

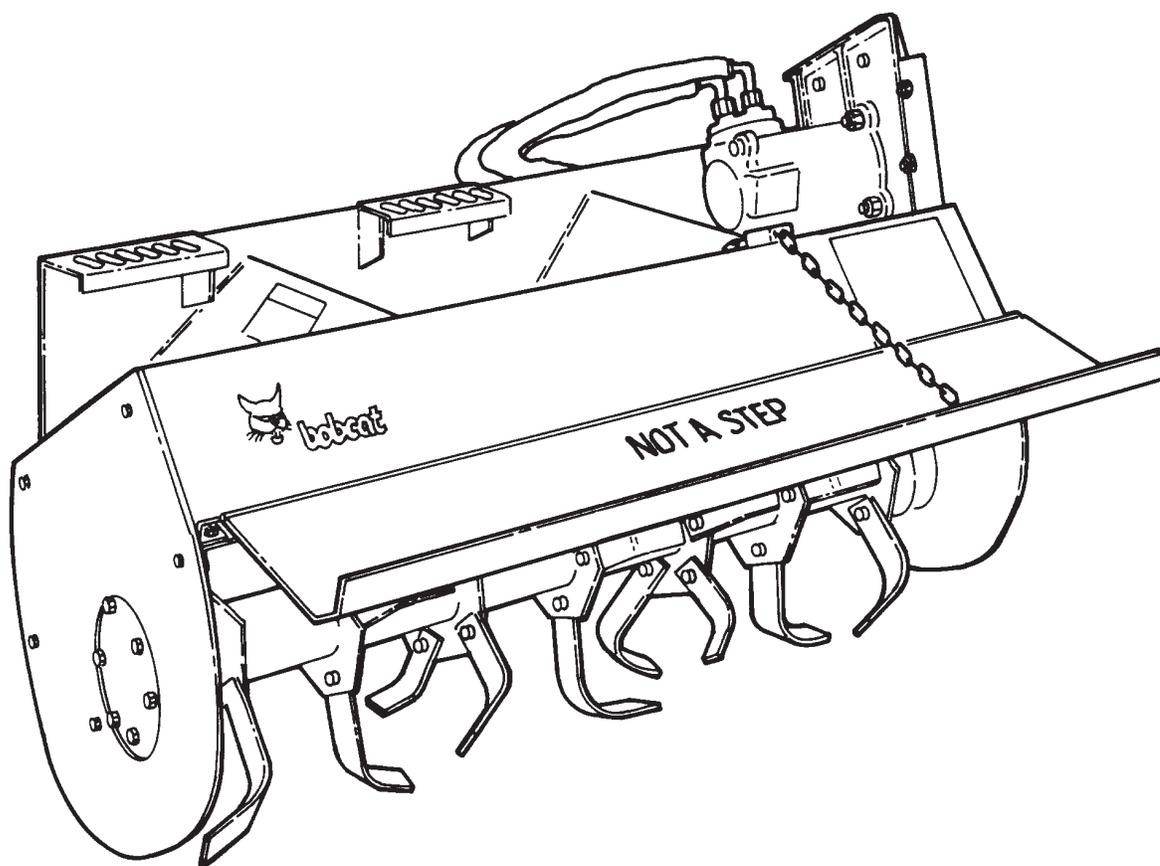
Product: 1999 Bobcat 52 INCH,68 INCH Tiller Service Repair Workshop Manual
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TILLER

52 INCH S/N 280100101 & Above
68 INCH S/N 054700101 & Above

Service Manual



Sample of manual. Download All 42 pages at:

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MAINTENANCE SAFETY



WARNING

Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, Operator's Handbook and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.

W-2003-0903



Safety Alert Symbol: This symbol with a warning statement, means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.



B-10731a

-  Never service attachments without instructions. See Operation & Maintenance Manual and Attachment Service Manual.
-  Cleaning and maintenance are required daily.
-  Never service or adjust attachment with the engine running unless instructed to do so in manual.
-  Always lower the attachment to the ground before lubricating or servicing.
-  Avoid contact with leaking hydraulic fluid or diesel fuel under pressure. It can penetrate skin or eyes.
-  Stop, cool and clean engine of flammable materials before checking fluids.
-  Keep body, loose objects and clothing away from moving parts, electrical contacts, hot parts and exhaust.
-  Safety glasses are needed for eye protection from electrical arcs, battery acid, compressed springs, fluids under pressure and flying debris or when tools are used. Use eye protection approved for type of welding.



