

Parker Majestic Manual Surface Grinders – Inspection Steps to Evaluate Amount of Refurbishment Needed

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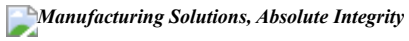
Many high precision manufacturing facilities have been “home” to Parker Majestic manual surface grinders since the WW II era. The reputation connected with these machines is one of ruggedness and high precision. As with any machine tool, various components wear over time, and hence refurbishment is necessary in order to keep these machines grinding with the precision and accuracy necessary to meet demanding tolerance requirements. This article briefly discusses the inspection steps that need to be taken by a trained technician in order to ascertain the degree of refurbishment that should be performed on a used Parker Majestic manual surface grinder. After the inspection has been completed, the appropriate refurbishment can be recommended in order to restore the surface grinder to a condition similar to its original OEM specifications.

Some of the key operations performed in a typical inspection of a Parker Majestic manual surface grinder include the following:

1. Level the machine using a high precision level.
2. Inspect flatness of the table and cross feed motions with an electronic level.
3. Measure the backlash of the cross feed screw and nut and also the elevating screw and nut.
4. Should the backlash readings exceed specification, replacement of the nut and screw as a set is strongly recommended.
5. Measure the runout of the spindle. Also, the condition of the spindle bearings will be evaluated using a series of sensors.
6. After removing the table, the way surfaces and oil pockets will be cleaned.
7. After removing the saddle, the way surfaces and oil pockets will be cleaned.
8. Inspect roller springs.
9. Inspect rollers for flat spots.
10. Inspect the table tape drives for creases or buckles, which would indicate that replacement is recommended.
11. Inspect the lubrication system. If oil lines are in poor condition, replacement will be recommended. If oil meters are not working, it will be recommended that these be replaced.
12. Inspect the bearings for the cross feed and elevating hand wheels.
13. Inspect the elevation assembly, including oil meters.

As a result of the above inspection steps, various options can be presented to the owner of the surface grinder. These options can include a custom “rebuild”, where the owner can pick and choose the options he/she desires to be refurbished. Alternatively, the owner may choose the route of a complete “remanufacture” of the surface grinder, which essentially includes replacement of all major components, restoring the surface grinder to original OEM specifications.

Parker Majestic, in business since 1929, designs and manufactures manual and CNC surface and cylindrical grinders. Parker Majestic is a division of Penn United Technologies, Inc. Parker Majestic manual and CNC grinders are some of the product offerings that allow us to stand by our slogan... **“Manufacturing Solutions. Absolute Integrity.”** Visit our web site at www.ParkerMajestic.com or call us at (724) 352-1551.



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