

TWO-WHEEL CONTRACTING BRAKES Part III

In Parts I & II of this series (November 2017) we covered the description of the contracting two-wheel brakes and the adjustments of the brakes. We complete this series with an article on relining contracting brakes from Skinned Knuckles, November 1990,

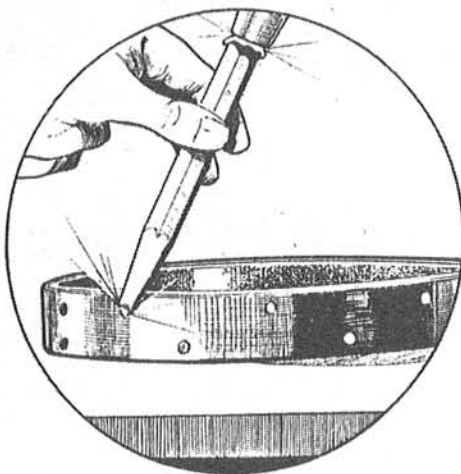
Relining the Brakes

Type of Lining

Most shop and service manuals usually specify woven lining for external band brakes. Made from asbestos in which copper or brass wires are usually embedded, this type of lining is thought to be superior to molded lining in this application because it is more flexible, resists the action of dirt and water better, and can be tightly fitted to the band with greater reliability. The fact is, however, that because of its ready availability and lower cost, many restorers use molded lining for external brakes without any serious problems.

Removing the Old Lining

A sharp chisel should be used to cut the rivets off at the outside of the band. A nail set can then be used to punch out the old rivets. Driving out the old rivets without first cutting off the clinched ends may damage or distort the band.



Type of Rivets

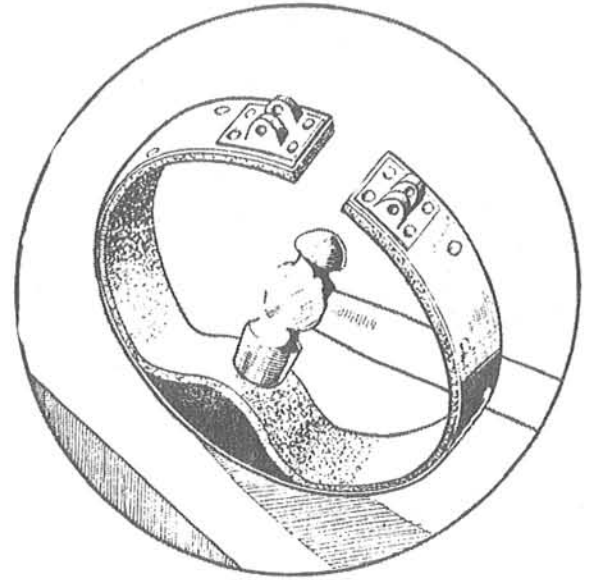
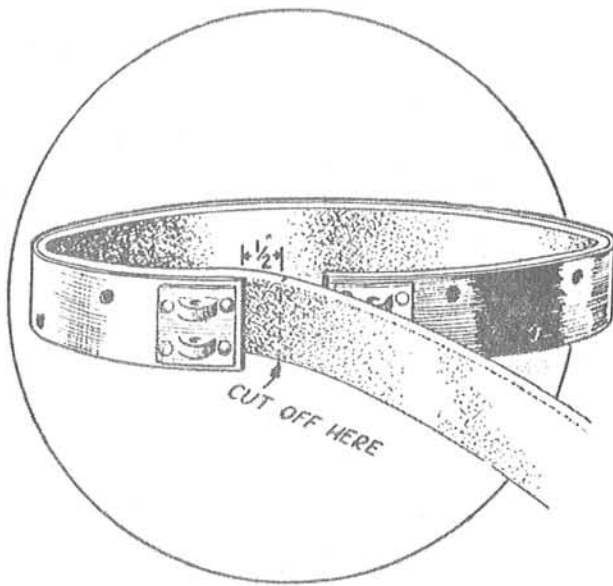
Although split rivets were once used for brake linings, especially on Ford cars, they are deficient in holding power and should never be used for modern brake work. The best practice calls for the use of semi-tubular brass rivets designed especially for brakes. They come in a variety of sizes and the specifications for the sizes most commonly used on passenger cars are given in the table below. Larger sizes for heavy duty brake jobs are available, but the specifications for these have been omitted from the table for brevity.

To set the rivets, you will need a rivet kit. It can be purchased or ordered from a larger automotive parts outlet. Most kits will include a drill and countersink.

