

- What aftermarket cams are available for the Beta Engine?
You have several options. Several companies in Korea make mild racing cams for the Beta engine, as does [HVE](#), [RPW](#) and [CatCams](#). One thing to keep in mind is that lumpy, high duration cams do not work well with forced induction applications. If you're going to convert to turbo, either get the XD/Beta2 intake cam, the 1.8L intake cam or just leave the stock ones on. (*Thanks Red, and others*)
- What about switching cams for the 1.8L engine into the 2.0L Beta engine, or the cam from the XD Elantra/Beta2 motor?
I've asked some people who have changed their stock cams to the 1.8 Elantra cams, and here's what they told me. The cams in the Elantra are semi-hi cams while the cams in the regular Tib are regular hi cams. The semi-hi cams are used in the 1.8 Avante(Korean-spec Elantra), 1.8 Tib, and Tib Special. The hi cams are used in regular Tibs. The semi-hi cams open a bit more on the intake, and if you install it, you can feel the increased torque, especially at high RPMs(over 5,000). Some people have said that the exchange will give you a 2 hp increase, while others have claimed that there is a 3~4 hp increase. (*Thanks Boogyman*). The Elantra XD/Beta2 cam offers even more lift and duration than the 1.8L cam, or the stock 2.0L cam. Some folks have reported problems with the 1.8L intake cam or the XD/Beta2 intake cam and using Nitrous Oxide. We've yet to figure out just why this happens, but it's something to be aware of.
- I see it (the phrase "lumpy cams") everywhere in the forum and i wanted to know exactly what it is, if it really helps, and if so how much, and how to get them. I also heard something about switching the intake cam w/ an accents. Does anybody know? (Long)

The term "lumpy", when used to describe a camshaft, means the lobes are larger than stock. Lumpy also generally refers to the idle quality of such a cam on the car; a very large-lobed camshaft will make the idle "lope" or become very irregular and/or "lumpy". Cam lobes that are noticeably larger than stock will result in better breathing under certain circumstances, and thus increased power if also given increased fuel to match.

The higher power is gained by opening the valve much further than stock, and this can cause problems when using stock valve springs. In many cases, higher-performance aftermarket camshafts can weaken the stock valve springs because they are opening the valve (compressing the springs) much further than the manufacturer intended. In some cases, if your cam lift is high enough, you can actually seize the motor because the spring will "bottom out" while the cam lobe still needs to go further. In most cases, you need new stronger valve springs when getting high performance camshafts. In some cases where the camshaft is particularly aggressive / oversized, you may need a whole replacement set of valve retainers as well as springs because the stock equipment cannot deal with the amount of lift the camshaft will produce.

However, larger is not better in all cases. If you have a radical cam profile and have done little else with the car, your engine will run very rough, will probably stall on idle, and your power gains will be minimal as compared to the instability of the motor. There are many things to consider upgrading on the Tiburon before cams should play into your head...

It is a good idea to have the entire exhaust (header, cat, pipe, everything...) and entire intake tract (filter, CAI, throttle body) upgraded for the onslaught of flow that the cams can produce. More than likely you will also need a fuel controller (ie APEXi SuperAFC or a Motec unit) for extra fuel tuning. And if you get decently tall-lobed cams, you will need to replace the valve springs with higher capacity

units. Another good idea, although very hard to tune on the Tiburon because of our "unique" (shitty) location of the intake cam sprocket, is to have adjustable cam gears to fine tune the lumpy cams to your motor's best potential. Usually the intake cam is advanced several degrees from the stock index mark, whereas the exhaust cam (for idle quality) is retarded several degrees from stock.

All in all, if you have a well-rounded list of bolt-on modifications, "lumpy" cams can produce a significant additional quantity of power. If placed on a near-stock vehicle, they will usually only cause headaches. Another good thing to consider right before/after cams is having the cylinder head ported and polished, and perhaps a valve job. While the cylinder head is off, you can replace the springs (I didn't do this because I was stupid...) for minimal cost because the head will already be taken apart. (*Thanks Red*)

- Does anybody know of a company that would stock/manufacture aftermarket valve springs and retainers for Hyundai's? Possibly stainless steel valves and titanium valve retainers?

You can get aftermarket valve springs here <http://www.rpw.com.au/>. They also have a bunch of other stuff to, but I think that most of their stuff for Hyundai comes from [HVE](#). [RPW](#) and HVE work closely together. HVE specializes in bolt-ons, while RPW specializes in engine internals. They are also available in Korea. You can get those parts through www.kspec.com (*Thanks bry and Quint*)

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