

Oil Galley Plug Repair Procedure

Service Category Engine/Hybrid System

Section Lubrication

Market USA

Toyota Supports
 ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2009 - 2017	Corolla	

Introduction

Some 2009 – 2017 model year Corolla vehicles equipped with the 2ZR-FE or 2ZR-FAE engines may exhibit a condition in which engine oil leaks between the engine block and transaxle. The source of the leak may be caused by a leaking oil galley plug. The purpose of this bulletin is to provide a Repair Procedure to remove/replace the engine oil galley plug located at the back of the engine block. Follow the Repair Procedure in this bulletin to address this condition.

Warranty Information

OP CODE	DESCRIPTION	YEAR	TRANSMISSION	TIME	OFP	T1	T2
EG1647	Install Threaded Oil Galley Plug	2009 – 2013	Manual	7.2	11410-09230	65	99
EG1648			Automatic	7.0			
EG1649		2014 – 2017	Manual, Automatic	6.5	11410-09320		
EG1650			CVT	7.1			

APPLICABLE WARRANTY

- This repair is covered under the Toyota Powertrain Warranty. This warranty is in effect for 60 months or 60,000 miles, whichever occurs first, from the vehicle's in-service date.
- Warranty application is limited to occurrence of the specified condition described in this bulletin.

Oil Galley Plug Repair Procedure

Parts Information

PART NUMBER	PART NAME	QTY
90080-17238	Nut (Front Axle Shaft)	2
43425-01030	Ring, Hole Snap (for Front Drive Shafts)	2
95381-02525	Pin, Cotter (Lower Ball Joint)	2
95381-03020	Pin, Cotter (Tie Rod)	2

Required Tools & Equipment

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
Kit, Engine Block Oil Plug Rep*	11216-00011	1

Engine Block Oil Plug Replacement Kit Contents

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
M22 X 1.5 Tapered (Intermediate) Tap*	01216-00111	1
M22 X 1.5 Tapered (Bottoming) Tap*	01216-00112	1
Slide Hammer*	01216-00113	1
Galley Plug Puller Screws*	01216-00114	1
Rubber Plugs*	01216-00115	1
Pipe Plug*	01216-00116	1
Alignment Bracket*	01216-00117	1

* Essential SST.

NOTE

Additional SSTs may be ordered by calling 1-800-933-8335.

REQUIRED TOOLS & MATERIAL	QUANTITY
ILSAC GF-4 Multi-grade SAE 0W-20	As Needed
Toyota Genuine Adhesive 1324, Three Bond 1324, or Equivalent	As Needed

Oil Galley Plug Repair Procedure

Required Tools & Equipment (Continued)

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
Techstream 2.0*	ADE	TS2UNIT	1
Techstream Lite		TSLITEPDLR01	
Techstream Lite (Green Cable)		TSLP2DLR01	

* Essential SST.

NOTE

- Only **ONE** of the Techstream units listed above is required.
- Software version **12.20.024** or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787

NOTICE

The following Repair Procedure is to correct oil leaks from the oil galley plug **ONLY**. Ensure the source of the oil leak is from the oil galley plug **BEFORE** proceeding. Refer to normal troubleshooting as needed.

Repair Procedure

1. Remove the transaxle.

Refer to the Technical Information System (TIS), applicable model and model year Repair Manual:

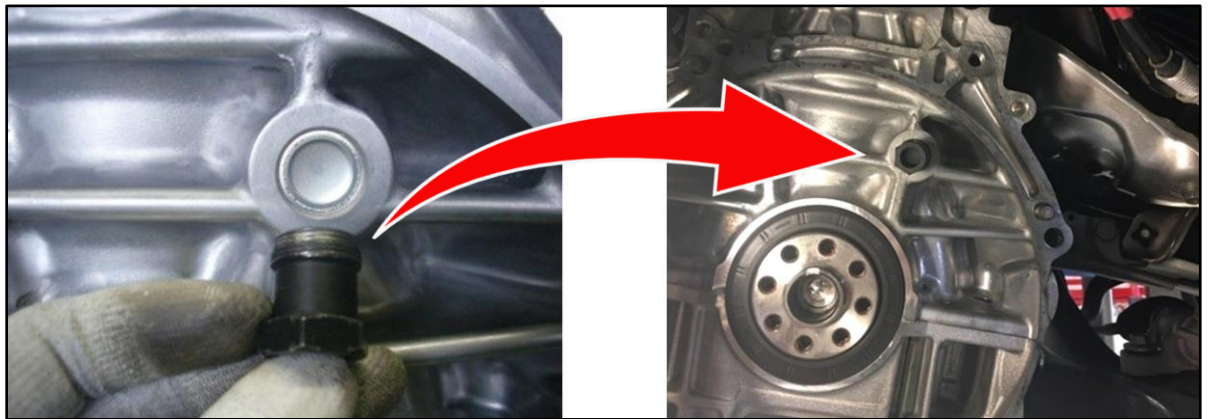
- [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) Corolla:
Drivetrain – Manual Transmission/Transaxle – “C59 Manual Transmission/Transaxle: Manual Transaxle Assembly: Removal”
- [2014](#) / [2015](#) / [2016](#) / [2017](#) Corolla:
Drivetrain – Manual Transmission/Transaxle – “EC65 Manual Transmission/Transaxle: Manual Transaxle Assembly (When Using the Engine Support Bridge): Removal”
- [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) Corolla:
Drivetrain – Automatic Transmission/Transaxle – “U341E Automatic Transmission/Transaxle: Automatic Transaxle Assembly: Removal”
- [2014](#) / [2015](#) / [2016](#) Corolla:
Drivetrain – Automatic Transmission/Transaxle – “U341E Automatic Transmission/Transaxle: Automatic Transaxle Assembly (When Using the Engine Support Bridge): Removal”

Oil Galley Plug Repair Procedure

Repair Procedure (Continued)

- [2014](#) / [2015](#) / [2016](#) / [2017](#) Corolla:
Drivetrain – CVT – “K313 CVT: Continuously Variable Transaxle Assembly (When Using the Engine Support Bridge): Removal”
2. Remove the flywheel (manual transmission) or drive plate (automatic transmission, CVT). Refer to TIS, applicable model and model year Repair Manual:
 - [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) Corolla:
Engine/Hybrid System – Engine Mechanical – “2ZR-FE Engine Mechanical: Rear Crankshaft Oil Seal: Removal”
 - [2014](#) / [2015](#) / [2016](#) / [2017](#) Corolla:
Engine/Hybrid System – Engine Mechanical – “2ZR-FE Engine Mechanical: Rear Crankshaft Oil Seal: Removal”
 3. Confirm the oil leak is coming from the oil galley plug.
Is the leak coming from the oil galley plug?
 - **YES** — Continue to step 4.
 - **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
 4. Remove the oil galley plug.
 - A. Thread and tighten the galley plug puller screw into the oil galley plug.

Figure 1.



HINT

The galley plug puller screw **MUST** be tightened until two full threads are engaged in the oil galley plug.

Oil Galley Plug Repair Procedure

Repair Procedure (Continued)

- B. Install the slide hammer by threading it onto the attachment.

Figure 2.



- C. Engage the slide hammer until the oil galley plug is released from the cylinder block.

Figure 3.



- 5. Install the rubber plug into the oil galley hole.
 - A. Remove ANY visible oil or debris from the entrance of the exposed bore using a clean cloth.

Oil Galley Plug Repair Procedure

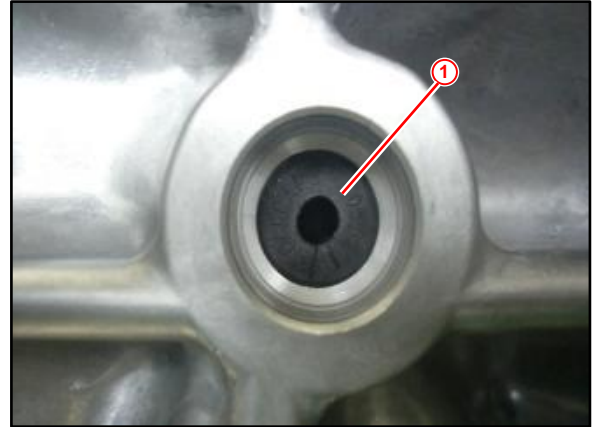
Repair Procedure (Continued)

- B. Insert the rubber plug.

HINT

Push on the rubber plug firmly with a finger to ensure that it is flush against the lip inside the oil galley plug bore.

Figure 4.

