# BRAKE COOLING CHART

## MINIMUM COOLING TIME ON THE GROUND (MINUTES)

<table>
<thead>
<tr>
<th>Previous Landing or RTD</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
<th>110</th>
<th>120</th>
<th>130</th>
<th>140</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brakes on Speed (kias)</td>
<td>39</td>
<td>41</td>
<td>43</td>
<td>39</td>
<td>41</td>
<td>43</td>
<td>39</td>
<td>41</td>
</tr>
</tbody>
</table>

## NORMAL

- **NORMAL** - WAIT 15 MINUTES OR QUOTED TIME
- **HIGH ALTITUDE** - WAIT 180 MINS.
- **FUSIBLE PLUG MELT ZONE** - WAIT 60 MINS OR QUOTED TIME. CHECK ALL TIRES BEFORE TAKEOFF.

**NOTE:** FOR REPEATED TURNAROUNDS: ADD 16 MINS IN-FLIGHT GEAR DOWN COOLING.

## TEMPERATURE EFFECT

- **PREVIOUS LANDING:** ADD 150% TAILWIND (KTS) TO BRAKES ON SPEED.
- **NEXT TAKEOFF:** FOR EVERY 5 KTS (OR PORTION THEREOF) TAILWIND ADD 1000LB TO TAKEOFF WEIGHT.

## WIND EFFECT

- **PREVIOUS LANDING:** ADD 50% HEADWIND (KTS) FROM BRAKES ON SPEED.
- **NEXT TAKEOFF:** FOR EVERY COMPLETE 10KTS HEADWIND SUBTRACT 1000LB FROM TAKEOFF WEIGHT.

## GRADIENT EFFECT

- **PREVIOUS LANDING:** FOR EVERY 1% (OR PORTION THEREOF) DOWNHILL RUNWAY GRADIENT, ADD 5 KNOTS TO THE BRAKES ON SPEED.

### Brake Cooling Chart - Tabulated Data

**Figure 4**

**Page 53/54**

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14. LIGHTS

A. Before Take-Off
   (1) EMERGENCY LIGHTING switch ..........ON Check lights come on then set to ARM.
   (2) L and R LANDING LT switches ..................ON if required, immediately prior to take-off.

B. After Landing
   (1) L and R LANDING LT switches ..................OFF immediately after landing.

C. Before Shutting Down Engines
   (1) EMERGENCY LIGHTING switch ..........OFF

NOTE

Taxi lights must be switched off whenever the airplane is stationary in excess of 10 minutes (refer to LIMITATIONS in the Airplane Flight Manual).
15. CREW OXYGEN SYSTEM

A. Before Take-Off

(1) Oxygen contents .................Check sufficient for flight.
(2) Oxygen mask .....................Set to 100%.
(3) Pilot and copilot oxygen flow indicators ........Check for sound of oxygen flow in headsets or flight compartment speakers.

NOTE

The OXYGEN pressure gauge is calibrated in psi x 100. Figure 5 provides a conversion of pressure vs contents. The example in Figure 5 shows that for an indicated oxygen pressure of 1700 psig and at an ambient temperature of 70°F (21.1°C), the oxygen content is 1150 litres.
AVAILABLE OXYGEN \( V^2 \) PRESSURE WITH TEMPERATURE EFFECT (49.8 CU. FT BOTTLE)

**Oxygen Pressure/Content Conversion**

**Figure 5**

**NORMAL PROCEDURES**
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The following tables show the total time (in hours, minutes and seconds) that oxygen will be available at various mask settings, during various flight conditions, at initial bottle pressures of 1400 psi and 1850 psi. A margin of safety of 10% was subtracted from the full charge of 1850 psi in all cases.

### LEVEL FLIGHT AT CABIN PRESSURE ALTITUDE OF 8,000 FEET

<table>
<thead>
<tr>
<th>Crewmembers</th>
<th>Initial Bottle Pressure</th>
<th>Normal Mask Setting</th>
<th>100% Mask Setting</th>
<th>Emergency Mask Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1400 psi</td>
<td>2h 35' 06&quot;</td>
<td>0h 36' 28&quot;</td>
<td>0h 32' 10&quot;</td>
</tr>
<tr>
<td>3</td>
<td>1850 psi</td>
<td>3h 18' 58&quot;</td>
<td>0h 46' 48&quot;</td>
<td>0h 40' 54&quot;</td>
</tr>
</tbody>
</table>

