

Brake Improvements

By Gene Davis and ERT

When I had to replace the pedals and shaft on my tractor because they had rusted together I decided I could make it a little better than it was now with the originals set up. After removing the floor plate and having to cut the old shaft out and then freeing up all the pedals and the shaft it looked like it needed help. No grease fittings or oil holes meant it was doomed to rust up again. So—the fun began. I laid it out on the table and looked closely at it and immediately saw much room for helping the situation.

Starting with the left pedal, I took the spacer that went between the pedal and the frame, drilled an 11/32" hole in it and tapped a 1/8" pipe thread grease fitting. I also drilled and tapped the clutch pedal, and the right brake pedal for a grease fitting. If you look at each pedal, there is a flat place on each one of them that is used on the left brake pedal for a setscrew to lock it to the shaft to operate the left brake rod, this is where I put the grease fittings. I also installed one in the brake lock cam. The spacer is then slipped back on the shaft with the fitting turned to the bottom, and then all the fittings will be aligned to make them accessible.

You need a short piece of 7/8" I.D.X 1" long tubing with a grease fitting in it also for a bearing support on the right side on the inside of the present shaft hanger. By inside, I mean the part that will be under the floor plate. Place both of the new support bearing tubes against the old hangers and weld them in place, but be sure to leave the shaft in place and check for free rotation after the tack weld. When they are both tack welded but free to rotate, weld them to the original hangers. Leave the shaft in place till the welds cool, so they still stay aligned. Then disassemble and replace washers, cotter pins, but do not reconnect the brake rods yet. When the pedals and shaft are all reassembled and in place, next you need to adjust your clutch to the correct free play, (there are 2 different specs, for different serial number ranges). When you have the clutch pedal free play adjusted correctly then select a place where you can align a return spring as straight as possible with the clutch-operating rod, and drill a 3/16" hole in the frame and also the clutch link. It will keep the throw out bearing from riding against the pressure plate and lengthen the bearing life. Next take a straight edge and clamp it across all 3 pedals and when they are lined up, take a short piece of 5/8" round stock and weld it to the right frame for a pedal stop and all the pedals stay neatly lined up. If you choose to this stop could have a length of threads and drill a hole and put a nut on each side of the hole in the frame. I welded mine so there was less showing. Be sure that you do not have the clutch pedal against the floor plate, leave approximately 1/4" clearance to the rear of the pedal. After you do this, take off the little equalizer tabs on the brake rods that activated the clutch to engage both brakes when you depress the clutch fully. Now make 2 tabs like them that are 3/4" longer but put the holes in the same places. Place these tabs back where you removed the short ones on each rod. Next drill and tap a 1/4"x 20 hole in the differential housing right under where the brake rod enters, be sure and

wear eye protection when drilling and tapping overhead to keep foreign matter out of the eyes. Then make an ear of 1/8" metal approximately $\frac{1}{2}$ " wide X 1" long, then drill a 17/32" hole in one end and a 3/16" hole in the other end, bend this tab at about a 15 degree angle to clear the end of a return spring hooked in it. Centering the holes makes a neater looking job. Bolt this in the newly drilled and tapped hole in the rear housing using a couple of the universal springs usually found at the local auto parts counter with only one end formed in a hook, and you cut the other to length. These springs really do a better job of returning the brakes pedals, and also it keeps the brake/clutch equalizer from rattling. This set up works well.