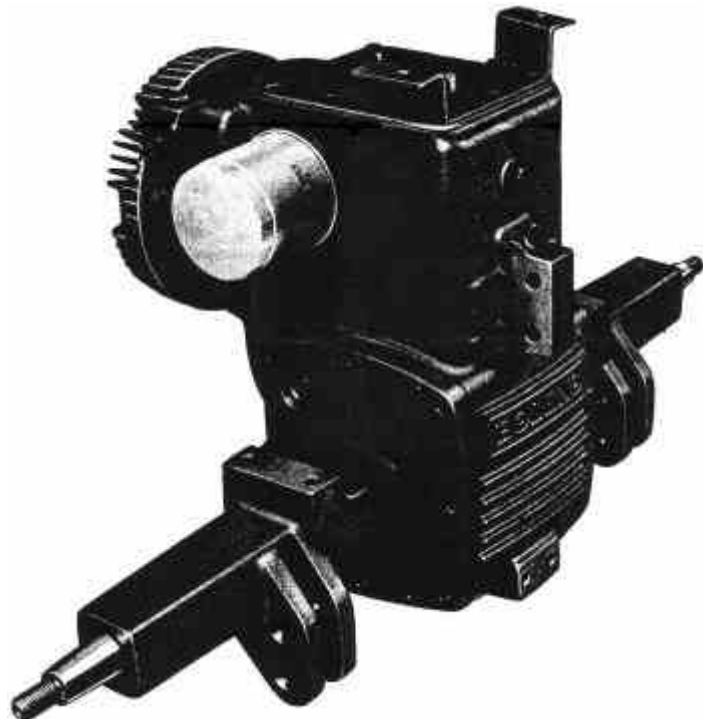


HUSKY TRACTOR

MODEL 12 HYDROSTATIC TRANSAXLE

Used on Models 197
198
1476
1477



PORT WASHINGTON, WISCONSIN, USA

Eaton 12 Service and Maintenance Instruction

Don and Pete Duff's notes

First let me say that in my opinion the Eaton-12 hydro & rear combination had the best features in a garden tractor ever made and if you ever used one you would know why. One was the P-N-D feature (Park – Neutral – Drive). In P or N it allowed you to start the engine with no back pressure a great help in cold weather, the park is like your car/pickup park, you can hold the tractor on a steep hill with the hydro pedal and put in park. This is easier then trying to set a parking break.

To take your Eaton 12 hydro apart,

Are you taking it apart for checking for wear or it does not move? If it does not move but the hydraulic lift works, there is one thing you can check without removing the hydro, that is the shuttle valve. You have to remove seat & pan assembly then the P-N-D valve and the top cover from the rear itself.



You will see three screw plugs, under the one on the left hand side is the shuttle valve, if you can see small rounded piece your shuttle valve is good, if you see a hole about 5/16" your shuttle valve is broken and you must find the broken parts, to remove the old shuttle valve insert a 3/8-16 tap in the 5/16" hole, with threads in the old valve you can use a standard 3/8" bolt as a puller to remove without hurting the bore of the hole so a new shuttle valve can be installed.



