

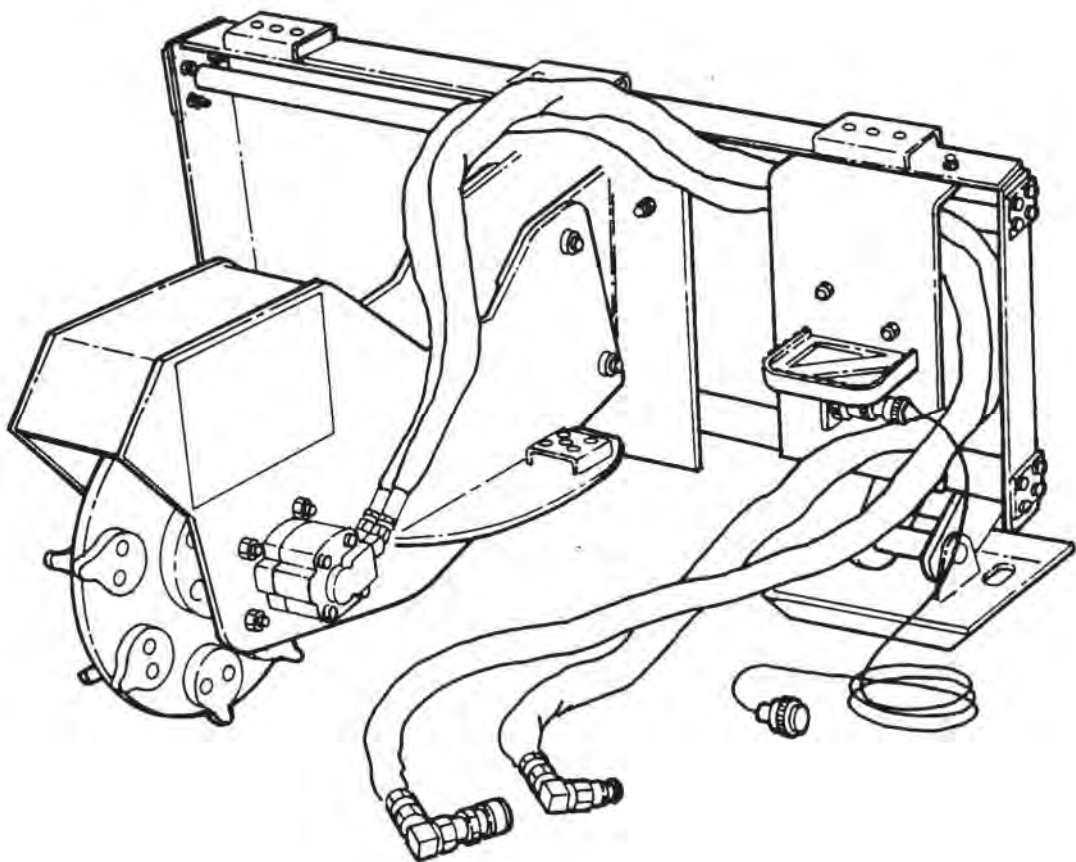


# STUMP GRINDER

SG-25  
SG-50

SG-25 (S/N 879300101 & Above)  
SG-50 (S/N 702100101 & Above)

## SERVICE MANUAL



**MELROE**  
**INGERSOLL-RAND**

6900892 (9-99)  
10178



© Melroe Company 1999  
Printed in U.S.A.



# MAINTENANCE SAFETY



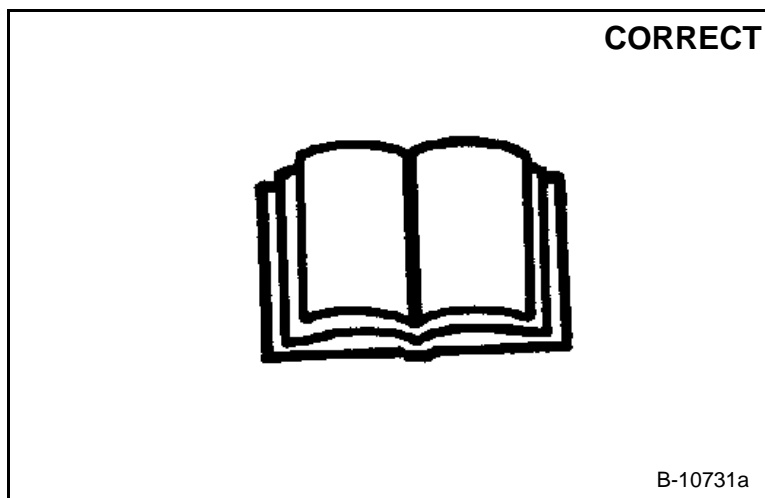
## WARNING









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.



