

UNCOMPRÓMISED

ACCURACY, AND

AT AN AFFORDABLI

QUALITY,

PRICE

DURABILITY

Utilizing advanced imaging technology, the Hofmann® geoliner® 630 provides accurate, real-time measurements reducing setup and measurement times while generating serious productivity benefits. Matched with our latest software, the geoliner® 630 wheel aligner will have your technicians getting readings in a matter of minutes.







# Who We Are

### **OUR MISSION**

The most valued productivity solutions in the world

#### BELIEFS

#### We deeply believe in:

Non-negotiable Product and Workplace Safety

Uncompromising Quality

Passionate Customer Care

Fearless Innovation

Rapid Continuous Improvement

#### VALUES

#### Our behaviors define our success:

We demonstrate Integrity. We tell the Truth. We respect the Individual. We promote Teamwork. We Listen.

#### VISION

To be acknowledged as the: Brands of Choice Employer of Choice Franchisor of Choice Business Partner of Choice Investment of Choice



# WHAT WE MAKE

IDEAS INSPECTS Inspec





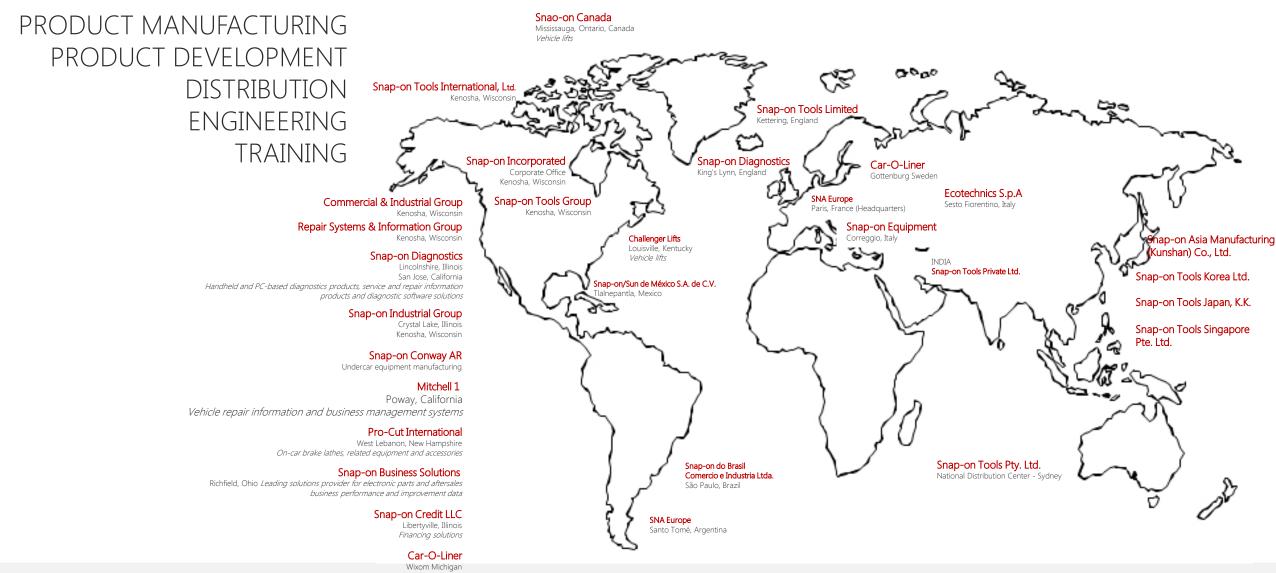
# **Products and services include:**

- HAND AND POWER TOOLS
- TOOL STORAGE
- DIAGNOSTICS SOFTWARE
- INFORMATION AND MANAGEMENT SYSTEMS
- SHOP EQUIPMENT

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### **OUR WORLDWIDE FOOTPRINT**





### **OUR PARTNERS WORLDWIDE**



Furon

North and Latin America may include Asian and European partners as well 5



# **THINK BIG**

# SNAP-ON IS THE LARGEST AUTOMOTIVE EQUIPMENT MANUFACTURER IN THE WORLD

WE HELP MORE PEOPLE DAILY, WITH CRITICAL TASK SOLUTIONS WORLDWIDE, THAN ANY OTHER AUTOMOTIVE SERVICE EQUIPMENT COMPANY



# WHO IS HOFMANN ?

HOFMANN is a division of Snap-on Incorporated, a leading global innovator, manufacturer and marketer of:

- IMAGING WHEEL ALIGNMENT EQUIPMENT
- WHEEL BALANCERS
- TIRE CHANGERS
- •ALIGNMENT RACKS

for professional users performing critical tasks

### WHERE SECOND BEST IS NOT AN OPTION

#### ▶ 1931

The company Gebrüder Hofmann OHG is founded by Dyonis and Roman Hofmann in Darmstadt/Germany.

