

### 3.0 AIRPLANE PERFORMANCE

#### 3.1 General Information

The graph in Section 3.2 provides information on operational empty weight (OEW) and payload, trip range, brake release gross weight, and fuel limits for a typical 767-400ER airplane. To use this graph, if the trip range and zero fuel weight (OEW + payload) are known, the approximate brake release weight can be found, limited by fuel quantity.

The graphs in Section 3.3 provide information on F.A.R. takeoff runway length requirements with typical 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:

PRESSURE ALTITUDE		STANDARD DAY TEMP	
FEET	METERS	°F	°C
0	0	59.0	15.00
2,000	609	51.9	11.04
4,000	1,219	44.7	7.06
6,000	1,828	37.6	3.11
8,000	2,438	30.5	-0.85
10,000	3,048	23.3	-4.81

Wet runway performance is shown in accordance with JAR-OPS 1 Subpart F, with wet runways defined in Paragraph 1.480(a)(10). Skid-resistant runways (grooved or PFC treated) per FAA or ICAO specifications exhibit runway length requirements that remove some or all of the length penalties associated with wet smooth (non-grooved) runways. Under predominantly wet conditions, the wet runway performance characteristics may be used to determine runway length requirements, if it is longer than the dry runway performance requirements.

The graph in Section 3.4 provides 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.

CHARACTERISTICS	UNITS	BASELINE AIRPLANE
MAX DESIGN TAXI WEIGHT	POUNDS	451,000
	KILOGRAMS	204,630
MAX DESIGN TAKEOFF WEIGHT	POUNDS	450,000
	KILOGRAMS	204,170
MAX DESIGN LANDING WEIGHT	POUNDS	350,000
	KILOGRAMS	158,800
MAX DESIGN ZERO FUEL WEIGHT	POUNDS	330,000
	KILOGRAMS	149,730
SPEC OPERATING EMPTY WEIGHT (1)	POUNDS	227,400
	KILOGRAMS	103,150
MAX STRUCTURAL PAYLOAD	POUNDS	102,600
	KILOGRAMS	46,540
SEATING CAPACITY (1)	ONE-CLASS	409 ALL ECONOMY
	TWO-CLASS	296 - 24 FIRST + 272 ECONOMY
	THREE-CLASS	243 - 16 FIRST + 36 BUSINESS + 189 ECONOMY
MAX CARGO - LOWER DECK (2)	CUBIC FEET	4,905
	CUBIC METERS	139
USABLE FUEL	US GALLONS	24,140
	LITERS	91,380
	POUNDS	161,740
	KILOGRAMS	73,360

