

## Knauz BMW

407 Skokie Valley Hwy.  
Lake Bluff, IL 60044

**(847) 604-5000**

knauzbmw.com

### Service Hours:

Mon - Thu: 7:00am - 7:00pm

Fri: 7:00am - 6:00pm

Sat: 8:00am - 3:00pm

### Sales Hours:

Mon - Thu: 9:00am - 8:00pm

Fri: 9:00am - 6:00pm

Sat: 9:00am - 5:00pm

Karl Knauz BMW

knauzbmw.com



The Ultimate  
Driving Machine®

# Karl Knauz BMW

## PREFERRED MAINTENANCE GUIDE



Photo by American Images Custom Aerial Photography, Marshfield WI



# Karl Knauz BMW

407 Skokie Valley Hwy.  
Lake Bluff, IL 60044

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knauzbmw.com

## Most Major Credit Cards Accepted



## Service and Parts Hours

Monday - Thursday: 7:00am to 7:00pm

Friday: 7:00am to 6:00pm

Saturday: 8:00am to 3:00pm

## Appointments

It is recommended that you call first to set up a time that is convenient for you to come in. You can also request an appointment online at knauzbmw.com, or scan this code below to request your appointment with your smart phone.



## Sales Hours

Monday - Thursday: 9:00am to 8:00pm

Friday: 9:00am to 6:00pm

Saturday: 9:00am to 5:00pm

## Service Drop Off

For your convenience service drop off is available. Pull into the service drive for valet service.

## Loaner Vehicles

As a courtesy to our customers, we will reserve a loaner for you upon request when you schedule a warranty or maintenance service appointment. See our Loaner Vehicle Policy in this guide for details.

## Shuttle Service

As an added customer convenience, we will be happy to provide our service/repair customers with shuttle service within 10 miles.

## Your Service Team at Karl Knauz BMW:

David Rolain, Service Manager  
drolain@knauz.com

Cesar Saucedo, Service Advisor  
csaucedo@knauz.com

Joseph Falbo, Service Advisor  
jfalbo@knauz.com

Jeremy Znidersic, Service Advisor  
jznidersic@knauz.com

James Matus, Service Advisor  
jmatus@knauz.com

## Frequently Asked Questions

### 1. Do I need an appointment when bringing my car in for service?

Yes. Our client care representatives are available at 7:00am to assist in scheduling an appointment.

### 2. Is there alternate transportation available?

Yes. We offer a shuttle service, providing you with a ride to your home or office. For those customers who have their vehicles in for service at Karl Knauz BMW, we also have BMW loaner cars and rentals by reservation.

### 3. What is the Karl Knauz BMW loaner vehicle policy?

For your convenience, we offer loaner vehicles to all Karl Knauz BMW customers.

In order to provide these benefits to you, please review our loaner vehicle guidelines:

- Loaner vehicles are available by reservation.
- Our loaner resources are limited and we cannot guarantee you will receive a like vehicle.
- It is your responsibility to supply fuel for this loaner vehicle.
- Please return your loaner vehicle the same day your service is completed; otherwise, a \$50 late charge may be applied.
- We cannot supply any loaner vehicle for quick services such as oil change, tire rotation or any low-mileage service.
- We do not supply loaner vehicles for collision or body shop repairs.
- We reserve the right to deny a loaner vehicle to anyone.
- Loaner insurance - Requirement of 100/300/50 minimum liability coverage. Provide your declaration page to show proof of coverage.

Thank you for your continued patronage. Following these guidelines make it possible to provide this service to you.

### 4. If I lose my car keys, how do I get a replacement?

Replacement keys are ordered using the vehicle identification number. BMW's strict safety measures require us to verify ownership. Therefore, please bring proof of ownership (such as vehicle registration) and a picture identification. Keys are not returnable so all key orders are prepaid.



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## Parts and Accessories

So far, your BMW has been perfect.  
Why stop now?

