

# HawkEye Alignment

Featuring ProAlign<sup>®</sup> Software



**HUNTER**  
Engineering Company

# HawkEye™ Alignment Featuring ProAlign® Software

The HawkEye™ Alignment System featuring ProAlign® alignment software functions on a Linux operating system. This unique combination enables any shop interested in providing profitable alignment service to do so with a minimal investment.

- ✓ ProAlign software includes the essential software tools to perform fast, accurate alignments.
- ✓ The Linux operating system supports ProAlign software with the benefits of a powerful operating system contained in a small, replaceable cartridge.



PA120E shown here with optional HS400FC HawkEye sensors and printer.

## System Features

- ✓ Alignment console with 17-in. LCD display.
- ✓ Full-sized keyboard, sloped for easy use, provides complete control of the alignment procedure.
- ✓ Optional hand-held wireless remote control allows operation from anywhere in the bay.
- ✓ Custom electronics optimized for wheel alignment.
- ✓ Full-speed USB support.
- ✓ State-of-the-art, high-speed application processor.
- ✓ Optional remote indicator aids vehicle adjustment, virtually duplicating bar graph display.

## Measurement Capability

- ✓ Measures camber, caster, toe, thrust angle, SAI, IA, Toe-Out-On-Turns† and Maximum Steering Angle†.

## Specification Database

- ✓ Includes more than 20 years of factory vehicle specifications.
- ✓ User Specs allows for customizable additions to the database for specific vehicles.
- ✓ Optional yearly specification and software updates can be made by the user simply by installing a new program cartridge.

## Powerful Intel® Processor

- ✓ Provides high-powered processing with low power consumption
- ✓ Supports high-quality graphics



# HawkEye™ Digital Imaging

**H**igh-definition imaging sensors continuously measure wheel target position and orientation, providing the same alignment measurements as conventional sensors.

HawkEye™ Sensors use multi-dimensional modeling to provide accurate alignment measurements. The operator can use either live plane mode, which uses the targets as a reference plane, or the traditional alignment mode, which uses the rack runways as a reference plane.

## HawkEye™ Sensor Alignment Targets\*

### Durability

- ✓ Corrosion resistant
- ✓ "Shatterproof" aluminum faceplate - no glass
- ✓ Impact-resistant housing
- ✓ Integrated protective bumpers

### Ease of Use

- ✓ No electronics at the wheel
- ✓ Virtually maintenance-free
- ✓ No calibration
- ✓ Lightweight
- ✓ No cables

### Self-Centering Adaptors

Self-centering wheel adaptors cover an extended range, allowing the adaptor to be used for passenger car or heavy-duty truck use. Optional extensions and adaptors are available for specialty and hard-to-mount wheels.



*All models include four HawkEye™ Sensor Alignment Hexagonal Targets and Self-Centering Wheel Adaptors.*



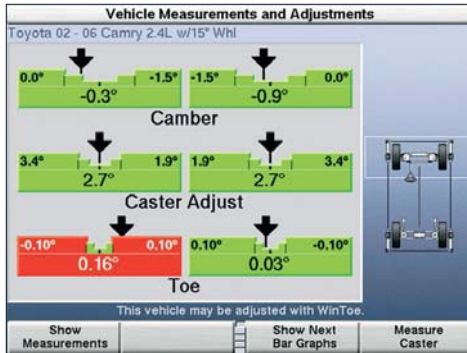
*Four stationary cameras (one for each wheel) measure the position and orientation of alignment targets.*



# ProAlign® Alignment Software

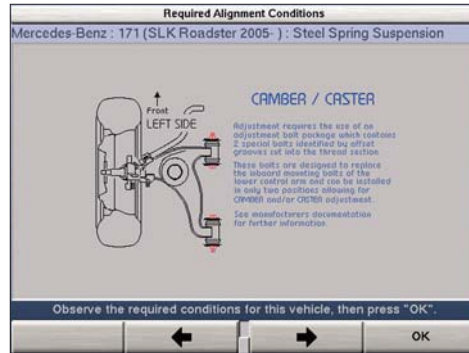
ProAlign Alignment Software incorporates key features of the Hunter top-of-the-line systems, ideal for getting into the alignment business economically.

