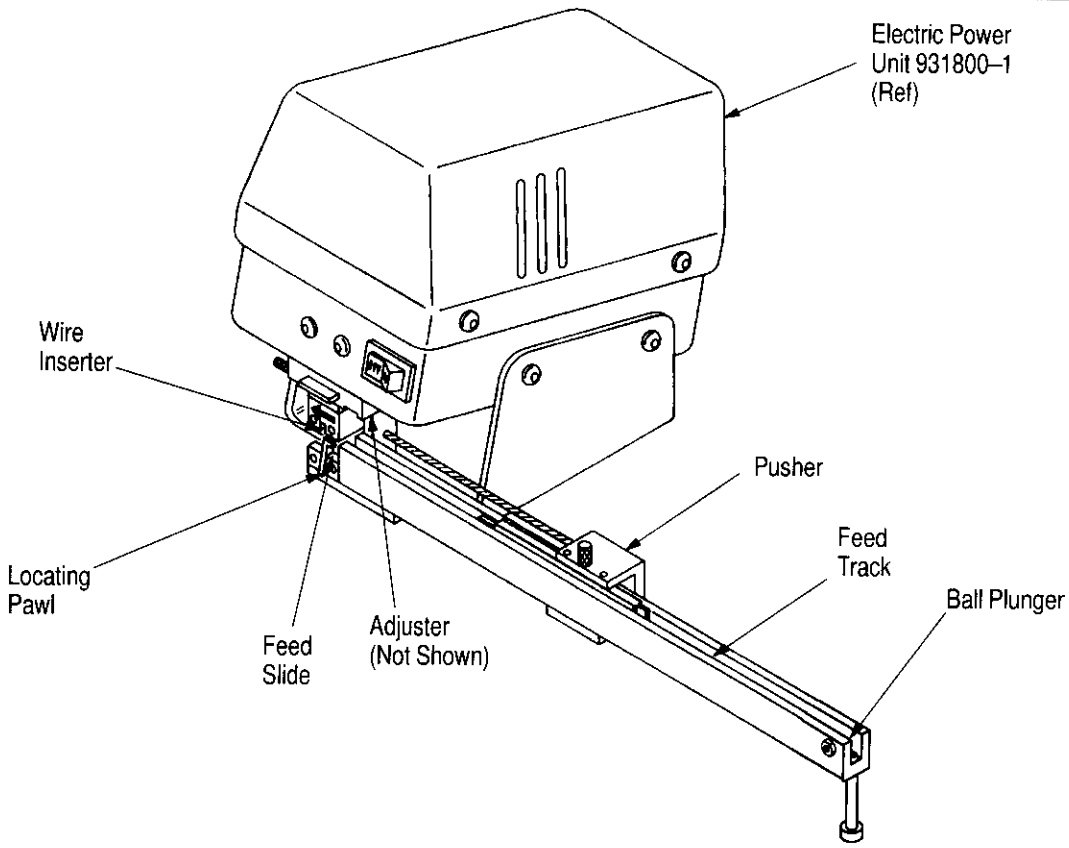


Figure 1 90–240A

1. INTRODUCTION

This instruction sheet covers the operation and maintenance of AMP* Feed Track Assembly 933568–1 which is designed to terminate unstripped wire in AMP MTA–.156 Closed–End Receptacle Connectors. The feed track assembly is used in AMP Electric Power Unit 931800–1, or AMP Bench Mount Power Assembly 58338–1. Refer to the instructions packaged with the power assemblies for feed track assembly installation and removal: AMP Customer Manual 409–5746 (electric power unit) and Instruction Sheet 408–9393 (bench mount power assembly).

Read these instructions carefully before terminating any connectors.

NOTE *All dimensions on this document are in metric units [with U.S. customary units in brackets].*

Reasons for reissue are provided in Section 8, REVISION SUMMARY.

