M274 Mule Boot Replacement

By Chuck Watford

PART THREE Adjust the Kingpin Bearing Preload.

Normally, if you don't change any of the bearings, races or kingpins, and you keep everything together in the same order as they were removed, you can simply reinstall everything and you should have the same bearing preload as before.

If you did change things, or mixed up the shims, or just want to make sure things are right, you'll need to use this adjustment procedure.

In this case, somebody installed home-made paper gaskets under the kingpins, so I want to start from scratch and readjust everything. We'll fix the potential for oil leaks when we go back together, and we won't use gaskets!

Shim sets are available from mule parts suppliers, and include .003", .005", .010" and .030" shims. I like to start with one of each on the top and bottom kingpin.

I install the knuckle, bearings, shims and kingpins dry, without the axles and dust boots. The book says you need 3 1/2 lbs of force with a spring gauge to move the knuckle. I just do it by feel. With a full shim set on the top and bottom kingpin, the knuckle will generally be way too loose and will even have up-and-down movement. You will have to remove each kingpin and adjust the number of shims several times until you get the proper amount of "drag" when you turn the knuckle. Try to remove and/or add the same number of shims to the top and bottom kingpins.

In this case, it required one .030", one .010" and one .003" on the top kingpin and one .030", one .010" and one .005" on the bottom to get the slight amount of turning resistance I was looking for.

Keep everything together until you are ready to go back together,

Some final cleaning, pack the bearings and axle joints with grease, and we'll be ready to put the knuckles back together with new dust boots and seals.