

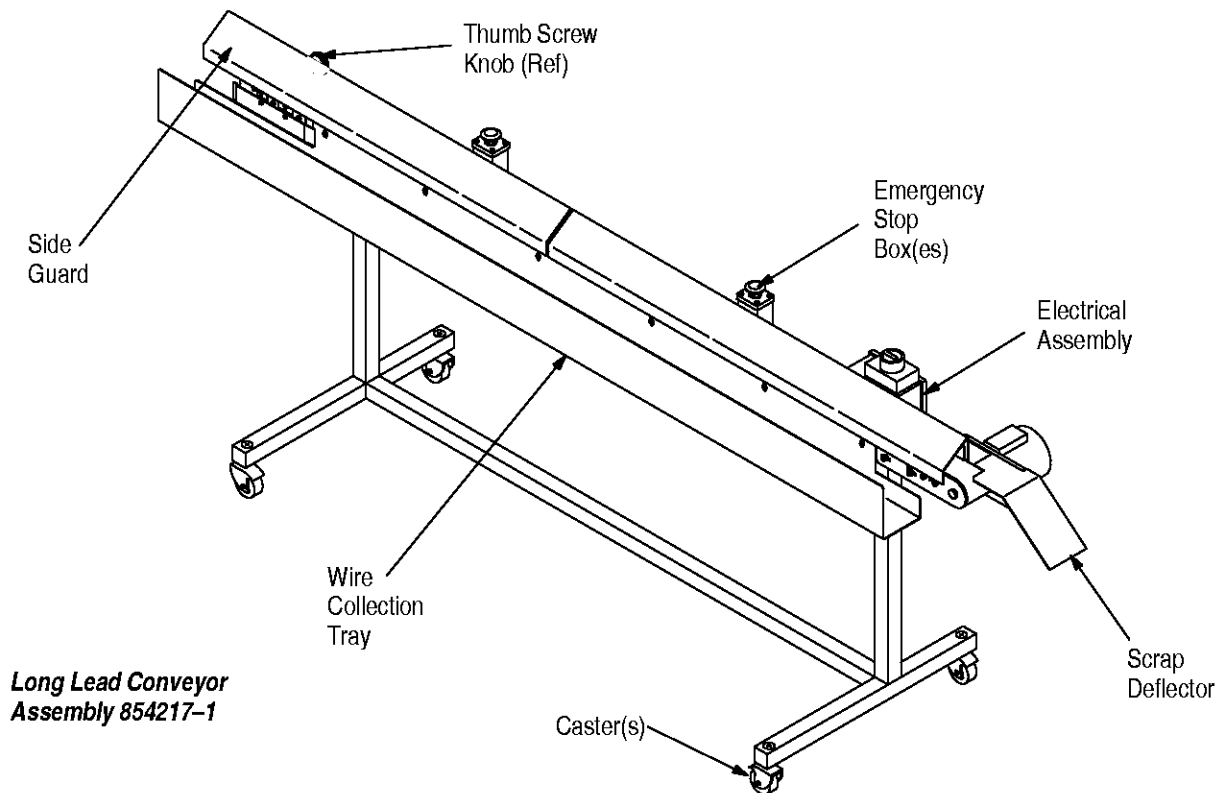


Figure 1

1. INTRODUCTION

The AMPOMATOR CLS Lead-Making Machines are designed to accept long lead conveyor assemblies which allow the machine to process lead lengths up to 25400 mm [1000 in.]. AMP* Long Lead Conveyor Assembly 854217-[] will accommodate lead lengths up to 3124.2 mm [123 in.]. The primary conveyor assembly should only be used when lead lengths exceed 1524 mm [60 in.]. Additional long lead conveyor assemblies are available and attach to the primary conveyor assembly to increase lead length capabilities by 2819.4 mm [111 in.].

Conveyor assemblies on domestic AMPOMATOR CLS Lead-Making Machines contain an electric motor (1/3 HP at 50 Hz, 1/2 HP at 60 Hz) which is connected to a 115 Vac power outlet. Conveyor assemblies on CE version AMPOMATOR CLS Lead-Making Machines contain an electric motor (1 HP 230V at 50 Hz) which is connected to a 230 Vac power outlet.

NOTE

AMP Long Lead Conveyor Assemblies are normally delivered from the factory wired for 115 Vac, 50/60 Hz, single-phase current. The assemblies can be rewired for 220 Vac, 60 Hz, single-phase current. For more information, contact the AMP Tooling Assistance Center at 1-800-722-1111.

