

Section 1

LIMITATIONS

TABLE OF CONTENTS

Subject	Paragraph Number	Page Number
Introduction	1-1	1-3
Basis of Certification	1-2	1-3
Types of Operation	1-3	1-3
Flight Crew	1-4	1-3
Configuration	1-5	1-3
Required Equipment	1-5-A	1-3
Optional Equipment	1-5-B	1-4
Doors Open/Removed	1-5-C	1-4
Passengers	1-5-D	1-4
Cargo	1-5-E	1-4
Internal Cargo Configuration	1-5-E-1	1-4
Baggage	1-5-E-2	1-4
Weight and Center of Gravity	1-6	1-4
Weight	1-6-A	1-4
Center of Gravity	1-6-B	1-4A
Longitudinal Center of Gravity	1-6-B-1	1-4A
Lateral Center of Gravity	1-6-B-2	1-4A
Airspeed	1-7	1-5
Altitude	1-8	1-5
Maneuvering	1-9	1-5
Prohibited Maneuvers	1-9-A	1-5
Climb and Descent	1-9-B	1-5
Height-Velocity	1-10	1-5
Ambient Temperatures	1-11	1-6
Electrical	1-12	1-6
Battery	1-12-A	1-6
Generator	1-12-B	1-6
Starter	1-12-C	1-6
Ground Power Unit	1-12-D	1-6
Power Plant	1-13	1-6
Gas Producer RPM (N_1)	1-13-A	1-7
Twin Engine Operation	1-13-A-1	1-7
One Engine Inoperative (OEI)	1-13-A-2	1-7
Power Turbine RPM (N_2)	1-13-B	1-7
Interturbine Temperature	1-13-C	1-7
Engine Torque	1-13-D	1-8

TABLE OF CONTENTS (CONT)

Subject	Paragraph Number	Page Number
One Engine Inoperative (OEI)	1-13-D-1..	1-8
Fuel Pressure	1-13-E	1-8
Engine Oil Pressure.....	1-13-F	1-8
Engine Oil Temperature	1-13-G.....	1-8
Combining Gearbox Oil Pressure	1-13-H.....	1-8
Combining Gearbox Oil Temperature.....	1-13-J.....	1-9
Transmission	1-14.....	1-9
Transmission Oil Pressure	1-14-A	1-9
Transmission Oil Temperature.....	1-14-B	1-9
Transmission Torque	1-14-C	1-9
Twin Engine Operation (Transmission Scale (Δ)).....	1-14-C-1..	1-9
Rotor	1-15.....	1-9
Rotor RPM — Power ON	1-15-A	1-9
Rotor RPM — Power OFF.....	1-15-B	1-9
Hydraulic	1-16.....	1-9
Hydraulic Pressure	1-16-A	1-9
Hydraulic Temperature.....	1-16-B	1-10
Fuel and Oil	1-17.....	1-10
Fuel	1-17-A	1-10
Oil — Engine and Combining Gearbox.....	1-17-B	1-10
Oil — Transmission, Intermediate, and Tail Rotor Gearboxes	1-17-C	1-10
Rotor Brake	1-18.....	1-10
Landing Gear.....	1-19.....	1-10
Instrument Markings and Placards.....	1-20.....	1-10
Heater.....	1-21.....	1-10

LIST OF FIGURES

Subject	Figure Number	Page Number
Weight-Altitude-Temperature Limitations for Takeoff, Landing, and In-Ground Effect Maneuvers Chart	1-1.....	1-11
Gross Weight Center of Gravity Chart.....	1-2.....	1-12
Placards and Decals.....	1-3.....	1-13
Single Engine Height-Velocity Chart	1-4.....	1-15
Instrument Markings	1-5.....	1-16

Section 1

LIMITATIONS

1-1. INTRODUCTION

NOTE

Compliance with limitations in this section is required by appropriate operating rules.

Minimum and maximum limits, and normal and cautionary operating ranges for helicopter and subsystems are indicated by instrument markings and placards. Instrument markings and placards represent aerodynamic calculations that are substantiated by flight test data.

Anytime an operating limit is exceeded, an appropriate entry shall be made in helicopter log book. Entry shall state which limit was exceeded, duration of time, extreme value attained, and any additional information essential in determining maintenance action required.

1-2. BASIS OF CERTIFICATION

This helicopter is certified under FAR Part 29, Category B.

1-3. TYPES OF OPERATION

The basic configured helicopter is approved as a fifteen-place helicopter and is certified for operation in day or night VFR non-icing conditions.

1-4. FLIGHT CREW

NOTE

Minimum cockpit (FS 47.0) weight is 170 pounds (77.1 kilograms). Refer to [Section 5](#).

Minimum flight crew consists of one pilot who shall operate helicopter from right crew seat.

Left crew seat may be used for an additional pilot for VFR day and night operations when approved dual controls and copilot instrument kits are installed.

NOTE

Refer to applicable operating rules for internal cargo operations.

1-5. CONFIGURATION

1-5-A. REQUIRED EQUIPMENT

Heated pitot-static system

Pilot windshield wiper

Force trim system

1-5-B. OPTIONAL EQUIPMENT

Refer to appropriate Flight Manual Supplement(s) for additional limitations, procedures, and performance data required for optional equipment installed (Appendix A).

1-5-C. DOORS OPEN/REMOVED

Helicopter may be flown with doors open or removed only with Bell Helicopter standard interior installed. Flight operation is approved for the following alternative configurations.

Symmetrical configurations:

Both crew doors removed.

Both sliding doors locked open or removed with both hinged panels installed or removed.

Asymmetrical configurations:

Cargo doors can be opened or closed asymmetrically to a locked position with following restrictions:

1. Two-way communications between pilot and cabin crewmember.
2. All crewmembers and passengers are secured with an approved restraint.