### DESCENT (10 Min.) FROM 41,000 FEET TO LEVEL FLIGHT AT SAFE ALTITUDE

#### LEVEL FLIGHT AT SAFE ALTITUDE

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</tbody>
</table>

Oxygen Consumption Data

Figure 5A

NORMA L PROCEDURES
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16. MACH TRIM SYSTEM

A. Before Take-Off

Before the first flight of the day:

(1) MACH TRIM TEST/ON/OFF switch .................. OFF
(2) MACH TRIM TEST/ON/OFF switch ... ON
(3) MACH TRIM TEST/ON/OFF switch .................. TEST
(4) MACH TRIM TEST/ON/OFF switch ... ON
(5) MACH TRIM INOP switch/light ............... Press

Check MACH TRIM INOP light on.
Check MACH TRIM INOP light off.
and hold for 5 seconds. Note that stabilizer moves in aircraft nose-up direction by reference to pitch trim indicator.
Check that MACH TRIM INOP light comes on within 10 seconds.
to reset system. MACH TRIM INOP light out.

17. STALL PROTECTION SYSTEM

A. Before Entering Airplane

(1) Left and right stall protection system vanes . .... Check
during walkaround inspection that left and right angle-of-attack vanes have full freedom of movement and are not damaged. Leave both vanes in a nominal horizontal position.
B. Before Engine Start

Before the first flight of the day:

Airplanes incorporating Service Bulletin 601-0510:

(1) Hydraulic system ELECT PUMP 3B .................. ON Check pressure normal.
(2) Pitch trim switch ............ NOSE DN and hold until trim is Full Nose Down.
(3) STALL PROTECTION, PUSHER switches (if fitted) ............ ON and latched.
(4) STALL PROTECT FAIL lights ... Check both out.
(5) Flaps .......................... 0
(6) Both STALL PROTECTION, TEST switches ............ TEST Hold both to TEST simultaneously.

Check the following functions as the SPS test indicator pointers move:

(a) Pointer within blue region .................. Check STALL PROTECT FAIL lights flash. ENG 1 and ENG 2, IGN A and IGN B lights come on.
(b) Pointer within yellow region .................. Check stick shakers operate.
(c) Pointer within red region .................. Check aural stall warning and stick pusher operates. STALL PUSH lights flash.
(d) Pointer .................. Check sweeps counter clockwise past red region; then returns to red region and remains there.
(e) Control column AP/SP DISC pushbuttons ............ Press in turn and check that stick pusher disengages and re-engage when pushbutton is released.
(f) Control surface position indicator .... Check right elevator indicates full travel or copilot control column is against forward stop.
(g) STALL PROTECTION, G SWITCH ............ TEST Check that stick pusher disengages and re-engages when G SWITCH is released.
(h) Both STALL PROTECTION, TEST switches ..... Release Ensure that above functions cease.
Airplanes not incorporating Service Bulletin 601-0510:

(1) Hydraulic system ELECT PUMP 3B .................... ON Check pressure normal.
(2) Pitch trim switch ........ NOSE DN and hold until trim is Full Nose Down.
(3) STALL PROTECTION, PUSHER switches (if fitted) .......... ON and latched.
(4) STALL PROTECT FAIL lights ... Check both out.
(5) Flaps ................ 0
(6) Both STALL PROTECTION, TEST switches ............ TEST Hold both to TEST simultaneously. Check ALT COMP FAIL lights come on.

Check the following functions as the SPS test indicator pointers move over the scale toward the red region:

(a) Pointer within blue region ........ Check ENG 1 and ENG 2, IGN A and IGN B lights on.
(b) Pointer within yellow region ........ Check stick shakers operate.
(c) Pointer within red region ........ Check aural stall warning and stick pusher operates. STALL PUSH lights flash.
(d) Pointer stops moving ... Check STALL PROTECT FAIL lights flash.

NOTE

The STALL PROTECT FAIL lights may flash earlier in the test sequence. This is an acceptable indication.

(e) Control column AP/SP DISC pushbuttons .......... Press in turn and check that stick pusher disengages and re-engages when pushbutton is released.
(f) Control surface position indicator ...... Check right elevator indicates full travel or copilot control column is against forward stop.
(g) STALL PROTECTION, G SWITCH ............ TEST Check that stick pusher disengages and re-engages when G SWITCH is released.
(h) Both STALL PROTECTION, TEST switches .... Release Ensure that above functions cease.

