
Servicing

Table of Contents

Servicing Record	6-3
Fuel	6-5
Capacities	6-5
Fuel Types	6-7
Safety Precautions	6-8
Fuel Additives	6-9
Pressure Fueling	6-10
Gravity Fueling	6-16
Suction Defueling	6-17
Gravity Defueling	6-19
Hydraulic Systems	6-20
Approved Hydraulic Fluids	6-20
Reservoir Servicing	6-20
Accumulator Preloads	6-21
Landing Gear	6-22
Tires	6-22
Struts	6-24
Oil	6-25
Oil Grades	6-25
Air-Driven Generator	6-28

CAE SimuFlite

Air Turbine Starter	6-29
Engine	6-31
Oxygen	6-33
ADG Drop	6-35
Preflight	6-35
In Flight	6-35

Servicing Record

	DATE	QTY	DATE	QTY
Engine Oil	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
Hydraulic Fluid	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
Alcohol	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____

CAE SimuFlite

Servicing Record (continued)

	DATE	QTY	DATE	QTY
Pneumatic Bottle	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
Oxygen	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
Other	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____
	_____	_____	_____	_____

Always refer to the Maintenance Manual – Chapter 12, and the Ground Handling and Servicing Information Manual for exact servicing procedures, precautions, and specifications.

Failure to follow safety precautions and the manufacturer's recommendations can result in personal injury and aircraft damage.

Fuel Capacities

Refer to the Limitations section for total fuel capacities. **Tables 6-A, 6-B, and 6-C** denote the maximum allowable fuel capacity possible during pressure and gravity refueling.

Tank	Pressure Fueling		Gravity Fueling	
	US Gal	Liters	US Gal	Liters
Left Main	717.5	2715.7	665.5	2518.9
Right Main	717.5	2715.7	665.5	2518.9
Auxiliary	1010.0	3822.9	943.0	3569.3
Total	2445.0	9254.3	2274.0	8607.1

Table 6-A; Maximum Allowable Fuel Capacity (S/Ns 3001 to 3014)

CAE SimuFlite

Tank	Pressure Fueling		Gravity Fueling	
	US Gal	Liters	US Gal	Liters
Left Main	722.0	2732.8	670.0	2536.0
Right Main	722.0	2732.8	670.0	2536.0
Auxiliary	1010.0	3822.9	943.0	3569.3
Total	2454.0	9288.5	2283.0	8641.3

**Table 6-B; Maximum Allowable Fuel Capacity
(S/Ns 3016 to 3066; 5001 to 5134 Without SB 601-0262)**

Tank	Pressure Fueling		Gravity Fueling	
	US Gal	Liters	US Gal	Liters
Left Main	722.0	2732.8	670.0	2536.0
Right Main	722.0	2732.8	670.0	2536.0
Auxiliary	1010.0	3822.9	943.0	3569.3
Tail	187.7	710.4	—	—
Total	2641.7	9998.9	2283.0	8641.3

**Table 6-C; Maximum Allowable Fuel Capacity
(S/N 5135 and Subsequent; Aircraft With SB 601-0262)**

Fuel Types

Fuel conforming to any of the following specifications is approved for use in the aircraft (**Table 6-D**). Mixing of approved fuels is permitted.

Type	Canadian	American	British
Jet A	CAN2-3.23-M81	ASTM D1655	D. Eng RD2494
Jet A-1	CAN2-3.23-M81	ASTM D1655	D. Eng RD2494
JP-5	—	MIL-T-5624	D. Eng RD2452
JP-8	—	MIL-T-83133A	D. Eng RD2453
Jet B	CAN2-3.22-M80	ASTM D1655	D. Eng RD2486
JP-4	CAN2-3.22-M80	MIL-T-5624	D. Eng RD2486

Table 6-D; Approved Fuels

Safety Precautions

WARNING: Fuel vapors are highly explosive and care must be taken to prevent ignition. Safety precautions are provided to prevent injury to personnel, damage to equipment, and to alert personnel to the harmful effects of fuel vapor inhalation and contact with eyes and skin.

