Maximum Number of Occupants:
- Total number of occupants shall not exceed 22. The number of passengers shall not exceed 19.

Takeoff & Landing Operations:
- Runway Conditions:
  - Slope: ±2%.
  - Max. Tailwind: 10 knots.
  - T/O & Landing Demonstrated x-wind: 20 KTS.
  - Landing Minimum x-wind: 10 KTS.
  - Max Airfield PA (s/n 6000 to 6009): 14,500 ft.
  - Max Airfield PA (s/n 6010 & >6020): 15,000 ft.

- Min / Max Operating temp (@ SL): -50°C to +50°C.
- Min temp for ground ops following prolonged cold soak: -40°C.

- Maximum Fuel Imbalance for to: 1,000 lbs.
  - With automatic ground spoilers inoperative, takeoff is permitted on dry & wet runways (less than 3mm of standing water) provided 20' flaps are used.

- Autorotates – during landing modes on contaminated runway surfaces are not authorized.
- Landing Lights – ground operation is limited to 10 minutes.

Enroute:
- Max. Operating Altitude: 51,000 ft.
- Max. Operating Altitude (single engine): 48,000 ft.
- Landing Gear extended/extension: 20,000 ft.
- Landing Flaps (39’): 20,000 ft.
- Flaps 10° or 20°: 25,000 ft.
- Max. Operating Altitude w/interior baggage door open: 40,000 ft.

- Max Fuel Imbalance (proceed with fuel balancing before imbalance exceeds 1,000 lbs).

Airspeed Limitations:
- VMCA - Flaps 20°: 101.5 KCAS.
- VMCA - Flaps 39°: 105.0 KCAS.
- VMCL (Landing): 100.5 KCAS.
- VMCA (Sea Level & ISA): 105.0 KCAS.
- VMCL (ISA): 85.0 KCAS.

- Nominal max speed (approx): 0.84 M.
- VSO: 200 KIAS.
- VFE: (10°): 220 KIAS.
- VFE: (20°): 220 KIAS.
- VFE: (39°): 190 KIAS.
- VLE: 250 KIAS.

- VLO (normal ops): 225 KIAS.
- VLO (alternate ops): 175 KIAS.
- MMO (35,000 – 51,000 ft): 0.925 M.
- MDH (29,380 ft): 0.875 M.
- VNO (above 8,000 ft): 0.84 M.
- VNO (below 8,000 ft): 0.30 M.
- VLOH MIN. (60,500 lbs): 160 KIAS.
- VLOH MIN. (120,000 lbs): 180 KIAS.
- VVTURB: (10,000 ft): 270 KIAS.
- VVTURB: (10,000 ft): 240 KIAS.

- Yaw damp Inop: 285 CAS / 0.5 M.
- Degraded Flight Control Law (not Normal): 285 CAS / 0.5 M.
- Flight Control Surface Failure: 285 CAS / 0.5 M.

- Windmill airspeed limit: Min 250 kts to Max 340 kts below 30,000 ft.
- Min Below MOW add 15% to DC Vc for Vcc (e.g. Vcc = 140 + 161 Vc).
- RVSM – ADS1 & 2 Max Op airspeed: 0.85 M.
- RVSM – ADS3 & 4 or 2 Max Op airspeed: 0.88 M.

Flight Load Acceleration:
- Flap 0° (all weights): +1 to +2.5 G.
- Flap 10° or 20° (all weights): +0 to +2.0 G.
- Flap 39° (up to max ldg. weight): +0 to +2.0 G.

- Flight Load Acceleration: Flap 39° (up to max ldg. weight): +1 to +1.5 G.

Weight:
- G650: Max Ramp: 100,000 lbs.
- G650ER: Max Ramp: 104,000 lbs.
- Max Takeoff: 96,600 lbs.
- Max Landing: 83,500 lbs.
- Max Zero Fuel: 60,500 lbs.

Air Conditioning & Bleed Air:
- Max. Cabin Press. Diff. / (iso & ldg.): 0.3 psi.

Internal Baggage Door:
- Door shall remain closed above 40,000 ft.

Auto Flight:
- Single engine autopilot coupled go-around is not approved.
- Use of auto-throttle during SE approaches is prohibited.

- Autothrottle (e.g. VREF 140 = 161 VA).

- Min temp for ground ops following prolonged cold soak: -40°C.

- Automatic anto-ice is provided as a backup to the crew for departure.

- Use of engine anti-ice is required if icing conditions are imminent, or immediately upon detection of ice formation.

- Max EGT Start: 1050°C.
- Max EGT Running: 732°C.
- Max Rotor Speed: 106%.

- APU Starter Limits: A/C Battery: 3 consecutive attempts.
- Use of external DC power source to start the APU is prohibited.

- APU Airstart Envelope:
  - Guaranteed: -1 hour cool down before operation.
  - Possible: -30,000 ft to 38,000 ft.
  - Dual Gen. Failure: Initiate start at or below 30,000 ft.

