

WARNING

Read manufacturer's instructions before using adhesive. In case of eye contact, flush with water and seek medical attention. If skin contact occurs, apply solvent (such as nail polish remover) to area and gently remove adhesive. Wash solvent off with water. Solvents should not be used in case of contact with eyes or open wounds. Always wear safety goggles (ANSI Std. Z87.1) and gloves when working with adhesive and/or unprotected fiberglass rod. See adhesive product label for Safety Data Sheet (SDS).



1. Cut away damaged section(s) of rod with a fine-tooth hacksaw, cable cutter or sharp knife. With pipe cutter and/or sharp knife, strip red protective jacket back from fiberglass core approximately 1". Do not cut fiberglass core when stripping jacket. Do not crush fiberglass core.

2. Once jacket is removed, use pipe cutter again to score a mark around fiberglass core approximately 1/2" from edge of jacket. Use sharp knife to carefully strip away 1/2" of fiberglass core closest to rod end to expose copper wire. Be careful not to damage wire. The 1/2" portion of rod closest to jacket will remain intact (Fig. 1).

3. Using sharp knife, strip away a flat spot on remaining 1/2" portion of fiberglass core approximately as deep as wire diameter (.025"). Cut exposed wire length to approximately 1/2" and lightly strip away thin coating on copper wire. Fold wire back along flat spot in fiberglass core (Fig. 2).

4. Attempt a test fit of replacement bullet tip over exposed fiberglass core with wire folded back. It should be firm and snug with little or no play to assure wire contacts inside of ferrule. If too loose, cut away rod end and repeat Steps 1-4.

5. Once proper fit is established, install bullet tip without adhesive and check for continuity of the internal copper wire using a digital multimeter. Touch a probe to bullet tip at each end of coiled rod. Any resistance reading (generally between 2-12 ohms) indicates proper continuity.

6. Remove bullet tip. Clean rod end and bullet tip with cleaning solvent or alcohol to remove debris and glass fibers. Allow solvent to completely evaporate. Step 6 is extremely important.

7. Mix and apply adhesive to entire surface of fiberglass core and wire. Insert rod into bullet tip as far as possible, enclosing end of red jacket in counterbore of ferrule. Wipe away excess adhesive.

8. Check rod again for continuity using digital multimeter. The adhesive remains workable for 20 minutes. If no continuity, remove ferrule, clean off adhesive and repeat steps 1-7.

Repaired rod should be allowed to cure 24 hours prior to use.

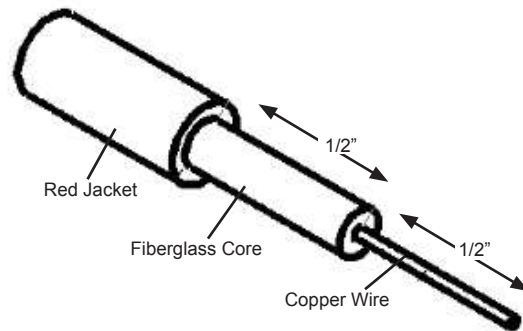


Fig. 1

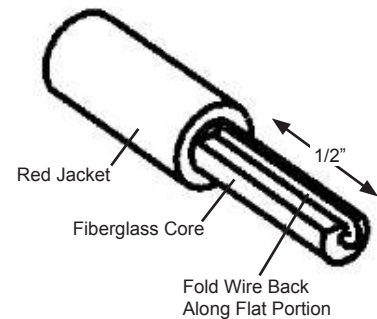


Fig. 2



Bullet Tip Rod

3/16" OD Rod

Used to trace the path of live non-metallic gas lines from customer's meter to main gas line. Unit utilizes a traceable fiberglass rodder and stuffing box to enable tracing with no blow by. Use any transmitter and receiver to non-invasively trace gas line from above ground.



