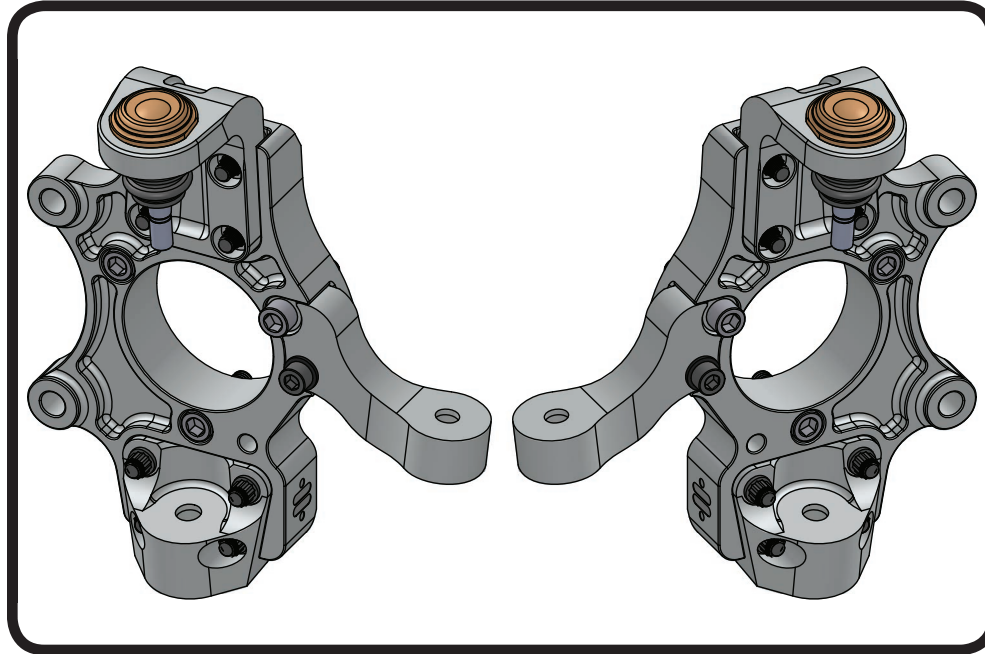
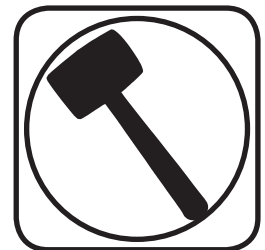
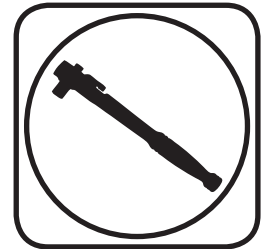


