

TECHNICAL MANUAL



Operator's and Crewmember's Checklist

ARMY MODEL OV-1B AIRPLANE, OBSERVATION STOL

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This manual supersedes TM 55-1510-204-CL/3, 28 January 1970, including all changes.

**HEADQUARTERS
DEPARTMENT OF THE ARMY**

22 FEBRUARY 1979

89-784-P

By Order of the Secretary of the Army:

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Chief of Staff

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To be distributed in accordance with DA Form 12-31, CL Requirements for OV-1B/C aircraft.

CHANGE }
 NO. 3 }

HEADQUARTERS
 DEPARTMENT OF THE ARMY
 WASHINGTON, DC, 5 January 1984

Operator's and Crewmember's
 Checklist

ARMY MODEL
 OV-1B AIRPLANE
 OBSERVATION STOL

TM 55-1510-204-CL/3, 22 February
 1979, is changed as follows:

1. Remove and insert pages as indicated
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Remove pages

Insert pages

E-11/E-12

E-11/E-12

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CHANGE }
No. 2 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 23 March 1982

Operator's and Crewmember's
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ARMY MODEL
OV-1B AIRPLANE
OBSERVATION STOL

TM 55-1510-204-CL/3, 22 February
1979, is changed as follows:

1. Remove and insert pages as indicated
below.

Remove Pages

Insert Pages

N-1 thru N-6
E-7 thru E-9/E-10
E-25/E-26
P-2

N-1 thru N-6
E-7 thru E-9/E-10
E-25/E-26

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aircraft.

CHANGE }
No. 1 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 25 March 1981

Operator's and Crewmember's
Checklist

ARMY MODEL
OV-1B AIRPLANE
OBSERVATION STOL

TM 55-1510-204-CL/3, 22 February 1979
is changed as follows:

1. Remove and insert pages as indicated below.

Remove pages	Insert pages
N-5 and N-6	N-5 and N-6
N-11 and N-12	N-11 and N-12
P-1 and P-2	P-2

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aircraft.

GENERAL INFORMATION AND SCOPE

SCOPE. This checklist contains the operator's and crewmember's checks to be accomplished during normal and emergency operations.

GENERAL INFORMATION. This checklist consists of three parts: normal procedures, emergency procedures, and performance data. Normal procedures consist of the procedures required for normal flight. Emergency procedures are subdivided into 10 classifications as follows: engine, propeller/rotor, fire, fuel, electrical (Elec), hydraulic (Hyd), landing and ditching (Ldg/Dtch), flight controls (Flt Cont), bailout or ejection (Bailout) (Eject), and mission equipment (MSN/EQPT), as applicable. Performance data consists of the performance checks.

NOTE

This checklist does not replace the amplified version of the procedures in the operator's manual (TM 55-1510-204-10/3), but is a condensed version of each procedure.

Normal Procedures Pages. The contents of the normal procedures of this manual are a condensation of the amplified checklist appearing in the normal procedures or crew duties portion of the applicable operator's manual.

Emergency Procedures Pages. The requirements in this section of the condensed checklist manual (CL) are identical to those for the normal procedures, except that the information is drawn from the amplified checks in the emergency procedures portion of the operator's manual. The emergency requirements are subdivided into the 10 classifications listed above.

Symbols Preceding Numbered Steps.

- - Indicates performance of steps is mandatory for all "Thru Flights."
- (N) - Means performance of step is mandatory for "Night Flights."
- * - Indicates a detailed procedure for this step is included in the Performance Checks section, located at the back of the condensed checklist.
- (I) - Indicates mandatory check for "Instrument Flights."
- (O) - Indicates if installed.

Immediate action emergency items are underlined and shall be committed to memory.

You can help improve this manual. If you find any mistake or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to Commander, US Army Troop Support and Aviation Materiel Readiness Command, ATTN: DRSTS-MTP, 4300 Goodfellow Blvd., St. Louis, Mo., 63120. A reply will be furnished to you.

BEFORE EXTERIOR CHECK

- * 1. Ejection seats—safe.
- * 2. Publications—check.
- * 3. Ignition lock switch—ON.
- 4. First aid kit—check.
- 5. Jettison air pressure—check.
- * 6. Seat pins—remove.
- ★ 7. Ejection seats—check.
- 8. Fire extinguisher—check.
- * 9. Gear handle—DOWN.
- 10. Battery—NORMAL.
- 11. Lighting systems—check/OFF.
- 12. Voltage—check.
- 13. Battery—OFF.
- 14. Gust lock—disengage.
- 15. Trim tabs—ZERO.
- 16. Oxygen system—check pressure.
- 17. Parachute harness (DA Form 3912)—Check.

EXTERIOR CHECK

- * Fuel sample—check.

NOSE SECTION

- 1. Skin condition—check.
- 2. Fuselage airscoop—check.
- 3. Left static port—check.
- 4. Wheel well—check.
- 5. Doors and linkage—check.

