

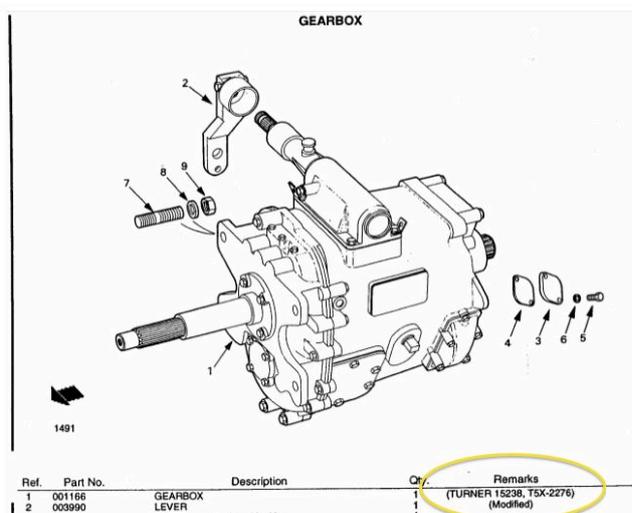
## History of the Oka Spicer Gearbox

Did you know your Oka has a British designed and manufactured gearbox as well as a British made engine?

It might say Spicer on the gearbox casing but it's actually a British design and if you look closely at the nameplate you'll see it says Spicer Trans. Division, Wolverhampton, England.

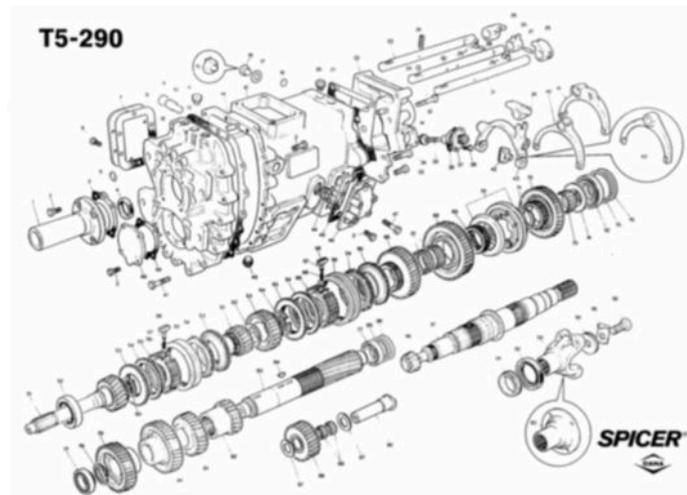


I became intrigued when I saw "Turner T5X-2276" as the name and type for the gearbox in the parts manual, even though the diagram in the service manual clearly shows it as a Spicer T5 290. I don't know what the *(Modified)* refers to in the parts list, maybe the interface or coupling to the transfer box, or to the Perkins engine?



Qty.	Remarks
1	(TURNER 15238, T5X-2276)
1	(Modified)

Ref.	Part No.	Description	Qty.	Remarks
1	001166	GEARBOX	1	(TURNER 15238, T5X-2276)
2	003990	LEVER	1	(Modified)



So I investigated further and found that this gearbox was designed and manufactured by the Turner Manufacturing Company of Wolverhampton (which subsequently became the Turner-Spicer Company).

The Thomas Turner Company started up in 1902 manufacturing steam powered motor cars under licence to a Belgian company, J Miesse et Cie.



**THE**



# TURNER-MIESSE.

To the Editor of "The Motor Car Journal."  
 Sir,—In reply to Dr. Oliver Smithson's letter, I should strongly recommend a 10-h.p. Turner-Miesse Steam Car as being most suitable for his requirements. Speaking from my own experience, I have driven my Car about 3,000 miles, and have never had a mishap or breakdown of any sort whatever. It is quiet, free from vibration, smokeless, and is also economical to run, as my expenses work out at slightly less than 1d. per mile. Apart from tyres, I have not spent a penny in repairs, and I think the Car goes better than ever.  
 Yours truly, "BJ—72."

**TURNER'S MOTOR MANUFACTURING COMPANY, Ltd., WOLVERHAMPTON.**



In 1907 they switched to making petrol cars and for the next 50 years, and particularly during the war years, the company grew into the design and manufacture of all manner of mechanical equipment, including hydraulic and pneumatic equipment, marine equipment, diesel engines, generators and tractors (the *Yeoman of England*). The company name was changed to the Turner Manufacturing Company (TMC) in 1939.

