



PRESS RELEASE

GASKET DEVELOPMENTS ADD DURABILITY

Integral seals are the future

Over the past decade Caterpillar's research and development programme has led to a steady transition from flat gaskets to 'integral seals' as standard fitment on latest generation Cat models to meet high performing engine, hydraulic and drive train sealing applications.

"Integral seals provide a more robust fluid seal than flat gaskets, which are cut out of flat sheets of gasket material," explains Barloworld Equipment group product specialist, Reuben Phasha. (Barloworld Equipment is the Cat dealer for southern Africa.)

Integral seals are controlled compression seals, with O-Ring technology applied to gasket-type carriers. These seals are composed of a rubber sealing element, or bead, bonded to a carrier, which can be plastic or metal. The carrier transfers the load through the bolted joint.

The rubber bead material is chosen based on the fluids, temperatures and pressures to be sealed. Therefore, depending on the application, integral seal gaskets are supplied with rubber beads made from Cat formulas such as Nitrile, HNBR (Highly Saturated Nitrile Buna Rubber), EPDM (Ethylene Propylene Diene Modified Rubber), FKM (Fluorocarbon Rubber) and silicone rubber.

Two types of integral seals are now being used: an edge-bonded (metal carrier) seal and a void-volume (plastic carrier) seal with integrated metal load limiters.

Today these seals are used in many applications across the Cat product line. The edge bonded seal, for example, is used as the front cover seal for the 3406E engine, whilst the void volume seal is widely used for oil pan applications.

"An additional advantage is that these seals come off in one piece," adds Phasha, "so there's no scraping required and no chance of getting foreign material into the engine."

ENDS

CAPTION

Cat integral seals virtually eliminate gasket leaks.

For Barloworld Equipment media enquiries, please contact:

Alastair Currie
Media Relations Manager
Barloworld Equipment
Tel: 011-301-4000
E-mail: acurrie@barloworld-equipment.com