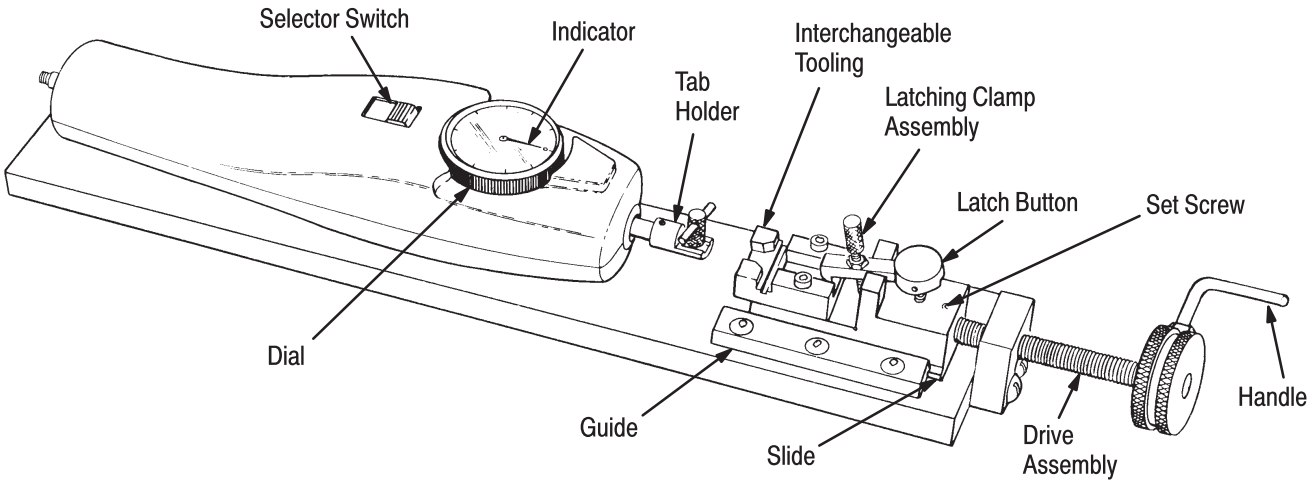
Force Gage 92–100505 for Testing FASTON* FASTIN–FASTON*, PIDG*, and Ultra–Fast Terminals



SERIES	TERMINAL TYPE	INTERCHANGEABLE TOOL NO.	TEST TAB NO.	TEST TAB THK mm [in.]
250	IN–LINE	92–100505–3	60447–1	0.81 [.032]
	IN–LINE (No Insul Barrel)	92–100505–4	60447–1	
	IN–LINE COMMERCIAL	92–100505–29	60447–1	
	ECONOMY COMBO	92–100505–35	60447–1	
	PC BOARD RECEPTACLE	92–100505–44	60447–1	
	RECEPTACLE PC	92–100505–52	60447–1	
	PIDG 16–14	92–100505–18	60447–1	
	PIDG 14–12	92–100505–19	60447–1	
	ULTRA–FAST	92–100505–71	60447–1	
	POSITIVE LOCK	92–104955–5	63274–1	
	FLAG	92–100505–2	60447–1	
	FLAG (Crimped)	92–100505–2, –11▲	60447–1	
	REVERSIBLE FLAG	92–100505–17	60447–1	
	REVERSIBLE FLAG (Crimped)	92–100505–27	60447–1	
	COMMERCIAL FLAG	92–100505–5●	60447–1	
	COMMERCIAL FLAG (Crimped)	92–100505–10	60447–1	
	ECONOMY FLAG (No Insul Barrel)	92–100505–39	60447–1	
	FLAG (No Insul Barrel)	92–100505–40	60447–1	
	FLAG, BUDGET & PREMIER	92–100505–67	60447–1	
	FLAG, ULTRA–FAST	92–100505–72	60447–1	
205	IN–LINE	92–100505–12	60613–1▪	0.50 [.020]
	FLAG	92–100505–13	60613–2▪	0.81 [.032]

