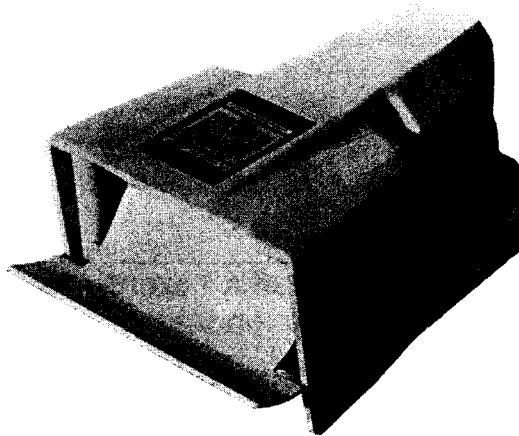




FOOT SWITCH INSTALLATION MANUAL



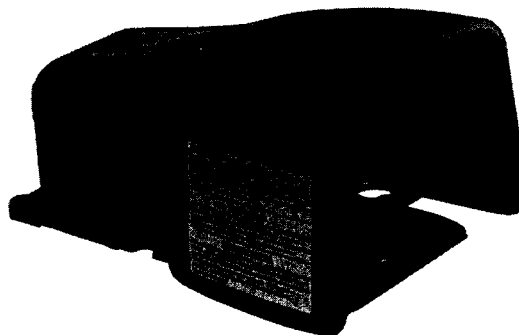
Heavy-Duty with Front Flap

Part No. CTD011

Single-Stage

Part No. CTD025

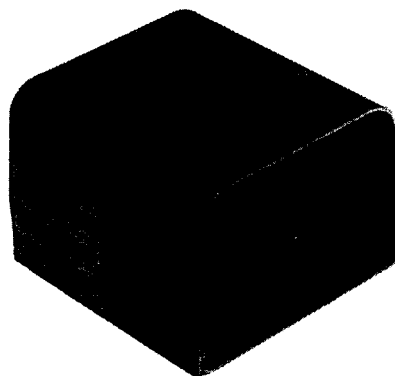
Two-Stage



Heavy-Duty

Part No. CTD065

Single-Stage



Light-Duty

Part No. CTD066

Single-Stage

Part No. CTD067

Two-Stage

WARNING: DO NOT USE A FOOT SWITCH ON MACHINERY THAT DOES NOT HAVE AN EFFECTIVE POINT-OF-OPERATION SAFEGUARD. LACK OF EFFECTIVE POINT-OF-OPERATION SAFEGUARDING ON A MACHINE CAN RESULT IN SERIOUS INJURY TO THE OPERATOR OF THAT MACHINE.

TABLE OF CONTENTS

I. IN GENERAL	3-5	III. INSTALLATION OF FOOT SWITCH	
A. Safety Precautions.....	2	PART NO. CTD065.....	6-7
B. OSHA's Act and Federal Regulations.....	3	IV. INSTALLATION OF FOOT SWITCH	
C. ANSI Safety Standards for Machines	3	PART NOS. CTD066 AND CTD067	7
D. National Safety Council Safety Manuals		V. OTHER INSTALLATION CONSIDERATIONS	7
and Data Sheets.....	4		
E. Warranty, Disclaimer and Limitation of			
Liability	4		
F. Danger and Warning Labels Provided on			
Foot Switch	5		
II. INSTALLATION OF FOOT SWITCH			
PART NOS. CTD011 AND CTD025	5-6		

I. IN GENERAL

Safety Precautions

“ DANGER” Danger is used to indicate the presence of a hazard which WILL cause SEVERE personal injury if the warning is ignored.

“” THIS SAFETY ALERT SYMBOL IDENTIFIES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL , BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY, AND CAREFULLY READ THE MESSAGE THAT FOLLOWS.

