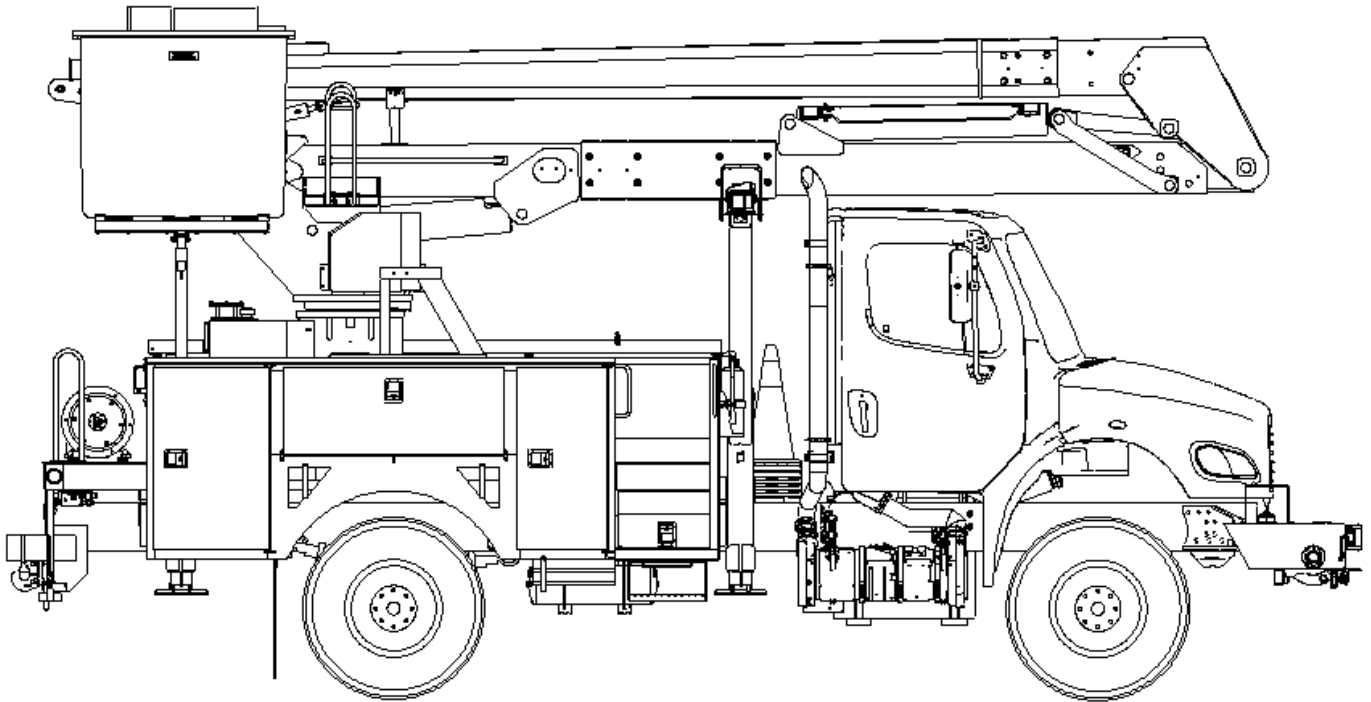




TECH TIPS

REPLACING LEVELING CHAINS ON AN HR37 AND HR40

NO. 127



SERVICE CALL:
REPLACING LEVELING CHAINS
ON AN HR37 AND HR40



MODEL(S):
HR37 AND HR40



TOOLS NEEDED:
TORQUE WRENCH
ASSORTED WRENCHES/ SOCKETS
CROW'S FEET
PLIERS AND SIDE CUTTER
ROPE
PAINT MARKER PEN

TEREX UTILITIES TECHNICAL SUPPORT TEAM

PHONE: 1-844-TEREX4U (1-844-837-3948) | EMAIL: UTILITIES.SERVICE@TEREX.COM



DANGER

Failure to obey the instructions and safety rules in the appropriate Operator's Manual and Service Manual for your machine will result in death or serious injury.

