

The Tale of the Burnt Out Starter Motor

Underlying issues causing starter motor failure must be investigated – not ignored

Autoelectro, the UK's largest independent rotating electrics remanufacturer and supplier, has vast experience in the automotive industry. Here, the company has leaned on more than 30 years' experience to provide crucial information to technicians about burnt out starter motors and what to look out for when diagnosing the fault.

It is an all too common issue for starter motors to burn out and fail in untimely circumstances. These incidents can happen within months, hours or even minutes of fitting, and it is often the starter motor that is assumed to be the problem.

However, a simple replacement does not mean that the component will not fail again – there may be underlying issues behind the failure. It is, therefore, important to note the potential indicators that may be causing it.

There are many common signs that show that a starter motor is burning out:

- Blue colour on armature shaft near pinion
- Rattling inside motor when starter motor is shaken
- Burnt smell from starter motor
- Damaged teeth on starter motor
- Varnish leaked from starter motor
- Burnt/discoloured/melted/broken wire from solenoid to starter motor body
- Shrivelled/heat damaged label

Below are two examples that Autoelectro has identified as faults that can lead to a starter motor failure, which technicians should look out for:

Ford Mondeo 2.0 TDCi (2001-2007)

This vehicle suffers from water contamination within the fuel tank/filter. The contamination can cause various faults with the vehicle, which result in excessive cranking of the starter motor, such as:

- Poor starting from cold
- Engine stalls after cold start

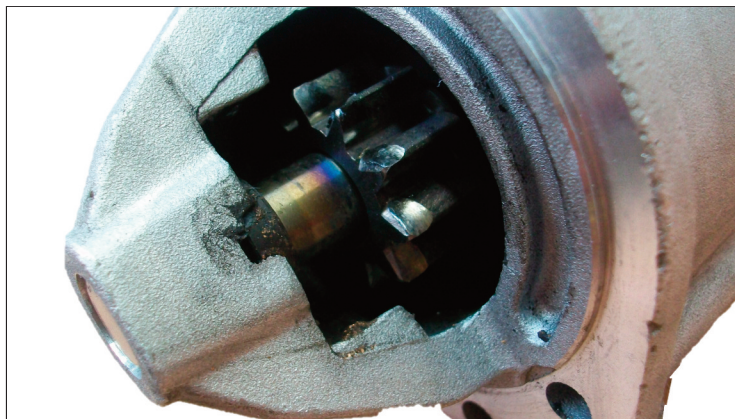
Fault codes stored P0251 and/or P1211.

In all instances of the above fault, technicians must clear the contamination and replace the fuel filter.

Toyota Aygo 1.4 D-4D (2005-2008)

This vehicle has known faults with the ignition switch and wiring harness, which can cause the starter motor to run in mesh and engage at the incorrect time.

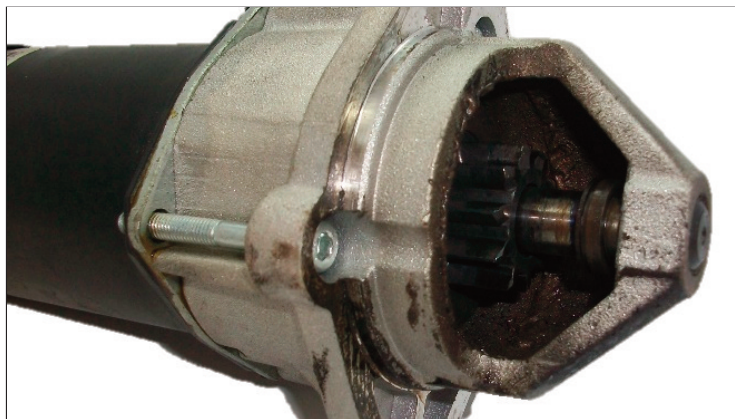
The faults lead the starter motor to burn out, can cause damage to the pinion teeth and can also result in the nose cone breaking. To rectify the origin of this failure, technicians must carry out component testing and replace the ignition switch and the wiring harness, if necessary.



Blue colour on armature shaft near pinion



Varnish leaked from starter motor



Blue colour on armature shaft near pinion



Shrivelled/heat damaged label