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SUSPENSION LIMITERS

by R. W. Caughlan, P.E.

Unlike most vehicles the GMC Motorhome does not have suspension limiters other than the stops in the shock absorbers. There are no snubbers or jounce pads commonly found on most vehicles. Unlike other independent suspension vehicles that do not have hard stops, the GMC Motorhome doesn't even have suspension limiting straps. As a result, the shock absorbers limit suspension travel in the front as well as the rear, but they are only designed to do so when they are correctly installed and the vehicle is properly operated and maintained.

Incorrect installation, tire failures, improper jacking and improper operation of the GMC Motorhome can abuse the shock absorbers, and can bend and destroy their mounts as well as cause other damage. Let's take them one at a time.

When a front tire abruptly fails on a GMC Motorhome, the shock absorber is abruptly collapsed completely. This puts the full load of that corner of the motorhome on the shock absorber and particularly on its upper seal. The shock absorber was not designed to take this abuse,

and it usually fails. Its lower mount is usually bent, and its upper mount can be bent, too. These mounts must be straightened and made parallel with each

other prior to installing a new shock absorber. If a new shock absorber is installed without making the upper and lower mounts parallel with each other, the shock absorber will break like a matchstick.

When a rear tire abruptly fails on a GMC Motorhome, the rear shock absorber is abruptly collapsed completely, too, even though the rear shock absorbers work backward. The air pressure in the rear air suspension air bag causes this to happen until the wheel hits the ground and completely extends the shock absorber. When this happens the shock absorber is usually pulled apart, and its lower mount is almost always bent. Since it is standard grade 8 bolt, it is usually replaced rather than straightened.

Back in the late 1970s tire failures were common on the GMC Motorhome until

General Motors and General Tire engineers learned that the GMC Motorhome was inade-

