



**It's all in the detail.**

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All prices exclude VAT and Delivery where applicable and are correct at time of printing.

## Company

Tran-X have over three decades of experience in the development and production of high performance drivetrain components. Based in Coventry, our 25,000 square foot facility offers the latest technology in every aspect of product development: Solid Works CAD modelling, prototype development, lifetime failure testing and final production release.

All aspects of this process are quality controlled, ensuring we meet and exceed the exacting standards set by this specialised industry.



Our current product range encompasses a wide selection of differentials, gearboxes, driveshafts, bespoke gear kits and much more. Installed in isolation or as an entire drivetrain upgrade, the end result is guaranteed to offer the pinnacle of performance and reliability.

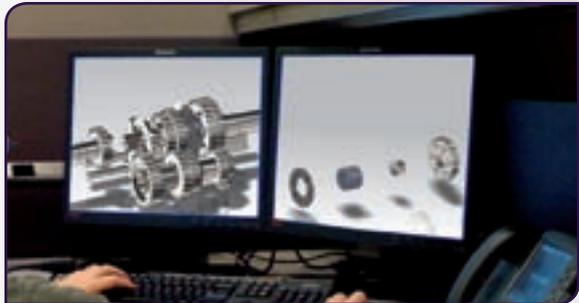
Our customer base could not be more diverse, encompassing specialist car manufacturers, professional motorsport teams, club racers and home enthusiasts alike.

If you are reading these words it is clear you appreciate the benefits of utilising the very best components. For further information or if you have any queries, please call our technical team. Be assured they will assist you in any way possible to meet your specific application.

## Design & Prototyping

One critical measure of the capabilities of an industry-leading engineering business is its ability to develop and manufacture new products in-house. Tran-X is one such company and we have assisted numerous customers in the development and roll out of bespoke performance components.

All stages are managed by our development team utilising state-of-the-art equipment and industry-acknowledged processes. In brief, an initial feasibility stage is followed by Solid Works CAD modelling, allowing the output to be automatically interference tested. Once signed off by the customer, rapid model prototyping can commence. Working closely with the client we can assist with material and production technique selection. Pre-production modelling is the next stage, at which point life testing can be undertaken utilising in-house test rigs. The output data is presented to the customer and any necessary design/material enhancements made.



Only when all parties are satisfied can the critical step of production release be undertaken. A strict change and version control process is subsequently initiated to ensure production quality repeatability and 100% traceability. Unlike many other industry offerings, Tran-X product management service does not end here. Once launched, the product's entire life cycle can be managed, including product enhancements, ongoing cost reductions, end of life disposal and life cycle statistics.



This cradle to grave product management ensures complete customer confidence that market position is not compromised by quality, reliability or cost. If interested, please contact our dedicated development management team.

## Tran-X Aftercare



When purchasing and installing a Tran-X product you can be safe in the knowledge that it has been designed and manufactured to the highest industry standards possible. From a single gear to an entire transmission assembly, we ensure fitment and subsequent use meet our customers' demanding expectations.

To guarantee optimum performance and reliability from any Tran-X purchase we recommend assemblies are fitted by a professional mechanic or fitter with a full understanding of the processes involved. Due to different manufacturers tolerances there may be a small amount of modification needed with some components.



This applies, in particular, to the fitment of gear kits to donor transmission cases, where it is essential to renew all consumable items, including bearings, seals and gaskets, etc. This is the only way to provide peace of mind and optimise the reliability of the upgrade. We also urge you to refer to the advice given in both our Lubricants section and our website.

The importance of using the correct lubricant cannot be overestimated, especially under the rigorous conditions of motorsport. Once any Tran-X components have been fitted it is also essential to follow a strict running in period: usually between 30 to 50 miles of light use. After this time the lubricant

must be replaced, as the bedding in of gear surfaces will result in microscopic contaminants entering the product.

We pride ourselves on providing industry-leading technical and post-purchase support, so if you have concerns or require advice on fitment or operation at any stage please call our technical team. Following these simple steps will ensure you optimise the service life of your Tran-X purchase and release its optimum performance.

### Servicing & spares

All servicing is carried out in-house by our experienced transmission technicians. Each unit is tested before being stripped and inspected by at least two of our expert technicians.

Each stage of the service is logged and signed off to make sure your product has been comprehensively checked, tested and cleaned before the diagnosis is confirmed.

Consultation is given to the customer prior to reassembly. When reassembly is complete all LSDs/CWPs/ Gearboxes are tested thoroughly before again being signed-off.

Tran-X offer a full range of spares and accessories for our products listed in this brochure, please visit our web site: [www.tran-x.com](http://www.tran-x.com), or call our sales or technical team for all spares/servicing requirements.

FWD Differential	Strip, clean, inspect and reassemble	<b>£47.95</b>
RWD Differential	Strip, clean, inspect and reassemble	<b>£47.95</b>
English CWP	Alignment / setting / fitting	<b>£85.00</b>
Ford Rocket Box	Strip, clean, inspect and reassemble	<b>£150.00</b>
Ford Type 9 Box	Strip, clean, inspect and reassemble	<b>£180.00</b>
SL72 Dog Box	Strip, clean, inspect and reassemble	<b>£180.00</b>
Ford Type 9 Helical Box	Strip, clean, inspect and reassemble	<b>£180.00</b>

## Gear Kits

### Changing Ratios

When building or modifying a car of any description for track or fast road use, it is relatively straightforward to decide on powerplant specification. In most cases budget will determine how much bhp and torque you can expect, with cam and induction choices determining when and how it will be delivered within the rev range.