Part # 11519300 - C5/C6 Modular Spindle Kit - Extra Camber



Recommended Tools



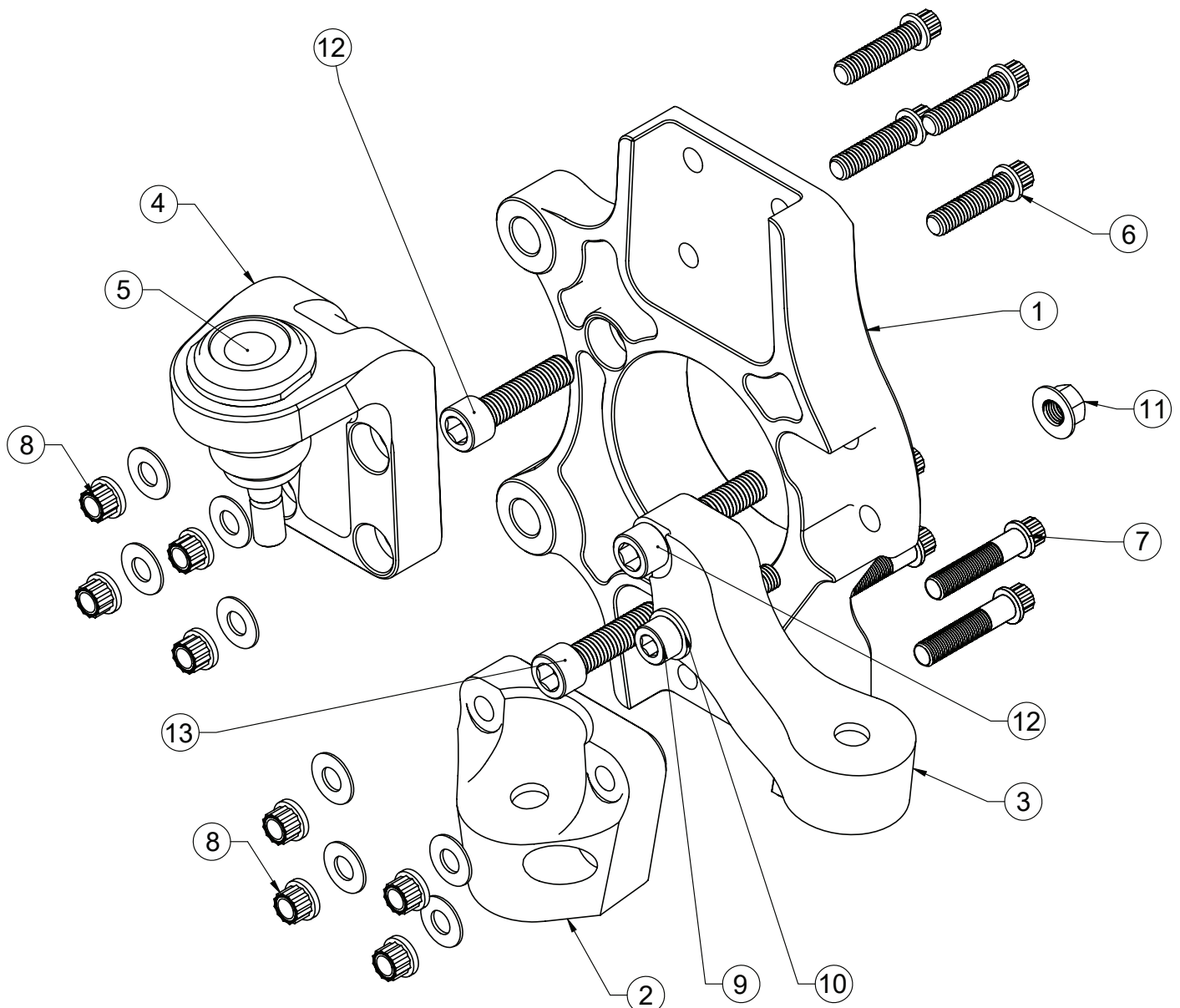
C5/C6 Modular Track1 Spindle Kit Installation Instructions

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Major ComponentsIn the box

Item #	Part #	Description	QTY
1	90003101	Spindle Main Body (LF & RR)	1
1	90003102	Spindle Main Body (RF & LR) - Not Shown	1
2	90003103	Lower Ball Joint Mount	2
3	90003104	Steering Arm (LF & RR)	1
3	90003105	Steering Arm (RF & LR) - Not Shown	1
4	90003106	Upper Ball Joint Mount	2
5	70014132	Upper Ball Joint - installed in mount	2



Hardware

Item #	QTY	Part Number	Description	
6	8	99371064	3/8"-16 x 1.50 Hex Bolt	Upper Ball Joint Mounts to Body
7	8	99371063	3/8"-16 x 1.75 Hex Bolt	Lower Ball Joint Mounts to Body
8	16	99372013	3/8"-16 Flange Nuts	Ball Joint Mounts to Body
9	2	99111010	M10-1.5 x 55mm SHCS	Steering ARM (FRONT ONLY)
10	2	99113002	M10 Flat Washer	Steering Arm (FRONT ONLY)
11	2	99112004	M10-1.5 Flange Nut	Steering Arm (FRONT ONLY)
12	2	99121011	M12-1.75 x 55 SHCS	Hub Mounting Bolt
13	4	99121007	M12-1.75 x 45 SHCS	Hub Mounting Bolt

Getting Started.....

