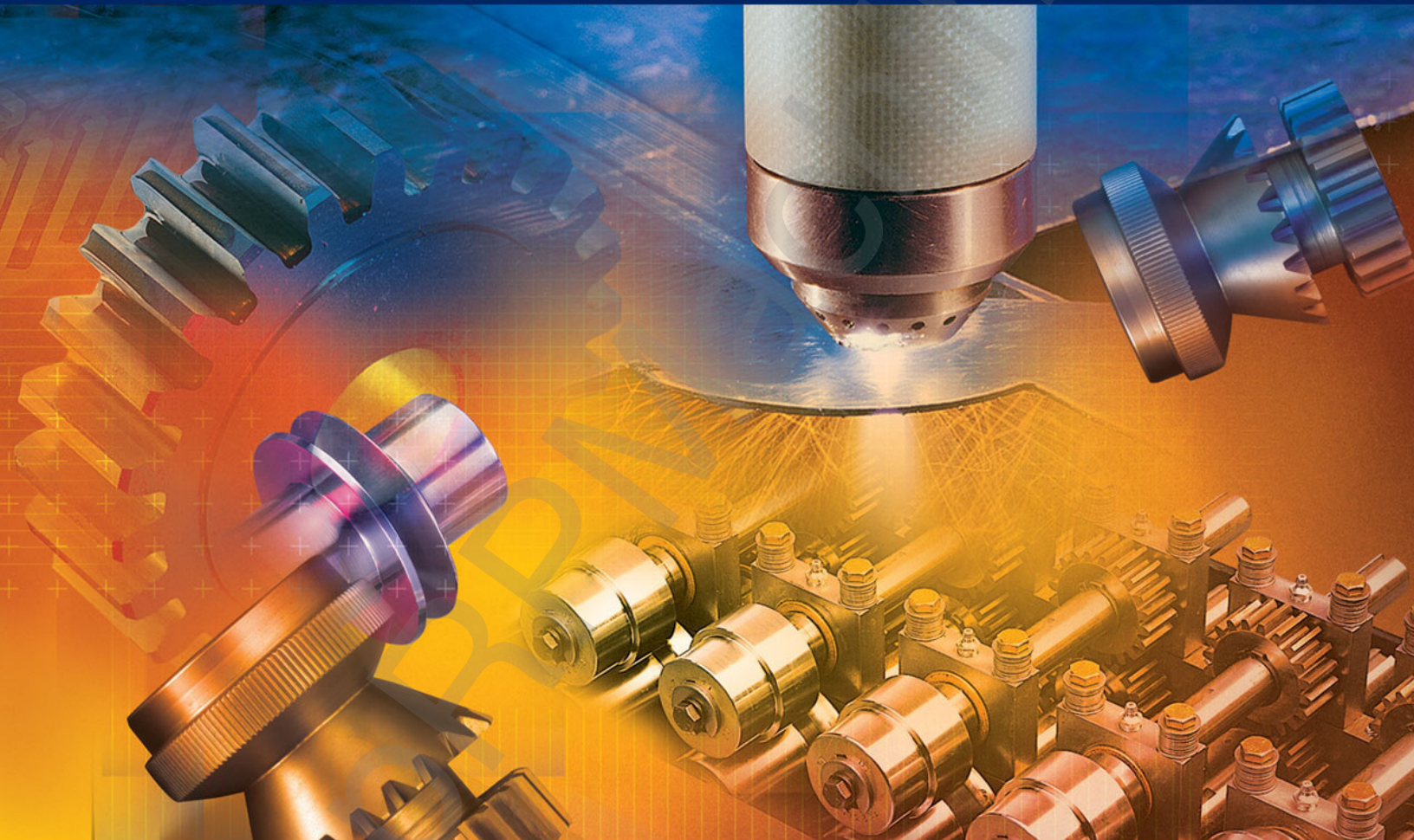


LOCKFORMER



INSTRUCTIONS &
PARTS DIAGRAM
Auto-Guide 16-18

LOCKFORMER

Auto-Guide 16-18 Instructions and Parts Diagram





WARNING

THIS EQUIPMENT IS DESIGNED TO BE OPERATED WITH ALL COVERS SECURED IN PLACE. OPERATION WITHOUT THESE SAFEGUARDS MAY RESULT IN CONDITIONS WHICH ARE HAZARDOUS TO THE OPERATOR AND OBSERVERS.

