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Document Information

Location: Powertrain

Topic: P14 Engine Idle Vibrations

Condition: N/A

Diagnostic Trouble Codes: N/A

Measure

After a cold start and once the exhaust catalysts have been warmed to the correct temperature, the engine idle of a P14 reduces to 700-800 rpm. This is not an issue with the vehicle. The vehicle idle speed is reduced so that it complies with emission regulations. It can be found that at this lower rpm, increased vibration can be felt in the cabin of the vehicle.

McLaren recommends the vehicle air conditioning is activated to improve driver and passenger comfort. This also increases the engine idle speed to around 800-900rpm and in-turn reduces the vibrations sometimes experienced within the cabin. Below are some images showing the different rpm levels described and when they occur.

Engine Idle with NO AC



Engine Idle with AC



The graph below shows how the engine idle varies during start up and with AC turned ON.



If the vibration is deemed to be excessive when compared to an identical vehicle, then the engine timing should be checked. Please follow KA-01035 to carry out a timing check using an oscilloscope and raise a Technical Request for support if required.

Parts Information

N/A

Attachments

N/A

KA Update Information

15/09/2021 - Initial Release

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