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

2016 Jeep Wrangler Unlimited at 98,000 mi

1C4BJWDG8GL123456

MODEL / CHASSIS	ENGINE	MILEAGE	DRIVETRAIN
Wrangler Unlimited · JK Wrangler Unlimited	3.6L Pentastar V6 (and the 3.2L Pentastar in the Jeep Cherokee)	98,000 mi	4x4
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.

1
inspection 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 (2)

- **19V-018** · Air bags · passenger inflator: The passenger air bag inflator can explode in a crash, sending metal fragments that can seriously injure or kill.
- **16V-734** · Air bags · front impact sensor: On Wranglers built June 16, 2015 to August 14, 2016, sensor wiring can detach so the front air bags and pretensioners may not deploy.

A model-year list, not a VIN check. 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. Read the build month (MM/YY) on the driver's door-jamb label.

Recommended now at the next service — **$140**

Inspection: check now, while it's cheaper to fix — **$140**

inspection EXAMPLE

Rocker arms (ticking valve cover): Inside the range (62,000–107,000 mi, the middle half of 76 owner reports) · if it fails: $1,800–$4,000

Known weak point for this engine, not a finding on your car. The inspection shows whether yours has early signs.

Next 12 months up to about 111,000 mi

Nothing scheduled here.

Within the next 30,000 miles up to 128,000 mi

Nothing else enters its reported range in this window.

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

Oil filter housing and oil cooler — **$650**
Any mileage (no reliable figure) · Inspect at each service; fix at the first sign
our price EXAMPLE

Water pump and radiator — **$700**
Past the range (37,000–92,000 mi, the middle half of 129 owner reports) · Inspect at each service; fix at the first sign
our price EXAMPLE

Oil pan gasket and oil pressure sensor leak — **$500**
Any mileage (no reliable figure) · Inspect at each service; fix at the first sign
our price EXAMPLE

Recommended now

$140

Springfield Auto Care prices (example)

Planned through 128,000 mi

From $568

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 98,000 mi to 128,000 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
Spark plugs 3.6L / 3.2L Pentastar: replace spark plugs every 100,000 mi.	every 100,000 mi	**Due at 100,000 mi** [M5][M6][M7][M8][M9][M10][M11][M12][M13][M14][M15][M16][M17][M18][M19][M20][M21][M22]	**$249**
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)** [M5][M6][M7][M8][M9][M10][M11][M12][M13][M14][M15][M16][M17][M18][M19][M20][M21][M22]	**From $179**

M1. 2011 Jeep Grand Cherokee Owner's Manual (Maintenance Schedules) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Jeep/2011/Grand_Cherokee/710.pdf

M2. 2011 Dodge Charger User Guide (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Dodge/2011/Charger/881.pdf

M3. 2012 Dodge Durango User Guide (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Dodge/2012/Durango/379.pdf

M4. 2012 Dodge Challenger User Guide (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Dodge/2012/Challenger/376.pdf

M5. 2013 Ram 1500 User Guide (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Ram/2013/1500/P130070_13_DSDJD2_UG_EN_USC_U10_V2.pdf

M6. 2013 Chrysler Town & Country Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Chrysler/2013/Town_Country/292.pdf

M7. 2014 Jeep Grand Cherokee Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Jeep/2014/Grand_Cherokee/275.pdf

M8. 2014 Jeep Cherokee Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Jeep/2014/Cherokee/265.pdf

M9. 2014 Chrysler 300 Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Chrysler/2014/300/191.pdf

M10. 2015 Chrysler Town & Country Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Chrysler/2015/Town_Country/254.pdf

M11. 2016 Chrysler 200 Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Chrysler/2016/200/7.pdf

M12. 2017 Jeep Wrangler Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Jeep/2017/Wrangler/2049.pdf

M13. 2017 Dodge Journey Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Dodge/2017/Journey/1942.pdf

M14. 2017 Chrysler Pacifica Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Chrysler/2017/Pacifica/1932.pdf

M15. 2018 Jeep Wrangler (JL) Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Jeep/2018/Wrangler_JL/9510.pdf

M16. 2018 Jeep Grand Cherokee Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Jeep/2018/Grand_Cherokee/P123794_18_WK_OM_EN_USC_t_DIGITAL.pdf

M17. 2018 Ram 1500 Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Ram/2018/1500/P127381_18_DSDJD2_OM_EN_USC_DIGITAL.pdf

M18. 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

M19. 2021 Dodge Challenger Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Dodge/2021/Challenger/P135574_21_LA_OM_EN_USC_DIGITAL.pdf

M20. 2022 Jeep Grand Cherokee L Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Jeep/2022/Grand_Cherokee_L/5617643_22_WL_OM_EN_USC_DIGITAL_E5.pdf

M21. 2023 Ram 1500 Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Ram/2023/1500_DT/5690659_23_DT_OM_EN_USC_DIGITAL_E6.pdf

M22. 2015 Ram ProMaster Owner's Manual (Maintenance Schedule) OFFICIAL
https://vehicleinfo.mopar.com/assets/publications/en-us/Ram/2015/ProMaster/185.pdf

WHERE 98K SITS FOR EACH WEAK POINT

#	WEAK POINT	REPORTED RANGE	THIS CAR
1	Rocker arms (ticking valve cover)	62,000–107,000 mi (middle half of 76 owner complaints that name the rocker arms and state a mileage) COMPUTED FROM NHTSA DATA	Inside the range
2	Oil filter housing and oil cooler	Any mileage; no reliable figure FORUM/BLOG	Any mileage
3	Water pump and radiator	37,000–92,000 mi (middle half of 129 owner complaints about the water pump or radiator that state a mileage) COMPUTED FROM NHTSA DATA	Past the range
4	Oil pan gasket and oil pressure sensor leak	Any mileage; no reliable figure 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 2016 Jeep Wrangler Unlimited

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 1C4BJWDG8GL123456.
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.

