

**PRECISION  
AIR FEED**



**INSTALLATION  
& OPERATING  
INSTRUCTION  
MANUAL**

## **P/A INDUSTRIES INC.**

### **OVER FORTY YEARS EXPERIENCE**

Since 1954, P/A engineers have been designing and building equipment for the Metalforming Industry. Our commitment to provide innovative production equipment of the highest quality is second to none.

### **CUP SEAL DESIGN**

P/A is the only air feed manufacturer that provides low maintenance, high-cycle life cup wiper seals on the main cylinder. Every quality-built air cylinder uses the same technology as P/A. Cup seals reduce friction and heat which increases cycle life and performance by a conservative factor of 50 times.

### **U.S. PATENTS**

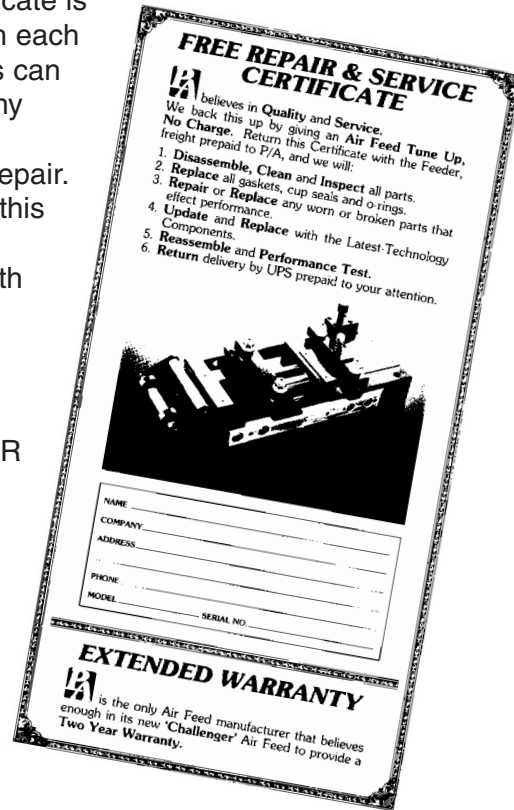
The leader in pneumatic press feed patents in the world is unquestionably P/A Industries. Today's design is covered by a combination of the following patents:

3,329,327; 3,462,056; 3,485,430; 3,561,657;  
3,583,268; 3,561,309; 3,847,320; 4,051,987;  
4,195,161; 4,310,114; 4,160,518; 4,076,161;  
4,095,733; 4,140,261; 4,175,688; 4,290,541;  
4,261,238; 4,277,997; 4,207,999; 4,267,950;  
4,329,897; 4,351,462; 4,399,937; 4,444,346;  
4,531,662; 4,619,390.

Other patents pending and foreign patents are not included above.



P/A believes in providing the best production performance air feed available anywhere in the world today. To prove that we are the BEST, a serialized Repair Certificate is enclosed with each air feed. This can be used at any time for a “no-charge” repair. Please keep this valuable Certificate with your records and return to P/A with the feed for our FREE REPAIR SERVICE.



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## AIR FEED FEATURES

### **FASTER SPEEDS**

Our patented system sequences high speed models up to 400 cycles per minute at full two inch pitch.

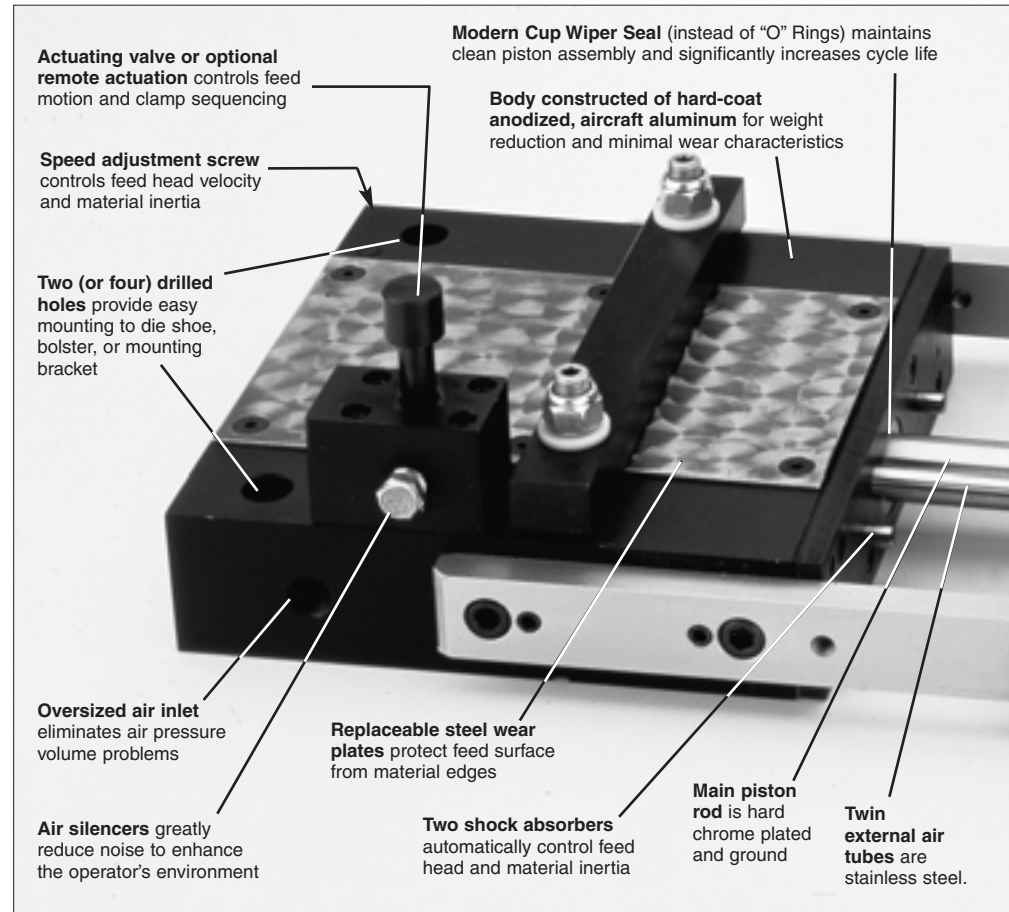
### **VERSATILE**

Coil stock can be fed in any direction or angle at any time during the machine cycle. A single feed can push or pull through long or short progressions. A variety of stock widths and thicknesses can be fed at different speeds and feed lengths. Two or more strips can be simultaneously fed by the same feed.

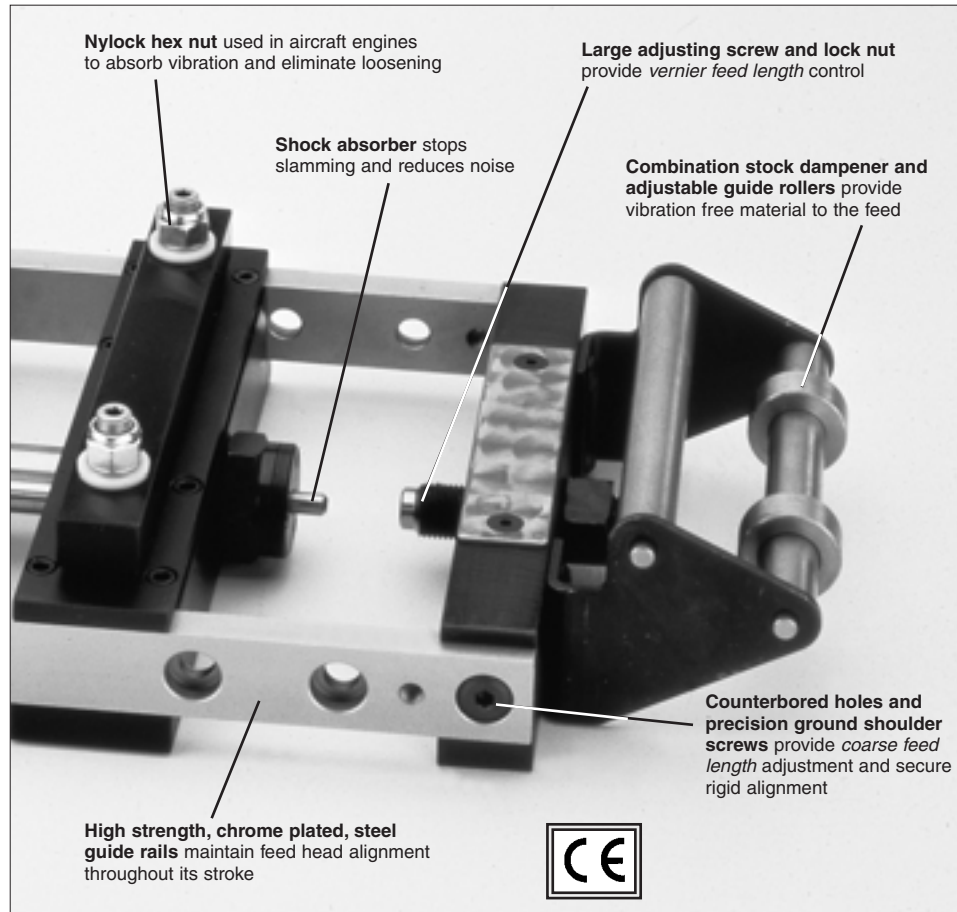
### **INEXPENSIVE**

The cost of P/A feeds are 65% to 90% less than conventional roll or slide feeds. With savings like that you should consider leaving the feed permanently mounted on the tool to decrease set up time and increase productivity.

Surveys show that Contract Job Shop Stampers prefer P/A air feeds because they are the easiest and most economical way to change from one job to another.



## AIR FEED FEATURES



### **SIMPLE INSTALLATION**

Our feeds are extremely easy to mount. Two (or four) mounting bolts and a single air line connection are all that's necessary. A compact, clean design permits the P/A Air Feed to be mounted right on the die set.

### **QUICK SET-UP**

Adjustments are quick, simple and positive. To change feed length, turn the adjustment screw to the desired pitch between positive stops and tighten the locknut.

### **PATENTED DESIGN**

Technologically the BEST air feed on the market today! U.S. Patent No. 4,444,346.

### **REPEATABILITY**

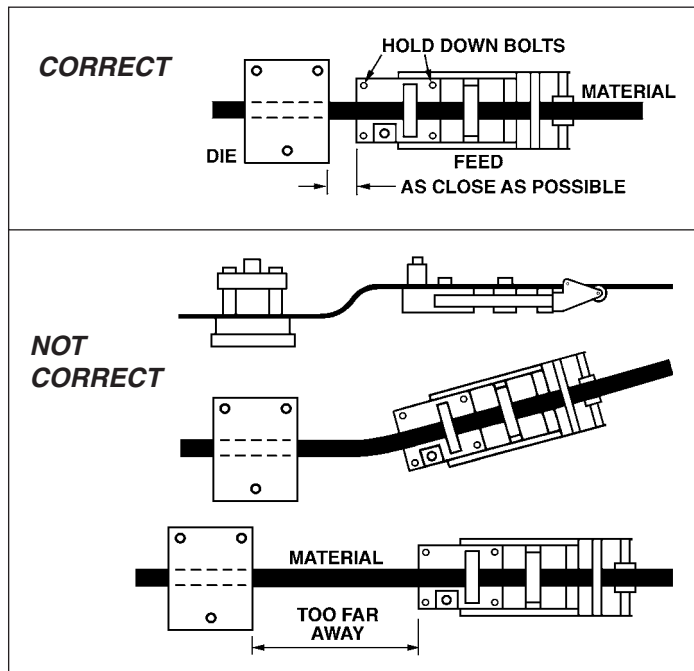
Consistently holds  $\pm .001$ " (.025mm) stroke after stroke. The most precise press feed available at a reasonable cost.

### **HANDLES VARIETY OF MATERIALS**

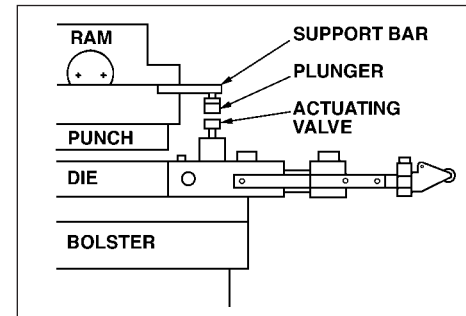
Paper, plastic, foil, fabric, wire, tubing . . . you name it and P/A will feed it. Highly polished materials or extrusions, preformed or irregularly shaped materials – all can easily be adapted with special clamps.

## MOUNTING THE AIR FEED

Its compact design will allow this Feed to be installed on the Die or Press Bolster, or on many types of machines, at any angle, including upside down or vertical. Use two (or four) minimal clearance Hold-Down Bolts to solidly fasten the Feed as close to the Work Station as possible. **NEVER** use 'C' clamps as the Feed may move or shift position.



