

Bell 429 Product Specifications

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Bell Helicopter
A Textron Company

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Publishers Notice

The data presented in this document is general in nature, and has been compiled from Bell Helicopter Textron, Inc. (BHTI) source materials including but not limited to; The Approved Rotorcraft Flight Manual, Maintenance Manual, Illustrated Parts Catalog, and other engineering design specifications.

This document is intended for the use of BHTI Sales Personnel and for prospective customers as an aid in determining estimated weight and performance of the helicopter when configured with equipment for specific missions.

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The listings of Optional Equipment (KITS) are subject to revision and change, and also may be different for specific serial number helicopters or special custom configurations. Please consult the NOTES cited in the right margins of the optional equipment list pages for equipment compatibility. The continuing product improvement process of BHTI may cause some components, equipment, and compatibility to be changed or replaced.

The specifications, weights, dimensions, and performance data shown in this document are subject to change without notice.

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World's Most Advanced Light Twin

Certified for Single or Dual Pilot IFR, Cat. A at MGW¹

Certified to FAR Part 27, Amendment 44, 2008

Latest Safety Requirements:

- Transport Canada (TC)
- United States Federal Aviation Administration (FAA)
- European Aviation Safety Agency (EASA)

State of the Art Glass Cockpit

Best in Class WAAS Navigation & IFR Capability

- Safer flights in rigorous IFR flight environments
 - greater situational awareness
 - decreased pilot workload
- Fully coupled 4-axis autopilot integration to execute LPV (Localizer Precision with Vertical guidance) approaches
 - up to and including 9 degree glide path angle
 - at speeds down to 45 KIAS
 - Enables flight on WAAS (Wide Area Augmentation System) enabled low-level IFR rotorcraft infrastructures



Fast Flexible Re-configuration for Changing Mission Requirements:

- Largest cabin in class, 204 ft³ / 5.78 m³
- Open cabin with flat floor
- 6 passenger std cabin seating with individual quick release for each seat
- 62 inch / 159 cm wide cabin door opening
- Optional rear clamshell doors

First Helicopter certified through the MSG-3 Process (Maintenance Steering Group-3) for enhanced maintenance efficiency and safety:

- First rotorcraft to have an approved EASA Maintenance Program
- Ensures Continuing Airworthiness – How and when maintenance will be performed
- Benefits show in significantly lower maintenance costs
- Same systems level maintenance and safety standards used in latest product development by major large commercial aircraft OEM's.

¹Category A Operations require installation of the following optional accessory kits:

- 200 Amp Starter Generators
- Increased Capacity Battery (53 AmpH or 44 AmpH)
- Articulated Landing Light
- Radar Altimeter

Specifications subject to change without notice.

Specification Summary (U.S. Units)

Weight	LBS	Weight	LBS
Empty Weight (Std. Config.) ¹	4,487 lb	Max Gross Weight (Internal)	7,000 lb
Useful Load (Internal, Std. Config.)	2,513 lb	Max Gross Weight (External Load)	7,500 lb
Minimum Empty Weight (SPIFR) ²	4,247 lb	Cargo Hook Capacity	3,000 lb
Max Useful Load (Internal, SPIFR)	2,753 lb		

Performance Summary:						
Takeoff, Gross Weight		lbs	5500	6000	6500	7000
IGE Hovering Ceiling	ISA	ft	20,000+	18,577	16,301	14,132
	ISA+20	ft	17,969	15,487	13,102	10,839
OGE Hovering Ceiling	ISA	ft	18,390	15,888	13,535	11,282
	ISA+20	ft	15,347	12,744	10,287	7963
Service Ceiling (MCP) - AEO	ISA	ft	20,000+	20,000+	20,000+	18,714
(30 minute) - OEI	ISA	ft	16,690	14,209	11,871	9629
(continuous) - OEI	ISA	ft	15,670	13,153	10,728	8443
Maximum Cruise Speed (true airspeed)	SL, ISA	ktas	154	153	152	150
	SL, ISA+20C	ktas	154	153	151	149
	4000 ft, ISA	ktas	155+	155+	155+	155
	4000 ft, ISA+20C	ktas	153	151	149	145
Cruise at Long Range Cruise (LRC) Speed Range (standard fuel, no reserve)	SL, ISA	nmi	246	376	378	368
LRC Speed (average true airspeed)		ktas	128	128	129	130
Range (standard fuel, no reserve)	4000 ft, ISA	nmi	271	413	414	407
LRC Speed (average true airspeed)		ktas	128	129	130	129
Endurance at Loiter Speed (60 kts)	SL, ISA	hr	2.8	4.2	4.2	4.0
(standard fuel, no reserve)	4000 ft, ISA	hr	3.0	4.6	4.5	4.4

Engine Ratings: (100% RPM)		Uninstalled Thermodynamic Power	Engine Rated Power
Pratt & Whitney Canada PW207D1 with Full Authority Digital Electronic Control (FADEC) Takeoff (5 minutes)	SHP	2 x 719	2 x 598
Max Continuous Power	SHP	2 x 635	2 x 586
OEI (30 seconds)	SHP	1 x 826	1 x 729
OEI (2 minutes)	SHP	1 x 784	1 x 701
OEI (30 minutes)	SHP	1 x 753	1 x 663
OEI (continuous)	SHP	1 x 719	1 x 655

Transmission Ratings: (100% RPM)		
Takeoff (5-minute)	SHP	1100
Max Continuous	SHP	1100
OEI (30 seconds)	SHP	729
OEI (2 minutes)	SHP	650
OEI (30 seconds & continuous)	SHP	550
Fuel Capacity (usable):		
Standard		216.9 US Gallons
Auxiliary (optional)		39.2 US Gallons

Note 1 Standard Configuration includes all items listed in the Standard Configuration section of this document as well as 24 pounds of engine oil. Ballast is not included in the standard configuration (ballast is a function of installed equipment). Also, see Note 1 on page 15.

Note 2 See Note 2 on page 15.

The data set forth on this document are general in nature and may vary with conditions.

For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

Specification Summary (Metric Units)

Weight	KG	Weight	KG
Empty Weight (Std.Config.) ¹	2,035 kg	Max Gross Weight (Internal)	3,175 kg
Useful Load (Internal, Std Config.)	1,140 kg	Max Gross Weight (External Load)	3,402 kg
Minimum Empty Weight (SPIFR) ²	1,926 kg	Cargo Hook Capacity	1,361 kg
Max Useful Load (Internal, SPIFR)	1,249 kg		

Performance Summary:

Takeoff, Gross Weight		KG	2495	2722	2948	3175
IGE Hovering Ceiling	ISA	m	6096+	5662	4969	4307
	ISA+20	m	5477	4720	3993	3304
OGE Hovering Ceiling	ISA	m	5605	4843	4125	3439
	ISA+20	m	4678	3884	3135	2427
Service Ceiling (MCP) - AEO	ISA	m	6096+	6096+	6096+	5704
(30 minute) - OEI	ISA	m	5087	4331	3618	2935
(continuous) - OEI	ISA	m	4776	4009	3270	2573
Maximum Cruise Speed (true airspeed)	SL, ISA	km/hr	285	283	281	278
	SL, ISA+20C	km/hr	285	283	280	276
	1220 m, ISA	km/hr	287+	287+	287+	287
	1220 m, ISA+20C	km/hr	283	280	276	269
Cruise at Long Range Cruise (LRC) Speed Range (standard fuel, no reserve)	SL, ISA	km	456	696	700	682
LRC Speed (average true airspeed)		km/hr	237	237	239	241
Range (standard fuel, no reserve)	1220 m, ISA	km	502	765	767	754
LRC Speed (average true airspeed)		km/hr	237	239	241	239
Endurance at Loiter Speed (111 km/hr)	SL, ISA	hr	2.8	4.2	4.2	4.0
(standard fuel, no reserve)	1220 m, ISA	hr	3.0	4.6	4.5	4.4

Engine Ratings: (100% RPM)		Uninstalled Thermodynamic Power	Engine Rated Power
Pratt & Whitney Canada PW207D1 with Full Authority Digital Electronic Control (FADEC)			
Takeoff (5 minutes)	kW	2 x 536	2 x 446
Max Continuous Power	kW	2 x 473	2 x 437
OEI (30 seconds)	kW	1 x 616	1 x 544
OEI (2 minutes)	kW	1 x 585	1 x 523
OEI (30 minutes)	kW	1 x 561	1 x 494
OEI (continuous)	kW	1 x 536	1 x 488

Transmission Ratings: (100% RPM)	
Takeoff (5-minute)	kW 820
Max Continuous	kW 820
OEI (30 seconds)	kW 544
OEI (2 minutes)	kW 485
OEI (30 seconds & continuous)	kW 410
Fuel Capacity (usable):	
Standard	821.1 Liters
Auxiliary (optional)	148.4 Liters

Note 1 Standard Configuration includes all items listed in the Standard Configuration section of this document as well as 11 kilograms of engine oil. Ballast is not included in the standard configuration (ballast is a function of installed equipment). Also, see Note 1 on page 15.

Note 2 See Note 2 on page 15.

The data set forth on this document are general in nature and may vary with conditions.
For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

Bell BasiX-Pro® Integrated Avionics System

The Bell BasiX-Pro® Avionics System has been specifically designed to meet the requirements of twin engine helicopters and is optimized for IFR, Category A, and JAROPS-3 compliant operations. The system is highly flexible and configurable to meet various operating and customization needs. The system takes advantage of the latest in display, computer processing, and digital data bus technology to provide a high degree of redundancy, reliability, and flexibility.

Standard Configuration SPIFR



The primary components of the Bell BasiX-Pro® Avionics System in the Bell-429 include the following:

Two Multi-Function Display Units (DUs) with 6 x 8 inch high-resolution displays.	Dual Channel Aircraft Data Interface Unit (ADIU)	Dual Digital 3-axis Automatic Flight Control System (AFCS)	Dual Channel Air Data Attitude Heading Reference System (ADAHRS)	Course/Heading/Flight Director Panel (CHFD)
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The standard configuration for the Bell Model 429 provides single-pilot IFR capability with 3-axis stability and control augmentation (SCAS) and a coupled flight director capability. All Engine Indication and Crew Alerting System (EICAS) display functions are provided through the Bell BasiX-Pro® Avionics System. The system works in conjunction with the engine control units (EECs) for the dual Pratt & Whitney electronically-controlled PW-207D1 engines. Other aircraft systems interfaces, warnings, cautions, aural alerts, and automated performance features are provided through the remotely located Aircraft Data Interface Unit (ADIU).

Specifications subject to change without notice.

COMMUNICATIONS & NAVIGATION -- The Bell 429 standard configuration for Communications Navigation and Surveillance (CNS) consists of dual Garmin GNS-430W NAV/COM/WAAS GPS systems, with a kit option to replace one of these with a GNS-530W. The standard system also includes a GTX-330 ELS compliant Mode S transponder, a PMA-7000H Audio/Intercom Panel with VOX and Integral Marker Beacon Receiver, and an ARTEX C406-N-HM Emergency Locator Transmitter (ELT).

DISPLAY UNITS -- The Multi-Function display units are “smart displays”, and include all of the processing required to collect sub-system information and generate display formats and graphics for the following:

- All primary flight and navigation instrumentation
- Presentation of flight director and autopilot status
- Engine and rotor drive system indications
- Electrical, hydraulic, and fuel system monitoring
- Crew alerting system (warnings/cautions/advisories and aural alerts)
- Navigation route mapping display
- Presentation of optional Traffic Collision Avoidance Symbology (TCAS)
- Presentation of optional weather radar or search radar information
- Presentation of optional FLIR/EVS video display (NTSC or PAL standard)
- Presentation of general color video display or digital map display (NTSC or PAL standard in either S-Video or Component RGB video)
- Presentation of electrical, AFCS, and fuel/weight and balance synoptic information
- Presentation of automated power assurance, Category A performance, and hover performance calculations
- Presentation of maintenance and diagnostic data

Automatic Flight Control System



AMAA-2210-000001

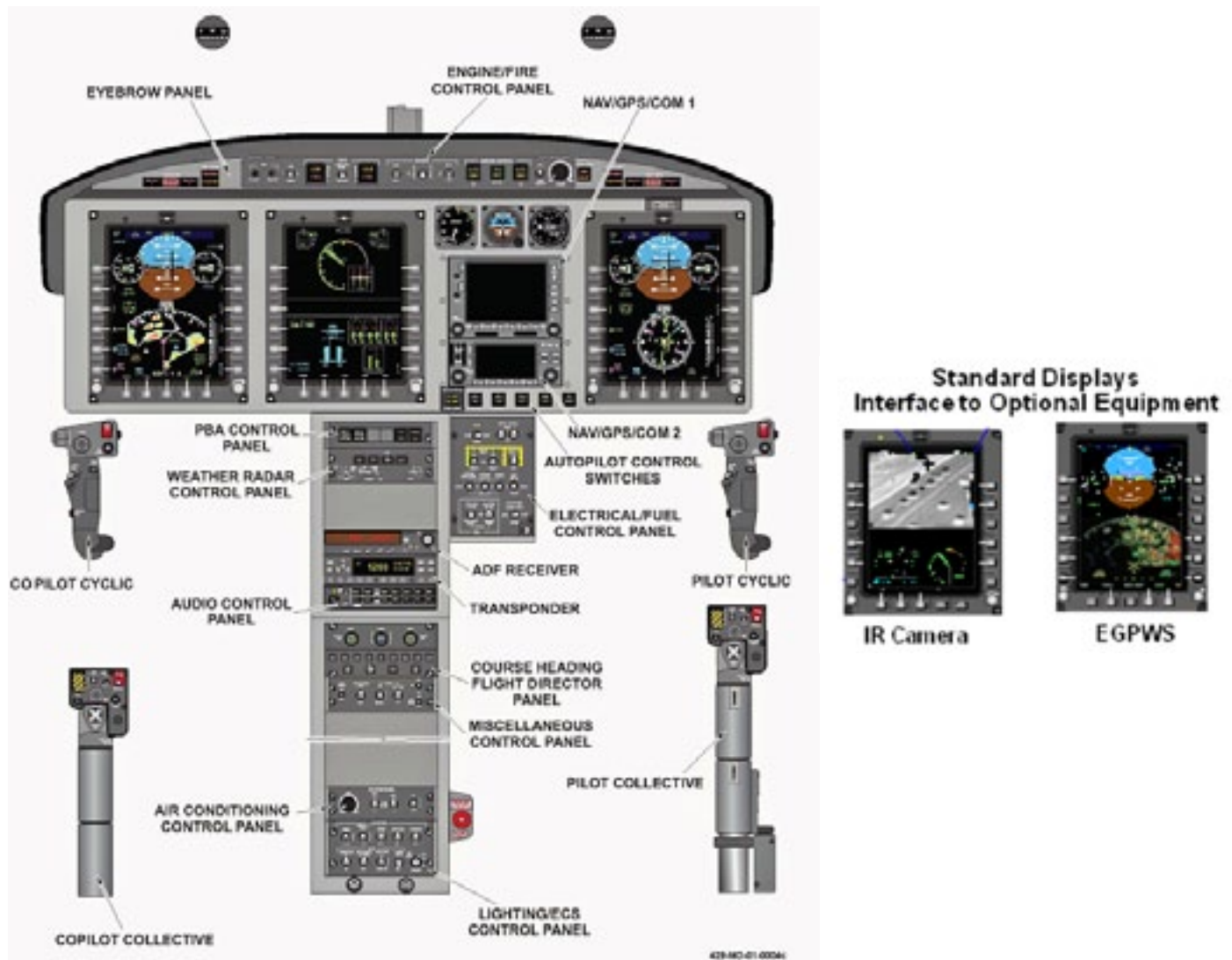
Specifications subject to change without notice.

Configuration Flexibility to Meet Operational Needs

The Basix-Pro® includes built-in provisions to allow customized configuration of the following equipment:

- Alternate FMS/GPS systems
- Alternate ARINC-429 radio nav aids
- U/VHF Direction Finder or 2nd ADF
- Weather/Search Radar
- FLIR/EVS display (NTSC or PAL standard)
- Designator Control Panel (allows FLIR or radar cursor designated positions to be captured as waypoints)
- General color video display or digital map display
- Velocity Sensor (for hover cues and/or search and rescue approach options)
- Programmable CAS messages (cautions/warnings/advisories)

A third display unit for the copilot position is available for the 429 as an optional accessory.



Specifications subject to change without notice.