NOSE SECTION (cont)

- * 6. Safety lock—remove.
- 7. Strut—check.
- * 8. Tiedown—release.
- 9. Torque arm—check.
- * 10. Tire—check.
- 11. Auxiliary vent—check.
- 12. Compartment access door—secure.
- 13. Auxiliary ram air scoops—check.
- 14. Pitot tube—check.
- 15. Windshield and wipers—check.
- 16. Right static port—check.
- 17. Hydraulic reservoir gage—check.
- 18. Emergency air pressure—check.
- 19. Accumulator pressure—check.
- 20. Hydraulic filler cap and door—secure.
- * 21. Fuel cap and door—secure.
- (O) 22. SLAR antenna condition—check.

RIGHT MAIN LANDING GEAR

- * 1. Tire—check.
- 2. Brake assembly—check.
- 3. Inboard doors and linkage—check.
- 4. Torque arm—check.
- 5. Strut and shrink rod—check.
- * 6. Safety lock—remove.
- 7. Wheel well—check.
- 8. Outboard door—check.

***RIGHT ENGINE AND PROP**

1. Oil level—check.
2. Cowling latches—secure.
3. Intake ducts—check.
4. Prop and spinner—check.

RIGHT WING

- * 1. Tiedown door secure.
2. Skin condition—check.
- (O) * 3. Drop tank connections—check.
- (O) 4. Detonator squib condition-check.
- (O) * 5. Pylon safety pin—remove.
- (O) * 6. Drop tank—quantity and cap check.
7. Deicer boot—check.
8. Wing tip—check.
9. Controls—check.
- * 10. Exhaust stack—check.

FUSELAGE—TOP

- * 1. Main tank fuel and cap—check.
- * 2. Fuel tank cover—secure.
- ★ 3. Ejection seats (top)—check.
4. Escape hatch—check.
5. Airscoops—check.
6. Skin condition—check.

FUSELAGE—RIGHT SIDE

- * 1. Wing ladder—secure.
- 2. Camera access door—secure.
- 3. Equipment compartment—check.
- 4. Equipment access door—secure.
- 5. Skin condition—check.
- * 6. Tiedown—release.

EMPENNAGE

- 1. Skin condition—check.
- 2. Deicer boots, right side—check.
- 3. Controls and trim tabs—check.
- 4. Beacon, position light, and antennas—check.
- 5. Deicer boots, left side—check.

FUSELAGE—LEFT SIDE

- 1. Skin condition—check.
- 2. Equipment compartment—check.
- * 3. Battery—check.
- 4. Equipment access door—secure.
- 5. Camera access doors—secure.

FUSELAGE—UNDER SIDE

- 1. Skin condition—check.
- 2. Camera door—secure.
- 3. Baggage door—secure.

LEFT WING

- * 1. Exhaust stack—check.
- 2. Controls—check.
- 3. Wing tip—check.
- 4. Deicer boot—check.
- 5. Skin condition—check.
- (O) * 6. Drop tank—quantity and cap check.
- (O) 7. Detonator squib condition-check.
- (O) * 8. Drop tank connections—check.
- (O) * 9. Pylon safety pin—remove.
- * 10. Tiedown door—secure.

*** LEFT ENGINE AND PROP**

- 1. Cowling latches—secure.
- 2. Intake ducts—check.
- 3. Prop and spinner—check.
- 4. Oil level—check.

LEFT MAIN LANDING GEAR

- 1. Outboard door—check.
- 2. Wheel well—check.
- * 3. Safety lock—remove.
- 4. Strut and shrink rod—check.
- 5. Torque arm—check.
- * 6. Tire—check.
- 7. Brake assembly—check.
- 8. Inboard doors and linkage—check.

EQUIPMENT COMPARTMENT

- * 1. Fire extinguisher pressure—check.
- 2. Equipment—check.
- 3. Ground locks and safety pins—check and secure.
- 4. Access door—secure.
- 5. Fire extinguisher disc—check.
- * 6. Fuel tank drain condition—check.
- (O) 7. External ground and bond cables — disconnect/clear.

* INTERIOR CHECK

- 1. Boarding ladders—stowed.
- 2. Loose equipment—secure.
- 3. Right side auxiliary ram air outlet (solo fit)—close.
- ★ 4. Personnel briefing—complete.

BEFORE STARTING ENGINES

- * 1. Pedals, leglines, belts, harnesses, straps—adjust.
- 2. Mag compass—check.
- 3. Hatch jettison handle—check horizontal and locked.
- 4. Stores selector switches—OFF and SAFE.
- 5. VHF transceiver—OFF.
- 6. Transponder—OFF.
- 7. Interior lights—as required.