Reasons for reissue are provided in Section 5, REVISION SUMMARY.

NOTE

Measurements are in metric units [with U.S. customary units in brackets].

2. INSTALLATION

2.1. Primary Long Lead Conveyor Assembly 854217-[]

DANGER

To avoid personal injury, turn the machine main power switch off, and unplug the electrical cord from the power source.

1. Remove the stacking tray assembly from the AMPOMATOR CLS Lead-Making Machine.
2. Remove side guard (854309-1) from the lead-making machine conveyor assembly and replace it with guard (856264-1) from the primary conveyor assembly. See Figure 2 for guard location on machine conveyor.
3. Roll primary conveyor assembly in front of machine. Align clamp plate of primary conveyor assembly with the 22.35 mm [.88 in.] slot on the motor mount of the machine. See Figure 3.

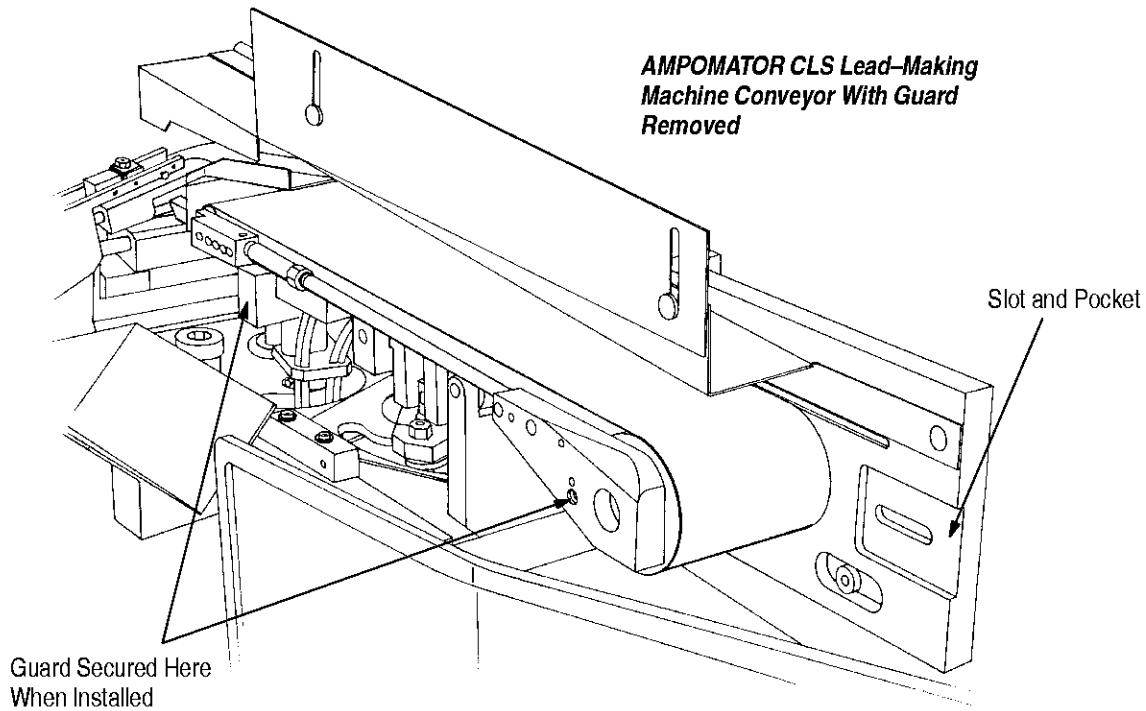


Figure 2

NOTE: View Shown from the **Back** Side of the Primary Conveyor Assembly.