NOTE

Opening or removing doors shifts helicopter center of gravity and reduces V_{NE} . Refer to Section 5 and Airspeed Limitations.

1-5-D. PASSENGERS**NOTE**

Refer to Section 5 for loading tables to be used in weight/CG computations.

With passenger seat kit installed, the helicopter is certified for operations as a 15-place helicopter.

The above loading does not apply if cargo or a combination of cargo and passengers are being transported. It shall be the responsibility of the pilot to ensure helicopter is properly loaded so entire flight is conducted within limits of gross weight center of gravity charts (Figure 1-2).

1-5-E. CARGO**1-5-E-1. INTERNAL CARGO CONFIGURATION**

Allowable deck loading for cargo is 100 pounds per square foot (4.9 kg/100 cm²). Deck mounted tie-down fittings are provided and have an airframe structural capacity of 1250 pounds (567.0 kg) vertical and 500 pounds (226.8 kg) horizontal per fitting. Provisions for installation of cargo tie-down fittings are incorporated in aft cabin bulkhead and transmission support structure and have an airframe structural capacity of 1250 pounds (567.0 kg) at 90° to bulkhead and 500 pounds (226.8 kg) in any direction parallel to bulkhead. Cargo shall be secured by an approved restraint method that will not impede access to cargo in an emergency. All cargo and equipment shall be securely tied down when operating with aft cabin doors open or removed.

1-5-E-2. BAGGAGE

Baggage compartment maximum allowable loading is 400 pounds (181.4 kg), not to exceed 100 pounds per square foot (4.9 kg/100 cm²).

1-6. WEIGHT AND CENTER OF GRAVITY**1-6-A. WEIGHT**

Maximum GW is 11,200 pounds (5080.3 kg).

Refer to Weight-altitude-temperature limitations for takeoff, landing and in ground effect maneuvers chart (Figure 1-1).

1-6-B. CENTER OF GRAVITY

NOTE

1-6-B-1. LONGITUDINAL CENTER OF GRAVITY

Station 0 (datum) is located 20 inches (508 mm) aft of most forward point of cabin nose.

Longitudinal CG limits are from station 130.0 to 144.0.

1-6-B-2. LATERAL CENTER OF GRAVITY

Longitudinal CG operational range is variable (Figure 1-2), depending upon GW, and shall be computed from weight and balance data.

Lateral CG limits are 4.7 inches (119.4 mm) left and 6.5 inches (165.1 mm) right of fuselage centerline.

1-7. AIRPEED

7500 pounds (3402 kg) GW — V_{NE} 130 KIAS.

11,200 pounds (5080.3 kg) GW — V_{NE} 100 KIAS.

Symmetrical doors open/off operation — V_{NE} 100 KIAS (any GW).

V_{NE} decreases linearly from 130 knots to 100 knots with GW. (Refer to Placards and Decals, Figure 1-3.)

V_{NE} decreases 3 knots per 1000 feet above 3000 feet H_D .

Maximum airspeed when operating above maximum continuous torque (87.5%) is 80 KIAS.

V_{NE} with cargo door open/off asymmetrically is 60 KIAS.

V_{NE} with cargo doors in transit or in an unlocked position is 60 KIAS.

1-8. ALTITUDE

Maximum operating — 20,000 feet H_P .

Refer to applicable operating rules for high altitude oxygen requirements.

WARNING

MONITOR ITT WHEN STARTING ENGINE IN MANUAL FUEL CONTROL MODE.

Above 15,000 feet H_P , restart shall be accomplished in manual fuel control mode only. (No airspeed restrictions.)

Below 15,000 feet H_P , restart may be attempted in either manual or automatic fuel control mode.

1-9. MANEUVERING**1-9-A. PROHIBITED MANEUVERS**

Intentional maneuvering resulting in roll attitudes in excess of 50° angle of bank, or pitch attitudes lower than 15° nose down or higher than 30° nose up are prohibited.

1-9-B. CLIMB AND DESCENT

Refer to Section 4.

1-10. HEIGHT-VELOCITY

The height-velocity limitations are critical in the event of a single engine failure during takeoff, landing, and other operation near the surface (Figure 1-4). The AVOID area of the Height-Velocity chart defines the combinations of airspeed and height above ground from which a safe single engine landing on a smooth, level, firm surface cannot be assured.

The H-V chart is valid only when the Weight-Altitude-Temperature limitations are not exceeded (Figure 1-1). The diagram does not define the conditions which assure continued flight following an engine failure nor the conditions from which a safe power off landing can be made.

When takeoffs are made in accordance with HV charts, proceed as follows:

Determine hover torque at a 4-foot skid height.

Perform takeoff with no more than 15% torque above hover power while accelerating to Takeoff Climb Out Speed (V_{TOCS}). Refer to Section 4 for V_{TOCS} .

NOTE

Downwind takeoffs are not recommended since published takeoff distance performance will not be achieved. When near zero wind conditions prevail, determine true direction of wind.

1-11. AMBIENT TEMPERATURES

Maximum sea level ambient air temperature for operation is +52°C (+125°F) and decreases with altitude at standard lapse rate (2°C per 1000 feet H_p). Minimum ambient air temperature at all altitudes is -54°C (-65°F). Refer to Weight-Altitude-Temperature Limitations for Takeoff, Landing, and In-Ground Effect Maneuvers Chart (Figure 1-1).

1-12. ELECTRICAL

1-12-A. BATTERY

WARNING

BATTERY SHALL NOT BE USED FOR ENGINE START AFTER ILLUMINATION OF BATTERY TEMP LIGHT (IF INSTALLED). BATTERY SHALL BE REMOVED AND SERVICED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS PRIOR TO RETURNING BATTERY TO SERVICE.

