

Hydraulic Crimping Tool

Catalog Number: TBM14MC



IMPORTANT: Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.

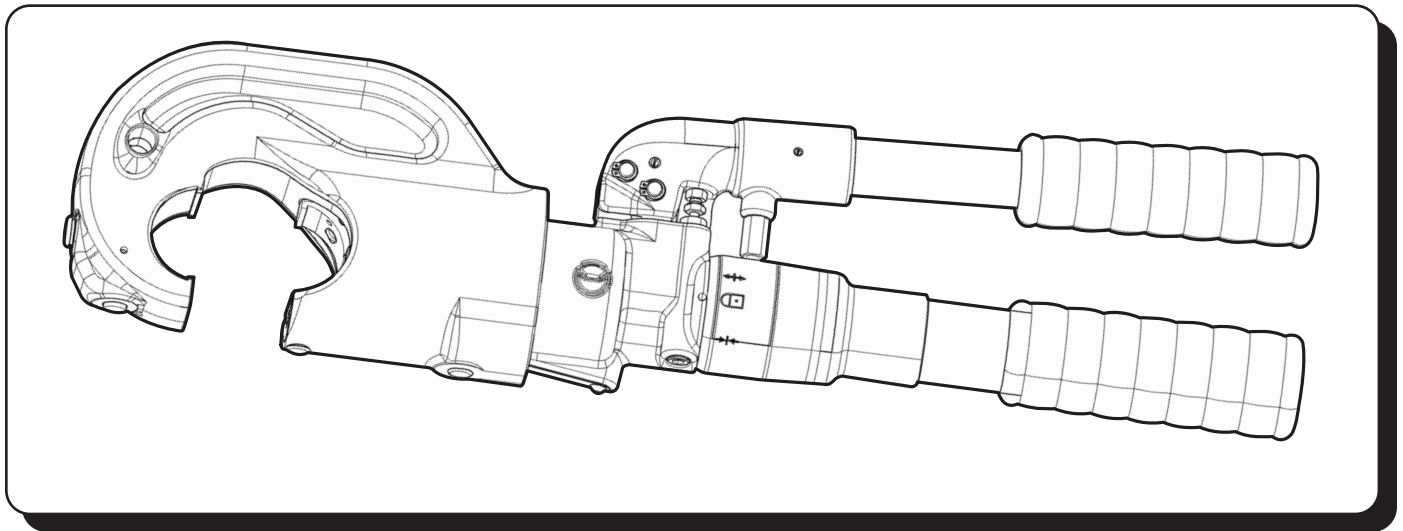


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1.0

GENERAL INFORMATION

⚠ WARNING ⚠

1. BEFORE USING THE TOOL, CAREFULLY READ INSTRUCTIONS IN THIS MANUAL.
2. WHEN OPERATING THE TOOL, NEVER PLACE HANDS OR OTHER BODY PARTS BETWEEN THE CRIMPING DIES.
3. DO NOT OPERATE WHEN DIES ARE NOT IN PLACE.
4. RISK OF ELECTRICAL SHOCK. DO NOT USE ON ENERGIZED LINES.



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2



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1.1 GENERAL CHARACTERISTICS

Head: "C" shaped with large jaw opening, see Figure 1.

Application range: suitable for installing electric compression connectors (lugs and splices) on conductors up to 900 MCM

Crimping Force: 14 tons

Rated operating pressure: 700 bar (10,000 psi)


Dimensions: length 21.3"


width (with handles closed) 5.67"


height (with handles open) 13.54"


Weight: 15.6 lbs

Recommended Oil: **AGIP ITE 360** or equivalent

Operating positions: The three operating positions are identified on the main handle  (13) (see Figure 1)