## Adjustment Bar Graphs



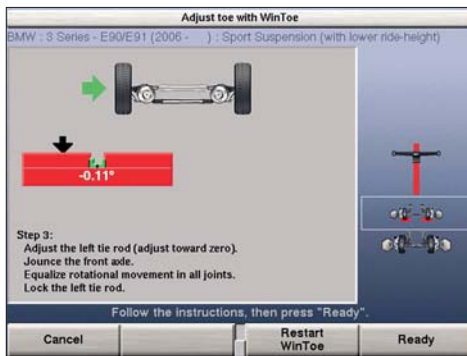
Adjustment bar graph displays show the amount and direction of adjustment necessary.

## Adjustment Illustrations



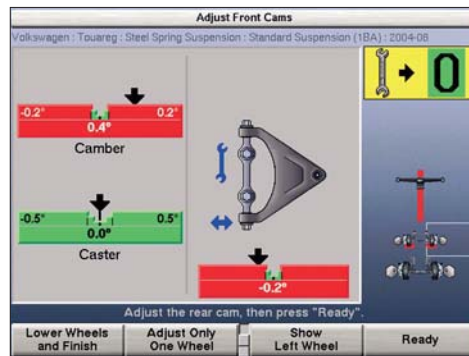
Adjustment illustrations provide illustrated diagrams and instructional information of recommended OEM adjustment methods.

## WinToe® Adjustment Feature



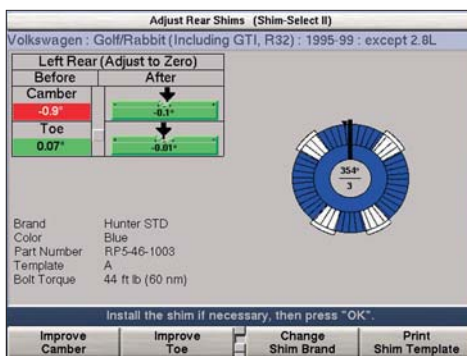
Allows technician to adjust toe without locking the steering wheel. Virtually ensures a straight steering wheel on the first try!

## CAMM® (Control Arm Movement Monitor)



CAMM® cuts adjustment time in half on vehicles with front shims, dual cam and dual slot adjustment. No trial and error required.

## Shim-Select® II Feature



Shows all the information needed for rear shim installation, including templates in actual size and color with required orientation angle, part number and bolt torque specifications.

## Work Management

**View Work Order**

Work Order ID: 000125  
Name: 26 Gram  
Address: 4567 One  
City: Anytown  
Telephone: 252-2526  
First Reg: 000002  
Vehicle (VIN): CP98UR22P5248 098  
License: LCO-568  
Mileage: 98854  
Technician: [Name]  
Date: 19/10/01 07:00:09

Benzley 99 - 03 Acura / Continental					
Left Front			Right Front		
Actual	Before	Specified Range	Actual	Before	Specified Range
.....	.....	-0.0° - 0.3°	.....	.....	-0.0° - 0.3°
.....	.....	2.5° - 3.5°	.....	.....	2.5° - 3.5°
.....	.....	0.00° - 0.14°	.....	.....	0.00° - 0.14°
.....	.....		.....	.....	
.....	.....		.....	.....	
.....	.....		.....	.....	

View Work Order, then press OK.

Buttons: Copy Customer Identification, ↑, ↓, OK

Valuable customer information can be conveniently stored in the database allowing shop personnel to quickly reference previous alignment work orders. Work Management feature requires a USB Flash Drive (not provided).

