READ ALL INSTRUCTIONS COMPLETELY AND THOROUGHLY UNDERSTAND THEM BEFORE DOING ANYTHING.
CALL CHASSISWORKS TECH SUPPORT (916) 388-0288 IF YOU NEED ASSISTANCE.

INSTALLATION GUIDE

CHRIS ALSTON'S Chassisworks
THE HOME OF HIGHER TECHNOLOGY

5715-A30

Bump Steer Kit
Adjuster Sleeve and Tapered Outer Stud

(Use customer provided inner tie rod.)

Description: Billet Adjusting Sleeve, Tapered Stud, and Rod End; creates height adjustable outer pivot point.

Applications: '71-72 Buick Skylark, '71-72 Chevrolet Chevelle, '71-72 Chevrolet El Camino, '71-72 Chevrolet Monte Carlo, '71 Oldsmobile 442, '71-72 Oldsmobile Cutlass, '71-72 Oldsmobile F85, '71-72 Pontiac LeMans, '71 Pontiac GTO

Notes: Requires spindle and inner tie rod. In some cases, it may be necessary to shorten the factory inner tie rods or billet adjusting sleeves to correctly align the vehicle.

PARTS LIST

5715-A30 - Bump Steer Set, 1971-1972 Chevelle (A-Body)

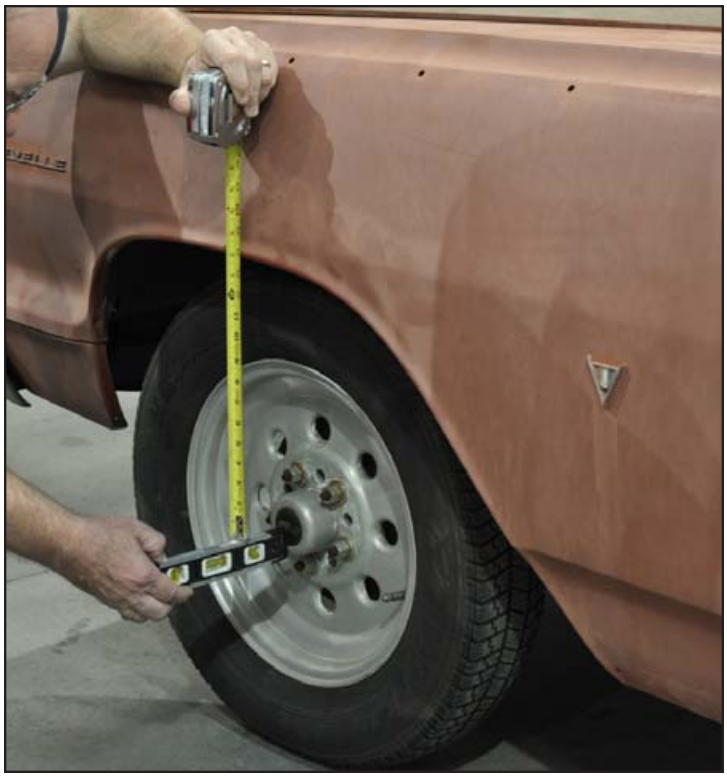
Qty	Part Number	Description
2	7900-249	Billet Tie-Rod Sleeve, 9-1/4” x 5/8-18 & 11/16-18
2	3102-069-18LY	Jam Nut, 11/16-18 LH, Grade 5, Yellow Zinc
2	3102-063-18RC	Jam Nut, 5/8-18 RH, Grade 5, Clear Zinc
2	3117-063-18C	Half-height Locknut, 5/8-18 Nylon Insert
4	3120-044S-Y	Washer, 7/16” Hardened Flat SAE
2	3131-044-20Y	Locknut, 7/16-20 Nylon Insert
2	3136-063X063-RT	Rod End 5/8-18 x 5/8” Bore
2	7900-226-.031	Spacer, .031 Thick x .815 OD x .630” ID
4	7900-226-.063	Spacer, .063 Thick x .815 OD x .630” ID
2	7900-226-.125	Spacer, .125 Thick x .815 OD x .630” ID
2	7900-226-.250	Spacer, .250 Thick x .815 OD x .630” ID
2	7900-226-.375	Spacer, .375 Thick x .815 OD x .630” ID
2	7900-227-E	Tie Rod Stud E .490” Minor

What is Bump Steer?

