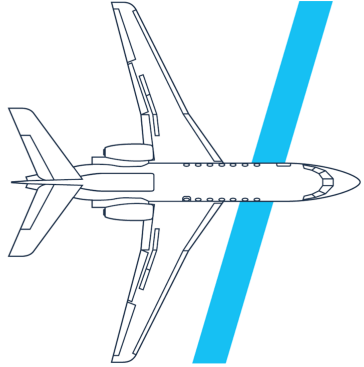




Falcon 50



REVISION 13 - APRIL 2022

OPERATING MANUAL GROUND SERVICING

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DGT239



NOTE: The figures in this document consider some possible options. Actual displays and layouts on A/C may vary according to options installed.

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STATUS: A=ADDED D=DELETED R=REVISED



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CONTENTS–LIST OF TEMPORARY CHANGES

Revision N° and date	Subject	Affected pages	Remarks



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CONTENTS—LIST OF TEMPORARY CHANGES

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DASSAULT AVIATION Proprietary Data

GENERAL CHARACTERISTICS-DIMENSIONS**OVERALL DIMENSIONS**

- Overall length 18.516 m (60.75 ft)
- Overall height 6.975 m (22.84 ft)
(with empty weight = 9,000 kg (19,841 lb))
- Wingspan 18.858 m (61.87 ft)

LANDING GEAR

- Wheel base 7.239 m (23.75 ft)
- Wheel track 3.98 m (13.05 ft)
- Main landing gear tires 26x6.6-14PR
- Nose landing gear tires 14.5x5.5-14PR
- Main and nose landing gear inflation nominal pressure
see section 2.010
- Maximum nose landing gear steering angle
during taxiing (torque link coupled) 60°
- Minimum turning radius with
nose landing gear wheels swiveled at 60° 13.5 m (44.29 ft)

CENTER OF GRAVITY LIMITS

Refer to PERFORMANCE MANUAL DTM912 Section 2.

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FALCON 50

GROUND SERVICING

GENERAL CHARACTERISTICS—AUTHORIZED ANTI-ICING PRODUCTS

AUTHORIZED ANTI-ICING PRODUCTS

CAUTION

Treatment must be carried out by specialized and well trained personnel only. Undiluted anti-icing type II (SAE AMS 1428), type III (SAE AMS 1428) and anti-icing type IV (SAE AMS 1428) fluids must be used very carefully.

CAUTION

It is prohibited to perform a second anti-icing treatment if the aircraft has not flown after the first application. A second application would dangerously overload the aircraft. If an aircraft undergoes anti-icing but does not fly, it must be cleaned either by washing, or deicing depending on outside temperature.

CAUTION

If possible, the engines and the APU should be shut down throughout the aircraft de-icing operations. If the engines or the APU must be kept running, do not spray de-icing fluid directly into the air intake, exhaust nozzle, probes, sensors or drains, and close the bleed air valves.

CAUTION

If type IV de-icing and anti-icing products have been used, any traces of fluid residue must be carefully removed from the moving components of the aircraft (areas: flaps, slats, airbrakes, ailerons, horizontal stabilizer, elevators, rudder, landing gear, etc.).

If traces of fluid are present, clean the aircraft (refer to task 20-31-00-100-801).

**GENERAL CHARACTERISTICS—AUTHORIZED
ANTI-ICING PRODUCTS****CAUTION**

If type IV de-icing and anti-icing products have been used, any traces of fluid residue must be carefully removed from the moving components of the aircraft (areas: flaps, slats, airbrakes, ailerons, horizontal stabilizer, elevators, rudder, landing gear, etc.).

If traces of fluid are present, clean the aircraft (refer to task 20-31-00-100-808).

NOTE

Refer to Operating Manual for the concentration and the utilization of anti-icing products.

GENERAL

The concentration of type I (SAE AMS 1424), type II (SAE AMS 1428), type III (SAE AMS 1428) and type IV (SAE AMS 1428) fluid is to be adapted to the climatic and ambient conditions to optimize the protection duration.

The protection duration is all the shorter since the climatic conditions are more severe (high wind, jet blast, snow fall or freezing rain).

DE-ICING

For de-icing, use diluted type I (SAE AMS 1424), type II (SAE AMS 1428), type III (SAE AMS 1428) and type IV (SAE AMS 1428) fluid.

De-icing can be performed with passengers on board, just before starting.

If possible, use a hot mixture of water and type I, type II, type III or type IV fluid. The protection duration is shorter if the mixture is cold.

ANTI-ICING

For anti-icing, use diluted type II (SAE AMS 1428), type III (SAE AMS 1428) and type IV (SAE AMS 1428) fluid.

Type II, type III or type IV fluid is to be used with care when pure.

Type II, type III or type IV fluid viscosity and adherence is greater than type I fluid ones. Together with the effect of aerodynamic friction, these characteristics improve aircraft streamlining upon take-off run phase. This provides elimination of snow or ice and gradual elimination of the anti-icing fluid.

DAILY SERVICING - BEFORE FIRST FLIGHT**GENERAL****NOTE**

The purpose of these servicing operations is to improve aircraft availability and dispatch rate.

NOTE

This daily servicing is not part of the recommended inspection program (Chapter 5) and is not required to be signed off by an approved mechanic. Nevertheless, if the daily servicing is signed off, as a whole, by an approved mechanic, all the daily servicing operations will be excluded from the Basic Inspection.

WARNING

DURING DAILY SERVICING, DO NOT STAND UNDER THE PASSENGER DOOR WHILE OPENING AND CLOSING.

NOTE

The daily servicing can be done with the first daily preflight inspection (see AFM, "Preflight Inspections").
The daily servicing is performed after a partial or complete refueling operation.

TIRE INFLATION PRESSURE - CHECK**CAUTION**

In case of extremely cold temperatures (OAT below - 15°C (5°F)), the wheel valve can be easily damaged.
It is preferable to perform the manual checking operation in a hangar.

Perform this check daily, and:

- pay particular attention to pressure drops, 5 to 10 landings after a tire replacement,

DAILY SERVICING - BEFORE FIRST FLIGHT

- more often, if there is a pressure drop of more than 10% between two consecutive checks.

NOTE

The check must be performed with tires at ambient temperature (aircraft at standstill for 3 hours minimum and in the shade).
If a pressure drop is recorded over 24 hours, see section 11.010 for the procedure to follow.

The NLG nominal tire pressure should be between:

- 9.4 bar (136 psi) and 9.9 bar (144 psi) for conventional structure tires,
- 10.9 bar (158 psi) and 11.4 bar (165 psi) for Michelin tires.

The MLG nominal tire pressure should be between:

- 14 bar (203 psi) and 14.7 bar (213 psi) for MTOW = 17,600 kg (38,800 lb) (without SB F50-161),
- 14.5 bar (210 psi) and 15.2 bar (220 psi) for MTOW = 18,500 kg (40,780 lb) (with SB F50-161).

Over-inflate the tire by 3.3% for each 10°C decrement (2% for 10°F decrement):

- if the pressure check is performed inside a hangar with an ambient temperature difference greater than 15°C (27°F) with the outside,
- if the ambient temperature at the arrival airport is lower than that at the departure airport by 25°C (45°F) or more.

The tables below give the recommended over-inflation pressures to apply depending on tire type and MTOW:

		OVER-INFLATION (IN BAR) VERSUS DIFFERENCE OF TEMPERATURE (IN °C)										
		dT >	15	20	25	30	35	40	45	50	55	60
NLG	CONVENTIONAL STRUCTURE TIRES	0.5	0.6	0.8	0.9	1.1	1.3	1.4	1.6	1.7	1.9	
	MICHELIN TIRES	0.5	0.7	0.9	1.1	1.3	1.5	1.6	1.8	2	2.2	
MLG	MTOW = 17,600 kg (38,800 lb)	0.7	0.9	1.2	1.4	1.6	1.9	2.1	2.3	2.6	2.8	
	MTOW = 18,500 kg (40,780 lb)	0.7	1	1.2	1.5	1.7	1.9	2.2	2.4	2.7	2.9	
		dT >	65	70	75	80	85	90	95	100	105	110
NLG	CONVENTIONAL STRUCTURE TIRES	2	2.2	2.4	2.5	2.7	2.8	3	3.1	3.3	3.4	
	MICHELIN TIRES	2.4	2.5	2.7	2.9	3.1	3.3	3.5	3.6	3.8	4	
MLG	MTOW = 17,600 kg (38,800 lb)	3	3.3	3.5	3.7	4	4.2	4.4	4.7	4.9	5.1	
	MTOW = 18,500 kg (40,780 lb)	3.1	3.4	3.6	3.9	4.1	4.4	4.6	4.8	5.1	5.3	

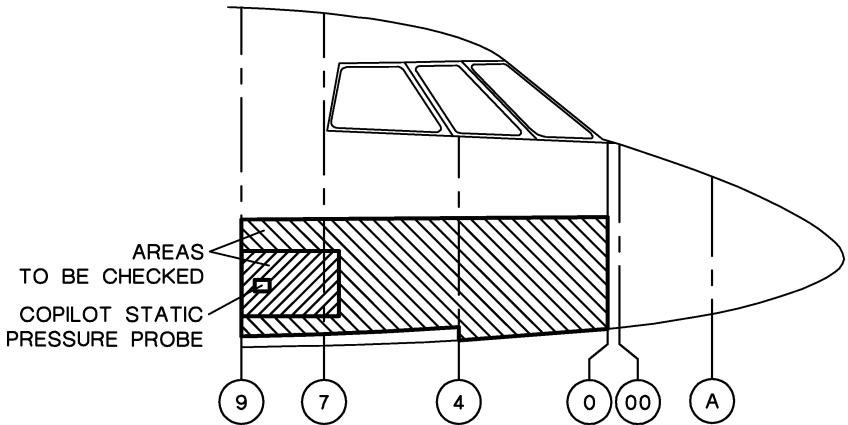
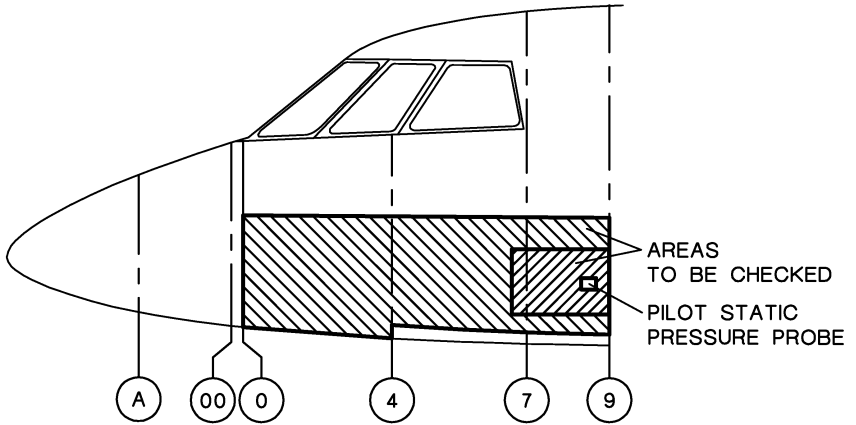
		OVER-INFLATION (IN PSI) VERSUS DIFFERENCE OF TEMPERATURE (IN °F)										
		dT>	20	30	40	50	60	70	80	90	100	110
NLG	CONVENTIONAL STRUCTURE TIRES	5.5	8.2	10.9	13.6	16.4	19.1	21.8	24.5	27.3	30	
	MICHELIN TIRES	6.3	9.5	12.6	15.8	19	22.1	25.3	28.5	31.6	34.8	
MLG	MTOW = 17,600 kg (38,800 lb)	8.1	12.2	16.2	20.3	24.4	28.4	32.5	36.6	40.6	44.7	
	MTOW = 18,500 kg (40,780 lb)	8.4	12.6	16.8	21	25.2	29.4	33.6	37.9	42.1	46.3	
		dT>	120	130	140	150	160	170	180	190	200	210
NLG	CONVENTIONAL STRUCTURE TIRES	32.7	35.4	38.2	40.9	43.6	46.4	49.1	51.8	54.5	57.3	
	MICHELIN TIRES	37.9	41.1	44.3	47.4	50.6	53.8	56.9	60.1	63.2	66.4	
MLG	MTOW = 17,600 kg (38,800 lb)	48.7	52.8	56.9	60.9	65	69	73.1	77.2	81.2	85.3	
	MTOW = 18,500 kg (40,780 lb)	50.5	54.7	58.9	63.1	67.3	71.5	75.7	79.9	84.1	88.3	

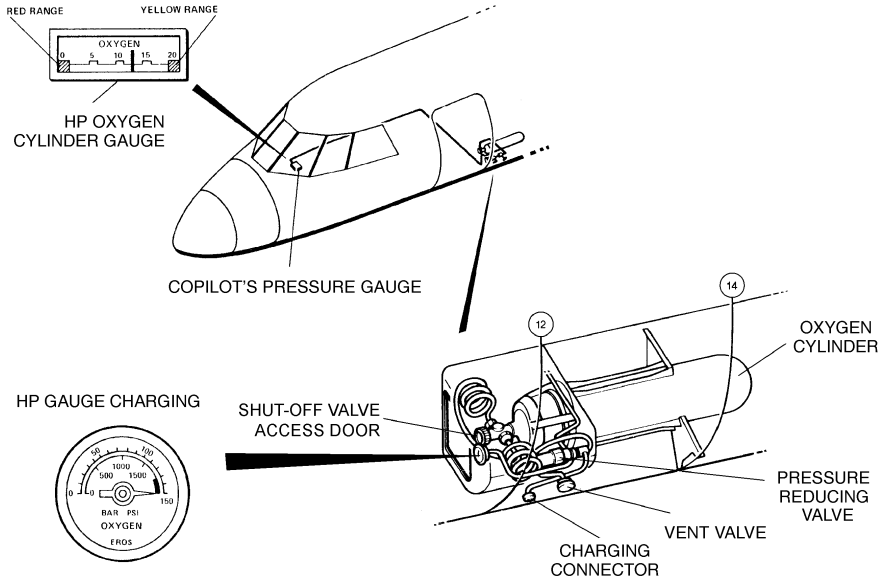
For more details refer to AMM Task 32-44-00-780-801

RVSM AREA - CHECK**NOTE**

This procedure is only applicable to A/C with SB F50-246.

- Visually check the aircraft skin between frames 0 and 9 to detect hollows and bulges.
- Check paint and inscriptions for condition.
- In case of damage in the RVSM areas:
 - flaked paint on rivet heads or locally around the edge of the static probe base is acceptable, but should be corrected at the first convenient opportunity,
 - for other cases, perform a thorough inspection (see Maintenance Manual, TASK 53–10–00–220–801).



PASSENGER OXYGEN - CHECK OF PRESSURE**CAUTION**

The oxygen pressure gauges (beside the oxygen cylinder and on the copilot's side) indicate the pressure in the cylinder, whether the pressure reducing valve is open or closed.

- Check that the oxygen cylinder shut-off valve behind the access door is open.
Otherwise, slowly open it then close by a quarter of a turn.
- Check that the pressure read off the HP gauge is at least equal to 1500 psi. Refill with oxygen if required (see section 12).

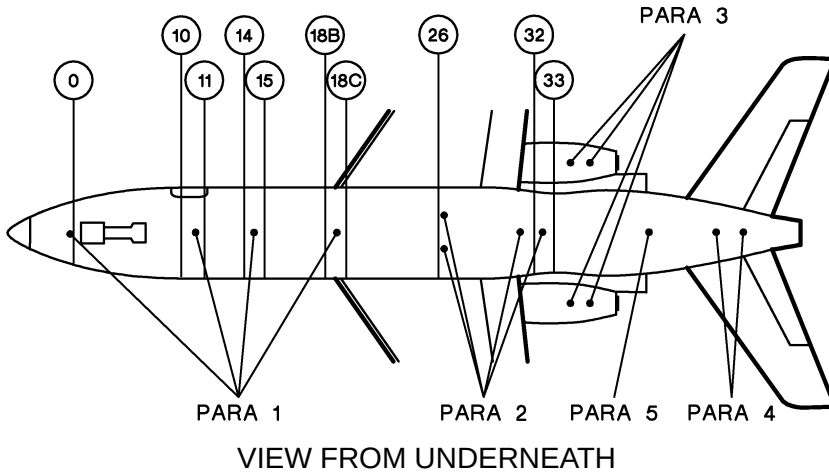
COCKPIT - CHECK**TEST OF LIGHT**

- On the warning panel, check the illumination of the warning lights as follows:

DAILY SERVICING - BEFORE FIRST FLIGHT

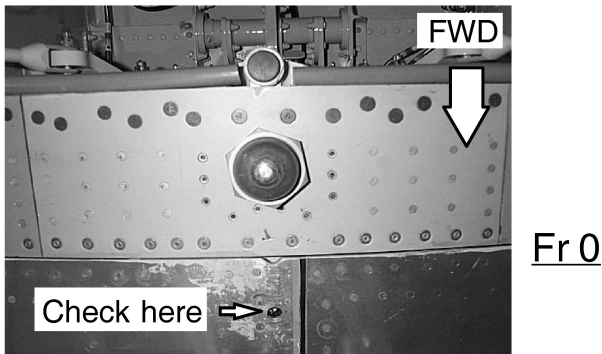
- Press in the “TEST” pushbutton.
 - Check the illumination of all warning lights on the warning panel.
 - Release the “TEST” pushbutton.
- On the fire warning panel, check the illumination of the warning lights as follows:
- Press in the “TEST” pushbutton.
 - Check the illumination of the following warning lights:
 - “FIRE 1”, “FIRE 2” and “FIRE 3”,
 - “WHEELS L/R”,
 - “FIRE BAG COMP” and “FIRE AFT COMP”,
 - “FIRE APU”.
 - Release the “TEST” pushbutton.

DRAINAGE POINTS - CHECK



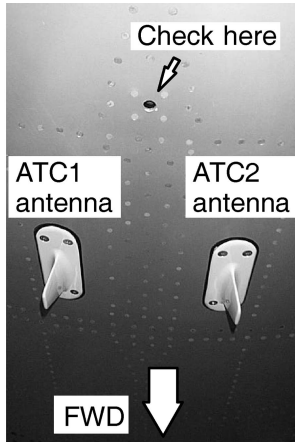
VIEW FROM UNDERNEATH

- At frames 0, 10 and 14, check that the automatic drains open freely, by inserting a 4 mm (0.16 in) maximum diameter pin. If a water flow is observed for more than 1 minute, inspect the underfloor area to find the cause of water accumulation.
- At frame 18, check that the drain hole is not obstructed.

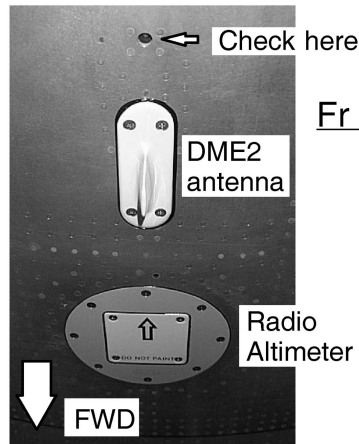


DETAIL DRAIN

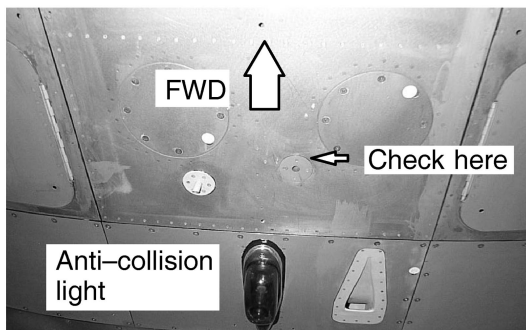
DASSAULT AVIATION Proprietary Data



Fr 10

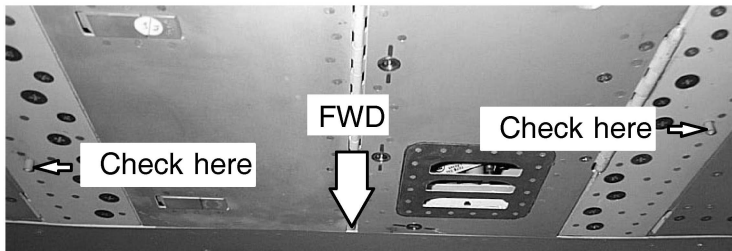
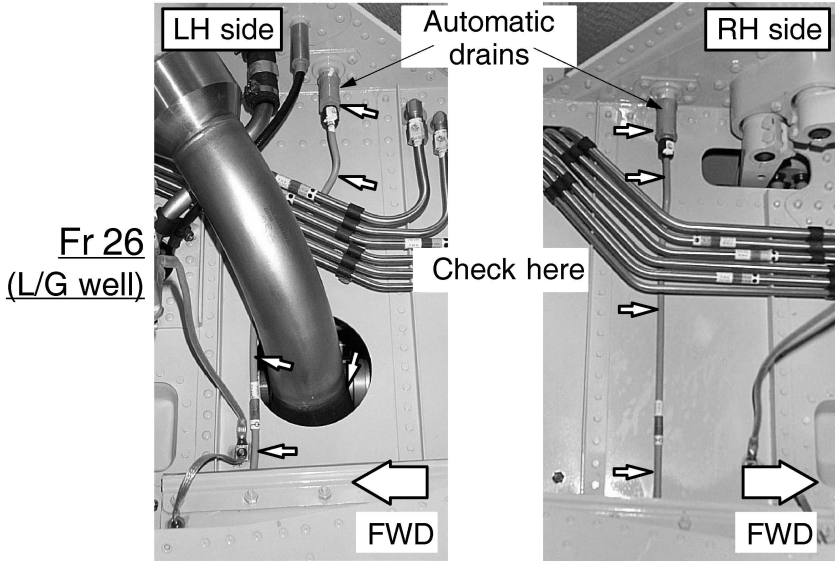


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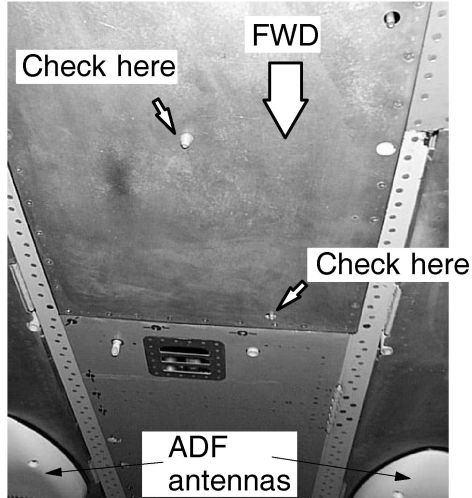
Fr 18

- Check that frame 26, 31 and 32 automatic drain holes are not obstructed.

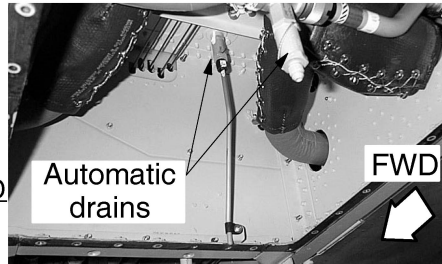


Fr 26 (VIEW FROM UNDERNEATH)

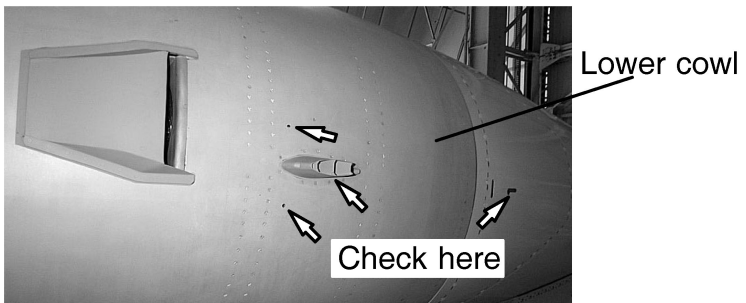
Fr 31/32



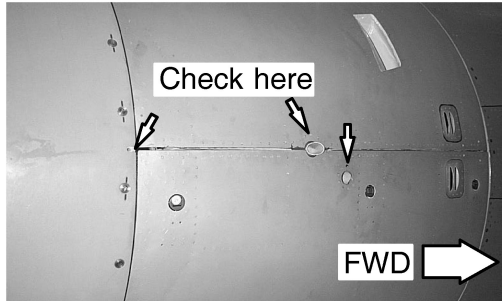
VIEW
WHEN
FAIRING
REMOVED



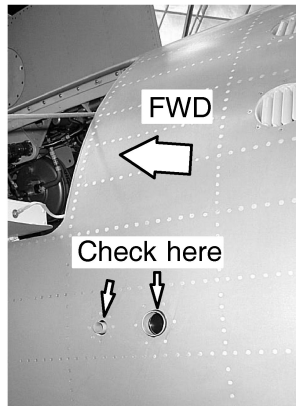
- Inspection underneath engines 1 and 3:
 - Check that draining points are free of blockage, leakage, seepage or abnormal dripping.
 - Check that the engine manifold fuel drain is not obstructed.



- Inspection underneath engine 2:
 - Make sure there is no leakage after:
 - the cowling mating line,
 - the fuel drain manifold.



- Check that the APU manifold mast and APU case drain hole (frame 41/42) are not obstructed.



BRAKE WEAR - CHECK

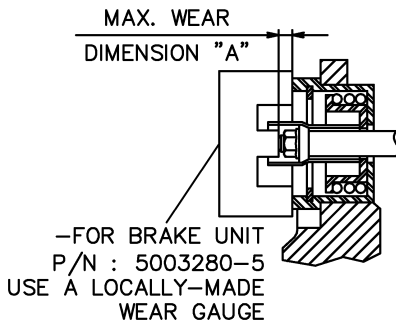
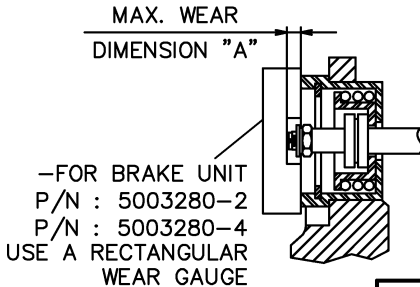
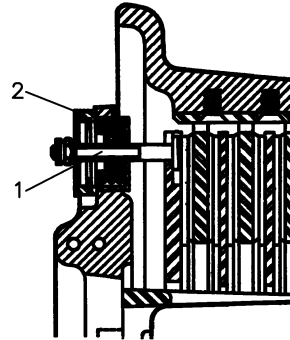
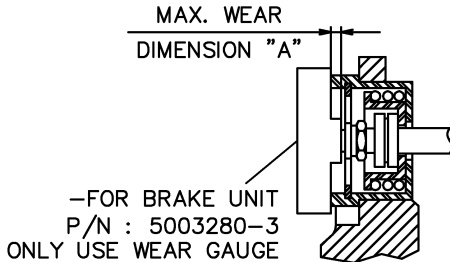
NOTE

This check is performed with aircraft on wheels, brakes cold and park brake pulled to first notch.

