# Detroit Speed, Inc.
# Detroit Speed Control Arm and Spindle Kit
## 1964-72 A-Body
## P/N: 030104 & 030105

The Detroit Speed A-Body front suspension kit is a bolt-on package that addresses the shortcomings of the stock A-Body suspension. It includes tubular upper and lower control arms and one-piece forged 4140 alloy steel spindles. This package provides additional positive caster and an optimized camber curve at a lower ride height. The spindles are taller than the stock spindles and provide 2" of drop from stock height. The stock steer arms mount in the optimal location to minimize bump steer. The spindle allows the use of OEM disc brakes or aftermarket brakes designed to fit the stock spindle. The tubular lower control arms will accommodate a conventional coil spring or our coilover conversion kit.

| Quantity | Description |
|---|---|
| 1 | LH Upper Control Arm |
| 1 | RH Upper Control Arm |
| 4 | #1 Caster Adjusters (Installed in control arms) |
| 4 | #2 Caster Adjusters |
| 4 | 7/16" – 14 Nyloc Nut |
| 4 | 7/16" Stainless Steel AN Flat Washer |
| 2 | 1/2" – 20 Castle Nut (installed on ball joint) |
| 1 | LH Lower Control Arm |
| 1 | RH Lower Control Arm |
| 2 | 9/16" – 18 Castle Nut (installed on ball joint) |
| 2 | DSE Forged Spindle |
| 2 | 3/4"–20 Spindle Nut |
| 2 | Tabbed Washer |
| 4 | 7/16"–20 x 2 1/2" Countersunk Bolt (64-67 A-body) |
| 4 | 1/2"–20 x 2 1/2" Countersunk Bolt (68-72 A-body) |
| 4 | 7/16" Torque Prevailing Nut (64-67 A-body) |
| 4 | 1/2" Torque Prevailing Nut (68-72 A-body) |
| 6 | Cotter Pin |
| 2 | 1/2"–20 x 1 1/2" Hex Head Bolt |
| 2 | 1/2"–20 Torque Prevailing Nut |
| 4 | 5/16"-18 x 1" Hex Head Bolt |
| 6 | 5/16"-18 Nylock Nut |
| 8 | 5/16" SAE Flat Washer |
| 2 | Polyurethane Rebound Bumpers |
| 2 | Jounce Bumper Pad |
| 2 | 5/16"-18 Countersunk Bolt |

| **Fastener Torque Specifications** | |
|---|---|
| **Application** | **Torque (ft-lbs)** |
| Upper Control Arm to Frame | 50 |
| Upper Ball Joint to Spindle | 50 |
| Lower Control Arm to Frame | 80 |
| Lower Ball Joint to Spindle | 80 |
| Upper Caliper Mounting Bracket | 120 |
| Steer Arm to Spindle ('64 – '67 7/16" Bolt) | 55 |
| Steer Arm to Spindle ('68 – '72 ½" Bolt) | 85 |
| Lower Shock Mounting Bolts | 25 |

**NOTE:** The ball joints are shipped <u>without</u> grease and must be lubed with a quality chassis grease before use.

1. Chock the rear wheels and loosen the front lug nuts. Raise the front of the vehicle and support the front of the vehicle with jack stands under the frame. Remove the front wheels.

2. Remove the brake caliper and rotor from the stock spindle. Remove the steer arm from the stock spindle. Do not discard the steer arm as it will be installed on the new spindle in a later step.

3. Remove the sway bar end links from the control arms if equipped. Remove the front shock absorbers.

4. Support the lower control arm with a jack and remove the nut from the lower ball joint. CAUTION: *The coil springs are under tension. The proper spring compressor must be used*. Use a ball joint removal tool to separate the lower ball joint from the spindle. Loosen and remove the control arm mounting bolts and remove the lower control arm from the vehicle.

5. Remove the nut from the upper ball joint and separate the upper ball joint from the spindle using the appropriate ball joint removal tool. Loosen and remove the 7/16" nuts from the upper control arm cross shaft and remove the upper control arm from the vehicle. Keep the alignment shims so they can be reinstalled in their original positions.

6. Remove the rebound stops from the framerails, and install the new polyurethane rebound stops. Install the new rebound stop into the framerail by twisting it into the hole in the frame. Soapy water applied to the bottom of the rebound stop may aid in installation. NOTE: *For 1964-67 A-Body applications proceed to Step 8.*

7. For 1968-72 A-Body applications, Install the jounce bumper pad on the frame as shown in Figure 1 below. Position the pad on the frame so the jounce bumper will make direct, square contact with the pad. Mark the frame for the bolt location to mount the pad to the frame and drill through the frame for the 5/16"-18 countersunk bolt. Use the 5/16"-18 Nyloc nut to attach the pad to the frame, no washer is required. Repeat this procedure on the other side of the vehicle.

Figure 1 – Jounce Bumper Pad

8. Install the new upper control arms using the factory 7/16" bolts and the supplied 7/16" stainless steel AN flat washers and 7/16"-14 nyloc nuts. It may be necessary to remove the bolts from the frame to allow removal. Reinstall the alignment shims removed earlier in their original locations. Torque the nuts to 50 ft-lbs. Figure 2 shows the correct orientation for driver and passenger side.

Figure 2 – LH and RH orientation

9. Install the DSE spindle onto the upper ball joint stud using the supplied 1/2"-20 castle nut. Torque the nut to 50 ft-lbs and install the cotter pin. If necessary, tighten further in order to insert the cotter pin. Make sure to bend the cotter pin after sliding it through the ball joint to insure it does not slide out of the ball joint.

10. Attach the new lower control arm to the frame using the factory hardware. Torque the bolts between the control arms and the frame to 80 ft-lbs.

11. Install the coil spring. **NOTE:** ***Use the appropriate spring compressor to install the coil springs.*** If installing a coil over conversion, refer to the appropriate instructions regarding the coil over conversion at this time.

12. Insert the lower ball joint stud into the spindle and install the supplied 9/16"-18 castle nut. Torque the nut to 80 ft-lbs and install the cotter pin. If necessary, tighten further in order to insert the cotter pin. Again, make sure to bend the cotter pin after sliding it through the ball joint to insure it does not slide out of the ball joint. Remove the spring compressor.

13. Attach the sway bar end links to the lower control arms. Install the front shocks using the provided 5/16"-18 x 1" Hex Head Bolts along with the 5/16"-18 Nylock nuts and washers. Torque to 25 ft-lbs.

14. Lube the upper and lower ball joints using a quality chassis grease.

15. Attach the original steer arms to the new spindles using the supplied countersunk cap screws and locknuts. When attaching the steer arm to the spindle, verify that the steer arm is level and in contact at both mounting points. Due to variation in the factory steer arms, clearancing for the steer arms may be necessary. On the '64-'67 models, torque the 7/16" bolts to 55 ft-lbs and on the '68-'72 models, torque the 1/2" bolts to 85 ft-lbs.

16. Install the brakes. Stock brakes can be used or an aftermarket brake kit can be used. If using stock brakes, the brake caliper brackets must be notched below the lower mounting hole to clear the new spindles. Refer to Figure 3. Use the original upper caliper bracket mounting bolts and the provided 1/2"-20 x 1-1/2" bolts and locknuts in the lower mounting holes. Torque the upper caliper bracket mounting bolts to 120 ft-lbs and the lower bolts to 85 ft-lbs. Use the provided new spindle tabbed washers, nuts and cotter pins when installing the rotors.

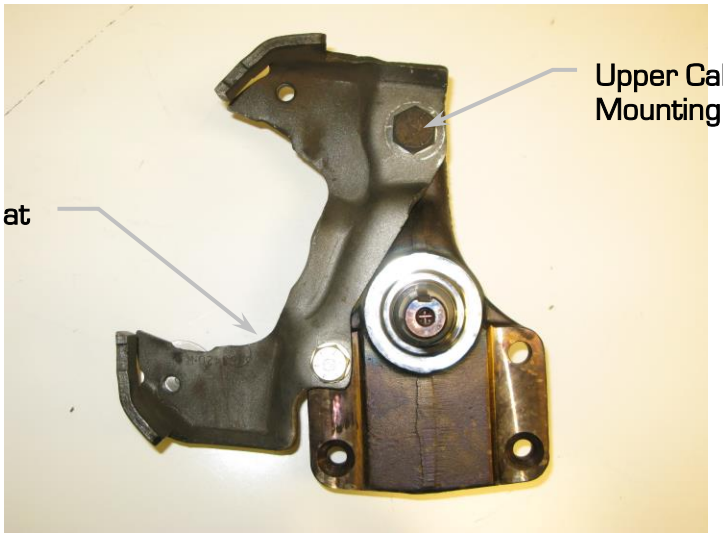


Figure 3 – Notching Stock Caliper Bracket

17. Install the wheels and lower the vehicle. A professional alignment must be performed at this time. Follow the specs in Figure 4.

| Alignment Specifications A-Body DSE Suspension | |
|---|---|
| Camber | – 0.5° ± 0.2° |
| Caster | + 4.0° ± 0.5° |
| Toe-in (Total) | 1/16" ± 1/16" |

Figure 4 – Alignment Specifications

**Additional Alignment Notes:**

Additional caster adjusters are supplied at no charge for caster adjustment if needed. Installing the caster adjuster with the attachment hole forward in the control arm will position the entire control arm rearward in car and create additional positive caster. The same adjusters can be rotated 180 degrees for the opposite effect on caster. Finally, the second set of caster adjusters you have received (labeled "2") can be used for additional caster or can be used for minimum caster. Figure 5 below shows the bushing removed and Figure 6 shows the bushing installed.

Figure 5 – Bushing Removed

Figure 6 – Bushing Installed

Camber should be adjusted by using shims provided by the alignment shop and placed between the frame attachment and cross shaft if needed.

18. The installation is now complete.

If you have any questions before or during the installation of this product please contact Detroit Speed Inc. at tech@detroitspeed.com or 704.662.3272