2. DESCRIPTION (Figure 1)

The feed track assembly terminates unstripped wire in four types of MTA–.156 Closed–End Receptacle Connectors: connectors with locking ramp *without* polarizing tabs; connectors with locking ramp *with* polarizing tabs; connectors without locking ramp *with* out polarizing tabs; and connectors without locking ramp *with* polarizing tabs. The connectors contain slotted contacts on 3.96–mm [.156–in.] centers. See Figure 2.

The wires are terminated in the connector using the Insulation Displacement Contact (IDC) Terminating technique, which is a method of inserting unstripped wire into a slotted contact beam to form a reliable electrical connection between the conductor and the contact.

After the feed track assembly is installed into the tooling, it serves as a guide and support for the connector during termination. Features of the feed track assembly (see Figure 1) and their functions are as follows:

Wire Inserter— forces wire into the two slotted beams of the contact. Note that it provides support for the contact beams when applying insertion force on the wire.

Adjuster (Insertion Rod) — acts as a piston for — and regulates travel of — wire inserter.

Feed Slide — automatically advances the connector after each termination.

Locating Pawl — aligns connector for insertion and prevents the connector from moving out of position during the termination.

Pusher — maintains a force against the connector to permit feeding.

Ball Plunger — acts as a holder for the pusher while the feed track is being loaded with connectors.

Feed Track — serves as a storage area for connectors.

3. SETUP ADJUSTMENTS AND TEST

3.1. Electric Power Unit and Bench Mount Power Assembly

1. Determine the wire size and select the appropriate connector. (Connectors are color–coded according to the wire sizes they accommodate.)

2. Using a small knife, cut off wire retainers (strain relief). This will provide a clear view for inspecting the connector for a properly terminated wire in the contact. See Figure 3.

3. Place connector in feed track assembly and make a test termination using procedure described in Section 4, TERMINATING PROCEDURE, Steps 1 through 6.

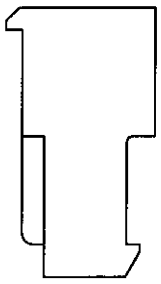
4. Push connector out of left side of head.

5. Inspect the termination according to Section 5, TERMINATION INSPECTION, to ensure that the conductor is terminated past the lead–in transition and is positioned about half–way into the contact slot. The insulation should be 2.03 to 2.54 mm [.080 to .100 in.] beyond the front contact beam. See Figure 3.

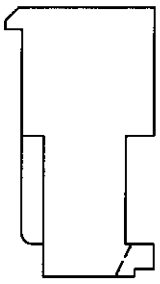
NOTE

For the bench mount power assembly only — if, after inspection, it is determined that the wire is not inserted deep enough, increase the air pressure by 69 kPa [10 psi]. Repeat the termination and inspection procedure until either the proper insertion depth is obtained, or the air pressure is set to 483 kPa [70 psi]. If proper insertion depth is not achieved at 483 kPa [70 psi], return the air pressure to 276 kPa [40 psi] and follow the adjustment in Paragraph 3.2, Wire Insertion Depth Adjustment.

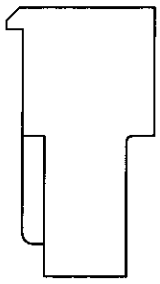
MTA–.156 Receptacle Connectors (Closed–End Style Only)



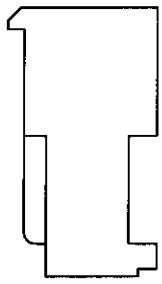
With Locking Ramp Without Polarizing Tabs



