

De Havilland Canada DHC-6 Twin Otter

Checklists

Short Checklist – Page 2

Expanded Checklist – Page 4

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Engine start switch CENTER POS

PREPARATION & INSPECTION

Exterior Checks	PERFORMED
Control lock	REMOVED
Parking brake	SET
Emergency fuel switches	NORMAL
Fuel selector	NORMAL
Fuel boost pumps	OFF
Cabin light and signs	SET
Position light	ON
Pitot heat	OFF
Generator switches	OFF
Flaps	CHECK UP
Fuel levers	OFF
Propeller levers	FULL FWD
Power levers	FLIGHT IDLE (10%)
Ignition switch	NORMAL
DC source and master	BAT and ON
Fuel quantity	CHECKED (> 25%)

ENGINE START (BATTERY)

Right engine start:	
Forward fuel boost pump	ON
Start switch	ENGAGE, RIGHT
Oil pressure, right	CHECK RISING
N _G , right	CHECK STABLE (14%)
Fuel lever, right	ON
$T_{\rm 5}$ and $N_{\rm G}$ gauge, right	MONITOR (42% N _G)
Engine start switch	CENTER POS
Repeat for left engine	
Forward fuel boost pump	ON
Start switch	ENGAGE, LEFT
Oil pressure, left	CHECK RISING
N _G , left	CHECK STABLE (14%)
Fuel lever, left	ON
$T_{\rm 5}andN_{\rm G}gauge$, left	MONITOR (42% N _G)

AFTER START CHECKS

Power levers	IDLE
Generator	ON, LIGHTS OUT
Engine instruments	WITHIN LIMITS
Compass and Gyros	SET
Caution lights	APPROPRIATE
Altimeters and clocks	SET
Anti Coll and position lights	ON

TAXI CHECKS

Brakes	CHECK
Gyros and turn needles	CHECKED

RUN-UP CHECKS

Parking brake	SET
Auto feather	ARM
Anti ice	AS REQUIRED
Autopilot	CHECKED

BEFORE TAKEOFF CHECKLIST

Fuel Quantity	CHECKED (> 25%)
Fuel Pumps	ON
Trim tabs Rudder and aileron trim must be respective markings	ALIGNED aligned with
Flight instruments	CHECKED
NAV / COM radios	SET
Propeller levers	FULL FWD
Auto feather	ON (LIGHT ON)
Flaps	SET 10-20°
Engine instruments	CHECKED
Pitot heat	ON
Anti ice	AS REQUIRED
Flight controls	FREE
Transponder	SET AND ON
Landing lights	ON
Caution lights	APPROPRIATE
Runway and heading	CHECKED



CLIMB CHECKS (400' AGL)

Flaps	UP
Auto feather	OFF
Climb power	SET
Landing lights	OFF
Vy (best rate)	85 KTS

CRUISE CHECKS

DESCENT CHECKS

Fuel quantity / selector	CHECKED
Caution lights	APPROPRIATE
Anti ice	AS REQUIRED
Altimeters	SET
Signs	SET
Landing lights	ON

SET

SHUTDOWN

Parking brake	SET
Power levers	FLIGHT IDLE (10%)
Propeller levers	FEATHERED
Generators	OFF
Fuel levers	OFF
Fuel boost pumps	OFF
All light switches	OFF
DC source and master	OFF
Control lock	INSTALLED
Aircraft	SECURE

BEFORE LANDING CHECKS

Flaps	SET, 20-37.5°
Propeller levers	FULL FORWARD

AFTER LANDING

Flaps	UP
Anti ice	OFF
Landing lights	OFF
Transponder	OFF
All trim tabs	NEUTRAL
Anti Coll lights.	OFF



Preparation and Inspection

Exterior check

Left forward fuselage

1	Left cockpit door	Unlocked
2	Pitot heats and static vents	Vents covers removed
3	Ram air intake	Check unobstructed
4	Hydraulic compartment door	Secured
5	Crew oxygen pressure	Check
6	Nose baggage compartment door	Secured