BEFORE STARTING ENGINES (cont)

- 8. Heating and ventilation—as required.
- (O) 9. Sloping console radios—OFF.
- 10. Circuit breakers—check.
- 11. Lower console equipment—as required.
- 12. Emergency stores release handle—check.
- 13. Autofeather/synchrophaser switch—OFF.
- 14. Emergency landing gear release handle—check.
- *15. Prop levers—MIN RPM.
- 16. Power levers—GROUND IDLE.
- 17. Flap handle—UP.
- 18. Engine instruments—check.
- 19. Fire handles—IN.
- 20. Power steer switch—ON.
- 21. Windshield wiper control—OFF.
- 22. Flight instruments—check.
- 23. Radar altimeter—OFF.
- 24. Compass system—set.
- 25. Oxygen equipment—check.
- 26. Pilot's instrument rheostat—OFF.
- 27. Marker beacon—OFF.
- 28. Autopilot circuit breakers—check.
- *29. Engine master switches—ON.
- *30. Fuel control—AUTO.
- *31. Fuel pumps—ON.
- 32. Drop tank transfer—OFF.
- 33. Exterior lights—as required.

BEFORE STARTING ENGINES (cont)

34. Generators—ON.
35. Inverter—EMER.
36. Battery—OFF.
37. Engine instrument rheostat—OFF.
38. Right and left overhead rheostat—OFF.
39. Weather control switches—OFF.
40. Observer's lights rheostat—OFF.
41. Right seat ICS—set.
42. Surveillance equipment—OFF.
43. SLAR circuit breakers—check.

***STARTING ENGINES**

1. Brakes—set.
2. Entrance hatches—as required.
- (N) 3. Wing and tail lights—ON.
4. Battery—NORMAL.
5. Marker beacon light—test.
6. Caution and warning lights—test.
7. Fire detection system—test.
8. Autofeather light—test.
9. Fireguard—posted.
10. Props and blast area—clear.

***FIRST ENGINE START**

1. Engine crank switch—CRANK and release.
2. Ignition button—press.
3. Engine RPM and EGT—check (38 to 46% N1).
4. Fuel press light—out.
5. Gen light—out.
6. Inst pwr light—out.
7. Oil pressure—check.
8. Hydraulic pressure—check.
9. Prop lever—MAX RPM.
10. Power lever—FLIGHT IDLE (63 to 68% N1).
11. Inverter—ON.
12. Inst pwr light—out.

***SECOND ENGINE START**

1. First engine ammeter—check.
2. Engine crank switch—CRANK and release.
3. Gen pwr assist button—press and release.
4. Ignition button—press.
5. Engine RPM and EGT—check (38 to 46% N1).
6. Fuel press light—out.
7. Oil pressure—check.
8. Hydraulic pressure—check.
9. Prop lever—MAX RPM.
10. Power lever—FLIGHT IDLE (63 to 68% N1).
11. Gen light—out.

ABORT START

1. Prop lever-FUEL OFF.
2. Ignition button-release.
3. Engine crank switch (EGT normal)-
INTERRUPT CRANK.

ENGINE CLEARING

1. Prop lever-FUEL OFF.
2. Engine crank switch-CRANK.
3. Engine crank switch (after 20 seconds)-
INTERRUPT CRANK.

***BEFORE TAXIING**

1. Radios and radar altimeter-ON.
2. Surveillance equipment-as required.
3. Controls-check.
4. Chocks-check removed.
5. Compass system-set/verify.
- ★ 6. Radios-check.
7. Attitude indicator-set.
- ★ 8. Autopilot-check.
- (1) 9. Weather control systems-check.
10. Taxi clearance-check.
11. Clock-set.
12. Altimeter-set.
13. Props-UNFEATHER.
14. Parking brake-release.

***TAXIING**

1. Brakes—check.
2. Flight instruments—check.
3. Reverse thrust—check.

***ENGINE RUNUP**

1. Nosewheel—centered.
2. Parking brake—set.
3. Power levers—FLIGHT IDLE.
4. Generators—check.
- ★ 5. Fuel pumps—check.
6. Fuel gage—check.
- ★ 7. Fuel quantity—check.
8. Transfer pumps—check.
- ★ 9. Prop governors—check.
- ★ 10. Autofeather system—check.

***BEFORE TAKEOFF**

1. Flaps 15°—set.
2. Autofeather—ON.
3. Prop levers—MAX RPM.
4. Fuel quantity—check.
5. Trim—set.
6. Navigation equipment—set.
7. Engine and flight instruments—check.
8. Flight controls—check.
9. Entrance hatches—LOCKED.

***BEFORE TAKEOFF (cont)**

10. Ejection seats—ARMED.
11. Stores selector switches—as required.
12. Takeoff clearance—as required.

***LINEUP**

1. Power levers—FLIGHT IDLE.
2. Gyro heading—check.
3. Power—stabilize as required.
4. Transponder—as required.
- (I) 5. Weather control switches—as required.
6. Engine instruments—check.

AFTER TAKEOFF

1. Gear—UP.
2. Flaps—UP.
3. Climb power—set.
4. Wheel and flap indicator—check.
5. Autofeather—OFF.
6. Landing and taxi lights—as required.
7. Stores selector switches—as required.

