2004 BMW 330i at 142,000 mi

WBAEV53474KM12345

MODEL / CHASSIS	ENGINE	MILEAGE	DRIVETRAIN
330i · E46 3 Series sedan	M54 2.5L / 3.0L inline-6 (and the 2000 M52TU, sold as 323i, 328i, 528i and Z3 2.3/2.8)	142,000 mi	RWD
BUILD MONTH	**REPORT DATE**	**MODE**	**PREPARED FOR**
Not entered (door jamb)	October 27, 2026	Owner	Sample Owner

VIN check: check digit valid; model-year code '4' = 2004, matches the year entered. The VIN doesn't record the build month. Sample report: synthetic VIN.

1 · SUMMARY

What this car needs, in order

Each item compares this car's mileage with when owners and shops report the part failing. It is not an inspection: a qualified technician decides what the car actually needs.

1
job recommended now

0
to plan in the next 30,000 miles · plus 2 factory maintenance items

3
to watch or check at each service

Safety recalls NHTSA lists for this model year (3 of 4)

- **15V-318** · Air bags · driver inflator: The driver air-bag inflator can rupture in a crash, risking serious injury or death. NHTSA advises not driving until remedied.
- **14V-428** · Air bags · passenger inflator: The passenger air-bag inflator can rupture in a crash, risking serious injury. NHTSA advises not driving until repaired.
- **20V-018** · Air bags · passenger inflator: The passenger air-bag inflator can explode in a crash, sending metal fragments at occupants and risking serious injury or death.

A model-year list, not a VIN check. The full report lists the others. Repairs are free at a BMW dealer if open. On a car over 15 years old, ask the dealer whether a newer recall is still repaired free. Check this VIN at nhtsa.gov/recalls.

Step 0 · Free: run the VIN at nhtsa.gov/recalls and ask a BMW dealer for a campaign printout, including 14V-428, 15V-318. Read the build month (MM/YY) on the driver's door-jamb label.

Recommended now at the next service — $1,173–$1,316

Cooling system overhaul (water pump, thermostat, expansion tank, hoses)
$1,173–$1,316
independent shop, installed

Inside the range (Median ~96k; middle half 74k–142k (97 reports))

`If it fails: $1,150–$7,350 · 3.4×`

Next 12 months up to about 148,000 mi

Nothing scheduled here.

Within the next 30,000 miles up to 172,000 mi

Nothing else enters its reported range in this window.

Watch inspect at each service, fix on condition, or optional

VANOS seals + DISA valve
$700–$1,700
independent shop, installed

Any mileage (Only 9 NHTSA reports name VANOS, too few for a mileage) · Inspect at each service; fix at the first sign

Includes: VANOS seals and solenoids · DISA valve (intake manifold flap)

Crankcase vent + oil filter housing and valve cover gaskets
$77–$341
parts only, labor extra

Any mileage (Median ~74.2k (43 crankcase-vent and vacuum-leak reports)) · Inspect at each service; fix at the first sign

Includes: Crankcase ventilation (CCV) hoses and oil separator · Oil filter housing and valve cover gaskets (oil leaks)

Rear subframe / trunk-floor mounts (E46)
$1,200–$1,350
independent shop, installed

Any mileage (Median ~115k (62 reports, 61 of 68 on 2000 cars)) · Ask for this check at every service

Recommended now

$1,173–$1,316

Independent shop, installed. Dealers often charge more.

Planned through 172,000 mi

$1,173–$1,316

No other repairs on the list before 172,000 mi. Now + next 12 months + next 30,000 miles. Excludes factory maintenance (listed separately), “watch” and optional items.

Costs are published independent-shop ranges (low end + low end, high end + high end). Bundled jobs are priced together because the labor overlaps. Routine service (oil, brakes, tires) isn't included; factory fluid and spark plug intervals are listed below.

FACTORY MAINTENANCE

Scheduled maintenance from 142,000 mi to 172,000 mi

The maker's normal schedule for this car. Service history isn't known here, so an item is shown at its next interval mark; skip it if the records show it was done.

