

# FG-1D CORSAIR Product Manual

### **IMPORTANT INFORMATION**

### MILVIZ

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Any inquiries regarding commercial, military or academic use of this program should be directed via e-mail to info@milviz.com.

Product support is provided by Milviz via the product support forums. For access please email info@milviz.com with your proof of purchase and preferred, or existing, forum user-name.











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### **INTRODUCTION**



The Corsair is arguably the most visually distinctive fighter airplane of the Second World War. Unmistakable with its rear-set cockpit, massive propeller and cranked "gull wings", this robust and versatile aircraft was one of the longest-serving fighters of the last century. Entering service in 1942, it was still flying and fighting right into the sixties. The Corsair saw action in the Second World War, the Korean War and various other hostilities right up to its last kill in 1969.

The gull-wing design, implemented to accommodate the mighty Pratt & Whitney R-2800 -8W "Double Wasp" with its huge Hamilton Standard Hydromatic propeller, enabled short and sturdy undercarriage legs, ideal for carrier operations, and the un-faired perpendicular wing-fuselage joints, were aerodynamically efficient and contributed to its high speed.

During the War, demand for these sturdy aircraft increased, outstripping Chance-Vought's supply capacity. Rival manufacturers Brewster and Goodyear were tasked with meeting the shortfall. The designation FG-1D identifies our Corsair as a Goodyear built aircraft.

The Milviz FG-1D is loosely based on FG-1D Bu No.92132 . Manufactured too late for war service, the aircraft spent its naval career in the Reserves before being retired in 1957. In the 70's, she was brought up to "good enough" flying condition and used in the TV series "Baa Baa Black Sheep", but then sat again for decades before being acquired by the Tri-State Warbird Museum (Batavia, Ohio), which is currently in the process of restoring the aircraft. A history of the aircraft can be viewed here:

Link: CORSAIR/Bu. 92132

Link: POOR LITTLE LAMBS – The Corsairs of Baa Baa Blacksheep



To re-live the exploits of 'Pappy' Boyington and the VMF-214 Black Sheep squadron, spawn at AGEV, Geva airport, Gizo, Solomon Islands.



### PRODUCT FEATURES & HIGHLIGHTS MILVIZ

- Realistic flight dynamics
- Realistic startup and shutdowns
- Realistic systems and avionics
- Realistic engine modeling with water injection and supercharger
- High quality external model using normal, bump and specular maps
- High quality internal model complete with custom 3D gauges
- Accurately modeled electrical system and cockpit lighting
- Authentically animated high air-load flap blowing and undercarriage dive brakes
- High resolution layer based paint kit available for download
- Full weapons loadout including rockets and bombs
- 21 HD liveries included

At the time of release there are features of the real aircraft that are either not permitted, or not possible for us to recreate in Microsoft Flight Simulator 2020 in its present state of development.

Please note due to current limitations of the platform:

- Weapons loadouts can be selected but the weapons themselves are inop.
- Differential braking, although limited in its effectiveness compared to previous simulators, can be used in conjunction with the free castoring tailwheel to achieve a tight turning radius during ground operations. Pilots may find use of the rudder to be of help while attempting to use differential braking.
- Weapons control, together with radio and oxygen systems are animated and clickable, otherwise inop.
- With wings folded, throttle is automatically limited to 25% power to prevent takeoff; (currently MSFS2020 wings have the same flight characteristics whether folded or unfolded).
- At present, the MSFS2020 AI does not respect the tendency of a carefully balanced taildragger to tip forward when braking hard during a fast taxi, and as such, it cannot be trusted to safely taxi the Corsair during the opening cinematic when choosing a runway start, nor can it be used to effect a landing.







#### SYSTEM REQUIREMENTS

The following requirements apply as a minimum to successfully install and operate the Milviz FG-1D.

Please note that choice of scenery, location, simulator settings and 3rd party utilities may place additional demands on your simulation platform.

#### **SUPPORTED PLATFORMS:**

• Microsoft Flight Simulator 2020

Note: This product is intended to be operated with a fully up-to-date installation of MSFS2020. This includes any released updates, patches, hotfixes, or point releases. However, because updates to MSFS2020 can sometimes cause compatibility issues with existing aircraft of a complex nature, please understand that it may take our team some time to prepare the necessary fixes for your product.

#### SUPPORTED OPERATING SYSTEMS:

• Windows 10

#### PROCESSOR (CPU)

- Intel i5-4460 / AMD Ryzen 3 (minimum)
- Intel i7-7700 / AMD Ryzen 5 (recommended)

#### VIDEO CARD (GPU)

- GTX 1060 Ti / Radeon RX 570 (minimum)
- RTX 3060 / AMD Radeon RX 590 (recommended)

#### VIDEO MEMORY (VRAM):

• 8 GB RAM

#### SYSTEM MEMORY (RAM):

• 16 GB RAM

#### **DISK SPACE**

• 1.2 GB

#### **GAMING CONTROLLER**

• Joystick, yoke, or other gaming controller

#### **MULTIPLAYER**

Please note that in multiplayer, your aircraft will only appear as our FG-1D Corsair if you and your player-partners all own the product, or you have bought it from the MSFS2020 marketplace.





RXXX

#### **INSTALLATION INSTRUCTIONS**

Please note: If you purchase via the MSFS2020 Marketplace, installation will be automatic and the following article does not apply

After purchase, you will have been given a link or an option to download a zipped (.zip) file. This compressed file contains an executable (.exe) file, which is the installer for the MilViz FG-1D.

Extract the compressed file to the temporary folder of your choice using an archive utility (like 7.zip)

To begin installation, navigate to the extracted .exe and right click, selecting "Run as administrator".

🕼 Milviz FG-1D Setup	×
Customer Information	
Please enter your customer information	MILVIZ
User Name:	
Windows User	
Organization:	
Serial Number:	
Advanced Installer	
< Back Next >	Cancel

If you agree to the terms of the License agreement, click accept and the installation window will follow.



After clicking through on the initial setup screen, you will come to the Customer Information window.

Fill in the fields, and enter the 12 digit activation key that was included in the purchase confirmation documentation

Please read the following license agreement carefully End user license agreement - EULA IMPORTANT - YOU SHOULD CAREFULLY READ THE FOLLOWING BEFORE INSTALLING THE SOFTWARE. USE OF THE SOFTWARE IS SUBJECT TO THE LICENCE TERMS SET FORTH BELOW. THIS LICENCE AGREEMENT ("LICENCE") IS A LEGAL DOCUMENT BETWEEN YOU ("LICENSEE" OR "YOU") MILITARY VISUALIZATIONS Inc ("MV" OR "MILVIZ") FOR THE SOFTWARE	End-User License Agreement	
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	< Back Next > Ca	ancel





Click 'Install', and everything from here on in will proceed automatically.



Congratulations! The Milviz FG-1D corsair has been successfully installed!



Note: Uninstalling Microsoft Flight Simulator 2020 will erase the community folder and its contents, so please ensure you have made a back-up of your community folder before uninstalling.



#### CONFIGURATION

Choose out of twenty-one liveries by either navigating to PROFILE > MY HANGAR > LIVERIES or WORLD MAP > AIRCRAFT SELECTION > LIVERIES.



#### HANDLING

The real-life Corsair was notoriously badly behaved at low speeds. Lack of rudder authority meant that at takeoff taming the torque of the massive Double Wasp was a difficult task for even the experienced pilot.

In the Milviz FG-1D Corsair, the flight dynamics have been tempered a little, however, if you prefer more of a challenge, set the Autorudder to 'OFF'. (If using autorudder, no trim is required for takeoff.)

As is typical of nose-heavy tail-draggers, injudicious application of toe-brakes will result in prop-strike face plants; especially on rough airstrips!

Ensure OPTIONS > FLIGHT MODEL is set to 'MODERN'.





### **INSTALLATION & CONFIGURATION**

#### **CHART BOARD LOADOUT UTILITY**

PAGE 1 Map PAGE 2 Loadout	MILVIZ FG-1D CORSAIR  MILVIZ FG-1D CORSAIR  MK117 BONB CENTER PYLON AUX FUEL TANK  HEFT MK117 BONB BOMB PYLONS AUX FUEL TANK  LEFT AUX TANK BONB PYLONS AUX TANK RIGHT  LEFT AUX TANK TANK PYLONS AUX TANK RIGHT  .50 CAL AMMO HVAR ROCKETS CHOCKS  LEFT AUX: 100 % CENTER: 100 % RIGHT AUX: 100 % +++++  GROSS WEIGHT (14,200 LBS MAX)  RESET TO CLEAN CONFIGURATION  DUIDT TOGGLE GUNSIGHT VISIBILITY

MILVIZ

PAGE

The chartboard is located on the front panel in between the lowest gauges and your knees (refer to p.15). Click on the edge of the board to extend it, and then click on the chartboard itself to reveal the load-out utility and the moving map.

Page one shows a moving map, styled to resemble the charts of the day.

Page two allows configuration of the loadout while on the ground. From here it is possible to:

- Select weapons configuration. (See p.33)
- Select drop-tanks.
- Select fuel quantity of external tanks.
- Show or hide the cockpit weapons systems (gunsight, gun switchbox, rocket switchbox)
- Reset to a clean configuration without external pylons.
- Toggle chocks.

All selections affect the gross weight, which in turn will affect the flight performance. Please be aware that it is possible to overload the aircraft causing it to become difficult, if not impossible to fly.

To change the quantity of fuel in the main tank, we recommend doing so via the Weight And Balance menu (WORLD MAP > AIRCRAFT SELECTION > WEIGHT & BALANCE) before starting your flight.

The utility is electrically powered requiring the battery to be switched on if the engine has not yet been started.