#### ▶ 1934

The first balancers for industrial applications are launched into the market. A subsidiary is founded in the United Kingdom.

#### ▶ 1949

The first mechanical balancer is developed for garages and work shops.

#### ▶ 1961

The ER2 wheel balancer is introduced and manufactured until 1978. Even today those balancers can be found in workshops, fully operational.

▶ 1969

Start of automotive lift production.

#### ▶ 1971

The geodyna series of wheel balancers are launched into the market. The name consists of geo for geometric wheel data and dyna for dynamic measurement in two planes. Geometric wheel data entry is patented for Hofmann wheel balancers worldwide.

#### ▶ 1980

Wheel aligners are introduced to complete the garage equipment range.

#### ▶ 1987

The launch of the geodyna 88 sees the introduction of the patented optimization mode on wheel balancers. This mode allows optimization of the tire position relative to the rim.

#### ▶ 1997

Hofmann becomes part of the Snap-on Corporation, the world's largest tools and equipment company

#### ▶ 1998

The patented Virtual Plane Measurement technique (VPM) is introduced for all wheel balancers. This technique ensures the most accurate balance results and is insensitive to ambient conditions.

#### ▶ 2004

The geodyna optima, the first fully automatic wheel balancer with diagnostic capability, is launched at the Frankfurt Automechanika show.

#### ▶ 2011

Hofmann celebrates 80 years of quality, expertise and innovation.



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### **FACTORY TRAINED SERVICE TECHNICIANS**

### **SNAP-ON EQUIPMENT**

A NEW STANDARD IN AUTOMOTIVE EQUIPMENT SERVICE

Snap-on Equipment has over 300 factory-trained service technicians nationwide with an average of 17 years of experience, representing the industry's largest repair & maintenance organization.

When you need installation, training or service, we'll have the right tools, genuine OEM replacement parts and the knowledge to satisfy your needs.

Your business is servicing automobiles. Keeping your equipment running smoothly and profitably is ours.



Highly skilled technicians equipped with the right tools and latest technology will ensure that repairs are done right, every time.



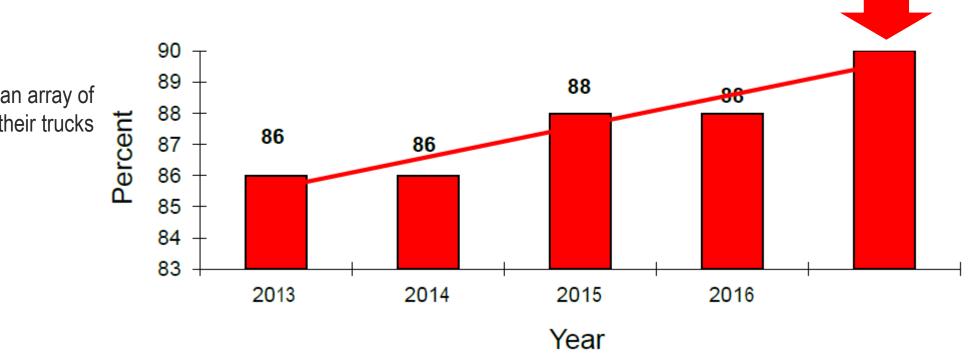
### **FAST AND DEPENDABLE SERVICE**



The most efficient service repair technicians in the industry

#### 90% OF ALL SERVICE CALLS ARE COMPLETED WITHIN 48 HOURS

# SNAP-ON EQUIPMENT KEY PERFORMANCE INDICATOR



Our service technicians carry an array of repair parts on their trucks



HILLY CA

### **BEST IN CLASS TRAINING**

# RAINING WHEN YOU NEED IT AT YOUR OWN-PACE http://education.s@ipon.ccentified course

 OPTIMIZE YOUR KNOWLEDGE
 MINIMIZE YOUR TRAINING EXPENSE
 INCREASE YOUR SHOP'S PRODUCTIVITY

The Snap-on Training group develops and delivers training for individuals as-well-as for groups.