Transferring this usable power to the tarmac is what differentiates a fast car from a winning car - and the secret is gearing. Apart from wheel diameter, the two components which determine drive ratios are obviously the gearbox and final drive/CWP.

Fortunately, Tran-X offer considerable flexibility in both these departments, with the option of bespoke gear kits and crown wheel/pinion kits to accommodate all needs. In particular we specialise in Ford-derived 4 and 5 speed gearboxes, with typical upgrades being more usable lower gear ratios and the option of conversion from synchromesh to dog box format.

Gear kits can be purchased in isolation or our transmission technicians can upgrade a supplied donor gearbox in-house using new gaskets and bearings. Combining the best components possible and industry-leading assembly practices ensures a car's capabilities are optimised.

To understand the implications of ratio choice, visit our website and use the speed calculator. This simply requires the input of wheel diameter, differential ratio and gearbox ratio to display (in table format) the speed in each gear at 500 rpm intervals. By altering the values, the impact of a wrong or right decision becomes immediately apparent.

For further information please contact our technical team who will advise on the best package for your application and intended use.



### Tran-X Gears

1. Tran-X gear kits are close ratio to get the very best from your engines power band.
  2. Tran-X gear kits incorporate straight cut gears which increases the efficiency of your gear box and reduces power loss.
  3. Gears are shaved and 'Super Finished' as standard to reduce friction and heat, reduce stress on gear teeth and remove any surface imperfections.
  4. Tran-X gear kits are manufactured using high quality, case hardened alloy steel (EN36) which produces a strong, hard wearing gear.
  5. Tran-X gear kits use oil absorbing coatings to maintain lubrication at high RPM.
  6. Tran-X gear kits are quality inspected to CMM standards to ensure perfection is reached.
- Please see page 20 for information on suitable donor gear boxes.



### **Gearbox essentials**

All Tran-X gear kits, where applicable, are specially coated to reduce friction, noise and heat build-up. Gear kits can either be supplied in isolation or our highly skilled engineers can rebuild your donor box to the highest standards, including new bearings, alloy lid, breathing system and a one piece selector finger manufactured from aviation quality billet steel. The type 9 box fitted to later Ford models (most notably the Sierra) offers considerably more flexibility and, as such, we can supply various upgrade packages.

Of notable significance are the 5 speeds, the majority of which were produced with removable bell housings. These two facts alone have seen these units used in a wide range of applications, from older vehicle upgrades, numerous forms of rear wheel drive motorsport and the kit car scene. To meet this vast array of needs we provide the following products and services:

- Straight cut, close ratio, synchromesh gear kits of varying ratios
- Helical close ratio synchromesh kits
- Complete helical gearboxes remanufactured to Ford specifications
- Various bell housings to accommodate a wide range of engines
- Complete dog engagement gearbox in 4 or 5 speed format

On this latter point, the option of a dog box replacement is of particular interest to those wanting to accommodate serious power upgrades and, of course, optimise gear change speed. Named the SL72, this is a direct replacement for the Ford Type 9 unit.

Every box is hand built utilising aviation specification materials. Each gear has six tapered teeth with a tri ground face to aid its guidance, which not only reduces stress on the teeth but increases the speed and smoothness of the shift.

All the main shaft gears run on needle roller bearings. Rigorously tested after assembly, the gearbox comes supplied with a Tran-X alloy lid and breathing system.

### **Gearbox casings**

Our alloy gearbox casings are all manufactured from heat treated aluminium (LM25TF) for the best possible durability and resistance to the stresses of use in performance motorsport and normal road use. Our alloy gearbox lids are not manufactured from the same material.

## Type 9 helical gear kits and gearboxes

### Standard: Original Ford Specification

A fully remanufactured unit with all new wear parts. No Donor box is required.

Box Only **£565.00**

### Low Ratio (2.98) 1st Gear Type Helical Gearbox

This box lowers the 1st gear original ratio to a much more user friendly 2.98. A brand new main shaft 1st gear and a used/reclaimed lay gear kit that has been modified/fitted with a new first gear. Also available in kit form where the lay shaft cluster and new 1st gear are supplied.

Exchange standard Type 9 lay gear cluster in usable condition must be supplied.

Gear kit **£235.00**

Gearbox **£625.00**

### Available ratios

1st	2nd	3rd	4th	5th
3.65:1	1.97:1	1.37:1	1.0:1	0.82:1
2.98:1	1.97:1	1.37:1	1.0:1	0.82:1

### Type 9 Close Ratio Helical Gear Kit

A full Type 9 close ratio helical 5 speed gear kit which is the next step in upgrading your Type 9 gearbox. Helical cut so no noise; it has all the upgrades of our straight cut kit. 1st/2nd gear run on cage needle roller bearings to reduce stress in this hard worked area. The lay gear assembly also runs using a caged roller bearing which is a big improvement on the standard design and irradiated a known type 9 weak point.

\* Gearbox prices are subject to an additional surcharge of £150 on listed price, which is refundable upon receipt of exchange unit.