ITEM	INTERVAL	THIS CAR
Spark plugs BMW lists its platinum plugs at 100,000 miles on these engines.	every 100,000 mi	**Was due at 100,000 mi (check records)** [M1]
Brake fluid BMW owner's manuals of this era call for new brake fluid every two years.	every 2 years	**By time: check the records** [M2][M3]
Engine coolant BMW gives the coolant a lifetime rating; no change interval.	no fixed interval	— [M3]

M1. BMW technical service bulletin: Platinum spark plug application chart (reproduced by AutoRepairHQ) OFFICIAL
https://manuals.autorepairshq.com/BMW/2004/Z4%20%28E85%29%20L6-3.0L%20%28M54%29/Repair%20and%20Diagnosis/Technical%20Service%20Bulletins/All%20Technical%20Service%20Bulletins/Ignition%20System%20-%20Platinum%20Spark%20Plug%20Application%20Chart

M2. 2002 BMW M3 Owner's Manual, brake fluid (copy on ManualsLib) OFFICIAL
https://www.manualslib.com/manual/368720/Bmw-M3-2002.html?page=113

M3. 2005 BMW M3 Service and Warranty Information, maintenance page (copy on ManualsLib) OFFICIAL
https://www.manualslib.com/manual/2263359/Bmw-M3-2005.html?page=7

WHERE 142K SITS FOR EACH WEAK POINT

#	WEAK POINT	REPORTED RANGE	THIS CAR
1	Cooling system overhaul (water pump, thermostat, expansion tank, hoses)	Median ~96k; middle half 74k–142k (97 reports) COMPUTED FROM NHTSA DATA	Inside the range
2	Crankcase ventilation (CCV) hoses and oil separator	Median ~74.2k (43 crankcase-vent and vacuum-leak reports) COMPUTED FROM NHTSA DATA	Any mileage
3	Oil filter housing and valve cover gaskets (oil leaks)	Median ~82.5k (26 oil-leak reports, thin) COMPUTED FROM NHTSA DATA	Any mileage
4	VANOS seals and solenoids	Only 9 NHTSA reports name VANOS, too few for a mileage COMPUTED FROM NHTSA DATA	Any mileage
5	DISA valve (intake manifold flap)	Only 17 NHTSA reports name DISA, idle control or rough idle, too few for a mileage COMPUTED FROM NHTSA DATA	Any mileage
6	Rear subframe / trunk-floor mounts (E46)	Median ~115k (62 reports, 61 of 68 on 2000 cars) COMPUTED FROM NHTSA DATA	Any mileage

Colors compare mileage with reported failures, not the car's condition. Red: past the range. Amber: inside or approaching. Green: below, or not listed for a recall.

2 · RECALLS AND BULLETINS

Recalls to check for this 2004 BMW 330i

Safety recall repairs are free at BMW dealers. On a car over 15 years old, ask the dealer whether a newer recall is still repaired free. Nothing here can tell whether a recall is open or already done on this VIN; only the official VIN lookup or a dealer can.

Official VIN check (2 minutes)

1. Go to nhtsa.gov/recalls and enter WBAEV53474KM12345.
2. Note every recall shown as “Recall incomplete” and keep a screenshot.
3. Ask a BMW dealer for a campaign printout; it also lists completed campaigns.

M54 RECALLS WE TRACK

14V-428 · Passenger air bag inflator (do not drive) NHTSA lists this model and year: check by VIN

Certain 2000 323i/328i, 2001–2006 325i/325xi/330i and M3: the passenger frontal inflator may rupture. NHTSA's record: owners are advised not to drive until repaired. Free. OFFICIAL [2]

☐ VIN checked ☐ Open: booked with dealer ☐ Completed (printout kept)

15V-318 · Driver air bag inflator (do not drive) NHTSA lists this model and year: check by VIN

Certain 3 Series and other cars: the driver inflator may rupture in a crash. NHTSA's record advises not driving until remedied. Free. OFFICIAL [2]

☐ VIN checked ☐ Open: booked with dealer ☐ Completed (printout kept)

01V-206 · Cooling fan motor (fan stops) Not listed for MY2004

Certain 2001 325/330/525/530 and X5: a failing fan motor can overload the fan control unit and the fan stops working. Free fan. OFFICIAL [2]

EVERY RECALL NHTSA LISTS FOR THE 2004 BMW 330I (5)

