SERVICE BULLETIN

DRUM BEARING REPLACEMENT

DRUM MULCHER

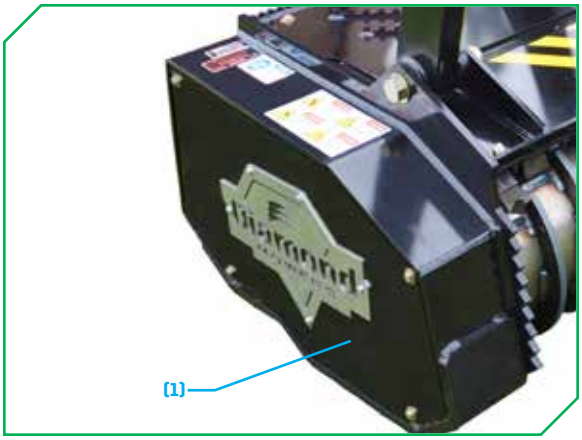
DOC #15-2037

WARRANTY + SERVICE 888.960.0364
PARTS 888.960.0361

Diamond MOWERS™

DIAMONDMOWERS.COM

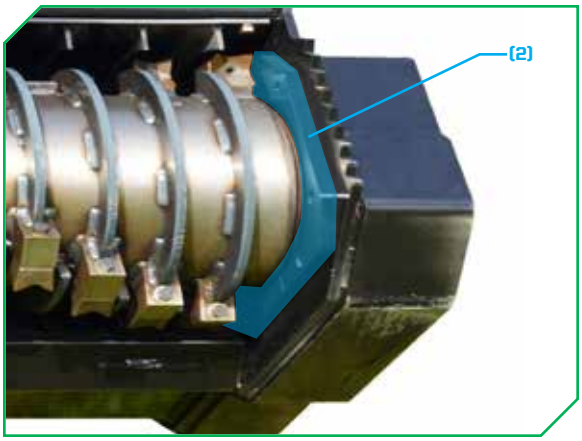
DRUM BEARING REPLACEMENT



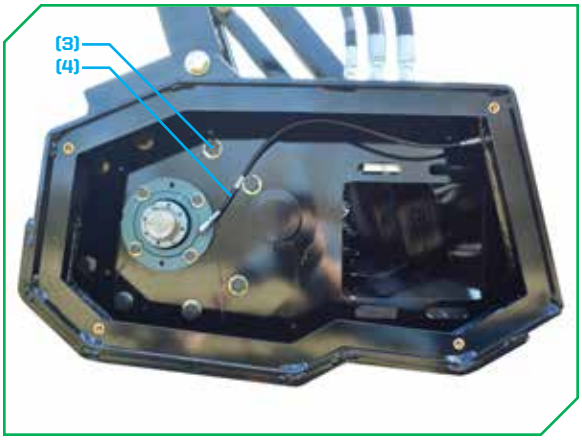
If bearings have side play, but do not require replacement, retorque the bearings following steps 1, 3-11, 13-14, (both sides), 15 (first bullet only - idle side only), 19-22 (drive side only), 25-30 (idle side only), 34-41, and 43.

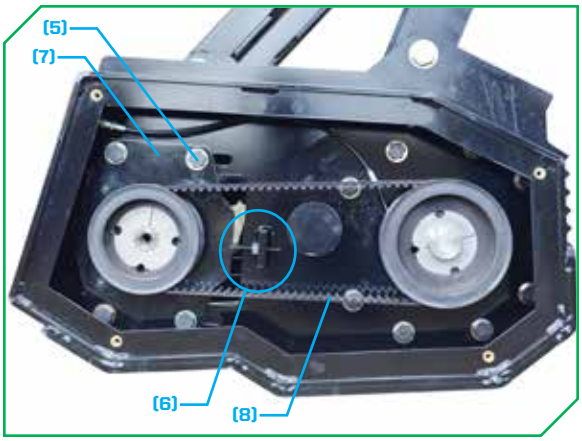
ANTI-WRAP PLATES

1. Remove the side covers(1) from each side of the machine.



2. Remove the anti-wrap plates(2).
   - Anti-wrap plates(2) are in (2) halves on each side (rear and front).
   - Mounting bolts(3) are located around the bearings for each anti-wrap plate(2).
   - Note location and orientation of bearing grease hoses(4).





