TECHNICAL MANUAL

Operator's and Crewmember's Checklist

ARMY MODEL

RC-12K

NSN 1510-01-235-5839

Pilot's Checklist

HEADQUARTERS
DEPARTMENT OF THE ARMY
30 June 1992

URGENT

CHANGE
NO. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 21 September 1992

OPERATOR'S and CREWMEMBER'S
CHECKLIST
ARMY MODEL RC-12K
NSN 1510-01-235-5839
PILOT'S CHECKLIST

TM 55-1510-222-CL, 30 June 1992, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
N-13 through N-16	N-13 through N-16

2. Retain this sheet in front of manual for reference purposes.

URGENT

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:

MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army
02537

DISTRIBUTION:
To be distributed in accordance with DA Form 12-31-E, block no. 3136, requirements for TM 55-1510-222-CL.

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. The checklist consists of three parts: normal procedures, emergency procedures, and performance data. Normal procedures consist of the procedures required for normal flight and those required for " Before Landing ". The normal procedures portion will be subdivided to include the before landing checks of Chapter 8 of the Operator's Manual. Emergency procedures are subdivided into 7 classifications as follows: engine, propeller (prop), fire, fuel, electrical (elect), landing and ditching (ldg/ditch), and flight controls (fit cont). Performance data consists of performance checks.

NOTE

This checklist does not replace the amplified version of the procedures in the operator's manual (TM 55-1510-222-10), 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 for 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 7 classifications listed above. Immediate action items shall be underlined.

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 checklist.

I - Indicates mandatory check for "Instrument Flights".

0 - Indicates if installed.

(3) - Copilot duties. To be performed at pilot's command.

Immediate action emergency items are underlined.

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS.

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications I and Blank Forms), or DA Form 2028-2 located in the back of the applicable Aircraft Operator's Manual direct to Commander, US Army Aviation Systems Command, ATTN; AMSAV-MC, 4300 Goodfellow Blvd., St. Louis, MO. 63120-1798. A reply will be furnished to you.

BEFORE EXTERIOR CHECK

* 1. Publications - Check.
★ 2. Oxygen system - Check.
* 3. Flight controls - Unlock and checked.
* 4. Parking brake - Set.
5. Elevator trim - Set to 0 (neutral).
*6. Gear - DN.
* 7. Keylock switch - ON.
8. Mission equipment - As required.
★9. Fuel pumps/crossfeed operation - Check.
*10. Ice vane control switches - ON.
*11. Battery switch - ON.
12. Lighting systems - Check.
13. Fuel gages - Check fuel quantity and gage operation.
★14. Stall and gear warning system - Check.
★15. Engine fire protection system - Check.
16. INS - Align as required.
17. Battery switch - As required.
18. Toilet - Check condition.
19. Emergency equipment - Check.
(O)20. Parachutes - Check.

FUEL SAMPLE

* 1. Fuel sample - Check collective fuel sample from all drains for possible contamination.

EXTERIOR CHECK

LEFT WING AREA

* 1. General condition - Check.
2. Flaps - Check.
* 3. Fuel sump drains - Check for leaks.
4. Aileron and movable trim tab - Check security and trim tab rig.
5. Static wicks - Check security and condition.
6. Wing pod, navigation lights, deice boots and antennas - Check condition.
7. Recognition light - Check condition.
8. Outboard antenna set - Check condition.
9. Outboard wing fuel vent - Check free of obstruc-tion.
*10. Main tank fuel and cap - Check.
11. Outboard deice boot - Check.
12. Stall warning vane - Check freedom of movement
13. Monopole antenna - Check condition.
*14. Tiedown - Released.
15. Inboard dipole antenna set - Check.
16. Wing ice light - Check condition.
17. AC GPU access door - Secured.
18. Recessed and heated fuel vents - Check free of obstructions.
19. Inverter inlet and exhaust louvers - Check free of obstructions.

LEFT MAIN LANDING GEAR

* 1. Tires - Check condition.
2. Brake assembly - Check.
* 3. Shock strut - Check.
4. Torque links - Check condition.
5. Safety switch - Check condition, wire, and security.
★ 6. Fire extinguisher pressure - Check pressure within limits.
7. Wheel, well, doors, and linkage - Check.
* 8. Fuel sump drains (forward) - Check for leaks.

LEFT ENGINE AND PROPELLER

* 1. Engine oil - Check.
* 2. Engine compartment, left side - Check.
3. Left upper cowl locks - Locked (check all latches).
4. Left exhaust stack - Check for cracks and free of obstruction.
* 5. Propeller blades and spinner - Check.
* 6. Engine air inlets and ice vane - Check.
7. Right upper cowl locks - Locked (check all latches).
8. Right exhaust stack - Check for cracks and free of obstructions.
* 9. Engine compartment, right side - Check.

LEFT WING CENTER SECTION

* 1. Auxiliary tank fuel and cap - Check.
2. Heat exchanger inlet and outlet - Check for cracks and free of obstructions.

3. Deice boot - Check.
* 4. Auxiliary tank fuel sump drain - Check for leaks.
5. Hydraulic reservoir vent and pump seal drain - Check.
6. Monopole antenna - Check condition.

FUSELAGE UNDERSIDE

* 1. General condition - Check for skin damage.
2. Antennas - Check security, and condition.

NOSE SECTION

1. Outside air temperature probe - Check condition.
2. Avionics door, left side - Check secure.
3. Air conditioner exhaust - Check free of obstruction.
4. Forward data link radome - Check condition.
5. Wheel well condition - Check.
6. Doors and linkage - Check.
7. Nose gear turning stop - Check condition.
* 8. Tire - Check condition.
* 9. Shock strut - Check.
10. Torque links - Check condition.
11. Shimmy damper and linkage - Check.
12. Landing and taxi lights - Check for security and condition.
13. Pitot tubes - Check free of obstruction.
14. Radome - Check condition.
15. Windshields and wipers - Check.
16. Air conditioner inlet - Check free of obstructions.