Bobcat®

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**CALIFORNIA
PROPOSITION 65 WARNING**
Diesel engine exhaust and some of its
constituents are known to the State of California
to cause cancer, birth defects and other
reproductive harm.

**PREVENTIVE
MAINTENANCE**

**HYDRAULIC
SYSTEM**

MAIN FRAME

**SPECIFICATIONS
AND
SCHEMATICS**

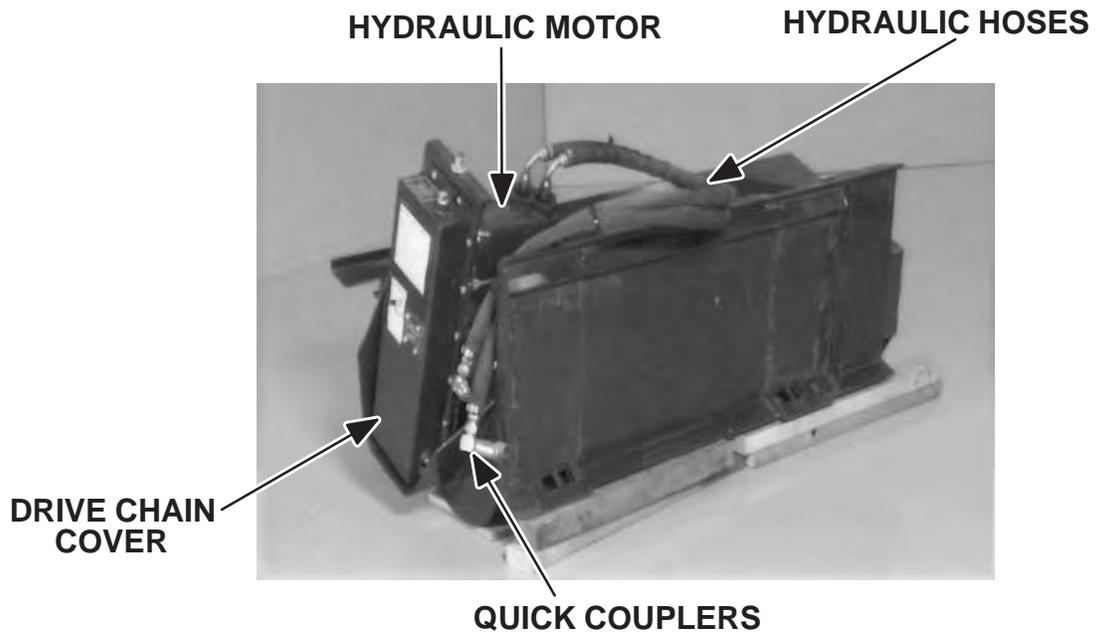
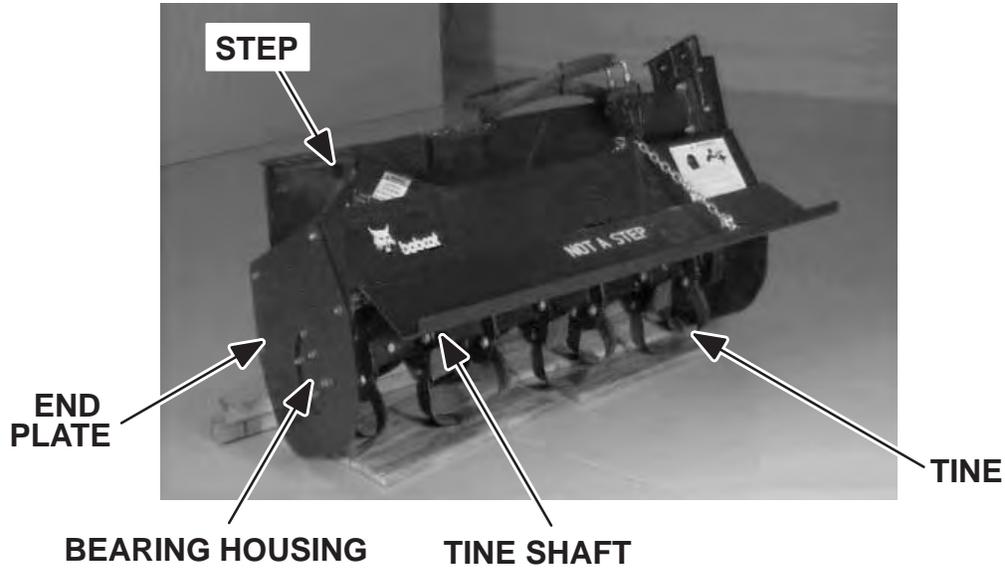