Original BMW Parts and Accessories deliver the fit, reliability and performance you deserve. They are also covered by your factory warranty, giving you peace of mind to go along with great looks.

Does your BMW vehicle deserve anything less?

Original BMW Parts and Accessories will enhance the experience of owning your BMW. A visit to the Parts and Accessories Department is well worth it.

Perhaps there is a particular accessory that will make your BMW vehicle more personalized. Also, you can purchase an office item that will serve as a reminder of the satisfaction and enjoyment that driving your BMW brings.

How about a gift for that special BMW owner in your life?

All of the products in our Parts and Accessories Department are of the finest quality, just as BMW owners have come to expect.

So, why not stop by today?



## Dear New BMW Owner,

Congratulations on your purchase of one of the finest vehicles on the road today, a BMW.

It is our pleasure to welcome you to the Service and Parts department of Karl Knauz BMW.

This booklet is designed to be a guide for maintaining your vehicle, and to ensure you are provided with the information you need to have your BMW serviced in the most convenient way possible. This guide contains information from the convenience of scheduling an appointment, our extended service hours, easy access to parking and dropping off your vehicle, to what is involved in maintaining your ultimate driving machine.

The service team at Karl Knauz BMW has the knowledge and expertise you can count on. As well as the honesty and integrity with which you deserve to be treated, when you entrust your BMW to us. Your experience with us goes from helpfulness at vehicle drop off or pick-up, and will continue with dependable responsiveness and keeping you well informed throughout your service visit. This will undoubtedly enhance the quality of work and value you receive with every service visit.

Thanks again for choosing Karl Knauz BMW. We look forward to meeting all of your service needs. Please feel free to call us with any questions, comments or concerns along the way.

Sincerely,

**The Karl Knauz BMW Team**

**Check out the amenities  
available to you when your  
vehicle is serviced at**

## **Karl Knauz BMW**

- ✓ Award-winning center
- ✓ BMW trained technicians
- ✓ Clean spacious facility
- ✓ Original BMW parts
- ✓ State-of-the-art equipment
- ✓ Complimentary Wi-Fi
- ✓ High customer satisfaction
- ✓ Loaner cars (with appointment)
- ✓ Complimentary shuttle service
- ✓ Professional detail department
- ✓ Paintless dent repair by Karl Knauz BMW
- ✓ Extended weekday service hours:  
Monday - Thursday until 7:00pm  
Friday until 6:00pm
- ✓ Saturday service and parts hours
- ✓ Complimentary car wash and vacuum  
with any service



### **BMW Paintless Dent Repair**

BMW Paintless Dent Repair covers the repair of the dents and dings that inevitably appear on your vehicle through everyday driving. The dent and ding removal process was designed by the automotive engineering community to provide an effective, paintless dent repair that does not harm a vehicle's factory finish. By permanently removing door dings and minor dents, BMW Paintless Dent Repair eliminates the stress that these unsightly and unavoidable imperfections can cause. Nothing is more effective in keeping your vehicle's appearance looking brand new for years to come.

#### **Value and convenience come first.**

Dents and dings, regardless of the cause, are sometimes simply accepted as part of vehicle ownership. Besides being unsightly, dents and dings greatly reduce the resale or trade-in value of your vehicle. Maintaining the value and beauty of your BMW is easy with BMW Paintless Dent Repair. With your convenience in mind, repairs can be performed at a BMW center.



### **Glass Repair and Replacement**

In addition to affecting the appearance of your BMW, such nuisances as cracks, stone chips and bull's-eyes can lead to greater safety problems. For that reason, we offer glass repair from BMW. All glass is repaired by our BMW trained technicians, giving you the peace of mind that comes with knowing the job has been performed at the high standard you have come to expect from BMW.



## The Beauty Is In The Details

Remember how great you felt about your BMW the day you drove it home? We can bring back that "just drove off the lot" feeling again.

