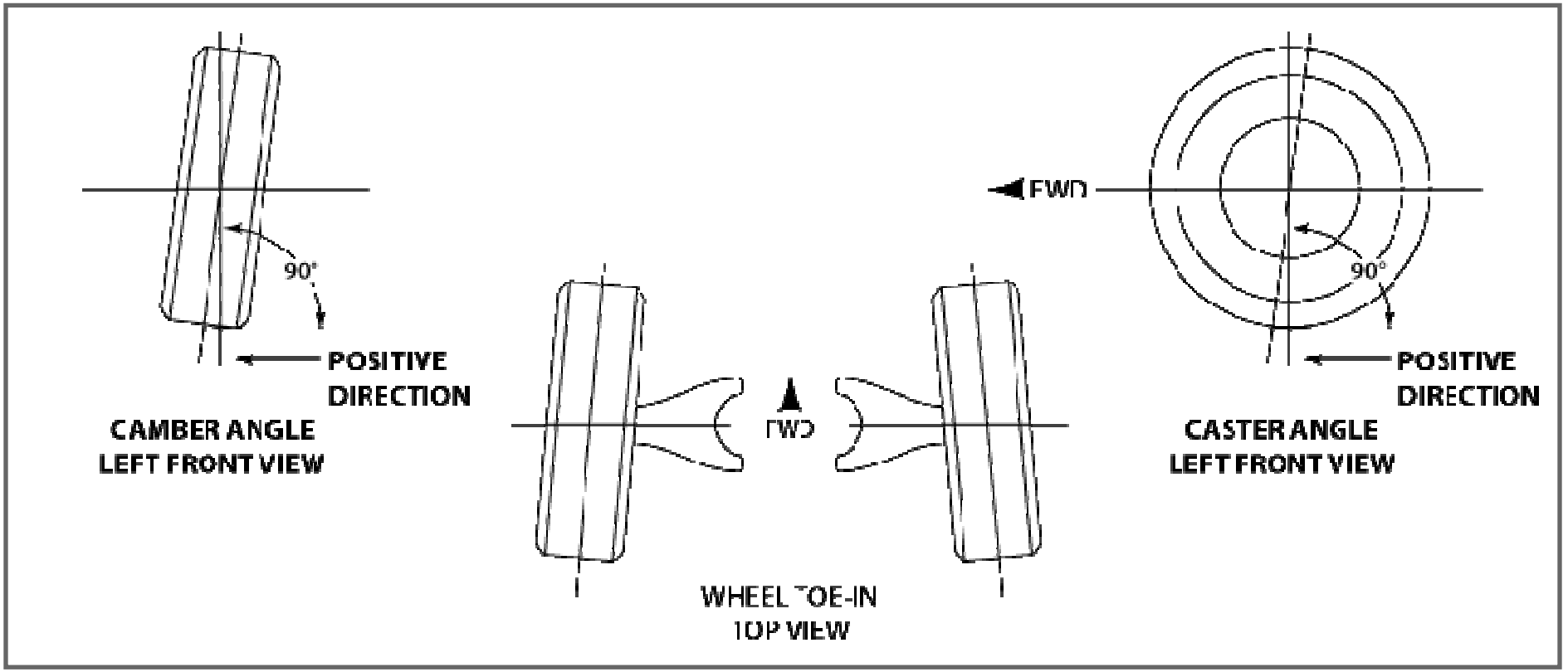
Getting Your GMC Under Control

Control Arm Presentation

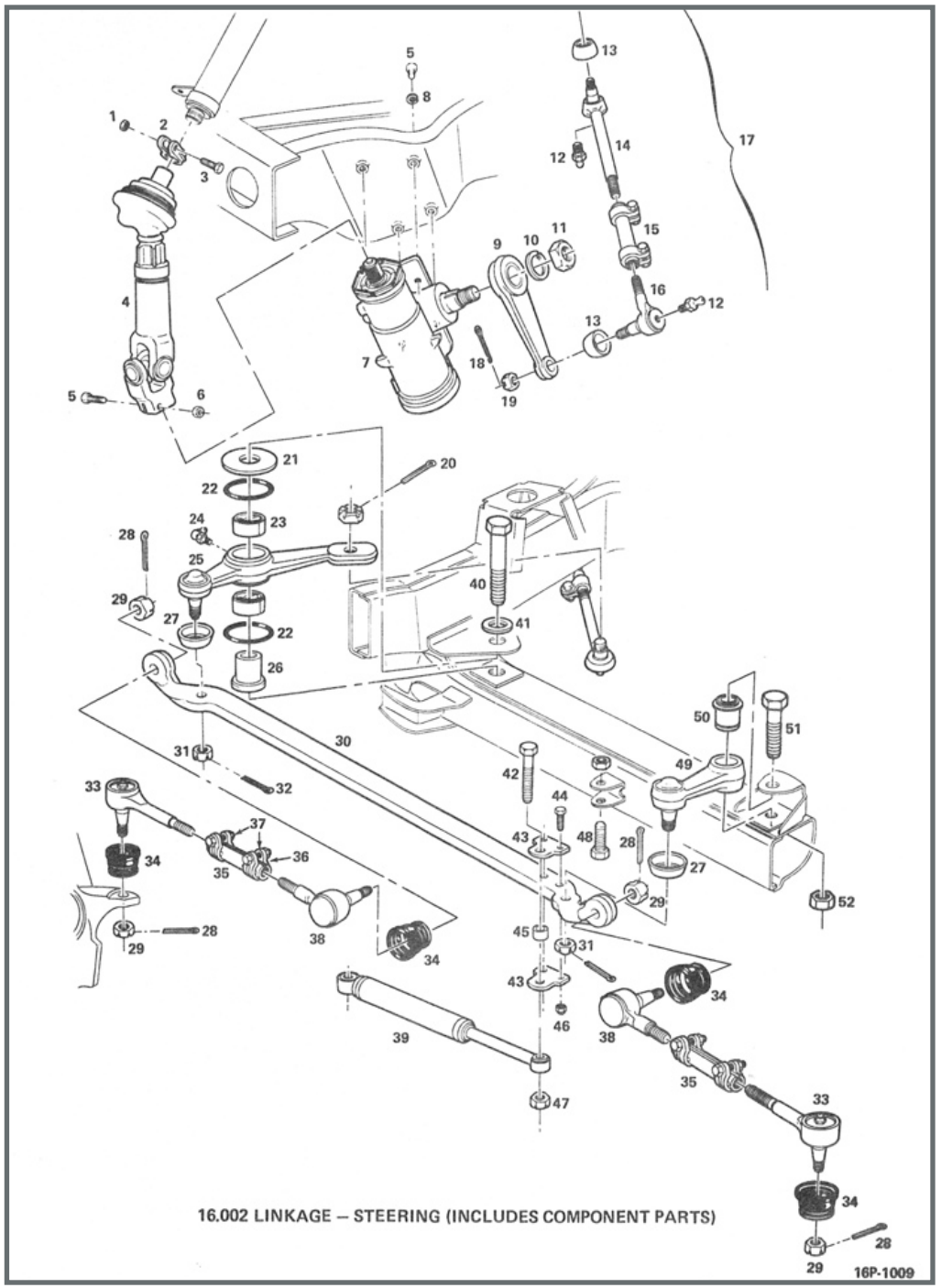
Steve Ferguson



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.)



16.002 LINKAGE – STEERING (INCLUDES COMPONENT PARTS)

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.

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.

