



Intelligent Performance, Part 1- Starting Points

How to spend the least to get the best

By Julian Edgar

No one ever has as much money as they'd like. And this sobering fact means that it's easy to come up with a shopping list of car modifications, then stop aghast when you realise how massive the total's grown.



So, how do you get the best performance for the least cash? In this Intelligent Performance series we'll cover normal street level performance, the sort of power-up where you get a competently quick street car that also handles and stops well. It'll be comfortable, convenient and practical car, too. You won't find advice aimed at dropping your Corolla straight into the elevens across the quarter - what we wanna do is to help the vast majority, rather than concentrate on the flamboyant minority who spend tens of thousands on each component of their cars. (They've got so much dosh that they don't need any advice, anyway!)

This week, we'll look at the cars that you can start with.

The Starting Point

If you want good performance in a factory package, you need either a large engine or forced induction. And, since you should always start off with the most factory performance you can buy, let's explore those ideas a bit further.

1. Big Engines



Traditionally, 'big engine' in Australia has meant V8, V6 or straight six - the Falcodores of about the last 15 years. Teamed with an auto trans - as almost all of them are - these big, heavy cars have quite strong performance. Many a naturally aspirated car owner judges the performance of their car against a stock V6 Commodore - "My car goes pretty well - I can beat a VN V6 off the lights." To put this statement another way, a standard six cylinder Falcon or Commodore is often as quick as an expensively modified, naturally aspirated four. The V8 versions are quicker again.



So if you want performance that's got a heap of neck-snapping torque off the line and your definition of grunt includes the ability to do smoky burn-outs and donuts when the urge occurs, you can't go past the big Australians. They're incredibly cheap, strong and comfortable cars for which there're numerous performance parts available. Falcons from the EA onwards and Commodores from the VN model fulfil these criteria.



However, don't buy one of these cars if you want a major, low cost power upgrade. Extractors, high flow exhausts and airbox mods will get you typically about 10-12 per cent more peak power - and then that's it. You want more grunt again, suddenly you're talking serious dollars. Cams, head work, reprogrammed engine management and the like can suddenly jump the bill by four or five thousand dollars, for a gain that's not all that wonderful. For power gains that **really** kick butt it's quite possible to spend \$10 - \$20,000 on the engine alone. When you consider that this sort of money would get you a twin turbo Lexus V8 with a silken 600hp, you need to consider whether it's worth pursuing this path with an old design engine. And consider it **before** you start!

These big, lazy engined cars have great performance in standard and near-standard forms, but the cost/benefit ratio starts going backwards really fast when you want more than just a little extra power. And for the on-road performance, fuel economy is poor.

Naturally aspirated small engine cars are, in standard form, basically slow. The fact that you and I can come up with exceptions to that statement doesn't disprove it - Honda S2000, Honda Integra Type R, er, Volkswagen Golf VR6, er.... For each one like this it's easy to name ten or twenty small engine cars that are slow, slow, slow. Like, slower than that ad rep's Falcodore. So buying a car like, say, a Corolla SX and expecting to make it a fast car by modifying its engine is going to cost you a lot of money and grief. Sure it's possible, but why start off behind the eight-ball? (Unless you're buying a car just so that you can do an engine swap - that's covered in a later story.)

Again, as with the big Australians, it depends on how much performance you want to actually achieve. Getting a relatively ('relatively', I said!) fast, old and cheap four cylinder like a JE Camira and then spending less than a thousand dollars on it can get you a fun performance car. You'll be well into the sixteens across the quarter mile, and the handling is also quite good. But to buy a Camira and then spend \$5,000 on it is just plain stupid - better to buy a \$5,000 better car in the first place.

2. Forced Induction



If you want good performance in a small engine car, get one with forced aspiration. Compared with taking **any** other road car option, buying a factory turbo car and then modifying it is the bang-for-buck performance option that's best. It's just so damn' easy to upgrade the power output - boost and an exhaust will get you 15-20 per cent more power. Depending on how you do it (eg the AutoSpeed pneumatic boost control and a press-bent mild steel exhaust) it can cost as little as \$600 to get that huge power gain. To remind you, on a big naturally aspirated six or eight, a power gain of this magnitude can set you back around five times the dollars... Intercoolers, turbo swaps, extra injectors, raised fuel pressure - all are techniques and options that can multiply power outputs with ridiculous ease. With care, the engine longevity will remain excellent, too.

It's a statement of fact: getting more power out of a naturally aspirated engine is a tortuous process of improving every tiny detail of the breathing; doing the same on a factory turbo engine is relative child's play.

