DW Guillotine 208/416
User's Manual

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Table of Contents

Chapter 1

About the DWG 208 and 416

In This Chapter

PURPOSE OF THIS MANUAL

This manual explains how to operate and maintain the DW (diamond wire) Guillotine. It includes instructions for set-up, operation, and maintenance. It also contains parts lists, diagrams, and service information to help you order replacement parts and perform user-serviceable repairs.

Before operating the DW Guillotine, you should read through this manual and become familiar with all instructions.

HOW TO USE THE MANUAL

This manual is organized to help you quickly find the information you need. Each chapter describes a specific topic on using or maintaining your equipment.

Each page is designed with two columns. This large column on the inside of the page contains instructions and illustrations. Use these instructions to operate and maintain the equipment.

The narrower column on the outside contains additional information such as warnings, special notes, and definitions. Refer to it for safety notes and other information.

Throughout this manual, refer to this column for warnings, cautions, and notices with supplementary information.

SYMBOLS AND WARNINGS

The following symbols are used throughout this manual to indicate special notes and warnings. They appear in the outside column of the page, next to the section they refer to. Make sure you understand what each symbol means, and follow all instructions for cautions and warnings.

WARNING

A WARNING alert with the safety alert symbol indicates a potentially hazardous situation that **could** result in **serious injury or death**.

CAUTION

A CAUTION alert with the safety alert symbol indicates a potentially hazardous situation that **could** result in **minor or moderate injury**.

CAUTION

A CAUTION alert with the damage alert symbol indicates a situation that **will** result in **damage to the equipment**.

IMPORTANT

An IMPORTANT alert with the damage alert symbol indicates a situation that **may** result in **damage to the equipment**.

This is the **safety alert symbol**. It is used to alert you to **potential personal injury hazards**. Obey all safety messages that follow this symbol to avoid possible injury or death.

This is the **equipment damage alert symbol**. It is used to alert you to **potential equipment damage situations**. Obey all messages that follow this symbol to avoid damaging the equipment or workpiece on which it is operating.

NOTE

This symbol indicates a user note. **Notes** provide additional information to supplement the instructions, or tips for easier operation.

NOTE

A NOTE provides supplementary information or operating tips.

MANUAL UPDATES AND REVISION TRACKING

Occasionally, we will update manuals with improved operation or maintenance procedures, or with corrections if necessary. When a manual is revised, we will update the revision history on the title page.

You may have factory service or upgrades performed on the equipment. If this service changes any technical data or operation and maintenance procedures, we will include a revised manual when we return the equipment to you.

Current versions of E.H. Wachs Company manuals are also available in PDF format. You can request an electronic copy of this manual by emailing customer service at sales@ehwachs.com.

EQUIPMENT DESCRIPTION

The DW Guillotine is designed to perform fast, square cut-offs of pipes using a diamond-studded wire that cuts through all common pipe materials. The machine is compact, light-weight, and easy to set up. Two models with different pipe size capacities are available:

- The DW Guillotine 208 cuts pipes 2”-8” (51-203 mm) in diameter.
- The DW Guillotine 416 cuts pipes 4”-16” (102-406 mm) in diameter.

The 2 models have the same hydraulic power requirements and operating features. The only differences between the models are the size of the machine and the cutting capacity. The setup and operating procedures in this manual apply to both models.

NOTE

A Type II circuit provides 7-9 gpm flow at up to 2000 psi. **Do not exceed 10 gpm or 2000 psi from the HPU.**

Hydraulic Specifications

The DW Guillotine operates on a standard Type II hydraulic tool circuit. Hydraulic operating specifications are the following:

- Flow operating range: 7-10 gpm (26-34 l/min); 7.5 gpm (28 l/min) recommended for maximum cutting wire life
- Pressure relief: 2000 psi (138 bar)
- Maximum oil temperature: 140° F (60° C).

Operating Features

The following figures illustrate the machine's features and components. The photos show the 208 model; the features of the 416 are the same.

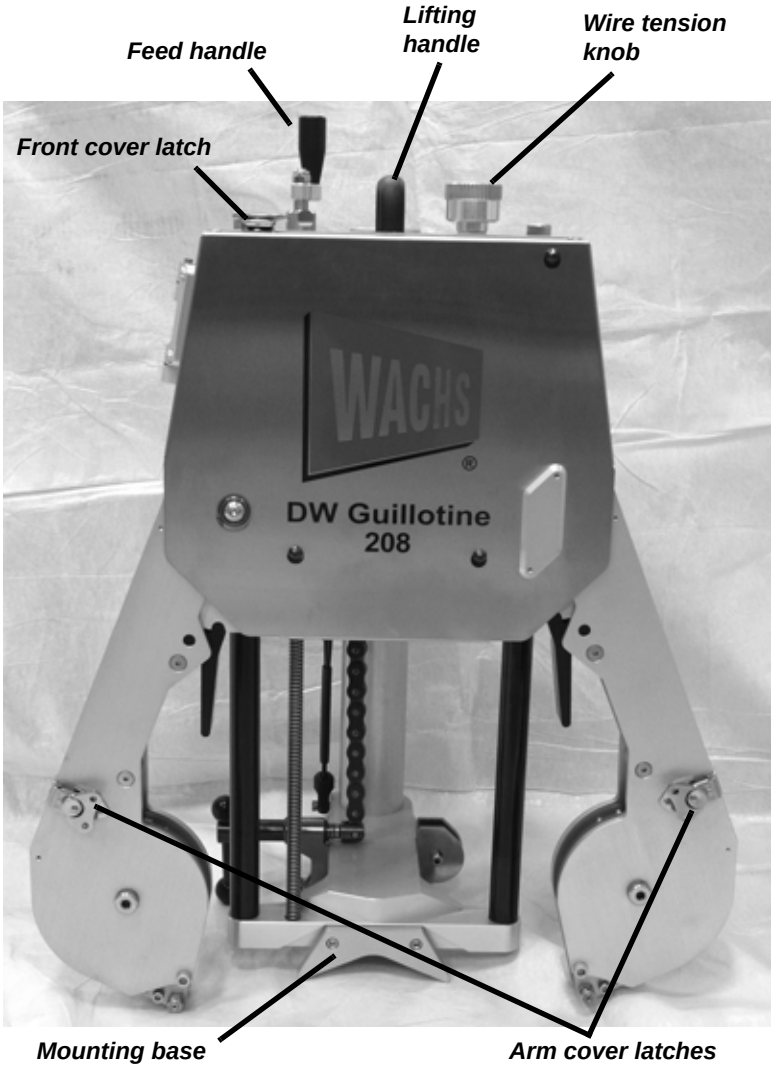


Figure 1-1. The photo shows the DW Guillotine major components.

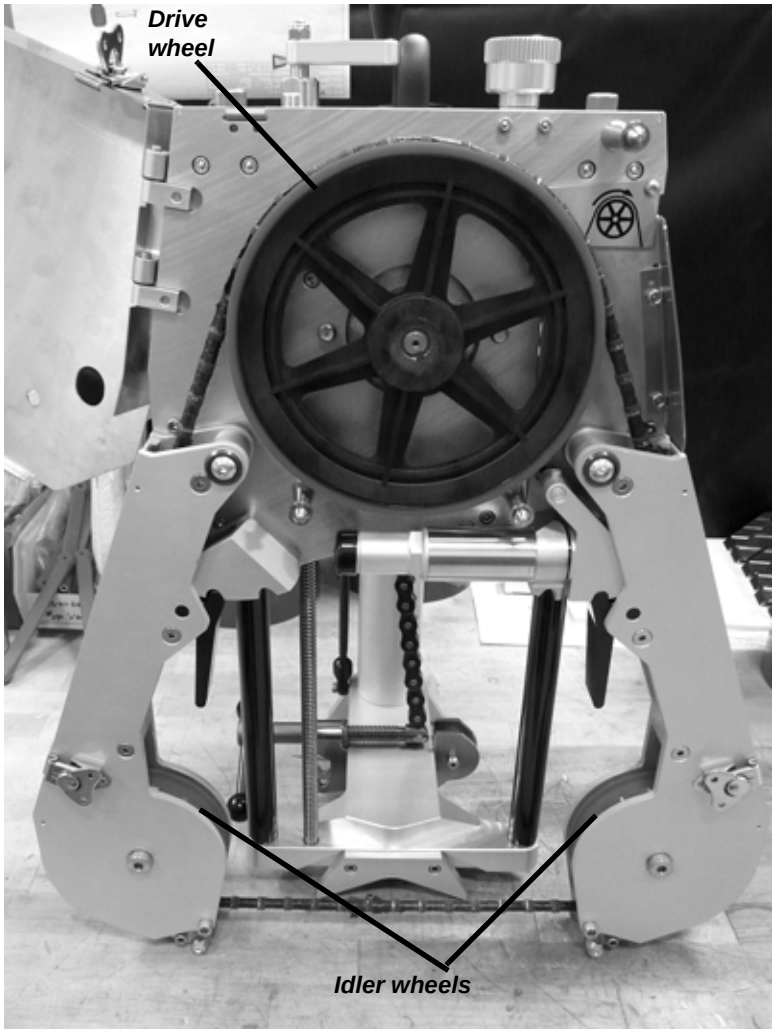


Figure 1-2. The photo shows the cutting wire installed on the wheels.

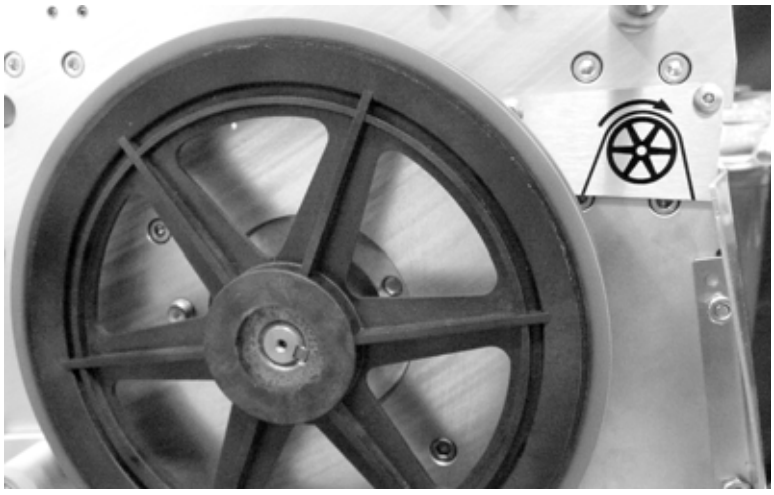


Figure 1-3. The direction label under the top cover shows the wire direction.

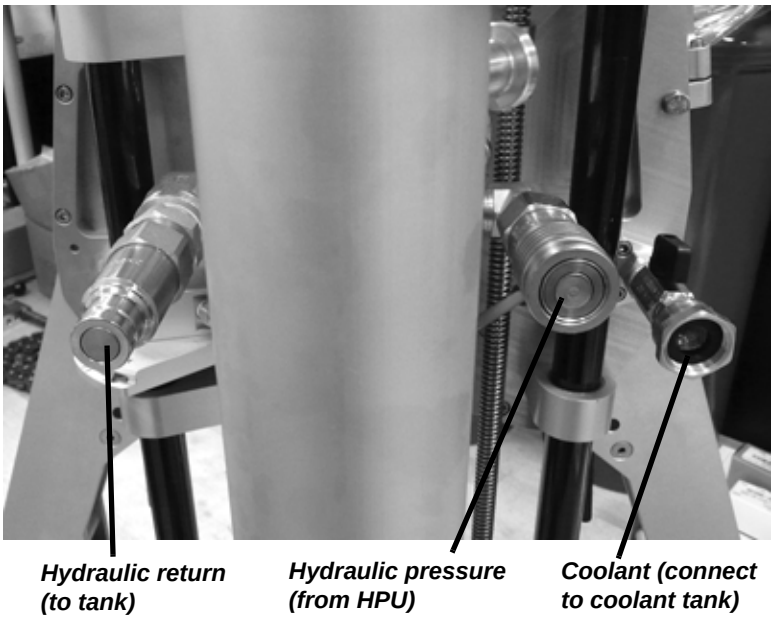


Figure 1-4. The photo shows the hydraulic and coolant connectors.

Figure 1-5. The photo shows the controls on the machine.

Figure 1-6. Refer to the wire tension gauge to set the tension and operate the saw.

- Before cutting, turn the tension knob to set the pointer at the **SET** position.
- During cutting, operate the feed handle to keep the pointer at the **CUT 1** position.
- For cutting heavy wall pipe, operate the feed handle to keep the pointer at the **CUT 2** position.

DISMANTLING AND DISPOSAL

Hydraulics and Lubricants

- Whenever servicing or dismantling the equipment, always capture hydraulic fluid and lubricants. Recycle or dispose of fluids as required by local environmental law.
- Do not dispose of fluids by pouring down the drain.

Machinery and Components

- Recycle or dispose of metal and other equipment components as required by local environmental law.

Chapter 2
Safety

E.H. Wachs takes great pride in designing and manufacturing safe, high-quality products. We make user safety a top priority in the design of all our products.

Read this chapter carefully before operating the DW Guillotine. It contains important safety instructions and recommendations. Tool operators and maintenance personnel must always comply with the safety precautions in this manual, and on the stickers and tags attached to the equipment.

In This Chapter

SAFE OPERATING GUIDELINES

Follow these guidelines for safe operation of all E.H. Wachs equipment.

- **READ THE OPERATING MANUAL.** Make sure you understand all setup and operating instructions before you begin. Keep this manual with the machine.
- **INSPECT MACHINE AND ACCESSORIES BEFORE USE.** Before starting the machine, look for loose bolts or nuts, leaking lubricant, rusted components, worn or damaged fittings, and any other physical conditions that may affect operation. Properly maintaining the machine can greatly decrease the chances for injury.
- **ALWAYS READ STICKERS AND LABELS.** Make sure all labels and stickers are in place, clearly legible, and in good condition. Refer to “Safety Labels” later in this chapter for label locations on the machine. Replace any dam-

Look for this symbol throughout the manual. It indicates a personal injury hazard.

aged or missing safety labels; see Chapter 5 for ordering information.

- **ESTABLISH A TRAINING PROGRAM.** Ensure that all operators know how to operate the machinery safely. Do not operate the machinery unless you have been trained, or are under the supervision of an instructor.
- **KEEP CLEAR OF MOVING PARTS.** Keep hands, arms, and fingers clear of all rotating or moving parts. Always turn the machine off and disconnect the power source before doing any adjustments or service.
- **SECURE LOOSE CLOTHING AND JEWELRY.** Secure or remove loose-fitting clothing and jewelry, and securely bind long hair, to prevent them from getting caught in moving parts of the machine.
- **FOLLOW SAFE PROCEDURES FOR HANDLING LUBRICANTS.** Refer to the manufacturer's instructions and the Material Safety Data Sheets.

Safe Operating Environment

•Do not use this equipment in a potentially explosive atmosphere. Fire or explosion could result, with the risk of serious injury or death.

•Provide adequate lighting to use the equipment, in accordance with worksite or local regulations.

- **KEEP WORK AREA CLEAR.** Keep all clutter and nonessential materials out of the work area. Only people directly involved with the work being performed should have access to the area.
- The end user is responsible for providing a safe hydraulic hose management procedure for the worksite. This should take into account mechanical protection of the hoses and trip hazards presented by the hoses. It is strongly recommended that the end user conduct a risk assessment to identify these risks and specify a suitable control action for hose management.
- Start in a work area without bystanders. The operator must be familiar with all prohibited work areas in the environment, and all worksite safety guidelines and procedures.

Safety Alerts in This Manual

The following alerts are used throughout this manual to indicate operator safety hazards. In all cases, these alerts include a notice describing the hazard and the means to avoid or reduce risk. Carefully read all safety alerts.

This icon is displayed with any safety alert that indicates a personal injury hazard.

⚠ WARNING

This safety alert, with the personal injury hazard symbol, indicates a potentially hazardous situation that, if not avoided, **could** result in **death or serious injury**.

⚠ CAUTION

This safety alert, with the personal injury hazard symbol, indicates a potentially hazardous situation that, if not avoided, **could** result in **minor or moderate injury**.

Protective Equipment Requirements

Protective Clothing

Wear safety shoes when operating or servicing the equipment. Serious injury could result from dropping the machine or its components.

Do not wear gloves while operating the DW Guillotine. Gloves are an entanglement hazard with moving parts.

Eye Protection

The Eye Protection hazard label is affixed to the machine. Always wear impact-resistant eye protection while operating or working near this equipment.

NOTE

Gloves should be worn when cleaning up chips and other cutting debris. Chips can be very sharp and can cause serious cuts. **Do not wear gloves while operating the DW Guillotine.**

Hearing Protection

The Hearing Protection hazard label is affixed to the machine. The highest continuous noise levels recorded for this equipment exceed 80 dB(A). Equipment operators/maintainers must wear hearing protection.

SAFE OPERATION OF THE DW GUILLOTINE

Intended Uses

The DW Guillotine is designed to cut pipes of various materials using an abrasive diamond wire. The machine mounts to the workpiece being cut off; the workpiece must be secure and stable to hold the machine, or be adequately supported. Do not mount the DW Guillotine on non-cylindrical workpieces.

Proper Use of the DW Guillotine

WARNING

Exceeding the maximum hydraulic pressure or flow rate can result in equipment damage or operator harm.

- This equipment is to be operated, serviced, and maintained only by qualified, trained personnel.
- Hydraulic pressure to the DW Guillotine must not exceed 2250 psi (155 bar). It is the operator's responsibility to install and set a pressure limiting relief valve on the hydraulic power unit. Normal operating pressure is 2000 psi (137 bar).
- Hydraulic flow to the DW Guillotine must not exceed 10 gpm (38 l/min). Normal operating flow is 7-10 gpm (26-38 l/min).
- If your HPU/PTO flow is not adjustable, install Wachs valve part no. 14-402-00 in-line to limit flow.
- Use the DW Guillotine only on horizontal pipe. The clamping system is not designed to hold it on a vertical pipe.
- Make sure the equipment is stable when attached to the workpiece for the operation. The mounting chain must be tightened securely—as tight as you can get it. Ensuring stability of the installed tool is the responsibility of the operator.
- Make sure the workpiece is supported adequately for installation of the equipment. This includes supporting

any workpiece "fall-off" section when severing the workpiece. Ensuring support of the workpiece is the responsibility of the operator.

- Mount the saw so that the controls are at an appropriate height and convenient to operate. The recommended height of the controls is 2-5 ft (0.6-1.5 m).
- Use water or coolant on the cutting wire when operating the DW Guillotine. Water/coolant is required to cool and lubricate the wire during cutting, and to reduce air-borne cutting debris. Excessive high temperatures will cause premature damage to machine components, and potential burn hazards.
- Tooling on any cutting equipment—including lathe tools, saw blades, abrasive wire, etc.—may get very hot. Do not touch tooling until you have made sure it is cool enough to handle.
- DO NOT wear gloves when operating the DW Guillotine. Gloves can become entangled in rotating machinery, causing serious injury. (You can wear gloves when removing or cleaning up chips and cutting debris. Chips can be very sharp and cause cuts.)
- Before performing any service on the equipment, disconnect the power source. Follow all lock-out/tag-out procedures required at the worksite.

Hydraulic Powered Equipment

- Be sure all hoses are connected for correct flow to and from the DW Guillotine.
- Hydraulic components such as hoses, motors, and manifolds will get hot during operation and may cause burns. Do not touch hydraulic components, except for operator controls, during or after operating the machine.

WARNING

Injection of hydraulic fluid through the skin is a serious injury that can result in infection, tissue damage, and possible loss of limb. **Seek medical treatment immediately.** First aid is not sufficient treatment for injection injury.

- **Hydraulic injection injury**—A pinhole in a hydraulic hose or fitting can eject fluid with enough force to pierce skin. Check hoses and fittings regularly for leaks; see the instructions in Chapter 4. **Do not use bare hands to check for leaks while the system is pressurized.** If you suspect a leak, move a piece of paper or cardboard at least 6 inches (15 cm) over the suspicious area and watch for fluid spraying on the surface.

Loss or Shut-Off of Power Supply

- If the power source to the equipment is lost, immediately set the ON/OFF lever to the OFF position (horizontal).
- Disconnect power from the equipment and lock out the power supply immediately to prevent accidental restarting of the machine.
- Follow all lock-out/tag-out procedures required at the worksite when disconnecting or servicing the equipment.

Misuse of Equipment

- Do not use the machinery for any purpose other than the procedures described in this manual.
- Do not use the machinery in a potentially explosive environment.
- Do not use the machinery to cut pipes containing explosive materials.
- Do not operate the machinery without all covers in place.
- Do not climb or step on the machinery.
- Do not reverse tool direction by changing fluid flow direction. **The DW Guillotine should never be operated in reverse direction.**
- Do not perform any set-up, maintenance, adjustments, service, or disassembly of the machinery without first disconnecting the hydraulic hoses and performing the required lock-out tag-out (LOTO) procedure to isolate power from the DW Guillotine.
- Always put the ON/OFF handle in the OFF position when the machine is not operating, to prevent accidental starting of the machine (for instance, by turning on the HPU while connected to the DW Guillotine).

Potential Hazards

Cutting Parts. The DW Guillotine can cut human flesh if contact is made while the wire is rotating. Keep clear of all moving parts when operating the machine.

Hot Surfaces. Hydraulic components and the cutting wire become hot during operation. Do not touch any surface before making sure it is not hot enough to cause burns.

Noise Hazard. The highest continuous noise levels recorded for this equipment exceed 80 dB(A). Equipment operators/maintainers must wear hearing protection.

Flying Debris. The DW Guillotine creates airborne dust and debris during cutting. Always wear impact-resistant eye protection while operating or working near this equipment. Use water on the diamond wire during cutting to reduce heat and suppress airborne debris.

High-Pressure Hydraulic Fluid. A pinhole in a hydraulic hose or fitting can eject fluid with enough force to pierce skin. Check hoses and fittings regularly for leaks. **Do not use bare hands to check for leaks while the system is pressurized.**

Outdoor Use. The DW Guillotine is designed for outdoor use. Do not operate the machine outdoors during or immediately after (30 minutes) an electrical storm.

Lifting Hazard. The DWG 208 weighs 54 lb (25 kg). The DWG 416 weighs 64 lb (29 kg). Use of a lifting device is recommended when moving the machine or mounting it on the workpiece. The DW Guillotine can be lifted by two operators. Make sure that there is stable footing and adequate clearance to handle the machine comfortably.

Ignition/Explosion Hazard. The DW Guillotine can produce heat and sparks during cutting. It is designed to cut pipes that carry water as a medium; it is not intended for use with pipes that carry any type of hydrocarbon (petroleum-based product) or other ATEX-classified materials. To reduce the risk of fire or explosion, do not use this wire saw for cutting pipe containing these materials. The user assumes all risks if this wire saw is misused in this type of application.

Residual Risks

- Hot surfaces on hydraulic components after operation.
- Hot surfaces on the cutting wire and the workpiece after cutting.
- Cut hazards of abrasive cutting wire.
- Noise hazard during operation of the machine.
- Entanglement hazards from moving parts of the machine.
- Handling of potentially hazardous materials, including fluids and lubricants used for operation and maintenance of the machine.
- Trip hazards from hydraulic hoses.
- Slip and fall hazards from spilled hydraulic fluid or lubricants.

Disconnecting Power

Power is disconnected by removing the hydraulic hoses from the fittings on the DW Guillotine. The wire drive mechanism will not operate or move when power is disconnected.

Disconnecting the hydraulic hoses from the fittings on the machine is the only way to completely isolate power from the DW Guillotine. Always disconnect the hoses when the machine is not in an operating situation.

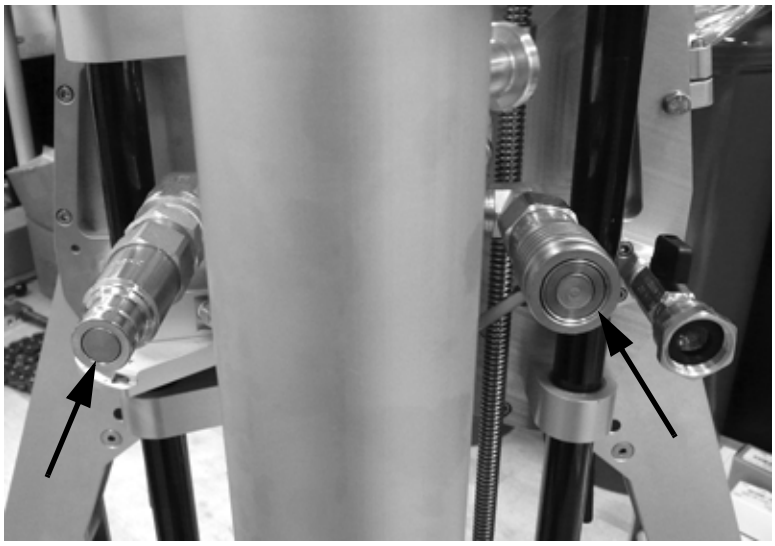


Figure 2-1. To disconnect power, remove the hydraulic hoses from their fittings.

Safe Lifting and Handling

Saw Only

- When lifting and positioning the machine, make sure that there is stable footing and adequate clearance to handle the saw comfortably.
  - The DWG 208 weighs 54 lb (25 kg).
  - The DWG 416 weighs 64 lb (29 kg).
- Use the lift handle on the top of the machine to lift and carry it. The machine is designed to be carried vertically, in its operating orientation.
- You can use a lifting device to move the machine or mount it on the workpiece. Attach the lifting device to the lift handle on top of the machine.

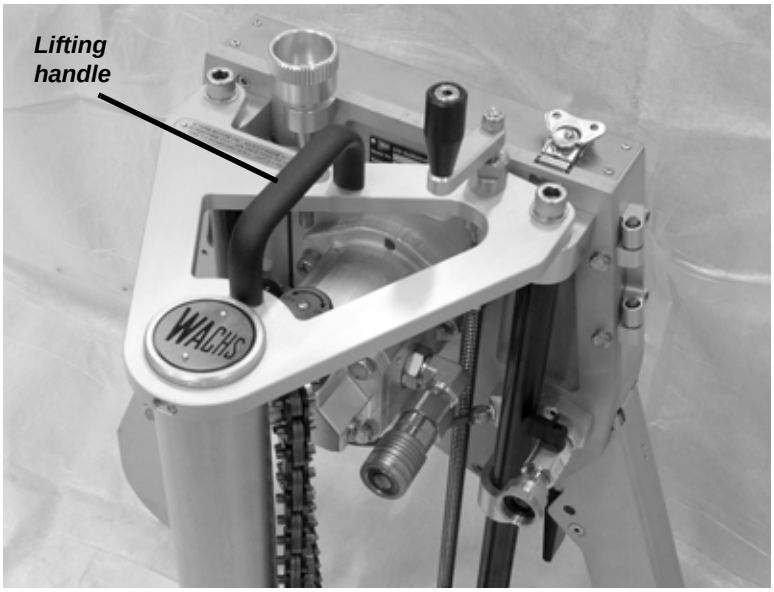


Figure 2-2. Lift the DW Guillotine by the handle on the top of the frame. If using a lifting device, attach it to the handle with a strap or hook.

Saw in Storage Cart

- The DWG 208 in its storage cart, with empty sprayer tank, weighs 86 lb (39 kg).
- The DWG 416 in its storage cart, with empty sprayer tank, weighs 128 lb (58 kg).
- Use the handle on top of the cart to roll the cart and saw on the wheels. **Do not lift the cart and saw by the top handle.**

- You can lift the cart by the top tubes of the frame. Grab the cart by the tubes (one person each side), or wrap a lift strap around both tubes and use a lifting device.

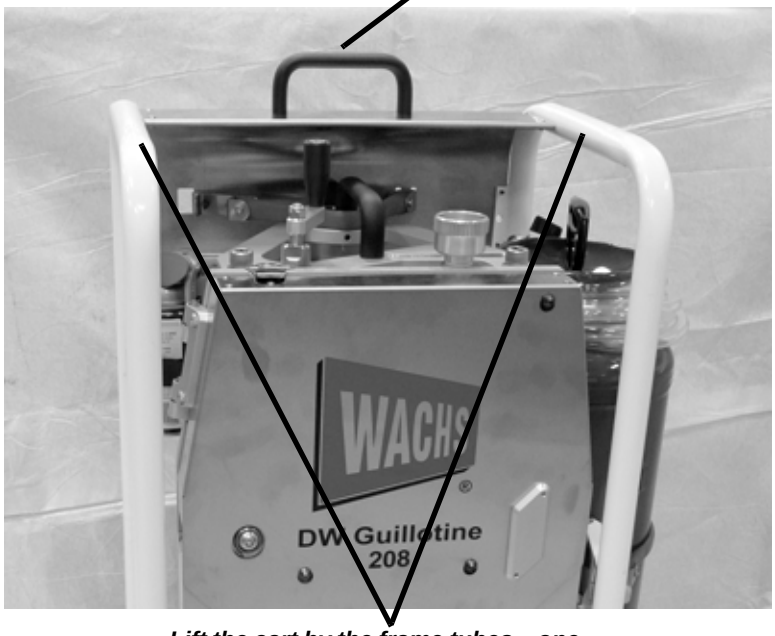


Figure 2-3. Lift the saw and cart by the cart frame, as shown.

LOCK-OUT/TAG-OUT

Before performing any service to the DW Guillotine, de-energize it by the following steps:

- Make sure the ON-OFF lever is in the OFF position.
- Disconnect the hydraulic hoses from the DW Guillotine.

Before re-connecting the hydraulic hoses, **always** make sure the ON-OFF lever is in the OFF position.

There is no lock-out/tag-out mechanism on the DW Guillotine. If your worksite has lock-out/tag-out procedures for the power supply, follow those procedures to prevent turning on the power to the saw.

SAFETY LABELS

The following safety labels are included on the machine. Always keep labels and warning stickers legible. If any labels are lost or damaged, order replacements. See ordering information and parts lists in Chapter 5.

Figure 2-4. The "Read User Manual" label (left) and "Read Service Manual" label (right) are affixed to the DW Guillotine.

Chapter 3

Operating Instructions

In This Chapter

STORING THE SAW IN THE CART

Always keep the saw in its storage cart when not in use. The cart protects the machine, and has wheels for easily moving the saw.

To remove the saw from the storage cart:

1. Disconnect the storage strap on the right side of the cart.

Figure 3-1. Disconnect the storage strap to remove the saw from the cart.

2. Lift the saw out of the cart by its lifting handle.

Figure 3-2. Lift the saw out of the cart by its handle.

To store the saw in the cart:

3. There are alignment brackets on the base of the cart. Set the mounting base of the saw on these brackets.

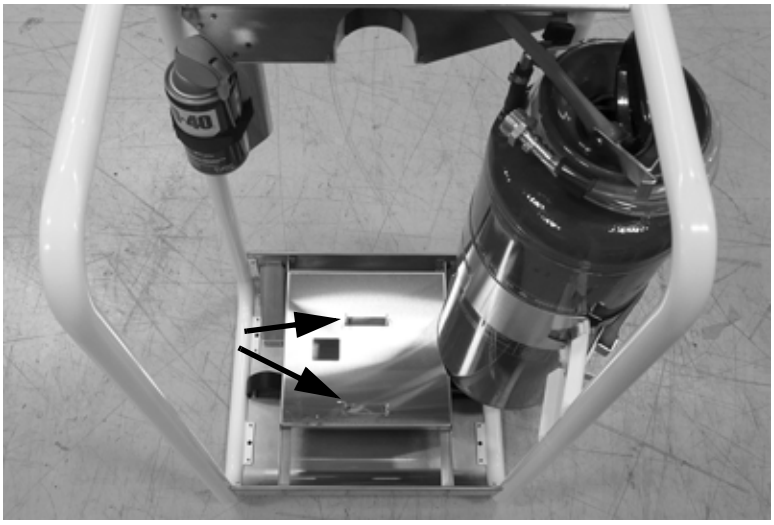


Figure 3-3. There are brackets on the base of the storage cart to mount the saw in the cart.

Figure 3-4. (Side view) Set the saw onto the brackets, with the saw saddle behind the cart base, as shown.

4. Put the storage strap through the saw handle and secure it to the back of the cart.

Figure 3-5. Secure the saw to the cart with the storage strap.

OPERATING FEATURES

This section provides an overview of the DW Guillotine's configuration and operating features.

Covers

The DW Guillotine has 5 safety covers. The covers must be in place at all times while operating the machine. Open the covers only to remove/install the cutting wire or to perform maintenance. Disconnect the hydraulic hoses from the machine before opening any of the covers.

- The front cover, over the drive wheel, is secured with a locking latch.
- The 2 wire channel covers on the arm assemblies are secured with locking latches.
- The 2 idler wheel covers are secured by the wire channel covers. Close the wheel covers first, then close and latch the wire channel covers.

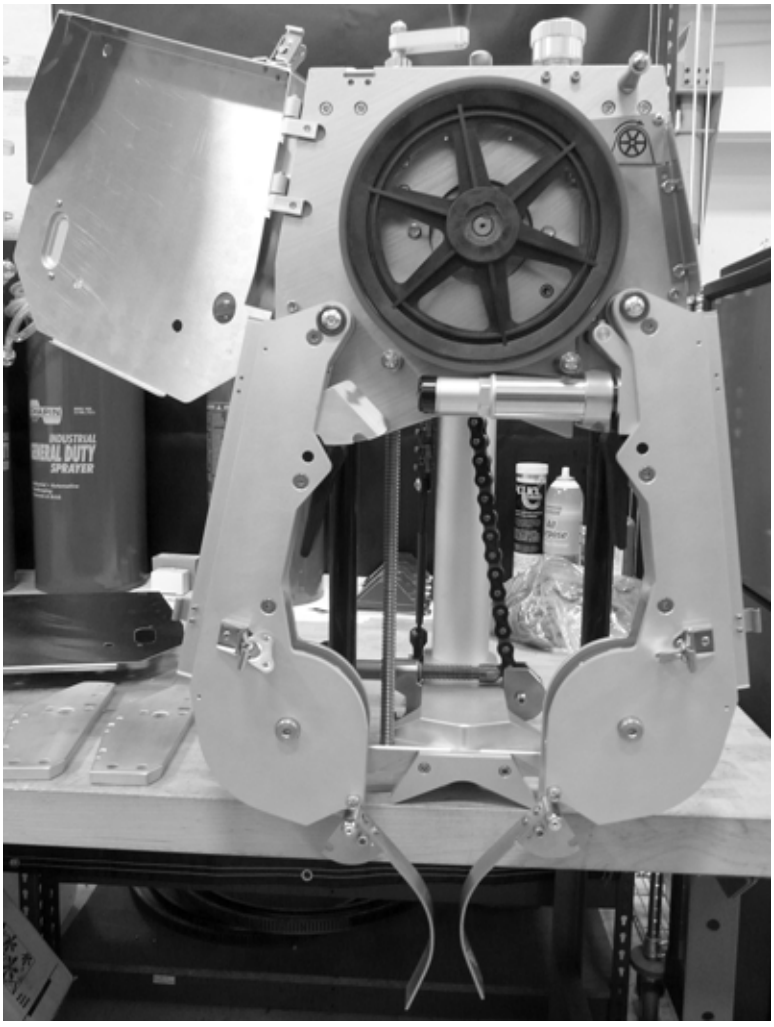


Figure 3-6. The photo shows the DWG 208 with all covers open. (The cover configuration is the same on the DWG 416.)

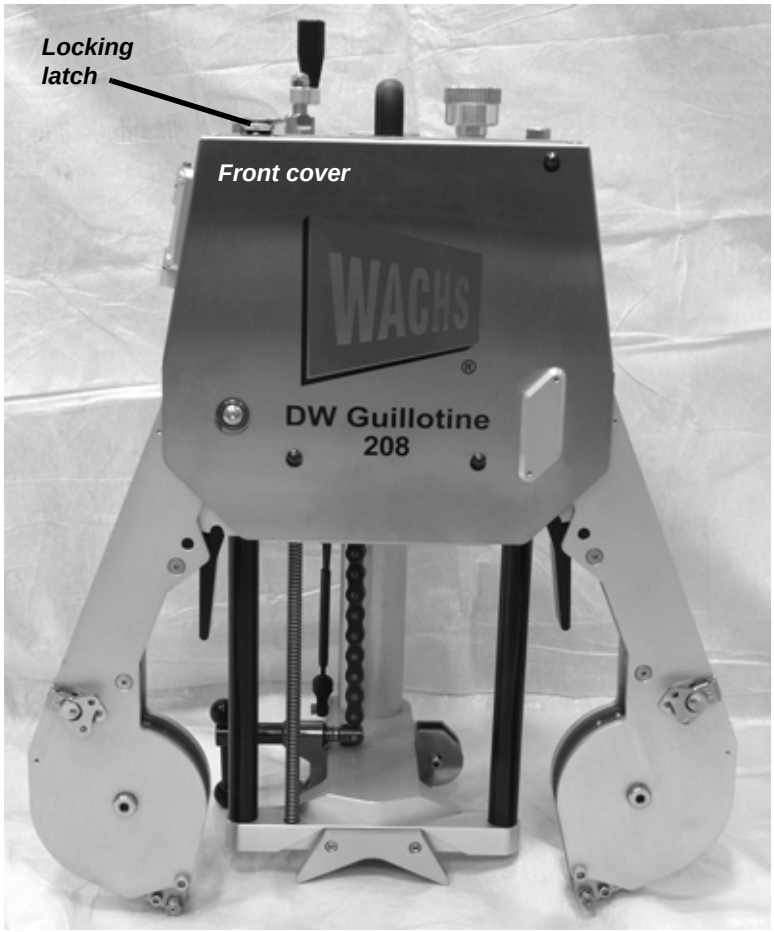


Figure 3-7. The front cover is secured by a locking latch. To open the cover, release the latch and swing the cover on its hinge.

