

# **Getting Your GMC Under Control**

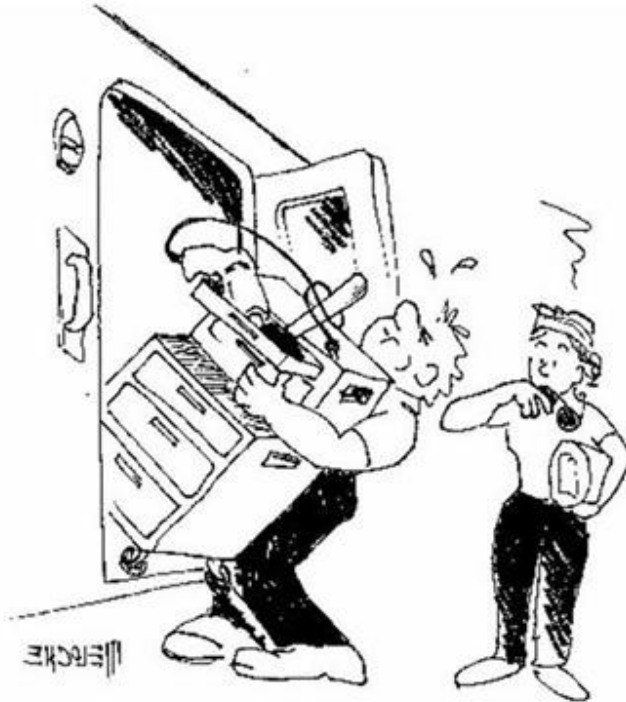
Control Arm Presentation  
By Steve Ferguson

# 1973 GMC CONTROL ARMS





TO. FOR SOME REASON, WE DON'T PACK AS LIGHT AS WE USED





NOT ONLY DO WE TRAVEL WITH MORE CLOTHES, TOOLS, AND SPARE PARTS, THE ROAD SYSTEM IN THE US SEEMS TO HAVE DETERIORATED DRAMATICALLY IN THE PAST TEN YEARS. WE ALSO TOW A LOT MORE BEHIND THE GMCS THAN THE ENGINEERS EVER ENVISIONED.

ALL OF THESE FACTORS HAVE TAKEN THEIR TOLL ON THE STEERING AND SUSPENSION SYSTEMS ON THE GMCS. THE FOLLOWING PHOTOS ARE WHAT I CALL MY "HALL OF SHAME". OVERLOADED COACHES, HEAVY TOW LOADS, AND MECHANICS THAT WE PAY GOOD MONEY TO FOR PROPER REPAIR OF OUR COACHES, AND DON'T DO IT CORRECTLY.

THE FIRST STEP AFTER REMOVAL IS  
INSPECTION.

# FACTORY WELDS



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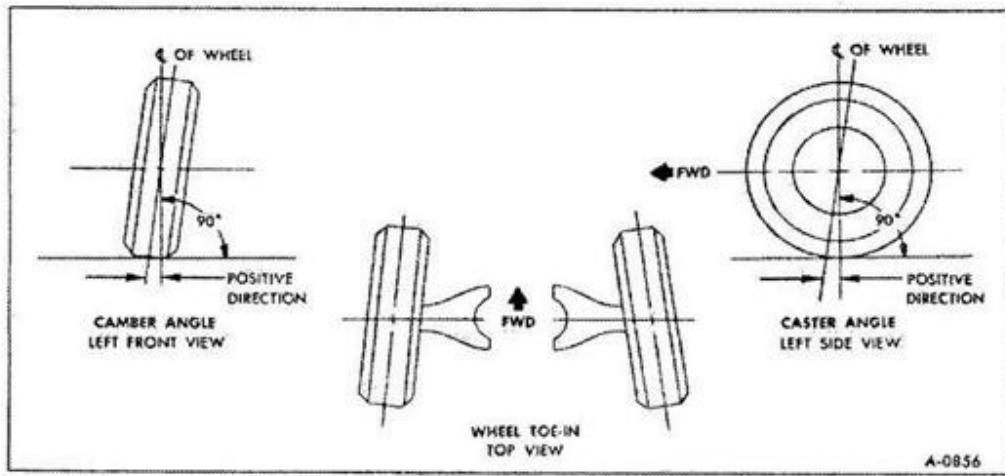