 **Rest position:** (Handles locked): Lock handles together by means of the handle latch (49) when tool is in use.

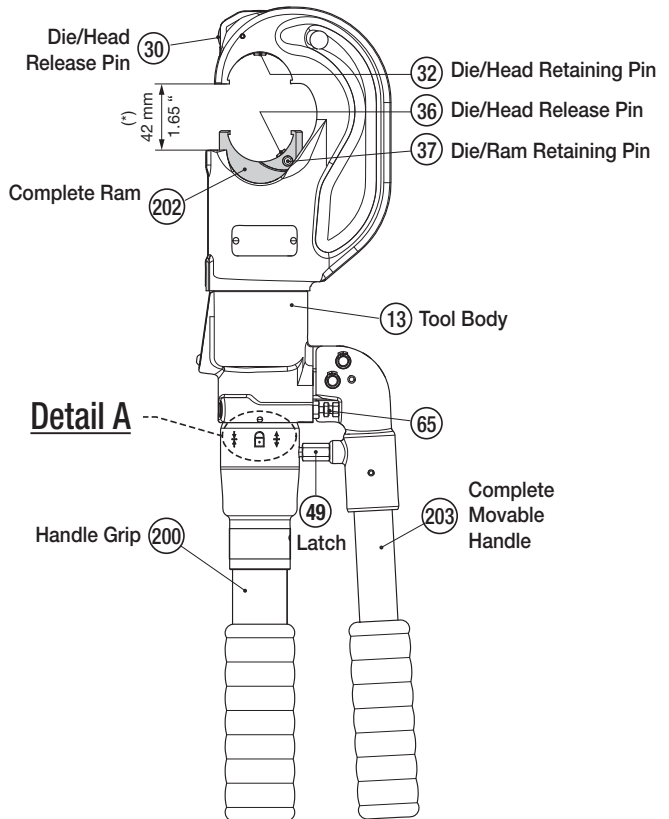
 **Release position:** Close the moveable handle (203) against the fixed handle (200), in order to discharge the oil pressure and retract the dies.

 **Operating position:** On releasing the moveable handle (203), the fixed handle (200) rotates automatically to this position. Operate the moveable handle (203) to build up pressure and close the dies.

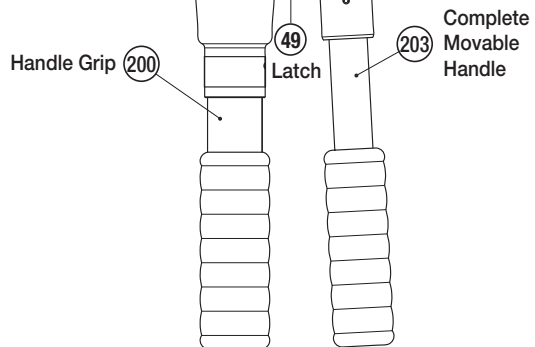
Advancing speed: The tool has two forward speeds of the ram and automatically switches from a fast advancing speed of dies to a slower crimping speed.

Safety: The tool is provided with a maximum pressure relief valve.

1.2 OVERALL VIEW



Detail A



Reference Symbol

Detail A

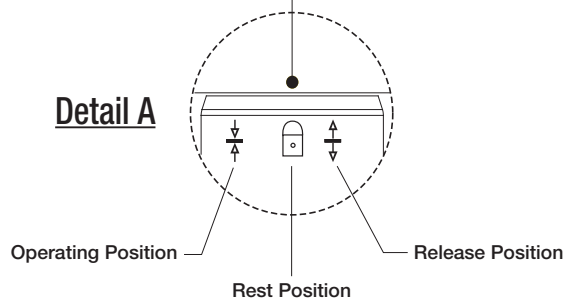



FIGURE 1

2.1 PREPARATION

With the tool in the rest position  prepare the tool as follows: (see Figure 2)

- Select the appropriate die set for the connector.
- Insert the die (91) in the upper seat of the tool head until it is locked by die/head pin (32). To ease the die insertion, keep die/head release pin (30) depressed.
- Operate the tool (per 2.2) to advance the ram (202) 8-10 mm (0.3 - 0.4 in.) and insert the die (90) into the seat on the ram until it is locked by die/ram retaining pin (37). To ease this operation, keep die/ram release pin (36) depressed.
- Insert the conductor in the connector.
- Position the connector between the dies and ensure the correct location of the crimp.
- For ease of operation, the tool head can rotate through 180°.

