

4WD Action Magazine Mega Fridge Comparo



In the recent issue 136 of Australian 4WD Action magazine, a massive 4WD fridge comparison test was undertaken, with seven 12V fridges put through a series of rigorous tests. And we are very happy to report that ARB's newly designed 50QT Fridge Freezer was the top performer, awarded the prestigious title of Best Overall. Unfortunately we didn't have enough room to reprint the entire article, but here's a summary of the findings.

Having a portable fridge in your vehicle is an extremely convenient and practical addition to any trip. It means that no matter where you are, you can enjoy cold, fresh or frozen food in a handy and easy to access location. No more soggy food or having to journey into town every few days to top up on ice. Occasionally (mostly in the southern states of the country), it's possible to go without these kinds of luxuries on a short trip, but if you're heading into hot weather or going away for more than a weekend, the benefits of having a portable fridge are many and varied.

"A reliable and efficient fridge on board is more than just a luxury – it's a necessity." 4WD Action Magazine, 2009

The best type of fridge to suit a customer's individual needs depends on exactly that – the customer's individual needs. Often, difficult, technical terms and complicated specifications can cause a lot of confusion with these kinds of products. Subsequently, the 4WD Action fridge comparison has been based on a number of important factors, including price, to help make this decision process easier.

For the purposes of this test, 4WD Action assessed the best-selling fridge from each manufacturer (that fitted into their required specifications), which meant the fridges ranged in internal capacity from 42QT through to 59QT – a size range commonly found in the back of many 4WDs. The fridges were not only tested in a controlled laboratory environment, but were also sent out into the harsh Australian Outback for in-field testing.

Test 1 & 2

Firstly, the fridges were sent to VIPAC's NATA approved climate controlled chamber to simulate each fridge being operated in both very cold and very hot environments. The fridges were subjected to two temperature extremes over two 24 hour periods with both current and internal cabinet temperatures monitored during this time.

A number of other important factors regarding this test should be noted as follows:

- > All fridges were tested together, at the same time in the same environment
- > They were connected to 12V, 40A DC power supplies to simulate being run off a car battery
- > Each fridge was packed with the same contents > Temperature sensing thermocouples were placed in the centre of each fridge and freezer compartment
- > All fridges were set to 39°F and left to run overnight beforehand
- > The chamber was set to run from 77°F down to 32°F (over ten hours), then held for two hours before ramping back up to 77°F. They were then stabilized at 77°F and ramped up to 140°F degrees (over ten hours), held for 2 hours and returned back to 77°F



**COMBINED CLIMATE RESULTS FOR TEST 1 & 2: 77°F> 32°F> 140°F>77°F
(AVERAGE AMBIENT AIR TEMP: 82.4°F)**

FRIDGE	TOTAL POWER CONSUMPTION Ah/48hrs	AVERAGE POWER CONSUMPTION	MAX COMPRESSOR ON TIME AT 32°F	MAX COMPRESSOR ON TIME AT 140°F
ARB	47.49	0.99	NIL	1 hr 47min
BUSHMAN	37.37	0.78	NIL	48min
ENGEL	50.45	1.05	NIL	2hrs
EXPLORER	75.68	1.58	NIL	2hrs
EVAKOOL	34.87	0.73	NIL	53min
NATIONAL LUNA	63.36	1.32	NIL	1 hr 35min
WAECO	42.28	0.88	NIL	1 hr 35min



Test 3

Following the lab analysis, the fridges were taken to the western outskirts of Burke where they could be tested in real world environments. Here, they were run for 72 hours straight to assess how each fridge handled the long hot days, warm evenings and cool nights. During this time, all the fridges were run at their lowest settings and were filled with the same contents as in tests one and two. To further simulate how they would actually be used, lids were randomly opened for one minute intervals.



