

9YA, 95B, 971 - Broken Valve Springs

Vehicles Affected

Models	Model Year	Model Type	VIN Range	Vehicle-Specific Equipment
Cayenne	As of 2021 up to 2022	All models (9YA)	N/A	N/A
Macan	As of 2021 up to 2022	S, GTS, Turbo (95B)	N/A	N/A
Panamera	As of 2021 up to 2022	All models (971)	N/A	N/A

Revision History

Revision	Release Date	Changes
0	February 12, 2022	Original document
1	February 25, 2022	Service Information Update, V6 Engine Info Update

Condition

Customer complains of misfiring, vehicle may experience loss of power, and/or have a warning in the display indicating reduced power and enter limp or emergency drive mode. This condition applies to both V6 and V8 Engines.

Related Faults:

NOTE: Fault combination and sub-fault information may vary depending on engine type and DME software version.

DME

P01C900 - Fuel high-pressure system, bank 2, pressure - above limit value

P2ADF00 - Leak behind throttle valve, bank 2

P030000 - Random/Multiple Cylinder, Misfire Detected

P030X00 - Cylinder X misfiring

P031600 - Engine Misfire Detected on Startup (First 1000 Revolutions)

P036300 - Misfire Detected - Fueling Disabled

P016A00 - Excessive Time to Enter Closed Loop Air/Fuel Ratio Control

Instrument Cluster

B19A8F0 - Display of reduced engine output, active

P162400 - Engine control indicator light switched on

Technical Background

The aforementioned faults/condition may be the result of a broken valve spring as shown in **Figure 1**. A manufactured batch of valve springs associated with the issue highlighted in this bulletin were quarantined by *Parts Withdrawal GR13D590 –PAB109623* (published December 8, 2021). Any remaining stock of springs not quarantined or new parts received are therefore considered safe to use for installation.

In many cases, failures occur in less than 1000km (620 mls) of runtime, of which the majority are below 500 km (310 mls).



Figure 1 - Broken Valve Spring

Service Information

A conventional misfire diagnosis is appropriate and necessary. If the mileage is low and the spark plugs are removed for compression (leak down could mask issue), the use of a borescope in the affected cylinder(s) may more quickly reveal if a valve(s) is not seated properly. More extensive, collateral damage will require the "Repair vs. Replace Analysis" and normal warranty guidelines apply.

In the event one or more valve springs are broken, then **ALL VALVE SPRINGS MUST BE REPLACED (INTAKE AND EXHAUST)**. Please perform the repairs in accordance with the respective workshop instructions.

Vehicles previously repaired for a broken valve spring(s) require no further action at this time.

New springs must be replaced in the following orientation in V8 engines:



Figure 2 - Orientation

Exhaust: ALWAYS blue 90 deg (4x) apart on top of the spring, these markings must be facing up with the spring installed

Intake: ALWAYS white 120 deg (3x) apart on top, installed facing up

Springs in V6 engines will be replaced similarly with all white markings facing up when arranged in the cylinder head.

Warranty

As always, please document the repair completely in PCSS.

For this repair, please code the "cause" as follows:

Cause location: 15650 Valve Spring

Cause symptom: 1511 Broken into pieces

Please employ the respective operations for relevant valve spring operation.

Search Items

971, 95B, 9YA, Valve, Valve spring, Fracture, Power loss, Intake, Exhaust, Pressure loss, Misfire, 15650

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