

MAINTENANCE

Maintenance and General Information - Operating Fluids

1.0 INTRODUCTION

These operating fluids specifications describe the standards which are necessary for approval and application for BMW automobiles. Operating fluids are arranged in vehicle group category and are approved for all assemblies. Before applying operating fluids, it is important to make sure that the specifications and manufacturing codes on the container conform with those on the enclosed specification list.

BMW of North America has also approved various fluids for use which are not available through the Parts Department, but may be obtained locally.

2.0 CORROSION PROTECTION FOR VEHICLE IN LONG-TERM STORAGE

Location-inside of a building whenever possible or covered parking lot (especially convertibles).

Replace engine oil and filter after engine reaches operating temperature. Run engine several minutes after replacing oil. Engine oil must be replaced every 12 months. Factory engine oil (in new cars) can remain in the engine up to 12 months.

Check/correct electrolyte level in battery cells.

Disconnect battery ground lead to avoid discharging battery through current draw of electrical equipment. Or, switch off battery main disconnect switch (if equipped).

Recharge battery.

Inspect undercoating for damage and repair as necessary.

Inspect wax coating in engine compartment, on engine, underbody and axles. Repair as necessary.

Operate air conditioner monthly for 10 minutes in order to lubricate the seals and the expansion valve. Note: The air conditioner will only work at temperatures above 37°F/3°C.

PRE-DELIVERY CARS

Replace brake fluid if car has been parked outdoors longer than six (6) months.

Fill the vehicle fuel tank with fresh fuel in order to prevent condensation inside the tank (applies only to metal fuel tanks).

Check, and if needed, correct the coolant level and concentration of long-term antifreeze and corrosion inhibitor.

Apply brakes to dry the brake discs of any moisture and spray them with a corrosion inhibitor. Spray the

complete brake assemblies after parking the car at its final storage location.

Do not apply the parking brake. Brake linings could seize when the parking brake is applied for an extended period of time. Rather, engage first gear (manual transmissions) or "park" position (automatic transmissions) to hold vehicle stationary.

Increase inflation pressure on all road tires to 50 psi.

Thoroughly clean the entire car, including underside, engine and engine compartment.

3.0 CONVERSION TABLE

CONVERSION TABLE

Liters	US Gallons	US Pints	Liters	US Gallons	US Pints
0.5	0.132	1.055	8.0	2.112	16.904
1.0	0.264	2.113	9.0	2.376	19.017
2.0	0.538	4.226	10.0	2.640	21.130
3.0	0.792	6.339	11.0	2.904	23.243
4.0	1.056	8.452	12.0	3.168	25.356
5.0	1.320	10.565	13.0	3.432	27.469
6.0	1.584	12.678	14.0	3.696	29.582
7.0	1.848	14.791	15.0	3.960	31.695

Conversion Factors:

Liters in US Gallons x 0.264

US Gallons in Liters x 3.785

Liters in US Pints x 2.113

US Pints in Liters x 0.473

4.0 ALTERNATE UNIVERSAL LUBRICANTS AND WORKSHOP SUPPLIES

ALTERNATE UNIVERSAL LUBRICANTS AND WORKSHOP SUPPLIES REFERENCE

BMW P/N	Description/Application	3M P/N	Wurth P/N	Loctite P/N
81 22 9 400 208 ⁽¹⁾	Lubricant/Contact Cleaner Spray Stops electrical and mechanical faults due to water, moisture, rust, dirt and friction. Colorless, neutral, free of grease and silicone, suitable for		89360/1	24379

all applications.
Examples: Stops
moisture on distributor,
generator, ignition coil,
starter, spark plugs, coils,
relays, contacts, etc.
Prevents metal parts
from corroding. Stops
rubber and plastic parts
from aging prematurely.
Applications: from -50oC
to +150oC.

81 22 9 400 229 ⁽¹⁾	Hand Cleaner	893900	25108
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Removes stubborn stains
and grit without
attacking skin. Contains
special skin protectant.
Does not clog pipes.

81 22 9 400 720 ⁽¹⁾	Molybdenum Disulfide (MOS2) Spray	8876	24378
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Loosens rust, eliminates
squeaking and similar
noises, prevent rust
seizure. Displaces water
on ignition components
to allow quick starting.
Insulates electrical
systems against moisture
and stops corrosion.

81 22 9 407 138 ⁽¹⁾	Stain Remover	89024	
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Removes tar, oil and
grease stains from seat
covers, leather
upholstery and painted
plastic components.

81 22 9 407 174 ⁽¹⁾	Bearing Grease	893530	
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A water repellent high-
pressure grease for
lubricating flywheel gear
rings, starter motor
pinions, etc., and also as
an acid-proof grease for
battery terminal posts.

81 22 9 407 301 ⁽¹⁾	Loctite 574	893574	24018
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Anaerobic, silicone
sealant for aluminum
flange surfaces. Provides

	instant sealing when flanges are assembled.			
81 22 9 407 388 ⁽¹⁾	Adhesive Remover Removes all residual or excess adhesive, sealing and coating compounds, wax, grease or oil films from painted and plastic surfaces, i.e. before installing front or rear spoilers and decor strips.	8984		
81 22 9 407 394 ⁽¹⁾	Loctite 380 Black cyanacrylate adhesive for joining metals, rubber, PVC.	8155	893 4103	38050
81 22 9 407 524 ⁽¹⁾	Contact Cement Powerful adhesive for leather and leatherette, rubber moldings, seats, rubber mats, noise- absorbent materials, etc. Has good heat resistance and does not attack paint. See and .	1357HP		
81 22 9 407 629 ⁽¹⁾	High-Adhesion Lubricant Long-life high-adhesion lubricant for clutch and brake linkages, spring struts, stabilizers, idler levers and pivots.	8878		20029
81 22 9 407 711 ⁽¹⁾	Universal Lube Spray Colorless lubricant with high lubricant content. Eliminates squeaks and grating noises from spring seat bases. Lubricates door stops and locks, seat adjustment mechanism, etc. Resistant to temperatures between- 50°C and 120°C.	8878	893106	20029
(1) *These items are no longer available through BMW NA Parts Department.				

The above alternate suppliers can be contacted below:

ALTERNATE SUPPLIERS REFERENCE

3M	Wurth USA, Inc.	Kem Krest, Inc. (Loctite)
19460 Victor Parkway	93 Grant Street	1919 Superior Street
Livonia, MI 48152	Ramsey, NJ 07446	Elkhart, IN 46515
(800) 521-8180	(800) 526-5228	(800) 285-5917

5.0 APPROVED OPERATING FLUIDS SOURCES**APPROVED OPERATING FLUIDS SOURCES REFERENCE**

Group	Description, S.I. Bulletin	Product Name, Source	Telephone
11	Engine Oil, SAE 5W-50	"Syntec FSX" Castrol Inc., Piscataway, NJ	732-980-9100
11	Oxygen Sensor Lubricant	Bostik "Never-Seez" NSBT-16 Bostik Findley, Middleton, MA	888-603-8558
11	Intake & Vacuum System Leak Detector S.I. Bulletin B 11 03 92 (3500)	"LiquiMoly (Lubro Moly) Motor Lecksucher" 2021 W.A.W.D.	800-477-9293
11	Cold Weld Epoxy	"J-B Weld" J-B Weld Company, Sulphur Springs, TX	903-885-7696
13	Loctite 290 Throttle Housing Fasteners S.I. Bulletin B 13 06 91 (3440)	"Loctite 290" Kem Krest, Inc., Elkhart, IN	800-285-5917
18	Copper Paste Exhaust System Joints S.I. Bulletin B 18 03 89 (1954)	"8945" 3M Automotive Trades Division, Livonia, MI	800-521-8180
23	Synthetic Transmission Fluid	"Mobil SHC 630" Mobil Oil Corporation	800-582-3645
34	Brake Component Lubricant S.I. Bulletins B 34 02 94 & B 34 05 98	Bostik "Never-Seez" NSBT-16 Bostik Findley, Middleton, MA	888-603-8558
36	Loctite 638 (green) Affix wheel hub covers	"Loctite 680" Kem Krest, Inc., Elkhart, IN	800-285-5917
36	Loctite Cleaner 755 Loctite 242 M5 Wheel Covers S.I. Bulletin B 36 03 90 (3182)	"Loctite Cleaning Solvent 755" "Loctite 242" Kem Krest, Inc., Elkhart, IN	800-285-5917
41	Structural Adhesive S.I. Bulletin B 41 01 95 (4150)	"DP420 Epoxy Adhesive with 3M EPX Applicator" 3M Industrial Tapes and Specialties Division, Livonia, MI	800-521-8180
54	Renax GL1	"Poliplex #1" Fuchs	800-323-7755

		Lubricants Corp., Harvey, IL	
61	Rubberized Super Glue	"893 4103" Wurth USA, Inc., Ramsey, NJ	800-526-5228
62	Contact Cleaner Spray IC Acoustic Transmitter S.I. Bulletin B 62 04 92 (3539)	"CRC QD Contact Cleaner Spray 5101" CRC Industries, Warminster, PA	800-272-8963
63	Silicone Gasket Material Turn Signals S.I. Bulletin B 63 05 91 (3313)	"Permatex Form-A-Gasket 6B-80627" Kem Krest, Inc., Elkhart, IN	800-285-5917
64	AC System Disinfectant S.I. Bulletin B 64 08 91 (3373)	"Airguard" J.J. Products, Inc., East Orange, NJ	800-654-2356
64	AC System Treatment	"Airsept" The Auto Doctor, Tucker, GA	404-662-6778
97	Brushable Seam Sealer Seals spot-welded, riveted, or bolted seams and joints. Brushable consistency remains flexible. Retains brush marks appearance.	"893540-U" Wurth USA, Inc., Ramsey, NJ	800-526-5228
97	Body Seal, Beige Underbody Seal, Black Permanent, flexible protection against stone chipping damage. Fast drying and paintable.	"8901021" Wurth USA, Inc., Ramsey, NJ	800-526-5228
97	Seam Sealer, Grey Fast drying, paintable, silicone-free sealant for special spray gun application.	"0892091 U" "0893075 U" Wurth USA, Inc., Ramsey, NJ	800-526-5228
99	Paint Cleaner	"0893228 U" Wurth USA, Inc., Ramsey, NJ	800-526-5228
99	Machine Glaze	"Machine Cleaner 1" and "Hi-Tech Cleaner 2" Meguiar's Inc., Irvine, CA	800-854-8073
99	Paint Sealer	"Mirror Glaze 3" Meguiar's Inc., Irvine, CA	800-854-8073
99	Paint Swirl Remover	"Sealer and Reseal Glaze 7" Meguiar's Inc., Irvine, CA	800-854-8073
		"Hi-Tech Swirl Remover 9" Meguiar's Inc., Irvine, CA	800-854-8073

Paint Carnauba Paste Wax "Hi-Tech Yellow Wax 800-854-8073
26" Meguiar's Inc., Irvine,
CA

MAINTENANCE

Maintenance and General Information - Repair - Z4

00 MAINTENANCE AND GENERAL INFORMATION

00 00 ... BATTERY: CHECKING DISPLAY. IF NECESSARY, RECHARGING BATTERY

IMPORTANT: Observe SAFETY INSTRUCTIONS FOR HANDLING VEHICLE BATTERY .

Vehicles with low-maintenance battery

Check acid level, top up with distilled water if necessary

If level drops below Max. marking, top up distilled water to Max. marking.

00 00 ... BODY: CHECK FOR CORROSION (EXCEPT CAVITIES)

- Visually inspect underbody and attachment parts (brake lines, exhaust system branch, sills) for corrosion and check for damage.
- Check wheel arches for corrosion.
- Open doors and check A-, B- and C-pillars for corrosion, especially door hinges.
- Check door frame for corrosion, folding back door seal slightly if necessary.
- Check outer body for stone impacts, scratches or damage to paintwork and associated corrosion.

IMPORTANT: If damage to the underbody is identified:

Rectify identified faults after consulting with customer and issue a separate invoice.

If damage to the underbody is identified:

- **If necessary, remove panels from underbody.**
- **Check mountings and fixtures and brake and fuel lines for damage, corrosion and correct installation position.**

Rectify identified faults after consulting with customer and issue a separate invoice.

00 00 ... BRAKE LINES AND CONNECTIONS: VISUAL INSPECTION FOR LEAKS, DAMAGE AND CORRECT POSITION

Check brake lines and connections

- Visual inspection in visible area for:
 - Check brake fluid level in expansion tank
 - leaks

- traces of fluid
- damage
- crushing/flattening
- correct routing of brake lines
- correct seating of brake lines in holders

NOTE: **Detected faults must urgently be repaired after consultation with the customer!**

00 00 ... CBS RESET

IMPORTANT: It is always recommended to reset the CBS jobs via the BMW diagnosis system. The CBS service jobs can be reset in the car with the on-board computer button on the direction indicator/main-beam switch. It is only possible to encode the statutory intervals specific to individual countries with the BMW diagnosis system.

CBS reset with the BMW diagnosis system

IMPORTANT: To be able to check and/or correct the vehicle's on-board date properly, the BMW diagnosis system requires the correctly set tester system date!
The jobs may only be reset after the service measure has been completed.
The brake pads can only be reset with a new brake pad wear sensor.

The CBS jobs can be reset via the BMW diagnosis system on the following path:==> Perform vehicle test ==> Service functions ==> Maintenance ==> CBS reset

CBS reset in the vehicle

On the vehicle, maintenance operations can be reset at the instrument cluster. Here, the availability of a service job is reset to 100 % (corresponding to new component). The availability is an internal computing value (not visible to the operator).

NOTE: **A reset is only possible in the car if there is no Check Control message and if the availability of the service job is below 80 %.**
On-board date must be correctly set.
Resetting the scope of maintenance work service job must always be carried out after a maintenance measure has been completed.
The resetting process is interrupted if the time is exceeded or if a terminal is changed.

Switch the ignition on.

Press and hold the trip distance recorder reset button for 10 seconds until the 1st scope of maintenance work appears in the LCD display.

The upper display in the speedometer is illuminated by a service symbol (e.g.: an oil can denotes an oil change).

The lower display in the speedometer indicates the time or distance remaining until the next service (e.g.: 25000).

Set desired maintenance scope with the rocker switch on the direction indicator/main-beam switch.



Fig. 1: Identifying Speedometer/Odometer Indicator
Courtesy of BMW OF NORTH AMERICA, INC.

To reset, press the on-board computer button on the turn-signal/main-beam switch until the word "RESET" appears.

Resetting is confirmed by pressing the onboard computer button for a slightly longer period.



Fig. 2: Display - RESET
Courtesy of BMW OF NORTH AMERICA, INC.

A clock is displayed during resetting.

A check/tick is displayed after "RESET" on successful resetting.

Repeat the procedure for each additional service which is to be reset.



Fig. 3: Display - RESET On Successful Resetting
 Courtesy of BMW OF NORTH AMERICA, INC.

The month and year are displayed in order to reset the statutory vehicle inspection.

Press on-board computer button.

Change month with rocker switch on direction indicator/main-beam switch.

Press on-board computer button to confirm.

Change year with rocker switch on direction indicator/main-beam switch.

Press on-board computer button to confirm.



Fig. 4: Display - Month And Year
 Courtesy of BMW OF NORTH AMERICA, INC.

00 00 ... CHECK WINDSCREEN WASH/WIPE SYSTEM

- Check wipe pattern for smearing; if necessary, replace **WIPER BLADES** after consulting with customer
- The spray jet must emerge uniformly from the spray nozzle, replace **NOZZLE** if necessary and issue a separate invoice

00 00 ... CHECKING COOLANT LEVEL AND CONCENTRATION, CORRECTING IF NECESSARY

- Check connections, hose clamps and hoses for coolant residues and damage such as e.g. cracks.
- Check coolant level in expansion tank. Coolant level must be between Min. and Max. markings. If necessary, top up coolant to max. fill level. If there is no coolant, also identify the cause and notify the customer.
- In event of topping up: Check concentration with antifreeze tester (special tool) in coolant expansion tank.

If necessary, drain off the difference quantity at the coolant drain plug and top up with recommended coolant (issue a separate invoice).

00 00 ... CHECKING HORN, HEADLIGHT FLASHERS AND HAZARD WARNING FLASHERS

Horn

Check function.

NOTE: **In the case of twin-tone fanfares, make sure that both fanfares are working properly.**

Headlamp flasher

Activate headlight flashers, check high-beam headlights and blue indicator lamp in instrument cluster for correct operation.

Hazard-warning system

Check function.

NOTE: **After consultation with the customer, rectify faults and issue a separate invoice.**

00 00 ... CHECKING INSTRUMENT AND INDICATION FIELD LIGHTING, HEATER BLOWER

Instrument lighting

Check function of instrument and indicator/warning lamps.

Indication field lighting

Check function of light switches; dimmer; controls; heater/air conditioning; rear window demister; radio; (depending on equipment) on-board computer; power windows; electric sunroof; fog lamp.

Heating

Check function of all blower stages, air distribution and air outlet.

NOTE: After consultation with the customer, rectify faults and issue a separate invoice.

00 00 ... CHECKING LIGHTING SYSTEM

- Check lighting system for correct operation:
 - Check headlights, rear lights and associated telltale/indicator lamps
 - Check headlight adjustment
 - Check side lights, parking lights, dipped-beam and main-beam headlights for correct operation
 - Check headlight flasher for correct operation
 - Check signal horn
 - Check left/right direction indicators and hazard warning system for correct operation
 - Check brake lights for correct operation
 - Check reversing lights and license plate lights for correct operation
 - Check front and rear fog lights for correct operation
 - Check interior lights (assembly: interior lights, footwell lights, luggage compartment lights, glovebox light) for correct operation
 - Check instrument and indication field lighting

00 00 ... CHECKING ROADWORTHINESS (TEST DRIVE)

Checking roadworthiness

- Take vehicle for a test drive, checking service and parking brakes in the process
- For vehicles with rear disc brakes, **BRAKE IN PARKING BRAKE AS INSTRUCTED**
- **CHECK FUNCTION OF PARKING BRAKE**
- Check steering for play, ease of movement and directional stability
- Check clutch for problem-free disengagement and non-spasmodic driving off at normal operating temperature
- Visually inspect shock absorbers for leaks
- Check indicator/warning lamps and Check Control system for correct operation
- Check due date for statutory roadworthiness and exhaust emission tests and advise customer of test dates

00 11 237 CHECKING/TOPPING UP FLUID LEVEL IN AUTOMATIC TRANSMISSION (GA6HP19Z)

IMPORTANT: Use only the approved **AUTOMATIC TRANSMISSION - OPERATING FLUIDS** . Failure to comply with this requirement will result in serious damage to the automatic transmission!

Installation:

Tighten down filler plug using

1. Hexagon wrench 8 A/F
2. Torque wrench
3. Socket 8 A/F

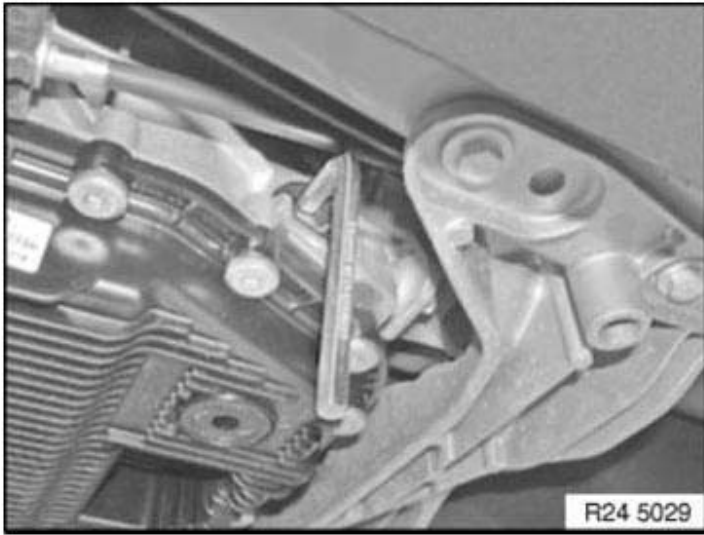


Fig. 5: Tightening Filler Plug
Courtesy of BMW OF NORTH AMERICA, INC.

Topping up transmission fluid after a repair

Stand vehicle on a level surface and secure against rolling off.

Undo filler plug (1).

Installation:

Replace sealing ring.

Top up transmission fluid until it emerges from filling orifice.

Start engine.

Replenish transmission fluid until it emerges from filling orifice.

Screw in filler plug (1).

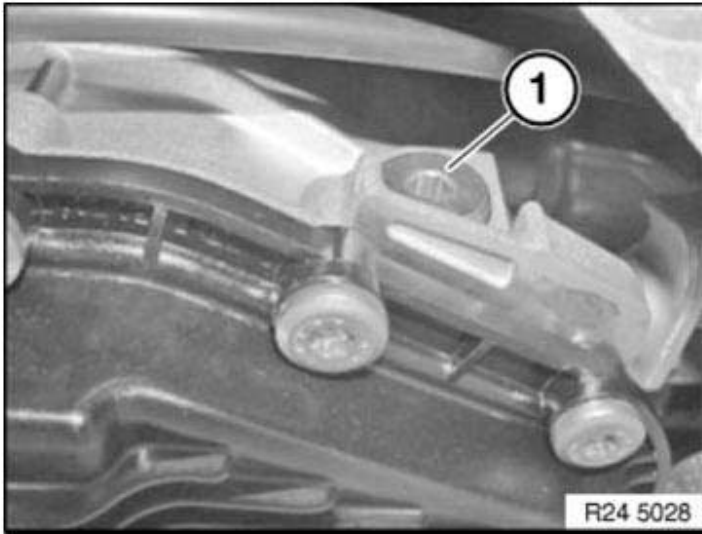


Fig. 6: Identifying Filler Plug
Courtesy of BMW OF NORTH AMERICA, INC.

Tightening torque: **24 11 7AZ** .

Press brake pedal to floor and shift through gears 1 to 6 several times at idle speed. Then shift selector lever to "P" position (Park).

Then check fluid level.

Checking fluid level

- Connect BMW Diagnosis and Information System (DIS) or BMW MoDiC to car.
- Call up Service functions (drive).
- Carry out fluid level check in accordance with instructions.

00 11 ... CHECKING/TOPPING UP OIL LEVEL IN REAR DIFFERENTIAL

WARNING: **DANGER OF POISONING** if oil is ingested/absorbed through the skin!
RISK OF INJURY if oil comes into contact with eyes and skin!

IMPORTANT: Risk of damage!

To avoid serious damage to the rear differential, it is essential to use **REAR AXLE - OPERATING FLUIDS** in the rear differential.

Undo oil filler plug (1).

Tightening torque **33 11 2AZ** .

Check oil level.

If necessary, pour in rear differential oil up to lower edge of opening for oil filler plug (1).

Installation:

Replace oil filler plug (1) with O-ring.

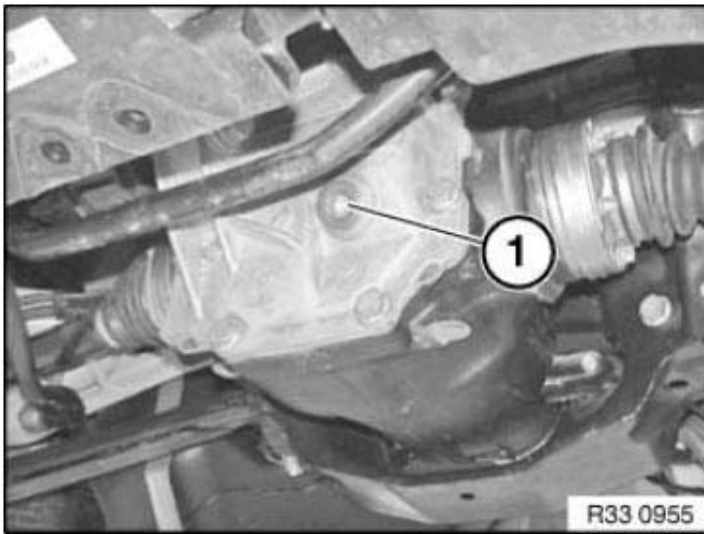


Fig. 7: Identifying Oil Filler Plug
Courtesy of BMW OF NORTH AMERICA, INC.

00 DANGER OF POISONING IF OIL IS INGESTED/ABSORBED THROUGH THE SKIN

Danger of poisoning!

Ingesting oil or absorbing through the skin may cause poisoning!

Possible symptoms are:

- Headaches
- Dizziness
- Stomach aches
- Vomiting
- Diarrhoea
- Cramps/fits
- Unconsciousness

Protective measures/rules of conduct

- Pour oil only into appropriately marked containers
- Do **not** pour oil into drinking vessels (drinks bottles, glasses, cups or mugs)
- Observe country-specific safety regulations

First aid measures

- Do not induce vomiting.

If the person affected is still conscious, he/she must rinse out their mouth with water, drink plenty of water and consult a doctor immediately.

If the person affected is unconscious, do not administer anything by mouth, place the person in the recovery position and seek immediate medical attention.

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If the person affected is unconscious, do not administer anything by mouth, place the person in the

recovery position and seek immediate medical attention.

00 00 ... DIAGNOSTIC BRIEF TEST

Connect diagnostic system to OBD socket.

Switch on ignition.

Carry out vehicle identification.

Click on Brief test.

The brief test is carried out.

NOTE: For motor vehicle diagnostics, the brief test is essential for evaluating possible stored diagnostic trouble codes. In the brief test, the control units are physically identified in succession and their fault memories read out. If the fault memory has been read out, the faults appear in the "Fault pattern selection" mask in the "Fault memory contents" field. Check identified faults and if necessary rectify these faults after consulting with customer.

00 11.. ... DRAINING/TOPPING UP GEAR OIL IN MANUAL TRANSMISSION

NOTE: Gearbox must be at normal operating temperature.
Gear oil:

- Refer to BMW Service Operating Fluids.

Filling capacities:

- Refer to Technical Data. See TED-TED-TDMUC2300-01B1S3 TRANSMISSION FILLING CAPACITIES or TED-TED-TDMUC2300-01B1S1 TRANSMISSION FILLING CAPACITIES .

Draining gear oil:

- Release oil drain plug (1) and filler plug (2).
- Clean oil drain plug (1) and screw in.

Tightening torque **23 00 4AZ** .

Fill transmission with ATF.

- Pour in gear oil until overflowing.

- Tighten in filler screw (2).

Tightening torque: **23 00 4AZ** .

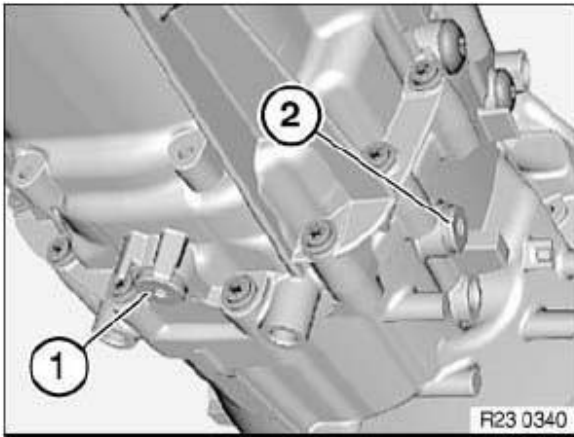


Fig. 8: Identifying Gear Oil Drain Plug And Filler Screw
Courtesy of BMW OF NORTH AMERICA, INC.

64 00 000 INFORMATION ON USING CLEANING AGENT/PAINTS (PERSONAL PROTECTION EQUIPMENT)

WARNING: Use of cleaning agents/paints not compliant with instructions can cause serious injuries or burns!
Handling cleaning agents/paints can trigger allergic skin and respiratory reactions!

IMPORTANT: Observe following instructions:

- Store cleaning agents/paints only in a secure cabinet.
- Keep cleaning agents/paints away from naked flames and other sources of ignition.
- Protect cleaning agents/paints from high temperatures and direct sunlight.
- Always keep an eye bath on hand, change the water regularly (once a month).

IMPORTANT: Observe following instructions before use:

- Manufacturer's instructions (on container/packaging)
- Hazard warnings (on container/packaging)
- Manufacturer's instructions on package insert
- Material safety data sheet of manufacturer

- **Product information in EPC**
- **National market regulations**

IMPORTANT: Observe following instructions during use:

- **Do not eat, drink or smoke while working with these products.**
- **Avoid direct contact with skin and eyes.**
- **Wear personal protective clothing/equipment.**
- **Ensure that all enclosed areas are well ventilated or extract fumes directly.**
- **Immediately change working clothes soiled with cleaning agent/paint.**
- **After finishing work, wash your hands and apply protective skin cream.**

IMPORTANT: Follow hazard warnings and wear personal protection equipment!

First Aid:

- If product comes in contact with eyes, immediately flush with running water for about 10 - 15 minutes. Seek the advice of eye specialist.
- In the event of skin contact and where applicable an allergic skin reaction, clean the affected areas immediately with soap and water and then apply silicone-free skin cream. Seek advice of physician.
- If an adhesive product is swallowed, rinse mouth/parts of mouth thoroughly with running water. Drink 1-2 glasses of water. Do not induce vomiting. Consult a doctor.
- After inhaling vapors ensure ample supply of fresh air. Keep calm, keep respiratory tracks clear and call doctor.

Recycling

Dispose of cleaning agents/paints in a professional manner!

Observe national/country-specific disposal regulations.

36 00 ... INFORMATION/RECOMMENDATIONS AND REPAIR METHODS FOR ALUMINUM WHEELS

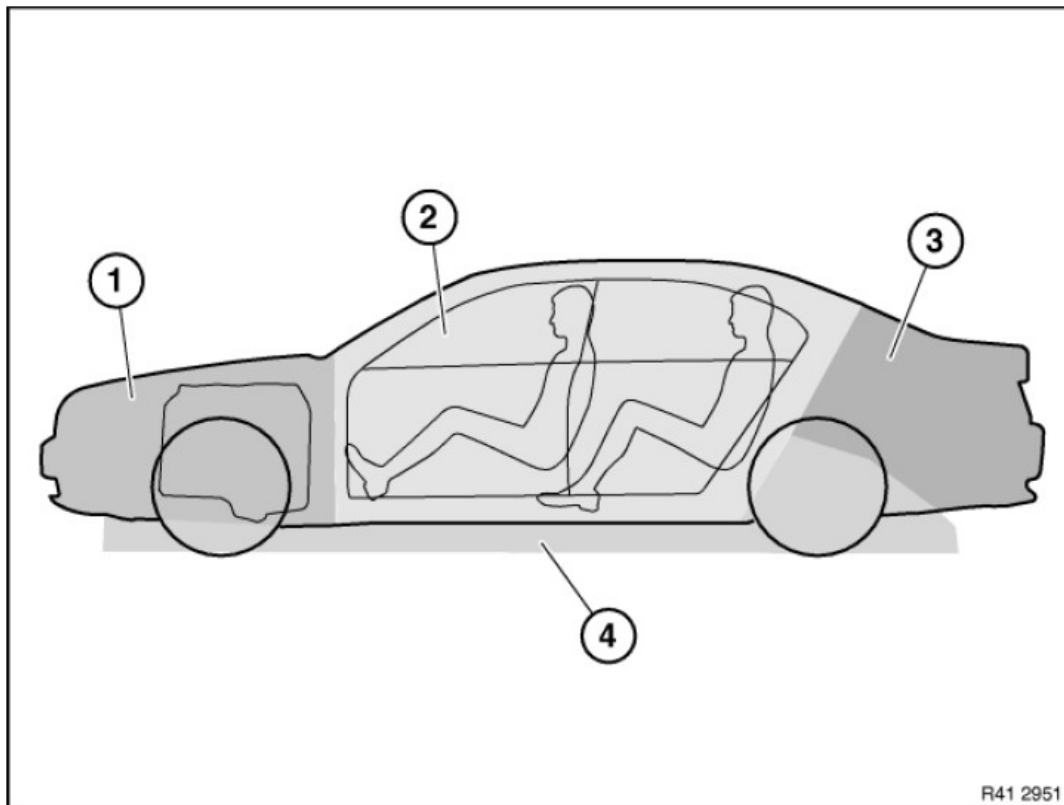
Cosmetic repairs of aluminum wheels using Color System

Recommendations and repair methods for aluminum wheels are described in the ASAP system under the following link:

- Aftersales Assistance Portal
 - Service/Technology
 - Color System

- Repair recommendations for aluminum wheels

00 00 ... INFORMATION/WARNING LABELS



1	Engine compartment	3	Rear end
2	Interior	4	Underfloor

Fig. 9: Identifying Engine Compartment, Interior, Rear End And Underfloor
 Courtesy of BMW OF NORTH AMERICA, INC.

Location: Information/warning label: Country

VARIOUS COMPONENTS CHART

Various components	Replacement identification - spare parts -	US, CDN
Various components	Anti-theft protection	US, CDN

ENGINE COMPARTMENT REFERENCE CHART

Engine compartment (1):

Battery	Battery sticker	Gulf States
Electronics box cover	High-voltage identification	Worldwide
Headlights/engine compartment	Mercury (xenon headlights)	Worldwide
Engine compartment/raw air snorkel	Aluminium screws/bolts	Worldwide
Cylinder head cover	Ignition coil	Worldwide
Engine compartment/end panel	BMW High Performance Oil	US, not CDN
Engine compartment/end panel	Premair	US
Engine compartment	ICES CDN	CDN
Engine compartment/hood/bonnet	Refrigerant	Worldwide
Engine compartment/hood/bonnet	Production date	Australia, Great Britain
Engine compartment/hood/bonnet	Exhaust gas	Australia, US, CDN
Engine compartment/brake booster	Brake fluid	CDN
Engine compartment/hood/bonnet	Exterior paint	Worldwide
Engine compartment/hood/bonnet	BMW genuine spare parts	Worldwide

INTERIOR REFERENCE CHART**Interior (2):**

Windscreen, top right	Airbag - windscreen	Europe
Windscreen	CCC	China
Windscreen	Vehicle identification number	US, CDN, Gulf States, Great Britain&South Africa
I Drive	A/C menu	US, CDN
Passenger compartment/instrument panel	Airbag, instrument panel	US, CDN
Interior/sun visor	Airbag - sun visor	US, CDN
Steering wheel/speedometer	Top speed - 210 km/h - Only with optional equipment and for car rental	Germany

BODY AND COMPLETE VEHICLE REFERENCE CHART**Complete vehicle, bodyshell:**

B-pillar	Airbag symbol (front passenger)	Worldwide (not US and CDN)
B-pillar	Vehicle identification number	Brazil
B-pillar	Manufacturer's certificate	US, CDN, Gulf States
B-pillar	Tyre inflation pressure	Europe, US, CDN, Australia
B-pillar	Runflat indicator	Worldwide
B-pillar	Side airbag	Worldwide
B-pillar	Nameplate	China
B-pillar	EC type plate with model designation, vehicle identification number, colour code	Worldwide, not US, CDN, Japan, Australia, Gulf States
Door, driver's side	Towing	Worldwide

REAR END REFERENCE CHART

Rear end (3):		
Fuel cap/hood/bonnet	Independent heating	Europe
Filling area	Refuelling	US, CDN, Europe
Filling area, instrument cluster (plug)	OBD system	US, CDN
Trim, striker	Nose weight (only with optional equipment)	Worldwide
Trim, cross-member (through-loading)	Lock, through-loading (only with optional equipment)	Worldwide
Luggage compartment cover	Retractable hardtop	Worldwide
Luggage compartment trim panel on side panel	Retractable hardtop	Worldwide
Tool box lid (E60)	HWS fluid	US
Rear lid trim (E61)	HWS fluid	US

UNDERFLOOR REFERENCE CHART

Underfloor (4):		
Vehicle jack	Vehicle jack	Australia
Front axle support	Airbag (basic setting)	Worldwide
Tension strut with hydro-mount	Do not lash down	Worldwide

Key:

US = United States

CDN = Canada

CCC = Car Communication Computer

OBD = On-Board Diagnosis

00 ... LIFTING VEHICLE WITH A LIFTING PLATFORM

WARNING: Danger to life!

Read and follow operating instructions for lifting platform.

Do not exceed carrying capacity of lifting platform.

NOTE: The lifting platform must comply with the relevant statutory accident prevention regulations and be serviced according to the manufacturer's instructions.

IMPORTANT: Risk of damage!

Before driving onto a lifting platform, make sure there is sufficient ground clearance between the lifting platform and the car.

The vehicle may only be raised with the lifting platform at the four jacking

points.

IMPORTANT: Risk of damage!

Align support plates (2) of lifting platform arms to jacking points (1) in such a way that no adjoining components are touched and thereby damaged.

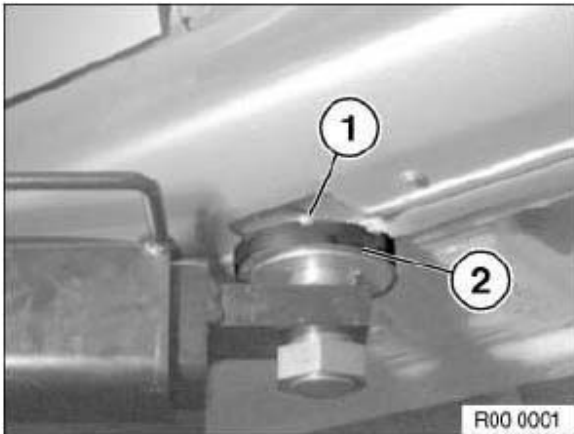


Fig. 10: Identifying Jacking Points And Support Plates

Courtesy of BMW OF NORTH AMERICA, INC.

00 LIFTING VEHICLE WITH A LIFTING PLATFORM

WARNING: Danger to life!

Read and follow operating instructions for lifting platform.

Do not exceed carrying capacity of lifting platform.

NOTE: The lifting platform must comply with the relevant statutory accident prevention regulations and be serviced according to the manufacturer's instructions.

IMPORTANT: Risk of damage!

Before driving onto a lifting platform, make sure there is sufficient ground clearance between the lifting platform and the car.

The vehicle may only be raised with the lifting platform at the four jacking points.

IMPORTANT: Risk of damage!

Align support plates (2) of lifting platform arms to jacking points (1) in such a way that no adjoining components are touched and thereby damaged.

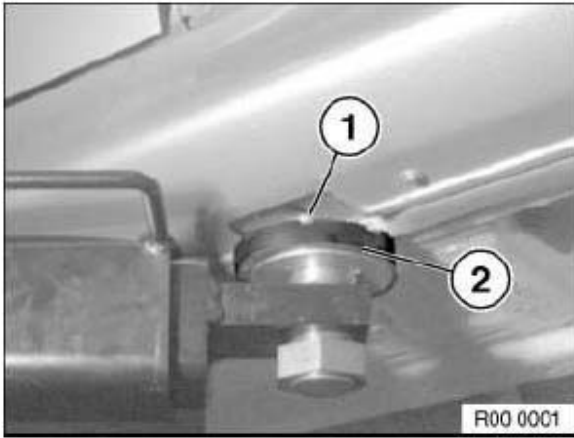


Fig. 11: Identifying Jacking Points And Support Plates
 Courtesy of BMW OF NORTH AMERICA, INC.

00 00 ... MICROENCAPSULATED SCREWS

Screw locking is a means to preventing a screwed connection from being loosened by external influences.

After the screw has been coated with the adhesive, the adhesive remains inactive until it is activated by capsule breakage when the screw is inserted and then cures at room temperature.

Installation:

- Microencapsulated screws (Loctite) must be replaced and may **not** be reused
- Screw connection must be completed within 20 mins. (start of curing)
- Microencapsulated screws must **not** be retightened
- Thread of nut must be cleaned beforehand in event of repeated use

00 ... NOTES ON USING REPAIR INSTRUCTIONS, TECHNICAL DATA, TIGHTENING TORQUES

If there are no cross-references to tightening torques in the repair instructions, the excerpts from the company standard BMW N 600 02.0 See **EXCERPT FROM COMPANY STANDARD BMW GS 90003-2 ;**
MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2 ; M16 AND M16X1.5 -
MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2 ; M14 AND M14X1.5 -
MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2 ; M12 AND M12X1.5 -
MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2 ; M10 AND M10 X 1 - MAXIMUM
TIGHTENING TORQUES ACC. TO BMW GS 90003-2 ; M8 AND M8 X 1 - MAXIMUM
TIGHTENING TORQUES ACC. TO BMW GS 90003-2 ; M6 AND M7 - MAXIMUM TIGHTENING
TORQUES ACC. TO BMW GS 90003-2 or M4 AND M5 - MAXIMUM TIGHTENING TORQUES ACC.
TO BMW GS 90003-2 must be observed.

61 00 ... NOTES ON HANDLING WIRING HARNESSES AND CABLES

The following applies in general

To avoid damage, observe the following instructions:

- Avoid compressive and tensile loads
- To ensure professional repairs, perform repair work only with BMW-approved or recommended special tools and spare parts
- Make sure cables are laid without kinks or abrasions
- Ensure non-contacting routing at sharp-edged body parts; use edge protection if necessary
- Secure additionally laid cables/leads with cable ties

The following additionally applies

Shielded lines (coaxial lines):

IMPORTANT: Shielded lines may not be repaired!

- This may lead to indifferences in noise radiation and interference immunity at contact points in the shield
- To satisfy the requirements of the type approval, it is essential to replace shielded cables completely

Fibre-optic cable:

NOTE: Fibre-optic cables are colored differently as follows:

- Green = MOST (Media Oriented Systems Transport) optical fibre
- Yellow = ISIS (Intelligent Safety Integration System) optical fibre
- Orange=repair fibre-optic cables

IMPORTANT:

- Optical fibres may only reveal one separation point (bridge); renew optical fibre if necessary
- Smallest permissible bending radius is 25 mm
- Avoid effects of heat > or = 85 °

Treating cables and fibre-optic cables See 6113... CUTTING OFF, STRIPPING INSULATION AND CUTTING OPTICAL FIBRES TO LENGTH or 6113... CRIMPING OPTICAL FIBRES

FlexRay:

It is possible to repair the FlexRay. In the event of damage, the cables can be joined with conventional **BUTT CONNECTORS AND HEAT-SHRINK HOSES** .

NOTE:

- FlexRay lines may only reveal one separation point (bride); renew complete line if necessary
- The cable is a twisted cable. If possible, maintain twisted cable after repair

Airbag lines:

REPAIRING AIRBAG CABLES**61 00 ... NOTES ON HANDLING WIRING HARNESSES AND CABLES****The following applies in general**

To avoid damage, observe the following instructions:

- Avoid compressive and tensile loads
- Make sure cables are laid without kinks or abrasions
- Ensure non-contacting routing at sharp-edged body components; use edge protection if necessary
- Secure additionally laid cables/lines with cable straps

The following additionally applies

Shielded lines

Contact points in the shield can cause problems with regard to noise radiation and interference immunity. Consequently, distinctions have to be drawn between the following types:

Coaxial line

- Shielded RTK031 coaxial lines may only be repaired with special crimping tools.

CVBS lines

- CVBS lines may not be repaired.
- CVBS lines must be replaced in their entirety.

HSD lines

- HSD lines may not be repaired.
- HSD lines must be replaced in their entirety.

Optical fibre cable:**NOTE:**

Optical fibre cables are colored differently as follows:

- Green = MOST (M edia O riented S ystems T ransport) optical fibre

- Yellow = ISIS (I ntelligent S afety I ntegration S ystem) optical fibre
- Orange = repair optical fibre cables

- IMPORTANT:**
- Optical fibre cables are permitted to show only one separation point (bridge), replace optical fibre cables if necessary
 - Smallest permissible bending radius is 25 mm
 - Avoid influence of heat > or = 85 °

Treating cables and optical fibre cables

FlexRay:

It is possible to repair the FlexRay. In the event of damage, the cables can be joined with conventional butt connectors.