Observance of the following safety precautions is necessary to prevent personnel injury and equipment damage.

- An open flame or smoking is not permitted near the aircraft.
- Adequate fire extinguishing equipment and trained personnel must be readily available and standing by.
- The aircraft and fueling equipment should be properly grounded.
- Ensure all electrical power is off except that necessary for monitoring of aircraft fueling.
- Avoid performing any maintenance on aircraft during fueling.
- Avoid fuel spills. If a fuel spill occurs, stop fueling until the spill is cleaned and fire personnel check the area.
- Avoid fuel contact with the eyes and skin, inhalation of vapors, or accidental swallowing of fuel. Immediately wash exposed areas and seek prompt medical attention.
- Use only clean fuel. If contamination is suspected, discontinue fueling.
- Do not use felt or chamois filters; these materials increase the likelihood of fuel contamination and generate static charges.
- Do not exceed a 2,500 lb (1,134 kg) fuel imbalance between the main wing tanks during fueling or defueling.

Fuel Additives

Anti-icing additive conforming to specification MIL-I-27686 can be added in concentrations of 0.10 to 0.15% by volume. Do not add anti-icing additive to JP-4, JP-5, and JP-8 fuels as these fuels have an equivalent additive pre-blended at the refinery.

Other approved additives include: SOHIO Biobor JF biocide at a concentration that does not exceed 270 parts per million (20 parts per million elemental boron) to prevent the growth of micro-organisms; Shell ASA-3 anti-static additive at a concentration that provides not in excess of 300 conductivity units (equivalent to 1 part-per-million).

Refer to the AFM Supplement 2 – Procedures for Blending Anti-Ice Additive into the Fuel for procedures.

Pressure Fueling Additive Blending

- Quantity ADEQUATE FOR FUELING
- Fueling Hose CONNECT TO ADAPTER
- Injector Panel Calibration Valve CLOSED
- Air Supply CONNECT
 - Air supply for additive blending must be 75 PSI (517 kPa) or greater.
- Injector Valve OPEN
- Air Supply Valve OPEN
- Air Supply Pressure CHECK
 - Air pressure must be 65 to 70 PSI (448 to 483 kPa).
- Refueling BEGIN
- Injector and Air Supply Valves CLOSE
 - When fueling complete, close the injector and air supply valves.

CAE SimuFlite

Gravity Fueling Additive Blending

Blender ATTACH TO FUEL HOSE

Additive USE 20 OZ PER
104 TO 260 GAL OF FUEL

Fueling BEGIN/PRESS ADDITIVE TRIGGER

While refueling at 30 to 60 GPM, press additive container trigger.

Pressure Fueling

Aircraft WINGS LEVEL/NOSE DOWN

Maximum refueling is only possible with wings level and aircraft approximately 0.5° nose down.

Electrical Power AVAILABLE

The fuel quantity gages require AC power (external AC or APU); filling to maximum capacity requires DC power (batteries or external DC power).

Refuel/Defuel Control Panel Door OPEN

Control Panel Switches OFF

Fuel Filler Adapter CONNECT FUELING HOSE

Control Panel POWER Switch ON

POWER ON Light ILLUMINATES

VV-OPEN Lights EXTINGUISH

SOV-CL Lights ILLUMINATE

Fueling Pressure 50 ±5 PSI

Do not exceed a supply pressure of 50 ±5 PSI during fueling.

Fuel Manifold PRESSURIZE

Fueling Test

On S/Ns 3001 to 3066 and 5002 to 5006 without SB 601-0217:

- VV-OPEN Lights ILLUMINATE
- VV-OPEN Lights remain illuminated until the fueling manifold is depressurized.

On S/Ns 5001, 5007 and subsequent; S/Ns with SB 601-0217:

- VV-OPEN Lights REMAIN EXTINGUISHED
- MODE Selector Switch TEST
- Tank Switches FUEL

On aircraft without SB 601-0217:

- SOV-CL Lights EXTINGUISH
- SOV-OP Lights ILLUMINATE
- After 20 to 30 seconds:
- SOV-CL Lights ILLUMINATE
- SOV-OP Lights EXTINGUISH

WARNING: During the fuel system test, the SOV-CL lights must illuminate within 30 seconds. If the SOV-CL lights do not illuminate, discontinue fueling until the problem is corrected.