Bump Steer is the change in “toe”, or left to right angle, as the suspension moves through its range of motion. Bump steer is most evident on rough road surfaces, during hard cornering or under heavy braking. With proper installation and settings, the Chassisworks bump steer kit can minimize and in some cases virtually eliminate the bump steer affect, making handling more consistent and predictable. **Toe** is the measured difference in track width of the leading edge and trailing edge of a set of tires.
Toe-Out = Front wider than rear / **Toe-In** = Rear wider than front / **Zero-Toe** = Front equal to rear

Installation/Setup

Installation of this kit requires the suspension to be moved through its range of travel and the toe measured at the extremes of the range and at ride height. This can be accomplished at home using a bump steer gauge but we recommend taking your vehicle to a qualified alignment shop for installation and setup. *Continue with instructions if you plan on performing the installation and setup yourself.*



INSTRUCTIONS

1. Measure from top of fender well to center of wheel on each side of vehicle to establish a ride height dimension from which to work. Record results.
2. Raise the front end of car and secure with jack stands. Wheels must not be in contact with the ground.
3. Remove wheels, making note of which side of vehicle they were removed from.

4. Unbolt stabilizer bar from lower control arms.
5. Measure length of each tie rod assembly (pivot-to-pivot) for adjustment starting point. Record results.

6. Remove coil springs from vehicle. *Later, when measuring bump steer, the suspension must be moved freely throughout its range of travel.*

   Stock style suspension requires removal of shock absorber and use of spring compressor.

   Coil-Over suspension requires removal of shock. Spring must be removed from shock.

7. Once the springs have been removed, reinstall the shocks to limit suspension travel during bump steer measurement process.
8. Remove cotter pin and castle nut of outer tie rod and separate from steering arm. A balljoint fork or similar tool may be required for separation.

9. Loosen the clamp fastener of the adjusting sleeve at the inner tie rod, then unscrew from the inner tie rod.
10. Inspect condition of inner tie rods, replace if necessary.
11. Apply anti-sieze or similar thread lubricant to internal threads at each end of adjusting sleeve.

12. Thread right hand jam nut (clear zinc) onto rod end until 1” of thread is past nut.

13. Screw rod end into billet adjusting sleeve until jam nut contacts sleeve.

14. Thread left hand jam nut (yellow zinc) onto inner tie rod to end of threads.

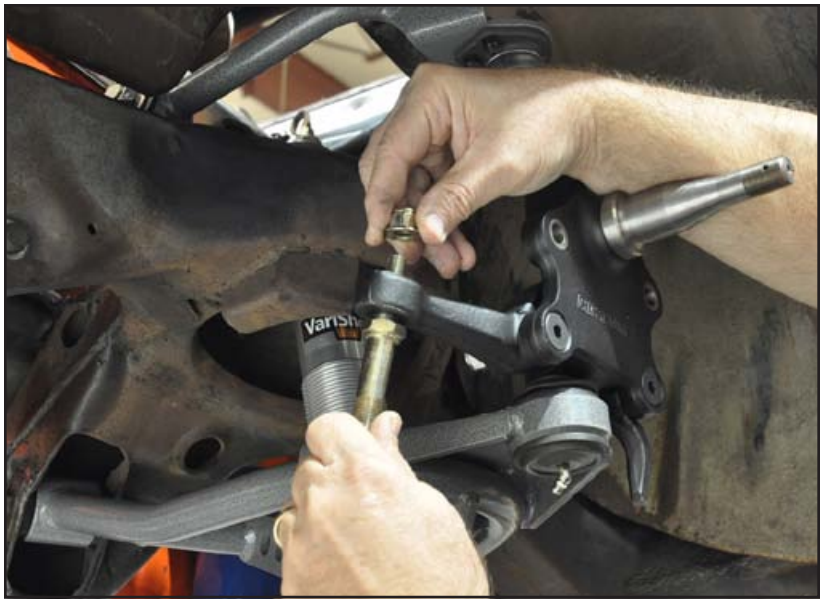
15. Screw inner tie rod into left hand end (hex end) of adjusting sleeve until length (pivot-to-pivot) matches the factory assembly. Use measurements taken earlier.