17. Avionics door, right side - Check secure.

RIGHT WING CENTER SECTION

* 1. Auxiliary tank fuel and cap - Check.
2. Battery access panel - Secure.
3. Battery exhaust louvers - Check free of obstructions.
4. Heat exchanger outlet and inlet - Check for cracks and free of obstruction.
5. Deice boot - Check.
6. Battery compartment drain - Check free of obstruction.
7. Battery ram air intake - Check free of obstruction.
8. TAS probe - Check condition and free of obstructions.
* 9. Auxiliary tank fuel sump drain - Check for leaks.
10. Monopole antenna - Check condition.

RIGHT ENGINE AND PROPELLER

* 1. Engine oil - Check oil level, add as required, and oil cap secure.
* 2. Engine compartment, left side - Check.
3. Left upper cowl locks - Locked (check all latches).
4. Left exhaust stack - Check for cracks and free of obstruction.
* 5. Propeller blades and spinner - Check.
* 6. Engine air inlets and ice vane - Check.
7. Right cowl locks - Locked (check all latches).
* 8. Engine compartment, right side - Check.

9. Right exhaust stack - Check for cracks and free of obstruction.

RIGHT MAIN LANDING GEAR

* 1. Tires - Check condition.
2. Brake assembly - Check.
* 3. Shock strut - Check.
4. Torque links - Check condition.
5. Safety switch - Check condition, wire, and security.
* 6. Fire extinguisher pressure - Check pressure within limits.
7. Wheel well, doors, and linkage - Check.
* 8. Fuel sump drains (forward) - Check for leaks.

RIGHT WING

* 1. General condition - Check.
2. Recessed and heated fuel vents - Check free of obstructions.
3. Inverter inlet and exhaust louvers - Check free of obstructions.
4. DC GPU access door - Secured.
5. Inboard dipole antenna set - Check.
6. Wing ice light - Check condition.
7. Outboard deice boot - Check.
* 8. Tiedown - Released.
9. Monopole antenna - Check condition.
*10. Main tank fuel and cap - Check.
11. Outboard wing fuel vent - Check free of obstruction.

12. Outboard antenna set - Check condition.
13. Recognition light - Check condition.
14. Wing pod, navigation lights, deice boots and antennas - Check condition.
15. Static wicks - Check security and condition.
16. Aileron and trim tab - Check security and condition.
*17. Fuel sump drains - Check for leaks.
18. Flaps - Check.
19. Chaff dispenser - Check.

FUSELAGE RIGHT SIDE

* 1. General condition - Check.
2. Emergency light - Check condition.
3. Flare/chaff dispenser - Check.
4. Beacon - Check condition.
5. Fuselage underside antennas - Check condition.
6. Towel bar antennas - Check condition.
7. P-band antenna - Check condition.
8. Tailcone access door - Check secured.
9. Oxygen filler door - Check secured.
10. Static ports - Check clear of obstructions.
11. APR 44 antenna - Check condition.
12. Emergency locator transmitter antenna - Check condition.
13. Stabilon - Check condition.

EMPENNAGE

* 1. General condition - Check.
* 2. Vertical stabilizer, rudder, and trim tab - Check condition.
3. Static wicks - Check installed.
4. Antennas - Check security and condition.
5. Deice boots - Check condition.
6. Horizontal stabilizer, tailets, elevator, and trim tab - Check condition.
7. Elevator trim tab Verify O (neutral) position.
8. Position and beacon lights - Check condition.
9. Rotating boom dipole antenna - Check condition and position.
10. Wide band data link antenna pod - Check condition.

FUSELAGE LEFT SIDE

* 1. General condition - Check.
2. Stabilon - Check condition.
3. Static ports - Check clear of obstruction.
4. ELT ARMED.
5. APR-44 antenna - Check condition.
6. P-band antenna - Check condition.
7. Towel bar antennas - Check condition.
8. Emergency light - Check condition.
9. Cabin door - Check door seal and condition.
10. Fuselage top side - Check.
*11. Chocks and tiedowns - Check removed.

*** INTERIOR - Check**

1. Cargo/loose equipment - Check secured.
* 2. Cabin/Cargo doors - Test and lock.
3. Emergency exit - Check secure and key removed.
4. Mission cooling ducts - Check open and free of obstructions.
5. Flare/chaff dispenser preflight test - Completed.
6. KY-58 key - Loaded as required.
7. Crew briefing - As required.

BEFORE STARTING ENGINES

* 1. Oxygen system - Set as required.
2. Circuit breakers - Check in.
* 3. Overhead panel - Check and set.
* 4. Fuel panel switches - Check.
5. Magnetic compass - Check.
* 6. Pedestal controls - Set.
* 7. Pedestal extension switches - Set.
8. Gear alternate extension handle - Stowed.
9. Free air temperature gage - Check.
10. Pilot's instrument panel - Check and set.
11. Copilot's instrument panel - Check and set.
12. Mission panel switches and circuit breakers - As required.
13. Subpanels - Check and set.
14. AC and DC GPU - As required.
*15. Battery switch - ON.

16. DC power - Check.

★17. Annunciator panels - Test.

*** FIRST ENGINE START (BATTERY START)**

1. Exterior lights switches - As required.
2. Propeller area - Clear.
3. #2 ignition and engine start switch - START IGNITION.
4. Condition lever (after N_1 RPM passes 13% minimum) - LOW IDLE.
5. TGT and N_1 - Monitor (TGT 1000°C maximum).
6. Oil pressure - Check (60 PSI minimum).
7. #2 ignition and engine start switch - OFF after TGT peaks.
8. Condition lever - HIGH IDLE.
9. Generator switch - RESET, then ON.

