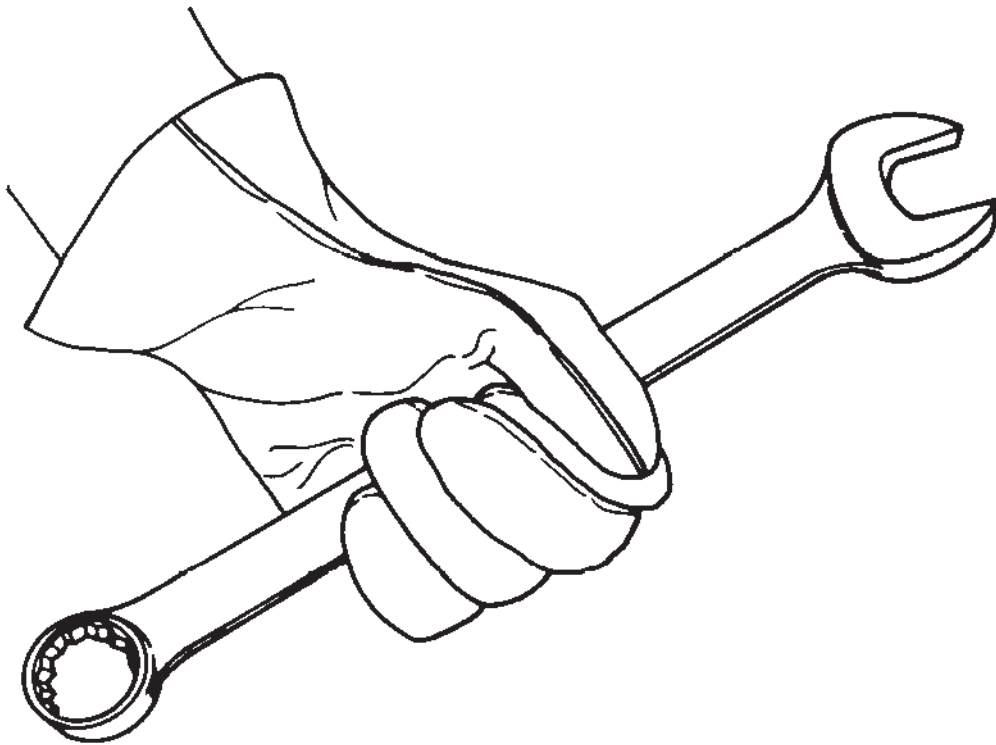




HYDROSTATIC PUMP

COMPONENT REPAIR MANUAL



MELROE
INGERSOLL-RAND

6570269(3-86)



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INTRODUCTION

Melroe recommends that all service technicians attend either field or factory Bobcat Service Workshops for necessary information and education.

Workshops are held many times a year at various locations throughout the U.S. and Canada. Contact your District Service Manager or Melroe Service Office Gwinner, N.D. (701) 678-6165 for schedule.

This Component Repair Manual provides the Service Technician with information for servicing Hydrostatic Pumps.

Make reference to the SERVICE MANUAL for your MODEL Loader to troubleshoot, test, remove and installation of the hydrostatic pumps.

See the INDEX Page to find your MODEL Loader, S/N listing, Tab # and Manufacturer.

SAFETY INSTRUCTIONS

We Care About Your Safety.



! WARNING

Wear safety glasses to prevent eye injury when any of the following conditions exist:

- When fluids are under pressure.
- Flying debris or loose material is present.
- Engine is running.
- Tools are being used.

