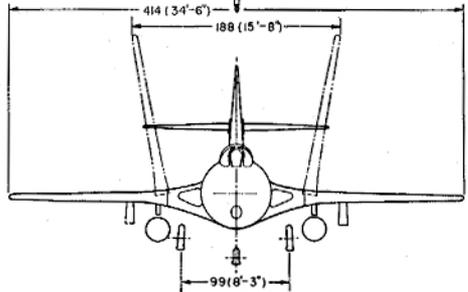
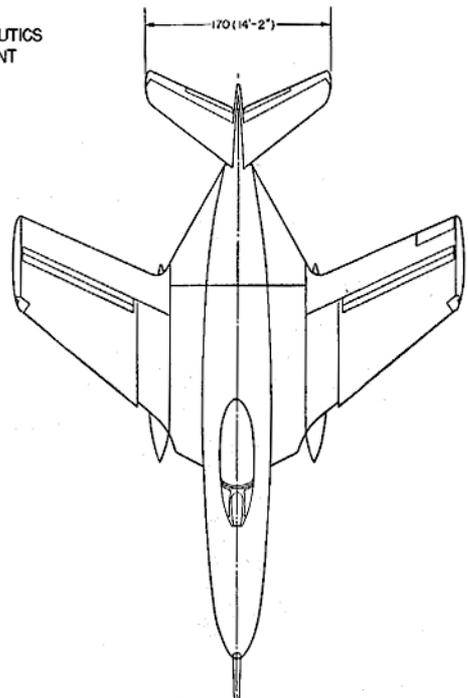


# STANDARD AIRCRAFT CHARACTERISTICS

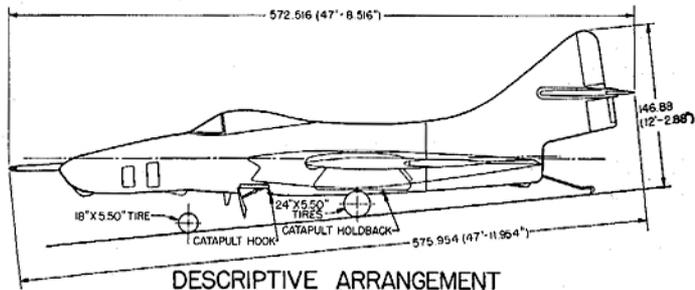
## F9F-8P "COUGAR"

GRUMMAN

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

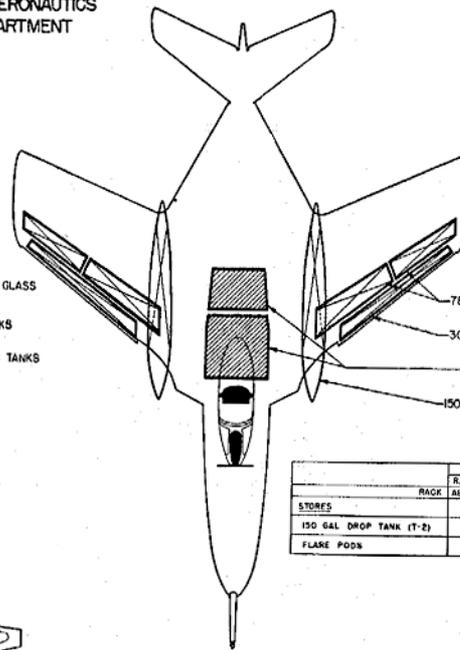


0 5 10  
SCALE - FEET



DESCRIPTIVE ARRANGEMENT  
F9F-8P

BUREAU OF AERONAUTICS  
NAVY DEPARTMENT

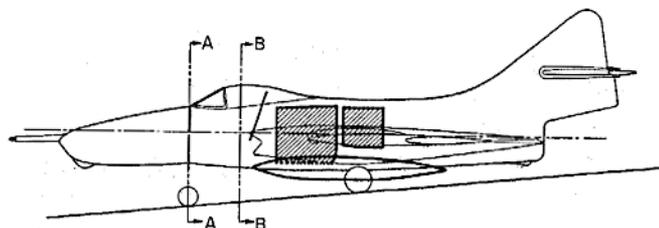
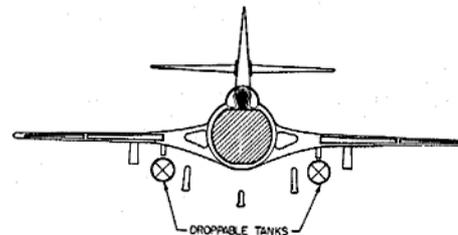


