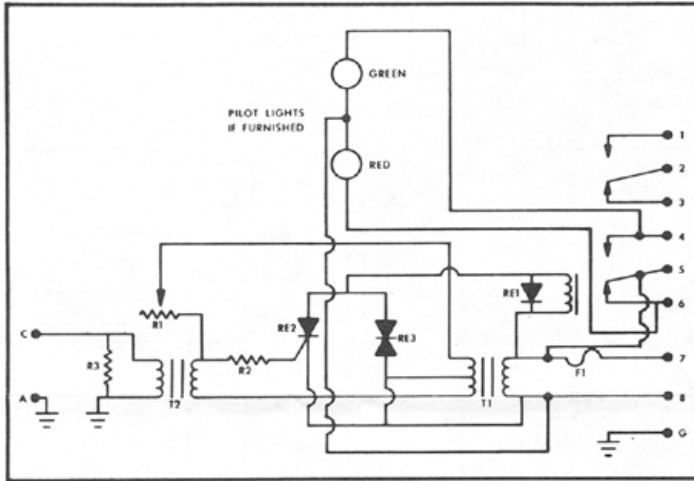


TR-7 SAFE-T-GROUND Ground and Continuity Control

W.E. Anderson
Div. of Dwyer Instr., Inc.

INSTALLATION AND OPERATING INSTRUCTIONS



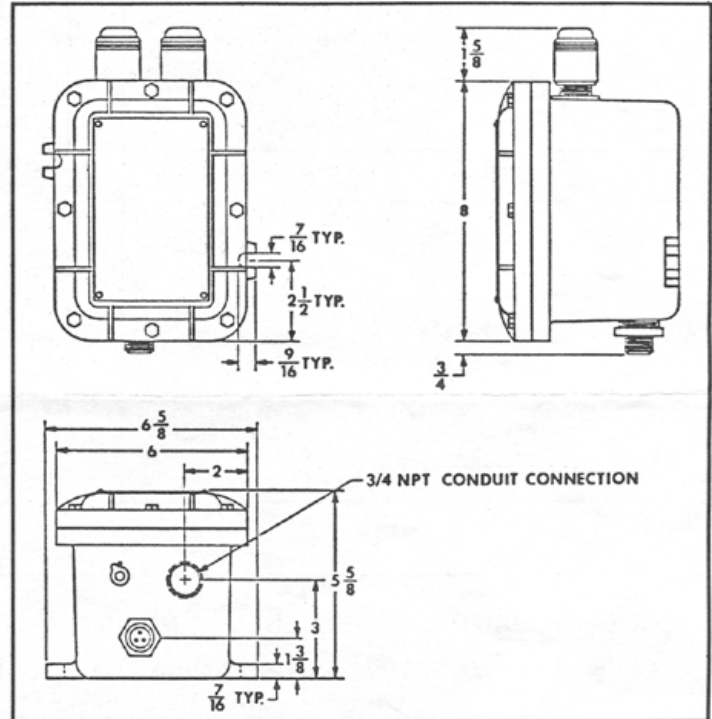
INSTALLATION

- The TR-7 should be rigidly mounted near the Truck Grounding Location under cover of protective canopy. Unit must be kept dry as the cover is not watertight.
- Wire per local code and NEC Specifications covering hazardous areas. Make sure to seal conduit with appropriate explosionproof seal. Include a conduit bushing to protect insulation on wires.
- If the unit does not include the optional, integral pilot lights, a red and a green pilot light should be provided somewhere in the system to indicate an ungrounded and a grounded condition, respectively.
- Green (Earth) ground wire must be attached to green ground screw.
- Wire code is as follows:

Terminal	Description
1	N.O. Relay Contact #1
2	Common Relay Contact #1
3	N.C. Relay Contact #1
4	N.O. Relay Contact #2
5	Common Relay Contact #2
6	N.C. Relay Contact #2
7	105-125 VAC Input
8	105-125 VAC Input
G	Green Screw for Green Earth Ground Wire
- Connect the Contactor to the unit by means of the connector provided. Install a hook or bracket convenient to the truck grounding location to hold the Contactor Handle when it is not in use. This will assist in preventing possible damage to the Contractor Handle.
- The Model TR-7 is shipped ready for use and requires no further adjustment.
- Install two grounding studs (see parts list provided) per truck using the template provided. Studs are to be mounted horizontally on the truck, spaced on $1\frac{1}{16}$ " centers. Hole size is $\frac{3}{8}$ " Diameter.
- Make sure that loading (filling) equipment is separately grounded. THE TR-7 UNIT DOES NOT GROUND THE LOADING STRUCTURE OR EQUIPMENT.