W-2019-1285

BEFORE YOU WORK ON THE HYDROSTATIC PUMP

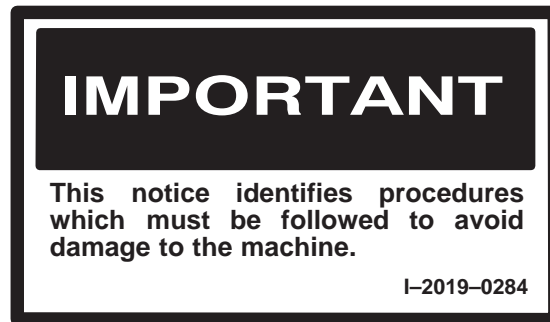
Read the complete sequence so you know the complete disassembly or assembly procedure before the work is actually started.



! WARNING

Warnings on the machine and in the manuals are for your safety. Failure to obey warnings can cause injury or death.

W-2044-1285



IMPORTANT

This notice identifies procedures which must be followed to avoid damage to the machine.

I-2019-0284

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HYDROSTATIC PUMP MANUAL INDEX

MODELS	S/N	TAB	SECTION	MANUFACTURER
farmboy, 440, 440B, 443	All	1	A	Cessna
530, 533	All	2	A	Vickers
540, 543	11999 & Below	2	A	Vickers
540, 543	12001 & Above	1	A	Cessna
630, 631, 632	All	2	B	Vickers
641, 642, 642B, 643	All	2	B	Vickers
720, 721, 722	All	2	A	Vickers
730, 731, 732	All	2	B	Vickers
741, 742, 743	All	2	B	Vickers
750 Series	All	3	D	Sundstrad
* 825, T135 & T136	All	1	B	Cessna
843	All	1	C	Cessna
853	All	3	E	Sundstrand
943	All	3	A	Sundstrand
974, 975	ALL	3	B	Sundstrand
1213	All	1	C	Cessna
1600	11999 & Below	2	B	Vickers
1600	12001 & Above	3	C	Sundstrand
2000	All	2	B	Vickers
2400	All	3	C	Sundstrand
Glossary of Terms	TAB #4			

* T116 Only: Refer to the Hydraulic Pump Manual, TAB 1, Section F for repair procedure.

CESSNA PUMP

Section A

PARTS IDENTIFICATION

MODEL: farmboy, 440, 443	A-1
MODEL: 540, 543 (S/N 12001 & Above)	A-2

HYDROSTATIC PUMP

Disassembly and Assembly	A-3
Inspection	A-8

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Hello dear friend!