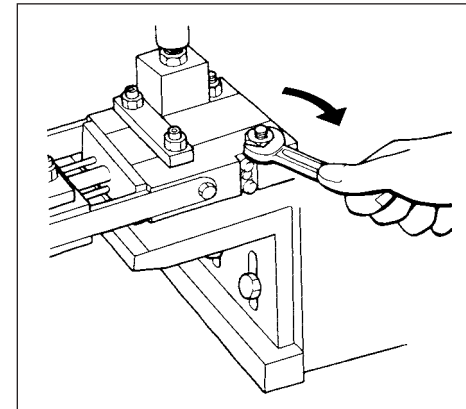
Mounting directly on the Die is **recommended** for "Just-In-Time" production and to reduce set-up time.



The top of the Feed Wear Plate should be level with the lower Die Face and the front of the Feed square and centered with the tool.

A mounting bracket provides easy vertical adjustment for tools with different stock line heights.

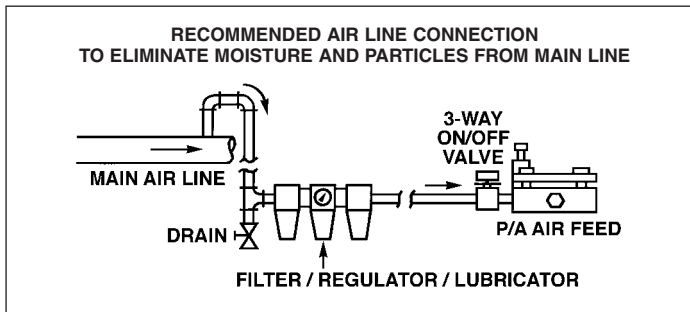
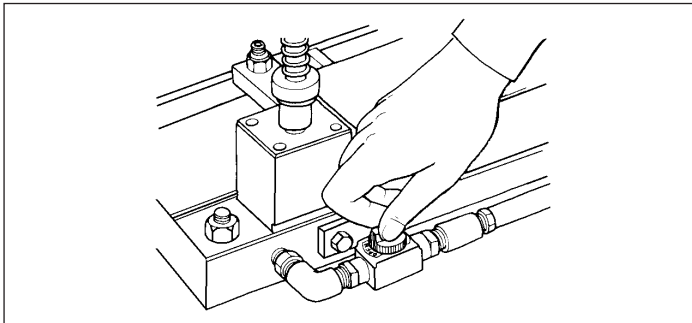
The Feed can be moved from press to press, or die to die, in a matter of minutes.



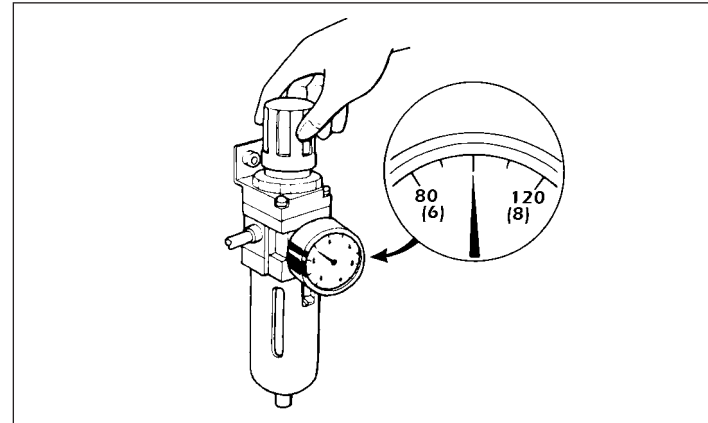
## AIR POWER SUPPLY CONNECTION TO THE FEED

A single air line connection is all that is needed for maximum power with minimum air consumption. We **strongly** recommend that an **oversized** air hose be connected to the Feed with a water separator type filter and air line oiler.

The use of a 3-Way On/Off Exhaust Valve will make minor adjustments and strip insertion easier.



Set the Air Pressure Regulator between 80 and 120 PSI (6 to 8 Bar).



## FEED LUBRICATION

Fill the air line lubricator with a good grade of hydraulic cylinder oil, like Shell Tellus 32. Set for one drop per minute to properly clean and lubricate all internal parts.

**NEVER** use Spindle Oils, Motor Oils, Solvents, WD-40, or Stock Lubricating Oils. Use of these types of oils will cause Feed performance to deteriorate, as well as premature wear.

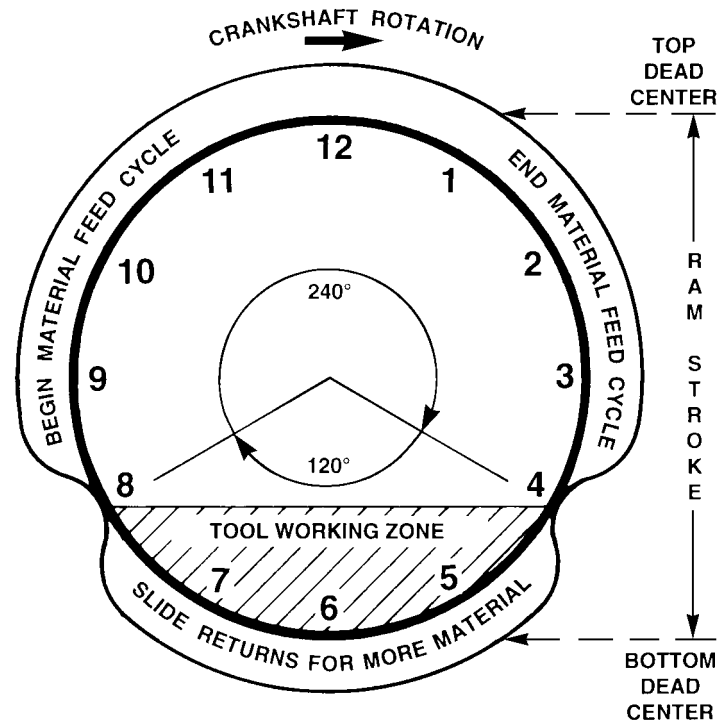
## PRESS FEED TIMING

The Reciprocating Linear Motion of the Feed Slide must be timed to the press crankshaft rotation for optimum performance. The Actuating Valve's vertical motion controls the sequencing of the Stock Clamp, Feed Clamp, and the Feed Slide.

To understand how the rotary crankshaft and linear Feed Slide motion work together in a Press Feed Cycle, it might be helpful to visualize a Clock Face. The position "Top Dead Center" of the Ram Stroke would be 12 o'clock, half way down would be 3 o'clock, "Bottom Dead Center" is 6 o'clock, and moving half way up would be 9 o'clock.

The optimum Feed cycle requires two thirds of the crankshaft rotation (240 degrees) to feed the material into position. During the remaining 120 degrees, the Feed Slide returns to the Stop Screw for more Material. As soon as the Stamped Part has been ejected and the Punches are clear of the Die (approximately 8 to 8:30 on the clock), the Feed Clamp will grip the Stock and then the Feed Slide will begin moving towards the Feed Body.

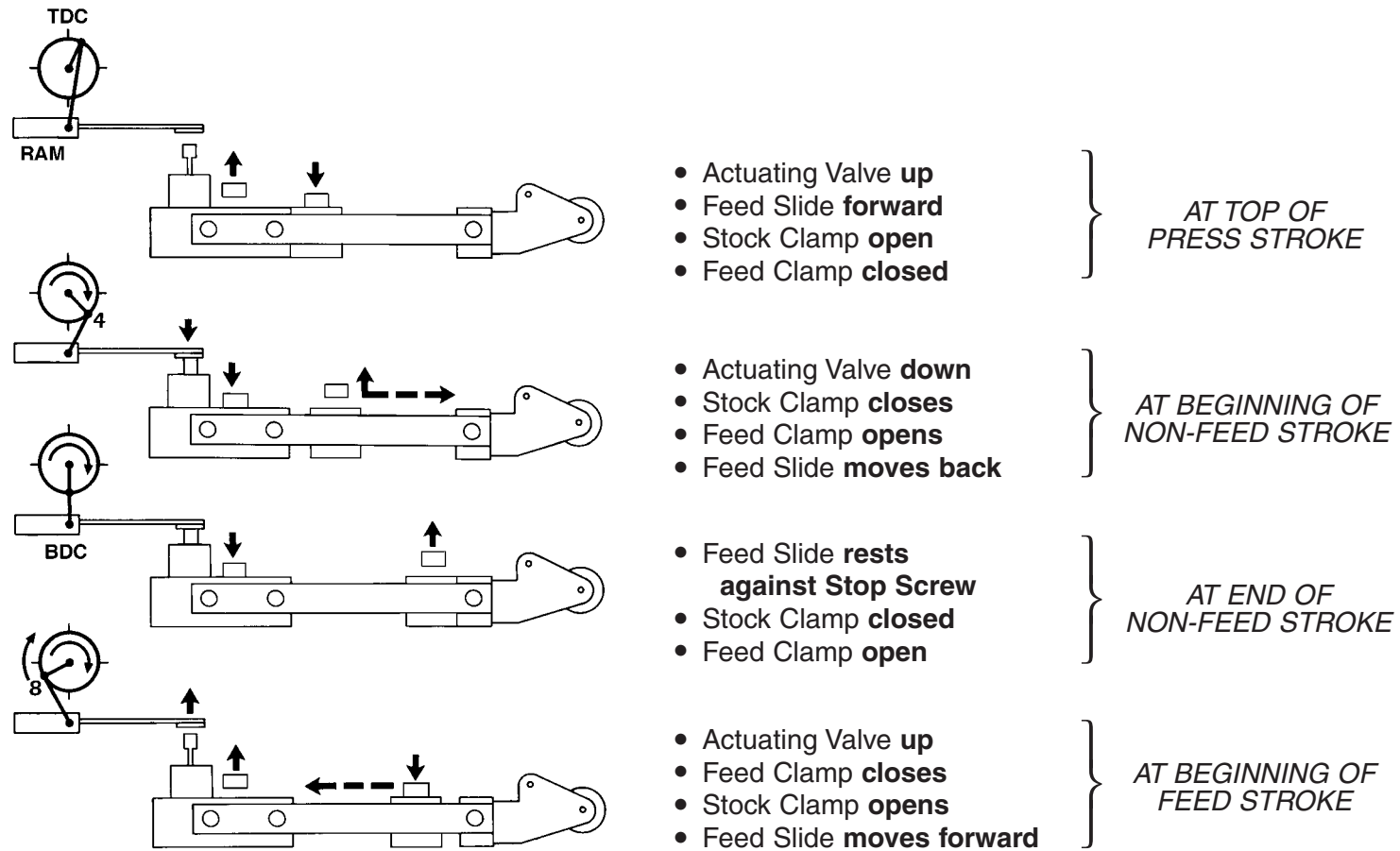
**CAUTION:** To properly complete a Feed Stroke, the Feed Slide must have enough time to contact the Feed Body before 4 o'clock and then return to the Stop Screw before 8 o'clock during the 360 degree crankshaft rotation otherwise erratic short feed progressions will occur.



Another method of controlling the Feed Timing is to use the Remote Electric or Pneumatic Actuation Systems to suit the Press and Part applications. These methods require the same 240° feed and 120° return timing cycle.



## AIR FEED SEQUENCE



## CONTROLLING THE FEED

### MECHANICAL ACTUATION

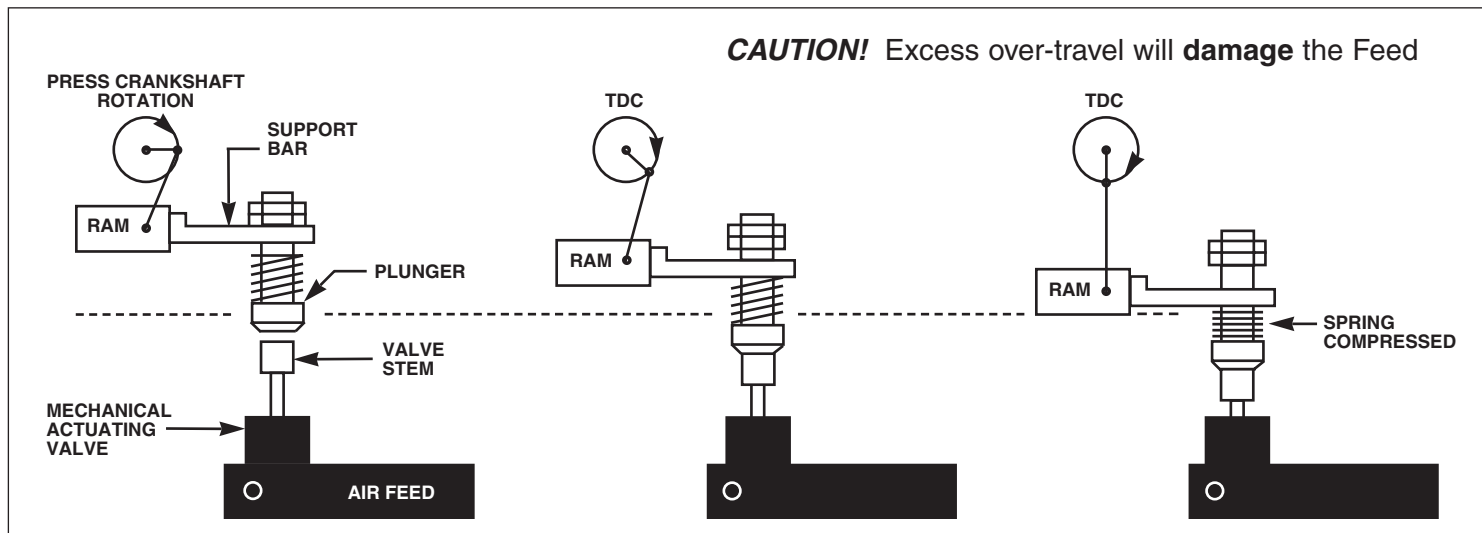
Install a Support Bar with a Plunger on the upper Die Block of the Tool or on the Press Ram. The vertical Plunger should be threaded to allow vertical height adjustments. The Plunger should contact the center of the Feeder's Actuating Valve Stem. After contact, and during the first 1/4" (6mm) of downward Valve Stem travel, nothing happens with the Feed Slide Control.