*** SECOND ENGINE START (BATTERY START)**

1. Propeller area - Clear.
2. #1 ignition and engine start switch - START IGNITION.
3. Condition lever (after N_1 RPM passes 13% minimum) - LOW IDLE.
4. TGT and N_1 - Monitor (TGT 1000°C maximum).
5. Oil pressure - Check (60 PSI minimum).
6. #1 ignition and engine start switch - OFF after TGT peaks.
7. Condition levers - HIGH IDLE.
8. Power levers - GROUND FINE.
9. Propeller levers - Retard to feather detent.

10. BATTERY CHARGE annunciator - Check on.
11. Inverter switches ON, - Check INVERTER annunciators off.
12. Second engine generator switch - RESET, then ON.
13. Beacon light - Reset. Then on.

ABORT START PROCEDURE

1. Condition lever - FUEL CUTOFF.
2. Ignition and engine start switch - STARTER ONLY
3. TGT Monitor for drop in temperature.
4. Ignition and engine start switch - OFF.

ENGINE CLEARING PROCEDURE

1. Condition lever - FUEL CUTOFF.
2. Ignition and engine start switch - OFF (1 minute minimum).
3. Ignition and engine start switch - STARTER ONLY.
4. Ignition and engine start switch - OFF.

*** FIRST ENGINE START (GPU START)**

1. INS - As required.
2. Exterior light switches - As required.
3. Propeller area - Clear.
4. #1 ignition and engine start switch - START IGNITION.
5. Condition lever (after N_1, RPM passes 13% minimum) - LOW IDLE.
6. TGT and N1 - Monitor (TGT 1000°C maximum)

7. Oil pressure - Check (60 PSI minimum).
8. #1 ignition and engine start switch - OFF after TGT peaks.
9. Condition lever - HIGH IDLE.
10. DC GPU disconnect - As required.
11. Generator switch RESET then ON.

*** SECOND ENGINE START (GPU START)**

1. Propeller area - Clear.
2. #2 ignition and engine start switch - START IGNITION.
3. Condition lever (after N1 RPM passes 13% minimum) - LOW IDLE.
4. TGT and N_1 - Monitor (TGT 1000°C maximum).
5. Oil pressure - Check (60 PSI minimum).
6. #2 ignition and engine start switch - OFF after TGT peaks.
7. Condition lever - HIGH IDLE.
8. Propeller levers - FEATHER (if required).
9. AC and DC GPU units - Disconnect.
10. Propeller levers - Advance, then retard to feather detent.
11. Power levers - GROUND FINE.
12. Inverter switches ON, - Check INVERTER annunciators extinguished.
13. Generator switches - RESET, then ON.
14. Beacon light - Reset.

BEFORE TAXIING

* 1. Brake deice - Check and set as required.
* 2. Cabin air mode and temperature switches - Set as desired.
★ 3. AC/DC power - Check.
* 4. Avionics master power switch - ON.
5. Weather radar - Test and set as required.
6. Mission panel - Set and checked as required.
★ 7. Automatic flight control system - Check.
8. Avionics - Check and set as required.
9. Flaps - Check.
10. Altimeters - Set and check.

*** TAXIING**

1. Brakes - Check.
2. Flight instruments - Check for normal operation.

ENGINE RUNUP

1. Mission control panel - Set.
* 2. Propeller feathering - Check.
★ 3. Autofeather - Check.
★ 4. Rudder boost - Check.
★ 5. Overspeed governor - Check.
★ 6. Primary governors - Check.
7. Propeller levers - Retard to detent.
8. Power levers - GROUND FINE.
★ 9. Engine anti-ice - Check.

★ 10. Anti-ice and deice systems - Check.

★ 11. Pneumatic pressure - Check.

★ 12. Pressurization system - Check.

13. Windshield anti-ice - As required.

***BEFORE TAKEOFF**

(1). Bleed air valves - As required.

(2). Ice and rain switches - As required.

3. Fuel panel - Check fuel quantity and switch positions.

4. Flight and engine instruments - Check for normal indications.

5. Cabin controller - Set.

6. Annunciator panels - Check (note indications).

7. Flaps - As required.

8. Trim - Set.

9. Avionics - Set.

10. Flight controls - Check.

★ 11. Departure briefing - Complete.

***LINE UP**

(1). Engine anti-ice - As required.

2. Propeller levers - HIGH RPM.

(3). Altitude alerter - Check.

(4). Transponder - As required.

(5). Engine auto ignition switches - ARM.

6. Lights - As required.

AFTER TAKEOFF

1. Gear - UP.
2. Flaps - UP.
3. Landing lights - OFF.
4. Climb power - Set.
5. Propeller synchronization - As required.

(6). Yaw damper - ON (required above 17,000 ft).

(7). Autofeather - As required.

(8). Brake deice - As required.

(9). Windshield anti-ice - As required.

(10). Cabin pressurization - Check.

(11). Wings and nacelles - Check.

(12). Flare/chaff dispenser safety pin (electronic module) - Remove.

(13). Chaff function selector switch - As required.

(14. APR-39 and APR-44 - As required.

CRUISE

1. Power- Set.

(2). Ice and rain switches - As required.

(3). Auxiliary fuel gages - Monitor.

4. Altimeters - Check.
5. Engine instrument indications - Noted.
6. Recognition lights - As required.

DESCENT-ARRIVAL

(1). Cabin controller - Set.

(2). Ice and rain switches - As required.

(3). Windshield anti-ice - As required.

4. Recognition lights - ON.

5. Radio altimeter - As required.
6. Altimeters - Set to current altimeter setting.
(7). Flare/chaff dispenser arm-safe switch - SAFE.
(8). Flare/chaff dispenser safety pin (electronic module) - Insert.
9. Condition lever- HIGH IDLE.
★10. Arrival briefing - Complete.

BEFORE LANDING

1. Propeller synchronizer switch - OFF.
(2). Autofeather switch - ARM.
3. Propeller levers - HIGH RPM.
4. Flaps (below 197 KIAS) - APPROACH.
5. Gear (below 178 KIAS) - DN.
6. Landing lights - As required.
(7). Brake deice - As required.

