



**DA40 - 180** QRH

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# USE OF THIS CHECKLIST

This Checklist is to be used at all times, together with the Company Operations Manual and Standard Operating Procedures. However, information contained in this Checklist does not take precedence over the CASA approved Aircraft Flight Manual and other regulatory requirements.

The **Normal Checklist** (indicated by a **GREEN** table) contains the routine procedures for normal operation of the aircraft that provide an acceptable level of airworthiness. Checklist titles encased in **BLACK** are to be committed to memory and actioned without recourse to the written checklist.

The **Abnormal Checklist** (indicated by a **YELLOW** table) contains procedures which, if followed, will maintain an acceptable level of airworthiness or reduce operational risk resulting from a failure or abnormal condition. The procedures under this part supplement Normal Checklist when a failure or abnormal condition exists.

The **Emergency Checklist** (indicated by a **RED** table) contains procedures to protect the occupants and the aircraft from harm during a critical situation requiring an immediate response. The procedures under this part supplement the Normal Checklist when an emergency condition exists. Checklist titles encased in **BLACK** are to be committed to memory and actioned without recourse to the written checklist. These are of particular relevance to critical emergency related procedures where immediate action is required.

In addition to the outlined items in both Emergency & Abnormal Checklists, the following steps are considered part of all emergency/abnormal situations:

**Control the Aircraft**

**Assess the Situation**

**Take Appropriate Action**



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# LIMITATIONS X

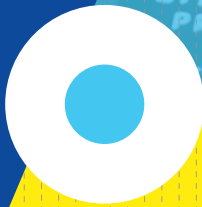


AIRSPEEDS	
V NE	178
V NO	129
V A	94 < 1036 KG < 111
V FE	91 - LDG
	108 - APP
V Y	67 - 1200 KG, FLAPS T/O
	76 - 1200 KG, FLAPS UP
V GLIDE	73 - 1150 KG
	76 - 1200 KG
V SO	52 - 1200 KG
V SI	53 - 1200 KG
V R	59
V BASE	80
V FINAL	75
V AT	70
X-WIND	20

WEIGHTS	
M TOW	1200 KG
M LW	1150 KG
M BAGGAGE (STANDARD)	30 KG
M BAGGAGE (TUBE)	5 KG
M BAGGAGE (FWD EXT)	45 KG
M BAGGAGE (AFT EXT)	18 KG

OTHERS	
FUEL	40 USG - Total
	50 USG - LRT
OIL	4 QTZ - VFR MIN
	6 QTZ - IFR MIN
	8 QTZ - MAX

# PRE FLIGHT INSPECTION



HEADWIND  
20KT  
WIND  
241° / 22  
XTK ERROR  
R 0.01NM  
GPS-L TRK  
270°T  
PRE-FLIGHT

PROGRESS 2/4  
CROSSWIND  
L 9KT  
SAT/ISA DEV  
+21°C / +08°C  
VERT DEV  
40LO  
1  
PROG  
REPO  
POSIT  
REPOR



1. CABIN	
Documentation	Complete & Current
Ignition Key	Out
Front Canopy & Rear Door	Clean, Undamaged & Check Lock
Switches	ALL OFF
Circuit Breakers	Set In
Engine Control Levers	Check Condition & Movement
	<b>IDLE   FINE   ICO</b>
Master	ON
Annunciation Panel	Check Function
Lights & Pitot Heat	All ON & Inspect
Flaps	LDG
Switches	All OFF
Fuel Quantities	Check, <b>2 min after 'Master ON'</b>
Master	OFF
Loose Items	Check & Secure
Flight Controls & Trim	Flight Controls & Trim
Baggage	Stowed & Secure

2. LEFT MAIN LANDING GEAR	
Landing Gear Strut	Inspect
Strut & Wheel Fairing	Inspect (if installed)
TYRE Pressure ( <b>36 PSI</b> )	Check
Wear & Tread	Check
TYRE, Wheel & Brake	Inspect
Brake Line Connection	Check for Leaks
Slip Marks	Inspect
Chocks	Remove