Efficient and safe machine operation depends on the development, implementation and enforcement of a safety program. This program requires, among other things, the proper selection of point-of-operation guards and safety devices for each particular job or operation, a thorough safety training program for all machine personnel, that includes instruction on the proper operation of the machine, the point-of-operation guards and safety devices on the machine, and a regularly scheduled inspection and maintenance program.

Rules and procedures covering each aspect of your safety program should be developed and published both in an operator's safety manual, as well as in prominent places throughout the plant and on each machine. Some rules or instructions which must be conveyed to your personnel and incorporated into your program include:

 DANGER Never place your hands or any part of your body in this machine.

 DANGER Never operate this machine without proper eye, face and body protection.

 Never operate this machine unless you are fully trained and instructed and unless you have read the instruction manual.

 Never operate this machine if it is not working properly - stop operating and advise your supervisor immediately.

 Never use a foot switch to operate this machine unless a point-of-operation guard or device is provided and properly maintained.

 Never operate this machine unless two-hand trip, two-hand control or presence sensing device is installed at the proper safety distance. Consult your supervisor should you have any questions regarding the proper safety distance.

 Never tamper with, rewire or bypass any control or component on this machine.

A company's safety program must involve everyone in the company, from top management to operators, since only as a group can any operational problems be identified and resolved. It is everyone's responsibility to implement and communicate the information and material contained in catalogs and instruction manuals to all persons involved in machine operation. If a language barrier or insufficient education would prevent a person from reading and understanding various literature available, it should be translated, read or interpreted to the person, with assurance that it is understood.

 FOR MAINTENANCE AND INSPECTION ALWAYS REFER TO THE OEM's (ORIGINAL EQUIPMENT MANUFACTURER'S) MAINTENANCE MANUAL OR OWNER'S MANUAL. If you do not have an owner's manual, please contact the original equipment manufacturer.

B OSHA's Act and Federal Regulations

Since the enclosed equipment can never overcome a mechanical deficiency, defect or malfunction in the machine itself, OSHA (Occupational Safety and Health Administration) has established certain safety regulations that the employers (users) must comply with so that the machines used in their plants, factories or facilities are thoroughly inspected and are in first-class operating condition before any of the enclosed equipment is installed.

1. An Act – Public Law 91 - 596, 91st Congress, S. 2193, December 29, 1970

Duties:

Sec. 5. (a) Each employer —

- (1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;
- (2) shall comply with occupational safety and health standards promulgated under this Act.
- (b) Each employee shall comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to this Act which are applicable to his own actions and conduct.

2. OSHA's Code of Federal Regulations, Subpart O, that an employer (user) must comply with include:

Section 1910.211 Definitions

Section 1910.212 (a) General Requirements for all Machines

Section 1910.217 Mechanical Power Presses

Section 1910.219 (b)(1) Mechanical Power-Transmission Apparatus (Flywheel and Gear Covers)

3. OSHA's 29 Code of Federal Regulations, Subpart J 1910.147 The Control of Hazardous Energy (Lockout / Tagout)

4. OSHA's Publications

- a. "General Industry Safety and Health Regulations Part 1910," Code of Federal Regulations, Subpart O
- b. "Concepts and Techniques of Machine Safeguarding," OSHA 3067, Revised 1992

These publications can be acquired by contacting:

US Department of Labor
Occupational Safety and Health Administration
Washington, DC 20210

C ANSI Safety Standards for Machines

The most complete safety standards for machine tools are published in the ANSI (American National Standards Institute) B11 series. The following is a list of ANSI B11 Standards available at the printing of this publication.