SERIES	TERMINAL TYPE	INTERCHANGEABLE TOOL NO.	TEST TAB NO.	TEST TAB THK mm [in.]
187	IN–LINE	92–100505–6	---	0.50 [.020]
	IN–LINE (No Insul Barrel)	92–100505–14	---	
	IN–LINE (Crimped)	92–100505–14	---	
	FASTIN–FASTON	92–100505–21●	---	
	RELAY C RECEPTACLE TAB	92–100505–23	---	
	WELD TAB RECEPTACLE	92–100505–30	60443–1†	
	SOLDER DIP RECEPTACLE	92–100505–31	60443–1†	
	RELAY RECEPTACLE	92–100505–32	60443–1†	
	COMMERCIAL	92–100505–36	60443–1	
	COMMERCIAL COMBO	92–104955–3	60443–1	
	ULTRA–FAST	92–100505–80	60443–1	
	POSITIVE LOCK	92–104955–4	60443–1	
	FLAG	92–100505–7	60443–1	
	FLAG "F" CRIMP	92–100505–16	60443–1	
	FLAG (Crimped)	92–100505–7 & 20◆	60443–1	
	PIGGYBACK FLAG	92–100505–28	60443–1	
	FLAG, BUDGET & PREMIER	92–104955–17	60443–1	
	FLAG, ULTRA–FAST	92–100505–92	60443–1	
110	FASTON RECEPTACLE	92–100505–24	62061–‡	See Note ‡
	PIDG 16–14 & 22–18	92–100505–26	62061–‡	
	FLAG FASTON	92–100505–61	62061–‡	
	FLAG, INSUL SUPPORT	92–100505–37	62061–‡	
	ULTRA–FAST	92–100505–73	62061–‡	
AMPEEZ	RECEPTACLE	92–100505–8	60447–1	0.81 [.032]
312	PREMIER INSUL SUPPORT	92–100505–34	679947–2	0.81 [.032]

▪The applicable tab is determined by the height of the receiving slot in the receptacle. Tab 60613–1 is 0.50 [.020 thick, tab 60613–2 is 0.81 [.032] thick.
†The applicable tab is determined by the height of the receiving slot in the receptacle. Tab 60443–1 is 0.50 [.020 thick, tab 61066–1 is 0.40 [.016] thick.
‡The applicable tab is determined by the height of the receiving slot in the receptacle. Tab 62061–1 is 0.50 [.020 thick, tab 62061–2 is 0.81 [.032] thick, tab 62061–3 is 0.40 [.016] thick. ●Denotes subassembly. ▲Insert used in conjunction with 92–100505–2 fixture. ◆Insert used in conjunction with 92.100505–7 fixture.

Figure 1

1. INTRODUCTION

NOTE

All dimensions on this document are in metric units [with U.S. customary units in brackets]. Figures and illustrations are for identification only and are not drawn to scale.

Reasons for reissue are provided in Section 6, REVISION SUMMARY.

Insertion/Extraction Force Gage is designed for measuring the force necessary to insert and extract the terminals listed in Figure 1. The gage is available with 44.48 N [10 lb], 111.20 N [25 lb], or 222.40 [50 lb] test capacity. The gage used depends on the known

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PRODUCT INFORMATION 1–800–522–6752

range of the terminal to be tested. For example: a terminal with a known range between 22.24 N [5 lb] and 35.58 N [8 lb] would require a 44.48 N [10 lb] capacity gage, while a terminal with a known range between 35.58 N [8 lb] and 53.37 N [12 lb] would require a 111.20 N [25 lb] capacity gage.

Interchangeable tooling, designed for each terminal, is used to adapt the gage for the terminals listed in Figure 1. The tooling is ordered by the tooling number that corresponds with the specified terminal series. In some cases, inserts for testing crimped terminals can be used in the tooling for testing uncrimped terminals. These applications are shown in the table in Figure 1.

Tyco Electronics recommends slotted brass tabs for testing terminals. A new tab must be used for testing each receptacle to ensure an accurate reading. The thickness of the test tab is determined by the height of the receiving slot in the receptacle.

2. TOOLING INSTALLATION

The tooling number is marked on the tooling. Check the chart in Figure 1 for the proper tooling and proceed as follows:

1. Remove the two socket head screws used to hold the tooling in place.

NOTE

It may be necessary to back off the adjustment screw and depress the latch button to facilitate installation and removal of the tooling. Do not, however, remove any of these components from the gage.

2. Place the tooling on the slide and align the holes in the tooling with those in the base of the slide.

3. Install the socket head screws in the tooling. Make certain that the tooling is aligned with the tab holder before securing the screws. This can be accomplished by placing a straight edge or an equivalent piece of flat stock material against the slide and holding it in position until the screws are secured in the base. See Figure 2.

