

NEWS BRAKE

2019
The Bendix Wrap-Up

Merry Christmas

From all of the team at Bendix, we would like to thank you for your support this year and wish you a very Merry Christmas. Enjoy the great holiday season and stay safe on the roads.

It's been a big year and this issue of Bendix Newsbrake is overflowing with new product releases, technical info, latest industry news and Cars of Bendix.

The new Bendix Catalogue App Scan Feature allows you to easily identify what type of brakes a vehicle requires simply by scanning a registration plate, VIN number or Bendix product barcode with your phone!

This year has seen Bendix release many new and exciting products such as our range of super convenient spray cans, the Ultimate 4WD Brake Upgrade Kit, Ultimate Disc Rotors and Protrans Brake Camshafts.

We've produced technical bulletins with the latest technical information and tutorials, along with articles that will benefit your business and help you discuss braking issues with your customers.

We continue to expand our training series of videos following the great feedback we have received from workshops.

The Cars of Bendix program has continued to be a favourite read while the new reference updates deliver fast access to the new Bendix lines.

The team here at Bendix are proud of our innovative technology that's designed to make driving safer and a lot more fun.

You can find out more by downloading our **catalogue app**, by visiting www.bendix.com.au or by calling **1800 819 666**.

We wish you a safe and enjoyable holiday, and a happy new year!

The Bendix Team

Bendix

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THE BENDIX CATALOGUE APP
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**SEE PAGE 7 FOR
MORE INFO!**

THE ULTIMATE 4WD UPGRADE



ULTIMATE 4WD BRAKE UPGRADE KIT

The Bendix Ultimate 4WD Brake Upgrade Kit with advanced brake pads and rotors, braided lines and a host of ancillary items is the ultimate brake upgrade for the latest 4WD vehicles such as Ranger and Hilux.

This comprehensive kit includes specially compounded high performance **CERAMIC** material brake pads for increased stopping power in extreme conditions plus the latest **Bendix Ultimate Rotors** designed and developed specifically for Australia’s demanding conditions.

Contents

- 2 × Ultimate Brake Rotors
- 1 × Set of Ultimate 4WD Brake Pads
- 1 × Vehicle Set Ultimate Brake Hose
- 1L Heavy Duty Brake Fluid
- 1 × Can Bendix Cleanup
- 1 × Tube Ceramasil Brake Parts Lubricant
- 1 × HD touring case
- Installation details

ULTIMATE 4WD BRAKE PADS

FEATURES:	BENEFITS:
Ceramic Material	■ Low Dust, Low Noise, while providing high temperature stability and excellent fade resistance
Mechanical retention system backing plate	■ MRS technology used in commercial vehicle brake pads, for improved pad attachment strength, for heavy duty operating conditions
Designed for Slotted Rotors	■ Works best with slotted rotors, delivers confident stopping in all conditions

ULTIMATE 4WD ROTORS

FEATURES:	BENEFITS:
Diamond Tip Slot	■ Allows gasses to escape in heavy duty driving, delivering consistent output ■ Better self cleaning for off road conditions
High Carbon Metallurgy	■ Noise damping, thermal conductivity, improved durability and increases brake performance & stopping power
SwiftFit	■ Protective zinc coating which is ready to fit
Pillar Construction	■ Improved thermal stability

ULTIMATE BRAKE HOSE

FEATURES:	BENEFITS:
Braided line with protection sleeve	■ Delivers a firm brake pedal, that won't over expand under high pressure
Meets SAE J1401	■ Compliant to international design standards, won't affect warranty
Designed to fit	■ Fits your application without any modification



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VEHICLE APPLICATIONS

MODEL	SERIES	YEAR	BENDIX KIT PART NUMBER
FORD			
Ranger	PX / PX11	2011 on	U4WD-BUK9
Ranger	PX / PX11 50mm (2") suspension lift	2011 on	U4WD-BUK9+2

HOLDEN			
Colorado	RG Std Ride height	2012 on	U4WD-BUK10
Colorado	RG 50mm (2") suspension lift	2012 on	U4WD-BUK10+2

ISUZU			
D-Max	RT50 / RT85 Std Ride height	2012 on	U4WD-BUK10
D-Max	RT50 / RT85 50mm (2") suspension lift	2012 on	U4WD-BUK10+2

MAZDA			
BT50	P5-AT Std Ride height	2011 on	U4WD-BUK9
BT50	P5-AT 50mm (2") suspension lift	2011 on	U4WD-BUK9+2

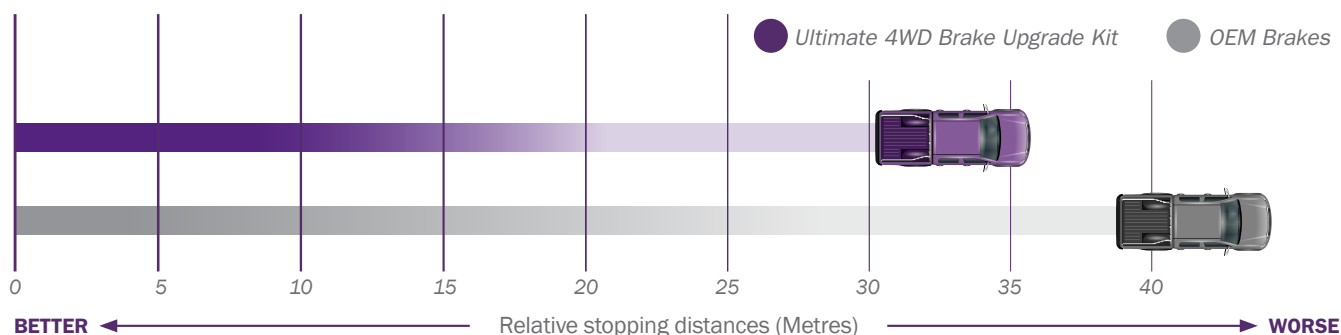
MITSUBISHI			
Triton	ML / MN / MQ / MR Std Ride height	2001 on	U4WD-BUK11
Triton	ML / MN / MQ / MR 50mm (2") suspension lift	2001 on	U4WD-BUK11+2

NISSAN			
Navara	D23 (NP300) Std Ride height	2014 on	U4WD-BUK12
Navara	D23 (NP300) 50mm (2") suspension lift	2014 on	U4WD-BUK12+2