Gear kit **£795.00**

\* Gear box **£1240.00**

### Available ratios

1st	2nd	3rd	4th	5th
2.482:1	1.61:1	1.225:1	1.1:1	0.87:7
2.482:1	1.61:1	1.225:1	1.1:1	0.82:1

## Ford 4 speed Rocket synchromesh engagement

The ever popular Rocket gearbox is well catered for with a range of ratios including our highly successful Hot Rod, F2 and Rally gear kits. Our Rocket gear kits come with all gaskets, main shaft and input shaft bearings and front and rear oil seals

All main shaft gears utilise high performance coatings to reduce friction and aid oil absorption, these high performance kits produce a long lasting driveline component. Full gearboxes can be assembled by our highly experienced technicians using a supplied donor item. The builds come with our alloy lid and breathing system as well as our heavy duty one piece selector finger made from aviation material.

**BHP Rating: 230 (approx.)**

Ford Rocket Gear Kit **£595.00**

Ford Rocket Gearbox (donor MUST BE supplied by customer) **£920.00**

1st	2nd	3rd	4th
2.48:1	1.69:1	1.27:1	1.0:1
2.38:1	1.69:1	1.27:1	1.0:1
2.29:1	1.55:1	1.22:1	1.0:1
2.16:1	1.69:1	1.27:1	1.0:1
2.07:1	1.63:1	1.23:1	1.0:1
2.48:1	1.69:1	1.61:1	1.0:1
3.03:1	2.07:1	1.98:1	1.0:1
2.93:1	2.07:1	1.98:1	1.0:1

Please see website for our full range of over 20 ratios

**New Rocket 4 Speed ratio:** Perfect for the oval racing competitor.

1st	2nd	3rd	4th
2.70:1	1.86:1	1.76:1	1.0:1

## Ford 5 speed Type 9 synchromesh engagement

Our Type 9 gear kit gives a new lease of life to your gearbox. Our experienced sales staff can help in every aspect of ratio choice ensuring the product suits you completely from the moment you turn the wheel.

Using needle roller bearing to run 1st and 2nd gears removes all problems from this highly stressed area of the gear train giving confidence when the power is really needed.

Expertly assembled and comprehensively tested full gearboxes can be supplied which includes our alloy lid and breathing system along with our aviation specification one piece selector finger.

Available with long V6 input shaft at no extra cost (applicable to many kit cars).

**BHP Rating: 250 BHP (approx.)**

Ford Type 9 Gear Kit **£785.00**

\* Gearbox prices are subject to an additional surcharge of £150 on listed price, which is refundable upon receipt of exchange unit.

T9 gearbox\* **£1230.00**

T9 Alloy Gearbox\* **£1655.00**

1st	2nd	3rd	4th	5th
2.48:1	1.69:1	1.27:1	1.0:1	0.87:1
2.38:1	1.69:1	1.27:1	1.0:1	0.87:1
2.29:1	1.55:1	1.22:1	1.0:1	0.88:1
2.25:1	1.54:1	1.16:1	1.0:1	0.87:1
2.16:1	1.45:1	1.16:1	1.0:1	0.82:1

Please see website for our full range of over 40 ratios

**Full range of spares available including:** Alloy Lids, One Piece Solid Selector Finger, Quick Shift Gear Lever, Synchro Rings, Gasket, Bearing & Oil Seal Sets

## Ford 4 speed 2000E/Bullet Synchromesh engagement

Available as gear kit only. The original and classic 1960's motorsport transmission utilises standard main shaft, and is suitable for use with early, up-rated second and late type transmissions. The diameter of the bore on 2nd main shaft gear will be 35mm (early) or 37mm (late), please state when ordering.

All kits are supplied with lay gear kit assembled, first motion shaft and 1st, 2nd, and 3rd mainshaft gears.

All first gears run on needle roller bearings. Kits also contain complete gasket, oil seal and bearing sets.

**BHP Rating: 200 (approx.)**

2000E/Bullet Gear kit - (early/35mm bore diameter on 2nd gear) **£695.00**

Available ratios 2000E/Bullet Gear kit - (late/37mm bore diameter on 2nd gear) **£695.00**

1st	2nd	3rd	4th
2.5:1	1.65:1	1.22:1	1.0:1

**Spares available include:** Gasket set - £6.95    Bearings set - £15.95    Oil seal set - £8.95

## Ford 4 speed 2000E Dog Engagement Gear Kit

Developed in association with Yarwood Engineering, all gears incorporate our tapered dog tooth design using 6 teeth on 1st/2nd and 5 teeth on 3rd/4th. This gives superb shift characteristics with seamless shifts removing and kick back. 3rd/4th gears use a light weight dog ring to further improve shift.

Kit comes with a billet steel selector fork to suit new dog ring design, all gears run on cage needle roller bearings Available with a standard length or short 'clubman' style main shaft.

Available ratios 2000E Dog Gear Kit **P.O.A**

	1st	2nd	3rd	4th
UK Spec	2.35:1	1.62:1	1.22:1	1.0:1
USA Spec	2.11:1	1.55:1	1.16:1	1.0:1

## SL72 Ford Type 9 replacement dog engagement



This full assembled dog box is a direct replacement for a Ford Type 9 gearbox and is an easy upgrade to dog engagement.

The SL72 gearbox showcases all of our experience to give you a high quality product that will instantly impress.

Tapered dog teeth give the gearbox an unparalleled level of shifting control. Aviation material is used for all gears. Along with a 72mm centre this gearbox gives the added strength you need.

Also includes heavy duty main casing 1mm thicker than original, new larger diameter main shaft, updated lay shaft spindle and steel selector forks manufactured from one-piece steel billets.

