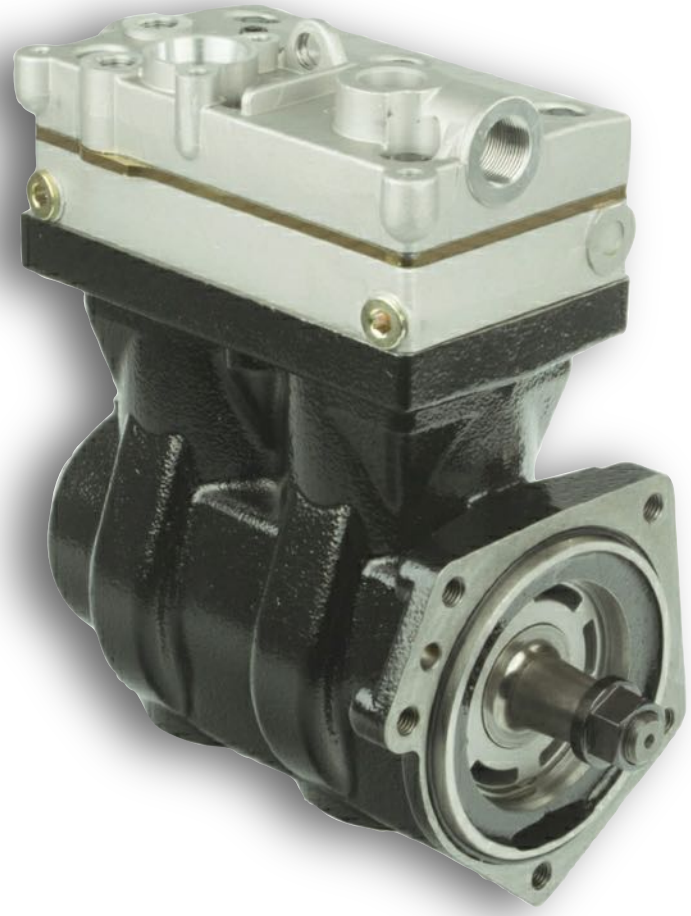


BUILT TO LAST

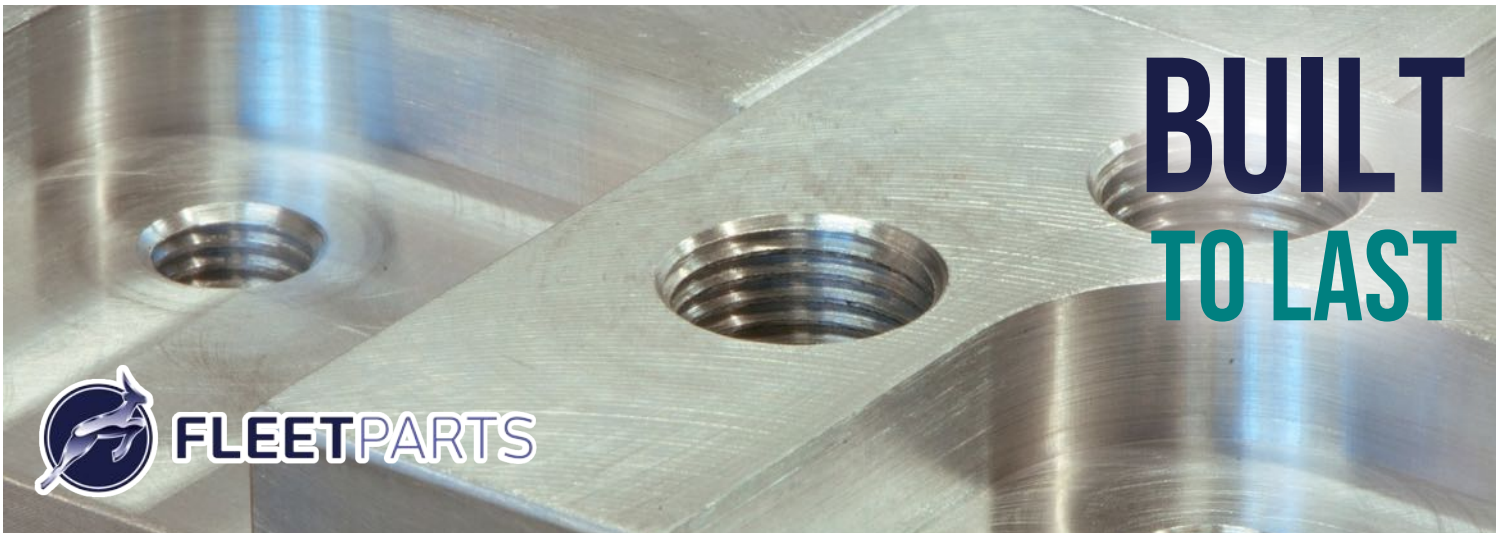
FLEETPARTS

COMPRESSORS

In this article we delve into the world of the production and manufacture of Air brake Compressors. We will look at how technology has dramatically improved the quality of own brand products but how it is difficult to externally differentiate these from the cheaper copy parts in the market that they are competing against.

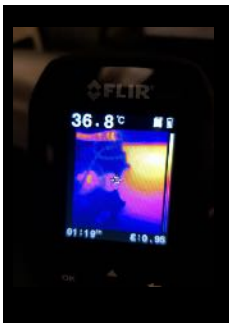
WHAT WE WILL LOOK AT...

We'll look at Raw Materials, Engineering Practices, Performance & Function as well as why Fleet Parts as a supplier, choose