Safety Enhancements

Bell is at the forefront in providing multiple ways of satisfying evolving requirements in helicopter traffic management, flight following and terrain awareness safety. The Bell 429 is the first helicopter in the light twin category to provide fully-coupled steep (i.e. 9-degree) LPV WAAS approaches. The Bell BasiX-Pro® Integrated Avionics System concentrates on providing true operational capabilities and flexibility to our customers to address rapidly changing regulatory requirements and technologies, with an open architecture and flexible avionics systems solutions.

The enhancements available for the Bell 429 through optional accessory kits and customizing include:

Traffic Advisory System (TAS):

Two TAS systems available:

- **Avidyne TAS605 (recommended)**, features 13 nm range; 5,500 ft vertical separation; and 55,000 ft service ceiling
 - Upgradable to Avidyne TAS605A for ADS-B
- **Avidyne TAS620**, features a 21 nm range, 9,900 foot vertical separation maximum, and 55,000 foot service ceiling
 - Upgradable to Avidyne TAS620A for ADS-B

Helicopter Terrain Awareness and Warning System / Enhanced Ground Proximity Warning System:

Three H-TAWS and EGPWS H-TAWS options available

- **Garmin GNS-530W with H-Taws:** Class B H-TAWS system, available as an option on the GNS-530W NAV/COM/GPS with Garmin system software 4.0 roll-out
 - Light weight, lowest cost solution
 - Displays on GNS-530W only
- **Honeywell Mark XXI EGPWS H-TAWS:** Class B H-TAWS system available as customizing
 - Installation with or without weather radar
 - Displays on BasiX-Pro® Display Units, underlaid on PFD HSI format or MFD Map/Radar format
 - Uses same input as weather radar
 - Provides only one TAWS image (one range setting only)
- **Honeywell Mark XXII EGPWS H-TAWS:** Class A H-TAWS system available as customizing, adds the following features
 - Interfaces with ADC and Rad Alt
 - Provides dual TAWS images with independent range control



TAWS/Terrain Data Base Card
Garmin GNS-530W with H-Taws



TAWS Display on MFD Map/Radar Page
H-TAWS Displays "Under Glass"

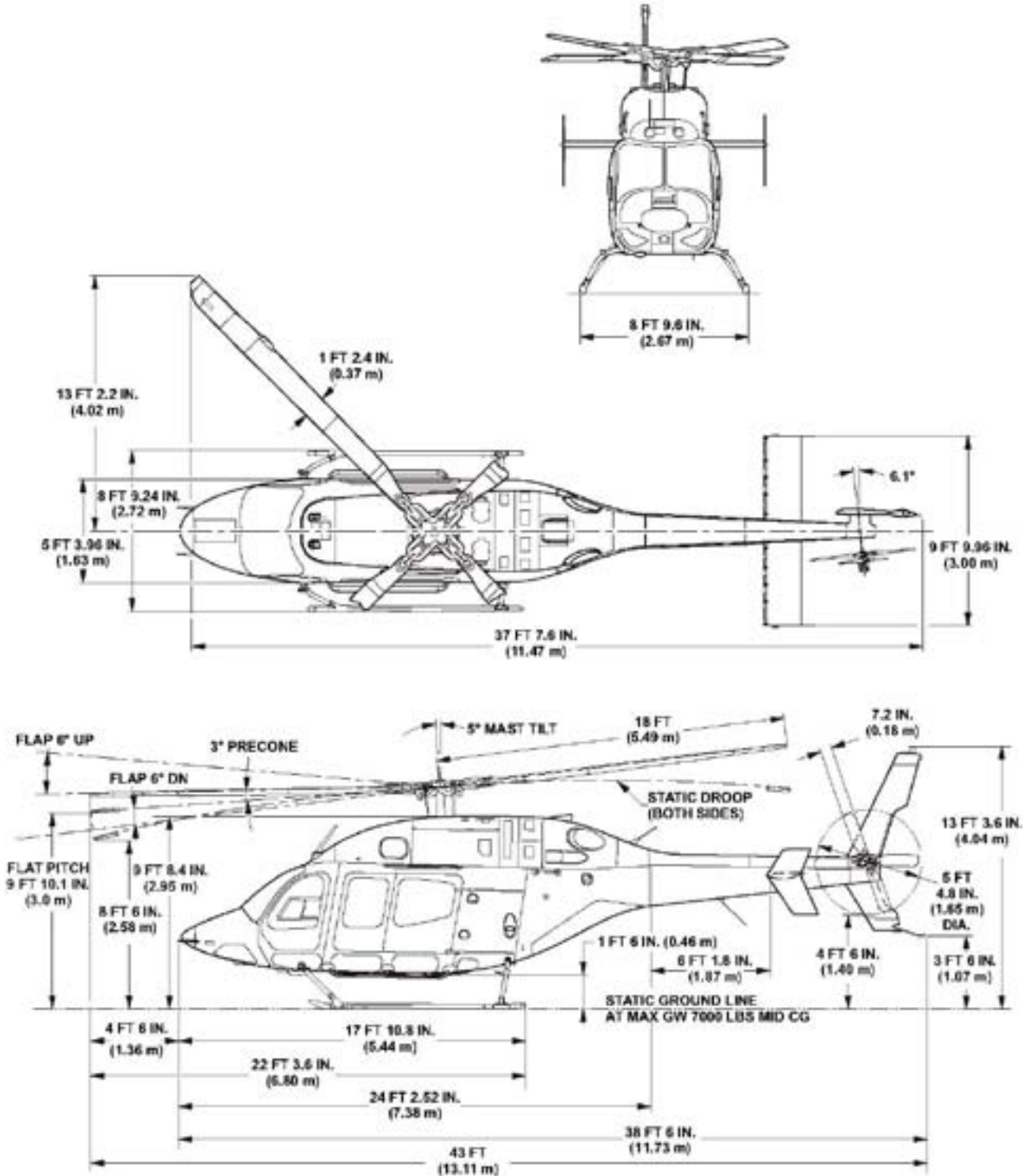


TAWS Displayed as HSI underlay on PFD

Available with Either Mark XXI or XXII EGPWS H-TAWS

Specifications subject to change without notice.

Bell 429 External Dimensions and Heliport Design Data



Landing Gear Loading at Maximum Gross Weight (7000-Pounds),
Based on 1G Static Conditions for both Structural CG Limit

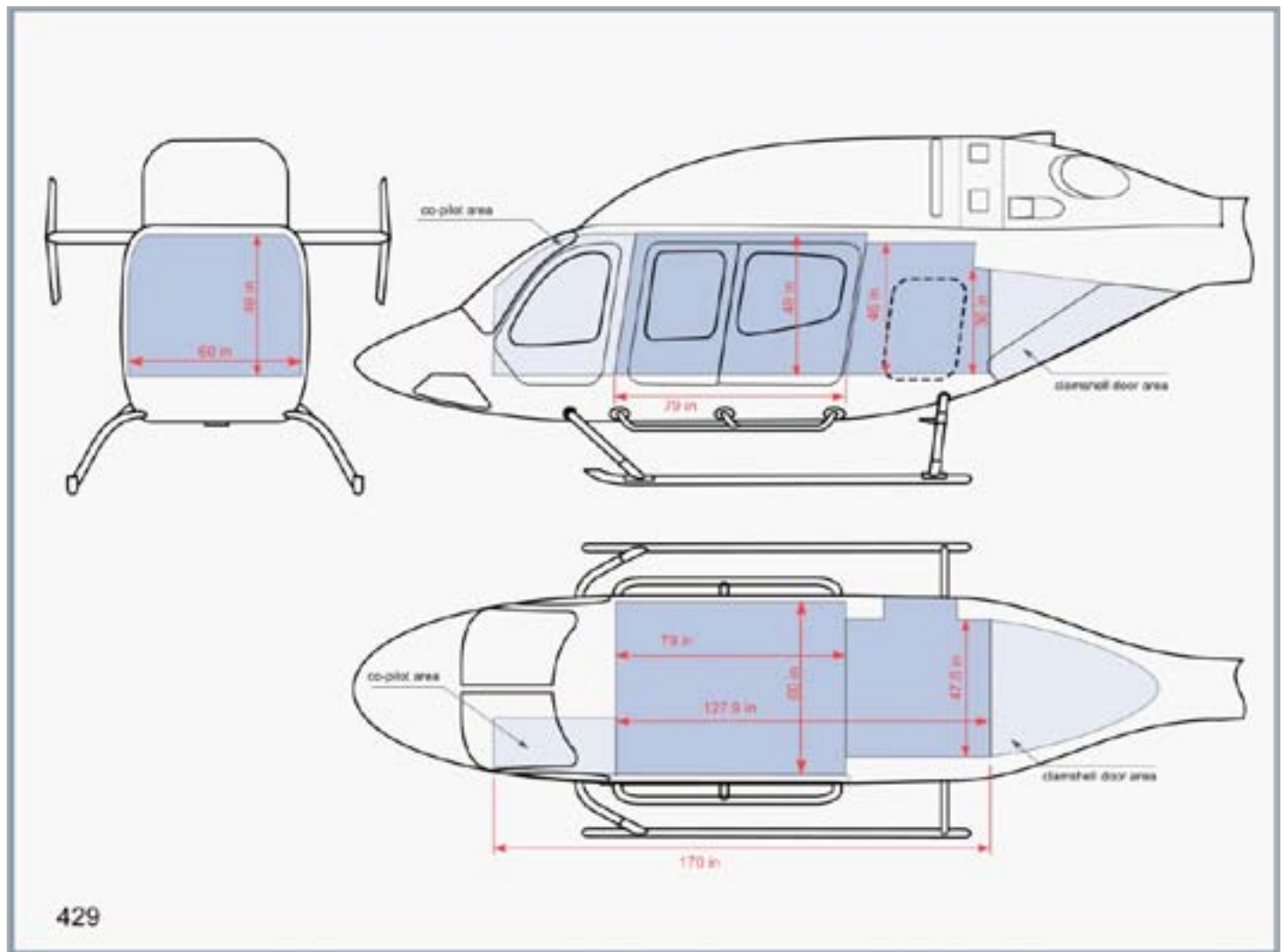
CG Position	Loading (lbs)		Contact Area (in ²)		Contact Pressure (lbs/in ²)	
	FWD	AFT	FWD	AFT	FWD	AFT
FWD CG	3327	3673	5.4 in ² x 2	9.9 in ² x 2	308	186
AFT CG	2306	4694	5.4 in ² x 2	9.9 in ² x 2	214	237

429 Interior

CREW SEATING – Two individual ergonomically designed energy attenuating seats with adjustable lumbar support, each equipped with seat adjustment controls forward and aft, up and down, adjustable lumbar support, a four-point restraint system, and adjustable pedals. The color and upholstery material for the seats match the color scheme selected for the cabin.

PASSENGER/CARGO COMPARTMENT – The passenger/cargo compartment occupies the middle section of the cabin. The compartment has a volume of 130 cubic feet (3.68 m³), which can be used in a standard or corporate configuration for passenger seating, or as cargo area. The aft cabin has an additional volume of 74 cubic feet (2.10 m³), giving a total contiguous cabin volume of 204 cubic feet (5.78 m³).

A forward hinged and aft sliding door on each side of the cabin provide a 61.9" wide x 44.25" high (158.7 x 112.3 cm) unobstructed door opening on each side of the helicopter for easy passenger compartment loading and unloading. The two forward doors are hinged to open forward and the two sliding doors open aft and flush along the cabin exterior. The passenger/cargo compartment doors can be opened individually or at the same time.



Specifications subject to change without notice.

STANDARD SEATING AND TRIM – Standard Configuration six-place seating consists of two rows of three energy-absorbing seats, with individual 4-point restraint system, quick release disconnects and fixed provisions for the optional passenger cabin ICS system. Two standard seating configurations are available:

- 6-place seating with 15.5" wide seats, which can be quickly arranged into either an airline configuration with both rows facing forward, or a club seating configuration with the two rows facing each other, or
- 6-place seating with 18.5" wide seats in a club seating configuration.

Each individual passenger seat assembly is installed on two transverse seat rail tracks that are attached to the cabin floor. The quick release disconnects enable the seats to be quickly arranged, or to remove individual seats to meet special mission configuration requirements. The seats are upholstered in fabric or optional vinyl.

Standard interior trim consists of full thermoplastic closeouts on all airframe areas, a molded thermoplastic headliner with two fixed slotted air vents, and a choice of either durable low loop nylon blend carpeting or optional "Aermat" vinyl floor covering.



Standard 6-place 15.5" wide passenger seats in Forward Facing Airline Seating Arrangement



Standard 6-place 18.5" wide passenger seats in Club Seating Arrangement



Standard Headliner with slotted air vents



Optional Headliner with LED lights & adjustable air vents

ADDITIONAL INTERIOR OPTIONS – The following additional optional accessory kits are also available for selection on aircraft equipped with standard interior and seating. See Optional Accessory Kits, page 18 for additional information on part numbers, availability and weights.

- Aft Cabin ICS – 6 Place (Headsets not included)
- Headliner with LED lights & adjustable Air Vents (recommended when optional air conditioning equipment is selected)
- Soundproofing
- Aft Bulkhead Closeout Panel, available with or without soundproofing

Specifications subject to change without notice.



Six place seating with 18.5" wide seats



Five place club seating with a row of two 21.5" seats separated by a center console facing a row of three 18.5" seats with a center seat fold-down table



Four place club seating with two 21.5" seats separated by a center console in each row



A molded thermoplastic corporate headliner with LED lights, adjustable air vents and color coordinated leather trim

CORPORATE SEATING AND INTERIOR TRIM:

Three corporate seating options are available:

All corporate seating options include plush "Overstuffed Style" seats with individual 3-point restraint system, quick release disconnects and fixed provisions for a passenger cabin ICS system. For the five place club seating option, the quick release disconnects enable the seats to be quickly arranged with the two 21.5" seats facing either forward or aft. The seats are upholstered in premium leather.

The corporate interior trim consists of full thermoplastic panels on all airframe areas with color coordinated leather or fabric trim, plush wool color coordinated carpet, and a molded thermoplastic corporate headliner with LED lights, adjustable air vents and color coordinated leather trim.

ADDITIONAL INTERIOR OPTIONS – The following additional optional accessory kits are also available for selection on aircraft equipped with a corporate interior and seating.

- Aft Cabin ICS – 6 Place (Headsets not included)
- Soundproofing
- Aft Bulkhead Closeout Panel, available with or without soundproofing
- 6-place 18.5" corporate seats with fold-down center tables as a customizing option

Note: Corporate passenger seats, interior trim and plush wool carpeting, corporate head liner, aft bulkhead closeout panel, and soundproofing are optional accessory kits, not included in Standard Configuration weight and price. See Optional Accessory Kits, page 18, for additional information.

Specifications subject to change without notice.

