

**TIMBERLINE**  
**TOOL**®

## **INSTRUCTION MANUAL**

### **MODEL TR650 TOPREACH CLAMP**

**TOPREACH**  
TOP • REACH • CLAMP

For your personal safety  
READ and UNDERSTAND  
instructions before using tools.



SAVE these instructions  
for future reference.

## SPECIFICATIONS

*Table 1 : Squeeze-off Tool for 3" to 6" (90mm - 180mm) PE Pipe \**



**NOTE**

|         |           |          |
|---------|-----------|----------|
| Length: | 6.5 ft ** | 2.0 m ** |
| Width:  | 17.8 in   | 45.1 cm  |
| Weight: | 60.0 lb   | 27.3 kg  |

*Table 2 : Rate of Closure*

| Pipe Size | # of Revolutions to Close | Maximum # of Revolutions per minute to Close per ASTM Specifications | Minimum Revolution Period in Seconds |
|-----------|---------------------------|--|--------------------------------------|
| 3-Inch    | 34                        | 11.0   | 5.5                                  |
| 4-Inch    | 39                        | 9.5  | 6.4                                  |
| 6-Inch    | 48                        | 8.0  | 7.5                                  |

\* Manufacturer reserves the right to change specifications without notice

\*\* Additional handle extensions may be added to increase the reach of the tool.

## INTRODUCTION

Timberline squeeze-off tools are designed to temporarily stop the pressurized flow of liquid or gas in polyethylene (PE) pipe.

Squeeze-off is a technique used to control the flow of gas or liquid in polyethylene pipe by compressing the pipe between parallel bars until the inside surfaces make contact. The flexibility and toughness of most polyethylene pipes allow the pipe to recover from a properly made squeeze-off without a measurable loss in service life. Squeeze-off is useful for making installation tie-ins and emergency repairs.

Timberline squeeze-off tools are made from high strength aluminum for superior durability and will not bend or break under normal use. However, care must be taken to ensure that the pipe is free of foreign material and the slap on jaw matches the diameter and wall thickness / SDR of the pipe to be squeezed. \*

Please read the following suggested procedure for squeezing off polyethylene plastic pipe using Timberline Squeeze-off Tools.

## GENERAL SAFETY RULES

### *For all Tools*

READ and UNDERSTAND all instructions. Failure to follow all instructions listed below may result in serious personal injury and/or damage to the tool.

The following ASTM standards provide guidance and requirements for squeeze-off tools, operating procedures, and qualification procedures.

- ASTM F1041, "Standard Guide for Squeeze-off of Polyolefin Gas Pressure Pipe and Tubing"
- ASTM F1563, "Standard Specification for Tools to Squeeze-Off Polyethylene (PE) Gas Pipe or Tubing"
- ASTM F1734, "Standard Practice for Qualification of a Combination of Squeeze Tool, Pipe, and Squeeze-Off Procedures to Avoid Long-Term Damage in Polyethylene (PE) Gas Pipe"

\* The SDR is the ratio of pipe diameter to wall thickness. SDR can be expressed as  $SDR = D/s$  where  $D$  = pipe outside diameter and  $s$  = pipe wall thickness.

# **SAFETY INSTRUCTIONS**

SAVE THESE FOR FUTURE REFERENCE

## *Static Electricity Safety*



### **WARNING**

Use a proper grounding rod at all times to insure personal safety.

PE pipe is a relatively low conductor of electricity. As a result PE pipe does build up a static charge when it is in gas service due to the gas flow on the inside of the pipe. During squeeze-off a larger amount of static charge builds up.

In addition to the potential for pipe damage due to static discharge, the build up of a static charge represents an ignition source. Timberline Tool recommends that you follow all of your company grounding techniques and that all personnel involved in squeeze-off operations receive training on those grounding procedures so that they understand the hazards involved.

## *Workplace Safety*



### **CAUTION**

Prior to using any squeeze-off tool, consult ASTM Standards F1041-02, F1563-01 and F1734-03.

Always follow applicable company and OSHA safety procedures.

Observe pipe manufacturers' recommendations and precautions for squeeze-off of polyethylene pipe, exercising particular caution when leaking gas is present.

