



UK MKIII Supra Owners Group

Model Information



Author	J Seaman
Date	29/08/07
Version	1.00
Edited by	NA

Disclaimer

Neither the author nor the MKIII Supra Owners Group accepts liability, including liability for negligence, in respect of any statement in this guide.

The guide reflects the opinions of the author following his own experience, and does not state any of the opinions as pure factual information, and accepts no liability for the interpretation of the report by the reader. Neither the author nor the MKIII Supra Owners Group accepts liability for the distribution of this guide, or for the actions that may occur following the guides distribution.

The guide may not be distributed without the express permission of the author

The Supra started off life as the Celica-Supra but by the time we reach the mk3, Supra was independent of the roots with Celica. "Supra" is derived from

Latin that stands for "over, above, beyond, or greater than" (Wikipedia).

All of the supras are :

- Fuel injected
- DOHC
- 6 cylinder inline 24 valve engines
- Front engine/rear wheel drive set ups
- Dual wishbones front+rear

1GGE

*Displacement:*2.0

*Aspiration:*NA

*Power:*150bhp @ 6200RPM

*Torque:*135 ft/lbs @ 5600RPM

*Gearbox:*5 spd manual or 4 spd auto

*Aero:*Available

*Additional:*This is the baby of the bunch, some people love them but most find them underpowered

*Chassis:*GA70

*Bore/stroke:*75/75

*Compression:*9.5:1

1GGTE

*Displacement:*2.0

*Aspiration:*Twin turbo (parallel)

*Power:*210bhp @ 6200RPM

*Torque:*203 ft/lbs @ 5600RPM

*Gearbox:*5 spd manual or 4 spd auto

*Aero:*Available

*Additional:*Better than the 1GGE but still lacking in performance compared to the other variants

*Chassis:*GA70

*Bore/stroke:*75/75

*Compression:*8.5:1

1JZGTE

Displacement: 2.5

Aspiration: Twin turbo (parallel)

Power: 280bhp @ 6200RPM

Torque: 269 ft/lbs @ 4800RPM

Gearbox: 5 spd manual or 4 spd auto (R154 or A342E respectively)

Aero: Available

Additional: Very capable engine, solid, reliable and capable of big power. Similar to mk4 Supra engine.

Thanks to Adi for this info-

1. The 'Limited' is the highest spec (and rarest in the UK, only 2 known), including the following standard equipment:

Digidash (digital dashboard rather than traditional dials)

Aerotop - removable panels in the roof

Torsen differential

Leather/Suede Combo seats

Electronically retracting wingmirrors

Highly adjustable electric drivers seat (more than normal)

TEMS (Toyota Electronically Modulated Suspension)

Various items such as anti hijack automatic door locking, seatbelt pretensioners etc

2. The Type 'R' which is a stripped out version produced in limited numbers (although readily available in the UK due to importers

favouring these)

Reduced weight

No toys like the limited

No ABS

Recaro interior

Momo steering wheel

Standard dash

Torsen diff

Bilsten shocks

3. The GT, base model 1JZ

Similar to the UK car, but can have some (but not all) of the options that the limited has

No torsen differential

No suede/leather option

Further to the above options, you can identify your car by a badge on the back (if still present) or the VIN will tell you

Chassis: JZA70

Bore/stroke: 86/71.5

Compression: 8.5:1

The 7th generation of the M series engine (7MGE and 7MGTE) had cooling system issues, head gaskets are common on these but they are otherwise tough and very capable.

According to Arnout's site : The MA70 chassis for the NA was supposed to go to the MA71 apparently for the turbo but only few of these are around and most are MA70 7MGTEs

7MGTE cams:

Intake 200 duration and 7.44mm lift. Open at 6 deg BTDC and closed at 50 deg ABDC
Exhaust 201 duration and 7.44mm lift. Open at 53 deg BBDC and closed at 3 deg ABDC

7MGE cams:

Intake <UNKOWN> duration and 7.44mm lift. Open at 6 deg BTDC and closed at 40 deg ABDC
Exhaust <UNKOWN> duration and 7.44mm lift. Open at 53 deg BBDC and closed at 3 deg ABDC

UK 7MGTE (Pre-facelift)

Displacement:3.0
Aspiration:Single turbo
Power:230bhp @ 5600RPM
Torque:246 ft/lbs @ 4000RPM
Gearbox:5 spd manual or 4 spd auto (R154 or A340E respectively)
Aero:Not available
Additional:Less common than the facelift but but still popular and plenty of torque
Chassis:MA70/1
Bore/stroke:83/91
Compression:8.4:1

UK 7MGTE (Facelift)

Displacement:3.0
Aspiration:Single turbo
Power:232bhp @ 5400RPM
Torque:254 ft/lbs @ 3200RPM
Gearbox:5 spd manual or 4 spd auto (R154 or A340E respectively)
Aero:Not available
Additional:The facelift 7MGTE is common in the UK and is excellent value for money. Manual turbos are arguably the most fun
Chassis:MA70/1
Bore/stroke:83/91
Compression:8.4:1

UK 7MGE

Displacement:3.0
Aspiration:NA
Power:200bhp @ 6000RPM
Torque:188 ft/lbs @ 3600RPM (185 for pre-facelift)

