

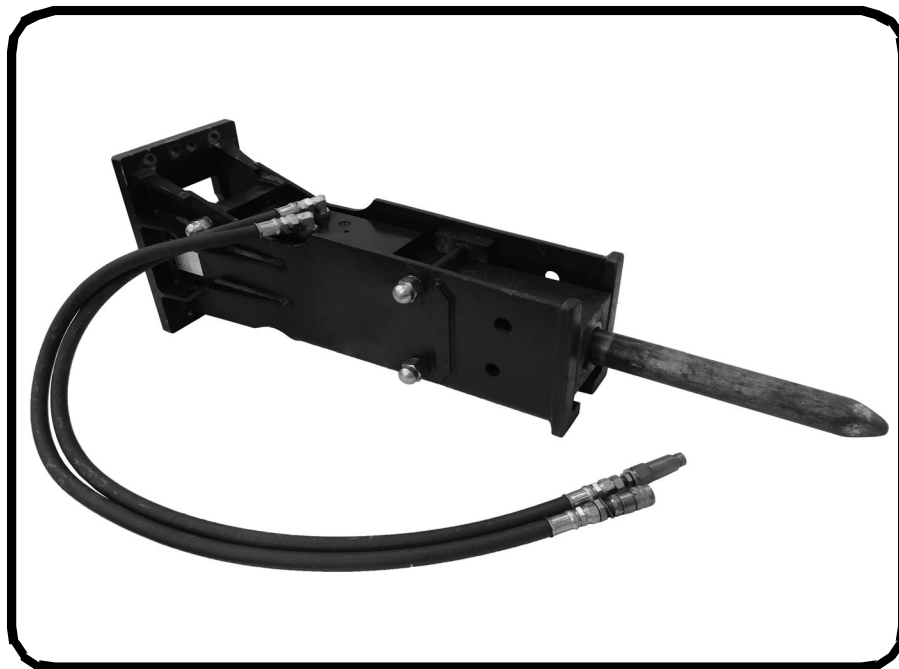


Bobcat®

Service Manual

NB Series Hydraulic Breaker

(Breaker NB110) S/N B4T100101 & Above
(Breaker NB140) S/N B4T400101 & Above
(Breaker NB150) S/N B37M00101 & Above
(Breaker NB160) S/N B37N00101 & Above
(Breaker NB170) S/N B4T700101 & Above
(Breaker NB180) S/N B4T800101 & Above



MAINTENANCE SAFETY



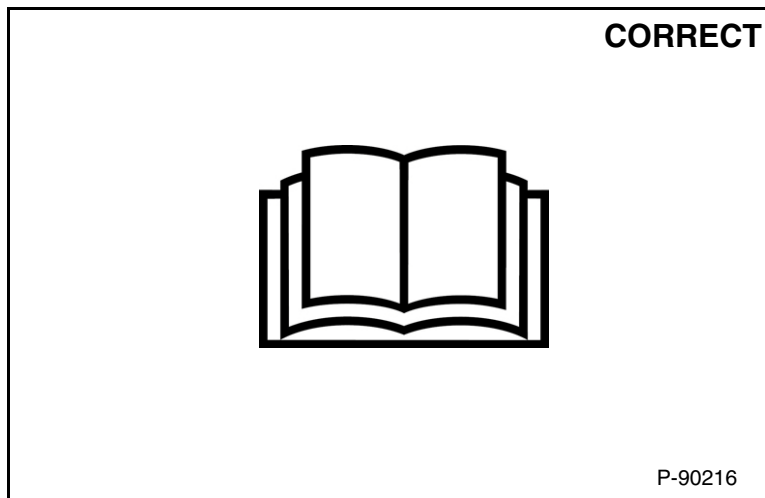
WARNING









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-2003-0807



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



-  Never service attachments / implements without instructions. See Operation & Maintenance Manual and Attachment / Implement Service Manual.
-  Cleaning and maintenance are required daily.
-  Never service or adjust attachment / implement with the engine running unless instructed to do so in manual.
-  Always lower the attachment / implement 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.



