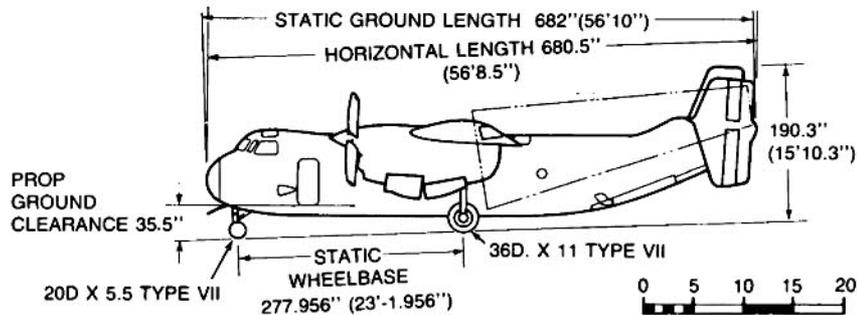
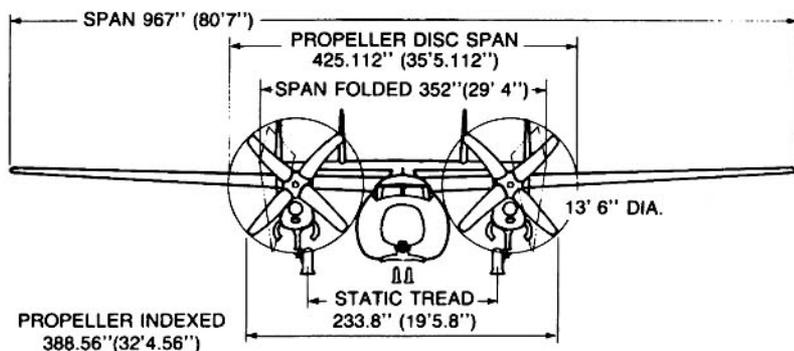
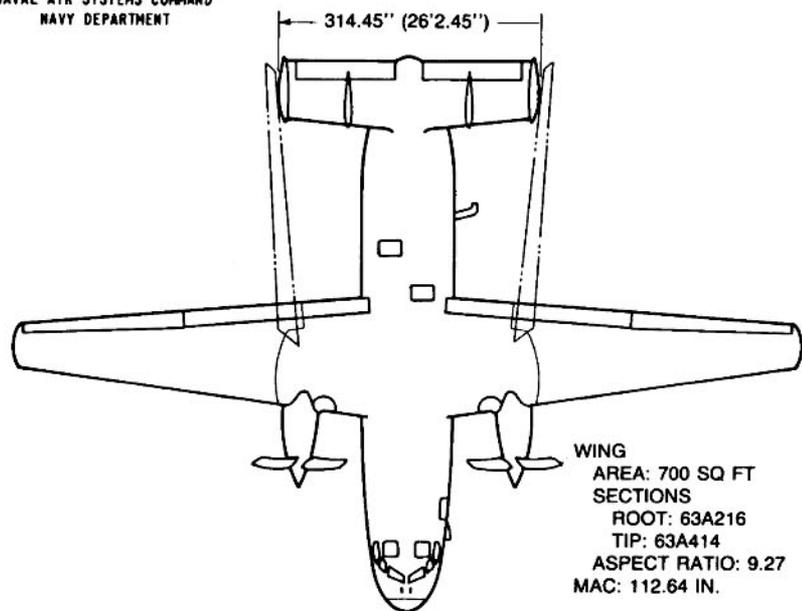


# STANDARD AIRCRAFT CHARACTERISTICS

REPROCURED C-2A

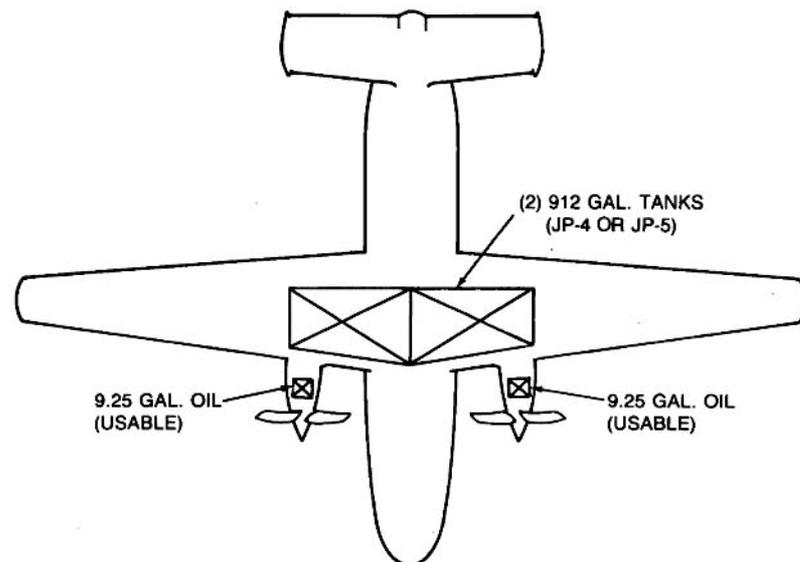
GRUMMAN

NAVAL AIR SYSTEMS COMMAND  
NAVY DEPARTMENT

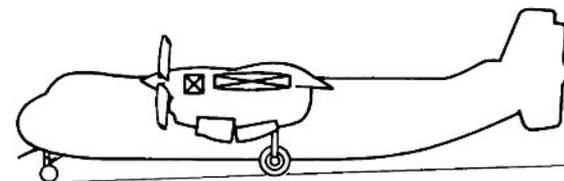
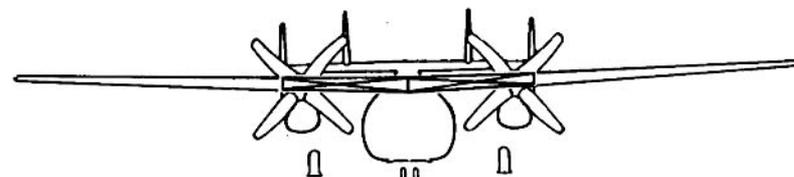


