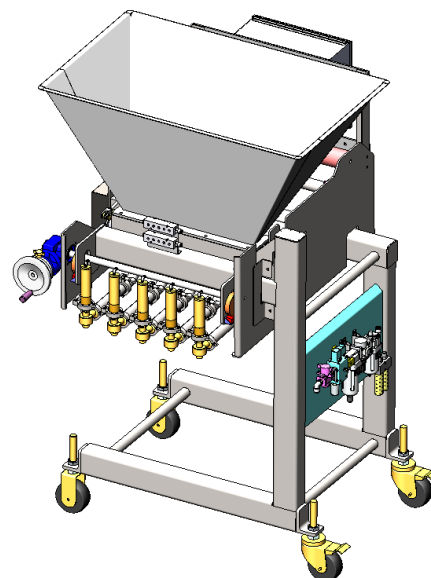




- ➔ Air Piston & Servo Filling / Depositing Systems
- ➔ Air Piston & Hydraulic Transfer Pumps
- ➔ Spotters & Stripers
- ➔ Icers & Glazers
- ➔ Custom Integrated Designs



## PARTS / SERVICE & INSTRUCTION MANUAL

UPPER CRUST BAKERY, INC.  
PHOENIX, AZ | USA

FIVE PISTON FILLER/DEPOSITOR

MODEL No.: 5P-08

SERIAL No.: 0006585

MFG. DATE: AUGUST 2011



### HINDS-BOCK CORPORATION

2122 - 222nd Street S.E. | Bothell, WA 98021-4430 | U.S.A.

TEL: 425.885.1183

TEL: 877.292.5715 (MAIN – TOLL FREE)

TEL: 888.557.7881 (PARTS DEPARTMENT – TOLL FREE)

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When ordering parts, please identify with parts number,  
serial & model number of equipment.

For Customer Service / Parts Dept. please call 1.877.292.5715 Toll Free  
Tel: 425.885.1183 | FAX: 425.885.1492 (Main) | 425.897.4110 (Parts Dept.)

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## SAFETY WARNINGS

**SERIOUS PERSONAL INJURY MAY RESULT IF THE FOLLOWING SAFETY PRECAUTIONS ARE NOT OBSERVED!**



**1. DO NOT OPERATE MACHINE UNTIL YOU HAVE READ THE INSTRUCTION MANUAL COMPLETELY**



**2. DO NOT OPERATE MACHINE WITH GUARDS AND/OR COVERS REMOVED.**



**3. SHUT OFF AIR SUPPLY WHEN SANITIZING, REPAIRING, ADJUSTING OR REMOVING JAMS ON THIS MACHINE.**



**4. DO NOT PUT FINGERS, HANDS OR ARMS INTO MACHINE WHEN IT IS RUNNING OR HAS AIR CONNECTED.**



**5. OPERATE MACHINE IN A MANNER FOR WHICH IT IS INTENDED ONLY.**



**6. DISCONNECT AIR SUPPLY BEFORE REPAIRING, ADJUSTING OR SERVICING THIS MACHINE.**



**7. DO NOT MOVE MACHINE WITH PRODUCT IN HOPPER OR WITH STAND EXTENDED. (WHERE APPLICABLE)**

## CAUTION!

**UNLESS EQUIPMENT ORDERED WITH SPECIAL COMPONENTS, PLASTIC COMPONENTS SWELL AND MAY BIND IF WASHED IN PLACE WITH SOLUTIONS WARMER THAN 110°F | 42.5°C**

# WARRANTY

SELLER WARRANTS EQUIPMENT OF ITS OWN MANUFACTURE TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP. THIS WARRANTY EXTENDS ONLY TO THE ORIGINAL BUYER AND IS LIMITED TO REPAIR OR REPLACEMENT F.O.B. SELLER'S FACTORY OF ANY ORIGINAL PART OR COMPONENT MANUFACTURED BY SELLER WHICH IS FOUND BY SELLER TO HAVE BEEN DEFECTIVE AT THE TIME OF SHIPMENT, PROVIDED WRITTEN CLAIM HAS BEEN RECEIVED FROM BUYER WITHIN SIX MONTHS OF SHIPMENT AND SUCH ORIGINAL PART OR COMPONENT IS RETURNED PREPAID TO SELLER.

THIS WARRANTY APPLIES ONLY TO THE EQUIPMENT INSTALLED AND OPERATED IN ACCORDANCE WITH HINDS-BOCK CORPORATION'S RECOMMENDATIONS AND SUCH WARRANTY DOES NOT APPLY WHERE HINDS-BOCK CORPORATION DETERMINES THAT ANY CLAIMED DEFECT AROSE AS A RESULT OF PURCHASER'S MISUSE, NEGLIGENCE, IMPROPER INSTALLATION, REPAIR, ALTERATION, ACCIDENT OR NORMAL WEAR AND TEAR WITH RESPECT TO ANY EQUIPMENT DELIVERED HEREUNDER.

