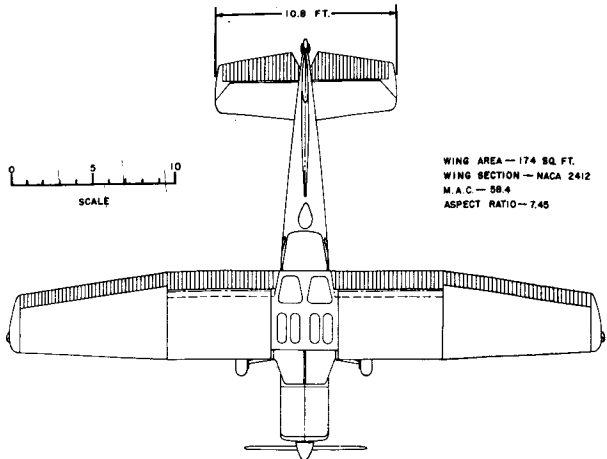


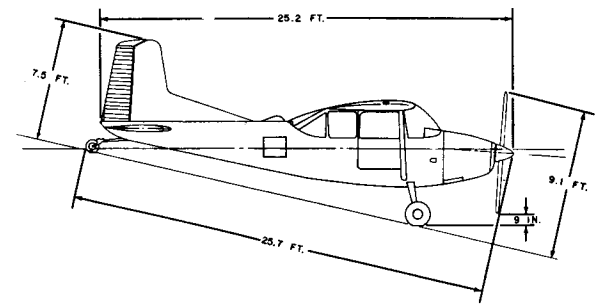
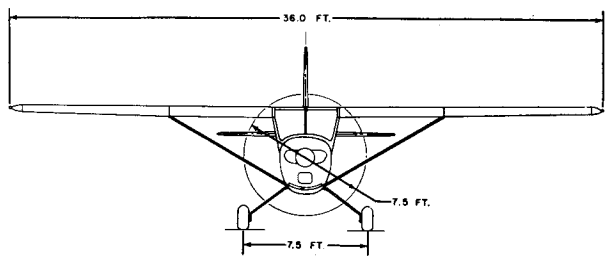
# STANDARD AIRCRAFT CHARACTERISTICS MODEL O-1C

CESSNA

Published by direction of the Commander of the Naval Air Systems Command

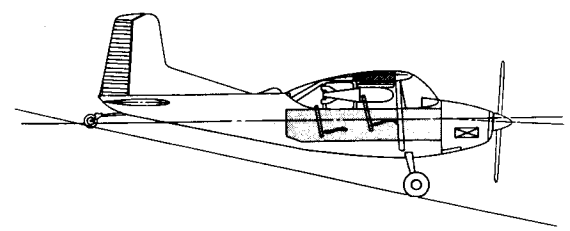
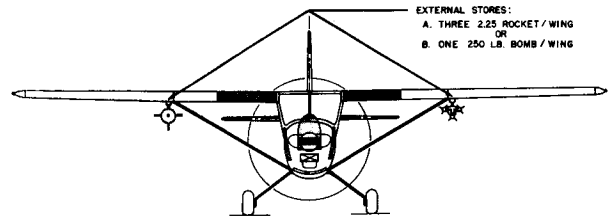
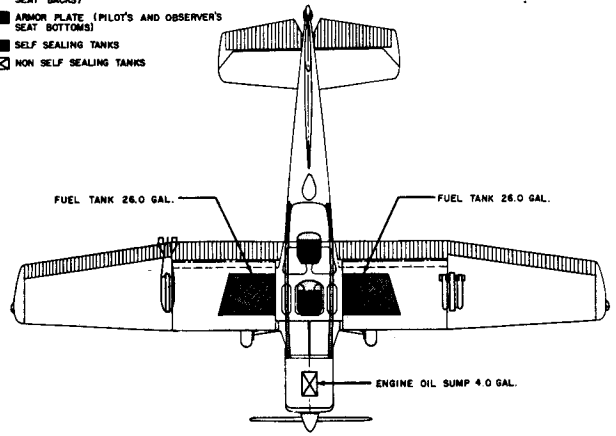