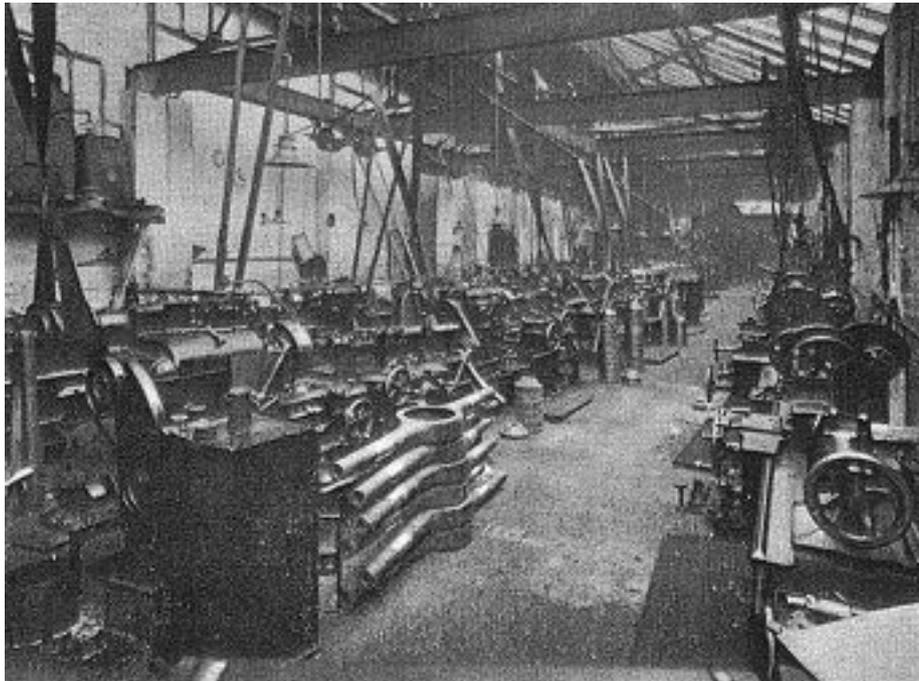


*A Yeoman of England tractor*

In 1960, TMC acquired the rights to manufacture gearboxes from the Clark Equipment Company of the USA. This experience led to the development and manufacture of their own design of gearboxes which were named T5-100, 200 and 300 etc.

The "5" in the series name indicates a 5 speed box and the 100, 200, 300 etc is a size/power rating. Turner also manufactured a T4 range for small vehicles and a T6 range for heavy trucks.

Confusingly, Borg-Warner also manufactured a 5 speed manual gear box with the T5 name but it has an aluminium case and doesn't appear similar to the Turner design. TMC also manufactured a range of gearboxes using the ZF prefix which got very confused with those from the German ZF company.



*An early photo of the Turner factory*

TMC expanded in the 60's and 70's and in 1972 was partially taken over (30%) by the Dana company. A few years later Dana acquired all of TMC which became the new Turner-Spicer Company, a subsidiary of Dana-Spicer. The company was revitalised and continued to manufacture Turner designed gearboxes in the UK until the mid-90's, retaining the T5-200 series names, including, it appears, the T5 290 which is fitted to our Okas (I believe T5X 2276 is the Spicer name for the Turner T5 290). It also made Spicer designed gear boxes such as the SST 10.

*[Dana 1987 business note: Transmission production here (the Turner-Spicer Company, UK) concentrates on the light and medium-weight range, catered for by four, five and six-speed boxes with input torque capacities ranging between 136 to 680Nm (100 to 500lb ft) covering a vehicle weight from 3.5 to 32 tons.]*

The T5-250 and 290 series gearboxes were widely used by Leyland in their Bedford and Daf trucks, and in Dodge (UK) vehicles.

In 1987, Leyland/DAF introduced the Turbo Roadrunner, a DAF produced small truck which was fitted with *Turner's sturdier T5-290 synchro-overdrive gear box replacing the T5-250 unit. Its slightly higher 0.791:1 top gear is better for motorway cruising, but there still a big gap between second and third.* [Note this "gear gap" was common comment and a complaint which I still have now].

In the mid-90's, the transmissions sector of the Turner-Spicer business (including gearbox designs) was sold to Caterpillar and became the [Turner Powertrain Systems](#) company, which is still based in Wolverhampton developing and manufacturing "off-highway transmissions", but not smaller gearboxes. (Caterpillar also now own the Perkins Company which they purchased in 1998).

After the sale, Spicer stopped manufacture of Turner gearboxes and provided only maintenance support. Spicer no longer makes gearboxes at all, which is why it's difficult finding information on the T5 290, but other divisions of Dana still manufacture heavy vehicle transmissions.

Information on the Turner Manufacturing Company is somewhat difficult to track down but there are a few useful historical references here.

- [Graces Guide to the Turner Manufacturing Company](#)
- [Wolverhampton History and Heritage Website](#), specifically the pages relating to the [Turner Manufacturing Company](#)
- [Black Country History](#), the [Turner Manufacturing Company](#) at Wolverhampton
- Forum entry on the [Historic Commercial Vehicle Club of Aust.](#) website
- Commercial Motor Magazine archives, 1981 [New Name on the Boxes](#)
- [Turner Tractors](#)
- [Turbo Roadrunner](#) and [Roadrunner Reborn](#) articles
- Complete history of the [Dana-Spicer Corporation \(11mb\)](#)
- Useful looking companies specialising in vintage truck spares:
  - [Midland Spares](#) (Melbourne)
  - [Bedford Spares](#) (Melbourne)
  - [About Time Spares](#) (Newcastle)

Note the [Hardy-Spicer company](#) is a wholly Australian owned organisation, involved in a similar business sector to Dana-Spicer (driveline components), however they 2 companies are not, and never have been related.

David Ribbans, January 2013