MODEL	SERIES	YEAR	BENDIX KIT PART NUMBER
TOYOTA			
Hilux	KUN26 3.0 D-4D With VSC Std Ride height	2005 - 2015	U4WD-BUK1
Hilux	KUN26 3.0 D-4D With VSC 50mm (2") suspension lift	2005 - 2015	U4WD-BUK1+2
Hilux	GUN125 (2.4) / GUN126 (2.8) / GGN125 (4.0) Std Ride height	2015 on	U4WD-BUK2
Hilux	GUN125 (2.4) / GUN126 (2.8) / GGN125 (4.0) 50mm (2") suspension lift	2015 on	U4WD-BUK2+2
Hilux	GGN25 (4.0) with VSC Std Ride height	2005 - 2015	U4WD-BUK4
Hilux	GGN25 (4.0) with VSC 50mm (2") suspension lift	2005 - 2015	U4WD-BUK4+2
Hilux	GUN136 (2.8) with VSC Std Ride height	2015 on	U4WD-BUK5
Hilux	GUN136 (2.8) with VSC 50mm (2") suspension lift	2015 on	U4WD-BUK5+2
Hilux	KUN26 3.0 D-4D / GGN25 (4.0) / 3.0D / 4.0 No VSC Std Ride height	2005 - 2015	U4WD-BUK6
Hilux	KUN26 3.0 D-4D / GGN25 (4.0) / 3.0D / 4.0 No VSC 50mm (2") suspension lift	2005 - 2015	U4WD-BUK6+2
Hilux	GGN135 (4.0) / GUN112 (2.4D) / TGN136 (2.7) / GUN136 (2.8D) Std Ride height	2015 on	U4WD-BUK8
Hilux	GGN135 (4.0) / GUN112 (2.4D) / TGN136 (2.7) / GUN136 (2.8D) 50mm (2") suspension lift	2015 on	U4WD-BUK8+2

VW			
Amarok	2HA / 2HB / S1G / S6B / S7A / S7B Std Ride height	2010 on	U4WD-BUK14
Amarok	2HA / 2HB / S1G / S6B / S7A / S7B 50mm (2") suspension lift	2010 on	U4WD-BUK14+2

Ultimate 4WD Brake Upgrade Kit vs OEM Brakes



Note: Varies per vehicle, load carried and road conditions.

FIND OUT MORE:

For more information about the Ultimate 4WD Brake Upgrade Kit, visit:
www.bendix.com.au/product-range/Ultimate-4WD-Brake-Upgrade-Kit

ABSOLUTE STOPPING POWER



Behind every Bendix Ultimate disc brake rotor lies OE expertise, leading technology and precision engineering so you can put your foot down with confidence™.

Bendix Ultimate Rotors offer the very latest in braking technology and manufacturing processes. Innovative technologies like, HIGH CARBON METALLURGY increases brake performance and stopping power, Diamond Tip Slot that are specifically designed slots and v-shaped dimples to efficiently expel gasses, dirt and water. All completely coated in our advanced protective zinc coating for a SWIFTFIT, allowing for a faster, easier installation. Bendix Ultimate rotors are the perfect complement to the extensive Bendix brake pad range.

These leading technologies combined with Bendix's unparalleled experience and absolute quality assurance ensure the Bendix Ultimate brake disc rotors are ready for the demands of today's vehicles and beyond.



HIGH CARBON METALLURGY

Quality straight from the casting thanks to proven HIGH CARBON METALLURGY, provides improved thermal stability & conductivity, and reduces the chance of warping when very hot.

The highest level of accuracy based on OE specifications for size, diameter and hole spacing for highest reliability and perfect fitting.



DIAMOND TIP SLOT

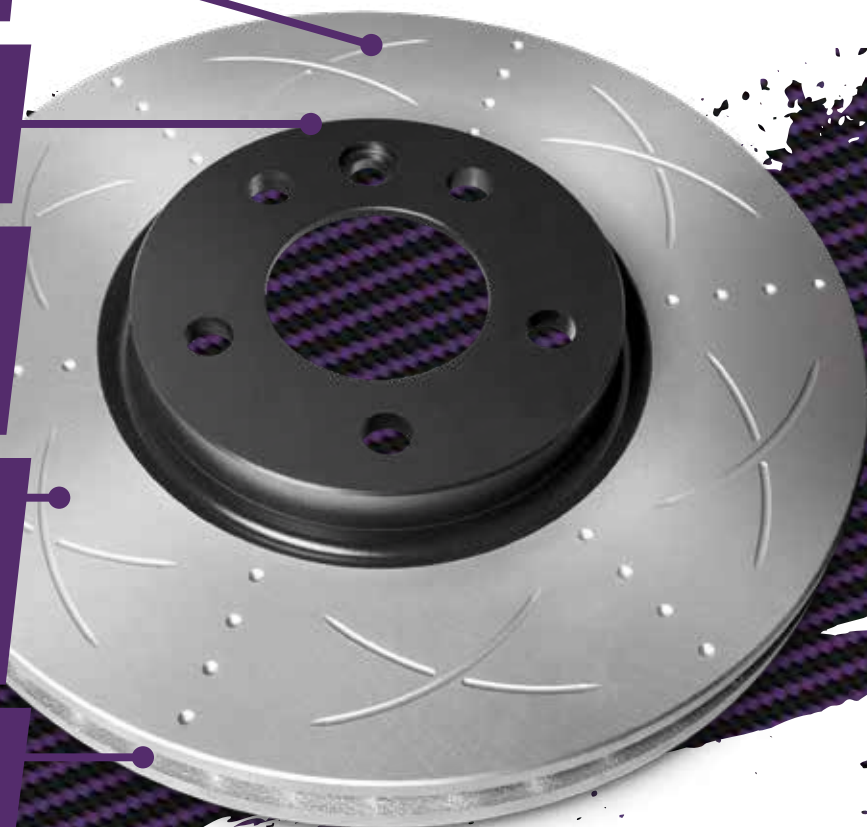
Diamond Tip Slot's that are specifically designed unidirectional slots and v-shaped dimples to efficiently expel gasses, dirt and water!



SWIFTFIT

Faster installation SwiftFit coating for fitting without pre-cleaning, with corrosion inhibitors for a great look and will not degrade over time.