- BULLET RESISTANT GLASS ARMOR PLATE
- ▨ SELF-SEALING TANKS
- ⊗ NON-SELF-SEALING TANKS



STORES	WING STAFF		WING CROSS	
	R.H. WING	L.H. WING	R.H. WING	L.H. WING
150 GAL DROP TANK (T-2)	●	●		
FLARE PODS			●	●

0 5 10  
SCALE - FEET



ARMAMENT & TANKAGE  
F9F-8P

Standard Aircraft Characteristics NAVAR 1335B (Rev. 1-55)

## POWER PLANT

NO. & MODEL.....(1) J48-P-8A  
 MFR.....Pratt & Whitney  
 Type.....Centrifugal Compressor  
 ENGINE LENGTH.....110.0"  
 ENGINE DIAMETER.....51.0"

## RATINGS

	LBS	@ RPM	@ ALT.
T.O.	7,250	11,000	S.S.L.
MIL.	7,250	11,000	S.S.L.
NORM.	5,600	10,400	S.S.L.

SPEC. NO. N-1614D Appendix B

## PHOTO EQUIPMENT

## EXTERNAL STORES PROVISIONS

Wing Sta.	Rack	Capability
71	Aero 65A	150 gal. Fuel Tank
96	MK 51	Photo Flash
	Mod. 14	Cartridge Ejector

## Photo Provisions, Bay #1

Camera	Body	Cones	Magazines
CA-13,	24",	36"	MA-8
CA-13b			

CA-3-2,	12"	MA-2a, MA, -9a
CA-3-2b		
KF-8	2", 4", 6", 10"	Integral

## Bay #2 &amp; #3

CA-13,	24", 36"	MA-8 with IMC (Rotating -Split Vert.)
CA-13b		
CA-3-2,	6", 12",	MA-2a, MA-9a, MA-10a
CA-3-2b	24"	(Rotating-Split Vert.)
CA-3-2(3)	6"	MA-2a, MA-9a (Tri-Met)
CA-17a	12"	MA-10a (Night)
T-11	6"	Integral Mapping
CAS-2a	100 mm, 7", 12", 20"	Integral (Strip-Manual or Automatic Exposure Lens Cones)

## MISSION AND DESCRIPTION

The F9F-8P is a single seat, swept wing, carrier-based photographic airplane. The primary mission of this airplane is photographic reconnaissance at low, medium and high altitudes.

The F9F-8P differs from the F9F-8 in that the nose has been elongated to provide space for 3 camera stations. Most standard Navy cameras can be utilized in the 3 bays with a maximum installation of 7 cameras. The airplane is equipped with an automatic camera control system, image motion compensation for most cameras and a view-finder scanner equipped with a traveling grid for automatic speed altitude information. This system enables the F9F-8P to do day or night reconnaissance photography, mapping or strip work.

Longitudinal, lateral and directional control systems are similar to those of the F9F-8.

## DEVELOPMENT

First Flight - - - - - August 1955  
 Service Use - - - - - February 1956

## DIMENSIONS

WING	
AREA.....	337 sq. ft.
SPAN.....	34' - 6"
M. A. C.....	119.83"
SWEEPBACK C/4.....	35°
LENGTH.....	44' - 1 9/16"
HEIGHT.....	12' - 3"
TREAD.....	8' - 3"

## WEIGHTS

LOADING	LBS.	L.F.
EMPTY.....	12,246	
BASIC.....	12,276	
DESIGN.....	16,780	7.0
COMBAT.....	17,532	
MAX. T.O. (Field)	22,697	
(Cat.)	22,697	
MAX. LAND (Field)	22,697	
(Arrest)	15,547	

All Weights are Actual

## FUEL AND OIL

GALS.	NO. TANKS	LOCATION
847	2	Fuse. C.S.
216	6	Wing Internal
300	2	Wing Droppable