SAFETY GUIDELINES

Before operating the machine, study and follow the safety precautions in this section. These precautions are intended to prevent injury to you and your fellow workers. They cannot, however, cover all possible situations. Therefore, EXERCISE EXTREME CAUTION and use COMMON SENSE before performing any procedure or operation.

Safety Precautions BEFORE starting the machine(s)

- Only one person should control the machine(s). Never allow anyone to operate the controls while you are operating or working on this equipment. In addition to disconnecting power **always use lock outs and tagouts** to prevent accidental start-up when performing maintenance procedures.
- Keep your hands away from internal workings of the machinery when starting, running or stopping.
- Keep your work area clean. Remove all scrap, oil spills, rags, tools and other loose items that could cause you to slip, trip and fall.
- When cleaning the machine or any of its components, do not use toxic or flammable substances. Do not perform any cleaning while the equipment is running.
- Never override or disable any safety switch or safety interlock.
- If so equipped, make sure that hydraulic and pneumatic pressures are at specified levels before operating this equipment.
- **Do not operate the rollformer unless all covers and guards are in place.**
- Be sure that this Instruction Manual is kept near the machine so the operator can refer to it when necessary.
- Keep this equipment properly maintained.
- Always turn off power to the machine(s) at the main disconnect before performing any maintenance or adjustments so accidental start-up or electrocution cannot occur.

Safety precautions WHILE operating the machine(s)

- Never leave the work area while the equipment is in operation.
- Never leave the machine unattended while it is under power or in operation.
- Always be alert while operating machinery.
- Be alert for loose, worn or broken parts. Do not attempt to operate any machinery with such parts present or if the machinery is making unusual noises or actions.
- Avoid skin contact, prolonged breathing, or eye exposure to any stock lubrication fluid being used.
- Be aware of the locations of the **Power Off** or **Emergency Stop** button in case of an emergency.
- **Be sure all guards and covers are in place.**
- Continually observe the rollforming process and related equipment. If any unusual condition develops, immediately stop and inspect the machine.
- Protect yourself! Wear safety glasses. Do not wear loose clothing, neckties, or jewelry. If long sleeves must be worn, avoid loose cuffs and buttons. Tie back and contain long hair.
- Never adjust any roll feature or perform work near the rolls, gears or power take off while they are running.

General

If any pneumatic or hydraulic feature is used, disconnect the main supply and exhaust pressure and bleed the lines to prevent cycling on retained pressure.

Always shut off the power at the main disconnect switch before entering the electrical control box.

Do not use compressed air to clean the machines. Air pressure may drive dirt and small chip into the machine(s) bearing surfaces or cause bodily injury.

IMPORTANT

The information contained herein is to be use as a general guide only. For further safety information obtain and read the ANSI bulletin entitled:

ANSI B11.12-1996 Rollforming and Roll-Bending Machines safety. Requirements for Construction, Care and Use.

CONTACT: American National Standards Institute

11 West 42nd Street. New York, New York 10036



CAUTION

To provide clarity to points in question the illustrations and photos appearing in this manual are shown with covers and guards removed.
NEVER OPERATE THIS EQUIPMENT UNLESS ALL COVERS AND GUARDS ARE IN PLACE.



SAFETY GUIDELINES

You are **NOT** ready to operate this equipment if you have not read and understood all of the safety information in this manual.



WARNING

- Do not wear loose clothing, neckties, improper gloves, or jewelry while operating this machine. If long sleeves must be worn, avoid loose cuffs or buttons, Tie back or contain long hair.
- Wear proper gloves to prevent lacerations caused by sharp edges of stock as it travels through the forming operation.
- Never operate this equipment unless all covers and guards are properly installed.
- Be alert for loose, worn, or broken parts. Never operate this equipment unless it is in good working condition.
- As the stock enters the guides and feeds into the rolls, a pinch point is created as the stock advances. Keep hands clear of area and all pinch points.
- Always disconnect the main power supply power and install lock outs using a lockout / tagout procedure when making adjustments or repairs.
- When transporting, take into consideration that the machine is top heavy and may suddenly tip over.
- The machine is designed for fixed installations and is not intended for portability.

