

DCS F4U-1D CORSAIR OPERATING PROCEDURES

FLIGHT PREPARATION

1. RUDDER PEDALS AND SEAT HEIGHT..... ADJUSTED (As Required)
2. CHRONOMETER..... DATE/TIME CHECKED
3. FLIGHT CONTROLS..... CHECKED FREE AND CORRECT
4. IGNITION SWITCH..... OFF
5. FUEL SELECTOR..... RESERVE
6. MIXTURE CONTROL..... IDLE CUTOFF (Aft Position)
7. SUPERCHARGER CONTROL..... NEUTRAL (FORWARD POSITION)
8. THROTTLE..... OPEN 1"
9. PROPELLER CONTROL..... MAX RPM (DOWN POSITION)
10. WEAPONS..... OFF/SAFE
11. FUEL & WEAPONS LOADOUT..... VERIFIED
12. COWL FLAPS..... FULL OPEN
13. CANOPY..... OPEN/CLOSED (As Required)

BEFORE ENGINE START

14. WHEEL CHOCKS..... REMOVED
15. PARKING BRAKE..... SET
16. BATTERY SWITCH..... ON
17. COCKPIT LIGHTS..... SET (As Required)
18. AUXILIARY FUEL PUMP..... ON
19. AUXILIARY FUEL PRESSURE..... CHECKED (~8 PSI)
20. ENGINE PRIME..... HOLD FOR 5 SECONDS (As Required)



If you over-prime the engine, the startup will take significantly longer as the cylinders need to clear out the excess fuel, which is done either by waiting a few minutes or force-turning the engine by the starter switch for approximately 15-20 seconds.

21. IGNITION..... SET MAGS TO BOTH
22. ENGINE STARTER SWITCH COVER..... OPEN
23. START AREA..... CLEAR PROP

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- 24. STARTER SWITCH..... ON (Until engine runs smoothly)
- 25. MIXTURE CONTROL..... AUTO RICH (Forward Position)
- 26. OIL PRESSURE..... >50 PSI
- 27. THROTTLE..... 800 RPM
- 28. AUXILIARY FUEL PRESSURE 14-16 PSI
- 29. WING HING PIN..... VERIFY UNLOCKED (Down Position)
- 30. WINGS..... SPREAD OPEN (Forward Position)
- 31. WING HING PIN..... LOCKED (Up Position)



During the last 7 degrees of wing movement, the warning horn will sound off. Once the wings are unfolded and are not moving, lock the wings by placing the wing lock lever in the upper position. This will silence the warning horn.



- 32. OIL PRESSURE..... WAIT UNTIL STABLE (60-90 PSI)
- 33. THROTTLE..... 1000 RPM
- 34. AUXILIARY FUEL PUMP..... OFF
- 35. COWL FLAPS..... 1/3
- 36. OIL COOLER FLAP..... CLOSED
- 37. INTERCOOLER FLAPS..... OPEN
- 38. DIRECTIONAL GYRO SET/UNCAGED
- 39. IDLE MAG CHECK..... COMPLETE
 - Perform a brief Mag check at idle (switch left, right then both)
 - Expect slight Rpm drop but not rough running.
- 40. CIRCUIT BREAKERS..... CHECKED
- 41. CYLINDER HEAD TEMP..... 40°C (104° F)

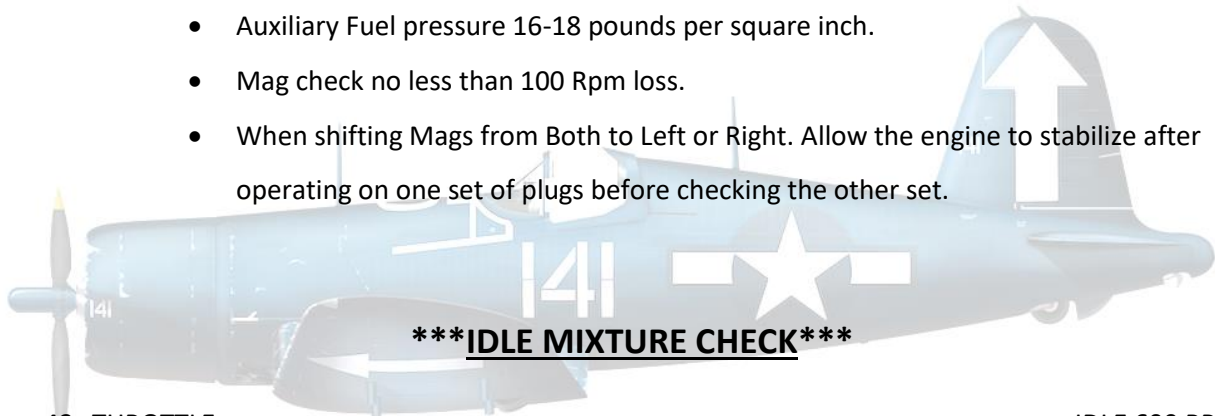
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Backfiring may result from opening the throttle too suddenly from the idle position in flight or on the ground.

42. THROTTLE..... 30 inHg

- Open throttle briefly to at least 2200 Rpm and 30 inches Hg. And check the following:
- Oil pressure 85-90 pounds per square inch.
- Auxiliary Fuel pressure 16-18 pounds per square inch.
- Mag check no less than 100 Rpm loss.
- When shifting Mags from Both to Left or Right. Allow the engine to stabilize after operating on one set of plugs before checking the other set.



43. THROTTLE..... IDLE 600 RPM

44. AUXILIARY FUEL PUMP.....ON

45. MIXTURE CONTROL..... IDLE CUTOFF (Briefly)

- Return mixture control to AUTO RICH before the engine cuts out.
- Observe the tachometer for any changes in Rpm.
- A rise of more than 10 Rpm indicates too rich an idle mixture.
- No change or drop in Rpm indicates that the mixture is too lean.
- A rise of 5 to 10 Rpm is recommended in order to permit idling at low speeds without danger of fouling plugs and at the same time to afford good engine acceleration.

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SUPERCHARGER CHECK

46. THROTTLE..... 1,200-1,400 RPM
47. SUPERCHARGER CONTROL..... HIGH (Rear Position) FOR 30 SECONDS
- A momentary drop in oil pressure, a fluctuation of manifold pressure & Rpm should accompany the shift.
 - Wait approximately 30 seconds in order to permit the supercharger to become fully engaged.
48. THROTTLE..... 30 inHg.
- Observe manifold pressure and oil pressure when Rpm stabilized.
49. THROTTLE..... IDLE 1000 RPM
50. SUPERCHARGER CONTROL..... LOW (30 Seconds)
- A fluctuation of manifold and oil pressure should accompany the shift.
 - Wait approximately 30 seconds in order to permit the supercharger to become fully engaged.
51. SUPERCHARGER CONTROL..... NEUTRAL (Forward Position)
52. THROTTLE..... IDLE 800-1000 RPM
53. AUXILIARY FUEL PUMP..... OFF
54. COWL FLAPS..... AS REQUIRED



Do not idle below 800 rpm any longer than is necessary to avoid fouling plugs. Be sure to clear out the engine and check both magnetos before takeoff and after extended idles.

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BEFORE TAXI CHECKS

55. GENERATOR..... 27.5V – 28.5V
56. HYDRAULIC PRESSURE..... 900-1150 (PSI)
57. OXYGEN..... CHECKED (1,800-2,000 PSI)
58. RADIO..... SET/CHECKED
59. THROTTLE..... 2000 RPM
60. PROP GOVERNER..... CHECKED (Min/Max)
61. THROTTLE..... IDLE 800-1000 RPM
62. Wing FLAPS..... CHECKED/SET

- 20° Recommended
- 30° for carrier operations
- 50° for short field

63. EXTERNAL LIGHTS..... SET (As Required)
64. ALTIMETER..... SET
65. ENGINE GAUGES..... CHECKED
66. ACCELEROMETER..... RESET
67. CANOPY..... OPEN/CLOSED (As Required)
68. TAKEOFF TRIM..... SET

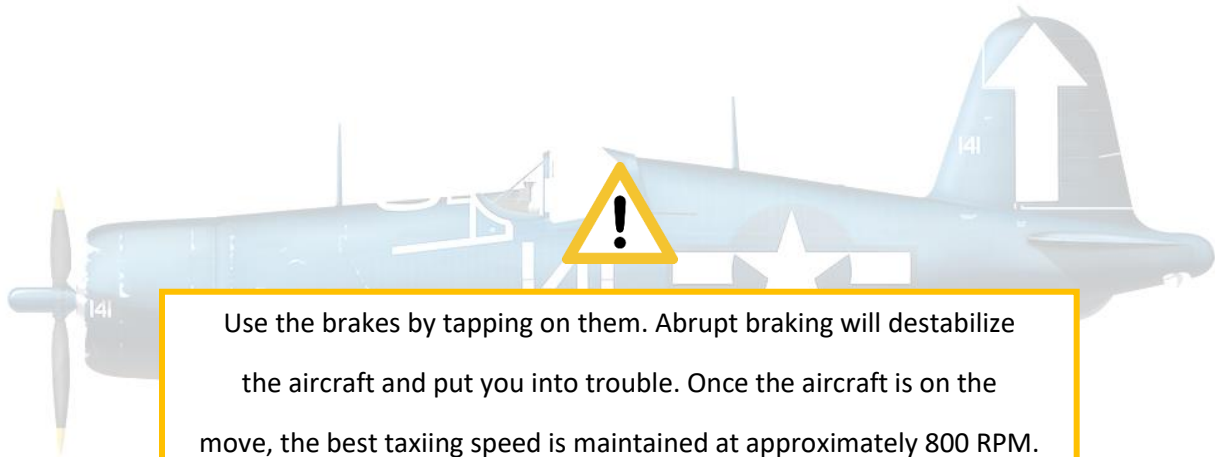
- AILERIONS SET 6° RIGHT.
- ELEVATOR SET 1° NOSE UP.
- RUDDER SET 6° RIGHT.