SERIAL NUMBER LOCATION

It is important to make the correct reference to the serial number of the Tiller attachment when making repairs or ordering parts. Early or later models (identifications made by serial number) may use different parts, or it may be necessary to use different procedures in doing a specific service operation. The Tiller serial number (Item 1) [A] is located on the top of the frame.



IDENTIFICATION



P-09150
P-02818

PREVENTIVE MAINTENANCE



	Page Number
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INSPECTION



WARNING

Instructions are necessary before operating or servicing machine. Read Operation & Maintenance Manuals, Handbook and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Failure to follow instructions can cause injury or death.

W-2003-1289

Maintenance work must be done at regular intervals. Failure to do so can result in damage to the Tiller. This service schedule is a guide for correct maintenance of the Tiller.

Daily Inspection

1. Clean the Tiller attachment to keep it free of material build up. Clean the debris wrapped around the tine shaft and tines.
2. Check all nuts, bolts, shield and guards for tightness.
3. Check safety signs (decals) and safety treads for damage. Replace if damaged, clean if soiled.
4. Check all hydraulic hoses and fittings for leaks or damage.
5. Check for loose or damaged parts.

25 Hour Inspection

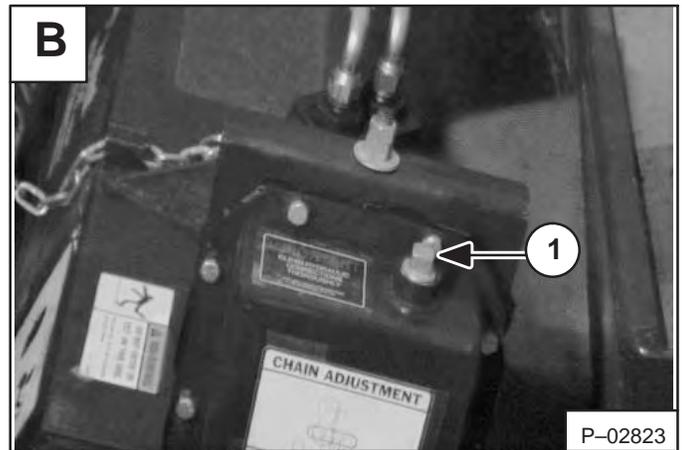
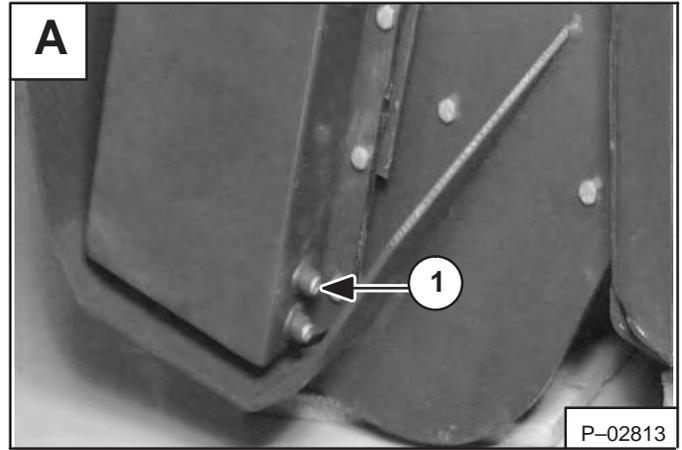
1. Adjust the tension of the drive chain. (See Page 10-30-1.)
2. Check Tiller tines for bent or worn tines. Replace the tines as needed.