During the next 3/16" (5mm) of travel, the Mechanical Actuation Valve opens causing the clamps to shift and

the non-feed stroke begins. The remaining downward stroke of the Valve Stem is over-travel.

When the Press Ram passes BDC and begins to move upward, the Valve Stem reverses travel direction. As the Plunger moves off the Valve Stem, the Mechanical Actuation Valve closes causing the clamps to shift and the Feed Slide to begin the feed stroke.

Installing a Spring on the Plunger to contact the Actuating Valve Stem will result in a more desirable Feed Cycle for Presses with long strokes.

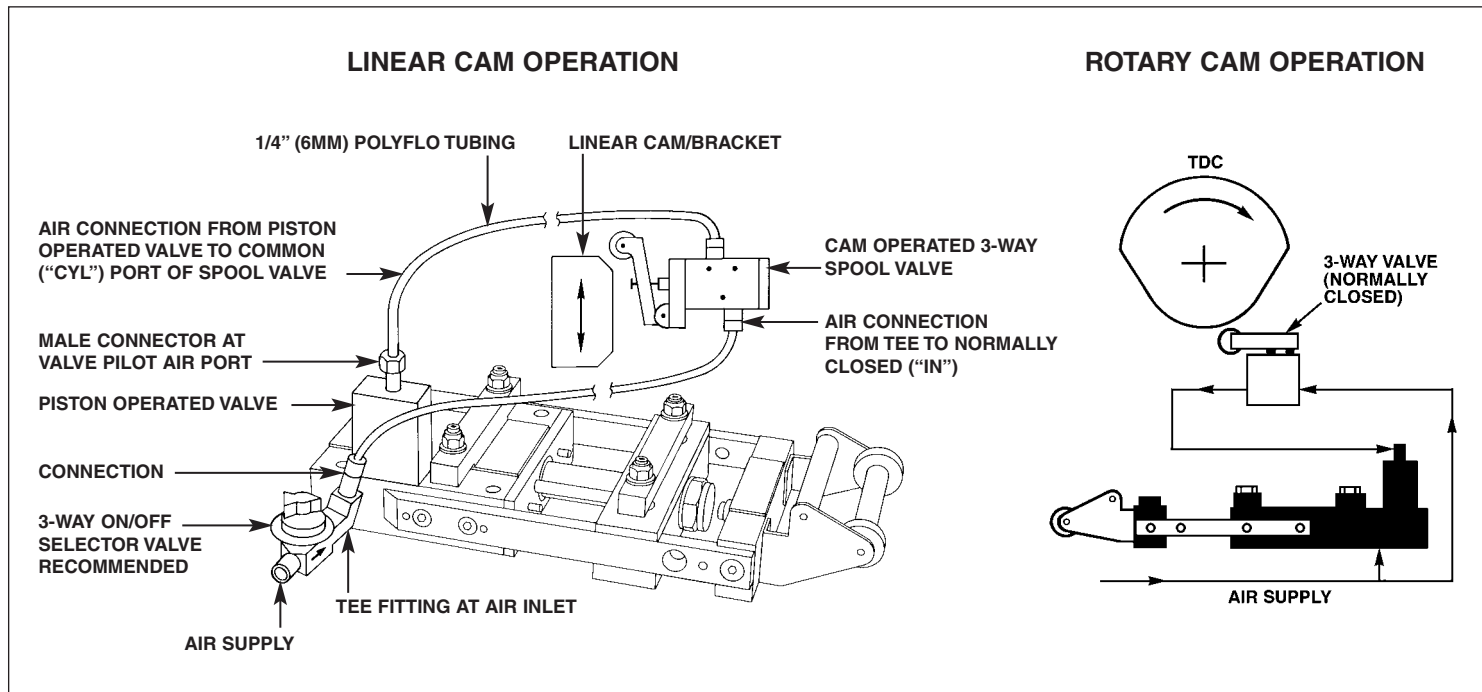


## CONTROLLING THE FEED

### REMOTE PNEUMATIC ACTUATION

By removing the Mechanical Actuating Valve Assembly, the timing control of the feed cycle can be changed by installing the optional Piston Operated Valve (POV).

The Feed Cycle is then controlled by a cam operated 3-Way Spool Valve and a Linear Cam mounted on the Press Ram, or by a Rotary Cam mounted on the crankshaft.

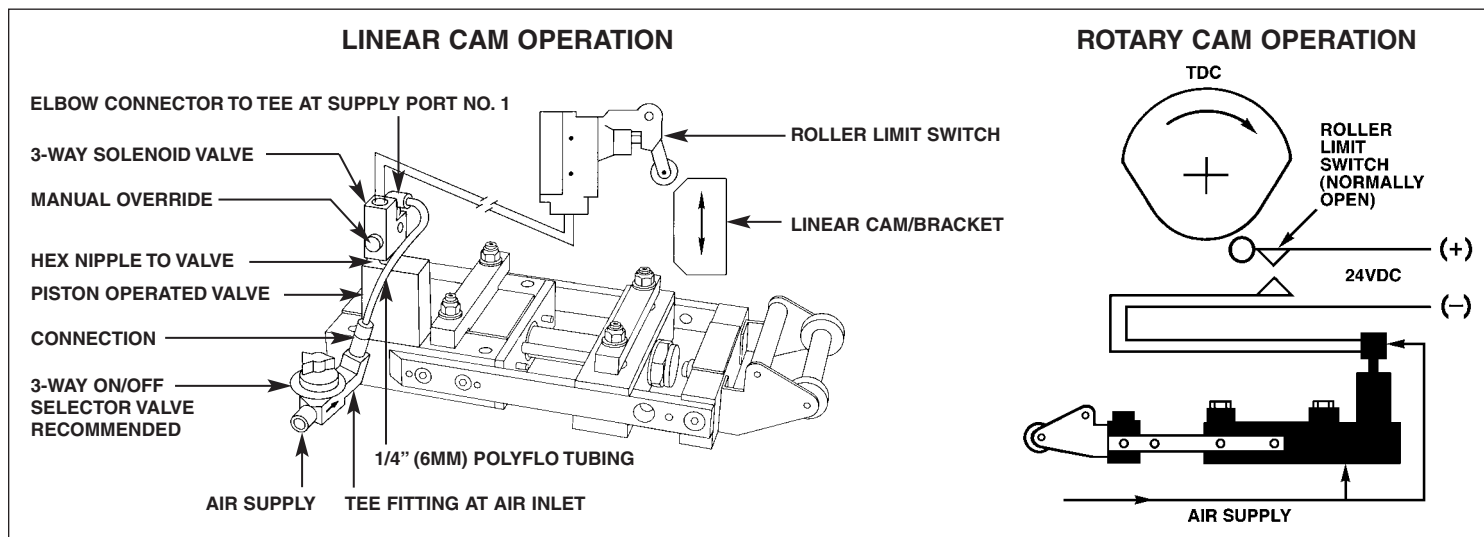
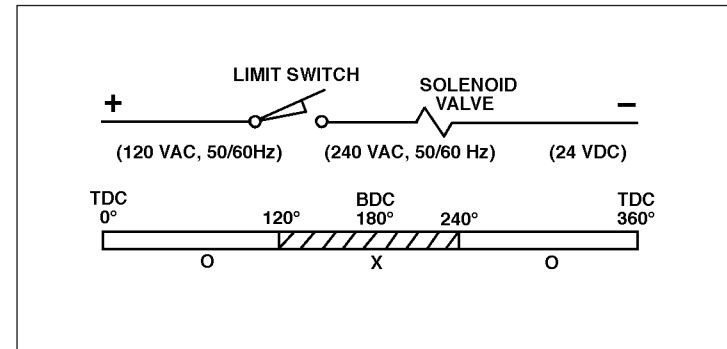


## CONTROLLING THE FEED

### REMOTE ELECTRIC ACTUATION

To control the timing of the Feed Slide motion electrically, install the 3-Way Solenoid Valve on top of the P.O.V. and wire into a Limit Switch. Mounting a Linear Cam on the Press Ram Slide or installing a Rotary Cam on the crankshaft are two ways to electrically control the Feed Cycle.

Many new presses today are equipped with electronic Programmable Controllers and/or electronic Rotary Limit Switches. Specify 24 VDC for Solenoid Valve.



## CONTROLLING THE FEED

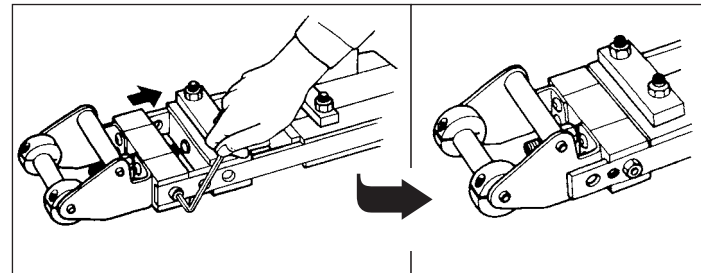
### REPEATER CONTROL SYSTEM

The Air Feed can be multiple stroked for each cycle of the Press to obtain greater feed length increments than the Air Feed's maximum feed stroke capacity. The Repeater Control has a digital counter and Key Lock Selector Control for "Feed Control Press" or "Press Control Feed". Used with Remote Electric Actuation and 120 VAC, 50/60 Hz Power Supply. Transformers for other voltages are available.

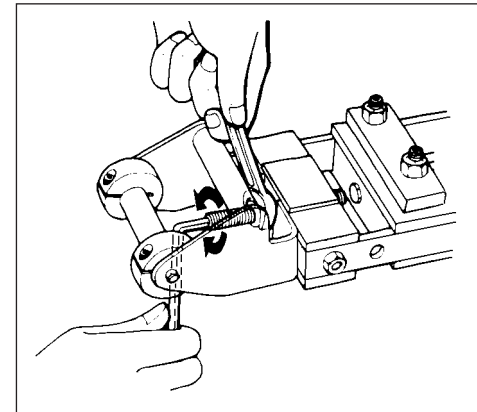


## FEED LENGTH ADJUSTMENT

For **coarse feed length adjustment** there are counter-bored holes provided in the side rails of the Feed. Move the Stop Block, and insert and tighten the Shoulder Screws in the holes closest to the desired feed stroke.

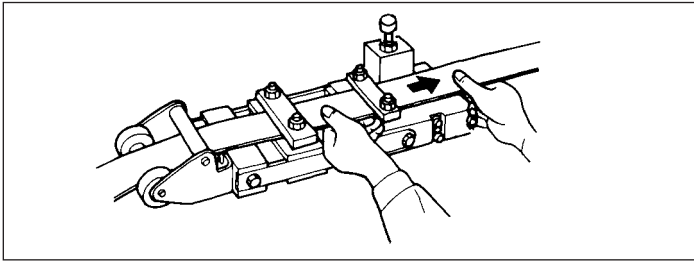


For **fine adjustment**, move the Feed Slide to the **exact distance** between it and the Main Body. Adjust the Stop Screw to contact the Feed Slide and tighten the Hex Nut.

