## Part A - Weight & Balance Maintenance Data D. J. MACARTHUR 11 PARADISE COURT CLONTARF 4019 WEIGHT CONTROL AUTHORITY No. AQ45 FAX: **AUSTRALIA** PHONE: (07) 3283 3817 Date 05-Jul-07 (07) 3319 6171 Aircraft Longitudinal Datum Centre of Gravity Position (CG) is **Fwd Face on Engine Firewall** measured Weight and Balance Report Ref. (to be completed by a Weight and Balance Control Officer (WBCO)) LONGITUDINAL **AFT** WEIGHT AND BALANCE RECORD of datum UNUSABLE FUEL & FULL ENGINE Configuration: SIX SEATS TOTAL running totals are Revision and Reissue by WBCO is required when calculated Empty Weight and Empty Weight CG Maximum & Minimum Empty Weight & Empty Weight CG Revision and Re-issue Required Weight (kg) 1039.5 Reweigh Dated or LESS THAN SUBJECT TO C.A.O. 100.7 MORE THAN Arm (mm) Weight (kg) 1029.5 1049.5 1050 Arm (mm) 05-Jul-07 NDEFINITE 1042 1058 Index 1091115

Organisation	O-Inf-co		Date		Part B - Record o
D. MacArthur & Associates			Description of Alteration		Part B - Record of Empty Weight and Balance (the person co-ordinating maintenance shall ensure that Part B is calculated and recorded in accordance with CAO 100.7)
		(mm)	from Datum	Moment Arm	ting maintenance
Aircraft Type C		Weight (kg)	<b>-</b> (D)		shall ensure that
Cessna 210N		Index	d (+)	Weight and B	Part B is calcu
z	7	Weight (kg)	Removed (-)	Weight and Balance Change	ulated and record
Registration		Index	ed (-)		led in accorda
VH-TQC	1039.5			Ru	nce with CAO 10
ac		Arm (mm)	and Empty Weight C of G	Running Total of Empty Weight	00.7)
Page 1 of 1		Index	ight C of G	mpty Weight	

WEIGHT AND BALANCE RECORD



## D. MacArthur & Associates

ABN 69 317 590 696 11 Paradise Court, Clontarf, QLD. 4019 Phone (07) 3283 3817 Fax (07) 3319 6171

Mobile 0439 328 338



## AIRCRAFT WEIGHING SUMMARY

#### **REASON FOR REPORT**

C of A

No. of Report Pages

These "Owners Copies" are supplied to ensure compliance with CAO 100.7 para 5.24 which requires that, "The owner or operator shall keep in a safe place on the groun duplicate copies of all current approved loading data applicable to his aircraft."

Cessna 210N Aircraft Type

VH-TQC Aircraft Registration

21063325 Aircraft Serial No.

Owner or Operator

Fwd Face on Engine Firewall Aircraft Datum

> Archerfield Place

EFM 136-457 Scales Number

D. MacArthur & Associates Organisation

**AQ-45** 

WB-3917 05-Jul-07 Work Order No. Date

**LOAD DATA SHEET** 

Authority No.

Date of Expiry

**INDEFINITE** 

**Empty Weight** 

Issue No.

ONE

1039.5 kg

Arm

1050 mm

**Index Units** 

1091115 kg.mm

## **Determination of Empty Weight**

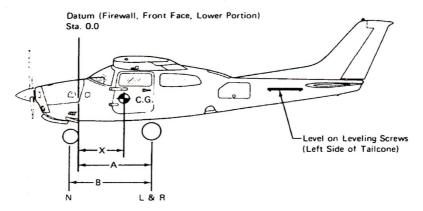
Note 1: The difference between the two gross weights must not exceed 0.2% or 10kg (whichever is the greater)

otherwise further weighings must be carried out until two consecutive weighings agree within this tolerance.

Note 2: Readings should be made to the nearest 1kg.

		First	Weig	hing		Second Weighing					
Jack Point	Cell Colour	Scale Reading	Zero Set	Correction	Actual Weight	Cell Colour	Scale Reading	Zero Set	Correction	Actual Weight	Average Weight
PORT	Red	356			356	Red	356			356	356.0
STBD	Yellow	355			355	Yellow	354			354	354.5
NOSE	Blue	326			326	Blue	326			326	326.0
TAIL											