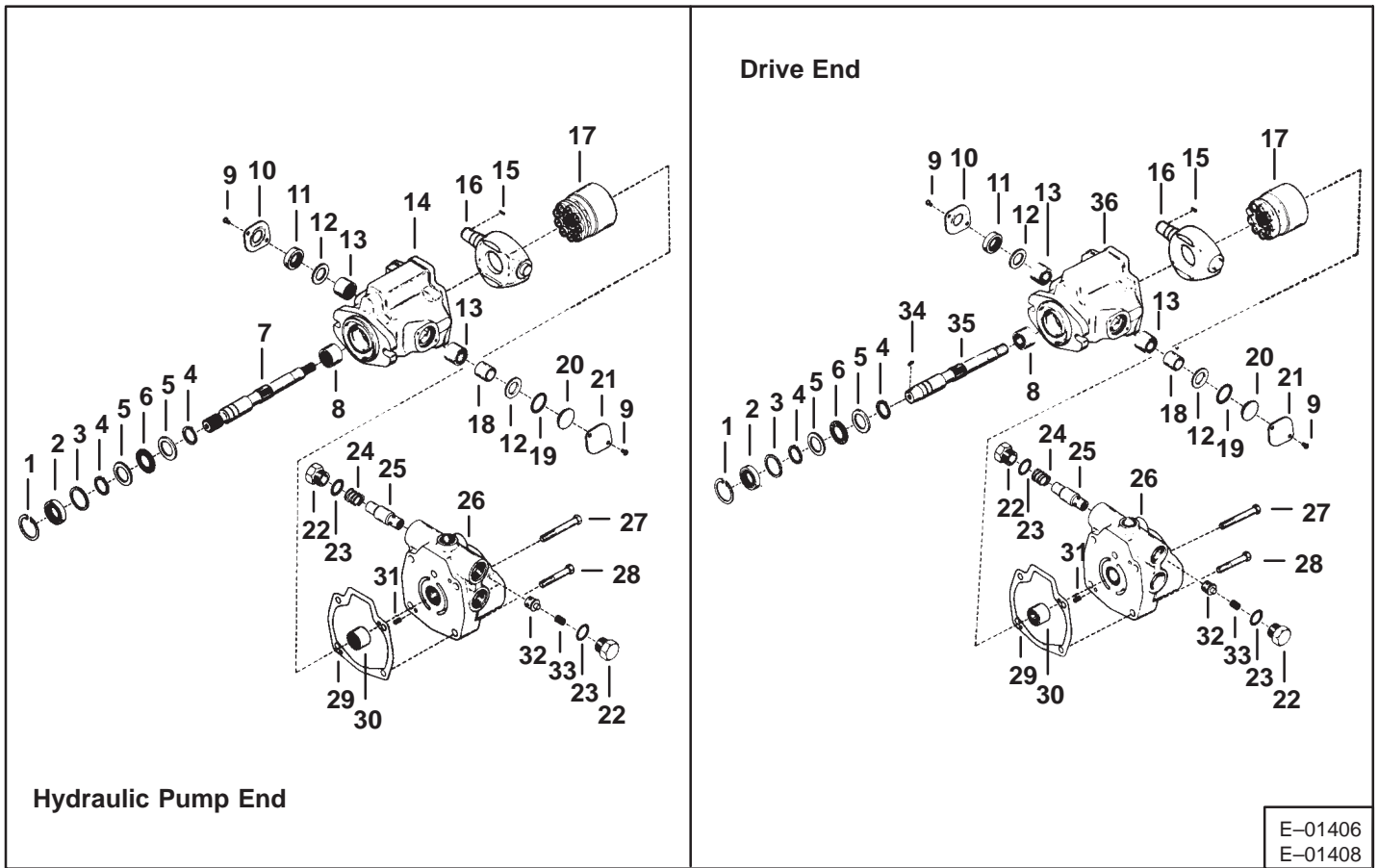
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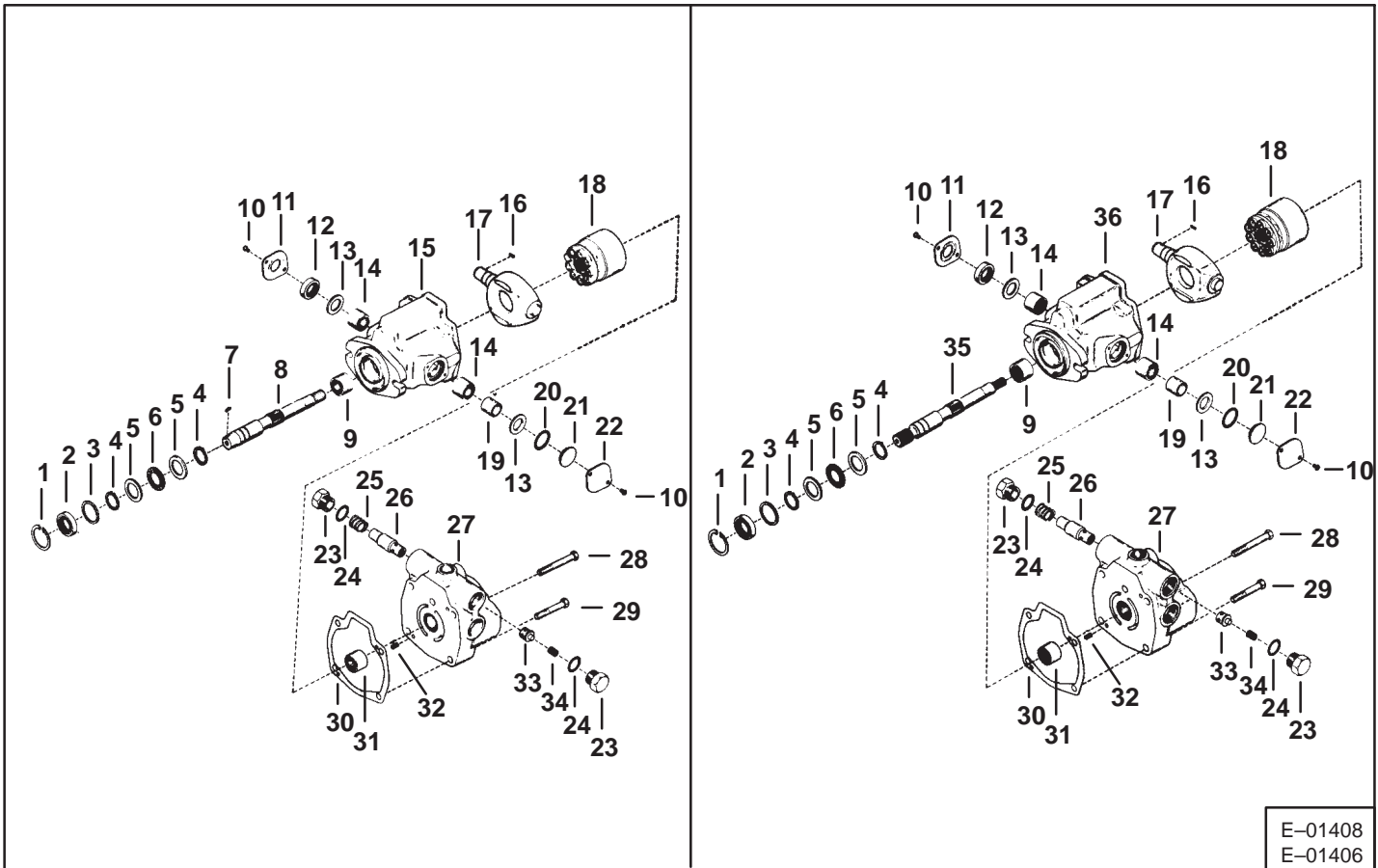
PARTS IDENTIFICATION