Text deleted

MAX DESCENT—CLEAN CONFIGURATION

1. Heat and defog—as required.
2. Props—MAX RPM.
3. Power levers—FLIGHT IDLE.
4. Airspeed V_{MO} .

MAX DESCENT—LANDING CONFIGURATION

1. Heat and defog—as required.
2. Prop levers—MAX RPM.
3. Power levers—FLIGHT IDLE.
4. Gear—DOWN (below 153 KIAS).
5. Flaps—45°.
6. Airspeed—153 KIAS max.

DESCENT—ARRIVAL CHECK

1. Stores selector switches—OFF and SAFE.
2. Surveillance equipment—OFF.

BEFORE LANDING

1. Gear—DOWN (below 153 KIAS).
2. Flaps—15°.
3. Autofeather/synchrophaser—OFF.
4. Props—set 1,600 RPM.
5. Gear down indications—check.
6. Landing and taxi lights—EXTEND/ON.

LANDING CHECK

1. Gear—recheck **DOWN**.
2. Props—**MAX RPM**.
3. Autopilot—disengage.

GO—AROUND

1. Power—max allowable.
2. Gear—**UP**.
3. Flaps—**15°** until flaps up V_{mc} , then **UP**.
4. Climb power—set.
5. Wheel and flap indicator—check.
6. Landing and taxi lights—as required.

AFTER LANDING

1. Weather control switches—**OFF**.
2. Landing and taxi lights—as required.
3. Flaps—**UP**.
4. Transponder—**OFF/STBY**.
5. Ejection seats—**SAFE**.

ENGINE SHUTDOWN

1. Power levers—GROUND IDLE.
2. Parking brake—set.
3. Landing light—OFF/RETRACT.
4. Radios—OFF.
5. Fuel pumps—OFF.
6. Inverter—EMER.
7. Prop levers (individually)—FUEL OFF.
8. Prop levers (individually)—FEATHER.
9. Prop levers (feathered props)—FUEL OFF.
10. Engine master switches—OFF.
11. Lighting systems—OFF.
12. Ejection seats—recheck SAFE.
13. Wheels—chocked.
14. Oxygen regulators—OFF.
15. Gust lock—engage.
16. All switches (except gen)—OFF.
17. Ignition lock switch—OFF.
18. Battery—OFF.

BEFORE LEAVING AIRCRAFT

1. Ground lock safety pins—insert.
2. Walkaround—complete.
3. Forms 2408-12 and -13—complete.
4. Aircraft—secure.

NOTE

The urgency of certain emergencies requires immediate and instinctive action by the pilot. The most important single consideration is aircraft control. All procedures are subordinate to this requirement.

ENGINE FAILURE

DURING TAKEOFF RUN (ABORT)

1. Power levers—GROUND IDLE.
2. Braking—as required.

AFTER TAKEOFF BELOW SINGLE ENGINE POSITIVE RATE OF CLIMB (SUFFICIENT RUNWAY)

1. Power—reduce.
2. Gear—DOWN.
3. Complete normal landing.

AFTER TAKEOFF (INSUFFICIENT RUNWAY)

1. Power levers—TAKEOFF.
2. External stores—JETTISON.
3. Gear—UP.
4. Flaps—15° until flaps up V_{mc} , then UP.
5. If unable to control aircraft or clear obstacles—EJECT.
6. Climbout—best single engine rate of climb.

ENGINE FAILURE (cont)

DURING FLIGHT

1. Autopilot—disengage.
2. Power—as required.
3. Dead engine—identify.
4. Power lever (dead engine)—FLIGHT IDLE.
5. Prop lever (dead engine)—FEATHER.
6. Gear—UP.
7. Flaps—UP.
8. Power—as required.
9. External stores—JETTISON (as required).

DURING FINAL APPROACH

1. Power—as required.
2. Gear—recheck DOWN.
3. Prop lever—MAX RPM.

ENGINE FAILURE (cont)

ENGINE RESTART DURING FLIGHT

1. Power lever—FLIGHT IDLE.
2. Prop lever—MIN RPM.
3. Fuel control—AUTO.
4. Engine crank switch—CRANK and release.
5. Gen pwr assist button—press and release.
6. Ignition button—press.
7. Engine RPM and EGT—check.
8. Engine RPM—stabilize.
9. Oil pressure—check.
10. Hydraulic pressure—check.
11. Propeller—UNFEATHER.
12. Power—as required.

SINGLE-ENGINE DESCENT ARRIVAL

1. Stores selector switches—OFF and SAFE.
2. Surveillance equipment—OFF.

SINGLE-ENGINE BEFORE LANDING

1. Gear—DOWN (below 153 KIAS).
2. Flaps—15°.
3. Prop—set 1,600 RPM.
4. Gear down indications—check.
5. Landing and taxi lights—EXTEND/ON.

ENGINE FAILURE (cont)

SINGLE-ENGINE LANDING

1. Gear—recheck DOWN.
2. Prop—MAX RPM.

SINGLE-ENGINE GO-AROUND

1. Power—max controllable.
2. Gear—UP.
3. External stores—JETTISON (if required).
4. Flaps—15° until flaps up V_{mc} , then UP.
5. Climb power—set.
6. Wheel and flaps indicator—check.
7. Landing light—as required.