Gol

### **INSTALLATION & CONFIGURATION**

#### FUEL

WORLD MAP				Q	9 8 0	OSHIWOSHI	۲
Milviz FG-1D Corsair	FROM SELECT DEPARTURE AIRPORT RUNWAY		Celect arrival airi	PORT	TO FLIGH		
AIRCRAFT SELECTION	DISPLAY FUEL AS			GAL 💽 LB	EMPTY CG POSITION %	MAC	27.60
	^ FUEL		0	33.00%	Center of gravity	•	31.31% MAC
LIVERIES	CENTER 1		0 100.00%	230.00 gal	CG forward limit		20.00% MAC
WEIGHT AND BALANCE	CENTER 2	•	0.00%	0.00 gal	-		55.00 % MAG
	EXTERNAL 1	0	0.00%	0.00 gal			
FAILURES	EXTERNAL 2	0	0.00%	0.00 gal			
CUSTOMIZATION	^ PAYLOAD		-0	4.70%			
	PILOT			200.00 lb			
	STATION 1 (DO NOT EDIT)			0.00 lb			LEMAC
	STATION 2 (DO NOT EDIT)			0.00 lb			WD LIMIT
	STATION 3 (DO NOT EDIT)			0.00 lb	+	<b></b>	AFT LIMIT
	STATION 4 (DO NOT EDIT)			0.00 lb			
	STATION 5 (DO NOT EDIT)			0.00 lb			
	STATION 6 (DO NOT EDIT)			0.00 lb	/		TEMAC
	STATION 7 (DO NOT EDIT)			0.00 lb			
	STATION 8 (DO NOT FOIT)			0 00 lb			
	Empty Weight / -		9,	640 LB / -			
	Fuel / Max Allowable Fuel		1,:	380 LB / 4,212 LB			
	Payload / Max Payload			200 LB / 4,280 LB		H	
	Total / Max Takeoff Weight		11,3	220 LB / 15,300 LB			
-							
Esc CLOSE F12 RESET							

In addition to the Chartboard Loadout utility, fuel quantity can be also set using the default MSFS2020 methods found at the WEIGHT AND BALANCE page, or via the in-game FUEL drop down menu.

Presently, due to the MSFS2020 naming rules, it may not be obvious which tanks are which.

- CENTER 1 is the main internal fuel tank (including reserve standpipe amount)
- CENTER 2 is the ventral drop-tank situated on the aircraft center-line
- EXTERNAL 1 left drop-tank
- EXTERNAL 2 right drop-tank

Set fuel amounts using the MSFS2020 default dialogues before configuring external stores in the chartboard utility. If fuel quantities are adjusted via the default methods, drop-tanks will spawn on the pylons replacing any previously selected bombs.

Main internal fuel tank quantity (CENTER 1) can only be adjusted using the MSFS2020 default dialogues.

#### MIXTURE

Using the OPTIONS > CONTROLS > POWER MANAGEMENT dialogue, ensure mixture axis is set to '-100 - 100%'.

POWER MANAGEMENT	
^ MIXTURE	
MIXTURE AXIS (-100 TO 100%) ■ REVERSE AXIS	Joystick Slider X
A THROTTLE	
THROTTLE AXIS	Joystick L-Axis 2



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### **CHECKLISTS**

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Interactive checklists in MSFS2020 render much of the following manual redundant as they neatly itemise all the steps required for each procedure.

- On Entering Cockpit
- Starting Engine
- Engine Warm-up
- Ground Test
- Taxi
- Before Take-off
- After Take-off
- Climb & Level Flight
- War Emergency Power
- Diving
- Approach & Landing
- Shutting Down Engine

It's your choice whether you read the lists and complete each one manually, or click 'Evaluation' to have the sim focus the view on the next item, with the specific control highlighted.

Note that any item with a pilot icon will require input in order to proceed to the next step.



Using the 'Auto Complete' option is not recommended due to inconsistencies with our custom code. Items will appear checked when in reality they have not been completed.

For those that prefer to fly 'by-the-book', the rest of the manual is for you...

CHECKLIST	 図 ×
ON ENTERING COCKPIT	0 / 12
STARTING ENGINE	0 / 18
ENGINE WARM UP	0 / 9
GROUND TEST	0 / 10
ТАХІ	0 / 4
BEFORE TAKE-OFF	0 / 18
AFTER TAKE-OFF	0/9
MILITARY POWER CLIMB AND LEVEL FLIGHT	0/2
WAR EMERGENCY POWER	0/5
DIVING	0 / 13
APPROACH AND LANDING	0 / 14
SHUTTING DOWN ENGINE	0/8

СН	ECKLIST		- C ×
	STARTI	NG	ENGINE 0/18
≣	< ON ENTERING COCKPIT		ENGINE WARM UP >
5	RESET PAGE		
	Magnetos		OFF
	Mixture Lever	8	IDLE CUT-OFF
	Pull the prop through (two ti	8	PULLED
AU	TO COMPLETE PAGE		
EV	ALUATION	1	AUTO COMPLETE ITEM

CHECKLIST	
STARTIN	G ENGINE 0/18
E < ON ENTERING COCKPIT	ENGINE WARM UP >
ර RESET PAGE	
<ul> <li>Magnetos</li> </ul>	OFF 💿
Mixture Lever	IDLE CUT-OFF
Pull the prop through (two ti	PULLED
AUTO COMPLETE PAGE	
PAUSE	AUTO COMPLETE ITEM
Magnetos switch must be set to "OF	F"

PAGE 13



## FG-1 Corsair

### **DESCRIPTION**



#### GENERAL

The FG-1D airplane is a single-engine, single-seat, folding low-wing monoplane designed as a long-range fighter-bomber for carrier and land based operations.



- Crew: 1
- Length: 33 ft (10.26 m)
- Wingspan: 41 ft (12.5 m)
- Height: 12 ft (4.5 m)
- Empty weight: 9,205 lb (4,175 kg)
- Loaded weight (no external load): 12,028 lb (5,714 kg)
- MAX takeoff weight: 15,415 lb (6,990 kg)
- Power plant: 1× Pratt & Whitney R-2800 -8W "Double Wasp" two-row radial engine with a two-speed twostage supercharger, 2,000 hp (1,491 kw)

Corsair

- Propeller: 3-blade Hamilton Standard Hydromatic 6501-A/6541A-0
- Propeller diameter: 13 ft 1 in (4.0 m)
- Fuel capacity: 250 U.S. gal (946 L) internal; up to 3x 150 U.S. gal (568 L) external drop tanks
- Drag area: 7.05 ft<sup>2</sup> (0.65 m<sup>2</sup>)
- Aspect ratio: 5.5
- Maximum speed: 369 knots (425 mph, 787 km/h) at 20,000 ft (6096 m)
- Stall speed: 77 knots (89 mph, 143 km/h)
- Combat range: 285 nm (328 mi, 528 km)
- Ferry range: 873 nm (1005 mi, 1617 km)
- Service ceiling 37,000 ft (12,600 m)
- Rate of climb: 3,120 ft/min (15.9 m/s)
- Take-off roll (no headwind, soft runway): 950 ft (290 m)





Cockpit - Forward

- 1. Gun switch box
- 2. Gunsight
- 3. Bomb switch box\*
- 4. Instrument panel
- 5. Droptank switch
- 6. Flaps indicator
- 7. Chart board
- 8. Rocket switch box\*



#### Cockpit - Left

- 1. Hinge-pin lock
- 2. Wing fold control
- 3. Manual tank/bomb release
- 4. Tail wheel lock
- 5. Rudder tab trim wheel
- 6. Elevator tab trim wheel
- 7. Aileron tab trim wheel
- 8. Engine controls
- 9. Fuel tank selector
- 10. Landing gear/dive brake control
- 11. Hydraulic hand pump



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#### Cockpit - Forward-left

- 1. Ignition switch
- 2. Pump check-valve
- 3. Landing gear indicator
- 4. Gun charging console
- 5. Flap lever/indicator

#### Cockpit - Right

- 1. Cooling flaps control
- 2. Radio equipment
- 3. Pilot's electrical distribution box





- 1. C43/ARC control\*
- 2. C26/ARC-5 control\*
- 3. Arrester hook control
- 4. IFF control\*

\* = non-functioning; for display only.









#### Instrument panel

- 1. Tachometer
- 2. Altimeter
- 3. Directional gyro
- 4. Water injection quantity warning
- 5. Stall warning indicator
- 6. Compass
- 7. Carburetor air temperature warning light
- 8. Gyro horizon
- 9. G-force indicator
- 10. Oil & fuel pressure gauge
- 11. Cylinder head temperature
- 12. Climb indicator
- 13. Turn & bank indicator
- 14. Airspeed indicator
- 15. Manifold pressure gauge
- 16. Droppable fuel tank switch
- 17. Fuel quantity
- 18. Hydraulic pressure gauge
- 19. Volt-ammeter
- 20. Fuel pressure gauge
- 21. Emergency hydraulic pressure release
- 22. Oil cooler flap indicator
- 23. Intercooler flap indicator



Right-hand sub instrument panel









Hydraulic hand-pump

Cooling Flaps Controls and Indicators









#### **CAMERA VIEWS**

Quickviews 5,6,7,8 are designed to be used with the canopy open, and are intended to emulate the pilot looking out of the canopy.

#### GENERAL

In addition to the conventional surface controls the cockpit contains the power plant, fuel system, oil system and hydraulic system controls and other miscellaneous controls. The location and operation of each control is described as follows

#### **POWER PLANT CONTROLS**

The throttle, mixture, propeller governor and supercharger controls are mounted in a control unit installed on the left side of the cockpit as shown on page 16. Each control moves through a quadrant in operation. For ease of handling the engine control unit is plainly marked with the name and correct positioning of the controls mounted thereon.

#### THROTTLE CONTROL

The throttle control is located on the engine control unit on the left side of the cockpit.

In the real aircraft, throttle opening is limited to 95% by the War Emergency Power safety wire. It is only by pushing against the resistance of the wire and then breaking it, that 100% opening can be achieved. Since the wire is not modeled, please refer to your instruments to ensure the throttle has not been opened further than intended.

#### **MIXTURE CONTROL**

The engine is equipped with a Bendix Stromberg injection carburettor with automatic mixture control. The mixture control has three effective positions: "Idle Cut-Off", "Auto Lean", "AUTO RICH".

For flight operations (except takeoff and landing approach) the control shall be set to "Auto Lean". If it becomes impossible to maintain cylinder head temperatures below 260° C (500° F) for 30 minutes at military power, and 232° (C 450° F) continuous at any lower power without opening the cowl flaps, enrich enough to restore proper cooling.

#### **PROPELLER GOVERNOR CONTROL**

The constant speed propeller control is located on the end of the engine control quadrant. Move the control down to increase RPM; move the control up to decrease RPM. Vernier adjustment is obtained by rotating the knob on the control lever.

