

## Customer Showcase

CS-BarryUpton

### Background:

The part is for a production race car...I believe for a Dodge Viper. It is so a manual brake master cylinder can replace the stock power boosted master cylinder.

They say it gives better 'feel'.

Here is a cool video one of these cars in action. Twin turbos and over 1000 HP...OMG.

<http://www.youtube.com/watch?v=8Dkr70J3FQM>

The part started out as a 6x6x6 block of aluminum . It was programmed using Mastercam X3 using mostly 2D tool paths and some 3D surfacing tool paths. It took 15 separate setups and 132 operations. It took about 2 weeks of programming...the last week was spent doing the last 10% of the design...the details always take the longest. The machining process took 8 different setups and close to 40 tool changes. Each part had a 14 hour cycle time.

The post processor, if I remember correctly, is by Freddy Beast on the Yahoo forum...works really well.

The biggest challenge was finding Depth of Cut, feeds and speeds to work with the available spindle HP and controlling chatter with the extra long tools required. I was really impressed with 3/4 powdered metal rough end mill. Good stiffness, material removal rate, zero detectable wear, and reasonable cost.

Sincerely,

Barry Upton