MODEL: farmboy, 440, 443

Ref.	Description	Ref.	Description
1.	RING, retaining	18.	BUSHING
2.	SEAL, shaft	19.	O-RING
3.	WASHER	20.	COVER
4.	RING, retaining	21.	COVER
5.	RACE	22.	PLUG
6.	BEARING, thrust	23.	O-RING
7.	SHAFT, drive	24.	SPRING
8.	BEARING	25.	VALVE, relief
9.	SCREW	26.	PLATE, back
10.	COVER	27.	BOLT
11.	SEAL	28.	BOLT
12.	WASHER	29.	GASKET
13.	BEARING	30.	BEARING
14.	HOUSING	31.	DOWEL
15.	KEY	32.	SEAT
16.	PLATE, yoke	33.	SPRING
17.	ROTATING GROUP	34.	KEY
		35.	SHAFT, drive
		36.	HOUSING

PARTS IDENTIFICATION



MODEL: 540, 543 (S/N 12001 & Above)

Ref.	Description
1.	RING, retaining
2.	SEAL
3.	WASHER
4.	RING, retaining
5.	RACE
6.	BEARING, thrust
7.	KEY
8.	SHAFT, drive
9.	BEARING
10.	SCREW
11.	COVER
12.	SEAL
13.	WASHER
14.	BEARING
15.	HOUSING
16.	KEY
17.	PLATE, yoke
18.	ROTATING GROUP

Ref.	Description
19.	BEARING
20.	O-RING
21.	COVER
22.	COVER
23.	PLUG
24.	O-RING
25.	SPRING
26.	VALVE, relief
27.	PLATE, back
28.	BOLT
29.	BOLT
30.	GASKET
31.	BEARING
32.	DOWEL
33.	SEAT
34.	SPRING
35.	SHAFT, drive
36.	HOUSING

HYDROSTATIC PUMP

THE ILLUSTRATIONS MAY NOT BE EXACTLY THE SAME AS THE HYDROSTATIC PUMP YOU ARE WORKING ON, BUT THE PROCEDURE IS THE SAME.

