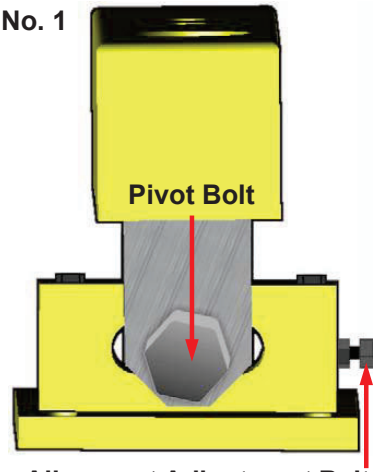
Catenary Idler Scale Installation Instructions

Component Preparation

1. Slide the pivot bolt to the center of the slot. See Figure No. 1. Tighten the pivot bolt ONLY finger tight.
2. Adjust the alignment adjustment bolt (M8 x 8mm Bolt) until it touches the pivot bolt. This will keep the pivot bolt centered while allowing for adjustment later.

Figure No. 1



Mechanical Installation

Pre-checks and Reference Marking:

Once the scale is installed, the roller sets will hang from the load cell assemblies. We need to make sure the height and angle of the rollers are maintained. To achieve this, perform the following pre-checks and reference marking of the rollers in their original position.

Tools Required: Angle Finder, Tape Measure, Marker

1. SCALE IDLER SELECTION AND POSITION (see Figure No. 2)

Select an idler that most closely meets the criteria shown below:

- The idler connected to the scale should be in the straightest portion of the belt, free from any interference & curves. The belt must maintain 100% contact with the belt at all times.
- The idlers before and after the scale (1 before and 1 after) need to be in a straight line and equally spaced +/- ¼ inch.
- Check to make sure the scale is clear of impact from any mechanical lever or fulcrum devices if the conveyor is folded over.

Figure No. 2

- Make sure there is no contact between the hydraulic hoses and the scale, or the idler connected to the scale.
- Verify there is a slight clearance between the skirting rubber and the conveyor belt if possible. If the skirting lays flat on the belt, it can be zeroed out so it is not a major issue.

2. RECORD WING IDLER ANGLE AND IDLER POSITION (see Figure No. 3)

- Place an angle finder or phone app onto the underside of the idler wing roller to record the current angle. Measure and record the angle for both angled rollers.

Please Note: The angle is related to the angle of the ground. Do not move the machine until after the **load cell assembly angle** (see step 3) is set for both sides.

- Measure the distance between the side of the roller and the conveyor frame. This distance will be used in **STEP 6** to adjust the idler to the same height as it is now.

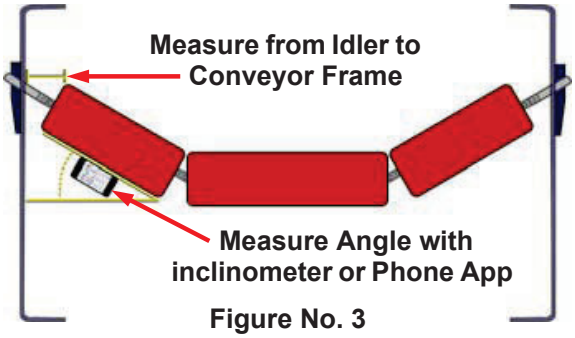


Figure No. 3

3. ADJUST LOAD CELL ASSEMBLY ANGLE

∗ MAKE SURE YOU HAVE THE CORRECT LOAD CELL ASSEMBLY FOR THE CORRECT SIDE OF THE MACHINE ∗.

The ALIGNMENT ADJUSTMENT BOLT (M8 x 8mm bolt) must face DOWNWARDS with the load cell cable facing towards the material feed point of the machine and conveyor.

Place the load cell assembly mounting base against the side of the machine (slot adjustment bolt facing **DOWN**) where you plan to mount the scale. See Figure No. 4. Place the angle finder on the **SIDE** of the yellow load cell assembly cover (with the base of the load cell assembly against the conveyor frame). By hand, adjust (pivot) the load cell assembly cover to the same angle measured in **STEP 2**.