300 Hour Inspection

Put the Tiller on the ground so the chaincase cover is level with the ground.

Remove the check plug (Item 1) **[A]** to check gear lube level. If the gear lube does not come out the check plug hole, remove the fill plug (Item 1) **[B]** and add 90W gear lube until it comes out the check plug hole (Item 1) **[A]**.

Install and tighten the check and fill plugs.





HYDRAULIC SYSTEM

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HYDRAULIC SYSTEM



HYDRAULIC MOTOR

Removal And Installation

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.

I-2003-0888

Remove the cover and drive chain. (See Page 10-30-1.)

Loosen the two set screws on the chain sprocket [A].

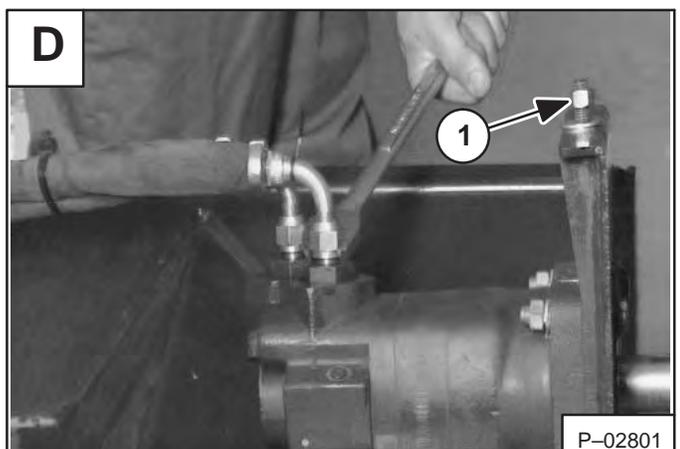
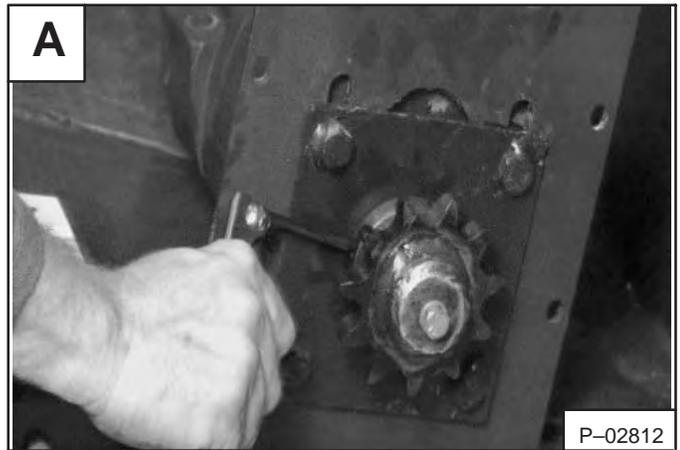
Remove the sprocket bolt [B].

Installation: Tighten the bolt to 25-26 ft.-lbs. (34-38 Nm) torque.

Remove the chain sprocket [C].

Mark the hydraulic hoses for correct installation. Disconnect the hydraulic hoses from the motor [D].

Remove the adjustment nut (Item 1) [D].

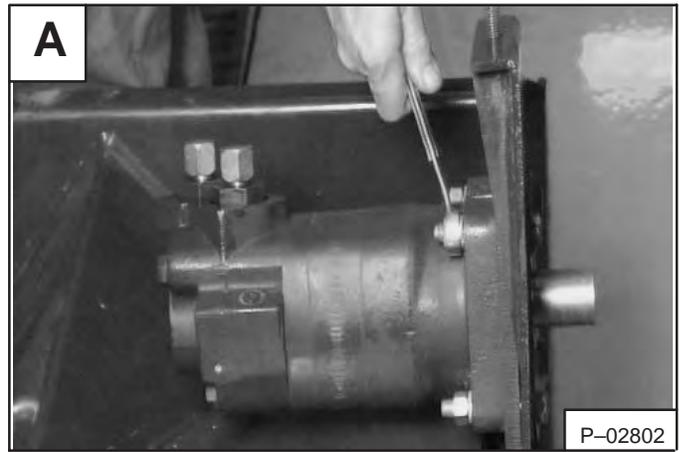


HYDRAULIC MOTOR (Cont'd)