Only available as a complete in house build, this gearbox will impress you from the moment you first turn a wheel.

## SL72 5 speed gearbox

Custom Built in house by experienced transmission technicians, the SL72 gearbox comes complete with lightweight Tran-X alloy top plate, solid one-piece competition selector finger and quick shift gear lever.

SL72 5 Speed T9 Dog Box **£2800.00**

SL72 5 Speed T9 Dog Box - Alloy **£3125.00**

### Available ratios

1st	2nd	3rd	4th	5th
2.38:1	1.76:1	1.39:1	1.15:1	1.0:1
2.07:1	1.53:1	1.217:1	1.00:1	0.87:1

## SL72 4 speed gearbox

(As 5 speed but with lever blanking plate and 5th gear removed)

NB Only available as complete box.

SL72 4 Speed Dog Box **£2345.00**

SL72 4 Speed Dog Box - Alloy **£2700.00**

### Available ratios

1st	2nd	3rd	4th
2.07:1	1.53:1	1.21:1	1.0:1

## Gearbox & gear kit options

	Rocket Synchromesh Engagement	Type 9 Synchromesh Engagement	2000E/Bullet Synchromesh Engagement	SL72 Type 9 Replacement Dog Engagement
4 Speed	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5 Speed		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Helical Gear kit		<input checked="" type="checkbox"/>		
Helical C/R Gear kit		<input checked="" type="checkbox"/>		
Helical Gearbox		<input checked="" type="checkbox"/>		
Helical C/R Gearbox		<input checked="" type="checkbox"/>		
S/C C/R Synchro Gear Kit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
S/C C/R Synchro Gearbox	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Dog Engagement Gear Kit			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dog Engagement Gearbox		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Alloy Main Casing		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>

## Bell housings & differential housings



New range of bell housings now available direct. Please contact us or refer to our web site for full product details.

2000E - Ford 4 Cylinder - Aluminium Alloy Bell housing (saves 4.6kg)	<b>£235.00</b>
2000E - Ford 4 Cylinder - Magnesium Alloy Bell Housing (saves 5.8kg)	<b>£530.00</b>
Rock/ Type 9 - 4 Cylinder - Aluminium Alloy Bell Housing (LH & RH Starter)	<b>£180.00</b>
Rock/ Type 9 - 4 Cylinder - Release arm for above (LH & RH)	<b>£38.95</b>
Rock/ Type 9 - 4 Cylinder - Aluminium Alloy Bell housing (LH Starter)	<b>£235.00</b>
Type 9 - Essex V6 - Aluminium Alloy Bell Housing	<b>£465.00</b>
Rock/ Type 9 - Duratech HE (I4) - Aluminium Alloy Bell Housing	<b>£320.00</b>
Type 9/V6 - Duratech HE (I4) - Aluminium Alloy Bell Housing	<b>£320.00</b>
Type 9 - Cologne V6 - Aluminium Alloy L Bell Housing	<b>£465.00</b>
Rock/ Type 9 - Zetec SE - Aluminium Alloy Bell Housing	<b>£235.00</b>
T5 Cosworth - Essex V4/V6 - Aluminium Alloy Bell Housing	<b>£385.85</b>
Rock/ Type 9 - SOHC Pinto & X/Flow - Aluminium Alloy Bell Housing (LH Starter)	<b>£195.00</b>

### Alloy English differential carrier/housing

Aluminium alloy lightweight differential carrier for the English Axle. Offers a weight saving of nearly 5kg. Supplied with pinion bearings, depth of mesh checked and correct shim fitted.

**£445.00**

## Tran-X plate type LSDs



A differential is a prerequisite for any vehicle, be it for motorsport or road use. The standard offering, often referred to as an open differential, provides an adequate solution but has many limitations. This is best illustrated when a car is negotiating a sharp bend. At the apex, the car's mass is transferred to the outer wheel, allowing the inner wheel to lift and lose traction.

This obviously impacts the rate at which the car can accelerate away from the corner. To minimise these failings Tran-X have developed a multiple plate limited slip alternative which utilises independent preload and ramp settings.

The Tran-X LSD is constructed with two ramp blocks which sandwich four pins/planets. Each pin/planet sits in the radius between the leading and trailing ramp angle. As torque is applied to the differential's input, the pins/planets ride up their respective leading ramps, pushing the blocks apart and increasing the transfer of torque.

The angle of this ramp determines how quickly this transfer is accomplished. An angle of 35 degrees will allow the blocks to be pushed apart more easily than, say, a 55 degree setting, resulting in a more aggressive power delivery.

A typical set-up for a lightweight track car would be a ramp setting of 45/90, allowing progressive application of power for optimum acceleration. The preload setting dictates the contact friction between the plates themselves. The higher the preload, the more rapidly friction will increase between the plates, creating a more aggressive differential. Combined with the ramp angles, this allows subtle adjustments to when and how torque is transferred.

Some Tran-X LSD differentials come with dual ramp blocks fitted, allowing the ramp angles to be changed between two combinations. This could combine track and fast road settings in one unit, though disassembly and reassembly of the diff would be required. The entire unit is fabricated in-house utilising high tensile billet steel, allowing optimum flexibility for the discerning customer. Please contact our technical team for advice on which combination best suits your vehicle and driving requirements

On some Lsds we are now offering a super light weight plate setting (pre-load 10-15%) to reduce noise, a less aggressive unit for road and kit car applications especially.