B11.1	Mechanical Power Presses
B11.2	Hydraulic Presses
B11.3	Power Press Brakes
B11.4	Shears
B11.5	Ironworkers
B11.6	Lathes
B11.7	Cold Headers and Cold Formers
B11.8	Drilling, Milling and Boring
B11.9	Grinding Machines
B11.10	Sawing Machines
B11.11	Gear Cutting Machines
B11.12	Roll Forming and Roll Bending
B11.13	Automatic Screw/Bar and Chucking
B11.14	Coil Slitting Machines
B11.15	Pipe, Tube and Shape Bending
B11.16	Metal Powder Compacting Presses
B11.17	Horizontal Hydraulic Extrusion Presses
B11.18	Coil Processing Systems
B11.19	Performance Requirements for Risk Reduction Measures: Safeguarding and other measures of Reducing Risk
B11.20	Safety Requirements for Manufacturing Systems/Cells
B11/TR1	Ergonomic Considerations for the Design, Installation and Use of Machine Tools

These standards can be purchased by contacting:

American National Standards Institute, Inc.
11 West 42nd Street
New York, New York 10036
(212) 642-4900

OR

AMT- The Association of Manufacturing Technology
7901 Westpark Drive
McLean, Virginia 22102-4269
(703) 827-5211

D National Safety Council Safety Manuals and Data Sheets

Other good references for safety on machine tools are the National Safety Council's Safety Manuals and Data Sheets. These manuals and data sheets are written by various committees including the Power Press, Forging and Fabricating Executive Committee. The following publications are available for all types of machines:

MANUALS

Power Press Safety Manual ~ 4th Edition
Safeguarding Concept Illustrations - 7th Edition
Forging Safety Manual

DATA SHEETS

Bench and Pedestal Grinding Wheel Operations
12304-0705
Boring Mills, Horizontal Metal 12304-0269
Boring Mills, Vertical 12304-0347
Coated Abrasives 12304-0452
Cold Shearing Billets and Bars in the Forging Industry
12304-0739
Degreasing (Liquid), Small Metal Parts 12304-0537
Dies, Setup and Removal of Forging Hammer
12304-0716
Drill Presses, Metalworking 12304-0335
Drills, Portable Reamer 12304-0497
Drop Hammers, Steam 12304-0720
Electrical Controls for Mechanical Power Presses
12304-0624
Forging Hammer Dies, Setup and Removal of
12304-0716
Forging Presses, Mechanical 12304-0728
Gear-Hobbing Machines 12304-0362
Handling Materials in the Forging Industry 12304-0551
Kick (Foot) Presses 12304-0363
Lathes, Engine 12304-0264
Milling Machines, Metalworking 12304-0364
Planers, Metal 12304-0383

Power Press (Mechanical) Point-of-Operation
Safeguarding, Concepts of 12304-0710
Power Press Point-of-Operation
Safeguarding: Two-Hand Control and
Two-Hand Tripping Devices 12304-0714
Power Press Point-of-Operation Safeguarding: Type A
and B Movable Barrier Devices 12304-0712
Power Press Point-of-Operation Safeguarding:
Point-of-Operation Guards 12304-0715
Power Press Point-of-Operation Safeguarding:
Presence Sensing Devices 12304-0711
Power Press Point-of-Operation Safeguarding:
Pullbacks and Restraint Devices 12304-0713
Power Presses (Mechanical), Inspection and
Maintenance of 12304-0603
Power Presses (Mechanical), Removing Pieceparts
from Dies in 12304-0534
Power Press, Setting Up and Removing Dies
12304-0211
Press Brakes 12304-0419
Robots 12304-0717
Saws, Metal (Cold Working) 12304-0584
Shapers, Metal 12304-0216
Shears, Alligator 12304-0213
Shears, Squaring, Metal 12304-0328
Upsetters, 12304-0721

These manuals and data sheets can be purchased by contacting:

National Safety Council
1121 Spring Lake Drive
Itasca, IL 60143-3201
(630) 285-1121

For additional safety information and assistance in devising, implementing or revising your safety program, please contact the machine manufacturer, your state and local safety councils, insurance carriers, national trade associations and your state's occupational safety and health administration.

