

# WHITELINE

Z8004

## KDT916 – S197 Performance Watts Linkage

### Kit Includes:

- **Differential Cover**
  - Magnetic Plug
  - Standard Plug
  - Main Brace
  - Center Pivot
  - Swivel Foot Bolts – 2
  - Swivel Foot Retaining nuts – 2
  - M12x30 Bolt – 4
  - M12x20 Bolt
  - M14x80 Bolt
  - M12 Grub Screw
  - M12 Flat Washer – 5
  - M14 Flat Washer
  - Center Pivot Retainer
  - Differential Cover Retaining Bolts – 10
  - Retaining Bolt Washers - 10
- **Linkage Arms – 2**
  - Arm Bushings – 8
  - M12x40 Arm Retaining Bolts – 2
  - M12 Flat Washer – 2
  - Center Pivot Arm Retainers – 2
  - Driver Side 37mm Crush Tube
  - Passenger Side 60mm Crush Tube
  - Passenger Side Retainers
  - Passenger Side Brace Spacer
- **Chassis Support Brace**
- **Driver Side Drop Bracket**
  - M10 Flat Washer
  - M10x20 Bolt -2
  - M12x70 Bolt
  - M12 Hex Nut
  - M12 Washer – 2
  - Spring Washer
- **Fuel Line Relocation Clamp**
- **Self-Tapping Screw**
- **Grease Satchel - 2**

### Tools / Items Required:

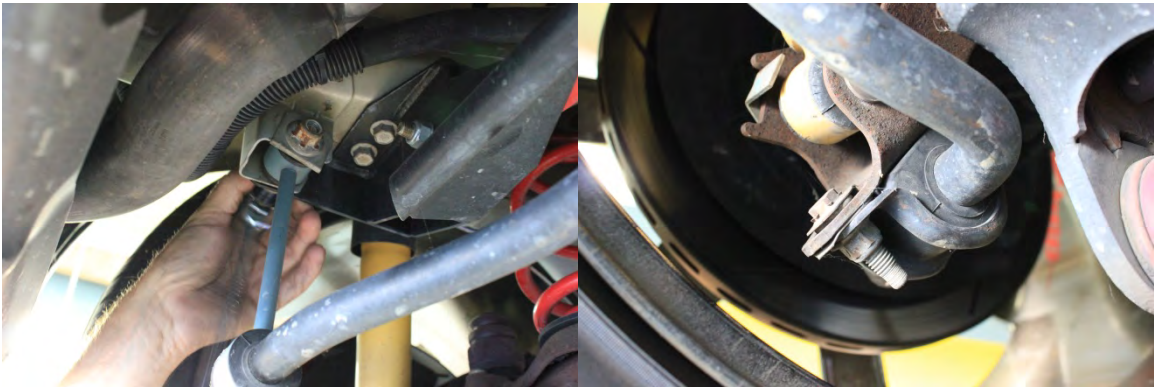
- 1 1/8 inch wrench
- 18mm Wrench
- 18mm Socket
- 15mm Socket
- 13mm Socket
- 24mm Socket
- Torque Wrench
- Blue Thread Lock
- Brake Cleaner
- Dow Corning RTV #732
- Zip Tie
- Synthetic gear lube
- differential friction modifier
- Blue Thread Lock

- **Control Arm Relocation Bracket Supplemental Hardware**

When using with lower control arm relocation brackets it may be necessary to use the supplied M12x30 bolt and nyloc nut to replace the driver side Panhard bolt when it is deleted.

**WARNING: Whiteline Products are designed to for easy installation but professional installation by a Whiteline Performance Center is recommended. Please drive carefully and accustom yourself to the improved handling characteristics of the vehicle.**

1. Lift the vehicle and place jack stands under the chassis (not rear axle).
2. Remove Rear Sway Bar using a 15mm socket. Remove the 2 bolts and 2 flag nuts holding the end links to the chassis, then the 4 bolts (2 per side) holding the sway bar to the axle. (**Note:** If using Whiteline rear sway bar please refer to Whiteline install manual for proper tools for removal and re-installation)

