


Grenadier 12,000 mi inspection

1/3/2025 11,11923 miles

- 1) Work performed in accordance with Ineos Grenadier Petrol 12,000 mile schedule, copy attached.
- 2) Oil and oil filter provided by pdb. 7 Liters BMW Twin Power Turbo 0-20W 17FE+
- 3) Differential (axle) oil replaced and transfer oil replaced by Culmination Motorsports per Ineos specification, copy attached.
- 4) Exterior of power steering fluid reservoir was dirty from seepage. This appears to be normal.
- 5) Engine oil was clean. Previously changed at ~6,000 miles
- 6) Rear differential oil appeared dirty. Monitor at 18,000 miles or sooner.



*P.S. Cabin air filter supplied by
RockAuto Mann does
not fit. *

VISUAL VEHICLE INSPECTION REPORT


Dealer Name: CULMINATION MOTORSPORTS Technician: RZ Date: 1-3-25
 Customer Name: PETE BROWN Yr./Make/Model: 24. INEOS Green Hat/Tag#: _____
 Mileage: 11923 VIN: SC6GM1CAORF006471 Repair Order #: 6734

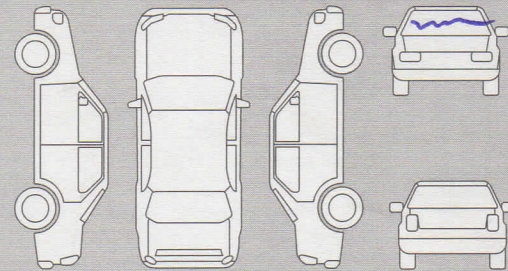
CHECKED AND OKAY			MAY NEED FUTURE ATTENTION			REQUIRES IMMEDIATE ATTENTION				
INTERIOR/EXTERIOR										
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Head Lights / Tail Lights / Turn Signals / Brake Lights / Hazard Warning Lights / Exterior Lamps / License Plate Lights						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Windshield Washer Spray / Wiper Operation / Wiper Blades						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Windshield Condition (Inspect for Cracks, Chips, or Pitting) <i>LARGE CRACK</i>						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mirrors / Glass						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Emergency Brake Adjustment						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Horn Operation						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fuel Tank Cap Gasket						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Air Conditioning Filter (if equipped) <i>N/A</i>						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clutch Operation (if equipped) <i>N/A</i>						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Back-up Lights Left / Right						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dash Warning Lights						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Carpet / Upholstery / Floor Mats <i>FLOOR DIRTY</i>						<input type="checkbox"/>	<input type="checkbox"/>

UNDER VEHICLE										
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shock Absorbers / Suspension / Struts						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Steering Gear Box / Linkage and Boots / Ball Joints / Dust Covers						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Muffler / Exhaust Pipes / Mountings / Catalytic Converter						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Engine Oil and/or Fluid Leaks <i>Reputead</i>						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Brake Lines / Hoses / Parking Brake Cable						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drive Shaft Boots / Constant Velocity Boots / U-joints / Transmission Linkage (if equipped)						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Transmission / Differential / Transfer Case (Check Fluid Level, Fluid Condition and Fluid Leaks)						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fuel Lines and Connections / Fuel Tank Band / Fuel Tank Vapor Vent Systems Hoses						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Inspect Nuts and Bolts on Body Chassis						<input type="checkbox"/>	<input type="checkbox"/>

UNDER HOOD										
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fluid Levels: Oil / Coolant / Battery / Power Steering / Brake Fluid / Washer / Automatic Transmission						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Engine Air Filter						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Drive Belts (condition and adjustment) <i>NO CRACKS</i>						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cooling System Hoses / Heater Hoses / Air Conditioning Hoses and Connections						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiator Core / Air Conditioning Condenser (if equipped)						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Coolant Recovery Reservoir Fluid Level / Condition <i>FILLED</i>						<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clutch Reservoir Fluid / Condition (as equipped) <i>N/A</i>						<input type="checkbox"/>	<input type="checkbox"/>