CAE SimuFlite

On S/Ns 5001, 5007 and subsequent; S/Ns with SB 601-0217:

VV-OPEN Lights ILLUMINATE

WARNING: If the SOV-CL and VV-OPEN lights do not illuminate, discontinue fueling until problem is corrected.

SOV-CL Lights EXTINGUISH

SOV-OP Lights ILLUMINATE

After 20 to 30 seconds:

SOV-CL Lights ILLUMINATE

SOV-OP Lights EXTINGUISH

Fueling

Wings LEVEL

If the wings are level, select the AUX tank switch to OFF.

If the wings are not level, identify the high wing. Select the low wing and AUX tank switches to OFF.

CAUTION: The auxiliary tank must not be refueled independently unless the main tanks have been refueled to capacity.

On S/Ns 3001 to 3066 and 5002 to 5006 without SB 601-0217:

MODE Selector Switch FUEL

L/R Tank SOV-CL Lights EXTINGUISH

L/R Tank SOV-OP Lights ILLUMINATE

V-V OPEN Lights (3) REMAIN ILLUMINATED

On S/Ns 5001, 5007 and subsequent; S/Ns with SB 601-0217:

- MODE Selector FUEL
- V-V OPEN Lights (3) EXTINGUISH
- L/R Tank SOV-CL Lights EXTINGUISH
- L/R Tank SOV-OP Lights ILLUMINATE

When tanks are full:

- L/R Tank SOV-OP Lights EXTINGUISH
- L/R Tank SOV-CL Lights ILLUMINATE
- AUX Tank Switch FUEL
- AUX Tank SOV-CL Light EXTINGUISHES
- AUX Tank SOV-OP Light ILLUMINATES

NOTE: The forward and aft aux tanks fill faster than the center aux tank. This causes a delay in reading fuel quantity in the aux tank because the only quantity transmitter is in the center aux tank.

When the tank is full:

- AUX Tank SOV-OP Light EXTINGUISHES
- AUX Tank SOV-CL Light ILLUMINATES
- L/R/AUX Tank Switches OFF

CAE SimuFlite

On S/Ns 5135 and subsequent and S/Ns with SB 601-262 (Tail Tank)

CAUTION: The tail tank cannot be fueled until the auxiliary tanks have been filled to capacity.

MODE Selector Switch TEST
Tail Tank Fueling Switch FUEL
VV-OPEN Lights (3) REMAIN EXTINGUISHED
Tail Tank SOV-CL Light EXTINGUISHES
TAIL TANK SOV-OP Light ILLUMINATES

After 20 to 30 seconds:

Tail Tank SOV-OP Light EXTINGUISHES
Tail Tank SOV-CL Light ILLUMINATES
MODE Selector Switch FUEL
Tail Tank SOV-CL Light EXTINGUISHES
Tail Tank SOV-OP Light ILLUMINATES

When tail Tank fueling is completed:

Tail Tank SOV-OP Light EXTINGUISHES
Tail Tank SOV-CL Light ILLUMINATES
Tail Tank Fueling Switch OFF

Servicing

When all fueling is completed:

Fueling hose DISCONNECT

CAUTION: Remove the nozzle from the single point adapter before setting the rotary mode selector to OFF to prevent fuel spilling from the vent valve(s).

On S/Ns 5001, 5007 and subsequent and S/Ns with SB 601-0217:

VV-OPEN Lights REMAIN EXTINGUISHED

On S/Ns 3001 to 3066 and 5002 to 5006 without SB 601-0217:

VV-OPEN lights EXTINGUISH AS PRESSURE BLEEDS OFF

CAUTION: Ensure that VV-OPEN lights extinguish before setting the POWER switch to OFF.

