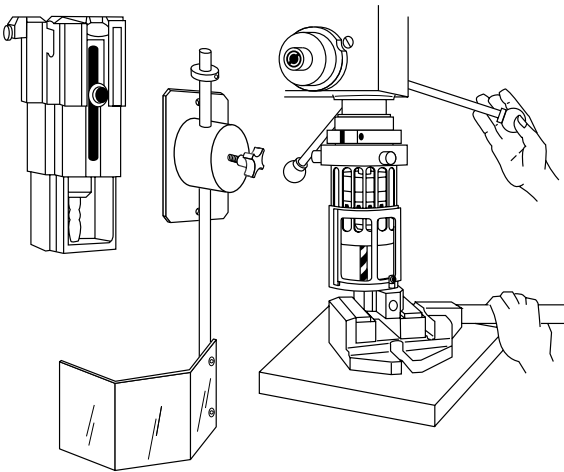


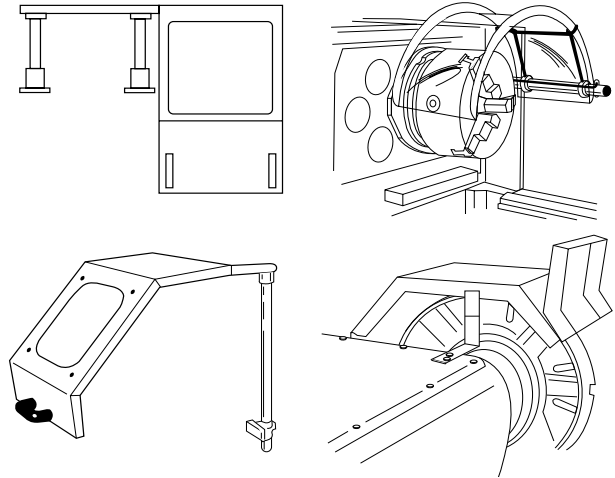


# GENERAL INFORMATION FOR SHIELDS

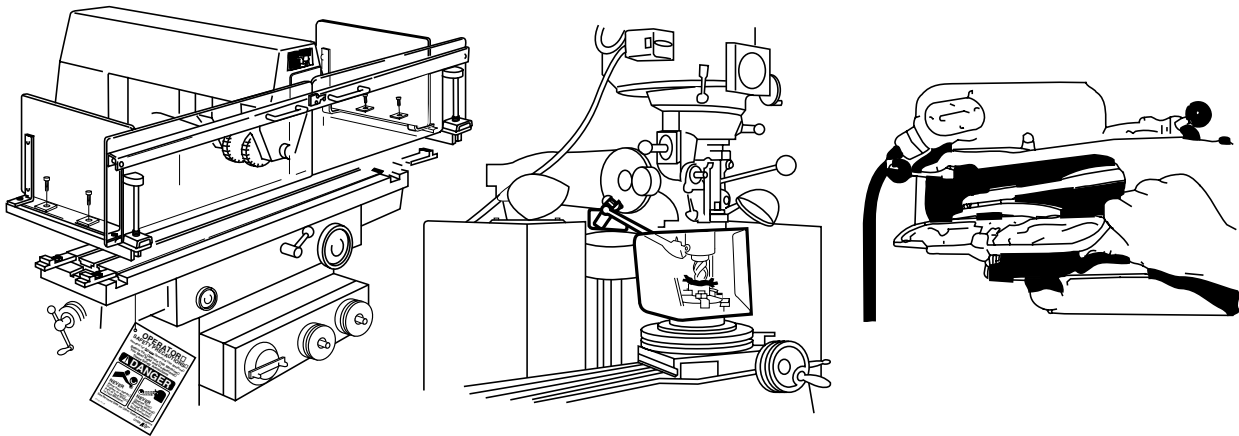
## DRILL PRESS SHIELDS



## LATHE CHUCK SHIELDS



## MILLING MACHINE SHIELDS



**IMPORTANT: PLEASE REVIEW THIS ENTIRE PUBLICATION BEFORE INSTALLING, ADJUSTING, OR POSITIONING SHIELDS, AND BEFORE OPERATING OR MAINTAINING TURNING MACHINES.**

# SECTION 1—IN GENERAL

## Shields

### Safety Precautions

#### **DANGER**

**DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.**



**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.**

#### **CAUTION**

**CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.**

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 and a thorough safety training program for all machine personnel. This program should include instruction on the proper operation of the machine, instruction on 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 in to your program include:

#### **DANGER**

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



**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 it 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 if 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.**

## Danger Sign(s) to be Mounted on the Machine



Accompanying this equipment is a 5" x 6" polyethylene danger sign, part No. KSC-046, that **MUST BE PERMANENTLY MOUNTED IN A PROMINENT POSITION** on the machine on which this equipment is installed. This sign must be in a **LOCATION THAT IS EASILY VISIBLE** to the operator, setup person or other personnel work on or around the machine. **ALWAYS** mount this sign with bolts or rivets when installing the enclosed equipment.