	SPECIFICATIONS	Cat. Nos.	Lengths
	Body Dia.	4-4	4/16"
	9/64"	4-4 1/2	4 1/2 / 16"
		4-5	5/16"
	Head Dia.	4-6	6/16"
	5/16"	4-7	7/16"
		4-8	8/16"
	Body Dia.	5-4	4/16"
	9/64"	5-4 1/2	4 1/2 / 16"
		5-5	5/16"
		5-6	6/16"
	Head Dia.	5-7	7/16"
	3/8"	5-8	8/16"
		5-10	10/16"
	5-12	12/16"	
	Body Dia.	7-4	4/16"
	3/16"	7-5	5/16"
		7-6	6/16"
		7-7	7/16"
		7-8	8/16"
	Head Dia.	7-9	9/16"
	3/8"	7-10	10/16"
		7-12	12/16"
		7-14	14/16"
	7-16	16/16"	

Fitting the Lining to the Band

A number of slightly different band lining recommendations may be found in the literature, but all agree on one point - the necessity of intimate fitting of the lining to the band. With woven lining this is readily accom-



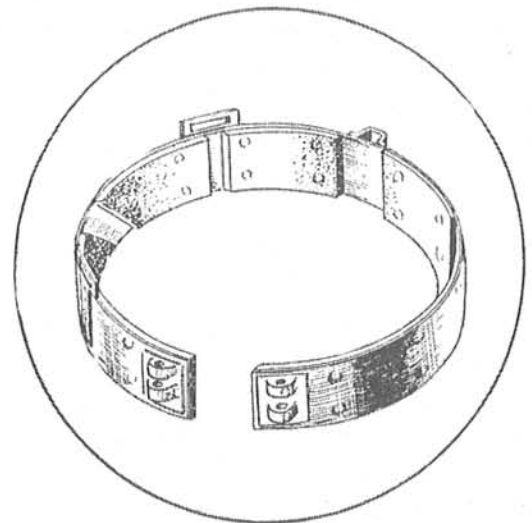
FITTING LINING TO BAND: Hold one end of lining flush with end of band, make lining hug inside of band all around, and cut off other end approximately 1/4" to 1/2" longer than band. Install and set end rivets only, allowing loop or bulge to form at center of lining. Remove bulge with hammer so that lining is compressed slightly and hugs band tightly. Remainder of rivets can then be installed and set. This installation procedure can be used with woven lining, but is not usually possible if molded lining is used.

plished by cutting the lining 1/2 inch too long for the band and riveting the ends of the lining to the band leaving a loop or bulge opposite the ends. The bulge is then hammered down, putting the lining under compression and insuring a tight fit to the band. The remaining rivets can then be countersunk and set.

The above procedure is ordinarily impossible with molded lining because it is too rigid. In this case, the riveting should start at the midpoint of the band while the lining is clamped firmly to the band with C-clamps. Work out both ways from the center, using clamps to hold the lining to the band as the rivets are set.

Countersinking Rivets

Counterboring the holes in the lining for the rivet heads is very important. Accepted practice calls for counterboring slightly more



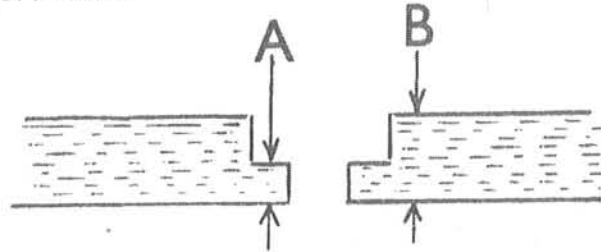
ABOVE: After the lining has been riveted in place, take a hacksaw and cut out a section of the lining at the anchor. This operation is recommended for woven lining and is essential for molded lining to impart more flexibility to the band. For molded lining, cuts may also be made at the guides (if used) and angular cuts may be made at opposite sides of the band as shown above. Do not bevel or chamfer the cuts — leave the sharp edges to improve the wrapping action of the band.

than half the thickness of the lining, so when the rivets are in place and set, about half the lining can be worn away before the rivet heads contact the drum. Recommended counterbore specifications are given below.

Counterboring must not be too deep or the bond between the lining and band will be weak. If not counterbored deep enough, the useful life of the lining before the rivets start to contact the drum will be reduced unnecessarily.

A high quality countersinking tool will have an ever so slight cone shape so the bot-

tom of the counterbored part tapers to conform to the slight taper of the underside of the rivet head.



B: Lining thickness	A. Thickness after counterboring
3/16"	5/64"
1/4"	5/64"
5/16"	7/64"

S.K.

The next issue of *Skinned Knuckles* magazine to have classified advertising will be February 2018. The deadline for ads is January 1, 2018; no exceptions. Ad submission must be in writing - no phone calls.

Ads are free to current, paid-up subscribers. Ads are limited to one item per ad, with a maximum of 25 words including contact information. Multiple ads will be accepted on a space available basis. Due to a very full issue of editorial content in November 2017, we were unable to include all of the ads received. Please re-submit your ad. We do not save them from one month to another. Ads are restricted to our hobby: 1970 vehicles and earlier.

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