MODE Selector Switch OFF
Control Panel POWER Switch OFF
Control Panel Switches OFF
Refuel/Defuel Panel Access Door . . . CLOSE AND SECURE
Electrical Power OFF AS REQUIRED

CAE SimuFlite

Gravity Fueling

CAUTION: Do not allow nozzle to touch tank bottom. Nozzle may break protective coating; this could cause tank skin corrosion. If a screened funnel is used, the nozzle must be at least one inch shorter than the depth of the tank under the filler cap.

CAUTION: The auxiliary tank must not be refueled unless the main tanks have been refueled.

- Safety Precautions OBSERVED
 - Aircraft GROUND
 - Fuel Supply GROUND
 - Fuel Nozzle GROUND
 - Filler Cap REMOVE
 - Fueling FILL TO DESIRED LEVEL
- Because of the location of the filler caps, the main tanks cannot be filled to capacity. A source of AC power is required to monitor fuel level with the cockpit fuel quantity gages.
- Fuel Nozzle REMOVE
 - Filler Cap REPLACE
 - Ground Wires REMOVE

Suction Defueling

CAUTION: To prevent damage to fuel manifold during refueling, do not exceed -8 PSI. If this pressure is exceeded, the defueling hose may collapse.

CAUTION: On S/N 5135 and subsequent and S/Ns with SB 601-0262 – Fuel Storage – Tail Cone Fuel Tank Addition, the tail tank must be defueled before the auxiliary tank can be defueled.

Aircraft Power ON

The fuel quantity gages require AC power for operation.

Refuel/Defuel Access Door OPEN

Open the refuel/defuel access door, then release the control panel to allow it to swing forward to the operating position.

Refuel/Defuel Control Panel Switches ALL OFF

Pressure Refuel/Defuel Access Door OPEN

Fuel Nozzle CONNECT

Connect the fuel nozzle to the single point adapter.

POWER Switch ON

Turn the control panel POWER switch to ON and verify that the POWER and SOV-CL lights illuminate. The VV-OPEN lights should remain off.

MODE Switch DEFUEL

CAE SimuFlite

Tank Switches DEF

The SOV-CL lights should extinguish; the SOV-OP lights should illuminate.

Fuel Nozzle Valve OPEN

Defueling BEGIN

Tank Switches OFF

Turn the associated tank switches to OFF when the desired level is reached or the tank is empty. **On S/N 5135 and subsequent and S/Ns with SB 601-0262**, the tail tank shutoff valve does not close automatically.

Fuel Nozzle Valve CLOSE

MODE Switch OFF

The SOV-CL lights illuminate; the SOV-OP lights extinguish.

POWER Switch OFF

Verify that the POWER light extinguishes.

Refuel/Defuel Control Panel STOW

Aircraft Power OFF

Fuel Nozzle DISCONNECT

Refuel/Defuel Access Door CLOSE AND SECURE

Gravity Defueling

WARNING: Ensure that the fueling adapter, fuel containers, and fuel tanks are electrically bonded and grounded.

WARNING: Gravity defueling must be carried out in the open or in a well ventilated area.

Fuel Containers IN POSITION
 Position an appropriate fuel container under each drain valve.

Drain Valves OPEN
 Remove the valve covers and install defueling adapters.

Defueling Adapters OPEN
 When a container fills, close the adapter. Repeat until the desired tank is empty.

Defueling Adapters CLOSED
 When the tank is empty, close the adapter. Remove adapter and replace drain cover.

Hydraulic Systems

The No. 1 and No. 2 hydraulic system filler connections, pressure gages and charging valves are on the hydraulic servicing panel in the rear equipment bay. The No. 3 hydraulic system filler connection, charging valve, and pressure gage are accessible through the right main wheel well.

The two brake system accumulator charging valves and pressure gage are on the forward left side of the nosewheel well.

Approved Hydraulic Fluids

Use only a synthetic phosphate-ester base fluid. Approved brand name fluids include:

- Chevron Hyjet IV
- Chevron Hyjet IV A
- Skydrol LD-4
- Skydrol 500B-4

Mixing of hydraulic fluid is permitted with no adverse affect on system operation.

Reservoir Servicing

Each hydraulic system reservoir must be serviced with the associated system pressurized to 3,000 PSI.