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**Thanks very much for your reading,
Want to get more information,
Please click here, Then get the complete
manual**

JustClickHere 

NOTE:

**If there is no response to click on the link above,
please download the PDF document first, and then
click on it.**

**Have any questions please write to me:
admin@servicemanualperfect.com**



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FOREWORD

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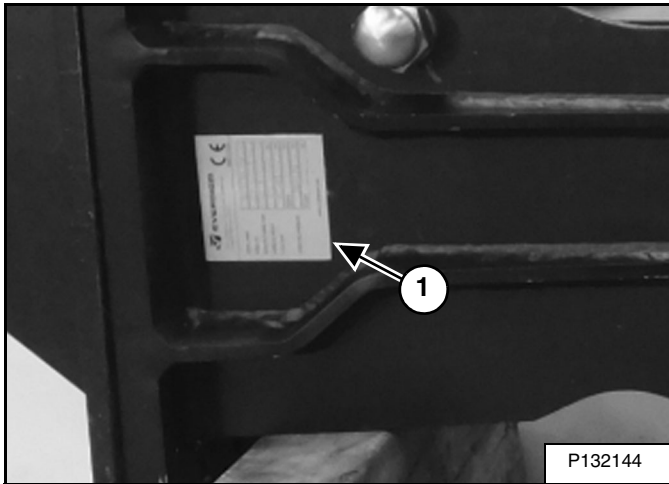


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SERIAL NUMBER LOCATION

Attachment Serial Number

Figure 1



Always use the serial number of the breaker when requesting service information or when ordering parts. Earlier or later models (identification made by serial number) may use different parts, or it may be necessary to use a different procedure in doing a specific service operation.

The breaker serial number plate (Item 1) [Figure 1] is located on the frame.

DELIVERY REPORT

Figure 2

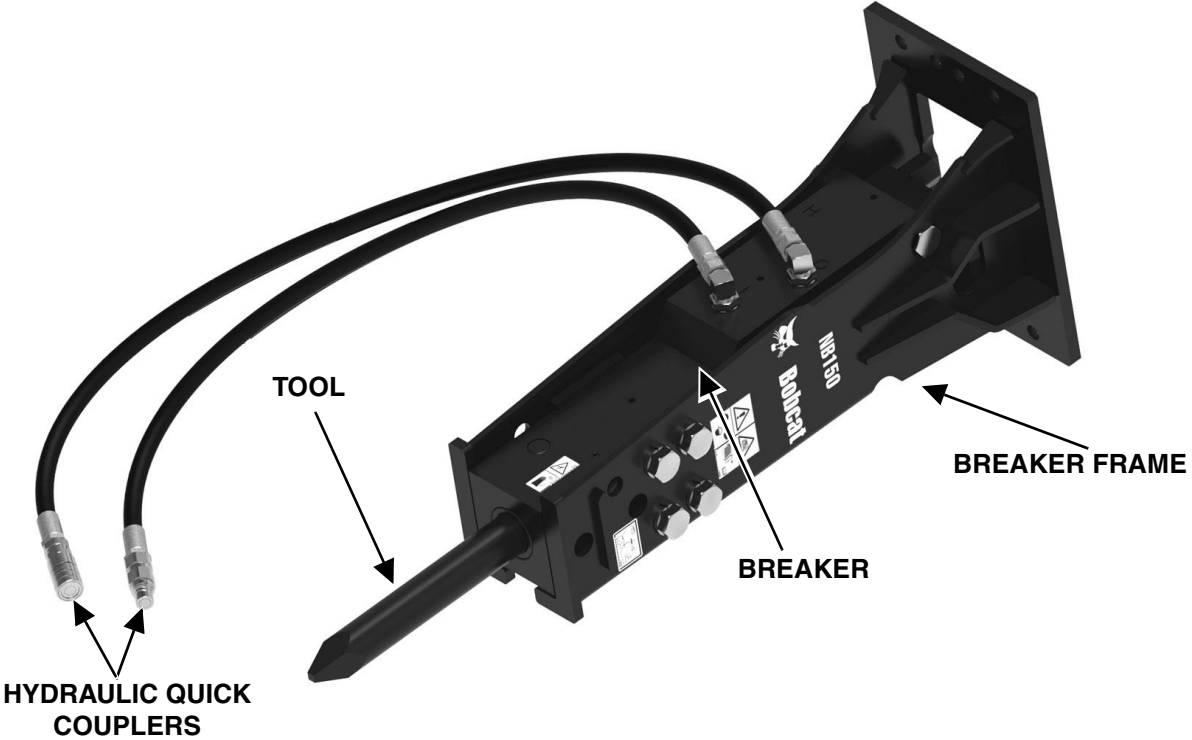
The diagram shows a form layout for a delivery report. It includes a main title 'DELIVERY REPORT' at the top right, a 'WARNING' section with a black header, and various sections of horizontal lines for text entry. A small box at the bottom right contains the identifier 'B-16315'.