- NOTE:**
- The line is a twisted cable. If possible, maintain twist in line after repair.

Airbag lines:

Repairing airbag cables

Ribbon cables:

Repairing ribbon cables Z

00 11 259 OIL CHANGE IN REAR DIFFERENTIAL INCL. USED OIL DISPOSAL

- NOTE:** Observe following instructions and torques.

- Replace screw plug with O-ring after releasing.

Tightening torque with O-ring 33 11 2AZ.

WARNING: Risk of burning if exhaust system is touched!

DANGER OF POISONING if oil is ingested/absorbed through the skin!

RISK OF INJURY if oil comes into contact with eyes and skin!

IMPORTANT: Risk of damage!

To avoid serious damage to the rear axle differential, it is essential to use only **REAR AXLE - OPERATING FLUIDS** in the rear axle differential.

- NOTE:** The oil does not need to be changed in rear differentials carrying the "Life-

Time-Oil" sticker.

Only change oil when rear differential is at normal operating temperature.

Recycling

Catch and dispose of emerging differential oil.

Observe country-specific waste-disposal regulations

Open plug (1).

Drain and dispose of differential oil.

Add rear differential oil up to lower edge of opening for screw plug (1); if necessary, refer to Technical Data See **REAR AXLE FINAL DRIVE** or **REAR AXLE FINAL DRIVE** for necessary fill quantity.

Replace screw plug.

Tightening torque **33 11 2AZ** (with O-ring).

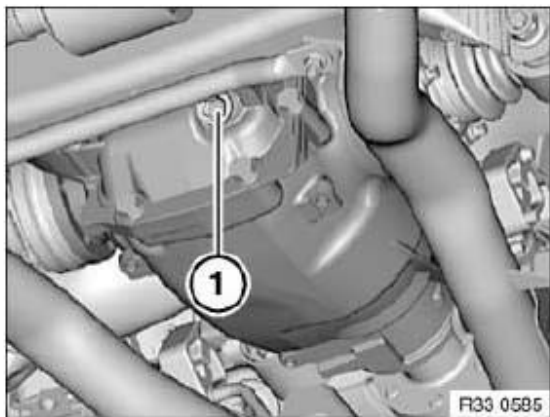


Fig. 12: Identifying Rear Differential Oil Screw Plug

Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... POSITIONING OF MULTITRAILER HOOD FOR MAINTENANCE AND REPAIR WORK

IMPORTANT: At least two persons are needed to install and remove the hood from the platform.

Before installing and removing the hood, secure the BMW multitrailer and the entire combination against rolling. For this purpose, use the parking brake and the chocks of the BMW multitrailer.

The hood can also be set up and lowered with the aid of the universal lift available from BMW in conjunction with the roof racks and the hood adapter. Under no circumstances should work of any kind be carried out below the suspended hood.

For maintenance and repair work, raise the hood using a lifting platform. Twin-column lifting platforms, body lifting platforms and twin-stamp underfloor platforms are suitable. The seating plates and areas of the lifting platform must be adjustable according to the dimensions of **Fig. 13**.

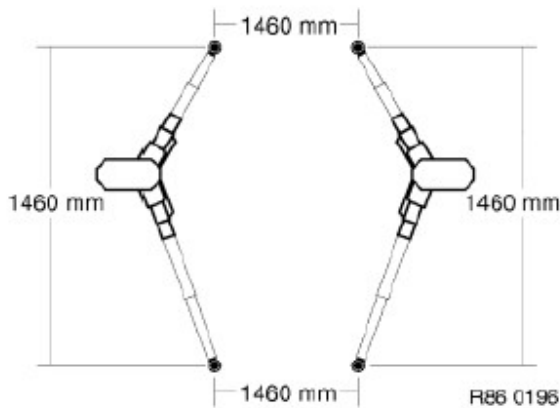


Fig. 13: Identifying Adjustable Dimension Of Seating Plates And Lifting Platform Areas
Courtesy of BMW OF NORTH AMERICA, INC.

The lifting platform must conform to the relevant legal provisions of the accident prevention regulations and be serviced as specified. Comply with the lifting platform operating instructions, in particular the safety instructions and the carrying capacity.

Make sure you adhere to the BMW-recommended work area of 5 x 7 m and to an escape route of 0.6 m between two lifting platforms.

Please comply with the following instructions before raising the hood:

- Raise only when it is unloaded;
- Ensure sufficient clearance between the seating plates/seating areas and the GFP edge of the hood;
- The hood must always be positioned in the middle of the lifting platform.

IMPORTANT: The hood may only be raised at the pin (1). Under no circumstances may the hood be raised at the GFP edge of the hood (2). See Fig. 14. Exclusively for removal of pin (1), raise the hood in the GFP area.

Also refer to:

86 21 ... REMOVING CENTERING PIN FROM MOUNTING BRACKET .

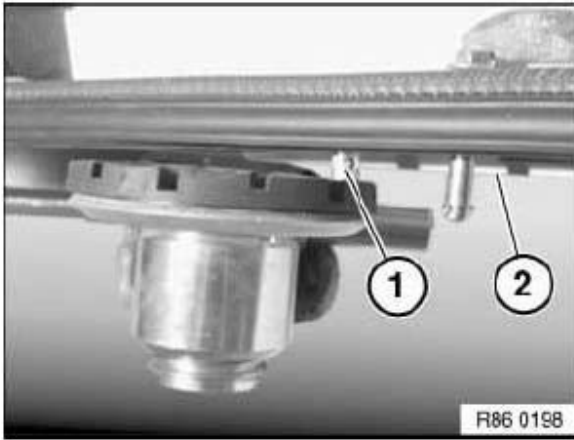


Fig. 14: Identifying Centering Pin Of Mounting Bracket And Hood
Courtesy of BMW OF NORTH AMERICA, INC.

00 .. . PRE-DELIVERY CHECK

Quality assurance by BMW Service

Model:

Vehicle identification number:

(Please tick where appropriate)

If necessary Quick Reference Guide: Discussed and handed over

Included with the vehicle:

Owner's Handbook(s)
Service Record Booklet
Master key/remote control
If necessary - spare key

The vehicle document case is left in

the vehicle:

Glove box
Storage box
Luggage compartment

I hereby confirm that I have received the vehicle in perfect condition.

.....
Place and date

.....
Signature of vehicle owner

Fig. 15: Pre-Delivery Check Sheet

Courtesy of BMW OF NORTH AMERICA, INC.

Pre-delivery check by BMW Service

Scopes of inspection: To be kept with the workshop documents

The following work must be carried out on the vehicle by BMW Service prior to delivery.

*** Denotes optional extra or national-market version. Observe possible changes in this regard.**

Model:
Vehicle identification number:

Battery master switch*	Not OK	OK
Removal and connection, carry out following scopes if necessary	☐	☐
Power windows regulator*: Initialise system	☐	☐
Glass sunroof*: Initialise system	☐	☐
Accessory items	Not OK	OK
Install	☐	☐

Fig. 16: Pre-Delivery Check Sheet (1 Of 5)
Courtesy of BMW OF NORTH AMERICA, INC.

With BMW Group diagnosis system	Not OK	OK
Carry out "CBS pre-delivery check" in the Service Function path under Maintenance	☐	☐
Deactivate transportation mode	☐	☐
Reset average mileage/kilometres driven	☐	☐
Enter first registration	☐	☐
Set on-board date	☐	☐
Set statutory inspection dates*	☐	☐
Enter service telephone numbers	☐	☐
Check battery, observe notes in tester, charge battery if necessary	☐	☐
Delete fault memory	☐	☐
Carry out vehicle test, eliminate faults if necessary	☐	☐
Engine compartment	Not OK	OK
Check for cleanliness	☐	☐
Washer fluid reservoir	Not OK	OK
Check fluid level and top up if necessary, where required with antifreeze additive	☐	☐

Fig. 17: Pre-Delivery Check Sheet (2 Of 5)
Courtesy of BMW OF NORTH AMERICA, INC.

Labels	Not OK	OK
Attach label for BMW Group Mobile Service	☐	☐
Body, interior equipment, underbody	Not OK	OK
Check for transportation damage	☐	☐
Spring blocker*	Not OK	OK
Remove	☐	☐
Tyres	Not OK	OK
Check inflation pressures; if provided, also compact or spare wheel	☐	☐
Initialise Run Flat Indicator	☐	☐
Winter tyres*	Not OK	OK
Attach V - max. sticker	☐	☐
Service Record Booklet	Not OK	OK
Stamp pre-delivery check / enter vehicle identification number	☐	☐
Include documents (glove box / storage box / luggage compartment)	Not OK	OK

Fig. 18: Pre-Delivery Check Sheet (3 Of 5)
Courtesy of BMW OF NORTH AMERICA, INC.

Owner's Handbook	☐	☐
Service Record Booklet	☐	☐
Contact booklet	☐	☐
BMW Group Mobile Service booklet	☐	☐
Include BMW key or remote control (make note of number)	☐	☐
Indicator/warning lights and Check Control	Not OK	OK
Check for incorrect display and eliminate faults if necessary	☐	☐
Navigation	Not OK	OK
If necessary, install navigation road map(s)	☐	☐
BMW TeleServices	Not OK	OK
Activated Yes / No	☐	☐
Service and parking brake	Not OK	OK
Transport and immobilisation periods of 3-6 weeks		
Check for correct operation	☐	☐

In event of transportation and immobilisation periods of more than 6 weeks

Fig. 19: Pre-Delivery Check Sheet (4 Of 5)
Courtesy of BMW OF NORTH AMERICA, INC.

Brake in	☐	☐
Interior mirror with digital compass*	Not OK	OK
Calibrate system	☐	☐
Optional equipment	Not OK	OK
Check for completeness and correction function	☐	☐
Preservation, cleaning	Not OK	OK
Remove transportation lock	☐	☐
Dewax and clean vehicle as prescribed	☐	☐

.....

Date	Mechanic	Workshop Supervisor
------	----------	---------------------

Fig. 20: Pre-Delivery Check Sheet (5 Of 5)
Courtesy of BMW OF NORTH AMERICA, INC.

00 00 612 PRELIMINARY CHECK PRIOR TO ROADWORTHINESS TEST

- Preliminary check prior to roadworthiness test:
 - Check headlight adjustment
 - Visually inspect steering system
 - Visually inspect axles, suspension, springs, anti-roll bar, vibration damper, axle damping, if necessary air suspension
 - Visually inspect silencers

00 00 ... RAISING BMW MULTI-TRAILER

CAUTION: Twin-strut underfloor platforms and twin-pillar lifting platforms are

suitable for raising the BMW multi-trailer.

Lifting platforms with drive-on surfaces are not suitable for raising in order to carry out maintenance and repair work.

The lifting platform must comply with the relevant statutory accident prevention regulations and be serviced according to the manufacturer's instructions. It is essential to follow the lifting platform operating instructions, in particular the safety instructions and carrying capacity!

Make sure you adhere to the BMW-recommended work area of 5 x 7 m and to an escape route of 0.6 m between two lifting platforms.

Before raising the BMW multi-trailer, please observe the following points:

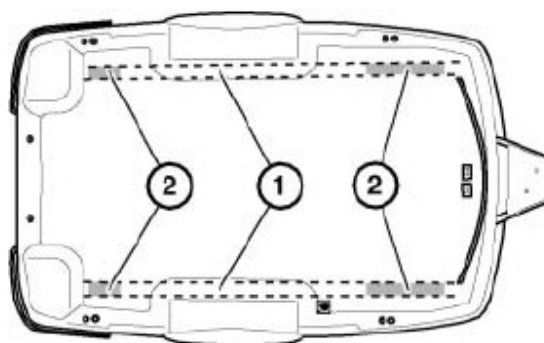
- Raise the trailer only when it is unloaded
- Remove a supplied loading ramp from the loading ramp frame so that all chassis areas of the BMW multi-trailer are freely accessible
- There must be sufficient clearance between the carrier arms/flat girder bridges and the GFK aprons or the front guard of the BMW multi-trailer
- The BMW multi-trailer must always be positioned in the middle of the lifting platform.

CAUTION: You will need special additional supports for the lifting platform in order to bridge the difference in height between longitudinal member and lower edge of GFK side apron or front guard of the BMW multi-trailer. The minimum height of the additional supports is 145 mm. Use only the additional supports approved by the platform manufacturer or specified in these repair instructions.

You will find appropriate examples in the repair instructions for the majority of lifting platforms present in BMW workshops. For lifting platforms that are not named, the relevant manufacturers will offer you appropriate additional supports. Please contact directly the manufacturer of the lifting platform used in your dealership.

CAUTION: The BMW multi-trailer may only be raised by its longitudinal members. Do not under any circumstances raise the BMW multi-trailer by the GFK aprons. Make sure the additional supports bear the longitudinal members over their entire width and no attachments or wiring harnesses are touched or jammed. Check the securing equipment of the additional supports for correct seating. Under no circumstances should any work be carried out underneath the BMW multi-trailer if it is not adequately secured against slipping off the lifting platform.

The areas (2) on the longitudinal members (1) marked in the adjacent diagram are the best areas for attaching the additional supports.



R86 0131

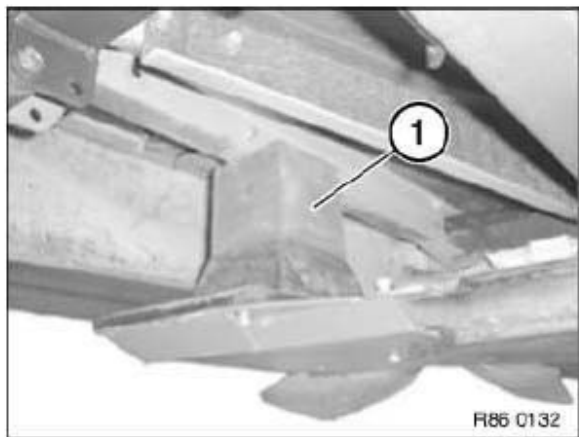
Fig. 21: Identifying Additional Support Areas On Longitudinal Members
 Courtesy of BMW OF NORTH AMERICA, INC.

General notes on using twin-pillar lifting platforms

For the twin-pillar lifting platforms described, the BMW multi-trailer is positioned in the direction of travel on the platform. For lifting platforms which do not create sufficient clearance between disk wheel and carrier arms, move the BMW multi-trailer against the direction of travel onto the platform.

Becker & Sohne twin-strut underfloor platform

The BMW multi-trailer can only be raised if it is supported at right angles to the direction of travel. For raising, use the high additional supports (1) of Becker&Sohne.



R86 0132

Fig. 22: Identifying Additional Supports
 Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Also lash the BMW multi-trailer to the flat girder bridges of the lifting platform. Flag the protruding tow hitch and the drawbar member of the BMW multi-trailer conspicuously so as to prevent injury, e.g. with a red cloth.

MAHA twin-pillar lifting platform

The BMW multi-trailer can only be raised if you use the support plate attachment sleeves for transporters (1). Position the axle of the BMW multi-trailer in the direction of travel in front of the pillars of the platform in order to obtain the specified lifting ranges and to establish sufficient clearance between disk wheel and carrier arms. The long carrier arms raise the front and the short carrier arms raise the rear of the BMW multi-trailer.

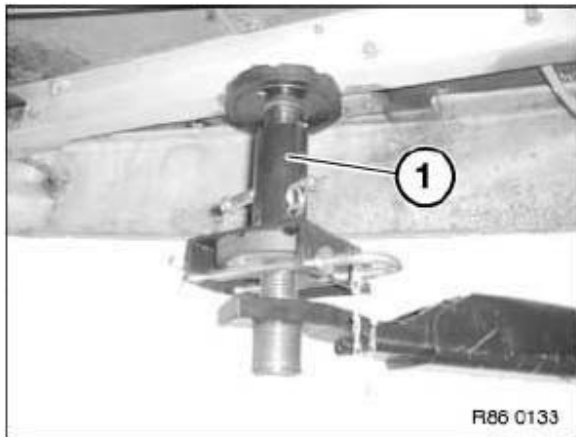


Fig. 23: Identifying MAHA Twin-Pillar Lifting Platform
Courtesy of BMW OF NORTH AMERICA, INC.

Romaico-Lift twin-pillar lifting platform

The BMW multi-trailer can only be raised if you use the 146 mm high attachments (1). Position the axle of the BMW multi-trailer in the direction of travel in front of the pillars of the platform in order to obtain the specified lifting ranges and to establish sufficient clearance between disk wheel and carrier arms. The long carrier arms raise the front and the short carrier arms raise the rear of the BMW multi-trailer.

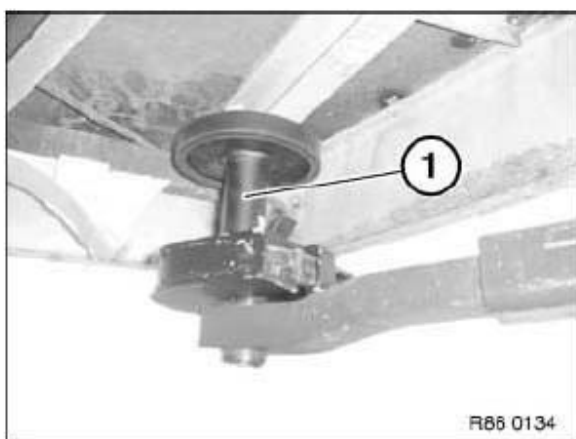


Fig. 24: Identifying High Attachment
Courtesy of BMW OF NORTH AMERICA, INC.

Working pit

The BMW multi-trailer can be serviced or repaired in conjunction with a working pit if the following measures are taken into consideration. The BMW multi-trailer must be secured against slipping/tilting sideways. The drawbar jockey wheel must be firmly secured against rolling.

00 ... RAISING VEHICLE WITH TROLLEY JACK

IMPORTANT: Observe the following trolley-jack-related instructions:

1. Use only BMW-distributed/approved trolley jacks which have rubber plate contact points.
2. Trolley jacks must be regularly serviced and always checked for functional reliability before they are used!
3. Check the rubber plate on the trolley jack prior to each use, replacing if necessary.

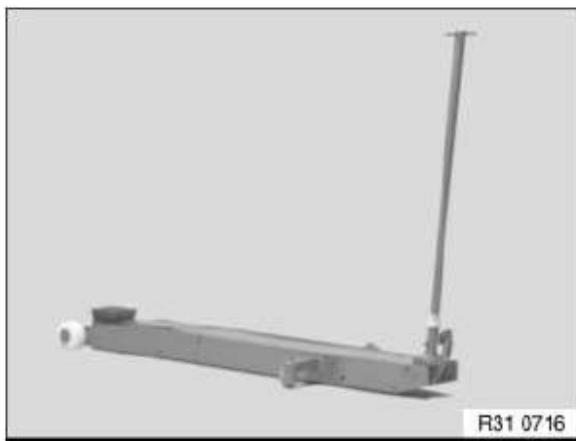


Fig. 25: Identifying Trolley Jack With Rubber Plate
Courtesy of BMW OF NORTH AMERICA, INC.

WARNING: The vehicle may be raised with a trolley jack only at the following jacking points!

1. Car jacking point
2. Side car jacking points
3. Rear differential (**REMOVE HEAT SHIELD**)

Risk of damage: It is not permitted to raise the vehicle at the rear differential cover!

4. Bolting point for rear axle tension struts

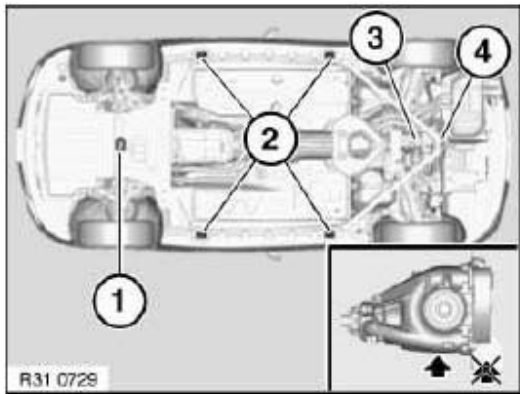


Fig. 26: Identifying Rear Differential With Car Jacking Points
 Courtesy of BMW OF NORTH AMERICA, INC.

11 00 REMOVING AND INSTALLING/REPLACING ACOUSTIC COVER (N52K)

Release screws (1).

Raise acoustic cover slightly and remove towards front.

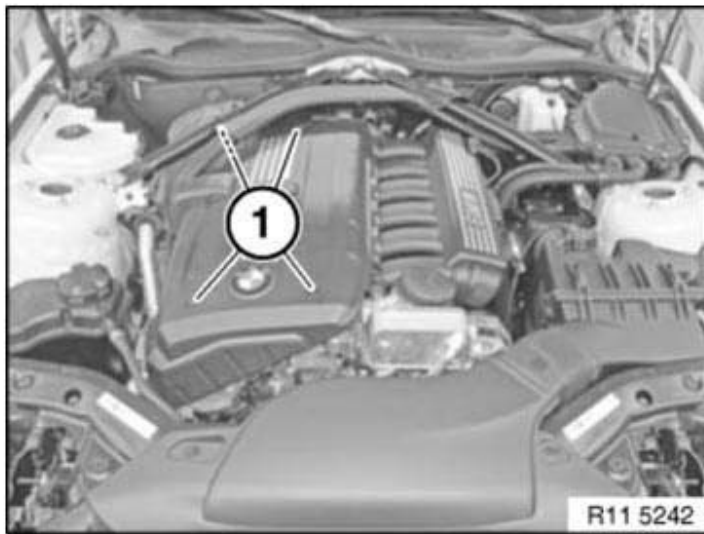


Fig. 27: Identifying Acoustic Cover Screws
 Courtesy of BMW OF NORTH AMERICA, INC.

00 RISK OF INJURY IF OIL COMES INTO CONTACT WITH EYES AND SKIN

Risk of injury!

Contact with eyes or skin may result in injury!

Possible symptoms are:

- Impaired sight
- Irritation of the eyes
- Reddening of the skin
- Rough and cracked skin

Protective measures/rules of conduct

- Wear protective goggles
- Wear oil-resistant protective gloves
- Observe country-specific safety regulations

First aid measures

- **Eye contact:** Rinse eyes immediately with plenty of water for at least 15 minutes; if available, use an eye-rinsing bottle. If irritation of the eyes persists, consult a doctor.
- **Skin contact:** Wash off with soap and water immediately. If irritation persists, consult a doctor.

NOTE: Do not use solvents/thinners.

00 RISK OF INJURY IF OIL COMES INTO CONTACT WITH EYES AND SKIN

Danger of injury!

Contact with eyes or skin may result in injury!

Possible symptoms are:

- Impaired sight
- Irritation of the eyes
- Reddening of the skin
- Rough and cracked skin

Protective measures/rules of conduct

- Wear protective goggles
- Wear oil-resistant protective gloves
- Observe country-specific safety regulations

First aid measures

- **Eye contact:** Rinse eyes immediately with plenty of water for at least 15 minutes; if available, use an eye-rinsing bottle. If irritation of the eyes persists, consult a doctor.
- **Skin contact:** Wash off with soap and water immediately. If irritation persists, consult a doctor.

NOTE: Do not use solvents/thinners.

00 SAFETY INFORMATION FOR WORKING ON VEHICLES WITH AUTOMATIC ENGINE START-STOP FUNCTION (MSA)

WARNING: If the engine hood/bonnet contact is pulled upwards (workshop mode), the information "switch closed" is output. The automatic engine start-stop function is active.
An automatic engine start is possible.

Observe safety precautions when working on MSA vehicles

Before carrying out practical work on the engine, always ensure that the MSA functionality is deactivated so as to prevent automatic engine starting while work is being carried out in the engine compartment.

MSA function is deactivated by

- Deactivate MSA by means of button (1) in passenger compartment
- Open seat belt buckle and driver's door

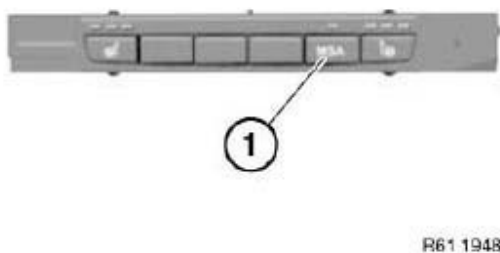


Fig. 28: Identifying MSA Button

Courtesy of BMW OF NORTH AMERICA, INC.

- Open engine bonnet/hood and ensure that engine hood/bonnet contact is not in workshop mode
- Workshop mode

A = 10 mm

- Basic setting (engine hood/bonnet open)

B = 7 mm

To make sure that the engine hood/bonnet contact is at the basic setting, if necessary press the hood/bonnet contact up to the limit position before starting work and slowly release.

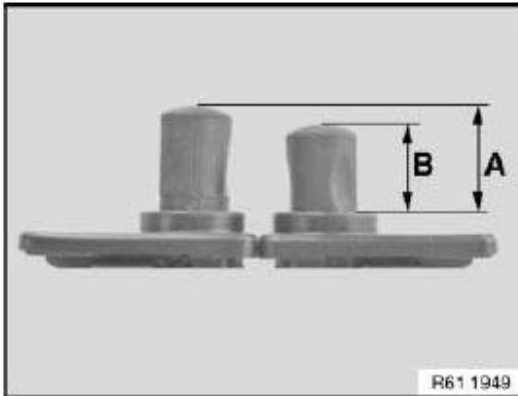


Fig. 29: Identifying Engine Hood/Bonnet Dimension
 Courtesy of BMW OF NORTH AMERICA, INC.

When working with diagnosis tools

- Observe instructions in diagnosis tool

NOTE: For further information on automatic engine start - stop function (MSA):

00 SAFETY INSTRUCTIONS FOR HANDLING OIL

WARNING: DANGER OF POISONING if oil is ingested/absorbed through the skin!
RISK OF INJURY if oil comes into contact with eyes and skin!

Recycling

Observe country-specific waste-disposal regulations.

Measures if oil is unintentionally released

- **Personal precautionary measures:** Danger of slipping! Keep non-involved persons away from the work area. Wear personal protective clothing/equipment.
- **Environmental protection measures:** Prevent oil from draining into drain channels, sewerage systems, pits, cellars, water and the ground.
- **Limiting spread:** Use oil blocks to prevent the surface spread of oil.
- **Cleaning procedure:** Bind and dispose of escaped oil with nonflammable absorbents.

NOTE: Do not flush oil away with water or aqueous cleaning agents.

00 00 ... SEAT BELTS: CHECKING CONDITION OF BELT STRAP, FUNCTION OF INERTIA REEL MECHANISM, LOCKING REEL, BELT BUCKLE

Belt strap, retractor mechanism, belt interlock

Pull out strap and make sure it emerges without jerking.

Belt strapj:

- folding
- unravelling
- pinches
- cracks and tears
- traces of melting
- Check retaining button on tongue of belt strap

for damage and proper installation.

Retract belt strap; here the inertia reel mechanism must retract the strap automatically and without squeaking noises, the last section of the strap may have to be fed in.

Pull out belt strap in short tugs - locking reel must lock.

Belt buckle

The tongue on the belt strap must easily snap into place with an audible click.

When the "Press" button is pressed, the tongue must be ejected from the buckle under spring pressure.

NOTE: **If the seat belt is damaged, you must replace the seat belt completely after consulting the customer; issue a separate invoice for this work.
Instructions on how to proceed, refer to CHECKING AUTOMATIC SEAT BELT .**

00 00 618 SERVICE - BRAKE FLUID

Service - brake fluid

- **CHANGING BRAKE FLUID**
- Reset CBS display See or **0000... CBS RESET** according to factory specification

IMPORTANT: Read and comply with GENERAL NOTES AND INFORMATION on brakes

00 00 618 SERVICE - BRAKE FLUID

Service - brake fluid

- **CHANGING BRAKE FLUID**
- Replace **MICROFILTER** for interior blower.
- Reset CBS display See or **0000... CBS RESET** according to factory specification

IMPORTANT: Read and comply with GENERAL NOTES AND INFORMATION on brakes

00 00 610 SERVICE - ENGINE OIL (PETROL VEHICLES FROM 03/2009)

Service - engine oil

- Change ENGINE OIL AND OIL FILTER
- PARKING BRAKE
 - Brake in and check for correct function
- A/C system or automatic A/C:
 - Change MICROFILTER
- At every 2nd engine oil change
 - Replace SPARK PLUGS
 - Intake silencer: change AIR FILTER ELEMENT . Shorten intervals accordingly for vehicles operated in dusty regions.
- Reset CBS display See or 0000... CBS RESET according to factory specification

00 00 612 SERVICE - FRONT BRAKES

Service - front brakes

- CHANGE BRAKE PADS , clean brake air ducts
- BRAKE DISCS
 - Check surface and thickness
 - If necessary: Replace
- Reset CBS display See or 0000... CBS RESET according to factory specification

NOTE:

- **Clean brake air ducts.**
- **Replace brake discs if they are below the MINIMUM BRAKE DISC THICKNESS and if scoring, heat cracks or thickness difference are detected.**
- **Apply a thin coat of grease to wheel centering on light alloy wheels.**
- **Issue a separate invoice for replacing the brake discs.**

00 00 602 SERVICE - INTAKE MUFFLER

- Change air cleaner element in accordance with Replacing air cleaner element (N52K) .
- Reset CBS display See or 0000... CBS RESET according to factory specification

00 00 616 SERVICE - MICROFILTER

Service - microfilter

- **HEATING/AIR CONDITIONING: CHANGE MICROFILTER/CARBON CANISTER**
- Reset CBS display See or **0000... CBS RESET** according to factory specification

00 00 614 SERVICE - REAR BRAKES

Service - rear brakes

- **CHANGE BRAKE PADS** , clean brake air ducts
- **BRAKE DISCS**
 - Check surfaces and thickness.
 - If necessary: Replace
- **HANDBRAKE**
 - Check operation
- Reset **0000... CBS RESET** according to factory specification

NOTE:

- **Clean brake air ducts.**
- **Replace brake disks if they drop below MINIMUM THICKNESS (refer to Technical Data) and in event of scoring, heat cracks or thickness difference.**
- **Apply a thin coat of grease to wheel centering on light alloy wheels, refer to Service Information Operating Fluids.**
- **Issue a separate invoice for replacing the brake discs and handbrake shoes.**

00 00 622 SERVICE - SPARK PLUGS

Service - spark plugs

- **REPLACE SPARK PLUGS**
- Reset CBS display See or **0000... CBS RESET** according to factory specification

00 00 624 SERVICE - VEHICLE CHECK

Service - vehicle check

- Check **HORN, HEADLIGHT FLASHERS AND HAZARD WARNING FLASHERS**
- Check **INSTRUMENT AND INSCRIPTION LIGHTING AND BLOWER**
- Check **LIGHTING SYSTEM**
- **SEAT BELTS:** Check condition of seat belt strap, function of automatic reel, seat belt locking reel and seat belt buckle
- Check **WINDSCREEN WASH/WIPE SYSTEM**
- Convertible only:

Trigger rollover protection system (Convertible) via diagnostic interface. Warning: open soft top first

- If available: (M) Mobility System: Check expiry date on sealant bottle, replace sealant bottle if necessary
- **TYRES:** Check tread depth, tread wear pattern, external condition and tire pressure and correct if necessary (spare wheel as well)
- Initialize Run Flat Indicator
- Check **BATTERY** (magic eye), if necessary recharge battery (issuing a separate invoice for this work)
 - Check display (magic eye)
 - If necessary: Charge battery
- Steering fluid reservoir: Check oil level.
- Checking **COOLANT LEVEL AND CONCENTRATION** , topping up if necessary
- **WINDSCREEN WASHER SYSTEM:** Check fluid level, top up if necessary
- **BRAKE LINES AND CONNECTIONS:** Check for tightness, damage and correct position
- **UNDERBODY INCL. ALL VISIBLE COMPONENTS:** Check for damage, tightness, corrosion
- **STEERING COMPONENTS:** Check for play, tightness, damage and wear
- **CHECK ROAD SAFETY** (test drive):
 - Brakes
 - Steering
 - Shock Absorbers
 - Transmission
- Reset **CBS DISPLAY** according to factory specification

00 00 105 STANDARD SCOPE OF SERVICE

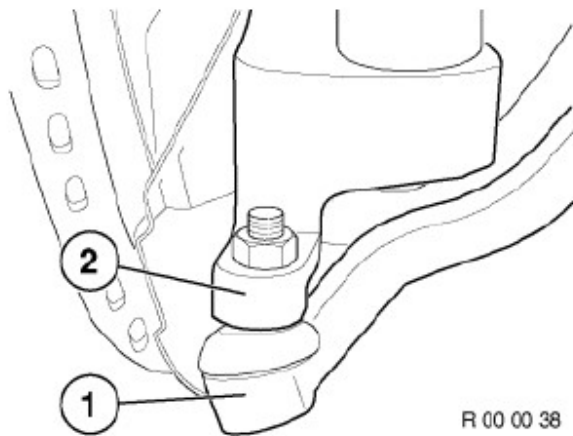
Standard scope of service

- Check Check Control messages
- Check indicator and warning lights
- Reset CBS display See or **0000... CBS RESET**

00 00 ... STEERING COMPONENTS: CHECKING FOR ZERO CLEARANCE, LEAKS, DAMAGE AND WEAR

Checking play

- For hydraulically assisted steering systems, the engine must be running
- For electrically assisted steering systems, the ignition must be on
- Steering wheel: Move steering wheel back and forth and check for play
- Tie rod joint: There must be no play between the track-rod arm (2) and track rod joint (1)



R 00 00 38

Fig. 30: Identifying Track-Rod Arm And Track Rod Joint
Courtesy of BMW OF NORTH AMERICA, INC.

Checking for leaks

The following illustration shows the arrangement of the power steering components and lines.

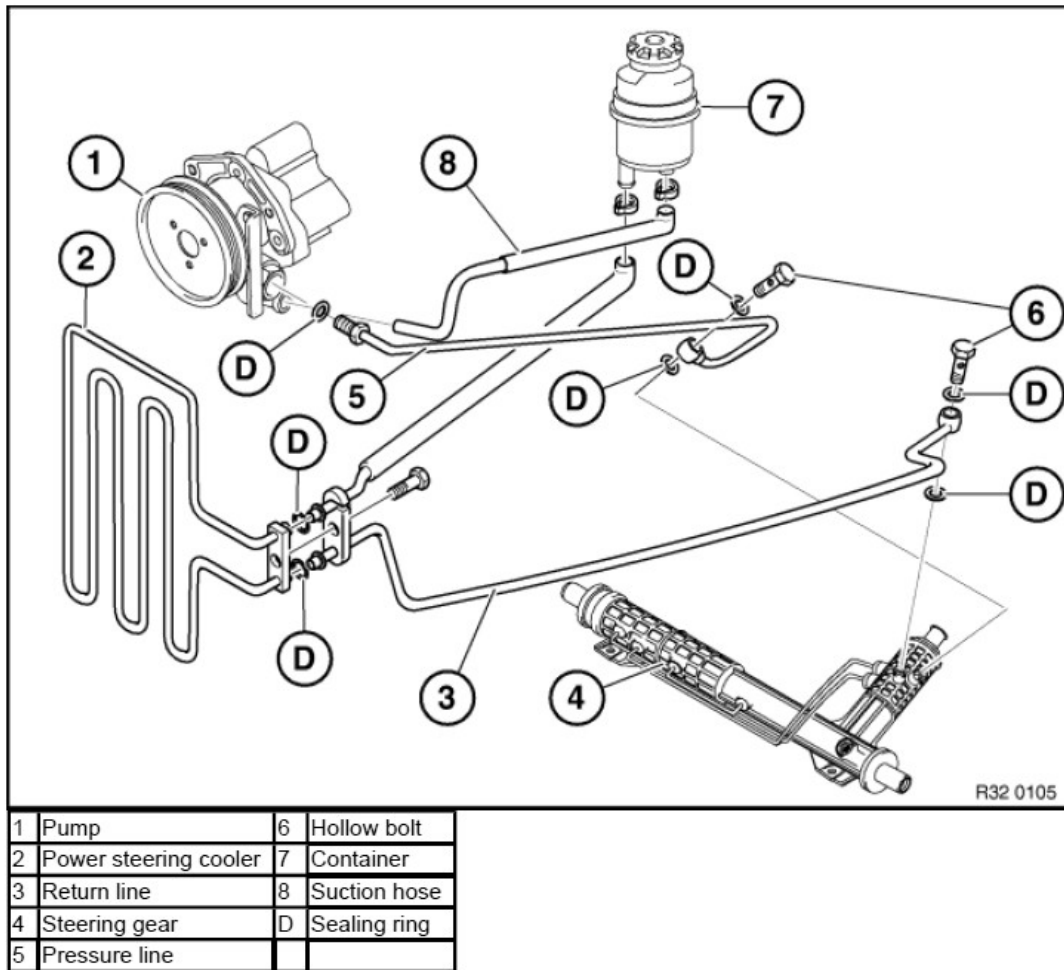


Fig. 31: Identifying Power Steering Components
 Courtesy of BMW OF NORTH AMERICA, INC.

Check all visible connections, hoses, lines and steering gear for traces of fluid.

Checking for damage and wear

Check gaiters, flexible disc and axle and tie rod sleeves for damage (e.g. cracks, holes), for leaks or missing clamping bands on gaiters.

00 SYMBOLS USED AND INFORMATION IN REPAIR INSTRUCTIONS

WARNING: Precautionary rules and measures which protect mechanics and other personnel against injury (including life-threatening injuries).

For example:

WARNING: Risk of scalding!

Only perform this work after engine has cooled down.

IMPORTANT: Specific instructions and precautionary measures which prevent damage to the vehicle or to vehicle parts. Failure to comply with the above will invalidate any warranty claims.

The caution symbol is used in all repair instructions.

However, use of the warning word "Caution!" is not binding in every case.

The notes, instructions and precautionary measures mentioned above retain their validity.

WARNING: High-voltage system - danger to life!

Before beginning work, follow the applicable safety rules and perform the necessary preliminary work.

NOTE: High-voltage symbol for hybrid cars (electrically powered vehicles) E72 and MINI E.

WARNING: High-voltage system - danger to life!

Before beginning work, follow the applicable safety rules and perform the necessary preliminary work.

NOTE: High-voltage symbol for hybrid car (electrically powered vehicle) from F04.

NOTE: Particular information on improved procedures for operation, testing, adjustment and upkeep.
Also indicates the end of a repair section.

Recycling

Observe country-specific waste disposal regulations

General information:

Refers to other instructions: such as e.g.:

Necessary preliminary tasks;

Further instructions: refer to operating instructions for balancing machine.

Replacement:

Carry out programming/encoding.

NOTE: Many electronic control units must be programmed/coded (e.g. when replaced).

Note (previous symbol):

- Connect BMW diagnosis system

Note (symbol for new diagnosis system ISID):

- Connect BMW diagnosis system

IMPORTANT: Read and comply with notes on protection against damage from electrostatic damage (ESD protection).

NOTE: Electronic control units and other electronic components - if handled incorrectly - can be damaged or destroyed by electrostatic discharge.

Special tools required

NOTE: List of special tools needed in these repair instructions.

WARNING: Laser beam!

For example:

Laser beam at adjustment unit. Do not look into the beam!

Note on laser class.

IMPORTANT: Use eye protection for the following operations.

For example:

Fuel can emerge spontaneously at high speed when the fuel delivery line is released!

IMPORTANT: Use eye protection and ear protection for the following operations.

IMPORTANT: Use face protection for the following operations.

**IMPORTANT: Use protective gloves for the following operations.
Avoid skin contact.**

IMPORTANT: Use eye protection and protective gloves for the following operations.

Avoid eye contact and skin contact.

WARNING: Danger of explosion!

First aid measures

Note on first aid measures that need to be administered immediately.

00 00 ... TYRES: CHECKING INFLATION PRESSURE, CORRECTING IF NECESSARY (INCL. SPARE WHEEL), CHECKING EXTERNAL CONDITION, TREAD DEPTH, PATTERN

Checking tire inflation pressure

- Check tire inflation pressure in accordance with information plate on B-pillar
- The inflation pressure in the spare wheel must be 0.5 bar higher than the maximum specified value on the information plate
- Initialize **RUN FLAT INDICATOR**

Check tire condition

- Check tread depth of all tires with tire tread gauge
- Check tire tread surfaces and side walls for incisions and foreign particles such as nails or screws
- Check tire tread pattern for localized flattening and wear on one side; if necessary, carry out wheel/chassis alignment after consulting with customer and issue a separate invoice for this work

NOTE:

- **For details of approved wheel-tyre combinations, refer to KSD CD**
- **For reasons of driving safety, only use tires of the same type and tread pattern on a single vehicle**
- **Inform customer of any incorrect or worn tires**

00 00 ... UNDERBODY INCL. ALL VISIBLE COMPONENTS: CHECKING FOR DAMAGE, LEAKS, CORROSION

- Visually inspect underbody:
 - For leaks (transmission, fuel system, brake components, steering)
 - For correct routing of electrical leads (brake pad sensor, pulse generator)
 - For leaks (shock absorber) and mounting (springs) - rebound
 - Damage to underbody
 - Corrosion on underbody

IMPORTANT: If damage to the underbody is identified:

- **If necessary, remove panels from underbody.**

- Check mountings and fixtures and brake and fuel lines for damage and correct installation position.

Rectify identified faults after consulting with customer and issue a separate invoice.

00 00 ... UPKEEP MEASURES FOR STORED VEHICLES (NEW AND USED CARS) AND VEHICLES TO BE LAID UP AT CUSTOMER'S PREMISES

IMPLEMENTATION REFERENCE CHART

Measure	Vehicles	Implementation
Renew outer skin preservation (new cars must always be stored in preserved condition; preservation/depreservation instructions, refer to Component Group 97)	New cars	every 6 months; Tropical countries every 4 months
Release parking brake	New cars	in general
	Used cars	in general
	Customer cars to be laid up (instructions to customer)	in general
Engage gear or selector lever position "P" for automatic	New cars	in general
	Used cars	in general
	Customer cars to be laid up (instructions to customer)	in general
Check covering of interior equipment	New cars	in general
Increase tire inflation pressure to 3.5 bar	New cars	in general
	Used cars	in general
	Customer cars to be laid up (instructions to customer)	in general
If battery master switch is fitted, switch off	New cars	in general
Charge battery		every 6 weeks batteries disconnected from vehicle

	New cars	electrical system every 12 weeks in general before handover to customer
	Used cars	every 6 weeks batteries disconnected from vehicle electrical system every 12 weeks
	Customer cars to be laid up (instructions to customer)	every 6 weeks batteries disconnected from vehicle electrical system every 12 weeks
Change brake fluid and reset service interval indicator (clock symbol only)	New cars	lay-up periods > 6 months, change before handover of vehicle to customer
	Used cars	lay-up periods > 6 months, change before handover of vehicle to customer
Check convertible top for possible damage	New cars	in general before handover to customer
	Used cars	in general before handover to customer
Park convertibles, if possible, under a roof	New cars	in general
	Used cars	in general
	Customer cars to be laid up (instructions to customer)	in general
Check for damage to paintwork and exterior/interior equipment	New cars	in general before handover to customer
	Used cars	in general before handover to customer
Change engine oil and oil filter when engine is at normal operating temperature	New cars	from 12 months lay-up period before handover of vehicle to customer
	Used cars	from 12 months lay-up period before handover of vehicle to customer
	Customer cars to be laid up (instructions to customer)	from 12 months lay-up period before handover of vehicle to customer

Check coolant concentrate	Used cars	in general
	Customer cars to be laid up (instructions to customer)	in general
Apply hand and foot brakes when dry	New cars	in general
	Used cars	in general
	Customer cars to be laid up (instructions to customer)	in general
Perform surface protection: Vehicle washing with inside cleaning and subsequent preservation of paintwork and chrome. Clean rubber seals on hoods/bonnets, rear lids and doors and apply talc or glycerine. Perform cleaning, preservation and subsequent treatment of engine, engine compartment, underbody, axles and assemblies with BMW-approved materials.	Used cars	in general
	Customer cars to be laid up (instructions to customer)	in general
Switch on A/C system once a month for 10 minutes	Used cars	necessary in order to retain full operational capability of gaskets and expansion valve (omitted in case of R134a refrigerant, identified by rating plate in engine compartment)
	Customer cars to be laid up (instructions to customer)	necessary in order to retain full operational capability of gaskets and expansion valve (omitted in case of R134a refrigerant, identified by rating plate in engine compartment)

00 00 ... VEHICLE DIAGNOSTIC TEST

Connect BMW diagnostic system (ISID) to diagnostic socket.