Remember that the information contained in this manual is only a portion of an adequate training program. It must be coupled with specific instructions for your application along with full information of national and local safety regulations that may apply.

Operating Instructions

The operation of the machine is dependent upon proper gauge settings. The heavier materials require a greater spring pressure than the lighter and the settings can be side by turning the rear adjusting dial (43412) counter clockwise until a stop is reached. Then turn adjusting dial clockwise the proper amount of turns as indicated in chart No. 1, at right.

The 14701 Adjusting Dial sets the proper clearance between the Knurled Forming Roll (11613) and Plain Forming Roll (11612). To operate machine properly, adjust the dial to thickness of material to be used and feed material with lead edge preformed into the rolls. (Performing can be done by inserting material into slot cut into lower right of machine table top.) Proper adjustments will result with a smooth regular flange. Too much pressure will create a "buckled" flange showing a heavy knurl marking on flanged edge of the material. Insufficient pressure will cause material to slip in the rolls and not be powered through the machine.

The buckled flange can also be caused by too much pressure being exerted by the pressure arm (40070). Consult setting chart in manual or data on machine. A slight change of the above settings may have to be made to suit variances in material.

An irregular flange on curve surfaces would be caused by not enough pressure on the pressure arm and the dial setting should be increased by a clockwise adjustment.

A section of material formed with a buckled flange can be corrected by moving Auto Guide lever arm roller assembly back and out of position. Then start flange back through the machine. Do not apply any pressure to material -- but only support piece as it goes through machine.

To eliminate galvanized accumulation on knurled forming roll it may be necessary from time to time to apply either kerosene or light machine oil to the knurled roll. This will aid in keeping the roll from over deposit of galvanized material. If galvanized material packs into knurl recesses it is.

When running materials, other than cold roll steel or galvanized, e.g. aluminum stainless or copper, a slight modification of the standard settings may be required to operate properly.

For Running Aluminum, Copper (soft) Materials:

The above materials will require a looser setting on both the front gauge (thickness) setting and pressure setting (spring pressure). Experience or test settings will be required. Should material shear at the corner, the damage could be caused by excessive pressure or metal pick-up and "galling" on the lifter button.

Where "galling" or metal pick-up is evident, the material will require lubrication to the part of the material being formed. Lubricants such as kerosene or light machine oil should prove adequate.

For Running Stainless Steel or Hard Brass Materials:

Increased spring pressure may be required for running certain types of stainless. A standard thickness setting is adequate. A drawing compound may be necessary to eliminate pick-up. A special aluminum bronze lifter button may be necessary for prolonged use of stainless materials. (A special quotation would be required for this button.)

