

CONVERTING MARUSHO IGNITION TO URAL SINGLE POINT SYSTEM

submitted by Jim Hughes, April 2011

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One of the most vexing problems with the Marusho, and the main reason for the failure of the marque, is the deficient design of the centrifugal advance mechanism. Unbalanced firing has caused many Marushos to be sidelined with holed pistons. Adding to the problem, no replacement points are available.

There is a solution which requires a vintage BMW advance mechanism and Delco points, but the cost of the advance has now reached \$300.

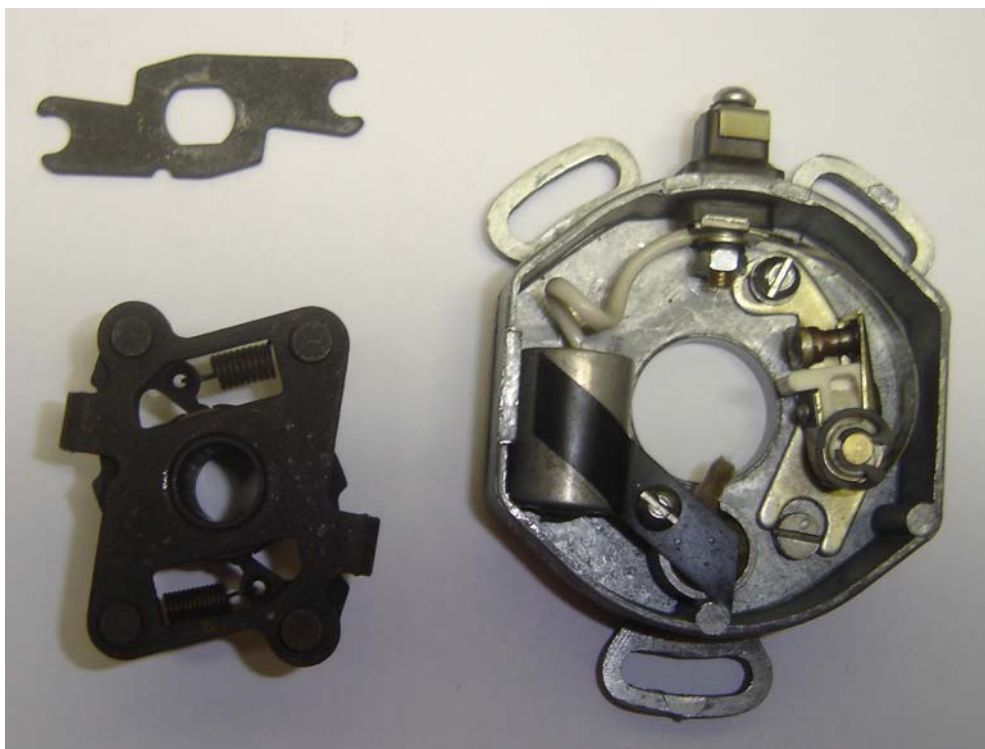
Over the years various owners have installed BMW magneto systems and electronic ignitions. What is presented here was developed by Jim Hughes and is a very economical solution. If you have questions about this mod you may phone Mr. Hughes at 419-874-2393.

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Since a number of Marusho enthusiasts are outside of the US, I have composed this document as 8.25" x 11". This will allow full-sized printing on either US Letter or A4 paper.

The photos are presented at 300dpi, so you may view them at up to 400% magnification for added clarity.

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Installation of the Ural single point ignition system on my Marusho engine is as follows:

Purchase Ural single point ignition system as shown on Page 1 on Ebay for about \$30.

Remove engine front cover, ignition advance unit, complete points plate assembly and drive adapter from camshaft.

Strip everything off of points plate including the small locating pins.

The center hole in the points plate is about a .001" smaller than the locating boss on the Ural ignition housing. I used a 1 inch sanding drum and my drill press to open up the point plate just enough so that the Ural housing boss would fit.

You will then find that two holes in the point plate line up with the mounting lugs on the right side of the ignition housing. Center the lugs over the holes and mark in the center of the lug on the left side for drilling a mounting hole. Drill, then tap the hole with an 8-32 tap. Run the tap through the two holes on the other side also.

Mount the housing to the point plate with 8-32 machine screws and flat washers.

The housing will protrude about 1/8" through the point plate. Grind the housing flush with the back side of the point plate. See photos.

The center hole of the ignition housing now needs to be opened up to 7/8" to give clearance for the modified drive adapter (see next paragraph). Strip everything out of the housing: points, condenser and terminal stud. With the housing mounted to the point plate I centered the hole through the housing on my drill press and used an end cutting end mill to enlarge the hole. Reassemble everything back into the ignition housing.

The original drive adapter must be modified to fit through the new housing and mount the new advance unit. See the photo showing an original adapter and one that has been modified. A sketch of the modified adapter with dimensions is found on the last page of this document. A local machine shop did the modifications to the adapter on a small lathe.

Finally, please see the wiring diagram on the last page and note how the original Marusho coils are wired to the single points ignition system.

