

# INSTRUCTIONS

## GM Metric Calipers/ Mustang II 5 Lug Rotors to Early '49-'54 Chevy Spindles

**910-31955**

Complete kit 5 on 4.5 BC

**910-31956**

Complete kit 5 on 4.75 BC

**916-31950**

Bracket kit only

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### ***THESE KITS REQUIRE SPINDLE MODIFICATION!***

### **PLEASE READ INSTRUCTIONS COMPLETELY BEFORE STARTING YOUR INSTALLATION!**

This kit installs '74-'78 Mustang II or '74-'80 Pinto/Bobcat rotors and '78-88 GM metric calipers on modified '49-'54 Chevy passenger car spindles. You can purchase spindles already modified from Speedway and eliminate having to find spindles and having them machined or you can send your OEM spindles to Speedway and we will do all the machine work for you.

**916-32100 NEW '49-'54 Chevy modified forged steel spindles**

**916-32101 machining of your '49-'54 Chevy spindles**

**NOTE:** This brake kit is designed to be used on street rod tube or I-beam front axles only, like those commonly used on Model T and Model A to 1936 Ford front ends. This kit will not work with stock steering arms and is not designed to be installed on stock 1949-54 Chevy vehicle front ends.

### Parts List

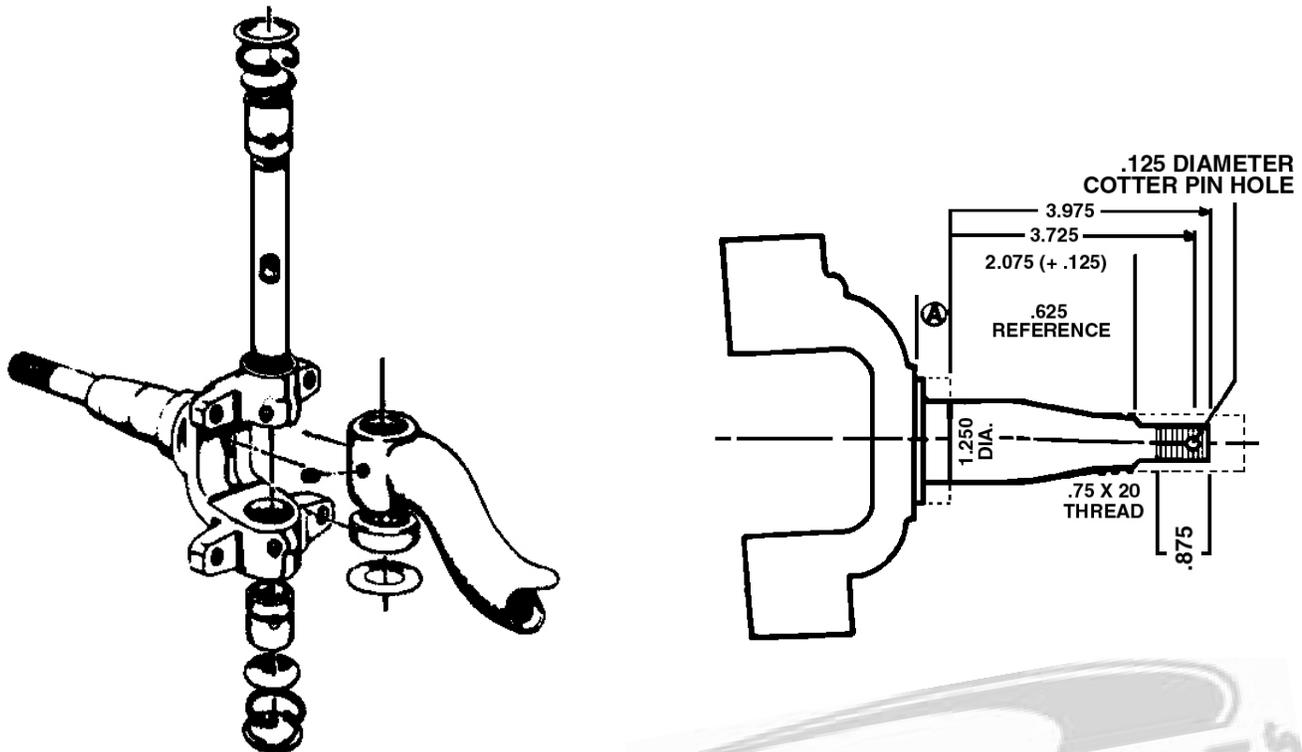
| Index No.                  | Description  | Part Number        | Quantity |
|----------------------------|--|--------------------|----------|
| *                          | Hardware kit   | 916-31950-2        | 1        |
| 1                          | Bearing adapter  | 910-09300          | 2        |
| 2 *                        | Caliper brackets   | 916-31950-1        | 2        |
| 3                          | 7/16"-20 x 1 3/4" GR 8 hex bolt  | in hardware kit    | 2        |
| 4                          | 7/16"-20 x 2" GR 8 hex bolt  | in hardware kit    | 2        |
| 5                          | 7/16"-20 locking nuts  | in hardware kit    | 4        |
| 6 & 7                      | Inner bearing cup/cone   | 912-TS6            | 2        |
| 8                          | Seal   | 912-S18565         | 2        |
| 9                          | Mustang II rotor 4 1/2" BP   | 910-31001          | 2        |
| 9                          | Mustang II rotor 4 3/4" BP   | 910-31002          | 2        |
| 10                         | Outer bearing cup  | 912-TLM19910       | 2        |
| 11                         | Outer bearing cone   | 912-TLM11949       | 2        |
| **                         | Spindle nut kit  | 910-616005         | 1        |
| 12                         | Spindle washer   | in hardware kit    | 2        |
| 13                         | Spindle nut  | in spindle nut kit | 2        |
| 14                         | Cotter pin   | in spindle nut kit | 2        |
| 15 **                      | Dust caps (pr)   | 910-31071          | 1        |
| 16                         | Brake pads (set)   | 919-3381           | 1        |
| 17                         | G.M. metric caliper (left)   | 910-31045-L        | 1        |
| 17                         | G.M. metric caliper (right)  | 910-31045-R        | 1        |
| 18                         | Caliper bolts  | 835-2300542        | 4        |
| 19**                       | '49-'54 Chevy spindle (pr)   | 910-32100          | 1        |
| <b>Other parts needed:</b> |  |                    |          |
|                            | 16" Stainless steel brake line kit<br>(7/16"-20 thread for Speedway<br>calipers) | 617-8562           | 1        |
|                            | 16" Stainless steel brake line kit<br>(10mm-1.5 thread for OEM<br>calipers)      | 617-8561           | 1        |

\* Bracket kit parts only

\*\* Not included in kit

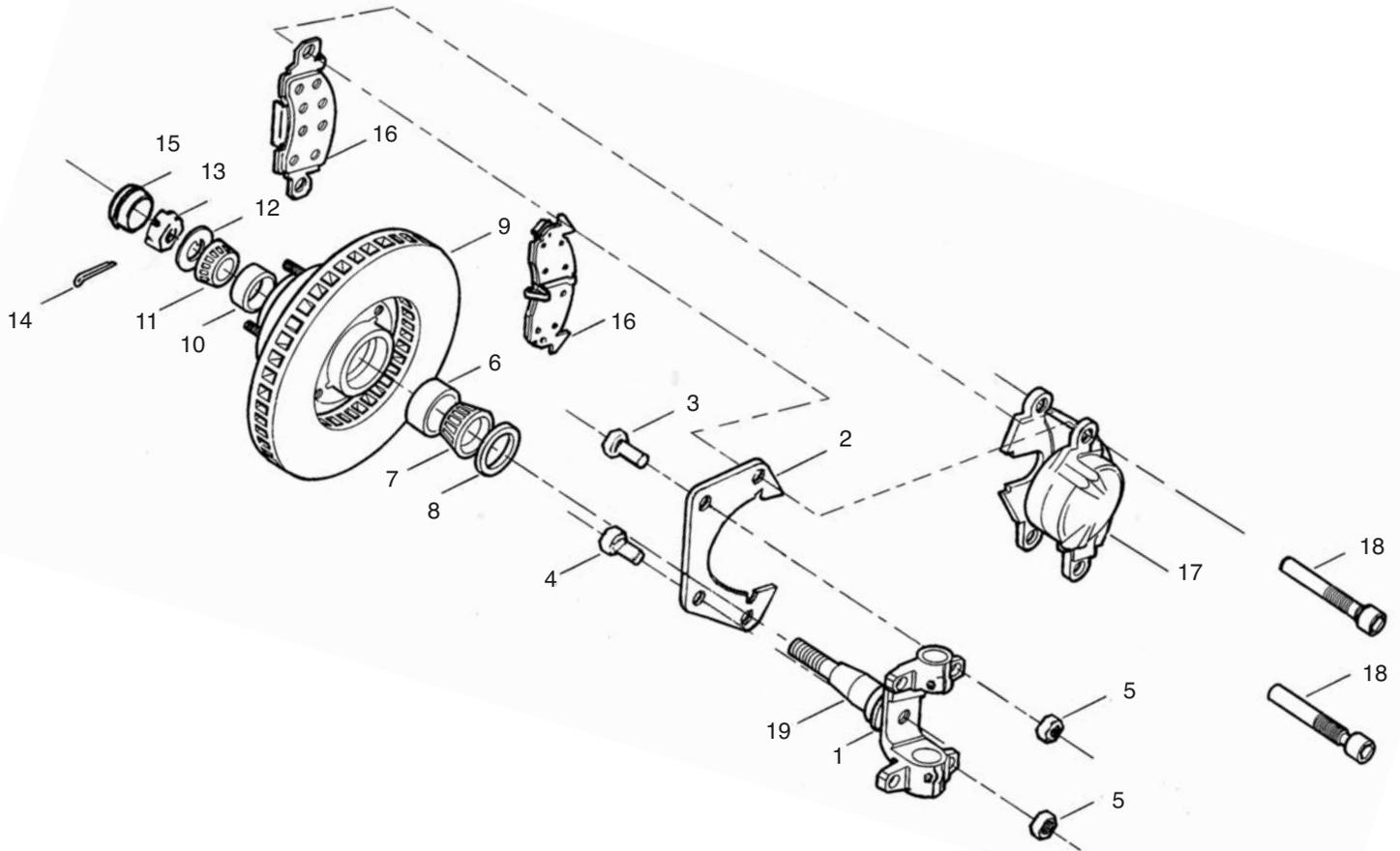
**BRAKE INSTALLATION ALERT:** The selection and installation of brake components should only be done by personnel experienced in the proper installation and operation of braking systems. The installer must use his/her own discretion to determine the suitability of the brake components and brake kits for every particular application.

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#### INSTRUCTIONS FOR MACHINING YOUR OEM SPINDLES - SPINDLES PURCHASED FROM SPEEDWAY MOTORS, INC. COME ALREADY MODIFIED AND DO NOT REQUIRE ANY MACHINING.

1. Using the parts list supplied, double check that you have received all the parts in the kit. If there are any missing parts, please contact our customer service department.
2. Acquire necessary '49-'54 Chevy passenger spindles. Check to make sure that they are not cracked or damaged and that the spindle snout is not bent.
3. Take the Chevy spindle and slide the spacer/seal race on the spindle. Check that the spindle face is even and free from excessive wear and damage.
4. Weld the spacer seal race in place at location "A". Eliminate all excess weld. Use tig welding to ensure a clean, precision weld if possible. Make sure the seal/race remains smooth and clean.
5. Place the spindle in the lathe and mount between centers.
6. Turn the spindle inner bearing race to 1.250" diameter as shown in drawing.
7. Turn the spindle outer bearing race down to .750" as shown in the drawing.
8. Remove the spindle and check bearing fit. Thread with a 3/4"-20 die per drawing. Cut key way to accommodate washer
9. Cut spindle length down to 3.975" as shown in drawing.



## **BRAKE KIT INSTALLATION:**

10. Remove the stock Mustang II inner and outer bearing races from the rotors and replace them with the inner bearing races (#6) and outer race (#10) supplied. **NOTE:** the stock bearing races that came in the rotor will not work in this kit. They must be replaced with the bearing races supplied. Make sure they are fully seated.
11. Install the inner bearing (#7), rotor (#9), outer bearing (#11), spindle washer (#12), and spindle nut (#13). Do not pack the bearings at this time.
12. Adjust the bearing preload as normal. If cotter pin does not line up, mark spindle for location of cotter pin. Disassemble and drill a 5/32" hole in the spindle for cotter pin. Thoroughly clean pieces to remove any metal shavings.
13. Assemble the spindles onto the axle.
14. The caliper brackets can be installed behind or in front of the axle depending on your steering arm location. The left and right caliper brackets are identical. The end of the bracket that has two mounting holes right next to each other goes down. Double check the caliper bracket orientation. If the brackets are installed upside down, the brake line boss on the caliper hits the spindle. Install the caliper brackets (#2) on to the spindle (#19) on the wheel side of the spindle using the 7/16"-20x1<sup>3</sup>/<sub>4</sub>" bolts (#3) and 7/16"-20 locking nuts (#5) supplied. Install the bolts from the bracket side. The longer 7/16"-20x2" bolts (#4) are used where the steering arms mount. Torque the bolts to 25-37 ft. lbs. making sure you use loctite on the threads. **NOTE:** The caliper brackets may need some grinding to clear the axle bosses. Do not grind any more than required for clearance. Some applications may require longer bolts for the steering/tie rod arms since they now have to bolt through the caliper brackets too.

15. Pack and install the inner bearings (#7) with fresh disc brake bearing grease and install the grease seals (#8). Seals must be installed straight. A seal installation tool works well for this.
16. Install the rotor (#9) onto the spindle (#19), pack and install the outer bearing (#11). Install the spindle washer (#12) onto the spindle followed by the spindle nut (#13). Adjust the bearing preload as normal. Install the cotter pin (#14) and dust cap (#15).
17. Install the brake pads (#17) into the calipers (#18) and install the calipers on to the mounting brackets (#2) with the bleeders pointing up. Only use the correct GM mounting bolts (#19). **NOTE:** Some GM metric calipers have a small tab cast into the body that will interfere with the caliper brackets. This can be easily ground for clearance.
18. Install new brake lines making sure you check that the lines have clearance through the entire suspension travel and turning radius. Bleed the system as normal.
19. Before operating the vehicle, test the brakes under controlled conditions. Make several stops in a safe area from low speeds and gradually work up to operating speeds.

## SPEEDWAY'S BOLT ON STEERING ARMS WORK WELL ON THIS BRAKE KIT

916-32031 '49-'54 Chevy, plain steering arms

916-32030 '49'54 Chevy, chrome steering arms

# IMPORTANT

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