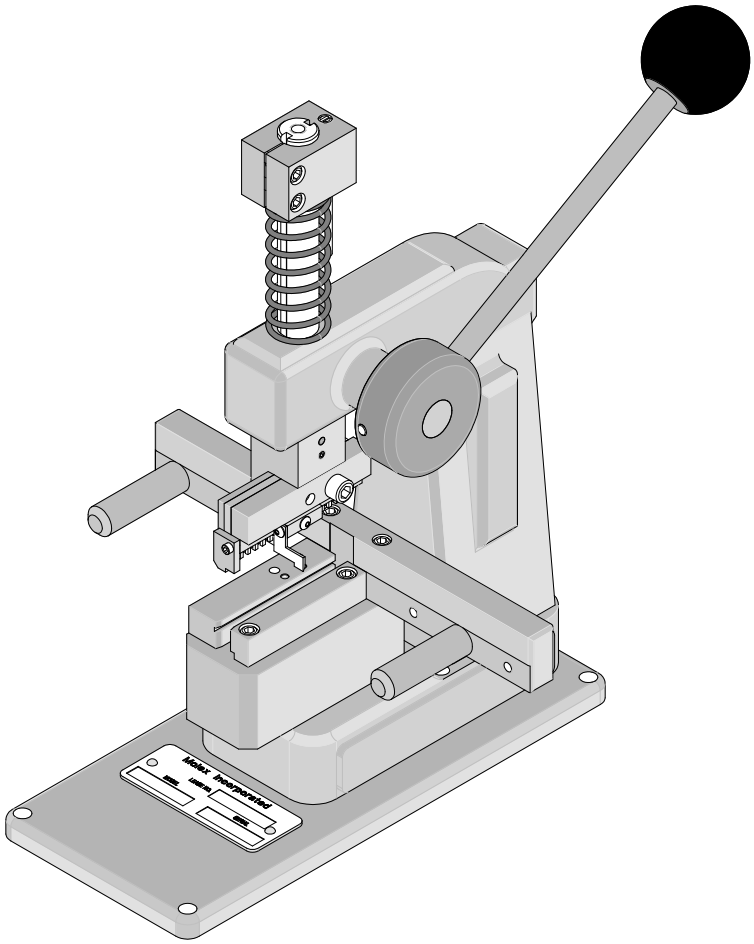

Arbor Terminator Press
Operation Manual
For IDT Connectors
Order No. 11-20-0815
Engineering No: AM7223-140

- Description
- Operation
- Maintenance

Safety Warnings and Information

	**Read** and **understand** all of the instructions and safety information in this manual before operating or servicing this tool. Keep this manual available when using this tool. Replacement manuals are available at www.molex.com.

SAFETY ALERT SYMBOL

This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.

 DANGER	**DANGER:** Indicates an imminently hazardous situation which, if not avoided, could result in death or serious injury.
 WARNING	**WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	**CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. **CAUTION** may also be used to alert against unsafe practices associated with events that could lead to personal injury.

	**WARNING** **Always** wear proper eye protection when Operating or servicing this tool. Failure to wear eye protection could result in serious eye injury from flying debris during test.		**WARNING** **Never** use this machine without safety devices that are intended to prevent hands from remaining in the tool. Failure to observe this warning could result in severe injury or death.
	**WARNING** **Never** operate, service, install, or adjust this equipment without proper instruction and without first reading and understanding the instructions in this manual and all applicable press and/or wire processing machine manuals.		**WARNING** **Do not use** compressed air to clean the equipment. The forces created by compressed air can force debris into the tool. Failure to observe these precautions may result in injury or property damage.

CAUTION

Never perform any service or maintenance other than as described in this manual.
Never modify, alter or misuse the equipment

Molex crimp specifications are valid only when used with Molex terminals and tooling.

Failure to observe this precaution may result in injury and / or property damage.

Tooling Technical Assistance

Molex offers tooling technical assistance for customers who may need some guidance for tooling adjustments. This support can be obtained by calling either of the two numbers listed below and asking for the Molex Tooling Group.
Call Toll Free 1-800-786-6539 (US) 1-630-969-4550 (Global).