4. Check alignment by placing a tab in the tab holder. Advance the slide until the tooling is directly under the tab. The tab should be centered over the terminal slot in the tooling. See Figure 3.

CAUTION

Make certain the tab is bottomed and centered in the tab holder before securing the tab holding screw.

The gage is now ready for testing the terminals.

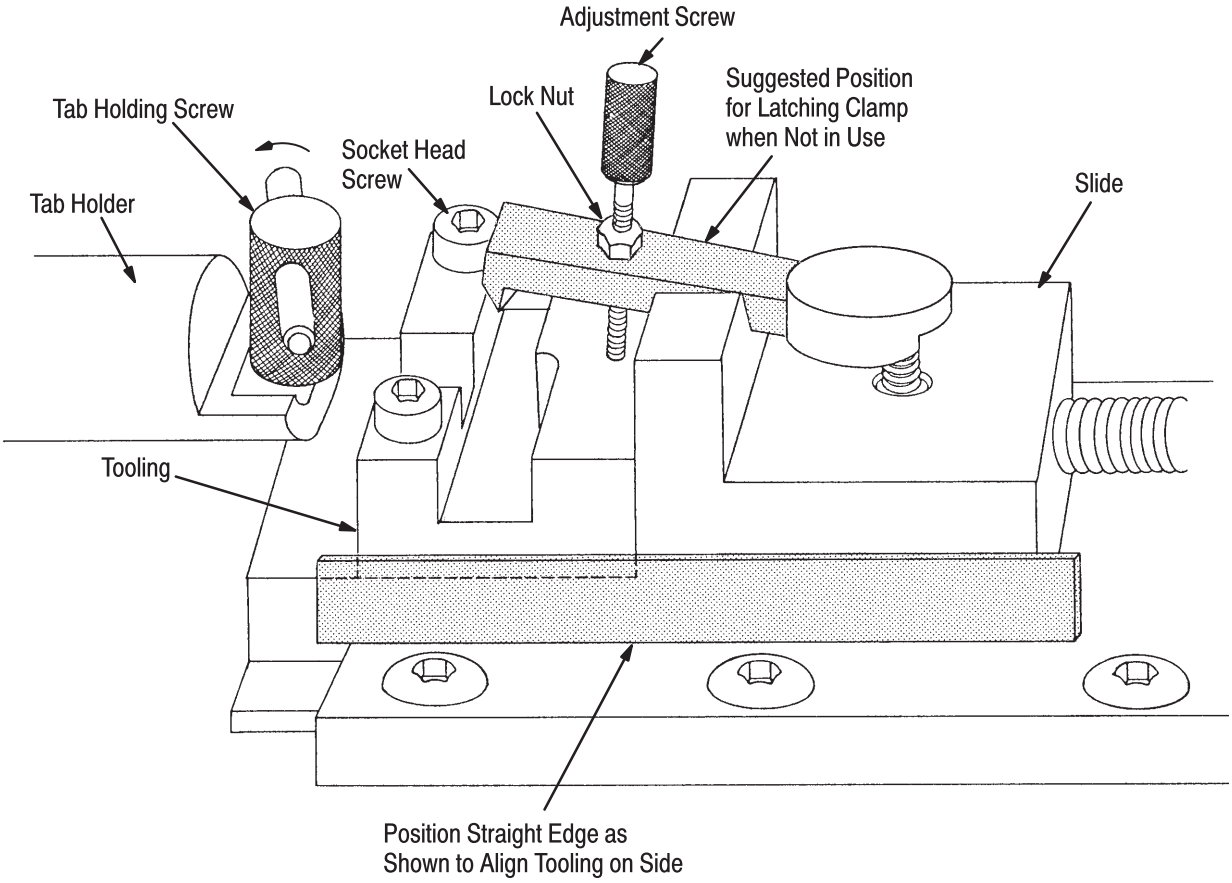

Figure 2

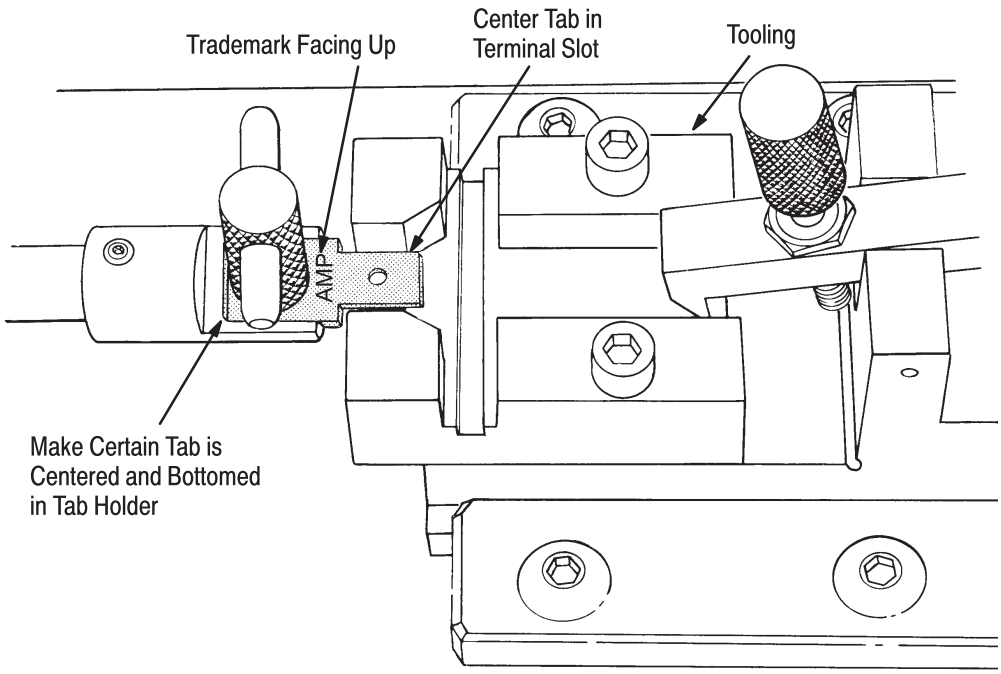

Figure 3

3. LATCHING CLAMP

The latching clamp is designed to hold in–line receptacles in the tooling during extraction tests.

Adjust the clamp according tot the following procedure:

NOTE

When the latching clamp is not in use, the adjustment screw can be positioned as shown in Figure 2 to prevent interference during testing. When tooling does not butt against the slide, a suitable piece of stock material can be positioned between the tooling and the slide to provide support for the adjustment screw. Do not remove the latching clamp assembly from the gage.