BELT & PULLEYS

3. Loosen the motor mount(5) bolts.
4. Loosen the tension adjustment(6) bolt.
   - Loosen the lock nut on the tension adjustment(6) bolt first.
5. Slide the motor mount(7) towards the tension adjustment(6) bolt.
6. Remove the belt(8).

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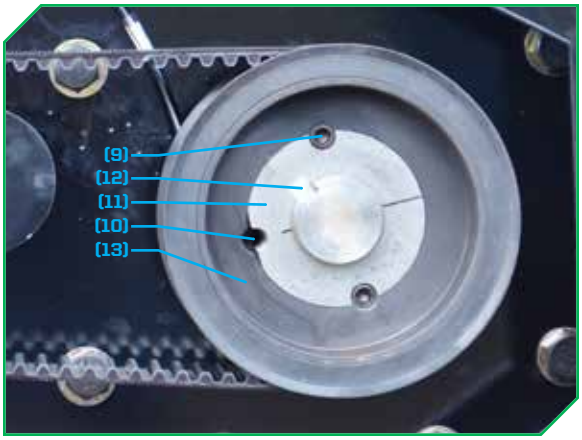
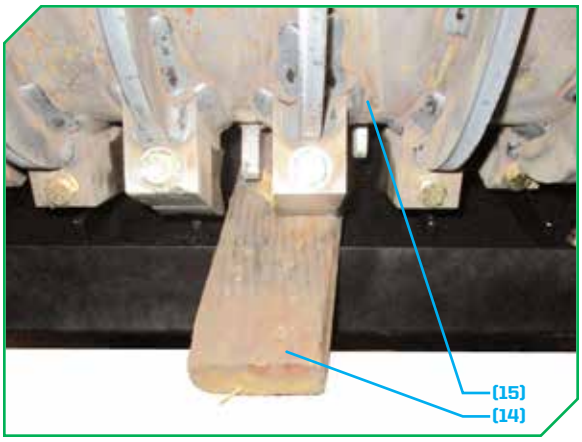
DRUM BEARING REPLACEMENT



7 Remove the set-screws(9).

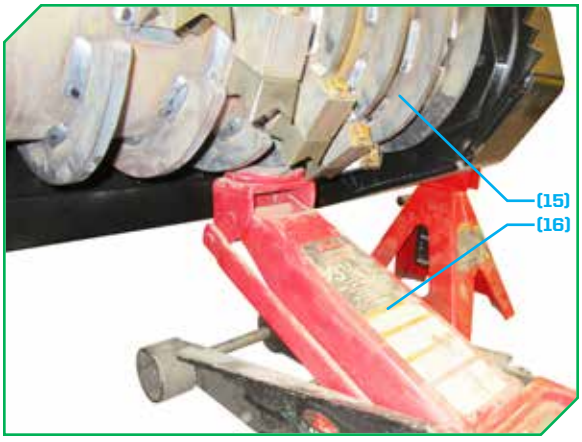
8 Thread a set-screw(9) in the open hole(10) to seperate the tapered collar(11) from the pulley(12).

9 Tap the tapered collar(11) with its shear key(12) and the pulley(13) off the drum shaft.

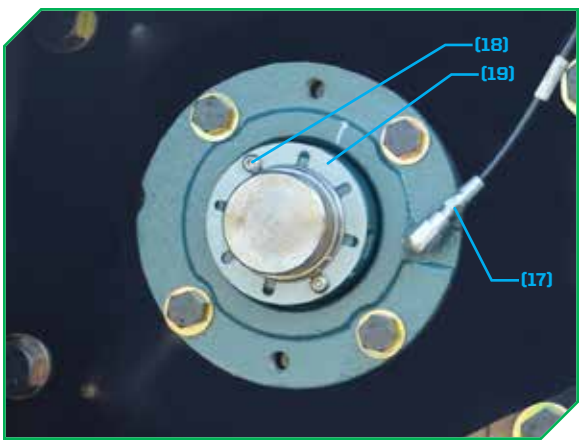


BEARINGS

10 Block(14) the drum(15) from rotation.



11 Use a floor jack(16) (centered on the drum) to remove all weight from the drum(15) and to center it in its mounts.
- NOTE: This step is critical in preventing the drum shaft from shifting while installing the bearings.