WITH RESPECT TO THE EQUIPMENT, MATERIALS, PARTS AND ACCESSORIES MANUFACTURED BY OTHERS, SELLER WILL UNDERTAKE TO OBTAIN FOR BUYER THE FULL BENEFIT OF THE MANUFACTURER'S WARRANTIES. SELLER WILL NOT BE LIABLE FOR ANY LOSS OF PROFIT, LOSS BY REASON OF PLANT SHUTDOWN, NON-OPERATIONAL OR INCREASED EXPENSE OF OPERATION, LOSS OF PRODUCT OR MATERIALS, OR OTHER SPECIAL OR CONSEQUENTIAL LOSS OR DAMAGE OF ANY NATURE, AND ALL CLAIMS FOR SUCH LOSS OR DAMAGE ARE EXPRESSLY WAIVED BY BUYER.

THIS WARRANTY IS IN LIEU OF ALL OTHER  
WARRANTIES, EXPRESSED OR IMPLIED



Hinds-Bock Corporation  
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## INTRODUCTION TO YOUR HINDS-BOCK FILLER / DEPOSITOR OPERATION INSTRUCTIONS & SERVICE MANUAL

***All piston filler operations are governed by three basic conditions:***

- The product characteristic, the amount to be dispensed, and the number of deposits per minute,
- The volume and pressure of air available to run the machine, and
- The size and characteristic of nozzle through which the product is deposited.

Each of the above characteristics are directly related to the others. For example: if a product with a heavy viscosity is to be deposited, it is usually necessary to use increased air pressure and a larger opening in the dispensing spout. On the other hand, when thin products with low viscosity, such as liquids, are to be filled, usually a lower air pressure and smaller openings in the dispensing nozzle can be used. To satisfy these extremes in filling requirements a wide range of accessories, spout variations, and attachments are available. All of these accessories are designed to operate within certain production requirements and to achieve a high degree of accuracy and control. This machine has been designed with both the operator and maintenance people in mind. It is simple yet rugged, easy to operate and simple to dismantle for either sanitation operations or routine maintenance.

As with any fine piece of equipment, the filling machine should be thoroughly cleaned and re-lubricated with appropriate jelly lubricant at the end of each run. The filler will then either be ready for another series of production operations or be well lubricated to prevent the seals from drying out should it be out of operation for a short period. Whenever maintenance, parts or service information are required and correspondence with the factory is necessary, always include the model number and serial number. This will help to avoid errors and/or shipping delays. ***Parts must also be requested by part number.***

### RECEIPT OF SHIPMENT



Immediately upon arrival the Hinds-Bock filler/depositor should be uncrated and inspected for damage during shipment. Check to see that all items listed on the packing sheet are included. If damages or shortages are noted, the transportation company should be advised immediately. Hinds-Bock Corporation should also be notified immediately.

### INSTALLATION PREPARATION

To better prepare you for a swift and efficient installation and successful start-up operation of this equipment, it is suggested that this manual be carefully read by those people who will be involved in the operation and maintenance functions of this equipment. The machine should be moved into the location where it will be placed in operation. Both electrical (where applicable) and air services should be brought to the machine. See electrical diagram for required electrical supply. Compressed air should be as clean and dry as possible and should be between 100 and 125 pounds per square inch pressure. A filter, regulator and oiler have been provided as integral parts of this machine for the purpose of properly powering the machine during operation. It should be noted, however, that **UNDER NO CIRCUMSTANCES SHOULD LINE PRESSURE TO THE MACHINE EXCEED 125 PSI.** To assure an adequate air supply to the machine, it is suggested that the air line leading to the filler be at least one-half inch inside diameter minimum.

### ADJUSTING THE MACHINE FOR HEIGHT (Where Applicable)

On units equipped with height adjustable floor stand frames, height adjustment is achieved by three simple steps:

- loosen the star knob at the lower rear of the pedestal column,
- raise the pedestal by turning handle of the side of the column,
- after proper height is achieved, re-lock the column with the star knob. The jack has approximately 8 inches of vertical travel.



## INTRODUCTION TO YOUR HINDS-BOCK FILLER / DEPOSITOR OPERATION INSTRUCTIONS & SERVICE MANUAL

### CONTROLLING MACHINE

Basically the machine is controlled by either of two methods: Manual or Automatic.

Manual cycling can be accomplished in either of three ways:

- Hand operation, either air or electric, is accomplished by activating a switch by hand.
- Foot operation, either air or electric, is accomplished by depressing a foot switch.
- Semi-automatic operation can be accomplished by holding either a hand or foot switch in the depressed position, thereby causing the filling machine to continue to cycle at a preset speed.

Automatic cycling can be accomplished in either of two ways:

- Container actuated mechanisms: In this case the container to be filled contacts a limit switch or other mechanical device, which in turn activates a solenoid valve on the filler causing the filler to cycle.
- No contact actuation: In this situation the container to be filled passes a photoelectric, electronic or pneumatic sensor which will send signals back to a switch causing the filler to cycle.

If the machine signaling device is to be attached to the conveyor or some other piece of equipment, care should be taken to locate the device in such a manner that it will cause the machine to cycle when the container to be filled is in the appropriate position.