#### Note:

use max RPM use for War Emergency Power only

The control sets the constant speed unit and has no direct control over propeller blade angle. The blade angle is such that 2700 RPM can be obtained at somewhat less than full power and 3060 RPM will not be exceeded in dives up to maximum allowable diving speed. Rapid changes in throttle or propeller control setting will tend to cause the RPM to overshoot the mark momentarily before settling down.

#### SUPERCHARGER CONTROL

The two-stage supercharger induction system installation comprises the main stage impeller, geared directly to the crankshaft and the auxiliary stage impeller, driven through oil operated clutches by means of which it can be engaged in either of two fixed gear ratios; "Low" or "High".

#### **CARBURETOR AIR TEMPERATURE**

A warning light is provided on the main instrument panel to indicate (red light on) if the carburetor air temperature exceeds the maximum limit of 43 °C. Operating the engine at high power with excessively high carburetor air temperature may cause serious damage to the engine, as well as spewing oil all over the paintwork.





#### **COWL FLAP CONTROL & CYLINDER TEMPS**

The cowl flap control is located on the right side of the cockpit forward of the electrical panel Hold open or closed using mouse click and drag until desired setting is obtained, then release. When released, the spring loaded levers will return to the neutral position. Tooltips will indicate the status. If a lever is unresponsive it means that the flaps are already at the full extent of their travel.

The cowl flaps should be adjusted so as not to exceed the following cylinder head temperatures

- Take-off Military and War Emergency power High speed and climb at normal rated power
   260° C (500° F)
- Continuous operation at any power at above - 232° C (450° F)

The full-open cowl flaps setting is provided primarily for ground cooling. Open about two-thirds for takeoff and climb and closed or open slightly if required for high speed and cruising level flight. Cylinder head temperatures can be reduced by:

- 1. Enriching mixture
- 2. Opening cowl flaps
- 3. Reducing power
- 4. Increasing speed

#### **INTERCOOLER FLAP CONTROL**

Control of the carburettor air temperature when operating in low or high blower is provided by means of the Intercooler Flap Control located on the right side of the cockpit forward of the electrical panel see p.18.

#### **OIL COOLER FLAP CONTROL**

The quantity of cooling air to be admitted to the oil coolers is regulated by two flaps controlled from the right side of the cockpit (see p.18). The two flaps may be placed in any position between "OPEN" and "CLOSED" as required to effect the flow of the necessary quantity of cooling air through the air-duct openings to the coolers.

#### **FUEL SYSTEM CONTROLS**

#### TANKS

The self-sealing main tank located in the fuselage forward of the cockpit has a total capacity of 237 US gallons 197 imperial gallons of fuel including a standpipe reserve of 50 US gallons (42 imp. gallons). Provision is made under the fuselage for the installation of a droppable auxiliary tank having a capacity of 170 US gallons (142 imperial gallons) of fuel.

For this aircraft, provision is made in the fuel system for installing two Navy standard type droppable tanks each with a capacity of 154 US gallons (129 imperial gallons) of fuel on the center section twin pylons.

#### **FUEL SELECTOR**

The fuel selector is located on the left hand shelf of the cockpit. For fuel selector positions see p.15.

#### FUEL QUANTITY GAUGE

An electrical fuel quantity gauge is provided for the main tank only; it shows the total quantity of fuel in the tank including the standpipe reserve. The gauge dial is calibrated to indicate correctly when the airplane is in level flight at approximately 175 knots indicated airspeed (normal fighter load) (201 mph).





#### LANDING GEAR CONTROL

To operate the landing gear retraction and extension, the control is moved to, and locked in the desired position. The gear and closure doors are automatically operated in proper sequence. The positions of each side of the landing gear and of the tail wheel are shown by the respective indicators.

#### **DIVE BRAKE CONTROL**

The shift type dive brake control is located on the left side of the cockpit (see p.15). Moving the control to "ON" extends the main landing gear only, the tail wheel remaining retracted. Moving the dive brake control to "OFF" retracts the main landing gear. The dive brake function is mapped to 'Toggle Spoilers' (numpad divide '/"). It cannot be mapped to an axis.

For dive brake flight restrictions see p.30.

#### **ARRESTER HOOK CONTROL.**

Three settings for the arresting hook control, located on the right-hand panel, are provided; "UP", "DOWN", and "PARKING". To lower the hook (tail wheel extended) move the handle to "DOWN", and vice versa. At all times except on arrested landings and when the airplane is on the ground, the hook control should be at "UP".

The tail hook will not extend unless the tail wheel has been lowered first.

To extend and retract tail hook, the lever must not be in park position.

#### WING FLAP CONTROL

The flap control mechanism located above the pilots left-hand shelf is designed so that any desired flap angle in 10° steps to "FULL DOWN" (50°) can be obtained by a corresponding setting of the wing flap control.

#### Note

The wing flap control should not be placed in position for lowering flaps at speeds in excess of 200 knots (230 mph) even though the flaps are protected by an overload relief mechanism. If the flap relief mechanism is not in operation the restricted speed with flaps down varies from 130 knots (150 mph) with flaps deflected 50° to 200 knots (230 mph) with flaps deflected 20°.

The flaps are also designed for use in maneuvering the airplane in combat. With typical maneuvering flap deflections of 20° or less the airplane may be maneuvered up to 200 knots (230 mph) using the "FLAPS UP" acceleration limits.

The wing flap system includes a mechanism which causes the flaps to "blow up" (back off) from the angle set by the control under excessive air loads caused by speeds greater than normal. The flaps will return to the angle corresponding to the control setting when the air speed is reduced.

Flaps at 10° will blow at 180 knots (207 mph) Flaps at 20° will blow at 160 knots (184 mph) Flaps at 30° will blow at 140 knots (161 mph) Flaps at 40° will blow at 120 knots (138 mph) Flaps at 50° will blow at 100 knots (115 mph)

#### TAIL WHEEL LOCK CONTROL

This control is located on the left hand shelf. To unlock the tail wheel, pull upward on the control handle and turn.

#### **ELECTRIC AUXILIARY FUEL PUMP SWITCH**

The switch is located on the left-hand shelf of the cockpit

#### **CHART BOARD**

Click on the chart board to reveal the moving map and loadout configuration utility.



### MILVIZ

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#### WING FOLDING AND LOCKING CONTROLS



To fold the wings, release the manual wing hinge pin lock handle adjacent to the wing folding control on the left side of the cockpit. Then move the wing fold control to "FOLD". This operation extracts the wing hinge pins and folds the wings in the proper sequence. With the engine running, the wings will fold automatically; otherwise, the hand pump must be used.

To spread the wings, set the wing fold control to "SPREAD". This operation spreads the wings and inserts the hinge pins in proper sequence. When the wings are spread, lock the pins mechanically by pulling and engaging the manual wing hinge pin locking handle in the "LOCK" position.

Warning: Wing fold handle must always be in "SPREAD" position during flight.

Note: Throttle is limited to 25% power while wings are folded.





#### HYDRAULIC SYSTEM HAND PUMP

The feed for the hand pump is drawn from the bottom of the hydraulic reservoir, while that for the engine-driven pump is drawn from the half-gallon level. In the event the failure of a hydraulic pressure line allows the engine-driven pump to pump overboard all of its available fluid, the half gallon of hydraulic oil remaining in the tank is sufficient for one operation each by use of the hand pump. Of the following: wing flaps, cooling flaps, and gun charging. The arresting hook does not require hydraulic pressure for extension. Emergency landing gear extension is provided for by CO2 extension system.

If the engine is off (or blown), use the hand pump to get hydraulic pressure up to 300 psi (approximately 5 pumps) making sure the Emergency Hydraulic Pressure Release valve has not been opened. Without hydraulic pressure, neither mouse nor key command for wing fold/unfold, cowl flap, oil cooler or intercooler will work.



#### **TRIM TABS**

Trim tabs are provided on the left-wing ailerons on the elevators and on the rudder to permit control forces to be trimmed to comfortable values under all normal operating conditions.

(For recommended Take-off tab settings please see Take-off)

#### **AILERON TAB CONTROL**

Rotating the aileron tab control (inclined wheel on left hand shelf) to the right results in downward movement of the right-wing in flight. Rotating the hand wheel to the left results in upward movement of the right wing.

#### **ELEVATOR TAB CONTROL**

Rotating the elevator trim tab control (large vertical wheel on the side of the left-hand shelf) forward lowers the nose of the airplane in flight. Aft rotation raises the nose.

#### **RUDDER TAB CONTROL**

Rotating the rudder tab control (horizontal hand wheel on left hand shelf) to the right moves the nose of the airplane to the right in flight. Rotating the hand wheel to the left moves the nose of the airplane to the left.





#### **BEFORE ENTERING THE COCKPIT**

#### NOTE THE FOLLOWING SPEED LIMITATIONS

ITEM	OPERATION	RESTRICTION
Airplane	Max. Diving Speed	Dependent on altitude
Landing Gear	Lowering	200 Knots (230 mph)
Dive Brake	Extending or Retracting	195 Knots (224 mph)
Wing Flaps		
Blow Up Operating (0° To 50°)	Max. Speed	200 knots (230 mph)
Blow Up Inoperative (0° To 50°)	Max. Speed	200 knots (230 mph)
(20° To 30°)	Max. Speed	170 knots (196 mph)
(30° To 40°)	Max. Speed	145 knots (167 mph)
(40° To 50°)	Max. Speed	130 knots (150 mph)
Cabin	Open	300 knots (345 mph)
Ailerons	Full Throw	300 knots (345 mph)
Cooling Flaps	Open	No restriction
Center Drop Tank	Diving	300 knots (345 mph)
Twin Pylon Drop Tank	Diving	300 knots (345 mph)

#### **BEFORE ALL FLIGHTS**

- 1. Make sure the mixture control is in "Idle Cut Off" then turn on the battery switch.
- 2. Check the fuel and oil quantity aboard
- 3. Make certain that the wings are spread unlocked.
- 4. Test operate the gun sight illumination.
- 5. See that the gyro horizon and directional gyro are uncaged.
- 6. Set the altimeter to the correct barometric pressure.
- 7. Check to ascertain that the desired armament load is carried.
- 8. See that all armament switches are in the "OFF" position and that the gun charging valves are in the "safe" position.