69. COWL FLAPS..... AS REQUIRED
70. TAIL HOOK..... RETRACTED (UP)

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TAXI

71. TAILWHEEL..... UNLOCKED
72. CONTACT ATC..... REQUEST TAXI CLEARANCE
73. FLIGHT CONTROL STICK..... AFT
74. TAXI AREA..... CLEAR
75. BRAKES..... OFF
76. THROTTLE..... 1000-1500 INITIAL RPM
- Reduced to 800 Rpm once rolling at a good taxi speed
77. S-TURNS..... AS REQUIRED
- Use tail wheel lock in extended crosswind taxiing to reduce excessive braking



Use the brakes by tapping on them. Abrupt braking will destabilize the aircraft and put you into trouble. Once the aircraft is on the move, the best taxiing speed is maintained at approximately 800 RPM. Do not allow the aircraft to accelerate beyond 10 kts (20 kph): If needed, reduce the RPMs to 700 or even idle. The brakes may be used to control the speed too.

Sharp braking in forward movement will result in a forward flip which will cause propeller and engine damage.

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HOLD SHORT CHECKS

78. HORIZON GYRO..... SET/UNCAGED
79. PROPELLER CONTROL..... MAX RPM (Full Down)
80. FUEL SELECTOR..... RESERVE
81. THROTTLE..... 2200 RPM
82. MAG CHECK..... COMPLETE
83. THROTTLE..... IDLE 1000 RPM
84. AUXILIARY FUEL PUMP.....ON
85. COWL FLAPS..... 2/3 OPEN
86. INTERCOOLER FLAPS..... CLOSED
87. OIL COOLER FLAP..... OPEN (As required)
88. ENGINE GAUGES..... CHECKED
89. PITOT HEAT..... AS REQUIRED
- ON when OAT temp is < 4° C (39° F)
 - ON before flying into visible moisture
90. CONTACT ATC..... REQUEST TAKEOFF CLEARANCE
91. CANOPY..... CLOSED/LOCKED
92. FLIGHT CONTROLS..... CHECKED

TAKEOFF

93. BRAKES..... ON
94. TAILWHEEL..... LOCKED
95. DIRECTIONAL GYRO..... HEADING SET
96. CHRONOMETER..... STARTED
97. FLIGHT CONTROL STICK..... FULL AFT
98. THROTTLE..... SMOOTHLY INCREASE (40-44 inHg.)
99. BRAKES..... OFF
100. THROTTLE..... SMOOTHLY INCREASE (As required)
- 44.0 inHg Normal rated (Max Continuous)
 - 52.5 inHg Military Power (30 minutes max Auto Lean)
 - 54.0 inHg Max takeoff (5 minutes)
 - 57.5 inHg War Emergency / water injection (5 minutes max)

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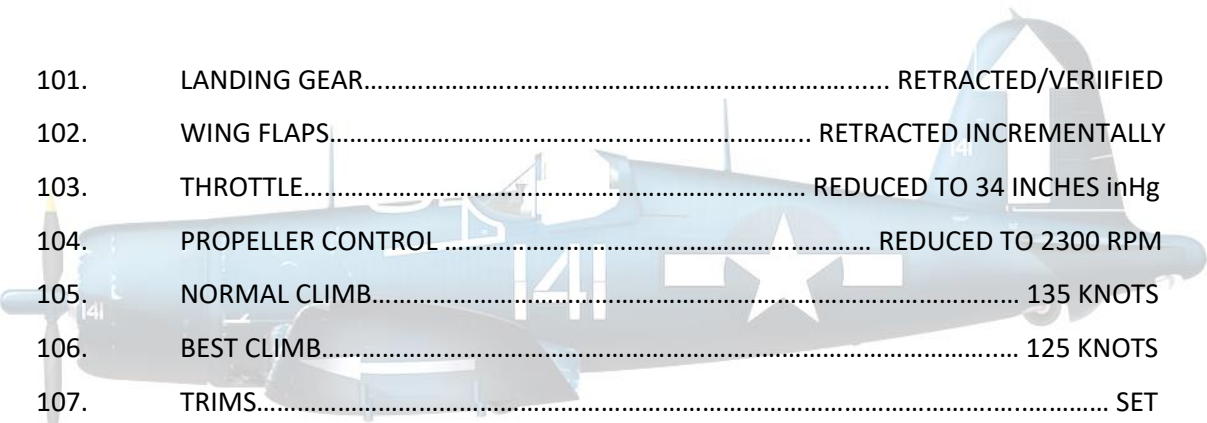


Once the aircraft starts moving, center the flight control stick and slightly apply forward pressure.

This will help the tail rise as soon as possible.

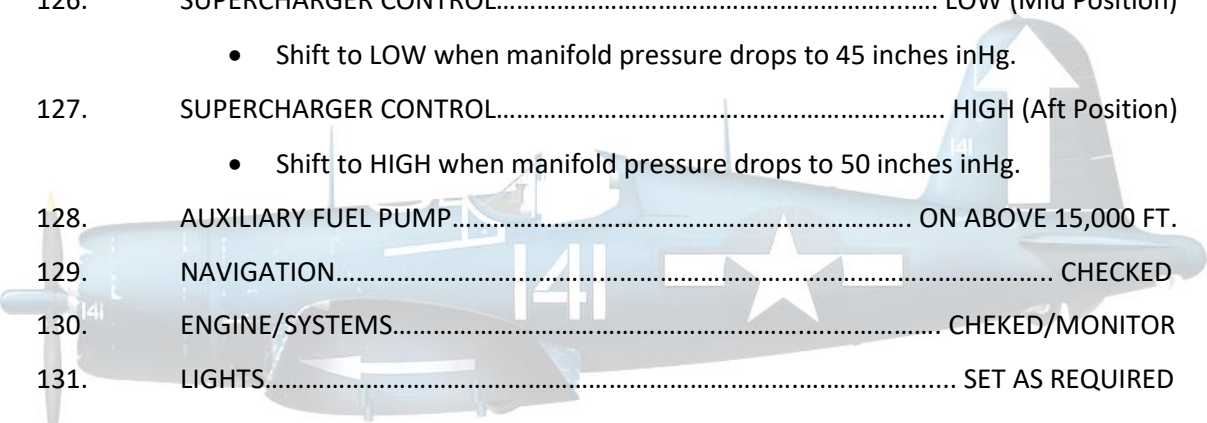
The more power that is applied, the more skill is required to perform a safe takeoff.

AFTER TAKEOFF

- 
101. LANDING GEAR..... RETRACTED/VERIFIED
 102. WING FLAPS..... RETRACTED INCREMENTALLY
 103. THROTTLE..... REDUCED TO 34 INCHES inHg
 104. PROPELLER CONTROL REDUCED TO 2300 RPM
 105. NORMAL CLIMB..... 135 KNOTS
 106. BEST CLIMB..... 125 KNOTS
 107. TRIMS..... SET
 108. MIXTURE CONTROL..... AUTO LEAN (Mid Position)
 109. AUXILIARY FUEL PUMP..... OFF
 110. ENGINE SYSTEMS..... MONITOR
 111. COWL FLAPS..... ADJUST AS REQUIRED
 112. OIL COOLER FLAP..... ADJUST AS REQUIRED
 113. CLIMB..... MISSION ALTITUDE
 114. OXYGEN..... ON ABOVE 10,000 MSL
 115. NAVIGATION..... CHECKED
 116. ENGINE/SYSTEMS..... CHEKED/MONITOR
 117. LIGHTS..... SET AS REQUIRED

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MIL POWER CLIMB

- 
118. MIXTURE CONTROL..... AUTO LEAN (Mid Position)
119. PROPELLER CONTROL..... MAX RPM (Full Down)
120. THROTTLE..... FULL (5 Minutes Max)
121. INTERCOOLER FLAPS..... OPEN
122. SUPERCHARGER CONTROL..... NEUTRAL (Forward Position)
123. BEST CLIMB RATE..... 3,000 FEET PER MIN
124. NORMAL CLIMB..... 140-150 KNOTS
125. TRIM..... AS REQUIRED
126. SUPERCHARGER CONTROL..... LOW (Mid Position)
- Shift to LOW when manifold pressure drops to 45 inches inHg.
127. SUPERCHARGER CONTROL..... HIGH (Aft Position)
- Shift to HIGH when manifold pressure drops to 50 inches inHg.
128. AUXILIARY FUEL PUMP..... ON ABOVE 15,000 FT.
129. NAVIGATION..... CHECKED
130. ENGINE/SYSTEMS..... CHEKED/MONITOR
131. LIGHTS..... SET AS REQUIRED
132. OXYGEN..... ON ABOVE 10,000 MSL

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NORMAL CRUISE

133. THROTTLE..... 30-35 INCHES inHg
134. PROPELLER CONTROL 1800-2000 Rpm
135. MIXTURE CONTROL..... AUTO LEAN
136. COWL FLAPS..... ADJUST AS REQUIRED
137. SUPERCHARGER CONTROL..... SET (As Required)

- Shift to LOW when operating below 15,000' msl
- Shift to HIGH when operating above 15,000' msl



Reduce manifold pressure three to four inches HG. To avoid power surge when shifting Supercharger.