Disassembly and Assembly

The tool listed will be needed to do the following procedure:

MEL-1219-4 – Torx Socket

IMPORTANT

When repairing hydrostatic and hydraulic systems, clean the work area before disassembly and keep all parts clean. Always use caps and plugs on hoses, tubelines and ports to keep dirt out. Dirt can quickly damage the system.

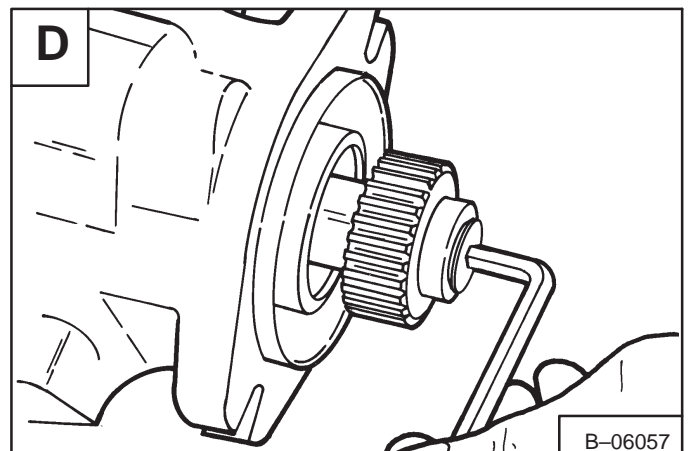
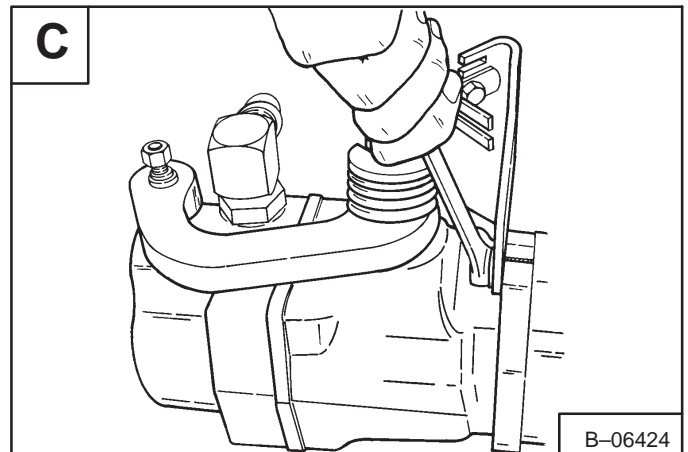
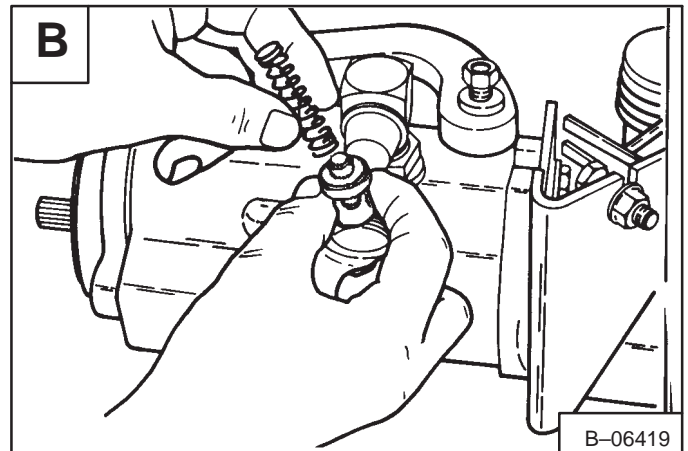
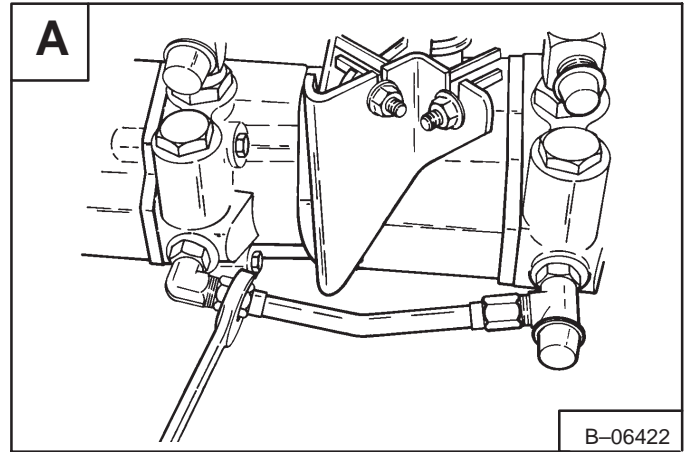
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NOTE: Before you begin to disassembly the hydrostatic pump, remove the hydraulic pump from the unit.