The No. 1 and No. 2 hydraulic system reservoirs should be serviced if the fluid level is below 60 +0/-5%. The No. 3 hydraulic system reservoir should be serviced when fluid level is below 55 +0/-5%. If the systems have been operating continuously for one hour or more, service No. 1 and No. 2 reservoirs to 70% and No. 3 reservoir to 65%.

Accumulator Preloads

Service the accumulators with nitrogen only. The associated hydraulic system must be depressurized (0 PSI).

Before servicing the accumulators, follow all safety precautions listed in the Maintenance Manual and Ground Handling and Servicing Information manual.

WARNING: Ensure that the nose gear door actuator pin is installed before working in the nosewheel well.

CAUTION: Do not use the ailerons to deplete hydraulic system pressure. Do not exceed 10 complete cycles when using the elevators to deplete hydraulic system pressure.

CAUTION: Before releasing hydraulic system pressure, ensure the main wheels are chocked and landing gear lock pins are installed.

Landing Gear

Tires

Refer to the Maintenance Manual, Chapter 12 – Servicing or the Ground Handling and Servicing Information manual for tire pressures based on aircraft maximum takeoff weight (MTOW). Always follow all servicing precautions. Refer to **Tables 6-E** and **6-F** for nose wheel and main wheel tire pressures.

Use only nitrogen to inflate tires.

MTOW		On Ground +5%/-0%		On Jacks +5%/-0%	
LBS	KG	PSI	kPa	PSI	Kpa
42,100	19,096	147	1,014	141	972
43,100	19,550	151	1,041	145	1,000
44,600	20,230	151	1,041	145	1,000
45,100	20,457	151	1,041	145	1,000

Table 6-E; Nose Wheel Tire Pressures

CAUTION: Only B.F. Goodrich high pressure tires P/N 031-614 and Goodyear tires P/N 184F23-2 are permitted on nose landing gear of aircraft with a 45,100 lbs (20,457 kg) MTOW.

MTOW		On Ground +5%/-0%		On Jacks +5%/-0%	
LBS	KG	PSI	kPa	PSI	Kpa
32,300	14,651	151	1,014	145	1,000
39,000	17,690	126	869	121	835
42,100	19,096	226	1,558	217	1,496
43,100	19,550	232	1,600	223	1,538
43,100	19,550	199	1,372	191	1,317
44,600	20,230	206	1,420	198	1,365
45,100	20,457	206	1,420	198	1,365

Table 6-F; Main Wheel Tire Pressures

¹Special operating conditions, refer to Maintenance Manual or Ground Handling and Servicing Manual.

²All four main wheel tires must be Goodyear P/N 256K43-2; MTOW must not exceed 39,000 lbs (17,690 kg).

³High pressure tires Goodyear P/N 266F43-2 or 266F43-1 or Goodrich P/N 033-659-1.

⁴Low pressure tires Goodyear P/N 256K43-1 (43,100 lb MTOW only) or 256K43-2 and 256K43-3 (up to 45,100 lb MTOW).

WARNING: All main wheel tires must be either high or low pressure tires. All four main wheel tires must have the same part number with the exception of Goodyear tires P/N 266F43-1 and 266F43-2. Both of these tires are permitted to be used on the same landing gear in any configuration.

CAE SimuFlite

CAUTION: Low pressure tires are mandatory for operation on unpaved/gravel runways for aircraft with a MTOW of 44,600 or 45,100 lbs, or for aircraft with a tail tank.

CAUTION: All four main wheels must be fitted with Goodyear P/N 256K43-2 tires if there is a requirement to reduce tire pressures below 145 PSI (1,000 kPa).

Struts

Refer to the Maintenance Manual, Chapter 12 – Servicing or the Ground Handling and Servicing Information manual for strut inflation procedures and safety precautions. Always service the strut with nitrogen. If nitrogen is not available, clean, dry compressed air may be used.

Refer to the landing gear strut servicing placard for the correct inflation pressure based on strut extension.

CAUTION: Only hydraulic fluid conforming to specification MIL-H-5606 may be used to fill the shock struts.