Maximum battery case temperature — 54.5°C (130°F).

Maximum battery internal temperature — 62.7°C (145°F).

1-12-B. GENERATOR

Maximum 150 amps per ammeter

NOTE

To attain published single engine performance, generator loads should not exceed 75 amps each during twin engine operation.

Ammeter needle may deflect full scale momentarily during generator assisted start of second engine.

1-12-C. STARTER

Starter energizing times shall be limited as follows:

30 seconds ON

60 seconds OFF

30 seconds ON

5 minutes OFF

30 seconds ON

15 minutes OFF

Above energizing cycle may then be repeated.

Above 15,000 H_p, restart shall be accomplished in manual fuel control mode only.

Below 15,000 H_p, restart may be attempted in either manual or automatic fuel control mode.

1-12-D. GROUND POWER UNIT

28 VDC ground power units for starting shall be rated at a minimum of 400 amps and a maximum of 1000 amps.

1-13. POWER PLANT

Pratt and Whitney Canada PT6T-3B or PT6T-3.

NOTE

Operation in 2 1/2 minute or 30 minute OEI range is intended for emergency use only, when one engine becomes inoperative due to actual malfunction. OEI ranges shall not be used for training.

1-13-A. GAS PRODUCER RPM (N₁)

Maximum 103.4%

1-13-A-1. TWIN ENGINE OPERATION

1-13-B. POWER TURBINE RPM (N₂)

PT6T-3B (Gauge 212-075-037-101/-105)

Continuous operation 61 to 100.8%
 Maximum continuous 100.8%
 Maximum for takeoff 100.8%
 Maximum transient (not to exceed 30 seconds) 102.4%

Takeoff 100%
 Minimum 97%
 Continuous operation 97 to 100%
 Maximum continuous 100%
 Transient (not to exceed 10 seconds) 101.5%



1-13-C. INTERTURBINE TEMPERATURE

PT6T-3B (Gauge 212-075-037-113)

PT6T-3B (TWIN ENGINE OPERATION)

Continuous operation 61 to 101.8%
 Maximum continuous 101.8%
 Maximum for takeoff 101.8%
 Maximum transient (not to exceed 30 seconds) 103.4%

Continuous operation 300 to 765°C
 Maximum continuous 765°C
 5 minute takeoff range 765 to 810°C
 Maximum for takeoff 810°C
 Maximum transient (not to exceed 5 seconds) 850°C
 Maximum for starting (not to exceed 2 seconds above 960°C) 1090°C

PT6T-3

Maximum continuous 100%
 Maximum transient (not to exceed 10 seconds) 101.5%

NOTE

If ITT remains above 810°C longer than 15 seconds or exceeds other limits, ITT and duration shall be recorded in helicopter logbook. Refer to Pratt and Whitney Maintenance Manual for inspection requirements.

1-13-A-2. ONE ENGINE INOPERATIVE (OEI)

PT6T-3B (Gauge 212-075-037-101/-105)

2 1/2 minute range 100.8 to 102.4%
 Maximum 102.4%

PT6T-3B (SINGLE ENGINE OPERATION)



PT6T-3B (Gauge 212-075-037-113)

2 1/2 minute range 101.8 to 103.4%

30 minute OEI range 765 to 822°C
 2 1/2 minute OEI range 822 to 850°C
 Maximum OEI 850°C

PT6T-3	
5 minute range (twin engine operation)	765 to 810°C
30 minute range (single engine operation)	765 to 810°C
Maximum continuous limit (single or twin engine operation)	765°C
Power change transient limit (5 seconds above 810°C not to exceed 850°C)	850°C
Starting transient limit (not to exceed 2 seconds above 810°C)	1090°C

30 minute power range	63.9 to 71.8%
Maximum	71.8%

1-13-E. FUEL PRESSURE

Minimum	4 PSI
Continuous operation	4 to 35 PSI
Maximum	35 PSI

1-13-F. ENGINE OIL PRESSURE

Minimum (below 79% N ₁)	40 PSI
79 to 100% N ₁	80 to 115 PSI
Maximum	115 PSI

1-13-D. ENGINE TORQUE

NOTE

For normal twin engine operation, maximum permissible torque needle split is 4% total.

1-13-G. ENGINE OIL TEMPERATURE

NOTE

Helicopters with PT6T-3B engine shall use only gauges marked 0 to 115°C. Helicopters with PT6T-3 engine may use either gauge.

1-13-D-1. ONE ENGINE INOPERATIVE (OEI)

PT6T-3B — INSTRUMENT MARKED 71.8% RED LINE

Maximum continuous	63.9%
30 minute power range	63.9 to 71.8%
Maximum	71.8%

PT6T-3B OR PT6T-3

Minimum	0°C
Continuous operation	0 to 115°C
Maximum	115°C

PT6T-3B — INSTRUMENT MARKED 79.4% RED LINE

Maximum continuous	63.9%
30 minute power range	63.9 to 79.4%
Maximum	79.4%

PT6T-3 ONLY

Minimum	5°C
Maximum	107°C

1-13-H. COMBINING GEARBOX OIL PRESSURE

Minimum for idle	40 PSI
Operation below 94% N ₂	40 to 60 PSI
Continuous operation	60 to 80 PSI
Maximum	80 PSI

PT6T-3

Maximum continuous	63.9%
--------------------	-------

1-13-J. COMBINING GEARBOX OIL TEMPERATURE

NOTE

Helicopters with PT6T-3B engine shall use only gauges marked 0 to 115°C. Helicopters with PT6T-3 engine may use either gauge.