Many of the hazards identified in the Operator's Manual are also safety hazards when maintenance and repair procedures are performed.

DO NOT PERFORM MAINTENANCE UNLESS:

- ✓ You are trained and qualified to perform maintenance on this machine.
- ✓ You read, understand and obey:
 - manufacturer's instructions and safety rules
 - employer's safety rules and worksite regulations
 - applicable governmental regulations
- ✓ You have the appropriate tools, lifting equipment and a suitable workshop.

The information contained in this Tech Tip is a supplement to the Service Manual. Consult the appropriate Service Manual of your machine for safety rules and hazards.



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INTRODUCTION

This tech-tip provides the basics to remove and replace the leveling chains on a Terex Aerial Device. This applies to units with stack booms that have leveling chains in both the upper boom and lower boom.

STEP 1

Soak the new chains in 30W non-detergent oil. The lube on the chain as received is for rust prevention only, it is not for lubrication. Then hang them to drip while removing the old chains.



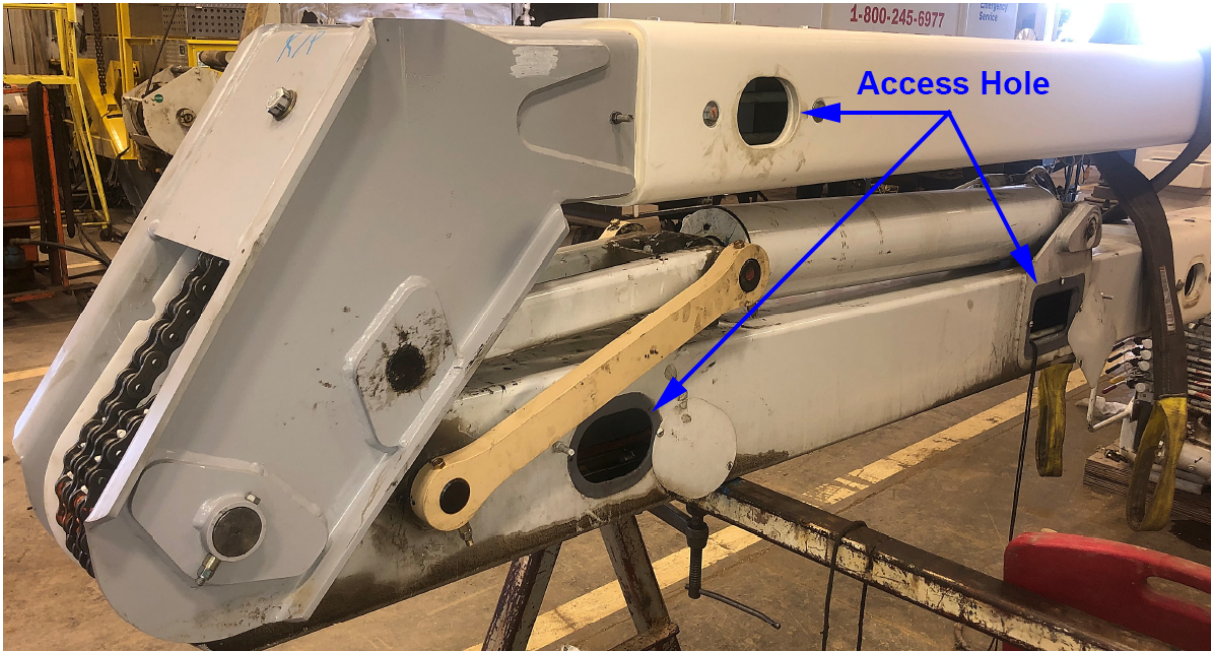
STEP 2

Set-up the unit in the best configuration to safely perform the job while preventing damage to the chassis. Stored, rotated off the side, or rotated 180 degrees off the back of the unit.