We now offer a new drifting ramp 35/35 – 45/45 in some applications as used by Ben Morley!!!

Please check our website for a number of exciting new LSD development in the coming year.



## Tran-X plate type LSDs



<b>Type</b>	Salisbury
<b>Ramp Angles</b>	45/45 30/60
<b>Pre-Load (lbs/ft)</b>	10-15, 30-40 & 65-75
<b>Side Gears</b>	22t/English Spline 16t/Atlas Spline
<b>Application</b>	Cortina mk1/2/models Escort mk1/2 Lotus Elan Ford Corsair Ford Anglia/105E Numerous kit car fitments
<b>Price</b>	22t - <b>£446.50</b> 16t - <b>£470.00</b>



<b>Type</b>	Tran-X English Axle
<b>Ramp Angles</b>	45/45 - 35/90 45/90 - 55/90 30/60 - 20/75 35/35 - 45/45
<b>Pre-Load (lbs/ft)</b>	10-15, 25-35 & 60-70 (Journal bearings included)
<b>Side Gears</b>	22t/English Spline 16t/Atlas Spline 18t/Group IV Spline
<b>Application</b>	Cortina mk1/2/models, Escort mk1/2 Lotus Elan, Ford Corsair Ford Anglia/105E Numerous kit car fitments
<b>Price</b>	22t - <b>£499.50</b> 16t - <b>£520.00</b> 18t - <b>£650.00</b>



<b>Type</b>	Peugeot Ma
<b>Ramp Angles</b>	45/45 30/60
<b>Pre-Load (lbs/ft)</b>	25-35 & 65-75
<b>Application</b>	Peugeot 106 Citroen AX Citroen Saxo
<b>Notes</b>	CWP ratios available – 4.92, 4.28, 3.9, 3.7
<b>Price</b>	Customer Modified CW <b>£645.00</b> Tran-X modified customer supplied CW <b>£695.00</b> Supplied with Tran-X Straight Cut CWP <b>£775.00</b>

## Tran-X plate type LSDs



<b>Type</b>	Vauxhall Nova/Corsa
<b>Ramp Angles</b>	45/45 - 35/90 45/90 - 55/90, 30/60 - 20/75 35/35 - 45/45
<b>Pre-Load (lbs/ft)</b>	10-15, 25-35 & 60 – 75
<b>Side Gears</b>	22t/Nova £510.00 34t/Astra £650.00
<b>Application</b>	Vauxhall Nova Vauxhall Corsa
<b>Price</b>	22t - <b>£510.00</b> 34t - <b>£650.00</b>



<b>Type</b>	MGC/MGB Salisbury Axle
<b>Ramp Angles</b>	45/45 30/60
<b>Pre-Load (lbs/ft)</b>	45-55 & 95-105
<b>Application</b>	MGC/MGB Salisbury Housing (3.9/3.7 CWP) MGC/V8 LSD - 45/45 (3.3:1/3.07:1 CWP)
<b>Price</b>	<b>£775.00</b>



<b>Type</b>	Sierra 7"
<b>Ramp Angles</b>	45/45 - 35/90 45/90 - 55/90 30/60 - 20/75 35/35 - 45/45
<b>Pre-Load (lbs/ft)</b>	10-15, 25-35 & 60-70
<b>Application</b>	Ford Sierra 7" CW, Various Kit car fitments (Caterham, Westfield, Tiger)
<b>Notes</b>	For push in and bolt in out put shaft types. Bolt in type shafts need modification to fit unit. Retaining out put shaft snap ring supplied with Lsd. Does not fit viscous type casing.
<b>Price</b>	<b>£575.00</b>

## Tran-X plate type LSDs



Type	IB5/BC
Ramp Angles	45/45 - 35/90 45/90 - 55/90 30/60 - 20/75 35/35 - 45/45
Pre-Load (lbs/ft)	10-15, 25-35 & 60-70
Application	Fiesta Focus Orion Ka Escort Mk6 Puma MEV Rocket (RTR Kit cars)
Price	<b>£585.00</b>



Type	Vauxhall Astra
Ramp Angles	45/45 - 35/90 45/90 - 55/90 30/60 - 20/75 35/35 - 45/45
Pre-Load (lbs/ft)	10-15, 25-35 & 60-70
Application	Vauxhall Astra (F16/F18/F20)
Price	<b>£680.00</b>



Type	MGB Banjo Axle
Ramp Angles	45/45 30/60
Pre-Load (lbs/ft)	10-15, 30-40 & 65-75
Application	MGB Roadster
Price	<b>£575.00</b>

## Tran-X plate type LSDs



<b>Type</b>	Hillman Imp
<b>Ramp Angles</b>	45/45 - 35/90 45/90 - 55/90 30/60 - 2075 35/35 - 45/45
<b>Pre-Load (lbs/ft)</b>	10-15, 25-35 & 60-75 (Includes A Series output shafts)
<b>Application</b>	Hillman Imp

**Price** **£655.00**



<b>Type</b>	Austin Healey
<b>Ramp Angles</b>	45/45 30/60
<b>Pre-Load (lbs/ft)</b>	45-55 & 95-105
<b>Application</b>	Austin Healey 3000