Standard Configuration

(Items Included in List Price)

Certified for Single Pilot IFR
Certification Basis: FAR Part 27 Amendment 44, 2008
(Most current Certification Standard)

AIRFRAME	TRANSMISSION AND DRIVE SYSTEMS
Fuselage: Machined alloy airframe with single piece machined roof beams, lift frames, cabin keel beams and nose beams; carbon fiber composite side-bodies, belly panels, nose skins, floor panels, decks and engine cowlings	Two-stage dual input drive main transmission, 1,100 shp Maximum Continuous Power
Corrosion resistant design with wet installed fasteners and sealed surfaces where dissimilar materials are found to provide exceptional resistance to adverse environmental conditions	Two fluid filled pylon mounts LIVE suspension (left and right vertical axis mounts)
Doors (six, carbon fiber): Hinged pilot & co-pilot doors with sliding windows; hinged forward and sliding aft passenger doors on both sides.	Two elastomeric forward/aft restraints
Passenger doors provide 61.9 inches unobstructed opening on each side.	Three main transmission chip detectors
Door Locks for cabin doors and luggage compartment	Two transmission-mounted hydraulic pumps
Luggage compartment: Aft cabin (74 cubic feet), with 16 discrete tie-down hardpoints and R/H side external luggage door	Tail rotor drive shaft:
Landing gear: Tubular skid type with replaceable wear shoes	Two steel forward drive shafts in engine deck/fire zone
Tailboom: Carbon fiber tailboom, vertical fin and horizontal stabilizer	Two interchangeable carbon fiber composite aft drive shafts in tailboom zone
Fuselage mounted passenger cabin steps, forward mounted crew steps, and aft maintenance step	Single stage 90° tail rotor gearbox
Provisions for mooring, jacking and single point lifting	One tail rotor gearbox chip detector
Windows: Gray tinted acrylic windows and windshields	ROTORS AND CONTROLS
Wire Strike Protection System Fixed Provisions , Cabin and Nose Provisions (Bristol/AAI)	Main rotor: Soft-in-plane system, 36 ft. diameter, four interchangeable M/R blades, with stacked composite yokes, titanium drive plate and CF fittings, elastomeric CF bearings and shear restraints, and elastomeric lead/lag dampers
Air Conditioning Drive Quill (Required for installation of any Air Conditioning system)	Composite M/R blades with Nickel-Cobalt leading edge abrasion strips and tip caps, HIGH VISIBILITY (orange/white top - white bottom) paint scheme
Air Conditioning Fixed Provisions	Tail rotor: Four blade stacked system, 65" diameter, with low tip speed, scissor arrangement, composite T/R blades with swept blade tips, Nickel-Cobalt leading edge abrasion strips, and elastomeric flapping bearings
Three color exterior paint schemes, Sample illustrations available upon request	Dual Hydraulic System with integrated hydraulic modules
POWERPLANT	Mechanical flight controls throughout
Two Pratt & Whitney Canada 207D1 Engines, 1,172 shp, (Mechanical) Maximum Continuous Rating (586 shp per engine)	Collective mounted throttle controls
Electronic Engine Controls (EEC)	Rotor Brake Provisions
Fuel Management Module (FMM)	FLIGHT & ENGINE INSTRUMENTS – Bell BasiX-Pro Integrated Avionics System
Fuel system: 216.9 gal. (821 liter) usable capacity, with three rupture resistant fuel cells located under the cabin floor panel and suction-type fuel feed system	EFIS/EICAS (Electronic Flight Instruments System/ Engine Indicating & Crew Alerting System)
Electrical Provisions for Inlet Barrier Filter	Two 6" x 8" color LCD displays with video display capability
Engine Fire Detector & Fire Extinguisher System	"Smart" programmable display unit provisions for future interface required for customized equipment installations
	Aircraft Data Interface Unit, Dual Channel
	AFCS (3-axis), Dual digital autopilot
	Dual channel SCAS and trim actuators
	AD/AHRS (Air Data/Attitude Heading Reference System), Dual Channel (Honeywell KSG7200)
	Course/Heading/Flight Director Panel

Specifications subject to change without notice.

Standard Configuration (cont)

(Items Included in List Price)

Certified for Single Pilot IFR

Certification Basis: FAR Part 27 Amendment 44, 2008

(Most current Certification Standard)

Standby Instruments: Attitude, Altitude, Heading and Airspeed	ELECTRICAL
Electronic Data Recorder embedded in the IAS (Integrated Avionic System) (non-crashworthy)	28 volt DC system, dual generator configuration
COMMUNICATIONS & NAVIGATION	25 AmpH Valve Regulated Lead-Acid (VRLA) Battery
Nav/Comm/GPS: VOR/ILS/GS/COMM/GPS and WAAS (Wide Area Augmentation System), with two 1.8"h x 3.3"w" displays (Garmin GNS 430W)	Two 150 Amp Starter Generators, with two generator-regulator control units
Transponder: ELS compliant Mode S (Garmin GTX 330)	External power source connection
Dual Keyed and/or VOX Intercom System	LED Cockpit instrument, annunciator, utility and map lighting with programmable lighting power supply to ensure light balancing across all cockpit display and control panels
PMA-7000H Audio Panel with Integral Marker Beacon Receiver	All LED basic external lighting system: <ul style="list-style-type: none"> • One forward & two sideward facing fixed LED array landing lights • Three high intensity LED position lights • One flashing LED anti-collision light
ELT (ARTEX C406-N-HM)	Digital maintenance interface available from cockpit for all digital aircraft systems
INTERIOR	RADS wiring for sensors embedded in basic aircraft wiring
Open cabin design with flat floor, total contiguous cabin volume 232 cu. ft. (passenger and aft cabin area volume 204 cu. ft.)	Baggage compartment lighting
Standard cockpit seating (2 seats), adjustable forward & aft, up & down, with lumbar support and adjustable pedals	Electrical Provisions Kit (Required for Cat. A Operations)
Passenger Seat Rails	MISCELLANEOUS
Standard 6-place passenger seating with 4-point restraint system, quick release disconnects & ICS fixed provisions (choice of 15.5" wide seats or 18.5" wide seats)	Keys for crew, passenger and baggage compartment doors
Ram air cockpit and cabin ventilation system, with cockpit windshield defogging vent blowers	Manuals – Flight, Maintenance and Illustrated Parts Breakdown/Special Tools Catalogue
Standard Interior (Thermoplastic panels covering all doors & durable low loop nylon carpet or "Aermet" vinyl floor covering)	Main and tail rotor tie downs
Standard Headliner, Passenger Cabin, with two fixed slotted side air vents	Cargo tie downs (loose equipment)
Note: Additional Passenger Cabin interior, headliner and seating options available for the 429 are listed in the Optional Accessory Kits section.	Covers – engine air, oil cooler, exhaust and pitot
	Ground handling wheels, hydraulic

Reference notes from pages 4-5

Note 1 Standard Configuration includes:

- Provisions for optional equipment including Cat. A Operations, Inlet Barrier Filter, Air Conditioning, Rotor Brake & Wire Strike Protection System
- ELT
- Pilot & Copilot seats
- 6 place Passenger Seating with 18.5" wide seats
- Standard Interior, Headliner panels and Carpet

Note 2 Minimum SPIFR Configuration includes:

- Provisions for optional equipment including Cat. A Operations, Inlet Barrier Filter, Air Conditioning, Rotor Brake & Wire Strike Protection System
- ELT
- Pilot seat

Specifications subject to change without notice.

Optional Accessory Kits

Refer to notes for kit compatibility.

Additional Kits and STC Items may be available for factory installation.

Please consult sales or contract personnel regarding special needs prior to selection of final configuration

Kit Description	Projected Availability Status	Wt (lbs)	Wt (kg)	Notes
AIRFRAME				
Dual Pilot Control Provisions	✓	5.3	2.4	3
Dual Pilot Controls Equipment (does not include co-pilot head set) (Required for Dual Pilot operation)	✓	10.5	4.8	3
Pilot Cyclic Stick Locking Device	✓	0.2	0.1	
200 Amp Starter Generator (Dual) (Required for Cat. A Operations)	✓	7.8	3.5	1, 18
Increased Capacity Battery, 53 AmpH (Cat. A Compliant)	✓	35.1	15.9	1, 18
Increased Capacity Battery, 44 AmpH (Cat. A Compliant)	✓	28.2	12.8	1, 18
36 AmpH Battery	✓	19.1	8.7	1, 18
Articulated Landing Light (Required for Cat. A Operations)	✓	9.2	4.2	1
Rotor Brake Equipment	✓	9.8	4.4	
Aux. Fuel Tank Equipment (39 US Gal.)	✓	60.2	27.3	
Windshield Wiper (Pilot)	✓	9.5	4.3	
Windshield Wiper (Co-pilot)	✓	6.7	3.0	
Rear Clamshell Doors with windows	✓	29.3	13.3	
Rear Clamshell Doors with windows	✓	28.8	13.1	
Emergency Float Provisions (Electrical & Fixed)	✓	2.0	0.9	4
Emergency Floats without life rafts (Aerazur) (life vests not included)	✓	143.6	65.1	4
Emergency Floats with one life raft, Left side (Aerazur) (life vests not included)	✓	189.3	85.9	4
Emergency Floats with two life rafts, Left & Right sides (Aerazur) (life vests not included)	✓	235.0	106.6	4
Life Vest Provisions, 4 place Stowage Pouches	✓	0.6	0.3	5
Life Vest Provisions, 5 place Stowage Pouches	✓	0.7	0.3	5
Life Vest Provisions, 6 place Stowage Pouches	✓	0.8	0.4	5
Ditching Kit (additional strengthening to a/c nose and belly)	✓	3.2	1.5	5
Emergency Egress, Standard Interior (push-out windows for hinged passenger doors)	✓	8.1	3.7	6
Protected Tail-Rotor System	✓	10.2	4.6	7
AUDIO				
Aft Cabin ICS - 6 Place (Headsets not included)	✓	2.5	1.1	
AVIONICS				
Radar Altimeter (Honeywell KRA 405B) (Required for Cat. A Operations)	✓	5.5	2.5	1
3rd Display Unit & 2nd Standby Compass (Required for Dual Pilot IFR)	✓	23.6	10.7	3
ADF (Honeywell KR 87)	✓	9.8	4.4	
GNS-530W NAV/COMM/GPS (replaces Standard Equipment #1 GNS-430W)	✓	2.2	1.0	

Specifications subject to change without notice.

Optional Accessory Kits (con't)

Kit Description	Projected Availability Status	Wt (lbs)	Wt (kg)	Notes
Traffic Advisory System (Avidyne TAS620)	✓	17.7	8.0	8
Traffic Advisory System (Avidyne TAS605)	✓	8.3	3.8	8
4th Axis Autopilot	✓	4.5	2.0	
Weather Radar (Primus 660)	✓	24.5	11.1	
ENGINE				
Engine Fuel Heater (PW207D2 Engine) (P&W)	✓	4.3	2.0	
Compressor Wash Kit	✓	1.4	0.6	
Inlet Barrier Filter	✓	20.5	9.3	
Engine Fire Extinguisher - 2nd bottle	✓	6.8	3.1	
ENVIRONMENT				
Single Evaporator Air Conditioning with manual controls	✓	84.5	38.3	9, 10
Dual Evaporator Air Conditioning with manual controls	✓	113.3	51.4	9, 10
Bleed Air Heater Provisions	✓	16.6	7.5	
Bleed Air Heater Equipment (with chin bubble defrost)	✓	21.1	9.6	
EQUIPMENT				
Cargo Hook Provisions (Onboard Systems)	✓	11.6	5.3	
Cargo Hook Equipment, 3,000 lb. capacity (Onboard Systems)	✓	31.4	14.2	
High Gross Weight Towing kit (AAI)	✓	N/A	N/A	
Main Rotor Blade Folding Kit (2 - fwd, 2 - aft) (Paravion)	3rd Qtr 2011	1.0	0.5	
Rescue Hoist Provisions	2nd Qtr 2011	35.4	16.1	11, 19, 20
Rescue Hoist Equipment, Goodrich 600 lb. capacity	2nd Qtr 2011	184.2	83.6	11
FLIGHT & ENGINE INSTRUMENTS				
Cockpit Voice Recorder/Flight Data Recorder, Crashworthy	✓	14.1	6.4	
Health & Usage Monitoring System (AAI)	✓	18.0	8.2	
NVG Compatible Pilot Display Units and Flight Director (US ITAR Controlled)	✓	0.0	0.0	12
3rd Display Unit and 2nd Standby Compass with NVG compatible 3rd Display Unit (US ITAR Controlled)	✓	0.0	0.0	12
NVG compatible lighting for other light sources (US ITAR Controlled)	Available as customized installation	TBD	TBD	12
INTERIOR				
Headliner with LED lights & adjustable Air Conditioning vents	✓	18.9	8.6	10
Corporate Headliner with LED lights, adjustable Air Conditioning vents and color coordinated leather trim	✓	19.1	8.7	10
Corporate Interior, Single Pilot: <ul style="list-style-type: none"> Corporate Interior Trim Plush Wool Carpets (for use with Single Pilot controls) 	✓	10.3	4.7	14
Corporate Interior, Dual Pilot: <ul style="list-style-type: none"> Corporate Interior Trim Plush Wool Carpets (for use with Dual Pilot controls) 	✓	9.3	4.2	14
Cabin Soundproofing	✓	10.0	4.5	13

Specifications subject to change without notice.

Optional Accessory Kits (con't)

Kit Description	Projected Availability Status	Wt (lbs)	Wt (kg)	Notes
Aft Bulkhead Closeout panel	✓	9.6	4.4	11, 13
Aft Bulkhead Closeout panel with soundproofing	✓	26.5	12.0	11, 13
Utility Light Weight Interior		-20.0	-9.1	
Note: All interior option weight values are weight increase or decrease from the standard configuration weights.				
PASSENGER SEATING OPTIONS				
Corporate 6-Place Seating, 18.5" wide seats with 3-point restraint system, quick release disconnects & ICS fixed provisions.	✓	25.2	11.4	
Corporate 5-Place club seating with 1 centre console and side arm rests, 3-point restraint system, quick release disconnects & ICS fixed provisions.	✓	34.0	15.4	
Corporate 4-Place club seating with centre consoles and side arm rests, 3-point restraint system, quick release disconnects & ICS fixed provisions.	✓	35.5	16.1	
Seat Rail Removal	✓	-6.0	-2.7	2, 17
Note: All passenger seating option weight values are weight increase or decrease from the standard configuration weights.				
VENDOR KITS - STC				
Sliding Passenger Door Photo (Sliding) Window, L/H (AAI)	✓	4.4	2.0	15
Sliding Passenger Door Photo (Sliding) Window, R/H (AAI)	✓	4.4	2.0	15
Automatic Door Openers, Crew (2 door kit) (AAI)	✓	2.0	0.9	
Automatic Door Openers, Passenger (2 door kit) (AAI)	✓	2.2	1.0	
Wire Strike Protection System Detachable Equipment, skid gear a/c (AAI) RECOMMENDED	✓	21.4	9.7	16
Crew Floor Protectors (AAI)	✓ ✓	5.2	2.4	
Cabin Floor Protectors (AAI)	✓	9.0	4.1	
Cargo Mirror (AAI)	✓	3.1	1.4	
Hard Point (Rappelling System) (AAI)	✓	0.4	0.2	
Hard Point (Ceiling, Spotter) (AAI)	✓	0.3	0.1	
Hard Point (Floor, Spotter) (AAI)	✓	0.4	0.2	
Fuel Filler Area Protector (AAI)	✓	0.1	0	

Notes:

- Kits required for Category A Operations:
 - 200 Amp Starter Generator (Dual)
 - Increased Capacity Battery (53 AmpH or 44 AmpH)
 - Articulated Landing Light
 - Radar Altimeter
- Standard Configuration kits removable by customizing or optional accessory kit
- Kits required for Dual Pilot IFR
 - Dual Pilot Control Provisions
 - Dual Pilot Controls Equipment

Specifications subject to change without notice.

3rd Display Unit & 2nd Standby Compass

4. Emergency Floats Electrical and Fixed Provisions kits are required for installation of Emergency Floats. Each Emergency Float kit (removable equipment) consists of two removable integrated skid mounted modules containing inflatable floats, inflation bottles and, if selected, an optional JAROPS compliant 6-person life raft with survival equipment, giving customers a choice among three Emergency Float configurations:
 - Emergency Floats without life rafts
 - Emergency Floats with one life raft (left side)
 - Emergency Floats with two life rafts
5. Ditching Kit is required for operations under European Joint Aviation Regulation JAR-OPS 3.843(a) for Performance Class 1 or 2 flights over water in a hostile environment at a distance from land corresponding to more than 10 minutes flying time at normal cruise speed. Life Vest Provision Kits are required when the Ditching Kit is installed.
6. Emergency Egress Kit is required for front row passenger emergency exit when Emergency Floats and 15.5" standard 6-place seating kit are installed with passenger seats in airline seating arrangement with front row of seats facing forward.
7. The Protected Tail Rotor System is designed to prevent injury and provide a safe working environment for personnel who are in the vicinity of the aircraft.
8. Avidyne TAS605 Traffic Avoidance System is a lighter weight system available as a customized installation. See page 9 for features comparison.
9. Air Conditioning Quill Drive and Provisions are included in Standard Configuration.
10. Headliner with adjustable air vents, p/n 429-706-202-103 or 429-706-202-105, is recommended for more effective cooling when air conditioning is installed.
11. Aft Cabin Bulkhead Closeout cannot be installed if Rescue Hoist Provisions are installed.
12. Complete NVG compatible lighting consists of the following optional accessories:
 - p/n 429-706-022-101 or -105 replaces the standard #1 & #2 Display Units and CHFD panel with NVG compatible units
 - p/n 429-706-022-103 Or -107 should be selected instead of p/n 429-706-026-101 for NVG compatible 3rd Display Unit
 - NVG compatible lighting treatment for other internal and external light sources, including NVG lighting for the standby compasses and cabin black-out curtains, will vary depending upon specific aircraft configuration. Aerodynamix STC'd NVG lighting is available as a customized installation.
13. For effective internal noise reduction, Aft Cabin Bulkhead panel, p/n 429-706-060-103 or 429-706-060-105, is strongly recommended when cabin soundproofing is installed.
14. Standard Configuration floor covering includes a customer choice of materials, either durable low loop nylon blend carpet or "Aermat" vinyl floor covering. Either single pilot or dual pilot standard carpet is included in Standard Configuration Price. Corporate Interior floor covering is plush 100% wool carpet, colour coordinated to match leather seat upholstery.
15. Three Passenger Door Sliding Window colour options available:
 - p/n 429-564-007, L/H (Gray)
 - p/n 429-564-009, L/H (Medium Gray)
 - p/n 429-564-011, L/H (Dark Gray)
 - p/n 429-564-008, R/H (Gray)
 - p/n 429-564-010, R/H (Medium Gray)
 - p/n 429-564-012, R/H (Dark Gray)
16. Wire Strike Protection System Provisions are included in Standard Configuration.
17. Passenger Seat Rail Removal kit required for installation of AMC or Aerolite EMS Interior Systems.
18. Installation of 53 AmpH, 44 AmpH or 36 AmpH battery requires installation of the 200 Amp Starter Generator kit. However, installation of 200 Amp Starter Generator does not require installation of the 53 AmpH battery.
19. Rescue Hoist Provisions cannot be installed when Aft Bulkhead Closeout panel is installed.
20. Right side aft passenger seat must be removed for installation of the Rescue Hoist Control Box Pendent Bracket. Pendent bracket is removable when pendent is not installed for mission use.

