

# D. MacArthur & Associates

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## AIRCRAFT WEIGHING SUMMARY

### REASON FOR REPORT

PERIODIC REWEIGH

No. of Report Pages 10

These "Owners Copies" are supplied to ensure compliance with **CAO 100.7 para 5.2 (5)** which requires that, "The owner or operator shall keep in a safe place on the ground, duplicate copies of all current approved loading data applicable to his aircraft."

Aircraft Type	Cessna 310R		
Aircraft Registration	VH-ULF		
Aircraft Serial No.	310R1429		
Owner or Operator	Redcliffe Aero Club		
Aircraft Datum	Fwd Face Fuse Bulkhead Fwd of Rudder Pedals		
Place	Caloundra		
Scales Number	DMA PT-1 / Mantracourt Wireless Modules		
Calibration Due	24-Apr-18		
Organisation	D. MacArthur & Associates		
Authority No.	AQ-45		
Work Order No.	WB-6411	Date	25-Aug-17

### LOAD DATA SHEET



Issue No.  

FIFTEEN
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Date of Expiry  

24-Aug-20
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Empty Weight  

1751.4 kg
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Arm  

890.9 mm
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Moment  

1560377 kg.mm
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# 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.

Jack Point	FIRST WEIGHING					SECOND WEIGHING					THIRD WEIGHING					Average Weight
	Cell	Scale Reading	Zero Set	Correction	Actual weight	Cell	Scale Reading	Zero Set	Correction	Actual weight	Cell	Scale Reading	Zero Set	Correction	Actual weight	
PORT	1T2	386			386.0	1T3	384			384.0						385.00
STBD	1T3	494			494.0	1T4	496			496.0						495.00
NOSE	1T4	861			861.0	1T2	859		1	860.0						860.50
TAIL																

1st Weigh  kg      2nd Weigh  kg      3rd Weigh  kg  
 0.2%      3.48      1.00      1740.00      1741.00  
**Average Two Weighings**  kg

## Deductions

_____	Moment Arm + or -	<input type="text"/>	<input type="text"/> kg
_____		<input type="text"/>	<input type="text"/> kg
_____		<input type="text"/>	<input type="text"/> kg
_____		<input type="text"/>	<input type="text"/> kg
_____		<input type="text"/>	<input type="text"/> kg
Total Deductions			<input type="text"/> kg

## Additions

Drainable unusable fuel	Tip	Moment Arm + or -	<input type="text" value="1118.0"/>	<input type="text" value="5.44"/> kg
Drainable unusable fuel	Aux		<input type="text" value="1194.0"/>	<input type="text" value="2.72"/> kg
Drainable unusable fuel	Wing Locker		<input type="text" value="1473.2"/>	<input type="text" value="2.72"/> kg
_____			<input type="text"/>	<input type="text"/> kg
_____			<input type="text"/>	<input type="text"/> kg
Total Additions			<input type="text" value="10.88"/> kg	

Gross Total (average of Three weighings)  kg  
 Net Adjustment +/-  kg  
 Empty Weight of Aircraft  kg

Configuration at time of weighing (refer also to equipment list)

UNUSABLE FUEL & FULL ENGINE OIL

Remarks

Supervised by:  
Weight Control Officer

  
WEIGHT CONTROL OFFICER AQ45

Date



# List of items included in the empty weight of aircraft

Aircraft Registration VH-ULF	Type Cessna 310R	Issue No. FIFTEEN	Date 25-Aug-17
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Details of Configuration SIX SEATS TOTAL	Work Order WB-6411
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### ENGINES (Type)

Contential	IO-520	2
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### PROPELLERS (Type)

McCauley	3 Blade	2
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### COMPASSES

Magnetic		1
Remote Indicating	KCS55A	1

### INSTRUMENTS

Altimeters		* 3
Ammeter/Volt		1
Clocks	M800	1
Propeller Synchroniser		1
Voltmeters		0
Propeller Amps		1

### GAUGES

Brake Pressure		0
Engine Oil Pressure	Triplex	2
Fuel Contents	Dual	1
Fuel Pressure		0
Hydraulic Oil Pressure		0
Manifold Pressure	Dual	1
Oil Contents		0
Oxygen Pressure		1
Suction Pressure	Dual	1
Torque Meter		0

### THERMOMETERS

Carburettor Air Temp.		0
Engine Temp.	CHT Triplex	2
Oil Temp.	Triplex	2
Outside Air Temp.	Digital	1
Turbine Temp.		0
E.G.T.	Digital/Dual	1