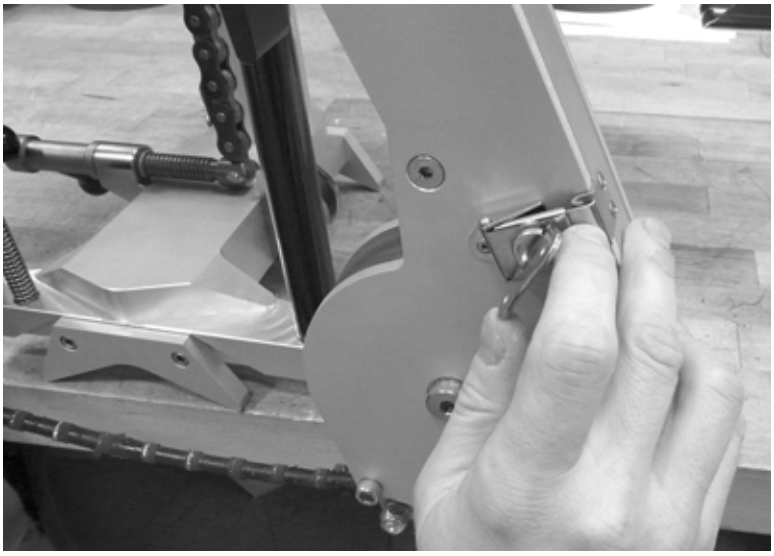


Figure 3-8. The wire channel covers on the arm assemblies are secured by locking latches. Release the latch and swing the cover open to remove or install the cutting wire.

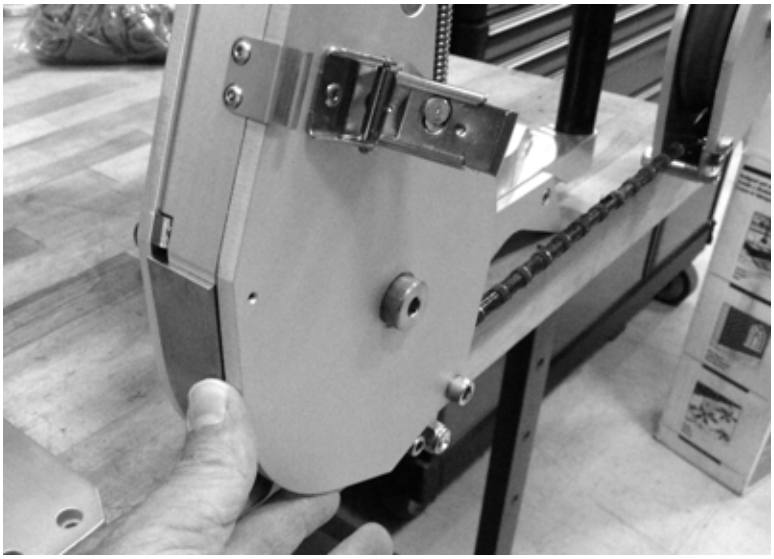


Figure 3-9. The idler wheel covers are secured in place by the wire channel covers. Close the wheel cover, then close and secure the wire channel cover.

Arm Assemblies

The arm assemblies swivel and can be set in two positions—closed for storage and for installing the cutting wire,

and open for operation. Each arm has a position lock lever to move it. There are notches in the frame for the open and closed positions.

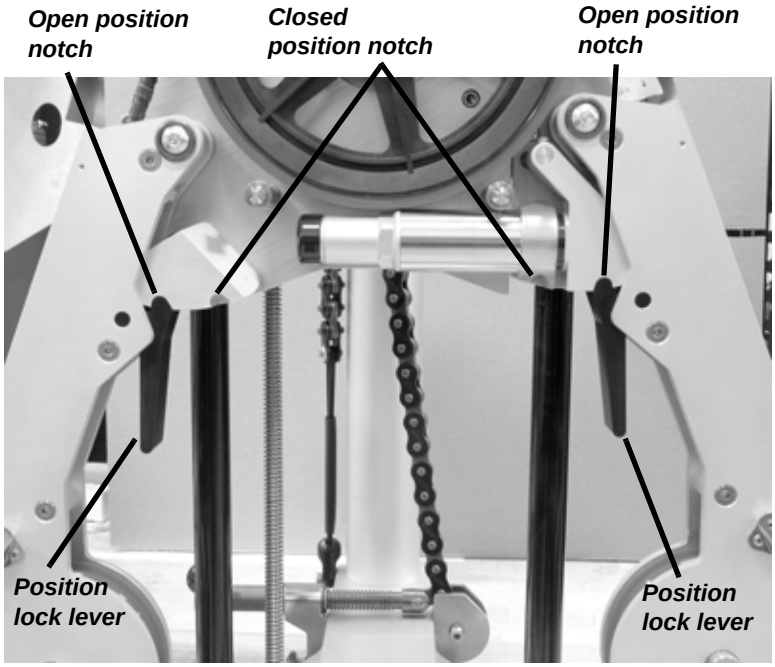


Figure 3-10. The photo shows the arm assemblies in the open (operating) position.

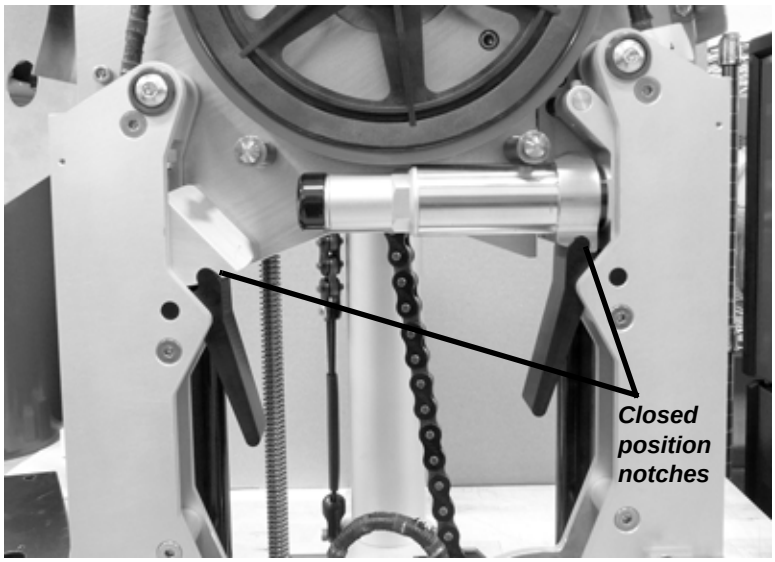


Figure 3-11. The photo shows the arm assemblies in the closed (storage) position.

Cutting Wire Tension and Feed

Use the wire tension knob to pre-set the wire tension before cutting. Use the feed handle to advance the cutting wire as you cut, and to maintain the correct wire tension.

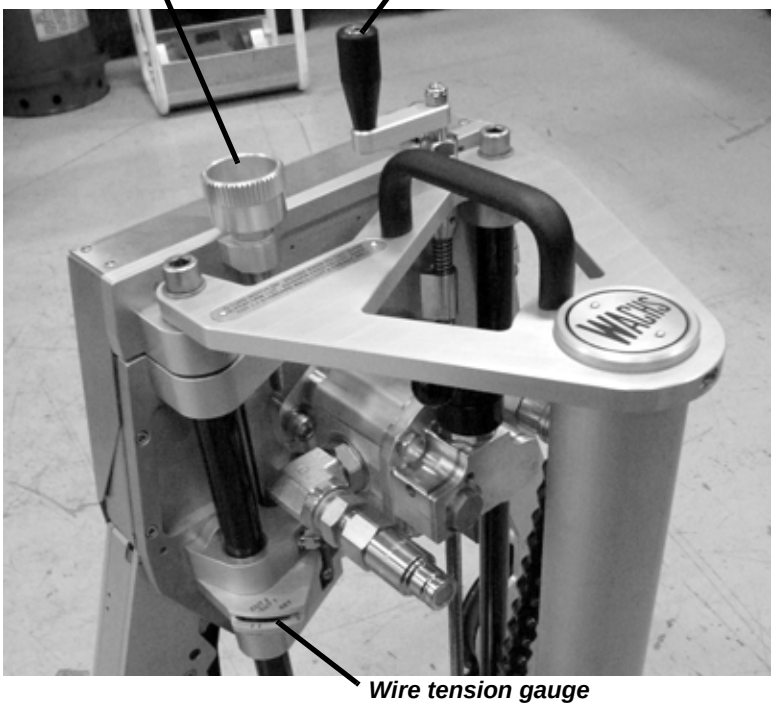


Figure 3-12. The photo shows the DWG 208 cutting controls. (The controls are the same on the DWG 416.)

Figure 3-13. A cutting instruction label is attached to the top of the saw frame.

Hydraulic Connections and On/Off Control

The hydraulic hose connections are on the back of the saw frame. To operate the saw, there is an ON/OFF knob on the hydraulic motor.

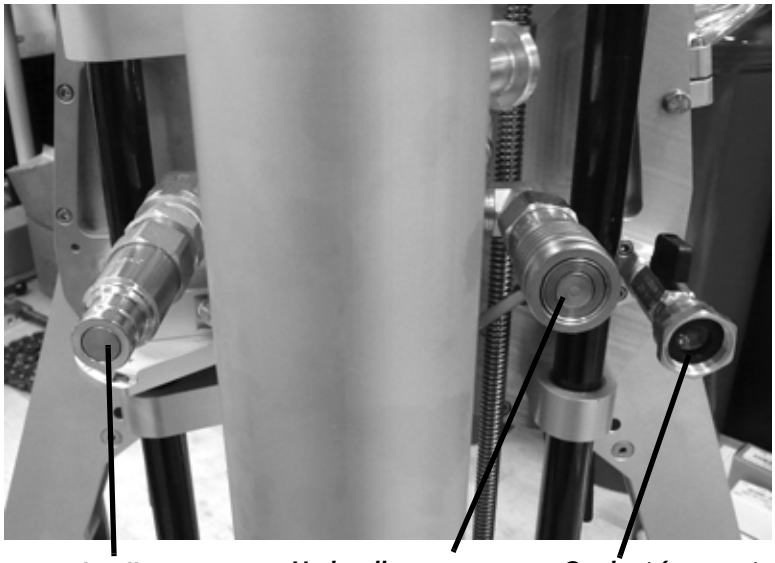


Figure 3-14. The photo shows the hydraulic and coolant connectors.

Figure 3-15. The photo shows the hydraulic ON/OFF knob.

INSTALLING THE CUTTING WIRE

It is easiest to install or replace the cutting wire with the saw on a workbench.

1. Position the saw where it is stable and won't tip. Mount or secure it if necessary. You will need to be able to open the idler wheel covers.
2. Open all the covers to access the drive wheel and wire channels.
3. Move the arms to the storage position. (See "Arm Assemblies" on page 29.)

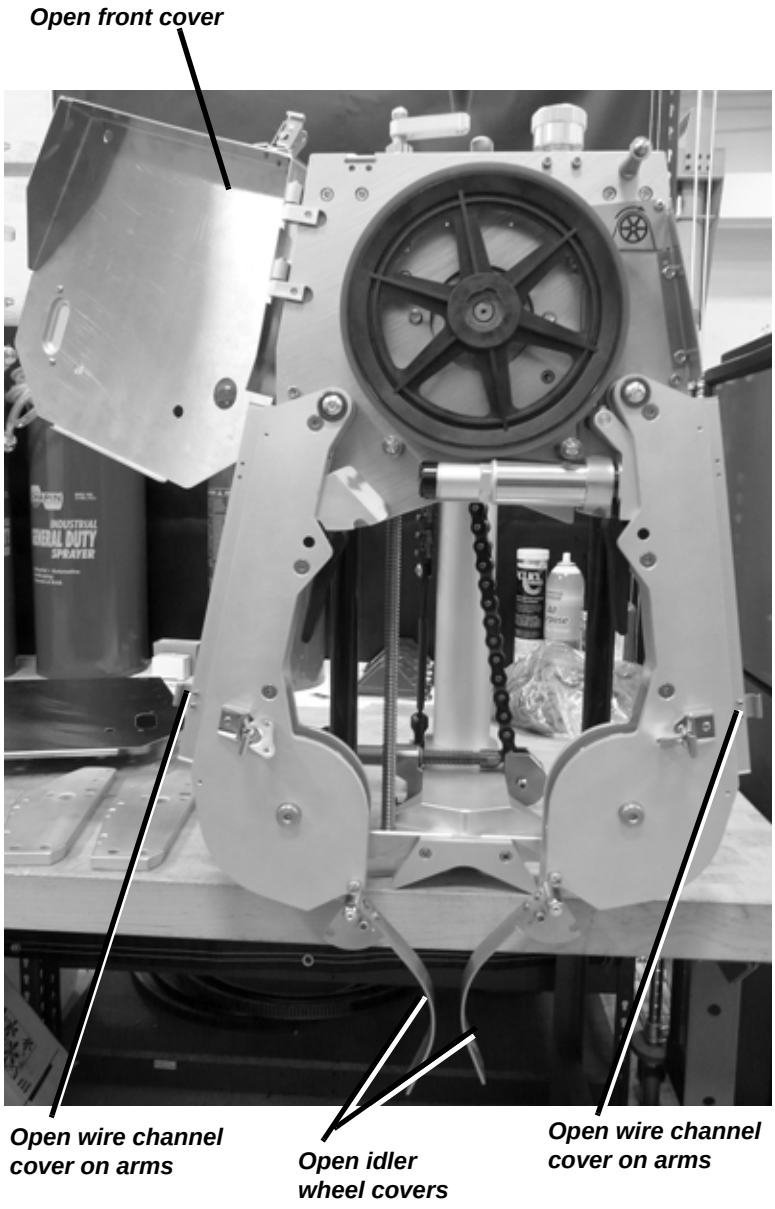


Figure 3-16. Open the covers to install the cutting wire.

4. Remove the old cutting wire, if necessary.
5. Verify the wire direction before installing the new wire. A label on the wire shows the direction.

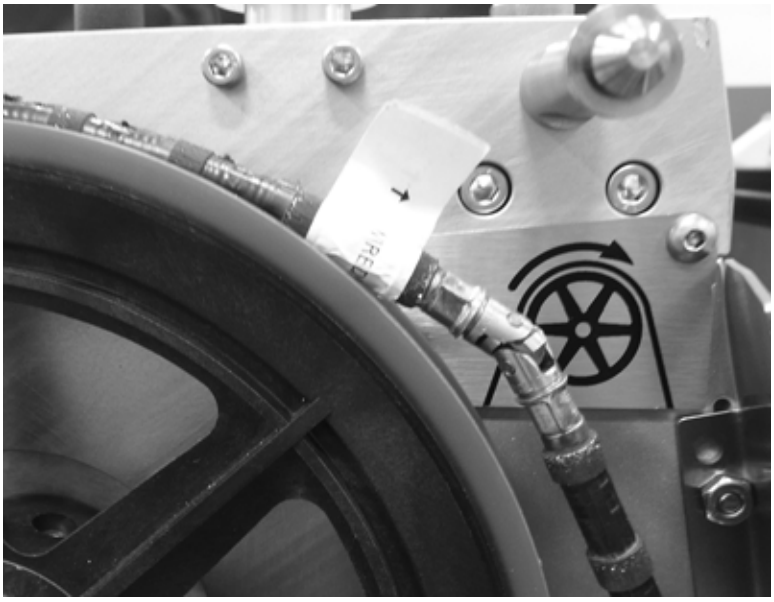


Figure 3-17. New cutting wires have a label indicating the cutting direction.

6. If the label on the cutting wire is missing, look closely at the wire for molded direction arrows between the beads.

Figure 3-18. The cutting wire casing has arrows showing the wire direction.

7. Insert the cutting wire between the idler wheel covers and the arms, and wrap the wire around the idler wheels.

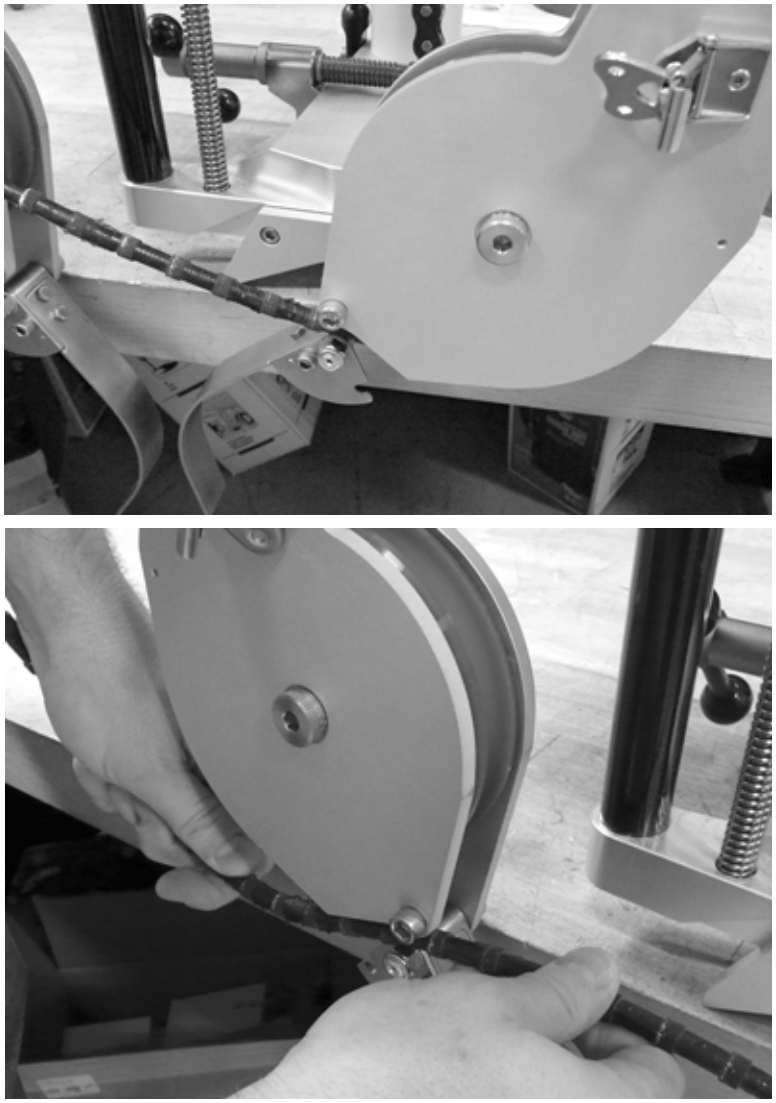


Figure 3-19. Insert the cutting wire between the covers and the idler wheels.

8. Wrap the cutting wire around the drive wheel.

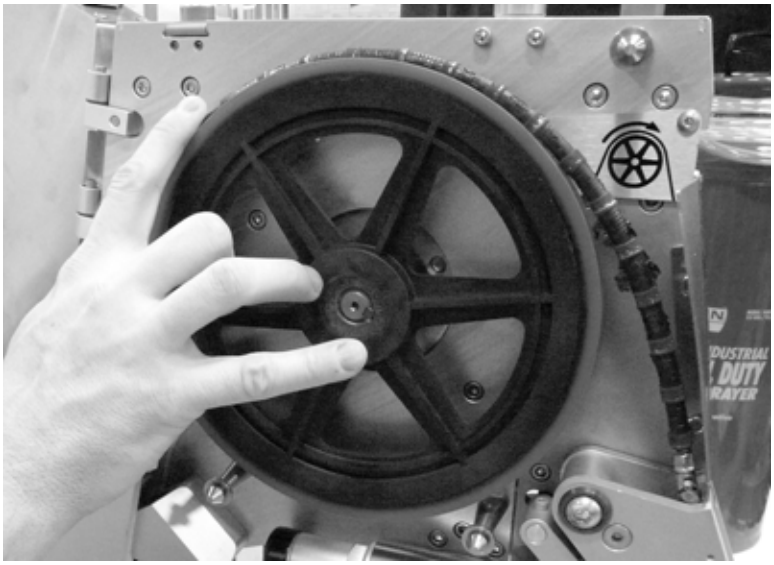


Figure 3-20. Put the cutting wire over the drive wheel.

9. Move the right arm out to the operating position, and lock the position latch in place.

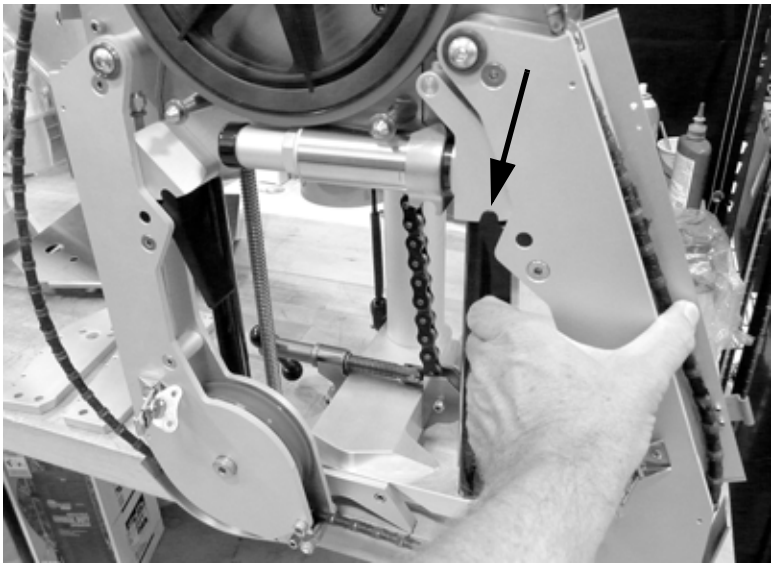


Figure 3-21. Latch the right arm assembly in the open (operating) position.

10. Move the left arm out to the operating position. To lock it in place, you will have to hold the saw frame and pull the left arm to compress the tension assembly on the right arm.

Figure 3-22. Pull the left arm assembly to the open (operating) position.

11. Close the idler wheel covers, then close and latch the wire channel covers on the arms. Make sure the wheel covers are tucked under the wire channel covers, to secure them.

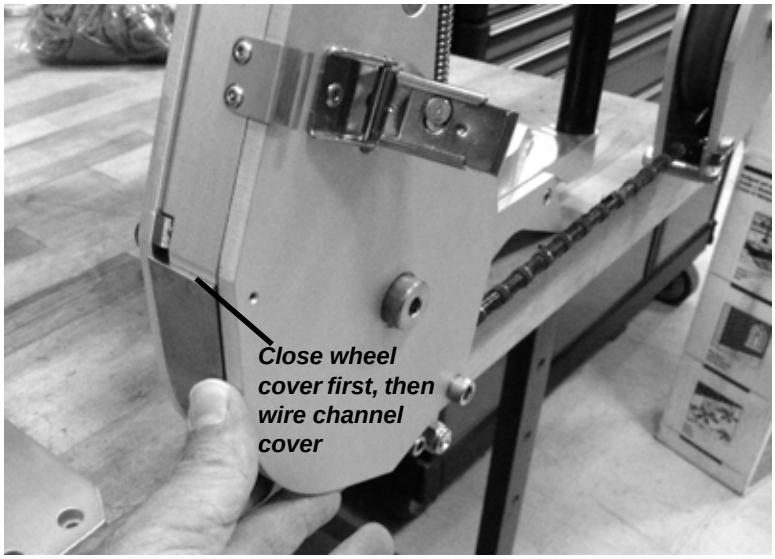


Figure 3-23. Close the idler wheel covers and the wire channel covers.

12. Close and latch the front cover.

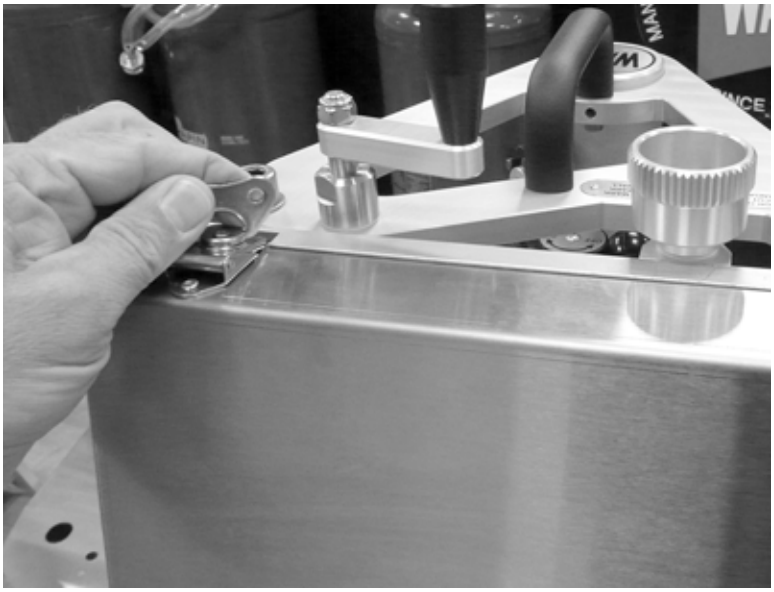


Figure 3-24. Close the front cover and secure it with the latch.

MOUNTING THE MACHINE ON THE PIPE

It is recommended that two operators mount the DW Guillotine on the workpiece, to avoid dropping or mis-positioning the saw.

- The DWG 208 weighs about 54 lb (25 kg).
- The DWG 416 weighs about 64 lb (29 kg).

You can also use a lifting device attached to the lift handle.

Use the DW Guillotine only on horizontal pipe. The clamping system is not designed to hold it on a vertical pipe.

1. Make sure the saw is configured for cutting:
   - The cutting wire is installed on the wheels.
   - All covers are closed and secured.
   - The swing arms are in the operating position.
   - The tension gauge is at the **SET** position.
   - The bow is fully retracted (all the way up).

NOTE

The bow is fully retracted (up) when it is stored. Mount the machine with the bow retracted.

CAUTION

It is recommended that you mount the saw so that the controls are at an appropriate height and convenient to operate. The recommended height for the controls is 2-5 ft (0.6-1.5 m).

NOTE

It is recommended that you support or set up a catch device for the fall-off piece of pipe. If you are cutting in-line pipe, make sure the pipe is supported on both sides of the cut.

2. Set the machine on the pipe at the cutting location, with the mounting baseplate on a supported section of pipe. The cutting wire will be toward the fall-off end of the pipe.

Figure 3-25. Set the machine on the pipe, with the wire on the fall-off side of the cut.

3. Position the machine to align the wire at the required cut line.

4. Detach the mounting chain and wrap the chain around the pipe.

5. Pull the chain as snug as possible and insert the link pins in the yoke on the chain clamp.

6. Turn the clamping handle to tighten the chain. Clamp the chain as tight as you can get it with the handle.

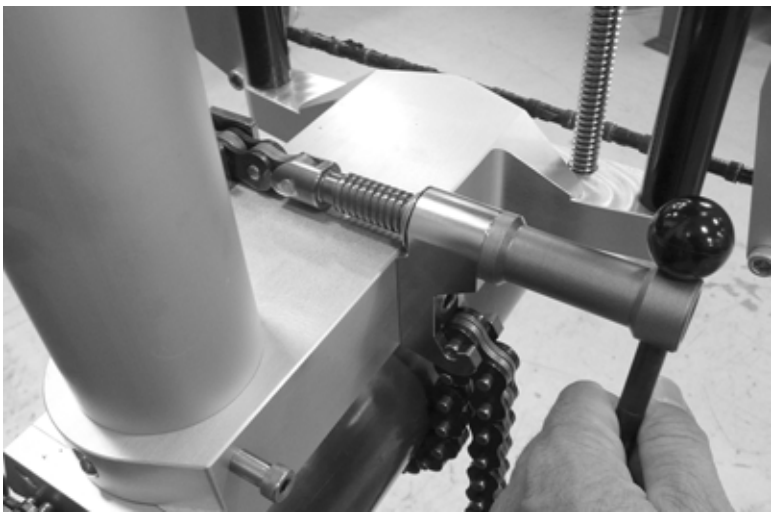


Figure 3-26. Wrap the chain around the pipe and insert the link pins into the yoke as shown. Turn the handle to tighten the chain.

7. With the hydraulic power unit off, connect the hydraulic hoses to the machine.

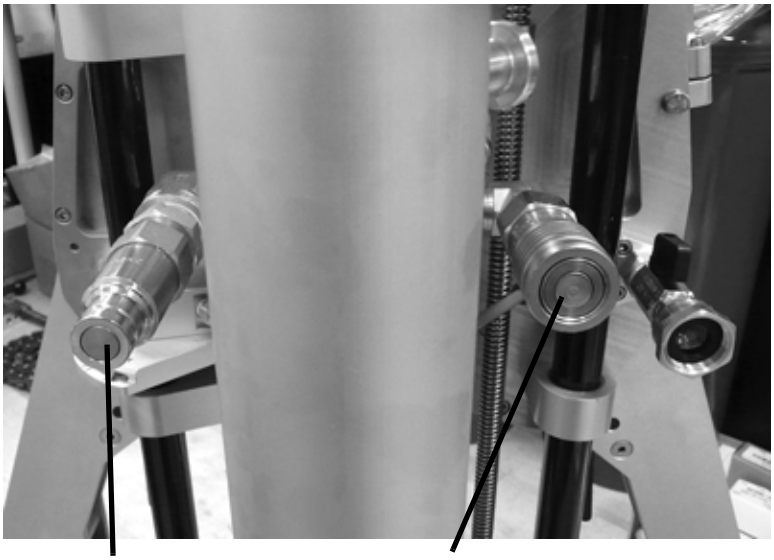


Figure 3-27. Attach the hydraulic hoses from the HPU to the connectors as shown.

8. Turn the wire tension knob clockwise until the pointer on the wire tension gauge is at the **SET** position.

CAUTION

Make sure the machine is securely attached to the pipe before operating it.

WARNING

Make sure the ON/OFF knob is in the OFF position when connecting the hoses. Always keep the handle in the OFF position when the machine is not cutting.

NOTE

Always have the HPU powered off when connecting and disconnecting hoses, to avoid fluid spills.

Figure 3-28. Adjust the wire tension knob to set the tension gauge to the **SET** *position.*

9. Power on the HPU and enable flow to the saw. Turn the ON/OFF knob to the ON position to operate the saw briefly (a few seconds), then turn the saw OFF. This will seat the cutting wire securely on the wheels.

10. Re-adjust the wire tension knob to reset the tension gauge to the **SET** position.

CAUTION

Do not operate the saw more than 15 seconds without water or coolant. Heat from the wire will damage the wheel liners.

MAKING THE CUT

Pre-Operation Checks

1. Do not use the machine where heat or sparks might cause a risk of fire or explosion.
   - Do not use the machine in an explosive environment.
   - Do not use the machine to cut pipe that contains explosive contents.
2. Check that the machine is securely mounted to the pipe.
   - The mounting chain should be as tight as you can get it.

- The saw should be rigid on the pipe, with no “wiggle” if you try to move it back and forth.

3. Verify that the controls are functioning correctly before each use:

   - Attach the hydraulic hoses as described.
   - Turn on flow from the HPU.
   - Set the ON/OFF knob to the ON position (clockwise) to make sure the wire starts. Set the ON/OFF knob to the OFF position to make sure the wire stops completely.
   - Make sure the wire travels in the correct direction. See the direction label inside the front cover. The wire travels clockwise when viewing the saw from the front.

4. Check the diamond wire and make sure it is installed in the right direction.

Note on Disabling Power and Loss of Power

Disconnecting the hydraulic hoses from the fittings on the machine is the only way to completely isolate power from the DW Guillotine. Always disconnect the hoses when performing service or adjustments, or when the machine is not in an operating situation.

If power to the DW Guillotine fails during operation (for instance, if the HPU stops unexpectedly), always move the ON/OFF lever to the OFF (counter-clockwise) position immediately. Make sure the lever is in the OFF position while troubleshooting the power failure. Disconnecting the hydraulic hoses is recommended.

CAUTION

Water is required to cool and lubricate the wire during cutting, and to reduce airborne cutting debris. Do not operate the machine without a water source for the sprayer. During operation, make sure that water is sprayed continuously on the wire at the cut location.

WARNING

Always wear eye and ear protection when operating the DW Guillotine.

The DW Guillotine can cut human flesh if contact is made while the wire is rotating. Keep clear of all moving parts when operating the machine.

WARNING

The saw will start if the lever is in the ON position when you start the HPU. Always keep the handle in the OFF position when the machine is not cutting.

Cutting Operation

1. A hand sprayer tank and hose are provided to supply coolant. Attach the hose from the tank to the coolant fitting on the saw. If a worksite water supply is available, you can attach a garden hose to the fitting.

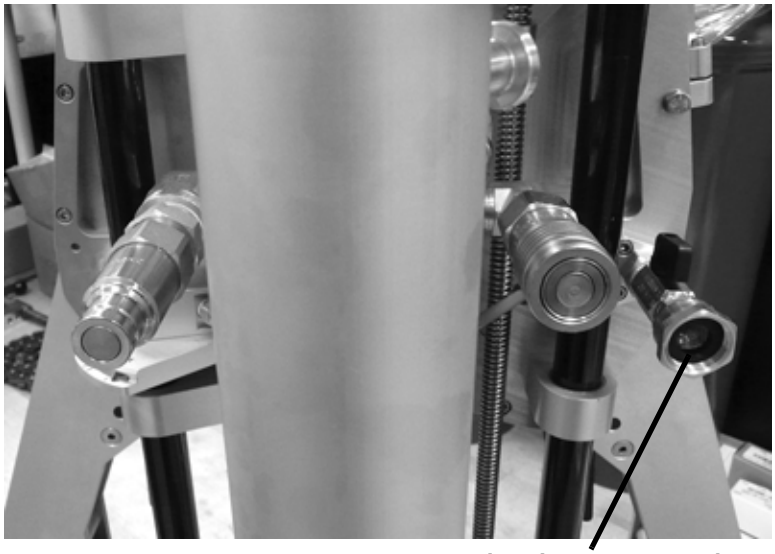


Figure 3-29. Attach the hand sprayer tank or a garden hose to the coolant connector.

2. Turn the feed handle to advance the bow down until the wire is close to the pipe surface.

3. Make sure the ON/OFF knob is in the OFF position.

Figure 3-30. Make sure the ON/OFF knob is in the OFF position, as shown, before connecting power.

4. Power on the HPU. Set the flow to 8 gpm (30 l/min).

5. Turn the ON/OFF lever to the ON position. The wire will start running.

Figure 3-31. Turn the ON/OFF knob to the ON position to start the saw.

6. Turn on the cooling water supply. If you are using the sprayer tank, pump the handle to pressurize the tank.

WARNING

Maximum hydraulic flow and pressure are 10 gpm, 2000 psi. Exceeding the maximum hydraulic pressure or flow rate can result in equipment damage or operator harm.
If your HPU/PTO flow rate is not adjustable, install a Wachs flow limiting valve in-line (part no. 14-402-00). Make sure the hydraulic oil temperature does not exceed 140° F (60° C).

WARNING

Keep away from the wire while the machine is operating. The wire runs at very high speed and can cause serious injury.

NOTE

Generally, you can feed faster through the center of the pipe, and slower through the crown at the top and bottom.

7. Turn the feed handle to advance the wire into the pipe. Feed at a rate that maintains the pointer on the tension gauge at the **CUT 1** position. If you are cutting heavy-wall pipe, you can move the tension up to the **CUT 2** position.

Figure 3-32. Turn the feed handle to keep the tension gauge at the **CUT 1** *position for normal pipe, or* **CUT 2** *for heavy-wall pipe.*

CAUTION

Water is required to cool and lubricate the wire during cutting, and to reduce airborne cutting debris. Do not operate the machine without a water source for the sprayer.

8. Make sure there is a continuous supply of water as you cut. If you are using the sprayer tank, you will need to pump it occasionally to pressurize it.

9. Use caution as you approach the end of the cut:

   - If you are cutting off the end of the pipe, support the fall-off piece, or be sure to stand clear of it when it falls.
   - If you are cutting in-line pipe, there may be stress on the pipe that will cause it to “spring” when cut, or snap off near the end of the cut. Use appropriate safety procedures at your worksite for cutting stressed pipes.

10. Finish the cut by feeding the wire past the bottom of the pipe.

11. Turn off the water to the coolant sprayer.

12. Turn the ON/OFF knob to the OFF position.

13. Turn off power at the HPU.

CLEANING AND REMOVING THE MACHINE

The DW Guillotine will be easier to clean if you leave it mounted vertically on the pipe. Spray and lubricate the machine, then remove it.

1. Turn the feed handle to fully retract the bow all the way to the top.
2. Disconnect the hydraulic hoses from the machine.
3. Turn the tensioning knob to take the tension off the wire. Leave the wire mounted on the wheels.
4. Release the latches on the front cover and the wire channel covers, and open the covers.

NOTE

If the wire binds against the pipe while retracting the bow, start the machine to run the wire while feeding the bow back to the top.

NOTE

Always have the HPU powered off when connecting and disconnecting hoses, to avoid fluid spills.

5. Spray all components thoroughly with water to wash off cutting debris.
6. Spray the following components with a water-displacing lubricant (such as WD-40):
   - feed screw
   - guide rods.
7. Hold the saw, or secure it with a support device, to keep it from falling when you release the clamping chain.
8. Turn the chain clamping handle to release the tension on the chain, until you can disconnect the pins from the yoke.
9. Wrap the chain around the storage pin on the frame, and connect the strap to secure it.