Fuel Flow Charts

ISA & ISA+20°C

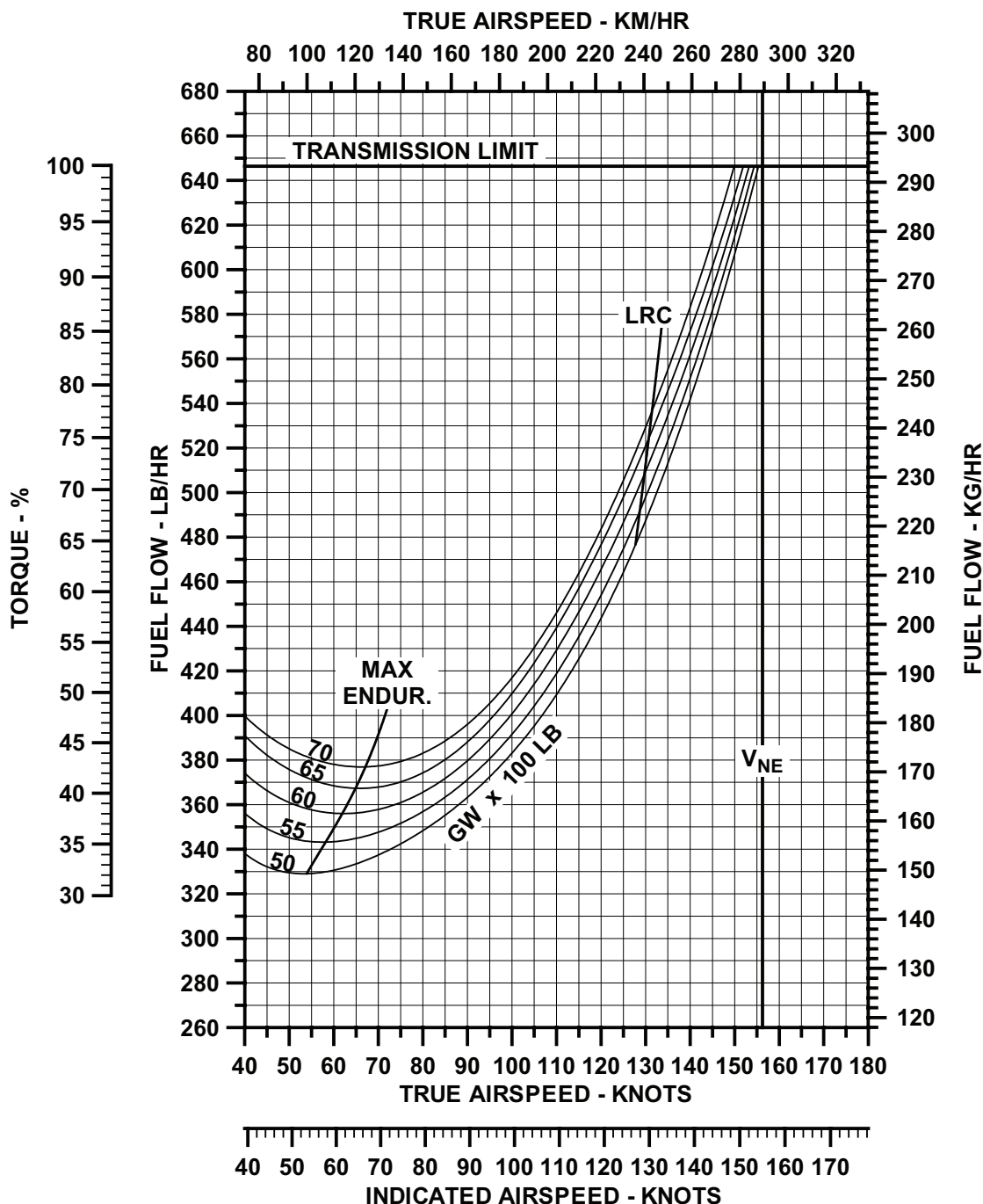
NEW PRATT & WHITNEY CANADA PW207D1/D2 ENGINES

BASIC INLET OR BARRIER FILTER INSTALLED

CLEAN CONFIGURATION WITH STANDARD SKID GEAR

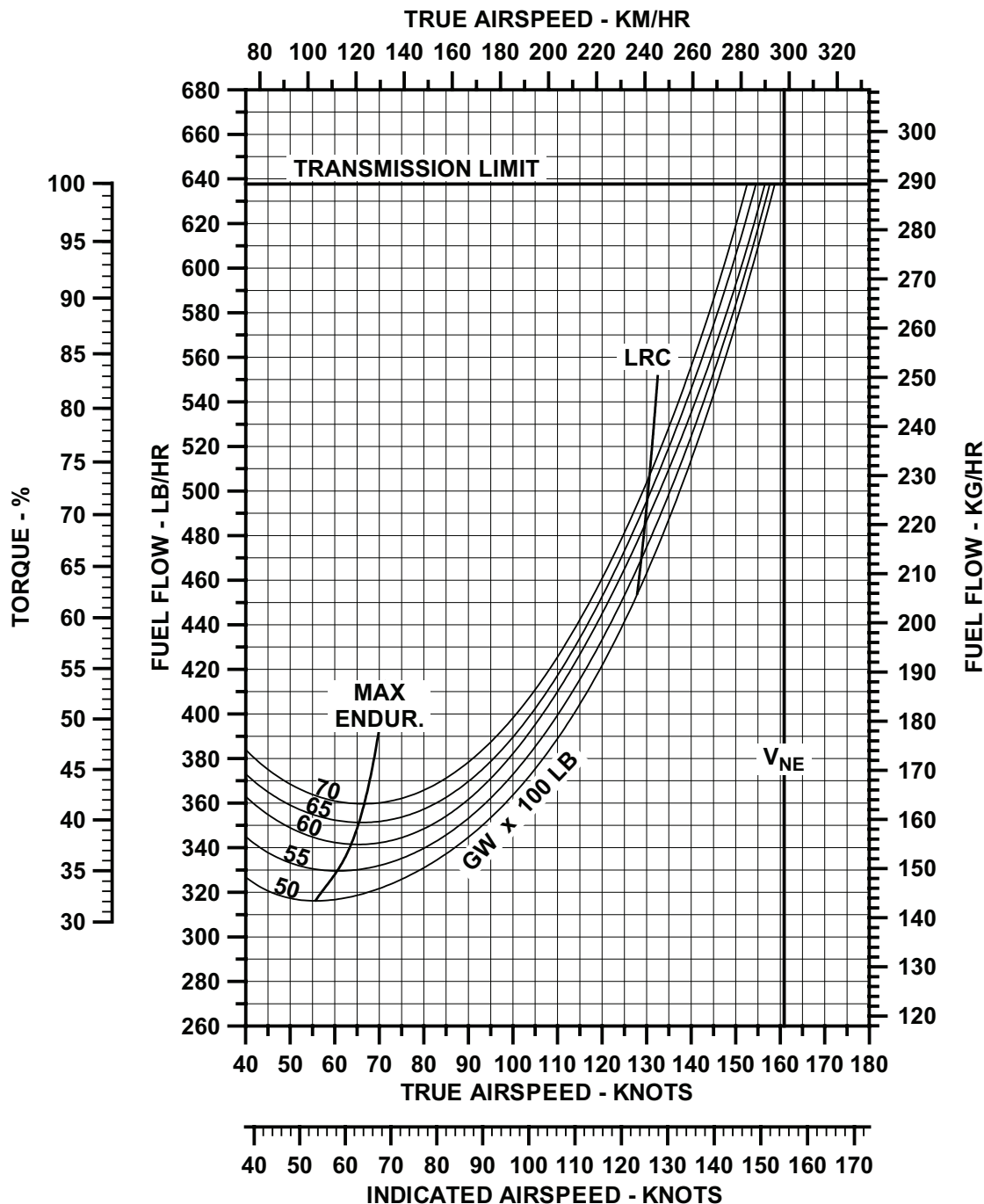
AIR CONDITIONING / HEATER OFF

Fuel Flow vs Airspeed
New Engines
Clean Configuration with Standard Skid Gear
Engine RPM - 100%
Zero Wind
Pressure Altitude = Sea Level
OAT = 15°C (ISA)



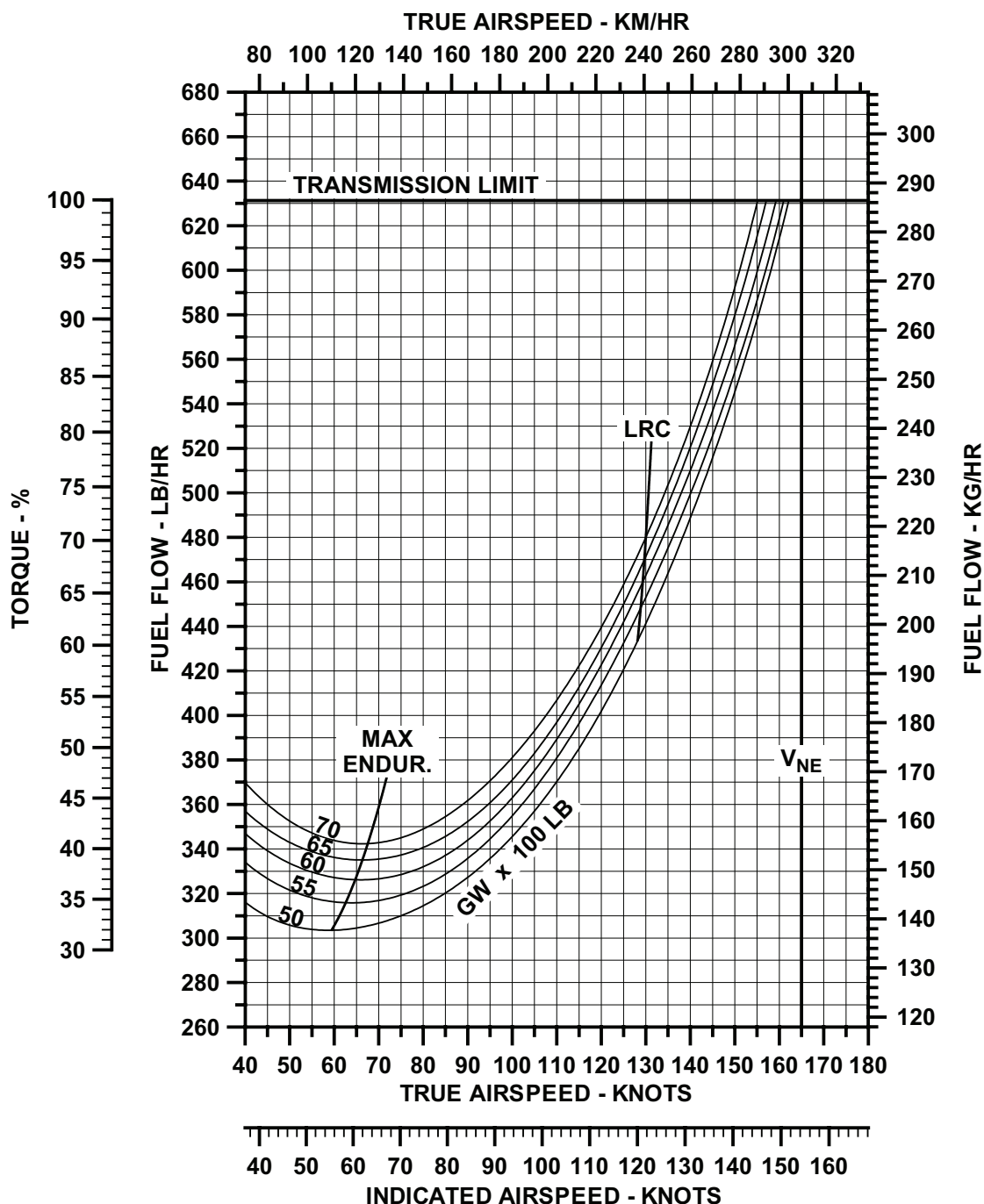
The data set forth on this document are general in nature and may vary with conditions.
For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

Fuel Flow vs Airspeed
New Engines
Clean Configuration with Standard Skid Gear
Engine RPM - 100%
Zero Wind
Pressure Altitude = 2000 Ft
OAT = 11°C (ISA)



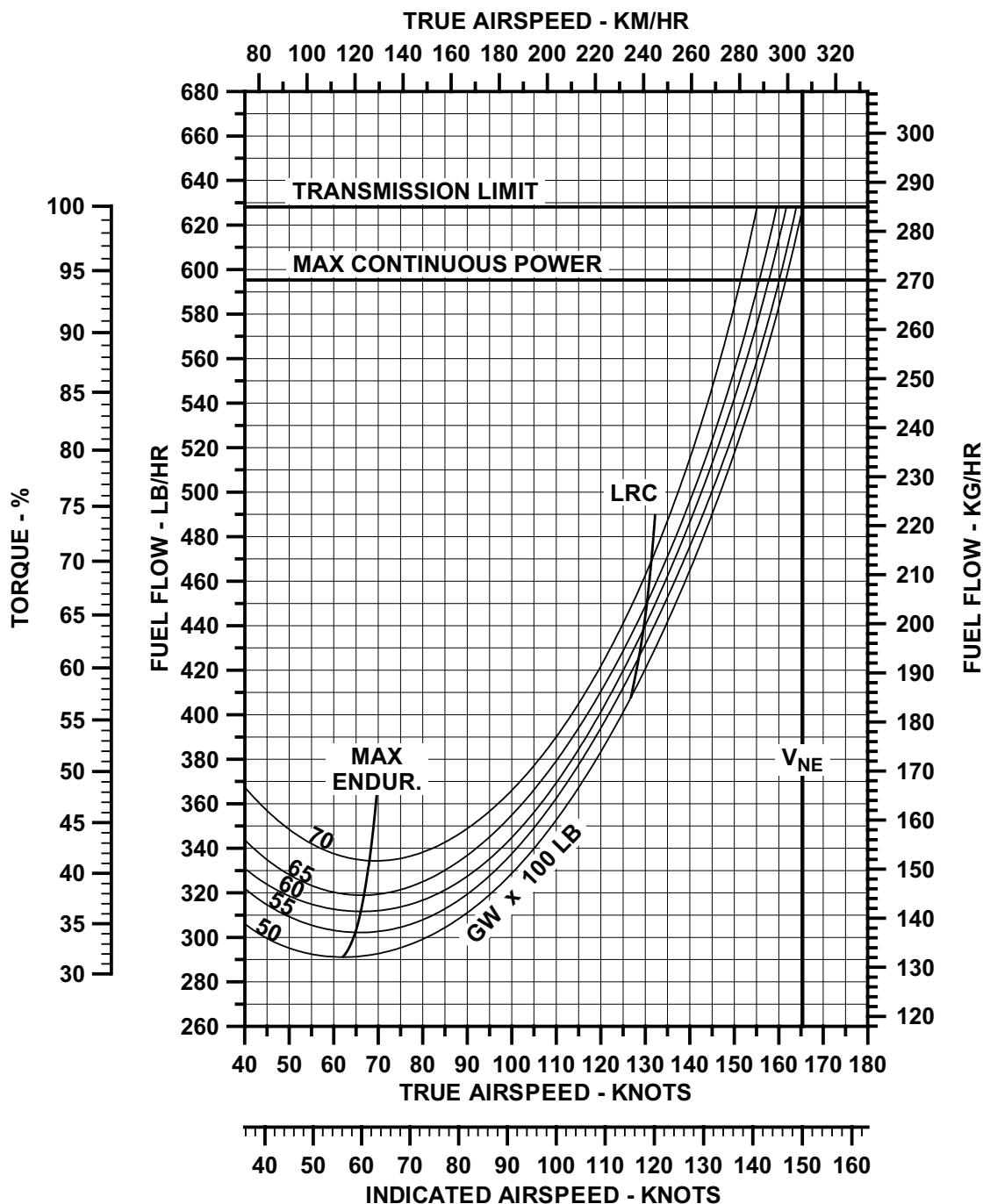
The data set forth on this document are general in nature and may vary with conditions.
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Fuel Flow vs Airspeed
New Engines
Clean Configuration with Standard Skid Gear
Engine RPM - 100%
Zero Wind
Pressure Altitude = 4000 Ft.
OAT = 7°C (ISA)



