# Aubsprint XL Construction Manual





Clubsprint



Dear customer

Many thanks for purchasing these assembly instructions. We believe that they set new industry standards for clarity, content and presentation. We hope that after reading them you feel confident enough to purchase a kit (if you have not done so already).

We hope that you find these instructions clear, concise and informative, but some customers do get "stuck" at some stage, so remember that if you have any problems we can be contacted by phone during normal working hours.

Otherwise you can e-mail <u>almaccars@paradise.net.nz</u>

Yours sincerely

Alex McDonald



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# 2-1 DONOR CARS

The Mazda MX5 1989 -1998 is the donor car that is used though later cars can be also be used.



The simplest build is to buy a car with body damage and remove all the mechanical components and electricals.

The MX5 engine is reasonably powerful but if more Horsepower is required it can be turbo charged using a multitude of after market accessories or a different engine can be fitted.

If the purchase of a complete car does not appeal then Almac can supply all the components.

# 2-2 DONOR CAR DISMANTLING

Always bear in mind that the pieces you remove are going to be re-used. so remove them with care. As you take pieces apart, make a note of how they go back together. Particularly the dashboard wiring loom, a tag on the end of each wire can save hours of work later.

Take care not to lose any special bolts or brackets, as these are often expensive parts to replace. It is best to either bolt them back onto the parts they came from, or to put them into marked plastic bags.

Refer to the MX5 workshop manual if you cannot work out how some of the parts are removed.

### 2-3 ALMAC KIT

The kit comprises of ....

Chassis Frame: Unpainted. Fully bracketed.

**Basic Body Kit:** Nose cone, scuttle, cycle guards and rear gurads.

Complete Body Kit: is Basic Body plus bonnet, rear panel, side panels and dashboard.

# 2-4 GUIDE TO WHAT YOU NEED

(\* = Supplied by Almac)

Aluminium panels

- Front top and bottom wishbones
- Front top wishbone ball joints
- \* Rear suspension bracket
- Steering intermediate shaft Steering coupling—Mazda 323 Intermediate shaft bearing Front shocks and springs AVO coil overs Rear shocks and springs AVO coil overs Brake pipes—cupro nickel Petrol pipes—cupro nickel Handbrake—Mazda 323
- \* Fuel tank and filler cap
- \* Pedal box
- \* Brake and clutch pedal Clutch master cylinder
- Wiper wheelboxes linkage Header tank Seat shell bare or upholstered
- \* Windscreen and frame
- Roll bar
- Soft top and windows Seat belts Wiper arms and blades Radiator—Suzuki Vitara 4 cyl Exhaust and silencer Headlight shells Headlights Front indicators—LEP RL325 Rear light cluster—LEP CRL107 High stop light—Hella 5243 Number plate light-LEPNPL73 Side repeaters—Hella HL2118

## **MX5 PARTS**

Front uprights, stub axles, bottom ball joint, hubs, discs & callipers Anti sway bar and links (optional Steering rack and track rod ends Steering column with ignition and indicator Rear suspension and dif complete in frame Accelerator pedal and cable Brake master cylinder Speedo cable (if using MX5 gearbox) Fuel tank sender and pump

# 3-8 REAR SUSPENSION COMPLETE

The rear suspension uses the MX5 assembly complete. The frame is bolted to the chassis with 12mm bolts.

Check that it is square to the chassis by measuring from the centre of the hub to a front wishbone bracket, then check the other side. When equal tighten the bolts.

The stabiliser bar is used to hold and locate the diff head to the frame.



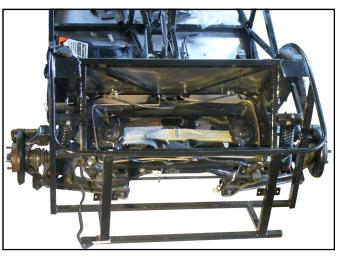
The **U** bracket is fitted on top of the side casting on the diff head. The plate is fitted on the underside and two M12 bolts with thick washers are fitted up through the casting and then held with nyloc nuts.



The crossbar is placed on top of the frame and bolted to the **U** bracket.

As the diff needs to be lifted to fit the driveshaft, fit the driveshaft then bolt the crossbar to the frame. Use M10 bolts with heavy washers on the underside of the frame.

Attach the brake lines.



The rear shock absorbers are attached to the rear wishbone and to the bracket on the chassis. The top mount is held with a 1/2" UNF bolt and the bottom shock mount needs a 12mm sleeve fitted as the MX5 has a M12 bolt. Use spacers to ensure clearance between the spring and the half shaft.



# 5-1 LIGHTS and INDICATORS

Headlights, front indicator, side indicator, stop tail lights, high stop, number plate light, reverse, interior light and cigarette lighter. Note the plugs may have to be changed to suit the lights.

The headlights are fitted into the headlight shells.

There are a number of different headlights on the market. The main criteria is that they have High and Low beam and a side light fitted in them.

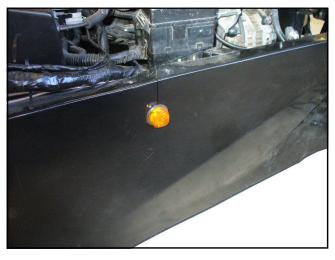
The headlight shells are fitted to a steel bracket that is bolted to the chassis. It is fitted in position over the three rivnuts and held in with M6 machine screws. The fibreglass cover that carries the front indicators is fitted over the bracket and the headlight stem is fed through the hole and the assembly is held together with the nut, this is also used to set the headlight beam.





The indicator is fitted to the front of the cover and the wires plus the headlight wires with a sleeve are fitted and fed through the hole in the side of the bracket and through the square tube.

The side repeaters are fitted to the side panel. The position is governed by the wire on the MX5 loom. MX5 repeaters can be used.



The high stop light is fitted by cutting a rectangular hole that is 220mm x 20mm and 60mm from the top of the panel and in the centre of the panel. The high stop light is then fitted in the hole and held in place by two self tapping screws



The number plate light is fitted in the centre of the panel approximately 240mm from the bottom edge.



# 5-2 WIRING LOOM

If using the MX5 engine, the wiring loom can be used straight from the donor. It is basically laid out as in the MX5. Some parts of the loom have to be laid in a loop as they are too long. It's an individual choice whether to take the wires out that are not needed or whether to seal unnecessary ends and tape them.

As stated in Section 2, putting a name tab on each plug when removing the loom simplifies the rewiring of the car.



### **Under The Bonnet**

Not used - The connection for the air conditioning fan

- For the emission control system (easier to leave in place)
- Power steering

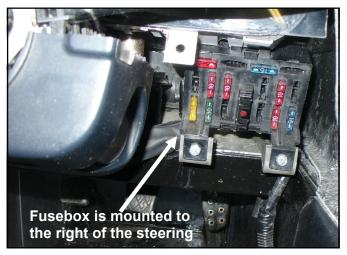
Everything else is standard and doesn't need to be modified, it will all fit.

The battery for the MX5 is in the boot with the Clubsprint it is under the bonnet so new

connections for the battery are required. The positive lead needs to be cut to the length and a new connector fitted to it. The earth lead is also shortened and a new connector fitted, the earth is bolted to the chassis frame.

An earth is also attached to the engine and chassis.





### **Cockpit**

The wiring runs down the right side of the car, the wiring will fit without too many modifications. You can remove the wires for the heater/air con and the radio. The only switch that is required is the hazard as the wires are there. An interior light (remove one) and the cigarette

lighter can be retained. These are fitted to a panel attached to the chassis rail across the interior of the car.



# 6-2 WINDSCREEN & FRAME

The windscreen frame comes completely assembled with the glass fitted. The posts are attached to the frame with 5mm screws.



Using a black sealant, attach the lower lip of the windscreen frame.

Fit the assembly onto the scuttle with the bottom lip up against the windscreen wiper bosses.

Drill holes through the holes in the posts into the scuttle, remove and apply the sealant to the underside of the lip, then fit the assembly in position.





Bolt through the posts. Sight through the posts from each side to make sure they are in line.

