

5.0 TERMINAL SERVICING

- 5.1 Airplane Servicing Arrangement - Typical Turnaround**
- 5.2 Terminal Operations - Turnaround Station**
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- 5.4 Ground Servicing Connections**
- 5.5 Engine Starting Pneumatic Requirements**
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- 5.7 Conditioned Air Requirements**
- 5.8 Ground Towing Requirements**

5.0 TERMINAL SERVICING

During turnaround at the terminal, certain services must be performed on the aircraft, usually within a given time, to meet flight schedules. This section shows service vehicle arrangements, schedules, locations of service points, and typical service requirements. The data presented in this section reflect ideal conditions for a single airplane. Service requirements may vary according to airplane condition and airline procedure.

Section 5.1 shows typical arrangements of ground support equipment during turnaround. As noted, if the auxiliary power unit (APU) is used, the electrical, air start, and air-conditioning service vehicles would not be required. Passenger loading bridges or portable passenger stairs could be used to load or unload passengers.

Sections 5.2 and 5.3 show typical service times at the terminal. These charts give typical schedules for performing service on the airplane within a given time. Service times could be rearranged to suit availability of personnel, airplane configuration, and degree of service required.

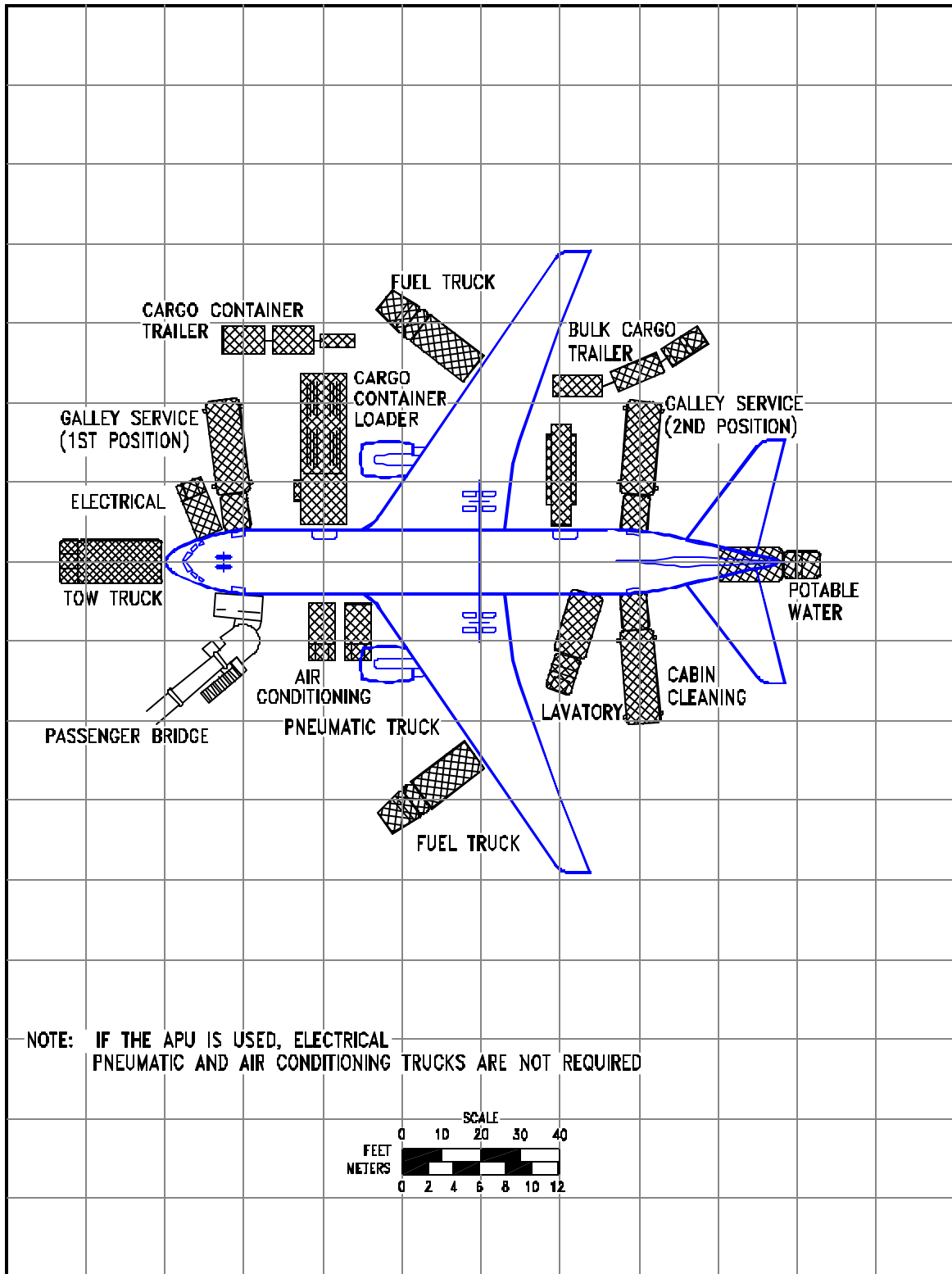
Section 5.4 shows the locations of ground service connections in graphic and in tabular forms. Typical capacities and service requirements are shown in the tables. Services with requirements that vary with conditions are described in subsequent sections.

Section 5.5 shows typical sea level air pressure and flow requirements for starting different engines. The curves are based on an engine start time of 90 seconds.

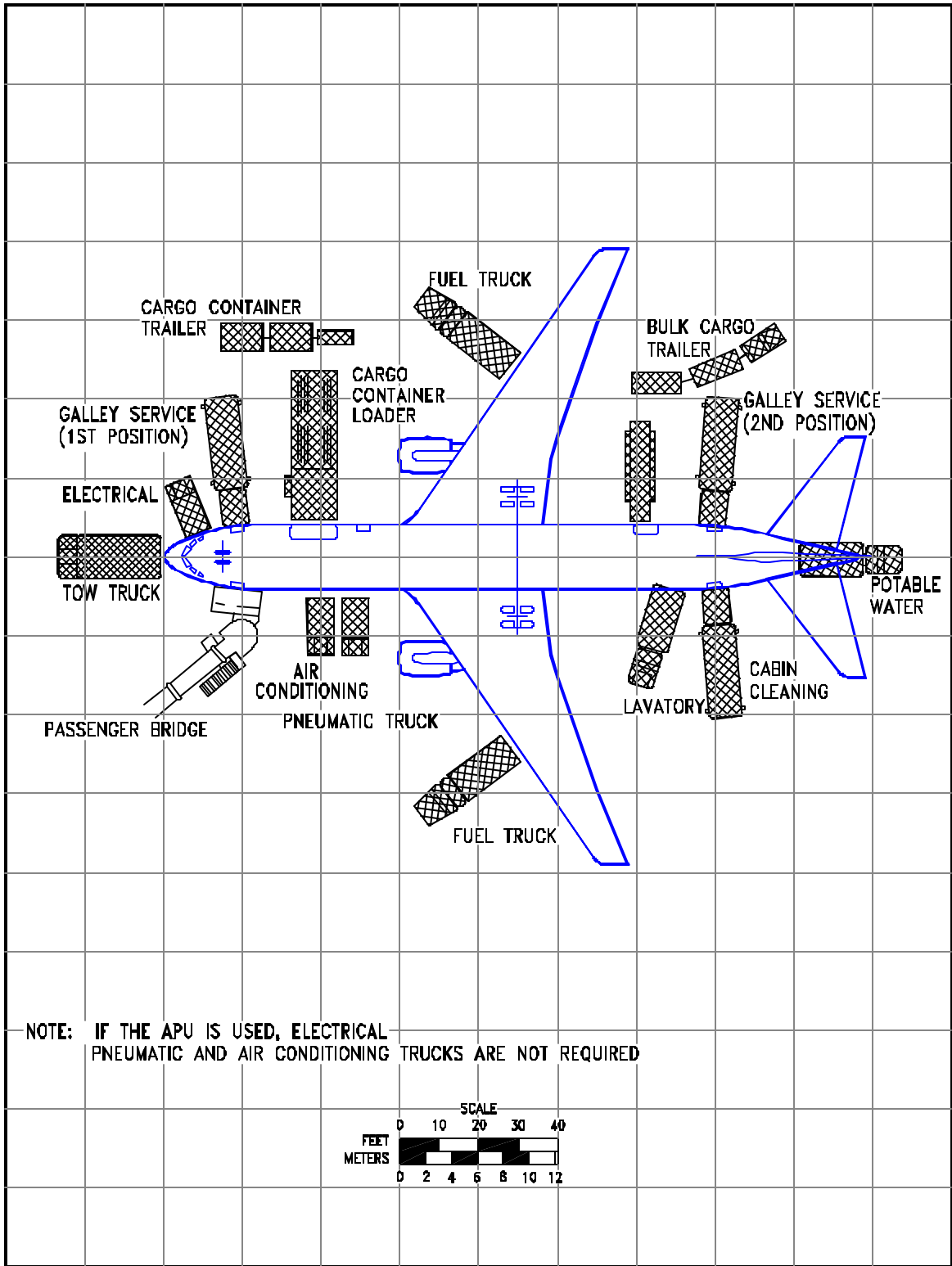
Section 5.6 shows air conditioning requirements for heating and cooling (pull-down and pull-up) using ground conditioned air. The curves show airflow requirements to heat or cool the airplane within a given time at ambient conditions.

Section 5.7 shows air conditioning requirements for heating and cooling to maintain a constant cabin air temperature using low pressure conditioned air. This conditioned air is supplied through an 8-in (20.3 cm) ground air connection (GAC) directly to the passenger cabin, bypassing the air cycle machines.

Section 5.8 shows ground towing requirements for various ground surface conditions.

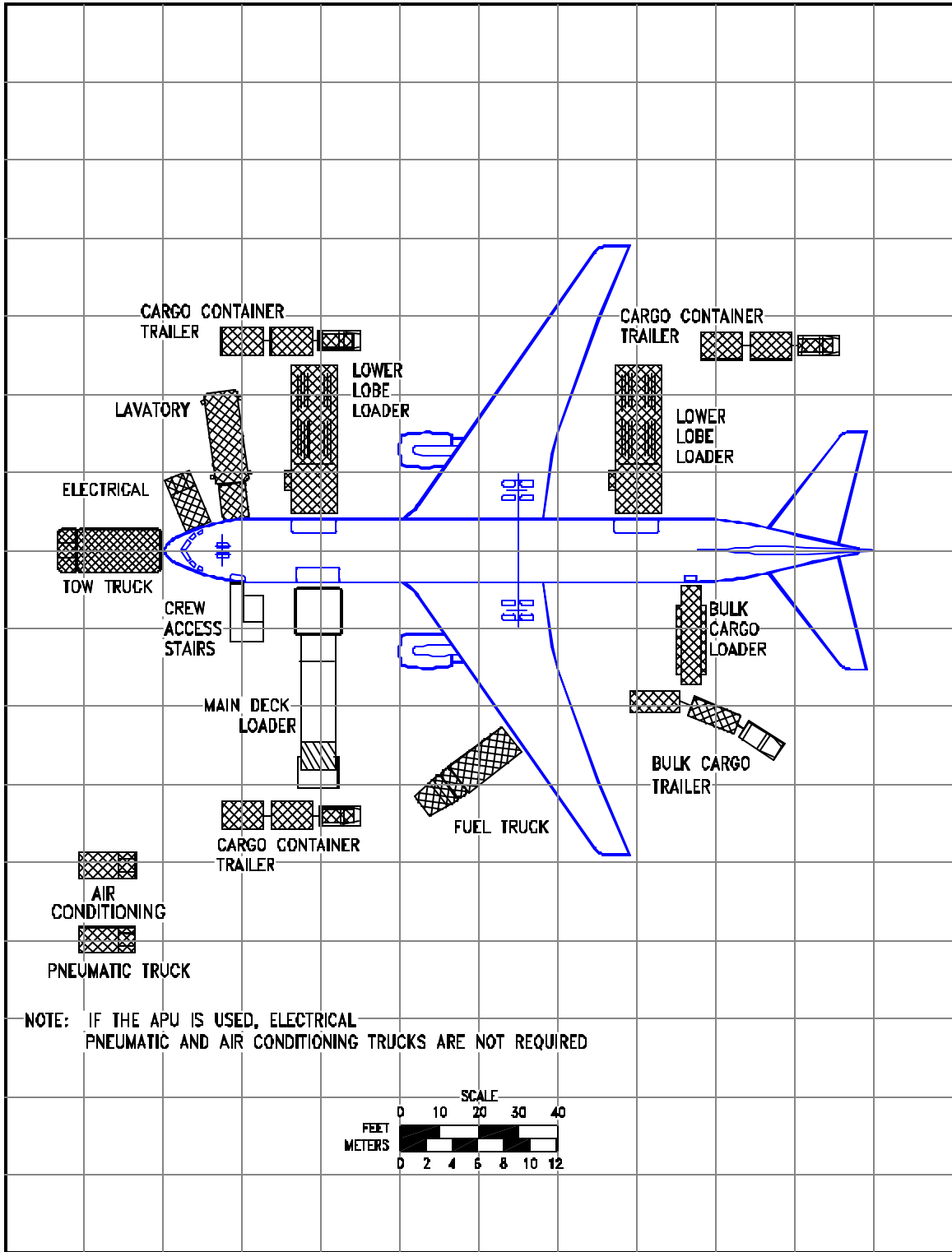


5.1.1 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
 MODEL 767-200, -200ER

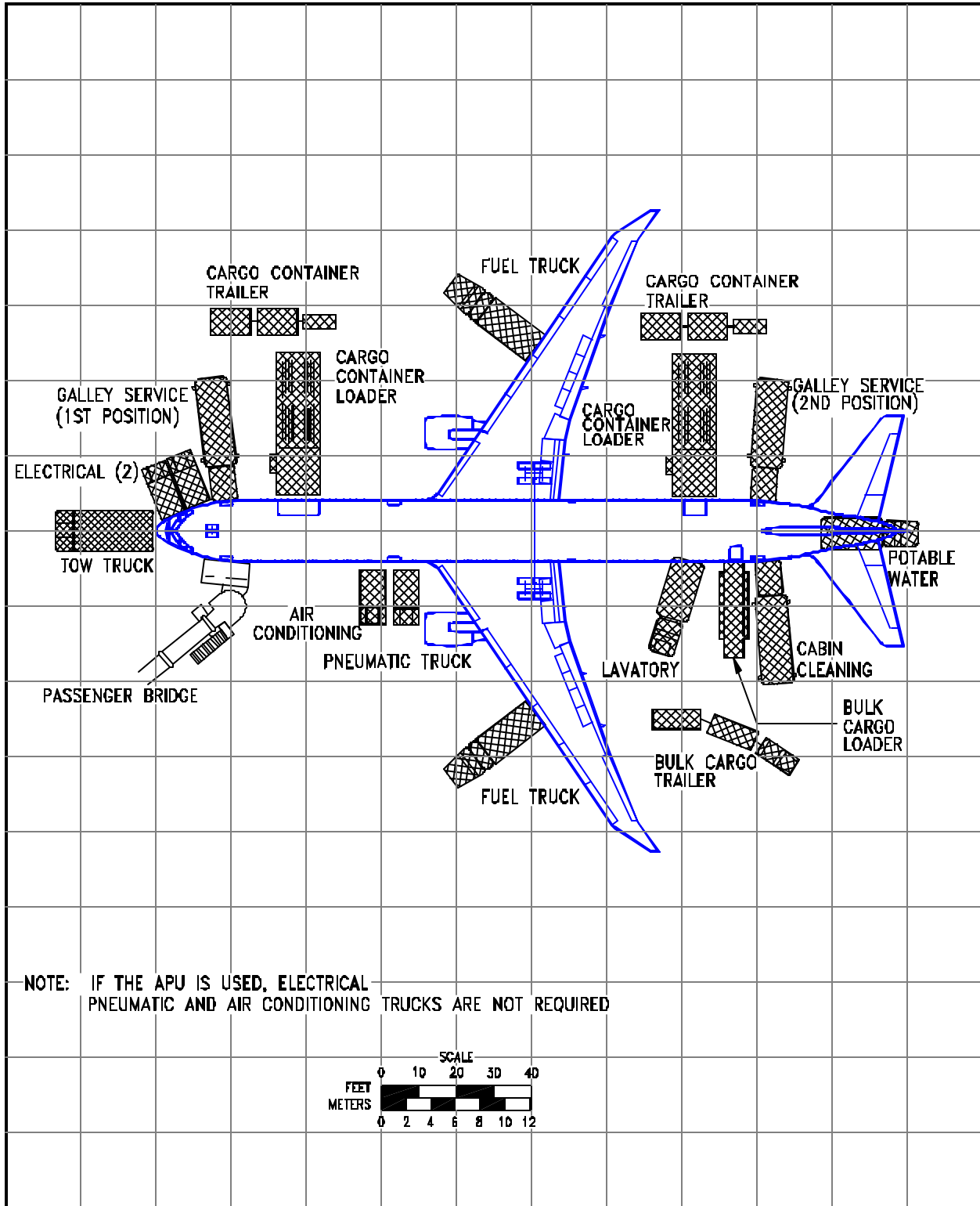


5.1.2 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
MODEL 767-300, -300ER

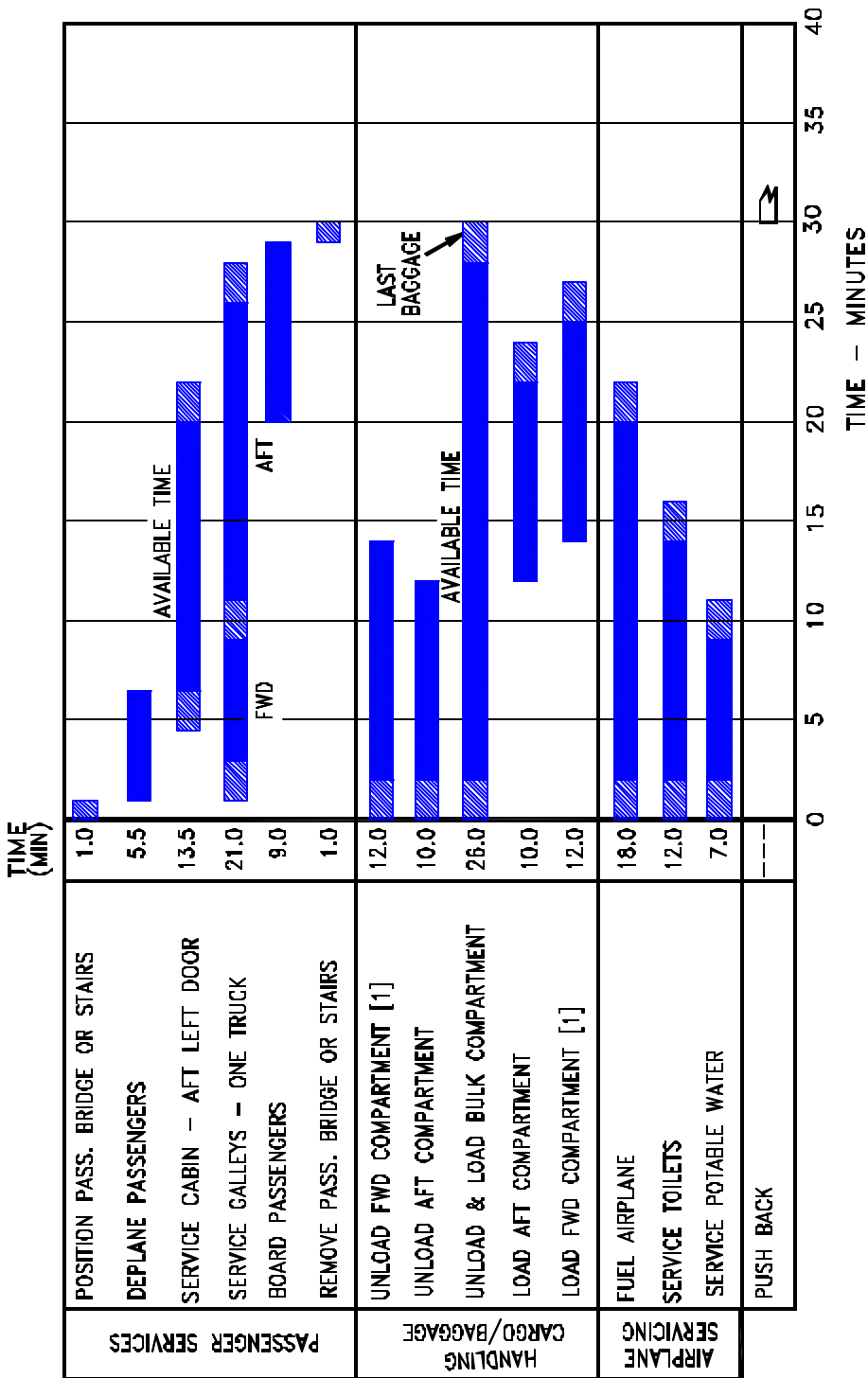
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5.1.3 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
MODEL 767-300 FREIGHTER