DESCRIPTIVE ARRANGEMENT

NAVAL AIR SYSTEMS COMMAND  
NAVY DEPARTMENT



☒ NON SELF-SEALING TANKS



0 5 10 15 20  
SCALE-FeET

ARMAMENT AND TANKAGE

POWER PLANT	MISSION AND DESCRIPTION	WEIGHTS																																						
<p>Number &amp; Model (2) T56-A-425            Manufacturer Allison            Propeller Gear Ratio 12.49:1            Number of Blades 4            Propeller Diameter 13 ft. 6 in.            Propeller Manufacturer Hamilton Standard            Propeller Blade Design No. 54460-1</p> <p style="text-align: center;"><b>RATINGS</b></p> <table border="1"> <thead> <tr> <th></th> <th>ESHP</th> <th>SHP</th> <th>RPM</th> </tr> </thead> <tbody> <tr> <td>Take-Off</td> <td>4910</td> <td>4591</td> <td>13,820</td> </tr> <tr> <td>Military</td> <td>4680</td> <td>4368</td> <td>13,820</td> </tr> <tr> <td>Normal</td> <td>4365</td> <td>4061</td> <td>13,820</td> </tr> </tbody> </table> <p>Engine Specification No. 825-A            Dated 1 June 1973</p>		ESHP	SHP	RPM	Take-Off	4910	4591	13,820	Military	4680	4368	13,820	Normal	4365	4061	13,820	<p>The Reprocured C-2A airplane, a carrier-based transport, is capable of carrying cargo or passengers, or a combination of both, for Carrier On-Board Delivery (COD). The maximum weight for payload and route support equipment combined is 10,000 lbs.</p> <p>The C-2A is operable from CV-41 and superior class carriers. It is catapulted with a nose-tow catapult system operable from C7 and superior catapults and may be arrested with MK7 MOD 2 and superior arresting gears. The overall dimensions of the C-2A together with automatic wing folding permit hangar deck servicing. An auxiliary power plant installation provides engine starting self-sufficiency.</p> <p>The C-2A has a wide range of communications and radio navigation equipment which are compatible with both military and civil airways on a world-wide basis. Communications equipment include HF, VHF, and UHF. Radio navigation aids include DOPPLER, TACAN, dual VOR, UHF/DF, LF/ADF, weather radar, and two carrier approach systems.</p> <p>The crew consists of a pilot and co-pilot/navigator. An automatic flight control system provides directional stability augmentation, three axis attitude control and altitude hold control. Each mode is engaged manually by the pilot.</p> <p>The airplane is equipped with modified Fowler type flaps and hydraulically powered irreversible flight controls with an independent hydraulic backup system.</p>	<p style="text-align: center;"><b>WEIGHTS</b></p> <table border="1"> <thead> <tr> <th>LOADINGS</th> <th>LB.</th> </tr> </thead> <tbody> <tr> <td>Empty</td> <td>33,746</td> </tr> <tr> <td>Basic</td> <td>34,139</td> </tr> <tr> <td>Design</td> <td>52,540</td> </tr> <tr> <td>Combat (60% Fuel)</td> <td>49,394</td> </tr> <tr> <td>Take-Off</td> <td></td> </tr> <tr> <td>  Field (Max.)</td> <td>54,354</td> </tr> <tr> <td>  Catapult (Max.)</td> <td></td> </tr> <tr> <td>Landing</td> <td></td> </tr> <tr> <td>  Field (Max.)</td> <td>50,060</td> </tr> <tr> <td>  Arrestment (Max.)</td> <td>49,058</td> </tr> </tbody> </table> <p>Weights Are Based on Detail Specification for C-2A Reprocurement of Carrier On-Board Delivery (COD) Aircraft, SD-551-1-3 Revision 1, Dated 28 January 1982.</p>	LOADINGS	LB.	Empty	33,746	Basic	34,139	Design	52,540	Combat (60% Fuel)	49,394	Take-Off		Field (Max.)	54,354	Catapult (Max.)		Landing		Field (Max.)	50,060	Arrestment (Max.)	49,058
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<p><b>COMMUNICATION</b></p> <p>UHF Communication (30W) (2) AN/ARC-159A</p> <p>VHF Communication VHF - 20B</p> <p>HF Communication AN/ARC-190(V)</p> <p>UHF Crypto KY-58</p> <p>HF Crypto KY-75</p> <p>Intercommunication AN/AIC - 14A</p> <p>Public Address System TBD</p> <p><b>NAVIGATION</b></p> <p>OMEGA LTN-211</p> <p>TACAN AN/ARN-118</p> <p>DOPPLER AN/APN-233</p> <p>UHF Auto Direction Finder OA-9697/ARD</p> <p>LF Auto Direction Finder AN/ARN-83</p> <p>VOR/LS Glide Slope &amp; Marker Beacon (2) VIR-31A</p> <p>Radar Beacon AN/APN-208</p> <p>Data Link AN/ASW-25B</p> <p>Receiver-Decoder AN/ARA-63</p> <p>Weather Radar AN/APN-234</p> <p>Attitude Heading Reference System (2) AN/ASN-116A            AHRS</p> <p><b>MISCELLANEOUS</b></p> <p>IFF Computer KIT-1A/TSEC</p> <p>IFF Transponder AN/APX-72</p> <p>Radar Altimeter AN/APN-194</p> <p>Standard Central Air Data Computer CPU-140A</p> <p>Automatic Flight Control System ASW-15</p> <p>Underwater Acoustic Beacon N15F2108</p>	<p style="text-align: center;"><b>REPROCUREMENT</b></p> <p>First Flight (Estimated) January 1985</p> <p style="text-align: center;"><b>DIMENSIONS</b></p> <table border="1"> <tbody> <tr> <td>Wing Span</td> <td>80 ft. 7 in.</td> </tr> <tr> <td>Folded Wing Span</td> <td>29 ft. 4 in.</td> </tr> <tr> <td>Propeller Indexed Span</td> <td>32 ft. 4.56 in.</td> </tr> <tr> <td>Propeller Disc Span</td> <td>35 ft. 5.112 in.</td> </tr> <tr> <td>Length</td> <td>56 ft. 10 in.</td> </tr> <tr> <td>Height</td> <td>15 ft. 10.5 in.</td> </tr> <tr> <td>Tread</td> <td>19 ft. 5.8 in.</td> </tr> <tr> <td>Propeller Ground Clearance</td> <td>35.5 in.</td> </tr> </tbody> </table>	Wing Span	80 ft. 7 in.	Folded Wing Span	29 ft. 4 in.	Propeller Indexed Span	32 ft. 4.56 in.	Propeller Disc Span	35 ft. 5.112 in.	Length	56 ft. 10 in.	Height	15 ft. 10.5 in.	Tread	19 ft. 5.8 in.	Propeller Ground Clearance	35.5 in.																							
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## PERFORMANCE SUMMARY (F)

		① BASIC CARGO MISSION 7240 lbs. Includes RSE	③ PASSENGER MISSION 28 Passengers & RSE	⑤ MAX. PAYLOAD MISSION 10000 lb. inc. RSE	⑦ FERRY MISSION W/CARGO RSE
<b>TAKE-OFF WEIGHT</b>	<b>lb.</b>	54,354	54,354	54,354	48916
Fuel internal/external (JP-5)	lb./lb.	12,400	11,638	9640	12400
Payload & Route Support Eqpt (RSE) (A)	lb.	7240	8002 (B)	10000	1802
Route Support Equipment	lb.	Variable (A)	1842	1802	1802
Wing Loading	lb. per sq. ft.	77.6	77.6	77.6	69.9
Stall speed — zero thrust	kn.	104.7	104.7	104.7	99.3
Take-off run of S.L. — standard day	ft.	2180	2180	2180	1710
Take-off run at S.L. — 90°F day	ft.	2530	2530	2530	1975
Take-off to clear 50 ft. — standard day	ft.	3060	3060	3060	2450
Take-off to clear 50 ft. — 90°F day	ft.	3460	3460	3460	2760
Max. speed/altitude — true airspeed (C)	kn./ft.	300/12000	300/12000	300/12000	303/13000
Rate of climb at S.L. (C)	fpm.	2610	2610	2610	3040
Time: S.L. to 20,000 ft. (C) (D)	min.	11.6	11.6	11.6	9.4
Time: S.L. to 30,000 ft. (C) (D)	min.	32.0	32.0	32.0	21.7
Service ceiling (100 fpm) (C)	ft.	30,000	30000	30000	33000
Combat range	n.mi.	1355	1243	961	1527
Average cruising speed	kn.	251	251	251	249
Cruising altitude(s)	ft.	28700/34100	28700/33700	28700/32550	33000/37400
<b>COMBAT LOADING CONDITION (60% FUEL)</b>					
		②	②A		
<b>COMBAT WEIGHT</b>	<b>lb.</b>	49,394	49,394		
Engine power		Normal	Military		
Fuel (JP-5)	lb.	7440	7440		
Combat speed/cruise altitude - true airspeed	kn./ft.	269/30500	280/30500		
Rate of climb/cruise altitude	fpm/ft.	300/30500	420/30500		
Combat ceiling (500 fpm)	ft.	28,800	29,600		
Rate of climb at S.L.	fpm.	3000	3200		
Max. speed at S.L.	kn.	292	292		
Max. Speed/altitude — true airspeed	kn./ft.	303/13000	310/13500		
<b>LANDING WEIGHT</b>	<b>lb.</b>	43645	44375	46291	38158
Fuel	lb	1691	1659	1577	1642
Stall speed — flight idle/approach power	kn./kn.	81.9/78.5	82.9/79.1	85.0/80.9	74.7/73.5
Landing distance-groundroll/over 50 ft. obst. (E)	ft./ft.	1428/2266	1436/2276	1500/2360	1363/2205

## NOTES

PERFORMANCE BASIS: Calculated data based on BIS and performance demonstration flight test results and on specification engine data with no increase in fuel consumption.

(A) Maximum weight for payload and route support equipment (RSE) combined is 6776 lb. Payload capacity is dependent upon selection of RSE. See Notes page for summary of RSE weights.

(B) Passenger, including life preserver, weighs 180 lb.

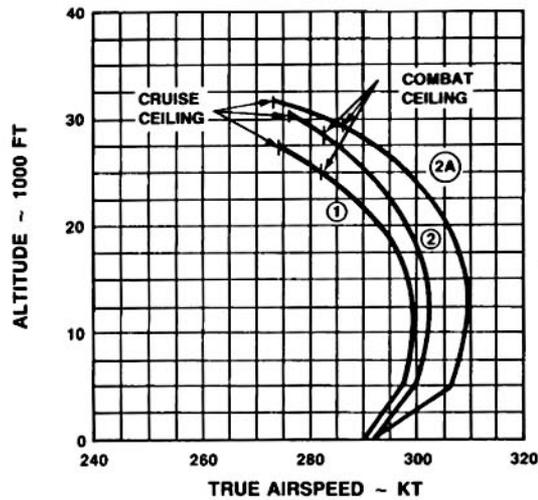
(C) Normal rated power.

(D) At take-off gross weight, minus fuel for warm-up, taxi, take-off and climb.

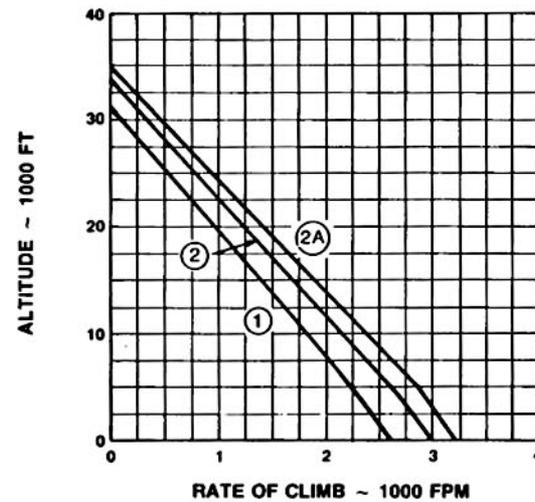
(E) Landing distance — brakes and reverse thrust

(F) The performance data shown is representative of the Reprocured C-2A as defined in Detail Specification SD551-1-3 Rev. 1. Operation at the structural design Take-Off Gross Weight of 57,500 lb (pending NAVAIR approval) permits 9,922 lb payload for this design mission.