#### **BEFORE NIGHT FLIGHTS**

In addition to the standard check for flights for night flights, turn on the battery switch and check the following items :

1. Interior lights.

Instrument board lights. Check the instrument board lights by turning on the rheostat located on the pilot's distribution box.

2. Exterior lights.

Check the formation, section, recognition wing and tail lights by turning on the respective switches and the exterior light master switch which can be found on the pilot's distribution box.





#### FUEL SYSTEM MANAGEMENT

The fuel system is managed with two controls, the fuel selector and the electric auxiliary fuel pump switch. The normal flow of gasoline in the system is as follows: the fuel flows from the tank outlet for which the fuel selector valve is set, through the valve, the electric auxiliary fuel pump, the strain drain units and the engine-driven fuel pump, to the inlets on the carburettor.

#### FUEL TANK SELECTION

Use droppable tanks before using the main tank fuel, except as noted immediately below.

Note: Set fuel tank selector on "RESERVE" for takeoff, landing, diving and maneuvers. Do not cruise on "RESERVE".

#### **ELECTRICAL AUXILIARY FUEL PUMP**

The electrical auxiliary fuel pump is used for :

- Starting.
- Takeoff and landing.
- Changing from one tank to another.
- If fuel pressure drops below 16 pounds per square inch.
- After failure of engine-driven fuel pump.
- To maintain fuel pressure during high power, high altitude operation.









#### **STARTING THE ENGINE**

#### PROCEDURE

- 1. Ignition switch to "OFF".
- 2. Mixture control to idle "CUT OFF".
- Clean engine fuel by pulling propeller by hand through four or five revolutions in the direction of operation (click on any prop blade).
   Failure to do so may cause hydraulic lock and break the motor, requiring a reloading of the aircraft.
- 4. Fuel selector to "RESERVE".
- Pump the hydraulic hand pump at least 5 times. Do not exceed 300psi. (p.15) and set engine cowl flaps fully open.
- Supercharger control to "NEUTRAL" (full forward).
- 7. Mixture control to idle "FULL RICH".
- 8. Throttle. Set to red quadrant mark (1" open).
- 9. Battery switch "ON".
- 10. Electrical auxiliary pump fuel switch to "ON".
- 11. Hold electric primer switch "ON" for 4 to 6 seconds immediately prior to operating the starter.
- 12. Ignition switch on "both".
- 13. Starter switch "ON" until engine runs smoothly.
- 14. Mixture control move slowly from "Idle Cutoff" to "AUTO RICH" as soon as engine fires. If moved too rapidly, engine will die.
- 15. Electric auxiliary fuel pump to "OFF" when changing mixture control setting.

Note:

- The motor will take longer to fire up if over- or under-primed.
- It should be necessary to operate the starter for no more than 30 seconds in order to start the engine. If the starter switch is held on for 1 minute and the engine does not start, allow the starter to cool before making another attempt.

#### WARM UP & GROUND TEST

For warm-up and ground testing the following should be observed

- 1. Apply toe-brakes, or use chocks to prevent the aircraft rolling forward.
- 2. Propeller control maximum rpm "INCREASE".
- 3. Cowl flaps "FULLY OPEN".
- 4. Oil cooler flaps "CLOSED".
- 5. Intercooler flaps "OPEN".
- 6. Mixture control "AUTO RICH".
- Cylinder head temperature 232° C (450° F) maximum. If cylinder head temperatures approach 232° C (450° F), the engine should be cooled at 1000 rpm before continuing with the ground test.

#### **ENGINE WARM UP**

1. Check oil pressure. With cold oil, oil pressure may be above 200 pounds per square inch until the oil in temperature is approximately 40° C.

2. Idle at 1,000 rpm until oil temperature is 40° C (104° F) and cylinder head temperature is 120° C (228° F).

#### **GROUND TEST**

- 1. Increase rpm to 2,000.
- 2. Oil pressure 80-90 psi
- 3. Fuel Pressure in normal range.
- 4. Magnetos 150 rpm max decrease.
- 5. Decrease rpm to 2,000.
- 6. Check generator output 27.5 28.5V.
- 7. Check Hydraulic pressure 750 1150 psi.
- 8. Decrease engine rpm to 1,000 rpm





#### SCRAMBLE TAKE-OFF

It is possible to make an emergency take-off providing the oil temperature is above 40° C (104° F.) In cases of extreme emergency, when the temperatures cannot be met, run the engine up; if it does not operate roughly or cut out altogether, take off.

#### TAXI INSTRUCTIONS

- Use the S-turn procedure for adequate forward visibility on taxi strips. However, let the airplane roll as freely as possible, using the brakes as an aid in steering, stopping and holding only.
- Use the tail wheel lock in extended crosswind taxiing to relieve excessive braking action.
- Use low power when taxiing. Don't rev up the engine and then ride the brakes. Bear in mind the badly overheated brakes are not fully effective and can fuse the disc brakes to the extent of leaving them frozen for landing.

#### TAKE-OFF CHECKLIST

- 1. Wings spread and locked.
- 2. Arresting hook control to "UP".
- 3. Fuel tank selector to "RESERVE"
- 4. Mixture to "AUTO RICH".
- 5. Supercharger control to "NEUTRAL".
- 6. Propeller control to maximum rpm "INCREASE".
- 7. Cowl flaps 2/3 open.
- 8. Intercooler flap "CLOSED".
- 9. Oil cooler flaps "OPEN" is required.
- 10. Rudder tab 6° "NOSE RIGHT".
- 11. Aileron tab 6° "RIGHT-WING DOWN".
- 12. Elevator tab 1° "NOSE UP".
- 13. Wing flaps set as required.
- 14. Tail wheel locked.
- 15. Manifold pressure limits 54 inches Hg.
- 16. Check to see the cylinder head and oil temperatures are above the minimum and not near the limits.

#### TAKE-OFF

For normal operation it is recommended that the setting of 20° be used for take-off. Actually, any flap setting from 0° to 50° may be used, the highest settings giving shorter ground distance. Take-offs with flaps up are easily accomplished with a small increase in run, dispensing with the inconvenience of retracting the flaps after takeoff. In addition, the rate of climb immediately after takeoff with flaps deflected is inferior to that with flaps up. Take-off at high flap setting and full flap should be made only when it is necessary to obtain the shortest possible ground run, and after more experience with settings increased gradually from the recommended setting of 20°. When a high flap setting is used. The elevator trim should be set slightly more tail heavy about 1°. it has been found with flaps down the tail can't be held on the ground, with a stick full-back, and manifold pressure is greater than 44 inches Hg.

#### MINIMUM RUN TAKE-OFF

- 1. Wing flaps full "DOWN" to 50°.
- 2. Propeller governor maximum rpm "increase"
- 3. Manifold pressure 54 inches Hg. 60 Inches Hg at war emergency power.
- 4. Elevator 3 4° "nose up."

FG-1 Corsa

- 5. Hold brakes slightly until tail starts to rise.
- 6. Release brakes and allow tail to rise to near level flight attitude (tail high).
- Take off when minimum flying speed is attained (approximately 70 knots indicated - 81 mph). The nose will be slightly heavy. If the take-off is made from an unpaved or muddy runway, take off with the tail slightly lower than directed above.

Note: If an obstacle is to be cleared during takeoff, the wing flap setting should be reduced to approximately 30°.

Important: Keep a keen eye on both throttle position and instruments to avoid inadvertantly activating War Emergency Power.



#### AFTER TAKE OFF

For most efficient operation :

- 1. Reduce manifold pressure to not more than 44.0 inches Hg.
- 2. Reduce rpm to not more than 2550.
- 3. Retract landing gear.
- 4. Retract wing flaps.
- 5. Trim airplane for 125 knots indicated airspeed for best climb.
- 6. Adjust cowl flaps if necessary.
- 7. Adjust oil cooler flaps if necessary.
- 8. Set fuel tank selector to desired setting.

#### WAR EMERGENCY POWER

War emergency power 2700 rpm (5 mins max).

To obtain war emergency power

- 1. Mixture control "AUTO RICH".
- 2. Propeller control maximum rpm "INCREASE".
- 3. Throttle "Full Open".

When activated, the manifold pressure will show a marked rise.

The water quantity warning light will start flashing once the water reservoir is half empty. When the water supply is exhausted the light will remain on until the throttle has been moved out of the WEP range. Failure to do so in a timely manner will result in overheating and subsequent engine failure

#### CRUISING

The engine should be operated in "Auto Lean" for cruising power operation.

#### **ENGINE OPERATING LIMITS**

Ensure that manifold pressure, cylinder head temperature and oil temperatures are maintained within limits. Failure to do so may in result bad things happening with subsequent loss of power and hydraulic pressure.

In the case of engine failure, cockpit visiblilty may be impaired by oil leaking onto the windshield.

#### MAXIMUM PERMISSIBLE INDICATED AIRSPEED AND ACCELERATIONS

The maximum permissible speeds and accelerations are shown on graph 1 for gross weight of 12,000 lb. At other weights the permissible accelerations are such as to maintain a constant product of gross weight and acceleration, except that 7.5 G positive and 3.4 G negative should not be exceeded.

Warning: Pilots should avoid steep dive angles because of the difficulty encountered in attempting to reduce speed and acceleration quickly if buffeting should occur.

For convenience, the restrictions given in the graph may be simplified by the following approximations : For diving or maneuvering at 3.0 G.

Altitude	Speed
10,000 Ft	390 knots (449 mph)
20,000 Ft	335 knots (386 mph)
30,000 Ft	255 knots (293 mph)

#### STALLS

The stalling characteristics of the airplane are not abnormal and warning of the approach of the stall exists in tail buffeting, the abnormal nose up attitude, and increasing left-wing heaviness with power on. The center of gravity positions enforced by wartime requirements are further to the rear than would normally be desirable. This results in the low degree of longitudinal stability. While the elevator forces are generally normal in direction, they vary only a small amount and approaching the stall with power on, and the control movement is very small. Thus the elevator control force and position do not provide the normal degree of feel warning of change in air speed or angle of attack. Pilots should observe carefully and familiarize themselves with this characteristic in the landing approach condition and in maneuvering turns which approach the stall at higher speeds. They should be done at various flap positions and powers until pilots are thoroughly familiar with the airplane in these conditions.