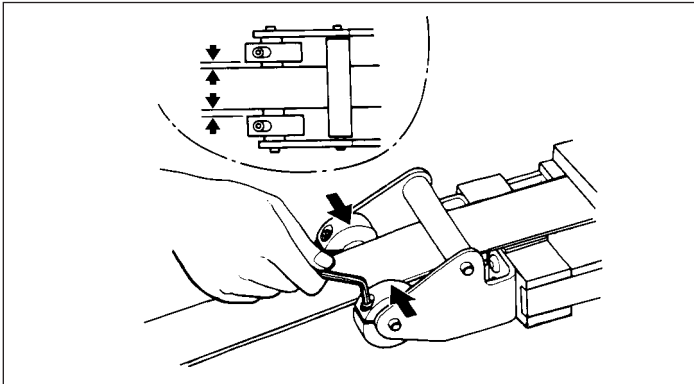


## MATERIAL ADJUSTMENT

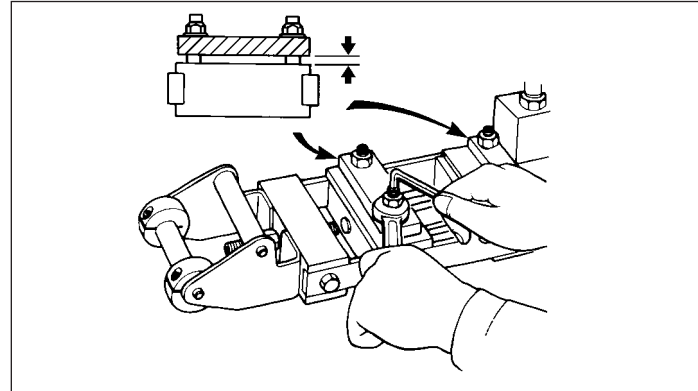
**STEP 1.** The strip material must be straight and parallel from the Rear Stock Guides through the Feed and into the Tool.



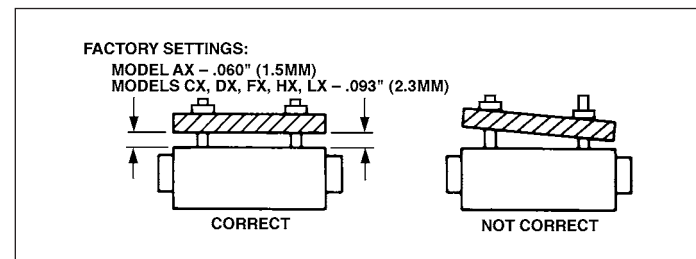
**STEP 2.** Adjust the two Roller Stock Guides with enough lateral clearance for camber and variations in stock width.



**STEP 3.** Recommended vertical clearance between the Material and the two Clamps is .010" to .020" (.3mm to .5mm). Adjust by holding the Clamp Piston Stem with a Hex Key and turn the Hex Nut.



**CAUTION!** It is very important to have a **level** Clamp condition for both the Feed Clamp and the Stock Clamp.

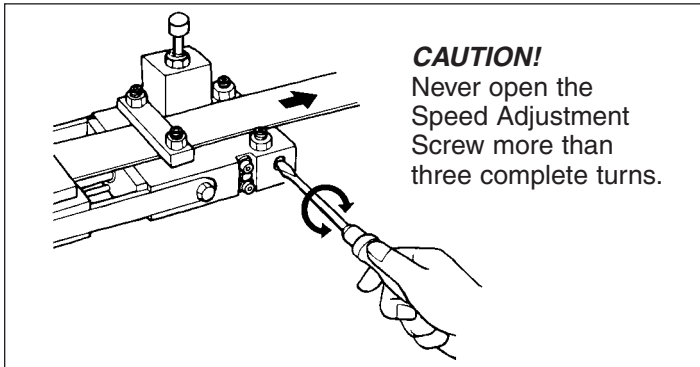


## SPEED CONTROL

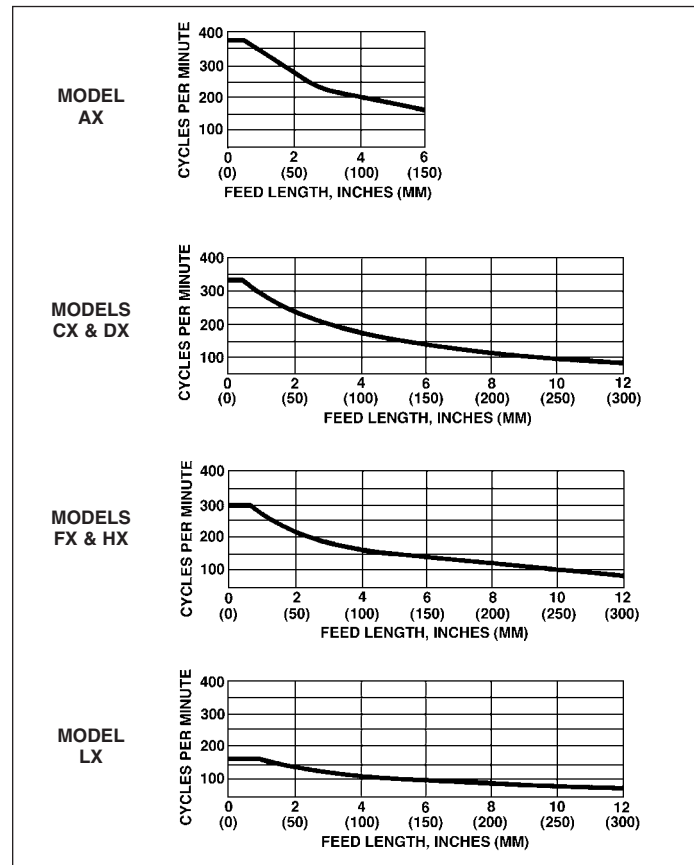
The Speed Adjustment Screw is located on the side opposite the air inlet. It provides material velocity control during the feeding direction of the Feed Slide.

### HOW TO SET

1. Cycle the Feed manually, turning the Speed Adjustment Screw clockwise until the Feed motion becomes erratic or incomplete.
2. Turn the Speed Adjustment Screw counter-clockwise until Feed Slide makes a complete forward motion.
3. Turn the Speed Adjustment Screw an additional half turn counter-clockwise.
4. If the material slips forward under the Clamp upon impact with the Main Body, turn the Speed Adjustment Screw clockwise 1/4 turn or until slippage stops.



### SAFE WORKING SPEEDS AT VARYING LENGTHS



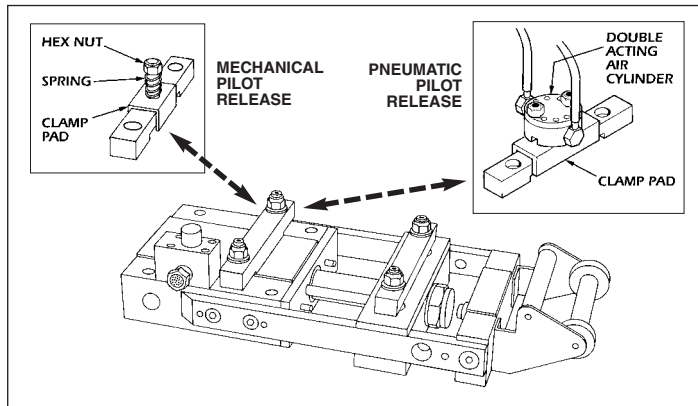
## THREE PILOT RELEASE METHODS

### MECHANICAL PILOT RELEASE

The Mechanical Spring-Loaded Pilot Release Clamp is installed in place of the standard Stock Clamp. Turn the Hex Nut to compress the Spring for the desired clamp and material pressure. Not available on LX.

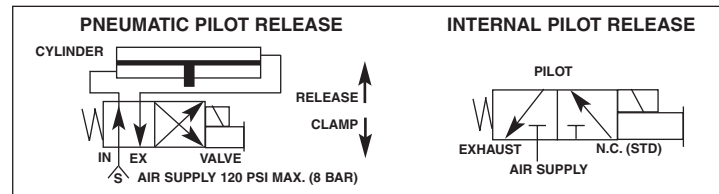
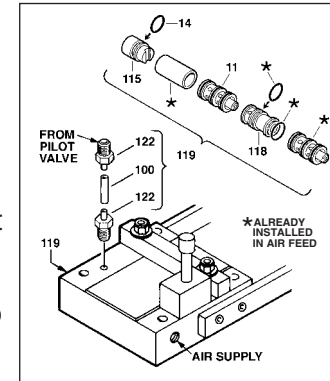
### PNEUMATIC PILOT RELEASE

The Pneumatic Pilot Release can be used for those applications that require more sensitive clamping pressure, or that the Clamp pad be completely free of the material. With this system, the clamping pressure may be adjusted by regulating the air supply to the valve. The clamp pad is fitted with a quick-response cylinder for positive stock grip and release. Timing is controlled by an external 4-way Solenoid valve or spool valve.



### INTERNAL PILOT RELEASE (IPR)

This internal valving system provides up to 270 pounds of clamping force with the standard clamp and is available on all FX, HX, and LX models. The Internal Pilot Release controls the release of the Stock Clamp with a timed air signal connected to the 1/8" NPT port. This feature gives you the option of using pilot release, or not, without the downtime necessary for changing clamps. One switch turns the system on or off. The IPR requires an external 3-Way Spool or Solenoid Valve.



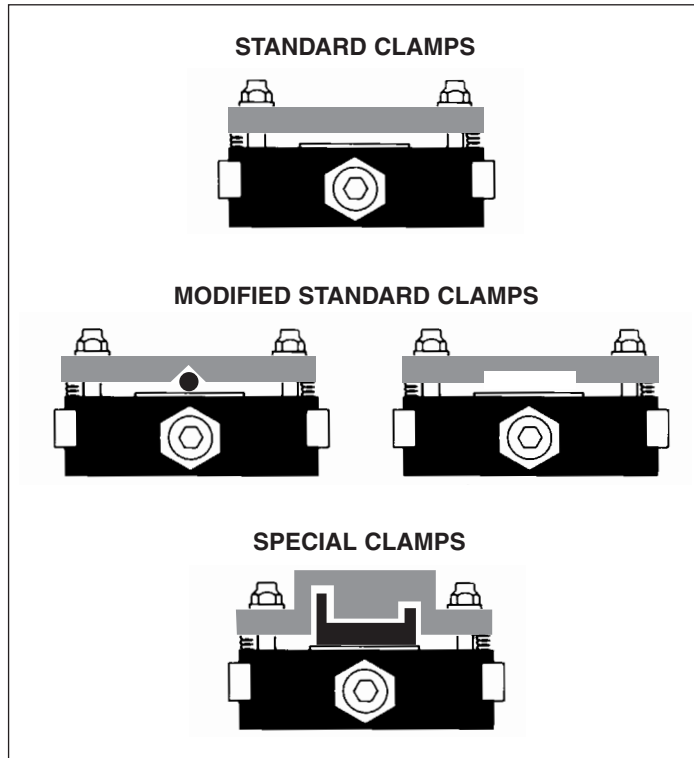
### ADJUSTMENTS

For most pilot release applications, set the Feed Pitch approximately .005" (.1mm) short and the Pilot Release Stock Clamp will allow the pilot pin to pull the material under the clamp pad into the proper position.



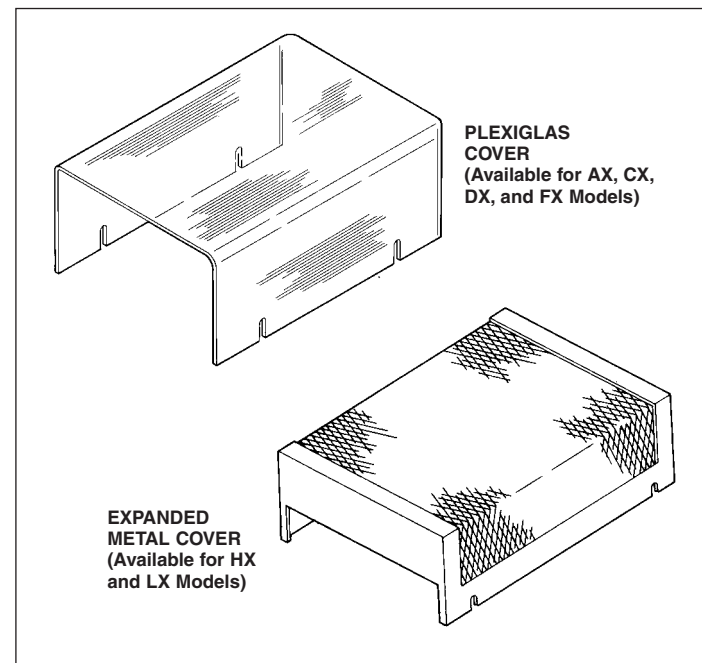
## FEEDING SHAPED MATERIAL

By machining the grip side of the Clamps to the desired contour, any kind of material or preformed parts like electronic contacts, terminals, or wire, tubing, and channel can be easily handled.



## PROTECTIVE COVERS

P/A Industries **strongly recommends** our rugged, see-through Cover of Plexiglas or Expanded Metal for operator protection. Pre-drilled holes in the Feed Guide Rail accept the Slip-Fit Fasteners that secure the Cover over the top and sides of the Feed. These Protective Covers further protect the Feed from dirt, oil, chips, and other harmful materials.