The delivery report **[Figure 2]** contains a list of items that must be explained or shown to the owner or operator by the dealer when the Bobcat breaker is delivered.

The delivery report must be reviewed and signed by the owner or operator and the dealer.

ATTACHMENT IDENTIFICATION

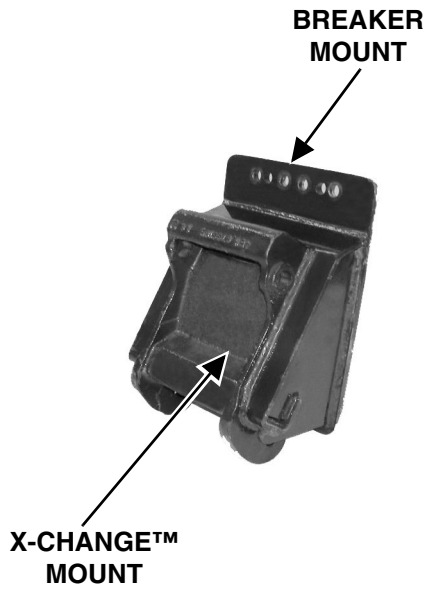
SHOWN WITHOUT MOUNTING FRAME



P135190

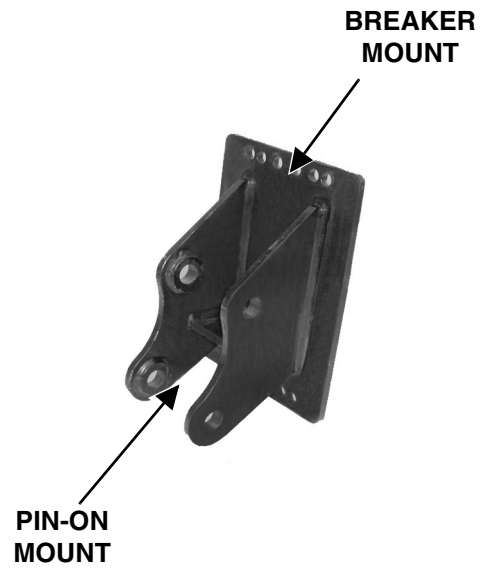
ATTACHMENT IDENTIFICATION (CONT'D)