Gearbox: 5 spd manual or 4 spd auto (W58 or A340E respectively)
Aero: Not available
Additional: A capable car but not in the same league as the turbo for performance/ability to tune
Chassis: MA70/1
Bore/stroke: 83/91
Compression: 9.2:1

7MGTE (GT Limited)

Displacement: 3.0
Aspiration: Single turbo
Power: 240bhp @ 5600RPM
Torque: 253 ft/lbs @ 3200RPM (185 for pre-facelift)
Gearbox: 5 spd manual or 4 spd auto (R154 or A340E respectively)
Aero: Available
Additional: Import cars only but the best of a 7MGTE with toys usually only seen on the 1JZ
Chassis: MA70/1
Bore/stroke: 83/91
Compression: 8.4:1

Turbo-A

Displacement: 3.0
Aspiration: Single turbo
Power: 263bhp @ 5600 (or 267?)
Torque: 264 @ 4400
Gearbox: R154
Aero: Not available
Additional: Only 500 of these were made (to allow rally usage), they only came in hardtop form and had :
- MAP based rather than AFM (D-Jetro system)
- Larger CT26 compressor wheel (marked with an E rather than the usual A)
- Grooved discs as standard
- 70mm throttle body to 65mm plenum (65 to 60 normally)
- Boost increased to 7.8psi
- No 3000 pipe & a metal air box
- Bigger intercooler
- Modified cams (8.9mm lift) and springs to prevent valve float
- Larger actuator
- Bigger injectors
- Turbo a duct in the bumper + oil cooler moved below this
- Stiffer suspension, no TEMS
- Leather as standard, analog Dash, 180KM/h Speedo, 6,500 redline, max boost at +400mmhg
- Black Momo shift knob & Steering wheel, turboA badging, smoked indicators
- Smaller mudguards, black sawblades, silver "TOYOTA SUPRA" emblem at rear
- NO cruise control
- Available only in Black (code 202)
Chassis: MA70/1
Bore/stroke: 83/91
Compression: 8.4:1

Group A turbo

*Displacement:*3.0

*Aspiration:*Single turbo

*Power:*584bhp @ 6800RPM

*Torque:*450 ft/lbs @ 4400RPM

*Gearbox:*R154 casing with Hollinger close-ratio gears

*Aero:*Not available

Additional: The best mk3 you could possibly make:

- NA block (hand picked) + magnesium 9L oil pan and high flow oil pump
- Knife edged steel crank, short skirt Mahle/TRD pistons, prepped rods and full floating pins
- 65mm throttle body, 1000cc injectors and multiple fuel pumps
- Oversized titanium valves (shim under bucket setup + 100lb valve springs)
- Extensive porting (inlet and exhaust manifolds port matched) and re-shaping of the combustion chambers
- MAP/IAT rather than AFM
- CT-26 derivative from the Turbo A with a larger compressor wheel, turbine housing and wheel + smaller wastegate outlet
- Larger intercooler core and piping
- TRD billet differential
- 2.8 turns lock to lock (10.8m turning circle)
- 393 x 32mm vented front discs with 4 pot Harrop callipers (18"x12" wheels)
- 20-30 psi actuator spring rate (ran with 2 bar of boost)
- Cams, intake + exhaust 288 duration+10.8mm lift
- 7,500 rpm redline
- Weighed in at 1340kg with a 110 litre fuel tank
- Titanium fasteners throughout + titanium cam gears

*Chassis:*MA70/1

*Bore/stroke:*83/91

*Compression:*7.6:1

1GFE

*Displacement:*2.0

*Aspiration:*NA

*Power:*135bhp @ 5600RPM

*Torque:*130 ft/lbs @ 4400RPM

*Gearbox:*5 speed manual

*Aero:*Unknown

*Additional:*Fuel efficient engine that can be found in a mk3 (veyr rare)

*Chassis:*GA70

*Bore/stroke:*75/75

*Compression:*9.6:1

<http://www.turbosupras.com/pages/en/.../MA70/ma70.htm>

Transmissions:

R154 ratios:

R 3.18
1 3.251
2 1.955
3 1.310
4 1
5 0.753

Final drive ratio 3.727

W58 ratios:

R 3.768
1 3.285
2 1.894
3 1.275
4 1
5 0.783

Final drive ratio 4.3

A340E ratios:

R 2.393
1 2.804
2 1.531
3 1
4 0.705
5 0.783

Differentials:

7MGTE:

11 drive pinion teeth
200mm ring gear with 41 teeth
29.6mm driveshaft diameter

7MGE:

10 drive pinion teeth
200mm ring gear with 43 teeth
29.6mm driveshaft diameter

Turbo specifications:

CT26:

Turbine:

Outlet diameter: 52mm
Inlet diameter: 68mm
11 steel blades

Housing:

Outlet inner diameter: 60.6mm
Inlet inner diameter: 60mm
Shaft diameter: 10mm

Compressor:

Inlet diameter: 46mm
Outlet diameter: 65mm
Aluminium blades

Housing:

Outlet inner diameter: 61.5mm
Inlet inner diameter: 70mm

Bearing:

Inner diameter: 10.05mm
Outer diameter: 16.9mm
Width: 9mm

Bronze bearing with 6 oil holes per bearing

Wastegate:

Wastegate inner diameter: 25.8mm
Maximum wastegate size inner diameter 28mm
Actuator spring rate: 6.8 psi