

Briefings & Checks

Robinson RH22 Beta II



Helicopter Data (Meteo / NOTAM / DABS / W&B)

1.	Immatriculation:	HB-
2.	Empty weight: lbs
3.	Main fuel: (USG x 6= lbs) lbs
5.	Pilot / Pax / Baggage: lbs
6.	actual TOM / HOGE: lbs / HOGE
7.	Max TOM:	1370 lbs or iaw HOGE perf. chart

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Limitations

Airspeed Limitation

up to 3000 ft DA	Vne 102 KIAS
>3000 ft DA	see Vne placard

Weight Limits

Max gross weight	1370 lbs
Min gross weight	920 lbs
Max per seat incl baggage comp	240 lbs
Max per baggage comp	50 lbs
Min solo pilot (incl baggage comp)	130 lbs (135 lbs with aux fuel)

Rotor (NR) Limitations

Power on	max 104 % min 101 %
Power off	max 110 % min 90 %
Low rpm warning	97 % RRPM

Altitude Limitations

Max operating alt	14'000 ft DA
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Airspeed for safe operation (iaw Vne placard)

Take off & Climbs	60 KIAS
Max Rate of climb	53 KIAS
Max Range	83 KIAS
Landing Approach	60 KIAS
Autorotation	65 KIAS

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Limitations

LIMIT MANIFOLD PRESSURE - IN. HG

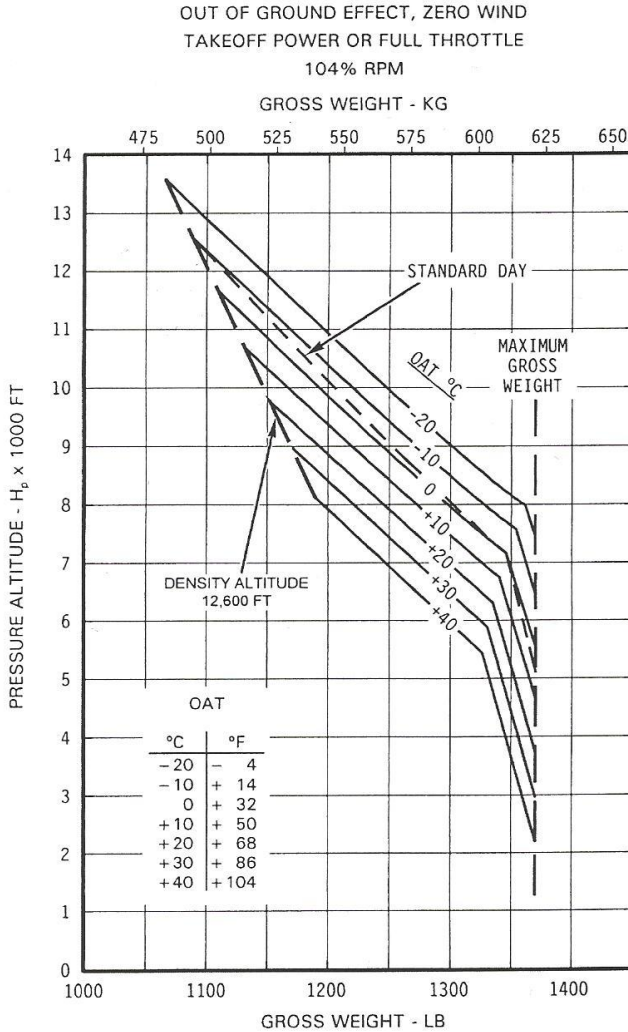
MAXIMUM CONTINUOUS POWER							
PRESS	OAT - °C						
ALT-FT	-20	-10	0	10	20	30	40
SL	21.5	21.8	22.1	22.3	22.6	22.9	23.2
2000	21.1	21.4	21.6	21.9	22.2	22.5	22.8
4000	20.7	21.0	21.2	21.5	21.8	22.0	22.3
6000	20.3	20.6	20.8	21.1	21.3	21.6	21.9
8000	19.9	20.2	20.4	20.7	20.9	FULL THROTTLE	
FOR MAX TAKEOFF POWER (5 MIN), ADD 0.9 IN. HG							

