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

2016 Jeep Grand Cherokee at 104,000 mi

1C4RJFBM9GC123456

MODEL / CHASSIS	ENGINE	MILEAGE	DRIVETRAIN
Grand Cherokee · Grand Cherokee Limited 3.0 EcoDiesel 4x4	FCA 3.0L EcoDiesel V6 (Gen 1–3)	104,000 mi	4WD
BUILD MONTH	**REPORT DATE**	**MODE**	**PREPARED FOR**
Not entered (door jamb)	October 27, 2026	Shop	Sample Owner

VIN check: check digit valid; model-year code 'G' = 2016, 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.

3
jobs recommended now

0
to plan in the next 30,000 miles · plus 1 factory maintenance item

1
to watch or check at each service

Safety recalls NHTSA lists for this model year (6 of 7)

- **23V-411** · Engine · crankshaft tone wheel (3.0L diesel): An engine stall can increase the risk of a crash.
- **22V-406** · Fuel system · high-pressure fuel pump (3.0L diesel): Fuel starvation may result in an unexpected loss of drive power, increasing the risk of a crash.
- **20V-699** · Engine · EGR cooler crack (3.0L diesel): A cracked EGR cooler can let hot coolant vapor into the intake, where it can burn, a fire risk.
- **20V-475** · Engine · crankshaft tone wheel (3.0L diesel): An engine stall can increase the risk of a crash.
- **18V-332** · Cruise control · cannot be switched off: A wiring short can stop the cruise control from switching off, so the vehicle keeps its speed or speeds up.
- **16V-168** · Brakes · left front caliper material: A cracked brake caliper may lengthen the distance needed to stop the vehicle and increase the risk of a crash.

A model-year list, not a VIN check. The full report lists the others. Repairs are free at a Jeep dealer if open. Check this VIN at nhtsa.gov/recalls.

Step 0 · Free: run the VIN at nhtsa.gov/recalls and ask a Jeep dealer for a campaign printout, including 20V-699, 22V-406, 20V-475, 23V-411. Read the build month (MM/YY) on the driver's door-jamb label.

Recommended now at the next service

EGR cooler cracking (coolant into the intake) — Free if open

Recall 20V-699 is listed for this model year. Check the VIN; the repair is free at a Jeep dealer if it is open.

High-pressure fuel pump failure (stall) — Free if open

Recall 22V-406 is listed for this model year. Check the VIN; the repair is free at a Jeep dealer if it is open.

Crankshaft tone wheel loss of signal (stall) — Free if open

Recalls 20V-475, 23V-411 are listed for this model year. Check the VIN; the repair is free at a Jeep dealer if it is open.

Next 12 months up to about 116,000 mi

Nothing scheduled here.

Within the next 30,000 miles up to 134,000 mi

Nothing else enters its reported range in this window.

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

Oil leak at the oil cooler / filter housing — **Ask us for a quote**

Any mileage (3.0L diesel) · Inspect at each service; fix at the first sign

Recommended now

Free recall check

Springfield Auto Care prices (example)

Planned through 134,000 mi

From $179

Now + next 12 months + next 30,000 miles, with the factory maintenance on this report if the records don’t show it done. 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

Scheduled maintenance from 104,000 mi to 134,000 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	OUR PRICE
Engine coolant Flush and replace engine coolant at 10 years or 150,000 mi, whichever comes first.	every 150,000 mi or 10 years	**Due by age: 10-year limit passed (check records)** [M1][M2][M3][M4]	**From $179**

M1. 2014 Ram 2500/3500 Diesel Supplement (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Ram/2014/2500/426.pdf

M2. 2016 Jeep Grand Cherokee Diesel Supplement (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Jeep/2016/Grand_Cherokee/117.pdf

M3. 2020 Ram 1500 Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Ram/2020/1500_DT/5633292_20_DT_OM_EN_USC_DIGITAL_E5.pdf

M4. 2021 Jeep Wrangler Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Jeep/2021/Wrangler/5690670_21_JL_OM_EN_USC_DIGITAL_E5.pdf

WHERE 104K SITS FOR EACH WEAK POINT

#	WEAK POINT	REPORTED RANGE	THIS CAR
1	EGR cooler cracking (coolant into the intake)	20,000–88,000 mi (middle half of 21 owner complaints that state a mileage) COMPUTED FROM NHTSA DATA	Past the range
2	High-pressure fuel pump failure (stall)	51,000–149,000 mi (middle half of 62 owner complaints that name the high-pressure fuel pump and state a mileage) COMPUTED FROM NHTSA DATA	Inside the range
3	Crankshaft tone wheel loss of signal (stall)	2014–2019 Ram 1500 and 2014–2020 Grand Cherokee 3.0L diesel OFFICIAL	Any mileage
4	Oil leak at the oil cooler / filter housing	3.0L diesel 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 2016 Jeep Grand Cherokee

Safety recall repairs are free at Jeep 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 1C4RJFBM9GC123456.
2. Note every recall shown as “Recall incomplete” and keep a screenshot.
3. Ask a Jeep dealer for a campaign printout; it also lists completed campaigns.

