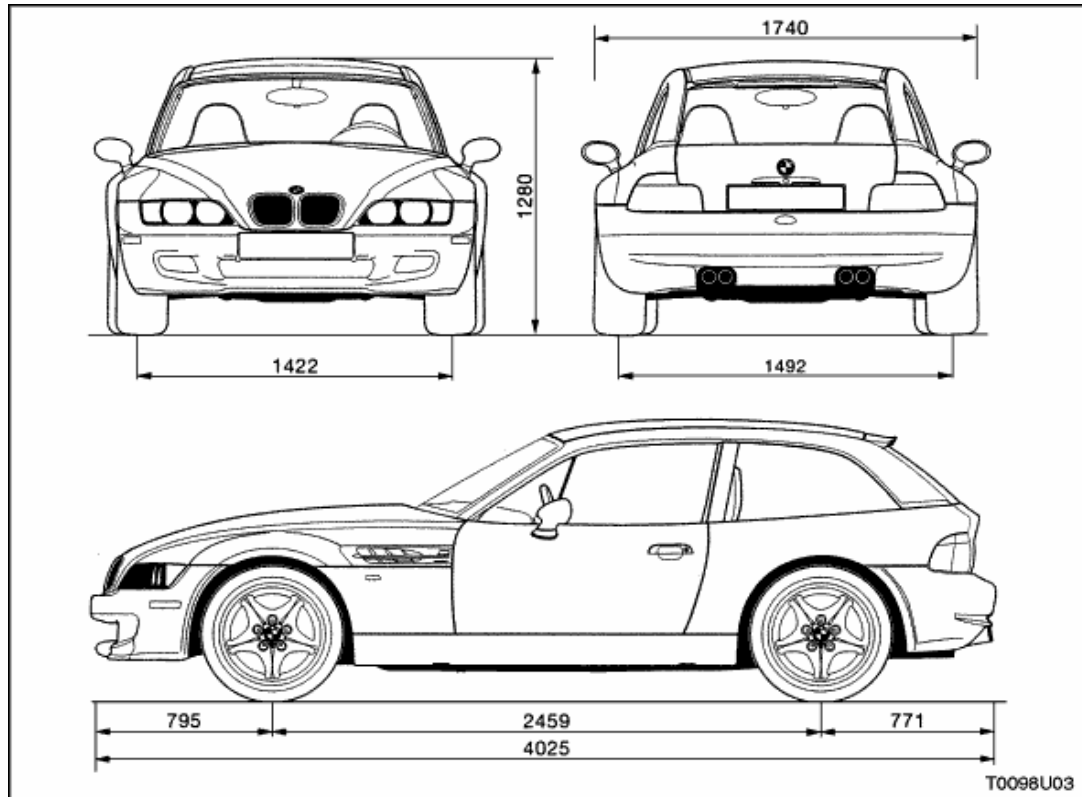


SUBJECT:**Z3 coupe 2.8 and M coupe Introduction**

General Information: The 1999 Z3 coupe and M coupe are exciting new additions to the popular Z3 line. The coupe has all the advantages of the roadster with the added convenience and versatility of a closed body with a rear hatch.

Models: 99 Z3 coupe 2.8 and M coupe



Body: In appearance from the front the Z3 coupe is identical to the roadster.

- The passenger compartment is now enclosed with a metal roof.
- A rear hatch attached to the roof with hinges allows access to the rear cargo area.
- The third brake light is integrated into a rear window wind deflector.
- The rear hatch window has an electric defogger as well as a rear window wiper. It cannot be opened separately.
- The frameless side door windows are different in shape from the roadster and include BMW's "drop down" function for sealing. Please note that the side windows have approximately 15mm of glass showing when they are fully lowered. Do not attempt adjustment.
- A power tilting glass moonroof is optional as well as a range of roof rack accessories.

-- The radio antenna is a 17 inch rubber aerial, raked back and mounted at the rear of the roof.