LANDING

1. Autopilot and yaw damp - Disengaged.
2. GEAR DOWN annunciators - Check.
3. Flaps - As required.
4. Power levers - Lift and retard to GROUND FINE.
5. Brakes - As required.

TOUCH AND GO/STOP AND GO LANDING

1. Propeller levers - HIGH RPM.
2. Flaps - As required.
3. Trim - Set.
4. Power stabilized - Check 25% minimum.
5. Takeoff power - Set.

GO-AROUND

1. Power - Maximum allowable
2. Gear - UP.
3. Flaps - UP.
4. Landing lights - OFF.
5. Climb power - Set.
6. Brake deice - Off.

AFTER LANDING

(1). Condition levers - HIGH IDLE.
2. Propeller levers - Retard to feather detent.
(3). Ice vane control switches - ON.
(4). Engine auto ignition switches - Off.
(5). Ice & rain switches - Off.
(6). Flaps - UP.
(7). Radar/transponder - As required.
(8). Lights - As required.
(9). Mission control panel - Set.

ENGINE SHUTDOWN

1. Brake deice - Off.
2. Parking brake - Set.
3. Landing/taxi lights - OFF.
4. Cabin air mode switch - OFF.
5. Autofeather switch - OFF.
6. Forward vent and aft vent blower switches - AUTO.
7. INS - OFF.
(8). Mission equipment - OFF.

9. Inverter switches - Off.
10. Battery condition - Check.
11. TGT - - Check stabilized.
12. Propeller levers - FEATHER.
13. Condition levers - FUEL CUTOFF.
14. Exterior lights - Off.
15. IR Flood lights - Off.
16. Master panel lights - Off.
17. Avionics master switch - Off.
18. Master switch - OFF.
19. Keylock switch - OFF.
20. Oxygen system - OFF.

BEFORE LEAVING AIRCRAFT

1. Wheels - Chocked.
2. Parking brake - As required.
3. Flight controls - Locked.
4. Overhead flood lights - OFF.
5. Standby fuel pump switches - Off.
6. Transponder - OFF.
7. Mode 4 - Zerioze as required.
8. KY-58 - Zeroize as required.
9. GPS - Zeroize as required.
10. Windows - As required.
11. Emergency exit lock - As required.
12. Aft cabin lights - OFF.
13. Door light - OFF.
14. Walk-around inspection - Complete.

15. Aircraft forms - Complete.
16. Aircraft secured - Check.

EMERGENCY PROCEDURES

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 MALFUNCTION

ENGINE MALFUNCTION PRIOR TO OR AT V_1, (ABORT)

1. Power levers - GROUND FINE.
2. Braking - As required.
3. Reverse thrust - As required.

(4). Condition levers - FUEL CUTOFF.

(5). Fire pull handles - Pull.

(6). Master switch - OFF.

ENGINE FAILURE AFTER V_1

1. Power - Maximum allowable.
2. Gear - UP (two positive climb indications).
3. Propeller - Verify feathered.
4. Flaps - UP after V_{enr} (121 KIAS).
5. Landing lights - OFF.
6. Engine cleanup - Perform.
7. Land as soon as practicable.

ENGINE MALFUNCTION DURING FLIGHT

1. Autopilot/Yaw Damp - Disengage.
2. Power - As required.
3. Dead engine - Identify.

4. Power lever (dead engine) - IDLE.
5. Propeller lever (dead engine) - FEATHER.
6. Condition lever (dead engine) - FUEL CUTOFF.
7. Gear - As required.
8. Flaps - As required.
9. Engine Cleanup - Perform.
10. Power - Set for Single Engine Cruise.
11. Land as soon as practicable.

ENGINE MALFUNCTION DURING FINAL APPROACH

1. Power - As required.
2. Gear- DN.

ENGINE MALFUNCTION (SECOND ENGINE)

1. Airspeed - 121 KIAS.
2. Power lever - IDLE.
3. Propeller lever - Do not FEATHER.
4. Conduct engine restart procedure.

ENGINE SHUTDOWN IN FLIGHT

1. Power lever - IDLE.
2. Propeller lever - FEATHER.
3. Condition lever - FUEL CUTOFF.
4. Engine cleanup - Perform.

ENGINE CLEANUP

(1). Condition lever - FUEL CUTOFF.

(2). Engine auto ignition switch - Off.

(3). Autofeather switch - OFF.

(4). Generator switch - OFF.

5. Propeller synchronizer switch - OFF.
6. Brake deice - Off.

ENGINE RESTART DURING FLIGHT (USING STARTER)

(1). Cabin air mode switch - OFF; Blower - AUTO.
2. Radar - STANDBY or OFF.
3. Power lever - IDLE.
4. Propeller lever - LOW RPM.
5. Condition lever - FUEL CUTOFF.
6. Fire pull handle - Push in.
(7). Ignition and start switch - START - IGNITION, check IGNITION annunciator - Illuminated.
8. Condition lever - LOW IDLE.
(9). Ignition and start switch - OFF after TGT peaks.
10. Condition lever - HIGH IDLE.
11. Propeller lever - As required.
12. Power lever - As required.
(13). Generator - RESET, then ON.
(14). Engine auto ignition - As required.
(15). Propeller synchronizer switch - As required.
(16). Electrical equipment - As required.

ENGINE RESTART DURING FLIGHT (NO STARTER ASSIST)

1. Power lever - IDLE.
2. Propeller lever - HIGH RPM.
3. Condition lever - FUEL CUTOFF.
4. Fire pull handle - Push.
(5). Engine anti-ice - Off.

(6). Generator (inoperative engine) - OFF.

7. Airspeed - As required.

8. Altitude - Below 25,000 feet.

9. Engine N1 - Monitor (10% minimum, propeller feathered).

(10). Auto ignition - ARM.

11. Condition lever - LOW IDLE.

12. Power - As required (after TGT peaks).

(13). Generator - RESET, then ON.

