

Nissan Skyline



Specifications

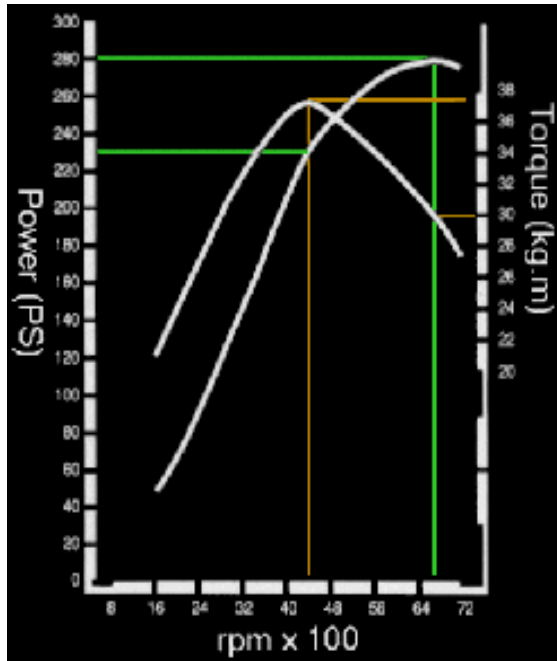
Specification Table

	R33	R33 V-Spec	Nismo 400R
Cd	0.35		0.??
Overall Length (mm)	4,675		4,675
Overall Width (mm)	1,780		1,830
Overall Height (mm)	1,360		1,330
Wheelbase (mm)	2,720		2,720
Track Front (mm)	1,480		1,500
Track Rear (mm)	1,490		1,510
Ground Clearance (mm)	145	135	105
Curb Weight (kg)	1,530	1,540	1,550
Turning Radius (m)	5.7		
Tyres	245/45 ZR17		275/35 ZR18
Engine¹			
Displacement (cc)	2,568		2,771
Bore x Stroke (mm)	86.0 x 73.7		87.0 x 77.7
Max. Power (PS ² @ rpm)	280 @ 6,800		400 @ 6,800
Max. Torque (kgm @ rpm)	37.5 @ 4,400		47.8 @ 4,400
Compression Ratio	8.5:1		
Gear ratios			
1st	3.214		
2nd	1.925		
3rd	1.302		
4th	1.000		
5th	0.752		
Reverse	3.369		
Final drive	4.111		

1: RBxxDETT stands for
 RB = Race Breed.
 xx = Engine capacity to the nearest litre. 20, 25, 26 and 28 are used.
 D = Dual overhead cam.
 E = Fuel injected.
 TT = Twin turbo.

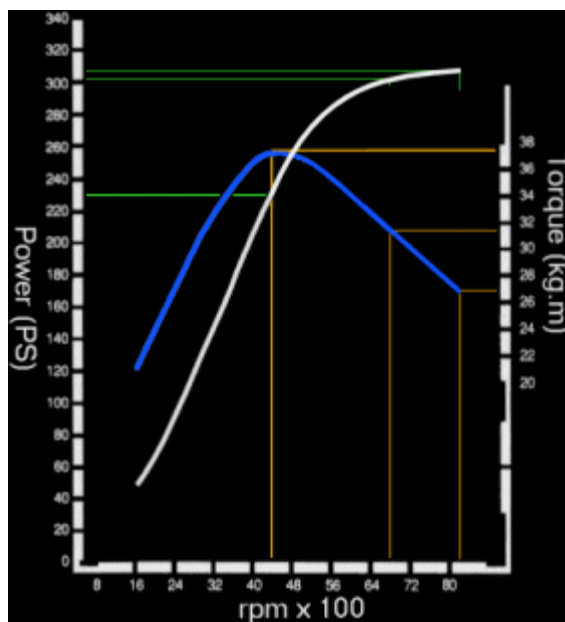
2: PS or Pferdestaerke is the Metric Horsepower.
 1PS = 75 kgm/s.
 1 Brake Horse Power (BHP) = 550 ft-lb/s or 745.7 Watt = 76.0398 kgm/s.
 280 PS = 276 BHP and 340 PS = 335 BHP.
 37.5 kgm = 271 ft-lb
 47.8 kgm = 346 ft-lb

Power



Looking at the R33 26DETT engine, Nissan's own power graph shows torque peaking at 37.5 kgm @ 4,400rpm delivering 230 PS. At the peak power of 280 PS, the graph shows 30 kgm torque @ 6,700 rpm. Note : not 6,800! Now, as $PS = \text{torque} \times \text{rpm} / 716$, this all squares up with the official power and torque numbers.

But, a *Driver* magazine article comparing the torque curves between the Skyline R33 GT-R, and the Mitsubishi Evo 5, actually showed a much, much flatter torque curve for the Skyline more like my impression shown below.



This places the torque at around 31.8 kgm at 6,800 rpm, which would equal about 302 PS. Skylines also rev to about 8,200 rpm, which if we draw a smooth curve, gives a drop to about 26.8 kgm of torque (and fits my driving experience, the GTR is still pulling hard at 8,000 rpm), and means it's producing 307 PS of power at the 8,200 rpm redline.

This all fits the rumours we've heard about peak power but this needs some more analysis as I'm sure the peak power is more like 7,500 rpm.

R33 Differences:

Various body modifications give a better Cd figure of 0.35; though the car does have a larger frontal area than the R32.

A four way adjustable rear spoiler for differing down force (Rear wheel lift coefficient = -0.03 @ 0° to -0.14 @ 18° of wing) but overall Cd is 0.39 with 18° of wing! (0.37 at 12° and 0.36 at 6°).

More torque (+1.5 kgm) due to better intercooler; higher peak boost and different computer control parameters.

Updated two-arm construction to the upper front multilink suspension; rear suspension travel is increased and stiffer anchor points all round.

Yaw rate feedback added to the Super HICAS system.

Brembo brakes as standard and revised ABS control parameters.

Bigger 17x9JJ five spoke wheels shod with Potenza RE0 10 245/45ZR tyres.

Various structural changes to increase the overall stiffness of the body and chassis: A strut tower bar and cross bar at the front and a strut tower bar and strut tower panel in the rear; a panel behind the rear seats; a floor cross bar and triple cross bars. In addition, the side members have been integrated, an outrigger construction has been adopted that connects the side sills and side members, the cross sectional shape of the centre pillars has been enlarged and the thickness of the floor panel has been increased.

Some improvements to weight distribution have been made such as moving the battery to the boot.

For the timid, there's also a driver's air bag and in later cars, a passenger air bag.

The R33 V-Spec:

ATTESA E-TS PRO can redirect up to 50% of the torque to the front wheels within 1/1000th of a second.

Active LSD system splits the torque between the rear wheels.

Even harder, and 10mm lower, suspension.

Experia S-07 tyres. Bridgestone Potenza tyres are fitted to UK spec cars.

Cost: ¥5,290,000 and £50,000 in the UK spec. More than the standard car but seems worth it!

The Nismo 400R:

The Nismo 400R costs ¥12,000,000 or £65,000

RBX-GT2 bored out engine variant redlines at 10,000.

Nismo brakes and intercooler.

10JJ x18" wheels with 275/35 tyres, Bilstein gas shocks and 40mm lower suspension than the R33!

Front, back, left & right Torque split controller.

Special Nismo aero body kit and spoiler.