### 3. LEFT WING

Wing Surface	Inspect
Step	Inspect
Lower Surface Air Intake & Openings	Inspect
Tank Drain	Drain & Inspect
Stall Warning	Check
Tank Filler	Inspect (as required)
Stall Strips	Inspect
Pitot Probe	Clean & Orifices Open
Landing & Taxi Lights	Inspect
Wing Tip	Inspect
Position & Strobe Lights	Inspect
Tie-Down	Check & Remove
Aileron, Linkage, Hinges & Pin	Inspect
Aileron Paddle	Inspect
Flap, Linkage, Hinges & Pin	Inspect

### 4. LEFT FUSELAGE

Canopy	Inspect
Rear Door & Window	Inspect
Fuselage Skin	Inspect
Antennas	Inspect

### 5. EMPENNAGE

Stabilizers & Control Surfaces	Inspect
Hinges	Inspect
Elevator & Rudder Trim Tabs	Inspect & Check Locking Wire
Tie-Down	Check & Remove
Tail Skid & Lower Fin	Inspect
Towing Assembly	Inspect

## 6. RIGHT FUSELAGE

Fuselage Skin	Inspect
Window	Inspect
Canopy	Inspect

## 7. RIGHT WING

Flap, Linkage, Hinges & Pin	Inspect
Aileron Paddle	Inspect
Aileron, Linkage, Hinges & Pin	Inspect
Tie-Down	Check & Remove
Position & Strobe Lights	Inspect
Wing Tip	Inspect
Stall Strips	Inspect
Tank Filler	Inspect (as required)
Tank Drain	Drain & Inspect
Lower Surface Air Intake & Openings	Inspect
Step	Inspect
Wing Surface	Inspect

## 8. RIGHT MAIN LANDING GEAR

Landing Gear Strut	Inspect
Strut & Wheel Fairing	Inspect (if installed)
TYRE Pressure ( <b>36 PSI</b> )	Check
Wear & Tread	Check
TYRE, Wheel & Brake	Inspect
Brake Line Connection	Check for Leaks
Slip Marks	Inspect
Chocks	Remove