14. Propeller synchrophaser - As required.

(15). Electrical equipment - As required.

16. Condition lever- HIGH IDLE.

MAXIMUM GLIDE

1. Landing Gear- UP.

2. Wing Flaps - UP.

3. Propellers - FEATHERED.

4. Airspeed - As required.

SINGLE ENGINE DESCENT/ARRIVAL

(1). Cabin Controller - Set.

(2). Ice & rain switches - As required.

3. Exterior lights - ON.

4. Radio altimeter - As required.

5. Altimeters - Set.

(6). Flare/chaff dispenser arm-safe switch - SAFE.

(7). Flare/chaff dispenser safety pin (electronic module) - Insert.

8. Arrival briefing - Complete.

SINGLE ENGINE BEFORE LANDING

1. Propeller lever - HIGH RPM.
2. Flaps - APPROACH.
3. Gear- DN.
4. Landing lights - As required.
5. Yaw damp - Off.
6. Brake deice - Off.

SINGLE ENGINE LANDING CHECK

1. Autopilot/yaw damp - Disengaged.
2. Gear down lights - Check.
3. Propeller lever (operative engine) - HIGH RPM.

SINGLE ENGINE GO-AROUND

1. Power - Maximum allowable.
2. Landing gear - UP.
3. Flaps - UP.
4. Airspeed - V_{yse}:
5. Landing lights - OFF

LOW OIL PRESSURE

1. Oil pressure below 90 PSI and above 60 PSI: Torque - As required (59% Maximum).
2. Oil pressure below 60 PSI: Perform engine shutdown, or land as soon as practicable using minimum power to ensure safe arrival.

CHIP DETECTOR WARNING ANNUNCIATOR ILLUMINATED

1. Perform engine shutdown.
2. Land as soon as practicable.

DUCT OVERTEMPERATURE CAUTION ANNUNCIATOR ILLUMINATED

(1). Cabin air control - In.

(2). Cabin air mode switch - AUTO.

(3). Cabin temperature switch - Decrease.

(4). Vent blower switch - HIGH.

(5). Cabin air mode switch - MAN COOL.

(6). Manual temperature switch - DECREASE (hold).

(7). Left bleed air valve switch - PNEU ONLY.

(8). Light still illuminated after 30 seconds: Left bleed air valve switch - ON.

(9). Right bleed air valve switch - PNEU ONLY.

(10). Light still illuminated after 30 seconds: Right bleed air valve switch - ON.

ENGINE ANTI-ICE FAILURE

(1). Ice vane power select switch - STBY.

2. Ice vane fail annunciator - Check extinguished.

ENGINE BLEED AIR SYSTEM MALFUNCTION

BLEED AIR FAILURE ANNUNCIATOR ILLUMINATED

(1). Brake deice switch - Off.

(2). TGT and torque - Monitor.

(3). Bleed air valve switch - Off.

(4). Cabin pressurization - Check.

EXCESSIVE DIFFERENTIAL PRESSURE

(1). Cabin altitude and rate-of-climb controller - Select higher setting.

If condition persists:

(2). Left bleed air valve switch - PNEU ONLY (annunciator illuminated).

If condition still persists:

(3). Right bleed air valve switch - PNEU ONLY (annunciator illuminated).

If condition still persists:

4. Descend immediately.

If unable to descend:

5. Oxygen masks - On and 100%.

(6). Cabin pressure switch - DUMP.

(7). Bleed air valve switches - ON, if cabin heating is required.

LOSS OF PRESSURIZATION (ABOVE 10,000 FEET)

1. Crew oxygen masks - On and 100%.
2. Descend as required.

CABIN DOOR CAUTION ANNUNCIATOR ILLUMINATED

(1). Bleed air valve switches - PNEU ONLY.

2. Descend below 14,000 feet as soon as practicable.
3. Oxygen - As required.

PROPELLER FAILURE (OVER 1802 RPM)

1. Power lever (affected engine) - IDLE.
2. Propeller lever - FEATHER.
3. Condition lever - As required.

(4). Engine cleanup - As required.

FIRE

ENGINE/NACELLE FIRE DURING START OR GROUND OPERATIONS

1. Condition levers - FUEL CUTOFF.
2. Propeller levers - FEATHER.
3. Fire pull handle - Pull.
4. Push to extinguish switch - Push.
5. Master switch - OFF.

ENGINE FIRE IN FLIGHT (FIRE PULL HANDLE LIGHT ILLUMINATED)

1. Power lever - IDLE.
2. If fire pull handle light is extinguished: Advance power.
3. If fire pull handle light is still illuminated: Engine fire in flight procedures (identified) - Perform.

ENGINE FIRE IN FLIGHT (IDENTIFIED)

1. Power lever - IDLE.
2. Propeller lever - FEATHER.
3. Condition lever - FUEL CUTOFF.
4. Fire pull handle - Pull.
5. Fire extinguisher - Actuate as required.

(6). Engine cleanup - Perform.

FUSELAGE FIRE

(1). Fight the fire.

2. Land as soon as possible if fire continues.

WING FIRE

1. Perform engine shutdown on affected side.
2. Land as soon as possible.

ELECTRICAL FIRE

1. Crew oxygen - On and 100%.

(2). Master switch - OFF.

(3). All nonessential electrical equipment - Off.

(4). Battery switch - ON.

(5). Generator switches (individually) - RESET, then ON.

(6). Circuit breakers - Check for indication of defective circuit.

(7). Essential electrical equipment - On (individually until fire source is isolated).

8. Land as soon as practicable.

SMOKE AND FUME ELIMINATION

(1). Crew oxygen - On and 100%.

(2). Bleed air valve switches - PNEU ONLY.

(3). FWD vent blower switch - AUTO.

(4). AFT vent blower switch - Off.

(5). Cabin temperature mode selector switch - OFF.

(6). If smoke and fumes are not eliminated: Cabin pressure dump switch - CABIN PRESS DUMP.