Fuel Grade.....JP-4  
 Fuel Spec... applicable....MIL-F-5624

## OIL

CAPACITY (Gals).....3.25  
 GRADE.....1010  
 SPEC.....applicable....MIL-O-6081

## ELECTRONICS

UHF.....AN/ARC-27A  
 UHF D.F.....AN/ARA-25  
 ADF.....AN/ARN-6  
 IFF.....AN/APX-6B  
 RADAR ALTIMETER.....AN/APN-22

Provisions for Service Installation of:

TACAN.....AN/ARN-21  
 SIF.....AN/APA-89

## PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		(1) CLEAN HIGH ALTITUDE PHOTO MISSION	(3) HIGH ALTITUDE PHOTO MISSION Clean + 2-150 gal. drop tanks	(5) LOW ALTITUDE PHOTO MISSION Clean + 2-150 gal. drop tanks
TAKE-OFF WEIGHT	lb.	19,947	22,340	22,340
Fuel JP-4	lb.	6930	6930/1950	6930/1950
Payload	lb.	515	768	768
Wing loading	lb./sq.ft.	59.2	66.4	66.4
Stall speed - power-off	kn.	114.2	122.4	122.4
Take-off run at S.L. - calm	ft.	3950	5200	5200
Take-off run at S.L. 25 kn. wind	ft.	2650	3600	3600
Take-off to clear 50 ft. - calm	ft.	4800	6300	6300
Max. speed/altitude	(A) kn./ft.	553/5000	527/9500	527/9500
Rate of climb at S.L.	(A) fpm.	4700	3900	3900
Time: S.L. to 20,000 ft.	(A) min.	4.8	6.3	6.3
Time: S.L. to 30,000 ft.	(A) min.	8.5	11.5	11.5
Service ceiling (100 fpm)	(A) ft.	41,500	37,700	37,700
Combat range	n.mi.	960	1160	1160
Average cruising speed	kn.	438	435	435
Cruising altitude(s)	ft.	36,900/41,300	34,000/40,700	34,000/40,700
Combat radius	n.mi.	360	510	250
Average cruising speed	kn.	437	435	436
Mission Time	hrs.	1.9	2.5	1.4
IFR Radius/Mission Time	(B) n. mi./hr.	--	920/4.8	--
COMBAT LOADING CONDITION		(2) CLEAN	(4) CLEAN plus 2 Aero 65A Racks	(6) CLEAN plus 2 Aero 65A Racks
COMBAT WEIGHT	lb.	17,175	18,349	18,349
Engine power		Military	Military	Military
Fuel	lb.	4158	4906	4906
Combat speed/combat altitude	kn./ft.	507/35,000	504/35,000	543/S.L.
Rate of climb/combat altitude	fpm/ft.	2050/35,000	1700/35,000	5200/S.L.
Combat ceiling (500 fpm)	ft.	42,200	41,200	41,200
Rate of climb at S.L.	fpm.	5650	5200	5200
Max. speed at S.L.	kn.	551	543	543
Max. speed/altitude	kn./ft.	555/5000	548/6000	550/6000
LANDING WEIGHT	lb.	13,811	14,553	14,553
Fuel	lb.	1241	1346	1346
Stall speed - power-off	kn.	92.8	95.5	95.5
Stall speed - with approach power	kn.	91.7	94.7	94.7

