SAC **Springfield Auto Care** EXAMPLE SHOP
service@springfield-auto-care.example

2002 Toyota Tacoma at 120,000 mi

5TEHN72N82Z123456

MODEL / CHASSIS	ENGINE	MILEAGE	DRIVETRAIN
Tacoma · N170 Tacoma Double Cab 3.4 V6 4WD	Toyota 5VZ-FE 3.4L V6 and RZ-family fours (3RZ-FE 2.7L, 2RZ-FE 2.4L) (truck engines)	120,000 mi	4WD
BUILD MONTH	**REPORT DATE**	**MODE**	**PREPARED FOR**
Not entered (door jamb)	October 28, 2026	Shop	Sample Owner

VIN check: check digit valid; model-year code '2' = 2002, 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: our technician decides what the car actually needs.

1 job recommended now

0 to plan in the next 30,000 miles

2 to watch or check at each service

Safety recalls NHTSA lists for this model year (3)

- **12V-542** · Spare tire · carrier lift plate: In salt-belt states the spare tire carrier plate can rust and break, so the spare can fall off the truck.
- **05V-225** · Suspension · front lower ball joints: A scratched lower ball joint can wear and loosen; in the worst case it can separate and cause loss of steering control.
- **03V-189** · Fuel system · fuel inlet hose (Double Cab): In a side impact, the body flange can damage the fuel inlet hose and leak fuel, a fire risk.

A model-year list, not a VIN check. Repairs are free at a Toyota 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 Toyota dealer for a campaign printout. Read the build month (MM/YY) on the driver's door-jamb label.

Recommended now at the next service — **$1,200**

Timing belt, water pump and tensioner (3.4L V6) — **$1,200**

Past the range (Every 90,000 miles (interval quoted for the 3.4L V6)) · if the records don't show it done

our price EXAMPLE

Next 12 months up to about 132,000 mi

Nothing scheduled here.

Within the next 30,000 miles up to 150,000 mi

Nothing else enters its reported range in this window.

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

Valve cover gasket oil leaks (3.4L V6) — **$1,100**
Any mileage (Older, high-mileage 3.4L engines) · Inspect at each service; fix at the first sign
our price EXAMPLE

Knock sensor and sub-harness (check-engine light P0325 / P0330) — **$1,500**
Any mileage (3.4L V6 engines with age and heat) · Inspect at each service; fix at the first sign
our price EXAMPLE

Recommended now
$1,200
Springfield Auto Care prices (example)

Planned through 150,000 mi
$1,200
Nothing else on the list before 150,000 mi. Now + next 12 months + next 30,000 miles. Excludes “watch” and optional items.

Prices are Springfield Auto Care's estimates for typical parts and labor. They don't include tax, shop supplies or disposal fees, and may change after inspection or if part prices change. Not a written repair estimate: Springfield Auto Care confirms the price and gets your OK before any work.

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

The maker's maintenance schedule isn't on this report

This report doesn't include the maker's scheduled maintenance for this car yet, so brake fluid, spark plugs, coolant and transmission fluid aren't listed even when they're due. Check the service records and the maker's schedule for this car.

WHERE 120K SITS FOR EACH WEAK POINT

#	WEAK POINT	REPORTED RANGE	THIS CAR
1	Timing belt, water pump and tensioner (3.4L V6)	Every 90,000 miles (interval quoted for the 3.4L V6) FORUM/BLOG	Past the range
2	Valve cover gasket oil leaks (3.4L V6)	Older, high-mileage 3.4L engines FORUM/BLOG	Any mileage
3	Knock sensor and sub-harness (check-engine light P0325 / P0330)	3.4L V6 engines with age and heat FORUM/BLOG	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 2002 Toyota Tacoma

Safety recall repairs are free at Toyota 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 5TEHN72N82Z123456.
2. Note every recall shown as “Recall incomplete” and keep a screenshot.
3. Ask a Toyota dealer for a campaign printout; it also lists completed campaigns.

3.4L 5VZ-FE V6 / 2.7L 3RZ-FE RECALLS WE TRACK

NHTSA lists no engine-specific recall campaign for the 3.4L 5VZ-FE V6 / 2.7L 3RZ-FE as of 2026-10-27. Recalls on the rest of the car are in the model-year list below.

EVERY RECALL NHTSA LISTS FOR THE 2002 TOYOTA TACOMA (3)

RECALL	COMPONENT	WHAT CAN HAPPEN (NHTSA, SHORTENED)
12V-542	Spare tire · carrier lift plate	In salt-belt states the spare tire carrier plate can rust and break, so the spare can fall off the truck. Details
05V-225	Suspension · front lower ball joints	A scratched lower ball joint can wear and loosen; in the worst case it can separate and cause loss of steering control. Details
03V-189	Fuel system · fuel inlet hose (Double Cab)	In a side impact, the body flange can damage the fuel inlet hose and leak fuel, a fire risk. Details

Source: NHTSA recalls API, fetched 2026-10-28 and combined across NHTSA model names: TACOMA. 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
Left out of this list (TACOMA): 06E-065 and 06E-026 cover aftermarket replacement lamps (AJ Motorsport, Pro-A Motors), not the factory truck, and are left out of this sample; a VIN check would show any recall that applies.