# FACTORY WELDS









## Understanding wheel alignment terminology

CAMBER  
TOE IN/OUT  
CASTER





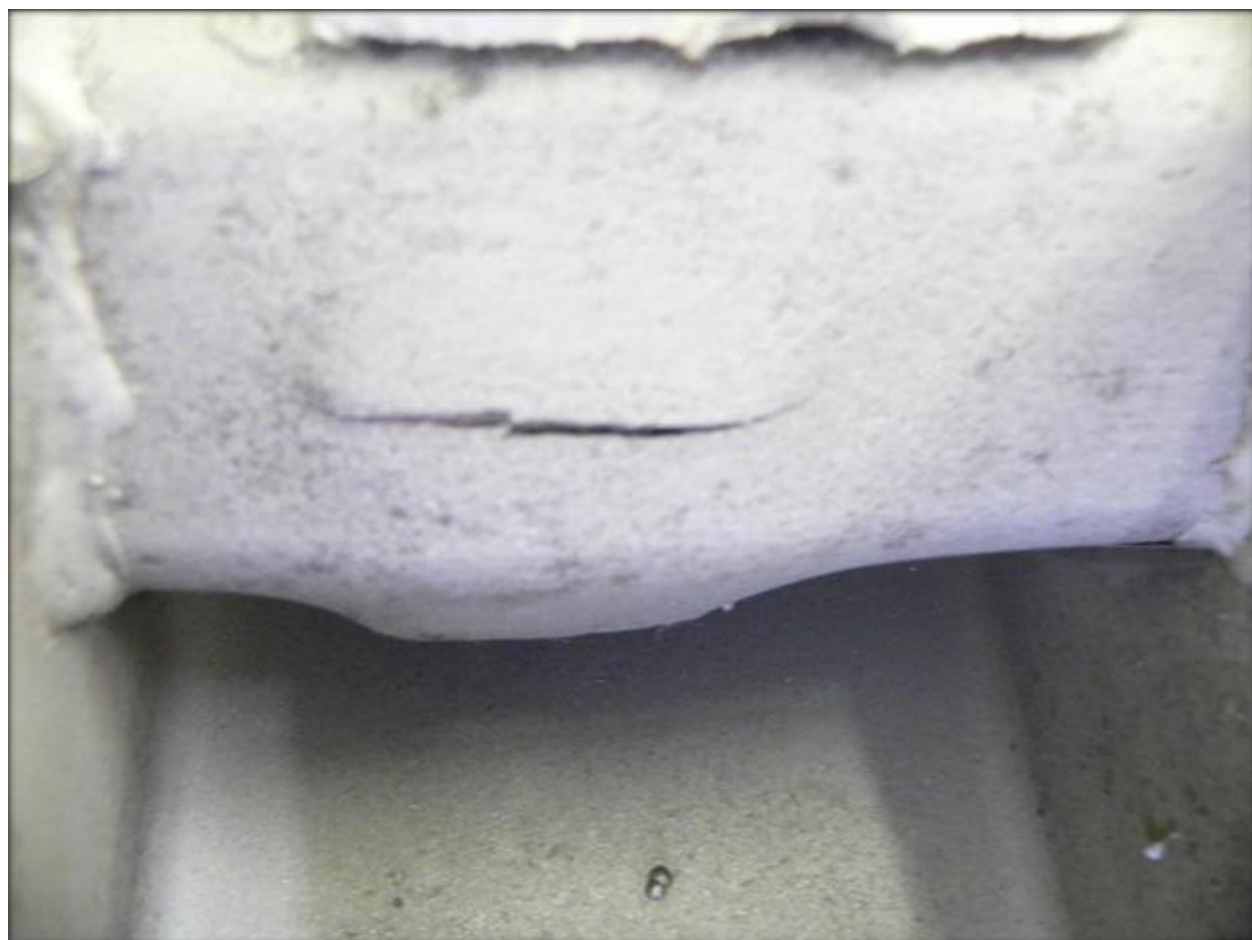






















The newest GMC is 31 years old. Age and mileage take their toll in wear on suspension parts. By now, most GMCs have had some suspension components replaced. The following components are between the steering wheel and the knuckles. (The steering box and Pitman arm are not included in this photo.)



















