

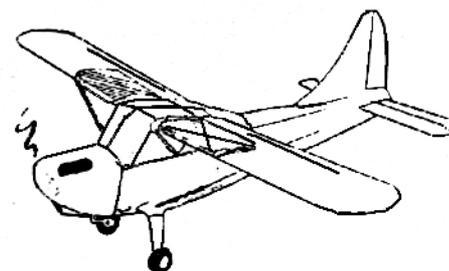
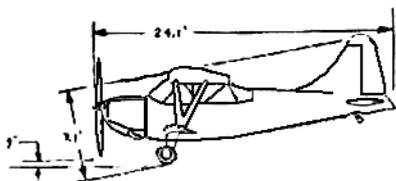
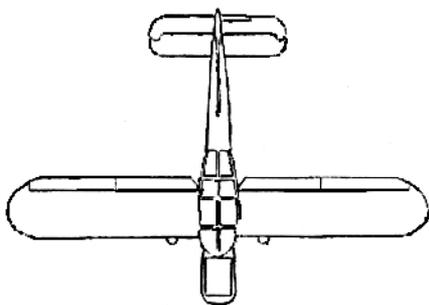
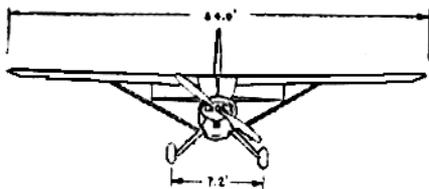


STANDARD AIRCRAFT CHARACTERISTICS OY-2 "SENTINAL"

CONSOLIDATE -VULTEE

Standard Aircraft Characteristics NAVAER 1335A (REV. 1-49)

Standard Aircraft Characteristics NAVAER 1335B (REV. 1-1-49)



 Fuel (Gal)

 Oil (Gal)

POWER PLANT

NO. & MODEL.....(1)0-435-11
 MFR.....Lycoming
 RED.GEAR RATIO...Direct Drive
 PROP.MFR.....Koppers
 PROP. HUB NO.....220
 NO. BL./DIA.....2/7' -1"

RATINGS

	BHP @	RPM @	ALT.
T.O.	190	2,550	S.L.
NORM.	190	2,550	S.L.

MISSION AND DESCRIPTION

AIR FORCE EQUIVALENT: L-5G

The principal mission of the OY-2 is short range liaison. The airplane can also be converted into an ambulance or cargo-carrier by folding down the back of the observers seat and removing the rear control stick.

The landing gear is a fixed cantilever type, with a fixed steerable tail wheel. Flight controls are operated manually and wheel brakes hydraulically. The electrical system is 24 volt. Provisions are made for the installation of floats. Normal crew consists of pilot and observer.

WEIGHTS

LOADINGS	LBS.	L.F
EMPTY.....	1,600.....	
BASIC.....	1,626.....	
DESIGN.....	2,020.....	6.7....
MAX.T.O.....	2,265.....	6.0....
MAX.LAND.....	2,265.....	

All weights are actual.

FUEL AND OIL

No. Tanks	Tot. Gal.	Location
2	36	Wing

FUEL GRADE.....80
 FUEL SPEC...MIL-F-572

OIL

CAPACITY(Gals.).....3
 GRADE.....1100
 SPEC.....MIL-O-6082

FEATURES

1 Litter or 200 lbs. cargo
 5 Message Containers
 Type A-1 Message pick-up
 K-20 Camera (Prov.)

DIMENSIONS

WING
 AREA.....155 sq.ft.
 SPAN.....34' -0"
 M.A.C.....4' -9"
 LENGTH.....24' -1"
 HEIGHT.....7' -1"
 TREAD.....7' -2"
 PROP.GRD.CLEARANCE.....9"

