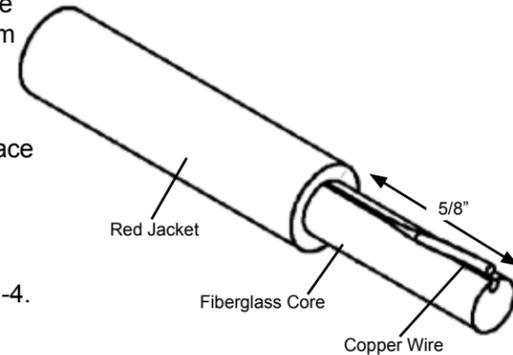


ATTACHING NEW END FERRULE

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 5/8". Do not cut fiberglass core when stripping jacket. Do not crush fiberglass core.
2. Copper wire is embedded in outer surface of fiberglass core. Use knife to pick loose tend of copper wire from fiberglass core. Peel wire away from fiberglass core with needle nose pliers.
3. Use knife to carefully scrape away enamel coating on outer surface of wire. Re-seat wire into fiberglass core, allowing it to remain free from surface of fiberglass core. This will enable contact with inside of new end ferrule.
4. Attempt a test fit of replacement end ferrule over exposed fiberglass core. 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 end ferrule without adhesive and check for continuity of the internal copper wire using a digital multimeter. Touch a probe to end ferrule at each end of coiled rod. Any resistance reading (generally between 2-12 ohms) indicates proper continuity.
6. Remove end ferrule. Clean rod end and end ferrule 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 end ferrule 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.

DISCLAIMER

The foregoing instructions are provided by Jameson LLC to give guidance regarding the use of its gas line tracer products. Jameson LLC cannot be responsible for any use of its products that does not comply with these instructions. However, you are also cautioned to comply with all instructions, regulations and requirements provide by the owner of the property and of the gas line, whether a utility company, governmental body or otherwise. You must also conform to and comply with all of your employer's requirements. To the extent of any questions or any conflicts between instructions from Jameson and from anyone else, please consult your supervisor as to the proper course of action.

GUARANTEE

Jameson products are guaranteed against any defect in material and workmanship for 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, misapplication or repairs made to its products or equipment by purchaser or others, or for damage caused thereto by negligence, accident, overloading or improper use by purchaser or others. Guarantee is limited to repair or replacement of item involved and does not include reimbursement for shipping or other expenses incurred. Any material claimed defective must be returned to our plant for inspection.



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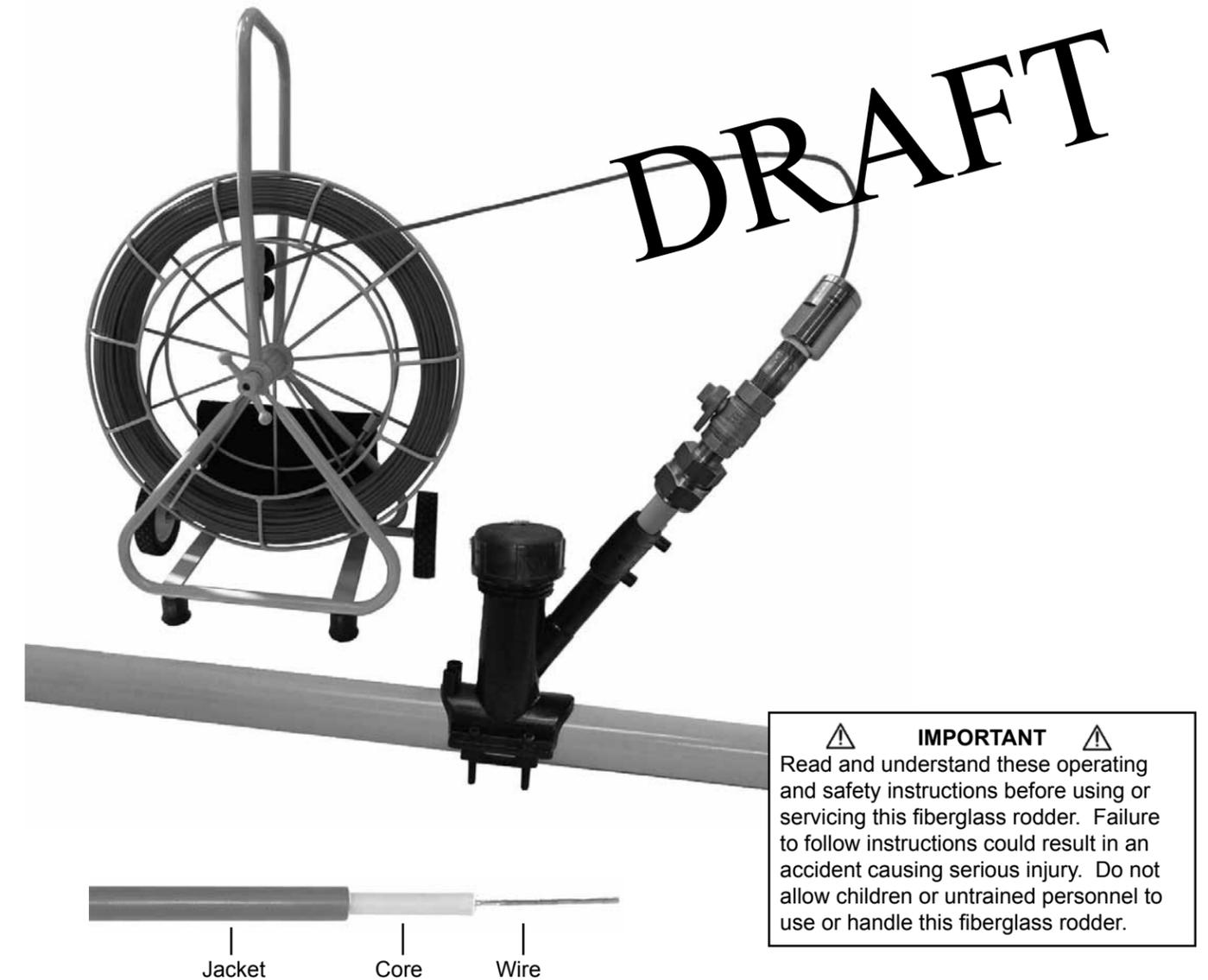
OPERATION AND SAFETY INSTRUCTION MANUAL

