

From: [REDACTED]
To: [Clean Cars](#)
Subject: Clean Car Discount
Date: Sunday, 18 August 2019 9:32:02 PM
Attachments: [image001.png](#)
[image003.png](#)

Hi,

I have completed the online survey, however have one point to add that is not asked in the survey.

I am very concerned that it is planned to offer discounts to hybrid vehicles, my reasons for not wanting discounts are as follows.

- Overseas studies have shown that on average hybrid vehicles only run on *electric only propulsion* for 10% of the time, the remaining 90% they are emitting CO2. Many ICE vehicles achieve similar or lower CO2 emissions than many hybrids, overseas feeling towards hybrids in particular Europe and Scandinavia are that they should not be classified as low emission vehicles.
- Hybrids typically have small battery packs that like all battery packs will deteriorate over time, however unlike plug in hybrids or pure EVs, hybrids just compensate with the internal combustion engine just operating more often. Due to this being a gradual process the owner is often unaware this is happening.
- Used hybrids are already heading down the above path and will be operating solely on their internal combustion engine within a shorter period once on NZ roads. These used imports are cheaper to purchase and would probably not have a manufacturers battery warranty, thus it will probably not be economically viable to replace the battery pack. Owners will either choose not to or will not be in the position to purchase a new battery pack. These vehicles will continue to operate for the remainder of their lives as ICE vehicles. Which could be up to 18-19 years based on NZ average vehicle life. For example there are still many first generation Toyota Prius being driven on NZ roads, many of these had severely deteriorated battery packs shortly after arriving on NZ ports, these vehicles will not be adding to the goal of achieving lower emissions.

Thanks

Graeme

Graeme Hansen • Production Engineer

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