NEVER EXCEED SPEED - KIAS

PRESS	OAT - °C						
ALT-FT	-20	-10	0	10	20	30	40
SL	102						
2000							
4000				98	94	91	87
6000	98 94		90	87	82	77	
8000	94	90	86	80	75	69	64
10000	86	80	74	68	62	57	
12000	74	67	61	NO FLIGHT			
14000	61						

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Performance



R22 BETA II
O-360-J2A ENGINE

OGE HOVER CEILING VS. GROSS WEIGHT

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Departure Briefing

1.	Obstacle /Wind	checked
2.	Departure procedure	take off profile (HIGE/HOGE)
3.	Limitations	LMP / MCP / Vne
4.	Emergency	sector

Engine prestart check **Departure Briefing completed**

(METEO / NOTAM / DABS / W&B / fuelcap / cabin / PAX / baggage / limit MP / Vne)

1.	Seat belts	fastened
2.	Fuel shut-off valve	on
3.	Cyclic / collective friction	off
4.	Cyclic / collective / pedals	full travel free
5.	Throttle	full travel free - CLOSED
6.	Collective	full down, friction on
7.	Cyclic	neutral / friction on
8.	Pedals	neutral
10.	GOV switch	on
11.	Circuit breakers	all in
11.	Carb heat	off
12.	Mixture	full rich
13.	Mixture guard	installed
	Primer (if installed)	down and locked
	All switches / Avionics	off
12.	Clutch	disengaged
13.	Altimeter	set
14.	Rotor brake / Map light	disengaged / off
15.	Start-up clearance	received (if necessary)

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Engine starting

1.	Master Switch	on
2.	Throttle twists for priming	as required
3.	Throttle	closed
4.	Aera (left + right)	clear
5.	Strobe light	on
6.	Ignition switch	start, then both
7.	Starter-On light	out
8.	Set idle speed	55%
9.	Clutch switch	engaged
10.	Alternator	on, light off
11.	Blades turning	< 5 sec
12.	Oil pressure within 30 sec	>25 psi min
13.	Avionics, Headset	on
14.	Wait for clutch light	out / warm up 70-75% RPM

Run-up Check

1.	Engine gages	green
2.	Warning lights	out
3.	Mag drop @ 75 % RPM	max 7 % RPM in 2 sec
4.	Carb heat check	CAT rise / drop
5.	Sprag clutch check from 75 % RPM	needles split
6.	Doors	closed and latched
7.	Cyclic / collective friction	off
8.	increase throttle	RPM 102 – 104 %
9.	Lift collective slightly, reduce RPM	horn / light @ 97 %

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Check before departure

1.	Cyclic and Collective frictions	off
2.	Trim	off
3.	Carb heat	as required
4.	Governor	on
5.	Ldg light	as required
6.	Fuel	endurance
7.	T&P's	green arc
8.	RPM	102-104 %
9.	Warning lights	out

Hover-Check

1.	Power Inch MP
2.	Carb heat	>10°C
3.	RRPM	102 – 104 %
4.	Wind	checked
5.	Departure sector	obstacle

Climb-Check

1.	Climbspeed (Vy)	60 KIAS
2.	Power	21 inch < MTP (5 Min)
3.	Ldg light	as required
4.	Carb heat	as required

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Cruise-Check

1.	Governor	on
2.	Carb heat	as required
3.	Trim	as required
4.	Landing light	as required
5.	Fuel	endurance
6.	T's & P's	green arc
7.	Power	20 inch – MCP
8.	RRPM	102-104 %
9.	Warning lights	out
10.	Altimeter	set

Approach Briefing

1.	REKO	W A HI BEL U PLA HÖ LEI
2.	Landing spot	elevation
3.	Limitations	LMP / HOGE
4.	Emergency	escape

Check for approach

1.	Governor	on
2.	Carb heat	as required
3.	Trim	off
4.	Landing light	as required
5.	Fuel	endurance
6.	T's & P's	green arc
7.	Speed	70 KIAS
8.	RPM	102 – 104%
9.	Warning lights	out