Nose wheel

1	Tire	Pressure and condition checked
2	Shock strut	Extension, no leaks
3	Torque link and connecting pin	In place and secure
4	Taxi light	Check condition of blub and wiring

Right forward fuselage

1	Radome	Check condition
2	Pitot heads and static vents	Vents covers removed
3	Right cockpit door	Unlocked
4	Hydraulic compartment door	Secured

Right main gear

1	Tire	Pressure and condition checked
2	Brake lines	Check for leakage
3	Fairings	Check

Right fuselage

1	Wing strut	Check undamaged
2	Right emergency exit	Secure
3	Cabin windows	Check
4	Antennas below fuselage	Check for damage
5	Fuel drains	Drain, check for water and visible contaminants

NOTE

Do not turn boost pumps on prior to draining fuel from fuselage tanks



Right inner wing

1	Leading edge access panel	Check
2	Wing and flap undersurface	Check

Right engine

1	Propeller blades, spinner	Check for damage, secure mounting
2	Air inlet, air exit ducts	Check unobstructed
3	Exhaust stubs	Check
4	Cowling and all access panels	Check security
5	Fire extinguisher discs	Check for discharge
6	Fuel drains	Drain, check for water and visible contaminants

NOTE

Boost pumps must be selected ON prior to draining fuel from fuselage tanks. Fuel drains are located at the rear of each engine nacelle.

Right outer wing

1	Wing and flap undersurface	Check clean and undamaged
2	Wing leading edge	Check clean, undamaged
3	Landing light	Check clean and lens secure
4	Stall strip and fence	Check
5	Fuel vent and lightning protection	check
	tunnel	
6	Navigation light	Check for damage
7	Static wicks and bonding straps	Check all are present, secure, good condition

Right aft fuselage

1 Right rear cabin door Unlocked

Empennage

1	Right vortex generators	Check
2	Vertical stabilizer leading edge	Check
3	Right horizontal stabilizer	Check clean and undamaged
4	Elevator flap interconnect tab	Check
5	Static wicks and bonding straps	Check all are present, secured, good condition
6	Tail bumper	Check
7	Antennas	Check for damage
8	Rotating beacon	Check
9	Elevator trim tab	Check
10	Left horizontal stabilizer	Check, clean and undamaged
11	Left vortex generators	Check



Left aft fuselage

1	Jury strut	Installed or stowed, as required
2	Baggage compartment door	Secure, unlocked
3	Baggage compartment	Contents secure, tied down as required
4	Passenger oxygen pressure	check
	(if installed)	
5	External power receptacle	Secure or ground power connected
6	Aft fuel cap	Cap secure

Left main gear

1	Tire	Pressure and condition
2	Brake Links	Check for leakage
3	Fairings	Check

Left outer wing

1	Wing and flap undersurface	Check clean and undamaged
2	Wing leading edge	Check clean, undamaged
3	Landing light	Check clean and lens secure
4	Stall strip and fence	Check (stall strip is installed on right wing on
_		floatplanes)
5	Stall warning vanes	Check clean, no deformation
6	Fuel vent and lightning protection	Check
	tunnel	
7	Navigation light	Check for damage
8	Static wicks and bonding straps	Check all are present, secure, good condition
9	Aileron and trim tab	Check

Left engine

1	Propeller blades, spinner	Check for damage, secure mounting
2	Air inlet, air exit ducts	Check unobstructed
3	Exhaust stubs	Check
4	Cowling and all access panels	Check security
5	Fire extinguisher discs	Check for discharge
6	Fuel drains	Drain, check for water and visible contaminants

Left inner wing

1	Leading edge access panel	Check
2	Wing and flap undersurface	Check clean and undamaged



Left fuselage

1	Wing strut	Check undamaged
2	Left emergency exit	Secure
3	Cabin windows	Check
4	Forward fuel cap	Cap secure

Warning

All accumulations of frost, ice, or snow need to be removed from all wing, tail, control surfaces, propellers, spinners, and the engine air inlets in cold weather.