CHECKED AND OKAY			MAY NEED FUTURE ATTENTION			REQUIRES IMMEDIATE ATTENTION				
INTERIOR/EXTERIOR										
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Battery Terminate / Cables / Mountings						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Check Condition of Battery (Storage Capacity Test) <i>12.28 Volts</i>						<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pass	Recharge Retest	Fail	Factory Spec Cold Cranking Amps <i>950</i>				
						Actual Cold Cranking Amps <i>823</i>				

BRAKE AND TIRE											
Left Front				Right Front							
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Brake Lining <i>10</i> mm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Brake Lining <i>10</i> mm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tire Tread <i>12</i> 32nds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tire Tread <i>12</i> 32nds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wear Pattern <i>NONE</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wear Pattern <i>NONE</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			Tire Pressure PSI				Tire Pressure PSI				
Before <i>38</i>			After <i>42</i>	Before <i>38</i>			After <i>42</i>				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rotor / Drum			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rotor / Drum		
<input type="checkbox"/>			Alignment Check Needed			<input type="checkbox"/>			Wheel Balance Needed		
											
Left Rear				Right Rear							
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Brake Lining <i>10</i> mm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Brake Lining <i>10</i> mm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tire Tread <i>12</i> 32nds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tire Tread <i>12</i> 32nds	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wear Pattern <i>NONE</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wear Pattern <i>NONE</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			Tire Pressure PSI				Tire Pressure PSI				
Before <i>39</i>			After <i>49</i>	Before <i>39</i>			After <i>49</i>				
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rotor / Drum			<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rotor / Drum		
<input type="checkbox"/> Brake Inspection Not Performed This Visit											

PRIOR BODY DAMAGE								
								
X ADVISOR _____ X CUSTOMER ACKNOWLEDGEMENT _____								

COMMENTS / ESTIMATES

1 SMALL LEAK @ PS RESU.

✓ COOLANT WAS - LOW TOPPED OFF

✓ BRAKE FLUID - LOW TOPPED OFF

Out-vehicle test

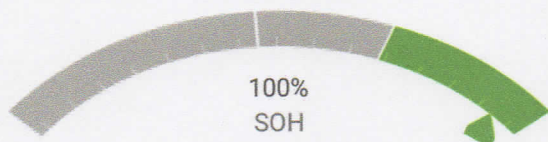
Device information

Scanner: D1
Battery ID: --

Serial Number: V17GMCC01288

Battery Test Results

Good & Recharge



Battery type:	AGM
Voltage:	12.28 V
Rated capacity:	950 CCA
Measured capacity:	823 CCA
Temperature:	42 °F

SOC: 48%

Repair advice: Battery is normal. Test battery again in 90 days.

Visual Inspection Results

Details: --

Customer name: _____

Technician: _____

Date: _____

Note: Please save a copy of this report for your records.

INEOS Grenadier Quick Ref Guide Specifications

The following tables outline the compliant products that can be used when conducting Service work on the INEOS Grenadier.

All the products in the tables have the same performance characteristics as those used in vehicle manufacture.

Only Products listed in the tables should be used when carrying out repairs/servicing to the INEOS Grenadier.

If any of the products listed in the tables are not available in the market in which you are located, then contact the product supplier to ascertain if there is a superseded product with the same performance and subsequently your INEOS Regional Technical Support Representative for guidance/assistance before continuing with any repair.

Product Type	Supplier	Specification	Quantity
Engine Oil Petrol	Titan EM BMW 4615E-0W	0W-20 ACEA C5 LL-17FE	6.5 litres
Engine Oil Diesel	Petronas Syntium 0W30DG	0/5W-30 ACEA C2 LL-12FE	7.0 litres
	SHELL 0W30 XSA10001JH	0W-30 ACEA C2 LL-12FE	7.0 litres
Anti-Freeze (coolant high and low circuits)	BMW 83195A42DF3	Lifetime coolant	HT 10.5 litres
	BMW 83195A42DF3	Lifetime coolant	LT 2.4 litres
Transfer Case oil	Titan Sintopoid	75w-90	1.8 litres unit drain 2.64 litres unit and cooling circuit oil change*
		75w-85	Fully compatible
Axle oil Shelf life 3 years	Fuchs Titan super gear	SAE 80W-90 GL-5	Front Axle 2.1 litres
	Fuchs Titan super gear	SAE 80W-90 GL-5	Rear Axle 2.1 litres
Petrol 8HP51X	ZF	LifeGuard Fluid 8	10.15 Ltrs
Diesel 8HP76X	ZF	LifeGuard Fluid 8	9.35 Ltrs
Power Steering	Comma	CHF 11S Pentosin Oil	2.5 (TBC)
AdBlue			17 Ltrs