3. Popularity



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If you want to modify with the least expenditure, buy a common car. Or, more specifically, buy a car commonly modified. In Australia, the Saab Turbo is a car that matches the sort of criteria I outlined above - a factory turbo performance four. But try finding locally a hi-flow turbo exhaust manifold, or a front suspension 'kit', or off-the-shelf intercooler upgrades and you'll realise that you've made things a bit hard for yourself. In fact, contrast that with a Mazda MX6 Turbo (depending on the models, the Saab and Mazda are about the same low dollars). For the Mazda you could ring half a dozen places and within an hour have sourced an upgrade turbo, upgrade intercooler, pre-built hi-flow exhaust and some cheap alloys.



The number and variety of brake kits for Commodores is legendary; the variety of body kits for Falcons numerous; the knowledge about Impreza WRX modifications widespread. European and American cars in Australia are poor relations in terms of modification parts and experience - that's not to say that you can't pick one of these cars, of course. But it **is** to say that to perform the mods will cost you more - sometimes **much** more - than if you'd done the same to a more popular performance option.



The presence of Japanese importing wreckers makes the attraction of both locally delivered and Japanese import performance cars incredibly high. While the performance advantages of these cars is often overstated by those who have never driven good cars originating elsewhere, the fact remains that when a replacement engine is available for effectively scrap value, and when **whole cars** cost less than you'd expect to pay for just an **engine** sourced through the official dealer, the cost benefits are simply wonderful. However, another point to remember is that, compared with all the cars in the market, the popularity of direct imports is low. This has implications for insurance, knowledge and performance parts - although again the last point is made a bit fuzzy by the direct importing of used modification stuff.

Of course you may well decide that blazing your own performance path is what you wanna do - but expect to pay more for the pleasure of having something different.

4. Over Capitalisation



We have no problem at all with the person who buys, say, a \$2,000 Datsun 1600 and then spends money on bodywork, interior, a good turbo EFI engine, brakes and suspension. It might have cost them \$25,000 but they're happy with their updated machine. Sometimes they'll keep it for ten years - and good on 'em! It's a classic performance car with style and heritage, simply fast-forwarded thirty years.

But contrast that with someone who buys, say, a Daihatsu Charade Turbo. They've heard that it's a cheap, good car so they spend maybe \$3,000 buying one. Then they have a new turbo fitted on a custom manifold, have the engine rebuilt with forged pistons and tickled head, get a suspension upgrade and fit bigger front brakes. They've spent an additional \$5,000 and they drive it for a year and then sell it. Why didn't they just buy a Laser 4WD turbo in the first place? It would have cost the same total dollars! The Laser is a far better car in every respect than the upgraded Charade, a year later the Laser wouldn't have been worth much less than its purchase price, and it also would have been a helluva lot less effort.

A cheap car is a cheap performance car only when "cheap performance" is the **overall** aim. Like, the aforesaid Charade Turbo with a bit of boost and an intercooler. Or the JE Camira with an exhaust. Or, a VN Commodore V6 with extractors and an exhaust. But to spend a heap of money - like 150 per cent of the original value of the car - for 12 months of upgraded performance is a waste. You won't get it back, and you won't even have got results as good as you would have, had you spent the total on a better car in the first place.

In other words, have some idea of where you intend going **before** you start. You will always end up with the best overall package (performance, brakes, interior, comfort, handling, NVH, etc) if you buy the most expensive late model car you can afford, rather than buying an inferior but cheaper car and spending money on it. We're not against modifying cars - how could we be when we love it?! But sometimes the things we see people doing make us shake our heads: if it's not even a very good car to start with, why spend huge amounts on it?

However, there is one way to turn this to your advantage. Low price cars that have had a lot of money spent on them still sell for little. For example, a good paint job is worth a heap - \$4-6,000 is common - but a painted car is generally worth only \$1000 or so over an unpainted car. Picking up someone else's project for a modest margin over buying a standard version puts the value for dollars straight back into the positive. Just make sure that the modification work has been done well!

Conclusion



You want good performance at low cost?

- Buy a car with either a big naturally aspirated engine or a turbocharged smaller engine.
- If you intend to increase the power considerably, buy a car with a turbo engine.
- Buy a car that's popular to modify.
- Consider buying a more expensive car in the first place, rather than spending a lot on modifying a cheaper car that will be kept only for a short time.
- Buy someone else's project car.

[Intelligent Performance, Part 2 - Exhausts](#)

[Intelligent Performance, Part 3 - Intakes](#)

[Intelligent Performance, Part 4 - Engine Management](#)

[Intelligent Performance, Part 5 - Turbo Cars](#)

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