OPERATION

- Connect Contactor Handle to studs mounted on truck. Relay should close.
- Be sure to disconnect Contactor from truck after loading.



SERVICE GUIDE

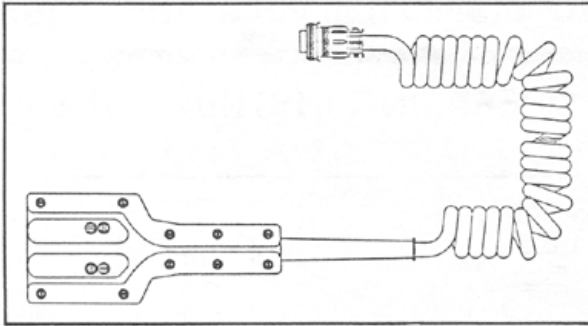
- Check fuse in power supply line to unit.
- Check grounding of case to known ground.
- Short contacts in the Contactor Handle together. If, by listening closely to the TR-7 case, you hear the relay operate, check external circuits controlled by the TR-7.
- Check continuity of Contactor/Cord assembly. Cord can "open up" if stretched too much.
- Shut off the power to the TR-7 and disconnect the unit from the power supply circuit before opening the cover. Remove the cover and check the internal fuse.
- If the above steps do not correct the problem, the chassis can be removed as follows:
 - Disconnect all field wiring.
 - Remove the three screws holding the chassis to the case.
 - Carefully pull the chassis out of the case. Be careful not to break the intrinsically safe control circuit wire.
 - Disconnect the intrinsically safe control circuit wire from the underside of the chassis.

Return the entire chassis to the factory for repair and recalibration. Include a note describing the nature of the problem.

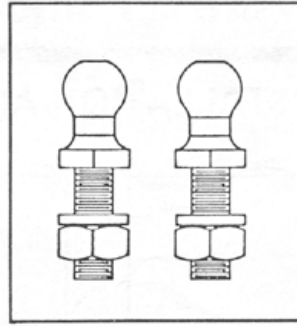
DO NOT SUBSTITUTE COMPONENTS. DO NOT ADJUST SLIDER RESISTOR.

- Replace Contactor when spring contacts become worn.
- "Battery Clamp" type Contactor (P/N 84-200615-00) is for temporary use only. USE WITH CAUTION. Use only until all trucks are fitted with grounding studs, then change to Stud type Contactor. The "Battery Clamp" type Contactor is easily clamped to an unauthorized ground (such as the loading structure or shelter) defeating the purpose of the TR-7 SAFE-T-GROUND.

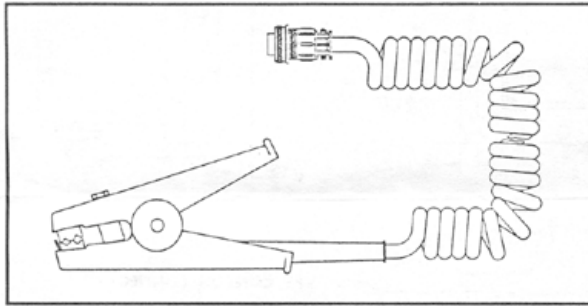
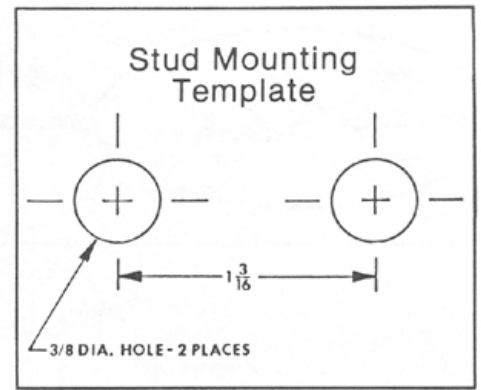
ACCESSORIES



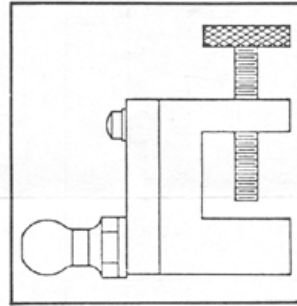
4 Standard Eq.