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**

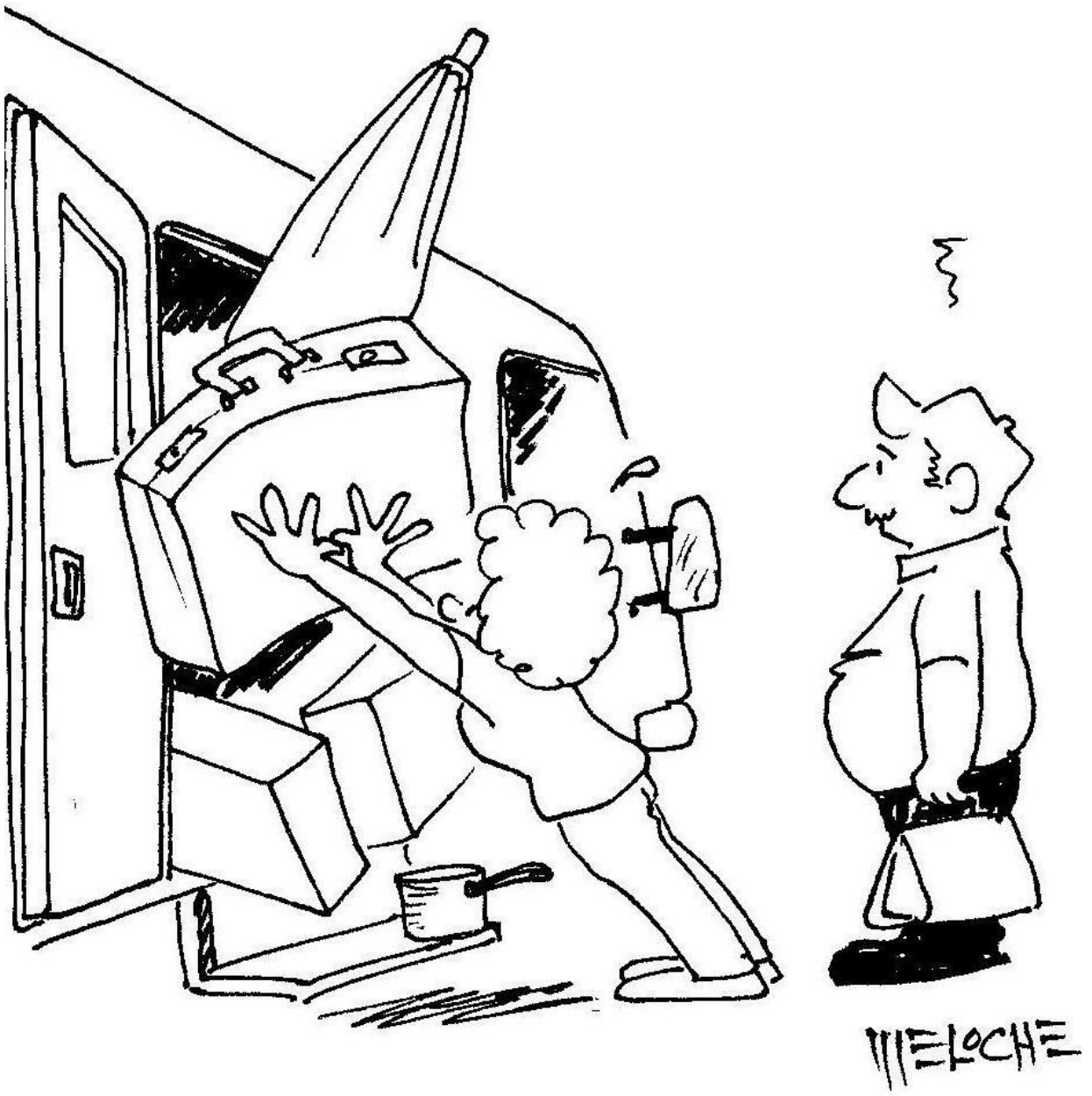
(NOTE: THESE URETHANE DUST BOOTS ARE REPLACEMENTS FOR ALL FRONT SUSPENSION DUST BOOTS.)

CAUSE AND EFFECT

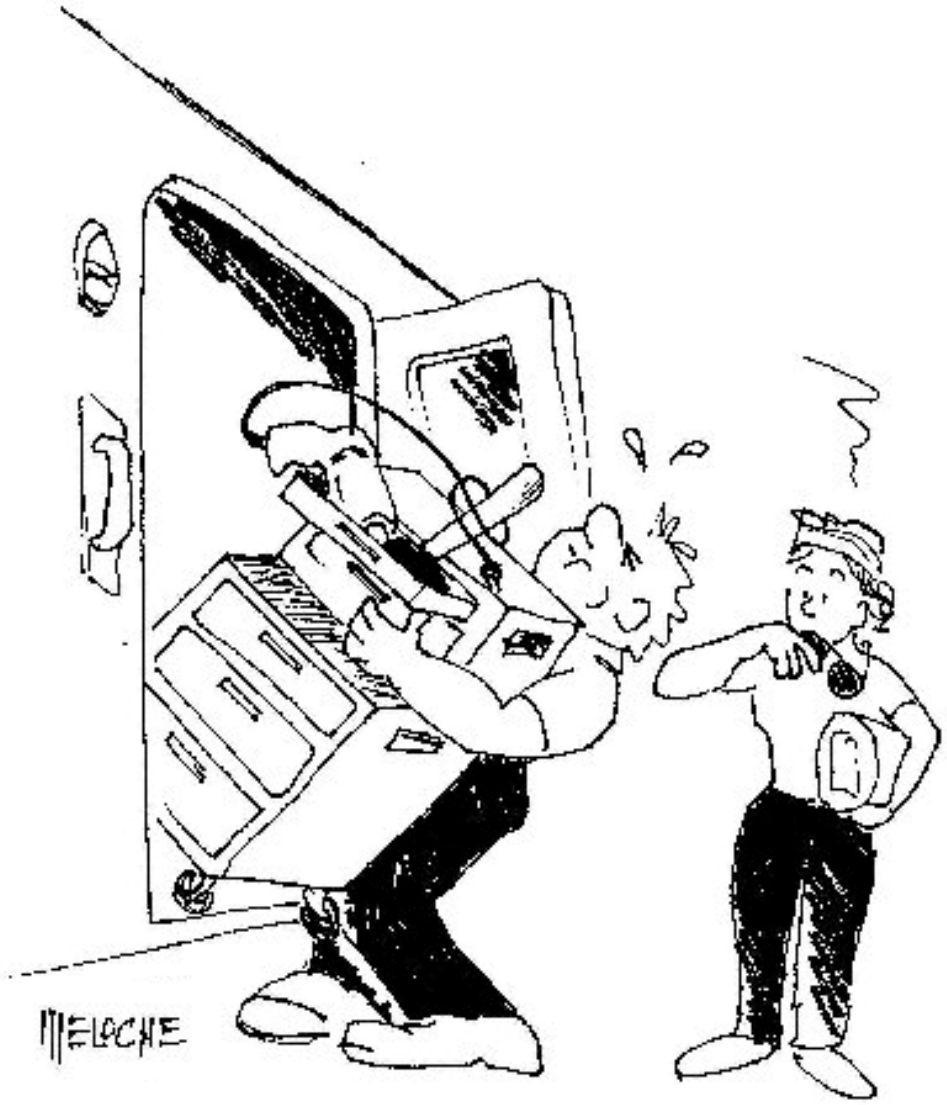
- The control arms on GMCs are off the shelf items designed for Cadillac Eldorado and Oldsmobile Toronado applications.
- Approximately 60% of the 4,600 lbs of the automobile vehicle weight was on the front wheels (roughly, 2,700 lbs.).
- A 26-foot GMC from the factory has approximately 7,000 lbs on the front wheels, less for the 23-foot 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 retro-fitting on the'73 models, to full blown re-enforcing beginning with the '74 model year.
- Both automobile and motorhomes applications used the same bushings.