Switch the ignition on.

Carry out vehicle identification.

Start vehicle test.

The vehicle test is carried out.

NOTE:

The vehicle test is a prerequisite for vehicle diagnosis, since it allows any stored fault codes to be read and a test schedule to be prepared. In the vehicle test, the control units are physically identified in succession and their fault memories read out.

Once the fault memory has been read, all fault memories are displayed in a fault memory list.

Check identified faults and if necessary rectify these faults after consulting with customer.

00 00 ... WINDSCREEN WASHER SYSTEM: CHECKING FLUID LEVEL, TOPPING UP IF NECESSARY

- Top up windscreen washer fluid reservoir, if necessary rear window washer fluid reservoir and (depending on equipment specification) intensive cleaning reservoir up to edge or mark.

IMPORTANT: A pH-neutral BMW window cleaning agent (antifreeze in winter) must always be added to the water.

MAINTENANCE

Maintenance and General Information - Repair - Z4

00 MAINTENANCE AND GENERAL INFORMATION

00 00 ... BATTERY: CHECKING DISPLAY. IF NECESSARY, RECHARGING BATTERY

IMPORTANT: Observe 61 00 ... SAFETY INSTRUCTIONS FOR HANDLING VEHICLE BATTERY .

Vehicles with low-maintenance battery

Check acid level, top up with distilled water if necessary

If level drops below Max. marking, top up distilled water to Max. marking.

Vehicles with maintenance-free battery

IMPORTANT: For information on how to proceed, refer to Battery charging.

Issue a separate invoice if the battery is recharged.

00 00 ... BODY: CHECK FOR CORROSION (EXCEPT CAVITIES)

- Visually inspect underbody and attachment parts (brake lines, exhaust system branch, sills) for corrosion and check for damage.
- Check wheel arches for corrosion.
- Open doors and check A-, B- and C-pillars for corrosion, especially door hinges.
- Check door frame for corrosion, folding back door seal slightly if necessary.
- Check outer body for stone impacts, scratches or damage to paintwork and associated corrosion.

IMPORTANT: If damage to the underbody is identified:

- **If necessary, remove panels from underbody.**
- **Check mountings and fixtures and brake and fuel lines for damage, corrosion and correct installation position.**

Rectify identified faults after consulting with customer and issue a separate invoice.

00 00 ... BRAKE LINES AND CONNECTIONS: VISUAL INSPECTION FOR LEAKS, DAMAGE AND CORRECT POSITION

Check brake lines and connections

- Visual inspection in visible area for:
 - Check brake fluid level in expansion tank
 - leaks
 - traces of fluid
 - damage
 - crushing/flattening
 - correct routing of brake lines
 - correct seating of brake lines in holders

NOTE: **Detected faults must urgently be repaired after consultation with the customer!**

00 00 ... CBS RESET

IMPORTANT: It is always recommended to reset the CBS jobs via the BMW diagnosis system. The CBS service jobs can be reset in the car with the on-board computer button on the direction indicator/main-beam switch. It is only possible to encode the statutory intervals specific to individual countries with the BMW diagnosis system.

CBS reset with the BMW diagnosis system

IMPORTANT: To be able to check and/or correct the vehicle's on-board date properly, the BMW diagnosis system requires the correctly set tester system date!

The jobs may only be reset after the service measure has been completed.

The brake pads can only be reset with a new brake pad wear sensor.

The CBS jobs can be reset via the BMW diagnosis system on the following path: =

=> Perform vehicle test => Service functions => Maintenance => CBS reset

CBS reset in the vehicle

On the vehicle, maintenance operations can be reset at the instrument cluster. Here, the availability of a service job is reset to 100 % (corresponding to new component). The availability is an internal computing value (not visible to the operator).

NOTE: **A reset is only possible in the car if there is no Check Control message and if the availability of the service job is below 80 %.**

On-board date must be correctly set.

Resetting the scope of maintenance work service job must always be carried

out after a maintenance measure has been completed.

The resetting process is interrupted if the time is exceeded or if a terminal is changed.

Switch the ignition on.

Press and hold the trip distance recorder reset button for 10 seconds until the 1st scope of maintenance work appears in the LCD display.

The upper display in the speedometer is illuminated by a service symbol (e.g.: an oil can denotes an oil change).

The lower display in the speedometer indicates the time or distance remaining until the next service (e.g.: 25000).

Set desired maintenance scope with the rocker switch on the direction indicator/main-beam switch.



Fig. 1: Identifying Speedometer And Odometer
Courtesy of BMW OF NORTH AMERICA, INC.

To reset, press the on-board computer button on the turn-signal/main-beam switch until the word "RESET" appears.

Resetting is confirmed by pressing the onboard computer button for a slightly longer period.



Fig. 2: Display Message - RESET
Courtesy of BMW OF NORTH AMERICA, INC.

A clock is displayed during resetting.

A check/tick is displayed after "RESET" on successful resetting.

Repeat the procedure for each additional service which is to be reset.



Fig. 3: Display - Clock During Resetting
Courtesy of BMW OF NORTH AMERICA, INC.

The month and year are displayed in order to reset the statutory vehicle inspection.

Press on-board computer button.

Change month with rocker switch on direction indicator/main-beam switch.

Press on-board computer button to confirm.

Change year with rocker switch on direction indicator/main-beam switch.

Press on-board computer button to confirm.



Fig. 4: Display - Month And Year

Courtesy of BMW OF NORTH AMERICA, INC.

00 00 ... CHECK WINDSCREEN WASH/WIPE SYSTEM

- Check wipe pattern for smearing; if necessary, replace wiper blades See **61 61 ... ADJUSTING LEFT OR RIGHT WINDSCREEN WIPER** or **61 61 041 REPLACING BOTH WINDSCREEN WIPER BLADES** after consulting with customer
- The spray jet must emerge uniformly from the spray nozzle, replace nozzle. See **61 71 015 REMOVING AND INSTALLING/REPLACING A JET NOZZLE IN WINDSCREEN WASHER SYSTEM** . If necessary and issue a separate invoice

00 00 ... Checking coolant level and concentration, correcting if necessary

- Check connections, hose clamps and hoses for coolant residues and damage such as e.g. cracks.
- Check coolant level in expansion tank. Coolant level must be between Min. and Max. markings. If necessary, top up coolant to max. fill level. If there is no coolant, also identify the cause and notify the customer.
- In event of topping up: Check concentration with antifreeze tester (special tool) in coolant expansion tank.

If necessary, drain off the difference quantity at the coolant drain plug and top up with recommended coolant (issue a separate invoice).

00 00 ... CHECKING HORN, HEADLIGHT FLASHERS AND HAZARD WARNING FLASHERS

Horn

Check function.

NOTE: In the case of twin-tone fanfares, make sure that both fanfares are working properly.

Headlamp flasher

Activate headlight flashers, check high-beam headlights and blue indicator lamp in instrument cluster for correct operation.

Hazard-warning system

Check function.

NOTE: **After consultation with the customer, rectify faults and issue a separate invoice.**

00 00 ... CHECKING INSTRUMENT AND INDICATION FIELD LIGHTING, HEATER BLOWER

Instrument lighting

Check function of instrument and indicator/warning lamps.

Indication field lighting

Check function of light switches; dimmer; controls; heater/air conditioning; rear window demister; radio; (depending on equipment) on-board computer; power windows; electric sunroof; fog lamp.

Heating

Check function of all blower stages, air distribution and air outlet.

NOTE: **After consultation with the customer, rectify faults and issue a separate invoice.**

00 00 ... CHECKING LIGHTING SYSTEM

- Check lighting system for correct operation:
 - Check headlights, rear lights and associated telltale/indicator lamps
 - Check headlight adjustment
 - Check side lights, parking lights, dipped-beam and main-beam headlights for correct operation
 - Check headlight flasher for correct operation
 - Check signal horn
 - Check left/right direction indicators and hazard warning system for correct operation
 - Check brake lights for correct operation
 - Check reversing lights and license plate lights for correct operation
 - Check front and rear fog lights for correct operation
 - Check interior lights (assembly: interior lights, footwell lights, luggage compartment lights, glovebox light) for correct operation
 - Check instrument and indication field lighting

00 00 ... CHECKING ROADWORTHINESS (TEST DRIVE)

Checking roadworthiness

- Take vehicle for a test drive, checking service and parking brakes in the process
- For vehicles with rear disc brakes, see **34 00 ... GENERAL INFORMATION ON BRAKING IN NEW BRAKE DISCS/BRAKE PADS**
- **CHECK BRAKES ON TEST STAND**
- Check steering for play, ease of movement and directional stability
- Check clutch for problem-free disengagement and non-spasmodic driving off at normal operating temperature
- Visually inspect shock absorbers for leaks
- Check indicator/warning lamps and Check Control system for correct operation
- Check due date for statutory roadworthiness and exhaust emission tests and advise customer of test dates

00 11 ... CHECKING/TOPPING UP OIL LEVEL IN REAR DIFFERENTIAL

WARNING: DANGER OF POISONING if oil is ingested/absorbed through the skin!

RISK OF INJURY if oil comes into contact with eyes and skin!

IMPORTANT: Risk of damage!

To avoid serious damage to the rear differential, it is essential to use only REAR AXLE - OPERATING FLUIDS in the rear differential.

Undo oil filler plug (1).

Tightening torque 33 11 2AZ, see **REAR DIFFERENTIAL CASE WITH COVER** .

Check oil level.

If necessary, pour in rear differential oil up to lower edge of opening for oil filler plug (1).

Installation:

Replace oil filler plug (1) with O-ring.

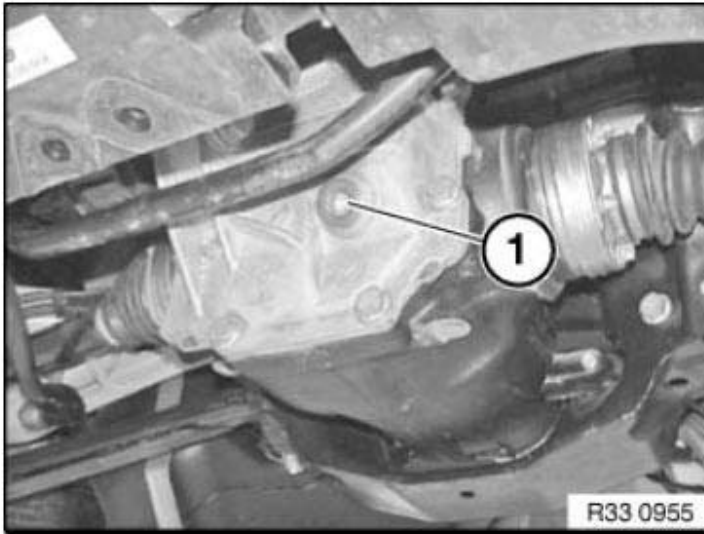


Fig. 5: Identifying Oil Filler Plug

Courtesy of BMW OF NORTH AMERICA, INC.

28 00 ... CHECKING/TOPPING UP OIL LEVEL IN TWIN-CLUTCH GEARBOX (GS7D36SG)

Checking oil level

- Call up Service functions (Drive) in BMW diagnosis system
- Carry out oil level check in accordance with instructions

IMPORTANT: On the twin-clutch gearbox a run-in check fluid change is not required at 2000 km.

Use only the approved gear oil for dual clutch transmission GS7D36SG .

Failure to comply with this instruction will result in serious damage to the twin-clutch gearbox.

IMPORTANT: The testing and filling procedure must be completed before the transmission oil temperature of 40°C is reached.

If a temperature in excess of 40°C is reached and no oil has emerged, insert the fluid adjusting screw and repeat the testing and filling procedure when it has cooled down.

Installation note:

Tighten down filler plug using

1. Hexagon wrench 8 A/F

2. Torque wrench
3. Socket 8 A/F

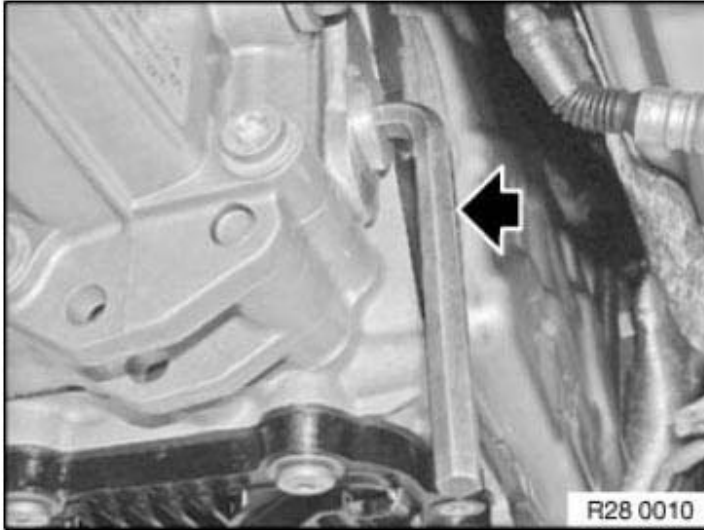


Fig. 6: Tightening Filler Plug Using Hexagon Wrench
Courtesy of BMW OF NORTH AMERICA, INC.

Topping up transmission oil after a repair

Stand vehicle on a level surface and secure against rolling off.

- Open fluid adjusting screw (1). If oil emerges, close screw again immediately

If no oil emerges, top up until oil emerges and close oil adjusting screw (1) again

NOTE: **If oil has been replenished here, a further refill must be carried out during the actual oil adjustment.**

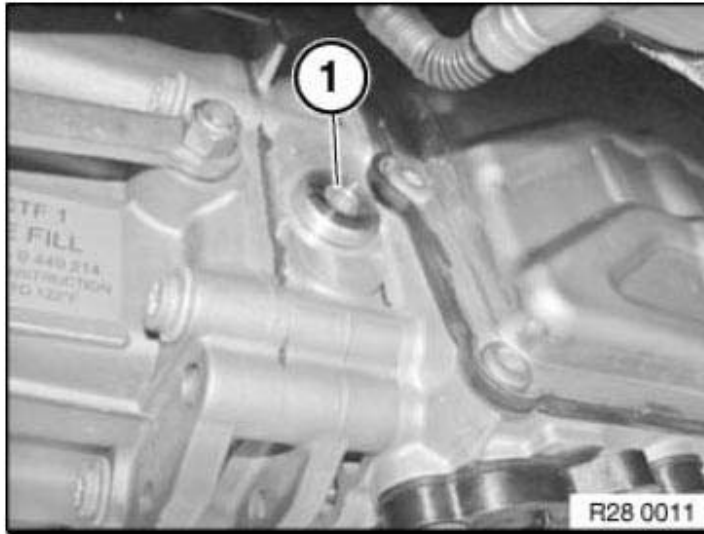


Fig. 7: Identifying Fluid Adjusting Screw
Courtesy of BMW OF NORTH AMERICA, INC.

- Connect diagnosis system and start service functions (drive).
- Start engine (drive position N or P)
- Record transmission temperature using Tester.
- (Drive position P)
- Permissible starting temperature $\leq 32^{\circ}\text{C}$
- Idle speed: maintain at approx. 2000 rpm for 1 minute.
- Open the oil adjusting screw (1)
- Fill until oil emerges.

Max. transmission oil temperature 40 degrees Celsius

- Insert screw.

Installation note:

Replace screw.

00 DANGER OF POISONING IF OIL IS INGESTED/ABSORBED THROUGH THE SKIN

Danger of poisoning!

Ingesting oil or absorbing through the skin may cause poisoning!

Possible symptoms are:

- Headaches

- Dizziness
- Stomach aches
- Vomiting
- Diarrhoea
- Cramps/fits
- Unconsciousness

Protective measures/rules of conduct

- Pour oil only into appropriately marked containers
- Do **not** pour oil into drinking vessels (drinks bottles, glasses, cups or mugs)
- Observe country-specific safety regulations

First aid measures

- Do not induce vomiting.

If the person affected is still conscious, he/she must rinse out their mouth with water, drink plenty of water and consult a doctor immediately.

If the person affected is unconscious, do not administer anything by mouth, place the person in the recovery position and seek immediate medical attention.

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Danger of poisoning!

Ingesting oil or absorbing through the skin may cause poisoning!

Possible symptoms are:

- Headaches
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Protective measures/rules of conduct

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If the person affected is still conscious, he/she must rinse out their mouth with water, drink plenty of water and consult a doctor immediately.

If the person affected is unconscious, do not administer anything by mouth, place the person in the recovery position and seek immediate medical attention.

00 00 ... DIAGNOSTIC BRIEF TEST

Connect diagnostic system to OBD socket.

Switch on ignition.

Carry out vehicle identification.

Click on Brief test.

The brief test is carried out.

NOTE: For motor vehicle diagnostics, the brief test is essential for evaluating possible stored diagnostic trouble codes. In the brief test, the control units are physically identified in succession and their fault memories read out.

If the fault memory has been read out, the faults appear in the "Fault pattern selection" mask in the "Fault memory contents" field.

Check identified faults and if necessary rectify these faults after consulting with customer.

00 11.. ... DRAINING/TOPPING UP GEAR OIL IN MANUAL TRANSMISSION

NOTE: Gearbox must be at normal operating temperature.

Gear oil:

- Refer to BMW Service Operating Fluids.

Filling capacities:

- See TRANSMISSION FILLING CAPACITIES or TRANSMISSION FILLING CAPACITIES

Draining gear oil

- Release oil drain plug (1) and filler plug (2).
- Clean oil drain plug (1) and screw in.

Tightening torque 23 00 4AZ .

Fill transmission with ATF.

- Pour in gear oil until overflowing.
- Tighten in filler screw (2).

Tightening torque: 23 00 4AZ .

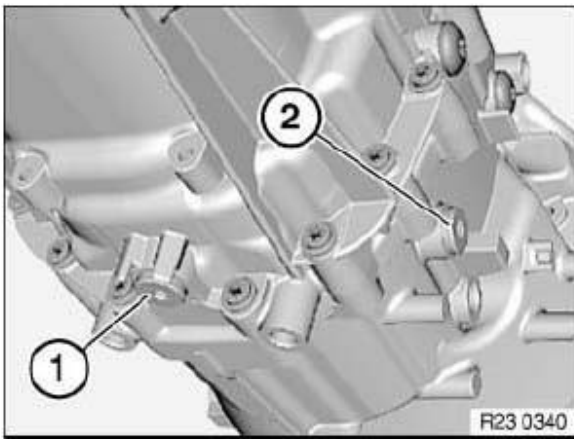


Fig. 8: Identifying Gear Oil Drain Plug And Filler Plug
Courtesy of BMW OF NORTH AMERICA, INC.

64 00 000 INFORMATION ON USING CLEANING AGENT/PAINTS (PERSONAL PROTECTION EQUIPMENT)

WARNING: Use of cleaning agents/paints not compliant with instructions can cause serious injuries or burns!

Handling cleaning agents/paints can trigger allergic skin and respiratory reactions!

IMPORTANT: Observe following instructions:

- Store cleaning agents/paints only in a secure cabinet.
- Keep cleaning agents/paints away from naked flames and other sources of ignition.
- Protect cleaning agents/paints from high temperatures and direct

sunlight.

- **Always keep an eye bath on hand, change the water regularly (once a month).**

IMPORTANT: Observe following instructions before use:

- **Manufacturer's instructions (on container/packaging)**
- **Hazard warnings (on container/packaging)**
- **Manufacturer's instructions on package insert**
- **Material safety data sheet of manufacturer**
- **Product information in EPC**
- **National market regulations**

IMPORTANT: Observe following instructions during use:

- **Do not eat, drink or smoke while working with these products.**
- **Avoid direct contact with skin and eyes.**
- **Wear personal protective clothing/equipment.**
- **Ensure that all enclosed areas are well ventilated or extract fumes directly.**
- **Immediately change working clothes soiled with cleaning agent/paint.**
- **After finishing work, wash your hands and apply protective skin cream.**

IMPORTANT: Follow hazard warnings and wear personal protection equipment!

First Aid:

- **If product comes in contact with eyes, immediately flush with running water for about 10 - 15 minutes. Seek the advice of eye specialist.**
- **In the event of skin contact and where applicable an allergic skin reaction, clean the affected areas immediately with soap and water and then apply silicone-free skin cream. Seek advice of physician.**
- **If an adhesive product is swallowed, rinse mouth/parts of mouth thoroughly with running water. Drink 1-2 glasses of water. Do not induce vomiting. Consult a doctor.**
- **After inhaling vapours ensure ample supply of fresh air. Keep calm, keep respiratory tracks clear and call doctor.**

Recycling

Dispose of cleaning agents/paints in a professional manner!

Observe national/country-specific disposal regulations.

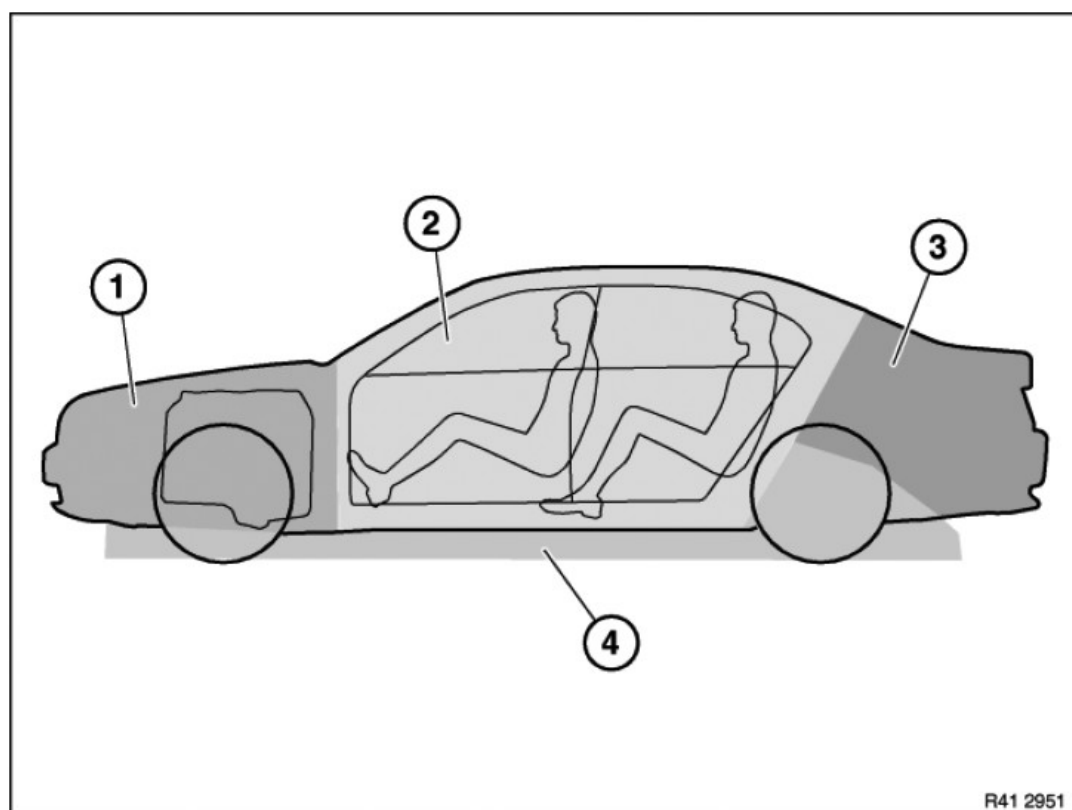
36 00 ... INFORMATION/RECOMMENDATIONS AND REPAIR METHODS FOR ALUMINIUM WHEELS

Cosmetic repairs of aluminium wheels using ColorSystem

Recommendations and repair methods for aluminium wheels are described in the ASAP system under the following link:

- Aftersales Assistance Portal
 - Service/Technology
 - ColorSystem
 - Repair recommendations for aluminium wheels

00 00 ... INFORMATION/WARNING LABELS



1	Engine compartment	3	Rear end
2	Interior	4	Underfloor

Fig. 9: Identifying Engine Compartment, Vehicle Interior, Rear End And Underfloor
Courtesy of BMW OF NORTH AMERICA, INC.

Location: Information/warning label: Country

INFORMATION/WARNING LABEL - COUNTRY

Various components	Replacement identification - spare parts-	US, CDN
Various components	Anti-theft protection	US, CDN

COUNTRY WISE INFORMATION/WARNING LABELS - ENGINE COMPARTMENT

Engine compartment (1):		
Battery	Battery sticker	Gulf States
Electronics box cover	High-voltage identification	Worldwide
Headlights/engine compartment	Mercury (xenon headlights)	Worldwide
Engine compartment/raw air snorkel	Aluminium screws/bolts	Worldwide
Cylinder head cover	Ignition coil	Worldwide
Engine compartment/end panel	BMW High Performance Oil	US, not CDN
Engine compartment/end panel	Premair	US
Engine compartment	ICES CDN	CDN
Engine compartment/hood/bonnet	Refrigerant	Worldwide
Engine compartment/hood/bonnet	Production date	Australia, Great Britain
Engine compartment/hood/bonnet	Exhaust gas	Australia, US, CDN
Engine compartment/brake booster	Brake fluid	CDN
Engine compartment/hood/bonnet	Exterior paint	Worldwide
Engine compartment/hood/bonnet	BMW genuine spare parts	Worldwide

COUNTRY WISE INFORMATION/WARNING LABELS - INTERIOR

Interior (2):		
Windscreen, top right	Airbag - windscreen	Europe
Windscreen	CCC	China
Windscreen	Vehicle identification number	US, CDN, Gulf States, Great Britain&South Africa
I Drive	A/C menu	US, CDN
Passenger compartment/instrument panel	Airbag, instrument panel	US, CDN
Interior/sun visor	Airbag - sun visor	US, CDN
Steering wheel/speedometer	Top speed -210 km/h - Only with optional equipment and for car rental	Germany

COUNTRY WISE INFORMATION/WARNING LABELS - COMPLETE VEHICLE

Complete vehicle, bodyshell:		
B-pillar	Airbag symbol (front passenger)	Worldwide (not US and CDN)
B-pillar	Vehicle identification number	Brazil
B-pillar	Manufacturer's certificate	US, CDN, Gulf States
B-pillar	Tyre inflation pressure	Europe, US, CDN, Australia

B-pillar	Runflat indicator	Worldwide
B-pillar	Side airbag	Worldwide
B-pillar	Nameplate	China
B-pillar	EC type plate with model designation, vehicle identification number, colour code	Worldwide, not US, CDN, Japan, Australia, Gulf States
Door, driver's side	Towing	Worldwide

COUNTRY WISE INFORMATION/WARNING LABELS - REAR END

Rear end (3):		
Fuel cap/hood/bonnet	Independent heating	Europe
Filling area	Refuelling	US, CDN, Europe
Filling area, instrument cluster (plug)	OBD system	US, CDN
Trim, striker	Nose weight (only with optional equipment)	Worldwide
Trim, cross-member (through-loading)	Lock, through-loading (only with optional equipment)	Worldwide
Luggage compartment cover	Retractable hardtop	Worldwide
Luggage compartment trim panel on side panel	Retractable hardtop	Worldwide
Tool box lid (E60)	HWS fluid	US
Rear lid trim (E61)	HWS fluid	US

COUNTRY WISE INFORMATION/WARNING LABELS - UNDERFLOOR

Underfloor (4):		
Vehicle jack	Vehicle jack	Australia
Front axle support	Airbag (basic setting)	Worldwide
Tension strut with hydro-mount	Do not lash down	Worldwide

Key:

US = United States

CDN = Canada

CCC = Car Communication Computer

OBD = On-Board Diagnosis

00 ... INSTRUCTIONS FOR PERFORMING SERVICE FUNCTIONS ON THE TWIN-CLUTCH GEARBOX (GS7D36SG)

NOTE: The service functions must be carried out in the relevant order!

TWIN CLUTCH GEARBOX SERVICING INSTRUCTION

Replacement of clutch and after all work on opened transmission	1. Carry out fluid adjustment 2. Teach in valve characteristic curves 3. Teach in kiss point 4. Parking lock hook test
Replacement of oil pump	1. Carry out fluid adjustment 2. Teach in valve characteristic curves 3. Teach in kiss point 4. Parking lock hook test
Replacement of transmission (complete)	1. Read out transmission data before replacement 2. Parking lock hook test 3. Write transmission data 4. Carry out fluid adjustment
Replacement/repair of parking lock cable, selector lever with parking lock unit	1. Parking lock hook test
Replacement of combination sensor	1. Carry out fluid adjustment 2. Teach in valve characteristic curves 3. Teach in kiss point 4. Parking lock hook test
Opening/replacement of fluid adjustment screw, repair/replacement of transmission fluid cooler, oil cooler lines, thermostat, water/oil heat exchanger (M3) and seals	1. Carry out fluid adjustment

00 ... LIFTING VEHICLE WITH A LIFTING PLATFORM

WARNING: Danger to life!

Read and follow operating instructions for lifting platform.

Do not exceed carrying capacity of lifting platform.

NOTE: The lifting platform must comply with the relevant statutory accident prevention regulations and be serviced according to the manufacturer's instructions.

IMPORTANT: Risk of damage!

Before driving onto a lifting platform, make sure there is sufficient ground clearance between the lifting platform and the car.

The vehicle may only be raised with the lifting platform at the four jacking points.

IMPORTANT: Risk of damage!

Align support plates (2) of lifting platform arms to jacking points (1) in such a way that no adjoining components are touched and thereby damaged.

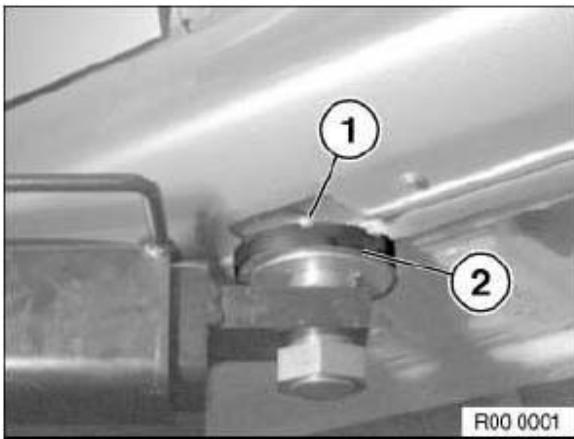


Fig. 10: Identifying Lifting Platform Arms Jacking Points And Support Plate
Courtesy of BMW OF NORTH AMERICA, INC.

00 LIFTING VEHICLE WITH A LIFTING PLATFORM

WARNING: Danger to life!

Read and follow operating instructions for lifting platform.

Do not exceed carrying capacity of lifting platform.

NOTE: The lifting platform must comply with the relevant statutory accident prevention regulations and be serviced according to the manufacturer's instructions.

IMPORTANT: Risk of damage!

Before driving onto a lifting platform, make sure there is sufficient ground clearance between the lifting platform and the car.

The vehicle may only be raised with the lifting platform at the four jacking points.

IMPORTANT: Risk of damage!

Align support plates (2) of lifting platform arms to jacking points (1) in such a way that no adjoining components are touched and thereby damaged.

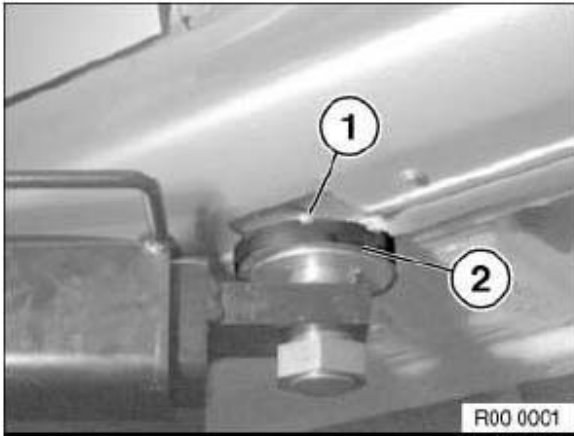


Fig. 11: Identifying Lifting Platform Arms Jacking Points And Support Plate
Courtesy of BMW OF NORTH AMERICA, INC.

00 00 ... MICROENCAPSULATED SCREWS

Screw locking is a means to preventing a screwed connection from being loosened by external influences.

After the screw has been coated with the adhesive, the adhesive remains inactive until it is activated by capsule breakage when the screw is inserted and then cures at room temperature.

Installation

- Microencapsulated screws (Loctite) must be replaced and may **not** be reused
- Screw connection must be completed within 20 mins. (start of curing)
- Microencapsulated screws must **not** be retightened
- Thread of nut must be cleaned beforehand in event of repeated use

00 NOTES ON USING REPAIR INSTRUCTIONS, TECHNICAL DATA, TIGHTENING TORQUES

These repair instructions are intended to help expertly carry out maintenance and repair work.

If there are no cross-references to tightening torques in the repair instructions, the excerpts from the company standard BMW : **EXCERPT FROM COMPANY STANDARD BMW GS 90003-2 ; M18 AND M18X1.5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2 ; M16 AND M16X1.5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2 ; M14 AND M14X1.5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2 ; M12 AND M12X1.5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2 ; M10 AND M10 X 1 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2 ; M8 AND M8 X 1 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2 ; M6 AND M7 - MAXIMUM TIGHTENING**

TORQUES ACC. TO BMW GS 90003-2 ; or M4 AND M5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2 must be observed.

Cross-references to other flat rate units are intended as an aid and can refer to a complete work operation or merely to individual work steps contained therein.

61 00 ... NOTES ON HANDLING WIRING HARNESSES AND CABLES

The following applies in general:

To avoid damage, observe the following instructions:

- Avoid compressive and tensile loads
- To ensure professional repairs, perform repair work only with BMW-approved or recommended special tools and spare parts
- Make sure cables are laid without kinks or abrasions
- Ensure non-contacting routing at sharp-edged body parts; use edge protection if necessary
- Secure additionally laid cables/leads with cable ties

The following additionally applies

Shielded lines (coaxial lines):

IMPORTANT: Shielded lines may not be repaired!

- **This may lead to indifferences in noise radiation and interference immunity at contact points in the shield**
- **To satisfy the requirements of the type approval, it is essential to replace shielded cables completely**

Fibre-optic cable:

NOTE: Fibre-optic cables are coloured differently as follows:

- Green = **MOST** (**M**edia **O**riented **S**ystems **T**ransport) optical fibre
- Yellow = **ISIS** (**I**ntelligent **S**afety **I**ntegration **S**ystem) optical fibre
- Orange=repair fibre-optic cables

IMPORTANT:

- **Optical fibres may only reveal one separation point (bridge); renew optical fibre if necessary**
- **Smallest permissible bending radius is 25 mm**
- **Avoid effects of heat < or = 85°**

FlexRay:

It is possible to repair the FlexRay. In the event of damage, the cables can be joined with conventional **BUTT CONNECTORS AND HEAT-SHRINK HOSES** .

NOTE:

- **FlexRay lines may only reveal one separation point (bride); renew complete line if necessary**
- **The cable is a twisted cable. If possible, maintain twisted cable after repair**

61 00 ... NOTES ON HANDLING WIRING HARNESSES AND CABLES

The following applies in general

To avoid damage, observe the following instructions:

- Avoid compressive and tensile loads
- Make sure cables are laid without kinks or abrasions
- Ensure non-contacting routing at sharp-edged body components; use edge protection if necessary
- Secure additionally laid cables/lines with cable straps

The following additionally applies

Shielded lines

Contact points in the shield can cause problems with regard to noise radiation and interference immunity. Consequently, distinctions have to be drawn between the following types:

Coaxial line

- Shielded RTK031 coaxial lines may only be repaired with special crimping tools .

CVBS lines

- CVBS lines may not be repaired.
- CVBS lines must be replaced in their entirety.

HSD lines

- HSD lines may not be repaired.
- HSD lines must be replaced in their entirety.

Optical fibre cable:

NOTE:

Optical fibre cables are coloured differently as follows:

- Green = **MOST** (**M**edia **O**riented **S**ystems **T**ransport) optical fibre
- Yellow = **ISIS** (**I**ntelligent **S**afety **I**ntegration **S**ystem) optical fibre

- Orange = repair optical fibre cables

- IMPORTANT:**
- Optical fibre cables are permitted to show only one separation point (bridge), replace optical fibre cables if necessary
 - Smallest permissible bending radius is 25 mm
 - Avoid influence of heat > or = 85°

Treating cables and optical fibre cables

FlexRay:

It is possible to repair the FlexRay. In the event of damage, the cables can be joined with conventional butt connectors.

- NOTE:**
- The line is a twisted cable. If possible, maintain twist in line after repair.

Airbag lines:

Repairing airbag cables

Ribbon cables:

Repairing ribbon cables Z

00 11 259 OIL CHANGE IN REAR DIFFERENTIAL INCL. USED OIL DISPOSAL

- NOTE:** Observe following instructions and torques.

- Replace screw plug with O-ring after releasing.

Tightening torque with O-ring, see 33 11 2AZ in 33 11 REAR DIFFERENTIAL CASE WITH COVER

WARNING: Risk of burning if exhaust system is touched!

DANGER OF POISONING if oil is ingested/absorbed through the skin!

RISK OF INJURY if oil comes into contact with eyes and skin!

IMPORTANT: Risk of damage!

To avoid serious damage to the rear axle differential, it is essential to use only approved transmission oils. See REAR AXLE - OPERATING FLUIDS .

NOTE: The oil does not need to be changed in rear differentials carrying the "Life-Time-Oil" sticker.

Only change oil when rear differential is at normal operating temperature.

Recycling

Catch and dispose of emerging differential oil.

Observe country-specific waste-disposal regulations

Open plug (1).

Drain and dispose of differential oil.

Add rear differential oil up to lower edge of opening for screw plug (1).

Replace screw plug.

Tightening torque 33 11 2AZ in **33 11 REAR DIFFERENTIAL CASE WITH COVER** .

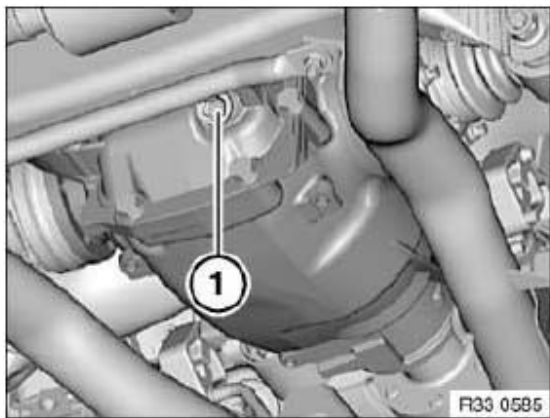


Fig. 12: Identifying Screw Plug

Courtesy of BMW OF NORTH AMERICA, INC.

86 10 ... POSITIONING OF MULTITRAILER HOOD FOR MAINTENANCE AND REPAIR WORK

IMPORTANT: At least two persons are needed to install and remove the hood from the platform.

Before installing and removing the hood, secure the BMW multitrailer and the entire combination against rolling. For this purpose, use the parking brake and the chocks of the BMW multitrailer.

The hood can also be set up and lowered with the aid of the universal lift

available from BMW in conjunction with the roof racks and the hood adapter. Under no circumstances should work of any kind be carried out below the suspended hood.

For maintenance and repair work, raise the hood using a lifting platform. Twin-column lifting platforms, body lifting platforms and twin-stamp underfloor platforms are suitable. The seating plates and areas of the lifting platform must be adjustable according to the dimensions of **Fig. 13**.

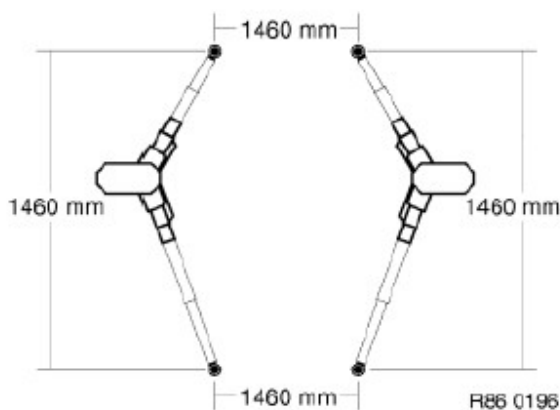


Fig. 13: Identifying Seating Plates And Lifting Platform Areas Adjustable Dimensions
Courtesy of BMW OF NORTH AMERICA, INC.

The lifting platform must conform to the relevant legal provisions of the accident prevention regulations and be serviced as specified. Comply with the lifting platform operating instructions, in particular the safety instructions and the carrying capacity.

Make sure you adhere to the BMW-recommended work area of 5 x 7 m and to an escape route of 0.6 m between two lifting platforms.

Please comply with the following instructions before raising the hood:

- Raise only when it is unloaded;
- Ensure sufficient clearance between the seating plates/seating areas and the GFP edge of the hood;
- The hood must always be positioned in the middle of the lifting platform.

IMPORTANT: The hood may only be raised at the pin (1). Under no circumstances may the hood be raised at the GFP edge of the hood (2). See Fig. 14. Exclusively for removal of pin (1), raise the hood in the GFP area.

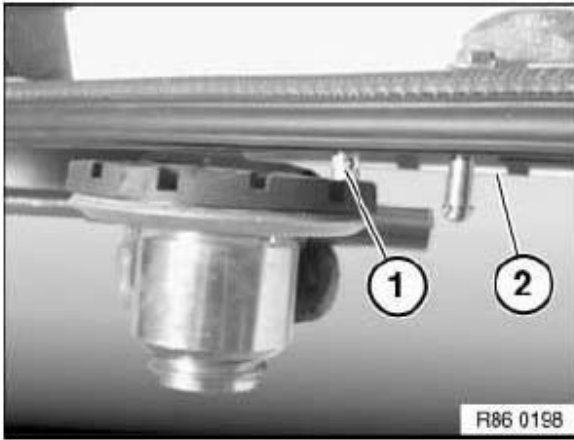


Fig. 14: Identifying Multitrailer Hood And Pin
 Courtesy of BMW OF NORTH AMERICA, INC.

00 .. . PRE-DELIVERY CHECK

Quality assurance by BMW Service

Model:

Vehicle identification number:

VEHICLE IDENTIFICATION NUMBER

(Please tick where appropriate) If necessary Quick Reference Guide:	Discussed and handed over
Included with the vehicle:	Owner's Handbook(s) Service Record Booklet Master key/remote control If necessary - spare key
The vehicle document case is left in the vehicle:	Glove box Storage box Luggage compartment

I hereby confirm that I have received the vehicle in perfect condition.

Place and date

Signature of vehicle owner

Pre-delivery check by BMW Service

Scopes of inspection: To be kept with the workshop documents

The following work must be carried out on the vehicle by BMW Service prior to delivery.