WARNING: Overfilled and/or overcharged shock struts may result in a loss of low speed braking.

Oil

Oil Grades

Refer to **Tables 6-G, 6-H, 6-I, and 6-J** for oil grade specifications.

MIL-L-7808 – Type I	MIL-L-23699 – Type II
Aeroshell Turbine Oil 390	Aeroshell Turbine Oil 500
BP Aero Turbine Oil 15	Aeroshell Turbine Oil 555
Brayco 880 Conojet	Castrol 580
Brayco 880H	Castrol Oil 5000
Castrol 3C	Esso/Exxon Turbo Oil 25
Castrol 325	Esso/Exxon Turbo Oil 2380
Esso Turbo Oil 2389	Mobil Jet Oil II
	Mobil 254
	Royco Turbine Oil 500
	Royco Turbine Oil 555
	Royco Turbine Oil 899
	Stauffer Jet II

Table 6-G; Oil Grades – Air Turbine Starter

CAE SimuFlite

APU	Generator/Generator Adapter
Aeroshell Turbine Oil 390	Aeroshell Turbine Oil 390
BP Aero Turbine Oil 15	Esso/Exxon Turbo Oil 2389
Brayco 880 Conojet	
Brayco 880H	
Castrol 3C	
Castrol 325	
Esso/Exxon Turbo Oil 2389	

Table 6-H; Oil Grades – APU, Generator, and Generator Adapter

MIL-L-7808 – Type I	MIL-L-23699 – Type II
Aeroshell Turbine Oil 390	Aeroshell Turbine Oil 500
Esso/Exxon Turbo Oil 2389	Aeroshell Turbine Oil 555
	Castrol 580
	Castrol Oil 5000
	Esso/Exxon Turbo Oil 25
	Esso/Exxon Turbo Oil 2380
	Mobil Jet Oil II
	Mobil 254
	Royco Turbine Oil 500
	Royco Turbine Oil 555
	Stauffer Jet II

Table 6-I; Oil Grades – Integrated Drive Generator (IDG)

MIL-L-7808 – Type I*	MIL-L-23699 – Type II
Esso/Exxon Turbo Oil 2389	Aeroshell Turbine Oil 500
	Aeroshell Turbine Oil 555
	Castrol Oil 5000
	Esso/Exxon Turbo Oil 2380
	Mobil Jet Oil II
	Mobil 254

Table 6-J; Oil Grades – Powerplant

*MIL-L-7808 (Type I) oils are limited to use in cold weather conditions where ambient temperature is between -40 to -54°C (-40 to -65°F) or in emergency conditions when MIL-L-23699 (Type II) oils are not available.

CAUTION: Do not mix different specifications of oil. Chemical structure makes them incompatible. If oils are mixed, drain and flush the system and refill with an approved oil.

CAE SimuFlite

Air-Driven Generator

Fluid Capacities:

Turbine/Generator Assembly 1.32 US PINTS
625 MILLILITERS

Ejection Jack/Pump Assembly 1.54 US PINTS
730 MILLILITERS

CAUTION: Inadvertent deployment of the ADG could cause serious injury. When working on a stowed ADG, isolate all ADG electrical circuits. Ensure all personnel in the vicinity of the aircraft stand clear of the ADG deployment arc. Personnel not involved in service of the ADG must remain clear of flight compartment. Ensure that the ADG ground safety pin is installed.

Approved hydraulic fluid meeting specification MIL-H-5606 includes:

- Chevron Hyjet IV
- Chevron Hyjet IV A
- Skydrol 500 B-4
- Skydrol LD-4.

Air Turbine Starter

CAUTION: Do not mix different specifications of oil. Chemical structure makes them incompatible. If oils are mixed, drain and flush the system and refill with an approved oil.

Auxiliary Power Unit

- APU Oil Tank 5.00 U.S. PINTS
2.37 LITERS
- APU Generator/Generator Adapter 3.59 U.S. PINTS
1.7 LITERS

CAUTION: Do not mix different specifications of oil. Chemical structure makes them incompatible. If oils are mixed, drain and flush the system and refill with an approved oil.