### INDICATORS

Airspeed		*	2
Cabin Rate of Climb			0
Compressor RPM			0
Directional Gyro	H.S.I.	*	1
Exhaust Gas Analyser			0
Flight Hour			1
Fuel Flow	Dual		1
Gyro Horizon		*	3
Stall Warning			1
Tachometer Non-recording	Dual		1
Tachometer Recording			0
Trim Indicator			3
Turn & Bank		*	1
Turn Co-ordinator			1
Undercarriage Position			Lights
Vertical Speed (rate of climb)		*	2
Wing Flap Position			1
Assigned Altitude			1
EFD	Aspen EFD 1000	*	1

### LIGHTS

Anti-Collision		1
Instrument		A/R
Landing		2
Map reading		2
Navigation		3
Signal		0
Taxi		1
White Strobe		3
Ice Inspection		2
Wing Courtesy		1

### FLUID TANKS

Fuel, Main		2
Fuel, Auxiliary		2
Fuel, Wing Locker		2
Fuel, Other		0

### RESTRAINT EQUIPMENT

Cargo Restraint Cordage/Webbing		0
Freight Restraint Nets		0
Inertia Reels	3 Point	2
Lap-sash Assemblies		0
Lap Assemblies		4

\* PART OF EFD 1000

**RADIO EQUIPMENT (Type)**

A.D.F. King KR87/Collins ADF650	1
Auto pilot S-Tec 55X	1
Cabin Speakers	1
D.M.E.	0
Glide Slope Rec. Part of Nav	1
Head Phones	0
H.F. Codan HF 2000	1
VAR	0
V.H.F. GNS430/King KX155	2
V.H.F. Nav. GNS430/King KX155	2
E.L.T. Artex ME406	1
Transponder Garmin GTX330	1
GPS Garmin GNS430	1
Audio King KMA24H	1
Encoder ACK A-30	1
Radar Bendix RDS81	1

**FLUID QUANTITY**

Fuel, Main	Liters	7.6
Fuel, Auxiliary	Liters	3.8
Fuel, Other	Liters	3.8
Oil, Hydraulic		Full
Oil, Lubricating		Full

**ELECTRICAL EQUIPMENT.**

Alternators	2
Batteries	1
Generators	0
Starters	2
External Power	1

**AGRICULTURAL EQUIPMENT**


**MISCELLANEOUS EQUIPMENT**

Dual Controls	Yes
De-icer Boots	0
Fire Ext. (engine)	0
Fire Ext. (portable)	1
Fixed Ballast	0
Hydraulic Pumps	0
L/G Warning Horn	1
Oxygen Equipment	0
Combustion Heater	1
Vacuum Pumps	2

**DISPOSABLE LOAD LIST**

Crash Axe	0
Flight Control Locks	1
First Aid Outfits	0
Disposable Ballast	0
Signalling Apparatus	0
Torch	0
Flight Manual	1
Carpet Cabin	Partial
Carpet Nose Locker	Yes

**SPECIAL PURPOSE EQUIP**

Vortex Kit	STC SA5668NM	Yes

Weight Control Officer  
Signature

  
WEIGHT CONTROL OFFICER AQ45

Date

25-Aug-17



**DETERMINE BASIC WEIGHT**

ITEM	WEIGHT	ARM	INDEX	MOMENT
<b>EMPTY WEIGHT</b>	<b>1751.38</b>	<b>890.94</b>		<b>1560376.70</b>
<b>EMPTY WEIGHT</b>	<b>1751.38</b>	<b>890.90</b>		<b>1560376.70</b>

**DETERMINE INDEX**

**DETERMINE MAX & MINIMUM EMPTY C of G AND ARM FOR REWEIGH**

0.5% or 10kg which ever is greater = 0.5% +/- empty weight  
 MTOW  
 Max Take Off weight kg =  12.88  kg

2% or 5mm which ever is the greater = 2% +/- mm C of G  
 C of G  
 Max C of G range mm =  5.89  mm

  
 WEIGHT CONTROL OFFICER AQ45

Date 25-Aug-17



**DETERMINE BASIC WEIGHT**

ITEM	WEIGHT	ARM	INDEX	MOMENT
<b>EMPTY WEIGHT</b>	<b>1751.38</b>	<b>890.90</b>		<b>1560376.70</b>
Remove Row 3 Seats	-15.30	2591.00		-39642.30
<b>EMPTY WEIGHT # 1</b>	<b>1736.08</b>	<b>876.00</b>		<b>1520734.40</b>