-  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®**

## ALPHABETICAL INDEX

COASTING VALVE SG-50 (S/N 702100264 & Below) .....	10-20-1
CUTTERS SG-25 .....	10-30-1
CUTTERS SG-50 .....	10-30-1
CUTTER HEAD .....	10-30-1
CUTTER WHEEL .....	10-30-1
ELECTRICAL SCHEMATIC SG-25 .....	10-40-1
ELECTRICAL SCHEMATIC SG-50 .....	10-40-1
EXTENSION CYLINDER SG-50 .....	10-20-1
GLOSSARY OF HYDRAULIC SYMBOLS FOR ATTACHMENTS .....	10-40-1
HYDRAULIC CONTROL VALVE SG-25 .....	10-20-1
HYDRAULIC CONTROL VALVE SG-50 .....	10-20-1
HYDRAULIC CYLINDER .....	10-20-1
HYDRAULIC MOTOR (Cutter) .....	10-20-1
HYDRAULIC MOTOR (Sideshift) .....	10-20-1
HYDRAULIC SCHEMATIC SG-25 .....	10-40-1
HYDRAULIC SCHEMATIC SG-50 .....	10-40-1
IDLER SPROCKET SG-50 .....	10-30-1
SERIAL NUMBER LOCATION .....	iii
SIDESHIFT CHAIN SG-50 .....	10-30-1
SIDE SHIFT CYLINDER SG-25 .....	10-20-1
SIDESHIFT PLATE .....	10-30-1
SIDESHIFT TUBES .....	10-30-1
SPECIFICATIONS SG-25 .....	10-40-1
SPECIFICATIONS SG-50 .....	10-40-1
STUMP GRINDER SG-25 CONVERSION MATRIX .....	10-40-1
STUMP GRINDER SG-50 CONVERSION MATRIX .....	10-40-1
STUMP GRINDER IDENTIFICATION .....	10-10-1
TILT CYLINDER SG-50 .....	10-20-1
TROUBLESHOOTING .....	10-10-1
TUBE ALIGNMENT .....	10-30-1
TUBE SEALS AND BUSHINGS .....	10-30-1



# CONTENTS

SERIAL NUMBER LOCATION .....	iii
IDENTIFICATION .....	iv
PREVENTIVE MAINTENANCE .....	10-10-1
HYDRAULIC SYSTEM .....	10-20-1
MAIN FRAME .....	10-30-1
SPECIFICATIONS AND SCHEMATICS .....	10-40-1

**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**

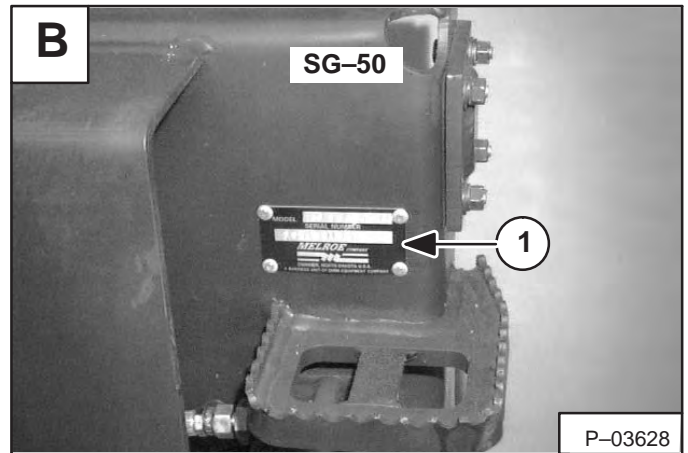
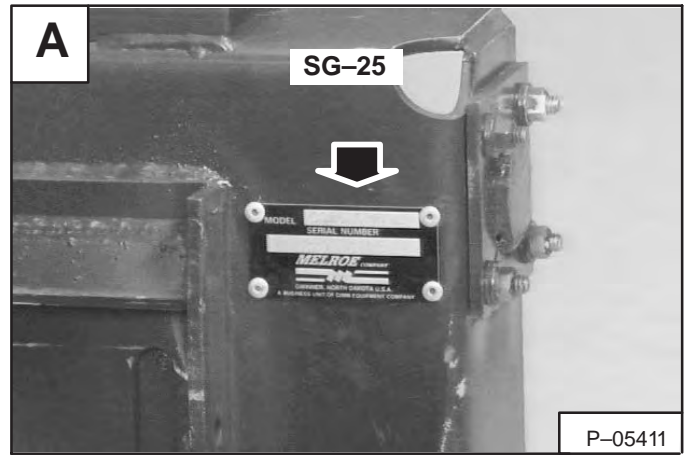
**SPECIFICATIONS  
AND  
SCHEMATICS**





