2020-01-17



# SIB 11 17 18

### RECALL CAMPAIGN 18V-755: EXHAUST GAS RECIRCULATION (EGR) COOLER INSPECTION (V8)

Please perform the procedure outlined in this Service Information on all affected vehicles before customer delivery. In the event the customer has already taken delivery of the vehicle, please perform the procedure the next time the vehicle is in the shop.

This Service Information bulletin (Revision 8) replaces SI B11 17 18 dated October 2019.

What's New (Specific text highlighted):

- Replacement N47T Intake manifolds are now available if needed to perform a repair
- The N47T Alternate Transportation Measures information has been removed

### MODEL

E-Series	Model Description	Production Date	Affected Engine
F02	740Ld Sedan	August 2013 – May 2015	N57T
F10	535d Sedan	February 2013 – September 2016	N57T
F15	X5 xDrive35d Sports Activity Vehicle	May 2013 – June 2017	N57T
F25	X3 xDrive28d SAV	September 2013 – December 2016	N47T
F30	328d Sedan	September 2012 – June 2017	N47T
F31	328d Sports Wagon	March 2013 – April 2017	N47T

### **AFFECTED VEHICLES**

This Recall Campaign involves various Model Year 2013-2018 BMW vehicles with the N47T and N57T diesel engine that have been produced from September 12, 2012 to June 29, 2017.

Vehicles which require this Recall Campaign to be completed will show it as Open when checked either in AIR, the Service Menu of DCSnet (Dealer Communication System) or with the Key Reader.

### **SITUATION**

Over time, the Exhaust Gas Recirculation Cooler (EGR cooler) could develop an internal coolant leak. The coolan could mix with normal soot / sediment and, in combination with high temperatures normally present in the EGR module, could create flammable deposits. This may lead to:

- Localized damage in the intake system
- Increased fire risk

### CORRECTION

Inspect the EGR cooler for contamination or clogging due to coolant loss inside the EGR cooler. Necessary repairs will be determined after inspection of the cooler (Procedure section).

### PROCEDURE

Replacement N47T Intake manifolds are now available so that the N47T Alternate Transportation Measures have been removed from this bulletin. Further, BMW NA will no longer accept new short-term rental car requests, and we will eliminate these rental car claim payments on January 31, 2020.

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Please use the time before January 31, 2020 to inform the affected customers, order the parts, schedule this repair; and complete the Recall.

- 1. Connect the vehicle to ISTA and perform a complete vehicle test to read out faults.
- 2. Close out of the ISTA session to send current FASTA data.

The procedure requires a borescope with a right angle (90°) camera lens.

The mandatory specifications for the borescope are:

- Flexible line
- Maximum diameter of the camera head (sensor) = 6 mm
- Side View and / or Dual View type
- Optimum length of the camera head is 36 mm with Side View
- · Camera element in the lower third of the camera head
- Focus: Minimum 2 cm
- An adjustable light source
- Photo documentation must be possible

**Note:** Mirror elements that are screwed on/attached **are not suitable** for side view (panel-plastic mirror). The recommended borescope can be found in <u>SI B04 14 18</u>. One borescope can be ordered, per dealer, and charged back to the warranty claim, as a sublet, for the first car inspected under this recall. **ONLY ONE BORESCOPE CAN BE ORDERED/CLAIMED PER DEALER.** 

3. Follow the procedure in Attachment 3: Inspecting the EGR Cooler

Attach clear pictures taken with and downloaded from the borescope. Do not attach pictures of the screen of the borescope. These pictures will need to be attached to the warranty claim documentation (refer to the inspection attachment).

### It is no longer necessary to submit a TC case for approval of repairs.

NOTE: A failed EGR cooler should be repaired immediately. It is recommended not to release the vehicle back to the customer with a failed EGR cooler waiting for parts to be available.

Please refer to the Alternate Transportation Measures attachment for information on assisting N47T diesel engine vehicle customers, if needed.