the R

- Wheel alignment geometry Level 1 and Level 2
- OEM specific wheel alignment training
- Equipment specific training
- Group assessment `



### **OUR LEGACY**

Find prior art

Discuss th

#### Patents

## Method and apparatus for determining the alignment of motor vehicle wheels

#### ABSTRACT

An apparatus for determining the alignment of a motor vehicle's wheels and including targets (22L, 22R, 24L, 24R) which either form part of the wheels or are attached thereto, an optical sensing means such as a television camera (30) for viewing the targets, an electronic processing means (32) connected to the optical sensing means for processing the target images to determine wheel alignment, and a display means (34, 36) for displaying the alignment information. The optical sensing means (30) views a target located on each wheel and forms an image of each target. Electronic signals corresponding to each of the images are transferred to the electronic processing means (32) which correlates the perspective image of each of the targets with the true shape of each target. In so doing, the processor (32) relates the dimensions of

Publication number Publication type Application number PCT number Publication date Filing date Priority date ⑦ Fee status ⑦	US5535522 A Grant US 08/122,550 PCT/US1993/008333 Jul 16, 1996 Sep 3, 1993 Sep 4, 1992 Paid
Also published as	CA2143844A1, 7 More »
Inventors	Bernie F. Jackson
Original Assignee	Jackson; Bernie F.
Export Citation	BiBTeX, EndNote, RefMan
Patent Citations (3), Reference Legal Events (6)	enced by (146), Classifications (11),

External Links: USPTO, USPTO Assignment, Espacenet

certain known geometric elements (62, 63) of the target with the dimensions of corresponding elements in the perspective image and calculates the alignment of the wheels of the vehicle.

Snab-on Equipment 5,535,522 METHOD AND APPARATUS FOR DETERMINING THE ALIGNMENT OF MOTOR VEHICLE WHEELS INVENTOR: Bernie F. Jackson, Los Gatos, CA

The

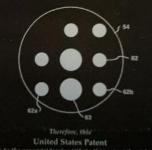
States

United

America

UNITED STATES PATENT Granted on July 16, 1996 to

An apparatus for determining the alignment of a motor vehicle's wheels and including targets which either form part of the wheels or are attached thereto, an optical sensing means such as a television camera for viewing the targets, an electronic processing means connected to the optical sensing means conprocessing the target images to determine wheel alignment, and a display means for displaying the alignment information. The optical sensing means views a target located on each wheel and forms an image of each target. Electronic signals corresponding to each of the images are transferred to the electronic processing means which correlates the perspective image of each of the targets with the true shape of each target. In so doing, the processor relates the dimensions of corresponding elements in the perspective image and calculates the alignment of the wheels of the vehicle.



Grants to the percential having title to this patent the right to exclude eithers from mixing, using, offering for sale, or selling the invention throughout the United States of America for the from of twenty water from the filing date of this patent, subject to the payment of maintenance fees as provided by Jane.



### **Snap-sn.** OUR COMPETITORS USE OUR TECHNOLOGY

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	Publication number Publication type Application number PCT number Publication date Filing date Priority date (?)	US5535522 A Grant US 08/122,550 PCT/US1993/008333 Jul 16, 1996 Sep 3, 1993 Sep 4, 1992	Sometimes tools are the most important part of your resume!	Publication number Publication type Application number Publication date Filing date Priority date ⑦ Fee status ⑦	US5724743 A Grant US 08/544,378 Mar 10, 1998 Oct 10, 1995 Sep 4, 1992 Paid
	Fee status ⑦	Paid		Also published as	CA2232534A1, 10 More »
	Also published as	CA2143844A1, 7 More »		Inventors	Bernie Fergus Jackson
	Inventors	Bernie F. Jackson	A DRADUOT OOUTREE DAY THE FOUL OWNER IN O	Original Assignee	Snap-On Technologies, Inc.
	Original Assignee	Jackson; Bernie F.	S PRODUCT COVERED BY THE FOLLOWING U.S	Export Citation	BiBTeX, EndNote, RefMan
and the second s	Export Citation	BiBTeX, EndNote, RefMan	REIGN EQUIVALENTS:	Patent Citations (17), R Legal Events (6)	Referenced by (152), Classifications (10),
1	Legal Events (6)	renced by (146), Classifications (11),	375,335 5,598,357 6,064,750 6,263 322 6,684,5 External Links: USPTO, USPTO Assignment, Espacenet		
	External Links: USPTO,	USPTO Assignment, Espacenet	488,471    5,724,128    6,134,792    6,427,346    6,796,036      5,513,439    5,774,361    6,178,358    5,442,460    6,799,376      5,528,496    5,870,315    6,219,134    6,498,959    6,917,417      5,553,389    5,937,365    6,252,973    6,556,904    7,000,326	7,100,289 7,136,728 7,289,020 7,382,913	
			THIS PRODUCT MAY BE USENSED UNDER U.S. PATENT 5,535,522 5,724,743 ADDITIONAL U.S. & FOREIGN PATENTS PENDING 24-158-2	TER	
	I		Picture taken from the back of a Hunter Wheel Aligner		

