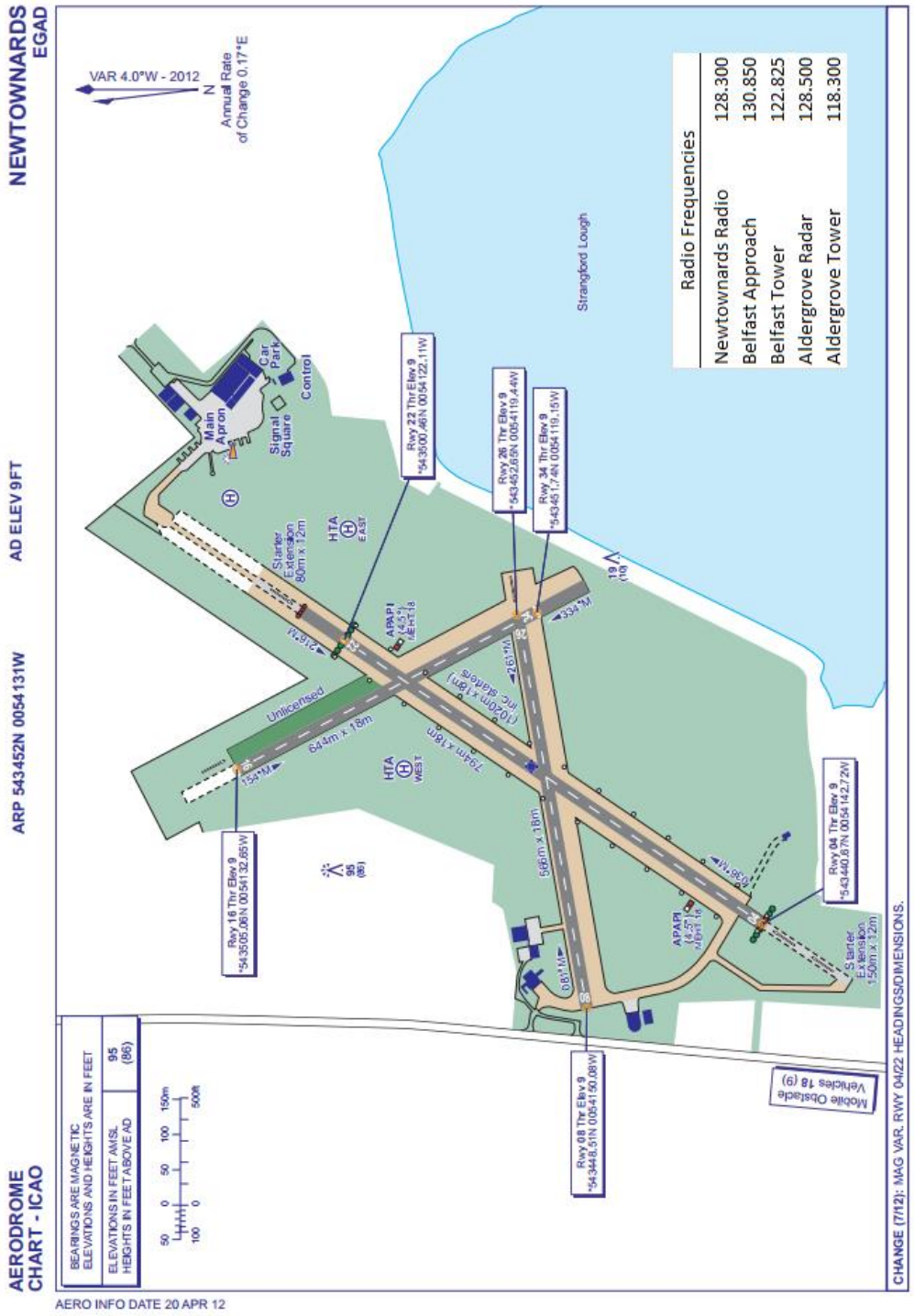

ULSTER FLYING CLUB

CESSNA 152

NORMAL & EMERGENCY PROCEDURES CHECKLIST

AIRSPEEDS FOR NORMAL OPERATION

The following indicated airspeeds in knots (KIAS) are based on a maximum weight of 1670 pounds & may be used for any weight below this figure.