138. TRIMS..... SET
139. FUEL SECTOR..... MANAGE

- Prioritize drop tanks (Must be selected before 19,000' msl)
- Note F4U-1D does not have internal wing fuel tanks*
- Prioritize left drop tank over right drop tank
- For high power operations at high altitude, use MAIN
- Do not cruise in RESERVE
- Use Aux fuel pump when switching fuel tanks

140. NAVIGATION..... CHECKED
141. DIRECTIONAL GYRO CHECKED
142. ENGINE/SYSTEMS..... CHECKED/MONITOR
143. LIGHTS..... SET (As Required)
144. OXYGEN..... ON ABOVE 10,000 MS�

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BEST ENDURANCE CRUISE

145. ALTITUDE..... 5,000-10,000' MSL
146. THROTTLE..... 28-30 INCHES inHg
- With two Corsair drop tanks installed, do not reduce below 30 inches inHg.
147. PROPELLER CONTROL 1600-1800 Rpm
- With two Corsair drop tanks installed, do not reduce below 1900 Rpm.
148. MIXTURE CONTROL..... AUTO LEAN
149. COWL FLAPS..... ADJUST (As Required)
150. SUPERCHARGER CONTROL..... LOW
151. TRIMS..... SET
152. FUEL SECTOR..... MANAGE
- Prioritize drop tanks
 - Note F4U-1D does not have internal wing fuel tanks*
 - Prioritize left drop tank over right drop tank
 - Do not cruise in RESERVE
 - Use Aux fuel pump when switching fuel tanks
153. AIRSPEED..... 140-160 KNOTS
154. NAVIGATION..... CHECKED
155. ENGINE/SYSTEMS..... CHECKED/MONITOR
156. LIGHTS..... SET (As Required)
157. OXYGEN..... ON ABOVE 10,000 MSL



Drop tanks and external stores increase drag and can reduce the cruise speed by ~26 knots using the same cruise settings. Ensure airspeed does not get too low or a stall will occur.

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COMBAT PREPARATION

158. PROPELLER CONTROL 2,400-2,700 Rpm
159. THROTTLE..... 40-44 INCHES inHg
160. SUPERCHARGER CONTROL..... SET (As Required)
- Shift to LOW when operating below 15,000' msl
 - Shift to HIGH when operating above 15,000' msl
161. MIXTURE CONTROL..... AUTO LEAN (Mid Position)
162. COWL/OIL/INTERCOOLER FLAPS..... TEMPS MAINTAINED
163. FUEL SECTOR..... MAIN
164. GUNS..... ARMED (As Required)
165. GUN HEAT..... ON (As Required)
- ON above 10,000 feet MSL
166. ROCKETS/BOMBS..... ARMED (As Required)
167. GUN SIGHT..... ON
- Adjust brightness as required
168. OXYGEN..... ON ABOVE 10,000 MSL
169. CANOPY..... CLOSED/LOCKED
170. HARNESS..... TIGHTEN
171. ENGINE/SYSTEMS..... MONITOR
172. SITUATIONAL AWARENESS..... ALERT
173. RADIO CALLS..... AS REQUIRED
174. DROP TANKS..... RELEASED (As Required)

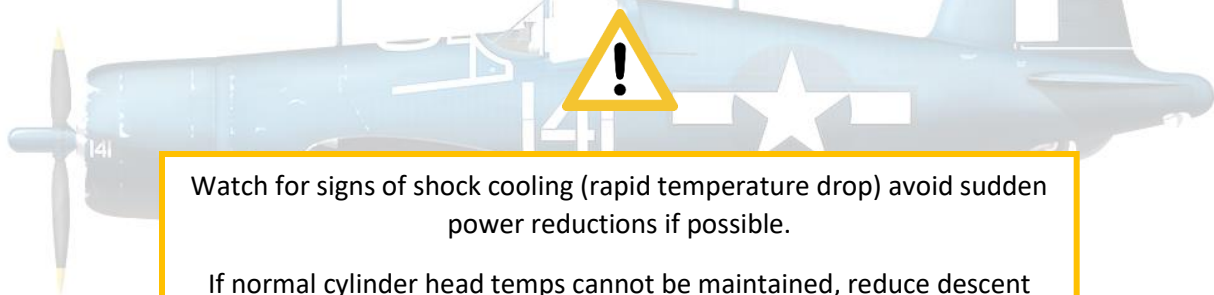


Do not release drop tanks before ensuring fuel selector has been set to
MAIN

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NORMAL DESCENT

175. THROTTLE 20-25 INCHES inHg
176. PROPELLER CONTROL 1,800-2,000 Rpm
177. MIXTURE CONTROL..... AUTO LEAN (Mid Position)
178. COWL/OIL/INTERCOOLER FLAPS..... ENGINE TEMPS MAINTAINED
179. SUPERCHARGER CONTROL..... LOW
- Neutral below 5,000 feet msl.
180. FUEL LEVEL..... CHECKED
181. FUEL SECTOR..... MAIN
182. AIRSPEED.....150-180 KNOTS
183. TRIM..... AS REQUIRED
184. ENGINE/SYSTEMS..... CHECKED/MONITOR



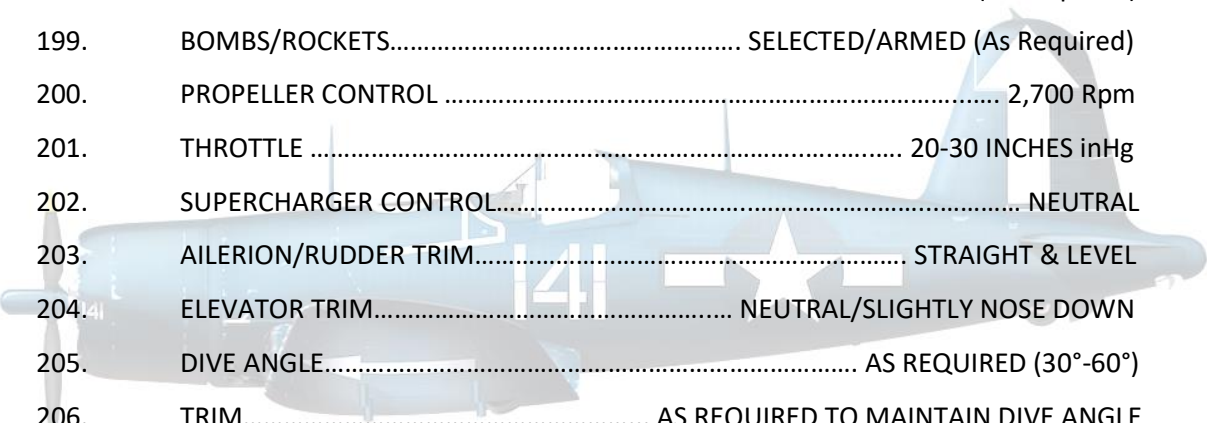
Watch for signs of shock cooling (rapid temperature drop) avoid sudden power reductions if possible.

If normal cylinder head temps cannot be maintained, reduce descent airspeed or level off with cruise power until cylinder temps are normalized.

185. RADIO CALLS..... AS REQUIRED (Carrier, ATC, Wingman)
186. ALTIMETER..... SET
187. OXYGEN..... OFF BELOW 10,000 MSL
188. WEAPON SWITCHES..... OFF/SAFE
189. NAVIGATION..... CHECKED
- Confirm heading and distance to airfield or carrier.
 - Cross check with charts or navigation aids.