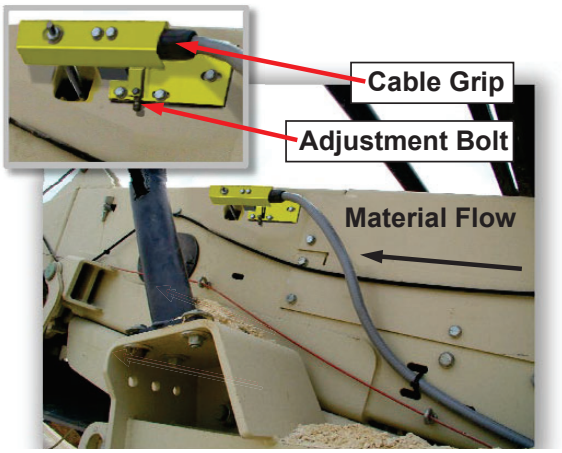


Figure No. 4

Adjust the Angle of the Load Cell Cover Using an inclinometer or Phone App

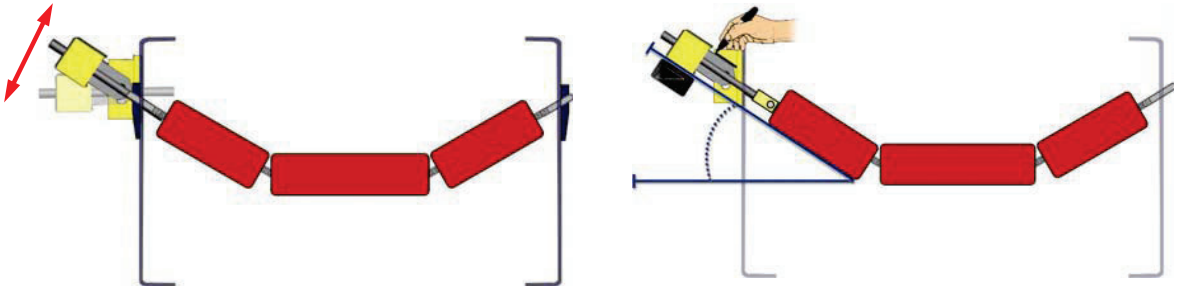


Figure No. 5

CAREFULLY mark the position of the load cell pivot block and slotted block of the load cell assembly as a reference to help re-align them if you should accidentally change the angle. See Figure No. 5. Maintaining the same reference positions, tighten the pivot bolt. See Figure No. 5.

REPEAT STEP 2 AND 3 FOR THE OTHER SIDE OF THE LOAD CELL ASSEMBLY.

4. MARK THE CURRENT IDLER POSITION TO FRAME

It is important to mark the existing mounting position of the idler on the Conveyor Frame.

- Use a marker to indicate the position of the roller mounting link exactly in the center. This will give us a reference for the center of the angled idler roller. Advance to **STEP 5** to proceed with the alignment process.

5. ALIGNMENT AND MOUNTING THE LOAD CELL ASSEMBLY

- Place the load cell assembly (without rod and yoke) in position. See Figures No. 6 & 7. Look down the hole in the load cell at the marks made on the link in STEP 4. Align the marks with the center of the hole in the load cell and make sure the assembly is parallel with the conveyor frame. Move the load cell assembly UP 1/8 of an inch and mark the holes for mounting the load cell assembly to the conveyor frame. See Figure No. 7.
- Drill the holes as marked and bolt the load cell assembly to the conveyor frame.

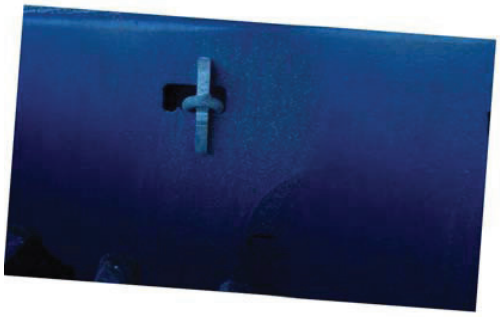


Figure No. 6

Figure No. 7

REPEAT THIS STEP FOR THE OTHER SIDE OF THE MACHINE.

6. CONNECTING AND ADJUSTING THE IDLER ROLLERS

Now we can connect the load cell assembly connecting rod and yoke to the idler.

- Slide the threaded connecting rod and yoke through the load cell and screw on the connecting rod nut 1/2 way down.
- Remove the idler on 1 side, using related instructions in the machine manufacturer's manual, and attach the yoke to the idler roller. This may vary slightly with different styles of rollers, but keep in mind our objective is to restore the idler set to its original position.
- Once the yoke is connected and tightened, adjust the gap between the idler and the conveyor frame as measured earlier in Step #2. This is intended to maintain a good string line between the idlers before and after the scale.
- Repeat the process to mount the other load cell assembly (on the opposite side of the conveyor).

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