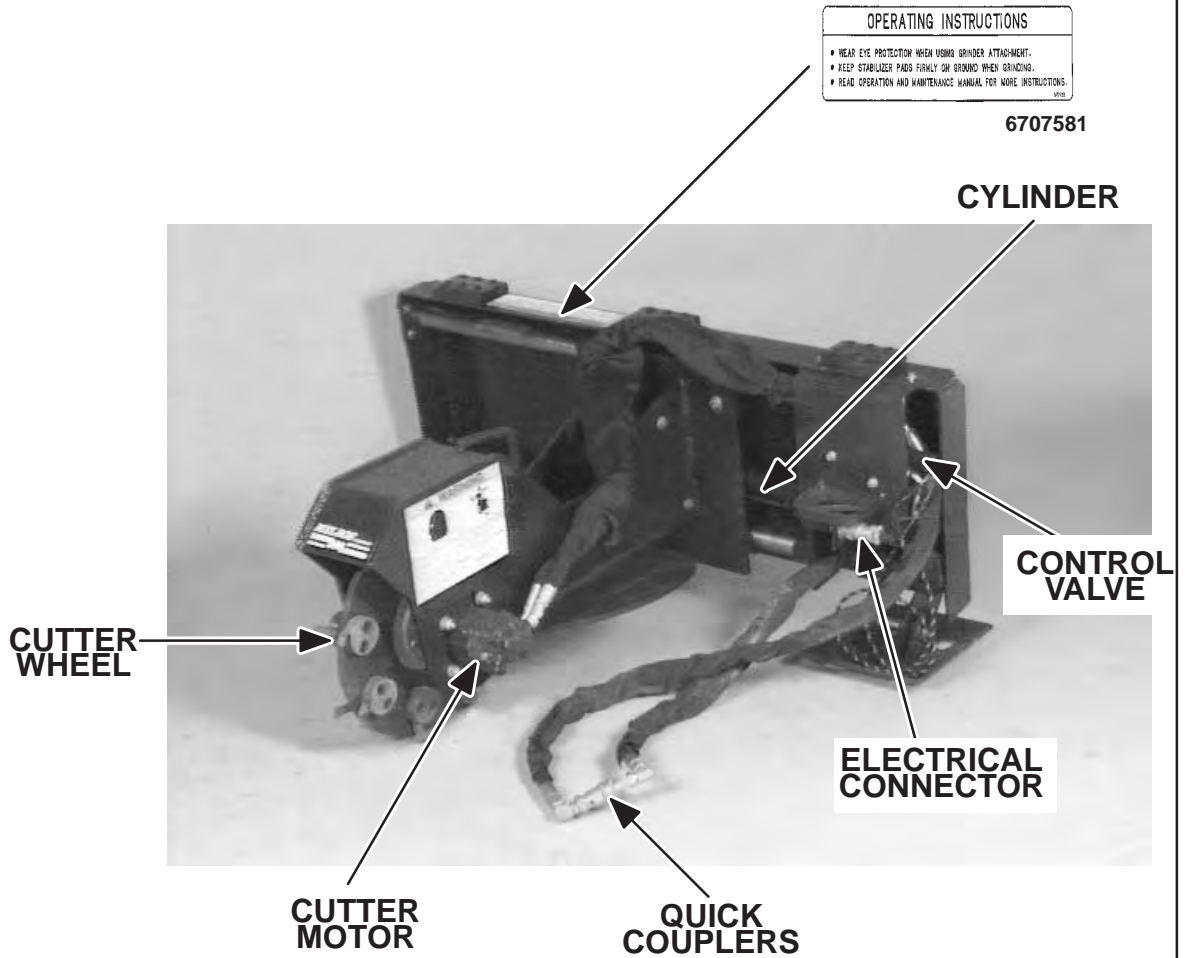