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18. TAXIING

A. Nose Wheel Steering

**CAUTION**

The nose wheel steering must be disarmed during castoring operations to shut off the hydraulic pressure supply.

Always make sure that the steering is within the nominal operating range of ±55 degrees before re-cycling the arming switch.

The nose wheel system permits a steering range of 55 degrees left and right using hydraulic power. Beyond 55 degrees, the nose wheels are free to castor up to approximately 99 degrees left and right. It is not possible to steer beyond 55 degrees using hydraulic power.

During operation of the system with the nose wheels near the maximum steering angle, steering angles greater than 55 degrees can be obtained on rough terrain or when normal steering inputs are augmented by differential application of brakes or engine thrust. In this case the system automatically reverts to the free castoring mode and powered steering can only be re-engaged by reducing the steering angle to below 55 degrees and cycling the N/W STEER switch between OFF and ARMED.

B. Thrust Reversers

The thrust reversers may be used to supplement the use of wheel brakes during taxiing in tailwinds up to 10 knots.

C. Anti-Ice

**NOTE**

During taxi with the anti-ice selected on, the cowl anti-ice FAIL lights may come on and will go out if thrust is increased.
D. Brakes

If conditions exist that could result in water saturated brakes during taxi, perform the following number of firm brake applications from 25 knots to 10 knots. Perform the prescribed number of brake applications during the last mile/kilometer of taxi prior to and not including the final stop or snub before take-off. Do not drag the brakes.

<table>
<thead>
<tr>
<th>AIRPLANE WEIGHT</th>
<th>NUMBER OF BRAKE APPLICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than 40,000 lb</td>
<td>3</td>
</tr>
<tr>
<td>34,000 to 40,000 lb</td>
<td>4</td>
</tr>
<tr>
<td>Less than 34,000 lb</td>
<td>5</td>
</tr>
</tbody>
</table>

**NOTE**

1. Use of symmetric braking is recommended, to ensure uniform brake heating.

2. Warming of the brakes will preclude the chance of water saturated brakes freezing at altitude and being locked for landing touchdown.
19. TAKE-OFF PROCEDURE

A. Procedure

(1) Continuous ignition .......... Set as required (refer to LIMITATIONS - OPERATING LIMITATIONS in the Airplane Flight Manual).

(2) GROUND SPOILERS switch ........ ON

(3) Go-around switches .......... Press

(4) Thrust levers ............. Advance to achieve take-off N₁ derived from take-off thrust setting chart (refer to PERFORMANCE - THRUST SETTINGS in the Airplane Flight Manual).

(5) Brakes .................... Release

(6) Nose wheel steering .......... Use as required for directional control.

(7) Rudder and aileron .......... Use as required for directional control.

NOTE

Gross use of aileron may be required to maintain wings level in strong crosswinds.

WARNING

Excessive rotation rates (exceeding 3 degrees per second) or over-rotations may lead to high pitch attitudes and angles of attack being attained while the aircraft is near the ground. This can reduce stall margins significantly resulting in stick shaker / pusher activation and potentially loss of control. Pilots must rotate smoothly towards the target pitch attitude then transition to speed control.

NOTE

1. The flight director guidance represents an initial target for rotation only and does not guarantee that the recommended climb speed will be achieved / maintained under all conditions. Pilots must transition to speed control immediately after initial rotation.

2. Stall margins may be improved by reducing initial pitch attitude.
At $V_R$:

(8) Airplane ............... Rotate smoothly towards an initial pitch target of 10 degrees in one continuous motion at a pitch rate not exceeding 3 degrees per second.

(9) Pitch attitude .......... Adjust to achieve a minimum airspeed of $V_2 + 10$ KIAS at 35 feet height.

(10) Landing gear ............ Retract after positive rate of climb is established.

**NOTE**

1. If taxi and/or take-off were on snow or slush covered surfaces, unless weather conditions or performance requirements prohibit, delay retraction of the landing gear until excess water, snow or slush is thrown off by wheel rotation and/or slip stream force.

2. The landing gear retraction time may be increased on airplanes 3020 and 3022 incorporating Canadair Service Bulletin 601-0112.

3. During retraction, the anti-skid OUTBD FAIL light will come on for approximately 0.5 second. This is a normal indication.

