

Race-Tec Motorsport

Differential Lock Seal Technology

- Low friction
- Cassette style assembly
- Excellent pressure/speed capability

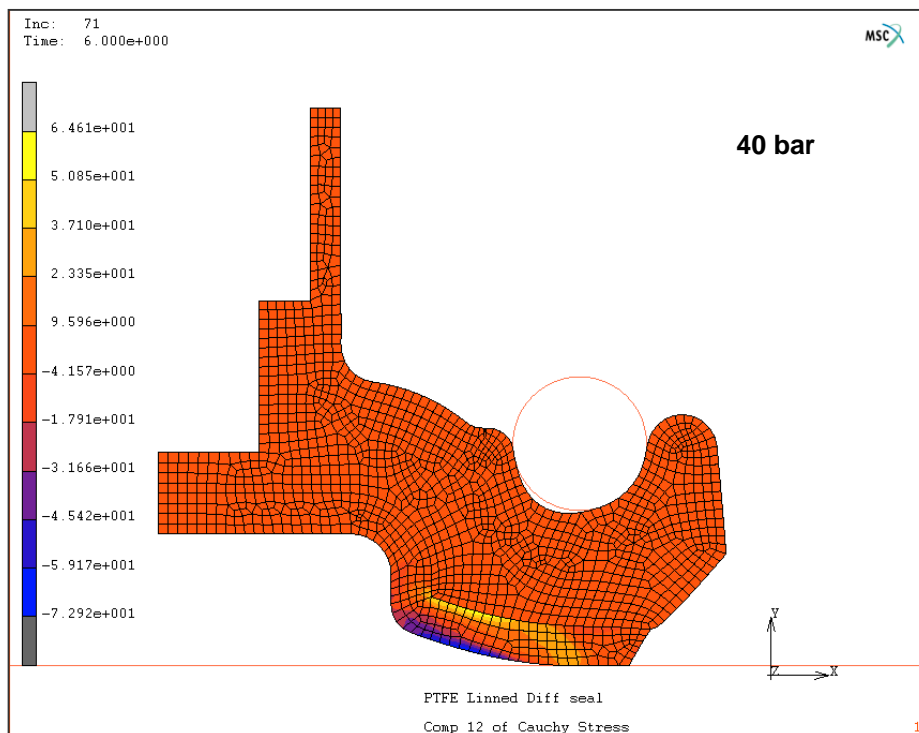


Race-Tec NAK low friction, PL Seal technology was introduced into dynamic hydraulic differential lock systems in order to minimise the power loss and heat generation found in other Ptfе seal technologies in these applications

Featuring two opposing PL Seals in a cassette style assembly, the diff lock seals allow the transfer of high pressure oil from the housing into the central clutch mechanism.

Race-tec NAK PL differential seals are designed for use in F1, WRC and Rally Raid applications.

Finite Element Simulation

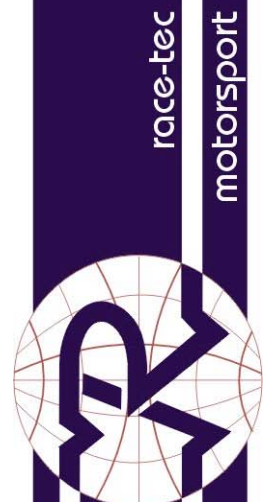


Race-Tec Motorsport race proven custom sealing

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Performance Features

Materials

The elastomer used may be any of the common compounds, Nitrile (NBR), Hydrogenated Nitrile (HNBR), Fluoroelastomers (FKM / FFKM).

In this type of application, the PTFE grades selected are designed to offer maximum strength & wear resistance whilst still minimising frictional losses.

Technical Features

A typical Diff Seal assembly comprises two opposing, narrow section, PL Seals each having a pressure support ring and separated by an oil transfer ring. These assemblies may be loose components, welded assemblies, or separable assemblies allowing replacement of key parts & depending on the exact application requirements..

The PL Seal assemblies have successfully been used in applications using speeds up to 8,000 rpm and pressures typically 30- 40 bar (and up to 70 bars) and with very high resultant PV values. Careful selection of materials ensures adequate life.

Typical widths of differential seal assemblies are 12 – 15mm.



Applications

Race-Tec PL Seals are used in all forms of top motorsport i.e. F1, F3000, F3, BTCC, WTCC, DTM, LMES, ALMS, LMP 675/900, GT, Sportcars, WRC, Nascar, Champcar, IRL, GP1, GP3, GP500, etc, where the seals are custom-designed to meet the performance demands of the application, whether it be ultra-low friction qualifying, high vacuum retention, dirt exclusion, etc.

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