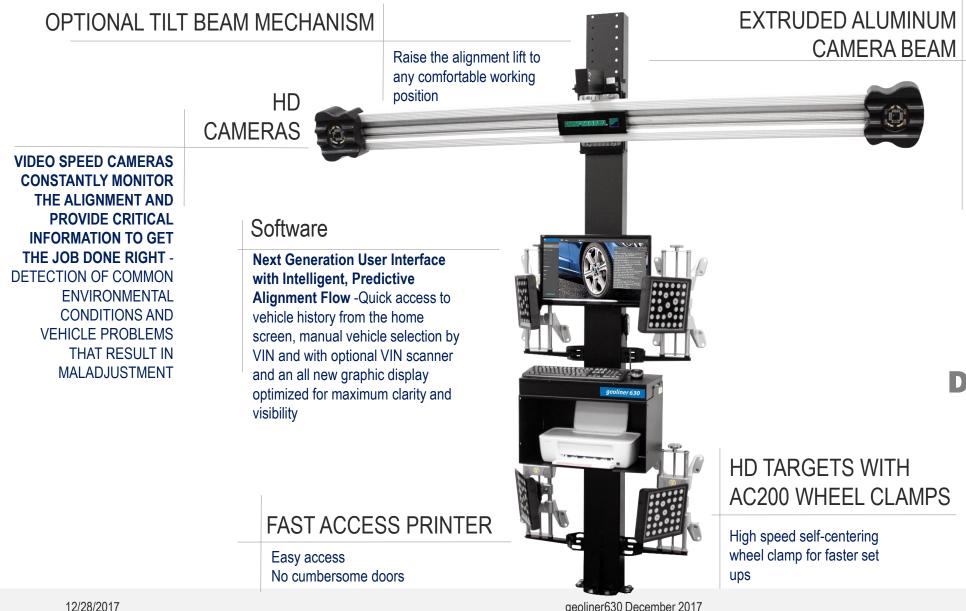




### DESIGNED FOR SHOPS WHO DO:

- SUSPENSION
- STEERINGTIRE WORK

- Space smart footprint optimized | mounts close to the wall
- Integrated design | everything in one location
- Connected and informed | WiFi ready
- Compact and practical



**Rigid support for added** consistency and precision yet lightweight

Provides smooth vertical motion

### SPEED and EASE of USE

**Do more alignments** faster and better



#### WHEEL ALIGNMENT EQUIPMENT

State-of-the art technology in an affordable package



geoliner® 770



geoliner® 770 Three camera system Portable Mobile Audit capable For high volume and high production shops

#### geoliner® 320



geoliner® 320 Break the space barrier Portable or smaller bays and low volume shops

#### geoliner® 630

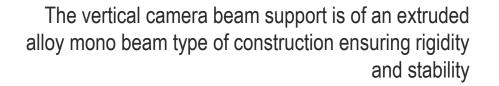
- Two Camera System
- Tilt beam option
- Passenger cars and light duty trucks up-to one ton
- OEM standard production vehicles
- Short and extended wheelbase
- Four wheel alignment
- Thrust line alignment
- Two wheel alignment





#### **MONO BEAM CAMERA SUPPORT**

Space saving construction Fixed, no moving parts



The small footprint does not take up a lot of shop real estate

Powder coat finish provides a durable finish impervious to automotive fluids. The geoloiner® 630 will look great for many year to come in your shop





#### **TILT MECHANISM**

Mechanically driven

n Electromechanical, robust and reliable

wider range of alignment rack heights regardless of wheelbase length.