4. For a minimum of 40 seconds and for as long as 90 seconds after take-off, the wheels continue to spin before their speed of rotation decreases to an equivalent ground speed of 17 knots; the speed set as an enabling condition for ground spoiler deployment. During this period, on aircraft equipped with auto-deploy ground spoilers, ground spoilers will deploy if the landing gear is left in the extended position, the GROUND SPOILERS switch is ON and both throttle levers are retarded to the IDLE position.

If this occurs, ground spoilers will retract when wheel speed decreases below the equivalent 17 knot spin-up speed, or the landing gear is retracted or at least one of the throttle levers is advanced.

(11) Flaps ................. Retract at minimum 1.25 $V_S$ and accelerate to normal climb speed.
20. LANDING PROCEDURE

NOTE

When conducting a precision approach (ILS/PAR), perform an altitude crosscheck at the final approach fix (FAF) or outer marker.

Approach through 50 feet height point at speed of 1.3 $V_s$ (refer to PERFORMANCE - LANDING) on stabilized glideslope of 3 degrees with gear down and flaps at 45 degrees.

Thrust reversers may be used after touchdown to supplement the use of wheel brakes.

CAUTION

With thrust reversers deployed, a nose-up pitching tendency will occur at high power settings, particularly at aft centre of gravity light weights. This tendency is controllable with elevator and may be minimized by ensuring that nose wheel touchdown is achieved and nose down elevator applied, before selecting reverse thrust.

A. Procedure

(1) Continuous ignition .......... As required refer to LIMITATIONS - OPERATING LIMITATIONS in the Airplane Flight Manual.

(2) Thrust levers ................. Reduce to IDLE at 50 feet.

(3) Body attitude ................. Maintain until close to runway. Perform partial flare and touchdown without holding off.

NOTE

If icing accumulation on the wheels and brakes is suspected, carry out a positive landing to ensure initial wheel spin up and breakout of frozen brakes.

(4) Flight spoilers ............... Extend immediately after main wheel touchdown.

On airplanes 3001 to 3059 not incorporating Canadair Service Bulletin 601-0113:

(5) Ground spoilers ............... Extend immediately after main wheel touchdown.
(6) Wheel brakes .................. Apply as soon as possible.
(7) Maximum braking ............... Maintain until safe stop on runway is assured.

(8) Thrust reverse levers ............ Lift and pull back to hold gently against baulk.

When baulk releases (REVERSE THRUST light on):
(9) Thrust reverse levers .......... Pull back to required thrust setting.

(10) Rudder and aileron ............. Use as required, to maintain directional control.

When speed falls to 60 KIAS:
(11) Thrust reverse levers ...... Adjust to reduce reverse thrust to 60% N₁ or below.

(12) Nose wheel steering .......... Use as required.

B. Bounced Landing

If the pilot believes that thrust must be added and maintained until touchdown to salvage a landing, then a rejected landing should be executed.

Should the aircraft bounce on landing, a rejected landing should be executed. Go-around thrust should be set and the normal landing attitude or slightly higher should be maintained. Aircraft configuration should not be changed at this time. Once the aircraft is accelerating above VREF and climbing through a safe height, the go-around maneuver should be continued.

Improper landing technique (thrust levers not at IDLE) may result in a shallow bounce. Should the pilot decide not to execute a rejected landing, then the normal landing attitude should be maintained and the thrust levers reduced to IDLE. Be aware that following the bounce, the ground spoilers may deploy as soon as the thrust levers are set to IDLE, even if the aircraft is still in the air.

A poorly executed approach and touchdown with a high rate of descent can generate a high, hard bounce that can quickly develop into a hard landing accident. A rejected landing should always be executed following such a bounce.
C. Hard Landing

An overweight landing is defined as a landing at more than the maximum landing weight. Overweight landings should be avoided. However, no inspection is required provided that neither a hard landing nor a hard de-rotation has occurred.

Following a hard landing or hard de-rotation at any weight, it is possible that damage may have occurred to the aircraft structure and systems. This damage may be visible or hidden. In this instance, it is strongly recommended that the aircraft be inspected for damage, prior to next flight, in accordance with the Hard / Overweight Landing Checks contained in the Time Limits / Maintenance Checks manual.

