91

TECHNICAL REPORT

Improvement design of the oil pan gasket ref 14070700 for Honda engines

ajusa

SCOPE

Inform our customer about the **improvement design of the oil pan gasket** established by Ajusa because of functional requirements.

DESCRIPTION

The Honda models mentioned in the following table presents an **oil pan made of low thickness steal sheet.** In the joint area with the **engine block** has a metal sheet supplement which gives a greater thickness. This provides a greater rigidity in that area where the closing pressure is generated by the screws.

BRAND	MODEL	C.C cm^3	ENGINE TYPE
HONDA	CIVIC	1396	D14Z1, D14Z2
		1493	D15Z3, D15Z6, D15Z8
	CIVIC / CRX	1590	D16Y2, D16Y5, D16Y6, D16Y7, D16Y8

On the other hand, the oil pan presents **stamping protrusions** to act like pressure limiters to prevent the breakage of the gasket.

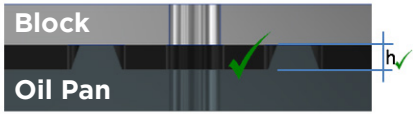
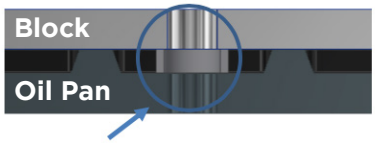
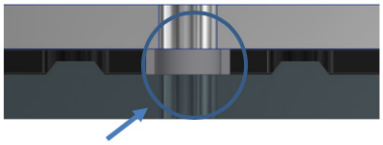
Due to vibrations generated in the engine, dilatations produced by temperature variation, dismantling and retightening, the **oil pan can deteriorate**, losing flatness of the sealing are and decreases the height of the stamping protrusion which are the closing pressure limiters.

*Detail of the **stamping protrusions** of a new oil pan*

*Detail of the **stamping protrusions** of an old and used oil pan*

When exist an incorrect height of this stamping protrusions and we perform the **tightening procedure** of the oil pan, it will not be limited, generating an over tightening causing the breakage and cracking of the gasket.

In that **state of deterioration**, if a new gasket with the original design is installed, it will crack due to overpressure during tightening or during the first kilometers of engine operation.

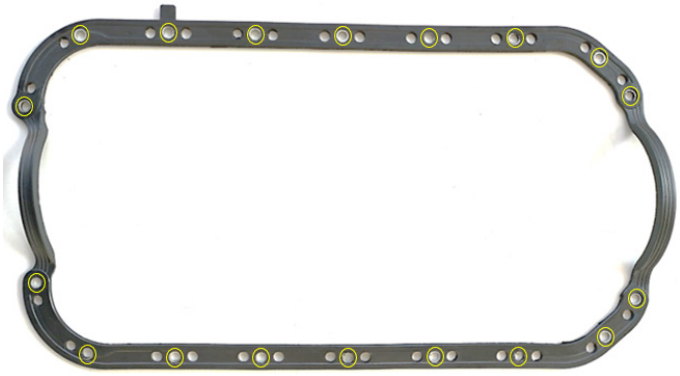
	Oil pan in perfect conditions	Oil pan in bad conditions
Gasket without pressure limiters		
Gasket with pressure limiters		
	Limiters	**Limiters**

Ajusa solution

To solve the above problem, there are two possibilities.

- The **first** is the most obvious and at the same time the most expensive, install a **new oil pan.**
- The **second** option is to install our **new improved gasket**, which is equipped with a metal reinforcement in all the screw steps. This limits the closing pressure from the gasket itself and not from the oil pan, and therefore it prevents the gasket from cracking in the tightening procedure

This **improved gasket** is applicable for both oil pan, new and used one.



MOUNTING

In this case, it's especially important the **following steps:**

- **Cleaning:** remove the remaining sealant and the gasket that may have remained. Pay special attention to the limiters that may have been embedded in the crankcase.
- **Sealant:** a small amount should be applied at the both height transition as indicated in the following image.
- **Tighten:** the tightening must be done in 2 stages to avoid deformation of the oil pan and / or breakage of the gasket:

  1st stage: 6 Nm | **2nd stage**: 12 Nm