The tilt mechanism moves the beam and provides a

Remote controlled electromechanical tilting camera beam provides an enhanced range of operation from the ground all the way up to the highest position on the alignment rack

Set the vehicle at a comfortable working height of your choice



Part number	EEWA741G
Vheel size	13" • 24" (33 • 61 cm)
re Diameter	Up to 37" (94 cm)
rack width	48" • 96" (122 • 244cm)
/heel base	79" • 180" (201 • 457cm)
hipping weight	501 lbs (227kg)
ower requirements	120/230V 1Ph 50/60Hz
AC200 SPECIFICATIONS	
/eight	11.5 lbs (5.2kg)
onstruction	Cast Magnesium
TANDARD ACCESSORIES	
C200 wheel clamps & targets	Steering wheel holder
rake pedal depressor	Two wheel chocks
olor inkjet printer	
OPTIONAL ACCESSORIES	
C200 wheel clamp accessory kit	EAK0320J34A
C200 universal wheel clamp xtension kit	EAK0268J62A
IN scanner	EAK0289J86A
heel clamp floor stand	EAK0289J71A
ip target	EAK0256J71A



State-of-the art technology in an affordable package



### geoliner® 630

- Two Camera System
- Tilt beam option
- Passenger cars and light duty trucks up-to one ton
- OEM standard production vehicles
- Short and extended wheelbase
- Four wheel alignment
- Thrust line alignment
- Two wheel alignment



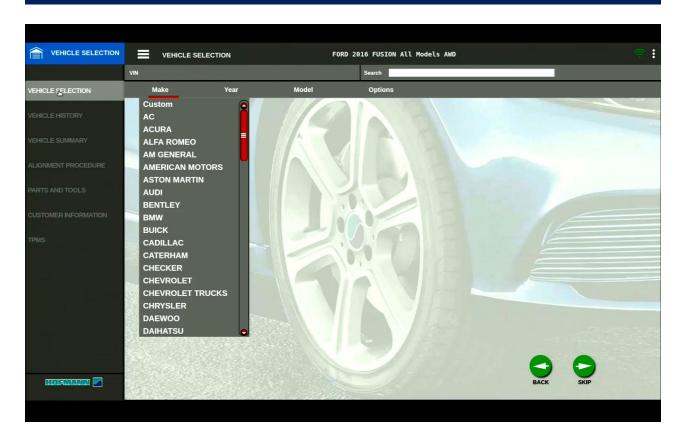
- EZToe
- Cradle Adjust
- Elevated adjustments
- A-arm adjustment
- Eccentric cams adjustment
- Slotted control arms adjustment
- Vehicle Dimensioning (basic)



State-of-the art technology in an affordable package

Ford Fusion ADAS example

### **ADAS SUPPORT**





### geoliner® 630 **Power Tools**

ADAS system support ٠



State-of-the art technology in an affordable package

EZToe for electromechanical power steering



### geoliner® 630 Power Tools

- EZToe
- Fast Caster
- Cradle Adjus
- Elevated adjustments
- A-arm adjustmen

### EZTOE PROCEDURE



#### STEERING LEVEL CHECK

#### SET THE FRONT TOE WITHOUT USING A STEERING WHEEL HOLDER



State-of-the art technology in an affordable package

Fast Caster for quick, easy, and precis measurements





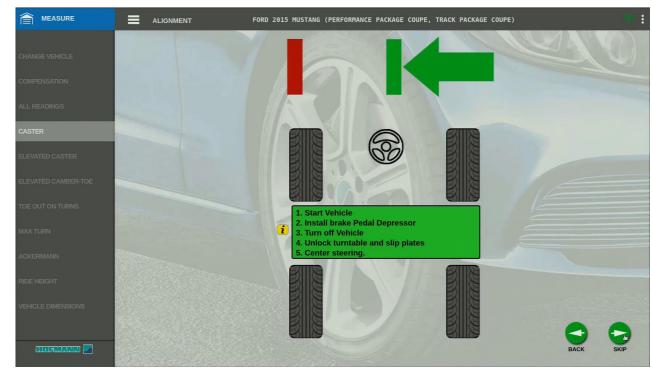
### geoliner® 630 Power Tools

EZToe

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- FAST CASTER
- Cradle Adjust
- Elevated adjustments
- A-arm adjustment