Cockpit preparation

1	Pilot operating handbook and other required documents	Available in aircraft
2	Parking brake	On
3	Control locks	Remove & stow
4	Yoke visibility	Optional: hide yoke
5	RAM AIR lever	As required
6	PILOT STATIC selector	NORM
7	Electrical loads (lighting, de-ice,	OFF
	unnecessary avionics)	
8	Circuit breakers	In

Warning

Ensure that the HYD PUMP circuit breaker is in before turning on aircraft power. It only needs to be pulled in the event of hydraulic abnormalities.

8	EXTERNAL / BATTERY switch	As required
9	DC MASTER switch	MASTER (lower 'on' position)
	LIGHTING EMER switch	Arm – Test – Arm
		Ensure that emergency lights come on and go out
_		after setting switch back to 'Arm'
10	IGNITION switch	NORMAL & GUARDED
11	ENG IGNITER switches	BOTH
12	GENERATOR switches	OFF – check that L and R GENERATOR caution
		lights are illuminated
13	BUSTIE	NORMAL
14	CAUTION LT TEST switch	TEST
		Check that all caution lights illuminate:
		* 18 lights on either side of the magnetic compass
		* the three beta systems
		* the stall warning light
		* red battery temperature light
		* green beta back-up power liever microswitch
		* autofeather SEL and ARM lights
_		* the stall warning horn sounds
15	NO SMOKING / FASTEN BELT	ON
	switches	
16	Bleed air switches	OFF
17	Power levers	IDLE



18	PROP levers	FEATHER
		Propeller blade latches simulated / installed?
19	FUEL levers	OFF
20	FIRE DETECTION switch	TEST
		Check that each end of the two FIRE PULL
		handles illuminates and the fire bell rings.
		Ensure that the FIRE BELL MUTE switch is in the
		down position with the guard lowered
21	FUEL CUT OFF emergency shut-off	NORMAL
	switches #1 & #2	
22	PROP AUTOFEATHER switch	OFF
23	FUEL SELECTOR knob	NORMAL (center position)
24	INVERTER switch	No. 1 or No. 2
25	System tests (every 24 hours)	1. Lift STDBY BOOST PUMP EMER AFT and
		STDBY BOOST PUMP EMER FWD switches
		to unmarked position. Check BOOST
		PUMP 2 AFT PRESS and BOOST PUMP 2
		FWD PRESS caution lights go out
		2. Move STDBY BOOST PUMP EMER AFT and
		STDBY BOOST PUMP EMER FWD switches
		to unmarked off position. Check BOOST
		PUMP 2 AFT PRESS and BOOST PUMP 2
		FWD PRESS caution lights illuminate.
		3. Move AFT BOOST pump and FWD BOOST
		pump switches to TEST. Check BOOST
		PUMP 2 AFT PRESS and BOOST PUMP 2
		FWD PRESS caution lights go out.
		4. Move AFT BOOST pump and FWD BOOST
		pump switches to ON. Check BOOST
		PUMP 1 AFT PRESS and BOOST PUMP 2
		AFT PRESS and BOOST PUMP 1 FWD
		PRESS and BOOST PUMP 2 FWD PRESS
		caution lights go out.
		5. Check, if correct (not in checklist): Move
		AFT BOOST pump and FWD BOOST pump
		switches to OFF. Check BOOST PUMP 1
		AFT PRESS and BOOST PUMP 2 AFT PRESS
		and BOOST PUMP 1 FWD PRESS and
		BOOST PUMP 2 FWD PRESS caution lights
		illuminate.
		6. Check if correct: no crossfeed valve
		installed



Cabin preparation

1	Fire extinguishers	Charged and secure
2	First Aid kit	Sealed and secure
3	All 6 exit doors	Unobstructed and secure
4	Left rear cabin door	Locking pins secure
5	Cabin furnishings	Checked
6	Passenger safety briefing cards	Present
7	All interior lights	Check for proper function (if required)
8	Cabin emergency lights	Check for proper function (see item 14 of cockpit
		preparation)