7. Engine instruments - Monitor.

FUEL SYSTEM

FUEL PRESSURE WARNING ANNUNCIATOR ILLUMINATED

(1). Standby pump switch - ON.

(2). Fuel pressure annunciator extinguished - Check.

(3). Fuel pressure annunciator still illuminated - Record unboosted time.

(4). Monitor system for further abnormal indications.

NO FUEL TRANSFER CAUTION ANNUNCIATOR ILLUMINATED

(1). Auxiliary transfer switch (affected side) - OVRD.

(2). Auxiliary fuel quantity - Monitor.

(3). Auxiliary transfer switch (after respective auxiliary fuel has completely transferred) - AUTO.

NACELLE FUEL LEAK

1. Perform engine shutdown.
2. Fire pull handle - Pull.
3. Land as soon as practicable.

FUEL CROSSFEED

(1). Auxiliary transfer switches - AUTO.

(2). Standby pumps - Off.

(3). Crossfeed switch - As required.

(4). Fuel crossfeed annunciator illuminated - Check.

(5). Fuel pressure annunciator extinguished - Check.

(6). Fuel quantity - Monitor.

NAC LOW ANNUNCIATOR ILLUMINATED

1. Land as soon as practicable.

ELECTRICAL SYSTEM EMERGENCIES

DC GEN ANNUNCIATOR ILLUMINATED

(1). Generator switch - OFF, RESET, then ON.

(2). Generator switch (no reset) - OFF.

(3). Mission control switch - ORIDE.

(4). Operating loadmeter- 100% maximum.

BOTH DC GENERATOR LIGHTS ILLUMINATED (RESET FAILED)

(1). All nonessential equipment - Off.

2. Land as soon as practicable.

EXCESSIVE LOADMETER INDICATION (OVER 100%)

(1). Battery switch - OFF.

(2). Loadmeter over 100% - Nonessential electrical equipment Off.

(3). Loadmeter under 100% - Battery switch ON.

INVERTER ANNUNCIATOR ILLUMINATED

(1). Affected inverter switch - Off.

INSTRUMENT AC ANNUNCIATOR ILLUMINATED

1. N_1 and TGT indications - Check.
2. Other engine instruments - Monitor.

CIRCUIT BREAKER TRIPPED

(1). Bus feeder breaker tripped - Do not reset.

(2). Nonessential circuit - Do not reset.

(3). Essential circuit - Reset once.

BATTERY CHARGE ANNUNCIATOR ILLUMINATED

(1). Battery ammeter - Check.

(2). Battery switch - OFF.

(3). Battery switch (landing gear/flap extension only) - ON.

AVIONICS MASTER POWER SWITCH FAILURE

(1). AVIONICS MASTER CONT. circuit breaker - Pull.

EMERGENCY DESCENT

1. Power levers - IDLE.
2. Propeller levers - HIGH RPM.
3. Flaps - APPROACH.
4. Gear - DN.
5. Airspeed - 178 KIAS maximum.

FLIGHT CONTROLS MALFUNCTION

AUTOPILOT/YAW DAMP EMERGENCY DISCONNECTION

1. Pressing the DISC - TRIM - AP - YD disconnect switch (control wheels).
2. Pressing the AP ENGAGE pushbutton on the autopilot mode selector control panel.
3. Pressing the go-around switch (left power lever), (yaw damper will remain on).
4. Pulling the AP CONTR and AFCS DIRECT circuit breakers (overhead control panel).
5. Setting AVIONICS MASTER POWER switch (overhead control panel) to the off position.
6. Setting aircraft MASTER switch (overhead control panel) to the OFF position.

PERFORMANCE CHECKS

OXYGEN SYSTEM

1. Oxygen supply pressure gages - Check
2. Supply control lever (green) - ON.
3. Diluter control lever - 100% OXYGEN
4. Emergency control lever (red) - Set to TEST MASK position while holding mask directly away from face, then return to NORMAL.
5. Oxygen mask - Put on and adjust.
6. Emergency pressure control lever - Set to TEST MASK position and check mask for leaks, then return to NORMAL.
7. Flow indicator - Check. During inhalation blinker appears, during exhalation blinker disappears. Repeat a minimum of 3 times.
8. Oxygen masks - Remove and store.

FUEL PUMPS/CROSSFEED OPERATION

1. Fire pull handles - Pull.
2. Standby pump switches - ON.
3. Battery switch - ON.
4. #1 and #2 FUEL PRESS warning annunciators - Illuminated.
5. Fire pull handles - In.
6. #1 and #2 FUEL PRESS warning annunciators - Extinguished.
7. Standby fuel pump switches - STANDBY PUMP.
8. #1 and #2 FUEL PRESS warning annunciators - Illuminated.
9. Crossfeed - Check. Check system operation by activating switch momentarily left then right, noting that #1 and #2 FUEL PRESS warning annunciators extinguish and that the FUEL CROSSFEED advisory light illuminates as switch is energized.

STALL AND GEAR WARNING SYSTEM

1. Stall warning test switch - TEST. Check that warning horn sounds.
2. Landing gear warning test switch - TEST. Check that warning horn sounds and that the LDG GEAR CONTR handle warning annunciator illuminates.

ENGINE FIRE PROTECTION SYSTEM

1. Engine fire protection test switches - Hold switches to DET position, check that FIRE PULL handle warning annunciators, and MASTER WARNING annunciators illuminate.
2. Engine fire protection test switches - Hold switches to EXT position, check that SQUIB OK and EXTGH DISCH annunciators, and MASTER CAUTION annunciators illuminate.