With Locking Ramp With Polarizing Tabs



Without Locking Ramp Without Polarizing Tabs



Without Locking Ramp With Polarizing Tabs

WIRE SIZE (AWG)	COLOR CODE	CLOSED–END STYLE *WITH* LOCKING RAMP				CLOSED–END STYLE *WITHOUT* LOCKING RAMP			
		WITHOUT POLARIZING TABS		WITH POLARIZING TABS		WITHOUT POLARIZING TABS		WITH POLARIZING TABS	
18	Orange	640426 641148	641217 644860	643817 644284	644460 —	640431 641153	641222 644502	644461 —	644082 —
20	Yellow	640427 641149	641218 —	643818 —	644663 —	640432 641154	641223 —	644462 —	— —
22	Red	640428 641150	641219 —	643819 —	644662 —	640433 641155	641224 644501	644463 644687	644566 —
24	White	640429 641151	641220 —	643820 —	— —	640434 641156	641225 —	644464 —	— —
26	Blue	640430 641152	641221 —	643821 —	— —	640435 641157	641226 —	— —	— —

Figure 2

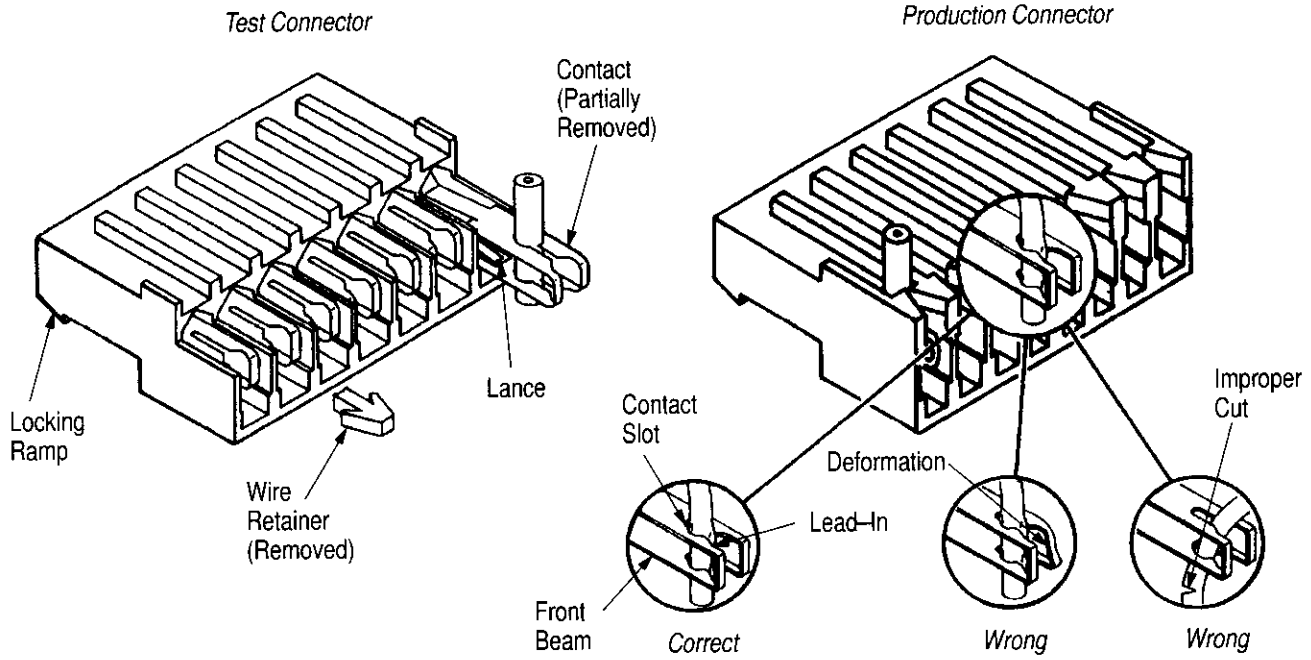


Figure 3

44T–41A

3.2. Wire Insertion Depth Adjustment

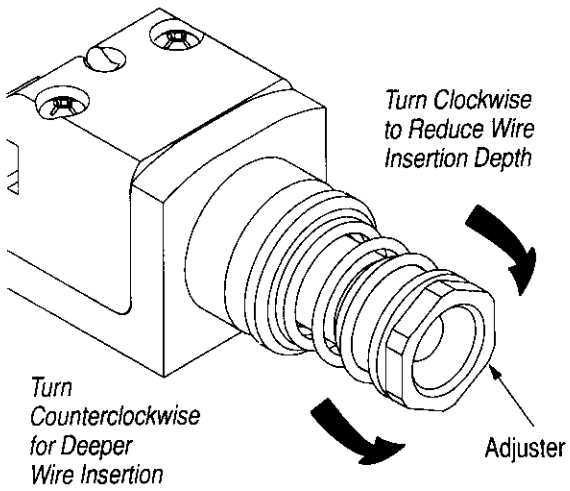
The adjuster (insertion rod) of the wire inserter is preset for the particular wire size used. If the wire is being inserted too deeply or not inserted deeply enough inside the contact, it may be necessary to adjust the depth of the wire inserter.

NOTE *If using the bench mount power assembly, it may be necessary to adjust either the air pressure or the depth of the wire inserter.*

CAUTION *Care must be taken when making adjustments to the adjuster to avoid overstressing the head or power assembly. Carefully insert the wire into the contact slot and adjust the wire until the proper wire depth is obtained.*