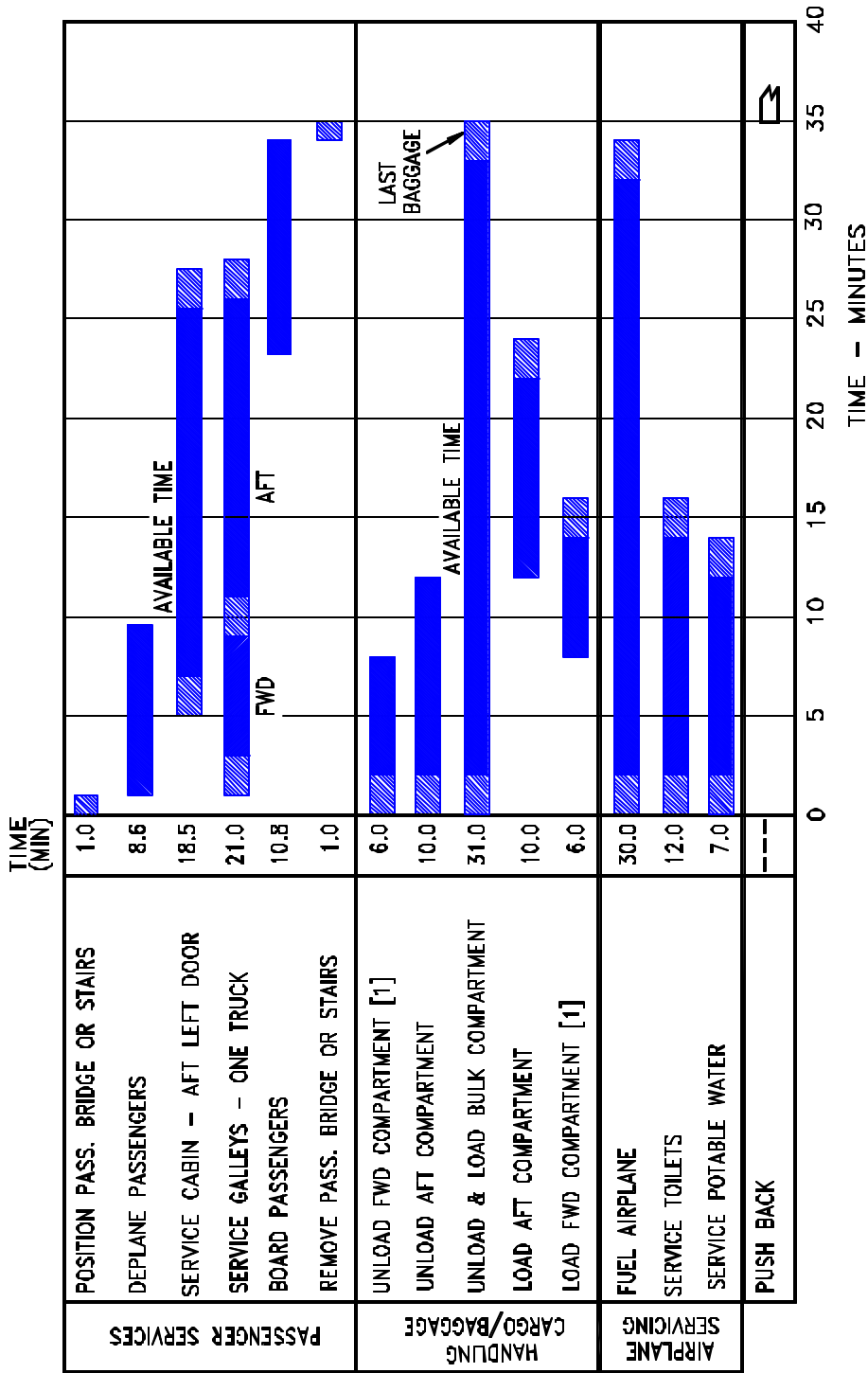


5.1.4 AIRPLANE SERVICING ARRANGEMENT - TYPICAL TURNAROUND
 MODEL 767-400ER



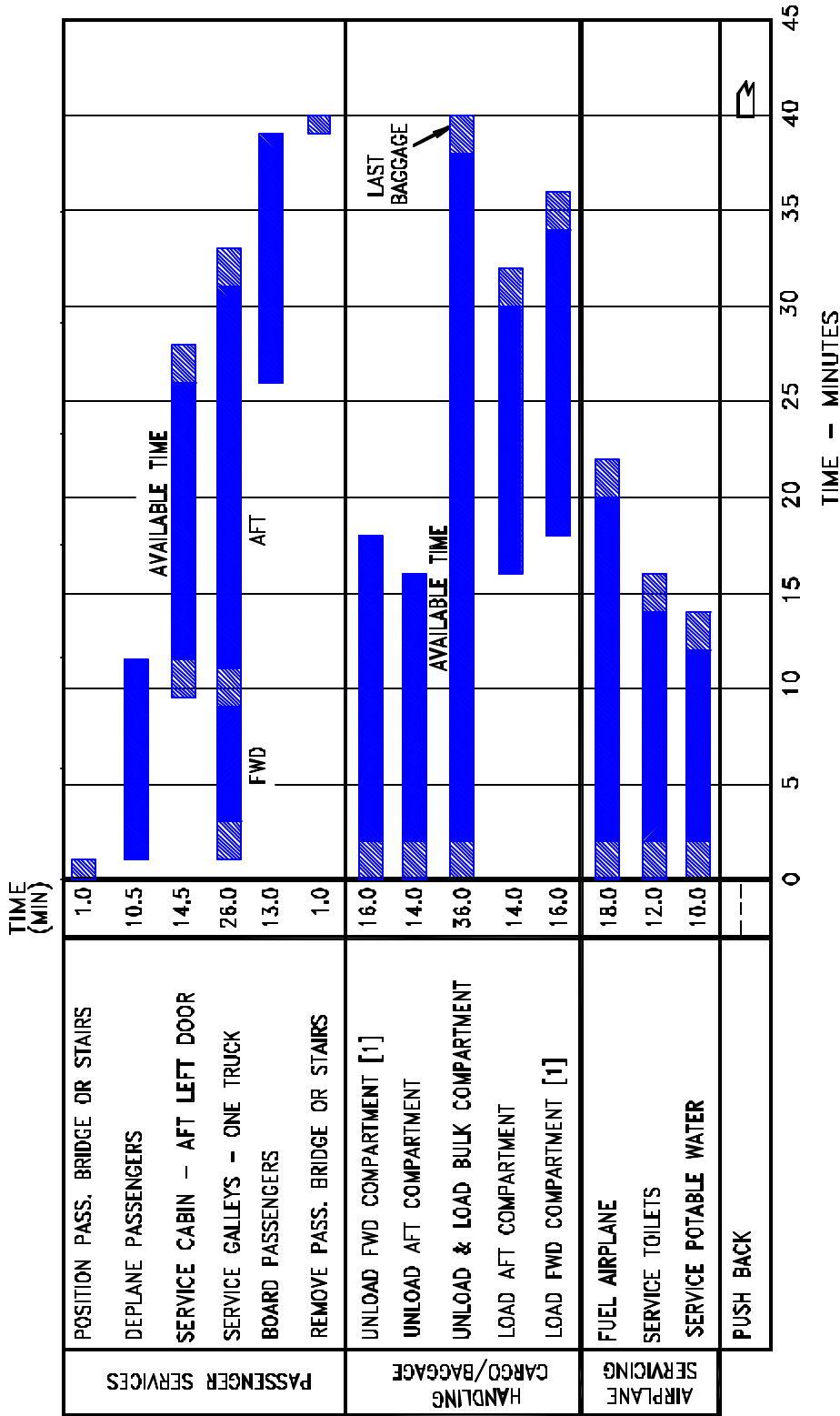
- 216 PASSENGERS DEPLANE & BOARD VIA DOOR L1
- FUEL - WITH 2,000 GAL (7,571 LITERS) OF RESERVE FUEL, MAX FUEL OF 14,700 GAL (55,645 LITERS) AT 800 GPM (3,028 LPM) ADDED
- DEPLANE & BOARDING TIMES BASED ON RATES OF 25 & 20 PASSENGERS PER MINUTE, RESPECTIVELY
- LOWER LOBE - 10 LD-2 CONTAINERS AFT
- 12 LD-2 CONTAINERS FWD
- FUEL - WITH 2,000 GAL (7,571 LITERS) OF RESERVE FUEL, MAX FUEL OF 14,700 GAL (55,645 LITERS) AT 800 GPM (3,028 LPM) ADDED
- POSITION/REMOVE EQUIPMENT
- [1] WITH OPTIONAL WIDE CARGO DOOR, THREE FULL PALLETS, LOAD & UNLOAD TIME ESTIMATED TO BE 6 MINUTES
- NOTE: 2 NOZZLE FUELING AT 50 PSI (3.5 KG/SQ CM); ACTUAL FUELING TIME MAY VARY DEPENDING ON FLOW RATE AND NOZZLE PRESSURE

5.2.1 TERMINAL OPERATIONS - TURNAROUND STATION
MODEL 767-200



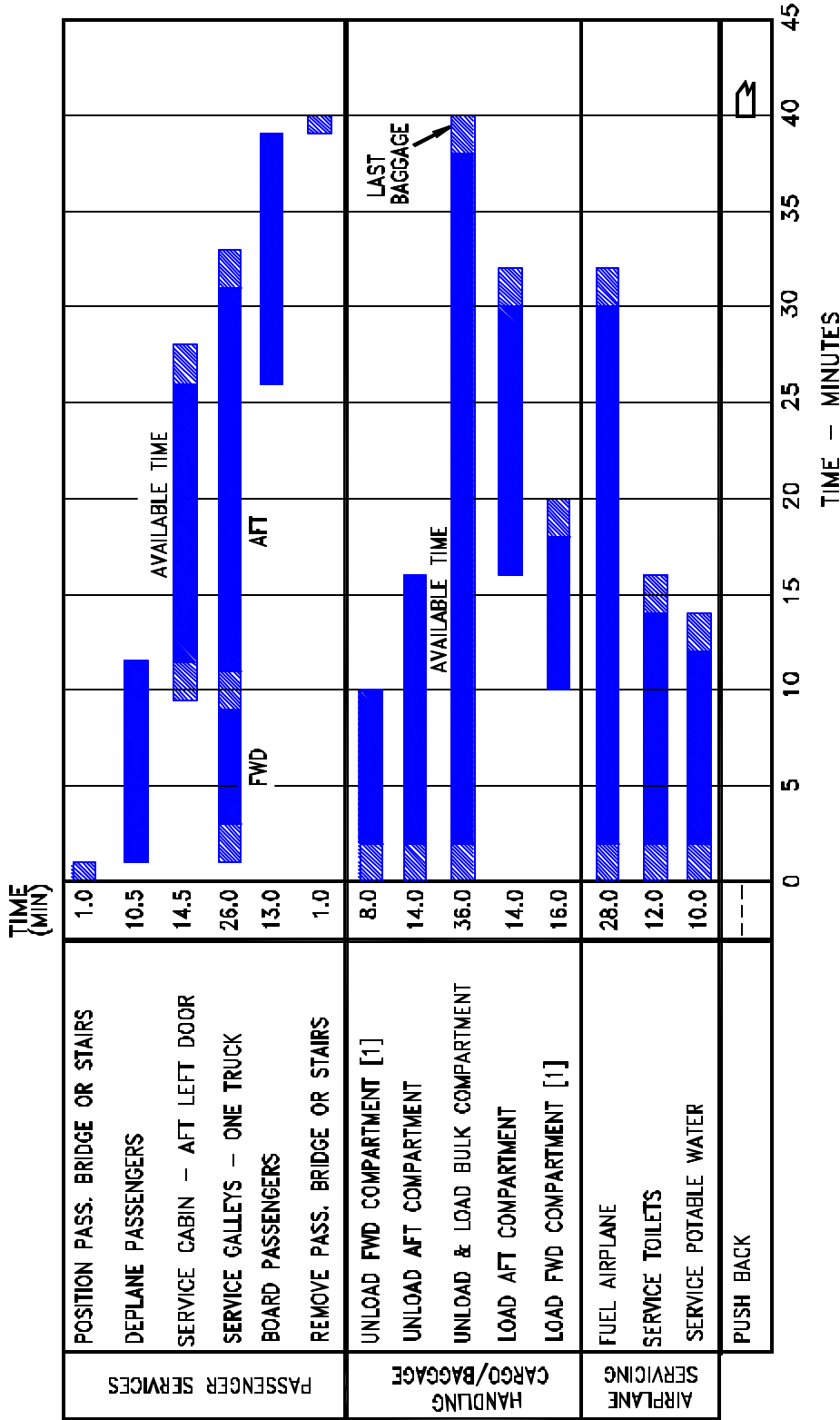
- 216 PASSENGERS DEPLANE & BOARD VIA DOOR L1
 - DEPLANE & BOARDING TIMES BASED ON RATES OF 25 & 20 PASSENGERS PER MINUTE, RESPECTIVELY
 - LOWER LOBE - 10 LD-2 CONTAINERS AFT
3 FULL PALLETS FWD
 - MAINTENANCE CHECK PRIOR TO ETOPS FLIGHT
CAN EXTEND TURNAROUND CONSIDERABLY
DEPENDING ON AIRLINE PRACTICE
 - FUEL - WITH 2,000 GAL (7,571 LITERS) OF RESERVE FUEL, MAX FUEL OF 18,450 GAL (69,841 LITERS) ADDED; 14,700 GAL (55,645 LITERS) AT 800 GPM (3,028 LPM) AND THEN 3,750 GAL (14,195 LITERS) AT 310 GPM (1,173 LPM)
 - POSITION/REMOVE EQUIPMENT [1] WITH 12 LD-2 CONTAINERS LOAD & UNLOAD TIME ESTIMATED TO BE 12 MINUTES
- NOTE: 2 NOZZLE FUELING AT 50 PSI (3.5 KG/SQ CM);
ACTUAL FUELING TIME MAY VARY DEPENDING
ON FLOW RATE AND NOZZLE PRESSURE

5.2.2 TERMINAL OPERATIONS - TURNAROUND STATION
MODEL 767-200ER



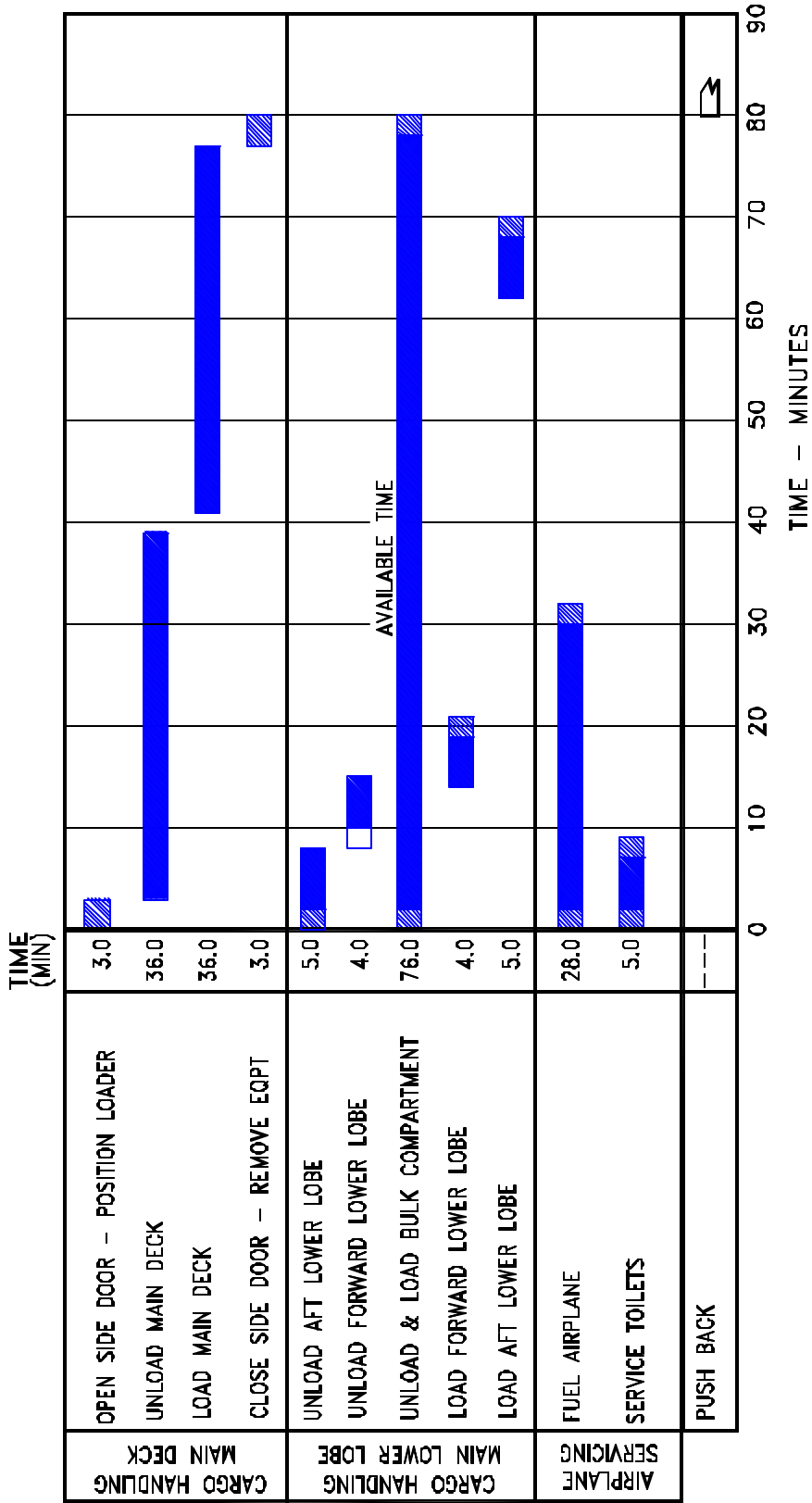
- 261 PASSENGERS DEPLANE & BOARD VIA DOOR L1
- DEPLANE & BOARDING TIMES BASED ON RATES OF 25 & 20 PASSENGERS PER MINUTE, RESPECTIVELY
- LOWER LOBE - 14 LD-2 CONTAINERS AFT
16 LD-2 CONTAINERS FWD
- FUEL - WITH 2,000 GAL (7,571 LITERS) OF RESERVE FUEL, MAX FUEL OF 14,700 GAL (55,645 LITERS) AT 800 GPM (3,028 LPM) ADDED
- NOTE: 2 NOZZLE FUELING AT 50 PSI (3.5 KG/SQ CM); ACTUAL FUELING TIME MAY VARY DEPENDING ON FLOW RATE AND NOZZLE PRESSURE
- POSITION/REMOVE EQUIPMENT [1] WITH OPTIONAL WIDE CARGO DOOR, FOUR FULL PALLETS, LOAD & UNLOAD TIME ESTIMATED TO BE 8 MINUTES