16. Tighten adjuster sleeve jam nuts.

17. Install tapered stud (7/8” hex) into steering arm and secure with 7/16” washers and a locknut (11/16” hex).

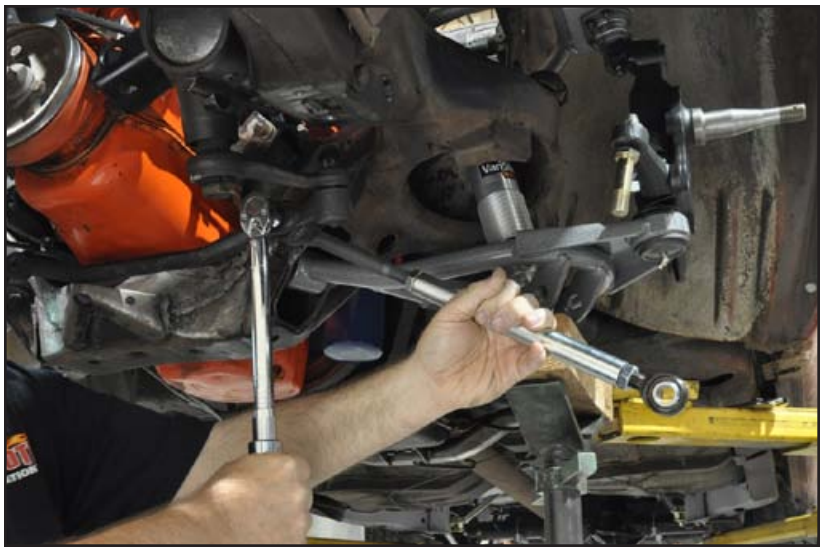
    Due to variance in steering arms, either one or two washers will be required to ensure the stud does not run out of threads before the nut is fully torqued. If in doubt, add the second washer.

18. Verify tapered stud fits correctly before proceeding. Stud taper should match existing outer tie rod.



19. Torque to 50 lb. ft.

20. Insert the inner tie rod into the drag link and tighten to 40 lb-ft.



21. Place largest adjustment shim (3/8” thick) onto stud at steering arm.
22. Place rod end onto stud against 3/8” thick shim.
23. Place remaining shims onto stud against rod end.
24. Thread a 5/8-18 jam nut onto stud to secure shim stack and rod end.

    The jam nut is used temporarily during setup and will be replaced by a locknut after final adjustment. Jam nut should be snug to prevent any free play of the shims during bump steer setup.

    If the vehicle will be moved before final adjustment install locknuts in place of jam nuts for safety purposes.

25. Additional shims are included and may be needed during bump steer measurement and set up.

    Springs must be removed from suspension system before proceeding.

26. Toe measurement and shim adjustment can now be done to make any bump steer corrections. A dual dial indicator bump steer gauge is highly recommended for this procedure. Gauges can be purchased through many high performance racing parts distributors.

Bump Steer Gauge

Adjustment Notes:

- At least one 1/16” shim must remain below rod end to prevent binding.
- A minimum of 3/4” thread engagement is required at the rod end and inner tie rod.
- The inner tie rod will typically have more thread engagement than the rod end.
- To maintain minimum thread engagement at rod end, inner tie rod can be unscrewed from adjusting sleeve up to the point of minimum thread engagement.

General Adjustment Rules:

- If compression travel toes-out and extension travel toes-in, then the outer tie rod is too high.
- If compression travel toes-in and extension travel toes-out, then the outer tie rod is too low.
- If compression travel toes-out and extension travel toes-out, then the tie rod assembly is too short.
- If compression travel toes-in and extension travel toes-in, then the tie rod assembly is too long.

There is not much you can do about the third and fourth conditions except modifying the steering arm. DO NOT heat and bend the steering arms. Corrected steering arms would have to be fabricated.

27. Once final adjustments have been made verify that minimum thread engagement has been maintained.
28. Tighten all jam nuts and install 5/8-18 locknuts onto stud. Torque to 60 lb. ft.

29. Reinstall springs, stabilizer bar and wheels.
30. Verify all mounting hardware is correctly torqued.
31. Use a grease gun to lubricate the inner tie rod end.

The vehicle must be professionally inspected and aligned prior to regular use.

WARRANTY NOTICE:
There are NO WARRANTIES, either expressed or implied. Neither the seller nor manufacturer will be liable for any loss, damage or injury, direct or indirect, arising from the use or inability to determine the appropriate use of any products. Before any attempt at installation, all drawings and/or instruction sheets should be completely reviewed to determine the suitability of the product for its intended use. In this connection, the user assumes all responsibility and risk. We reserve the right to change specification without notice. Further, Chris Alston's Chassisworks, Inc., makes **NO GUARANTEE** in reference to any specific class legality of any component. **ALL PRODUCTS ARE INTENDED FOR RACING AND OFF-ROAD USE AND MAY NOT BE LEGALLY USED ON THE HIGHWAY**. The products offered for sale are true race-car components and, in all cases, require some fabrication skill. **NO PRODUCT OR SERVICE IS DESIGNED OR INTENDED TO PREVENT INJURY OR DEATH**.

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