- Check that park brake is pulled to first notch.

DAILY SERVICING - BEFORE FIRST FLIGHT

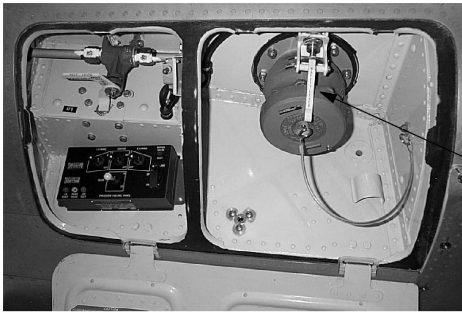
- Check that the wear indicators comply with the tolerance (dimension "A").
- If one wear indicator is out of tolerance, replace the brake unit (Maintenance Manual, TASK 32-44-17-900-801).



BRAKE UNIT P/N	DIMENSION "A"
5003280-2	FLUSH WITH SPRING HOUSING (2)
5003280-3	0.635 mm (0.025 in) BELOW SPRINGHOUSING (2)
5003280-4	0.381 mm (0.015 in) ABOVE SPRING HOUSING (2)
5003280-5	0.762 mm (0.030 in) ABOVE SPRING HOUSING (2)

FUEL TANKS - WATER DRAINING**DEPRESSURIZATION OF FUEL TANKS****WARNING**

IF FUEL TANKS ARE NOT DEPRESSURIZED, FUEL WILL SPRAY OUT DURING DRAINING.



Air vent valve
control lever

If tanks are not already depressurized, perform the following steps:

- Open the refueling door.
- Raise the vent valve control lever.
- Make sure that the red "STOP FUELING" warning light comes on then goes off when the vent valves are fully open.
- Set the refueling coupling lever to the up position.
- Close the refueling door.

DRAINING WATER FROM THE FUEL TANKS**CAUTION**

Under icing conditions (less than -5°C (23°F)), avoid draining water.

Do not turn the fuel tank sump-draining tool when pushing it up to open the fuel sump.

If water is not drained at least once a week, microbiological contamination can occur inside the fuel tanks.

NOTE

Water draining gives the best results:

- when the aircraft has been at a standstill for 5 hours minimum,
- before refueling,
- early in the morning (low temperature conditions),
- when the aircraft is horizontal.

NOTE

It is recommended to drain water from the feeder tanks at least every 7 days.

Sump draining of the other tanks is recommended every 2 months, but should be performed more often in the following conditions :

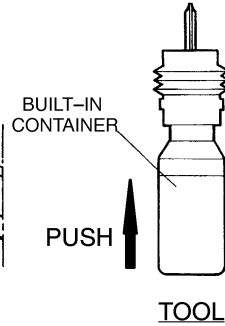
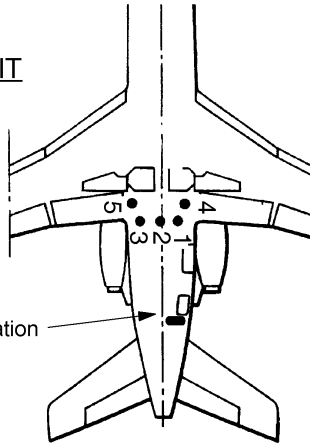
- aircraft operating in inter-tropical areas,
- aircraft using suspect fuel,
- aircraft which are in storage,
- aircraft operated occasionally,
- aircraft operating trans-oceanic flights,
- aircraft operating low altitude flights.

For aircraft under an “Expanded Prevention Program for Fuel Tank Contamination” (FSA 28-00-013), it is recommended to drain all sump valves at least once a week.

Using the fuel tank sump draining tool (stowed in the servicing compartment), perform the following operations at minimum on the five main fuel sumps marked with a circle:

LOCATION OF DRAIN UNIT

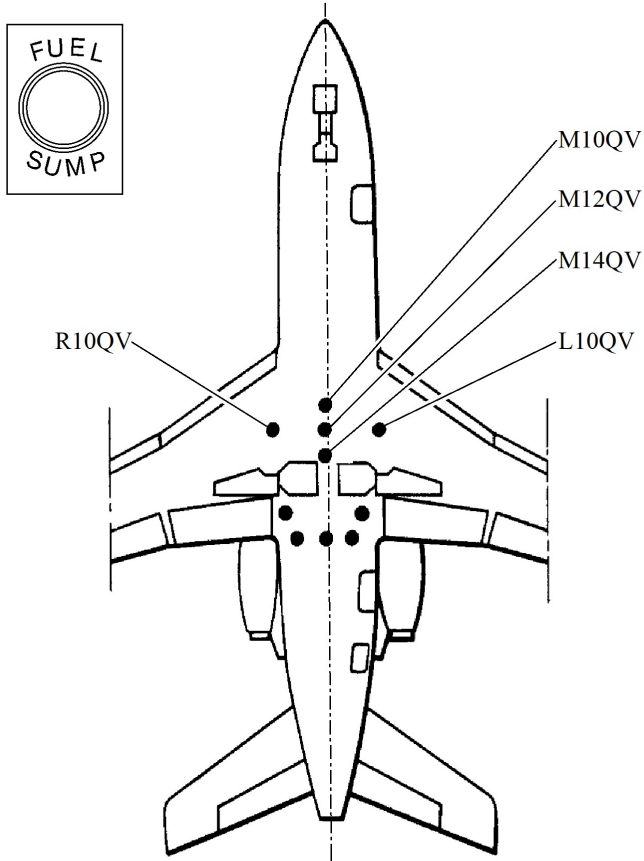
- 1: LH FEEDER TANK
- 2: CENTER FEEDER TANK
- 3: RH FEEDER TANK
- 4: LH FEEDER TANK DOOR
- 5: RH FEEDER TANK DOOR



DETAIL A



For A/C with BS F50-553: put the guiding tool in the "MAIN FUEL SUMP" hole to facilitate draining. Release the guiding tool after use.



- Push the fuel sump, taking care not to turn the fuel tank sump draining tool.
- Drain the quantity of one full tool (1 liter (0.26 USG) of fuel).
- Let the water settle at the bottom of the fuel tank sump draining tool.

DAILY SERVICING - BEFORE FIRST FLIGHT

- If the tool contains water (two distinct layers): discard its contents and continue to drain until there is no more water in the tool.
- Check the fuel for smell and clarity (nauseating smell, presence of sludge or other contaminants).
- To drain water from other fuel tanks, use the fuel tank sump draining tool (refer to previous paragraph) and perform the draining operation on the other fuel sumps.
- If fuel contamination is suspected, report it to the maintenance personnel.

GENERAL**NOTE**

The following operation is performed at the end of a flight, before the refueling operations, within 60 minutes after engine shutdown.

1 – DRAINING OF THE WATER SYSTEM

If the temperature is near 0°C (32°F), it is mandatory to drain the water system.

See section 13.010.

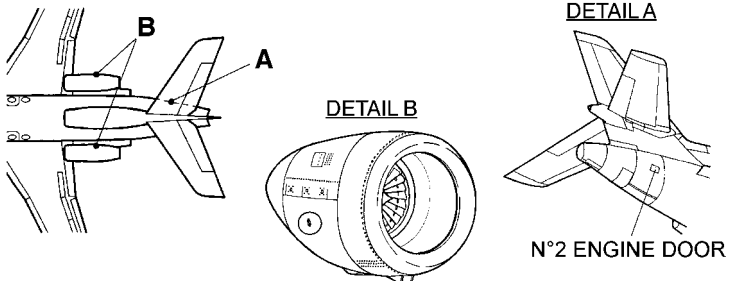
2 – CHECK OF MAGNETIC INDICATORS ON THE MAINTENANCE PANEL

Location: cockpit.

- Check that both magnetic indicators are white.
- If not, trace out the cause of their tripping to red, troubleshoot as required and reset the magnetic indicator by pressing the RESET pushbutton.

3 – CHECK ENGINE OIL LEVEL**CAUTION**

This check must be performed within 10 to 60 minutes after engine shutdown, otherwise the engines must be restarted.



FALCON 50

GROUND SERVICING

DAILY SERVICING—AFTER LAST FLIGHT

- Check the oil level using a flashlight if necessary (see type A or B, depending on typed oil tank installation).

NOTE

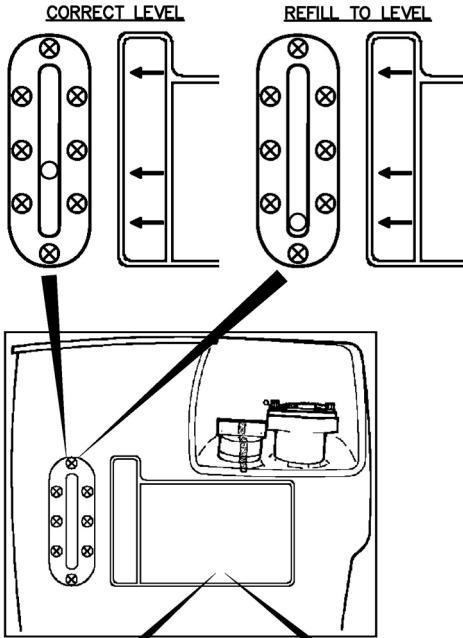
If the oil level is higher than at the preceding inspection and the oil smells of fuel, search for presence of fuel as instructed in the Honeywell Maintenance Manual.

FALCON 50

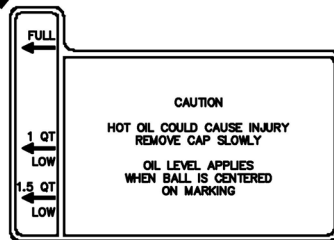
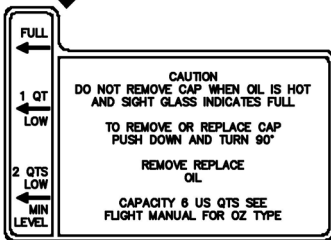
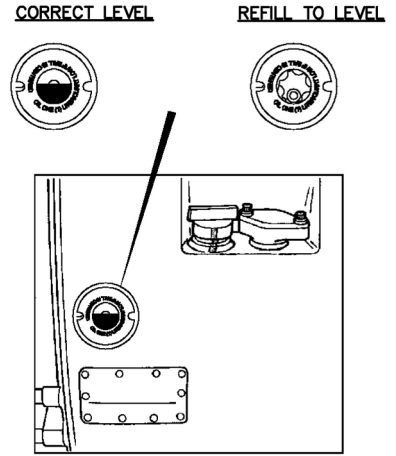
GROUND SERVICING

DAILY SERVICING—AFTER LAST FLIGHT

TYPE A
FOR ENG TFE 731-1 OR TFE 731-40



TYPE B
FOR ENG TFE 731-40

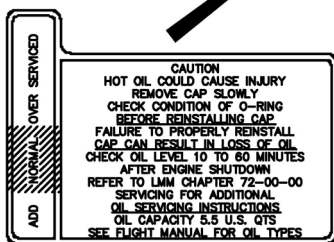
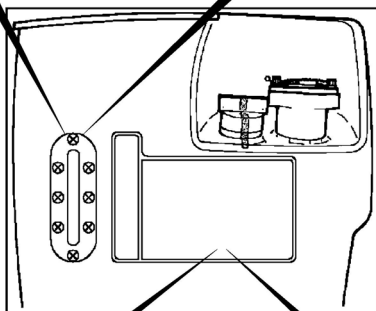
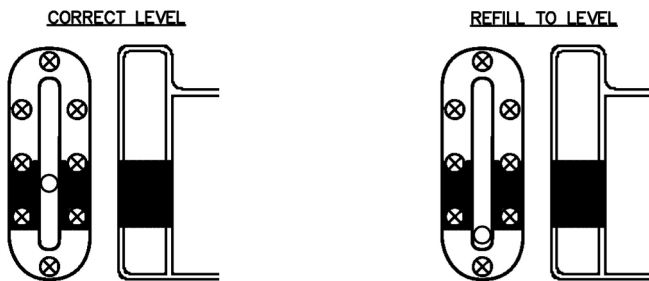


ORIGINAL OIL TANK LABEL

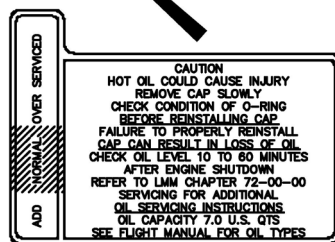
FALCON 50

GROUND SERVICING

DAILY SERVICING—AFTER LAST FLIGHT



IFE731-3



IFE731-40

NEW OIL TANK LABEL

- Replenish as required (See Section 7).

4 – CHECK IN THE REAR COMPARTMENT

- Get access to the rear compartment.
- Using a lint-free cloth, wipe off hydraulic fluid from the pressure switches (a few drops may have oozed through the vent port with each pressurization of the hydraulic systems).
- Check APU oil level (See section 8.010).

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DAILY SERVICING-REMEDIAL ACTION**REMEDIAL ACTION**

For information, the operations listed below describe the necessary procedure numbers for remedial action after daily servicing.

HYDRAULIC FLUID LEAKS

See section 10.010.

FUEL LEAKS

See section 9.040.

CHARGING OF SHOCK ABSORBER

- Nose landing gear

See procedure TASK 32-21-01-610-802 (Maintenance Manual).

- LH/RH main landing gear

See procedure TASK 32-11-05-610-802 (Maintenance Manual).

TIRE INFLATION

See section 11.010.

REMOVAL/INSTALLATION OF A WHEEL BRAKE

See procedure TASK 32-44-17-900-801 (Maintenance Manual).

REPLACEMENT OF A WHEEL TIRE

- Nose landing gear

See procedure TASK 32-44-05-900-801 (Maintenance Manual).

- LH/RH main landing gear

See procedure TASK 32-44-13-900-801 (Maintenance Manual).

REMOVAL/INSTALLATION OF FIRE EXTINGUISHERS

Removal/Installation of engine fire extinguishers (See procedure TASK 26-20-09-900-801).

RH extinguisher in baggage compartment: Removal/Installation (See procedure TASK 26-20-09-900-803).

DAILY SERVICING—REMEDIAL ACTION

LH extinguisher in baggage compartment: Removal/Installation
(See procedure TASK 26–20–09–900–804).

APU extinguisher: Removal/Installation (See procedure TASK
26–20–09–900–802).

APU OIL TANK FILLING AND REPLENISHING

See section 8.010.

CHARGING OF HYDRAULIC SYSTEM ACCUMULATOR

See procedure TASK 29–14–11–610–801 (Maintenance Manual).

LED NAVIGATION LIGHTS

For A/C with SB F50–494: a “F” displayed on a navigation light
means that the light is still operative but needs to be replaced within
the next 30 days.

**DAILY SERVICING—CHECK AFTER COLLISION
WITH FOREIGN OBJECT****CHECK AFTER COLLISION WITH A FOREIGN OBJECT****NOTE**

In case of damage or suspected damage, contact the maintenance support team.
If necessary, a ladder can be used to inspect all surfaces that cannot be seen from the ground.

This check is to be performed if a collision with a foreign object has occurred or is suspected.

- 1 – Visually check the aircraft surfaces and all components protruding from it.

This includes:

- windshields,
- cabin windows,
- wings and slats (skins, leading edges, wing tip or winglet if installed),
- horizontal stabilizer and vertical stabilizer (leading edges, tip fairings),
- the skins of the flight control surfaces (elevators, flaps, rudder, ailerons, airbrakes),
- engine pylons and air intakes (leading edges, fan blades, skins, vents of engine pylons, engine cowlings),
- S-duct and engine 2 fan blades, through the S-duct door (see figure 1) located in the maintenance servicing compartment (the S-duct door must be closed and locked when finished),

NOTE

On some aircraft, the S-duct door may be safetied with lockwire. Cut the lockwire to open the door. Replacement of lockwire is not mandatory.

- landing gear structures (L/G doors, hydraulic lines, electrical wiring, supports and brackets),
- fuselage skin, vents, body fairings and structure adjacent to doors.

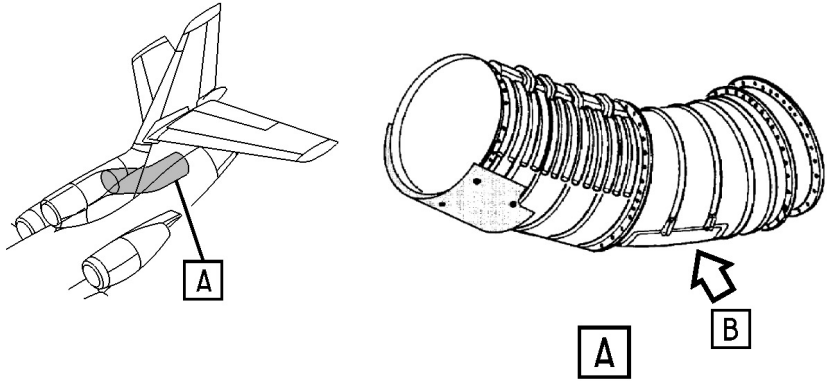
**DAILY SERVICING—CHECK AFTER COLLISION
WITH FOREIGN OBJECT**

- 2 – Visually check the lights (navigation, anti-collision and landing lights).
- 3 – Visually check the external equipment (TAT sensors, pitot probes, static dischargers, ice detectors).
- 4 – If no damage is found, resume normal operation. Report the incident to the maintenance support team at the first opportunity.
- 5 – If any damage is found, contact the maintenance support team.

FALCON 50

GROUND SERVICING

DAILY SERVICING—CHECK AFTER COLLISION WITH FOREIGN OBJECT



S-DUCT DOOR

B

— FIGURE 1 —
S-DUCT DOOR — LOCATION



FALCON 50
GROUND SERVICING
DAILY SERVICING—CHECK AFTER COLLISION
WITH FOREIGN OBJECT

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ELECTRICAL SERVICING**ELECTRICAL SUPPLY FROM GPU**

See figure 1.

PRELIMINARY STEPS

- In the cockpit, or in the passenger cabin (depending on aircraft layout), disengage the following circuit breakers:
 - "TOILET",
 - "WATER PUMP TOILET",
 - "DRAIN HEATER".
- On the instrument panel, check that the "STBY PUMP" switch is set to "OFF".
- On the overhead panel check that the following switches are in the OFF position:
 - "LH PITOT HEAT",
 - "RH PITOT HEAT".
- Open the rear compartment access door.
- Check that all the circuit breakers of the main electrical box are engaged.
- Open the external power receptacle door.
- Connect the GPU connector to the external power receptacle.
- Check that the GPU circuit breaker located in the external power receptacle box is engaged.
- Start the GPU and set voltage to + 28.5 V DC.

ENERGIZATION OF AIRCRAFT SYSTEMS**CAUTION**

Set the warning panel BRIGHT-DIM switch to DIM to minimize warning panel overheating.

- Set the NORMAL/EXT POWER switch to EXT POWER.

NOTE

The aircraft systems are supplied.

ELECTRICAL SERVICING

- For A/C without SB F50–317, set the LH BUS/RH BUS tie selector to the horizontal position.
- Check that the LH and RH voltmeters indications are in the green range.
- On warning panel, check that **BAT 1**, **BAT 2**, **GEN 1**, **GEN 2**, **GEN 3** and **BUS TIED** lights are illuminated.

DE-ENERGIZATION OF AIRCRAFT SYSTEMS

- For A/C without SB F50–317, set LH BUS/RH BUS tie selector to the vertical position.
- Set the NORMAL/EXT POWER switch to NORMAL (voltages read on the LH and RH voltmeters drop to zero).

NOTE

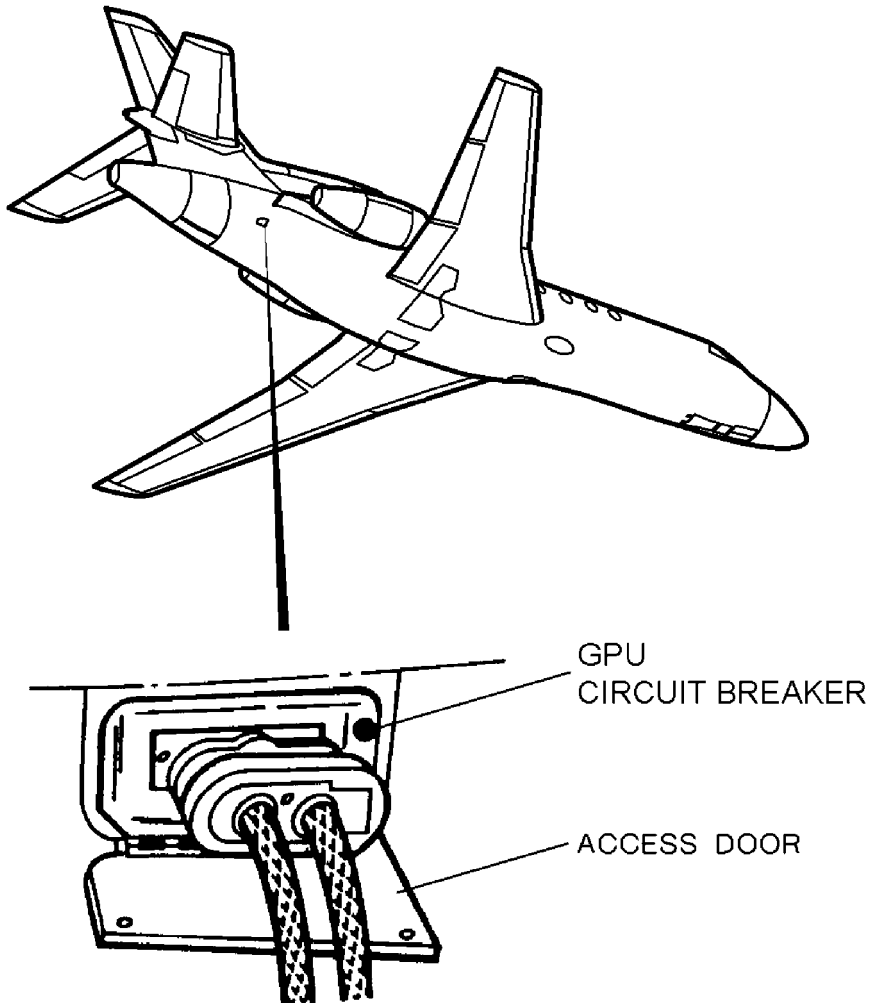
The aircraft systems are no longer supplied.

- Stop the GPU.
- Disconnect it from the external power receptacle.
- Close the external power receptacle door.
- Close the rear compartment door.
- In the cockpit, or in the passenger cabin, engage the following circuit breakers:
 - "TOILET",
 - "WATER PUMP TOILET",
 - "DRAIN HEATER".

FALCON 50

GROUND SERVICING

ELECTRICAL SERVICING



– FIGURE 1 –
EXTERNAL POWER RECEPTACLE

ELECTRICAL SERVICING**ELECTRICAL SUPPLY FROM BATTERY 1****CAUTION**

On the ground, the aircraft systems must never be energized from the aircraft batteries to perform any test, except for a short period of time (less than 1 minute) to start up the APU or an engine.

PRELIMINARY STEPS

- In the cockpit, or in the passenger cabin (depending on aircraft layout), disengage the following circuit breakers:
 - "TOILET",
 - "WATER PUMP TOILET",
 - "DRAIN HEATER".
- On the instrument panel, check that the "STBY PUMP" switch is set to "OFF".
- On the overhead panel check that the following switches are in the OFF position:
 - "LH PITOT HEAT",
 - "RH PITOT HEAT".
- Open the rear compartment access door and check that the battery is connected.
- Check that all the circuit breakers of the main electrical box are engaged.

ENERGIZATION OF AIRCRAFT SYSTEMS**CAUTION**

Set the warning panel BRIGHT–DIM switch to DIM to minimize warning panel overheating.

- Check that **HOT BAT** light of warning panel and WARM light of battery temperature indicator are extinguished before and throughout the utilization of the battery.
- On the overhead panel:
 - Check that the NORMAL/EXT POWER switch is set to NORMAL.

ELECTRICAL SERVICING

- Check that the LH BUS/RH BUS tie selector is set to FLIGHT NORM.
- Set the BAT 1 switch to BAT 1.
- On warning panel, check that:
 - **BAT 1** and **BUS TIED** lights are extinguished.
 - **GEN 1**, **GEN 2** and **GEN 3** lights are illuminated.
- Check that the battery voltage indication on the LH voltmeter is in the green range.
- Set the LH BUS/RH BUS tie selector to the horizontal position. Check that **BUS TIED** warning light illuminates.
The LH main bus supplies the RH main bus.
- Check for presence of RH bus voltage on the RH voltmeter.

DE-ENERGIZATION OF AIRCRAFT SYSTEMS

- Set the LH BUS/RH BUS tie selector to FLIGHT NORM.
- Check that **BUS TIED** warning light extinguishes.
- Set the BAT 1 switch to OFF.
The voltage read on the LH voltmeter drops to zero.
- Close the rear compartment door.
- In the cockpit, or in the passenger cabin, engage the following circuit breakers:
 - "TOILET",
 - "WATER PUMP TOILET",
 - "DRAIN HEATER".

ELECTRICAL SUPPLY FROM BATTERY 2**CAUTION**

On the ground, the aircraft systems must never be energized from the aircraft batteries to perform any test, except for a short period of time (less than 1 minute) to start up the APU or an engine.

