

## Tank Car Part V

### ASSEMBLING THE TANK BODY AND TANK BODY TO FRAME

#### BILL OF MATERIALS

	QTY	DESCRIPTION
	1	5'3" of 12" Schedule 40 PVC pipe
	1	TV ANTENNA CHIMINEY MOUNT KIT
	4'	1/8" RUBBER VACUUM HOSE
	4	1/4 x 20 SHAKE PROOF NUTS
OPTIONAL	1	1/8 NPT Drain cock

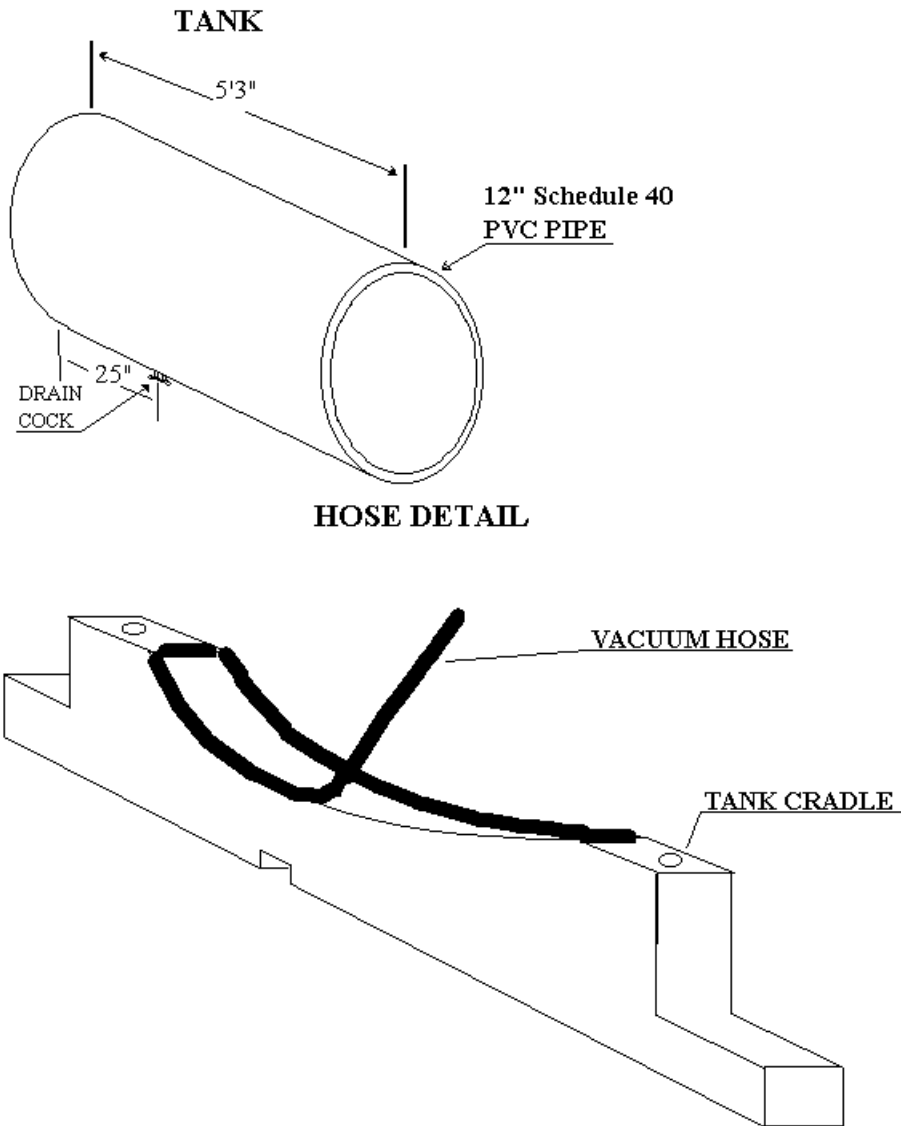
Time now to do the basic tank section. The tank body is made from a piece of 12" Schedule 40 PVC pipe 5' 3" long. Now the fun of working with 12" diameter Schedule 40 is it ain't as light as it looks. When I went to buy the pipe I had not decided on the final tank size. So I asked the pipe place to cut it into 6' sections. I did this for two reasons, First I could only buy 12" pipe in 20' sections and second a 20' piece would not fit in my truck. Two gorillas that worked in the delivery area cut the pipe and threw the pieces into the back of my truck. When I got them home I discovered that these pieces of pipe weigh about 50 pounds a piece and are very hard to get a good grip on. So after some fighting and some choice words I got them into the back yard. But enough of my grief, If for some reason your pipe supplier did not cut it to the length you need the first time you will need to cut this hard to handle piece of plastic and keep the end square! I will try to explain how I cut it.

The cutting process was 80% thought on how to do it and 20% doing it. I have a small 8" table saw with a carbide blade that I rigged up some 2x4s and saw horses to accommodate the pipe. I took two 8' 2x4s and clamped them to the table of the saw so the saw blade is centered in-between the two 2x4s. The distance between the 2x4s is approx. 7.5 inches. Place a short piece of 2x4 on the far end and attach with some screws to form a cleat on the top side of the two parallel boards. Make sure this cleat is square to the two 8' pieces. This cleat will become your zero reference for the length you're going to cut. Place the second cleat on the opposite end to keep the 8' pieces parallel. Use saw horses to support the end of the 2x4s that are dangling in the air. Now measure the distance from the zero reference cleat to the edge of the saw blade and set it to 5' 3". Clamp this rig to the table saw and make sure that the reference cleat and the saw blade are square. Retract the saw blade into the table. Place your pipe into the 2x4 cradle and pull the end flush against the zero reference cleat. Turn on the saw and slowly plunge the blade about an 1/8" into the pipe. Now rotate the pipe in the cradle until you have cut a groove all the way around the pipe. Repeat the previous operation until you have cut through the pipe.

If you desire to make this a functional tank car as I have now is the time to put the drain cock in. Trust me on this one. I did not put the drain in first and later I had to remove the tank from the frame to do this. If you wish to have a false tank you can skip this operation. Mark 25" from the end of the pipe. Drill and tap for a 1/8" NPT and install the drain cock into the hole with some teflon tape. Where you have put this drain cock is the bottom of the tank. This will sit over the center sill of the car and be protected from derailments by the center sill. O.K. Last thing to do this time is mount the pipe to the car frame. Take the rubber vacuum hose and slit one side of it so you have a "C" shaped piece. Place this slit tubing over the edges of the tank cradle where the tank would sit in the cradle. This will hide any variations in the cut curve and protect the PVC pipe from being cut by the steel edges. Now sit the pipe into the cradles and align the drain cock to face the car center sill. Make sure the pipe is set so the overhang on end of the pipe is equal this will center the pipe in the car frame. Now you're going to find out what the antenna mount kit is for. Take the steel straps that the kit provides and use these to strap the tank to the frame. These

straps will have one eye bolt riveted to one end and nothing on the other end. Place the eye bolt into one of the holes on the top side of the tank cradle and put a 1/4 20 shake proof nut on the bolt about have the length of the bolt. Do this for both ends of the tank. Measure the length of the strap to wrap the tank and provide for a length required to attach it to the second eye bolt. Cut the strap and attach the eye bolt per the instructions provided with the kit. Put the second Eye bolt through the hole on the opposite side and put another shake proof nut on the bolt and tighten the strap against the tank. Do the same thing for the other strap.

Next time mounting the end caps.



# ASSEMBLY DETAIL