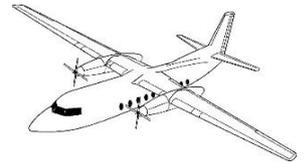
  
WEIGHT CONTROL OFFICER AQ45

Date 25-Aug-17

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# LOAD DATA SHEET

D. MacArthur & Associates  
 (NAME OF ORGANISATION)



Aircraft Type Cessna 310R S/N 310R1429 Aircraft Reg VH-ULF

Approved Loading System Load Chart BC/C310R/3

AUTHORISED	DATE	DATE OF EXPIRY	ISSUE
D. J. MacArthur	25-Aug-17	<b>24-Aug-20</b> or at the First Maintenance Release Inspection following that date.	FIFTEEN



ITEM	WEIGHT Kg	ARM mm	MOMENT	INDEX * (IU)	CONFIGURATION (ALSO SEE EQUIPMENT LIST)
EMPTY WEIGHT	1751	891	1560377		SIX SEATS TOTAL
<b>BASIC WEIGHT # 1</b>	<b>1736</b>	<b>876</b>	<b>1520734</b>		<b>FOUR SEATS TOTAL</b>

**THE ABOVE WEIGHTS INCLUDE:**  
 EMPTY WEIGHT: UNUSABLE FUEL & FULL ENGINE OIL

**LOAD SYSTEM**

- 1) REFER TO FLIGHT MANUAL & SUPPLEMENTS FOR LOAD LIMITATIONS.
- 2) LOAD DATA SHEET PAGE 3 ISSUE 12 REMAINS CURRENT ( use of Chart instructions)

**VORTEX KIT & GROSS WEIGHT PER STC SA5668NM.**



WORK ORDER WB-6411	<b>DATUM</b> Fwd Face Fuse Bulkhead Fwd of Rudder Pedals
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**LOADING CHECK**

	A/C Weight	Arm	Moment	Moment	Arm	Weight	FWD	AFT
<b>PLOT # 1</b>	1751.4			1560377	891	1751.4	OK	OK
Crew	172	940	161680	1722057	895	1923.4	OK	OK
Row 2	172	1727	297044	2019101	964	2095.4	OK	OK
Row 3	172	2591	445652	2464753	1087	2267.4	OK	OK
Nose Bag	50	-787	-39350	2425403	1047	2317.4	OK	OK
Nac Bag	50	1600	80000	2505403	1058	2367.4	OK	OK
Aft Bag				2505403	1058	2367.4	OK	OK
Fuel Tip	198	889	176022	2681425	1045	2565.4	OK	OK
Fuel		1194		2681425	1045	2565.4	OK	OK
Fuel Wing Locker		1245		2681425	1045	2565.4	OK	OK
TAUW	2565.4							
MTOW	<b>2576</b>							

	A/C Weight	Arm	Moment	Moment	Arm	Weight	FWD	AFT
<b>PLOT # 2</b>	1751.4			1560377	891	1751.4	OK	OK
Crew	172	940	161680	1722057	895	1923.4	OK	OK
Row 2	172	1727	297044	2019101	964	2095.4	OK	OK
Row 3		2591		2019101	964	2095.4	OK	OK
Nose Bag		-787		2019101	964	2095.4	OK	OK
Nac Bag	109	1600	174400	2193501	995	2204.4	OK	OK
Aft Bag				2193501	995	2204.4	OK	OK
Fuel Tip	268	889	238252	2431753	984	2472.4	OK	OK
Fuel	93	1194	111042	2542795	991	2565.4	OK	OK
Fuel Wing Locker		1245		2542795	991	2565.4	OK	OK
TAUW	2565.4							
MTOW	<b>2576</b>							