TAKE OFF

Initial Climb ---------- 65 Kts
Short Field – Flap 10° ---------- 54 Kts @ 50 ft AGL

ENROUTE CLIMB (Sea Level, Flaps Up)

Normal ---------- 75 Kts
Best Rate of Climb ---------- 61 Kts
Best Angle of Climb ---------- 55 Kts

LANDING APPROACH

Normal – Flaps 30° ---------- 60 Kts
Normal – Flaps 20° ---------- 65 Kts
Flaps Up ---------- 65 Kts
Short Field – Flaps 30° ---------- 54 Kts

BEST GLIDE – FLAPS UP ---------- 65 Kts

GO AROUND

Max Power Flaps 20° ---------- 55 Kts

CROSSWIND VELOCITY

Maximum Demonstrated ---------- 12 Kts

PRE-FLIGHT INSPECTION: INTERNAL

Aircraft Position ---------- CHECK OBSTRUCTIONS

Parking Brake ---------- SET

Control Wheel Lock ---------- REMOVE AND STOW

Control Wheel ---------- CHECK FULL, FREE & CORRECT MOVEMENT

Ignition Switch ---------- OFF, KEY REMOVED

Instruments ---------- CHECK

Radio & Avionics ---------- OFF

Fuel Selector Valve ---------- ON

Elevator Trim ---------- CHECK SET NEUTRAL
(Full movement nose up/down)

Master Switch ---------- ON

Fuel Quantity Indicators ---------- CHECK QUANTITES

Anti-Collision Beacon ---------- ON - CHECK OPERTATION

Flaps ---------- EXTEND

Pitot Heat ---------- ON for 30 seconds then OFF

Master Switch ---------- OFF

First Aid Pack ---------- CHECK

Fire Extinguisher ---------- CHECK

PRE-FLIGHT INSPECTION: EXTERNAL

PORT WING

Pitot ---------- WARM, UNOBSTRUCTED

Flap ---------- CHECK (Tracks & Linkage)

Aileron ---------- CHECK
(Hinges, Linkage & full free movement)

Wing & Control Surface ---------- UNDAMAGED

Navigation Light & Fairing ---------- UNDAMAGED

Stall Warning Opening ---------- CHECK OPERATION

Fuel Tank Vent ---------- UNOBSTRUCTED

Fuel Drain Valve ---------- CHECK

Fuel Quantity ---------- CHECK WITH DIP STICK

Fuel Filler Cap ---------- SECURE

Undercarriage ---------- CHECK
(Strut, brakes & no hydraulic leak)

Tyre ---------- CHECK
(Undamaged, Inflated, alignment of creep mark)

NOSE

Static Source ---------- UNOBSTRUCTED

Tyre ---------- CHECK
(Undamaged, Inflated, alignment of creep mark)

Nose Wheel Strut ---------- CHECK]
(Oleo extension 2”-3”, torque linkage secure)

PRE-FLIGHT INSPECTION: EXTERNAL (continued…)

NOSE (Continued…)

Landing & Taxi Lights ---------- CHECK (Condition & Clean)

Air Filter ---------- UNOBSTRUCTED

Engine Cooling Inlets ---------- UNOBSTRUCTED

Alternator Drive Belt ---------- SECURE

Propeller & Spinner ---------- CHECK
(Leading edge & Tips **undamaged**, Spinner **secure**)

Fuel Strainer Drain Valve ---------- CHECK

Engine Oil ---------- CHECK
(Oil level **min 4 quarts**, extended flight 6 quarts)

Oil Filler Cap ---------- SECURE

Windscreen ---------- CLEAN

STARBOARD WING

Fuel Quantity ---------- CHECK WITH DIP STICK

Fuel Filler Cap ---------- SECURE

Fuel Drain Valve ---------- CHECK

Wing & Control Surfaces ---------- UNDAMAGED

Navigation Light & Fairing ---------- UNDAMAGED

Aileron ---------- CHECK

Flap ---------- CHECK

PRE-FLIGHT INSPECTION: EXTERNAL (continued...)

