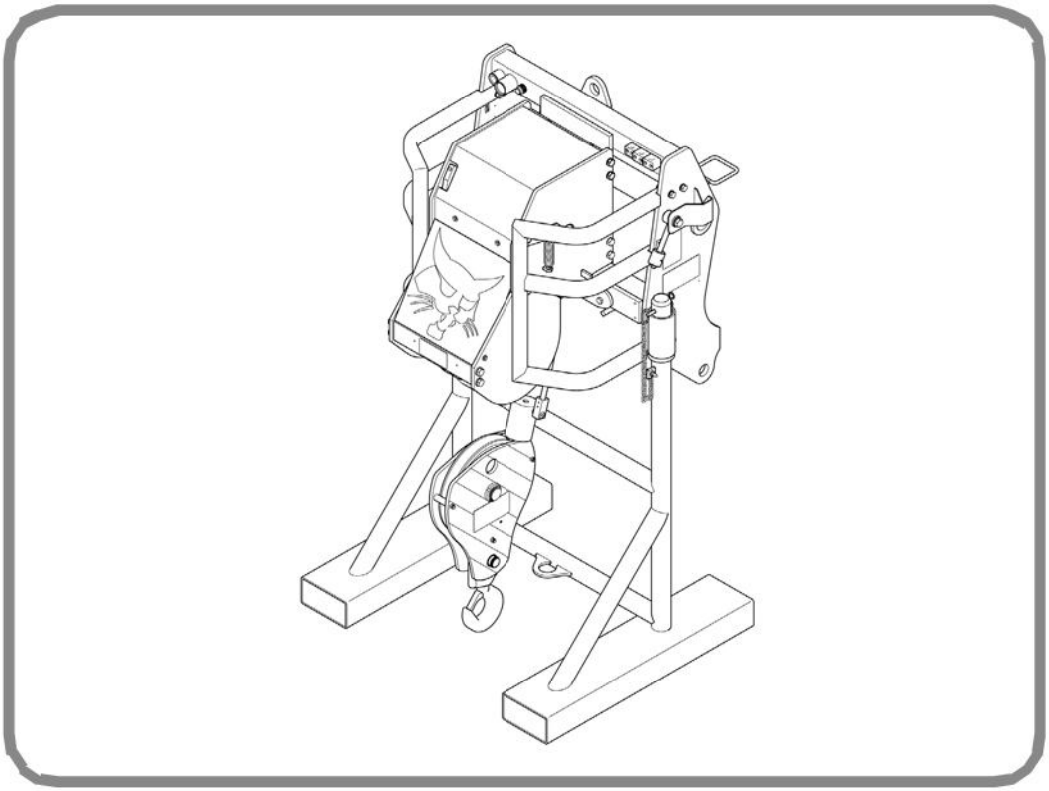
EN

Bobcat®

Service Manual
Hoisting Winch

Winch Hoist 4T: S/N AK3D00101 & Above
Winch Hoist 3.5T: S/N AK3E00101 & Above



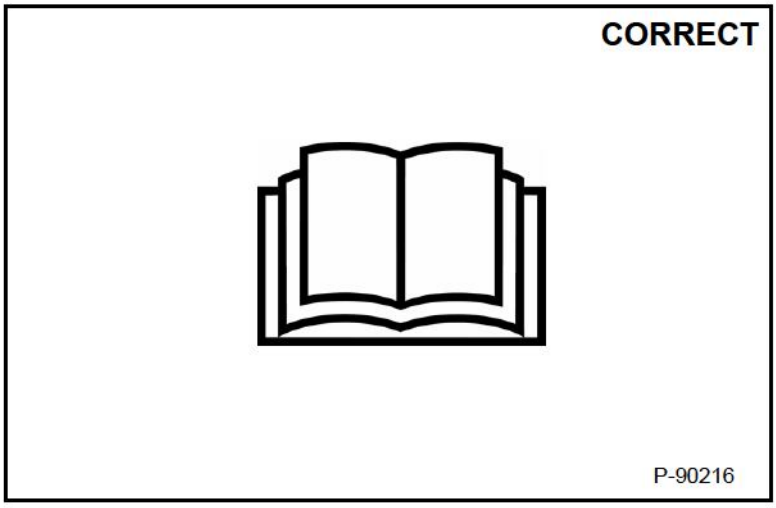
MAINTENANCE SAFETY