NOTE

You can use the coolant sprayer to clean the machine.

WARNING

Make sure you are supporting the machine when you release the clamping chain. It could shift or fall from the pipe, causing serious injury.

Figure 3-33. Secure the clamping chain in its storage position, as shown.

10. Lift the machine from the pipe. Set it down on a workbench.

11. Squeeze the position latch lever on the left arm assembly, and move the arm to the closed (storage) position. Loop the cutting wire up between the idler wheels.

12. Squeeze the position latch lever on the right arm assembly, and move the arm to the closed (storage) position.

13. Make sure both position latches are locked in the closed position.

IMPORTANT

Store the machine with all tension relieved from the wire. Leaving tension on the wire could damage the wheel liners.

Figure 3-34. Store the machine with the arms and cutting wire in the storage position, as shown.

Chapter 4
Maintenance

In This Chapter

NOTE ON DISABLING POWER

Always disconnect the hydraulic hoses from the DW Guillotine when performing service or adjustments, or when the machine is not in an operating situation. Disconnecting the hydraulic hoses from the fittings on the machine is the only way to completely isolate power from the DW Guillotine.

LUBRICATION

1. Every time you use the DW Guillotine, spray the following components with a water-displacing lubricant (such as WD-40):

   - feed screw
   - guide rods.

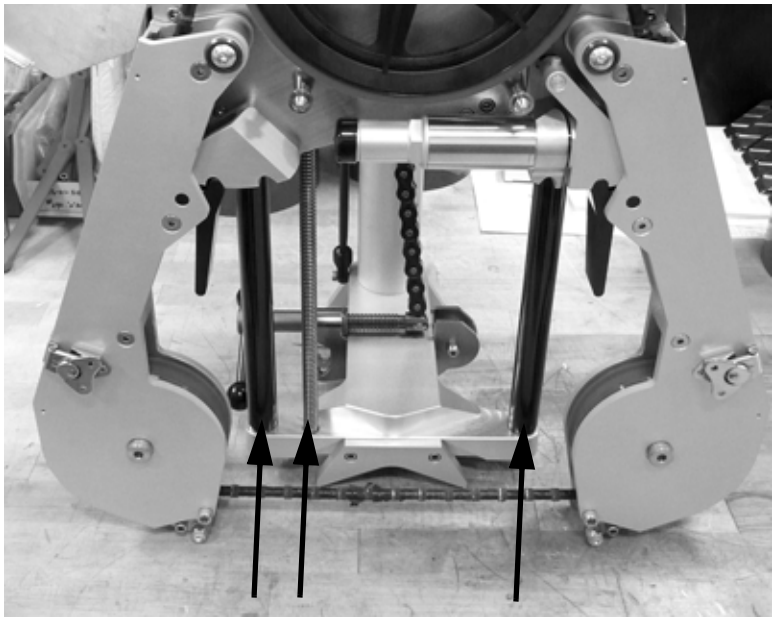


Figure 4-1. Spray the feed screw and guide rods with WD-40 or equivalent after each use.

REPLACING THE CUTTING WIRE

See the section “Installing the Cutting Wire” in Chapter 3 for instructions on replacing the wire.

Always disconnect the machine from the power source before replacing the wire or performing any service.

Chapter 5

DWG 208 Drawings and Parts Lists

In This Chapter

ORDERING INFORMATION

To place an order, request service, or get more detailed information on any E.H. Wachs Company products, call us at one of the following numbers:

U.S.	800-323-8185
International:	847-537-8800

You can also visit our Web site at:

www.ehwachs.com

Ordering Replacement Parts

When ordering parts, refer to the parts lists in this chapter. Please provide the part description and part number for all parts you are ordering.

Repair Information

Please call us for an authorization number before returning any equipment for repair or factory service. We will advise you of shipping and handling. When you send the equipment, please include the following information:

- Your name/company name
- Your address
- Your phone number

- A description of the problem or the work to be done.

Before we perform any repair, we will estimate the work and inform you of the cost and the time to complete it.

Warranty Information

Enclosed with the manual is a warranty card. Please fill out the registration card and return to E.H. Wachs Company. Retain the owner's registration record and warranty card for your information.

Return Goods Address

Return equipment for repair to the following address.

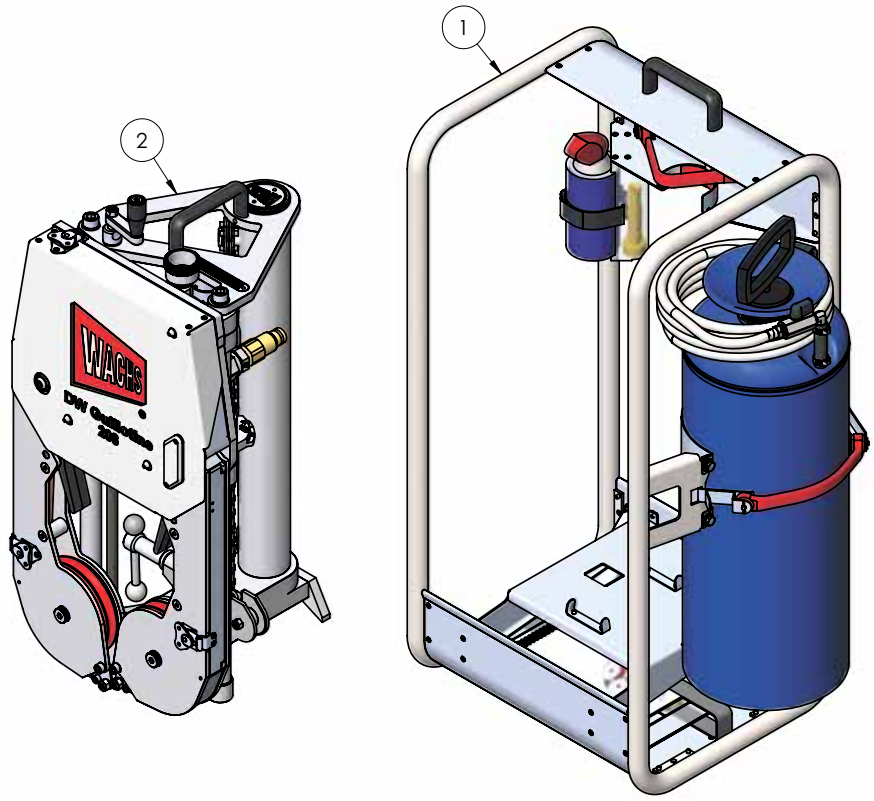
E.H. Wachs
600 Knightsbridge Parkway
Lincolnshire, Illinois 60069 USA

DRAWINGS AND PARTS LISTS

The drawings on the following pages illustrate the components of the DWG 208, and include parts lists for ordering spare or replacement parts.

DWG 208 Kit, 29-000-08

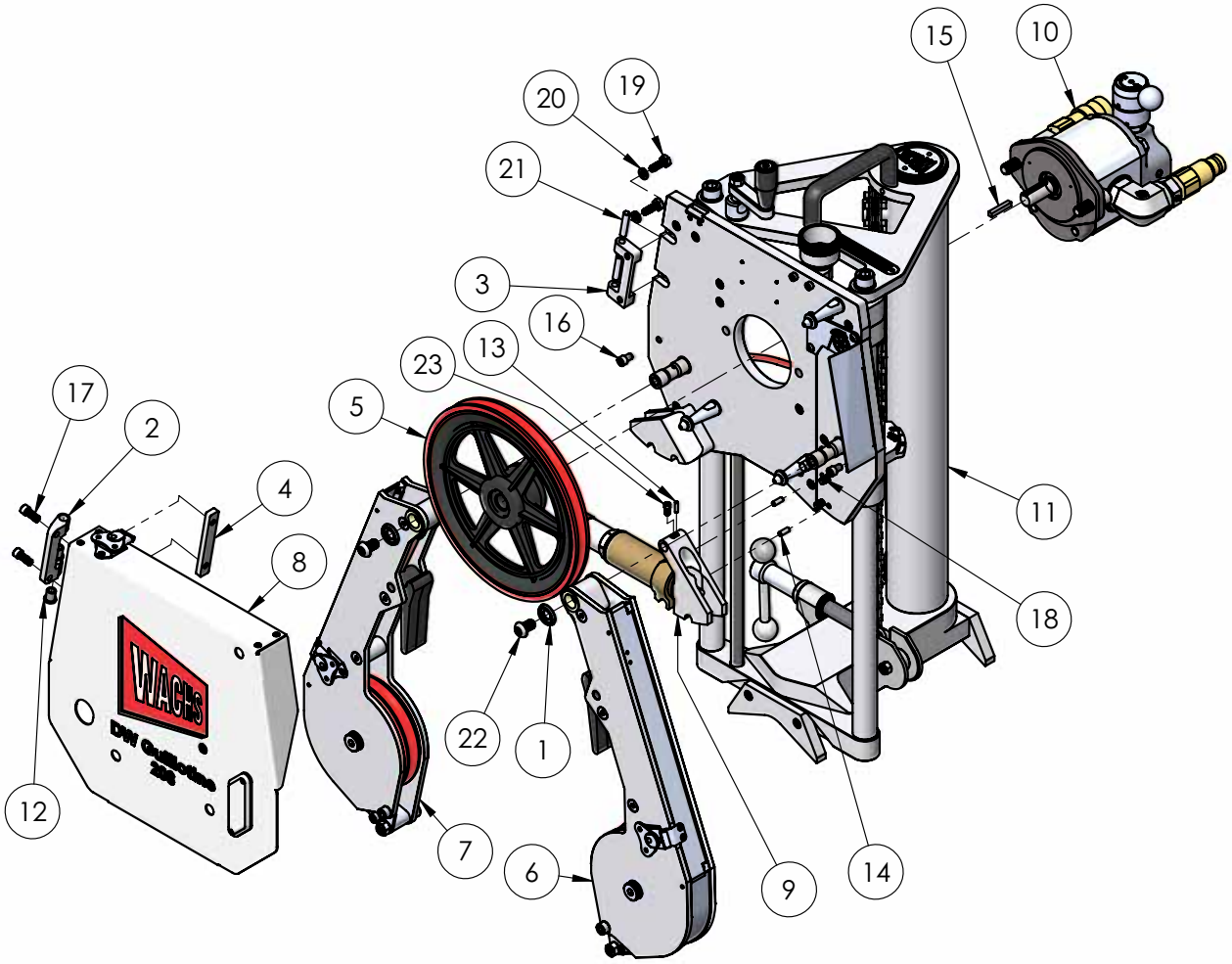
BOM 29-000-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-4022-08	ASSEMBLY, STORAGE CAGE	1
2	29-4028-08	ASSEMBLY, WS-802	1



DWG 208 Assembly, 29-4028-08

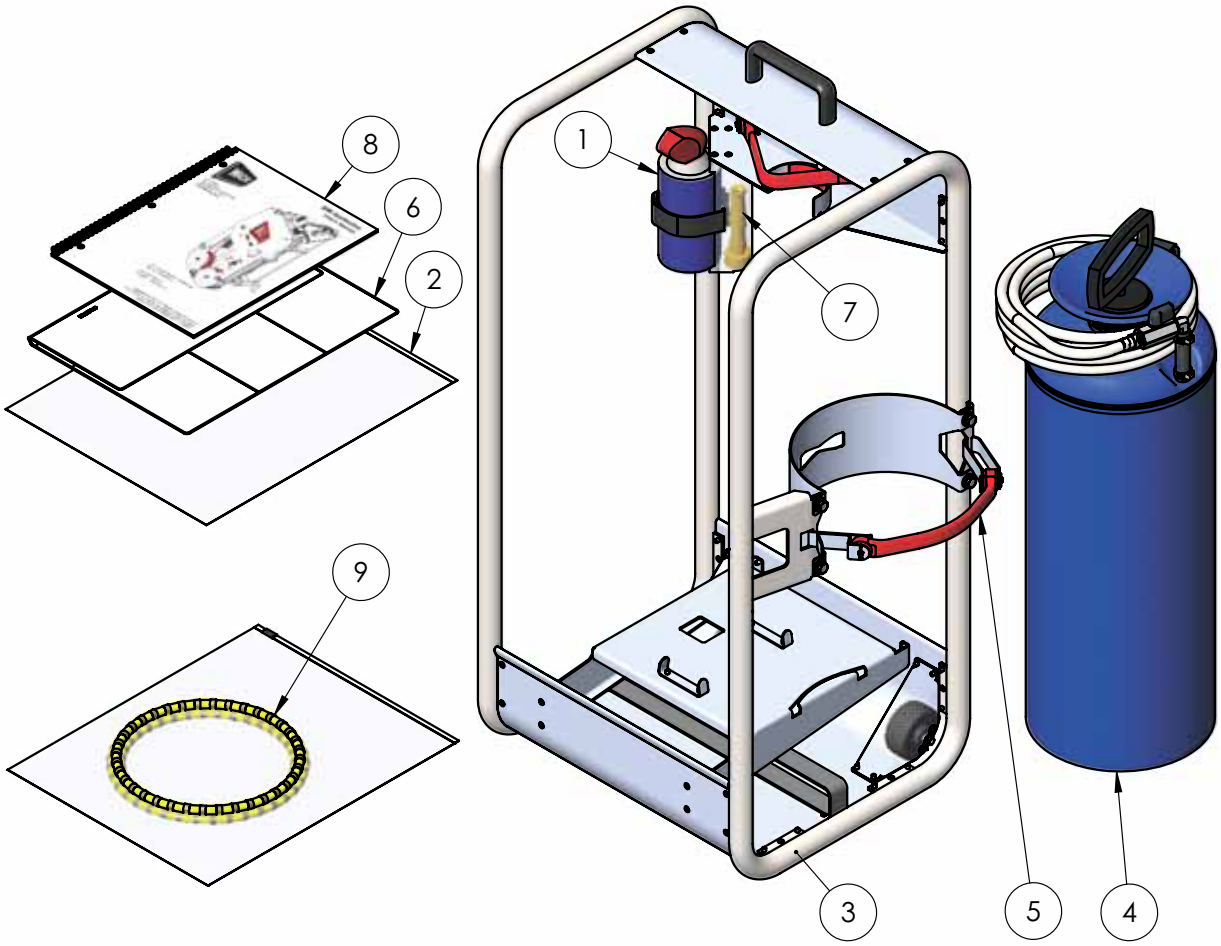
BOM 29-4028-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
14	90-146-05	PIN, ∅3/16" x 1/2" LNG. - 18-8 SS	2
15	90-147-11	KEYWAY, 3/16" x 3/16" x 1-1/8" LNG.	1
16	90-150-03	SHCS 1/4-20 X 3/8 SS	2
17	90-150-26	SHCS, 1/4-20 x 5/8" LNG. - 18-8 SS NAS 1352C-4-10	2
18	90-150-56	SHCS, 1/4-28 x 5/8" LNG. - 18-8 SS	2
19	90-151-07	HHCS, 1/4-20 x 3/4" LNG. - BUMAX-88 SS	2
20	90-155-54	WASHER, 1/4" NAS 620 - 18-8 SS	2
21	90-156-42	PIN, ∅1/4" x 1-1/4" LNG. - 416 SS MS 16555-649	2
22	90-172-06	BHCS, 3/8-16 x 5/8" LNG. - 18-8 SS	2
23	90-220-03	SHCS, #8-32 x 3/8" LNG.	1

BOM 29-4028-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0114-00	WASHER, ARM ASSEMBLY	2
2	29-0116-00	BLOCK, COVER HINGE	1
3	29-0117-01	BLOCK, HINGE	1
4	29-0118-00	BLOCK, HINGE	1
5	29-0201-00	WHEEL, DRIVE	1
6	29-4001-08	ASSEMBLY, ARM	1
7	29-4002-08	ASSEMBLY, ARM	1
8	29-4005-08	ASSEMBLY, COVER	1
9	29-4007-08	ASSEMBLY, ARM TENSIONING	1
10	29-4009-00	ASSEMBLY, DRIVE MOTOR	1
11	29-4011-08	ASSEMBLY, WS BASE PLATE WITH TOWER	1
12	29-8021-00	BUSHING, 1/4" ID x 1/2" OD x 1/2" LNG. FLANGE	2
13	90-126-05	PIN, ∅1/8" x 1/2" LNG. DOWEL - 18-8 SS	1



DWG 208, Storage Cage Assembly, 29-4022-08

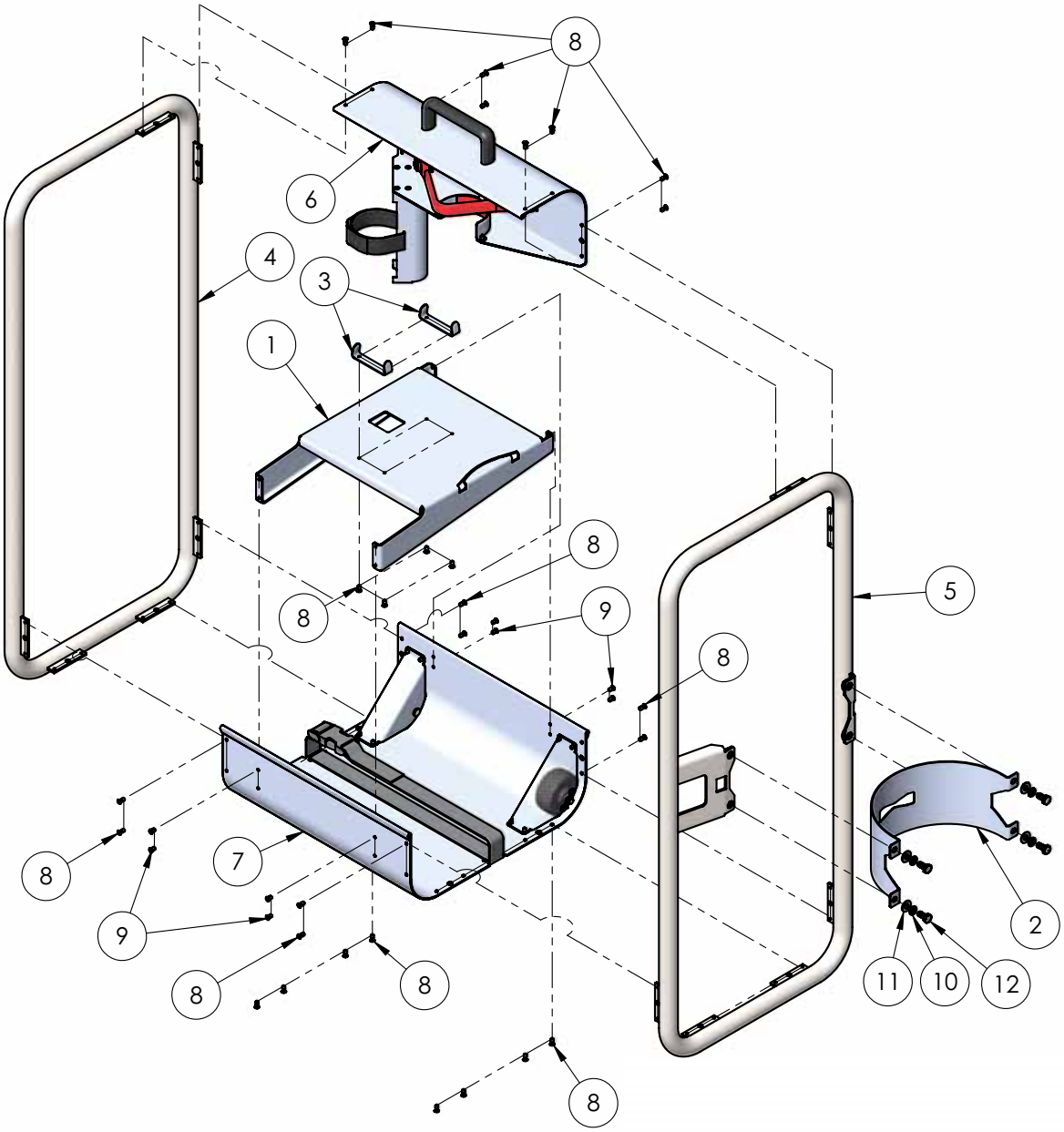
BOM 29-4022-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-010-10-01	LUBRICANT, WD-40 8oz.	1
2	29-0430-00	BAG, 12" x 15" CLEAR	1
3	29-4020-08	ASSEMBLY, WS-208 CAGE	1
4	29-4021-00	ASSEMBLY, COOLANT TANK	1
5	29-4024-00	ASSEMBLY, STRAP	1
6	29-8034-00	SLEEVE, MANUAL	1
7	29-8041-00	ADAPTER, GARDEN HOSE (F) x 3/8" HOSE	1
8	29-MAN-00	MANUAL, WS-208	1
9	29-608-00	WIRE, WS-208 DIAMOND	1



DWG 208 Storage Cage Assembly, 29-4020-08

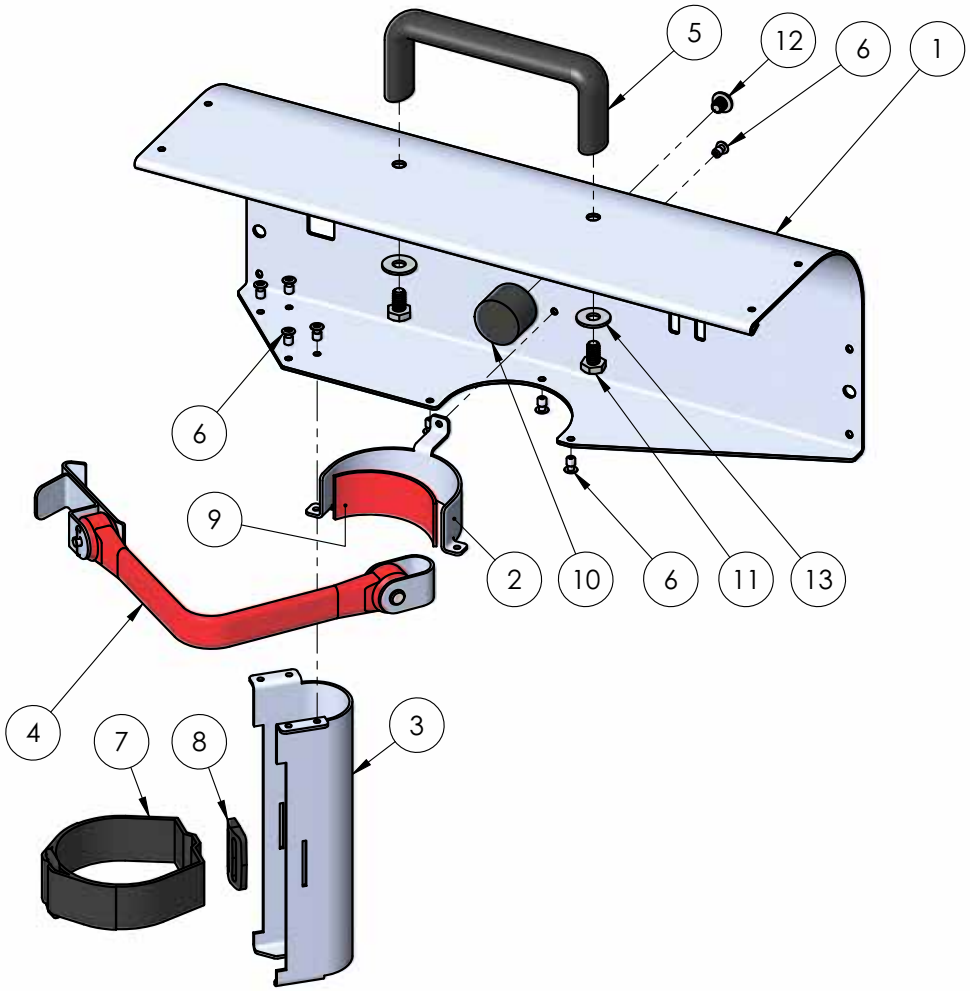
BOM 29-4020-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0405-08	SHEET METAL 5	1
2	29-0408-00	SHEET METAL 8	1
3	29-0409-00	SHEET METAL 9	2
4	29-0410-08	TUBE, LEFT	1
5	29-0411-08	TUBE, RIGHT	1
6	29-4029-08	ASSEMBLY, CAGE HANDLE	1

BOM 29-4020-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
7	29-4030-08	ASSEMBLY, CAGE WHEEL	1
8	29-8006-00	RIVET, ∅1/8" - SS	28
9	29-8020-00	RIVET, ∅1/8" - SS	8
10	90-155-52	WASHER, 1/4 SPLIT RING SS18-8	4
11	90-155-58	WASHER, 1/4" 18-8 SS FLAT	4
12	90-351-05	HHCS, 1/4-20 x 9/16" LNG. - 18-8 SS	4



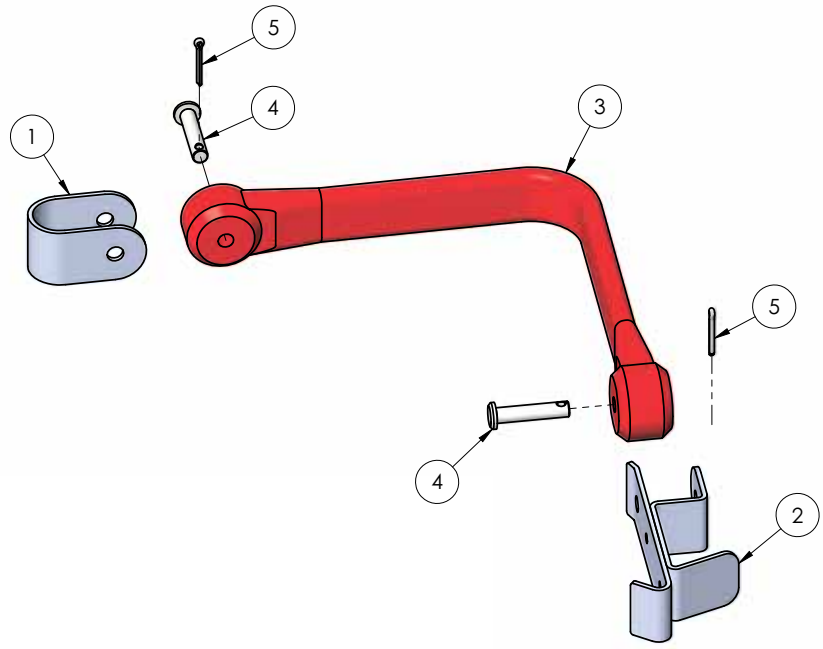
DWG 208 Cage Handle Assembly, 29-4029-08

BOM 29-4029-08			
ITEM	**PART NUMBER**	**DESCRIPTION**	**QTY**
1	29-0402-08	SHEET METAL 2	1
2	29-0404-00	SHEET METAL 4	1
3	29-0407-00	SHEET METAL 7	1
4	29-4023-00	ASSEMBLY, STRAP	1
5	29-8001-00	HANDLE, ALUMINUM	1
6	29-8020-00	RIVET, ∅1/8" - SS	8
7	29-8035-00	TIE, HOOK AND LOOP CABLE	1
8	29-8036-00	SLIDE, 1" WEBBING	1
9	29-8037-00	RUBBER, 1" x 1/16" x 2.071 ADHEASIVE BACKED	1
10	29-8046-00	BUMPER, RUBBER	1
11	90-151-04	HHCS, 1/4-20 x 7/16" LNG. - 18-8 SS	2
12	90-152-02	BHCS, 1/4-20 x 1/4" LNG. - 18-8 SS	1
13	90-155-57	WASHER, 1/4" MS-15795-853B	2



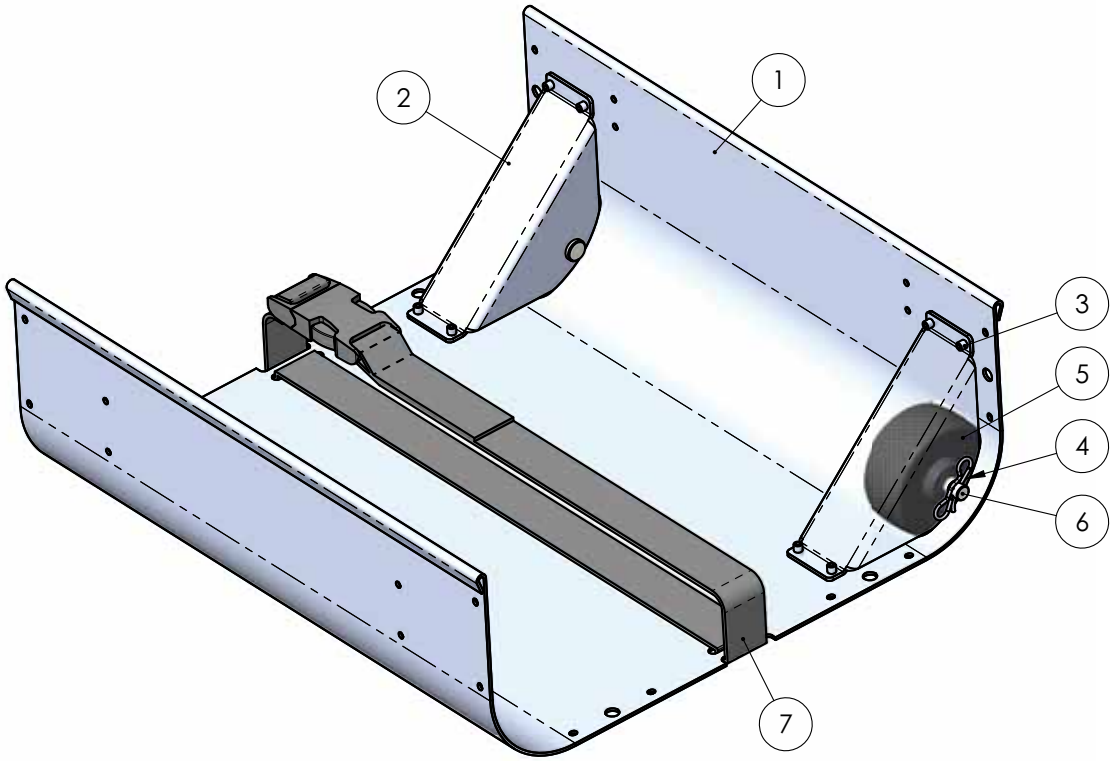
DWG 208/416 Strap Assembly, 29-4023-00

BOM 29-4023-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0412-00	SHEET METAL 12	1
2	29-0414-00	SHEET METAL 14	1
3	29-8024-00	THE PERFECT BUNGEE	1
4	29-8045-00	PIN, ∅3/16" x 7/8" CLEVIS	2
5	90-006-95	PIN, ∅1/16" x 1/2" LNG. COTTER	2



DWG 208 Cage Wheel Assembly, 29-4030-08

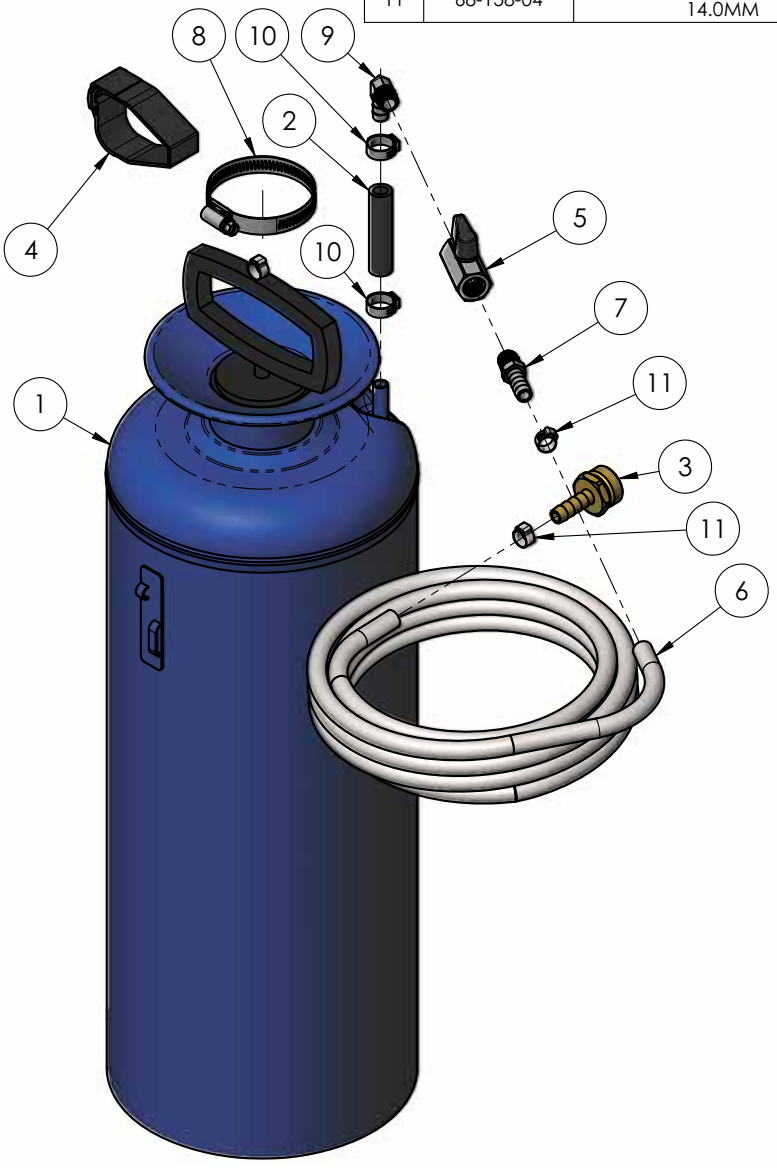
BOM 29-4030-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0401-08	SHEET METAL 1	1
2	29-0406-00	SHEET METAL 6	2
3	29-8006-00	RIVET, ∅1/8" - SS	8
4	29-8038-00	PIN, BOW TIE COTTER	2
5	29-8039-00	WHEEL, ∅2-1/2" RUBBER	2
6	29-8040-00	PIN, ∅5/16" x 1-7/8" LNG. CLEVIS	2
7	29-8033-00	STRAP, PLASTIC BUCKLE WITH 3 FT. NYLON	1



DWG 208/416 Coolant Tank Assembly, 29-4021-00

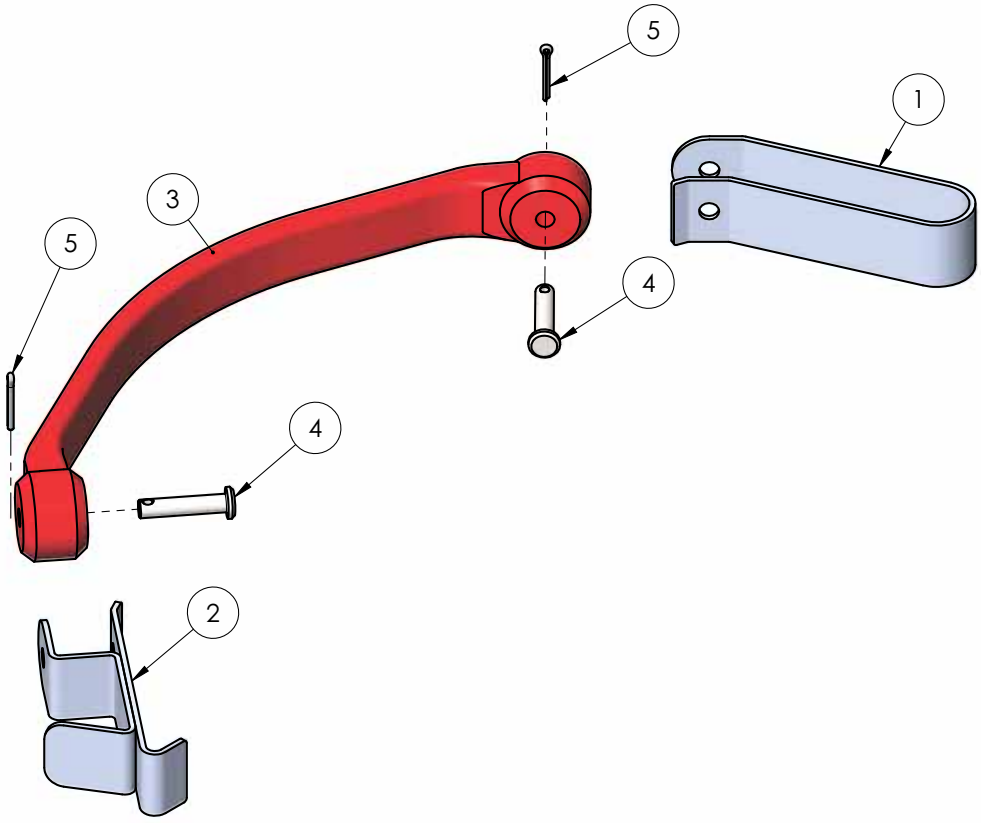
BOM 29-4021-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-013-00	TANK, PRESSURE	1
2	INCLUDED IN 29-013-00	TANK HOSE, CUT TO 2-1/2" LNG.	REF.
3	29-310-01-04	ADAPTER, GARDEN HOSE (3/4-11 1/2 M) x 3/8" HOSE	1
4	29-8030-00	TIE, HOOK AND LOOP CABLE	1
5	29-8026-00	VALVE, 1/4" BALL	1