LANDING WITH BOTH ENGINES INOPERATIVE

1. Stores selector switches—OFF and SAFE.
2. Props—check feathered.
3. Gear handle—DOWN (when landing assured).
4. Emergency landing gear release handle—PULL (when landing assured).
5. Landing light—as required.

CHIP DETECTOR WARNING LIGHT

1. Engine instruments—monitor
2. Land as soon as practicable.

PROPELLER

PROPELLER GOVERNOR FAILURE

1. Airspeed—reduce.
2. Power lever—FLIGHT IDLE.
3. Prop lever—FEATHER.
4. Synchrophaser—OFF.

UNEVEN REVERSE THRUST

1. Power—minimum power.
2. Power (if yaw persists)—GROUND IDLE
(forward thrust).

FIRE

ENGINE FIRE ON GROUND

1. Brakes—set.
2. Props—FEATHER.
3. Fire handle—PULL.
4. Discharge switch—activate both.
5. Battery—OFF.
6. Abandon aircraft.

ENGINE FIRE IN FLIGHT (FIRE HANDLE LIGHT ILLUMINATED)

1. Power lever—FLIGHT IDLE.
2. Fire handle light out—advance power.
3. Monitor engine instruments and land as soon as practical.
4. Fire handle light illuminated—perform engine fire in flight (identified).

ENGINE FIRE IN FLIGHT (IDENTIFIED)

1. Power lever—FLIGHT IDLE.
2. Prop—FEATHER.
3. Fire handle—PULL.
4. Discharge switch—activate both.
5. If fire continues or if aircraft control remains in doubt - perform bailout procedure.

FIRE (cont)

FUSELAGE FIRE

1. Identify source of fire - as required, perform electrical fire procedure.
2. If cockpit fire - as required, use hand fire extinguisher.
3. If fire continues or if aircraft control remains in doubt - perform bailout procedure.

WING FIRE

1. Prop lever (app wing)—FEATHER.
2. Fire handle (app wing)—PULL.
3. Discharge switch—activate both.
4. If fire continues or if aircraft control remains in doubt - perform bailout procedure.

ELECTRICAL FIRE

1. Defective circuit— isolate.
2. Defective circuit—OFF.
3. If unable to isolate—descend to below 6,000 feet pressure altitude (if practicable).
4. Generators—OFF.
5. Battery—OFF.
6. If fire continues or if aircraft control remains in doubt - perform bailout procedure.
7. Land as soon as practicable.

FIRE (cont)

SMOKE AND FUME ELIMINATION

1. Oxygen - don masks, ON, 100%.
2. FLOW switch - VENT.
3. AUX VENT handle - PUSH OPEN.
4. Face air outlets - OPEN.
5. Foot diffuser controls - fully aft to OPEN.
6. Auxiliary ram air cooling outlets - OPEN.
7. If aircraft control is in doubt due to impaired sight or breathing:
Airspeed - 120 KIAS,
Helmet visors - lower, and
Escape HATCH - JETTISON.
8. If aircraft control remains in doubt perform bailment procedure.



FUEL SYSTEM FAILURE

FUEL PRESS LIGHT ILLUMINATED

1. Engine instruments—monitor.
2. Land as soon as practicable.

FUEL PUMPS LIGHT ILLUMINATED

1. Circuit breakers--check.
2. Fuel pumps switch--check ON.
3. Light still illuminated--descend to 6,000 feet pressure altitude or below (if practicable).
4. Avoid negative G's.
5. Land as soon as practicable.

ELECTRICAL SYSTEM FAILURE

GENERATOR LIGHT ILLUMINATED

1. Gen switch—RESET, then ON.
2. Gen switch (light still illuminated)—OFF.
3. Land as soon as practicable.

BOTH GENERATORS INOPERATIVE

1. Battery—EMER.
2. All unnecessary electrical equipment—OFF.
3. Land as soon as practicable.

NO. 1 INVERTER FAILURE

1. No. 1 inverter circuit breaker—pull.
2. If practical, discontinue flight under IMC conditions.

INST PWR LIGHT ILLUMINATED

1. Inverter—EMER.
2. No. 2 inv circuit breaker—check.
3. Inverter—ON.
4. Light still illuminated (after 6 sec)—inverter EMER.
5. Land as soon as practicable.

ELECTRICAL SYSTEM FAILURE (cont)

OVERLOAD INDICATIONS

1. Defective circuit—**isolate.**
2. Defective circuit—**OFF.**

IF UNABLE TO ISOLATE:

3. All unnecessary electrical equipment—**OFF.**
4. Land as soon as practicable.

MALFUNCTION FLAGS SHOWING ON PRIMARY ATTITUDE INDICATOR AND/OR COURSE INDICATOR

1. Autopilot—**disengage.**
2. Inverter—**EMER.**
3. Primary attitude indicator and course indicator—**check steady indications and malfunction flags masked.**
4. Autopilot—**as required.**
5. If practical, **discontinue flight under IMC conditions.**
6. Land as soon as practicable.