WARNING

DO NOT ATTEMPT TO TURN THE HEAD IF THE HYDRAULIC CIRCUIT IS PRESSURISED.

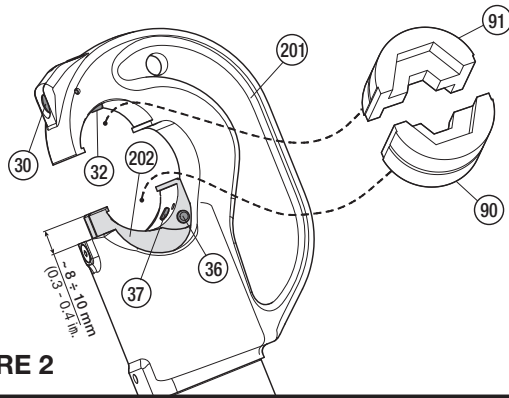




FIGURE 2

2.2 DIE ADVANCEMENT

- Set the tool in the release position  by rotating the fixed handle (200). The moveable handle (203) will be released and the main handle will rotate automatically to the operating position .
- Operate moveable handle (203) for lower die advancement. This first stage rapidly closes the dies to the connector.

WARNING


Never place the tool under pressure without inserting the dies, this could cause damage to the head and the ram.

Make sure the dies are exactly positioned on desired crimp point, otherwise re-open dies following instructions as per 2.4 and reposition the connector.

2.3 COMPRESSION

- Continue operating the movable handle (203). The tool will automatically change over to the high pressure stage. The ram will advance until the dies meet.
- Continue pumping until the maximum pressure valve is activated and a “click” is heard.

2.4 RELEASE OF DIES

- Rotate the fixed handle to release position  Close handles. The ram will then retract, and the dies will open.

2.5 DIE REPLACEMENT

To replace dies proceed as follows: (Refer to Figure 2)

Upper die (91)

- Take the die off its guide by pushing the die/head release pin (30).
- Insert replacement die until secured by the die/head retaining pin (32).

Lower die (90)

- Take the die off its guide by pushing the die/head release pin (36).
- Insert replacement die until secured by the die/ram retaining pin (37). To facilitate this operation an advancement of the ram by 8-10 mm (0.3 - 0.4 in.) is suggested.

3.0

MAINTENANCE

Compliance with the following points should help to maintain the optimum performance of the tool.

3.1 CLEANING

Dust, sand and dirt are a danger for any hydraulic device. Every day, after use, the tool must be cleaned with a clean cloth, taking care to remove any residual particles, especially close to pivots and moveable parts.

3.2 STORAGE

When not in use, the tool should be put in the rest position and placed in the plastic case for storage and transportation. The plastic case can also accommodate 14 die sets (See Figure 3).

To put the tool in the rest position:

- Retract the ram completely as describe in 2.4.
- Keeping the handles completely closed, release the fixed handle which will rotate automatically to the rest position **ED**. The moveable handle will then be locked by means of the handle latch (49).



FIGURE 3

3.4 PURGING AIR BUBBLES

Air in the hydraulic circuit may affect the performance of the tool (e.g. no lower die advancement; slow advancement of lower die; lower die pulsating). See Figures 4 and 5.

