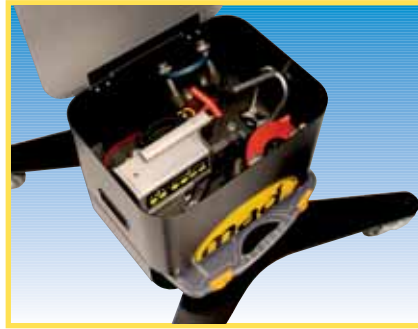




Disc Aligner 2002



New Drive Unit!

The most profitable solution.





Disc Aligner DA2002 The most profitable solution



The DA2002 of MAD proved itself as an effective and durable method to repair brake discs. This method of disc aligning offers a considerable advantage over replacing the discs, in warranty cases, on used cars, exchange of defective discs and for maintenance.

Applications:

Brake problems / Customer complaints

All modern cars are equipped with brake discs, mostly front and rear, even on light commercial vehicles and trucks. Every brake disc suffers from rust and distortion as a result of its material; cast iron. Influences like salt, sand, temperature, humidity, friction and chemicals determine the wear of the surface of the brake disc (rotors). As soon as this changes, the performance decreases. The driver experiences loss of safety, brake pedal judder and steering wheel vibration.



Brake pedal judder and steering wheel vibrations

Brake Noise

Brake noise is the effect of rust and/or roughness, brake disc rough surface and grooves. The discs are not worn out, so it is cost effective to align the discs.

Who rest will rust!

Often cars are equipped with nice alloy wheels. Through these wheels you are looking at rusty discs. Renewing the disc is expensive. Why not disc aligning?



before

after

Rusty Discs on customer vehicles

Rusty rear discs on vehicles, because customers don't use their brakes hard enough to keep the rear discs clean, although the car is frequently driven. The discs are mostly not worn and are worthwhile to align.

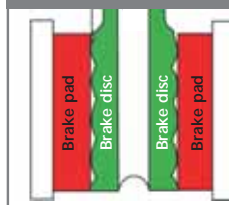
Is disc aligning cost effective?

Owners of older vehicles often ask, is it worthwhile to align the discs? Yes, It is cost-effective to align the discs with an DA2002. Also, you will get more satisfied customers.

Best brake service

By disc aligning you can easily use the lathe for regular maintenance and we advise to service the discs while changing the pads to ensure full brake performance immediately after re-assembly. Especially when the safety of the driver and passengers is involved and every cm/inch may makes the difference, brake maintenance is essential. Optimum brake performance can be achieved only if both parts are completely flat and 100 % parallel, so the result will be an immediately enhanced brake performance. Brake pads will not have the glazing effect. The effect is optimum brake performance.

Wrong Service

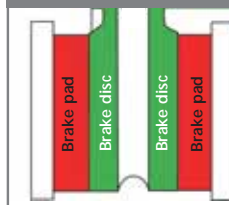


Bad contact between brake pads and disc

Bad heat transfer, causes over heating, the effect is glazing of brake pads

Brake performance will decrease by approximately 10 %

Right brake service



Perfect contact between brake pads and disc

Optimal heat transfer

Optimal brake performance

Warranty

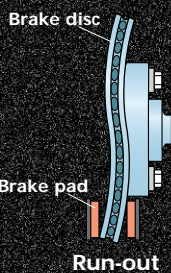
Most car manufacturers agree that the only correct method to eliminate brake problems is to realign the brake disc on the car. However, it is vital that the aligning should be done from the mounting surface of the brake calliper. Important is fitting the disc lathe on the brake calliper ears, this is to assure the 100 % parallelism between brake calliper and brake disc. The MAD brake disc aligners have been approved and often even prescribed for guarantee work by most car manufacturers.

Profitable solution

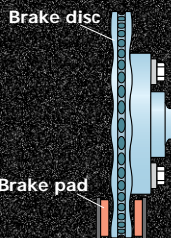
Passenger, LCV, SUV and 4 x 4 vehicles, the MAD DA2002 will give you a return on investment. And, above all, a satisfied customer.