BOM 29-4021-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
6	29-8028-00	HOSE, 3/8" ID x 1/2" OD x 10' LNG.	1
7	29-8027-00	ADAPTER, 3/8" HOSE x 1/4" NPT - STR	1
8	29-8029-00	CLAMP, 2-3/4" WORM	1
9	29-8025-00	ADAPTER, 3/8" HOSE x 1/4" NPT - 90°	1
10	29-8032-00	CLAMP, 14.5-17mm CRIMP HOSE	2
11	68-158-04	HOSE CLAMP, CRIMP 11.5-14.0MM	3



DWG 208/416 Strap Assembly, 29-4024-00

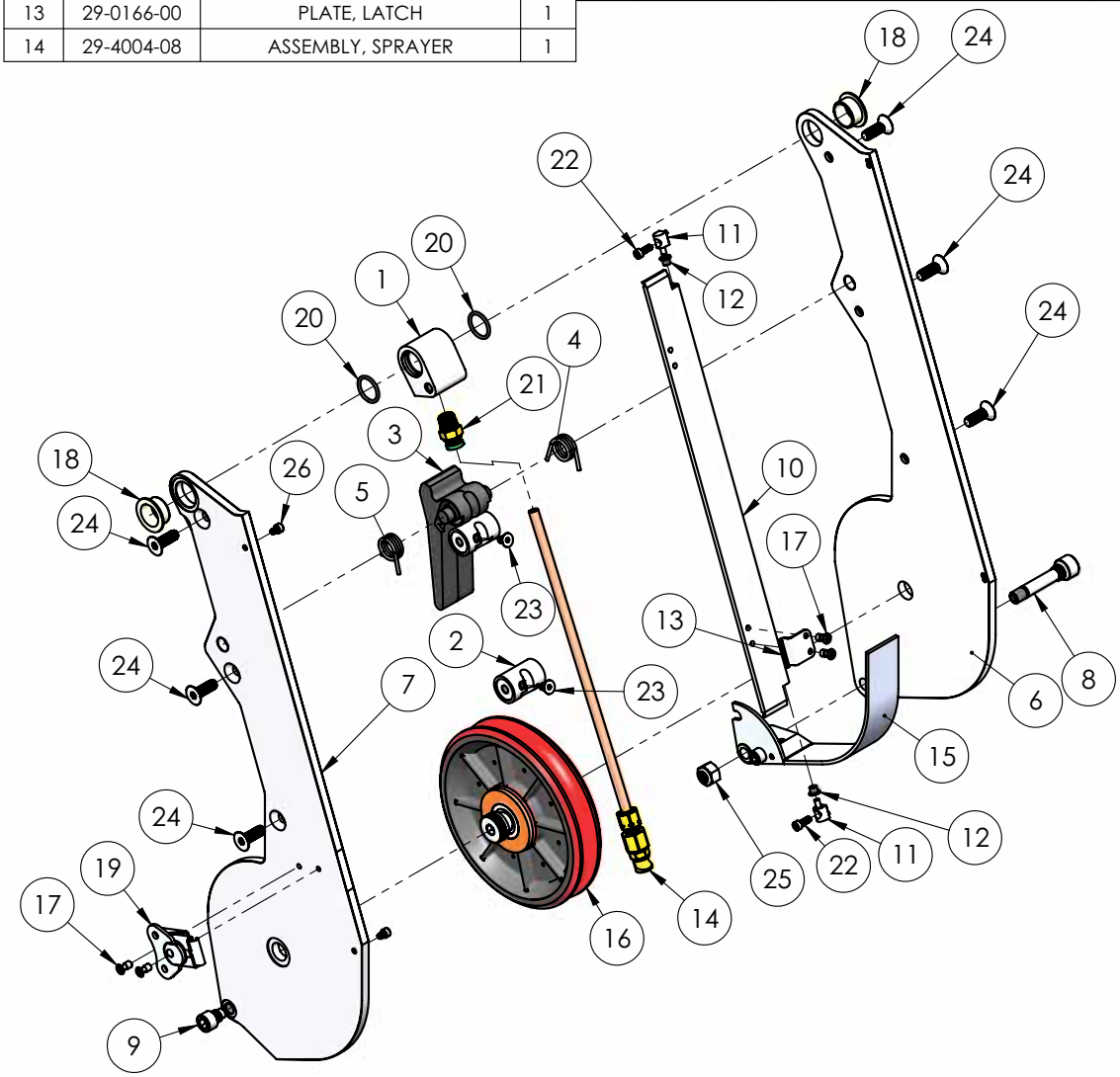
BOM 29-4024-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0413-00	SHEET METAL 13	1
2	29-0414-00	SHEET METAL 14	1
3	29-8024-00	THE PERFECT BUNGEE	1
4	29-8045-00	PIN, ∅3/16" x 7/8" CLEVIS	2
5	90-006-95	PIN, ∅1/16" x 1/2" LNG. COTTER	2



DWG 208 Arm Assembly, 29-4001-08

BOM 29-4001-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0108-00	BLOCK, ALIGNMENT SPACER	1
2	29-0109-00	BLOCK, SPACER	2
3	29-0123-08	LATCH, ARM POSITIONING	1
4	29-0125-00	SPRING, R.H. TORSIONAL	1
5	29-0126-00	SPRING, L.H. TORSIONAL	1
6	29-0152-08	PLATE, ARM	1
7	29-0153-08	PLATE, ARM	1
8	29-0158-00	SCREW, GUARD PIVOT	1
9	29-0159-00	SCREW, GUARD LOCATING	1
10	29-0160-08	COVER, WIRE	1
11	29-0162-00	BLOCK, GUARD HINGE	2
12	29-0163-00	BUSHING, 1/8" ID x 3/16" OD x 3/16" LNG. FLANGE	2
13	29-0166-00	PLATE, LATCH	1
14	29-4004-08	ASSEMBLY, SPRAYER	1

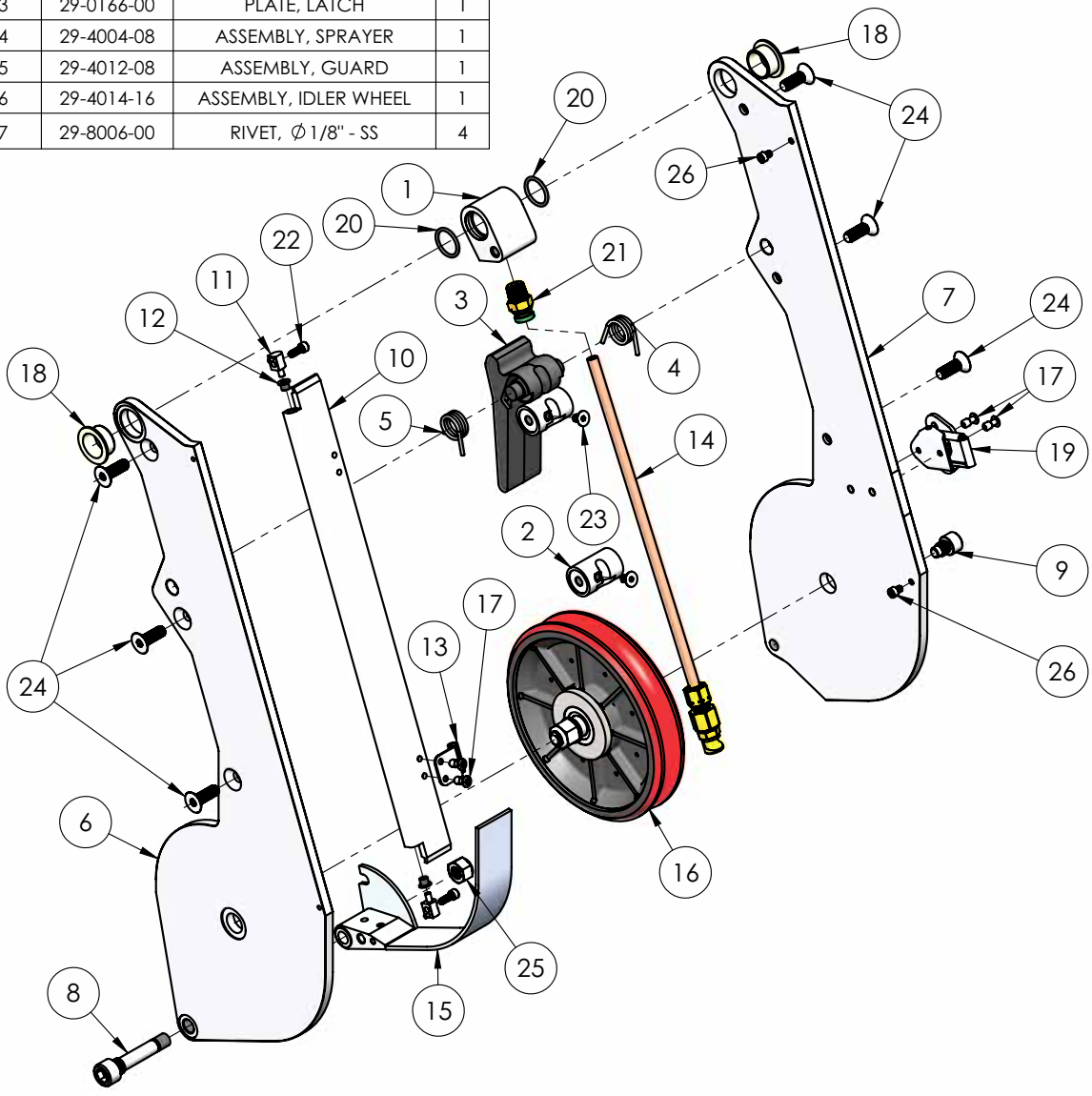
BOM 29-4001-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
15	29-4013-08	ASSEMBLY, GUARD	1
16	29-4014-16	ASSEMBLY, IDLER WHEEL	1
17	29-8006-00	RIVET, ∅1/8" - SS	4
18	29-8007-00	BUSHING, 5/8 ID x 23/32" OD x 3/8" LNG. FLANGE	2
19	29-8008-00	LATCH, DRAW	1
20	29-8009-00	O-RING, -016	2
21	29-8010-00	FITTING, PUSH TO CONNECT	1
22	90-100-03	SHCS, #6-32 x 3/8" LNG. - 18-8 SS	2
23	90-123-03	FHCS, #8-32 x 5/6" LNG. - 18-8 SS	2
24	90-153-07	FHCS, 1/4-20 x 3/4" LNG. - 18-8 SS	6
25	90-165-03	NUT, 5/16-18 - 18-8 SS NYLOCK	1
26	90-300-01	SHCS, #6-32 x 3/16" LNG. - 18-8 SS	2



DWG 208 Arm Assembly, 29-4002-08

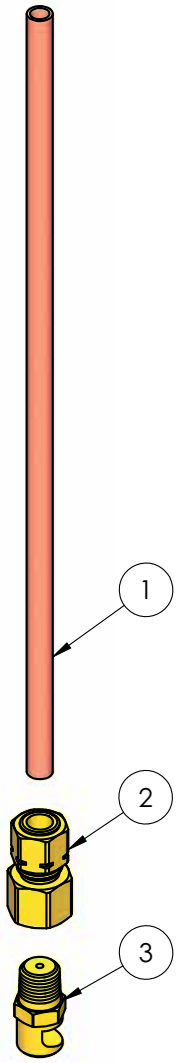
BOM 29-4002-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0108-00	BLOCK, ALIGNMENT SPACER	1
2	29-0109-00	BLOCK, SPACER	2
3	29-0123-08	LATCH, ARM POSITIONING	1
4	29-0125-00	SPRING, R.H. TORSIONAL	1
5	29-0126-00	SPRING, L.H. TORSIONAL	1
6	29-0150-08	PLATE, ARM	1
7	29-0151-08	PLATE, ARM	1
8	29-0158-00	SCREW, GUARD PIVOT	1
9	29-0159-00	SCREW, GUARD LOCATING	1
10	29-0160-08	COVER, WIRE	1
11	29-0162-00	BLOCK, GUARD HINGE	2
12	29-0163-00	BUSHING, 1/8" ID x 3/16" OD x 3/16" LNG. FLANGE	2
13	29-0166-00	PLATE, LATCH	1
14	29-4004-08	ASSEMBLY, SPRAYER	1
15	29-4012-08	ASSEMBLY, GUARD	1
16	29-4014-16	ASSEMBLY, IDLER WHEEL	1
17	29-8006-00	RIVET, ∅1/8" - SS	4

BOM 29-4002-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
18	29-8007-00	BUSHING, 5/8 ID x 23/32" OD x 3/8" LNG. FLANGE	2
19	29-8008-00	LATCH, DRAW	1
20	29-8009-00	O-RING, -016	2
21	29-8010-00	FITTING, PUSH TO CONNECT	1
22	90-100-03	SHCS, #6-32 x 3/8" LNG. - 18-8 SS	2
23	90-123-03	FHCS, #8-32 x 5/6" LNG. - 18-8 SS	2
24	90-153-07	FHCS, 1/4-20 x 3/4" LNG. - 18-8 SS	6
25	90-165-03	NUT, 5/16-18 - 18-8 SS NYLOCK	1
26	90-300-01	SHCS, #6-32 x 3/16" LNG. - 18-8 SS	2



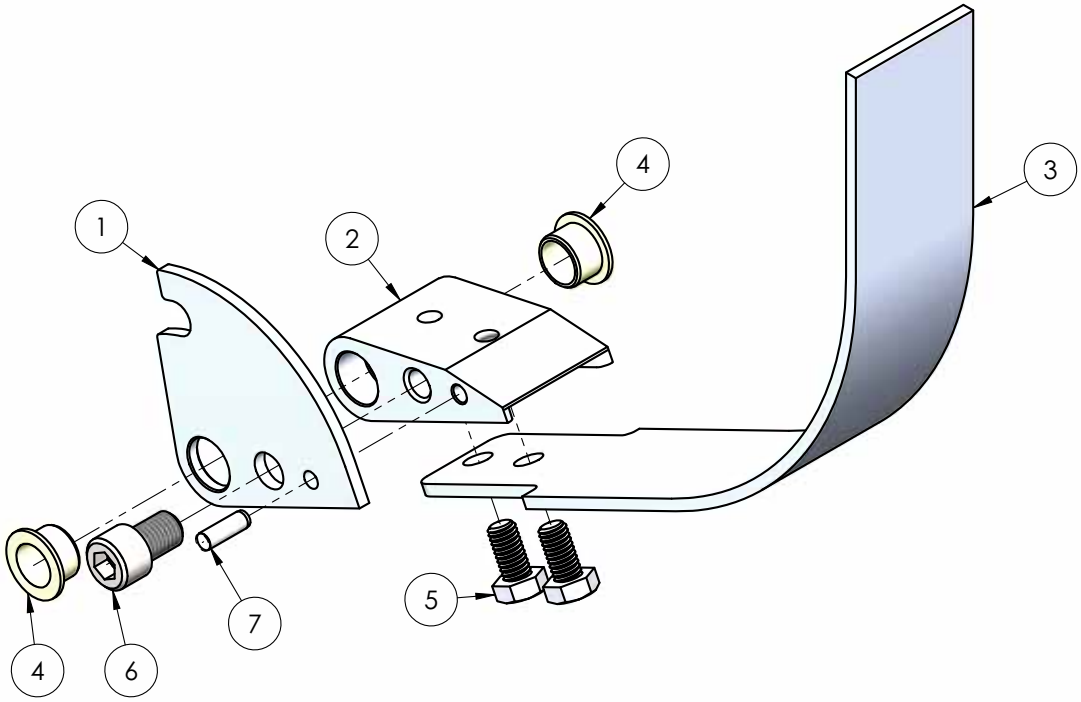
DWG 208 Sprayer Assembly, 29-4004-08

BOM 29-4004-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	29-0329-08	TUBE, SPRAYER	1
2	29-8011-00	ADAPTER, 1/4" TUBE x 1/8" NPT (F)	1
3	29-8012-00	NOZZLE, SPRAY	1



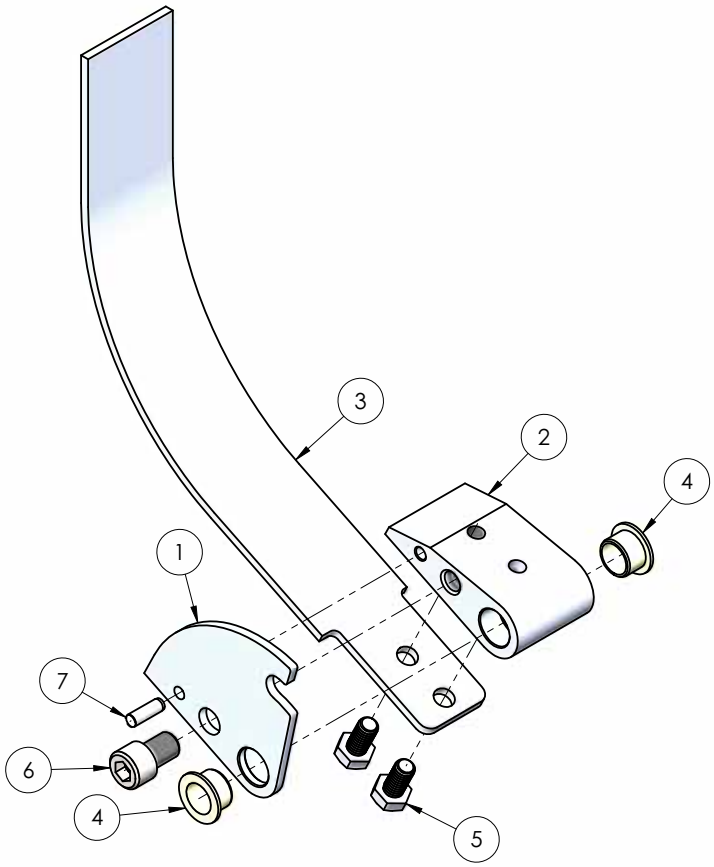
DWG 208 Guard Assembly, 29-4013-08

BOM 29-4013-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0154-00	PLATE, GUARD	1
2	29-0155-00	BLOCK, GUARD	1
3	29-0157-08	PLATE, GUARD	1
4	29-8013-00	BUSHING, 1/2" ID x 5/8" OD x 1/4" LNG. FLANGE	2
5	90-141-51	HHCS, #10-32 x 3/8" LNG. - 18-8 SS	2
6	90-150-03	SHCS 1/4-20 X 3/8 SS	1
7	90-026-03	PIN, 1/8 X 3/8 DOWEL	1



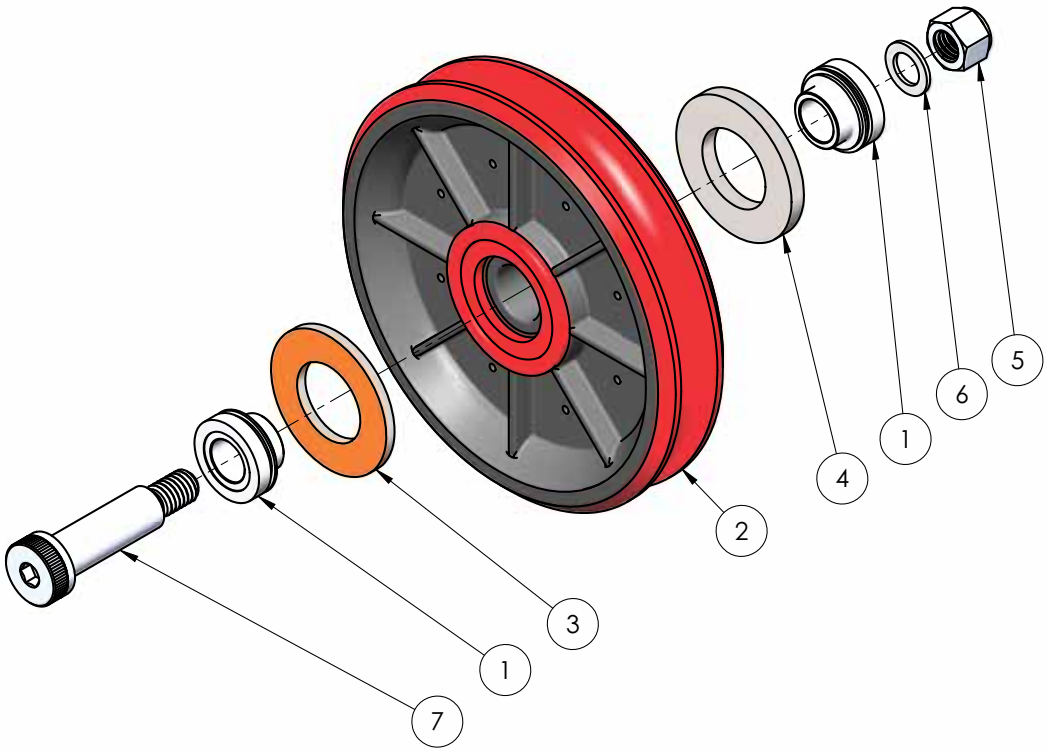
DWG 208 Guard Assembly, 29-4012-08

BOM 29-4012-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0154-00	PLATE, GUARD	1
2	29-0155-00	BLOCK, GUARD	1
3	29-0156-08	PLATE, GUARD	1
4	29-8013-00	BUSHING, 1/2" ID x 5/8" OD x 1/4" LNG. FLANGE	2
5	90-141-51	HHCS, #10-32 x 3/8" LNG. - 18-8 SS	2
6	90-150-03	SHCS 1/4-20 X 3/8 SS	1
7	90-026-03	PIN, 1/8 X 3/8 DOWEL	1



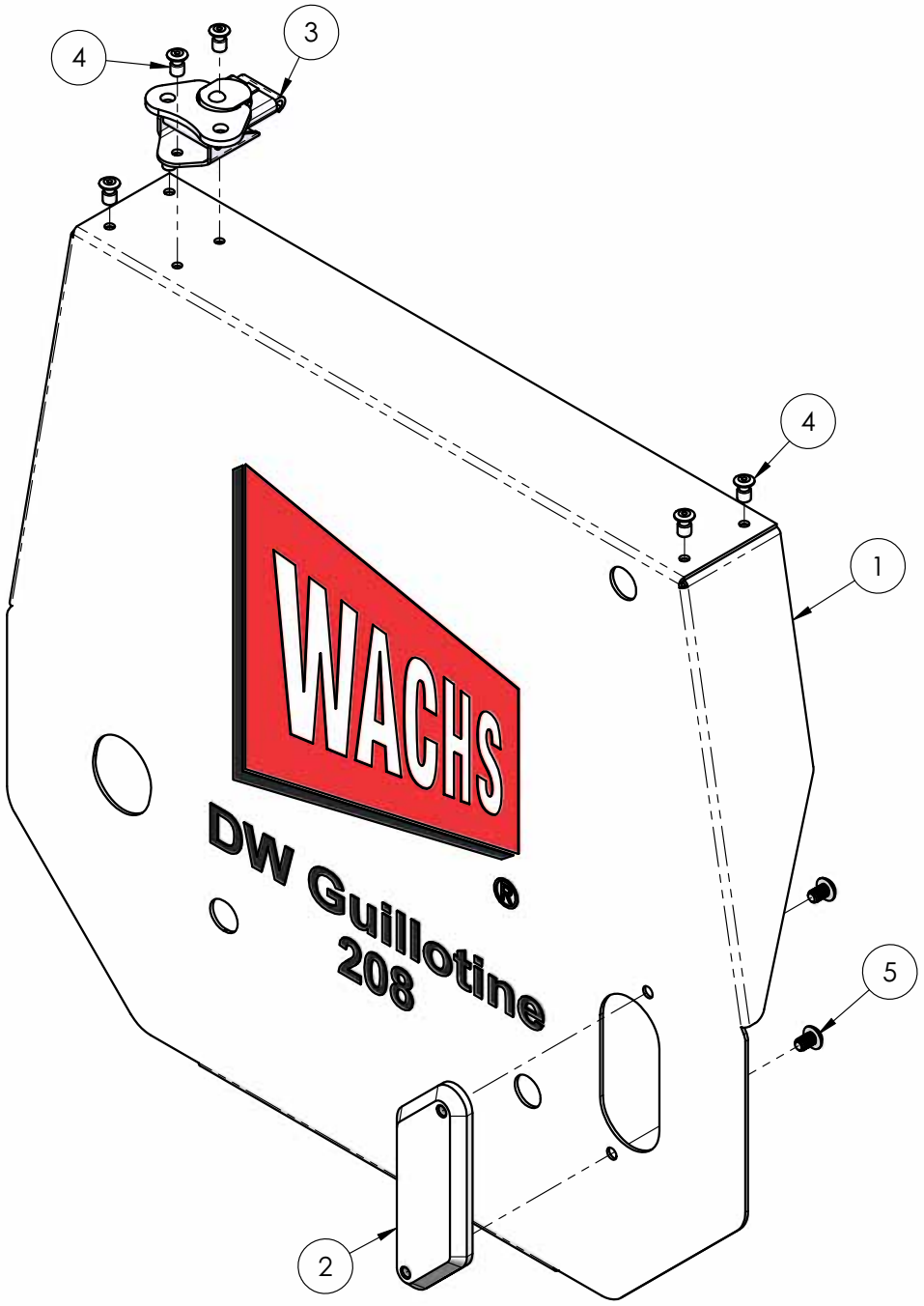
DWG 208/416, Idler Wheel Assembly, 29-4014-16

BOM 29-4014-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0170-00	SPACER, IDLER	2
2	29-0200-00	WHEEL, IDLER	1
3	29-0212-00	WASHER, FELT	1
4	29-0213-00	WASHER, FELT	1
5	90-175-41	NUT, 3/8-16 NYLOCK - 18-8 SS	1
6	90-175-55	WASHER, 3/8 - 18-8 SS NAS	1
7	90-197-15	BOLT, SHOULDER 1/2 x 1-1/2" LNG. - 18-8 SS	1



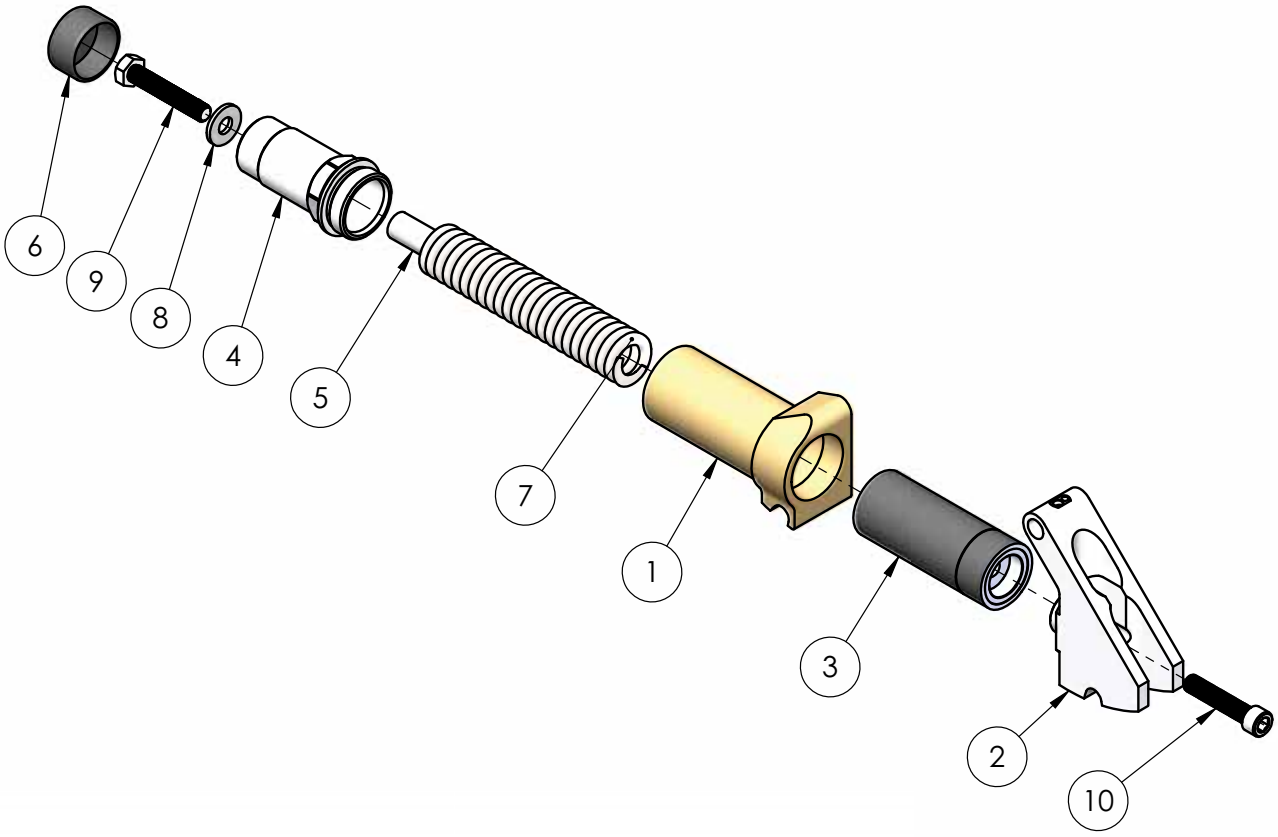
DWG 208 Cover Assembly, 29-4005-08

BOM 29-4005-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0105-08	COVER, FRAME BASE	1
2	29-0115-00	COVER, ARM PIVOT	1
3	29-8008-00	LATCH, DRAW	1
4	29-8020-00	RIVET, ∅1/8" - SS	6
5	90-122-09	BHCS, #8-32 x 1/4" LNG. - 18-8 SS	2



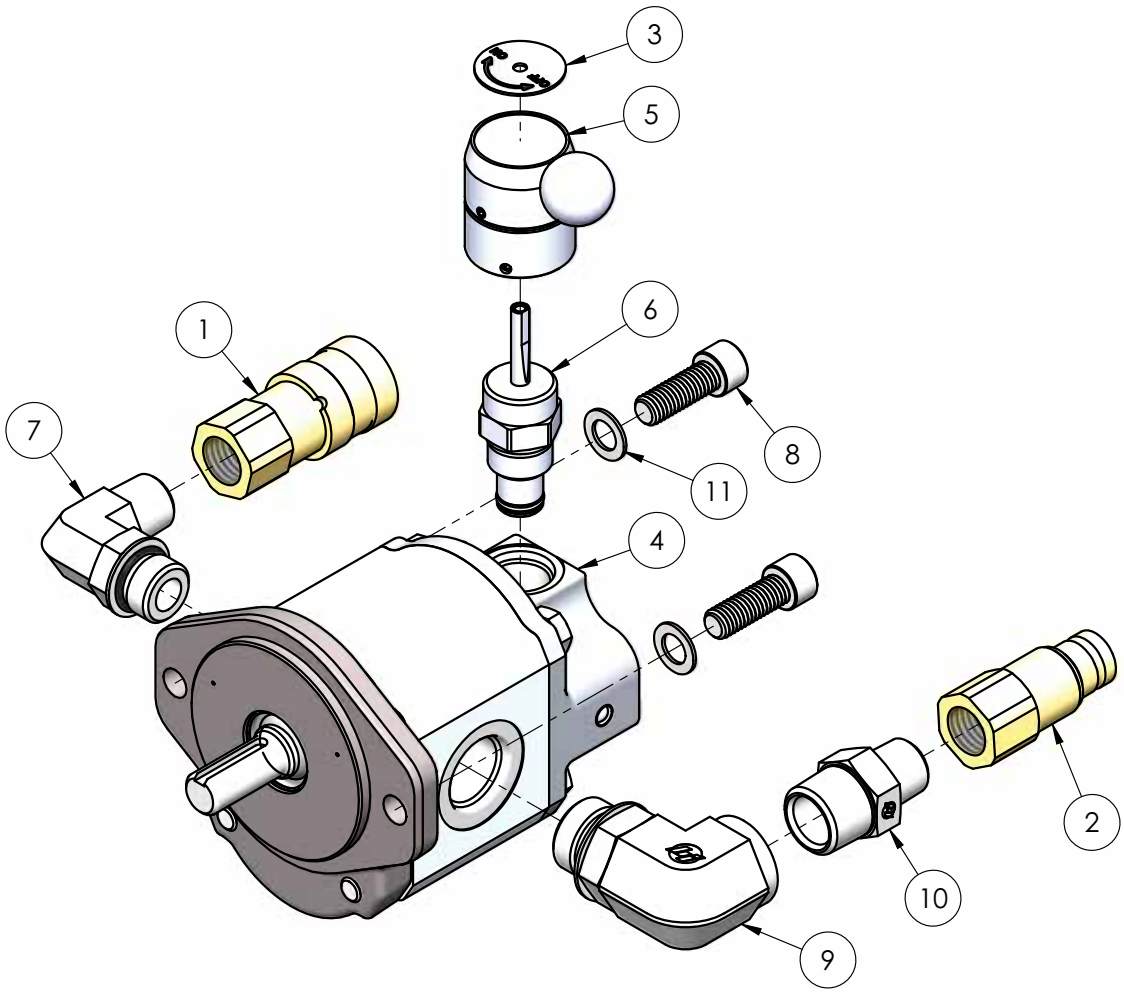
DWG 208 Arm Tensioning Assembly, 29-4007-08

BOM 29-4007-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0144-00	BLOCK, ARM TENSIONING	1
2	29-0145-08	BLOCK, ARM ALIGNMENT	1
3	29-0146-00	SHAFT, WHEEL ADJUSTMENT	1
4	29-0147-00	SCREW, SPRING TENSIONING	1
5	29-0148-00	SHAFT, SPRING TENSIONING	1
6	29-8018-00	CAP, VINYL PUSH ON	1
7	29-8019-00	SPRING, 1" x 6" LNG. DIE	1
8	90-155-55	WASHER, 1/4" MS-16212-11 - 18-8 SS	1
9	90-161-67	HHCS, 5/16-24 x 1-3/4" LNG. - 18-8 SS	1
10	90-060-65	SHCS, 5/16-24 x 1-1/2" LNG. ZINC PLATED	1



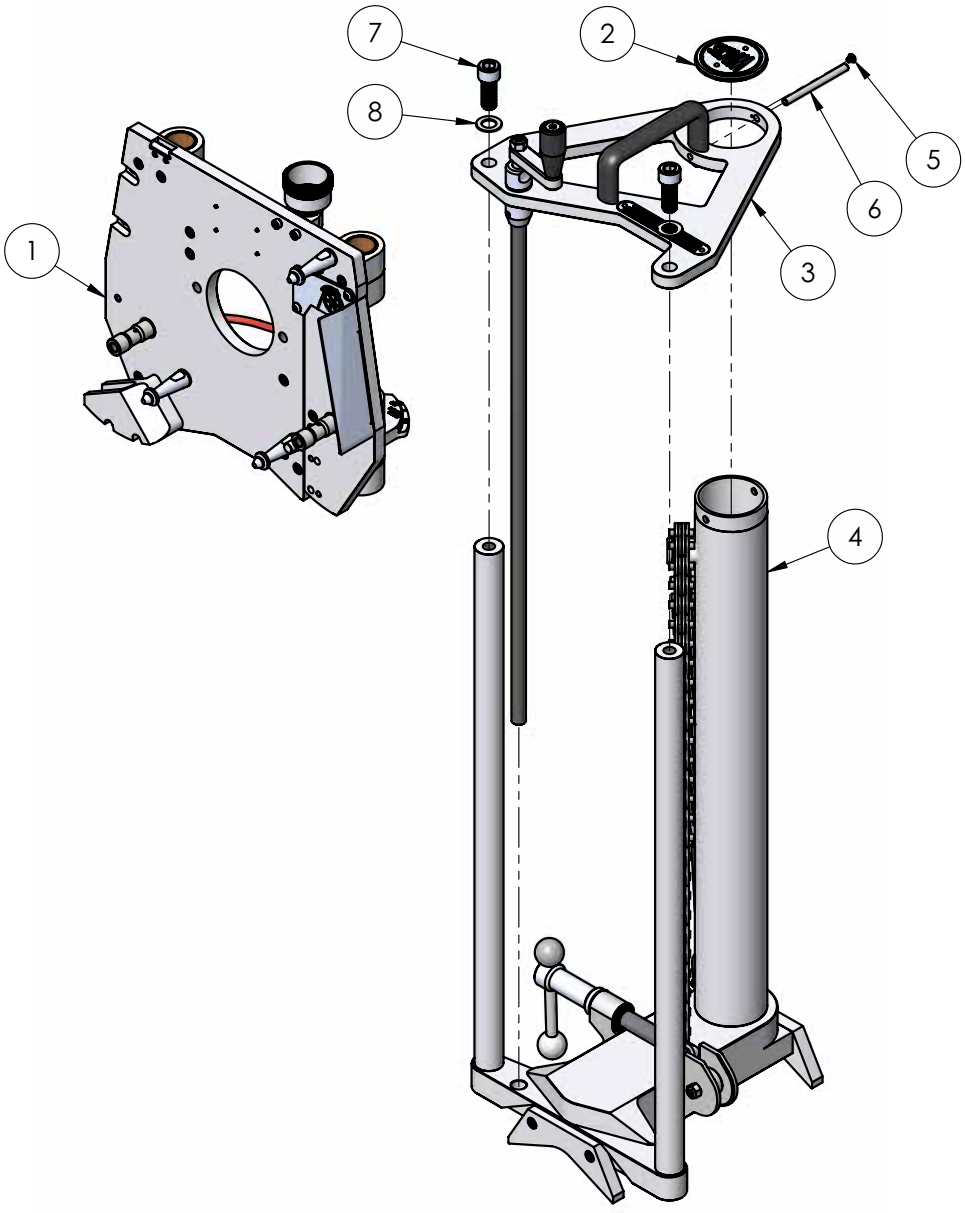
DWG 208/416 Drive Motor Assembly, 29-4009-00