A hard landing is described as:

- A landing at a vertical descent rate greater than 600 feet per minute or 10 feet per second when the aircraft gross weight is less than or equal to the maximum landing weight.
- A landing at a vertical descent rate greater than 360 feet per minute or 6 feet per second when the aircraft gross weight is greater than the maximum landing weight, but less than or equal to the maximum take-off weight.
- A landing where the aircraft lands with an uncontrolled sideways skid or continues to move from the prepared surface to a runway surface that is not prepared.
- A landing where the aircraft touches the ground with one or more landing gear on a surface other than the prepared surface.
- A landing where the aircraft nose landing gear touches the ground before both main landing gear have touched the ground.
- A landing where the aircraft bounces or skips after initial impact and the ground spoilers subsequently deploy while the aircraft is still in the air.
- A touchdown that results in a burst tire.

Factors contributing to a hard de-rotation are:

- Application of brakes before the nose landing gear touches the ground resulting in an unchecked, high de-rotation rate.
- Full or nearly full nose-down elevator applied before the nose landing gear touches the ground.
- Forward column pressure applied following main landing gear touchdown resulting in an unchecked, high de-rotation rate.
21. GO-AROUND PROCEDURE

A. From a Gear-Down, Flap at 45 Degrees Approach

NOTE

A go-around procedure should not be attempted with a fuel quantity of less than 500 lb per side, assuming a maximum airplane climb attitude of 10° nose up.

(1) Flight spoilers (if extended) .............. Retract
(2) Take-off thrust ..................... Apply
(3) Flaps .......................... Retract to 20 degrees.
(4) Airplane ....................... Rotate to go-around attitude.

When positive rate of climb is established:
(5) Landing gear ................ Retract Climb at minimum speed of $V_2$ until safe height is achieved.

NOTE

Do not select the landing gear UP before the previous lowering cycle is complete otherwise the gear will retract leaving the nose gear doors open. If this occurs, refer to EMERGENCY PROCEDURES - LANDING GEAR, WHEEL AND BRAKE SYSTEM EMERGENCIES.
22. SEVERE TURBULENCE PENETRATION PROCEDURES

A. Airspeed
   Turbulence penetration speed is 280 KIAS or 0.75 M_\text{\textit{L}}, whichever is lower. Severe turbulence may cause large and rapid variations in airspeed. Do not chase airspeed.

B. Attitude
   Maintain wings level and desired pitch attitude. Use attitude indicator as primary instrument. In extreme wind shear, large attitude changes may occur. Do not use sudden or large control inputs.

C. Stabilizer
   Maintain control of airplane with elevators. After establishing trim setting for penetration speed, avoid using stabilizer trim for controlling attitude.

D. Altitude
   The penetration altitude should be an altitude which provides adequate maneuvering margins. Large altitude variations are possible in severe turbulence. Sacrifice altitude to maintain desired attitude and air speed. Do not chase altitude. Refer to Figure 4.

E. Thrust
   Make initial thrust setting for target airspeed. Change thrust only in case of extreme airspeed changes.

F. Autopilot
   When autopilot is engaged, soft ride mode may be used but do not use air data modes.

G. Thunderstorms
   Set continuous ignition on immediately for both engines if flight into thunderstorms, heavy turbulence, heavy precipitation or lightning is anticipated or encountered. If freezing rain, hail or ice crystals are evident, engine anti-ice should be selected on.

H. Buffet Boundary Chart
   A buffet boundary chart is presented in Figure 6. The example shown on the chart by arrowed lines, shows that at a speed of 0.60 M (A) and a gross weight of 36,000 lb (16,329 kg) (B) and an altitude of 38,500 feet, buffet can be expected at 1.3 G load factor or at a bank angle of 40 degrees (C).

   The margin between high and low speed buffet boundaries can be obtained by entering the chart from the right. For example, at an altitude of 38,500 feet, at a load factor of 1.3 G and at a gross weight of 36,000 lb (16,329 kg), the operating range is between 0.60 M and M_{\text{\textit{MO}}}. 

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Buffet Boundary
Figure 6
23. CONSOLIDATED CHECK LIST

A. Introduction

The following check lists comprise a consolidation of the systems and equipment procedures which are defined in the NORMAL PROCEDURES section of the Airplane Flight Manual. The check lists are supplementary to those checks arising from basic airmanship and procedural practices common to the operation of any modern transport category jet airplane. The check lists are based on the normal procedure of APU start before engine start.

Check items have been abbreviated and reference must be made to the relevant paragraphs in the NORMAL PROCEDURES section of the Airplane Flight Manual for the definitive check procedures.