5.2.3 TERMINAL OPERATIONS - TURNAROUND STATION
MODEL 767-300



- 261 PASSENGERS DEPLANE & BOARD VIA DOOR L1
 - DEPLANE & BOARDING TIMES BASED ON RATES OF 25 & 20 PASSENGERS PER MINUTE, RESPECTIVELY
 - LOWER LOBE - 14 LD-2 CONTAINERS AFT
4 FULL PALLETS FWD
 - MAINTENANCE CHECK PRIOR TO ETOPS FLIGHT CAN EXTEND TURNAROUND CONSIDERABLY DEPENDING ON AIRLINE PRACTICE
 - FUEL - WITH 2,000 GAL (7,571 LITERS) OF RESERVE FUEL, MAX FUEL OF 24,149 GAL (83,809 LITERS) ADDED; 16,700 GAL (63,210 LITERS) AT 1,000 GPM (3,785 LPM) AND THEN 5,440 GAL (20,593 LITERS) AT 470 GPM (1,779 LPM)
 - POSITION/REMOVE EQUIPMENT [1] WITH 16 LD-2 CONTAINERS LOAD & UNLOAD TIME ESTIMATED TO BE 6 MINUTES
- NOTE: 2 NOZZLE FUELING AT 50 PSI (3.5 KG/SQ CM); ACTUAL FUELING TIME MAY VARY DEPENDING ON FLOW RATE AND NOZZLE PRESSURE

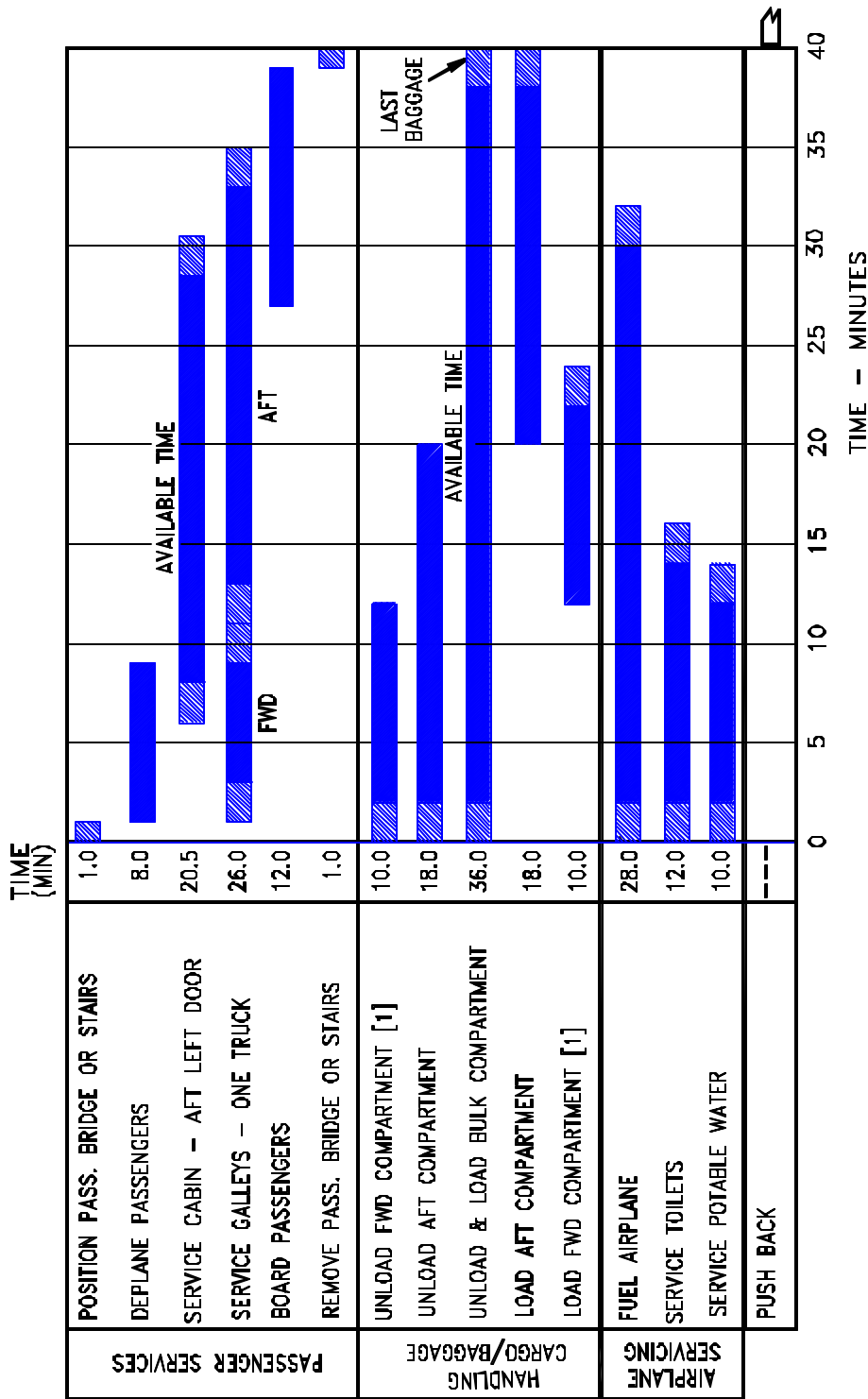
5.2.4 TERMINAL OPERATIONS - TURNAROUND STATION
MODEL 767-300ER



NOTES:

1. MAIN DECK CARGO - 24 88 X 125 IN (224 X 318 CM) CONTAINERS/
PALLETS. 100 PERCENT CARGO EXCHANGE - 1.5 MINUTES PER
CONTAINER/PALLET
2. AFT LOWER LOBE - 5 CONTAINERS: 3 LD-7/LD-9s, 2LD-2s
FORWARD LOWER LOBE - 4 CONTAINERS: 4 LD-7/LD-9s
1.0 MINUTE PER CONTAINER, LOWER LOBE
3. FUELING WITH 2 NOZZLES AT 50 PSI (3.5 KG/SQ CM);
TOTAL AIRPLANE FUEL ADDED = 22,140 GAL (83,809 L)
REFUELING FROM A RESERVE LEVEL OF 2,000 GAL (7,571 L)

5.2.5 TERMINAL OPERATIONS - TURNAROUND STATION
MODEL 767-300 FREIGHTER



- 304 PASSENGERS DEPLANE & BOARD VIA DOOR L1
- FUEL - WITH 2,000 GAL (7,571 LITERS) OF RESERVE FUEL, MAX FUEL OF 24,140 GAL (83,809 LITERS) ADDED; 16,700 GAL (632,169 LITERS) AT 1,000 GPM (3,785 LPM) AND THEN 5,440 GAL (20,593 LITERS) AT 470 GPM (1,779 LPM)
- DEPLANE & BOARDING TIMES BASED ON RATES OF 25 & 20 PASSENGERS PER MINUTE, RESPECTIVELY
- LOWER LOBE - 18 LD-2 CONTAINERS AFT 5 FULL PALLETS FWD
- POSITION/REMOVE EQUIPMENT [1] WITH 20 LD-2 CONTAINERS LOAD OR UNLOAD TIME ESTIMATED TO BE 20 MINUTES

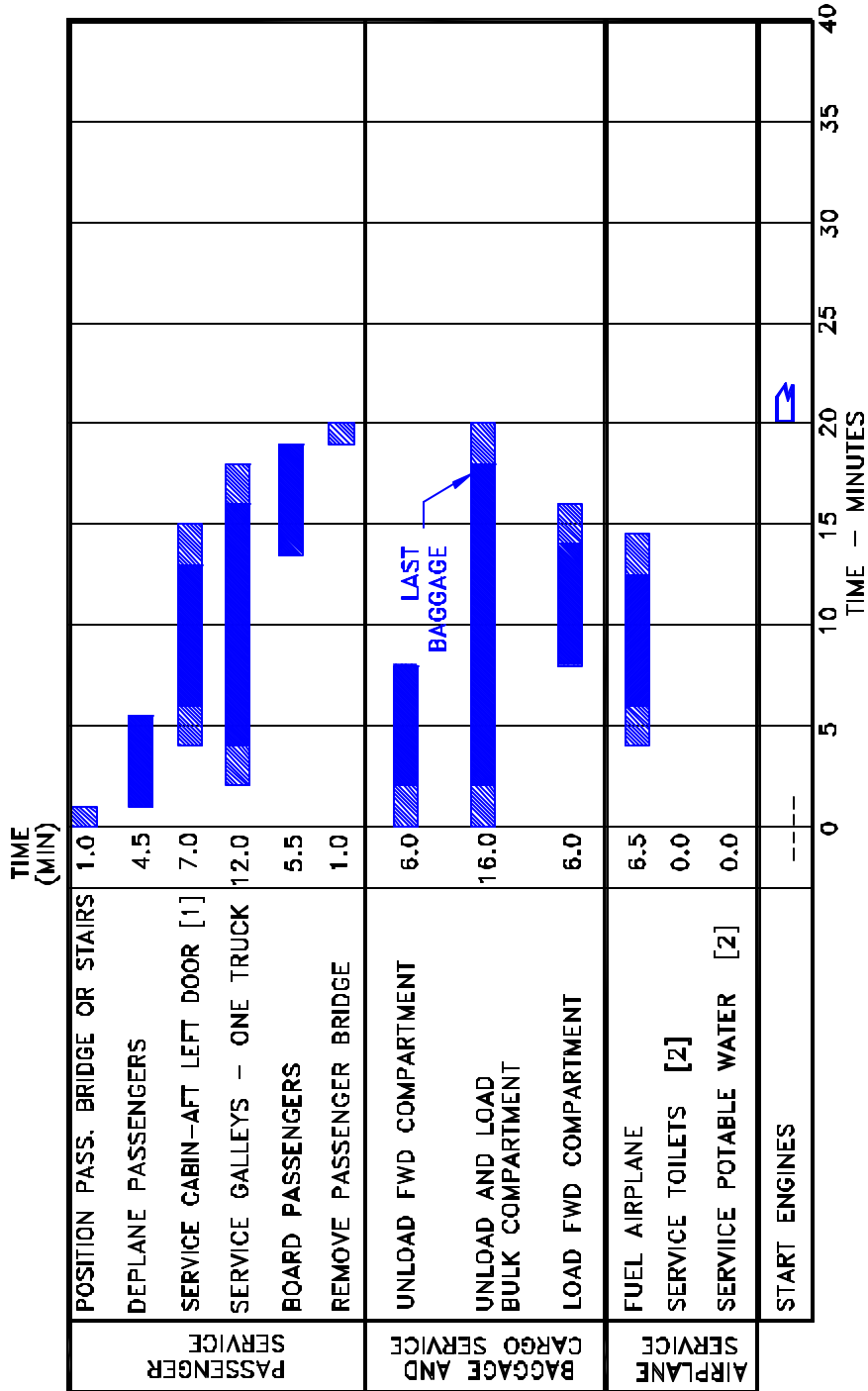
NOTE: 2 NOZZLE FUELING AT 50 PSI (3.5 KG/SQ CM); ACTUAL FUELING TIME MAY VARY DEPENDING ON FLOW RATE AND NOZZLE PRESSURE

MAINTENANCE CHECK PRIOR TO ETOPS FLIGHT CAN EXTEND TURNAROUND CONSIDERABLY DEPENDING ON AIRLINE PRACTICE

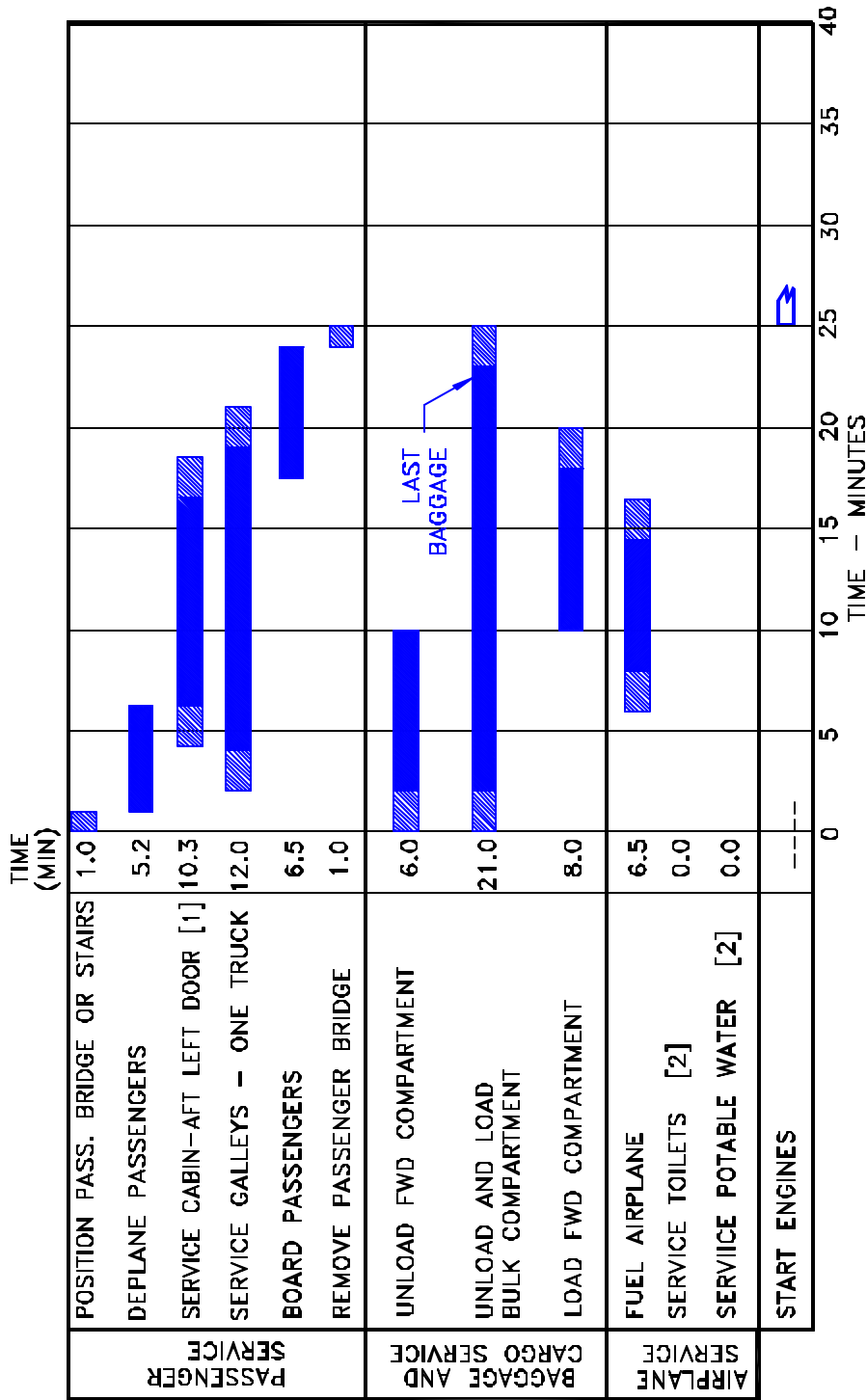
5.2.6 TERMINAL OPERATIONS - TURNAROUND STATION

MODEL 767-400ER

5.3.1 TERMINAL OPERATIONS - EN ROUTE STATION
 MODEL 767-200, -200ER

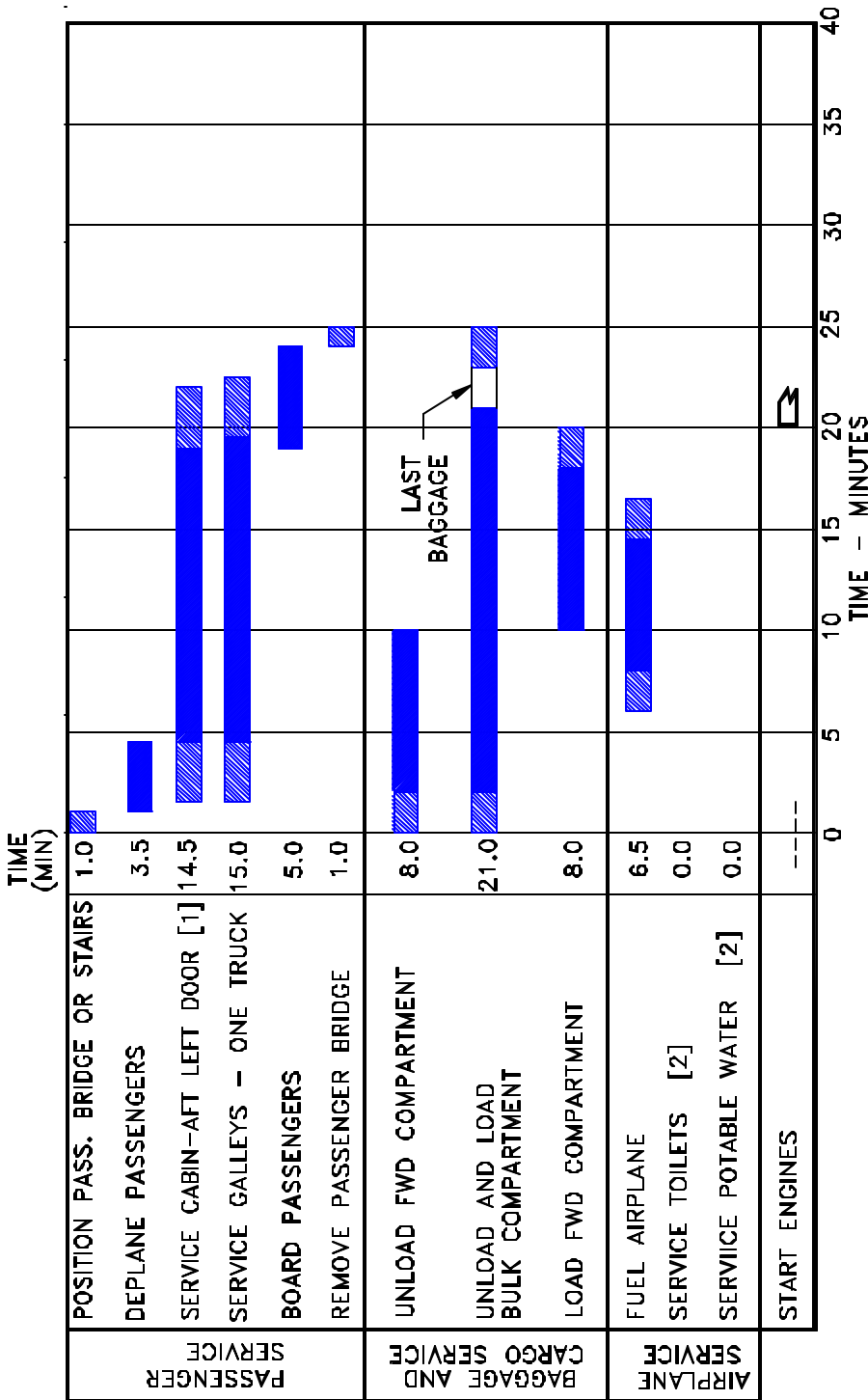


- POSITION/REMOVE EQUIPMENT
- PASSENGERS DEPLANE & BOARD VIA DOOR L1
- 50% PASSENGER TRANSFER - 108 PASSENGERS
- DEPLANE & BOARDING TIMES BASED ON RATES OF 25 & 20 PASSENGERS PER MINUTE, RESPECTIVELY
- LOWER LOBE - 6 LD-2 CONTAINERS FWD
- FUEL - WITH 5,000 GAL (18,927 LITERS) ADDED AT 800 GPM (3,028 LPM)
- NOTE: 2 NOZZLE FUELING AT 50 PSI (3.5 KG/SQ CM) ACTUAL FUELING TIME MAY VARY DEPENDING ON FLOW RATE AND NOZZLE PRESSURE
- [1] CABIN SERVICE RESTRICTED TO MINOR PICKUP
- [2] NO POTABLE WATER OR TOILET SERVICE