### CASTER AND SAI MEASUREMENTS



#### STEER IN THE DIRECTION OF THE ARROW



#### WHEEL ALIGNMENT EQUIPMENT

State-of-the art technology in an affordable package Cradle adjust

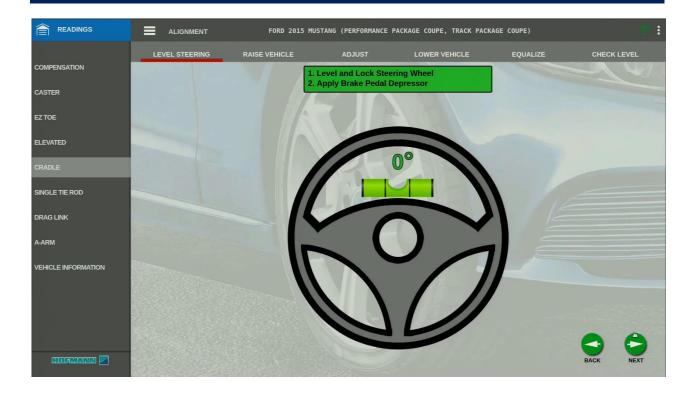




### geoliner® 630 Power Tools

- EZToe\
- Fast Caste
- Cradle Adjust —
- Elevated adjustments
- A-arm adjustment
- Eccentric cams adjustment
- Slotted control arms adjustment

### CRADLE ADJUST

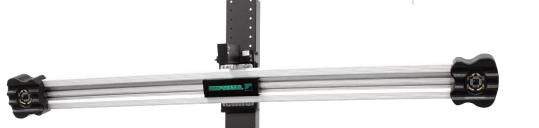


Move cradle front to back and sideways until the SAI meter is centered and the caster is equal



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Vehicle Manufacturer Specific Ride Height information

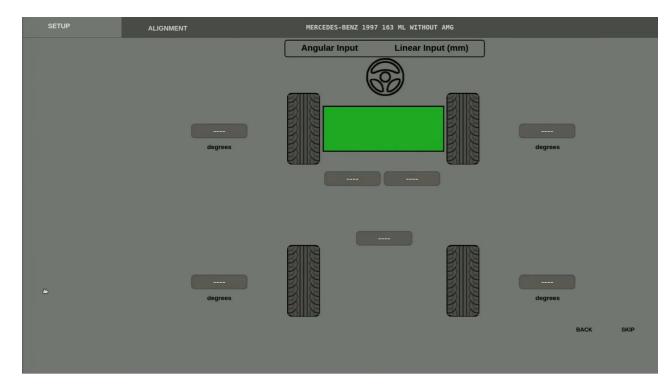




### **geoliner® 630** Power Tools

- EZToe\
- Fast Caste
- RIDE HEIGHT →
- Elevated adjustments
- A-arm adjustment
- Eccentric cams adjustmer
- Slotted control arms adjustment

### **MERCEDES BENZ RIDE HEIGHT**



Mercedes Benz ride height data screen. Ride height can be entered two ways, linear in millimeters or inches, and angular using a Romess gauge.



State-of-the art technology in an affordable package

Shims, eccentric cams, slotted control arms



### **geoliner® 630** Power Tools

- EZToe\
- Fast Caste
- Cradle Adjust
- Elevated adjustments
- A-ARM ADJUSTMENT (SHIMS)
- ECCENTRIC CAMS ADJUSTMENT
- SLOTTED CONTROL ARMS
  ADJUSTMENT

### **A ARM ADJUST**





#### WHEEL ALIGNMENT EQUIPMENT

State-of-the art technology in an affordable package

Vehicle Manufacturer Specific Requirements

### geoliner® 630 Power Tools

- EZToe\
- Fast Caste
- Cradle Adjust
- Elevated adjustments
- BMW Loading information

#### Номе ê, ENGLISH /EHICLE SELECTION 1997 MERCEDES-BENZ 163 ML Without AMG 1997 MERCEDES-BENZ 163 ML Without AMG 2015 MERCEDES-BENZ 164 (W, M Class) USA, sion With 430 (Locking Differentia PREFERENCE 2015 FORD MUSTANG (Performance Package Coupé, Track Package Coupé 2015 FORD MUSTANG (Performance Package SERVICE Coupé, Track Package Coupé) SHOP REPORT Last week **1985 AMERICAN MOTORS EAGLE** 2014 ACURA ILX Hybrid All Models HELP <u>Two weeks ago</u> SHUT DOWN 2015 FORD MUSTANG (Performance Package Coupé, Track Package Coupé) KIA SOUL (PS) All Models CADILLAC SRX 2016 CHEVROLET MALIBU (VIN Z) GNA + LKN 2016 CHEVROLET MALIBU (VIN Z) GNA + LKN 2015 LINCOLN MKX All Except GTDI Vehicles

### **BMW LOADING**



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#### AC200 CLAMPS

Faster set up, wider range, positive clamping

### **GRAB IT AND HOLD IT**

AC200 wheel clamps are a legacy product. They provide a wide range of wheel size clamping.