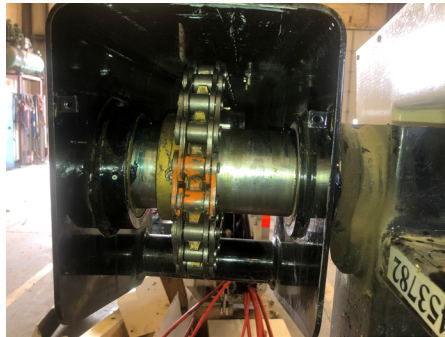
STEP 3

Remove all covers at the boom tip and at the elbow. Remove all side covers at the elbow area on the upper and lower boom.



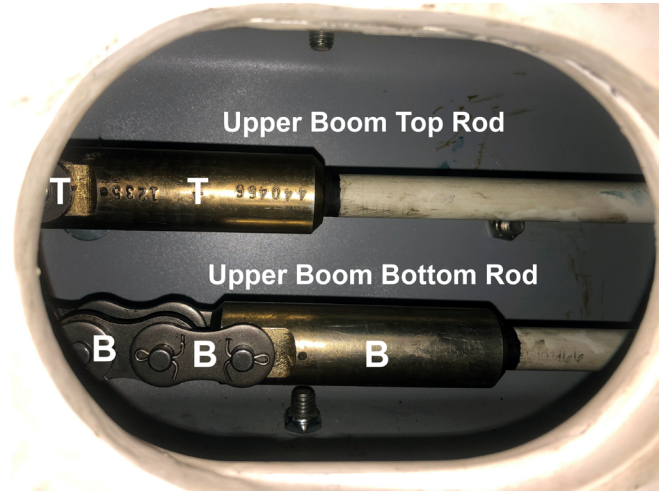
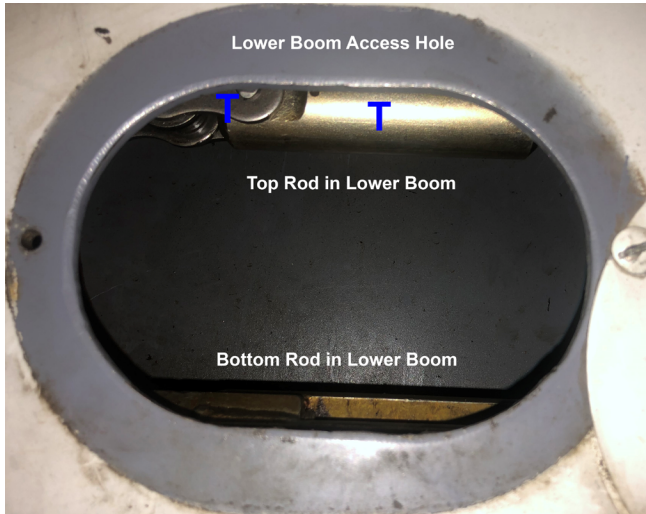
STEP 4

Clean off an area on both the sprocket and chain at the boom tip, elbow area, and the back of the lower boom. Using a paint marker or pen, mark one link and that tooth. Also mark the sprocket in-line with the tooth.



STEP 5

At the access holes in the upper and lower boom, mark the chain and the leveling rod, top and bottom in several locations.