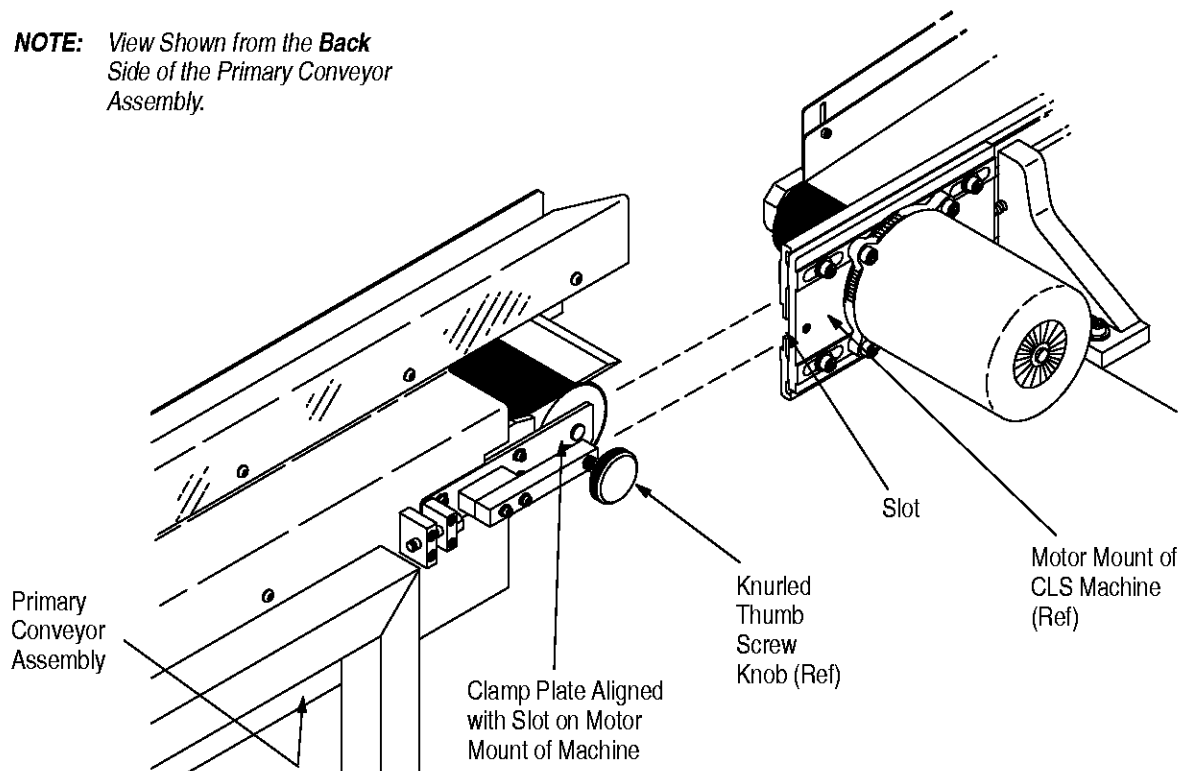


Figure 3

NOTE

The motor assembly end of the primary conveyor assembly must be positioned away from the machine.

NOTE

The thumb screw hole on the clamp block must be aligned with the pilot hole on the motor mount of the machine. See Figure 4.

4. Remove thumb screw knob; then slide primary conveyor assembly toward the machine until the clamp plate is positioned between the slot, then adjust the height of the conveyor using the feet on the conveyor assembly.

5. Measure the gap between the left front block, auxiliary 1, of the primary conveyor assembly and the conveyor belt of the machine conveyor. The primary conveyor assembly should be positioned so that the gap is approximately .76 mm [.030 in.]. See Figure 5.

NOTE: View Shown from the **Back** Side of the Primary Conveyor Assembly.