Live Tracer For Gas Service Lines With Bullet Tip Fiberglass Rod On Reel with Stuffing Box And Accessory Kit	
15-316-100-GL	3/16" X 100' Live Tracer
15-316-150-GL	3/16" X 150' Live Tracer
15-316-200-GL	3/16" X 200' Live Tracer
15-316-250-GL	3/16" X 250' Live Tracer
15-316-300-GL	3/16" X 300' Live Tracer
15-316-325-GL	3/16" X 325' Live Tracer

WARNING

- Wear safety glasses and gloves.
- Keep rod inside reel when not in use. Out-of-control rod can harm personnel or property.
- Keep rod clean. Some contaminants (including water) can conduct electricity.
- Keep secure footing. Protect yourself from falling should pulling eye move suddenly or separate from rod.
- Check for rod damage prior to use. Cracks, gouges, nicks, or white stress marks on jacket or sharp bends will weaken rod. Injury could result if rod breaks while pulling.
- Do not use slip joint pliers, locking pliers or powered pulling equipment on rod.
- Do not force a pull that is stuck. Check for kinks or obstructions.
- Avoid pulling rod over sharp edges.
- Do not bend rod beyond 2.5" radius.



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NOTICE

The components of the Live Tracer system are specifically designed to work exclusively with each other. The use of these components individually or in combination with other non-Jameson tools or accessories is not recommended and will not guarantee the safety or effectiveness of the system.

DISCLAIMER

The foregoing instructions are provided by Jameson LLC as guidance in the use of its Live Tracer product. Jameson LLC cannot be responsible for any use of its products that does not comply with these instructions. However, user is cautioned to comply with all instructions, regulations and requirements provided by the property and gas line owner(s), whether a utility company, governmental body or otherwise. User must conform to and comply with all employer requirements. For questions or conflicts between instructions from Jameson and anyone else, consult with your supervisor as to proper course of action.

Warranty

Jameson products carry a warranty against any defect in material and workmanship for a period of one year from date of shipment unless failure is due to misuse or improper application. Jameson shall in no event be responsible or liable for modifications, alterations, misapplications or repairs made to its products by purchaser or others. This warranty is limited to repair or replacement of the product and does not include reimbursement for shipping or other expenses incurred. Jameson disclaims any other express or implied warranty.

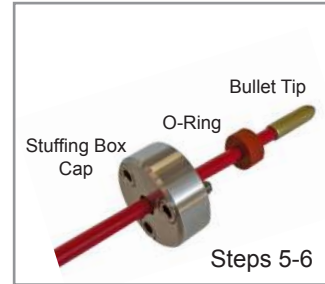
Live Tracer Operation

Before Each Use:

Inspect O-ring for any sign of tearing, cracking or pitting. Replace if damaged BEFORE EVERY USE. Jameson O-rings are custom designed. Only Jameson-provided O-rings will guarantee proper safety and effectiveness.

Inspect rod for damage. If rod surface is broken, replace rod. A scratched rod could cause leaking when scratch passes through Stuffing Box O-Ring. Portions of rod can be cut away and new end fitting attached if it is not necessary to replace entire rod.

1. Close valves at riser. Remove meter. Follow your company procedures to check for gas leaks and verify safe environment.
2. Install Stuffing Box to riser. Use Teflon tape or other sealing method as necessary. The Stuffing Box is equipped with a 3/4" NPT nipple. If your riser has a different size thread, install the proper fitting(s) to adapt Stuffing Box to riser.
3. Remove cap and O-ring from Stuffing Box by removing the 3 screws with hex wrench.
4. INSPECT O-RING. If it shows any sign of tearing, cracking or pitting, replace with new O-ring. Inspect and replace if necessary BEFORE EVERY USE. Only Jameson-provided O-rings will guarantee proper safety and effectiveness.



Traceable Fiberglass Rodder

Unit has 3/16" diameter rod with permanent 1/4" diameter Bullet Tip, Rod has copper trace wire embedded in fiberglass core and is coated with polypropylene jacket for safety and durability.

Accessory Kit

Storage Bag, Grounding Cable, 3 Screws, 6 O-Rings, Lubricated Wipes, Hex Key Driver, Adhesive, Replacement Bullet Tip

Stuffing Box

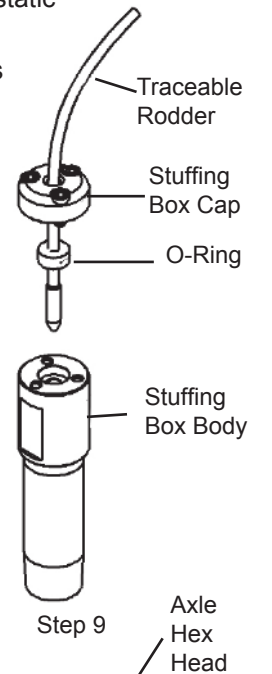
Designed with custom o-ring to provide seal when rod is inserted into pressurized lines for use up to 100 psi. Includes 5" pipe nipple with 3/4" NPT thread.