DCS F4U-1D CORSAIR OPERATING PROCEDURES

DIVE CHECKLIST

- 
190. LANDING GEAR/ FLAPS RETRACTED
191. CANOPY..... CLOSED/LOCKED
192. HARNESS..... TIGHTEN
193. AUXILIARY FUEL PUMP..... ON
194. FUEL SECTOR..... RESERVE
195. MASTER ARM..... ON (As Required)
196. GUNS..... ON/CHARGED (As Required)
197. GUN HEAT..... ON (As Required)
- ON above 10,000 feet MSL
198. GUN SIGHT..... ON (As Required)
199. BOMBS/ROCKETS..... SELECTED/ARMED (As Required)
200. PROPELLER CONTROL 2,700 Rpm
201. THROTTLE 20-30 INCHES inHg
202. SUPERCHARGER CONTROL..... NEUTRAL
203. AILERON/RUDDER TRIM..... STRAIGHT & LEVEL
204. ELEVATOR TRIM..... NEUTRAL/SLIGHTLY NOSE DOWN
205. DIVE ANGLE..... AS REQUIRED (30°-60°)
206. TRIM..... AS REQUIRED TO MAINTAIN DIVE ANGLE
207. DIVE BRAKE..... ON (When Ready)
- ON when reaching ~54° dive angle to prevent overspeed.
 - Do not exceed 347 Knots / 400 Mph
 - Use throttle as required.
 - Monitor target through gunsight.
208. WEAPONS RELEASED..... WHEN READY
- Minimum 1,500' to 3,000' MSL above target.
209. ALTITUDE..... LEVEL OFF
210. DIVE BRAKE..... OFF
211. AIRSPEED..... 200-250 KNOTS
212. TRIM..... AS REQUIRED
213. ENGINE/SYSTEMS..... CHECKED/MONITOR

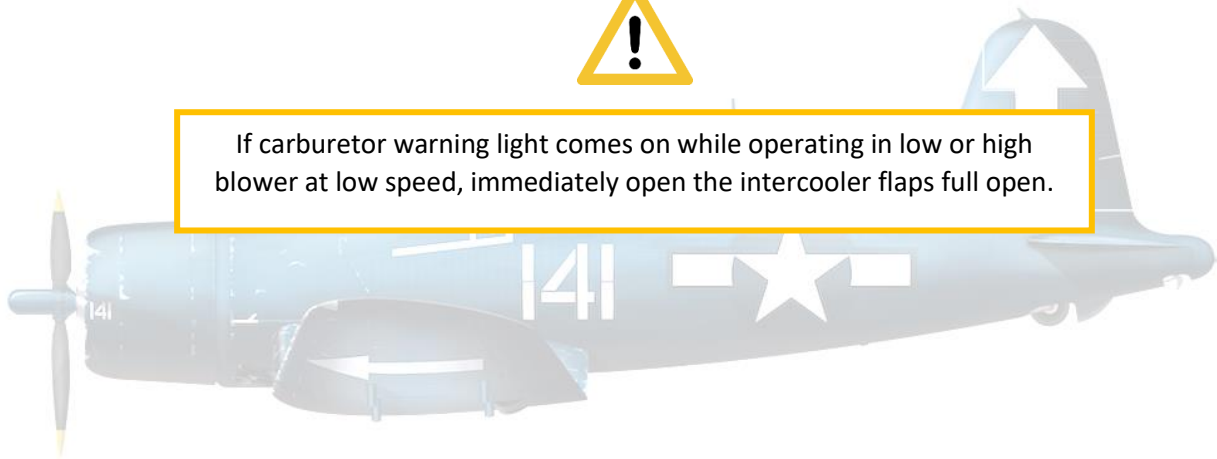
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Do not shift the supercharger control more often than at five-minute intervals during flight except in an emergency to allow the dissipation of heat from the clutches.



If carburetor warning light comes on while operating in low or high blower at low speed, immediately open the intercooler flaps full open.



Set fuel selector to RESERVE for takeoff, landing, diving and maneuvers.
DO NOT cruise on RESERVE.

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APPROACH AND LANDING

214. TAIL WHEEL..... LOCKED
- Unlocked for carrier
215. AUXILIARY FUEL PUMP..... ON
216. FUEL SELECTOR..... RESERVE
217. MIXTURE CONTROL..... AUTO RICH (Forward Position)
218. SUPERCHARGER CONTROL..... NEUTRAL (Forward Position)
219. PROPELLER CONTROL 2300-2400 Rpm
220. COWL/OIL/INTERCOOLER FLAPS..... ENGINE TEMPS MAINTAINED
221. ALTIMETER..... SET
222. LANDING GEAR..... DOWN / POSITIONS VERIFIED
- Gear down below 200 knots
223. WING FLAPS..... SET AS REQUIRED
- 30° for field landing
 - 50° for carrier or short field
224. TAIL HOOK..... SET AS REQUIRED
- UP for field landing
 - DOWN for carrier landing
225. CANOPY..... OPEN
226. TOUCHDOWN..... Wheel landing (Tail Level)
- 3-point attitude (Carrier)



Pilots should avoid flat approaches. After flaring out, no difficulty should be experienced in executing a normal three-point landing.

Use the brakes cautiously until the tail wheel is on the ground.

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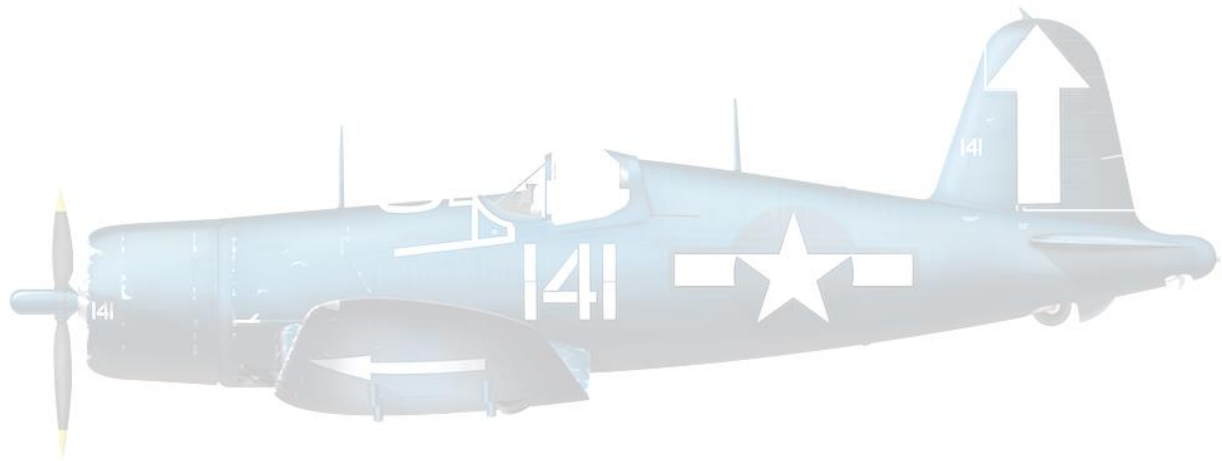
GO-AROUND

- 227. THROTTLE..... INCREASE SMOTHLY
- 228. PROPELLER CONTROL INCREASE SMOTHLY
- 229. PITCH..... MINIMAL
- 230. LANDING GEAR..... RETRACTED
- 231. WING FLAPS..... RETRACTED
- 232. TRIM..... AS REQUIRED
- 233. COWL/OIL/INTERCOOLER FLAPS..... ENGINE TEMPS MAINTAINED
- 234. TRAFFIC PATTERN..... MAINTAIN

AFTER LANDING / SHUTDOWN

- 235. COWL FLAPS..... FULL OPEN
- 236. INTERCOOLER FLAPS..... FULL OPEN
- 237. OIL COOLER FLAP..... FULL OPEN
- 238. PROPELLER CONTROL..... MAX RPM (Down Position)
- 239. PITOT HEAT..... OFF
- 240. TAXI..... PARKING COMPLETE
- 241. WHEEL CHOCKS..... IN PLACE
- 242. THROTTLE..... IDLE 800-900 RPM
 - Wait for cylinder temps to cool to 170° C (328° F) or below.
- 243. WINGS..... FOLDED AS REQUIRED
- 244. AUXILIARY FUEL PUMP..... OFF
- 245. MIXTURE CONTROL..... IDLE CUTOFF
 - When the engine begins to cut out, slowly move the throttle forward to fill the carburetor with fuel for the next flight.
- 246. MIXTURE CONTROL..... AUTO LEAN
- 247. IGNITION SWITCH..... OFF
- 248. BATTERY SWITCH..... OFF
- 249. RADIOS..... OFF
- 250. LIGHTS..... OFF
- 251. DIRECTIONAL / HORIZON GYROS..... CAGED

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DCS F4U-1D CORSAIR OPERATING PROCEDURES

EMERGENCY PROCEDURES

*****ENGINE FAILURE*****

RESTART ATTEMPTED

- **Immediate Actions:**

1. **Airspeed:** Maintain best glide speed (~135 knots / 155 mph) to maximize range.
2. **Trim:** As required to maintain Best Glide speed.
3. **Fuel Selector:** Set to alternate fuel tank.
4. **Auxiliary Fuel Pump:** Turn ON
5. **Mixture:** Set to AUTO RICH (Forward position)
6. **Ignition:** Set to Both or cycle LEFT/RIGHT to test magnetos
7. **Propeller:** Set to HIGH Rpm (full down) for restart to ensure engine turnover.
8. **Throttle:** Set to ¼ open (~10-15 inches manifold pressure)
9. **Altitude Check:** If above 10,000 ft, attempt restart with supercharger in high blower.
10. **Primer:** Prime engine to ensure fuel. (Avoid flooding)
11. **Starter Switch:** Engage the starter for 5-10 seconds while monitoring response

- **Wind milling start:** (If no starter response) if altitude allows, dive slightly up to 200 knots to windmill the propeller for restart.

- **If Engine Restarts:**

1. Gradually advance throttle to 20-25 inches manifold pressure and 1,800 Rpm.
2. Monitor oil pressure (60-90 psi) and cylinder head temperatures
3. Return to nearest airfield, maintaining conservative power settings.
4. Be prepared for another engine failure if cause of first engine failure is unknown.

This checklist assumes the engine failure is due to a recoverable issue (Fuel mismanagement, Ignition fault) rather than a catastrophic mechanical failure. Restart attempts should be brief to avoid losing critical altitude.

