

## 3 Series 1999-2005 (E46 & M3)

Getting EDGEucated:

The "75k Mile List"

The E46 3-Series (1999-2005, including M)  
Edition

After years of working on BMW's, we have begun to see common problems and maintenance concerns that need to be addressed on nearly every middle-aged BMW. e46 3-series cars, like all BMWs, they have certain areas that need to be inspected regularly, and prospective owners should always have a pre-purchase inspection done to verify the condition of these items.

In this list, you will find items that should have been replaced or at least inspected by 75k-100k miles. Some are model specific, and will be noted as such.

If you suspect you may have some of these issues, or just want us to take a look for your peace of mind, call us at 925.479.0797 to schedule an appointment!

Areas of Concern:

## Lower Control Arm Bushing Failure

Common symptoms for torn or cracked lower control arm bushings are undesired front toe changes during cornering, vague and rubbery feel in the steering, and vibration experienced while braking at freeway speeds. Early model bushings are replaced with the larger late-model bushings for longer life. (e36 shown, E46 Similar)

## Rear Differential Mount Failure

If you have a thunk from the rear of your E46, it may be a bad rear bushing. At this point, mileage has varied on Diff Mount failures, but we are seeing them more and more frequently. This failure can stress the subframe mounting points and contribute to their failure, so we recommend replacing them at the earliest sign of failure.

#### Tie Rod Wear

Symptoms include: steering shimmy, clunking during steering input and inability to hold proper alignment. If any of the ball joint boots is cracked (you'll see grease coming out) then expect that component to need replacement. All components should also be checked for excessive play, and replaced if out of BMW spec.

#### Worn or Blown Shocks and Struts

Factory BMW shocks work great for about 30k. By

60k they are completely shot. Most folks who have been driving their cars since new hardly notice the deterioration as it is gradual. Symptoms include: Diving under braking and acceleration, excessive lean and suspension compression during cornering. Bouncy and uncomfortable ride. Shocks and struts may visibly leak shock oil. EDGE generally recommends replacing the factory units with quality shocks from Koni whenever possible. When replacing shocks and struts, keep in mind it is a great time to install lowering springs or freshen up other areas of the suspension. You will be amazed at the difference a good set of shocks can make in both comfort and performance!

#### Worn or Failed Swaybar Endlinks

Worn swaybar endlinks can compromise handling. A worn swaybar can sound like a metallic clicking noise. There is no critical danger in a failed swaybar endlink, but the handling of the car is severely compromised.

#### Torn Rear Trailing Arm Bushings (RTABs)

E46's are prone to the same RTAB failure as the E36. In fact, since they are heavier cars, they tend to wear faster on the E46. If the rear of the car feels strange during cornering or you have excessive rear tire wear, expect that your RTABs are shot. Typical mileage for the E46 is around 35-45k. Failure to replace could lead to torn subframe and costly repairs. EDGE recommends replacement with factory units and RTAB limiting shims. The shims prevent excessive movement and can double the life of the bushing.

## Torn Rear Shock Mounts

Torn or destroyed rear shock mounts will produce a very pronounced clunk during any sort of suspension movement, and could possibly just tear right through the trunk carpeting into the passenger cabin. Sloppy and erratic handling and excessive rear suspension play are common symptoms of a RSM failure.

## Torn Subframe and Subframe Bushings

Torn subframe bushings could lead to subframe failure. Common symptoms of subframe failure are erratic handling and unidentified clunks and bangs from the rear of the car. Early detection of a torn or cracked subframe bushing can prevent costly subframe repair and welding. We see subframe issues mainly appearing in tracked and autocrossed E46's, but we have swapped out cracked bushings in higher mileage E46's as well.

#### Torn or Cracked Transmission Mounts

Torn transmission mounts could lead to the dreaded 'money shift,' or mechanical overrev and the possible (and likely) destruction of the car's motor. Worn transmission mounts allow for an excess amount of transmission movement. Symptoms can be hard, notchy and forced shifting during cornering, excessive shifter jerk during hard acceleration and braking, and muddy shifter feel.

Stock replacements are just "OK" we recommend replacing them with stronger aftermarket units.

#### Ripped or Failed Guibo

A torn guibo (Flex Disc) will result in a perceivable 'drivetrain elasticity.' Acceleration will be preceded with a loud clunk as the guibo bolts bind together.

#### Electronic Thermostat Failure

E46's use electronically controlled thermostats which are prone to failure every 60k or so. When they fail, they will throw an SES light. In "failed" mode, the engine will run about 10 degrees hotter than normal. Fuel mileage will suffer.

#### Water Pump Failure

### Water pump

failure is without a doubt the easiest way to cause extensive and expensive damage to your BMW. The main symptom will be a rapidly overheating motor. What occurs is that the bearing or impeller on the stock pump, breaks, completely disabling the cooling system. If you ever see the temperature gauge on your BMW climb above the 3/4 mark,

**TURN THE CAR OFF IMMEDIATELY AND CALL A TOW**

**TRUCK!!**

We can't stress this enough. Failure to catch the overheating motor in time can result in a warped head or even more severe engine damage. We recommend changing out the waterpump in six cylinder cars every 60-80k.

### Cracked Radiator Necks

BMW loves their plastic radiator tanks....Unfortunately...The plastic around the radiator necks become brittle and crack with age, often without warning (see warning above.) Radiators should be thought of as 80-100k mile wear items. Trust us, this is cheap insurance!

### Electric Fan Failures

Early E46 manual transmission cars have no engine-driven fan. They rely solely on the electric fan which is prone to failure. If you see the temp climbing, **PULL OVER and CALL A TOW TRUCK**. Trust us.

### Fan Clutch Failure

Most fan clutches fail between 80 and 100k miles. They provide the primary cooling for your car, and are easy for us to diagnose.

### Accessory Belts and Tensioners

Worn tensioners and idler pulleys will make a squealing noise from the engine bay. Belts should be inspected for cracks regularly. If a belt happens to snap, the cooling system will fail as the water pump will cease to operate. Power steering and the alternator will also fail to work. Again, pull over and shut the car off immediately should you suspect a belt failure or see the temperature gauge rise past the 3/4 mark.

Prevalent on all BMWs, a burning oil smell could indicate a leaky valve cover gasket. If the condition continues unchecked, oil can seep into the spark plug holes and damage the ignition coils, resulting in costly replacement. Replacement of this inexpensive gasket is a good idea when changing sparkplugs as the coilpacks will already be out.

### O2 Sensor Failure

Poor mileage, poor idle and flat spots in the power curve could be caused by bad O2 sensors. Even if your car isn't throwing a check engine light, they may not be performing optimally. BMW recommends replacing the O2 sensors every 100k miles. Extended high-RPM running/racing and high-performance chips may shorten the replacement cycle.

### Oil Separator

Non M cars. If you have a poor idle and periodic Check Engine lights, you may have a bad oil separator. This valve tends to go bad and introduce a vacuum leak which produces the above symptoms and will eventually strand you somewhere. Typical mileage seems to be around 80k. The good news is that the part is only around \$75..the bad news is that the labor runs about 4 hours, depending on the year of the car.

### Power Steering Lines

ALL BMWs!!! The swaged ends on the BMW lines start seeping and eventually leaking heavily. Check your fluid often and look for leaks. When its time, replace all of them AND the reservoir as it contains the filter for the system.

### Clogged/Dirty Pollen Filter

If the flow of air out of the air conditioning and heater system is not as strong as it used to be, it strongly suggests the pollen microfilter of your car has become dirty and clogged over time. A damp and musky smell can also indicate a dirty filter. This is a service II replacement item.