BOM 29-4009-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	09-025-00	QUICK DISCONNECT, FEMALE - HTMA 1/2 NPT F	1
2	09-026-00	QUICK DISCONNECT, MALE - HTMA 1/2 NPT F	1
3	29-0220-00	LABEL, ON/OFF	1
4	29-8022-00	MOTOR, HYDRAULIC	1
5	29-8023-01	KIT, LEVER	1
6	29-8023-00	VALVE, CARTRIDGE	1
7	90-098-18	FITTING, 5/8" ORB (M) x 1/2" NPT (M) - 90°	1
8	90-180-12	SHCS, 7/16-14 x 1-1/4" LNG. - 18-8 SS	2
9	90-218-63	ADAPTER, -12 ORB (M) x -12 NPT (F) - 90°	1
10	90-218-73	ADAPTER, 3/4" NPT (M) x 1/2" NPT (M)	1
11	90-285-52	WASHER, 7/16" NAS - 18-8 SS	2



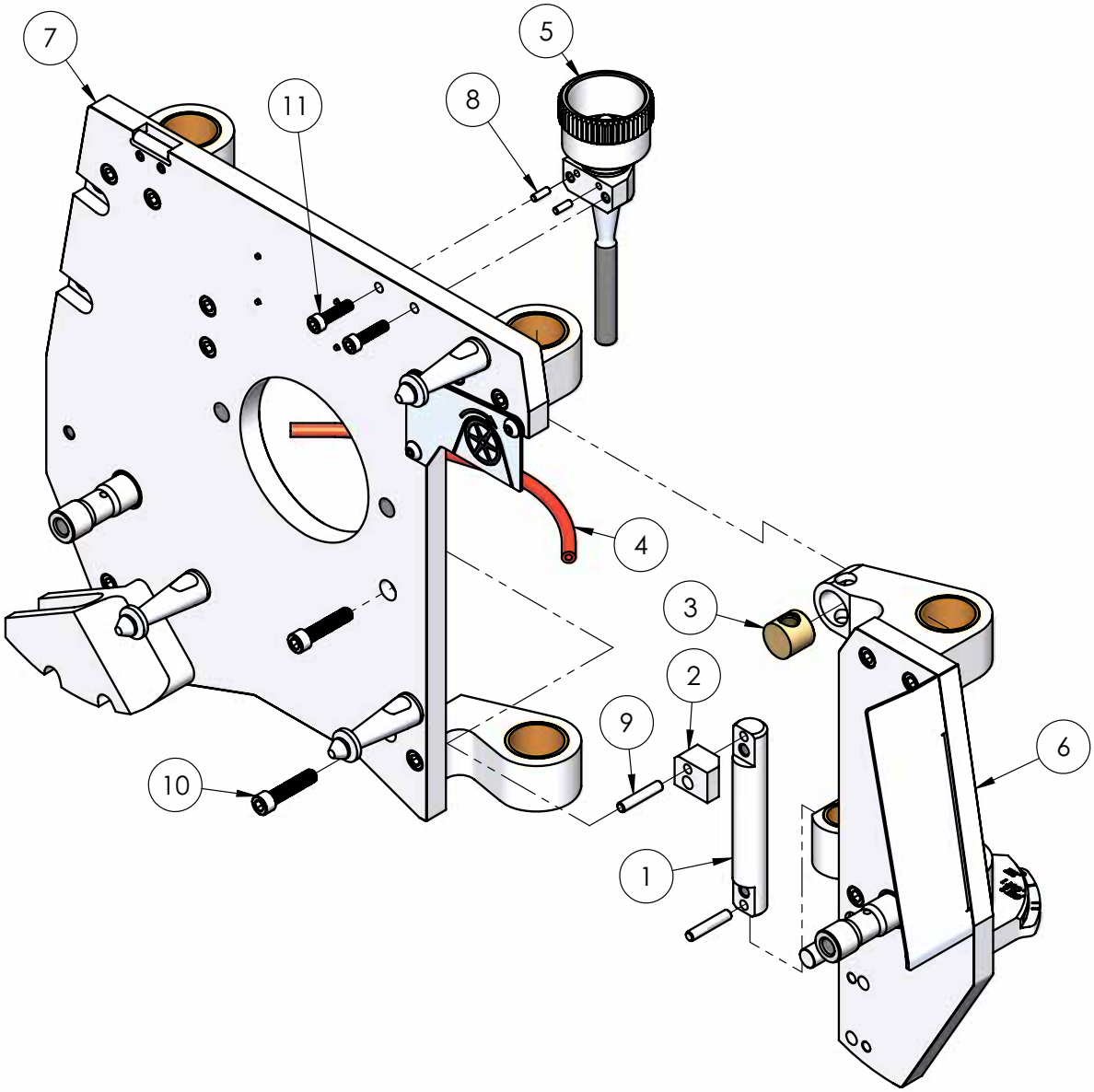
DWG 208 Base Plate/Tower Assembly, 29-4011-08

BOM 29-4011-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	29-4000-08	ASSEMBLY, FRAME	1
2	29-4015-00	ASSEMBLY, FEED TOWER END CAP	1
3	29-4016-08	ASSEMBLY, FEED	1
4	29-4017-08	ASSEMBLY, FEED TOWER	1
5	90-122-03	BHCS #8-32 x 3/16" LNG. - 18-8 SS	1
6	90-156-30	PIN, DOWEL ∅1/4 x 3" LNG. - 18-8 SS	1
7	90-190-12	SHCS, 1/2-13 x 1-1/4" LNG. - 18-8 SS	2
8	90-195-53	WASHER, 1/2" 18-8 SS AN NAS 1149-C0863R	2



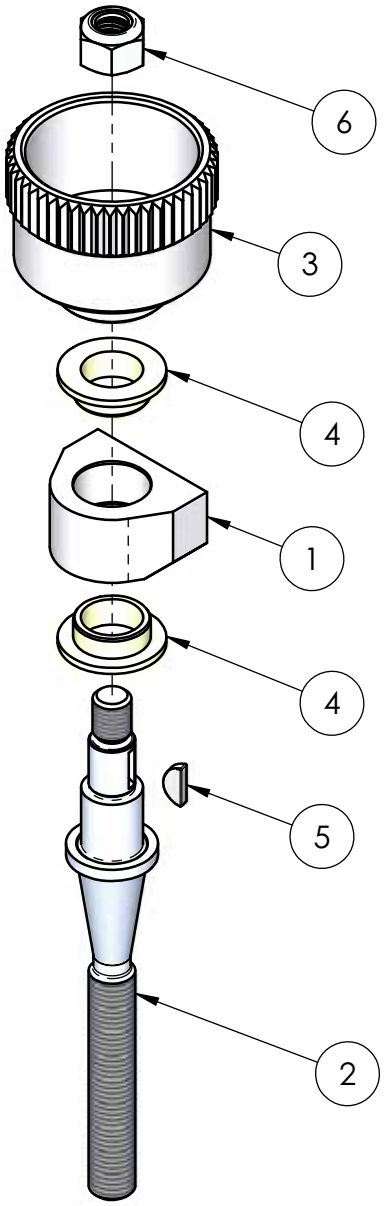
DWG 208 Frame Assembly, 29-4000-08

BOM 29-4000-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0132-00	ROD, SLIDE	1
2	29-0133-00	BLOCK, TRUNNION	1
3	29-0134-00	NUT, TOOL HOLDER	1
4	29-0322-08	HOSE, SPRAYER	1
5	29-4006-00	ASSEMBLY, WHEEL SLIDE	1
6	29-4008-08	ASSEMBLY, WIRE TENSIONING	1
7	29-4010-08	ASSEMBLY, FRAME BASE PLATE	1
8	90-126-03	PIN, Ø1/8" x 3/8" LNG. DOWEL - 18-8 SS	2
9	90-146-10	PIN, Ø3/16" x 1" LNG. DOWEL - 18-8 SS	2
10	90-150-11	SHCS, 1/4-20 x 1-1/8" LNG. - 18-8 SS	2
11	90-340-57	SHCS, #10-32 x 3/4" LNG. - 18-8 SS MS-16886-12	2



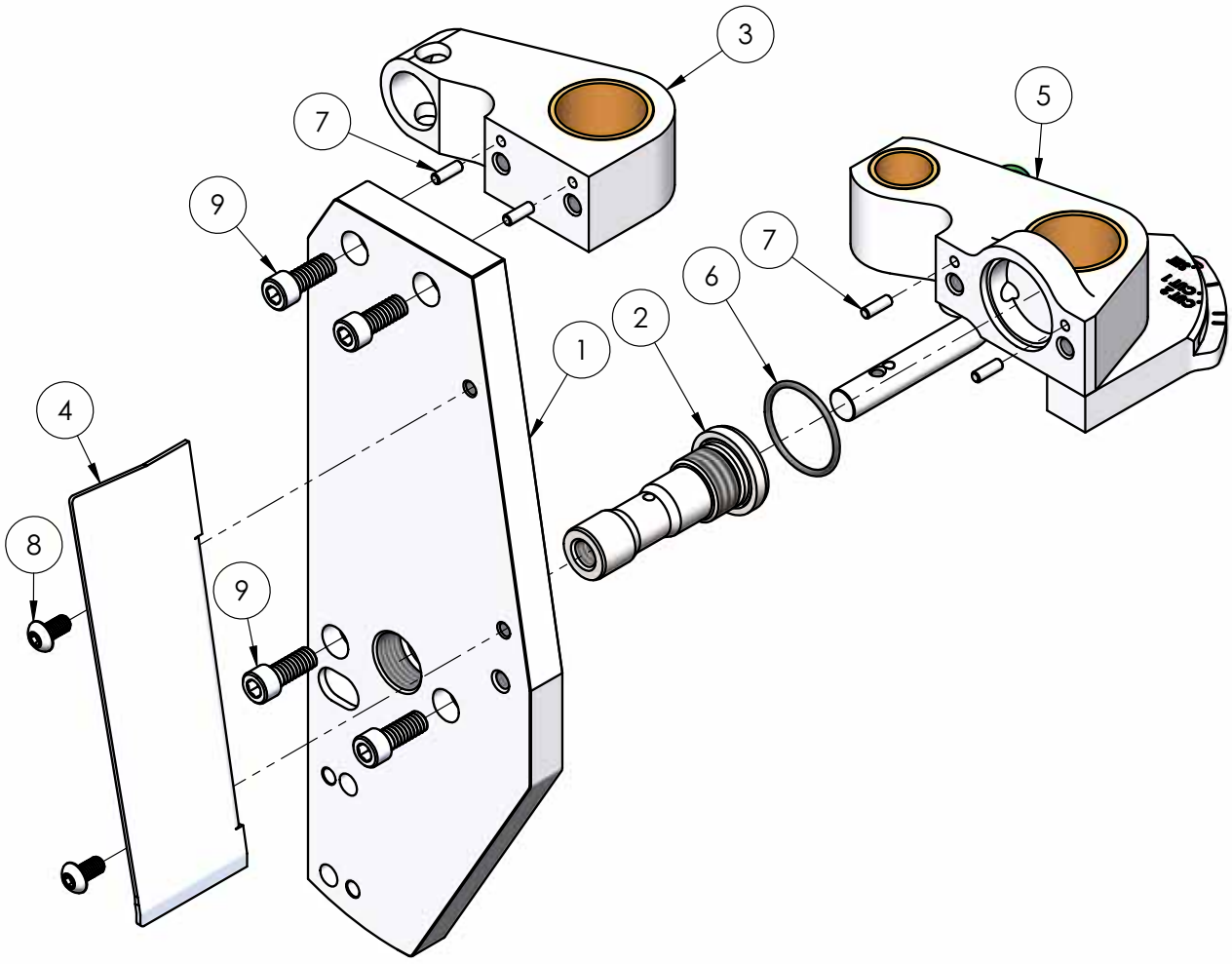
DWG 208/416 Wheel Slide Assembly, 29-4006-00

BOM 29-4006-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0135-00	BLOCK, WHEEL ADJUSTMENT	1
2	29-0136-00	SCREW, WHEEL ADJUSTMENT	1
3	29-0137-00	KNOB, TENSIONING	1
4	29-8000-00	BUSHING, 1/2" ID x 5/8" OD x 1/4" LNG. FLANGE	2
5	90-017-03	KEY, #303 WOODRUFF	1
6	90-165-04	NUT, 5/16-24 - 18-8 SS NYLOCK	1



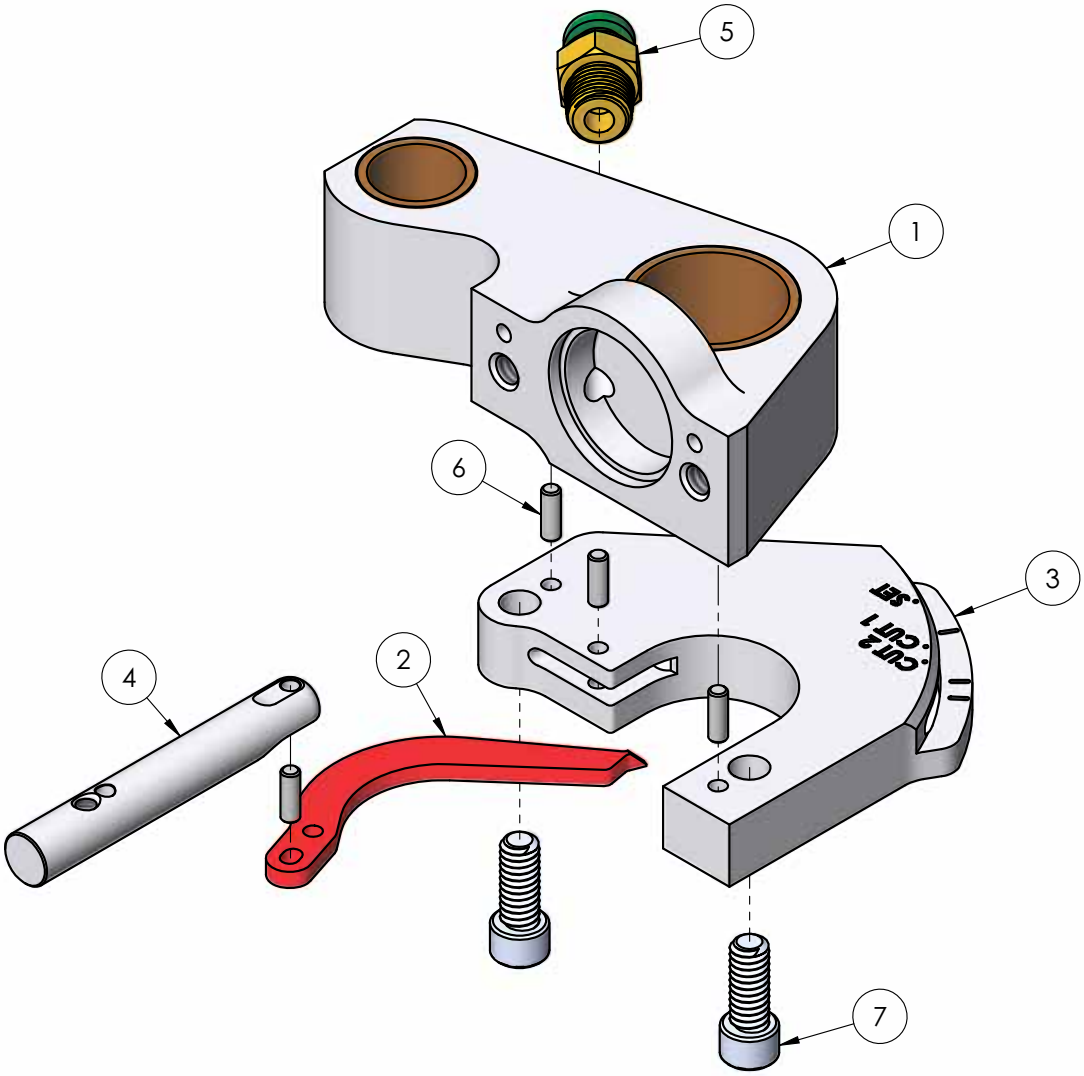
DWG 208 Wire Tensioning Assembly, 29-4008-08

BOM 29-4008-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0102-08	PLATE, FRAME BASE	1
2	29-0103-00	PIN, PIVOT ARM	1
3	29-0113-00	ASSEMBLY, TRUNNION BLOCK	1
4	29-0232-00	GUARD, FRAME BASE PLATE	1
5	29-4019-08	ASSEMBLY, GAUGE / TRUNNION	1
6	29-8015-00	O-RING, -022	1
7	90-126-03	PIN, ∅1/8" x 3/8" LNG. DOWEL - 18-8 SS	4
8	90-142-06	BHCS, #10-32 x 3/8" LNG. - 18-8 SS	2
9	90-150-26	SHCS, 1/4-20 x 5/8" LNG. - 18-8 SS NAS 1352C-4-10	4



DWG 208 Gauge/Trunnion Assembly, 29-4019-08

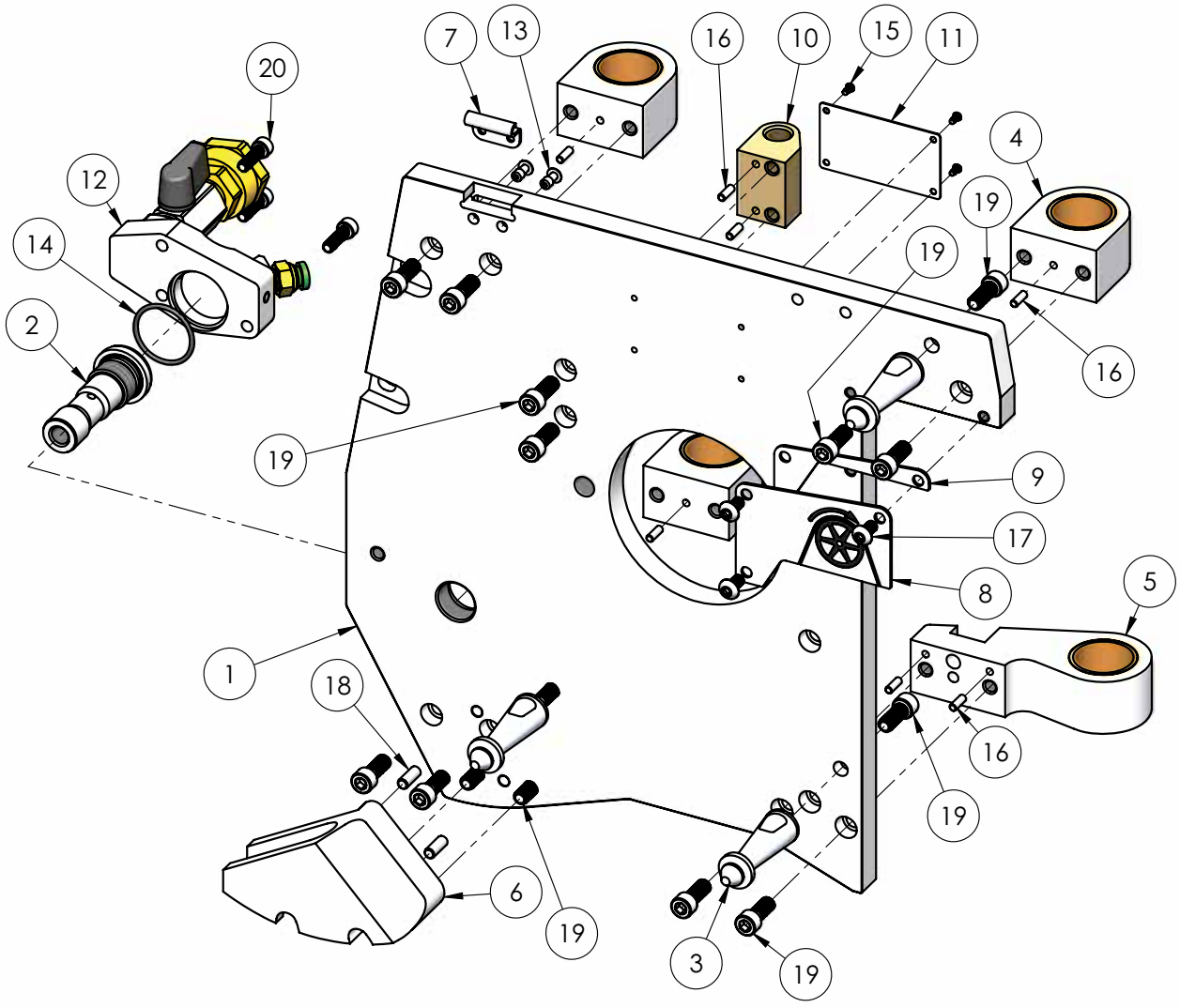
BOM 29-4019-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0112-08	ASSEMBLY, TRUNNION BLOCK	1
2	29-0140-00	INDICATOR, TENSION	1
3	29-0141-00	HOUSING, TENSION INDICATING	1
4	29-0142-00	ROD, GAUGE	1
5	29-8010-00	FITTING, PUSH TO CONNECT	1
6	90-126-03	PIN, ∅1/8" x 3/8" LNG. DOWEL - 18-8 SS	4
7	90-150-26	SHCS, 1/4-20 x 5/8" LNG. - 18-8 SS NAS 1352C-4-10	2



DWG 208 Frame Base Plate Assembly, 29-4010-08

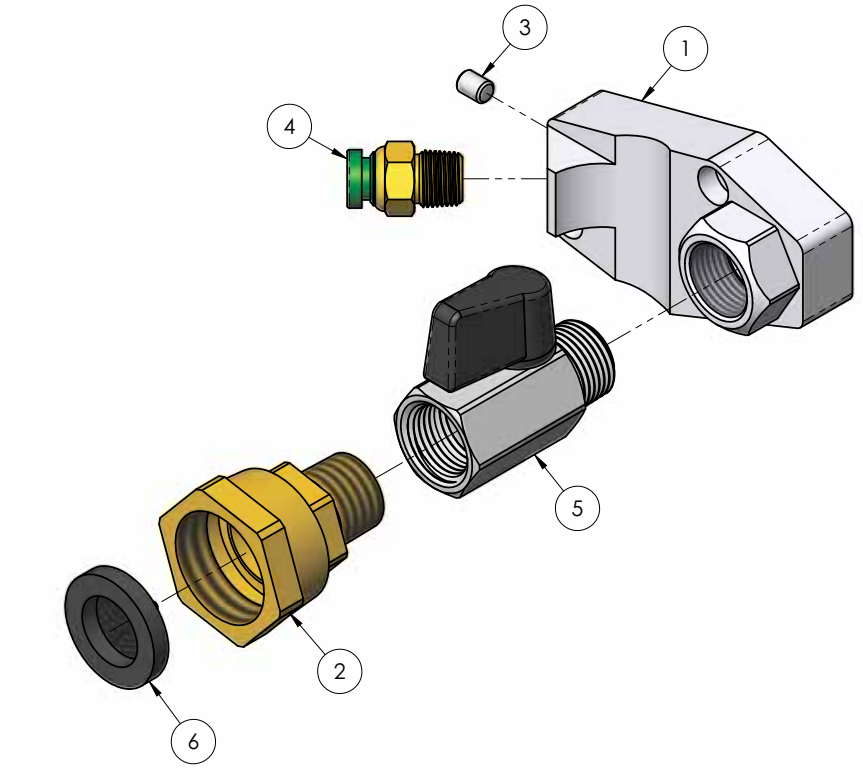
BOM 29-4010-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0101-08	PLATE, FRAME BASE	1
2	29-0103-00	PIN, PIVOT ARM	1
3	29-0107-00	PIN, COVER ALIGNMENT	3
4	29-0110-00	ASSEMBLY, TRUNNION BLOCK	3
5	29-0111-00	ASSEMBLY, TRUNNION BLOCK	1
6	29-0122-08	BLOCK, ARM ALIGNMENT	1
7	29-0168-00	PLATE, LATCH	1
8	29-0230-00	GUARD, FRAME BASE PLATE	1
9	29-0231-00	SPACER, FRAME BASE PLATE GUARD	1

BOM 29-4010-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
10	29-0311-00	NUT, FEED	1
11	29-0800-00	PLATE, DW GUILLOTINE NAME	1
12	29-4018-08	ASSEMBLY, COOLANT SPRAY BLOCK	1
13	29-8006-00	RIVET, ∅1/8" - SS	2
14	29-8015-00	O-RING, -022	1
15	90-049-06	SCREW, #2-3/16 U-DRIVE	4
16	90-126-03	PIN, ∅1/8" x 3/8" LNG. DOWEL - 18-8 SS	7
17	90-142-06	BHCS, #10-32 x 3/8" LNG. - 18-8 SS	3
18	90-146-05	PIN, ∅3/16" x 1/2" LNG. - 18-8 SS	2
19	90-150-26	SHCS, 1/4-20 x 5/8" LNG. - 18-8 SS NAS 1352C-4-10	15
20	90-240-56	SHCS, #10-32 x 5/8" LNG. - 18-8 SS MS-16996-11	3



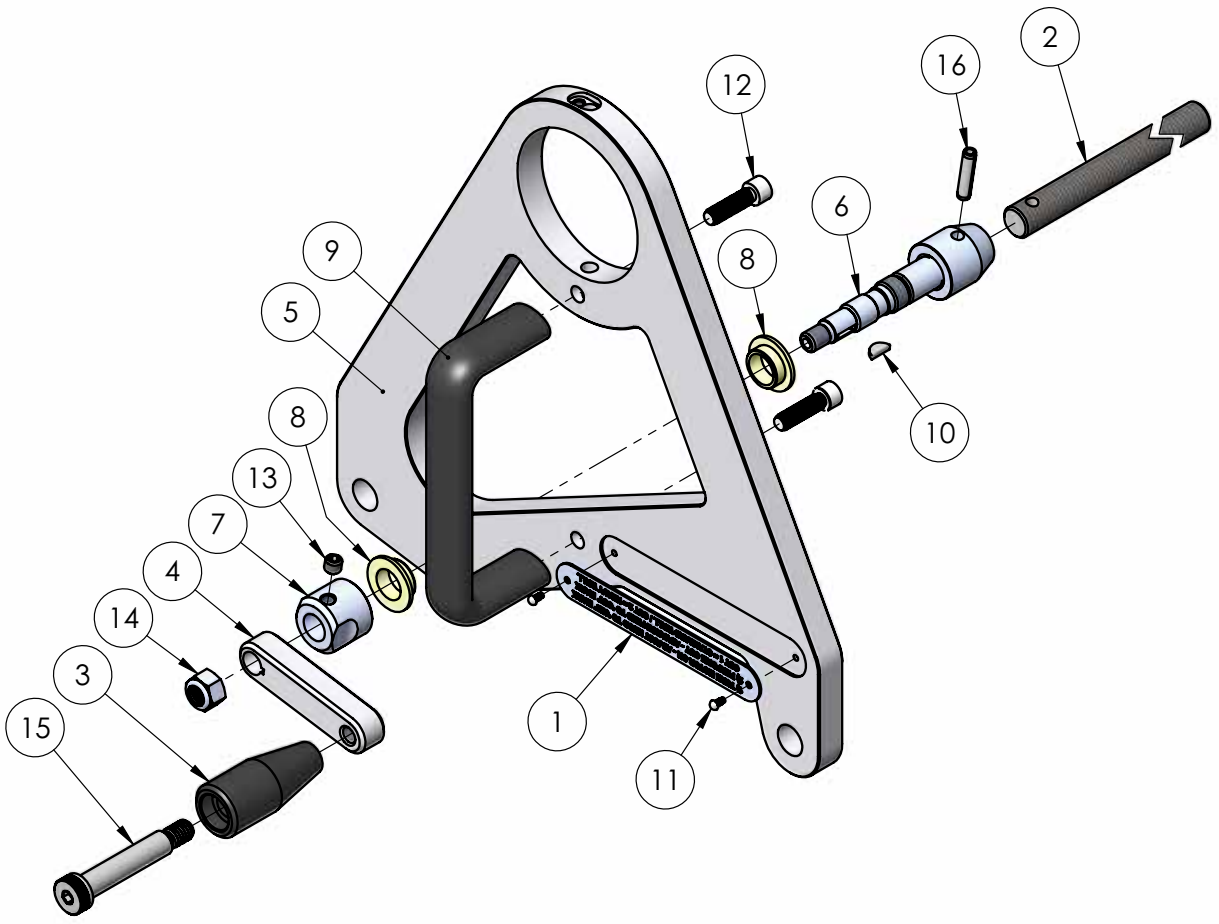
DWG Coolant Spray Block Assembly, 29-4018-08

BOM 29-4018-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0320-00	BLOCK, COOLANT SPRAY	1
2	29-310-00-08	GARDEN HOSE ADAPTER, 3/8 NPT SWIVEL	1
3	90-146-02	PIN, ∅3/16" x 1/4" LNG. DOWEL - 18-8 SS	1
4	29-8010-00	FITTING, PUSH TO CONNECT	1
5	29-8016-00	VALVE, 3/8" x 3/8" BALL	1
6	29-310-00-09	WASHER, HOSE W/SCREEN	1



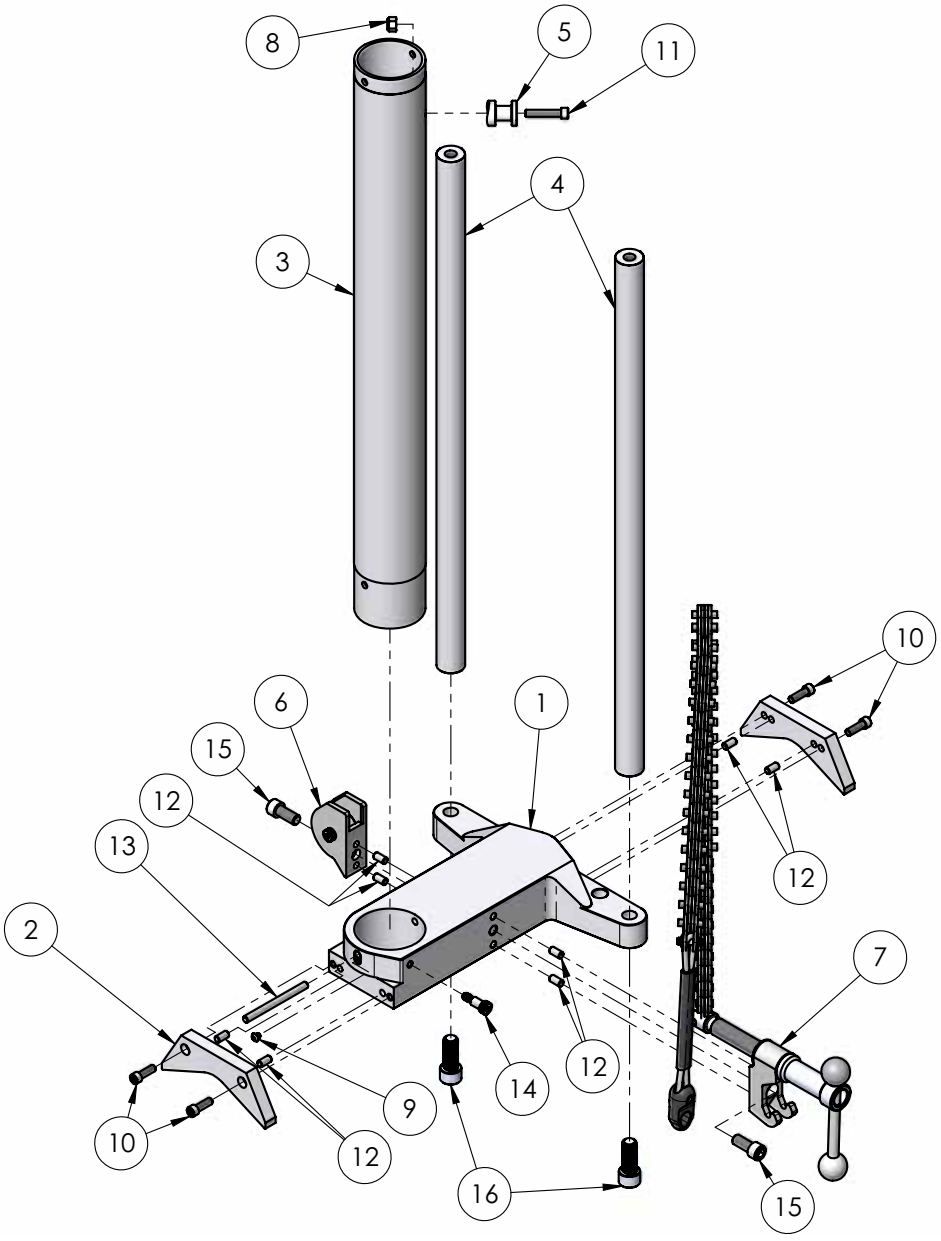
DWG 208 Feed Assembly, 29-4016-08

BOM 29-4016-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0222-00	LABEL, FEED TOWER INSTRUCTION	1
2	29-0310-08	SCREW, FEED	1
3	29-0312-00	KNOB, FEED	1
4	29-0313-00	PLATE, FEED HANDLE	1
5	29-0315-00	PLATE, UPPER GUIDE BAR	1
6	29-0316-00	SPACER, FEED HANDLE	1
7	29-0318-00	NUT, FEED SCREW	1
8	29-8000-00	BUSHING, 1/2" ID x 5/8" OD x 1/4" LNG. FLANGE	2
9	29-8001-00	HANDLE, ALUMINUM	1
10	90-017-03	KEY, #303 WOODRUFF	1
11	90-049-06	SCREW, #2-3/16 U-DRIVE	2
12	90-150-08	SHCS 1/4-20 X 7/8" LG.SS	2
13	90-154-02	SSS, 1/4-20 X 1/4 SS18-8	1
14	90-165-04	NUT, 5/16-24 - 18-8 SS NYLOCK	1
15	90-177-57	BOLT, ∅3/8" x 1-3/4" LNG. SHOULDER - 18-8 SS	1
16	90-346-08	PIN, ∅3/16" x 7/8" LNG. ROLL - 400 SS	1



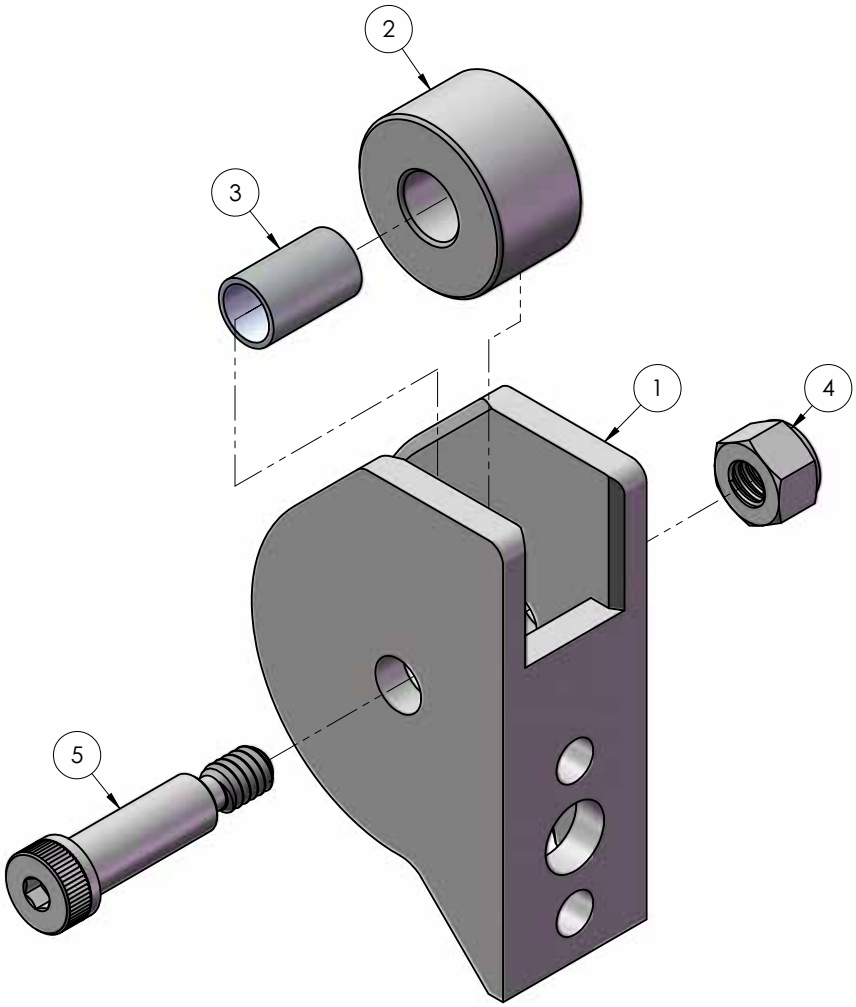
DWG 208 Feed Tower Assembly, 29-4017-08

BOM 29-4017-08				BOM 29-4017-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY	ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0300-00	SADDLE	1	10	90-150-07	SHCS, 1/4-20 X 3/4, SS 18-8	4
2	29-0302-08	PLATE, SADDLE	2	11	90-150-12	SHCS, 1/4-20 X 1-1/4 SS	1
3	29-0314-08	TUBE, FEED TOWER	1	12	90-156-05	PIN, DOWEL ∅1/4" x 1/2" LNG. - 18-8 SS	8
4	29-0327-08	SHAFT, GUIDE	2				
5	29-0340-00	BRACKET, CHAIN STORAGE	1	13	90-156-30	PIN, DOWEL ∅1/4 x 3" LNG. - 18-8 SS	1
6	29-4026-00	ASSEMBLY, CHAIN GUIDE BLOCK	1				
7	29-4027-08	ASSEMBLY, CLAMPING	1	14	90-167-05	BOLT, ∅5/16" x 1/2" LNG. SHOULDER -18-8 SS	1
8	90-055-13	NUT, 1/4-20 NYLOCK - SS	1	15	90-170-09	SHCS, 3/8-16 X 7/8 SS18-8	2
9	90-122-03	BHCS #8-32 x 3/16" LNG. - 18-8 SS	1	16	90-190-12	SHCS, 1/2-13 x 1-1/4" LNG. - 18-8 SS	2



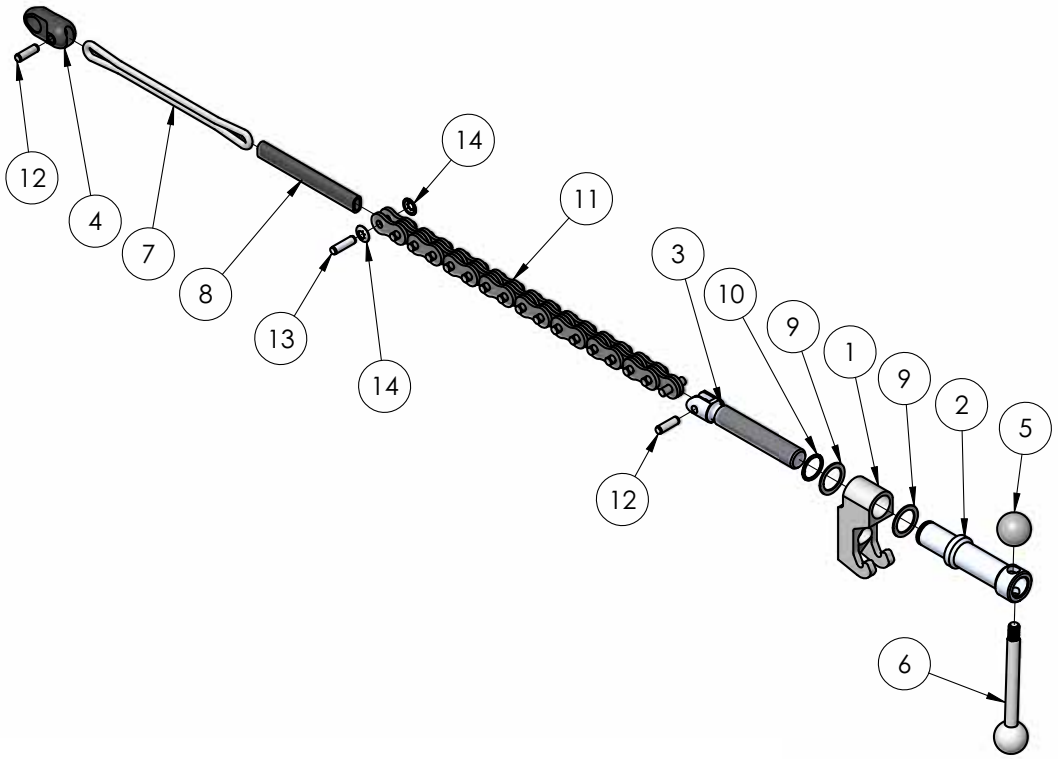
DWG 208/416 Chain Guide Block Ass'y, 29-4026-00

BOM 29-4026-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0304-00	BLOCK, CHAIN GUIDE	1
2	29-0307-00	WHEEL, CHAIN	1
3	29-0308-00	ROLLER, CHAIN GUIDE	1
4	90-055-13	NUT, 1/4-20 NYLOCK - SS	1
5	90-067-58	BOLT, ∅5/16" x 7/8" LNG. SHOULDER	1



DWG 208 Clamping Assembly, 29-4027-08

BOM 29-4027-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0303-00	BLOCK, CLAMP CHAIN MOUNT	1
2	29-0305-00	TUBE, CLAMP THREAD	1
3	29-0306-00	SCREW, CLAMP	1
4	29-0342-00	CLIP, CHAIN BUNGEE	1
5	29-8002-00	KNOB, 1" DIA.	1
6	29-8003-00	HANDLE, LEVER	1
7	29-8004-00	O-RING, -341	1
8	29-8005-00	TUBING, ∅5/16" X 4" LONG	1
9	29-8043-00	SHIM, .75 ID. x 1" OD x .032 THICK	2
10	29-8044-00	SNAP RING, EXTERNAL	1
11	29-8100-08	CHAIN, CLAMPING	1
12	90-1003-20	PIN, ∅6mm x 20mm LNG. DOWEL - 18-8 SS	2
13	90-1003-22	PIN, ∅6mm x 22mm DOWEL - 18-8 SS	1
14	90-655-50	PUSH NUT, 6mm	2



Chapter 6

DWG 416 Drawings and Parts Lists

In This Chapter

ORDERING INFORMATION

To place an order, request service, or get more detailed information on any E.H. Wachs Company products, call us at one of the following numbers:

U.S.	800-323-8185
International:	847-537-8800

You can also visit our Web site at:

www.ehwachs.com

Ordering Replacement Parts

When ordering parts, refer to the parts lists in this chapter. Please provide the part description and part number for all parts you are ordering.

