

AIRPLANE CHARACTERISTICS & PERFORMANCE

BUREAU OF AERONAUTICS, NAVY DEPT.

COLUMN NUMBER			1	2		
LOADING CONDITION			RESEARCH AIRPLANE	RESEARCH AIRPLANE		
GROSS WEIGHT	LBS.		8929	9481		
EMPTY WEIGHT	LBS.		7349	7349		
FUEL / OIL	GALS.		138/3.5	230/3.5		
FIXED GUNS/AMMUNITION			None			
FLEXIBLE GUNS/AMMUNITION			None			
ENGINE POWER USED FOR PERFORMANCE			MILITARY	NORMAL		
WING LOADING	LBS./SQ.FT.					
POWER LOADING ①	LBS./BHP.					
V-MAX. SEA LEVEL	KN.		549			
V-MAX./ CRITICAL ALT.	KN./FT.		522			
V-STALL GROSS WEIGHT ②	KN.			111.5		
V-STALL. WITHOUT FUEL ②	KN.			103.2		
TIME-TO-CLIMB -10000 FT.-	MIN.		1.4			
TIME-TO-CLIMB -20000 FT.-	MIN.		3.0			
SERVICE CEILING	FT.		49600			
TAKE-OFF DISTANCE -CALM-	FT.			2125		
TAKE-OFF DISTANCE -15 KN-	FT.			1647		
TAKE-OFF DISTANCE -25 KN-	FT.			1367		
TAKE-OFF DISTANCE -50 FT. OBST.	FT.					
TAKE-OFF TIME	SECONDS					
RATE OF CLIMB -SL-	FT./MIN.		7980			
MAX. RANGE / V-AV. ③	N MI./KN.					
RANGE / V-AV. -60%NSP-③-	N MI./KN.					
SEARCH RADIUS / V-AV. -20%R-	N MI./KN.					
A.S.W. RADIUS / V-AV. -20%R-	N MI./KN.					
SCOUT RADIUS	N MI.					
COMBAT RADIUS	N MI.					

ENGINE / PROP. GEAR RATIO G.E. TG-180 TURBO JET ENGINE

ENGINE RATING BHP/RPM/ALT.	MILITARY	NORMAL
	4000# Static Thrust/7600 RPM/SL	3340# Static Thrust/7300 RPM/SL

TANKAGE IN GALLONS OIL FUEL ARMAMENT - None

AUX. FIXED	PROTECTED	OIL	FUEL	Performance is based on calculations.
	UNPROTECTED	3.5	230	
TOTAL - FIXED INTERNAL	3.5	230		Condition (1) represents the airplane when 40% of the fuel of Condition (2) has been burned.
DROPPABLE				Note: Gross weight includes 500 pounds of test equipment.
DROPPABLE				
TOTAL	3.5	230		

NOTE	① BHP AT MAX. CRIT. ALT.
	② STALL - WITHOUT POWER
	③ AT ALTITUDE

DATE 1 MAY 1947

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MODEL D-558-I

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Endurance at maximum speed.

Endurance is 13.7 minutes for maximum speed run ($V=504$ kn.) at 30,000 ft. altitude, computed in accordance with the following sequence of operations and with the initial gross weight and fuel of Condition (2).

Warm-up - 30 secs. at rated T.O. thrust.

Take-off - 1 min. at rated T.O. thrust.

Accelerate from $V_{T.O.}$ TO V climb at military thrust.

Climb from S.L. to 30,000 ft. altitude at military thrust.

Accelerate from V climb to V_{max} at 30,000 ft. altitude at military thrust.

Maximum speed run at 30,000 ft. altitude.