Perfect brake cooling and the best possible thermal relief of the brake disc due to the highly effective interior ventilation design.+



FIND OUT MORE:

For more information about Bendix Ultimate Rotors, visit: www.bendix.com.au/product-range/bendix-ultimate-sports-performance-disc-rotors



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THE BENDIX CONSUMABLES RANGE

Bendix have got it in the can with our new range of super convenient spray cans!
The all new range of Bendix spray cans, available at your nearest automotive stockist now.



CLEANUP BRAKE & PARTS CLEANER

A dynamic cleaner designed to rapidly remove brake fluids, oils, dust, dirt, grease and other contaminants from brake linings, disc pads, drums, clutch plates, rotors, cylinders and springs. Stops squeal in disc brakes and can be applied without disassembly of brakes. Bendix Cleanup dries super-fast which enables quicker brake part changes. It also cleans other workshop equipment.



SHINE SHINES TYRES

The easiest and most effective way to shine your tyres, mudflaps and bumpers, is Bendix Shine, designed to give the ultimate new appearance. Prevents dirt from forming on tyres. Just spray on and let the product produce the shine on your tyres. Ideal for use on low profile and performance tyres.



DEGREASE REMOVES OIL & GREASE

A powerful multipurpose degreaser designed to remove grease and grime from numerous surfaces including engines, lawn mowers, outboard motors, concrete floors, driveways and general workshop surfaces. Bendix Degrease is formulated to quickly soften and remove grease and grime in one application leaving the surface sparkling clean.



MULTI-USE PENETRATES & LUBRICATES

A heavy duty water dispersant designed to displace moisture and assist in lubricating, protecting and starting wet motors. The product is suitable to be used on most machinery parts, heavy duty engines and hobby engines. It is fast acting in displacing moisture from engines and motor parts and protects against corrosion. Bendix Multi-Use also stops squeaks and loosens rusted parts.



SMOOTH WHITE LITHIUM GREASE

An all-purpose lubricant designed to lubricate and protect surfaces from abrading or scratching one another and helps prevent squeaking. It is an ideal lubricant for bearings operating under all service conditions, chassis lubrication, metal hinges, door catches, striker plates, cables and springs, outboard motors, chains, winches, jacks, garden tools etc. It is suitable for automotive (cars, trucks, tractors and trailers), marine, agriculture, general industrial and household use.



SILICONE LUBRICATES & PROTECTS

A heavy duty lubricant designed to lubricate, waterproof and protect most surfaces from binding, corroding and squeaking. Bendix Silicone is an ideal protectant for plastic, vinyl leather and rubber, window and sliding door tracks, doors hinges, rubber gaskets, metals, vinyl, fibreglass, locks, fishing equipment and boat fittings. It is suitable for marine, automotive and household applications.



FIND OUT MORE:

For more information about Bendix Consumables Range, visit:
www.bendix.com.au/product-range



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BENDIX COMMERCIAL VEHICLE PROTRANS BRAKE S-CAMSHAFTS

Protrans brake camshafts are designed for a range of commercial vehicle applications. Forged using high quality carbon steel to meet SAE 1045 standard this combined with hardened critical contact points to increase reliability, wear life and corrosion resistance. Precision machined for exact fit and easy replacement.



ENGINEERED EXCELLENCE



Forged

Using high quality carbon steel allows for strength and durability in harsh conditions.

Heat Treated Journal & Splines

Minimises wear on critical contact points and eliminates the risk of splines or steel sheering off the camshaft shaft.

Precision Machined

Ensuring direct replacement with easy fitment and improved wear life.

Oil Washed And Boxed

Allowing safe storage, transport and resistance to rusting from contamination before use.

FIND OUT MORE:

For more information about Bendix Ultimate Rotors, visit: www.bendix.com.au/product-range/commercial-vehicle-brake-s-camshafts



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SCAN YOUR VEHICLE WITH THE BENDIX CATALOGUE APP!



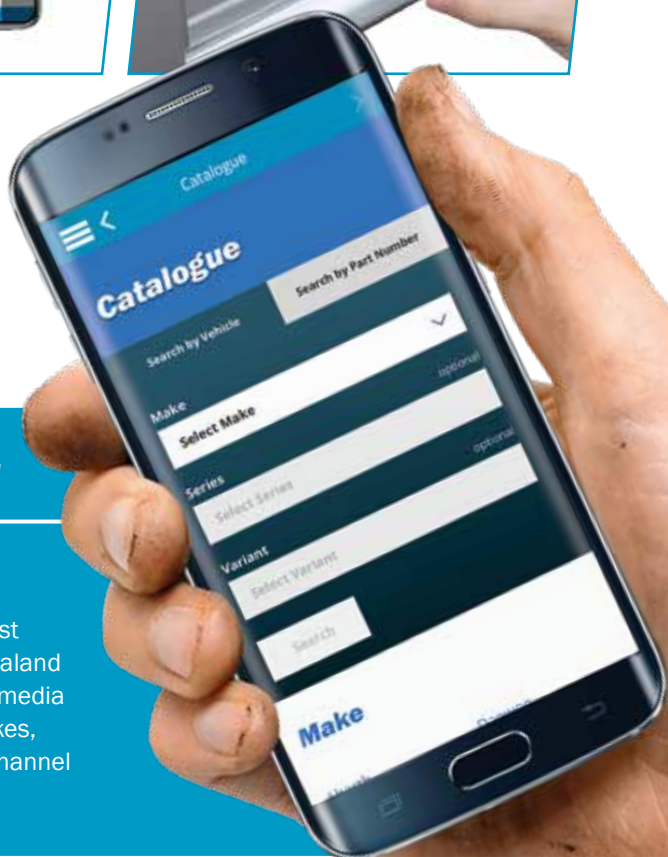
The new **Bendix Catalogue App Scan Feature** allows you to easily identify what type of brakes a vehicle requires simply by scanning a **registration plate**, **VIN number** or Bendix **product barcode** with your phone!

THE CATALOGUE APP ALSO FEATURES:

Fast Catalogue Access

Use the Bendix search engine to quickly find the Bendix part number that fits your job. You can also match an OE/FMSI/WVA or other brake pad part number.

Search for any Bendix stockist across Australia and New Zealand or access industry news via media releases, B-m@ils, Newsbrakes, promotions, the Bendix TV channel and more!