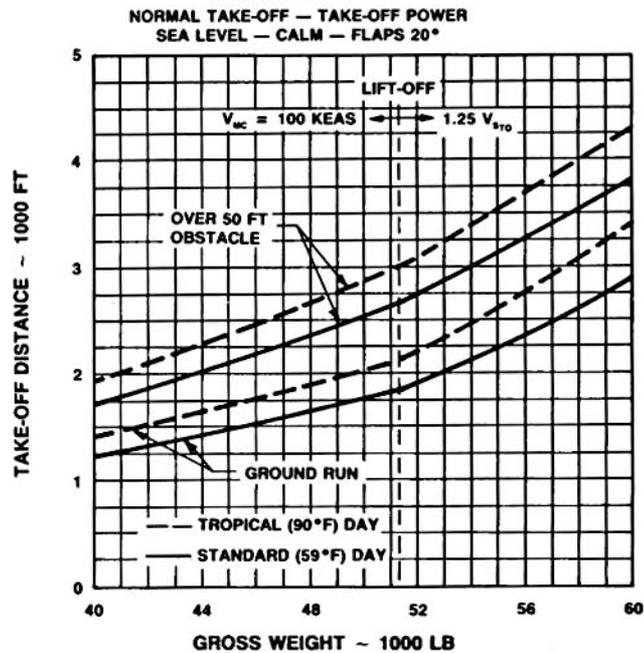
### SPEED



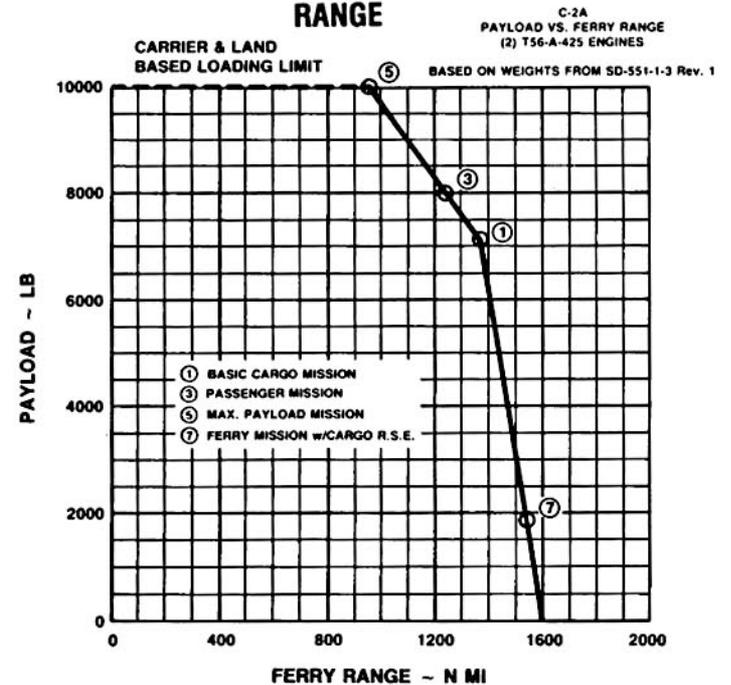
### CLIMB



### TAKE-OFF

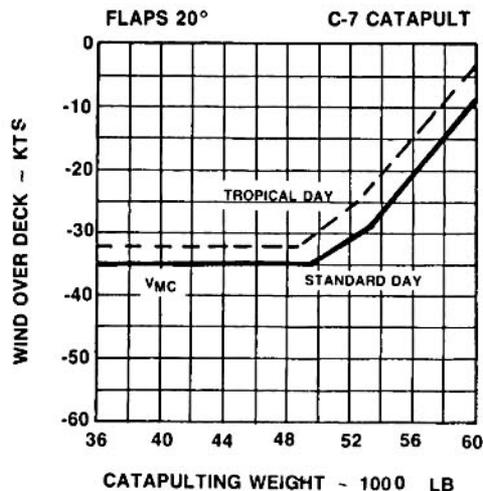


### RANGE



○ LOADING CONDITION COLUMN NUMBER

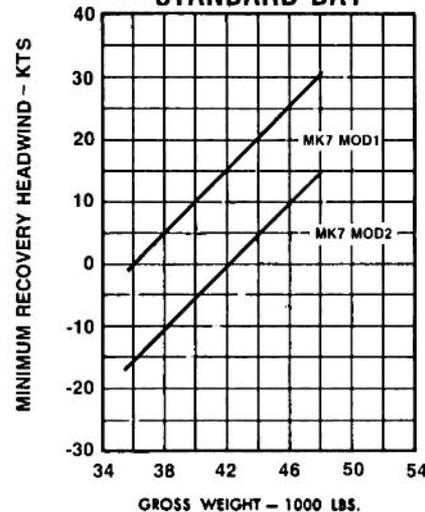
### MINIMUM WIND OVER DECK REQUIRED FOR CATAPULTING VS. GROSS WEIGHT



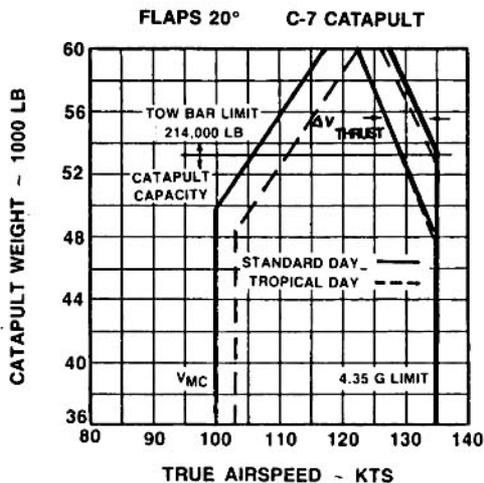
### MINIMUM WIND OVER DECK REQUIRED FOR ARRESTING VS. GROSS WEIGHT

TOUCHDOWN SPEED BASED ON FLEET SURVEY DATA

#### STANDARD DAY

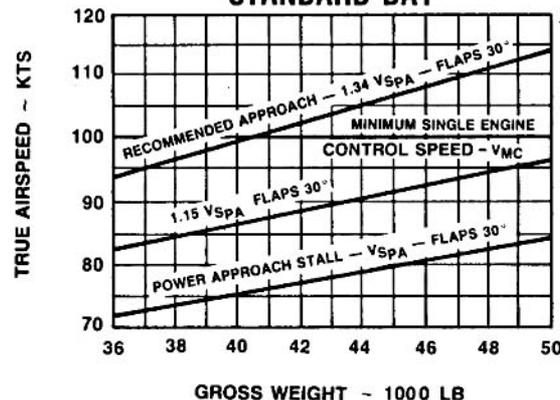


### CATAPULT ENDSPEEDS



### CARRIER APPROACH SPEEDS

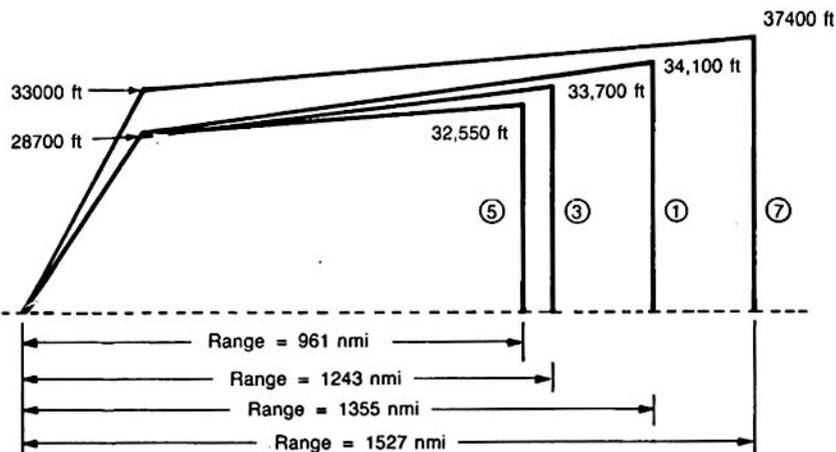
#### STANDARD DAY



### NOTES

THESE DATA ARE FOR PLANNING ONLY. CARRIER AIR OPERATIONS ARE PRESCRIBED BY AIRCRAFT LAUNCHING BULLETINS, AIRCRAFT RECOVERY BULLETINS, NATOPS FLIGHT MANUAL, AND CVA CVS NATOPS MANUAL.