# PARTS INFORMATION

Only needed for full inspection of EGR cooler (see Procedure attachment)-

Part Number:	Description:	Quantity:
11 71 7 794 785	Pipe Socket	2

# Only needed for replacing the EGR cooler and the intake manifold/Pipe (failed inspection of EGR cooler)

Part Number:	Description:	Quantity:
11 71 7 799 853	O-ring	1
13 62 8 637 896	Sensor boost pressure N47 N57	1
And		
11 71 8 476 994	EGR Cooler (F15 built up to 9/2015, and all F25 and F02)	1
Or		
11 71 8 476 993	EGR Cooler (F15 built 10/2015 and later; and all F30, F31, F10)	1
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1/17/2020

And		
11 71 8 479 905	Small parts set of the exhaust-gas recirculation cooler for engine N47	1
Or		
11 71 8 490 221	Small parts set of the exhaust-gas recirculation cooler for engine N57	1
And:		
11 61 7 811 909	Intake pipe with air flap control F02 F10 (N57T)	1
Or:		
11 61 8 514 731	Intake pipe with air flap control F15 (N57T)	1
Or		
11 61 8 514 771	Intake pipe with air flap control F25 F30 F31 (N47T)	1

# WARRANTY INFORMATION

Defect code: 0011050500

Refer to Attachment

Supporting Materials

picture\_as\_pdf B111718 Attachment 1 Recall Notice 18V-755.pdf

picture\_as\_pdf B111718 Attachment 3 Inspecting the EGR Cooler.pdf

picture\_as\_pdf B111718 Attachment 2 Recall 18V-755 (QA)-(17Dec2018).pdf

picture as pdf B111718 Attachment Warranty Information 9 19.pdf

# SAFETY RECALL NOTICE

To: All Center Operators, Sales Managers, Service Manager, Parts Manager and Warranty Processor

RE: Recall 18V-755: Exhaust Gas Recirculation (EGR) Cooler (B11 17 18)

BMW of North America, LLC is conducting a Voluntary Safety Recall (effective October 25, 2018) on various Model Year 2013-2017 BMW vehicles with a diesel engine that have been produced between September 12, 2012 – June 19, 2017.

Owners will be notified by First Class mail about the Recall and will be instructed to bring their vehicles in for a free repair when parts are available.

Please be reminded that it is a violation of federal law (The Safety Act) for you to sell, lease or deliver any new motor vehicle covered by this notification until the recall repair has been performed. This means that centers may not legally deliver new motor vehicles to consumers until they are fixed or use/sell replacement equipment/parts subject to this recall. Note also that substantial civil penalties apply to violations of the Safety Act.

Also, you should not sell, lease or deliver any Certified Pre-Owned or used vehicles subject to a safety recall until the repair is completed.

Please follow any special instructions that we provide to you for the return or disposition of recall parts.

We appreciate all your assistance with this Recall.

# Inspecting the EGR Cooler

### STEP ONE

- Switch off the ignition
- Inspection should be done on a cooled down engine (under 50°)
- **<u>NOTE</u>**: Photo documentation of the EGR cooler must be attached to the Repair Order after Inspection.



• Measure the temperature at the EGR cooler outlet pipe (1).



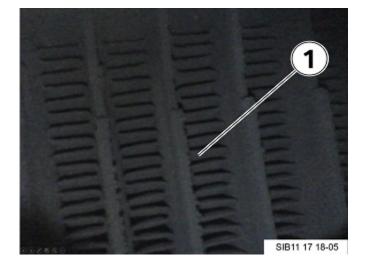
• The temperature of the cooler needs to be below 50°C (1) before the probe of the digital video scope can be safely inserted to inspect the cooler.