BRAKING NEWS



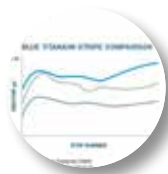
NEW PART No. RELEASES



LATEST PROMOS



NOTIFICATIONS



PRODUCT INFO



LOCAL STOCKISTS



CONTACT DIRECTLY



CHOICE OF STORES & LOCATIONS

DOWNLOAD IT FOR FREE TODAY!

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INCREASE YOUR PROFITS WITH BENDIX

PART 1 Introduction

In the land of the automotive trade, “time is money” are words to live by. With brakes, as with any other aspect to automotive mechanical work, spending time to make sure the job is done properly not only keeps your customers safe and happy, but also nets you a heftier profit.

This video series shows you, your staff and apprentices how to keep your customers coming back with a proper brake service all whilst increasing your brake service profit margins.

In part 1, we'll be walking you through an extensive brake service from start to finish and showing you which components to service and/or replace to not only increase profits, but also value for your customer.

You will learn how to keep customers coming back.



VIEW IT ON YOUTUBE:

To watch **Part 1** of Increase your profits with Bendix visit:
www.youtube.com/watch?v=dZUrF2zd8Zo

PART 2 How to sell brake pads to your customer

In episode 2 of increase your profits with Bendix we look at how to sell the brake service to your customer. You want to make sure that your customer gets the right brake pad for their vehicle and driving style so we suggest a series of questions to help identify their driving needs.

Its then important to discuss the brake disc and its servicing requirements or possible replacement options to ensure that the Bendix brake pad friction materials suits the new disc. Brake fluid is also a serviceable item that requires maintenance and we explain the best approach to testing this system and discussing servicing with your customer.

Knowing how to match the right brake pad to a driving style is vital training.



VIEW IT ON YOUTUBE:

To watch **Part 2** of Increase your profits with Bendix visit:
www.youtube.com/watch?v=y2p_N1nzi8Q



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PART 3 The Service!

In this episode we look at how to sell the service to your customer which can result in more profit and better customer retention, from work being performed without any customer come backs for braking system complaints.

You want to make sure that you have inspected and reported all possible issues with the cars braking hardware, such as caliper boots, dust, slide pins or hydraulic leaks. If there are issues they need to be rectified with an overhaul or replacement of the component. We discuss how to carry out and sell a basic caliper service which should be done along with the brake pad service to ensure to higher labour margins for your business and better customer satisfaction.

Teaching apprentices to carry out a complete check of all components can increase margins for your business.



VIEW IT ON YOUTUBE:

To watch **Part 3** of Increase your profits with Bendix visit:
www.youtube.com/watch?v=FI61dvOyeqo

PART 4 The Post Service Talk!

In the final episode of increase your profits with Bendix we look at how to explain the brake service invoice to your customer. This overlooked part of your customers service experience can be the most crucial part as they often will not understand what's been done to their vehicle.

In this video we demonstrate the best practice of discussing the repair, talking through each invoice line item and giving them peace of mind that the jobs been carried out correctly and at a reasonable cost.

Apprentices will learn how to help their customers understand brake service costs.



VIEW IT ON YOUTUBE:

To watch **Part 4** of Increase your profits with Bendix visit:
www.youtube.com/watch?v=-7v8TPVQGrk



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TECHNICAL BULLETINS



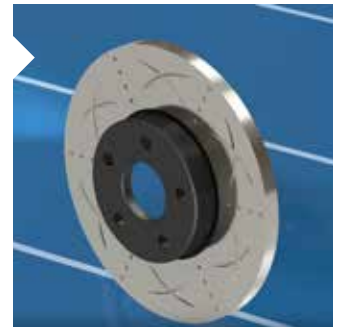
We've created the ultimate video to display in your workshop: **Brake parts and how they work together to stop a vehicle.** Enlighten your customers with this simple and informative video that demonstrates how a modern disc brake system works...

BRAKE PARTS AND HOW THEY WORK TOGETHER TO STOP A VEHICLE

Welcome to Bendix brakes, today we will look at how a modern disc brake system works. We will start by looking at the braking components involved in stopping a vehicle and how they work together.



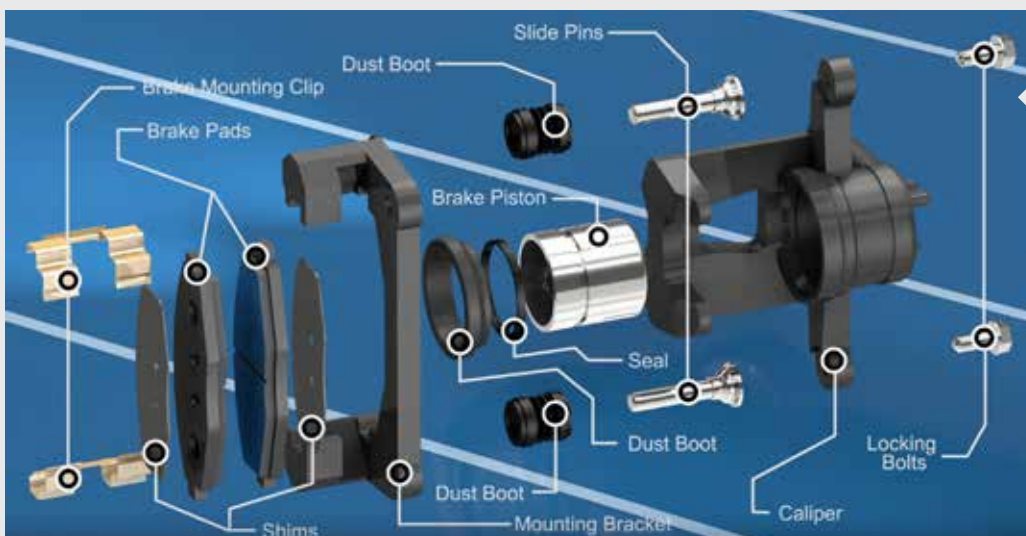
Starting with one of the main components in the braking system we look at the disc rotor which the brake pads squeeze against. This will create friction that decelerates the rotation of the wheel and vehicle.



The caliper is activated by brake fluid hydraulic pressure produced from the vehicles brake pedal and master cylinder. In this assembly the brake pads are squeezed up against the disc rotor surface to create friction.