**BASIC CARGO MISSION**



Fuel allowance for starting engines, taxi, take-off and accelerate to climb speed is the pounds of fuel used in five minutes with normal power at sea level.

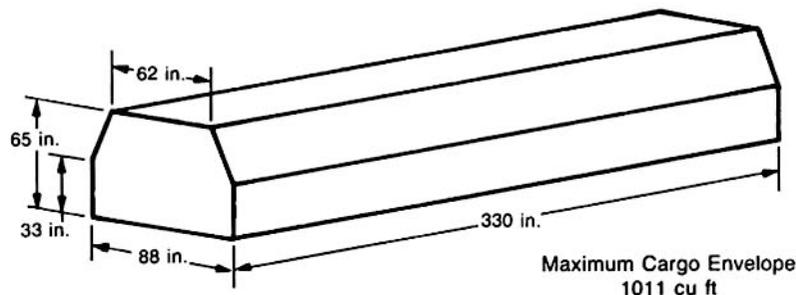
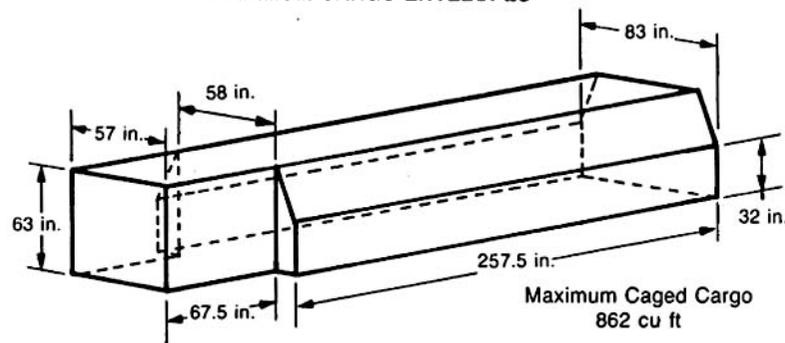
Normal rated power climb on course to cruise ceiling.

Cruise at airspeed for maximum specific range at cruise ceiling utilizing available fuel.

Fuel allowance for reserve and landing is the sum of five per cent of the initial internal fuel and fuel required for thirty minutes at speed for maximum endurance at sea level.

○ LOADING CONDITION COLUMN NUMBER

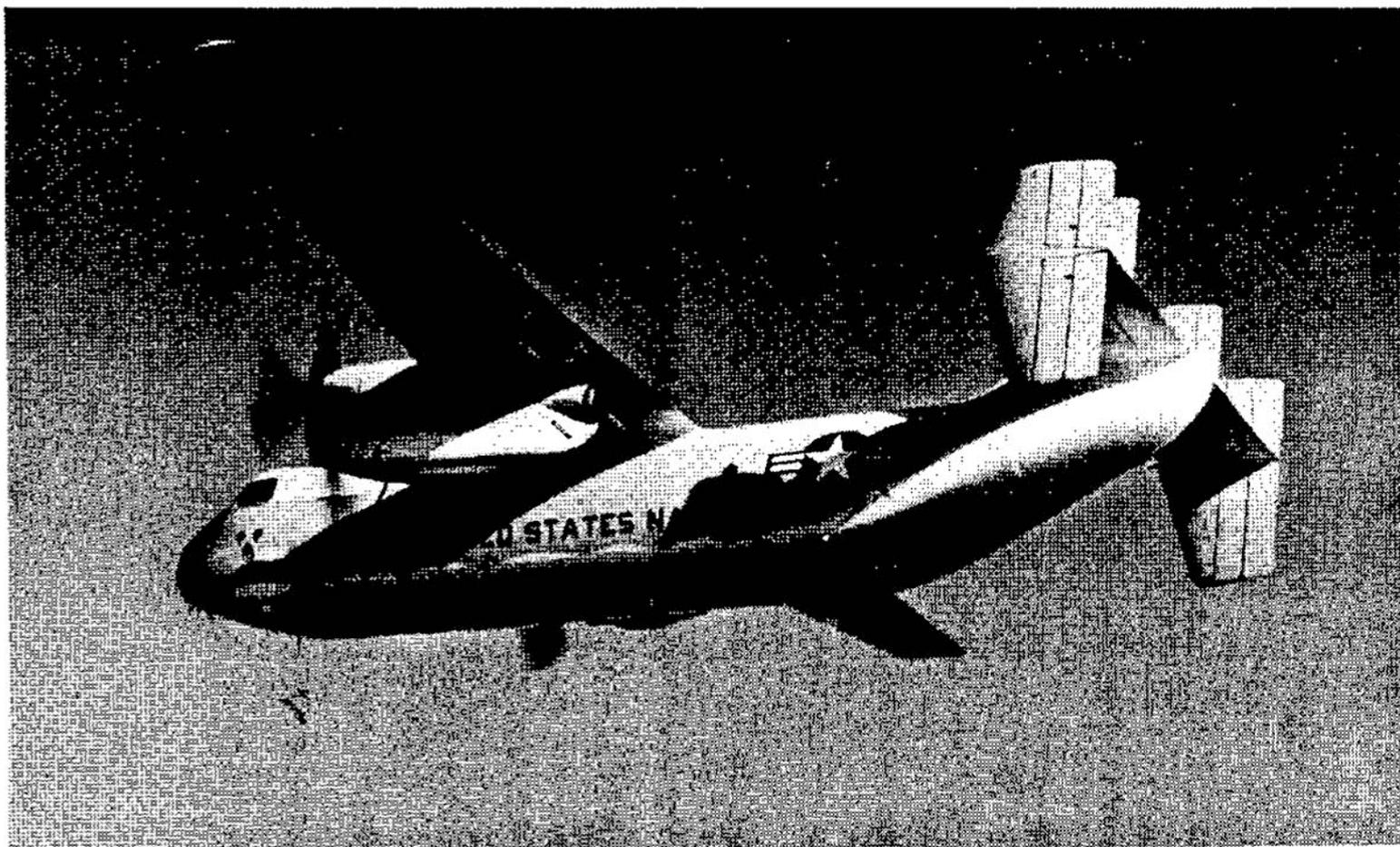
**MAXIMUM CARGO ENVELOPES**



**WEIGHT SUMMARY  
ROUTE SUPPORT EQUIPMENT**

Cargo Restraining and Handling Equipment	
Cargo Cage and Tiedown	1499 lb
Winch and Cargo Handling	239 lb
Treadways (2)	64 lb
Facilities for 28 Passengers	
Passenger Seats, 14 doubles @ 77 lb each	1078 lb
(4) Life Rafts—LRU-13/A @ 56.5 lb each, plus 9 lb stowage	235 lb
Additional LOX and Converter, Toilet, and Baggage Provisions	60 lb
Baggage Compartment & Panel	434 lb

\*420 lb of this weight common to cargo cage and tiedown weight



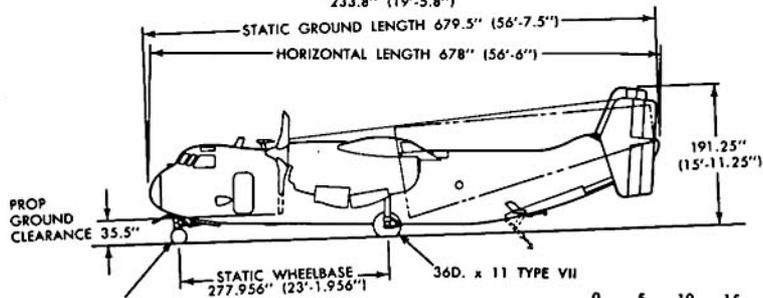
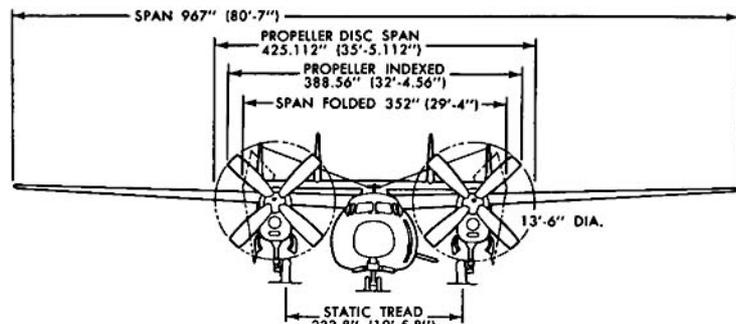
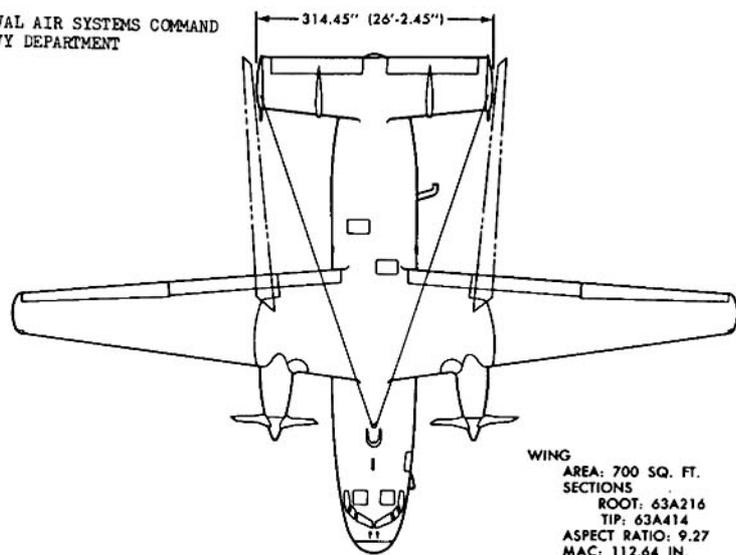
# STANDARD AIRCRAFT CHARACTERISTICS