RECALL	COMPONENT	WHAT CAN HAPPEN (NHTSA, SHORTENED)
15V-318 M54 tracked	Air bags · driver inflator	The driver air-bag inflator can rupture in a crash, risking serious injury or death. NHTSA advises not driving until remedied. Details
14V-428 M54 tracked	Air bags · passenger inflator	The passenger air-bag inflator can rupture in a crash, risking serious injury. NHTSA advises not driving until repaired. Details
20V-018	Air bags · passenger inflator	The passenger air-bag inflator can explode in a crash, sending metal fragments at occupants and risking serious injury or death. Details
11V-438	Exterior lighting · tail lights	Intermittent rear lamp failure gives other drivers less warning, increasing the risk of a crash. Details
07E-023	Service brakes · master cylinder (replacement	A failed seal in certain replacement master cylinders can leak brake fluid and reduce braking, increasing the risk of a crash. *Aftermarket or replacement*

RECALL	COMPONENT	WHAT CAN HAPPEN (NHTSA, SHORTENED)
	equipment)	*equipment: applies only if that part was fitted.* Details

Source: NHTSA recalls API, fetched 2026-10-27 and combined across NHTSA model names: 330I. Safety categories (air bags, fire, brakes, stalling, roll-away and loss of control) are listed first; listings whose NHTSA text names another engine, or an aftermarket part, go last. OFFICIAL

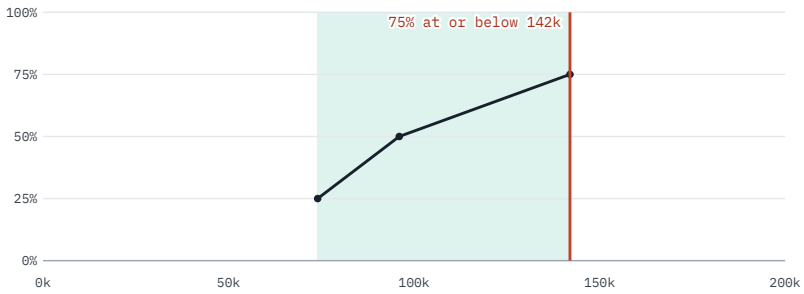
SERVICE ACTIONS, BULLETINS AND WARRANTY PROGRAMS

CAMPAIGN	WHAT IT SAYS	THIS CAR
No engine warranty extension	We found no BMW warranty extension or recall for the water pump, thermostat, VANOS, DISA or oil leaks in NHTSA's records. OFFICIAL [2]	Owner's cost
Other recalls on M54-era cars	02V-138 (cooling fan), 04V-182 (2003–2004 Z4 stall), 04V-402, 04V-409 and 03V-124 (fuel line, engine speed, high idle), 11V-438 (2002–2005 3 Series tail lights), 20V-018 (passenger inflator). OFFICIAL [2]	Check by VIN

3 · OWNER-REPORT DATA

Cooling problems: what owner reports show

Of 97 owners who reported a cooling-system problem to NHTSA with a mileage, about 8 in 10 had 142k or fewer miles. This car's 142k is inside the 74k–142k range where the middle half of reports fell.



Line = share of the 97 reports at or below each mileage, drawn through the published percentiles (dots). Shaded = middle half of reports, 74k–142k. Half came before about 96k (95% confidence range 85k–108.2k).
COMPUTED FROM NHTSA DATA

How to read this. Data: owners who filed an NHTSA complaint about a cooling-system problem and gave a mileage (97 of 156). Cars that never failed, and owners who didn't complain, aren't in it, so this is not a failure rate or a prediction for any car.

2001 cars stand out at 13.0% of complaints, and 54 of those 75 mention the cooling fan covered by recall 01V-206; every other model year is 1.2–3.5%.

Computed by RepairAhead from NHTSA data (version 2026-10-26); NHTSA has not reviewed or endorsed this analysis.

4 · THE 6 WEAK POINTS

Each weak point, one card each

Every figure carries its source. Retailer part numbers are shown only when the retailer lists them for this chassis (E46).

1 Cooling system overhaul (water pump, thermostat, expansion tank, hoses)

Inside the range

Severity: Critical: rare, but can badly damage the engine · 156 mentions in VIN-confirmed NHTSA complaints COMPUTED FROM NHTSA DATA

At 142,000 mi this car is inside the reported range (Median ~96k; middle half 74k–142k (97 reports)), 68,000 miles past where reports start. Range: Median ~96k; middle half 74k–142k (97 reports) COMPUTED FROM NHTSA DATA



WHAT FAILS FORUM/BLOG

Plastic cooling parts age out together: the water pump impeller, thermostat, expansion tank, radiator necks and hoses. An overheat can warp the head.