FIRE EXTINGUISHER

1. Check pressure limits.

Engine Fire Extinguisher Gage Pressure

TEMP °C	**-40**	**-29**	**-18**	**-06**	**04**	**16**	**27**	**38**	**48**
PSI	190	220	250	290	340	390	455	525	605
	to	to	to	to	to	to	to	to	to
	240	275	315	365	420	480	550	635	730

CABIN/CARGO DOORS

1. Safety arm and diaphragm plunger - Check position (lift door step)
2. Index marks on rotary cam locks (6) - Check aligned with indicator windows.
3. Lower pin latch handle - Check closed and latched. (observe through cargo door lower latch handle access cover window.)
4. Carrier rod - Check indicator aligned with orange stripe on carrier rod. (Observe through window aft lower corner.)
5. Battery switch - OFF.
6. Cargo door - Check close and latched
7. Cabin door - Close but leave unlatched. Check CABIN DOOR annunciator light extinguished.
8. Cabin door - Open. Check CABIN DOOR annunciator light extinguished.
9. Battery switch - ON. Check CABIN DOOR annunciator light illuminated.
10. Cabin door - Closed and latch. Check CABIN DOOR annunciator light extinguished.
11. Battery switch - OFF.

ANNUNCIATOR PANELS

1. MASTER CAUTION, MASTER WARNING, #1 FUEL PRESS, #2 FUEL PRESS, L BL AIR FAIL, R BL AIR FAIL, INST AC, #1 OIL PRESS, #2 OIL PRESS, #1 DC GEN, #1 INVERTER, #1 NO FUEL XFR, #2 NO FUEL XFR, #2 INVERTER, #2 DC GEN,#1 VANE EXT, #2 VANE EXT, GEAR DOWN - Check illuminated.
2. Annunciator test switch - Hold to TEST position. Check that the annunciator panels, fire pull handle annunciators, marker beacon annunciators, antenna azimuth indicator, master caution, and master warning annunciators are illuminated. Release switch and check that all annunciators except those in step (a) are extinguished.

NOTE

The Marker Beacon lights will illuminate only if the Avionics Master is turned ON/ EXT PWR as applicable.

3. MASTER CAUTION and MASTER WARNING annunciators - Press and release. Both annunciators should extinguish.

AC/DC POWER

1. AC frequency - 394 - 406 Hz.
2. AC voltage - 104 - 124 VAC.
3. DC voltage - 28 - 28.5 VDC.

AUTOMATIC FLIGHT CONTROL SYSTEM

1. Altitude alert.

NOTE

Pause a few seconds between each step to allow time for the proper indications.

a. Set alert controller more than 1000 feet above altitude indicated on pilot's altimeter. The pilot's altimeter alert annunciator should be extinguished.

b. Decrease the alert controller to within 1000 feet of the pilot's altimeter setting. The alert annunciator should illuminate.

c. Decrease the controller to less than 250 feet above the pilot's altimeter setting. The alert annunciator should extinguish.

d. Increase the controller to 300 ± 50 feet above the pilot's altimeter indication and check that the alert annunciator illuminates.

e. Set the desired altitude.

2. Autopilot.

a. Autopilot controller UP TRIM, DN TRIM annunciators - Check not illuminated.

CAUTION

A steady illumination of UP TRIM or DN TRIM annunciator indicates that the automatic synchronization is not functioning and the autopilot should not be engaged.

b. Turn knob - Center.

c. Elevator trim control switch - ON.

d. Control wheel - Hold to mid travel.

e. AP button - Press. AP ENGAGE and YD ENGAGE annunciators on autopilot controller will illuminate. Servo clutches will engage.

WARNING

If the STBY annunciator on the flight director mode selector does not illuminate within 10 seconds after the avionics master switch is turned on, the autopilot has failed self-test and is considered non-operative and should not be used. The elevator trim system must not be forced beyond the limits which are indicated on the elevator trim tab indicator.

f. Elevator trim follow-up - Check.

(1) Control wheel - Hold aft of mid travel. Trim wheel should run nose down after approximately 3 seconds. Trim down annunciator should illuminate after approximately 8 seconds, and AP TRIM annunciator should illuminate after approximately 13 seconds.

(2) Control wheel - Hold forward of mid travel. Trim wheel should run nose up after approximately 3 seconds, trim up annunciator should illuminate after approximately 8 seconds, and AP TRIM annunciator should illuminate after approximately 13 second.

g. Turn controller - Check that control wheel follows in each applied direction, then center.

h. Pitch wheel - Check that trim responds to pitch wheel movement. (UP TRIM and DN TRIM annunciators may illuminate).

i. Heading bug - Center and engage HDG. Check that control follows a turn in each direction.

j. Disengage AP by selecting GA. Check that AP disengages and FD commands 7 DEG nose up, wings level attitude, and YD remains on.

3. Electric elevator trim - Check.

a. Elevator trim switch - ON.

b. Pilot and copilot trim switches - Check operation.

WARNING

Operation of the electric trim system should occur only by movement of pairs of switches. Any movement of the elevator trim wheel while depressing only one switch element indicates a trim system malfunction. The electric elevator trim control switch must then be turned OFF and flight conducted by operating the elevator trim wheel manually. Do not use autopilot.

(1) Pilot and copilot. Check individual element for no movement of trim, then check proper operation of both elements.

(2) Check pilot switches override copilot switches while trimming in opposite directions, and trim moves in direction commanded by pilot.

c. Check pilot and copilot trim disconnects while activating trim.

d. Elevator trim switch - OFF then ON (ELECT TRIM OFF annunciator extinguishes).

AUTOFEATHER

1. Power levers - Approximately 25% torque.
2. Autofeather switch - Hold to TEST (both AUTOFEATHER annunciators illuminated).
3. Power levers - Retard individually.
   a. At 14% to 20% torque - Opposite annunciator extinguished.
   b. At 7% to 13% torque - Both annunciators extinguished (propeller starts to feather).

NOTE

The power lever may have to be lifted and pulled towards the ground fine gate in order to attain the 7% to 13% torque. Autofeather annunciators will illuminate and extinguish with each fluctuation of torque as the propeller feathers.

   c. Return power lever to approximately 25% torque.
4. Repeat above procedure with other engine.
5. Autofeather switch - ARM.