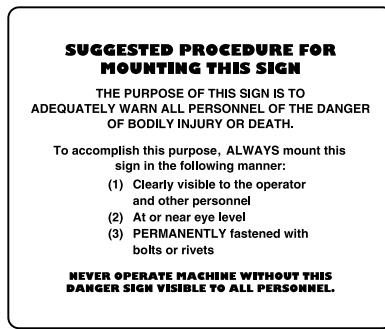
If any danger sign becomes destroyed or unreadable, the sign must be replaced immediately. Contact the factory for replacement danger sign(s).



**Never operate this machine unless the danger sign(s) is in place.**

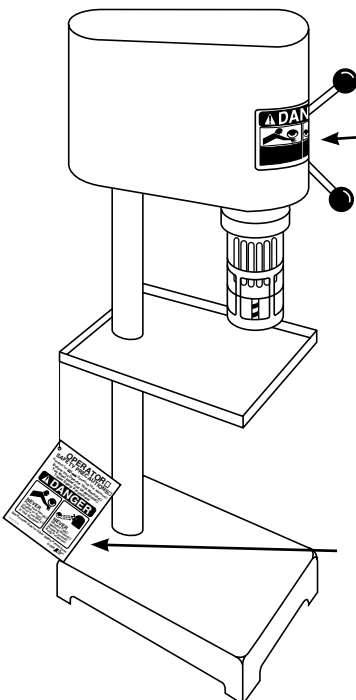


Front Side

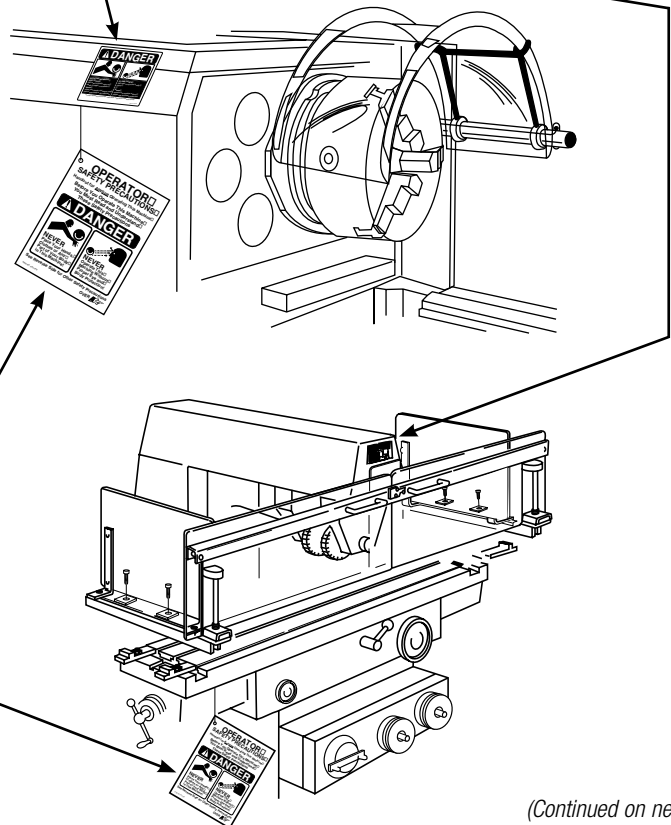


Reverse Side

- Part No. KSC-046 Danger Sign—Standard
- Part No. KSC-046S—Spanish
- Part No. KSC-046F—French



See page 4 for details on this precautions sign.



(Continued on next page.)

# SECTION 2—DANGER SIGNS

Shields

## Operator Safety Precautions Sign

### OPERATOR SAFETY PRECAUTIONS

Handout for Anyone Operating This Machine  
Before You Operate This Machine  
You Must Read and Understand  
These Safety Precautions

**DANGER**

ROTATING MEMBERS AND TOOLS

NEVER

Place Your Hands,  
Clothes or Any  
Part of Your Body  
in This Machine!

FLYING PARTS

NEVER

Operate This  
Machine Without  
Proper Eye and Other  
Body Protection!

See Reverse Side for Other Safety Precautions.

