

Building and Enjoying a Competition 240Z

Part 7 Fitting The LSD part 2

To be able to fit up the CV's I turned to Modern Motor Sports.



Billet companion flanges & fittings supplied by Ross at Modern Motor Sports in Canada. These are to allow the CV joints to be fitted to the 240Z. They are well made, and we are lucky there are people like Ross and John Coffey (camber plates Part 16) around that make all these things possible.



The R200 open diff removed and the R200 LSD ready to go in.



The LSD up in place



The Modern Motors
billet companion
flange in place with
the CV bolted up



The removed standard
companion flanges

With the LSD and CV's successfully in place, it was simply a matter of reconnecting up the tail shaft. Wrong!

I couldn't believe it, even though they were both R200 diffs, and looked identical, the pinion bolt holes and the flange centre are different.



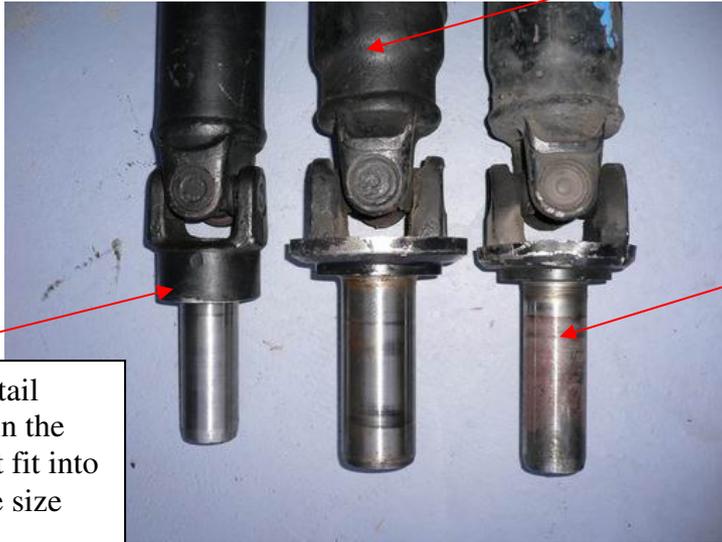
The R200 & 260Z gearbox tail shaft that was in the car – 58mm flange

The RB26 tail shaft I received with the GTR halfcut – 50mm flange but different yoke

A Z31 tail shaft I purchased (\$50) to solve the problem. It has the right size flange (50mm) for the LSD and the right yoke for the 260Z gearbox



The R200 diff that was in the car – 58mm coupling, rather than the 50mm coupling of the Z31 R200 LSD



The GTR tail shaft & yoke I will use when I later fit the RB26 motor and RB25DET R34 gearbox to the 260Z. No use for the current temporary problem.

The Z31 tail shaft that has the flange & yoke fittings required. Next it had to be shortened to 670mm

The R200 diff tail shaft that was in the car & wouldn't fit into the LSD flange size



The tail shaft that was in the car & now cannot be used

The Z31 tail shaft before being shortened

The GTR tail shaft



The temporary tail shaft in place after Veem shortened the Z31 one to suit



The current 260Z gearbox and mount

Will the gearing in the LSD be too low?

The current R200 diff in my 240Z, which is mated to a 2.8L motor, is a 4.1 and it drives pretty well.

The gearing in the R200 LSD I am going to fit is 4.375 – too low or not??

To the rescue HybridZ.org, what a site! Jimmy (RZTMartini) came up with this speed calculator. Thanks mate!

<http://www.kabamus.com/garage/gears.html>

Speeds in gears at 7500rpm

DIFF RATIO	CAR	GEARBOX RATIO	GEAR	SPEED MPH	SPEED KPH
4.1	Datsun 240Z	3.321	1st	40.45	65.10
		1.902	2nd	70.63	113.66
		1.308	3rd	102.70	165.28
		1.0	4th	134.34	216.19
		0.759	5th	176.91	284.70
4.375	Datsun 240Z	3.321	1st	37.91	61.01
		1.902	2nd	66.19	106.52
		1.308	3rd	96.25	154.90
		1.0	4th	125.89	202.59
		0.759	5th	165.87	266.93

Cruising Revs Open Road Speed Limit (110km=67mph in WA)

DIFF RATIO	CAR	GEARBOX RATIO	GEAR	RPM	SPEED MPH	SPEED KPH
4.1	Datsun 240Z	0.759	5th	3000	70.80	113.94
4.375	Datsun 240Z	0.759	5th	3000	66.35	106.78

So will the gearing in the LSD be too low? Depends on how the car is to be used. On a small track it will be fine, on a large track such as Phillip Island the limited top speed might be a problem. Time will tell!