Wire Too Deep in Contact Slot — If the wire is inserted too deeply, remove the head and turn the adjuster 1/6 revolution CLOCKWISE (see Figure 4). This will reduce the wire insertion depth by approximately 0.20 mm [.008 in.]. Repeat Steps 2, 3, and 4 of Paragraph 3.1 for Electric Power Unit and Bench Mount Power Assembly.

Wire Not Deep Enough in Contact Slot — If the wire is not inserted deeply enough in the contact slot, remove the head and turn the adjuster 1/6 revolution COUNTERCLOCKWISE (see Figure 3). This will increase the wire insertion depth by approximately 0.20 mm [.008 in.]. Repeat Steps 2, 3, and 4 of Paragraph 3.1 for Electric Power Unit and Bench Mount Power Assembly.



NOTE: 1/6 turn equals 0.20 mm [.008 in.] adjustment.

Figure 4

3.3. Feed Adjustment

A socket head adjustment screw, located on the right side of the terminating head, controls the location of the feed slide. If the screw is positioned **in** too far, the pawl on the feed slide will not engage in the connector housing and the housing will not advance. If the screw is **out** too far, the feed slide will back up until the pawl engages, and thus, will incorrectly position the contact to be terminated. Adjust the feed slide by turning the adjustment screw either in or out until it aligns the contact with the inserter and engages the locator pawl in the connector housing.