HYDRAULIC SYSTEM FAILURE

WITH FLAPS DOWN

1. Airspeed—above 120 knots.
2. Banking attitude—level as possible.
3. Flaps—UP.
4. Perform no-flap approach and landing.



LANDING AND DITCHING

LANDING WITH ENGINES INOPERATIVE

(See Engine Failure Section)

EMERGENCY DESCENT

- 1. Heat and defog—as required.**
- 2. Props—MAX RPM.**
- 3. Power levers—FLIGHT IDLE.**
- 4. Airspeed— V_{MO} .**

LANDING GEAR SYSTEM FAILURE

- 1. Hydraulic pressure—check.**
- 2. Gear—recycle.**
- 3. Gear—check.**

EMERGENCY GEAR EXTENSION

- 1. Airspeed—reduce.**
- 2. Gear—DOWN.**
- 3. Emergency landing gear release handle—
PULL.**
- 4. Gear indications—check.**

LANDING AND DITCHING (cont)

LANDING WITH ONE MAIN GEAR UP OR UNLOCKED

- 1. Before landing checks—complete.**
- 2. Drop tanks—JETTISON (as required).**
- 3. Escape hatch—JETTISON.**
- 4. Ejection seats—SAFE.**
- 5. Power—as required.**
- 6. Prop (gear up side)—FEATHER (after touchdown).**
- 7. Reverse thrust—as required (to maintain direction).**
- 8. Props—FEATHER.**
- 9. Battery—OFF.**
- 10. Abandon aircraft.**

LANDING WITH NOSE GEAR UP OR UNLOCKED

- 1. Before landing checks—complete.**
- 2. Drop tanks—JETTISON (if necessary).**
- 3. Flaps—UP.**
- 4. Escape hatch—JETTISON.**
- 5. Ejection seats—SAFE.**
- 6. Power—as required.**
- 7. Landing attitude—nose high.**
- 8. Props (after touchdown)—FEATHER.**
- 9. Brakes—minimum.**
- 10. Battery—OFF.**
- 11. Abandon aircraft.**

LANDING AND DITCHING (cont)

LANDING WITH FLAT TIRE

1. Land on side of runway favoring good tire.
2. Brake—on good wheel only.
3. Flat nose tire—use light braking.

DITCHING

1. Radio—distress procedure.
2. Transponder—emergency mode.
3. Right seat occupant—alerted.
4. Gear—UP.
5. Drop tanks—JETTISON (if full).
6. Flaps—45°.
7. Ejection seats—SAFE.
8. Inertia reel—LOCKED.

BEFORE IMPACT:

9. Escape hatch—JETTISON.
10. Power levers—FLIGHT IDLE.
11. Props—FEATHER.

AFTER IMPACT:

12. Parachute release fittings—disconnect.
13. Manual override—activate.
14. Leg garters—squeeze manual release.
15. Exit aircraft—escape hatch.

LANDING AND DITCHING (cont)

EMERGENCY EGRESS

1. Manual override—activate.
2. Leg garters—squeeze manual release.
3. Lap belt fittings—release.
4. Parachute release fittings—disconnect.
5. Oxygen hose—disconnect.
6. Escape hatch—JETTISON.
7. Exit aircraft—escape hatch.

FLIGHT CONTROL EMERGENCY

FLAPS INOPERATIVE

Follow normal landing procedure except approach for landing is made at the flaps up speed.

INBOARD AILERON EMERGENCY OPERATION

If one inboard aileron jams, control aircraft with other inboard aileron plus outboard ailerons. Anticipate reduced roll rate.

BAILOUT

EJECTION PROCEDURE—TIME PERMITTING

1. Radio—distress procedure.
2. Transponder—other than OFF.
3. Escape hatch—JETTISON.
4. Sit erect with head pressed back.
5. Firing handle—PULL.

**EXTERNAL STORES EMERGENCY
JETTISON**

SELECTED JETTISON

1. Station selector switch—as required.
2. Stores selector switch—STORES.
3. Armt pwr switch—ON.
4. Stores release button—press.