SYMPTOMS

- Temperature gauge climbing
- Coolant smell or puddles
- Low-coolant warning
- Heater going cold
- A cracked plastic expansion tank or a leaking hose or radiator

IF IT'S LEFT TOO LONG

Overheating can damage the aluminum cylinder head and head gasket, which turns a parts job into an engine repair.

GOOD TO KNOW

On 2001 cars, 54 of the 75 NHTSA cooling complaints mention the cooling fan: that is the model year of recall 01V-206 (fan motor and control unit). Check that recall first; it is free. The plastic expansion tank, its cap, the thermostat and the water pump are the usual parts replaced together: ask the shop to list what's in the quote.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Strong case: the overhaul is a bounded price and the downside of an overheated engine is far larger.

ESTIMATED REPAIR COST

Fix early	**$1,173–$1,316** FORUM/BLOG independent shop, installed
Bills owners quoted in NHTSA cooling complaints (middle half)	**$1,150–$7,350** FORUM/BLOG reported range for the bill after a failure
Dealer	**Often 1.5–2× the independent-shop price** OUR ESTIMATE

3.4× The failure-bill midpoint ($4,250) is about 3.4× the early-fix midpoint ($1,245). A cost ratio, not a probability.

Where the numbers come from: Fix early: BimmerBench's E46 cooling guide gives $1,173–$1,316 for a full overhaul, based on owner-reported bills (its sample includes M3s, which have a different engine). If it fails: the middle half of 16 bills owners quoted in NHTSA cooling complaints (median $2,250), which cover overheating damage as well as parts. Mileage: all 156 NHTSA cooling complaints (coolant, overheating, pump, thermostat, radiator, tank and fan), 97 with a usable mileage (95% range of the median ~85,000–108,200).

PARTS FOR E46

- FCP Euro lists an E46 cooling overhaul kit (E46COOLKIT, Graf, $301.06), an expansion tank kit (E46EXPANKIT,

Genuine BMW, $264.15) and a water pump and thermostat kit (11517509985KT, Graf, $273.87), Oct 26, 2026. Kits differ by model (E39, E46, X3, X5, Z4): confirm by VIN.

WHAT TO ASK YOUR SHOP

- When was the cooling system last overhauled? Plastic-impeller or metal-impeller pump?
- Any coolant loss or temperature gauge above center?

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2 Crankcase ventilation (CCV) hoses and oil separator

Any mileage

Severity: Medium: leaks and wear · 45 mentions in VIN-confirmed NHTSA complaints

COMPUTED FROM NHTSA DATA

Reports cover a wide mileage span (Median ~74.2k (43 crankcase-vent and vacuum-leak reports)), so mileage doesn't say much here. Range: Median ~74.2k (43 crankcase-vent and vacuum-leak reports) COMPUTED FROM NHTSA DATA

WHAT FAILS FORUM/BLOG

The oil separator and its hoses clog and crack, causing vacuum leaks, rough idle, oil consumption and blown seals.

SYMPTOMS

- Rough or surging idle
- A hiss or whistle from the engine bay
- Oil smoke or rising oil use
- Lean-mixture fault codes
- Oil residue in the intake hoses

IF IT'S LEFT TOO LONG

A leaking vent system lets unmetered air and oil vapor into the engine: rough running and oil use, and a check-engine light.

GOOD TO KNOW

The category counts any mention of PCV, CCV, crankcase, a vent valve, an oil separator or a vacuum leak, so it overstates the CCV alone. The parts sit at the back of the valve cover, so shops often do it together with the valve cover gasket.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Moderate case: cheap parts and a clear symptom. Replace when you see the symptoms, or with the valve cover gasket.

ESTIMATED REPAIR COST

Parts only, DIY (FCP Euro; labor not included)	**$37–$185** SHOP/RETAILER parts only, labor extra
Bills owners quoted in NHTSA crankcase-vent and vacuum-leak complaints (middle half)	**$1,400–$5,243** FORUM/BLOG reported range for the bill after a failure
Dealer	**Often 1.5–2× the independent-shop price** OUR ESTIMATE

Where the numbers come from: Fix early: parts prices only, from $37.09 for a Hengst oil separator (11617501566) to $185.18 for a full CCV kit (11617501566KT), FCP Euro, Oct 26, 2026; labor isn't included and we found no published shop price. If it fails: the middle half of 15 bills owners quoted in NHTSA complaints that mention the crankcase vent, PCV or a vacuum leak (median $1,955), which often cover several repairs at once. Mileage: 45 NHTSA complaints, 43 with a usable mileage (95% range of the median ~67,500–83,000).

