



Inserting a piston stop with o-ring into an oil pump assembly

Objective To insert a piston stop with o-ring into an oil pump assembly

Material Rubber o-ring, steel piston stop and plastic pump body

Temperature 650 °F (343°C)

Frequency 323 kHz

Equipment

- Ambrell 1 kW induction heating system, equipped with a remote workhead containing one 0.66µF capacitor.
- An induction heating coil designed and developed specifically for this application.

Process A two turn helical coil is used to heat the piston stop to 650°F (343°C) for 8-10 seconds prior to insertion into the black plastic pump body. The piston stop with the o-ring is then inserted into the pump body. Air is supplied to cool the steel insert quickly so that the o-ring does not melt. The piston stop is inserted into the pump body and is held in place during cooling and creates the bond.

Results/Benefits Induction heating provides:

- Increased production speed
- Simpler tooling for customer
- Hands-free heating that involves no operator skill for manufacturing
- Even distribution of heating



Assembly prior to piston stop insertion



Finished assembly