Warranty

9. Limited Warrantie

9.1. (i) Subject to Section 8.1(ii) below, Rockford Systems makes to Customer the following sole and exclusive warranties with respect to Goods:

(a) with respect to Goods that are manufactured based on Customer specifications, at the time of shipment by Rockford Systems, the Goods sold under the Agreement that are manufactured by Rockford Systems pursuant to such specifications conform to such specifications set forth in the applicable Order Documentation; and

(b) at the time of shipment by Rockford Systems, the Goods sold under the Agreement that are manufactured by Rockford Systems are free from defects in material and workmanship.

(c) Rockford Systems's warranty is for a period of 1 year, and begins from date of shipment from Rockford Systems to the original purchaser.

This warranty does not include accessories, parts or equipment sold hereunder that are manufactured by someone other than Rockford Systems.

(ii) Every claim by Customer against Rockford Systems for breach of warranty with respect to the Goods shall be deemed waived by Customer unless written notice thereof is received by Rockford Systems within fifteen (15) days after discovery.

9.2. If Rockford Systems breaches either of the warranties set forth in Section 8.1(i) above, and written notice thereof is received by Rockford Systems from Customer within the applicable time period specified in Section 8.1(ii) above, Customer's sole and exclusive remedy and Rockford Systems's only obligation shall be, as Rockford Systems in its sole and exclusive judgment shall determine, the replacement of the nonconforming Goods, or an adjustment to the purchase price for the nonconforming Goods or the repair of the nonconforming Goods. All transportation charges related to replacement or repair of Goods shipped to Rockford Systems's plant or facility (or other place at Rockford Systems's direction) shall be prepaid by Customer. Rockford Systems shall be responsible for reasonable transportation charges back to Customer for Goods that have been replaced or repaired by Rockford Systems. Any replacement Goods or repaired Goods shall be subject to these Terms and Conditions.

9.3. THE EXPRESS WARRANTIES SET FORTH HEREIN ARE THE ONLY WARRANTIES APPLICABLE TO THE SALE OF GOODS BY ROCKFORD SYSTEMS TO CUSTOMER PURSUANT TO THE AGREEMENT, AND THEY EXCLUDE ALL OTHER EXPRESS, ORAL OR WRITTEN WARRANTIES, AS WELL AS ANY WARRANTIES IMPLIED BY LAW WITH RESPECT TO THE GOODS, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PURPOSE, NOTWITHSTANDING ANY DISCLOSURE TO ROCKFORD SYSTEMS OF THE INTENDED USE OF THE GOODS.

9.4. Rockford Systems's warranties under Section 8.1(i) are void if repairs or modifications of the Goods are made by anyone other than Rockford Systems. Without limitation of the foregoing, Rockford Systems assumes no responsibility for and shall have no obligations to Customer because defects in any materials furnished by, or any faulty workmanship provided by, any party other than Rockford Systems.

9.5. Rockford Systems reserves the right to improve its products through changes in design or material without being obligated to incorporate such changes into products of prior manufacture. Customer cannot rely on any such changes as proof of insufficiency or inadequacy of prior designs of the Goods or material contained in the Goods.

9.6. If Customer grants to an end user of the Goods (or any other customer of Customer) any warranty that is greater in scope or time than the warranty and claims period stated herein, Rockford Systems shall not be liable beyond the scope of the limited warranty, the claim period, the damages and the remedies provided for under this Section.

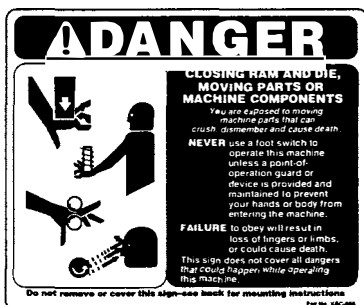
9.7. Solely to the extent transferable, Rockford Systems assigns and transfers to Customer the original manufacturer's warranty on Goods sold hereunder that are not manufactured by Rockford Systems.

F Danger and Warning Labels Provided with Foot Switch

! The illustrated danger and warning labels must be affixed to each foot switch provided and on the machine where the foot switch is installed. All personnel operating or working around the machine, where this foot switch is installed, must be required to read, understand and adhere to all dangers and warnings. If any of these labels become destroyed or unreadable, labels **MUST** be replaced. Contact factory immediately for replacement labels and do not operate machine until danger and warning labels are all in place.

