


 **TEST DATE:**
30th April 2026

 **TEST COMPLETED BY:**
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 **SAMPLE REFERENCE:**
PRD-RL-002

 **TEST EQUIPMENT:**
Road Simulator
(Wheel Tracking Machine)

1 OBJECTIVE

To evaluate the performance of PaveVent Pothole Relief Devices when installed in asphalt under repeated traffic loading using a road simulator.

The test aimed to determine:

- Resistance to deformation
- Structural integrity under cyclic wheel loading
- Retention of position within the asphalt
- Surface condition after extended loading

2 TEST METHOD

Three 50mm thick asphalt slabs were prepared with PaveVent devices installed at the centre of each slab.

- Each slab contained one device of different material:
 - Nylon/Glass 70/30
 - Nylon/Glass 90/10
 - TPE 80A (Flex)
- Slabs were installed into the road simulator machine.
- The machine was set to apply repeated wheel loading.
- Total of 100,000 wheel passes applied to the samples.
- Slabs were inspected during and after testing for any signs of distress, movement or damage.

4 KEY OBSERVATIONS

-  **Structural Integrity**
All devices remained intact with no signs of cracking, fracture or damage.
-  **Retention**
No movement or displacement of devices within the asphalt matrix was observed.
-  **Surface Condition**
No surface distress, rutting or edge damage around the device locations.
-  **Performance**
All samples withstood 100,000 wheel passes under simulated traffic loading conditions.

3 EVIDENCE / RESULTS

TEST SETUP – SAMPLES INSTALLED IN MACHINE



NYLON/GLASS 70/30

NYLON/GLASS 90/10

TPE 80A (FLEX)

AFTER TEST – POST LOAD INSPECTION (100,000 WHEEL PASSES COMPLETED)



5 CONCLUSION

The road load test demonstrates that all PaveVent Pothole Relief Device variants maintained their performance under repeated traffic loading conditions.

This indicates:

-  High resistance to cyclic loading
-  Devices remain structurally sound
-  Secure retention within asphalt
-  Suitable for use in real-world roads

OVERALL CONCLUSION:

All PaveVent Pothole Relief Device variants (Nylon/Glass 70/30, Nylon/Glass 90/10 and TPE 80A) passed the road load test after 100,000 wheel passes with no visible damage or performance issues. The devices are considered suitable for installation in asphalt roads.

6 RECOMMENDATIONS / NEXT STEPS

-  Continue extended testing for longer cycle durations (e.g., 100,000+ passes)
-  Monitor long-term in-service performance in trial installations
-  Evaluate performance under different environmental conditions
-  Assess performance with varying traffic loads and speeds

Note: This is a simple test conducted in a laboratory environment for observational purposes. Further controlled testing in real-world conditions is recommended to validate long-term performance.