STARBOARD WING (Continued...)

Undercarriage ---------- CHECK
(Strut, brakes & no hydraulic leak)

Tyre ---------- CHECK
(Undamaged, Inflated, alignment of creep mark)

FUSELAGE & TAILPLANE

Antennas ---------- CHECK SECURITY

Tailplane & Elevator ---------- CHECK
(Hinges & Linkage, full free movement)

Trim Tab ---------- CHECK NEUTRAL

Rudder & Fin ---------- CHECK
(Gust lock removed, hinges & linkage, full free movement)

Navigation Light ---------- UNDAMAGED

PRE ENGINE START

Aircraft Documentation ---------- CHECKED

Flight Authorisation ---------- COMPLETED

Weight & Balance ---------- WITHIN LIMITS

Pre-flight Inspection ---------- COMPLETE

Passenger Briefing ---------- COMPLETE
(Exits, seats & seat belts, first aid kit, extinguisher, life jackets if required)

Seats & Belts ---------- ADJUSTED AND SECURE

PRE ENGINE START (continued...)

Cabin Doors ---------- CLOSED & LOCKED

Parking Brake ---------- SET

Fuel Selector Valve ---------- ON

Circuit Breakers ---------- IN

All Radio & Avionics ---------- OFF

STARTING ENGINE

Throttle ---------- OPEN ¼ INCH

Mixture ---------- RICH

Master Switch ---------- ON

Anti-Collision Beacon ---------- ON

Navigation Lights (Night Only) ---------- ON

Primer ---------- OPERATE AS REQUIRED
(Nil HOT / 1-2 WARM / 3-4 COLD)

Primer ---------- LOCKED

Propeller Area ---------- CLEAR

Ignition Switch ---------- START
(Then release when started)

Mixture ---------- IDLE

Throttle ---------- OPEN HALF-FULL

Ignition switch ---------- START
(Then release when started)

When Engine fires ---------- MIXTURE FULLY RICH
AND RETARD THROTTLE

AFTER ENGINE START

RPM ---------- SET 1200

Starter Warning Light ---------- EXTINGUISHED

Oil Pressure ---------- CHECK

Suction ---------- WITHIN LIMITS

Ammeter ---------- WITHIN LIMITS

Low Voltage Warning Light ---------- EXTINGUISHED

Magnetos ---------- CHECK FOR DEAD CUT

Flaps ---------- UP (Check even operation)

Radios & Avionics ---------- ON & SET

Radio ---------- OBTAIN AIRFIELD DATA

Flight Instruments ---------- CHECK AND SET

Taxi Light (Night only) ---------- ON (If required)

PRE ENGINE START

Lookout ---------- CHECK ALL ROUND

Brakes ---------- CHECK

Rudder ---------- CHECK FULL & FREE

Instruments / ADF ---------- CHECK

ENGINE POWER CHECK

Location ---------- AREA CLEAR IN FRONT AND BEHIND

Parking Break ---------- SET

ENSURE ENGINE WARM UP PERIOD

RPM ---------- SET 1700

Engine Temperature & Pressure ---------- WITHIN OPERATING LIMITS

Carburettor Heat ---------- OPERATE check revs drop SET COLD

Magnetos ---------- RIGHT – BOTH – LEFT – BOTH
(Max drop on each mag. 125 RPM)
(Max difference between mags 50 RPM)