PT6T-3B OR PT6T-3

Minimum	0°C
Maximum	115°C

PT6T-3 ONLY

Minimum	0°C
Maximum	107°C

1-14. TRANSMISSION

1-14-A. TRANSMISSION OIL PRESSURE

Minimum for idle	30 PSI
Idle range	30 to 40 PSI
Continuous operation	40 to 70 PSI
Maximum	70 PSI

1-14-B. TRANSMISSION OIL TEMPERATURE

Continuous operation	15 to 110°C
Maximum	110°C

1-14-C. TRANSMISSION TORQUE

1-14-C-1. TWIN ENGINE OPERATION (TRANSMISSION SCALE (Δ))

Maximum continuous	87.5%
Takeoff power range (5 minutes)	87.5 to 100%
Maximum	100%

1-15. ROTOR

1-15-A. ROTOR RPM — POWER ON

Minimum	97%
Maximum	100%

1-15-B. ROTOR RPM — POWER OFF

Minimum	91%
Maximum	104.5%

1-16. HYDRAULIC

NOTE

Refer to BHT-212-MD-1 for approved fluids, vendors, and allowable mixing of approved fluids.

Hydraulic fluid MIL-PRF-87257 (NATO H-538) or MIL-PRF-5606 (NATO H-515) may be used at all ambient temperatures.

Both hydraulic systems shall be operative prior to takeoff.

1-16-A. HYDRAULIC PRESSURE

Minimum	600 PSI
Caution range	600 to 900 PSI
Normal operation	900 to 1100 PSI
Maximum	1100 PSI

1-16-B. HYDRAULIC TEMPERATURE

Maximum 88°C

1-17. FUEL AND OIL**1-17-A. FUEL****NOTE**

Refer to BHT-212-MD-1 for approved fuels.

Fuel conforming to ASTM D-6615 Jet B, NATO F-40, or MIL-DTL-5624 Grade JP-4 may be used at all ambient air temperatures.

Fuel conforming to ASTM D-1655 Jet A or A-1, NATO F-44, MIL-DTL-5624 Grade JP-5, NATO F-34, or MIL-DTL-83133 Grade JP-8 is limited to ambient air temperatures above -30°C (-22°F).

1-17-B. OIL — ENGINE AND COMBINING GEARBOX**NOTE**

Refer to BHT-212-MD-1 for approved vendors.

Oil conforming to PWA Specification No. 521 Type I and MIL-PRF-7808 (NATO O-148) may be used at all ambient air temperatures.

Oil conforming to PWA Specification No. 521 Type II and MIL-PRF-23699 (NATO O-156) may be used at all ambient air temperatures above -40°C (-40°F).

1-17-C. OIL — TRANSMISSION, INTERMEDIATE, AND TAIL ROTOR GEARBOXES

Oil conforming to MIL-PRF-7808 (NATO O-148) may be used at all ambient temperatures.

Oil conforming to DOD-PRF-85734 or MIL-PRF-23699 (NATO O-156) may be used at all ambient air temperatures above -40°C (-40°F).

NOTE

DOD-PRF-85734 or MIL-PRF-23699 is recommended.

1-18. ROTOR BRAKE

Engine starts with rotor brake engaged are prohibited. Rotor brake application is limited to ground operation and shall not be applied until engines have been shut down and ROTOR RPM has decreased to 40% or less.

1-19. LANDING GEAR

Refer to BHT-212-MD-1.

