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Grinding the shoe using the No. 8050 Universal Brake Shoe Clamp shown in Figure 15 is similar to the procedure for using the No. 8250 Fixed Anchor Clamp. Rotate the Handle clockwise 1/8 turn at a time, moving the Handle from side to side until the entire surface of the shoe has been reconditioned by the Abrasive Belt.

Periodically check the calibration of the Model 890 Brake Shoe Grinder. Refer to Figure 16. To do this:

1. Unlock the Slide. Set it at the 6" setting.
2. Set Micrometer Dial at zero.
3. Put the No. 9632 Calibration Pin through the hole in the Slide. (The Pin is 3/16" in diameter.)
4. Turn the Dial gently back and forth until the Pin drops through under slight pressure.
5. At this point the Dial should read zero, and the calibration is correct.

IF A CORRECTION IS REQUIRED

1. Lock the Slide with the No. 9632 Calibration Pin in place.
2. Loosen both set screws in the Micrometer Dial until the Dial is free.
3. Turn the Micrometer Dial to zero. Use a screwdriver to hold the Micrometer Screw forward against the Slide Key and tighten both Dial Set Screws evenly.
4. Release the Slide Lock. Remove the Calibration Pin and recheck the dial reading.

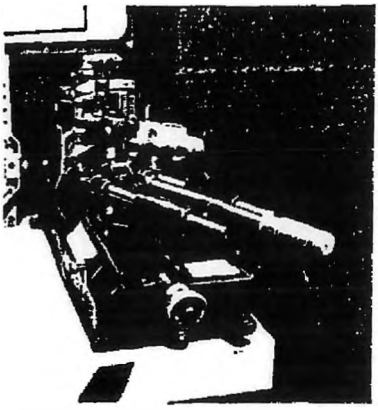


Figure 15 — Grinding a brake shoe with the No. 8050 Universal Brake Shoe Clamp



Figure 16 — Inserting No. 9632 Calibration Pin to check calibration of Model 890 Shoe Grinder

Study this manual carefully until you are thoroughly familiar with the procedure for grinding brake shoes.

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AMMCO

HOW TO GRIND A BRAKE SHOE

PREPARED BY THE AMMCO TRAINING CENTER

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HOW TO *Grind a Brake Shoe on an AMMCO model 890 BRAKE SHOE GRINDER*

In this manual we show the proper way to grind a brake shoe on an AMMCO Model 890 Brake Shoe Grinder.

Grinding brake shoes is the step following reconditioning of the brake drums. First, determine the drum diameter. You can do this in any one of three ways: on the Lathe using the AMMCO Model 8500 Brake Drum Micrometer, on the Lathe using the Cross Slide Depth-of-Cut Dial, or off the Lathe using the Brake Drum Micrometer. Figure 1 shows the brake drum being measured on the Lathe after the finish cut has been taken. The Micrometer reads 58 (.058"), and you'll notice the instructor is pointing with his right hand to the Cross Slide Dial which also reads 58. One way you can save time is to grind the shoe while the Lathe is making the finish cut on the drum. You simply take your reading off the Cross Slide Depth-of-Cut Dial and use the same reading to set up the Model 890 Shoe Grinder. Many shops prefer to take the finished drum off the Lathe, measure it, mark the dimension in chalk on the drum and later grind the shoe to match. If done correctly, whichever way you do it, the finished brake shoe will be ground with an arc matching the newly machined brake drum.

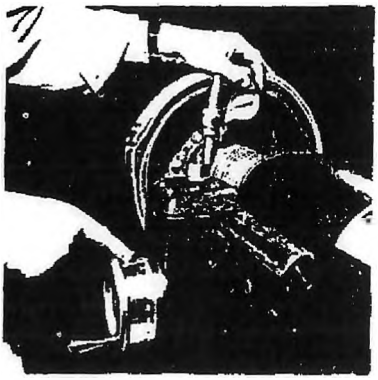


Figure 1 — Measuring the drum on the Lathe using the Brake Drum Micrometer or the Cross Slide Depth-of-Cut Dial.

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Figure 2 — Adjusting Grinder Slide To Drum Diameter



Figure 3 — Setting the Micrometer Dial to the reconditioned drum's diameter

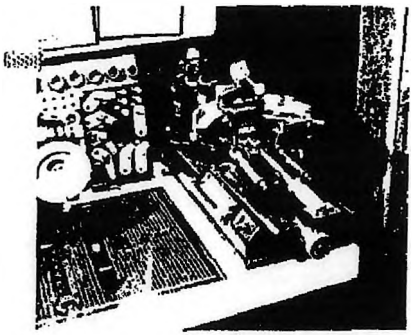


Figure 4 — Model 890 Shoe Grinder is the correct model to use for grinding shoes with dual servo (Bendix type) brakes

The next step is to adjust the Grinder Slide to the drum diameter. To do this you unlock the Grinder Table by moving the Slide Lock Lever away from you. In Figure 2, the instructor is shown doing this with his right hand. Then set the Micrometer at .000". Pull out the red knob of the Slide Index Pin at the left. With the Pin pulled outward, slide the table with your right hand until the pointer on the table is opposite the proper drum diameter -- in this case the pointer is on 11". Then push the Slide Index Pin inward.