- FUEL - WITH 5,000 GAL (18,927 LITERS) ADDED AT 800 GPM (3,028 LPM)
- POSITION/REMOVE EQUIPMENT
- PASSENGERS DEPLANE & BOARD VIA DOOR L1
- 50% PASSENGER TRANSFER - 130 PASSENGERS
- DEPLANE & BOARDING TIMES BASED ON RATES OF 25 & 20 PASSENGERS PER MINUTE, RESPECTIVELY
- LOWER LOBE - 6 LD-2 CONTAINERS FWD
- FUEL - WITH 5,000 GAL (18,927 LITERS) ADDED AT 800 GPM (3,028 LPM)
- NOTE: 2 NOZZLE FUELING AT 50 PSI (3.5 KG/SQ CM) ACTUAL FUELING TIME MAY VARY DEPENDING ON FLOW RATE AND NOZZLE PRESSURE
- [1] CABIN SERVICE RESTRICTED TO MINOR PICKUP
- [2] NO POTABLE WATER OR TOILET SERVICE

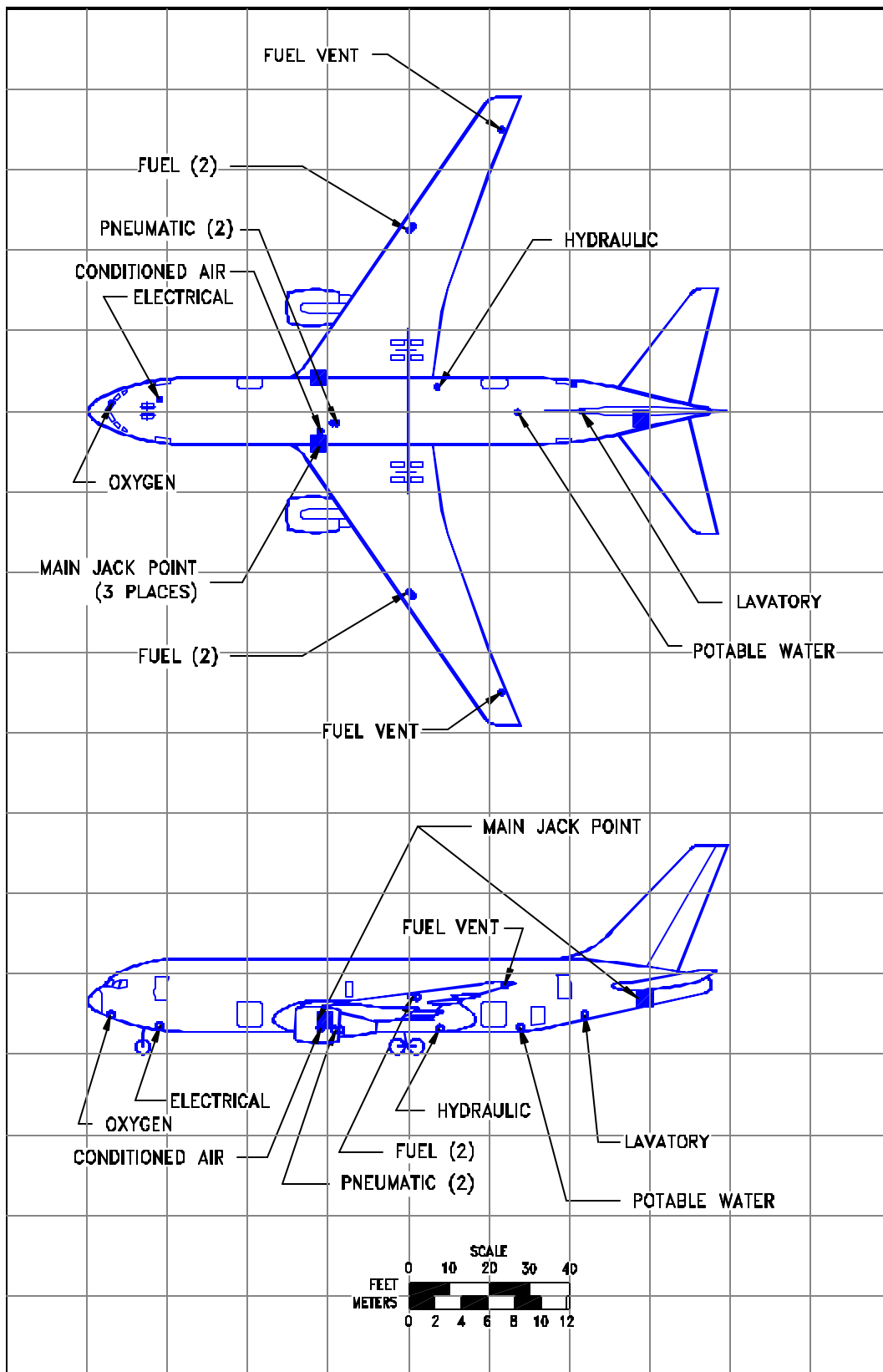
5.3.2 TERMINAL OPERATIONS - EN ROUTE STATION
 MODEL 767-300, -300ER



● FUEL - WITH 5,000 GAL (19,927 LITERS) ADDED AT 800 GPM (3,028 LPM)
 NOTE: 2 NOZZLE FUELING AT 50 PSI (3.5 KG/SQ CM) ACTUAL FUELING TIME MAY VARY DEPENDING ON FLOW RATE AND NOZZLE PRESSURE
 [1] CABIN SERVICE RESTRICTED TO MINOR PICKUP
 [2] NO POTABLE WATER OR TOILET SERVICE

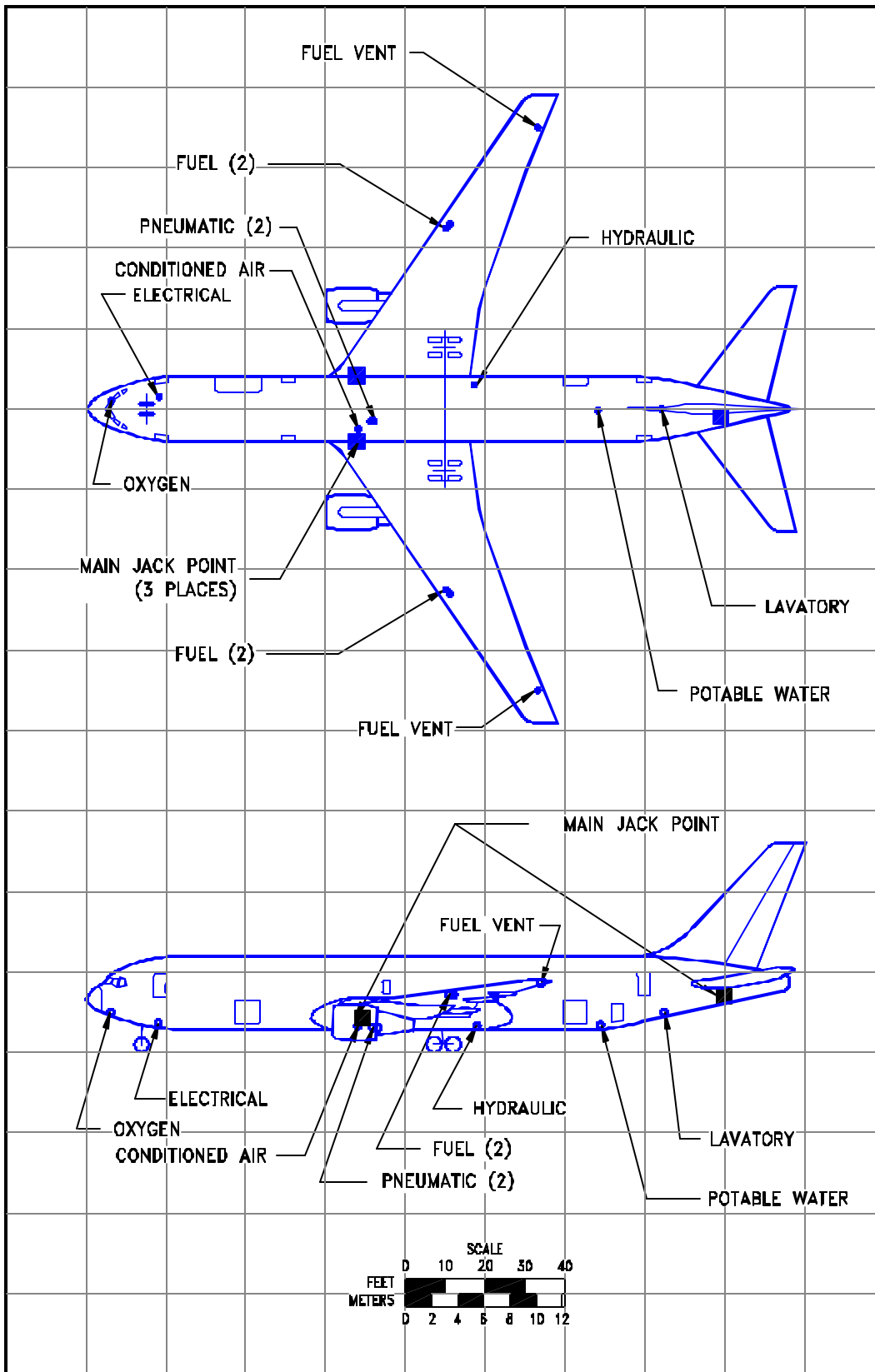
■ POSITION/REMOVE EQUIPMENT
 ● PASSENGERS DEPLANE & BOARD VIA DOOR L1
 ● 50% PASSENGER TRANSFER
 ● DEPLANE & BOARDING TIMES BASED ON RATES OF 25 & 20 PASSENGERS PER MINUTE, RESPECTIVELY
 ● LOWER LOBE -- 8 LD-2 CONTAINERS FWD

5.3.3 TERMINAL OPERATIONS - EN ROUTE STATION
 MODEL 767-400ER



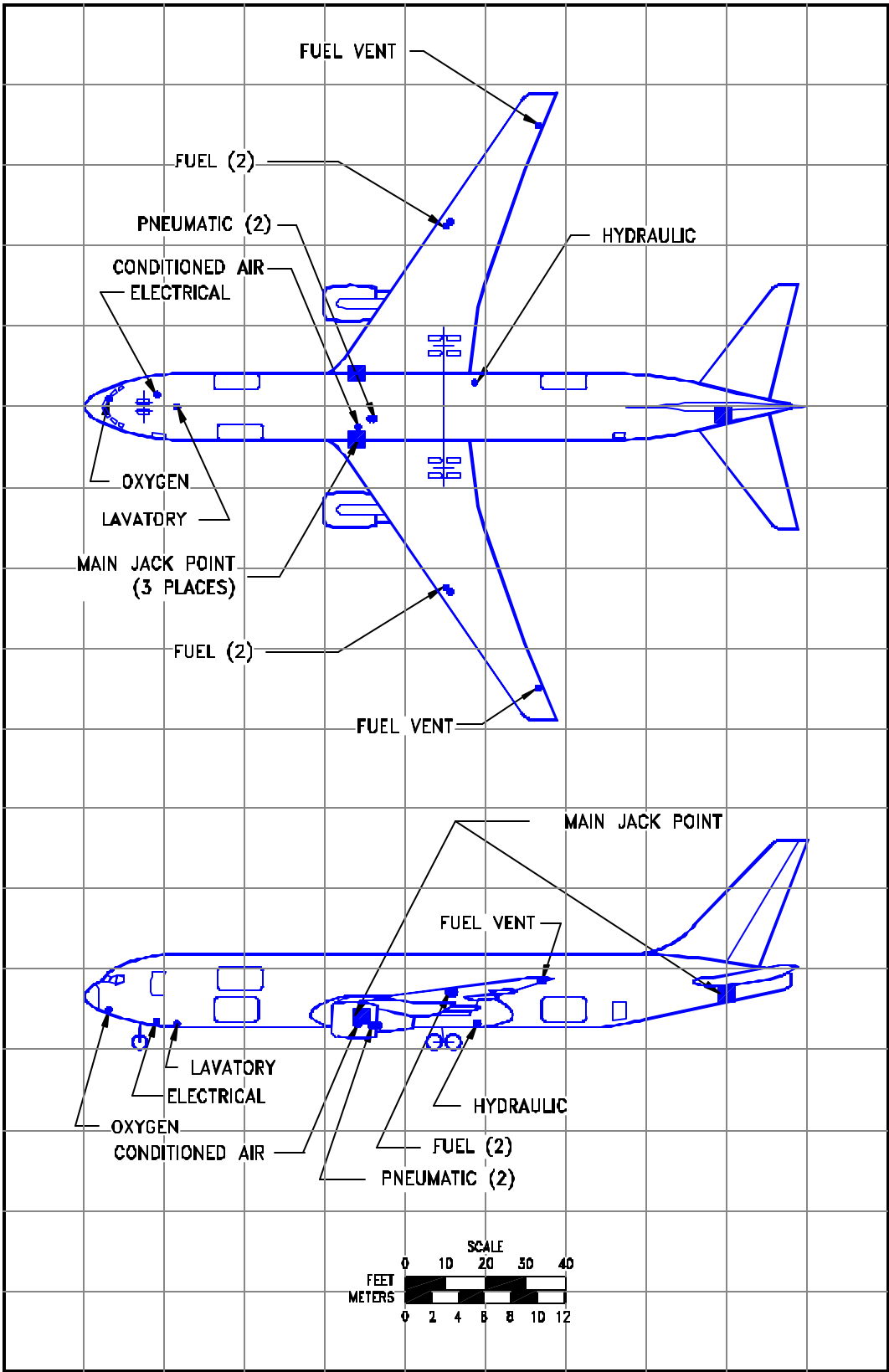
5.4.1 GROUND SERVICING CONNECTIONS
 MODEL 767-200, -200ER

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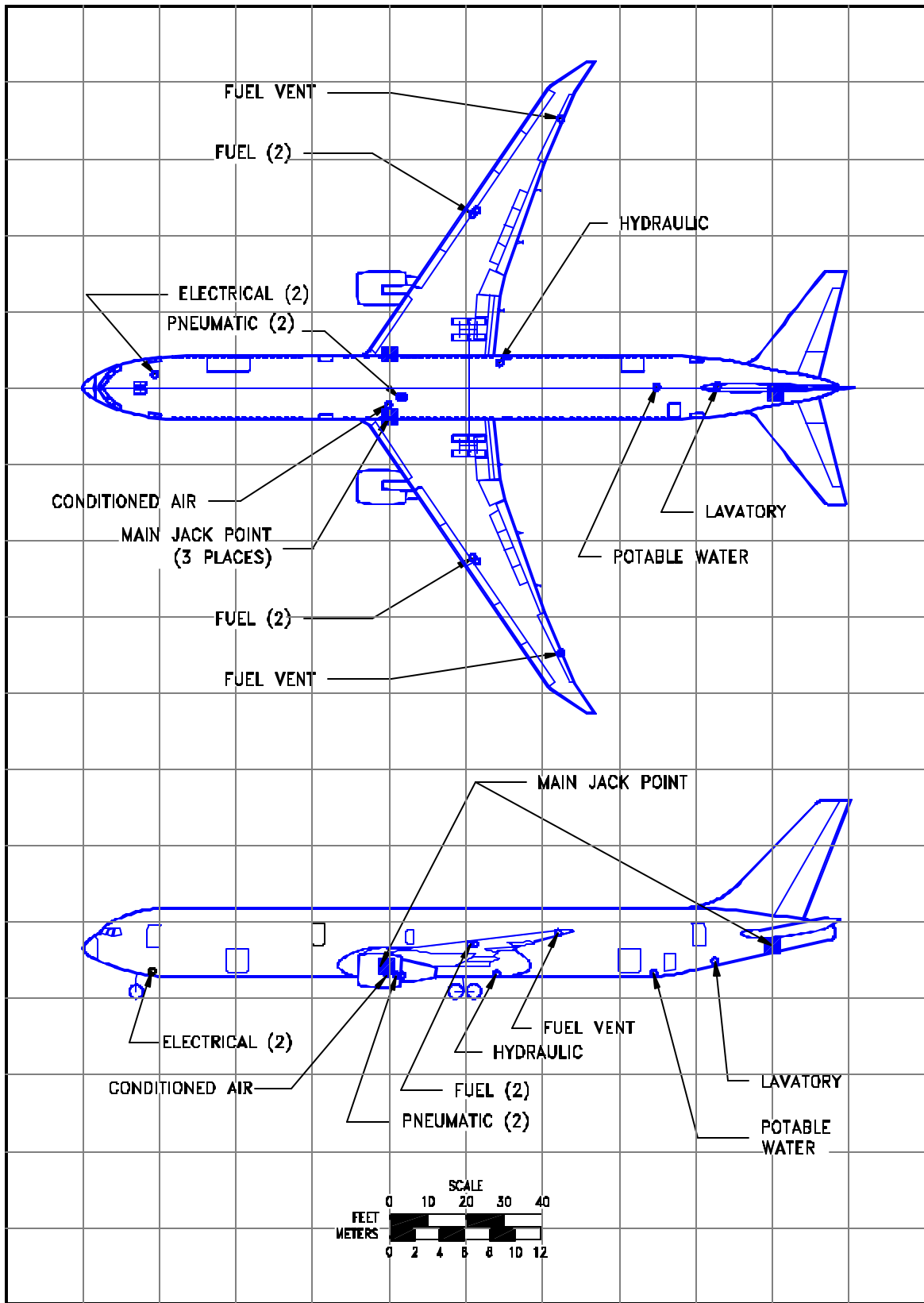
5.4.2 GROUND SERVICING CONNECTIONS

MODEL 767-300, -300ER



5.4.3 GROUND SERVICING CONNECTIONS
MODEL 767-300 FREIGHTER

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5.4.4 GROUND SERVICING CONNECTIONS
 MODEL 767-400ER

SYSTEM	MODEL	DISTANCE AFT OF NOSE		DISTANCE FROM AIRPLANE CENTERLINE				MAX HT ABOVE GROUND	
		FT	M	LH SIDE		RH SIDE		FT	M
				FT	M	FT	M		
CONDITIONED AIR ONE 8-IN (20.3 CM) PORT	-200, -200ER,	58	17.7	5	1.5	-	-	7	2.1
	-300, -300ER, -300 F	68	20.8	5	1.5	-	-	7	2.1
	-400ER	79	24.1	5	1.5	-	-	7	2.1
ELECTRICAL ONE CONNECTION ON -200, -300 TWO CONNECTIONS ON -400ER 90 KVA , 200/115 V AC 400 HZ, 3-PHASE EACH	-ALL	18	5.5	-	-	3	0.9	7	2.1
FUEL TWO UNDERWING PRESSURE CONNECTORS ON EACH WING	-200	80	24.4	45	13.7	45	13.7	15	4.5
	-200ER	81	24.7	46	14.0	46	14.0	15	4.5
	-300	90	27.4	45	13.7	45	13.7	15	4.5
	-300ER -300 F	91	27.7	46	14.0	46	14.0	15	4.5
	-400ER	101	30.8	45	13.7	45	13.7	14	4.3
		102	31.1	46	14.0	46	14.0	15	4.5
FUEL VENTS	-200	103	31.4	70	21.3	70	21.3	17	5.2
	-200ER								
	-300	113	34.4	70	21.3	70	21.3	17	5.2
	-300ER -300 F								
TOTAL TANK CAPACITY: -200, -300, -300 FREIGHTER 16,700 U.S. GAL (63,210 L)	-400ER	124	37.8	70	21.3	70	21.3	17	5.2
-200ER 20,450 U.S. GAL (77,410 L)									
-300ER, -400ER 24,140 U.S. GAL (91,370 L)									
MAX FUEL RATE: 1,000 GPM (3,970 LPM)									
MAX FILL PRESSURE: 55 PSIG (3.87 KG/CM ²)									