Repair Information

Please call us for an authorization number before returning any equipment for repair or factory service. We will advise you of shipping and handling. When you send the equipment, please include the following information:

- Your name/company name
- Your address
- Your phone number

- A description of the problem or the work to be done.

Before we perform any repair, we will estimate the work and inform you of the cost and the time to complete it.

Warranty Information

Enclosed with the manual is a warranty card. Please fill out the registration card and return to E.H. Wachs Company. Retain the owner's registration record and warranty card for your information.

Return Goods Address

Return equipment for repair to the following address.

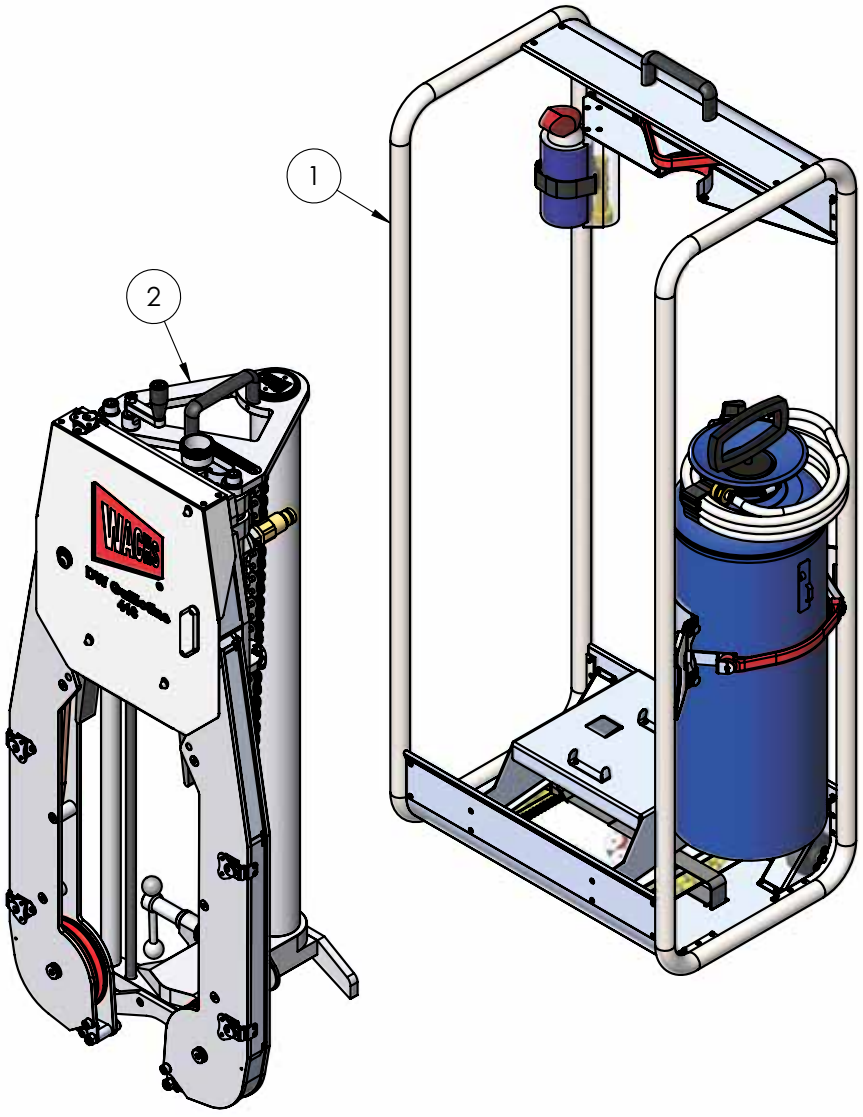
E.H. Wachs
600 Knightsbridge Parkway
Lincolnshire, Illinois 60069 USA

DRAWINGS AND PARTS LISTS

The drawings on the following pages illustrate the components of the DWG 416, and include parts lists for ordering spare or replacement parts.

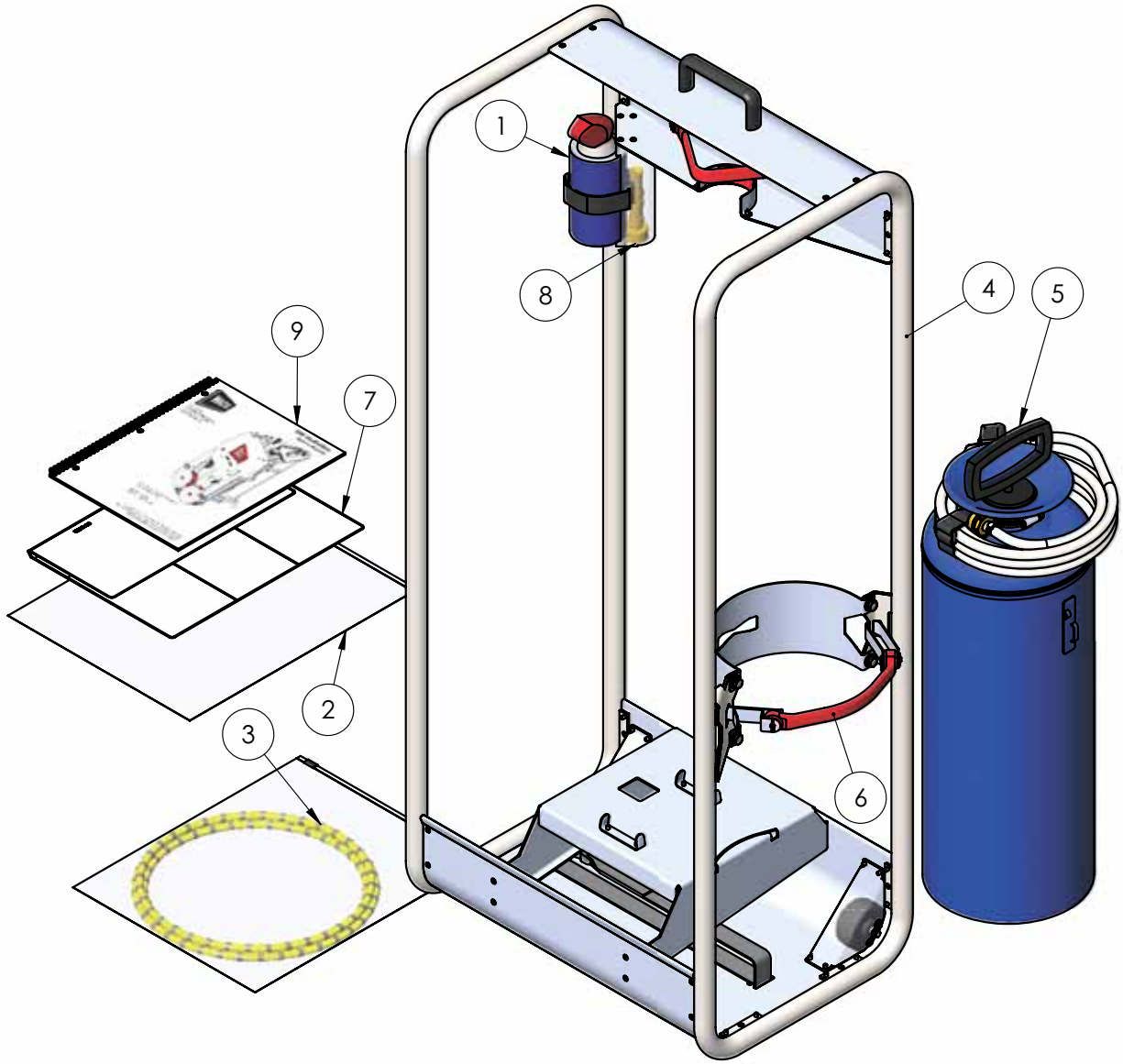
DWG 416 Kit, 29-000-16

BOM 29-000-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	29-4022-16	ASSEMBLY, STORAGE CAGE	1
2	29-4028-16	ASSEMBLY, WS-416	1



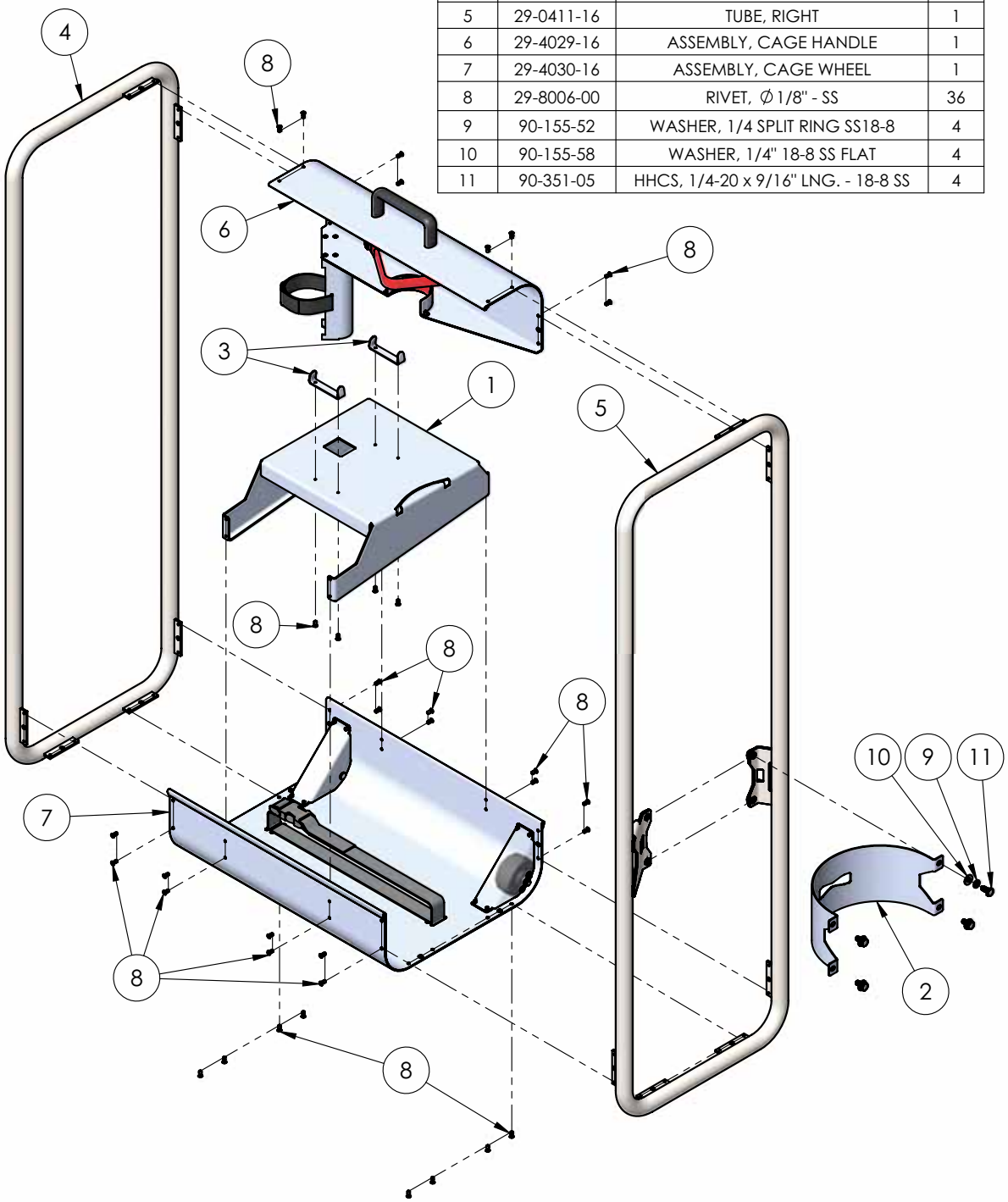
DWG 416 Storage Case Assembly, 29-4022-16

BOM 29-4022-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-010-10-01	LUBRICANT, WD-40 8oz.	1
2	29-0430-00	BAG, 12" x 15" CLEAR	2
3	29-616-00	WIRE, WS-416 DIAMOND	1
4	29-4020-16	ASSEMBLY, WS-416 CAGE	1
5	29-4021-00	ASSEMBLY, COOLANT TANK	1
6	29-4024-00	ASSEMBLY, STRAP	1
7	29-8034-00	SLEEVE, MANUAL	1
8	29-8041-00	ADAPTER, GARDEN HOSE (F) x 3/8" HOSE	1
9	29-MAN-00	MANUAL, WS-208	1



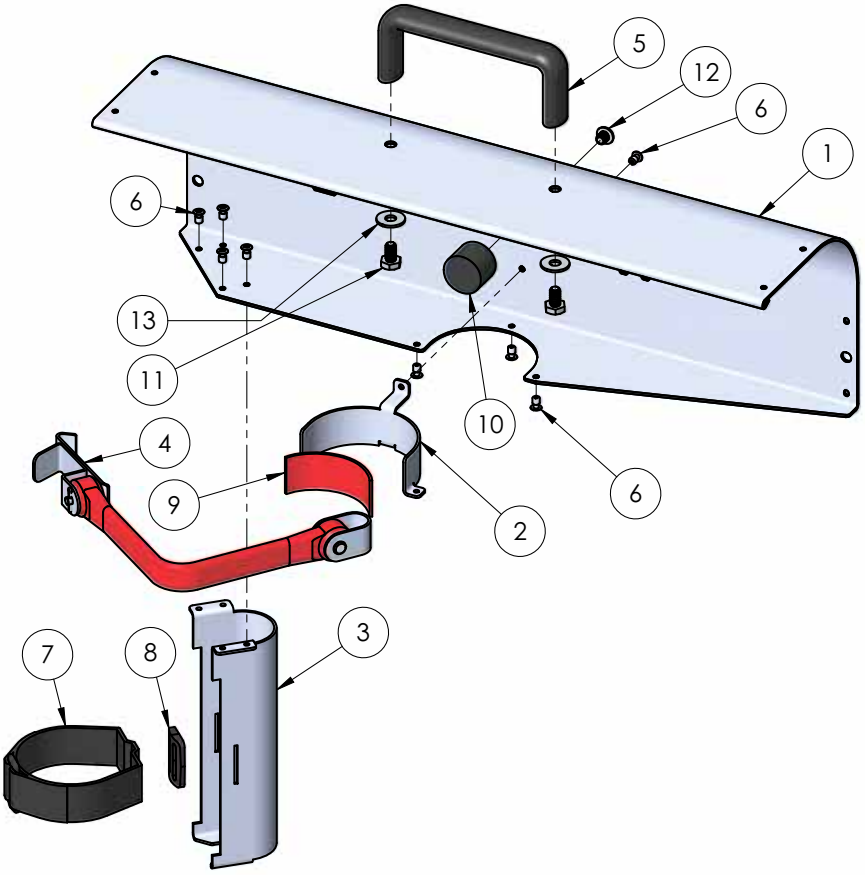
DWG 416 Cage Assembly, 29-4020-16

BOM 29-4020-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0405-16	SHEET METAL 5	1
2	29-0408-00	SHEET METAL 8	1
3	29-0409-00	SHEET METAL 9	2
4	29-0410-16	TUBE, LEFT	1
5	29-0411-16	TUBE, RIGHT	1
6	29-4029-16	ASSEMBLY, CAGE HANDLE	1
7	29-4030-16	ASSEMBLY, CAGE WHEEL	1
8	29-8006-00	RIVET, ∅1/8" - SS	36
9	90-155-52	WASHER, 1/4 SPLIT RING SS18-8	4
10	90-155-58	WASHER, 1/4" 18-8 SS FLAT	4
11	90-351-05	HHCS, 1/4-20 x 9/16" LNG. - 18-8 SS	4



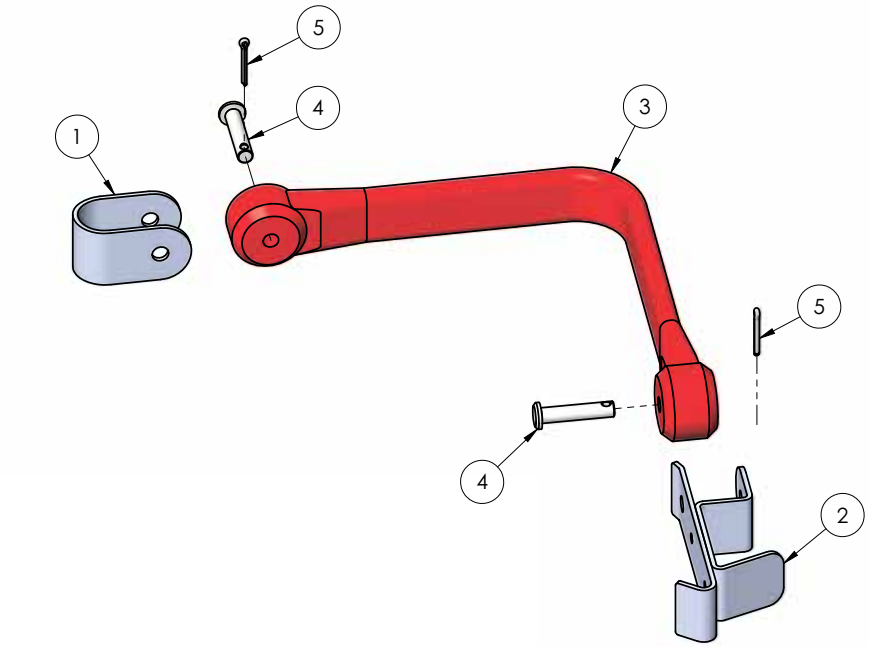
DWG 416 Cage Handle Assembly, 29-4029-16

BOM 29-4029-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	29-0402-16	SHEET METAL 2	1
2	29-0404-00	SHEET METAL 4	1
3	29-0407-00	SHEET METAL 7	1
4	29-4023-00	ASSEMBLY, STRAP	1
5	29-8001-00	HANDLE, ALUMINUM	1
6	29-8020-00	RIVET, ∅1/8" - SS	8
7	29-8035-00	TIE, HOOK AND LOOP CABLE	1
8	29-8036-00	SLIDE, 1" WEBBING	1
9	29-8037-00	RUBBER, 1" x 1/16" x 2.071 ADHEASIVE BACKED	1
10	29-8046-00	BUMPER, RUBBER	1
11	90-151-04	HHCS, 1/4-20 x 7/16" LNG. - 18-8 SS	2
12	90-152-02	BHCS, 1/4-20 x 1/4" LNG. - 18-8 SS	1
13	90-155-57	WASHER, 1/4" MS-15795-853B	2



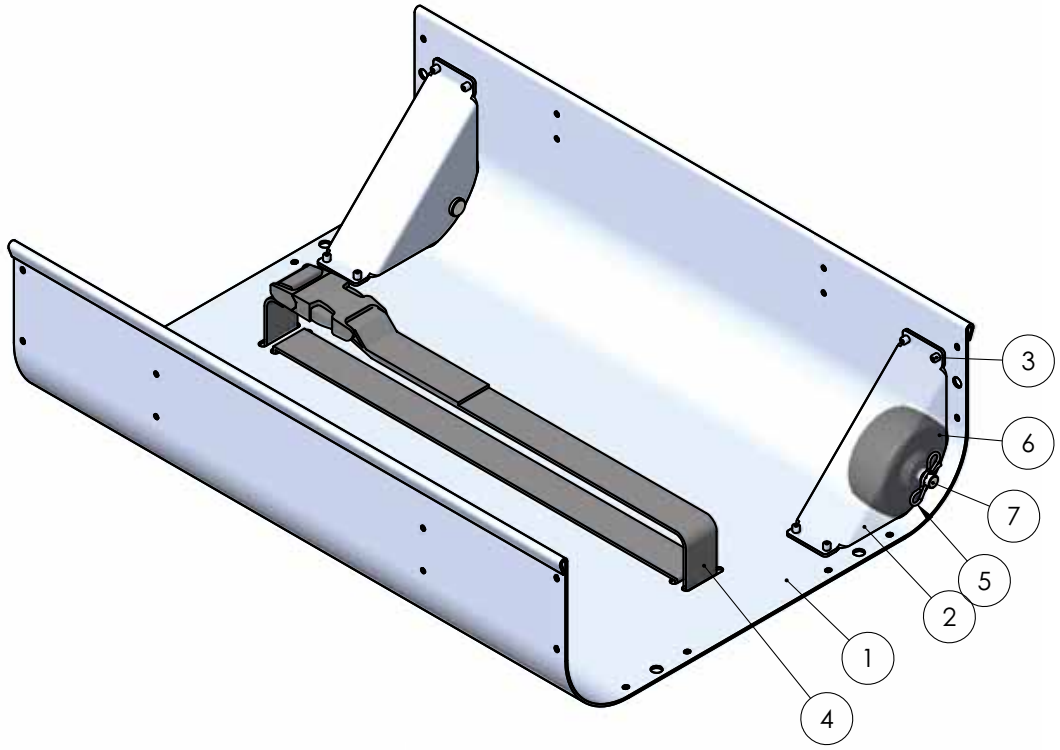
DWG 208/416 Strap Assembly, 29-4023-00

BOM 29-4023-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0412-00	SHEET METAL 12	1
2	29-0414-00	SHEET METAL 14	1
3	29-8024-00	THE PERFECT BUNGEE	1
4	29-8045-00	PIN, ∅3/16" x 7/8" CLEVIS	2
5	90-006-95	PIN, ∅1/16" x 1/2" LNG. COTTER	2



DWG 416 Cage Wheel Assembly, 29-4030-16

BOM 29-4030-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	29-0401-16	SHEET METAL 1	1
2	29-0406-00	SHEET METAL 6	2
3	29-8006-00	RIVET, ∅1/8" - SS	8
4	29-8033-00	STRAP, PLASTIC BUCKLE WITH 3 FT. NYLON	1
5	29-8038-00	PIN, BOW TIE COTTER	2
6	29-8039-00	WHEEL, ∅2-1/2" RUBBER	2
7	29-8040-00	PIN, ∅5/16" x 1-7/8" LNG. CLEVIS	2



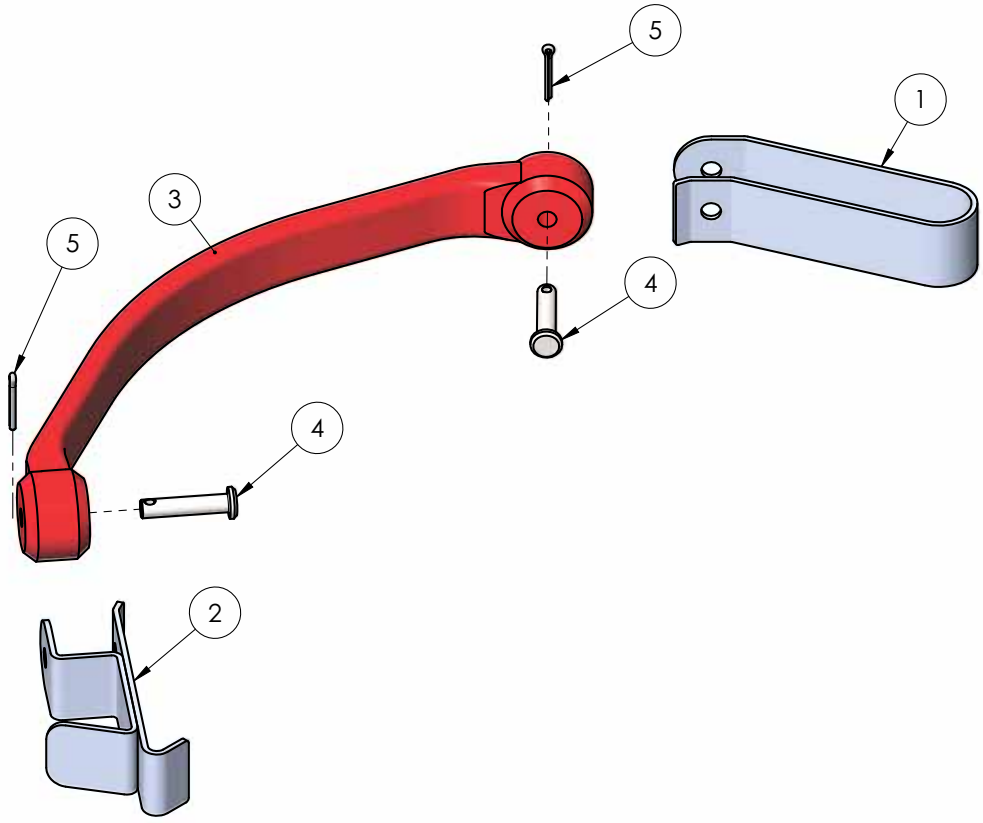
DWG 208/416 Coolant Tank Assembly, 29-4021-00

BOM 29-4021-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-013-00	TANK, PRESSURE	1
2	INCLUDED IN 29-013-00	TANK HOSE, CUT TO 2-1/2" LNG.	REF.
3	29-310-01-04	ADAPTER, GARDEN HOSE (3/4-11 1/2 M) x 3/8" HOSE	1
4	29-8030-00	TIE, HOOK AND LOOP CABLE	1
5	29-8026-00	VALVE, 1/4" BALL	1

BOM 29-4021-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
6	29-8028-00	HOSE, 3/8" ID x 1/2" OD x 10' LNG.	1
7	29-8027-00	ADAPTER, 3/8" HOSE x 1/4" NPT - STR	1
8	29-8029-00	CLAMP, 2-3/4" WORM	1
9	29-8025-00	ADAPTER, 3/8" HOSE x 1/4" NPT - 90°	1
10	29-8032-00	CLAMP, 14.5-17mm CRIMP HOSE	2
11	68-158-04	HOSE CLAMP, CRIMP 11.5-14.0MM	3

DWG 208/416 Strap Assembly, 29-4024-00

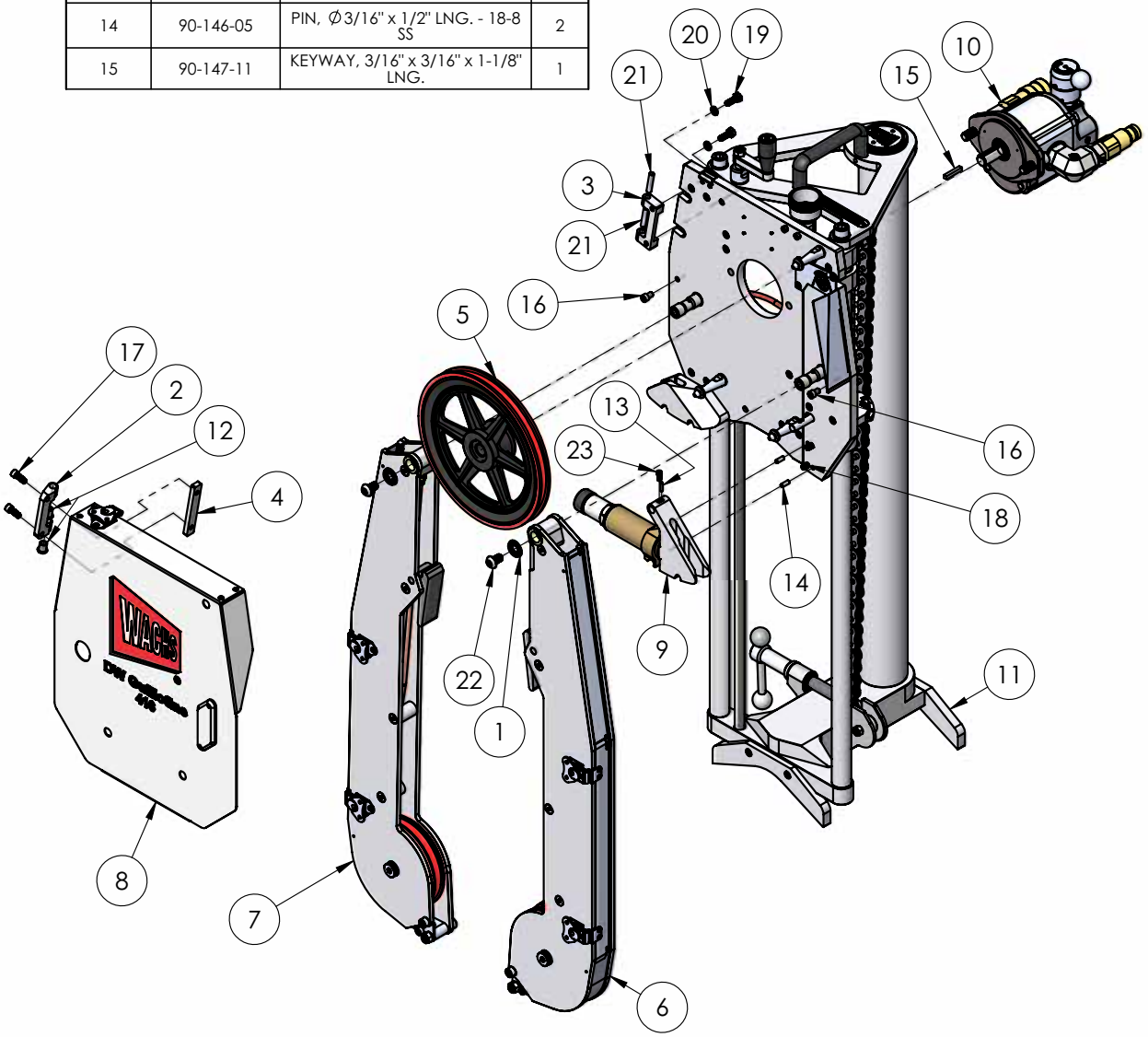
BOM 29-4024-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0413-00	SHEET METAL 13	1
2	29-0414-00	SHEET METAL 14	1
3	29-8024-00	THE PERFECT BUNGEE	1
4	29-8045-00	PIN, ∅3/16" x 7/8" CLEVIS	2
5	90-006-95	PIN, ∅1/16" x 1/2" LNG. COTTER	2



DWG 416 Assembly, 29-4028-16

BOM 29-4028-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	29-0114-00	WASHER, ARM ASSEMBLY	2
2	29-0116-00	BLOCK, COVER HINGE	1
3	29-0117-01	BLOCK, HINGE	1
4	29-0118-00	BLOCK, HINGE	1
5	29-0201-00	WHEEL, DRIVE	1
6	29-4001-16	ASSEMBLY, ARM	1
7	29-4002-16	ASSEMBLY, ARM	1
8	29-4005-16	ASSEMBLY, COVER	1
9	29-4007-16	ASSEMBLY, ARM TENSIONING	1
10	29-4009-00	ASSEMBLY, DRIVE MOTOR	1
11	29-4011-16	ASSEMBLY, WS BASE PLATE WITH TOWER	1
12	29-8021-00	BUSHING, 1/4" ID x 1/2" OD x 1/2" LNG. FLANGE	2
13	90-126-05	PIN, ∅1/8" x 1/2" LNG. DOWEL - 18-8 SS	1
14	90-146-05	PIN, ∅3/16" x 1/2" LNG. - 18-8 SS	2
15	90-147-11	KEYWAY, 3/16" x 3/16" x 1-1/8" LNG.	1