SERVICE ACTIONS, BULLETINS AND WARRANTY PROGRAMS

Manufacturer bulletins and warranty programs for this engine are cited on each weak point in section 4, where they apply.

4 · THE 3 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 (N170). Left out because they apply to other models, years, engine sizes or body codes: Timing chain tensioner or balance shaft rattle (2.7L four).

1 Timing belt, water pump and tensioner (3.4L V6)

Past the range

Severity: High: overheating, stalls, limp mode or a big bill · 8 mentions in counted NHTSA complaints COMPUTED FROM NHTSA DATA

At 120,000 mi this car is past the reported range (Every 90,000 miles (interval quoted for the 3.4L V6)). If the original parts are still fitted, have them checked and plan for them. Range: Every 90,000 miles (interval quoted for the 3.4L V6) FORUM/BLOG [2]



WHAT FAILS FORUM/BLOG [2]

The 3.4L V6 uses a rubber timing belt that must be changed on schedule. The water pump sits behind the belt, so shops replace the pump, tensioner and idlers at the same time. The engine is usually described as non-interference, but a belt that jumps or breaks leaves the truck running badly or stranded.

SYMPTOMS

- No warning before a belt breaks
- Coolant seep at the water pump behind the timing cover

IF IT'S LEFT TOO LONG

A broken belt stops the engine at once.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Yes, if there is no record of it within the last 90,000 miles.

ESTIMATED REPAIR COST

Timing belt replacement, 2002 Tacoma Double Cab (KBB fair range)	**Our price is in the plan above** ask us for a written quote
Same job after a failure; towing extra	**$1,131–$1,260** SHOP/RETAILER [3] reported range for the bill after a failure

PARTS FOR N170

- Ask your parts supplier for the OE part number for this VIN.

QUESTIONS TO ASK US

- When was the timing belt last replaced? Water pump with it?

2 Valve cover gasket oil leaks (3.4L V6)

Any mileage

Severity: Medium: leaks and wear · 21 mentions in counted NHTSA complaints COMPUTED FROM NHTSA DATA

Reports cover a wide mileage span (Older, high-mileage 3.4L engines), so mileage doesn't say much here. Range: Older, high-mileage 3.4L engines FORUM/BLOG [2][4]

WHAT FAILS FORUM/BLOG [2][4]

With age the valve cover gaskets harden and leak oil, which can drip onto the exhaust manifolds. On the V6 the upper intake plenum has to come off to reach the rear of the covers.

SYMPTOMS

- Burning-oil smell after a drive
- Oil wetness along the valve covers
- Smoke from the exhaust manifold area

IF IT'S LEFT TOO LONG

Oil on a hot manifold smells and can become a fire risk; the oil level also drops.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Reseal when the covers are wet; do the spark-plug tube seals at the same time.

ESTIMATED REPAIR COST

Valve cover gasket replacement, 2002 4Runner 3.4L (YourMechanic estimate to shop/dealer range)	**Our price is in the plan above** ask us for a written quote
Same job	**$1,004–$1,623** SHOP/RETAILER [5] reported range for the bill after a failure

PARTS FOR N170

- Ask your parts supplier for the OE part number for this VIN.

QUESTIONS TO ASK US

- Any burning-oil smell?
- Valve cover gaskets ever replaced?

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3 Knock sensor and sub-harness (check-engine light P0325 / P0330)

Any mileage

Severity: Medium: leaks and wear · 1 mentions in counted NHTSA complaints

COMPUTED FROM NHTSA DATA

Reports cover a wide mileage span (3.4L V6 engines with age and heat), so mileage doesn't say much here. Range: 3.4L V6 engines with age and heat FORUM/BLOG [6]

WHAT FAILS FORUM/BLOG [6][7]

The two knock sensors sit in the engine valley under the intake manifolds. Their small wiring harness bakes over time, the insulation crumbles and the circuit opens, setting P0325 or P0330. The fix is buried under the intake, so most of the cost is labor; shops replace the harness with the sensors.

SYMPTOMS

- Check-engine light with P0325 or P0330
- Reduced power or poorer fuel economy

IF IT'S LEFT TOO LONG

The engine computer retards timing, so power and mileage drop; the truck will fail an emissions check.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Replace sensors and harness together when the code is confirmed; pair it with other intake-off work.

ESTIMATED REPAIR COST

Knock sensor replacement, V6 shop labor (parts extra)	**Our price is in the plan above** ask us for a written quote
Same job	**$1,100–$1,800** SHOP/RETAILER [7] reported range for the bill after a failure

PARTS FOR N170

- Ask your parts supplier for the OE part number for this VIN.

