



4X4 ACCESSORIES



# PRODUCT RANGE UPDATE

DATE:

October 2013

## AIR LOCKER.....

## NEW BRANDING, NEW FEATURES, NEW WARRANTY



### NEW BRANDING:

To celebrate ARB Air Lockers new innovative features such as the two piece design, forged gears and timed gearing ARB's marketing team have launched a new logo and branding to capture the new innovations. Incorporating the 'A' and 'L' of 'Air Locker' in a modern symbol, the new logo gives the brand a fresh and contemporary look that is sure to further strengthen the brand that has been internationally synonymous with traction since 1988 all backed by an industry leading 5 year warranty.

A strong marketing campaign will support the launch of the new logo including a new print campaign, promotional items, and apparel range and retail display material. Further details will be available as the campaign is rolled out.



## NEW FEATURES:

The best just gets better.

Never satisfied with the achievements of yesterday, our team is dedicated to the constant evolution of ever more superior products.

With the completed introduction of forged gear sets across the entire Air Locker range, the already proven superior strength of the design, increased significantly.

In the Air Locker, one side gear, which is attached to one axle, is locked to the outer case when air pressure is applied to the locking ring. The other axle, being connected through its side gear and the spider gears to that now locked side gear, is also then positively locked. Thus, the strength of these gears, their durability and fatigue resistance is paramount.

Precision forged gears have increased load carrying capacity and fatigue strength. Forged gears are typically found in the most demanding of applications such as heavy duty industrial, commercial, race car and agricultural transmissions.

From a metallurgical standpoint, there is no stronger way to produce a gear. This is because the forging process produces a part whose internal molecular grain flow closely conforms to the shape of each individual tooth, something that cannot be achieved with other manufacturing methods.

When combined with ARB's patented "Timed Gear Design" the resultant strength of the whole assembly is amplified. Simply put, timing the gears means that the locking mechanism has its spline spacing synchronised with the gear tooth spacing so that whenever the assembly locks, it always does so with the maximum tooth surface area and point of strength in contact with each other.

Housing this superior internal gear train in a two piece case brings further benefits. Machining a case from two pieces instead of three results in much higher dimensional accuracy of the finished assembly. Eliminating the smaller cylinder cap as a separate part and switching the air entry to the crown wheel side of the differential not only adds huge strength, but also allows us to refine the locking mechanism design, eliminate the need for an internal annular piston and lock the side gear directly to a redesigned high strength flange cap. In addition, this also allows the locking ring to reside closer to the splined side gear, reducing actuation and disengagement time considerably.



Side Gear



Pinion Gear





The design process of an Air Locker involves countless hours of testing. Computerised Finite Element Analysis (FEA) allows the designer to subject each Air Locker design to 'virtual' off road driving stress simulations much more extreme than those experienced in real life, including extreme temperatures and harsh wheel spin. Prototypes are tested to ensure the strength of the Air Locker exceeds that of the axles or other driveline components. Finally, field testing is carried out with units being fitted to 4WDs that operate in the harshest environments imaginable

ARB Air Locker has always been at the leading edge in development of vehicle traction solutions, but now, with a raft of industry leading innovations and technology, there is simply nothing to compare to this vast range of superior products.

ARB is a justifiably proud and innovative Australian Manufacturer. In the last 25 years we have taken the Roberts Diff Lock from a humble but brilliant Australian Invention spanning 5 part numbers, to being a highly evolved international product with hundreds of applications lovingly built in our world class aerospace standard machine shop in Melbourne. Our dedicated team of gifted local design engineers, CNC production specialists, and 4x4 enthusiast support staff love coming to work every day and the company has a long term commitment to local manufacture.

## NEW WARRANTY:

ARB has a reputation for quality and is committed to supporting their products. From the 1<sup>st</sup> of July 2013, all 2 piece Air Lockers installed are now supported with an industry leading 5 year warranty from the date of installation, increased from the previous 2 year warranty. This includes all 2 piece Air Lockers which were purchased but not installed prior to the 1<sup>st</sup> of July 2013.

YEAR **5** WARRANTY

## AIR LOCKER CARTON CHANGEOVER:

All Air Lockers that have been packed for despatch in sea freight orders on or after October 1<sup>st</sup> 2013 have been supplied in the new design carton. New style replacement cartons can be supplied to distributors upon request for the re-packaging of 2 piece Air Lockers, upon receipt of serial numbers we will issue new cartons and serial number stickers along with detailed carton changeover instructions. Please note that some earlier 2 piece Air Lockers may not contain forged gear sets and will not qualify for the new carton changeover. We will advise if necessary upon receipt of serial numbers.

Air Locker build dates can be identified by their serial number, the first 2 digits represent the year of manufacture, the second 2 digits represent the calendar month of manufacture and the remaining 4 digits are the individual unit ID number. For example, Air Lockers produced in July 2013 will have a serial number of 1307xxxx; Air Lockers produced in August 2013 will have a serial number of 1308xxxx.