5.4.5 GROUND SERVICING CONNECTIONS AND CAPACITIES

MODEL 767-200, -200ER, -300, -300ER, -300 FREIGHTER, -400ER

D6-58328

SYSTEM	MODEL	DISTANCE AFT OF NOSE		DISTANCE FROM AIRPLANE CENTERLINE				MAX HT ABOVE GROUND	
		FT	M	LH SIDE		RH SIDE		M	FT
				FT			FT		
HYDRAULIC ONE SERVICE CONNECTION TOTAL SYSTEM CAPACITY = 80 GAL (303 L) FILL PRESSURE = 150 PSIG (10.55 KG/CM ²)	-200, -200ER,	87	26.5	-	-	6	1.8	7	2.1
	-300, -300ER, -300 F	97	29.6	-	-	6	1.8	7	2.1
	-400ER	108	32.9	-	-	6	1.8	7	2.1
LAVATORY BOTH FORWARD AND AFT TOILETS ARE SERVICED THROUGH ONE SERVICE PANEL THREE SERVICE CONNECTIONS : DRAIN – ONE 4 IN (10.2 CM) FLUSH – TWO 1 IN (2.5 CM) TOILET FLUSH REQUIREMENTS: FLOW – 10 GPM (38 LPM) PRESSURE 30 PSIG (2.11 KG/SC CM) TOTAL SERVICE TANK REQUIREMENTS: WASTE – 140 US GAL (530 L) FLUSH – 50 US GAL (189 L) PRECHARGE – 12 US GAL (45 L)	-200, -200ER,	123	37.5	0	0	0	0	10	3.0
	-300, -300ER	144	43.9	0	0	0	0	10	3.0
	-400ER	165	50.3	0	0	0	0	10	3.0
OXYGEN CREW SYSTEM USES REPLACEABLE CYLINDERS PASSENGER SYSTEM USES SELF-CONTAINED OXYGEN GENERATION UNITS	ALL ALL	6	1.8	-	-	2	0.6	10	3.0
PNEUMATIC TWO 3-IN(7.6-CM) PORTS	-200,	61	18.6	3	0.9	-	-	7	2.1
	-200ER,	62	18.9	3	0.9	-	-	7	2.1
	-300,	71	21.6	3	0.9	-	-	7	2.1
	-300ER, -300 F	72	21.9	3	0.9	-	-	7	2.1
	-400ER	82	25.0	3	0.9	-	-	7	2.1
		83	25.3	3	0.9	-	-	7	2.1

5.4.6 GROUND SERVICING CONNECTIONS AND CAPACITIES

MODEL 767-200, -200ER, -300, -300ER, -300 FREIGHTER, -400ER

SYSTEM	MODEL	DISTANCE AFT OF NOSE		DISTANCE FROM AIRPLANE CENTERLINE				MAX HT ABOVE GROUND	
		FT	M	LH SIDE		RH SIDE		FT	M
				FT	M	FT	M		
POTABLE WATER ONE SERVICE CONNECTION (BASIC)	-200, -200ER	107	32.6	0.3	0.1	-	-	7	2.1
OPTIONAL LOCATION	-200,	121	36.8	-	-	8	2.4	18	5.5
ONE SERVICE CONNECTION (BASIC)	-300, -300ER, -300 F	128	39.0	0.3	0.1	-	-	7	2.1
	-400ER	149	44.4	0.3	0.1	-	-	7	2.1
FORWARD DRAIN PANEL	ALL	46	14.0	0.3	0.1	-	-	7	2.1
TANK CAPACITY 102 U.S. GAL (386 L)	-200, -300								
149 U.S. GAL (564 L)	-200ER -300ER -400ER								
FILL PORT – ¾ IN (1.9 CM) MAX FILL PRESSURE = 25 PSIG (1.76 KG/SQ CM)									

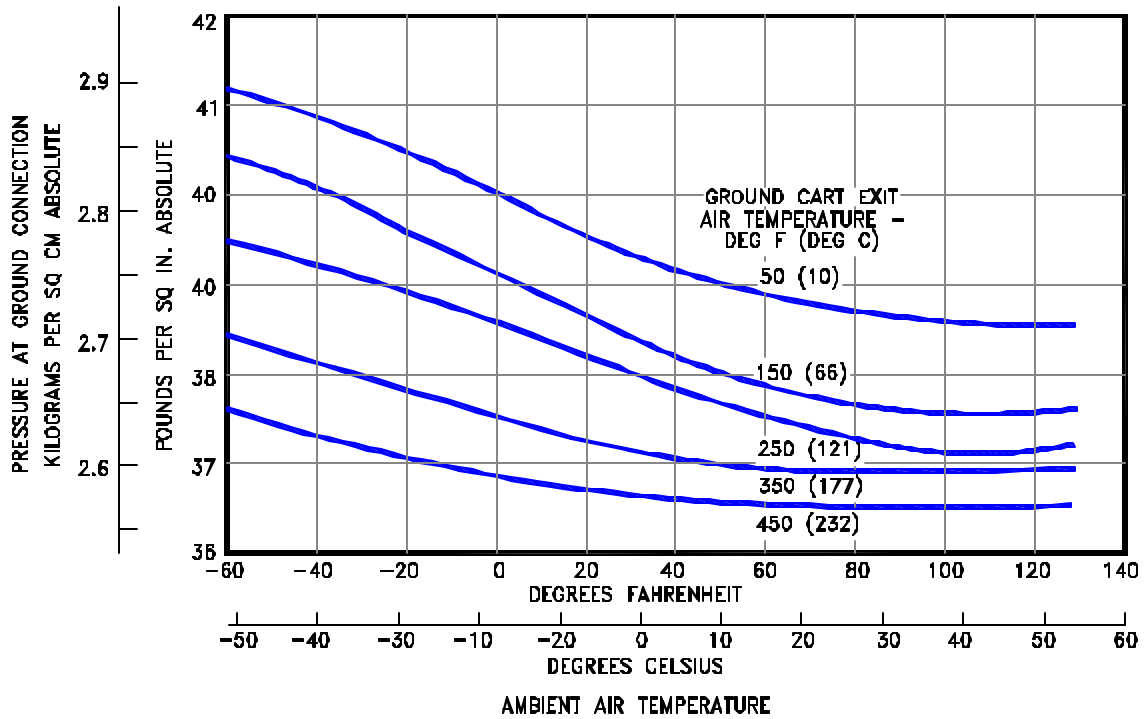
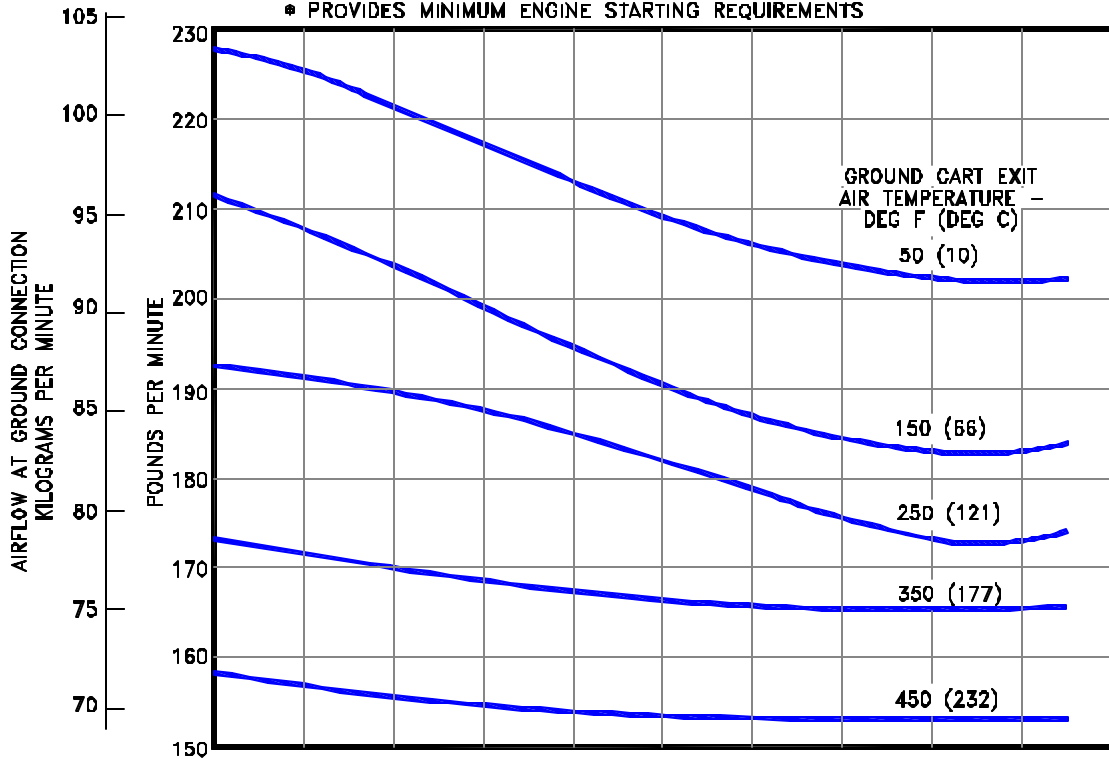
5.4.7 GROUND SERVICING CONNECTIONS AND CAPACITIES

MODEL 767-200, -200ER, -300, -300ER, -300 FREIGHTER, -400ER

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NOTES:

- ALTITUDE = SEA LEVEL
- GARRETT STARTER MODEL ATS200-58
- USE OF TWO GROUND CONNECTIONS IS ASSUMED
- PROVIDES MINIMUM ENGINE STARTING REQUIREMENTS

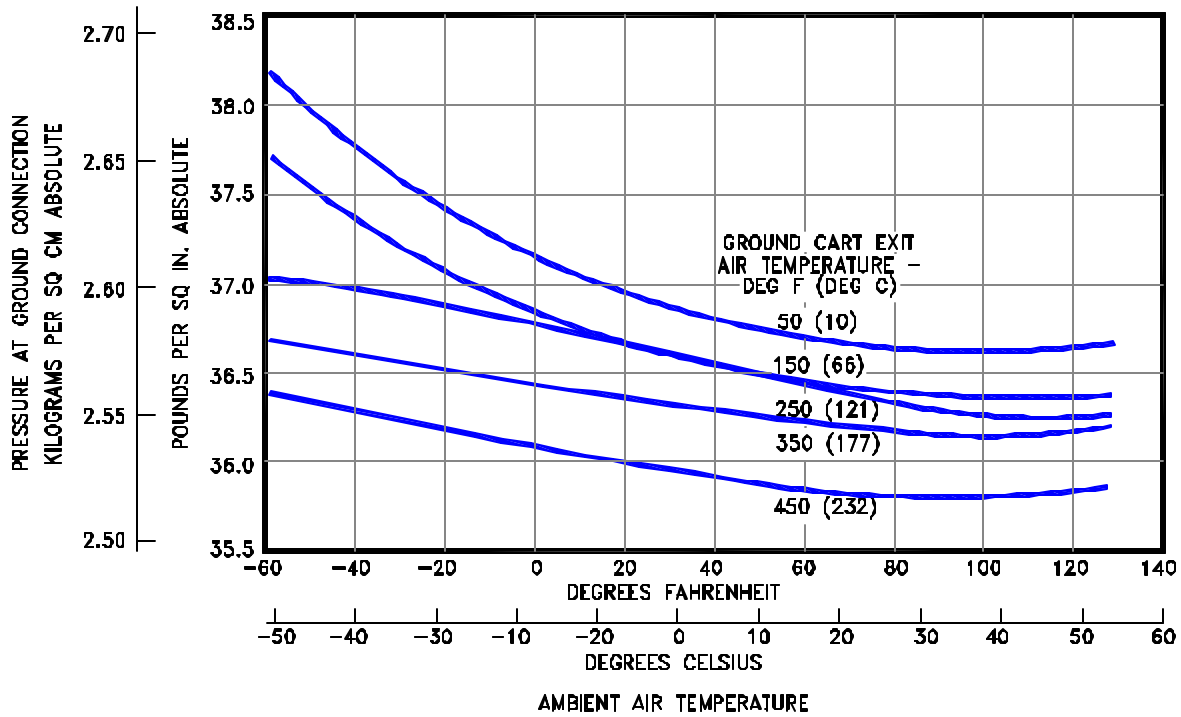
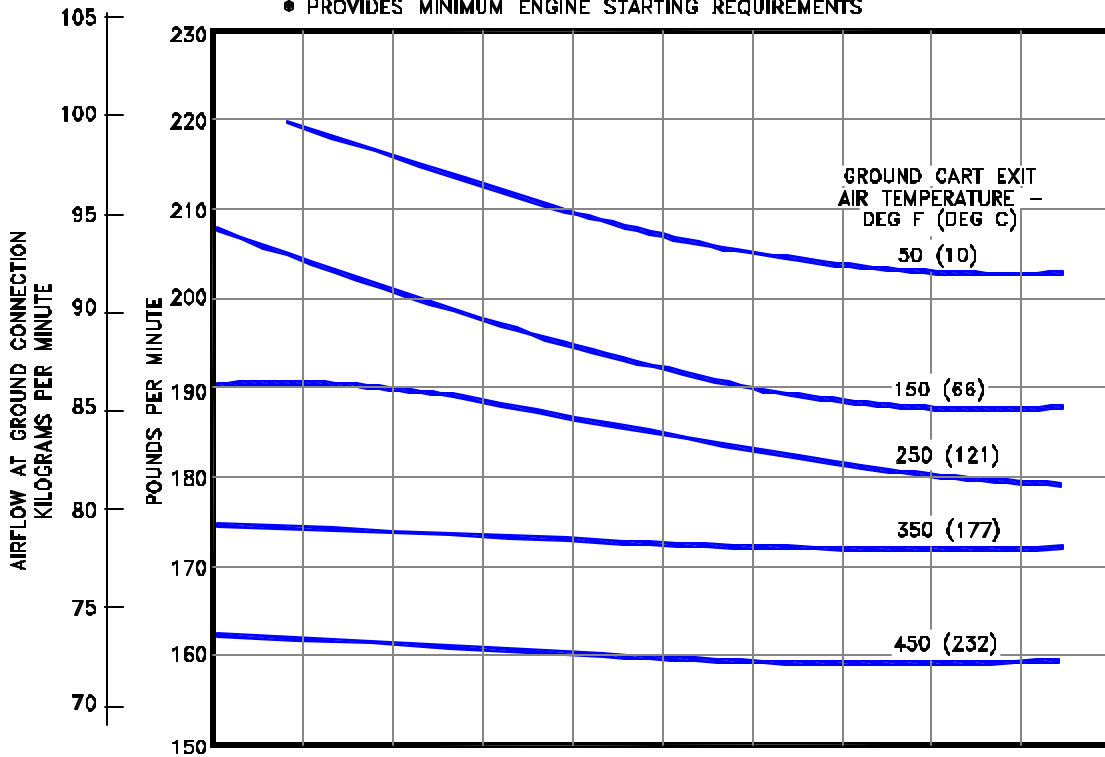


5.5.1 ENGINE START PNEUMATIC REQUIREMENTS - SEA LEVEL

MODEL 767-200, -200ER, -300, -300ER, -300 FREIGHTER, -400ER (GE ENGINES)

NOTES:

- ALTITUDE = SEA LEVEL
- HAMILTON STANDARD STARTER MODEL PS700-5
- USE OF TWO GROUND CONNECTIONS IS ASSUMED
- PROVIDES MINIMUM ENGINE STARTING REQUIREMENTS

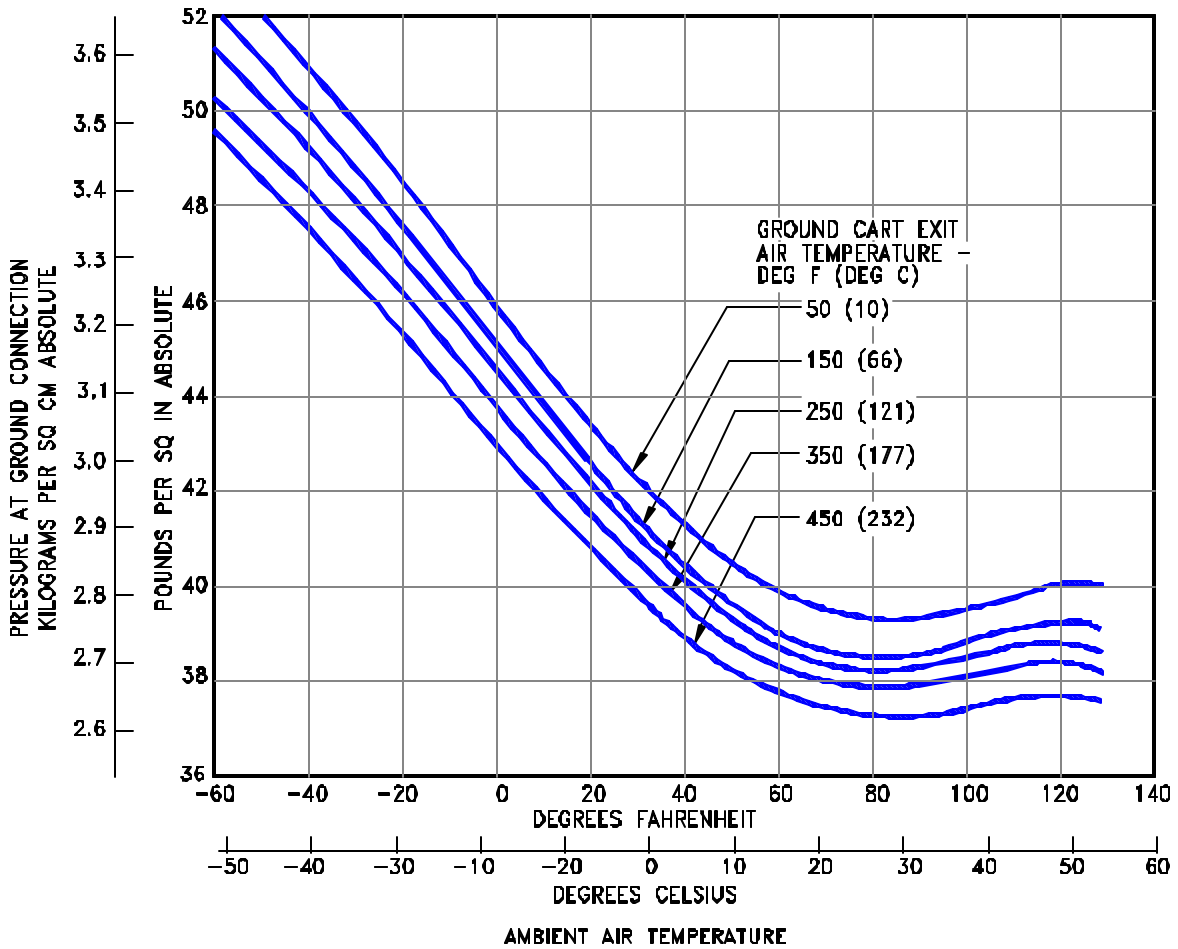
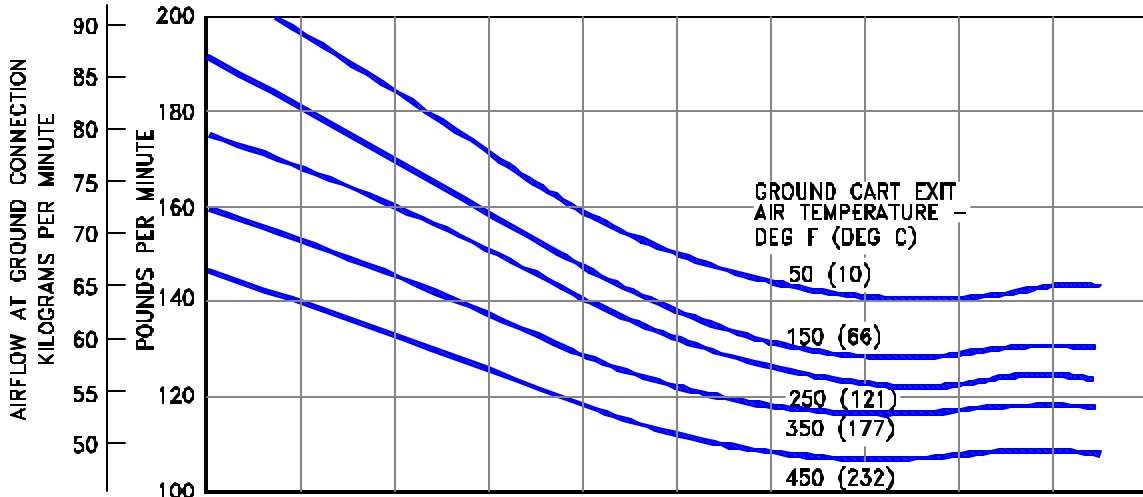