1973 GMC CONTROL ARMS

1973 GMC CONTROL ARMS


MELOCHE

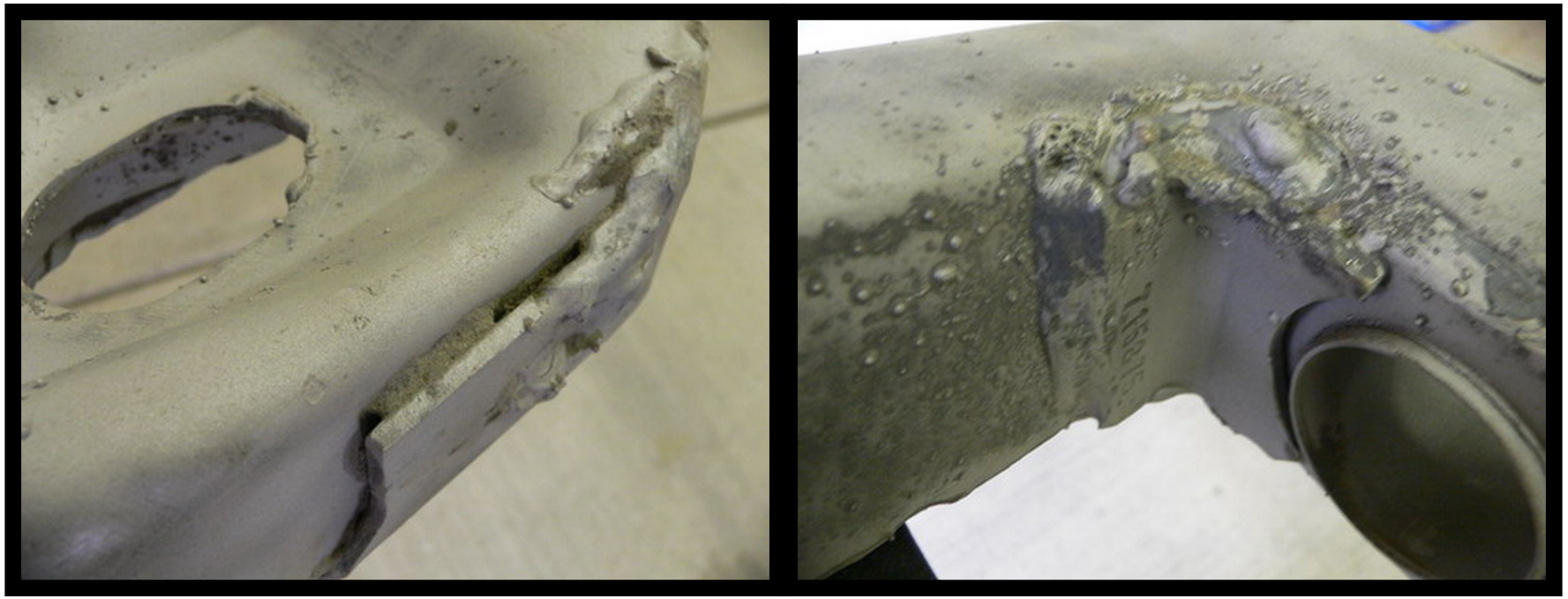
FOR SOME REASON, WE DON’T PACK AS LIGHT AS WE USED TO.



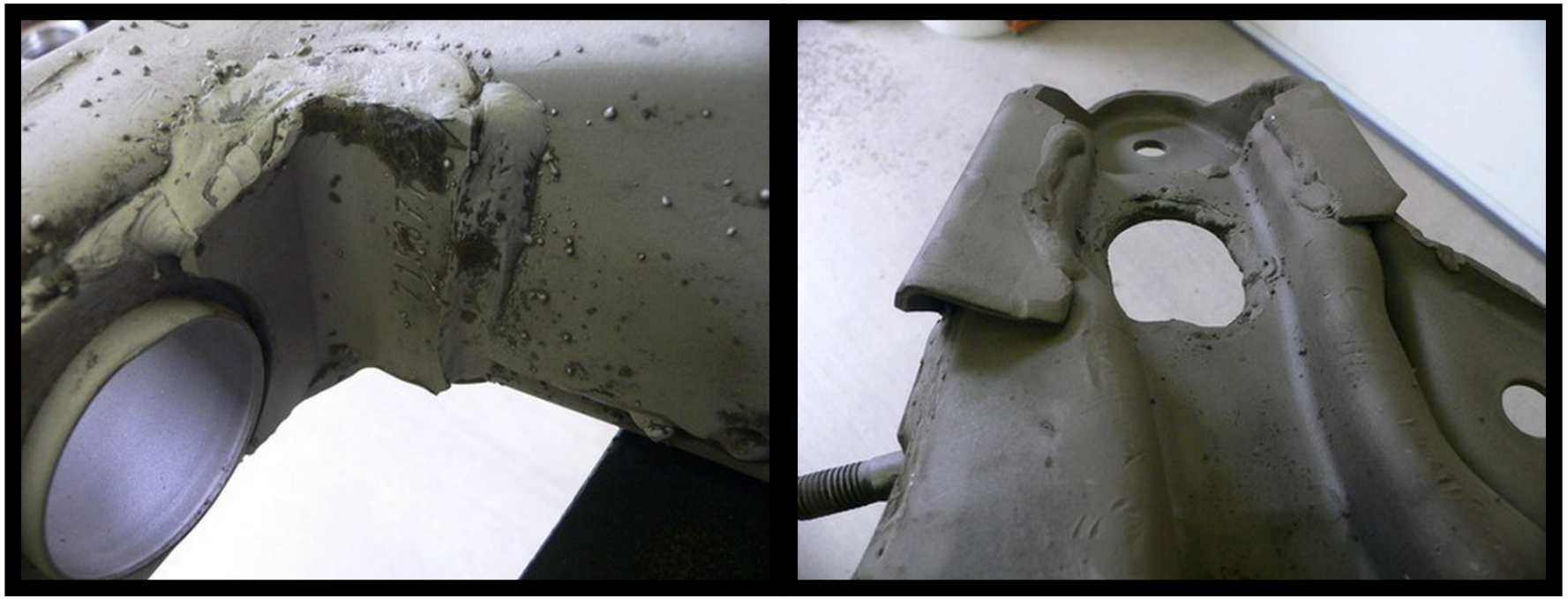
Not only do we travel with more clothes, tools, and spare parts, the road system in the USA seems to have deteriorated dramatically in the past ten years.
We also tow a lot more behind the GMCs than the engineers ever envisioned. All of these factors have taken their toll on the steering and suspension 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