ELECTRONICS

COMMAND SET.....SCR-274N

Alternate Provisions

RADIO SET.....SCR-610
 or AN/ARC-3

PERFORMANCE SUMMARY

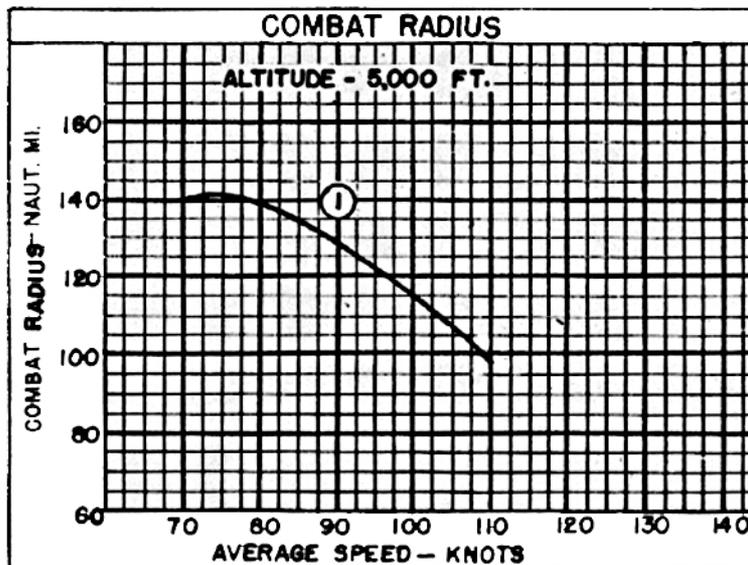
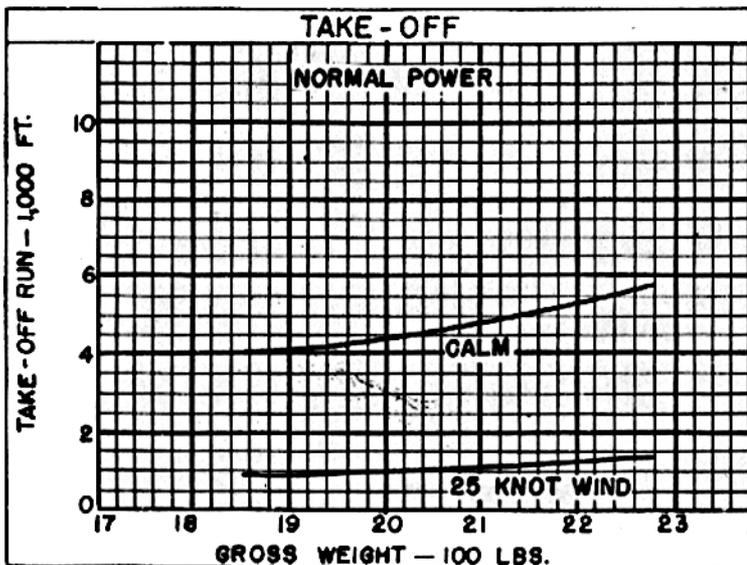
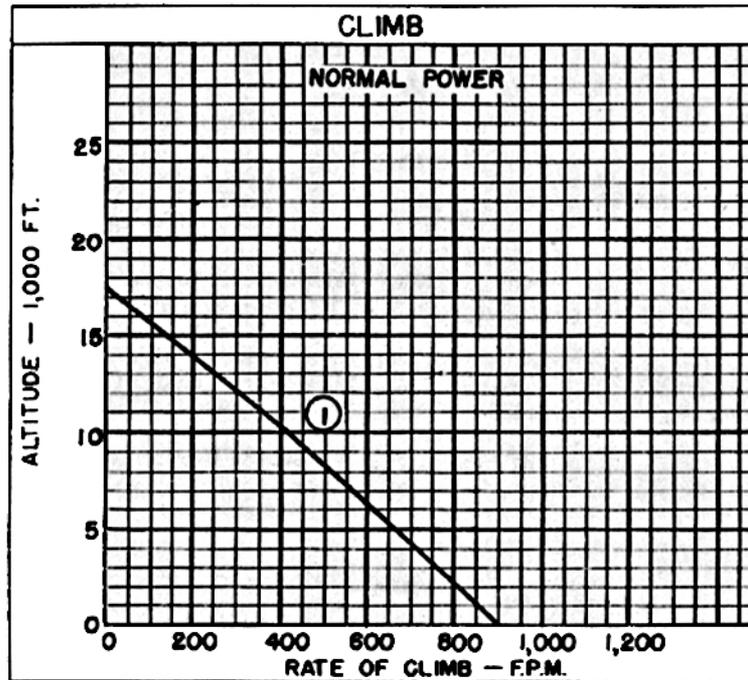
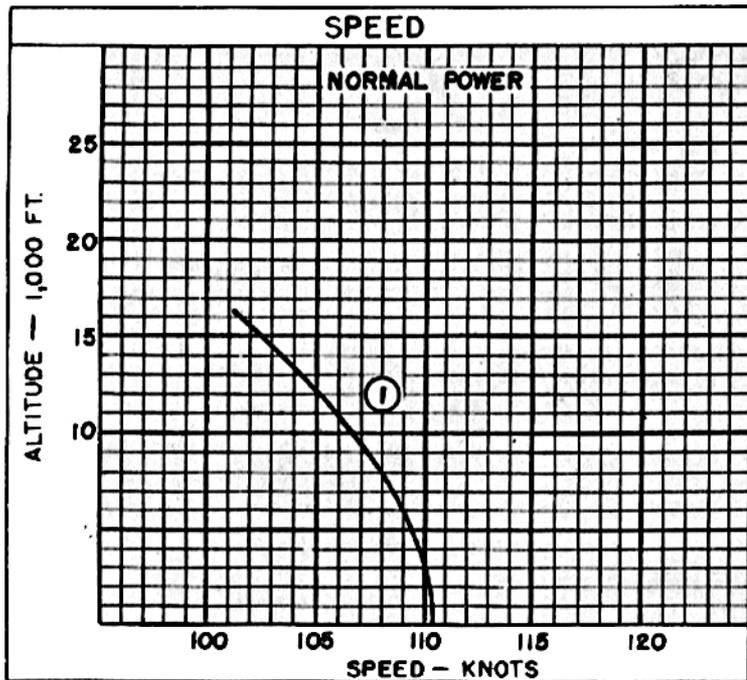
TAKE-OFF LOADING CONDITION	(1) LIAISON	(2) RECONNAISSANCE	(3) EVACUATION	(4) FERRY RANGE
TAKE-OFF WEIGHT lb.	2,265	2,265	2,065	2,065
Fuel lb.	216	216	216	216
Payload lb.	-	-	-	-
Wing loading lb./sq.ft.	14.6	14.6	13.3	13.3
Stall speed - power-off kn.	45.0	45.0	43.0	43.0
Take-off run at S.L. - calm (A) ft.	570	570	465	465
Take-off run at S.L. 25 kn. wind (A) ft.	135	135	110	110
Take-off to clear 50 ft. - calm (A) ft.	910	910	730	730
Max. speed/altitude (A) kn./ft.	110/S.L.	110/S.L.	113/S.L.	113/S.L.
Rate of climb at S.L. (A) fpm	900	900	1,050	1,050
Time: S.L. to 10,000 ft. (A) min.	18.3	18.3	12.4	12.4
Time: S.L. to service ceiling (A) min.	29.4	29.4	27.3	27.3
Service ceiling (100 fpm) (A) ft.	15,600	15,600	17,450	17,450
Combat range n.mi.	310	310		325
Average cruising speed kn.	79	79		78
Cruising altitude(s) ft.	5,000	5,000		5,000
Combat radius n.mi.	140	156	145	
Average cruising speed kn.	79	79	78	
Mission time hrs.	3.6	4.0	3.7	
COMBAT LOADING CONDITION				
COMBAT WEIGHT lb.				
Engine power				
Fuel lb.				
Combat speed/combat altitude kn./ft.				
Rate of climb/combat altitude fpm/ft.				
Combat ceiling (500 fpm) ft.				
Rate of climb at S.L. fpm				
Max. speed at S.L. kn.				
Max. speed/altitude kn./ft.				
LANDING WEIGHT lb.				
Fuel lb.				
Stall speed - power-off kn.				
Stall speed - with approach power kn.				