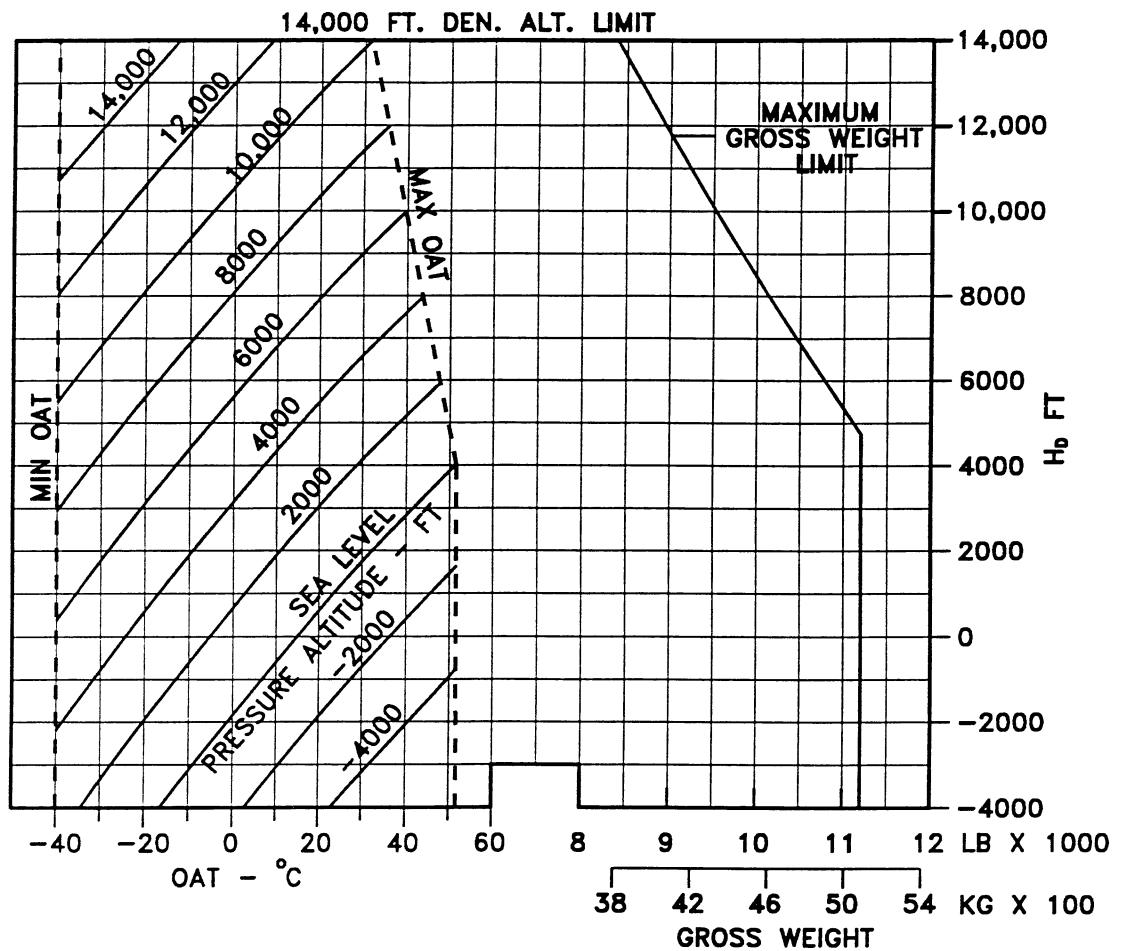
1-20. INSTRUMENT MARKINGS AND PLACARDS

Refer to Figure 1-3 for placards and decals. Refer to Figure 1-5 for instrument range markings.

1-21. HEATER

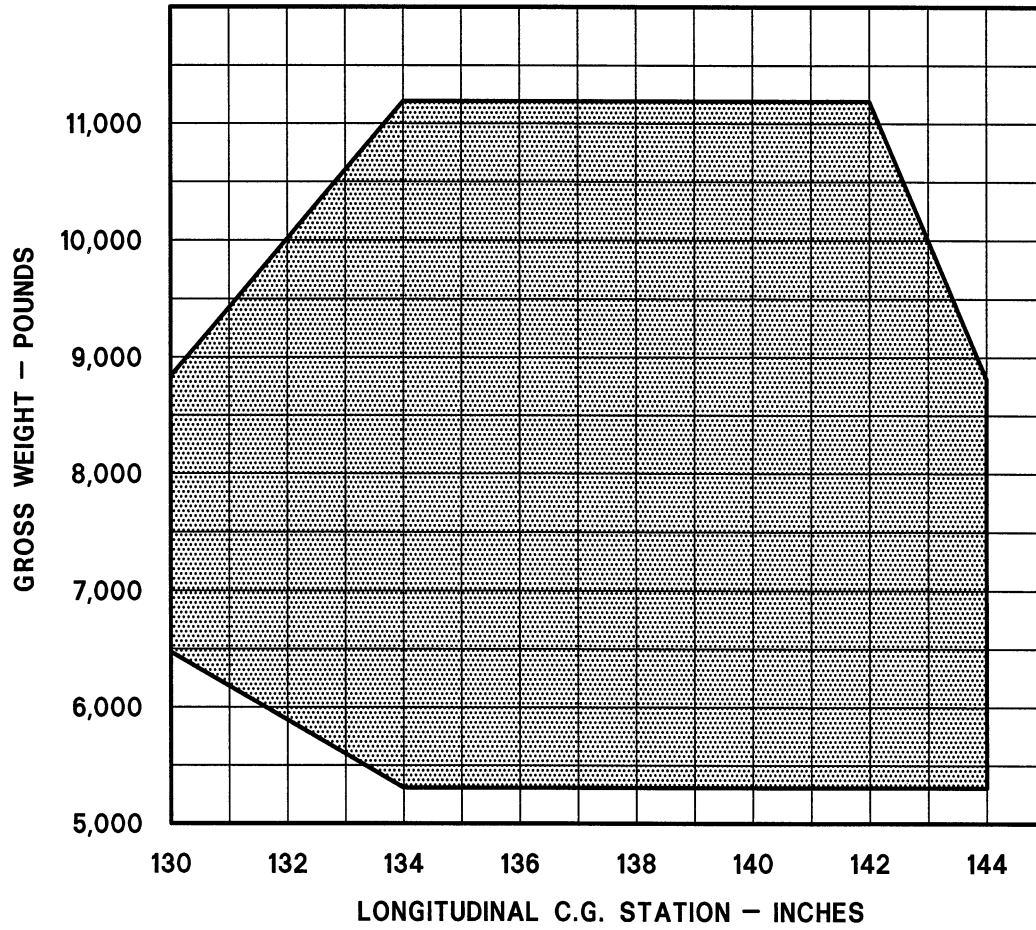
Heater shall not be operated when OAT is above 21°C (69.8°F).

NOTE : ALLOWABLE GROSS WEIGHTS OBTAINED FROM THIS CHART MAY EXCEED CONTINUOUS HOVER CAPABILITY UNDER CERTAIN AMBIENT CONDITIONS. REFER TO HOVER CEILING CHARTS IN SECTION 4



212VFR-FM-1-1

Figure 1-1. Weight-altitude-temperature limitations for takeoff, landing and in ground effect maneuvers chart