### PRE-START CHECKOUT

Before applying air or electricity to the filling machine or filling it with product, it should be taken apart and all food contact parts should be thoroughly sanitized and lubricated. Proceed as follows:

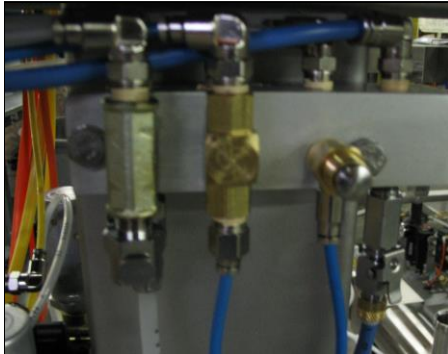
- Remove the hopper by lifting straight up with slight rotating motion. Remove bolts or tri-clamp.
- Remove the product valve by pulling the connecting pin and removing the air cylinder rod eye out of the "H" arm. Lift the product valve latch bar and grasping the "H" arm firmly, pull the product valve straight out with a slight rotating motion. Undue force should never be applied. However, on occasion it is possible that the product valve will become wedged due to the close tolerance fit between the product valve and head. If this should happen, it can be forced out from the opposite side. Even then, nothing should ever come in contact with the valve except a wooden object. A broom or mop handle works well for this operation. A light tapping blow while holding the valve so that it will not fall to the floor once it has become dislodged is all that is necessary.
- To remove the product piston from the cylinder, first turn the stroke adjust hand wheel clockwise fully until the stroke stop and pressure sure pilot valve have come to rest at the rear of the machine. Now grasp the stroke stop disk with both hands and pull the disk to its rear most position. This will also remove the product piston from the product cylinder.
- The product cylinder can now be removed from the machine by grasping it and rotating it counter-clockwise.

All food contact zones are now available for sanitizing and re-lubrication. During the sanitation and re-lubricating process all parts, especially O-ring seals and gaskets, should be inspected for nicks, cuts, cracks or other imperfections that might cause improper operation. Worn or cut rings or seals should be replaced. Lubrication should be accomplished with a good grade of food approved jelly lubricant compatible with the product. Once the machine has been placed into operation, the product should serve as a satisfactory lubricant.



## INTRODUCTION TO YOUR HINDS-BOCK FILLER / DEPOSITOR OPERATION INSTRUCTIONS & SERVICE MANUAL

### PRE-START CHECKOUT



**RESET BUTTON ON DEPOSITOR MUST BE PUSHED IN  
TO ENGAGE AIR PRESSURE TO MACHINE**

When applicable, connect the electrical line cord to the specified supply point. Connect specified air line to the air inlet on the back of the filling machine with the air valve in the "Off" position.

**(Filler/Depositor cover must be in place to operate.)**

The air valve is off when the lever is in the closed position. Slowly move the lever to the open position. A slight hissing sound is normal and the air pressure gauge should show approximately 80 PSI. If some other pressure is indicated, adjust by lifting the black lock sleeve located on top of the regulator and turn the lock sleeve until 80 pounds is indicated on the gauge. Slide the sleeve downward to lock. If the machine is not in the rest position, it will complete one cycle and stop, with the product piston in its more rearward position. The product valve will be closed to the filling spout and open to the hopper. Place product in the hopper and activate the machine several times by depressing either the hand or foot control device. Both the flow control speed regulating valves should be rotated clockwise until they are closed and then opened counter-clockwise one full turn. This will give a beginning operating speed from which final speed adjustment can be made. After two or three cycles, the product cylinder and valve cavity should be "primed" with product and the product should now be coming out of the end of the spout. The machine is now ready to adjust for proper amount of product to be deposited during each fill cycle. **To set the fill volume or amount required per cycle**, hold a container under the filling spout and cycle the machine once. Weigh the output of the product. If it is an incorrect weight, adjust the machine as follows:

- ➔ Shut off the air supply by sliding the black lever on the air valve to the closed position. This not only shuts off incoming air, but exhausts all trapped air inside the filling machine.
- ➔ If more product is required, turn the hand wheel adjustment knob clockwise. If less product is desired, turn the hand wheel counter-clockwise.
- ➔ Turn on the air and repeat above procedure for weight check.

When the proper weight is achieved, record the settings of the machine for future production runs.

### ADJUSTING THE SPEED OF FILL

As a means of producing accuracy of fill and versatility of application, the filling machine is provided with two speed control valves. There is a flow control speed valve mounted on each end of the main air cylinder. **(Some models with dual cylinders have the control valves located under the filler on the main power valve.)** The control connected to the end of the main cylinder closest to the hopper is the FORWARD flow control. It controls the speed of the piston in the forward direction. That forward motion controls the speed of the product being dispensed from the spout or nozzle. The other flow control is located at the end of the cylinder that is furthest from the hopper and controls the rearward speed of the piston.



## INTRODUCTION TO YOUR HINDS-BOCK FILLER / DEPOSITOR OPERATION INSTRUCTIONS & SERVICE MANUAL

### ROUTINE MAINTENANCE

**"While Hinds-Bock supplies a system and basic guidelines for clean in place, it is the customer's responsibility to validate cleanliness."**

A small amount of normal maintenance and good machine practice is required to keep this filling machine in top operating condition. A few suggestions about care of the machine will assure its operation in a trouble-free manner for a long period of time.



