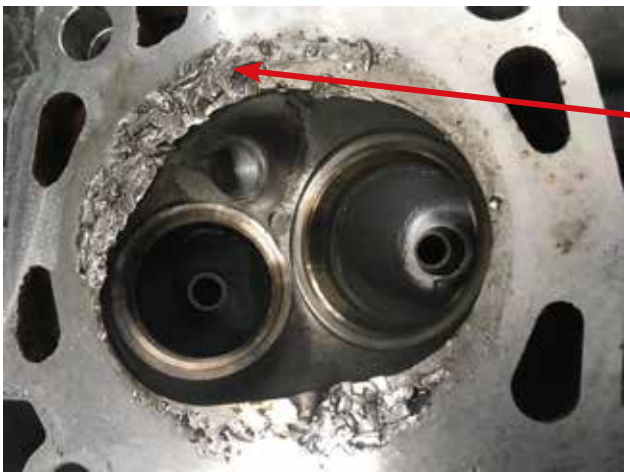
Warning: Clean Out Your Intake Manifolds...



A piece of old piston ring between the piston and head can destroy both!

We would like to thank Geoff, from All Head Services, for sharing this practical information and photos
www.allhead.com.au

All Head Services recently had a customer who purchased a reconditioned Mitsubishi 6G72 long engine. They swapped all the components over from the original engine and fitted the reconditioned engine to the vehicle, but it did not end well.

After start up the engine had a severe rattle. The customer then rang us to discuss what the issue could be and ask about the warranty process.

After removing the engine and sending it down for assessment, the engine was dismantled and found to have ingested an old piece of piston ring from the original engine failure. Upon further investigation, it was found that the inlet manifold had not been cleaned out before to being fitted to the new engine and was full of shrapnel from the initial failure!

Modern intake manifolds now have viable intake runner lengths with butterfly valves and complex plenum chamber designs. This is making the manifolds difficult to clean out, and to be confident that there is no foreign material present before refitting. In such cases replacement of the manifold may be required to be sure.

If you are going to reuse the manifold, this a good time to clean out any carbon and sludge build-up as well, if you follow this procedure.

- Mark the position of any sensors and vacuum hoses (and take a photo as well) and remove them from the manifold.
- Get a bottle or toilet brush with a bendable handle or similar.
- With dish soap or citrus based degreaser and hot water, scrub the runners as best you can.
- Allow the manifold to dry out.
- Blow the manifold out with an air gun, making sure to open and close any variable intake valves. This is to release anything that might be trapped in the valves that will get dropped into the engine later.
- Tip the manifold over, shake it and keep blowing into all of the holes.
- Reassemble manifold

It is imperative that all accessories and engine parts be thoroughly cleaned before refitting to avoid these expensive failures!

WARNING:

Don't put the manifold into a hot wash with a caustic mixture as this may damage and seize any variable intake valve bushes.

Don't use carby cleaner for the same reason.

Don't put plastic manifolds in the hot wash as they may warp.

Bottle brush with a bendable handle