To purge air bubbles from hydraulic circuit:

- Hold tool upright with the head in a vice and handles open (Figure 4).
- Using a 2,5mm allen key, remove screws (17 and 56), slide off the fixed handle (200) to expose the oil reservoir (3). Recover spring (54) and spring cover (53).
- Remove reservoir cap (1).
- Operate the moveable handle (203) three or four times to advance the ram (202).
- Depress pressure release pin (65) until ram is fully retracted.
- Repeat points **d** and **e** at least five times, to ensure all air bubbles in the hydraulic circuit are purged into the reservoir.
- If the oil level is low, top off as directed in paragraph 3.5.
- Replace the cap (1).
- With the tool in the horizontal position, relocate spring (54) and spring cover (53) in seat A (see detail in Fig. 4). Reassemble the fixed handle (200), insert screws (17 and 56) complete with washers (55) in their respective positions and tighten them.

If the tool continues to malfunction, return the tool for service/repair as detailed on page 8.

3.5 ADDING OIL

Every six months, check the oil level in the reservoir. If necessary, bring the oil level up to the top lip of the reservoir, see section 3.4 , a, b, c, e, g, h and i.

- Always use clean recommended oil, see section 1.1, pg. 2.
- Do not use old or recycled oil.
- Do not use hydraulic brake fluid.

IMPORTANT: Ensure that disposal of used oil is in accordance with current legislation.

3.6 TOOL POSITION

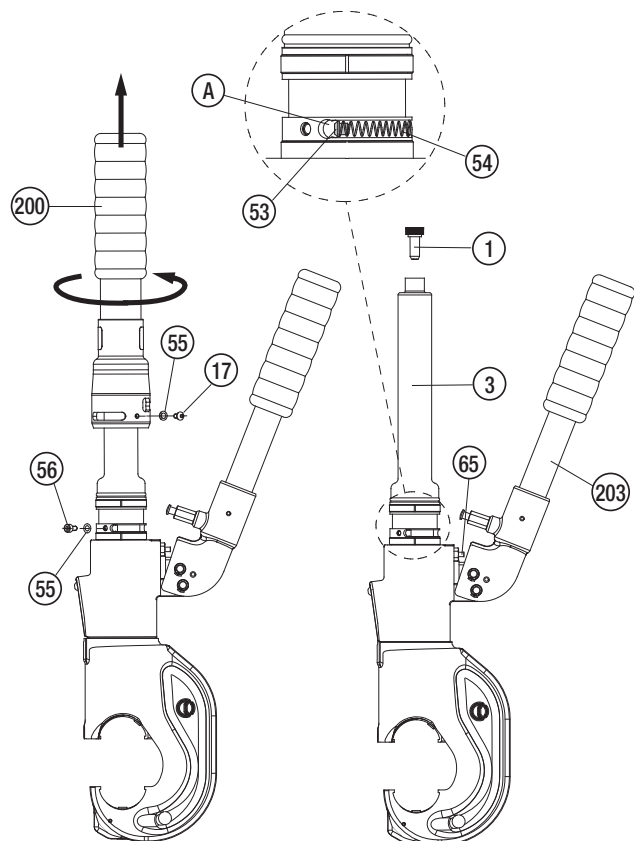


FIGURE 4 For Maintenance Operations

4.0

PARTS LIST For Type 2

See Figure 5 for complete tool assembly.

Code N°	Item	Description	Qty
6800040	1	RESERVOIR CAP	1
6720100	3	OIL RESERVOIR	1
6360260	8	O-RING	1 ☆
6040685	8	GUIDING RING	2
6900621	9	SUCTION SCREW	1
6360160	10	O-RING	2 ☆
6740060	11	BALL	2 ☆
6520765	12	SPRING	2 ☆
6160044	13	TOOL BODY	1
6740140	14	BALL	2 ☆
6520180	15	SPRING	2 ☆
6340566	16	DOWEL	2
6900059	17	SCREW M4x8	2
6100037	18	KEY	1
6900211	27	SCREW M5x10	1
6100035	28	KEY	1
6340540	34	GRUB SCREW	1
6362035	38	SEAL	1 ☆
6362010	39	SEAL	1 ☆
6641140	40	BACK-UP RING	1 ☆
6360240	41	O-RING	1 ☆
6362020	42	SEAL	1 ☆
6620382	43	PUMPING RAM	1
6700100	46	CIRCLIP	4 ☆
6560420	48	PIN	2
6600101	53	SPRING COVER	1 ☆
6520862	54	SPRING	1 ☆
6640205	55	WASHER	2
6900080	56	SCREW M4x8	1
6340720	57	GRUB SCREW	1
6520861	58	SPRING	1
6635011	59	PIN	1
6895050	60	COMPLETE VALVE	1
6740120	61	BALL	1 ☆
6600100	62	BALL SUPPORT	1
6520260	63	SPRING	1
6740080	64	BALL	1 ☆
6620120	65	PIN	1
6360120	66	O-RING	1 ☆