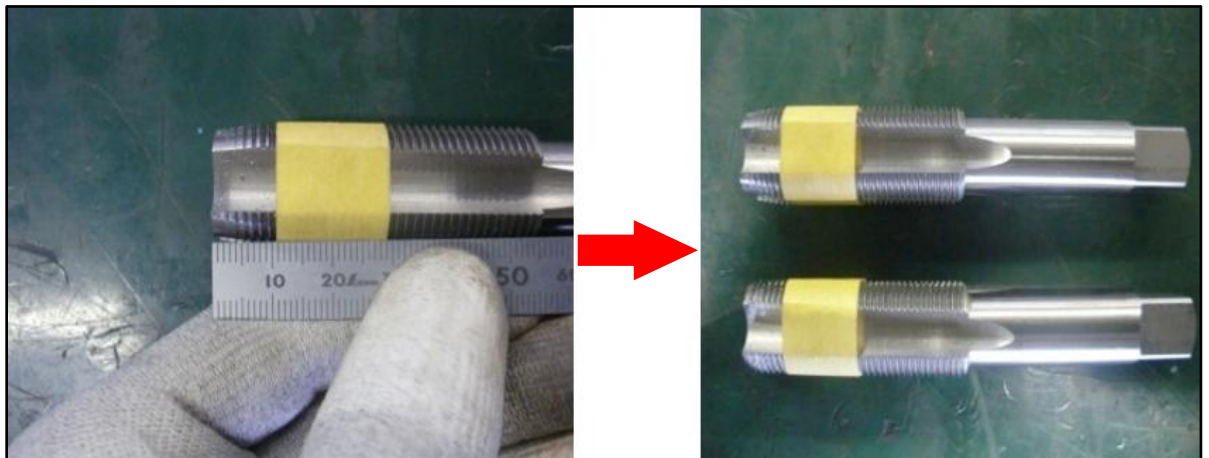


1

Rubber Plug

- 6. Mark the taps to the correct thread cutting depth.
 - A. Measure and mark the intermediate tap 11 mm (0.4 in.) from the tip of the tap.
 - B. Measure and mark the bottoming tap 12 mm (0.45 in.) from the tip of the tap.

Figure 5.



HINT

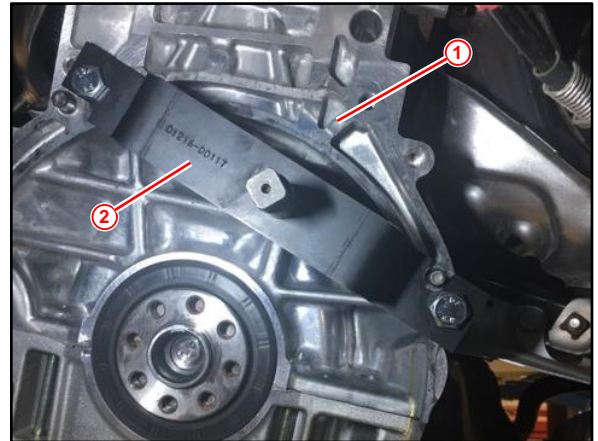
Use tape to mark the tap threads. Not only does this provide a visual marking, it also acts as a stop.

Oil Galley Plug Repair Procedure

Repair Procedure (Continued)

7. Cut initial threads using the intermediate tap.
 - A. Lubricate the oil galley bore and intermediate tap using a lubricating spray.
 - B. Assemble the alignment bracket with the intermediate tap to the cylinder block using the provided bolts and nuts.

Figure 6.



1	Cylinder Block
2	Alignment Bracket

- C. Rotate the tap clockwise slowly to cut threads into the oil galley bore. Stop when the mark created on the tap lines up with the oil galley bore boss.
- D. Remove the alignment bracket and intermediate tap.
- E. Clean ANY metal shavings from the oil galley bore with a clean cloth.

NOTICE

Be careful if using air or a spray cleaner to remove debris as this may blow out the rubber plug.

Figure 7.

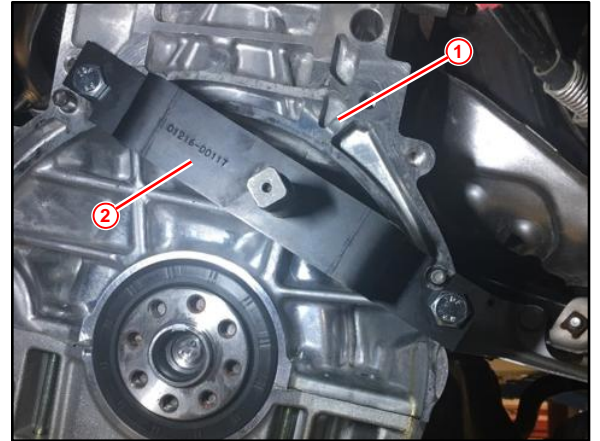


Oil Galley Plug Repair Procedure

Repair Procedure (Continued)

8. Cut final threads using the bottoming tap.
 - A. Lubricate the oil galley bore and bottoming tap using a lubricating spray.
 - B. Assemble the alignment bracket with the bottoming tap to the cylinder block using the provided bolts and nuts.