Flight Controls:
- Stall Protection System is operable only in the Normal Flight Control mode.
- Speed brake is not approved for extension with flaps 30° and leading edge flaps extended in flight.

- Flight into known icing conditions is prohibited when operating in a flight control law other than Normal (i.e., Alternate, Direct, or Backup).

- Max Landing Weight: 100,000 lbs.
- Max Takeoff Weight: 104,000 lbs.

Wing Anti-icing:
- Operation is required if icing conditions are imminent, or immediately upon detection of ice formation.

Cowl Anti-icing:
- Use of cowl anti-icing is required for taxi and takeoff when SAT temperature (SAT) is +10°C or below and visible moisture, precipitation, or wet runway are present.

In Flight:
- To help shed the ice when high vibration occurs and operational circumstances permit, one engine at a time may be quickly retarded to idle, held there for five seconds and then accelerated to 40% L.P., the power lever may then be returned to its original position.

ON GROUND:
- When taxing, engine holding on the ground in low power in temperatures less than +1°C & visible moisture:
  - At intervals of not more than 60 minutes, slowly accelerate engine to 40% L.P. for 10 seconds, then idle operation.
  - Takeoff – slowly accelerate the engine to 40% L.P., pause for 2 seconds to check normal operation, then select takeoff thrust.

Frosting Fog:
- At intervals of not more than 60 minutes, slowly accelerate engine to 40% L.P., pause for 2 seconds to check for normal operation, then select idle operation.
- Takeoff – slowly accelerate the engine to 40% L.P., pause for 2 seconds to check normal operation, then select takeoff thrust.

- Takeoff is prohibited if it cannot be performed within 10 minutes after resumption of idle operation. Engines should be shut down as soon as practicable. Ensure all ice accreted on engine components is removed prior to subsequent flight attempt.

- Automatic anti-ice is inhibited above 35,000 ft. If anti-ice protection above 35,000 ft is required, it must be manually selected.

Tire Pressure:
- Recommended tire pressure for all gross weights is 216 psi, measured when tires have been stationary for at least 2 hours. Airplane operations below 186 psi may require tire(s) to be replaced.

Inlet Reference System (IRS):
- No provision for IRS “down mode align”.
- Certification for alignement to 28” Latitude.
- For flights above 73°N and 60°S Latitude, EFIS heading info must be switched from MAG to TRUE due to lack of valid MAG heading from the IRS.

Airborne Weather Radar:
- Do NOT operate during refueling of the aircraft or within 50 ft of any other refueling operations.
- Do NOT operate within 11 ft of ground personnel.

EVS:
- At 100 feet altitude, visual cues must be seen without the aid of EVS to continue to landing.

CAS Messages:
- Amber: CAS messages are DO NOT DISPATCH messages.
- Blue: CAS messages are to be dispatched and the systems that generate these messages are fault tolerant. Dispatch with an amber color message shall be with reference to the MEL.

APU:
- Honeywell RE200.

- APU cannot be operated on the ground and in all phases of flight (refer to AFD Supp. 2016-03).
- APU cannot be used to supply pressurization airflow in flight.
- APU may be used for starter assisted starts below 30,000 ft.

- Max Operating Altitude: 105,000 ft.
- APU Gen. Electrical load: 40% (40kVA) S/L to 45,000 ft.
- Max APU Start: 105°C.
- Max APU Start: 90°C.
- Max APU Start: 78°C.
- APU Start Limit: Max Rotor Speed: 106%.
- APU Battery: 3 consecutive attempts.
- Use of external DC power source to start the APU is prohibited.

- APU Airstart Envelope:
  - Guaranteed: -1 hour cool down before operation.
  - Possible: -30,000 ft to 38,000 ft.
  - Dual Gen. Failure: Initiate start at or below 30,000 ft.
Powerplant:
- BMW/Ru BR725A1-12: High bypass turbofans (4:18:1 bypass ratio). Rated at 16,100 pounds @ 86°F (30°C)

<table>
<thead>
<tr>
<th>CONDITION</th>
<th>LP % RPM</th>
<th>HP % RPM</th>
<th>MAX TGT</th>
<th>TIME LIMIT</th>
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<tbody>
<tr>
<td>Ground start</td>
<td>--</td>
<td>--</td>
<td>700°C</td>
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<td>Airstart (right)</td>
<td>--</td>
<td>--</td>
<td>850°C</td>
<td>Momentary</td>
</tr>
<tr>
<td>Takeoff</td>
<td>102.8</td>
<td>100.0</td>
<td>900°C</td>
<td>5 minutes</td>
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<tr>
<td>Max. Continuous</td>
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<td>98.7</td>
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<td>Max. Overspeed</td>
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<td>101.3</td>
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<td>20 seconds</td>
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<tr>
<td>Max. Over-temp</td>
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<td>--</td>
<td>920°C</td>
<td>20 seconds</td>
</tr>
<tr>
<td>Reverse thrust</td>
<td>78.1</td>
<td>--</td>
<td>--</td>
<td>30 seconds</td>
</tr>
</tbody>
</table>

Max. TGT prior to ground start .................. --150°C
Max. Tail-Wind Component for Engine Start .......... 20 kts.
Take Off in the ALTERNATE (LP) control mode is prohibited.
Static operation above idle is limited to an x-component of <25 knots and/or a tailwind component of <20 knots.
Airstart envelope: Starter assist at <250 KCAS. Windmill start at 250 KCAS to 340 KCAS, max altitude 30,000 ft.