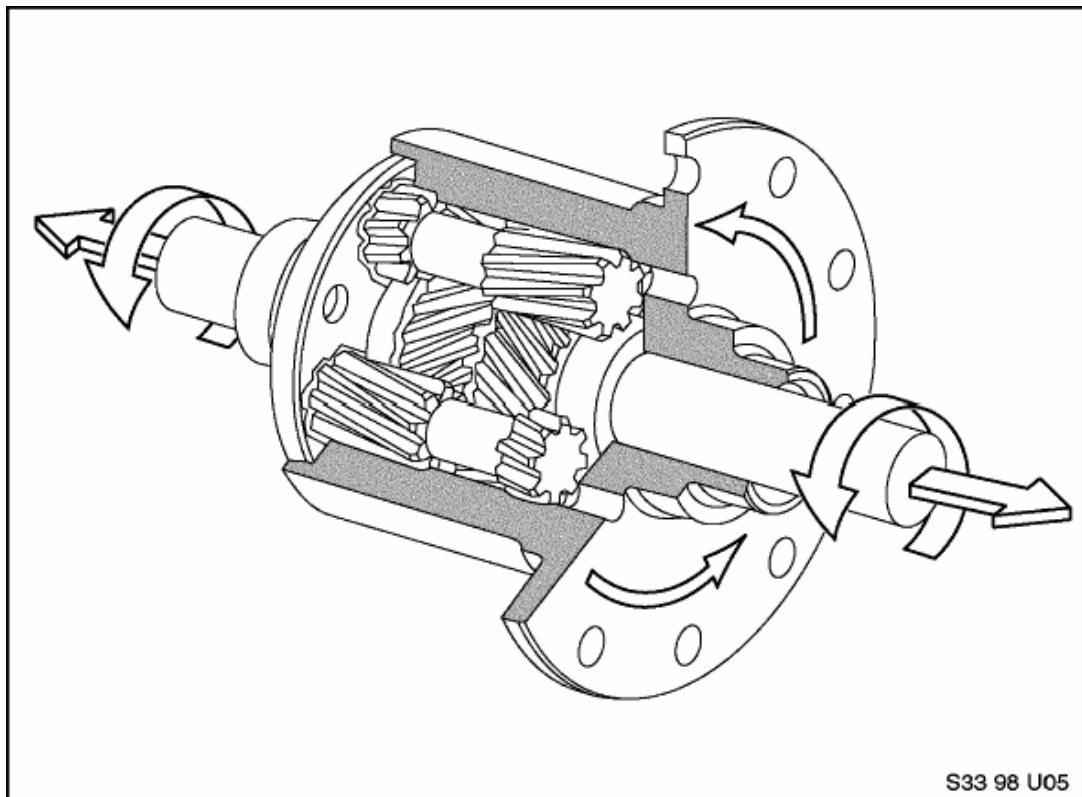
Engine: The Z3 coupe 2.8 utilizes the new M52TU B28 engine with 193Hp (see TRI 11 75 98). The M coupe utilizes the S52 B32 engine with 240Hp.

Transmission: The Z3 coupe 2.8 is available with both the S5D 310Z 5-speed manual or the A4S 270R automatic. The M coupe is only available with the ZF 5-speed manual (see 97 new model update hand-out part A).

Differential/Rear Axle: The Torsen Differential is used by BMW for the first time in the Z3 coupe. It is a limited-slip differential that operates without a multi-disc system.

The name **Torsen** comes from the words **Torque Sensing**.

This limited-slip differential was developed by the American engineer Vernon Gleasman and is manufactured by Zexel in Belgium.



The Torsen differential has a 25% locking value.

Scope of service/repair

The differential's internal components are not serviceable individually. Replace with an exchange unit if repairs are necessary. Parts that remain serviceable include:

-- Drive flange seals, pinion seal, speed pulse generator, and rubber mounting.

The fluid used is a lifetime fill of BMW synthetic SAF-XJ final drive oil (see SIB 33 01 92).

This is the only gear oil approved for top-up or refill. The oil fill capacity for this differential is 1.5 qts. (note:Tightening torque for fill/drain plug is 70Nm).

Design/function

The Torsen differential consists of the following components:

- Differential cage, 4 pairs of planetary gears, 1 pair of sun gears and a thrust washer.

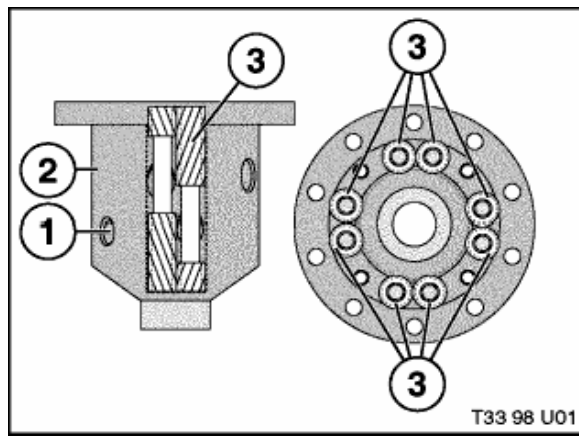
As in a conventional differential, the drive pinion still drives the ring gear which is bolted to the differential cage. The differential cage transmits the power to the planetary gears which now assume the function of the previous differential pinions. The planetary gears are fitted in pairs horizontally in the differential cage.