### MILVIZ

#### STALLS (CONTINUED)

The stall with power on is rather pronounced particularly with flaps down but is preceded by some warning in the nature of buffeting. In the carrier approach condition, the approach to the stall is indicated to some extent by increasing left-wing heaviness and increasing amount of right rudder required. The stall in this condition (flaps down power on) is accompanied by a relatively sharp roll to the left

Note: Pilots should familiarize themselves thoroughly with the stall in both straight flight and tight turns.

#### STALL WARNING LIGHTS

The stall warning light is installed near the top of the main instrument panel (see p.17) and it will come on a few knots before the stall. A test which is provided so that the pilot can check while in flight, to see that the lamp is not burned out. The stall warning should operate from 4 to 8 knots (5-10 mph) above the stall in the landing condition, and 14 to 18 knots (17-21 mph) above the stall in the clean condition.

#### SPIN RECOVERY

- 1. Apply full opposite control sharply leading with opposite rudder, and follow by applying full-forward stick. Apply ailerons against the spin.
- 2. Hold full reverse controls until rotation stops and airplane assumes normal diving attitude.

- 3. Ease the airplane out of the ensuing dive. Do not pull the stick back to rapidly as a high-speed stall may result requiring more altitude for recovery.
- 4. The rate of rotation will probably increase after full opposite controls are used. Don't be alarmed; this is a good sign and recovery is starting.
- 5. Use trim tabs if forces are too heavy, especially the elevator trim. The later is effective in reducing push forces during spin recovery.
- 6. Oscillation is present in left spins. The nose oscillates between a position varying from approximately on the horizon to 40° 50° below the horizon. This does not mean that's a flat spin is developing. Recovery will be normal. Recovery will be faster if controls are reversed when the nose is at a steep angle in the oscillation.
- 7. If full opposite controls cannot be held and the stick walks back, return the controls with the spin for a brief interval and repeat full recovery control.

#### Note

Full forward stick against stop must be applied for spin recovery in this airplane. Make certain that full reverse controls are used promptly and sharply and held until recovery is effected.

The indicated stalling speeds for a 11,300 lb fighter (178 US gallons 148 imperial gallons of fuel; 1200 rounds of ammunition) are given in the table below. For other weights see charts on pages 43 & 44.

CONDITIONS	FLAPS	POWER	INDICATED STA	LLING SPEED
Landing	50°	closed throttle		75
Landing	30°	closed throttle		77
Landing	20°	closed throttle		79
Landing	50°	power on level flight 2	3 inches Hg 2400 rpm	66
Cleaning	up	closed throttle		87
Clean	up	power on level flight 1	8 inches Hg 2400 rpm	84





#### DIVING

Checklist:

- 1. Cabin closed
- 2. Landing gear control "UP".
- 3. Drive brake control "OFF" or "ON" as desired.
- 4. Wing flaps "UP".
- 5. Propeller control set at 2050 2250 rpm.
- 6. Mixture "AUTO RICH".
- 7. Supercharged control neutral blower shall be used for dives except those incident to military tactics at high altitudes\*.
- 8. Throttle slightly open. Shift to neutral blower before retarding throttle\*.
- 9. Fuel tank selector "RESERVE".
- 10. Cowl flaps "closed".
- 11. Oil cooler flaps "closed."
- 12. Intercooler flaps "closed".
- 13. Maximum rpm limit 3060 rpm (not over 30 second duration).

Caution: 15 to 20 inches of manifold pressure is recommended during prolonged dives.

The cockpit cabin sliding section must be closed before entering high-speed dives as it is not designed for such speeds in the open position. In the open position speeds up to 300 knots indicated (345 mph) are allowable.

#### **DIVE BRAKE CONTROL**

The type brake control may be operated at any speed within the normal airplane restrictions. When the dive brake control is operated at speeds greater than 260 knots, (299 mph) the wheels will trail instead of extending fully and locking but are nevertheless effective as a dive brake.

Caution: Do not dive the airplane with the tail wheel extended (landing gear control to "DOWN") as damage to the tail wheel doors due to high air loads may results.

Dive brakes are mapped to the MSFS2020 spoiler control (numpad '/').

#### **APPROACH & LANDING**

#### Checklist:

- 1. Tail wheel locked for field (Free for carrier).
- 2. Electric fuel pump "ON".
- 3. Fuel tank selector "RESERVE".
- 4. Mixture "AUTO RICH".
- 5. Supercharger control "NEUTRAL".\*
- 6. Propeller control 2300 rpm to 2400 rpm.
- 7. Cowl flaps "closed".
- 8. Landing gear "DOWN".
- Wing flaps at 50° or as required for field landing. (50° For carrier).
- 10. Arresting hook "UP" the field. ("DOWN" for carrier).
- 11. Gun switch "OFF".
- 12. Gun charging knobs "SAFE" (push in).
- 13. Rockets and pylon switches "off."
- 14. Rocket safety plug removed.

#### LANDING

- 1. Extend landing gear at a speed less than 200 knots (230 mph).
- 2. Lower flaps to desired setting.
- 3. Open cabin.
- 4. Air speed in approach 90 95 knots

Warning: Pilot should avoid flat approaches.

#### **STOPPING THE ENGINE**

- 1. Cowl flaps full "OPEN".
- 2. Intercooler flap "OPEN".
- 3. Oil cooler flap "OPEN".
- 4. Propeller control "MAXIMUM RPM"
- 5. Throttle set for 800 900 rpm
- 6. Electric fuel pump -"OFF."
- 7. Mixture control "Idle Cut Off"
- 8. Ignition switch "OFF".
- 9. Battery switch "OFF".
- 10. Fuel selector "OFF".
- 11. Turn off all switches used for flights (radio lights etc.)



### **EQUIPMENT**



#### RADIO

The war-era radio set has been modified to maintain its vintage look while allowing modern radio communication.

Using what used to be the receiver control box, adjust the sensitivity knob (1) to increase or decrease COM1 frequency (kHz). A tool tip will display the frequency. Push to swap between active and stand-by frequencies.

Turn the tuning knob (2) to obtain the desired frequency in the mHz range.



Radio





### **EQUIPMENT**



#### ELECTRICAL EQUIPMENT

- A volt-ammeter (see p.17) indicates the generator output in amperes. This will vary accordingtothechargecondition of the battery and the amount of electrical equipment being used. A push button is supplied on the volt-ammeter which when pushed, indicates voltage. When the engine is stopped, or when at any time the rpm is less than 1300, push the button in to indicate battery voltage. The generator voltage should read between 27.5 And 25.5 Volts.
- 2. A battery switch is provided which disconnects the battery from the remainder of electrical system. With this switch in the "OFF" position, the generator cannot deliver current to the battery, nor can the battery deliver current to any external load except the recognition lights and inertia switch. When the airplane is on the ground with engine off, the battery switch, recognition light switches and inertia switch should be "OFF". For starting the engine and for ground running and flight operation, the battery switch should be "ON".
- The emergency generator switch located on the pilot's distribution box is normally closed. Power for the electrical system is thus obtained from the generator, regulated by the voltage regulator and measured by the volt-ammeter.
- 4. An instrument switch is installed on the pilot's distribution box which operates the electric fuel gauge, electric oil temperature gauge, carburettor air temperature warning lights, and remote compass. It is of the switch-breaker type and is used in conjunction with the battery switch; it must be "ON" for airplane and engine operation.

01) INSTR EXT.LIGHTS FLASH EXTLIGHTS DAC RÈCOGNITION 

Pilot's Distribution Box



### **WEAPONS**



The Milviz FG-1D Corsair features 6 guns and hardpoints for combinations of bombs and rockets. Although the mass of the ordnance is faithfully simulated, there is no animation apart from gun flashes. Dropping, releasing, or firing will subtract weight from the plane and turn off visibility, but you won't actually see the bombs fall, or the rockets streak off towards their target.



Weapons can be configured using the chartboard loadout manager. (p.11)

Weapons Load-out



### **WEAPONS**



#### **CHARGING THE GUNS**

The charging knobs located on the left hand side of the cockpit, just below the main instrument panel, operate the charging and safety guns.

To charge the guns rotate the knob to charge, then push in. The knob will spring back out, indicating completion of the cycle of operation.

To safety the guns, turn the charging knob to "SAFE" and push in. The knob will spring out when the guns are safe. The gun charges will then hold the bolts back in the safe position. To allow the bolts to go forward from "SAFE" to "CHARGE", simply turn the knobs to "charge".

#### **FIRING THE GUNS**

- 1. Turn on the master armament switch.
- 2. Turn on the individual gun switches.
- 3. Press the trigger switch

The trigger is mapped to 'Toggle Water Rudder' (CTRL + W), and can be assigned to the input of your choice.

#### **ROCKETS & BOMBS**

Bombs can be 'released' using the Manual tank/bomb release controls (Cockpit - Left, p.15). Rockets are static decoration and cannot be fired.



Gun Charging & Safety



Gun Charging & Safety







### EMERGENCY PROCEDURES



#### EMERGENCY LANDING GEAR OPERATION

The landing gear can be extended if there is complete failure of the hydraulic system, that is, even if no action can be obtained by operating the hand pump.

The emergency gear extension is actuated buy a CO2 system on the main gear and a spring system on the tail wheel. However, before resorting to emergency landing gear extension, attempt to lower the gear with the hand pump, since subsequent retraction may be desired and will be impossible once the CO2 system is operated.

To lower the landing gear with the hand pump:

- 1. Move the landing gear control to down.
- Operate the hand pump until the landing gear indicators show that the gear is fully down and locked

The following procedure is used for emergency extension of landing gear in case of actual failure of the hydraulic system:

- 1. Close throttle and reduce speed to about 110 knots.
- 2. Open the emergency landing gear release valve. The valve is located to the left of the Pilot's seat.

Note the CO2 system will extend the landing gear regardless of the position of the landing gear control handle, but it is recommended that the control handle be placed in the down position.

Further reduce speed to about 90 knots (keep above the stalling speed) while the landing gear is extending.

Check the indicators that the landing gear and tail wheel are fully locked down.

The emergency extension of the landing gear is started at a comparatively high speed so that the airflow will assist in opening the landing gear doors.