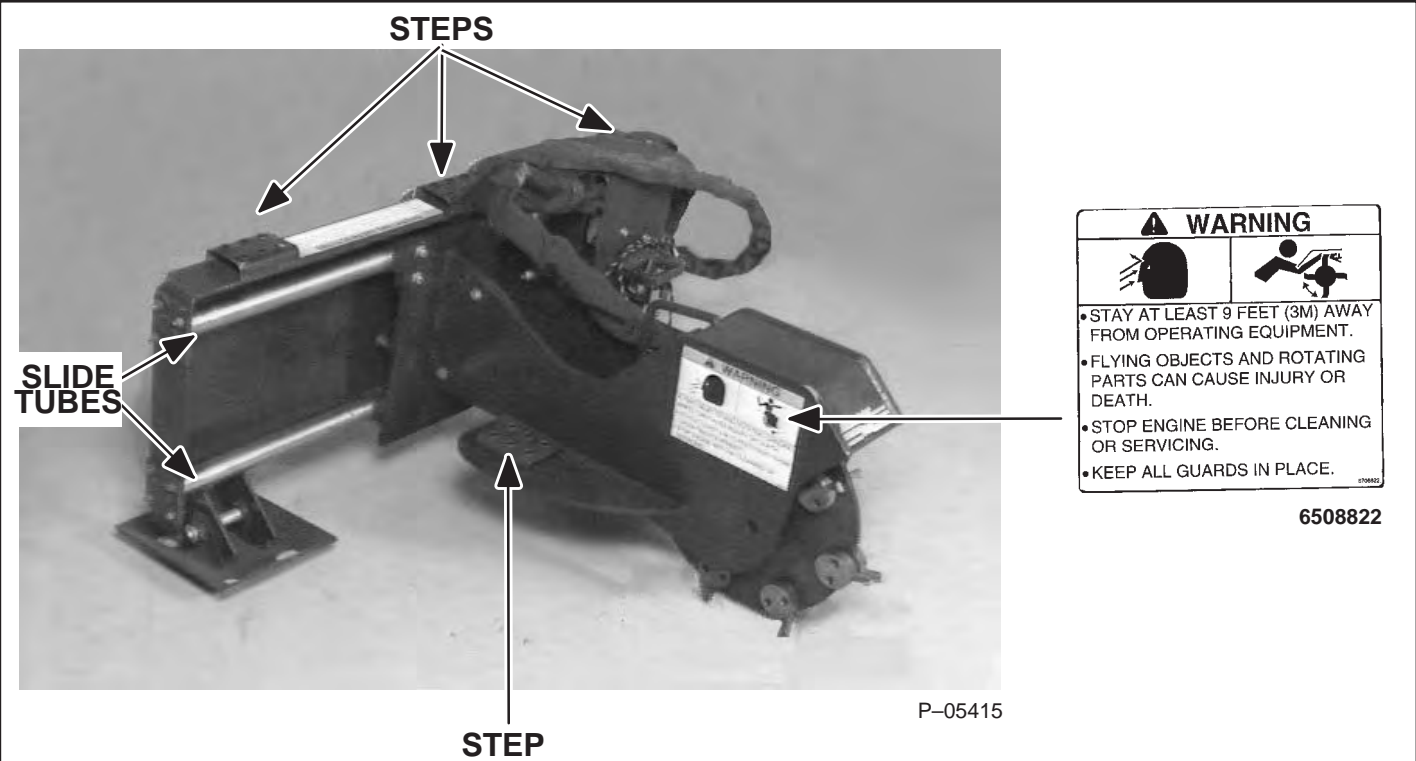
### SERIAL NUMBER LOCATION