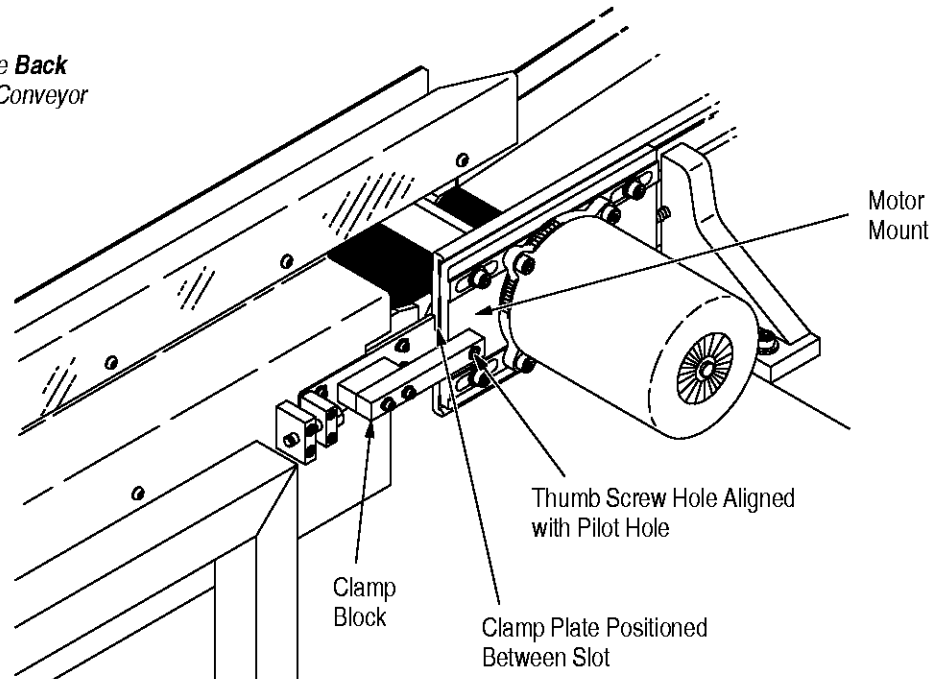


Figure 4

NOTE: View Shown from the **Back** Side of the Primary Conveyor Assembly.

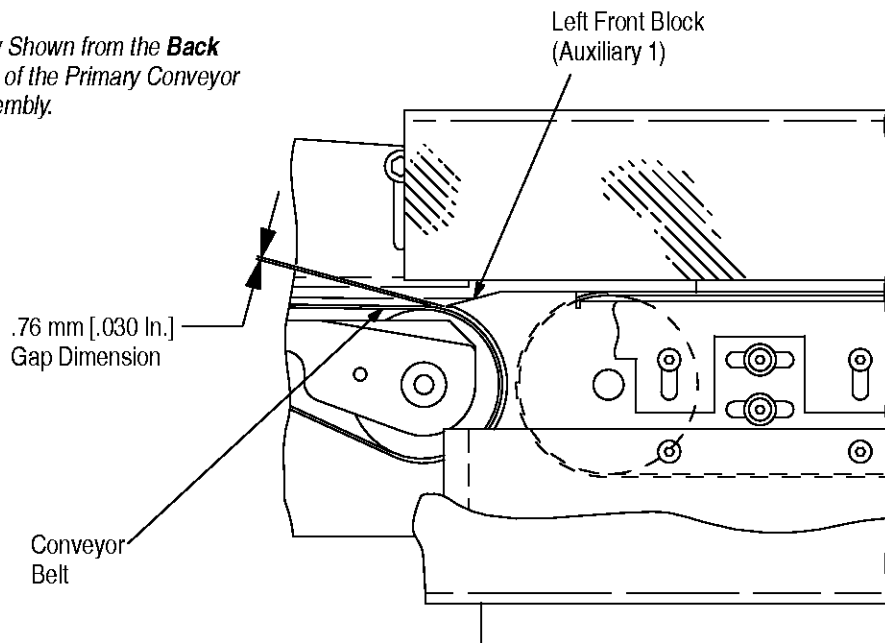


Figure 5

NOTE: View Shown from the **Back**
Side of the Primary Conveyor
Assembly.

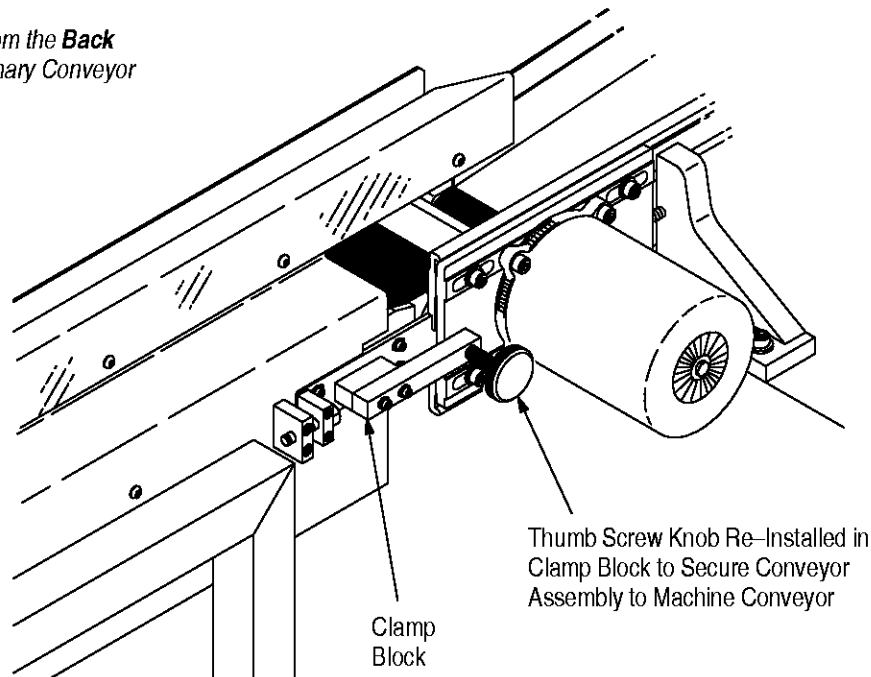


Figure 6

6. Re-install the thumb screw knob into the threaded hole of the clamp block; then tighten it to secure the primary conveyor assembly to the machine. See Figure 6.