Code N°	Item	Description	Qty
6040060	67	BACK-UP RING	1 ☆
6080080	68	BUSH	1
6232589	77	TA04568 LABEL	1
6170143	88	PLASTIC CAP	2
6480407	200	COMPLETE MAIN HANDLE	1
6380265	200	2 HANDLE GRIP	1
6370238	201	COMPLETE INSULATED HEAD	1
6620245	201	30 PIN	1
6760160	201	31 PIN	1
6620440	201	32 PIN	1
6522006	201	33 SPRING	1
6340540	201	34 GRUB SCREW	1
6800088	201	75 PLASTIC CAP	1
6620250	201	76 PLASTIC CAP	1
6620312	202	COMPLETE RAM	1
6700250	202	19 CIRCLIP	1
6170140	202	20 COVER	1
6362058	202	21 SEAL	1 ☆
6040128	202	22 BACK-UP RING	1 ☆
6520619	202	23 SPRING	1
6520611	202	24 SPRING	1
6300079	202	25 RAM GUIDE	1
6522006	202	33 SPRING	1
6760040	202	35 PIN	2
6620445	202	36 PIN	1
6620320	202	37 PIN	1
6480196	203	COMPLETE MOVEABLE HANDLE	1
6760320	203	44 SPLIT PIN	1
6200032	203	49 LATCH	1
6760280	203	50 SPLIT PIN	1
6480269	203	51 MOVEABLE HANDLE	1
6380240	203	52 MOVEABLE HANDLE GRIP	1
6900280	203	69 SCREW M5x18	1
6180200	203	70 NUT	1

The warranty is void if parts used are not original Thomas & Betts parts. When ordering spare parts always specify the following:

- **Code Number of Item**
- **Name of Item**
- **Type of Tool**
- **Tool Serial Number**

The items marked with (☆) are those that Thomas & Betts recommends replacing if the tool is disassembled.

These items are supplied on request in the "TBM14MC Spare Parts Package"