Safety first. Timberline squeeze-off tools must be used by qualified, trained personnel only and must never be left on the pipe unattended. Refer to pipe manufacturers' recommendations for locating squeeze-off distances from fittings and joints.

## *Personal Safety*



### **WARNING**

Stay Alert, watch what you are doing, and do not use tools while tired or under the influence of narcotics, alcohol, or medication.

Use proper clothing, eye protection, and safety equipment when using squeeze-tools.

A moment of inattention while operating squeeze-off tools may result in personal injury.

Store idle tools out of reach of children and other untrained persons.

## *Specific Tool Safety*



If you have used other Timberline products please be aware that the operation of this tool may differ from others and that you may need to follow different rules. Always consult the manual to insure you are following the correct safety instructions to avoid personal injury.

## *Tool Usage Safety*

Do not force the tool to perform a squeeze-off. The tool will operate safer and better if the rate of squeeze in these instructions is followed.

Maintain the tool with care. A properly maintained tool will be less likely to cause damage and is easier to control.

Check for misalignment, binding of parts, breakage of parts, and other conditions that might affect the operation of the tool. Accidents may be caused by improperly maintained tools.

Always use the Timberline TR650 with the grounding rod inserted in the ground when working with natural gas, or any other flammable substance.

Use only the accessories, slap-on jaws, or extension handles that correspond to your product. Accessories specific for one tool may be hazardous if used on a different tool.

Failure to use the TR650 in the manner specified in this manual may result in injury and/or permanent damage to the tool.

This tool complies with ASTM F1563-01.



Always make sure to use the slap-on jaw that corresponds to the pipe size and SDR or wall thickness of the pipe to be squeezed-off.

## *Tool Service Safety*



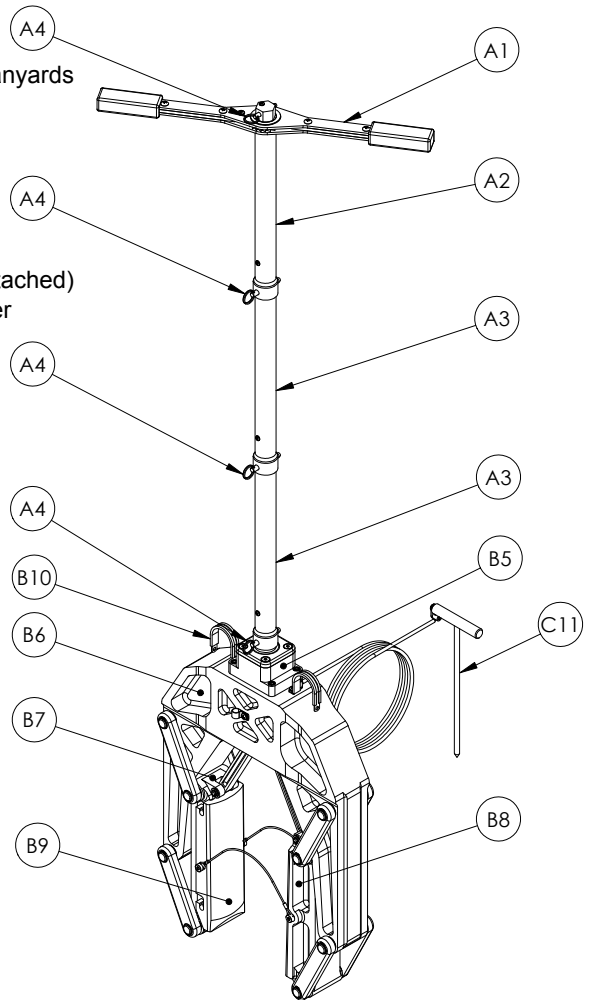
Tool service must only be performed by qualified repair personnel. Service or maintenance performed by unqualified personnel could result in a risk of injury.