TAIL											
First Wei	<b>ghing</b> - Gro	oss Total		1037 kg			<b>eighing</b> - G			1036 kg	
						Averag	ge - Both W	eighin	gs 1	036.5 kg	
Deduction	ns	2		Mome	nt				kg kg		
			_	Arm + or					kg kg		
							Tota	al Ded	uctions		kg
<b>Additions</b> Drain	nable unus	able fuel		Mome Arm + or		584			3.0 kg kg kg kg kg		
				7			Tota	al Addi	itions	3.0	kg
				Gross To	tal (averag	e of both w	eighings)	10	036.5 kg		
						Net Adjus	tment +/-		3.0 kg		
					Em	oty Weight	of Aircraft	1	039.5 kg		
	on at time o				oment list)						
Remarks Aircraft st	ripped, rep	ainted, ra	dio upç	grade.					,		
Supervise Weight Co	ed by: ontrol Offic	er /	a. j. s	Ma Co	all	AQ45	Date	05-J	ul-07	Page 2 of	9
ndk			<u> </u>							1 490 2 01	-



**Centre of Gravity Determination** 

Aircraft weighed on wheels using platforms	First Wei	ghing	Second Weighing	Average
Horizontal distance from datum to jack point	1625	mm	1625 mm	1625 mm
Horizontal distance from datum to nose or tail jack point	-200	mm	-200 mm	-200 mm

Note: Distances measured aft of the datum are positive (+). Distances measured forward of the datum are negative (-).

Moight	Weight kg	Moment Arm	Index Moment (kg.	mm)
Weight	+ -	+/- mm	+	-
PORT	356.0	1625	578500	
STBD	354.5	1625	576063	
NOSE	326.0	-200		65200
TAIL				
Drainable unusable fuel	3.0	584	1752	
	,	4		
		7		
		Moment Totals	1156315 (1)	65200 (2)
	Aircraft Emp	oty Moment Index	1091115 ((1)-(2)	)

Aircraft Empty Weight (from page 2) 1039.5 kg

Aircraft Empty Weight C of G (empty moment index) amply weight empty weight

Supervised by:

Prepared by:

Date

Weight Control Officer

D. MacArthur & Associates 05-Jul-07 p.1. MacArthur & O5-Jul-07

Date

#### List of items included in the empty weight of aircraft Aircraft Registration Туре Issue No. Date VH-TQC Cessna 210N ONE 05-Jul-07 **Details of Configuration** Work Order SIX SEATS TOTAL WB-3917 Continental **IO-520** 1 Airspeed 1 Cabin Rate of Climb 0 Compressor RPM 0 Hartzel 3 Blade 1 **Directional Gyro** 2 Exhaust Gas Analyser 0 Flight Hour 1 Magnetic Fuel Flow 1 **Duplex** 1 Remote Indicating Gyro Horizon 0 1 Stall Warning 1 Tachometer Non-recording 0 Tachometer Recording 1 Trim Indicator 1 **Altimeters** Turn & Bank 0 **Ammeters** 1 Turn Co-ordinator 2 Clocks 1 **Undercarriage Position** Lights Propeller Synchroniser 0 Vertical Speed (rate of climb) 1 Voltmeters 0 Wing Flap Position 1 Anti-Collision Brake Pressure 0 Instrument A/R Engine Oil Pressure Landing 1 1 **Fuel Contents** 2 Map reading 1 Fuel Pressure Navigation 0 3 Hydraulic Oil Pressure 0 Signal 0 Manifold Pressure **Duplex** Taxi 1 1 Oil Contents 0 **Under Wing** 2 Oxygen Pressure 0 Suction Pressure 1 Torque Meter 0 Fuel, Main 2 Fuel, Auxiliary 0 Fuel, Wing Tip 0 Fuel, Other 0 Carburettor Air Temp. 0 Engine Temp. C.H.T. 1 Oil Temp. Cargo Restraint Cordage/Webbing 1 0 Outside Air Temp. 1 Freight Restraint Nets 0

0

1

1

Insight

Inertia Reels

Lap Assemblies

Lap-sash Assemblies

Turbine Temp.

C.H.T & E.G.T

Exhaust Gas Temp.