- ☆ Remove the charge tubeline [A].
- ☆ Remove the four replenishing valves from the pump [B].
- ☆ Remove the bolts and center bracket from the pumps [C].
- ☆ Assembly: Tighten the bolts to 27–31 ft.-lbs. (37–42 Nm) torque.
- ☆ Separate the pump housing from the center section.
- ☆ Remove the coupler from the center section.
- ☆ Remove the pintle levers from the pump.
- ★ Remove the bolt and splined gear from the pump shaft [D].
- ★ Assembly: Tighten the bolt to 25–28 ft.-lbs. (34–38 Nm) torque.

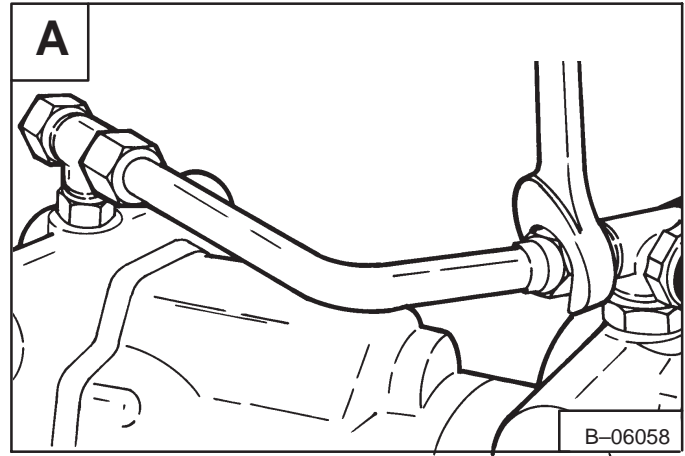
☆ farmboy, 440, 443 Procedure Only

★ 540, 543 Procedure Only



HYDROSTATIC PUMP (Cont'd)

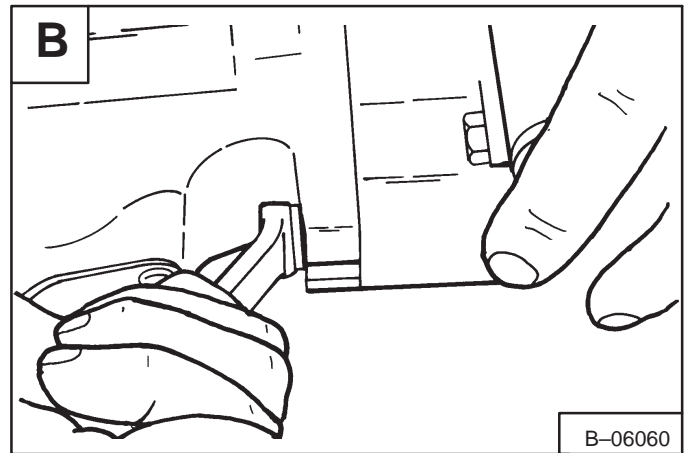
★ Remove the charge tubeline between the two pumps [A].