Turning the emergency landing gear release valve admits CO2 to a sequence valve which actuates two unloader valves, the unloader valves bypassing the hydraulic oil at the bottom of the landing gear and tail wheel struts, directly back to the hydraulic reservoir. The sequence valve in turn admits CO2 pressure to the top of the landing gear struts thereby extending the gear. The early models incorporating a pull handle emergency release work on much the same principle.







### **EMERGENCY PROCEDURES**



#### **ENGINE FAILURE DURING FLIGHT**

Engine failure is noticeable in either of the following conditions :

- 1. Freezing of engine.
- 2. Drop in altitude and loss of speed.

If engine fails but does not freeze, no absence of engine noise is apparent since the wind-milling propeller simulates normal engine operation. Also, in this condition manifold pressure can be increased and decreased normally, and the propeller blade angle can be changed within certain limits. While the propeller is wind-milling, the hydraulic system can be operated normally. However, if the engine should freeze or rough operation should necessitate stopping the engine by placing the propeller governor in high pitch (minimum RPM) position, the hydraulically controlled units must be operated by the hand pump (p.18).

If altitude permits, attempt to find the cause of engine failure by the following procedure:

- The selected tank may be empty. Switch to another tank.
- If it is apparent that the fault does not lie in fuel system operation and altitude still permits, check the following:
- 1. Move the mixture control to Auto rich
- 2. Test the Magneto's individually.

If, after completing the above operations, the engine does not start, prepare for an emergency landing. Note the gliding ratio of this airplane in the clean condition at 140 knots indicated airspeed (best gliding speed) is 13:1.

#### FORCED LANDINGS

In the event of a forced landing over land the pilot should consider a number of variables in order to determine his best landing attitude. These include altitude, type of terrain and the characteristics of the airplane. Landings in soft or uneven terrain such as golf courses or plowed fields and in rough, rocky, or tree stump to rain should be made with landing gear up. Most nose-overs occur as a result of landing in such territory with the landing gear down, and nearly all serious injuries and fatalities results from nosing over.

Pilot should remember the ground which appears smooth and level from the air frequently turns out to be rough, crossed with ditches, soft or full of obstructions when the actual landing is made.

All forced landings should be made well above the stalling speed. There will be no control of the airplane if an attempt is made to land at, or slightly above stalling speed. The plane should be on the ground before that stage of deceleration is reached.

#### **BELLY LANDINGS**

Preparation for belly landing:

- 1. Release droppable fuel tanks or bombs.
- 2. Landing gear "UP".
- 3. Landing flaps "DOWN".
- 4. Shoulder harness and safety belts "LOCKED".
- 5. Jettison the cockpit sliding section.
- 6. Fuel tank pressure release "AFT".

Prior to contact with the ground:

- 1. Drop pilot seat several inches.
- 2. Switches (battery, ignition) "OFF".
- 3. Fuel selector "OFF".
- 4. Master Armament switch "OFF".

#### WATER LANDINGS (DITCHING)

The same procedure as has been outlined for belly Landings is applicable to ditching.

Note this airplane has excellent water characteristics due to the inverted gull-wing which causes it to plane on contact with the water because of the planing feature, a full stall Landing is not necessary



### **TROUBLESHOOTING**



PAGE 37

#### **ON LOAD PROP-STRIKE**

At some locations with certain 3rd party add-ons, users may be unlucky enough to encounter the dreaded face-plant propstrike. To counter this behaviour, an extra load station has been added over the tailwheel.

WORLD MAP									•
Milviz FG-1D Corsair	FROM	to the	and the second s						NDITIONS
Lein	CTF5 Turchyn		🛛 🔽 📐 SELE	CT ARRIVAL AIRPORT				<b>V</b>	
- Andrew	RUNWAY (26)		RUNI	NAY					Y.
AIRCRAFT SELECTION		DISPLAY FUEL AS					GAL 🔵 LB	EMPTY CG POSITION %MAC	27.60
		^ FUEL				0	33.00%	Center of gravity	41.39% MAC
LIVERIES		CENTER 1				• 100.00%	230.00 gal	CG forward limit CG aft limit	20.00% MAC 35.00% MAC
WEIGHT AND BALANCE		CENTER 2			•	0.00%	0.00 gal		2
FAILURES		EXTERNAL 1			•	0.00%	0.00 gal		$\mathbf{\lambda}$
		EXTERNAL 2			•	0.00%	0.00 gal		
CUSTOMIZATION		^ PAYLOAD				<b>—</b> •	16.40%		
		PILOT					200.00 lb		
		REAR BALLAST					500.00 lb		- \
		STATION 2 (DO NOT EDIT)					0.00 lb		
		STATION 3 (DO NOT EDIT)					0.00 lb		
		STATION 4 (DO NOT EDIT)					0.00 lb		
		STATION 5 (DO NOT EDIT)					0.00 lb		
		STATION 6 (DO NOT EDIT)					0.00 lb		
		STATION & (DO NOT EDIT)					0.00 Ib		15140
		STATION & (DO NOT EDIT)					0.00 lb		LEMAC
		STATION 10 (DO NOT EDIT)					0.00 lb		
		STATION 11 (DO NOT EDIT)					0.00 lb		FWD LIMIT
		STATION 12 (DO NOT EDIT)					0.00 lb		
		STATION 13 (DO NOT EDIT)					0.00 lb		AFTLIMIT
		STATION 14 (DO NOT EDIT)					0.00 ІЬ		

1) The user may, as above, add weight to the new station - 'Rear Ballast':

They can add as much as they want; in the image above, I've added 500lbs.

In testing, this makes it extremely hard for the Corsair to tip forward onto her nose.

2) When loading the aircraft, this ballast weight is reflected in the UI as well as our loadout manager:

				EMPTY CG POSITION %MAC	27.60
			33.00%	Center of gravity	41.39% MAC
CENTER 1		0 100.00%	229.96 gal	CG forward limit CG aft limit	20.00% MA
CENTER 2	•	0.00%	0.00 gal		
EXTERNAL 1	•	0.00%	0.00 gal		
EXTERNAL 2	•	0.00%	0.00 gal		
PAYLOAD			16.40%		
PILOT			200.00 lb		LEMAC FWD LIMIT
REAR BALLAST			500.00 lb		- AFT LIMIT
STATION 2 (DO NOT EDIT)			0.00 lb		
STATION 3 (DO NOT EDIT)			0.00 lb		TEMAC
Empty Weight / -		ş	9,640 LB / -		
Fuel / Max Allowable Fuel		1	1,380 LB / 4,212 LB		
Payload / Max Payload			700 LB / 4,280 LB	O CG out of limit	
Total / Max Takeoff Weight		11	,720 LB 15,300 LB		
Consumption and CO2 Emiss	sion				

3) Any ballast weight added by the user will be automatically removed once the throttle is advanced. However, it's important to note that the weight portion of the UI Weight and Balance panel does not update when you manipulate weights through code. The balance portion does. In this image, you can see the weight being updated on our loadout manager, and the balance properly updating, but the displayed weight in the sim UI is incorrect (Asobo has been made aware of this bug):



### **TROUBLESHOOTING**



				-		
FUEL						- 🗳 🗯
DISPLAY FUEL AS			GAL 🧿	🔵 LB	EMPTY CG POSITION %MAC	27.60
∧ FUEL			<b>—</b> 33.	00%	Center of gravity	
CENTER 1		• 100.00%	229.96 g	al	CG forward limit	20.00% MA
CENTER 2	0	0.00%	0.00 g	al		
EXTERNAL 1	0	0.00%	0.00 g	al		
EXTERNAL 2	•	0.00%	0.00 g	al		
A PAYLOAD			• 16.	40%		
PILOT			200.00	lb		LEMAC FWD LIMIT
REAR BALLAST			500.00	lb		AFT LIMIT
STATION 2 (DO NOT EDIT)			0.00	lb		
STATION 3 (DO NOT EDIT)			0.00	lb		TEMAC
Empty Weight / -			9,640 LB /			
Fuel / Max Allowable Fuel			1,380 LB / 4,212	LB		
Payload / Max Payload			700 LB / 4,280	LB	CC out of limit	
Total / Max Takeoff Weight			11,720 LB 15,300	LB		
Consumption and CO2 Emission						
RESET						

4) The user, if desired, can re-add weight to the ballast station at any time through the UI panel. (although, since the point of this is to help prevent 'tipping' at various airports on aircraft load, there's little point). I've re-added 1500 lbs this time. Note that the UI, the balance screen, and our loadout manager agree at this point:

FUEL						<mark>-</mark> 🛙 🗙
DISPLAY FUEL AS			GAL 🤇	D LB	EMPTY CG POSITION %MAC	27.60
∧ FUEL			<b>—</b> 3	3.00%	Center of gravity	
CENTER 1		• 100.00%	229.96	gal	CG forward limit	20.00% MAC
CENTER 2	•	0.00%	0.00	gal		35.00% MAC
EXTERNAL 1	•	0.00%	0.00	gal		
EXTERNAL 2	•	0.00%	0.00	gal		
A PAYLOAD			-0 1	6.40%		
PILOT			200.0	0 lb		LEMAC FWD LIMIT
REAR BALLAST			500.0	0 Ib		AFT LIMIT
STATION 2 (DO NOT EDIT)			0.0	O Ib		
STATION 3 (DO NOT EDIT)			0.0	0 lb		TEMAC
Empty Weight / -			9,640 LB /			
Fuel / Max Allowable Fuel			1,380 LB / 4,21	<b>2</b> L B		
Payload / Max Payload			700 LB / 4,28	OLB	O CC out of limit	
Total / Max Takeoff Weight			11,720 LB, 15,30	OLB		
Consumption and CO2 Emission						
RESET						

5) Once again, advancing the throttle has removed that extra weight; the UI balance screen returns to normal, and our loadout manager is returning the proper weight (and removing 1500 lbs causes a noticeable decompression of the shocks!). The UI weight section doesn't change, however.