Before starting engines

1	Exterior check checklist	Completed
2	Cockpit preparation checklist	Completed
3	Cabin preparation checklist	Completed
4	Preflight weight and balance	Completed
	checks	
5	Passenger briefing	Completed
6	HYD OIL PUMP circuit breaker (CB)	Visually confirm, that CB is not pulled / tripped
7	Hydraulic pressures	Check that both are above 1.300 PSI (1.500 is a
		typical value)
8	Fuel quantity	Sufficient for planned flight
9	AFT BOOST and FW BOOST	ON – check that all four BOOST PUMP caution
	switches	lights are out
10	Red anti-collision beacon switch	ON



Starting engines

External power start

The external power source needs to provide a minimum of 28 volt (negative) with at least 800 and max. 1700 ampere capacity.

1	EXTERNAL / BATTERY switch	EXTERNAL
2	VOLTMETER	Confirm 28 Volt external power
3	START switch	First RIGHT to start right engine and minimize wind blast direct to the ground crew. After the right engine, the left engine is started and LEFT selected accordingly

CAUTION

Do not move the engine fuel lever to on, before turbine RPM $N_{\rm G}$ is stabilized. The minimum stabilized $N_{\rm G}$ to start fuel flow is 12%. Do not select fuel on, if 12% $N_{\rm G}$ cannot be archived.

4		Allow the gas generator to stabilize. Confirm rising oil pressure and as soon as the gas generator is stabilized, N _G exceeds 12%, move fuel lever to ON without delay.
5	Light-up	Check that engine accelerates to idle RPM (typically 52% N _G at ISA, standard atmosphere). Make sure, that T₅ temperature stays within limitations.
6	START switch	Release, when N _G has reached idle speed. Check, that respective L GENERATOR or R GENERATOR caution light illuminates when start switch is released. Check oil pressure is within limits.
7		Repeat steps 1-6 for opposite engine
8	EXTERNAL / BATTERY switch	BATTERY
9		Disconnect external power source
10	PROP levers	MAX RPM
11	Power levers	If a significant electrical load is anticipated, when generators are brought online, advance throttle to idle $N_{\rm G}$ +15%
12	GENERATOR switches	RESET, then ON Check that L GENERATOR and R GENERATOR lights extinguish. Monitor T₅ temperature (idle limit = 600°C)
13	Generator IND SELECT switch	L GEN and R GEN. Check generator load is below 0.5 on each side
14	Power levers	Idle



Battery power start

1	EXTERNAL / BATTERY switch	BATTERY
2	VOLTMETER	Confirm 24 Volt power
3	START switch	First RIGHT to start right engine and minimize wind blast direct to the ground crew. After the right engine, the left engine is started and LEFT selected accordingly

CAUTION

Do not move the engine fuel lever to on, before turbine RPM $N_{\rm G}$ is stabilized. The minimum stabilized $N_{\rm G}$ to start fuel flow is 12%. Do not select fuel on, if 12% $N_{\rm G}$ cannot be archived.

4		Allow the gas generator to stabilize (usually between 16 and 18%). Confirm rising oil pressure and as soon as the gas generator is stabilized, N _G exceeds 12%, move fuel lever to ON without delay. The gas generator of the second engine being started will normally stabilize 1% lower than the first engine due to depletion of the battery.
5	Light-up	Check that engine accelerates to idle RPM (typically 52% N _G at ISA, standard atmosphere). Make sure, that T₅ temperature stays within limitations.
6	START switch	Release, when N _G has reached idle speed. Check, that respective L GENERATOR or R GENERATOR caution light illuminates when start switch is released. Check oil pressure is within limits.
7		Repeat steps 1-6 for opposite engine. Check sufficient battery voltage or perform procedure to recharge battery between starts
8	EXTERNAL / BATTERY switch	BATTERY
9	PROP levers	MAX RPM
10	Power levers	If a significant electrical load is anticipated, when generators are brought online, advance throttle to idle $N_{\rm G}$ +15%
11	GENERATOR switches	RESET, then ON Check that L GENERATOR and R GENERATOR lights extinguish. Monitor T5 temperature (idle limit = 600°C)
12	Generator IND SELECT switch	L GEN and R GEN. Check generator load is below 0.5 on each side
13	Power levers	Idle



