

**Haynes**  
shows you how

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**BMW 3-Series and Z4 (99-05) Includes 2006 325ci/330ci Coupe and Convertible models Haynes Online Manual.**

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## Specifications

### Recommended lubricants and fluids

**Note:**

The fluids and lubricants listed here are those recommended by the manufacturer at the time this manual was written. Vehicle manufacturers occasionally upgrade their fluid and lubricant specifications, so check with your local auto parts store for the most current recommendations.

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**Engine oil**

Type	BMW long-life oil or fully synthetic, API SJ/CD, EC II “Certified for gasoline engines”
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Viscosity	SAE 5W-30 or 5W-40
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**Automatic Transmission fluid**

BMW Lifetime Transmission oil\*

**Manual Transmission fluid**

BMW Lifetime Transmission oil MTF-LT-2

**Rear differential fluid**

BMW Synthetic Final Drive Oil (SAF-XO)\*

**Brake and clutch fluid type**

DOT 4 brake fluid

**Power steering fluid**

Dexron III\*

**Fuel type**

91 Octane (or higher) is recommended

**Engine coolant**

50/50 mixture of long-life ethylene glycol based  
antifreeze and water\*

\*Refer to your BMW dealer or local auto parts store for brand name and type recommendations

### Capacities\*

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Engine oil (including filter)	6.9 quarts (6.5 liters)
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Cooling system	8.9 quarts (8.4 liters)
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**Manual transmission**

Getrag transmission	1.1 quarts (1.0 liter)
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ZF transmission	1.3 quarts (1.2 liters)
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S6S420G transmission	1.8 quarts (1.7 liter)
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<b>GS6-37BZ transmission</b>	<b>1.6 quarts (1.5 liters)</b>
<b>Automatic transmission (drain and refill)**</b>	
<b>A5S 325Z (2.5L engine)</b>	
Without torque converter	6.5 quarts (6.2 liters)
With torque converter	9.4 quarts (8.9 liters)
<b>A5S 325Z (3.0L engine)</b>	
Without torque converter	6.4 quarts (6.1 liters)
With torque converter	9.2 quarts (8.7 liter)
<b>A5S 360R and A5S 390R</b>	
Without torque converter	4.2 quarts (4 liters)
With torque converter	9.5 quarts (9 liters)
<b>Differential</b>	<b>1.8 quarts (1.7 liters)</b>
With automatic transmission	0.95 quart (0.9 liter)
With manual transmission	1.06 quarts (1.0 liter)

\* All capacities approximate. Add as necessary to bring to appropriate level.

\*\*If you want to flush the converter during a fluid change, purchase twice the amount of fluid listed here.

## Ignition system

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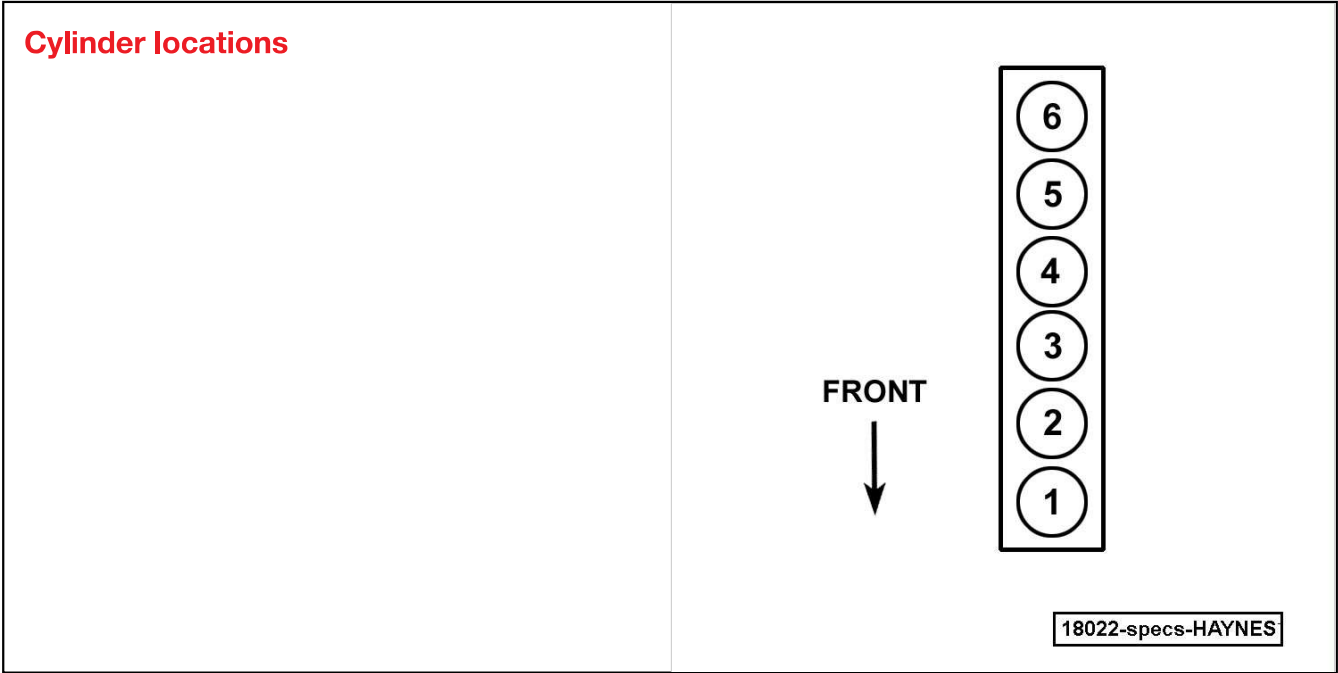
### Spark plugs

Type	NGK BKR6 EQUIP or equivalent
Gap	Do not adjust (see <a href="#">Section 19</a> )

## Brakes

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Brake pad friction material minimum thickness	0.079 inch (2.0 mm)
Parking brake shoe friction material minimum thickness	0.059 inch (1.5 mm)



Ft-lbs (unless otherwise indicated)Nm

Torque specifications

**Note:**  
One foot-pound (ft-lb) of torque is equivalent to 12 inch-pounds (in-lbs) of torque. Torque values below approximately 15 foot-pounds are expressed in inch-pounds, because most foot-pound torque wrenches are not accurate at these smaller values.

Automatic transmission fluid pan bolts		
A5S 325Z	48 in-lbs	6
A5S 360R/A5S 390R	84 in-lbs	10
Automatic transmission drain plug		
A5S 325Z	26	35
A5S 360R/A5S 390R	168 in-lbs	18
Cylinder block coolant drain plug	18	25
Engine oil drain plug	18	25
Oil filter housing cover	18	25
Spark plugs	18	25
Wheel bolts	74	100