FACTORY WELDS



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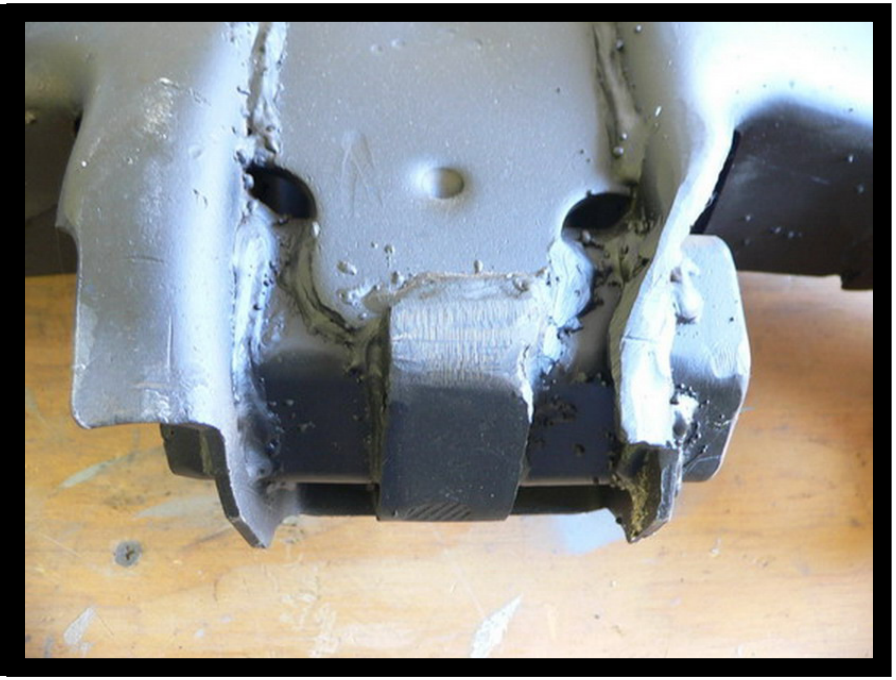