B. Before Entering Airplane

(1) Stall protection system vanes ................. Check and set.
(2) NLG DOOR close/mechanism ................. Check and engage.
(3) NLG DOOR SWITCH ..................... Check set to FLT/CLOSE DOOR
(4) Walkaround inspection ......................... Completed

C. APU Start

(1) BATTERY MASTER switch ................. ON
(2) GPWR switch ......................... ON if ground power available.
   If fitted:
(3) AUXILIARY BATTERY HEATER/CHARGER switch ................. ON if required.
(4) FIRE WARNING TEST switch ................. Set to WARN TEST and FAULT TEST.
(5) FIREX MONITOR ......................... Test
(6) APU, BLEED AIR switch/light ................. Press out OPEN light out.
(7) APU, FUEL ON/OFF switch/light ................. Press in
(8) AC POWER, APU generator control switch ................. OFF
(9) APU START/STOP switch/light ................. Press in
   If fitted:
(10) AUXILIARY BATTERY HEATER/CHARGER switch ................. OFF
(11) AC POWER, APU generator control switch ................. TEST then ON. Disconnect GPU.
* (12) BLEED AIR LEAK, SYSTEM TEST switch ................. Press to test.
* (13) BLEED AIR LEAK, IND RESET switch ................. Press
* (14) BL AIR LEAK DETECT switch/light ................. Press to test.
* (15) DUCT MON switch ................. Check LOOP A, BOTH, LOOP B.
* Required only before the first flight of the day.
D. Before Starting Engines

(1) BATTERY MASTER switch ........... ON
(2) Doors .................................. Closed
(3) Warning lights ....................... TEST
(4) FIRE WARNING TEST switch ...... Set to WARN TEST and FAULT TEST.
(5) FIREX MONITOR ...................... Test
(6) ENG JET PIPE LEFT and RIGHT switch/lights (4) ........ Press to test.
(7) Hydraulic ELECT PUMP NO. 3B .... ON
* (8) STALL PROTECTION system ...... Test
(9) IGN A or IGN B switch/light ........ Press in to arm.
(10) BLEED AIR 10th STAGE L and R switch/lights ... Press out BLEED CLOSED lights on.
(11) ANTI-ICE WING control switch .... Check OFF.
(12) ANTI-ICE COWL switch/lights .......... Check ON lights out.
(13) BLEED AIR 14th STAGE L and R switch/lights .... Press in BLEED CLOSED lights out.
(14) EJCTRS SCAV lights ............... Check on.
(15) Fuel PUMP switch/lights .. Press in
** (16) Fuel X-FLOW valve ............... Checked and closed.
(17) GEN 1 and GEN 2 control switches .......... OFF
(18) ANTI-SKID ................. ARM and TEST.
(19) ADG ................................ LAMP test.
(20) PARKING BRAKE ................. Set
(21) Thrust levers ................. SHUT OFF

* Required only before the first flight of the day.
** Required before each flight in excess of 1 hour.

E. Starting Engines

(1) APU BLEED AIR switch/light .......... Press in if using APU air for starting. OPEN light on.

On airplanes not incorporating Canadair Service Bulletin 601-0450:
(2) L and R ACUs ........................ OFF
(3) START switch/light .............. Press START light and ignition ON light on and N<sub>1</sub> increases.
when N<sub>2</sub> rpm reaches 20% and ITT is below 120°C.
(4) Thrust lever .................. IDLE
(5) IGNITION switch/light .......... Check ON light out.
(6) START switch/light .............. Check START light out.
(7) BLEED AIR, 10th STAGE L and R switch/lights ...... Check BLEED CLOSED lights on.
(8) BLEED AIR, ISOL switch/light .......... Check OPEN light out.
(9) EJCTRS SCAV light ............... Check out.
F. After Starting Engines