PARTS FOR E46

- FCP Euro lists a CCV kit (11617501566KT, $185.18), a Hengst oil separator (11617501566, $37.09) and a Genuine BMW crankcase vent valve (11157840446, $154.99; Vaico $55.99), Oct 26, 2026. Confirm by VIN.

WHAT TO ASK YOUR SHOP

- Any whistle, rough idle or lean codes? Oil in the intake?
- When was the CCV last replaced?

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3 Oil filter housing and valve cover gaskets (oil leaks)

Any mileage

Severity: Medium: leaks and wear · 33 mentions in VIN-confirmed NHTSA complaints

COMPUTED FROM NHTSA DATA

Reports cover a wide mileage span (Median ~82.5k (26 oil-leak reports, thin)), so mileage doesn't say much here.
Range: Median ~82.5k (26 oil-leak reports, thin) COMPUTED FROM NHTSA DATA

WHAT FAILS FORUM/BLOG

The oil filter housing gasket and valve cover gasket harden and seep, often onto the exhaust or the belts.

SYMPTOMS

- Oil on the left side of the engine below the filter housing
- Oil seeping at the valve cover edges or in the spark plug wells
- A burning-oil smell

IF IT'S LEFT TOO LONG

Oil on the belt, hoses and exhaust can smoke and soaks nearby rubber parts; a low oil level risks engine damage.

GOOD TO KNOW

Shops usually change the gaskets together with the spark plug tube seals and the CCV parts, so ask what the quote covers.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Moderate case: cheap gaskets, labor-heavy work. Do it when it leaks, and pair it with the CCV parts.

ESTIMATED REPAIR COST

Parts only, gasket kits (FCP Euro; labor not included)	**$40–$156** SHOP/RETAILER parts only, labor extra
Bills owners quoted in NHTSA oil-leak complaints (middle half)	**$872–$4,496** FORUM/BLOG reported range for the bill after a failure
Dealer	**Often 1.5–2× the independent-shop price** OUR ESTIMATE

Where the numbers come from: Fix early: parts prices only: an oil filter housing gasket kit $40.45 (11421719855KT4) and an Elring valve cover gasket kit $155.74 (11129070990KT), FCP Euro, Oct 26, 2026; labor isn't included. If it fails: the middle half of 10 bills owners quoted in NHTSA oil-leak complaints (median $2,248), which can include other leaks. Mileage: 33 NHTSA oil-leak complaints, 26 with a usable mileage (95% range of the median ~64,700–99,700); thin sample.

PARTS FOR E46

- Elring valve cover gasket kit 11129070990KT ($155.74) and an oil filter housing gasket (11421719855: Genuine BMW $10.49, Elring $2.92) on FCP Euro, Oct 26, 2026. Confirm by VIN.

WHAT TO ASK YOUR SHOP

- Oil on the exhaust side or at the filter housing? Burning smell?

4 VANOS seals and solenoids

Any mileage

Severity: High: overheating, stalls, limp mode or a big bill · 9 mentions in VIN-confirmed NHTSA complaints COMPUTED FROM NHTSA DATA

Reports cover a wide mileage span (Only 9 NHTSA reports name VANOS, too few for a mileage), so mileage doesn't say much here. Range: Only 9 NHTSA reports name VANOS, too few for a mileage COMPUTED FROM NHTSA DATA

WHAT FAILS FORUM/BLOG

The double-VANOS unit's seals harden, causing a loss of low-end power, rough idle and rattle.

SYMPTOMS

- Rough idle
- Weak low-speed power
- A rattle at start-up
- A VANOS fault code
- Uneven acceleration

IF IT'S LEFT TOO LONG

A failing VANOS gives rough running and poor power; it is a drivability problem, not usually a breakdown.

GOOD TO KNOW

VANOS jobs often get done with the DISA valve (item 5). The guide is for the E39; other models (E46, X3, X5, Z4) share the engine but not the labor time.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Weak case for early replacement: wait for symptoms and a diagnosis, then fix.