\* Patented

# Rapid Rolling Compensation Helps Your Shop Complete More Alignments Per Day

## Obtain Measurement Data Faster Than Conventional Sensors

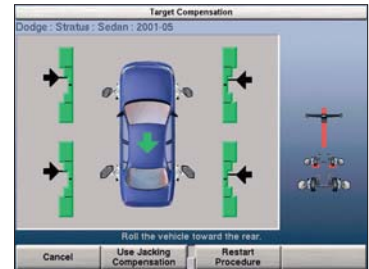


### Step 1

Mount alignment targets

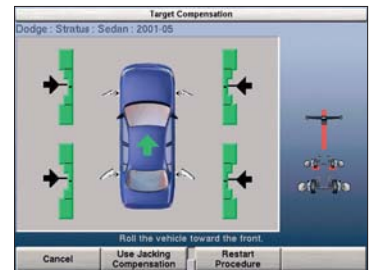
### Step 2

Roll vehicle back until on-screen indicators turn green



### Step 3

Roll vehicle forward and stop on center of turnplate



### Step 4

All front and rear camber and toe measurements are immediately displayed

Vehicle Measurements and Adjustments		
Dodge : Stratus : Sedan : 2001-05		
Save the "before" measurements before making adjustments.		
<b>Front</b>		
Camber	Left -0.76°	Right -0.96°
Cross Camber	0.20°	
Cross Caster	.....	
Toe	Left 0.24°	Right 0.03°
Total Toe	0.26°	
<b>Rear</b>		
Camber	Left -1.23°	Right -1.19°
Cross Camber	-0.04°	
Toe	Left 0.01°	Right -0.11°
Total Toe	-0.10°	
Thrust Angle	0.06°	



## LED Remote Indicator

The optional Remote Indicator allows the technician to easily perform rolling compensation when the console is out of view and provides complete control while making adjustments underneath or at the rear of the vehicle.

HS400FC Hawkeye™ Sensors shown with optional 30-419-1-X Icon Remote Indicator

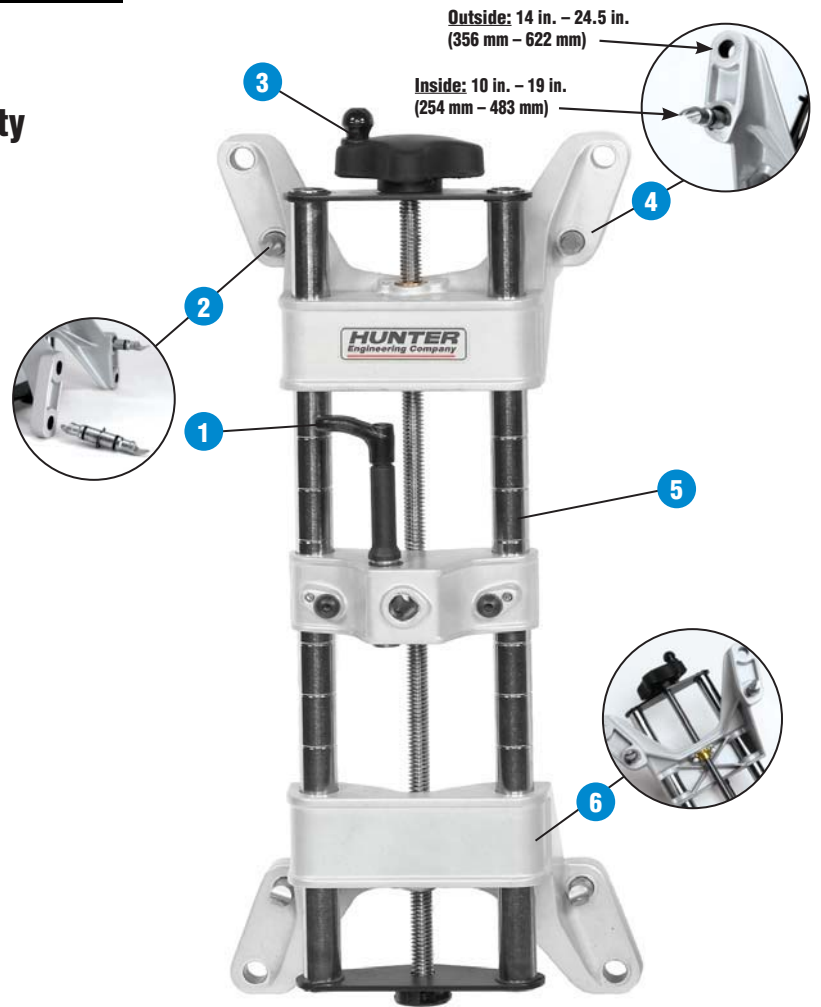


30-419-1-X Icon Remote Indicator

# Self-Centering Wheel Adaptors

## Exclusive Features Provide Ease of Use, Durability and Greater Versatility

1. Extended range fits 10 in. to 24.5 in. (254 mm to 622 mm) rims.
2. Reversible adaptor rim studs provide adaptability for steel rims, over wheel cover mounting options and specialty rims with Run-Flat and Flange-Guard tires.
3. Quick-Knob provides fast adjustment of the adaptor's range, allowing it to fit various rim sizes.
4. Adaptor's unique design is able to accommodate a wide variety of wheel configurations and sizes. Simply insert the rim studs into the appropriate slot according to the rim-size range needed.
5. Lightweight, non-flexing adaptors are designed to provide rigidity and stability, yet are easy to handle.
6. Reinforced machined aluminum castings and hard-chromed support rods resist damage and corrosion.



