

HOW TO INSTALL A TURNING JACK ON YOUR FAIRMONT M-19

By Joel Williams

(Western Maryland M-19, No. 334)

Problem: How do you turn your Fairmont M-19, when you reach the end of the line? While my M-19 runs equally well in either direction, I have been on several railroads where grade crossings in which to turn the car around are not available for several miles. The inconvenience of having to run in reverse for several miles can be a real nuisance (plus, it isn't a recommended practice for the air-cooled condenser/water hopper cooling system).

My first attempt to solve this problem was to use a jack stand, similar to the ones that are found in auto parts stores. I installed a pin on the stand, which slipped into a socket on the car frame. To use the stand, the car was lifted to the height of the stand, the pin was inserted into the frame, the car was balanced, and then turned on the stand. The thing worked, but not too well. If the car wasn't balanced just right, the stand would try to jackknife under the car.

I concluded that a jack mounted solidly under the frame would be the best approach. A search in the local junk yard turned up just the right style jack...a scissors jack from a Toyota.

The base of the jack is in the form of a shallow "U". I removed the base by drilling out the rivets, taking a short piece of alluminum angle, and bolting it to the center cross member of the car frame (see drawing), forming an inverted "U", similar to the original base. Holes were drilled in the angles to match the original jack base, and bolts were used to mount the whole assembly to the car frame.

The top of the jack had a special piece riveted to it that must have fit the Toyota frame. The rivet was drilled out, and a flat plate was bolted to it with a countersunk screw.

A jack handle was then made. I used a trunk lid torsion spring, which is a straight rod 1/4 inch in diameter, made of spring steel. The rod was then heated and bent to form a crank handle.

The whole project takes only a few hours, and requires no special tools. The jack tucks up under the frame very nicely, and doesn't present a clearance problem. Since this jack doesn't extend far enough down to reach the ties, I found that an ammunition box (which doubles nicely as a small-sized tool box and tucks handily under the seat) works very well. An 8x8 wood block would also work in place of the ammunition box.

To turn my car, I find a level tie, put the tool box on it, move the car in place, and jack up the car so the rear wheels are about 3 inches above the rails, turn, and lower the car for the trip in the opposite direction. Turning the car is easy, and it takes less than two minutes. Sorry, but it won't work on an M-9...the cross member is too close to the engine flywheels.

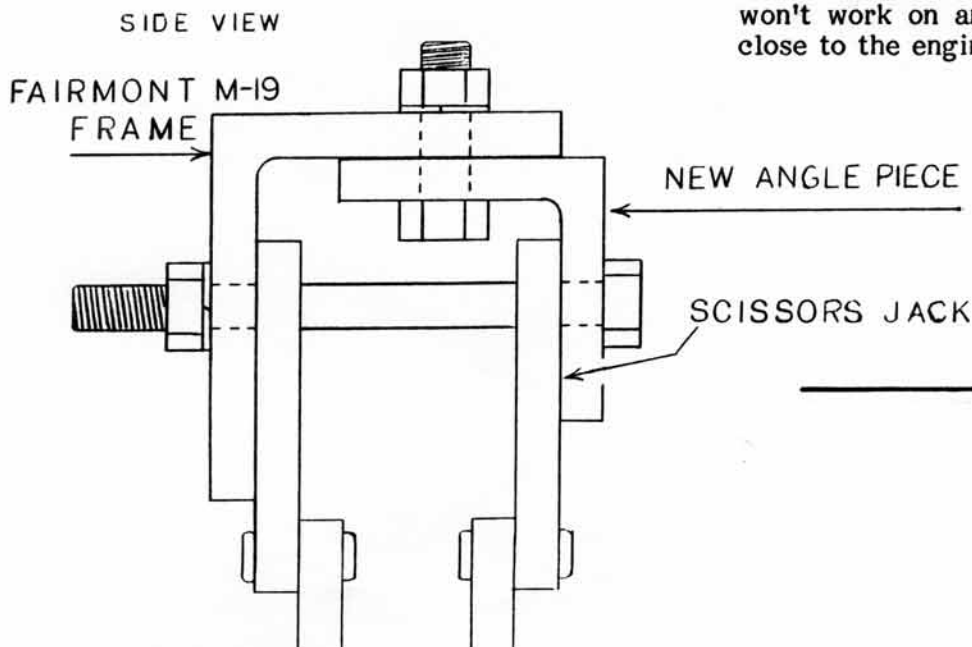


Diagram of Joel Williams' modified Toyota automobile jack for Fairmont M-19 application