric stabilizer mounted to lower tail cone forward of tail rotor replaces asymmetric stabilizer mounted at aft tail cone	None (Reduces right roll tendency in low-G (prohibited) flight conditions)	Minor: Pre-flight inspection	Level A: Self-instruction	N/A	N/A

*Level A training is also applicable for the R44 or R44 II with symmetric horizontal stabilizer as base helicopter and R44 or R44 II with asymmetric horizontal stabilizer as difference helicopter.