Required tools not included in this kit:	
Company Approved Leak Check Equipment	
Transmitter and Receiver for locating	
Wrenches, Channel Locks	
Various Pipe Fittings (may be required to adapt 3/4" NPT to your specific riser)	
Teflon Tape	

Replacement Parts Available From Jaemson	
15-316-SB-KIT	Accessory Kit with Stuffing Box, 3/16"
15-SB	Stuffing Box 3/16", 3 Screws, 6 O-Rings
15-146-GW	Bullet Tip Repair Kit for 3/16"
15-146-GW-T	Tapered Tip for 3/16"
15-170-GW	O-Ring, 3/16", 12 Pack
15-WIPE	Lubricated Wipes

Live Tracer Operation - Continued

5. Install Stuffing Box cap over tip of traceable rodder as shown. Mark rod with a permanent black marking pen approximately 6 inches from bullet tip.
6. Lubricate tip of rodder with lubricated wipes provided. Install O-ring over rod.
7. Pay out approximately 15 ft. of rod. Insert tip of rod into Stuffing Box mounted to riser.
8. Secure Stuffing Box cap by completely tightening the 3 screws. (NOTE: It is critical to tighten all 3 screws to ensure proper seal).
9. Jameson includes a ground clip to be used at user's discretion if grounding canister for static discharge is a concern. Attach ground clip to axle hex head on canister and the other end to a suitable ground location. Ground clip should not be confused with ground clamp included with signal transmitter - it is only for static grounding.
10. Open valve at riser. Check for gas leaks and verify safe environment by following your company's procedure. If gas leak is present, close valve and remove Stuffing Box. Check O-ring and rod for damage. Replace as necessary.
11. If no gas is leaking, begin pushing rod into pipe. Hold lubricated wipe against rod to continuously lubricate while pushing. Continue to push rod until it reaches main.
12. Attach transmitter lead to brass lug on edge of rodder canister. Follow manufacturer's instructions for proper set up of transmitter. If possible, it is recommended to install ground spike (not included with Gas Tracer Kit) at 90° from anticipated pipe path.
13. It is recommended to use a high frequency when tracing (i.e. 82kHz). If you have a 1W transmitter, use highest frequency available. If higher wattage than 1W, use highest frequency below 45kHz. If this is unsuccessful, use highest frequency available.
14. Push rod into Stuffing Box while holding lubricated wipe against rod to continuously lubricate rod. Lack of lubrication can result in excessive push force on rod and could cause breakage. Adjust wing nut on canister to allow controlled payout of rod. Canister should only spin when rod is actively being pushed into pipe. Canister must spin while paying out or risk tangling and damage to rod.
15. FIBERGLASS ROD IS FRAGILE. When pushing rod, keep hands within 6 inches of stuffing box to avoid kinking rod. Do not attempt to force rod past obstructions. Do not repeatedly pull rod back and re-insert with a ramming motion. Do not allow rod to buckle at entry of Stuffing Box under excessive force as this can result in rod breakage.
16. When insertion is nearly complete, allow 2-3 coils of rod to remain on spool to prevent slippage and rod damage.



Removing The Rod

17. When tracing is complete, pull rod back and reinstall onto rod spool canister. Adjust wing nut to apply light tension on canister. Manually push rod into canister. DO NOT manually spin canister to take up rod. Canister should spin only while actively pushing rod into canister. The rod should always lie firmly along inner edges of canister. A second person may be required to manage this task.
18. If removing rod creates friction, periodically reinsert rod a few inches while using lubricating wipe and then continue removing.
19. Remove rod until the black mark is visible. This ensures tip of rod has cleared riser valve. Do not completely remove rod from Stuffing Box. Pulling rod tip past O-ring when sealed can damage O-ring. Close valve first, then remove cap from Stuffing Box.
20. Slide O-ring off rod, then remove cap from rod. Remove Stuffing Box from riser, install O-ring and cap for storage.

NOTE: The Jameson traceable rodder has a copper wire that can be inserted underground. Jameson cannot guarantee successful tracing for every make and model transmitter under all soil and moisture conditions. If tracing is unsuccessful, try improving the depth of the ground spike or wetting the area around the ground spike.