4H Standard Eq.

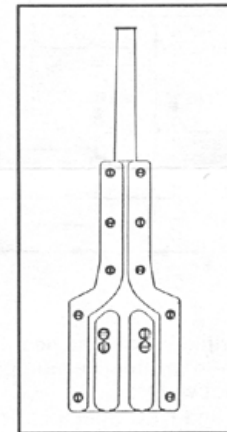


#4B

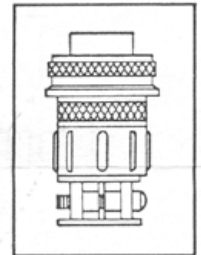


#4H-T

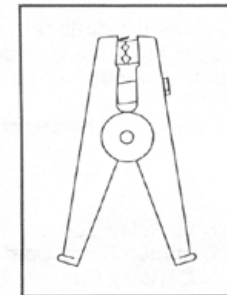
CONTACTOR PARTS



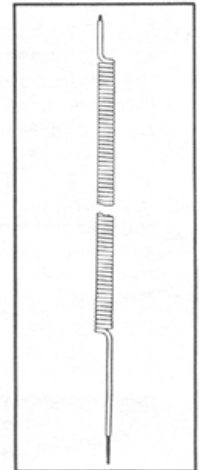
#4A



#4G



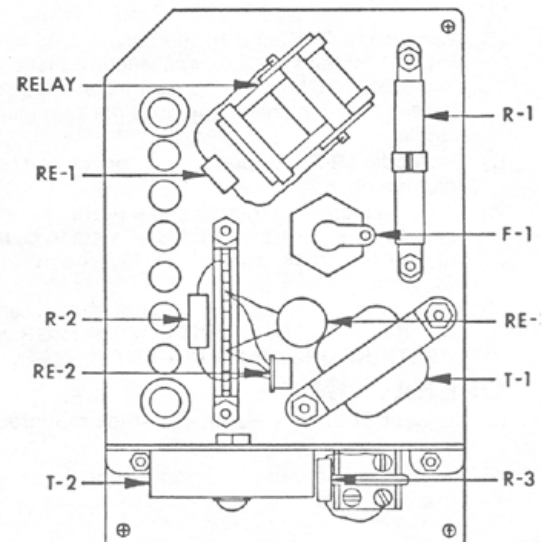
#4C



#4F/#4F-X

CODE	PART NUMBER	DESCRIPTION
#4	84-200616-00	Stud Type Contactor (complete) Includes: #4A, #4F & #4G
#4A	84-200652-00	Stud Type Contactor Handle
#4F	84-350648-00	Coiled Cord, 16 Ft. (Standard Length)
#4F-X	84-350648-01	Coiled Cord, 32 Ft.
#4G	84-350649-00	Mil-Spec Cord Connector
#4B	84-200615-00	Battery Type Contactor (complete) Includes: #4C, #4F & #4G
#4C	84-200653-00	Battery Type Contactor Handle
#4H	84-200654-00	Brass Grounding Stud (2 required per truck)
#4H-T	84-200655-00	Temporary Grounding Stud Assembly
ICC-7	84-200663-00	TR-7 Internal Chassis Circuit (Complete Assembly)
F-1	84-350647-00	Fuse, 0.5 Amp
R-1	84-350718-00	Variable Resistor, 5K Ohm max.
R-2	84-350719-00	Resistor, 15K Ohm
R-3	84-350720-00	Resistor, 10 Ohm
RE-1	84-350721-00	Rectifier
RE-2	84-350722-00	Silicone Controlled Rectifier
RE-3	84-350723-00	Diode
RELAY	84-350650-00	DPDT Relay
T-1	84-350731-00	Power Transformer
T-2	84-350724-00	Toroidal Transformer

INTERNAL CIRCUIT PARTS



WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY