

AGF-16

OPERATOR'S MANUAL

AUTO-GUIDE-FLANGER 16 gauge

INSTRUCTIONS AND PARTS DIAGRAM



CINCINNATI PRECISION MACHINERY 513-860-4133

VER. INT. AGF-16
06-2005


LOCKFORMER

A PRODUCT OF


More Productive Metalforming Solutions

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 chips 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**

WARRANTY

Our warranty on the products we manufacture is limited to repair or replacement without charge, of any part found to be defective in materials or workmanship. This warranty is for a period of one year (unless otherwise specified) from the date of shipment from our factory, for all mechanical features of the machine except purchased components that carry the warranty of the original manufacturer.

This warranty is conditioned on proper installation, maintenance and use of the equipment. The warranty will be void if the equipment is subjected to misuse or abused or if used beyond the standards in this manual, including material dimensions and gauge.

Warranty parts and components will be shipped freight collect from FORMTEK. If the defective part has not been returned to FORMTEK within 15 working days after receiving the replacement part, your company will be responsible for the cost of replacement.

The warranty provided in this clause is in lieu of all other warranties, express or implied, arising by law or otherwise, including the implied warranties of merchantability and fitness for a particular purpose which are hereby disclaimed by FORMTEK and excluded from this agreement. This warranty shall not be modified for any reason. In no event shall FORMTEK be liable for consequential or incidental damages, including the cost of assembly or disassembly, lost production or personal injury.



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.

The information in this document has been reviewed and is believed to be complete and accurate. No responsibility is assumed for minor inaccuracies or content not addressed in this manual. Furthermore, FORMTEK reserves the right to make changes to any products herein, at any time, to improve reliability, function, or design. FORMTEK does not assume any liabilities arising out of any use of any product described herein, nor does it convey any license under its trade secrets or patent rights nor the rights of others.

SAFETY FIRST

Common sense and **extreme** care must be used at all times during the operation and maintenance of this equipment. It is important that ALL personnel who will operate, maintain, or supervise the use of this equipment, read and understand the sections of this manual concerning **SAFETY** and the **OPERATION** of the equipment.

The equipment described in this manual was designed and manufactured for a specific function. It should not be used for any other purpose or outside of the design specifications as this may result in damage to the equipment and/or injury to the operator. Modifications or additions to this equipment should not be made. Any such modifications or additions will void the warranty and may subject the operator to injury.

Replacement and maintenance parts must be purchased from FORMTEK or the component original equipment manufacturer. Use of other parts may result in unsafe operation or failure of the machinery. If there is a question to the suitability of a part, proper personnel FORMTEK should be consulted.

In general, every piece of equipment must be treated with extreme care. While operating or maintaining this equipment, each individual must be aware of their own safety as well as the safety of all bystanders.

SAFETY SIGN-OFF SHEET

It is the employer's responsibility to instruct all persons who may come in contact with this equipment on the safe operation and maintenance of this equipment. If a language barrier or other restriction limits understanding, this manual can be read to the individual with appropriate follow up questions to verify understanding. Have each individual sign below only after demonstrating their understanding of the safety practices described in this manual.

I verify that I have read and understand the safety and operation sections for this equipment:

NAME	DATE	NAME	DATE

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 are 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.

ELECTRICALS

Standard electrical: 1.5 H.P. 110V.

Provide a grounded 110V power supply at the point of operation. If a 230V or 380V motor is ordered, install the power supply in compliance with the local and national electric codes. For further information contact a certified electrician or the proper Formtek/Lockformer personnel.

CAPACITY

Maximum capacity is 1.5mm (16 ga.) mild steel and galvanized steel.

CINCINNATI PRECISION MACHINERY 513-860-4133

OPERATING INSTRUCTIONS

BASIC OPERATION

The AGF-16 requires proper adjustments for the material gauge (thickness).

- ⚠️ **DISCONNECT POWER BEFORE ATTEMPTING TO MAKE ANY ADJUSTMENTS ON THE MACHINE.**

The forming roll clearance must be set for the gauge or material thickness which is done by adjusting the front adjusting dial. This clearance should match the material thickness that will be run in the machine.