X-CHANGE™ MOUNTING FRAME



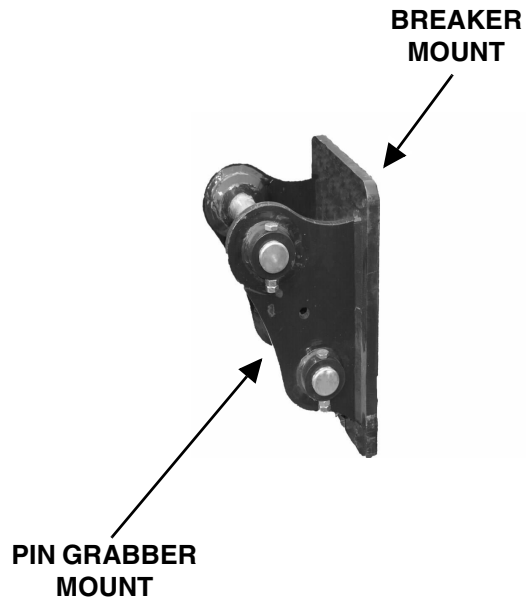
P-88735

PIN-ON MOUNTING FRAME



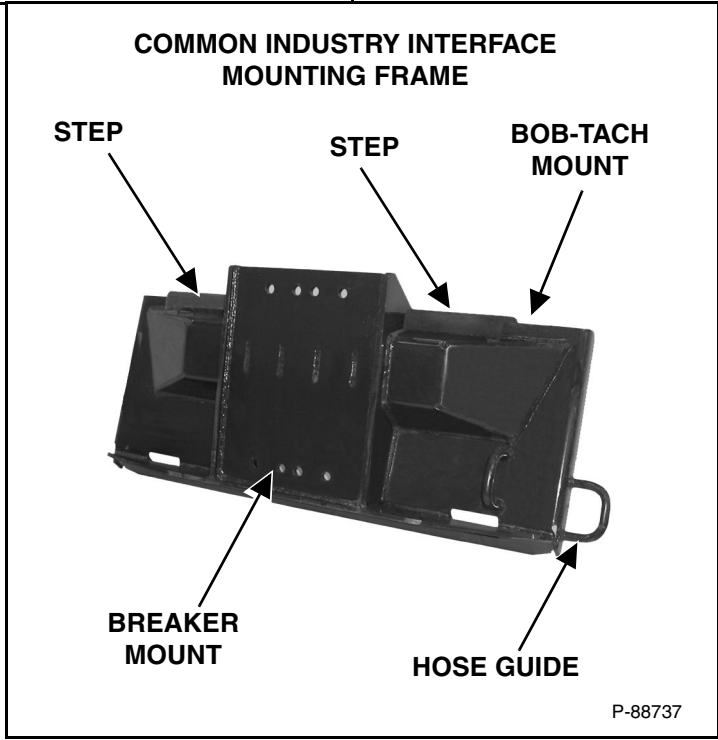
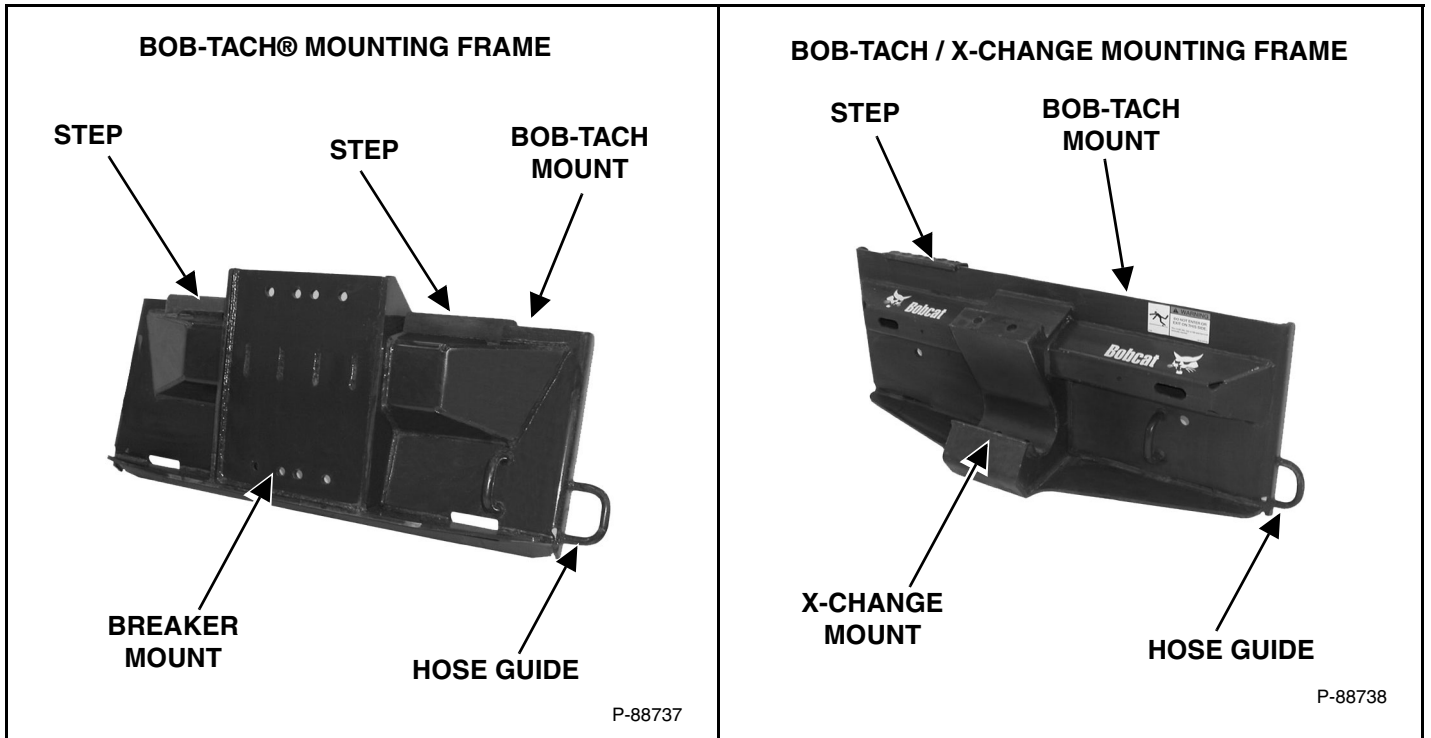
P-88736