APU Oil Level

- APU Access Panel REMOVE
- APU Oil Level CHECK
- Oil Filler Cap REMOVE/WIPE CLEAN/REINSTALL
- Oil Level 0.2 INCHES (0.5 CM) ABOVE ADD LINE
- Oil ADD UNTIL ABOVE ADD LINE
- Oil Filler Cap REPLACE
- Access Panel REPLACE

CAE SimuFlite

Generator Adapter Oil Level

CAUTION: Exercise caution to prevent injury from hot oil when checking APU generator adapter oil level immediately after APU use.

CAUTION: The generator/generator adapter must be removed for overhaul if oil color is abnormally dark or oil level is high. These indicate contamination and impending internal failure.

- APU Access Panel REMOVE
- Filler Plug/Dipstick REMOVE
- Oil Level CHECK
Normal oil level should be above the dipstick ADD line.
- Oil ADD UNTIL VISIBLE IN FILLER NECK
- Filler Plug/Dipstick REPLACE

Engine

Oil Level Check/Refill

CAUTION: Examine oil quantity between 15 to 30 minutes after you stop the engine, or in less than 5 minutes after a dry motor run. If you do not do this, the quantity indication is incorrect and you will fill the engine with too much oil, which can cause engine damage.

Engine Cowl OPEN

Open the upper translating and core cowls to gain access to the oil tank.

Cap/Dipstick REMOVE/CHECK LEVEL

If oil level is below the ADD mark, slowly add oil until oil level is between the 1 QT and 2 QT marks.

If tank contents are very low or oil pressure has been fluctuating:

- check for external oil leakage or filter contamination
- clean oil filter element
- fill oil tank and record quantity added
- perform ground engine run; note oil pressure and temperature
- check oil level and filter condition immediately after engine shutdown.

If oil does not register on dipstick, add oil as required. Motor engine, check oil level, and add oil as required.

CAE SimuFlite

If oil level is above overflow mark after motoring the engine, remove excess oil, motor engine for 30 seconds, then recheck oil level. Repeat this process until oil level remains stable.

Cap/Dipstick REPLACE

After replacing cap, wipe off excess oil.

Engine Cowls CLOSE AND SECURE

Oil Replenishment System

Rear Equipment Bay Door OPEN

Replenishment Tank CHECK LEVEL/REFILL

Oil Level Control Panel LIGHTS OFF

Oil Level Control Panel Switch ON

ON, LH FULL, and RH FULL lights illuminate.

If the LH FULL and/or RH FULL lights do not illuminate:

PRESS TO TEST Switch PRESS AND HOLD

Light illuminates for four seconds, then extinguishes.
Release the PRESS TO TEST switch.

Manual Selector Valve L ENG/R ENG

As necessary, select L ENG or R ENG for the engine oil tank to be filled.

Manual Selector Valve OFF

Select OFF when the appropriate LH FULL/RH FULL light illuminates.

Oil Level Control Panel Switch OFF

Oil Replenishment Tank REFILL

Rear Equipment Bay Door CLOSE

Oxygen

Always refer to the Maintenance Manual, Chapter 12 – Servicing and Chapter 35 – Oxygen for servicing procedures and precautions. Failure to follow safety precautions can result in a serious fire, injury, and damage to the aircraft.

The oxygen servicing access door is on right forward nose.

Normal Operating Pressure 1,850 PSIG

Refer to the servicing placard for servicing pressure based on ambient temperature.

WARNING

- Ensure that all clothing, hands, tools, fittings, oxygen components, and work area are free from oil and grease which could cause an explosion if exposed to pure oxygen. Remove all traces on or around oxygen equipment by washing with a castle soap and water solution.
- Oils, grease, and solvents may spontaneously burn or explode when in contact with pressurized oxygen. Extreme care must be taken to avoid any contamination of oxygen system and components.
- Servicing of the aircraft must be carried out by personnel familiar with oxygen equipment.
- Use only MIL-O-27210E aviator’s gaseous breathing oxygen.
- If oxygen pressure falls below 50 PSI (172 kPa), the oxygen cylinder must be sent to an authorized shop for purging and testing; the oxygen system must be purged.
- Before servicing oxygen system, ensure aircraft power is off.