Suction ---------- WITHIN LIMITS

Ammeter ---------- WITHIN LIMITS

Throttle ---------- CLOSE 500-600 RPM
(Then ensure engine accelerates smoothly to 1200 RPM)

PRE TAKEOFF

Throttle Friction Lock	ADJUST FINGER TIGHT
Elevator Trim	SET FOR TAKEOFF
Mixture	RICH
Carburettor Heat	OPERATE then SET COLD
Primer	LOCKED
Magnetos	BOTH
Fuel Quantity	SUFFICIENT FOR FLIGHT
Fuel Selector Valve	ON
Flaps	AS REQUIRED
Seats & Seat Belts	SECURE
Doors & Windows	CLOSED & LOCKED
Pitot Heat	ON (If required)
Instruments & Gauges	SET & CHECK
Transponder	SET (If required)
Flight Controls (NOT RUDDER)	FULL & FREE MOVEMENT
Brakes	OFF

AFTER TAKEOFF

Flaps	UP AT 300’
Engine Instruments	CHECK
Landing & Taxi Lights	OFF

CRUISE

Fuel Quantity	SUFFICIENT
Radios	SET
Engine Instruments & Mixture	CHECK
Carburettor Heat	HOT 20 secs then COLD
Direction Indicator	SET
Altimeter	SET

PRE LANDING

Brakes	OFF
Carburettor Heat	HOT
Mixture	RICH
Fuel	SUFFICIENT
Flaps	AS REQUIRED
Seats & Belts	SECURE
Cabin Doors	SECURE
Taxi & Landing Lights	ON (If required)
Carburettor Heat	COLD

AFTER LANDING

VACATE RUNWAY & STOP THE AIRCRAFT

Pitot Heat ---------- OFF

Landing Light ---------- OFF

Taxi Light ---------- AS REQUIRED

Transponder ---------- OFF

Flaps ---------- UP

Carburettor Heat ---------- CHECK COLD

SHUTDOWN

Parking Brake ---------- SET

Taxi Light ---------- OFF

Magnetos ---------- CHECK DEAD CUT

Radios and Avionics ---------- OFF

Electrical Equipment ---------- OFF

Beacon ---------- ON

Throttle ---------- CLOSE

Mixture ---------- IDLE CUT OFF

Ignition Switch ---------- OFF – KEYS OUT

Master Switch ---------- OFF

Control Lock ---------- INSTALL

Aircraft ---------- SECURE as REQUIRED

TAKEOFF DISTANCE

SHORT FIELD

CONDITIONS:
Flaps 10°
Full Throttle Prior to Brake Release
Paved, Level, Dry Runway
Zero Wind

WEIGHT LBS	TAKEOFF SPEED KIAS		PRESS ALT FT	0°C		10°C		20°C		30°C		40°C	
	LIFT OFF	AT 50 FT		GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS
1670	50	54	S.L.	640	1190	695	1290	755	1390	810	1495	875	1605
			1000	705	1310	765	1420	825	1530	890	1645	960	1770
			2000	775	1445	840	1565	910	1690	980	1820	1055	1960
			3000	855	1600	925	1730	1000	1870	1080	2020	1165	2185
			4000	940	1775	1020	1920	1100	2080	1190	2250	1285	2440
			5000	1040	1970	1125	2140	1215	2320	1315	2525	1420	2750
			6000	1145	2200	1245	2395	1345	2610	1455	2855	1570	3125
			7000	1270	2470	1375	2705	1490	2960	1615	3255	1745	3590
			8000	1405	2800	1525	3080	1655	3395	1795	3765	1940	4195

NOTES:
1. Short field technique as specified in Section 4.
2. Prior to takeoff from fields above 3000 feet elevation, the mixture should be leaned to give maximum RPM in a full throttle, static runup.
3. Decrease distances 10% for each 9 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2 knots.
4. For operation on a dry, grass runway, increase distances by 15% of the "ground roll" figure.