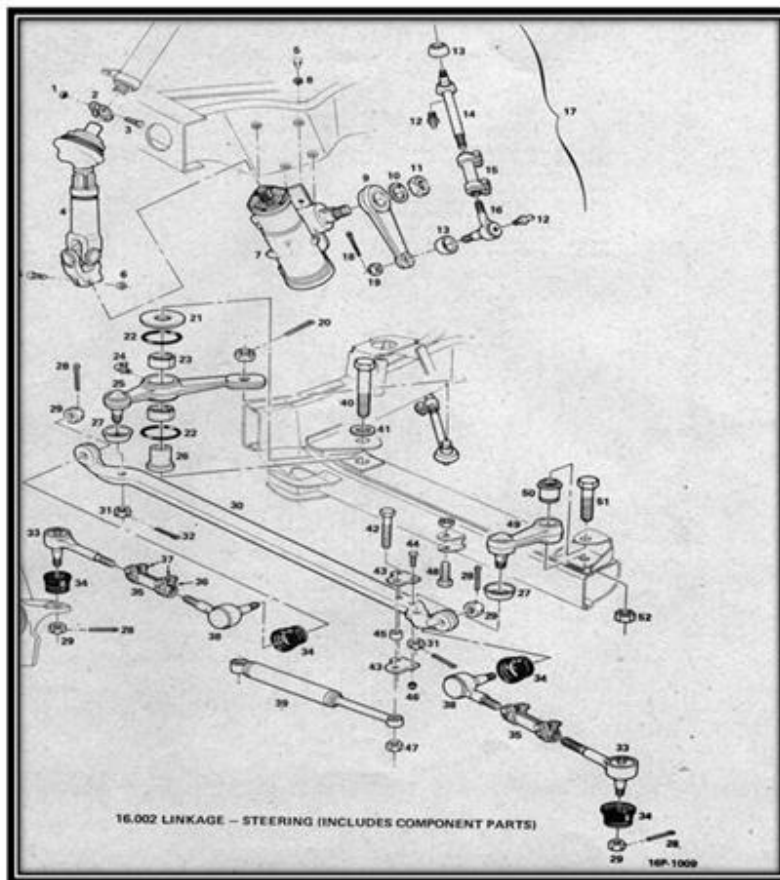














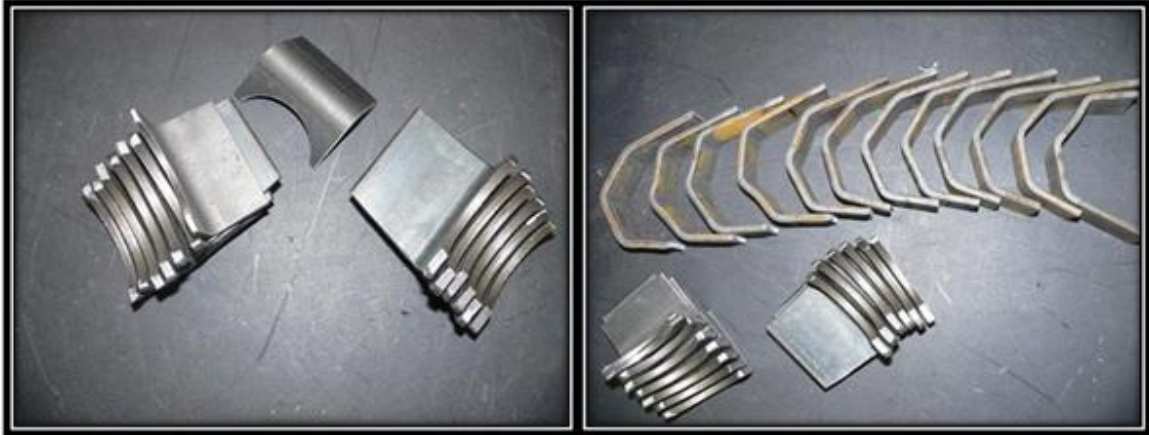








# REENFORCEMENTS



# SOCKET REENFORCEMENT





# ADDING CONNECTOR AND ANCHORING TORSION BAR SOCKET



# CORNER REENFORCEMENTS



# TIP REENFORCEMENTS



# DRILLED FOR 3/8" HARDWARE



As you can see from the previous page out of the parts manual, there are a lot of moving parts in the steering system. System is the key word here. Like any system, unless every part works as designed, the system will suffer. In our case, if some parts of this system are worn or are in need of repair, the symptoms are poor handling.

Poor handling is the number one complaint of nearly every GMC owner. Or to put this in perspective, most of us would like our GMCs to handle better.

# SWAY BAR AND SHOCK BRACE







STEP 1  
PRESS OUT THE INNER SLEEVE



STEP 1  
DIFFERENT VIEW



STEP 2  
USE A SOCKET OR ANYTHING SLIGHTLY  
SMALLER THAN THE ID OF THE SLEEVE, PRESS  
OUT THE OLD RUBBER



A NOTE HERE: IF YOU PLAN ON USING OEM STYLE RUBBER BUSHINGS, DO NOT ATTEMPT TO REMOVE THE OLD BUSHING WITHOUT THIS SPACER BETWEEN THE MOUNTING EARS.



