

## **Reshimming the IRS dog bone arm to the diff casing:**

This work is required due to the bolts holding these “dog bone” brackets to the side of the diff casing coming loose, and the “horseshoe” shims falling out.

This shimming is **CRITICAL** to the rear suspension working as designed.

It is one of the first tasks when reassembling the cradle.

Ensure the diff top bolts (4) are **TIGHT**. They are wired ex the factory and rarely come loose. The cradle itself can crack around these bolts, so an inspection is a must. Clean the threads, apply Loctite to the threads, refit and torque, and rewire if you so desire.

Invert the cradle.

Find a method of “pulling” the cradle front and rear faces towards each other, as they would be when all is assembled. I use a ratchet tiedown strap, and simply trial and error until the inner pivot pins slide smoothly through both sides of the cradle.

**NOTHING** else in the way.

Now, with the pivot pins removed, fit the “dog bones” to the diff casing, and leave the bolts loose.

Slide the inner pins into place, juggling the “bones” as you go.

Using a feeler gauge, measure the gap between the “bone” face and the diff casing face, write it down, front and rear, they will probably be different. Measure it again, just because.

Decision time. Go with the Jaguar horseshoe shims, or cut some round washer style shims. I use the latter. Some markets have a selection, in a compartmented box for sale, with a good selection of various thicknesses.

Fit the shim as required on what you wrote down.

Tighten the “bone” bolts.

That inner pin **SHOULD** slide out if you have done it right.

If that inner pin is “jammed”, loosen the bolts, measure the gap with the shims you have already, reshim as needed. Tighten the bolts, see what the results are.

As I said, this is time consuming and will 100% test your patience, but get it right, and the ride quality is unbeatable.

Once one side is done, do the other side. Then go back and check the 1<sup>st</sup> pin. Once you are satisfied, Loctite the bolts and call it done.

I **ALWAYS** persist with this shimming, and near enough is simply **NOT** good enough. I keep at it until those pins slide in with a firm push of my hand, or a slight “tap” with a rubber hammer. If you need to **BASH** them in, you have a problem, start again. I have a good shade tree outside the shed, and I will take a break, beer in hand, and the 4 legged assistant, and sit under that tree for an hour, and then back to it. It is surprising what a difference that break makes.

When done, reassemble the lower arms etc as needed.

The first one I did, way back in the mid '80's, and NOT an XJS, took me 2 days. Later reshimming took a few hours, it just got better as I did more of them.

The reason for the washer style shims is simple. Those bolts do come loose, bad design, and the washer shims cannot fall out, so a simple tighten during the life of the car will suffice.

Loctite on those bolts, and a smear on the taper seat will assist in keeping them tight.

All my cars, MK X onward had them loose, and the factory wiring did nothing to prevent this. I do not rewire any of them, Loctite is better when used correctly.