C-2A GREYHOUND

GRUMMAN

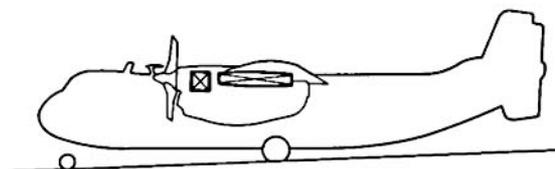
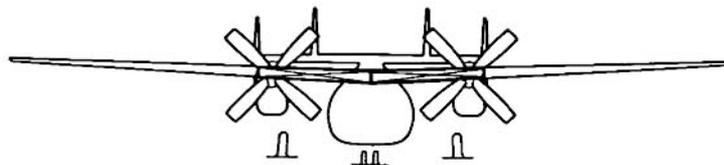
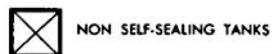
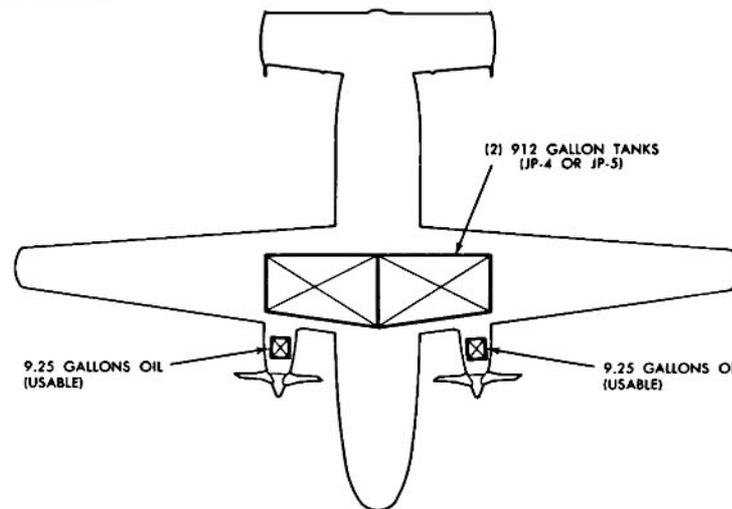
JANUARY 1970

NAVAL AIR SYSTEMS COMMAND  
NAVY DEPARTMENT



DESCRIPTIVE ARRANGEMENT

NAVAL AIR SYSTEMS COMMAND  
NAVY DEPARTMENT



ARMAMENT AND TANKAGE

POWER PLANT	MISSION AND DESCRIPTION	WEIGHTS																																				
Number & Model _____ (2) T56-A-8A Manufacturer _____ Allison Propeller Gear Ratio _____ 12.49 : 1 Number of Blades _____ 4 Propeller Diameter _____ 13 ft. 6 in. Propeller Manufacturer _____ Aero Products Propeller Blade Design No. _____ A6441 FN-248	<p>The C-2A airplane, a carrier-based transport, is capable of carrying high-priority cargo or passengers, or a combination of both, for Carrier On-Board Delivery (COD). Litter patients may also be accommodated. Among the high-priority items the C-2A can deliver are special stores, jet engines and afterburners, as well as general cargo. The maximum weight for payload and route support equipment combined is 10,000 pounds. Cargo tiedown is facilitated by a cage system. This system could restrain the cargo during a crash condition of 20 g's forward; it also provides restraint for the catapulting and arresting loads encountered during carrier operation. The large aft cargo ramp/door and powered winch facilitate fast turnaround time by straight-in rear cargo loading and unloading.</p> <p>The airplane is operable from CVS-10, CVA-19, and superior class carriers equipped with H-8, C11-1, C-7 and C-13 catapults, and MK 5 Mod-3, MK 7 Mod-1 or MK 7 Mod-2 arresting gear. The C-2A is catapulted with a nose-tow catapult system. The overall dimensions of the C-2A together with automatic wing folding permit hangar deck servicing. An auxiliary power plant installation provides engine starting self-sufficiency.</p> <p>The C-2A has a wide range of communications and radio navigation equipment which are compatible with both military and civil airways on a world-wide basis. Communications equipment include HF, VHF, and UHF; radio navigation aids include LORAN, TACAN, dual VOR, UHF/DF, LF/ADF, and provisions for weather radar.</p> <p>The crew consists of a pilot and a copilot/navigator. An automatic flight control system provides crew relief by means of a maneuvering autopilot with flight path and altitude relief modes as well as TACAN coupling.</p> <p>The airplane is equipped with modified Fowler type flaps, and hydraulically powered irreversible flight controls with an independent hydraulic backup system.</p>	<table border="1"> <thead> <tr> <th>LOADINGS</th> <th>LBS.</th> <th>LF.</th> </tr> </thead> <tbody> <tr> <td>Empty</td> <td>31,369</td> <td></td> </tr> <tr> <td>Basic</td> <td>35,014</td> <td></td> </tr> <tr> <td>Design</td> <td>49,394</td> <td>2.65</td> </tr> <tr> <td>Combat (60% fuel)</td> <td>49,541</td> <td></td> </tr> <tr> <td rowspan="3">Take-Off</td> <td>Field (maximum)</td> <td>55,000</td> </tr> <tr> <td>C-11 Catapult (basic design)</td> <td>54,354</td> </tr> <tr> <td>H-8 Catapult (basic design)</td> <td>54,354</td> </tr> <tr> <td rowspan="3">Landing (max.)</td> <td>Field</td> <td>51,000</td> </tr> <tr> <td>MK 7 Arresting</td> <td>46,000</td> </tr> <tr> <td>MK 5 Arresting</td> <td>44,154</td> </tr> </tbody> </table> <p>Weights are based on weighing of C-2A Factory No. 19 (MIL No. 155124-15) as reported in the Actual Weight and Balance Report, WT-123R-505 dated 3 January 1968.</p>	LOADINGS	LBS.	LF.	Empty	31,369		Basic	35,014		Design	49,394	2.65	Combat (60% fuel)	49,541		Take-Off	Field (maximum)	55,000	C-11 Catapult (basic design)	54,354	H-8 Catapult (basic design)	54,354	Landing (max.)	Field	51,000	MK 7 Arresting	46,000	MK 5 Arresting	44,154							
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## PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION	①	BASIC CARGO MISSION 10,000 lbs. Includes RSE	③	PASSENGER MISSION 28 Passengers and RSE	⑤	FERRY MISSION With all RSE	⑦	FERRY MISSION Without RSE
TAKE-OFF WEIGHT	lb.	54,501		52,998		47,958		44,501
Fuel (JP-5)	lb.	12,400		12,400		12,400		12,400
Payload & Route Support Equipment (RSE) (A)	lb.	10,000		8497 (B)		3457		-
Route Support Equipment	lb.	Variable (A)		3457		3457		-
Wing loading	lb. per sq. ft.	77.9		75.7		68.5		63.6
Stall speed — zero thrust	kn.	98.0		96.9		92.0		88.6
Take-off run at S.L. — standard day	ft.	2120		1950		1480		1230
Take-off run at S.L. — 90°F day	ft.	2440		2270		1795		1530
Take-off to clear 50 ft. — standard day	ft.	2570		2400		1920		1650
Take-off to clear 50 ft. — 90°F day	ft.	3100		2890		2285		1950
Maximum speed/altitude — true airspeed (C)	kn./ft.	294/10,000		296/10,500		299/10,500		300/13,000
Rate of climb at S.L.	(C) fpm.	2360		2450		2800		3130
Time: S.L. to 20,000 ft.	(C)(D) min.	14.0		12.5		10.5		9.5
Time: S.L. to 30,000 ft.	(C)(D) min.	41.0 (E)		41.0 (E)		26.0		21.0
Service ceiling (100 fpm)	(C) ft.	28,600		29,500		32,500		34,500
Combat range	n. mi.	1442		1492		1679		1841
Average cruising speed	kn.	259		259		260		260
Cruising altitudes	ft.	26,400/32,000		27,250/33,000		30,250/36,400		32,350/39,000
<b>COMBAT LOADING CONDITION (60% FUEL)</b>								
		②	②A	④		⑥		⑧
COMBAT WEIGHT	lb.	49,541	49,541	-		-		-
Engine power		Normal	Military	-		-		-
Fuel (JP-5)	lb.	7440	7440	-		-		-
Maximum speed/cruise altitude — true airspeed	kn./ft.	272/28,300	287/28,300	-		-		-
Rate of climb/cruise altitude	fpm/ft.	300/28,300	440/28,300	-		-		-
Combat ceiling (500 fpm)	ft.	26,000	27,500	-		-		-
Rate of climb at S.L.	fpm.	2700	3030	-		-		-
Maximum speed at S.L.	kn.	283	298	-		-		-
Maximum speed/altitude — true airspeed	kn./ft.	297/12,000	307/13,500	-		-		-
<b>LANDING WEIGHT</b>								
LANDING WEIGHT	lb.	43,651		42,128		37,058		33,601
Fuel	lb.	1550		1530		1500		1500
Stall speed — flight idle/approach power	kn./kn.	91.0/76.2		88.9/75.0		81.1/70.4		76.0/67.1
Landing distance-ground roll/over 50 ft. obst. (F) ft./ft.		1650/2330		1590/2250		1400/2005		1270/1830