*** Denotes optional extra or national-market version. Observe possible changes in this regard.**

Model:

Vehicle identification number:

BATTERY MASTER SWITCH OPERATION REFERENCE CHART

Battery master switch*	Not OK	OK
Removal and connection, carry out following scopes if necessary	O	O
Power windows regulator*: Initialise system	O	O
Glass sunroof*: Initialise system	O	O

ACCESSORY ITEMS INSPECTION CHART

Accessory items	Not OK	OK
Install	O	O

BMW GROUP DIAGNOSIS SYSTEM INSPECTION CHART

With BMW Group diagnosis system	Not OK	OK
Carry out "CBS pre-delivery check" in the Service Function path under Maintenance	O	O
Deactivate transportation mode	O	O
Reset average mileage/kilometres driven	O	O
Enter first registration	O	O
Set on-board date	O	O
Set statutory inspection dates*	O	O
Enter service telephone numbers	O	O
Check battery, observe notes in tester, charge battery if necessary	O	O
Delete fault memory	O	O
Carry out vehicle test, eliminate faults if necessary	O	O

ENGINE COMPARTMENT INSPECTION CHART

Engine compartment	Not OK	OK
Check for cleanliness	O	O

WASHER FLUID RESERVOIR INSPECTION CHART

Washer fluid reservoir	Not OK	OK
Check fluid level and top up if necessary, where required with antifreeze additive	O	O

LABELS INSPECTION CHART

Labels	Not OK	OK
Attach label for BMW Group Mobile Service	O	O

BODY INTERIOR EQUIPMENT INSPECTION CHART

Body, interior equipment, underbody	Not OK	OK
Check for transportation damage	O	O

SPRING BLOCKER INSPECTION CHART

Spring blocker*	Not OK	OK
Remove	O	O

TYRES INSPECTION CHART

Tyres	Not OK	OK
Check inflation pressures; if provided, also compact or spare wheel	O	O
Initialise Run Flat Indicator	O	O

WINTER TYRES INSPECTION CHART

Winter tyres*	Not OK	OK
Attach V-max. sticker	O	O

SERVICE BOOKLET INSPECTION CHART

Service Record Booklet	Not OK	OK
Stamp pre-delivery check/enter vehicle identification number	O	O

DOCUMENTS INSPECTION CHART

Include documents (glove box/storage box/luggage compartment)	Not OK	OK
Owner's Handbook	O	O
Service Record Booklet	O	O
Contact booklet	O	O
BMW Group Mobile Service booklet	O	O
Include BMW key or remote control (make note of number)	O	O

INDICATOR/WARNING LAMPS AND CHECK CONTROL INSPECTION CHART

--	--	--

Indicator/warning lights and Check Control	Not OK	OK
Check for incorrect display and eliminate faults if necessary	O	O

NAVIGATION INSPECTION CHART

Navigation	Not OK	OK
If necessary, install navigation road map(s)	O	O

BMW TELESERVICES INSPECTION CHART

BMW TeleServices	Not OK	OK
Activated Yes/No	O	O

SERVICE AND PARKING BRAKE INSPECTION CHART

Service and parking brake	Not OK	OK
Transport and immobilisation periods of 3-6 weeks Check for correct operation	O	O
In event of transportation and immobilisation periods of more than 6 weeks Brake in	O	O

INTERIOR MIRROR WITH DIGITAL COMPASS INSPECTION CHART

Interior mirror with digital compass*	Not OK	OK
Calibrate system	O	O

OPTIONAL EQUIPMENT INSPECTION CHART

Optional equipment	Not OK	OK
Check for completeness and correction function	O	O

PRESERVATION/CLEANING INSPECTION CHART

Preservation, cleaning	Not OK	OK
Remove transportation lock	O	O
Dewax and clean vehicle as prescribed	O	O

Date

Mechanic

Workshop Supervisor

00 00 612 PRELIMINARY CHECK PRIOR TO ROADWORTHINESS TEST

- Preliminary check prior to roadworthiness test:
 - Check headlight adjustment
 - Visually inspect steering system
 - Visually inspect axles, suspension, springs, anti-roll bar, vibration damper, axle damping, if necessary air suspension
 - Visually inspect silencers

00 00 ... RAISING BMW MULTI-TRAILER

CAUTION: Twin-strut underfloor platforms and twin-pillar lifting platforms are suitable for raising the BMW multi-trailer.

Lifting platforms with drive-on surfaces are not suitable for raising in order to carry out maintenance and repair work.

The lifting platform must comply with the relevant statutory accident prevention regulations and be serviced according to the manufacturer's instructions. It is essential to follow the lifting platform operating instructions, in particular the safety instructions and carrying capacity!

Make sure you adhere to the BMW-recommended work area of 5 x 7 m and to an escape route of 0.6 m between two lifting platforms.

Before raising the BMW multi-trailer, please observe the following points:

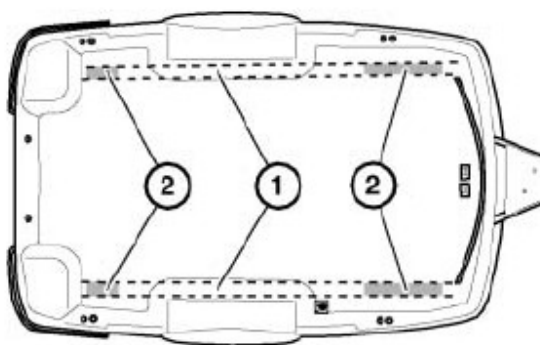
- Raise the trailer only when it is unloaded
- Remove a supplied loading ramp from the loading ramp frame so that all chassis areas of the BMW multi-trailer are freely accessible
- There must be sufficient clearance between the carrier arms/flat girder bridges and the GFK aprons or the front guard of the BMW multi-trailer
- The BMW multi-trailer must always be positioned in the middle of the lifting platform.

CAUTION: You will need special additional supports for the lifting platform in order to bridge the difference in height between longitudinal member and lower edge of GFK side apron or front guard of the BMW multi-trailer. The minimum height of the additional supports is 145 mm. Use only the additional supports approved by the platform manufacturer or specified in these repair instructions.

You will find appropriate examples in the repair instructions for the majority of lifting platforms present in BMW workshops. For lifting platforms that are not named, the relevant manufacturers will offer you appropriate additional supports. Please contact directly the manufacturer of the lifting platform used in your dealership.

CAUTION: The BMW multi-trailer may only be raised by its longitudinal members. Do not under any circumstances raise the BMW multi-trailer by the GFK aprons. Make sure the additional supports bear the longitudinal members over their entire width and no attachments or wiring harnesses are touched or jammed. Check the securing equipment of the additional supports for correct seating. Under no circumstances should any work be carried out underneath the BMW multi-trailer if it is not adequately secured against slipping off the lifting platform.

The areas (2) on the longitudinal members (1) marked in the adjacent diagram are the best areas for attaching the additional supports.



R86 0131

Fig. 15: Identifying Additional Support Areas On Longitudinal Members
Courtesy of BMW OF NORTH AMERICA, INC.

General notes on using twin-pillar lifting platforms

For the twin-pillar lifting platforms described, the BMW multi-trailer is positioned in the direction of travel on the platform. For lifting platforms which do not create sufficient clearance between disk wheel and carrier arms, move the BMW multi-trailer against the direction of travel onto the platform.

Becker & Sohne twin-strut underfloor platform

The BMW multi-trailer can only be raised if it is supported at right angles to the direction of travel. For raising, use the high additional supports (1) of Becker&Sohne.

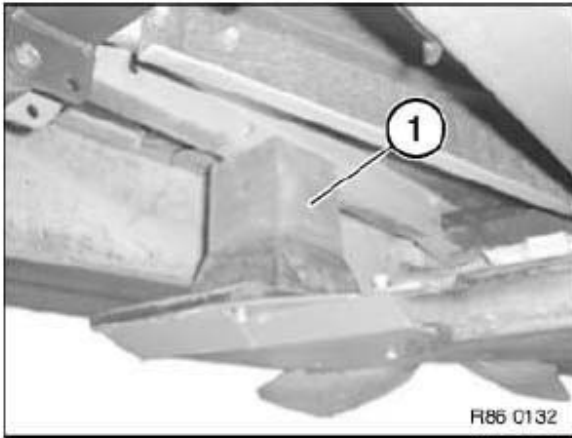


Fig. 16: Identifying Twin-Strut Underfloor Platform With Additional Support
 Courtesy of BMW OF NORTH AMERICA, INC.

CAUTION: Also lash the BMW multi-trailer to the flat girder bridges of the lifting platform. Flag the protruding tow hitch and the drawbar member of the BMW multi-trailer conspicuously so as to prevent injury, e.g. with a red cloth.

MAHA twin-pillar lifting platform

The BMW multi-trailer can only be raised if you use the support plate attachment sleeves for transporters (1). Position the axle of the BMW multi-trailer in the direction of travel in front of the pillars of the platform in order to obtain the specified lifting ranges and to establish sufficient clearance between disk wheel and carrier arms. The long carrier arms raise the front and the short carrier arms raise the rear of the BMW multi-trailer.

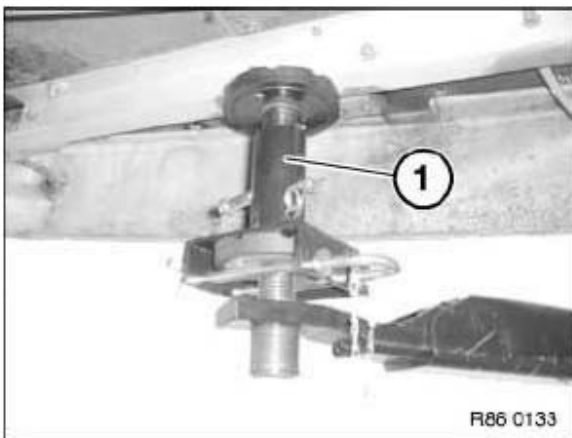


Fig. 17: Identifying MAHA Twin-Pillar Lifting Platform
 Courtesy of BMW OF NORTH AMERICA, INC.

Romaico-Lift twin-pillar lifting platform

The BMW multi-trailer can only be raised if you use the 146 mm high attachments (1).

Position the axle of the BMW multi-trailer in the direction of travel in front of the pillars of the platform in order to obtain the specified lifting ranges and to establish sufficient clearance between disk wheel and carrier arms. The long carrier arms raise the front and the short carrier arms raise the rear of the BMW multi-trailer.

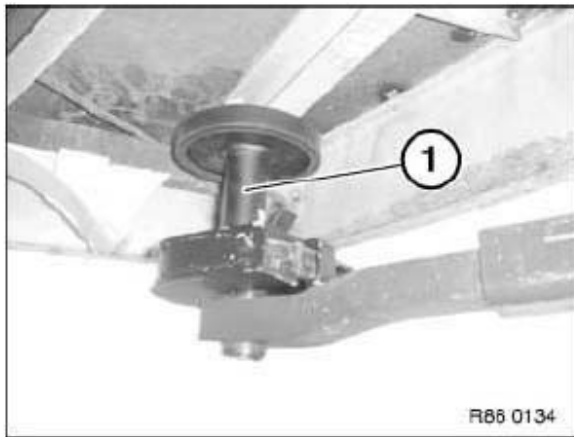


Fig. 18: Identifying Romaico-Lift Twin-Pillar Lifting Platform
Courtesy of BMW OF NORTH AMERICA, INC.

Working pit

The BMW multi-trailer can be serviced or repaired in conjunction with a working pit if the following measures are taken into consideration. The BMW multi-trailer must be secured against slipping/tilting sideways. The drawbar jockey wheel must be firmly secured against rolling.

00 ... RAISING VEHICLE WITH TROLLEY JACK

IMPORTANT: Observe the following trolley-jack-related instructions:

- 1. Use only BMW-distributed/approved trolley jacks which have rubber plate contact points.**
- 2. Trolley jacks must be regularly serviced and always checked for functional reliability before they are used!**
- 3. Check the rubber plate on the trolley jack prior to each use, replacing if necessary.**

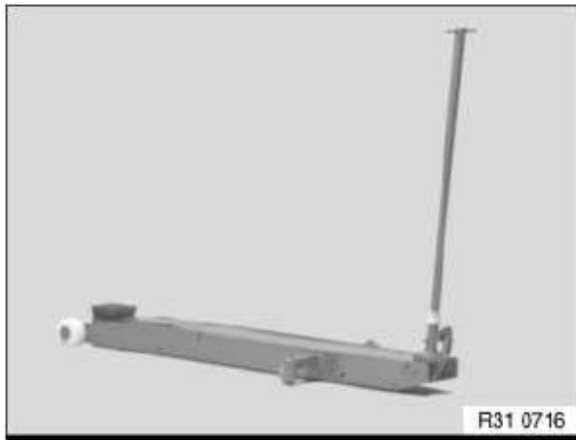


Fig. 19: Identifying Trolley Jack
 Courtesy of BMW OF NORTH AMERICA, INC.

WARNING: The vehicle may be raised with a trolley jack only at the following jacking points!

1. Car jacking point
2. Side car jacking points
3. Rear differential (remove heat shield: see **51 71 390 REMOVING AND INSTALLING/REPLACING REINFORCEMENT PLATE ON REAR AXLE**)

Risk of damage: It is not permitted to raise the vehicle at the rear differential cover!

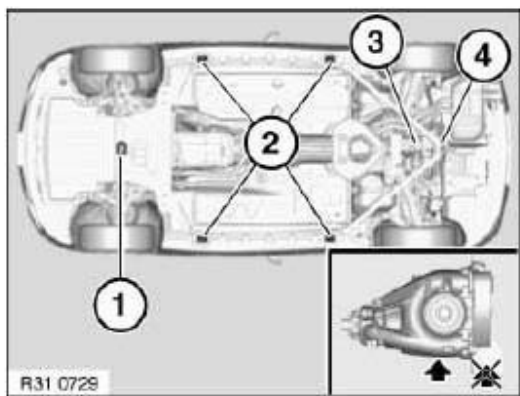


Fig. 20: Identifying Vehicle Jacking Points
 Courtesy of BMW OF NORTH AMERICA, INC.

4. Bolting point for rear axle tension struts

Release screws (1).

Raise acoustic cover slightly and remove towards front.

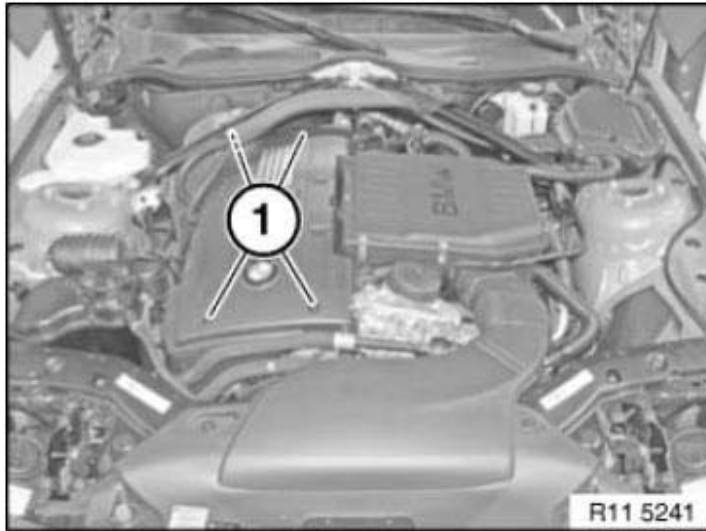


Fig. 21: Identifying Acoustic Cover Mounting Screws
Courtesy of BMW OF NORTH AMERICA, INC.

00 RISK OF INJURY IF OIL COMES INTO CONTACT WITH EYES AND SKIN

Risk of injury!

Contact with eyes or skin may result in injury!

Possible symptoms are:

- Impaired sight
- Irritation of the eyes
- Reddening of the skin
- Rough and cracked skin

Protective measures/rules of conduct

- Wear protective goggles
- Wear oil-resistant protective gloves
- Observe country-specific safety regulations

First aid measures

- **Eye contact:** Rinse eyes immediately with plenty of water for at least 15 minutes; if available, use an eye-rinsing bottle. If irritation of the eyes persists, consult a doctor.

- **Skin contact:** Wash off with soap and water immediately. If irritation persists, consult a doctor.

NOTE: **Do not use solvents/thinners.**

00 RISK OF INJURY IF OIL COMES INTO CONTACT WITH EYES AND SKIN

Danger of injury!

Contact with eyes or skin may result in injury!

Possible symptoms are:

- Impaired sight
- Irritation of the eyes
- Reddening of the skin
- Rough and cracked skin

Protective measures/rules of conduct

- Wear protective goggles
- Wear oil-resistant protective gloves
- Observe country-specific safety regulations

First aid measures

- **Eye contact:** Rinse eyes immediately with plenty of water for at least 15 minutes; if available, use an eye-rinsing bottle. If irritation of the eyes persists, consult a doctor.
- **Skin contact:** Wash off with soap and water immediately. If irritation persists, consult a doctor.

NOTE: **Do not use solvents/thinners.**

00 SAFETY INFORMATION FOR WORKING ON VEHICLES WITH AUTOMATIC ENGINE START-STOP FUNCTION (MSA)

WARNING: If the engine hood/bonnet contact is pulled upwards (workshop mode), the information "switch closed" is output. The automatic engine start-stop function is active.

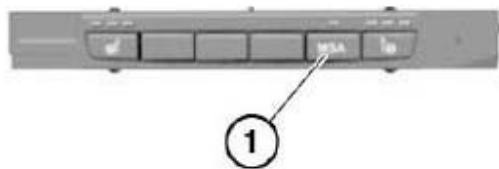
An automatic engine start is possible.

Observe safety precautions when working on MSA vehicles

Before carrying out practical work on the engine, always ensure that the MSA functionality is deactivated so as to prevent automatic engine starting while work is being carried out in the engine compartment.

MSA function is deactivated by

- Deactivate MSA by means of button (1) in passenger compartment
- Open seat belt buckle and driver's door



R61 1948

Fig. 22: Identifying MSA Switch In Passenger Compartment
Courtesy of BMW OF NORTH AMERICA, INC.

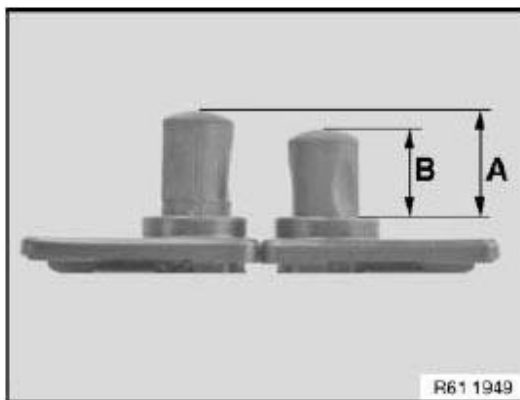
- Open engine bonnet/hood and ensure that engine hood/bonnet contact is not in workshop mode
 - Workshop mode

A = 10 mm

- Basic setting (engine hood/bonnet open)

B = 7 mm

To make sure that the engine hood/bonnet contact is at the basic setting, if necessary press the hood/bonnet contact up to the limit position before starting work and slowly release.



R61 1949

Fig. 23: Identifying Engine Hood/Bonnet Basic Setting And Workshop Mode
Courtesy of BMW OF NORTH AMERICA, INC.

When working with diagnosis tools

- Observe instructions in diagnosis tool

00 SAFETY INSTRUCTIONS FOR HANDLING OIL

WARNING: DANGER OF POISONING if oil is ingested/absorbed through the skin!

RISK OF INJURY if oil comes into contact with eyes and skin!

Recycling

Observe country-specific waste-disposal regulations.

Measures if oil is unintentionally released

- **Personal precautionary measures:** Danger of slipping! Keep non-involved persons away from the work area. Wear personal protective clothing/equipment.
- **Environmental protection measures:** Prevent oil from draining into drain channels, sewerage systems, pits, cellars, water and the ground.
- **Limiting spread:** Use oil blocks to prevent the surface spread of oil.
- **Cleaning procedure:** Bind and dispose of escaped oil with nonflammable absorbents.

NOTE: Do not flush oil away with water or aqueous cleaning agents.

00 00 ... SEAT BELTS: CHECKING CONDITION OF BELT STRAP, FUNCTION OF INERTIA REEL MECHANISM, LOCKING REEL, BELT BUCKLE

Belt strap, retractor mechanism, belt interlock

Pull out strap and make sure it emerges without jerking.

Belt strap:

- folding
- unraveling
- pinches
- cracks and tears
- traces of melting
- Check retaining button on tongue of belt strap

for damage and proper installation.

Retract belt strap; here the inertia reel mechanism must retract the strap automatically and without squeaking noises, the last section of the strap may have to be fed in.

Pull out belt strap in short tugs - locking reel must lock.

Belt buckle

The tongue on the belt strap must easily snap into place with an audible click.

When the "Press" button is pressed, the tongue must be ejected from the buckle under spring pressure.

NOTE: If the seat belt is damaged, you must replace the seat belt completely after consulting the customer; issue a separate invoice for this work.

Instructions on how to proceed, refer to 72 11 ... CHECKING AUTOMATIC SAFETY BELT .

00 00 618 SERVICE - BRAKE FLUID

Service - brake fluid

- BLEEDING BRAKE SYSTEM WITH DSC
- Reset CBS according to factory specification.

00 00 618 SERVICE - BRAKE FLUID

Service - brake fluid

- REPLACING FLUID IN BRAKE SYSTEM
- Replace MICROFILTER for interior blower.
- Reset CBS according to factory specification

IMPORTANT: Read and comply with GENERAL INFORMATION on brakes

00 00 610 SERVICE - ENGINE OIL (PETROL VEHICLES FROM 03/2009)

Service - engine oil

- Change ENGINE OIL AND OIL FILTER
- PARKING BRAKE FUNCTION CHECK
 - Brake in and check for correct function
- A/C system or automatic A/C:
 - Change MICROFILTER
- At every 2nd engine oil change
 - Replace SPARK PLUGS
 - Intake silencer: change air filter element. Shorten intervals accordingly for vehicles operated in dusty regions.
- Reset CBS according to factory specification.

00 00 612 SERVICE - FRONT BRAKES

Service - front brakes

- Change **BRAKE PADS** , clean brake air ducts
- **BRAKE DISCS**
 - Check surface and thickness
 - If necessary: Replace
- Reset **CBS** according to factory specification

NOTE:

- **Clean brake air ducts.**
- **Replace brake discs if they are below the minimum brake disc thickness. See FRONT BRAKE E89 and if scoring, heat cracks or thickness difference are detected.**
- **Apply a thin coat of grease to wheel centering on light alloy wheels, refer to Service Information Operating Fluids.**
- **Issue a separate invoice for replacing the brake discs.**

00 00 602 SERVICE - INTAKE MUFFLER

- Change air cleaner element
- Reset **CBS** according to factory specification

00 00 616 SERVICE - MICROFILTER

Service - microfilter

- **REPLACING MICROFILTER**
- Reset **CBS** according to factory specification.

00 00 614 SERVICE - REAR BRAKES

Service - rear brakes

- Change brake pads. See **BRAKE PADS ON BOTH REAR DISC BRAKES**
- **REMOVING AND INSTALLING OR REPLACING BOTH REAR BRAKE DISCS**
 - Check surfaces and thickness.
 - If necessary: Replace
- **PARKING BRAKE FUNCTION CHECK**
 - Check operation
- Reset **CBS DISPLAY** according to factory specification

NOTE:

- **Clean brake air ducts.**
- **Replace brake disks if they drop below minimum thickness. See E89 REAR**

BRAKE .

- Apply a thin coat of grease to wheel centering on light alloy wheels, refer to Service Information Operating Fluids.
- Issue a separate invoice for replacing the brake discs and handbrake shoes.

00 00 622 SERVICE - SPARK PLUGS

Service - spark plugs

- **REPLACE SPARK PLUGS**
- Reset **CBS** according to factory specification.

00 00 624 SERVICE - VEHICLE CHECK

Service - vehicle check

- Check **HORN, HEADLIGHT FLASHERS AND HAZARD WARNING FLASHERS**
- Check **INSTRUMENT AND INSCRIPTION LIGHTING AND BLOWER**
- Check **LIGHTING SYSTEM**
- **SEAT BELTS:** Check condition of seat belt strap, function of automatic reel, seat belt locking reel and seat belt buckle
- Check **WINDSCREEN WASH/WIPE SYSTEM**
- Convertible only:

Trigger rollover protection system (Convertible) via diagnostic interface. Warning: open soft top first

- If available: (M) Mobility System: Check expiry date on sealant bottle, replace sealant bottle if necessary
- **TYRES:** Check tread depth, tread wear pattern, external condition and tyre pressure and correct if necessary (spare wheel as well)
- Initialize Run Flat Indicator
- Check **BATTERY** (magic eye), if necessary recharge battery (issuing a separate invoice for this work)
 - Check display (magic eye)
 - If necessary: Charge battery
- Steering fluid reservoir: Check oil level.
- Checking **COOLANT LEVEL AND CONCENTRATION** , topping up if necessary
- **WINDSCREEN WASHER SYSTEM:** Check fluid level, top up if necessary
- **BRAKE LINES AND CONNECTIONS:** Check for tightness, damage and correct position
- **UNDERBODY INCL. ALL VISIBLE COMPONENTS:** Check for damage, tightness, corrosion
- **STEERING COMPONENTS:** Check for play, tightness, damage and wear
- **CHECK ROAD SAFETY** (test drive):
 - Brakes

- Steering
- Shock Absorbers
- Transmission
- Reset **CBS** according to factory specification

00 00 105 STANDARD SCOPE OF SERVICE

Standard scope of service

- Check Check Control messages
- Check indicator and warning lights
- Reset **CBS**

00 00 ... STEERING COMPONENTS: CHECKING FOR ZERO CLEARANCE, LEAKS, DAMAGE AND WEAR

Checking play

- For hydraulically assisted steering systems, the engine must be running
- For electrically assisted steering systems, the ignition must be on
- Steering wheel: Move steering wheel back and forth and check for play
- Tie rod joint: There must be no play between the track-rod arm (2) and track rod joint (1)

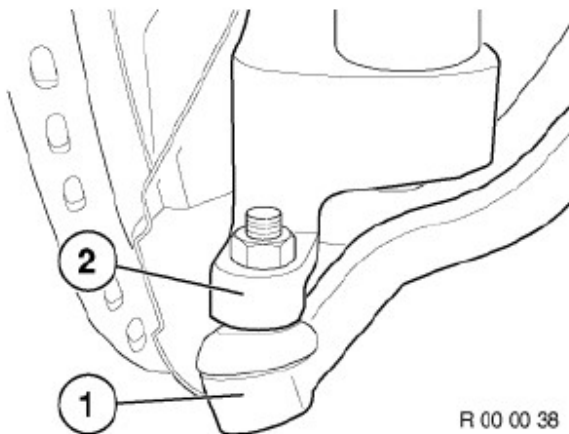
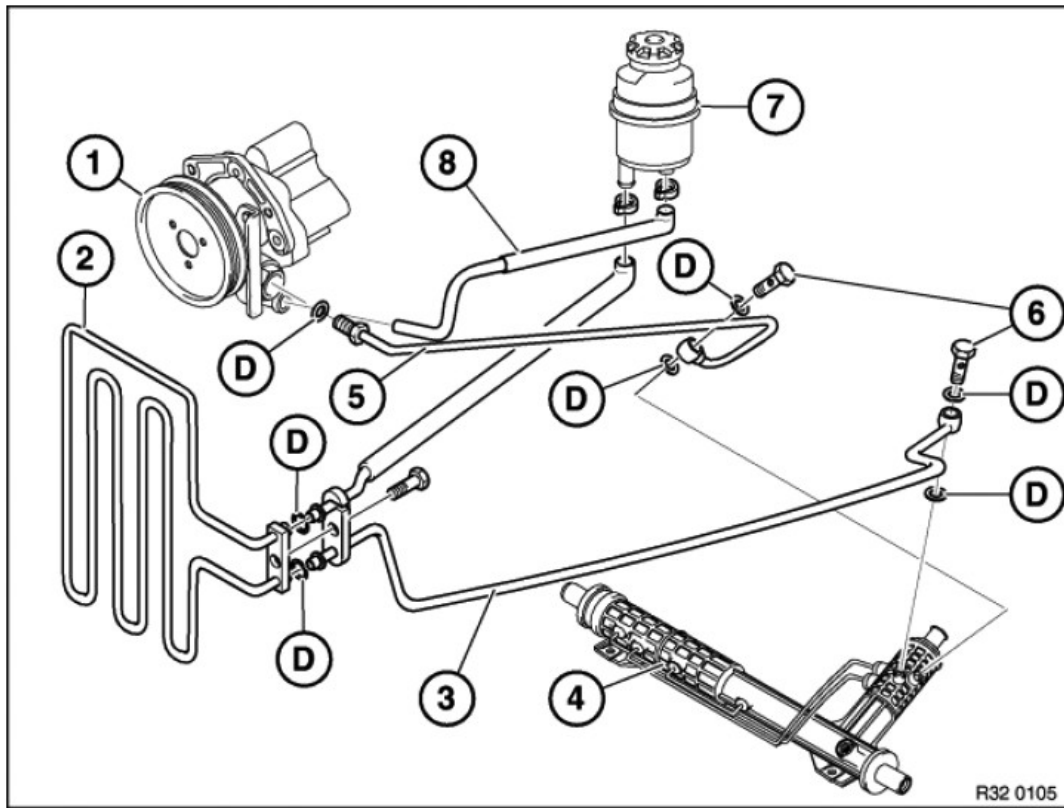


Fig. 24: Identifying Track Rod Joint And Arm
 Courtesy of BMW OF NORTH AMERICA, INC.

Checking for leaks

The following illustration shows the arrangement of the power steering components and lines.



1	Pump	6	Hollow bolt
2	Power steering cooler	7	Container
3	Return line	8	Suction hose
4	Steering gear	D	Sealing ring
5	Pressure line		

Fig. 25: Identifying Power Steering Components
Courtesy of BMW OF NORTH AMERICA, INC.

Check all visible connections, hoses, lines and steering gear for traces of fluid.

Checking for damage and wear

Check gaiters, flexible disc and axle and tie rod sleeves for damage (e.g. cracks, holes), for leaks or missing clamping bands on gaiters.

00 SYMBOLS USED AND INFORMATION IN REPAIR INSTRUCTIONS

WARNING: Precautionary rules and measures which protect mechanics and other personnel against injury (including life-threatening injuries).

For example:

WARNING: Risk of scalding!

Only perform this work after engine has cooled down.

IMPORTANT: Specific instructions and precautionary measures which prevent damage to the vehicle or to vehicle parts. Failure to comply with the above will invalidate any warranty claims.

The caution symbol is used in all repair instructions.

However, use of the warning word "Caution!" is not binding in every case.

The notes, instructions and precautionary measures mentioned above retain their validity.

WARNING: High-voltage system - danger to life!

Before beginning work, follow the applicable safety rules and perform the necessary preliminary work.

NOTE: High-voltage symbol for hybrid cars (electrically powered vehicles) E72 and MINI E.

WARNING: High-voltage system - danger to life!

Before beginning work, follow the applicable safety rules and perform the necessary preliminary work.

NOTE: High-voltage symbol for hybrid car (electrically powered vehicle) from F04.

NOTE: Particular information on improved procedures for operation, testing, adjustment and upkeep.

Also indicates the end of a repair section.

Recycling

Observe country-specific waste disposal regulations

General information:

Refers to other instructions: such as e.g.:

Necessary preliminary tasks;

Further instructions: refer to operating instructions for balancing machine.

Replacement:

Carry out programming/encoding.

NOTE: Many electronic control units must be programmed/coded (e.g. when replaced).

Note (previous symbol):

- **Connect BMW diagnosis system**

Note (symbol for new diagnosis system ISID):

- Connect BMW diagnosis system

IMPORTANT: Read and comply with notes on protection against damage from electrostatic damage (ESD protection).

NOTE: Electronic control units and other electronic components - if handled incorrectly - can be damaged or destroyed by electrostatic discharge.

Special tools required

NOTE: List of special tools needed in these repair instructions.

WARNING: Laser beam!

For example:

Laser beam at adjustment unit. Do not look into the beam!

Note on laser class.

IMPORTANT: Use eye protection for the following operations.

For example:

Fuel can emerge spontaneously at high speed when the fuel delivery line is released!

IMPORTANT: Use eye protection and ear protection for the following operations.

IMPORTANT: Use face protection for the following operations.

IMPORTANT: Use protective gloves for the following operations.

Avoid skin contact.

IMPORTANT: Use eye protection and protective gloves for the following operations.

Avoid eye contact and skin contact.

WARNING: Danger of explosion!

First aid measures

Note on first aid measures that need to be administered immediately.

00 00 ... TYRES: CHECKING INFLATION PRESSURE, CORRECTING IF NECESSARY (INCL. SPARE WHEEL), CHECKING EXTERNAL CONDITION, TREAD DEPTH, PATTERN

Checking tyre inflation pressure

- Check tyre inflation pressure in accordance with information plate on B-pillar
- The inflation pressure in the spare wheel must be 0.5 bar higher than the maximum specified value on the information plate
- Initialize **RUN FLAT INDICATOR (RPA)**

Check tyre condition

- Check tread depth of all tyres with tyre tread gauge
- Check tyre tread surfaces and side walls for incisions and foreign particles such as nails or screws
- Check tyre tread pattern for localized flattening and wear on one side; if necessary, carry out wheel/chassis alignment after consulting with customer and issue a separate invoice for this work

NOTE:

- **For details of approved wheel-tyre combinations, refer to KSD CD**
- **For reasons of driving safety, only use tyres of the same type and tread pattern on a single vehicle**
- **Inform customer of any incorrect or worn tyres**

00 00 ... UNDERBODY INCL. ALL VISIBLE COMPONENTS: CHECKING FOR DAMAGE, LEAKS, CORROSION

- Visually inspect underbody:
 - For leaks (transmission, fuel system, brake components, steering)
 - For correct routing of electrical leads (brake pad sensor, pulse generator)

- For leaks (shock absorber) and mounting (springs) - rebound
- Damage to underbody
- Corrosion on underbody

IMPORTANT: If damage to the underbody is identified:

- If necessary, remove panels from underbody.
- Check mountings and fixtures and brake and fuel lines for damage and correct installation position.

Rectify identified faults after consulting with customer and issue a separate invoice.

00 00 ... UPKEEP MEASURES FOR STORED VEHICLES (NEW AND USED CARS) AND VEHICLES TO BE LAID UP AT CUSTOMER'S PREMISES

STORED VEHICLE UPKEEP MEASURES

Measure	Vehicles	Implementation
Renew outer skin preservation (new cars must always be stored in preserved condition; preservation/depreservation instructions, refer to Component Group 97)	New cars	every 6 months; Tropical countries every 4 months
Release parking brake	New cars	in general
	Used cars	in general
	Customer cars to be laid up (instructions to customer)	in general
Engage gear or selector lever position "P" for automatic	New cars	in general
	Used cars	in general
	Customer cars to be laid up (instructions to customer)	in general
Check covering of interior equipment	New cars	in general
Increase tire inflation pressure to 3.5 bar	New cars	in general
	Used cars	in general
	Customer cars to be laid up (instructions to customer)	in general
If battery master switch is fitted, switch off	New cars	in general
Charge battery	New cars	every 6 weeks batteries disconnected from vehicle electrical system every 12 weeks in general before handover to customer
	Used cars	every 6 weeks batteries

		disconnected from vehicle electrical system every 12 weeks
	Customer cars to be laid up (instructions to customer)	every 6 weeks batteries disconnected from vehicle electrical system every 12 weeks
Change brake fluid and reset service interval indicator (clock symbol only)	New cars	lay-up periods > 6 months, change before handover of vehicle to customer
	Used cars	lay-up periods > 6 months, change before handover of vehicle to customer
Check convertible top for possible damage	New cars	in general before handover to customer
	Used cars	in general before handover to customer
Park convertibles, if possible, under a roof	New cars	in general
	Used cars	in general
	Customer cars to be laid up (instructions to customer)	in general
Check for damage to paintwork and exterior/interior equipment	New cars	in general before handover to customer
	Used cars	in general before handover to customer
Change engine oil and oil filter when engine is at normal operating temperature	New cars	from 12 months lay-up period before handover of vehicle to customer
	Used cars	from 12 months lay-up period before handover of vehicle to customer
	Customer cars to be laid up (instructions to customer)	from 12 months lay-up period before handover of vehicle to customer
Check coolant concentrate	Used cars	in general
	Customer cars to be laid up (instructions to customer)	in general
Apply hand and foot brakes when dry	New cars	in general
	Used cars	in general
	Customer cars to be laid up (instructions to customer)	in general
Perform surface protection: Vehicle washing with inside cleaning and subsequent preservation of paintwork and chrome. Clean rubber seals on	Used cars	in general

hoods/bonnets, rear lids and doors and apply talc or glycerine. Perform cleaning, preservation and subsequent treatment of engine, engine compartment, underbody, axles and assemblies with BMW-approved materials.	Customer cars to be laid up (instructions to customer)	in general
Switch on A/C system once a month for 10 minutes	Used cars	necessary in order to retain full operational capability of gaskets and expansion valve (omitted in case of R134a refrigerant, identified by rating plate in engine compartment)
	Customer cars to be laid up (instructions to customer)	necessary in order to retain full operational capability of gaskets and expansion valve (omitted in case of R134a refrigerant, identified by rating plate in engine compartment)

00 00 ... VEHICLE DIAGNOSTIC TEST

Connect BMW diagnostic system (ISID) to diagnostic socket.

Switch the ignition on.

Carry out vehicle identification.

Start vehicle test.

The vehicle test is carried out.

NOTE: **The vehicle test is a prerequisite for vehicle diagnosis, since it allows any stored fault codes to be read and a test schedule to be prepared. In the vehicle test, the control units are physically identified in succession and their fault memories read out.**

Once the fault memory has been read, all fault memories are displayed in a fault memory list.

Check identified faults and if necessary rectify these faults after consulting with customer.

00 00 ... WINDSCREEN WASHER SYSTEM: CHECKING FLUID LEVEL, TOPPING UP IF NECESSARY

- Top up windscreen washer fluid reservoir, if necessary rear window washer fluid reservoir and (depending on equipment specification) intensive cleaning reservoir up to edge or mark.

IMPORTANT: A pH-neutral BMW window cleaning agent (antifreeze in winter) must always be added to the water.

MAINTENANCE

Maintenance and General Information - Special Tools - Z4

00 MAINTENANCE AND GENERAL INFORMATION

00-2261 ADAPTER (2 X)

Adapter (2 x)

SI number

01 22 06 (307)

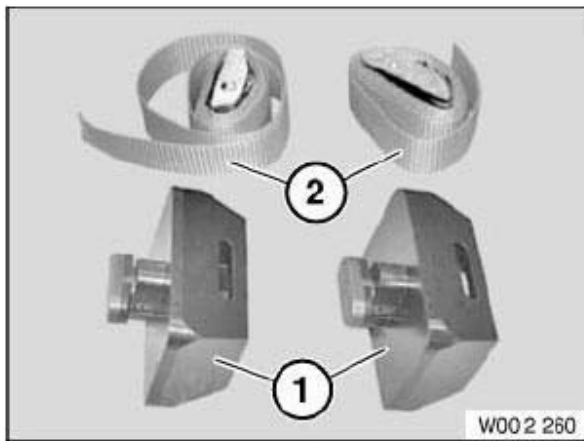


Fig. 1: Identifying Adapter (2 X) (00-2261)
Courtesy of BMW OF NORTH AMERICA, INC.

00-2300 ASSEMBLY STAND

Assembly stand MW

NOTE: (Assembly stand with universal flange) For mounting engines from S85

SI number

01 25 04 (155)

Consisting of:

1 = 0495188 Assembly stand

2 = 0495189 Tool

NOTE: (Universal flange)

3 = 0495200 Crank

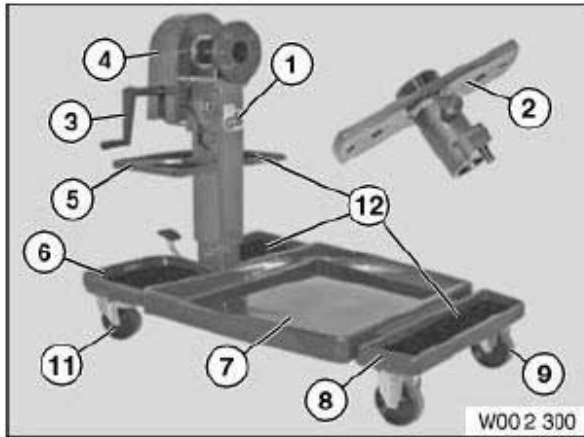


Fig. 2: Identifying Assembly Stand (00-2300)
Courtesy of BMW OF NORTH AMERICA, INC.

4 = 0495201 Cover

NOTE: (Protective hood)

5 = 0495202 Oddments tray

NOTE: (Oddments tray for small parts)

6 = 0495203 Shaped element

NOTE: (Rear shaped pan)

7 = 0495204 Collection pan

NOTE: (Oil collection pan)

8 = 0495205 Shaped element

NOTE: (Front shaped pan)

9 = 0495206 Wheel

NOTE: (Front wheel (without stop))

10 = 0495207 Wheel

NOTE: (Rear wheel (with stop))

11 = 0495208 Mat

NOTE: (Checker mat set)

00-1490 ASSEMBLY STAND

Assembly stand MW

Replaced by: 0495187

NOTE: For accommodating engine, transmission and rear axle, replaced by 00 1 450 (passenger car) Release for motorcycle only! Replaced by 00 2 300 (0 495 187)

Consisting of:

1 = 0490119 Frame

NOTE: (tube frame) Release for motorcycle only!

2 = 0490120 Fixture

NOTE: (Mounting head without mounting flange)

3 = 0490121 Fixture

NOTE: (Mounting flange (2 pieces required)) Release for motorcycle only!

4 = 0490122 Fuse

5 = 0490123 Fitting aid

NOTE: (Locking of mounting flange)

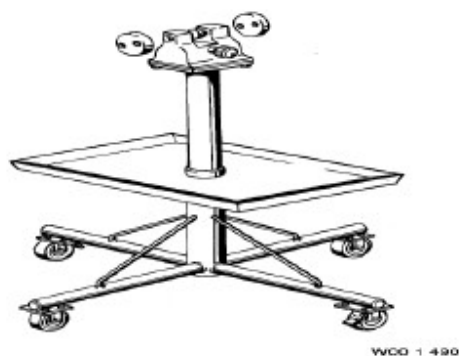


Fig. 3: Identifying Assembly Stand (00-1490)
Courtesy of BMW OF NORTH AMERICA, INC.

6 = 0490124 Lever

NOTE: (release lever)

7 = 0490125 Wheel

NOTE: (wheel without brake) Release for motorcycle only!

8 = 0490126 Wheel

NOTE: (wheel with brake) Release for motorcycle only!

9 = 0490127 Oddments tray

NOTE: (storage plate)

00-3070 AWL

Awl MW

NOTE: Diameter 3 mm

Storage Location

A21

SI number

01 28 06 (331)

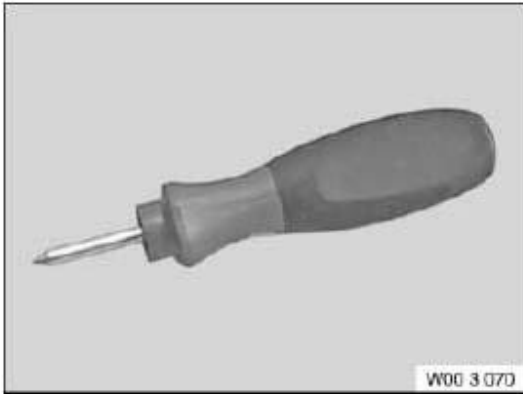


Fig. 4: Identifying Awl (00-3070)
Courtesy of BMW OF NORTH AMERICA, INC.