Foot Switch Danger Sign - Part No. KSC055

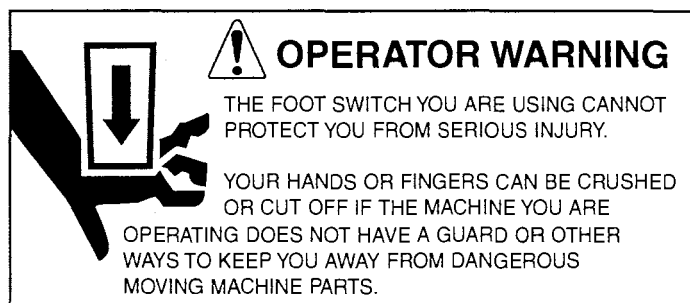
If a foot switch is ordered, a 5" x 6" polyethylene danger sign is available. This sign must be firmly attached to the machine in a location readily visible to all personnel.



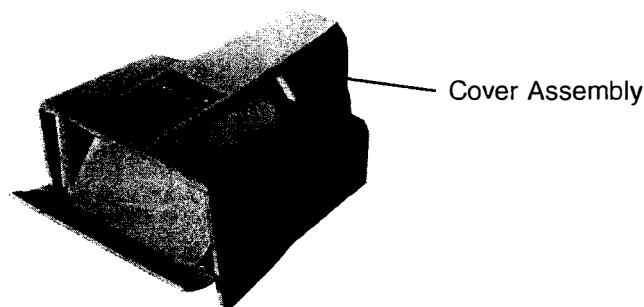
This label is furnished with foot switch Part No. CTD011.



This label is furnished with foot switch Part Nos. CTD065, CTD066 and CTD067.



II. PART NOS. CTD011 AND CTD025 HEAVY-DUTY FOOT SWITCH



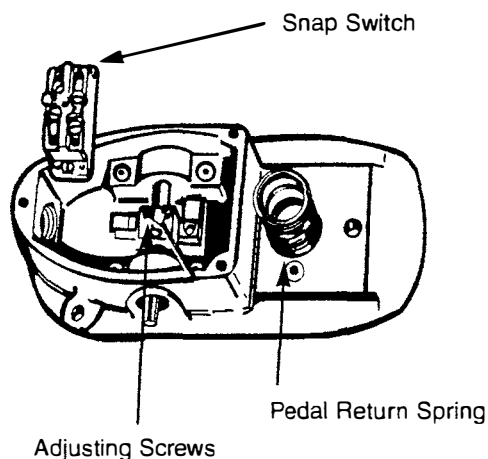
A Installation Procedure

Remove the cover exposing the contact module. Use the ground screw provided to ground the enclosure of the foot switch. Be certain the conduit entry is sealed tightly to prevent foreign materials from entering the switch. Replace the cover and tighten the cover screws to assure a tight seal. To permanently mount the foot switch, remove the rubber feet and use the holes for mounting. The foot switch has been factory adjusted. If adjustment ever becomes necessary, follow the appropriate procedure.

B Contact Module Replacement

A snap switch or contact block serves as the basic contact module and must be replaced as a complete unit. Readjustment of the foot switch should not be necessary when replacing the snap switch. If adjustment becomes necessary, follow the appropriate procedure.

Caution: Disconnect power and lockout before performing any work on the foot switch.



(Continued on next page.)

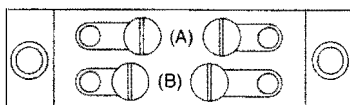
C Adjustment Procedure

A 5/64" Allen wrench is needed for most adjustments.

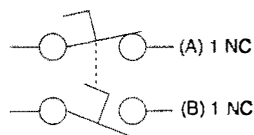
Caution: Adjusting screws must not be turned in too far or actuator block breakage may occur.