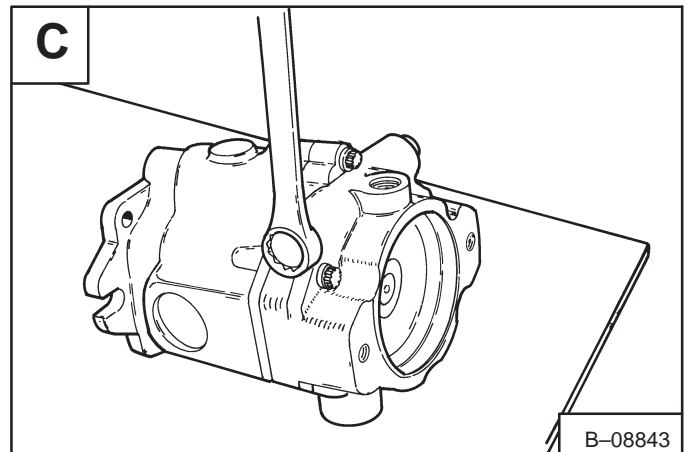
★ Remove the two bolts which fasten the two pumps together [B].

★ Assembly: Tighten the bolts to 25–28 ft.-lbs. (34–38 Nm) torque.

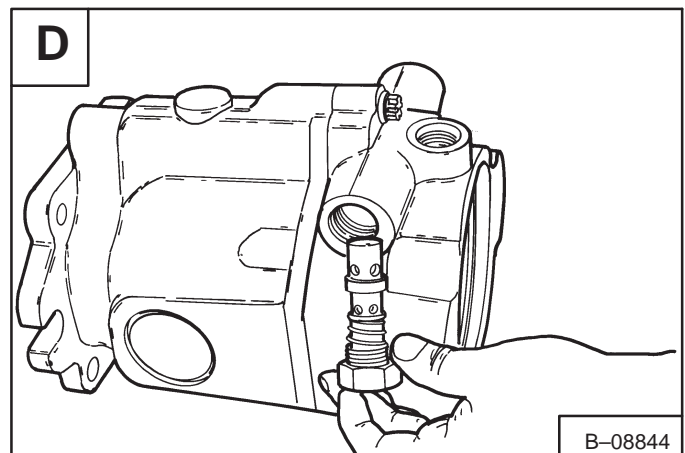
★ Separate the pumps and remove the coupler.



★ Remove the plugs at the high pressure replenishing valves [C].



★ Remove the high pressure replenishing valves [D].



☆ farmboy, 440, 443 Procedure Only

★ 540, 543 Procedure Only



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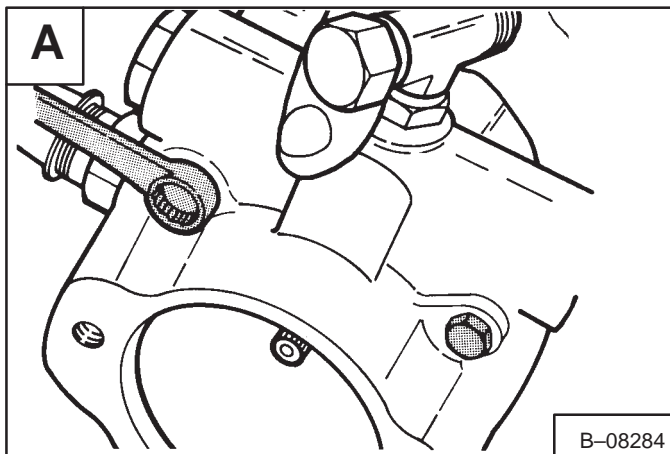
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HYDROSTATIC PUMP (Cont'd)