00-1290 BASE FRAME

Base frame MW

NOTE: 4 m special tool cabinet. USA version

00-0151 BASIC FRAME

Basic frame MW

NOTE: Length 4040 mm/height 2150 mm/depth 680 mm Replaced by 00 1 000 (0 494 897) See Service Information (bulletin) 01 10 04 (092)

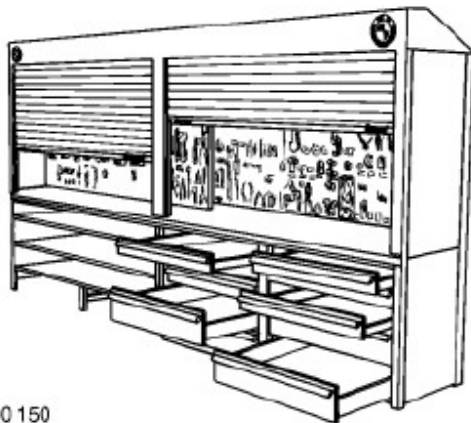


Fig. 5: Identifying Basic Frame (00-0151)
Courtesy of BMW OF NORTH AMERICA, INC.

00-0100 BASIC FRAME

Basic frame MW

NOTE: (Base frame) Frame for special tool board. Replaced by 00 0 220 (0 493 777), 00 0 221 (0 493 778), 00 0 224 (0 493 781)

00-0180 CABLE CABINET

Cable cabinet MW

NOTE: (Cable cabinet II, complete) For extended accommodation of adapter cables, measuring equipment and testers

SI number

00 02 99 (399)

Consisting of:

4 = 0494120 Drawer block

NOTE: For cable cabinet II only

5 = 0494121 Holder

NOTE: (holder) Holder set for test adapters. For cable cabinet II only

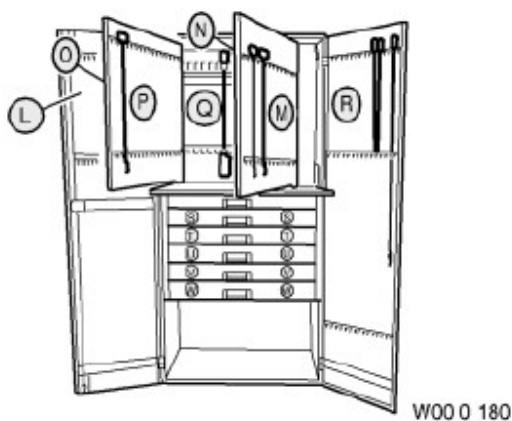


Fig. 6: Identifying Cable Cabinet (00-0180)
Courtesy of BMW OF NORTH AMERICA, INC.

1 = 0493522 Film

NOTE: (Film set II) For identifying storage locations in cable cabinet II - valid status in each case

2 = 0493523 Holder

NOTE: (Cable holder set - H -) For cable cabinet II only 16 guide rails with 15 holding straps as fixture for adapter cables - valid status in each case

3 = 0493524 CD holder

NOTE: For holding two program CDs with cover - Can be installed in cable cabinets I and II

6 = 0493527 Holder

NOTE: (Holder) Holding strap set (optional) 20 holding straps for cable clips - H - For extension to cable hanging in cable cabinets I and II

00-0190 CABLE CABINET

Cable cabinet MW

NOTE: (Cable cabinet I, complete) With foil set and accessories - For storing the adapter cables and measuring devices and testers

SI number

00 02 99 (399)

Consisting of:

1 = 0494122 Cable cabinet

NOTE: Without content and without accessories Base for cable cabinet I and II

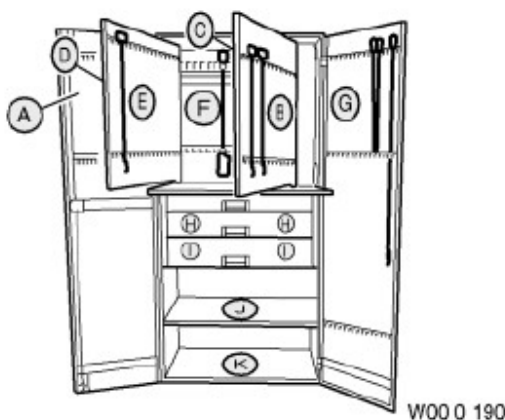


Fig. 7: Identifying Cable Cabinet (00-0190)

Courtesy of BMW OF NORTH AMERICA, INC.

6 = 0494123 Frame

NOTE: (Frame) Swivel panel frame support of the cable suspensions in the cable cabinet I and II

9 = 0494124 Floor

NOTE: (Floor) For cable cabinet I only

2 = 0490072 Foil

NOTE: (Foil set I) For identification of the storage locations in the cable cabinet I - valid status in each case

3 = 0490073 Holder

NOTE: (Cable holder set - H -) For cable cabinet I only 24 guide rails with 15 holding straps each for accommodating the adapter cables

= 0490074

4 = 0490074 Cable holder

NOTE: (Cable holder) Cable holder - B - For mounting the engine test cable For extending the cable suspensions in cable cabinet I and II

7 = 0493529 Drawer block

NOTE: For cable cabinet I only

8 = 0493530 Magnet

NOTE: (Magnet) Magnet with roller. For better fixation and spacing of the swivel panels - Only for retrofittings in cable cabinets I and II

10 = 0493532 Register

NOTE: For locating the BMW special tools for the vehicle electrical system in cable cabinet I and II

00-0120 CARDBOARD BOX

Cardboard box Minimum set: Mechanical tools MW

NOTE: (Cardboard box) Cardboard box (set) for cable cabinet. For adapter cable storage (cable cabinet modification) 2 cardboard boxes are delivered at this time: 00 0 121 = storage location Y1 00 0 122 = storage location Y2

SI number

00 04 04 (104)

Consisting of:

0494948

0494949

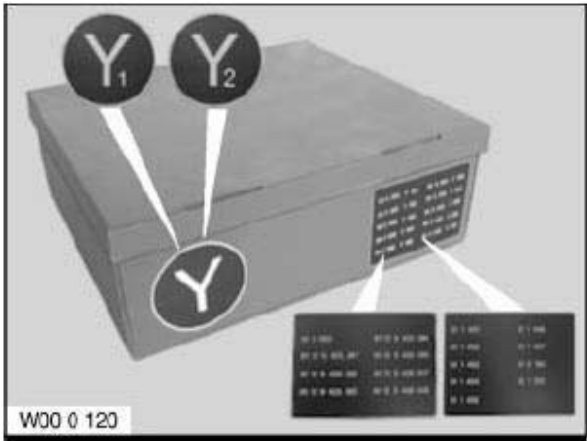


Fig. 8: Identifying Cardboard Box (00-0120)
Courtesy of BMW OF NORTH AMERICA, INC.

00-0122 CARDBOARD BOX

Cardboard box MW

NOTE: (Cardboard box) Cardboard box Y2 = storage location for adapter cable

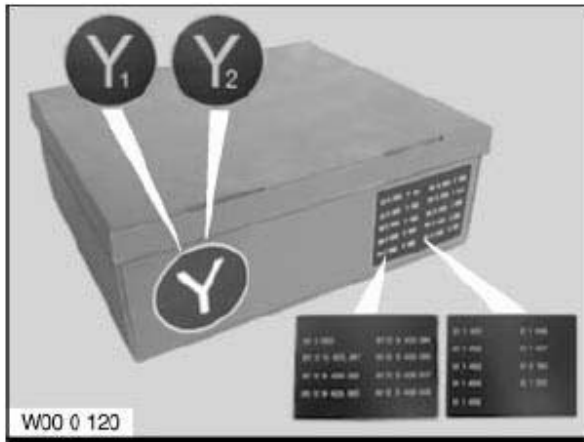


Fig. 9: Identifying Cardboard Box (00-0122)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-0121 CARDBOARD BOX

Cardboard box MW

NOTE: (Cardboard box) Cardboard box Y1 = storage location for adapter cable



Fig. 10: Identifying Cardboard Box (00-0121)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-9329 CASE

Case MW

NOTE: (Case) with insert not incl. panel wedges

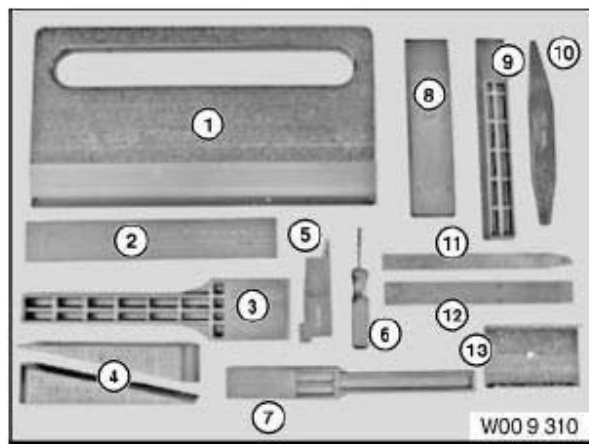


Fig. 11: Identifying Case (00-9329)
Courtesy of BMW OF NORTH AMERICA, INC.

00-0450 DECADE NUMBER

Decade number

NOTE: Reserved for consecutive sub-no. Cross-member 00 0 200. Replaced by: 00 6 040

SI number

1 10 02 (907)

00-0200 DEVICE

Device MW

NOTE: (Cross-member) To hold the engine when removing and installing the front axle support, the oil sump and transmission. Replaced by: 00 6 000, 00 6 010, 00 6 020, 00 6 030

Storage Location

Individual

SI number

01 14 01 (766)

Consisting of:

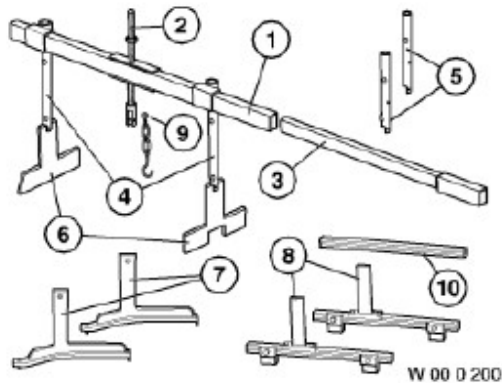


Fig. 12: Identifying Device (00-0200)

Courtesy of BMW OF NORTH AMERICA, INC.

8 = 0490083 Support

NOTE: (Support foot (2 pieces) with pads (4 pieces)) Series: E38, E39, E46, E60, E65.
Replaced by 00 6 030 (0 496 422)

1 = 0490076 Bridge

NOTE: (Support bridge) Replaced by 00 6 001

2 = 0490077 Spindle

NOTE: (Spindle with hook) Replaced by 00 6 002

3 = 0490078 Extension

NOTE: For extending the support bridge 00 0 201 Series: E65 Replaced by 00 6 003

4 = 0490079 Adapter

NOTE: (Adapter leg (1 piece)) Replaced by 00 6 004

5 = 0490080 Extension

NOTE: Series: R50, R53 Replaced by 00 6 005

6 = 0490081 Support

NOTE: (Support foot (2 pieces)) Series: E30, E31, E32, E34, E36, Z3 Only 6-cylinder engines. Replaced by 00 6 010

7 = 0490082 Support

NOTE: (Support foot (2 pieces)) Model: Z3/Only 4-cylinder engines. Replaced by 00 6 020

9 = 0493123 Chain

NOTE: (Chain) Chain with hook. Version similar to 11 0 003. Replaced by 00 6 006

00-2030 DEVICE

Device MW

NOTE: (Universal hydraulic lifter base unit) Chassis and hydraulic lifter - For removing and installing rear axle supports and transmissions. Also for soft top mounts.

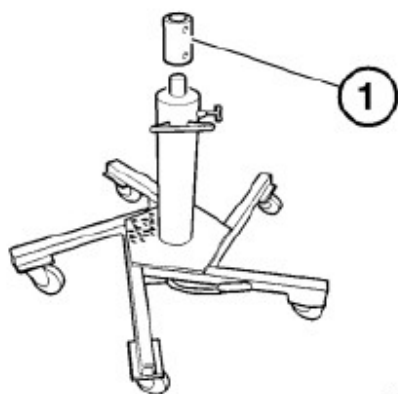
SI number

01 05 90 (207)

Consisting of:

1 = 0490134 Adapter

NOTE: (Adapter for gearbox holder) Series: E30, E31, E32, E34, E36



W00 2 030

Fig. 13: Identifying Device (00-2030)

Courtesy of BMW OF NORTH AMERICA, INC.

00-0154 DRAWER BLOCK

Drawer block MW

NOTE: (Drawer unit) With 5 drawers, lockable

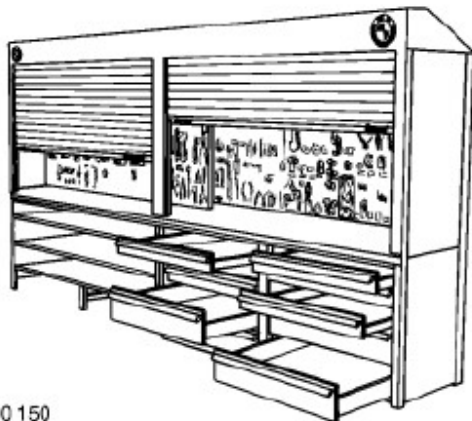


Fig. 14: Identifying Drawer Block (00-0154)
Courtesy of BMW OF NORTH AMERICA, INC.

00-2327 ENGINE SUPPORT PLATES

Engine support plates

NOTE: Engine: S62 Replaced by 11 5 420



Fig. 15: Identifying Engine Support Plates (00-2327)
Courtesy of BMW OF NORTH AMERICA, INC.

00-2220 EXHAUST CUTTER

Exhaust cutter MW

NOTE: (Exhaust pipe cutter) For cutting V2a pipes on exhaust system.



Fig. 16: Identifying Exhaust Cutter (00-2220)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-2511 EXTENSION

Extension MW

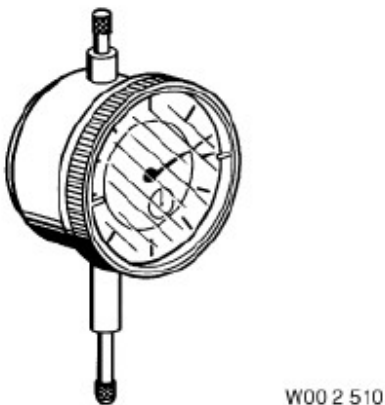


Fig. 17: Identifying Extension (00-2511)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-7500 EXTRACTOR

Extractor MW

NOTE: (Universal extractor Kukko 17/K) For pulling bearing inner race from drive flange on wheel bearing, rear

Consisting of:

1 = 0490483 Spindle

NOTE: (Pressure spindle with bridge)

2 = 0490484 Spindle

NOTE: (Adjusting spindle (2 pieces) with knurled nuts (4 pieces))

3 = 0490485 Spindle

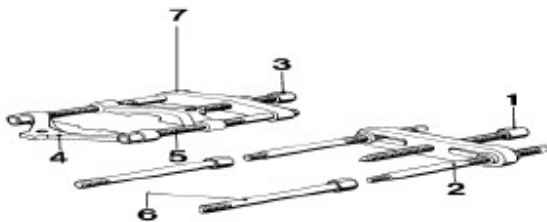
NOTE: (Pressure spindle, side)

4 = 0490486 Retaining bracket

NOTE: (Adjusting jaws (2 pieces))

5 = 0490487 Bolt

NOTE: (Adjusting screws (2 pieces) with nut) For adjusting jaw (2 pieces)



W00 7 500

Fig. 18: Identifying Extractor (00-7500)
Courtesy of BMW OF NORTH AMERICA, INC.

6 = 0490488 Extension

NOTE: (Extension (2 pieces))

7 = 0490489 Bridge

00-0051 FILM

Film MW

NOTE: (Film, German)



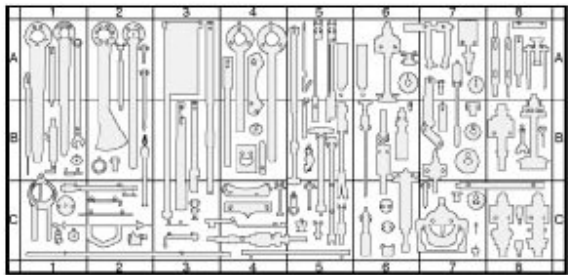
W00 0 050

Fig. 19: Identifying Film (00-0051)
Courtesy of BMW OF NORTH AMERICA, INC.

00-0012 FILM

Film MW

NOTE: (Set of films for special tool board I)



W00 0 010

Fig. 20: Identifying Film (00-0012)
Courtesy of BMW OF NORTH AMERICA, INC.

00-1331 FILM

Film MW

NOTE: (Film number 10 USA version)

00-0054 FILM

0490032 000054 Film MW

NOTE: (Film, Dutch)



SPEZIAL - WERKZEUGE

W00 0 050

Fig. 21: Identifying Film (00-0054)

Courtesy of BMW OF NORTH AMERICA, INC.

00-0365 FILM/HOOK

0496468 000365 Film/hook MW

NOTE: (Supplementary films/hook set for N63/E83/E88/E92)

00-0361 FILM/HOOK

0496220 000361 Film/hook MW

NOTE: (Additional films/hooks for N43, N47)

00-1171 FILM S85

00 1 171 Film S85

00-1161 FILM S85

00 1 161 Film S85

00-1323 FOIL

0495080 001323 Foil MW

NOTE: (Film no. 3 USA version)

00-1327 FOIL

0495084 001327 Foil MW

NOTE: (Film no. 7 USA version)

00-5103 FOIL

0495975 005103 Foil MW

NOTE: (Foil 3, panel I)

SI number

01 19 06 (298)

00-5107 FOIL

0495979 005107 Foil MW

NOTE: (Foil 7, panel III)

SI number

01 19 06 (298)

00-1322 FOIL

0495079 001322 Foil MW

NOTE: (Film no. 2 USA version)

00-5453 FOIL

0495985 005453 Foil MW

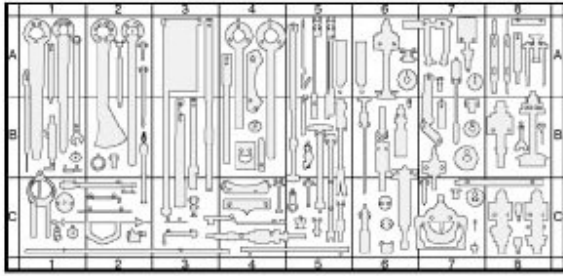
NOTE: (Stock issue film 3)

SI number

01 19 06 (298)

00-5115 FOIL

0496802 005115 Foil MW



W00 0 010

Fig. 22: Identifying Foil (00-5115)

Courtesy of BMW OF NORTH AMERICA, INC.

00-1335 FOIL

0496560 001335 Foil MW

NOTE: (Foil 14 USA (A/B/C 35/36))

00-1328 FOIL

0495085 001328 Foil MW

NOTE: (Foil no. 8 USA version)

00-1334 FOIL

0496559 001334 Foil MW

NOTE: (Foil 13 USA (A/B/C 33/34))

00-5106 FOIL

0495978 005106 Foil MW

NOTE: (Foil 6, panel II)

SI number

01 19 06 (298)

00-5101 FOIL

0495973 005101 Foil MW

NOTE: (Foil 1, panel I)

SI number

01 19 06 (298)

00-0418 FOIL

0495513 000418 Foil MW

NOTE: (Foil set cable cabinet 2)

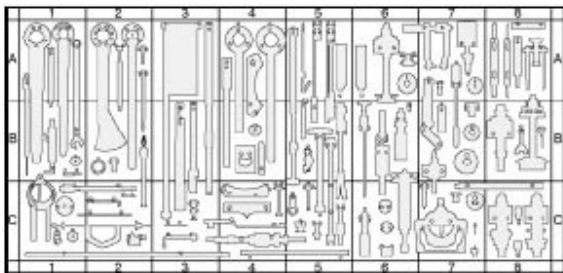
00-5113 FOIL

0496214 005113 Foil MW

NOTE: (Foil 12 (A/B/C 23/24)) GM6 and RHT

00-0368 FOIL

0496800 000368 Foil MW



W000 010

Fig. 23: Identifying Foil (00-0368)

Courtesy of BMW OF NORTH AMERICA, INC.

00-5114 FOIL

0496556 005114 Foil MW

NOTE: (Foil 13 (A/B/C 25/26)) F01

00-5111 FOIL

0495867 005111 Foil MW

NOTE: (Foil 10 (A/B/C 19/20)) Engine: N54

00-5452 FOIL

0495984 005452 Foil MW

NOTE: (Stock issue film 2)

SI number

01 19 06 (298)

00-5108 FOIL

0495980 005108 Foil MW

NOTE: (Foil 8, panel III)

SI number

01 19 06 (298)

00-0416 FOIL

0495282 000416 Foil MW

NOTE: (Foil set cable cabinet 1 for E90)

00-5102 FOIL

0495974 005102 Foil MW

NOTE: (Foil 2, panel I)

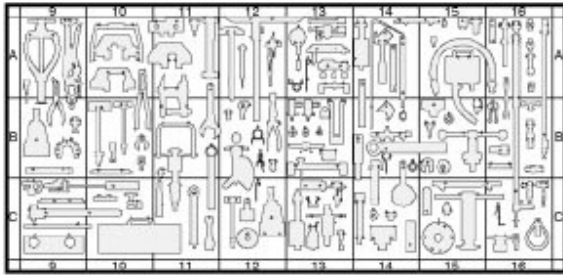
SI number

01 19 06 (298)

00-0022 FOIL

0490009 000022 Foil MW

NOTE: (Foil set for special tool board II)



W00 0 020

Fig. 24: Identifying Foil (00-0022)

Courtesy of BMW OF NORTH AMERICA, INC.

00-0053 FOIL

0490031 000053 Foil MW

NOTE: (foil, French



SPEZIAL - WERKZEUGE

W00 0 050

Fig. 25: Identifying Foil (00-0053)

Courtesy of BMW OF NORTH AMERICA, INC.

00-5109 FOIL

0495981 005109 Foil MW

NOTE: (Foil 9, panel 3)

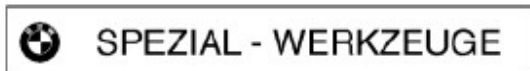
SI number

01 19 06 (298)

00-0056 FOIL

0490034 000056 Foil MW

NOTE: (foil, Spanish)



W00 0 050

Fig. 26: Identifying Foil (00-0056)

Courtesy of BMW OF NORTH AMERICA, INC.

00-5454 FOIL

0495986 005454 Foil MW

NOTE: (Stock issue film 4)

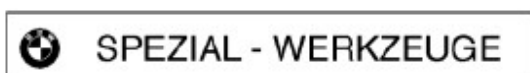
SI number

01 19 06 (298)

00-0055 FOIL

0490033 000055 Foil MW

NOTE: (Foil, Italien)



W00 0 050

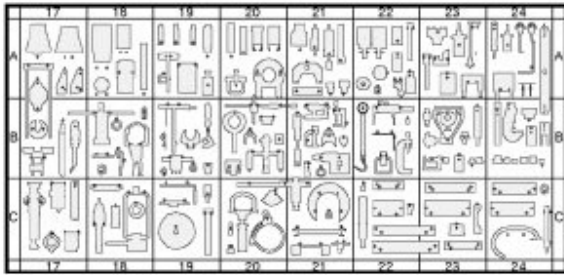
Fig. 27: Identifying Foil (00-0055)

Courtesy of BMW OF NORTH AMERICA, INC.

00-0032 FOIL

0490016 000032 Foil MW

NOTE: (set of foils for special tool board III)



W00 0 030

Fig. 28: Identifying Foil (00-0032)

Courtesy of BMW OF NORTH AMERICA, INC.

00-5104 FOIL

0495976 005104 Foil MW

NOTE: (Foil 4, panel II)

SI number

01 19 06 (298)

00-0415 FOIL

0495281 000415 Foil MW

NOTE: (Foil set 1 + 2 for E87)

00-5112 FOIL

0496096 005112 Foil MW

NOTE: (Film 11 (A/B/C 21/22)) Model series: E70

00-1329 FOIL

0495086 001329 Foil MW

NOTE: (Film no. 9 USA version)

00-5451 FOIL

0495983 005451 Foil MW

NOTE: (Stock issue film 1)

SI number

01 19 06 (298)

00-1333 FOIL

0496252 001333 Foil MW

NOTE: (Foil no. 12 USA version)

00-1325 FOIL

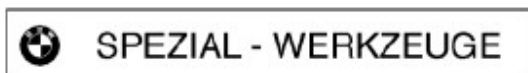
0495082 001325 Foil MW

NOTE: (Film no. 5 USA version)

00-0052 FOIL

0490030 000052 Foil MW

NOTE: (Film sheet, English)



W00 0 050

Fig. 29: Identifying Foil (00-0052)

Courtesy of BMW OF NORTH AMERICA, INC.

00-1332 FOIL

0496251 001332 Foil MW

NOTE: (Foil no. 11 USA version)

00-1320 FOIL

0495077 001320 Foil MW

NOTE: (Foil set, complete, USA version)

00-1336 FOIL

0496561 001336 Foil MW

NOTE: (Foil 15 USA (A/B/C 37/38))

00-5105 FOIL

0495977 005105 Foil MW

NOTE: (Foil 5, panel II)

SI number

01 19 06 (298)

00-5455 FOIL

0495987 005455 Foil MW

NOTE: (Relocation template 5)

SI number

01 19 06 (298)

00-1321 FOIL

0495078 001321 Foil MW

NOTE: (Film no. 1 USA version)

00-1326 FOIL

0495083 001326 Foil MW

NOTE: (Film no. 6 USA version)

00-1324 FOIL

0495081 001324 Foil MW

NOTE: (Foil no. 4 USA version)

00-0353 FOIL

0495363 000353 Foil MW

NOTE: (Additional foil for E60 all-wheel drive/E90/M57 T2/M67 TU)

00-0366 FOIL/HOOK

0496558 000366 Foil/hook MW

NOTE: (Supplementary foil/hook set USA - update)

00-1120 FOIL/HOOK

0494388 001120 Foil/hook MW

NOTE: (Film and hook set)

Consisting of:

1 = 0494389 Foil

2 = 0494390 Hook

NOTE: (Hook set)

00-0355 FOIL/HOOK

0495556 000355 Foil/hook MW

NOTE: (Film and hook set) 61 6 100, 61 6 110

00-0356 FOIL/HOOK

0495566 000356 Foil/hook MW

NOTE: (Film and hook set) 23 0 320

00-1160 FOIL/HOOK

0495414 001160 Foil/hook MW

NOTE: (Foil and hook set for S85) (for special offer tool)

SI number

01 12 05 (196)

Consisting of:

4 = 0495608 Foil

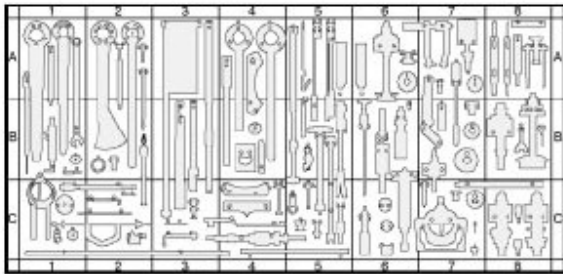
NOTE: (Foil S85)

4 = 0495609 Hook

NOTE: (Hook set S85)

00-5215 FOIL/HOOK

0496803 005215 Foil/hook MW



W000 010

Fig. 30: Identifying Foil/Hook (00-5215)
Courtesy of BMW OF NORTH AMERICA, INC.

00-0363 FOIL/HOOK

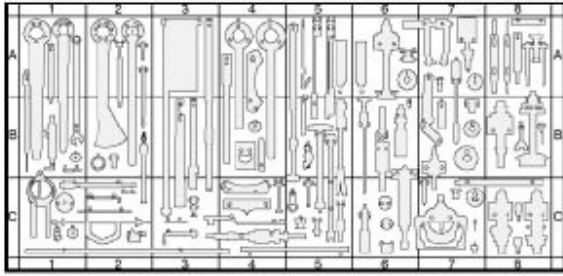
0496313 000363 Foil/hook MW

NOTE: (Supplementary film/hook set for N43)

99-5000 FOIL/HOOK

0496688 995000 Foil/hook MW

NOTE: Complete set for BMW



W00 0 010

Fig. 31: Identifying Foil/Hook (99-5000)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-0362 FOIL/HOOK

0496301 000362 Foil/hook MW

NOTE: (additional foils/set of hooks for S65)

00-1170 FOIL/HOOK

0495415 001170 Foil/hook MW

NOTE: (Foil and hook set for S85) (for store tool)

SI number

01 12 05 (196)

Consisting of:

4 = 0495610 Foil

NOTE: (Foil S85)

4 = 0495611 Hook

NOTE: (Hook set S85)

00-1140 FOIL/HOOK

0495292 001140 Foil/hook MW

NOTE: (E87 Foil and hook set) E87

Consisting of:

1 = 0495296 Foil

2 = 0495297 Hook

NOTE: (Hook set)

00-1100 FOIL/HOOK

0494205 001100 Foil/hook MW

NOTE: (Foil and hook set)

Consisting of:

1 = 0494206 Foil

2 = 0494207 Hook

NOTE: (Hook set)

00-0354 FOIL/HOOK

0495504 000354 Foil/hook MW

NOTE: (Foils/hook set E90)

00-1150 FOIL/HOOK

0495293 001150 Foil/hook MW

NOTE: (N 52 foil and hook set) N52

Consisting of:

1 = 0495294 Foil

2 = 0495295 Hook

NOTE: (Hook set)

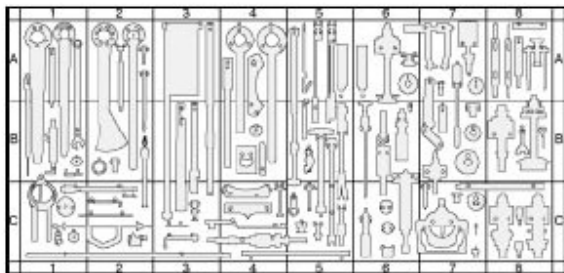
00-0358 FOIL/HOOK

0496255 000358 Foil/hook MW

NOTE: (Foil/hook set)

00-0369 FOIL/HOOK

0496801 000369 Foil/hook MW



W000010

Fig. 32: Identifying Foil/Hook (00-0369)
Courtesy of BMW OF NORTH AMERICA, INC.

00-0359 FOIL/HOOK

0496217 000359 Foil/hook MW

NOTE: (Supplementary foils + hooks for 24 2 354 and 24 4 166)

00-0357 FOIL/HOOK

0495804 000357 Foil/hook MW

NOTE: (Film and hook set) For 33 4 285

00-9321 FOLDING STICK

0490538 009321 Folding stick MW

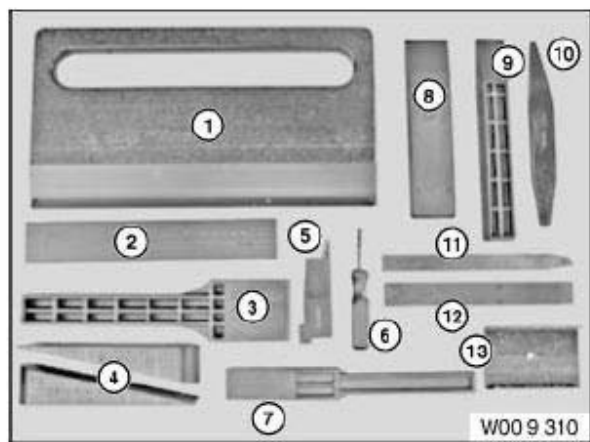


Fig. 33: Identifying Folding Stick (00-9321)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-0159 FRAME

0490067 000159 Frame MW

NOTE: (Carrier housing with roller) Consisting of: Carrier housing (3 pieces)/roller (3 pieces)/roller, bottom (6 pieces) Replaced by 00 1 000 (0 494 897) See Service Information (bulletin) 01 10 04 (092)

00-9470 GAUGE

0496076 009470 Gauge MW

NOTE: (Gap gauge) From 1 to 5 mm (1; 1.5; 2; 2.5 ...). For checking body gap dimensions.

Storage Location

A23

SI number

01 03 07 (337)

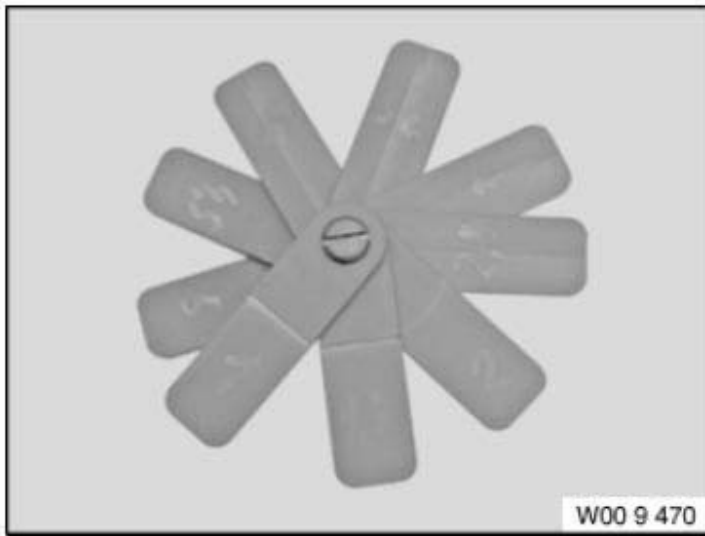


Fig. 34: Identifying Gauge (00-9470)
Courtesy of BMW OF NORTH AMERICA, INC.

00-5208 HOOK

0496004 005208 Hook MW

NOTE: (Hook set) for foil 8

00-1345 HOOK

0495093 001345 Hook MW

NOTE: (Hook set for foil no. 5 USA version)

00-5213 HOOK

0496215 005213 Hook MW

NOTE: (Hook set) Hook set for foil 12

00-1351 HOOK

0496253 001351 Hook MW

NOTE: (Hook set for film no. 10 USA version)

00-5205 HOOK

0496001 005205 Hook MW

NOTE: (Hook set) for film 5

00-5201 HOOK

0495997 005201 Hook MW

NOTE: (Hook set) for film 1

00-1354 HOOK

0496562 001354 Hook MW

NOTE: (Hook set for foil 13 USA)

00-5499 HOOK

0495982 005499 Hook MW

NOTE: (Supplementary set of hooks for foil 1-9)

SI number

01 19 06 (298)

00-1346 HOOK

0495094 001346 Hook MW

NOTE: (Hook set for film no. 6 USA version)

00-5214 HOOK

0496557 005214 Hook MW

NOTE: (Set of hooks) Set of hooks for film 13 F01

00-5207 HOOK

0496003 005207 Hook MW

NOTE: (Hook set) for film 7

00-1340 HOOK

0495088 001340 Hook MW

NOTE: (Hook set, complete, for 00 1 300, USA version)

00-1349 HOOK

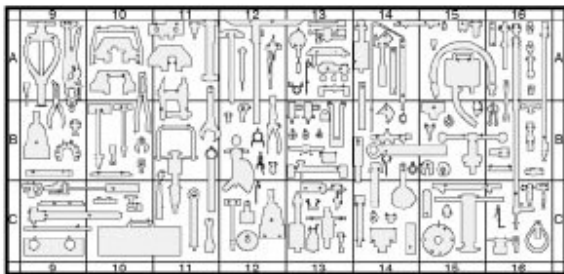
0495097 001349 Hook MW

NOTE: (Hook set for film no. 9 USA version)

00-0023 HOOK

0490010 000023 Hook MW

NOTE: (Hook set for foil 4, 5 and 6)



W00 0 020

Fig. 35: Identifying Hook (00-0023)

Courtesy of BMW OF NORTH AMERICA, INC.

00-1356 HOOK

0496564 001356 Hook MW

NOTE: (Hook set for foil 15 USA)

00-1348 HOOK

0495096 001348 Hook MW

NOTE: (Hook set for film no. 8 USA version)

00-1344 HOOK

0495092 001344 Hook MW

NOTE: (Hook set for film no. 4 USA version)

00-5211 HOOK

0495868 005211 Hook MW

NOTE: (Hook set for film 10) Engine: N54

00-1342 HOOK

0495090 001342 Hook MW

NOTE: (Hook set for foil no. 2 USA version)

00-5202 HOOK

0495998 005202 Hook MW

NOTE: (Hook set) for foil 2

00-5204 HOOK

0496000 005204 Hook MW

NOTE: (Hook set) for foil 4

00-1352 HOOK

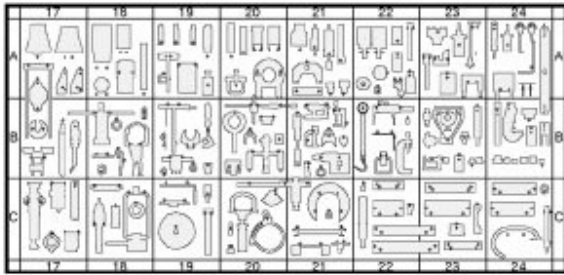
0496254 001352 Hook MW

NOTE: (Hook set for film no. 11 USA version)

00-0033 HOOK

0490017 000033 Hook MW

NOTE: (Hook set for foils 7, 8 and 9)



W00 0 030

Fig. 36: Identifying Hook (00-0033)

Courtesy of BMW OF NORTH AMERICA, INC.

00-1343 HOOK

0495091 001343 Hook MW

NOTE: (Hook set for film no. 3 USA version)

00-5203 HOOK

0495999 005203 Hook MW

NOTE: (Hook set) for film 3

00-1355 HOOK

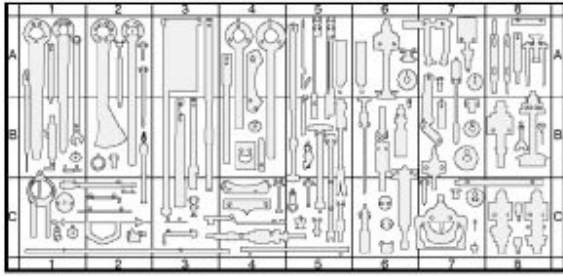
0496563 001355 Hook MW

NOTE: (Hook set for film 14 USA)

00-0013 HOOK

0490003 000013 Hook MW

NOTE: (Hook set for the foils 1, 2 and 3)



W00 0 010

Fig. 37: Identifying Hook (00-0013)

Courtesy of BMW OF NORTH AMERICA, INC.

00-1347 HOOK

0495095 001347 Hook MW

NOTE: (Hook set for film no. 7 USA version)

00-5212 HOOK

0496097 005212 Hook MW

NOTE: (Hook set) Hook set for foil 11

00-5209 HOOK

0496005 005209 Hook MW

NOTE: (Hook set) for film 9

00-5206 HOOK

0496002 005206 Hook MW

NOTE: (Hook set) for foil 6

00-1341 HOOK

0495089 001341 Hook MW

NOTE: (Hook set for film no. 1 USA version)

00-5471 HOOK SET

0495988 005471 Hook set MW

NOTE: (Hook set for stock issue film 1)

SI number

01 19 06 (298)

00-5472 HOOK SET

0495989 005472 Hook set MW

NOTE: (Hook set for relocation template 2)

SI number

01 19 06 (298)

00-5473 HOOK SET

0495990 005473 Hook set MW

NOTE: (Hook set for relocation template 3)

SI number

01 19 06 (298)

00-8600 HOOK SET

00 8 600 Hook set

For reorganization and mounting of existing special tools on tool boards-

NOTE: The following individual tools cannot be ordered in the set!

Series: All models

Consisting of:

1 = 00 8 601 Hook No. 1

10 = 00 8 612 Hook No. 12

11 = 00 8 613 Hook No. 13

12 = 00 8 614 Hook No. 14

13 = 00 8 615 Hook No. 15

14 = 00 8 616 Hook No. 16

15 = 00 8 617 Hook No. 17

16 = 00 8 620 Hook No. 20

17 = 00 8 621 Hook No. 21

18 = 00 8 622 Hook No. 22

19 = 00 8 625 Hook No. 25

2 = 00 8 602 Hook No. 2

20 = 00 8 626 Hook No. 26

21 = 00 8 628 Hook No. 28

22 = 00 8 629 Hook No. 29

23 = 00 8 630 Hook No. 30

3 = 00 8 603 Hook No. 3

4 = 00 8 604 Hook No. 4

5 = 00 8 606 Hook No. 6

6 = 00 8 608 Hook No. 8

7 = 00 8 609 Hook No. 9

8 = 00 8 610 Hook No. 10

9 = 00 8 611 Hook No. 11

00-5474 HOOK SET

0495991 005474 Hook set MW

NOTE: (Hook set for stock issue film 4)

SI number

01 19 06 (298)

00-5475 HOOK SET

0495992 005475 Hook set MW

NOTE: (Hook set for stock issue film 5)

SI number

01 19 06 (298)

00-1162 HOOK SET S85

00 1 162 Hook set S85

00-1172 HOOK SET S85

00 1 172 Hook set S85

00-0059 LABELLING BOARD

0490035 000059 Labelling board MW

NOTE: (Labelling board) Without film

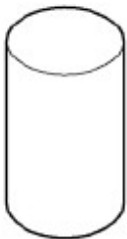
00-8660 MAGNET

0493217 008660 Magnet MW

NOTE: For tool cabinet

Storage Location

Tool cabinet



W00 8 660

Fig. 38: Identifying Magnet (00-8660)
Courtesy of BMW OF NORTH AMERICA, INC.

00-9130 MAGNET

0495108 009130 Magnet Minimum set: Mechanical tools MW

NOTE: (Magnet with 1/2" connection) For securing torque angle dial 00 9 120 to body.

Storage Location

A52

SI number

01 17 04 (130)



Fig. 39: Identifying Magnet (00-9130)

Courtesy of BMW OF NORTH AMERICA, INC.

00-5500 MANDREL

0490475 005500 Mandrel Minimum set: Mechanical tools MW

NOTE: (Handle for drifts)



W00 5 500

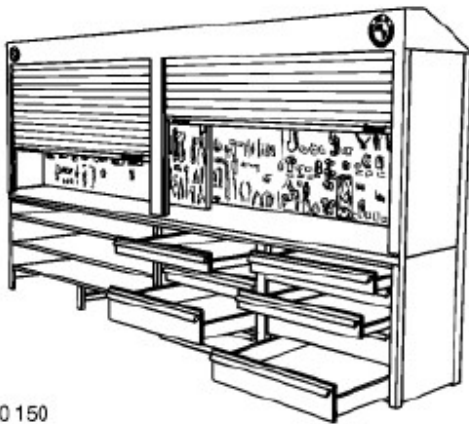
Fig. 40: Identifying Mandrel (00-5500)

Courtesy of BMW OF NORTH AMERICA, INC.

00-0153 MAT

0490063 000153 Mat MW

NOTE: (mat) Wide-groove mat (2 mats)



W00 0 150

Fig. 41: Identifying Mat (00-0153)

Courtesy of BMW OF NORTH AMERICA, INC.

00-2550 MEASUREMENT AID

0490189 002550 Measurement aid MW

NOTE: (Depth gauge) E.g. for determining side clearance of transmission shaft and basic adjustment dimension for installing bevel pinion in rear axle final drives

Storage Location

B5

A5

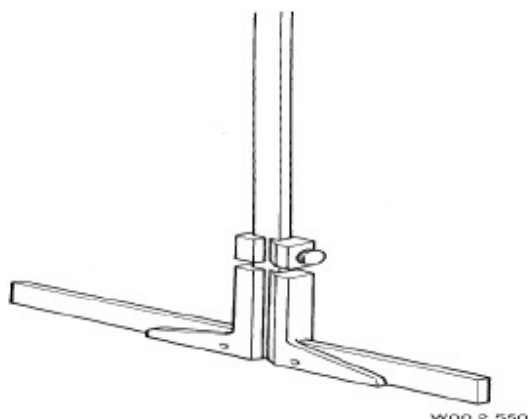


Fig. 42: Identifying Measurement Aid (00-2550)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-2590 MEASUREMENT AID

0490190 002590 Measurement aid MW

NOTE: (Plastigage (5 x)) For checking bearing clearance on crankshaft and connecting rod bearings



W00 2 590

Fig. 43: Identifying Measurement Aid (00-2590)
 Courtesy of BMW OF NORTH AMERICA, INC.

