2023 Toyota bZ4X at 40,000 mi

JTMABACA2PA123456

MODEL / CHASSIS	DRIVETRAIN	MILEAGE	DRIVETRAIN
bZ4X · 2023 bZ4X Limited AWD	Toyota bZ4X and Subaru Solterra electric drive (e-TNGA, FWD or dual-motor AWD)	40,000 mi	AWD
BUILD MONTH	**REPORT DATE**	**MODE**	**PREPARED FOR**
Not entered (door jamb)	October 28, 2026	Owner	Sample Owner

VIN check: check digit valid; model-year code 'P' = 2023, 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

1 to plan in the next 30,000 miles

2 to watch or check at each service

Safety recalls NHTSA lists for this model year (1 of 3)

- **22V-444** · Wheels · hub bolts: Hub bolts can loosen and a wheel can come off after low mileage. Toyota told owners not to drive until repaired; dealers replace the hub bolts and wheels free.

A model-year list, not a VIN check. The full report lists the others. Repairs are free at a Toyota dealer if open. 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, including 25V-577. Read the build month (MM/YY) on the driver's door-jamb label.

Recommended now at the next service

Electric A/C compressor failure: no heat or defrost (recall 25V-577) Free if open

Recall 25V-577 is listed for this model year. Check the VIN; the repair is free at a Toyota dealer if it is open.

Next 12 months up to about 52,000 mi — **$200–$320**

12V battery drain and no-start — **$200–$320**
Any mileage (Owner reports on 2023–2025 bZ4X and Solterra) — independent shop, installed

`If it fails: $280–$400 · 1.3×`

Within the next 30,000 miles up to 70,000 mi

Nothing else enters its reported range in this window.

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

Slow DC fast charging and charging software faults — `Free if covered` check the VIN
Any mileage (2023 bZ4X and Solterra (software updates); 2024 Solterra settings; 2024–2025 bZ4X supplied charge cable) · Ask for this check at every service

EV system warning codes (battery heater P2D384B, motor ECU P060694), 2023 — **$40–$60**
Any mileage (2023 bZ4X (battery heater code) and 2023 Solterra (motor ECU code)) · Inspect at each service; fix at the first sign — labor only, parts extra

Recommended now

Free recall check

Independent shop, installed. Dealers often charge more.

Planned through 70,000 mi

$200–$320

Now + next 12 months + next 30,000 miles. Excludes “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 (tires, brakes, cabin filter) isn't included; factory fluid intervals are listed below.

FACTORY MAINTENANCE

Scheduled maintenance from 40,000 mi to 70,000 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
Traction battery coolant First change at 120,000 mi or 12 years, then every 50,000 mi or 5 years.	first at 120,000 mi, then every 50,000 mi or 5 years	Next at 120,000 mi [M1]
Heater coolant First change at 120,000 mi or 12 years, then every 50,000 mi or 5 years.	first at 120,000 mi, then every 50,000 mi or 5 years	Next at 120,000 mi [M1]

M1. 2024 Toyota bZ4X Warranty & Maintenance Guide `OFFICIAL`
https://assets.sia.toyota.com/publications/en/omms-s/T-MMS-24bZ4X/pdf/T-MMS-24bZ4X.pdf

WHERE 40K SITS FOR EACH WEAK POINT

#	WEAK POINT	REPORTED RANGE	THIS CAR
1	Slow DC fast charging and charging software faults	2023 bZ4X and Solterra (software updates); 2024 Solterra settings; 2024–2025 bZ4X supplied charge cable OFFICIAL	Any mileage
2	12V battery drain and no-start	Owner reports on 2023–2025 bZ4X and Solterra OFFICIAL	Any mileage
3	Electric A/C compressor failure: no heat or defrost (recall 25V-577)	2023–2025 bZ4X and Solterra OFFICIAL	Any mileage
4	EV system warning codes (battery heater P2D384B, motor ECU P060694), 2023	2023 bZ4X (battery heater code) and 2023 Solterra (motor ECU code) OFFICIAL	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 2023 Toyota bZ4X

Safety recall repairs are free at Toyota dealers. 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 JTMABACA2PA123456.
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.

