1973-74 GENERAL MOTORS TORSION BAR TYPE

GMC – Motor Home Chassis (1973-74)

DESCRIPTION

Front suspension is torsion bar type, with control arms, stabilizer bar, and tubular, gas filled shock absorbers. Front end of each torsion bar is attached to lower control arm. Rear end of each torsion bar is mounted at torsion bar crossmember through an adjustable arm, which is used for vehicle riding height adjustments. Steering knuckle is mounted between upper and lower control arms by conventional ball joints. Front wheel bearings require no adjustment.

ADJUSTMENT

WHEEL ALIGNMENT SPECIFICATIONS & PROCEDURES

See Wheel Alignment Specifications & Procedures in WHEEL ALIGNMENT Section.

BALL JOINT CHECKING

See Ball Joint Checking in WHEEL ALIGNMENT Section.

REMOVAL & INSTALLATION

HUB & BEARING ASSEMBLY

Removal – Remove and discard ⅔ of the brake fluid from front reservoir of master cylinder. Raise and support vehicle, and remove hub nut and washer. Remove wheel, then remove disc brake caliper. *See appropriate article in BRAKE SYSTEMS Section.* Remove three retainer-to-knuckle attaching bolts. Using a slide hammer, if necessary, remove hub and bearing assembly from vehicle.

Installation – To install, reverse removal procedure, and tighten all nuts and bolts.

KNUCKLE SEAL

Removal (Right Hand Side) – Raise and support vehicle. Remove drive axle cotter pin, nut, and washer. Remove inner constant velocity joint attaching bolts, and move joint outward just enough to disengage joint from output shaft. Remove output shaft support bolts, output shaft, and drive axle assembly from vehicle. Carefully pry seal from bore in knuckle.

Removal (Left Hand Side) – Raise and support vehicle under lower control arms. Remove wheel, then remove drive axle cotter pin, nut, and washer. Remove tie rod end cotter pin and nut, and remove tie rod end, using suitable tool (J-24319). Remove upper control arm ball joint cotter pin and nut, and remove brake hose clip from ball joint stud. Drive on knuckle with brass drift and hammer until upper ball joint stud is free from knuckle. Remove lower control arm ball joint cotter pin and nut. Using suitable tool (J-24319), remove lower ball joint from knuckle. Remove knuckle and support to prevent damage to brake hose. Carefully pry seal from bore in knuckle.

Installation (Both Sides) – To install, reverse removal procedure, using suitable driver (J-23115) to seat new seal in knuckle. Use NEW bolts to attach inner constant velocity joint.

STEERING KNUCKLE

Removal – Raise and support vehicle. Remove wheel, and hub and bearing assembly. Remove upper ball joint cotter pin and nut, and remove brake line clip from ball joint stud. Using a brass drift and hammer, drive upper ball joint stud from knuckle. Remove tie rod end, then remove lower ball joint stud from knuckle. Remove knuckle from vehicle.

Installation – Position knuckle on vehicle and install lower ball joint stud in knuckle. Loosely attach lower ball joint nut. Install tie rod end, then install upper ball joint stud into knuckle. Loosely install nuts. Install hub and bearing assembly, then tighten all nuts and bolts, and install cotter pins. *NOTE – Do not back off nuts to install cotter pins.*

UPPER CONTROL ARM

Removal – Raise and support vehicle under lower control arm. Remove upper shock absorber attaching bolt. Remove cotter pin, and nut from upper ball joint, and remove brake line clip from ball joint stud. Using brass drift and hammer, drive on ball joint stud until it is free from knuckle. Remove upper control arm cam assemblies, and remove control arm from vehicle.

Installation – To install, reverse removal procedure, being sure that upper ball joint cotter pin is bent toward upper control arm, to prevent damage to constant velocity joint seal. Check alignment.

LOWER CONTROL ARM

Removal – Raise and support vehicle. Remove wheel and torsion bar. *See Torsion Bar Removal.* Disconnect shock absorber and stabilizer link from lower control arm. Remove drive axle nut, and remove cotter pin and nut from lower ball joint stud. Remove lower ball joint stud from control arm, and remove lower control arm-to-frame attaching bolts. Push inward on drive axle, and outward on steering knuckle to gain clearance, then lower control arm from vehicle.

Installation – To install, reverse removal procedure, and check alignment and riding height.