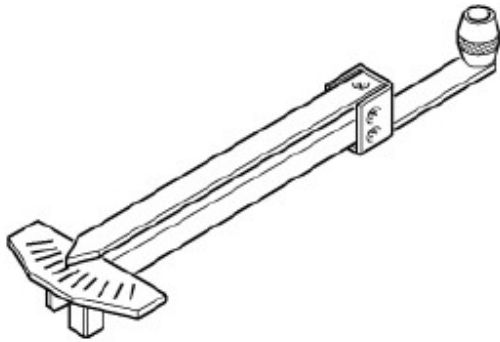
00-2010 MEASUREMENT AID

0490130 002010 Measurement aid MW

NOTE: (Coefficient of friction meter) For adjusting the steering box (measurement possible in both directions) and for checking and adjusting the bevel pinion and crown wheel bearing in all final drives

Storage Location

X9



W00 2 010

Fig. 44: Identifying Measurement Aid (00-2010)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-2510 MEASURING DEVICE

0490180 002510 Measuring device MW

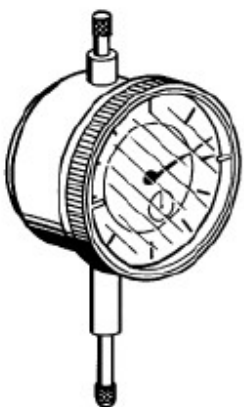
NOTE: (Dial gauge with gauging pin) Dial can be turned to the pointer zero position using the outer ring

Storage Location

A5

Consisting of:

1 = 2208442 Extension



W00 2 510

Fig. 45: Identifying Measuring Device (00-2510)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-1310 PANEL

0495076 001310 Panel MW

NOTE: (Tool boards, complete, USA version) Comprising: - 3 large tool boards, covered with film - including hook set - including wall mounting

00-9324 PANEL WEDGE

0495484 009324 Panel wedge MW

NOTE: (Panel wedge (panel)) For removing cavity strips from E60

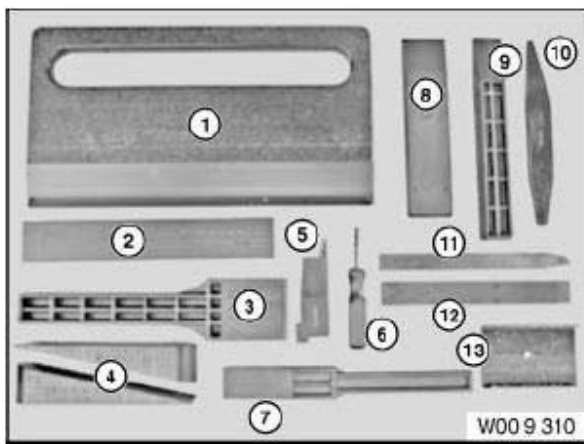


Fig. 46: Identifying Panel Wedge (00-9324)
Courtesy of BMW OF NORTH AMERICA, INC.

00-9311 PANEL WEDGE

0490528 009311 Panel wedge MW

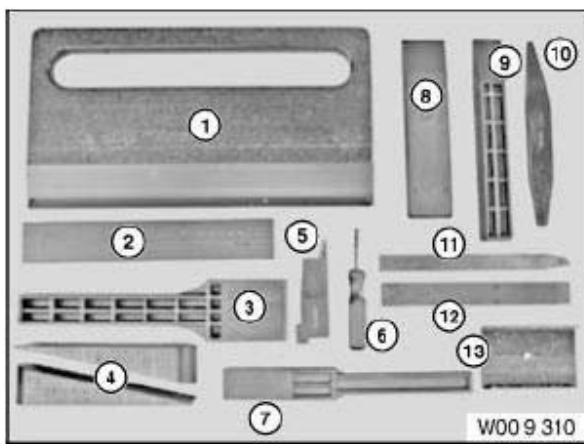


Fig. 47: Identifying Panel Wedge (00-9311)
Courtesy of BMW OF NORTH AMERICA, INC.

00-0050 PANEL WITH LETTERING

0490028 000050 Panel with lettering MW

NOTE: (Panel with lettering) Panel with lettering: "SPECIAL TOOLS" With foil in the required language - size 2000 mm x 215 mm

Storage Location

Tool cabinet



W00 0 050

Fig. 48: Identifying Panel With Lettering (00-0050)
Courtesy of BMW OF NORTH AMERICA, INC.

00-9290 PLIERS

0494313 009290 Pliers MW

Replaced by: 0496521

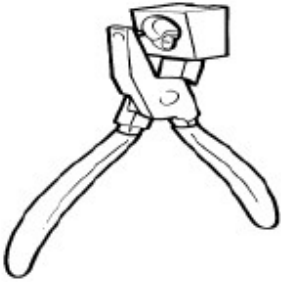
NOTE: (Rivet pliers) Replaced by 00 2 240! Replaced by 00 2 230 (0 496 521)

00-5030 PLIERS

0490473 005030 Pliers MW

Replaced by: 0490474

NOTE: (Special pliers for seat belt limiter) Replaced by 00 5 040 (0 490 474)



W00 5 030

Fig. 49: Identifying Pliers (00-5030)

Courtesy of BMW OF NORTH AMERICA, INC.

00-2250 PLIERS

0494959 002250 Pliers MW

NOTE: (Special pliers for cabling rearrangement) With market introduction of engines (N46, N52 and S85), cable 12 7 420/421 can be used for diagnostics after completion

SI number

02 03 04 (106)

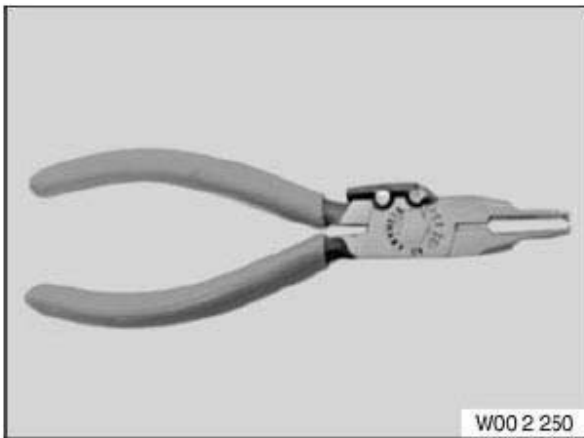


Fig. 50: Identifying Pliers (00-2250)

Courtesy of BMW OF NORTH AMERICA, INC.

00-5010 PULLER

0490466 005010 Puller Minimum set: Mechanical tools MW

NOTE: (universal puller) For removing radial shaft seals 00 5 011 for E90

Storage Location

A14

Consisting of:

1 = 0490467 Claw

NOTE: (extractor claw (3 pieces required))

2 = 0490468 Spindle

NOTE: (guide spindle)

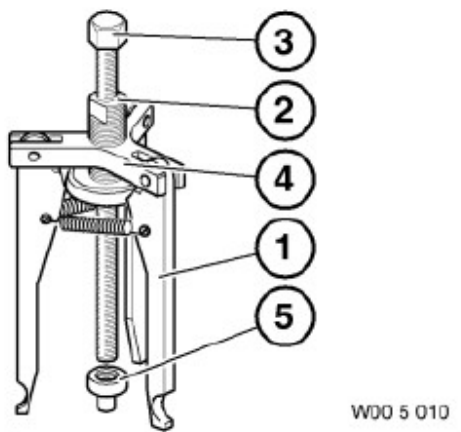


Fig. 51: Identifying Puller (00-5010)

Courtesy of BMW OF NORTH AMERICA, INC.

3 = 0490469 Spindle

NOTE: (Pressure spindle)

4 = 0490470 Fixture

NOTE: (Locating star) For accommodating extractor claws

5 = 0490471 Synchronizing key

00-2080 PUMP

0493337 002080 Pump MW

NOTE: (Hand pump) For lifetime oil filling

SI number

01 01 98 (294)

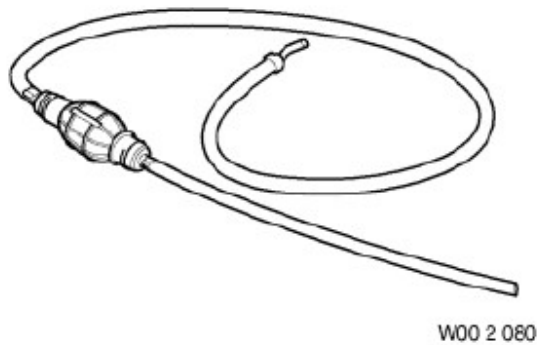


Fig. 52: Identifying Pump (00-2080)
Courtesy of BMW OF NORTH AMERICA, INC.

00-9313 PUNCH ELEMENT

0490530 009313 Punch element MW

NOTE: (striking wedge, large)

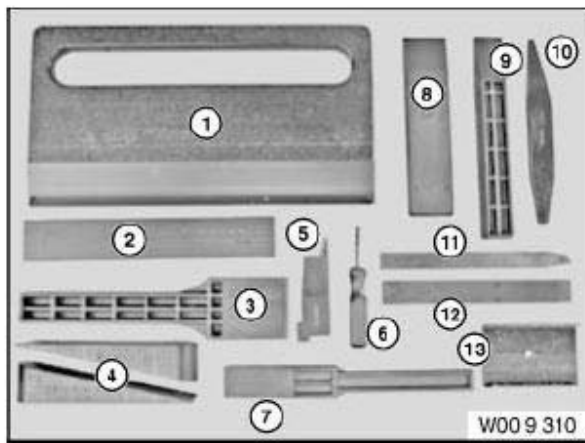


Fig. 53: Identifying Punch Element (00-9313)
Courtesy of BMW OF NORTH AMERICA, INC.

00-9319 PUNCH ELEMENT

0490536 009319 Punch element MW

NOTE: (striking wedge, small)

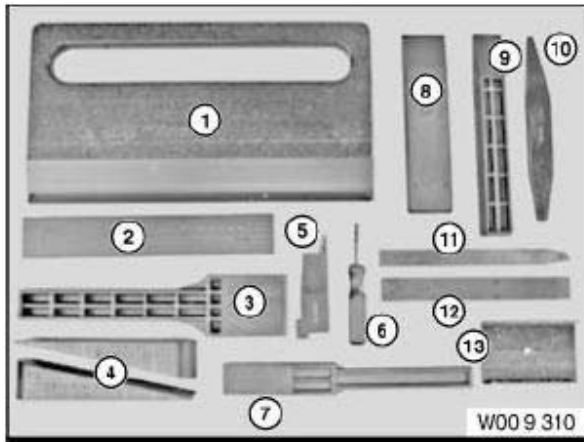


Fig. 54: Identifying Punch Element (00-9319)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-9312 PUNCH ELEMENT

0490529 009312 Punch element MW

NOTE: (striking wedge, square)

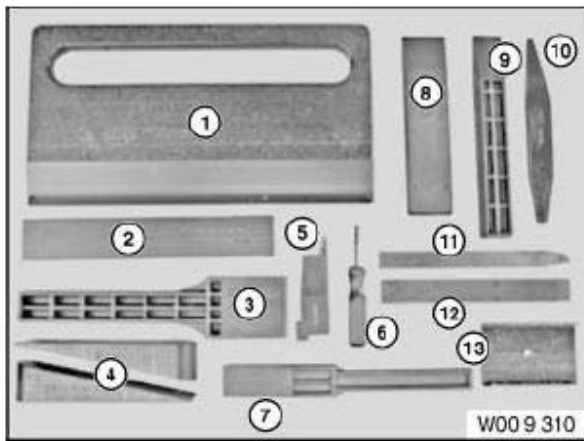
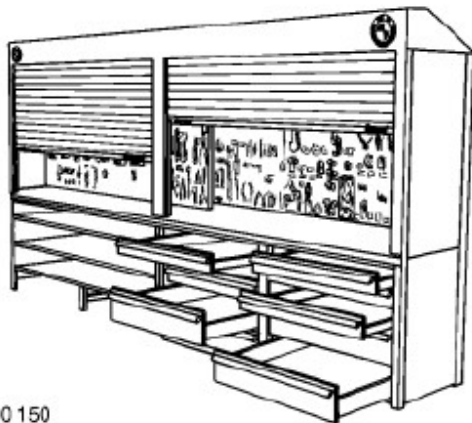


Fig. 55: Identifying Punch Element (00-9312)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-0155 REAR PANEL

0490065 000155 Rear panel MW



W00 0 150

Fig. 56: Identifying Rear Panel (00-0155)

Courtesy of BMW OF NORTH AMERICA, INC.

00-0270 REAR PANEL

0493785 000270 Rear panel MW

NOTE: (rear panel (2 pieces)) For closing the rear panel (2 m high by 1 m wide) when setting up a free-standing special tool cabinet.

SI number

00 01 00 (549)

00-9340 REMOVAL AID

0493687 009340 Removal aid Minimum set: Mechanical tools MW

NOTE: (Removal aid (2 x)) For levering out switch block on driver's door.

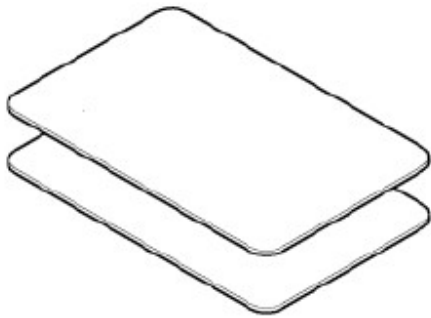
SI number

01 15 99 (483)

Consisting of:

1 = 0496289 Removal aid

NOTE: Only available as a set (2 pieces) under 00 9 340, thus separate component blocked.



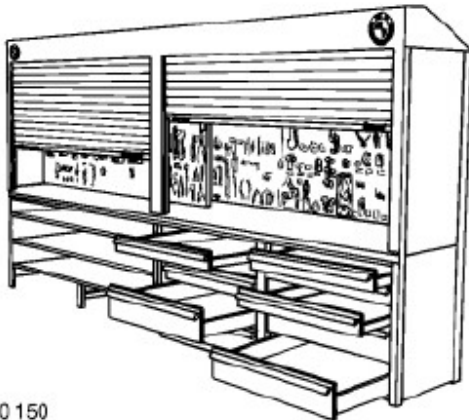
W00 9 340

Fig. 57: Identifying Removal Aid (00-9340)
Courtesy of BMW OF NORTH AMERICA, INC.

00-0158 ROLLER SUNBLIND

0490066 000158 Roller sunblind MW

NOTE: (Roller sunblind) Lockable (2 pieces)



W00 0 150

Fig. 58: Identifying Roller Sunblind (00-0158)
Courtesy of BMW OF NORTH AMERICA, INC.

00-9323 SCRAPER

0490540 009323 Scraper MW

Replaced by: 0496571

NOTE: (Cleaning wedge (scraper)) Replaced by special tool 00 9 327 from 11/2008
(quality improvement due to new material) Replaced by 00 9 327 (0 496 571)

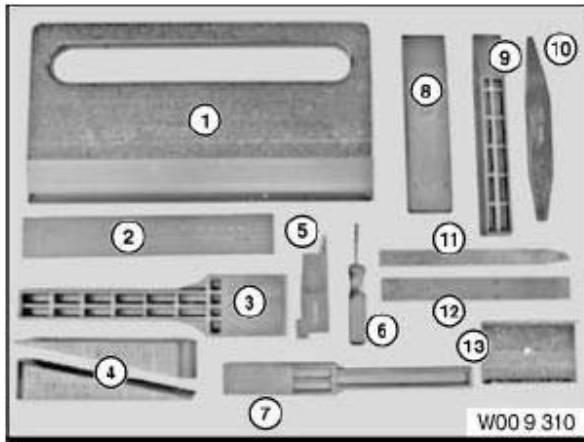


Fig. 59: Identifying Scraper (00-9323)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-9010 SOCKET

0494938 009010 Socket Minimum set: Mechanical tools MW

NOTE: (Socket Torx E18) For releasing and tightening down transmission screw connections on engine (aluminium screws).

Storage Location

A51

SI number

01 17 04 (130)



Fig. 60: Identifying Socket (00-9010)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-0230 SPECIAL TOOL BOARD

0493786 000230 Special tool board MW

NOTE: (large board (2x1 m) with set of rollers) For retrofitting to a large special tool board for use in a special tool cabinet with a minimum length of 4 m.

Consisting of:

1 = 0493787 Special tool board

NOTE: (large special tool board without foils)

2 = 0493788 Roller

NOTE: (upper rollers for large board)

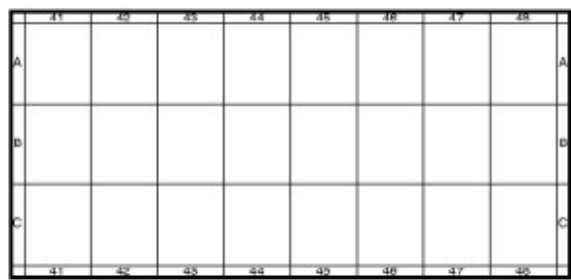
3 = 0494125 Roller

NOTE: (lower rollers for large board)

00-0131 SPECIAL TOOL BOARD

0490056 000131 Special tool board MW

NOTE: (special tool board VI without foils) Replaced by 00 0 224



W00 0 130

Fig. 61: Identifying Special Tool Board (00-0131)
Courtesy of BMW OF NORTH AMERICA, INC.

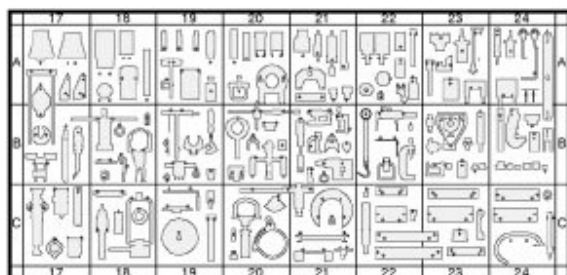
00-0030 SPECIAL TOOL BOARD

0490014 000030 Special tool board MW

NOTE: (Special tool board III complete) Size 2 m x 1 m

Storage Location

Tool cabinet



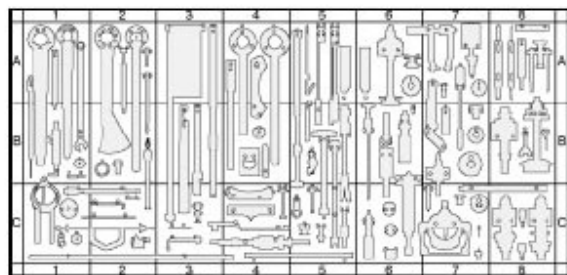
W00 0 030

Fig. 62: Identifying Special Tool Board (00-0030)
Courtesy of BMW OF NORTH AMERICA, INC.

00-0011 SPECIAL TOOL BOARD

0490001 000011 Special tool board MW

NOTE: (special tool board I with bracket without foils) Replaced by 00 0 224



W00 0 010

Fig. 63: Identifying Special Tool Board (00-0011)
Courtesy of BMW OF NORTH AMERICA, INC.

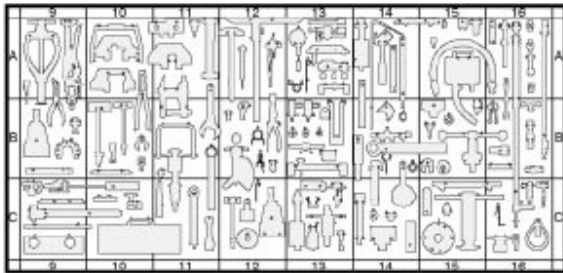
00-0020 SPECIAL TOOL BOARD

0490007 000020 Special tool board MW

NOTE: (Special tool board II, complete) Size 2 m x 1 m

Storage Location

Tool cabinet



W00 0 020

Fig. 64: Identifying Special Tool Board (00-0020)
Courtesy of BMW OF NORTH AMERICA, INC.

00-0010 SPECIAL TOOL BOARD

0496243 000010 Special tool board MW

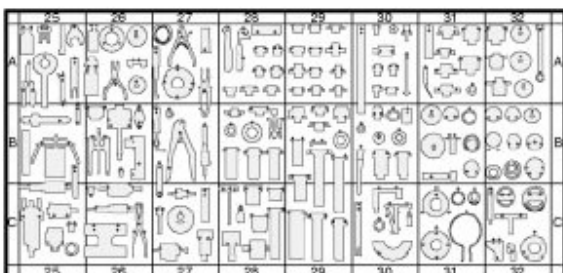
NOTE: (Special tool board I)

00-0041 SPECIAL TOOL BOARD

0490022 000041 Special tool board MW

Replaced by: 0493781

NOTE: (Special tool board IV with bracket without foils) Replaced by 00 0 224 (0 493 781)



W00 0 040

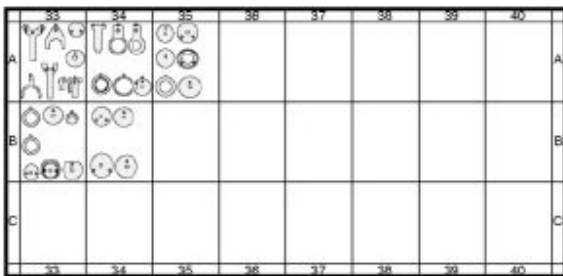
Fig. 65: Identifying Special Tool Board (00-0041)
Courtesy of BMW OF NORTH AMERICA, INC.

00-0061 SPECIAL TOOL BOARD

0490037 000061 Special tool board MW

Replaced by: 0493781

NOTE: (Special tool board V with bracket without foils) Replaced by 00 0 224 (0 493 781)



W00 0 060

Fig. 66: Identifying Special Tool Board (00-0061)
Courtesy of BMW OF NORTH AMERICA, INC.

00-0031 SPECIAL TOOL BOARD

0490015 000031 Special tool board MW

NOTE: (special tool board III with bracket without foils) Replaced by 00 0 224



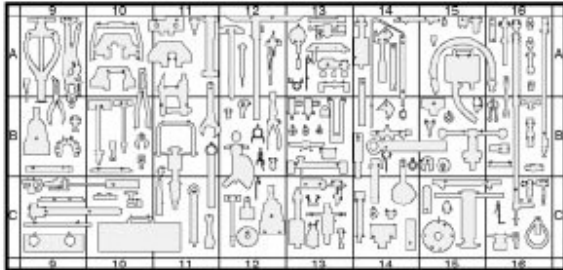
W00 0 030

Fig. 67: Identifying Special Tool Board (00-0031)
Courtesy of BMW OF NORTH AMERICA, INC.

00-0021 SPECIAL TOOL BOARD

0490008 000021 Special tool board MW

NOTE: (special tool board II with bracket without foils) Replaced by 00 0 224



W00 0 020

Fig. 68: Identifying Special Tool Board (00-0021)
Courtesy of BMW OF NORTH AMERICA, INC.

00-0240 SPECIAL TOOL BOARD

0493789 000240 Special tool board MW

NOTE: (small movable special tool board without foils) For retrofitting a special tool cabinet from 2 m in length.

SI number

00 01 02 (810)

Consisting of:

1 = 0493790 Tool

NOTE: (small special tool board 0.65 m x 1 m)

2 = 0493791 Roller

NOTE: (upper rollers) For moving a small special tool board

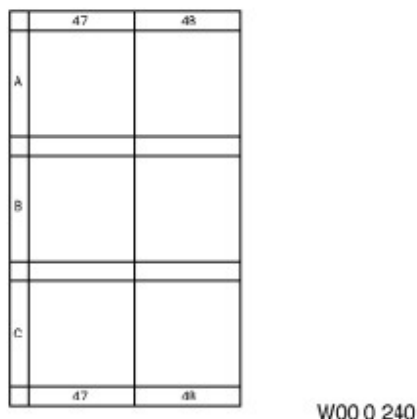


Fig. 69: Identifying Special Tool Board (00-0240)
 Courtesy of BMW OF NORTH AMERICA, INC.

3 = 0494119 Roller

NOTE: (lower rollers) For moving a small special tool board

00-1010 SPECIAL TOOL CABINET

0494899 001010 Special tool cabinet MW

NOTE: (Special tool cabinet, length 4 m and 2m, complete current range of equipment)
 Consisting of tool cabinet 4 m and 2 m. All boards covered with foil, hook set
 and folding index with list. Accessories such as storage shelves (00 0 250),
 drawer blocks (00 0 260) and rear panels (00 0 270) must be ordered separately.

00-1300 SPECIAL TOOL CABINET

0495073 001300 Special tool cabinet MW

NOTE: (Tool cabinet, USA version, complete) Comprising: - Tool cabinet 4 m - All
 boards covered with film, USA version - including hook set - including lighting

Consisting of:

0495074

0495075

00-1301 SPECIAL TOOL CABINET

0495074 001301 Special tool cabinet MW

NOTE: (2 m tool cabinet USA basic version) Comprising: - Tool cabinet 2 m - Large bright-finish board - including lighting

00-0220 SPECIAL TOOL CABINET

0493777 000220 Special tool cabinet MW



Fig. 70: Identifying Special Tool Cabinet (00-0220)
Courtesy of BMW OF NORTH AMERICA, INC.

NOTE: (Special tool cabinet, length 2 m) Dimensions: (LxHxD) 2.05 m x 2.10 m x 0.65 m
For extended accommodation of special tools.

PLEASE NOTE: To construct a complete 6 m long special tool cabinet, use the ordering code 00 1 000.

SI number

Consisting of:

00 01 00 (549)

1 = 0493778 Basic frame

NOTE: (Basic frame) Basic frame with rollerblind for constructing a separate 2 m long tool cabinet.

NOTE: For an individual order as an attachment frame, the complete delivery specification must already be present under ordering code 00 0 220. Overall length with a mounting frame: 4 m

2 = 0493779 Side wall

NOTE: (side wall) Left side wall. Only required once for constructing the basic frame

3 = 0493780 Side wall

NOTE: (side wall) Right side wall. Only required once for constructing the basic frame

4 = 0493781 Special tool board

NOTE: (large special tool board 2 m x 1 m) This special tool board is used as the rear panel of basic and attachment frames and is the basis for large fixed or movable special tool boards.

5 = 0493782 Roller-blind

NOTE: (roller-blind) Lockable Is included in the 00 0 221 delivery specification. This order number is for reordering purposes only.

6 = 0494126 Frame

NOTE: (side frame) Only required once for constructing the basic frame

00-1302 SPECIAL TOOL CABINET

0495075 001302 Special tool cabinet MW

NOTE: (2 m tool cabinet USA mounting version) Comprising: - Tool cabinet 2 m - Large bright-finish board - including lighting

00-0150 SPECIAL TOOL CABINET

0490060 000150 Special tool cabinet MW

NOTE: To accommodate 5 special tool boards. Replaced by 1x 00 0 220 complete plus 1x 00 0 221 and 1x 00 0 224

Consisting of:

0490061

0490062

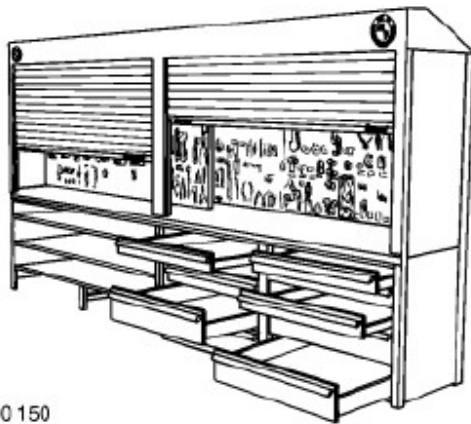
0490063

0490064

0490065

0490066

0490067



W00 0 150

Fig. 71: Identifying Special Tool Cabinet (00-0150)
Courtesy of BMW OF NORTH AMERICA, INC.

00-0070 SPECIAL TOOL CABINET

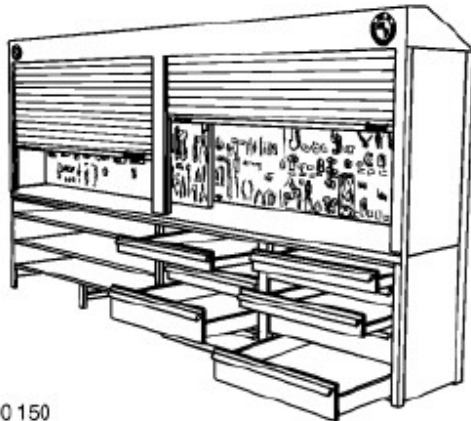
0490043 000070 Special tool cabinet MW

NOTE: (Special tool cabinet, length 6 m) For storing large and small transportable special tool boards (not included in scope of delivery) for the entire current special tool range. Consisting of: 1x 00 0 220 complete plus 2x 00 0 221 and 2x 00 0 224

00-0152 STORAGE

0490062 000152 Storage MW

NOTE: (Storage shelf)



W00 0 150

Fig. 72: Identifying Storage (00-0152)

Courtesy of BMW OF NORTH AMERICA, INC.

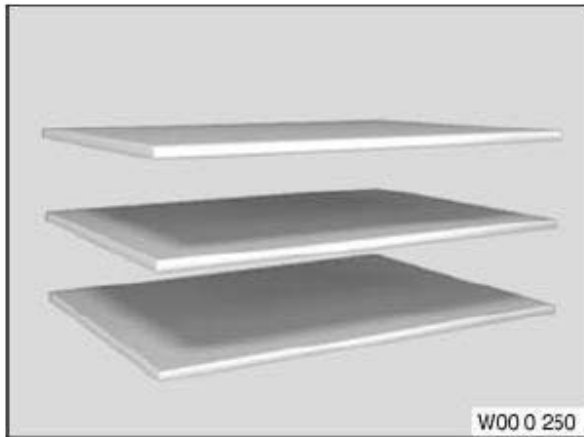
00-0250 STORAGE

0493783 000250 Storage MW

NOTE: (Storage shelf) With mounting material.

SI number

00 01 00 (549)



W00 0 250

Fig. 73: Identifying Storage (00-0250)

Courtesy of BMW OF NORTH AMERICA, INC.

00-0260 SUPPLEMENT

0493784 000260 Supplement MW

NOTE: (Set of drawers) With 5 lockable drawers

SI number

00 01 00 (549)



Fig. 74: Identifying Supplement (00-0260)
Courtesy of BMW OF NORTH AMERICA, INC.

00-2262 TENSIONING STRAP (2 X)

00 2 262 Tensioning strap (2 x)

SI number

01 22 06 (307)

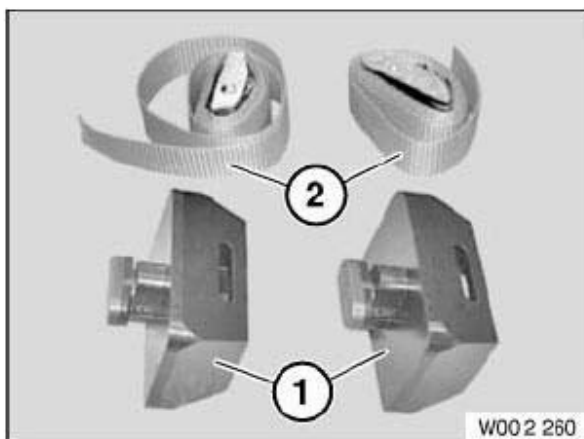


Fig. 75: Identifying Tensioning Strap (2 X) (00-2262)
Courtesy of BMW OF NORTH AMERICA, INC.

00-1210 TESTER

0495430 001210 Tester MW

NOTE: (Exhaust-gas test universal adjustment unit) Disturbance air valves in case

00-5040 TOOL

0490474 005040 Tool MW

NOTE: (riveting tool) For riveting the seat belt limiters

Storage Location

C3

SI number

01 05 95 (932)

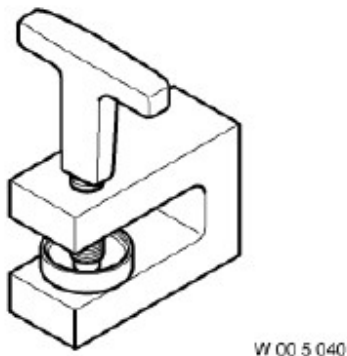


Fig. 76: Identifying Tool (00-5040)

Courtesy of BMW OF NORTH AMERICA, INC.

00-0080 TOOL REGISTER

0490044 000080 Tool register MW

NOTE: (tool register) Overview of tool positioning/storage locations

Storage Location

Tool cabinet

SI number

01 12 97 (202)



W00 0 080

Fig. 77: Identifying Tool Register (00-0080)
Courtesy of BMW OF NORTH AMERICA, INC.

00-9450 TORQUE WRENCH

0496055 009450 Torque wrench Minimum set: Mechanical tools MW

NOTE: Infinitely adjustable from 0.05 Nm to 0.6 Nm (5 cNm to 60 cNm). 1/4" external square bit connection. For information on adjustment, see Special Tool Service Information (bulletin) 1 03 07 337 Annex 3.

SI number

01 03 07 (337)



W00 9 450

Fig. 78: Identifying Torque Wrench (00-9450)
Courtesy of BMW OF NORTH AMERICA, INC.

00-9460 TORQUE WRENCH

0496778 009460 Torque wrench Minimum set: Mechanical tools MW

NOTE: Measuring range 0.40 to 3.00 Nm (accuracy +/-3%). Set 00 9 460 consists of 00 9 461 = torque wrench and 00 9 462 extension. Replaces special tool 00 9 250 from KW41/2009.

SI number

01 24 09 (590)

Consisting of:

2 = 0496782 Extension

NOTE: Flexible shaft (Replaces special tool 00 9 552 from KW41/2009)

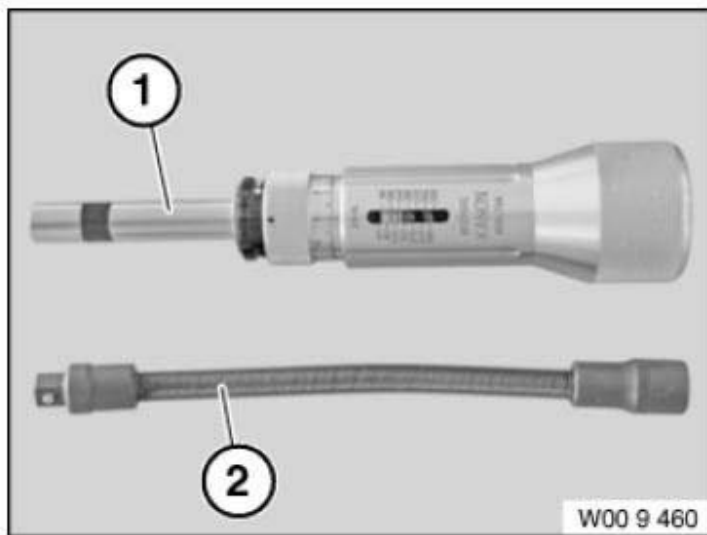


Fig. 79: Identifying Torque Wrench (00-9460)
Courtesy of BMW OF NORTH AMERICA, INC.

1 = 0496781 Torque wrench

NOTE: N30LTDK (0.4 - 3.0 Nm accuracy 3%) (replaces special tool 00 9 251 from KW41/2009)

00-9140 TORSION ANGLE GAUGE

0495605 009140 Torsion angle gauge MW

NOTE: (Angle of rotation measuring disc 3/4" connection) For torsion angle adjustment of the central bolt up to 600 Nm.

Storage Location

B19

A19

SI number

01 20 06 (299)

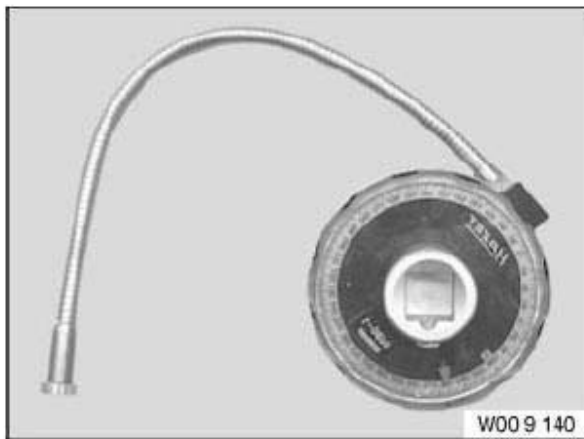


Fig. 80: Identifying Torsion Angle Gauge (00-9140)
Courtesy of BMW OF NORTH AMERICA, INC.

00-9120 TORSION ANGLE GAUGE

0490504 009120 Torsion angle gauge Minimum set: Mechanical tools MW

NOTE: For torsion angle adjustment of cylinder head bolts (all engines) And reinforcement plate front axle support E46

Storage Location

A5

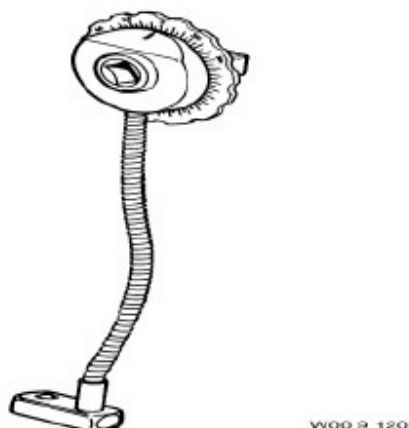


Fig. 81: Identifying Torsion Angle Gauge (00-9120)
Courtesy of BMW OF NORTH AMERICA, INC.

00-2520 TORX

0490181 002520 Torx MW

NOTE: (Torx sockets E10, E12, E14) Replaced by Torx tool set (see Workshop Equipment - Planning Documentation, Group 9)

Consisting of:

1 = 0490182 Torx socket

NOTE: (Torx socket E10) see Workshop Equipment Catalogue

2 = 0490183 Torx socket

NOTE: (Torx socket E12) see Workshop Equipment Catalogue

3 = 0490184 Torx socket

NOTE: (Torx socket E14) see Workshop Equipment Catalogue

00-2470 TRIPOD

0493724 002470 Tripod MW

Replaced by: 0493577

NOTE: (Measuring tripod with magnetic retainer) Replaced by 00 2 480 (0 493 577)

Consisting of:

1 = 0493725 Holder

NOTE: (Magnetic retainer) Replaced by 00 2 480 (0 493 577)

2 = 0493726 Rod

NOTE: Replaced by 00 2 480 (0 493 577)

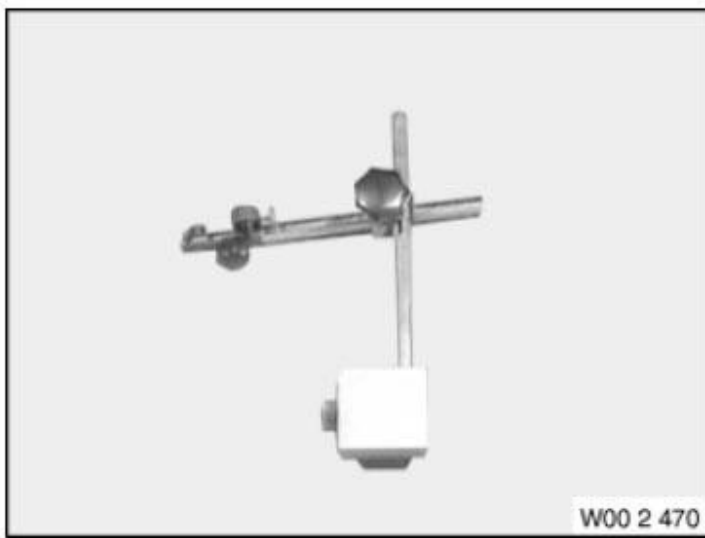


Fig. 82: Identifying Tripod (00-2470)

Courtesy of BMW OF NORTH AMERICA, INC.

3 = 0493727 Bolt

NOTE: (Clamping bolt) Replaced by 00 2 480 (0 493 577)

4 = 0493728 Rod

NOTE: (Rod with dial gauge holder) Replaced by 00 2 480 (0 493 577)

00-2480 TRIPOD

0493577 002480 Tripod MW

NOTE: (Measurement stand with clamping bracket)

SI number

01 18 99 (489)

Consisting of:

1 = 0493720 Terminal

NOTE: (Clamping base)

2 = 0493721 Terminal

NOTE: (Clamping piece)

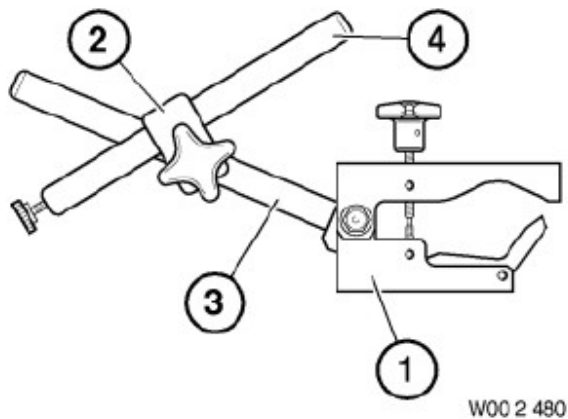


Fig. 83: Identifying Tripod (00-2480)
Courtesy of BMW OF NORTH AMERICA, INC.

3 = 0493722 Shaft

4 = 0493723 Shaft

00-8690 WASHERS AND SCREWS

00 8 690 Washers and screws

Consisting of:

1 = 00 8 691 Washers, 100 x

2 = 00 8 692 Screws, 100 x

3 = 00 8 693 Screws, 100 x

NOTE: For USA

4 = 00 8 694 Box 40 mm

5 = 00 8 695 Box 100 mm

6 = 00 8 696 Box 150 mm

00-9317 WEDGE

0490534 009317 Wedge MW

Replaced by: 0496569

NOTE: (Trim wedge) Replaced by special tool 00 9 325 from 11/2008 (quality improvement due to new material) Replaced by 00 9 325 (0 496 569)

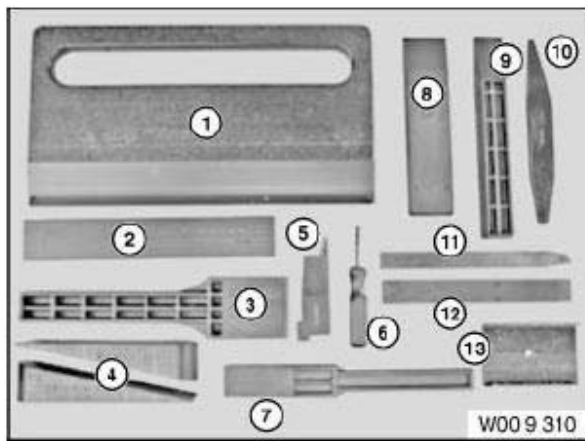


Fig. 84: Identifying Wedge (00-9317)
Courtesy of BMW OF NORTH AMERICA, INC.

00-9030 WEDGE

0496714 009030 Wedge Minimum set: Mechanical tools MW

NOTE: For dismantling O-rings, gaskets and trim panels. This special tool is in future to replace special tool 00 9 316.