Brake Caliper Assembly



A caliper is made up of multiple parts all crucial in effective operation of the brake system. These parts include the caliper and mounting bracket, slide pins, locking bolts, dust boots, brake mounting clips, brake pads and shims, the brake piston with dust boot and seal.



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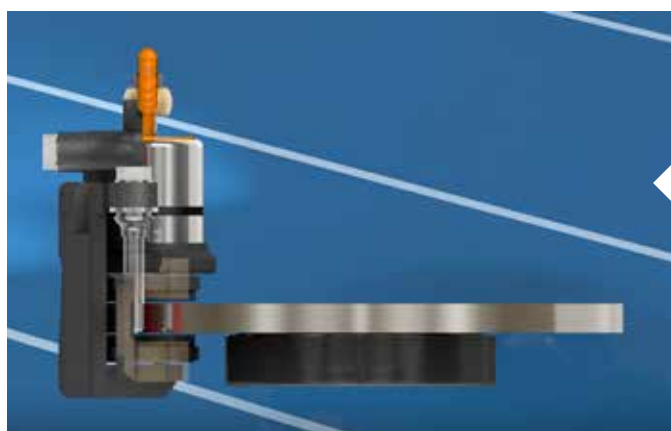


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The caliper is fed brake fluid through a banjo fitting which drives the piston forward towards the inside brake pad when the brake pedal is pushed. This causes the caliper to move along the slide pins which then pulls the outside brake pad up against the brake disc rotor.



Now that we understand the parts let's see how the braking system works. When the brake pedal is pressed the caliper will receive high pressure brake fluid from the master cylinder which will push the piston into the inside brake pad and onto the disc rotor surface. Hydraulic pressure will cause the caliper to move along the slide pins pulling the outer brake pad against the opposite side of the disc rotor causing friction and decelerating the brake and the vehicle.



Looking at the braking process from another angle we can see the brake fluid pushing the piston which in turn pushes the inner brake pad against the inside of the disc rotor. Once this has happened the fluid will now push the caliper along the slides and the outer brake pad will be pulled towards the opposite side of the disc rotor.

We hope that you have learned the fundamentals of how Bendix brake pads work within a modern braking system. *Remember to always fit Bendix brakes!*

GET YOUR COPY OF THE VIDEO!

Contact your local Bendix Representative to ask for your copy of the ***Brake parts and how they work together to stop a vehicle*** video.

Preview the video at: www.bendix.com.au/bendix-news/brake-parts-and-how-they-work-together-to-stop-a-vehicle

THE NEW BENDIX BRAKE CLEANER SPRAY BOTTLE

The Bendix Brake Cleaner spray bottle (BBC1L-PUMP) is specifically designed for use with hydrocarbon-based solvents, lubricants and petroleum products, applicable for brake cleaning, vehicle bodyworks, machinery and engine cleaning, degreasing, waterproofing and de-waxing fluids.

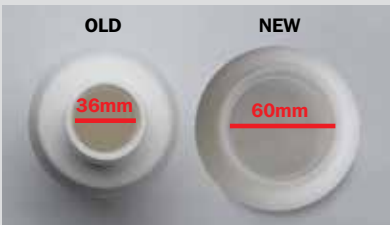


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The Bendix Brake Cleaner spray bottle offers a number of features:

- 1 WIDE** filling aperture (60mm) for easy refilling and minimise risk of chemical spill.
 
- 2 SAFETY** valve with depressurisation option.
 
- 3 VISIBLE** liquid level – Translucent tank with liquid level indication.
 
- 4 ERGONOMIC** pump and handle for comfortable operating.
 
- 5 PROTECTIVE** sleeve – To prevent direct chemical contact and wear and tear on the gasket, hence extend lifespan and usage.
 
- 6 SUITABLE** material nozzle and high quality O-ring and gasket to withstand brake cleaner active ingredient.
 

Product Testing

The sprayer has been tested with several high concentrations of the most common solvents, for example:

- a) Naptha
- b) Xylene
- c) White Spirit
- d) Decane
- e) Heptane

The sprayer has also been tested in extreme conditions to ensure no leakage, deformation, pressure loss, or pumping mechanism failure and that the valve and seal maintain there integrity.

The product was tested at:

- a) Maximum operation pressure at 14.5 PSI (3 bar)
- b) 40 Degrees Celsius
- c) For 15 days

Changing from a Brass to Plastic Nozzle

The brass/metal nozzles may seem better quality and robust, there is however a hidden issue that commonly goes unnoticed, brass nozzles are subject to higher erosion compared to “plastic” nozzles that are specifically made for brake cleaning application.

Two reasons for using a “plastic” nozzle:

1. The particular “plastic” material that Bendix is using has been developed to be used with brake cleaners. Active ingredients used in brake cleaners can cause aggressive erosion unless a special material is used.
2. A study was carried out to compare against brass/metal nozzle, in fact after certain period of spraying, the nozzle orifice increased and resulted in leaking and increase brake cleaner consumption.

FIND OUT MORE:

Download the full technical bulletins now at:
www.bendix.com.au/bendix-news



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BRAKE WEAR SENSORS IN-DEPTH

Nowadays, electronic brake pad wear sensors are fitted to a wide variety of modern cars and especially European cars. They let you know when it's time to swap out your brake pads for a fresh set. But how do they work? And how often do they need to be replaced?

Electronic brake pad wear sensors replace the traditional metal squealer tabs found more commonly in braking systems. These tabs work by rubbing against the rotor once the pads have reached the end of their service life. By making a loud squeal, it lets the driver know that the brakes are up for a service.

The downside to this apart from the squeal, is that most drivers tend to ignore the warning, thinking the sound will eventually go away. Electronic brake wear sensors eliminate this noise and give you a more accurate gauge on how much brake pad life is left.

The wear sensors are designed to break or complete a circuit once the brake pad has worn enough for the sensor to contact the brake rotor. A warning light will usually light up on the dash, indicating it's time for a brake pad change.

Basic brake wear systems feature a sensor at each corner of the vehicle and is usually installed within the inner brake pad. However the number of wheels fitted with sensors and placement on the brake pad can vary from car to car. These systems simply consist of a loop of wire with a small of current running through it.