Engine Fuel Temperature:
Min. ................................................. -40°C
Max. unrestricted .................................... +140°C
Max. (15 min) Transient .......................... +165°C

Thrust Reversers:
- Idle reverse position by 60 KCAS.
- No time limit for use of idle reverse thrust for taxi purposes.
- If in an emergency, reverse thrust is used to bring the a/c to a halt, record and report such an operation for mx action.
- Use of reverse thrust for power back is NOT approved.

Wet RWY: Dispatch with inop. thrust reverser(s) – increase
- Use of reverse thrust for power back is NOT approved.
- No time limit for use of idle reverse thrust for taxi purposes.

Reverses
- Shot 1 = RIGHT Bottle
- Shot 2 = LEFT Bottle
- APU uses LEFT Bottle

FLEX T/O THRUST LIMITATIONS / INFO:
Using Appendix A Tab Data:
Detailed instructions for the procedures (both normal and emergency) and limitations associated with the use of reduced thrust takeoffs are provided in AFM Appendix A.
While use of the data in Appendix A is prohibited in the presence of tailwinds and uphill slopes, the general data in Section 05-02-00 can be used for all allowable wind conditions (10-knot tailwind to 40-knot headwind) and all allowable runway slopes (-2% downhill to <2% uphill).
- Reduced/FLEX EPR takeoff thrust may be used on dry or wet hard-surfaced runways.
- Reduced/FLEX EPR takeoff thrust procedures are prohibited on runways contaminated with standing water, snow, slush or ice.
- The FLEX EPR takeoff performance computed using this appendix is limited to takeoffs for nil or downhill runway slopes and no wind or headwind conditions only. Reduced thrust/FLEX EPR takeoff performance for downhill runway slopes or tailwinds must be computed using the assumed temperature method for the takeoff data presented in Section 05-02 of the AFM (spaghetti charts).
- FLEX EPR t/o performance is applicable to Cow Anti-Ice bleed ON or OFF. Use of Wing Anti-icing bleed is not approved.
- The Auto Ground Spoilers must be operative.
- All EPR limitations must be observed.
- To ensure that at least 75% of rated t/o thrust is used and that t/o configuration warnings are not inhibited, rated thrust EPR may be reduced no more than 0.16 for FLEX takeoffs.

EGPWS:
The terrain awareness display feature shall be selected OFF (TERRAIN INHIBIT switch selected ON) when within 15 NM of landing at an airport when:
- The airport has no published instrument approach procedure.
- The longest runway is less than 3,500 ft in length.
- The airport is not in the database.
- QFE altimeter settings are used for approach and landing on subsequent takeoff without the availability of geometric altitude.

Permitted Airplane Operations:
- Polar Nav: RNP-10; BRNAV; RNAV 5; RNP-5; RNP-4; P-RNAV; RNP-1; RNAV 2; RNP-5; NAT-HLA; RNP 0.3; RNP-RNAV; RNP-AR; A-RNP; LPV; Radius-to-Fix Legs; VNAV; RVSM; AFN & ADS-C; ADS-B; FANS 1/A; FANS 2 / ATN B1.

Gear Horn:
- Below 500ft AGL with both throttle lever at idle, flaps less than 22°, any gear NOT down and locked. Horn can be muted using HORN SILENCE button.
- Flaps greater than 22° and any landing gear NOT down and locked. Horn cannot be muted.

Pavement Loading:
- ACN must be less than or equal to the airport PCN.
- Ramp permissible loading is not always the same as Rey.

Examples: @85k w/ PCN 80/R/B/W/T the ACN = 26.6 (acceptable). And @ 75k w/ PCN 24/FC/VY the ACN = 21.7 (unacceptable due 145psi limit). See Perf Handbook PC-9.

Equivalent Single Wheel Load (ESWL) @ 104k MRW = 36,563 lb. w/ H37.5x12.0R19 tires w/ 22” spacing, 216 psi, reduction factor of 1.29 (i.e., rigid, 13.5” thick concrete). See Perf Handbook PC-17.

MINIMUM ENGINE OIL PRESSURE

<table>
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<th>MINIMUM ENGINE OIL PRESSURE</th>
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<tr>
<td>For Takeoff</td>
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<tr>
<td>Below 72.3% HP</td>
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<tr>
<td>Above 90.0% HP</td>
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