# MODEL AX PARTS LIST

( ) Indicates quantity used if more than one

| Item | Description                   | AX               |
|------|-------------------------------|------------------|
| 1    | Valve Block                   | 14261            |
| 2    | O-Ring                        | 14208-011 (2)    |
| 3    | Ring Insert                   | 14295-01 (2)     |
| 4    | Valve Stem                    | 14260            |
| 5    | Valve Disc                    | 14263-01         |
| 6    | O-Ring                        | 14208-008        |
| 7    | Hex Nut                       | 943010ZP         |
| 8    | Screw                         | 900006-08LA (4)  |
| 9    | Gasket, Valve Block           | 14262            |
| 11   | Cartridge Valve               | 12110-12         |
| 12   | Valve Plug                    | 15488-01         |
| 13   | O-Ring                        | 14208-011        |
| 14   | O-Ring                        | 14208-012        |
| 15   | Screw                         | 901010-03LA (2)  |
| 16   | Washer                        | DIN-125-M5B0 (2) |
| 17   | Collar, Spacer - Loctite #609 | 14571-06 (2)     |
| 18   | O-Ring                        | 14208-011 (2)    |
| 20   | Screw                         | 905010-02.5LA    |
| 21   | Stock Clamp Piston            | 14287-04 (2)     |
| 22   | O-Ring                        | 14208-114 (2)    |
| 23   | Spring, Compression           | 12442-18 (2)     |
| 24   | Pilot Release Clamp           | 15856            |
| 25   | Spring Stud                   | 15832            |
| 26   | Spring Clamp                  | 15857            |
| 27   | Spring Sleeve                 | 15833            |
| 28   | Spring, Compression           | 12442-36         |
| 29   | Hex Nut                       | 943031ZP         |
| 31   | Hex Nut, Nylock               | 943031ZP (4)     |
| 32   | Speed Adj. Screw              | 15787            |
| 33   | O-Ring                        | 14208-006        |
| 34   | Silencer (Body)               | 12024-11         |
| 36   | Spring Pin                    | 972018-04 (2)    |
| 37   | Shoulder Screw                | 919032-03 (4)    |
| 40   | Ring                          | 14271-01         |
| 41   | Piston Seal                   | 14245-01         |
| 42   | Spacer                        | 14272-01         |
| 43   | Locknut - Loctite #242        | 947038ZP         |
| 45   | Retaining Plate               | 14274            |
| 46   | Guide Bushing - Loctite #324  | 14298            |
| 47   | O-Ring                        | 14208-113        |
| 49   | O-Ring                        | 14208-008        |
| 50   | Dowel Pin                     | 970012-03 (2)    |
| 51   | Gasket, Retaining Plate       | 14273            |
| 52   | Screw                         | 900008-03LA (4)  |
| 53   | Feed Slide                    | 16278            |
| 56   | Feed Clamp Piston             | 14287-08 (2)     |
| 57   | O-Ring                        | 14208-117 (2)    |
| 58   | Rod Guide                     | 16283 (2)        |
| 59   | O-Ring                        | 14208-020 (2)    |
| 61   | O-Ring                        | 14208-012 (2)    |
| 62   | Cover Plate                   | 16279            |
| 63   | Screw                         | 900008-03LA (4)  |
| 64   | Spring, Compression           | 12442-16 (2)     |
| 65   | Feed Clamp                    | 14289-01         |
| 67   | Stop Anvil - Loctite #242     | 14283            |
| 74   | Stop Block                    | 16311            |
| 75   | Wear Strip                    | 15874-01         |

| Item | Description                                 | AX              |
|------|---|-----------------|
| 77   | Stop Screw                                  | 16312           |
| 78   | Hex Nut                                     | 941044B0        |
| 79   | Roller Bracket, Left                        | 15858-03        |
| 80   | Roller Bracket, Right                       | 15858-04        |
| 81   | Screw                                       | 902025-02LA (4) |
| 82   | Roller Shaft                                | 15859-01 (2)    |
| 84   | Roller Stock Guide                          | 12441-25 (2)    |
| 89   | Cartridge Guide P.O.V.                      | 12110-13        |
| 90   | Valve Block P.O.V.                          | 15486           |
| 91   | Piston Oper. Valve Assy.                    | 15507           |
| 92   | Mechanical Valve Assy.                      | 14304           |
| 93   | P.R.S.C. Assy.                              | 15806           |
| 94   | Stock Clamp                                 | 14289-05        |
| 97   | Dowel Pin - Loctite #609                    | 970006-01 (2)   |
| 98   | Flanged Bushing                             | 12128-52 (4)    |
| 100  | Air Line Tubing (10 Ft.)                    | 15676-02        |
| 101  | Fitting                                     | 12032-13        |
| 102  | Cylinder                                    | 12111-23        |
| 103  | Clamp Pad                                   | 16507           |
| 105  | Clamp, Pneu. Release                        | 16508           |
| 106  | Screw                                       | 904006-10       |
| 107  | Screw                                       | 905010-05LA     |
| 108  | Spool Valve 3-Way                           | 12110-10        |
| 109  | Spool Valve 4-Way                           | 12110-18        |
| 110  | Solenoid Valve 3-Way<br>(120 VAC, 50/60 Hz) | 12039-31        |
|      | Solenoid Valve 3-Way<br>(240 VAC, 50/60 Hz) | 12039-39        |
|      | Solenoid Valve 3-Way<br>(24 VDC)            | 12039-60        |
| 111  | Solenoid Valve 4-Way<br>(120 VAC, 50/60 Hz) | 12039-59        |
|      | Solenoid Valve 4-Way<br>(240 VAC, 50/60 Hz) | 12039-58        |
|      | Solenoid Valve 4-Way<br>(24 VDC)            | 12039-61        |
| 112  | 3-Way On/Off Exhaust                        | 12110-02        |
| 113  | Linear Cam                                  | 14170           |
| 114  | Limit Switch                                | 12031-02        |
| 116  | Nut   | 942006ZP        |
| 117  | Pneu. Pilot Release Assy.                   | 16604           |
| 122  | Fitting, Straight                           | 12032-12        |

| Item | Description          | AX2          | AX4          | AX6          |
|------|----------------------|--------------|--------------|--------------|
| 10   | Main Body            | 15546-01     | 15546-02     | 15546-03     |
| 19   | Wear Strip, Body     | 15841-01     | 15841-02     | 15841-03     |
| 35   | Guide Rail           | 15733-01 (2) | 15733-02 (2) | 15733-03 (2) |
| 38   | Main Piston Rod      | 14269-01     | 14269-02     | 14269-03     |
| 55   | Tubes w/Loctite #609 | 15844-01 (2) | 15844-02 (2) | 15844-03 (2) |
| 121  | Protective Cover     | 14222-01     | 14222-02     | 14222-03     |

## REPAIR KITS

Model AX - P/A No. 15925

Repair Kits include these Item Numbers:

2, 5, 6, 9, 11, 13, 14, 18, 22, 23, 28, 31, 33, 34, 41, 46, 47, 49, 51, 57, 59, 61, 64, 98

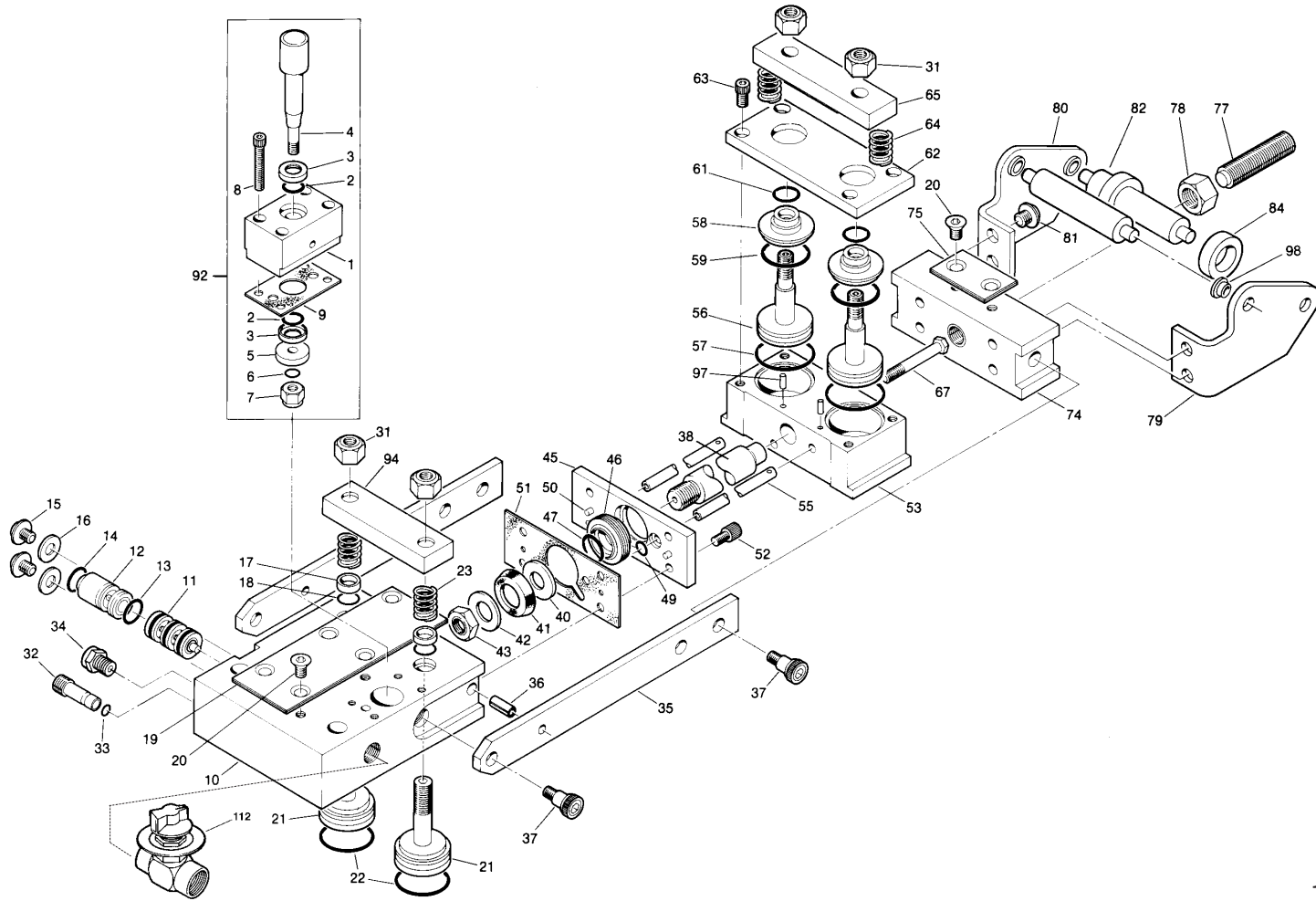
REPAIR KIT includes a complete set of O-Rings, Cartridge Valve, Gaskets, Piston Seal, Guide Bushing, Springs, Valve Disc, and Exhaust Silencers.

Note: O-Rings may be ordered from a local supplier by specifying the 3-digit number which conforms with ARP Universal series numbers.  
(Example: Model AX item 2, specify -011).

Note: Item Number 31, Nylock Hex Nut, **MUST** be replaced after disassembly.

Note: Assemble Guide Bushing (Item #46) with outer rim slot aligned with slot in Gasket (Item #51)