ELECTRICAL SERVICING**PRELIMINARY STEPS**

- In the cockpit, or in the passenger cabin (depending on aircraft layout), disengage the following circuit breakers:
 - "TOILET",
 - "WATER PUMP TOILET",
 - "DRAIN HEATER".
- On the instrument panel, check that the "STBY PUMP" switch is set to "OFF".
- On the overhead panel check that the following switches are in the OFF position:
 - "LH PITOT HEAT",
 - "RH PITOT HEAT".
- Open the rear compartment access door and check that the battery is connected.
- Check that all the circuit breakers of the main electrical box are engaged.

ENERGIZATION OF AIRCRAFT SYSTEMS**CAUTION**

Set the warning panel BRIGHT–DIM switch to DIM to minimize warning panel overheating.

- Check that **HOT BAT** light of warning panel and WARM light of battery temperature indicator are extinguished before and throughout the utilization of the battery.
- On the overhead panel:
 - Check that the NORMAL/EXT POWER switch is set to NORMAL.
 - Check that the LH BUS/RH BUS tie selector is set to FLIGHT NORM.
 - Set the BAT 2 switch to BAT 2.
- On warning panel, check that:
 - **BAT 2** and **BUS TIED** lights are extinguished.
 - **GEN 1**, **GEN 2** and **GEN 3** lights are illuminated.

ELECTRICAL SERVICING

- Check that the battery voltage indication on the RH voltmeter is in the green range.
- Set LH BUS/RH BUS tie selector to the horizontal position. Check that **BUS TIED** warning light illuminates.
The RH main bus supplies the LH main bus.
- Check for presence of LH bus voltage on the LH voltmeter.

DE-ENERGIZATION OF AIRCRAFT SYSTEMS

- Set the LH BUS/RH BUS tie rotactor to FLIGHT NORM.
- Check that **BUS TIED** amber light extinguishes.
- Set the BAT 2 switch to OFF.
The voltage read on the RH voltmeter drops to zero.
- Close the rear compartment door.
- In the cockpit, or in the passenger cabin, engage the following circuit breakers:
 - "TOILET",
 - "WATER PUMP TOILET",
 - "DRAIN HEATER".

BATTERY CHARGING (SB F50–429 / OPTION)

See figure 2.

CAUTION

It is necessary to set the RECHARGE BAT switch to OFF before shutting down the GPU to prevent battery from discharging.

If SB F50–429 is applied, the batteries can be charged from the GPU.

PRELIMINARY STEPS

- Energize the aircraft systems using the GPU (see procedure ELECTRICAL SUPPLY FROM GPU).
- On the RH voltmeter, check that the voltage is between 28 and 29 V DC.
- Set the BAT 1 and BAT 2 switches respectively to BAT 1 and BAT 2.

ELECTRICAL SERVICING**BATTERY CHARGING**

- Set the RECHARGE BAT switch to ON.
- Check that the green indicator light illuminates.
- Check that the battery fan is operating.
- In the cockpit:
 - Check that **BAT 1** and **BAT 2** warning lights are still illuminated.
 - On the LH and RH ammeters, check that the batteries are charging (current values are negative).

NOTE

At beginning of charging, the current may reach negative abutment and decreases to 0 A when the battery is fully charged.

NOTE

Safety devices protect the charging system against:

- battery overheat,
- battery overcharge,
- APU start,
- GPU disconnection or failure,
- NORMAL/EXT POWER switch set to NORMAL.

If any of the above events occurs, the RECHARGE BAT switch trips to OFF position.

END OF BATTERY CHARGING

- In the rear compartment:
 - Set the RECHARGE BAT switch to OFF.
 - Check that the green indicator light extinguishes.
 - Check that the battery fan stops.

FINAL STEPS

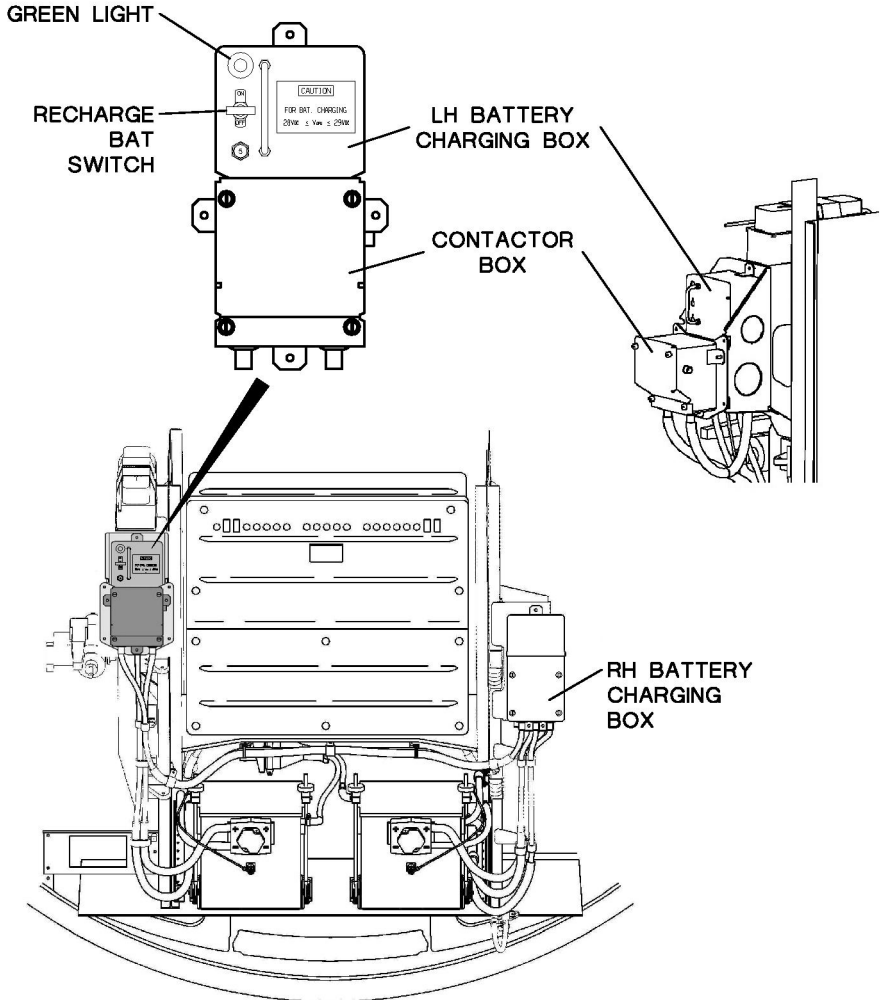
- Set the BAT 1 and BAT 2 switches to OFF.
- De-energize the aircraft systems (see procedure ELECTRICAL SUPPLY FROM GPU).

FALCON 50

GROUND SERVICING

ELECTRICAL SERVICING

- Disconnect the GPU.



- FIGURE 2 -

LOCATION OF BATTERY CHARGING BOX

ELECTRICAL SERVICING**REMOVAL / INSTALLATION OF THE BATTERIES****WARNING**

MAKE SURE THAT THE ELECTRICAL SYSTEMS STAY DE-ENERGIZED DURING THIS PROCEDURE.

WARNING

YOU MUST INSTALL THE BATTERY BLANKING PLUG OR AN ADHESIVE TAPE IN THE BATTERY CONNECTOR WHEN YOU DISCONNECT THE BATTERY. A SHORT CIRCUIT CAN CAUSE INJURY TO PERSONNEL AND/OR DAMAGE TO EQUIPMENT.

WARNING

IN VIEW OF THE WEIGHT OF THE BATTERIES, TAKE ALL APPROPRIATE PRECAUTIONS BEFORE REMOVAL/INSTALLATION.

NOTE

Two operators are necessary to remove/install a battery:

- one operator inside the servicing compartment to remove/install the battery,
- one operator outside the servicing compartment to help move the battery.

REMOVAL OF THE BATTERIES

- Disconnect the removable plug (1) and install a protective cover or non metallic adhesive tape in the battery connector.
- For A/C equipped with batteries provided with a temperature probe, disconnect the temperature probe connector (2).
- Loosen clamps on the end-fittings securing ventilation ducts (3).
- Loosen the knurled nuts (4) on the tie-rods (5) securing the batteries.
- Lift the clips and tilt back tie-rods (5).
- Remove the battery from the aircraft.

INSTALLATION OF THE BATTERIES

- Put the battery in the correct installation position on the battery base (6).
- Position tie-rods (5) and clips.
- Tighten the knurled nuts (4) on the tie-rods (5) securing the batteries.
- Fit the ventilation ducts (3) end-fittings and tighten clamps.
- For A/C equipped with batteries provided with a temperature probes, connect the temperature probe connector (2).
- Remove the protective cover or the non metallic adhesive tape from the battery connector and connect the removable plug (1) to the battery.

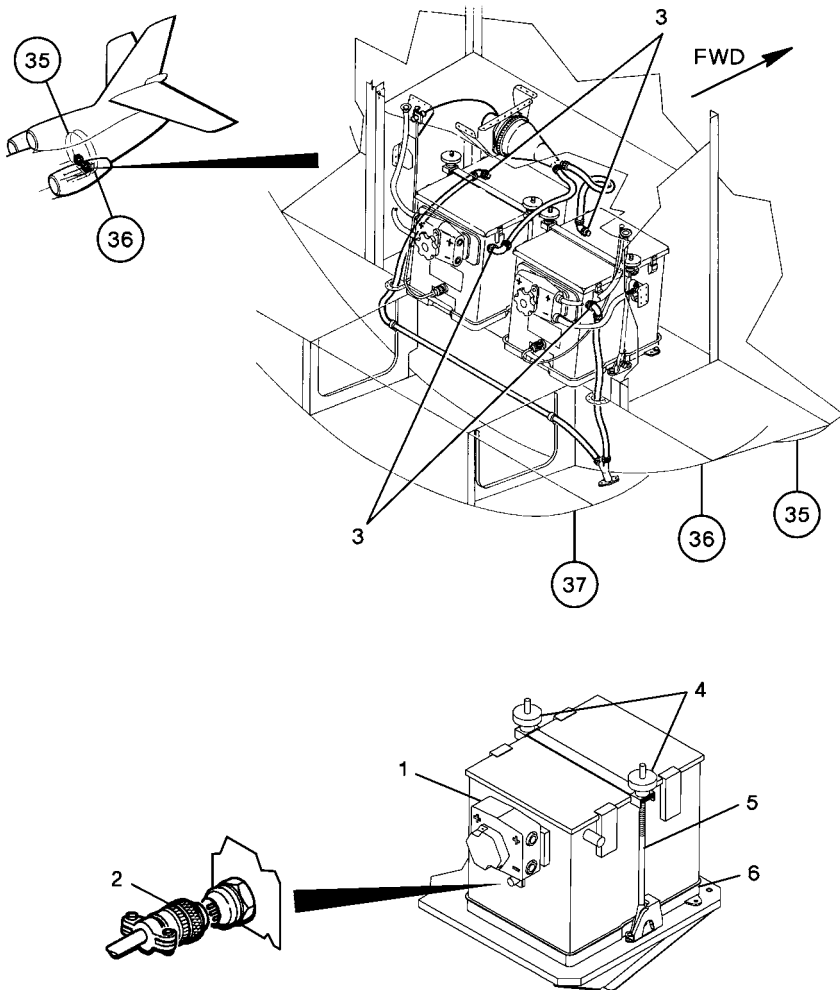
TEST

- Energize the aircraft electrical systems with the batteries (see section 3).
- De-energize the aircraft electrical systems (see section 3).

FALCON 50

GROUND SERVICING

ELECTRICAL SERVICING



– FIGURE 1 –

REMOVAL/INSTALLATION OF THE BATTERIES

PARKING AND MOORING**PARKING****WARNING**

DURING THE PREFLIGHT INSPECTION FOLLOWING AIRCRAFT PARKING AND MOORING, ALL THE MOORING EQUIPMENT ITEMS MUST BE REMOVED. ENSURE ALL BLANKED OFF OPENINGS ARE FREE OF FOREIGN OBJECTS. SPECIAL ATTENTION MUST BE PAID TO THE TOTAL AND STATIC PRESSURE PORTS.

CAUTION

When the aircraft is parked outside under strong wind or at night, it is mandatory to install the parking and mooring elements to ensure personnel safety, aircraft integrity and protection of aircraft protruding equipment by proper installation of protection equipment.

TOOLS AND EQUIPMENT

- All protectors contained in the aircraft fly away kit.
- Chocks

Qty: 6

PROCEDURE

See figures 1 and 2.

CAUTION

In case of snowfall, it is mandatory to attach the aircraft at the front mooring point (see MOORING IN SNOWY CONDITIONS).

- If required, orientate the aircraft into wind.
- Install wheel chocks.
- Check that a possible tire or shock absorber deflation cannot damage the airframe.
- Move all the ground support equipment away from the aircraft.
- Check that battery magnetic switches are set to off position.

PARKING AND MOORING**WARNING**

BEFORE USING THE STEPLADDER, INSPECT IT FOR CORRECT CONDITION.

CAUTION

Install the pitot probe covers on probes which have cooled down sufficiently for hand contact. In the event of a nylon pitot probe cover melting onto the probe tube following an incident, immediately discard the relevant pitot probe.

- Install all the plugs and covers contained in the aircraft fly away kit.
- Depending on local weather conditions and parking duration, the operator will add parking equipment (see following list) as suitable, and have the aircraft moored if necessary.

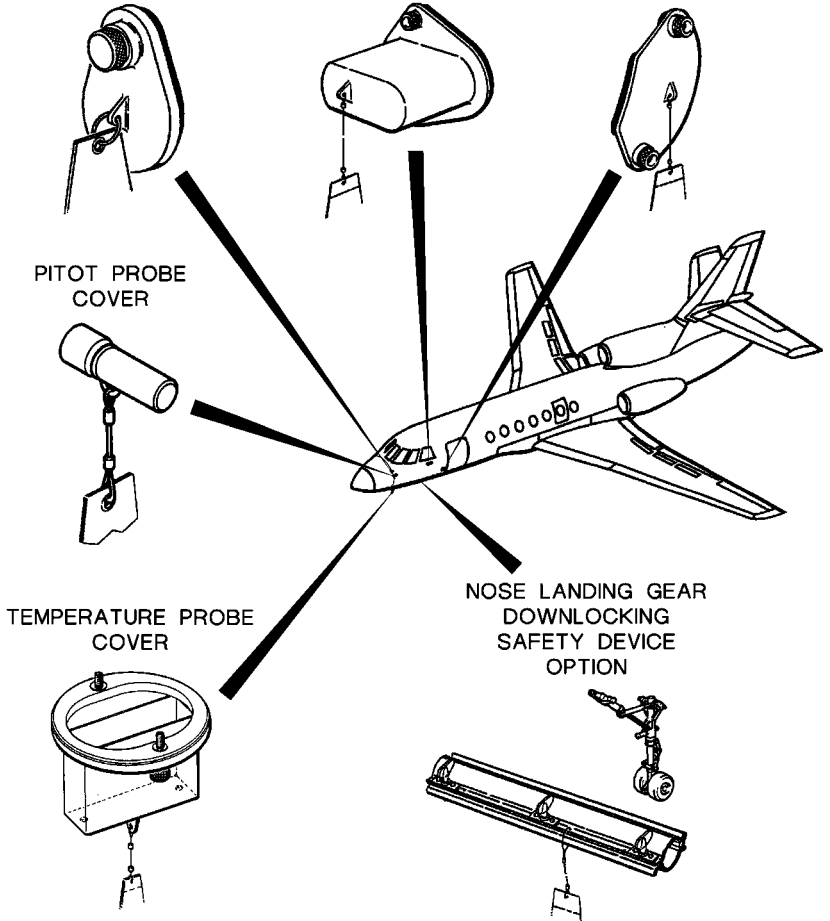
DESIGNATION	Qty
ECU exhaust cover	2
ECU lower intake cover	1
ECU upper intake cover	1
APU generator air intake cover	1
Cabin cover	1
Cabin heating cover	1
Wing centersection vent port cover	2
Feeder tank vent port cover	1
Air conditioning outlet cover	1
Forward and rear mooring	3

PARKING AND MOORING

STANDBY STATIC PORT
COVER PLATE

ANGLE OF ATTACK
TRANSMITTER COVER

NORMAL STATIC PORT
COVER PLATE



DASSAULT AVIATION Proprietary Data

– FIGURE 1 –
PLUGS AND COVERS 1/2

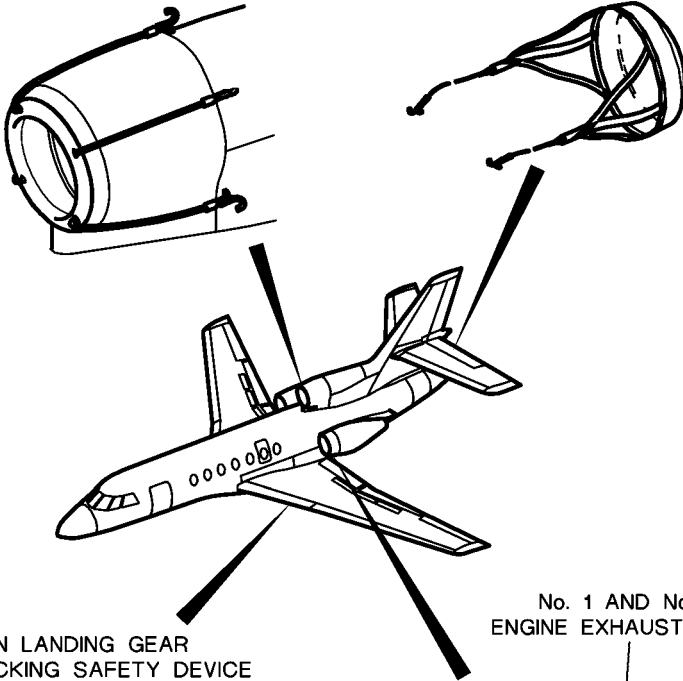
FALCON 50

GROUND SERVICING

PARKING AND MOORING

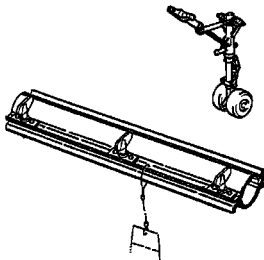
No. 2 ENGINE AIR INTAKE COVER

No. 2 ENGINE EXHAUST COVER

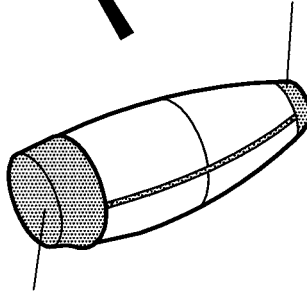


MAIN LANDING GEAR
DOWNLOCKING SAFETY DEVICE
OPTION

No. 1 AND No. 3
ENGINE EXHAUST PLUGS



No. 1 AND No. 3
ENGINE AIR INTAKE PLUGS



– FIGURE 2 –
PLUGS AND COVERS 2/2

DASSAULT AVIATION Proprietary Data

PARKING AND MOORING**MOORING****TOOLS AND EQUIPMENT**

- | | | |
|---|-----------|--------|
| – Tiedown rings | P/N: AH21 | Qty: 3 |
| – Chocks | | Qty: 6 |
| – Mooring cables
or
Mooring ropes | | Qty: 3 |

PROCEDURE

See figure 3.

CAUTION

The aircraft must be moored and parked nose into wind if it is to remain parked outside in windy conditions (aircraft tie-down points are designed to withstand wind speed up to 65 kt).

- Chock the landing gear wheels.
- Remove access plug of the jacking fittings.
- Install tiedown ring in the front jacking fitting.
- Install a tiedown ring on each wing jacking fitting.
- Moor aircraft to the ground with slightly taut cables or ropes.

MEASURES TO BE TAKEN WHEN PARKING IN COLD WEATHER CONDITION**CAUTION**

If the aircraft is subjected to freezing conditions, it is mandatory to drain the water system (see section 13.010).

CAUTION

When the aircraft is exposed to cold weather, specific measures must be taken to prevent any damage to the aircraft and its systems.

PARKING AND MOORING**NOTE**

In case of freezing condition, the check of tire inflation pressure is not to be performed during the daily servicing.

- Make sure that the chocks are installed.
- In the cockpit
 - Release the park brake handle.
 - Make sure that the reducing valve of the oxygen cylinder is closed (“OFF” position).
- In case of snowfall, moor the aircraft at the front jacking-up point.

CAUTION

Snow accumulation on the aircraft will shift the center of gravity aft .

- Dassault recommends that aircraft main batteries be removed whenever the ambient temperature is forecast to be lower than - 15°C (5°F) (see section 3). Dassault also recognizes that operational considerations may prevent this from being consistently applied each time temperatures reach this threshold.

MOORING IN SNOWY CONDITIONS**TOOLS AND EQUIPMENT**

- Tiedown ring P/N: AH-21
- One mooring cable or mooring rope.

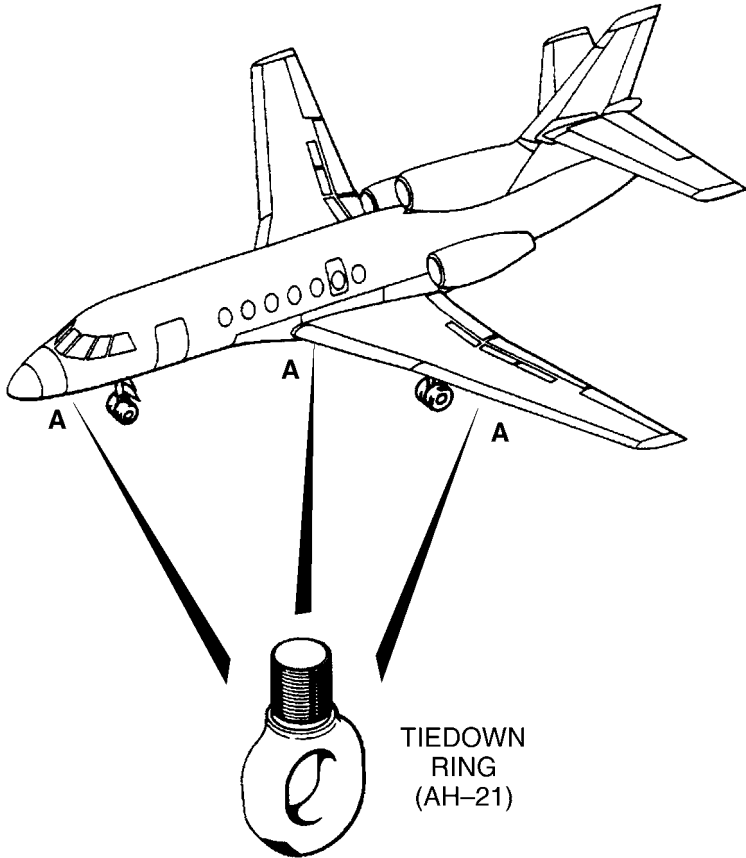
PROCEDURE

See figure 3.

- Perform aircraft PARKING procedure.
- Moor the aircraft to the ground at the front jacking point.
 - Remove access plug of the front jacking fitting.
 - Install tiedown ring (AH-21) in the front jacking fitting.
- Moor aircraft to the ground with a slightly taut cable or rope.

PARKING AND MOORING**CAUTION**

When parking the aircraft in freezing conditions, it is recommended to drain entire water system (see section 13.010).



DETAIL A: INSTALLATION OF FRONT MOORING RING
ONTO FRAME 0 MOORING FITTING
AND REAR MOORING RING FITTING
ONTO RIBS 5.

– FIGURE 3 –
TIEDOWN RINGS



FALCON 50
GROUND SERVICING
PARKING AND MOORING

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DASSAULT AVIATION Proprietary Data

TOWING THE AIRCRAFT WITH A TOWBAR

TOOLS AND EQUIPMENT

- Light towbar TF50B09101
- Tractor towbar TF50B09102
- TRONAIR Tractor towbar (non collapsible) 01-1202-0000
- TRONAIR Tractor towbar (non collapsible) 01-1329-0000
- TRONAIR Towbar attachment head 01-0612-0000
- Chocks Qty: 6

NOTE

TRONAIR towbar attachment head can only be used with TRONAIR towbar P/N 01-1202-0000 or TRONAIR towbar P/N 01-1329-0000

ADDITIONAL SPARE PARTS (IF NECESSARY)

- Shear pin P/N: TMY20-09-105005 Qty: 3
- Shear pin P/N: Z-7812 Qty: 3

NOTE

Only use shear pin P/N Z-7812 with towbar 01-1202-0000
Only use shear pin P/N TMY20-09-105005 with towbar TF50B09102

CAUTION

Only use a towbar that is specified in the tools and ground support equipment section. In case of high load due to poor ground conditions (snow, cracks or steps in the ground), an unsuitable towbar can cause damage to the landing gear structure (bending).

UTILIZATION OF THE LIGHT MANUAL TOWBAR (TF50B09101)

See figure 1.

FALCON 50

GROUND SERVICING

TOWING

This towbar is used to move the aircraft by hand (steering engaged or disengaged).

UTILIZATION OF THE TRACTOR TOWBAR (TF50B09102) or (01-1202-0000) or (01-1329-0000)

CAUTION

It is mandatory to disconnect the Nose Wheel Steering (NWS) control when towing the aircraft with the tractor towbar.

PRELIMINARY STEPS

See figure 1.

- Disconnect the bonding braid.
- Uncouple the torque links:
 - Lift the lever.
 - Unscrew and remove the castellated nut.
 - Pull out the pin.
 - Lower the lower torque link along the shock absorber sliding tube.
 - Keep the upper torque link in up position.
 - Install the pin in the upper fitting with the castellated nut.
 - Install and hand-tighten the castellated nut.
 - Lower the lever.
- Check the charging pressure of the park brake accumulator. As required, use the stand-by pump to adjust the pressure in hydraulic system 2.
- In the cockpit, check that :
 - an operator is present to operate the park brake handle if required,
 - the park brake is operating.
- Check that there is no equipment around the aircraft.
- Check that all external equipment is disconnected, including grounding wire.

TOWING THE AIRCRAFT

- Attach the towbar to the towing fittings (latch handle in position 2).