Always use the serial number of the machine when requesting service information or when ordering parts. Early 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 [A] & [B].



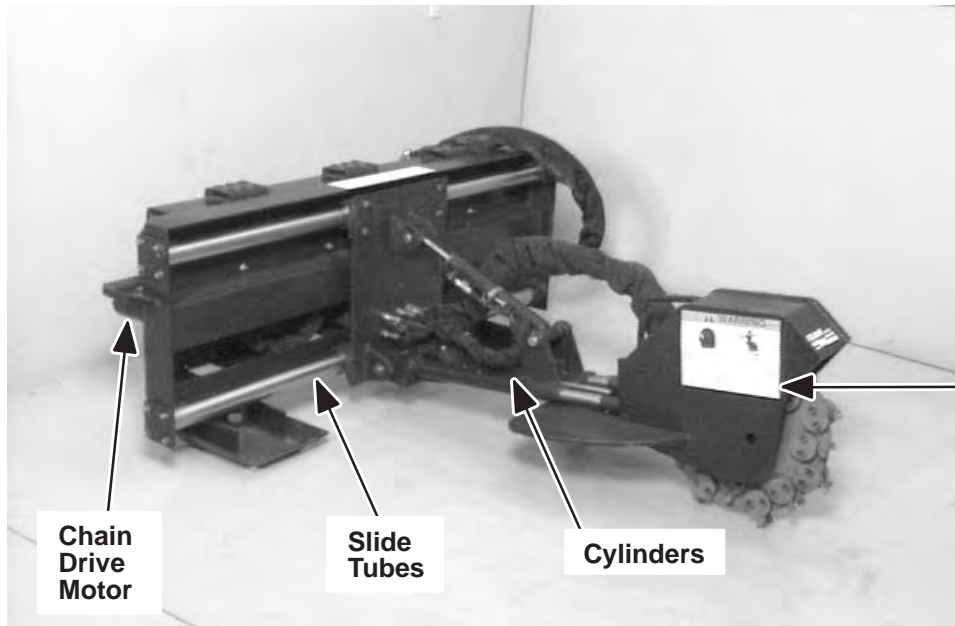
**STUMP GRINDER IDENTIFICATION**

**SG-25**



# STUMP GRINDER IDENTIFICATION (Cont'd)

SG-50

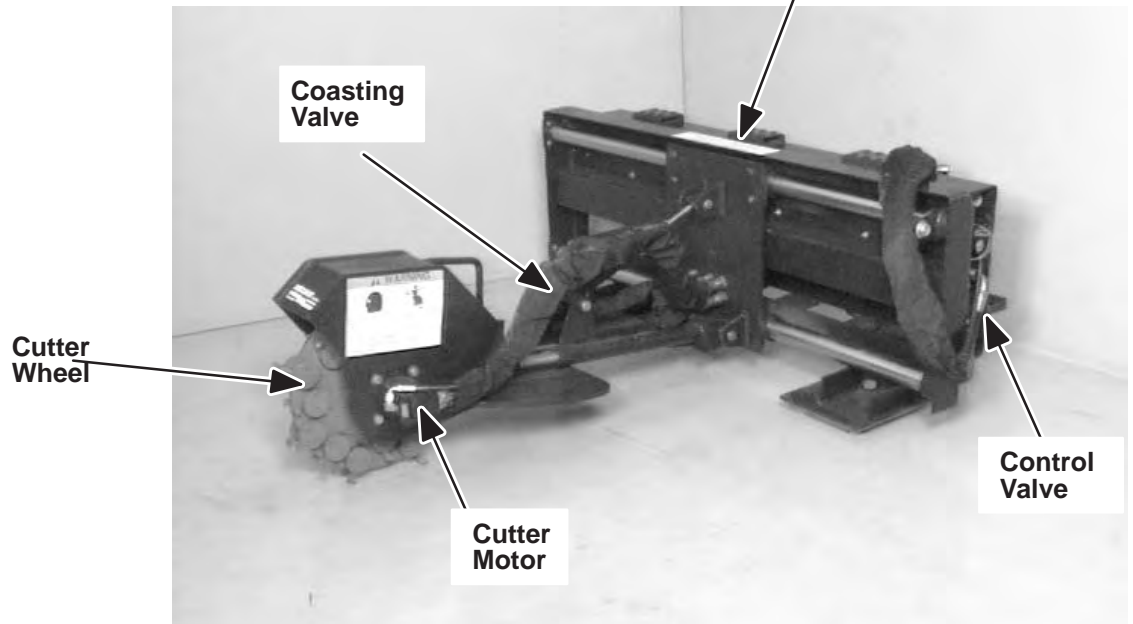


WARNING	
FLYING OBJECTS AND ROTATING GRINDING WHEEL CAN CAUSE INJURY OR DEATH.	
• STAY AT LEAST 4 M (12 FEET) AWAY FROM OPERATING EQUIPMENT.	
• STOP ENGINE BEFORE CLEANING OR SERVICING.	

6707580

OPERATING INSTRUCTIONS
• WEAR EYE PROTECTION WHEN USING GRINDER ATTACHMENT.
• KEEP STABILIZER PADS FIRMLY ON GROUND WHEN GRINDING.
• READ OPERATION AND MAINTENANCE MANUAL FOR MORE INSTRUCTIONS.