5.5.2 ENGINE START PNEUMATIC REQUIREMENTS - SEA LEVEL

MODEL 767-200, -200ER, -300, -300ER, -300 FREIGHTER, -400ER (PRATT & WHITNEY ENGINES)

NOTES:

- ◆ ALTITUDE = SEA LEVEL
- ◆ GARRETT STARTER MODEL ATS100-350L
- ◆ USE OF TWO GROUND CONNECTIONS IS ASSUMED
- ◆ PROVIDES MINIMUM ENGINE STARTING REQUIREMENTS

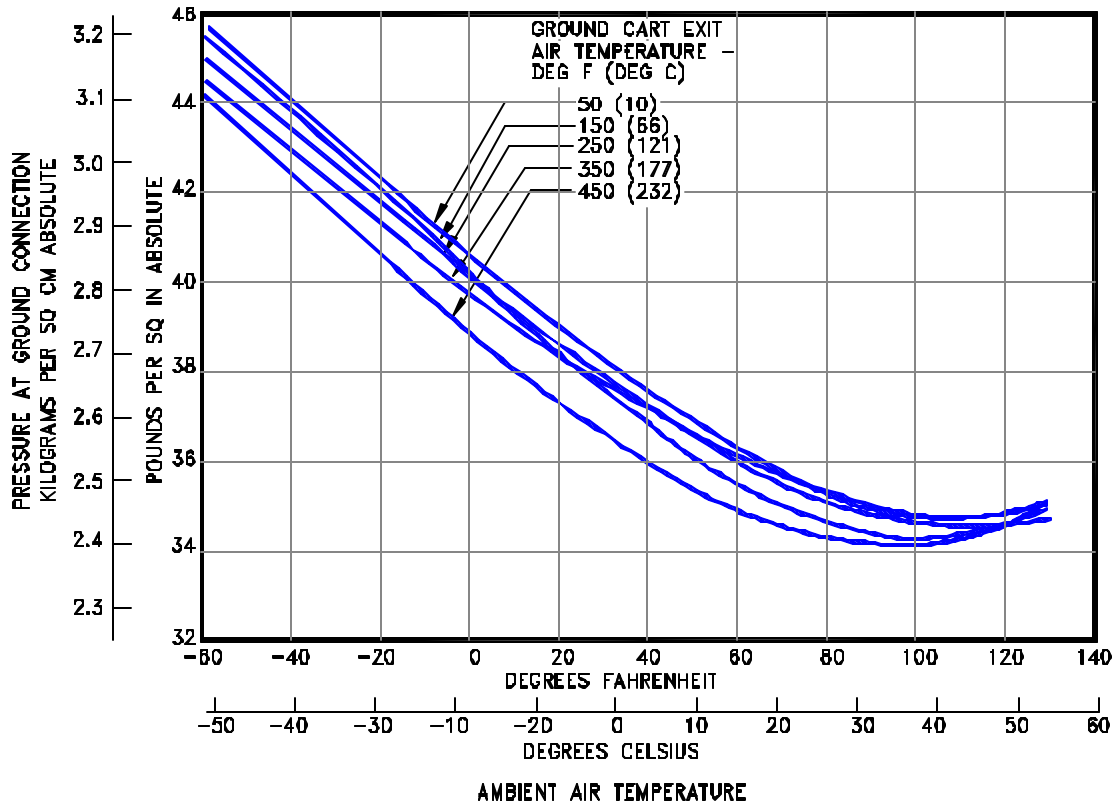
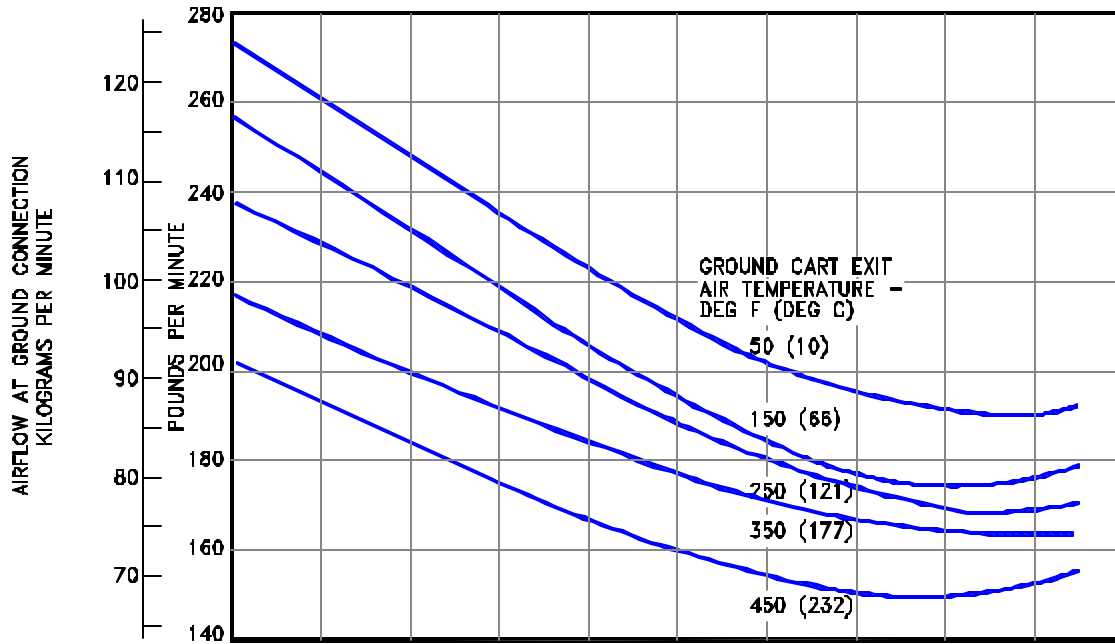


5.5.3 ENGINE START PNEUMATIC REQUIREMENTS - SEA LEVEL

MODEL 767-200, -200ER, -300, -300ER, -300 FREIGHTER, -400ER (GENERAL ELECTRIC ENGINES)

NOTES:

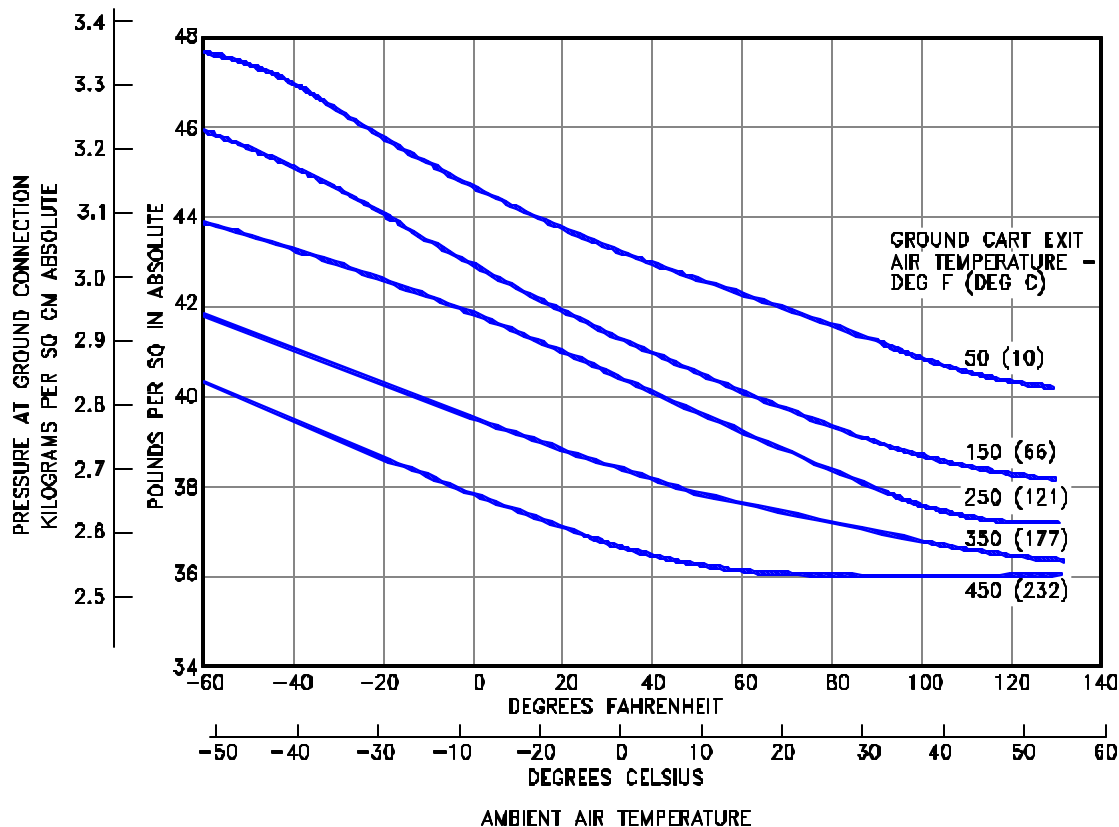
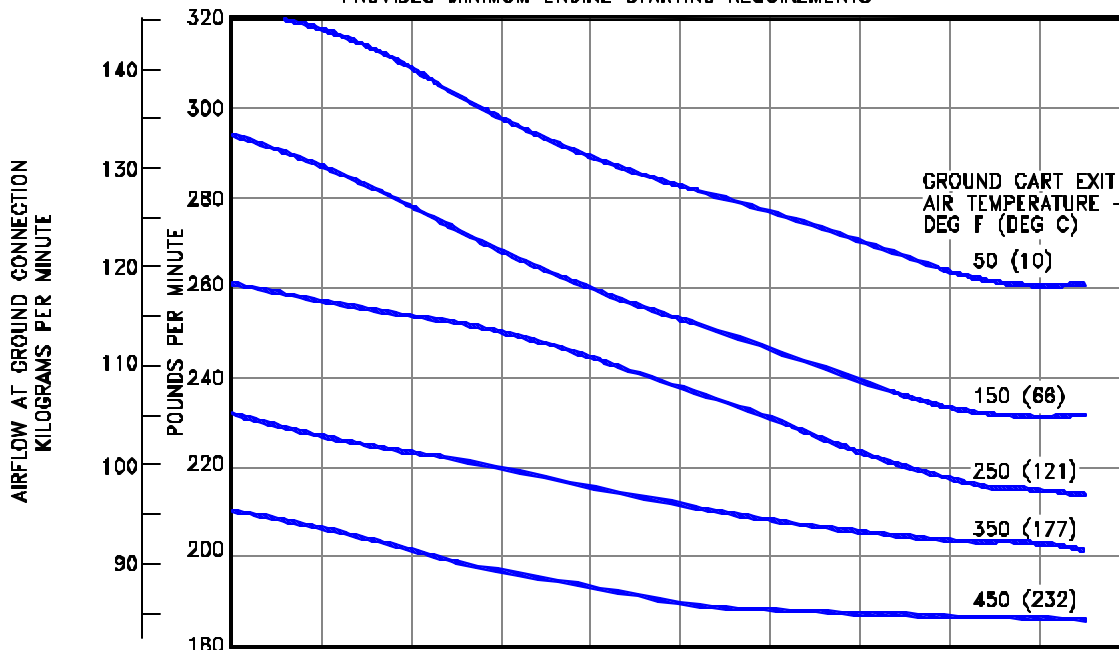
- ◆ ALTITUDE = SEA LEVEL
- ◆ HAMILTON STANDARD STARTER MODEL PS600-B
- ◆ USE OF TWO GROUND CONNECTIONS IS ASSUMED
- ◆ PROVIDES MINIMUM ENGINE STARTING REQUIREMENTS



5.5.4 ENGINE START PNEUMATIC REQUIREMENTS - SEA LEVEL

MODEL 767-200, -200ER, -300, -300ER, -300 FREIGHTER, -400ER (GENERAL ELECTRIC ENGINES)

- NOTES:
- ALTITUDE = SEA LEVEL
 - HAMILTON STANDARD STARTER MODEL PS600-3
 - USE OF TWO GROUND CONNECTIONS IS ASSUMED PROVIDES MINIMUM ENGINE STARTING REQUIREMENTS

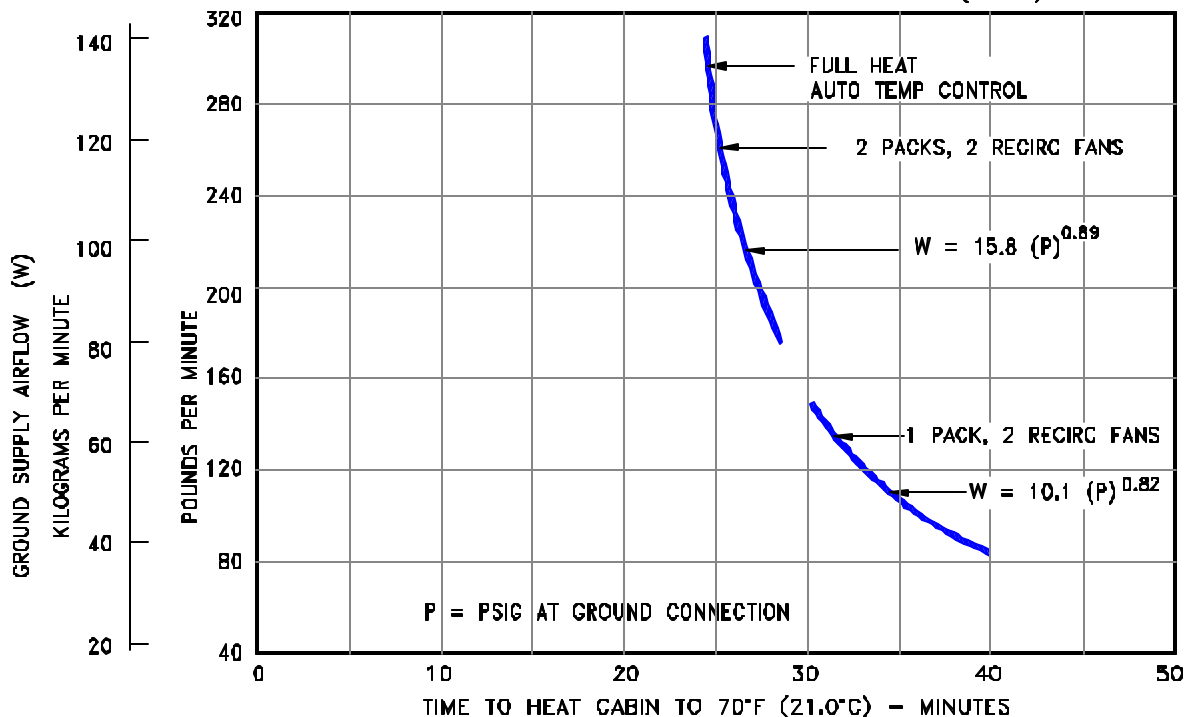


5.5.5 ENGINE START PNEUMATIC REQUIREMENTS - SEA LEVEL

MODEL 767-200, -200ER, -300, -300ER, -300 FREIGHTER (ROLLS ROYCE ENGINES)

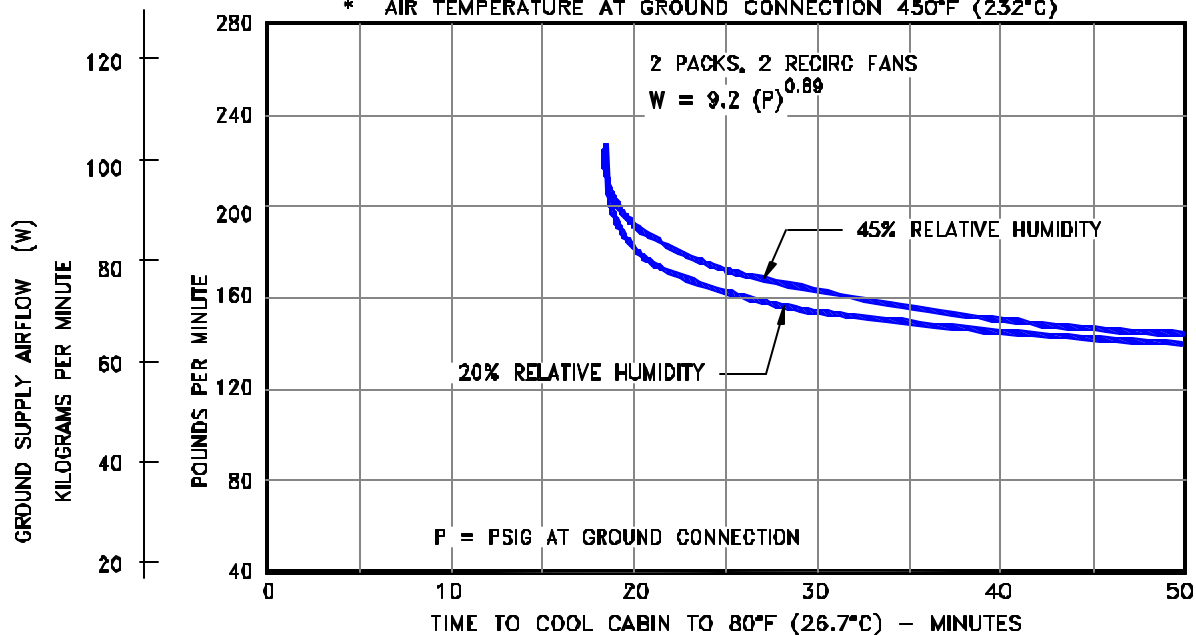
HEATING (PULL-UP)

- * CABIN INITIALLY AT 0°F (-17.8°C)
- * NO OCCUPANTS OR OTHER HEAT LOAD
- * AIR TEMPERATURE AT GROUND CONNECTION 300°F (149°C)



COOLING (PULL-DOWN)

