GMC Motorhome Frame Off Rebuild

By Linwood Auther of Flower Mound, Texas

This coach was a transmode that had never been used as a motor home. It was owned by a clothing salesman that used it as a mobile showroom to display wares to his costumers.

There were closets down the entire drivers side and a table with two chairs on the passengers side.

There was no plumbing or DC electric system. It did have an Onan and a 120 volt AC system for lights and two air conditioners. Have no idea how many miles were on the coach as the speedometer wasn't working.

First, I removed everything from the inside of the coach, including the two roof air conditioners' the driver and passenger seats, all of the windows, the carpet, the headliner and wall coverings.

Then I hung the body in the ceiling of my shop and removed the engine, transmission and final drive from the frame.

The engine and transmission were rebuilt and I purchased a 3.46 final drive.

FRONT END
Replaced one lower A-frame as it was cracked
Replaced all A-frame bushings.
Replaced upper and lower ball joints.
Replaced both knuckles and bearings.
Replaced both calipers, front brake hoses and pads after having rotors turned.
Replaced sway bar bushings.
Replaced stabilizer shock absorber.
Replaced both tie rod ends

REAR END
Removed bogies and straightened them as necessary.
Replaced bogie bushings
Rebuilt all four brakes; turned drums, new wheel cylinder (larger front),new pads including new springs(Eaton).
Installed truetrack system.
Installed new shocks.

DIFFERENCES From ORIGINAL GMC DESIGN

I decided to change a few things about the coach as it was reassembled!

1. **BODY LIFT**

I added 2 1/2" to the height of the frame by attaching a 2" X 2" tube to the top of the frame and a 1/2" rubber pad along the top of the tube.

WHY?

1. More holding tank capacity.
2. More fuel tank capacity. (Not a major consideration as I like to stop at least ever two hours anyway).
3. Less likely to drag when extended.
4. No "Dog House" required when installing Edlebrock aluminum intake manifold and fuel injection system.
5. Allows more room for 245 R-16 tires.

2. **FUEL SYSTEM**

1. Had two tanks made of 3/16" Aluminum.

Front tank - moved forward one bay so as to move center of gravity forward. The front tank holds 25 gallons.

Rear tank - Also moved forward one bay so as to move C.G. forward. The rear tank holds 40 gallons.

2. Tanks are independent of each other. Main tank (40 gal) feeds engine and Onan. Reserve tank (25 gal) feeds engine only and each tank can be selected as desired from the cockpit.

3. Tanks are filled from the original filler spot, but the fuel flows into the top of the tanks as opposed to the side in the original design. This allows fuel to flow freely into the tanks!

4. An inline electric fuel pump (6-10 GPM) in installed just down stream of the fuel selector valve. (Back up and precaution against vapor lock. Presently an engine driven fuel pump supplies fuel to a 750CFM Edlebrock Carburetor)

3. **AIR SYSTEM**

1. Removed both leveling valves.
2. Installed Valves and Schreder valves at each air bag.(Byron Maxwell's system)
3. Installed two cylinder air compressor (Original design).
4. Installed 5 gallon air tank (made from Freon bottle).
5. Installed 3 electric (spring-loaded closed) valves:

(1) One down stream of compressor to prevent bleed back thru compressor. This valve opens only when the pressure switch turns on the compressor

(2) One that allows air to the right bag.

(3) One that allows air to the left air bag.

6. There are three pressure gauges on the coach.

(1) One under the hood near the compressor that reads the total pressure in the tank.

(2) One in the dash at the air control panel that reads the total pressure in the tank.

(3) One on the dash that has two needles. The Green needle indicates the pressure in the right bag; the red needle indicates the pressure in the left bag.

7. The air control panel located on the dash in the same position of the original air control panel contains:

(1) A three position switch (spring-loaded to center position - OFF).

Pushing left- opens valve to inflate left bag.

Pushing right - opens valve to inflate right bag.

(2) Two (2) manually operated Schrader valves, one for each bag to reduce pressure as desired.

8. With bogie extenders, pressure in the bags run at approximately 75 - 80Psi.

The compressor pressure switch is set to turn the compressor on at 65 psi and off at 120 psi.

4. **BODY EXTENSION and REAR WHEEL MOVEMENT**

While contemplating what I wanted in the coach, it became apparent that more room was needed, so, without too much detail:

1. Removed back cap.
2. Obtained 3 1/2 feet (42") of body with ribs from a junker.
3. Added same amount to frame with welding, bolting, fishplating, etc.
4. Installed additional 42" rib section and back cap.

5. re-skined addition

6. Slid rear bogie assembly rearward 20 inches.

7. Moving the rear wheels back required that the Onan be moved. It was placed under the sink in a box constructed of aluminum sheets and insulation all contained in a wooded box. This aided in moving the CG forward.

The additional space was taken up with twin beds, a dry shower, additional pantry and closet space and a larger sink area.

Numerous other differences from original design were performed on this coach. If you have questions, contact Linwood Arthur at 972-539-8202 or on line at larthur539@aol.co.