



Remanufactured Automotive Compressors

EDITORIAL - Professional Motor Mechanic

Automotive Air Conditioning Compressor Remanufacturing”

Probably one of the most misunderstood aspects of the automotive industry is remanufacturing. The concept has been ahead of its time in recycling existing material, overcoming inherent weaknesses and producing a product, which is, in many instances better than the original. It involves an outstanding knowledge of the product and can take years of planning to establish an operation.

In the Automotive aftermarket one key area that has seen a steady growth is Vehicle Air Conditioning Servicing. There has been a considerable increase in both vehicles having air conditioning as a standard feature and in Garages investing in the specialist equipment required to carry out the servicing aspect.

Remanufacturing is not a new concept to the automotive industry. Starter motors, Alternators, Clutches, Gear boxes are all remanufactured. The growth in vehicle air conditioning service and repair and indeed the repair costs involved when replacing components leads to an opening for the remanufacturing of air conditioning compressors.

The European Union (EU) has an End Of Life Directive that clearly states from 2008 all vehicle manufacturers will have to pursue Total Life Cycle Management, whereby as much as 80% of a vehicle will have to be recyclable or remanufactured.

Remanufacturing saves up to 80% required to manufacture the equivalent NEW part, as well as providing the customer with a substantial saving on the cost of motoring. The emphasis is very much on protecting our environment, remanufacturing does just that, saving energy and natural resources.

There are 5 main components on a vehicle A/C system, a compressor, condenser, receiver drier (filter), expansion valve and an evaporator. An A/C system is a sealed system independent of the vehicles engine. It contains refrigerant and oil. The refrigerant used in systems since 1993 is called R134a. The oil in an A/C system is called Polyalkalolglycol (PAG).

A Compressor is the ‘heart’ of a vehicles air conditioning system. It is responsible for dispersing the refrigerant and oil around the A/C system. The oil is a vital ingredient for lubrication of the system components, (and acts as a vehicle for the refrigerant to flow freely around the system.)

It is essential that the compressor be lubricated for it to function correctly. If for whatever reason the compressor is starved of oil, it will become noisy and will eventually seize. The A/C system will fail to function and the driver will ultimately contact a specialist to ascertain the reason for the failure of his cars air conditioning system.

Any technician working on air-conditioned vehicles must have a basic understanding of how the system works and the diagnostic procedures used to determine a fault and the rectification necessary.

There are many reasons why a compressor will fail. It is the responsibility of the service technician to correctly diagnose the failure and indeed the reason for the failure. If this does not happen any replacement compressor might also fail.

Compressors can have one of the following common problems

1. Completely seized
2. Noisy bearing
3. Leaking seals
4. Worn / Damaged clutch

Until recently if any of the above were detected a technician would naturally install a 'new' compressor.

As mentioned 'cost' plays an important role when a garage has to quote his customer for repair. Generally compressor failure occurs when a vehicle is 'out of warranty' and therefore will be paid for by the customer himself. E.g. Audi - £1050.00, GM - £650.00

The Compressor remanufacturing process at Birmingham based Compressortech begins with the 'core', a compressor suitable for remanufacture.

The compressor is sent to the disassembly process area. Here it is inspected and tested and then dismantled into component parts. Each item progresses through a variety of unique cleaning processes. Any damaged or worn parts are automatically replaced with new components and the remaining are checked and reworked back to OEM specification. The compressor is then reassembled.

Each remanufactured compressor is 'bench tested' and a PASS certificate is issued that will be shipped with the compressor to the installer.

Offering a quality remanufactured compressor, with all the resemblance of 'new' including the warranty period, but at a more competitive price will enable more customers to make the decision to have the air conditioning repair completed.

Compressortech have a technical service line available to their customers. Their 'Service Exchange' programme provides a speedy turn around to industry.

For more information contact Bob Stokes Parts Manager on 0121 766 5006 Ex 206.