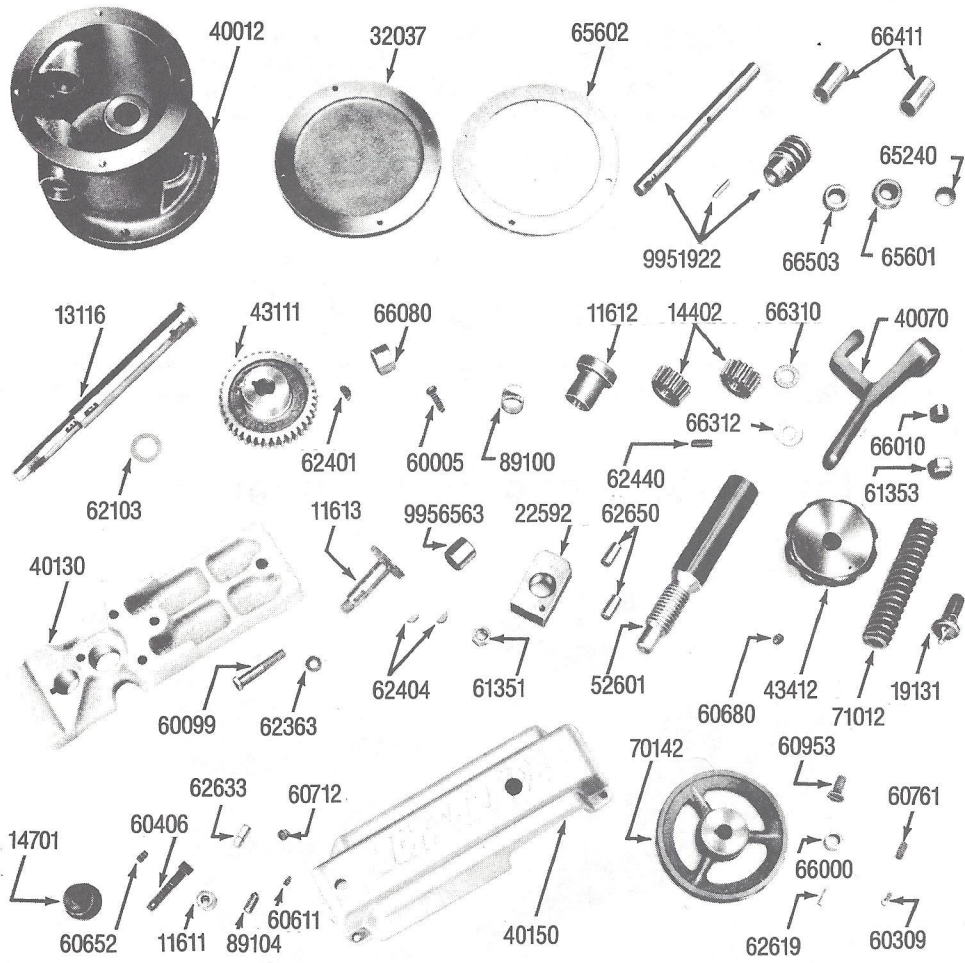
CHART No.1

With Rear Adjusting Handle (43412) all the way out (counter clockwise movement), settings for gauges as follows:

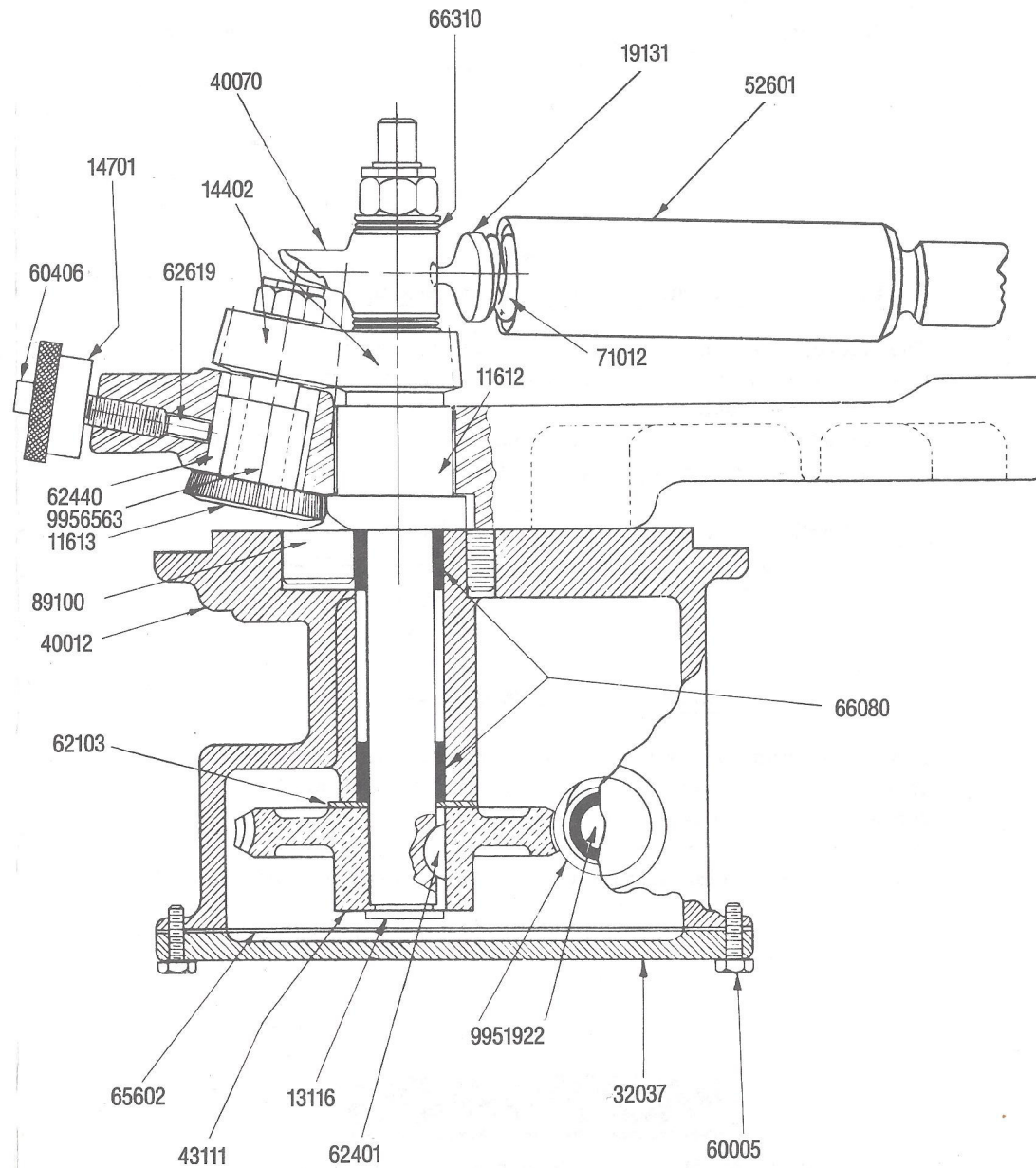
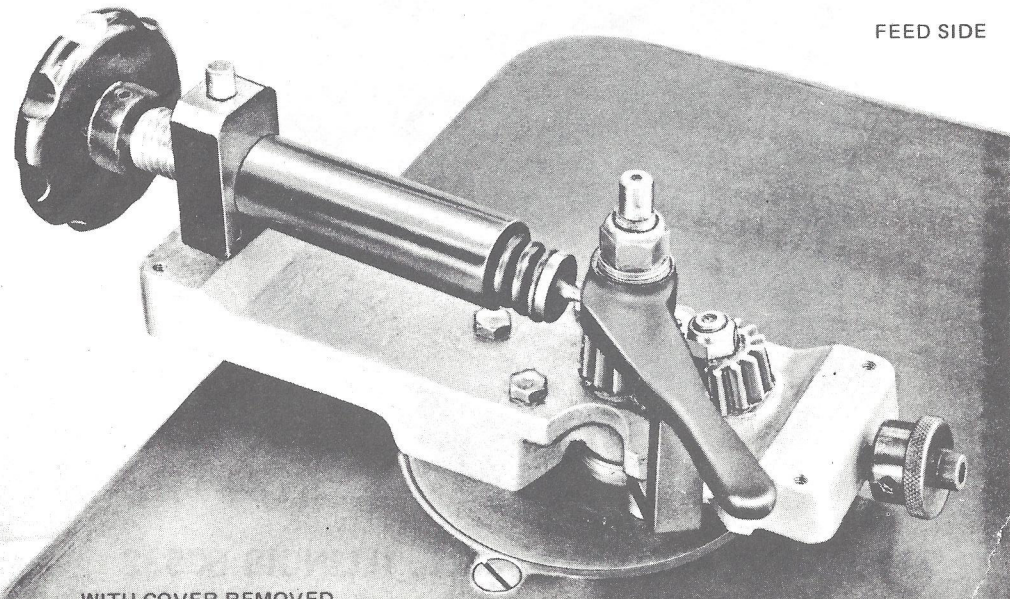
Settings Clockwise	To
• 1/2 to 1 turn	24-26 ga
• 1-1/2 to 2 turns	20-22 ga
• 2-1/2 to 3 turns	18 ga
• 3-1/2 to 4 turns*	16 ga