Live Tracer

Gas Main

1/4" OD Rod

Part Number: 16-14-600-GL



IMPORTANT
Read and understand these operating and safety instructions before using or servicing this fiberglass rodder. Failure to follow instructions could result in an accident causing serious injury. Do not allow children or untrained personnel to use or handle this fiberglass rodder.

General Information

The Live Tracer is used to trace the path of live non-metallic gas mains. The kit utilizes a traceable fiberglass rodder and a stuffing box to enable tracing while maintaining no blow by. Use with custom insertion tap tee for entry into 2" PE gas mains. Use any transmitter and receiver to trace gas main from above ground.

Live Tracer Operation



WARNING

Read entire instructions before attempting to use this tool. Failure to follow instructions could result in serious injury. Follow your company installation procedures at all times.



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.

Live Tracer Kit Includes:



Traceable Fiberglass Rodder

Unit has 1/4" diameter rod with permanent 5/16" diameter end ferrule, Rod has copper trace wire embedded in fiberglass core and is coated with polypropylene jacket for safety and durability.

Accessory Kit

Canvas Storage Bag, Grounding Cable, 3 Screws, 11 O-Rings, Rod Lubricant, Hex Key Driver, Adhesive, Replacement End Ferrule, Spring Leader

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 1" NPT thread.

Replacement Accessories Available From Jameson	
16-SB	Stuffing Box with 3 Screws, 5 O-Rings
16-146	End Ferrule Repair Kit
16-170	O-Ring, 12 Pack
15-WIPE	Lubricated Wipes

Required tools not included in this kit:
Gas leak detector
Transmitter and Receiver for locating
Wrenches, channel locks
Various pipe fittings (may be required to adapt 1" NPT to your specific fitting)
Teflon tape

DRAFT

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.

Follow your company safety procedures at all times. These instructions shall no take the precedence over any safety procedures established by your company.

1. Access PE gas pipe to be traced. Install electrofusion Tap Tee to pipe. Follow all installation and safety procedures provided with your equipment and those established by your company.

Prepare Tap Tee Access Port

2. Follow your established procedures to attach any necessary couplers, adapters, extensions, valves or any equipment to the access port of the tap tee. Perform all necessary tests established in your company procedures to ensure proper fusion of the tee and all accessories.

Install Rod into Stuffing Box

- Remove cap of Stuffing Box by removing the 3 screws.
- INSPECT O-RING. If it shows any sign of tearing, cracking or pitting, replace with new O-ring.
- Pay out rod approximately 15 feet.
- Install rod end through Stuffing Box cap as shown.
- Lubricate end ferrule, rod and inside O-ring with lubricated wipes provided. Install O-ring over rod.
- Insert rod end into Stuffing Box body.
- Attach Spring Leader Accessory to end ferrule of rod.
- Install Stuffing Box cap with 3 screws provided. Snugly secure all screws to ensure proper O-ring seal. Mark rod with permanent marking pen 6" from Stuffing Box to monitor retracting of rod.
- Attach Stuffing Box to angled access port of Tap Tee. Follow your company's procedures for attaching to access port.
- Use cutter of Tap Tee to tap into PE pipe. Retract cutter. Follow your company procedures and those provided with Tap Tee.
- Check for gas leaks following your company procedures. If Stuffing Box is leaking, inspect O-rings and rod for damage. Replace as necessary.

Insert Rod for Tracing

- Push rod into Tap Tee while holding a lubricated wipe against the rod to continuously lubricate rod. Lack of lubrication can result in excessive push force on rod and could cause breakage.
- 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 the entry of Stuffing Box under excessive force as this can result in rod breakage.
- When insertion is nearly complete, allow 2-3 coils of rod to remain on spool to prevent slippage and potential rod damage.

Tracing the Rod

- Attach transmitter cable clip to the end fitting at the opposite end of the rod. Follow manufacturer's instructions for proper set-up of transmitter.
- It is recommended to install the ground spike at a 90 degree angle to the anticipated rod path. If you have a 1W transmitter, use the highest frequency available. If your transmitter is greater than 1W, use the highest frequency below 45kHz. Follow proper locating practices established by your company or your locating equipment manufacturer.

Removing the Rod

- When tracing is complete, pull the rod back through the Tap Tee and reinstall onto the rod spool.
- A grease fitting is available on the Stuffing Box for lubrication when removing the rod. Use a standard 1/4" grease gun and synthetic non-petroleum grease to lubricate the rod. If this is not available, periodically reinsert the rod a few inches while using the lubricating wipe and then continue removing.
- When black mark on rod end is visible, stop removing the rod. Do not pull rod end past the O-ring as this will damage the O-ring.
- Depressurize the Tap Tee and Stuffing Box following your company procedures.
- Remove the Stuffing Box. Disassemble Stuffing Box from rod end.
- Reinstall Stuffing Box 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.