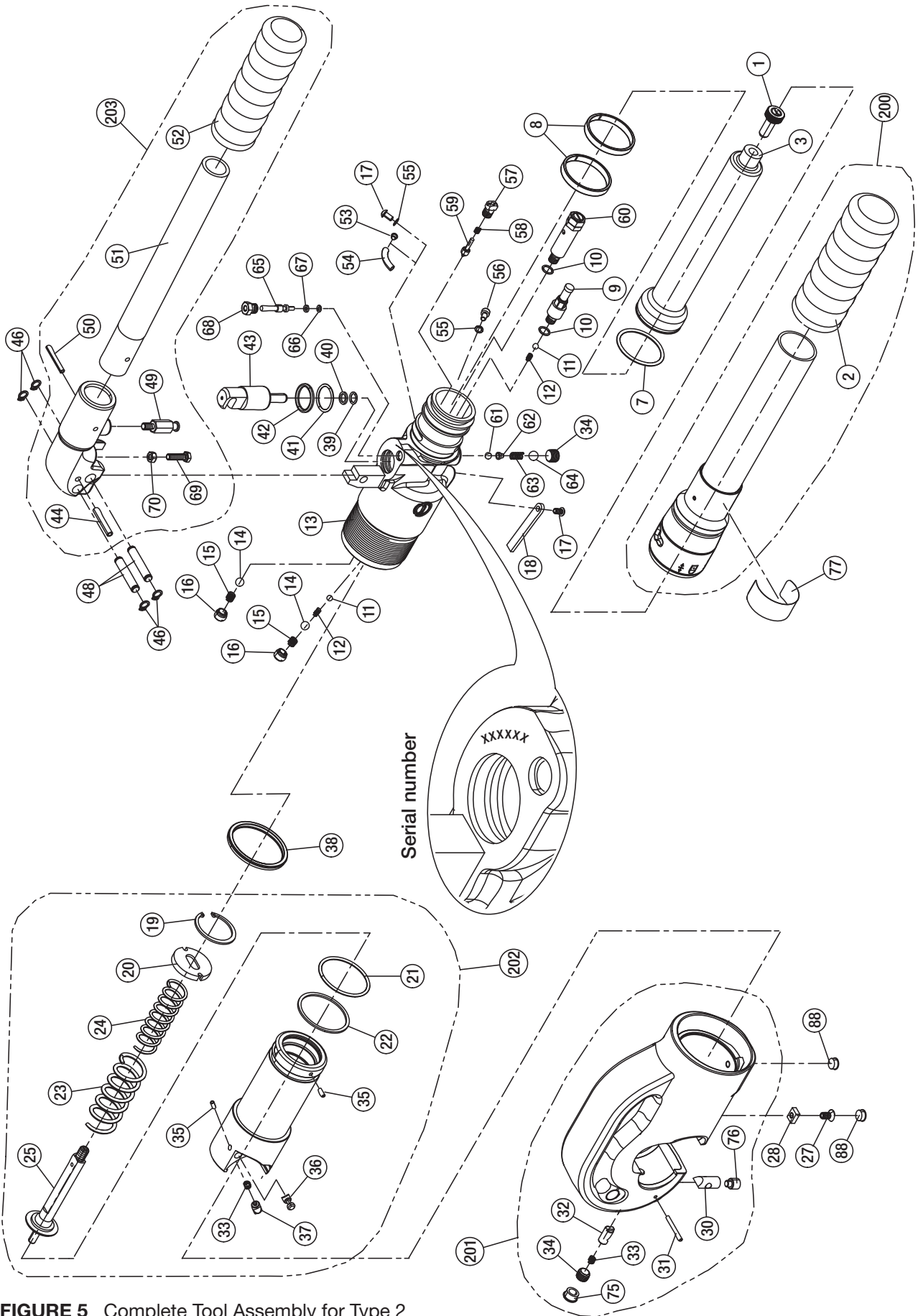


FIGURE 5 Complete Tool Assembly for Type 2

5.0

PARTS LIST for Older Models

CODE N°	ITEM	DESCRIPTION	QTY.
6800040	01	Reservoir Cap	1
6380265	● 02	Fixed Handle Grip	1
6720100	03	Oil Reservoir	1
6480043	● 04	Fixed Handle	1
6780114	● 05	Fixed Handle Support	1
6360260	★ 06	O-Ring	1
6040685	07	Guiding Ring	2
6900621	08	Suction Screw	1
6360160	★ 09	O-Ring	1
6740060	★ 10	3/16" Ball	1
6520765	★ 11	Suction Spring	1
6160044	12	Body	1
6740060	★ 13	3/16" Ball	1
6520765	★ 14	Suction Spring	1
6740140	★ 15	9/32" Ball	1
6520180	★ 16	Spring	1
6340566	17	Ball Positioning Dowel	1
6900059	18	M 4x8 Screw	1
6700250	▲ 19	Ø 36 Circlip	1
6170140	▲ 20	Spring Cover	1
6100037	21	Key	1
6520619	▲ 22	Ram Return Outer Spring	1
6520611	▲ 23	Ram Return Inner Spring	1
6300081	▲ 24	Ram Spring Guide	1
6620317	▲ 25	Ram	1
6900022	26	M3x8 Screw	1
6100038	27	Key	1
6760160	■ 28	D.3x28 Spring Pin	1
6620245	■ 29	Die/Head Release Pin	1
6340540	■ 30	M 10x8 Grub Screw	1
6522006	■ 31	Spring	1
6620440	■ 32	Die/Head Retainer Pin	1
6370219	■ 33	"C" Head	1
6362035	★ 34	Seal	1
6040320	★ ▲ 35	Back-Up Ring	1
6360420	★ ▲ 36	O-Ring	1
6362010	★ 37	Seal	1
6641140	★ 38	Back-Up Ring	1
6360240	★ 39	O-Ring	1
6362020	★ 40	Seal	1
6620382	41	Pumping Ram	1
6760320	⊕ 42	D.5x30 Spring Pin	1
6780265	⊕ 43	Moveable Handle Support	1
6700100	★ 44	Circlip	4
6080060	⊕ 45	Movable Handle Bushing	4