1. Disconnect the power to the machine and install proper power lock outs to prevent accidental start-up while working on the machine!
2. With a small strip of the material to be formed or with a feeler gauge, set the adjusting dial so that the clearance between the forming rolls matches the material thickness. It will probably be necessary to set the adjusting dial an extra 1/8 of a turn tighter (45 degrees clockwise) to prevent material slippage during operation. **DO NOT SET** this too tight. Too tight of a setting will cause a heavy knurl mark, wrinkle, break the material or worse yet, damage the machine! (FIG.1)



FIG.1

3. The REAR ADJUSTING DIAL controls the spring pressure on the AUTOGUIDE compensating arm. Turn the dial counter clockwise for lighter settings. Run some test samples to determine the proper setting for the material you will run. (FIG.2)



FIG.2

4. Insert the lead edge of the piece into the table slot and bend down, or prebend the edge with a hand tool (sheet metal tongs, or pliers) to approximately 45 degrees. (FIG.3)



FIG.3

5. Feed the pre-bent lead edge into the forming rolls. (FIG.4)

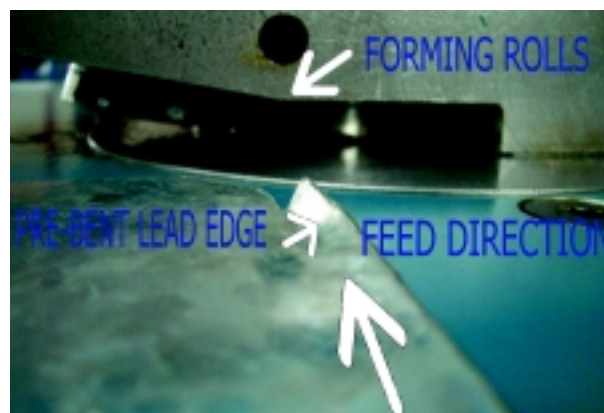


FIG.4

6. With the machine running, feed metal into and throw the rolls. (FIG.5)



FIG.5

7. As the metal flows through the forming rolls the operator should gently guide the piece through. Operation of the AGF-16 is very simple but it will take some practice to develop the proper feeling for the following;

- feeding the material in and through the forming rolls
- adjusting the AUTOGUIDE compensating arm.

8. This AUTOGUIDE feature is activated by moving the compensating arm forward. The operator has the option of not using the AUTOGUIDE feature. Leave the compensating arm in the back position in that case. (FIG.6)



FIG.6

9. If the piece is not formed completely. The operator may feed the piece through the forming rolls a 2nd time in an effort to obtain the desired results.

- Apply Lockformer GALV-OFF for proper lubrication in the forming rolls and to minimize galvanize build-up in the forming rolls.

MAINTENANCE

⚠ DISCONNECT POWER BEFORE ATTEMPTING TO MAKE ANY ADJUSTMENTS ON THE MACHINE.

Install power lock outs to prevent accidental start-up while working on the machine!

LIFTER BUTTON ADJUSTMENT



FIG.7

The lifter button is very important adjustment. It functions as the beginning forming die and allows for the material to transition smoothly into the forming rolls. (FIG.7)

The height of the lifter button is controlled from a set screw underneath and is adjusted by turning the set screw. Raise the lifter button to increase the sharpness of the bend or when lighter gauges (thinner material) do not form or there is no grip on the metal.

-Heavier gauges may require lowering the lifter button if the metal is breaking. Before adjusting the lifter button make sure the FRONT ADJUSTING DIAL and the forming rolls are set properly for the material thickness. (see section in this manual "BASIC OPERATION")



To access this allen head screw you must remove the side panels and reach underneath the machine. Use a 6mm allen wrench to adjust the lifter button. (FIG.8)

FIG.8

SENSORY CASTING

The SENSORY CASTING helps control the height of the flange. (See “TROUBLE SHOOTING” below.)