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.**

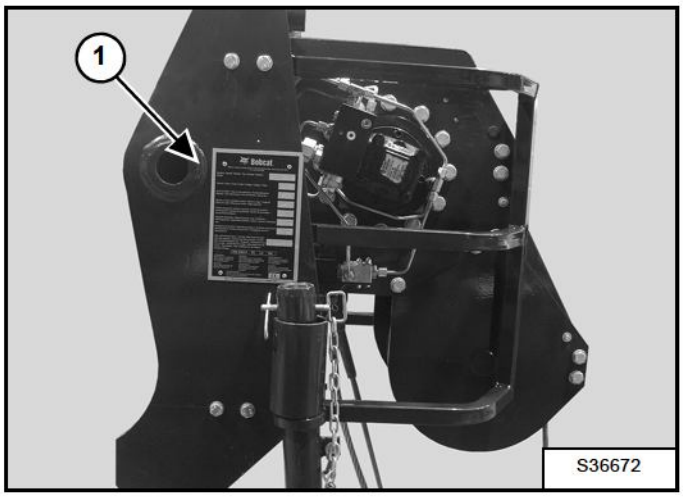
MSW30-0409

ALPHABETICAL INDEX

CONTENTS

SERIAL NUMBER LOCATION

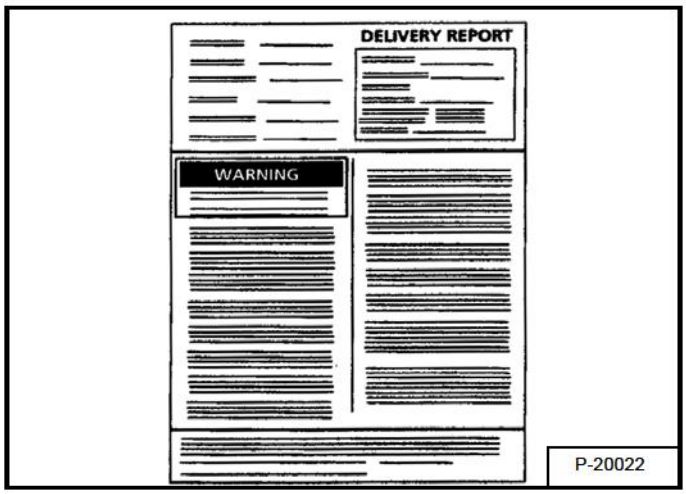
Figure 1



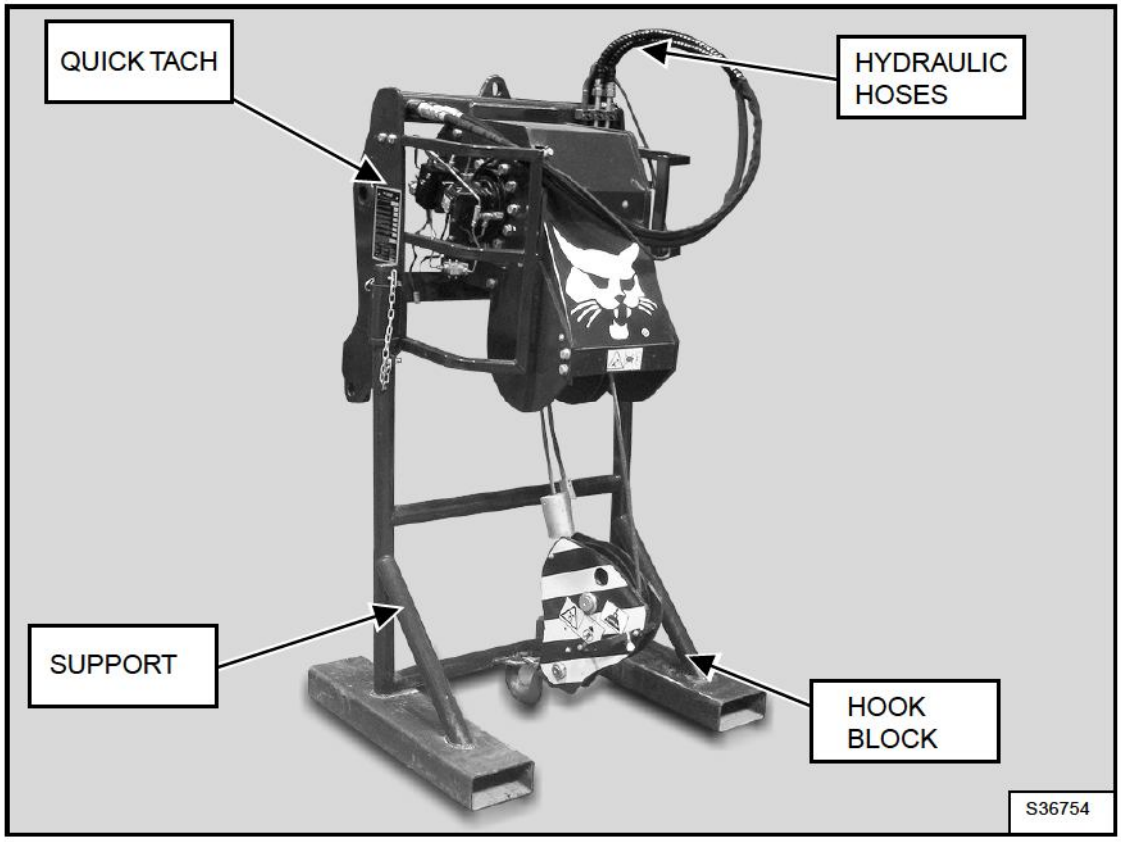
Always use the serial number (Item 1) **[Figure 1]** of the hoisting winch when requesting service information or when ordering parts. Early or later models (identification made by number) may use a different procedure in doing a specific service operation.