CODE N°	ITEM	DESCRIPTION	QTY.
6560420	46	Moveable Handle Pivot	2
6760280	⊕ 47	D.4x30 Spring Pin	1
6200032	⊕ 48	Movable Handle Latch	1
6480269	⊕ 49	Moveable Handle	1
6380240	⊕ 50	Movable Handle Grip	1
6760014	● 51	3x4 Spring Pin	1
6232006	52	Label (TG. 0356)	1
6340720	55	Pressure Release Dowel	1
6520861	56	Pressure Release Spring	1
6635011	57	Pressure Release Pin	1
6740140	★ 58	9/32" Ball	1
6520180	★ 59	Non Return Spring	1
6340566	60	Ball Positioning Dowel	1
6180200	⊕ 61	M5 Nut	1
6900280	⊕ 62	M 5x18 Screw	1
6080080	63	Pressure Release Ram Bushing	1
6620445	▲ 64	Die/Ram Release Pin	1
6760040	▲ 65	D. 3x8 Spring Pin	1
6522006	▲ 66	Spring	1
6620320	▲ 67	Die/Ram Retainer Pin	1
6040060	★ 68	Back-Up Ring	1
6360120	★ 69	O-Ring	1
6620120	70	Pressure Release Pin	1
6340540	71	M 10x8 Grub Screw	1
6740080	★ 72	5/16" Ball	1
6520260	73	Spring	1
6600100	74	Ball Positioning Dowel	1
6740120	★ 75	7/32" Ball	1
6360160	★ 76	O-Ring	1
6895050	77	Max Pressure Valve	1
6900080	78	M 4x8 Screw	1
6640205	79	Washer	1
6760040	▲ 80	D. 3x8 Spring Pin	1
6520862	★ 81	Spring	1
6600101	★ 82	Spring Cover	1
6640205	83	Washer	1
6900059	84	M 4x8 Screw	1
6480407	●	Complete Main Handle	
6620318	▲	Complete Ram	
6370237	■	Complete "C" Head	
6480196	⊕	Complete Moveable Handle	
6000058	★	Spare Parts Package	

The items marked with (★) are those Thomas & Betts recommends replacing if the tool is disassembled.

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- Name of Item
- Type of Tool
- Head Serial Number