This assistance is limited to the operation and set-up of a customer's Molex tool. Questions with regard to Molex connector products or how to identify the proper tooling and/ or tooling documentation should be directed to your local Molex personnel or Customer Service Representative.

When calling for service on the Arbor Terminator Press it is recommended to have the following: a copy of the *Operation Manual* and a person familiar with the press should be present. The following information is also recommended to supply:

1. Customer name
2. Customer address
3. Person to contact such as (name, title, e-mail, and telephone number)
4. Hand held pull tester number (638019700)
5. Urgency of request
6. Nature of problem

Molex Application Tooling Group
2200 Wellington Court
Lisle, IL 60532, USA
Tel: +1 (630) 969-4550
Fax:+1 (630) 505-0049

Visit our Web site at http://www.molex.com

Table of Contents

Section 1

General Description

1.1. Description

1.2. Features

1.3. Technical Specifications

1.4. Delivery Check

1.5. Tools

General Description

1.1 Description

The Arbor Terminator Press Order No. 11-20-0815 (Engineering No. AM7223-140) is the Complete Press. It is designed to terminate 7660 or 7664 series 3.96 mm (.156 inch) centerline insulation displacement connectors 18 to 24 AWG copper wire, using insulation displacement or ribbon cable.

It will terminate from 2 to 16 circuits.

A connector is placed into the module, and then the pre-cut wires or ribbon cable is inserted into the upper strain relief barbs of the connectors. When the press is actuated, the wires or ribbon cable will be terminated into the connectors.

1.2 Features

- Intended for medium volume assemblies
- Manually operated, no shop air or electricity required.
- Bench Mounted operated.
- Simple to use.
- Easy to move from one place to another.
- Feed thru Assembly
- Feed-to assembly (Left and Right)

1.3 Technical Specifications

Dimensions	**Press with tooling**
Height	317.5mm (12.5”)
Width	228.6mm (9.0”)
Depth	203.2mm (8.0“)

Unpacked weight
8.6kg (18.0 lbs.)

Production Rate

Rates are termined by the operators skill which include:

1. Loading a connector assembly.
2. Positioning the pre-cut cable or wires.
3. Lowering the ram.
4. Removing a complete assembly.

1.4 Delivery Check

Carefully remove the Arbor Terminator Press from its shipping container. The following items are included in this package:

Decription:	
Arbor Terminator	11-20-0815
Arbor Terminator Manual	TM-011200815

1.5 Tools

The following tools are recommended for setup and adjustments to the this tool.