**Price** **£750.00**



<b>Type</b>	Atlas Axle HD
<b>Ramp Angles</b>	45/45 35/65 35/85
<b>Pre-Load (lbs/ft)</b>	45-50 & 85-95
<b>Side Gears</b>	16t/Atlas Spline 18t/Group IV Spline
<b>Application</b>	Ford Capri (All mk's) Ford Granada (All mk's)

**Price** 16t -**£655.00**  
18t -**£695.00**

## Tran-X plate type LSDs



Type	VW 02J
Ramp Angles	45/45 - 35/90 45/90 - 55/90, 30/60 - 20/75 35/35 - 45/45
Pre-Load (lbs/ft)	10-15, 25-35 & 60-75
Application	VW Golf MK 3 & 4 VW Jetta Seat Ibiza Audi A3

Price **£525.00**



Type	Sprite/Midget BMC
Ramp Angles	45/45 - 35/90 45/90 - 55/90, 30/60 - 20/75 35/35 - 45/45
Pre-Load (lbs/ft)	10-15, 25-35 & 60-75
Side Gears	10t /A series spline 22t/English spline
Application	Sprite/Midget

Price **£485.00**



Type	Peugeot BE
Ramp Angles	45/45 30/60
Pre-Load (lbs/ft)	25-35 & 65-75
Application	Peugeot 205 Peugeot 309 Peugeot 405

Price **IRS - £575.00**

## Tran-X plate type LSDs



<b>Type</b>	Mini LSD
<b>Ramp Angles</b>	45/45 - 35/90 45/90 - 55/90 30/60 - 20/75 35/35 - 45/45
<b>Pre-Load (lbs/ft)</b>	10-15, 25-35 & 60-75
<b>Side Gears</b>	A series
<b>Application</b>	Mini Salisbury type only

**Price** **£462.95**



<b>Type</b>	Triumph TR
<b>Ramp Angles</b>	45/45 30/60
<b>Pre-Load (lbs/ft)</b>	10-15, 30-40 & 65-75
<b>Application</b>	TR6 IRS TR2 Live Axle TR3 Live Axle TR4 Live Axle TR5 Live Axle Dolomite Sprint

**Price** IRS - **£650.00**  
Live Axle - **£690.00**



<b>Type</b>	Alfa LSD
<b>Ramp Angles</b>	45/45 - 35/90 45/90 - 55/90 30/60 - 20/75 35/35 - 45/45
<b>Pre-Load (lbs/ft)</b>	10-15, 25-35 & 60-75
<b>Application</b>	Alfa 101 & 105 series excluding 2 litre

**Price** **£565.00**

## Crown wheel & pinion kits



A CWP transfers the power from the gearbox to differential (LSD), which then sends it to the wheels via the drive shafts. The CWP ratio is just as important as the gear ratios for getting the most out of your engine and should always be considered when selecting gear ratios. Our Speed calculator can help you decide which ratios are best suited to your application and allow you to compare different ratios and their results.

The replacement of gear kits within a gearbox provides fine adjustment when it comes to optimisation of an engine's power delivery characteristics. However the Crown wheel and pinion has a significant impact on the vehicles gearing.

This is of upmost importance when competing on differing circuits or when trying to combine a usable road car which will occasionally see the track. To this end, we can supply a selection of crown wheel and pinion combinations to original specification to suit all needs. Ranging from 3.54:1 to 5.3:1, the components are machined from high tensile billet steel and are quality inspected to the highest standards possible.

To complement these gear combination kits we can also provide lightweight aluminium alloy differential casings to complete the installation. These not only make future ratio changes hassle free, but also shave off almost 5 kg in weight compared to the standard offering.

We can either supply components separately or in the case of our English units (only) we can build complete units utilising new bearings, oil seals and gaskets (while obviously ensuring the correct mesh by fine adjustment).

Designed and manufactured to the highest standard and original specification, these are the very best available.

A wide range of ratios are available to suit all applications.

### Atlas Crown Wheel & Pinion

Ratios	4.63:1	£270.00	5.14:1	£270.00
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### English Crown Wheel & Pinion

Ratios	4.4:1	£250.00	4.7:1	£250.00	5.1:1	£250.00
	5.3:1	£250.00	3.89:1	£250.00	3.54:1	£250.00

## Competition driveshafts, halfshafts and flanges



Half shafts are often a forgotten component (especially in an English or Atlas configuration) due to their enclosure within the axle casing. However, the upgrading of the powerplant, transmission and differential can render these shafts as the weakest link, particularly when you consider the majority of donor English or Atlas axles may have a considerable mileage prior to conversion for motorsport or fast road use.

Tran-X offer a range of larger diameter shafts fabricated from EN24T (high tensile alloy steel) which offers considerable sheer resistance compared to standard alternatives. Machined from billet, there are three basic spline configurations: 22T English, 16T Atlas and, finally, 18T Atlas Group 4 and are available in varying lengths to accommodate specific tracks.

We are also happy to produce half shafts to special order using aviation grade materials such as S155. If we do not stock the length of shaft you require or you have something that cannot be purchased off the shelf please contact us, as we can produce custom shafts to suit your needs, using a current sample or supplied drawings for manufacturing.

A half shaft upgrade reduces the risk of component shear, but another failing of standard assemblies is the loosening of flange nuts, especially with intense motorsport use. Consequently, we have developed a flange design incorporating a coned washer and locking nut assembly which, during tightening, securely clamps the shaft's outer surface. We consider this an essential safety feature and, as such, any Tran-X half shaft upgrade requires the fitment of these new flanges which can be retro fitted with ease and with the minimum of fuss.

