

### **QB1 Primary Belt Cleaner**

### Installations without chutework

These procedures were written for equipment that is being installed on enclosed pulley chutework. If the pulley is not enclosed, the equipment should be installed using the best available field resources and methods to ensure that the critical dimensions are followed for proper installation.

#### Belt cleaner inspection access

If the belt cleaner is installed on enclosed pulley chutework, at least one Martin® Inspection Door should be installed. Martin® Inspection Doors are available from Martin Engineering or a representative.

#### Materials required

Installation of this equipment requires the use of standard hand tools.

### PLEASE ENSURE THAT YOU ARE WEARING THE NECESSARY PPE BEFORE ATTEMPTING INSTALLATION



1. Remove belt cleaner assembly from shipping container.

2. If anything is missing contact Martin Engineering or a representative.

3. Turn off and lockout / tagout / blockout / testout energy source according to customer specific requirements.

4. If this equipment will be installed in an enclosed area, test the gas level or dust content before using a cutting torch or welding. Using a torch or welding in an area with gas or dust may cause an explosion resulting in serious injury or death. Follow local confined space procedures.

5. If using a cutting torch or welding, test atmosphere for gas level or dust content. Cover conveyor belt with fire retardant cover.

6. Center the belt cleaner blades to clean an area narrower than the conveyor belt width. This allows for side-to-side movement of the belt and prevents damage to the belt edge.

Note: The chute wall that the tensioner will be located on is referred to as the "operator side." The other side of the chute is referred to as the "far side." (If installing dual tensioners, side that is most accessible is "operator side.")

**Problem Solved**<sup>™</sup> GUARANTEED!

### Figure 1. Belt Cleaner Mainframe Location & Chute Wall Cutouts



7. On operator side of chute, find pulley center point (A).

8. Measure radius of head pulley including lagging and belt thickness (B). To this dimension, add 89 mm.

9. Starting from center point (A), measure the total distance calculated in step 2 (B + 89mm) and draw an arc on chute wall.

10. Measure down from pulley's horizontal centerline the distance shown in Figure 1 and draw a horizontal line parallel to it. Locate center point of belt cleaner mainframe (C) where this line intersects the arc on the chute wall.

11. Make sure mainframe and blade do not lie in path of material unloading from conveyor belt. Make sure blade tip of Martin® QB1 Cleaner HD is at or below pulley's horizontal centerline.

12. Repeat steps 7 through 11 for far side chute wall.

13. Drill or cut holes for tensioner mounting plates on chute walls as follows:

a. If bolting tensioner mounting plates to chute walls, do the following:

(1) Drill or cut one 101.6mm. hole for mainframe and four 16mm. holes for screws in both operator side and far side chute walls. Remove burrs and sharp edges.

b. If welding tensioner mounting plates to chute walls, do the following:

(1) Drill or cut one 101.6mm. hole for mainframe in both operator side and far side chute walls. Remove burrs and sharp edges.

Problem Solved<sup>™</sup> GUARANTEED!

### Figure 2. Removing and Installing Blade



14. Lock pins and blade stops should remain attached to mainframe assembly during blade removal and installation.

- 15. Remove lock pin (A) from operator side of mainframe.
- 16. Remove blade stop (B) from operator side of mainframe.
- 17. Pull blade cartridge (D) away from blade stop (C) and remove from mainframe (E).
- 18. Install tensioner.

19. Position blade on mainframe with blade curve facing conveyor belt. Push far side end of blade into blade stop (C) until it locks.

- 20. Push blade cartridge (D) onto mainframe (E) until it is fully seated.
- 21. Install blade stop (B).
- 22. Insert lock pin (A) in mainframe (E).
- 23. Make sure blades are centered on belt and mainframe is parallel to belt.
- 24. Tension belt cleaner.

Problem Solved<sup>™</sup> GUARANTEED! Form No. M4022-ZA Revised 01/18,11/23 © Martin Engineering Company 2018,2023

25. Remove Lock out locks.

26. Turn on conveyor belt for 1 hour, then turn off.

27. Make sure all fasteners are tight. Tighten if necessary.

28. Inspect belt cleaner for the following:

 Wear. (A small amount of "break-in" wear may be found. This will stop once blades wear to conveyor belt contour.)

• Material buildup. (No material between blades and return side of conveyor belt should be found.)



Martin Engineering Africa Cnr Antwerpen str & Arnhemsingel Die Heuwel, Witbank, Emalahleni Tel +27 13 656 5135 Fax +27 13 656 5129 www.martin-eng.co.za



**Problem Solved**<sup>™</sup> GUARANTEED!

Form No. M4022-ZA Revised 01/18,11/23 © Martin Engineering Company 2018,2023