NOTE

The clamp block may have to be re-adjusted to align the threaded hole with the pilot hole. To re-adjust the clamp block, loosen the two socket head cap screws and align the threaded holes. Tighten the socket head cap screws when the clamp block is properly adjusted.

7. Check the alignment of the primary conveyor assembly with the machine and straighten it, if necessary. Tighten the caster brakes to secure the primary conveyor assembly.

NOTE

If the primary conveyor assembly is ordered with the CLS machine, proceed to Step 8. If the primary conveyor assembly is ordered separately, proceed to Section 3, Electrical Installation of Long Lead Conveyor Kit. (Drawing supplied with long lead conveyor assembly.)

8. Plug primary conveyor assembly motor into the appropriate power outlet.

9. Remove long lead conveyor jumper plug from the CLS machine (located below the short lead conveyor motor) and install the long lead electrical harness into the same receptacle.

10. Install the long lead conveyor jumper plug into the electrical assembly. (Refer to Figure 1 for location of electrical assembly.)

2.2. Additional Long Lead Conveyor Assembly 854217-[]

DANGER

To avoid personal injury, turn the machine main power switch off, and unplug the electrical cord from the power source.

1. Remove scrap deflector and lap rail from the primary conveyor assembly.

2. Roll additional conveyor assembly next to motor mount assembly of the primary conveyor assembly. Make sure that the additional conveyor assembly is aligned with the primary conveyor assembly and machine.

NOTE

Additional long lead conveyor assemblies must be positioned so that the motor end of the conveyor is positioned away from the motor mount assembly end of the primary conveyor assembly.

3. Remove thumb screw from the clamp block of the additional conveyor assembly.

4. Roll additional conveyor assembly toward primary conveyor assembly until the clamp plate is aligned with the 22.35 mm [.88 in.] slot on the motor mount of the primary conveyor assembly. The thumb screw hole must be aligned with the pilot hole. Refer to Figure 4.

5. Measure the gap between the left front block, auxiliary 2, of the additional conveyor assembly and the conveyor belt of the primary conveyor assembly. The gap should measure approximately .76 mm [.030 in.]. Refer to Figure 5.

6. Install the thumb screw into the threaded hole of the clamp block; then tighten it to secure the conveyor assemblies.

7. Check the alignment of both conveyor assemblies with the machine. Straighten the conveyors if necessary. Tighten the caster brakes on the additional conveyor assembly to secure it.

8. Repeat Steps 1 through 7 for additional conveyors required for production.

9. Install the scrap deflector to the last conveyor assembly in the line.

10. Plug conveyor motor plug(s) into appropriate power outlets.

11. Connect electrical harness to primary conveyor assembly. Make sure that the jumper plug is connected to the last conveyor control box on the system. Refer to the AMP Engineering Drawing packaged with the conveyor assemblies.

3. ELECTRICAL INSTALLATION OF LONG LEAD CONVEYOR KIT

- Refer to Paragraph 3.1 to install Kit 90894-1 to AMPOMATOR CLS III Lead-Making Machines.
- Refer to Paragraph 3.2 to install Kit 122729-2 to AMPOMATOR CLS IV and IV+ Lead-Making Machines.
- Refer to Paragraph 3.3 to install Kit 1213590-1 to CLS IV+ (CE Version) Lead-Making Machines.

NOTE

The CLS machine will not run if the primary conveyor control cable P70 is not connected to J70 of the CLS machine and the jumper plug is not connected to the primary conveyor control box.

NOTE

When connecting additional long lead conveyor assemblies, connect each conveyor control cable to the conveyor control box, located to the front of that conveyor. The jumper plug must be connected to the last conveyor control box on the system.

