

## Application Report: CV Joint Grind

**MACHINE:** Accura 1210G

**WORKPIECE:** CV Joint Housing

**OPERATION:** Contour Grind Ball Bearing Tracks

**MATERIAL:** Steel (hardened)



**OBJECTIVE:** To establish general performance capabilities of Accura 1210G as used in a CV joint grind application.

**DESCRIPTION:** The Accura 1210G was used to CNC contour grind the internal bearing tracks of a steel CV joint housing. The part is small / medium sized (Ford Escort).

The tracks were ground with an angled wheel with a 0.350" radius pre-dressed onto the nose. CBN wheels were used. In production, a rotary dresser would be used to dress the spherical form into the wheel.

With a dual indexing workspindle, the housing and the race can be ground on the same machine. Thus providing a matched set ready for assembly.

### PRELIMINARY RESULTS:

|                              |                                  |
|------------------------------|----------------------------------|
| <b>STOCK REMOVAL:</b>        | 0.020 in (0.762 mm) ... dia.     |
| <b>CYCLE TIME (APPROX.):</b> | 150 seconds for housing and race |
| <b>WHEEL SPINDLE SPEED:</b>  | 40,000 RPM to 60,000 RPM         |
| <b>WHEEL POWER:</b>          | 3 Horsepower (2.2 KW)            |
| <b>WHEEL:</b>                | Vitrified bond CBN               |
| <b>FIXTURE:</b>              | Manual jaw chuck                 |