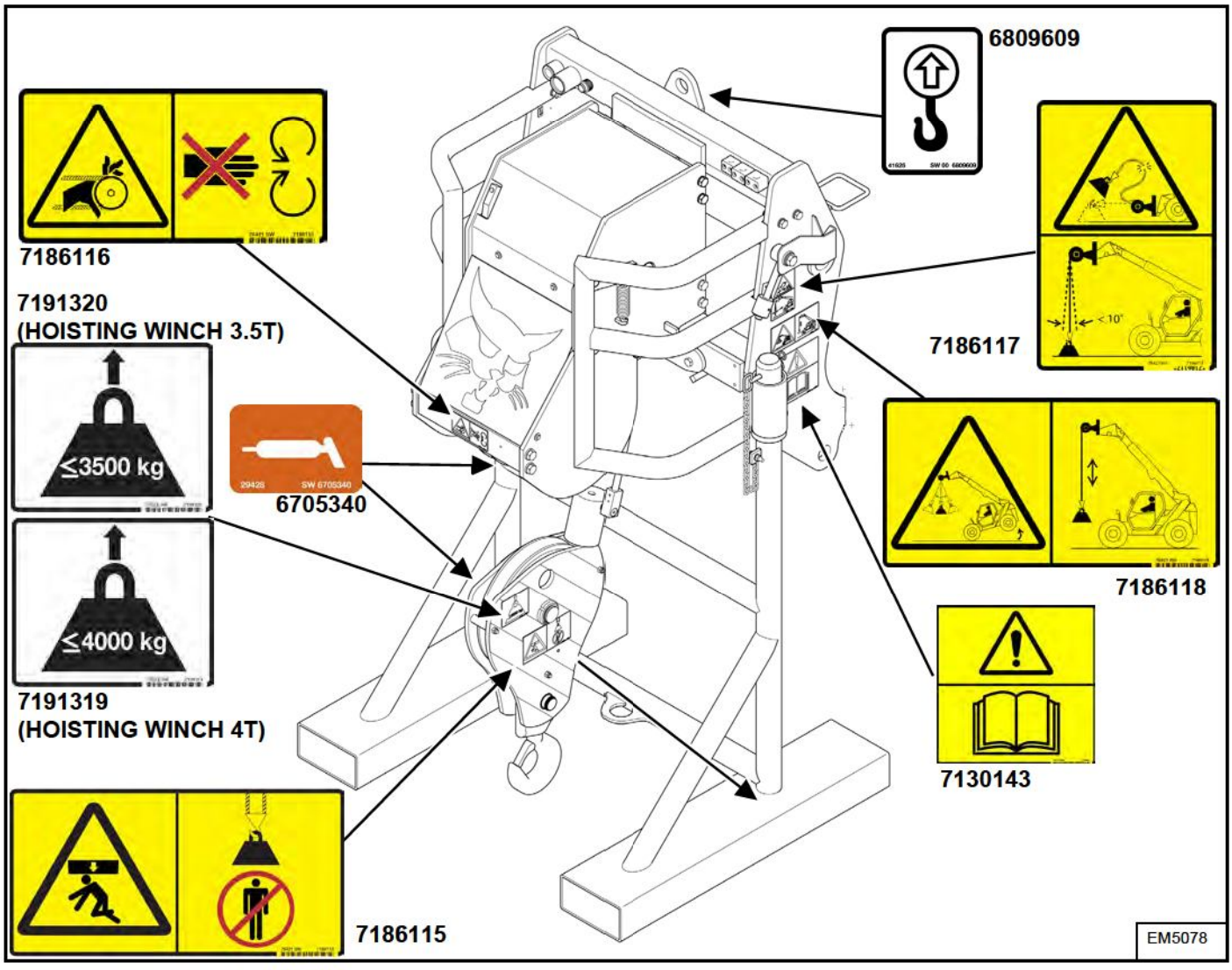
ATTACHMENT DELIVERY REPORT

Figure 2



The Attachment Delivery Report must be completed by the dealer and signed by the owner or operator when the hoisting winch is delivered. An explanation of the form must be given to the owner. Make sure it is entirely completed **[Figure 2]**.


QUICK TACH
HYDRAULIC HOSES
SUPPORT
HOOK BLOCK
S36754


6809609
7186116
7191320
(HOISTING WINCH 3.5T)
≤3500 kg
6705340
7186117
<10°
≤4000 kg
7191319
(HOISTING WINCH 4T)
7186118
7130143
7186115
EM5078

