



Brown Davis Automotive Pty. Ltd.

ABN: 72 657 573 544

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MCHR3

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Last edited: 21/05/2014

Fuel Tank Part List and Installation Instructions

TANK P/N: MCHR3

MITSUBISHI CHALLENGER 2009on
100ltr REPLACEMENT TANK

| Item | Description | Quantity | Part number | P | C |
|------|---|----------|-------------|---|---|
| | | | | | |
| 1 | TANK – REPLACEMENT | 1 | MCHR3 | | |
| 2 | HOSE – FUEL AND EMISSION – 6mm | 1.2m | | | |
| 3 | HOSE – FUEL AND EMISSION – 10mm | 330mm | | | |
| 4 | HOSE – FUEL AND EMISSION – 12mm | 270mm | | | |
| 5 | HOSE CLAMP – NORMA - 12mm | 2 | | | |
| 6 | HOSE CLAMP – PLATED – 8-16mm | 2 | | | |
| 7 | HOSE CLAMP – PLATED – 12-22mm | 4 | | | |
| 8 | HOSE CLAMP – PLATED – 25-40mm | 2 | | | |
| 9 | DRAIN PLUG – MAGNETIC – M14 (fitted to tank) | 1 | DP-M14 | | |
| 10 | BRASS – TAIL BARB - ½" x 3/8" BSP | 1 | | | |
| 11 | WASHER – PANEL PLATED – M10 | 4 | | | |
| 12 | SET SCREW – PAN HEAD – M5 x 10mm – PLATED 8.8 | 6 | | | |
| 13 | WASHER – SPRING PLATED – M5 | 6 | | | |
| 14 | WASHER – FLAT PLATED – M5 | 12 | | | |
| 15 | DISCRIMINATOR VALVE | 1 | | | |
| 16 | DISCRIMINATOR VALVE SEAL | 1 | | | |
| 17 | CABLE TIE – 8" BLACK | 2 | | | |
| 18 | WARRANTY CARD & INFORMATION SHEET | 1 | | | |
| 19 | BROWN DAVIS AUTOMOTIVE STICKER | 1 | | | |

Packed by (P): _____

Checked by (C): _____

Date Packed: ____ / ____ / ____



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All Brown Davis Automotive fuel tank kits are manufactured to Australian Standards and the Australian Design Rules where applicable and carry a full **3 Year Warranty**. Construction in 2.0 mm cold rolled, aluminium coated steel ensures maximum strength and durability and minimum corrosion susceptibility. More than 30 years of testing within the field has shown that this gauge of steel is sufficiently impact resistant that an additional tank guard is not necessary (most standard tank guards are thinner than 1.5 mm).

All tanks are M.I.G. (Metal Inert Gas) welded to ensure the strongest possible seams and are baffled to prevent fuel surge. They are then pressure tested using two different techniques to eliminate the possibility of leaks. Drain plugs are fitted horizontally to prevent them being damaged if the tank is scraped over rocks and are magnetic to collect any metallic dirt that may enter your fuel system.

In all cases, Brown Davis Automotive fuel tanks are designed with general off road use in mind and are designed not to compromise ground clearance, entry, exit or ramp over angles.

Please remember it is the driver's responsibility to operate their vehicle in a sensible manner in 4WD conditions, Brown Davis Automotive cannot be held responsible for the abuse of your vehicle and subsequent possible fuel tank damage.

REPLACEMENT TANKS This tank is a replacement for the standard tank and fits in the same location. The standard filler is retained as is the fuel gauge sender unit which still works in the same manner except it takes longer to reach empty. Rearrangement of the exhaust system **IS NOT** necessary with this fitment.

ANY QUESTIONS OR INFORMATION REQUIRED IN RELATION THE BELOW INSTRUCTIONS PLEASE DO NOT HESITATE TO CONTACT BROWN DAVIS HEAD OFFICE OR ONE OF OUR DISTRIBUTORS.

PLEASE ENSURE ALL CONNECTIONS AND MOUNTINGS ARE CHECKED A SECOND TIME AFTER FINISHING YOUR INSTALLATION TO CONFIRM THERE ARE NO LEAKS AND THAT ALL BOLTS ARE TIGHT. ALWAYS ROAD TEST THE VEHICLE AND MAKE SURE THERE IS COMPLETE SUSPENSION TRAVEL CLEARANCE.

BROWN DAVIS CAN TAKE NO RESPONSIBILITY FOR AFTER MARKET SUSPENSION SYSTEMS INTERACTING WITH THE TANK, IF FITTED.

FITTING

1. Remove the rear passenger side seat and the metal plate to expose the top of the tank to access the fuel pick up, return and gauge wiring.



2. Remove rear passenger wheel arch cover and undo the filler hose, fast fill and breather hoses.
3. Remove the tailshaft making sure to mark both the flange and spline ends for correct alignment when refitting later.
4. Remove tank by undoing front and rear mounting bolts.
5. Remove wiring loom bracket and cable tie the wiring loom. The loom bracket is not reused.



6. Fit discriminator valve and seal to tank. Fit 6mm hose to valve.
7. Fit brass fast fill fitting.
8. Fit sender unit to new tank using supplied M5 screws and washers. Check the rotation of sender unit.



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Note that extra washers may be needed to allow sender unit to be firmly sealed.



9. Fit longer hoses to pick up and return on chassis rail and point towards floor access hole. These are to be fitted to fuel sender when tank is in place.
10. Lift tank into position and bolt in using original hardware and M10 washers supplied.
11. Shorten filler hose 50mm and fit to tank with supplied hose clamps.
12. Shorten fast fill hose 50mm and fit to tank with supplied hose clamps. Refit inner guard cover.



13. Fit fuel lines to sender with supplied hose clamps. Make sure fuel line is clear of tank and not jammed.



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14. Plug in wiring loom.



15. Tighten bolts and refit floor hatch.

16. Refit the tailshaft.

17. Refill tank with fuel. Idle car to make sure there are no air locks in fuel lines.



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OPERATION INFORMATION

The operation of your new Brown Davis Automotive long range fuel tank is little different from the original tank.

Simply fill the long range/auxiliary tank exactly as with a standard tank. (It just takes more fuel to fill, and a dual filler will be used for filling auxiliary tanks).

The fuel gauge on the vehicles dash will read as with the standard tank. It should read with the same degree of accuracy as it did with the standard tank other than staying on full for most of the new increase in capacity. For about 20% more than the standard tank held the gauge will now read in proportion from full down to empty. Auxiliary tanks come with a separate tank gauge to show separate fuel level to main tank.

The low fuel light will still function as normal with it coming "on" at about 20% more fuel volume left to go than it used to, to warn you of low fuel.

Remember your new long range tank(s) are carrying a lot more fuel than standard. Remain aware of how much fuel has been used during the initial period of the gauge remaining on full for future reference in estimating fuel usage and consumption.

Maintenance and service of your new Brown Davis Automotive long range fuel tank other than the recommended 1000km check and filter change should be in align with the normal vehicle Manufactures service schedule and guidelines. Remember the long range tank has a magnetic drain plug that the standard tank did not. With the fuel level low the drain plug can be removed and cleaned to remove any metal fragments introduced from the filler bowser scraping on the filler tube when filling or particles and rust flakes from jerry cans used on long trips. This facility is supplied to protect the in-tank fuel pumps fitted to most modern vehicle fuel tanks.

Finally make sure the warranty card is filled out completely and returned to Brown Davis Automotive and that the warranty information is read and understood. If there are any queries about this or any of the above information please contact us at Brown Davis at the attached address or phone and fax numbers for assistance.