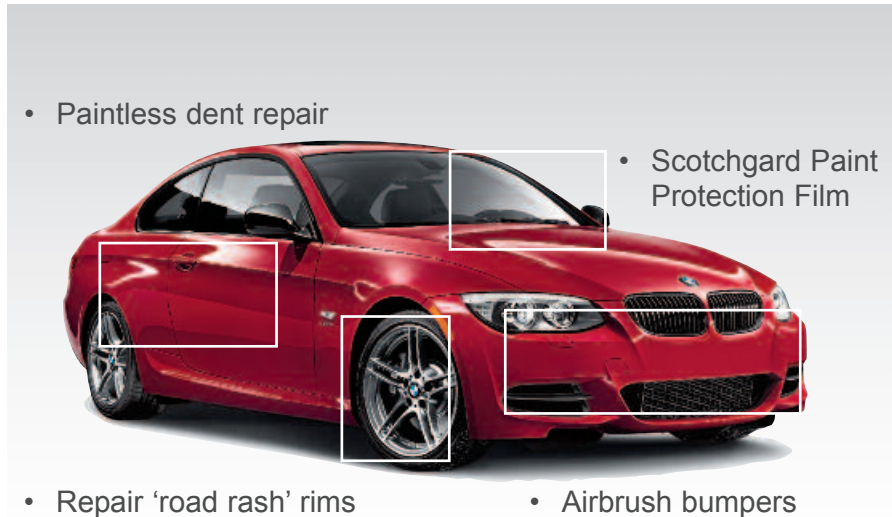
### Take advantage of our BMW Spa services:

#### **Interior Items Detailed:**

Clean interior glass, clean and dress instrument panel and console, vacuum interior and trunk, clean and condition leather and vinyl upholstery (i.e. door panels and seats), shampoo interior carpets and floor mats.

#### **Exterior Items Detailed:**

Hand wash exterior, bug and tar removal, clean hood and trunk gutters, clean door jambs, clean wheel walls and dress, clean wheels and dress tires, hand wax, buff exterior.



## Original BMW Cleaning and Care Products



## Maintenance System

The BMW Maintenance System has been devised with the following objectives: to maximize vehicle safety, reliability, and resale value by minimizing breakdowns resulting from wear, and minimizing cost and inconvenience by computing maintenance intervals based up on the specific manner in which each individual vehicle is driven.

Maintenance intervals on motor vehicles have conventionally been specified based upon accumulated mileage. However, driving conditions have a major influence on routine maintenance requirements; distance traveled is only one of the significant factors. A vehicle driven for 50,000 miles of short trips in the city with numerous cold starts, prolonged periods of idling, stop-and-go driving, and high engine speeds during acceleration requires more frequent maintenance intervals than a vehicle driven for 50,000 miles for long distances at low engine speeds primarily at operating temperature.

The advanced technologies at BMW have led to the development of the unique BMW Condition Based Service System (CBS) which computes the actual optimum maintenance requirements based not only upon the accumulated mileage, but taking into account important factors such as high or low engine speeds, short or long trip driving, and condition of the engine oil and brake pads.

The BMW Maintenance System supports the preservation of the traffic and operating safety of your BMW. The service schedule also includes operations related to the vehicle's comfort and convenience features, such as replacement of the filters for the inside air. The objective is to optimize efforts with respect to minimal vehicle maintenance costs.

Sensors and special algorithms take the different driving conditions of your BMW into account. Condition Based Service uses this to determine the current and future service requirements. By letting you define a service and maintenance regimen that reflects your own individual requirements, the system builds the basis for trouble-free driving.

If and when you come to sell your BMW, a comprehensive record of service will prove a significant benefit.



## Maintenance System (Continued)

Your vehicle continuously stores service requirement information in the remote key while you are driving. Your Karl Knauz BMW Service Advisor can read this data from the key reader and propose an optimized maintenance approach. Whenever you take your car in for servicing you should therefore hand your Karl Knauz BMW Service Advisor the remote key that you last used.

Make sure that the date in the instrument cluster is always set correctly, otherwise the effectiveness of Condition Based Service CBS is not assured.