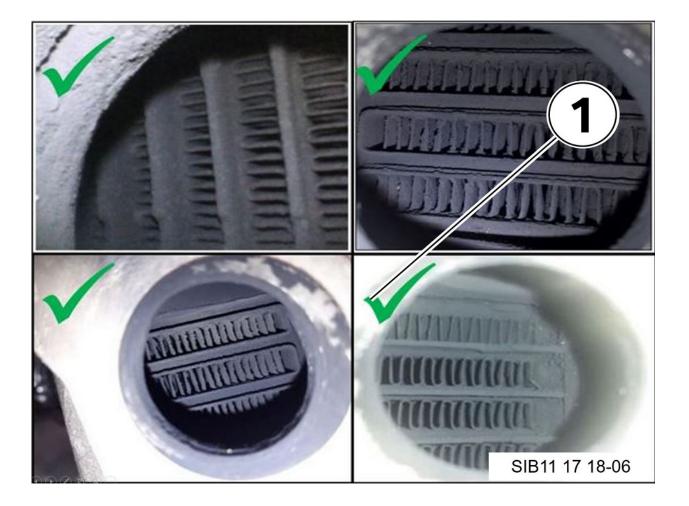
- Remove the EGR temperature sensor (1). **NOTE:** Count the number of revolutions (turns) required to remove the temperature sensor.
- **NOTE:** During installation, Pre-wind the temp sensor counterclockwise the number of turns it took to remove the sensor. This will keep the wires from twisting when reinstalled. Tightening torque 21Nm.



• Set the borescope to the 90° setting and install in the port temperature sensor (1).



 Inspect the fins on the EGR cooler for any build up or contamination. Black dry soot is a normal byproduct of the EGR system. An internally failed cooler will have a mix of soot and coolant which creates a moist "sludge" build-up.



Clean or normal cooler with dry soot on fins (outlet side).



Contaminated or clogged coolers will have extensive soot/sludge build-up (outlet side).

If the cooler is contaminated: Proceed to STEP FIVE.

If the cooler fins are clear (minimal dry soot build-up): Go to STEP TWO.

### STEP TWO



 Loosen the tamperproof T30 screws (1) on the EGR valve and remove the valve from the EGR cooler. NOTE: The valve only needs to be removed from the cooler far enough to inspect the inside of the cooler. Do not disconnect the cooling lines from the EGR valve.

**NOTE:** (F25 is pictured) It is necessary to disconnect the crankcase breather line to access the EGR valve (2).



• **NOTE: (**F15 is pictured) Remove the T30 screw (1) before removing EGR valve.



• Insert the probe for the borescope and inspect the fins on the inlet side of the EGR cooler for any build up or contamination (1).



Clean or normal cooler with dry soot on fins (inlet side).



Contaminated or clogged coolers will have extensive build-up (inlet side).

If the fins on the inlet side of the cooler are free from sludge build-up:

• Reinstall the EGR valve (with new seal PN 11 71 7 794 785) and continue to **STEP THREE**.

If the cooler is clogged or contaminated:

• Continue to **STEP FIVE**.

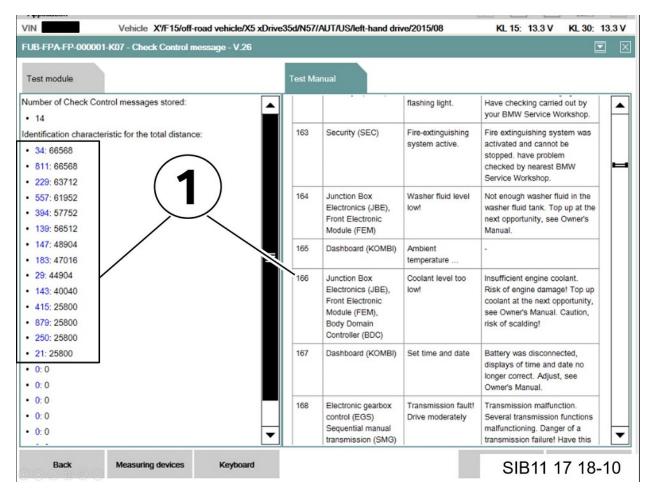
### STEP THREE

Checking the cooling system.

Connect the vehicle to ISTA/D and read out the fault memory of the DDE control unit and check if there is a stored Check Control "CC" message "Coolant level too low" (code 166) in the KOMBI.