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Fuel Flow vs Airspeed
New Engines
Clean Configuration with Standard Skid Gear
Engine RPM - 100%
Zero Wind
Pressure Altitude = 6000 Ft
OAT = 3°C (ISA)

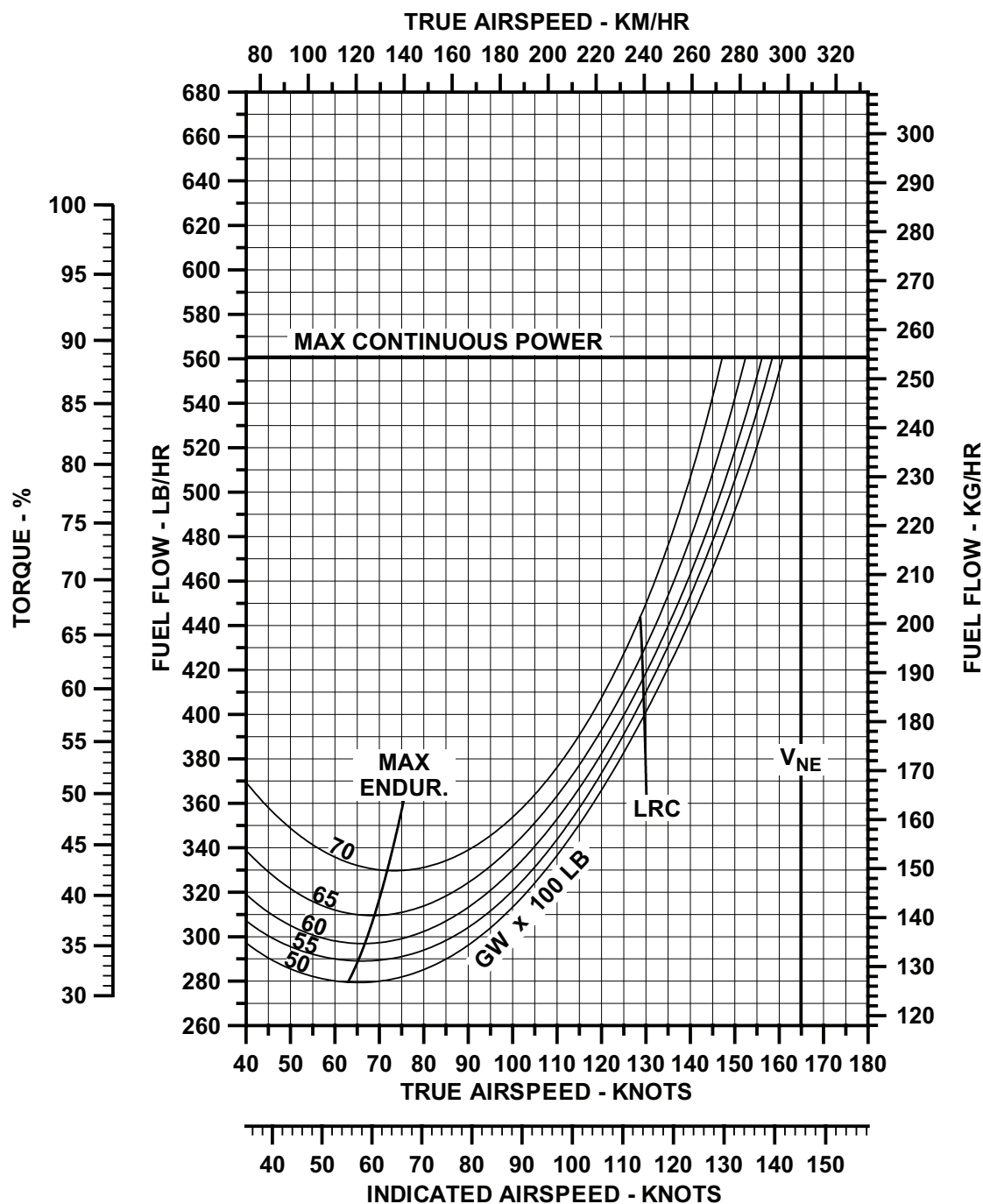


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Fuel Flow vs Airspeed

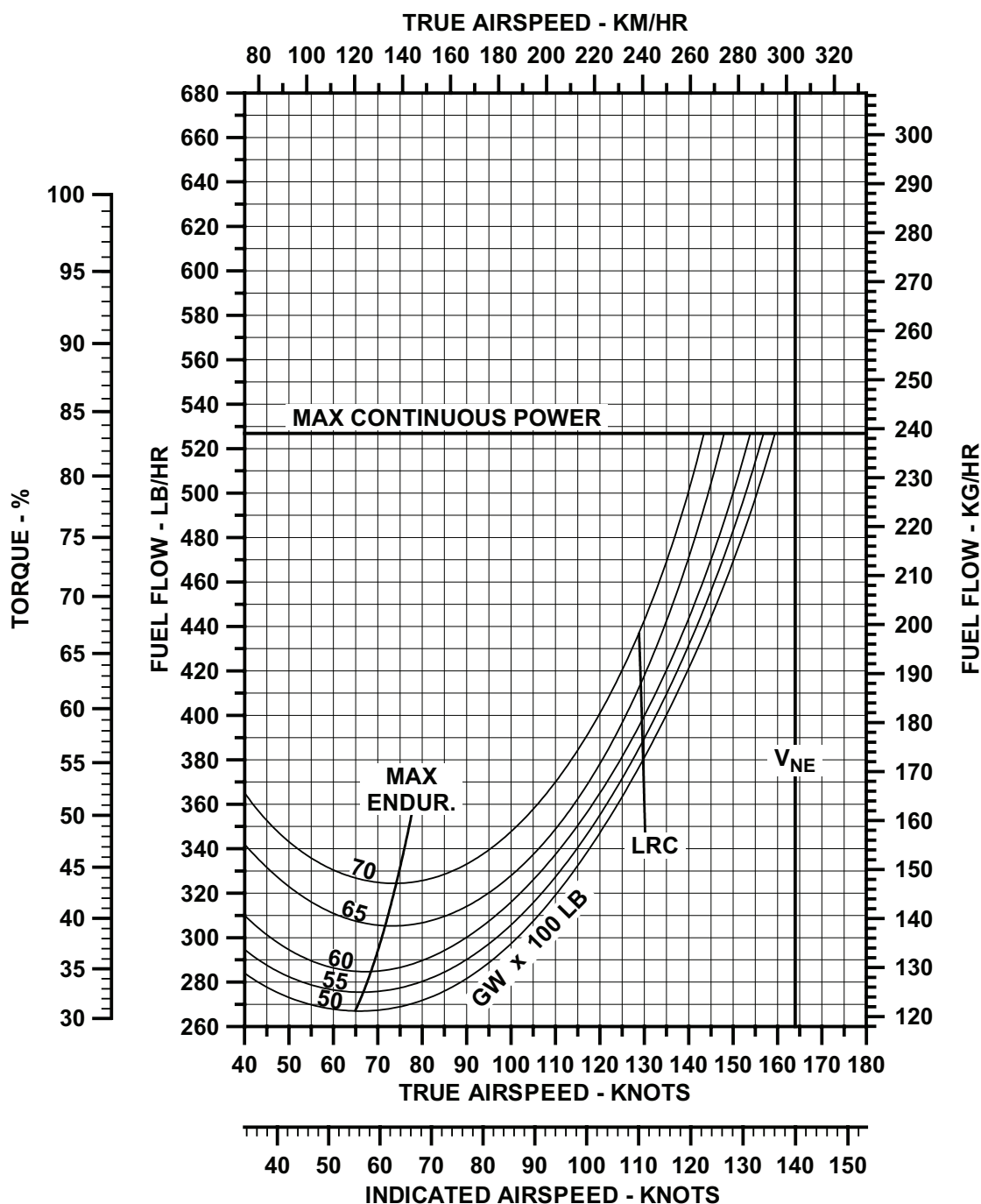
New Engines
Clean Configuration with Standard Skid Gear
Engine RPM - 100%
Zero Wind

Pressure Altitude = 8000 Ft.
OAT = -1°C (ISA)



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Fuel Flow vs Airspeed
New Engines
Clean Configuration with Standard Skid Gear
Engine RPM - 100%
Zero Wind
Pressure Altitude = 10,000 Ft
OAT = -5°C (ISA)

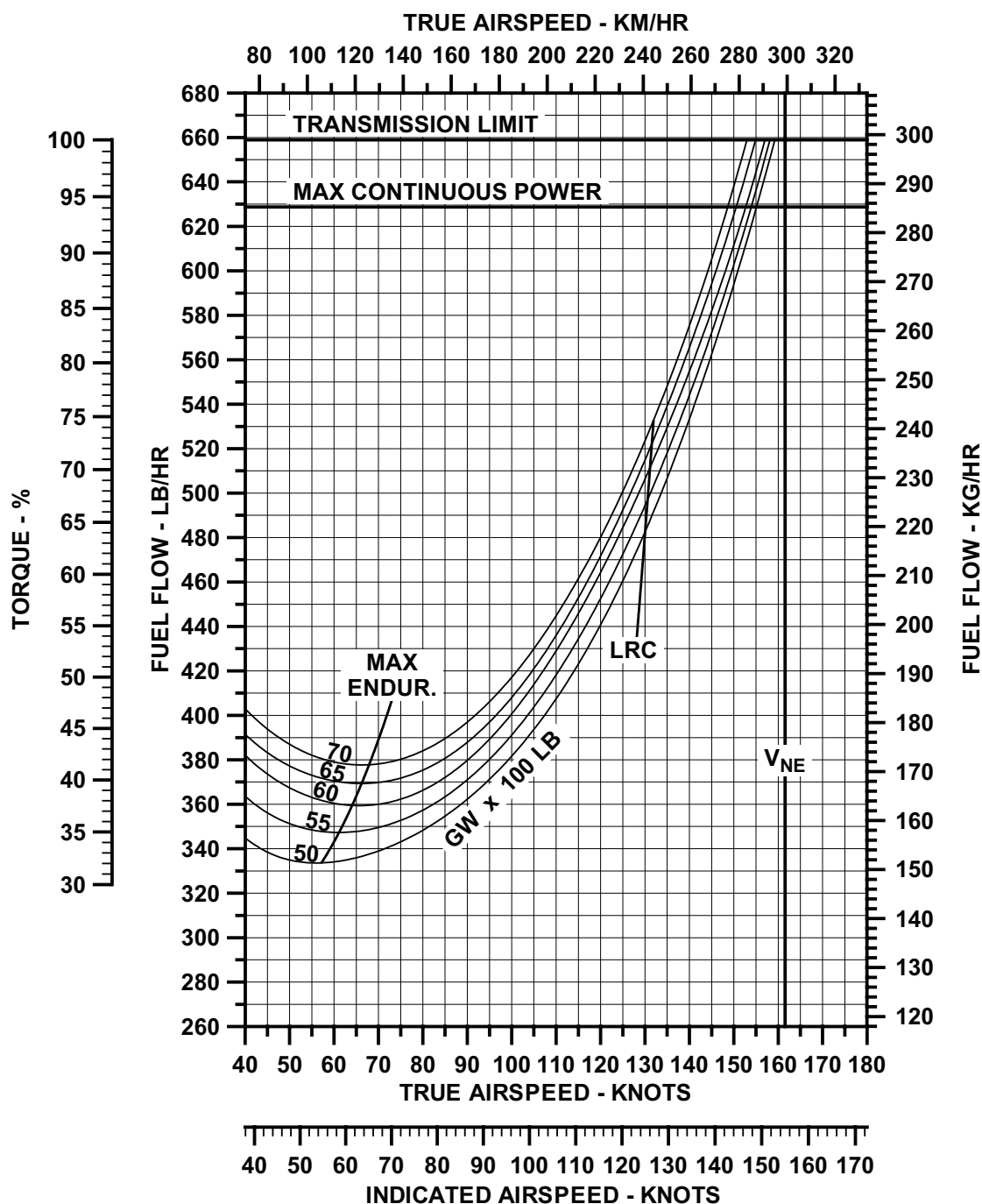


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Fuel Flow vs Airspeed

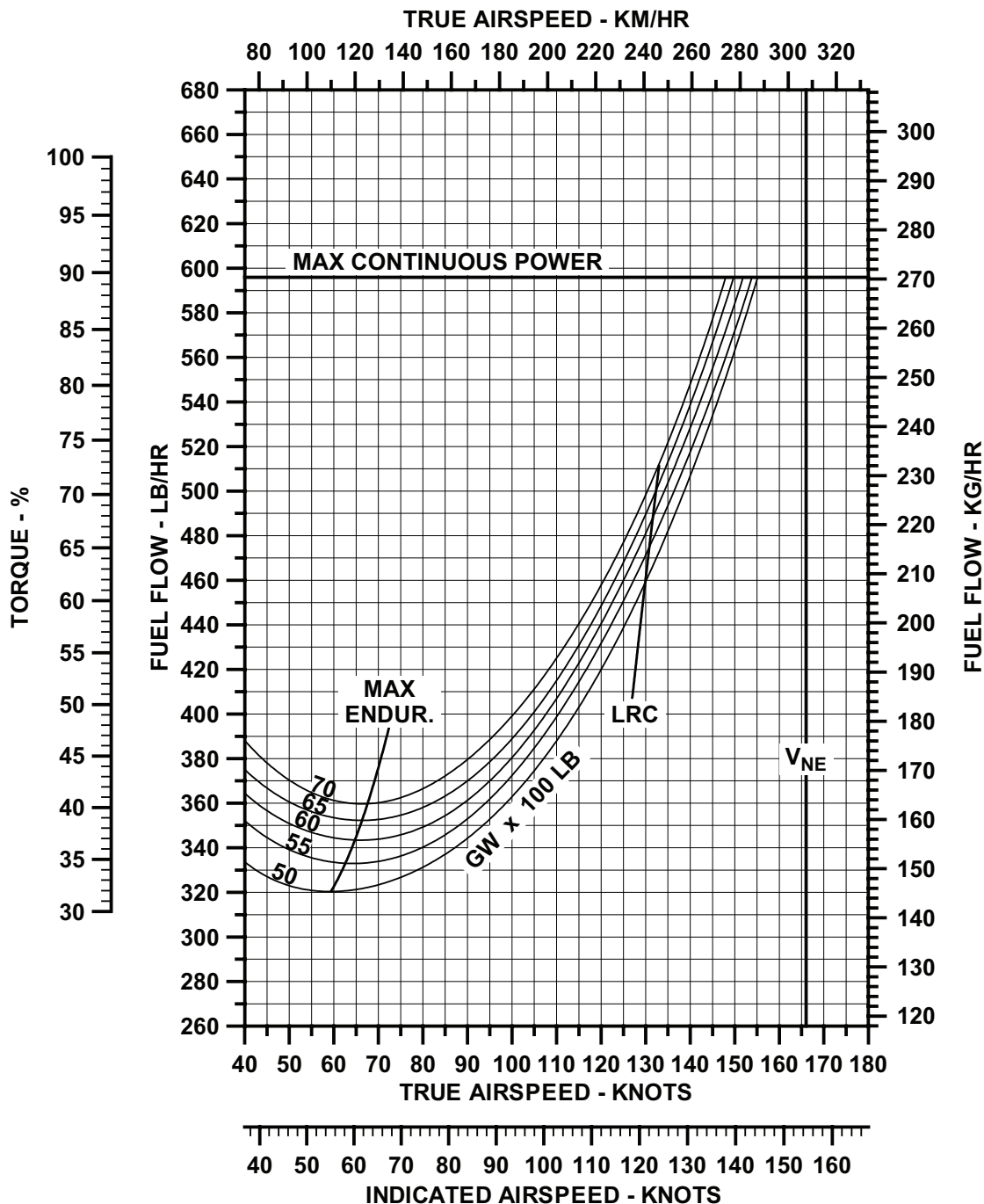
New Engines
Clean Configuration with Standard Skid Gear
Engine RPM - 100%
Zero Wind