(1) GEN 1 AND GEN 2 control switches ............ TEST
(2) AUTO OFF switch/lights ............ Press out
(3) DC BUS TIE CLOSED switch/lights ............ Check
(4) DC VOLTS and AMPS ............ Check
(5) Hydraulic systems No. 1 and No. 2 content and pressure ........ Check
(6) IGNITION switch/lights ............ Pressed out
(7) APU bleed air valve ... As required
(8) APR switch ............. TEST and ARM.
(9) BLEED AIR 14th STAGE L and R switch/lights ... Press out
(10) BLEED AIR 14th STAGE L and R switch/lights ... Press in
(11) BLEED AIR 10th STAGE L and R switch/lights . As required
(12) L and R ACUs ............ As required
(13) CABIN PRESSURIZATION .. As required
(14) ANTI-ICE COWL switch/lights ............ Press in
(15) ANTI-ICE WING control switch ............ NORMAL
(16) LEFT reverse thrust ARMED switch/light ...... Press in
(17) Left thrust reverser ...... Deploy
(18) ANTI-ICE WING L HEAT and R HEAT switch/light .... Press
(19) Left thrust reverser ........ Stow
(20) RIGHT reverse thrust ARMED switch/light ...... Press in
(21) Right thrust reverser ...... Deploy
(22) ANTI-ICE WING L HEAT and R HEAT switch/light .... Press
(23) Right thrust reverser ........ Stow
(24) ANTI-ICE WING control switch ............ OFF
(25) ANTI-ICE COWL switch/lights ............ Press out

* Required only before the first flight of the day.

then ON.
AUTO OFF lights out.
BUS TIE CLOSED lights out.
Check BLEED CLOSED lights on.
Check BLEED CLOSED lights out.
AUTO MODE, A, B and R controls set.
for test.
to test (on airplanes incorporating Service Bulletin 601-0608).
for test.
to test (on airplanes incorporating Service Bulletin 601-0608).
(26) LEFT and RIGHT reverse thrust ARMED switch/lights .... Press out
(27) Windshield anti-ice .......... Test
(28) ANTI-ICE, WSHLD LEFT and RIGHT control switches .... LOW
(29) ADS HEATER CONT selector switch .................. Set to ALL ON position.
** (30) ICE DETECTOR SYS 1 and SYS 2 FAIL switch/lights .... Test
(31) ANTI-ICE WING control switch .................. NORMAL
(32) ANTI-ICE WING L HEAT and R HEAT switch/light .... Press to test.
(33) Wing anti-ice .................. Test
** (34) Anti-Ice isolation valve .... Test
** (35) Cowl anti-ice ............... Test
(36) Primary flight controls .... Check for free movement and correct indicated surface displacement.
* (37) GROUND SPOILERS .............. Test
* (38) Spoilers ....................... Check lights and correct indicated surface displacement. full travel.
* (39) Trims ......................... Check
* (40) MLG BAY OVHT DETECT lights (2) .......... Test
* (41) LG GEAR panel TEST button .................. Push to test.
* (42) Autopilot ..................... Test and off.
(43) Yaw damper .................... On
(44) SERVO MONITOR panel .... Check lights out.
(45) ADG ............................ UNIT test.
* (46) MACH TRIM switch ............. TEST and ON.
(47) Crew oxygen .................. Check contents sufficient.
* (48) AURAL WARNING tones ........ Test
* (49) EMERGENCY LIGHTING switch .... ON
(50) Annunciator ....................... RECALL
(51) BRAKE pressures ................. Check and ARM.
(52) N/W STEER switch ................ ARMED

* Required only before the first flight of the day.
** Required before the first flight of the day, or before every flight in known or forecast icing conditions.
G. Before Take-Off

(1) STALL PROTECTION system .......... On
(2) Trims .................................. Set
(3) Flight spoilers ..................... Stowed
(4) GROUND SPOILERS switch .......... OFF on airplanes 3060 to 3990 and airplanes incorporating Canadair Service Bulletin 601-0113.

(5) FLAPS ....................... 20 degrees
(6) Hydraulic ELECT PUMP switches 1, 2, 3A and 3B ...... ON
(7) ENG SPEED CONTROL switches .... ON
(8) L and R FUEL TEMPS .......... Normal
(9) L and R FUEL QUANTITY ....... Check
(10) L and R ACUs .............. As required
(11) APU ....................... As required
(12) APU bleed air valve ... As required
(13) BLEED AIR, ISOL switch/light .......... As required
(14) BLEED AIR 10th STAGE L and R switch/lights .......... As required
(15) ANTI-ICE COWL switch/lights ........ As required
(16) ANTI-ICE WING control switch .......... As required if required. Operation normal. Parking brake released.
(17) LANDING LT switches ............ ON
(18) Brakes ............................ Check
(19) N/W STEER switch .......... ARMED
(20) Correct runway .............. Confirm
(21) Continuous ignition ... As required
(22) Left and right reverse thrust ARMED switch/lights ...... Press in
(23) Annunciator ................. RECALL
(24) GROUND SPOILERS switch ........ ON Annunciator lights out. on airplanes 3060 to 3990 and airplanes incorporating Canadair Service Bulletin 601-0113.
(25) APR ............................ Check READY and TEST lights during power up.
H. After Take-Off