QUESTIONS TO ASK US

- Any P0325 / P0330 codes?

5 · ALSO REPORTED, NOT RANKED

Other themes in 3.4L 5VZ-FE V6 / 2.7L 3RZ-FE owner complaints

Every NHTSA complaint theme with 10 or more counted reports is either a weak point above or explained here.

THEME	COMPLAINTS	WHY IT ISN'T A WEAK POINT
Frame rust	1,605	Frame corrosion on 1995–2004 Tacoma (Toyota frame programs and buy-backs); a body/frame issue, not an engine fault, but check it before any engine work.
Air bags	150	Air-bag recalls (Takata) and complaints; not an engine fault.
Lower ball joints / suspension	138	Front lower ball joint campaign 50J; suspension, not an engine fault.
Throttle / hesitation	60	Mixed throttle and hesitation reports, including unintended-acceleration claims; no Toyota engine bulletin for these trucks.

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. Shop prices come from the issuing shop. The worst-case cost of every item failing is not shown: it isn't an expected cost.

Labels. `OFFICIAL` NHTSA/Toyota 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. Pulled Oct 28, 2026 from NHTSA's complaints API for All 2000–2004 Tacoma complaints (2.4L, 2.7L and 3.4L), all 2000–2002 4Runner complaints, and 2000–2004 Tundra complaints that name the V6 / 3.4L (Tundra V8 complaints belong to the UR/UZ V8 page): 2,670 complaints. Some of these nameplates were sold with other engines too; for those we kept only complaints whose text names this engine, which under-counts. Themes are keyword matches on the complaint text. `COMPUTED FROM NHTSA DATA`

THEME	COMPLAINTS	IN THIS REPORT
Frame rust	1,605	Also reported
Air bags	150	Also reported
Lower ball joints / suspension	138	Also reported
Throttle / hesitation	60	Also reported
Oil leak	21	Item 2
Timing belt / water pump	8	Item 1
Knock sensor	1	Item 3
Timing chain / rattle	0	Other years or engine sizes

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 owner complaints for 2000–2004 Tacoma (all engines), 2000–2002 4Runner and 2000–2004 Tundra V6, pulled Oct 28, 2026 (ODI numbers in the cost notes) `OFFICIAL`
https://www.nhtsa.gov/report-a-safety-problem#complaints

2. 8020 Automotive: the 3 most common Toyota 5VZ-FE 3.4 V6 engine problems (timing belt at 90,000 miles, oil leaks, head gaskets) `FORUM/BLOG`
https://8020automotive.com/the-3-most-common-toyota-5vz-fe-3-4-v6-engine-problems/

3. Kelley Blue Book: 2002 Toyota Tacoma Double Cab timing belt replacement, fair repair range (ZIP 45011), via search extract Oct 28, 2026 `SHOP/RETAILER`
https://www.kbb.com/toyota/tacoma-double-cab/2002/timing-belt-replacement/

4. Cararac: Toyota 3.4L engine (5VZ-FE) longevity and problems (valve cover gasket leaks with age) `FORUM/BLOG`
https://cararac.com/blog/toyota-3-4-l-engine-5-vz-fe-problems-durability.html

5. YourMechanic: Toyota 4Runner valve cover gasket replacement estimate, via search extract Oct 28, 2026 SHOP/RETAILER
https://www.yourmechanic.com/estimates/toyota/4runner/valve-cover-gasket-replacement

6. au7o.io: Known issues, P0325 on Toyota (5VZ-FE knock sensor sub-harness under the intake) — AI-assisted site, not independently verified FORUM/BLOG
https://au7o.io/known-issues/dtc/p0325/toyota

7. Go-Parts: 1995–2005 Toyota Tacoma knock sensor guide (V6 sensors under the intake manifold; replace the harness with the sensors), via search extract Oct 28, 2026 SHOP/RETAILER
https://www.go-parts.com/garage/ps-1995-2005-toyota-tacoma-ignition-knock-detonation-sensor

8. RepairPal: loud rattling or slapping noise from engine on Toyota Tacoma (balance shaft bearing or timing chain tensioner) SHOP/RETAILER
https://repairpal.com/loud-rattling-or-slapping-noise-from-engine-301

9. RepairPal: 1999 Toyota Tacoma timing chain tensioner replacement estimate, via search extract Oct 28, 2026 SHOP/RETAILER
https://repairpal.com/estimator/toyota/tacoma/1999/timing-chain-tensioner-replacement-cost

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. It was issued by Springfield Auto Care using RepairAhead data; the inspection findings and prices are the shop's.

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 Toyota dealer or qualified shop. Safety recall repairs are free at Toyota dealers. Confirm recalls for this VIN at nhtsa.gov/recalls.

No warranty

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