1. Place the terminal to be tested in the appropriate tooling. Position the clamp between the insulation barrel and the wire barrel. For terminals without an insulation barrel, place the clamp between the tab receiver and wire barrel. Allow the clamp to bottom in the terminal.

NOTE

Remove in–line connecting tabs from the terminals that butt against the tooling. If possible, allow lateral connecting tab to remain on the applicable terminal during testing procedure. See Figure 4.

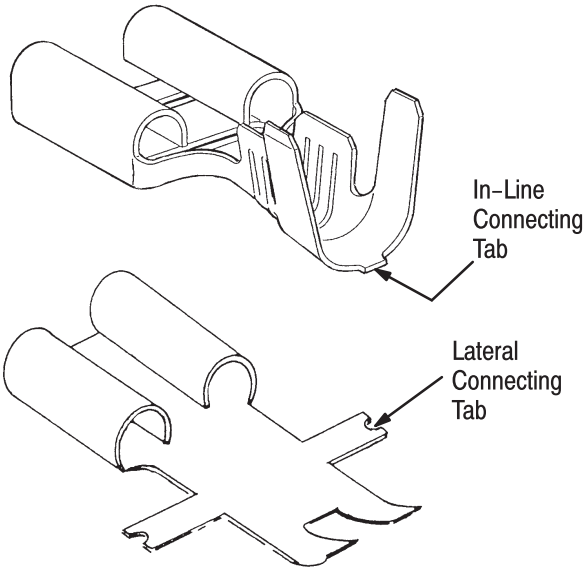

Figure 4

2. Turn the adjusting screw clockwise, just enough to release the pressure on the terminal. Lock the screw in position with the locknut.

The adjustment should be such that the terminal is retained in the tooling, but loose enough to facilitate alignment during the insertion test. See Figure 5. Depress the latch button to install and extract the terminal from the tooling.

