

Light Commercial Vehicles (LCV's) Starters

Premature failure of replacement starter for LCV's

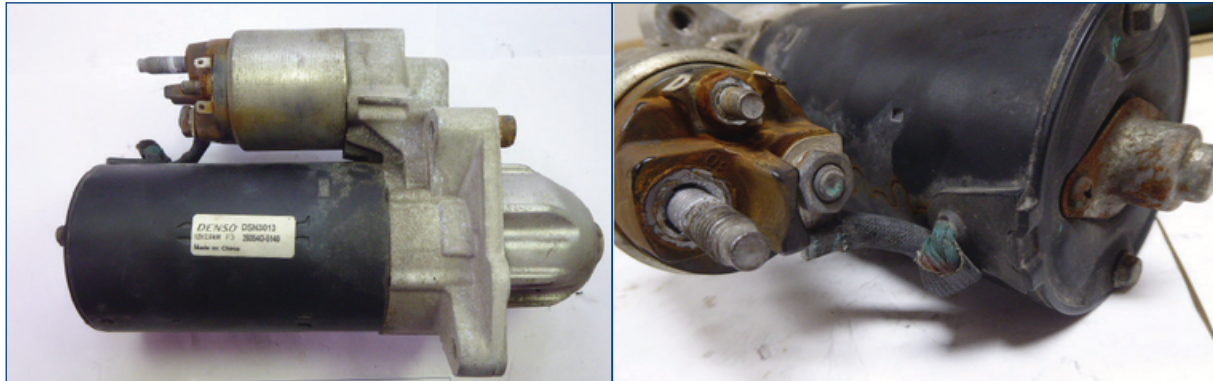
This bulletin outlines common reasons of premature failure for DENSO starters DSN3013 and DSN3014 fitted as replacement starters in Fiat Ducato, Citroen Jumper and Peugeot Boxer. The root cause for the potential failure has been identified and instructions to prevent recurrences are provided below.



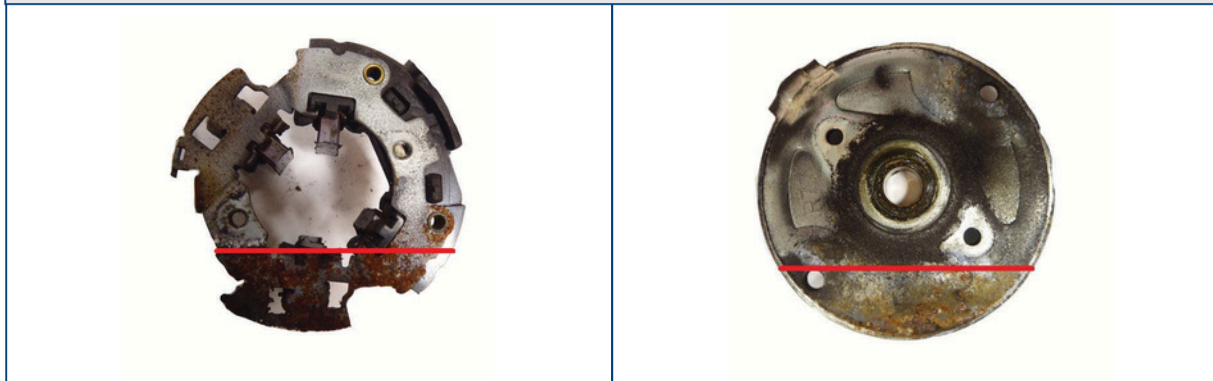
Investigation results

Investigation has shown that replacement starters fail prematurely after installation due to (extreme) water ingress, causing severe corrosion of the starter inner parts and housing.

It was found that the starters fail due to external factors and extreme exposure to water. Despite the high quality of the unit, starters fail when exposed to a significant amount of water, even if not fully submerged.



Starter is corroded on the outside



Indicating water level inside starter



Brush holder is heavily corroded

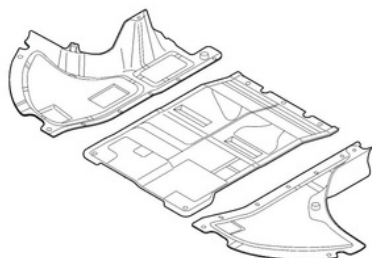
Heavily corroded commutator and armature

Root cause



The starter is located at the left side of the engine and is facing in the driving direction of the vehicle. When the lower engine protection cover is missing, damaged or modified, during rainy periods or driving through (big) puddles of water, high amounts of splash water will cause the starter to take water inside more than it can drain via the drain holes. These high quantities of water is the root cause of heavy corrosion inside the starter motor, as shown in the pictures. Also, the use of high-pressure water cleaners can cause water ingress in the starter.

Important!



Make sure the complete lower engine cover is properly installed or avoid driving through deeply flooded roads to prevent splash water entering the replacement starter motor.

! Be careful when using a high-pressure cleaner. Do not point directly to the starter motor when cleaning the engine and engine bay.



Note!

If the starter motor you are replacing shows signs of corrosion it is important to follow the instructions above, as failure to do so will result in premature failure of the replacement starter and may invalidate your warranty.

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