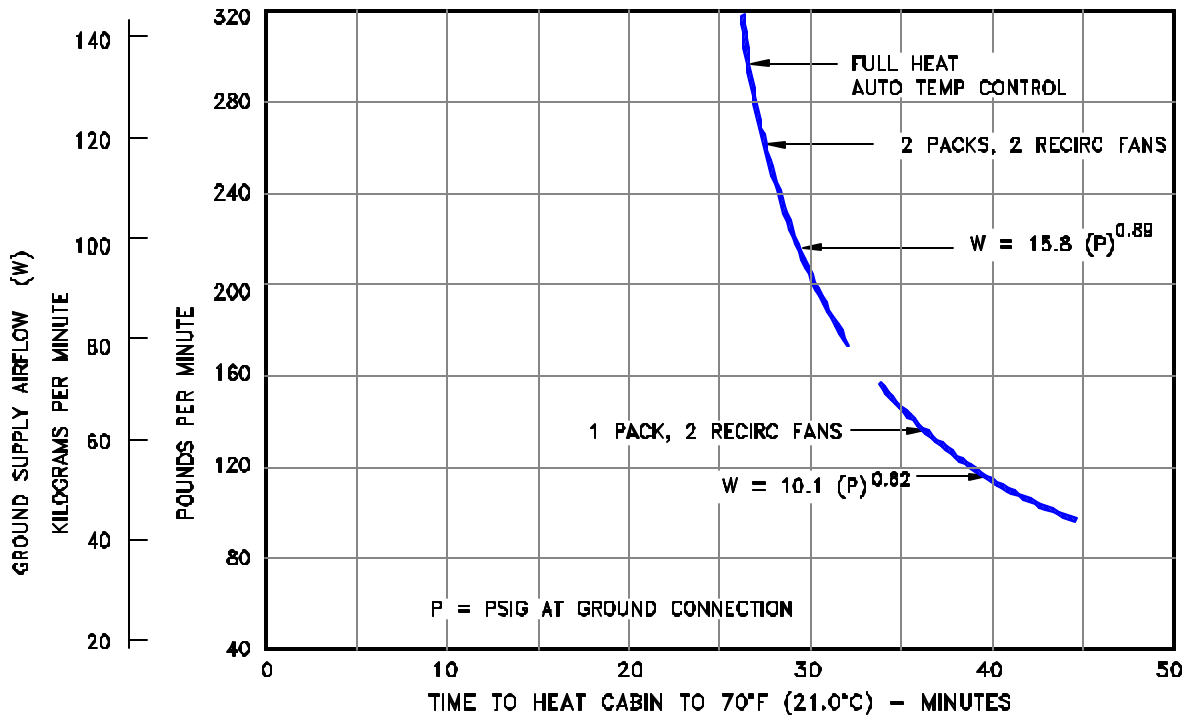
- * CABIN INITIALLY AT 103°F (39°C)
- * NO OCCUPANTS, NO GALLEY OR ELECTRICAL HEAT LOAD
- * AMBIENT TEMPERATURE AT 103°F (39°C)
- * SOLAR HEAT LOAD 11,400 BTU/HR (2,870 KCAL/HR)
- * AIR TEMPERATURE AT GROUND CONNECTION 450°F (232°C)



5.6.1 GROUND PNEUMATIC POWER REQUIREMENTS - HEATING AND COOLING
MODEL 767-200, -200ER

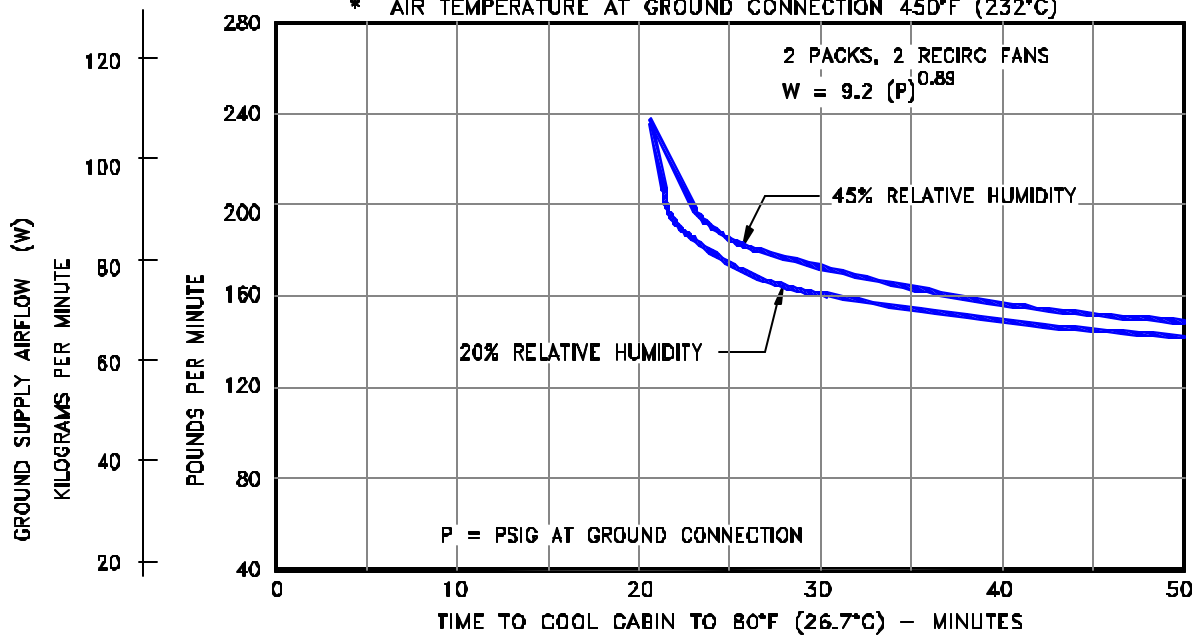
HEATING (PULL-UP)

- * CABIN INITIALLY AT 0°F (-17.8°C)
- * NO OCCUPANTS OR OTHER HEAT LOAD
- * AIR TEMPERATURE AT GROUND CONNECTION 300°F (149°C)

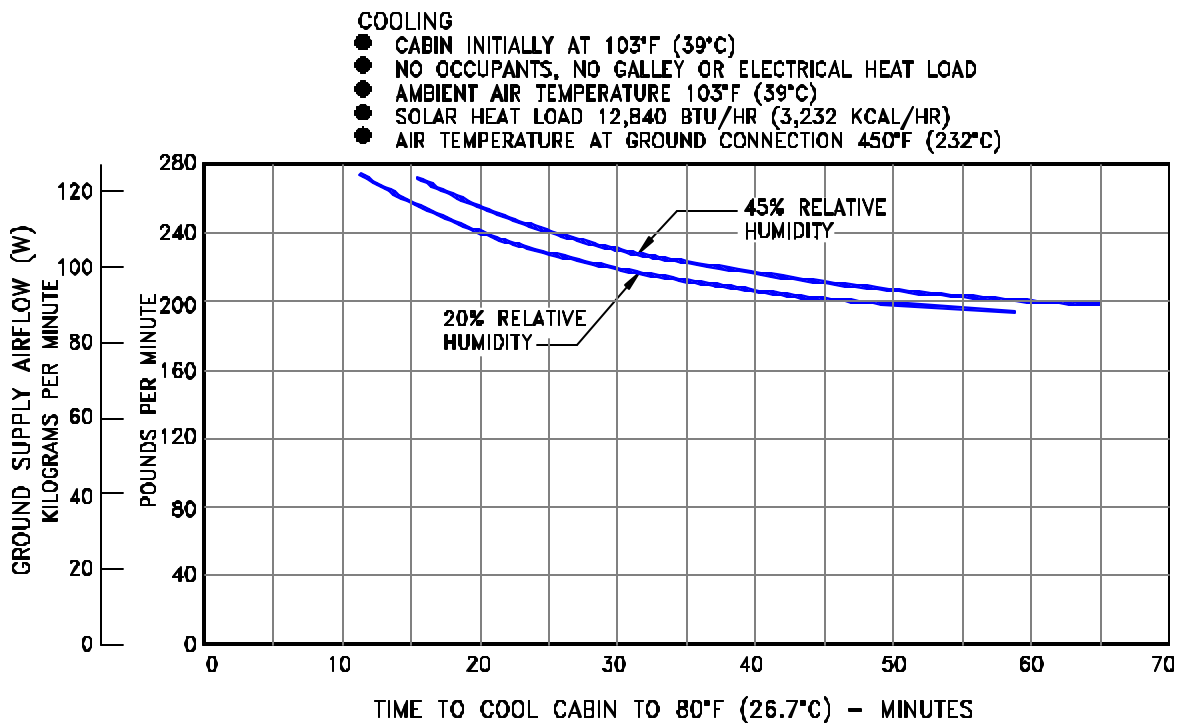
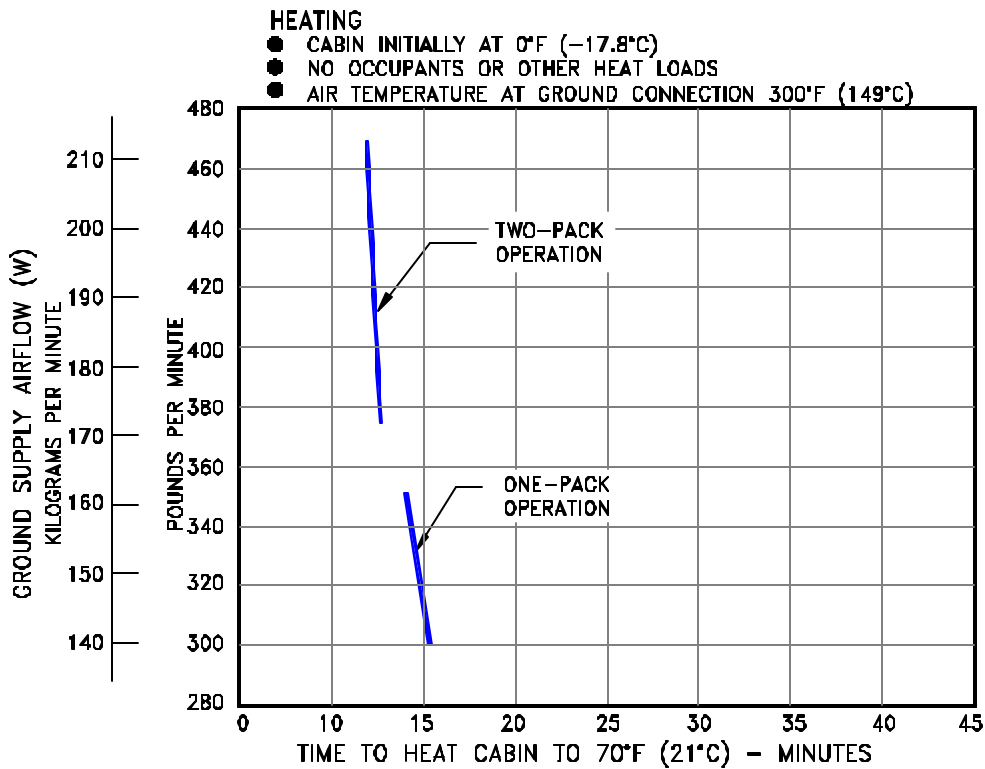


COOLING (PULL-DOWN)

- * CABIN INITIALLY AT 103°F (39°C)
- * NO OCCUPANTS, NO GALLEY OR ELECTRICAL HEAT LOAD
- * AMBIENT TEMPERATURE AT 103°F (39°C)
- * SOLAR HEAT LOAD 11,400 BTU/HR (2,870 KCAL/HR)
- * AIR TEMPERATURE AT GROUND CONNECTION 450°F (232°C)



5.6.2 GROUND PNEUMATIC POWER REQUIREMENTS - HEATING AND COOLING
MODEL 767-300, -300ER

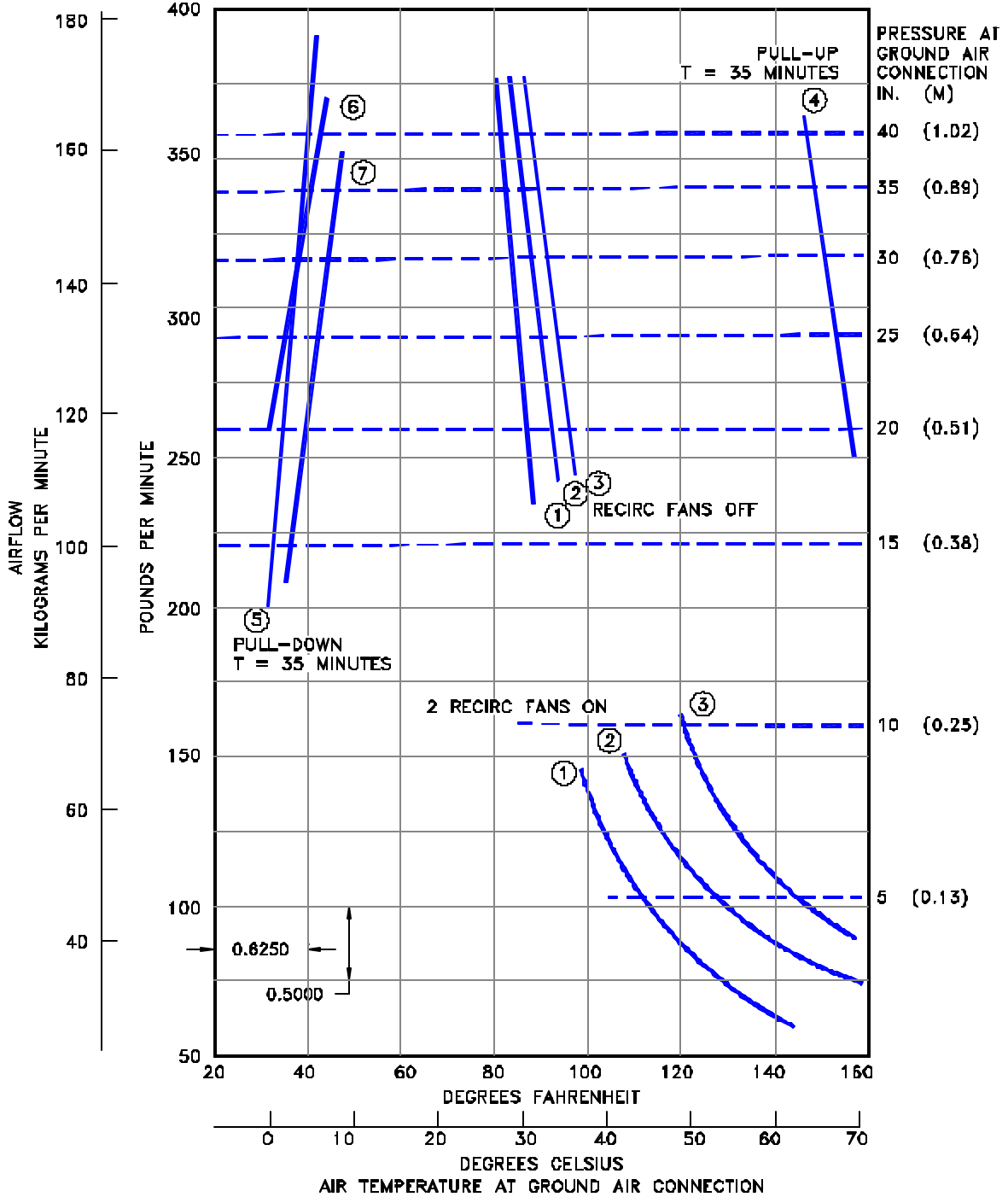


5.6.3 GROUND PNEUMATIC POWER REQUIREMENTS - HEATING AND COOLING
 MODEL 767-400ER

D6-58328

CONDITION	AMBIENT TEMPERATURE	SOLAR LOAD	ELECTRICAL LOAD	OCCUPANTS	CABIN TEMPERATURE
①	0°F (-17.8°C)	0	45 BTU/MIN (11.3 KCAL/MIN)	0	75°F (23.9°C)
②	-20°F (-29.0°C)	0		0	75°F (23.9°C)
③ ④	-40°F (-40.0°C)	0		0	75°F (23.9°C)
⑤ ⑥	103°F (39.0°C)	169.5 BTU/MIN (42.7 KCAL/MIN)	837 BTU/MIN (160.5 KCAL/MIN)	216	75°F (23.9°C)
⑦	103°F (39.0°C)				216

NOTE: ALL DOORS AND HATCHES CLOSED ON ALL CONDITIONS

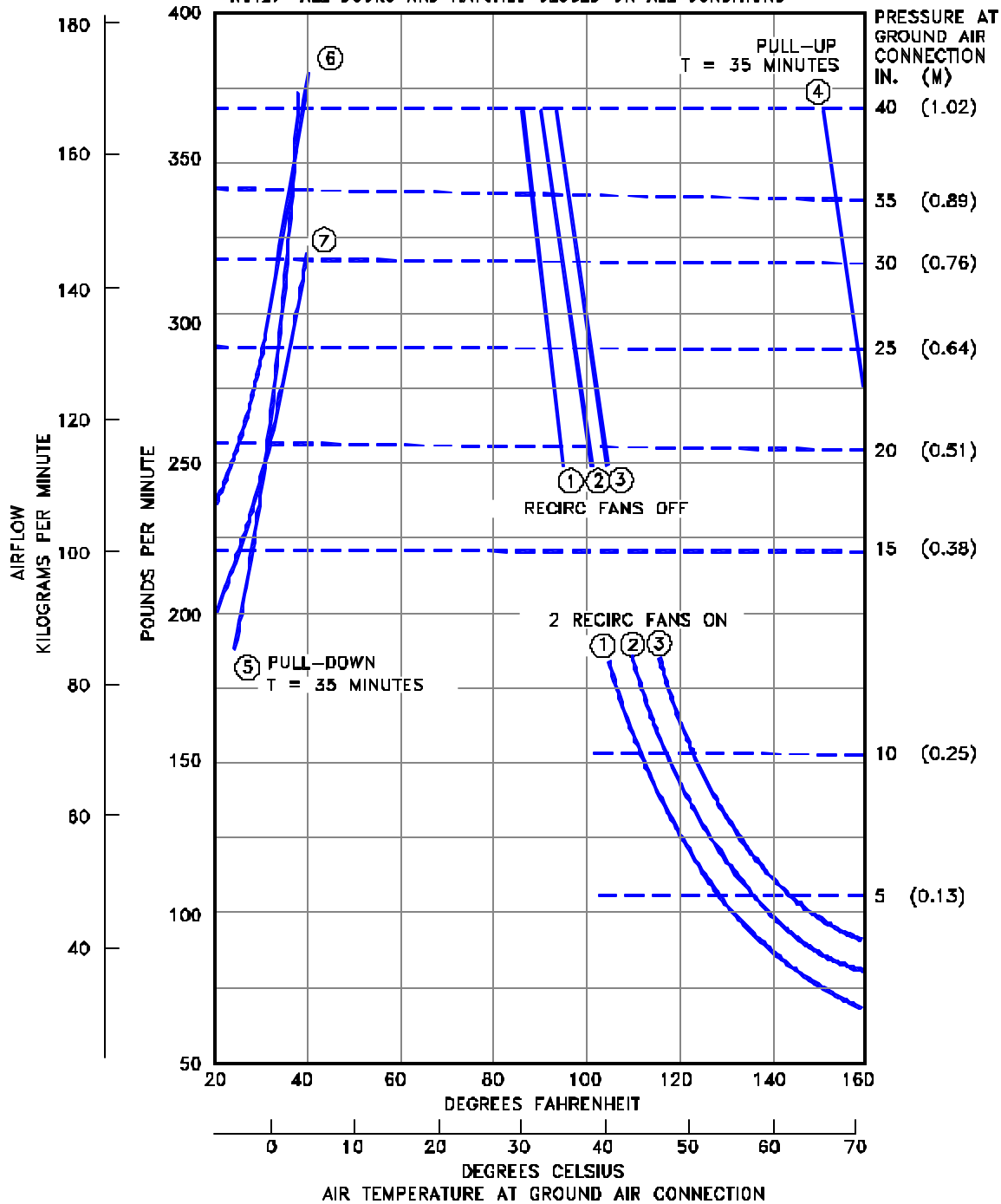


5.7.1 CONDITIONED AIR FLOW REQUIREMENTS – STEADY STATE

MODEL 767-200, -200ER

CONDITION	AMBIENT TEMPERATURE	SOLAR LOAD	ELECTRICAL LOAD	OCCUPANTS	CABIN TEMPERATURE
①	0°F (-17.8°C)	0	45 BTU/MIN (11.3 KCAL/MIN)	0	75°F (23.9°C)
②	-20°F (-29.0°C)	0		0	75°F (23.9°C)
③ ④	-40°F (-40.0°C)	0		0	75°F (23.9°C)
⑤ ⑥	103°F (39.0°C)	214 BTU/MIN (53.9 KCAL/MIN)	803 BTU/MIN (201.5 KCAL/MIN)	268	75°F (23.9°C)
⑦	103°F (39.0°C)			268	80°F (26.7°C)