- ✓ Inch hex wrench set
- ✓ Small standard screwdriver
- ✓ Adjustable wrench

Section 2

Operation

2.1. Adjustments

2.2. Individual Wire Termination

2.3. Ribbon Cable Termination

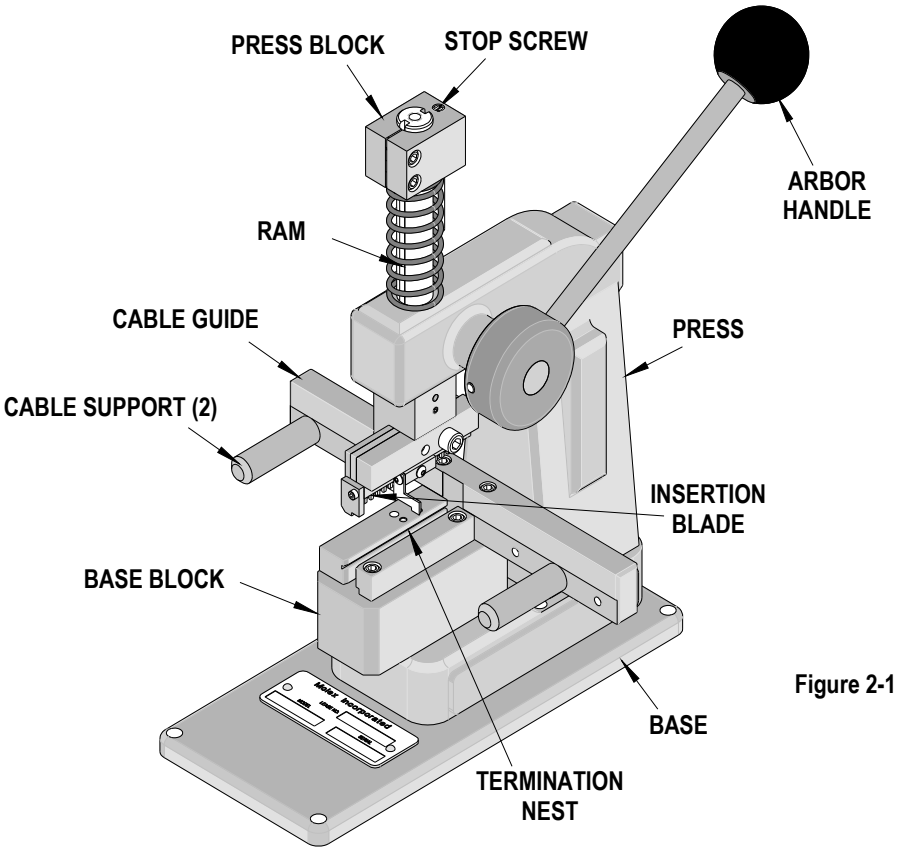

Figure 2-1

2.1 Adjustments

1. The wires or cable should be pushed into the connector by hand until the insulation just touches or is .25mm (.010") above the bottom of the housing wire slot.
2. The insertion blade in the upper nest should enter a connector without touching the contact. If realignment is needed, move the base block by loosening the (2) screws holding the block to the arbor press. Retighten the base block carefully with the ram down (blade engaged in the connector housing) to establish the proper location.
3. The support rods on the rear cable guide can be relocated to provide support for the cable without interfering with the connectors already assembled on the wires or cable.
4. To adjust this displacement depth, turn the stop screw located in the press block that is fastened to the top of the arbor ram.

2.2 Connector Placement

1. Slide the connector into the pocket between the left and right plate. See Figure 2-1.
2. The wire slots and exposed terminals of the connector should be facing up.
3. The housing rib of the connector should be located on the left wall of the pocket
4. Push the connector to the rear wall of the pocket where the spring loaded ball plunger contacts the opening of the connector.

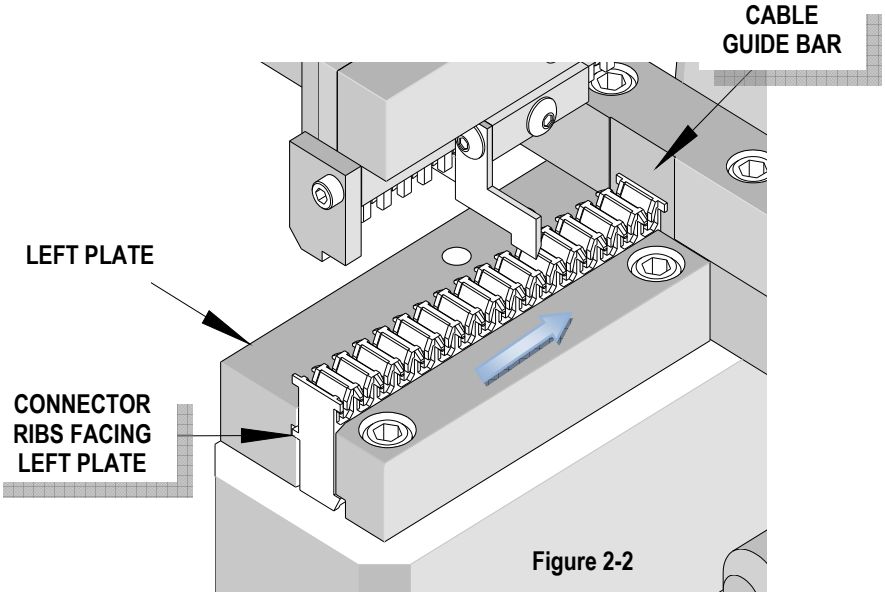

Figure 2-2

2.3 Insulation Displacement Wire Termination

1. Each wire should be positioned just above the connector contact that will be terminated.
2. Push each wire down one at a time into the connector far enough so that the plastic barbs on the connector spring opens and the insulation of the wire is between them. Make sure all the wires are held in position before terminating.