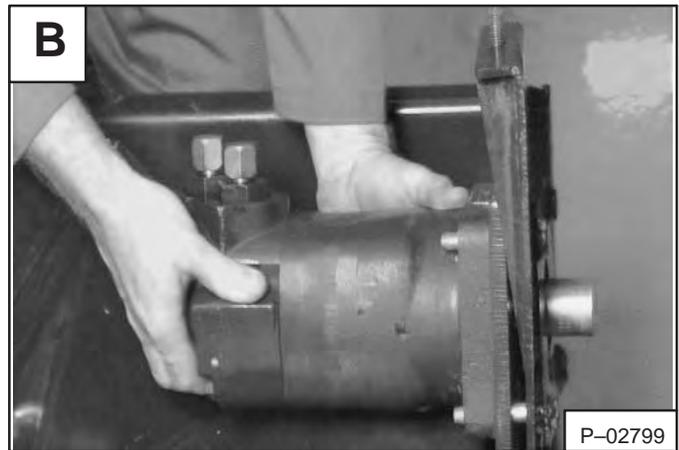
Removal and Installation (Cont'd)

Remove the mounting nuts and lock washers [A].

Installation: Tighten the nuts to 65–70 ft.-lbs. (88–95 Nm) torque.



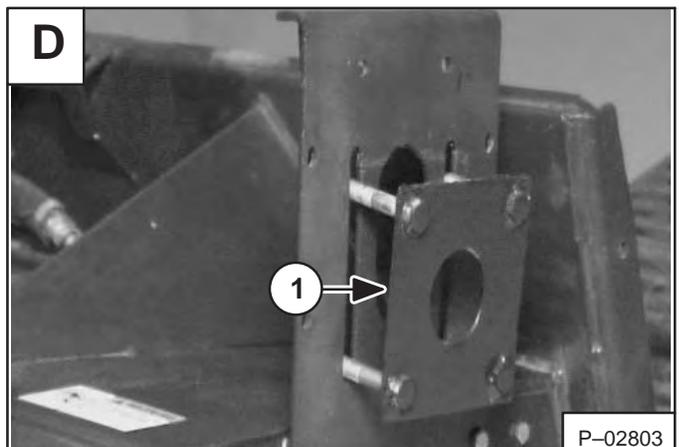
Remove the hydraulic motor from the mounting frame [B].



Installation: Put silicone sealant in the slotted holes on the motor mounting plate/bolt assembly [C].



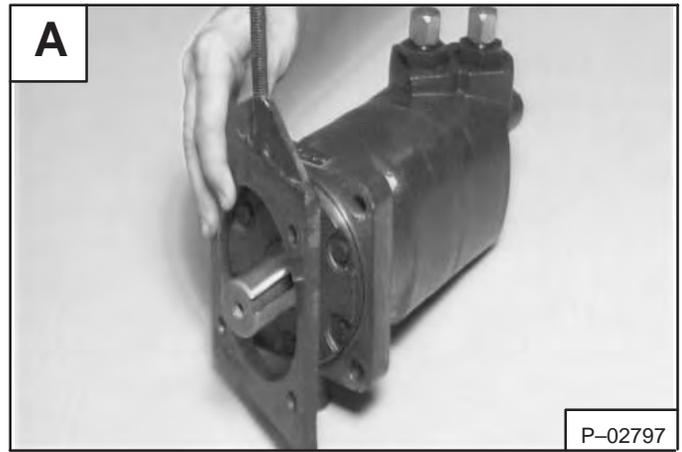
Remove the mounting plate/bolt assembly (Item 1) [D].