SI number

01 20 09 (581)

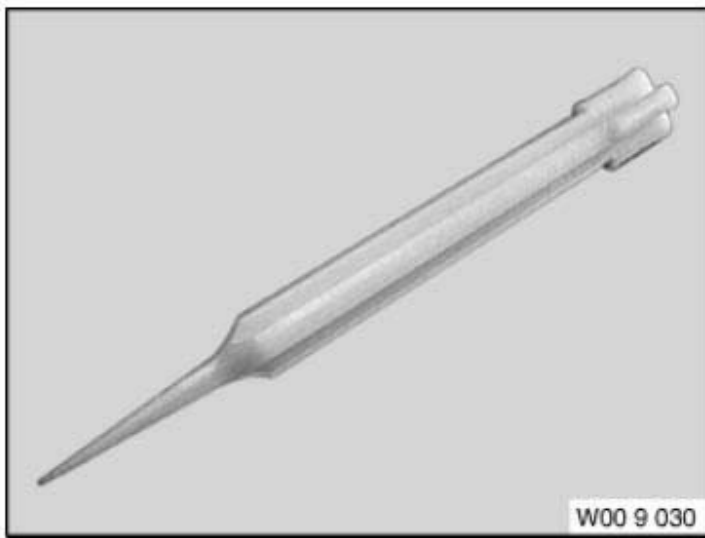


Fig. 85: Identifying Wedge (00-9030)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-9322 WEDGE

0490539 009322 Wedge MW

NOTE: (Panel wedge)

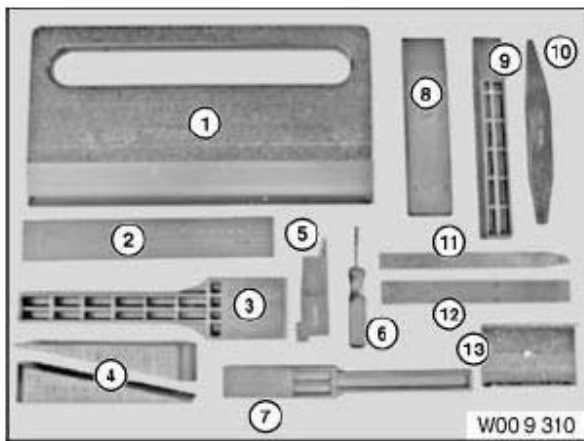


Fig. 86: Identifying Wedge (00-9322)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-9318 WEDGE

0490535 009318 Wedge MW

Replaced by: 0496570

NOTE: (Universal wedge) Replaced by special tool 00 9 326 from 11/2008 (quality improvement due to new material) Replaced by 00 9 326 (0 496 570)

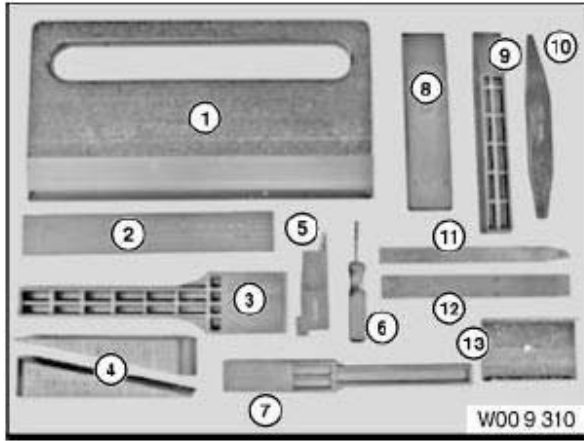


Fig. 87: Identifying Wedge (00-9318)
Courtesy of BMW OF NORTH AMERICA, INC.

00-9326 WEDGE

0496570 009326 Wedge MW

NOTE: (Universal wedge) From 11/2008 this special tool replaces panel wedge 00 9 318 (different material)

00-9325 WEDGE

0496569 009325 Wedge MW

NOTE: (Panel wedge) From 11/2008 this special tool replaces panel wedge 00 9 317 (different material)

00-9316 WEDGE

0490533 009316 Wedge MW

NOTE: (Sealing lip wedge)

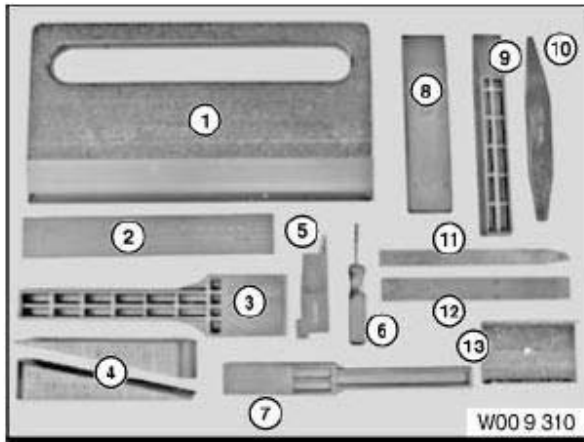


Fig. 88: Identifying Wedge (00-9316)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-9310 WEDGE

0490527 009310 Wedge Minimum set: Mechanical tools MW

NOTE: (Panel wedges (set in plastic case)) For straightening and installation work on vehicle, e.g. feeding in trim panels, removing window cavity strips, removing minor dents, removing adhesive residues, measuring gap widths, levering out trim panels --> 13-piece

SI number

01 25 05 (230)

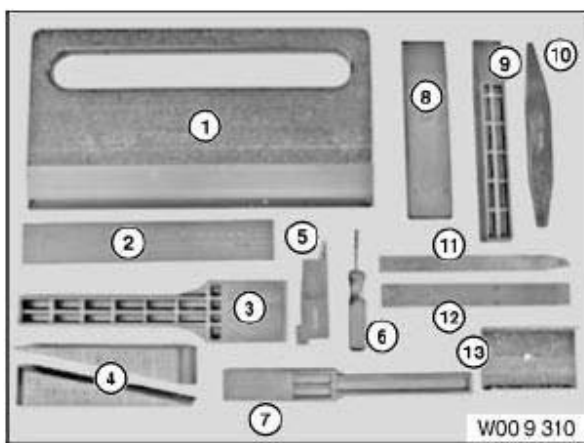


Fig. 89: Identifying Wedge (00-9310)
 Courtesy of BMW OF NORTH AMERICA, INC.

Consisting of:

0495484

0496569

0496570

0496571

0490528

0490529

0490530

0490531

0490532

0490533

0490534

0490535

0490536

0490538

0490539

0490540

0493752

00-9327 WEDGE

0496571 009327 Wedge MW

NOTE: (Cleaning wedge) From 11/2008 this special tool replaces panel wedge 00 9 323
(different material)

00-9315 WEDGE

0490532 009315 Wedge MW

NOTE: (gap dimension wedge)

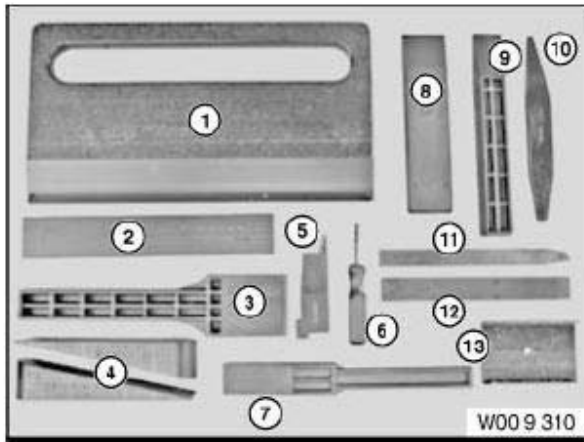


Fig. 90: Identifying Wedge (00-9315)
 Courtesy of BMW OF NORTH AMERICA, INC.

00-9314 WEDGE

0490531 009314 Wedge MW

NOTE: (adjusting wedges (2 x))

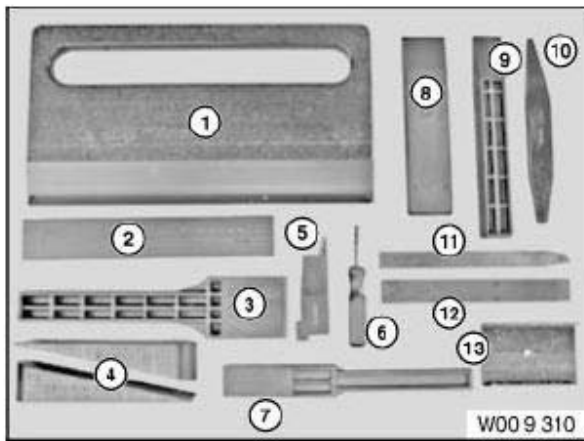


Fig. 91: Identifying Wedge (00-9314)
 Courtesy of BMW OF NORTH AMERICA, INC.

GENERAL INFORMATION

Maintenance and General Information - Tightening Torques - Z4

EXCERPT FROM COMPANY STANDARD BMW GS 90003-2

00 00 EXCERPT FROM COMPANY STANDARD BMW GS 90003-2

TIGHTENING TORQUE SPECIFICATION - EXCERPT FROM COMPANY STANDARD BMW GS 90003-2

	Type	Thread	Tightening specification	Measure
If there are no cross-references to tightening torques in the repair instructions, the excerpts from the company standard BMW GS 90003-2; <u>AZD-AZD-AZD00-08 M16 AND M16X1.5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2; AZD-AZD-AZD00-07 M14 AND M14X1.5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2; AZD-AZD-AZD00-06 M12 AND M12X1.5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2; AZD-AZD-AZD00-05 M10 AND M10 X 1 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2; AZD-AZD-AZD00-04 M8 AND M8 X 1 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2; AZD-AZD-AZD00-03 M6 AND M7 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2; or AZD-AZD-AZD00-02 M4 AND M5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2</u> must be observed.				
There are different screws/nuts with surface color/(surface coating) - yellow (ZN) and silver (ZNS) The maximum tightening torques are: Surface color yellow (ZN): Applicable only to shank screws with metric coarse- and fine-pitch threads according to DIN 13-28 and nuts with nut height 0.8 x d according to DIN 934 and exclusively for a $\mu_{tot} = 0.125$ (screws phosphatized, nuts without subsequent treatment or galvanized. Lubrication condition: unlubricated and also oiled).				
Surface color silver (ZNS): Applicable only to shank screws with metric coarse- and fine-pitch threads according to DIN 13-28 and nuts with nut height 0.8 x d according to DIN 934 and exclusively for a spread of $\mu = 0.09$ to 0.15 (screws cadmium-plated, nuts without subsequent treatment or galvanized. Lubrication condition: unlubricated and also oiled). The values specified in this table apply to all screw connections conforming to the aforementioned conditions. Not applicable when using a different surface or lubricant condition on the thread, or if the height of the nut differs.				
Not applicable to necked-down bolts, self-tapping screw connections or to connections between parts made of different materials. Attention! To be able to carry out competent repairs, it is essential to comply with the specified tightening torques. This presupposes that the required torque wrenches are subjected to regular testing. Permitted tolerance of torque wrenches $\pm 2\%$ of scale value.				

M10 AND M10 X 1 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS

90003-2

00 00 M10 AND M10 X 1 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2

TIGHTENING TORQUE SPECIFICATION - M10 AND M10 X 1 - ACC. TO BMW GS 90003-2

	Type	Thread	Tightening specification	Measure
Scope of applicability of tightening torques, refer to excerpt from COMPANY STANDARD BMW GS 90003-2	Surface colour/ (surface coating)			
M10 thread	yellow (ZN)	M10 8.8		47 Nm
	silver (ZNS)	M10 8.8		38 Nm
	yellow (ZN)	M10 10.9		66 Nm
	silver (ZNS)	M10 10.9		56 Nm
	yellow (ZN)	M10 12.9		79 Nm
	silver (ZNS)	M10 12.9		62 Nm
M10x1 thread	yellow (ZN)	M10 x 1 8.8		54 Nm
	silver (ZNS)	M10 x 1 8.8		41 Nm
	yellow (ZN)	M10 x 1 10.9		75 Nm
	silver (ZNS)	M10 x 1 10.9		60 Nm
	yellow (ZN)	M10 x 1 12.9		91 Nm
	silver (ZNS)	M10 x 1 12.9		67 Nm

M12 AND M12X1.5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2

00 00 M12 AND M12X1.5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2

TIGHTENING TORQUE SPECIFICATION - M12 AND M12X1.5 - ACC. TO BMW GS 90003-2

	Type	Thread	Tightening specification	Measure
Scope of applicability of tightening torques, refer to excerpt from COMPANY STANDARD BMW GS 90003-2	Surface colour/ (surface coating)			
M12 thread	yellow (ZN)	M12 8.8		82 Nm
	silver (ZNS)	M12 8.8		66 Nm

M12x1.5 thread	yellow (ZN)	M12 10.9	115 Nm
	silver (ZNS)	M12 10.9	98 Nm
	yellow (ZN)	M12 12.9	140 Nm
	silver (ZNS)	M12 12.9	108 Nm
	yellow (ZN)	M12 x 1.5 8.8	87 Nm
	silver (ZNS)	M12 x 1.5 8.8	68 Nm
	yellow (ZN)	M12 x 1.5 10.9	123 Nm
	silver (ZNS)	M12 x 1.5 10.9	100 Nm
	yellow (ZN)	M12 x 1.5 12.9	147 Nm
	silver (ZNS)	M12 x 1.5 12.9	110 Nm

M14 AND M14X1.5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2

00 00 M14 AND M14X1.5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2

TIGHTENING TORQUE SPECIFICATION - M14 AND M14X1.5 - ACC. TO BMW GS 90003-2

	Type	Thread	Tightening specification	Measure
Scope of applicability of tightening torques, refer to excerpt from <u>COMPANY STANDARD BMW GS 90003-2</u>	Surface colour/ (surface coating)			
M14 thread	yellow (ZN)	M14 8.8		130 Nm
	silver (ZNS)	M14 8.8		104 Nm
	yellow (ZN)	M14 10.9		180 Nm
	silver (ZNS)	M14 10.9		155 Nm
	yellow (ZN)	M14 12.9		220 Nm
	silver (ZNS)	M14 12.9		170 Nm
M14x1.5 thread	yellow (ZN)	M14 x 1.5 8.8		143 Nm
	silver (ZNS)	M14 x 1.5 8.8		110 Nm
	yellow (ZN)	M14 x 1.5 10.9		200 Nm
	silver (ZNS)	M14 x 1.5 10.9		165 Nm
	yellow (ZN)	M14 x 1.5 12.9		240 Nm
	silver (ZNS)	M14 x 1.5 12.9		180 Nm

M16 AND M16X1.5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2

00 00 M16 AND M16X1.5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2

TIGHTENING TORQUE SPECIFICATION - M16 AND M16X1.5 - ACC. TO BMW GS 90003-2

	Type	Thread	Tightening specification	Measure
Scope of applicability of tightening torques, refer to excerpt from <u>COMPANY STANDARD BMW GS 90003-2</u>	Surface colour/ (surface coating)			
M16 thread	yellow (ZN)	M16 8.8		200 Nm
	silver (ZNS)	M16 8.8		160 Nm
	yellow (ZN)	M16 10.9		280 Nm
	silver (ZNS)	M16 10.9		235 Nm
	yellow (ZN)	M16 12.9		340 Nm
	silver (ZNS)	M16 12.9		260 Nm
M16x1.5 thread	yellow (ZN)	M16 x 1.5 8.8		216 Nm
	silver (ZNS)	M16 x 1.5 8.8		170 Nm
	yellow (ZN)	M16 x 1.5 10.9		303 Nm
	silver (ZNS)	M16 x 1.5 10.9		250 Nm
	yellow (ZN)	M16 x 1.5 12.9		364 Nm
	silver (ZNS)	M16 x 1.5 12.9		275 Nm

M18 AND M18X1.5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2**00 00 M18 AND M18X1.5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2****TIGHTENING TORQUE SPECIFICATION - M18 AND M18X1.5 - ACC. TO BMW GS 90003-2**

	Type	Thread	Tightening specification	Measure
Scope of applicability of tightening torques, refer to excerpt from <u>COMPANY STANDARD BMW GS 90003-2</u>	Surface colour/ (surface coating)			
M18 thread	yellow (ZN)	M18 8.8		280 Nm
	silver (ZNS)	M18 8.8		225 Nm
	yellow (ZN)	M18 10.9		390 Nm
	silver (ZNS)	M18 10.9		330 Nm
	yellow (ZN)	M18 12.9		470 Nm
	silver (ZNS)	M18 12.9		365 Nm

M18x1.5 thread	yellow (ZN)	M18 x 1.5 8.8		313 Nm
	silver (ZNS)	M18 x 1.5 8.8		245 Nm
	yellow (ZN)	M18 x 1.5 10.9		440 Nm
	silver (ZNS)	M18 x 1.5 10.9		360 Nm
	yellow (ZN)	M18 x 1.5 12.9		527 Nm
	silver (ZNS)	M18 x 1.5 12.9		400 Nm

M4 AND M5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2

00 00 M4 AND M5 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2

TIGHTENING TORQUE SPECIFICATION - M4 AND M5 - ACC. TO BMW GS 90003-2

	Type	Thread	Tightening specification	Measure
Scope of applicability of tightening torques, refer to excerpt from COMPANY STANDARD BMW GS 90003-2	Surface colour/ (surface coating)			
M4 thread	yellow (ZN)	M4 8.8		3 Nm
	silver (ZNS)	M4 8.8		2 Nm
	yellow (ZN)	M4 10.9		4 Nm
	silver (ZNS)	M4 10.9		3 Nm
	yellow (ZN)	M4 12.9		5 Nm
M5 thread	yellow (ZN)	M5 8.8		6 Nm
	silver (ZNS)	M5 8.8		5 Nm
	yellow (ZN)	M5 10.9		8 Nm
	silver (ZNS)	M5 10.9		7 Nm
	yellow (ZN)	M5 12.9		10 Nm
	silver (ZNS)	M5 12.9		8 Nm

M6 AND M7 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2

00 00 M6 AND M7 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2

TIGHTENING TORQUE SPECIFICATION - M6 AND M7 - ACC. TO BMW GS 90003-2

	Type	Thread	Tightening specification	Measure
Scope of applicability of tightening torques,	Surface colour/ (surface coating)			

refer to excerpt from <u>COMPANY</u> <u>STANDARD</u> <u>BMW GS 90003-2</u>				
M6 thread	yellow (ZN)	M6 8.8		10 Nm
	silver (ZNS)	M6 8.8		8 Nm
	yellow (ZN)	M6 10.9		14 Nm
	silver (ZNS)	M6 10.9		12 Nm
	yellow (ZN)	M6 12.9		17 Nm
	silver (ZNS)	M6 12.9		13 Nm
M7 thread	yellow (ZN)	M7 8.8		15 Nm
	silver (ZNS)	M7 8.8		13 Nm
	yellow (ZN)	M7 10.9		21 Nm
	silver (ZNS)	M7 10.9		19 Nm
	yellow (ZN)	M7 12.9		26 Nm
	silver (ZNS)	M7 12.9		21 Nm

M8 AND M8 X 1 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2

00 00 M8 AND M8 X 1 - MAXIMUM TIGHTENING TORQUES ACC. TO BMW GS 90003-2

TIGHTENING TORQUE SPECIFICATION - M8 AND M8 X 1 - ACC. TO BMW GS 90003-2

	Type	Thread	Tightening specification	Measure
Scope of applicability of tightening torques, refer to excerpt from <u>COMPANY</u> <u>STANDARD</u> <u>BMW GS 90003-2</u>	Surface colour/ (surface coating)			
M8 thread	yellow (ZN)	M8 8.8		24 Nm
	silver (ZNS)	M8 8.8		19 Nm
	yellow (ZN)	M8 10.9		34 Nm
	silver (ZNS)	M8 10.9		28 Nm
	yellow (ZN)	M8 12.9		40 Nm
	silver (ZNS)	M8 12.9		32 Nm
M8x1 thread	yellow (ZN)	M8 x 1 8.8		26 Nm
	silver (ZNS)	M8 x 1 8.8		21 Nm
	yellow (ZN)	M8 x 1 10.9		36 Nm
	silver (ZNS)	M8 x 1 10.9		30 Nm
	yellow (ZN)	M8 x 1 12.9		44 Nm

silver (ZNS)

M8 x 1 12.9

33 Nm

GENERAL INFORMATION

BMW - Gasoline - 1982-11

BRAKE PAD WARNING LIGHT

- NOTE:** Most vehicles are equipped with a Malfunction Indicator Light (MIL) or check engine light. If light comes on and remains on while driving, the vehicle requires some type of repair. See appropriate service and repair information. After repairing fault(s) and clearing fault code(s), the Malfunction Indicator Light (MIL) or check engine light should go out. Some models may use a dual-function indicator light, which is also used to indicate emission component service is due. After performing required service, reset indicator light.
- NOTE:** Brake pad warning light should go out after replacement of brake pad thickness sensor. If warning light does not go out, turn ignition on, engine off, for 30-45 seconds. Warning light should go out. If the above procedure is not successful, connect vehicle to DIS tester, access Instrument Cluster/IKE, then "clear fault memory".
- NOTE:** The base instrument cluster OIL SERVICE INSPECTION display is located on the bottom of the cluster, to the right of center. The base cluster is also equipped with a graphic display of the car that shows if a door or the trunk lid is open. The high instrument cluster OIL SERVICE INSPECTION display is located on the bottom of the cluster, to the left of center.
- NOTE:** To determine the appropriate reset procedure, refer to **BRAKE PAD WARNING LIGHT RESET INDEX**. Only vehicles listed in this index have a specific brake pad warning light reset procedure. For other vehicles, perform **PROCEDURE 1** first. If light does not reset, perform **PROCEDURE 2**. If the above procedures are not successful, connect vehicle to DIS tester, access Instrument Cluster/IKE, then "clear fault memory".

BRAKE PAD WARNING LIGHT RESET INDEX

Model & Year	Reset Procedure
5-Series	
1997-00 (w/High Instrument Cluster)	<u>Brake Pad Warning Light Reset - Procedure 1</u>
1997-00 (w/Base Instrument Cluster)	<u>Brake Pad Warning Light Reset - Procedure 2</u>
7-Series	
1997-00	<u>Brake Pad Warning Light Reset - Procedure 1</u>

BRAKE PAD WARNING LIGHT RESET - PROCEDURE 1

To reset light after replacing brake pads, turn ignition on with engine off. Wait 30 seconds. Brake pad warning indicator light will switch off.

BRAKE PAD WARNING LIGHT RESET - PROCEDURE 2

Start engine. Brake pad warning indicator will switch off.

OXYGEN SENSOR WARNING LIGHT

NOTE: To determine the appropriate reset procedure, refer to **OXYGEN SENSOR WARNING LIGHT RESET INDEX**. Only vehicles listed in this index have an oxygen sensor warning light.

OXYGEN SENSOR WARNING LIGHT RESET INDEX

Model & Year	Reset Procedure
All Models	
1983 & Earlier	<u>Oxygen Sensor Warning Light Reset - Procedure 1</u>
1984 & Later	<u>Oxygen Sensor Warning Light Reset - Procedure 2</u>

OXYGEN SENSOR WARNING LIGHT RESET - PROCEDURE 1

1. Every 30,000 miles (25,000 miles on 528i) the OXYGEN light in dash will come on as a reminder to replace the oxygen sensor.

NOTE: On 528e models, pull the protective metal plate off before removing oxygen sensor.
2. On 528e models, no interval reset switch is provided. After replacing sensor, remove instrument panel. Remove and discard bulb for OXYGEN sensor light.
3. On all other models, trace speedometer cable to interval switch (in-line with cable, mounted on frame rail left of transmission). Press White reset button. See **Fig. 1**. Ensure warning light is out.

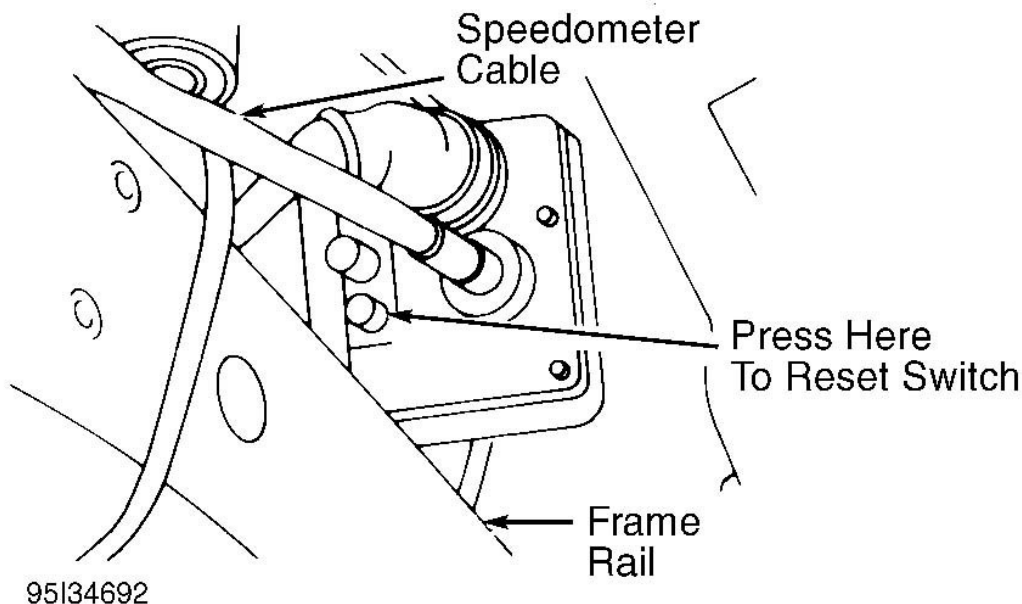


Fig. 1: Locating Oxygen Sensor Warning Light Reset Switch (All BMW Models Before 1983)
 Courtesy of BMW OF NORTH AMERICA, INC.

OXYGEN SENSOR WARNING LIGHT RESET - PROCEDURE 2

NOTE: Some late production (February 1985 and later) BMW models have a reset button on rear of the light control assembly located near pedal assembly. Press button to reset light after servicing oxygen sensor.

No reset switch is provided. When oxygen sensor light comes on, service oxygen sensor. Remove and discard bulb from indicator.

SERVICE INTERVAL REMINDER LIGHTS

NOTE: This is sometimes referred to as the "Oil Change Light" or "Oil Service Light".

NOTE: On models that still use the round diagnostic connector in engine compartment, use SIA reset tool to reset service lights. See **SERVICE INTERVAL LIGHT RESET - PROCEDURE 1**. On models without the round diagnostic connector in the engine compartment, the use of the SIA reset tool is not possible. See **SERVICE INTERVAL LIGHT RESET - PROCEDURE 2**. The service indicator can only be reset using the reset mode in the instrument cluster or by using BMW hardware. This procedure applies to 3-Series from production date 9/99, and 5-Series and 7-Series from production date 9/00 (except 2002-05 7-Series and

2004-05 5-Series) without an engine compartment diagnostic connector. For 2002-up models with condition based service (CBS) interval system reset procedure, see SERVICE INTERVAL LIGHT RESET - PROCEDURE 3.

NOTE: To determine the appropriate reset procedure, refer to **SERVICE INTERVAL REMINDER LIGHT RESET INDEX**. Only vehicles listed in this index have a service interval reminder.

SERVICE INTERVAL REMINDER LIGHT RESET INDEX

Model & Year	Reset Procedure
Models With Engine Compartment Diagnostic Connector	
1983-05	<u>Service Interval Light Reset - Procedure 1</u>
Models Without Engine Compartment Diagnostic Connector	
2001-05	<u>Service Interval Light Reset - Procedure 2</u>
Models With Condition Based Service (CBS) Interval System	
2002 & Newer	<u>Service Interval Light Reset - Procedure 3</u>
Models Without Condition Based Service (CBS) Interval System	
2004-05	<u>Service Interval Light Reset - Procedure 4</u>

DESCRIPTION & OPERATION

Starting in 1983 and ending on some models in 1999, service indicator on instrument panel consists of 5 Green, 3 Red and one Yellow Light Emitting Diodes (LED) and the inscriptions OIL SERVICE and INSPECTION. When ignition is on, as many as 5 Green LEDs will light up. The Green LEDs go out when the engine is started. If the Yellow LED glows and one of the inscriptions comes on and remains on when the engine is started, maintenance service is due immediately. When maintenance interval has been exceeded (after approximately 1000 miles) the Red LED's will come on in addition to the Yellow LED as a reminder for servicing.

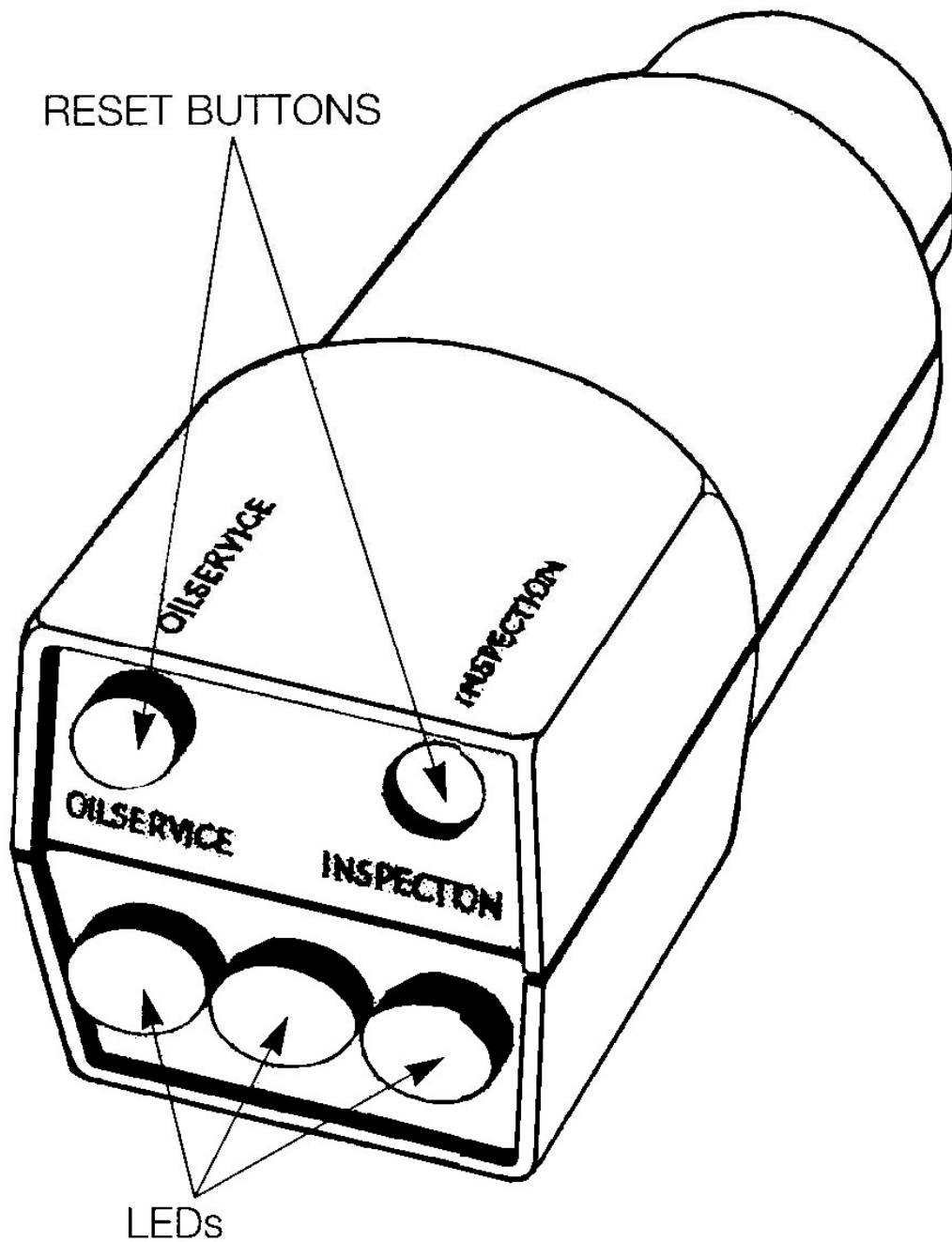
Beginning on some models in 1999, a new method for displaying the service interval is used. Colored LEDs are no longer used to display the amount of time until the next service or inspection is due. The actual mileage remaining until the next service will be displayed for five seconds when the ignition is first switched on. The text OIL SERVICE or INSPECTION will also illuminate to show which service is due. A minus symbol (-) before the mileage display indicates that a service is past due.

The 2002-05 models with condition based service (CBS) interval system uses an entirely different service interval system. See **SERVICE INTERVAL LIGHT RESET - PROCEDURE 3**.

SERVICE INTERVAL LIGHT RESET - PROCEDURE 1

1. To reset instrument cluster SIA OIL SERVICE indicator, turn ignition switch to ON position. Connect Service Indicator Resetter (62 1 110) to diagnosis connector in engine compartment. See **Fig. 2**.
2. Press Yellow OIL SERVICE button. Green LED will illuminate. Wait until Yellow LED illuminates and then goes out again. Ensure that OIL SERVICE indicator has been reset.
3. To reset SERVICE INTERVAL indicator, press Red INSPECTION service button for inspection. Green LED illuminates. Wait until Red LED illuminates and then goes out again. Turn ignition switch to OFF

position, wait 20 seconds and repeat procedure in order to adapt interval of annual inspection to inspection. Ensure that SERVICE INTERVAL indicator has been reset.



G00131569

Fig. 2: Identifying BMW Service Interval Reset Tool

Courtesy of BMW OF NORTH AMERICA, INC.

SERVICE INTERVAL LIGHT RESET - PROCEDURE 2

Reset service light by performing the following:

1. Ignition key must be in OFF position.
2. Press and hold trip odometer reset button in the instrument cluster (left button), and turn ignition key to first position.
3. Keep the button pressed for approximately 5 seconds until one of the following words appear in the display: "OIL SERVICE", or "INSPECTION", with "RESET".
4. Release reset button and press it again until "RESET" begins to flash in the display. See **Fig. 3** and **Fig. 4**.
5. Service due is shown with "RESET" if coded minimum consumption limit has been reached and resetting is possible. If "RESET" is not shown, minimum limit has not been reached and resetting is not possible.
6. While "RESET" is flashing, press left button briefly to reset service interval. After display has shown new interval, following will appear: "END SIA".
7. System can only be reset again after 2.5 gallons of fuel have been consumed.

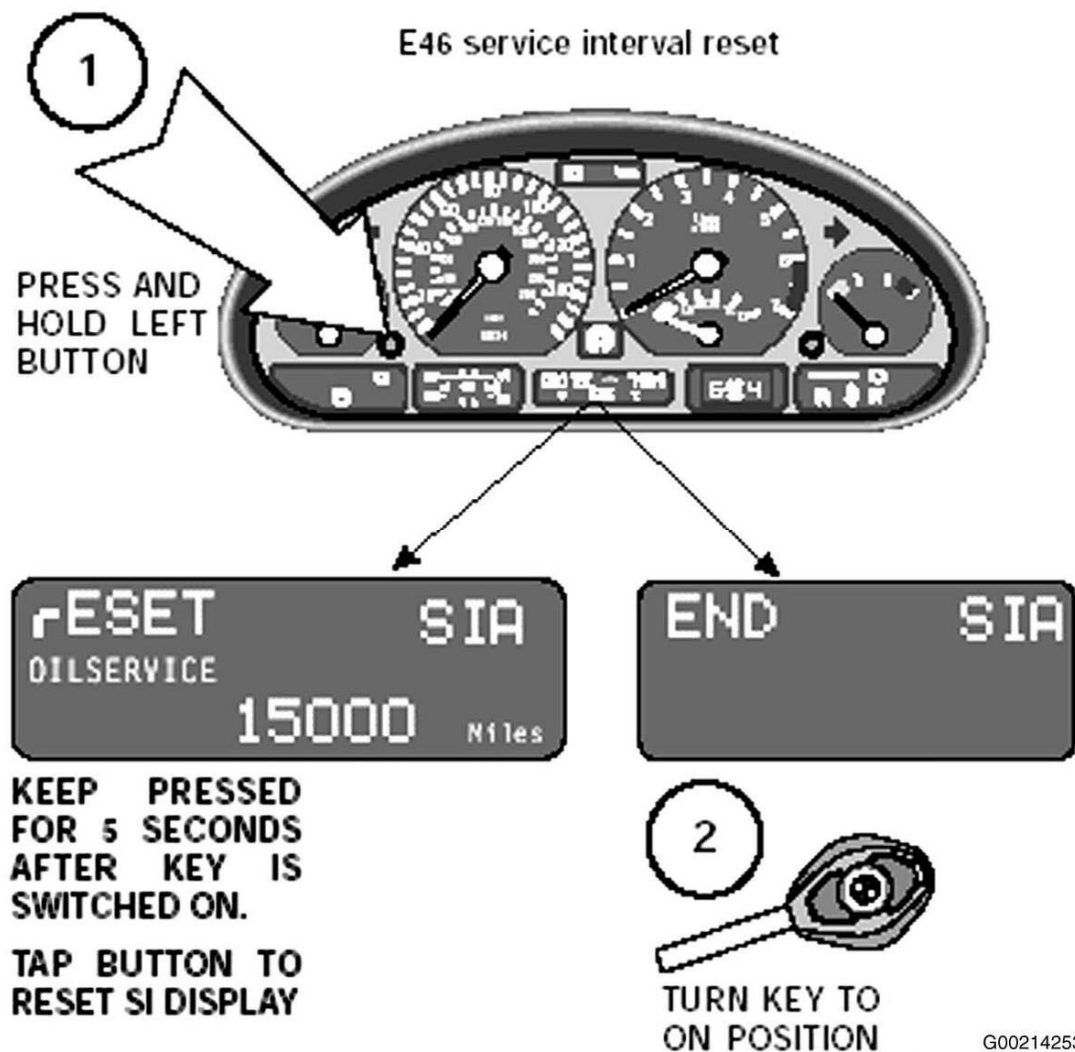
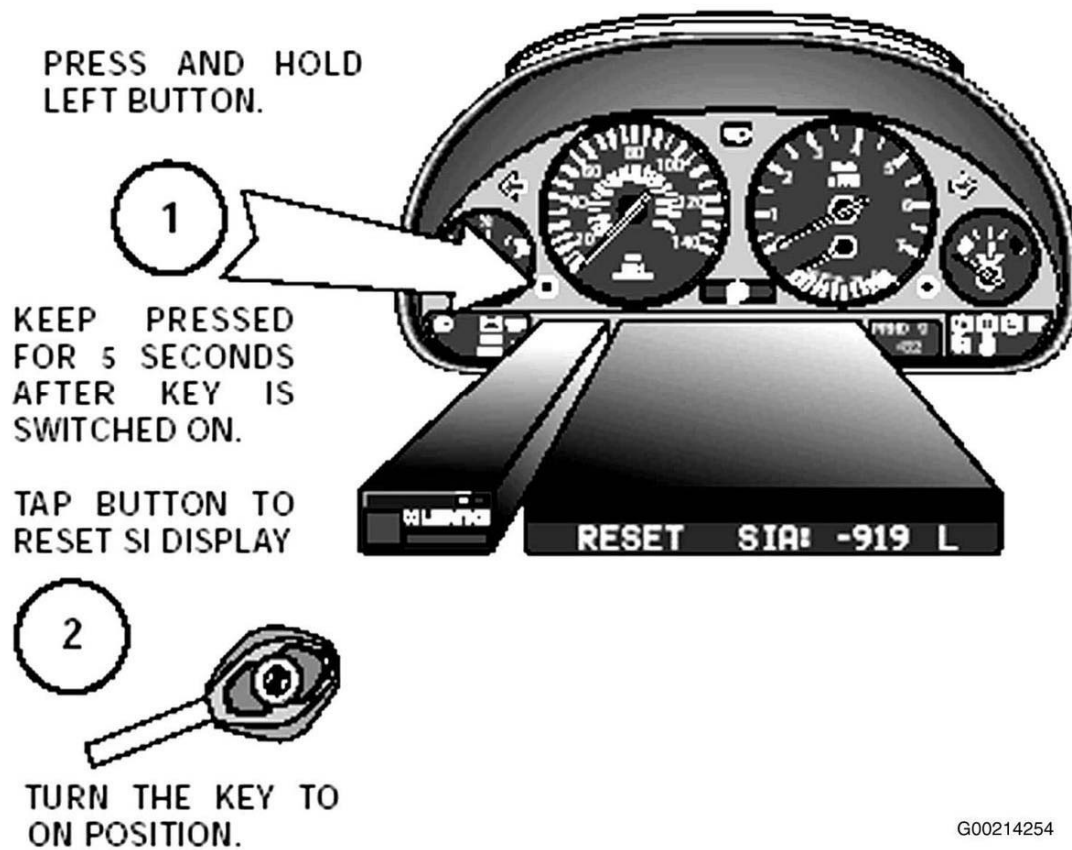


Fig. 3: Resetting Service Interval Light (E46)
Courtesy of BMW OF NORTH AMERICA, INC.

E39 service interval reset (High Version)



G00214254

Fig. 4: Resetting Service Interval Light (E39)
Courtesy of BMW OF NORTH AMERICA, INC.

SERVICE INTERVAL LIGHT RESET - PROCEDURE 3

Models use a Condition Based Service (CBS) service interval system, which displays a Service Need Display (SND). When ignition is on, Service Need Display appears under the speedometer in the instrument cluster for 10 seconds in the place where the fuel tank level is normally displayed. The first line corresponds to the mileage dependent service items. It specifies the mileage when the next service is due.

If the mileage is exceeded (service overdue), it appears with a minus sign. The second line corresponds to the time dependent service items and is displayed by a clock symbol. It specifies the weeks/months/years when the next service is due. If the service is overdue, it appears with a minus sign. The actual service item (with additional information) can be viewed in the control display.

NOTE: On some models an appropriate scan tool may be used to reset CBS service schedules. By using suitable diagnostic equipment connected to the vehicle diagnostic connector it is possible to reset CBS service schedules at any time. By selecting the 'CBS' option, the diagnostic equipment will gather information regarding the current state of CBS items from their relevant modules on the CAN network.

Service reset is accomplished using instrument cluster:

1. Insert key into ignition.
2. Press start/stop button without depressing the clutch or brake, and wait for the service reminder to dissapear.
3. Immediately after the service reminder indicator goes out, press and hold the odometer reset button. After 3 secs a warning triangle will appear, keep the odometer button pressed and after another 2-3 secs an oil can will appear.

NOTE: If the odometer button is pressed too long (10 secs in total), German writing will appear (giving the software level/ can bus etc. of the vehicle). This indicates that you've overshoot the reset procedure and you need to re-start from the beginning.

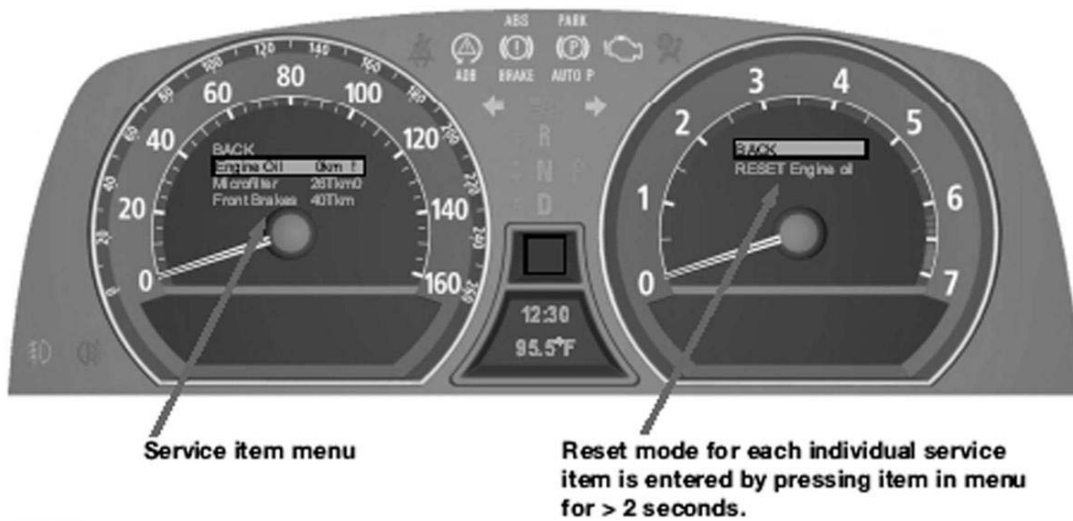
4. The service menu should now be displayed. Use the toggle switch on indicator stalk (twisting the stalk) to scroll up/down through the various service items.
5. When the item to be reset is showing, press the BC button on end of indicator stalk. "Reset" should now appear in the display. Press in and hold the BC button for 2-3 secs and a whirling clock icon will be displayed. The reset procedure for the selected service item is done.
6. Scroll up/down to select another item (as in step 4), or press the start/stop button to exit.