CAUTION: Before doing the next step, make sure all fingers are out of the termination area!

3. With all wires in their proper position cycle the press. This is done by pulling the arbor handle forward and down until it stops.
4. Release the handle and return it to the original full up position. This will terminate the connector.
5. Pull the connector assembly forward and out of the lower nest.

2.4 Ribbon Cable Termination

1. Position the ribbon cable with the edge along the guide bar in the back.
2. The notch area of the cable should be visually lined up over the connector.
3. For Feed-thru termination the notch openings are centered across the connector width.
4. For Feed-to termination the pre-cut cable is moved from left to right until the wire ends are centered across the connector.

CAUTION: Before doing the next step, make sure all fingers are out of the termination area!

5. Hold the ribbon cable in position making sure fingers are out of the termination area; pull the arbor handle towards the front of the press until the stop screw contacts the press frame.
6. Release the handle and return it to the original full up position. This will terminate the connector.
7. Pull the connector assembly forward and out of the lower nest.

Section 3

Maintenance

3.1. Cleaning

3.2. Lubrication

3.3. Perishable Parts

3.4. Spare Parts

3.5. Troubleshooting

3.1 Cleaning

Arbor Terminator Press should be cleaned daily. Use a soft bristle brush to remove debris from critical areas such as the crimp tooling.
See the Chart on next page for recommended Preventive Maintenance Schedule.

NOTE: Using compressed air to clean tooling is *not* recommended. Chips can wedge in the tooling and/or fly at an operator.

3.2 Lubrication

1. Grease the press ram.
2. Lubricate with multipurpose synthetic lubricant with Teflon or an equivalent. Molex ships its presses pre-greased with Permatex multi-purpose synthetic grease with Teflon No. 82329.

WARNING: Never use penetrants such as WD40 for any lubrication on the press.

An example of a maintenance chart is shown below. Copy and use this chart to track the maintenance of your Press or use this as a template to create you own schedule or use your company's standard chart, if applicable.

Preventive Maintenance Chart

Daily: Clean. See Section 3.1.
As Required: Lubricate. See Section 3.2.

CHECK SHEET MONTH _____YEAR _____

Week	Daily Clean	Days of the Week							Solution
		MON	TUE	WED	THU	FRI	SAT	SUN	
1									
2									
3									
4									
Cleaning Reapply greasing	Yes								Soft Brush Industrial Degreaser
Inspect all tooling for wear	Yes								Replace if signs of wear.

Schedule should be adjusted up or down depending on usage. Molex recommends that a log of preventive maintenance be kept with the press.

3.3 Perishable Parts

Customers are responsible for maintaining the Arbor Terminator Press. Perishable parts are those parts that come in contact with the product and will wear out over time. Molex recommends that all customers keep at least one set of the perishable tool kit in stock at all times. This will reduce the amount of production down time. These parts are identified in the Parts List. See Section 4.

3.4 Spare Parts

Customers are responsible for maintaining the Arbor Terminator Press. Spare parts are available. Moving and functioning parts can be damaged or wear out over time and will require replacement. Molex recommends that the customer keep some or all of them in stock to reduce production down time. These parts are identified in the Parts List. See Section 4.

Troubleshooting

Symptom	▪ Cause	Solution
Termination depth too shallow	▪ Operator	Pull handle until it stops.
	▪ Cable thickness	Use thinner cable.
	▪ Stop screw adjustment	Turn the stop screw counter-clockwise to increase depth.
Termination depth too deep	▪ Stop screw adjustment	Turn the stop screw clockwise to reduce depth.
Terminals will not mate to header after termination	▪ Damage from excessive termination depth	Reduce termination depth by adjusting the stop screw.
	▪ Insertion blades damaging the terminals	Re-align insertion blade to housing nest.