Group 1 'English' Half Shaft	22T	700-730mm	<b>£100.00</b>
Group 1 'English' Half Shaft	22T	690mm	<b>£100.00</b>
Group 1 'Atlas' Half Shaft	16T	700-730mm	<b>£100.00</b>
Group 1 'Atlas' Half Shaft	16T	690mm	<b>£100.00</b>
Group 1-Group IV Half Shaft	18T	690mm	<b>£100.00</b>
Group 1-Group IV Half Shaft	18T	700-730mm	<b>£100.00</b>
Group 1 Half Shaft Flange	-	-	<b>£65.00</b>
Group 1 Coned Washer	-	-	<b>£5.00</b>
Group Half Shaft Nut	-	-	<b>£5.00</b>
Atlas Group IV Flange	-	-	<b>£60.00</b>
Atlas Group IV	18T	740mm	<b>£95.00</b>
Atlas Group IV	18T	770mm	<b>£95.00</b>
Group IV Half Shaft Nut	-	-	<b>£6.00</b>
Group 1 Half shaft sets: includes half shafts, Flanges, coned washers and nuts			<b>£350.00</b>
Atlas/GIV Half shaft sets: includes half shafts, flanges and nuts			<b>£322.00</b>
Custom Half Shafts can be re-engineered from a sample or drawing			from <b>£250.00</b>

## Lubricants

Having invested thousands upgrading the drivetrain of your race or fast road car, compromising on the chosen lubricant can prove to be a false economy.

In addition to the friction-reducing nature of these fluids, lubricants are also essential in cooling, noise reduction, maintaining component surface cleanliness, minimising the risk of corrosion, improving reliability and, above all, optimising performance.

Here at Tran-X we understand the clear advantages of selecting the optimum lubricant and, as such, our technical team are happy to provide clear and informative advice in this area, made possible by working closely with some of the country's leading producers.

Millers offer an extensive range of semi-synthetic and fully synthetic transmission and differential oils specifically developed for the demanding motorsport fraternity.

Please check our website for new and exciting products to be added in 2011.



## Recommended Lubricants

### Transmission Oils

Millers Trans CRX 80W-90

P.O.A

Millers - Classic Transmission Oil 80W 90

P.O.A

Millers Trans CRX 75W-90 1203

P.O.A

### LSD/Differential Oils

Millers CRX LS 80W-90 1202

P.O.A

Millers - Classic Diff Oil 85W 140 - GL5

P.O.A

### Transmission/LSD Oils

Millers CRX Trans/ LS 80W-140 1204 'BM'

P.O.A

Millers Trans CRX LS 75W-90 BM

P.O.A

Please refer to our web site or contact our sales team for current prices

	FWD Synchro Box	RWD Synchro Box	RWD LSD	FWD Synchro Box w/LSD	FWD Dog Box w/LSD	RWD Dog Box	Comp Use	Road Use
Trans CRX 80w 90	●	●		●			●	
Classic Trans Oil 80w 90	●	●		●				●
CRX 75w 90						●	●	
CRX LS 80w 90			●				●	
Classic Oil 85w 140			●					●
CRX Trans LS 80w 140 BM					●		●	
CRX LS 75w 90 BM					●	●	●	

## Donor gear boxes

### Where to find your donor gearbox

Specialising in Ford transmissions and in particular the 2000E Bullet, Rocket and Type 9, Tran-X offer you the option of supplying your own donor gear boxes for our helical and straight cut, close ratio sychromesh engagement gear kits - a sound investment for those appreciating 1960's classics.

The 2000E is the oldest design, comes in a 4 speed configuration and can be found in such models as the Cortina MK1, Lotus Cortina MK 1 & 2, Escort twin cam and Escort RS 1600/Mexico.

Moving on to the Rocket box which found its way into the Capri, later Cortinas, Escorts and early Sierras, this is also only available in 4 speed configuration but is far more durable than its 2000E predecessor. Unlike our 2000E gear kits, our Rocket gear kits come in various ratios, including the ever-popular Hot Rod, F2 and Rally kits.

Lastly, our 5 speed Type 9 kits are most commonly used for RWD conversions and are typically found fitted in Capri's and Sierra's (inc. XR4i). Straight cut, close ratio, synchromesh engagement or close ratio, helical configurations of various ratios are available.

### 2000E Bullet

A medium duty 4 speed box with three selector rails. Has been made with various gear selector positions.

Fitted in:

- Cortina Mk1
- Lotus Cortina Mk1/2
- Escort Twin Cam
- Escort RS 1600/Mexico



### Rocket Gearbox (Type E):

4 Speed single rail gearbox used for more demanding applications. It is available most often without an integral bell housing although later boxes (most often found in Sierras) had integral bell housings. Often referred to as the 'Rocket' box.

Fitted in:

- Capri 1.62/2.0 82 on
- Cortina Mk3 2.0
- Cortina Mk4/5 1.6GT/2.0/2.3
- Escort RS2000 Mk 1/2
- Escort RS Mexico Mk2
- Sierra 1.6/2.0



### Type 9 Gearbox:

Ford's first RWD 5-Speed box, based on the rocket box. This gearbox is commonly used for 5 speed conversions on older vehicles. Some later versions were available with integral bell housings although they are more commonly found with removable bell housings.