212VFR-FM-1-2

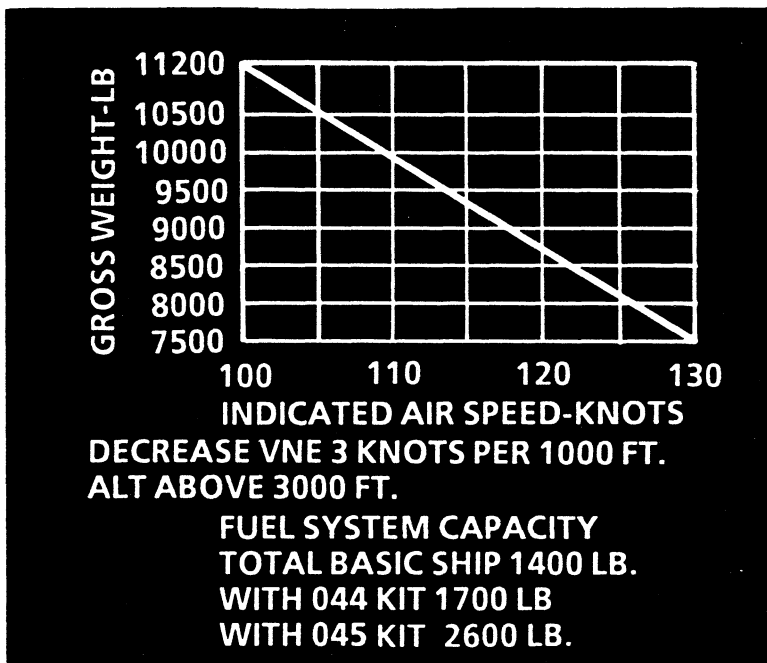
Figure 1-2. Gross weight center of gravity chart

**DO NOT OPERATE
HEATER ABOVE 21
DEG C OUT AIR TEMP**

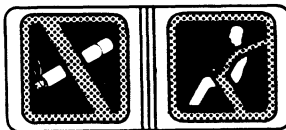
**BAGGAGE FIRE
TEST SWITCH**

**IN ALTN POSITION MAINTAIN
INSTRUMENT ACCURACY BY
CLOSING WINDOWS AIRVENTS
AND TURNING HEATER OFF**

(if installed)



(TYPICAL)



PANEL AFT END OF OVERHEAD CONSOLE

**THIS HELICOPTER MUST BE OPERATED
IN COMPLIANCE WITH THE OPERATING
LIMITATIONS SPECIFIED IN THE FAA
APPROVED ROTORCRAFT FLIGHT MAN.**

212VFR-FM-1-3-1

Figure 1-3. Placards and decals



TWIN & 30 MIN OEI 100.8%
2 1/2 MIN OEI 102.4%



TWIN & 30 MIN OEI 101.8%
2 1/2 MIN OEI 103.4%

NOTES:



USED WITH GAS PRODUCER GAGE P/N 212-075-037-101



USED WITH GAS PRODUCER GAGE P/N 212-075-037-113

212VFR-FM-1-3-2

Figure 1-3. Placards and decals (Sheet 2 of 2)

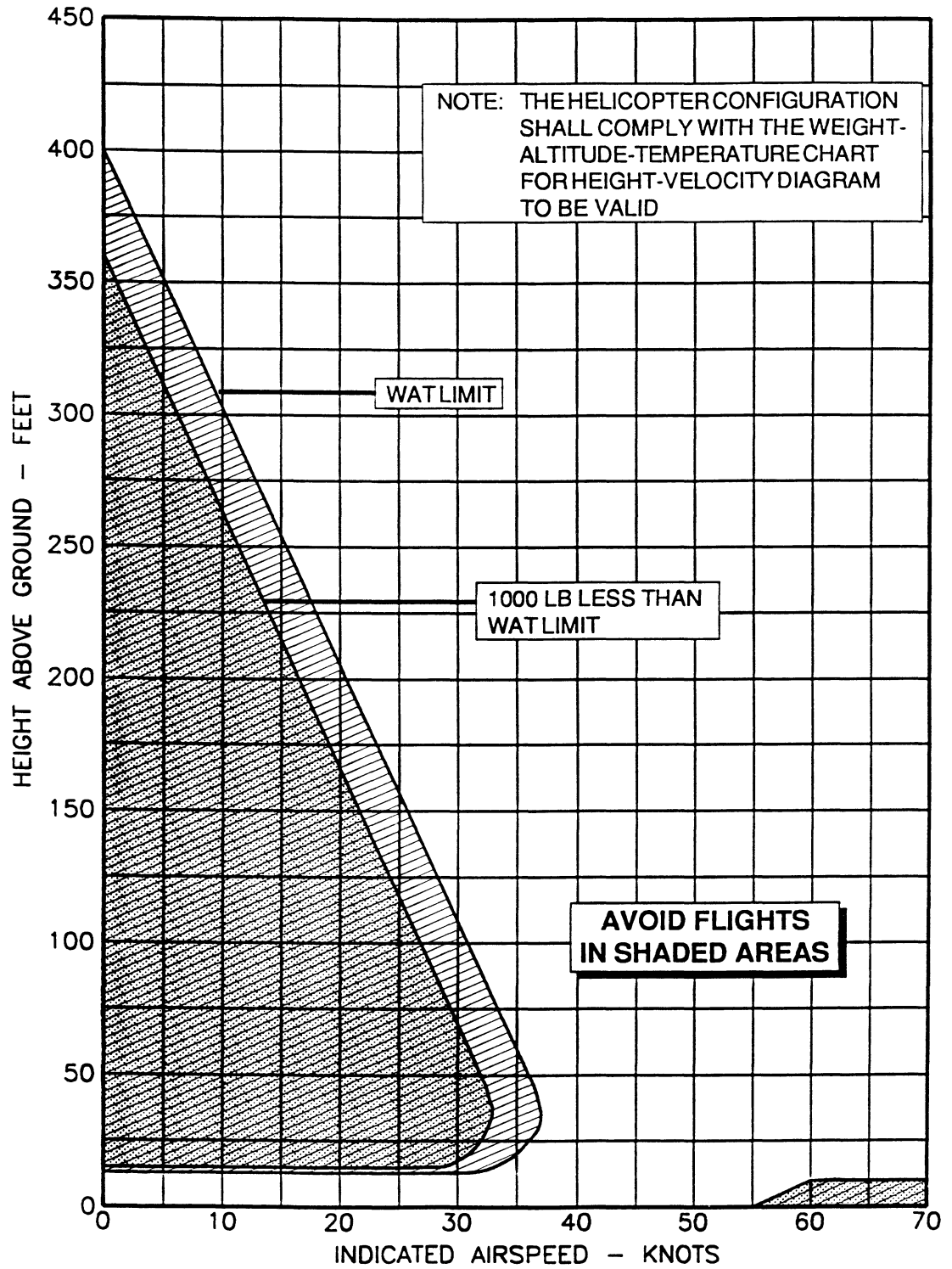


Figure 1-4. Single engine height-velocity chart

INSTRUMENT MARKINGS — PT6T-3B

GAS PRODUCER RPM (N₁)