WING AREA — 174 SQ. FT.  
 WING SECTION — NACA 2412  
 M.A.C. — 58.4  
 ASPECT RATIO — 7.45



DESCRIPTIVE ARRANGEMENT

- PROTECTION
- FLAK CURTAIN (CABIN SIDE WALLS FROM FIREWALL TO AFT END OF BAGGAGE COMPARTMENT AND PILOT'S AND OBSERVER'S SEAT BACKS)
  - ARMOR PLATE (PILOT'S AND OBSERVER'S SEAT BOTTOMS)
  - SELF SEALING TANKS
  - NON SELF SEALING TANKS



ARMAMENT AND TANKAGE

2

**POWER PLANT**

NO. & MODEL.....O-470-2  
 MFR.....Continental  
 RED.GEAR RATIO.....Direct Drive  
 PROP.MFR.....McCaughey  
 PROP.BLADE DES.NO.....2A36C1/90M-0  
 NO.BL./DIA.....2/7.5'

**RATINGS**

	<u>BHP</u>	<u>@ RPM</u>	<u>@ ALT.</u>
T.O.	265	2,600	S.S.L.
NORM.	250	2,600	S.S.L.

SPEC. NO. 1378e

**MISSION AND DESCRIPTION**

The basic mission of the OE-2 airplane is short range liaison.

The airplane has an all-metal, high wing, adjustable stabilizer, constant-speed propeller, controllable cowl flaps, armor plate on bottom of both seats and self-sealing fuel cells. Normal crew capacity consists of a pilot and observer.

The OE-2 differs from the OE-1 airplane in that it incorporates a O-470-2 engine in lieu of an O-470-11, constant speed prop, electric flap system, self-sealing fuel cells, new tail surfaces and free blown windshield.

**DEVELOPMENT**

First Flight.....August 1954  
 Service Use.....September 1955

**WEIGHTS**

<u>LOADINGS</u>	<u>LES.</u>	<u>Lbs.</u>
EMPTY.....	1,830.....	
BASIC.....	1,861.....	
DESIGN.....	2,650.....	4.4
MAX. T.O.....	2,650.....	4.0
MAX. LAND.....	2,650.....	4.0

**FUEL AND OIL**

<u>NO. TANKS</u>	<u>TOT. GAL.</u>	<u>LOCATION</u>
2	48.5	Wing
	Fuel Grade.....	100/130
	Fuel Spec.....	MIL-F-5572

**OIL**

CAPACITY (gals).....	4
GRADE.....	30
SPEC.....	1100
	MIL-L-6062

**ORDNANCE**

Provisions for the following on a MK-8 shackle under each wing:

<u>NO.</u>	<u>ITEM</u>
3	2.25" sub-cal. AAR
1	250 lb. Aero-15A spray tank

Max. Capacity - 500 lb.

**DIMENSIONS**

WING AREA.....	174 sq.ft.
SPAN.....	36'-0"
MAC.....	58.4"
LENGTH.....	25'-8"
HEIGHT.....	9'-1"
TREAD.....	7'-6"
PROP. GRD. CLEAR.....	9"

