



Technical Service Bulletin

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Unnecessary Spark Plug Replacement Caused by Improper Spark Plug Gap Measuring Techniques: Cylinder Misfire Fault Codes

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Warranty Statement

The information in this document has no effect on present warranty coverage or repair practices, nor does it authorize TRP or Campaign actions.

Contents

Product Affected

- L9N CM2380 L142B
- L9N CM2380 L147B

Issue Summary

Spark plugs that are within specification or that could have the spark plug gap adjusted to be within specification are being replaced unnecessarily.

Symptoms:

- Spark plugs are replaced to resolve the Fault Codes listed below and the Fault Code(s) return even after spark plug replacement.
 - 5895
 - 5896
 - 5897
 - 5898
 - 5899
 - 5911
 - 5914
 - 6413
 - 6425
 - 6426
 - 6427

- 6428
- 6429
- 6431

Root Cause:

- Incorrect measurement of spark plug gap and **not** performing a spark plug gap adjustment on the out of specification spark plug is causing unnecessary replacement of spark plugs and other components.

Verification

- Verify any of the following fault codes are present:
 - Multiple Cylinder Misfire Fault Codes: 5914, 6413
 - Single Cylinder Misfire Fault Codes: 5895, 5896, 5897, 5898, 5899, 5911, 6425, 6426, 6427, 6428, 6429, 6431

Resolution

Spark plug gap adjustment is allowed on spark plug if spark plug gap size is lower than specification. Follow instructions below and the spark plug gap adjustment and reuse guidelines in the corresponding Service Manual. Reference Procedure 013-016 in Section 13.

- **Never** use a feeler gauge to measure the spark plug gap. A feeler gauge is **not** able to measure the spark plug gap correctly and will damage the spark plug electrodes and shorten the life of the spark plug.
- For spark plugs with three ground electrodes, **only** the wire spark plug gap gauge can correctly measure the spark plug gap. See Figure 1.
- Use a wire spark plug gap gauge to check spark plug gap. See Figure 2.



Figure 1, Spark Plug Gap Measurement. Left: Correct. Right: Incorrect.



Figure 2, Correct Use of Wire Spark Plug Gap Gauge.

Document History

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2023-9-14	Module Created

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