



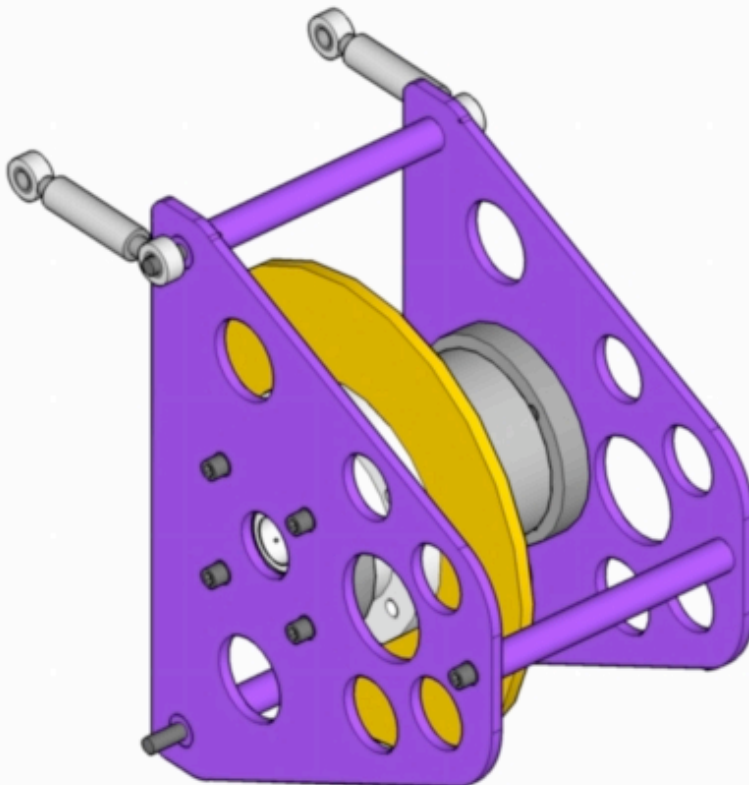
FORMULA STUDENT CHAIN DRIVE DIFFERENTIALS

Westgarage Engineering Services are pleased to offer their range of chain drive differentials and components to Formula Student Teams.

Westgarage Engineering manufacture a range of chain drive differentials to suit bike engined single seater racing cars, sports cars, hillclimb & sprint cars, autocross, autosolo, autograss, kit cars, buggies, quads, trikes and electric vehicles.

We also manufacture bearing carriers and sprockets to suit other manufacturer's chain drive differentials.

Westgarage Engineering's differentials are based on recycled OEM differentials from a range of volume production vehicles and some aftermarket performance differentials.



**Ford Sierra Based Limited Slip Chain Drive Differential
(Typical Installation)**



Westgarage Engineering Services

Chain Drive Differentials



Sierra Chain Drive Differential





Sierra 7" LSD Chain Drive Differential Kit

This kit uses a recycled Ford viscous coupled limited slip differential unit from a Ford Sierra and comprises:

Modified Sierra 7" Limited Slip Differential

Sierra output shafts (for "Lobro" 86mm pcd bolt on couplings)

Alloy oil retaining can

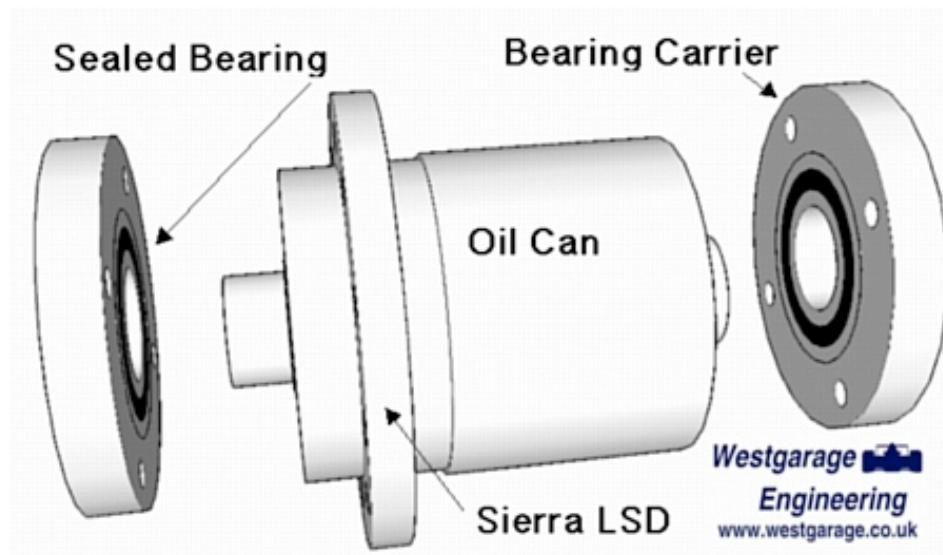
Pair of side mount, alloy, bearing carriers