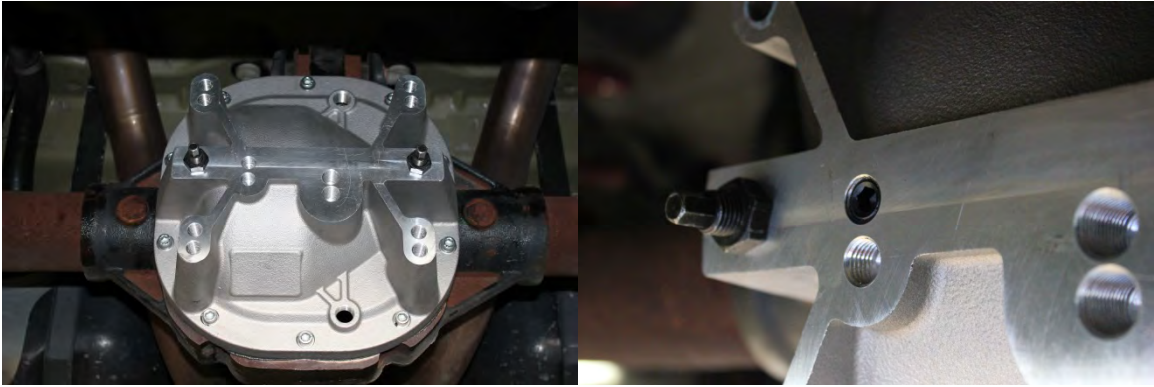


3. Using a flat blade screwdriver, remove the Panhard Rod cover from the driver side end by sticking the screwdriver through the access hole and releasing the retainer clips. Using an 18mm socket, remove the Panhard bolts (2 per side) and remove Panhard rod from vehicle. Removal may require long handle pry bar.  
**Note:** Save passenger side bolt and flag nut, as it will be re-used in step 26.
4. Drain fluid from differential cover by loosening the ten 13mm bolts holding the differential cover to the housing and using a flat blade screw driver to pry the cover loose.
5. Remove the differential cover. We recommend cleaning out remaining fluid in the casing to get it as clean as possible. Carefully remove any remaining silicone sealant from the mating surface of the housing with a razor blade.
6. Spray the back inside of the Whiteline Differential Cover with brake cleaner to ensure clean surface, focusing on the mating surface of the cover, then wipe down with a clean cloth rag.



7. Install the two swivel foot bolts into the diff cover, hand threading them in from the back until the foot is flush with the back of the cover.
8. Apply RTV sealant to the mating surface of the differential cover, applying one continuous bead.
9. Spray brake clean on the differential housing where it will mate to the differential cover and wipe surface clean with a cloth rag. Make sure housing surface is clean of all gear lube and silicone sealant before setting new cover in place.
10. Match the 10 supplied 1/4" allen bolts to the supplied washers and have them within reach for installation.
11. Line up the differential cover to the housing (the side of the cover with the square should be positioned on the bottom) and press into place. Begin hand threading the ten bolts with washers through the differential cover and into housing. Once all bolts are in place, use a torque wrench and tighten in star pattern to 20 ft.-lbs.
12. Tighten down the swivel foot bolts on each side to 5 ft-lbs and install jam nuts.

13. Apply a small amount of RTV to the 10mm grub screw and install into to hole you don't plan to use.



14. Ensure that both rear differential plugs are snug using a 24mm socket. Remove the differential fill plug from the front side of the differential with a 3/8". Pump the gear lubricant and differential friction modifier into the housing (refer to your owner's manual for proper amount and weight); the fluid should reach the bottom of the fill hole. Re-install the fill plug and tighten with 3/8".
15. Apply a liberal amount of supplied grease to the bushing within the center pivot, and press the pivot onto the main brace assembly.



16. Match up the four M12x30 bolts with washers and apply a drop of blue Thread Lock to each bolt. Repeat process with M12x20 bolt.
17. Mount the main brace assembly to the differential cover using the bottom set of holes, using the M12x30 bolts in the outside holes and the M12x20 bolt in the middle left hole. Tighten M12x30 bolts to 60 ft. lbs, and M12x20 bolt to 40ft lbs.



18. Remove the upper support brace located just above the Panhard bar location, using a 15mm socket for the two driver side bolts and an 18mm for the passenger side. Keep the fasteners as they will be re-used later.

19. Apply blue Thread Lock to the two 15mm bolts removed in step 12 and install the Whiteline drop bracket on the driver side. Position the bracket so that the mounting tab sets on the outside of the sway bar mount, facing the inside of the vehicle (see photo for reference). Tighten to 46 ft. lbs.



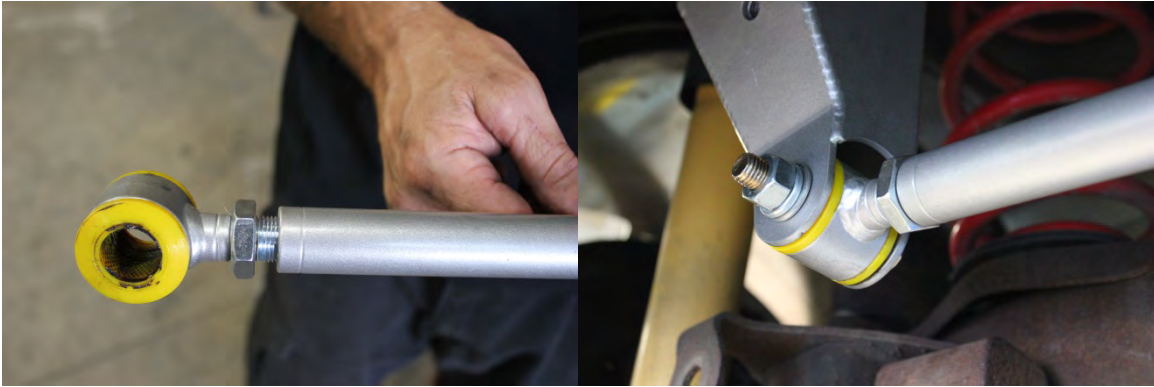
20. Directly above the differential there are 3 lines for the fuel system held by a retainer clip, it is required to flip the direction of this clip to allow clearance (see below), remove the secondary single retainer clip (see above).