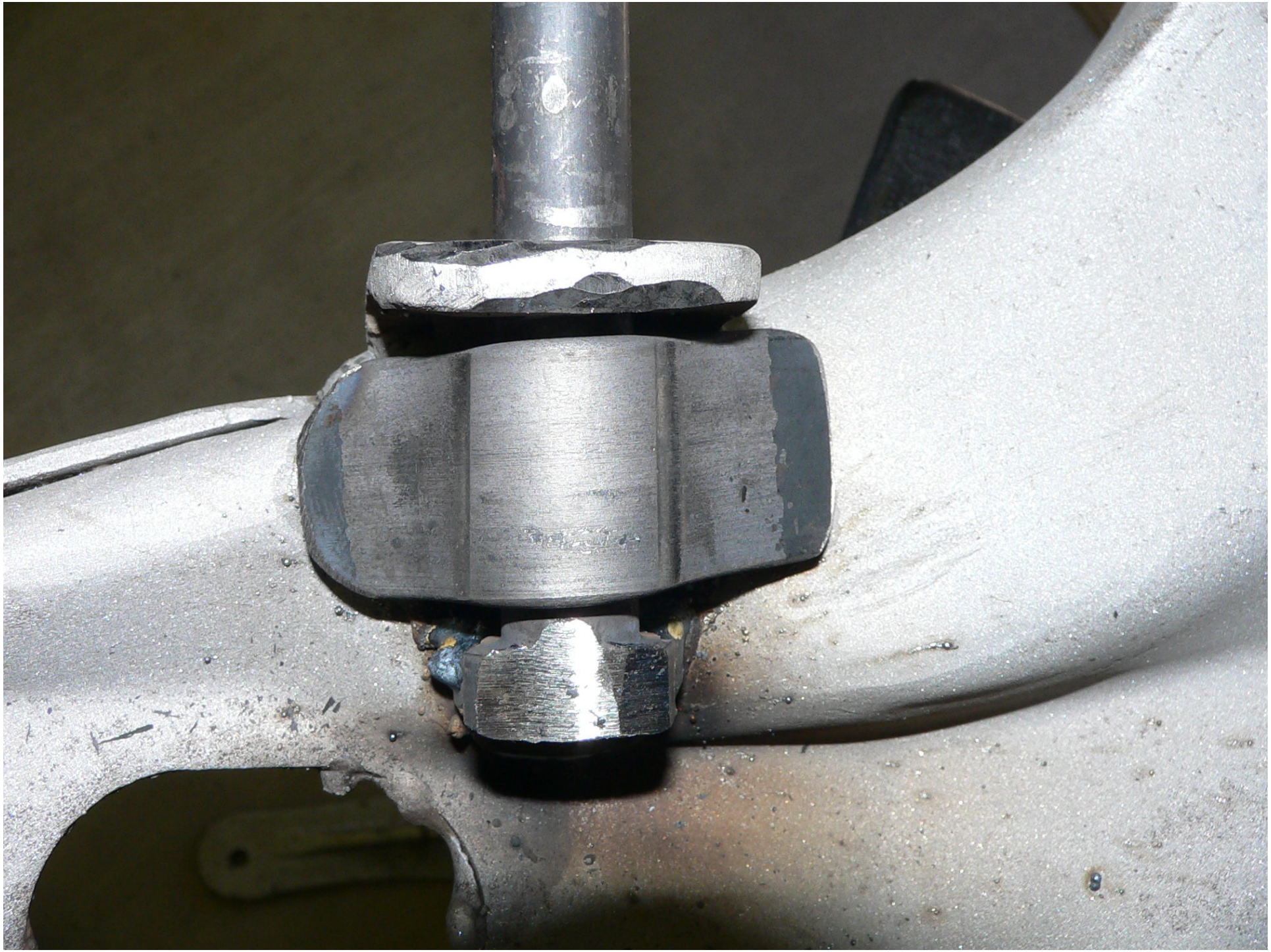
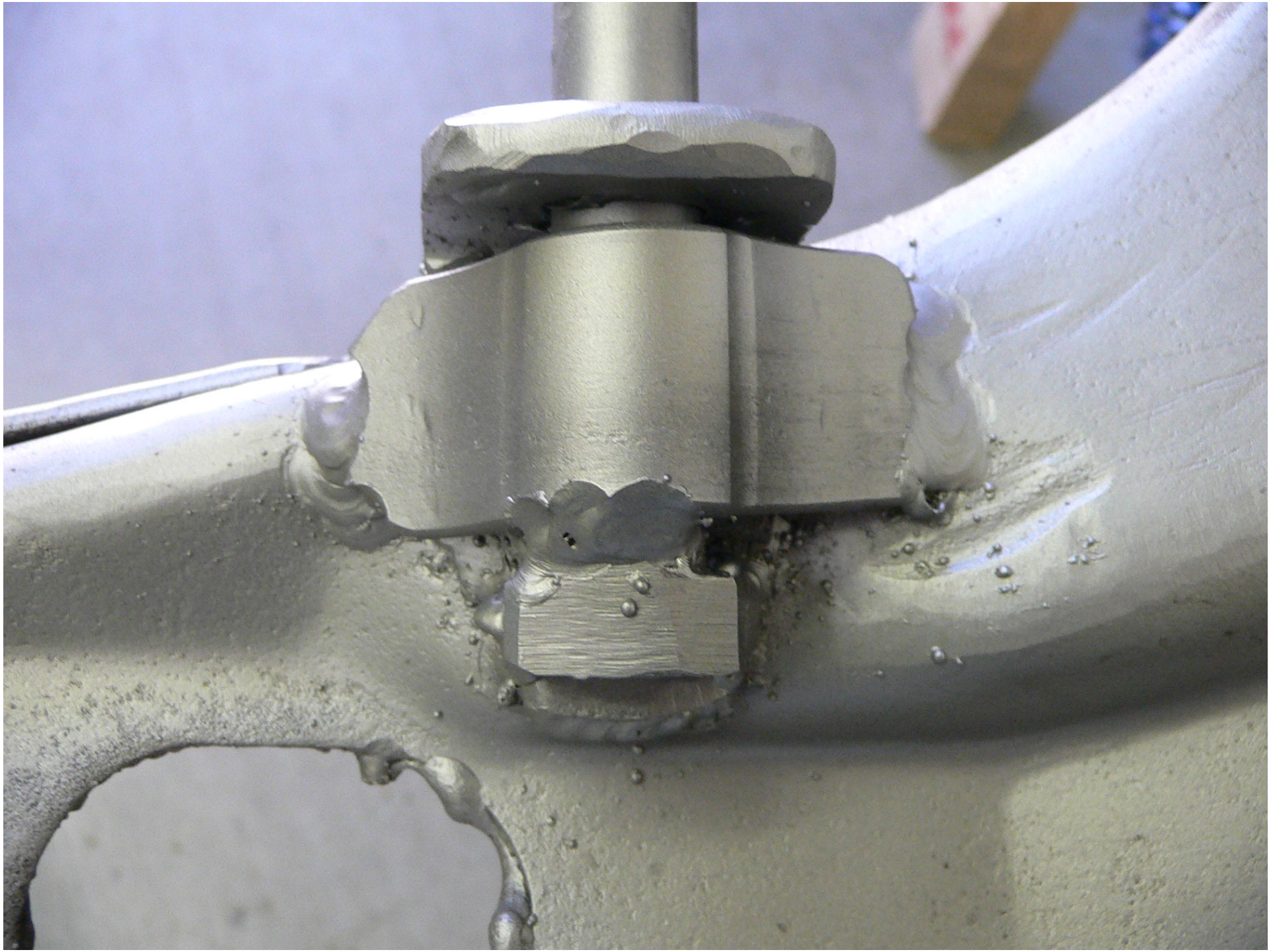