NON-SELECTED JETTISON

1. Emergency stores release handle—PULL.

**ALL DATA ON PAGES P-1 AND P-2
DELETED.**



PERFORMANCE CHECKS

EJECTION SEAT CHECK

- 1. Top latch mechanism—indicating dowel pin flush with plunger face, plunger flush with housing.**
- 2. Personnel parachute D ring—installed in spring clip.**
- 3. Personnel parachute withdrawal line—withdrawal line complete with Teflon cover must pass through guillotine spring gate.**
- 4. Guillotine cutter blade—blade must not contact withdrawal line cover.**
- 5. Drogue gun cartridge installation (barrel)—lockwire and lead seal.**
- 6. Drogue gun mechanism trip rod—connected to ejection gun crossbeam fittings, and indicating collars flush or not more than 0.5 inches from outer barrel. Pip pins secured.**
- 7. TCR dispenser cable—end fitting must be connected to drogue gun trip rod.**
- 8. Personnel parachute restraint straps—properly routed and secure.**
- 9. Personnel parachute risers—risers must not be twisted. The roller yokes should not be separated.**
- 10. Seat survival kit container—secure. Pull up on lap belt halves vigorously to ensure security. Visual check of sticker clips.**

PERFORMANCE CHECKS (cont)

EJECTION SEAT CHECK (cont)

11. Leg restraint cords—secure and check garters for condition.
12. Manual override handle—handle must be full down and connecting rod attached to guillotine sear.
13. Guillotine cartridge installation (breech)—lockwire and lead seal.
14. Emergency oxygen bottle—disconnect lanyard connected to lap belt half. Check for pressure (1,800 PSI).
15. Time release mechanism, trip rod—connected to ejection gun crossbeam fitting, and indicating collars flush or not more than 0.5 inches from outer barrel. Pip pin secure.
16. Time release mechanism barostat—lockwire and lead seal.

EJECTION SEAT (TOP) CHECK

1. Firing cables—installed and attached to sear.
2. Scissor shackle—bolthead down.
3. Upper firing mechanism—lockwire and lead seal.

PERFORMANCE CHECKS (cont)

EJECTION SEAT (TOP) CHECK (cont)

4. Drogue withdrawal line—connected to drogue gun projectile and routed over all other lines at top of seat. Withdrawal line connection pointing forward.
5. Drogue flap securing pin—safetied.
6. Drogue flap sunshade—check for deterioration.

PASSENGER BRIEFING

CREW INTRODUCTION

EQUIPMENT

1. Personnel to include ID tags.
2. Professional.
3. Survival.

FLIGHT DATA

1. Route.
2. Altitude.
3. Time enroute.
4. Weather.

PERFORMANCE CHECKS (cont)

PASSENGER BRIEFING (cont)

NORMAL PROCEDURES

1. Entry and exit of aircraft.
2. Seating.
3. Seat belts.
4. Movement in aircraft.
5. Internal communications.
6. Security of equipment.
7. Smoking.
8. Oxygen.
9. Refueling.
10. Weapons.
11. Protective masks.
12. Parachutes.

EMERGENCY PROCEDURES

1. Emergency exits.
2. Emergency equipment.
3. Emergency landing/ditching procedures.
4. Bailout.

PERFORMANCE CHECKS (cont)

RADIO CHECK

ADF CHECK

Check antenna, compass and loop positions, tuning meter, BDHI/RMI indication, BFO, and operation of loop switch.

FLIGHT DIRECTOR SYSTEM CHECK (VOR and ILS)

1. HDG/ILS knob—HDG.
2. Heading marker left and right (from nose)—check deflection.
3. Nav receiver—localizer frequency.
4. GS and LOC flags (if within range of station)—masked.
5. Glide slope pointer—deflected.
6. To-from arrow—masked.
7. Course selector on localizer heading—set.
8. Course bar—indicating properly.
9. HDG/ILS knob—ILS.
10. Steering pointer and horizon bar—check.
11. HDG/ILS knob—HDG.
12. Nav receiver—VOR frequency.
13. LOC flag (if within range of station)—masked.

PERFORMANCE CHECKS (cont)

FLIGHT DIRECTOR SYSTEM CHECK (VOR and ILS) (cont)

14. To-from arrow (if within range of station)—indicating properly.
15. Course selector on test radial—set.
16. Course bar—indicating properly.
17. BDHI/RMI—indicating properly.

AUTOPILOT CHECK

1. Aircraft controls—neutral.
2. Turn knob—detent.
3. Servo effort indicators—aligned.
4. Autopilot engage switch—ON. Check for no movement of controls.
5. Turn knob fore and aft, left and right—check controls follow movement.
6. Steering pointer—center.
7. Lateral selector switch—HDG.
8. Lateral engage switch—ON.
9. Heading marker left and right—check controls follow movement.
10. Vertical selector switch—BAR.
11. Vertical engage switch—ON. Check elevators remain neutral.
12. Autopilot release button—press to disengage.

PERFORMANCE CHECKS (cont)

FUEL PUMPS CHECK

1. Pump test aft button—press. Check fuel pumps light out.
2. Pump test fwd button—press. Check fuel pumps light out.
3. Both pump test buttons—press. Check fuel pumps light illuminated.

FUEL QUANTITY CHECK

1. Fuel quantity switch main—check gage.
2. Fuel quantity switch left—check gage.
3. Fuel quantity switch right—check gage.
4. Totalizer—check with computed fuel.