Part No. KSC-048 OVER

Front

### Do Not Operate This Machine Until You Read and Understand the Following Safety Precautions.

- 1 **Never** operate this machine unless you understand that this machine is dangerous. Never place your hands or any part of your body in this machine which could result in loss of fingers, limbs or even death.
- 2 **Never** operate this machine without the use of a point-of-operation guard, shield, or safety device that will protect you from bodily injury.
- 3 **Always** wear safety glasses, face protection or both and any other personal protection equipment needed when operating this machine.
- 4 **Never** operate this machine with loose clothing, jewelry, or unrestrained hair styles that are hazardous to your own personal safety. When there are moving parts present such as cutters, chucks, and tables, pay particular attention to loose clothing and hair, neckties, finger rings, necklaces, watch bands, etc.
- 5 **Always** use hand tools for feeding or retrieving material from the point of operation or any other hazardous part of the machine. Never reach through or into a hazardous area of a machine for any reason.
- 6 **Never** operate this machine unless you have been fully trained and have received and understand all operating instructions. Make sure you know how the machine works and how it is controlled.
- 7 **Never** operate this machine unless you are sure the safeguarding is adjusted properly and working correctly. If you are not sure, notify your supervisor.
- 8 **Never** operate this machine if it is not working properly or if you notice any unusual noise or change in the performance of the machine. Stop operating the machine immediately and advise your supervisor.
- 9 **Always** notify your supervisor immediately if you observe an unsafe practice or condition.
- 10 **Always** maintain an orderly work area. Pay particular attention to the storage of tools or parts that could be dislodged and cause a hazardous condition.
- 11 **Never** start the machine with the wrench in the chuck. The chuck wrench should be removed from the chuck immediately after using it or a spring-loaded chuck wrench should be used.
- 12 **Never** tamper with, alter, remove, or disable any component or safeguard on this machine.
- 13 **All employees** who adjust, position, or install safety equipment, devices, guards, or shields should follow instructions from the employer.
- 14 **Always** check the setup during each shift and between each job to ensure all safeguarding is working and the operation will be performed in a safe manner. Severe hazardous operating conditions may require more frequent checking.
- 15 **Be sure** everyone is clear of the machine before it is cycled, especially when multiple operators are present. Do not operate the machine unless you and every operator and helper are protected from injury by a guard or safety device.
- 16 **Always** stay alert (don't daydream) and never operate this machine while under the influence of alcohol or any drug, including prescription medications.
- 17 **Maintenance and Set-Up Personnel:** Never work on this machine unless power is off and locked out, rotating members are at rest, and all energy (electrical, air, hydraulic, etc.) is at a zero state.
- 18 **Always** be prepared for an emergency situation. You should know how to stop and shut down the machine if required.
- 19 **Never** operate this machine unless all mechanical power-transmission apparatus covers (for shafts, gears, etc.) and auxiliary equipment are free from hazards.

□ Point of Operation - "The location in the machine where the material or workpiece is positioned and work is performed." (ANSI B11.19)

**NOTICE TO EMPLOYER:** These Operator Safety Precautions must be given to all operators (including set-up people, maintenance personnel, and supervisors) of this machine. These precautions should also be hung on the machine readily accessible and visible to the operator. Additional precautions are available upon request.

**IMPORTANT:** If a language barrier or insufficient schooling prevents a person from reading and understanding these precautions, you should either translate this information or have it read or interpreted to the person. Make sure that it is understood. If Spanish or French safety precautions are required, please consult the factory.

THESE PRECAUTIONS MUST BE REVIEWED DAILY.

Back



Accompanying this equipment is an 8½" x 11" operator safety precautions sign, part No. KSC-048, for anyone operating the machine where this equipment will be installed.



This sign should be permanently mounted to the machine, readily accessible and visible to the operator. Attach the sign to the machine with a nylon tie through the hole provided. Additional copies of these precautions are available. Please call, write, fax, e-mail, or use the order form found on a later page in this manual.



When a language barrier or insufficient education prevents a person from reading or understanding the contents of this sign, you should either translate this information or have it read or interpreted to the person. Make sure the person understands the information. To order this sign in Spanish, use Part No. KSC-048S; in French, use Part No. KSC-048F.



These precautions must be reviewed daily.

(Continued on next page.)

Rockford Systems, LLC  
Call: 1-800-922-7533

## OSHA and ANSI Standards

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 regulations on employers (users) to ensure the machines used in their plants, factories or facilities are thoroughly inspected and in first-class operating condition before any of the enclosed equipment is installed.