Section 4

Parts List and Assembly

4.1 Parts List

4.2 Assembly Drawings

4.1 Parts List

.156 Arbor Terminator Press 11-20-0815				
Item	**Order No.**	**Engineering No.**	**Description**	**Quantity**
Perishable Tooling				
1	11-31-0464	AM7223-137	L.H. Insertion Blade	1
2	11-31-0465	AM7223-138	R.H. Insertion Blade	1
Other Components				
3	11-10-1050	AM4700-26	Base Plate	1
4	11-17-0676	4968	Name Tag Arbor Press	1
5	11-21-1245	AM7223-41	Press Stop	1
6	11-21-1627	AM7223-52	Press Chuck - Blade Holder	1
7	11-21-1632	AM7223-58	Cable Guide Bar	1
8	11-21-1633	AM7223-59	Cable Support	2
9	11-21-1634	AM7223-43	Spring Plunger	1
10	11-21-1636	AM7223-44	Compression Spring	2
11	11-21-1637	AM7223-42	Clamp Bar - Chuck	1
12	11-21-1638	AM7223-45	Stop Screw	1
13	11-21-2409	AM7223-129	Left Plate	1
14	11-21-2410	AM7223-130	Right Plate	1
15	11-21-2411	AM7223-131	Base Block	1
16	11-21-4970	AM4700-40	Plastic Ball Knob	1
17	11-21-5517	AM7223-133	End Wall Retainer	1
18	11-21-5518	AM7223-134	Floating Retainer	1
19	11-21-5519	AM7223-135	Floating Retainer Mounting Block	1
Frame				
20	11-21-0698	AM4700-25	Lever Press (Modification)	1
Hardware				
21	N/A	N/A	#2-56 by 1/8 Long Drive Screw	2**
22	N/A	N/A	#4-40 by 1/4 Long BHCS	1**
23	N/A	N/A	#4-40 by 1/2 Long BHCS	1**
24	N/A	N/A	#5-40 by 1/4 Long SHCS	1**
25	N/A	N/A	#6-32 by 3/8 Long SSS (Dog Point)	1**
26	N/A	N/A	#8-32 by 1-1/4 Long SHCS	2**
27	N/A	N/A	#8-32 by 5/8 Long SHCS	2**
28	N/A	N/A	#8-32 by 3/4 Long SHCS	2**
29	N/A	N/A	#10-32 by 1.0 Long SHSS	8**
30	N/A	N/A	#1/4-20 by 1.0 Long SHCS	1**
31	N/A	N/A	#5/16-18 by 3/4 Long BHCS	2**
32	N/A	N/A	1/8 Diameter by 3/4 Long Dowel Pin	2**
33	N/A	N/A	1/8 Diameter by 1.0 Long Roll Pin	1**
34	N/A	N/A	3/16 Diameter by 7/8 Long Dowel Pin	1**
** Available from an industrial supply company such as MSC (1-800-645-7270).				