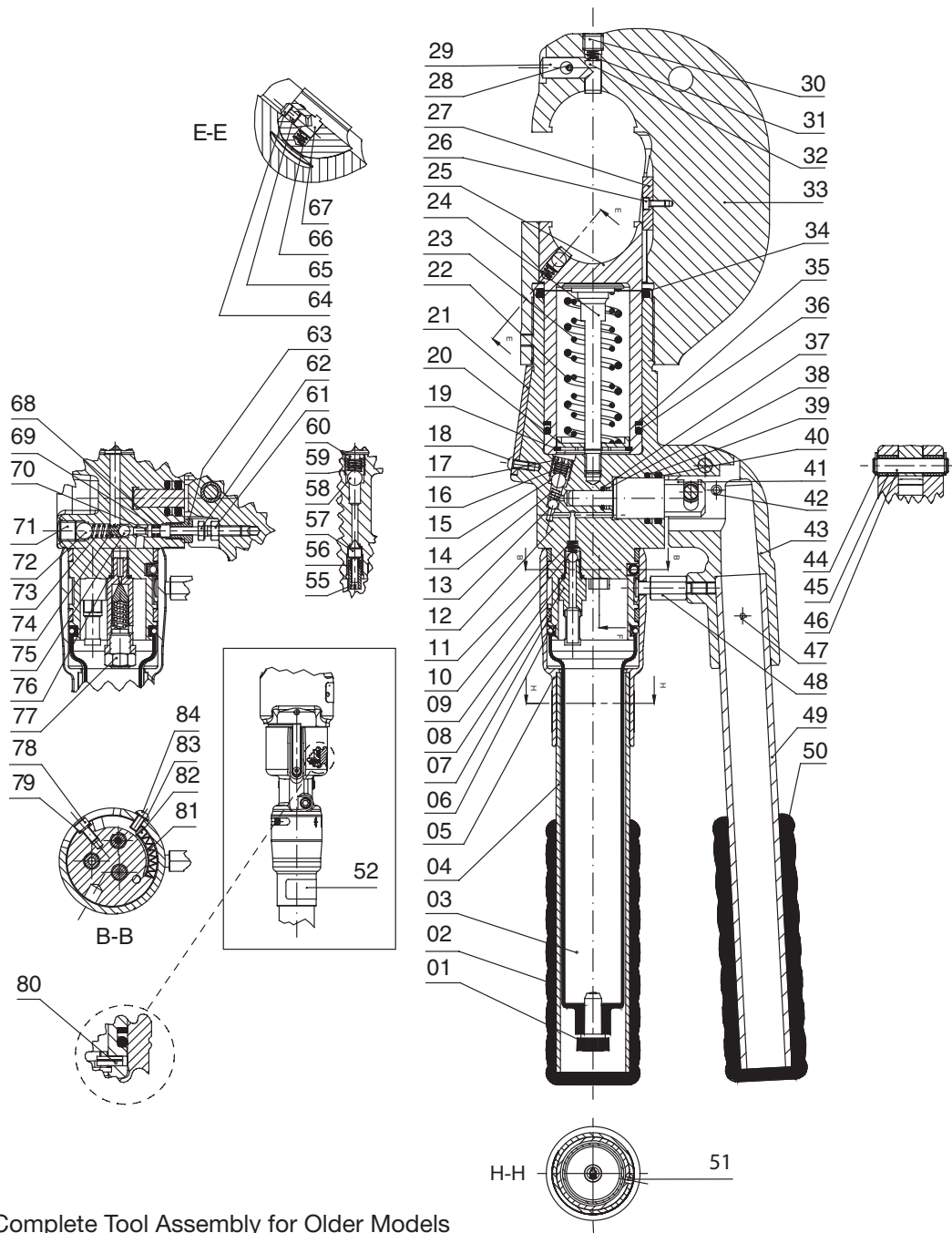


FIGURE 6 Complete Tool Assembly for Older Models

In case of a breakdown contact the Thomas & Betts Tool Service Center at 1-800-284-TOOL (8665).

WARRANTY: Thomas & Betts sells this product with the understanding that the user will perform all necessary tests to determine the suitability of this product for its intended use. Thomas & Betts manufactures its goods and tools in a manner to be free of defects. Should any defect occur in its goods within two (2) years (or tools within time stated on warranty card) of date of purchase, Thomas & Betts, upon prompt notification, will at its option, exchange or repair the goods or tools or refund the purchase price. Proof of purchase required.

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