12 Remove remote grease hoses(17) and their elbows.

13 Remove the button head screws(18).

14 Remove the lock plates(19).

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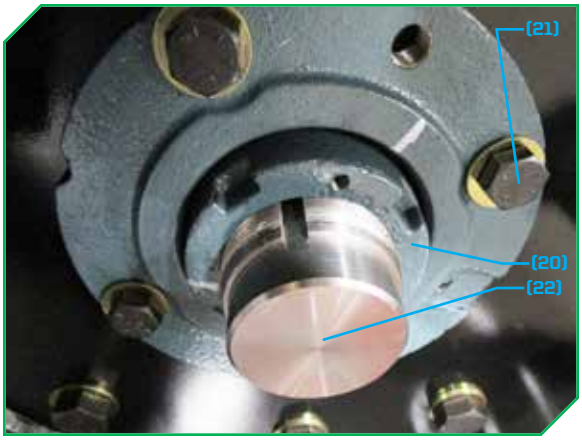
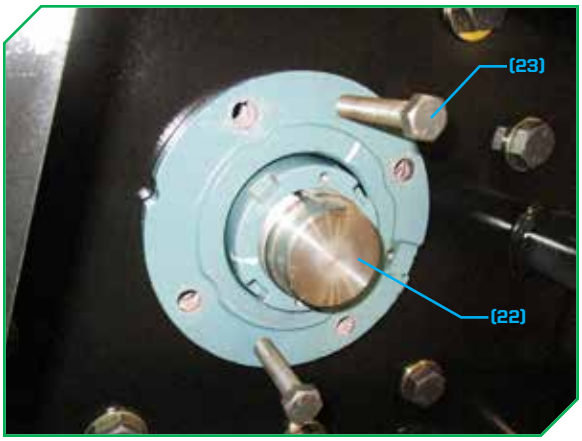
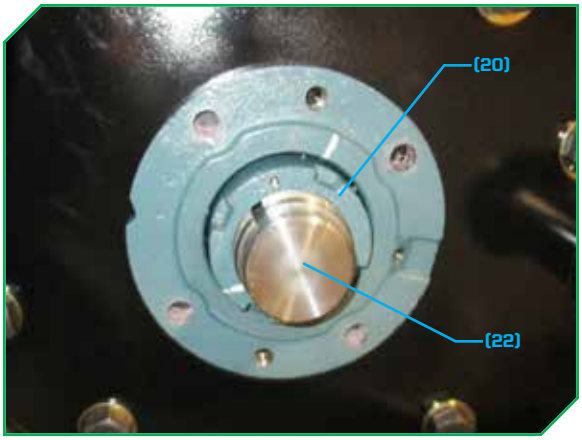
DRUM BEARING REPLACEMENT

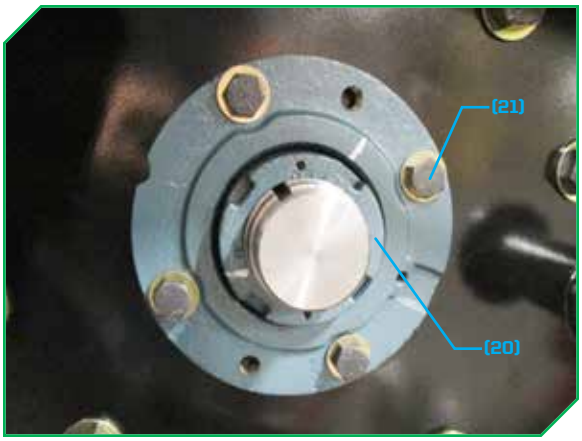


15 Rotate the locknuts(20) counter-clockwise several turns.
- Use a spanner or drift and hammer.
- Unbolt the bearing bolts(21) and slide the bearings off the drum stub shafts(22).
  - It may be necessary to thread in removal bolts(23) to force the bearing off the drum stub shafts(22).





16 Replace the drive side (non-floating) bearing (part #10-1068) onto the drum stub shaft(22).
- Turn locknut(20) counter-clockwise until the bearing will freely slide onto the drum stub shaft(22).
- NOTE: **BOTH** bearings need to be loosened prior to tightening the drive side bearing. Drive side bearing **MUST** be tightened **FIRST /BEFORE** the idle side bearing.