Pressure Altitude = Sea Level
OAT = 35°C (ISA+20°C)



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Fuel Flow vs Airspeed
New Engines
Clean Configuration with Standard Skid Gear
Engine RPM - 100%
Zero Wind
Pressure Altitude = 2000 Ft
OAT = 31°C (ISA+20°C)

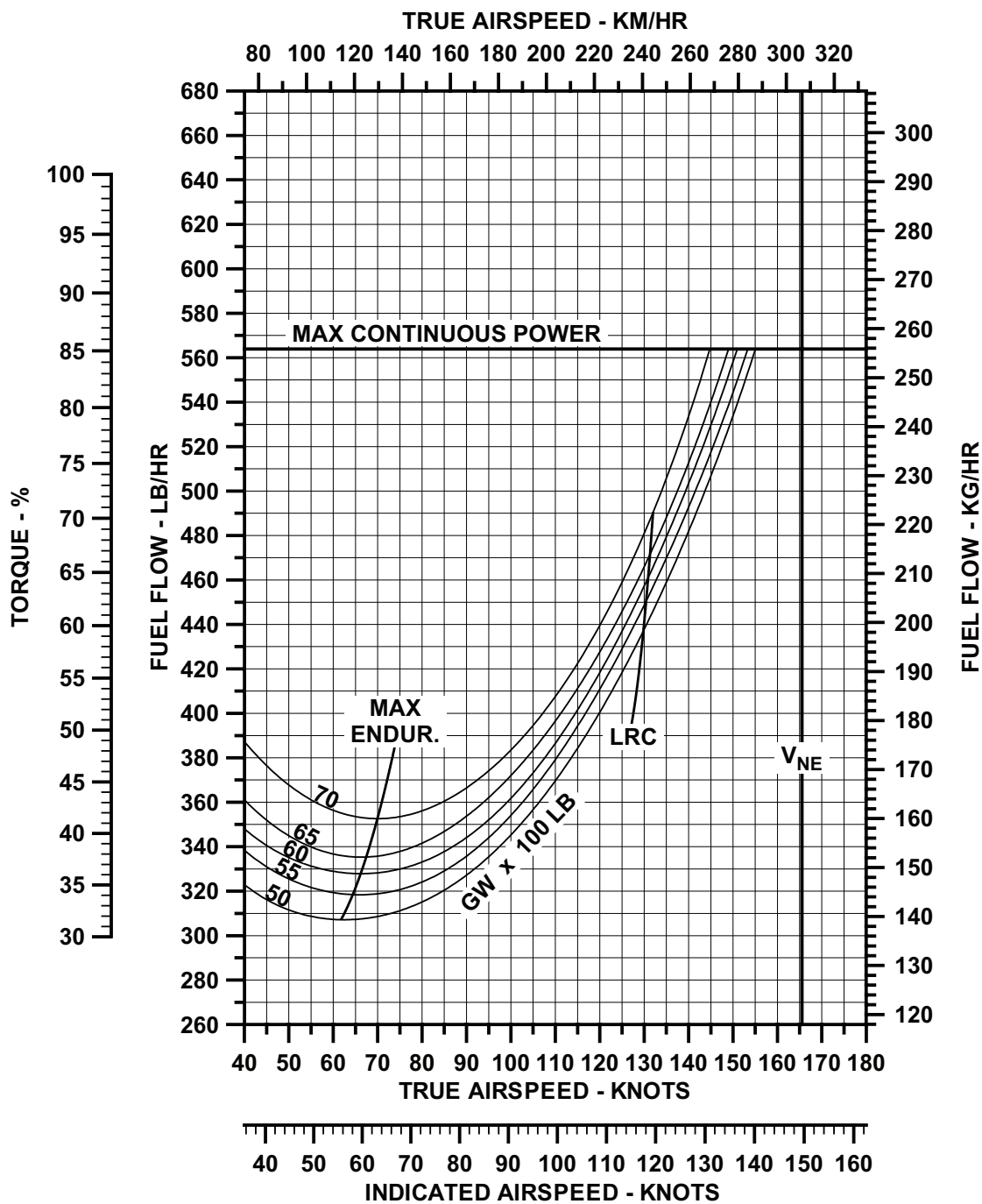


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Fuel Flow vs Airspeed

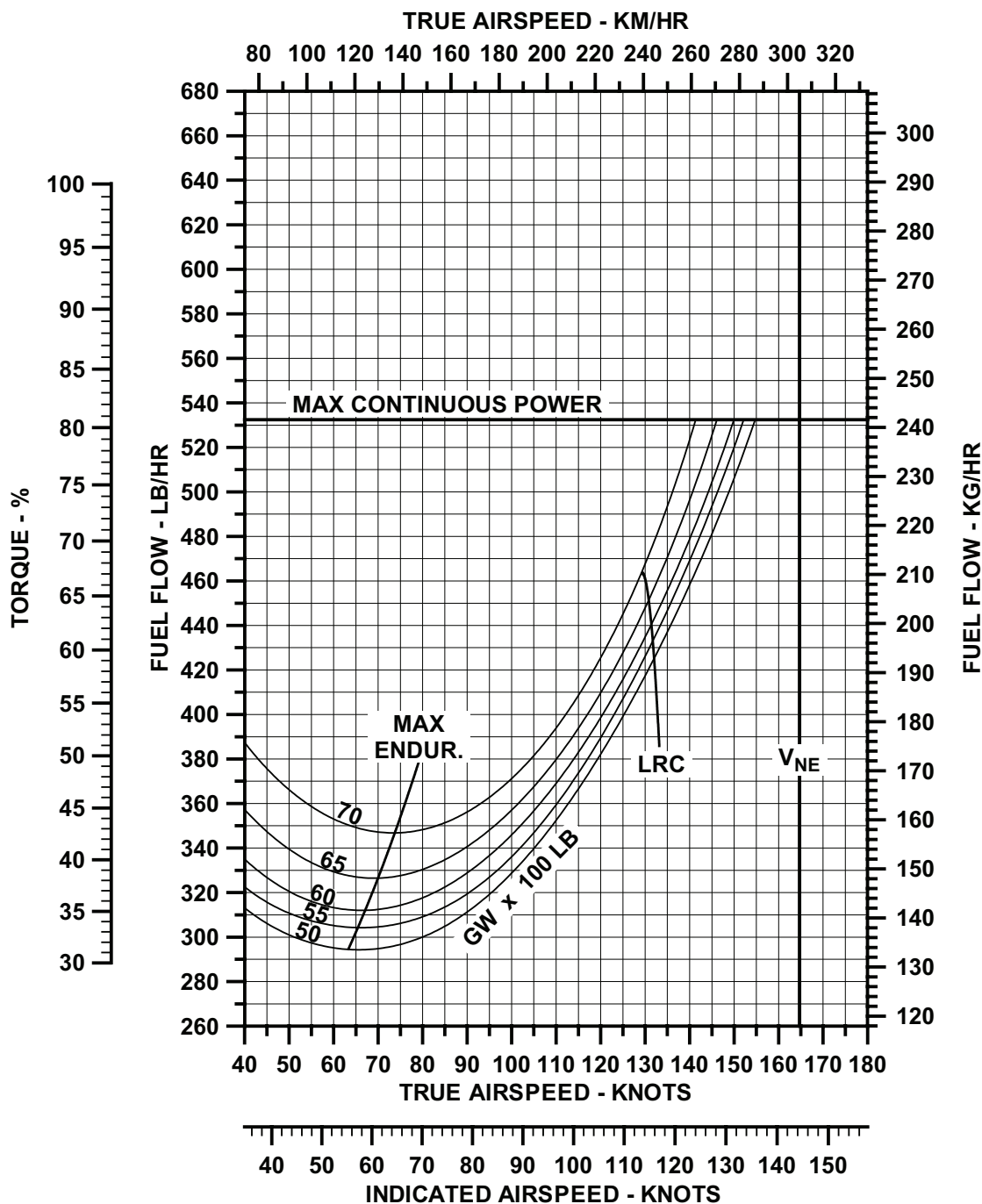
New Engines
Clean Configuration with Standard Skid Gear
Engine RPM - 100%
Zero Wind

Pressure Altitude = 4000 Ft.
OAT = 27°C (ISA+20°C)



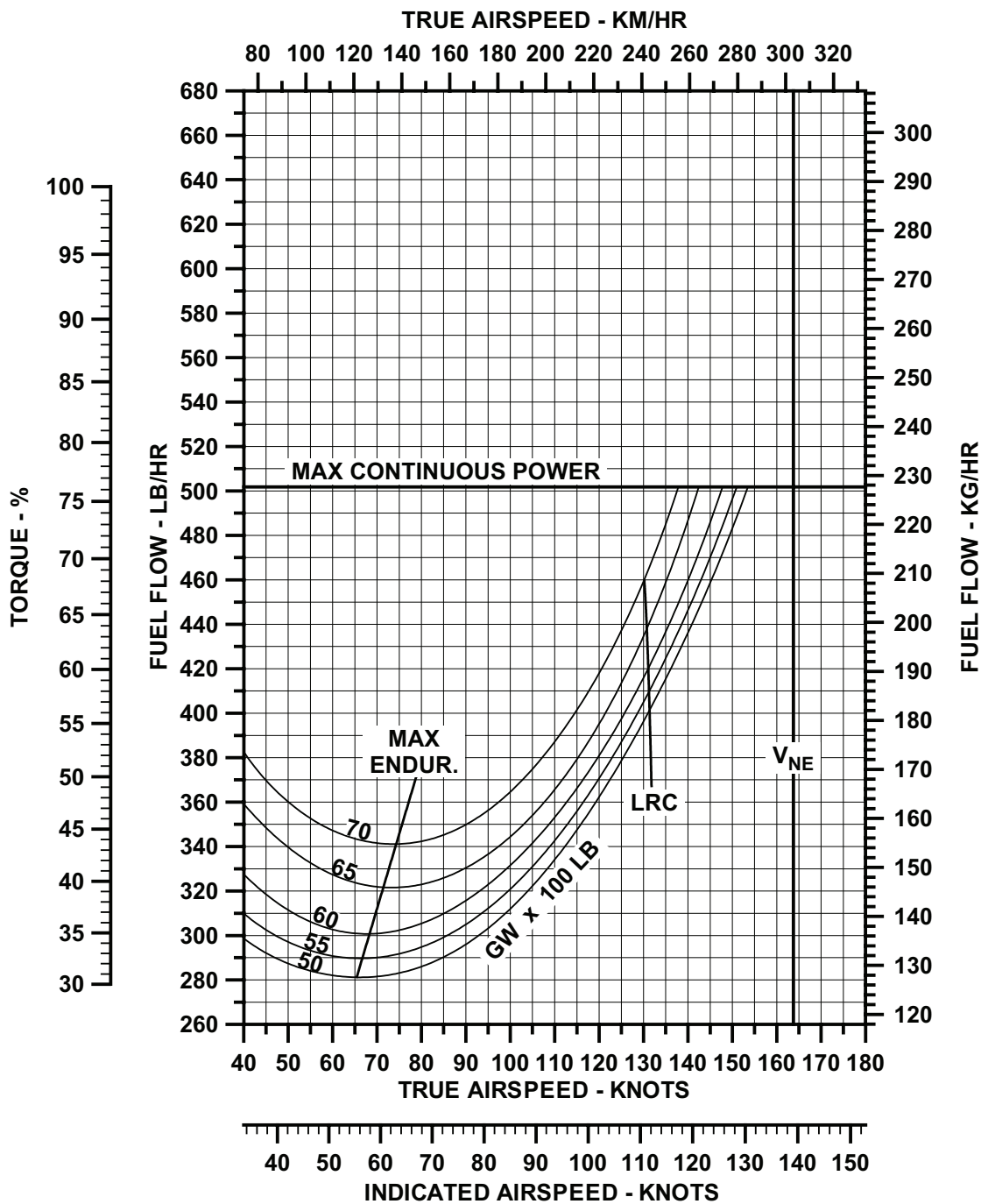
The data set forth on this document are general in nature and may vary with conditions.
For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

Fuel Flow vs Airspeed
New Engines
Clean Configuration with Standard Skid Gear
Engine RPM - 100%
Zero Wind
Pressure Altitude = 6000 Ft
OAT = 23°C (ISA+20°C)



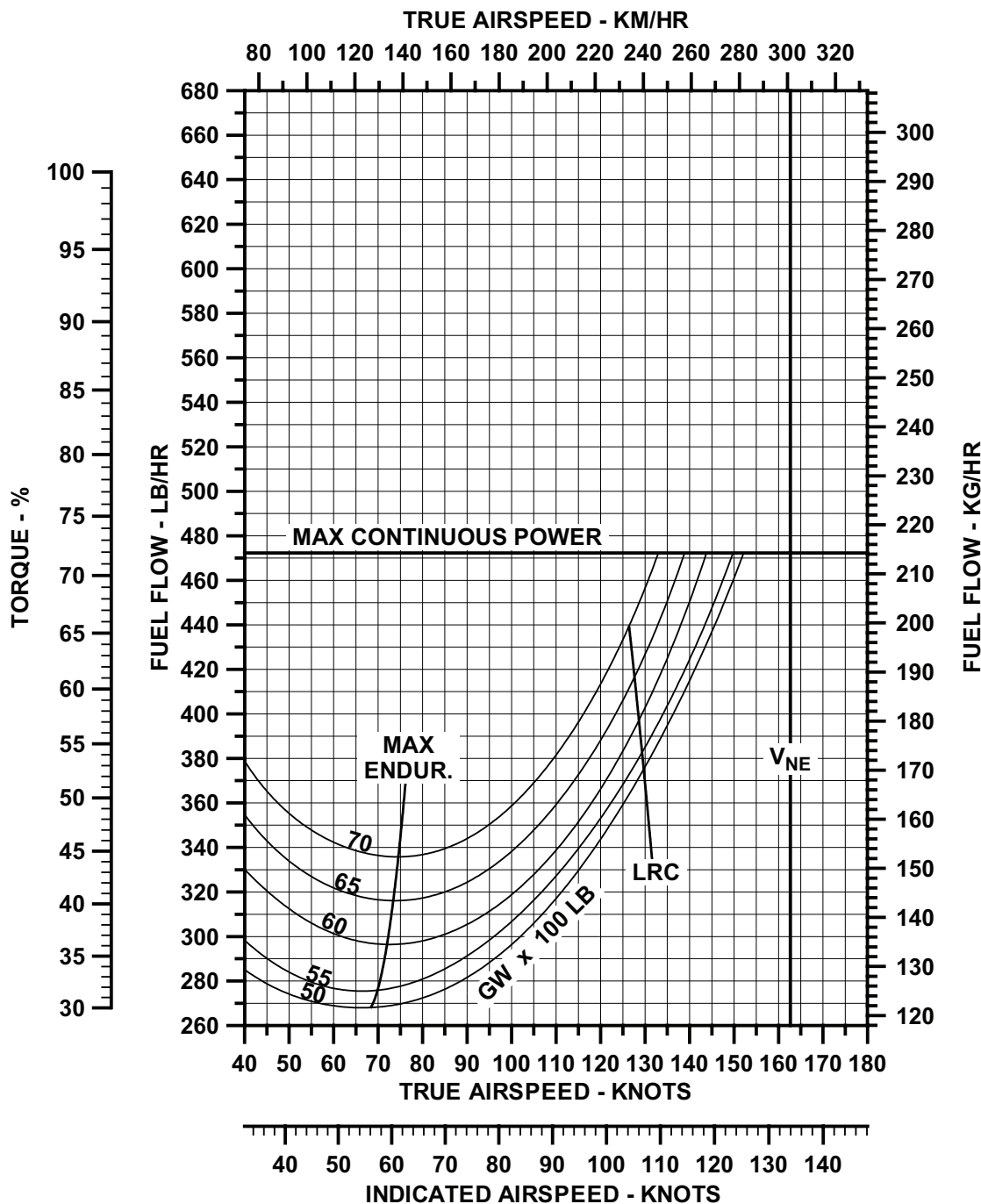
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Fuel Flow vs Airspeed
New Engines
Clean Configuration with Standard Skid Gear
Engine RPM - 100%
Zero Wind
Pressure Altitude = 8000 Ft.
OAT = 19°C (ISA+20°C)



