



ARCH

ENVIRONMENTAL
EQUIPMENT, INC.

E2P700RBL

BELT MISALIGNMENT (RETURN)

CONVEYOR MANAGEMENT SYSTEM COMPONENT

INSTALLATION

4/07



INTRODUCTION:

The Conveyor Management System Belt Misalignment Unit (Return) is a single unit that will trip the conveyor belt if a misalignment occurs in the return side of the belt.

Belt Misalignment is detected via (2) misalignment arms that hang down along the sides of the return belt. These arms are connected to an electrical switch via a polycarbonate made coupling mechanism.

Should the belt encounter a misalignment of the return belt, it will come in contact with one of the misalignment arms - swinging it, thus tripping the switch mechanism.

The switch coupling mechanism is designed to provide an adjustable mechanical trip delay.

Once operated, the switch latches in the "off" position and must be manually reset.

The electrical switch consists of 2 change over contacts rated at 500 V 16 Amp which can be connected to the existing electrical system as desired.

The misalignment switching system consists of (1) enclosure mounted on a chassis plate that forms a protective canopy above the enclosure.

The enclosure is made of U.V. stabilized high impact polycarbonate and carries a rating of IP65 degree of protection.

The total unit is made from mild steel. The bearings used are the "2RS" type, which are sealed on both sides.

All mechanical connections between the steel parts and the electrical system are completely isolated via a polycarbonate coupling system thus maintaining the galvanic isolation of the unit.

NOTE: THE STAND ALONE UNIT ONLY CONTAINS ONE ENCLOSURE ON ONE SIDE OF THE UNIT, WHILE THE SYSTEM UNIT HAS TWO ENCLOSURES ON ONE SIDE.

THIS MANUAL USES THE STAND ALONE UNIT IN THE DIAGRAMS. BOTH UNITS ARE ASSEMBLED EXACTLY THE SAME WAY.

BELT MISALIGNMENT (RETURN) SUB-ASSEMBLIES:

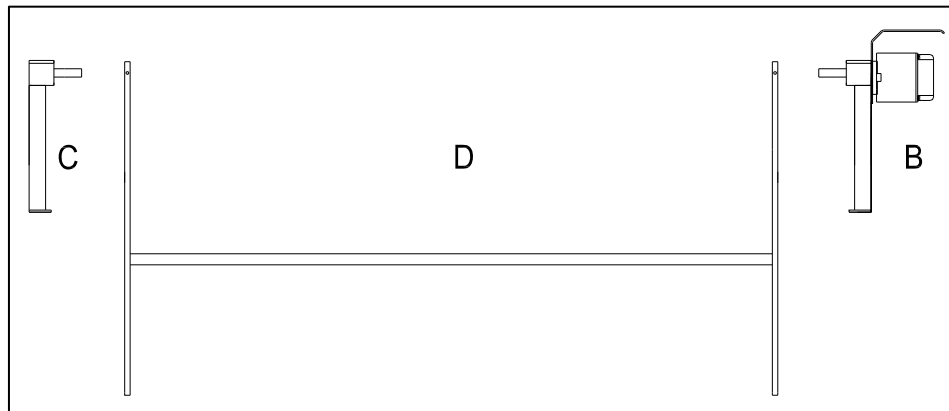


FIGURE 1

ALL PARTS HAVE BEEN LABELED WITH THE FOLLOWING:

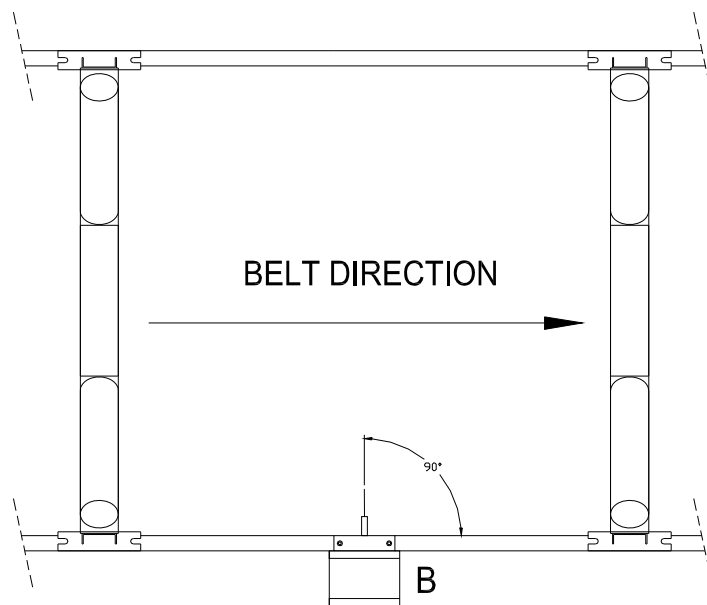
- B – MISALIGNMENT CONTROL STANTION**
- C – MISALIGNMENT STANTION**
- D – MISALIGNMENT ARM ASSEMBLY**

INSTALLATION PROCEDURES

PLACE THE MISALIGNMENT CONTROL STATION (B) ON CONVEYOR STRINGER BETWEEN TWO EXISTING IDLERS.