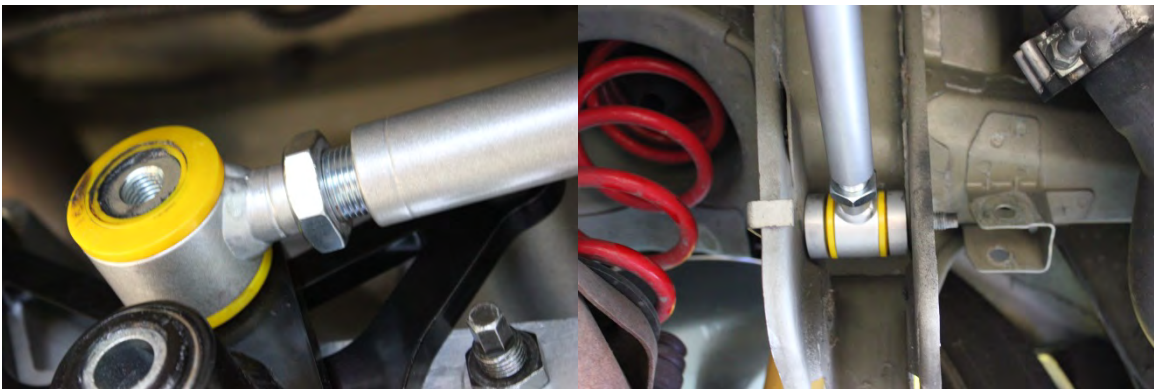
21. Using the supplied vinyl clamp and self-tapping screw, secure the fuel line to the chassis, then zip tie the wiring harness to it as shown below. This will replace the removed plastic clip.



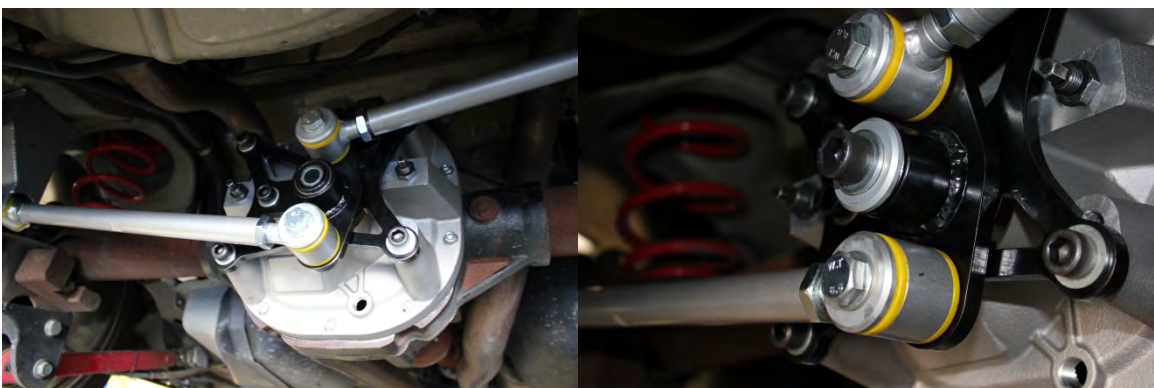
22. Prepare each arm for install by installing the bushings on each arm, and greasing them thoroughly with the supplied grease. At this stage the overall length of the arms is not critical, however it is required that each end is adjusted out evenly and the jam nuts are loose for later adjustment.
23. Each arm is marked with a line on one end which represents the thread direction; install the first arm onto the lower pivot of the main brace, with the marked side of the arm facing towards the outside of the car. Insert the 37mm crush tube into the left side of the arm, and line up with the driver side drop bracket.
24. Using a flat washer on both sides, and additionally using a lock washer on the rear; loosely bolt arm to drop bracket, but do not yet tighten.