17 Replace the bearing bolts(21).
- Use Loctite 262 with primer 7649 on bolt threads(21).
- Torque the bearing bolts(21) to 107ft-lbs (145Nm).
- Confirm even gaps on either side of the drum(15) relative to the housing.
  - NOTE: Spacers may be used to center drum when tightening bearings (¼" for 60" units, and ⅜" for 72").

18 Rotate the locknut(20) clockwise with both hands as tight as possible.
- Tap the locknut(20) evenly all the way around its circumference, **WHILE** tightening the locknut(20) again. Repeat until the locknut(20) can no longer be rotated by hand.

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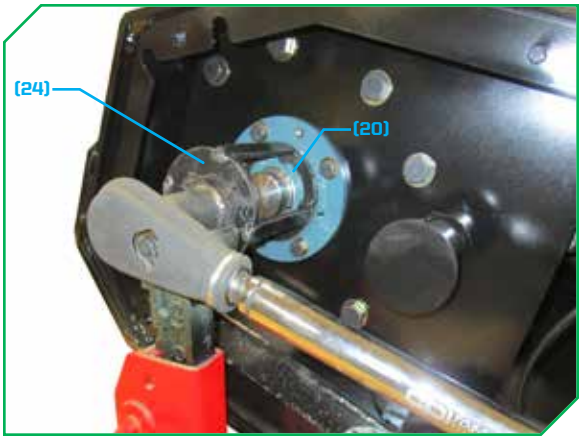
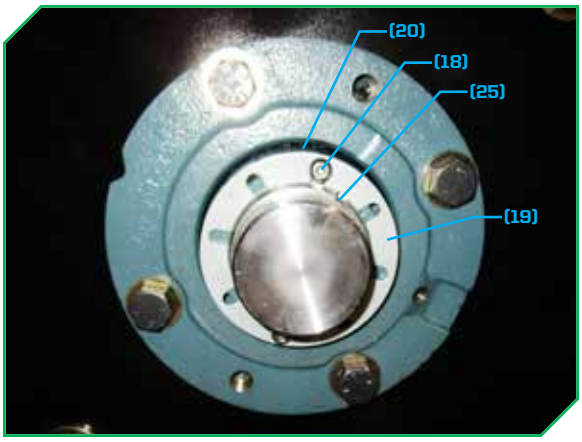
DRUM BEARING REPLACEMENT



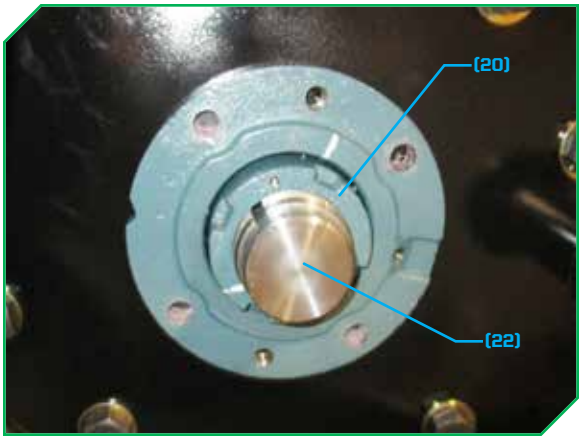
19 Using the spanner socket(24) (part #24-0378) and a torque wrench, torque the bearing locknut(20).
- Torque to 250ft-lbs (339Nm).
- Tap the locknut(20) evenly all the way around its circumference and retorque again to 250ft-lbs (339Nm).
- **NOTE:** Repeat this step 3 times; this is extremely important!



20 Replace the lock plate(19).
- Align tang of lock plate(19) with the adapter sleeve slot(25).

21 **TIGHTEN, NOT LOOSEN** the locknut(20) until the lock plate(19) slot overlaps the button head screw(18) holes.

22 Replace the button head screws(18).



23 Replace the idle side (floating) bearing (part #10-1069) and slide it onto the drum stub shaft(22).
- Turn locknut(20) counter-clockwise until the bearing will freely slide onto the drum stub shaft(22).

24 Replace the bearing bolts(21).
- Use Loctite 262 with primer 7649 on bolt threads(21).
- Torque the bearing bolts(21) to 107ft-lbs (145Nm).