Procedure to check the CC message with the diagnosis system:

- Vehicle Management
- Service functions
- Vehicle information
- Check Control messages
- ABL Read the Check Control history memory



Check the CCM history for message 166 "Coolant level to low" (1).

If possible, check the warranty and repair history for complaints of low coolant warnings with no history of repairs to the cooling system.

If there are no Check Control messages stored and no service records of low coolant complaints: Reassemble removed components and release the vehicle. <u>Attach the pictures of the inspected cooler to the Repair Order.</u>

If the vehicle has a current CC message for low on coolant or has stored CC message for low coolant:

• Continue with **STEP FOUR**.

### STEP FOUR

Top up the coolant level to specification and check the cooling system for leaks. Follow Repair instruction **17 00 009 Checking cooling system for watertightness.** 

No external leaks from the cooling system: Coolant can be leaking from the EGR cooler (internal leak).

• Continue to **STEP FIVE**.

In case of a diagnosis of a possible coolant loss which is not caused by the exhaust-gas recirculation cooler, but by other components of the cooling system, it must be diagnosed and repaired separately if necessary (consultation with the customer if necessary) and must not be invoiced using the special defect code of this Technical Campaign. After these repairs are made the cooling system will need to be pressurized again to determine if there is a leak within the EGR cooler (loses pressure during pressure check).

### STEP FIVE

Replace the EGR cooler and intake manifold (Refer to the *PARTS INFORMATION* section of SI B11 17 18). <u>NOTE:</u> The EGR valve will need to be <u>reused</u>. Recall EGR coolers will be shipped <u>without</u> an EGR valve.

### N47T:

- Follow Repair Instruction 11 71 100 Removing and installing/renewing exhaust-gas recirculation cooler (N47D20 K/U/O/T 1)
- Follow Repair Instruction 11 61 550 Removing and installing/renewing the intake plenum (N47D20 K/U/O/T 1)

### N57T:

- Follow Repair Instruction **11 71 100 Removing and installing/replacing exhaust-gas** recirculation cooler (N57 D30 O/T 1)
- Follow Repair instruction 11 61 550 Removing and installing/renewing intake plenum (N57 D30 U/O/T 1)

# RECALL CAMPAIGN 18V-755: EXHAUST GAS RECIRCULATION (EGR) COOLER INSPECTION

## WARRANTY INFORMATION

Changes indicated by yellow highlighting.

Reimbursement for this Recall will be via normal claim entry utilizing the following information:

Defect Code:	0011050500	Checking/replacing F02 F10 F25 F30 F31 N47 N57 EGR cooler
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# Completion before the first vehicle delivery to a customer, or the vehicle is already in the workshop:

Work Pkg	Labor Operation	Description (Plus work)	Labor Allowance
# 1	00 67 536	Visual inspection of the outlet side of the exhaust-gas recirculation cooler. Replacing the exhaust-gas recirculation cooler and the intake system. (Plus work)	Refer to AIR
Or:			
# 2	00 67 582	Visual inspection of the outlet and inlet sides of the exhaust-gas recirculation cooler. Replacing the exhaust-gas recirculation cooler and the intake system. (Plus work)	Refer to AIR
Or:			
# 3	00 67 583	Visual inspection of the exhaust-gas recirculation cooler outlet and inlet. Check for Check Control message. Check coolant level. Delete fault memory. (Plus work)	Refer to AIR
Or:			
# 4	00 67 584	Visual inspection of the exhaust-gas recirculation cooler outlet and inlet. Read out Check Control message. Check coolant level. Checking the cooling system for tightness. Delete fault memory. (Plus work)	Refer to AIR
Or:			

Work Pkg	Labor Operation	Description (Plus work)	Labor Allowance
# 5	00 67 585	Visual inspection of the exhaust-gas recirculation cooler outlet and inlet. Read out Check Control message. Check coolant level. Checking the cooling system for tightness. Replacing the exhaust-gas recirculation cooler and the intake system. Delete fault memory (Plus work)	Refer to AIR
Or:			
# 6	00 67 586	Vehicle was already taken care of through another repair or Technical Campaign (Plus work)	Refer to AIR