- The air filter bowl at the rear of the machine should be drained daily. It is normal for this bowl to collect water during the use of the machine and this water should never be allowed to stand in the bowl. There is a small drain valve in the bottom of the plastic bowl. Never use pliers to tighten this valve. Finger tight is all it will ever need.
- Air being delivered to the machine should be as dry and clean as possible.
- If this machine is equipped with an electronic signal device, this unit along with the sensing head must be removed and placed in a dry area while the filling machine is being washed and sanitized.
- Whatever parts are removed from the machine for cleaning, maintenance, etc. should be stored in an area safe from damage.
- When disassembling or reassembling components of the machine, never use force other than hand pressure. It is not necessary to use hammers or mallets during any of the operational procedures on this machine.
- This machine is equipped with an air cylinder operated shut-off spout. The air cylinders must never be allowed to submerge in water or solvent during the sanitation process. The air cylinders and connecting hoses should be hand held above or outside of a wash tank while the contact parts of the spout are being washed. If water or solvent is allowed inside the small plastic air lines connected to the cylinder, premature damage and failure of the air cylinder will result.



## INTRODUCTION TO YOUR HINDS-BOCK FILLER / DEPOSITOR OPERATION INSTRUCTIONS & SERVICE MANUAL

### AIR LINE LUBRICANT

**CAUTION: DO NOT OVER LUBRICATE. THE LUBRICATING DEVICE SHOULD BE ADJUSTED TO PRODUCE ONE DROP OF LUBRICANT FOR EACH 50 TO 40 CYCLES OF THE MACHINE IT IS MOUNTED ON.**

The use of an oil that is specifically recommended for air line lubricators is required for the proper lubrication of air tools, valves, cylinders, motors, etc. To withstand the adverse conditions of everyday use, high temperatures, dirty air and oxidation, the oil must have superior oxidation stability and high film strength. Otherwise it will blow off the surfaces to be oiled leaving a tacky residue known as varnish.

Viscosity is an important factor in the choice of which oil to use. In order to reach the part requiring lubrication, the oil must be atomized and carried downstream to the component. However if the oil is too heavy, it will often condense in the pipe. Listed below are characteristics of lubricating oils we have found that work quite well.

1. High viscosity index: 90+
2. Viscosity: 100 - 150 SUS at 100 degrees Fahrenheit
3. Anti-foaming
4. Superior oxidation stability as determined by ASTM test D943: 2000+
5. Compatible with Buna N rubber
6. Aniline range: 180 – 210
7. High film strength

**A partial list is also shown of lubricants that meet the above described specifications. Contact your supplier for their recommendation of an oil that meets our suggested specifications.**

#### AIR LINE OIL

| Manufacturer                                                             | Brand Name | Hinds-Bock P/N             |
|--------------------------------------------------------------------------|------------|----------------------------|
| Chevron *                                                                | GST-32     | 09192-399 (Air Trio Bowls) |
| <b>Note: See back of manual for (Chevron Material Safety Data Sheet)</b> |            |                            |
| Chevron                                                                  | GST-100    | 10250 (Gear Box Oil)       |

#### LUBRICATING GELS

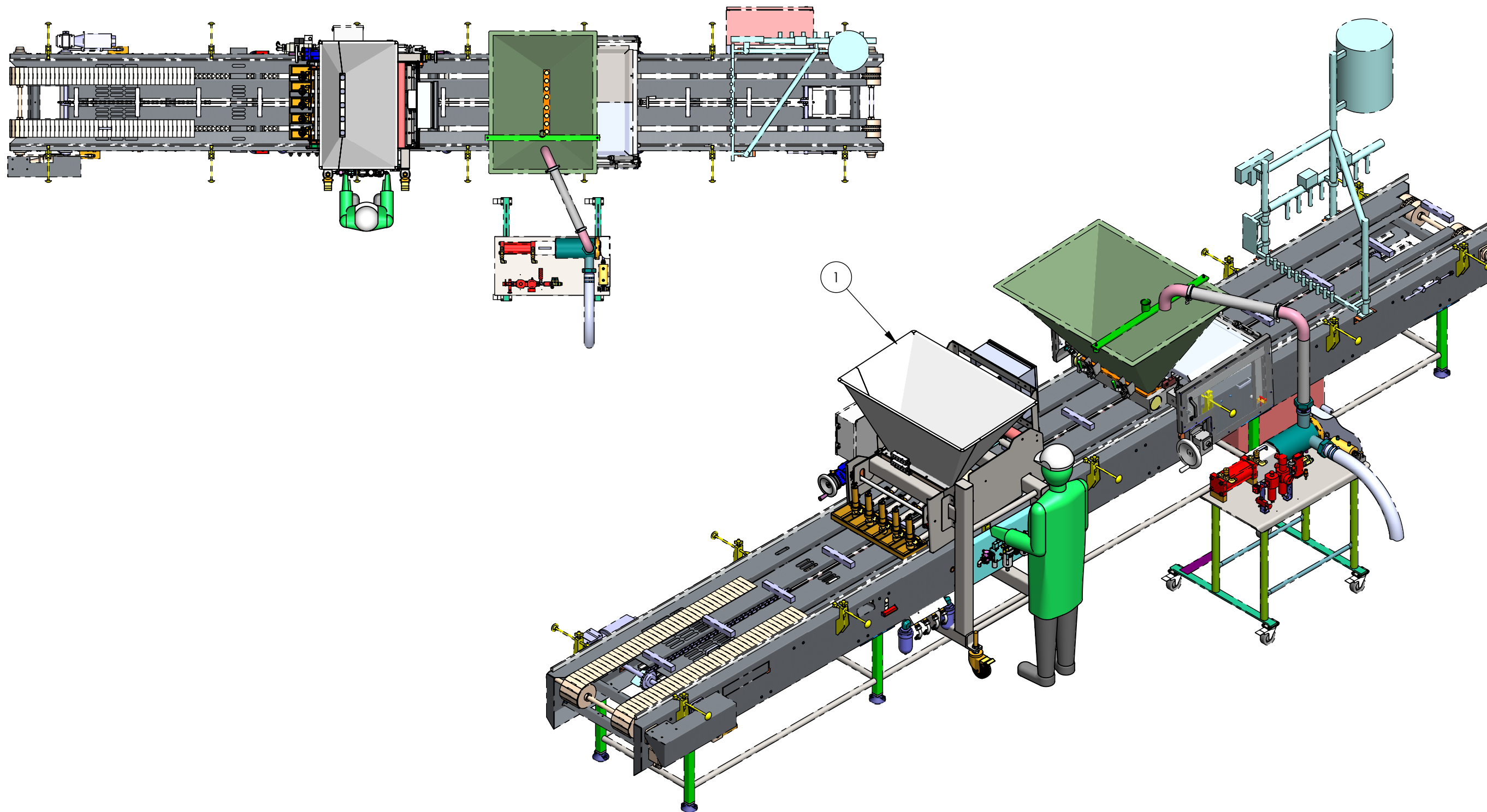
| Manufacturer                                                                 | Brand Name | Hinds-Bock P/N |
|------------------------------------------------------------------------------|------------|----------------|
| McGlaughlin Oil Co.                                                          | Petrol-Gel | 09192-054      |
| <b>Note: See back of manual for (McGlaughlin Material Safety Date Sheet)</b> |            |                |