6707581



P-03691  
P-03693



# PREVENTIVE MAINTENANCE

	<b>Page Number</b>
TRoubleshooting	
SG-25 .....	10-10-3
SG-50 .....	10-10-4



## TROUBLESHOOTING

SG-25

### **WARNING**

Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, 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-2003-0199

If the Stump Grinder is not working correctly, check the hydraulic system of the machine thoroughly before making any repairs on the Stump Grinder. Stump Grinder problems can be affected by a hydraulic system that is not operating to specifications. Connect a flow meter to the loader to check the hydraulic pump output, relief valve setting and tubelines to check flow and pressure. (See the loader 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 Stump Grinder.

<b>PROBLEM</b>	<b>CAUSE</b>	<b>CORRECTION</b>
Functions too slow or weak	Loader relief setting is too low	Check and reset relief
Sideshift stalls	Slide tubes misaligned.	Re-align tubes
Cutter head hops excessively	Missing cutter. Dull cutter(s) Cutting too much material Cutter setting wrong	Replace cutter(s) Check cutting technique Reduce the cut Reset cutter(s)
Productivity seems low	One or more cutter(s) dull.	Replace cutter
Cutter head stops when side shift is engaged	Cutting too much material	Reduce the cut
Motor shaft seal leaks	Seal damaged	Replace seal

## TROUBLESHOOTING

SG-50

### **WARNING**

Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, 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-2003-0199

If the Stump Grinder is not working correctly, check the hydraulic system of the machine thoroughly before making any repairs on the Stump Grinder. Stump Grinder problems can be affected by a hydraulic system that is not operating to specifications. Connect a flow meter to the loader to check the hydraulic pump output, relief valve setting and tubelines to check flow and pressure. (See the loader 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 Stump Grinder.

<b>PROBLEM</b>	<b>CAUSE</b>	<b>CORRECTION</b>
Functions too slow or weak	Auxiliary relief setting is below 1500 PSI	Reset Relief
Sideshift stalls	Slide tubes misaligned. Motor worn internally because of excessive chain tension	Re-align tubes Replace motor Set the chain tension
Cutter head hops excessively	Missing cutter. Dull cutter(s) Improper cut technique. Cutter setting wrong	Replace cutter(s) Check cutting technique Reset cutter(s)
Productivity seems low	One or more cutter(s) dull. High flow switch off. Failed spring in the coasting valve	Replace cutter Head should speed up when High Horsepower switch is on. Replace spring
Cutter head stops when side shift is engaged	Jumper wire missing or in wrong pin location	Check for connection
Motor shaft seal leaks	Case drain coupler loose. Seal damaged	Tighten case drain connection. Replace seal
Head lifts or extends too fast	Orifice fitting missing	Add orifice fitting at cylinder base.



## HYDRAULIC SYSTEM

	Page Number
COASTING VALVE SG-50 (S/N 702100264 & Below) Removal And Installation .....	10-20-10
EXTENSION CYLINDER SG-50 Removal And Installation .....	10-20-27
HYDRAULIC CONTROL VALVE SG-25 Disassembly And Assembly .....	10-20-5
Parts Identification .....	10-20-4
Removal And Installation .....	10-20-3
HYDRAULIC CONTROL VALVE SG-50 Disassembly And Assembly .....	10-20-9
Parts Identification .....	10-20-8
Removal And Installation .....	10-20-7
HYDRAULIC CYLINDER Disassembly And Assembly .....	10-20-29
Parts Identification .....	10-20-28
HYDRAULIC MOTOR (Cutter) Disassembly And Assembly .....	10-20-13
Flange Removal And Installation .....	10-20-11
Inspection .....	10-20-17
Parts Identification .....	10-20-12
Removal And Installation .....	10-20-11
Timing The Hydraulic Motor .....	10-20-18
HYDRAULIC MOTOR (Sideshift) Assembly And Timing The Hydraulic Motor .....	10-20-24
Disassembly .....	10-20-21
Parts Identification .....	10-20-20
Removal And Installation .....	10-20-19
SIDESHIFT CYLINDER SG-25 Removal And Installation .....	10-20-26
TILT CYLINDER SG-50 Removal And Installation .....	10-20-27

## HYDRAULIC SYSTEM



**Dear**

**Thanks very much for your visiting and  
patience.**

**Want to get more information,**

**Please click here, Go back to the page.**

**After your payment, you will have instant access to  
your download.**

**The Download Link will also be sent to your e-mail.**

**You will get the complete manual**

**Have any questions**

**please write to me**

**[admin@servicemanualperfect.com](mailto:admin@servicemanualperfect.com)**