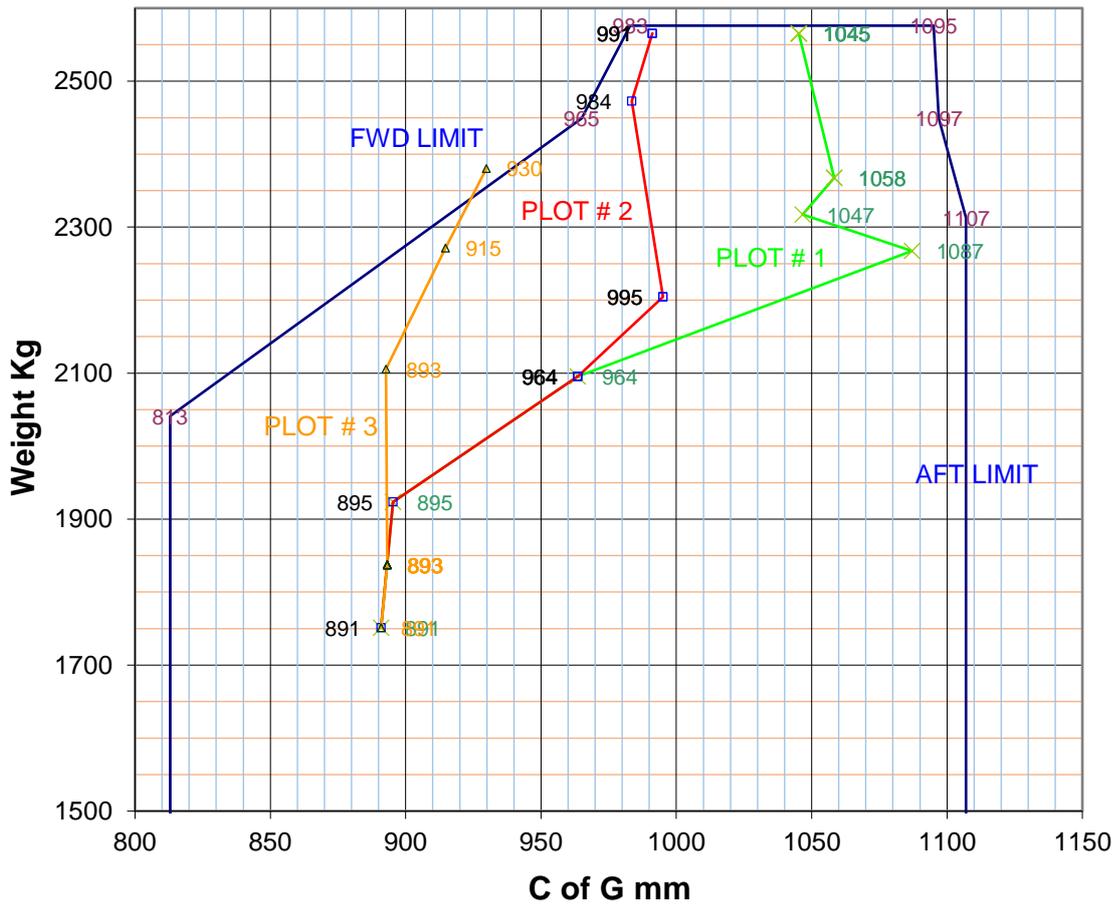
	A/C Weight	Arm	Moment	Moment	Arm	Weight	FWD	AFT
<b>PLOT # 3</b>	1751.4			1560377	891	1751.4	OK	OK
Crew	86	940	80840	1641217	893	1837.4	OK	OK
Row 2		1727		1641217	893	1837.4	OK	OK
Row 3		2591		1641217	893	1837.4	OK	OK
Nose Bag		-787		1641217	893	1837.4	OK	OK
Nac Bag		1600		1641217	893	1837.4	OK	OK
Aft Bag				1641217	893	1837.4	OK	OK
Fuel Tip	268	889	238252	1879469	893	2105.4	OK	OK
Fuel	166	1194	198204	2077673	915	2271.4	OK	OK
Fuel Wing Locker	109	1245	135705	2213378	930	2380.4	OUT FWD	OK
TAUW	2271.4							
MTOW	<b>2576</b>							

  
 WEIGHT CONTROL OFFICER AQ45

Date 25-Aug-17



VH-ULF



**PLOT # 1** FULL OCCUPANTS @ 86Kg, BAGGAGE NOSE 50kg, NACELLE 50kg AND FUEL TO ALL UP WEIGHT

**PLOT # 2** FOUR OCCUPANTS @ 86Kg, BAGGAGE NACELLE 109Kg AND FUEL TO ALL UP WEIGHT

**PLOT # 3** PILOT ONLY @ 86Kg AND FULL FUEL.

Note: 'OUT FWD'

*P. J. MacArthur*  
WEIGHT CONTROL OFFICER AQ45

Date 25-Aug-17