1 212-075-037-101/-105

▽	12%	Minimum for opening throttle during start
△	61%	Flight idle RPM
■	61 to 100.8%	Continuous operation
■	100.8 to 102.4%	2 1/2 minute OEI range
■	102.4%	Maximum OEI



1 212-075-037-113

▽	12%	Minimum for opening throttle during start
△	61%	Flight idle RPM
■	61 to 101.8%	Continuous operation
■	101.8 to 103.4%	2 1/2 minute OEI range
■	103.4%	Maximum OEI

NOTE

1 Either gauge may be installed, in pairs.

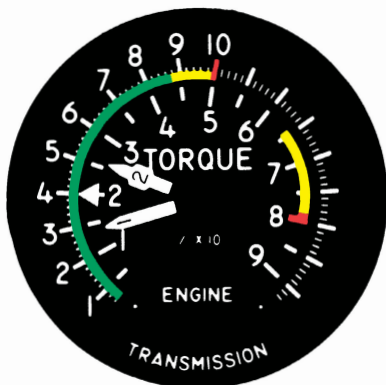
DUAL TORQUEMETER

TRANSMISSION TORQUE (△) (TWIN ENGINE OPERATION)

■	0 to 87.5%	Continuous operation
■	87.5 to 100%	5 minute takeoff range
■	100%	Maximum

ENGINE 1 OR ENGINE 2 TORQUE (ONE ENGINE INOPERATIVE)

■	63.9 to 79.4%	30 minute OEI range
■	79.4%	Maximum OEI



212_FM_VFR_01_0005a+

Figure 1-5. Instrument Markings (Sheet 1 of 6)

INSTRUMENT MARKINGS — PT6T-3B

INTERTURBINE TEMPERATURE (ITT)

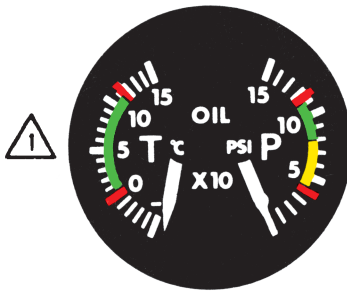


	300 to 765°C	Continuous operation
	765 to 810°C	5 minute takeoff range
	810°C	Maximum for takeoff
	822°C	Maximum 30 minute OEI
	850°C	Maximum 2½ minute OEI
	1090°C	Maximum for starting (2 seconds max. above 960°C)

ENGINE OIL TEMPERATURE



NOTE: This gage may be used in helicopters equipped with either PT6T-3B or PT6T-3 engine.



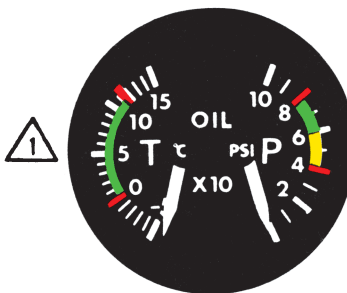
	0°C	Minimum
	0 to 115°C	Continuous operation
	115°C	Maximum

ENGINE OIL PRESSURE



	40 PSI	Minimum for flight idle
	40 to 80 PSI	Conditional operation — Below 79% NI RPM
	80 to 115 PSI	Continuous operation
	115 PSI	Maximum

COMBINING GEARBOX OIL TEMPERATURE



	0°C	Minimum
	0 to 115°C	Continuous operation
	115°C	Maximum

COMBINING GEARBOX OIL PRESSURE

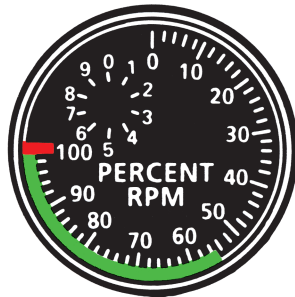


	40 PSI	Minimum for flight idle
	40 to 60 PSI	Conditional operation — Below 94% NII RPM
	60 to 80 PSI	Continuous operation
	80 PSI	Maximum

212VFR-FM-1-5-2

Figure 1-5. Instrument markings (Sheet 2 of 6)

INSTRUMENT MARKINGS — PT6T-3



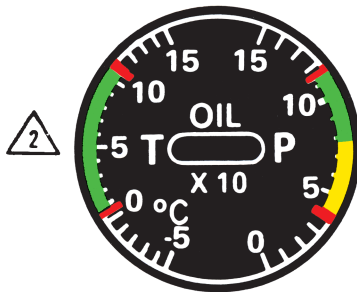
GAS
PRODUCER
TACHOMETER

- 55% to 100%
- 100%

ENGINE OIL
TEMPERATURE AND
PRESSURE



NOTE: This gage is for helicopters equipped with PT6T-3 engine only.