## NOTES

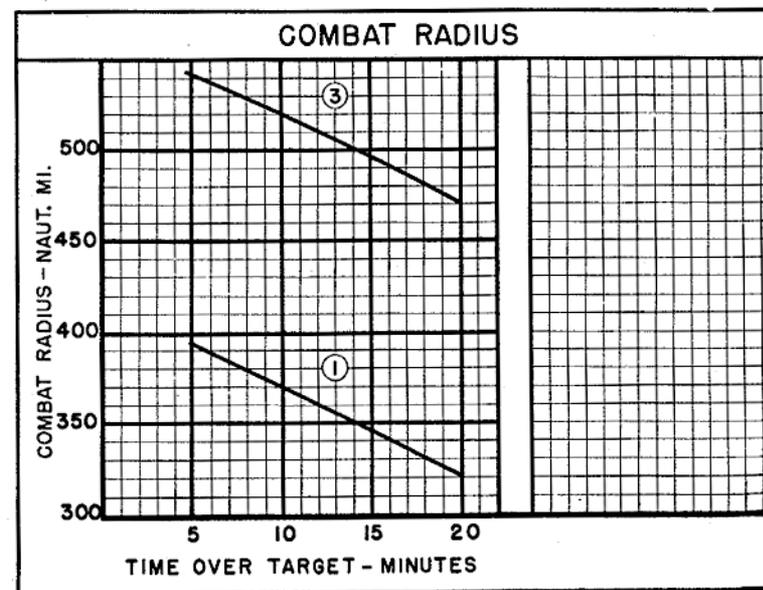
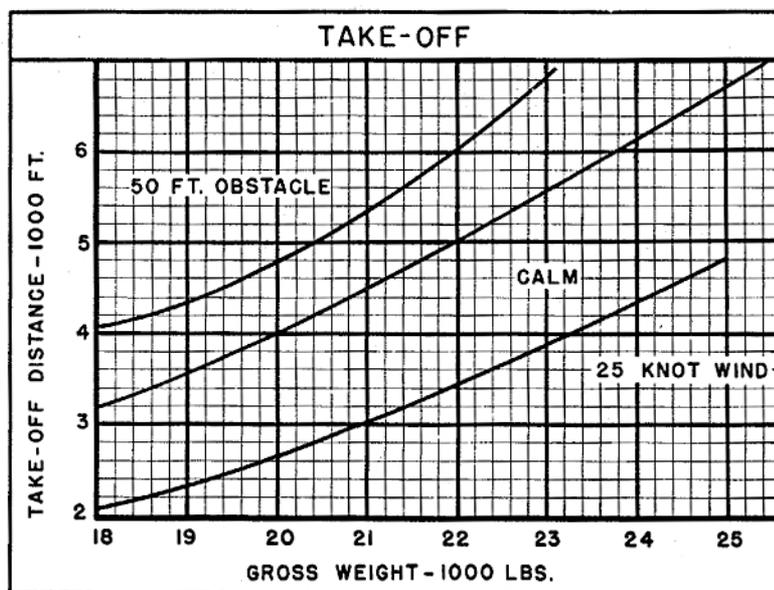
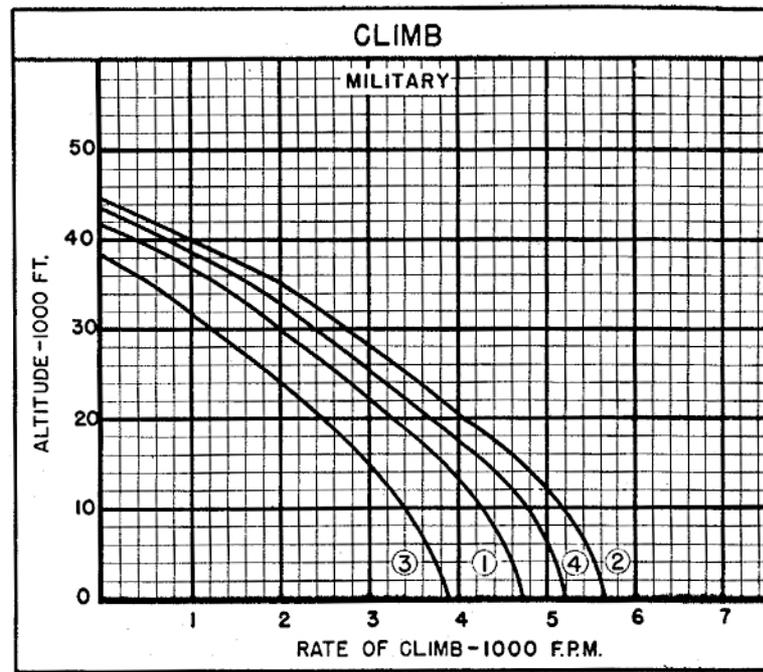
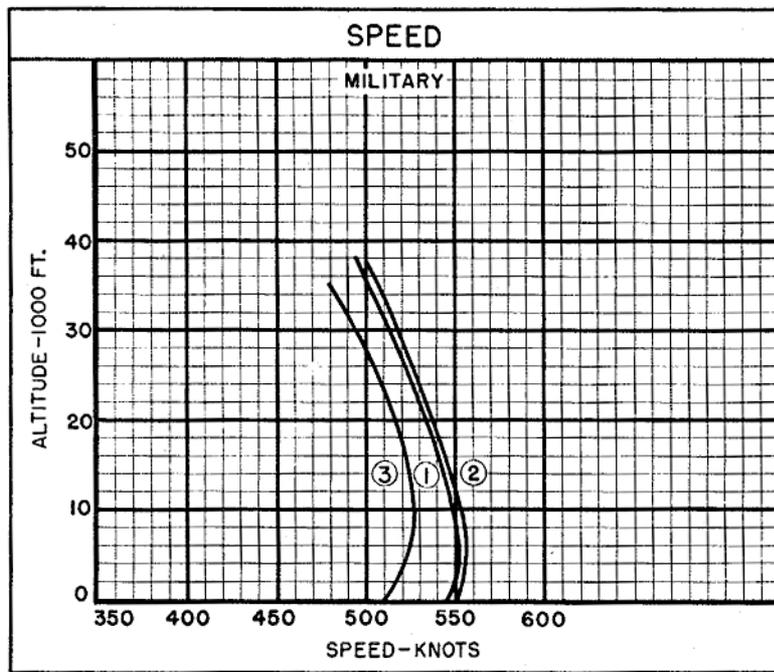
(A) Military Rated Thrust