(1) Landing gear ...................... UP
(2) FLAPS ................................ Up
(3) Hydraulic ELECT PUMP
   switches 1, 2 and 3B .............. OFF
(4) Continuous ignition .............. OFF
(5) BLEED AIR 10th STAGE
   L and R switch/lights .......... Open
(6) L and R ACUs ...................... On

If APU used for air-conditioning:

(7) BLEED AIR, 10th STAGE
   L and R switch/lights .... Press in
(8) APU bleed air valve .......... Closed
(9) BLEED AIR, ISOL
   switch/light ................. Press out
(10) ANTI-ICE COWL
    switch/lights ............. As required
(11) ANTI-ICE WING
    control switch ............ As required
(12) Left and right
    reverse thrust
    ARMED switch/lights .... Press out
(13) APR switch .................... OFF
(14) APU .......................... Off
(15) ANTI-ICE, WSHLD LEFT and
    RIGHT control switches ... HIGH/LOW as required.

I. During Cruise

(1) L and R FUEL QUANTITY ....... Check for imbalance.
J. Before Landing

(1) CABIN PRESSURIZATION ......... Set
(2) Hydraulic ELECT PUMP switches 1, 2, 3A and 3B ...... ON
(3) L and R ACUs ........ As required
(4) APU .......................... As required
(5) APU bleed air valve  As required
(6) BLEED AIR ISOL switch/light .......... As required
(7) BLEED AIR 10th STAGE L and R switch/lights . As required
(8) ANTI-ICE COWL switch/lights ........ As required
(9) ANTI-ICE WING control switch ...... As required
(10) L and R FUEL QUANTITY .... Check
(11) Landing gear ................. Down for imbalance.

(12) Hydraulic quantity and pressure ........... Normal
(13) ANTI-SKID switch ............ ARM
(14) Brake pressures .............. Normal
(15) N/W STEER switch ............ ARMED
(16) FLAPS .......................... Set
(17) APR switch .................... OFF
(18) Continuous ignition ... As required
(19) Flight spoilers ............. Retracted
(20) Autopilot ..................... Disengage
(21) Left and right reverse thrust ARMED switch/lights .... Press in

K. After Landing

(1) Hydraulic ELECT PUMP switches 1, 2 and 3B .......... OFF
(2) APU .......................... Start
(3) GROUND SPOILERS switch .... OFF

(4) LANDING LT switches ............ OFF
(5) Windshield anti-ice  As required if required.


and TEST.

as required.

on airplanes 3060 to 3990 and airplanes incorporating Canadair Service Bulletin 601-0113.
L. Shutting Down Engines

1. Thrust reversers .............. Stow
2. Left and right reverse thrust
   ARMED switch/lights .... Press out
3. L and R ACU switch/lights ........ Press out
if APU not providing air conditioning. OFF lights on.
4. CKPT HEAT switch .............. OFF
5. BLEED AIR 10th STAGE
   L and R switch/lights ...... Closed
6. ANTI-ICE COWL switch/lights ........ Check ON lights out.
7. ANTI-ICE WING control switch ........ Check OFF.
8. Hydraulic ELECT PUMP
   switch 3A ..................... OFF
9. GEN 1 and GEN 2 control switches .......... OFF
10. Thrust levers ........... SHUT OFF
11. Fuel PUMP switch/lights ........ Press out

M. Shutting Down APU

1. APU generator control switch .............. OFF
2. APU, START/STOP switch/light ........ Press out APU RDY light out.
3. L and R ACU switch/lights ........ Press out OFF lights on.
5. APU, SOV CLOSED light ........ ON
   SOV CLOSED light remains out on airplanes 3045 and subsequent
   and airplanes incorporating Canadair Service Bulletin 601-0099.
6. APU, PWR FUEL ON/OFF switch/light ........ Press out
   SOV CLOSED light on, on airplanes 3045 and subsequent
   and airplanes incorporating Canadair Service Bulletin 601-0099.

N. Before Leaving the Airplane

1. BATTERY MASTER switch ....... OFF