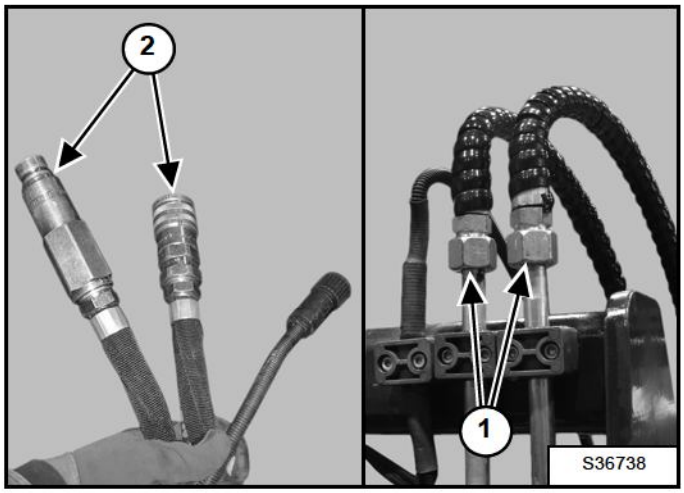
SAFETY AND MAINTENANCE

PROBLEM	CAUSE	CORRECTION
Winch function not working	No auxiliary hydraulic pressure	Check if boom head hydraulics are ON and all controls (radio control) are working
	Defective electrical switch	Check if Kit Presence Switch makes contact with the tab on the quick-tach. Re-position if needed.
		Replace switch
	Defective hydraulic valve	Check if Lower Limit Valve is working. Replace if needed.
		Check if Upper Limit Valve is working. Replace if needed.
	Defective solenoid valve	Check if solenoids are working. Replace if needed.
	Clogged orifices (located in the hydraulic motor fittings)	Clean the orifices
	Defective Main Hydraulic Manifold.	Replace Main Hydraulic Manifold.
	Cable is stuck	Check cable for kinks or loops. Replace if needed.

INSPECTION

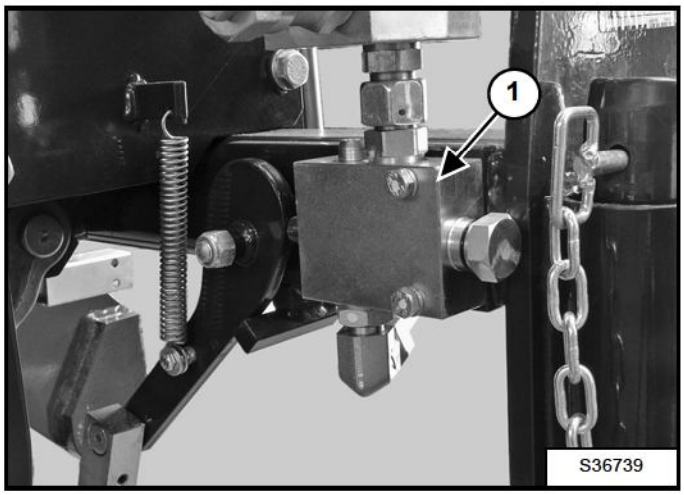
Hydraulic System Inspection

Figure 10-20-1



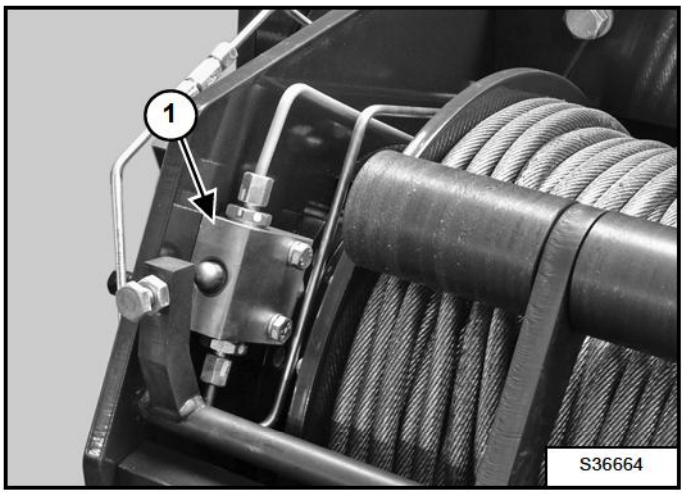
Check the tightness of hydraulic connections on the hoisting winch (Item 1) and hydraulic quick couplers (Item 2) **[Figure 10-20-1]**.

Figure 10-20-2



Check the working of the Upper Limit Valve (Item 1) **[Figure 10-20-2]**.

