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Toyota gearbox tech info – W58 / R154 / V160 / V161

W58

W58 alloy center plate 1982-1989 non-turbo supra/celica/cressida.

W58 steel center plate 89+ MK3/MK4 supra, SC300. This version is considered stronger due to wider bearings and gears, different gear selection mechanism. Built by AISIN.

Competition Clutch

\$518.01

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W58 gear ratios:

1 – 3.285:1
2 – 1.894:1
3 – 1.275:1
4 – 1.00:1
5 – 0.783:1
R – 3.768:1

Clutch:

Disc 236x150x21x29.8 (part# 31250-30390, EXEDY TYD112U)

R154

Gearbox found in MK3 supra turbo, crown / chaser tourer v / mark II tourer v / cresta tourer v / soarer turbo up to 2004. Built by AISIN.

R154 gear ratios:

1 – 3.251:1
2 – 1.955:1
3 – 1.310:1
4 – 1.00:1
5 – 0.753:1



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MK3 turbo supra used mechanical speed sensor. Converting to electronic vehicle speed sensor (vss) – marlin crawler makes conversion adapters to use with mechanical sensor gear (22×1,5 thread pitch).

<https://www.marlincrawler.com/transfer-case/parts-upgrade/vehicle-speed-sensor-mci>



R154 Speed sensor gears:

Electric sensors

83181-24060 – speed sensor JZZ30 JZX90 JZX100 JZX110 R154

83181-24070 – speed sensor JZA80 W58

83181-20040 – speed sensor adapter ST18*, *X80, previa etc



Cable W58 and R154 Speedometer drive gears (MA70 etc)

3.73:1 diff = 33 driven, 11 drive

3.91:1 diff = 32 driven, 10 drive

4.10:1 diff = 33 driven, 10 drive

4.30:1 diff = 35 driven, 10 drive

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33403-29115 – R154/W58 Speedometer Driven Gear (3.73:1 Final Drive) (33-tooth) – cable
 33403-29125 – R154/W58 Speedometer Driven Gear (3.91:1 Final Drive) (32-tooth) – cable
 33403-29135 – R154/W58 Speedometer Driven Gear (4.10:1 Final Drive) (33-tooth) – cable
 33403-19235 – R154/W58 Speedometer Driven Gear (4.30:1 Final Drive) (35-tooth) – cable
 33403-69195 – A340E Speedometer Driven Gear (3.73:1 Final Drive) (18-tooth)
 33403-29065 – A340E Speedometer Driven Gear (3.91:1 Final Drive) (20-tooth)
 33482-39015 – A340E Speedometer Driven Gear (4.30:1 Final Drive) (21-tooth)

33481-14071 – R154/W58 Speedometer Drive Gear (3.73:1 Final Drive) (11-tooth) 7MGTE
 33481-14080 – R154/W58 Speedometer Drive Gear (3.91:1 Final Drive) (10-tooth) 7MGTE
 33481-14031 – R154/W58 Speedometer Drive Gear (4.10:1 & 4.30:1 Final Drive) (10-tooth) 1JZGTE and 7MGE
 33481-30060 – A340E Speedometer Drive Gear (3.73:1 & 3.91:1 Final Drive) (6-tooth)
 33481-24020 – A340E Speedometer Drive Gear (4.30:1 Final Drive) (6-tooth)



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Electronic W58/R154 speedometer drive gears (JZZ30, JZX90, JZX100 etc)

JZZ30 Soarer

33403-29325 – driven gear 33 teeth, 33:10 (91-92) JZZ30 1JZGTE R154, JZA80 2JZGE W58 – electronic sensor
 33403-29315 – driven gear 32 teeth, 32:10 (91-xx) JZZ30 1JZGTE R154, JZA80 2JZGE W58 – electronic sensor
 33481-14080 – drive gear 10 teeth (1JZGTE R154 – 91-94) JZZ30 1JZGTE R154, JZA70 1JZGTE R154
 33481-35130 – drive gear 10 teeth (DRIVE GEAR 10X31-33) 1JZGTE R154 – 94-xx

JZX90 CHASER, JZX100 MARK2, JZX110 MARK2

33403-39425 – driven gear – 32 teeth, 32:11 – electronic sensor
 33481-35190 – drive gear – 11 teeth, (11X31-33)

Recommended oil – Redline MTL 75w80 / Castrol VMX80 / Redline Light Weight Shock Proof / Redline Heavy Weight Shock Proof

Reliability issues: Good oil and fresh plastic shifter bushing for best gear changing. Thrust washer cracks when loading 1st gear due to axial load on the helical gears (straight cut gears have less load on the shaft). [Marlin Heavy Duty Bearing retainer](#) should be changed along with the [Marlin Crawler thrust washer](#). Billet forks if you're feeling fancy.