Modern brake wear sensors have gained a few more tricks up their sleeves. Not only do they warn the driver of a due brake service, but they can also estimate how much you'll get out of your current brake pads. These trick sensors work using two resistor circuits running parallel at two depths, also known as two-stage sensors. As the first resistive circuit breaks, the resistance in the sensor increases. This is used to gather information such as wheel speed, brake pressure, brake disc temperature, brake operating time and mileage to estimate the life left in your brake pads. This is usually displayed in your car's information centre or as a warning light that varies in colour as the pad wears. Once the second circuit is broken, the circuit becomes open. This triggers the warning light that lets you know that it's time for a brake service.

As brake pad wear sensors are designed to break or complete a circuit by contacting the brake rotor, they aren't a reusable item. Brake pad wear sensors should be replaced with every brake pad change. Bendix supplies brake pad wear sensors to suit a wide range of vehicles. Ask your mechanic for Bendix brakes at your next service.

Check out episode #100 of Bendix TV at:
www.facebook.com/bendixworkshop
or at: www.youtube.com/BendixTV



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BRAKE NOISE IN-DEPTH — CAUSES AND PREVENTION

One of the biggest mechanical annoyances is brake noise. What is it? Broken down into basic science, it means that under braking, something is vibrating at a frequency high enough to make you notice there's 'noise'.

Cause of Vibrations

First, we must understand how vibrations are generated under braking. When the brake pads come into contact with the rotor, it causes oscillations and vibrations. In engineering terms, this is called force coupled excitation, which means both components are now locked together and will vibrate at that frequency's combined modes of vibration. The amount of vibration and frequency generated is varied by changes in brake torque and friction changes across the face of the rotors.

As the brakes heat up, the rotors can develop hotspots where different ranges of friction can occur, causing changes in brake torque. These changes in brake torque across the surface of the rotors is where most of the noise is generated.

Brake Noise – Collective System Inspection

While contact between the rotor and the pad is the main instigator of brake noise, it is not the only component at fault. Low frequency oscillations from the pad and rotor travel through brake and suspension components while higher frequencies tend to remain at the pad/rotor, which leads to the passenger compartment, resulting in detectable noise when a natural frequency of the components is reached. These connected parts vibrating will be the cause of the noise. Let's check out each brake component and see how these vibrations can be reduced.

Brake Pads

The friction material used in a brake pad can reduce noise in two ways. A good brake pad compound that keeps friction coefficient consistent across a range of temperatures and environmental conditions will tend to be more quiet. By maintaining consistent friction coefficients, variations in brake torque are reduced, therefore also reducing the possibility of noise.

Some brake pads such as the Bendix General CT transfer a film of friction material on the rotor surface. This protects the rotor surface, so that under braking there is minimum change of brake torque as pads come into contact with hot spots. Normally this film is generated during the bedding-in procedure, however Bendix's Blue Titanium Stripe means



you can drive straight on to the road and get instant pedal feel and stopping power, while reducing brake noise. The General CT is also made using the STEALTH Advanced Technology. The proprietary diamond shaped chamfers eliminate noise and vibration at the source.

Checking each component: Rotors

Many mechanics are quick to blame brake pads as a source of noise, but actually, most of the noise is caused by the interaction of the pad and brake rotors. The brake rotor is regarded as an unchanging factor when it comes to brakes, when in reality, it can be altered as brake pressure and heat are applied. Rotors can actually move and flex as brake force is applied, invisible to the human eye. This movement can cause noise and excitation at friction coupling; that is when brakes are applied. The brake noise will also be increased if the rotors have poor metallurgy and differ from OE design.

The smoothness of the rotor surface also matters when it comes to noise prevention. When reusing brake rotors, it is very important to machine them, using a good condition lathe for a proper smooth finish. To prevent any chemicals from contaminating the brake rotors, wipe it down thoroughly with Bendix Brake Cleaner & Parts Degreaser and a clean rag.



Brake Shims and Insulators

Brake shims are key in controlling noise. First, they reduce transmission of vibrations from the pads and rotors into other brake components. Most shims supplied with Bendix brake pads are covered with fibre reinforced rubber coating, which dampen vibrations incredibly well compared to non-coated shims. In Bendix's performance brake pads, the supplied shims are coated with nitrile, which adds more heat resistance. Secondly, shims add mass to a brake pad, causing vibrations to lose energy and reduce noise-causing frequency levels. Last but not least, shims act as a thermal barrier to help spread heat evenly across the face of the brake pad, ensuring consistent brake torque. Bendix's brake shims are made from carbon steel, which has low thermal conductivity, and are designed to last the lifetime of the brake pads.

Lubricant

Lubricant is extremely important in a braking component system. Not only do they allow caliper pins to work efficiently, by applying them on caliper fingers, and between shims and brake pads, it forms another barrier that further dampens vibrations under braking. However, only lubricants such as Bendix's Ceramasil Brake Parts Lubricant should be used. Bendix's new lubricant uses a formula that does not break down under extreme heat and pressure generated by brakes. It also does not contain petroleum, which will cause boots and seals to react and fail prematurely.

To ensure your brakes are quiet, effective and long lasting, ask your mechanic to only use Bendix brake products at your next service.



Check out episode #104 of Bendix TV at:
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 or at: www.youtube.com/BendixTV

REAR BRAKE PADS ON VEHICLES WITH STABILITY CONTROL

When it's time to service the brakes and a change of brake pads are required, you might be told that the front brake pads are done, but the rears will be fine. It's a rule of thumb that since the rear brakes do less work than the front, the pads will last twice as long.

In modern cars and vehicles, this is no longer the case. With the advent of traction control, stability programs and electronic brake force distribution systems found in today's new cars, the rear brakes are given a work out just as much as the fronts, often without us realising it.

Electronic brake force distribution (EBD) is a system that is now found on most modern cars with high safety ratings. EBD works by varying brake pressure between front and rear wheels, depending on speed, road conditions and how hard the driver is braking. It works alongside standard anti-lock braking systems for peace of mind.

Often, EBD uses the rear brakes to stop the car from diving under initial brake application. This prevents excessive weight transfer to the front, allowing for more stable handling, and a better ride for the car's occupants.

In rear wheel drive cars, clever traction and stability programs are used in place of a limited slip differential, by braking the inside or outside rear wheels to improve handling and traction. Stability control programs also brake the inside rear wheels to prevent understeer in emergency situations.