the manufacturers that we do. We strive for excellence with our own remanufactured products so we guarantee the very same standards from the parts that we distribute.



BUILT TO LAST

FLEETPARTS

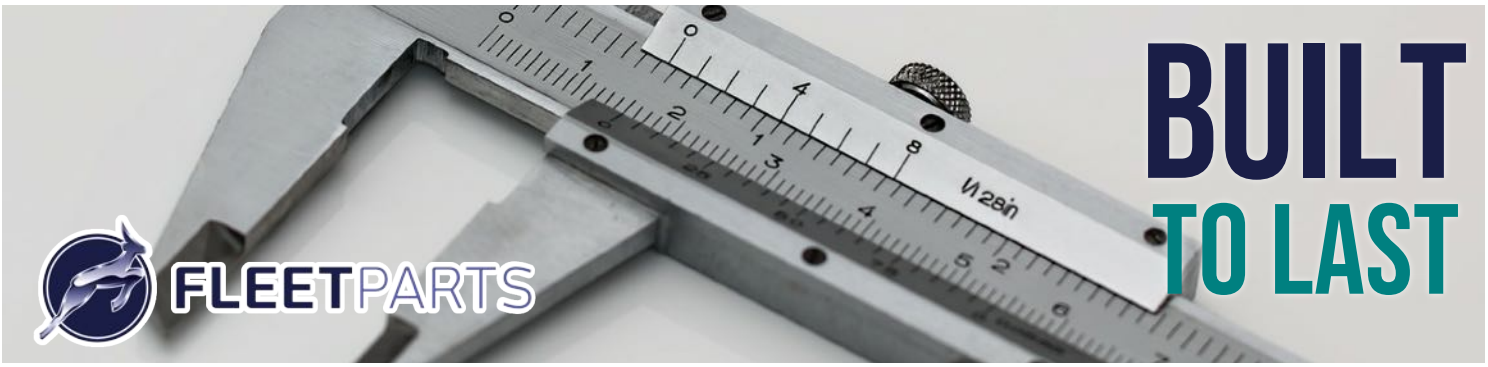


MATERIAL IS KEY

If we look at OE Compressors we will find high strength, forged metals and raw materials which have been proved to efficiently withstand the workload that is required of them. A quality after-market Compressor like the Fleet Parts branded range contains these very same materials which have been selected for their Strength, Hardness and Heat, Wear & Corrosion Resistance properties.