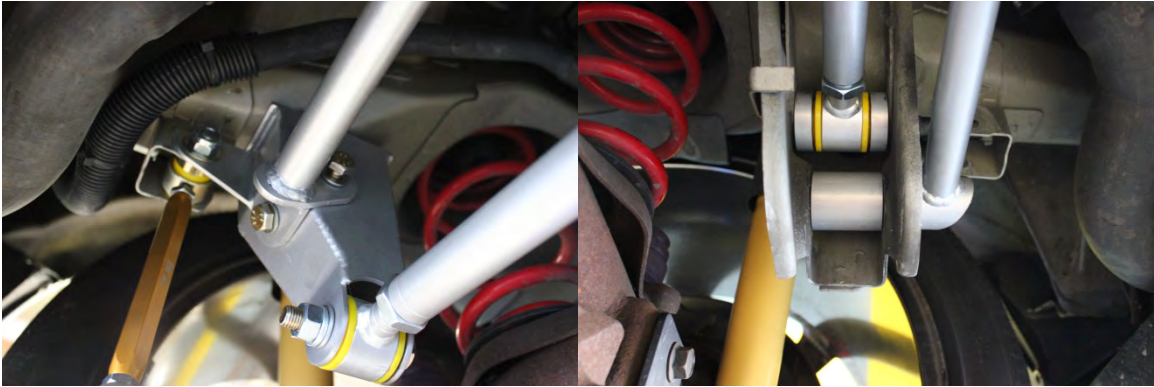
25. Attach the second arm to the main brace, this time with the marked end of the arm attached to the main brace. Push the 60mm crush tube through the bushings on the outside eyelet and place the retainers on each side as shown below.
26. Using the hardware removed in step 3, slide bolt into place but do not use the nut or tighten yet.



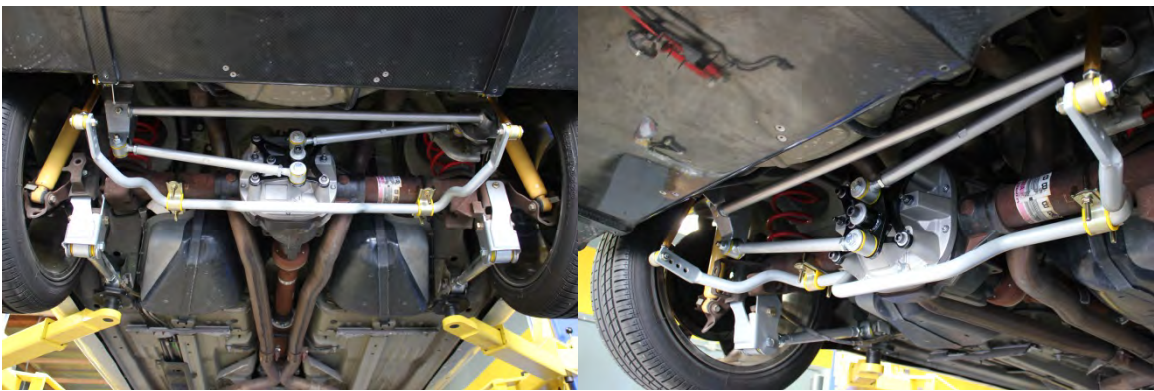
27. Take the 2 arm retaining washers and corresponding flat washers and match them to the arm retaining bolts. Apply blue thread lock and bolt into the main brace. Torque to 55 ft. lbs.
28. Match the M14x80 bolt with the supplied center pivot retainer with the M14 washer and loosely thread into the middle right hole. Torque to 55 ft. lbs. (Note: M14 x 80 Socket head bolt pictured may be substituted with M14 x 80 Hex Head Bolt.)



29. Loosely mount cross chassis brace to driver side drop bracket using 2 supplied bolts and flat washers applying a small amount of blue thread lock.
30. Attach brace to passenger side using the arm retaining bolt and the left over chassis brace hardware. Use the supplied spacer on the lower hole as shown below. Torque brace on passenger side to 95 ft lbs and then the arms on driver side mount and chassis to 129 ft. lbs. Tighten bolts on drop bracket side of brace to 46 ft lbs.



31. Reinstall rear sway, bar. Refer to factory manual or Whiteline rear sway bar manual for detailed instructions.
32. Double check all bolts are tight and loosely tighten jam nuts on watts link arms; then follow axle centering steps.



### **ADJUSTING AXLE CENTER**

1. Cycle suspension of vehicle, driving in and out of a driveway should suffice.
2. Using a plumb line hanging from the rear fender, measure the distance from the fender to the wheel rim on both sides of the car and record the measurements.
3. Subtract the larger number from the smaller number to get the offset distance. At the set length the axle is biased to the driver side indicating that the watts link arms need to be shortened.
4. Divide the offset by two, to split the difference. You will then need to split the difference again between the two arms.
5. Loosen the jam nuts on both ends of the Watts Link arms and adjust the length previously determined. It is important to adjust both arms equally so that they end up roughly the same length.
6. Apply thread lock and tighten jam nuts with 1 1/8 inch wrench.

#### **For specialist assistance in North America:**

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