### A.1 Pre Clean the hopper

- a. TURN OFF AIR AND REMOVE AIR LINE.**
- b. Scrape excess product off the hopper wall to bottom of the hopper.
- c. Cycle the excess product out of the machine.

### A.2 Clean the hopper and depositor

- a. Put approximately 2 gallons of LUKEWARM water into the hopper with about a teaspoon of Dawn ® or equivalent grease dissolving liquid dish washing detergent.
- b. Swirl and scrub the hopper walls with a scrub brush or sponge to remove all residual product.
- c. Repeat steps A.2. with clean lukewarm water to completely clean the hopper.
- d. Remove product valve(s), Spout(s), Piston(s), and Product cylinder(s). Be sure to remove all O-rings in Product Valve(s) and Product piston(s). Wash in LUKEWARM water with Dawn ® or equivalent grease dissolving liquid dish washing detergent. Rinse with clean lukewarm water to completely clean.
- e. Re-install O-rings onto Product valve(s) and Product Piston(s).
- f. Re-install Product Valve(s), Product Cylinder(s) and Product piston(s), (Remembering to generously lubricating the O-rings with Petrol Gel ®)



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## MECHANICAL PARTS LISTING

### GEN ASSY - 5P-08 AUTO ANSWER DEPOSITOR

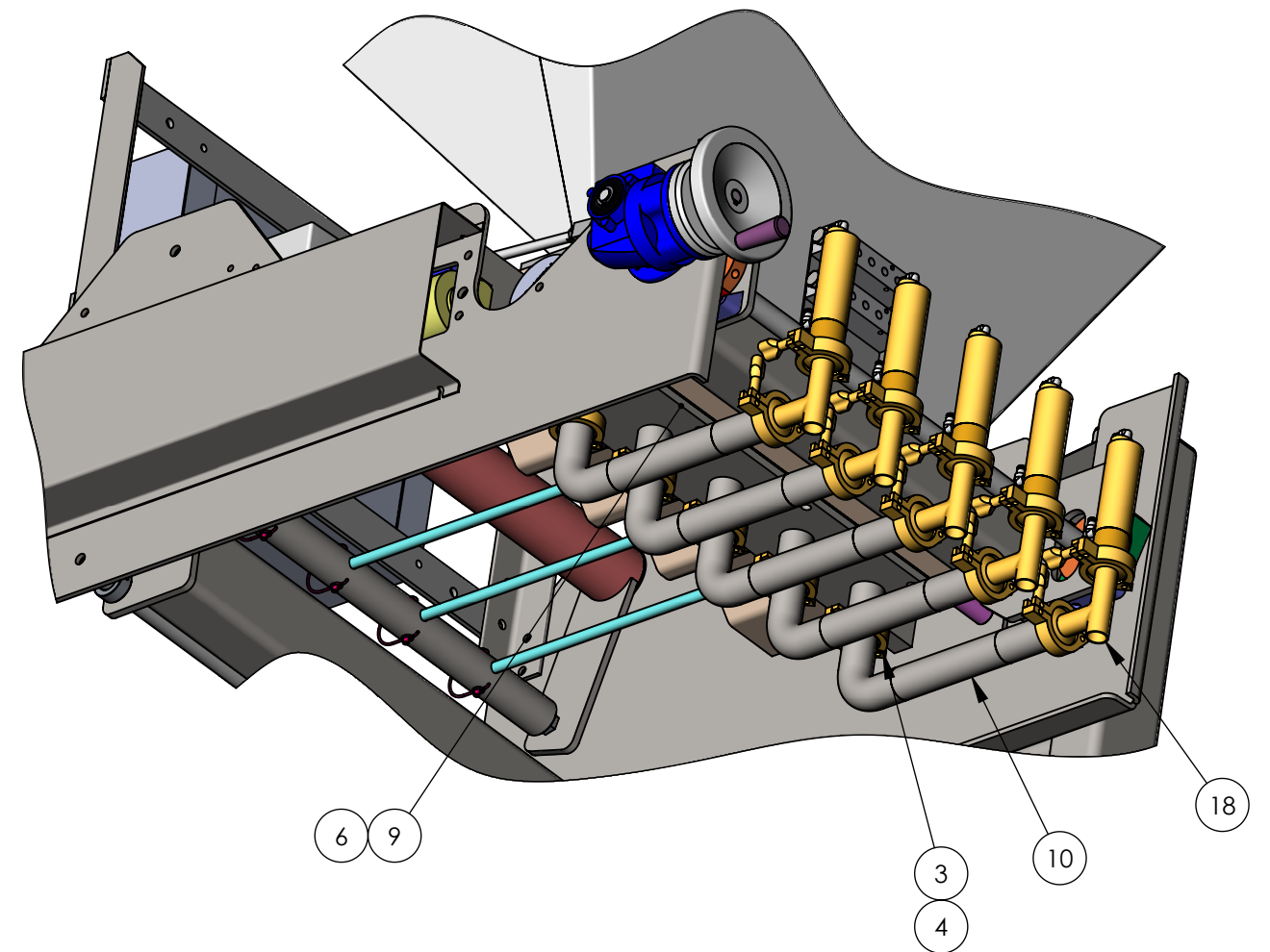
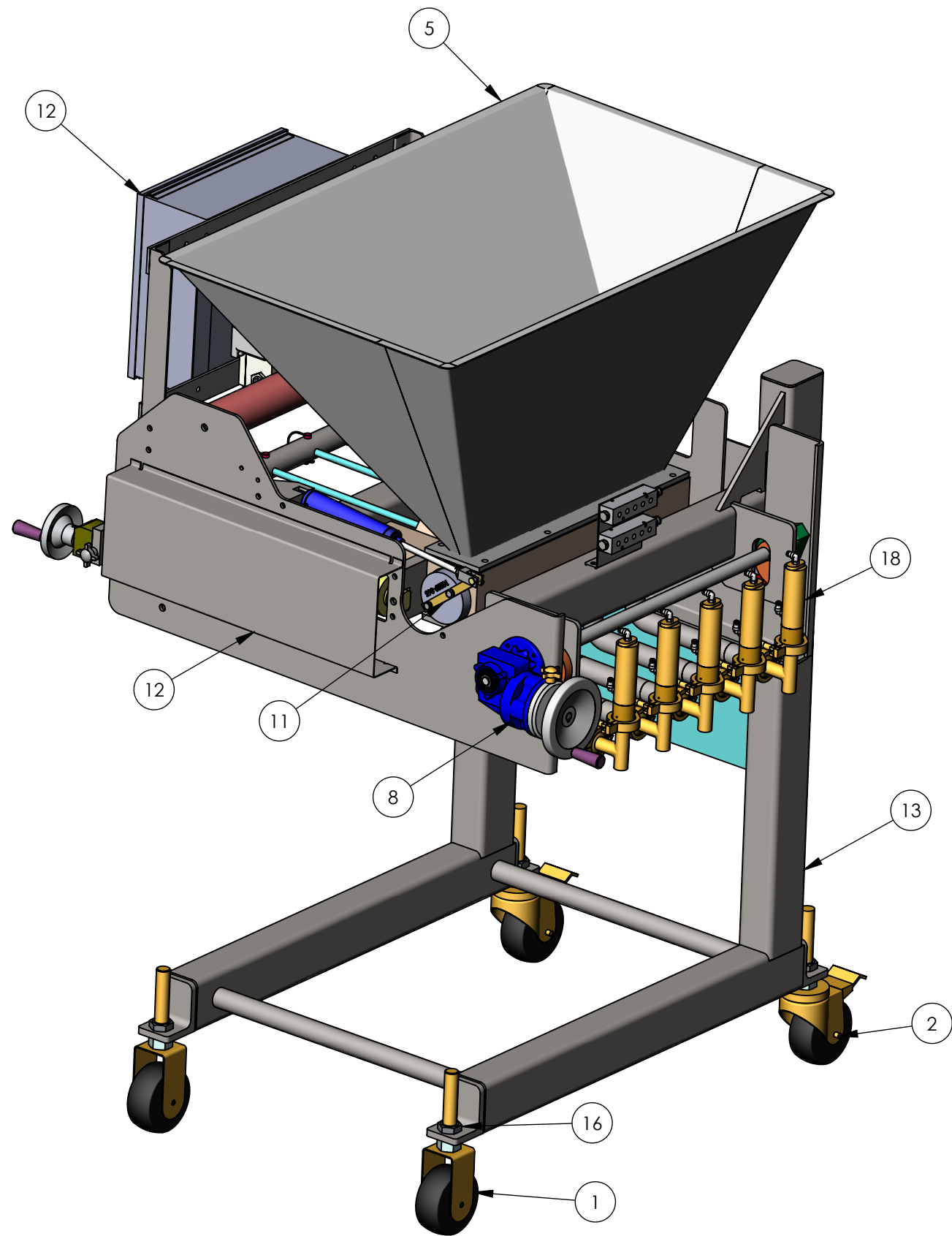
#### 10289001