FALCON 50

GROUND SERVICING

TOWING

- Latch the towbar to the towing fittings (by setting the latch handle in position 1).
- Remove the wheel chocks.
- Release the park brake.
- Tow the aircraft smoothly while observing the steering radii and angles (see figure 2).

NOTE

The towbar is fitted with three stress-limiting shear pins: one lateral limiting shear pin, two tension limiting shear pins. If one of the pins breaks, stop towing immediately and use the spare pins delivered with the towbar.

Pin calibration (for shear pin P/N TMY20–09–105005) :

- tension: 3300 daN (7419 lbf),
- lateral: 100 daN.m (737 lbf.ft).

- When finished towing, it is recommended to park the aircraft with the nose wheels aligned with the aircraft axis. Then pull the park brake to the first notch.

NOTE

The aircraft must be stopped by the towing vehicle only, except in case of emergency.

MINIMUM TURNING RADIUS

See figure 2.

- With steering disconnected: 11.2 m (36.74 ft).
- With steering engaged: 13.5 m (44.29 ft).

FINAL STEPS

- Install the wheel chocks.
- Unlock and remove the towbar.
- Couple torque link to the rotating tube:
 - Lift the lever.
 - Unscrew the castellated nut and remove the pin from the upper fitting.

FALCON 50

GROUND SERVICING

TOWING

- Align the holes in the two link arms.
- Install the pin.
- Hand-tighten the castellated nut.
- Lower the lever in the nearest notch of the castellated nut.
Slightly loosen the castellated nut if necessary.

NOTE

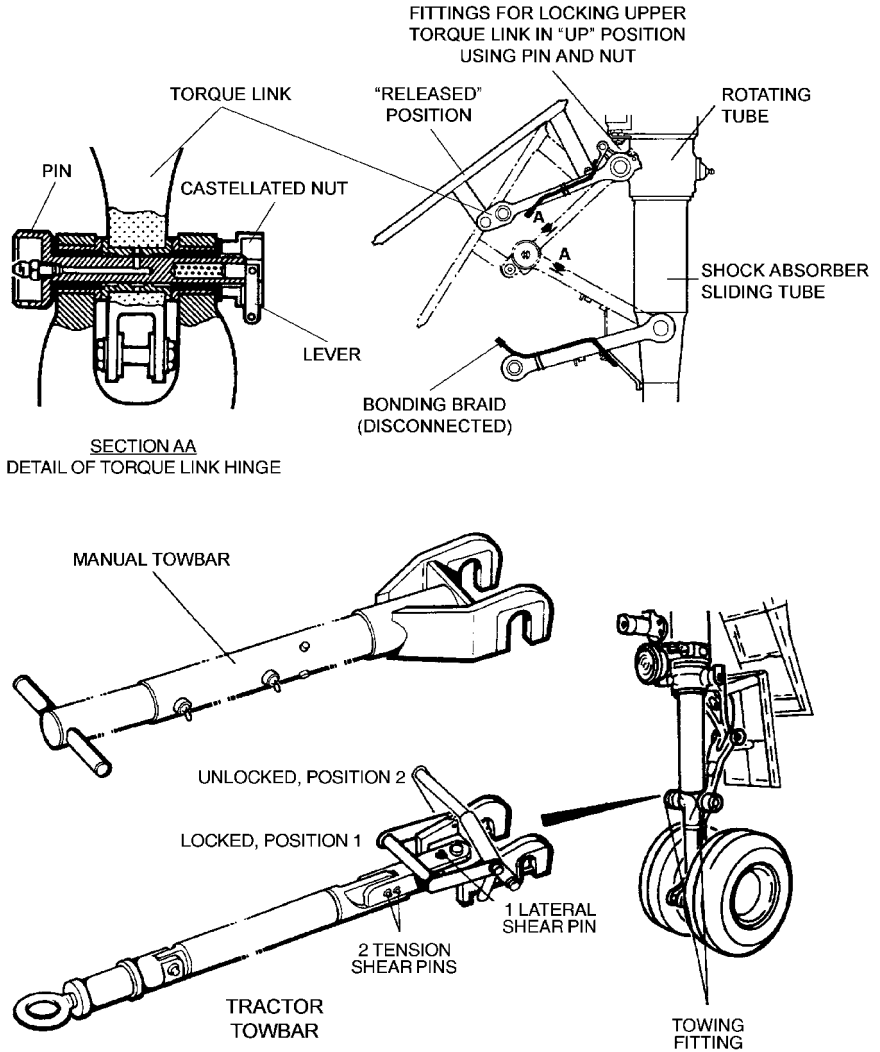
A lateral or side movement of the nut on the thread is acceptable, provided that the nut can be hand-tightened and the lever can be locked into the nut notch.

- Connect the bonding braid.
- If you use the collapsible towbar, make sure that the towbar is properly stored.

FALCON 50

GROUND SERVICING

TOWING



DASSAULT AVIATION Proprietary Data

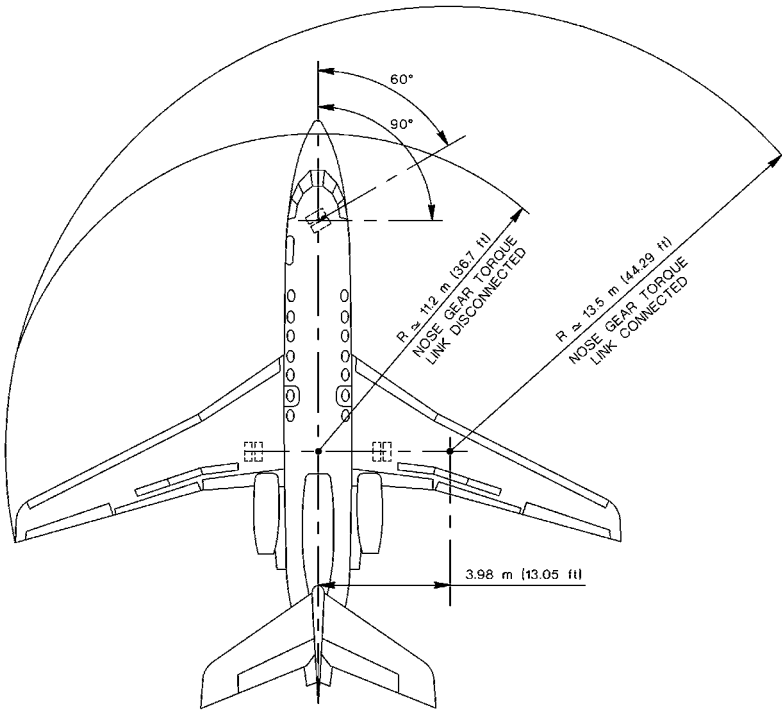
– FIGURE 1 –

DISCONNECTION OF STEERING CONTROL – TOWING

FALCON 50

GROUND SERVICING

TOWING



– FIGURE 3 –
MINIMUM TURNING RADII

NOTE

Landing gear:

- wheel base: 7.24 m (23.75 ft),
- wheel track: 3.98 m (13.05 ft).

FALCON 50

GROUND SERVICING

TOWING

TOWING THE AIRCRAFT WITH A TOWBARLESS VEHICLE
--

TOOLS AND EQUIPMENT

- LEKTRO Towbarless vehicle type AP8700, AP8750, AP8800, AP8850, AP8900 or AP8950

OR

- LIFTOW Towbarless vehicle P/N: 50AC
- Interface tool P/N: APM2466
- Chocks Qty: 6

ADDITIONAL SPARE PARTS (IF NECESSARY)

- Shear pin P/N: APM2466-2

PRELIMINARY STEPS

See figure 1.

- Disconnect the bonding braid.
- Uncouple torque links:
 - Lift the lever
 - Unscrew the castellated nut.
 - Pull out the pin.
 - Lower the lower torque link along the shock absorber sliding tube.
 - Keep the upper torque link in up position.
 - Install the pin into the upper fitting with castellated nut.
 - Install and hand-tighten the castellated nut.
 - Lower the lever.
- Check the interface tool:
 - shear pin in good condition,
 - red-painted area not visible (see figure 3).
- Check the charging pressure of the park brake accumulator.
As required, use the stand-by pump to adjust the pressure in hydraulic system 2.
- In the cockpit, check that:
 - an operator is present to operate the park brake handle if required,
 - that the park brake is operating.
- Check that there is no equipment around the aircraft.
- Check that all external equipment is disconnected, including grounding wire.

TOWING THE AIRCRAFT

See figures 3 and 4.

CAUTION

Before towing the aircraft, check that the torque link is disconnected.

During towing, use aircraft brakes only in case of emergency, modify the speed smoothly and change directions slowly.

FALCON 50

GROUND SERVICING

TOWING

CAUTION

During the **winching** or **towing** operations, if the interface tool shear pin breaks (red-painted area is visible):

- Stop the operation immediately.
- Install the spare shear pin.
- Perform a check of the nose landing gear.

CAUTION

If the aircraft is parked on a slope facing the towing vehicle, the cradle should be driven under the tire until the aircraft is fully secured, before removing the wheel chocks and releasing the park brake.

- Position the towbarless vehicle.
- Attach the interface tool to the towbarless vehicle strap hook first and then to the nose gear towing fittings.
- Remove the wheel chocks.
- Release the park brake.
- Winch the nose gear onto the cradle of the towbarless vehicle until the tires are firmly applied against the stop.
- Actuate the winch cut-off control according to the towbarless vehicle operating manual.
- Lift the cradle.
- Tow the aircraft smoothly while observing the steering angle and radius (see figure 2) and the following limits:
 - acceleration limited to 0.16 g,
 - deceleration limited to 0.2g.
- At the end of towing, it is recommended to park with nose wheels aligned with the aircraft axis.

Then pull the park brake to the first notch.

NOTE

The aircraft must be stopped by the towing vehicle only, except in an emergency.

FALCON 50

GROUND SERVICING

TOWING

- Lower the cradle.
- Remove the interface tool.
- Slowly move the towbarless vehicle away from the aircraft.

FINAL STEPS

See figure 1.

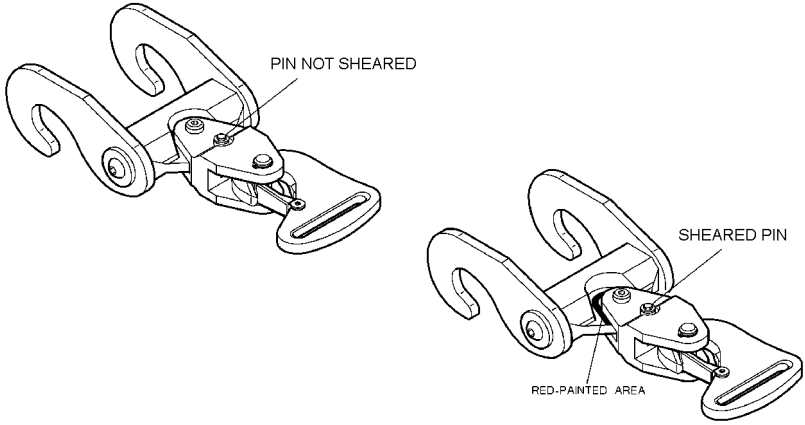
- Install the wheel chocks.
- Couple torque links:
 - Lift the lever.
 - Unscrew the castellated nut and remove the pin from the upper fitting.
 - Align the holes in the two link arms.
 - Install the pin.
 - Finger-tighten the castellated nut.
 - Lower the lever in the nearest notch of the castellated nut.Slightly loosen the castellated nut if necessary.

NOTE

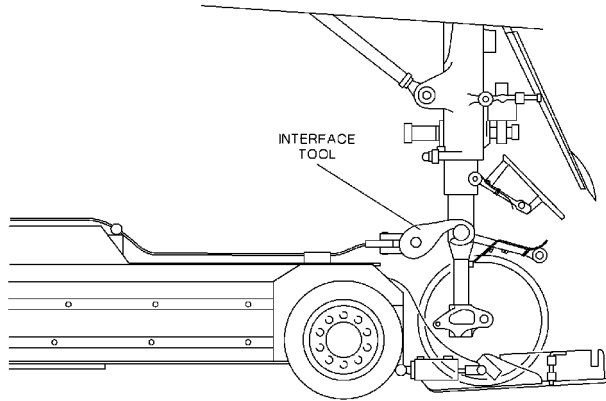
A lateral or side movement of the nut on the thread is acceptable, provided that the nut can be finger-tightened and the lever can be locked into the nut notch.

- Connect the bonding braid.

FALCON 50 GROUND SERVICING TOWING



– FIGURE 3 –
INTERFACE TOOL



– FIGURE 4 –
TOWBARLESS VEHICLE

FALCON 50
GROUND SERVICING
TOWING

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FALCON 50

GROUND SERVICING

ON-BOARD EQUIPMENT

Check the contents of the fly away kit and the various tools in the fly away kit.

TOOLS IN REAR COMPARTMENT

DESIGNATION	Qty
No. 1 and No. 3 engine 1 air intake plugs	2
No. 1 and No. 3 engine 1 exhaust plugs	2
No. 2 engine air intake blanking cover	1
No. 2 engine exhaust blanking cover	1
Blanking cover for temperature probe	1
Fuel tank sump tool	1
Fuel tank sump tool kit	1
Fuel drain cap (if equipped)	2
Fuel drain cap tool (if equipped)	1

TOOLS IN PASSENGER/CREW DOOR LOWER STEP

DESIGNATION	Qty
Pitot probe cover	2
Normal static probe cover	2
Standby static pressure probe cover	2
Angle-of-attack probe cover	2
Pin to hold thrust reverser in stowed position	1
Pin to hold thrust reverser in deployed position	1
ECU door safety pin	1

ON-BOARD EQUIPMENT**TOOLS IN PASSENGER/CREW DOOR UPPER STEP**

DESIGNATION	Qty
Jack pad	3
Down locking safety device for nose landing gear (optional)	1
Down locking safety device for main landing gear (optional)	2
Transfer pump drain wrench	1
No. 2 engine winch crank	1

FUEL PANEL COMPARTMENT

DESIGNATION	Qty
Electrostatic grounding set for gravity fueling	1

ENGINE LUBRICATION

EQUIPMENT

- Spout.
- Clean lint-free cloth.

INGREDIENTS

- Refer to the engine LMM 72–00–00 for approved engine oils.
- Lockwire

PRELIMINARY

CAUTION

Before opening the engine cowling after unlatching, fully retract latches to prevent damage.

- Open corresponding engine cowling:
 - With the engine cowling door in the fully closed position, open the latches in the following order:
 - rear latch,
 - centre latch,
 - forward latch.
 - Using one hand to align the forward edge of the door with the nose cowl seam, lower the door with the other hand to the open position.
 - Take the weight of the door in one hand.
 - Secure the engine cowling with its hold-open struts.

OIL TANK FILLING AND REPLENISHING

See figures 1,2,3 or 4

NOTE

The oil level must be checked between 10 and 60 minutes after the engine has been shut down.

- Check the oil level through the transparent window.

FALCON 50

GROUND SERVICING

ENGINE

- Unsafety the tank cap (if lockwire present) and, to unlock, push and then turn counterclockwise 1/4 turn to clear the latching dogs.

NOTE

(Original oil tank label)

As No 1 tank access is not easy, remove the cap located at the end of the oil refill tube on the LH side of the engine.

The dipstick fitted on the cap is scaled in missing quarts ("FULL" - "1 Qt/low") to gauge refill quantities.

It should not be used to check the oil level.

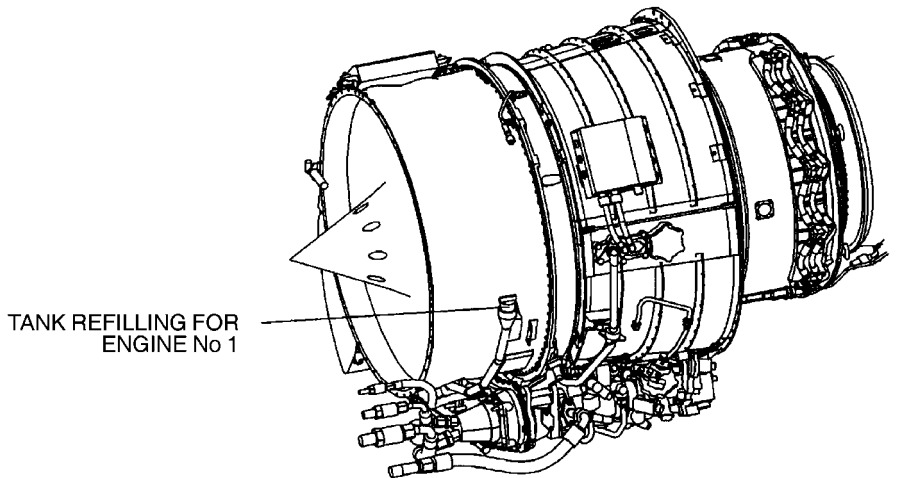
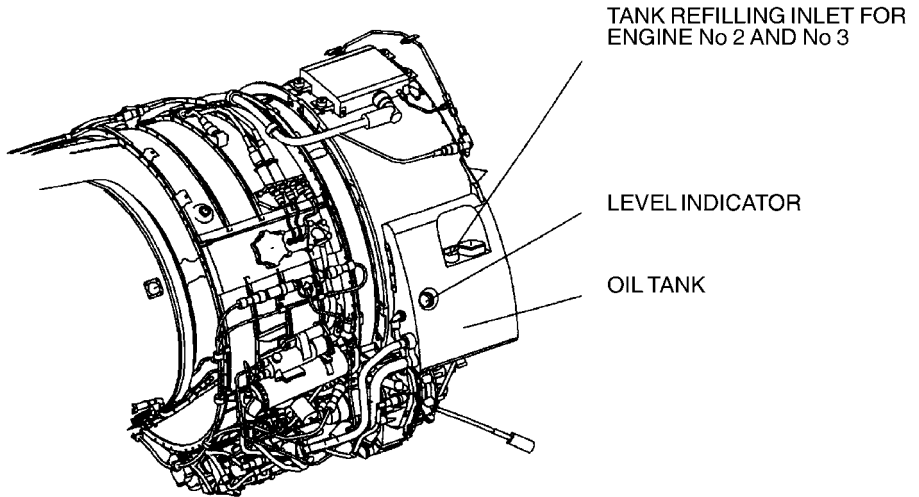
Use the sight glass on the tank instead (see figure 1).

- (Original oil tank label) Fit the oil can with a spout and replenish to the "1 Qt/low" indication or slightly below (see figure 2 or 3).
- (New oil tank label) Fit the oil can with a spout and replenish to the green range (see figure 4).
- Install and lock the tank cap. Make sure that the yellow marks on cap and tank are aligned.
- If the tank cap was safetied before removal, safety it with lockwire.

FINAL STEP

- Release the hold-open struts from the engine, and secure them on the engine cowling.
- Take the weight of the door in one hand.
- Using the other hand to align the forward edge of the door within nose cowl seam, raise the door to the fully closed position.
- Operate the latches to the closed position in the following order:
 - forward latch,
 - centre latch,
 - rear latch.

FALCON 50 GROUND SERVICING ENGINE

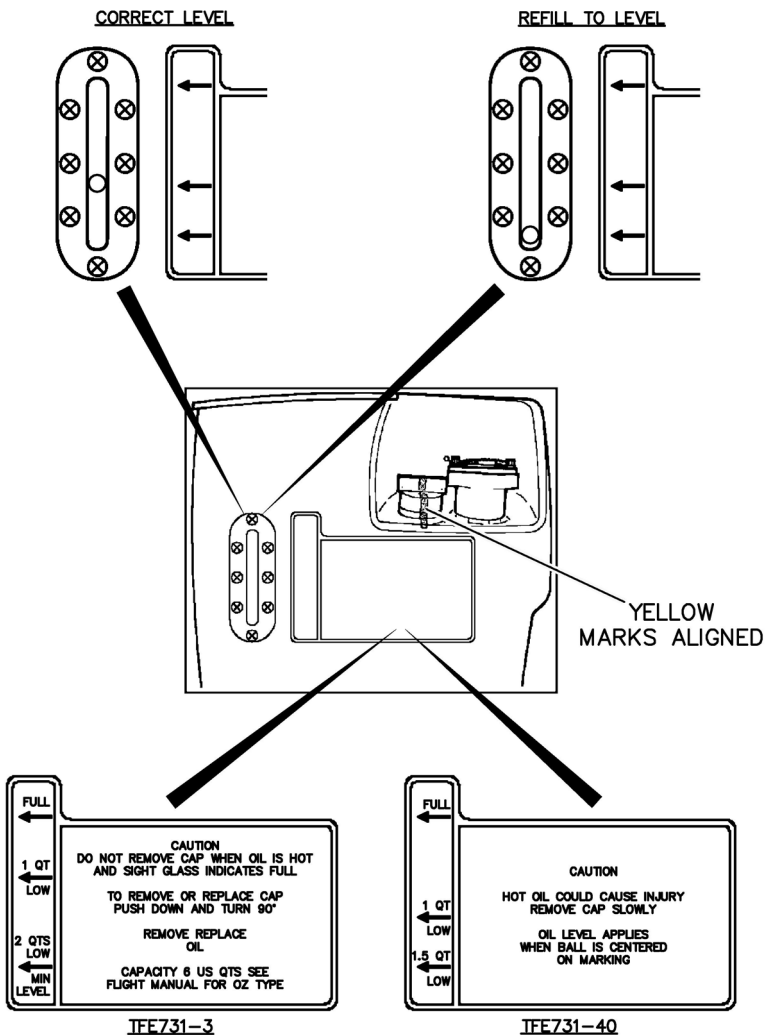


– FIGURE 1 –
REFILLING PORT

FALCON 50

GROUND SERVICING

ENGINE



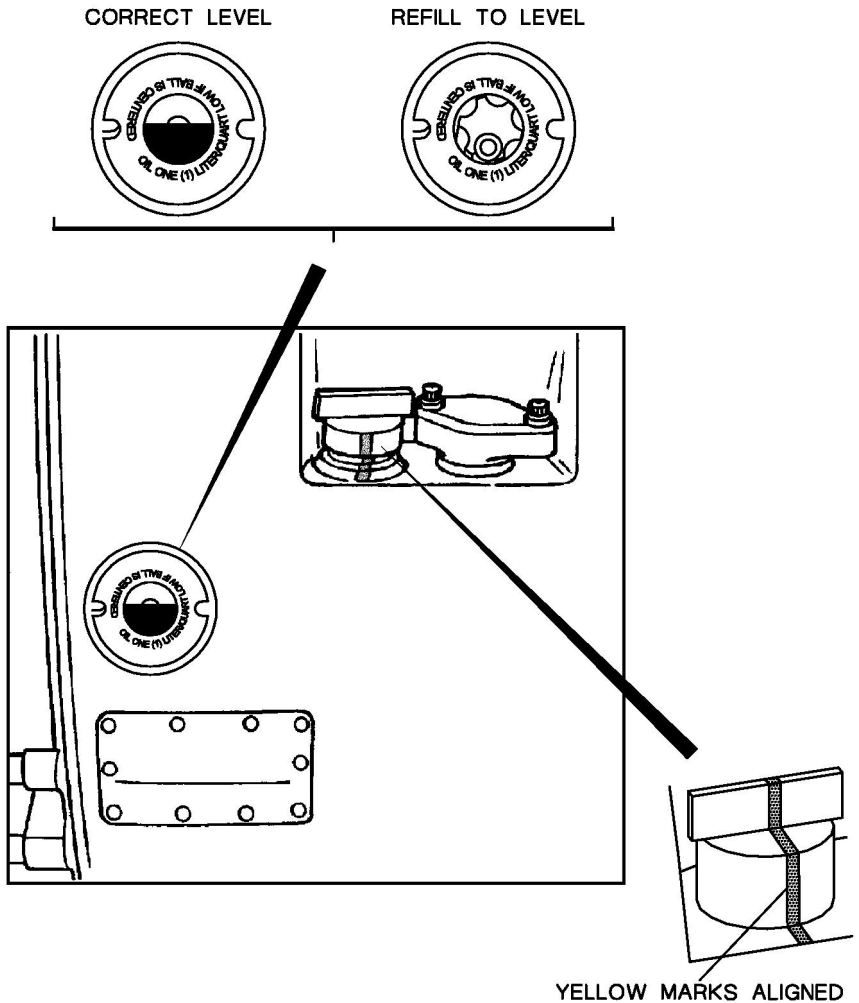
- FIGURE 2 -

(ENGINE TFE 731-3 OR TFE 731-40)
CHECK OF ENGINE OIL LEVEL
(ORIGINAL OIL TANK LABEL)

FALCON 50

GROUND SERVICING

ENGINE

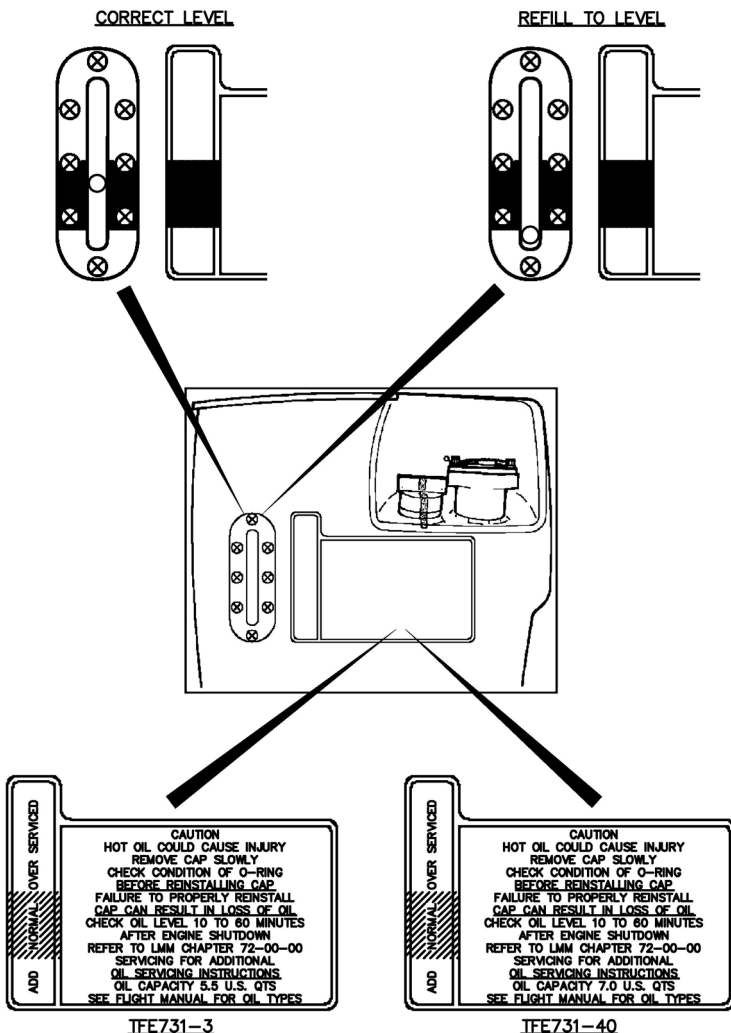


– FIGURE 3 –
(ENGINE TFE 731-40)
CHECK OF ENGINE OIL LEVEL

FALCON 50

GROUND SERVICING

ENGINE



- FIGURE 4 -
 (ENGINE TFE 731-3 OR TFE 731-40)
 CHECK OF ENGINE OIL LEVEL
 (NEW OIL TANK LABEL)

DASSAULT AVIATION Proprietary Data

APU-LUBRICATION**APU LUBRICATION**

See figure 1

INGREDIENTS

Refer to the APU Maintenance Manual 49-20-00 for approved APU oils.