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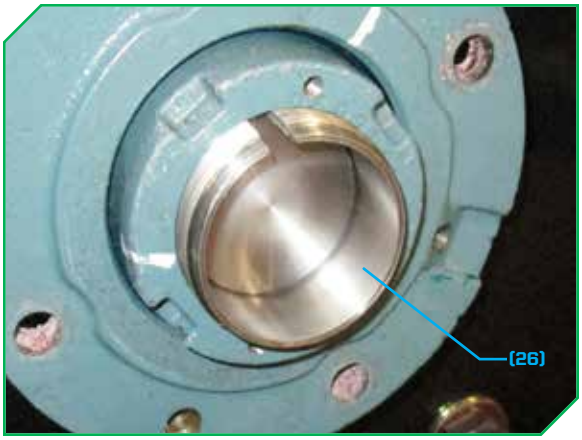
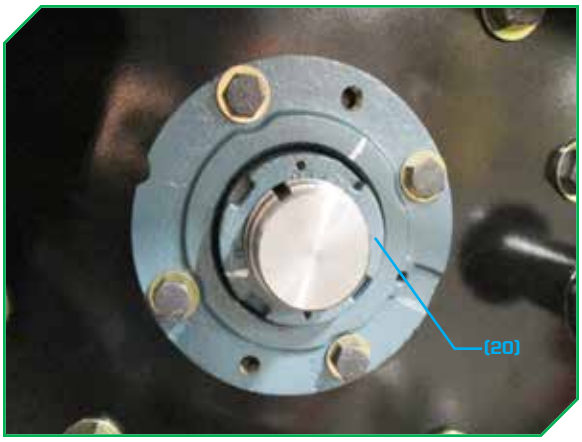
DRUM BEARING REPLACEMENT

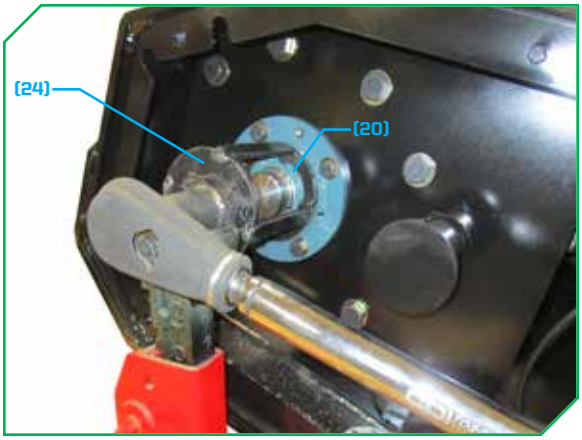


25 Push the adapter sleeve(26) insert in as far as possible (towards the drive side bearing).



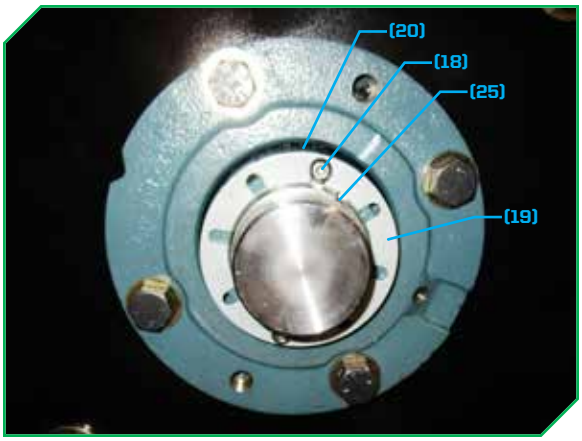
26 Rotate the locknut(20) clockwise with both hands as tight as possible.

- Tap the locknut(20) evenly all the way around its circumference, **WHILE** tightening the locknut(20) again. Repeat until the locknut(20) can no longer be rotated by hand.



27 Using the spanner socket(24) (part #24-0378) and a torque wrench, torque the bearing locknut(20).

- Torque to 250ft-lbs (339Nm).
- Tap the locknut(20) evenly all the way around its circumference and retorque again to 250ft-lbs (339Nm).
- **NOTE:** Repeat this step 3 times; this is extremely important!



28 Replace the lock plate(19).

- Align tang of lock plate(19) with the adapter sleeve slot(25).

29 **TIGHTEN, NOT LOOSEN** the locknut(20) until the lock plate(19) slot overlaps the button head screw(18) holes.