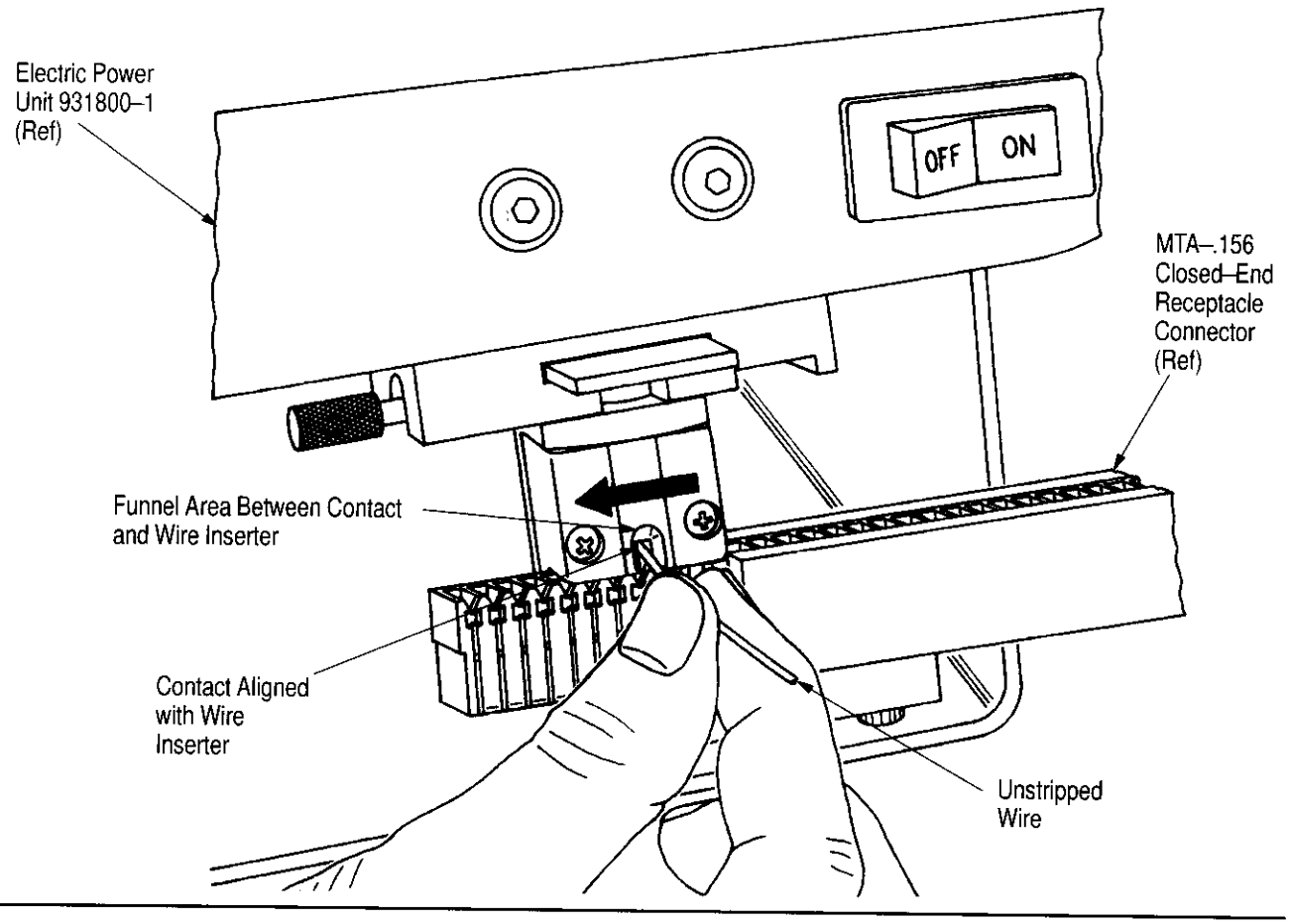


Figure 5 90–241

The following three observations are made when the feed slide is adjusted correctly:

1. The inserter is aligned with the contact to be terminated.

2. The locator pawl is engaged in the housing.

3. No movement of the housing occurs as the trigger or cam handle is actuated.

4. TERMINATING PROCEDURE (Figure 5)

1. Slide pusher on track assembly until the pusher is held by the ball plunger.

2. Load connectors into the feed track.

NOTE *The feed track is capable of holding 84 positions of MTA connectors.*

3. Slide the pusher toward the connectors until it is positioned against the last connector in the feed track.

CAUTION *Hold on to the pusher as it is being moved along the feed track. A sudden release of the pusher will move the connectors beyond the termination area.*

4. Holding the pusher, align contact to be terminated with the wire inserter. Make sure locating pawl rests between connector index ribs.

5. Insert an **unstripped** wire into the funnel area between the contact and wire inserter until it bottoms in the head.

6. Depress the footswitch to crimp the wire to the contact. The wire inserter will retract and the feed slide will automatically advance the connector to the next contact position.

