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**Springfield Euro Auto** EXAMPLE SHOP

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TECHNICIAN WORKSHEET · N54
RA-N54-012345-20261027

# 2008 BMW 335i · E90 3 Series sedan · RWD

WBAVB73508NH12345

| ODOMETER IN | DOOR-JAMB BUILD (MM/YY) | RO # | TECHNICIAN / DATE |
|---|---|---|---|
| 118,000 | | | |

## A · RECALLS AND CAMPAIGNS TO VERIFY (DEALER PRINTOUT OR NHTSA.GOV)

| | |
|---|---|
| **24V-513** · Air bags · driver inflator (replacement steering wheel) | ☐ Open ☐ Done ☐ N/A |
| **22V-119** · Emission control · crankcase (PCV) | ☐ Open ☐ Done ☐ N/A |
| **20V-017** · Air bags · driver inflator | ☐ Open ☐ Done ☐ N/A |
| **17V-676** · Electrical system · wiring | ☐ Open ☐ Done ☐ N/A |
| **13V-044** · Electrical system · battery cable | ☐ Open ☐ Done ☐ N/A |
| **09V-257** · Air bags | ☐ Open ☐ Done ☐ N/A |

## B · INSPECTION POINTS, IN PLAN ORDER

### 1. Water pump + thermostat

Now · Past the range (Median ~70k reported (middle half ~55k–82k))

Pump speed and current draw ☐ OK ☐ Watch ☐ Fix

Thermostat opening ☐ OK ☐ Watch ☐ Fix

Pump: original / replaced at ____ mi

Scan for: Coolant pump codes, Thermostat codes

Parts (E90): Parts to know: Electric coolant pump and thermostat, usually replaced together. 335i category pages mix N54 and N55 parts, so confirm part numbers by VIN.

### 2. Plugs & coils

Now · Past the range (Median ~67k reported (middle half ~28k–97k))

Plug gap and wear ☐ OK ☐ Watch ☐ Fix

Misfire counters ☐ OK ☐ Watch ☐ Fix

Plugs replaced at ____ mi

Scan for: Misfire codes

Parts (E90): Parts to know: Six coils and six plugs. Owner sources suggest shorter plug intervals than BMW's on turbo engines, especially tuned ones.

### 3. High-pressure fuel pump

Check now · Past the range (Median ~25k reported (middle half ~10k–60k))

Hot-restart cranking time ☐ OK ☐ Watch ☐ Fix

Low-pressure and rail-pressure readings under load ☐ OK ☐ Watch ☐ Fix

Pump part no. ____

Scan for: 29DC, 29F1, 29F2, 2FBF

Parts (E90): Parts to know: BMW's 2010 bulletin SI B13 03 09 introduced an improved pump, part 13 51 7 613 933. Pumps sold for the N54 today are listed as 13 51 7 616 170 (or the alternate 13 51 7 616 446). 13 51 8 604 231 is the N55 pump, so don't mix them up. Confirm the number by VIN with a parts counter.

### 4. Fuel injectors

Check now · Past the range (Median ~72k reported (middle half ~37k–95k))

Injector index on each injector (marked next to 7585261) ☐ OK ☐ Watch ☐ Fix

Misfire counters per cylinder ☐ OK ☐ Watch ☐ Fix

Index: _ _ _ _ _ _

Scan for: Misfire codes, Mixture codes

Parts (E90): Parts to know: BMW's bulletin SI B13 04 09 (2013 revision) says injectors with index 11 or higher have a different calibration and can't be used in the same engine as index 10 or lower; its replacement part is 13 53 8 616 079 (index 11 or higher). The index is marked on the injector body next to 7585261. Injectors sold today are usually index 12 (13 53 7 585 261-12).

**5. Oil filter housing gasket + belt** — Watch · Any mileage (Too few NHTSA reports to chart (6))

Oil at the filter housing and belt ☐ OK ☐ Watch ☐ Fix

Belt glazing or fraying ☐ OK ☐ Watch ☐ Fix

Leak: dry / damp / wet

Parts (E90): Parts to know: Oil filter housing gasket and oil-cooler gaskets, plus the drive belt (and tensioner or idler if worn). Confirm by VIN.

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**6. Turbos & wastegates** — Watch · Any mileage (Median ~40k reported (30 reports, rough))

Wastegate rattle, cold ☐ OK ☐ Watch ☐ Fix

Boost deviation logs ☐ OK ☐ Watch ☐ Fix

Oil at the charge pipes ☐ OK ☐ Watch ☐ Fix

Scan for: Boost / charge-pressure codes

Parts (E90): Parts to know: Two turbos (front and rear) on the exhaust side. Owners usually rebuild or replace them as a pair. Confirm any turbo part by VIN.

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**7. Valve cover / PCV** — Watch · Any mileage (Too few NHTSA reports to chart (11))

Seep at cover gasket, exhaust side ☐ OK ☐ Watch ☐ Fix

Leak: dry / damp / wet

Scan for: Lean / crankcase codes

Parts (E90): Parts to know: Valve cover gasket, or the whole cover if it's cracked. Often done in the same visit as the oil filter housing.

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FACTORY MAINTENANCE DUE BY 148,000 MI (ASK FOR RECORDS)

**Brake fluid** · every 2 years · $149 ☐ Done (records) ☐ Due ☐ Quoted

C · ALSO REPORTED FOR THE N54, QUICK CHECKS

WHAT TO SAY AT THE COUNTER (ADVISOR)

**1. Water pump + thermostat**
The electric coolant pump often fails without warning, and the thermostat sticks. At 118,000 mi your car is past the usual range, so if the original part is still fitted it is worth checking. Our price is $1,050, before tax and shop supplies. Left until it fails, published repair bills run $1,841–$2,250.
Ask: have you noticed overheat or coolant-temperature warning, fan running at full speed, reduced power, or the electric pump often fails without warning?

**2. Plugs & coils**
Plugs wear quickly under boost and old coils start misfiring. At 118,000 mi it is due, unless the records show it done. Our price is $690, before tax and shop supplies. Left until it fails, published repair bills run $1,000–$2,500.
Ask: have you noticed misfire, or rough idle?

**3. High-pressure fuel pump**
The original pre-2010 high-pressure fuel pump loses pressure, causing long hot starts and failsafe mode. At 118,000 mi your car is past the usual range, so if the original part is still fitted it is worth checking. Our price is $1,350, before tax and shop supplies.
Ask: have you noticed long cranking before the engine starts (worst when hot), a check-engine light, reduced power with a warning tone (failsafe mode), stumbling under load, or BMW's diagnosis bulletin SI B12 55 06 lists fault codes 29DC, 29F1, 29F2 and 2FBF?

**4. Fuel injectors**
Piezo injectors leak or misfire; a leaking one can wash fuel into a cylinder. At 118,000 mi your car is past the usual range, so if the original part is still fitted it is worth checking. Our price is $3,900, before tax and shop supplies.
Ask: have you noticed misfire codes, rough idle or a rough cold start, smoke or a fuel smell, a flashing check-engine light, or A leaking injector can wash fuel into a cylinder?

Adjust after the inspection. The report is not a diagnosis or a guarantee, so say what the technician found, not what the report predicts.

NOTES FOR THE ADVISOR

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Record findings here (OK / Watch / Fix and measurements); the advisor adjusts the quote before the handout is printed or sent.



Reference only. Follow BMW repair procedures and your shop's judgment.