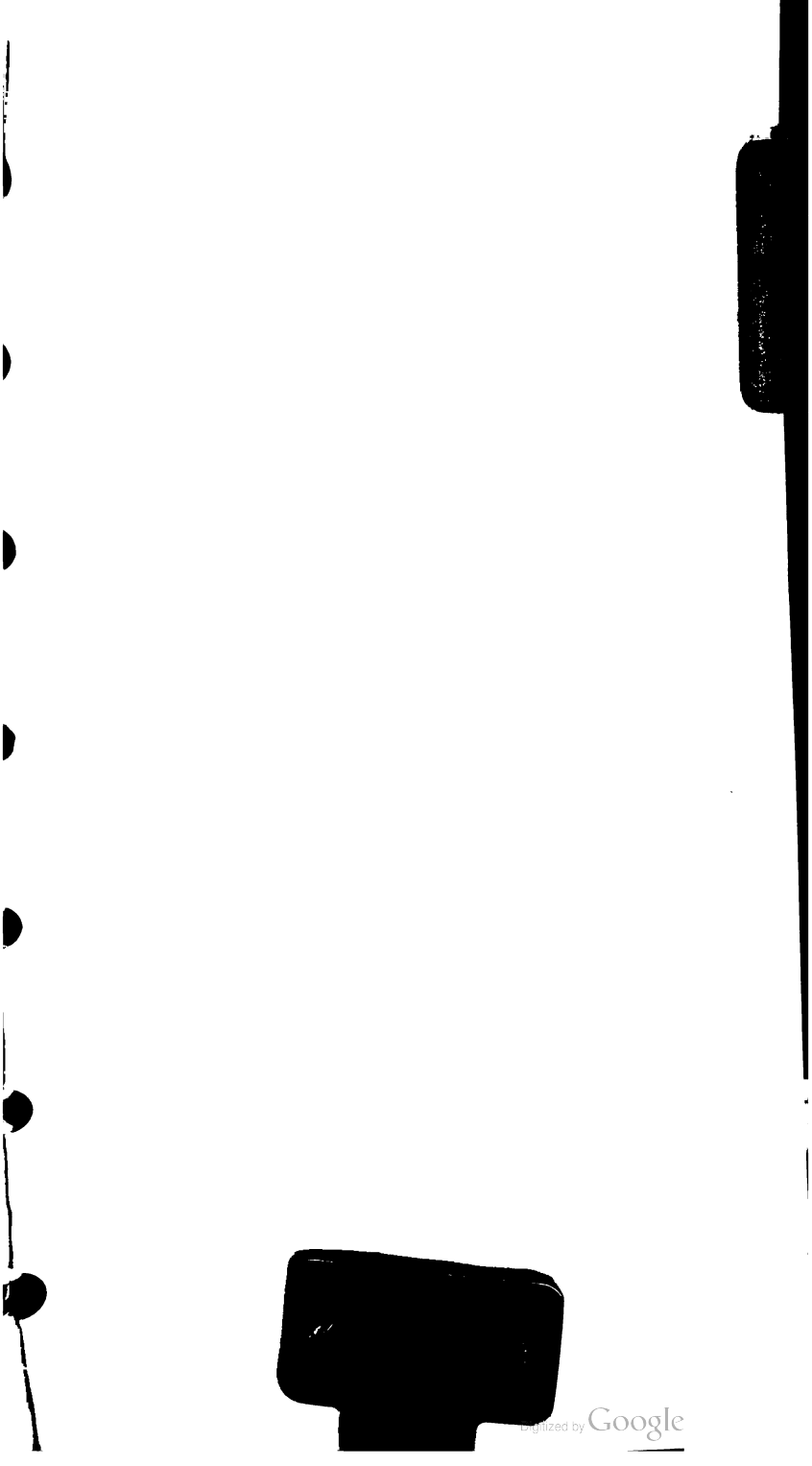
PROPELLER GOVERNORS CHECK

1. Prop levers—MAX RPM.
2. Power levers—1,400 RPM.
3. Prop levers—MIN RPM. Check for 1,175 \pm 25 RPM.
4. Prop levers—MAX RPM. Check for 1,400 RPM.
5. Power levers—FLIGHT IDLE.

PERFORMANCE CHECKS (cont)

AUTOFEATHER SYSTEM CHECK

1. Autofeather/synchrophaser switch—
AUTOFEATHER ON. Check light
illuminated.
2. Power levers—11 PSI torque (cold weather
16 PSI).
3. Autofeather test button—press, check
neither prop feathers.
4. Power levers—GROUND IDLE.
5. Advance No. 1 power lever rapidly to
TAKEOFF and return to GROUND IDLE—
check that No. 1 propeller feathers.
6. Advance No. 2 power lever rapidly to
TAKEOFF and return to GROUND IDLE—
check that No. 2 propeller does not feather.
7. Autofeather/synchrophaser switch—recycle,
check light illuminated.
8. Advance No. 2 power lever rapidly to
TAKEOFF and return to GROUND IDLE—
check that No. 2 propeller feathers.
9. Autofeather/synchrophaser switch—OFF.
10. Power levers—FLIGHT IDLE.
11. Propellers—UNFEATHER.



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