

Ford 9 Inch Identification and Detailing Guide

Part 2 Backing Plates and Drums

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This guide on the Ford 9 inch rear end housings is split in to 4 separate sections, with this being section 2 covering backing plates and drums. This article is related to identification and detailing items on the Ford 9 inch rear end and associated parts as they were installed in the 1965 to 1973 Mustangs and the 1967 to 1973 Mercury Cougars.

Part 1 Axle Housings

Part 2 Backing plates and drums

Part 3 Center section

Part 4 Axles



This article is intended not only for those that are looking for parts or for concours judging, but also for basic maintenance to determine what the correct set up and sizing is for their particular car. For Mustangs from 1965 to 1973 the rear drums/backing plates and brake shoes came in three sizes. 1.75 inch was the most common application, 2.00 inch was generally for performance and big block cars, and 2.50 inch for 1965, 1966 and 1967 Sheldys. Mixing and matching these components can cause fitment issues so this guide should be helpful to determine whats correct for your vehicle.



Backing Plates

For 1965 to 1973 Ford Mustangs there was three different 10 inch factory size backing plates used for the 9 inch rear end. There was a backing plate for 1.75 inch, 2.00 inch, and 2.50 inch brake shoe. Backing plates were not designed to be interchangeable with different size shoes and drums.

Ford had two suppliers for the backing plate assemblies that were shipped to the Sterling Axle Plant —Bendix and Kelsey Hayes. The backing plates already had all the hardware attached and were ready as assembled units that just needed to be installed on the axle housing. By this it means all the brakes, springs, wheel cylinders were installed and simply needed to be bolted in place. Because of this supply process its not uncommon for an axle housing to have a Bendix backing plate and brakes on one side, and a Kelsey Hayes backing plate and brakes on the other side since they are functionality completely interchangeable. A quick easy way to reference each is shown below.

10 x 1.75 Backing Plates

Some common backing plate numbers seen stamped on the back include KH 48621 (left side) and KH 48620 (right side), KH 70866 (right side) and KH 70867 (left side), and Bendix 319481 (right side) and Bendix 319480 (left side).



An easy way to identify a 1.75 inch backing plate is to look at the flat area (shoe pads) and stamping around it next to the anchor pin. These are not the same between the different size backing plates. Compare this to the other backing plates from the front and back and you can see the variation.



Backing Plates

10 x 2.00 Backing Plates

Some common backing plate numbers seen stamped on the back include KH 71086 (left side) and KH 71085 (right side), and Bendix 317559 (right side) and Bendix 317558 (left side).

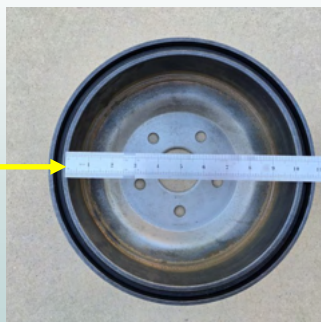


To identify a 2.00 inch backing plate compare the flat area (shoe pads) and stamping around it next to the anchor pin to the other backing plates. These are much more pronounced and look very different from any of the other two size backing plates that Ford was using during this time.



How to measure A 10 inch backing plate does not actually measure 10 inches across because the reference is to the drum size and not the backing plate. If you measure the matching drum it will have a 10 inch diameter on the inside surface as shown and the backing plate will actually have an 11 inch diameter.

10 inch diameter



11 inch diameter

Backing Plates

10 x 2.50 Backing Plates

The 2.50 inch backing plates were only installed on 1965 to 1967 Shelbys and some other vehicles outside of the Mustang line. It seems that only Kelsey Hayes supplied these. Common numbers seen for 65 and early 66 are KH-49294 (right side) and KH-49295 (left side), 1966 Shelby are KH-70390 (right side) and KH-70391 (left side), and 1967 Shelby are KH's 70858 (right side) and 70859 (left side).



The 2.50 inch backing plate has the most pronounced flat area (shoe pad) and stamping around it next to the anchor pin from the other two sizes shown here. Compare this to the other backing plates and they are very different.

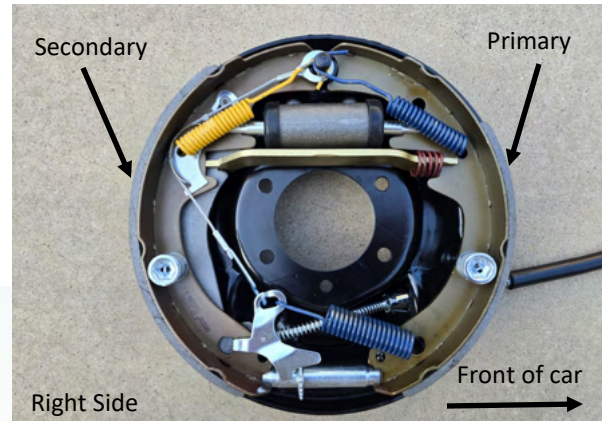
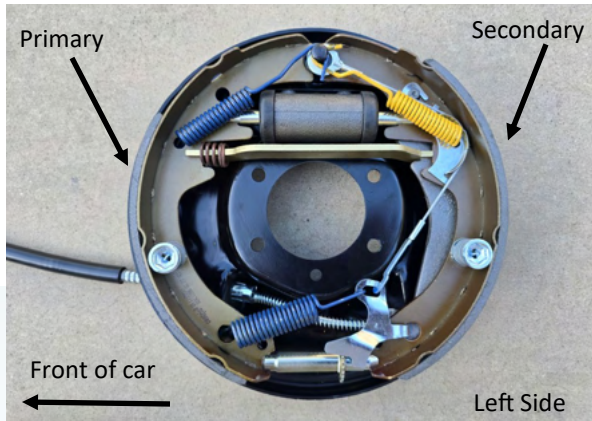