3.6L PENTASTAR RECALLS WE TRACK

NHTSA lists no engine-specific recall campaign for the 3.6L Pentastar 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 2016 JEEP WRANGLER UNLIMITED (2)

RECALL	COMPONENT	WHAT CAN HAPPEN (NHTSA, SHORTENED)
19V-018	Air bags · passenger inflator	The passenger air bag inflator can explode in a crash, sending metal fragments that can seriously injure or kill. Details
16V-734	Air bags · front impact sensor	On Wranglers built June 16, 2015 to August 14, 2016, sensor wiring can detach so the front air bags and pretensioners may not deploy. Details

Source: NHTSA recalls API, fetched 2026-10-27 and combined across NHTSA model names: WRANGLER. 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 (WRANGLER): Three recalls for right-hand-drive Wranglers only (19V-680, 16V-288, 24V-196) are left out of this sample.

SERVICE ACTIONS, BULLETINS AND WARRANTY PROGRAMS

CAMPAIGN	WHAT IT SAYS	THIS CAR
Left cylinder head warranty extension (2011–2013)	FCA extended coverage on the left cylinder head to 10 years or 150,000 miles for 2011, 2012 and some 2013 3.6L engines (not the later 3.2L) (valve-seat wear on cylinder 2). Most cars are now past it. FORUM/BLOG [2]	Mostly expired
Rocker arm service bulletin	FCA issued a bulletin with a superseding rocker arm in 2014; an owner-report site gives it as TSB 09-002-14 REV. B. FORUM/BLOG [3]	Owner's cost

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 (JK).

1 Rocker arms (ticking valve cover)

Inside the range

Severity: High: overheating, stalls, limp mode or a big bill · 1019 mentions in counted NHTSA complaints COMPUTED FROM NHTSA DATA

At 98,000 mi this car is inside the reported range (62,000–107,000 mi (middle half of 76 owner complaints that name the rocker arms and state a mileage)), 36,000 miles past where reports start. Range: 62,000–107,000 mi (middle half of 76 owner complaints that name the rocker arms and state a mileage) COMPUTED FROM NHTSA DATA [6]



Half of the 76 rocker-arm complaints to NHTSA on these engines that state a mileage came before about 86,000 miles.

WHAT FAILS FORUM/BLOG [2]

The roller bearings in the rocker arms (cam followers) wear or seize, which ticks and can wipe a camshaft lobe.

SYMPTOMS

- Ticking from under a valve cover
- Misfire codes
- Rough running

IF IT'S LEFT TOO LONG

A seized roller can wear the camshaft, turning a rocker job into a cam job.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Fix when the tick starts; shops usually replace all the rockers on that bank.

ESTIMATED REPAIR COST

Rocker arm replacement, mostly labor	**Our price is in the plan above** ask us for a written quote
Rockers plus camshaft (reported range)	**$1,800–$4,000** FORUM/BLOG [3] reported range for the bill after a failure

PARTS FOR JK

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

QUESTIONS TO ASK US

- Any ticking or misfire codes?
- Rockers or camshaft ever replaced?

2 Oil filter housing and oil cooler

Any mileage

Severity: Medium: leaks and wear · 623 mentions in counted NHTSA complaints COMPUTED FROM NHTSA DATA

Reports cover a wide mileage span (Any mileage; no reliable figure), so mileage doesn't say much here. Range: Any mileage; no reliable figure FORUM/BLOG [4]

WHAT FAILS FORUM/BLOG [4]

ESTIMATED REPAIR COST

The plastic oil filter housing with its built-in oil cooler cracks or its gaskets leak oil and coolant into the valley of the engine.

SYMPTOMS

- Oil or coolant pooling at the back of the engine
- Oil on the transmission bell housing
- Low coolant

IF IT'S LEFT TOO LONG

A cracked housing loses oil and coolant; left long, the engine can run low on either.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Fix when it leaks.

Housing replacement (reported range)	**Our price is in the plan above** ask us for a written quote
Same job	**$400–$900** FORUM/BLOG [4] reported range for the bill after a failure

PARTS FOR JK

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

QUESTIONS TO ASK US

- Any oil or coolant at the back of the engine?