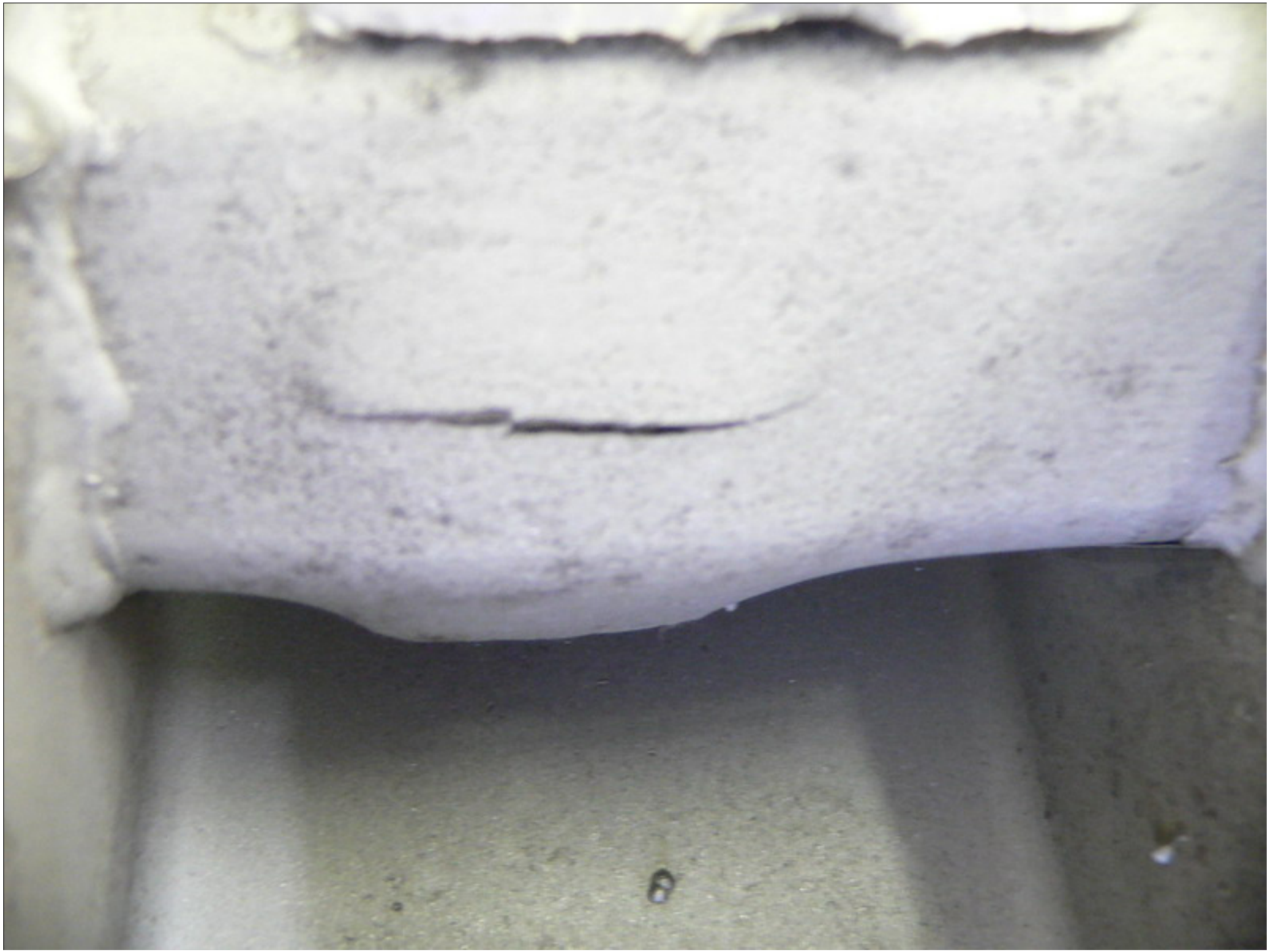
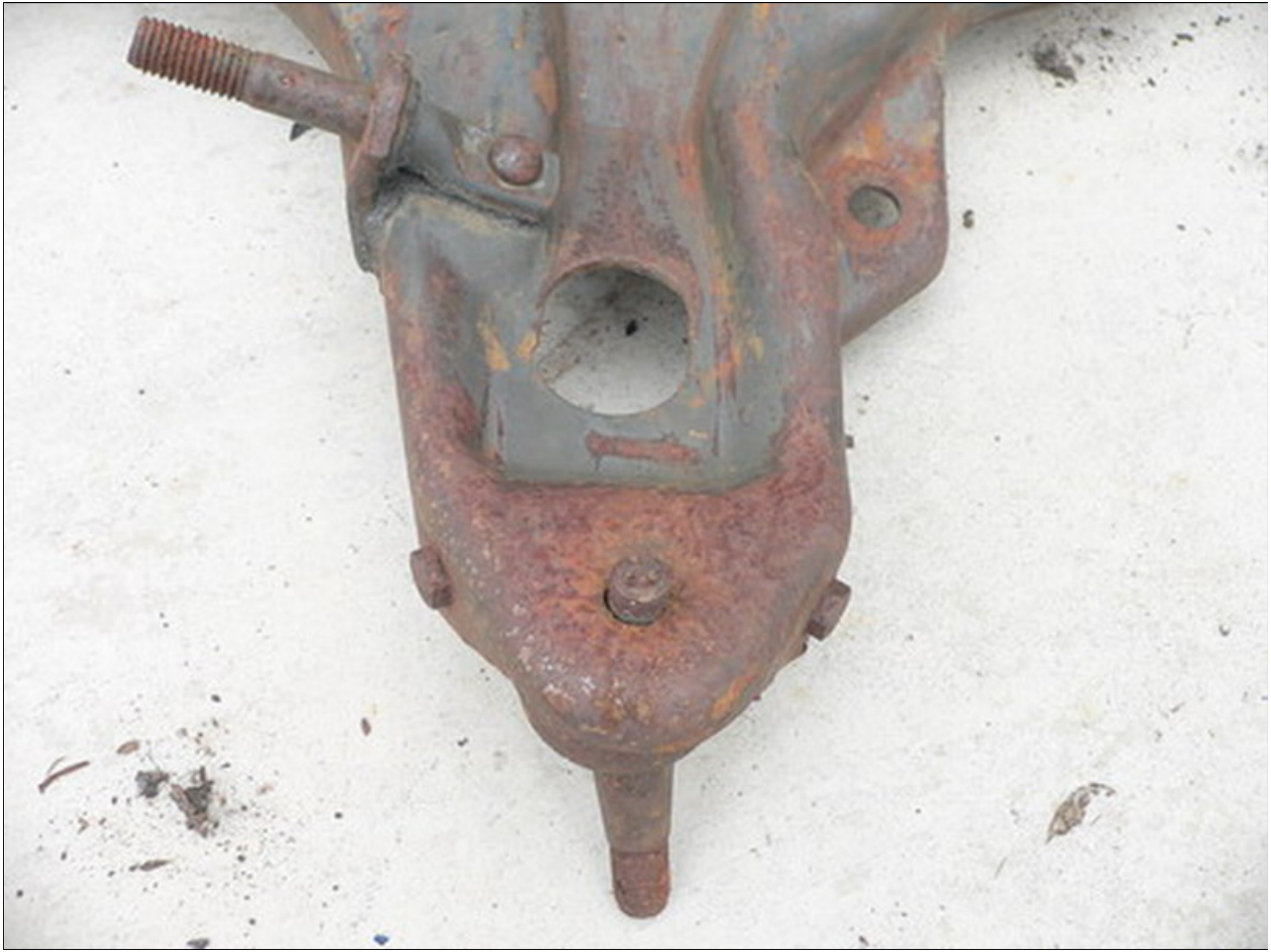
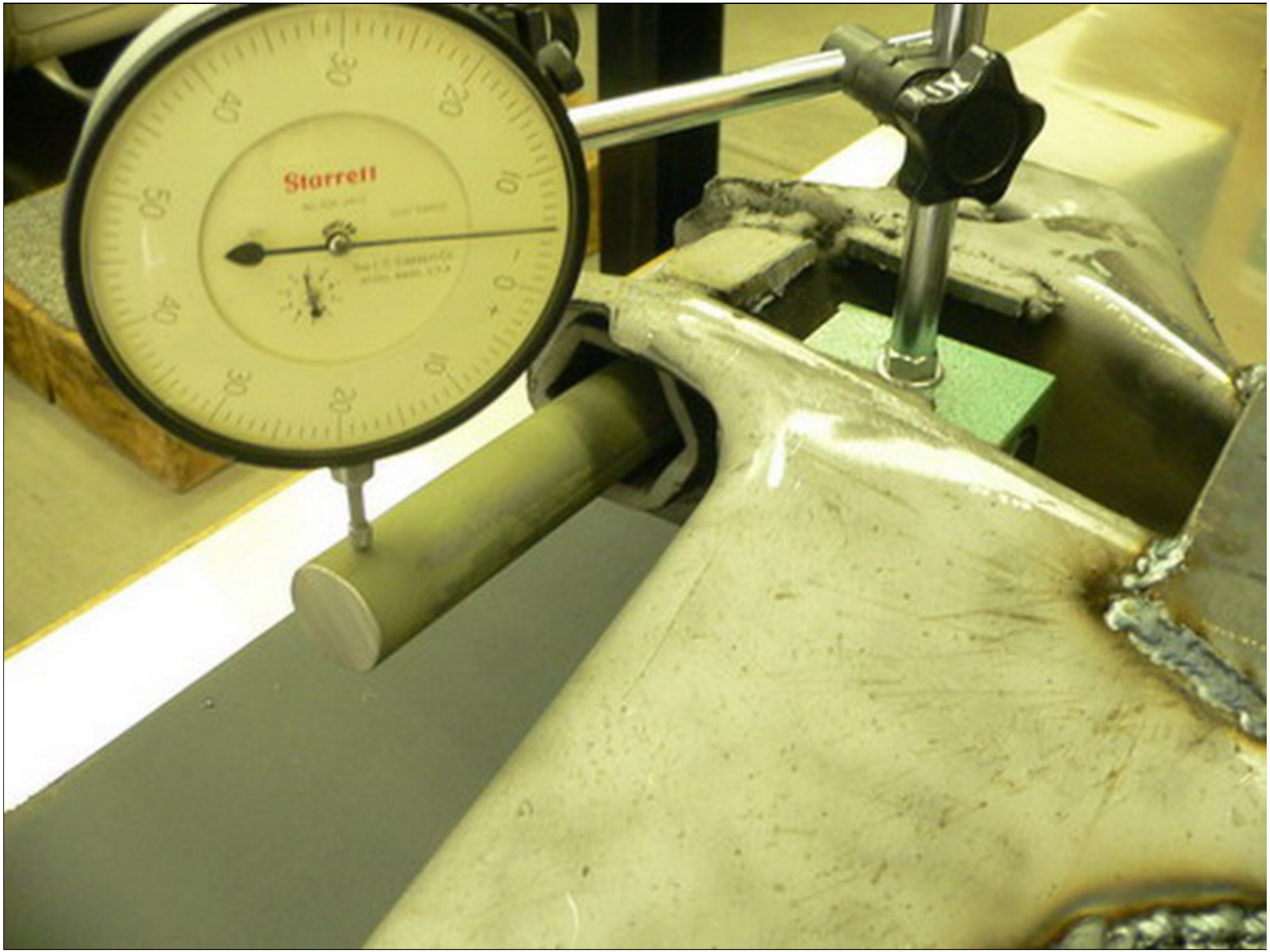