Please consult your Service and Warranty Information Booklet for additional information on service requirements.

BMW recommends that you have service and repair operations performed at your BMW Center.

Take the time to ensure that these service procedures are confirmed by stamped entries in your vehicle's Service and Warranty Information Booklet. These stamped entries verify that your vehicle has received the specified regular maintenance.

### Condition Based Service (CBS)

CBS is a further development of the Service Interval Indicator System. Sensors and sophisticated algorithms take even more detailed account of the various conditions of vehicle use.

CBS determines the current and future maintenance requirements. This data can also be read from your vehicle key by your Karl Knauz BMW Service Advisor and used to propose the optimum scope of maintenance.

Have maintenance and repair work performed by Karl Knauz BMW. Make sure that the maintenance work is stamped in the Service and Warranty Information Statement. These entries are the evidence of regular maintenance of your vehicle and a requirement.



## Battery Care

If your car is driven only for short distances of less than 10 miles over a prolonged period of time, without an occasional drive at highway speeds, the engine's charging system will not maintain the battery. Insufficient use of the vehicle could result in short term starting problems and in the long term could damage the battery.



In case the car is not operated for several weeks it is advisable to:

- A.) Consider using a proper trickle charger, following the charger manufacturer's instructions, to maintain the battery's state of charge; or
- B.) Consult your BMW center regarding battery removal. Once removed, the battery must be charged and stored in a cool, dry place where it can be protected from freezing. If the battery will be stored for over 3 months, it must be recharged every 3 months, or else it will become damaged and useless.

Please consult your BMW center for further guidance and information.

## Fuel Injection Service (Recommended annually)

The fuel injector is an electronically controlled valve responsible for supplying an even flow of fuel to your vehicle's engine. The injectors spray directly into the combustion chamber or on the intake valves, and it is critical that this spray is as fine a mist as possible so that the fuel will burn more easily. When fuel injectors become dirty or clogged, your vehicle can experience problems ranging from surging and hesitation to hard starting. Utilizing our specialized equipment, one of our highly trained technicians will clean your vehicle's fuel injectors with a specially formulated solvent that flushes out unwanted particles and deposits, enabling your vehicle's fuel injectors to deliver a fine, even spray. This service not only can improve driveability and restore horsepower, but it can also improve fuel economy.



Improper fuel injection spray



Proper fuel injection spray

## What Everyone Should Know About Wheel Alignment

On this vehicle, the front wheels are not aligned to the rear thrust line. This can happen from normal wear and stress, whether your vehicle has adjustable or non-adjustable rear suspension.



To steer straight ahead, you would have to steer the front wheels slightly to the right.

A common result would be that the vehicle would “dog track” and possibly “pull” to the side.

The angles are exaggerated here so you can more easily see the condition. But it takes only a small misalignment to create problems.

### Why Four Wheel Alignment?

#### Reduced Tire Wear

Improper alignment is a major cause of premature tire wear. Over the years, a properly aligned vehicle can add thousands of miles to tire life.

#### Better Gas Mileage

Gas mileage increases as rolling resistance decreases. Total alignment sets all four wheel parallel which, along with proper inflation, minimizes rolling resistance.

#### Improved Handling

Does your car pull to one side? Does the steering wheel vibrate? Do you constantly have to move the steering wheel to keep your car traveling straight ahead? Many handling problems can be corrected by total alignment. With all the system components aligned properly, road shock is more efficiently absorbed for a smoother ride.

#### Safer Driving

A suspension system inspection is part of our alignment procedure. This allows us to spot worn parts before they cause costly problems.

#### Here's what we do:

For vehicles with adjustable rear suspensions

1. Angle readings are measured at all four wheels.
2. Rear wheels are set to specification. (Rear thrust line corresponds to vehicle centerline.)
3. Steering wheel is centered.
4. Front wheels are referenced to the rear thrust line and set to specification.