Digital Engine Monitoring

2

0

4

Auto pilot Cabin Speakers Di M.E. Glide Slope Rec. Part of Navs Head Phones H.F VAR VH.F. GNS 480/GNC 250XL VH.F. Nav. Rec. GNS 480 CPS Carmin GNS480/GNC 250XL Audo/Mkr Garmin GMS 340 Storm Scope Hand Mike  Fuel, Main Fuel, Main Fuel, Auxiliary Fuel, Oil, Lubricating  Alternators Batteries 24 Volt Generators Starters External Power  List (nortable) Fire Ext. (engine) Fixed Ballast Hydraulic Combustion Fixed Ballast Hydraulic Combustion Fixed Ballast Hydraulic Combustion Fixed Ballast Fire Ext. (engine) Fire Ext. (engine) Fire Ext. (engine) Fixed Starlers Fire At. (engine) Fire Ext. (engine) Fixed Ballast Hydraulic Combustion Fixed Ballast Hydraulic Combustion Fixed Ballast Fire Ext. (engine) Fixed Ballast Hydraulic Combustion Fixed Ballast Fire Ext. (engine) Fixed Ballast Hydraulic Combustion Fixed Ballast Fire Ext. (engine) Fixed Ballast Hydraulic Combustion Fixed Ballast Fire Ext. (engine) Fixed Ballast Hydraulic Combustion Fixed Ballast Fixed Ballast Fixed Ballast Hydraulic Combustion Fixed Ballast Fixed Ballast Hydraulic Combustion Fixed Ballast Fixed Ballast Fixed Ballast Hydraulic Combustion Fixed Ballast Fixe			MISSE FANERIS ENVENENT	
Fuel, Main Fuel, Auxiliary Fuel, Auxiliary Fuel, Other Oil, Hydraulic Oil, Lubricating  Alternators Batteries 24 Volt Generators Starters External Power  Liters 3.8 0 0 0 0 1 1 5 1 1 1 1 1 1 1 1 1 1 1 1 1	Auto pilot S-Tec Cabin Speakers D.M.E. Glide Slope Rec. Part of Navs Head Phones H.F VAR V.H.F. GNS 480/GNC 250XL V.H.F. Nav.Rec. GNS 480 E.L.T. ACK-E01 Transponder Garmin GTX 330 GPS Garmin GNS480/GNC 250XL Audio/Mkr Garmin GMA 340 Display Garmin MX20 Storm Scope BFG	1 1 0 2 0 0 0 2 2 2 1 1 1 2	De-icer Boots Fire Ext. (engine) Fire Ext. (portable) Fixed Ballast Hydraulic Pumps L/G Warning Horn Oxygen Equipment Combustion Heater Vacuum Pumps Landing Gear Mirrors  Crash Axe Flight Control Locks First Aid Outfits Disposable Ballast Signalling Apparatus Torch	Ye 00 00 11 10 00 11 11 11 11 11 11 11 11
Batteries 24 Volt 1 Generators Starters 1 External Power 1	Fuel, Auxiliary Fuel, Other Oil, Hydraulic	0 0 Full		4
	Batteries 24 Volt Generators Starters	, 1 0 1		-
//				
Weight Control Officer  Signature  Date  05-Jul-07	Weight Control Officer	A res les	Date OF Int O7	



#### **DETERMINE BASIC WEIGHT**

ITEM	WEIGHT	ARM	INDEX	
ITEM EMPTY WEIGHT	WEIGHT 1039.50	1050	INDEX	MOMENT 1091115
BASIC WEIGHT	1039.5	1050		1091115

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### **DETERMINE INDEX**

DETERMINE MAX & MINIMUM	EMPTY C of G AN	D ARM FOR RE	WEIGH
0.5% or 10kg which ever is greate	er	= 0.5%	+/- empty weight
		MTOW	
Max Take Off weight kg =	1723	9.00	10 kg
2% or 5mm which ever is the great	ater	= 2%	+/- mm C of G
		C of G	
Max C of G range mm =	406.4	8.00	8 mm
	Weight Control O	ereke officer AQ45	Date 05-Jul-07
	/ /		

## LOAD DATA SHEET

11 PARADISE COURT CLONTARF

QLD. AUSTRALIA 4019

Phone: (07) 3283 3817 (07) 3319 6171 Fax: Mobile 0439 328 338

D. MacArthur & Associates

(NAME OF ORGANISATION)



Aircraft Type

Cessna 210N

S/N 21063325 Aircraft Reg VH-TQC

Approved Loading System

Cessna 210N Pilots Operating Handbook Section 6

AUTHORISED	DATE	DATE OF EXPIRY	ISSUE
		INDEFINITE	
D. J. MacArthur	05-Jul-07	SUBJECT TO C.A.O. 100.7	ONE



ITEM	WEIGHT Kg	ARM mm	MOMENT	INDEX * (IU)	CONFIGURATION (ALSO SEE EQUIPMENT LIST)
EMPTY WEIGHT	1039.5	1050	1091115		SIX SEATS TOTAL
	IMPERIAL				SIX SEATS TOTAL
	WEIGHT Lbs	ARM Inches	MOMENT		SIX SEATS TOTAL
EMPTY WEIGHT	2291.7	41.3	94705		SIN SEATS TOTAL

THE ABOVE WEIGHTS INCLUDE:

EMPTY WEIGHT: UNUSABLE FUEL & FULL ENGINE OIL

LOAD SYSTEM

1) REFER TO FLIGHT MANUAL & SUPPLEMENTS FOR LOAD LIMITATIONS.