RUDDER BOOST

1. Propeller levers - HIGH RPM
2. Rudder boost/yaw damper test switch - Hold in YAW CONTROL TEST Position.
3. Check rudder boost annunciator illuminated and YD ENGAGE annunciator extinguished.
4. Yaw damper - Engage. Ensure that the Yaw Damp system will not engage.
5. Rudder boost/yaw damper test switch - Rudder boost. Check rudder boost annunciator extinguished.
6. Yaw damper - Engage. Observe YD ENGAGE annunciator illuminated.
7. Advance left power lever - At approximately 60% torque differential, the YD ENGAGE annunciator should extinguish, and the left rudder pedal should start to move forward. Increasing engine power should result in increased rudder pedal travel. (Observe torque and TGT limits.)
8. Slowly retard the left power lever - Rudder pedal travel should decrease with decreasing power. At approximately 50% torque differential, the YD ENGAGE annunciator may flicker as the Rudder Boost system disengages.
9. Reengage the Yaw Damper, and repeat with the other engine.

OVERSPEED GOVERNORS

1. Propeller test switch - Hold to PROP GOVERNOR TEST position.
2. Left power lever - Increase until propeller stabilizes at 1540 to 1580 RPM.
3. Release propeller test switch - Observe that propeller RPM increases.

4. Repeat above steps with other engine.

PRIMARY GOVERNORS

1. Power levers - Set at 1500 RPM.
2. Exercise propeller - Move aft to detent, then return to high RPM.

ENGINE ANTI-ICE

1. Ice vane power select switch - MAIN.
2. Ice vane control switches - Off, verify VANE EXTEND annunciator extinguishes.
3. Ice vane power select switch - STBY.
4. Ice vane control switches - ON, verify VANE EXTEND annunciators illuminated.
5. Ice vane power select switch - MAIN.

ANTI-ICE AND DEICE SYSTEMS

1. Beacon - Off.
2. Left pitot heat switch ON - Check for loadmeter rise, then off.
3. Right pitot heat switch ON - Check for loadmeter rise, then off.
4. Stall warning heat switch ON - Check for loadmeter rise, then off.
5. Fuel vent heat switches ON - Check for loadmeter rise, then off.
6. Windshield anti-ice switches NORMAL - Check PILOT and COPILOT (individually) for loadmeter rise, then OFF.
7. Propeller deice MANUAL switch - ON (momentarily), check for loadmeter rise.
8. Surface deice switch - SINGLE CYCLE AUTO. Check for a drop in pneumatic pressure and wing deice boot inflation after 6 seconds for a second drop in pneumatic pressure.

9. Surface deice switch - MANUAL. Check that surface boots inflate, and remain inflated, then off.
10. Antenna deice switch - SINGLE CYCLE AUTO. Check for a drop in pneumatic pressure and antenna deice boot inflation.
11. Antenna deice switch - MANUAL. Check that boots inflate, and remain inflated, then OFF.
12. Radome Anti-ice switch - ON, Check for proper indications - Off.
13. Beacon - As required (DAY or NIGHT).

PNEUMATIC PRESSURE

1. ENVIRO & PNEU bleed air LEFT switch - Off.
2. Pneumatic pressure 12 - 20 PSI - Check.
3. L BL AIR OFF annunciators illuminated - Check.
4. ENVIRO & PNEU bleed air RIGHT switch - Off.
5. L & R BL AIR OFF and L & R BL AIR FAIL annunciators illuminated - Check.
6. ENVIRO & PNEU bleed air LEFT switch - ON.
7. L BL AIR OFF and L & R BL AIR FAIL annunciators extinguished, pneumatic pressure at 12 - 20 PSI - Check.
8. ENVIRO & PNEU bleed air RIGHT switch - ON.
9. R BL AIR OFF annunciator extinguished - Check.

PRESSURIZATION SYSTEM

1. CABIN DOOR caution annunciator extinguished - Check.
2. Vent windows closed - Check.

3. Bleed air valve switches ON - Check.
4. Cabin altitude 500 feet lower than field pressure altitude - Set.
5. Cabin pressure switch - TEST (hold).
6. Cabin climb indicator descending indication - Check, then release TEST switch.
7. ACFT ALT set to planned cruise altitude plus 500 feet - Check (if this setting does not result in CABIN ALT indication of at least 500 feet over takeoff field pressure altitude, adjust as required).
8. Rate control set between 9 and 12 o'clock - Check.

DEPARTURE BRIEFING

1. ATC clearance - Review.
   a. Routing.
   b. Initial altitude.
2. Departure procedure - Review.
   a. SID.
   b. Noise abatement procedure.
   c. VFR departure route.
3. Copilot duties - Review.
   a. Adjust takeoff power.
   b. Monitor engine instruments.
   c. Ensure autofeather lights illuminated.
   d. Call V_1, ROTATE.
   e. Call out engine malfunctions.
   f. Tune/identify all knave/comb radios.
   g. Make all radio calls.

h. Adjust transponder and radar as required.

i. Complete flight log during flight. Note altitudes and headings. Note departure time.

4. PPC - Review

a. Takeoff power.

b. V.

C. V_r.

d. V_2.

e. V_{yse}.

f. V_{enr}.

ARRIVAL BRIEFING

1. Weather/altimeter setting.
2. Airfield/facilities - Review.

a. Field elevation.

b. Runway length.

c. Runway condition.

3. Approach procedure - Review.

a. Approach plan/profile.

b. Altitude restrictions.

c. Missed approach.

(1) Point.

(2) Time.

(3) Intentions.

d. Decision height or MDA.

e. Lost communications.

4. Backup approach/frequencies.

5. Copilot duties - Review.

a. Nav/comm set-up.
b. Monitor altitude and airspeeds.
c. Monitor approach.
d. Call out visual/field in sight.

6. Landing performance data - Review.
   a. Approach speed.
   b. Runway required.

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:

MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army
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The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 decagram = 10 grams = .35 ounce
1 hectogram = 10 decagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

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