

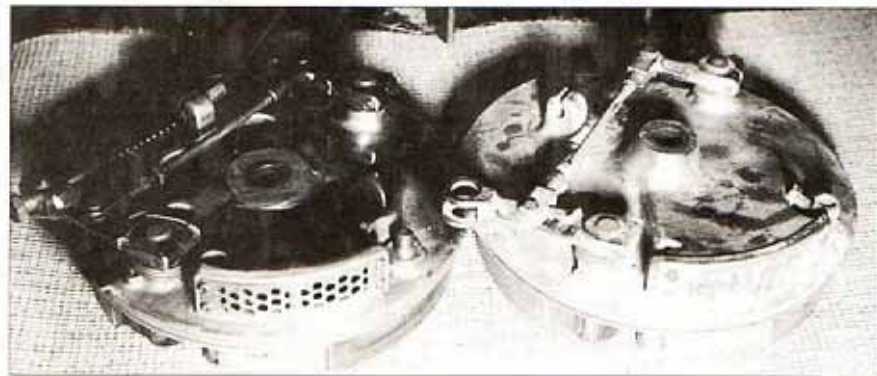
SUZUKI'S FRONT DRUM FOR BRITISH BIKES

1967 Norton Atlas 'Vintage' racer with Suzuki four shoe brake.



American classic racers have hit upon a cheap alternative to the original four-leading-shoe brakes fitted to their British machinery — fit one from a Suzuki GT750. Rusty Lowry explains how.

Standard Suzuki backing plate (right) compared to machined unit (left).



NOTHING looks quite as reminiscent of motorcycle racing's classic era as a big multiple leading shoe drum brake. Apart from the rules a basic sense of period appearance dictates the use of these pieces of metallurgical art on a British vintage racer or classic era street bike.

Unfortunately, most desirable drum brakes were produced in minimal quantities and are extremely costly now. So what is the alternative?

Though not possessing the magical reputation of a Ceriani, Oldani or Fontana, an affordable means of entry into the four leading shoe brake realm can be found through the older Suzuki GT750 'Kettle'.

The early (up to 1972) variants of this machine, along with its smaller 550 version available at that time in the States, incorporated a dual cable operated four shoe brake with a 36 spoke aluminium hub.

These are probably in short supply now in the UK but are still reasonably available over here. Measuring 6½ inches across at the flanges, the Suzuki four shoe was often maligned when it was new and disc brakes were becoming the vogue.

Though somewhat weak when it came to stopping the substantial 550lb bulk of what we called the 'Water Buffalo', the 210mm stopper proves quite adequate in dealing with a more reasonable 350lb British classic.

Though never as popular as the manufacturer may have wanted, there are still enough GT750 and GT550 machines lying about in American salvage yards and sheds to provide a good supply of reasonably priced front brakes. All it takes is a determined search and a small amount of machine work to acquire one and mate it up with your classic beauty.

Prices for a complete front wheel in the United States can range from a low of \$50 to about \$200. This should also include both brake cables and the handlebar mounted lever assembly.

The latter is unique in having dual cable adjustments and a 'gang bar' device affixed to the end of the lever itself to actuate both left and right side brakes. This design not only offers the practicality of parts support from your Suzuki dealer but also provides a redundant means of front brake application should a single cable fail.



Suzuki Four shoe brake on a Norton Commando 'Vintage' racer.



THE brake should first be stripped down to bare pieces and its condition thoroughly assessed. New brake shoes (Suzuki part number 54410-31001) and bearings (number 6202Z) should be ordered immediately as these will no doubt need to be replaced. The speedometer drive gear should be removed as its housing will later be machined away to narrow down the wheel's width.