Figure 8.



1	Cylinder Block
2	Alignment Bracket

- C. Rotate the tap clockwise slowly to cut threads into the oil galley bore. Stop when the mark created on the tap lines up with the oil galley bore boss.

Figure 9.



Oil Galley Plug Repair Procedure

Repair Procedure (Continued)

- D. Remove the alignment bracket and bottoming tap.
- E. Clean ANY metal shavings from the oil galley bore with a clean cloth.

Figure 10.



- 9. Remove the rubber plug from the oil galley bore.

Figure 11.



- 10. Install the tapered pipe plug into the threaded oil galley bore.

Oil Galley Plug Repair Procedure

Repair Procedure (Continued)

- A. Pre-install the tapered pipe plug using a 10 mm hex socket to check the condition of the threads.

NOTE

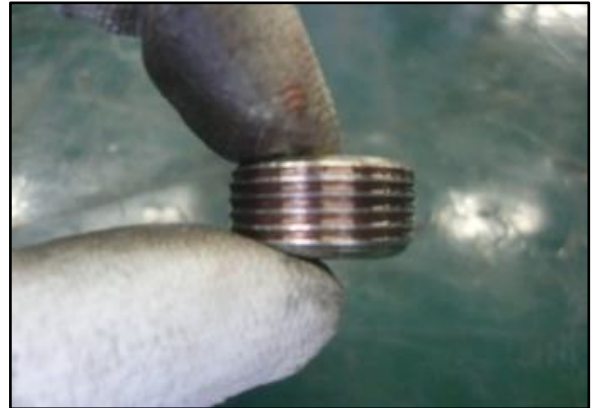
Cut the threads again using the bottoming tap until the pipe plug threads in smoothly. If the pipe plug does NOT thread in smoothly, reinsert the rubber plug and repeat step 7.

Figure 12.



- B. Remove the tapered pipe plug.
- C. Apply Toyota Genuine Adhesive 1324 evenly to the threaded portion of the tapered pipe plug.

Figure 13.



- D. Install the tapered pipe plug into the threaded oil galley bore using a 10 mm hex socket.
- E. Torque the tapered pipe plug.
Torque: 50 N*m (510 kgf*cm, 37 ft*lbf)

Figure 14.



Oil Galley Plug Repair Procedure

Repair Procedure (Continued)

11. Measure the height of the tapered pipe plug from the oil galley bore boss at four points in 90° intervals.

Figure 15.



12. If the height is more than 1 mm at ANY point, reduce the tapered pipe plug height down using a grinder until it is 1 mm or less.

Figure 16.



HINT

The flywheel and clutch (manual transmission) or drive plate and torque converter (automatic transmission) can be pre-installed to check the clearance of the threaded galley plug **BEFORE** grinding.

13. Clean the rear of the engine to ensure there is no residual oil.
14. Reinstall the flywheel (manual transmission) or drive plate (automatic transmission, CVT).
Refer to TIS, applicable model and model year Repair Manual:
 - [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) / [2014](#) / [2015](#) / [2016](#) / [2017](#) Corolla:
Engine/Hybrid System – Engine Mechanical – “2ZR-FE Engine Mechanical: Rear Crankshaft Oil Seal: Installation”

Oil Galley Plug Repair Procedure

Repair Procedure (Continued)

15. Reinstall the transaxle.

Refer to TIS, applicable model and model year Repair Manual:

- [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) Corolla:
Drivetrain – Manual Transmission/Transaxle – “C59 Manual Transmission/Transaxle: Manual Transaxle Assembly: Installation”
- [2014](#) / [2015](#) / [2016](#) / [2017](#) Corolla:
Drivetrain – Manual Transmission/Transaxle – “EC65 Manual Transmission/Transaxle: Manual Transaxle Assembly(When Using The Engine Support Bridge): Installation”
- [2009](#) / [2010](#) / [2011](#) / [2012](#) / [2013](#) Corolla:
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Drivetrain – CVT – “K313 CVT: Continuously Variable Transaxle Assembly(When Using The Engine Support Bridge): Installation”

16. Add oil to the engine as needed to bring oil level to the full mark.

17. Perform a Health Check using Techstream and test drive the vehicle to confirm normal operation.