30 Replace the button head screws(18).

31 Confirm axial play in the drum falls within range; if not, loosen idle side bearing, make necessary adjustments, and then retighten the idel side bearing.

- Drum axial play range is from 0.015" to 0.045".

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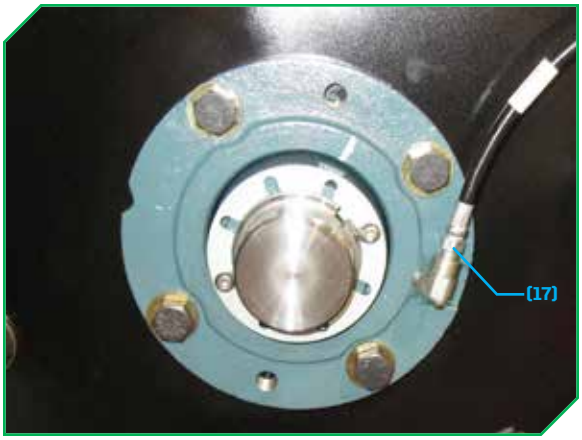
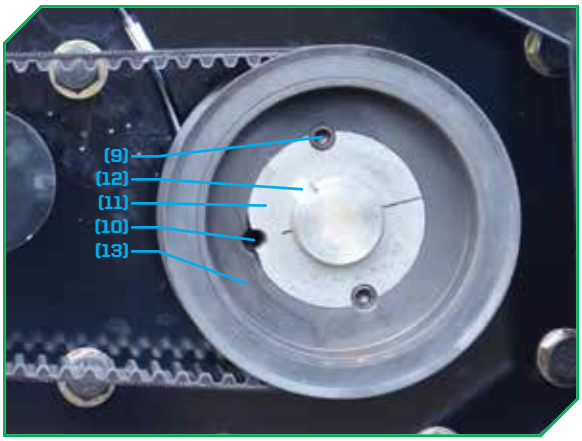
DRUM BEARING REPLACEMENT



32 Replace remote grease hoses(17) and their elbows for both bearings.
- Route the grease hoses through their brackets (if applicable), confirming the hoses / elbows are orientated as observed and noted earlier.

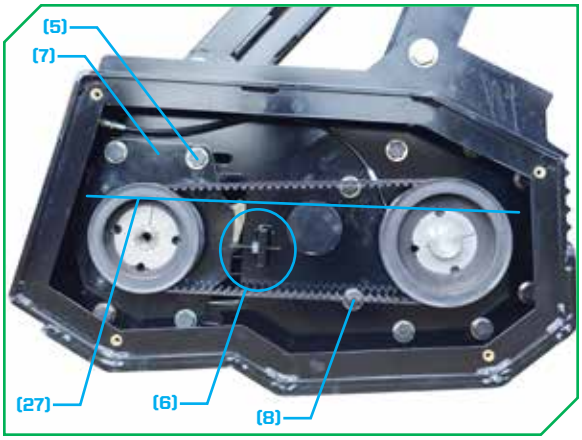
33 Grease both bearings until grease is observed purging from the bearings.
- Use synthetic / blend #2 lithium based grease.
- Spin the drum(15) while greasing to evenly distribute the grease in the bearings.



BELT & PULLEYS

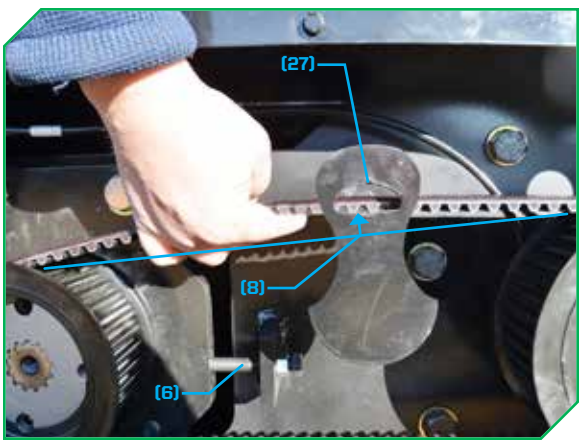
34 Tap the tapered collar(11) with its shear key(12) and the pulley(13) onto the drum shaft.