(B) In-flight refueling - outbound only. Transfer 5510 lbs. at 598 n. mi. out. Radius is reduced 23 n. mi. and refuel allowance is increased 5 min. for each additional aircraft up to a total of 3 aircraft.

Performance Basis: Contractor's and NATC flight test data.

Range and Radius: Based on contractor and NATC fuel consumption data increased by 5%.

External tanks dropped when empty.



Standard Aircraft Characteristics NAVAER 1335E (Rev. 1-55)

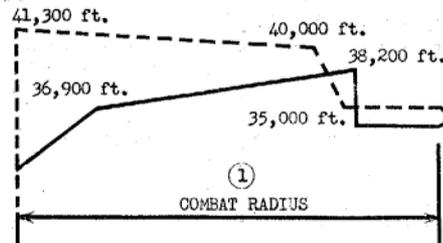
○ LOADING CONDITION COLUMN NUMBER

# NOTES

SPOTTING: A total of 103 airplanes can be accommodated on the flight and hangar decks of a CVA-19 class angled deck carrier.

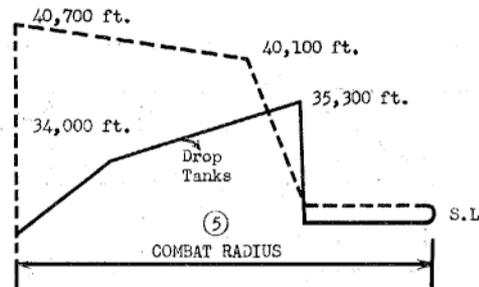
HIGH ALTITUDE PHOTO MISSION (CLEAN)

1. WARM-UP, TAXI, TAKEOFF: 5 minutes with normal rated thrust at sea level.
2. CLIMB: On course to cruise altitude with military rated thrust.
3. CRUISE OUT: At altitudes and speeds for long range.
4. DESCEND: To 35,000 feet (No fuel used - no distance gained).
5. RUN-IN: 50 nautical miles at maximum speed with military rated thrust.
6. TARGET TIME: 12 minutes at maximum speed with normal rated thrust. (No distance gained).
7. EVASIVE ACTION: 5 minutes at maximum speed with military rated thrust. (No distance gained).
8. RUN-OUT: 50 nautical miles at maximum speed with military rated thrust.
9. CLIMB: To cruise altitude with military rated thrust.
10. CRUISE BACK: At altitudes & speeds for long range.
11. RESERVE FUEL: 20 minutes at speeds for maximum endurance at sea level plus 5% of initial fuel load.



