Maintenance & Service | 1

Maintenance and Service Procedures

This section will describe service procedures for major mechanical elements of your system.

A WARNING A

Only qualified and trained personnel should perform the disassembly and assembly of electrical and mechanical components.

How to Switch Main Gearmotor Caterpillar Drive to Standby

Lock out power to the pendulum system per your plant's 1 procedure.

2 Remove the pins from their parking location.

- Insert the pins fully into the slots underneath the take-up weight.
- 3

The take-up is now mechanically secured.





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5 Remove the covers for both motor couplers.

4

Manually release the brake on the Main gearmotor.

This releases any remaining tension on the conveyor chains.

6 Remove the locking collar that is mounted on the coupler for the Main gearmotor.

Remove the lever pin that holds the lever for the Main gearmotor coupler in the engaged position.









8 Pull this lever towards the gearmotor to disengage the coupler.

Insert the lever pin to hold this lever in the disengaged position.

9 This lever should angle towards the gearmotor and the lever pin is in the left slot.

10 Remove the lever pin that holds the lever for the Standby gearmotor coupler in the disengaged position.

11 Pull this lever away from the gearmotor to engage the coupler.











12 Insert the lever pin to hold this lever in the engaged position.This lever should be vertical and the lever pin in the right slot.

13 Install the locking collar onto the coupler.

14 Install the covers for the motor couplers.

15 Perform the necessary functions at the HMI to inform the system controls that the Standby gearmotor is functional.









16 Remove the pins from where they are slotted underneath the take-up weight.

17 Stow the pins in their parking location.







How to Complete an Overload Torque Test & Adjustment

Lock out power to the pendulum system per your plant's 1 procedure.

2 Remove the pins from their parking location.

- Insert the pins fully into the slots underneath the take-up weight.
 - The take-up is now mechanically secured.

3

Remove the cover over the drive coupler on the Primary 4 (Main) Drive.







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- Remove the fan cover from the rear of the electric motor.

Locate the orange disengagement lever and black locking pin at 8 the base of the lever.

Remove the retaining collar from the drive coupler.

With the coupler collar removed, use a paint marker to mark the

coupler location when the sleeve is in the engaged position.

5

6

7







Remove black locking pin and pull the orange lever to release the coupler. If the coupler does not easily release, use your hand to manually turn the fan and relieve pressure from the coupler.

10 Put the black locking pin thru the base of orange lever in the uncoupled position.

11 On the lower platform of the drive unit, open the guard in front of the cardan shaft.

12 Place 10-Ton hydraulic ram between the push pads on the fixed and floating frame on the primary (main) drive side.



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13 When the system is in normal running or stopped position, the prox. light will be turned on as shown.

14 Pump the hydraulic ram to 7250 PSI (14,500 Ft/Lbs.), at this point, the prox. light is to turn off.

If prox. light does not turn off, adjust the black flag above the prox. so that it turns off at this exact location.



15

Relieve pressure from hydraulic ram and pump it back up to 7250 16 PSI to confirm prox. turns off at the correct pressure.

17 Repeat procedure steps 10-14 for the second unit.

Close/secure the guard in front of the cardan shaft. Go to the 18 upper platform of the drive unit.

Remove the black locking pin and pull the orange lever to engage **19** the coupler. When the coupler does not easily engage, use your hand to turn the fan on the motor to line-up the coupler.















20 Make sure the coupler is fully engaged. Use the paint marker line to confirm the coupler is fully engaged.

21 Reassemble the coupler retaining collar.

22 Reinstall the black lockout pin thru the orange lever in the engaged (running) position.

23 Reassemble the fan cover on the rear of the motor and make sure the end coder is not loose.





PENDULUM SYSTEM – MAINTENANCE ଡୁ SERVICE

Reinstall the drive coupler guard.

25 Remove the pins from where they are slotted underneath the take-up weight.

26 Stow the pins in their parking location.

24

27 Reverse the lockout procedure, walk the system for a safety check and start the conveyor.









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Mastering Part Touching Details

1 Drop the mastering fixture on the stand aligned with the pins.

2 All the checking details should be raised and locked into upper positions.

3 Bring the skid into the station. The automatic positioner stops the skid and locates it in the X direction.

Lock the positioner clamps between the Destaco clamp andpositioner plate on the opposite side of the bed. This will locate the skid in the Y direction.

PENDULUM SYSTEM – MAINTENANCE ହ SERVICE









Drop down the checking details over the skid perches and lock them in the lowered positions. Make sure the checking details are resting on the hard stops to verify the location in the Z direction.

Use the attached gages to properly evaluate each perch:

6

5

Set-up Gage: $\frac{1}{4}$ " Go Gage: $\frac{3}{16}$ " No Go Gage: $\frac{5}{16}$ "

Use the fixture locators to properly evaluate each feature:

7

Go Gage: ${}^{3/}_{16}$ " No Go Gage: ${}^{5/}_{16}$ "

Set-up Gage: 1/4 "

If adjustments are necessary, continue to step 9.If no adjustment are necessary, skip to step 13.















13 Skid fixturing is now complete. Raise the checking details off the skid and lock them in the upper positions.

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SERVICE

ΟΜΑΤΙΟ

Replacing the Skid Locking Device Assembly

Lock out power to the pendulum system per your plant's 1 procedure.

2 Remove the hexagon nuts holding the lever in place.

3 Take out the lever and set aside.

Remove the four screws at the base of the locking device. 4











- **5** Take out the worn assembly and replace with new.

6 Return the screws at the base of the locking device.

7 Return the lever and hexagon nuts.







Replacing the Skid Stop Wear Bar

1 Lock out power to the pendulum system per your plant's procedure.

2 Place the skid stop in an upright and accessible position.

3 Remove the M6 set screws and set aside.

4 Remove the worn UHMW wear bar and replace with new one.

5 Return the set screws.















Replacing the Paint Skid Scrapers

1 Lock out power to the pendulum system per your plant's procedure.

2 Remove the two M8 screws for the lower or lateral blades.

3 Slide out the blades to be replaced.

holes of the supports.

Insert new blades making sure to align the fixing slots with the





4





5 Screw in the M8 locking screws again, complete with washers and nuts.





Resetting the Pendulum Diving Board

A WARNING A

This area is a tie-off zone and must be completed prior to continuing the procedure. Failure to do so could result in personal injury from potential fall to the lower floor between the diving board and outlet table.

1 Lock out power to the pendulum system per your plant's procedure.

2 Remove the pins from their parking location.

- Insert the pins fully into the slots underneath the take-up weight.
 - The take-up is now mechanically secured.

3

4 Wearing a safety hardness, tie-off at appropriate location(s).











9

Enter the pendulum exit area and check the diving board and surrounding area to be clear and free from items. If pendul is resting on the diving board, the pendul will need to be jogged into a non-contact position.

5

6 Once the area is clear, manually lift the board in the up position resetting the spring.

Should the board not remain in the up position the spring may need to be replaced.

8 After resetting the diving board, reset the fault from HMI following reset procedures.

Remove the pins from where they are slotted underneath the take-up weight.











10 Stow the pins in their parking location.