**ELECTRONICS**

RADIO COMPASS.....	ADF-R14B
UHF.....	ARC Type 12
COMMUNICATIONS.....	PRC-8,9,10

## PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1)	(2)		
		LIAISON	FERRY		
TAKE-OFF WEIGHT	lb.	2,650	2,400		
Fuel (6.0 lbs/gal)	lb.	312	312		
Payload	lb.	40			
Wing loading	lb./sq.ft.	15.2	13.8		
Stall speed - power-off (C)	kn.	51.1	48.6		
Take-off run at S.L. - calm (A)	ft.	390	300		
Take-off run at S.L. kn. wind	ft.				
Take-off to clear 50 ft. - calm (A)	ft.	735	600		
Max. speed/altitude (B)	kn./ft.	157.3/10,000	158.4/10,000		
Rate of climb at S.L. (B)	fpm.	1,300	1,500		
Time: S.L. to 10,000 ft.	min.	8.5	7.3		
Time: S.L. to 20,000 ft.	min.	22.6	18.7		
Service ceiling (100 fpm)	ft.	26,000	27,800		
Combat range	n.mi.	580	610		
Average cruising speed	kn.	108	107		
Cruising altitude(s)	ft.	5,000	5,000		
Combat radius	n.mi.	270			
Average cruising speed	kn.	108			
Mission time	hrs.	5.0			
<b>COMBAT LOADING CONDITION</b>					
COMBAT WEIGHT	lb.				
Engine power					
Fuel	lb.				
Combat speed/altitude	kn./ft.				
Rate of climb/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.	2,388			
Fuel	lb.	29			
Stall speed - power-off (C)	kn.	48.4			
Stall speed - with approach power (C)	kn.	39.6			

## NOTES

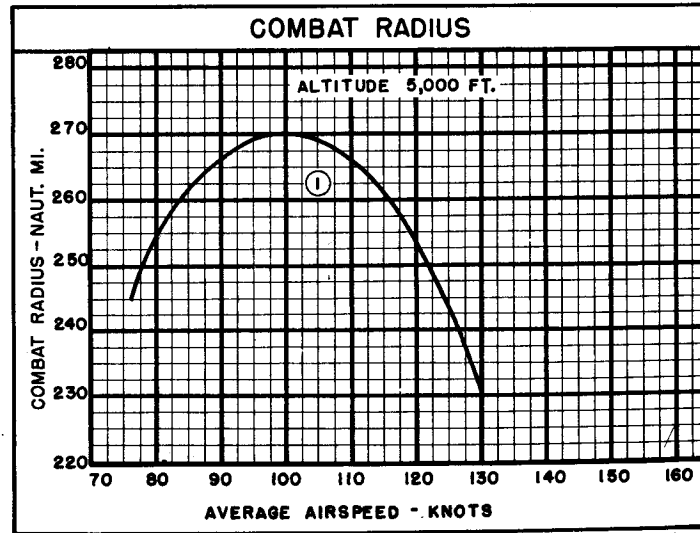
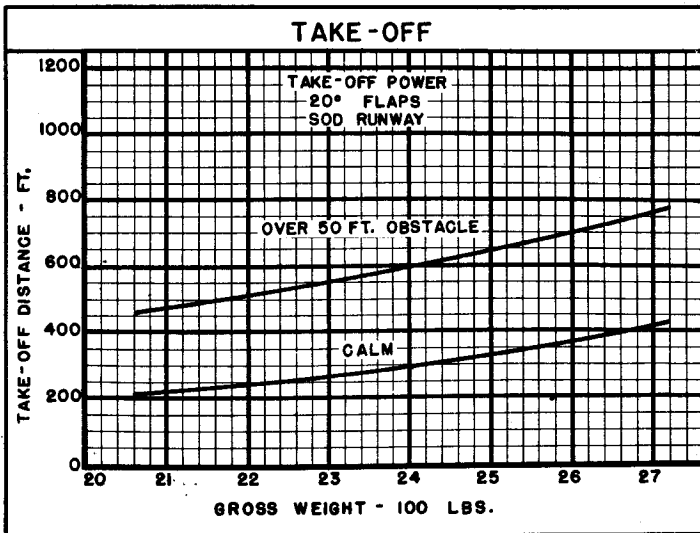
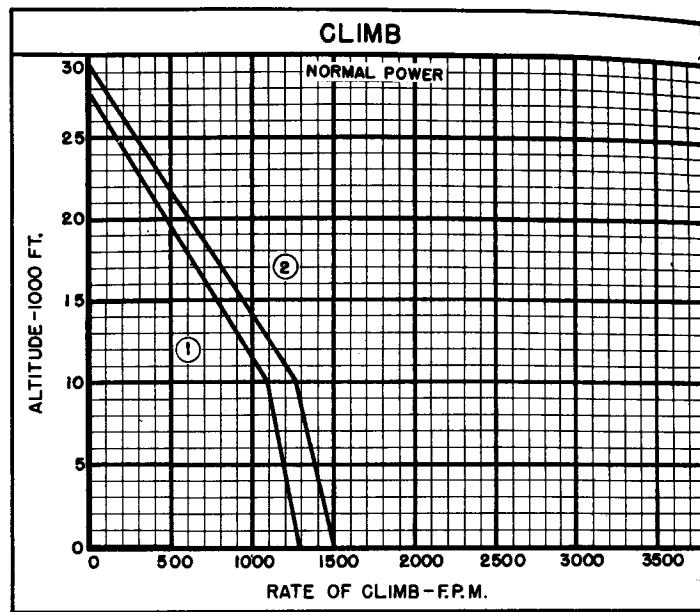
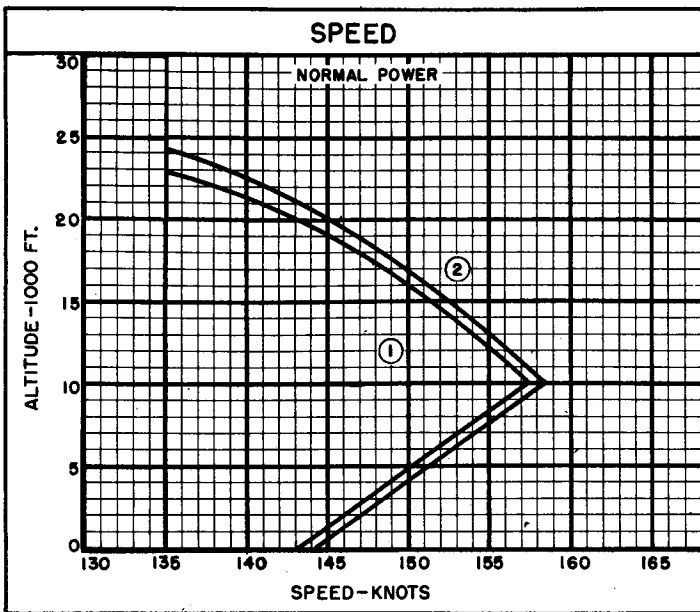
(A) Take-off power.

