

Mono[®] NOV Keeps Nissan's Wheels Turning

Nissan's award winning manufacturing plant in Sunderland is using progressing cavity pumps from Mono[®] NOV to effectively lubricate tyres and wheel rims before assembly to ensure a safe, secure and long lasting fit with minimum process wastage.

The Sunderland plant is Nissan's European centre for passenger car production, and is one of the most efficient in terms of output. It manufactures the Micra, Primera saloon and Primera estate models, producing approximately 250,000 cars per year, around 80% of which are exported worldwide.

Within the wheel assembly plant, tyres and rims are lubricated with a solution, containing soap, calcium carbonate and water. Effective lubrication of tyres and rims is vital to enable the tyre to be quickly eased onto the rim without tearing, thus maintaining optimum output while minimising wastage; and for achieving a long-term secure fit as the solution dries and bonds the tyre to the rim.

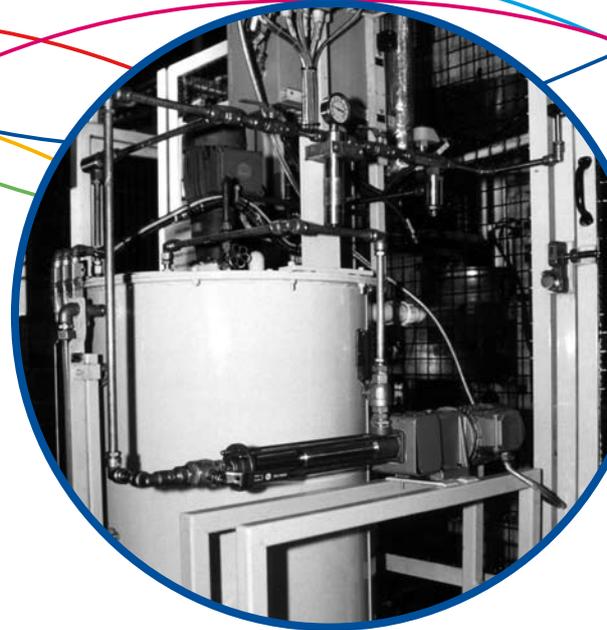
The Mono Low Flow (LF) pumps are installed within the lubrication loop system, to transfer the soap solution from the 45 gallon storage tank, through a filter, to spray guns for coating the rims, and to separate soap brushes for the tyre inners.

The efficiency of the assembly process depends upon the precise coating of the rims with an even layer of lubricant. With

an output which is directly proportional to speed, and the ability to guarantee a minimum pressure of 2 bar and flow rate of 1.2 l/min, the Mono pumps are ideal for such demanding dosing duties.

In addition to abrasive calcium carbonate particles, the lubricant can sometimes contain small fragments and shavings of rubber as all surplus solution is recycled. This had caused blockage and wear problems with the small gear pumps previously used, thus promoting Nissan to source an alternative pumping system.

The Mono LF progressing cavity pumps installed incorporate a single stainless steel helical rotor turning within a double helical resilient rubber stator. This provides a smooth, positive pumping action which can accommodate shear sensitive, abrasive, viscous materials, solids in suspension, and slurries, without blocking or wearing, increasing product life while reducing maintenance requirements.



Pumps:	2 off SLF50221R8
Product:	Soap lubricant
Capacity:	1.2 l/m
Pressure:	2 bar
Pump Speed:	214 rpm
Drive:	0.37kW fixed speed motor



Mono Pumps Ltd
Martin Street, Audenshaw
Manchester, M34 5JA England
T. +44 (0)161 339 9000
E. info@mono-pumps.com
www.mono-pumps.com

Mono[®] NOV

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