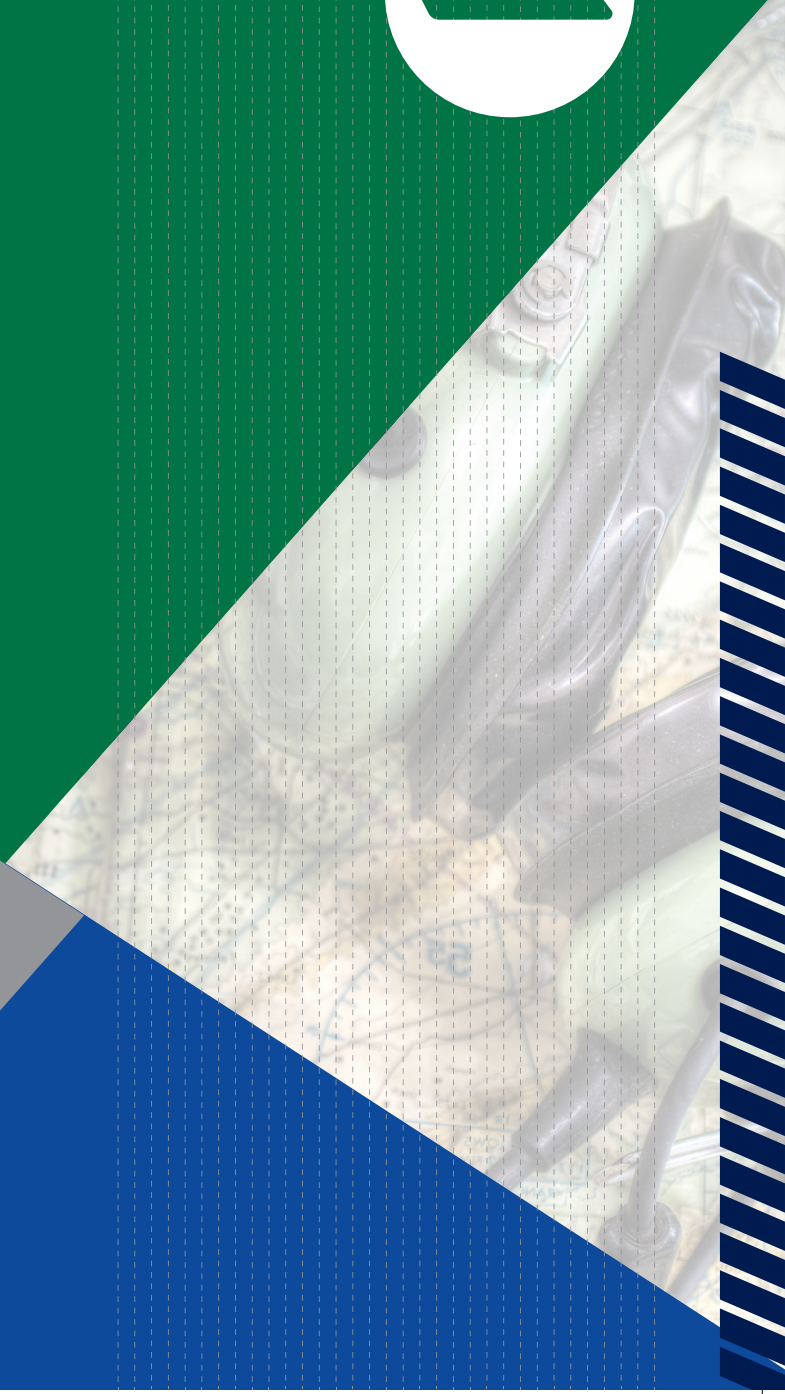
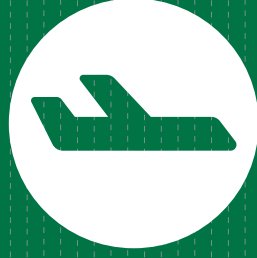


9. FRONT FUSELAGE	
Oil Level	4 QTZ – VFR MIN
	6 QTZ – IFR MIN
Cowling	Inspect
Air Intakes	Clear
Propeller	Blade Shake & Inspect
Spinner & Screws	Inspect
Landing Gear	Inspect
TYRE & Wheel	Inspect
Slip Marks	Inspect
Strut Fairing	Inspect (if installed)
Wear & Tread	Check
Wheel Fairing	Inspect
Tow Bar	Remove
TYRE Pressure (29 PSI)	Check
Chocks	Remove
Exhaust	Inspect
Forward Air Inlets	Clear (if installed)
Winter Baffle	Inspect (if installed)
Antennas	Inspect
Tank Drain	Drain & Inspect
Venting Pipes	Check for Blockage
Fuselage Underside	Check for Excessive Contaminants





# NORMAL CHECKLIST



## 1. BEFORE START

Pre-Flight	Completed
Documentation	On-Board
Start Position	Suitable
PAX Brief	Completed
Harness	Secured
Front Canopy & Rear Door	Secured / Cooling Gap
Rudder Pedals	Adjusted
Fuel Selector	Lowest Tank or LEFT
Engine Control Levers	<b>IDLE   FINE   ICO</b>
Park Brake	Reset ON
Alternate Air / Static	Closed
Switches	ALL OFF
Master	ON
Circuit Breakers	Checked
ELT	Armed / Portable
CO Detector	Tested
Emergency Switch	OFF & Guarded
G1000 Database	Verified
PFD   MFD	Checked   Back-Up
Flight Times	Checked
MR & Trip Sheet	Completed
Fuel Quantities	Checked or Reset
Voltage	<b>&gt; 24 V</b>

2. START PROCEDURE			
	Normal	Warm (> 100°F)	Flooded
Throttle	3 cm	3 cm	½ Open
Fuel Pump	ON	ON	OFF
Mixture	RICH 3-5 s	RICH 1-3 s	ICO
Fuel Flow	Positive	Positive	-
Mixture	ICO	ICO	-
Throttle	1 cm	1 cm	-
Starter	Engage	Engage	Engage
Mixture	RICH	RICH	RICH