Use a 5mm allen wrench to adjust the Sensory Casting.(FIG.9)

FIG.9

TROUBLE SHOOTING

Buckled or rippled flange

- Too much pressure on the compensating arm. Reduce pressure by turning the rear adjusting dial counter clockwise
- Too much pressure on the front adjusting dial , reduce pressure by turning the dial counter clockwise/

Material stalls in the rolls

- Increase the pressure on the front adjusting dial to insure that the metal drives threw the forming rolls.
- The lifter button may be too high. Reduce the height of the lifter button. This adjustment is made from underneath with an allen wrench

Inconsistently formed flange

- Check the Sensory casting for wear and that it is not pushing too hard on the material or too high were it has no effect. Replace this part if it is worn
- Check the Lifter button for excessive wear and its height setting. Replace if it is showing signs of excessive wear.

LUBRICATION

- Gear box- use 90 weight gear oil if filling the gear box. There is small fill hole on the top of the casting. The proper oil level is the half way point of the site plug (you must remove the side panels to see the site plug)

* Do not overfill ! Running the machine while overfilled will damage the oil seals!

AGF-16 PARTS

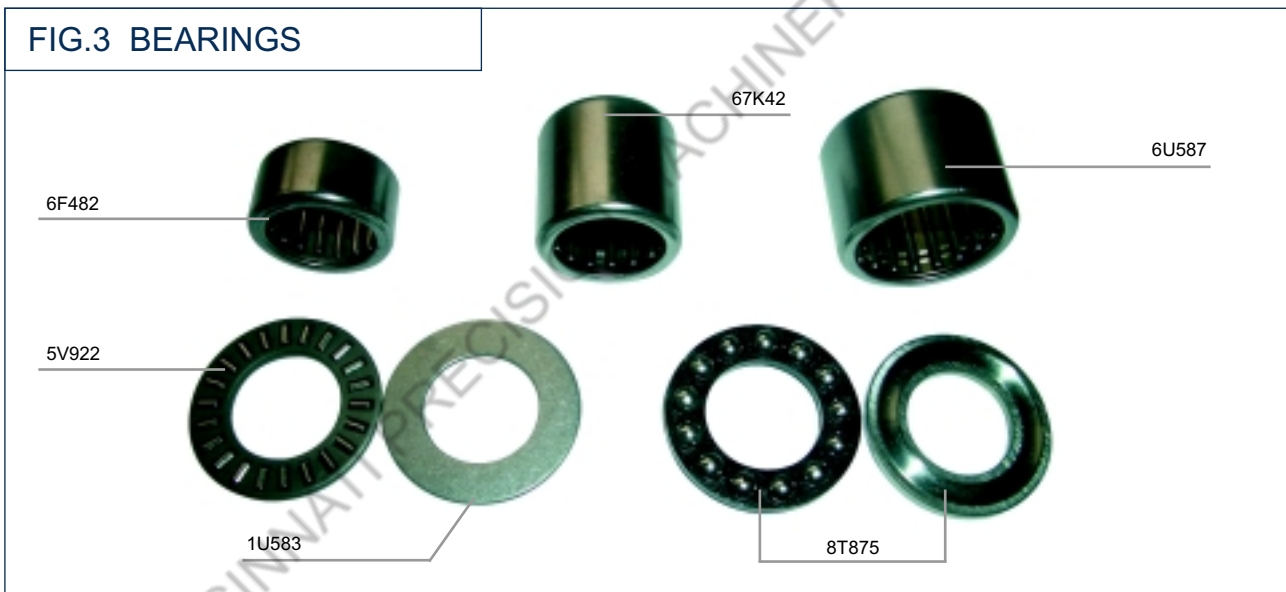


FIG.6 DRIVE GEARS

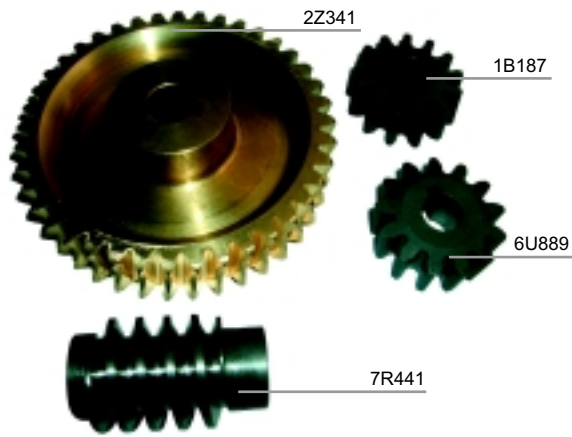


FIG.7 MISC.PARTS