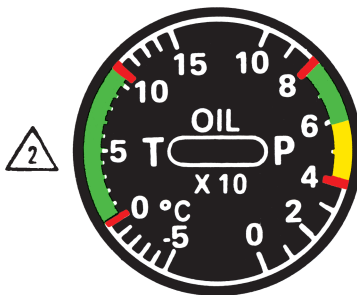
TEMPERATURE (T)

- 0° or 5°C
- 5° to 107°C
- 107°C

PRESSURE (P)

- 40 PSI
- 40 to 80 PSI
- 80 to 115 PSI
- 115 PSI

COMBINING GEARBOX
OIL TEMPERATURE
AND PRESSURE



TEMPERATURE (T)

- 0°C
- 0° to 107°C
- 107°C

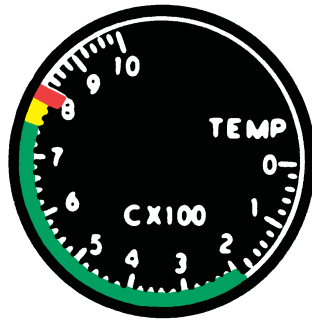
PRESSURE (P)

- 40 PSI
- 40 to 60 PSI
- 60 to 80 PSI
- 80 PSI

212VFR-FM-1-5-3

Figure 1-5. Instrument markings (Sheet 3 of 6)

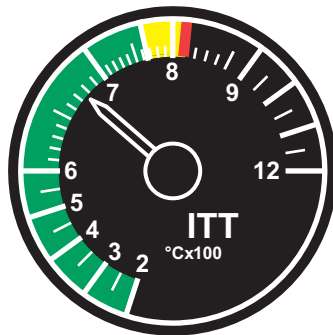
INSTRUMENT MARKINGS — PT6T-3



1 212-070-240

INTERTURBINE TEMPERATURE

	200 to 765°C
	765 to 810°C
	810°C



1 212-075-562

NOTE

1 Either gauge may be installed.

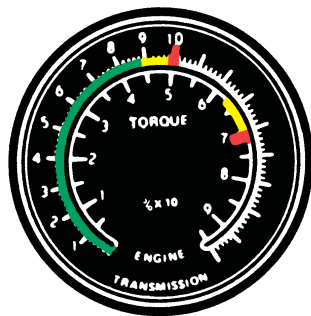
DUAL TORQUE INDICATOR

TRANSMISSION (TWIN ENGINE OPERATION)

	0 to 87.5%
	87.5 to 100%
	100%

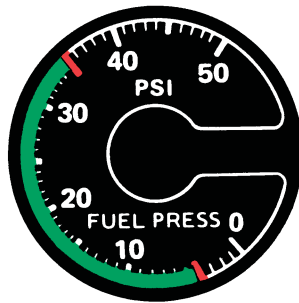
ENGINE (SINGLE ENGINE OPERATION)

	63.9 to 71.8%
	71.8%

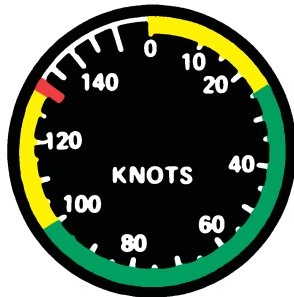


212_FM_VFR_01_0005d

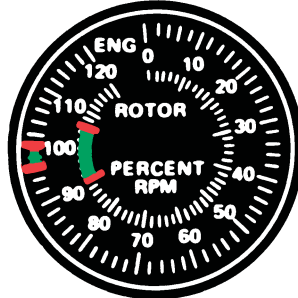
Figure 1-5. Instrument Markings (Sheet 4 of 6)



FUEL PRESSURE

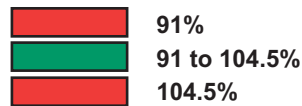


AIRSPED

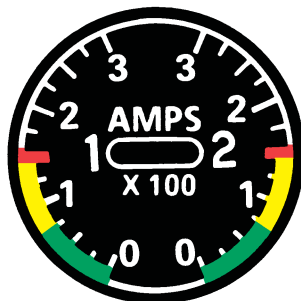
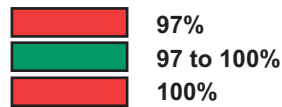


TRIPLE TACHOMETER

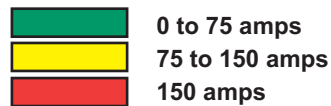
ROTOR



ENGINE



AMMETER

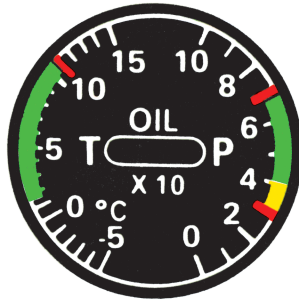


212_FM_VFR_01_0005e

Figure 1-5. Instrument Markings (Sheet 5 of 6)

INSTRUMENT MARKINGS

TRANSMISSION OIL TEMPERATURE AND PRESSURE



TEMPERATURE (T)



PRESSURE

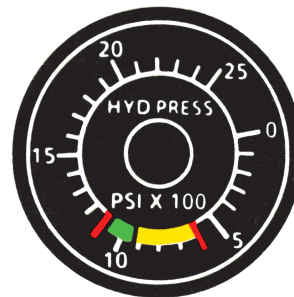
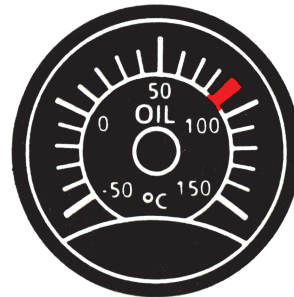


*HYDRAULIC INDICATOR

*INSTALLED IN HELICOPTER S/N 30597 AND SUB.



HYDRAULIC TEMPERATURE



HYDRAULIC PRESSURE



212VFR-FM-1-5-6

Figure 1-5. Instrument markings (Sheet 6 of 6)