BZ4X / SOLTERRA EV RECALLS WE TRACK

25V-577 · Defroster and defogger can stop working after an HVAC fault such as electric compressor failure (2023–2025 bZ4X, Solterra)

NHTSA lists this model and year: check by VIN

Dealer updates the HVAC control software and inspects or replaces the electric compressor, free of charge. OFFICIAL [7]

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

EVERY RECALL NHTSA LISTS FOR THE 2023 TOYOTA BZ4X (3)

RECALL	COMPONENT	WHAT CAN HAPPEN (NHTSA, SHORTENED)
22V-444	Wheels · hub bolts	Hub bolts can loosen and a wheel can come off after low mileage. Toyota told owners not to drive until repaired; dealers replace the hub bolts and wheels free. Details
25V-577 bZ4X / Solterra EV tracked	HVAC · defroster after compressor fault	If the electric A/C compressor fails (or after some other HVAC faults), the defroster and defogger can stop working. Free software update and compressor inspection or replacement. Details
25V-744	Rearview camera · Panoramic View Monitor software	On cars with the Panoramic View Monitor, the rearview image can freeze or go blank in reverse. Free software update. Details

Source: NHTSA recalls API, fetched 2026-10-28 and combined across NHTSA model names: BZ4X. 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 (BZ4X): 24V-548 (Gulf States Toyota accessory load labels) covers dealer-installed accessories from one distributor and is left out of this sample; a VIN check would show it if it applied.

SERVICE ACTIONS, BULLETINS AND WARRANTY PROGRAMS

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

4 · THE 4 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 (bZ4X).

1 Slow DC fast charging and charging software faults

Any mileage

Severity: Medium: leaks and wear · 9 mentions in counted NHTSA complaints

COMPUTED FROM NHTSA DATA

Reports cover a wide mileage span (2023 bZ4X and Solterra (software updates); 2024 Solterra settings; 2024–2025 bZ4X supplied charge cable), so mileage doesn't say much here. Range: 2023 bZ4X and Solterra (software updates); 2024 Solterra settings; 2024–2025 bZ4X supplied charge cable OFFICIAL [2][3][4][5][6][11]

WHAT FAILS OFFICIAL [2][3][4][5][6][11]

Early cars charged slowly on DC fast chargers, especially in cold weather. Toyota released two free software updates for the 2023 bZ4X (22TC11 for cold-weather DC charging and 23TC05 for charging speed and the range display), and Subaru reprogrammed 2023 Solterra modules. Subaru also fixed 2023 Solterras that could not charge at EVgo stations and 2024 Solterras that lost their charging settings. On 2024–2025 bZ4X, the supplied Level 1/2 cable may not charge the car.

SYMPTOMS

- DC fast charging much slower than expected, worse in cold weather
- Range display jumps or seems wrong
- Will not charge at some stations
- Supplied charge cable shows lit LEDs but does not charge

IF IT'S LEFT TOO LONG

Long charging stops; the car may not charge on some chargers.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Check the VIN for the charging software updates; they are free at a Toyota or Subaru dealer.

ESTIMATED REPAIR COST

Free under software updates 22TC11 / 23TC05 / EEA-23	**Free if covered** OFFICIAL [2][3][4] independent shop, installed
Labor only, 0.4 h Subaru warranty time	**$40–$60** OUR ESTIMATE [9][12] labor only, parts extra
Dealer	**Often 1.5–2× the independent-shop price** OUR ESTIMATE

Where the numbers come from: If a reprogram is needed outside a campaign: Estimate: Subaru warranty labor time of 0.4 h (bulletin [9]) × $100–$160/h independent-shop labor rate [12]. Parts are extra unless stated; check the VIN for open warranty coverage first.

PARTS FOR BZ4X

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

WHAT TO ASK YOUR SHOP

- Charging software updates done?
- How fast does DC charging run?
- Does the supplied cable charge the car?

2 12V battery drain and no-start

Any mileage

Severity: Medium: leaks and wear · 5 mentions in counted NHTSA complaints

COMPUTED FROM NHTSA DATA

Reports cover a wide mileage span (Owner reports on 2023–2025 bZ4X and Solterra), so mileage doesn't say much here. Range: Owner reports on 2023–2025 bZ4X and Solterra OFFICIAL [1]

WHAT FAILS FORUM/BLOG [1][10]

Owners report the 12V battery running down, sometimes repeatedly after replacement. With a weak 12V battery the car will not go Ready, the doors may only open with the key, and brake or parking-brake warnings can appear. Premature 12V failures have been replaced under warranty.

SYMPTOMS

- Car will not go Ready
- Doors open only with the mechanical key
- Screens flicker or reboot
- Parking brake or brake system warning at start-up

IF IT'S LEFT TOO LONG

A dead 12V battery strands the car even with a charged traction battery.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Test the 12V battery at each service and replace it at the first sign of weakness.

ESTIMATED REPAIR COST

12V battery replacement at an independent shop	**$200–$320** FORUM/BLOG [10] independent shop, installed
12V battery replacement at a Toyota dealer	**$280–$400** FORUM/BLOG [10] reported range for the bill after a failure
Dealer	**Often 1.5–2× the independent-shop price** OUR ESTIMATE

1.3× The failure-bill midpoint ($340) is about 1.3× the early-fix midpoint ($260). A cost ratio, not a probability.

