

FLATHEAD TED BRAKE FLOATERS



Many of our readers have been asking about the newly advertised “Flathead Ted Brake Floaters.” Flathead Ted (Ted Spain) is located in New Zealand and sells his brake floater kit through the internet and his Web site. His kit is a bit pricey as compared to other brake floater kits, so the question is “do they really work?” The Model A Times purchased a kit and began to install, understand, and evaluate the concept of this brake floater system.

Yes! Flathead Ted has developed a full floating and self energizing brake system, using his brake floater kit. This concept for the Model A mechanical brakes translates to a great improvement of the original brake system, as it simulates the 1937-39 self energizing brake action.

Ted’s brake floaters replace the one-piece adjusting wedge with two pieces, an adjusting bolt and a floating wedge.



**Original
Adjusting
Wedge**



**Ted's Adjusting Bolt
and Floating Wedge**

The shoe’s lower rollers are removed so the roller pin can be reversed, placing the large pin head on the outside rather than the inside, where the pin head ran on the roller track. This takes the lower end of the brake shoe off the roller track. Centering of the shoes is handled differently. The anchor bolt is replaced with a floater anchor bolt similar to the brake floater that Bratton’s sells.

This anchor bolt is undercut on the sides to allow the actuating wedge to move both vertically and horizontally.

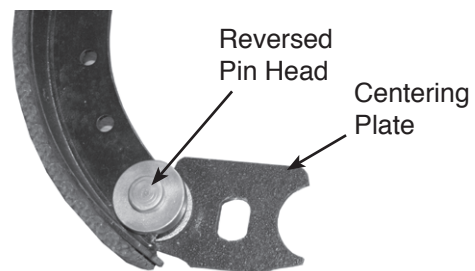


**Original
Anchor Bolt**



**Ted's Floater
Anchor Bolt**

A new centering plate mounts behind the anchor bolt. This plate has a half round cutout on both ends that allow the brake shoe roller to rest in the cutout. This positions the shoes in a fixed centered position. There is no pressure on this plate to cause wear that occurs on the original roller tracks.



Ted's Centering Plate

The current installation instructions are difficult to follow and the explanation of how it works

needs lots of help. This editor will be working with Ted to help improve his installation instructions for easy installation and a clear definition of the operating concept.

The important part is that we have found that this kit greatly improves the Model A Braking system.

The following is an explanation of how Flat-head Ted's Brake Floater Kit converts the Model A brakes into full floating and self energizing brakes.

Brake Operation

The original top adjusting wedge is a one-piece wedge. This wedge is removed and replaced with a single adjusting bolt and an independent wedge. This small wedge is able to move a small amount horizontally, sliding on the head of the adjusting bolt. This provides horizontal floating action at the top of the brake shoes. The adjusting bolt allows the wedge to be adjusted in or out, pushing the shoes out toward the drum surface, adjusting the clearance between the shoe lining and the drum (about .010" clearance).

As mentioned previously, a new centering plate is used at the lower anchor bolt to keep the shoes centered vertically in the drum. The brake shoe bottom roller rather than the roller pin head, rests in a half moon arch in the centering plate. No pressure is exerted on the centering plate, so no wear occurs as does on the original roller track arms. As the actuating wedge is pushed down (brake pedal action), the bottom of the brake shoes are spread apart, moving the shoe rollers slightly out of the centering plate half moon arch. This allows the shoes to move slightly in either direction horizontally. The new anchor bolt is also machined to allow the operating wedge to move horizontally in either direction, pushing both shoes into the drum as the operating wedge moves down. This provides full floating action at the bottom of both shoes. This means that after one shoe makes contact with the drum, there is still movement to allow the opposite shoe to make contact with the drum.

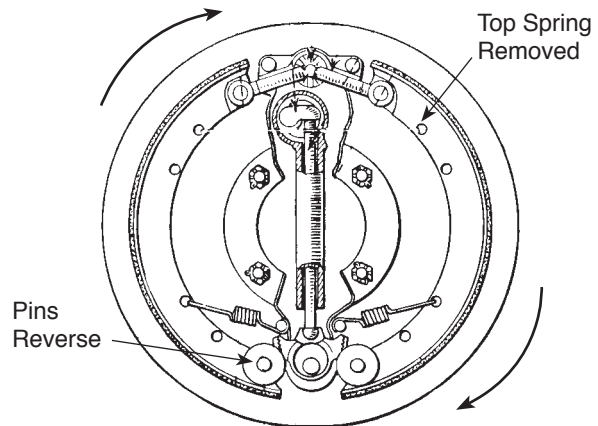
The full floating action at the bottom of the shoes allow both shoes to make full contact with the drum, increasing stopping ability.

The floating action at the top of the shoes allows the self energizing action to occur.

Self Energizing Concept

The two shoes are kept centered (vertically) to the drum when the inside rollers are seated in the half circle arch on the new centering plate.

With the rotation of the drum and brake pedal pressure applied, the bottom of both shoes are pushed outward toward the drum. Forward rotation of the drum grabs the rear shoe and forces the adjusting pin at the top of the shoe into the floating wedge, transferring the force to the front shoe and pushing it into the drum. The new top floater wedge allows the drum rotation to use the rear shoe to energize the front shoe into the drum. This same drum rotation aids in forcing the front shoe bottom roller against the floating wedge, transferring motion to the bottom of the rear shoe and pushing it against the drum. The shoes are now able to float and self energize, needing just one-third the pedal pressure to energize the brakes.



Self Energizing Motion

In the relaxed position, the shoes are nudged back to center by the drum, same as are modern disk brakes. The top long spring must be removed to allow the self energizing action to take place with the floating upper wedge.

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The rear brakes are already floating with the original cam. Only the adjuster bolt and wedge are replaced to allow self energizing rear brakes as described for the front brakes. The total results are outstanding. Brake pedal pressure and braking action is similar to hydraulic brakes. Full adherence to the installation instructions provided with the kit is paramount for correct operation.

This article is not meant to replace the installation instructions, as there is additional information required for correct installation. This article is intended to provide an overview and enough information so the reader can understand the concept, and to decide if this Brake Floater Kit is beneficial for his Model A.

Additional information and ordering can be obtained at Flathead Ted's web site:

www.flatheadted.com