

## TO THE READER

This Workshop Manual shows the altered points of new T1700H-T1700HX (Serial No.: above 50000) which is installed with Eaton's hydrostatic transaxle, from T1700H-T1700HX (Serial No.: up to 50000). It is divided into two parts, "MECHANISM" and "DISASSEMBLING AND SERVICING".

As for the items which are not explained in this Workshop Manual, refer to the description of the T1700H-T1700HX Workshop Manual (Code No. : 97897-11260) issued before.

All information, illustrations and specifications contained in this manual are based on the latest production information available at the time of publication.

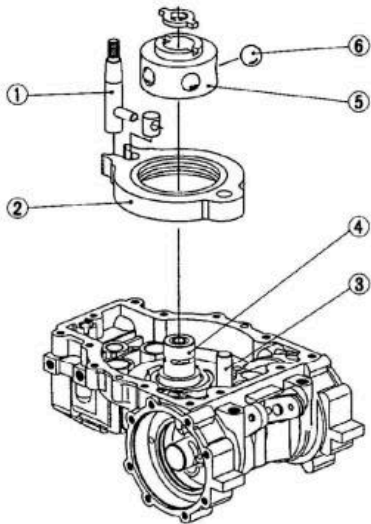
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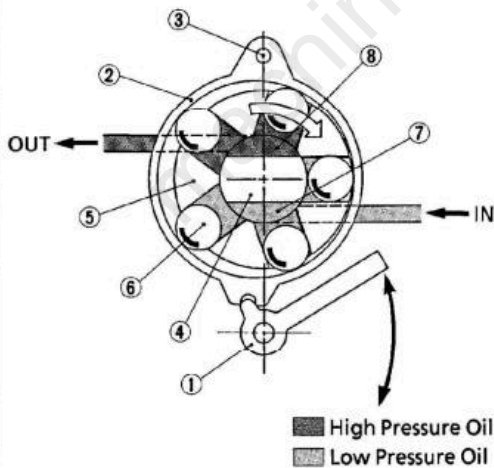
**(1) Ball Piston Pump**

**[Ball Piston Pump]**



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**[Operation]**



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The ball piston pump driven by the input shaft is of the variable displacement type in which the delivery rate and direction are changed by the cam ring.

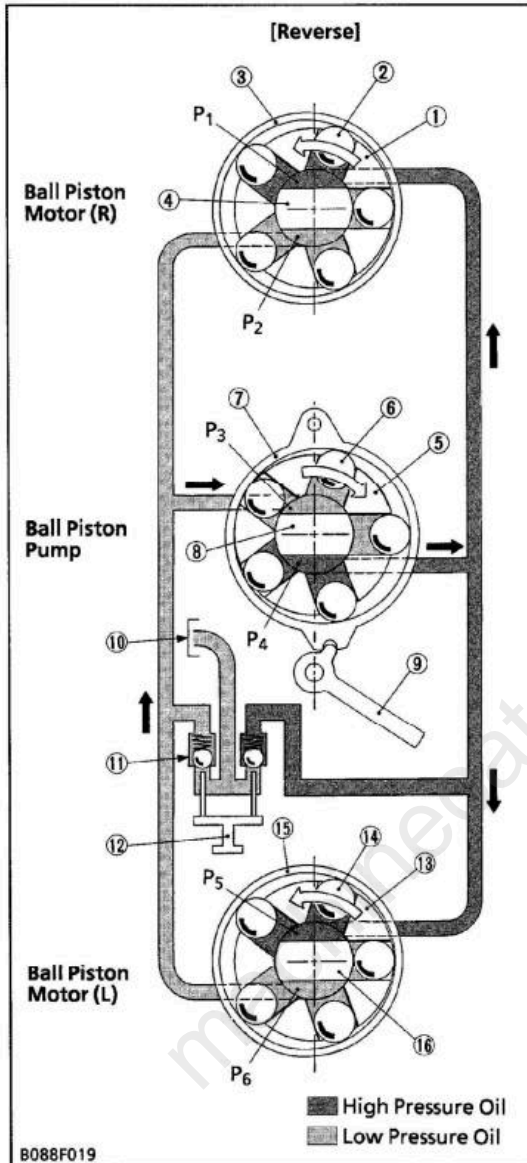
The ball piston pump consists of pump shaft (4) having two ports (7), (8), pump rotor (5) having five ball pistons (6) installed on the pump shaft, and cam ring (2) whose position around the pump rotor is changed by the speed control pedal operation.

When the input shaft drives the pump rotor, the ball pistons move along the inner circumference of the cam ring because of the centrifugal force.

When the cam ring is in an eccentric position as against the pump rotor, ball pistons also move in the up and down direction as against the cylinder to effect oil suction and discharge through two ports on the pump shaft.

Speed control pedal operation causes control shaft (1) to be rotated via the link mechanism to oscillate the cam ring around fulcrum (3). As a result, the cam ring is placed concentrically or eccentrically with the rotor. As the cam ring eccentricity increases, the oil suction and discharge rates increase.

- |                   |                 |
|-------------------|-----------------|
| (1) Control Shaft | (5) Pump Rotor  |
| (2) Cam Ring      | (6) Ball Piston |
| (3) Fulcrum       | (7) Port        |
| (4) Pump Shaft    | (8) Port        |



■ **Reverse**

When the speed control pedal is operated in the reverse direction, control shaft (9) sets cam ring (7) eccentrically with pump rotor (5) in the direction opposite to that for forward traveling.