## TR650 DIAGRAM

A1 – Ratchet Handle  
A2 – Top Extension  
A3 – Bottom Extensions  
A4 – Quick Release Pins on Lanyards  
(lanyards not shown)

B5 – Bearing House  
B6 – Yoke  
B7 – Slap-On Jaw Post  
B8 – Fixed Jaw Post  
B9 – Slap-On Jaw (2 cables attached)  
B10 – Ground Rod Strap Holder

C11 - Grounding Rod

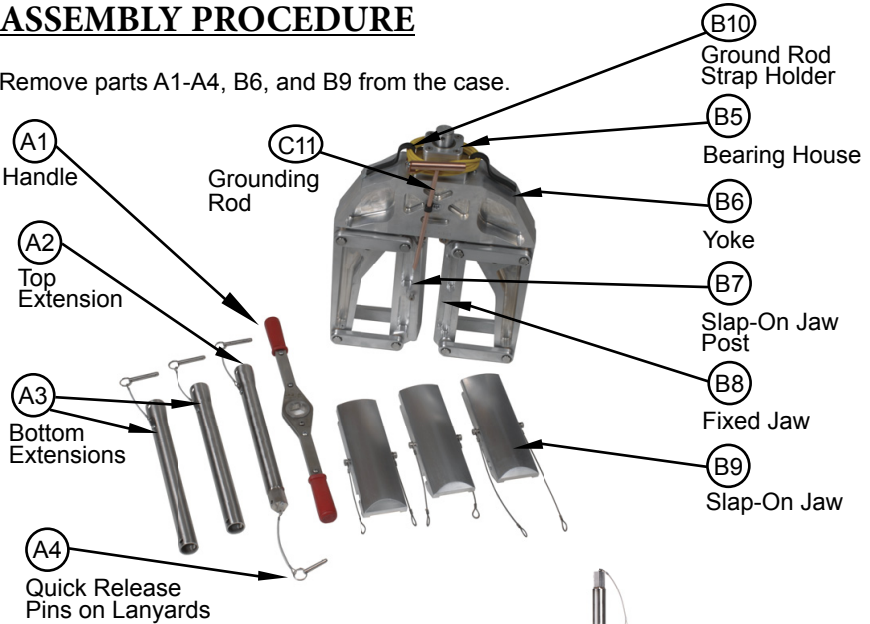


**NOTE**

Familiarize yourself with all parts, names, and numbers. Refer to this diagram for the assembly and operation procedures that follow.

## ASSEMBLY PROCEDURE

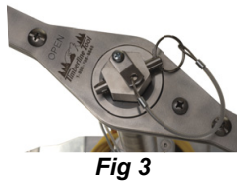
Remove parts A1-A4, B6, and B9 from the case.



1. Attach the **Top Hex Head Extension** with the **Quick Release Pin**. (Fig 1)
2. Thread the **Quick Release Pin** through the **Ratchet Handle**, making sure "OPEN" is up. (Fig 2)



3. The **Quick Release Pin** secures the **Ratchet Handle**. (Fig 3)
4. Turn the **Ratchet Handle** counterclockwise until the tool is halfway open (approximately three inches). (Fig 4)





Make sure the **Slap-On Jaw** matches the diameter and SDR of the pipe to be squeezed-off. (Fig 5)

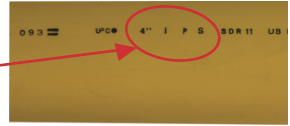


Fig 5



- Attach the **Slap-On Jaw**. (Fig 6)
- Attach both cables to the **Fixed Jaw**. (Fig 7)



The tool can be operated with the **Ratchet Handle** and **Top Hex Head Extension** only. (Fig 8)

**NOTE**

- If you need more length add the **Bottom Extensions**. (Fig 9)



Fig 6

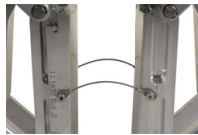


Fig 7



Fig 8



Fig 9

**OPERATING PROCEDURE**



**WARNING**

Remember this is only a recommended procedure for a safe and effective squeeze-off. Always follow your specific company safety rules when working around natural gas.

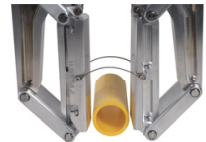


Fig 10

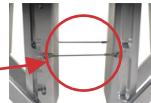
- Ground the tool with the **grounding rod**.
- Open the TR650 just enough to fit over the pipe. The cables will not be tight. (Fig 10)



Fig 11



If the cables are tightened and the clamp is dropped on the pipe the cables will break.