BALL JOINTS

Removal (Lower Ball Joint) – Raise and support vehicle. Remove steering knuckle. *See Steering Knuckle Removal.* Drill out rivets attaching ball joint to control arm, and remove ball joint from vehicle.

Removal (Upper Ball Joint) – Raise and support vehicle under lower control arms, and remove wheel. Remove cotter pin and nut from upper ball joint stud, and disconnect brake hose clip from stud. Using a brass drift and hammer, drive on upper ball joint stud until it is free from knuckle. Raise and support control arm to gain access to ball joint rivets, and drill out rivets attaching ball joint to control arm. Remove ball joint from vehicle.

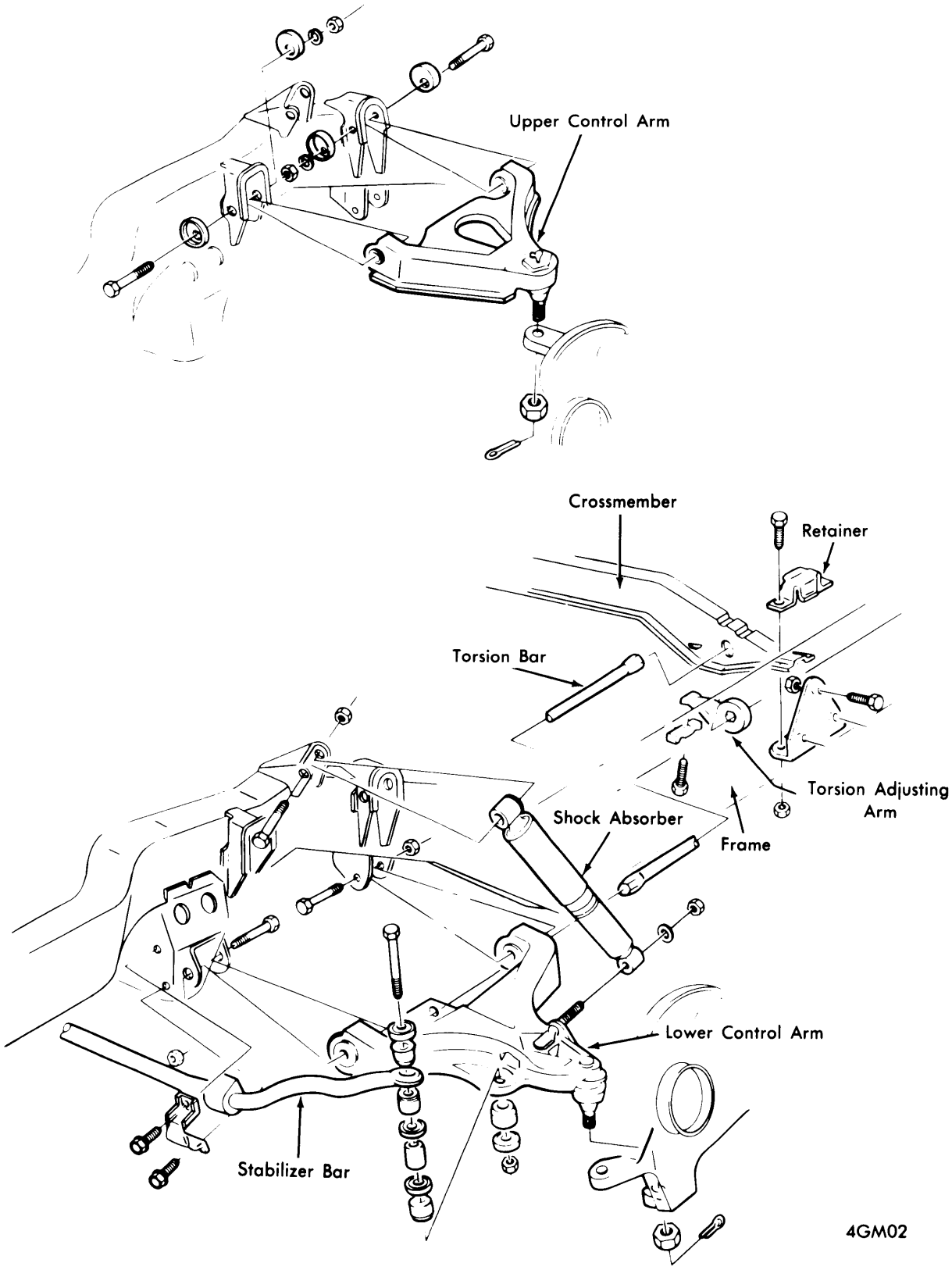
Installation (All) – To install, reverse removal procedure, using bolts supplied with service ball joint in place of rivets.