3. AFTER START	
Throttle	1200 RPM
Oil Pressure	<b>GREEN within 15 s</b>
Voltage   Ammeter	Checked   Charging
Fuel Pump	OFF (check pressure)
Avionics Master	ON
Flaps	UP
Annunciation Panel	Checked
ANN Test (AUX - 5/6)	Checked & Tested
Pitot Heat	ON, then OFF
Radios - COM 1	CTR / CTA
- COM 2	ATIS / AWIS / CTAF
ATIS & QNH	Checked & Set
Transponder	Checked Code & STBY
Standby AI	Caged
Flight Plan	Loaded & Verified

4. TAXI	
Brakes	Checked
Turning Left   Right	Compass & HSI ↓   ↑
	Right   Left Skid
	AI No Topple

5. PRE-TAKE-OFF	
Park into Wind	
Park Brake	ON
<b>T</b> Throttle	1500 RPM
Trim	Tested & Set for T/O
<b>M</b> Mixture	RICH
Magnetos	BOTH
Master	ON
<b>P</b> Pitch	FINE
<b>F</b> Fuel Pump	ON
Fuel Selector	Switch Tank & Start Timer
Fuel Pump	OFF
Flaps	Checked & UP
<b>I</b> Instruments	Left to Right Checked
	HDG & CDI Set
	ALT Set
Autopilot	AP Engaged & Tested
	CWS Tested
	AP Disengaged
	Electric Trim Tested
Oil Temperature	<b>&gt; 100°F</b>
Throttle	2000 RPM
<b>S</b> Switches – Magnetos	L – BOTH – R – BOTH
	Max Drop <b>175 RPM</b> Each
	Max Diff <b>50 RPM</b> Between

5. PRE-TAKE-OFF (continued)	
Pitch	Cycle <b>3</b> Times:
	RPM ↓
	MAP ↑
	Oil P's ↓
Throttle	IDLE & Checked
	1200 RPM
<b>C</b> Circuit Breakers	Checked
Controls	Correct, Full & Free
<b>H</b> Hatches & Harnesses	Secured
<b>T.O.S.B. &amp; Taxi Call</b>	

6. LINE-UP	
<b>F</b> Fuel Pump	ON
Flaps	Set for T/O
<b>A</b> Avionics	Set Current & Next Frequencies
<b>S</b> Switches & Lights	Magnetos – BOTH
	Strobe – <b>ON</b> for entering RWY
	Landing – <b>ON</b> for T/O
<b>T</b> Transponder	Set ALT when entering RWY
Trim	Checked
Oil T's	<b>GREEN</b>
Hatches & Harnesses	Secured

7. AFTER TAKE-OFF	
<b>300 FT</b>	
Flaps	UP
Lights	Landing – <b>OFF</b>
<b>Safe ALT</b>	
Fuel Pump	OFF (check pressure)

### 8. PRE-LANDING

<b>B</b>	Brakes	OFF & Operating
<b>O</b>	Oil T's & P's	GREEN
<b>U</b>	Undercarriage	Fixed
<b>M</b>	Mixture	RICH
	Magnetos	BOTH
	Master	ON
<b>F</b>	Fuel Pump	ON
	Fuel Selector	Every 30 min or Fullest Tank
	Fuel Quantities	Checked & Sufficient
<b>A</b>	Autopilot	Disengaged
<b>H</b>	Hatches & Harnesses	Secured
<b>L</b>	Lights	Landing - <b>ON</b>

### 9. SHORT FINAL

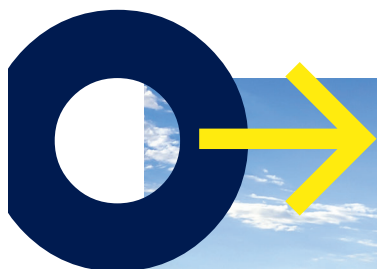
<b>C</b>	Carby Heat	N/A
<b>P</b>	Pitch	FINE
<b>U</b>	Undercarriage	Fixed
<b>F</b>	Flaps	As Required