ESTIMATED REPAIR COST

VANOS repair (E39 guide)	**$500–$1,200** FORUM/BLOG independent shop, installed
No separate failure price published (same range)	**$500–$1,200** FORUM/BLOG reported range for the bill after a failure
Dealer	**Often 1.5–2× the independent-shop price** OUR ESTIMATE

1.0× The failure-bill midpoint ($850) is about 1.0× the early-fix midpoint ($850). A cost ratio, not a probability.

Where the numbers come from: Fix early and if it fails: GarageBoy's E39 VANOS guide gives USD 500–1,200 for the VANOS repair; we found no separate price for a failed VANOS. Only 9 NHTSA complaints name it (3 on 2000 cars), so no mileage is given. FCP Euro lists a Febi VANOS solenoid (11361432532, $61.79).

PARTS FOR E46

- Febi VANOS solenoid 11361432532 ($61.79) and a Febi/Vaico seal filter kit (11361401971KIT, $66.21) on FCP Euro, Oct 26, 2026. Confirm by VIN.

WHAT TO ASK YOUR SHOP

- Any loss of low-end torque or rough idle? Have the VANOS seals been done?

5 DISA valve (intake manifold flap)

Any mileage

Severity: Medium: leaks and wear · 17 mentions in VIN-confirmed NHTSA complaints COMPUTED FROM NHTSA DATA

Reports cover a wide mileage span (Only 17 NHTSA reports name DISA, idle control or rough idle, too few for a mileage), so mileage doesn't say much here. Range: Only 17 NHTSA reports name DISA, idle control or rough idle, too few for a mileage COMPUTED FROM NHTSA DATA

WHAT FAILS FORUM/BLOG

ESTIMATED REPAIR COST

The DISA flap inside the intake manifold rattles or breaks; a loose flap can be drawn into the engine.

SYMPTOMS

- A rattle or buzz from the intake at certain revs
- Rough idle
- Low-end power loss or surging

IF IT'S LEFT TOO LONG

A failed DISA flap can break loose in the intake; shops describe it as a rattle first.

GOOD TO KNOW

Parts: Rein 11617544805 $183.08, Febi $194.99; Vaico 11611440049 $320.99 (

IS IT WORTH DOING EARLY? OUR ESTIMATE

Weak case for early replacement: replace on symptoms, ideally with another intake-side job.

DISA adjuster, added to a VANOS job	**$200–$500** FORUM/BLOG independent shop, installed
No separate failure price published (same range)	**$200–$500** FORUM/BLOG reported range for the bill after a failure
Dealer	**Often 1.5–2× the independent-shop price** OUR ESTIMATE

1.0× The failure-bill midpoint ($350) is about 1.0× the early-fix midpoint ($350). A cost ratio, not a probability.

Where the numbers come from: Fix early and if it fails: GarageBoy's E39 VANOS guide says the DISA adjuster adds about $200–500 to that job; we found no separate failure price. The NHTSA category also counts idle-control and rough-idle complaints (17), so it isn't a DISA count alone.

PARTS FOR E46

- Rein DISA valve 11617544805 ($183.08) and Febi ($194.99) on FCP Euro, Oct 26, 2026. Confirm by VIN.

WHAT TO ASK YOUR SHOP

- Any rattle from the intake or rough idle? Is the DISA valve original?

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6 Rear subframe / trunk-floor mounts (E46)

Any mileage

Severity: High: overheating, stalls, limp mode or a big bill · 68 mentions in VIN-confirmed NHTSA complaints COMPUTED FROM NHTSA DATA

Reports cover a wide mileage span (Median ~115k (62 reports, 61 of 68 on 2000 cars)), so mileage doesn't say much here. Range: Median ~115k (62 reports, 61 of 68 on 2000 cars) COMPUTED FROM NHTSA DATA

WHAT FAILS FORUM/BLOG

On the E46 the rear subframe mounts can crack the trunk floor, and in bad cases the subframe separates.

SYMPTOMS

- A clunk or shifting feel from the rear on acceleration
- Cracks around the subframe mounts under the trunk floor
- Visible rust or a wandering rear end

IF IT'S LEFT TOO LONG

A cracked subframe mount changes the rear suspension geometry and can let the mount tear out of the body.