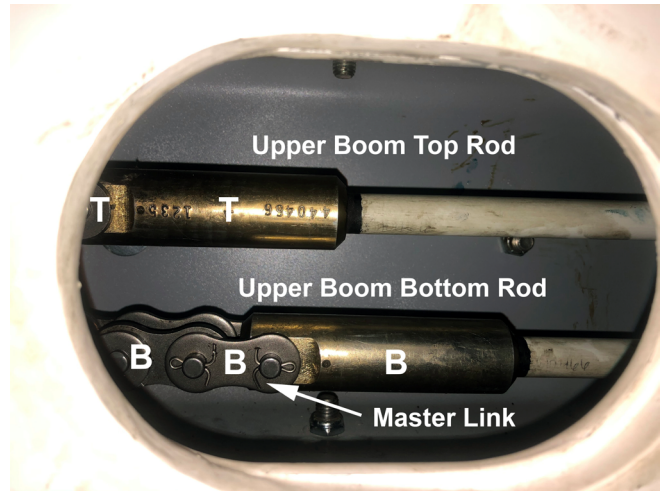
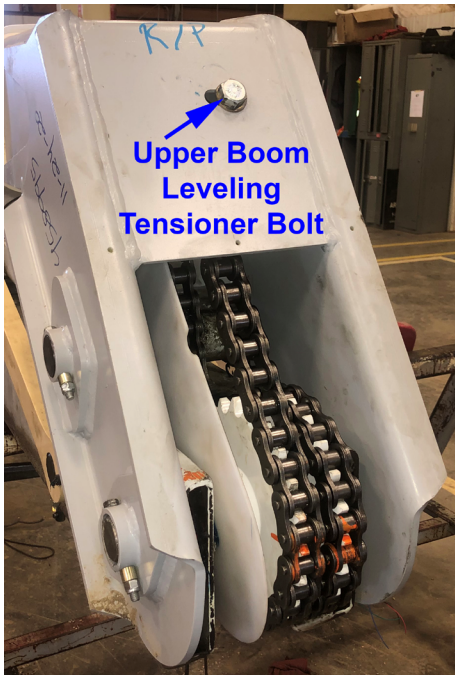
STEP 6

Be sure to support the platform so it does not rotate while loosening the leveling.



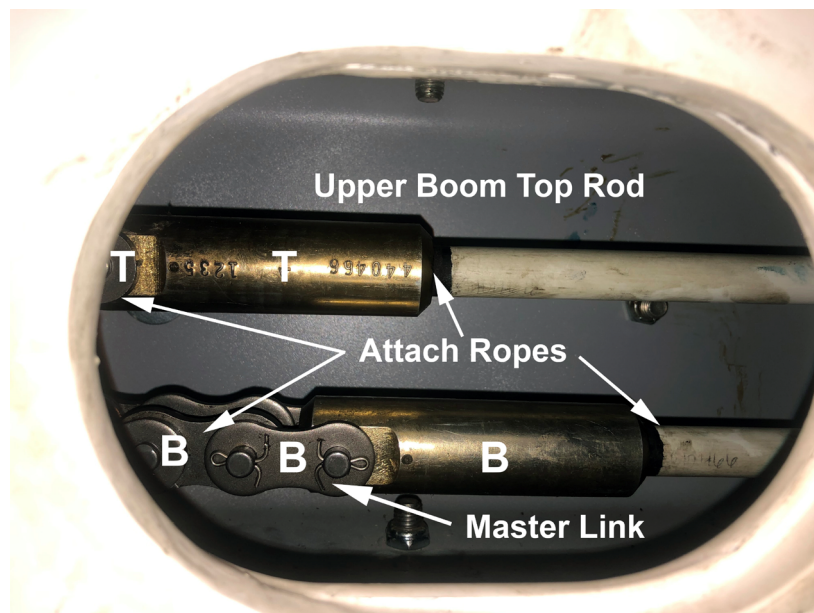
STEP 7

Locate the tensioner bolt at the elbow for the upper boom. Loosen it so you can unhook the master links.