OSHA, 29 CFR (Code of Federal Regulations) that an employer (user) must comply with include:

### SECTION \*1910.212 GENERAL REQUIREMENTS FOR ALL MACHINES

(a) *Machine guarding - (1) Types of guarding.* One or more methods of machine guarding shall be provided to protect the operator and other employees in the machine area from hazards such as those created by point of operation, ingoing nip points, rotating parts, flying chips and sparks. Examples of guarding methods are - barrier guards, two-hand tripping devices, electronic safety devices, etc.

(2) *General requirements for machine guards.* Guards shall be affixed to the machine where possible and secured elsewhere if for any reason attachment to the machine is not possible. The guard shall be such that it does not offer an accident hazard in itself.

(3) *Point of operation guarding.* (i) Point of operation is the area on a machine where work is actually performed upon the material being processed.

(ii) The point of operation of machines whose operation exposes an employee to injury, shall be guarded. The guarding device shall be in conformity with any appropriate standards therefor; or, in the absence of applicable specific standards, shall be so designed and constructed as to prevent the operator from having any part of his body in the danger zone during the operating cycle.

(iii) Special hand tools for placing and removing material shall be such as to permit easy handling of material without the operator placing a hand in the danger zone. Such tools shall not be in lieu of other guarding required by this section, but can only be used to supplement protection provided.

(iv) The following are some of the machines which usually require point of operation guarding:

(a) Guillotine cutters

(b) Shears

(c) Alligator shears

(d) Power presses

(e) Milling machines

(f) Power saws

(g) Jointers

(h) Portable power tools

(i) Forming rolls and calenders

(4) *Barrels, containers and drums.* Revolving drums, barrels and containers shall be guarded by an enclosure which is interlocked with the drive mechanism, so that the barrel, drum or container cannot revolve unless the guard enclosure is in place.

(5) *Exposure of blades.* When the periphery of the blades of a fan is less than seven (7) feet above the floor or working level, the blades shall be guarded. The guard shall have openings no larger than one-half (1/2) inch.

(b) *Anchoring fixed machinery.* Machines designed for a fixed location shall be securely anchored to prevent walking or moving.

### SECTION \*1910.219 (b)(1) MECHANICAL POWER-TRANSMISSION APPARATUS

(b) *Prime-mover guards—(1) Flywheels.* Flywheels located so that any part is seven (7) feet or less above floor or platform shall be guarded in accordance with the requirements of this subparagraph:

(i) With an enclosure of sheet, perforated, or expanded metal, or woven wire;

(ii) With guard rails placed not less than fifteen (15) inches nor more than twenty (20) inches from rim. When flywheel extends into pit or is within 12 inches of floor, a standard toeboard shall also be provided;

(iii) When the upper rim of flywheel protrudes through a working floor, it shall be entirely enclosed or surrounded by a guardrail and toeboard.

(iv) For flywheels with smooth rims five (5) feet or less in diameter, where the preceding methods cannot be applied, the following may be used: a

disk attached to the flywheel in such manner as to cover the spokes of the wheel on the exposed side and present a smooth surface and edge, at the same time providing means for periodic inspection. An open space, not exceeding four (4) inches in width, may be left between the outside edge of the disk and the rim of the wheel if desired, to facilitate turning the wheel over. Where a disk is used, the keys or other dangerous projections not covered by disk shall be cut off or covered. This subdivision does not apply to flywheels with solid web centers.

(v) Adjustable guard to be used for starting engine or for running adjustment may be provided at the flywheel of gas or oil engines. A slot opening for jack bar will be permitted.

(vi) Wherever flywheels are above working areas, guards shall be installed having sufficient strength to hold the weight of the flywheel in the event of a shaft or wheel mounting failure.

\*See OSHA, 29 Code of Federal Regulations, Subpart O, for complete sections.

(Continued on next page.)

# SECTION 3—SAFETY REFERENCES

## Shields

### Safety Sources

This manual does not cover all aspects of a safety program. There are many publications on the subject of safety. Some publications and sources that are useful in organizing and implementing a safety program for metal turning machines are as follows:

#### ANSI Standards

- B11.6 *Manual Turning Machines* (Lathes)
- B11.8 *Drilling, Milling, and Boring Machines*
- B11.9 *Grinding Machines*
- 01.1 *Woodworking Machinery*

These standards can be purchased by contacting:

ANSI  
American National Standards Institute, Inc.  
25 West 43rd Street, 4th Floor  
New York, New York 10036  
Phone: 212-642-4900  
Fax: 212-302-1286  
[www.ansi.org](http://www.ansi.org)