**Result: All four wheels are positioned straight ahead and parallel, and the steering wheel is centered.**



## Maintenance Summary

The Condition Based Service System (CBS) will determine the requirement for performance of the maintenance services described here and on the following pages. These services may be required either individually or in conjunction with other maintenance services.

### Standard Scope Operation

#### Maintenance Work

- Brief diagnostic test
- Verify Check Control messages
- Check indicator and warning lights
- Reset CBS display
- Multi-point inspection

### Engine Oil and Filter Change

#### Maintenance Work

- Change the engine oil and oil filter.  
We recommend BMW High Performance 5W-30 Synthetic Oil P/N 07 51 0 017 866
- After every 3rd engine oil change: intake air cleaner: replace air filter element (reduce replacement interval in dusty operating conditions)
- Parking brake: check function

### Microfilter Replacement

#### Maintenance Work

- Replace ventilation microfilter



## Maintenance Summary (Continued)

### Vehicle Check Operation

#### Maintenance Work

- Check operation of horn, headlight flasher and hazard warning flashers
- Check instrument and control lighting and heater air-conditioning blower
- Check lighting system: turn signals, back-up, license plate, interior (incl. map, reading lights), glovebox, flashlight, luggage area lights
- Safety belts: check condition and function
- Check windshield wiper and washer jet positions
- Body: check for corrosion (except cavities)
- Tires: check tread depth, wear pattern, outer condition, inflation pressure (also spare tire)  
If necessary, correct pressure (also spare)
- Battery: check state of charge (magic eye) and charge if required
- Power steering reservoir: Check fluid level
- Visually inspect all SRS airbag units for torn covers, obvious damage or attachment of stickers
- Rear-view mirrors
- Coolant: check fluid level and concentration
- Windshield washer and intensive cleaning system: check protection level, fluid level, top if necessary
- Brake system connection is and lines: check for leaks damage and correct positioning
- Underbody, incl. all visible parts (i.e. transmission, rear axle, fuel lines, exhaust system), check for damage, leaks and corrosion
- Steering components: check for clearance, leaks, damage and wear
- Final inspection: road test with check of
  - Brakes
  - Steering
  - Shock absorbers (visual)
  - Transmission

### Brake Fluid

#### Maintenance Work

- Replace brake fluid

### Spark Plugs

#### Maintenance Work

- Replace spark plugs at intervals of 100,000 miles\*

### Automatic Transmission

#### Maintenance Work

- Replace ATF at intervals of 100,000 miles\*

\*Intervals determined by Condition Based Service monitor.

## Important Tips For Your Tires (Continued)

### Balance

An unbalanced wheel and tire assembly may create an annoying vibration when you drive on a smooth road and may result in irregular treadwear.

### Tire Rotation

The purpose of regularly rotating tires is to achieve more uniform wear for all tires on a vehicle. For BMW vehicles, tire rotation only applies when front and rear tires are the same size. Before rotating your tires, always refer to your individual owner's manual or ask your Service Advisor for rotation recommendations. If no rotation period is specified, tires should be rotated with every oil service. Have the vehicle checked by a qualified technician to determine the cause of the wear problem. The first tire rotation is the most important.

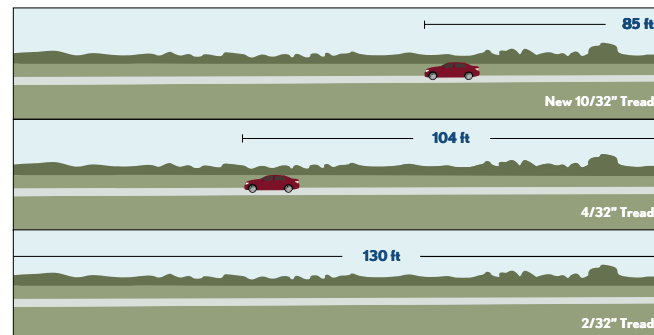
## Important Tips For Your Tires (Continued)

We offer tire replacements done here at our BMW Center. We offer only the tires designed and recommended for your car by BMW. We use a BMW-approved tire machine for safe and damage-free installation of your tires. Don't take the risk of after market tire dealers selling tires they have in stock. Get the right tires for your car and drive with confidence. Our pricing is competitive. Stop by and give us the opportunity to serve you. BMW trained technicians do all your work.