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EMERGENCY PROCEDURES

ENGINE FAILURE

NO RESTART

- **If Engine Does Not Restart:**

1. **Prepare for Dead Stick Landing:**

- **Cease restart attempts** to conserve battery and focus on glide.
- **Select landing site** (Runway, field, water).
- **Propeller:** Set to LOW Rpm (full forward) to minimize drag
- **Radio:** Transmit "Mayday" with position and intentions (if time permits).
- **Fuel and Ignition:** Turn OFF fuel selector and ignition to minimize fire risk.
- **Battery Switch:** OFF to prevent electrical fire.
- **Cowl Flaps:** Closed to reduce drag.
- **Wing Flaps:** Lower to full (50°) if landing is imminent and airspeed allows.
- **Landing Gear:** Up for water or rough terrain; down for smooth field.
- **Canopy:** Open or jettison to ensure egress.

- **Bail Out:**

- Bail out if landing is impossible due to fire, control loss, or no suitable landing site.
- Proceed to Bailout checklist if time allows.

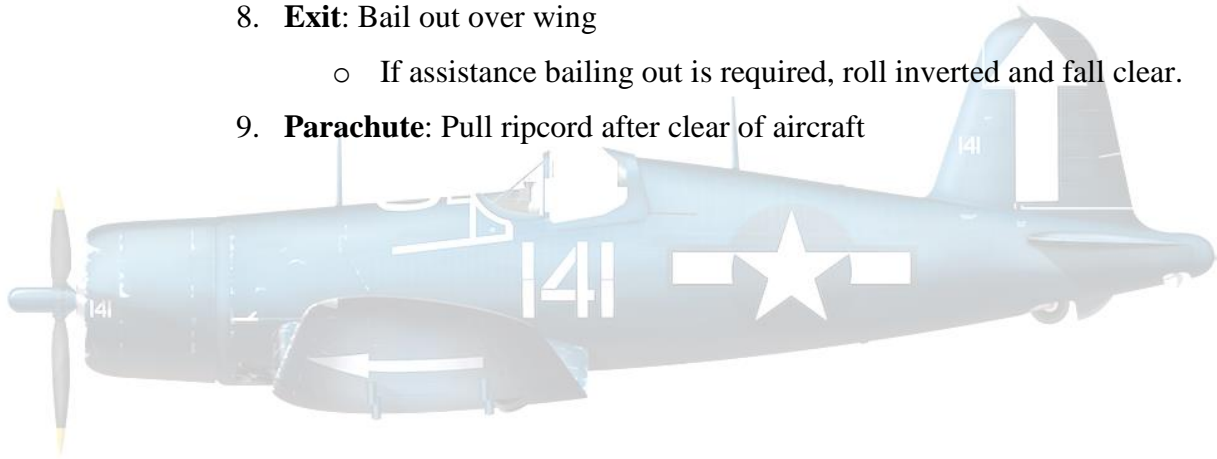
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EMERGENCY PROCEDURES

BAIL OUT PROCEDURE

- **Actions:**

1. **Altitude:** Above 1,000 ft AGL required for parachute deployment.
2. **Trim:** Stabilize aircraft to neutral pitch.
3. **Radio:** If time allows, transmit "Mayday" with position.
4. **Canopy:** Open or jettison to ensure egress.
5. **Harness:** Release seat harness.
6. **Mixture Control:** Idle Cutoff
7. **Ignition:** Off
8. **Exit:** Bail out over wing
 - If assistance bailing out is required, roll inverted and fall clear.
9. **Parachute:** Pull ripcord after clear of aircraft



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EMERGENCY PROCEDURES

*****ENGINE FIRE IN FLIGHT*****

- **Immediate Actions:**

1. **Fuel Selector:** OFF to starve fire.
2. **Mixture:** Move to "Idle Cut-Off."
3. **Ignition:** Switch to "OFF."
4. **Throttle:** Close fully.
5. **Auxiliary Fuel Pump:** OFF.
6. **Cowl Flaps:** Close to smother fire.

- **Secondary Actions:**

1. **Dive:** Increase airspeed (up to 250 knots) to blow out flames, if possible.
2. **Side-Slip:** Use rudder to divert flames from cockpit and fuel tanks.
3. **Fire Extinguisher:** Activate if installed (some F4U-1D models had CO2 systems).
4. **Battery Switch:** OFF to prevent electrical ignition.

- **Outcome:**

- If fire extinguishes, attempt to glide to a landing site (Engine Failure checklist).
- If fire persists, prepare to bail out:
 - **Canopy:** Open or jettison to ensure egress.
 - **Harness:** Release after trimming aircraft.
 - **Bail Out:** Exit over wing, pull parachute ripcord after clear of aircraft.

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EMERGENCY PROCEDURES

PROPELLER FAILURE

Symptoms: Excessive RPM beyond redline (2,700 RPM) or inability to adjust propeller pitch.

- **Actions:**

1. **Throttle:** Reduce throttle to minimum safe manifold pressure to limit overspeed
2. **Prop Control:** Set propeller control to high RPM (full forward)
3. **Airspeed:** Reduce to ~120-150 knots to minimize prop stress.
4. **Land:** Select a suitable landing field and prepare for a precautionary landing.
5. **Emergency Landing:** If overspeed persists, shut down the engine (mixture to idle cutoff, ignition off) and glide to landing, following dead-stick landing procedures.

OIL SYSTEM FAILURE

Symptoms: Low oil pressure, high oil temperature, erratic oil gauge readings, engine roughness or vibration, visible oil leaks, sudden loss of power.

- Oil pressure below 40 psi or temps above 85° C can seize the R-2800.

- **Actions:**

1. **Throttle:** Reduce power to 25 inches manifold pressure.
2. **Prop Control:** 1,800 Rpm
3. **Cowl Flaps:** Fully Open
4. **Monitor oil pressure gauge:** If pressure drops below 40 psi, prepare for shutdown.
5. **Divert.** Nearest airfield. Have Engine failure checklist ready if engine seizes.

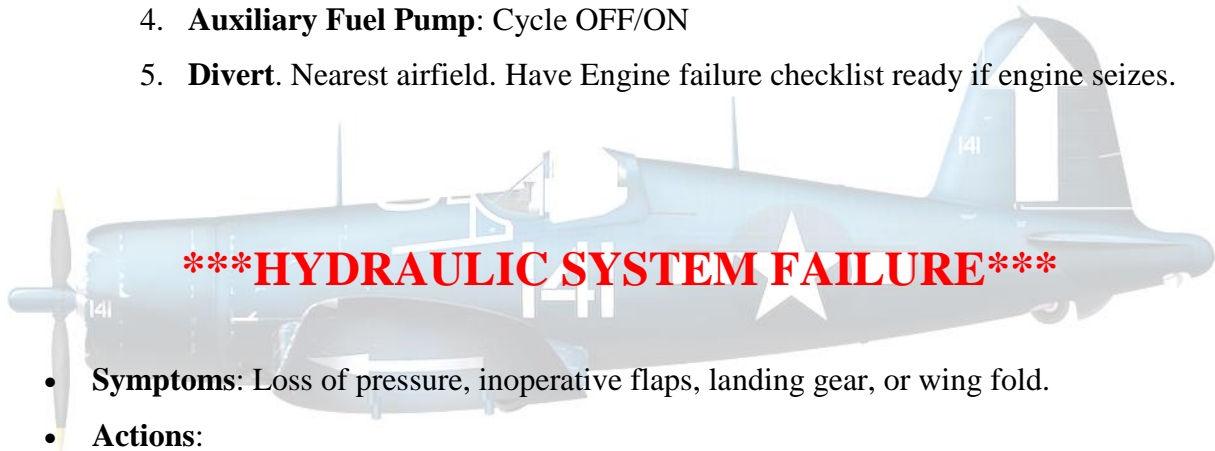
DCS F4U-1D CORSAIR OPERATING PROCEDURES

EMERGENCY PROCEDURES

FUEL SYSTEM FAILURE

Symptoms: Low or dropping fuel pressure, erratic fuel gauge readings, engine roughness or power loss, visible fuel leaks, engine failure to respond to throttle, sudden drop in fuel quantity.

- Fuel starvation or leaks can cause engine failure, leaks can increase risk of fire.
- **Actions:**
 1. **Fuel Selector:** Switch to alternate fuel tank.
 2. **Throttle:** Reduce power to 25-30 inches manifold pressure
 3. **Prop Control:** 1,800 Rpm
 4. **Auxiliary Fuel Pump:** Cycle OFF/ON
 5. **Divert.** Nearest airfield. Have Engine failure checklist ready if engine seizes.