3.1. Installation of Long Lead Conveyor Kit 90894-1 to AMPOMATOR CLS III Lead-Making Machines

Refer to the AMP Engineering Drawing 90894 and proceed as follows:

DANGER

To avoid personal injury, turn the main power switch off and unplug the electrical cord from the power source.

1. Install J69 into the electrical control panel. Refer to drawing 854117-1, Sheet 2.
2. Connect wire 303 to K303, position A.
3. Connect wire 6 to K313, position 6.
4. Connect wire 25 to SSR-216, position 4.
5. Use AMP Extraction Tool 91067-2, included with the kit, to remove jumper wire from J313, positions 11 and 6.
6. Insert wire 327B into J313, position 11.
7. Use extraction tool to remove jumper wire from J313, position 27 to K313, position 6. Cut off wire at K313, position 6. Insert wire 123 in J313, position 27.
8. Attach J70 to hole provided in frame. See Figure 1 of 90894-1.
9. Run cable through 3,4,5,6,7, and 8. Refer to drawing 854230-1, Sheet 6.
10. Connect P69 to back side of control panel.
11. Connect jumper plug to J70.
12. When conveyor is attached to machine, remove jumper plug from J70 and put it on the conveyor control box. Plug the conveyor control cable into J70.

3.2. Installation of Long Lead Conveyor Kit 122729-2 to AMPOMATOR CLS IV and CLS IV+ Lead-Making Machines

Refer to the AMP Engineering Drawing 122729 to install the cable assembly included with the kit. The cable has a plug on one end and six discrete wires with contacts on the other end.

DANGER

To avoid personal injury, turn the main power switch off and unplug the electrical cord from the power source.

1. Attach the end of the cable below the machine base plate with Screws 5-23715-9 and Nuts 25098-3. Refer to the illustration on Drawing 122729.

NOTE

Be sure the flange on J70 is located on the outside of the machine base.

2. Remove circular plastic connector (CPC) P69 from the back of the electrical panel. Disassemble the plug by removing the hex head screws.

3. Insert wires into the appropriate cavity as shown below:

WIRE COLOR	WIRE NUMBER
Black	1
Brown	2
Red	3
Orange	4
Yellow	5
Green	6

NOTE

Be sure to thread additional wires through the back of the disassembled plug before inserting them into the appropriate cavities.

4. Re-assemble the plug and attach P69 to J69.
5. Insert the six wires included with this kit into the front of the electrical panel. Wire locations can be found on Drawing 122729.
 - a. Connect Wire 303 to Relay K303, Position A.
 - b. Connect Wire 1 to J69.
 - c. Locate J313 on the electrical panel and remove the jumper that connects cavity No. 6 to Cavity No. 11 with the supplied extraction tool.
 - d. Insert Wire 327 in J313, Position 6 and J69, Position 3.
 - e. Insert Wire 327B in J13, Position 11 and J69, Position 4.
 - f. Use the extraction tool included with the kit to remove the wire from J13, Position 27. Cut the other end of the wire at Relay K313, Position 6.
 - g. Insert Wire 127 into J313, Position 27 and J69, Position 5.
 - h. Run one end of Cable 25 to Positions 6 and 2 on J69.
 - i. Attach the other end of Cable 25 to Solid State Relay (SSR) 301, Position 4.
 - j. Dress all the wires so that they are neatly contained in the electrical panel.

3.3. Installation of Long Lead Conveyor Kit 1213590-1 to AMPOMATOR CLS IV+ (CE Version) Lead-Making Machines

DANGER

To avoid personal injury, turn the main power switch off and unplug the electrical cord from the power source.

Refer to the AMP Engineering Drawing 1213590 to install the cable assembly included with the kit.

4. PARTS REPLACEMENT AND ADJUSTMENTS

4.1. Belt Removal and Replacement for Long Lead Conveyor Assemblies

In the event that the conveyor belt must be removed or requires replacement, the following procedure must be observed:

DANGER

To avoid personal injury, be sure the main power switch is turned off, and unplug the conveyor assembly from the power source.

1. Remove the wire collection tray from the conveyor assembly.
2. Loosen, but do not remove, the socket head screws which secure the side plates of the left front block and motor mount.
3. Slide the belt off the pulley and motor rollers.

NOTE

If replacing a motor or bearing(s), refer to AMP Customer Drawing 854217 (supplied with the conveyor assembly) for replacement part numbers and orientation.

4. Replace belt on pulley and motor rollers, centering it on the rollers. Adjust the belt using the procedures provided in Paragraph 4.2, Belt Tracking Adjustment.
5. Re-install wire collection tray to the conveyor assembly.