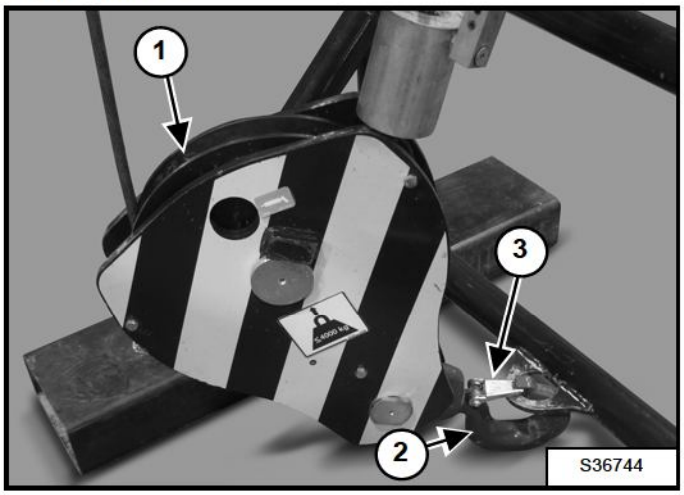
Figure 10-20-3



Check the working of the Lower Limit Valve (Item 1) **[Figure 10-20-3]**.

Cable Inspection

Figure 10-20-4

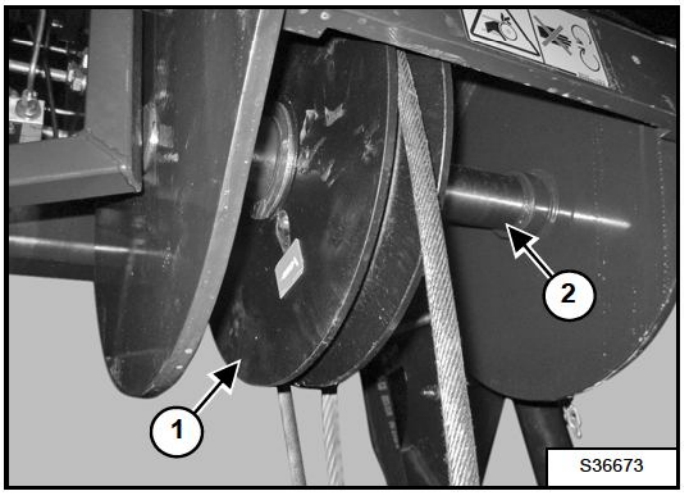


Check that the pulley (Item 1) **[Figure 10-20-4]** of the block rotates freely.

Check that the lifting hook (Item 2) **[Figure 10-20-4]** rotates freely.

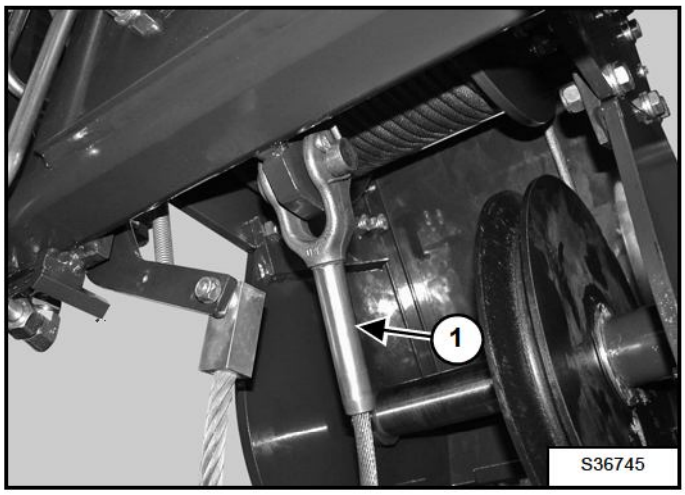
Check that the safety tab (Item 3) **[Figure 10-20-4]** is intact and positions itself correctly.