**MODEL AX**



## MODELS CX, DX PARTS LIST

( ) Indicates quantity used if more than one

| Item | Description                  | CX               | DX               |
|------|------------------------------|------------------|------------------|
| 1    | Valve Block                  | 15783            | 15783            |
| 2    | O-Ring                       | 14208-012 (2)    | 14208-012 (2)    |
| 3    | Ring Insert                  | 14295-03 (2)     | 14295-03 (2)     |
| 4    | Valve Stem                   | 14325            | 14325            |
| 5    | Valve Disc                   | 14263-02         | 14263-02         |
| 6    | O-Ring                       | 14208-008        | 14208-008        |
| 7    | Hex Nut                      | 943010ZP         | 943010ZP         |
| 8    | Screw                        | 900008-12LA (4)  | 900008-12LA (4)  |
| 9    | Gasket, Valve Block          | 14327            | 14327            |
| 11   | Cartridge Valve              | 12110-12         | 12110-12         |
| 12   | Valve Plug                   | 15488-02         | 15488-03         |
| 13   | O-Ring                       | 14208-011        | 14208-011        |
| 14   | O-Ring                       | 14208-012        | 14208-012        |
| 15   | Screw                        | 901010-03LA (2)  | 901010-03LA (2)  |
| 16   | Washer                       | DIN-125-M5BO (2) | DIN-125-M5BO (2) |
| 17   | Piston Guide                 | 16375 (2)        | 16375 (2)        |
| 18   | O-Ring                       | 14208-014 (2)    | 14208-014 (2)    |
| 20   | Screw                        | 905010-02.5LA    | 905010-02.5LA    |
| 21   | Stock Clamp Piston           | 14287-05 (2)     | 14287-05 (2)     |
| 22   | O-Ring                       | 14208-214 (2)    | 14208-214 (2)    |
| 23   | Spring, Compression          | 13453-04 (2)     | 13453-04 (2)     |
| 24   | Pilot Release Clamp          | 16177            | 16178            |
| 25   | Spring Stud                  | 15832            | 15832            |
| 26   | Spring Clamp                 | 15831            | 15805            |
| 27   | Spring Sleeve                | 15833            | 15833            |
| 28   | Spring, Compression          | 12442-36         | 12442-36         |
| 29   | Hex Nut                      | 943031ZP         | 943031ZP         |
| 30   | Insert, Clamp                | 14272-05 (4)     | 14272-05 (4)     |
| 31   | Hex Nut, Nylock              | 943038ZP (4)     | 943038ZP (4)     |
| 32   | Speed Adj. Screw             | 15787            | 15787            |
| 33   | O-Ring                       | 14208-006        | 14208-006        |
| 34   | Silencer (Body)              | 12024-11         | 12024-11         |
| 36   | Spring Pin                   | 972018-06 (4)    | 972025-06 (4)    |
| 37   | Screw                        | 900031-06LA (4)  | 900031-06LA (4)  |
| 39   | O-Ring                       | 14208-016        | 14208-016        |
| 40   | Ring                         | 14271-02         | 14271-02         |
| 41   | Piston Seal                  | 14245-02         | 14245-02         |
| 42   | Spacer                       | 14272-02         | 14272-02         |
| 43   | Locknut - Loctite #242       | 14317-02         | 14317-02         |
| 45   | Retaining Plate              | 15485            | 15609            |
| 46   | Guide Bushing - Loctite #324 | 14338-01         | 14338-01         |
| 47   | O-Ring                       | 14208-116        | 14208-116        |
| 48   | O-Ring                       | 14208-010 (2)    | 14208-010 (2)    |
| 49   | O-Ring                       | 14208-011 (2)    | 14208-011 (2)    |
| 50   | Dowel Pin - Loctite #609     | 970012-03 (2)    | 970012-03 (2)    |
| 51   | Gasket, Retaining Plate      | 15794            | 15811            |
| 52   | Screw                        | 901010-05LA (6)  | 901010-05LA (6)  |
| 53   | Feed Slide                   | 15484-01         | 15484-02         |
| 54   | Hard Disc - Loctite #324     | 15770 (2)        | 15770 (2)        |
| 56   | Feed Clamp Piston            | 14287-06 (2)     | 14287-06 (2)     |
| 57   | O-Ring                       | 14208-217 (2)    | 14208-217 (2)    |
| 58   | Rod Guide                    | 15492 (2)        | 15492 (2)        |
| 59   | O-Ring                       | 14208-027 (2)    | 14208-027 (2)    |
| 60   | O-Ring                       | 14208-016 (2)    | 14208-016 (2)    |
| 61   | O-Ring                       | 14208-112 (2)    | 14208-112 (2)    |
| 62   | Cover Plate                  | 14330            | 14349            |
| 63   | Screw                        | 901010-03LA (6)  | 901010-03LA (6)  |

| Item | Description                                 | CX              | DX              |
|------|---|-----------------|-----------------|
| 64   | Spring, Compression                         | 12442-17 (2)    | 12442-17 (2)    |
| 65   | Feed Clamp                                  | 15830           | 15804           |
| 68   | Buffer Housing                              | 14335           | 14352           |
| 69   | Buffer Piston                               | 14316-02        | 14316-03        |
| 70   | O-Ring                                      | 14208-011       | 14208-110       |
| 71   | Striker Plate                               | 14333           | 14333           |
| 72   | Screw                                       | 900006-02LA (3) | 900006-02LA (3) |
| 73   | O-Ring                                      | 14208-018       | 14208-018       |
| 74   | Stop Block                                  | 15862           | 15863           |
| 75   | Wear Strip                                  | 15874-02        | 15874-03        |
| 76   | Shoulder Screw                              | 919039-04 (2)   | 919039-04 (2)   |
| 77   | Stop Screw                                  | 14331           | 14331           |
| 78   | Hex Nut                                     | 941062BO        | 941062BO        |
| 79   | Roller Bracket, Left                        | 15858-01        | 15858-01        |
| 80   | Roller Bracket, Right                       | 15858-02        | 15858-02        |
| 81   | Screw                                       | 902025-04LA (4) | 902025-04LA (4) |
| 82   | Roller Shaft                                | 15859-02 (2)    | 15859-03 (2)    |
| 84   | Roller Stock Guide                          | 12441-25 (2)    | 12441-25 (2)    |
| 86   | Buffer Piston                               | 15491-01 (2)    | 15491-01 (2)    |
| 87   | O-Ring                                      | 14208-110 (2)   | 14208-110 (2)   |
| 88   | E-Ring                                      | 12013-20        | 12013-20        |
| 89   | Cartridge Guide P.O.V.                      | 12110-13        | 12110-13        |
| 90   | Valve Block P.O.V.                          | 15487           | 15487           |
| 91   | Piston Oper. Valve Assy.                    | 15508           | 15508           |
| 92   | Mechanical Valve Assy.                      | 14307           | 14307           |
| 93   | P.R.S.C. Assy.                              | 15807           | 15808           |
| 94   | Stock Clamp                                 | 15830           | 15804           |
| 96   | Silencer (Valve Block)                      | 12024-11        | 12024-11        |
| 97   | Dowel Pin - Loctite #609                    | 970012-02 (2)   | 970012-02 (2)   |
| 98   | Flanged Bushing                             | 12128-52 (4)    | 12128-52 (4)    |
| 100  | Air Line Tubing (10 Ft.)                    | 15676-02        | 15676-02        |
| 101  | Fitting                                     | 12032-10        | 12032-10        |
| 102  | Cylinder                                    | 12111-24        | 12111-24        |
| 103  | Clamp Pad                                   | 16514           | 16514           |
| 105  | Clamp, Pneu. Release                        | 16504           | 16505           |
| 106  | Screw                                       | 905010-10LA     | 905010-10LA     |
| 107  | Screw                                       | 905031-05LA     | 905031-05LA     |
| 108  | Spool Valve 3-Way                           | 12110-10        | 12110-10        |
| 109  | Spool Valve 4-Way                           | 12110-18        | 12110-18        |
| 110  | Solenoid Valve 3-Way<br>(120 VAC, 50/60 Hz) | 12039-31        | 12039-31        |
|      | Solenoid Valve 3-Way<br>(240 VAC, 50/60 Hz) | 12039-39        | 12039-39        |
|      | Solenoid Valve 3-Way<br>(24 VDC)            | 12039-60        | 12039-60        |
| 111  | Solenoid Valve 4-Way<br>(120 VAC, 50/60 Hz) | 12039-59        | 12039-59        |
|      | Solenoid Valve 4-Way<br>(240 VAC, 50/60 Hz) | 12039-58        | 12039-58        |
|      | Solenoid Valve 4-Way<br>(24 VDC)            | 12039-61        | 12039-61        |
| 112  | 3-Way On/Off Exhaust                        | 12110-02        | 12110-02        |
| 113  | Linear Cam                                  | 14170           | 14170           |
| 114  | Limit Switch                                | 12031-02        | 12031-02        |
| 116  | Nut   | 943010ZP        | 943010ZP        |
| 117  | Pneu. Pilot Release Assy.                   | 16605           | 16606           |
| 122  | Fitting, Straight                           | 12032-12        | 12032-12        |



## MODELS FX, HX, LX PARTS LIST

( ) Indicates quantity used if more than one

| Item | Description                  | FX               | HX              | LX               |
|------|------------------------------|------------------|-----------------|------------------|
| 1    | Valve Block                  | 15783            | 15783           | 15783            |
| 2    | O-Ring                       | 14208-012 (2)    | 14208-012 (2)   | 14208-012 (2)    |
| 3    | Ring Insert                  | 14295-03 (2)     | 14295-03 (2)    | 14295-03 (2)     |
| 4    | Valve Stem                   | 14325            | 14325           | 14325            |
| 5    | Valve Disc                   | 14263-02         | 14263-02        | 14263-02         |
| 6    | O-Ring                       | 14208-008        | 14208-008       | 14208-008        |
| 7    | Hex Nut                      | 943010ZP         | 943010ZP        | 943010ZP         |
| 8    | Screw                        | 900008-12LA (4)  | 900008-12LA (4) | 900008-12LA (4)  |
| 9    | Gasket, Valve Block          | 14327            | 14327           | 14327            |
| 11   | Cartridge Valve              | 12110-13         | 12110-13        | 12110-13         |
| 12   | Valve Plug                   | 15769            | 15769           | 15769            |
| 13   | O-Ring                       | 14208-015        | 14208-015       | 14208-015        |
| 14   | O-Ring                       | 14208-113 (3)    | 14208-113 (3)   | 14208-113 (3)    |
| 15   | Screw                        | 901010-03LA (2)  | 901010-03LA (2) | 901010-03LA (2)  |
| 16   | Washer                       | DIN-125-M5BO (2) | 958010 (2)      | 958010 (2)       |
| 17   | Piston Guide                 | 16375 (2)        | 16375 (2)       | 16375 (2)        |
| 18   | O-Ring                       | 14208-014 (2)    | 14208-014 (2)   | 14208-014 (2)    |
| 20   | Screw                        | 905P010-02.5LA   | 905P010-02.5LA  | 905010-03LA      |
| 21   | Stock Clamp Piston           | 14287-05 (2)     | 14287-05 (2)    | 14287-10 (2)     |
| 22   | O-Ring                       | 14208-214 (2)    | 14208-214 (2)   | 14208-220 (2)    |
| 23   | Spring, Compression          | 13453-04 (2)     | 13453-04 (2)    | 12442-43 (2)     |
| 24   | Pilot Release Clamp          | 16179            | 16767           | N/A              |
| 25   | Spring Stud                  | 15832 (2)        | 15832 (2)       | N/A              |
| 26   | Spring Clamp                 | 15824            | 15824           | N/A              |
| 27   | Spring Sleeve                | 15833 (2)        | 15833 (2)       | N/A              |
| 28   | Spring, Compression          | 12442-36 (2)     | 12442-36 (2)    | N/A              |
| 29   | Hex Nut                      | 943031ZP (2)     | 943031ZP (2)    | N/A              |
| 30   | Insert, Clamp                | 14272-05 (4)     | 14272-05 (4)    | 14272-06 (4)     |
| 31   | Hex Nut, Nylock              | 943038ZP (4)     | 943038ZP (4)    | 943050ZP (4)     |
| 32   | Speed Adj. Screw             | 15787            | 15787           | 15787            |
| 33   | O-Ring                       | 14208-006        | 14208-006       | 14208-006        |
| 34   | Silencer (Body)              | 12024-12         | 12024-12        | 12024-12         |
| 36   | Spring Pin                   | 972025-06 (4)    | 972025-06 (4)   | 972025-06 (4)    |
| 37   | Screw                        | 900031-06LA (4)  | 900031-06LA (4) | 900031-06LA (4)  |
| 39   | O-Ring                       | 14208-016        | 14208-016       | 14208-016        |
| 40   | Ring                         | 14271-03         | 14271-03        | 14271-06         |
| 41   | Piston Seal                  | 14245-03         | 14245-03        | 14245-04         |
| 42   | Spacer                       | 14272-03         | 14272-03        | 14272-07         |
| 43   | Locknut - Loctite #242       | 14317-02         | 14317-02        | 14317-02         |
| 44   | Ring Insert                  | N/A              | N/A             | 14295-01 (2)     |
| 45   | Retaining Plate              | 15818            | 16752           | 16938            |
| 46   | Guide Bushing - Loctite #324 | 14338-02         | 14338-02        | 14338-02         |
| 47   | O-Ring                       | 14208-116        | 14208-116       | 14208-116        |
| 48   | O-Ring                       | 14208-010 (2)    | 14208-010 (2)   | 14208-010 (2)    |
| 49   | O-Ring                       | 14208-011 (2)    | 14208-011 (2)   | 14208-011 (2)    |
| 50   | Dowel Pin - Loctite #609     | 970012-03 (2)    | 970012-03 (2)   | 970012-03 (2)    |
| 51   | Gasket, Rtnng Plate          | 15819            | 16753           | 16939            |
| 52   | Screw                        | 901010-05LA (6)  | 901010-05LA (8) | 901010-05LA (12) |
| 53   | Feed Slide                   | 15671            | 16754           | 16940            |
| 54   | Hard Disc - Loctite #324     | 15770 (2)        | 15770 (2)       | 15770 (2)        |
| 56   | Feed Clamp Piston            | 14287-07 (2)     | 14287-07 (2)    | 14287-09 (2)     |
| 57   | O-Ring                       | 14208-223 (2)    | 14208-223 (2)   | 14208-228 (2)    |
| 58   | Rod Guide                    | 15771 (2)        | 15771 (2)       | 16951 (2)        |
| 59   | O-Ring                       | 14208-031 (2)    | 14208-031 (2)   | 14208-036 (2)    |
| 60   | O-Ring                       | 14208-016 (2)    | 14208-016 (2)   | 14208-016 (2)    |
| 61   | O-Ring                       | 14208-112 (2)    | 14208-112 (2)   | 14208-114 (2)    |
| 62   | Cover Plate                  | 14361            | 16755           | 16941            |