## Check Your Tires, Check Your Safety

### Stopping Distances of Tread Depths:

Wet asphalt (.02 - .06 in water – typical of rain) / 50 mph at beginning of braking w/ ABS system



**Tires are the only thing between your vehicle and the road.**

#### Tires:

- Support the vehicle's weight
- Absorb road shocks
- Transmit acceleration, cornering and braking forces

#### Tire Tread:

- Channels and removes water
- Reduces road noise
- Provides traction

Tests were carried out by independent experts, The Motor Industry Research Association in 2003 and 2004 on four vehicles: a mid-range family hatchback, a minivan, a luxury car and a high-performance luxury car. Tires were tested at four tread depths - 10/32", 6/32", 4/32", and 2/32".



## Important Tips For Your Tires

Tires are designed and built with great care to provide thousands of miles of excellent service. For maximum benefit they must be maintained properly.

### The Most Important Factors in Tire Care are:

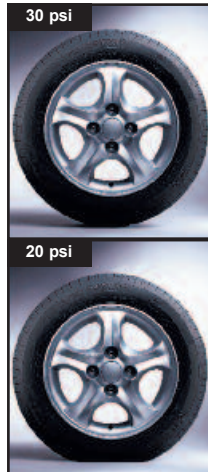
- Proper inflation pressure
- Proper tire wear
- Good driving habits
- Proper vehicle loading
- Regular inspection
- Proper balance
- Proper alignment
- Vehicle condition

### The Benefit of Proper Inflation

With the right amount of air pressure, you will achieve optimum tire performance. This means your tires wear longer, save fuel and help prevent accidents. The "right amount" of air is the pressure specified by the vehicle manufacturer, which may be different on the front than the rear tires on your particular model vehicle.

Failure to maintain correct inflation pressures may result in rapid wear and uneven tread wear, improper vehicle handling and excessive heat buildup which may result in tire failure. Evidence of air loss or repeated under-inflation requires tire removal and expert inspection.

Air pressure also enables a tire to support the load, so proper inflation is critical. It is extremely difficult to determine whether tires are properly inflated just by looking at them.



### Inflation Tips

Check tire inflation pressure (including the spare) at least once a month and before every long trip. Tires must be checked when they are cold; that is, before they have been run a mile. If you must drive over one mile for air, before you leave home, measure the cold inflation pressure of each tire and record the actual under-inflation amount for each tire.

### Under-Inflation

Tires lose air normally through the process of permeation. Changes in outdoor temperature can affect the rate in which your tire loses air. This change is more pronounced in hot weather. Generally speaking, a tire may lose one or two pounds of air per month in cool weather, and even more in warmer weather. Under-inflation is the leading cause of tire failure, so check inflation pressure regularly.

Under-inflation or overloading creates excessive stresses and heat, and can lead to tire failure. This could result in vehicle damage and/or serious injury or death. Proper inflation extends tire life and saves fuel.

## Warning Light Indicators



### Anti-Lock Brakes

Indicates a fault in the anti-lock brake system. Needs servicing.



### Engine Malfunction

Stop when safe and have serviced immediately.



### Battery System

Battery charge is low. Do not drive long distance. Service immediately.



### Low Tire Pressure

Check tire pressure, fill to proper PSI. Have tires checked for leaks.



### Brake Pad Wear

Brake pads are worn and need to be replaced as soon as possible.



### Low Oil Pressure

Check oil level. Immediately add oil to the proper level and service soon.



### Cooling System

Stop when safe. After engine is cool, check and add coolant as needed.



### Service Needed

Schedule service at Knauz BMW as soon as possible.



### Traction Control Activated

Tires have temporarily lost traction. Drive with extreme caution.



### Traction Control OFF

Warning that traction control has been turned off and is not active.