4.2. Belt Tracking Adjustment (Figure 7)

When a conveyor belt is removed and replaced, and occasionally during use, the tracking must be adjusted. The procedure is as follows:

DANGER

To avoid personal injury, be sure the main power switch is turned off, and unplug the conveyor assembly from the power source.

1. Loosen screws on Plate "A."
2. Turn adjuster as required.
3. Tighten screws on Plate "A."
4. Adjust belt tension by using the jackscrew on the motor plate "C," allowing approximately 12.70 – 63.50 mm [.5 – 2.5 in.] of slack in the belt on the bottom side. Be sure to loosen retaining screws on Guard 854813-1 prior to adjustment.
5. Tighten plates "B," then "C."
6. Spin the belt by hand to determine tracking alignment. If additional tracking adjustment is necessary, adjust by moving plates "A" or "C" in or out to achieve straight travel.

Belt Tracking Adjustment Points

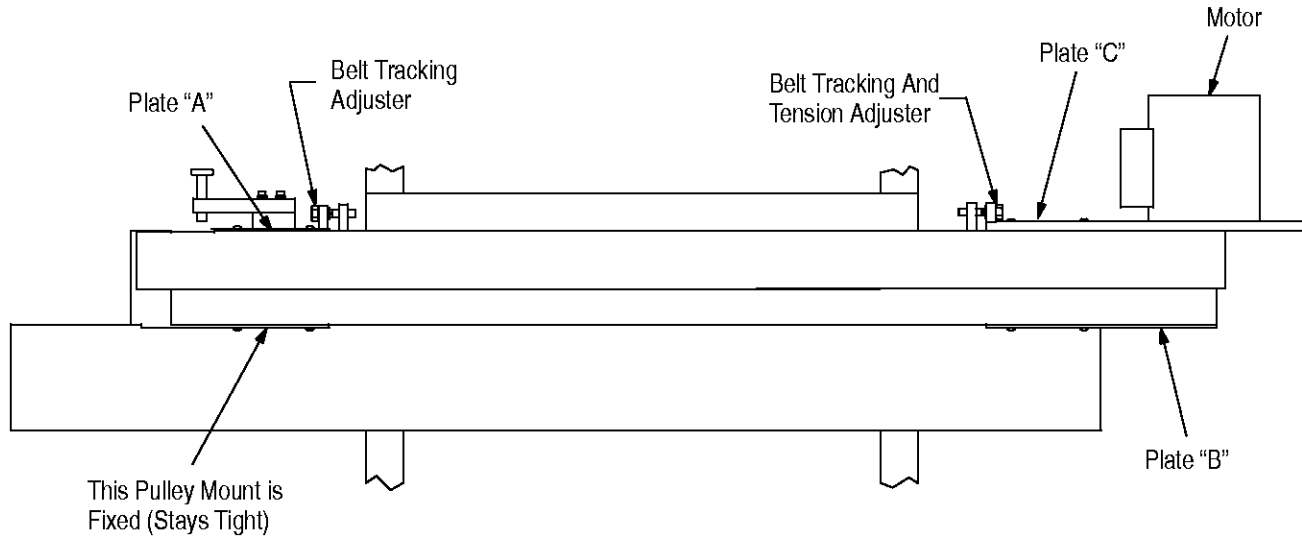


Figure 7

CAUTION

DO NOT tighten belt beyond the amount of slack indicated in Step 4. Over-tightening the belt will result in bearing failure

7. Plug conveyor motor into power receptacle.

4.3. Tray and Guard Adjustment

The following is a description of general adjustments that may be made on long lead conveyor assemblies. Due to different types of wire that may be run on the AMPOMATOR CLS Lead-Making Machine, adjusting the tray and guard on the long lead conveyor to ensure proper wire position requires some experimentation by the operator.

There are three adjustable parts on long lead conveyor assemblies. Sliding these parts on their mounting screws allows for vertical adjustment of the parts, in order to determine acceptable positioning of the lead on the conveyor. The adjustable parts and their functions are as follows:

- **Side Guard 854823-1** is used primarily to keep the tail end of a lead on the conveyor belt.
- **Wire Collection Tray 854810-1** is used to keep leads on the conveyor. The back side of the tray functions as a guide. It may also be adjusted to help with the rolling action of the wire as it comes off the belt into the tray.
- **Guard 856071-1 / 856072-1** are used for making a smooth transition from the CLS machine to the primary conveyor; or from the primary conveyor

to additional conveyor(s). Guard 856071-1 is used with Conveyor Assembly 854217-1, -3, -5, and -8. Guard 856071-2 is used with Conveyor Assembly 854217-2, -4, and -9.