CAUTION

Exxon/Esso Turbo Oil 2380 and Mobil Jet II may be mixed.
No other oil brands are approved for mixing.

PRELIMINARY STEPS

- Open the engine 2 cowlings.
- Remove the inspection door.

APU OIL LEVEL CHECK AND OIL TANK FILLING AND REPLENISHING

- Remove the oil filler cap/dipstick assembly and wipe off oil.
- Install the oil filler cap/dipstick and make sure that it is fully engaged.

NOTE

Make sure that the dipstick is pushed in fully. If the dipstick is not pushed to the bottom, an incorrect oil level reading will be obtained.

- Turn and remove the oil filler cap/dipstick.
- Check the APU oil level:

NOTE

The APU oil tank is full when the oil level is 5 mm (0.2 in) above the ADD line on the dipstick.

CAUTION

Add oil of the same specification and manufacturer's brand as the oil already in the tank. Do not mix oils of different specifications or brands.

FALCON 50

GROUND SERVICING

APU-LUBRICATION

CAUTION

Do not overfill the gearbox. The oil may flow from the gearbox vent tube if the gearbox is overfull. The gearbox is sufficiently full when oil is 5 mm (0.2 in) above the ADD line on the dipstick.

- If the oil level is not above ADD line on dipstick, add oil until the oil is 5 mm (0.2 in) above ADD line.

NOTE

The capacity of the APU oil tank is 2.2 l (0.58 USG).

- Fit the oil filler cap/dipstick assembly.

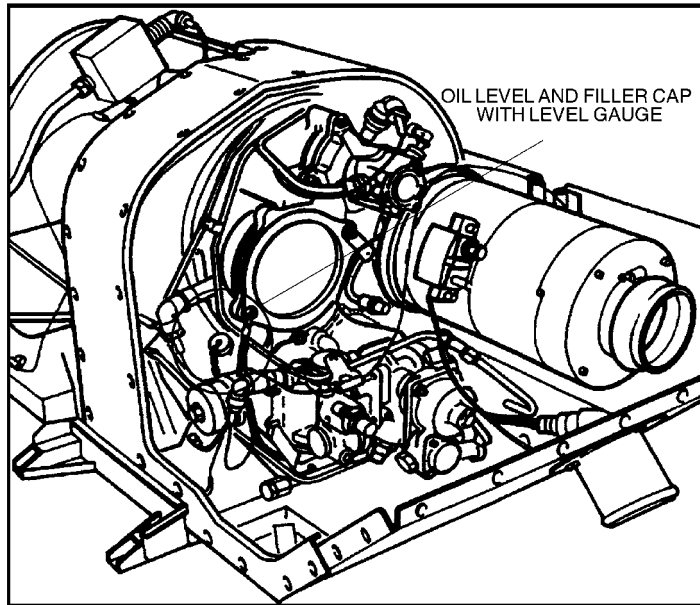
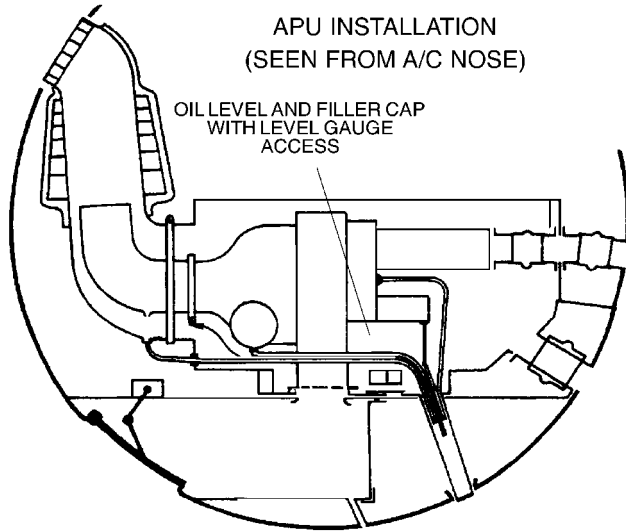
FINAL STEPS

- Install the inspection door.
- Close the engine 2 cowlings.

FALCON 50

GROUND SERVICING

APU-LUBRICATION



– FIGURE 1 –

FALCON 50
GROUND SERVICING
APU-LUBRICATION

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FUEL-GENERAL**TYPES OF FUEL**

Refer to Airplane Flight Manual.

NOTE

When shifting to another type of fuel, or when using a fuel mixture, it is necessary to modify the engine computer display setting according to the instructions set forth in the authorized maintenance manual for the HONEYWELL TFE 731-3 engine or TFE 731-40 engine according to the motorization of the aircraft..

FUEL ADDITIVES**CAUTION**

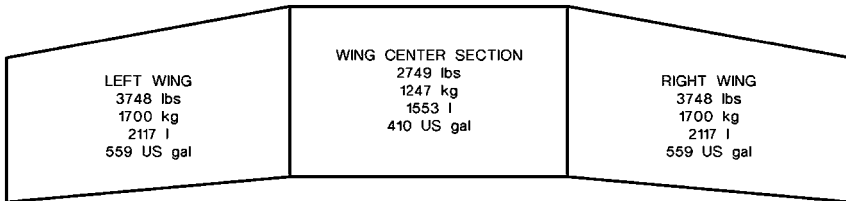
Never pour undiluted additive into an empty tank.

Refer to Airplane Flight Manual.

FUEL-GENERAL

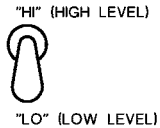
FUEL CAPACITY AND WEIGHT

CAPACITY OF TANKS



FEEDER TANKS

LEFT	CENTER	RIGHT
1404 lbs 637 kg 793 l 210 US gal	2460 lbs 1116 kg 1390 l 367 US gal	1404 lbs 637 kg 793 l 210 US gal
609 lbs 276 kg 344 l 91 US gal	1750 lbs 794 kg 988 l 261 US gal	609 lbs 276 kg 344 l 91 US gal



COMPLETELY REFUELED "HI" LEVEL

15513 lbs
7073 kg
8763 l
2315 US gal

PARTIALLY REFUELED "LO" LEVEL

13213 lbs
5993 kg
7463 l
1971 US gal

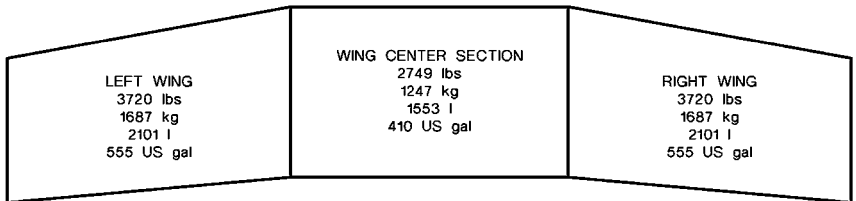
– FIGURE 1 –

AIRCRAFT WITHOUT SB 496

DASSAULT AVIATION Proprietary Data

FUEL-GENERAL

CAPACITY OF TANKS



FEEDER TANKS

LEFT	CENTER	RIGHT
1404 lbs 637 kg 793 l 210 US gal	2460 lbs 1116 kg 1390 l 367 US gal	1404 lbs 637 kg 793 l 210 US gal
609 lbs 276 kg 344 l 91 US gal	1750 lbs 794 kg 988 l 261 US gal	609 lbs 276 kg 344 l 91 US gal

"HI" (HIGH LEVEL)



"LO" (LOW LEVEL)

COMPLETELY REFUELED "HI" LEVEL

15456 lbs
7011 kg
8731 l
2306 US gal

PARTIALLY REFUELED "LO" LEVEL

13156 lbs
5967 kg
7431 l
1963 US gal

– FIGURE 2 –

AIRCRAFT WITH SB 496



FALCON 50
GROUND SERVICING
FUEL-GENERAL

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DASSAULT AVIATION Proprietary Data

PRESSURE REFUELING**CAUTION**

Take the applicable safety measures. A fire extinguisher must be available near the aircraft.

NOTE

Anti-icing products such as Prist are known to slow the development of micro-organisms by reducing the amount of free water in fuel. It is recommended to use fuel treated with Prist (or equivalent anti-icing additive) when available. However, these products must not replace Biobor or Kathon for biocide treatment as they do not have the same effect.

NOTE

The aircraft is normally refueled under pressure, but gravity refueling can be used if pressure refueling is not possible. The fueling flow rate of tanks is limited to 300 l/min (79 USG/min) at a 50 psi / 3.5 bar / 350 kPa maximum pressure.

NOTE

Make sure that the fuel quantity in the center section tank is less than 2350 lb. If the quantity is greater, defuel the center tank as described in TASK 28-30-00-650-801.

PRELIMINARY STEPS**CAUTION**

The electrostatic links must include:

- fuel truck-to-aircraft,
- refueling coupling-to-aircraft connections before connecting the coupling to the aircraft.

Proper weight distribution must be followed during the fueling operation.

See figure 1.

The pressure refueling operation allows selection of either HI or LOW (LEVEL) refueling of the feeder tanks by means of the REAR selector on PRESSURE REFUELING PANEL.

- Make the fuel truck/aircraft electrostatic link on the relevant connector on the RH landing gear leg.
- Make the coupling/aircraft electrostatic link (grounding receptacle located beside the pressure refueling port).

CAUTION

Be attentive to the quality of the fuel in the fuel truck.
Check for signs of contamination, deposits or water.

- Remove the refueling filler plug and connect the fuel truck coupling.

**PRESSURE REFUELING WITH BAGGAGE COMPARTMENT
LOAD LOWER THAN 400 KG (882 LB)**

- Open access door of pressure refueling panel.
 - The red **STOP FUELING** light is illuminated.
 - The green **FUELING OK** light is extinguished.
- Lift the vent valve control lever.

FUEL - REFUELING

- The red **STOP FUELING** light extinguishes.
- The green **FUELING OK** light illuminates.

NOTE

If the red **STOP FUELING** warning light stays illuminated, it is possible to set the vent valves manually to the OPEN position after removal of the relevant access doors (see figure 3).

- Establish refueling nozzle to aircraft electrostatic links through the receptacle provided for that purpose (next to refueling connector), before connecting refueling nozzle to refueling connector.
- Set LH WING, CENTER and RH WING switches to ON position.
- Set REAR switch to the position corresponding to the feeder tank refueling: either HI or LO position.
- Start the fuel truck (minimum outlet pressure: 1.2 bar (17.4 psi)).
- Open test valve.

The fuel must stop flowing after approximately 20 seconds (check the counter).

NOTE

If fuel does not stop flowing, stop pressure refueling.
If fuel stops flowing, close the test valve: refueling is resumed.

**PRESSURE REFUELING WITH BAGGAGE COMPARTMENT
LOAD GREATER THAN 400 KG (882 LB)****NOTE**

In case of baggage compartment load greater than 400 kg (882 lb), the pressure refueling procedure is modified and indicated on a plate on the refueling door.

- Start refueling with REAR switch set to LO position on the refueling panel.

FUEL - REFUELING

- After automatic sequence stop, check on cockpit fuel gauges that wing and center section tanks have been correctly filled.
- Then set REAR switch to HI position to top up the tanks if necessary.

FINAL STEPS

- When the fuel truck has stopped delivering fuel, shut down the truck pump and remove the refueling nozzle.

Visually check that the refueling connector sealing valve has come back to its seat and that there is no fuel leakage.

- Disconnect electrostatic links.
- Lower the vent valve control lever.

NOTE

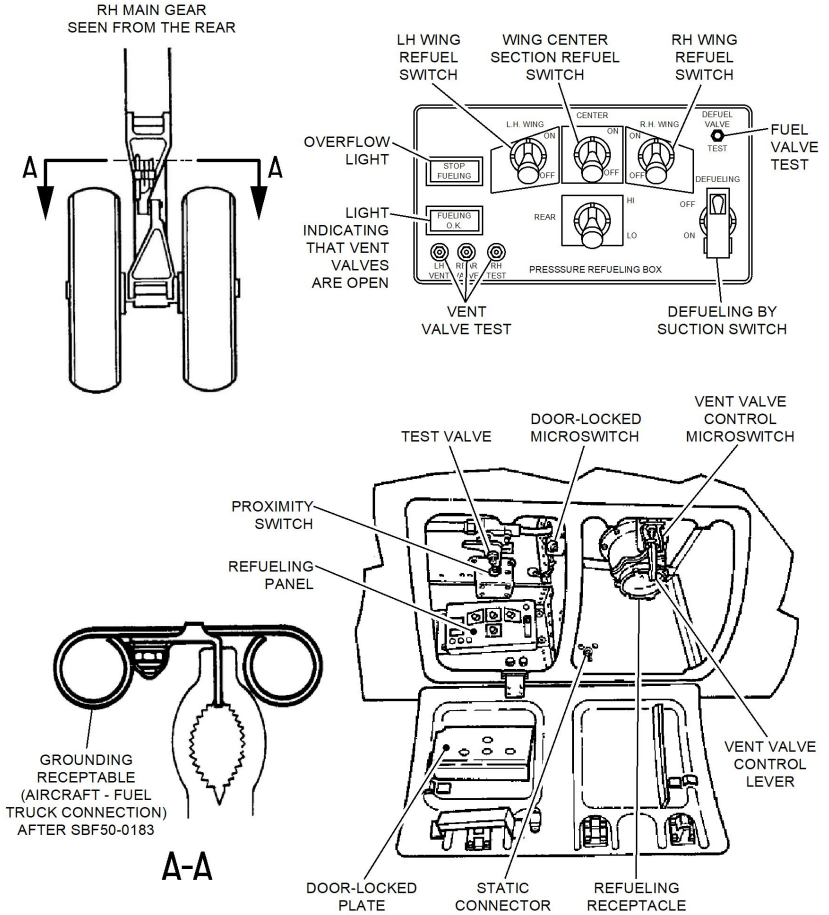
If the vent valves have been manually opened, manually set the vent valves to the CLOSED position through the relevant access doors (see figure 3).

Place a “FUEL VENT VALVES MANUALLY CLOSED” placard in sight on the cockpit pedestal.

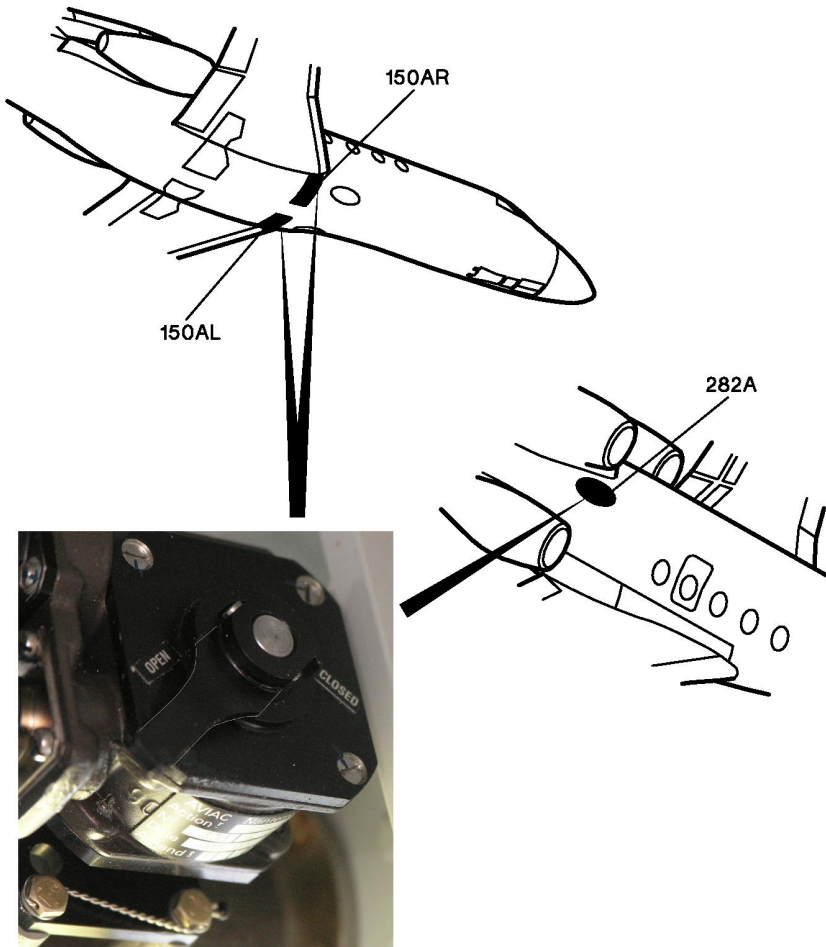
- Set REAR switch to LO position.
- Set LH WING, CENTER and RH WING switches to OFF position.
- Close access door of pressure refueling panel.

NOTE

The access door of refueling panel can be closed only if the switches are in the required position.



- FIGURE 1 -



- FIGURE 3 -

FUEL - REFUELING**GRAVITY REFUELING****CAUTION**

Take the applicable safety measures. A fire extinguisher must be available near the aircraft.

NOTE

Make sure that the fuel quantity in the center section tank is less than 2350 lb.

If the quantity is greater, defuel the center tank as described in TASK 28-30-00-650-801.

NOTE

Anti-icing products such as Prist are known to slow the development of micro-organisms by reducing the amount of free water in fuel. It is recommended to use fuel treated with Prist (or equivalent anti-icing additive) when available. However, these products must not replace Biobor or Kathon for biocide treatment as they do not have the same effect.

TOOLS AND GROUND SUPPORT EQUIPMENT

Designation	Reference	Quantity
• Electrostatic grounding set for gravity fueling	TF50B28201	IOB
• DC electrical ground power unit.		

PRELIMINARY STEPS

See figure 2 and figure 4.

NOTE

Fuel tank capacity: refer to section 9.010.

- Connect the electrical ground power unit and energize the aircraft (see section 3).

CAUTION

In order to limit heating of the warning panel during refueling, set BRIGHT–DIM switch to DIM position.

- In the cockpit, on maintenance panel, set the GRAVITY FUELING switch to ON position.

The **FUELING** light (warning panel) illuminates.

- On the pressure refueling panel
 - Check that the REAR switch is in LO position.
 - Set DEFUELING switch to ON position.

CAUTION

Be attentive to the quality of the fuel in the fuel truck.
Check for signs of contamination, deposits or water.

- Unlock and remove the gravity refueling tank filler caps.

NOTE

The two open filler caps ensure venting of the wing center section tank in the event of a failure of the venting valve in closed position.

CAUTION

The electrostatic links must include:

- fuel truck–to–aircraft,
 - refueling nozzle–to–aircraft connections before inserting the refueling nozzle in the refueling port.
-
- Make the fuel truck/aircraft electrostatic link on the relevant connector on the RH landing gear leg.
 - Before inserting the nozzle in the fueling port, make the coupling-to-aircraft electrostatic link on electrostatic grounding set after inserting the latter in LIFE LINE port located respectively beside LH and RH gravity fueling caps (the

FUEL - REFUELING

electrostatic grounding set is stowed in the pressure refueling compartment).

CAUTION

Never pour undiluted additive in an empty tank.

- At this stage, the procedure to be followed varies according to the required refueling mode:
 - partial refueling $Q < 4,048$ lb (Q is the fuel quantity for the wing tanks and the lateral feeder tanks),
 - partial refueling $Q > 4,048$ lb,
 - total refueling.

PARTIAL REFUELING $Q < 4,048$ LB

CAUTION

The minimum wing fuel quantity before to set XFR PUMP switches is ≥ 200 lb.

- On overhead panel, set RH and LH XFR PUMP switches to ON position.
- Fill up the wing tanks.
- On overhead panel, set XFR INTERCOM rotary to OPEN position.
- When the fuel quantity in the feeder tanks is > 450 lb, on overhead panel:
 - Set RH and LH BOOSTER switches to ON position.
 - Set X FEED rotary switches to OPEN position.

NOTE

During refueling of the wing center tank, maintain a sufficient quantity of fuel in the LH and RH feeders and wing tanks to avoid unpriming.

- When the wing center section tank is full, on overhead panel:

FUEL - REFUELING

- Set XFR INTERCOM rotary switches to CLOSED position.
 - Set RH and LH XFR PUMP switches to OFF position.
 - Set RH and LH BOOSTER switches to OFF position.
 - Set X FEED rotary switches to CLOSE position.
- Finish to fill up the wing tanks.
 - Install tank filler caps on wing tanks.
 - Disconnect the electrostatic links.
 - On the pressure refueling panel, set DEFUELING switch to OFF position.
 - Close pressure refueling panel access door.
 - In the cockpit on maintenance panel, set GRAVITY FUELING switch to OFF position, the **FUELING** light (warning panel) extinguishes.
 - De-energize the aircraft systems and disconnect the ground power unit (see section 3).

PARTIAL REFUELING Q > 4,048 LB**CAUTION**

The minimum wing fuel quantity before to set XFR PUMP switches is ≥ 200 lb.

- On overhead panel, set RH and LH XFR PUMP switches to ON position.
- Fill up the wing tanks.
- On overhead panel, set XFR INTERCOM rotary to OPEN position.
- When the fuel quantity in the feeder tanks is > 450 lb, on overhead panel:
 - Set RH and LH BOOSTER switches to ON position.
 - Set X FEED rotary switches to OPEN position.

NOTE

During refueling of the wing center tank, maintain a sufficient quantity of fuel in the LH and RH feeders and wing tanks to avoid unpriming.

- When the wing center section tank is full, on overhead panel:
 - Set RH and LH BOOSTER switches to OFF position.
 - Set X FEED rotary switches to CLOSE position.
- On pressure refueling panel, set REAR switch to HI position, until desired fuel quantity is reached in the lateral feeder tanks, as read on fuel gauging indication.
- On overhead panel:
 - Set RH and LH XFR PUMP switches to OFF position.
 - Set XFR INTERCOM rotary switches to CLOSE position.
- When desired fuel quantity is reached, on pressure refueling panel set the REAR switch to LO position.
- Finish to fill up the wing tanks.
- Install tank filler caps on wing tanks.
- Disconnect the electrostatic links.
- On the pressure refueling panel, set DEFUELING switch to OFF position.
- Close pressure refueling panel access door.
- In the cockpit on the maintenance panel, set GRAVITY FUELING switch to OFF position, the **FUELING** light (warning panel) extinguishes.
- De-energize the aircraft systems and disconnect the ground power unit (see section 3).

TOTAL REFUELING**CAUTION**

The minimum wing fuel quantity before to set XFR PUMP switches is ≥ 200 lb.

- On overhead panel, set RH and LH XFR PUMP switches to ON position.
- Fill up the wing tanks.
- On overhead panel, set XFR INTERCOM rotary switches to OPEN position.

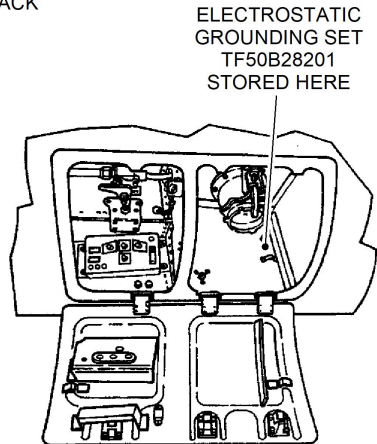
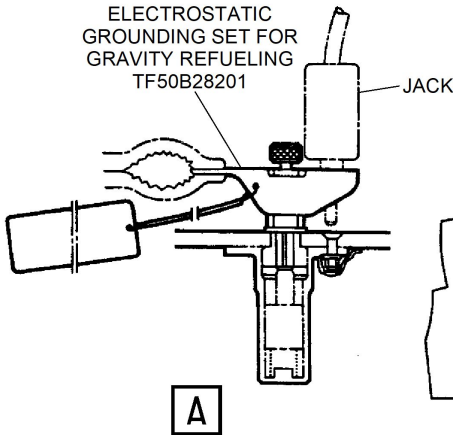
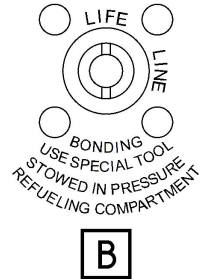
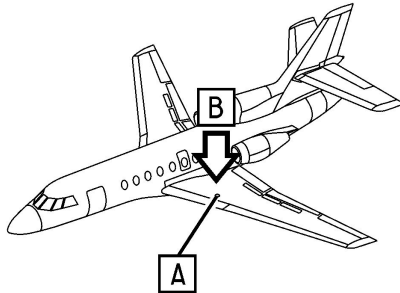
NOTE

During refueling of the wing center tank, maintain a sufficient quantity of fuel in the LH and RH feeders and wing tanks to avoid unpriming.

