



# The Metro TT (that's short for Turbo Technics)



Geoff Kershaw and Wyn Rees fulfilled a long-standing ambition with the founding of their new company TURBOTECHNICS LIMITED last month. Turbotecnics Ltd has been formed to engineer, manufacture and sell a range of turbocharger conversion kits for cars, vans and agricultural machinery.

Geoff and Wyn did not have to look very far for the ideal vehicle to start this venture. The Metro 1.3 was their choice and the resulting conversion has lived up to all their expectations.

The design philosophy is based on the continued use of a high engine compression ratio to maintain driveability and fuel economy. The standard compression ratio of 9.4 is retained and combustion control is maintained by an ingenious combination of electronic ignition retard and careful carburettor matching. Boost pressure is controlled at 5 lb/in, giving a 28 percent increase in road horsepower in the all-important middle speed range.

Ease of servicing is important and the original carburettor is retained, the standard air filter element is utilised and the major part of the standard exhaust system continues in use.

The policy from commencement of this project has been one of producing in volume and all peripheral equipment has been purpose-designed and manufactured on a batch production basis. This approach

has allowed Turbotecnics Ltd to produce a very competitive price package.

The conversion comes complete (No hidden extras) and is priced at £825 plus VAT.

A 12 month warranty underwritten at Lloyds is given by Turbotecnics on engine, gearbox and driveline. Less than one day's work is involved in fitting the Turbotecnics conversion and full product training will be available at their new 3,500 sq.ft factory in Market Rasen, Lincolnshire.

The factory opened on July 1st and includes a complete rolling road department, a dynamometer cell, all necessary back-up manufacturing facilities and a design and development office.

The burning question now is, of course 'What about performance then?' The major objective has always been to improve the top gear performance and the results are absolutely startling. The 50-70 miles/hr. figure has been reduced from 14.5 seconds to 8.2 seconds!

This is not, however, at the expense of fuel economy as witnessed by Marshall of

Cambridge. Michael Marshall said - 'Yes, we had a Turbotecnics Metro down here for a few days and it was incredibly impressive. We can substantiate the claims for top gear performance and we also found a dramatic improvement in the 0-60 figure. We timed it at 10.1 seconds and achieved an overall 35 mpg whilst driving it hard'.

The Golf GTI and R5 Gordini have been selected as benchmarks and the performance comparisons below are based on figures taken from 'Motor' magazine:

The conversion brings a new market sector within the reach of the Metro range and opens up very exciting prospects for a car that is already a world beater.

Turbotecnics Ltd will be delighted to show their product to distributors interested in handling this very saleable proposition.

Write to them at: Turbotecnics Ltd., Gallamore Lane, Market Rasen, Lincolnshire, or better still ring Market Rasen 842410.

	0-60	50-70	Max.Speed	Fuel Overall	Consumption Touring
Golf GTI	8.2	9.5	112	25.1	-
R5 Gordini	9.7	11.3	105	30.2	35.1
Turbotecnics Metro	10.1	8.2	105	31.6	36/38

# Metro TT by TURBO TECHNICS

## Technical Specification

### Engine

Leyland A-plus engine, 1275 c.c. Engine Internals are unmodified.

### Turbocharger

Garrett AiResearch T3 with carbon seal, and integral swing valve wastegate. Boost pressure is set at 6lbf/in<sup>2</sup>, and the aerodynamic match gives full boost pressure from 2,900 rpm.

### Carburetter

The turbocharger sucks through the original S.U. HIF 44 carburetter. The spring and needle are changed for correct air/fuel matching.

### Exhaust Manifold

Purpose designed in high nickel content ni-resist cast iron for corrosion resistance.

### Induction System

Inlet manifold purpose designed in aluminium with particular attention to shared flow, and cold start characteristics. Cast aluminium induction tract with integral water heating jacket. A purpose designed GRP moulding houses a standard Metro paper element air filter.

Turbo Technics Ltd., operates from a recently completed 3,500 sq. ft. factory on a 32,000 sq. ft. site in Market Rasen. The company has been set up to specialise in Turbocharger systems for a wide variety of after market applications.

Garrett AiResearch Ltd. turbochargers are used exclusively and it is relevant to add that Turbo Technics Ltd. are the only non OEM company to whom Garrett are prepared to supply integral wastegate turbochargers.

Facilities include a comprehensive machine shop, fabrication and welding bays, clean room for Turbo assembly. Test and development facilities include a well equipped high speed engine dynamometer cell and a high performance rolling road.

### Oil Feed

Engine oil is taken from the main engine gallery via a steel pipe, returning through the primary drive gear case.

### Exhaust System

A new downpipe joins to the standard exhaust system forward of the main expansion box.

### Ignition

Reactive discharge electronic ignition is employed in conjunction with a management module to control ignition timing in response to boost pressure.

### Service

12,000 mile servicing is per standard Metro with the exception of ignition setting and spark plug specification. An additional 6,000 mile ( or 6 months) service is required comprising oil, filter and spark plug change.



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