HYDRAULIC MOTOR (Cont'd)

Removal And Installation (Cont'd)

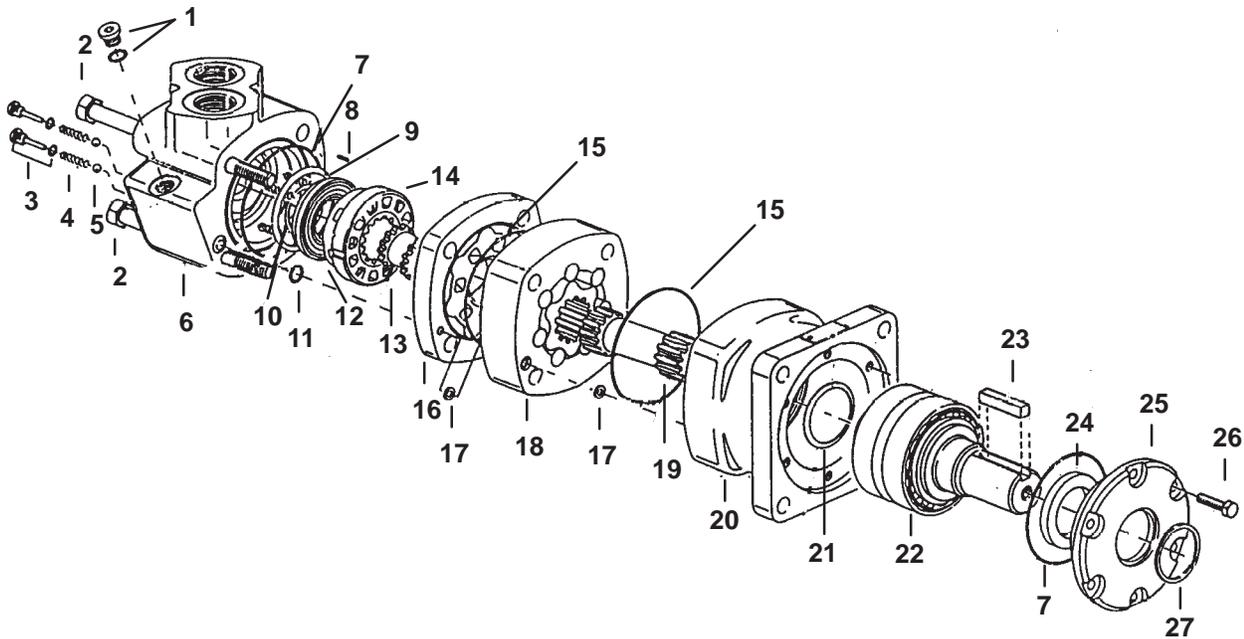
Remove the motor adjustment plate [A].



HYDRAULIC MOTOR (Cont'd)

Parts Identification

1. PLUG ASSY.
2. BOLT
3. CHECK PLUG ASSY.
4. SPRING
5. BALL
6. HOUSING
7. O-RING
8. PIN
9. OUTER SEAL
10. INNER SEAL
11. O-RING
12. BALANCE RING
13. VALVE DRIVE
14. VALVE
15. O-RING
16. VALVE PLATE
17. O-RING
18. GEROLER
19. DRIVE
20. BEARING HOUSING
21. SEAL
22. SHAFT/BEARING ASSY.
23. KEY
24. SEAL
25. RETAINER
26. BOLT
27. SEAL



D-02255

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

- MEL1187 – Socket
- MEL1015 – Seal Tool

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.

I-2003-0888

Put the motor in a vise with output shaft down. Clamp across the edge of the bearing housing (Item 1) [A].

Put a mark across the motor sections for correct assembly.

Remove the four bolts (Item 2) [A] from the motor.

Lift the valve housing straight up. If done carefully, the springs and balance plate will stay on the valve [B].