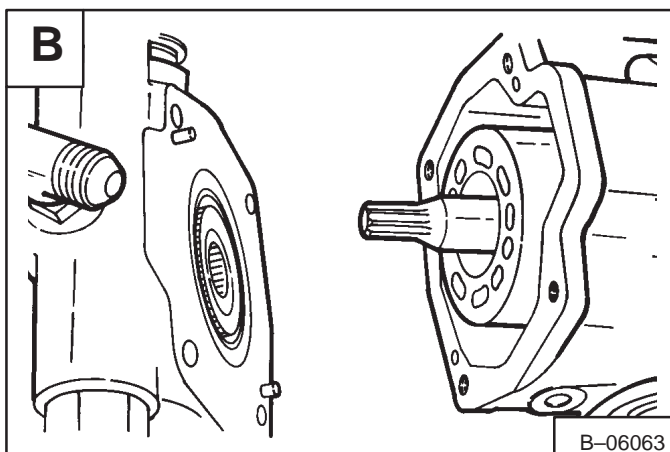
NOTE: The hydrostatic pump front and rear internal parts are the same. Keep all the parts for one pump separated from the parts for the other pump.

Remove the four bolts from the center section [A].

Assemble: Tighten the bolts to 17–21 ft.-lbs. (23–28 Nm) torque.

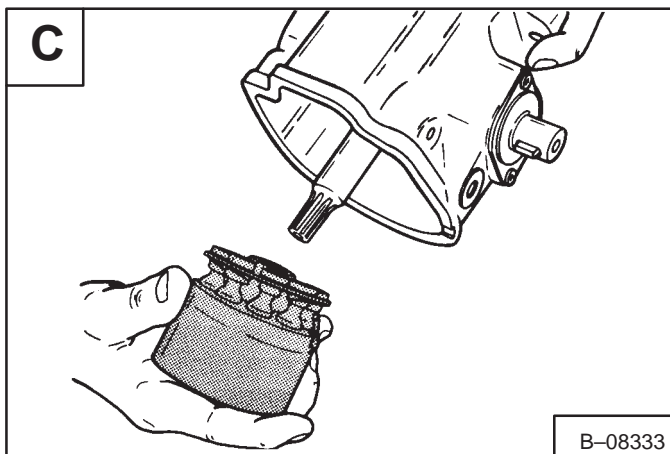


Remove the center section [B].



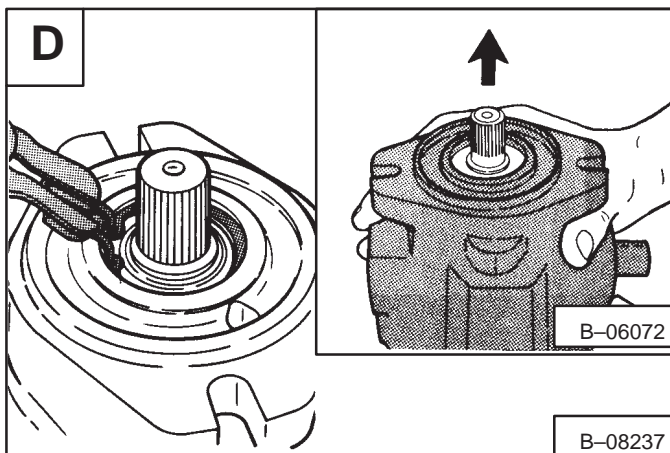
Remove the rotating group [C].

Put your hand under the rotating group and turn the pump housing around so the rotating group will slide into your hand.



Remove the snap ring from the rear housing [D].

Hit the shaft on a block of wood to remove the bearing and shaft [D].



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