Customer Name	VIN	Date
License Plate	Repair Order #	Mileage

Key

A = Adjust Top Up	I = Inspect	Mileage	12,000	24,000	36,000	48,000	60,000	72,000	84,000
R = Replace	IR = Inspect Replace	Months	12	24	36	48	60	72	84

Initial Checks

✓ Check for Outstanding Campaigns or Recalls	I	I	I	I	I	I	I	I
✓ Complete Body Inspection	I	I	I	I	I	I	I	I
✓ Complete VHC	I	I	I	I	I	I	I	I

Vehicle Functionality (Prior to lift)

✓ Horn & Toot Function	I	I	I	I	I	I	I	I
✓ Interior Lights	I	I	I	I	I	I	I	I
✓ Exterior Light Function (lenses & glass condition)	I	I	I	I	I	I	I	I
✓ Windscreen Wiper Blades (including spare)	IR	IR	IR	IR	IR	IR	IR	IR
✓ Seatbelt & Buckle Check	I	I	I	I	I	I	I	I
✓ Warning Triangle & Aux Equip	I	I	I	I	I	I	I	I
First Aid Kit (check expiry date and record) ?	I	I	I	I	I	I	I	I
Door Hinge, Check Strap & Lock Barrels Clean & Lube	A	A	A	A	A	A	A	A
✓ Read DTC's NONE	I	I	I	I	I	I	I	I
Reset Service Indicator	A	A	A	A	A	A	A	A

Under Bonnet Checks

✓ Windscreen Washers Fluid & Spray Pattern (heated washer jet operation if fitted)	A	A	A	A	A	A	A	A
Headlight Adjustment (market specific)	A	A	A	A	A	A	A	A
Skuttle Chamber Clean Drain Channels	I	I	I	I	I	I	I	I
✓ Brake Fluid Check (inc water content)	A	R	A	R	A	R	A	A
✓ Coolant Check (level & anti-freeze content) *	A	A	A	A	A	A	A	R
Spark Plugs	N/A			R				
✓ Air Filter		R		R			R	
Aux Belt	IR	IR	IR	IR	IR	IR	IR	IR
✓ Power Steering Fluid	A	A	A	A	A	A	A	A
Air Conditioning Operation	I	I	I	I	I	I	I	I

Vehicle Raised on Lift

✓ Check Tyre Pressures	A	A	A	A	A	A	A	A
✓ Remove & Rotate Road Wheels (torque wheel nuts to spec)	A	A	A	A	A	A	A	A
✓ Record Tread Depths (including spare)	I	I	I	I	I	I	I	I
Check Front & Rear Brake Pad Thickness	I	I	I	I	I	I	I	I
Check Brake Disc Condition	I	I	I	I	I	I	I	I
✓ Oil & Filter Change	R	R	R	R	R	R	R	R
Pipes & Hoses Condition	I	I	I	I	I	I	I	I
✓ Vac Pipes & Breather Condition	IR	IR	IR	IR	IR	IR	IR	IR
✓ Transfer Box Oil*	A	A	A	A	R	A	A	A
✓ Axle Oil*	R	A	A	A	A	A	A	R
✓ Gearbox Oil*	A	A	A	A	A	A	A	R
Brake & Fuel Lines (condition & routing)	I	I	I	I	I	I	I	I
✓ Exhaust System (condition & leaks)	I	I	I	I	I	I	I	I
✓ All Front & Rear Suspension - Ball Joints - Hub Swivel Joints - Steering Linkages & Fasteners for wea & security	I	I	I	I	I	I	I	I
Inspect All Prop shafts for Wear & Security	I	I	I	I	I	I	I	I
✓ Steering & Suspension Springs & Rubber Elements Boots Sleeves & Bushes for Wear & Security	I	I	I	I	I	I	I	I
✓ Underbody & Frame inspection (corrosion & security)	I	I	I	I	I	I	I	I