3.0L ECODIESEL V6 RECALLS WE TRACK

19V-757 · EGR cooler may crack (2014–2019 Ram 1500 3.0L diesel)

Not listed for MY2016

The EGR cooler may crack and let heated coolant vapor into the EGR system, where it may burn in the intake manifold, a fire risk. Dealers replace the EGR cooler and inspect the intake manifold, free. OFFICIAL [2]

20V-699 · EGR cooler may crack (2014–2019 Grand Cherokee 3.0L diesel)

NHTSA lists this model and year: check by VIN

Same EGR cooler condition as 19V-757 on Grand Cherokee. Free repair. OFFICIAL [2]

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

22V-406 · High-pressure fuel pump may fail (2014–2020 Grand Cherokee, 2014–2019 Ram 1500)

NHTSA lists this model and year: check by VIN

A failing HPFP may send debris through the fuel system and starve the engine, causing a loss of power. Dealers replace the pump and other fuel parts as needed, free. OFFICIAL [3]

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

22V-767 · High-pressure fuel pump may fail (2020–2022 Wrangler, Ram 1500, 2021–2022 Gladiator)

Not listed for MY2016

The HPFP may fail and stall the engine. Dealers replace the pump and other fuel parts as needed, free. OFFICIAL [3]

23V-263 · High-pressure fuel pump may fail (2021–2023 Wrangler, Gladiator, 2022–2023 Ram 1500)

Not listed for MY2016

The HPFP may fail and stall the engine. Dealers replace the pump and other fuel parts as needed, free. OFFICIAL [3]

20V-475 · Crankshaft tone wheel may delaminate (2014–2018 Ram 1500, 2014–2016 Grand Cherokee)

NHTSA lists this model and year: check by VIN

The tone wheel may delaminate so the engine loses injector timing and stalls. Dealers update the PCM so it runs on the cam signal, free. OFFICIAL [4]

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

23V-411 · Crankshaft tone wheel may delaminate (2014–2019 Ram 1500, 2014–2020 Grand Cherokee)

NHTSA lists this model and year: check by VIN

Same tone wheel condition as 20V-475 on more vehicles. Free PCM software update. OFFICIAL [4]

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

EVERY RECALL NHTSA LISTS FOR THE 2016 JEEP GRAND CHEROKEE (7)

RECALL	COMPONENT	WHAT CAN HAPPEN (NHTSA, SHORTENED)
23V-411 3.0L EcoDiesel V6 tracked	Engine · crankshaft tone wheel (3.0L diesel)	An engine stall can increase the risk of a crash. Details
22V-406 3.0L EcoDiesel V6 tracked	Fuel system · high-pressure fuel pump (3.0L diesel)	Fuel starvation may result in an unexpected loss of drive power, increasing the risk of a crash. Details
20V-699 3.0L EcoDiesel V6 tracked	Engine · EGR cooler crack (3.0L diesel)	A cracked EGR cooler can let hot coolant vapor into the intake, where it can burn, a fire risk. Details
20V-475 3.0L EcoDiesel V6 tracked	Engine · crankshaft tone wheel (3.0L diesel)	An engine stall can increase the risk of a crash. Details
18V-332	Cruise control · cannot be switched off	A wiring short can stop the cruise control from switching off, so the vehicle keeps its speed or speeds up. Details
16V-168	Brakes · left front caliper material	A cracked brake caliper may lengthen the distance needed to stop the vehicle and increase the risk of a crash. Details
16V-249	Transmission · shift interlock solenoid	If the solenoid loses function, the transmission may lock in the Park or Neutral position when the vehicle comes to a stop, possibly rendering the vehicle disabled in traffic, increasing the risk of a crash. Details

Source: NHTSA recalls API, fetched 2026-10-27 and combined across NHTSA model names: GRAND CHEROKEE. 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 (GRAND CHEROKEE): Two listings are left out of this 3.0L EcoDiesel sample: 16V-814 (3.6L gas V6 fuel rail tube) and 17E-061 (an aftermarket supercharger kit for SRT models). A VIN check would show them if they applied.

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 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 (WK2).