NOTE: ALL DOORS AND HATCHES CLOSED ON ALL CONDITIONS



5.7.2 CONDITIONED AIR REQUIREMENTS – STEADY STATE

MODEL 767-300, -300ER, -300 FREIGHTER

D6-58328

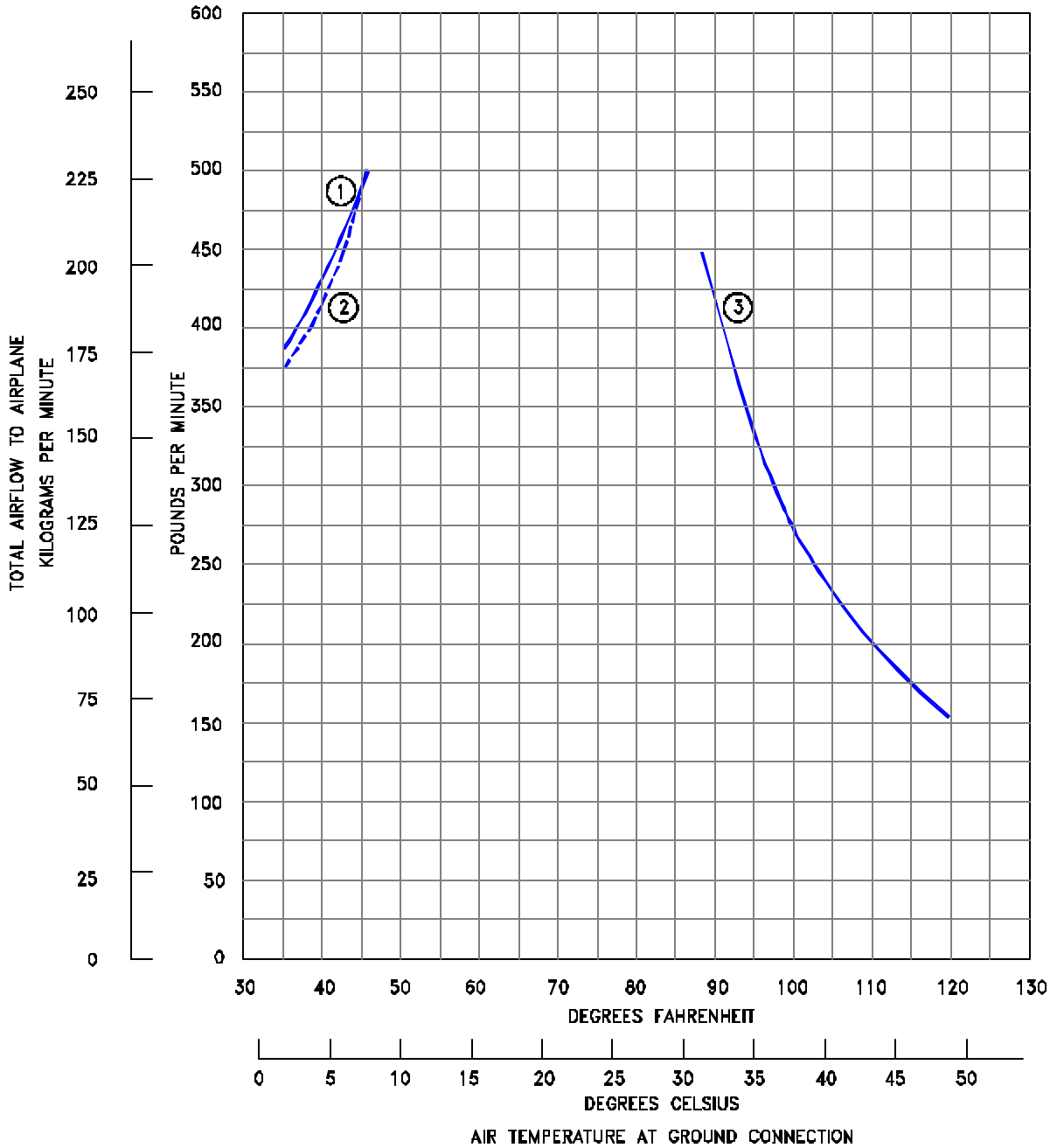
COOLING (1), (2)

- ALL EXTERIOR DOOR AND WINDOWS CLOSED
- OUTSIDE TEMPERATURE 103°F (39°C)
- FULL SOLAR AND ELECTRICAL HEAT LOADS
- RECIRCULATION FANS OFF
- CHILLERS ON
- 216 OCCUPANTS
- CABIN TEMPERATURE MAINTAINED AT 75°F (24°C)

- ① IFE ON
- ② IFE OFF

HEATING (3)

- ALL EXTERIOR DOORS AND WINDOWS CLOSED
- OUTSIDE TEMPERATURE -40°F (-40°C)
- NO SOLAR OR ELECTRICAL HEAT LOADS
- RECIRCULATION FANS OFF
- CHILLERS OFF
- NO OCCUPANTS
- CABIN TEMPERATURE MAINTAINED AT 75°F (24°C)

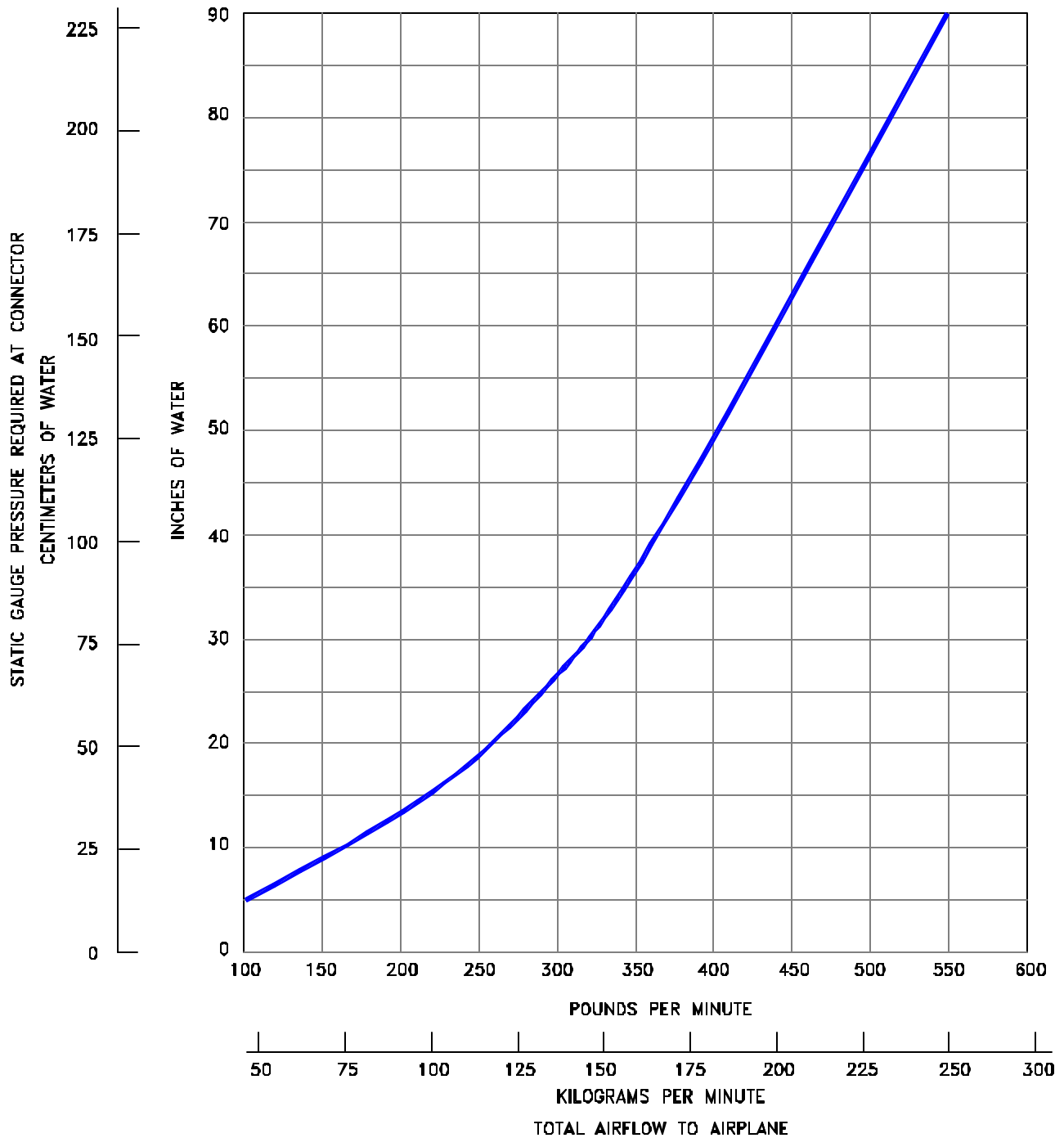


5.7.3 CONDITIONED AIR REQUIREMENTS

MODEL 767-400ER

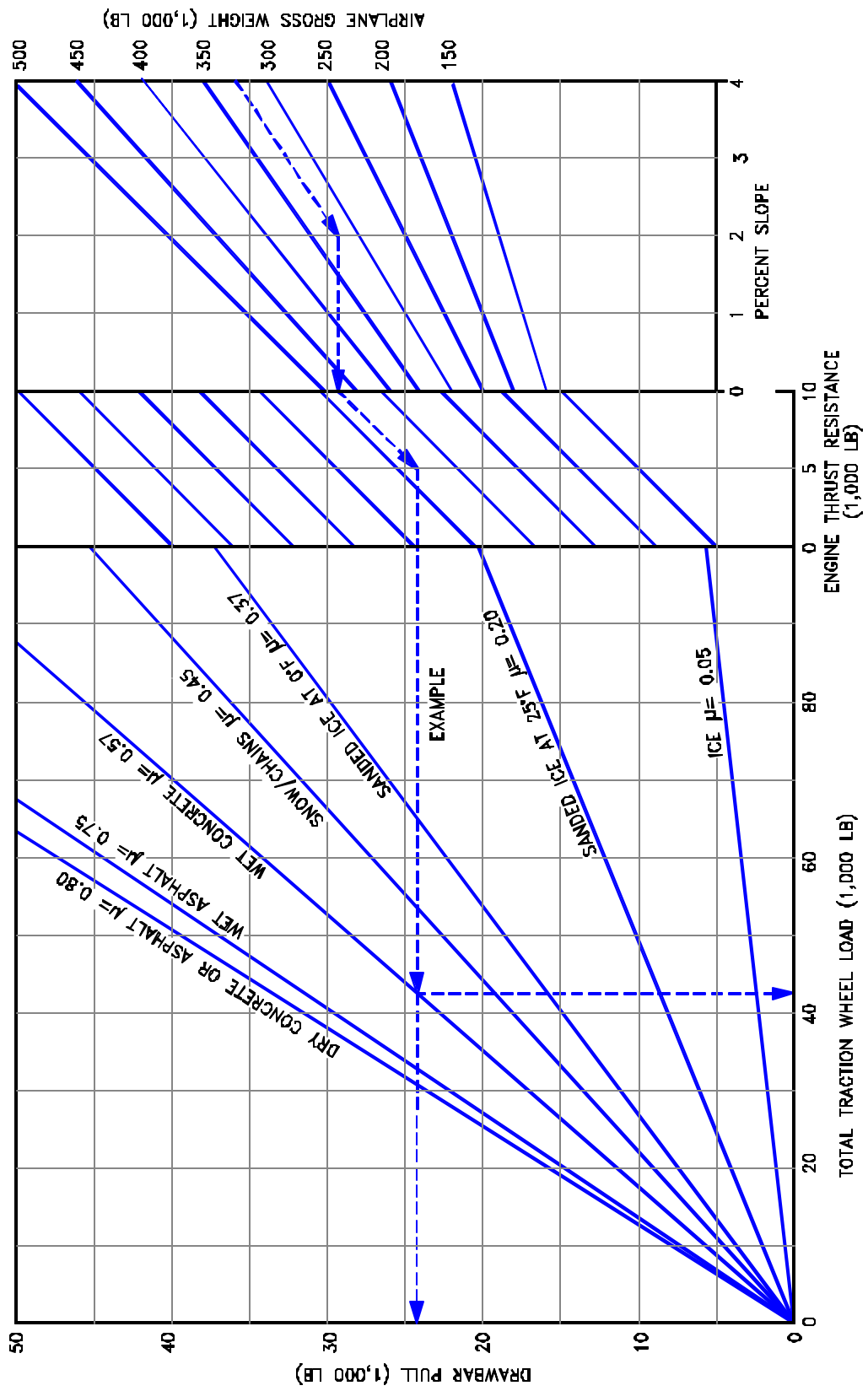
NOTE:

THE GRAPH ON THIS PAGE SHOWS THE STATIC PRESSURE GAGE AT THE CONNECTOR AS A FUNCTION OF AIRFLOW. THIS GRAPH IS USED IN CONJUNCTION WITH THE GRAPH IN SECTION 5.7.1 TO DETERMINE THE AIRFLOW AND PRESSURE REQUIREMENTS WHEN USING A CONDITIONED AIR GROUND SOURCE.



5.7.4 CONDITIONED AIR FLOW PRESSURE REQUIREMENTS
MODEL 767-400ER

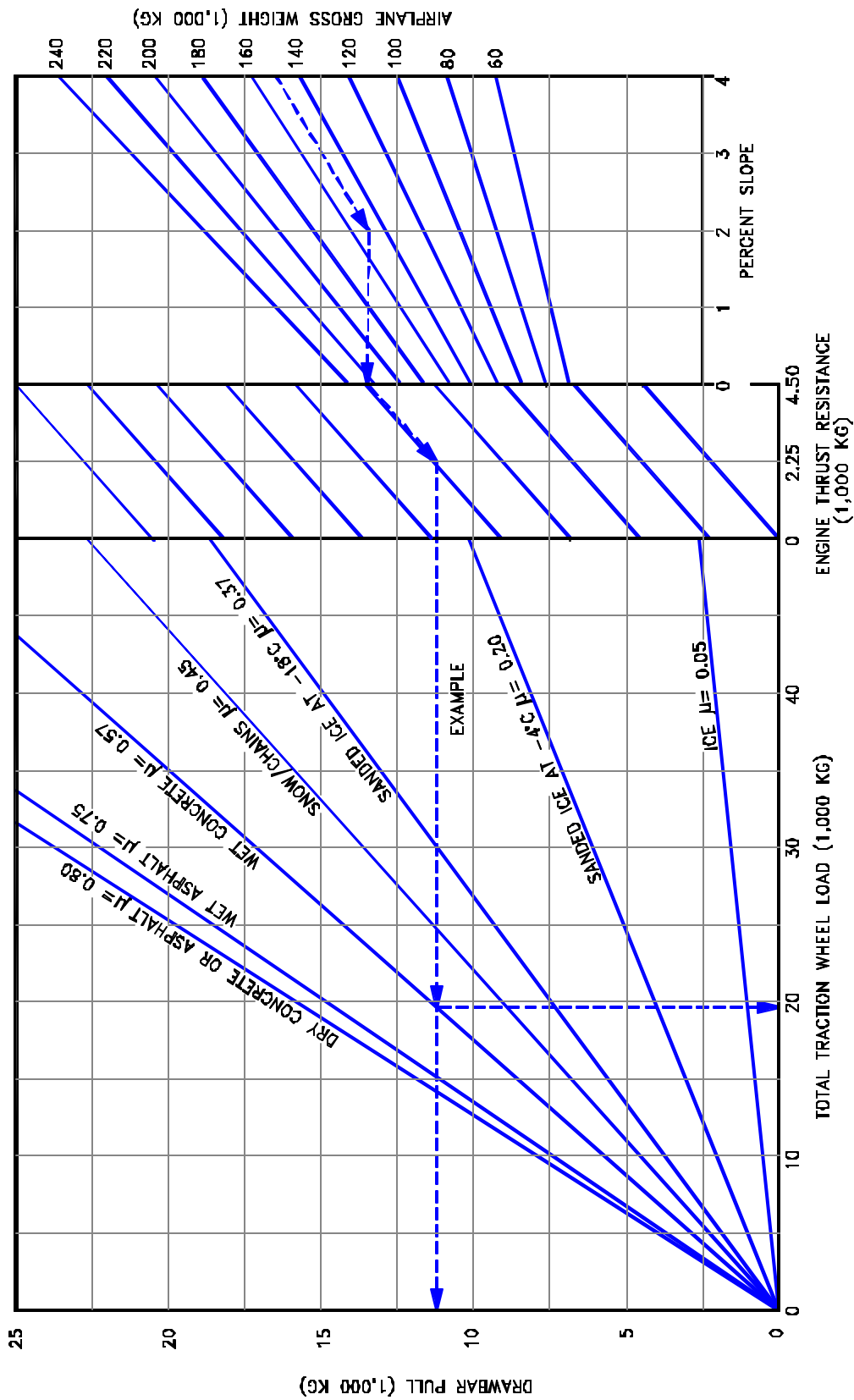
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EXAMPLE: A 767-300ER WEIGHING 325,000 LB BEING PUSHED UP A 2% SLOPE ON WET CONCRETE AGAINST TWO ENGINES AT IDLE THRUST (APPROX 5,000 LB OF THRUST) WILL REQUIRE APPROX 24,300 LB OF DRAWBAR PUSH AND A WHEEL TRACTION LOAD OF APPROX 42,700 LB

NOTES:
 1. STRAIGHT-LINE TOW
 2. UNUSUAL BREAKAWAY CONDITIONS NOT SHOWN
 3. COEFFICIENTS OF FRICTION (μ) ARE ESTIMATED FOR RUBBER-TIRED TOW VEHICLES

5.8.1 GROUND TOWING REQUIREMENTS - ENGLISH UNITS
 MODEL 767-200, -200ER, -300, -300ER, -300 FREIGHTER, -400ER



EXAMPLE: A 767-300ER WEIGHING 150,000 KG BEING PUSHED UP A 2% SLOPE ON WET CONCRETE AGAINST TWO ENGINES AT IDLE THRUST (APPROX .2250 KG OF THRUST) WILL REQUIRE APPROX 11,200 KG OF DRAWBAR PUSH AND A WHEEL TRACTION LOAD OF APPROX 19,750 KG

- NOTES:
1. STRAIGHT-LINE TOW
 2. UNUSUAL BREAKAWAY CONDITIONS NOT SHOWN
 3. COEFFICIENTS OF FRICTION (μ) ARE ESTIMATED FOR RUBBER-TIRED TOW VEHICLES

5.8.2 GROUND TOWING REQUIREMENTS - METRIC UNITS
 MODEL 767-200, -200ER, -300, -300ER, -300 FREIGHTER, -400ER