

GR Engine Cylinder Block Replacement – Important Notice

Overview

This document provides important information regarding **replacement of the cylinder block on Toyota GR-series engines**. Due to a design change in the **crankshaft position sensor installation surface**, sensor compatibility may vary depending on **engine production timing**.

When replacing the cylinder block, it is critical to confirm whether the **crankshaft position sensor** must also be replaced.

Key Information

- The **mounting surface shape** for the crankshaft position sensor on GR engines has changed based on **sensor part number updates**.
- Depending on the **engine number**, the existing sensor may or may not be compatible with the replacement cylinder block.
- In some cases, the crankshaft position sensor **must be replaced at the same time** as the cylinder block.

Required Action

1. **Confirm the engine number** before beginning installation.
2. Refer to **Table 1** to determine whether crankshaft position sensor replacement is required.
3. If replacement is required, use the **correct new sensor part number** listed in **Table 2**.
4. If replacement is *not* required, reuse the existing sensor.

 If the engine number does **not** appear in Table 1, sensor replacement is **not necessary**.

Table 1 – Sensor Replacement Requirement by Engine Number

| Engine Number Range | Sensor Replacement Required |
|---------------------|-----------------------------|
| 8501001 – 9011618 | Yes |
| 9501001 – 9501584 | Yes |
| N001001 – N029459 | Yes |
| 6001001 – 8083190 | Yes |

| Engine Number Range | Sensor Replacement Required |
|---------------------------------|-----------------------------|
| D** / E**** / F000000 – F277089 | Yes |
| M001001 – M486094 | Yes |
| 9011619 – 9501585 | No |
| N029460 – | No |
| 8083191 – | No |
| F277090 – | No |
| M486095 – | No |

Table 2 – New Crankshaft Position Sensor Part Numbers

| Vehicle Drive System | Engine Stop & Start System | New Sensor Part Number |
|----------------------|----------------------------|------------------------|
| FF | No | 90919-05090 |
| FF | Yes | 90919-05100 |
| FR | No | 90919-05098 |
| FR | Yes | 90919-05099 |

Notes

- Always verify the **engine number stamped on the vehicle**.
- Using the correct sensor ensures **proper engine timing, performance, and ECU compatibility**.
- Failure to replace the sensor when required may result in **engine malfunction or fault codes**.

Toyota Motor Corporation