1 EGR cooler cracking (coolant into the intake)

Past the range

Severity: Critical: rare, but can badly damage the engine · 129 mentions in counted NHTSA complaints COMPUTED FROM NHTSA DATA

At 104,000 mi this car is past the reported range (20,000–88,000 mi (middle half of 21 owner complaints that state a mileage)). If the original parts are still fitted, have them checked and plan for them. Range: 20,000–88,000 mi (middle half of 21 owner complaints that state a mileage) COMPUTED FROM NHTSA DATA [1]



Applies to: 2014–2019 Ram 1500 and Grand Cherokee 3.0L diesel

WHAT FAILS OFFICIAL [2][6]

FCA recalled these trucks because the EGR cooler can crack and let hot coolant vapor into the EGR system, where it can burn in the intake manifold. Dealers replace the EGR cooler and inspect the intake manifold. FCA also tells technicians that a "coolant leak" from the cooler is often normal condensation, so the coolant level should be checked first.

SYMPTOMS

- Coolant level dropping with no visible leak
- White smoke
- Check-engine light

IF IT'S LEFT TOO LONG

A cracked cooler can start a fire in the intake.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Yes. Check the VIN for recalls 19V-757 / 20V-699.

ESTIMATED REPAIR COST

Free under recall 19V-757 / 20V-699	**Free if covered** OFFICIAL [2] published independent-shop range
No published price (intake manifold if damaged)	**No published price** reported range for the bill after a failure

PARTS FOR WK2

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

QUESTIONS TO ASK US

- EGR cooler recall done?
- Any coolant loss?

2 High-pressure fuel pump failure (stall)

Inside the range

Severity: Critical: rare, but can badly damage the engine · 187 mentions in counted NHTSA complaints COMPUTED FROM NHTSA DATA

At 104,000 mi this car is inside the reported range (51,000–149,000 mi (middle half of 62 owner complaints that name the high-pressure fuel pump and state a mileage)), 53,000 miles past where reports start. Range: 51,000–149,000 mi (middle half of 62 owner complaints that name the high-pressure fuel pump and state a mileage) COMPUTED FROM NHTSA DATA [9]



Applies to: All 2014–2023 3.0L diesel Ram 1500, Grand Cherokee, Wrangler and Gladiator under one of three recalls

WHAT FAILS OFFICIAL [3]

FCA recalled every model year of this engine because the high-pressure fuel pump can fail. A failing pump can shed debris into the fuel system and starve the engine, so it stalls. Dealers replace the pump and inspect or replace other fuel system parts.

SYMPTOMS

- Sudden stall or loss of power
- Hard starting
- Check-engine light with fuel pressure codes

IF IT'S LEFT TOO LONG

Debris can damage the injectors and rails, and the engine can stall while driving.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Yes. Check the VIN for recalls 22V-406, 22V-767 or 23V-263.

ESTIMATED REPAIR COST

Free under recall 22V-406 / 22V-767 / 23V-263	**Free if covered** OFFICIAL [3] published independent-shop range
No published price outside the recall	**No published price** reported range for the bill after a failure

PARTS FOR WK2

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

QUESTIONS TO ASK US

- Fuel pump recall done?
- Any stalls?

---

3 Crankshaft tone wheel loss of signal (stall)

Any mileage

Severity: High: overheating, stalls, limp mode or a big bill · 53 mentions in counted NHTSA complaints

COMPUTED FROM NHTSA DATA

Reports cover a wide mileage span (2014–2019 Ram 1500 and 2014–2020 Grand Cherokee 3.0L diesel), so mileage doesn't say much here. Range: 2014–2019 Ram 1500 and 2014–2020 Grand Cherokee 3.0L diesel OFFICIAL [4][5]

WHAT FAILS OFFICIAL [4][5]

The crankshaft position sensor tone wheel can delaminate. The engine then loses the signal it uses to time the injectors and can stall. Recalls 20V-475 and 23V-411 add PCM software so the engine keeps running on the camshaft signal. On 2014–2018 Grand Cherokee, FCA also replaces the tone wheel under the X95 warranty extension.

ESTIMATED REPAIR COST

Free software update under recall 20V-475 / 23V-411	**Free if covered** OFFICIAL [4] published independent-shop range
Labor only, 5.1–6.6 h FCA warranty	**$510–$1,060** OUR ESTIMATE [5][8] labor only, parts extra

SYMPTOMS

- Check-engine light
- Stall or no-start
- Crank or cam position codes

IF IT'S LEFT TOO LONG

Without the software update the engine can stall while driving.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Yes. Make sure the software recall is done; ask about X95 on a Grand Cherokee.

time plus a crankshaft tone wheel	

Where the numbers come from: Estimate: FCA warranty labor time of 5.1–6.6 h (bulletin [5]) × $100–$160/h independent-shop labor rate [8]. Parts are extra unless stated; check the VIN for open warranty coverage first.