OR

AMT  
The Association for Manufacturing Technology  
7901 Westpark Drive  
McLean, VA 22102-4206  
Phone: 703-893-2900  
Fax: 703-893-1151  
[www.amtonline.org](http://www.amtonline.org)

#### OSHA's Publications

General Industry Safety and Health Regulations Part 1910,  
CFR, Subpart O  
Concepts and Techniques of Machine Safeguarding, OSHA 3067

These publications can be purchased by contacting:

US Government Printing Office  
P.O. Box 371954  
Pittsburgh, PA 15250-7954  
Phone: 202-512-1800  
<http://bookstore.gpo.gov>

#### Other Safety Sources

National Institute of Occupational Safety and Health (NIOSH)  
4676 Columbia Parkway  
Cincinnati, OH 45226  
Toll-Free: 1-800-35-NIOSH (1-800-356-4674)  
Phone: 513-533-8238  
[www.cdc.gov/niosh](http://www.cdc.gov/niosh)

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, Disclaimer and Limitation of Liability

### WARRANTY

Rockford Systems, LLC warrants that this product will be free from defects in material and workmanship for a period of 12 months from the date of shipment thereof. ROCKFORD SYSTEMS LLC'S OBLIGATION UNDER THIS WARRANTY IS EXPRESSLY AND EXCLUSIVELY LIMITED to repairing or replacing such products which are returned to it within the warranty period with shipping charges prepaid and which will be disclosed as defective upon examination by Rockford Systems, LLC This warranty will not apply to any product which will have been subject to misuse, negligence, accident, restriction and use not in accordance with Rockford Systems, LLC's instructions or which will have been altered or repaired by persons other than the authorized agent or employees of Rockford Systems, LLC Rockford Systems, LLC's warranties as to any component part is expressly limited to that of the manufacturer of the component part.

### DISCLAIMER

The foregoing Warranty is made in lieu of all other warranties, expressed or implied, and of all other liabilities and obligations on the part of Rockford Systems, LLC, including any liability for negligence, strict liability, or otherwise, and any implied warranty of merchantability or fitness for a particular purpose is expressly disclaimed.

### LIMITATION OF LIABILITY

Under no circumstances, including any claim of negligence, strict liability, or otherwise, shall Rockford Systems, LLC be liable for any incidental or consequential damages, or any loss or damage resulting from a defect in the product of Rockford Systems, LLC.

(Continued on next page.)

Rockford Systems, LLC  
Call: 1-800-922-7533

# SECTION 4—RETURN MATERIALS AUTHORIZATION REQUEST FORM

Shields

To return material for any reason contact the sales department in our organization at 1-800-922-7533 for an RMA Number. All return materials shipments must be prepaid. Complete this form and send with material to Rockford Systems, LLC, 5795 Logistics Parkway, Rockford, IL 61109. Make sure the RMA Number is plainly identified on the outside of the shipping container.

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

Contact Name \_\_\_\_\_ Representative \_\_\_\_\_

Items Authorized To Return on RMA No. \_\_\_\_\_ Original Invoice No. \_\_\_\_\_ Date \_\_\_\_\_

Part No.	Serial No.	Description
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**Service Requested**     Full Credit     25% Restocking     Repair & Return     Warranty Replacement

Reason for return (describe in detail):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Return Materials Authorized by \_\_\_\_\_ Date \_\_\_\_\_

# **SECTION 5—ORDER FORM FOR SIGNS AND LITERATURE**

## *Shields*

This instruction manual references signs and literature available for your machines. This order form is for your convenience to order additional signs and literature as needed. This order form is part of your installation manual so please make a copy of it before writing an order.

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_

Name \_\_\_\_\_ Purchase Order No. \_\_\_\_\_ Date \_\_\_\_\_

<b>Part No.</b>	<b>Description</b>	<b>Quantity Required</b>
KSL-160	Installation Manual	_____
KSC-046	Danger Sign 5" x 6" (English)	_____
KSC-046S	Danger Sign 5" x 6" (Spanish)	_____
KSC-046F	Danger Sign 5" x 6" (French)	_____
KSC-048	Operator Safety Precautions Sign (English)	_____
KSC-048S	Operator Safety Precautions Sign (Spanish)	_____
KSC-048F	Operator Safety Precautions Sign (French)	_____
SFM	Catalog—Safeguarding Cutting and Turning Machines	_____
FAB	Catalog—Controls and Safeguarding for Fabricating Machines	_____

For prices and delivery, please use address, phone or fax number listed on the front cover of this manual.

Your Signature \_\_\_\_\_ Date \_\_\_\_\_