Fitted in:

- Capri 1.6/2.0 02/83 on
- Capri 2.8 11/82 on
- Sierra 1.6/1.8/2.0 to 1288
- Sierra XR4i



## New Products for 2011

### Trials Differential

Coming soon: A differential unit that can be used when regulations do not allow the use of an Lsd, but standard units are just not strong enough.

After talking to many customers and race drivers/series, where reliability of standard unit is a real issue. Tran-X have come up with a design to solve such problems.

Running both the planet and side gears on caged needle roller bearings, this reduces stress and friction and increases the strength suspect areas. Will be available initially in BMC Sprite/Midget unit, it will comply with all competitions where Lsd's are prohibited.

More applications will be available soon.

**T.B.A**

Please check our website for many exciting new products available throughout the year. Including:

- MG/Sprite Dog Gear Kit • IB5/BC Gear kit
- Talbot Sunbeam LSD • VW 02A LSD
- VW 020 LSD • Plus a new range of CWP and spares.

## Jargon Buster

**M/S** - Main Shaft

**BRGS** - Bearings

**L/S** - Lay shaft

**I/S** - Input Shaft

**H/S** - Half Shaft

**BHP** - Brake Horse Power

**CW** - Crown Wheel

**C/R** - Close Ratio

**LSD** - Limited Slip Differential

**S/C** - Straight Cut

**RPM** - Revolutions Per Minute

**CWP** - Crown Wheel and Pinion

#### Donor Box:

Box supplied by customer as exchange unit.

#### Synchromesh Engagement:

Uses synchroniser rings to slow next gear down when shifting so a smooth gear change can be achieved.

#### Dog Engagement:

Uses dog teeth to select gears. Allows for much quicker shift as does not have to wait for the synchroniser ring to slow next gear down. Driver can shift as quick as possible.

#### Side Gear:

Bevel gear which accepts the drive shafts to transfer power from the differential to the wheels.

#### Planet Gear:

Bevel gear that rotates around side gear.

#### Ramp Angle:

This dictates where the Limited Slip Differential operates. Split into 2 angles acceleration/deceleration.

#### Preload:

This dictates how quickly the LSD locks.

#### Helical Cut:

Gear teeth are cut at an angle. This makes gears quieter.

#### Straight Cut:

Gears teeth are cut straight providing more efficiency and higher power ratings.

#### Half Shaft:

This transfers the power from the differential to the wheels.

#### Input shaft:

Sometimes called the first motion shaft, this brings power into the gearbox and it connected to the clutch.

#### Lay Shaft:

Sometimes called the lay gear, this holds the bottom input gears which rotate the gears on the main shaft.

#### Main shaft:

This holds the output gears which are selected when gears are shifted. This transfers the power out of the gearbox.

## Materials

**EN36** High alloy case hardening steel used for gears

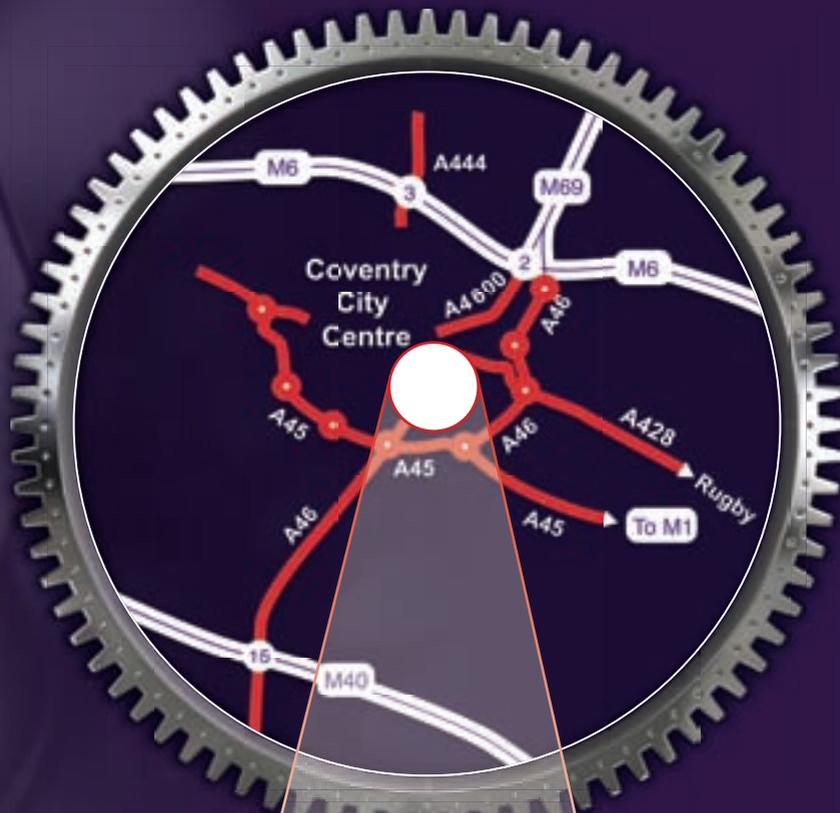
**S156** Aviation Specification high alloy steel. Very High strength used for all our Dog gears and heavy duty Bevel Gears

**EN24T** High quality, High tensile, High alloy steel used for half shafts and heavy duty diff housings

**S155** High strength aviation specification steel used for heavy duty half shafts

**LM25TF** Aluminium alloy used for our alloy gearbox casings

**SG Iron** Steel Grade Iron used for our steel gearbox housings



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