Congratulations on your purchase of the Ridetech Modular Spindle. This Spindle has been designed to give your Corvette excellent handling along with a lifetime of enjoyment. Some of the key features of the Ridetech Modular Spindle:

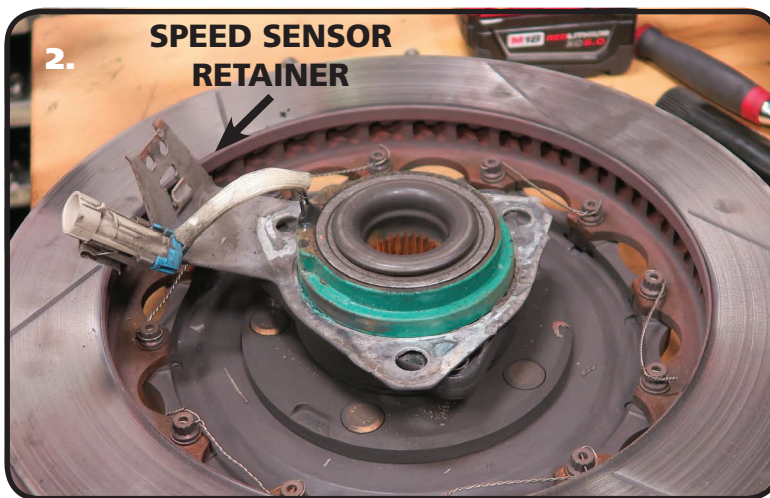
1. Lowers the car by raising the bearing hub position by 1".
 - a. Increased handling performance by allowing the suspension to operate at its optimum ride height.
 - b. Allows more shock and spring travel on both OEM leaf spring AND coilover equipped cars
 - c. Lower center of gravity.
 - d. Improved looks.
 - e. 1 Degree of extra Negative Camber with an Shim Option(11519350) for stock camber settings.
2. Compatible with OEM hubs, brakes, ball joints and tie rods. Also compatible with C7 bearing hubs on front.
3. Compatible with OEM rear parking brake assembly.
4. Modular design allows up to 1 degree extra camber over factory spindles by offsetting the upper ball joint mount. [optional shim kit available to retain OEM camber position, part number 11519350]
5. Extreme Duty ARP hardware is used to attach ball joint mounts and steering arms. Compatible with OEM hub and parking brake hardware.

This Spindle Kit can be used on Front or Rear.

If using on the rear, you will need to attach your Emergency Brake Cable Brackets to the Spindle.

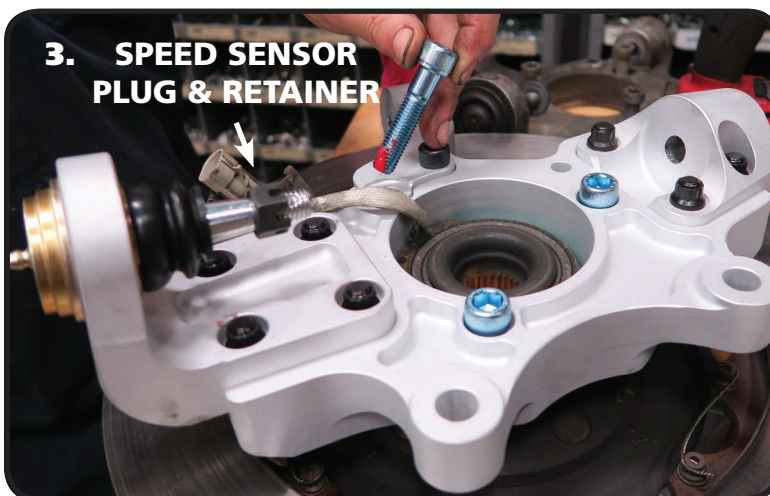
Disassembly

1. The Disassembly for the Front or Rear is similar, the steps that vary are noted "REAR ONLY".
 - a. Remove the Caliper by disconnecting the caliper bracket from the spindle
 - b. Remove the Rotor
 - c. REAR ONLY - Remove the Axle Nut
 - d. Disconnect the Speed Sensor at the plug on the spindle
 - e. Disconnect the Tie Rod
 - f. Disconnect the Upper & Lower Ball Joints - We recommend using a ball joint separator to avoid damage to the spindle
 - g. Remove the Speed Sensor Plug from the bracket on the spindle
 - g. REAR ONLY - Remove the Emergency Brake Cable Bracket
 - h. Remove the Hub Bearings