(B) Normal power.

(C) 40 degrees flaps.

PERFORMANCE BASIS: Contractors and partial NATC flight tests.

RANGE AND RADIUS are based on contractors flight test fuel consumption increased by 5%.



○ LOADING CONDITION COLUMN NUMBER

# NOTES

MISSION TIME = TIME TO CLIMB / CRUISE-OUT / CLIMB / CRUISE-BACK

## BASIC MISSION - LIAISON

WARM-UP, TAXI, TAKE-OFF: Fuel allowance for 5 minutes with normal rated power at sea level.

CLIMB: To 5,000 feet with normal rated power.

CRUISE-OUT: At 5,000 feet at speed for best cruise.

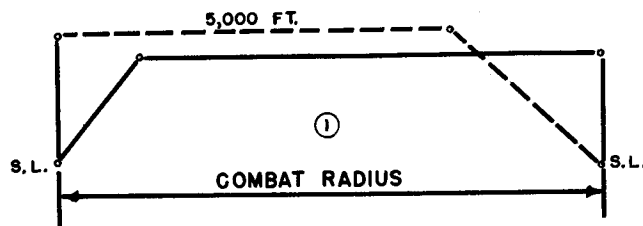
LAND: At remote sea level base - no fuel used - no distance gained.

TAKE-OFF: Fuel allowance for 5 minutes with normal rated power at sea level.

CLIMB: To 5,000 feet with normal rated power.

CRUISE-BACK: At 5,000 feet at speed for best cruise.

RESERVE: 5 percent of initial fuel plus 20 minutes fuel allowance at long range airspeeds at sea level.



○ LOADING CONDITION COLUMN NUMBER