4.4. Belt Tracking Theory

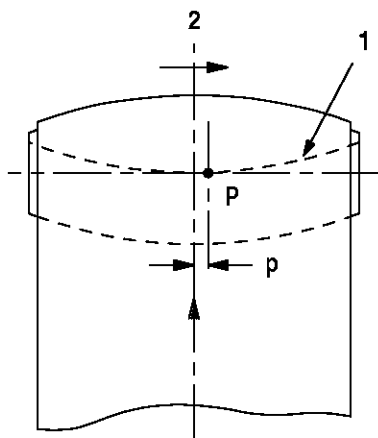
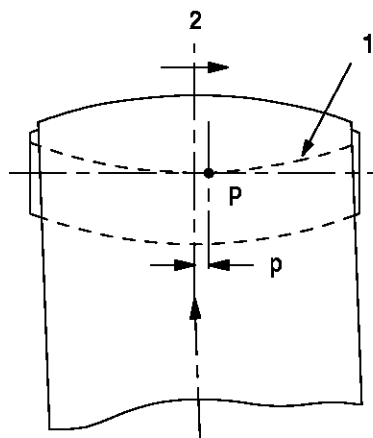
Occasionally, difficulties may arise in the proper tracking of the belt. Refer to Figure 8 for illustrations of belt tracking on a crowned drum:

In both illustrations, point P lies in the right-hand half of the belt which is guided toward the right. In the first illustration, this movement continues until the belt has returned to the installation centerline. In the second illustration, movement continues until point P has drifted onto the belt centerline.

In assessing belt runoff behavior, it is important to keep the following operating characteristics in mind:

- The belt usually runs off the side on which the tension is lower.
- The belt always runs off the side on which it first reaches its line of contact with the drum surface.

With the long lead conveyor belt correctly aligned, it will track accurately on the drive and idler rollers. If deviation exists, it must be corrected with the procedure described in Paragraph 4.2, Belt Tracking Adjustment. Incorrect tracking alignment will result in uneven wear on the belt and on the bearings of the rollers.

*Belt Running Parallel
Displaced to the Left**Belt Running
at an Angle*

- 1 Line of contact between drum and conveyor belt
- 2 Belt centerline
- P Point at which belt first contacts drum
- p Distance between point P and belt centerline

Figure 8

5. REVISION SUMMARY

Revisions made per EC 0990-1207-98:

- Removed references to CLS III from title and throughout
- Removed specific references to AMPOMATOR CLS III from the first paragraph in Section 1, Introduction
- Added electrical specifications for conveyor assembly on CE version machines
- Changed title (part number reference) in Paragraph 2.1, Primary Long Lead Conveyor Assembly 854217-[]
- Removed references to CLS III from Paragraph 2.1, Primary Long Lead Conveyor Assembly 854217-[]
- Removed reference to CLS III from Figures 2 and 3
- Changed Figures 1, 3, and 6 to illustrate a knurled thumb screw knob.
- Changed Paragraph 2.1, Step 4.
- Added NOTE following 2.1, Step 4
- Revised NOTE following Paragraph 2.1, Step 7
- Removed reference to CLS III from Paragraph 2.1, Step 7
- Changed part number reference to 854217-[] in Paragraph 2.2, Additional Long Lead Conveyor Assembly 854217-[]
- Revised Paragraph 2.2, Step 11
- Revised heading of Section 3, Electrical Installation Of Long Lead Conveyor Kit
- Added Paragraph 3.1, Installation of Long Lead Conveyor Kit 90894-1 to AMPOMATOR CLS III Lead-Making Machines
- Added Paragraph 3.2, Installation of Long Lead Conveyor Kit 122729-2 to AMPOMATOR CLS IV and IV+ Lead-Making Machines
- Added Paragraph 3.3, Installation of Long Lead Conveyor Kit 1213590-1 to AMPOMATOR CLS IV+ (CE Version) Lead-Making Machines
- Revised DANGER statement after Paragraph 4.1.
- Added Danger statement after Paragraph 4.2.
- Revised Paragraph 4.3, Tray and Guard Adjustment
- Revised Section 5, Revision Summary