### **TROUBLESHOOTING**



FUEL						<u>- 🛛 ×</u>
DISPLAY FUEL AS			GAL 🧿	🔵 LB	EMPTY CG POSITION %M	AC 27.60
∧ FUEL				.00%	Center of gravity	
CENTER 1		• 100.00%	229.96	gal	CG forward limit	20.00% MAC
CENTER 2	•	0.00%	0.00	gal		35.00% MAC
EXTERNAL 1	0	0.00%	0.00	gal		
EXTERNAL 2	•	0.00%	0.00	gal		
* PAYLOAD			- 16	.40%		
PILOT			200.00	lb		FWD LIMIT
REAR BALLAST			500.00	lb		
STATION 2 (DO NOT EDIT)			0.00	lb		
STATION 3 (DO NOT EDIT)			0.00	lb		
Empty Weight / -			9,640 LB /			
Fuel / Max Allowable Fuel			1,380 LB / 4,212	LB		
Payload / Max Payload			700 LB / 4,280	LB	O CC out of limit	
Total / Max Takeoff Weight			11,720 LB 15,300	LB		
Consumption and CO2 Emission						
RESET						

6) In addition to the above addition, if someone does advance the throttle (removing the ballast), let the aircraft roll a bit, and then hammer on the brakes... the aircraft will still tip, but if the speed is below 5 knots, the prop damage will no longer occur.





### **CREDITS**



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### DATA



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MILVIZ

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FG-1D OPERATING FLIGHT STRENGTH DIAGRAM GROSS WEIGHT 12,000 POUNDS

Operating Flight Strength Diagram



	FUEL PRESSURE	OIL						L		ERMISSABLE	DIVING RPM:	3060		
	(LB. SQ. IN.)	(LB. SQ. IN.)	ç	Å					CONDITION		ALLOW	ABLE OIL CON	ISUMPTION	
DESIRED	17	06-09	60-80	140-194					NORMAL RA (MAX. CONI	(TED	<mark>32</mark> U.S. G	1T∕HR	53 IMP. PT/	¥
MAXIMUM	18	100	01	212					MAX. CRUIS		16 U.S. G	1T/HR	26 IMP. PT/	Ŧ
MINIMUM	16	50	40	104				1	MIN. SPECIF	v	U.S. G	tT/HR	IMP. PT/	HR
DLING	7	25						1	OIL GRADE:	(N) 0011(S)	1100			
SUPERCHARGER	TYPE: TW(	O STAGE, TV	NO SPEEC				]	J	FUEL GRADE	: 100 130 C	CTANE - SPE	C. AN-F-28.		
DPERATING	RPM	MANIFOLD	HORSE	CRITICAL		BLOWER	USE LOW BLOWER	USE NEUTRAL BLOWER	MIXTURE	FUEL F (GAL.	'LOW HR.)	MAXIMI CYL. TEA	W G	
		(BOOST)		WITH RAM	NO RAM		BELOW	BELOW	POSITION	U.S.	IMP.	°c	۴	(- <b>b</b>    <b>b</b>
AKE-OFF	2770	54.0	2000	S.L.	S.L.	z	I	I	AUTO RICH	290	240	260	500	ŝ
VAR MERGENCY	2770 2770 2770	57.5 59.0 59.5	2250 2135 1975	S.L. 15000 20000	S.L. 12500 17000	Z - I	17000	8000	AUTO RICH	245 245 245	205 205 205	I	I	S
AILITARY	2770 2770 2770	52.5 53.0 53.0	2000 1800 1650	2500 18500 23000	2000 16000 21000	Z – T	20000	0009	AUTO RICH	290 275 280	2000 16000 21000	260	500	5
HORMAL RATED MAX. CONT.)	2550 2550 2550	44.0 49.5 49.5	1675 1625 1550	7000 19000 24000	5500 16500 22000	z - I	21000	10000	AUTO RICH	220 240 250	5500 16500 22000	260	500	I
AAXIMUM CRUISE	2150 2150 2050	34.0 34.0 34.0	1070 970 950	10000 20500 26000	10000 20500 26000	z – I	22000	13000	AUTO LEAN	83 93 82	10000 20500 26000	232	450	
WIWIN	1330 920 570	30.0 26.5 23.5	570 570 600	5000 10000 15500	5000 10000 15500	z				42 43 51	35 36 42			
UEL	1550 1700 1800	28.0 26.0 25.0	600 595 610	1 <i>55</i> 00 20000 22000	15500 20000 22000	_	22000	15500	AUTO LEAN	50 53 56	42 44 47	232	450	
	1700 1750 2000	28.0 25.5 25.5	660 650	22000 25000 30000	22000 25000 30000	т				57 58 65	48 48 54			