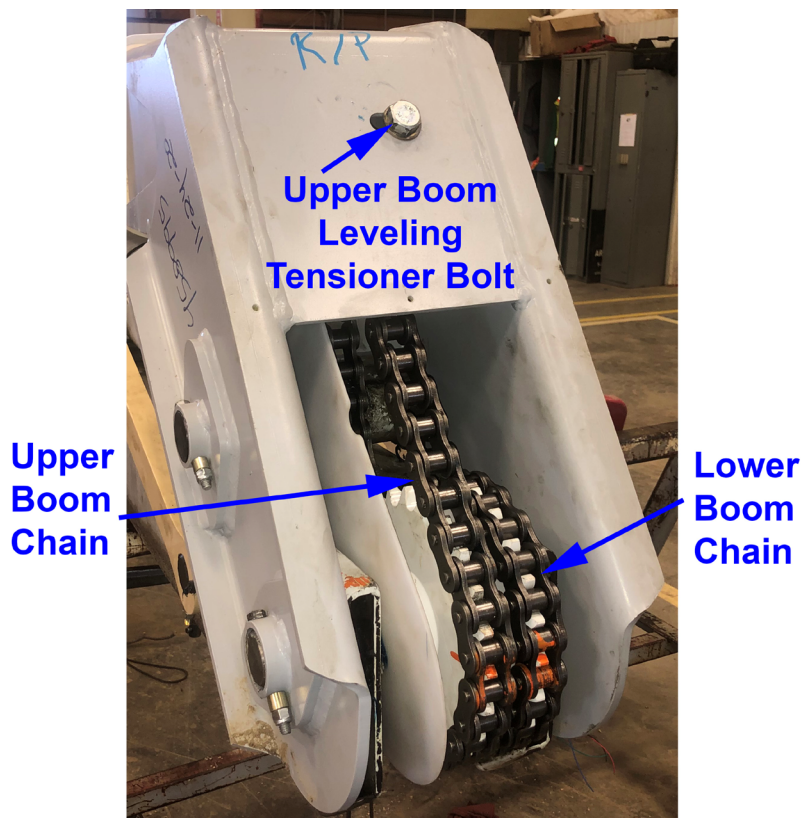
STEP 8

Once loosened, start with the upper boom at the elbow. Tie a rope to the end of each chain after the master link. Also tie a separate rope to the end of each leveling rod. Remove and discard the cotters keys and master links.



STEP 9

Loosen the ropes on the chain and slowly lower the upper boom chain out the elbow end. Once removed, untie the ropes and lay the chain on the floor or bench.



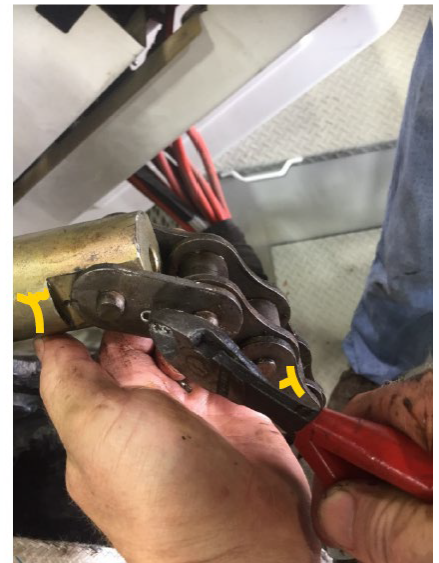
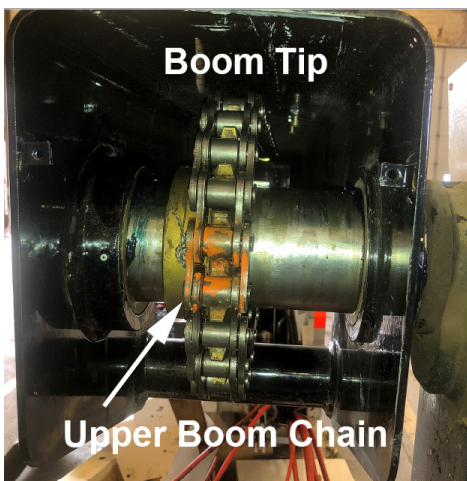
STEP 10

Lay the replacement chain next to the old chain to make sure they are the same length. Mark the new chain exactly like the old chain. If the old chain had a half link, make sure to install a half link on the new chain. Set this chain off to the side and start removing the boom tip chain.