CRUISE PERFORMANCE

CONDITIONS:
1670 Pounds
Recommended Lean Mixture (See Section 4, Cruise)

NOTE:
Cruise speeds are shown for an airplane equipped with speed fairings which increase the speeds by approximately two knots.

PRESSURE ALTITUDE FT	RPM	20°C BELOW STANDARD TEMP			STANDARD TEMPERATURE			20°C ABOVE STANDARD TEMP		
		% BHP	KTAS	GPH	% BHP	KTAS	GPH	% BHP	KTAS	GPH
2000	2400	- - -	- - -	- - -	75	101	6.1	70	101	5.7
	2300	71	97	5.7	66	96	5.4	63	95	5.1
	2200	62	92	5.1	59	91	4.8	56	90	4.6
	2100	55	87	4.5	53	86	4.3	51	85	4.2
	2000	49	81	4.1	47	80	3.9	46	79	3.8
4000	2450	- - -	- - -	- - -	75	103	6.1	70	102	5.7
	2400	76	102	6.1	71	101	5.7	67	100	5.4
	2300	67	96	5.4	63	95	5.1	60	95	4.9
	2200	60	91	4.8	56	90	4.6	54	89	4.4
	2100	53	86	4.4	51	85	4.2	49	84	4.0
	2000	48	81	3.9	46	80	3.8	45	78	3.7
6000	2500	- - -	- - -	- - -	75	105	6.1	71	104	5.7
	2400	72	101	5.8	67	100	5.4	64	99	5.2
	2300	64	96	5.2	60	95	4.9	57	94	4.7
	2200	57	90	4.6	54	89	4.4	52	88	4.3
	2100	51	85	4.2	49	84	4.0	48	83	3.9
	2000	46	80	3.8	45	79	3.7	44	77	3.6
8000	2550	- - -	- - -	- - -	75	107	6.1	71	106	5.7
	2500	76	105	6.2	71	104	5.8	67	103	5.4
	2400	68	100	5.5	64	99	5.2	61	98	4.9
	2300	61	95	5.0	58	94	4.7	55	93	4.5
	2200	55	90	4.5	52	89	4.3	51	87	4.2
	2100	49	84	4.1	48	83	3.9	46	82	3.8
10,000	2500	72	105	5.8	68	103	5.5	64	103	5.2
	2400	65	99	5.3	61	98	5.0	58	97	4.8
	2300	58	94	4.7	56	93	4.5	53	92	4.4
	2200	53	89	4.3	51	88	4.2	49	86	4.0
	2100	48	83	4.0	46	82	3.9	45	81	3.8
12,000	2450	65	101	5.3	62	100	5.0	59	99	4.8
	2400	62	99	5.0	59	97	4.8	56	96	4.6
	2300	56	93	4.6	54	92	4.4	52	91	4.3
	2200	51	88	4.2	49	87	4.1	48	85	4.0
	2100	47	82	3.9	45	81	3.8	44	79	3.7

LANDING DISTANCE

SHORT FIELD

CONDITIONS:
Flaps 30°
Power Off
Maximum Braking
Paved, Level, Dry Runway
Zero Wind

NOTES:
1. Short field technique as specified in Section 4.
2. Decrease distances 10% for each 9 knots headwind. For operation with tailwinds up to 10 knots, increase distances by 10% for each 2 knots.
3. For operation on a dry, grass runway, increase distances by 45% of the "ground roll" figure.

