

## ES3007 RB211 helical starter conversion

Providing increased reliability and greater torque to starting sequences



### Engineered solution purpose

This engineered solution improves RB211 gas generator starter reliability and provides increased torque for installations operating on lower fuel gas pressures.

### Applicability

All RB211 engines that use a gas starter.

### Technical description

The Lucas or Hilliard lobed gas starter is replaced by a Hilliard helical type starter. The unit has been designed to allow installation in either an axial or transverse orientation.

Some site evaluation is required to determine the extent of modification required to the associated piping and electrical interfaces.

### Benefits

By converting to the helical starter, reliability is greatly improved. Spare parts for the helical starter are readily available and overhaul costs are lower than for the lobed type. The helical starter demonstrates a 100% improvement in mean time between overhaul when compared to the Lucas starter with the need for overhaul after 250 start sequences being extended to 500 starts.

### Experience

There are in excess of 50 helical starter units currently in service

### Scope of work

Remove and discard starter motor containment shield

Modify piping and electrical interfaces

Modify control system

Replace starter motor and associated parts

### Bill of materials

Piping and wiring

Control system modification

Starter motor and associated parts (Mod 1201)

Starter motor speed probe (Mod 1295)

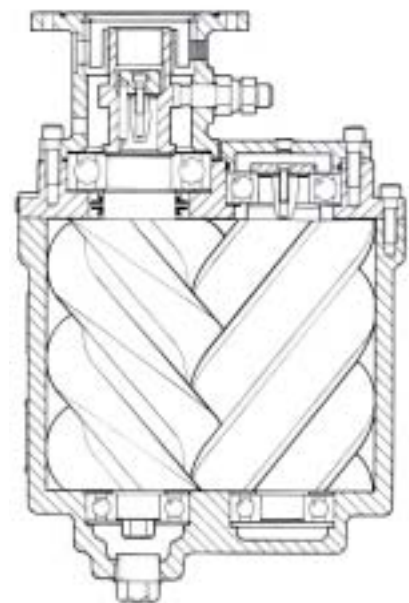
### Undertaken

At site

### Bundling opportunities

Controls upgrade [ES6006]

Instrumentation upgrade [ES6007]



Helical starter