The pressurized oil is fed through the P4 port and flows through the P1 and P5 ports to the ball piston motor (R) and (L). As a result, ball piston motors (R) and (L) rotate in the reverse direction to cause reverse traveling of the vehicle.

- |                     |                      |
|---------------------|----------------------|
| (1) Motor Rotor (R) | (9) Control Shaft    |
| (2) Ball Piston     | (10) Oil Tank        |
| (3) Motor Race (R)  | (11) Check Valve     |
| (4) Motor Shaft (R) | (12) By-pass Lever   |
| (5) Pump Rotor      | (13) Motor Rotor (L) |
| (6) Ball Piston     | (14) Ball Piston     |
| (7) Cam Ring        | (15) Motor Race (L)  |
| (8) Pump Shaft      | (16) Motor Shaft (L) |

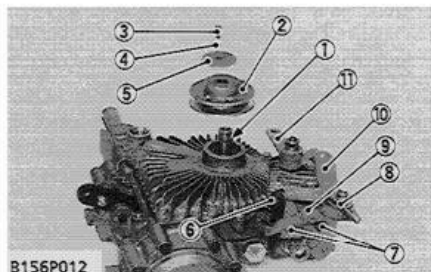
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## **S. DISASSEMBLING AND SERVICING**

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- |                   |                            |
|-------------------|----------------------------|
| (1) Key           | (7) Bracket Mounting Screw |
| (2) Pulley        | (8) Neutral Adjuster       |
| (3) Screw         | (9) Bracket                |
| (4) Spring Washer | (10) Neutral Arm           |
| (5) Plate         | (11) Speed Change Arm      |
| (6) Spring        |                            |

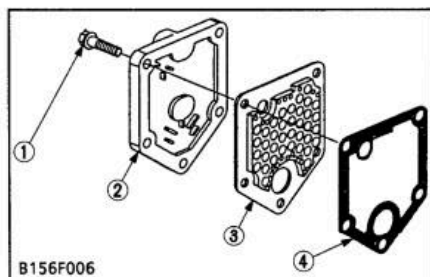
### Neutral Arm, Speed Change Arm and Pulley

1. Remove the spring (6).
2. Unscrew the mounting screw (7) and remove the bracket (9) together with the neutral arm (10) and neutral adjuster (8).
3. Remove the speed change arm (11).
4. Unscrew the screw (3) and remove the plate (5), pulley (2) and key (1).

### (When reassembling)

- After reassembling, be sure to adjust the neutral. (See page S-5.)

Tightening torque	Bracket mounting screw	12.7 to 15.7 N·m 1.3 to 1.6 kgf·m 9.4 to 11.6 ft·lbs
	Neutral adjuster retaining screw	18.6 to 24.5 N·m 1.9 to 2.5 kgf·m 13.7 to 18.1 ft·lbs
	Pulley mounting screw	9.8 to 11.3 N·m 1.00 to 1.15 kgf·m 7.2 to 8.3 ft·lbs

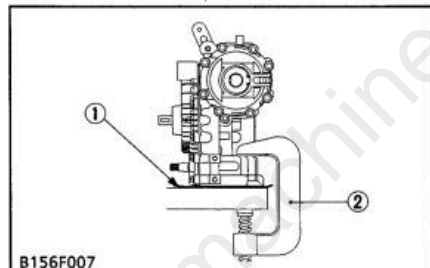


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### Valve Cover and Filter

1. Unscrew the hex flange screws (1) and remove the valve cover (2), filter (3) and gasket (4).

- |                      |            |
|----------------------|------------|
| (1) Hex Flange Screw | (3) Filter |
| (2) Valve Cover      | (4) Gasket |

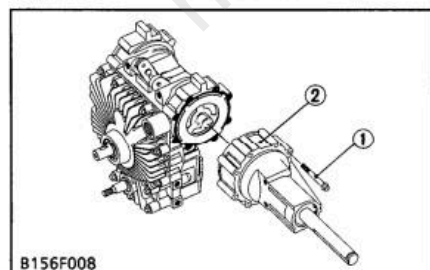


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### Securing the Transaxle

1. It is easier to disassemble the axle assemblies with the transaxle as shown. Before securing the transaxle in this position, place a clean towel (1) between the sealing surface and the work surface to protect the sealing surface from possible damage during repositioning.
2. Use a 6 to 8 inch (150 to 200 mm) C-clamp (2) to secure the transaxle to a clean work surface. Do not overtighten the C-clamp when securing the transaxle.

- |                 |             |
|-----------------|-------------|
| (1) Clean Towel | (2) C-clamp |
|-----------------|-------------|



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### Separating Axle Housing

1. Use a 3/8 inch (9.5 mm) socket or end wrench to unscrew the mounting screws (1).
2. Carefully remove the axle housing (2) with planetary gears inside from the housing.

Tightening torque	Axle housing mounting screw	14.0 N·m 1.4 kgf·m 10.3 ft·lbs
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- |                                 |                  |
|---------------------------------|------------------|
| (1) Axle Housing Mounting Screw | (2) Axle Housing |
|---------------------------------|------------------|

# Full Version Available

Kubota T1700H Lawn Tractor Workshop Manual

This is a short preview. The complete manual contains all chapters, wiring diagrams, torque specifications and full service procedures.

**VIEW THE FULL MANUAL**

<https://machinecatalogic.com/kubota-t1700h-lawn-tractor-workshop-manual/>