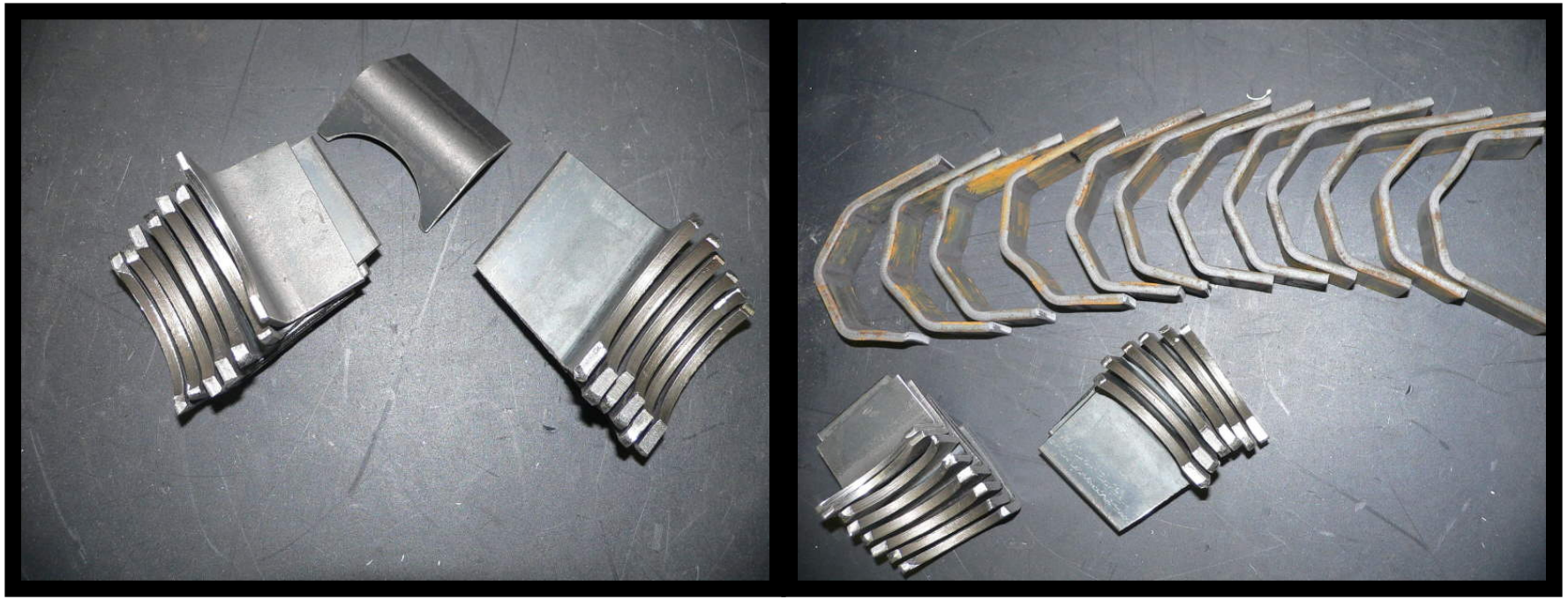


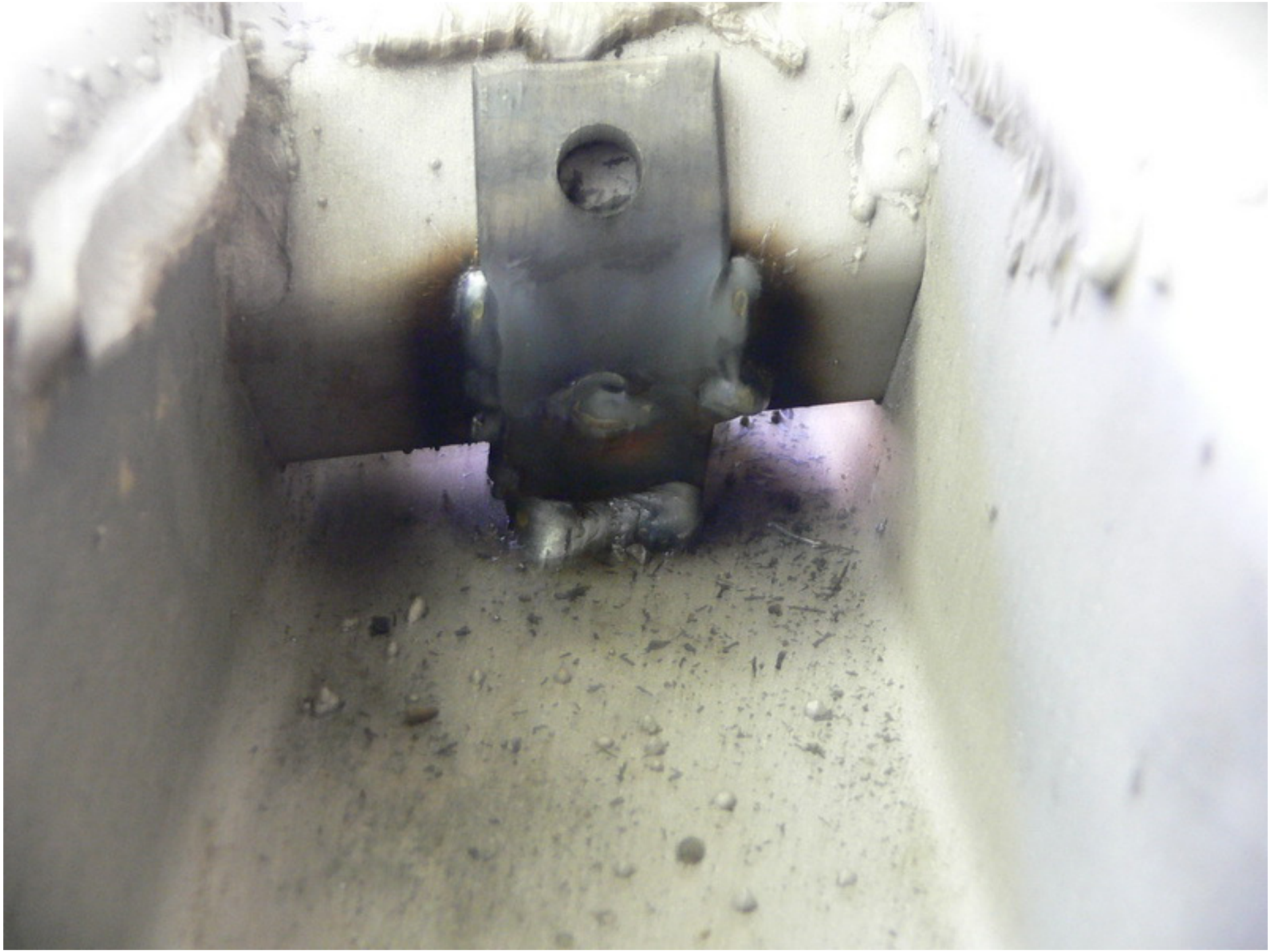





Starrett

REINFORCEMENTS



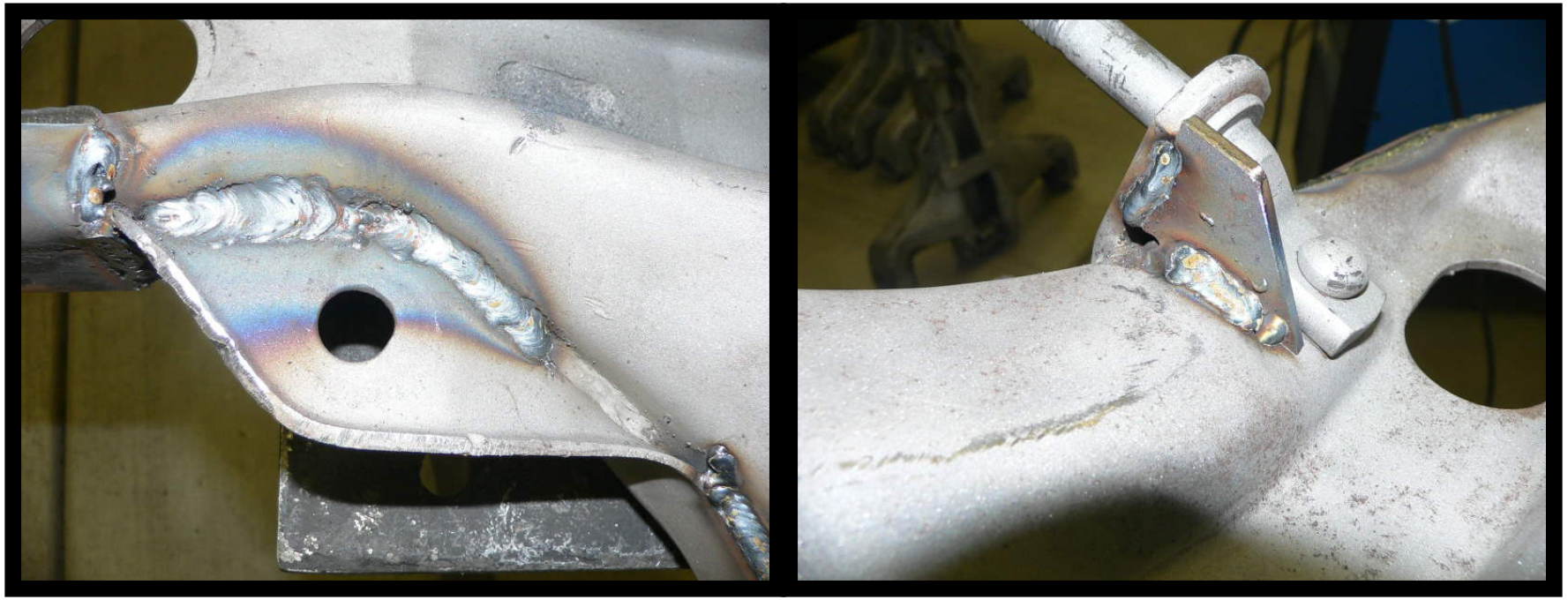


CORNER REINFORCEMENTS

TIP REINFORCEMENTS

DRILLED FOR 5/16 HARDWARE

SWAY BAR AND SHOCK BRACE



STEP 1

PRESS OUT THE INNER SLEEVE

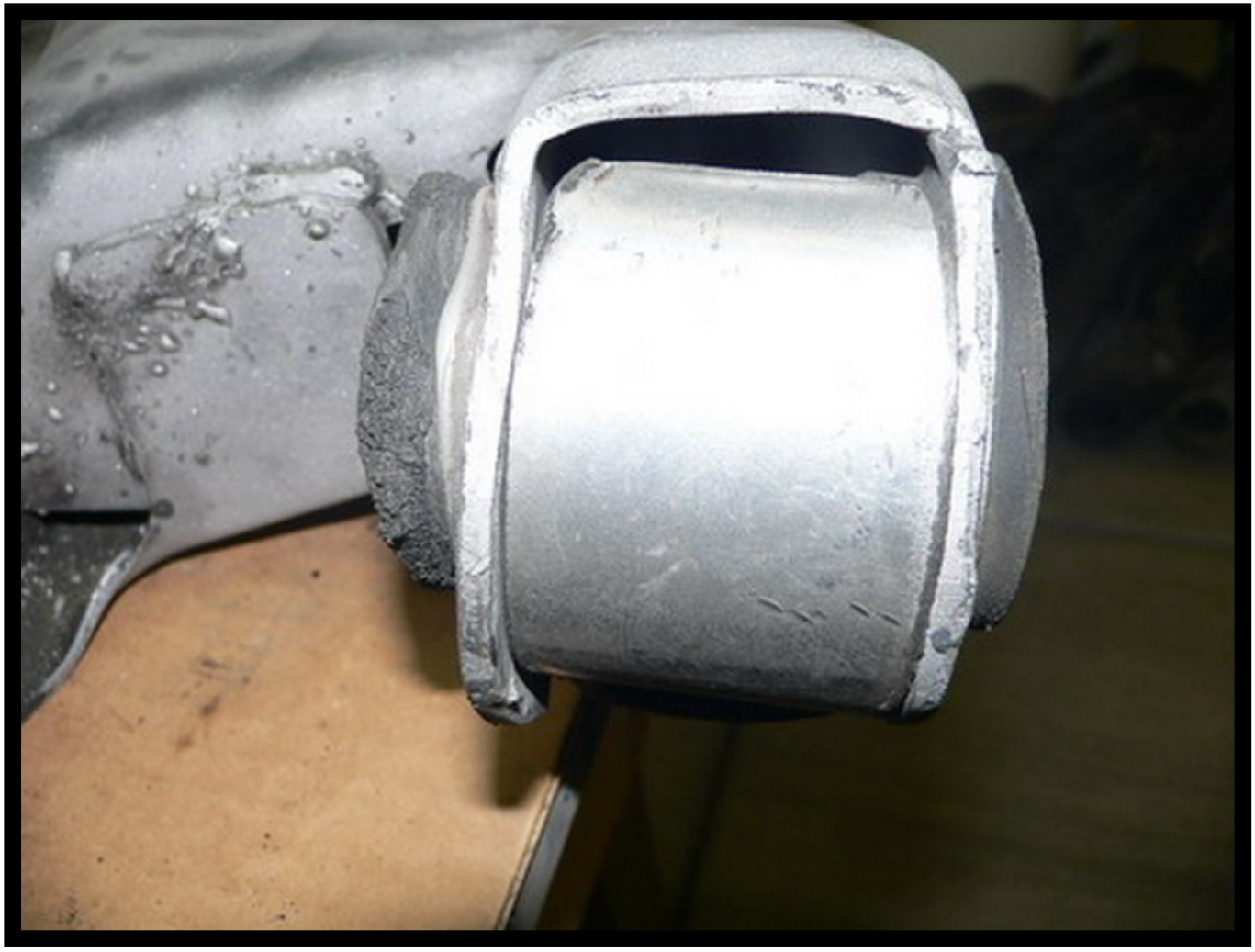
STEP 1

DIFFERENT VIEW

STEP 2

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

