Additive Manufacturing of NISSAN Special Vehicle Tooling

EXCELENCIAtech
PROFESSIONAL 3D PRINTING SOLUTIONS

Email: info@excelencia-tech.es | **Telf.**: +34 932 420 182 | **Web**: www.excelencia-tech.com

Sector: Automotive

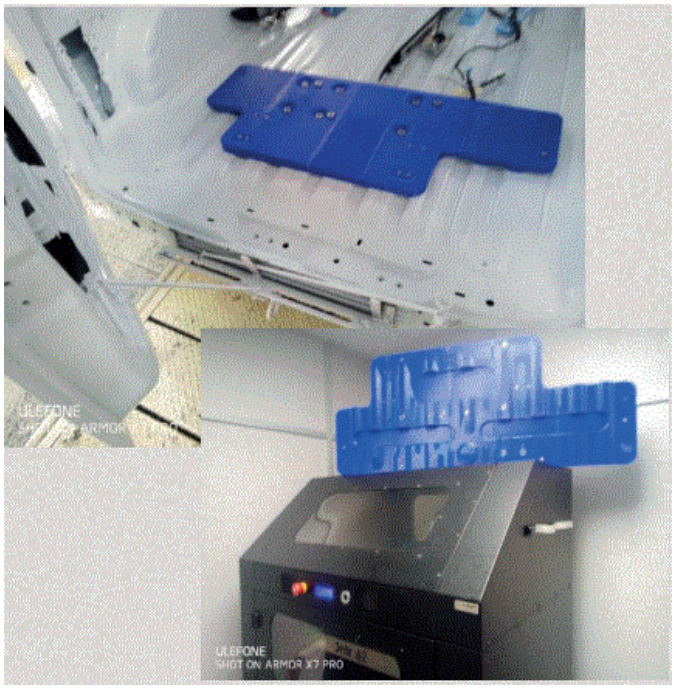
Challlenge: Vans for special groups with exterior labeling and installation of specialized interior integrated equipment (anchors on the floor and interior pillars)

Solution: The solution they found was the use of PoKa-Yoke tools.

CHALLENGE

In a car production chain, errors are not welcome, but it is precisely in the processes non-automated and low-production where there is more risk of committing them. The Kaizen department Trim & Chassis decided to find the best way to customize the vehicles in an agile way and without committing mistakes. The solution they found was the use of PoKa-Yoke tools. A Poka-Yoke tooling is a tool designed to avoid errors and that guarantees the process. In short, it is a template that It can only be placed in one way (the correct one).

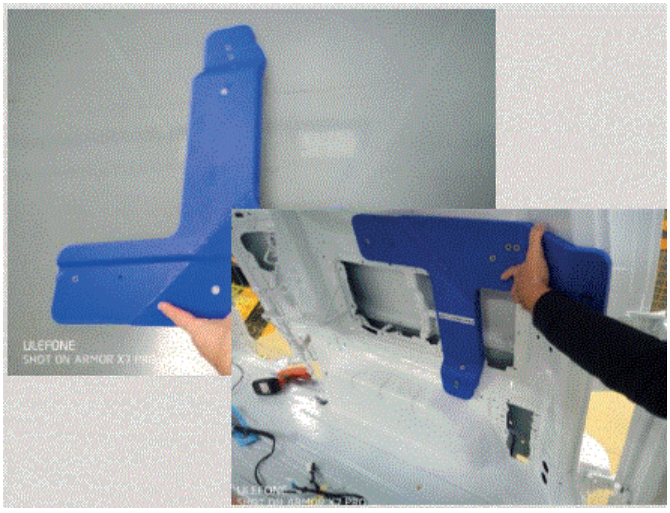
From the proper design of these tools, that the engineers of the Kaizen Trim & Chassis department call useful, they had to decide how to make them, and the most competitive option was through printing 3D as it provides total design freedom, fast production time and avoids the need for molds.



Horizontal positioning tool for boring.

SOLUTION

More than 200 different tools. The Kaizen Trim & Chassis department already has more than 200 models of tools and consumables manufactured in 3D, which are classified into tools for the production line, of which in some cases there are about 30 units of each tool, and tools for special vehicles.

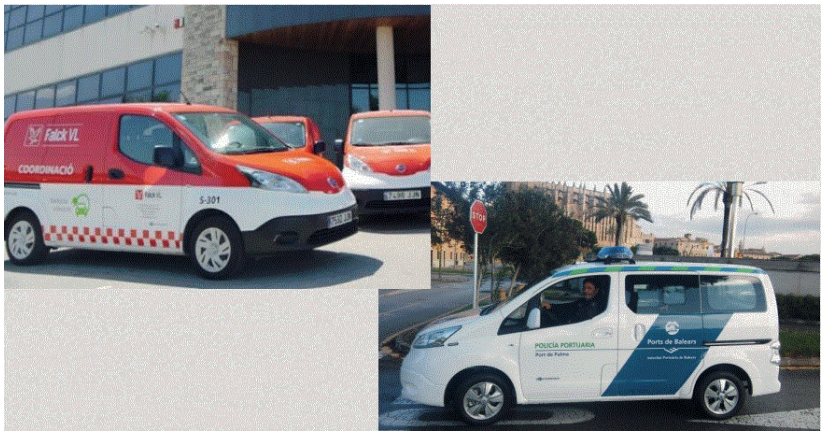


Second case: Gauge for vertical positioning.

ADVANTAGES

In this case, the gauge is for the same vehicle, and NV200, and measures more than 50cm long by 40cm wide, so it was manufactured in two parts.

It has proven to be a very reliable and good performance. Anyway, they have manufactured two units and only one of the them so that when one fails you can use the second while repairing the first.



Manufacture of special vehicles.