And, as necessary (RO and Claim Comments Required):

Labor Operation	Description (Associated work)	Labor Allowance
1006/791	Additional work for installing EGR valve into new Cooler (Associated work)	Refer to AIR

Or:

# The vehicle arrives at your center for this Recall repair (No other Main work will be performed/claimed during this workshop visit):

Work Pkg	Labor Operation	Description (Main work)	Labor Allowance
# 7	00 67 026	Visual inspection of the outlet side of the exhaust-gas recirculation cooler. Replacing the exhaust-gas recirculation cooler and the intake system. (Main work)	Refer to AIR
Or:			
# 8	00 67 060	Visual inspection of the outlet and inlet sides of the exhaust-gas recirculation cooler. Replacing the exhaust-gas recirculation cooler and the intake system. (Main work)	Refer to AIR
Or:			

Work Pkg	Labor Operation	Description (Main work)	Labor Allowance
# 9	00 67 061	Visual inspection of the exhaust-gas recirculation cooler outlet and inlet. Check for Check Control message. Check coolant level. Delete fault memory. (Main work)	Refer to AIR
Or:			
# 10	00 67 062	Visual inspection of the exhaust-gas recirculation cooler outlet and inlet. Read out Check Control message. Check coolant level. Checking the cooling system for tightness. Delete fault memory. (Main work)	Refer to AIR
Or:			
# 11	00 67 063	Visual inspection of the exhaust-gas recirculation cooler outlet and inlet. Read out Check Control message. Check coolant level. Checking the cooling system for tightness. Replacing the exhaust-gas recirculation cooler and the intake system. Delete fault memory (Main work)	Refer to AIR
Or:			
# 12	00 67 064	Vehicle was already taken care of through another repair or Technical Campaign. (Main work)	Refer to AIR

And, as necessary (RO and Claim Comments Required):

Labor Operation	Description (Associated work)	Labor Allowance
100 67 791	Additional work for installing EGR valve into new Cooler (Associated work)	Refer to AIR

Refer to AIR for the corresponding flat rate unit (FRU) allowances.

### **Claim Repair Comments**

Unless additional related/in conjunction work was required (not addressed and/or included in one of the options provided above), then only reference the SIB number and the work package (Pkg) number performed in the RO technician notes and in the claim comments (For example: B11 17 18 WP 1), unless otherwise required by State law.

### Sublet – Bulk Materials (RO and Claim Comments Required):

Sublet Code 4 Up to \$30.00	Reimbursement for the repair-related bulk materials (Do not use the BMW part numbers for claim submission)
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Sublet reimbursement calculation for claiming the applicable repair-related bulk materials (BMW part numbers) is at the dealer net price amount for the quantities used plus your centers handling.

BMW Antifreeze/Coolant: Claim for the amount that is needed to replace what was drained with a 50/50 coolant/water solution. One (1) gallon bulk container reference P/N 82 14 1 467 704) for approximately 2 liters, quantity used, 4 liters total at a 50/50 solution.

Enter this material cost in sublet and itemize the amount on the repair order and in claim comment section.

# Sublet – One-Time Claimable Item: One Endoscope (PN 83 30 2 468 102 obtained from BMW only, (RO and Claim Comments Required):

Sublet Code 3 \$		Reimbursement for one (1) BMW Part Number Endoscope (Tool P/N 83 30 2 468 102)
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Sublet reimbursement calculation for one (1) BMW Part Number Endoscope (Tool P/N 83 30 2 468 102 Endoskop - BK6500Dual55) **at cost with no handling.** 

Enter the Endoscope tool cost in sublet **only one time** and itemize the amount by providing the Tools P/N 83 30 2 468 102 in the claim comment section.