WORK ORDER WB-3917

DATUM

Fwd Face on Engine Firewall

# Aircraft Registration VH-TQC



Work Order WB-3917

### **LOADING CHECK**

	A/C							
	Weight	Arm	Moment	Moment	Arm	Weight		
PLOT # 1							FWD	AFT
	1039.5			1091115	1050	1039.5	OK	OK
Pilot	86	940	80840	1171955	1041	1125.5	OK	OK
Pax Front	86	940	80840	1252795	1034	1211.5	OK	OK
Row 2	172	1803	310116	1562911	1130	1383.5	OK	OK
Row 3	120	2565	307800	1870711	1244	1503.5	OK	OK
Wheelwell	30	2972	89160	1959871	1278	1533.5	OK	OK
Aft Bag	30	3505	105150	2065021	1321	1563.5	OK	OK
Fuel 236Kg	159.0	1092	173628	2238649	1300	1722.5	OK	OK
				2238649	1300	1722.5	OK	OK
TAUW	1722.5							
MTOW	1723							
	A/C							
	Weight	Arm	Moment	Moment	Arm	Weight		
PLOT # 2							FWD	AFT
	1039.5			1091115	1050	1039.5	OK	OK
Pilot	86	940	80840	1171955	1041	1125.5	OK	OK
Pax Front	86	940	80840	1252795	1034	1211.5	OK	OK
Row 2	172	1803	310116	1562911	1130	1383.5	OK	OK
Row 3		2565		1562911	1130	1383.5	OK	OK
Wheelwell	68	2972	202096	1765007	1216	1451.5	OK	OK
Aft Bag	56	3505	196280	1961287	1301	1507.5	OK	OK
Fuel	215.0	1092	234780	2196067	1275	1722.5	OK	OK
TAUW	1722.5							
MTOW	1723							
			*					
	4.00							
	A/C	A rm	Mamont	Moment	Arm	Weight		
PLOT#3	Weight	Arm	Moment	Woment	AIIII	vveignt	FWD	AFT
PLUT#3	1020 F			1001115	1050	1039.5	OK	OK
Dilet	1039.5	040	00040	1091115 1171955	1030	1125.5	OK	OK
Pilot	86	940	80840					OK
Pax Front		940		1171955	1041	1125.5	OK	
Row 2		1803		1171955	1041	1125.5	OK	OK
Row 3		2565		1171955	1041	1125.5	OK	OK
Wheelwell		2972		1171955	1041	1125.5	OK	OK
Aft Bag		3505		1171955	1041	1125.5	OK	OK
Fuel	236.0	1092	257712	1429667	1050	1361.5	OK	OK
TAL 1147	1264 5							
TAUW	1361.5							
MTOW	1723							

Weight Control Officer AQ45

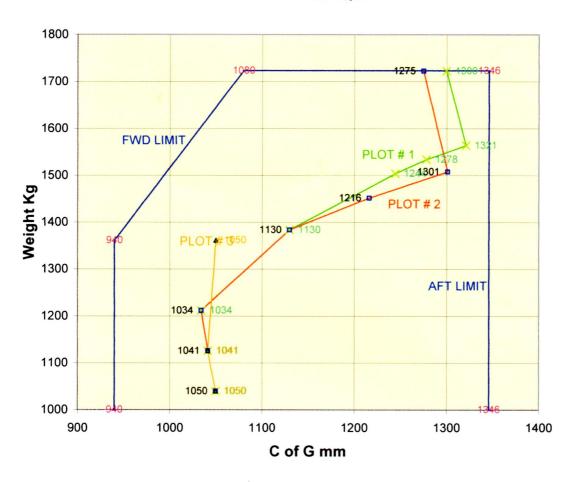
Date 05-Jul-07



#### Cessna 210N

Work Order WB-3917

#### VH-TQC



- PLOT #1 FULL OCCUPANTS 4 @ 86Kg EACH, ROW 3 60Kg EACH, 60Kg BAGGAGE FUEL TO ALL UP WEIGHT.
- PLOT # 2 FOUR OCCUPANTS @ 86Kg EACH, NIL PAXS ROW 3, BAGGAGE 68Kg (wheelwell) 56Kg (Rear) FUEL TO ALL UP WEIGHT
- PLOT #3 PILOT ONLY @ 86Kg, FULL FUEL

Weigh Control Officer AQ45

Date 05-Jul-07