CAE SimuFlite

Electrical Power REMOVE

Oxygen Service Panel OPEN

Oxygen Pressure CHECK

Oxygen pressure reading between the cockpit and service panel gages must be within 4%.

Filler Valve REMOVE DUST CAP/INSTALL ADAPTER

Oxygen Supply Unit CONNECT TO ADAPTER

WARNING: A slow oxygen charging rate is essential to avoid overheating and risk of fire.

Oxygen Supply Unit Valve OPEN SLOWLY

Do not exceed a 200 PSI (1,379 kPa) pressure rise per minute when charging the system.

Oxygen Supply Unit Valve CLOSE

Oxygen Supply Unit SLOWLY REMOVE HOSE FROM ADAPTER

Charging Adapter REMOVE FROM FILLER VALVE

Crew Oxygen Masks ALL IN N POSITION

Oxygen Pressure CHECK WITHIN +0/-50 PSI FROM FULL

Oxygen Service Panel SECURE

ADG Drop

Preflight

CAUTION: Prior to flight, inspect ADG bay for foreign objects.

ADG Deploy Cont CB-AUTO (CB E-3, aft bay) . . . CLOSED

In Flight

CAUTION: If icing conditions encountered while ADG is only source of electrical power, wing anti-icing must be operated in standby mode.

APU START

APU Generator TEST/OFF

Check for normal volts/frequency; leave OFF.

VHF Comm/NAV/ADF/XPDR SELECT #1

#2 systems inoperative during test.

Hyd 1B and 2B Pumps ON

Landing Gear DOWN

Hyd 3A and 3B Pumps OFF

Allow pressure to decrease.

Airspeed MAINTAIN 180 TO 210 KTS

CAE SimuFlite

Flaps 20°
Altitude 10,000 MSL AND BELOW
AC Metering Selector Switch ADG
Volts and Hz both read zero (0).

ADG Deploy Cont CB (B156) PULL

ADG Man Deploy Handle PULL FOR 1 SEC/STOW

Within 3 to 5 seconds, verify:

- ADG AC Volts – 105 to 125V
- ADG Hz – 380 to 420 Hz

WARNING: If ADG fails to deliver required power, immediately reset GEN 1 and 2 switches to ON, stow ADG manual deploy handle, and press PWR TXFR OVERRIDE to restore normal power.

GEN 1 and 2 Switches OFF INDIVIDUALLY

Check following illuminate:

- GEN 1 OFF
- GEN 2 OFF
- MAIN BUS 1 OFF (AC and DC)
- MAIN BUS 2 OFF (AC and DC)
- ESS TRU 2 OFF
- AC ESS BUS ALTN

CABIN PRESSURIZATION AS REQUIRED

On -3A aircraft, 10th stage bleed air SOVs close when power is removed. Normal control is lost with cabin altitude slowly increasing. Emergency pressurization may be used if desired.

Pitch Trim Channel 2 ENGAGE

Channel 1 does not operate on ADG power. Power interruption momentarily fails Channel 2.

AC and DC Buses CHECK POWER

- 28V DC ESS powered if any ONE indicates power:
 - VHF NAV 1
 - ADF 1
 - Transponder 1
 - Pilot's EFIS
 - Copilot's Clock
- 115V AC ESS bus powered if any ONE indicates power:
 - IRU 1
 - L AOA Vane Heater
 - L Pitot Heater
- 26V AC ESS bus powered if any ONE indicates power:
 - Pilot's EFIS
 - Pilot's Altimeter
 - Pilot's Mach/Airspeed Indicator
 - Pilot's VSI
- Battery bus powered if any ONE indicates power:
 - Standby Horizon
 - VHF Comm 1

With ADG Supplied Power:

Pitch Trim VERIFY CORRECT OPERATION

Hydraulic System 3 Pressure 3,000 PSI (STABLE)

Landing Gear CYCLE/THEN RAISE

Verify System 3 pressure remains above 1,500 PSI during gear cycling.