The differential cage has openings (1) for the purpose of lubricating the internal parts. In order for the planetary gears (3) to fit, the differential cage (2) is machined on the inside so that each pair has its own pocket.

The pair of gears are engaged on both sides when located in the pocket.

During slip-free straight ahead driving the planetary gears are carried by the differential cage and do not rotate themselves.

Four pairs of planetary gears are housed in the differential cage.

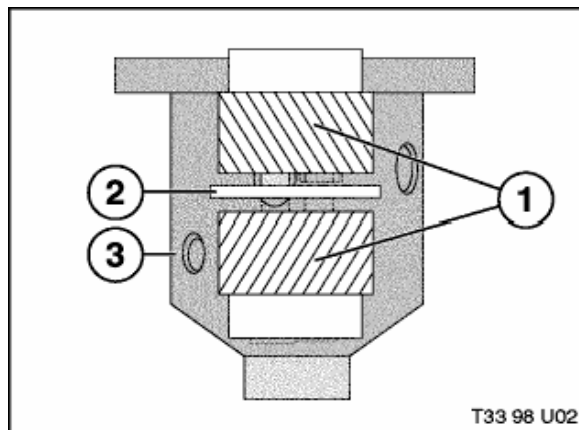


- (1) Differential cage lubrication holes
- (2) Differential cage
- (3) Planetary gear pairs

A pair of sun gears (1) is installed in the center of the differential cage (3).

The sun gears assume the function of the previous side axle gears and are engaged with the planetary gears.

The two sun gears are separated from each other with a thrust washer (2).



- (1) Sun gears
- (2) Thrust washer
- (3) Differential cage

Each planetary gear is engaged on both sides with the corresponding second planetary gear but is engaged only on one side with the sun gear. This arrangement provides the necessary speed compensation between the right and left axle when cornering.

The principle of the Torsen differential is based on internal friction produced between the contact surfaces of the planetaries and sun gears. The pitch of the helical cut planetary gears and the contact surface of the sun gears determine the amount of slip allowed.

Advantages of the Torsen differential include a smoother torque distribution than an on-off clutch type differential and a good compatibility with traction control systems.

The Torsen also has a low noise level and less internal wear due to the absence of clutches, and the use of a planetary gear set.

Suspension:

Suspension systems for the Z3 coupe 2.8 and the M coupe will be virtually the same as the roadster models, with single pivot Macpherson strut front axle and semi-trailing arm rear axle.

The biggest changes will come to the M coupe with specially calibrated shocks, increased front caster, firmer spring rates, and the rear anti-roll bar which has been increased from 18.5mm to 19.0mm.

Brakes:

The brake system for the coupes will be the same as the roadsters.

With the introduction of the M coupe, ASC will be available on both models.

Wheels/Tires:

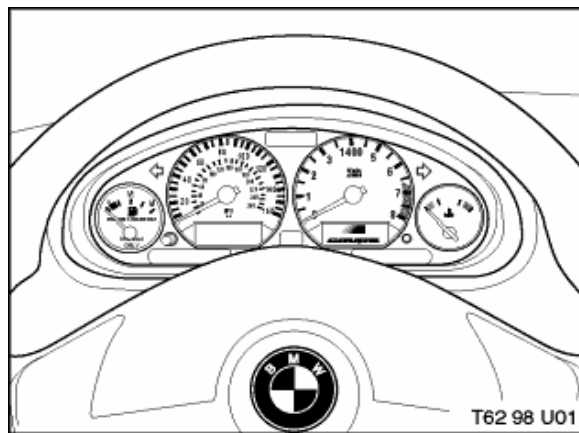
Standard wheels on the Z3 coupe 2.8 will be the same 16in. double-spoke wheels as the roadster. Tires will be 225/50ZR 16 performance radials.

The new optional 17in. radial spoke wheels are 7.5 in. wide at the front and 8.5 in. at the rear. Tire sizes are 225/45ZR-17 and 245/40ZR-17 respectively.

The M coupe has as standard equipment the 17 in. M roadster 5 spoke wheels, 7.5 in. wide and 225/45ZR-17 tires in the front. Rears are 9.0 in. wide with 245/40ZR-17 tires.

Interior:

The Z3 coupe and the M coupe have the same instrument panel as the Z3 2.8 and the M roadster respectively.