Brake Service:

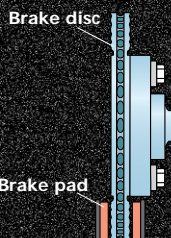
Return on Investment. Break even at 1,5 axles a month! Our break-even analysis proves this. Let us prove to you, and guarantee you what you may expect.



Run-out



Disc Thickness Variation



Roughness/Rust

How does the DA2002 work

DA2002 consists of 2 components, the disc lathe DL2002 and the drive unit DU2010. Mount the DL on the calliper ear with the USM. Position the slide at the middle of the disc, adjust the cutting-tips, position the slide to the hub and push the start button. In just 5 minutes the disc is like new or even better.



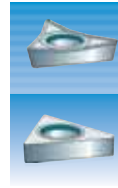
The DL has easy access control panels on each side. The feedmotor of the DL runs on 36 V, this low voltage ensures the safety of the mechanic. Automatic feed with a choice of two speeds 6 mm or 12 mm/min. The DL is made as short as possible, this makes it possible to machine discs on the rear axle.

The DU2010 drive unit is height adjustable to drive the hub with enough power to suit even the heaviest All Wheel Drive vehicles. With a continuously variable speed the mechanic can choose the correct speed for the best result.



A toolbox, providing safe storage for the disc lathe and accessories. An optional drawer for small parts, toolbits and small handtools.

Toolbits



The toolbit has 6 cutting tips and is made of hardened carbide steel. For the hardened brake discs we offer positive rake toolbits with 3 cutting edges.

Easy mounting by USM



With the Universal Slide Mountings USM mounting the disc lathe on the calliper ears is very easy. No more extra adapters and it always fits.

Quality

The Disc Aligner DA2002 complies with the strictest international test specifications for workshop equipment. The configuration has been developed and manufactured according to ISO 9001-2000 standard. Approved by 20 car manufacturers. The CE safety mark, as well as the official approval of many other independent international authorities, ensures a constant high quality product. The DA2002 comes with a one year warranty. If you register your unit on our website you can profit from our two year warranty program.



Advantages

On the Car Disc Aligning:

- Completely eliminates Run-out, DTV, excessive brake noise and Rust;
- Saves dismantling, re-assembly and adjustment of the brake disc;
- Guarantees perfect contact between the brake pads and brake disc;
- Can be used everywhere, both on a car lift or at ground level. Due to easy height adjustment of drive unit;
- Fits on 99 % of all passenger cars, SUV's and light commercial vehicles, with or without ABS;
- No depending on outside specialists, no need for stocking brake discs;
- One stop shopping for brake service;
- High return on investment;
- And, above all, a satisfied customer!



Technical specifications DA2002:

Performance specifications

Run-out/Disc oscillation	< 20 µm
Disc Thickness variation	< 20 µm
Surface roughness/finish	< 2 µm
Max. brake disc thickness	41 mm
Max. depth of cut	0,4 mm pro bit
Working height DA2002	450 - 1250 mm

Disc Lathe DL2002

Autofeed 1	6 mm/min.
Autofeed 2	12 mm/min.
< >	50 mm/min
<< >>	475 mm/min.

Drive Unit DU2010

Rotation speed	80 - 160 rpm
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Electrical Data	DL2002	DU2010
Voltage	36 Vdc	230V / 50 Hz
Current	max. 1.3 A	2,4 / 3 A
Power	70 W	0,4 kW
Torque		65 nm

Weights	DL2002	DU2010
Net weight	7,5 kg	60 kg

Colours

Black RAL 9005/Yellow RAL 1003

Service

MAD works in conjunction with car manufacturers and so keeps up-to date with all new developments.

MAD research division tests all new car types in relation to aligning equipment. The Vehicle Information database is being updated regularly on our website:

www.mad-tooling.com

Our international service desk in the Netherlands supports a worldwide network of distributors and workshops.



GIO Award 2010
For good industrial design!

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