FOR VIDEO ASSEMBLY INSTRUCTIONS
VISIT - https://www.quicktrickalignment.com/nell/

KIT ASSEMBLY

COMPONENTS

90080 Fleet System Components

Long Bolt Bracket Knob (2)

Short Bolt Bracket Knob (2)

Gauge Bracket (2)

Attachment Magnet and Allen Wrench (8)

Digital Gauge/Level (1)

Stabilizer bar(2)

Attachment Pins and Allen Wrench w/red tips (8)

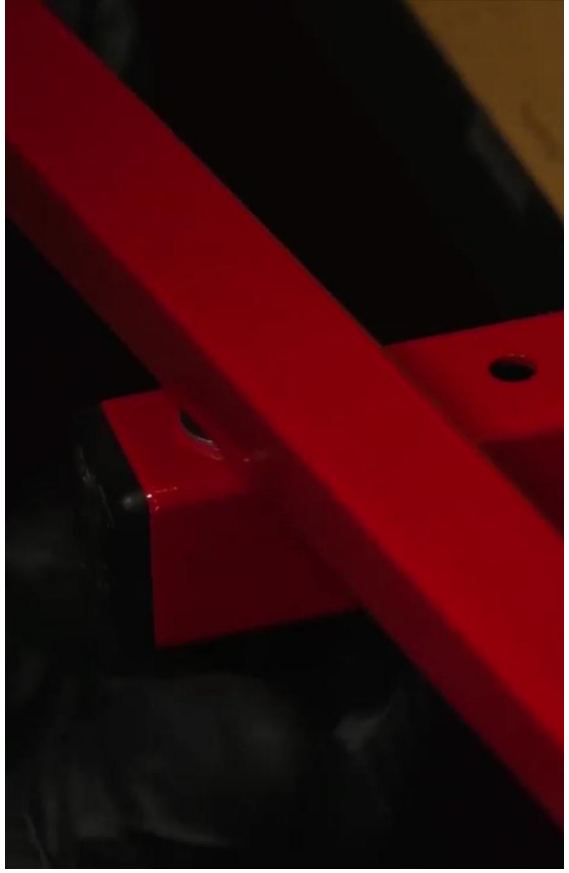
Tape Measures (2)

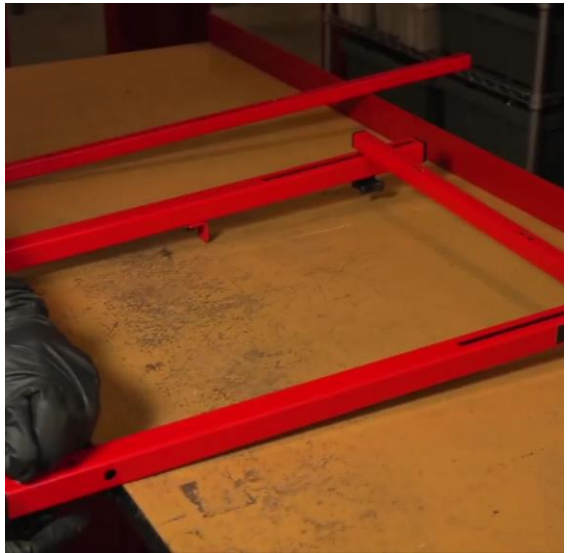
Toe Bars (2)

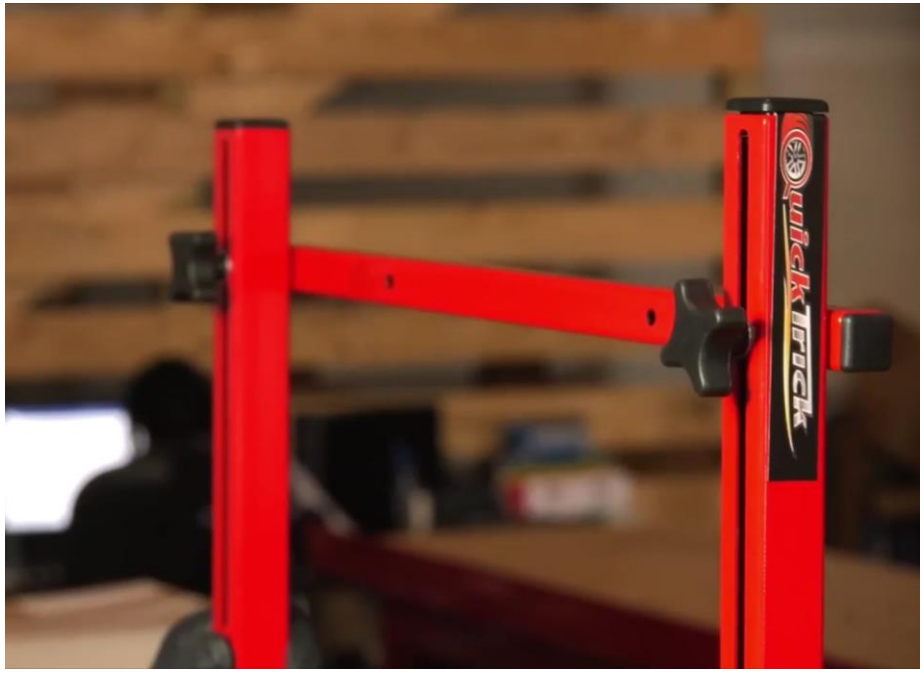
Right Side Frame Vertical (2)