Side by side comparison of the three sizes:

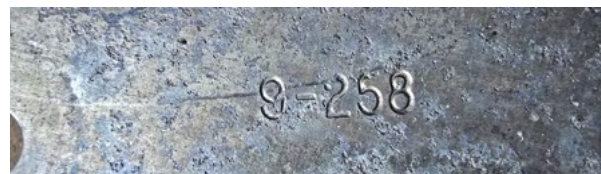
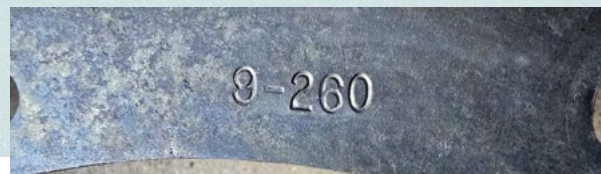


Assembled Backing Plates

Orientation: The backing plates were shipped as complete units (including the drums) from Bendix or Kelsey Hayes to the Sterling Axle Plant for assembly on to the axle housings. Photos here show the correct placement of the various components as related to the position on the car - in particular the primary (shorter) shoe lining and secondary (longer) shoe lining, springs, levers and adjusters etc. Refer to shop manual for full illustrations.



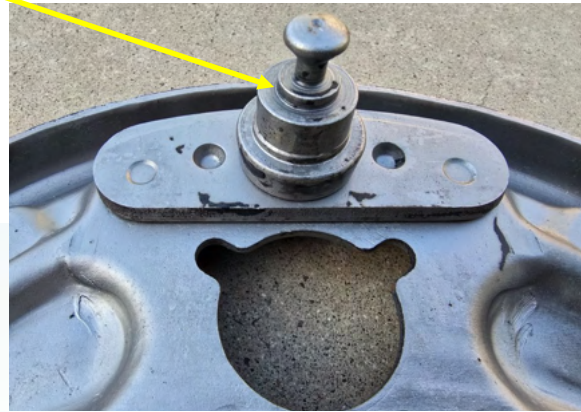
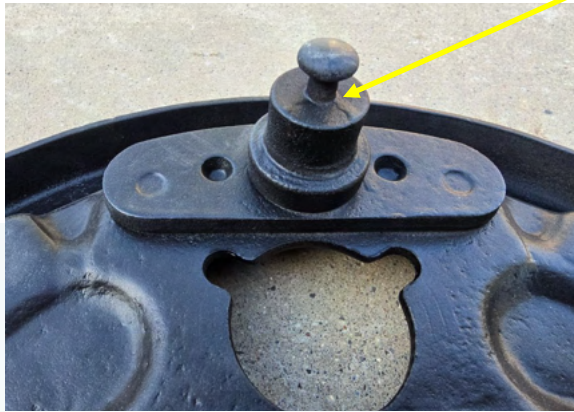
Example of low mileage assembly line original brakes (1970 Mustang)



Original Bendix brake shoe date codes—9-260 and 9-258
= Sept 16 and Sept 14 1969 for an October built car.

Shoe Guide (anchor pin) plate

Starting in about April of 1968 the backing plate design was changed to accommodate a shoe guide plate. This plate was added to help keep the brake shoes in place on the center anchor pin. The anchor pin will have a machined relief area where the shoe guide plate sits in place. Photos here show shoe version with and without that feature. The plate itself comes in two versions with the most common being the diamond shaped version.



Brake shoe hold down pin

Just like there is 3 different size brakes, there is also three different size brake shoe hold down pins. Most aftermarket kits sold today are the wrong length or do not offer different versions so assembly of brakes can be difficult to impossible without the correct sizing. Original Ford pins will have a number stamped on the back for each size and are visible from the back side. 1.75 inch brake pins have an 8 on the head, 2.00 inch have a 1, and 2.5 inch have a 6 stamped on the head.



Date Codes

Date codes have been documented on various locations on the backing plate assemblies starting around 1968 on both Kelsey Hayes and Bendix backing plates. Examples of these ink stamps shown here—these follow the Julian style dating which has a number from 001 to 365 for the day, and a single digit for the year. There is more than one font style, however all examples were either white or yellow ink. Starting in late 1969 you start to see date codes stamped in the metal edge of the backing plate. Still collecting examples to confirm when these were being applied.



Correct installation

Pictures here show what a correct and incorrect backing plate to drum installation should look like—or not look like. The drum needs to overlap the backing plate when the two are matched correctly. If you can see a gap or space it is the wrong combination. The idea was to avoid any road debris or water to easily get in the braking surfaces.



