Lazy Ammeter
(contibutions by Ford Barn members 'Tom Wesenberg' & 'MikeK')





Most of the meters just need to have the cover removed, then use a toothpick and carefully put a drop of heavy oil on each of the two pivots for the needle.

If you take the amp meter completely apart, make sure the magnet goes back the same way it came out. The heavy wire semi-circle is the magnet, and if you suspend it by a thread one side will point north.

Some people solder the studs to the buss bar for a foolproof connection inside the ammeter, but the main thing is to be sure the connections are clean and tight. I made a special wrench to tighten the nuts on the back of the original ammeter. ALL connections must be clean and tight.

If you suspect a bad meter, connect a volt meter across the two terminal box wing nuts. If the terminal box nuts are tight and the 2 wires going to the ammeter are good, and the volt meter is good, then you should show less than .1 volts. To make this measurement you need current flowing, so turn the engine off and the lights on.

Many repro gauges are aluminum, and none of the repro's I've seen have the studs and top half of the bussbar painted flat black. When you look through the slot for the needle, anything you see should be flat black, and not shiny brass.

You can put the 'snap' back in your ammeter by touching and stroking, from end to end, the old, tired magnet ring with a really powerful rare earth magnet. Do it several dozen times. If you have an old computer hard drive to take apart you will find a good super-powerful neodymium magnet in there.

There are adjusting tabs or wings on the needle movement. Put it in series with a quality meter and about a 10 amp load. Best to adjust it mid-range.

The adjusting tabs swing with the needle. Originals are triangle points that go out sideways from the pivot, a brass triangle and a steel triangle. Some of the repops have them both pointing down. Bending them closer or farther from the brass shunt affects the inductive couple between the magnetic field of the current passing through the shunt and the emf induced in the needle which reacts against the ring magnet field.

The magnetic steel triangles are what need to move. They are actually one piece, kind of shaped like this < > with the needle pivot through the center. The brass piece is a clip that holds the aluminum needle to the steel < > and pivot pin assembly. To make it read higher, bent the tips of the < > down. It may also be possible to slide the entire < > assembly down/up on the pivot pin.