Vehicle and Caravan empty weights				
Item	**Not to exceed**	**Description**		**Weight**
Vehicle on its own				
Tare		Empty vehicle plus 10 litres of fuel		2110
Kerb weight		Empty vehicle plus full fuel (Includes Bullbar & Tow bar)		2240
Empty Front axle		Only front axle on weighbridge		1220
Empty Rear axle		Only rear axle on weighbridge		1040
Caravan on its own				
Tare (Same as Empty Van)		Empty caravan (Includes Full Heater fuel and Hot water system full, both batteries)		
Empty Van	ATM	All wheels on weighbridge		2340
Empty Van	GTM	Only axle wheels on weighbridge		2100
TBD		Weighed using bathroom scales at ball coupling		152.1
Vehicle and Caravan				
			Without WDH	**With WDH**
Empty Car & Van	GCM	Empty vehicle and empty caravan on weighbridge	4580	4580
Empty Rear axle		Only rear car axle on weighbridge with caravan attached	Could not weigh	Could not weigh
Empty Front axle		Only front car axle on weighbridge with caravan attached	1100	1140
Empty Van axles		Only van axles on weighbridge with caravan attached	2140	2160
Kerb weight	GVM	Both car axles only on weighbridge	2440	2420

Base weights				
	Caravan		Vehicle	
Rego papers	Tare	2280	Tare	2110
	ATM	2760	GVM	2750
Compliance plate	Tare	2216	Tare	N/A
	ATM	2800	GVM	2750
	GTM	2611		
Website	Tare	N/A	Tare	2110
	ATM	N/A	Kerb	2157
			GVM	2750
			Payload	593
			GCM	5750
			BTC	3000
			TBD	300
Weighbridge	Tare	2340	Kerb	2240

Notes:

1. Van tare according to rego papers is 2280
2. Van tare according to compliance plate is 2216, a difference of 64kg. To put that into perspective, it's over 3 x 20 litre jerry cans of water. Why?
3. Empty van weight according to weighbridge is 2340 so I am already short 60kg or 124kg depending on whether rego or compliance is true. To put that into perspective, it's either (3 or 6) x 20 litre jerry cans of water. This was with water tanks drained though they may not be empty due to water below the drain hole level. Gas cylinders were empty.
4. Kerb vehicle weight according to weighbridge is 2240 so I am already short 83kg based on website. To put that into perspective, it's over 4 x 20 litre jerry cans of water. There is no kerb weight on compliance plate or rego papers
5. The vehicle front axle plus vehicle rear axle weights is 20kg more than the empty weight of the vehicle so I assume that is weighbridge error. I have heard they show in 20kg increments. Is this true?

6. The difference between having the WDH and not having the WDH is only 20kg though apart from weighbridge error, it can be explained by me having raised the hitch by one hole due to the van being low at the drawbar and not raising the hooks on the van drawbar yet. I will be raising them by one hole to compensate which will put more tension on the WDH.
7. TBD in empty configuration was 152.1 kg. When water tanks were filled to top, the TBD was 173.4 kg, a positive of 21.3 kg.
8. The website advertised 2 x "up to 95 litres" water tanks. When I topped them up, using a pre calibrated 20 litre jerry can, it only took 164 litres so 26 litres short of advertised.
9. 9 kg gas cylinder holds 9.5 kg of gas.
10. TBD when basic accessories and luggage was added was 227.1 kg.

Here's an exercise you can complete using the spreadsheet:

1. The top part of the "Load calculator" TAB shows the maximum values for the vehicle and caravan you have chosen.
2. Hover over the heading names to see what they mean. These have a small red triangle in the corner.
3. I have pre loaded the luggage and tools from the "Luggage" and "Accessories" TABS. I have no "Tools" in this example.
4. Click on the "Option 1" hyperlink on the "Load calculator" TAB. This option has a fully loaded vehicle so you can only adjust the caravan payload. Already you can see the Rear axle weight has been exceeded. You can see it tells us we can add another 119 kg of payload which you should add now. It will not change Rear axle weight as we have not changed TBD but it has changed a few other values including Actual % TBD, Actual ATM and GVM to GTM ratio. WDH will reduce Rear axle weight though I can't say it will reduce it enough.
5. Click on the "Option 2" hyperlink on the "Load calculator" TAB. This option has a fully loaded caravan so you can only adjust the vehicle payload. You can see it tells us we can add another 47 kg of payload which you should add now. Watch what happens to the Rear axle weight when you put the 47 kg in the Boot, then the Rear, then the Front.
6. Click on the "Option 3" hyperlink on the "Load calculator" TAB. This option allows you complete control on where you load either vehicle or caravan. Using the pre loaded weights which don't include food, drink or clothes yet, you can see we can add 120 kg to the vehicle and 119 kg to the caravan. We can also change the actual TBD to what suits us. Try adding 119 kg to the caravan and see what happens to the GVM to GTM ratio. Remove the 119 kg and then add 120 kg to the vehicle to see what happens. Now change the 120 kg added to the vehicle to 77 kg, add 119 kg to the caravan and change the Actual TBD to 270 kg to see what happens. The GVM to GTM ration is amber though may be acceptable, the Actual TBD % is acceptable but the Actual rear axle weight is slightly over. Using WDH will probably reduce the Actual rear axle weight sufficiently, though with some of that weight transferring to the caravan axles, it will cause the Actual ATM to be exceeded as it is already at the limit. Reducing the payload of 119 kg already added to say 100 kg, may be enough to keep Actual ATM within limits.

7. Try adding more water or gas than the maximum allowed and see what happens.
8. If you weigh more or less than my wife and I, try changing the “People” value and see the results.
9. Now try a few other combinations and see what goes either red or amber. Look at the values inside the blue boxes.
10. The next step is for you to add your own vehicle and caravan to the “Tugs and Vans” TAB. You can have up to eight of each so you can compare results. Make sure you get weighbridge values for all the possible values as compliance plates and rego papers are almost always incorrect from what I have found and heard. I emptied my vehicle of everything not bolted to it except for the Jack and Wheel brace. I have a bulbar which becomes part of my Kerb weight since I can’t take it off to weigh separately. I even took a jerry can of diesel with me to the weighbridge so I could top up the tank before I weighed everything. I removed everything from the caravan not bolted to it except for the Jack and Wheel brace and no gas and no water. This becomes my Empty weight. All lineal measurements were made by marking the ground with insulation tape at the various positions and then measuring between them.
11. Once you have your vehicle and caravan setup on the “Tugs and Vans” TAB, you can select it on the “Load calculator” TAB by clicking on the YELLOW cells and then clicking on the down arrow. You can then change any YELLOW cell on any of the three Options.
12. Take a look at the “Useful links”.
13. I hope you get something from this and I welcome any feedback, be it positive or negative.