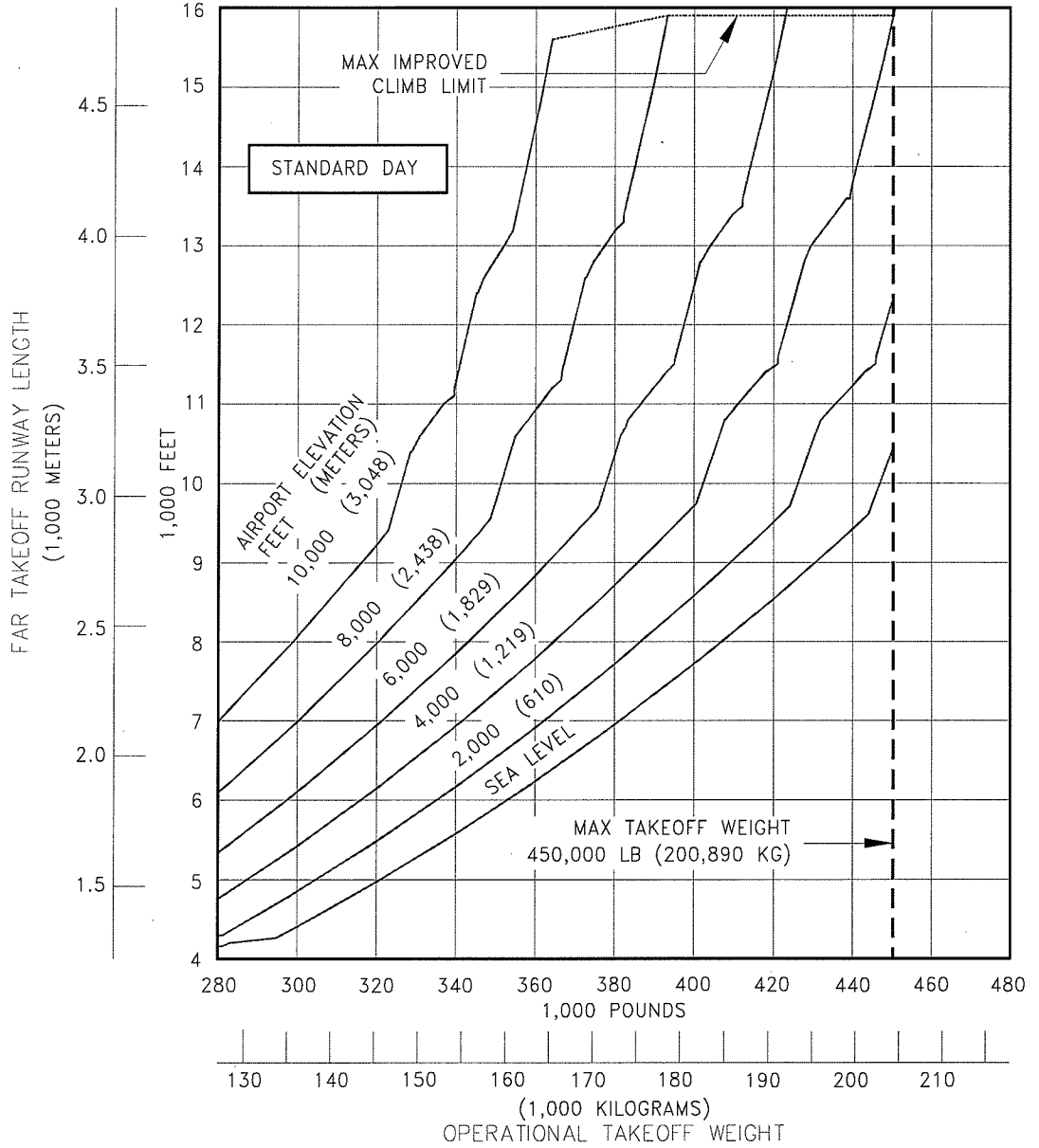
NOTES: (1) SPEC WEIGHT FOR BASELINE CONFIGURATION OF 296 PASSENGERS. CONSULT WITH AIRLINE FOR SPECIFIC WEIGHTS AND CONFIGURATIONS.

(2) FWD CARGO = 20 LD-2 CONTAINERS AT 120 CU FT EACH  
AFT CARGO = 18 LD-2 CONTAINERS AT 120 CU FT EACH  
BULK CARGO = 345 CU FT

**2.1.1 GENERAL CHARACTERISTICS**  
**MODEL 767-400ER**

NOTES:

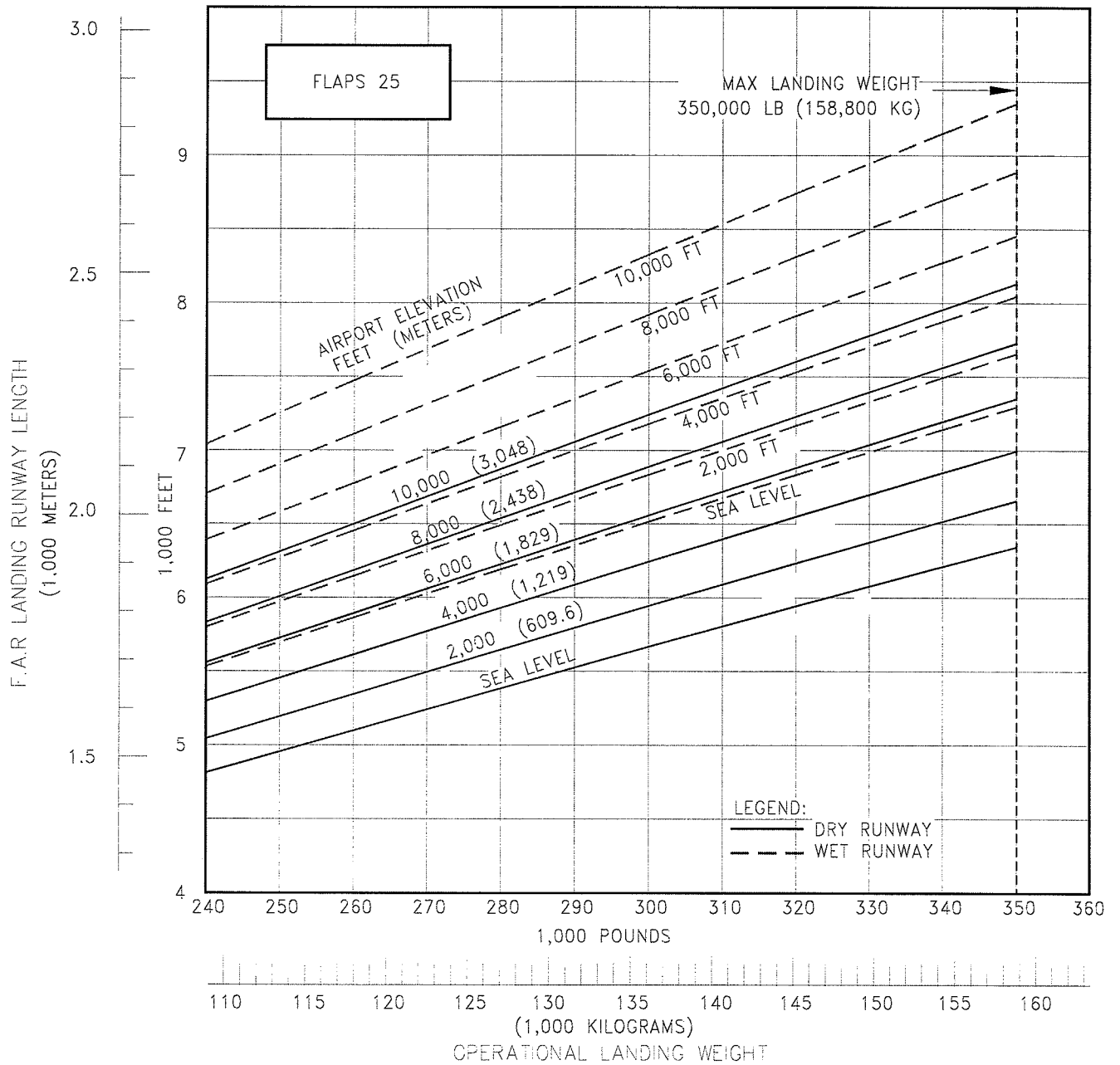
- \* CF6-80C2B8F ENGINES
- \* NO ENGINE AIRBLEED FOR AIR CONDITIONING
- \* ZERO WIND, ZERO RUNWAY GRADIENT
- \* WET SMOOTH RUNWAY SURFACE
- \* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN
- \* LINEAR INTERPOLATION BETWEEN ALTITUDES INVALID
- \* LINEAR INTERPOLATION BETWEEN TEMPERATURES INVALID



**3.3.3 FAA TAKEOFF RUNWAY LENGTH REQUIREMENTS - STANDARD DAY - WET RUNWAY**  
**MODEL 767-400ER**

NOTES:

- \* GE ENGINES
- \* STANDARD DAY
- \* NO REVERSE THRUST
- \* ANTI-SKID OPERATIVE
- \* AUTO SPEED BRAKES
- \* ZERO WIND
- \* ZERO SLOPE
- \* CONSULT USING AIRLINE FOR SPECIFIC OPERATING PROCEDURE PRIOR TO FACILITY DESIGN



**3.4.2 FAA LANDING RUNWAY LENGTH REQUIREMENTS - FLAPS 25**  
*MODEL 767-400ER*