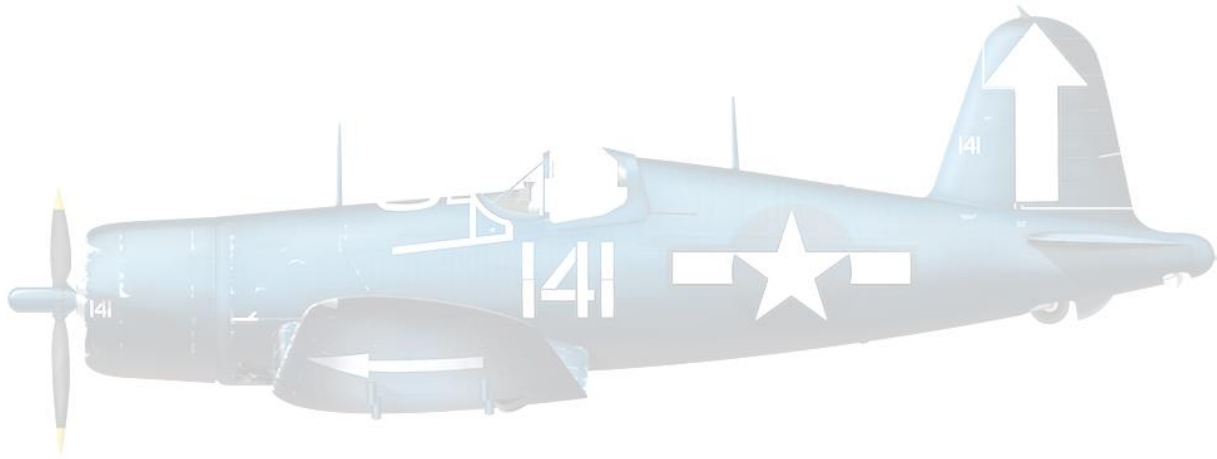
- **Symptoms:** Loss of pressure, inoperative flaps, landing gear, or wing fold.
- **Actions:**
 1. **Hydraulic Pump:** Verify hand pump is operational.
 2. **Landing Gear:**
 - Use emergency hand pump to lower gear (requires ~50-100 strokes).
 - Check gear indicators (visual or mechanical) for down-and-locked.
 - If gear fails to extend, prepare for gear-up landing (see below).
 3. **Wing Flaps:**
 - If flaps fail, land without flaps (increase approach speed to ~110 knots).
 4. **Carrier Landing:** If on a carrier, signal hydraulic failure.
 - wave-off if gear not down.
 5. **Radio:** Inform ground or carrier of hydraulic issues.

DCS F4U-1D CORSAIR OPERATING PROCEDURES

EMERGENCY PROCEDURES

LANDING GEAR FAILURE

- **Actions:**
 1. **Cycle Gear:** Raise and lower gear again using normal hydraulic system.
 2. **Hydraulic Pressure Gauge:** Checked.
 3. **Emergency Extension:** Use hand pump to lower gear manually.
 4. **Visual Check:** Request ground or wingman to confirm gear position.
- **If Gear Remains Up:**
 1. **Proceed to Gear Up / Belly Landing Checklist.**



DCS F4U-1D CORSAIR OPERATING PROCEDURES

EMERGENCY PROCEDURES

GEAR UP BELLY LANDING

- **Preparation:**

1. **Drop tanks / Bombs:** Released.
2. **Fuel:** Burn off to reduce landing weight and fire risk.
3. **Landing gear:** UP.
4. **Wing Flaps:** Full Down 50°
5. **Cowl Flaps:** Closed.
6. **Rocket Safety Pin:** Removed
7. **Harness:** Tightened.
8. **Canopy:** Open/Jettison for egress.
9. **Fuel tank Pressure Relief:** Pulled AFT.
10. **Pilot Seat:** Lowered
11. **Mixture control:** Idle cutoff (just before touchdown)
12. **Ignition switch:** OFF
13. **Battery Switch:** OFF (Reduce fire risk)
14. **Master Arm switch:** OFF

- **Approach:**

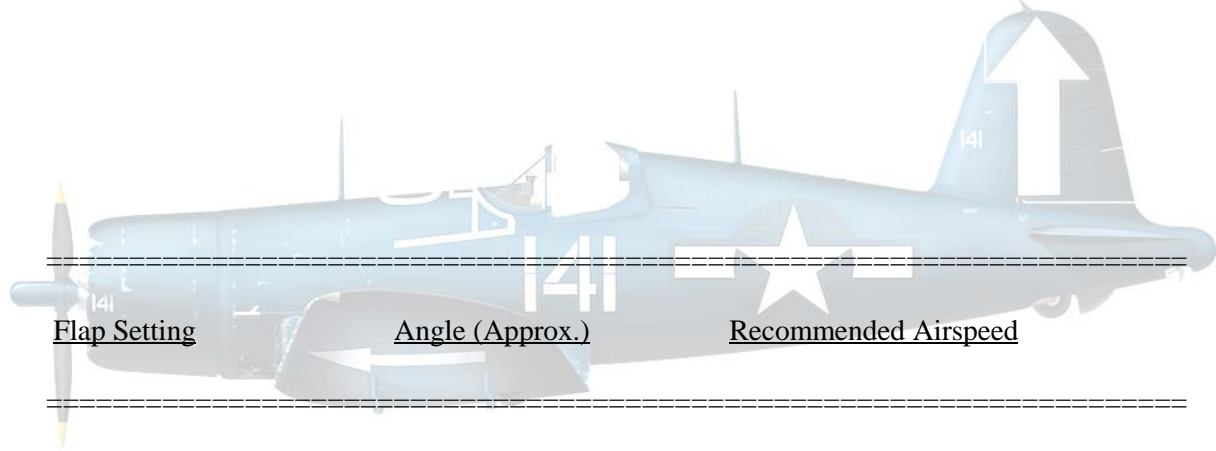
1. **Wind:** Land into wind for minimum speed if able.
2. **Touchdown:** Gently, tail-first, and keep nose high to protect cockpit.
3. **Egress:** Release harness, exit over wing.
4. **Carrier:** If gear-up for carrier approach, wave off if possible; expect barrier engagement.
5. **Bail Out:** If no safe landing site is available, (see Bailout checklist).

DCS F4U-1D CORSAIR OPERATING PROCEDURES

EMERGENCY PROCEDURES

FLAP ASYMMETRY OR FAILURE

- **Symptoms:** Uneven flaps cause roll instability; no flaps increase landing speed & distance.
- **Actions:**
 1. **Landing:** Abort.
 2. **Altitude:** Climb to 1,500 feet Agl or greater.
 3. **Wing Flaps:** Cycle flap controls, raise flaps completely if asymmetric.
 4. **Approach:** Increase approach speed to 110-120 knots for no-flap landing.
 5. **Runway:** Use long runway, maintain coordinated flight to counter roll tendency.



<u>Flap Setting</u>	<u>Angle (Approx.)</u>	<u>Recommended Airspeed</u>
Flaps Up	0°	150–380 mph (130–330 knots)
Combat Flaps	10°–20°	Up to 250 mph (217 knots)
Takeoff Flaps	20°–30°	100–140 knots (115–161 mph)
Landing Flaps (Full)	40°–50°	85–100 knots (98–115 mph)

DCS F4U-1D CORSAIR OPERATING PROCEDURES

EMERGENCY PROCEDURES

ELECTRICAL SYSTEM FAILURE

- **Symptoms:** Loss of lights, radio, instruments, or gauges. Ammeter showing discharge/zero output indicating generator failure, bus fault.
- **Actions:**
 1. **Battery Switch:** Verify Battery master switch is on.
 2. **RPM:** Verify Rpm is greater than 1,000 Rpm.
 3. **Load Shed:** Turn off non-essential electrical equipment (e.g., lights, non-critical radios).
 4. **Generator:** Check ammeter or voltage.
 - Verify generator output (24V+) or positive charging on ammeter.
 - If zero or negative, assume generator failure and rely on battery.
 5. **Circuit Breakers:** Reset if tripped.
 6. **Navigation:** Use manual compass and visual references if instruments fail.
 - Use wingman for navigation assistance if able.
 7. **Landing:** Use hand signals for carrier ops or ground crew if radio fails.
 8. **Land as Soon as Possible:** Prioritize nearest airfield or carrier.
 - Preferably VFR conditions to minimize reliance on electrical instruments.

DCS F4U-1D CORSAIR OPERATING PROCEDURES

EMERGENCY PROCEDURES

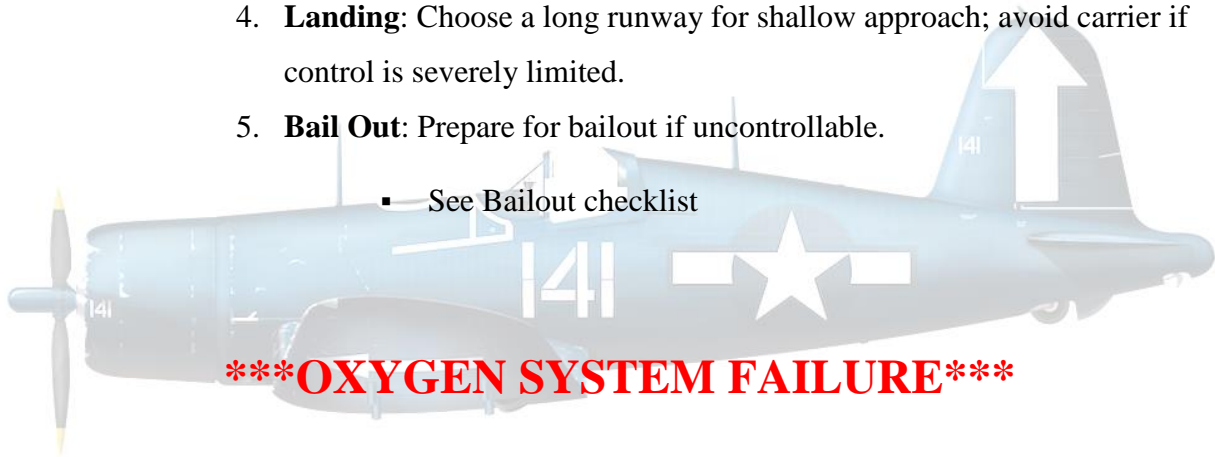
CONTROL SURFACE FAILURE

Symptoms: Stiff or unresponsive surfaces, or loss of control. Battle damage or mechanical failure reduces control, but partial control may allow landing.

