3.0 AIRPLANE PERFORMANCE

3.1 General Information

3.2 Payload/Range for 0.84 Mach Cruise

3.3 F.A.R. Takeoff Runway Length Requirements

3.4 F.A.R. Landing Runway Length Requirements
3.0 AIRPLANE PERFORMANCE

3.1 General Information

The graphs in Section 3.2 provide information on operational empty weight (OEW) and payload, trip range, brake release gross weight, and fuel limits for airplane models with the different engine options. To use these graphs, if the trip range and zero fuel weight (OEW + payload) are known, the approximate brake release weight can be found.

The graphs in Section 3.3 provide information on F.A.R. takeoff runway length requirements with the different engines at different pressure altitudes. Maximum takeoff weights shown on the graphs are the heaviest for the particular airplane models with the corresponding engines. Standard day temperatures for pressure altitudes shown on the F.A.R. takeoff graphs are given below:

<table>
<thead>
<tr>
<th>PRESSURE ALTITUDE</th>
<th>STANDARD DAY TEMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEET</td>
<td>METERS</td>
</tr>
<tr>
<td>-------</td>
<td>--------</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2,000</td>
<td>609</td>
</tr>
<tr>
<td>4,000</td>
<td>1,219</td>
</tr>
<tr>
<td>6,000</td>
<td>1,828</td>
</tr>
<tr>
<td>8,000</td>
<td>2,438</td>
</tr>
<tr>
<td>9,000</td>
<td>2,743</td>
</tr>
</tbody>
</table>

The graphs in Section 3.4 provide information on landing runway length requirements for different airplane weights and airport altitudes. The maximum landing weights shown are the heaviest for the particular airplane model.
3.2.1 PAYLOAD/RANGE FOR 0.84 MACH CRUISE

MODEL 777-200 (BASELINE AIRPLANE)

NOTES:
* STANDARD DAY, ZERO WIND
* 0.84 MACH STEP CRUISE
* TYPICAL MISSION RULES
* NORMAL POWER EXTRACTION AND AIR CONDITIONING BLEED
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE AND OEW PRIOR TO FACILITY DESIGN

MZFW = 420,000 LB (190,500 KG)

1,000 LB (1,000 KG)
545 (244.9)
520 (235.8)
480 (226.8)
500 (230.5)
540 (240.0)
545 (244.9)

FUEL CAPACITY
51,000 US GAL (1,913,000 L)

RANGE, 1,000 NAUTICAL MILES

OEW PLUS PAYLOAD (1,000 POUNDS)
(1,000 KILOGRAMS)
3.2.2 PAYLOAD/RANGE FOR 0.84 MACH CRUISE
MODEL 777-200 (HIGH GROSS WEIGHT AIRPLANE)

NOTES:
* STANDARD DAY, ZERO WIND
* 0.84 MACH STEP CRUISE
* TYPICAL MISSION RULES
* NORMAL POWER EXTRACTION AND AIR CONDITIONING BLEED
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE AND CFW PRIOR TO FACILITY DESIGN

MZFW = 430,000 LB (195,000 KG)

GROSS WEIGHT
656' (297.6)
648' (291.3)
580 (263.1)
560 (254.0)
540 (244.9)
520 (235.8)
500 (226.8)
480 (217.7)
460 (208.6)
440 (199.6)
420 (190.5)
400 (181.4)
380 (172.3)
360 (163.3)

FUEL CAPACITY
45,220 US GAL (171,100 L)

RANGE, 1,000 NAUTICAL MILES

CEW PLUS PAYLOAD
(1,000 POUNDS)

(1,000 KILOGRAMS)
3.2.3 PAYLOAD/RANGE FOR 0.84 MACH CRUISE

MODEL 777-300 (TYPICAL 90K ENGINE)

NOTES:
* STANDARD DAY, ZERO WIND
* 0.84 MACH STEP CRUISE
* TYPICAL MISSION RULES
* NORMAL POWER EXTRACTION AND AIR CONDITIONING BLEED
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE
AND OEW PRIOR TO FACILITY DESIGN
3.2.4 PAYLOAD/RANGE FOR 0.84 MACH CRUISE
MODEL 777-300 (TYPICAL 98K ENGINE)

NOTES:
* STANDARD DAY, ZERO WIND
* 0.84 MACH STEP CRUISE
* TYPICAL MISSION RULES
* NORMAL POWER EXTRACTION AND AIR CONDITIONING BLEED
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE
  AND OEW PRIOR TO FACILITY DESIGN
3.3.1 FAA TAKEOFF RUNWAY LENGTH REQUIREMENTS - STANDARD DAY

MODEL 777-200 (BASELINE AIRPLANE)
3.3.2 FAA TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL 777-200 (BASELINE AIRPLANE)

NOTES:
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* AIR CONDITIONING OFF
* ZERO RUNWAY GRADIENT
* ZERO WIND

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3.3.3 FAA TAKEOFF RUNWAY LENGTH REQUIREMENTS - STANDARD DAY

MODEL 777-200 (HIGH GROSS WEIGHT AIRPLANE)
3.3.4 FAA TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL 777-200 (HIGH GROSS WEIGHT AIRPLANE)
3.3.5 FAA TAKEOFF RUNWAY LENGTH REQUIREMENTS - STANDARD DAY

MODEL 777-300 (TYPICAL 90K ENGINE)

NOTES:
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* AIR CONDITIONING OFF
* ZERO RUNWAY GRADIENT
* ZERO WIND
3.3.6 FAA TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL 777-300 (TYPICAL 90K ENGINE)
3.3.7 FAA TAKEOFF RUNWAY LENGTH REQUIREMENTS - STANDARD DAY

MODEL 777-300 (TYPICAL 98K ENGINE)

NOTES:
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* AIR CONDITIONING OFF
* ZERO RUNWAY GRADIENT
* ZERO WIND
3.3.8 FAA TAKEOFF RUNWAY LENGTH REQUIREMENTS

STANDARD DAY +27°F (STD + 15°C)

MODEL 777-300 (TYPICAL 98K ENGINE)
3.4.1 FAA LANDING RUNWAY LENGTH REQUIREMENTS

MODEL 777-200

NOTES:
- CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- ZERO RUNWAY GRADIENT
- ZERO WND
3.4.2 FAA LANDING RUNWAY LENGTH REQUIREMENTS

NOTE:
* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
* ZERO RUNWAY GRADIENT
* ZERO WIND

MODEL 777-300

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