- Make sure the pipe clear of any debris (rock, dirt, etc).
- Remove the **Ratchet Handle** - turn it over so that "CLOSE" is up. (Fig 11)
- Reattach the **Ratchet Handle** with the pin. (Fig 12).



Fig 12

- Lower the TR650 onto the pipe until both cables are resting on the pipe. Keep the tool perpendicular to the pipe during squeeze off. (Fig 13)

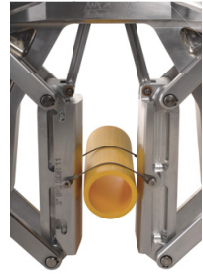


Fig 13

- Turn the **Ratchet Handle** clockwise until the pipe is squeezed-off. The table on page 2 shows the rate of closure and number of revolutions to complete the squeeze-off procedure per ASTM specifications. (Fig 14)



Fig 14



Complete squeeze-off will be evident when you will feel the tool hit its mechanical stops and the top of the posts contact the yoke. (Fig 15)



Fig 15

- To prevent accidental release of the tool during service operations on the pipe, remove the **Ratchet Handle**. A padlock or lock-out/tag-out may be placed through the **Top Hex Head** to further prevent accidental release. (Fig 16)



Fig 16

- A padlock or lock-out/tag-out may be placed through the **Bottom Extensions**. (Fig 17)



Fig 17

- When removing the tool from the pipe, attach the **Ratchet Handle** making sure "OPEN" is up. Turn the **Ratchet Handle** counterclockwise at half the closing rate per ATSM Specifications. (Fig 18)

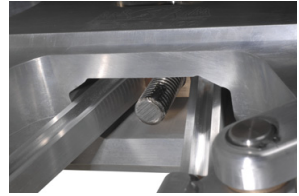


Fig 18

## SERVICE

**After every ten uses:**

1. Apply a small amount of grease to the ACME thread. *(Fig 19)*
2. Lubricate the pins and bushings with light oil if it is difficult to open and close the tool. *(Fig 20)*
3. Use a small amount of light lubricating oil in the ball-nose spring plungers located on the slap-on jaw post. *(Fig 21)*
4. The bearing house is sealed and additional lubrication is not necessary. *(Fig 22)*



**Fig 19**



**Fig 20**



**Fig 21**



**Fig 22**



**NOTE**

If you have questions, please feel free to contact our customer service representatives at 1-800-735-6845 or by email at [service@timberlinetool.com](mailto:service@timberlinetool.com).

## ACCESSORIES



**WARNING**

Any accessories or attachments recommended for use with your Timberline Tool are specified in this manual. The use of any other accessories or attachments might present a risk of injury. Only use accessories or attachments for the stated purpose.

## TIMBERLINE LIMITED WARRANTY

### *Warranty Policy*

Every product manufactured by Timberline Tool is thoroughly inspected and tested before leaving the factory. Our products are warranted to be free of defects from workmanship and materials for the period of ONE YEAR from the date of original purchase. Should any trouble develop with our tools, handles, or accessories during this one-year period please call 800.735.6845 to obtain return authorization for repair. If inspection shows the trouble is caused by defective workmanship or material, Timberline Tool will repair or, at our option, replace the product without charge.

This Warranty does not apply where:

- repairs have been made or attempted by others.
- repairs are required because of normal wear and tear.
- the tool has been abused, misused, or improperly maintained.
- alterations have been made to the tool.

IN NO EVENT SHALL TIMBERLINE TOOL BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM THE SALE OR USE OF THE PRODUCT. THIS DISCLAIMER APPLIES BOTH DURING AND AFTER THE TERM OF THIS WARRANTY.

TIMBERLINE TOOL DISCLAIMS LIABILITY FOR ANY IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF "MERCHANTABILITY" AND "FITNESS FOR A SPECIFIC PURPOSE," AFTER THE ONE-YEAR TERM OF THIS WARRANTY.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.



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