- **Actions:**

1. **Trim:** Use trims to compensate for control loss.
2. **Airspeed:** Reduce airspeed to 120–150 knots to minimize stress on damaged surfaces.
3. **Alternate Controls:** Use rudder for roll if ailerons fail; use throttle for pitch if elevators fail.
4. **Landing:** Choose a long runway for shallow approach; avoid carrier if control is severely limited.
5. **Bail Out:** Prepare for bailout if uncontrollable.

- See Bailout checklist



OXYGEN SYSTEM FAILURE

- **Immediate Actions:** (High altitude)

1. **Altitude:** Immediately descend below 10,000 feet MSL.
2. **Oxygen supply:** Check oxygen regulator and connections.
 - If oxygen supply is depleted or faulty, maintain consciousness by focusing on breathing.
 - Above 10,000 ft, hypoxia can impair pilot performance.
3. **Land:** Nearest airfield.

DCS F4U-1D CORSAIR OPERATING PROCEDURES

EMERGENCY PROCEDURES

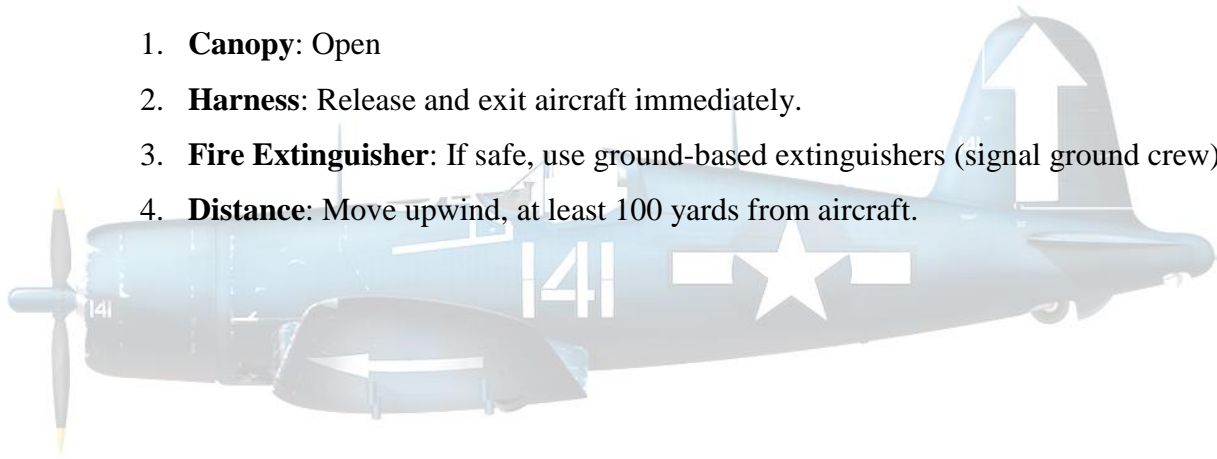
ENGINE FIRE ON STARTUP

- **Immediate Actions:**

1. **Throttle:** Close fully.
2. **Mixture:** "Idle Cut-Off."
3. **Fuel Selector:** OFF.
4. **Ignition:** OFF.
5. **Auxiliary Fuel Pump:** OFF.
6. **Battery Switch:** OFF.

- **Evacuation:**

1. **Canopy:** Open
2. **Harness:** Release and exit aircraft immediately.
3. **Fire Extinguisher:** If safe, use ground-based extinguishers (signal ground crew).
4. **Distance:** Move upwind, at least 100 yards from aircraft.



DCS F4U-1D CORSAIR OPERATING PROCEDURES

EMERGENCY PROCEDURES

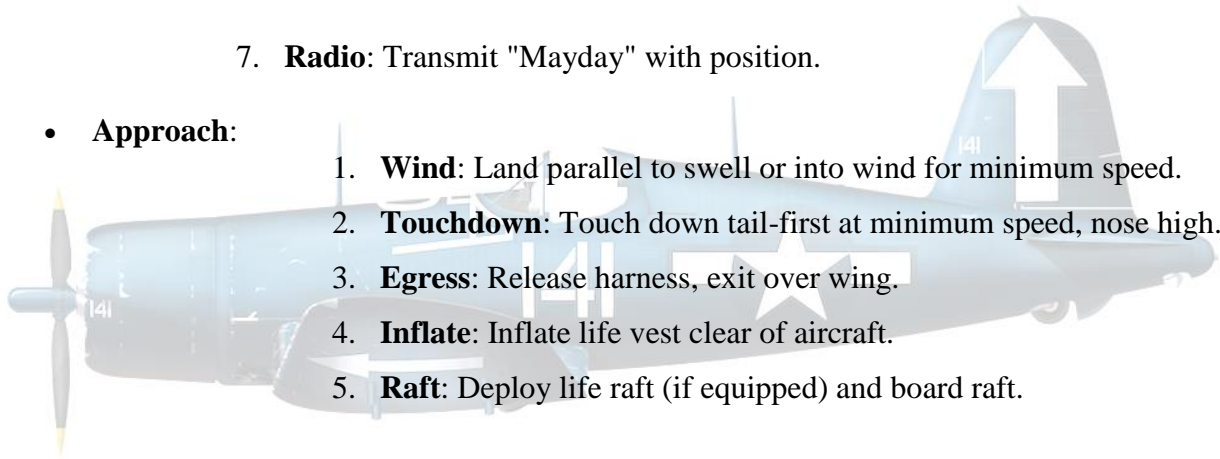
WATER EMERGENCY DITCHING

- **Preparation:**

1. **Fuel:** Burn off to lighten aircraft.
2. **Gear:** Up to reduce drag and prevent flipping.
3. **Wing Flaps:** Full (50°) to reduce stall speed (~80-90 knots).
4. **Cowl Flaps:** Closed
5. **Canopy:** Open or jettison to ensure egress.
6. **Harness:** Tighten; ensure life vest is secure.
7. **Radio:** Transmit "Mayday" with position.

- **Approach:**

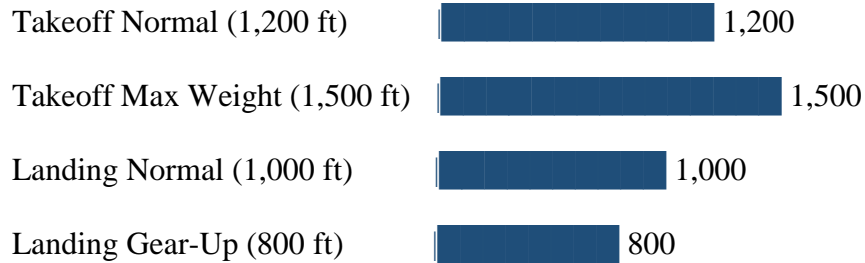
1. **Wind:** Land parallel to swell or into wind for minimum speed.
2. **Touchdown:** Touch down tail-first at minimum speed, nose high.
3. **Egress:** Release harness, exit over wing.
4. **Inflate:** Inflate life vest clear of aircraft.
5. **Raft:** Deploy life raft (if equipped) and board raft.



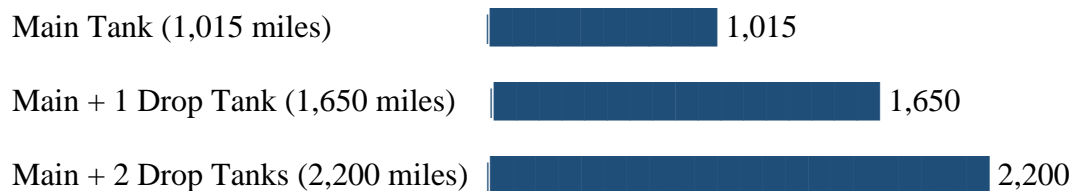
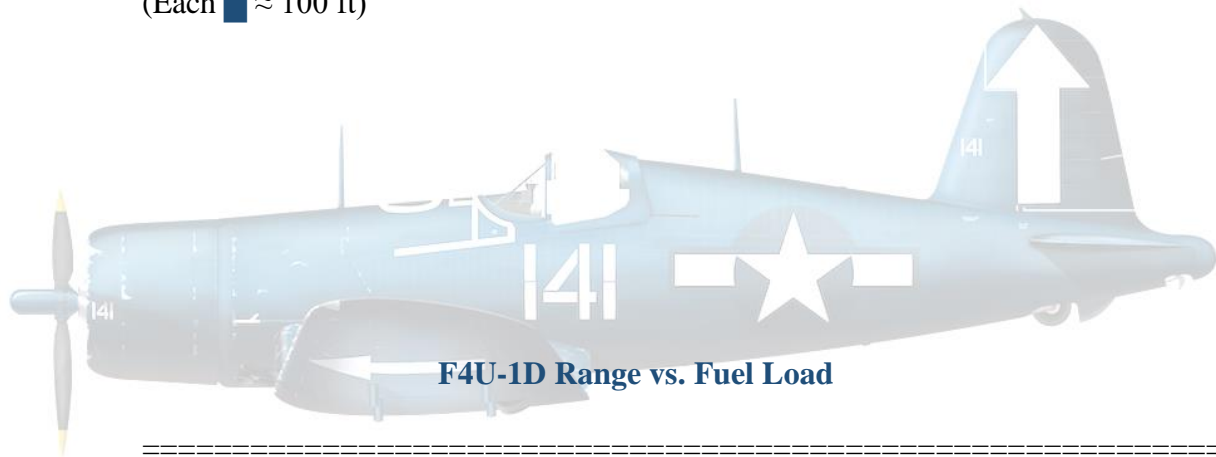
DCS F4U-1D CORSAIR OPERATING PROCEDURES