V160 / V161

Getrag 233, 6 speed gearbox, which is made by Getrag in Germany .
 Weight – 51.0 kg

V160 – May 1993 to May 1996

V160 Gear ratios:

1 – 3.827:1
 2 – 2.360:1
 3 – 1.685:1
 4 – 1.312:1

5 – 1.000:1
 6 – 0.793:1
 R – 3.280:1



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V161 – June 1996 to July 2002

V161 Gear ratios:

1 – 3.724:1
 2 – 2.246:1
 3 – 1.541:1
 4 – 1.205:1
 5 – 1.000:1
 6 – 0.818:1
 R – 3.192:1

MK3 Supra diff ratios:

4.56:1 – 1G-GTE
 4.30:1 – 7MGE
 4.10:1 – 1JZGTE
 3.90:1 – 7MGTE (87-88)
 3.73:1 – 7MGTE (88-92)

MKIV Supra diff ratios:

Supra TT 4.1:1
 Supra V8 3.9:1

1JZ-GTE R154 gearbox bolts:

4 – 10mm x 1.25 x 40mm
 5 – 12mm x 1.25 x 50mm
 2 – 10mm x 1.25 x 70mm (starter)

Clutch discs:

W58 – disc dia 236mm, 21 splines
 R154 – disc dia 240mm, 21 splines
 V160 – disc dia 250mm, 14 splines

W58 and R154 spigot bearing:

pilot bearing – 6201 type, 32mm OD x 12mm ID x 10mm width

Drive shaft yoke:

W58 – 21 spline
 R154 – 23 spline, 39.95mm OD, 92mm length (some R151 are 21 spline)
 A340e – 23 spline

R154 slip yoke 37302-24010 (4runner v8 v6 i4 AT| previa | tacoma v6 MT | hiace MT)

37302-30030

A340e slip yoke is shorter than R154 and might kill oil seals

Oil drain plugs:

90341-18006 – standard drain plug 24mm head, non magnetic



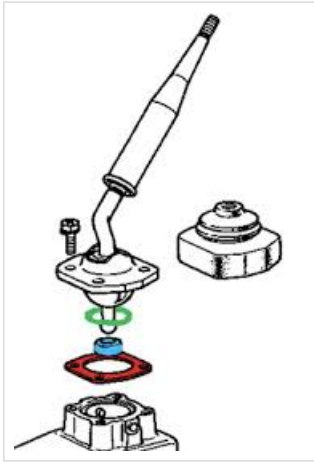
90341-18057 – magnetic drain plug 24mm head



90341-18021 – magnetic drain plug 10mm hex head



R154 shifter assembly and part numbers:



- 33555-22050 – Shifter square rubber boot
- 33584-22020 – Shifter square cover paper gasket – red in picture
- 33505-35020 – Shifter seat (rubber 41mm) – green in picture
- 33548-31010 – Shifter bushing (x1) – blue in picture
- 33584-14020 – Shifter retainer gasket
- 33565-14010 – Steel spacer/washer (PLATE, CONTROL SHIFT LEVER RETAINER) x6

Generic part numbers:

- 13405-46030 – 1JZ R154 flywheel
- 31111-14110 – 1JZ R154 bellhousing
- 91611-61045 – 1JZ R154 bellhousing bolts – 9pcs
- 90910-02103 – 1JZ R154 flywheel bolts – M10x1,25 23mm – 8pcs
- 90910-02115 – flywheel bolts – M10x1,25 45mm
- 90311-40001 – R154 rear oil seal (OD 58mm, ID 40mm, thickness 11mm, counterclockwise rotation) (NOK BH2501E, CORTECO 19019491B)

2 THOUGHTS ON "TOYOTA GEARBOX TECH INFO – W58 / R154 / V160 / V161"



Richard Vartanian

on [2018-12-07 at 23:38](#) said:

Please advise if 1985 Supra Mk2 rear differentials have any identifying external markings that indicate if ratio is 4.10:1 or 4.30:1 .Help will be much appreciated. Thank you.



ROD

on [2019-03-14 at 01:28](#) said:

manual MK2 are 3.73 (w55) or 3.9 (w58) and auto 4.10

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