4.2 Assembly

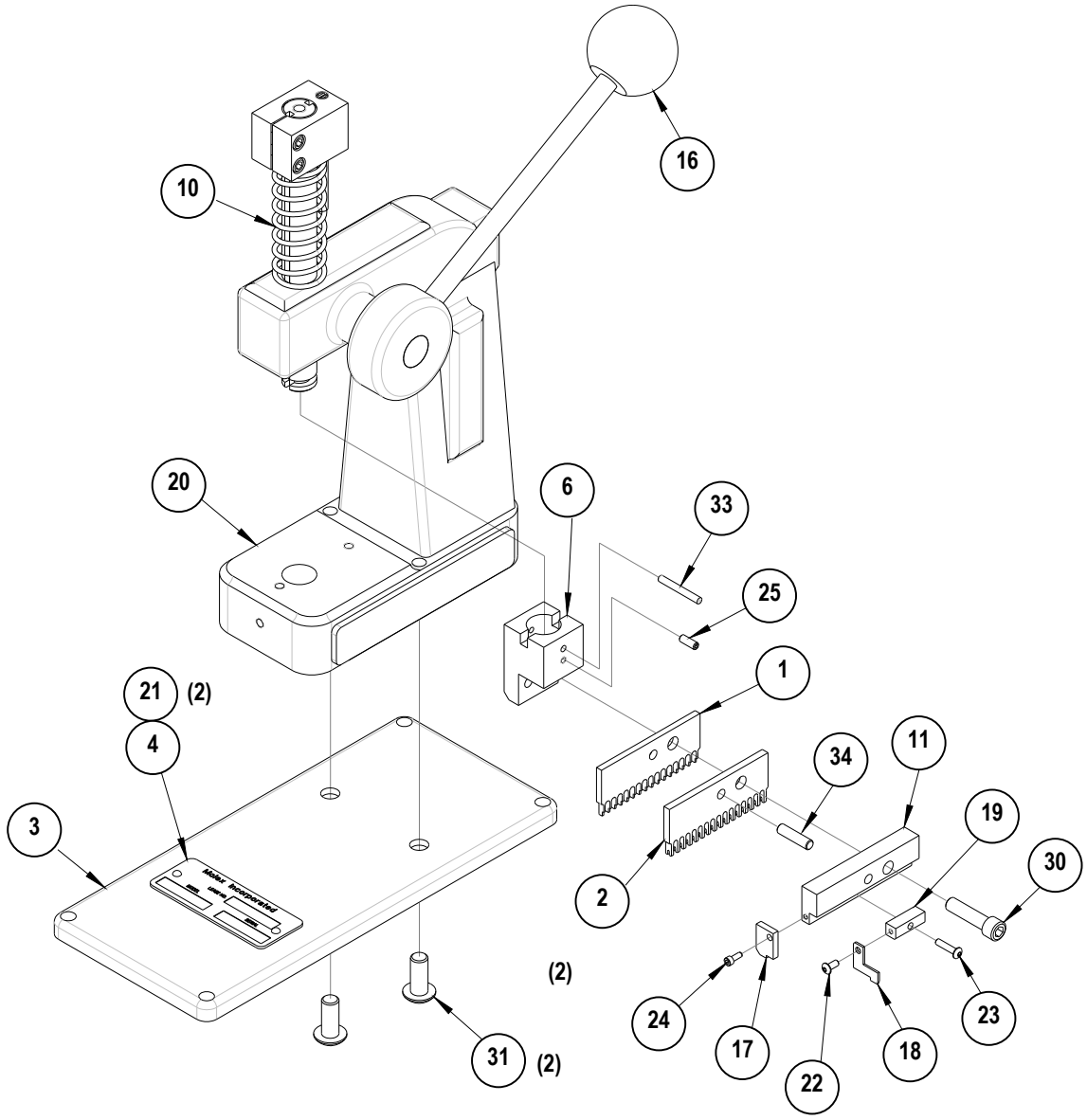

Figure 4-1

4.2 Assembly (cont.)

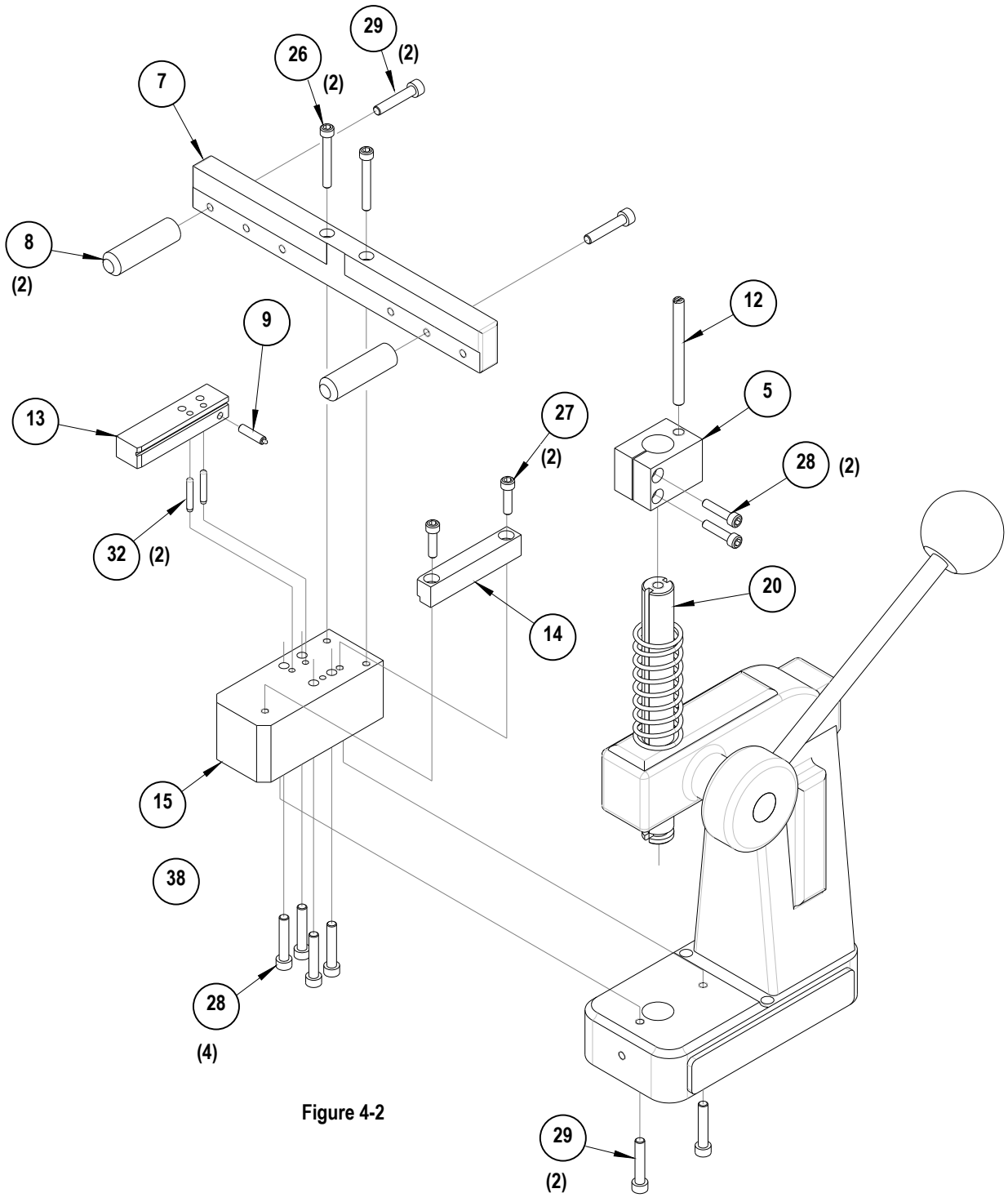

Figure 4-2

Section 5

Connector Series Chart

Terminal Series No.	Terminal Order No.							
7660	09-06-1026	09-06-1036	09-06-1046	09-06-1056	09-06-1066	09-06-1076	09-06-1086	09-06-1096
	09-06-1106	09-06-1116	09-06-1126	09-06-1136	09-06-1146	09-06-1156	09-06-1166	09-06-2026
	09-06-2036	09-06-2046	09-06-2056	09-06-2066	09-06-2076	09-06-2086	09-06-2096	09-06-2106
	09-06-2116	09-06-2126	09-06-2136	09-06-2146	09-06-2156	09-06-2166	09-06-3026	09-06-3036
	09-06-3046	09-06-3056	09-06-3066	09-06-3076	09-06-3086	09-06-3096	09-06-3106	09-06-3116
	09-06-3126	09-06-3136	09-06-3146	09-06-3156	09-06-3166	09-06-5026	09-06-5036	09-06-5046
	09-06-5056	09-06-5066	09-06-5076	09-06-5086	09-06-5096	09-06-5106	09-06-5116	09-06-5126
	09-06-5136	09-06-5146	09-06-5156	09-06-5166				
	09-07-1026	09-07-1036	09-07-1046	09-07-1056	09-07-1066	09-07-1076	09-07-1086	09-07-1096
	09-07-1106	09-07-1116	09-07-1126	09-07-1136	09-07-1146	09-07-1156	09-07-1166	09-07-2026
	09-07-2036	09-07-2046	09-07-2056	09-07-2066	09-07-2076	09-07-2086	09-07-2096	09-07-2106
	09-07-2116	09-07-2126	09-07-2136	09-07-2146	09-07-2156	09-07-2166	09-07-3026	09-07-3036
	09-07-3046	09-07-3056	09-07-3066	09-07-3076	09-07-3086	09-07-3096	09-07-3106	09-07-3116