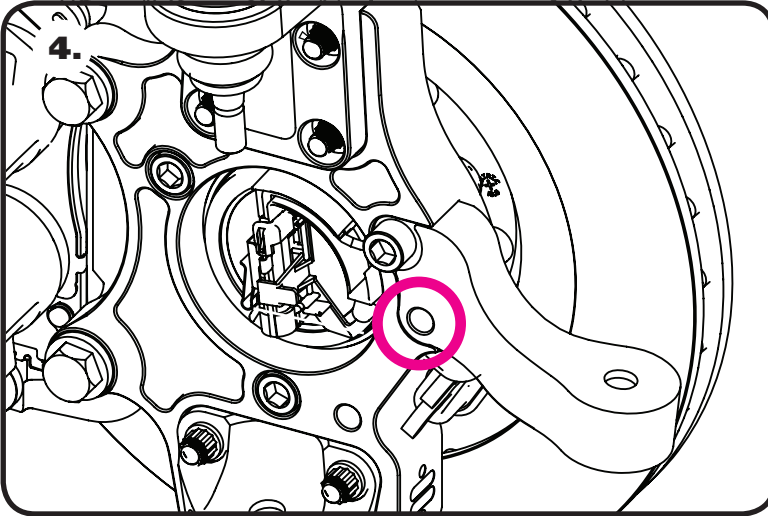
2. Even if you purchased new Hub Bearings, the existing Speed Sensor Plug Retainer will need to be reused. The Plug Retainer is positioned between the spindle and hub bearing. To get to it, the Hub Bearings will need to be disassembled from the OEM spindle. Remove the (3) Bolts attaching the hub to the spindle.

Hub Installation

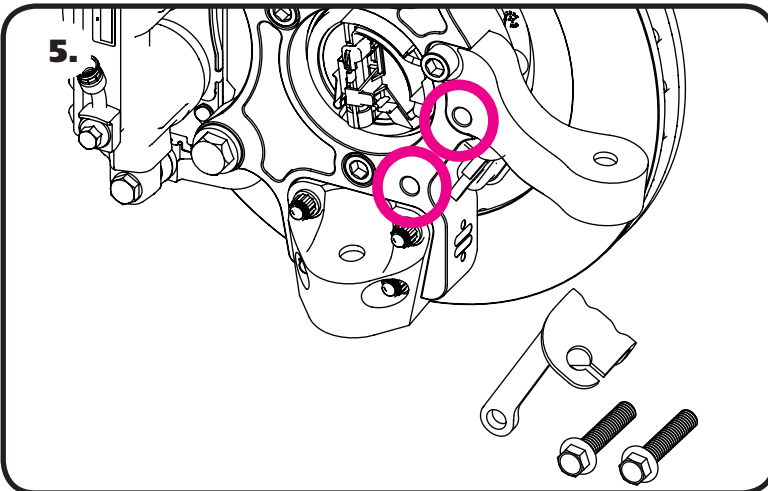


3. Line up the Speed Sensor Wire with the Tab on the Wire Retainer along with the mounting holes. **You may need to clearance the speed sensor bracket to clear the steering arm nut.** The Speed Sensor is positioned above the steering arm. Slide the spindle onto the hub bearing lining up the holes in the spindle with the threaded holes of the hub assembly. Make sure the speed sensor mount and wire are positioned above the steering arm. The kit includes new Hardware to attach the hub assembly. The Hub is attached to the spindle using (2) M12-1.75 x 45 SHCS & (1) M12-1.75 x 55 SHCS, the longer of the 3 is used in the steering arm hole. Apply RED Loctite to each of the mounting bolts. Insert them into the correct holes and Torque to 99 ftlbs.

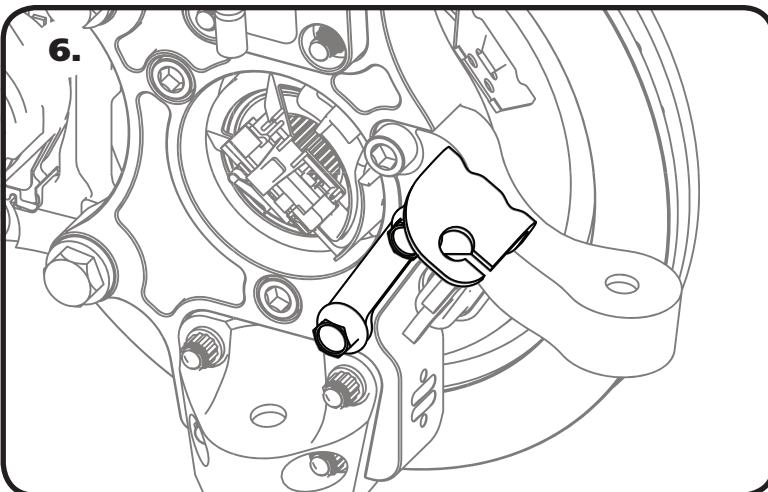
REAR ONLY - Attaching Emergency Brake Cable Mount



4. REAR ONLY- The Rear will require the Emergency Brake Cable Mount to be attached to the Ridetech Modular Spindle. Remove the Mount from the OEM Spindle. Remove the **BOTTOM** Bolt from the Steering Arm of the new spindle. The Hole is circled in **Image 4**.