NOTE *The locating pawl will move up and down as the connector is automatically advanced through the head. However, if movement is obstructed, or if desired, the locating pawl can be depressed and the connector moved manually out the LEFT side of the head.*

7. Repeat Steps 5 and 6 until all contacts have been terminated.

8. Inspect each termination according to the procedure in Section 5, TERMINATION INSPECTION.

5. TERMINATION INSPECTION (Figure 3)

AMP Application Specification 114–01020 lists the information necessary for termination inspection. Figure 3 represents properly and improperly terminated contacts which should be inspected as follows:

1. Make sure the conductor is terminated past the lead–in transition and about halfway in the contact slot.

2. The insulation should be 2.03 to 2.54 mm [.080 to .100 in.] beyond the front contact beam.

3. The wire is NOT bottomed in the contact slot.

4. The contact beams are NOT deformed. If damage is apparent, replace the contacts according to the instructions packaged with the connector.

5. The insulation is NOT nicked or cut in any area other than the two wire slots.

6. The wire extends below the strain relief features of the connector.

6. TOOL INSPECTION

AMP recommends that the feed track assembly be inspected immediately upon its arrival at your facility to ensure that the tooling has not been damaged during transit. Customer–replaceable parts are listed in Figure 6. When parts are needed, order by part number and description to:

CUSTOMER SERVICE (38–35)
AMP INCORPORATED
P.O. BOX 3608
HARRISBURG, PA 17105–3608

6.1. Daily Maintenance

It is recommended that each operator be made aware of — and responsible for — the following two steps of daily maintenance:

1. Remove dust, moisture, and other contaminants with a clean brush or a soft, lint–free cloth. Do NOT use objects that could damage the feed track assembly.

2. Make sure all components are in place and properly secured.

6.2. Periodic Inspection

Regular inspections should be performed by quality control personnel. A record of scheduled inspections should remain with the track assembly and/or be supplied to supervisory personnel. Though recommendations call for at least one inspection a month, the inspection frequency should be based on the amount of use, ambient working conditions, operator training and skill, and established company standards. These inspections should include a visual inspection and should be performed in the sequence shown in Paragraph 6.3, Visual Inspection.

6.3. Visual Inspection

1. Remove any accumulated film with a suitable commercial degreaser that will not affect paint or plastic material.

2. Make sure all components are in place and are properly secured.

3. Check for chipped, cracked, worn, or broken areas. If damage is evident, repair is necessary. See Section 7, REPAIR.

7. REPLACEMENT AND REPAIR

AMP recommends that certain replaceable parts be stocked by the customer to prevent loss of production time. The pats listed in Figure 6 can be replaced by qualified personnel at your production or tool repair facility.

NOTE

When replacing components in the MTA Head Assembly, the customer can: 1) order the head with a single part number and receive a complete, tested MTA head that is ready for installation into the feed track; or 2) purchase individual components that make up the head assembly. AMP recommends stocking a single head assembly.

When repair is necessary, return the feed track assembly with a written description of the problem to:

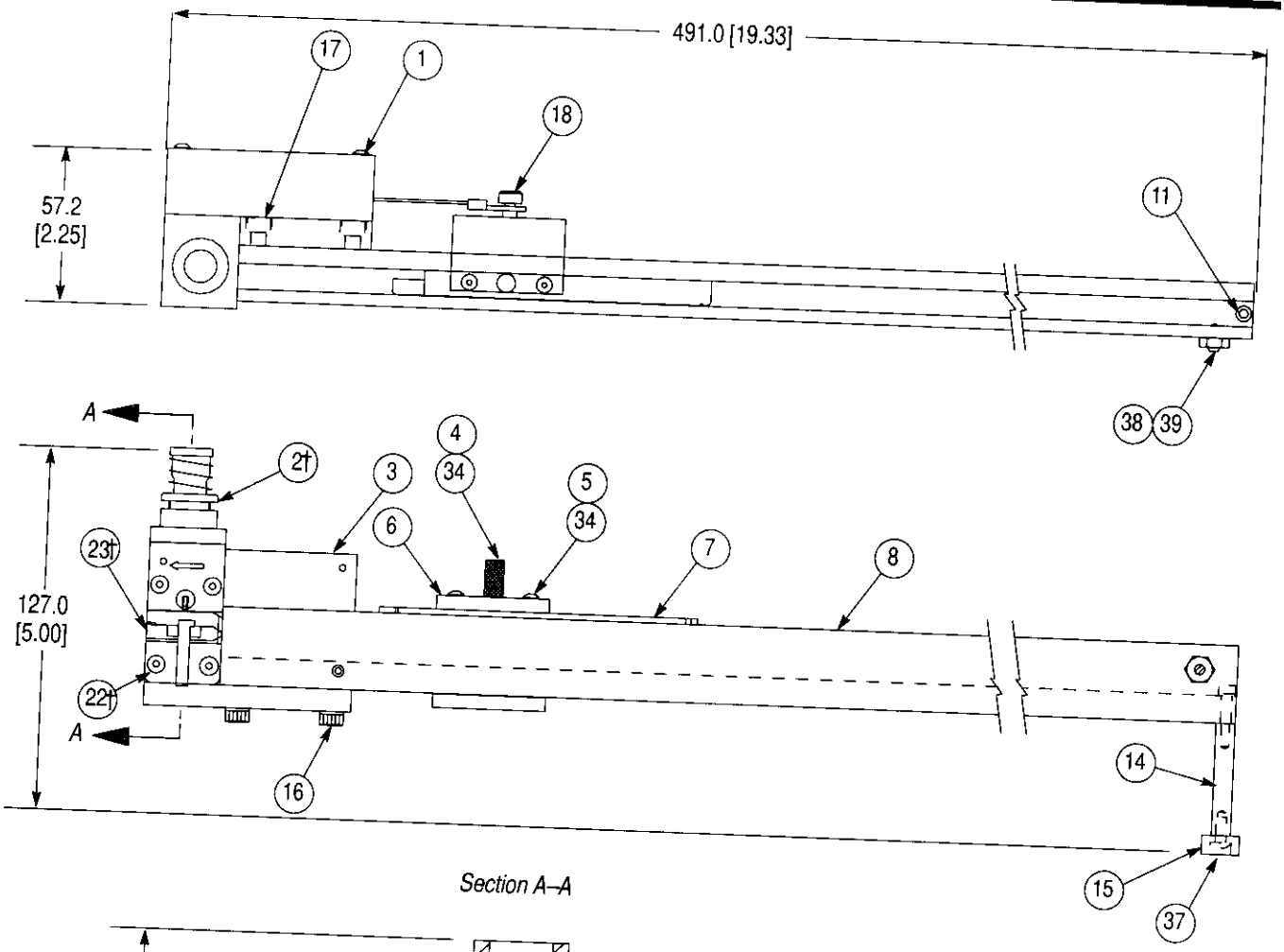
CUSTOMER REPAIR (01–12)
AMP INCORPORATED
1523 NORTH 4TH STREET
HARRISBURG, PA 17102–1604

8. REVISION SUMMARY

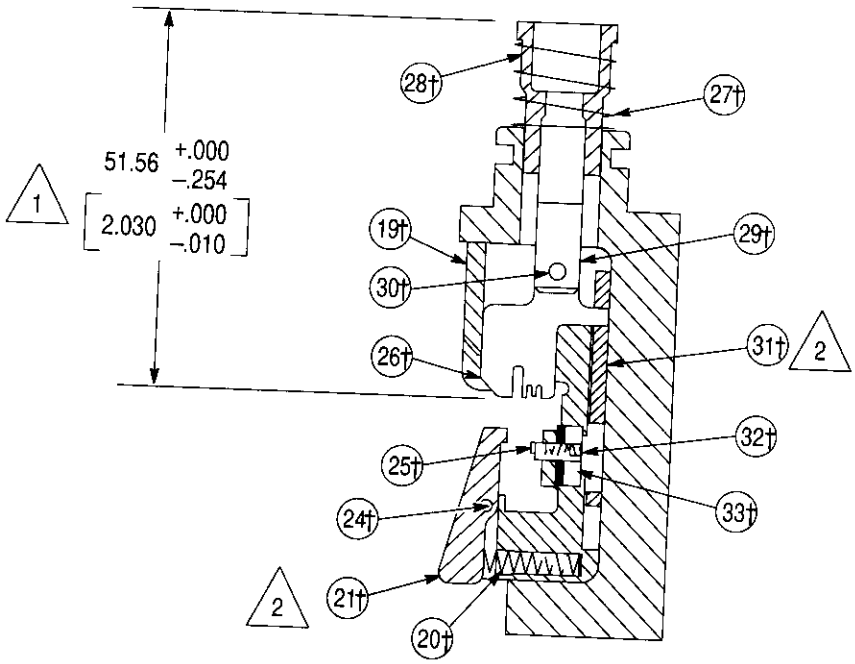
Since the previous release of this sheet, the following changes were made:

Per EC 0990–0201–96

- Revised product part numbers in Figure 2.
- Added MTA .156 Feed Track Head Assembly 318863–1 (and Housing Insert 313814–1) to Figure 6.
- Deleted Housing Insert 933804–1 from Figure 6.



Section A–A



MTA .156 Head Assembly 318863–1

1. Adjust Item 28† for initial setting. Reference Paragraph 3.2 for final adjustment procedure.
2. Lubricate with EP Lithium grease during component replacement.
3. "†" indicates those parts included in MTA–.156 Head Assembly 318863–1. Insertion Head Assembly 318863–1 can be ordered, stocked, and replaced as a single, tested unit.

Weight: 1641 g [3 lb. 10 oz.]

Figure 6 (cont'd)

REPLACEMENT PARTS MTA–.156 FEED TRACK ASSEMBLY 933568–1

ITEM	PART NUMBER	DESCRIPTION	QTY PER ASSY
1	4–22430–9	SCREW, Mach (No. 4–40 UNC x 1.00)	2
2†	933808–1	HEAD	1
3	983533–1	PULLBOX	1
4	2–22346–4	SCREW, Thumb, Knurled	1
5	1–21002–5	SCREW, Btn Hd Cap, (No. 4–40 UNC x .50)	2
6	933811–1	GUIDE	1
7	933810–1	PUSHER	1
8	933807–1	TRACK	1
11	2–21000–1	SCREW, Skt Hd Cap, (No. 6–32 UNC x .63)	1
14	983530–1	POST, Spacer	1
15	125854–2	BUMPER	1
16	3–21000–5	SCREW, Skt Hd Cap, (No. 10–32 UNF x .50)	1
17	3–21000–4	SCREW, Skt Hd Cap, (No. 10–32 UNF x .38)	2
18	27210–8	SCREW, Shld., (.188 Dia x .19)	2
19†	313814–1	HOUSING, Insert	1
20†	22278–9	SPRING, Compression	1
21†	768531–2	PAWL, Locating	1
22†	4–22430–8	SCREW, Mach (No. 4–40 UNC x .88)	1
23†	1–21010–9	SCREW, Socket Set	4
24†	21041–7	PIN, Spiral Spring	1
25†	312192–1	PAWL, Finished Feed	1
26†	312154–1	INSERTER, Wire	1
27†	1–22488–5	SPRING, Compression	1
28†	312149–1	ADJUSTER, Rod Inserter	1
29†	312148–1	ROD, Inserter	1
30†	3–21028–2	PIN, Slotted Spring	1
31†	768530–2	CAM, Traverse Slide	1
32†	1–23147–2	SPRING, Compression	1
33†	312151–1	SLIDE, Feed	1
34	24367–1	WASHER, Spring Lock	3
37	1–21002–7	SCREW, Btn Hd Cap (No. 6–32 UNC x .38)	1
38	21068–6	NUT, (No. 8–32)	1
39	2–23057–3	PLUNGER, Ball	1

† Parts for MTA .156 Insertion Head 318863–1. Insertion Head 318863–1 may be ordered, stocked and replaced as a complete, assembled unit.

Figure 6 (end)