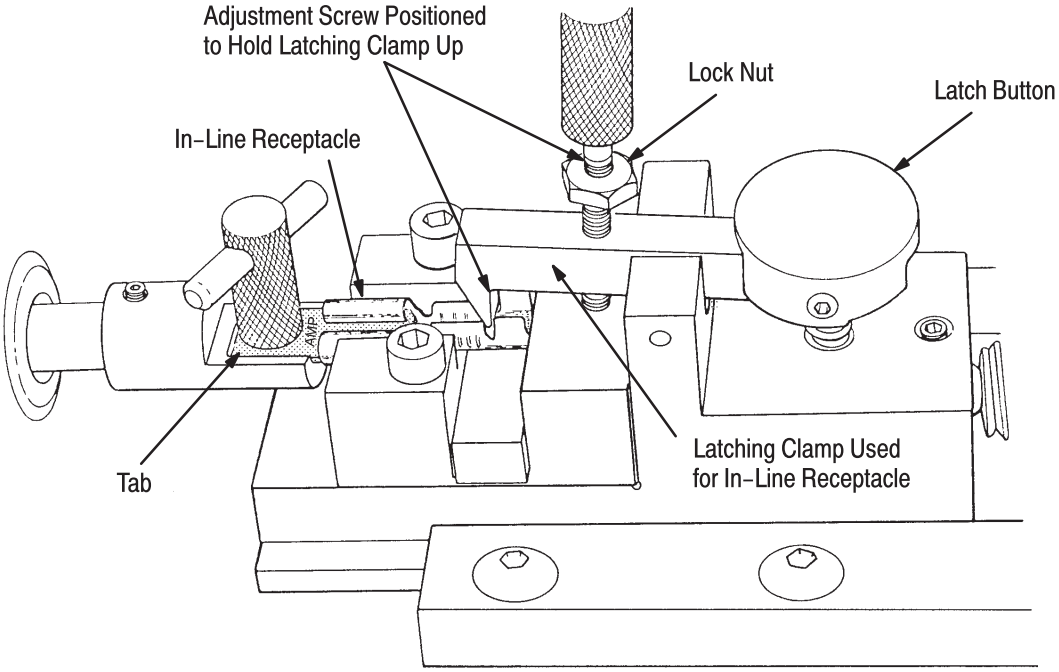

Figure 5

4. TESTING PROCEDURE

Center the selector switch and gently tap the gage body with a finger to ensure that the indicator is at rest. Turn the indicator dial until the indicator points to zero. Select the appropriate terminal and test tab to be evaluated and proceed as follows:

NOTE

Place the selector switch in the position (towards the dial) to obtain insertion values, or in the position (away from the dial) to obtain extraction values. The indicator needle may move off zero when the selector is moved; however, this will not affect the previously zeroed position.

1. Place the test tab in the tab holder with the trademark facing UP. Make sure that the tab is fully inserted before securing the tab holder screw.

2. Place the terminal in the tooling. Advance the slide with a slow, uniform movement to ensure that the tab and receptacle mate properly.

NOTE

If the receptacle begins to lift, apply light pressure with a finger to hold the components in alignment. Release finger pressure after the receptacle advances beyond the lead–in on the tab. Be certain that the finger pressure does not affect the testing reading.

3. Stop the slide when the dimples of the tab and receptacle have engaged. Do not over–insert the tab into the receptacle.

4. Record the amount of force indicated on the dial, and then reposition the selector switch away from the dial. Back the slide away from the tab holder to obtain the extraction value.

5. Install a new test tab for the next receptacle and repeat the testing procedure.

5. MAINTENANCE

When it is not in use, the gage should be kept in its packaging container. Lubricate the threaded drive and the base of the slide with any good instrument oil. If it becomes necessary to replace the drive, first remove the setscrew in the slide and then rotate the drive in a counterclockwise direction until it is free. Position a new drive assembly, and then replace the setscrew.

CAUTION

Do not remove any components of the gage other than those specified in this instruction sheet.

If repairs other than those described are required, contact your local Tyco Electronics Representative or call 1 800 722–1111, or send a facsimile of your problem to 1 717 540–2310, or send the gage and a written description of your problem to:

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P.O. BOX 3608
HARRISBURG PA 17105–360

6. REVISION SUMMARY

- Updated document to corporate requirements
- New format

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