1

MARK AND DRILL (2) ½" MOUNTING HOLES IN THE STRINGER. MARK AND DRILL (2) ½" MOUNTING HOLES ON OPPOSITE STRINGER STRAIGHT ACROSS FROM FIRST SET OF HOLES.



BOLT THE MISALIGNMENT CONTROL STATION (B) TO THE STRINGER AS SHOWN ABOVE.

2

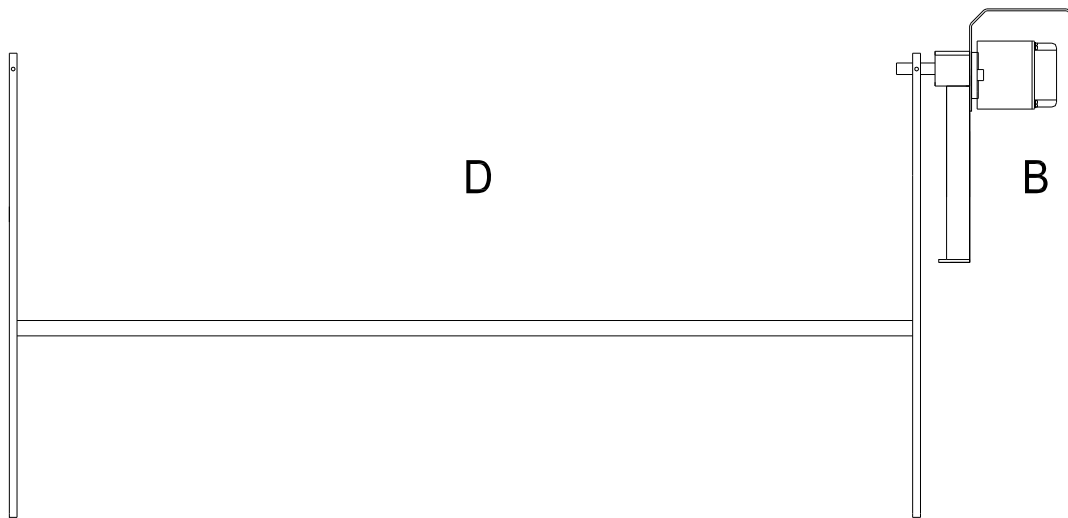


3

THE MISALIGNMENT ARM ASSEMBLY (D) HAS (2) SET SCREWS AND (2) JAM NUTS IN EACH ARM THAT WILL LOCK THE ARM TO THE SHAFT OF THE MISALIGNMENT CONTROL STATION (B).

LOOSEN THE JAM NUTS AND BACK THE SET SCREWS OUT UNTIL THEY CLEAR THE HOLE FOR THE SHAFT.

1. ROTATE THE MISALIGNMENT ARM ASSEMBLY (D) SO THAT IT IS HORIZONTAL TO THE GROUND.
2. INSERT IT FROM THE OPPOSITE SIDE OF THE MISALIGNMENT CONTROL STATION (B) BETWEEN THE BELT AND THE STRINGERS UNTIL THE MISALIGNMENT ARM CLEARS THE BELT.
3. TURN THE MISALIGNMENT ARM VERTICAL AND SLIDE THE ARM ON THE MISALIGNMENT CONTROL STATION (B) SHAFT.



INSTALL THE MISALIGNMENT STATION (C) BY SLIDING THE SHAFT THROUGH THE HOLE IN THE MISALIGNMENT ARM ASSEMBLY (D).

4

BOLT THE MISALIGNMENT STATION (C) TO THE CONVEYOR STRUCTURE.



CENTER THE MISALIGNMENT ARM ASSEMBLY (D) ON THE SHAFTS BETWEEN THE STATIONS.

1. ENSURE THE SWITCH ON THE MISALIGNMENT CONTROL STATION (B) IS IN THE UPRIGHT POSITION.
2. TURN THE SHAFT ON THE CONTROL STATION IN THE DIRECTION OF THE TROUGH BELT MOVEMENT.
3. LOCK DOWN THE (2) SET SCREWS IN EACH OF THE ARMS OF THE MISALIGNMENT ARM ASSEMBLY (D) TO LOCK IT IN PLACE.
4. LOCK DOWN THE JAM NUTS ON EACH OF THE SET SCREWS.

THE MISALIGNMENT UNIT IS NOW MECHANICALLY READY FOR SERVICE.

THE ELECTRICAL CONNECTIONS ARE LOCATED ON A LABEL

INSIDE THE MISALIGNMENT CONTROL STANTION ENCLOSURE.