

Side pipe & fitting

This is an option that some people may go for or you may prefer under floor system.

There are many different types and quality / price of side pipes on the market, stainless steel and chrome plated steel. Chromed Steel is the cheaper end of the price scale but do not last as long as stainless steel, your budget will help decide the material that your pipes are made of.

RVD have developed our own side pipes that comply with the SVA standards and noise limits. and under floor system to fit your python, it is not essential that you use or purchase your system from RVD.

This part of the manual covers the RVD side pipes, the methods can be applied to other makes of pipes as well, but you may have to make some different brackets than the ones shown here in the manual.

Parts needed

1. two side pipes
2. four heavy duty rubber mounts
3. two bolt plates (these you may have to make if not using RVD Fitting Kit)
4. M8 bolts and nuts, washers
5. two mounting brackets
6. two 3"(76mm) exhaust clamps

Method:

1. First you will need to fit your manifolds to the engine, these may or may not be RVD parts, depending upon your engine choice. RVD side pipes have one 3" (76mm) collector pipe, this allows the 6 cylinder engines run 3 pots out each said to help cover that fact that it's a six cylinder and not a V8.



2. If you are using a 520 or 525 (720 or 725) engine the manifold has a 2" (51mm) pipe from the manifold and the RVD pipe has the reducer on the side pipe.
3. For M30 engines they run into a 3" pipe, there are many companies that can supply you with all manner of side pipes, steel Chromed, Stainless Steel polished or black painted steel and of different diameters and noise out put. Some are complaint with SVA and others are track use only.
4. RVD we make only Stainless steel polished 4.5" Dia main section and 3" tube in 1.5 mm thick 18/8 stainless as standard. We would have to make to order any other type, RVD pipes are 100% compliant with SVA rules and noise out put, But are straight through pipes with no restriction inside to give maximum power output from your engine.



5. Once you have fitted your manifolds this will give you a start position to cut a hole in the GRP. Note the GRP is double skinned at this point. Once you have a small hole approximately in the center of where you need the hole, open up and use a rule on the inside of the pipe (as with rollover hoops) to help you keep the hole on center.
6. Test fit the side pipe through the GRP , once you can get it over the end of the manifold pipe, lift the rear of the pipe up with a jack or something that can be adjusted to get the required position and level. Now mark evenly 13mm (1/2") around the pipe on the GRP. Remove the side pipe and open up the hole to full size, make sure the inner skin is cutback to the same clearance.
7. Repeat this on the other side. Position your pipes back in position and check the position of the bracket bolts, level up.
8. There are many ways to mount side pipes, on the RVD side pipes there are TWO M8 bolts welded onto a re-enforcing plate spot welded to the outer tube at the outlet end, (these are L/H and R/H). There are also a huge number of different rubber mounts that can be used to hold your pipes in position, if you decide to use a different part to us then you may have to make your own brackets.

- 9.** The below picture shows one method and type of rubber bobbins that can be used to hold you exhaust in position.



- 10.** The inner mount is bolted through the floor panel as close to the seat runner lug as possible, with large washers on the inside to spread the load on the GRP.

- 11.** For the outer mount we used a steel plate riveted on to the GRP sill with two M8 studs welded into the plate, it was then “wet assembled”(with PU adhesive or silicon compound) onto the roughed up GRP and riveted with counter sunk rivets. As shown below. The above picture shows one method and type of rubber bobbins that can be used to hold you exhaust in position.



- 12.** Now you have all the mounts on there just remains the trim plate, this is best made from aluminum or Stainless steel, the best way to get the shape is to use a piece of card. Cut it at the side so you can slip it over the pipe without taking it off, trim it on the inside until you have 10mm (3/8”) clearance around the pipe when bent to the shape of the sill. Then mark 32mm (1 1/4”) around the center hole you have cut, now you have a pattern to cut the metal. **Note** both side may not be the same it best to check before cutting the other side one!!.

- 13.** The picture below show the trim in position, It is up to you how it is attached, it can be riveted with small pop rivets (3/32 2.4mm or 1/8" 3.2) or small bolts (M3 or M4 best) they must have rounded heads or counter sunk to pass SVA as even these can cost you a failuar at the test
- 14.** Of course you cannot fit these trims until the car has had its coat of paint and it is buffed and flat. It's best to clamp the trims in position with the trusty hole clamps and drill all the holes before painting. As this will save any damage to the paint if the drill slips (as it tends to do when you have just finished everything and it's all gone so well) and stop the kids hearing language that they should not.



- 15.** *You now should be in a position to run the engine for the fist time, a great moment in any kit build !!!*