Automatic hill descent features are now mostly standard in modern 4x4 vehicles and SUVs. The hill descent program individually brakes each wheel while the vehicle goes down a steep slope, without input from the driver. Front and rear brakes are independently used to maintain a specified speed going downhill in slippery off road conditions. This also results in rear brake pads to wear out sooner than expected.

Bendix brakes are suited to modern car technology that continuously improves to meet ever stricter safety regulations. Combined they offer exceptional on-road safety. Make sure to check your rear brake pads, calipers and rotors as well at your next service, and ask your mechanic for Bendix brakes.



Check out episode #97 of Bendix TV at:
www.facebook.com/bendixworkshop
or at: www.youtube.com/BendixTV

NEW REFERENCE UPDATES

Bendix has released 24 new brake pad, brake shoes, brake linings and brake wear sensor part numbers in 2019!

Through our new application releases we've also released over 100 new references for new models and application changes for old models. This detailed information on the latest reference releases can help to keep your workshop up to date!

Stay tuned for upcoming & continuous updates in 2020, and check out our new Master Products Catalogue, detailing our entire product range! Contact your local Bendix rep to get your copy!



PASSENGER VEHICLES

New & Updated Part Numbers:

Part	Vehicle Application	Part	Vehicle Application	Part	Vehicle Application
BWS1175	Mini Mini Clubman Mini Countryman	BWS1180	Land Rover Discovery Sport	DB2449	Toyota Camry
BWS1176	Mini	BWS1181	Audi A7	DB2454	Kia Carnival
BWS1177	BMW 2 Series BMW X1 Series Mini Mini Clubman Mini Countryman	BWS1183	Mercedes Benz Sprinter VW Crafter	DB2469	Toyota Camry
BWS1178	Land Rover Discovery Sport	DB2325	Kia Picanto	DB2476	Renault Master
BWS1179	Land Rover Discovery Sport Land Rover Discovery Evoque	DB2358	Cadillac CTS-V Holden Commodore	DB2479	Toyota C-HR
		DB2425	Mazda 6	DB2489	Holden Crewman
		DB2426	Toyota C-HR	BS5292	Toyota Landcruiser 200 Series
		DB2429	Honda Civic		



COMMERCIAL VEHICLES

New & Updated Part Numbers:

Part	Vehicle Application	Part	Vehicle Application	Part	Vehicle Application
CVP1008	Kenworth K Series Kenworth T Series Mack/Renault CH Series Mack/Renault CHR Series	MB/74/75/1	MAN NL Series MAN O Series MAN SL Series	VL/88/2	Volvo B12 Series Bus Volvo FM Series Truck
		MB/76/77/1	MAN NL Series MAN O Series MAN SL Series	VL/89/2	Volvo B12 Series Bus Volvo FM Series Truck

FIND OUT MORE:

For more information on our new releases, visit us online at:
www.bendix.com.au/new-releases



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THE LATEST AUTO INDUSTRY NEWS



INDEPENDENT WORKSHOP HEALTH AND GROWTH RESEARCH 2019

The Australian automotive workshop landscape remains in healthy condition overall despite the challenges.

A significant slice of the workshop sector is growing and the focus on further opportunities to increase profitability and customer satisfaction is encouraging.

The latest research conducted by ACA Research for the Australian Automotive Aftermarket Association (AAAA) delves deeper into workshop performance, business profitability, growth strategies, and industry challenges.



DOWNLOAD NOW:

Download the full report from: www.aaaa.com.au/policy-advocacy/resources/independent-workshop-health-growth-research-2019/



HOW TO EXPLAIN YOUR LABOUR CHARGE(S) TO YOUR CUSTOMERS

We take a closer look at why a multi-door approach to calculating labour charges could mean the difference between becoming or remaining profitable, and merely surviving in a very tough industry.

While charging simple hourly-based rates is not all bad, we would like to suggest that there are better ways of calculating labour charges. Thus, in this article, we will take a closer look at why a multi-door approach to calculating labour charges could mean the difference between becoming or remaining profitable, and merely surviving in a very tough industry. Let us start with saying that: Simple hourly-based labour charges could sink a new workshop.



READ MORE:

View the full article by visiting: www.mechanic.com.au/news/how-to-explain-your-labour-charge-s-to-your-customers



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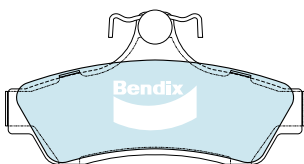


PRODUCT BULLETINS

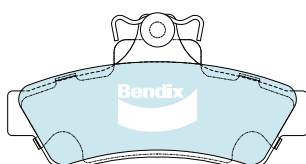
NEW PAD FOR HOLDEN CREWMAN REAR

The Bendix Disc Pads for the rear disc brake Holden Crewman, DB1332 were developed in the OE style with “wrap-around” shims that extended from the back of the backing plate and were bent around the two ends of the pad.

While this was very good for positive location of the shim, in severe service the metal of the shim could fatigue and break off where it was bent around the end of the pad.



DB1332



DB2489

This allowed too much clearance in the caliper and was responsible for a knocking noise when changing between reversing and forward motion.

The new pad DB2489 uses a full-length backing plate and a different shim to avoid these problems. The new positions of the locating tabs hold the shim in the correct position while protecting the tabs from damage.



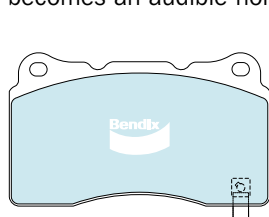
READ MORE:

View the full article by visiting:
www.bendix.com.au/bendix-news/new-pad-for-holden-crewman-rear

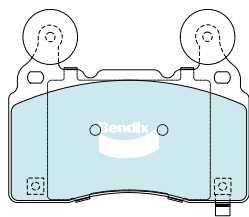
CHANGES TO DB2358 FOR BREMBO CALIPERS

This Brembo caliper has been fitted to many vehicles, and has had many disc pads with different wear sensor, groove and chamfer configurations to mitigate any noise.

All friction causes vibrations, and most brake and suspension components have natural frequency they vibrate at. If the Pad or Caliper's natural vibration frequency matches the vibration frequency coming from the friction surface it becomes an audible noise.