STEP 11

Loosen the rope holding the leveling rods and then pull the chain and leveling rods out the boom tip. With the chains hanging on the rods, mark the rods and chains for top and bottom in the same manner as Step 4 and then remove the chains.



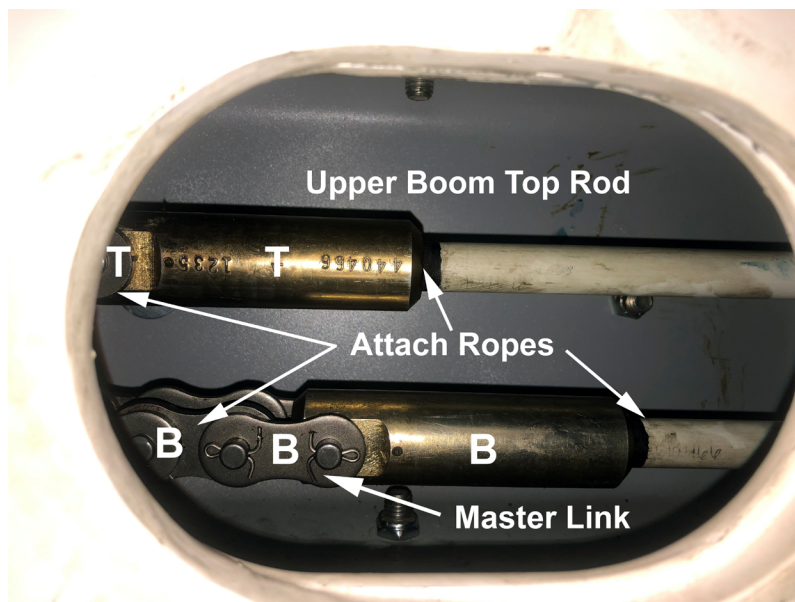
STEP 12

Verify the chain length and mark the new chain in the same manner as Step 10. Count the links according to the drawing in the maintenance manual to verify they are marked in the right location.



STEP 13

Wrap a rag around the metal part of the fiberglass rod and remove the leveling rods out the boom tip end and unhook the ropes. The ropes are used to position the rods and chains back into the original location. Inspect and clean the leveling rods according to the instructions in **Tech Tip #55**.



STEP 14

Once the rods have been cleaned and inspected, tie the ropes back on and reinstall the rods leaving them stick out the boom tip enough to attach the boom tip chain. Wrap a rag on the terminal end to prevent metal transferring on to the fiberglass while installing the rods.



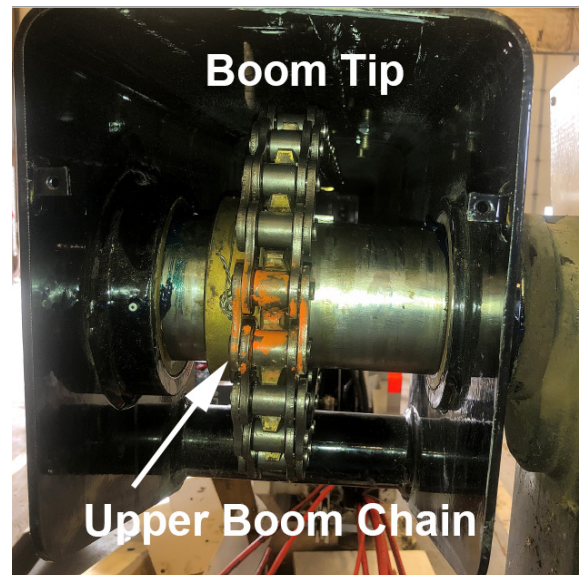
STEP 15

Connect the new boom tip chain to the leveling rods using new master links and cotter keys.