LOW ALTITUDE PHOTO MISSION (CLEAN + 2 DROP TANKS)

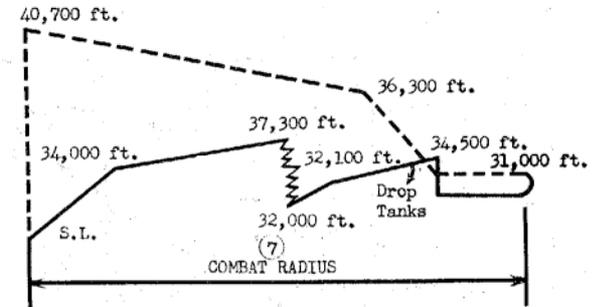
1. WARM-UP, TAXI, TAKE-OFF: 5 minutes at normal rated thrust.
2. CLIMB: To cruise altitude with military rated thrust.
3. CRUISE OUT: At altitudes and speeds for long range.
4. DESCEND: To sea level. (No fuel used, no distance gained).
5. RUN-IN: 50 nautical miles at maximum speed with military rated thrust.
6. TARGET TIME: 8 minutes at maximum speed with normal rated thrust.
7. EVASIVE ACTION: 5 minutes at maximum speed with military rated thrust. (No distance gained).
8. RUN-OUT: 50 nautical miles at maximum speed with military rated thrust.
9. CLIMB: To cruise altitudes with military rated thrust.
10. CRUISE BACK: At altitudes and speeds for long range.
11. RESERVE FUEL: 20 minutes at speeds for maximum endurance at sea level plus 5% of initial fuel load.



IN-FLIGHT REFUELING (A3D-2 Tanker)

HIGH ALTITUDE PHOTO MISSION (CLEAN + 2 DROP TANKS)

1. WARM-UP, TAXI, TAKE-OFF: 5 minutes with normal rated thrust.
2. CLIMB: To cruise altitudes with military rated thrust.
3. CRUISE OUT: At altitudes and speeds for long range. (Use main tank fuel - Wing and drop tank fuel unused).
4. DESCEND: To 31,000 feet for rendezvous with tanker. (No distance gained, no fuel used).
5. Allowance for rendezvous, hook-up, and flight contingencies: 15 minutes at maximum endurance airspeeds. (Assume no fuel used, no distance gained during transfer of fuel).
6. REFUEL POINT: Limited to return of aircraft to base with normal reserve if contact for refueling is not made.
7. CRUISE: Continue to cruise-out at altitudes and speeds for long range. External tanks dropped when empty.
8. Remainder of problem is the same as the general purpose fighter problem of column No. 3.



If JP-5 fuel is used, the following are applicable:

- ① High-altitude photo mission (Clean)
- ③ High-altitude photo mission (Clean + (2) 150 gal. drop tanks)
- ⑤ Low-altitude photo mission (Clean + (2) 150 gal. drop tanks)

LOADING CONDITION COLUMN NUMBER	WEIGHT	RANGE	RADIUS	MISSION TIME
①	320 lb.	+ 70 naut. miles	+ 35 naut. miles	+ .16 hr.
③	410 lb.	+ 84 naut. miles	+ 42 naut. miles	+ .19 hr.
⑤	410 lb.	+ 85 naut. miles	+ 43 naut. miles	+ .19 hr.

○ LOADING CONDITION COLUMN NUMBER

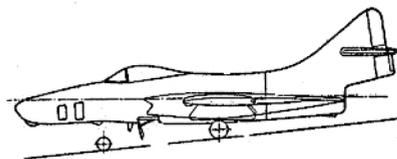
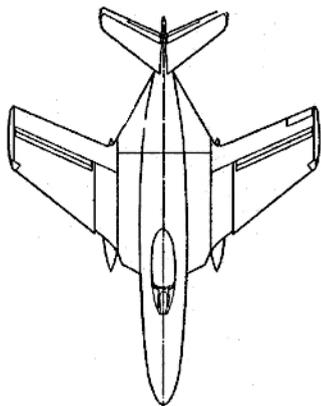
Standard Aircraft Characteristics NAVAER 1335F (Rev. 1-55)

# CHARACTERISTICS SUMMARY

PHOTO RECONNAISSANCE

F9F-8P

GRUMMAN



WING AREA 337 sq. ft.  
WING SPAN 34' 6"

LENGTH 44' 1-9/16"  
HEIGHT 12' 3"

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

## STATUS

First Flight - - - - - August 1955  
Service Use - - - - - January 1956

### ENGINES

P & W J48-P-8A  
Specification number N-1614-D  
Military static rating—7250 lbs.  
Normal static rating—5600 lbs.