- On overhead panel:
 - Set RH and LH BOOSTER switches to ON position.
 - Set X FEED rotary switches to OPEN position.
- Finish to fill up the wing tanks.
- As soon as the center wing tank and the wing tanks are full:
 - On pressure refueling panel, set the REAR switch to HI position.
 - On overhead panel:
 - Set RH and LH BOOSTER switches to OFF position.
 - Set X FEED rotary switches to CLOSE position.
- As soon as the feeder tanks are full, on overhead panel:
 - Set RH and LH XFR PUMP switches to OFF position.
 - Set XFR INTERCOM rotary switches to CLOSE position.
- Install tank filler caps on wing tanks.
- Disconnect the electrostatic links.
- On the pressure refueling panel:
 - Set DEFUELING switch to OFF position.
 - Set REAR switch to LO position.
- Close pressure refueling panel access door.

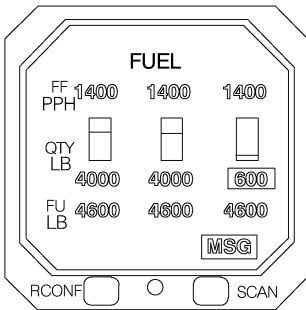
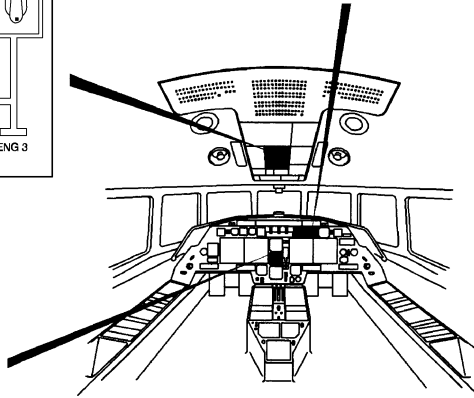
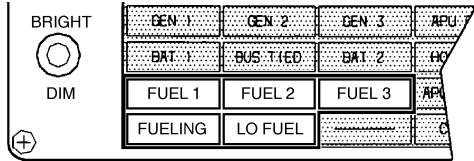
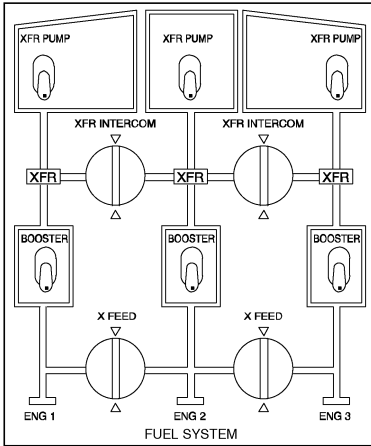
FUEL - REFUELING

- In the cockpit, set GRAVITY FUELING switch (maintenance panel) to OFF position, the **FUELING** light (warning panel) extinguishes.
- De-energize the aircraft systems and disconnect the ground power unit (see section 3).

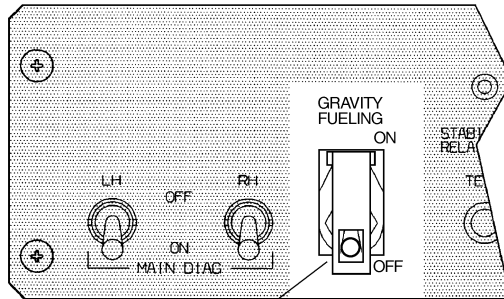


- FIGURE 2 -

FUEL SYSTEM PANEL



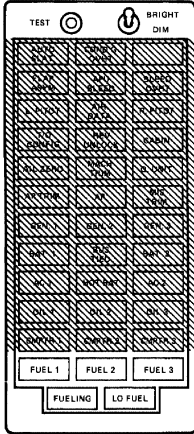
MAINTENANCE PANEL (LH ELECTRICAL CABINET)



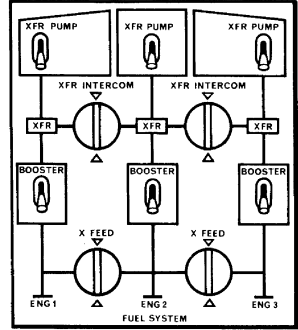
GRAVITY FUELING SWITCH

- FIGURE 4 -
FOR AIRCRAFT F50B ENG TFE 731-40

MASTER WARNING PANEL

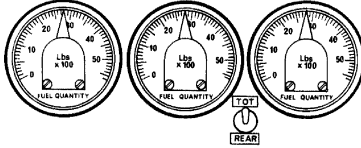


"FUEL SYSTEM" PANEL

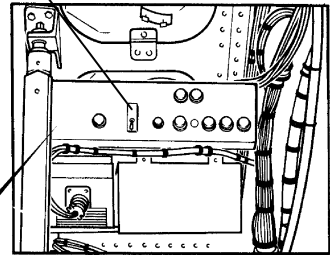


"GRAVITY FUELING" SWITCH

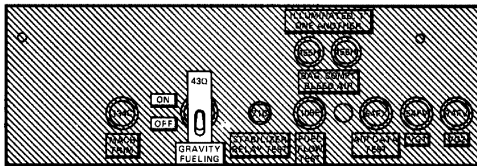
FUEL QUANTITY INDICATORS



LH ELECTRICAL RACK



FLIGHT ENGINEERS TEST PANEL
ELECTRICAL RACK



- FIGURE 5 -
FOR AIRCRAFT F50B ENG TFE 731-3



FALCON 50
GROUND SERVICING
FUEL - REFUELING

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DASSAULT AVIATION Proprietary Data

FUEL-DEFUELING**SUCTION DEFUELING**

See figures 1, 2 and 3 section 9.020.

NOTE

The suction defueling system enables a simultaneous suction of all tanks or suction according to any combination of tanks.

NOTE

Make sure that the fuel quantity in the center section tank is less than 2350 lb. If the quantity is greater, defuel the center tank as described in TASK 28-30-00-650-801.

CAUTION

Take the applicable safety measures. A fire extinguisher must be available near the airplane.

PRELIMINARY STEPS**CAUTION**

Electrostatic grounding connections must include:

- airplane-to-ground,
- fuel truck-to-ground,
- fuel truck-to-airplane,
- fueling nozzle-to-airplane

connections before connecting fueling nozzle to airplane.

- Make the fuel truck/ground electrostatic link.
- Make the ground/aircraft electrostatic link on the relevant connector on the RH landing gear leg.
- Make the fuel truck/aircraft electrostatic link on the relevant connector on the RH landing gear leg.
- Make the coupling/aircraft electrostatic link (grounding receptacle located beside the pressure refueling port).
- Remove the refueling filler plug and connect the fuel truck coupling.

FUEL-DEFUELING

- Connect the electrical ground power unit and energize the airplane.

CAUTION

In order to limit heating of the warning panel during defueling, set BRIGHT-DIM switch to DIM position.

- Open door giving access to PRESSURE REFUELING PANEL.
 - The red **STOP FUELING** light is illuminated.
 - The green **FUELING OK** light is extinguished.
- Lift the lever controlling the vent valves.
 - The red **STOP FUELING** light extinguishes.
 - The green **FUELING OK** light illuminates.

NOTE

If the red **STOP FUELING** warning light stays illuminated, it is possible to set the vent valves manually to the OPEN position after removal of the relevant access doors (see figure 3, section 9.020).

- Establish fueling nozzle-to-airplane electrostatic connections through the receptacle provided for that purpose (next to refueling connector), before connecting fueling nozzle to refueling connector.

NOTE

Continuation of the operation varies according to desired defueling. The operations described below indicate the additional operations to be performed for each type of defueling.

CAUTION

When a "XFR" indicator light illuminates, the related transfer pump must be immediately stopped to prevent the unpriming of the transfer pump.

FUEL-DEFUELING**CAUTION**

When there is not enough fuel in a feeder tank, the related booster pump must be immediately stopped to prevent the priming of the booster pump.

SIMULTANEOUS DEFUELING OF ALL TANKS

- On REFUELING CONTROL PANEL, set DEFUELING guarded switch to ON (guard raised).
- In the cockpit (overhead panel), set the three XFR PUMP switches, the three BOOSTER switches to on and set the two X FEED rotary selectors to the horizontal position.

DEFUELING CENTER FEEDER TANK ONLY

- On REFUELING CONTROL PANEL, set DEFUELING guarded switch to ON (guard raised).
- In the cockpit (overhead panel), set central BOOSTER switch to on.

DEFUELING CENTER FEEDER TANK AND EITHER RH OR LH FEEDER TANK

- On REFUELING CONTROL PANEL, set DEFUELING guarded switch to ON (guard raised).
- In the cockpit (overhead panel), set central BOOSTER switch, LH or RH BOOSTER switch to on and set the corresponding side (LH or RH) X FEED rotary selector to the horizontal position.

DEFUELING OF THE THREE FEEDER TANKS

- On REFUELING CONTROL PANEL, set DEFUELING guarded switch to ON (guard raised).
- In the cockpit (overhead panel), set the three BOOSTER switches to on and set the two X FEED rotary selectors to the horizontal position.

DEFUELING OF CENTER FEEDER TANK AND WING CENTER SECTION TANK

- On REFUELING CONTROL PANEL, set DEFUELING guarded switch to ON (guard raised).
- In the cockpit (overhead panel):

FUEL-DEFUELING

- Make sure that the two XFR INTERCOM rotary switches are in the vertical position.
- Set central XFR PUMP switch to on.
- Set central BOOSTER switch to on.

DEFUELING OF CENTER FEEDER TANK, LH FEEDER TANK AND LH WING TANK

- On REFUELING CONTROL PANEL, set DEFUELING guarded switch to ON (guard raised).
- In the cockpit (overhead panel):
 - Make sure that the two XFR INTERCOM rotary switches are in the vertical position.
 - Set LH XFR PUMP switch to on.
 - Set LH X FEED rotary switch to the horizontal position and make sure that RH X FEED rotary switch is in the vertical position.
 - Set LH and central BOOSTER switches to on.

DEFUELING OF CENTER FEEDER TANK, WING CENTER SECTION TANK, LH FEEDER TANK AND LH WING TANK

- On REFUELING CONTROL PANEL, set DEFUELING guarded switch to ON (guard raised).
- In the cockpit (overhead panel):
 - Make sure that the two XFR INTERCOM rotary switches are in the vertical position.
 - Set LH and central XFR PUMP switches to on.
 - Set LH X FEED rotary switch to the horizontal position.
 - Set LH and central BOOSTER switches to on.

DEFUELING OF FEEDER TANKS AND WING TANKS

- On REFUELING CONTROL PANEL, set DEFUELING guarded switch to ON (guard raised).
- In the cockpit (overhead panel):
 - Make sure that the two XFR INTERCOM rotary switches are in the vertical position.
 - Set LH and RH XFR PUMP switches to on.

FUEL-DEFUELING

- Set LH and RH X FEED rotary switches to the horizontal position.
- Set the three BOOSTER switches to on.

FINAL STEPS

- Disconnect the hose coupling from the aircraft receptacle.
- Install the refueling plug on the refueling connector.
- Disconnect the electrostatic connections.
- Lower the vent valve control lever.

NOTE

If the vent valves have been manually open, manually set the vent valves to the CLOSED position through the relevant access doors (see figure 3, section 9.020). Place a “FUEL VENT VALVES MANUALLY CLOSED” placard in sight on the cockpit pedestal.

FUEL-DEFUELING**DRAINING OF FUEL TANKS BY GRAVITY****NOTE**

Make sure that the fuel quantity in the center section tank is less than 2350 lb. If the quantity is greater, defuel the center tank as described in TASK 28-30-00-650-801.

EQUIPMENT

- Drip pan.
- DC electrical ground power unit.
- Tank truck with nozzle complying with STD MS29520.
- Hose measuring 25 mm (0.98 in) inside dia., 1.60 m (5.25 ft) in length equipped with a clamp.

CAUTION

Electrostatic grounding connections must include:

- airplane-to-ground,
- fuel truck-to-ground,
- fuel truck-to-airplane,
- fuel truck-to-drip pan,
- drip pan-to-ground,
- airplane-to-drip pan

connections before connecting fueling nozzle to airplane.

Take the applicable safety measures (same as for pressure refueling).

- Make the ground/aircraft electrostatic link on the relevant connector on the RH landing gear leg.
- Make the fuel truck/ground electrostatic link.
- Make the fuel truck/aircraft electrostatic link on the relevant connector on the RH landing gear leg.
- Make the fuel truck electrostatic link to drip pan.
- Make the drip pan electrostatic link to ground.
- Make the aircraft electrostatic link to drip pan.

FUEL-DEFUELING**SIMULTANEOUS DEFUELING OF ALL TANKS****PRELIMINARY STEPS**

- Connect the electrical ground power unit and energize the airplane systems (see section 3).

CAUTION

In order to limit heating of the warning panel during defueling, set BRIGHT-DIM switch to DIM position.

- Open: (see figure 1)
 - wing center section tank access door,
 - LH and RH feeder tank access door,
 - pressure fueling door.
- Set up drip pans under the defueling valves.
- Bring the fuel truck up to the airplane and perform grounding connections.

PROCEDURE

- On the refueling panel, raise the vent valve lever located above the refueling receptacle.
 - red **STOP FUELING** light extinguishes,
 - green **FUELING OK** light illuminates.
- Remove defueling valve cap of transfer manifold (wing center section tank access door), connect a hose to defueling valve end and open the valve.
- Remove defueling valve caps of lateral supply manifold (LH and RH feeder tank access doors), connect a hose to each defueling valve end and turn the valve knob into the draining position as shown in Figure 2.
- In the cockpit, on the overhead panel:
 - Set the two XFR INTERCOM rotary switches and the two X-FEED rotary switches to open position.
 - Set the three XFR PUMP switches and the three BOOSTER switches to on position.
- The fuel flows into the pan and the fuel truck picks it up simultaneously by suction.

FUEL-DEFUELING

- When defueling is over, set the XFR INTERCOM and X-FEED rotary switches on the overhead panel to closed position and XFR PUMP and BOOSTER switches to off position.
- Shut transfer manifold drain valve, disconnect hose, reinstall cap and close access door.
- Reset the feeder tank defueling valve to flight position (see figure 2), disconnect hose and reinstall caps. Close LH and RH feeder tank access doors.
- On the refueling panel, close the vent valve by lowering the lever located above the refueling receptacle.
 - red **STOP FUELING** light illuminates,
 - green **FUELING OK** light extinguishes.

FINAL STEPS

- Close refueling panel access door.
- Remove drip pan and grounding cables.
- De-energize airplane systems and disconnect DC ground power unit (see section 3).
- Record defueling complied with.

DEFUELING INDIVIDUAL TANKS

PRELIMINARY STEPS

- Connect the electrical ground power unit and energize the airplane systems (see section 3).

CAUTION

In order to limit heating of the warning panel during defueling, set BRIGHT-DIM switch to DIM position.

- Place a drip pan under the airplane.
- Bring in the fuel truck and connect the grounding connections.

DEFUEL WING CENTER SECTION TANK

- Open wing center section tank access door (see figure 1) and close the wing tank shutoff valve.
- Open refueling panel access door (see figure 1).
 - red **STOP FUELING** light is illuminated,

FUEL-DEFUELING

- green **FUELING OK** light is extinguished.
- Lift air vent valve control lever.
 - red **STOP FUELING** light extinguishes,
 - green **FUELING OK** light illuminates.
- Remove the defueling valve cap (wing center section tank access door).
- Connect the hose to the defueling valve end.
- Open the defueling valve.
- Set XFR PUMP center switch (overhead panel) to on position.
- The fuel flows into the drip pan, and the fuel truck pumps the fuel from the drip pan.
- When defueling is over, set center XFR PUMP switch (overhead panel) in off position.
- Shut the defueling valve, remove the hose, screw the plug back in and close wing center section tank access door.
- Lower the vent valve control lever (refueling panel).
 - red **STOP FUELING** light illuminates,
 - green **FUELING OK** light extinguishes.
- Close refueling panel access door.
- De-energize the airplane systems and disconnect the DC ground power unit (see section 3).
- Remove drip pan and grounding cables.

LH OR RH WING TANK DEFUELING

- Open wing center section tank access door (see figure 1), close wing center section tank isolation shutoff valve and LH and RH wing tank isolation shutoff valve.
- Open refueling panel access door (see figure 1) and lift the vent valve control lever.
 - red **STOP FUELING** light is illuminated,
 - green **FUELING OK** light is extinguished.
- Remove the defueling valve cap (wing center section tank access door).
- Open the defueling valve.
- Connect the hose to the defueling valve end.

FUEL-DEFUELING

- In the cockpit, on the overhead panel, set XFR INTERCOM rotary switch (LH or RH according to the tank to be defueled) to open position and the corresponding XFR PUMP switch to on position.
- The fuel flows into the drip pan, and the fuel truck pumps the fuel from the drip pan.
- When defueling is over, set center XFR PUMP switch (overhead panel) in off position and the XFR INTERCOM rotary switch to on position.
- Close the defueling valve, remove the hose and screw the plug back in.
- Open isolation shutoff valve of wing center section tank and wing tank and close wing center section tank access door.
- Lower the vent valve control lever (refueling panel).
 - red **STOP FUELING** light illuminates,
 - green **FUELING OK** light extinguishes.
- Close refueling panel access door.
- De-energize the airplane systems and disconnect the DC ground power unit (see section 3).
- Remove drip pan and grounding cables.

DEFUEL LATERAL FEEDER TANK

- Open LH or RH feeder tank access doors (see figure 1).
- Remove defueling valve cap of the supply manifold of the feeder tank being defueled.
- Connect the hose to the defueling valve end.
- Turn the defueling valve knob into the position shown on figure 2.
- Open refueling panel access door (see figure 1) and lift the vent valve control lever.
 - red **STOP FUELING** light is illuminated,
 - green **FUELING OK** light is extinguished.
- In the cockpit, on the overhead panel, set the corresponding BOOSTER switch to the on position.
- The fuel flows into the drip pan, and the fuel truck pumps the fuel from the drip pan.
- When defueling is over, set the BOOSTER switch (overhead panel) to off position.

FUEL-DEFUELING

- Set the defueling valve to flight position, remove hose and screw plug back in (see figure 2) and close LH or RH feeder tank access door.
- Lower the vent valve control lever (refueling panel).
 - red **STOP FUELING** light illuminates,
 - green **FUELING OK** light extinguishes.
- De-energize the airplane systems and disconnect the DC ground power unit (see section 3).
- Remove drip pan and grounding cables.

DEFUEL CENTER FEEDER TANK**NOTE**

Defueling of the center feeder tank is accomplished through the defueling valve of either of the lateral feeder tank defueling valves.

- Open LH or RH feeder tank access door or both, depending on whether the center feeder tank is to be defueled by one or both of the lateral feeder tank defueling valves.
- Remove defueling valve cap(s).
- Connect the hose to the defueling valve end.
- Turn the defueling valve knob(s) into the position shown on figure 2.
- Open refueling panel access door (see figure 1) and lift the vent valve control lever.
 - red **STOP FUELING** light is illuminated,
 - green **FUELING OK** light is extinguished.
- In the cockpit, on the overhead panel, set one or both of the X-FEED rotary switches to open position and the center BOOSTER switch to on position.
- The fuel flows into the drip pan, and the fuel truck pumps the fuel from the drip pan.
- When defueling is over, set X-FEED rotary selector(s) to closed position and center BOOSTER switch to off position.

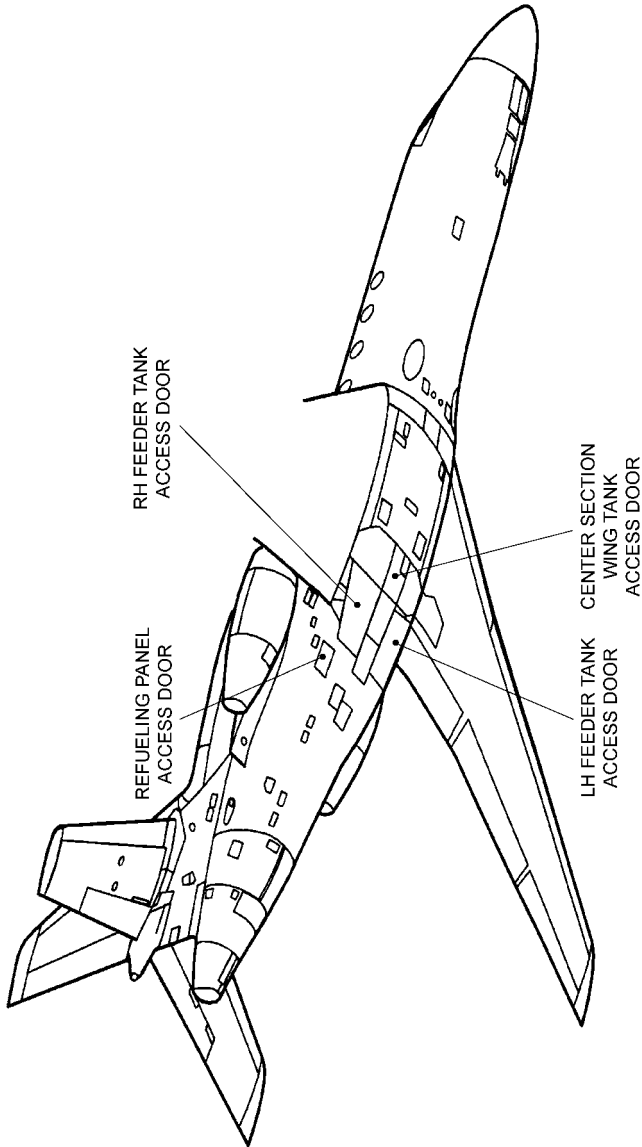
FUEL-DEFUELING

- Set the defueling valve(s) to flight position (see figure 2), remove hose, install the cap(s) and close LH or RH feeder tank access door(s).
- Lower the vent valve control lever (refueling panel).
 - red **STOP FUELING** light illuminates,
 - green **FUELING OK** light extinguishes.
- De-energize the airplane systems and disconnect the DC ground power unit (see section 3).
- Remove drip pan and grounding cables.

FALCON 50

GROUND SERVICING

FUEL-DEFUELING

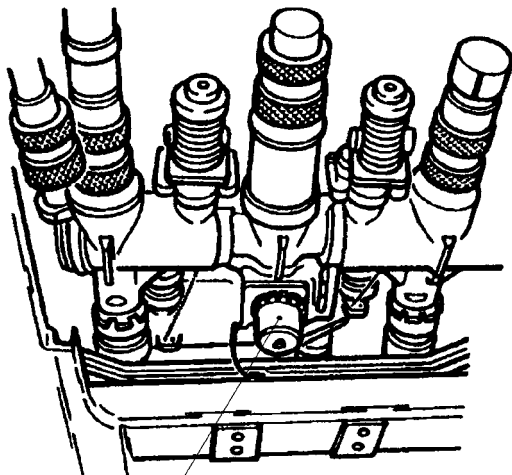


DOORS

– FIGURE 1 –

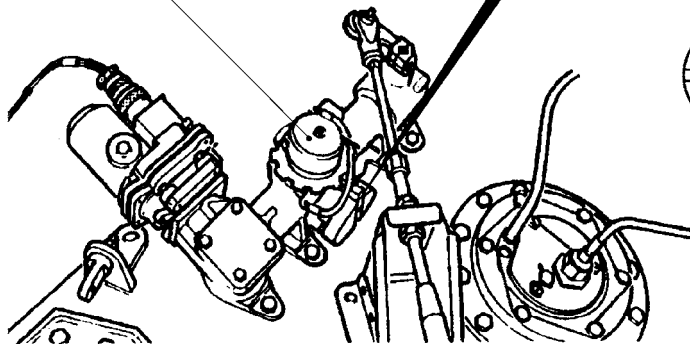
FALCON 50 GROUND SERVICING

FUEL-DEFUELING



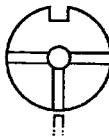
WING TANK GROUP
CENTER SECTION WING TANK
ACCESS DOOR

DEFUELING VALVE

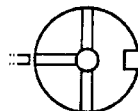


FEEDER TANK
RH AND LH FEEDER TANK ACCESS DOORS

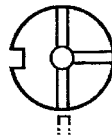
KNOB



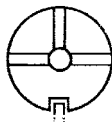
CENTERING FEEDER TANK
WITH "X-FEED" ROTARY
SWITCH ON OPEN
POSITION



CENTERING AND
LATERAL FEEDER TANK
WITH "X-FEED" ROTARY
SWITCH ON OPEN
POSITION



LATERAL FEEDER
TANK



IN FLIGHT
POSITION

- FIGURE 2 -

FUEL-FUEL LEAKS**ACCEPTANCE CRITERIA OF FUEL LEAKS****DEFINITION OF LEAK TYPES – CORRECTIVE ACTIONS**

This task provides the instructions to determine the importance of a leak, and gives the actions to be performed accordingly.

- 1 – Locate and mark the leak area.
- 2 – Based on figures 1, 2 and 3, assess the criticality of the leak location (Green/Orange/Red).
- 3 – Based on the following, identify the leak type:

NOTE

The identification of the leak type is performed with non-pressurized fuel tanks.

- Stain: a stain is defined as a colored mark which does not run, caused by soiled fuel. This is the smallest type of leak.
 - Seepage: seepage is defined as a large stain that runs and causes formation of drips, not exceeding four drops per minute.
 - Running leak: a running leak is defined as a fuel leak that generates more than four drops per minute.
- 4 – Refer to the following table for the appropriate corrective action.

Leak location criticality	Stain	Seepage	Running leak
Green	A	B	C
Orange	B	B	C
Red	B	C	C

FUEL-FUEL LEAKS

5 – Do the relevant corrective action:

- A: record the location of the leak and monitor the leakage. Repair when possible.
- B: record the location of the leak and monitor the leakage on a daily basis. Repair at the next scheduled maintenance inspection within 12 months following detection.
- C: repair immediately, contact DASSAULT AVIATION Command Center for dispatch.