**Adjustment for 16ga material only*

INDICATE SERIAL NUMBER OF MACHINE WHEN ORDERING PARTS



FEED SIDE



Pittsburgh Models 16 and 18 Auto-Guide Part List

New Part No.	Description	Pieces per unit	New Part No.	Description	Pieces per Unit
40012	Gr. Hsg. AG 88010	1	40150	Topcvr. AG 88150	1
32037	Hsg.Cvr. AG 88020	1	68000	B88 Torr Brg.	1
65602	Gskt. 15028	1	60309	1/4-20 x 1/2 SHCS	4
9951922	Stl. Worm Gr. Assy.	1	60761	5/16-18 x 3/4 Sq. HSS	1
66503	605 Thrust Brg.	1	*58514	Stand Assy.	1
66411	AA832-5 Amplx. Brg.	2	*29469	Mtr Base	2
65240	7/8 Freeze Ptg.	1	*80030	3/4 HP 1 60 1866	1
65601	Oil Seal 6260	1	*70140	AC 33 x 5/8 Shv.	1
13116	Drv Shft.	1	*70142	AC 63 x 5/8 Shv.	1
62103	7/8 x .025 Wshr.	1	*70027	4L560 Belt	1
43111	Worm Gr. Bz. 70854	1	*80481	Bx. Conn. 1/2	2
62401	9 Wdrf. Key	3	*80431	Bx Cable 14-2 x 42	1
66080	B1412 Torr. Brg.	2	*60875	3/8-16 x 1CB	4
60005	1/4-20 x 3/4 HHCS	5	*61120	3/8-16 HN Hvy. St.	4
89100	Raw Lift Bttn.	1	*80204	Toggle Swch. 5011	1
11612	Pt. Form Roll	1	*80675	Handy Box Cvr.	1
14402	Gr Bvl.	2	*60048	5/16-18 x 1-1/4 HHCS	4
62404	61 Wdrf. Key	2	*60576	10-24 x 1/2 RHMS	1
66310	NTA 1018 Torr. Brg.	2	*60795	4 x 3/16 Dr. Scr. TP-U	4
40070	Comp. Arm AG 88070	1	*60797	4 x 1/4 D4 Scr. TP-U	8
66010	B108 Torr. Brg.	3	*60953	3/8-16 x1 FHSCS	4
61353	5/8-18 Stop Nut	1	*61101	5/16-18 HN Hvy. SF.	4
40130	Form Hd. AG 88130	1	*62010	5/16 x 1/16 Wshr.	8
60099	3/8-16 x 2 1/4 HHCS	3	*62029	3/8 x 1/16 Wshr.	4
62353	3/8 Lck. Wshr.	7	*62362	5/16 Lck Wshr.	4
11613	Knrl Roll	1	*62370	1/4 Lck. Wshr.	4
9956583	Inner Race Assy.	1	*66312	TRB1018 Torr Race	4
61351	1/2-20 Stop Nut	1	*80483	Bx Conn. 3/8	2
22592	Adj. Pvt. Nut	1	*80525	Cord Set 14-3 10	1
62650	1/2 x 1 DWL	2	*80602	Rg. Tng. Terminal	2
52601	Adj. Spring Tube	1	*80607	Insulating Cap	1
43412	Adj. Handle. 70912	1	*80608	Wire Joint	1
60680	3/8-16 x 3/8 SSS	1	*80650	Handy Box 4SSI	1
71012	Comp Sprg.	1	*85151	AG Pt Name Plate	1
19131	Spr Pvt. Rod	1	*85182	Instruction Plt	1
62440	Cncv Key	1	*85164	Lckform Logo	1
14701	Adj. Dial	1	14702	Adj. Dial	1
60652	5/16-18x 1/2 SSS	1	80020	1/2 HP-1-60-18-56	1
60406	3/8-16 x 13/34" SHCS	1			
62619	1/4x 1" DW1	1			
11611	Adj. Guide Roll	1			
62633	3/8 x 1 DWL	1			
89104	Sensory Cstg.	1			
60712	7/16-20 x 3/8 SSS Cup	1		*Not illustrated	
60611	1/4-20 x 3/8 SSS	1			

LOCKFORMER

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