Compared to the highly technical and very accurate lab analysis the fridges underwent beforehand, this particular test cannot be backed up by scientific data. However, the overwhelming result was that each of the fridges' involved performed as their manufacturer's intended them to. Each kept their contents cold or frozen and stood up to being subjected to harsh Outback conditions for the entire 72 hours while remaining fully operational.

ARB - 47L

The ARB fridge is lined on the outside with powdercoated zinc steel and the injection-moulded lid is tough enough for a big bloke like me to sit on. The lid didn't have that annoying free play other fridges have and the quick release mechanism is actually quick, easy and positive locking.

Inside, the ARB fridge uses an integrated evaporator that not only helps keep your food and drinks cold, it also prevents food internally mounted drain plug further aids cleaning and the interior light was enough to give you some idea where your beers are hidden. The reversible internal basket is lower at one end so you can store longer items or turning it around allows you to create a separate soft goods compartment for fruit and dairy etc. The internal layout makes for easy food storage and repeat access, meaning you aren't constantly repacking the fridge every time you get something out.

The ARB fridge has great features like the reversible basket, integrated drain plug, separate soft food shelf and the compact, rugged outside design will surely be a winner for many. The latch system shouldn't be mistaken for a handle – because it's not.

Performance-wise, the ARB fridge has proved it can maintain internal cabinet temperatures in extreme environments, proving it's sure to have an ice-cold thirst quencher ready whenever you are.

NOTE: At the time of printing, all new ARB fridges will be supplied with the new latch design. Customers with the earlier design latch are able to upgrade to the new latch free of charge.



ARB - 47L

COMPRESSOR: DANFOSS BD35
WEIGHT: 49lbs
POWER SUPPLY: 12/24V DC and 100-240V AC
BATTERY PROTECTION SYSTEM: Yes
FUSED: Yes
LISTED INTERNAL CAPACITY: 50QT
EXTERNAL DIMENSIONS: H20" X W15" X L28"
WARRANTY: 3 YEARS
MSRP: \$854.35



Conclusion

The Australian 4WD Action magazine fridge comparison clearly demonstrated that it's important to look at a very broad spectrum of features when choosing the optimum fridge for your needs. Stand out performers from the test were mentioned as follows:

“First place and congratulations must go to ARB for designing a fridge that has a range of operational features that make it suitable for many users. While the new handle design gives it the most positive locking action of all, it’s also power efficient and able to keep internal cabinet temperatures stable across a range of external temperatures. The tough build quality makes it ideal for punishing off road use, all the while keeping your food and drinks icy cold.

“Waeco scores second place with a fridge that is power and thermally efficient, wrapped in a tough exterior. Again, internal design is very good and the control panel easy to use. Our testing has proved the Waeco can easily handle any climate without sucking your battery dry.”
4WD Action Magazine, 2009

Overall Scores

The overall scores shown at the bottom of the page reflect how the fridge models scored out of ten in each of the nine categories – personal requirements will determine what order of priority should be placed on them. After all, there’s no point choosing the smallest, most power efficient fridge if it can’t refrigerate enough food for your needs. And similarly, a quick and easy vehicle upgrade can ensure your 4WD is capable of handling a larger power consumption if necessary.



FRIDGE	POWER CONSUMPTION	THERMAL EFFICIENCY	INTERNAL LAYOUT	COMPACT DESIGN	HANDLE DESIGN	LID DESIGN AND FUNCTION	OVERALL RUGGEDNESS	CONTROL PANEL DESIGN	VALUE FOR MONEY
ARB 50Q	7	10	10	10	8	10	9	9	9
BUSHMAN 35-42L	9	10	9	10	6	9	7	10	10
ENGEL MT45F SERIES II 40L	6	10	8	10	10	10	10	7	8
EXPLORER DC-50	4	10	9	10	8	10	10	6	7
EVAKOOL REF47	10	8	8	8	8	9	7	7	8
NATIONAL LUNA 50L TWIN	5	10	8	10	9	9	10	10	7
WAECO CF50	8	9	9	10	10	8	8	9	9