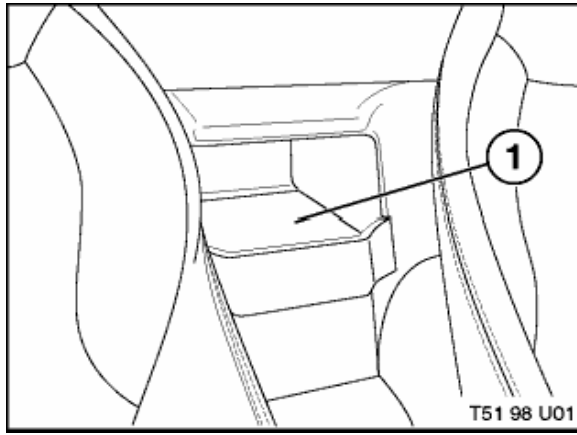
The instrument cluster for the 2.8 has the finish in black with black rings and "coupe" script nameplate. As an option an aluminum finish cluster with black trim rings will be available.

The M coupe (illustration) has the same instrument cluster as the M roadster, black with chrome rings, and the "M coupe" script nameplate below the tachometer.

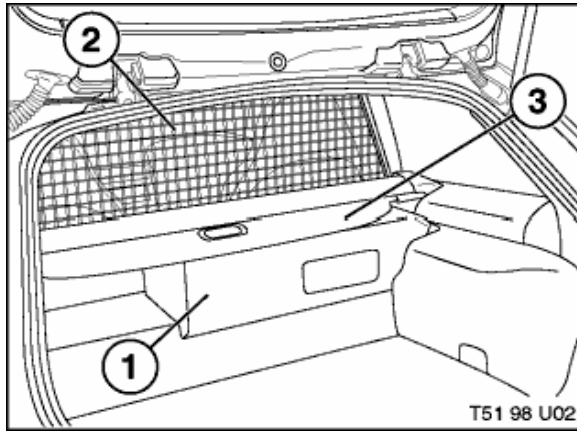
Sport seats are standard on both models.

Interior color schemes are the same as the roadsters; solid colors for the 2.8 and two-tone color

coordinated leather interior for the M coupe. Both feature the higher grade Nappa leather over the roadsters "Oregon" grade.

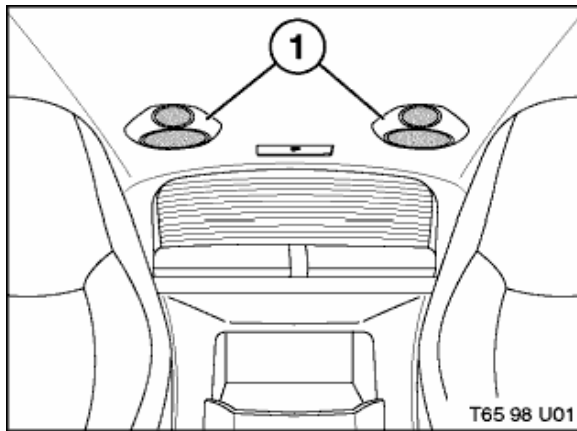


The partition between the rear seats and the cargo area has a forward facing storage box (1).



In the cargo area a carrier box (1) for the CD player is located on the right side behind the seat partition.

A cargo net (2) and luggage cover (3) are also included.



The rear speakers (1) are located in the headliner above the cargo area.

Refer to repair manual section 65 13 100 for removal and installation instructions.

The battery location in the trunk floor along with tool storage is the same as on the roadsters.

Specifications:

General

	2.8	M
Curb weight	1280 kg/2888 lb.	1370 kg/3131 lb.
Weight dist.		
Front/Rear	50.4% : 49.6% manual 50.1% : 49.9% auto.	50.0% : 50.0%
Wheelbase	2446 mm/96.3 in	2459 mm/96.8 in.
Length	4025 mm/158.5 in.	4025 mm/158.5 in.
Width	1740 mm/68.5 in.	1740 mm/68.5 in.

Height	1306 mm/51.4 in.	1280 mm/50.4 in.
Track width		
Front	1413 mm/55.0 in.	1422 mm/55.6 in.
Rear	1494 mm/58.7 in.	1492 mm/58.8 in.
Trunk capacity	206 ltr./7.2 cu. ft.	206 ltr./7.2 cu. ft.
Fuel tank capacity	51 ltr/13.5 gal.	51 ltr/13.5 gal.
Rear axle ratio	3.15:1man 4.10:1auto	3.23:1