During our inspection of low cost copy brands we have found cheap metals and materials which are not suitable for compressor manufacture, such as unsuitable low cost crankcase materials prone to premature wear & Crankshafts that are Cast instead of Forged – again it is much cheaper to produce a Cast Crankshaft and the trade-off is they are not able to withstand the same stresses as a Crankshaft that has been correctly Forged.

The Valve Steel & Gaskets are critically important too, as are the Pistons & Rings, and should be at least to the same specs as OE. These cost cutting exercises will, & do cause premature failure of the compressor...

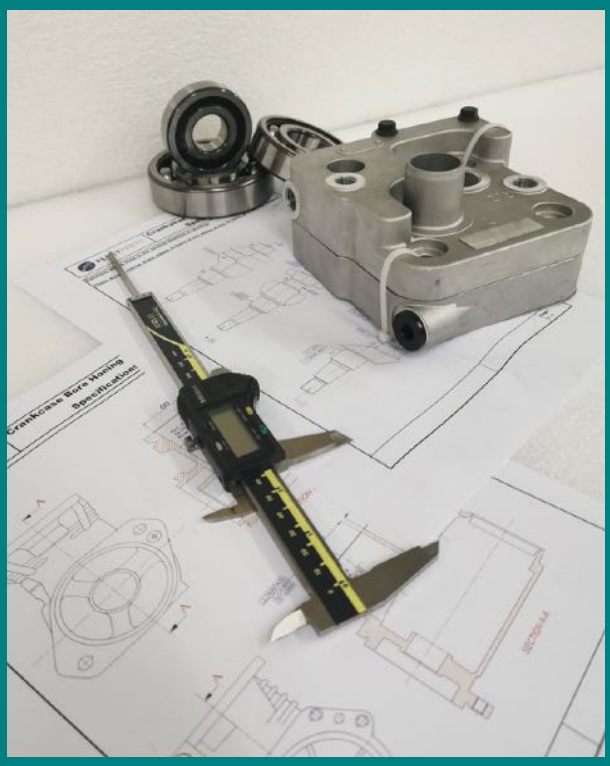


ENGINEERING

Engineering, is equally as important as the choice of materials & components. The photographs shown, represent just two important aspects of a competitor's own brand Compressor that we have examined – the top of the Crankcase, where the Cylinder Head Valve Plate locates, and the Piston Bore itself. To summarise the Roughness Average (Ra) of the top of the Crankcase was significantly above the required specification, and the Ra of the Bore was way below the required Ra.

WHAT DOES THIS MEAN?

It means Sealing issues for the Cylinder Head. To explain what that means for the Bore, we went a little further. We sent the competitor's Crankcase away, as well as an OE one & one of our own for an independent inspection by Sunnen, who are the industries honing experts. Sunnen reported that the Bore of the Feet Parts Compressor and the OEM Compressor are comparable, but the competitors one is too smooth. A Bore that is too smooth will not retain oil as it should, which means that the Rings will wear prematurely, the compressor will pass oil, and may well ultimately seize. We see from industry standards that "*the surface finish must meet the piston ring manufacturer's specifications and have the proper crosshatch so the cylinder walls will retain oil and provide adequate lubrication for the rings.*" Once again the cheaper compressor does not.



WHY CHOOSE US?

Fleet Parts' main goal has always been to offer the highest quality parts at the lowest possible prices. We have teamed up with suppliers who share our values. Below we outline exactly what you get from our Branded Compressor range:

. The Same raw materials used in OE compressors by importing from the same companies.

. Analyzed parts such as Castings and Forgings having the same chemical compounds as original products as well as the same hardness values applied to Crankcases, Crankshafts, Cylinder Heads etc.

. Surface roughness and parallelism for cylinder heads and valve plates within tolerance values. These are matched with OE through correct tools and grinding operations, using state of the art equipment & techniques.

. Honing values also within tolerances as displayed through our independent comparison.

. Testing – Parts are tested electronically simulating the working conditions of the vehicle.

FLEETPARTS

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