Pair of sealed roller bearings

Set of shims for aligning differential sprocket to gearbox sprocket

Alloy sprocket (typically 530 pitch 48 to 54 tooth)

Full set of fixings



Specification:

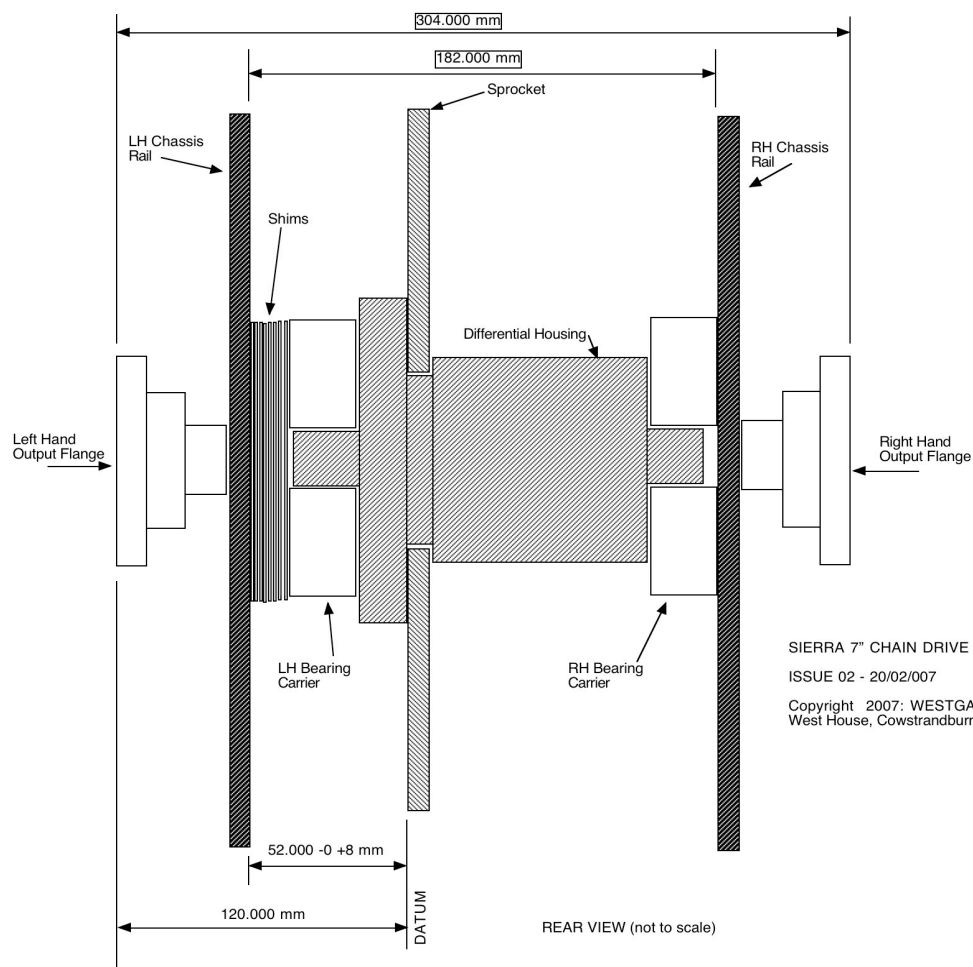
Weight (including sprocket, carriers, bearings and output shafts) approx. 12.5Kg

Slip Torque 70 Nm (+30Nm) [Ford figures]



Westgarage Engineering Services

Chain Drive Differentials



NOTES:

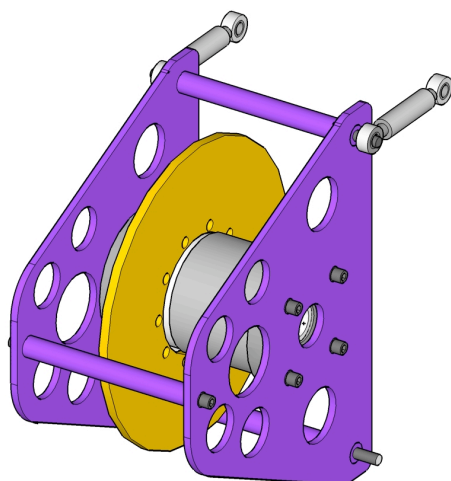
1. Width between chassis rails 182mm (allowing for 8mm of shims)
2. Overall width between output flange faces 304mm
3. Sprocket mounting face to inside face of left hand chassis rail (adjustable by shims) between 52 mm and 60 mm
4. Sprocket mounting face to outside face of left hand output flange 120 mm
5. Sprocket, 113.000 -0 +1 mm centre hole, P.C.D. 130.000 mm, (10) equispaced 10 mm diameter bolt holes
6. Bearing Carrier P.C.D. 106.070mm, (4) equispaced M10 tapped holes (75mm between pairs of bolt holes)
7. Typical sprocket and chain 290mm diameter (54 tooth 530 pitch chain)

SIERRA 7" CHAIN DRIVE DIFFERENTIAL INSTALLATION DRAWING

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Typical Installation Dimensions



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Alternative installation using pivoting carrier



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Chain Drive Differentials

Cost Comparison (November 2007)

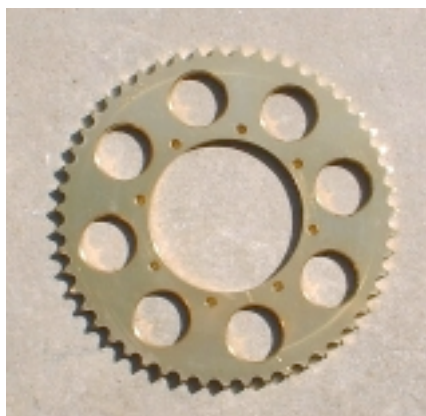
Westgarage Engineering		Quaife	
Sierra LSD Chain Drive Kit	£580.00	ATB Chain Drive*	£586.33
86mm pcd output shafts	incl	86mm pcd output shafts**	£307.85
Bearing carriers	incl	Bearing carriers***	£120.00
Sealed bearings	incl	Sealed Bearings***	£ 35.00
Alloy Sprocket	incl	Alloy Sprocket***	£ 60.00
Fixings	incl	Fixings***	£ 15.00
Total (excluding delivery)	£580.00	Total (excluding delivery)	£1124.18

Notes:

* Quaife list price including VAT

** Quaife ATB Chain Drive differential normally uses Fiesta/Escort inner CV joints – Optional Quaife 86mm pcd output shafts quoted.

*** Westgarage Engineering Services parts to suit a Quaife ATB.



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Other Products and Services

Chain Drive Differentials:

- BL/Rover Mini based “open” chain drive differential kit
- Quaife ATB Mini, Fiesta or Honda Civic based “Isd” chain drive differential kit
- Sierra based “open” chain drive differential kit

Sprockets:

- Lightweight Aluminium Alloy rear sprockets to suit differentials
- Various sizes and pitches available

Drive shafts & Couplings:

- Custom length drive shafts
- CV Joints and couplings

Differential Mounting Carriers:

- Fabrication of custom carriers for chain drive differentials

Aluminium Alloy Airfoils (wings):

- Aluminium airfoils for racing, hillclimb and sprint cars
- Splitters, flaps wing end plates

GRP Mouldings and Repairs:

- GRP moulds and moulding of race car components
- Repairs to GRP
- Painting

Trailers:

- Race car transporters
- Covered race car transporters and trailers

Fabrication & Welding:

- TIG, MIG, gas welding of steel and aluminium
- Spaceframe chassis build and repair
- Sheet metalwork

Visit the Westgarage Engineering Services web site at:

<http://www.westgarage.co.uk>



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Westgarage Engineering Services

Chain Drive Differentials

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We have no control over what taxes you may be charged by your own national tax authorities. We are not responsible for compensating you for payment of any such taxes.

If you do not know how much (if any) import tax you might have to pay, please check with your local tax authorities BEFORE entering into a contract to purchase.

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If your goods are retained or confiscated by your own national Customs authorities for any reason, it is your responsibility alone to negotiate with them the terms on which such goods might be released to you.

If your goods are undeliverable for any reason and are returned to us, we reserve the right to reclaim from you any associated costs which may be charged back to us.

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