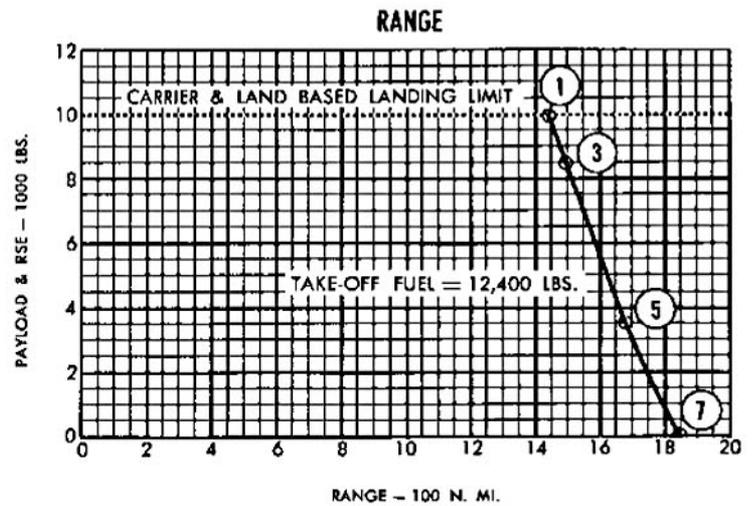
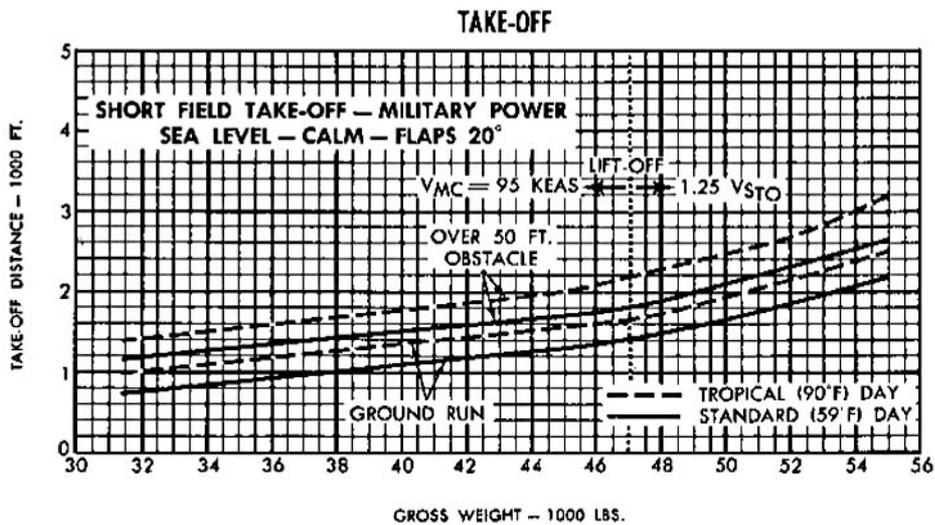
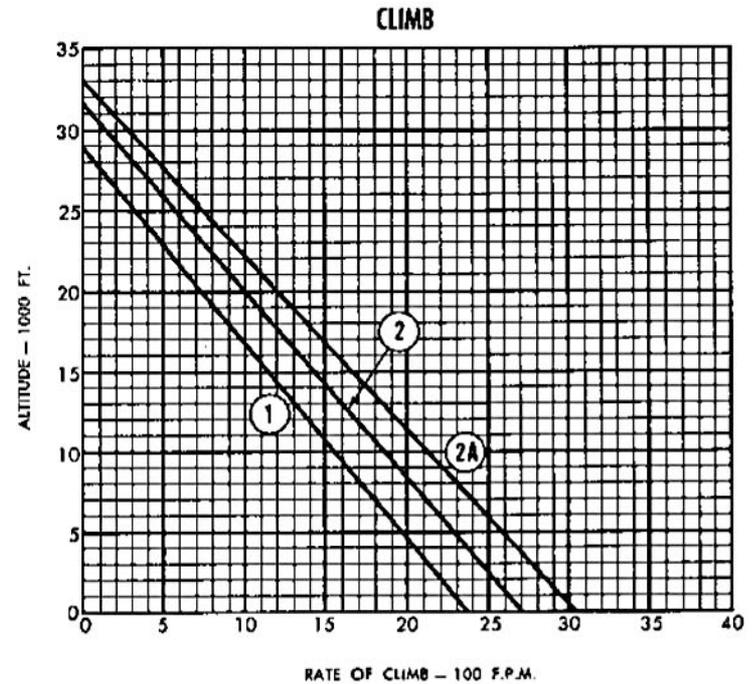
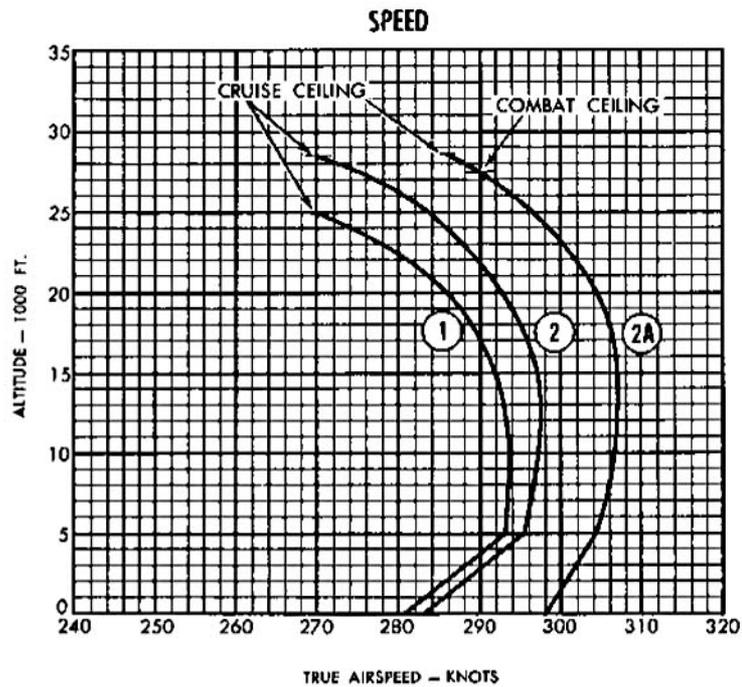
## NOTES

PERFORMANCE BASIS: Calculated data based on BIS and performance demonstration flight test results and on calibrated engine data with no increase in fuel consumption.

SPOTTING: A total of 45 airplanes can be accommodated on the flight and hangar decks of a CVS-10 class angled deck carrier.

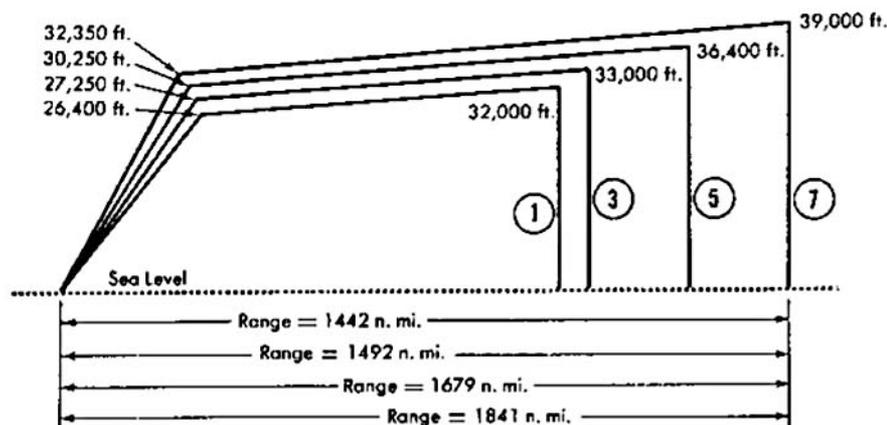
- (A) Maximum weight for payload and route support equipment (RSE) combined is 10,000 pounds. Payload capacity is dependent upon selection of RSE. See Notes page for summary of RSE weights.
- (B) Passenger, including life preserver, weighs 180 pounds.