Figure 10-20-5



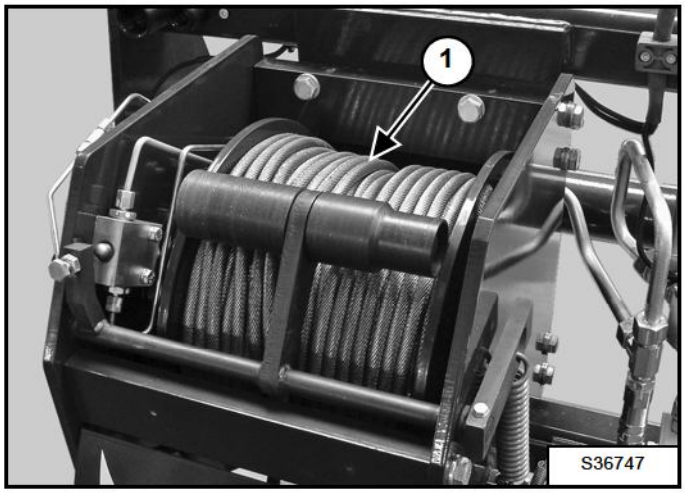
Check the lateral sliding of the cable guide pulley (Item 1) on the shaft (Item 2) **[Figure 10-20-5]**.

Figure 10-20-6



Check the condition of the fixed socket (Item 1) **[Figure 10-20-6]**.

Figure 10-20-7



Check the condition of the cable and its correct winding around the drum (Item 1) **[Figure 10-20-7]**.

Check the cable (Item 1) **[Figure 10-20-7]** for broken strands and wear, stretching, deformation and rusting in the winding area. (See Cable Deterioration And Replacement Criteria (as per ISO 4309) on Page 10-20-3.)

NOTE: Replace the cable with a certified replacement cable provided by Bobcat Company.

INSPECTION (CONT'D)

Cable Deterioration And Replacement Criteria (as per ISO 4309)

Replace the cable in case of breakage of 10 strands along a length of 14.2 in. (360 mm) for 0.47 in. (12 mm) diameter cable.

Cables should be replaced when:

- the cable diameter, even at just one point, is 7% smaller than the nominal diameter;
- the cable appears permanently crushed, twisted or bent;
- the core can be seen even at just one point;
- while in tension, there are one or more loose strands.

NOTE: Replace the cable with a certified replacement cable provided by Bobcat Company.

The photos below show examples of deterioration of cables, describing the cause and replacement conditions.

Broken wires out of position in two strands of a regular lay cable. Replace this cable.	
Major wear and high number of broken wires in a regular lay cable. Replace this cable immediately.	
Broken wires in a single strand and slight wear in a long lay cable. In this case, remove the broken wires to make the cable smooth.	
Broken wires in several strands, close to a return sheave (sometimes hidden by the sheave). Replace this cable.	
Broken wires in two strands due to bending fatigue, linked to major localized wear. Replace this cable.	
Birdcage in a multilayer (non rotating) type of cable caused by forced rotation around small grooves or excessive fleet angle. Replace this cable immediately.	
Protrusion of the steel core, generally llinked to basket deformation. Replace this cable immediately.	
The wires of a single strand have loosened although inspection of a section of cable has shown that the deformation can be seen at regular intervals, normally equal to the lay pitch. This defect must be kept under control.	
More serious example of the previous defect with protrusion on the inner wires of the strands. Major localised defect caused by applying shock loads. Replace this cable immediately.	
Confined increase of diameter of a long lay cable, caused by distortion of the metal core caused by dynamic load. There are also traced of corrosion and major wear of the external wires. Replace this cable immediately.	
Confined increase of diameter of the cable, due to the protrusion of the textile core between the external strands. Replace this cable.	
Major kink causing fibrecore protrusion. Replace this cable immediately.	
Wire cable which has been twisted during installation and use. Now subject to localised wear and lengthening of the strands. Replace this cable.	
Confined reduction in the cable diameter because the outer strands tend to fill the volume of the textile core which has been destroyed. Replace this cable immediately	

Thank you so much for reading.

Please click the “Buy Now!” button below to download the complete manual.

After you pay.

You can download the most perfect and complete manual in the world immediately.

Our support email:

ebooklibonline@outlook.com