5. The OEM Cable Mount will align with the (2) holes circled in **Image 5**. Use **Images 5 & 6** to aid in the installation of the mount.



6. Attach the Cable Mount to the Spindle using the OEM Hardware. Apply RED Loctite to the threads of the bolts before installing. Install the Bolts while holding the Mount in position. Torque the Bolts to 40 ftlbs.

Reassembly and Torque Specifications

1. The Assembly is in reverse of the Disassembly.

- a. Attach the Spindle to the Upper and Lower Ball Joints - make sure the steering arm is pointing the correct direction to verify it is on the correct side. If you are installing the spindles on the Rear, feed the Axle into the hub as you install the spindle on the ball joints.
- b. REAR ONLY - Install the Axle Nut
- c. Attach the Tie Rod
- d. Reconnect the Speed Sensor
- e. Reinstall the Rotors and Calipers
- f. REAR ONLY - Reattach the Emergency Brake Cables

Reassembly and Torque Specifications

- Lower Control Arm Ball Joint Stud: 1st Pass 22 ftlbs 2nd Pass +180 degrees
- Upper Control Arm Ball Joint Stud: 1st Pass 15 ftlbs 2nd Pass +250 degrees
- Outer Tie Rod Stud: 1st Pass 15 ftlbs 2nd Pass 160 degrees 3rd Pass 33 ftlbs
- Drive Axle Spindle Nut: 118 ftlbs
- Caliper Mounting Bracket Bolt: 125 ftlbs
- Ball Joint Mounts to Spindle: 45 ftlbs using RED Loctite
- Emergency Brake Cable Mount: 40 ftlbs using RED Loctite

Track Alignment Specifications

Suggested Alignment Specs:

FRONT

Camber: -2.9°
Caster: +7.4°
Toe: -.08" per side

REAR

Camber: -1.4°
Toe: +.07" per side

Howe Ball Joint Maintenance

Maintenance

Grease after every 300 to 400 laps with low friction grease. We use Citgo MP Lithoplex 3 or Red Line CV2. Unlike conventional ball joints, a Howe ball joint will only accept grease until it is full (typically, one pump or less is required). Once the grease passages are full they will not vent, the pressure from the grease gun can make it difficult to remove the gun from the zerk. To relieve the pressure work the ball stud around to vent grease onto the ball, if the ball joint is on the vehicle, bounce the suspension for the same result. Disassemble annually or every 2000 laps to adjust the lash.

Adjusting the Lash

Lash can be set with the a-frame attached to the car if the spring is unloaded and the ball joint taper is free from the spindle. If you choose to remove the ball joint from the a-frame, gently clamp the housing by the flat sides in a vise to disassemble.

Disassembly

- 1) Using a pair of snap ring pliers remove the retainer ring and then the hex retainer plate.
- 2) Turn adjuster cap counterclockwise to remove, use a 3/4" socket or wrench if necessary.
- 3) Clean moving parts to inspect for excessive wear. Replace any parts that are worn or damaged. The ball stud is concentric and should be checked for straightness. Install the ball stud upside down in the housing and spin the stud against the side of the housing with your fingers. If the ball stud is bent, you will see it wobble.

Assembly

- 1) Install the housing into the a-frame or gently clamp the housing by the flats into a vise.
- 2) Install the ball stud into the housing without grease.
- 3) Apply a small amount of light lubricant to the threads of the cap, install and tighten until it contacts the top of the ball.
- 4) Set the lash on the ball by loosening the cap 1/8 turn.
- 5) Place the hex retainer plate on, adjust the cap slightly as needed, so the retainer locks the cap in place. Install the retainer ring using snap ring pliers.
- 6) Using a grease gun, grease and rotate the ball stud by hand until the grease is visible on the bottom of the ball.