CLEAN OUT ALL THE OLD RUBBER

# READY FOR URETHANE BUSHINGS





ABOUT 4 GOOD WHACKS WILL  
DRIVE HOME THE NEW  
URETHANE BUSHING



GREASE LIBERALLY WITH  
PROVIDED SILICONE, DRIVE  
THE INNER SLEEVE IN



# ROAD READY

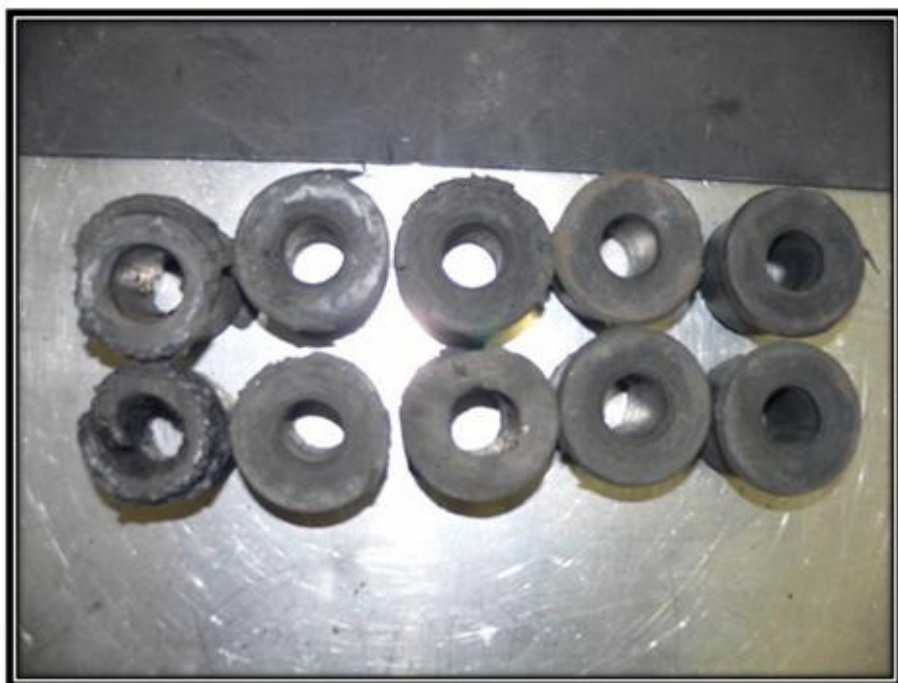


The purpose of this presentation is to focus your attention on the upper and lower control arms.

If you have replaced all of the worn steering components, had a wheel alignment done by a competent shop, and your GMC does not handle like you want it to, the control arms are the last link between the steering assembly and the knuckles.



TIP REPAIR



OLD LOWER BUSHINGS



# UPPER INNER SLEEVE AND END WASHERS ARE REUSED FOR URETHANE





### **Offset bushing/Upper control arm**

This is the right side, upper control arm, rear bushing. Note that this is installed for additional caster adjustment. By installing offset bushing in this manner (arrow pointing away from the ball joint) you should pick up 2 deg of additional caster. Only one offset per arm is really needed.



And now that  
we've finished,  
it's time to go  
drag racing!



The End

## PART NUMBERS

UPPER BALL JOINT	MOOG K-5238
LOWER BALL JOINT	MOOG K-6215

STANDARD UPPER BUSHING	MOOG K-7006
UPPER BUSHING (OFFSET)	MOOG K-7104

STANDARD LOWER BUSHING	MOOG K-5222
URETHANE LOWER BUSHING	ES 3.3181 G
URETHANE DUST BOOTS	ES 13024 G

(NOTE: THESE URETHANE DUST BOOTS ARE  
REPLACEMENTS FOR ALL FRONT SUSPENSION DUST  
BOOTS.)