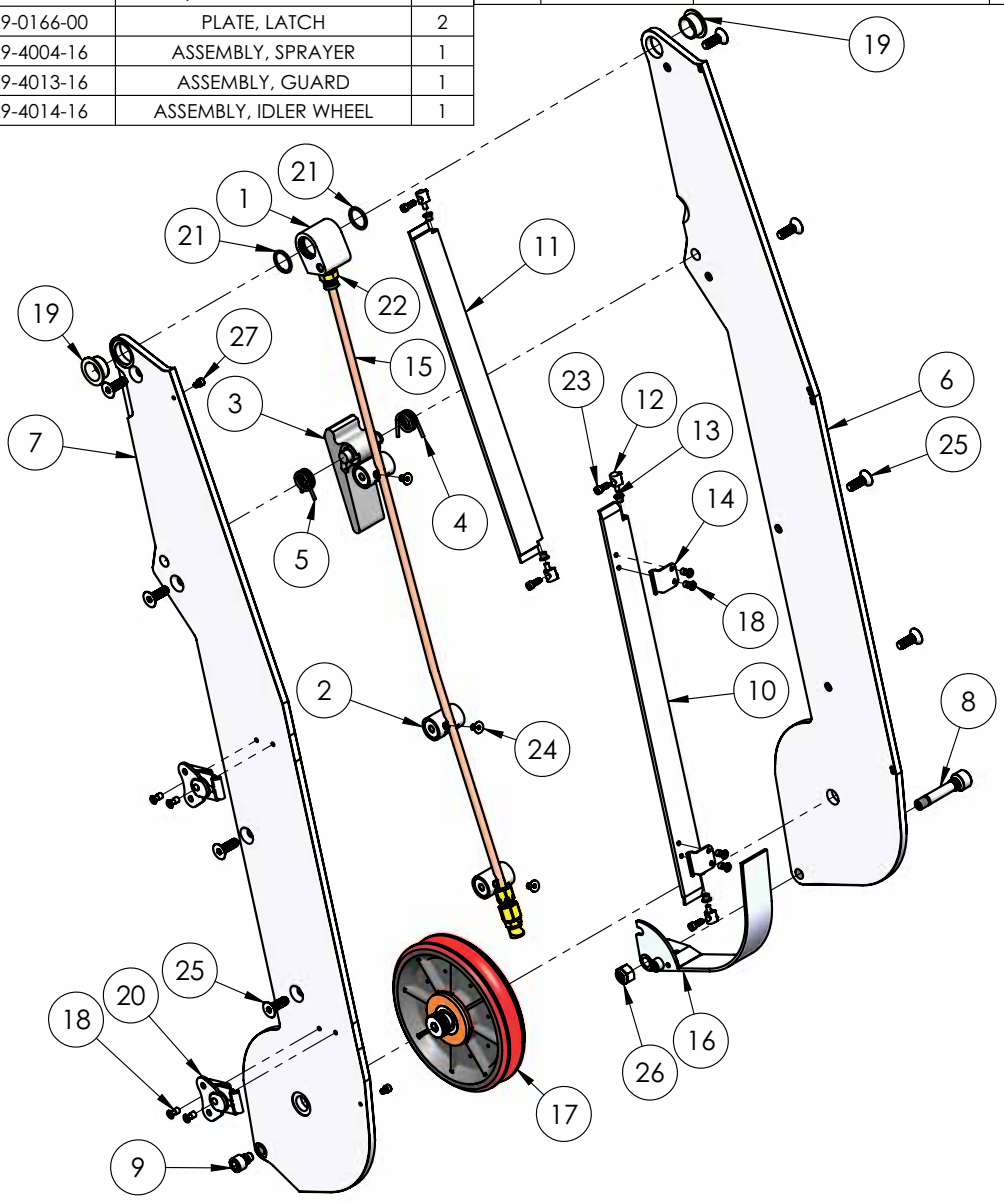
BOM 29-4028-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
16	90-150-03	SHCS 1/4-20 X 3/8 SS	2
17	90-150-26	SHCS, 1/4-20 x 5/8" LNG. - 18-8 SS NAS 1352C-4-10	2
18	90-150-56	SHCS, 1/4-28 x 5/8" LNG. - 18-8 SS	2
19	90-151-07	HHCS, 1/4-20 x 3/4" LNG. - BUMAX-88 SS	2
20	90-155-54	WASHER, 1/4" NAS 620 - 18-8 SS	2
21	90-156-42	PIN, ∅1/4" x 1-1/4" LNG. - 416 SS MS 16555-649	2
22	90-172-06	BHCS, 3/8-16 x 5/8" LNG. - 18-8 SS	2
23	90-220-03	SHCS, #8-32 x 3/8" LNG.	1



DWG 416 Arm Assembly, 29-4001-16

BOM 29-4001-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0108-00	BLOCK, ALIGNMENT SPACER	1
2	29-0109-00	BLOCK, SPACER	3
3	29-0123-16	LATCH, ARM POSITIONING	1
4	29-0125-00	SPRING, R.H. TORSIONAL	1
5	29-0126-00	SPRING, L.H. TORSIONAL	1
6	29-0152-16	PLATE, ARM	1
7	29-0153-16	PLATE, ARM	1
8	29-0158-00	SCREW, GUARD PIVOT	1
9	29-0159-00	SCREW, GUARD LOCATING	1
10	29-0160-16	COVER, WIRE	1
11	29-0161-16	COVER, WIRE	1
12	29-0162-00	BLOCK, GUARD HINGE	4
13	29-0163-00	BUSHING, 1/8" ID x 3/16" OD x 3/16" LNG. FLANGE	4
14	29-0166-00	PLATE, LATCH	2
15	29-4004-16	ASSEMBLY, SPRAYER	1
16	29-4013-16	ASSEMBLY, GUARD	1
17	29-4014-16	ASSEMBLY, IDLER WHEEL	1

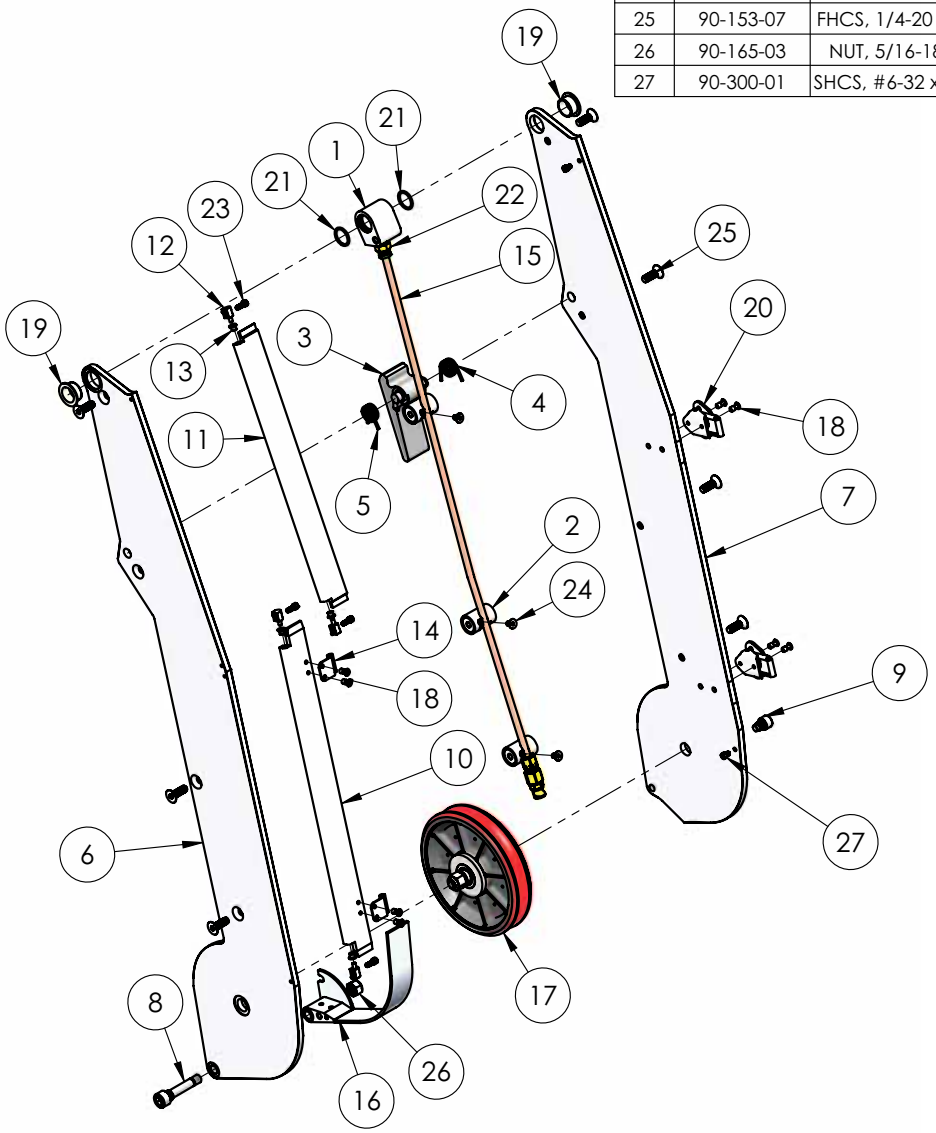
BOM 29-4001-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
18	29-8006-00	RIVET, ∅1/8" - SS	8
19	29-8007-00	BUSHING, 5/8 ID x 23/32" OD x 3/8" LNG. FLANGE	2
20	29-8008-00	LATCH, DRAW	2
21	29-8009-00	O-RING, -016	2
22	29-8010-00	FITTING, PUSH TO CONNECT	1
23	90-100-03	SHCS, #6-32 x 3/8" LNG. - 18-8 SS	4
24	90-123-03	FHCS, #8-32 x 5/6" LNG. - 18-8 SS	3
25	90-153-07	FHCS, 1/4-20 x 3/4" LNG. - 18-8 SS	8
26	90-165-03	NUT, 5/16-18 - 18-8 SS NYLOCK	1
27	90-300-01	SHCS, #6-32 x 3/16" LNG. - 18-8 SS	2



DWG 416 Arm Assembly, 29-4002-16

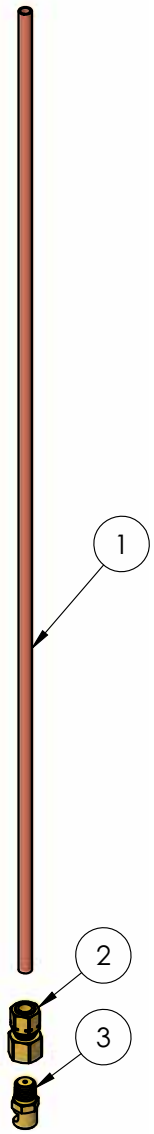
BOM 29-4002-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0108-00	BLOCK, ALIGNMENT SPACER	1
2	29-0109-00	BLOCK, SPACER	3
3	29-0123-16	LATCH, ARM POSITIONING	1
4	29-0125-00	SPRING, R.H. TORSIONAL	1
5	29-0126-00	SPRING, L.H. TORSIONAL	1
6	29-0150-16	PLATE, ARM	1
7	29-0151-16	PLATE, ARM	1
8	29-0158-00	SCREW, GUARD PIVOT	1
9	29-0159-00	SCREW, GUARD LOCATING	1
10	29-0160-16	COVER, WIRE	1
11	29-0161-16	COVER, WIRE	1
12	29-0162-00	BLOCK, GUARD HINGE	4

BOM 29-4002-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
13	29-0163-00	BUSHING, 1/8" ID x 3/16" OD x 3/16" LNG. FLANGE	4
14	29-0166-00	PLATE, LATCH	2
15	29-4004-16	ASSEMBLY, SPRAYER	1
16	29-4012-16	ASSEMBLY, GUARD	1
17	29-4014-16	ASSEMBLY, IDLER WHEEL	1
18	29-8006-00	RIVET, ∅1/8" - SS	8
19	29-8007-00	BUSHING, 5/8 ID x 23/32" OD x 3/8" LNG. FLANGE	2
20	29-8008-00	LATCH, DRAW	2
21	29-8009-00	O-RING, -016	2
22	29-8010-00	FITTING, PUSH TO CONNECT	1
23	90-100-03	SHCS, #6-32 x 3/8" LNG. - 18-8 SS	4
24	90-123-03	FHCS, #8-32 x 5/6" LNG. - 18-8 SS	3
25	90-153-07	FHCS, 1/4-20 x 3/4" LNG. - 18-8 SS	8
26	90-165-03	NUT, 5/16-18 - 18-8 SS NYLOCK	1
27	90-300-01	SHCS, #6-32 x 3/16" LNG. - 18-8 SS	2



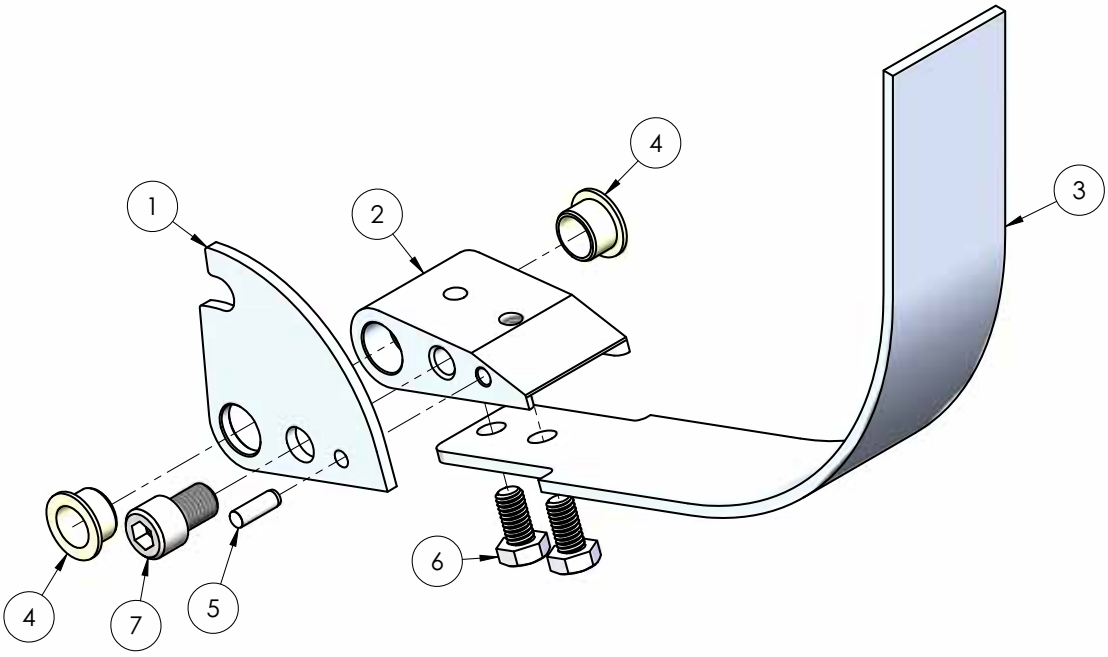
DWG 416 Sprayer Assembly, 29-4004-16

BOM 29-4004-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	29-0329-16	TUBE, SPRAYER	1
2	29-8011-00	ADAPTER, 1/4" TUBE x 1/8" NPT (F)	1
3	29-8012-00	NOZZLE, SPRAY	1



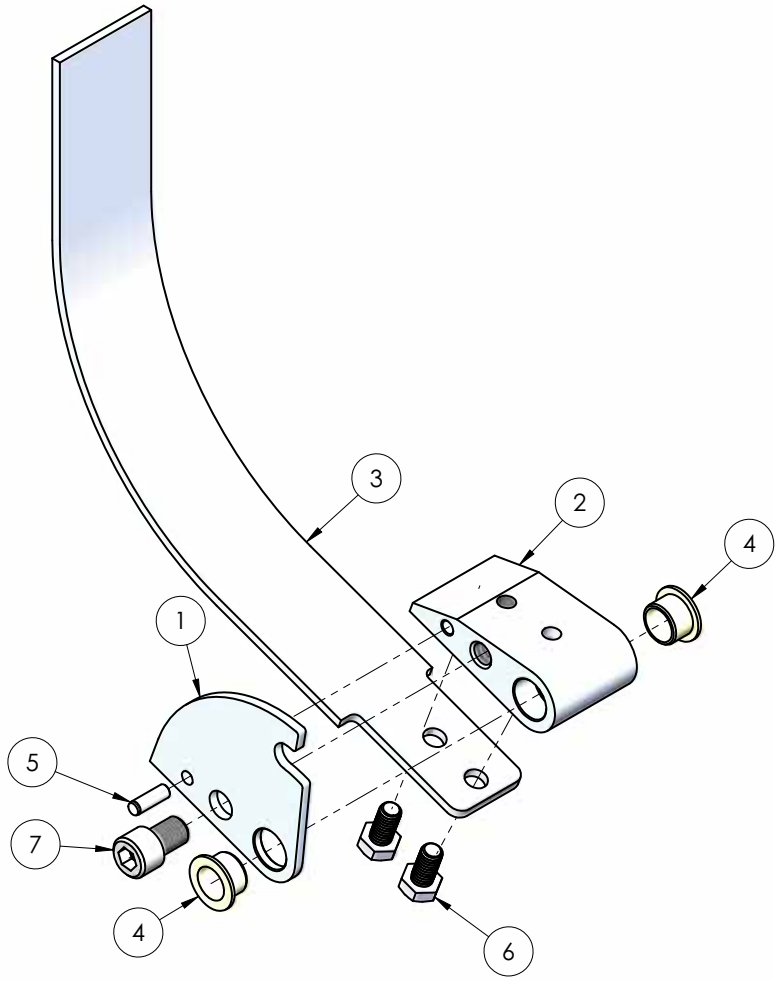
DWG Guard Assembly, 29-4013-16

BOM 29-4013-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0154-00	PLATE, GUARD	1
2	29-0155-00	BLOCK, GUARD	1
3	29-0157-16	PLATE, GUARD	1
4	29-8013-00	BUSHING, 1/2" ID x 5/8" OD x 1/4" LNG. FLANGE	2
5	90-026-03	PIN, 1/8 X 3/8 DOWEL	1
6	90-141-51	HHCS, #10-32 x 3/8" LNG. - 18-8 SS	2
7	90-150-03	SHCS 1/4-20 X 3/8 SS	1



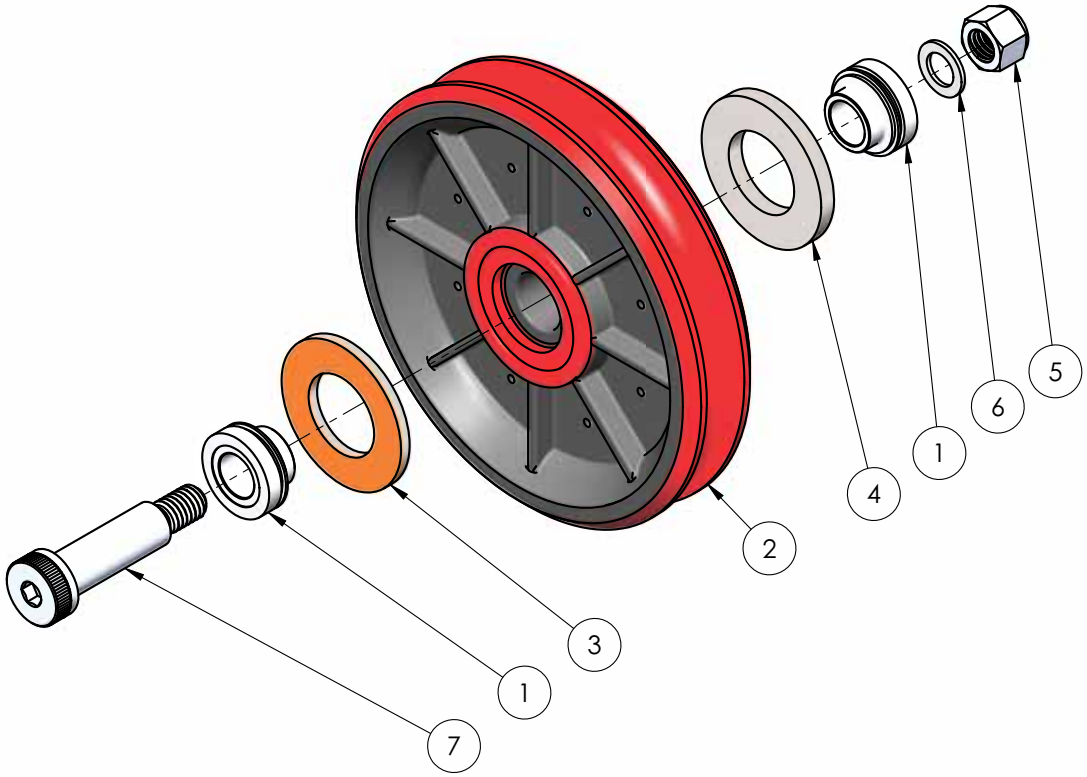
DWG Guard Assembly, 29-4012-16

BOM 29-4012-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0154-00	PLATE, GUARD	1
2	29-0155-00	BLOCK, GUARD	1
3	29-0156-16	PLATE, GUARD	1
4	29-8013-00	BUSHING, 1/2" ID x 5/8" OD x 1/4" LNG. FLANGE	2
5	90-026-03	PIN, 1/8 X 3/8 DOWEL	1
6	90-141-51	HHCS, #10-32 x 3/8" LNG. - 18-8 SS	2
7	90-150-03	SHCS 1/4-20 X 3/8 SS	1



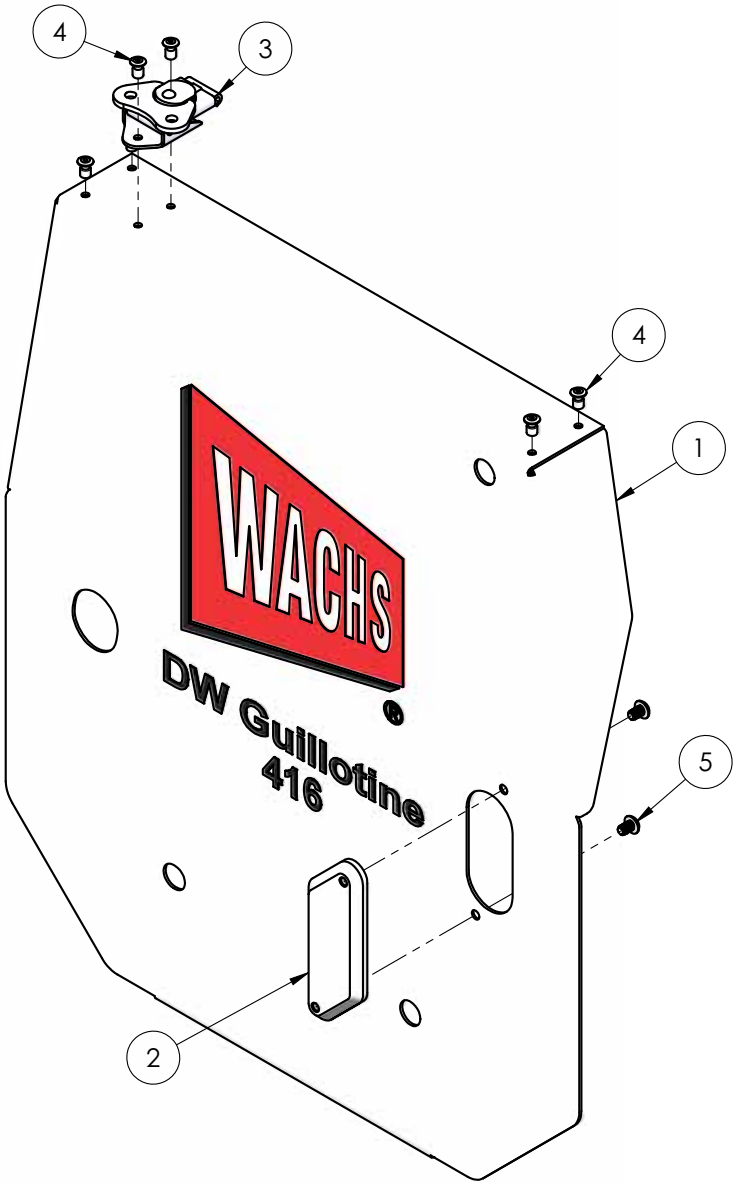
DWG 208/416 Idler Wheel Assembly, 29-4014-16

BOM 29-4014-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0170-00	SPACER, IDLER	2
2	29-0200-00	WHEEL, IDLER	1
3	29-0212-00	WASHER, FELT	1
4	29-0213-00	WASHER, FELT	1
5	90-175-41	NUT, 3/8-16 NYLOCK - 18-8 SS	1
6	90-175-55	WASHER, 3/8 - 18-8 SS NAS	1
7	90-197-15	BOLT, SHOULDER 1/2 x 1-1/2" LNG. - 18-8 SS	1



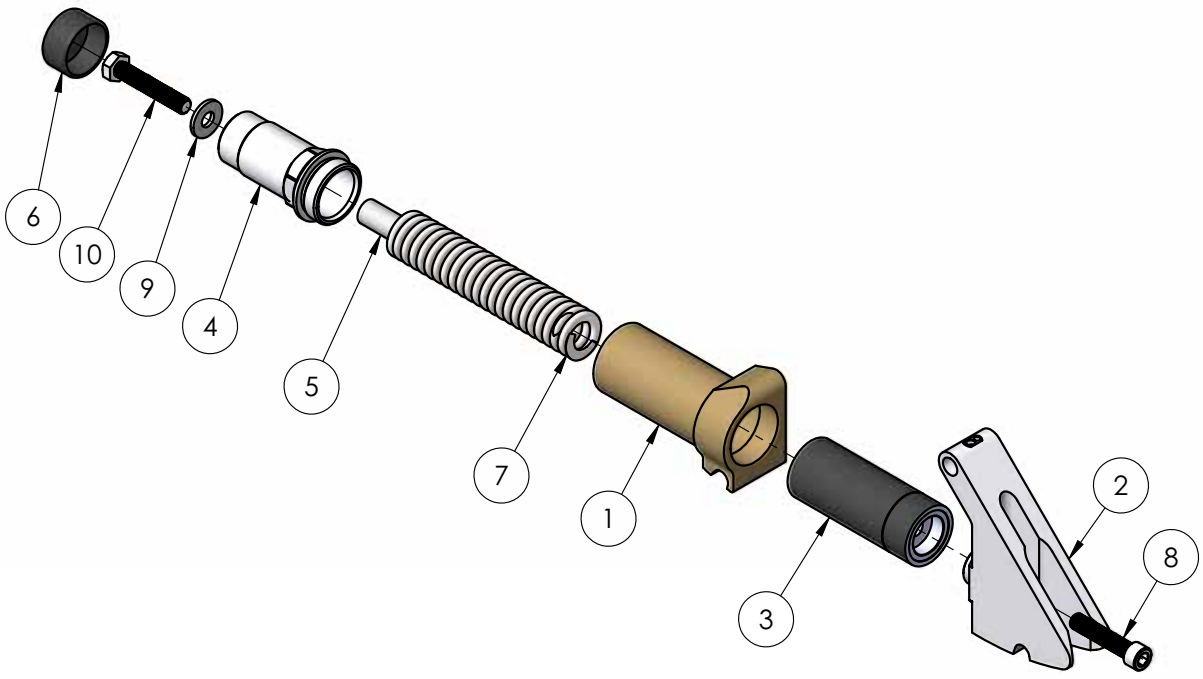
DWG 416 Cover Assembly, 29-4005-16

BOM 29-4005-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0105-16	COVER, FRAME BASE	1
2	29-0115-00	COVER, ARM PIVOT	1
3	29-8008-00	LATCH, DRAW	1
4	29-8020-00	RIVET, ∅1/8" - SS	6
5	90-122-09	BHCS, #8-32 x 1/4" LNG. - 18-8 SS	2



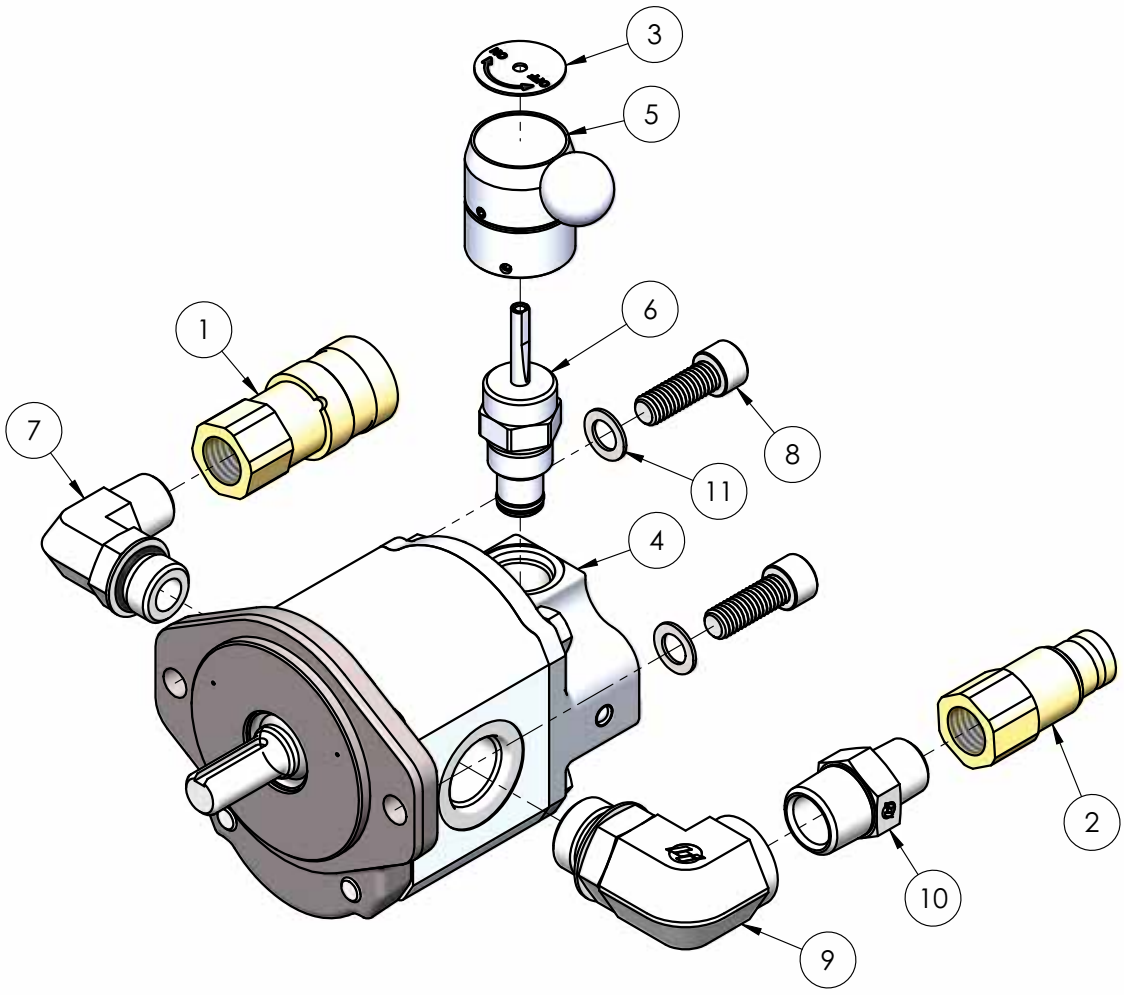
DWG 416 Arm Tensioning Assembly, 29-4007-16

BOM 29-4007-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0144-00	BLOCK, ARM TENSIONING	1
2	29-0145-16	BLOCK, ARM ALIGNMENT	1
3	29-0146-00	SHAFT, WHEEL ADJUSTMENT	1
4	29-0147-00	SCREW, SPRING TENSIONING	1
5	29-0148-00	SHAFT, SPRING TENSIONING	1
6	29-8018-00	CAP, VINYL PUSH ON	1
7	29-8019-00	SPRING, 1" x 6" LNG. DIE	1
8	90-060-65	SHCS, 5/16-24 x 1-1/2" LNG. ZINC PLATED	1
9	90-155-55	WASHER, 1/4" MS-16212-11 - 18-8 SS	1
10	90-161-67	HHCS, 5/16-24 x 1-3/4" LNG. - 18-8 SS	1



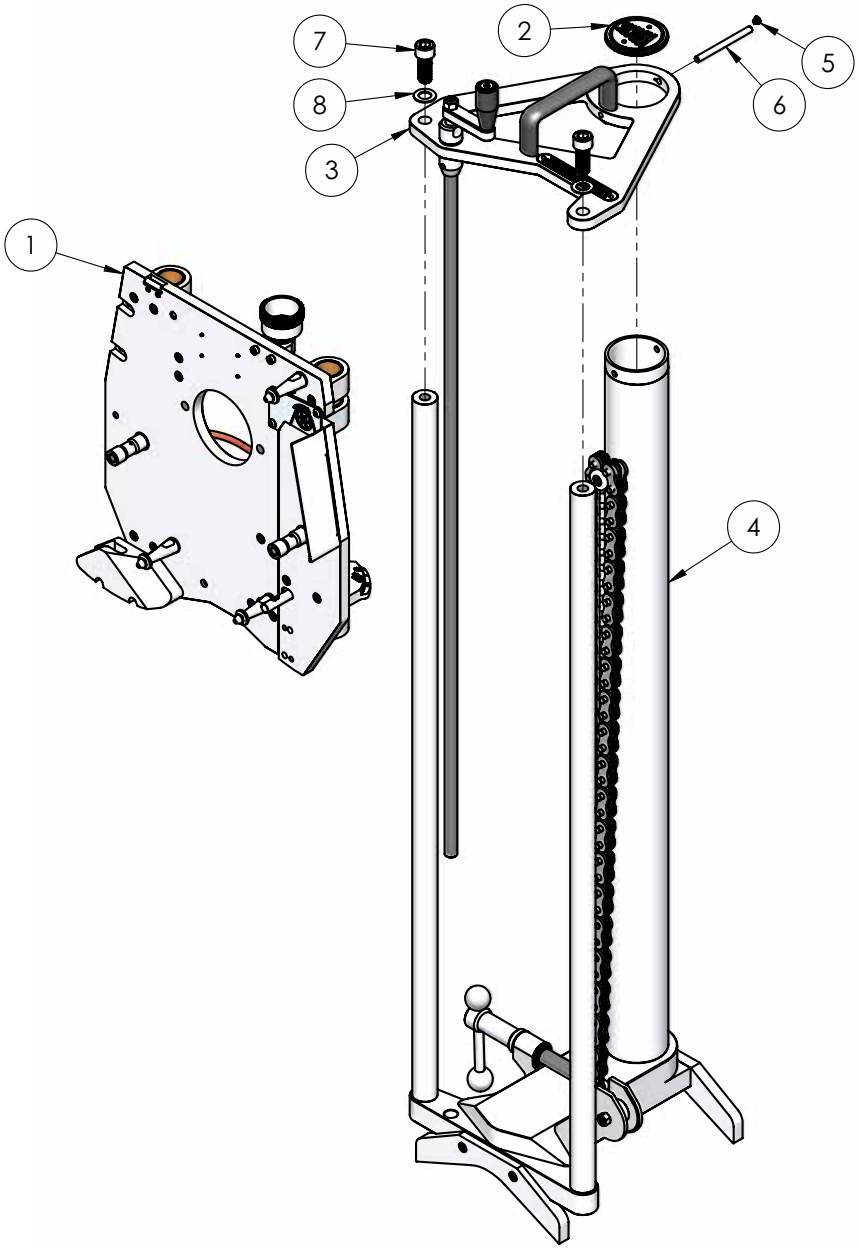
DWG 208/416 Drive Motor Assembly, 29-4009-00

BOM 29-4009-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	09-025-00	QUICK DISCONNECT, FEMALE - HTMA 1/2 NPT F	1
2	09-026-00	QUICK DISCONNECT, MALE - HTMA 1/2 NPT F	1
3	29-0220-00	LABEL, ON/OFF	1
4	29-8022-00	MOTOR, HYDRAULIC	1
5	29-8023-01	KIT, LEVER	1
6	29-8023-00	VALVE, CARTRIDGE	1
7	90-098-18	FITTING, 5/8" ORB (M) x 1/2" NPT (M) - 90°	1
8	90-180-12	SHCS, 7/16-14 x 1-1/4" LNG. - 18-8 SS	2
9	90-218-63	ADAPTER, -12 ORB (M) x -12 NPT (F) - 90°	1
10	90-218-73	ADAPTER, 3/4" NPT (M) x 1/2" NPT (M)	1
11	90-285-52	WASHER, 7/16" NAS - 18-8 SS	2



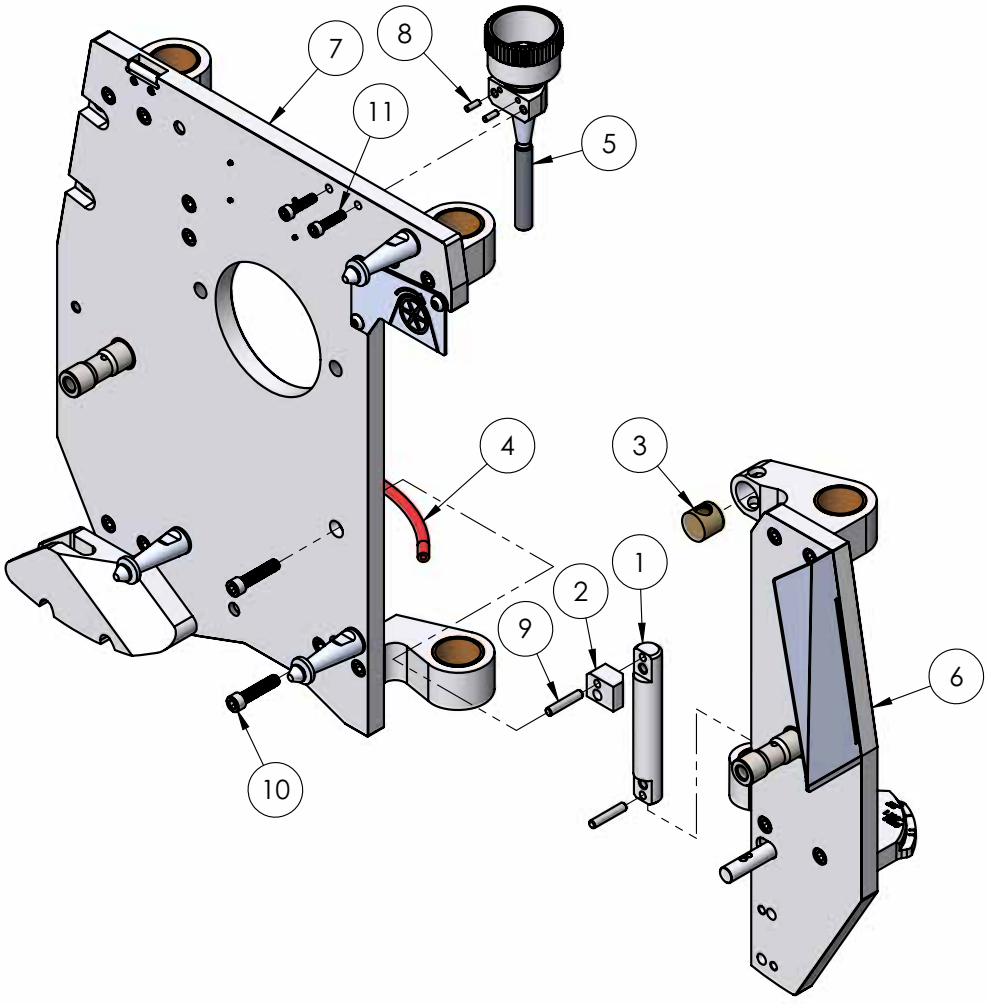
DWG 416 Base Plate/Tower Assembly, 29-4011-16