### 10. AFTER LANDING

<b>F</b>	Fuel Pump	OFF
	Flaps	UP
<b>A</b>	Avionics	Set Current Frequency & Taxi Call
<b>S</b>	Switches	Landing - <b>OFF</b> Strobe - <b>OFF / ON</b> if crossing RWY
<b>T</b>	Transponder	Checked Code & STBY
	Trim	Set for T/O

## 11. SHUTDOWN

Park Brake	ON
Throttle	1200 RPM
Avionics Master	OFF
Magnetos	L - BOTH - R - BOTH - OFF - BOTH
Mixture	<b>ICO</b>
Magnetos	OFF & Key Out
Flight Times	Checked
Master	<b>OFF</b>
Switches	All <b>OFF</b>





# ABNORMAL CHECKLIST



<b>PRECAUTIONARY LANDING</b>	
Landing Area	As appropriate
Wind	Considered
Approach	Overfly at ALT suitable to recognise obstacles
IAS	75 KTS
ATC	Advised
<b>On FINAL</b>	
Flaps	LDG
Hatches & Harnesses	Secured
Touchdown	Lowest possible IAS
<b>If Time Permits</b>	
Fuel Selector	OFF
Magnetos	OFF
Master	OFF

<b>LOW VOLTAGE CAUTION</b>	
<b>On Ground</b>	
Throttle	1200 RPM
Electrical Equipment	OFF
Ammeter	Checked, <b>terminate</b> flight if no change
<b>In-Flight</b>	
Electrical Equipment	OFF
Ammeter	Checked, follow 'ALTERNATOR FAILURE' if no change
<b>After Landing</b>	
	Follow 'On Ground' procedures

LOW OIL PRESSURE	
If 'OIL PRES LO' light is <b>ON</b>	Follow 'OIL PRES LO'
If 'OIL PRES LO' light is <b>OFF</b>	Check Oil T's and P's
	If normal – Monitor
	If rising – Reduce power, land
	If near zero – <b>Shutdown</b> engine, land

HIGH OIL PRESSURE	
Oil T's	If normal – Continue flight

HIGH MANIFOLD PRESSURE	
Faulty gauge	Aircraft should be serviced

LOW CYLINDER HEAD OR EXHAUST GAS TEMPERATURE	
May be a loose sensor	Aircraft should be serviced

HIGH CYLINDER HEAD OR EXHAUST GAS TEMPERATURE	
Oil T's	If also high – Check Oil P's
Oil P's	If low – Follow 'LOW OIL PRESSURE'
	If GREEN – Reduce power, and if <b>unchanged</b> , land <b>ASAP</b>

HIGH OIL TEMPERATURE	
CHT & EGT	If normal – Continue flight
	If high & Oil P's is low – Follow 'LOW OIL PRESSURE'
	If high & Oil P's is GREEN – Reduce power and enrich mixture, and
	if <b>unchanged</b> , land <b>ASAP</b>

HIGH FUEL FLOW	
If 'FUEL PRES LO' light is ON	Suspected fuel leak – Land <b>ASAP</b>
If 'FUEL PRES LO' light is OFF	Continue flight – Use FF from AFM



# EMERGENCY CHECKLIST



<b>EMERGENCY LANDING</b>	
Seats	Upright
IAS	75 KTS
ATC	Advised
Fuel Selector	OFF
Mixture	ICO
<b>On FINAL</b>	
Flap	LDG
Magnetos	OFF
Master	OFF
Harnesses	Tightened

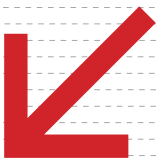
<b>WINDMILL ENGINE START</b>	
IAS	73-80 KTS
Fuel Selector	Fullest Tank
Magnetos	BOTH
Mixture	Checked
Fuel Pump	ON
Alternate Air	OPEN
<b>If unchanged</b>	
Mixture	LEAN, then slowly RICH