## CAUSE AND EFFECT

THE CONTROL ARMS ON OUR GMCS ARE OFF THE SHELF ITEMS THAT WERE DESIGNED FOR CADILLAC ELDORADO AND OLDSMOBILE TORONADO APPLICATIONS. APPROXIMATELY 60% OF THE 4,600 LBS OF THE AUTOMOBILE VEHICLE WEIGHT WAS ON THE FRONT WHEELS. (Roughly, 2,700 LBS.) A 26' GMC FROM THE FACTORY HAS APPROXIMATELY 5,000 LBS ON THE FRONT WHEELS, LESS FOR THE 23' MODELS. THE ONLY DIFFERENCES BETWEEN THE LOWER CONTROL ARMS USED ON THE AUTOS AND THOSE USED ON THE MOTORHOME APPLICATION WAS THE ADDITION OF REINFORCEMENTS BEGINNING WITH SOME RETROFITTING ON THE '73 MODELS, TO FULL BLOWN REINFORCING BEGINNING WITH THE '74 MODEL YEAR. BOTH AUTOMOBILE AND MOTORHOMES APPLICATIONS USED THE SAME BUSHINGS.

I HAVE NEVER HAD TO REPAIR LOWER CONTROL ARMS THAT HAD THE ORIGINAL, RIVITED BALL JOINT IN PLACE. ALL MY REPAIRS HAVE BEEN ON THOSE THAT SOMEONE HAD INSTALLED NEW BALL JOINTS IN.

No matter how worn the lower ball joint gets, the OEM rivited ones never wallow around in the pocket. Replacement ones do because they come with inadequate mounting hardware installed by automotive mechanics. Always drill the control arms and ball joints for Grade 8, 3/8 NF mounting hardware and use a good brand of threadlock. Torque to 65 lbs ft. Just look at those photos and see all of the damage that can occur when things aren't done right. In the years that I have been doing this, I have only received one set of cores with new ball joints mounted with 5/16 hardware that weren't damaged.

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