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Fuel Flow vs Airspeed
New Engines
Clean Configuration with Standard Skid Gear
Engine RPM - 100%
Zero Wind
Pressure Altitude = 10,000 Ft
OAT = 15°C (ISA+20°C)



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Performance Charts

IGE & OGE HOVER AND SERVICE CEILINGS

PRATT & WHITNEY CANADA PW207D1/D2 ENGINES

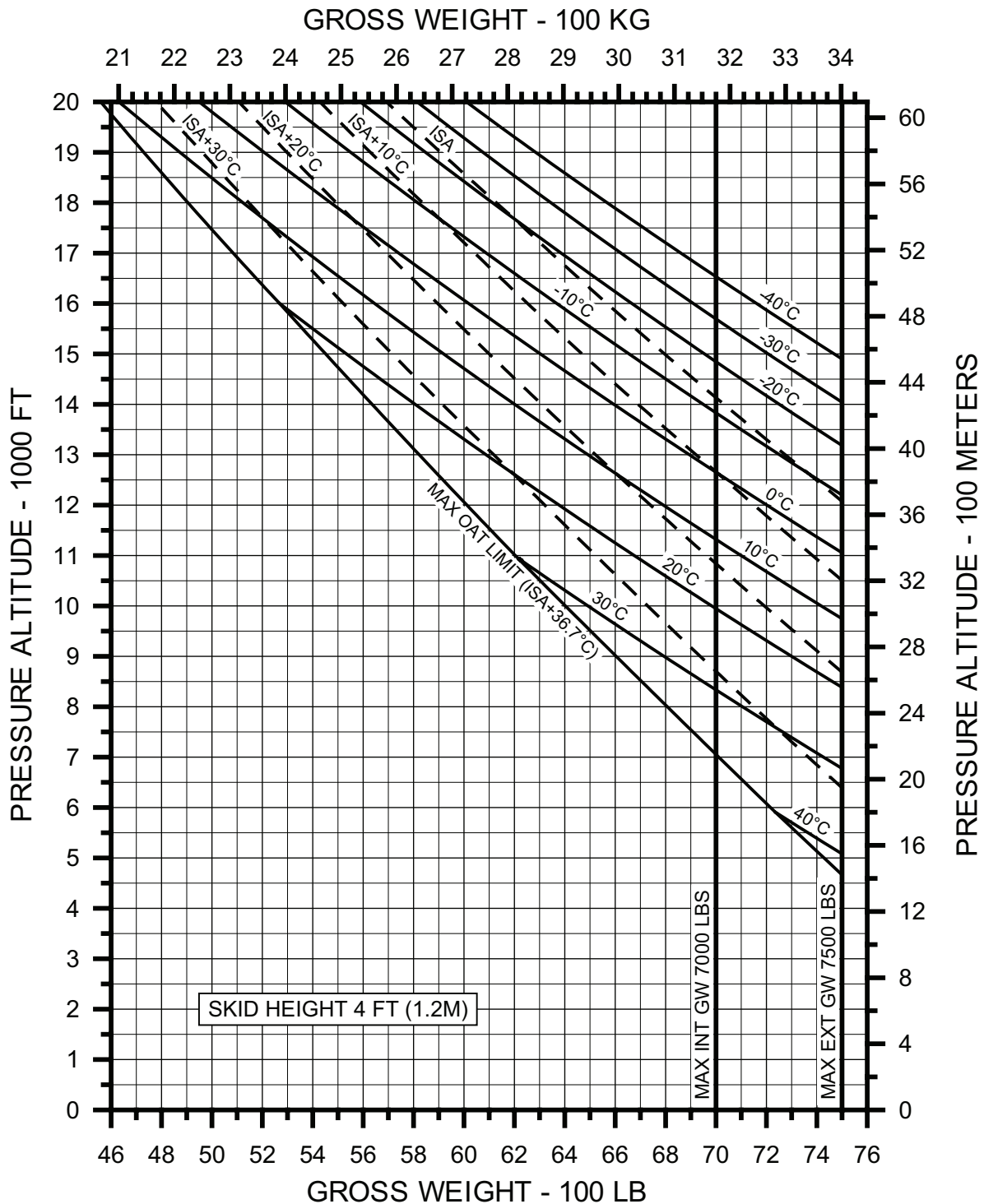
MINIMUM SPECIFICATION ENGINE POWER

BASIC INLET OR BARRIER FILTER INSTALLED

AIR CONDITIONING / HEATER OFF

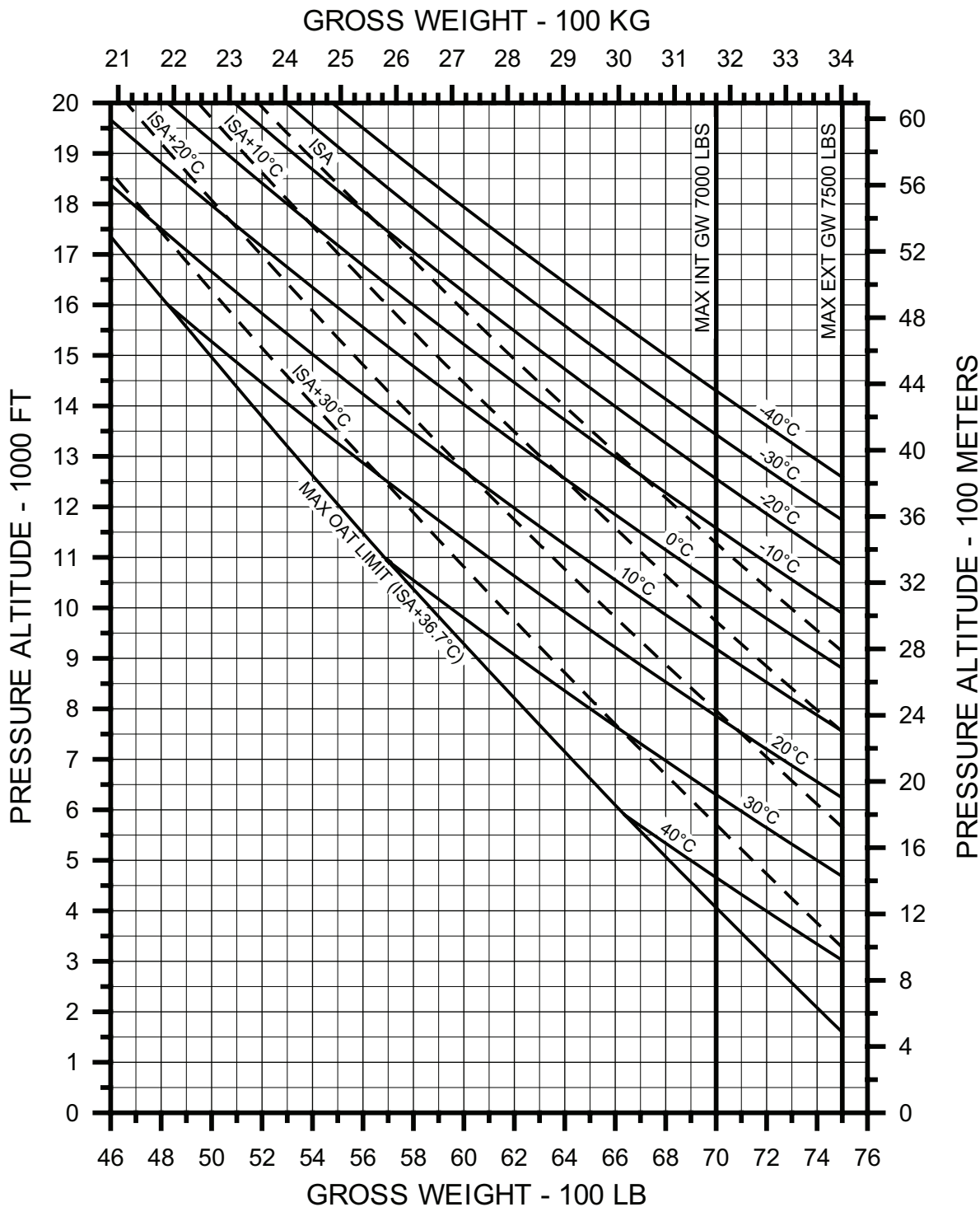
The data set forth on this document are general in nature and may vary with conditions.
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IGE Hover Ceiling
Twin Engine Takeoff Power
Basic Inlet or Barrier Filter Installed
Rotor RPM = 100%
Zero Wind or Headwind



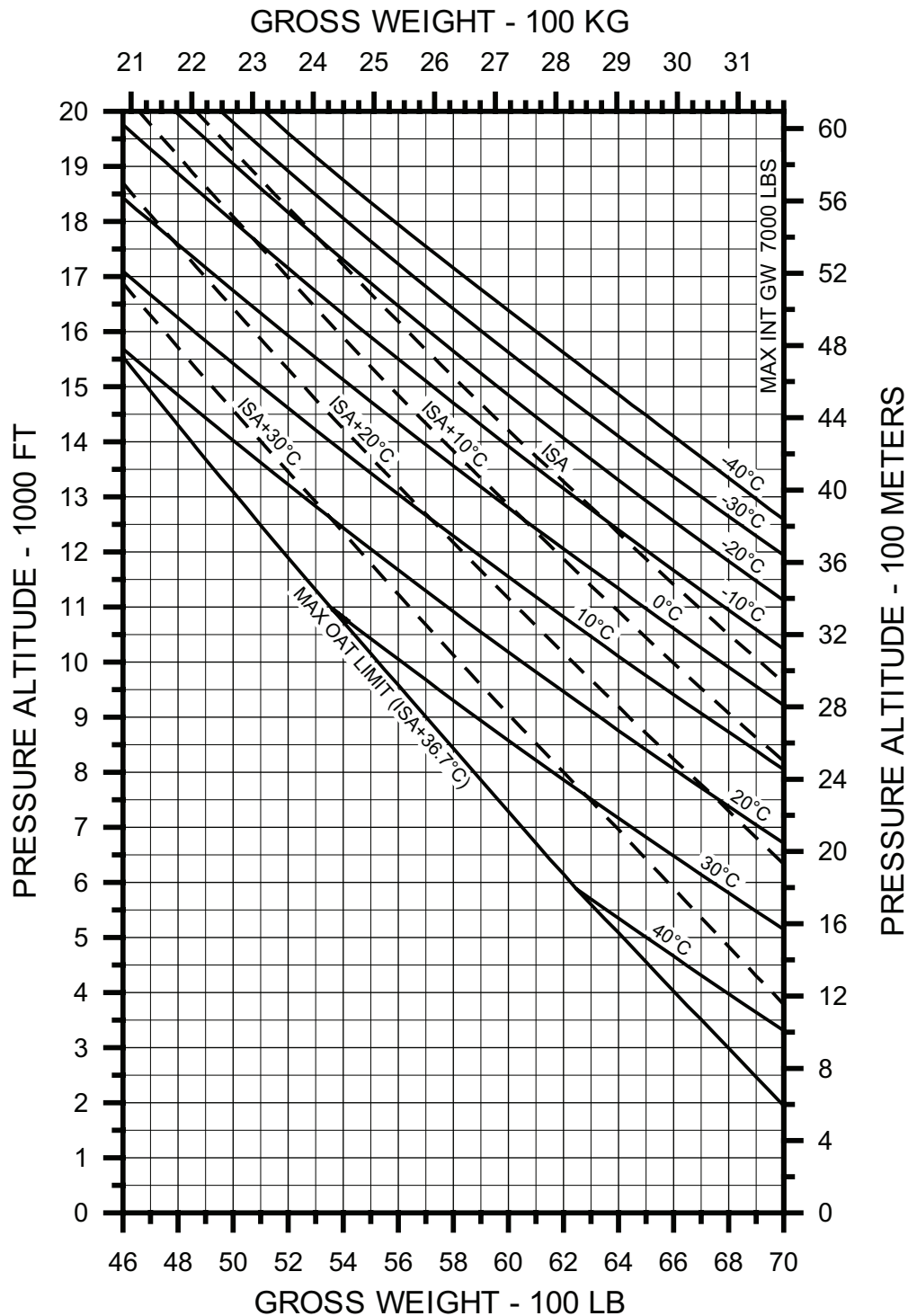
The data set forth on this document are general in nature and may vary with conditions.
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OGE Hover Ceiling
Twin Engine Takeoff Power
Basic Inlet or Barrier Filter Installed
Rotor RPM = 100%
Zero Wind or Headwind



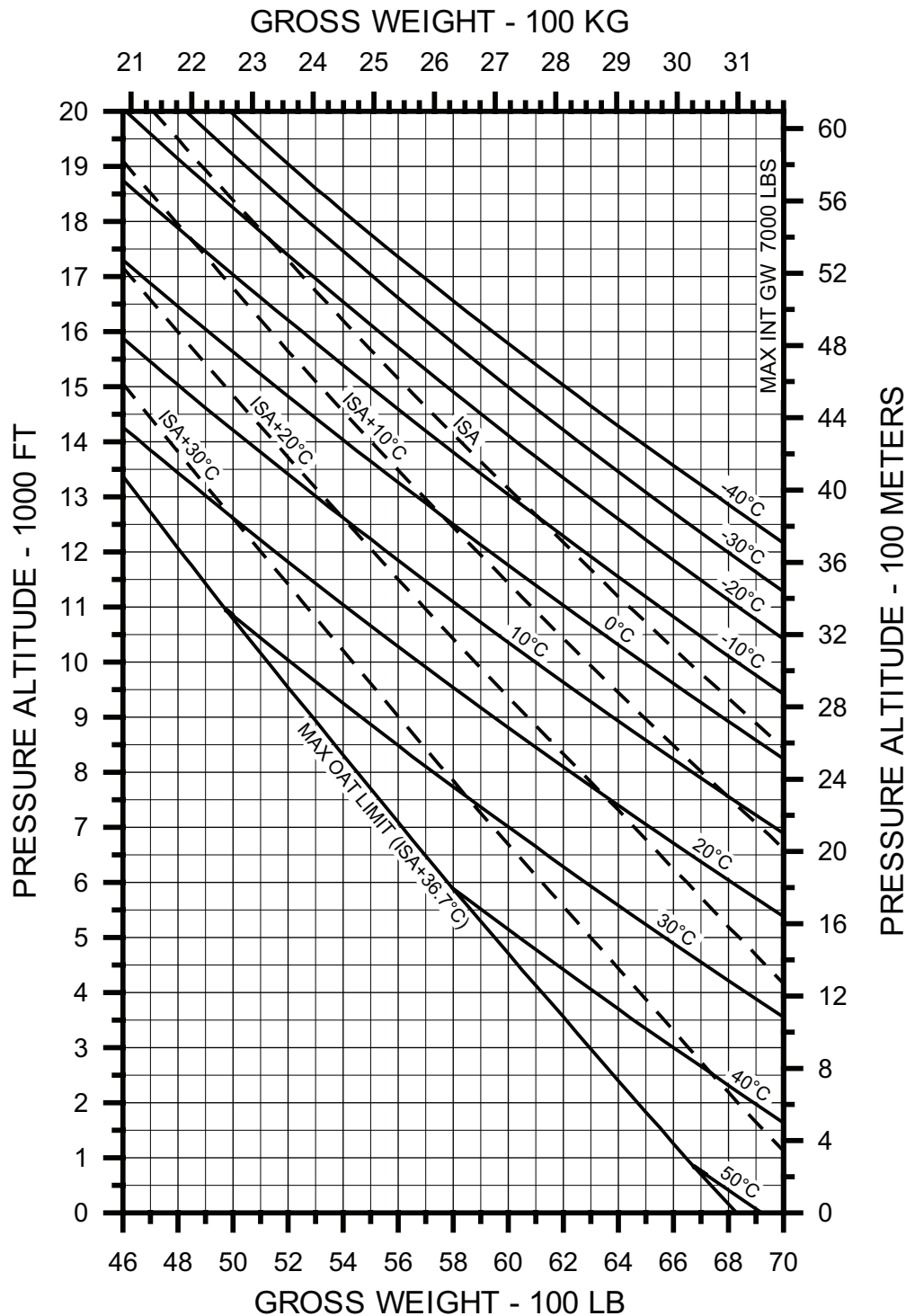
The data set forth on this document are general in nature and may vary with conditions.
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OEI Service Ceiling
OEI 30-Minute Power
Basic Inlet or Barrier Filter Installed
Zero Wind or Headwind



