

MACHINE TOOL PROBING

Presented by:

Mastercam®

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Mastercam

ABOUT ME

- 12 years machine shop experience
- Certified Mastercam Sales Professional

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Mastercam Probing

WHAT IS MACHINE PROBING

A device mounted in a CNC mill's spindle which is capable of making geometric measurements.



MACHINE PROBING

What can machine probing do for us?

Three areas of improvement...

- Speed
- Accuracy
- Safety



MACHINE PROBING SPEED

Old Method



New Method



MACHINE PROBING ACCURACY

- Remove the human element
- Use machine tolerance



MACHINE PROBING SAFETY

Probe operated via
commands in the machine
control panel

Keep operators head and
hands outside of machine



MACHINE PROBING

How is it used in production environments

- Workpiece Setup / Locating
- Measurement and Inspection



MACHINE PROBING SETUP / LOCATING

For initial part setup to set work offset
(G54,G55...)

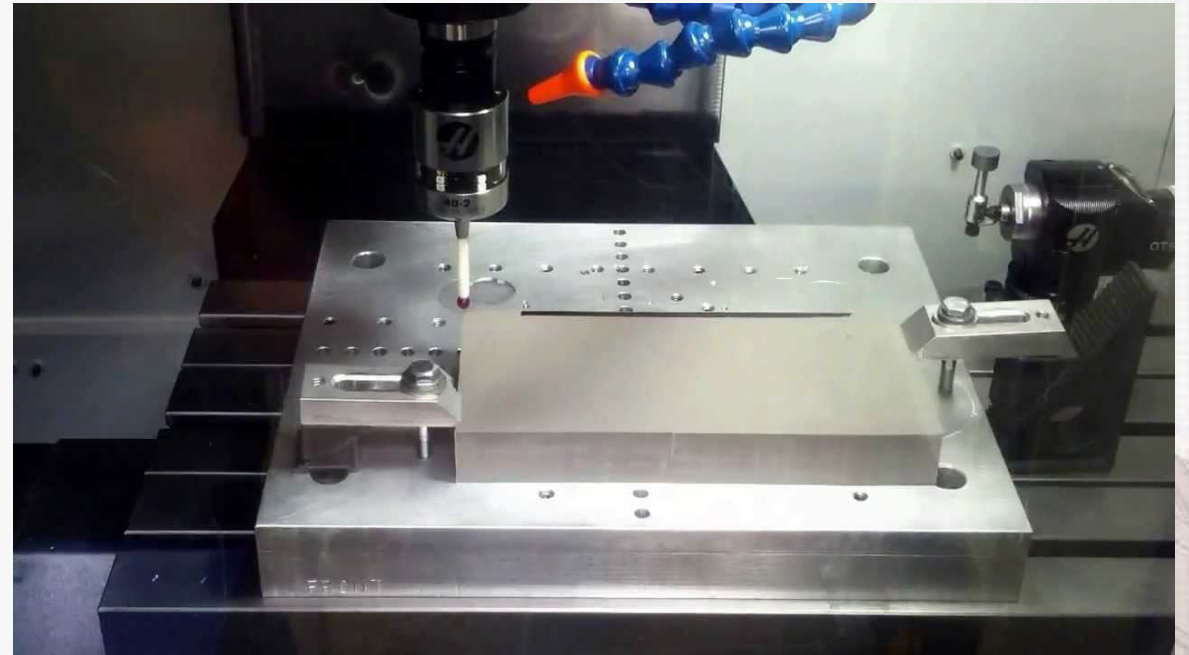
Programmed work offset to ensure repeatability



MACHINE PROBING SETUP / LOCATING

Automatically apply
G68 work shift for parts
that are not aligned to
machine axis.

Align rotary axis to part



MACHINE PROBING

MEASUREMENT & INSPECTION

- Measure parts for tolerance
- Inspect features for remachining
- Check tool length after operation (detect broken tools)
- In-process inspection, automatic report output



MACHINE PROBING

Typical Probe hardware

- Touch probe
- Tool setter
- Probe sensor



MACHINE PROBING

Required software

- Machine Control settings
- Mastercam Renishaw Productivity+

MACHINE PROBING

Demonstration



Thank You

Questions / Comments