Procedure for recharging battery between starts

1	PROP lever (operating engine)	Full INCREASE
2	Power lever (operating engine)	Advance to idle N _G + 15%
3	GENERATOR switch (operating	RESET, then ON
	engine)	Check that L GENERAIOR or R GENERAIOR lights
		extinguish. Monitor T₅temperature (idle limit =
		600°C)
4		Observe battery charge current (loadmeter
		reading with switch in center position) until
		battery charge current load is .4 or less
5	GENERATOR switch (operating	OFF.
	engine)	Check L GENERATOR or R GENERATOR caution
		light illuminates.
6	Power lever (operating engine)	As desired
7		Repeat the starting procedure for second engine

Battery start of cold soaked engines

This procedure applies when the engine / or the battery has been cold-soaked to temperatures below -30°C or -20°F.

1	START switch	LEFT or RIGHT
		Engine starter for 5 seconds, do NOT introduce
		fuel. Release switch after 5 seconds.
2		Wait approximately one minute, then start the
		engine using the normal battery start procedure
3		Allow the engine to idle until oil temperature
		reaches 0°C. Do not increase engine speed above
		idle, before oil temperature reached 0°C.
4		Once 0°C oil temperature is reached, advance
		throttle lever to idle N_G + 15%.
5	GENERATOR switch	RESET, then ON
		Check that L GENERATOR and R GENERATOR
		lights extinguish.
6		Observe battery charge current (loadmeter
		reading with switch in center position) until
		battery charge current load is .4 or less
7	GENERATOR switch (operating	OFF.
	engine)	Check L GENERATOR or R GENERATOR caution
		light illuminates.
8	Power lever (operating engine)	As desired
9		Repeat steps 1 through 4 for the second engine,
		including the 5 second dry motoring and one
		minute wait.
10	Power levers	Advance to idle N _g +15%
11	GENERATOR switches	RESET, then ON
		Check that L GENERATOR and R GENERATOR
		lights extinguish.
12	Generator IND SELECT switch	L GEN and R GEN. Check generator load is below
		0.5 on each side



13 Power levers

idle

After start (pre-taxi)

1	Doors	Secure. Check thet the DOORS UNLOCKED caution light
		is out
2	EXTERNAL / BATTERY switch	BATTERY
3	External power	Disconnected
4	Hydraulic pressure	Between 1.300 and 1.600 PSI
5	Chocks	Removed
6	BLEED AIR switches	ON
		If cabin heat or surface de-ice is required
7	PROP levers	Full INCREASE
8	Crew seats, Seat Belts, Shoulder	Check secure
	Harnesses	
9	Brakes	Off.
		Check operation of nose wheel steering and
		brakes, and correct function of electrically
		operated hydraulic pump motor

System functional checks

Bleed / pneumatic test

1		Select de-icing system mode switch to OFF
2		Ensure bot BLEED AIR switches are OFF
3		Confirm PNEUMATIC LOW PRESS caution light I
		illuminated
4	Power levers	Advance to idle N _G + 15%
5	BLEED AIR	LEFT - ON
		Check that PNEUMATIC LOW PRESS caution light
		goes out
6	BLEED AIR	LEFT – OFF
		Check that PNEUMATIC LOW PRESS caution light
		illuminates
7	BLEED AIR	RIGHT - ON
		Check that PNEUMATIC LOW PRESS caution light
		goes out
8	BLEED AIR	RIGHT – OFF
		Check that PNEUMATIC LOW PRESS caution light
		illuminates
9	Power levers	Idle



Battery temperature monitor test

The battery temperature indicator has a push-button test function. Pressing it simulates an overheat situation. The pointer, as well as the warning lamp, should be activated by this. This system is normally installed on nickel-cadmium batteries. If lead-acid batteries are used, the system is inactive.

The battery warning lamp has a trigger of 150° degrees Celsius. The graduation of the scale ranges from 120° to 180° degrees and is highlighted with the colors green (normal), yellow (caution), red (danger).