BOM 29-4011-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	29-4000-16	ASSEMBLY, FRAME	1
2	29-4015-00	ASSEMBLY, FEED TOWER END CAP	1
3	29-4016-16	ASSEMBLY, FEED	1
4	29-4017-16	ASSEMBLY, FEED TOWER	1
5	90-122-03	BHCS #8-32 x 3/16" LNG. - 18-8 SS	1
6	90-156-30	PIN, DOWEL ∅1/4 x 3" LNG. - 18-8 SS	1
7	90-190-12	SHCS, 1/2-13 x 1-1/4" LNG. - 18-8 SS	2
8	90-195-53	WASHER, 1/2" 18-8 SS AN NAS 1149-C0863R	2



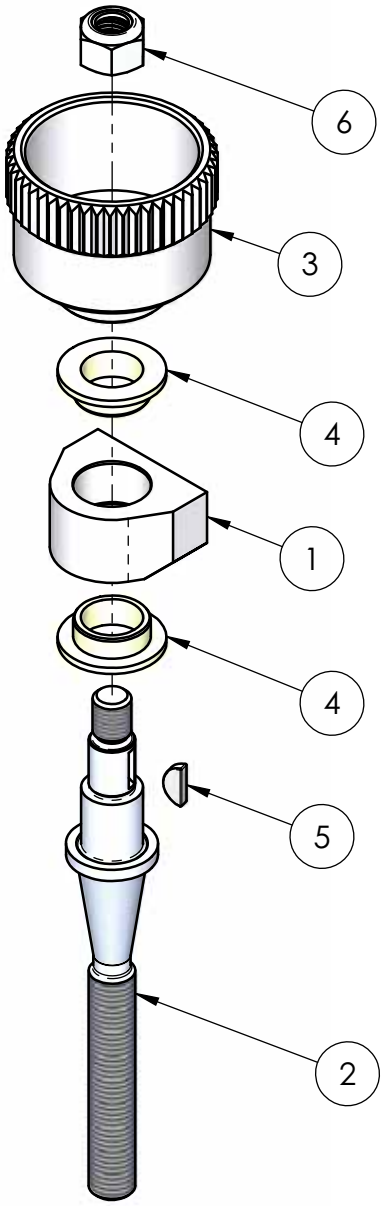
DWG 416 Frame Assembly, 29-4000-16

BOM 29-4000-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	29-0132-00	ROD, SLIDE	1
2	29-0133-00	BLOCK, TRUNNION	1
3	29-0134-00	NUT, TOOL HOLDER	1
4	29-0322-08	HOSE, SPRAYER	1
5	29-4006-00	ASSEMBLY, WHEEL SLIDE	1
6	29-4008-16	ASSEMBLY, WIRE TENSIONING	1
7	29-4010-16	ASSEMBLY, FRAME BASE PLATE	1
8	90-126-03	PIN, ∅1/8" x 3/8" LNG. DOWEL - 18-8 SS	2
9	90-146-10	PIN, ∅3/16" x 1" LNG. DOWEL - 18-8 SS	2
10	90-150-11	SHCS, 1/4-20 x 1-1/8" LNG. - 18-8 SS	2
11	90-340-57	SHCS, #10-32 x 3/4" LNG. - 18-8 SS MS-16886-12	2



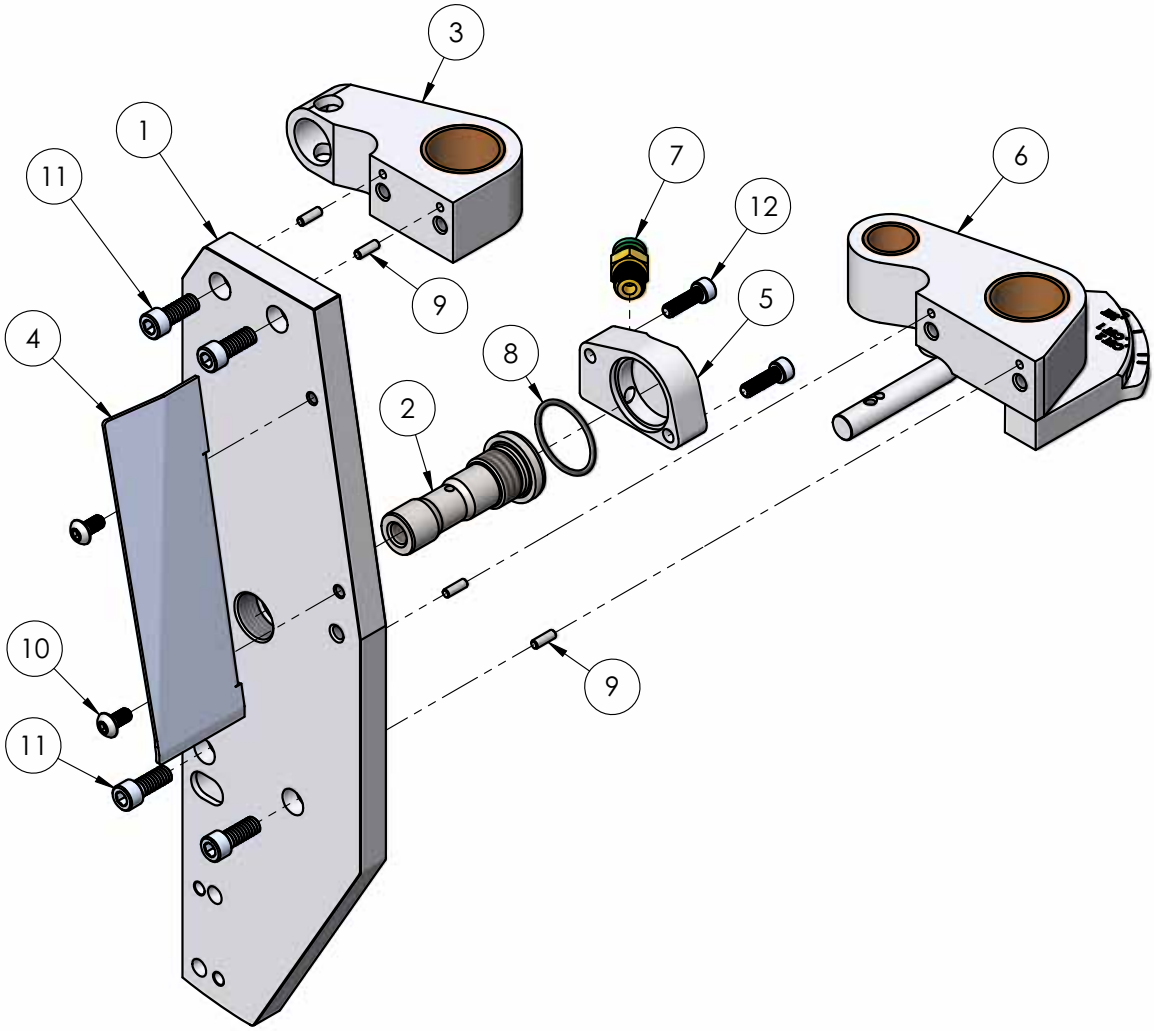
DWG 208/416 Wheel Slide Assembly, 29-4006-00

BOM 29-4006-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0135-00	BLOCK, WHEEL ADJUSTMENT	1
2	29-0136-00	SCREW, WHEEL ADJUSTMENT	1
3	29-0137-00	KNOB, TENSIONING	1
4	29-8000-00	BUSHING, 1/2" ID x 5/8" OD x 1/4" LNG. FLANGE	2
5	90-017-03	KEY, #303 WOODRUFF	1
6	90-165-04	NUT, 5/16-24 - 18-8 SS NYLOCK	1



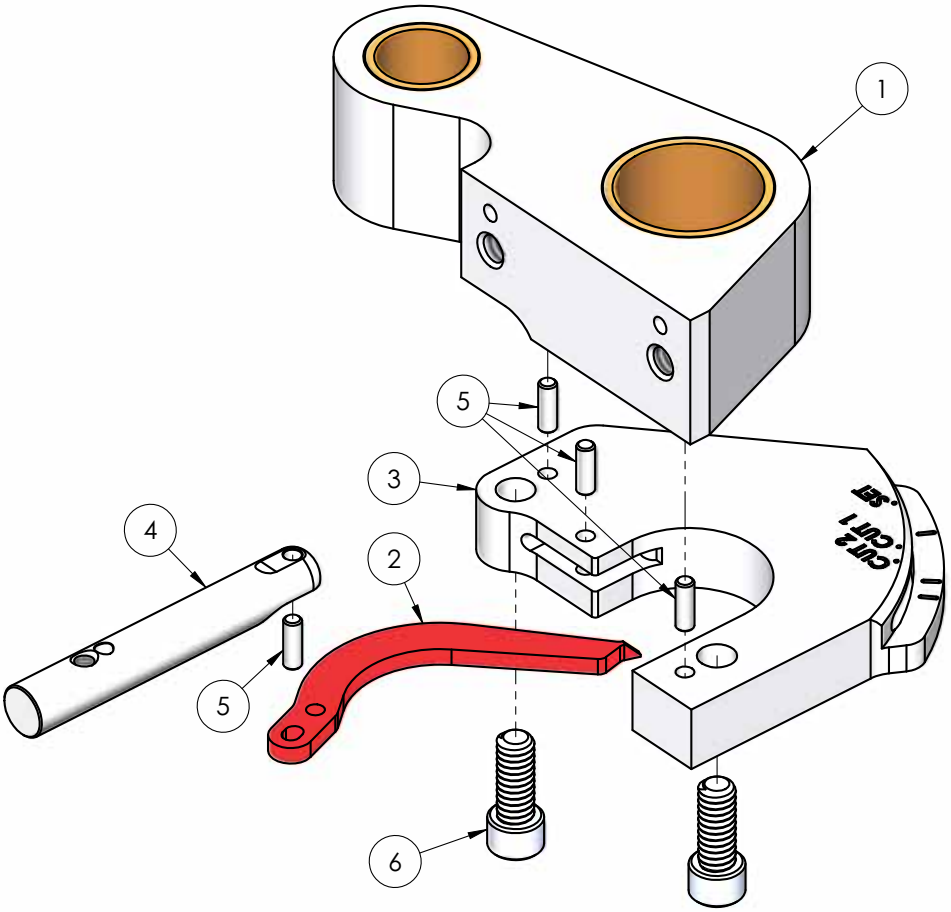
DWG 416 Wire Tensioning Assembly, 29-4008-16

BOM 29-4008-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0102-16	PLATE, FRAME BASE	1
2	29-0103-00	PIN, PIVOT ARM	1
3	29-0113-00	ASSEMBLY, TRUNNION BLOCK	1
4	29-0232-00	GUARD, FRAME BASE PLATE	1
5	29-0321-16	BLOCK, COOLANT SPRAY	1
6	29-4019-16	ASSEMBLY, GAUGE / TRUNNION	1
7	29-8010-00	FITTING, PUSH TO CONNECT	1
8	29-8015-00	O-RING, -022	1
9	90-126-03	PIN, ∅1/8" x 3/8" LNG. DOWEL - 18-8 SS	4
10	90-142-06	BHCS, #10-32 x 3/8" LNG. - 18-8 SS	2
11	90-150-26	SHCS, 1/4-20 x 5/8" LNG. - 18-8 SS NAS 1352C-4-10	4
12	90-240-56	SHCS, #10-32 x 5/8" LNG. - 18-8 SS MS-16996-11	2



DWG 416 Gauge/Trunnion Assembly, 29-4019-16

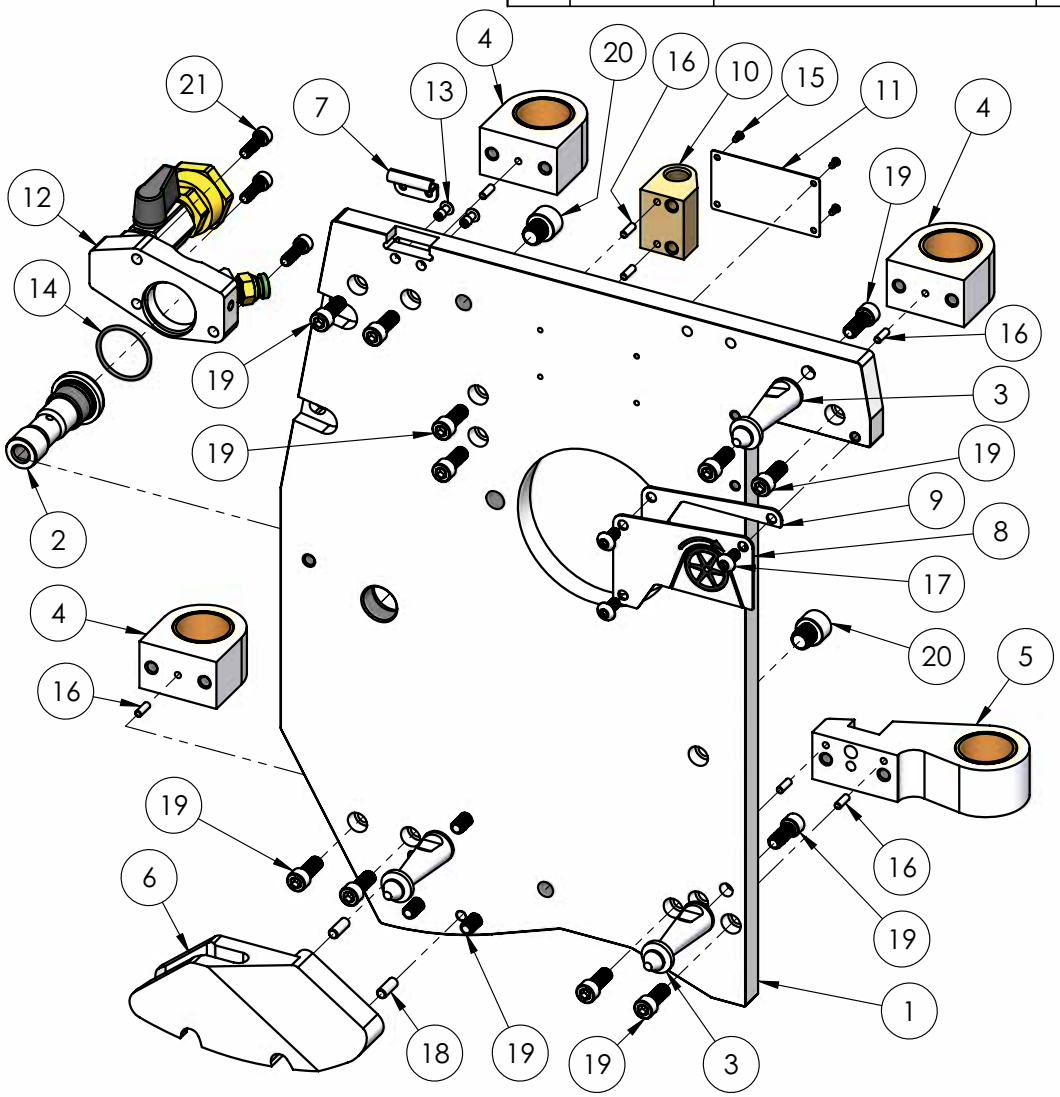
BOM 29-4019-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	29-0112-16	ASSEMBLY, TRUNNION BLOCK	1
2	29-0140-00	INDICATOR, TENSION	1
3	29-0141-00	HOUSING, TENSION INDICATING	1
4	29-0142-00	ROD, GAUGE	1
5	90-126-03	PIN, ∅1/8" x 3/8" LNG. DOWEL - 18-8 SS	4
6	90-150-26	SHCS, 1/4-20 x 5/8" LNG. - 18-8 SS NAS 1352C-4-10	2



DWG 416 Frame Base Plate Assembly, 29-4010-16

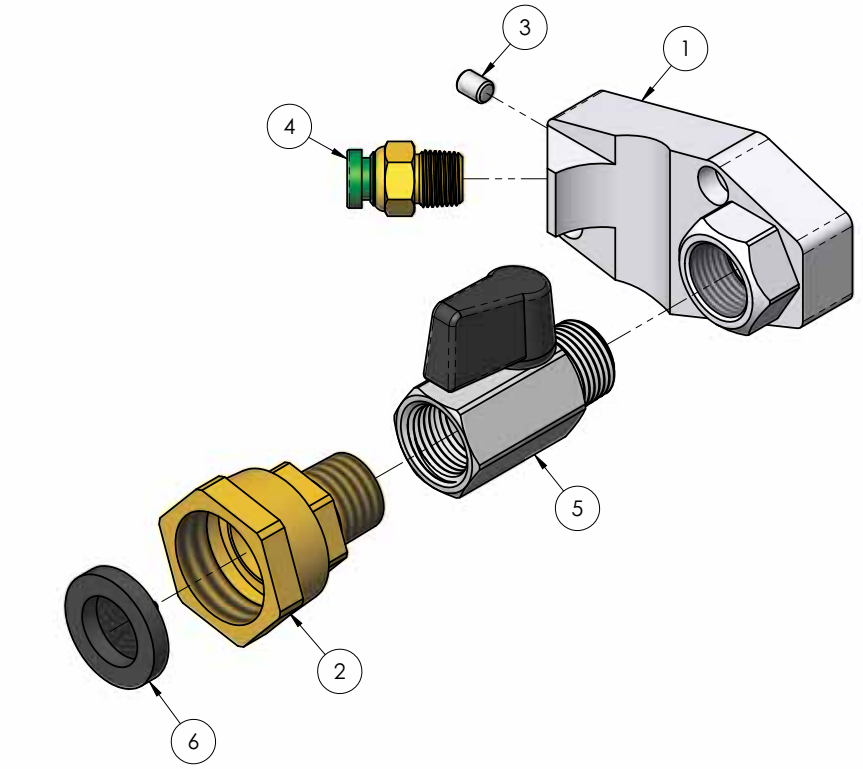
BOM 29-4010-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	29-0101-16	PLATE, FRAME BASE	1
2	29-0103-00	PIN, PIVOT ARM	1
3	29-0107-00	PIN, COVER ALIGNMENT	3
4	29-0110-00	ASSEMBLY, TRUNNION BLOCK	3
5	29-0111-00	ASSEMBLY, TRUNNION BLOCK	1
6	29-0122-16	BLOCK, ARM ALIGNMENT	1
7	29-0168-00	PLATE, LATCH	1
8	29-0230-00	GUARD, FRAME BASE PLATE	1
9	29-0231-00	SPACER, FRAME BASE PLATE GUARD	1
10	29-0311-00	NUT, FEED	1
11	29-0800-00	PLATE, DW GUILLOTINE NAME	1

BOM 29-4010-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
12	29-4018-08	ASSEMBLY, COOLANT SPRAY BLOCK	1
13	29-8006-00	RIVET, ∅1/8" - SS	2
14	29-8015-00	O-RING, -022	1
15	90-049-06	SCREW, #2-3/16 U-DRIVE	4
16	90-126-03	PIN, ∅1/8" x 3/8" LNG. DOWEL - 18-8 SS	7
17	90-142-06	BHCS, #10-32 x 3/8" LNG. - 18-8 SS	3
18	90-146-05	PIN, ∅3/16" x 1/2" LNG. - 18-8 SS	2
19	90-150-26	SHCS, 1/4-20 x 5/8" LNG. - 18-8 SS NAS 1352C-4-10	15
20	90-170-03	SHCS, 3/8-16 x 3/8" LNG. - 18-8 SS	2
21	90-240-56	SHCS, #10-32 x 5/8" LNG. - 18-8 SS MS-16996-11	3



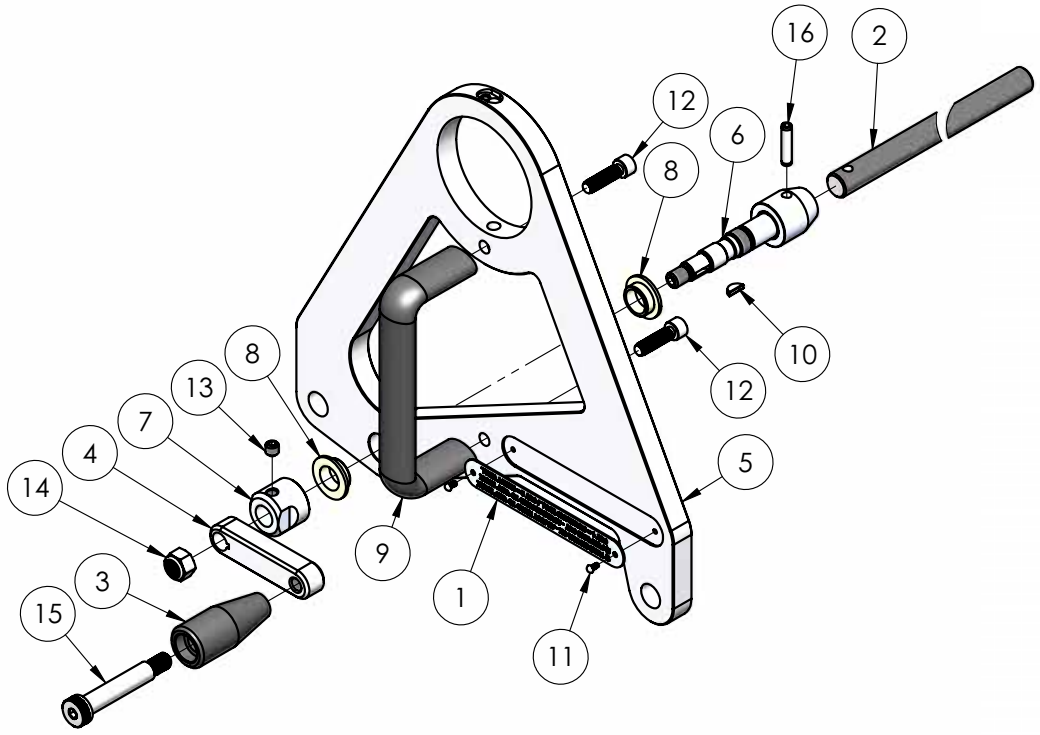
DWG Coolant Spray Block Assembly, 29-4018-08

BOM 29-4018-08			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0320-00	BLOCK, COOLANT SPRAY	1
2	29-310-00-08	GARDEN HOSE ADAPTER, 3/8 NPT SWIVEL	1
3	90-146-02	PIN, ∅3/16" x 1/4" LNG. DOWEL - 18-8 SS	1
4	29-8010-00	FITTING, PUSH TO CONNECT	1
5	29-8016-00	VALVE, 3/8" x 3/8" BALL	1
6	29-310-00-09	WASHER, HOSE W/SCREEN	1



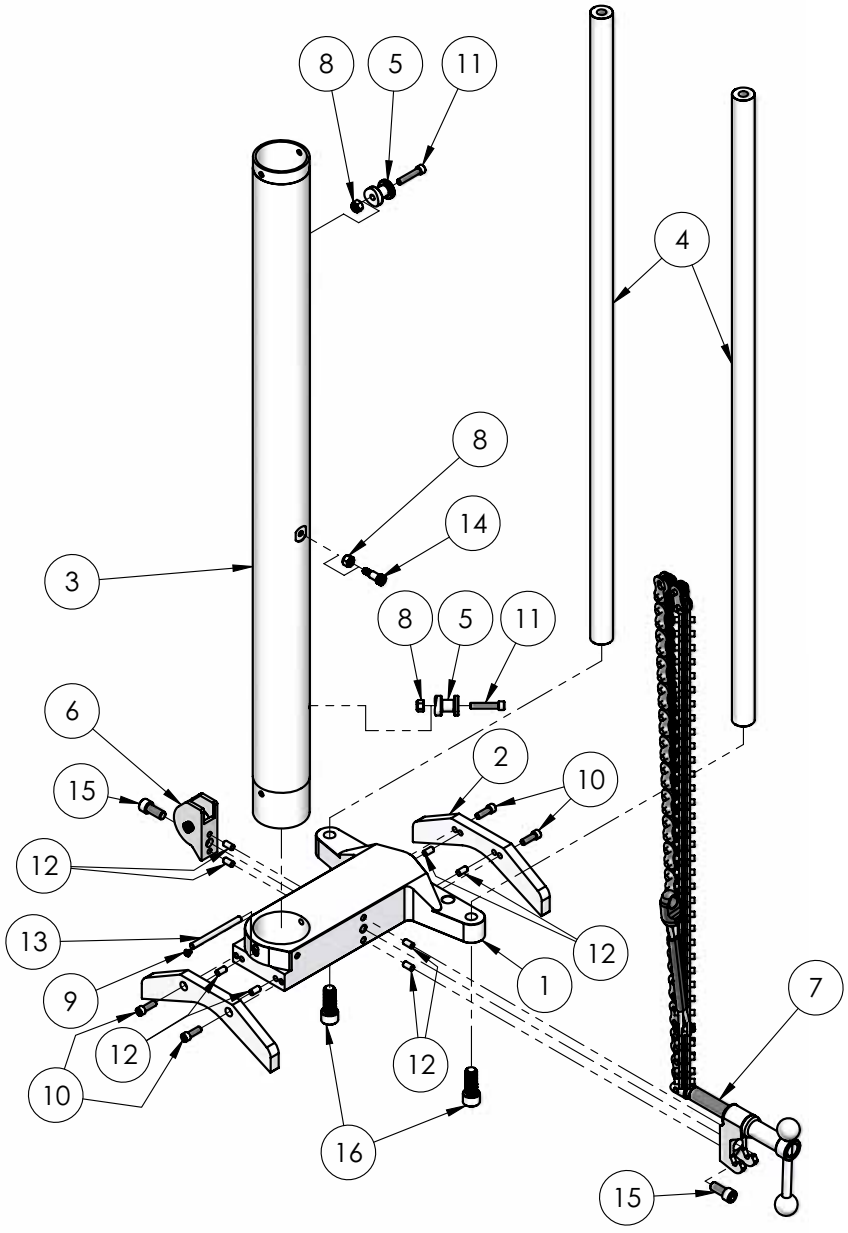
DWG 416 Feed Assembly, 29-4016-16

BOM 29-4016-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	29-0222-00	LABEL, FEED TOWER INSTRUCTION	1
2	29-0310-16	SCREW, FEED	1
3	29-0312-00	KNOB, FEED	1
4	29-0313-00	PLATE, FEED HANDLE	1
5	29-0315-00	PLATE, UPPER GUIDE BAR	1
6	29-0316-00	SPACER, FEED HANDLE	1
7	29-0318-00	NUT, FEED SCREW	1
8	29-8000-00	BUSHING, 1/2" ID x 5/8" OD x 1/4" LNG. FLANGE	2
9	29-8001-00	HANDLE, ALUMINUM	1
10	90-017-03	KEY, #303 WOODRUFF	1
11	90-049-06	SCREW, #2-3/16 U-DRIVE	2
12	90-150-08	SHCS 1/4-20 X 7/8" LG.SS	2
13	90-154-02	SSS, 1/4-20 X 1/4 SS18-8	1
14	90-165-04	NUT, 5/16-24 - 18-8 SS NYLOCK	1
15	90-177-57	BOLT, ∅3/8" x 1-3/4" LNG. SHOULDER - 18-8 SS	1
16	90-346-08	PIN, ∅3/16" x 7/8" LNG. ROLL - 400 SS	1



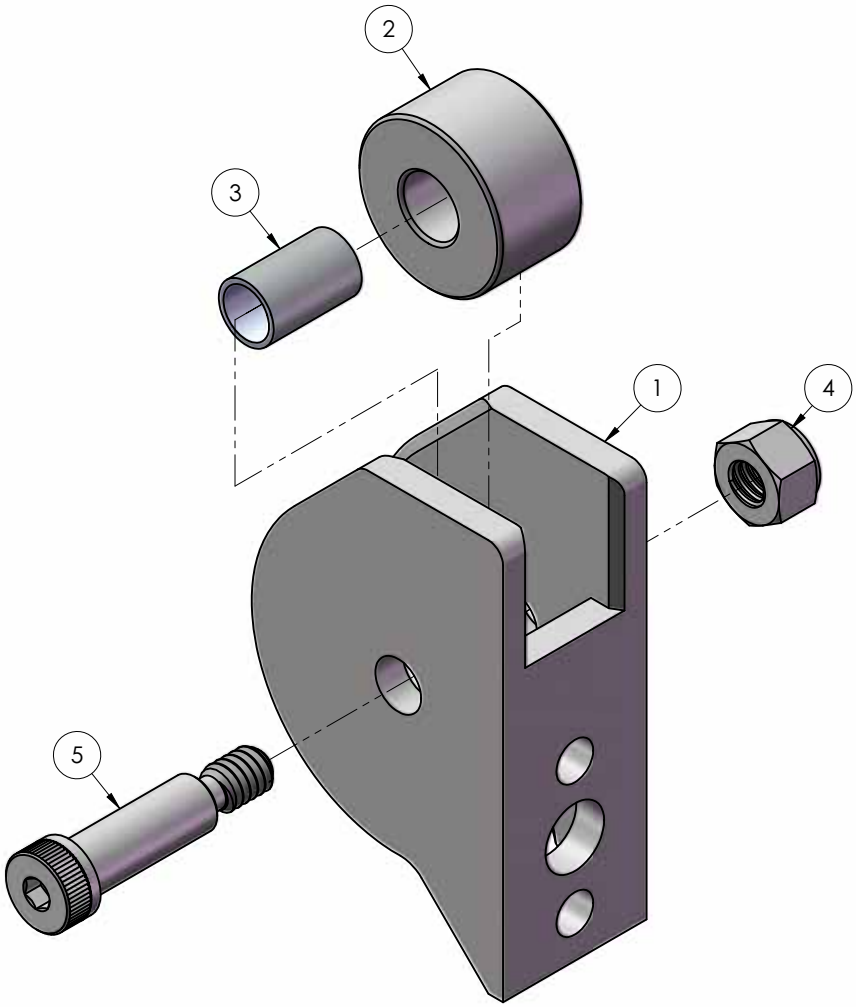
DWG 416 Feed Tower Assembly, 29-4017-16

BOM 29-4017-16				BOM 29-4017-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	29-0300-00	SADDLE	1	10	90-150-07	SHCS, 1/4-20 X 3/4, SS 18-8	4
2	29-0302-16	PLATE, SADDLE	2	11	90-150-12	SHCS, 1/4-20 X 1-1/4 SS	2
3	29-0314-16	TUBE, FEED TOWER	1	12	90-156-05	PIN, DOWEL ∅1/4" x 1/2" LNG. - 18-8 SS	8
4	29-0327-16	SHAFT, GUIDE	2				
5	29-0340-00	BRACKET, CHAIN STORAGE	2	13	90-156-30	PIN, DOWEL ∅1/4 x 3" LNG. - 18-8 SS	1
6	29-4026-00	ASSEMBLY, CHAIN GUIDE BLOCK	1				
7	29-4027-16	ASSEMBLY, CLAMPING	1	14	90-167-05	BOLT, ∅5/16" x 1/2" LNG. SHOULDER -18-8 SS	1
8	90-055-13	NUT, 1/4-20 NYLOCK - SS	3	15	90-170-09	SHCS, 3/8-16 X 7/8 SS18-8	2
9	90-122-03	BHCS #8-32 x 3/16" LNG. - 18-8 SS	1	16	90-190-12	SHCS, 1/2-13 x 1-1/4" LNG. - 18-8 SS	2



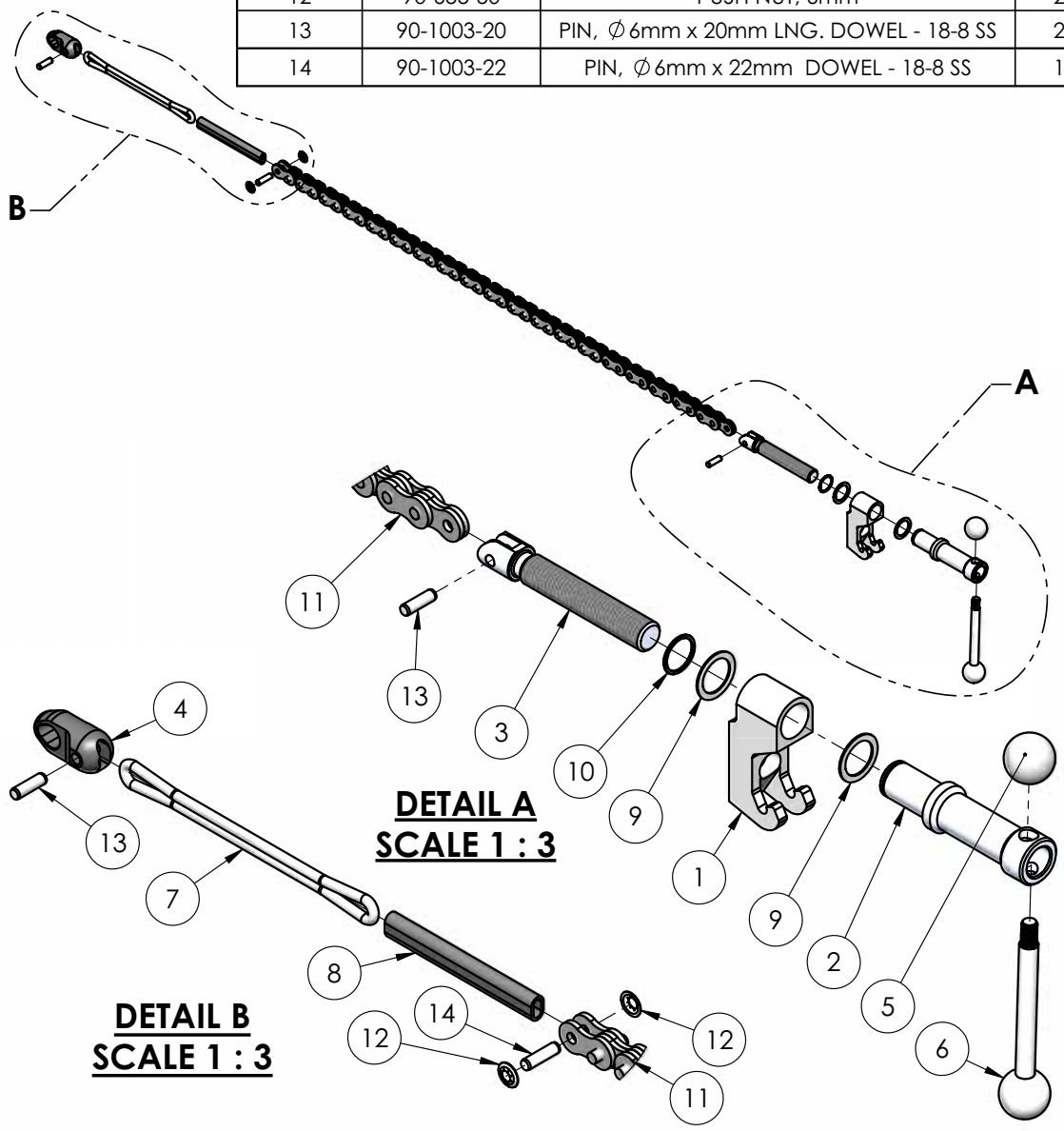
DWG 208/416 Chain Guide Block Ass'y, 29-4026-00

BOM 29-4026-00			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
1	29-0304-00	BLOCK, CHAIN GUIDE	1
2	29-0307-00	WHEEL, CHAIN	1
3	29-0308-00	ROLLER, CHAIN GUIDE	1
4	90-055-13	NUT, 1/4-20 NYLOCK - SS	1
5	90-067-58	BOLT, ∅5/16" x 7/8" LNG. SHOULDER	1



DWG 416 Clamping Assembly, 29-4027-16

BOM 29-4027-16			
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	29-0303-00	BLOCK, CLAMP CHAIN MOUNT	1
2	29-0305-00	TUBE, CLAMP THREAD	1
3	29-0306-00	SCREW, CLAMP	1
4	29-0342-00	CLIP, CHAIN BUNGEE	1
5	29-8002-00	KNOB, 1" DIA.	1
6	29-8003-00	HANDLE, LEVER	1
7	29-8004-00	O-RING, -341	1
8	29-8005-00	TUBING, ∅5/16" X 4" LONG	1
9	29-8043-00	SHIM, .75 ID. x 1" OD x .032 THICK	2
10	29-8044-00	SNAP RING, EXTERNAL	1
11	29-8100-16	CHAIN, CLAMPING	1
12	90-655-50	PUSH NUT, 6mm	2
13	90-1003-20	PIN, ∅6mm x 20mm LNG. DOWEL - 18-8 SS	2
14	90-1003-22	PIN, ∅6mm x 22mm DOWEL - 18-8 SS	1



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