| Item | Description                                 | FX              | HX              | LX               |
|------|---|-----------------|-----------------|------------------|
| 63   | Screw                                       | 900025-04LA (6) | 900025-04LA (8) | 900025-04LA (12) |
| 64   | Spring, Compression                         | 12442-21 (2)    | 12442-21 (2)    | 12442-42 (2)     |
| 65   | Feed Clamp                                  | 15850           | 16756           | 16942            |
| 68   | Buffer Housing                              | 14631           | 14631           | 14631            |
| 69   | Buffer Piston                               | 14316-03        | 14316-03        | 14316-03         |
| 70   | O-Ring                                      | 14208-110       | 14208-110       | 14208-110        |
| 71   | Striker Plate                               | 14333           | 14333           | 14333            |
| 72   | Screw                                       | 900006-02LA (3) | 900006-02LA (3) | 900006-02LA (3)  |
| 73   | O-Ring                                      | 14208-018       | 14208-018       | 14208-018        |
| 74   | Stop Block                                  | 15864           | 16758           | 16943            |
| 75   | Wear Strip                                  | 15874-4         | 15874-5         | 16584            |
| 76   | Shoulder Screw                              | 919051-04 (2)   | 919051-04 (2)   | 919051-04 (2)    |
| 77   | Stop Screw                                  | 14331           | 14331           | 16945            |
| 78   | Hex Nut                                     | 941062BO        | 941062BO        | 947075BO         |
| 79   | Roller Bracket, Left                        | 15858-01        | 15858-01        | 15858-05         |
| 80   | Roller Bracket, Right                       | 15858-02        | 15858-02        | 15858-06         |
| 81   | Screw                                       | 902025-02LA (4) | 902025-02LA (4) | 902025-02LA (4)  |
| 82   | Roller Shaft                                | 15859-04 (2)    | 15859-05 (2)    | 15859-06 (2)     |
| 84   | Roller Stock Guide                          | 12441-25 (2)    | 12441-25 (2)    | 12441-22 (2)     |
| 86   | Buffer Piston                               | 15491-01 (2)    | 15491-01 (2)    | 15491-01 (2)     |
| 87   | O-Ring                                      | 14208-110 (2)   | 14208-110 (2)   | 14208-110 (2)    |
| 88   | E-Ring                                      | 12013-20        | 12013-20        | 12013-20         |
| 89   | Cartridge Guide P.O.V.                      | 12110-13        | 12110-13        | 12110-13         |
| 90   | Valve Block P.O.V.                          | 15487           | 15487           | 15487            |
| 91   | Piston Oper. Valve Assy.                    | 15508           | 15508           | 15508            |
| 92   | Mechanical Valve Assy.                      | 14307           | 14307           | 14307            |
| 93   | P.R.S.C. Assy.                              | 15809           | 16762           | N/A              |
| 94   | Stock Clamp                                 | 15823           | 16761           | 16946            |
| 96   | Silencer (Valve Block)                      | 12024-11        | 12024-11        | 12024-11         |
| 97   | Dowel Pin - Loctite #609                    | 970012-02 (2)   | 970012-02 (2)   | N/A              |
| 98   | Flanged Bushing                             | 12128-52 (4)    | 12128-52 (4)    | 12128-60 (4)     |
| 100  | Air Line Tubing (10 Ft.)                    | 15676-02        | 15676-02        | 15676-02         |
| 101  | Fitting, Elbow                              | 12032-10        | 12032-10        | 12032-10         |
| 102  | Cylinder                                    | 12111-24        | 12111-24        | 12111-24         |
| 103  | Clamp Pad                                   | 16512           | 16512           | 16950            |
| 105  | Clamp, Pneu. Release                        | 16506           | 16763           | 16947            |
| 106  | Screw                                       | 905010-10LA     | 905010-10LA     | 905010-10LA      |
| 107  | Screw                                       | 905031-05LA     | 905031-05LA     | 905031-06LA      |
| 108  | Spool Valve 3-Way                           | 12110-10        | 12110-10        | 12110-10         |
| 109  | Spool Valve 4-Way                           | 12110-18        | 12110-18        | 12110-18         |
| 110  | Solenoid Valve 3-Way<br>(120 VAC, 50/60 Hz) | 12039-31        | 12039-31        | 12039-31         |
|      | Solenoid Valve 3-Way<br>(240 VAC, 50/60 Hz) | 12039-39        | 12039-39        | 12039-39         |
|      | Solenoid Valve 3-Way<br>(24 VDC)            | 12039-60        | 12039-60        | 12039-60         |
| 111  | Solenoid Valve 4-Way<br>(120 VAC, 50/60 Hz) | 12039-59        | 12039-59        | 12039-59         |
|      | Solenoid Valve 4-Way<br>(240 VAC, 50/60 Hz) | 12039-58        | 12039-58        | 12039-58         |
|      | Solenoid Valve 4-Way<br>(24 VDC)            | 12039-61        | 12039-61        | 12039-61         |
| 112  | 3-Way On/Off Exhaust                        | 12110-15        | 12110-15        | 12110-21         |
| 113  | Linear Cam                                  | 14170           | 14170           | 14170            |
| 114  | Limit Switch                                | 12031-02        | 12031-02        | 12031-02         |
| 115  | Cap   | 16956           | 16956           | 16956            |
| 116  | Nut   | 943010ZP        | 943010ZP        | 943010ZP         |
| 117  | Pneu. Pilot Release Assy.                   | 16607           | 16764           | 16948            |
| 118  | Valve Plug                                  | 16955           | 16955           | 16955            |
| 119  | Internal Pilot Release Kit                  | 16957-01        | 16957-02        | 16957-03         |
| 120  | Spacer                                      | N/A             | 16772-01        | 16772-02         |
| 122  | Fitting, Straight                           | 12032-12        | 12032-12        | 12032-12         |

# MODELS FX, HX, LX

## REPAIR KITS

Model FX – P/A No. 15928  
 Model HX – P/A No. 16751  
 Model LX – P/A No. 16935

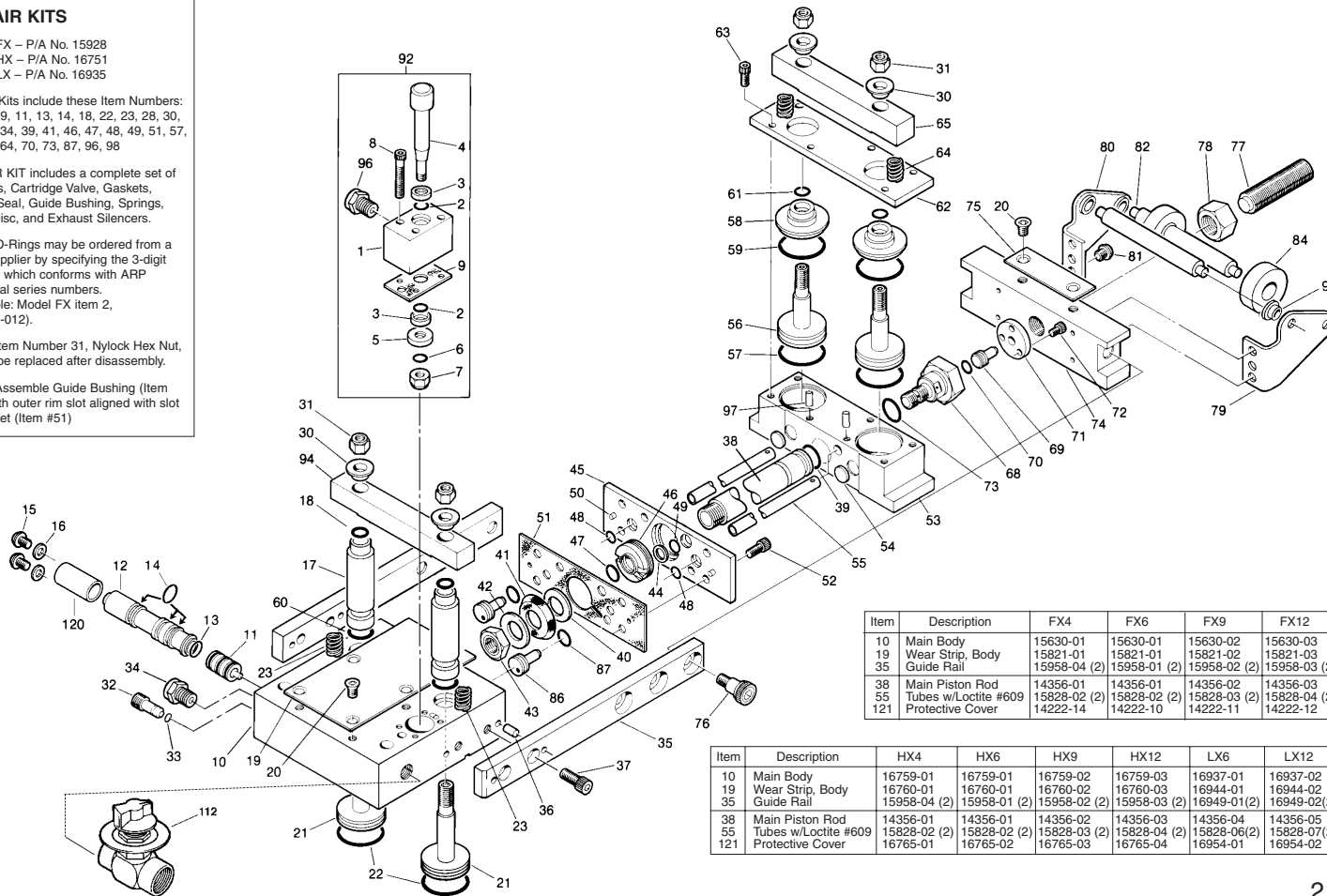
Repair Kits include these Item Numbers:  
 2, 5, 6, 9, 11, 13, 14, 18, 22, 23, 28, 30,  
 31, 33, 34, 39, 41, 46, 47, 48, 49, 51, 57,  
 59, 61, 64, 70, 73, 87, 96, 98

REPAIR KIT includes a complete set of  
 O-Rings, Cartridge Valve, Gaskets,  
 Piston Seal, Guide Bushing, Springs,  
 Valve Disc, and Exhaust Silencers.

Note: O-Rings may be ordered from a  
 local supplier by specifying the 3-digit  
 number which conforms with ARP  
 Universal series numbers.  
 (Example: Model FX item 2,  
 specify -012).

Note: Item Number 31, Nylock Hex Nut,  
**MUST** be replaced after disassembly.

Note: Assemble Guide Bushing (Item  
 #46) with outer rim slot aligned with slot  
 in Gasket (Item #51)



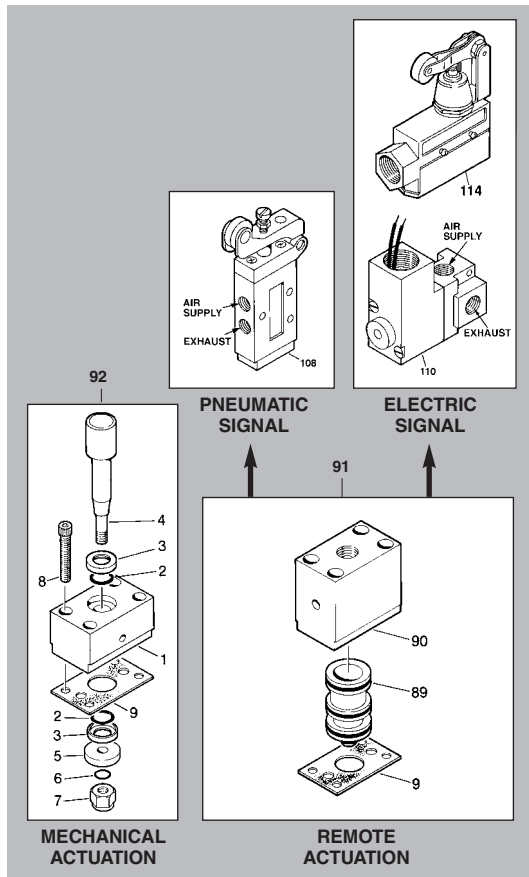
| Item | Description          | FX4          | FX6          | FX9          | FX12         |
|------|----------------------|--------------|--------------|--------------|--------------|
| 10   | Main Body            | 15630-01     | 15630-01     | 15630-02     | 15630-03     |
| 19   | Wear Strip, Body     | 15821-01     | 15821-01     | 15821-02     | 15821-03     |
| 35   | Guide Rail           | 15958-04 (2) | 15958-01 (2) | 15958-02 (2) | 15958-03 (2) |
| 38   | Main Piston Rod      | 14356-01     | 14356-01     | 14356-02     | 14356-03     |
| 55   | Tubes w/Loctite #609 | 15828-02 (2) | 15828-02 (2) | 15828-03 (2) | 15828-04 (2) |
| 121  | Protective Cover     | 14222-14     | 14222-10     | 14222-11     | 14222-12     |

| Item | Description          | HX4          | HX6          | HX9          | HX12         | LX6         | LX12        |
|------|----------------------|--------------|--------------|--------------|--------------|-------------|-------------|
| 10   | Main Body            | 16759-01     | 16759-01     | 16759-02     | 16759-03     | 16937-01    | 16937-02    |
| 19   | Wear Strip, Body     | 16760-01     | 16760-01     | 16760-02     | 16760-03     | 16944-01    | 16944-02    |
| 35   | Guide Rail           | 15958-04 (2) | 15958-01 (2) | 15958-02 (2) | 15958-03 (2) | 16949-01(2) | 16949-02(2) |
| 38   | Main Piston Rod      | 14356-01     | 14356-01     | 14356-02     | 14356-03     | 14356-04    | 14356-05    |
| 55   | Tubes w/Loctite #609 | 15828-02 (2) | 15828-02 (2) | 15828-03 (2) | 15828-04 (2) | 15828-06(2) | 15828-07(2) |
| 121  | Protective Cover     | 16765-01     | 16765-02     | 16765-03     | 16765-04     | 16954-01    | 16954-02    |