1	BATTERY TEMPERTURE monitor	Press and hold
	test switch	Check that the 150° warning light comes on when
		the indicator pointer reaches 150°

The test switch should be released either as soon as the warning light illuminates or before the indicators reaches 170°

NOTE The temperatures are degrees Fahrenheit

Power lever microswitch test

1	Power levers	Idle
2	PWR LEV TEST switch	Press until light illuminates, then release
3	PWR LEV TEST light	Check On, then off



Anti ice systems test

1	Power levers	Idle + 15%
2	BLEED AIR switches left & right	On
3	PNEU LOW PRESS light	Out
4	De-ice boots	Man
5	Inner / outer wing	Toggle
6	Left / right stab	Toggle
7	STAB DE-ICE PRESS light left &	On
	right	
8	De-ice boots	As required
9	Power levers	Advance to 80% N _G
10	Intake deflectors	Extend
11	De-Ice Dollseyes	EXT
12	Intake deflectors	Retract
13	Power levers	Idle
14	BLEED AIR switches left & right	As required
15	Generator left & right	Off
16	Propeller de-ice	On – check battery load increase
17	Propeller de-ice	Off
18	Windshield heat	On – check battery load increase
19	Windshield heat	Off
20	Generator left & right	On

Before takeoff checks:

1	Trim tabs	Set
2	Flaps	10°
3	Flight instruments	Check
4	Radios	Set
5	Propeller levers	Full forward
6	Autofeather	ON
7	SELECT light	ON
8	Engine instruments	Check
9	Bleed air left & right	As required
10	De-ice	As required



Line-up checks:

1	Flight controls	Free
2	Transponder	On
3	Landing lights	On
4	Strobe lights	On
5	Caution lights	As appropriate
6	Runway & heading	Check

After takeoff 400 ft AGL:

1	Flaps	Up
2	Autofeather	OFF
3	Climb Power	Set
4	Nosewheel steering	Centered
5	Yaw damper	On
6	Passenger signs	As required
7	Landing lights	Off

Cruise (no checklist)

Descend checks

1	Fuel quantity & selector	Check / Set
2	Hydraulic pressure	Check
3	Caution lights	Check
4	De-ice	As required
5	Altimeters	Set

Approach checks

1	Passenger signs	On
2	Landing lights	On



Before landing checks:

Flaps 20° is the usually recommend flap setting for landing. Flaps 37.5° is only chosen due to runway length limitations. Flaps 20° landing distance can be determined by multiplying the landing distance for flaps 37.5° by 1.3.

1	Nosewheel steering	Centered
2	Yaw damper	Off
3	Flaps	Set (20° or 37.5°)
4	Propeller levers	Full forward
5	Power levers	Idle - When crossing runway threshold at 50 ft AGL
6		Touchdown on main wheels
7	Brakes	Apply as required after nose wheel contact
8	Zero thrust / reverse power	As required

Warning

Reverse power cannot be applied unless the prop levers are at full increase (max RPM).

Flap angle	Min. V _{REF} = 1.3 * V _s (Stall Speed)					
	12.300 lbs	11.500 lbs	10.500 lbs	9.500 lbs	8.500 lbs	7.500 lbs
	5.600kg	5.200kg	4.800kg	4.300kg	3.900kg	3.400kg
20°	80	77	73	70	66	62
37.5°	74	70	67	64	60	57

After landing checks:

1	Flaps	Up
2	Bleed air left & right	Off
3	De-Ice	Off
4	Landing lights	Off
5	Strobe lights	Off
6	Transponder	Off
7	Trim tabs	Reset for takeoff



Shutdown checks:

1	Parking brake	Set
2	Radios	Off
3	Power levers	Idle
4	Propeller levers	Feather
5	Generators	Off
6	Fuel levers	Off
7	Boost pumps	Off
8	Lights	Off (all)
9	External / Battery switch	Off
10	D.C. Master switch	Off
11	Control locks	Attached

Go-Around

1	Power levers	Advance to take-off power setting
2	PROP levers	Ensure at full INCREASE position
3	Flaps	10°
4	Minimum Airspeed	1.3 times staal speed with flap 10° - see table
_		below
5	Flaps	0° when clear of obstacles and positive rate of
		climb