	09-07-3126	09-07-3136	09-07-3146	09-07-3156	09-07-3166	09-07-5026	09-07-5036	09-07-5046
	09-07-5056	09-07-5066	09-07-5076	09-07-5086	09-07-5096	09-07-5106	09-07-5116	09-07-5126
	09-07-5136	09-07-5146	09-07-5156	09-07-5166	09-09-2036	09-09-2096	09-10-2032	09-10-2057
	09-10-2092	09-10-2126	26-32-5106	26-32-5126	26-32-5156	50-34-8538		
7664	09-05-5025	09-05-5035	09-05-5045	09-05-5055	09-05-5065	09-05-5075	09-05-5085	09-05-5095
	09-05-5105	09-05-5115	09-05-5125	09-05-5135	09-05-5145	09-05-5155	09-05-5165	09-05-5175
	09-05-5185	09-05-5195	09-05-5205	09-05-5215	09-05-5225	09-05-5235	09-05-5245	09-06-0025
	09-06-0035	09-06-0045	09-06-0055	09-06-0065	09-06-0075	09-06-0085	09-06-09-5	09-06-0105
	09-06-0115	09-06-0125	09-06-0135	09-06-0145	09-06-0155	09-06-0165	09-06-0175	09-06-0185
	09-06-0195	09-06-0205	09-06-0215	09-06-0225	09-06-0235	09-06-0245	09-06-1025	09-06-1035
	09-06-1045	09-06-1055	09-06-1065	09-06-1075	09-06-1085	09-06-1095	09-06-1105	09-06-1115
	09-06-1125	09-06-1135	09-06-1145	09-06-1155	09-06-1165	09-06-1175	09-06-1185	09-06-1195
	09-06-1205	09-06-1215	09-06-1225	09-06-1235	09-06-1245	09-06-2245	09-06-3025	09-06-3035
	09-06-3045	09-06-3055	09-06-3065	09-06-3075	09-06-3085	09-06-3095	09-06-3105	09-06-3115