Left side frame dual Vertical (2)

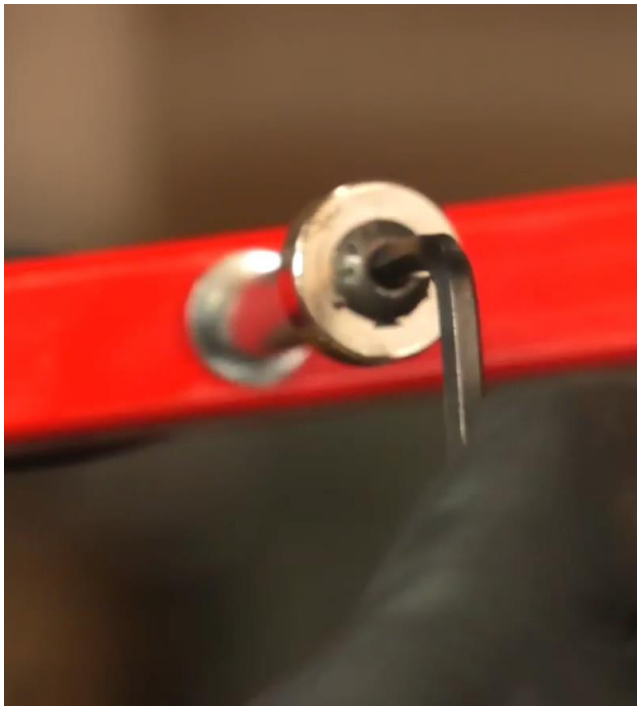
Horizontal Toe Bar can be moved up to this hole for smaller wheels



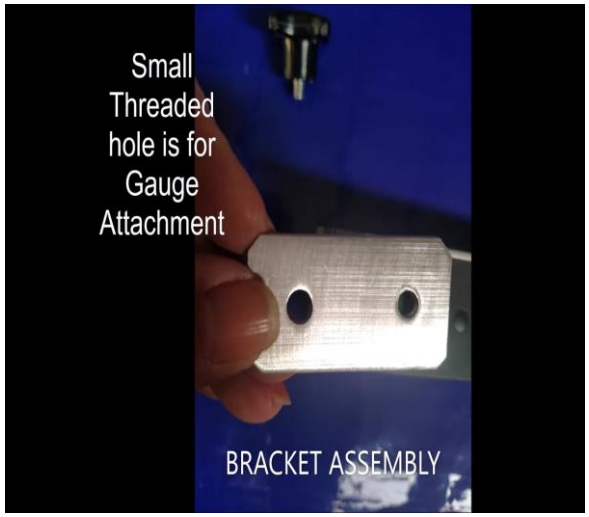




FOR OUTER RIM PIN ATTACHMENTS
BOLT GOES THROUGH THE BAR
SCREW ON FROM OTHER SIDE



For Steel Wheels, Use Magnet attachments.
Screw directly into the bar in smaller tapped holes.



Zero out gauge in front of tire and place on frame after affixing QuickTrick Frames to wheels

Extension Kit Included for use If additional clearance from tire is needed: Utilize the extension kit as pictured. Make sure to use the spacers to keep your lengths consistent.

QUICKTRICK INSTRUCTIONS

5th Gen 90080

- ALIGNMENT SIMPLE SOLUTIONS

- Thank you for your support of QuickTrick products. You are supporting an American Dream business grown from the Garage and the racetrack to a Worldwide small business. We pride ourselves on supporting the automotive community with quality solutions to everyday automotive issues. We enjoy helping you and others be their best on the track, in the garage, at the custom shop, on military deployment, your children's school bus maintenance departments and in your driveway. Thank you for your support!