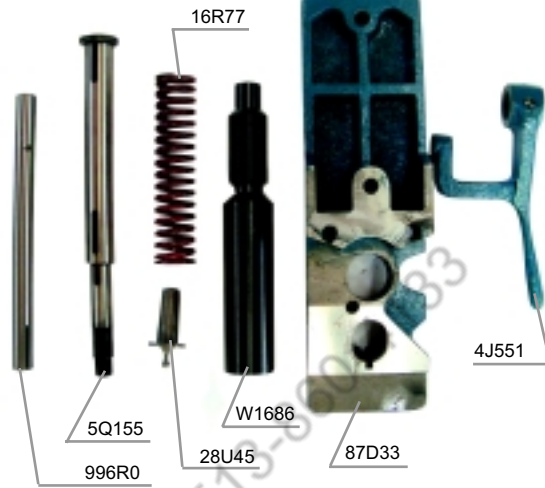


FIG.8 DIALS

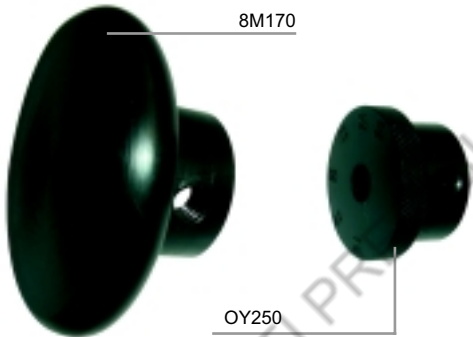


FIG.9 HOUSINGS



FIG.10 BLOCK & PIN

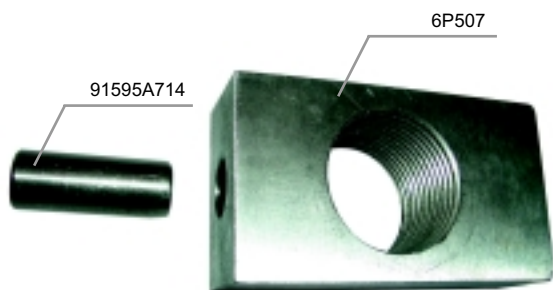


FIG.11 KEYS

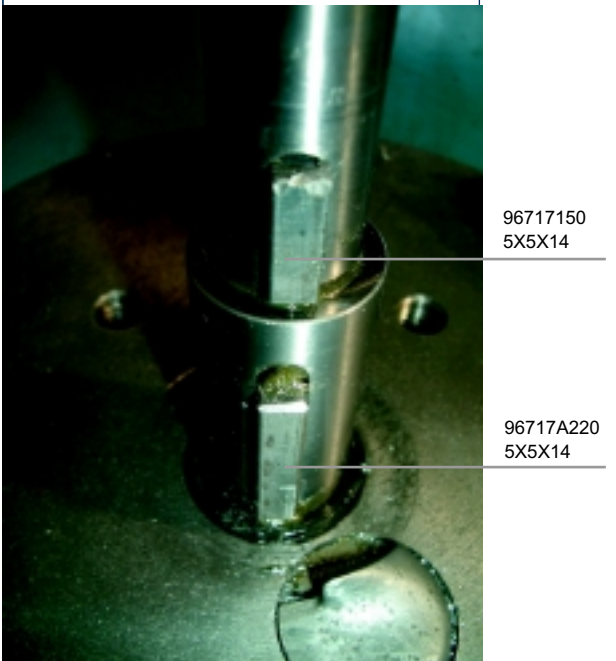


FIG.12 CALIBRATION DIAL & SPRING

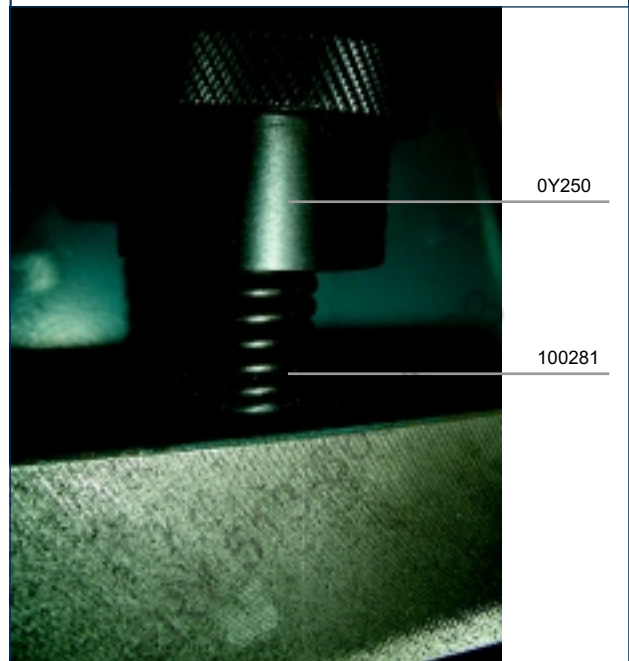


FIG.13 MOTOR/PULLEYS/BELT

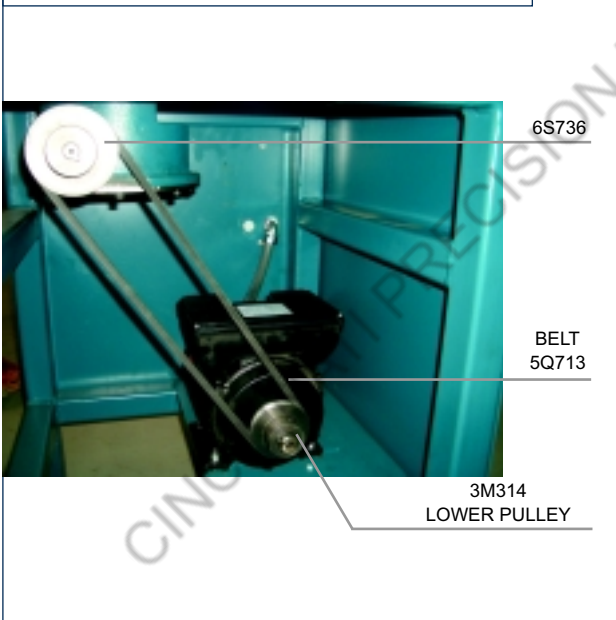


FIG.14 COMPENSTATING ARM
GUIDE ROLL



FIG.15 RING

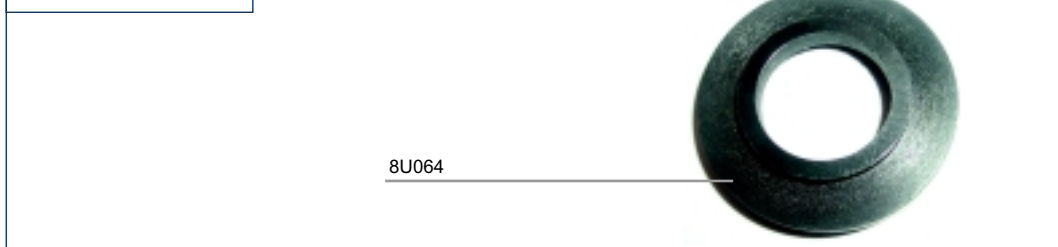
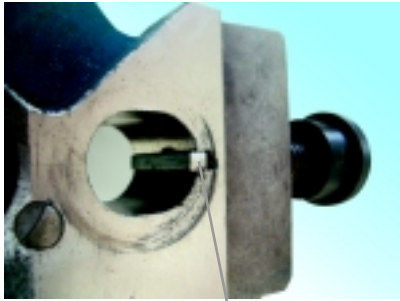
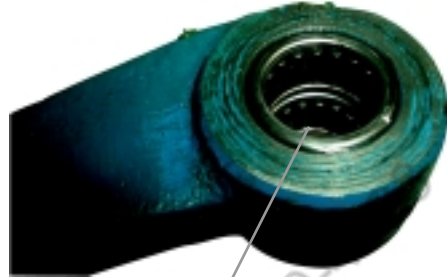


FIG.16 KEY



90457A140

FIG.17 COMPENSTATING
ARM BEARINGS



67K42

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