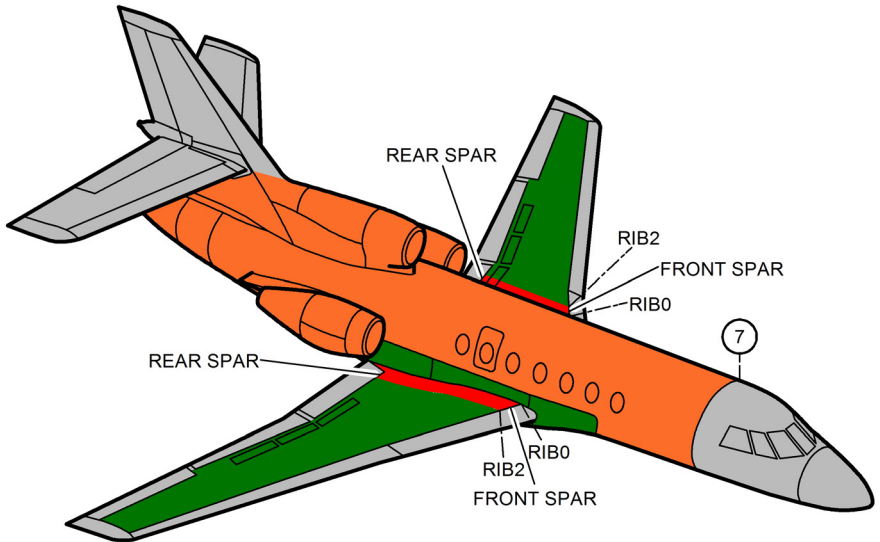
NOTE

Refer to RPI 51-40-07 — Sealing repair, for repair procedure.

FALCON 50

GROUND SERVICING

FUEL-FUEL LEAKS

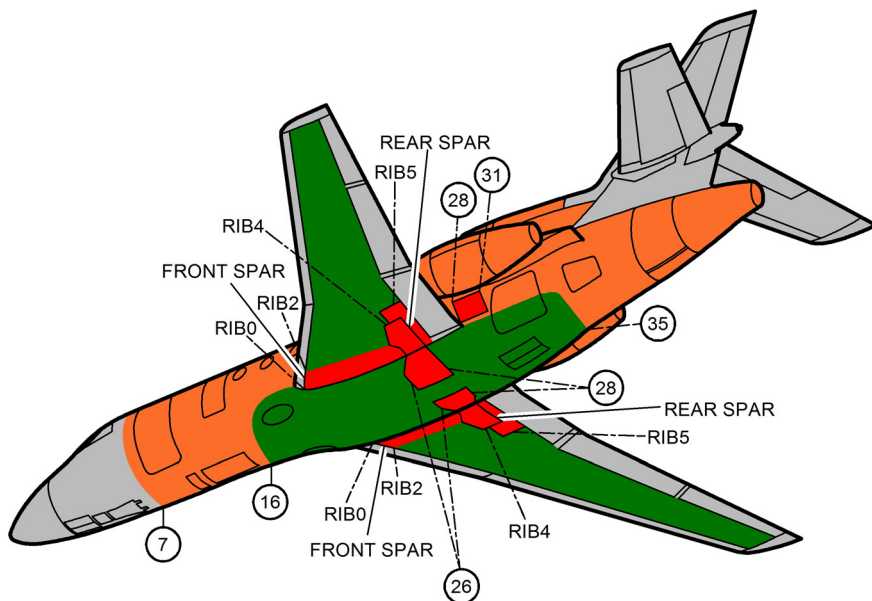


– FIGURE 1 –
FUEL LEAKAGE CRITICAL AREAS (1/2)

FALCON 50

GROUND SERVICING

FUEL-FUEL LEAKS

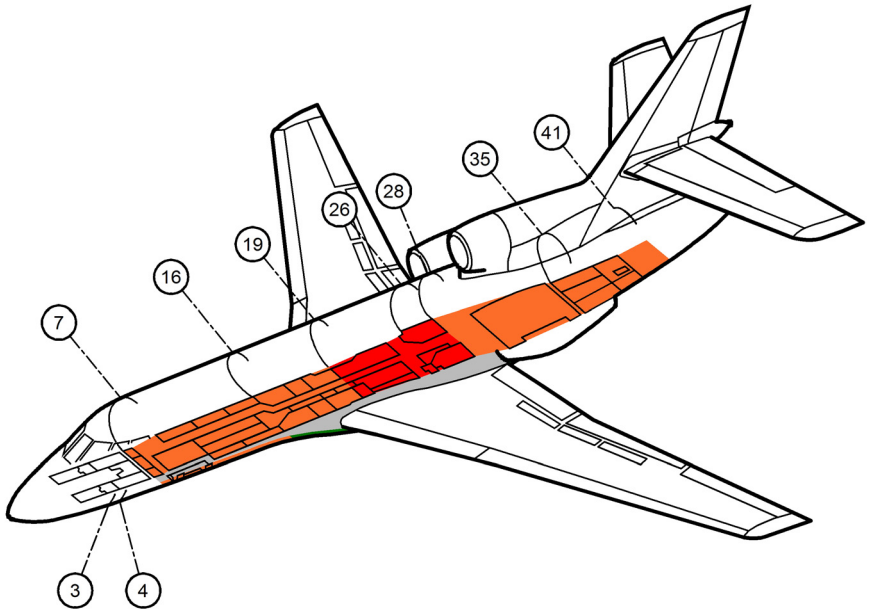


– FIGURE 2 –
FUEL LEAKAGE CRITICAL AREAS (2/2)

FALCON 50

GROUND SERVICING

FUEL-FUEL LEAKS



– FIGURE 3 –
FUEL LEAKAGE CRITICAL AREAS
IN UNDERFLOOR AREA



FALCON 50

GROUND SERVICING

FUEL-FUEL LEAKS

I

DASSAULT AVIATION Proprietary Data

DEFINITION OF HYDRAULIC FLUID LOSS

The loss of hydraulic fluid can be characterized in terms of the various following aspects:

SPLASHES

Splashed fluid on partitions next to an hydraulic equipment or on the equipment itself does not automatically mean leakage of this equipment.

Fluid may have been spilled or ejected during previous maintenance operations.

This fluid, running along various routes, can contaminate an equipment far removed from the original fluid source.

SEEPAGE

Seepage is an imperceptible and unmeasurable oozing of fluid, characterized by the formation of a thin film of fluid on a sliding surface.

Exception made for pipe couplings, seepage is acceptable within specified limits.

Seepage is necessary for the lubrication of sliding parts and results from fluid being allowed past a seal as seals cannot be totally leaktight.

ACCUMULATED SEEPAGE

Accumulated seepage may often be mistaken for leakage as the volume of loose fluid reaches non-negligible values. These values often proportional to the time during which the equipment was not operating.

When an hydraulic equipment is not pressurized, the various seals are no longer pressed tightly against the walls of their grooves and, due to their shape or surface irregularities, their leaktightness is not as efficient as when pressurized.

Generally, after a few operating cycles, the seals original position, shape and dimensions are restored and, what seemed to be a leak disappears.

LEAKAGE

A leakage is characterized by fluid dripping and is classified as slight or heavy.

HYDRAULIC SERVICING—HYDRAULIC LEAKS

Leak tolerances vary for each hydraulic equipment. Tolerances are given in the following paragraphs.

ACCEPTANCE CRITERIA OF HYDRAULIC LEAKS**GENERAL CHECKING INSTRUCTIONS FOR HYDRAULIC LEAKS**

- Checking for leaks is carried out without operating the equipment and without pressurizing the systems being checked. The systems must be at the highest possible ambient temperature. In winter, with low temperature, avoid checking an airplane that has been parked for a long time.
- When fluid is found on an equipment or in its vicinity, determine whether this fluid comes from splashing or leakage from another, sometimes remote, equipment. In such a case, wipe off all traces of fluid from the equipment and its piping.
- No leakage is accepted, except for the following equipment.

LEAK CRITERIA FOR HYDRAULIC SYSTEM EQUIPMENT

- Hydraulic pressure switches
 - For "Custom Control" components:
For components whose P/N are referenced in MPD chapter 5–20, no leakage is acceptable.
For other P/N, a leak rate of one drop through the vent port of the pressure switch is acceptable each time its associated system has been pressurized.
 - For "Hydra-Electric" components:
A leak rate of one drop through the vent port of the pressure switch is acceptable each time its associated system is pressurized.
- Other hydraulic system equipment
No external leakage is accepted on hydraulic system equipment. In event of leakage, refer to TASK 20–32–00–910–802.

LEAK CRITERIA FOR LANDING GEAR HYDRAULIC EQUIPMENT

- 1 – Shock absorber sliding rod

HYDRAULIC SERVICING—HYDRAULIC LEAKS

If fluid loss extends over less than a quarter of the rod circumference but its progression along the rod does not exceed 25 mm (1 in) in one minute, the shock absorber is considered serviceable. If the leakage exceeds this tolerance, replace the shock absorber (Maintenance Manual, TASK 32-11-05-900-801 and 32-21-01-900-801).

2 – Brace strut actuators, drag brace and actuating cylinder

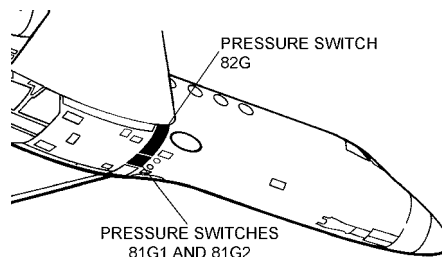
A band of fluid 2-3 mm wide (0.08-0.12 in) is permissible around the end of the sliding rod. A leak of one drop every 2 minutes from the cylinder on the rod side, is permissible.

LEAK CRITERIA FOR ACCESSORY GEARBOX HYDRAULIC EQUIPMENT

- Maximum leak at pump drain:
 - Not operating: 1 drop every 2 minutes.
 - Operating: 1 drop per minute.

LEAK CRITERIA OF "CUSTOM COMPONENT" PRESSURE SWITCHES ON HYDRAULIC SYSTEMS

- A leak rate of one drop through the vent port of the pressure switch is acceptable each time its associated system is pressurized.
 - Pressure switch 82G: see figure.
 - Pressure switches 81G1 – 81G2: see figure.
 - Pressure switches 11D1 – 11D2 – 11D3 – 16M1 – 16M2: rear compartment.
 - Pressure switches 58G1 – 58G2: in each main L/G compartment.



HYDRAULIC SERVICING—HYDRAULIC LEAKS**LEAK CRITERIA FOR FLIGHT CONTROL HYDRAULIC EQUIPMENT**

Static and dynamic leak tightness checks are to be performed on flight control hydraulic equipment items whenever traces of hydraulic fluid are evidenced on the equipment or in its box structure.

In case of leaks, refer to Maintenance Manual, TASK 27-00-00-790-801.

PRECAUTIONS TO BE TAKEN FOR PIPE COUPLINGS**CAUTION**

Do not tighten the coupling if a leak is found.

- If a leak is found at a coupling:
 - Unscrew the coupling.
 - Check and install the coupling (refer to TASK 20-41-00-400-801).

REPLENISHING OF HYDRAULIC RESERVOIRS

See figure 1.

TOOLS AND EQUIPMENT

- Hydraulic reservoir refilling device P/N: TM20H29001
- Drain container

INGREDIENTS

- Hydraulic fluid MIL–PRF–5606
- Lockwire MS20995C32

PRELIMINARY STEPS

- Place a drain container under the draining and recovery line outlet (antipollution measure).
- Open rear compartment door.
- Check the airplane is in the following configuration:
 - Hydraulic system 1
 - landing gears down and locked,
 - main L/G doors closed,
 - slats retracted,
 - thrust reverser accumulator pressure: 100 bar (1450 psi),
 - hydraulic pressure dropped in system 1.
 - Hydraulic system 2
 - slats, flaps and airbrakes retracted,
 - parking brake accumulator pressure: 70 bar (1015 psi),
 - hydraulic pressure dropped in system 2,

TOPPING UP

See figure 1

- Get access to the hydraulic reservoirs (1) and (2).
- Remove safety wire and unscrew filler plug (4) by three or four turns in order to depressurize the reservoir.
- Continue unscrewing in order to remove the filler plug.
- Fill hydraulic reservoir up to the upper mark of window (3)

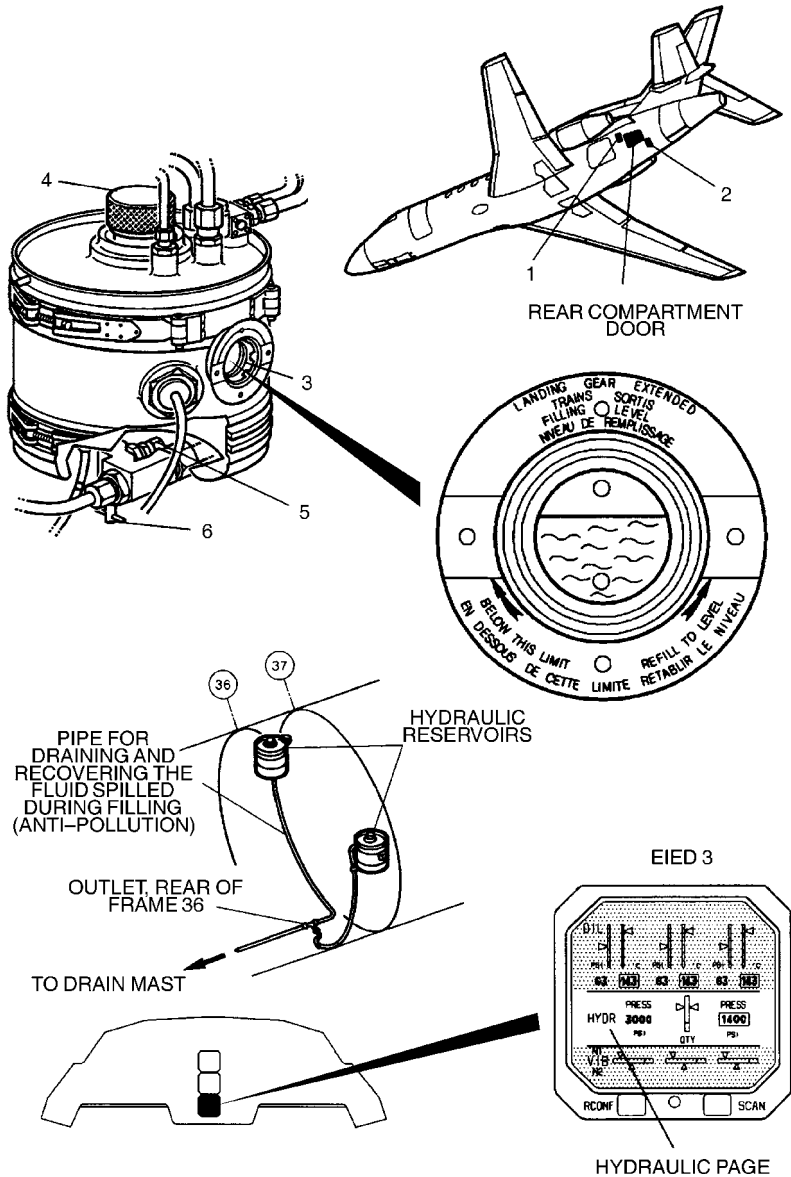
HYDRAULIC SERVICING–REPLENISHING

- Remove excess fluid from the reservoir as required by using bleed connector (5) controlled by valve (6).
- Reinstall filler plug (4) and safety with lockwire.

FINAL STEPS

- Remove the drain container.
- Close the rear compartment door.

HYDRAULIC SERVICING—REPLENISHING



— FIGURE 1 —

REPLENISHING OF HYDRAULIC RESERVOIRS



FALCON 50

GROUND SERVICING

HYDRAULIC SERVICING—REPLENISHING

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TIRE AND GEAR SERVICING–TIRE

TIRE INFLATION

- Connect a nitrogen supply to the wheel valve.
- Inflate tire (see pressure in section 2.010).
- Check that the wheel valve and the tire are pressure tight.
- Tighten the wheel valve plug by hand.

TIRE REPLACEMENT CRITERIA

NOTE

The purpose of this card is to indicate the action to take when certain anomalies, defined in the tables below, are found on tires in use.

MONITORING OF TIRE INFLATION PRESSURE

DAILY PRESSURE VARIATION (P)	TIRE CONDITION	ACTION
$P_n + 5\% < P$	Over-inflated	Correct pressure to operating range maximum pressure.
$n < P \leq P_n + 5\%$	Normal operating range.	
Nominal pressure	Correct.	
$P_n - 5\% \leq P < P_n$	Daily pressure loss permitted.	Correct pressure to operating range maximum pressure.

FALCON 50

GROUND SERVICING

TIRE AND GEAR SERVICING—TIRE

DAILY PRESSURE VARIATION (P)	TIRE CONDITION	ACTION
$P_n - 10\% \leq P < P_n - 5\%$	Exceptional under-inflation.	Correct pressure to operating range maximum pressure. Mandatory check the next day on a cold tire. If the pressure drop is confirmed, remove tire to check wheel and tire.
$P_n - 20\% < P \leq P_n - 10\%$	Significant under-inflation	Remove tire to check wheel and tire. Thoroughly check tire of adjacent wheel.
$P < P_n - 20\%$ or complete deflation	Major under-inflation.	Remove and discard the relevant tire.
	Tire puncture or wheel fuse melted.	Check the wheel. If in doubt, perform a non-destructive check of the wheel (dye penetrant or eddy current inspection). Remove tire of adjacent wheel to check wheel and tire.

P_n = Nominal pressure

TIRE AND GEAR SERVICING—TIRE

TIRE TREAD WEAR REMOVAL CRITERIA

FINDING	TIRE CONDITION	ACTION
A Tire tread wear	The depth of the grooves is nil at any point of the tread.	Replace the tire. See NOTE below
	The protector ply is exposed.	Replace the tire

NOTE

Authorization is given to return to a maintenance base ONLY (no more than 5 flight cycles) when the tire tread wear removal criteria are reached, as long as the depth of the grooves is nil for no more than 1/8 of the circumference. When this tolerance is reached, the tire damage criteria and the countdown of the remaining flight cycles authorized must be recorded in the technical logbook after each flight.

NORMAL WEAR



A

TIRE AND GEAR SERVICING-TIRE

DAMAGE WITH TOLERANCES 1/3

FINDING	TIRE CONDITION	ACTION
B - Figure 1 Flat spot on the tread (following hard braking)	The flat spot does not exceed the tire tread wear removal criteria The flat spot damage exceeds the tire tread wear removal criteria	Tire kept in service (if no vibration is detected upon retraction of landing gear or taxiing). Replace the tire.
C - Figure 1 Asymmetrical wear of the tread and uneven wear (see NOTE)	The tire tread wear limits are reached or about to be reached.	Replace the tire.

NOTE

In case of asymmetrical wear of the tire, the landing gear adjustment must be checked.

TIRE AND GEAR SERVICING—TIRE

FINDING	TIRE CONDITION	ACTION
D - Figure 1 Groove cracking on the tread	If the protector ply is exposed over more than 6 mm (0.24 in) circumferentially in length	Replace the tire See NOTE below

NOTE

Authorization is given to return to a maintenance base ONLY (no more than 5 flight cycles) to replace tires reaching these criteria if there is no continuous cracking exposing the protector ply, greater than 25 mm (1 in) in length. When this tolerance is reached, the tire damage criteria and the countdown of the remaining flight cycles authorized must be recorded in the technical logbook after each flight.

TIRE AND GEAR SERVICING—TIRE

FINDING	TIRE CONDITION	ACTION
	<ul style="list-style-type: none"> • If the depth of the cut is less important than or equal to the cut Limit Depth (LD), measure the greatest length of the cut and compare it with the Limit Length (LL): <ul style="list-style-type: none"> ▶ The length is greater than LL, ▶ The length is shorter than or equal to LL. 	<p>Replace the tire.</p> <p>Keep the tire in service.</p>
	The cut extends entirely between two adjacent grooves.	Replace the tire.
	Undercutting occurs at the base of any tread rib cut.	Replace the tire.
F' — Figure 2 Chevron cuts	The protector ply is exposed	Replace the tire.
G — Figure 2 Tread chipping or chunking: Areas of tread rubber removed from surface areas. Most commonly adjacent to tread grooves	The protector ply is exposed	Replace the tire.

TIRE AND GEAR SERVICING—TIRE

DAMAGE WITH TOLERANCES 3/3

FINDING	TIRE CONDITION	ACTION
H - Figure 2 Crack in the upper section of the tire bead	Depth greater than 1 mm (0.04 in)	Replace the tire.
I - Figure 2 Tire bead section in contact with the upper section of the rim flange is worn	The worn area is more than 1 mm (0.04 in) deep	Replace the tire.
J - Figure 3 Cut on NLG tire chine	Cut > half the width of the chine	Replace the tire.
K - Figure 3 Cut, crack or splits	More than 2 mm (0.08 in) deep or reaching the carcass	Replace the tire.
L - Figure 3 Ozone cracking on the sidewall	Reaching the carcass	Replace the tire.
Slipping of tire on rim (the red balance mark on the lower sidewall of the tire must be aligned next to the inflation valve on the inboard wheel subassembly)	Slipping more than 20°	Remove the tire for further inspection and appropriate action.
M - Figure 4 Rib undercutting on tire tread	The undercutting extends under a rib by 6 mm (0.25 in)	Replace the tire.

DASSAULT AVIATION Proprietary Data

TIRE AND GEAR SERVICING-TIRE

NOTE: TIRE IS
SERVICEABLE



FLAT SPOT

NOTE: TIRE IS
NOT SERVICEABLE



B

ASYMMETRICAL WEAR



C

GROOVE CRACKING



D

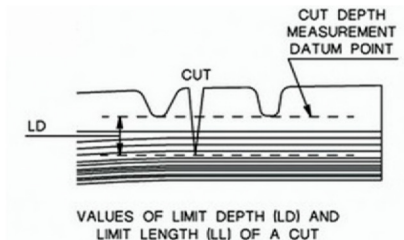
F.O.D



E

– FIGURE 1 –
DAMAGE WITH TOLERANCES (1/4)

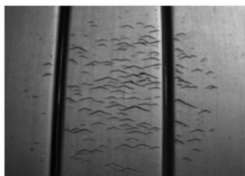
TIRE AND GEAR SERVICING—TIRE



	NOSE L/G TIRES	MAIN L/G TIRES
LD	3 mm (0.12 in)	4 mm (0.16 in)
LL	15 mm (0.59 in)	20 mm (0.79 in)

F

CHEVRON CUTS



F'

TREAD CHIPPING OR CHUNKING



G

– FIGURE 2 –
 DAMAGE WITH TOLERANCES (2/4)

TIRE AND GEAR SERVICING—TIRE

TIRE BEAD DAMAGE



H



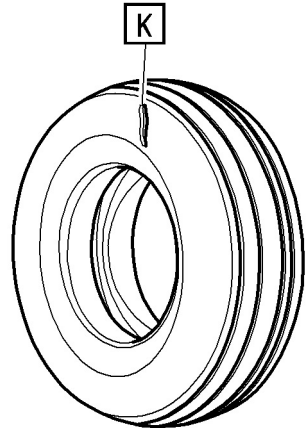
I

CUT ON NLG TIRE CHINE



J

CUT OR CRACK



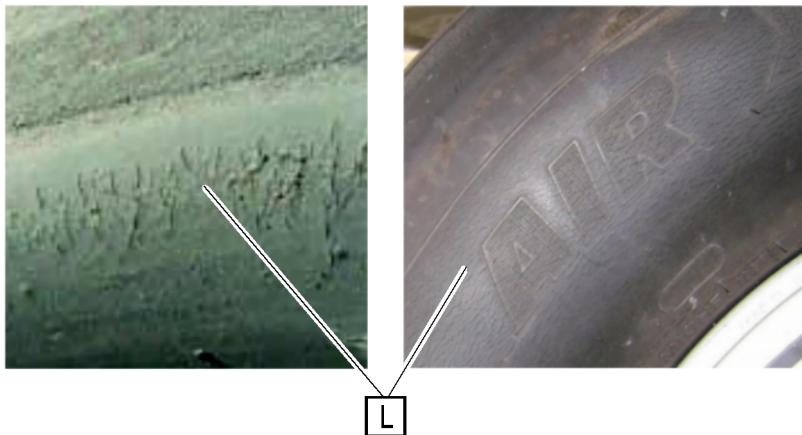
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– FIGURE 3 –

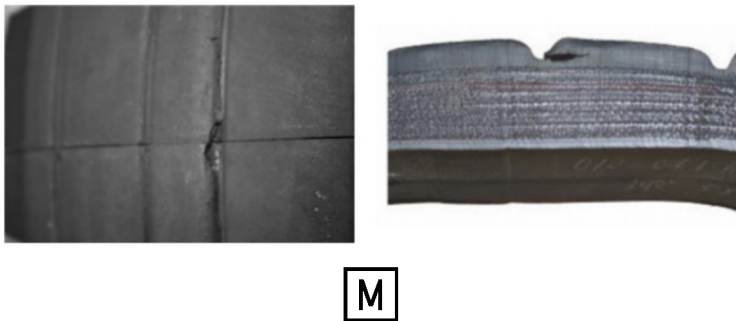
DAMAGE WITH TOLERANCES (3/4)

TIRE AND GEAR SERVICING—TIRE

OZONE CRACKING



RIB UNDERCUTTING



– FIGURE 4 –

DAMAGE WITH TOLERANCES (4/4)

TIRE AND GEAR SERVICING—TIRE

DAMAGE WITH NO TOLERANCES

FINDING	TIRE CONDITION	ACTION
N - Figure 5 Stripped rib	Partial or full loss of the tread rubber between adjacent grooves	Replace the tire.
O - Figure 5 Open tread splice	Cracking in the tread rubber where the manufacturing joint or splice separates in a radial direction across the tread ribs	Replace the tire.
Tread bulge	An irregular area of the tread surface	Replace the tire.
P - Figure 5 Tire bead bundles are apparent. Tire beads or bundles are distorted	No tolerance.	Replace the tire.
Blister, bulge or separation. See the two NOTES on page 11.010.12		
Q - Figure 5 On the sidewall	No tolerance.	Replace the tire.
R - Figure 5 In the upper section of the tire bead (above the rim flange)	No tolerance.	Replace the tire.