NOTE: Residual wear or remaining time are specified (possibly with a minus sign). The "1" symbol means that you can reset service operation (early production vehicles may show an "F"), while a "0" indicates it is not resettable (the first 20 percent of the service interval is also protected against accidental reset). For additional information about Condition Based Service (CBS), see RESETTING AND CORRECTING CONDITION BASED SERVICE under PROGRAMMING in SELF-DIAGNOSIS - 7-SERIES article.



G00214255

Fig. 5: Identifying Condition Based Service (CBS) Instrument Panel Controls (1 Of 2)
Courtesy of BMW OF NORTH AMERICA, INC.



G00214256

Fig. 6: Identifying Condition Based Service (CBS) Instrument Panel Controls (2 Of 2)
 Courtesy of BMW OF NORTH AMERICA, INC.

SERVICE INTERVAL LIGHT RESET - PROCEDURE 4

The BMW maintenance system SIA IV (service interval indicator) is used on X3 models (E83). The service interval indicator is a system subject to constant development which in its development stages has been integrated in various model series such as E85 (Z4) and E46 (3 and M3-Series).

The service indicator appears in the LC display in the instrument cluster's speedometer. The indicator is shown for 5 seconds in the LC display after terminal R is "ON". See **Fig. 7**.

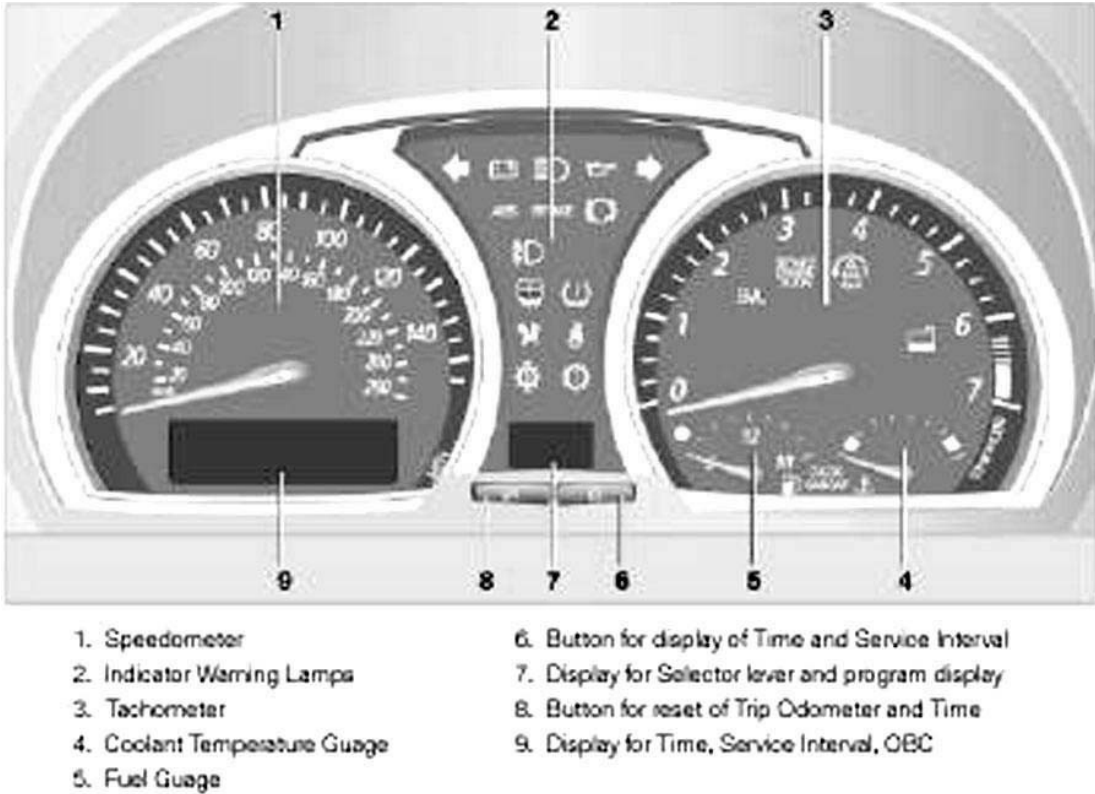


G00313209

Fig. 7: Identifying Service Interval Indicator
 Courtesy of BMW OF NORTH AMERICA, INC.

Resetting Service Interval Indicator

Resetting the service interval indicator for the oil service and inspection procedures can only be done by pressing the left button in the instrument cluster. See **Fig. 8**.



G00313208

Fig. 8: Identifying Service Interval Indicator Reset Button
Courtesy of BMW OF NORTH AMERICA, INC.

TIRE PRESSURE MONITOR SYSTEM (TPMS)

NOTE: If a tire pressure has been adjusted, or a wheel or tire has been changed or replaced, or repairs have been made to air spring suspension, the TPM system must be reinitialized. System must be reinitialized both before and after pulling a trailer.

CAUTION: When driving with snow chains or a space-saver spare tire, DO NOT initialize the system.

NOTE: To determine the appropriate reset procedure, refer to **TPMS RESET INDEX**. Only vehicles listed in this index have a TPMS reset.

TPMS RESET INDEX

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Model & Year	Reset Procedure
1-Series (128i & 135i)	
2008	<u>TPMS Reset - Procedure 8</u>
2009-11	<u>TPMS Reset - Procedure 9</u>
3-Series	
2001-08	<u>TPMS Reset - Procedure 1</u>
2009-11	<u>TPMS Reset - Procedure 9</u>
5-Series	
2001-03	<u>TPMS Reset - Procedure 1</u>
2004-09	<u>TPMS Reset - Procedure 8</u>
2010-11	<u>TPMS Reset - Procedure 9</u>
6-Series	
2004-09	<u>TPMS Reset - Procedure 8</u>
2010-11	<u>TPMS Reset - Procedure 9</u>
7-Series	
2002-05	<u>TPMS Reset - Procedure 2</u>
2006-11	<u>TPMS Reset - Procedure 9</u>
Alpina	
2007-08	<u>TPMS Reset - Procedure 5</u>
2011	<u>TPMS Reset - Procedure 9</u>
M3	
2001-06	<u>TPMS Reset - Procedure 1</u>
2008	<u>TPMS Reset - Procedure 8</u>
2009-11	<u>TPMS Reset - Procedure 9</u>
M5	
2002-03	<u>TPMS Reset - Procedure 3</u>
2006-08	<u>TPMS Reset - Procedure 8</u>
2009-10	<u>TPMS Reset - Procedure 9</u>
M6	
2006-07	<u>TPMS Reset - Procedure 8</u>
2008-10	<u>TPMS Reset - Procedure 9</u>
M-Coupe & M-Roadster	
2006-08	<u>TPMS Reset - Procedure 6</u>
X3	
2004-10	<u>TPMS Reset - Procedure 6</u>
2011	<u>TPMS Reset - Procedure 9</u>
X5 & X5 M	
2001-05	<u>TPMS Reset - Procedure 1</u>
2006	<u>TPMS Reset - Procedure 6</u>
2007-11	<u>TPMS Reset - Procedure 9</u>
X6 & X6 M	
2008-11	

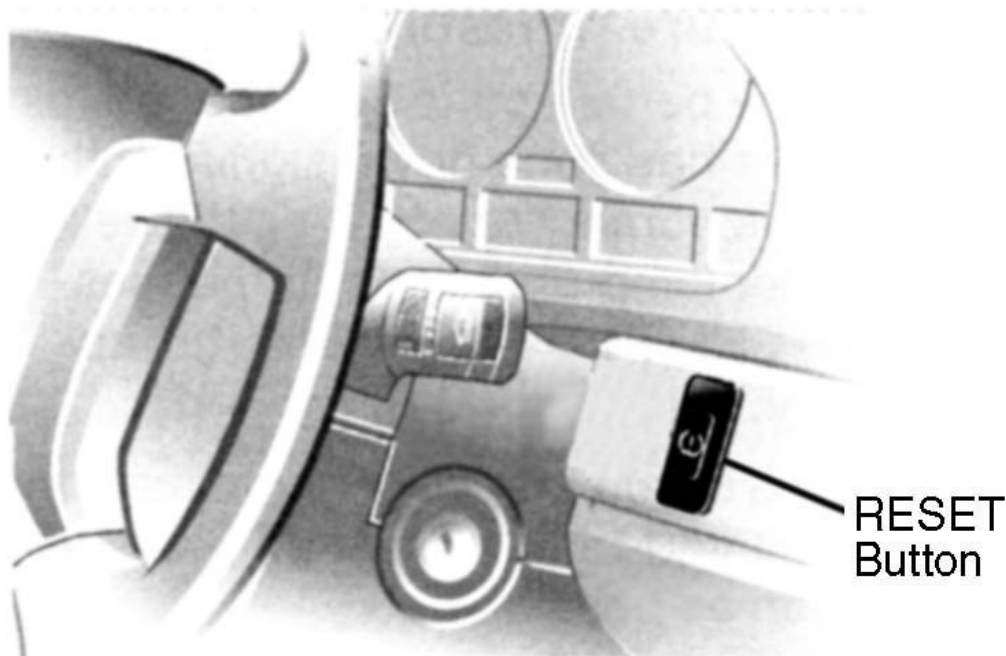
	<u>TPMS Reset - Procedure 9</u>
Z3	
2001-02	<u>TPMS Reset - Procedure 1</u>
Z4	
2003-06	<u>TPMS Reset - Procedure 1</u>
2007-08	<u>TPMS Reset - Procedure 6</u>
2009-11	<u>TPMS Reset - Procedure 9</u>
Z8	
2001-03	<u>TPMS Reset - Procedure 1</u>

TPMS RESET - PROCEDURE 1

1. Set the tire pressure on all wheels to specification.
2. Turn ignition switch to ON position, with engine off.
3. Press reset button (for no longer than 10 seconds) until tire pressure warning light illuminates Yellow for a few seconds. See Fig. 9, Fig. 10, Fig. 11 or Fig. 12 .

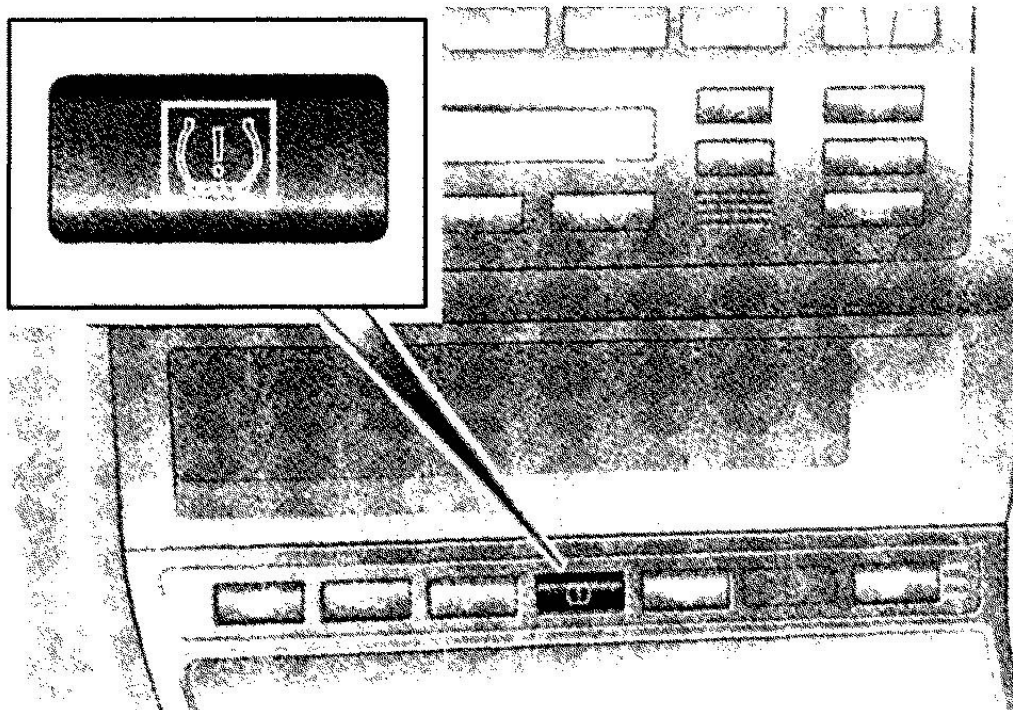
NOTE: On some X5 models, the reset button is marked "RDC".

4. Drive vehicle. Initialization is automatically completed during the drive, without any feedback issued.



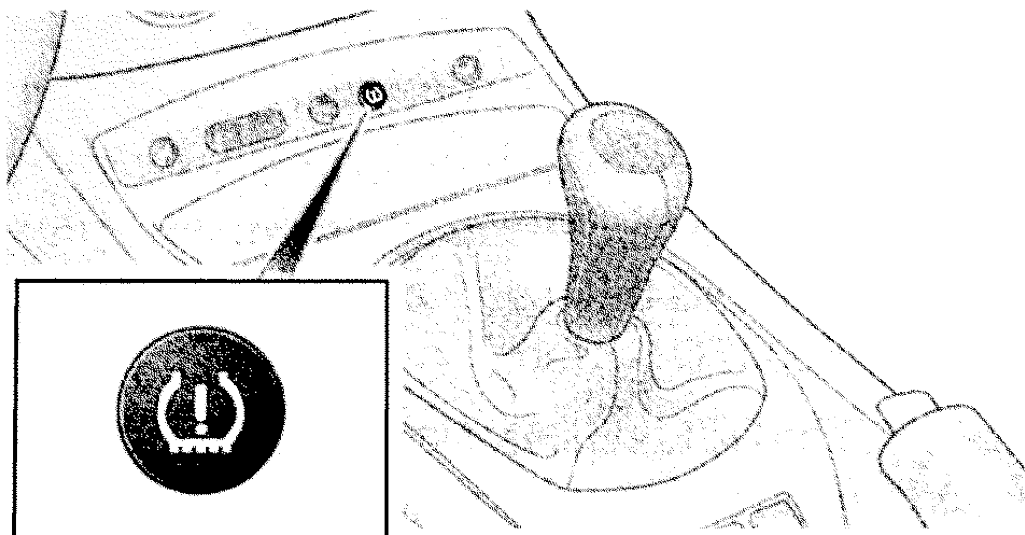
G00251683

Fig. 9: Locating TPM System Reset Button (5-Series)
Courtesy of BMW OF NORTH AMERICA, INC.



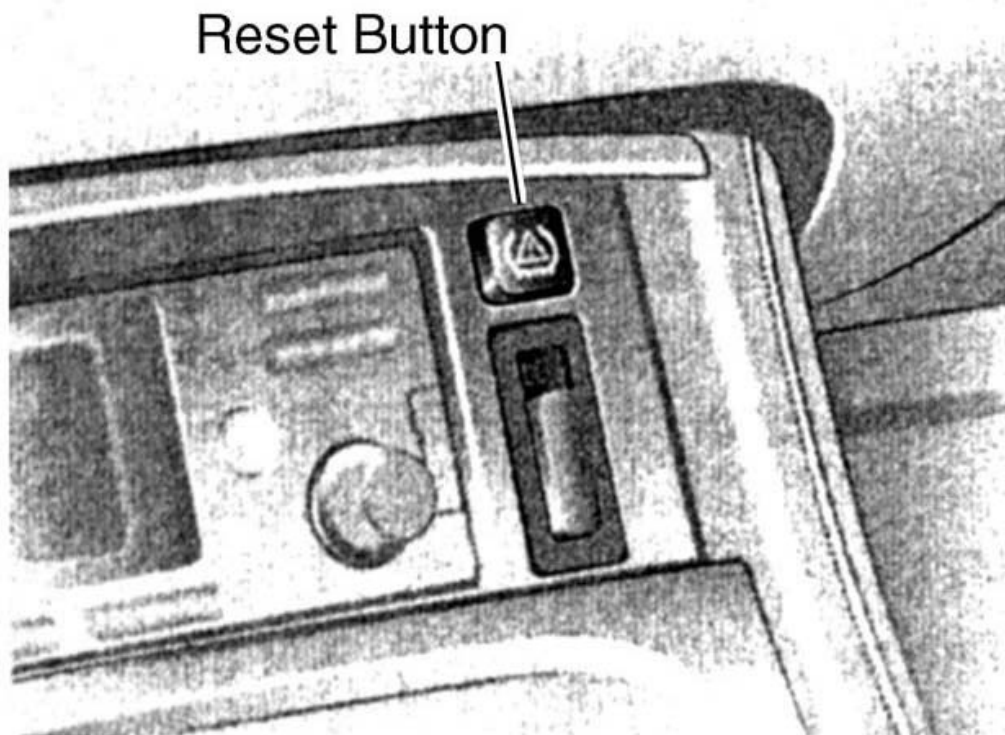
G00225522

Fig. 10: Locating TPM System Reset Button (3-Series & X5 - Typical)
 Courtesy of BMW OF NORTH AMERICA, INC.



G00225521

Fig. 11: Locating TPM System Reset Button (Z4)
 Courtesy of BMW OF NORTH AMERICA, INC.



G00251684

Fig. 12: Locating TPM System Reset Button (Z28)
Courtesy of BMW OF NORTH AMERICA, INC.

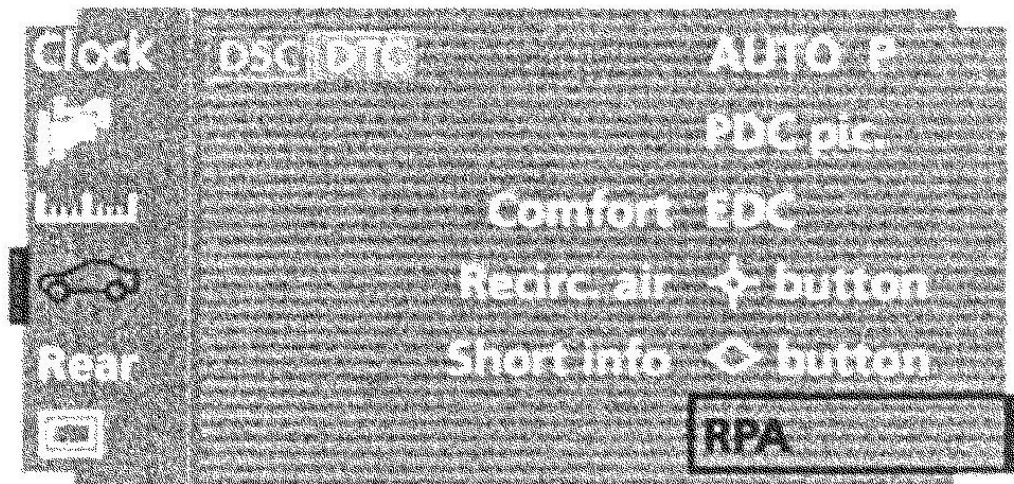
TPMS RESET - PROCEDURE 2

NOTE: The initialization finishes during driving, which can be interrupted at any time. When driving resumes, the initialization is continued automatically.

1. Set the tire pressure of all wheels to specification.
2. Start engine, but do not start driving.
3. On Control Center, select "RPA" from the "SETTINGS" menu and confirm selection. The initialization menu will appear. See **Fig. 13**.
4. Select "SET" and confirm selection.
5. Drive vehicle. The message "FTM IS BEING INITIALIZED" will be displayed. See **Fig. 14**.

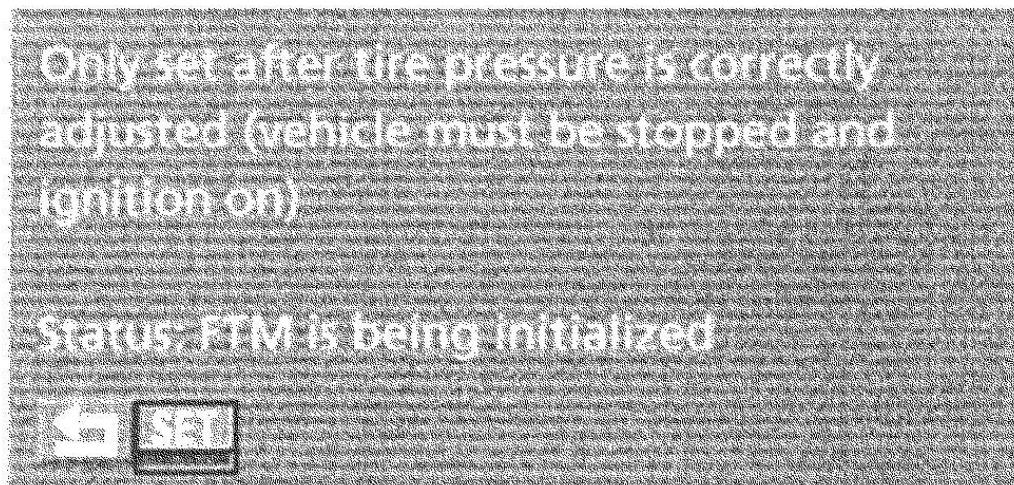
NOTE: It takes at least 10 minutes before the TPM system can detect and report a flat tire.

6. Select counterclockwise left arrow button and confirm to exit from menu.



G00225474

Fig. 13: Identifying TPM System Reinitialization Messages (1 Of 2)
 Courtesy of BMW OF NORTH AMERICA, INC.



G00225475

Fig. 14: Identifying TPM System Reinitialization Messages (2 Of 2)
 Courtesy of BMW OF NORTH AMERICA, INC.

TPMS RESET - PROCEDURE 3

NOTE: **The initialization finishes during driving, which can be interrupted at any time. When driving resumes, the initialization is continued automatically.**

1. Set the tire pressure of all wheels to specification.
2. Start the engine.
3. Press iDrive knob down once to enter Vehicle Info.
4. Select Settings.
5. Select Vehicle Tires.
6. Select TPM.
7. Select Reset.
8. Scroll to Yes.
9. Select "YES" and press the controller.
10. After selecting Yes, drive vehicle until tires on iDrive screen turn green.

TPMS RESET - PROCEDURE 4

Resetting TPM With iDrive Controller

When the color of the tire indicator is Green, tire pressure is within the established target value. When the indicator color is Yellow in one of the wheel, check for a flat tire or substantial loss of pressure in the indicated tire. A message also appears in Control Display.

If indicator color is Yellow in all wheels, check for flat tire or substantial loss of tire pressure in several tires. A message will also appear in Control Display.

If indicator color is Gray, system cannot detect a puncture. Check for TPM being reset, temporary malfunction caused by systems or devices using the same radio frequency or a system malfunction.

1. Press MENU button. The Start menu is called up.
2. Press the controller to open the i-menu.
3. Select "Vehicle Settings" and press the controller.
4. Select "TPM" and press controller.
5. Drive vehicle for a few minutes. The set inflation pressures in the tires are accepted as target values to be monitored. The system reset is completed during the drive, but can be interrupted any time. When driving resumes, reset is continued automatically.
6. The Control Display will show Green indicators and "Status: TPM active" is shown in Control Display
7. If a flat tire is detected while system is resetting and determining inflation pressures, all tires on Control Indicator will appear in Yellow and message "Tire Low" is shown.

Resetting TPM Without iDrive Controller

1. Start engine, but do not drive vehicle.
2. Lightly push button the top button on turn indicator lever up or down repeatedly until the tire symbol

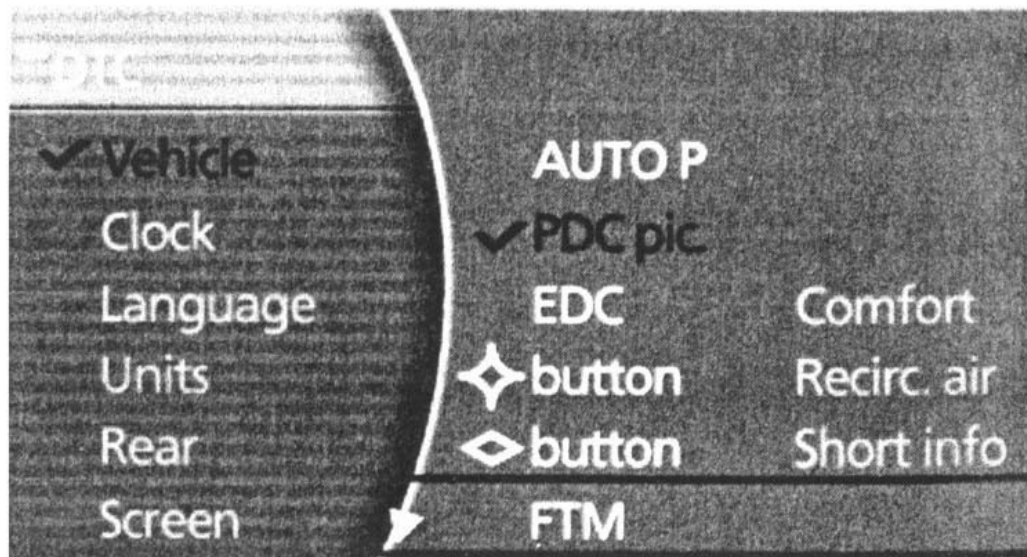
appears in the display accompanied by the word "RESET".

3. Press the side button on turn indicator to confirm your choice of the Tire Pressure Monitor.
4. Press and hold the side button for about 5 seconds, until "RESET" is displayed.
5. Drive vehicle. The set inflation pressures in the tires are accepted as target values to be monitored. The system reset is completed during the drive, but can be interrupted any time. When driving resumes, reset is continued automatically.

TPMS RESET - PROCEDURE 5

NOTE: The initialization finishes during driving, which can be interrupted at any time. When driving resumes, the initialization is continued automatically.

1. Set the tire pressure of all wheels to specification.
2. Press "MENU" button to open start menu.
3. Open the i-menu of the Control Center.
4. Select "SETTINGS" and press the controller.
5. Select "VEHICLE" and press the controller. See **Fig. 15**.
6. Select "TIRES: TPM" and press controller.
7. Start engine, but do not start driving.
8. Select "RESET" and press the controller.
9. Select "YES" and press the controller.
10. Drive vehicle. The message "RESETTING TPM...." will be displayed. Initialization is automatically completed during the drive. When initialization is complete, "STATUS: TPM ACTIVE" message will be displayed.



G00251686

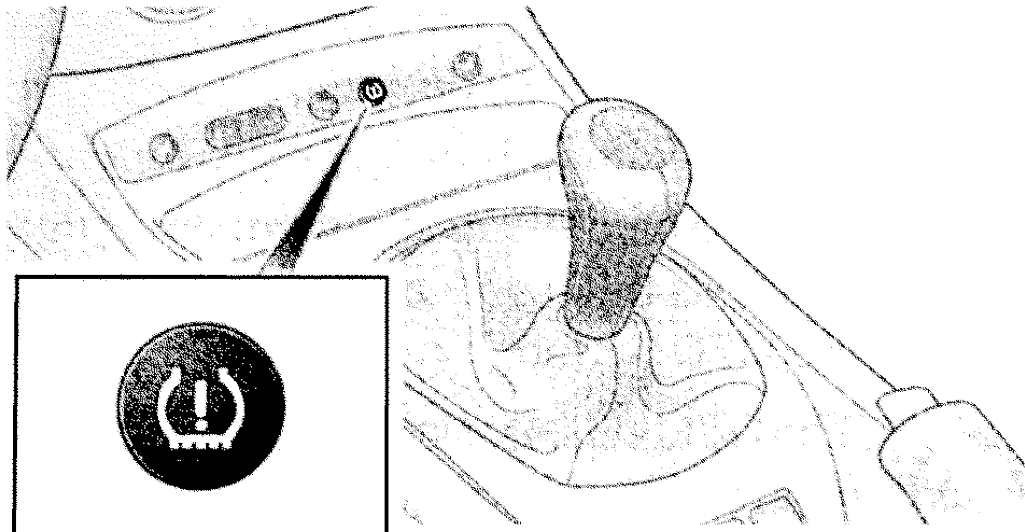
Fig. 15: Identifying TPM System Reinitialization Messages

Courtesy of BMW OF NORTH AMERICA, INC.

TPMS RESET - PROCEDURE 6

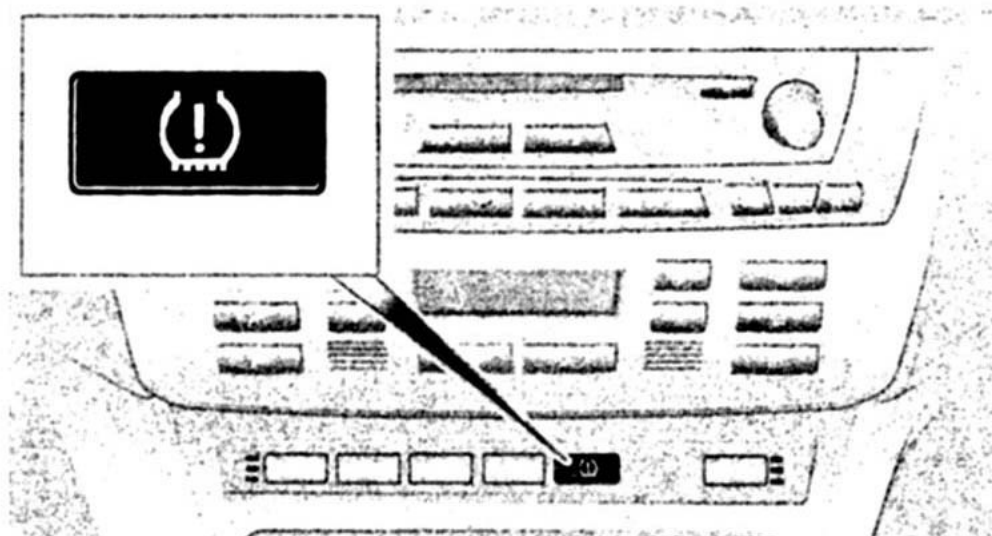
CAUTION: When driving with snow chains or a space-saver spare tire, DO NOT initialize the system.

1. Set the tire pressure of all wheels to specification.
2. Start engine, but do not start driving.
3. Press reset button (for no longer than 10 seconds) until tire pressure warning light illuminates Yellow for a few seconds. See **Fig. 16**, **Fig. 17**, **Fig. 18** or **Fig. 19**.
4. Drive vehicle. Initialization is automatically completed during the drive, without any feedback issued.



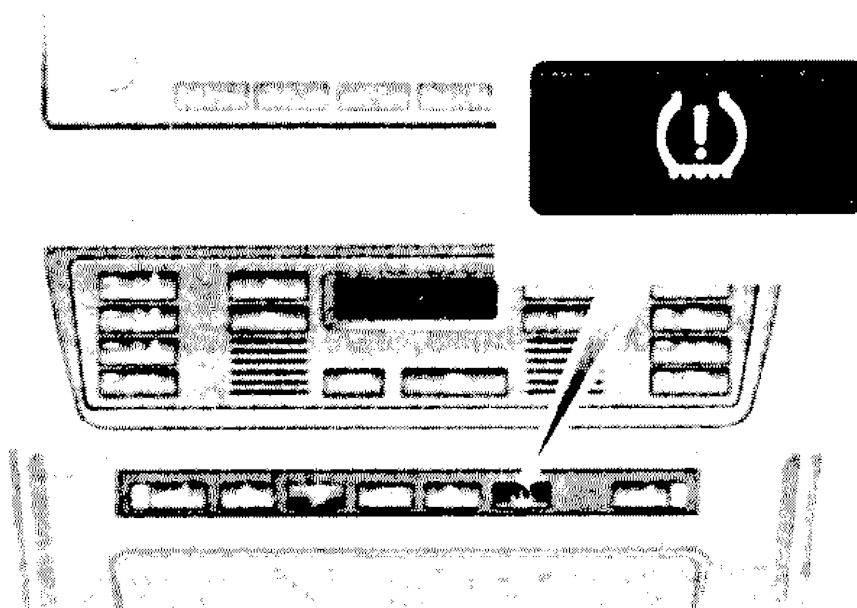
G00225521

Fig. 16: Locating TPM System Reset Button (M-Coupe & Roadster)
Courtesy of BMW OF NORTH AMERICA, INC.



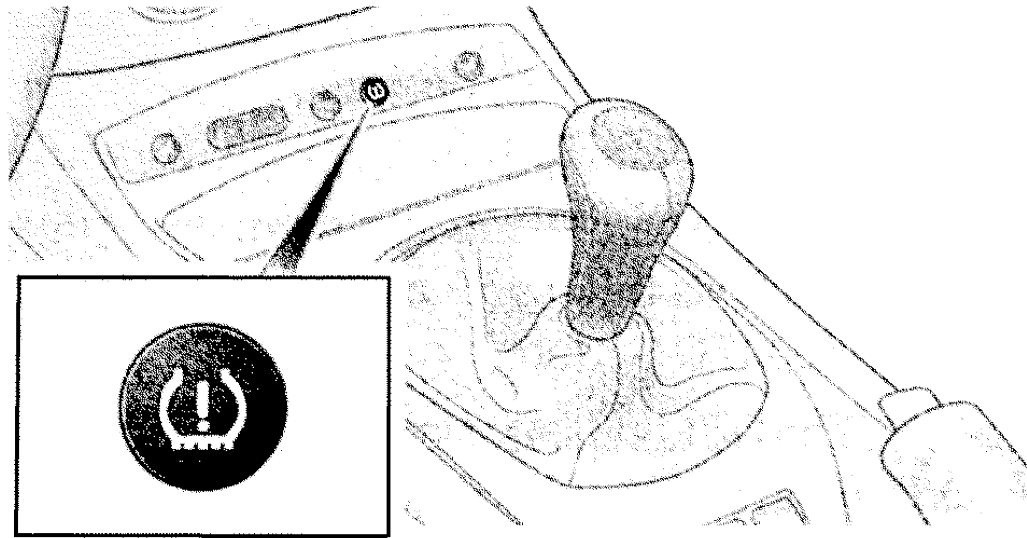
G00251685

Fig. 17: Locating TPM System Reset Button (X3)
 Courtesy of BMW OF NORTH AMERICA, INC.



G00251688

Fig. 18: Locating TPM System Reset Button (X5)
 Courtesy of BMW OF NORTH AMERICA, INC.



G00225521

Fig. 19: Locating TPM System Reset Button (Z4)
Courtesy of BMW OF NORTH AMERICA, INC.

TPMS RESET - PROCEDURE 7

1. Set the tire pressure of all wheels to specification.
2. Press "MENU" button.
3. Open the "i" menu of the Control Center.
4. Select "SETTINGS" and press the controller.
5. Select "VEHICLE/TIRES" and press the controller.
6. Change to upper field if necessary. Turn controller until "TPM" is selected and press the controller.
7. Start engine, but do not start driving.
8. Select "RESET" and press the controller.
9. Select "YES" and press the controller.
10. Drive vehicle. The message "RESETTING TPM...." will be displayed. Initialization is automatically completed during the drive. When initialization is complete, "STATUS: TPM ACTIVE" message will be displayed.

TPMS RESET - PROCEDURE 8

Resetting TPM With iDrive

1. Set the tire pressure of all wheels to specification.
2. Turn ignition switch ON.
3. Press controller to call up I menu. See **Fig. 20**.
4. Select SETTINGS and press controller.
5. Select CAR/TIRES and press controller.

6. If necessary, switch to top field and select TIRES/RDC and press controller.
7. Start engine.
8. Select CONFIRM TIRE PRESSURE and press controller.
9. Drive vehicle. Initialization is automatically completed during the drive, without any feedback issued.



Fig. 20: Locating TPM System Reset Button (With iDrive)
Courtesy of BMW OF NORTH AMERICA, INC.

Resetting TPM Without iDrive

1. Set the tire pressure of all wheels to specification.
2. Start engine.
3. Move turn signal lever up or down until TPM warning symbol and RESET appears. See **Fig. 21**.
4. Press BC button on end of turn signal lever to confirm selection.
5. Press and hold BC button for approximately 5 seconds until a CHECK/TICK appears after RESET.
6. Drive vehicle. Initialization is automatically completed during the drive, without any feedback issued.

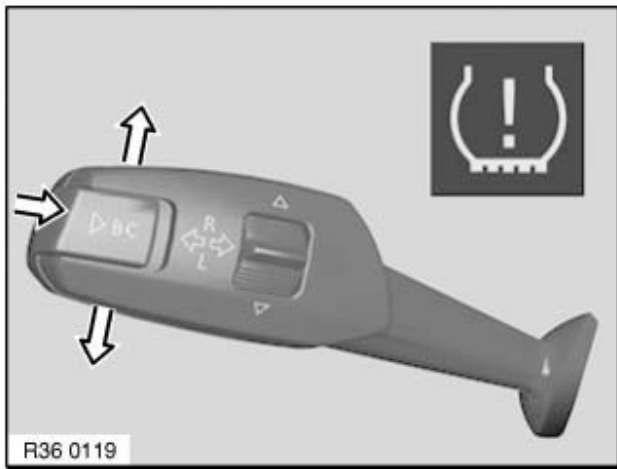


Fig. 21: Locating TPM System Reset Button (Without iDrive)
 Courtesy of BMW OF NORTH AMERICA, INC.

TPMS RESET - PROCEDURE 9

With iDrive

Indirect System (Flat Tire Monitor)

CAUTION: Do not initialize the system while snow chains are attached.

NOTE: Each time a tire inflation pressure has been corrected or a wheel or tire has been changed, reset the system.

Initialization :

1. Using the iDrive MENU button, choose:
2. "Vehicle Info"
3. "Vehicle status"
4. "Reset"
5. Start the engine.
6. Start the initialization using "Reset". See **Fig. 22**.
7. Start to drive.

The initialization is completed during driving, which can be interrupted at any time. When driving resumes, the initialization is continued automatically.



Fig. 22: iDrive Showing Tire Monitor "Reset"
 Courtesy of BMW OF NORTH AMERICA, INC.

Checking FTM Status:

1. Using the iDrive MENU button, choose:
2. "Vehicle Info"
3. "Vehicle status"
4. "Flat Tire Monitor"
5. The status will be displayed. See **Fig. 23**.



Fig. 23: iDrive Showing Tire Monitor Status
 Courtesy of BMW OF NORTH AMERICA, INC.

Direct System (Tire Pressure Monitor)

NOTE: Each time a tire inflation pressure has been corrected or a wheel or tire has been changed, reset the system.

TPMS Status indicator on the Control Display:

The color of the tires represents the status of the tires and the system. TPM takes into account that tire pressures change while the vehicle is being driven. The tire pressures do not need to be corrected unless the TPM instructs you to do so by means of color indicators.

- **Green:** The tire inflation pressure corresponds to the established target value. "TPM active" appears on the Control Display.

- **One Wheel Yellow:** There is a flat tire or substantial loss of tire pressure in the indicated tire. A message appears on the Control Display.
- **All Wheels Yellow:** There is a flat tire or substantial loss of tire pressure in several tires. A message appears on the Control Display.
- **Gray:** The system cannot detect a puncture. Possible reasons for this:
 - TPM is being reset.
 - Temporary malfunction caused by systems or devices using the same radio frequency.
 - Malfunction.

Initialization (Reset): :

1. Using the iDrive MENU button, choose:
2. "Vehicle Info"
3. "Vehicle status"
4. "Reset"
5. Start the engine.
6. Start the initialization using "Reset". See **Fig. 22**.
7. Start to drive.
8. The tires are shown in gray and "Resetting TPM..." is displayed.

After driving a few minutes, the set inflation pressures in the tires are accepted as the target values to be monitored. The system reset is completed during your drive, and can be interrupted at any time. When driving resumes, the reset is continued automatically. On the Control Display, the tires are shown in green and "TPM active" is displayed again.

IMPORTANT: If a flat tire is detected while the system is resetting and determining the inflation pressures, all tires on the Control Display are displayed in yellow. The message "Low tire!" is shown.

System Reset Failure:

- **Message For Unsuccessful System Reset:** The warning lamp lights up yellow. A message will appear on the Control Display. Check the tire inflation pressure and reset the system.
- **Malfunction:** The small warning lamp flashes in yellow and then lights up continuously; the larger warning lamp comes on in yellow. On the Control Display, the tires are shown in gray and a message appears. No punctures can be detected. This type of message is shown in the following situations:
 - If there is a malfunction. Have the system checked.
 - If a wheel without TPM electronics has been mounted.
 - If TPM is temporarily malfunctioning due to other systems or devices using the same radio frequency.

Without iDrive

Indirect System (Flat Tire Monitor)

CAUTION: Do not initialize the system while snow chains are attached.

NOTE: Each time a tire inflation pressure has been corrected or a wheel or tire has been changed, reset the system.

Reset: :

1. Start the engine.
2. Lightly push button 1 on the turn indicator. See **Fig. 24**.
3. Lever the turn indicator up or down repeatedly until the tire monitor symbol appears in the display, accompanied by the word "RESET". See **Fig. 24**.
4. Press button 2 to confirm your choice of the Flat Tire Monitor.
5. Press button 2 for approx. 5 seconds until the a check mark is shown next to the "RESET" display.
6. Drive the vehicle.

The initialization is completed during driving, which can be interrupted at any time. When driving resumes, the initialization is continued automatically.



Fig. 24: Flat Tire Monitor Status Display
Courtesy of BMW OF NORTH AMERICA, INC.

Direct System (Tire Pressure Monitor)

CAUTION: Do not initialize the system while snow chains are attached.

NOTE: Each time a tire inflation pressure has been corrected or a wheel or tire has been changed, reset the system.

IMPORTANT: The system does not work correctly if it has not been reset; for example, a flat tire may be indicated even though the tire inflation pressures are correct. The system is inactive and cannot indicate a flat tire if a wheel without TPM electronics, such as a compact spare wheel, has been mounted, or if TPM is temporarily malfunctioning due to other systems or devices using the same radio frequency.

Reset: :

1. Start the engine.
2. Lightly push button 1 on the turn indicator. See **Fig. 25**.
3. Lever the turn indicator up or down repeatedly until the tire monitor symbol appears in the display, accompanied by the word "RESET". See **Fig. 25**.
4. Press button 2 to confirm your choice of the Tire Pressure Monitor. In the display, "ACTIVE" will appear above "RESET". See **Fig. 25**.
5. Press button 2 for approx. 5 seconds. In the display, "RESETTING" will now appear above "RESET". See **Fig. 25**.
6. Drive the vehicle.

After driving a few minutes, the set inflation pressures in the tires are accepted as the target values to be monitored. The system reset is completed during your drive, and can be interrupted at any time. When driving resumes, the reset is continued automatically. The indicator lamp goes out after the system reset is completed.



Fig. 25: Tire Pressure Monitor Status Display
Courtesy of BMW OF NORTH AMERICA, INC.

System Reset Failure:

- **Message For Unsuccessful System Reset:** The warning lamp lights up yellow. The system was not reset. Check the tire inflation pressure and reset the system.
- **Malfunction:** The small warning lamp flashes in yellow and then lights up continuously; the larger warning lamp comes on in yellow. On the Control Display, the tires are shown in gray and a message appears. No punctures can be detected. This type of message is shown in the following situations:
 - If there is a malfunction. Have the system checked.
 - If a wheel without TPM electronics has been mounted.
 - If TPM is temporarily malfunctioning due to other systems or devices using the same radio

frequency.