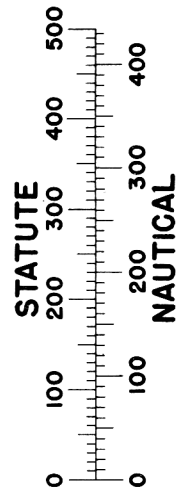
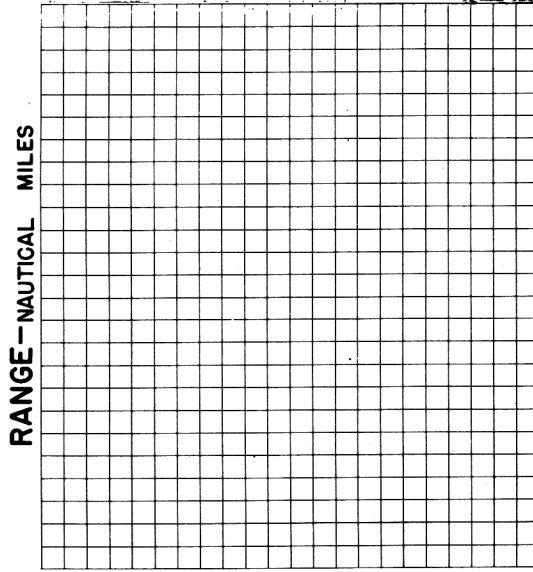
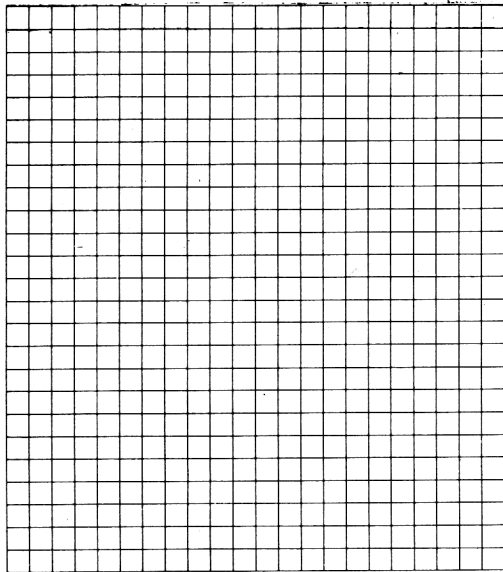
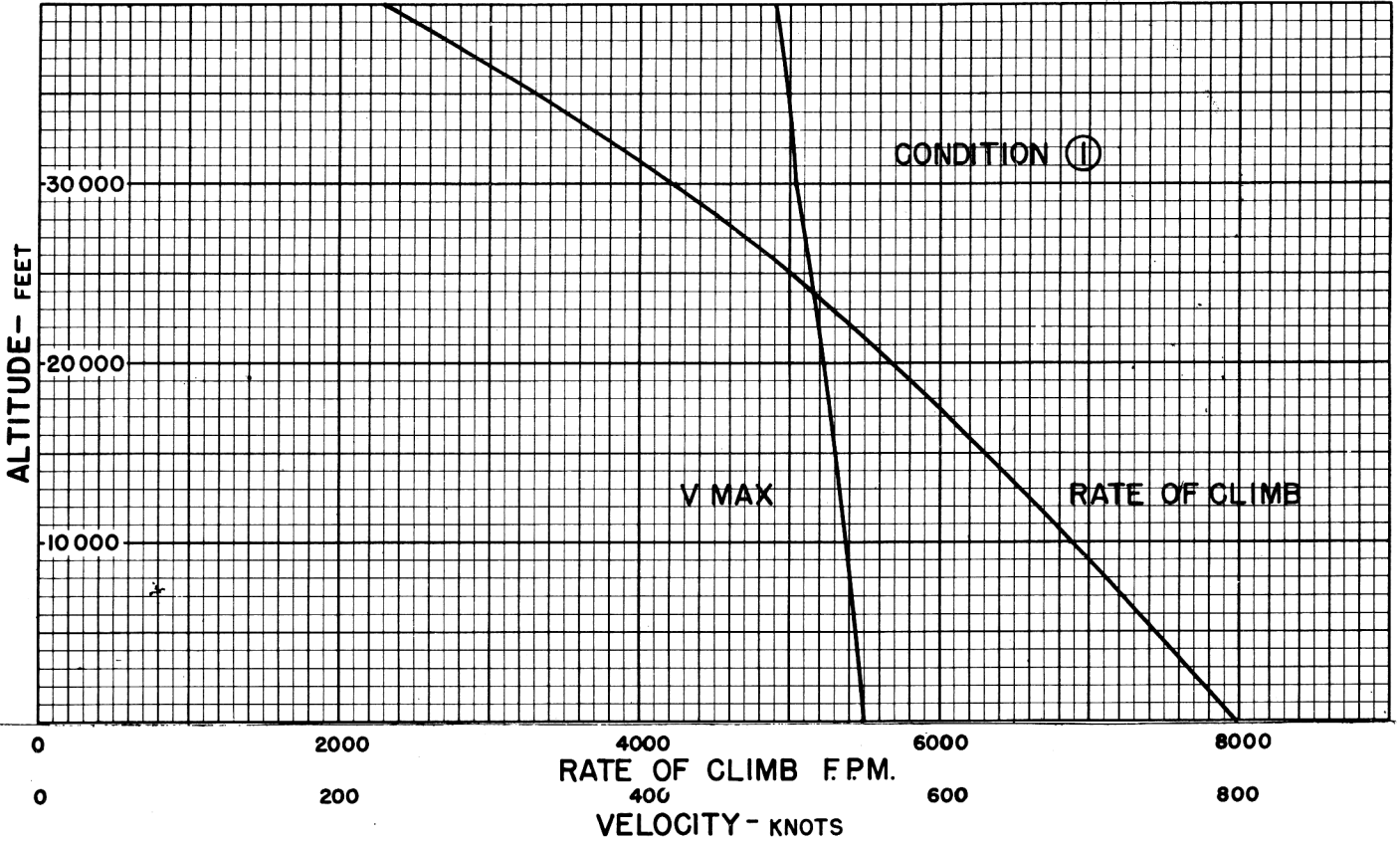
Descend to 10,000 ft assuming no fuel used.

Rendezvous at V for maximum endurance, normal thrust, at 10,000 ft. altitude for 15 min. (Includes reserve fuel).

AIRPLANE PERFORMANCE

NAVAER - 1335 C (REV. 2-47)

BUREAU OF AERONAUTICS, NAVY DEPT.



AV. VELOCITY - KNOTS

○ LOADING CONDITION COLUMN NUMBER

BUREAU OF AERONAUTICS
NAVY DEPARTMENT

WING AREA - 150 SQ. FT.
WING SECTION - N.A.C.A. 65, -110
M.A.C. - 74.5