- **Mr & Mrs. QuickTrick®**

QuickTrick Alignment Kits are Professional quality tools designed for a lifetime of reliable service. QuickTrick Kits can be used on any vehicle for measurement of the alignment featuring angles of caster, camber and toe alignment.
The QuickTrick gauge contains an alt zero feature for smooth and effortless operation on any hard surface. The pieces are aluminum designed lightweight for easy grip to last for years of accuracy and Made in the USA.

Specifications & Components:

- Aluminum frame
  - 16-24" Vertical with 40" Toe set for 90080
- 2.5" Aluminum Attachment Pin Set of 8 w/Protector Caps
- 1.5" Extension kit for additional clearance with pins
- 3" Magnetic tip for steel wheels with allen wrench
- 3/16 Allen Wrench
- QuickTrick Tape Measures
- Digital Gauge – (RoHS Certified) Batteries included –
  - Measuring range from 0° ~ 90°; 4 x 90° (360°)
  - Resolution of 0.1° (1.75mm/M)
  - Accuracy of ± 0.1° at around 0° & 90° ; ± 0.2° at 1°~89°
  - Alternate zero feature
  - Digital display of angle in °(Degree) & %(slope)
  - Buzzer sound
  - 3 Minutes auto off/Will hold
  - current level setting when turned on again

Safety:

This tool should only be used by personnel who have the necessary skill, and tools to do the job correctly and safely. Incorrect usage can result in personal injury, vehicle damage and / or loss of vehicle control.

Ensure vehicle emergency brake is applied before starting measurements and check your tire pressure.

Clear work area of potential hazards

Always use safety gear – (gloves, eye protection, footwear)

Use & Care:

QuickTrick Alignment kits are portable tools used to quickly and accurately measure caster, camber & toe.

For long tool life, make sure to wipe down the metal/aluminum after each use and properly store all components and frame pieces to ensure no damage to parts.

Ensure digital gauge batteries are in good condition

Calibrate gauge when needed following instructions:
http://www.youtube.com/embed/jLHIp_wKdQE

Instructions

Minimum Items Needed:
Quicktrick 90080 Fleet/RV/Dually set up

- Performing Alignment (Follow QuickTrick Instructions).
- Confirm no runout/wheel bent issues
- Check for appropriate air pressure
- Center tires straight ahead and mark steering wheel center to maintain visibility from outside the vehicle.
- Affix QuickTrick frames to all 4 rims of the vehicle using magnets or pins.
- Check horizontal bars to ensure level and verticals at 90 degrees

CASTER: With and without toe plates, Caster is a lot easier than most people think.

- Center your steering wheel (use a small piece of tape for reference as you measure)
- Place the QuickTrick frame on the wheel you are measuring
- Use the gauge to determine the vertical is at 90 degrees (Make sure it is on the mode for degrees and not inches)
- Make sure your tires are straight and center the steering wheel
- Turn the wheel until the tire you are measuring is at 20 degrees. From Drivers side turn as if making a left hand turn
- Place the gauge on bracket and zero out
- Turn the steering wheel back to the center.. then 20 degrees in the opposite direction
- Read the gauge. Multiply the reading by 1.5 and this is your caster measurement (Arrow of gauge is opposite on Caster. If arrow is up = negative caster/down arrow = positive caster
    - EXAMPLE: FINAL READING 3.0 ON GAUGE – 3.0 X 1.5 = 4.5 POS CASTER

CAMBER:

- Place the frames on your wheels. Adjust for wheel height and size and attach the QuickTrick frame to either side. Make sure you are working on a totally flat surface against the wheel and the verticals are at 90 degrees prior to placing your gauge on the bracket.
- Level the camber gauge. This is accomplished by placing the gauge in front of the tire and wheel you are checking. Turn the gauge on and the first reading you will see is the level of the surface you are working on. Example: If the reading on the gauge is 1.0 followed by the ^ arrow, this indicates the surface you're working on is 1.0 degrees positive, the opposite would show on the gauge as 1.0 v or negative. Simply hit the zero button and the gauge will recalibrate and show on the screen as 0.00 and will hold this recalibrated number until the unit is turned off. Affix the gauge to the bracket on frame.
- Once the gauge is on the gauge bracket it records your camber. Example: 0.7 v indicates this wheel has less than 1 degree of negative camber. The only thing you really need to remember when using the gauge is ^ is positive, v is negative. In most cases you do not have to reset the gauge to level for each wheel, but I would recommend until you have become totally familiar with the system to re-adjust for each wheel.
- As a side note, you can also place the gauge directly against the vertical to check camber, the number that shows on the gauge will be plus or minus 90 degrees If you use this method, taking our first example would be 89.3 v or 0.7 of negative camber.
- Repeat on opposite side