Warning

With flap fully extended at 37.5° any pitch attitude in the go-around maneuver greater than 0° (level flight attitude) may cause a rapid decrease in airspeed and possible stall

Flap angle	1.3 * V _s (Stall Speed)					
	12.300 lbs	11.500 lbs	10.500 lbs	9.500 lbs	8.500 lbs	7.500 lbs
	5.600kg	5.200kg	4.800kg	4.300kg	3.900kg	3.400kg
10°	88	83	79	75	71	67



Flight in icing conditions

Ice may form in conditions of visible moisture (i.e. clouds, or fog) at temperatures below +5°C OAT.

WARNING

Following exposure to any icing conditions in flight, flap extension to the final setting must be accomplished prior to descending below 500 feet AGL. The speeds in the following table must be maintained. They may be increased by a maximum of 5 knots to offset turbulence. Higher speeds increase the risk of ice contaminated tailplane stall (ICTS).

Ac accumulation of ice on the airplane may change the stall characteristics, stall speed, or warning margin provided by the stall warning device.

In case a significant amount of ice has accumulated, an airspeed margin of 1.3 times the normal stall speed appropriate to weight should be maintained accordingly,

The aircraft may only be flown into known or forecast icing conditions as long as it is equipped with properly working de-icing equipment. This comprises:

- Pitot heat
- Intake deflectors
- Windshield heat
- Valve heat
- Bleed air switches
- Surface de-ice boots
- Propeller anti-ice
- Engine ignition system

Operation of intake deflectors

The intake deflectors are only extended for flight in icing conditions as they reduce engine power but are needed to ensure engine operation in icing conditions.

To extend the intake deflectors, the INTAKE DEFLECTOR switch should be held in the EXTEND position for 3 to 5 seconds, after EXT is indicated.

To retract the switch does not need to be held in the Retract position.

In the event of a malfunction, the deflectors will remain in their last selected position. In case the malfunction prevents extension of either deflector, icing conditions must be avoided.

A minimum of 80% $N_{\rm G}$ is required to extend the intake deflectors. They will normally retract at idle $N_{\rm G}.$



Max performance STOL take-off and landing

Maximum performance STOL take-off

1	Flap	Set (20°)
2	Line-up	Into wind and apply brakes
3	Power levers	Advance smoothly to engine take-off setting, check autofeather ARM light illuminates
		NOTE

At temperatures above ISA hold power setting of 85% NG and allow engine air inlet condition to stabilize before advancing to take-off power setting.

4	Brakes	Release
5	Control-column	Hold fully aft until lift-off

NOTE

At full aft CG full elevator will not be required to lift off at speed according 'Max. performance STOL takeoff speed' (See AOM).

6	Allow speed to increase to value oat 50ft given in
	'Max. performance STOL takeoff speed' (see AOM)

CAUTION

As airspeed increases torque pressure will increase with a constant power lever setting. Adjust power levers as required to avoid exceeding the torque and T₅ temperature limit.

6	When clear of obstacles	Retract flaps in increments, allowing speed to
		increase to desired climb speed
7	Power levers	Reduce according climb power settings
8	Autofeather switch	OFF.
		Check SEL and ARM lights go out

Maximum performance STOL approach and landing

1	Flaps	SET (37,5°)
2	Propeller levers	Full increase
3	Power levers	Idle
4	Airspeed	Maintain approach speed value at 50 ft according
		'Max. performance STOL landing speed' (See
		AOM) until the flare
5	Flare	Using full up elevator
6	Touchdown	On main wheels in nose up attitude
7	Immediately following touchdown	Apply full reverse thrust and maximum braking

CAUTION

Reverse power cannot be applied unless the propeller levers are in full increase.



NOTE

Most effective braking is achieved by intermittent application of full brake, in which duration of each application is approximately 1 second with intervals between as brief as possible.

8	Direction	Maintain during landing roll by small amounts of differential reverse power and differential braking
9	Power levers	Bring aircraft to complete stop before advancing power levers to IDLE