- (C) Normal rated power.
- (D) At take-off gross weight, minus fuel for warm-up, taxi, take-off and climb.
- (E) Time to service ceiling.
- (F) Landing distance — brakes and reverse thrust



○ LOADING CONDITION COLUMN NUMBER

## BASIC CARGO MISSION



Fuel allowance for starting engines, taxi, take-off and accelerate to climb speed is the pounds of fuel used in five minutes with normal power at sea level.

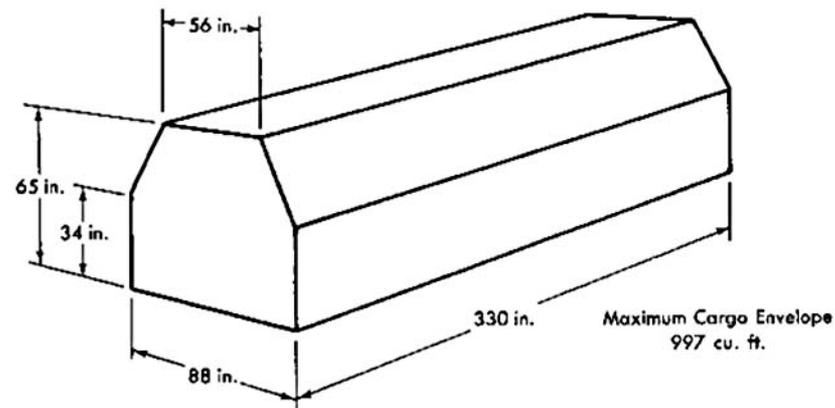
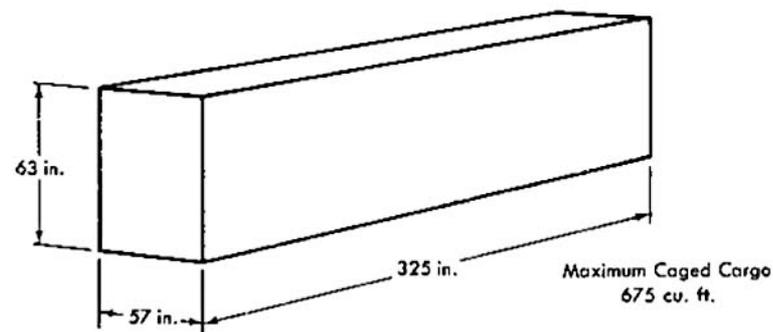
Normal rated power climb on course to cruise ceiling.

Cruise at airspeed for maximum specific range at cruise ceiling utilizing available fuel.

Fuel allowance for reserve and landing is the sum of five per cent of the initial internal fuel and fuel required for thirty minutes at speed for maximum endurance at sea level.

○ LOADING CONDITION COLUMN NUMBER

## MAXIMUM CARGO ENVELOPES

WEIGHT SUMMARY  
ROUTE SUPPORT EQUIPMENT

## Fixed Equipment

APU and Self-Starting Eqt. \_\_\_\_\_ 367 lbs.  
LORAN and Charts \_\_\_\_\_ 50 lbs.

## Cargo Restraining and Handling Equipment

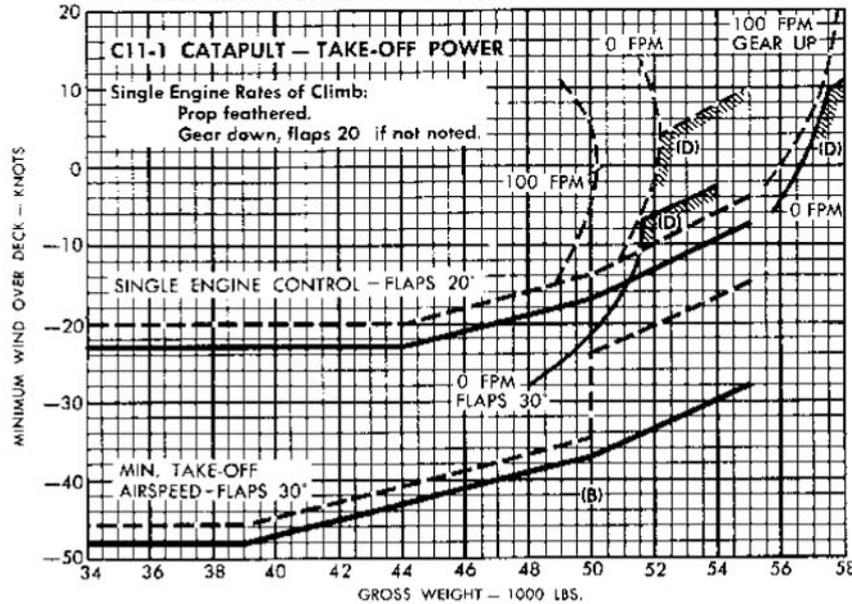
Cargo Cage and Tiedown \_\_\_\_\_ 1420 lbs.  
Winch and Cargo Handling \_\_\_\_\_ 201 lbs.

## Facilities for 28 Passengers

Passenger Seats, 14 doubles @ 66 lbs. each \_\_\_\_\_ 924 lbs.  
(4) Life Rafts — MK 7 @ 103 lbs. each, plus 9 lbs. stowage \_\_\_\_\_ 421 lbs.  
Additional LOX and Converter, Toilet, and Baggage Provisions \_\_\_\_\_ 74 lbs.

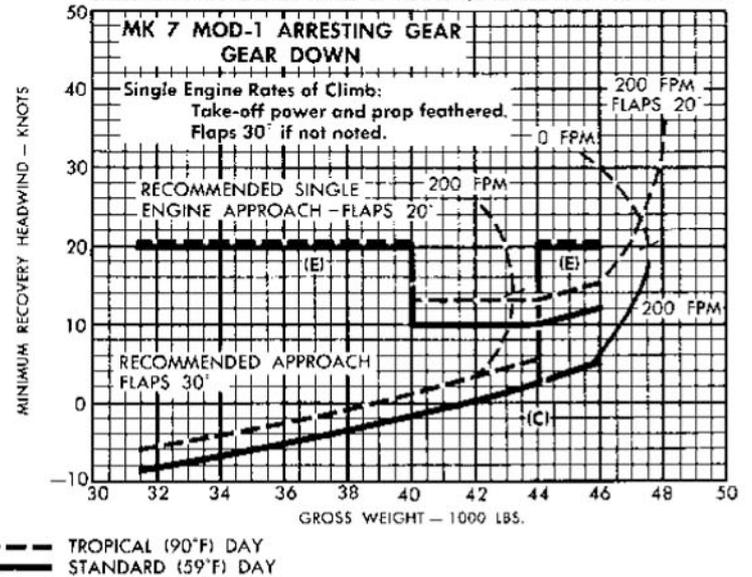
**MINIMUM WIND OVER DECK REQUIRED FOR CATAPULTING**  
SINGLE ENGINE RATES OF CLIMB

BASED ON NATC CARRIER TRIALS OF AUGUST-SEPTEMBER 1966 AND BIS TRIALS



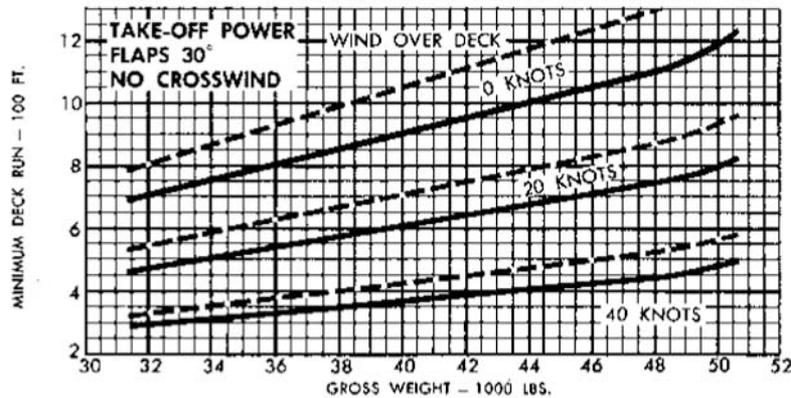
**MINIMUM RECOVERY HEADWIND REQUIRED FOR ARRESTING**  
SINGLE ENGINE RATES OF CLIMB

