PAX Facts

The Latest PAX Information from Michelin

Spring 2003

Welcome to PAX Facts!

Welcome to the first issue of *PAX Facts*, your source for the latest information on the PAX System. As you know, PAX represents the future of continued mobility, as well as the passenger tire industry in general. But where did the name "PAX" originate?

PAX comes from the French acronym PAV, which stands for *Pneu à Accrochage Vertical* – translated to English as "vertical anchorage tire." This refers to the way the bead seats onto the rim vertically.

PAV began in 1997, and by 1998, PAV was renamed "PAX" because of its universality – and for the values of peace of mind, safety and the future that it conveys.

Several years of research prompted a significant improvement in the technology, particularly in terms of weight and aesthetics: since January 2002, PAX System has been standard feature on the Renault Scenic.

Developed by Michelin, PAX System is on its way to becoming the future standard of the automotive industry. This technology is shared among tire manufacturers since a new standard cannot be imposed by one sole manufacturer. Pirelli, Goodyear and Sumitomo have also begun developing their own versions of PAX.

PAX "Crosses the Pond"

Although the PAX System has been primarily a concept born and developed on the streets of Europe, PAX has now invaded the New World on the legendary Rolls-Royce Phantom.

The Michelin PAX 265x790R540A tires come standard on the 2004 Phantom, the first North American fitment riding on PAX. However, PAX has been available in Europe since 1998 on the Renault Scenic and now the new Audi A8.

Rolls-Royce is the first automaker to use PAX System on 100 percent of this new model.

The Phantom represents the third vehicle segment that comes with PAX System standard – mini-van (Renault Scenic), performance car (Audi A8) and luxury (Phantom). Michelin has already delivered 125,000 PAX System assemblies to Renault for the Scenic, which is now sold throughout Europe.

Another high-profile fitment for the PAX System is the Edonis, produced by B. Engineering near Modena, Italy. Unveiled in January 2001 in the Italian city of Modena, Edonis is equipped with PAX System. The Edonis supercar combines the unique hallmarks of Italian design and engineering: carbon chassis, a 600 bhp centrally positioned V12 engine equipped with two turbochargers — all housed in a superbly stylish silhouette.

2004 Rolls Royce Phantom

Renault Scenic

B. Engineering Edonis

The Magic Ring

The support ring that is anchored to the wheel is a vital component of the of the PAX System, and the one that bears the weight of the vehicle when continued mobility is required. Manufacturers specify the type of support ring needed based on the needs of the vehicle.

The variables that determine the load-carrying capacity of the support ring are: width, thickness and materials. Regardless of the configuration of the insert, keep in mind that the insert is only used when there is a pressure loss in the tire.

At press time, there are two different kinds of support rings utilized in the PAX System, rubber and polyurethane (or "P-U").

- Rubber support rings are used in early PAX System projects, and are specified for vehicles that require heavier load-carrying capacity.
- P-U rings are used in more recent applications, and are specified for vehicles that handle more normal loads. Its minimum mass, which means the P-U is lighter than rubber.

Please ensure that you replace a rubber or P-U support ring with an identical support ring when servicing PAX System components.

Corghi Artiglio Master

Artiglio Master is designed to mark a new frontier in the world of tire changers.

Probably only Corghi could have developed a product capable of superseding the traditional tire changer, invented in the Fifties and even today the characteristic product of a brand and an entire sector of professional users.

Artiglio Master marks **the end of the lever**, of physical effort, precautions and worry for light rims, dangerous stresses on the tire itself and the problems associated with the continual development of new types of rim.

The units extreme ease of use enables anyone to mount, demount and break the bead of any type of tire from 10" to 24".

The unit's operation is based in a completely new principle: electronic wheel diameter selection with automatic tool positioning, wheel lifter for loading and unloading the wheel in the optimal position, bead breaker with controlled penetration and automatic actuation, automatic tool head for **leverless wheel mounting/demounting;** all this without the need for the operator to leave his station, since all controls are mounted in a single ergonomic console for completely safe operation.

The result: **speed, precision and safety.**

Main characteristics

- **Universal tire changer** for all vehicle wheels to 24"
- **Integrated Pax system**
- **Electronic wheel diameter selection** with automatic mounting/demounting tool and bead breaker disk positioning (Corghi patent)
- **Axial mounting turntable** with automatic locking (Corghi patent)
- **Pneumatic bead breaking unit** with double vertical bi-directional disk with automatically controlled penetration (Corghi patent)
- **Mounting/demounting tool head** with vertical bi-directional motion controlled from the console, for optimal tire mounting/demounting without the use of the bead lifter lever (Corghi patent)
- **Pneumatic wheel lifter** for loading and unloading the wheel in the optimal position (Corghi patent)
- **Pneumatic support unit** with automatic positioning for supporting the tire during demounting
- Available with traditional pedal-controlled inflation or **with integrated T.I.** bead seating/inflation system

Technical data

Range of Wheel Sizes
Rim diameter 10"- 24"
Max. tire diameter 1020 mm
Max. keying diameter 360mm/14"
Tires: Conventional and PAX SYSTEM

Turntable
Positioning relative to tools: Automatic
Pad: Flanged
Centring on cone
Clamping automatic
Rotational torque 1000 Nm
Rotational speed 6 / 18 rpm

Bead breaker
Tool: Disk
Positioning relative to rim: Automatic
Penetration: Guided
Lower breaker stroke 450 mm
Upper breaker stroke 400 mm
Lower breaker pressure 7600 N
Upper breaker pressure 7600 N

Mounting/demounting tool
Positioning relative to rim: Automatic
Tool change: Automatic
Demounting: Automatic
Mounting: Automatic

Wheel loading/unloading
Operation: Automatic
Power: Pneumatic

Power
Electric 1-phase 230V-0.55 kW
Electric 1-phase (alternative) 110V-0.55 kW
Pneumatic 8 (min) bar

Weight 350 kg

For more information about the Corghi Artiglio Master or other PAX capable Corghi Machines Phone 1-800-232-2190

Your next issue of *PAX Facts* will be on its way during the second quarter with more exciting *PAX Facts* and other machine manufacturers. Stay tuned!

CORGHI McCOURT Industries