NOTES

(A) NORMAL RATED POWER

PERFORMANCE BASIS: Flight test

Range and radius are based on flight test fuel consumption increased by 5%.



○ LOADING CONDITION COLUMN NUMBER

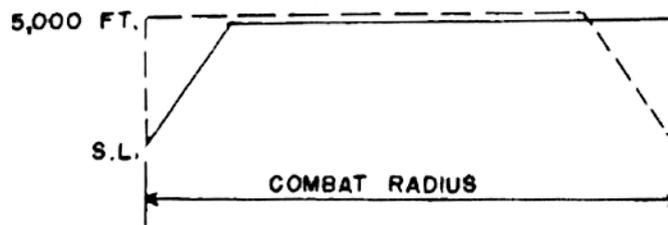
STANDARD AIRPLANE PERFORMANCE NUMBER 13395 (REV. 2-50)

NOTES

MISSION TIME = TOTAL TIME FOR CLIMB, CRUISE-OUT AND CRUISE-BACK

COMBAT RADIUS PROBLEM - LIAISON

WARM-UP, TAXI, TAKE-OFF: Fuel allowance for 5 minutes at normal rated power at sea level.
 CLIMB: To 5,000 feet at normal rated power.
 CRUISE-OUT: At speed for long range at 5,000 feet.
 LAND: At sea level base (No fuel consumed, no distance gained).
 WARM-UP, TAXI, TAKE-OFF: Fuel allowance for 5 minutes at normal rated power at sea level.
 CLIMB: To 5,000 feet at normal rated power.
 CRUISE-BACK: At speed for long range at 5,000 feet.
 RESERVE: Fuel allowance for 20 minutes at speed for long range at sea level plus 5 percent of initial fuel.



CHARACTERISTICS SUMMARY

BASIC MISSION
OY-2


PERFORMANCE

COMBAT RADIUS	COMBAT RANGE	SPEED
140 naut. mi. 79 knots avg. 5,000 ft. altitude	310 naut. mi. 79 knots avg. 5,000 ft. altitude	110 knots at S.L. ft. knots at ft. knots at ft. T.O. Weight Normal Power
CLIMB	CEILING	TAKE OFF
900 ft./min. Sea Level, T. O. wt. Normal Power	15,600 ft. 100 ft./min., T. O. wt. Power	570 ft. - calm No assist 910 ft. - calm Over 50 ft. - No assist
LOAD	WEIGHTS	STALLING SPEED
Fuel 36 gal. fixed 36 drop	Empty 1,600 lbs. Combat - - - lbs. Take-off 2,265 lbs.	45.0 knots Flaps down, T. O. wt.
		TIME TO CLIMB
		ft. in min. Combat Wt., Max. Power

NOTES

Performance basis: Flight test
Range and radius are based on flight

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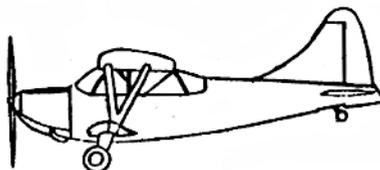
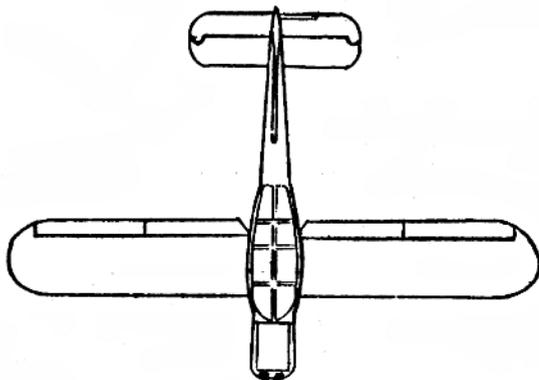
NAVAER-15198 (Rev. 10-51)

CHARACTERISTICS SUMMARY

LIAISON

OY-2

CONSOLIDATED-VULTEE "SENTINEL"



WING AREA 155 sq. ft.
WING SPAN 34' -0"

LENGTH 24' -1"
HEIGHT 7' -1"

AVAILABILITY			PROCUREMENT			
NUMBER AVAILABLE			NUMBER DELIVERED IN FISCAL YEARS			
ACTIVE	RESERVE	TOTAL				

STATUS	
First Flight-	- - - - - June 1948
Service Use -	- - - - - January 1949

ENGINES			
2 Lycoming O-435-11			
	<u>BHP</u>	<u>@ RPM</u>	<u>@ ALT</u>
T.O.	190	2550	S.L.
NORM.	190	2550	S.L.

FEATURES
Crew - 2
1 litter or 200 lbs. cargo
5 message containers
Type A-1 message pick-up
K-20 Camera (Prov.)
24 Volt Electrical Sys.
Max. fuel capacity....
..... 36 gal.

ARMAMENT
NONE

NAVAER 1519 A (REV. 1-49) 51 35807