STEP 16

Pull the leveling rods and chain back into position and place the chain on the sprocket in line with the marked link and paint mark on the sprocket.



STEP 17

Attach the ropes to the chain for the elbow. Install this chain and place it in position according to the paint marks.

STEP 18

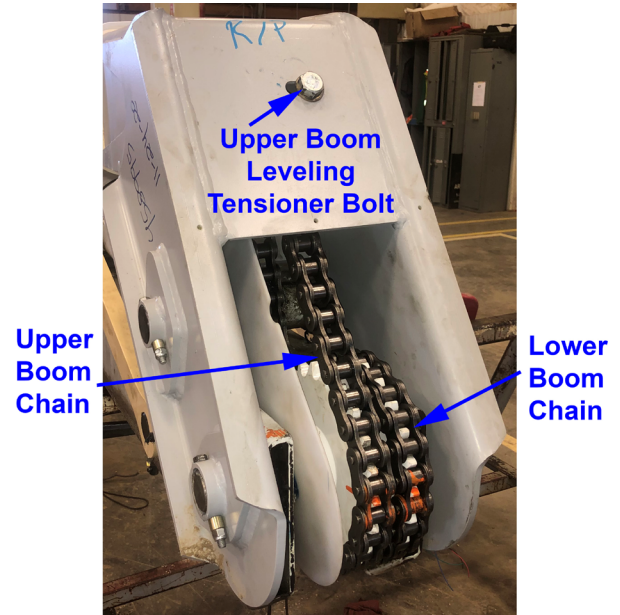
Install the new master links and cotter keys to the leveling rods. If a half link is used, install it on the bottom rod and chain.

STEP 19

If there are issues with getting the rods to attach to the chains, the platform may have to be pushed or pulled on to make this easier to attach.

STEP 20

Once the chains are attached and cotter keys are in place, tighten the tensioner for the upper boom leveling. Torque to 60ft/lbs.



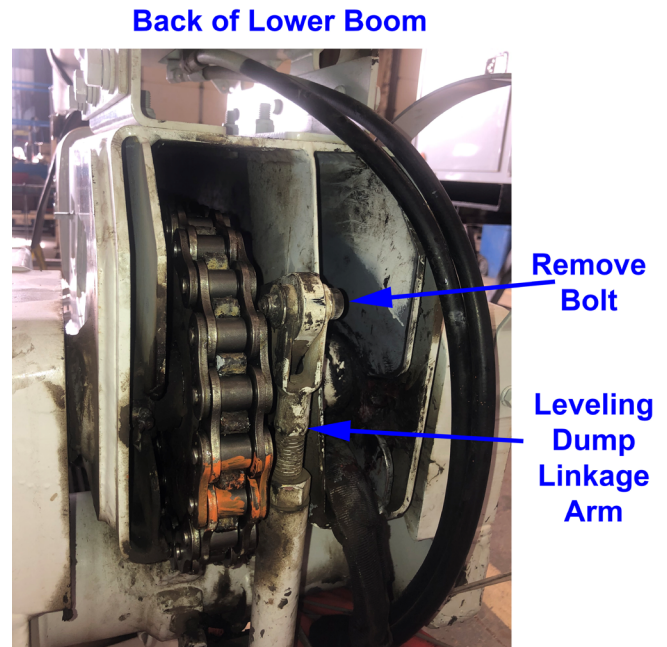
STEP 21

Once this is done then go to the lower boom and at the elbow and locate the turnbuckle for the lower leveling assembly. Loosen the turnbuckle enough to be able to remove the master links.



STEP 22

Repeat steps 5 through 18 with the lower boom assembly. To help remove the chain from the back of the lower boom, remove the platform dump linkage. This will give access to rotate the sprocket if needed. Also, when removing the leveling rods, put a rag on the terminal end and slide them out the back of the lower boom or the elbow area. Inspect and clean the rods according to Tech Tip 55.