PARTS FOR WK2

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

QUESTIONS TO ASK US

- Tone wheel recall or X95 done?
- Any crank sensor codes?

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4 Oil leak at the oil cooler / filter housing

Any mileage

Severity: Medium: leaks and wear · 20 mentions in counted NHTSA complaints

COMPUTED FROM NHTSA DATA

Reports cover a wide mileage span (3.0L diesel), so mileage doesn't say much here. Range: 3.0L diesel OFFICIAL [7]

WHAT FAILS OFFICIAL [7]

FCA reports oil leaks between the engine oil cooler/filter housing and the block. Its guidance is to replace the gasket rather than the whole housing.

SYMPTOMS

- Oil on the top or back of the engine
- Burning oil smell

IF IT'S LEFT TOO LONG

Leaking oil can reach hot exhaust parts.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Reseal it when you see the leak.

ESTIMATED REPAIR COST

No published price	**Our price is in the plan above** ask us for a written quote
No published price	**No published price** reported range for the bill after a failure

PARTS FOR WK2

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

QUESTIONS TO ASK US

- Any oil leaks fixed?

5 · ALSO REPORTED, NOT RANKED

Other themes in 3.0L EcoDiesel V6 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
Stalling / loss of power	405	The most common complaint. FCA links stalls to the fuel pump and tone wheel recalls; other reports are DEF or electrical faults.
Emissions / DEF	183	Emissions parts faults; FCA ran emissions recalls on 2014–2016 engines but we could not read the coverage terms.
Engine knock / bearing failure	62	Owners report bottom-end failures; we found no FCA bulletin or recall for this, so it is not a weak point here.

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/Stellantis 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 Ram 1500 and Grand Cherokee complaints that mention the diesel; Wrangler and Gladiator diesel complaints: 2,890 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
Stalling / loss of power	405	Also reported
Fuel pump / stall	187	Item 2
Emissions / DEF	183	Also reported
EGR cooler / coolant loss	129	Item 1
Engine knock / bearing failure	62	Also reported
Crank sensor / tone wheel	53	Item 3
Oil leaks	20	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 owner complaints for 2014–2023 Ram 1500 and 2014–2019 Grand Cherokee complaints that mention the diesel, plus 2020–2023 Wrangler and Gladiator diesel, pulled Oct 27, 2026 (ODI numbers in the cost notes) OFFICIAL
https://www.nhtsa.gov/report-a-safety-problem#complaints

2. NHTSA recall records: 19V-757 and 20V-699 (EGR cooler may crack, fire risk), checked Oct 27, 2026 OFFICIAL
https://www.nhtsa.gov/recalls?nhtsaId=19V757000

3. NHTSA recall records: 22V-406, 22V-767 and 23V-263 (high-pressure fuel pump failure, stall), checked Oct 27, 2026 OFFICIAL
https://www.nhtsa.gov/recalls?nhtsaId=22V406000

4. NHTSA recall records: 20V-475 and 23V-411 (crankshaft position sensor tone wheel may delaminate, stall), checked Oct 27, 2026 OFFICIAL
https://www.nhtsa.gov/recalls?nhtsaId=20V475000

5. FCA US TSB 14-008-21: 3.0L diesel crankshaft tone wheel loss of signal: X95 warranty extension, replace the crankshaft tone wheel (2014–2018 Grand Cherokee) (2021-08-19), filed with NHTSA OFFICIAL
https://static.nhtsa.gov/odi/tsbs/2021/MC-10218581-9999.pdf

6. FCA US STAR case S2125000001: High-pressure EGR cooler: perceived internal coolant leak (2021-01-21), filed with NHTSA OFFICIAL
https://static.nhtsa.gov/odi/tsbs/2021/MC-10215892-9999.pdf

7. FCA US STAR case S2009000004: Oil leak between the engine oil cooler/filter housing and the engine block (2021-06-18), filed with NHTSA OFFICIAL
https://static.nhtsa.gov/odi/tsbs/2021/MC-10221293-9999.pdf

8. Tekmetric: average auto repair labor rates by state, 2026 SHOP/RETAILER
https://tours.tekmetric.com/answers/average-auto-repair-labor-rates-by-state-2026

9. NHTSA complaint flat file (every complaint received 1995 to Oct 31, 2026), VIN prefixes decoded with vPIC and matched to this engine with the report matcher; complaints that mention the high-pressure fuel pump (HPFP or CP4), read Nov 2, 2026
OFFICIAL
https://static.nhtsa.gov/odi/ffdd/cmpl/

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

No warranty

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