PARTS FOR BZ4X

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

WHAT TO ASK YOUR SHOP

- Has the 12V battery been replaced?
- Any no-start or low-voltage warnings?

3 Electric A/C compressor failure: no heat or defrost (recall 25V-577)

Any mileage

Severity: High: overheating, stalls, limp mode or a big bill · 15 mentions in counted NHTSA complaints

COMPUTED FROM NHTSA DATA

Reports cover a wide mileage span (2023–2025 bZ4X and Solterra), so mileage doesn't say much here. Range: 2023–2025 bZ4X and Solterra OFFICIAL [7]

WHAT FAILS OFFICIAL [7]

The high-voltage electric compressor runs the heat pump. If it fails, or with certain other HVAC faults, the defroster and defogger can stop working. Toyota and Subaru update the HVAC control software and inspect the electric compressor, replacing it if needed, free of charge.

SYMPTOMS

- No heat or no defrost

ESTIMATED REPAIR COST

Free under recall 25V-577	**Free if covered** OFFICIAL [7] independent shop, installed
Compressor replacement outside the recall: no published price	**No published price** reported range for the bill after a failure

- A/C or heat pump warning
- Windows fog up and will not clear

IF IT'S LEFT TOO LONG

A fogged windshield is a crash risk.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Check the VIN for recall 25V-577 (Toyota 25TB07 / 25TA07, Subaru WRD-25) and have the compressor checked.

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

PARTS FOR BZ4X

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

WHAT TO ASK YOUR SHOP

- Recall 25V-577 done?
- Any loss of heat or defrost?

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4 EV system warning codes (battery heater P2D384B, motor ECU P060694), 2023

Any mileage

Severity: Medium: leaks and wear · 4 mentions in counted NHTSA complaints

COMPUTED FROM NHTSA DATA

Reports cover a wide mileage span (2023 bZ4X (battery heater code) and 2023 Solterra (motor ECU code)), so mileage doesn't say much here. Range: 2023 bZ4X (battery heater code) and 2023 Solterra (motor ECU code) OFFICIAL [8][9]

WHAT FAILS OFFICIAL [8][9]

On the 2023 bZ4X, Toyota investigated a battery pack heater over-temperature code (P2D384B) and tells dealers to contact technical assistance before repairing. On the 2023 Solterra, the motor EV control ECU can falsely set P060694 in Power mode while parking with the Advanced Parking System; Subaru reprograms the ECU.

SYMPTOMS

- Check-engine (MIL) or EV system warning
- DTC P2D384B or P060694

IF IT'S LEFT TOO LONG

The car may limit power or charging until the fault is cleared; battery repairs are dealer-only.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Have a dealer scan for these codes and apply the software fix; battery work stays under the 8-year/100,000-mile traction battery warranty.

ESTIMATED REPAIR COST

Labor only, 0.4 h Subaru warranty time	**$40–$60** OUR ESTIMATE [9][12] labor only, parts extra
Battery heater repair: no published price	**No published price** reported range for the bill after a failure
Dealer	**Often 1.5–2× the independent-shop price** OUR ESTIMATE

Where the numbers come from: Estimate: Subaru warranty labor time of 0.4 h (bulletin [9]) × $100–$160/h independent-shop labor rate [12]. Parts are extra unless stated; check the VIN for open warranty coverage first.

PARTS FOR BZ4X

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

WHAT TO ASK YOUR SHOP

- Any EV system warnings?
- Software updates done?

5 · ALSO REPORTED, NOT RANKED

Other themes in bZ4X / Solterra EV 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
Driver assistance / braking alerts	25	Driver-assistance complaints; not part of the electric drive.

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

- VIN check for charging software updates and recall 25V-577
- 12V battery test
- Heat and defrost check
- DC fast-charge test

Ask the seller

- Charging updates and 25V-577 done?
- Any 12V or no-start events?
- Hub-bolt recall done (2023)?

Documents to request

- Dealer service-history printout for the VIN (recalls, campaigns and battery work)
- nhtsa.gov/recalls screenshot

WHAT A BUYER MAY DEDUCT

FINDING	ESTIMATED ADJUSTMENT
Slow DC fast charging and charging software faults: fault found on inspection	$40–$60 + parts
12V battery drain and no-start: original, no replacement invoice	$200–$320
Electric A/C compressor failure: no heat or defrost (recall 25V-577): fault found on inspection	No published price
EV system warning codes (battery heater P2D384B, motor ECU P060694), 2023: symptoms or fault codes present	$40–$60 + parts
Pre-ticked rows (●), if no records clear them	**None at this mileage**