TOE:

1. Extend the tapes under the vehicle, one in front of the tire and one behind the tire. We have found working from right to left is easiest for us.
2. Slide the clip of the tape measure into the slots of the opposite frame, left front and rear, return the right front and slide the extended tapes into the slots front and rear.
3. Gently pull the tapes at the same time making sure the opposite side is seated against the tire.
4. Read the tapes carefully. Typically, you will have readings something like this:
   Front measurement 75 ¼ – Rear measurement 75 ⅛. This indicates that you have ⅛ of an inch of toe out. Easy way to remember this is if the front number is higher, you have toe out. If the rear number is higher then you have toe in.

**If toe adjustments are needed, we recommend you string the vehicle to determine which or if both sides need adjustment.

TROUBLE SHOOTING & USEFUL INFORMATION

Suspension adjustment	Effect on vehicle balance, extreme useable adjustment limit	Symptom of TOO MUCH adjustment
Front spring rate increase	More understeer	Terminal understeer, front of car hops in corners, excess wheel spin in FWD car
Front spring rate decrease	Less understeer	Too much oversteer, oversteer then understeer if spring is so soft that the car bottoms under lean, car bottom excessively with a jolting ride
Rear spring rate increase.	More oversteer	Too much oversteer, hop in corners, twitchy
Rear spring rate decrease	Less oversteer	Car understeers, if way to soft car understeers then oversteers as car bottoms out under lean, car bottoms out excessively with a jolting ride
Front antisway bar stiffer	More understeer	Terminal understeer, Lifts inside front tire off the ground which can cause massive wheel spin, also not good for most effective tire usage as inside wheel is now doing nothing
Front antisway bar softer	Less understeer	Oversteer
Rear antisway bar stiffer	More oversteer	Big time oversteer, Can cause the inside rear tie to lift off the ground which is not too bad on a FWD car. On Classics, if this happens while trail braking into a turn, the abs can shut the brakes down which can be a bit scary
Rear antisway bar softer	Less oversteer	understeer
Front tire pressure higher	Less understeer Except with BFG R-1 tires. They will grip less and understeer more if the pressures are increased within a reasonable amount.	No traction as tire is crowned so more understeer, bad wheel spin, jarring ride, center of tires wear out
Front tire pressure lower	More understeer Except with BFG R-1 tires. They will grip more and understeer less if the pressures are decreased within a reasonable amount.	Edges of tires wear quickly because tire is folding over, feels mushy, tires chunk because low pressure means more heat build up
Rear tire pressures higher	Less oversteer Except with BFG R-1 tires. They will grip less and oversteer more if the pressures are increased within a reasonable amount.	No traction as tire is crowned so more oversteer, bad wheel spin on RWD cars, jarring ride, center of tire wears out
Rear tire pressures lower	More oversteer Except with BFG R-1 tires. They will grip more and oversteer less if the pressures are decreased within a reasonable amount.	Edges of tires wear quickly because tire is folding over and cupping upward, feels loose in back, tires chunk because low pressure means more heat build up
More negative camber on front wheels	Less understeer/ -3 degrees	Poor braking, car is road crown sensitive, twitchy, tires wear out on the inside edge
Positive camber on front wheels	More understeer, a little can make the tires last a little longer	Poor braking, car is road crown sensitive, twitchy, tires wear out on the outside edge You almost never want to have positive camber
More negative camber on rear wheels	Less oversteer, more rear grip, less breakaway warning when limit is exceeded/-3 degrees	More oversteer, car feels twitchy in back, tires wear out on inside edge
More positive camber at rear	More oversteer, more forgiving at limit	Car feels twitchy in the back, tires wear out on outside edge
Positive front caster	Helps both stability, steady state cornering and turn in because the suspension will get more negative camber when the wheel is turned/ 6-7 degrees positive, negative caster is not useable	Can increase understeer, especially in cars with wide, low profile tires due to a non-linear increase in corner weight. Increases steering effort, SE-R's are not easily modified to make this adjustable, FWD cars can see an increase of torque steer with excessive positive caster

If you have any questions about the use of this product, please contact us:

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