And, as applicable:

### Alternative Mobility Solution (AMS) for Vehicle Owners (RO and Claim Comments Required)

This Recall repair qualifies for Alternative Mobility Solution (AMS) expense reimbursement, claim this item under the Defect Code noted above as follows:

• Sublet Code 2 - Itemize the AMS sublet amount on the repair order and in the claim comment section.

Please refer to <u>SI B01 29 16</u> for additional information.

### TREAD Act Reimbursement - Qualifying Prior Customer-Pay Repairs

If your center is presented with a reimbursement request, BMW of North America, LLC will reimburse qualifying customer-pay repairs that were performed on affected vehicles prior to the release of this Recall Service Information bulletin.

If the customer previously paid for a qualifying repair, please proceed as applicable:

### A. The customer arrives with an affected vehicle to your workshop

- Perform the open Recall repair outlined in this bulletin, and
- If the prior repair qualifies (see below), submit for both the Recall repair and the customer-pay reimbursement (Separate repair line items/separate defect codes).

Or:

### B. The customer only presents your center with a customer-pay invoice for the prior repair

• If the vehicle and the prior repair qualifies (see below), submit for the customer-pay reimbursement portion only.

### **Customer-pay Invoice Review and Reimbursement Procedure**

- 1. Review and verify that the prior customer-pay invoice (BMW center or independent repair shop) contains a repair that was performed to address the issue described in this Recall Service Information bulletin.
- 2. If this prior repair qualifies, reimburse the customer (labor and parts).
- 3. Submit for this customer-paid repair expense under Defect Code 85 99 00 12 NA, as follows:
  - Sublet Code 3
  - Dollar amount (with no markup)
  - Comment: Recall Campaign 18V-755: Exhaust Gas Recirculation (EGR) Cooler -Reimbursement for allowable expenses that relate to performing the prior qualifying customerpay repair
  - Additionally, explain and itemize the claimed sublet amount on the repair and in the claim comments
- 4. Retain the original customer pay invoice in your files; this documentation may be requested by BMW during the claim review process.

**Note:** A repair performed on a non-affected vehicle or the diagnosis and repair of other unrelated issues do not qualify for reimbursement.

This claim submission for the prior customer-pay reimbursement, when it is submitted as outlined under Defect Code 85 99 00 12 NA, **will not close** the Open Safety Recall on the vehicle.

### Exhaust Gas Recirculation (EGR) Cooler Safety Recall 18V-755 Model Year 2013-2018 BMW Models w/Diesel Engines Diesel Engines (4-cyl. – N47 / 6-cyl. – N57) Last updated December 17, 2018

### Q1. Which BMW Group models in the US are potentially affected by this Safety Recall?

Approximately 44,368 Model Year 2013-2018 BMW vehicles with a diesel engine, produced between September 2012 and June 2017, are potentially affected. The vehicles have the 4-cylinder ("N47") and 6-cylinder ("N57") diesel engines. Please refer to the table below for additional information.

Series	Model Year	Model	Approx. Volume	Production Dates
F30	2013-2018	328d, 328xd	12,781	Sep 2012 – Jun 2017
F31	2014-2018	328d/xd Sports Wagon	4,766	Mar 2013 – Apr 2017
F10	2014-2016	535d, 535xd	7,551	Feb 2013 – Sep 2016
F02	2015	740Lxd	331	Aug 2013 – May 2015
F25	2015-2017	X3 xDrive 28d	4,061	Sep 2013 – Dec 2016
F15	2014-2017	X5 xDrive35d	14,878	May 2013 – Jun 2017

### Q2. What is the specific issue?

The issue involves the Exhaust Gas Recirculation (EGR) system which contains an integrated cooling component ("Cooler"). Over time, a leak of cooling fluid (glycol), could develop in the EGR Cooler.

### Q3. What can happen as a result of this issue?

If cooling fluid leaks in the EGR Cooler, and combines with typical diesel engine soot deposits while the temperature is high (which is normal), this could create smoldering particles. In very rare cases, these particles could contact the engine intake manifold and cause damage by creating small holes in the manifold due to melting. In extremely rare cases, due to the holes in the manifold, this could increase the risk of a fire.