PERFORMANCE DATA

F4U-1D Takeoff and Landing Distances



(Each  \approx 100 ft)

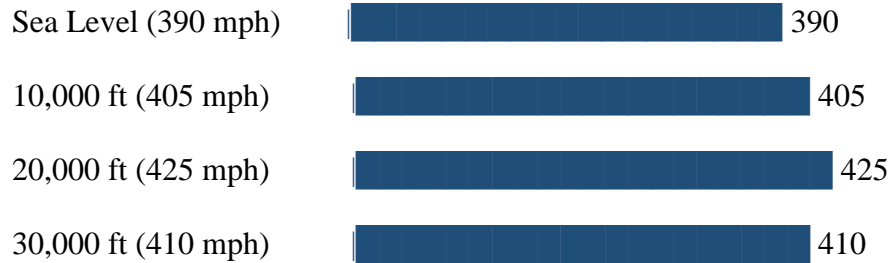


(Each  \approx 100 miles)

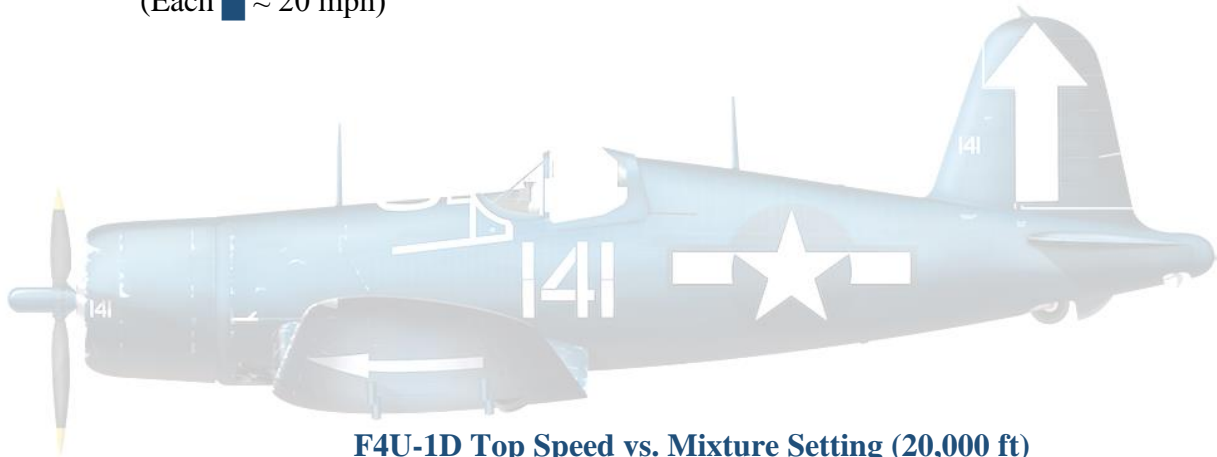
DCS F4U-1D CORSAIR OPERATING PROCEDURES

PERFORMANCE DATA

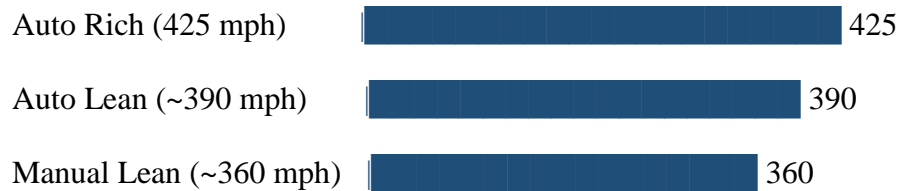
F4U-1D Top Speed vs. Altitude



(Each  \approx 20 mph)



F4U-1D Top Speed vs. Mixture Setting (20,000 ft)



(Each  \approx 20 mph)

PERFORMANCE DATA

Normal (250 mph)	<div><div></div></div>	250
Military (400 mph)	<div><div></div></div>	400
Water Injection (425 mph)	<div><div></div></div>	425

Auto Rich (425 mph)	425
Auto Lean (~390 mph)	390
Manual Lean (~360 mph)	360


V3

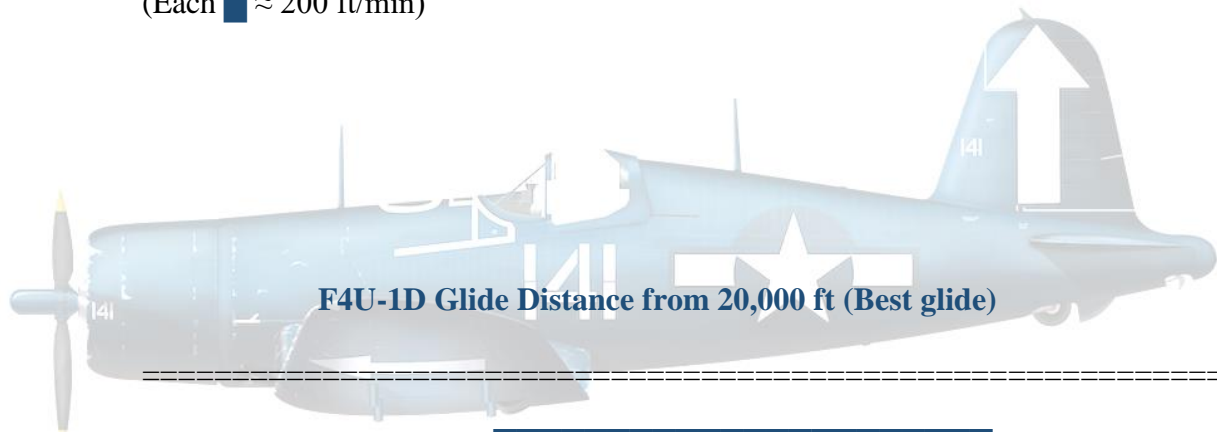
DCS F4U-1D CORSAIR OPERATING PROCEDURES

PERFORMANCE DATA

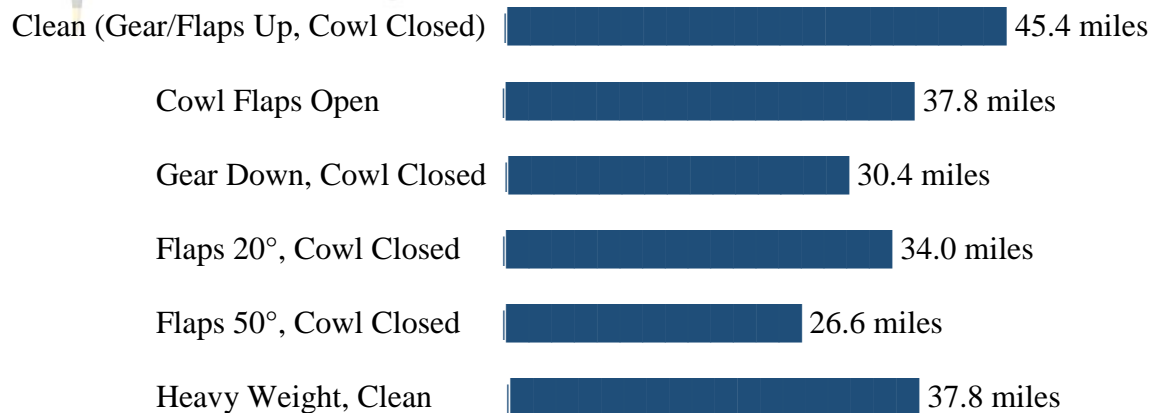
F4U-1D Climb Rate vs. Altitude




(Each  ≈ 200 ft/min)



F4U-1D Glide Distance from 20,000 ft (Best glide)



(Each  ≈ 2 statute miles)

DCS F4U-1D CORSAIR OPERATING PROCEDURES

PERFORMANCE DATA

F4U-1D Corsair vs. A6M5 Zero: Top Speed

Corsair (425 mph)  425


Zero (351 mph)  351

(Each  \approx 20 mph)

F4U-1D Corsair vs. A6M5 Zero: Climb Rate

Corsair (3,200 ft/min)  3,200


Zero (3,100 ft/min)  3,100

(Each  \approx 200 ft/min)

F4U-1D Corsair vs. A6M5 Zero: Range

Corsair (1,015 miles)  1,015

Zero (1,194 miles)  1,194

(Each  \approx 100 miles)

F4U-1D Corsair vs. A6M5 Zero: Glide Distance (10,000 ft)

Corsair (22.7 miles)  22.7

Zero (19.9 miles)  19.9

(Each  \approx 1 mile)

F4U-1D vs. A6M5 Zero: 360° Turn Time

Corsair (~21 sec)  21

Zero (~17 sec)  17

(Each  \approx 1 sec)