OLD LOWER BUSHINGS



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.

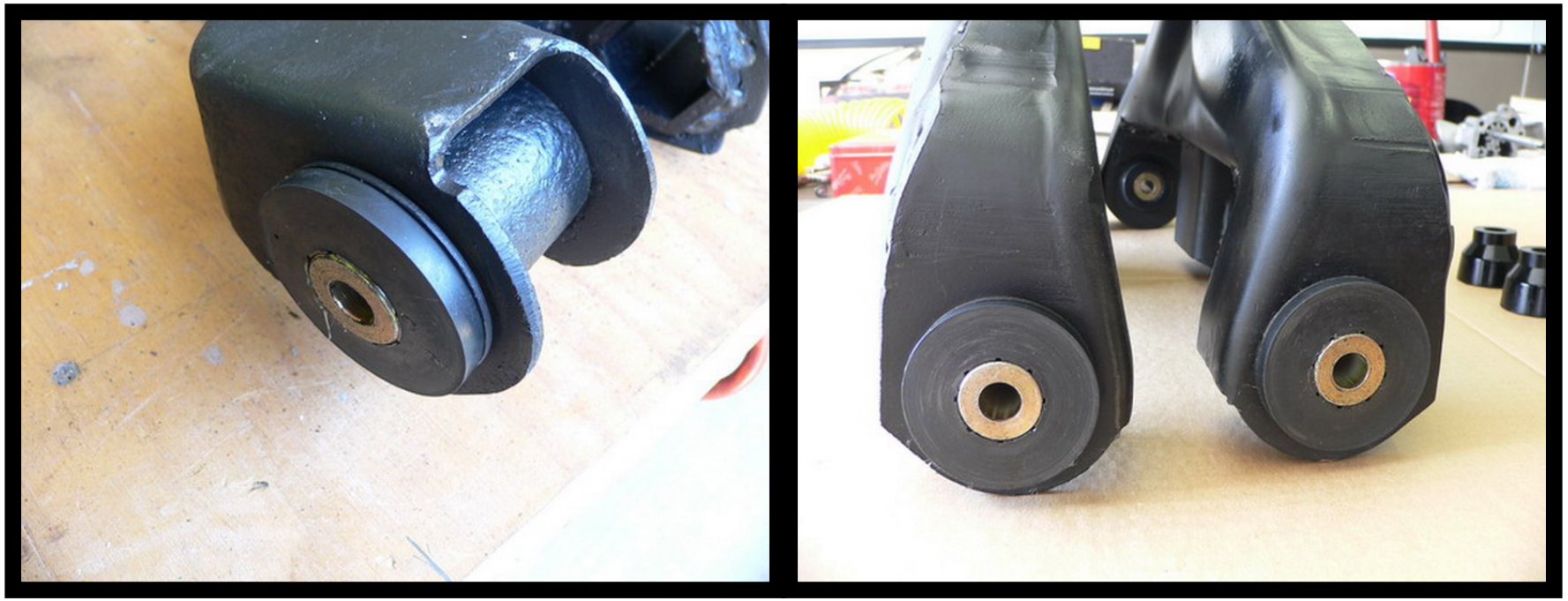
CLEAN OUT ALL THE OLD RUBBER

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



TIP REPAIR

UPPER INNER SLEEVE AND END WASHERS ARE REUSED FOR URETHANE


J-22228

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.


GMC
GMC

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

The End