ISSUE OF 4 PAGES

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-	NMI./KN.				
A.S.W. RADIUS / V-AV. -20%R-	NMI./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: 4000# Static Thrust/7600 RPM/SL

NORMAL: 3340# Static Thrust/7300 RPM/SL

TANKAGE IN GALLONS		OIL	FUEL
FIXED	PROTECTED		
	UNPROTECTED	3.5	230
	TOTAL - FIXED INTERNAL	3.5	230
AUX.	DROPPABLE		
	DROPPABLE		
TOTAL		3.5	230

NOTE

(1) BHP AT MAX. CRIT. ALT.
(2) STALL – WITHOUT POWER
(3) AT ALTITUDE

ARMAMENT - None

Performance is based on calculations.

Condition (1) represents the airplane when 40% of the fuel of Condition (2) has been burned.

Note: Gross weight includes 500 pounds of test equipment.

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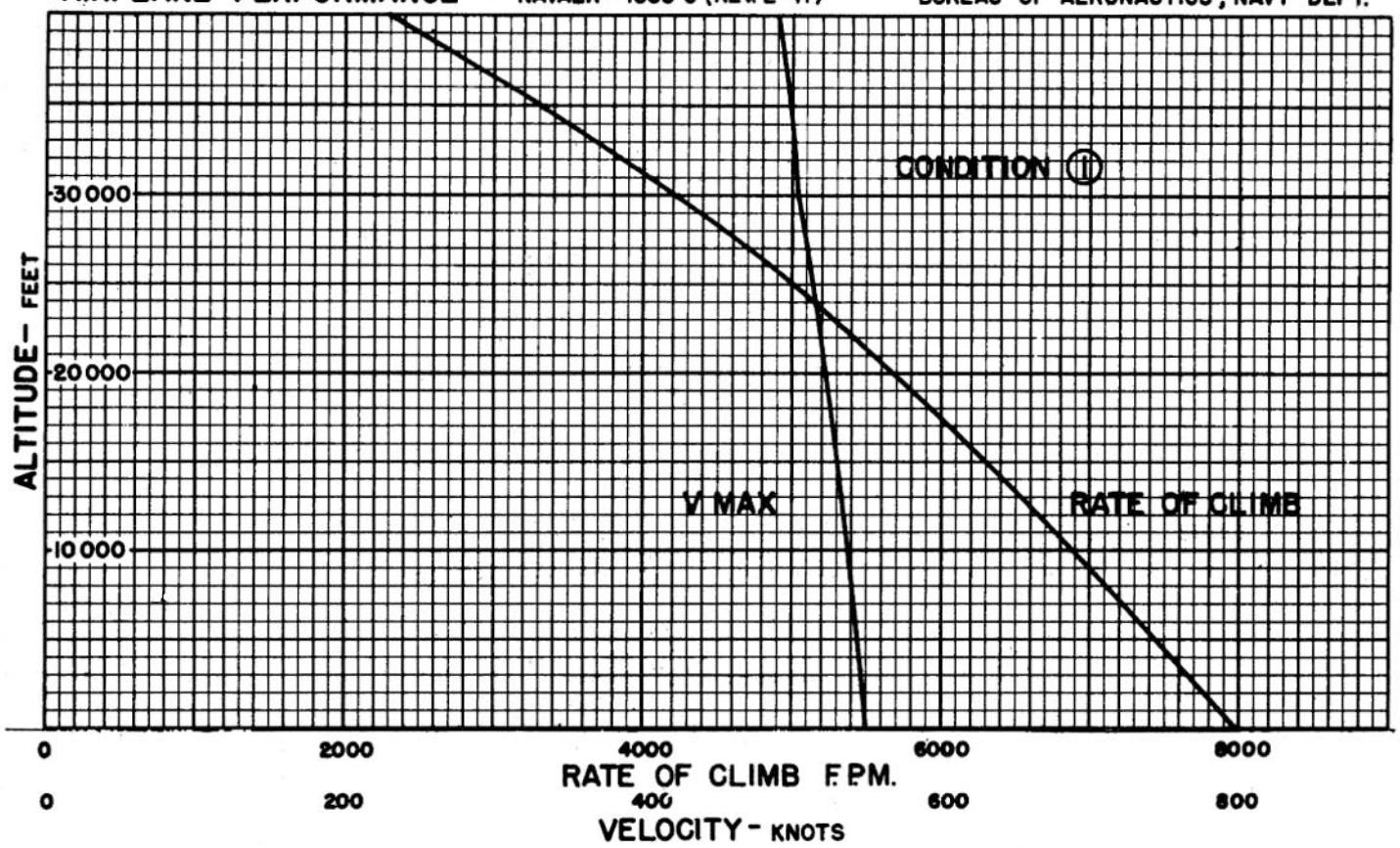
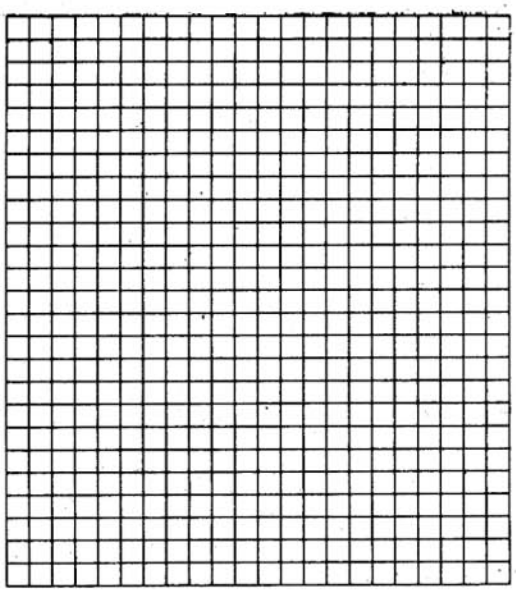
Endurance at maximum speed.

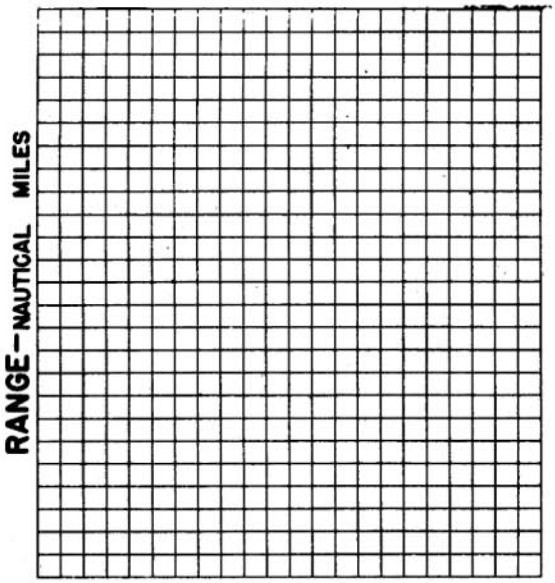
Endurance is 13.7 minutes for maximum speed run (V=504 kn.) at 30,000 ft. altitude, computed in accordance with the following sequence of operations and with the initial gross weight and fuel of Condition (2).

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