35 Thread the set-screws(9) into the (2) holes (not in hole(10)) to pull together the tapered collar(11) and pulley(13).



36 Use a straight edge(27) to confirm the drum pulley(13) is aligned with the drive pulley.
- If the pulleys are not straight, loosen the tapered collar(11) with its shear key(12) from the drum pulley(13) as described in steps 7-8, move the drum pulley(13) and tapered collar(11) with its shear key(12) the desired direction and amount, and repeat steps 35-37.
- Repeat as needed until the pulleys are aligned.

37 Reinstall the belt(8).
- **NOTE:** Replace the belt if wear or damage is noted.



38 Tighten the tension adjustment(6) bolt until the belt(8) is taught.
- Loosen the lock nut on the tension adjustment(6) bolt first.

39 Pulling upward on the belt in the location illustrated, belt(8) deflection should be within the notched cutout(27) of the tension gauge when the belt is cold (not been running).
- **NOTE:** Older units without the notched cutout:
  - Deflect the belt(8) in-between the pulleys up and down.
  - Total deflection(28) should be in-between 1-¼ - 1-¹³⁄₁₆" (32-46mm) when the belt is cold (not been running).
  - Adjust the tension adjustment(6) bolt as needed.

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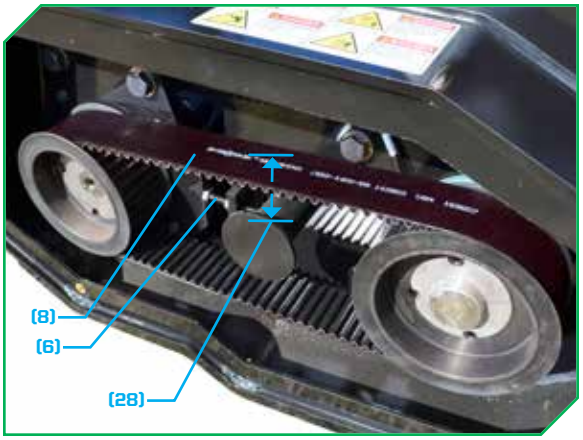
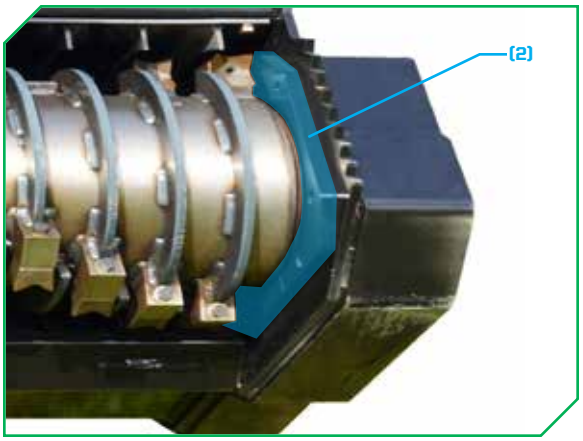
DRUM BEARING REPLACEMENT



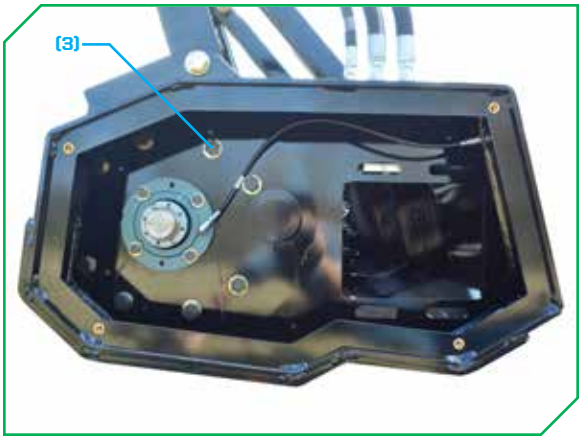
ANTI-WRAP PLATES

40 Tighten the motor mount(5) bolts.
- Re-check belt(8) deflection and repeat steps 38-40 as needed.

41 Tighten the lock nut on the tension adjustment(6) bolt.



42 Replace the anti-wrap plates(2).
- Anti-wrap plates(2) are in (2) halves on each side (rear and front).
- Mounting bolts(3) are located around the bearings for each anti-wrap plate(2).



43 Replace the side covers(1) for each side of the machine.