● = 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 drivetrain 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/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 27, 2026 from NHTSA's complaints API for All complaints for the bZ4X and Solterra in the years shown: 78 complaints. We pooled every complaint NHTSA files under these model names and years; where a nameplate also came with another engine or powertrain, a few complaints may be about it. Themes are keyword matches on the complaint text.
COMPUTED FROM NHTSA DATA

THEME	COMPLAINTS	IN THIS REPORT
Driver assistance / braking alerts	25	Also reported
Heat / defrost / A/C	15	Item 3
Charging / range	9	Item 1
12V battery	5	Item 2
EV system warnings / loss of power	4	Item 4
Wheel hub bolts	0	—

Limits: complaints are self-reported and not adjusted for cars sold; keyword matching over- and under-counts; owners rarely file safety complaints about slow-building faults such as coolant seeps or noises, so those look rarer than they are.

SOURCES

1. NHTSA owner complaints for 2023–2025 Toyota bZ4X and Subaru Solterra, pulled Oct 27, 2026 (ODI numbers in the cost notes) OFFICIAL
https://www.nhtsa.gov/report-a-safety-problem#complaints

2. Toyota Special Service Campaign 22TC11: Software update: DC fast charging in cold weather, 2023 bZ4X (2022-11-02), filed with NHTSA OFFICIAL
https://static.nhtsa.gov/odi/tsbs/2022/MC-10228592-9999.pdf

3. Toyota Software Update 23TC05: EV charging performance and display update (faster DC charging, better range and state-of-charge display; 1.9 h, about 8,500 vehicles), 2023 bZ4X (2023-07-27), filed with NHTSA OFFICIAL
https://static.nhtsa.gov/odi/tsbs/2023/MC-10241408-9999.pdf

4. Subaru Product Enhancement Program EEA-23: Reprogramming of the EV, EV battery, motor generator, plug-in control, air conditioner and meter modules, 2023 Solterra (2023-09-26), filed with NHTSA OFFICIAL
https://static.nhtsa.gov/odi/tsbs/2023/MC-10243400-0001.pdf

5. Subaru Service Bulletin 07-228-24: Reprogramming for inability to charge at EVgo charging stations, 2023 Solterra (2024-05-29), filed with NHTSA OFFICIAL
https://static.nhtsa.gov/odi/tsbs/2024/MC-11000839-0001.pdf

6. Toyota Tech Tip T-TT-0801-26: Unable to charge with the supplied Level 1 or 2 charge cable (LEDs lit on the charger), 2024–2025 bZ4X (2026-04-16), filed with NHTSA OFFICIAL
https://static.nhtsa.gov/odi/tsbs/2026/MC-11032478-0001.pdf

7. NHTSA recall records: 25V-577 (2023–2025 bZ4X and Solterra: with an HVAC fault such as electric compressor failure, the defroster and defogger may stop working), checked Oct 27, 2026 OFFICIAL
https://www.nhtsa.gov/recalls?nhtsaId=25V577000

8. Toyota Tech Tip T-TT-0727-23: MIL on with DTC P2D384B (EV battery pack heater performance over temperature), 2023 bZ4X: contact Toyota technical assistance before repair (2023-03-27), filed with NHTSA OFFICIAL
https://static.nhtsa.gov/odi/tsbs/2023/MC-10234339-9999.pdf

9. Subaru Service Bulletin 03-93-24: Reprogramming for DTC P060694 (EV powertrain control processor unexpected operation) set by the motor EV control ECU (0.4 h), 2023 Solterra (2024-05-29), filed with NHTSA OFFICIAL
https://static.nhtsa.gov/odi/tsbs/2024/MC-11000840-0001.pdf

10. Recharged: Toyota bZ4X 12V battery replacement (about $200–$320 at an independent shop, $280–$400 at a Toyota dealer; warning signs and warranty notes; via search extract Oct 28, 2026) FORUM/BLOG
https://web.archive.org/web/20260517111516/https://recharged.com/articles/toyota-bz4x-12v-battery-replacement/

11. Subaru Service Bulletin 07-230-24: Customized charging settings default back to factory settings about ten minutes after Ready Off: reprogram the electric converter unit (0.4 h), 2024 Solterra (2024-12-19), filed with NHTSA OFFICIAL
https://static.nhtsa.gov/odi/tsbs/2025/MC-11012264-0001.pdf

12. Tekmetric: average auto repair labor rates by state, 2026 (national average $132/h; state averages $85–$197/h). We use $100–$160/h for labor-time estimates. SHOP/RETAILER
https://tours.tekmetric.com/answers/average-auto-repair-labor-rates-by-state-2026

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 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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Wrong input (VIN, mileage, build date)? Email hello@repairahead.com with report ID RA-BZ4X-123456-20261028 and we'll correct and reissue it.

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.