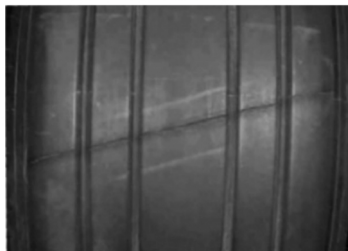
TIRE AND GEAR SERVICING—TIRE

STRIPPED RIB



N

OPEN TREAD SPLICE



O

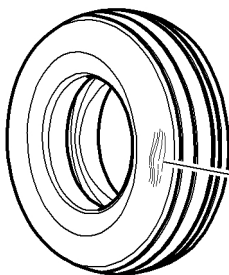
TIRE BEAD DAMAGE



P



R



Q
BLISTE OR BULGE
ON TIRE WALL

– FIGURE 5 –

DAMAGE WITH NO TOLERANCES

TIRE AND GEAR SERVICING—TIRE**NOTE**

A separation manifests itself as a bump in the sidewall which can be difficult to see but which can be felt with the fingertips during a tactile inspection.

NOTE

Some radial tires may show a slight deformation in the sidewall after being mounted on the wheel and inflated. See detail **S**.

- The deformation results from a small amount of extra rubber at the splice of sidewall rubber. It is normally less than 15 mm (0.6 in) wide and may extend the full height of the sidewall.
- The deformation is orientated approximately 15° from the radial direction.

The deformation has no impact on tire performance and the tire can remain in service.

**S**



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GROUND SERVICING

TIRE AND GEAR SERVICING-TIRE

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DASSAULT AVIATION Proprietary Data

TIRE AND GEAR SERVICING—GEAR

GEAR SERVICING

NOTE

The shock absorber minimum height is to be complied with in the "before take-off" configuration.

NLG SHOCK ABSORBER

- The dimension must be measured between the lower section of the landing gear cylinder and the top of the sleeve bushing (1) on the shock absorber.
- Compare the recorded dimension to the following table, according to the ambient temperature.

AMBIENT TEMPERATURE		DIMENSION "H"	
– 40°C	(– 40°F)	26 mm	(1.02 in)
– 20°C	(– 4°F)	39 mm	(1.53 in)
0°C	(+ 32°F)	54 mm	(2.12 in)
+ 20°C	(+68°F)	67 mm	(2.63 in)
+ 40°C	(+ 104°F)	81 mm	(3.18 in)

- Charge the shock absorber if required (see Maintenance Manual, TASK 32–21–01–610–802).

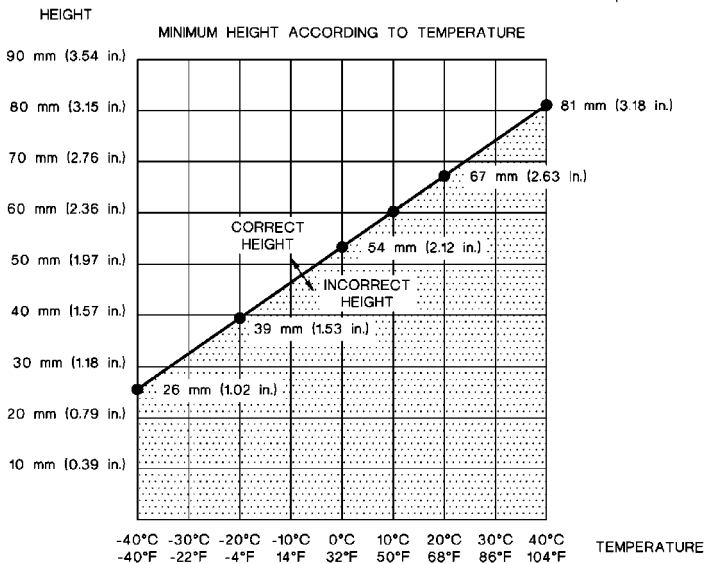
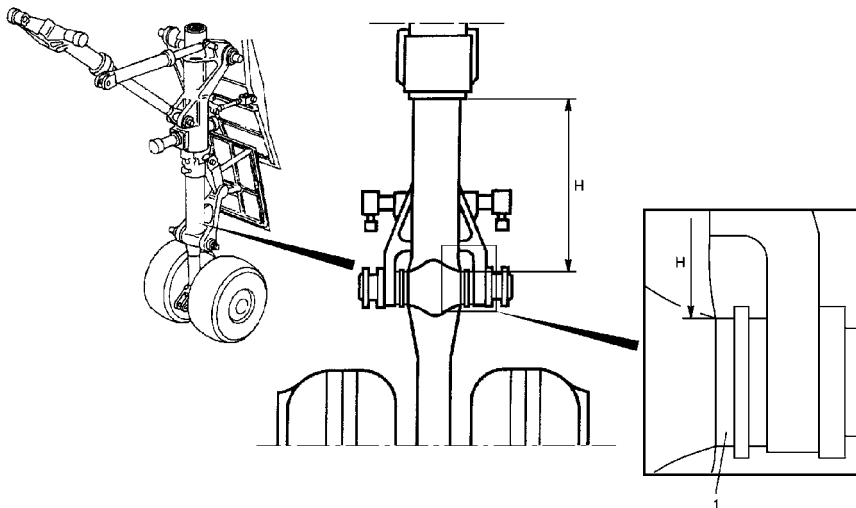
MLG SHOCK ABSORBER

- The dimension must be measured between the lower section of the landing gear cylinder and the top of the spindle flange (1) of the shock absorber.
- Compare the recorded dimension to the following table, according to the ambient temperature.

AMBIENT TEMPERATURE		DIMENSION "H"	
– 40°C	(– 40°F)	16 mm	(0.63 in)
– 20°C	(– 4°F)	32 mm	(1.26 in)
0°C	(+ 32°F)	46 mm	(1.81 in)
+ 20°C	(+68°F)	62 mm	(2.44 in)
+ 40°C	(+ 104°F)	76 mm	(2.99 in)

- Charge the shock absorber if required (see Maintenance Manual, TASK 32–11–05–610–802).

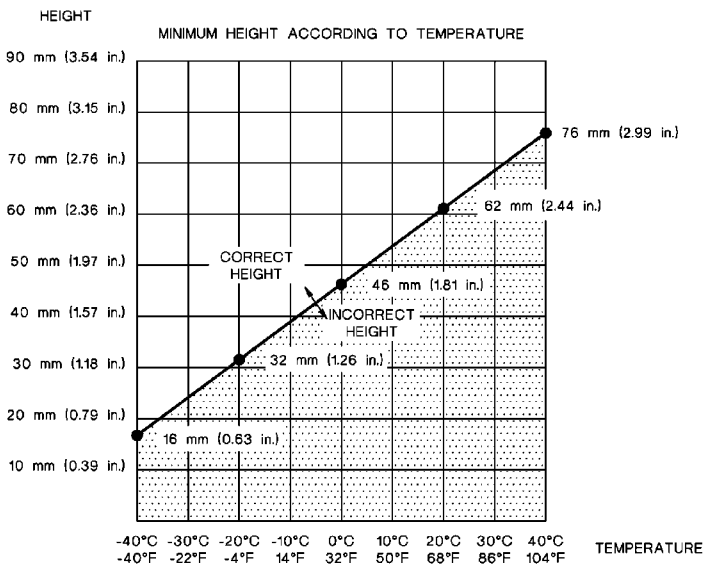
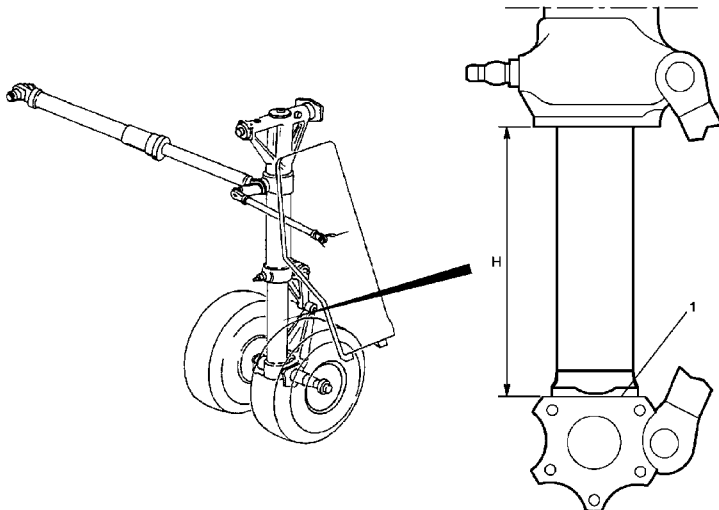
TIRE AND GEAR SERVICING—GEAR



– FIGURE 1 –

NLG SHOCK ABSORBER

TIRE AND GEAR SERVICING—GEAR



– FIGURE 2 –

MLG SHOCK ABSORBER

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OXYGEN-OXYGEN CHARGING**OXYGEN CHARGING****CAUTION**

Unusual calendar intervals between two oxygen refilling operations might lead the operator to think that there is a leak in the crew or passenger oxygen system. In this case, perform a sealing test of the oxygen system to check the oxygen sealing (Refer to task 35-00-00-360-801 and 35-10-00-790-801).

TOOLS AND EQUIPMENT

- Gaseous breathable oxygen cylinder cart
- Oxygen filling adapter P/N: TMY20-35-101

INGREDIENT

- Leak detector
- Oxygen MIL-O-27210E

PROCEDURE

See figure 1.

CAUTION

Refer to the plate indicating cylinder pressure versus temperature.

OXYGEN–OXYGEN CHARGING**WARNING**

COMPLY WITH THE SAFETY MEASURES APPLYING TO THE TYPE OF OPERATIONS TO BE PERFORMED ON OXYGEN SYSTEM:

- HANDS, CLOTHES AND TOOLS MUST BE IMPERATIVELY FREE OF GREASE,
- VENTILATE COCKPIT AND PASSENGER CABIN (PASSENGER DOOR OPEN),
- SMOKING IS PROHIBITED,
- CUT OFF ALL AIRCRAFT POWER SUPPLIES,
- REFER TO THE PROCEDURE PROVIDING SPECIFIC INSTRUCTIONS FOR OXYGEN SYSTEM MAINTENANCE (REFER TO TASK 35–00–00–910–801).

NO PERSONNEL IS ALLOWED ON BOARD DURING OXYGEN CYLINDER CHARGING.

WARNING

CHARGING MUST BE PERFORMED IN THE OPEN.

CHECK THE FOLLOWING:

- AIRCRAFT GROUNDING,
- THE ELECTRICAL SYSTEMS ARE NOT ENERGIZED,
- NO REFUELING OR DEFUELING UNDER WAY.

- Make sure that the oxygen bottle is not empty: pressure read on the oxygen pressure gauge must be greater than zero with no ambiguity.
- If not, send the oxygen cylinder to an approved service center or to the vendor.
- Carefully clean the frame of the charging connector access cap with a clean and dry cloth, then remove the cap.
- Check for cleanliness of the charging connector.
- Place the oxygen cylinder cart near the charging connector.
- Connect the charging hose fitted with adapter TMY20–35–101 into the charging connector.
- Open the shut-off valve access door.

OXYGEN-OXYGEN CHARGING

- Slowly open the cylinder shut-off valve then close by a quarter of a turn (protection of the seal at opening).
- Slowly open the valves of the cart cylinder valve.
- Slowly increase the charging pressure by acting on the pressure adjustment screw of the cylinder cart pressure reducing valve.
- Compare the readings on the copilot console gauge and the HP gauge.

The cylinder contains 2.150 liters (75.9 cu.ft) at a pressure of 127.5 bar (1.850 psi) at 21 °C (70 °F).

NOTE

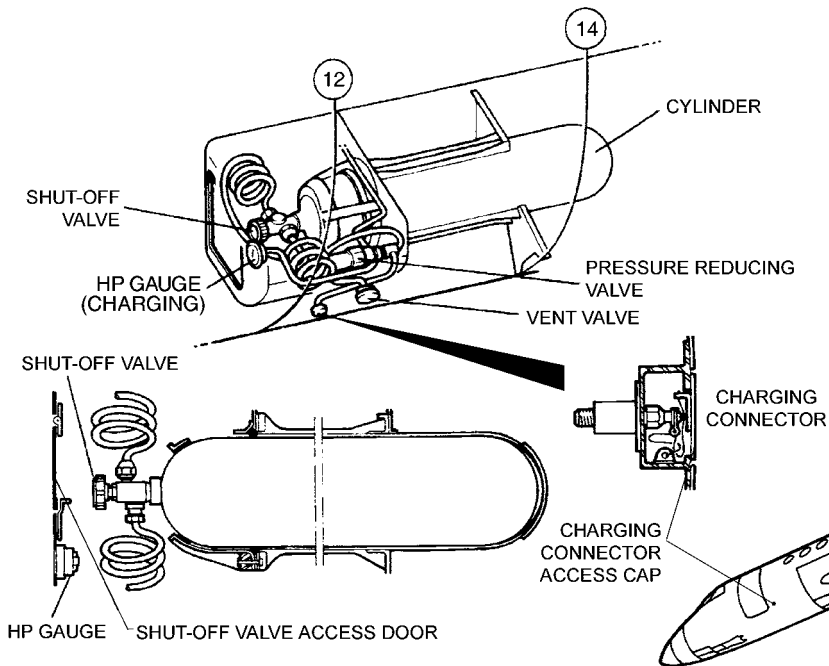
A placard located at the back of the shut-off valve access door indicates the correction values versus temperature (see figure 1).

- When the pressure is reached, close the shut-off valve and the valves of the cart cylinders.
- Disconnect the charging hose.
- Screw the cap onto the charging connector.
- Check for leakage, using leak detector (fluid must be wiped off immediately after check).
- If the aircraft is being prepared for flight, open the oxygen cylinder shut-off valve.
- Close access doors.

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GROUND SERVICING

OXYGEN-OXYGEN CHARGING



OXYGEN		
MAX. REFILLING PRESS.		
AMBIENT TEMP.		O₂ PRESS.
° C	° F	PSI
-50	-59	1220
-40	-40	1320
-30	-22	1400
-20	- 4	1490
-10	+ 14	1580
0	+ 32	1670
+ 10	+ 50	1750
+ 20	+ 68	1850
+ 30	+ 86	1930
+ 40	+104	2020
+ 50	+122	2100

- FIGURE 1 -
EQUIPMENT LOCATION

WATER - DRAINING**POTABLE WATER SYSTEM - DRAINING****TOOLS AND GROUND SUPPORT EQUIPMENT**

Designation	Reference	Quantity
• Drain container		

PRELIMINARY STEPS

- Place a drain container under the rear drain mast.

DRAINING OF POTABLE WATER SYSTEM**CAUTION**

If draining is to prevent damage by freezing, it is necessary to perform the following procedure.

NOTE

The filter consists of a fixed base connected to the aircraft water system and a removable filter cartridge. Quick disconnect couplings are fitted in the inlet and the outlet of the filter to allow replacement of the filter cartridge without having to drain the system.

See figure 1.

- In the rear toilet
 - Open the tank drain valve.
 - When the water tank is drained, close the tank drain valve.
 - Open the rear toilet washbasin faucet and galley faucet (hot and cold water).
 - Under washbasin, open the accumulator and the water heater drain valve (open faucet).
 - When the water accumulator and the water heater are drained:
 - Close the galley faucet (hot and cold water).
 - Close the accumulator and the water heater drain valve.
- Behind the washbasin

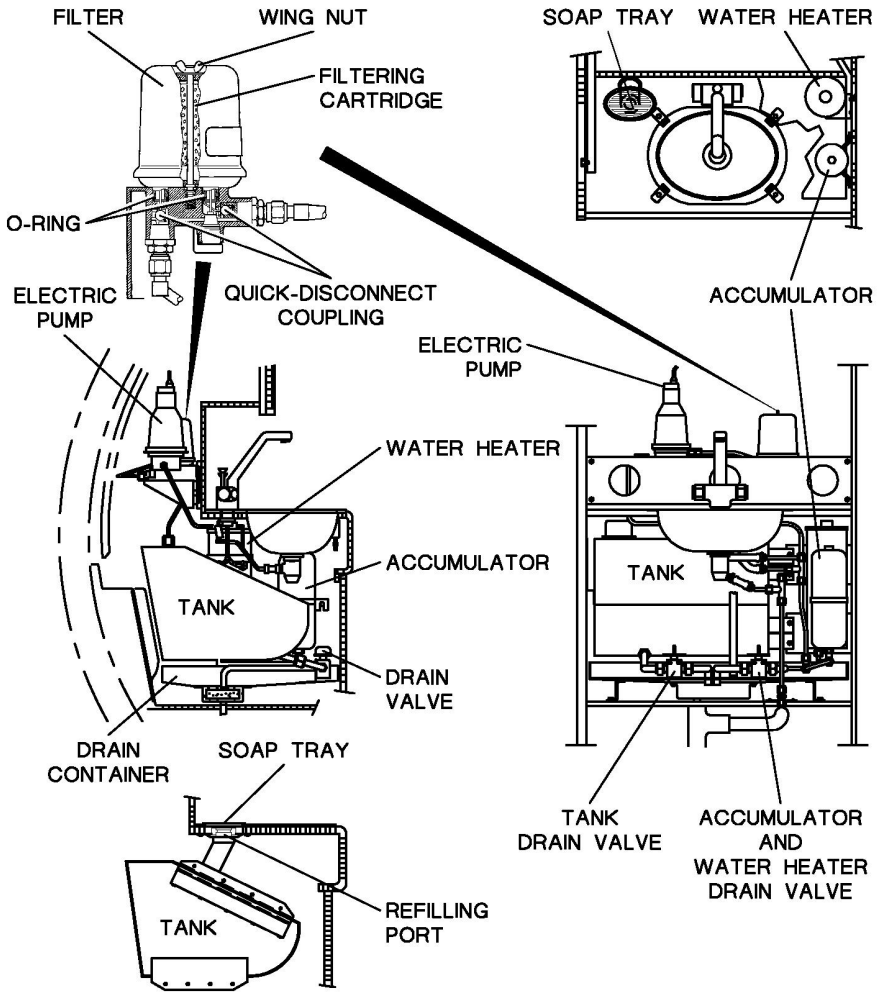
WATER - DRAINING

- Unscrew the center attaching screw wing nut.
- Lift and remove the filter.
- Drain the water in the drain container.
- In cold weather (temperature near or below 0°C (32°F)), it is mandatory to remove the water filter and to store it in a warm room.

FINAL STEPS

See figure 1.

- If draining was performed to prevent damage by freezing:
 - Reinstalled the filter for next flight.
 - Check that O-rings are correctly fitted on the filter outlet and inlet.
 - Screw the wing nut fully home.
 - Pressurize the system and check the filter inlet and outlet for leaks. A leak indicates that the O-rings were not fitted properly.
- Remove the drain container.



- FIGURE 1 -

TOILET WASTE TANK - DRAINING**NOTE**

This procedure is only applicable to A/C with option 38-00-02.

TOOLS AND GROUND SUPPORT EQUIPMENT

Designation	Reference	Quantity
• Toilet drainage adapter	TMY20-38-001 or TMY20-38-002	

INGREDIENTS AND CONSUMABLE PRODUCTS

Designation	Reference	Quantity
• Toilet blue deodorant		

DRAINING

See figure 2.

- Open the door (1) giving access to the drain plug located between frames 26 and 27.
- Connect the ground unit drain connection to the drain plug (2).
- Remove the cap of the rinse pipe (3).
- Connect the rinse hose to the rinse pipe (3).
- Actuate pull knob (4) to open valve.

NOTE

Rinsing of the reservoir is possible during drainage by supplying the rinse pipe with water.

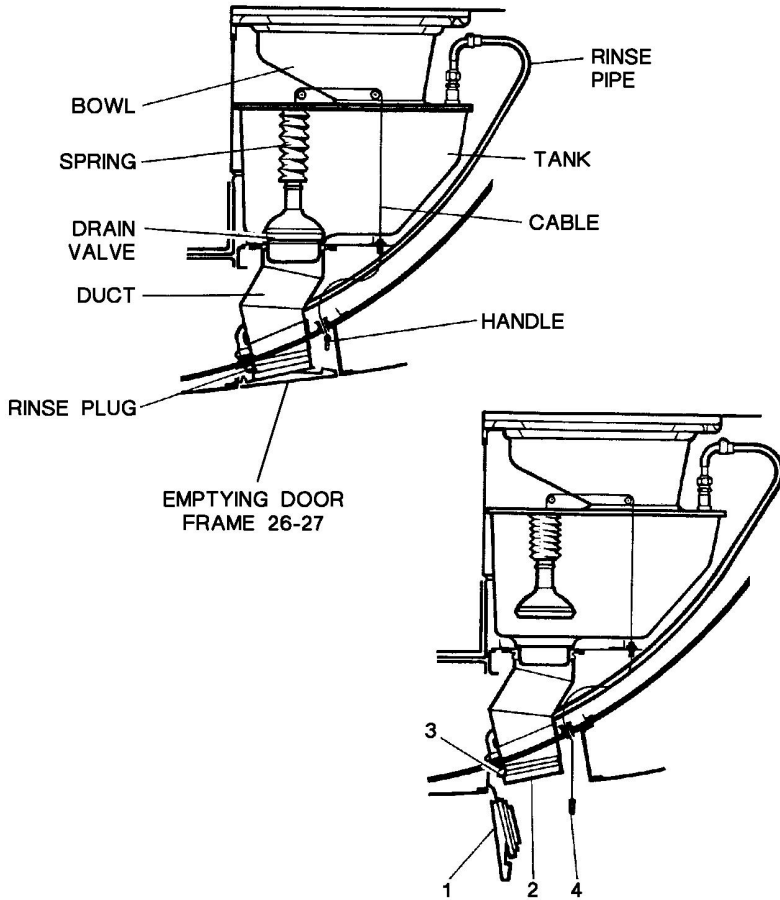
- Firmly push the draining control handle (4) to close the valve.
- Pump necessary amount of water into toilet tank: 11 liters max. (2.91 US gal) through the rinse pipe (3). Beyond this value, the bowl will be overfilled.

NOTE

In very cold weather, glycol anti-freeze may be added to the water and toilet blue deodorant mixture.

The amount to add depends on the outside temperature. The glycol anti-freeze agent does not affect the toilet blue deodorant.

- Add toilet blue deodorant into the toilet tank through the inside of toilet compartment.
- Disconnect the ground unit drain connection.
- Disconnect the rinse and drain pipes.
- Install the cap on the rinse pipe (3).
- Close and lock access door.



- FIGURE 2 -

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WATER - FILLING

TOILET WATER TANK - FILLING

INGREDIENTS AND CONSUMABLE PRODUCTS

Designation	Reference	Quantity
• Anti-freeze fluid		

FRONT TOILET (OPTION)

- Get access to the passenger compartment.
- Open the toilet door.

NOTE

The tank is located under arm-rest.

- Remove the arm-rest as follows:
 - Remove the ash-tray.
 - Depress the arm-rest locking pushbutton, lift up the arm-rest and disengage from the two centering pins.
- Disconnect the quick disconnect coupling of the tank coupling pipe (self-sealing).
- Extract the tank from the housing.
- Remove the refilling plug.
- Replenish or refill the tank.
- Install the plug.
- Fit the tank in the housing.
- Connect the quick disconnect coupling.
- Perform a short flow test.
- Re-install the arm-rest and check for correct locking.

REAR TOILET

CAUTION

If the toilet assembly is subjected to freezing, precharge toilet with water and anti-freeze fluid. In this case, fill the tank with only 6 L (1.6 USG) of water and add 5 L (1.4 USG) of anti-freeze fluid.



FALCON 50

GROUND SERVICING

WATER - FILLING

- Get access to the water tank.
- Remove the filler plug below soap tray.
- Fill the tank with potable water.
- Install the plug.

THRUST REVERSER**THRUST REVERSER IMMOBILIZED IN FLIGHT****CAUTION**

This procedure is only to be performed by personnel fully trained and authorized by the operator.

TOOLS AND SPARE PARTS

- One pin for locking reverser doors in stowed position: F10A5C20236-1 (located in passenger door step).

PROCEDURE

See figure 1.

- Lock the thrust reverser in stowed position:
 - Stow the doors or make sure that they are stowed.
 - Make sure that they are mechanically locked in stowed position.
 - Take the reverser door locking pin from the fly-away kit (in lower opening step of passenger door).
 - Insert the locking pin in the relevant hole (above the reverser).
 - Make sure that the locking pin is correctly inserted (impossible to remove by pulling upwards), then remove the pennant together with the pennant retaining ring.

NOTE

This pin has length allowance of approximately 25 mm (1 in).

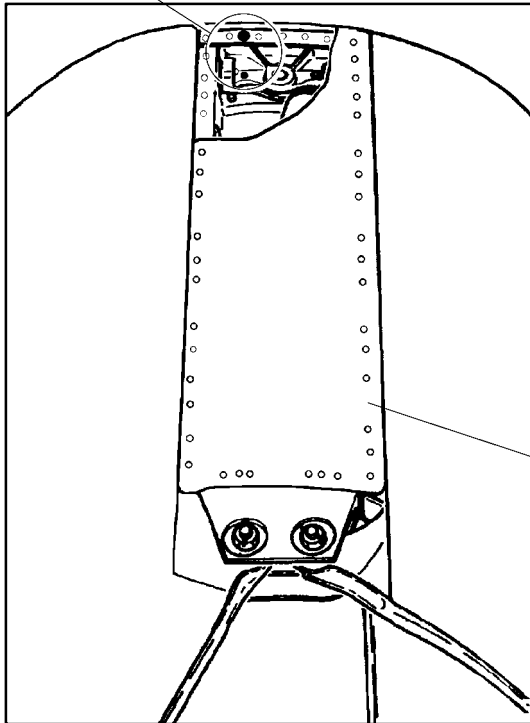
- Deactivate thrust reverser control:
 - Pull “REVERSE CONTROL” circuit breaker located on center circuit breaker panel.
 - Install a circuit breaker lockout on “REVERSE CONTROL” circuit breaker.
- Install a “THRUST REVERSER INOPERATIVE” placard in the cockpit.

CAUTION

After repair, do not forget to reinstall red pennant on pin.

THRUST REVERSER

PINNING HOLES



ACCESS
DOOR

– FIGURE 1 –

THRUST REVERSER NACELLE — TOP VIEW

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