175-325-1 Adaptor

### 20-1789-1 Tire Clamp Adaptor

Clamps effectively fasten wheel adaptors on tires with an outside dimension of 21 in. (533 mm) to 40 in. (1,016 mm). Ideal for rims without rim lips or when space between tire and rim is limited. Grips onto tire treads and protects alloy wheels from damage. Required for use with PAX System Wheels.



### 20-1792-1 28 in. Wheel Adaptor Extensions

Extensions increase the Self-Centering Wheel Adaptor's maximum rim range from 24.5 in. (622 mm) to 28 in. (711 mm). (Kit 20-1792-1 contains 16 pieces, 4 for each adaptor.)



# HawkEye™ Sensor Configurations

## Space-Saving HawkEye™ Sensors Offer Enhanced Productivity in a Small Footprint

HawkEye sensors can be installed within an inch of a wall, saving space at the front of your bay.



The fixed-column standard configuration HS400FC1E fits most service bay applications.\*



HS400LZ1E provides a vertical camera lift with a 51-inch (1,295mm) range of motion to achieve additional lift height or to work with the vehicle lowered to the floor.



The HS400WM1E may also be mounted to the wall or ceiling. When paired with the RX-P Pit In-Ground Scissor Lift, the combination is ideal for drive-through service bays handling vehicles with minimum ground clearance.



The HS400FM1E Floor-mounted wide sensors are excellent for drive-through bay applications.

## Other HawkEye Sensor Configurations Include:

**HS400DT1E** - Drive-thru configuration

# Specifications

## **ProAlign Wheel Alignment Systems include:**

Mobile or column/wall mount cabinet  
17-inch color LCD flat panel monitor  
ProAlign software cartridge  
Language specific keyboard  
Optical mouse pointing device  
Color inkjet printer.

## **ProAlign Hawkeye Sensor Software includes:**

Linux operating system  
Factory vehicle specification database  
Work Management customer database\*  
Passenger car program  
Heavy-duty truck program  
WinToe  
Shim Select II  
CAMM  
Symmetry measurements  
Ride Height measurement (with 20-1885-1)  
VAG Raised Toe procedure  
Faster Caster measurement  
Turning angle difference measurement  
Maximum steer angle measurement  
Adjustments with wheels raised  
Zero adjustment  
Reverse sensor test

\*Work Management customer database can be enabled by adding a USB memory device to the ProAlign console.

## **Power Requirements**

100-240V, 3.5A-1.75A, 50-60Hz

## **Options**

Infrared Remote Control	146-55-1
Icon Remote Indicator	30-419-1-X
Icon Cordless Remote Indicator <sup>†</sup>	30-421-1-X
XF Pod Kit	
(for Cordless or Remote Sensors)	20-2072-1
Standard Turnplate (2 required)	25-140-1
Stainless Steel Turnplate (2 required)	25-129-1
Electronic Turnplates	20-1487-1
Ride Height Measurement Tool	20-1885-1

<sup>†</sup> Requires XF Pod Kit 20-2072-1. (Ships standard with DSP506XF or DSP508XF.)

## **ProAlign Compatible Sensors**

HS400, DSP504, DSP506, DSP506XF, DSP508, DSP508XF

HS400 Sensors require ProAlign version 1.5 or greater software.

**HawkEye sensor configuration choices are depicted on the previous page. All HawkEye sensor groups include; 4 digital cameras, 4 hexagonal targets, 4 self centering wheel adapters, 4 target supports, cables, and mounting hardware. Because of continuing technological advancements, specifications, models and options are subject to change without notice. Contact your Hunter distributor to configure a system to satisfy your needs.**



**“Before” and “after” measurements can be printed to explain service and record work performed. Screens and rear shim templates can also be printed.**



**The optional Icon Remote Indicator provides the operator with complete control while making adjustments to the vehicle. Available in conventional or cordless models.**



**Optional Hand-Held Ride Height Measurement Tool 20-1885-1.**

Visit our website at [www.hunter.com](http://www.hunter.com)

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