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Final-Check

1.	Carb heat	as required
2.	Power	>11 inch MP

Safety-Window

1.	Speed / Sinkrate	< 30 kts / < 300 ft ROD
2.	Decision	land / go around

Shutdown

1.	Collective down, RPM 60 – 70%	friction on
2.	Cyclic , Pedals	neutral, friction on
3.	CHT	drop (3'30" cooling down)
4.	Avionics	121.5 checked / off
5.	Throttle	closed
6.	Clutch switch	disengage
7.	Wait 30 sec / 30 sec	mixture off / apply rotor brake
8.	Clutch light out	all switches / ignition off

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Emergencies

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|----|---------------------------|--|
| 1. | Autorotation procedure | <ul style="list-style-type: none">- collectiv down (90- 110 RRPM / 65 KIAS)- high RRPM – increase rate off descent- max glide: 90 % RRPM / 75 KIAS |
| 2. | In flight relighting | <ul style="list-style-type: none">- normal AR-procedure- > 500 ft AGL- mixture full rich- throttle closed- starter engage |
| 3. | GOV failure | <ul style="list-style-type: none">- grip throttle firmly to override the GOV- GOV switch off- manual throttle control |
| 4. | Electrical fire in flight | <ul style="list-style-type: none">- master battery switch - OFF- alt switch - OFF- land immediately- extinguish fire |
| 5. | Fire in flight | <ul style="list-style-type: none">- enter AR- master battery switch off- cabin heat off- cabin vent on- if engine running – normal landing- if engine stops running - AR |
| 6. | Engine fire during start | <ul style="list-style-type: none">- cranking- if engine starts, run 50-60 % RPM short time- if engine fails to start, shut off fuel and battery- extinguish fire- inspect for damage |

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| 7. | Loss of TR thrust in flight | <ul style="list-style-type: none">- indicated by nose right yaw, cannot stopped by- left pedal- maintain 70 KIAS- select landing site, roll throttle off, perf AR landing |
|----|-----------------------------|--|

Airflow around the vertical fin may permit controlled flight at low power levels and sufficient airspeed when a suitable landing site is not available; however, the touchdown shall be accomplished with the throttle in the full closed position.

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| | Loss of TR thrust in hover | <ul style="list-style-type: none">- immediately roll off throttle- raise collective just before touchdown to cushion landing |
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| 8. | Tachometer failure | <ul style="list-style-type: none">- use remaining tach to monitor RPM- allow GOV to control RPM |
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Warning lights

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|----|-----------------|--|
| 1. | OIL | <ul style="list-style-type: none">- loss of engine power or oil pressure- check oil pressure gauge- if pressure loss, land immediately |
| 2. | MR TEMP | <ul style="list-style-type: none">- excessive temp of MRGB |
| 3. | MR CHIP | <ul style="list-style-type: none">- indicates metallic particles in MRGB |
| 4. | TR CHIP | <ul style="list-style-type: none">- indicates metallic particles in TRGB |
| 5. | LOW FUEL | <ul style="list-style-type: none">- indicates approx 1 USG Fuel- engine will run out of fuel after 5 Min MCP |

Robinson RH22 Beta II

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| 6. | CLUTCH | <ul style="list-style-type: none">- clutch actuator circuit is on- max 7-8 sec, then pull CLUTCH circuit breaker- reduce power- land immediately and prepare to enter AR |
| 7. | ALT | <ul style="list-style-type: none">- low voltage / ALT failure- turn off nonessential electr equipment- ALT off, after 1 sec on- if light stays on, land as soon as practical |
| 8. | BRAKE | <ul style="list-style-type: none">- rotor brake is engaged- release immediately in flight or before starting engine |
| 9. | STARTER- ON | <ul style="list-style-type: none">- indicates starter motor is on- if light does not go out when starter button is released, immediately pull mixture to idle cut off and turn master switch off |
| 10. | GOV OFF | <ul style="list-style-type: none">- indicates engine RPM throttle governor is off |
| 11. | CARBON MONOXIDE | <ul style="list-style-type: none">- elevated levels of CO in cabin- open nose doors an vents- shut off heater- if hovering, transition to forward flight- if symptoms of CO poisoning (headache, drowsiness, dizziness) land immediately |
| 12. | LOW RPM (and Horn) | <ul style="list-style-type: none">- rotor RPM is below safe limits- roll throttle on, lower collective- in forward flight, apply aft cyclic |

Standard Circuit