Specific Engine Flight Chart

### DATA

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<section-header></section-header>		_	_				_		_			_			_	_		_						_				_		
<section-header></section-header>			EF.	TO CLEAR 50' OBJ.	2330	710	3440	1810	1130	4810 3660	2600 1680						Jel From Ea level	.s. IMP.	9 64						0 FT.	GROUND ROLL	2510 3760			
<section-header></section-header>			AT 6000	ROUND	1250 870	540 290	1740	790	450	2290 1640	1070 650			NG POWER		00 FT. ALT.	TIME FI	s.t. U	 2 61						AT 600	O CLEAR 10 ' OB J.	367 0 403 0			
<section-header></section-header>		۲		LEAR G OBJ.	20	0.00	520	0 0 0	8	0 8	740 080			AUM CRUISI		TO 300	FT./MIN. AT ALT.		500 -	1 1	1 1			RY .			90 30			
<section-header>         IMAGE-OFF CIMB &amp; FAMDING CHART         TRAFE-OFF DISTRUCTIONE TELEVIENCE NETHER OF PLAY STITE         TRAFE-OFF DISTRUCTIONE TELEVIENCE NETHER OF PLAY STITE         TRAFE       TRAFE       Trafe         Trafe       Trafe       Trafe         Trafe       Trafe       Trafe         Trafe       Trafe       Trafe       Trafe         Trafe       Trafe       Trafe       Trafe       Trafe         Trafe       Trafe       Trafe       Trafe       Trafe       Trafe       Trafe       Trafe       Trafe       Trafe       Trafe       Trafe         Trafe       Trafe       Trafe       Trafe       Trafe       Trafe       Trafe         Trafe       Trafe       Trafe       Trafe       Trafe         Trafe       Trafe       Trafe       Trafe         <th c<="" td=""><th></th><td>OR SLIPPEI</td><td>3000 FT.</td><td>0 20 0</td><td>2 5</td><td></td><td>25</td><td><u> </u></td><td></td><td>6 8</td><td>2 2</td><td></td><td></td><td>USE MAXIA</td><td></td><td></td><td>BEST I.A.S.</td><td>(KNOTS)</td><td>120 -</td><td>1 1</td><td>1.1</td><td></td><td></td><td>OR SLIPPE</td><td>3000 FT.</td><td>RO RO</td><td>22</td><td></td><td></td></th></section-header>	<th></th> <td>OR SLIPPEI</td> <td>3000 FT.</td> <td>0 20 0</td> <td>2 5</td> <td></td> <td>25</td> <td><u> </u></td> <td></td> <td>6 8</td> <td>2 2</td> <td></td> <td></td> <td>USE MAXIA</td> <td></td> <td></td> <td>BEST I.A.S.</td> <td>(KNOTS)</td> <td>120 -</td> <td>1 1</td> <td>1.1</td> <td></td> <td></td> <td>OR SLIPPE</td> <td>3000 FT.</td> <td>RO RO</td> <td>22</td> <td></td> <td></td>		OR SLIPPEI	3000 FT.	0 20 0	2 5		25	<u> </u>		6 8	2 2			USE MAXIA			BEST I.A.S.	(KNOTS)	120 -	1 1	1.1			OR SLIPPE	3000 FT.	RO RO	22		
<section-header></section-header>		WET	AT	GROUN RUN	960	100	1330	570 570	320	11680	760 430			RY CLIMB: I			fuel from Sea level	J.S. IMP.	55 44 39 31	71 57 56 45	36 69 			WET	АТ	TO CLEAI 50' OBJ.	3380 3710			
<section-header></section-header>			VEL	TO CLEAR 50' OBJ.	1460	690 380	2050	016	590	2640 1960	1350 820			FOR FER		00 FT. ALT.	TIME FROM	s.L.	11	34	6				LEVEL	GROUND ROLL	2100 2410			
<section-header></section-header>			at sea le		790 520	310	060	750 450	230	370 950	390 320					TO 250	FT./MIN. AT ALT.	_	1500 700	1000 300		('')			AT SEA I	CLEAR 0' OBJ.	3110 3520			
<section-header>         IMAGE-OFTM &amp; LATURD &amp; LATURD CHART INCOMPACTING A LATURD CHART INCOMPACTING INC</section-header>				AR SJ. GR						-		T SEA-LEVE					BEST I.A.S.	(KNOTS	125 125	125 125	125 -	, 8 IMP. G/		$\mathbb{H}$		UND 11	30 00			
<section-header></section-header>	AR		Ë	TO CLE 50' OE	2150	011	316(	1680	1050	438( 336(	2400 1560	<sup>×</sup> HG. ⊿					L FROM	IMP.	36 25	47 34	53 43	GALS.			00 FT.	GRO	12			
<section-header>         IMAE-OFF, CIUMB &amp; LANDING CIMB &amp; LAND</section-header>	Η Η "		T 6000	9								ND 54				LI.	FUE SE/	U.S.	45 31	58 42	66 54	SU 01) :	()		AT 60	LEAR DBJ.	60 10	1		
<section-header>         Image: Colspan="2"&gt;Colspan="2" Static in term or the term of t</section-header>				GROUP	1070	256	1460	970 980 980	380	1330	870 530	700 RPM A				20000 FT. /	N. TIME T. FROM	S.L.	8 91	3 1	13 32	LOWANCE	SETTING			50, C	23 26			
<section-header>         IAKE-OFF, CLIMB &amp; LAN         ARE-OFF, DISTANCE IN FEEL OR 3.         ARE-OFF, DISTANCE IN FEEL OR 3.</section-header>		sob	Ë	TO CLEAR 50' OBJ.	1650	820 480	2330	1190	730	3050 2300	1620 1010	AKE-OFF 27		IG LIMITS		03	FT./MI	(S)	0001 0	0 1400	5 400	AKE-OFF AI	ELAP	RY SOD	00 FT.	GROUND ROLL	1090 1200			
IAKE-OFF, CIIMB & I         IAKE-OF, DISTANCE IN FEIT J         ACT ACT IN TAKE-OFF, DISTANCE IN FEIT J         ACT ACT IN TAKE OFF TO TAKE OFF	M N N	FIRM DRY	AT 3000	anna	850	350	140	480	280	6 10 000	540 370	AITS FOR T	۲	OPERATIN		_	M BES' EL LA.S	io M ii	9 130	5 13( 5 13(	1 13	8 T/	OR 30	FIRM D	AT 30(	0 CLEAR	2180 2390	1		
IARE-OFF, CLIMB - TARE-OFF, DISTANCE IN TARE OFF, BISTANCE IN TARE	<b>–</b>			S. S.			-			2 2	•	SINE LIA	B DA	ART FOR			uel Fro	s. IN	5 5 2 5	5 3	9 4	DES WAF	EET P			52				
Image: Fight Figh			EVEL	TO CLEAR 50' OBJ.	1380	860 370	0161	850	360	2440 1830	1260 780	ENG	СШМ	FLIGHT CH/		00 FT. ALT.	FROM 5	s.L. U.	11 23	8 4 16 3:	9 5: 21 3:	UEL INCLUE	ICE IN F		<b>LEVEL</b>	GROUNE ROLL	990 1030			
TARE OFF			AT SEA L		710	270	950	630 400	200	810	510 280			EE ENGINE		TO 1500	FT./MIN. AT ALT.		2600 1200	1600 800	1300 500	Ŧ	DISTAN		AT SE/	O CLEAR 50' OBJ.	2000 2140	OUND ROLI		
TAK         TAK <u> <u> </u></u>	E OFF.	-		AR J. GR										s			BEST I.A.S.	(KNOTS)	130 130	130 130	130 125		(E-OFF,	Η			013	SE IN GR		
Image: I	O ≹		H	TO CLE 50' OB	2090	1070	3070	1640	1030	4250 3260	2330						FR.OM LEVEL	IMP.	23 15	27 19	30 22		TAK		000 FT.	GRO RC	51 91	INCRE/		
Total         Interpretation         Interpretation<	¥		AT 6000	₽_												ы	FUEL SEA	U.S.	28 19	33 23	37 27				AT 6	CLEAR OBJ.	250 480	W 10%		
GROSS MERCIN         HEAD MIND         AT SAL LEVEL         AT 300 FT.           MERCIN         HEAD MIND         AT SAL LEVEL         AT 300 FT.           MERCIN         WIND         CCLEAR         REQUIND         TO CLEAR           IN Las.)         INNOTS         GROUND         TO CLEAR         REQUIND         TO CLEAR           IN Las.)         INNOTS         GROUND         TO CLEAR         REQUIND         TO CLEAR           11700         13         200         310         310         270           1210         13         230         130         270         700           1200         10         1110         230         100         1100           1200         30         300         300         300         700           1200         30         300         300         300         700           1200         30         300         300         300         700           1200         30         300         300         300         700           1200         30         300         300         300         700           1200         300         300         300         300         700	TA		Ĺ	GROUN	1020	230	1370	6 5 K	36	1730	810					000 FT. A	TIME FROM	S.L.	4 7	5 10	5 12	2°F)				50, TO	2.4	AND ALO		
Reading to the second of the second		JRFACE	Ë	O CLEAR 50' OBJ.	1620	810	2270	1160	720	2970 2250	1580 990					9 9	FT./MIN. AT ALT		2700 1400	2100 1000	1800 700	VE 0°C (33		SURFACE	00 FT.	GROUNE ROLL	0601 066	I.A.S. 10%		
Hubble         AT SEA LEVEL         H           GROSS         HEAD         AT SEA LEVEL         H           WEIGNT         WIND         AT SEA LEVEL         H           WEIGNT         WIND         CCEAR         GROUND         TO CEAR         GRO           11700         15         GROUND         TO CEAR         GRO         PRO         P1           111700         15         GROUND         TO CEAR         GRO         PRO         P1           111700         15         GROUND         TO CEAR         GRO         PRO         P1           111700         15         430         930         1930         P1         P1           112100         15         10         1110         2380         P1         P1           112100         15         200         15         1700         1200         P1         P1           112100         15         11100         2380         11         11         P1         P1         P1           112100         15         2700         12         2700         12         P1         P1           112100         15         111         12         12         P1<		ARD DRY SI	AT 3000		810	340	080	460	260	330 940	600 340	0°C (32°F)		4. ONLY			A BEST	(KNOTS	135 130	135 130	135 125	(20°F) ABC		HARD DRY	AT 30	O CLEAR O' OBJ.	2080 2280	PROACH		
GROSS         HEAD WIND         AT SAL LEVEL           GROSS         HEAD WIND         AT SAL LEVEL           (IN LBS.)         (IN UBS.)         (IN UBS.)           (IN LBS.)         (IN UBS.)         (IN UDD)           11700         30         900           13100         13         0           13100         13         0           13100         13         0           13100         13         0           13100         13         0           13100         13         200           13100         13         370           14200         13         370           13100         13         370           14200         13         200           MOTE: INCREASE DISTANCE         100         1700           MOTE: INCREASE DISTANCE         100         200           MOTE: INCREASE DISTANCE         100         200           MOTE: INCREASE DISTANCE         100         200           1485.1         11100         220           1485.1         1480         370           1485.1         133         2100           1485.1         133         2100		Ξ		а С С С С С С С			_			-		ABOVE		R 5 MI		H	el froa A levei	. IMP.	15 11	16 13	18	н 10°С		╎╎		£ "		REASE A		
GROSS         HEAD WIND         AT SEA LE           GROSS         HEAD         AT SEA LE           (IN LBS.)         (RNUTS)         GROUND         1           (IN LBS.)         (RNOTS)         GROUND         1           11700         15         620         1           13100         15         620         100         1110           13100         15         620         100         100         100           14200         15         620         100         1110         100         100         1110         100         100         1110         100         100         1110         100         100         11100         100         100         11100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100 <th></th> <td></td> <td>VEL</td> <td>O CLEAR 50' OBJ.</td> <td>1350</td> <td>650 360</td> <td>1870</td> <td>830</td> <td>550</td> <td>2380 1780</td> <td>1240 760</td> <td>0° (20°F) /</td> <td></td> <td>OWER FO</td> <td></td> <td>000 FT. AL</td> <td>IME FUE</td> <td>i.L. U.S</td> <td>2 18 4 14</td> <td>2 20 5 16</td> <td>3 22 6 18</td> <td>6 FOR EAC</td> <td></td> <td></td> <td>IEVEL</td> <td>GROUNI ROLL</td> <td>016 016</td> <td>35°C INCR</td> <td></td>			VEL	O CLEAR 50' OBJ.	1350	650 360	1870	830	550	2380 1780	1240 760	0° (20°F) /		OWER FO		000 FT. AL	IME FUE	i.L. U.S	2 18 4 14	2 20 5 16	3 22 6 18	6 FOR EAC			IEVEL	GROUNI ROLL	016 016	35°C INCR		
CROSS         HEAD         CROSS           VIIID         VIIID         VIIID         VIIID           (IN LBS.)         (RUOTS)         CROSS         VIIID           11700         13         0         0         0           13100         13         0         13         0           13100         13         12         0         14           14200         13         13         0         14           14200         13         13         0         13           11700         13         0         13         0           11700         FERRY         133         0         13           11700         FERRY         133         0         13           11200         FERRY         133         0         13           11200         FERRY         133         0         1           14200         FERRY         133         0         1           1125         14200         FERRY         133         0         1           14200         FERRY         133         0         0         1         1           14200         FERRY         133			at sea le	- anna	580	260	016	180	06	370	480 260	OR EACH 1		MILITARY I		LEVEL TO 5	/MIN. T	•,	2700 1500	2100	800	4G TIME 6%			AT SEA	O CLEAR 0^ OBJ.	1920 2080	ES ABOVE		
CROSS         HEAD CROSS           CROSS         WIND (IN UBS.)           (IN UBS.)         (RONTS)           (IN UBS.)         (RONTS				GRC					$\downarrow$	- "		CE 10% F		.IMB USE - THEN		SEA	EST FT. A.S. A	IOTS)	35	35	35 25	) CLIMBI		μ		ب ش		IPERATUR		
FOR         FOR <th></th> <td></td> <td>HEAD WIND</td> <td>(KNOTS)</td> <td>• ;</td> <td>30 <u>-</u> 92</td> <td>°</td> <td>30</td> <td>45</td> <td>10</td> <td>30</td> <td>SE DISTANC</td> <td></td> <td>COMBAT CL</td> <td>ŀ</td> <td></td> <td>OF LA</td> <td>LIMB) (KN</td> <td>DMBAT 1 RY 1</td> <td>MBAT 1 RY 1</td> <td>MBAT 1 RY 1</td> <td>se elapsec</td> <td></td> <td></td> <td>BEST I.A.S.</td> <td>(KNOT</td> <td>56 06</td> <td>OUND TEM</td> <td></td>			HEAD WIND	(KNOTS)	• ;	30 <u>-</u> 92	°	30	45	10	30	SE DISTANC		COMBAT CL	ŀ		OF LA	LIMB) (KN	DMBAT 1 RY 1	MBAT 1 RY 1	MBAT 1 RY 1	se elapsec			BEST I.A.S.	(KNOT	56 06	OUND TEM		
			GROSS WEIGHT	(IN LBS.)		11700		13100			14200	NOTE: INCREA		FOR (			GROSS WEIGHT	(LBS.) C	11700 FER	13100 FEF	14200 FEK	NOTE: INCREA			GROSS WEIGHT	(LBS.)	10000	NOTE: FOR GR		

Take-Off, Climb And Landing Chart

### DATA



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Variation Of Performance With Weight (1)





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# FC-TCorsair

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Angle Of Attack At Terminal Velocity Vs Dive Angle







Angle Of Attack Vs Cockpit Airspeed Indicator Reading

FC-1 Corsair









High-powered Vought Corsairs are rolling off production lines for the United States Navy.

With their 2,000-horsepower aircooled engines, these mighty shipboard fighters pack the firepower, range, climb and speed at all altitudes to take the measure of the best the enemy can produce.

VOUGHT-SIKORSKY AIRCRAFT

2008/07

AVIATION, August, 1942

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