
# 2012 USAC .25 MIDGET ENGINE TECH BULLETIN

**ATTENTION USAC .25 MIDGET DRIVERS, HANDLERS, & ENGINE BUILDERS**

USAC members: the Honda program has been an affordable and viable part of the USAC Mopar .25 Midget Series. As you know, Honda shifted its production of the GX120 and GX160 small engine platforms from Japan to Thailand. When this occurred we began to notice parts on the Thailand motors that were modified during production. These discrepancies in the Thailand engines led USAC to outlaw the Thailand engine in for the 2011 USAC Mopar .25 Midget race season. The decision to outlaw the Thailand engines has caused Japan engines and parts to become scarce. This has in turn led to an increase in the price of the Japan Honda engine as well as the engine components made in Japan. This is a big problem for our families competing in the USAC .25 midget program as we strive to control cost. Meanwhile USAC has continued to work with Honda as they worked to eliminate the problems in production with their Thailand engines. As time went on Honda has assured USAC that they were able to eliminate this process during production. The current Thailand engines coming out of the factory do not display these inconsistencies.

The 2012 USAC engine rules have been completed after consultation from our USAC clubs. There have been several changes that need to be noted from the previous year. These changes were made for the long term betterment of the sport. The goals of these changes were to save the racer money, make the engines more consistent from one engine to the next, and save the Honda platform. This bulletin will explain the changes as well as the reasons they went into effect.

1. **HONDA GX120 engine allowed to use the GX140 VALVE SPRING**

   The valve spring change in the Honda 120 engine was simply made to save the racer on the cost of springs. Allowing the 140 springs eliminates the need for carrying two different sizes of springs. The GX140 springs are also the current springs used in the 160 classes. Most .25 midget racers are changing their valve springs every other race, if not more frequently. By allowing the GX140 valve springs racers should only need to change them a couple of times during the racing season. This eliminates the rush of trying to get things changed at the track before you go back out for competition. It will also lower the chances of having the springs not being installed correctly at the track.

2. **NO TECH ON MAIN JET of HONDA ENGINES**

   No tech on the main jet was decided to help fine tune the carburetor that might need a jet that is between the current sizes offered. If a racer buys a new carburetor the jet that comes with it can now be drilled out to save the racer money. This gives the racer the option of not buying a new jet. Sometimes a carburetor may not perform as expected. By allowing the jet to be drilled, the fuel rate can be altered to make the carburetor perform better without having to purchase a new carburetor.

3. **ALLOWING MILLING OF THE HEAD AND BLOCK DECK SURFACE**

   Allowing milling to the head and block deck surface will allow for an older engine to be brought back into service. Engines that have gasket surfaces that are scratched or warped can be fixed. This will save some of the blocks and heads that were taken out of service. This will also save the racer money when it comes to wanting that perfect engine with the piston pop up close to 0. Before, people were looking for the perfect combination of parts to achieve this. This drove the price of the engine up. By allowing the milling, reaching 0 piston pop up can be achieved at a fraction of the cost. Talking to several builders, this can be done for $25.00 per surface. This will help racers on a limited budget achieve the performance that they might not have been able to afford in the past. The same thing goes for the cylinder head. It can now be milled out to the specifications to level out the disparity between parts. This keeps people from over charging for parts.

4. **BIGGER CARBURETORS FOR HEAVY HONDA & HEAVY 160 CLASSES**

The introduction of bigger carburetors on the Heavy Honda and the Heavy 160 classes were added to speed up the classes after consulting with each USAC club. The racers should speed up as they advance through the quarter midget divisions. Heavy Honda drivers should not be running lap times similar to Junior Honda. These are generally older drivers. With the changes the GX120 will use the GX160 carburetor, and the GX160 will use the GX200 carburetor. These two classes can be made faster with a minimal amount of cost. The GX200 carburetor that will be the spec carburetor for the Heavy 160 class is in the price range of under $50. Competitors should see about a 2 tenth pick up on the track with these changes. These changes will make the Heavy 160 class similar to Senior Honda. This could provide smaller clubs the opportunity to run both the Senior Honda and Heavy Honda classes together if there are low car counts.

5. **INTRODUCTION OF THE THAILAND ENGINE**

Following extensive discussions with club leaders and participants, the decision was made to aprrove the UT1 Thailand engines for USAC .25 midget competition during the 2012 race season. UT2 engines are not approved for 2012. After meetings and surveys conducted among the USAC clubs, several factors played a hand in this decision, including the growth of the sport. With a limited supply of Japanese engines available USAC is faced with no other option than to allow the Thailand Engines to grow the sport. If a racer wants a new engine they would need to purchase a Thailand. New Japanese motors are just not available. Allowing the Thailand engine gives the racer the ability to purchase a new motor. New motors will not have to be purchased, though, due to the machining changes that will be allowed. Allowing machining will bring the Japanese and Thailand engine on the same performance level. With the Honda production department moving to Thailand, many of the replacement parts are now made in Thailand. This means Thailand parts are currently the majority of the parts available for rebuilds on Japan engines anyway.

**6. MILLING OF THE WORLD FORMULA BLOCK & HEAD**

Milling of the World Formula Block and Head will be allowed. This model has been successful with the current Briggs & Stratton Animal platform. This allows for a competitor to fix the cylinder head when it warps, and allows for regulation with the differences in piston pop-up. Engine parity and controlling the cost are the ultimate goals. This milling should provide desired results to level the playing field with significant cost-saving implications.