# Q4. If I had a similar issue occur previously, and I had a repair performed, will I need to have this Safety Recall performed? Why?

Yes. Your vehicle will need to have the 2018 Safety Recall performed. The EGR Cooler will be inspected and, if necessary, replaced. If it is determined that the EGR Cooler has leaked, then the engine intake manifold will also be replaced.

### Q5. Are BMW Group models, which are not Diesel, affected? Why not?

No. They are not affected because they have a different engine design.

**Q6.** Are BMW Group models with Diesel engines, but of different Model Years, affected? Why not? No. They are not affected because they have a different engine design.

#### Q7. How did BMW Group become aware of this issue?

BMW Group became aware of this issue through its quality control procedures.

Q8. Is BMW Group aware of any accidents, injuries or fires, in the US, involving these BMW Group vehicles associated with this Safety Recall? No. BMW is continuing to monitor this issue, and it is too early to determine if specific cases, involving fires, have occurred in the US due to this particular issue.

#### Q9. Can I determine if this issue exists in my vehicle?

You may or may not be able to determine if this issue is occurring to your vehicle. Your vehicle may display a warning symbol indicating a loss of engine coolant. In some cases, your vehicle may experience a reduction in engine power. You may notice an unpleasant odor, i.e., an odor of exhaust gas, and/or hear an unusual noise from the engine compartment. In rare cases, you may see smoke from the engine.

### Exhaust Gas Recirculation (EGR) Cooler Safety Recall 18V-366 Model Year 2013-2018 BMW Models w/Diesel Engines Diesel Engines (4-cyl. – N47 / 6-cyl. – N57) Last updated December 17, 2018

#### Q10. What should I do if I notice this condition in my vehicle?

If this condition occurs, pull off the road to a safe location away from traffic, and switch off the engine. Do not open the hood. All occupants should carefully exit the vehicle and move to a safe location away from traffic. Do not continue to drive your vehicle.

Contact BMW Roadside Assistance at 1-800-332-4269 immediately to have your vehicle brought to the nearest authorized BMW center.

### Q11. Can I continue to drive my vehicle (before I receive my Safety Recall letter)?

Yes. The likelihood of this issue occurring to your vehicle is extremely low. However, when you receive a letter asking you to have this Safety Recall performed by an authorized BMW center, please do so as soon as possible. If you are not the only driver of this vehicle, please advise all other drivers of this important information.

### Q12. How will I be informed of this Safety Recall?

You will receive a <u>letter in December</u> via First Class mail advising you of this Safety Recall. When parts become available, you will receive another letter, requesting you to schedule an appointment with an authorized BMW center as soon as possible to have this Safety Recall performed. You can locate your nearest authorized BMW center at <u>www.bmwusa.com/dealer</u>.

To ensure the BMW Group has your most recent contact and vehicle information, please register your vehicle at <u>www.bmwusa.com/myBMW</u>. Registration is free, and will give you access to factory initiated campaigns and other information specific to your vehicle.

### Q13. How will my vehicle be repaired?

The EGR Cooler will be inspected and, if necessary, replaced. If it is determined that the EGR Cooler has leaked, the engine intake manifold will also be replaced.

### Q14. Is a loaner vehicle, or alternate transportation available?

Your dealer can provide you with a loaner vehicle during the service appointment.

#### Q15. How long will the repair take?

Depending upon the repair, and the specific model, this could take up to several hours to perform.

**Q16.** Do I have to wait for my letter to have my vehicle serviced? Yes. We are in the process of implementing this Safety Recall campaign to ensure that the necessary parts are at the BMW centers. For the latest updates to this Safety Recall, please visit www.bmwusa.com/recall.

# Q17. I see the "TREAD Act Customer Reimbursement Plan" attached to my letter. Can you explain what that is about? Am I eligible for reimbursement?

If you have already had this repair performed at your own expense, you may be eligible for reimbursement of certain expenses that you incurred.