## Setting Up Your Bluetooth

### In Vehicle:

1. Enable "Bluetooth": "Main menu" > "Telephone" > "Option" > "Bluetooth"
2. Or Pair New Device: "Main menu" > "Telephone" > "Add new device"

### On Mobile Device:

1. Enable "Bluetooth" and Start Pairing: "Settings" > "General" > "Bluetooth" on Mobile phone will automatically start searching for Bluetooth-devices in range
2. Select "BMW xxxx" device from the list of Bluetooth devices found
3. Passkey entry vehicle and on mobile device (depending on the entry command prompt)
4. Enter identical passkey in car and mobile phone

### For additional information please visit [www.bmwusa.com](http://www.bmwusa.com)

Note: Complete pairing within 30 seconds or repeat procedure. "Data Communication" and/ or "Bluetooth-Audio" can be selected if compatibility is given and using desired. System holds a maximum of four devices. Delete devices via "Options" and select "Remove from list" if required.

## Inspection I

### Condition Based Service - Early Generation Models

30,000 • 90,000 MILES

#### Here is what we do:

- Change engine oil and filter
- Replace air filter
- Replace micro filter (cabin air)
- Inspect drive belts
- Inspect lights
- Inspect tire tread depth and wear pattern
- Inspect for leaks and check the condition of the engine, transmission, clutch, front and rear suspension, brakes, steering, and fuel system
- Inspect all fluid levels
- Replace wiper blade inserts
- Inspect braking system and adjust parking brake
- Lubricate door, hood hinges, and locks
- Inspect and lubricate electrical antenna
- Inspect A/C and A/C components
- Safety check and test drive the vehicle

#### Additional Dealer Recommended Services:

- Four-wheel alignment
- Brake flush
- Coolant service
- Fuel injection service

#### Here is why we do it:

Keeping your BMW vehicle in top condition and maintained according to factory requirements involves more than an oil change. At this service, we replace the air filter, which protects your engine from harmful foreign particles. As gasoline and air is used in your engine, it passes through a filter and series of injectors. When all of these components become dirty and clogged, it can cause poor performance and decreased fuel economy. We also recommend replacing the micro filter, which removes harmful contaminants from entering the interior of your vehicle.

Next, we inspect your fuel lines and connectors for any damage or wear and check your fuel tank vapor vent system, hoses and fuel tank supports. Exhaust pipes, mufflers and hangers are inspected for cracks, deterioration or damage. Additionally, your brake lines and hoses need to be checked for cracks or damage, and your tires checked for uneven wear. These are all preventative checks designed to keep your BMW on the road and trouble-free.



## Inspection II

60,000 • 120,000 MILES

#### Here is what we do:

- Change engine oil and filter
- Replace air filter
- Replace micro filter (cabin air)
- Inspect drive belts
- Inspect lights
- Inspect tire tread depth and wear pattern
- Inspect for leaks and check the condition of the engine, transmission, clutch, front and rear suspension, brakes, steering, and fuel system
- Inspect all fluid levels
- Replace wiper blade inserts
- Inspect braking system and adjust parking brake
- Lubricate door, hood hinges, and locks
- Inspect A/C and A/C components
- Safety check and test drive the vehicle
- Inspect valve cover and bushings
- Pressure test the cooling system

#### Additional Dealer Recommended Services:

- Replace spark plugs
- Four-wheel alignment
- Brake flush
- Coolant service

#### Here is why we do it:

During the Inspection II, Karl Knauz BMW Trained Technicians closely examine your vehicle's engine components, using specialized equipment to be sure that all the mechanical, electronic and computer devices are working properly. At this time, we also need to address your vehicle's heating and cooling system. Over time your engine coolant becomes contaminated, losing its ability to protect your engine from freezing in cold weather conditions and overheating in hot conditions. Very expensive repairs could result from lack of this required maintenance. We inspect your fuel lines and connectors for any damage or wear, and we check your fuel tank vapor vent system, hoses and fuel tank supports.