Vehicle on Floor

✓ Handbrake Travel & Footbrake Operation	IR	IR	IR	IR	IR	IR	IR
✓ Climate Filter	R	R	R	R	R	R	R

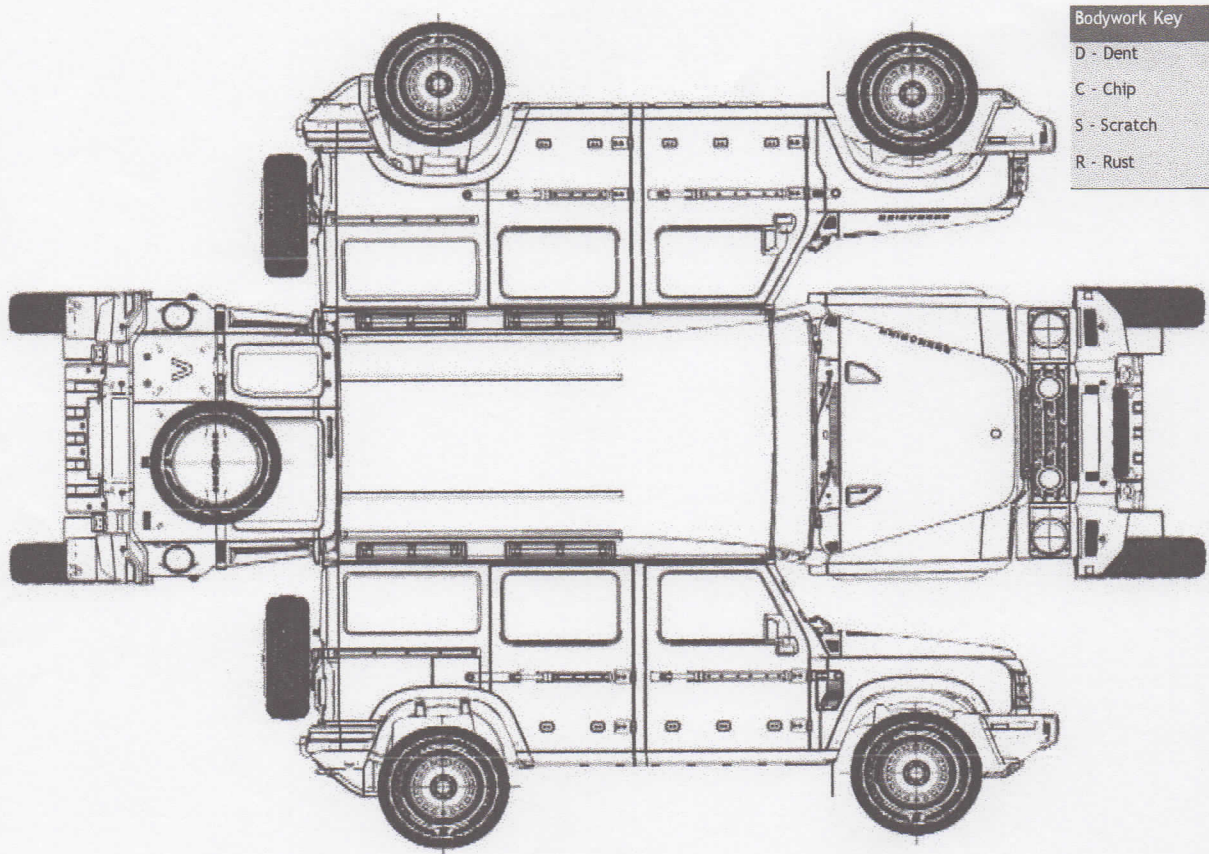
Final Checks

Road Test Vehicle - Check Gearbox & Transfer Box Operation

I confirm I have completed the above procedure in accordance with the recommended Grenadier service schedule.