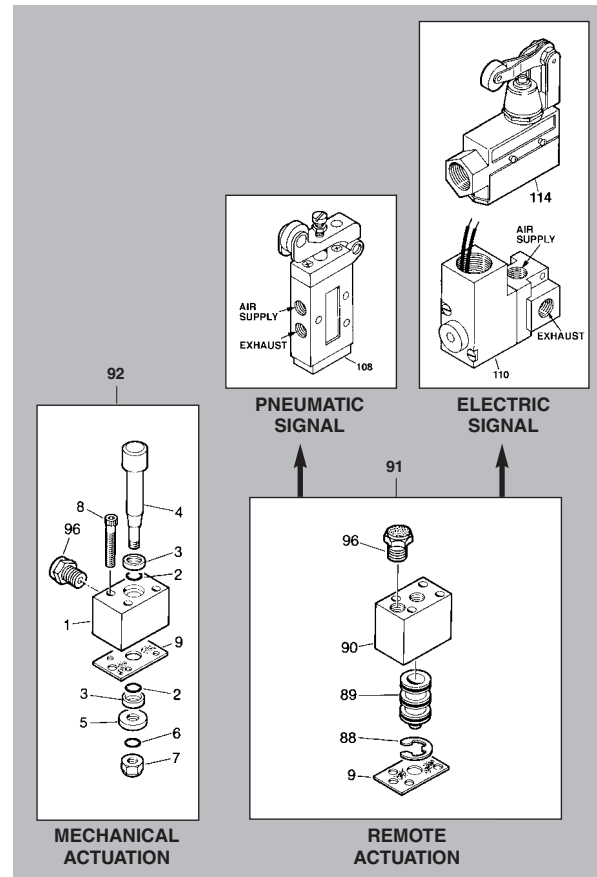
# FEED ACTUATION METHODS

See pages 9 and 10 for schematics

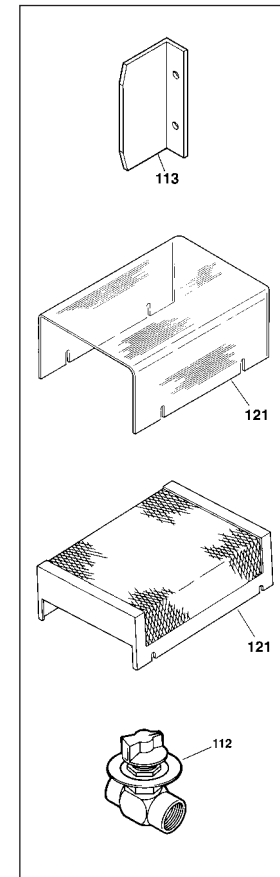
# ACCESSORIES



**MODEL  
AX**



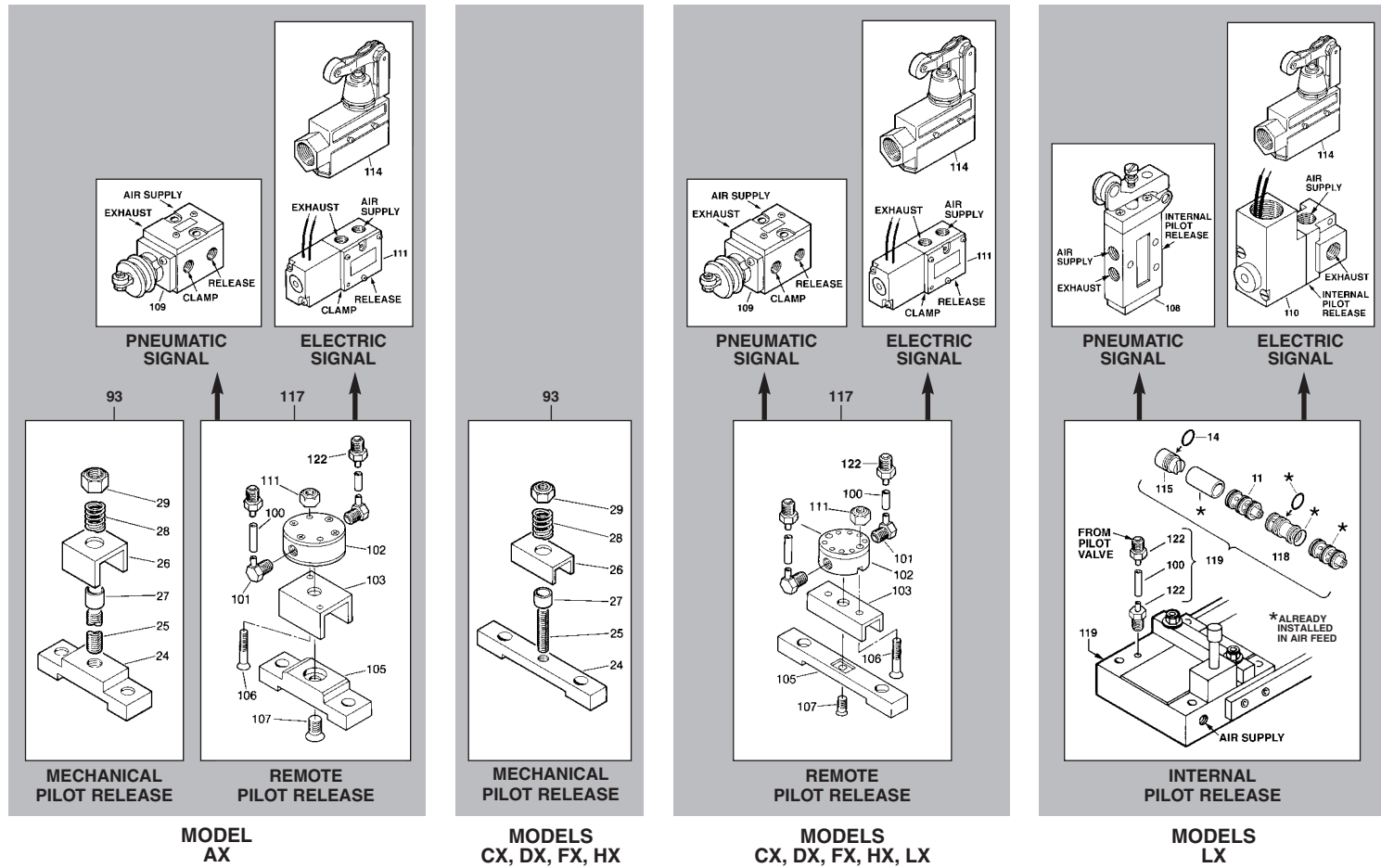
**MODELS  
CX, DX, FX, HX, LX**





# PILOT RELEASE ACTUATION METHODS

See page14 for schematics



## TROUBLE SHOOTING CHART

|                                      | FEEDS SHORT                  |                               |                                   |   | FEEDS LONG                   |                               | FEEDS LONG AND SHORT | FEED SLIDE          |           | AIR LEAKAGE |                        |           |
|--------------------------------------|------------------------------|-------------------------------|-----------------------------------|---|------------------------------|-------------------------------|----------------------|---------------------|-----------|-------------|------------------------|-----------|
|                                      | Strip Moves Under Feed Clamp | Strip Moves Under Stock Clamp | Feed Slide Not Making Full Stroke | Feed Slide Moves Before Feed Clamp Closes | Strip Moves Under Feed Clamp | Strip Moves Under Stock Clamp | Stock Buckles        | Moves To Stop Screw | No Motion | Valve Block | Exhaust Port Main Body | Air Tubes |
| <b>SET-UP &amp; OPERATION</b>        |                              |                               |                                   |   |                              |                               |                      |                     |           |             |                        |           |
| Air Pressure or Volume Too Low       | ✓                            | ✓                             | ✓                                 |   |                              |                               | ✓                    |                     | ✓         |             |                        |           |
| Feed Mounted Loose or Misaligned     | ✓                            |                               | ✓                                 |   | ✓                            |                               | ✓                    |                     |           |             |                        |           |
| Obstruction within Die: Slugs, Scrap | ✓                            |                               | ✓                                 |   |                              |                               | ✓                    |                     |           |             |                        |           |
| Camber, Burrs, Unstraightened Coil   | ✓                            |                               | ✓                                 |   |                              |                               | ✓                    |                     |           |             |                        |           |
| Oily, Slippery Strip                 | ✓                            |                               |                                   |   | ✓                            |                               | ✓                    |                     |           |             |                        |           |
| Stock Reel Drag or Tight Loop        | ✓                            | ✓                             | ✓                                 |   |                              |                               | ✓                    |                     |           |             |                        |           |
| Feed Timing Incorrect                | ✓                            |                               | ✓                                 |   | ✓                            | ✓                             | ✓                    |                     |           |             |                        |           |
| Forming Die Pulls Strip Forward      |                              |                               |                                   |   |                              | ✓                             | ✓                    |                     |           |             |                        |           |
| Shearing Die Pushes Strip Backward   |                              | ✓                             |                                   |   |                              |                               | ✓                    |                     |           |             |                        |           |
| Speed Adjust Screw Set Wrong         |                              |                               | ✓                                 |   | ✓                            |                               | ✓                    |                     | ✓         |             |                        |           |
| Clamp Clearance Set Wrong            | ✓                            | ✓                             |                                   | ✓   | ✓                            | ✓                             |                      |                     |           |             |                        |           |
| <b>MAINTENANCE</b>                   |                              |                               |                                   |   |                              |                               |                      |                     |           |             |                        |           |
| Water or Dirt in Air Line            | ✓                            | ✓                             | ✓                                 | ✓   | ✓                            | ✓                             | ✓                    |                     |           |             | ✓                      |           |
| Cartridge Valve Malfunction          | ✓                            | ✓                             | ✓                                 | ✓   | ✓                            | ✓                             | ✓                    | ✓                   | ✓         |             | ✓                      |           |
| Clamp Pistons O-Rings Leaking        | ✓                            | ✓                             |                                   | ✓   | ✓                            | ✓                             |                      |                     |           | ✓           |                        |           |
| Main Piston Cup Seals Leaking        |                              |                               | ✓                                 |   |                              |                               |                      |                     |           |             | ✓                      |           |
| Air Tube O-Rings Leaking             |                              |                               |                                   | ✓   | ✓                            |                               |                      |                     |           |             |                        | ✓         |
| Valve Disc Broken                    |                              |                               |                                   |   |                              |                               |                      | ✓                   |           | ✓           |                        |           |
| Gasket Failure Under Valve           |                              |                               |                                   |   |                              |                               |                      | ✓                   |           | ✓           |                        |           |
| Worn or Broken Clamp Springs         | ✓                            |                               |                                   |   |                              |                               | ✓                    |                     |           |             |                        |           |
| Feed or Stock Clamp Springs Reversed | ✓                            |                               |                                   |   | ✓                            |                               | ✓                    |                     |           |             |                        |           |
| Not Enough Air Line Oil              |                              |                               | ✓                                 | ✓   |                              |                               |                      |                     |           |             |                        |           |
| Retaining Plate Gasket Leaking       |                              |                               | ✓                                 |   |                              |                               |                      |                     |           | ✓           |                        | ✓         |
| Cushions Filled with Oil or Dirt     | ✓                            |                               | ✓                                 |   | ✓                            |                               | ✓                    |                     |           |             |                        |           |

## **WARRANTY**

We warrant our new parts against defects under normal use and service for a period of 2 years after date of shipment. Our obligation under this warranty is limited to replacing or repairing (at our option) the defective part without charge, F.O.B. our plant in Bloomfield, Connecticut. The defective part must be forwarded to our plant, freight-prepaid, for our inspection prior to replacement or repair. EXCEPT AS EXPRESSLY PROVIDED HEREIN, THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING A WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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All P/A products are sold for use only in accordance with our installation and operating instructions which accompany the products. P/A accepts no responsibility for any use or application not in accordance with our instructions, or for any modification or alteration of the product.

Accident-free press operation will result from a well developed, management-sponsored and enforced press safety program. P/A Industries is not responsible for notifying the user of this equipment of further changes in State or Federal laws, construction standards, or changes in P/A designed and built products.



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