BASED ON NATC CARRIER TRIALS OF AUGUST-SEPTEMBER 1966 AND BIS TRIALS



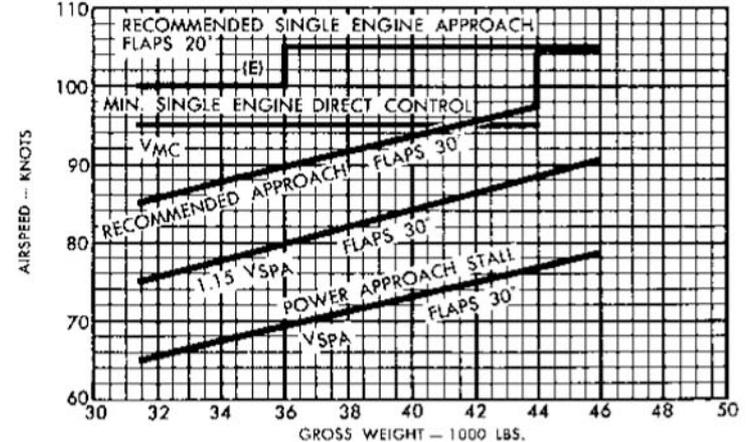
**MINIMUM RUN REQUIRED FOR DECK LAUNCHING**

PRELIMINARY DATA BASED ON NATC CARRIER TRIALS OF AUGUST-SEPTEMBER 1966



**CARRIER APPROACH AIRSPEEDS**

BASED ON NATC CARRIER TRIALS OF AUGUST-SEPTEMBER 1966 AND BIS TRIALS

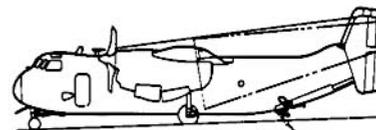
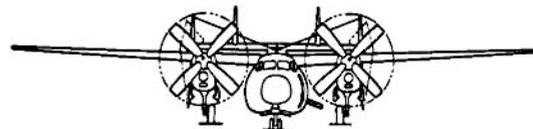
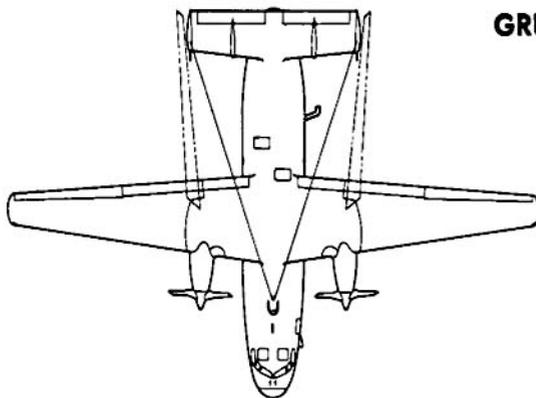


- (A) These data are for planning only. Carrier air operations are prescribed by Aircraft Launching Bulletins, Aircraft Recovery Bulletins, NATOPS Flight Manual, and CVA CVS NATOPS Manual.
- (B) C11-1 Catapult. Maximum endspeeds are limited by aircraft cg drag acceleration limit below 50,000 pounds and catapult capacity above 50,000 pounds.
- (C) MK 7 Mod-1 Arresting Gear with sheave dampers, 95 ft. span. Maximum engaging speeds are limited by aircraft cg drag acceleration limit below 44,000 pounds and by aircraft hook strength above 44,000 pounds.
- (D) Single engine flight in this region incurs sink rates with full power while on the back side of the speed-power required curve.

- (E) Twenty knots minimum recovery headwind is required for the recommended single engine approach airspeed, with flaps 20°, to preclude possible nose gear first landings. In the 36,000-40,000 pounds weight range, the recommended single engine approach airspeed is 105 knots; below 36,000 pounds, the single engine approach airspeed has been lowered to 100 knots. Above 44,000 pounds, with flaps 30°, the twenty knots minimum recovery headwind is also required for the 105 knot recommended approach airspeed.

# CHARACTERISTICS SUMMARY

## C-2A GRUMMAN



WING AREA: 700 sq. ft.

WING SPAN: 80 ft. 7 in.

LENGTH: 56 ft. 7.5 in.

HEIGHT: 15 ft. 11.25 in.

### AVAILABILITY NUMBER AVAILABLE

### PROCUREMENT NUMBER DELIVERED IN FISCAL YEARS

ACTIVE	RESERVE	TOTAL					

### STATUS

First Flight \_\_\_\_\_ November 1964

Service Use (estimated) \_\_\_\_\_ September 1966

### ENGINES

(2) T56-A-8A  
AllisonTake-Off:  
4050 ESHP at 13,820 RPMMilitary:  
4050 ESHP at 13,820 RPMNormal:  
3730 ESHP at 13,820 RPM

### FEATURES

The C-2A aircraft is capable of transporting high-priority cargo or passengers, or a combination of both, for Carrier On-Board Delivery (COD). Among the high-priority items the C-2A can deliver are special stores, jet engines, and afterburners, as well as general cargo. Payload and special equipment can be carried to the extent that the combination does not exceed 10,000 pounds. The large aft cargo ramp/door and powered winch facilitate fast turnaround time by straight-in rear cargo loading and unloading.

The airplane is operable from CVS-10, CVA-19, and superior class carriers equipped with H-8, C11-1, C-7 and C-13 catapults, and MK 5 Mod-3, MK 7 Mod-1 or MK 7 Mod-2 arresting gear. The C-2A is catapulted with a nose-tow catapult system. The overall dimensions of the C-2A together with automatic wing folding permit hangar deck servicing. An auxiliary power plant installation provides engine starting self-sufficiency.

The C-2A has a wide range of communications and radio navigation equipment which are compatible with both military and civil airways on a world-wide basis. Communications equipment include HF, VHF, and UHF; radio navigation aids include LORAN, TACAN, dual VOR, UHF/DF, LF/ADF, and provisions for weather radar.

The crew consists of a pilot and a copilot/navigator. An automatic flight control system provides crew relief by means of a maneuvering autopilot with flight path and altitude relief modes as well as TACAN coupling.

The airplane is equipped with modified Fowler type flaps, and hydraulically powered irreversible flight controls with an independent hydraulic backup system.

### CARGO CAPACITIES

The maximum weight allowance for payload and special equipment combined is 10,000 pounds. This allowance may consist of: cargo, the cargo cage, securing and handling equipment such as the powered winch; passengers and baggage, passenger seats, parachutes, life rafts, and accommodations; auxiliary power plant, LORAN, and navigation gear.

The maximum caged envelope is as follows:

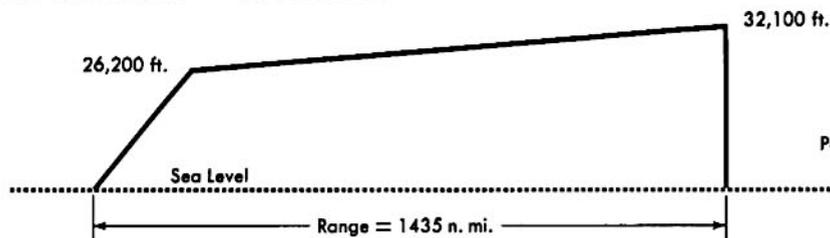
Length \_\_\_\_\_ 27 ft. 1 in.  
Width \_\_\_\_\_ 4 ft. 9 in.  
Height \_\_\_\_\_ 5 ft. 3 in.  
Volume \_\_\_\_\_ 675 cu. ft.

The average limit floor load is 300 pounds per square foot.

# CHARACTERISTICS SUMMARY

## BASIC MISSION

COMBAT RANGE



Clean Configuration

Payload and Special Equipment = 10,000 lbs. maximum

## PERFORMANCE

COMBAT RADIUS	COMBAT RANGE	SPEED
	1435 naut. mi. 258 knots avg.  Mission Time = 5.7 hrs. Take-Off Weight Cruise Ceiling	293 knots at 10,300 ft.  Take-Off Weight Normal Rated Power
CLIMB	CEILING	TAKE-OFF
2330 ft./min.  Sea Level, Take-Off Weight Normal Rated Power	28,800 ft.  100 ft./min., Take-Off Weight Normal Rated Power	1395 ft. Standard Day 1668 ft. 89°F Day Ground Run  2105 ft. Standard Day 2525 ft. 89°F Day To Clear 50 ft. Obstacle
LOAD	WEIGHTS	STALLING SPEED
Fuel 12,400 lbs.                  Gal. 1824	Empty                  31,096 lbs.  Combat                49,274 lbs.  Landing                43,376 lbs.  Take-Off                54,234 lbs.	V <sub>SPA</sub> = 76 knots Full Flaps, Approach Power Landing Weight  <b>TIME TO CLIMB</b>  To Service Ceiling in 35 min.  Take-Off Weight Normal Rated Power

## NOTES

1. Calculated data based on flight test demonstration drag, and calibrated engines with no increase in fuel consumption.
2. Weights are based on Weight and Balance Report No. 123R-501 dated 23 January 1965, adjusted for applicable changes.
3. Reasons for changes in performance from that shown in the October 1964 Characteristics Summary chart are:
  - a — Weight basis has changed from estimated to the actual weighing of No. 2 C-2A.
  - b — Drag basis has changed from estimated to flight test.
  - c — Engine performance basis has changed from a specification engine to a calibrated engine.
4. A total of 45 airplanes can be accommodated on the flight and hangar decks of a CVS-10 class angled deck carrier.