<b>POWERED ENGINE START</b>	
IAS	80 KTS
Electrical Equipment	OFF
Avionics Master	OFF
Master	ON
Mixture	Checked
Fuel Selector	Checked
Fuel Pump	ON
Alternate Air	OPEN
Starter	Engaged

<b>ENGINE FIRE ON GROUND</b>	
Fuel Selector	OFF
Cabin Heat	OFF
Throttle	Fully Opened
Master	OFF
Magnetos	OFF
Canopy	Opened

<b>ELECTRICAL FIRE / SMOKE ON GROUND</b>	
Master	OFF
Throttle	IDLE
Mixture	ICO
Canopy	Opened

<b>ENGINE FIRE IN-FLIGHT / AFTER TAKE-OFF</b>	
Cabin Heat	OFF
IAS	75 KTS
ATC	Advised
Canopy	Unlatched as required
Fuel Selector	OFF
Throttle	Fully Opened
Fuel Pump	OFF
Master	ON
Mixture	ICO
Flaps	LDG
Magnetos	OFF
Master	OFF



<b>ELECTRICAL FIRE / SMOKE IN-FLIGHT</b>	
Horizon Emergency Switch	ON
Canopy	Unlatched as required
Master	OFF
Cabin Heat	OFF
<b>Land ASAP</b>	
<b>If electrical equipment is required</b>	
Master (BAT)	ON
Essential Bus	ON
Smoke Condition	If decreased – Land <b>ASAP</b>
<b>If unchanged</b>	
Master (ALT)	ON
Essential Bus	OFF
BATT & ESS TIE Circuit Breakers	Pulled
<b>Land ASAP</b>	

<b>ALTERNATOR FAILURE</b>	
Mixture	ICO
Fuel Shutoff Valve	OFF
<b>If Alternator does not reset</b>	
Essential Bus	ON
Unnecessary Electrical Equipment	OFF
Horizon Emergency Switch	ON
<b>Land ASAP</b>	

<b>TOTAL ELECTRICAL FAILURE</b>	
Circuit Breakers	Checked, pull, reset
Essential Bus	ON
<b>If unchanged</b>	
Horizon Emergency Switch	ON
Throttle & Flaps	Via lever positions and engine noise
<b>Land ASAP</b>	

RPM OVERSPEED	
Friction Adjuster	Checked
Oil P's	Checked
	If Oil P's lost – Use Throttle to control, follow 'LOW OIL PRESSURE'

RPM UNDERSPEED	
Fuel Pump	ON
Fuel Selector	Checked
Friction Adjuster	Checked
Pitch	FINE
<b>If unchanged – Use Throttle to control, land ASAP</b>	

OIL PRES LO	
CHT, Oil T's & P's	Checked
	If Oil T's is normal and Oil P's below GREEN – Monitor
	If Oil T's or CHT is rising, Oil P's below GREEN – Throttle IDLE, land <b>ASAP</b>
	If Oil P's near zero – <b>Shutdown</b> engine, land

STARTER NOT DISENGAGING	
Throttle	IDLE
Mixture	ICO
Magnetos	OFF
Master	OFF



<b>DOOR OPEN</b>	
IAS	Reduced
Front Canopy & Rear Door	Visually Checked
<b>If unlocked</b>	
IAS	< 140 KTS
<b>Land ASAP</b>	

<b>LANDING WITH DEFECTIVE MAIN TYRE</b>	
ATC	Advised
Touchdown	Land on 'good' TYRE
	Keep wing on 'good' side low
	Use brakes as required

<b>AFTER TOUCHDOWN WITH DEFECTIVE BRAKES</b>	
Fuel Selector	OFF
Mixture	ICO
Magnetos	OFF
Master	OFF

<b>UNINTENTIONAL FLIGHT INTO ICING CONDITIONS</b>	
Pitot Heat	ON
Cabin Heat	ON
Cabin Air Distribution	UP
Throttle	Increased
<b>When pitot heat fails</b>	
Alternate Air / Static	OPEN



**LEARN TO FLY** 

22-24 Northern Ave,  
Moorabbin Airport VIC 3194