Technician Name _____ Dealer Stamp _____
 Technician Signature _____

Quality Check - Road Test (minimum test 3 miles) Distance Covered _____
 Tester Name _____
 Tester Comments _____



Bodywork Key

- D - Dent
- C - Chip
- S - Scratch
- R - Rust

*S1AKA market specific *Gearbox oil change every 7 years or 84,000 miles. *Axle oil change at year 1 or 12,000 miles then at year 7 or 84,000 miles thereafter. *Coolant change every 7 years or 84,000 miles. *Transfer box oil change every 5 years or 60,000 miles.

From: Pete Brown pdbrown170b@me.com
Subject: Re: INEOS Grenadier 12K service
Date: Dec 27, 2024 at 1:25:16 PM
To: Bailey Buckingham bailey@elliottbayineosgrenadier.com

Bailey,

I found this on a BMW dealer site. VHC stands for vehicle health check which seems to be the customary and reasonable very basic periodic inspections. Most of these are included in the Ineos schedule for 12k service.

To ensure your experience with Conlans and BMW remains **PREMIUM**, we will give your vehicle a Visual Health Check at no extra cost to you that will assess your vehicles overall condition. This includes:

- Check of all of your Engine fluid levels, including Oil and Coolant .
- Checking your Brake Fluid level.
- Checking the brake pads for wear.
- Checking the condition of your Tyres.
- Check for any Service Inclusive packages or Warranty that may be already on your vehicle.
- Check of any outstanding campaigns on your vehicle.
- Checking Drive Belt Condition .

We shall then present you with an electronic print out advising you on any areas of your vehicle which may require attention at present or that may require attention in the future.

I checked with my dealer today and there are no recalls or software updates yet that I

don't have so the VHC seems to be pretty basic and most items are already identified in the Grenadier 12k service list.

If you find out anything, please let me know.

Pete

Pete Brown

Anchorage Alaska

Cell: 907 748 7529

<https://flic.kr/p/2md1XLD>

Going home after a long day

http://farm2.static.flickr.com/1415/1325102827_f322928754_b.jpg

The fleet at Summit. Mt. McKinley is about 45nm away at 20,320 msl.

http://farm1.static.flickr.com/187/437346531_a9cb8d2482_b.jpg

On Dec 27, 2024, at 10:01 AM, Bailey Buckingham

<bailey@elliottbayineosgrenadier.com> wrote:

Hey Pete,

1. I just checked my INEOS portal. Your Grenadier does not have any outstanding recalls at this time.

2. VHC? All I can figure out is it might mean Vehicle Health Check. Is

there any more context to this question?

3. You do not have to do anything with the center diff lock. The only thing you'd need to worry about is the drain and fill of the front and rear differential with GL5-80/90 generic brand differential oil.

4. Let me see if I can find a PDF with specific instructions for diff maintenance.

Front and rear axle - 80W90GL5 2.1 Liters front and back.

<image.png>

Thank you Pete.

Bailey Buckingham
Service Advisor

Elliott Bay **INEOS Grenadier**

Main: 206.944.3040

[Our Website](#) | [Directions](#)



On Thu, Dec 26, 2024 at 3:35 PM Pete Brown

<pdbrown170b@me.com> wrote:

Bailey,

Here are my questions based on the following docs. Are these docs the current ones?

Regarding the 12k checklist,

1) Are there any recalls?

2) What does VHC mean?

3) Your note refers to changing the front and rear diff oil. What about the center diff lock? Does it need to be changed or adjusted? If so, what is the specification for that oil?

4) The 12k check list refers to transfer box oil, axle oil, and gear box oil. By "axle oil" do they mean diff lock oil? What is the specification for diff lock oil? If you have a document that refers to the fill height or amount of fresh oil for the diffs, that would be helpful.

Can you please provide the answers by Friday late afternoon? I'm suspect your shop mechanics can answer them in a minute.

Thanks,