PIN GRABBER MOUNTING FRAME



P-116237

ATTACHMENT IDENTIFICATION (CONT'D)





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SAFETY & MAINTENANCE

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TROUBLESHOOTING

Chart



WARNING

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W-2003-0807

If the attachment is not working correctly, check the hydraulic system of the machine thoroughly before making any repairs on the attachment. Attachment problems can be affected by a hydraulic system that is not operating to specifications. Connect a flow meter to the machine to check the hydraulic pump output, relief valve setting and tube lines to check flow and pressure. (See the machine's Service Manual for the correct procedure to connect the flow meter.)

Use the following troubleshooting chart to locate and correct problems which most often occur with the attachment.

PROBLEM	CAUSE	CORRECTION
Breaker will not fire.	Machine hydraulic reservoir fluid level is low.	Add fluid to the hydraulic reservoir as needed.
	Hydraulic hoses connected to wrong ports.	Reverse hydraulic hoses.
	Damaged hydraulic couplers.	Replace hydraulic couplers.
	Machine main relief valve set too low.	Adjust main relief valve to correct setting.
	No hydraulic flow to the breaker.	Check the hydraulic flow to the breaker.
	Low hydraulic oil pressure.	Check flow of hydraulic pump. Repair or replace as needed.
	Machine hydraulic pump not working.	
	Oil in the nitrogen chamber.	Damaged internal seals, replace seals. (See Breaker Service Manual).
	Nitrogen charge pressure to high.	Check nitrogen pressure. (See Breaker Service Manual).
	Damaged valve or piston.	Repair damaged components. (See Breaker Service Manual.)
	Tool bushing is worn.	Replace bushing.
Breaker runs very slowly or blow per minute reducing.	Low fluid level.	Add fluid to the reservoir as needed.
	Machine main relief valve set too low.	Adjust main relief valve to correct setting.
	Not enough hydraulic flow.	Test hydraulics for correct flow and pressure.
	Excessive heat build up.	Check oil cooler for debris and air flow. Check relief valve pressure.
	Damaged hydraulic couplers.	Replace hydraulic couplers.
	Excessive back pressure.	If equipped with a direct to tank valve, set valve for correct operation.
		Hydraulic oil filter restriction. Replace filter. (See machine Operation & Maintenance Manual.)
	Breaker point not contacting piston.	Apply additional down force with the machine.
	Internal leakage.	Check seals and O-rings in the breaker. Check piston, sleeve and seal carrier for wear.
	Nitrogen charge pressure is low.	Check nitrogen pressure.
No breaking force and hoses jumping.		

Troubleshooting chart continued on next page.

TROUBLESHOOTING (CONT'D)**Chart (Cont'd)**

PROBLEM	CAUSE	CORRECTION
Oil leaks between back head and cylinder	Seals defective.	Replace seals. (See Breaker Service Manual)
Oil leaks from tool	Cylinder seals damaged.	Replace seals. (See Breaker Service Manual)
Back head gas leaks	Loose through bolts	Tighten through bolts. (See Breaker Service Manual)
	Defect in back head gas valve	Replace back head gas valve. (See Breaker Service Manual)
	Defective O-ring on back head	Replace O-ring. (See Breaker Service Manual)
	Defective cylinder bushing seals	Check and replace the piston bushing seals. (See Breaker Service Manual)
Breaker fires erratically.	Tool binding.	Add grease to the tool shank fittings.
	Machine main relief valve set too low.	Adjust main relief valve to correct setting.
	Excessive back pressure.	Check for plugged or bent return lines.
	Low fluid level.	Add fluid to the reservoir as needed.
	Not enough hydraulic flow.	Test hydraulics for correct flow and pressure.
	Damaged hydraulic couplers.	Replace hydraulic couplers.
	Nitrogen charge pressure is low.	Check nitrogen pressure. (See Breaker Service Manual).
Breaker lacks striking force.	Damaged breaker valve	Repair breaker. (See Breaker Service Manual).
	Not enough hydraulic flow.	Test hydraulics for correct flow and pressure.
	Nitrogen charge pressure low.	Check nitrogen pressure. If pressure low, recharge nitrogen. (See Breaker Service Manual).
Excessive heat build up.	Tool is broken inside bushing.	Replace tool.
	Blank firing.	Refer to the hydraulic controls section for correct operating procedure.
Hydraulic hoses between breaker and machine are pulsing more than normal.	Machine fluid reservoir is low.	Add hydraulic fluid to the fluid reservoir.
	Nitrogen charge pressure is lower or higher than specified.	Check nitrogen pressure. If pressure low, or too high, recharge nitrogen. (See Breaker Service Manual).
Hydraulic oil on breaker tool.	Damaged piston seals.	Replace seals. (See Breaker Service Manual).