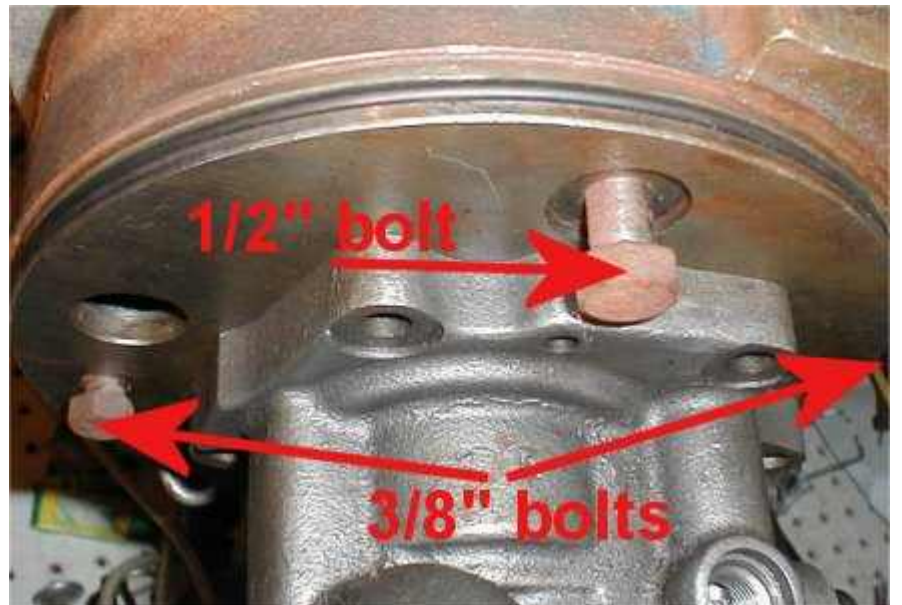
Eaton 12 Service and Maintenance Instruction

Under the right side cap is a check ball & spring for the P-N-D oil bypass; this is for easy starting and rolling the tractor. The ball is 0.437 in diameter and the tapered spring is about 7/8" long. If the spring is broken tractor will not have drive power.



Check ball & spring for the P-N-D oil bypass

To remove the finned alum front cover on front of the hydro, you need to remove two 3/8" bolts & one 1/2" bolt from the rear of the centre section.



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This allows the finned cover to be removed so you can check your slippers (7), pistons (7) & cam ring for wear or to replace them.



Radial pump with new (used) and worn slippers



Worn and new (used) slippers

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Worn cam ring



Can ring machined and sanded

Eaton 12 Service and Maintenance Instruction

Also on the rotor is a roller thrust bearing consisting of a thin race 0.032 thick, a roller bearing 0.075 wide and a thicker race 0.093 thick (thin race towards the rotor).



To check or change the charge pump you must remove the drive motor casting from the centre section. There are five 3/8" bolts holding this together. Remove the large "O"-ring from the finned aluminium cover and put back on with the slippers, pistons & cam ring removed with two of the 3/8" bolts to hold it. Now you can remove the five 3/8" bolts holding the drive motor & charge pump wear plate from the centre section.



There are two other bolts on the other side.

Eaton 12 Service and Maintenance Instruction

With the drive motor removed you can check the charge pump ring & rollers for wear or replacement and also check the wear plate for wear or groves. Under the charge pump wear plate is a tapered spring & plunger. This spring is about 1 3/16" long. The charge pump is made up of a ring with six rollers 0.250 in diameter X 0.562 long, a drive key (round 3/16" in diameter X 3/8" long) and an outer ring in the gear motor housing with a bore 2.940 - 2.450 inside diameter.

You can also check the pintle shaft for wear or groves, (pintle size 1.437 in diameter) there is a snap ring holding the pintle shaft to the gear motor housing. Remove this snap ring and pull out straight. There is a dowel pin in there for line up purposes and two "O"-rings. With the drive motor section removed, turn the hydro so you remove the front finned cover. Now you can remove the rotor. The rotor comes out the front of the hydro and has seven holes for the pistons. It also has a bushing inside the centre of it (that rides on the pintle shaft). That bushing should be 1.4375 to 1.438 in size. If much larger in diameter or a groove wore between the seven holes, the bushing should be replaced or the oil will bypass making the tractor lose drive power. The front of the rotor is also the input shaft that should be 0.875 in diameter with a good woodruff key.

To check the drive motor gears, (the gears & housing should be checked if you had a broken shuttle valve) bearings or the drive key (round key) remove the eight (8) 3/8" bolts from the side of the gear motor. Take out the gear & shaft for repair or replacement.



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The short shaft is on top for brake rotor coupling while the long splined on the bottom for drive gear both shafts come out the right side.

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Charge Pump

The charge pump is a secondary pump used for auxiliary accessories as the hydraulic cylinder.



Six rollers pins 1/4 X 9/16

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