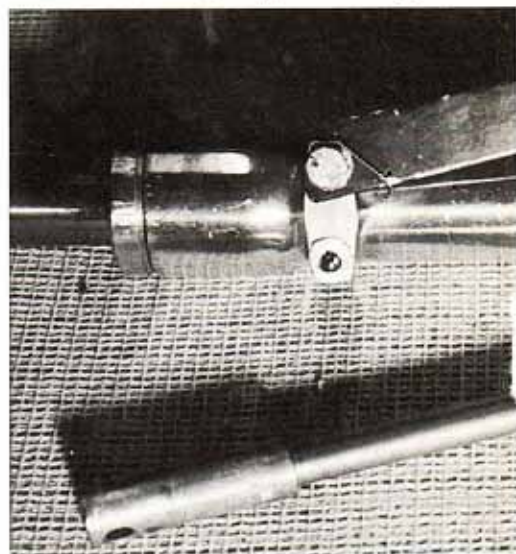
The brake's original flange-to-flange width of 6½ inches is wider than most classic fork assemblies but up to 0.6" of material can safely be removed from each backing plate to reduce the width to a more manageable 5.3". This dimension should be narrow enough to fit to most older machines with any additional clearance needed taken off the lower fork sliders.

The brake backing plates incorporate air inlet scoops and exhaust holes on each side. These are normally covered up for street use to keep bugs and gravel out of the brake but can be opened out for racing through the removal of the solid covers from the scoops and the small rubber plugs from the exhaust holes.

The front axle will need to be changed as the stock Suzuki piece is too small for British fork legs such as

the Roadholder. An original Norton front axle, for example, will work nicely after its shaft diameter is turned down from 17mm to 15mm and a collar made to mate its new diameter up with the right fork slider's lower boss.

Some means of securing the brake backing plates needs to be provided with the most simple approach being



Norton Roadholder fork leg, modified Norton axle, and right side axle spacer.



Left and right: Suzuki four shoe brake backing plates after machining.

fabrication of two aluminium torque arms that attach to the fork's mudguard mounts. These torque arms must be strong enough to withstand the reactive forces of the brake's application and should be made of at least 3/8" high grade aluminium.

Further modifications to the fork sliders themselves are largely up to the builder's preference. The only

requirements are to provide a strong attachment for the brake assembly and to ensure there is adequate wheel clearance available.

For instance, two left hand Roadholder fork sliders can be used to avoid machining off the stock right

hand unit's front brake anchor boss. I chose to do this on my Norton Atlas as I had an abundance of sliders and wanted to keep several right hand units on hand for other projects.

The brake cables (Suzuki part numbers 58110-31000 and 58110-31600) can be routed in any manner that is convenient as long as care is taken to keep them away from hot areas such as exhaust pipes and cylinders.

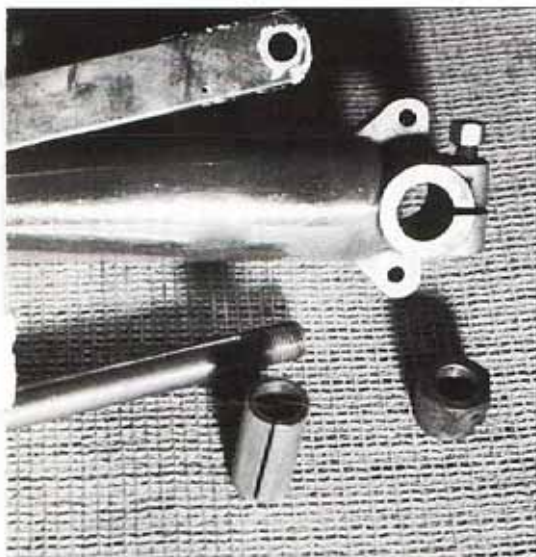
It should also be kept in mind that the less twists and turns the cables are forced through, the less resistance will have to be overcome in actuating the brake. A little forethought and care in cable routing can reap large benefits in smooth and reliable brake operation.

The lever assembly itself fits 3/8 inch handlebars and has a mounting boss for a rear view mirror. This can be ground down and the brake light switch removed if desired.

The cable adjustments need to be set up fairly tight so adequate braking remains after the drum warms up. Few adjustments should be required after a good initial set up.

So far, I have used this four shoe set-up on my 1967 Atlas-based vintage racer here in the United States for the last four seasons. The brake has performed well, requiring only minimal maintenance and periodic cleaning.

Though not a high cost Italian import, the Suzuki four leading shoe brake offers the classic bike enthusiast exceptional value for money on looks and performance.



Rusty Lowry's own 1967 modified Suzuki four shoe brake Norton Atlas 'Vintage Racer'