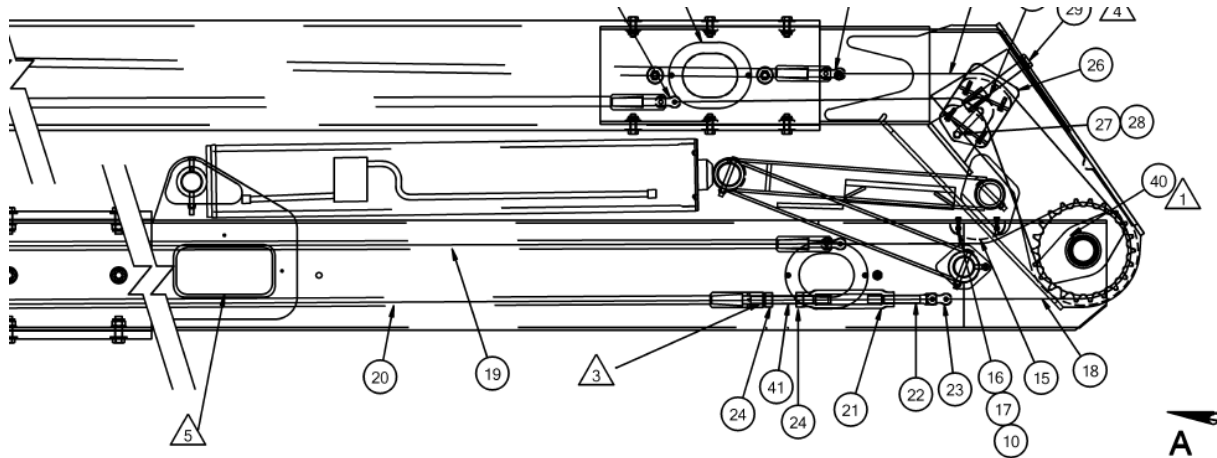
STEP 23

Once the leveling rods have been cleaned, reinstall the rods and chains. Be sure to wrap a rag on the terminal end before installing the leveling rods to prevent metal tracing inside the fiberglass. Start tightening the turnbuckle and set the tension according to the leveling installation guidelines in the unit specific manual.

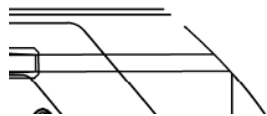
The example in **Figure 27** shows that when the rod is pulled down with 17-20lbs of down force, the rod should deflect 1.00”.

STEP 24

Once everything is installed and the tension is set, run the unit from the lower controls through the full range of motion. Recheck the tension and install all covers.



A: 13 LINKS (16.25")



NOTE:

- 1) LOCATE LUBE FITTING AT 45° ANGLE AS SHOWN
- △ 2 EXTEND CYLINDER, ITEM 44, FULLY. TILT BASKET TO PUSH ON ITEM 45 WITH LINK ARM, ITEM 9, THEN SNUG UP SET SCREWS, ITEM 46, TO 100 IN LBS AND TIGHTEN LOCK NUT, ITEM 43. ADJUST LINK, ITEM 9, TO LEVEL BASKET BETWEEN LIMITS SHOWN. IF NOT CHECK LEVEL TIMING DIM.
- △ 3 LUBRICATE WITH RED LOCKTITE (271) TORQUE TO 30. FT LBS.
- △ 4 LUBRICATE WITH ANTI-SIEZE TORQUE TO 60 FT LBS.
- △ 5 TIGHTEN LEVELING SYSTEM TO DEFLECT 1.00" AT 17-20 LBS.
- △ 6 CENTER ROLL PINS IN PIN

28	H26291	1/2-13NC LOCKNUT	1
27	10626	1/2-13NC X 1.50 HHCS	1
26	458552	CHAIN TENSIONER ASS'Y	1

FIGURE 27



FOR FURTHER ASSISTANCE,
CONTACT THE TEREX UTILITIES TECHNICAL SUPPORT TEAM
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