3 Water pump and radiator

Past the range

Severity: Medium: leaks and wear · 582 mentions in counted NHTSA complaints

COMPUTED FROM NHTSA DATA

At 98,000 mi this car is past the reported range (37,000–92,000 mi (middle half of 129 owner complaints about the water pump or radiator that state a mileage)). If the original parts are still fitted, have them checked and plan for them. Range: 37,000–92,000 mi (middle half of 129 owner complaints about the water pump or radiator that state a mileage) COMPUTED FROM NHTSA DATA [6]



Half of the 129 Pentastar water-pump and radiator complaints to NHTSA that state a mileage came before about 62,000 miles. Owner forums often say past 100k; the complaint data says sooner.

WHAT FAILS FORUM/BLOG [2]

The water pump and radiator are the most common cooling failures; the heater core and oil cooler can also fail.

SYMPTOMS

- Coolant leak
- Overheating
- Heat or A/C problems

IF IT'S LEFT TOO LONG

Overheating can damage the engine.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Fix when it leaks or overheats.

ESTIMATED REPAIR COST

Water pump or radiator at a repair shop	**Our price is in the plan above** ask us for a written quote
Water pump failure (reported range)	**$800–$1,800** FORUM/BLOG [4] reported range for the bill after a failure

PARTS FOR JK

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

QUESTIONS TO ASK US

- Any coolant loss or overheating?

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4 Oil pan gasket and oil pressure sensor leak

Any mileage

Severity: Medium: leaks and wear · 258 mentions in counted NHTSA complaints

COMPUTED FROM NHTSA DATA

Reports cover a wide mileage span (Any mileage; no reliable figure), so mileage doesn't say much here. Range: Any mileage; no reliable figure FORUM/BLOG [4]

WHAT FAILS FORUM/BLOG [4]

The oil pan gasket and the oil pressure sensor can leak.

SYMPTOMS

- Oil spots
- Burning-oil smell
- Low oil level

IF IT'S LEFT TOO LONG

A big leak lowers the oil level.

IS IT WORTH DOING EARLY? OUR ESTIMATE

Fix when it leaks.

ESTIMATED REPAIR COST

Sensor up to pan reseal (reported range)	**Our price is in the plan above** ask us for a written quote
Same range	**$150–$1,200** FORUM/BLOG [4] reported range for the bill after a failure

PARTS FOR JK

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

QUESTIONS TO ASK US

- Any oil drips?

5 · ALSO REPORTED, NOT RANKED

Other themes in 3.6L Pentastar 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	2,202	Many are 2011–2016 minivan and Journey complaints that blame the power module (TIPM) or fuel pump relay, the alternator or the transmission rather than the engine; check those first.
TIPM / electrical	1,177	Power-module (TIPM), fuel pump relay and charging faults, mostly on 2011–2016 minivans; not engine-internal.

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 28, 2026 from NHTSA's complaints API for All 2012–2017 Wrangler, 2017+ Pacifica, 2011–2020 Grand Caravan, 2011–2016 Town & Country, 2011–2014 VW Routan, Voyager and Ram C/V complaints; Gladiator and ProMaster complaints that do not mention a diesel or EV; and complaints for later Wranglers, Grand Cherokee, Ram 1500, Durango, Charger, Challenger, 300, Journey, 200, Avenger and 2014–2022 Cherokee that mention the 3.6L (3.2L for the Cherokee), Pentastar or V6. Counts under-count on the shared nameplates: 17,584 complaints. Some of these nameplates were sold with other engines too. For some we kept only complaints whose text names this engine (which under-counts); for others we left out complaints that name another engine or a hybrid (so a few about other engines can remain). Themes are keyword matches on the complaint text. `COMPUTED FROM NHTSA DATA`

THEME	COMPLAINTS	IN THIS REPORT
Stalling / loss of power	2,202	Also reported
TIPM / electrical	1,177	Also reported
Ticking / rocker arms	1,019	Item 1
Oil filter housing / oil cooler	623	Item 2
Cooling	582	Item 3
Oil leaks	258	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 recall list for the 2016 Jeep Wrangler (5 recalls; none for the engine), checked Oct 27, 2026 `OFFICIAL`
https://www.nhtsa.gov/recalls

2. 8020 Automotive: the 4 most common FCA Pentastar 3.6L engine problems (updated Jan 16, 2024) `FORUM/BLOG`
https://8020automotive.com/the-4-most-common-fca-pentastar-3-6l-engine-problems/

3. Au7o known issues: Ram 1500 2015 (3.6L entries) (reported cost ranges; AI-assisted site, not independently verified) `FORUM/BLOG`
https://au7o.io/known-issues/ram-1500?year=2015

4. Au7o known issues: Jeep Grand Cherokee 2016 (3.6L entries) (reported cost ranges; AI-assisted site, not independently verified) `FORUM/BLOG`
https://au7o.io/known-issues/jeep-grand-cherokee?year=2016

5. fueleconomy.gov: Volkswagen Routan engines (2009–2010: 3.8L or 4.0L V6; 2011–2014: 3.6L V6 only), checked Oct 28, 2026 `OFFICIAL`
https://www.fueleconomy.gov/feg/bymodel/2012_Volkswagen_Routan.shtml

6. 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 water pump or radiator, and separately complaints that name the rocker arms, 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

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

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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.