### FEATURES

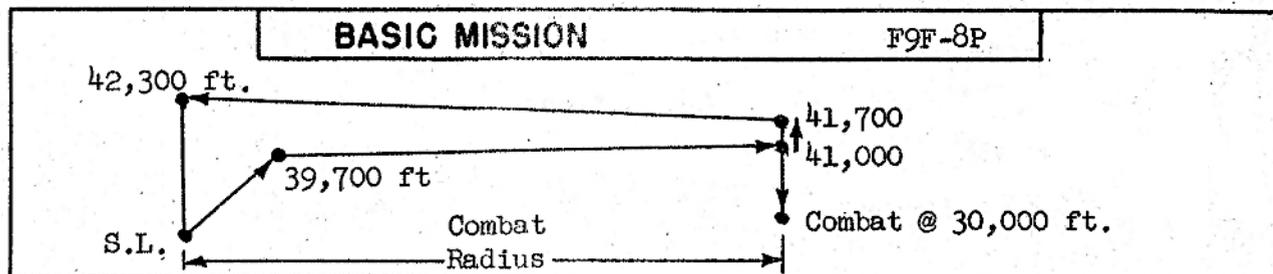
Utilizes all standard Navy cameras, including forward firing camera  
Night photograph capability  
Complete automatic camera control system, including image motion compensation for most cameras, including K38  
Viewfinder-scanner-equipped with traveling grid for automatic speed—altitude information. Improved forward view  
Cameras installed in 3 bays, providing excellent access for installation. Max. cameras carried in one installation 7

### ARMAMENT - PHOTO

Cameras—Basic  
K38 24", 36" F.L.  
CA-13b  
Cameras—Additional  
K17c 6", 12", 24" F.L.  
CA-3-2b  
K-47—12" (night)  
T-11—6"  
CAS-2A 100mm 1", 12", 20", manual or automatic exposure lens cones  
KF-8—2", 4", 6", 10" F.L.  
Wing station Rack Store  
71 Aero 65A 150 gallon drop tanks  
96 MK 51\* Photo flash cartridge ejector pylon  
\*Rack is an integral part of photo flash unit

NAVAER 1519 A (REV. 1-49)

## CHARACTERISTICS SUMMARY



CLEAN PERFORMANCE		
COMBAT RADIUS	COMBAT RANGE	SPEED
444 naut. mi.	996 naut. mi.	550 knots at S.L.ft.
450 knots avg.	448 knots avg.	548 knots at 10,000 ft.
2.11 hours	2.27 hours	504 knots at 35,000 ft.
		Combat Weight Military Power
CLIMB	CEILING	TAKE OFF
4725 ft./min.	40,200 ft.	4000 ft. - CALM
Sea Level, T. O. wt. Military Power	100 ft./min., T. O. wt. Military Power	NO ASSIST
5750 ft./min.	41,800 ft.	2680 - 25 knot HEADWIND
Sea Level, Combat Wt. Military Power	500 ft./min., Combat Wt. Military Power	NO ASSIST
LOAD	WEIGHTS	STALLING SPEED
Fuel 6935 lbs. (1067 gal.)	Empty 12323 lbs.	$V_{S_L} = 113.5$ knots
fixed 6935 drop 0	Combat 17141 lbs.	Flaps down, T. O. wt.
	Take-off 20082 lbs.	TIME TO CLIMB
		40000 ft. in 15 min.
		Combat Wt., Max. Power

### NOTES

- 1) Performance based on estimated data and flight test data from contractor not substantiated by BuAer.
- 2) Vortex Generators and Splitter Plates installed