1. Remove the cover assembly.
2. With the foot pedal toward you, remove the end and left hand cover screws. Loosen the right hand cover screw and swing the cover counterclockwise almost 180°; and **retighten** the screw. This will make the snap switch adjustment accessible, and the cover will provide the necessary stop for the pedal in its upper position.
3. Depress the pedal fully. If the switch trips, release the pedal, and turn the adjusting screw **in** until the switch **does not** trip when the pedal is depressed again.
4. With the pedal fully depressed, slowly back out the adjusting screw until the switch just trips. Back out the screw 3/4 of a turn more.
5. Check overtravel at each end of the stroke by depressing the pedal **slowly**. Overtravel at each end of the stroke should be equal, approximately 3/8 inch.

FOOT SWITCH CONTACT



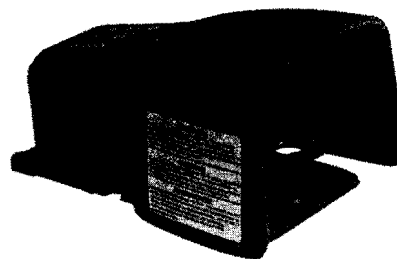
SCHEMATIC SYMBOL



D Replacement Parts List

Item	RSI Part No.	Description	Part Number	Quantity
1	CTD058	Cover Assembly (Full Guard with Front Flap)	Class 9002 Type AC5	1
2	CTD022	Pedal Return Spring	2502-X5	1
3	CTD023	Snap Switch (Contact Block)	Class 9007 Type AO2	1

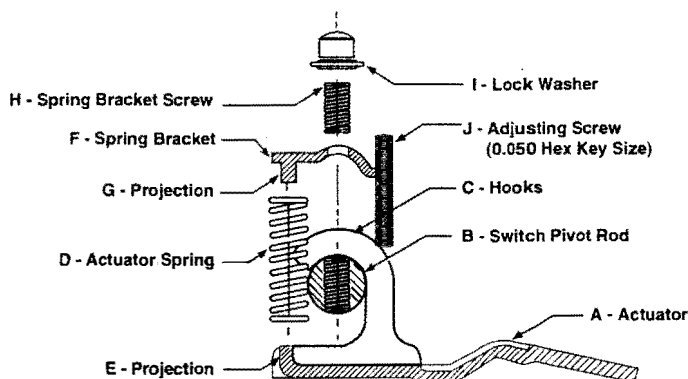
2. When wiring this foot switch with flexible cord a UL listed liquid-tight connector must be provided. Use appropriate pipe thread sealant at assembly to seal the connector threads. When threading into the conduit opening, ensure that the threaded joint is tightened sufficiently to prevent loosening. Do not force it.



The conduit threads should be kept clean; free from dirt and foreign material that would hinder proper installation.

B Adjustment Procedure

1. To change the adjustment of the operating point of the interior switch, depress the treadle to the point where you want the switch to operate. With the treadle depressed to the desired operating point, turn the adjusting screw until the switch snaps.
2. Turn clockwise to lower the operating point and counterclockwise to raise it.
3. Apply liquid adhesive to adjusting screw "J" after changing adjustment. Avoid applying an excessive amount of liquid adhesive to prevent migration. Remove excess liquid adhesive by wiping.



C Finalizing Installation

1. Tighten the cover screws so that an effective seal is obtained with the gasket.
2. Cleanliness must be observed during installation and use.

(Continued on next page.)

III. PART NO. CTD065 HEAVY-DUTY FOOT SWITCH

A Installation Procedure

1. When wiring this foot switch shut off all power to the machine. Padlock the disconnecting means, if already provided, in the "off" position and do not actuate the machine again until the installation of all components has been completed. Lockout/tagout energy isolation procedures must also be practiced and enforced.

