

# UNLEASHING THE FURY WITHIN

## PART 2

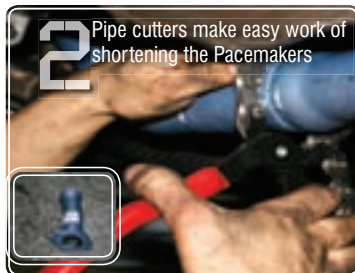
LAST ISSUE, WE RIPPED THOSE HORRIBLE STANDARD, CAST EXHAUST HEADERS OFF AN ECOTEC V6, AND REPLACED THEM WITH SOME MUCH MORE EFFICIENT PACEMAKERS. WE CAN'T LEAVE THE REST OF THE EXHAUST STANDARD NOW, CAN WE?

STORY AND PICS BY CHRIS SORGSEPP

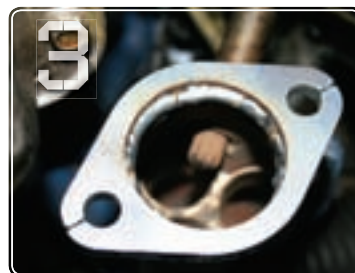
So, with the Pacemakers now bolted firmly in place, it's time for Performance Exhaust in Northmead to fabricate a custom, single 3in system. Why a 3in system on a V6 you ask? Well, this particular Ecotec isn't your average run-of-the-mill six banger, but rather our very own Project Seagull. With power expectations to be around the 250rwhk mark in the end, those hot exhaust gasses are going to need a nice free-flowing path to make their exit in the most efficient manner possible.



**1.** First things first, and that is to remove the rest of that horrid exhaust. A large flat-head screwdriver proves to be your most valuable tool here to pry those tight exhaust rubbers from their tabs.



**2.** One thing that we noticed when planning the system was that the Pacemakers themselves had a larger section when merging into one than they did at the flange. So the decision was made to cut the extractors short and make good use of the larger merging section. Doing this allowed us to use quarter-inch larger diameter Y-piece pipes.



**3.** With the extra pieces now removed from the extractors, a flange needs to be welded onto the end that allows the rest of the system to bolt up easily.



**4.** Next comes the plan for the Y-section. A 3in stainless steel catalytic converter was chosen for its durability and flow properties over a standard ceramic-type unit. The stainless version bears a much higher price tag, but with performance and reliability absolutely paramount, the stainless version was chosen.





Even though the arc is a nice pretty blue colour, stay away from the light!



**5.** The catalytic converter now is placed on a stand and manoeuvred into place. Pre-fabricated mandrel bends and straight sections are chosen to merge the two pipes into a single 3in flange, which then sees the rest of the exhaust bolt straight to it.

**6.** Once the desired bend and straight sections have been chosen, they are tacked together. Tacking is the simple act of using a welder to create a small weld to hold two sections together temporarily. Using this method makes it easy to alter the design later on. Once fully satisfied, the pipes are removed from the car and placed on a bench to be fully welded.

**7.** With the Y-section now fully welded up, we give it a coat of heatproof paint to ensure none of the welds or pipes rust out.

**8.** The Y-piece now is bolted back the extractor flanges. A gasket is used in between these two flanges and is coated in a liquid gasket adhesive.

**9.** It's now time for the rest of the exhaust to be fabricated. The muffler is placed on a stand and held in position while more pre-made bends and straight sections are modified to be used in the system.

**10.** Once the catalytic converter and centre muffler have been joined together with 3in pipe, all joins are tack welded and then placed back on the bench for full welding.

**11.** With the exhaust this far completed, lugs need to be welded to the muffler in order to hang the system from the car.

**12.** This system also receives a rear resonator to get that noise level below the legal limit. The muffler is joined to the resonator in the same fashion going under the rear axles. Once this is done, the rest of the system is removed for full welding and painting.

**13.** To add to the aesthetic appearance of the Seagull, a 3.25in chrome exhaust tip was fitted to the rear. The entry into the tip needed to be flanged out to accommodate the 3in pipe. The tip then is held and welded into place.

With the 3.8L Raptor blown V6 kicked into life, it was time to take it for the official test drive. Noticeable immediately was the gain in low-down torque with boost arriving earlier and the top end gaining a few pounds. Under full throttle acceleration, the boost gauge happily showed 10psi rather than previously only displaying a maximum of 8psi.

Research and careful design pays great dividends when it comes to exhaust choice. Not every exhaust modification nets a gain in horsepower and road manners, and losses can also result from poor thought and cost-cutting assembly techniques. Make sure the exhaust shop you choose has a reputable performance track record up their sleeve to offer you peace of mind.