Correct installation



Incorrect installation and fit

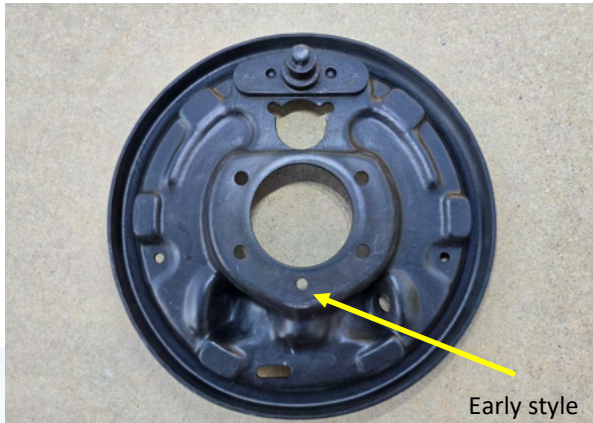
Paint

The backing plates were painted a satin to semi gloss being a bit glossier than the axle housing. The original backing plate and drum combination below show the sheen from an unrestored Boss 429. The backing plates were actually dipped in paint and not sprayed where on some rare occasions you can see them not completely dipped in paint.

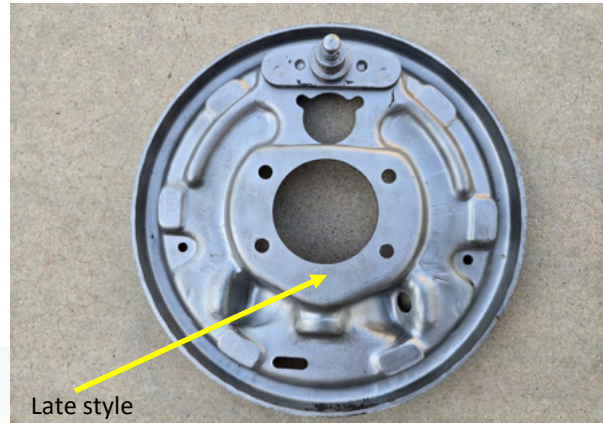


Early and late style backing plates

As the axle flange design changed in 1968 so did as well the backing plates. There was no longer a weep hole in the center of the backing plate. Below shows the early and late style difference.



Early style



Late style

Brake adjuster hole and cover

The brake adjuster in early Mustangs had the provision for a hole, but the metal was not punched out. A Ford TSB (#327) released in June of 1965 gives instruction to shops to remove the stamped knock out in the backing plates and replace with a rubber plug as needed. The change appears to have taken place around mid May 1965 and continued through 1966 production. After that time eventually all the backing plates had this access hole knocked out at the factory and a rubber plug in its place. By 1967 all cars had a rubber plug in place. Bendix backing plates use a rubber plug with the number 8A-2092 embossed in the rubber, and Kelsey Hayes uses a rubber plug that has no numbers. See examples below.



Bendix



Kelsey Hayes

Brake Drums

Factory original drums on the 9 inch Ford axle housings came in three sizes. 1.75 inch, 2.00 and 2.50 inch. The size of the drum actually refers to the size of the brake shoe used and is not an actual measurement of the drum itself. Example of each shown below for reference.

1.75 inch Drums

Original 1.75 inch drums are easy to recognize as they typically have two grooves machined in the outside surface. They also will have a FoMoCo cast in them and the date code. The actual machined surface for the brake pads measures about 2.00 inches.

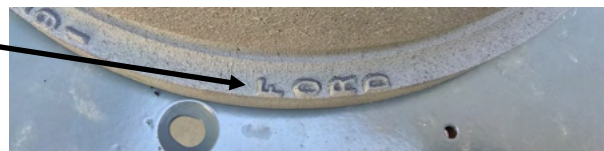


2.00 inch Drums

Original 2.00 inch drums will have a single groove machined on the outside surface. They also will have a FoMoCo or Ford (later years) cast in them and the date code. The actual machined surface for the brake pads measures about 2.25 inches. Ford had the actual maximum diameter cast in the later drums of 10.060 inches.



Later service drums with
"Ford" casting and max diam-
eter stamping.



Brake Drums—cont.

2.50 inch Drums

Original 2.50 inch drums were a Shelby only application used from 1965 to 1967 and supplied by Kelsey Hayes to match the KH backing plates. They will have a single groove machined on the outside surface and two square cut outs on the face of the drum. They also will have a FoMoCo cast in them and the date code. The actual machined surface for the brake pads measures about 2.75 inches. 1965 drums will have three nubs around the outside edge, and the 1966 and 1967 do not have this.



1965



1966 and 1967

Paint, stampings, and date codes

Paint was applied to the rear drums not at the axle assembly plant, but at the assembly line. Paint would be applied as shown below, and only on applications when the wheels allowed for the drum to be visible thru the wheel. Paint would help minimize any visible surface rust and was applied sloppy with drips and around the axle studs as shown.



9J12 = Sept 12, 1969



KH = Kelsey Hayes

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