



PRODRIVE HUNTER FOR BAHRAIN RAID XTREME

EQUIPPED WITH AP RACING CALIPERS, PEDAL BOX,
MASTER CYLINDERS AND CLUTCH

Bahrain Raid Xtreme (BRX)'s Prodrive Hunter has been re-designed to meet new FIA T1+ cross country regulations and will compete at the 44th running of the Dakar Rally, which takes place in Saudi Arabia in January 2022.



Following the introduction of Dakar's new T1+ regulations, Bahrain Raid Xtreme (BRX) operated by Prodrive, has redesigned its Hunter in preparation for the 2022 Dakar in Saudi Arabia. The platform has already established itself as a contender, with BRX setting eight out of a possible 11 fastest sector times at the Baja Aragon event in July.



HAVING WORKED WITH AP RACING FOR MANY YEARS ACROSS A RANGE OF PROJECTS - INCLUDING WORLD RALLY CAR, GROUP M RALLY, BTCC AND FORMULA ONE - PRODRIVE TURNED TO THE RENOWNED BRAKE AND CLUTCH SPECIALIST FOR ITS SUPPORT WITH THE HUNTER UPGRADE PROGRAMME.

The new T1+ Hunter runs on larger tyres with a wider track and significantly increased suspension travel. These alterations required extensive changes to the Hunter's drivetrain, suspension and bodywork, in turn leading to new calipers, pedal box, master cylinder and clutch requirements.

Having worked with AP Racing for many years across a range of projects – including World Rally Car, Group M Rally, BTCC and Formula One – Prodrive turned to the renowned brake and clutch specialist for its support with the Hunter upgrade programme. Continuing its long history of partnership and collaboration, Prodrive and AP Racing engineers set to work developing an all-new package for the T1+ Hunter.

“It was very exciting to once again work with the Prodrive team, our long-time collaborator,” explained David Hamblin, Managing Director at AP Racing. “The Hunter doesn't just look and sound fantastic, but it is an incredibly capable off-road racing machine too – designed to set the pace in rugged and inhospitable conditions. With such impressive performance, it was vital that the all-new T1+ specification Hunter had the required stopping power.”

A unique and capable package

AP Racing's engineers put together a bespoke package for the Hunter T1+, including the company's innovative D drive 355mm disc assemblies, Radi-CAL billet monobloc calipers and a pull-type pedal box, with high-performance master cylinders and 184mm cerametallic clutch. Importantly, identical brakes were developed for both the front and rear, enabling BRX to carry spares appropriate for all four wheels and ensuring efficient servicing.

Based on AP Racing's patented, industry-leading Radi-CAL technology, the Hunter T1+ caliper design was informed by the Hunter's previous AP Racing package. The engineers studied the effects and issues caused by stone and sand strikes, further refining the design into one of AP Racing's most robust off-road Radi-CAL solutions to date. With a shift to larger discs, the primary challenge for AP Racing engineers was to develop a larger and stiffer caliper while minimising additional weight.

"Due to the types of events that BRX wanted to race the Hunter in, we needed to build as much protection into the caliper as possible," explained Hamblin.



The direct-drive disc assemblies designed for the Hunter T1+ forgo the traditional disc on a bobbin, eliminating the requirement to create holes in the disc itself. Instead, the Hunter's discs are driven by a series of square teeth, avoiding bolts entirely. This design helps to eliminate the stress concentrations caused by holes and prevents cracking – essential for long-distance, off-road racing in harsh conditions like the Dakar. While a traditional disc may have up to 12 bolts, this has 18 drives, effectively reducing the loading – and, therefore, stress – on each drive while allowing the disc to "float".

The cerametallic clutch in the T1+ package is capable of effectively transmitting high torque loads in extremely adverse off-road conditions. With smooth engagement, resistance to judder and high energy input, it provides the Hunter T1+ with a dependable clutch for Dakar racing conditions. AP Racing's clutch technology is utilised across the highest levels of track and off-road motorsport by high-profile teams competing for international championships.

Testing and timescales

Initial testing of the package was conducted internally at AP Racing and followed by Prodrive's own test programme at Sweet Lamb in the UK before continuing in Dubai to "simulate a range of conditions and distances that the team will experience in the Dakar", according to rally engineer, Jean Patrice Loof, who heads up the BRX test programme.

"One of the most critical and pressing aspects of this project was the timescale involved," explained Hamblin. "With extensive motorsport experience and an intimate understanding of rapid development, we developed this package for the Hunter T1+, including bespoke caliper and disc solutions, within just a few months. With Dakar taking place in January 2022, it was critical that the BRX had the finalised car ready early enough to finalise set-up and undertake sufficient real-world testing."

For Prodrive, the close collaboration with AP Racing ensured a thoroughly engineered and well-integrated solution that was delivered in time for BRX to train and practice with the new vehicle, from pace and racecraft to navigation, servicing and in-race repairs.

"It's great to once again be working with AP Racing and making the most of their technical expertise – it brings so much to the programme. Now that testing of the new T1+ has begun, we are confident that BRX has one of the best car and driver packages in the field. We will continue working with the team to ensure they have everything they need to be extremely competitive at both Dakar and in the FIA Cross Country Championships. AP Racing has been a critical partner in the T1+ programme and we look forward to their continued support." concluded Gus Beteli, Head of Performance, Prodrive.

- ▶ For more information on Prodrive, visit: www.prodrive.com
- ▶ For more information on Bahrain Raid Xtreme, visit: www.bahrainraidxtreme.com
- ▶ To learn more about AP Racing and its industry-leading motorsport solutions, visit: www.apracing.com



"WITH EXTENSIVE MOTORSPORT EXPERIENCE AND AN INTIMATE UNDERSTANDING OF RAPID DEVELOPMENT, WE DEVELOPED THIS PACKAGE FOR THE HUNTER T1+, INCLUDING BESPOKE CALIPER AND DISC SOLUTIONS, WITHIN JUST A FEW MONTHS"

David Hamblin, Managing Director at AP Racing

With 100 years' experience in the automotive industry, AP Racing has become one of the world's leading suppliers of brakes, clutches and pedal boxes for motorsport and high-performance applications. In developing a pedal box for the Pagani Huayra R, the company demonstrated its ability to collaborate with customers to develop high-quality, bespoke solutions that meet unique vehicle requirements and end-user considerations. ■