As shown in Figure 3, the next step is to set the Micrometer Dial to the reconditioned drum's diameter, as indicated on the Brake Drum Micrometer or on the Cross Slide Depth-of-Cut Dial. In our example it was 58 (.058"). Turn the Micrometer Dial on the Grinder clockwise to the nearest division. In this case you'd set it to 60 since it is the nearest division to 58. This sets up the pivot point of the Shoe Clamp to grind the correct shoe radius but does not control the depth of feed. Pull the Lock Lever toward you to lock the Grinder Table. The Model 890 Shoe Grinder permits fast, accurate shoe grinding to the "brakes applied" position ensuring accurate lining to drum contact. The clamp is the correct one to use for grinding shoes with dual servo (Bendix type) brakes, that have fixed or non-adjustable anchors. This includes most cars in use now.

Your next step will be to select the correct Gage Plate, and you do this by referring to the No. 4181 Specification Chart as shown in Figure 5. The Specification Chart enables you to select the correct Gage Plate and Anchor Pin Sleeve when you have either the make, model number and year of car or the FSMI number from the brake shoe box. Figure 6 is a closeup of the No. 4181 Specification Chart, and in this example we have selected Gage Plate No. 4127 and Anchor Sleeve No. 2 for Brake Shoe No. 228 (1970 Chevrolet).

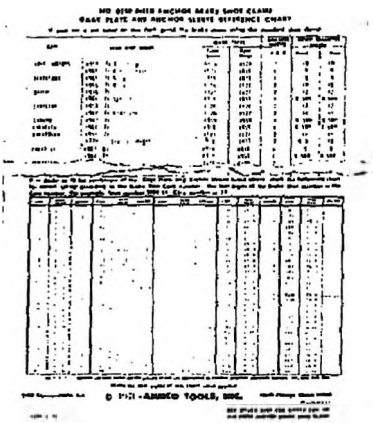


Figure 5 — Selecting correct Gage Plate using the No. 4181 Specification Chart or the FMSI number

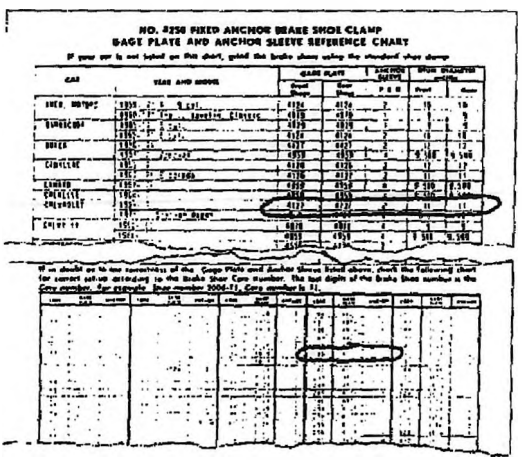


Figure 6 — Instructor selects Gage Plate No. 4127 and Anchor Sleeve No. 2 for Brake Shoe No. 228

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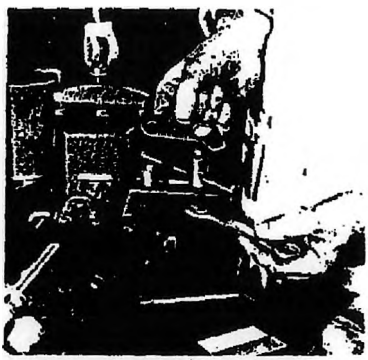


Figure 7 — Installing the Gage Plate

Now, as shown in Figure 7, the next step is to install the Gage Plate. The Gage Plate goes over the Anchor Pin and the Locating Pin.

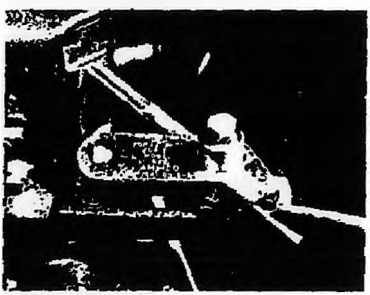


Figure 8 — End of the Gage Plate must be snugly seated to the Pin on the Rod. The instructor is pointing to the Pin on the Rod with his pen.

Pay particular attention to the blunt, slightly curved portion of the Gage Plate because, as you'll see in Figure 8, the end of the Gage Plate must be snugly seated against the Pin on the Rod.