STABILIZER BAR

Removal – Remove link bolts, nuts, grommets, spacers, and retainers from lower control arm. Remove dust shield from frame. Remove stabilizer frame bracket, and remove stabilizer bar from vehicle.

Installation – To install, reverse removal procedure, tighten nuts and bolts, and cut off bolt such that ¼" of threads extend beyond nut.

1973-74 GENERAL MOTORS TORSION BAR TYPE (Cont.)

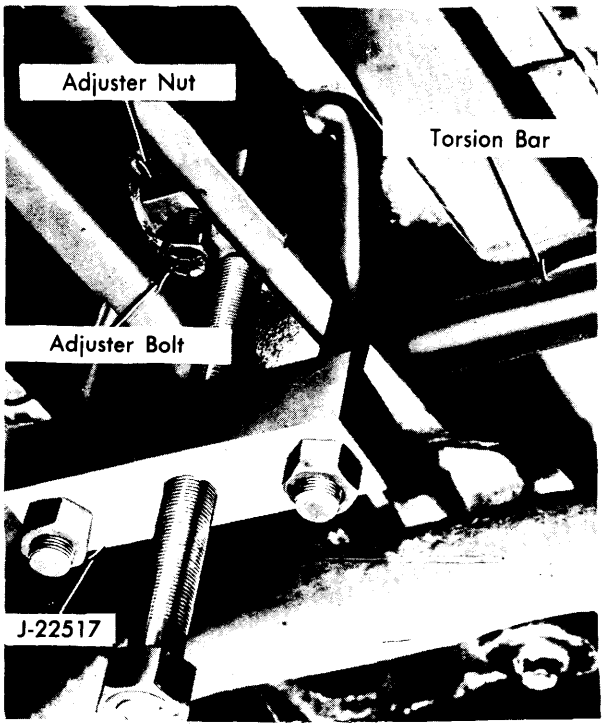


FRONT SUSPENSION ASSEMBLY

1973-74 GENERAL MOTORS TORSION BAR TYPE (Cont.)

TORSION BARS/CROSSMEMBER

Removal – Raise and support vehicle. Install suitable tool (J-22517) on crossmember, and turn tool screw until seated in dimple of torsion bar adjusting arm. Remove torsion bar adjusting bolt and nut, noting number of turns required to remove. *NOTE – Reinstall bolt same number of turns on installation to obtain original ride height.* Tighten center screw of tool until torsion bar is completely relaxed. Remove tool and repeat procedure on opposite torsion bar. Remove bolts attaching torsion bar crossmember to frame, and remove exhaust pipe hanger from crossmember. Move crossmember toward rear until torsion bars are free and adjusting arms are removed. Move crossmember toward left and remove from vehicle. Remove torsion bars and mark for reassembly reference.



REMOVING TORSION BAR

Installation – 1) Lubricate both ends of torsion bar and install bars on vehicle. Install crossmember insulators on crossmember and position on vehicle, approximately two inches rearward of its normal position. Raise torsion bars and align with holes in crossmember. Slide torsion bar forward, so that torsion bars just rest on edges of holes.

2) Insert adjusting arms in crossmember, and position so arms will engage torsion bars and end of arms are 1¾-2" below crossmember. Tap crossmember forward into its normal position. *NOTE – Make sure end of torsion bar is flush with rear face of adjusting arm. Move torsion bar to adjust.* Install crossmember retainers and nuts, then install exhaust pipe hanger. Install suitable tool (J-22517) over crossmember, and turn center screw until adjusting arm is positioned to allow installation of adjusting nut. Install adjusting nut and turn adjusting bolt into nut same number of turns as were recorded at removal. Turn center screw of tool until torsion is completely relaxed and remove tool.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
Drive Axle Nut	110
Stabilizer Link Nut	35
Stabilizer Bracket-to-Frame Bolt	15
Crossmember Retainer Bolts	10
Shock Absorber Nuts	90
Upper Ball Joint Nut	50
Lower Ball Joint Nut	100
Tie Rod End Nut	40
Constant Velocity Joint-to-Output Shaft Bolts	65
Bearing Retainer-to-Knuckle Bolts	35