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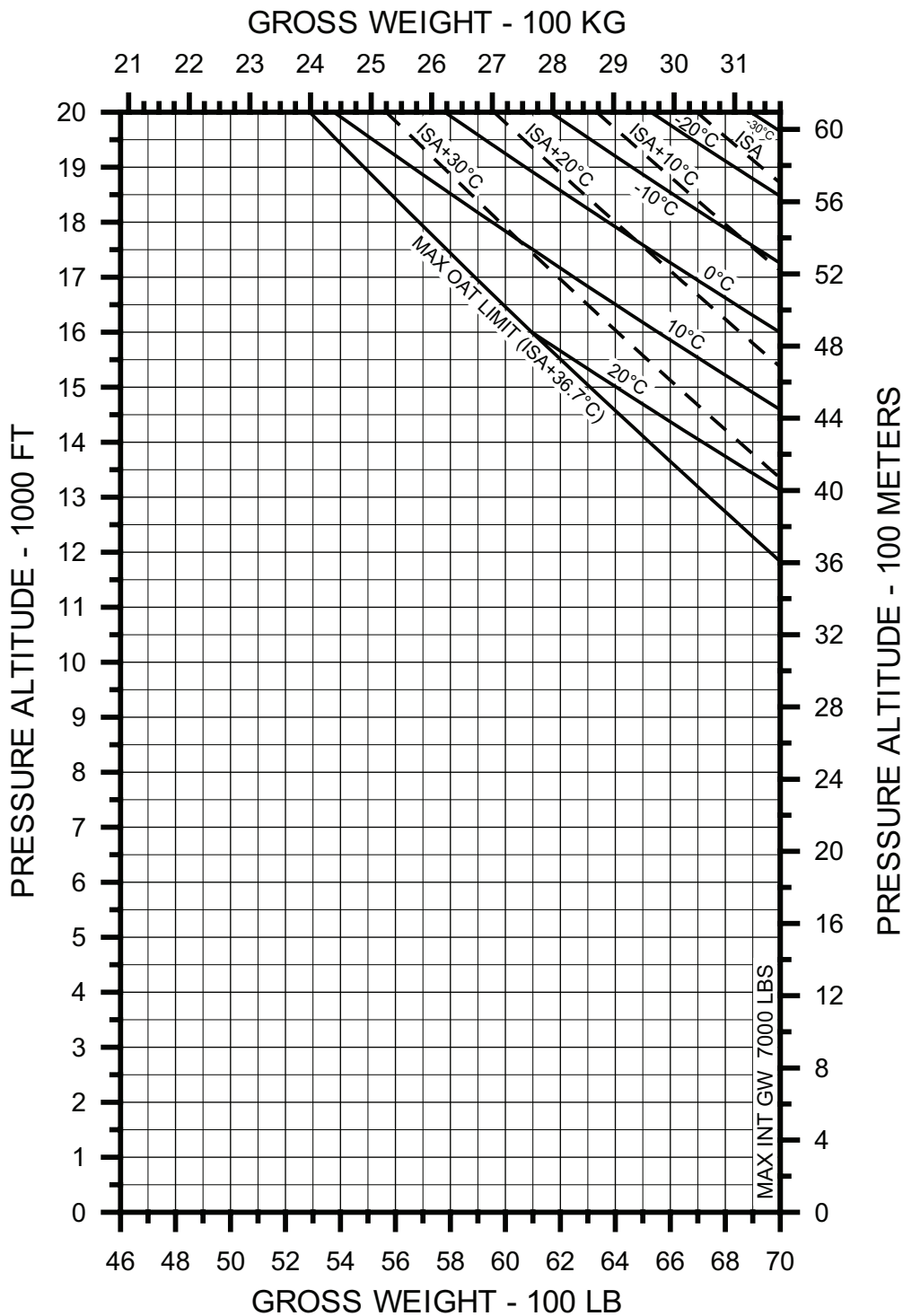
OEI Service Ceiling
OEI Max Continuous Power
Basic Inlet or Barrier Filter Installed
Zero Wind or Headwind



The data set forth on this document are general in nature and may vary with conditions.
For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

Service Ceiling

Twin Engine Max Continuous Power Basic Inlet or Barrier Filter Installed Zero Wind or Headwind



The data set forth on this document are general in nature and may vary with conditions.
For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

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429 Maintenance Program

Designed through Maintenance Steering Group - 3 (MSG-3)

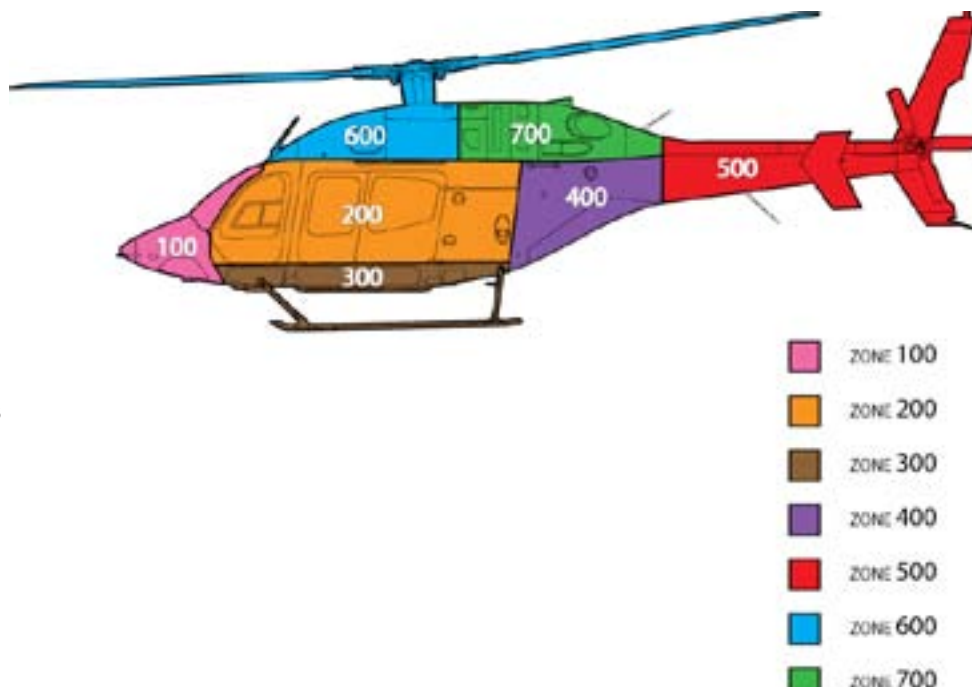
Bell understands the importance of aircraft reliability to meet your mission needs. That's why our maintenance philosophy is to streamline maintenance requirements to ensure low direct operating costs, low direct maintenance costs, and improved reliability by utilizing the Maintenance Steering Group – 3 (MSG-3) while increasing occupant safety.

The Bell 429 is the first rotorcraft designed through the MSG-3 in the creation of a maintenance schedule on a commercial helicopter with the support of the Aviation authorities, mainly Transport Canada (TC), the Federal Aviation Administration (FAA) and the European Aviation Safety Agency (EASA).

During the Customer Maintenance Advisory Panel (CMAP) meetings, the team analyzed every aircraft system, including airframe structure and wiring installation, to determine the failure modes, their criticality, the ease of detection, the level of inspection required and the ideal recurrence of inspection. This is where the varied experience of the team came in to play; Aircraft Maintenance Engineers (AME) / Airframe & Power Plant (A&P) technicians also provided input as to the system detailed functions and used their many years of experience in aircraft operation, respectively. From this resulted a maintenance schedule that requires 35% less maintenance man hours versus a comparable aircraft, thus improving the cost of ownership for the Bell 429.

The following are excellent features derived through MSG-3 for the Bell 429:

- **Approved Maintenance Program (TC/EASA)**
 - First rotorcraft to use the MSG-3 Process
- **Certification through MSG-3 Process**
 - Same process used by commercial airlines to ensure continued airworthiness
 - Determines how and when maintenance will be performed
 - Helicopter designed and built for maintenance
- **Accessible panels to aircraft systems**
- **Maintenance Program**
 - Task Intervals
 - Every 200 hours
 - 800 hours/12 month
 - Zonal Inspection Program introduced
 - Life Limited Parts
 - Composite Components – On Condition
 - Metallic Components – 10,000 + hours (Goal)
 - Elastomeric Components – 5000 hours (Goal)



- Zonal Inspections
 - General Visual Inspections
 - Part of Scheduled Inspection Program
 - Start at 12-month
 - Extent out to 10-Years
 - Reduce Scheduled Inspection repeats
- **Instructions for Continued Airworthiness (ICA)**
 - Maintenance Manual & Flight Manual
 - Maintenance Manual accepted by TC, EASA and FAA
 - Maintenance Program approved by TC & EASA, and accepted by FAA
 - Flight Manual approved by TC, EASA and FAA
 - Wear and repair damage limits included in initial release to customers
- **Scheduled Maintenance and Component Inspections**

Bell 429 Scheduled Maintenance Inspections			
Inspection	Individual Task Hours	Cumulative Task Hours	Notes
200 hour	0.16 hrs	0.16 hrs	
400 hour	5.00 hrs	5.16 hrs	includes 200 hr
600 hour	3.16 hrs	3.32 hrs	includes 200 hr
600 hour / 12 month	4.00 hrs	4.00 hrs	
800 hour	15.892 hrs	21.212 hrs	includes 200 & 400 hr
12 month	2.038 hrs	2.038 hrs	
2 year	5.68 hrs	7.718 hrs	includes 12 month
3 year	1.19 hrs	3.228 hrs	includes 12 month
4 year	13.12 hrs	20.838 hrs	includes 12 month & 2 year
5 year	2.50 hrs	4.538 hrs	includes 12 month
6 year	5.15 hrs	14.058 hrs	includes 12 month, 2 & 3 year
8 year	10.00 hrs	30.838 hrs	includes 12 month, 2 & 4 year
10 year	8.19 hrs	18.408 hrs	includes 12 month, 2 & 5 year

Bell 429 Scheduled Component Inspections						
Component	Interval	Removal	Overhaul	Installation	Follow Up	Total
Swashplate and Support	5000hr	1hr	33hr	1hr	Friction check 1.5hr	36.5hr
Mast Assembly	5000hr	1hr	20hr	1hr	N/A	22hr
Main Rotor Gearbox	5000hr	11hr	150hr	16hr	N/A	177.5hr
T/R Gearbox	5000hr	2hr	27hr	4hr	T.Q. check 1hr	34hr
Main Rotor Head	5000hr	2hr	80hr	3hr	T.Q. check 1hr	85hr
T/R Hub	5000hr	1hr	12hr/hub	2hr	T.Q. check 1hr	14hr/hub

Bell 429 Training

Bell Helicopter has trained more than 110,000 pilots and maintenance technicians from over 120 countries since opening the Bell Helicopter Training Academy (BTA) in 1946. The Training Academy currently trains approximately 2,000 pilots and 1,800 maintenance technicians each year.

Highly trained professionals in courseware development and classroom instruction are part of the Bell Helicopter team. BTA courseware developers and technical instructors have over 200 years of combined maintenance experience, and BTA instructor pilots have an average experience level of 12,500 flight hours.

Pilot and maintainer courses have been developed for the 429 to ensure that the training suite matches the capabilities of the 429 helicopter. The complete suite consists of advanced course materials complemented by a Flight Training Device constructed to U.S. FAA Level 7 certification requirements¹, and a composite maintenance trainer which provides hands-on training for maintenance tasks.

For additional information about the Bell Training Academy, please visit our website, www.bellhelicopter.com, and click on "Training".

429 Training Course Summary

The courses offered for the Bell 429 helicopter are listed in table below. Complimentary training is offered with each new 429 helicopter delivery for two positions in the 429 Pilot Transition Course and one position each in the 429 Field Maintenance, Electrical Maintenance and Avionics/AFCS Maintenance courses.

The Bell Helicopter Training Academy offers World Class Training Solutions

- FAA Certified
- > 60 years of continuous operations
- Over 110,000 pilot and maintenance engineers trained from over 120 countries
- Flight Training Devices (FTD) available for enhanced pilot training
- Maintenance and technical instructors have over 375 years of combined training experience



Bell Training Academy (BTA)
Alliance Airport north of Fort Worth, Texas.

Course	Training Hours			Duration
429 Pilot Transition Course (Ground & Flight Procedures):	VFR	IFR	Total	5 to 7 days
Classroom Training	23	6	29	
Flight Training Device	4.5	3	7.5	
Transition Flight Training in BTA's 429 ²	up to 6	up to 3	up to 9	
429 Pilot Refresher Course (available 2011)				~ 3 days
Classroom Training	16 hours			
Flight Training Device	2 hours			
Flight Training	2 hours			
429 Field Maintenance	120 hours			3 weeks
429 Electrical Maintenance	40 hours			1 week
429 AFCS & Avionics Maintenance	40 hours			1 week
429 Field Maintenance Refresher Course (available 2011)	24 hours			~ 3 days
429 Component Overhaul (available late 2011)	80 hours			2 weeks

429 Course Descriptions

Pilot Training:

Bell Helicopter recognizes that pilots have different backgrounds and experience levels. For that reason the classroom instruction, flight training device (FTD) and flight training are designed to prepare each attendee to successfully meet the course standards. The standards followed by the instructor reflect the standards required for aircraft operation by FAA regulations and Bell Helicopter. Training is considered complete with demonstrated knowledge of aircraft systems and proficiency in flight maneuvers appropriate to the course of instruction.

This course provides pilots with a comprehensive knowledge of the aircraft systems and components and a thorough understanding of the operational characteristics and flight limitations. Classroom presentations cover the cockpit controls and instrumentation, airframe, power-plant and all aircraft systems. In addition, normal procedures, emergency procedures, operating limitations and performance are studied.

The flight training includes complete familiarization of the Bell 429 helicopter, instruction in the turbine engine operation and flight instruction in normal flight maneuvers and all emergency procedures. Instruction in the flight training device (FTD) simulates emergency procedures including FADEC failure modes, hydraulic boost failure, auto-rotations and tail rotor failure.

Maintenance Training:

429 Field Maintenance Course

This three weeks course provides a comprehensive coverage of the description, function, and maintenance procedures required for field maintenance of the Bell 429 helicopter. The following topics are covered during classroom or shop work: Airframe, Ground Handling and Servicing, Main Rotor, Mast, Rotating Controls, Transmission, Main Drive Shaft, Power-plant Interface (installation and rigging as related to the airframe), Fuel System, Tail Rotor, Tail Rotor Drive, Hydraulic System, Flight Controls, Electrical System, and Utility Systems. This course is designed to meet the EASA Part 66 B1.3 requirements.

429 Electrical Maintenance Course

This one-week course is a comprehensive study of the 429 electrical systems to include a detailed analysis of each circuit in the following categories: AC and DC power distribution, power-train systems, airframe systems, utility systems, and instrument indicating systems. The type, function, location of components and access provisions, component description and operation of these circuits will be presented to enable the student to perform the inspection, servicing, use of special tools, materials, manuals, and equipment to perform field level maintenance of the system. Recommended troubleshooting procedures will be discussed using known and probable fault symptoms in the classroom and shop to prepare the student for actual work on the helicopter.

429 Avionics/AFCS Maintenance Course

This one-week course includes a discussion of development concepts and system requirements for operation within VFR and IFR parameters. Flight controls and system interface, including modes of operation are presented. System components are studied with respect to their function, operational specifications, location and access provisions. Operational modes and theory of operation are covered using functional and detailed block diagrams providing an understanding of total system integration. Line maintenance level inspection and servicing requirements, including the use of special tools, equipment and manuals are covered. Fault isolation and troubleshooting procedures will also be discussed utilizing ground test checkout provisions in preparation for actual work on the system.

The avionics maintenance includes theory of operation, component location, system operation, system programming, field maintenance and troubleshooting. This will provide familiarization with the inspection, servicing, use of special tools, materials, manuals and equipment to perform field level maintenance of the related avionics system.

When taken with the Electrical Maintenance course, the Avionics/AFCS Course is designed to meet the EASA Part 66 B2 requirements.

The following additional courses are anticipated to be available as early as January 2011:

- 429 Component Overhaul (2 weeks course)
- 429 Pilot Refresher Course (3 days)
- 429 Field Maintenance Refresher (3 days)

Note 1: The 429 Advanced FTD is projected to be available for training in April, 2010. US FAA Certification to Level 7 standards is projected for December 2010.

Note 2: Actual flight training time flown will be based on student pilot proficiency and is not intended as an absolute value.



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