ESTIMATED REPAIR COST

Reinforcement kit and install, owner-reported (BimmerBench)	**$1,200–$1,350** FORUM/BLOG independent shop, installed
Same repair range plus one owner's $1,600 bill after separation	**$1,200–$1,600** FORUM/BLOG reported range for the bill after a failure

GOOD TO KNOW

This is an E46 body issue, not an engine issue: it applies to E46 3 Series only (not the E39, E60, X3, X5, Z3 or Z4). 61 of the 68 NHTSA reports are on 2000 cars, which suggests a cluster of complaints rather than a steady rate.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Moderate case, E46 only: a bounded price against a structural repair.

Dealer	**Often 1.5–2× the independent-shop price** OUR ESTIMATE

Where the numbers come from: Fix early: BimmerBench's E46 guide gives $1,200–$1,350 for subframe reinforcement, based on owner-reported bills (its sample includes M3s). If it fails: the same repair range; one owner told NHTSA a separated subframe cost $1,600 (ODI 10043050). Mileage: 68 NHTSA complaints name the subframe or trunk floor, 62 with a usable mileage (95% range of the median ~99,500–134,000). FCP Euro lists Meyle HD (E46SUBKIT, $101.82) and Corteco (E46SUBKIT1, $81.76) kits (parts only).

PARTS FOR E46

- Meyle HD subframe reinforcement kit E46SUBKIT ($101.82) and Corteco E46SUBKIT1 ($81.76) on FCP Euro, Oct 26, 2026 (parts only). Confirm by VIN.

WHAT TO ASK YOUR SHOP

- Can you inspect the rear subframe mounts and trunk floor for cracks?
- Has the subframe been reinforced?

5 · ALSO REPORTED, NOT RANKED

Other themes in M54 owner complaints

Every NHTSA complaint theme with 40 or more VIN-confirmed reports is either a weak point above or explained here.

THEME	COMPLAINTS	WHY IT ISN'T A WEAK POINT
Engine-internal (failure, oil burning, VANOS)	46	Only 1.0% of complaints, spread across causes; the M54 has no known recurring internal failure. VANOS is its own item below.

6 · BUYING OR SELLING

Used-car checklist and resale helper

For owners this is a resale checklist: it's what a careful buyer will ask.

Ask the inspecting shop to check

- Cooling: tank neck, radiator ends, pump wobble
- E46: subframe mounts and trunk floor for cracks
- Oil at the filter housing and cover gasket
- Idle quality and lean codes (CCV, DISA)
- Airbag recall status (some say do not drive)

Ask the seller

- Cooling overhaul done? When?
- CCV, VANOS seals or DISA done?
- Subframe reinforced?

Documents to request

- Service records with mileages
- nhtsa.gov/recalls screenshot showing the airbag recalls done
- Invoices for cooling and subframe work

WHAT A BUYER MAY DEDUCT

	FINDING	ESTIMATED ADJUSTMENT
●	Cooling system overhaul (water pump, thermostat, expansion tank, hoses): original, no replacement invoice	$1,173–$1,316
	Crankcase ventilation (CCV) hoses and oil separator: symptoms or fault codes present	$37–$185 + labor
	Oil filter housing and valve cover gaskets (oil leaks): seeping or leaking	$40–$156 + labor
	VANOS seals and solenoids: seeping or leaking	$500–$1,200
	DISA valve (intake manifold flap): symptoms or fault codes present	$200–$500
	Rear subframe / trunk-floor mounts (E46): fault found on inspection	$1,200–$1,600
	Pre-ticked rows (●), if no records clear them	**$1,173–$1,316**

● = expected at this mileage. Estimated repair costs, not an appraisal. Recalls cost the seller nothing: ask for open recalls to be completed rather than discounted. OUR ESTIMATE

7 · METHOD AND SOURCES

How this report is built

Inputs. VIN, model year, model, mileage and build month (if entered). Model and engine are checked with NHTSA's vPIC decoder.

Mileage positions. Below: more than 10,000 miles before the reported range. Approaching: within 10,000. Inside: in the range, or past the start of an open-ended range. Past: beyond the top of the range. These bands are our rules, not an industry standard.

The plan. Critical items inside or past their range go first; high-severity items follow, and jobs that share labor are bundled. At most three jobs land in “Recommended now”. Leaks that are cheap to watch are fixed on condition; inspections are asked for at each service.

Costs. Published independent-shop ranges from shop quotes, retailer prices and owner reports. The worst-case cost of every item failing is not shown: it isn't an expected cost.