Troubleshooting chart continued on next page.

TROUBLESHOOTING (CONT'D)

Chart (Cont'd)

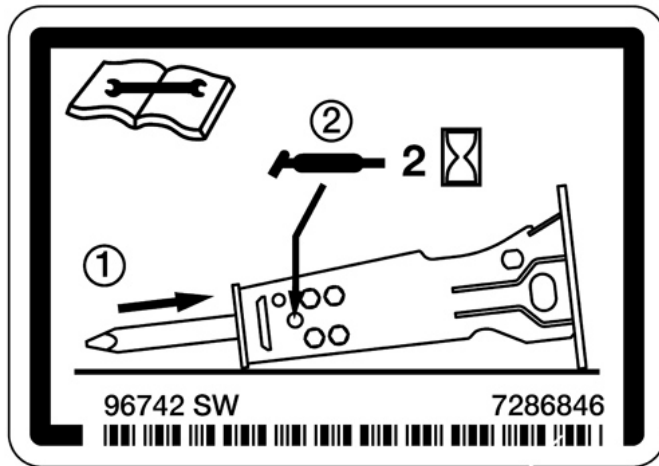
PROBLEM	CAUSE	CORRECTION
Tool breakage.	Firing without sufficient down force on the tool.	Apply additional down force with the machine.
	Using the tool as a pry bar.	Only use perpendicular down force on the tool when breaking, do not pry with tool.
	Grinding on the side face of the tool.	Grinding on the side face of the tool may cause fatigue points or stress areas on the tool.
	Tool corrosion.	If the breaker or tool is unused for extended periods of time, retract tool and grease the outside of the tool.
	Cold tool.	If used in cold weather, keep tool in a warm area prior to usage.



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SERVICE SCHEDULE

Chart



NOTE: Push tool in before greasing.

NOTE: For detailed lubrication information, (See Lubrication Locations on Page 10-40-1.)

Grease the breaker every two hours of operation.

1. Push the tool fully into the breaker.
2. Apply grease to the upper end of the tool until grease is visible at the tool pin.
3. Apply grease to the lower end of the tool until grease is visible at the lower bushing.

Maintenance Schedule

HOURS	PROCEDURE
Every 2 Hours	Grease Tool Bit (See Lubrication Locations on Page 10-40-1.)
10 Hours or Daily	Remove the retaining pin and the tool bit and check condition. Grind any burrs that are present from the bit. (See Tool Retainer Pin Inspection on Page 10-50-8.) and (See Tool Bit Inspection on Page 10-50-7.) Check tool bit for proper lubrication. Grease more often if necessary.
50 Hours or Weekly	Check nitrogen pressure in the breaker chamber. Add nitrogen if needed. (See Checking The Nitrogen Chamber Charge Pressure on Page 10-50-1.) and (See Discharging The Nitrogen Chamber on Page 10-50-4.) Check tool bit and bushing for damage. Replace parts as necessary. (See Tool Bit Inspection on Page 10-50-7.) (See Tool Bushing Inspection on Page 10-50-8.) Check through bolts for damage. Replace parts if damaged. (See Breaker Through Bolts Inspection And Torque on Page 10-50-10.) Check side bolts for correct torque. Tighten to correct torque specifications. (See Breaker Through Bolts Inspection And Torque on Page 10-50-10.)
100 Hours or Monthly	Check routing of hoses and hose and couplers for damage. Replace parts as necessary.
600 Hours or 6 Months	Check through bolts for damage. Replace parts if damaged. (See Breaker Through Bolts Inspection And Torque on Page 10-50-10.) Check side bolts for correct torque. Tighten to correct torque specifications. (See Breaker Through Bolts Inspection And Torque on Page 10-50-10.) Check machine mounting frame for damage. (See Mounting Frame, Hardware Inspection And Torque on Page 10-50-9.) Repair or replace as needed. (See Breaker Through Bolts Inspection And Torque on Page 10-50-10.) Check breaker mounting frame for damage. Repair or replace as needed.



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