WEIGHT LBS	SPEED AT 50 FT KIAS	PRESS ALT FT	0°C		10°C		20°C		30°C		40°C	
			GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS	GRND ROLL	TOTAL TO CLEAR 50 FT OBS
1670	54	S.L.	450	1160	465	1185	485	1215	500	1240	515	1265
		1000	465	1185	485	1215	500	1240	520	1270	535	1295
		2000	485	1215	500	1240	520	1270	535	1300	555	1330
		3000	500	1240	520	1275	540	1305	560	1335	575	1360
		4000	520	1275	540	1305	560	1335	580	1370	600	1400
		5000	540	1305	560	1335	580	1370	600	1400	620	1435
		6000	560	1340	580	1370	605	1410	625	1440	645	1475
		7000	585	1375	605	1410	625	1440	650	1480	670	1515
		8000	605	1410	630	1450	650	1480	675	1520	695	1555

EMERGENCY PROCEDURES

ENGINE FIRE DURING START

Ignition Switch	CONTINUE CRANKING ENGINE
Throttle	FULLY OPEN
Mixture	IDLE CUT OFF
Fuel Selector Valve	OFF
Ignition Switch	OFF
Master Switch	OFF
Parking Brake	OFF

EVACUATE THE AIRCRAFT WITH FIRE EXTINGUISHER IN AN UPWIND DIRECTION

ELECTRICAL FIRE IN FLIGHT

Master Switch	OFF
Vents, Cabin Heat & Air	CLOSED
Fire Extinguisher	USE AS NECESSARY (Ventilate cabin after use)
Radio & Avionics	OFF
Electrical Switches	ALL OFF EXCEPT IGNITION SWITCH

IF FIRE HAS BEEN EXTINGUISHED

Master Switch	ON
Circuit Breakers	CHECK for faulty circuit – do not reset
Radio / Electrical Switches	ON one at a time, with delay after each until short circuit is identified

EMERGENCY PROCEDURES

ELECTRICAL FIRE IN FLIGHT

Airspeed	65 kts (Flaps UP) 65 kts (Flaps Down)
Landing Site	SELECT SUITABLE AREA
Radio	TRANSMIT **"MAYDAY"**
Mixture	IDLE CUT OFF
Fuel Selector Valve	OFF
Ignition Switch	OFF
Flaps	AS REQUIRED
Master Switch	OFF
Passengers	BRIEF
Cabin Doors	UNLATCHED

ENGINE FIRE IN FLIGHT

Mixture	IDLE CUT OFF
Fuel Selector Valve	OFF
Cabin Heat & Air	OFF (Except overhead vents)
Transponder	SET CODE **7700**
Airspeed	100 kts (Until Fire Extinguished)

INITITATE FORCED LANDING – DO NOT ATTEMPT TO RESTART ENGINE

EMERGENCY PROCEDURES

ENGINE FAILURE DURNIG FLIGHT

Airspeed	65 kts
Landing Site	SELECT SUITABLE AREA INTO WIND
Radio	TRANSMIT **"MAYDAY"**
Transponder	SET CODE 7700
Fuel Selector Valve	ON
Carburettor Heat	HOT
Mixture	RICH
Ignition Switch	BOTH or START (if propeller has stopped)

ONLY IF ENGINE HAS FAILED TO RESPOND

Mixture	IDLE CUT OFF
Fuel Selector Valve	OFF
Ignition Switch	OFF
Flaps	OFF AS REQUIRED
Master Switch	OFF
Passengers	BRIEF
Seats & Seat Belts	SECURE
Cabin Doors	UNLATCHED

EMERGENCY PROCEDURES

ENGINE FAILURE DURNIG FLIGHT

Ammeter	CHECK INDICATION
Radio & Avionics	OFF
Alternator Circuit Breaker	CHECK IN
Master Switch	OFF (Both Sides) - pause then ON
Low Voltage Warning Light	CHECK OFF
Radio & Avionics	ON

IF LOW VOLTAGE WARNING CONTINUES

Alternator	OFF
Non-essential Radio & Electrical Equipment	OFF
LAND	As Soon As Safely Possible

With alternator switched off, compass deviations up to 25°

AMMETER SHOWS EXCESSIVE RATE OF CHARGE

(Full Scale Direction)

Alternator	OFF
Non-essential Radio & Electrical Equipment	OFF
LAND	As Soon As Safely Possible

With alternator switched off, compass deviations up to 25°