Labels. OFFICIAL NHTSA/BMW documents · SHOP/RETAILER parts prices and shop articles · FORUM/BLOG owner forums and blogs · COMPUTED FROM NHTSA DATA our analysis of NHTSA data · OUR ESTIMATE ours.

NHTSA complaint data. RepairAhead analysis of every complaint whose VIN decodes to an M54 or 2000 M52TU car (six-cylinder, leaving out M cars and the N52): 4,510 owner complaints in NHTSA's complaint file (dated Oct 19, 2026) whose partial VIN decodes, with NHTSA's vPIC decoder, to a car with this engine; 3,160 give a usable mileage. Themes are keyword matches, so one complaint can count toward two themes. Most M54 complaints are about airbags (1,341), steering (829), lighting and electrical faults, not the engine. The engine repairs shops know the M54 for are mostly out-of-warranty jobs on 20-plus-year-old cars. Engine version is estimated from model and year. COMPUTED FROM NHTSA DATA

THEME	COMPLAINTS	IN THIS REPORT
Cooling system	156	Item 1
Rear subframe / trunk floor (E46)	68	Item 6
Engine-internal (failure, oil burning, VANOS)	46	Also reported
Crankcase vent / vacuum leaks	45	Item 2
Oil leaks	33	Item 3
DISA / idle control / rough idle	17	Item 5
VANOS	9	Item 4

Limits: complaints are self-reported and not adjusted for cars sold; keyword matching over- and under-counts; owners rarely file safety complaints about oil seeps, so leaks look rarer than they are.

SOURCES

1. NHTSA complaints bulk file (FLAT_CMPL), dated Oct 19, 2026: 4,510 M54 and M52TU complaints, VIN-filtered via NHTSA vPIC (RepairAhead analysis, Oct 26, 2026) OFFICIAL
https://static.nhtsa.gov/odi/ffdd/cmpl/

2. NHTSA recall records 14V-428, 15V-318, 20V-018, 01V-206, 02V-138, 04V-182, 04V-402, 04V-409, 03V-124, 11V-438; 2004 330I list re-checked Oct 27, 2026 OFFICIAL
https://www.nhtsa.gov/recalls?nhtsaId=14V428000

3. BimmerBench E46 cooling and subframe guides (owner-reported bills), fetched Oct 26, 2026 SHOP/RETAILER
https://bimmerbench.com/

4. GarageBoy E39 VANOS and DISA guide, fetched Oct 26, 2026 FORUM/BLOG

5. FCP Euro part pages (prices fetched Oct 26, 2026) SHOP/RETAILER
https://www.fcpeuro.com/

6. Owner repair bills quoted in NHTSA complaints (e.g. ODI 10043050) OFFICIAL
https://www.nhtsa.gov/nhtsa-datasets-and-apis

7. Earlier RepairAhead engine page repairahead.com/m54/ (Oct 26, 2026): weak-part cards and cost tables, folded into this report COMPUTED FROM NHTSA DATA
https://repairahead.com/m54/

This report contains no affiliate links; retailer prices are quoted as price sources only. Found an error? Email hello@repairahead.com.

PLEASE READ

Important

Based on public records and published repair costs. Not a diagnosis or a guarantee. Your technician's inspection decides what your car needs. Confirm recalls with a dealer using your VIN.

Informational only. This report is not a mechanical inspection, a diagnosis, or professional, legal or financial advice. Nobody from RepairAhead has seen, driven or inspected this vehicle.

Reported ranges and estimates, not predictions

Failure mileages are reported ranges compiled from public owner complaints, manufacturer bulletins, recalls and repair-shop reports. Costs are estimates. Parts can fail earlier, later or not at all, and other problems can occur. Statistics from owner complaints describe past reports to NHTSA; NHTSA has not reviewed or endorsed this analysis.

Safety issues go to a dealer

If you notice overheating, a burning or fuel smell, smoke, a brake-assist problem, stalling or loss of power, pull over when it's safe and contact a BMW dealer or qualified shop. Safety recall repairs are free at BMW dealers. Confirm recalls for this VIN at nhtsa.gov/recalls.

No warranty

Provided “as is”, without warranties of any kind, under the Terms of Use at repairahead.com/terms.

Trademarks and independence

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Wrong input (VIN, mileage, build date)? Email hello@repairahead.com with report ID RA-M54-012345-20261027 and we'll correct and reissue it.