DB1678



Original DB2358

The standard approach to stop noise was by adding a noise-dampening shim on the back. Recently another approach was created, weights were added to the pad to change its natural vibration frequency, so DB2358 was developed from the original DB1678.

With the introduction of DB2358 it was found that the large round weights could come into contact with the inside of the wheel rim on some wheel designs. To rectify this the shape of the weights was modified so that they don't protrude from the caliper as much.

We are reintroducing the DB2358 with the modified weight design.

READ MORE:

View the full article by visiting:
www.bendix.com.au/bendix-news/changes-to-db2358-for-brembo-calipers



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Cars OF Bendix



As part of Bendix's support of various automotive meets at various locations, we've chosen a few cars from each month that we think are cool to be showcased on the Bendix Facebook page. Here are some of our picks for 2019:

1932 FORD ROADSTER SEPTEMBER 2019

The bright yellow paintjob, the exposed wheels and engine bay, the assorted chromed bits; yes, it can only be a '32 Ford. It's tough to pinpoint what exactly draws car enthusiasts, young or old, back to these custom built classics.

1972 FORD FALCON XA GT-HO PHASE IV JUNE 2019

A piece of 'almost' racing history was out on track at Rolling 30 – 2 of 4 XA GT-HO Phase IV sedans ever produced. The production of the car, for homologation to the Group E Series Production Touring Car series aiming for the 1972 Hardie-Ferodo race at Bathurst, was cut short when on the 25th June 1972 the Sun-Herald published an article entitled "160MPH 'Super Cars' Soon" sparked the New South Wales Minister for Transport, Milton Morris, to call for a ban on the supercars three days later.

TWS'S BOZO SKYLINE

APRIL 2019

There's not a lot of details that we could find out about the Team Wild Speed Bosozoku Skyline, but just from the look of it you can tell it's got to be wild, with a crazy body kit and over bonnet exhaust system. The myth is that the C210 2000 GT is powered by a L20DET, and was once owned by a member of the Japanese Yakuza under world prior to being imported to Australia.



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JESS'S 2011 WRX HATCH MAY 2019

Jess's modifications on her 2011 WRX have come thick and fast seeing as she only purchased the (basically stock) car less than a year ago. Since then the car has undergone some drastic changes in the lower end with the flagship of AirLift Performance's Airbag kits – the 3P and a custom boot setup, HardRace lower control arms and ZSS upper control arms that tuck the 18x10" Work Emotion T7R 2P wheels coated in Work's own Asterism Black; a clear coat with colour shifting properties.



NIGEL'S 1977 TORANA LX SL AUGUST 2019

A good thing can take a long time to achieve, as evident with Nigel's Torana LX SL. He first purchased it in 1992, packing a straight six auto and in a dark shade of blue. Over time, it began to morph into what we see here; a Torana in searing orange, proper V8 under the bonnet, and an interior so clean you could eat off it.



ANTHONY'S 1972 HQ MONARO LX

AUGUST 2019

Just one glance at Anthony's silver Monaro and we knew this was a very special car. The sleek, timeless lines of the HQ Monaro was once a bare shell, when Anthony first purchased it back in 1984.



FRANK'S 1957 CHEVROLET

SEPTEMBER 2019

There's something seductive about the colour silver; a sleek colour that hides details until you come closer, and yet still catching your eye across the parking lot like a shiny coin on black pavement. As we walked nearer, we knew we were in for a treat.





ANTHONY'S S14 APRIL 2019

Anthony's S14 sits on a set of bronze TE37s, and at first sight, it looks like a stock car, but once you get under the hood, and into the car, you'll find that it's so much more. The engine has been swapped to an RB26 that sits neatly in the engine bay and makes 365kW. Inside the cabin you'll find that Team Wild Speed have been able to replace the S14 dash with an S15 one.



FLORIN'S 1975 FORD ESCORT APRIL 2019

Florin's 1975 Ford Escort is definitely a little attention seeker. It runs custom flared guards and rear Cosworth bonnet vents. The Phantom Purple paint sets the car off nicely. Under the hood, the stock engine has been replaced with an SR20 mounted with a Garrett 3540 turbo which is now making 388HP at the wheels thanks to the 1100cc injectors and EMS ECU.



AARON'S 1951 CHEVY 3100 PICKUP

JUNE 2019

Aaron's 51 Chev is definitely a head turner, guaranteed to attract attention anywhere it goes, and when your business is building cars like it for a living, that's a unique business card to hold.



MARK'S 1973 VW KARMANN GHIA

JUNE 2019

The Volkswagen Karmann Ghia is definitely an interesting sports car and Mark's is a fine example of the 2+2 coupe. Built in Germany from 1955 to 1974, there were just over 445,000 cars produced, combining the chassis & mechanicals of a Type 1 Volkswagen Beetle with styling from Italy's Carrozzeria Ghia and hand-build bodywork by Germany's Wilhelm Karmann GmbH.

AXE'S MAZDA RX7 FD MAY 2019

Axe unveiled his 2000 Mazda RX7 FD at Hot Import Nights 2018, taking out Hottest Overall car for the show. He picked up Best Engine Bay and Best Body and Paint awards at UNITED Festival, so let's take a look at what makes HLK20B such a stand out car. In the engine bay, the 13B has been replaced with a 20B 3 Rotor Bridgeport engine which has been dowelled & balanced and a big Comp Turbo CT6X Billet Wheel turbo hanging off the side, 2400cc injectors, custom fuel rails and 3 x Walbro 460 fuel pumps running through a Microtech LT-16C ECU to make a tidy 1000 RW HP.



PAUL'S 1971 FORD FALCON GT TRIBUTE

SEPTEMBER 2019

In the build for the last 10 years, Paul's Ford Falcon GT made its show car debut here at the Cars under the Stars, and what a debut it was. Parked right up front, it was the centre piece of the show. With a blower poking out the bonnet and gleaming black paint drawing attention from bystanders, the wow factor.



WATCH THE VIDEOS:

Check out our Cars of Bendix wrap up videos by visiting our Facebook page:

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<https://www.bendix.com.au/news-categories/events>



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*Bendix brake components are appropriate for the purpose intended and if installed by qualified staff, to the vehicle manufacturer's specifications, can be used in logbook servicing. PRJ-07458