

AIRPLANE MODELS

ENGINE MODELS

TAKE-OFF, CLIMB & LANDING CHART

SPEC. AN-4-B
Dec. 11, 1942
FORM 832-510

P-40D,E

TAKE-OFF DISTANCE (IN FEET)

V-710-39(F-3R)

GROSS WEIGHT (IN LBS.)	HEAD WIND		HARD SURFACE RUNWAY								SOD-TURF RUNWAY						SOFT SURFACE RUNWAY					
			AT SEA LEVEL		AT 3,000 FT.		AT 6,000 FT.		AT SEA LEVEL		AT 3,000 FT.		AT 6,000 FT.		AT SEA LEVEL		AT 3,000 FT.		AT 6,000 FT.			
	MPH	KNOTS	GROUND RUN	TO CLEAR 50' OBJ.	GROUND RUN	TO CLEAR 50' OBJ.	GROUND RUN	TO CLEAR 50' OBJ.	GROUND RUN	TO CLEAR 50' OBJ.	GROUND RUN	TO CLEAR 50' OBJ.	GROUND RUN	TO CLEAR 50' OBJ.	GROUND RUN	TO CLEAR 50' OBJ.	GROUND RUN	TO CLEAR 50' OBJ.	GROUND RUN	TO CLEAR 50' OBJ.		
8700	0	0	1600	2700	1050	2300	2450	4150	1650	2750	2000	3350	2500	4200	1750	2850	2200	3500	2750	4350		
	20	17	1000	1900	1250	2350	1600	3000	1050	1350	1300	2400	1650	3050	1100	2000	1400	2500	1800	3250		
	40	35	550	1200	700	1550	350	2000	550	1200	750	1600	950	2000	600	1250	800	1650	1050	2100		
8100	0	0	1300	2200	1600	2800	2000	3300	1350	2250	1650	2650	2050	3350	1450	2350	1750	2350	2200	3500		
	20	17	500	1550	1000	1850	1300	2400	350	1000	1050	1300	1300	2400	900	1650	1100	1050	1450	2550		
	40	35	400	950	550	1150	750	1550	450	1000	550	1150	750	1550	450	1000	600	1200	600	1600		
7500	0	0	1050	1800	1300	2150	1600	2850	1100	1050	1350	2200	1650	2700	1150	1900	1400	2250	1750	2900		
	20	17	650	1200	800	1500	1000	1850	650	1200	800	1500	1050	1300	700	1250	900	1600	1100	1060		
	40	35	300	750	400	950	550	1200	300	750	450	1000	550	1200	350	800	450	1000	600	1250		

NOTE: INCREASE DISTANCE % FOR EACH 10°C ABOVE 0°C | % FOR EACH 20°F ABOVE 32°F | ENGINE LIMITS FOR TAKE-OFF 3000 RPM & 45.5 IN. HG

COMBAT MISSIONS USE 3000 RPM & 44.6 IN. HG

CLIMB DATA

FERRY MISSIONS USE 2300 RPM & 28 IN. HG

GROSS WEIGHT IN LBS.	TYPE OF CLIMB	S. L. TO		FT. ALT.		FT. ALT.		FT. ALT.		FT. ALT.		FT. ALT.		FT. ALT.		BLOWER CHANGE													
		BEST I.A.S.	FT/MIN	BEST I.A.S.	FT/MIN	BEST I.A.S.	FT/MIN	BEST I.A.S.	FT/MIN	BEST I.A.S.	FT/MIN	BEST I.A.S.	FT/MIN	BEST I.A.S.	FT/MIN														
		MPH	KNOTS	MPH	KNOTS	MPH	KNOTS	MPH	KNOTS	MPH	KNOTS	MPH	KNOTS	MPH	KNOTS														
8700	COMBAT	145	126	1850	1.6	150	130	1800	5.5	30	25	140	122	1100	9.5	38	32	135	117	650	15.3	46	38	130	113	250	26.1	60	
	FERRY	135	117	700	4.4	140	122	700	14.5	33	28	140	122	650	21.9	42	35	130	113	400	31.3	51	43						
8100	COMBAT	145	126	2050	1.4	150	130	2000	4.8	29	24	140	122	1250	8.3	35	29	135	117	800	13.2	43	36	130	113	400	21.6	53	
	FERRY	135	117	800	3.7	140	122	800	12.2	30	25	140	122	800	18.4	38	32	130	113	500	26.0	45	37						
7500	COMBAT	145	126	2300	1.3	150	130	2250	4.4	28	23	140	122	1400	7.2	34	28	135	117	950	11.4	40	33	130	113	550	18.1	48	
	FERRY	135	117	950	3.2	140	122	950	10.4	28	23	140	122	950	16.2	35	29	130	113	650	22.0	41	34						

NOTE: INCREASED ELAPSED CLIMBING TIME % FOR EACH 10°C ABOVE 0°C FREE AIR TEMPERATURE | % FOR EACH 20°F ABOVE 32°F | FUEL INCLUDES WARM-UP AND TAKE-OFF ALLOWANCE

LANDING DISTANCE (IN FEET)

GROSS WEIGHT IN LBS.	BEST I.A.S. APPROACH		HARD DRY SURFACE								FIRM DRY SOD						WET OR SLIPPERY					
			AT SEA LEVEL		AT 3,000 FT.		AT 6,000 FT.		AT SEA LEVEL		AT 3,000 FT.		AT 6,000 FT.		AT SEA LEVEL		AT 3,000 FT.		AT 6,000 FT.			
	MPH	KNOTS	TO CLEAR 50' OBJ.	GROUND ROLL	TO CLEAR 50' OBJ.	GROUND ROLL	TO CLEAR 50' OBJ.	GROUND ROLL	TO CLEAR 50' OBJ.	GROUND ROLL	TO CLEAR 50' OBJ.	GROUND ROLL	TO CLEAR 50' OBJ.	GROUND ROLL	TO CLEAR 50' OBJ.	GROUND ROLL	TO CLEAR 50' OBJ.	GROUND ROLL	TO CLEAR 50' OBJ.	GROUND ROLL		
8400	90	78	1750	1100	1850	1200	2000	1300	1850	1200	1950	1300	2100	1400	3100	2450	3350	2700	3650	2950		
7500	84	73	1550	950	1700	1050	1800	1150	1650	1050	1800	1150	1900	1250	2800	2200	3000	2350	3250	2600		

NOTE: FOR GROUND TEMPERATURES ABOVE 35°C (95°F) INCREASE APPROACH I.A.S. 10% AND ALLOW 20% INCREASE IN GROUND ROLL.

REMARKS * For five minutes only - then use 2600 RPM & 38.5 IN. HG

- I.A.S.: Indicated Air Speed
- M.P.H.: Miles Per Hour
- S.L.: Sea Level
- U.S.: U. S. Gallons
- IMP.: Imperial Gallons
- NOTE: All Distances are Average
- RED FIGURES HAVE NOT BEEN FLIGHT CHECKED