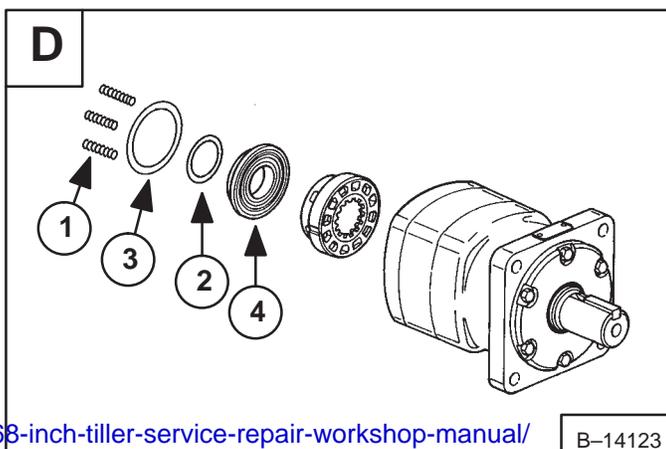
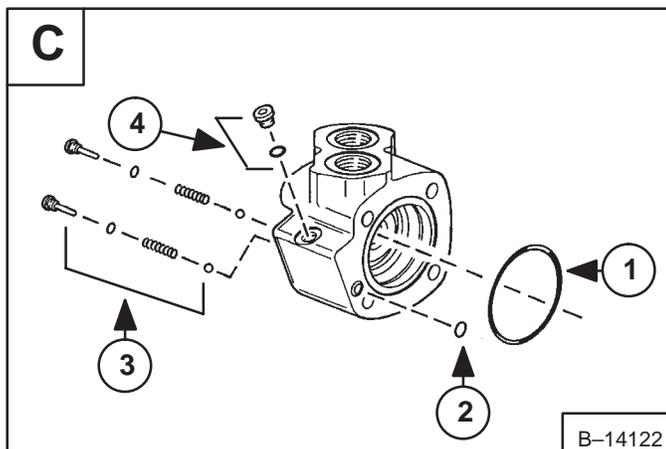
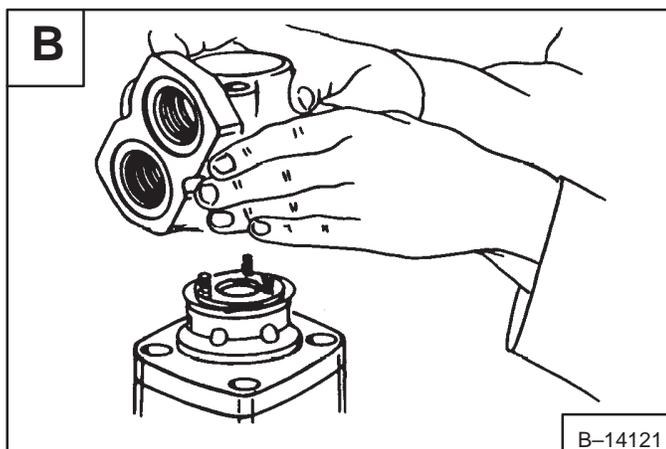
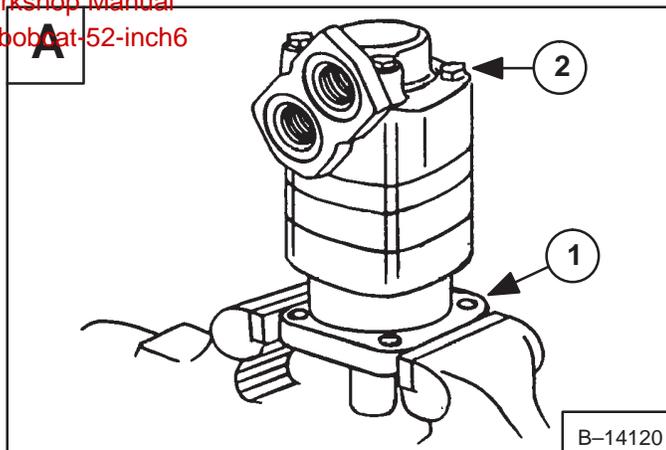
Remove the following items from the valve housing [C]:

1. O-ring – 3.625 inch I.D.
2. O-ring – 0.3125 inch I.D.
3. Check Valve Plug Assemblies (Qty 2)
4. Case Drain Plug

Remove the three balance ring springs (Item 1) [D].

Remove the balance ring subassembly and remove the inner (Item 2) [D] and outer (Item 3) [D] face seals from the balance plate.

Lift off the valve (Item 4) [D].



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