III. PART NO. CTD065 HEAVY-DUTY FOOT SWITCH (continued)

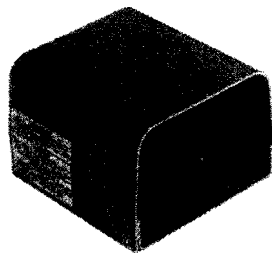
3. Lubricate the treadle pivot rod with one or two drops of lubricating oil. Do this on the portion of the pivot rod that extends between the outside of the base and on the inside of the treadle.

D Inspection

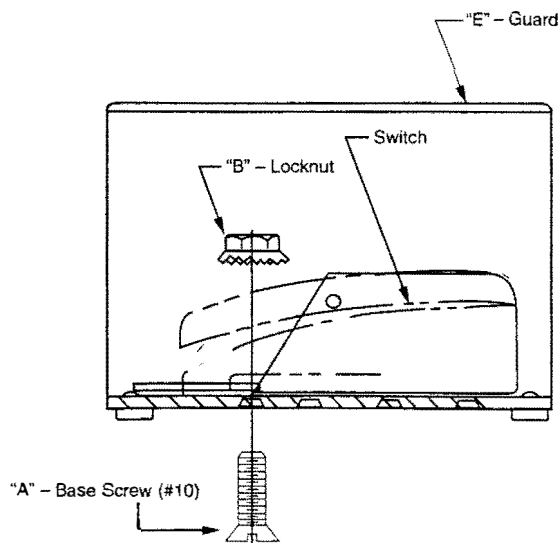
Inspect the foot switch on a regular basis for wear, damage, unlawful alterations or removal of guards, or for unusual enclosure deterioration. Inspect the entire length of the connecting cord (or wiring system) for wear or loose strain relief connections, etc. Inspection should be from where the cord enters the foot switch to the equipment it is wired to.

! Do not operate the foot switch if any of the above is observed or if the nameplate or warning label has been obscured or removed.

IV. INSTALLATION PROCEDURE FOR PART NOS. CTD066 AND CTD067 LIGHT-DUTY FOOT SWITCH



- A Do not remove switch base plate and pad when mounting to guard.
- B Assemble switch to guard "E," using base screw "A" and locknut "B."
- C Tighten base screw "A" and locknut "B."



V. OTHER INSTALLATION CONSIDERATIONS

! If you elect to use a foot control, all personnel must be warned that it is impossible for a foot switch to provide any form of point-of-operation safeguarding. It is the responsibility of the employer (user) to always provide an appropriate guard and/or device to prevent bodily injury whenever a foot switch is used to initiate a machine cycle. (See OSHA 1910.217 paragraph (c) for safeguarding.)

Steps to be taken when using a foot switch:

- A A method of safeguarding the point of operation must be provided before installing or using a foot switch.
- B The machine will not operate or must not be operated until you either:
 1. Electrically interlock or
 2. Mechanically guard the machine's point of operation with a safeguarding system or device.
- C Install either the electrically interlocked method of safeguarding or the mechanical guard or device.
 1. When an electrically interlocked method of safeguarding the point of operation is chosen, connect the interlock to the safeguard interlock terminals marked with "★" in the control box, as shown on the control wiring schematic.
 2. When a mechanical guard or device (nonelectrically interlocked) is chosen, the safeguard interlock terminals marked with "★" are not used. In order for the machine to operate with the use of a mechanical guard or device, the **safeguard interlock** terminals must be connected.

! Never use a foot switch to operate this machine unless a point-of-operation guard or device is provided and properly maintained.

! The mechanical guard or device must be properly installed, used and maintained. It must always prevent all personnel from bodily injury.

! If the mechanical guard or device is not used, is removed or is defeated, an electrically interlocked method of safeguarding must be used and connected to the safeguard interlock terminals marked with "★."

- D When installing the foot switch, be sure the wiring schematics are referenced for proper connections. Be sure to maintain the foot switch in first-class condition. It must always be wired properly and the protection on top, sides and front must always remain in place.