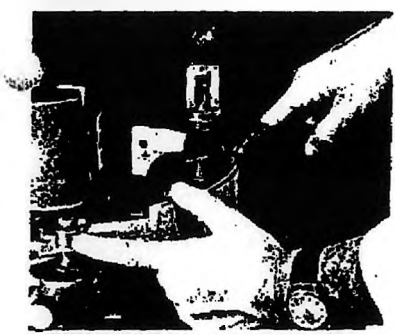


Figure 9 — Locking the Brake Shoe into the Clamp

Next, as you'll see in Figure 9, lock the brake shoe into the Shoe Clamp. Locate the eye of the shoe firmly against the Anchor Pin. Hold the back of the shoe against the two Locating Bosses of the Clamp. Then lock the shoe firmly in place by moving the Handle down.

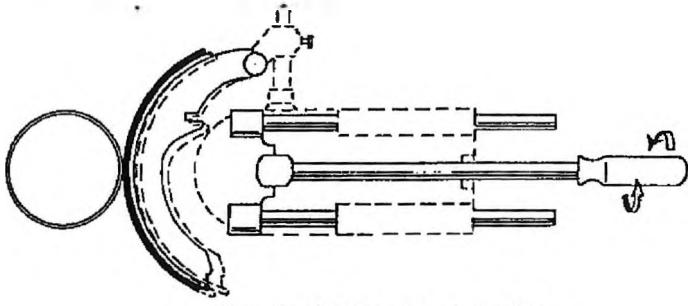


Figure 10 — Location of the shoe during grinding

Figure 10 is a drawing showing the location of the shoe during grinding. Swing the Handle away from you (toward the Dust Bag) and start the motor. Feed the shoe into the rotating Abrasive Belt by turning the Handle clockwise. Then swing the Handle from side to side as you move the shoe against the Abrasive Belt. After each swing of the Handle, rotate the Handle 1/8 turn until you've resurfaced the entire lining.

The No. 8050 Universal Brake Shoe Clamp shown in Figure 11 (optional equipment) is recommended for grinding brake shoes of trucks, motorcycles, domestic and foreign cars, and industrial brakes that do not have the conventional eye. The Clamp Buttons locate on the brake shoe table to allow accurate grinding of irregular or cast shoes down to 6".

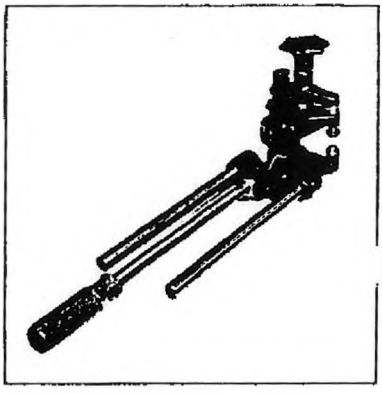


Figure 11 — No. 8050 Universal Brake Shoe Clamp

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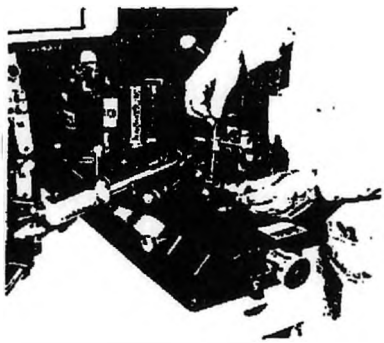


Figure 12 — Removing the No. 8250 Fixed Anchor Clamp

To remove the standard No. 8250 Fixed Anchor Clamp from the No. 890 Shoe Grinder and substitute the No. 8050 Universal Brake Shoe Clamp, unscrew the set screw using an Allen Wrench as shown in Figure 11, and remove the Knurled Pin.

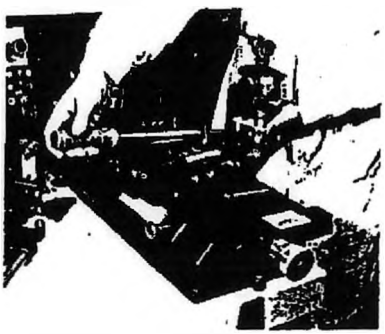


Figure 13 — Lifting Handle to slide out the No. 8250 Clamp

Then lift the Feed Handle and slide the Clamp out as shown in Figure 13.

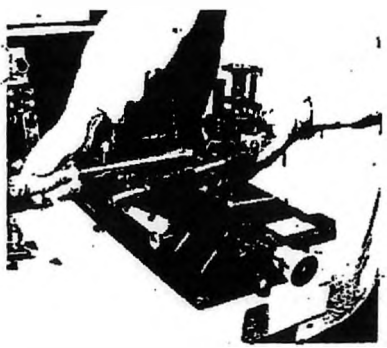


Figure 14 — Installing the No. 8050 Universal Brake Shoe Clamp

To install the No. 8050 Universal Brake Shoe Clamp, lift its Handle and slide the Guide Rods into the ways as shown in Figure 14.