	09-06-3125	09-06-3135	09-06-3145	09-06-3155	09-06-3165	09-06-3175	09-06-3185	09-06-3195
	09-06-3205	09-06-3215	09-06-3225	09-06-3235	09-06-3245	09-07-0025	09-07-0035	09-07-0045
	09-07-0055	09-07-0065	09-07-0075	09-07-0085	09-07-09-5	09-07-0105	09-07-0115	09-07-0125
	09-07-0135	09-07-0145	09-07-0155	09-07-0165	09-07-0175	09-07-0185	09-07-0195	09-07-0205
	09-07-0215	09-07-0225	09-07-0235	09-07-0245	09-07-1025	09-07-1035	09-07-1045	09-07-1055
	09-07-1065	09-07-1075	09-07-1085	09-07-1095	09-07-1105	09-07-1115	09-07-1125	09-07-1135
	09-07-1145	09-07-1155	09-07-1165	09-07-1175	09-07-1185	09-07-1195	09-07-1205	09-07-1215
	09-07-1225	09-07-1235	09-07-1245	09-07-3025	09-07-3035	09-07-3045	09-07-3055	09-07-3065
	09-07-3075	09-07-3085	09-07-3095	09-07-3105	09-07-3115	09-07-3125	09-07-3135	09-07-3145
	09-07-3155	09-07-3165	09-07-3175	09-07-3185	09-07-3195	09-07-3205	09-07-3215	09-07-3225
	09-07-3235	09-07-3245	09-07-5025	09-07-5035	09-07-5045	09-07-5055	09-07-5065	09-07-5075
	09-07-5085	09-07-5095	09-07-5105	09-07-5115	09-07-5125	09-07-5135	09-07-5145	09-07-5155
	09-07-5165	09-07-5175	09-07-5185	09-07-5195	09-07-5205	09-07-5215	09-07-5225	09-07-5235
	09-07-5245	09-07-7081	09-07-7082	09-09-2064	09-09-5044	09-09-5074	09-09-5093	09-09-5094
	09-10-1085	09-10-1095	09-10-1096	09-10-1155				

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