The wheel claws are angled facilitating mounting on the wheel

The positive grip ensures that the targets will not move due to excessive vibrations when using pneumatic tools to loosen the adjustments



### COMPENSATE



### ALERT

# geoliner® 630

A unique feature of the geoliner 630, is it's ability to detect circumstances that would lead to a bad alignment

The three levels of error detection





# geoliner® 630

IMAGING ALIGNER

# LEVEL 1 ERROR COMPENSATION

The machine has detected a potential error and will compensate or make the necessary corrections

You will have a great alignment

### COMPENSATE

Correct do not inform the user



### ALERT



# geoliner® 630

IMAGING ALIGNER



The machine has detected a potential error and will compensate or make the necessary corrections and is advising you of the condition

You will have a great alignment

### COMPENSATE

### WARN Correct and inform user

### ALERT



# geoliner® 630

IMAGING ALIGNER



The machine has detected an issue and is informing you that this may not be a good alignment Read the error message and rectify the

condition causing the error message

### COMPENSATE



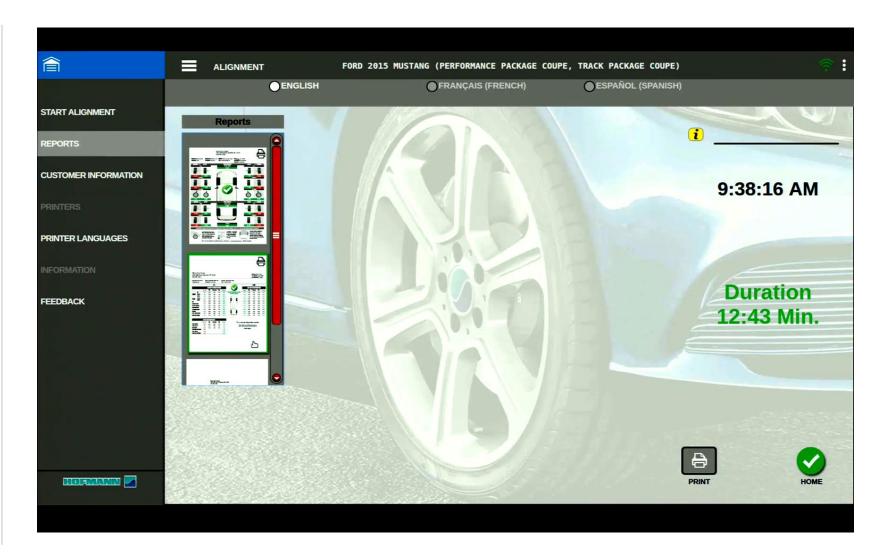
### **ALERT** Inform and notify the user to correct the condition

# WHEEL ALIGNMENT REPORTS

Before and after customer friendly wheel alignment report

Technician's report

Vehicle dimensioning report





# FIVE YEAR "PEACE OF MIND" WARRANTY

AVAILABLE ON HOFMANN WHEEL ALIGNMENT EQUIPMENT

#### OPERATE YOUR WHEEL ALIGNER WITH CONFIDENCE

- Extended Factory Warranty
- Current Specification Updates
- Annual Optimizations and Precision Adjustments

#### PLATINUM PACKAGE

Five Years of Specifications Five Years of Software Upgrades and Enhancements (Three Updates per Year Installed by a Factory Trained Professional) Five Years of On-Site Service (Includes Parts & Labor) Five Annual Optimizations and Precision Adjustments

#### GOLD PACKAGE

Five Years of Specifications Five Years of Software Upgrades and Enhancements Three Years of On-Site Service (Includes Parts & Labor)

#### SILVER PACKAGE

Five Years of Specifications Five Years of Software Upgrades and Enhancements

PRICE: \$0

DECLINED Standard Warranty Applies

Customer Signature

Customer (Print)

Representative Signature

Representative (Print)

Date

Date



### INNOVATION PRECISION ENGINEERING EXCELLENCE

### **ORDER ONE TODAY**

For more information:

https://us.hofmann-equipment.com/



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