SHEET 1 OF 2

| ITEM # | PART #   | QTY. | U/M | NOTES | DESCRIPTION          |
|--------|----------|------|-----|-------|----------------------|
| 1      | 10289003 | 1    | EA  | A     | PORTABLE AUTO ANSWER |

|  |
|--|
|  |
|--|

|                                                                                                                                                                                                                                                                                                                          |                                                                                                              |                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
|  <p>Bothell, WA 98021   425.885.1183</p> <p><i>The design data depicted on this drawing is confidential and proprietary. Do not copy or disclose in whole or part except by written permission of the HINDS-BOCK CORPORATION.</i></p> | <p><b>MECHANICAL PARTS LISTING</b></p> <p><b>GEN ASSY - 5P-08 AUTO ANSWER DEP</b></p> <p><b>10289001</b></p> | <p><b>NOTES:</b></p> <p><b>A.</b> SEE SEPERATE PARTS LISTING</p> <p><b>SHEET 2 OF 2</b></p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|



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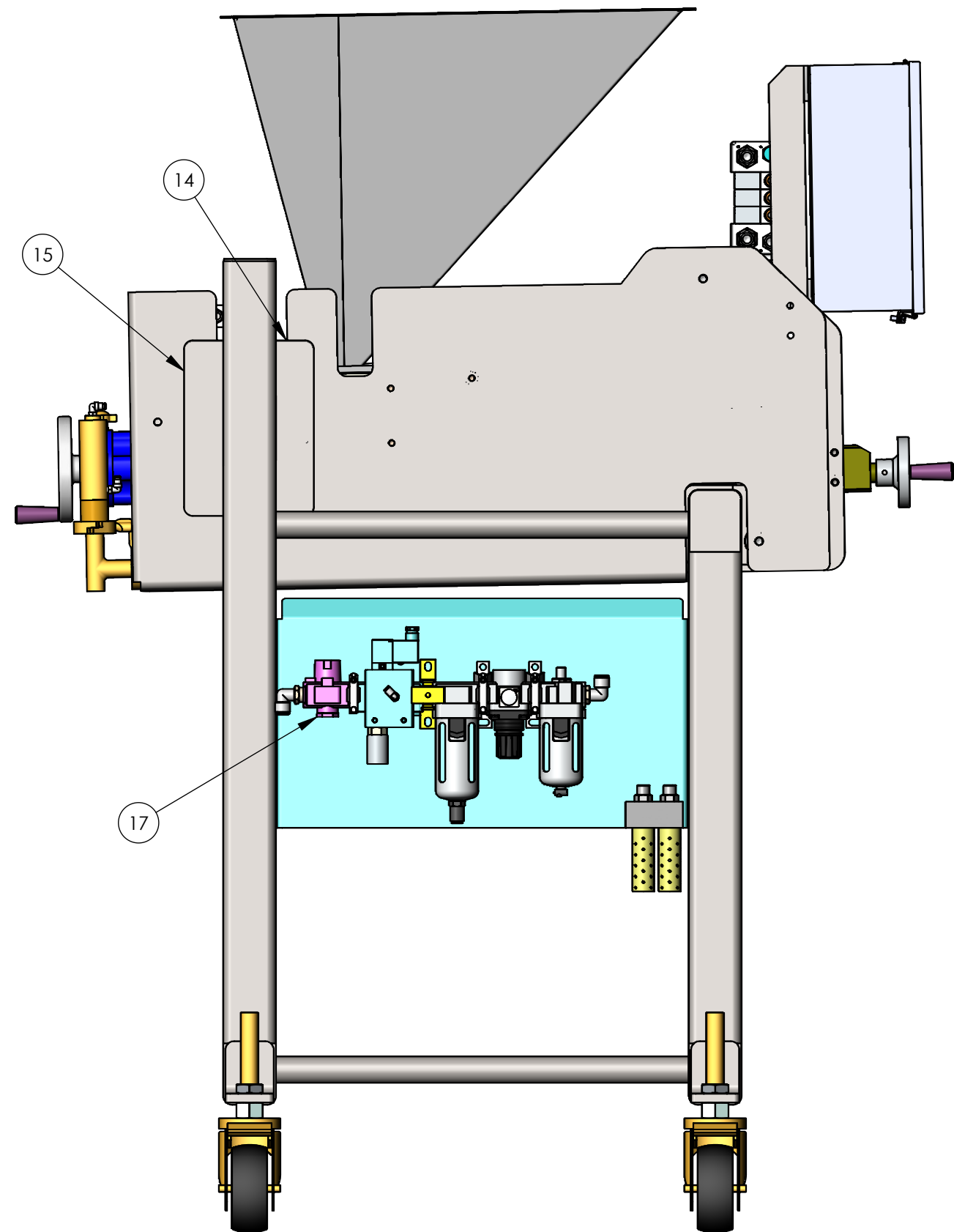
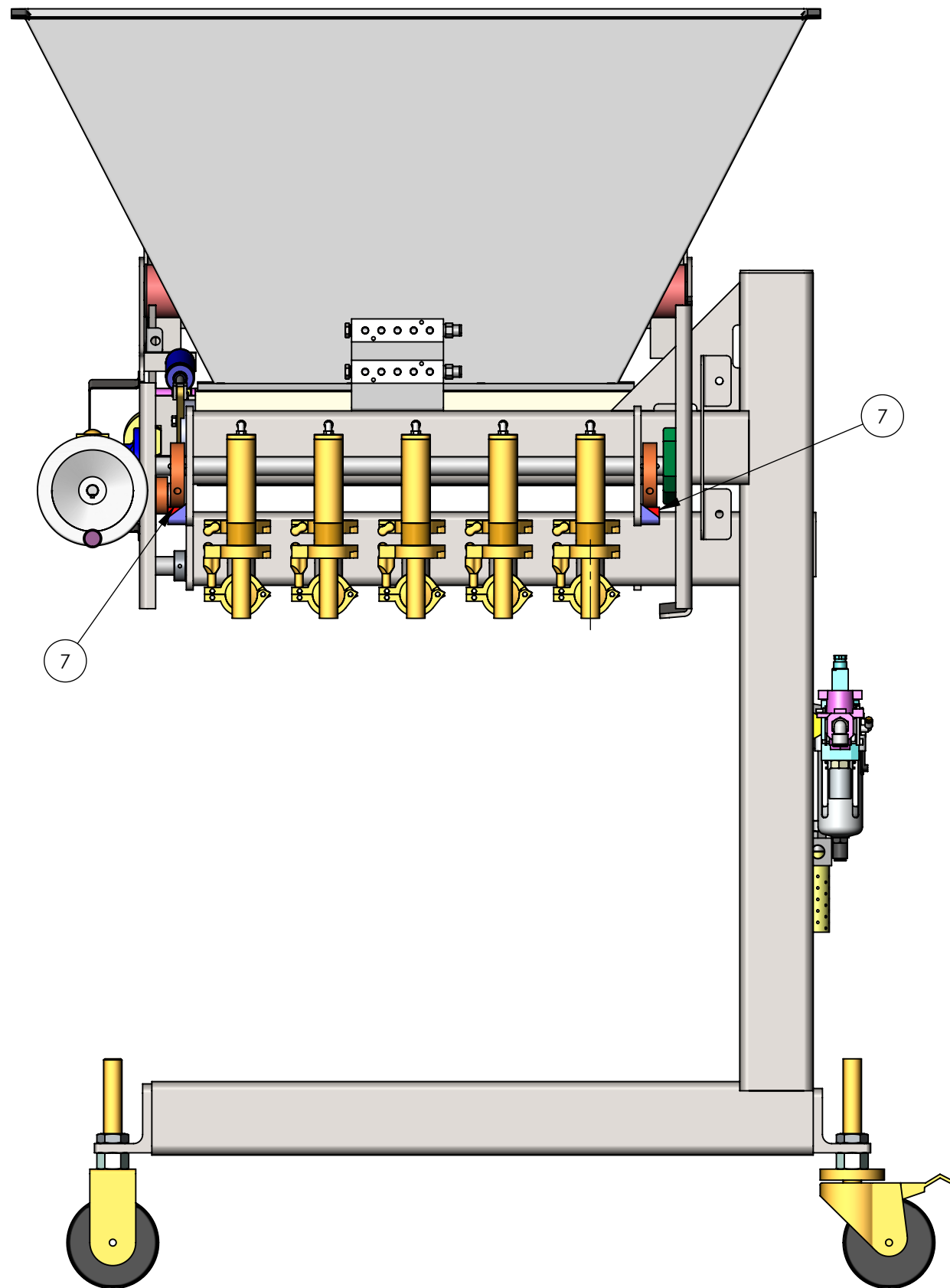
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## MECHANICAL PARTS LISTING

## PORTABLE AUTO ANSWER

**10289003**

SHEET 1 OF 3



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## MECHANICAL PARTS LISTING

## PORTABLE AUTO ANSWER

10289003

SHEET 2 OF 3

| ITEM # | PART #         | QTY | U/M | NOTES | DESCRIPTION                    |
|--------|----------------|-----|-----|-------|--------------------------------|
| 1      | 09183731       | 2   | EA  |       | CASTER RIGID 5"DIA WHEEL       |
| 2      | 09185006       | 2   | EA  |       | CASTER SWVL 5"DIA WHEEL 800#SS |
| 3      | 09190045       | 5   | EA  |       | CLAMP HINGED HVY DUTY, 1-1/2"  |
| 4      | 09190051       | 5   | EA  |       | GASKET 1-1/2" BUNA             |
| 5      | 09443048       | 1   | EA  |       | HOPPER 40 GAL WIDE w/BASE      |
| 6      | 09443060       | 1   | EA  |       | GASKET 5PWT SIL 4137           |
| 7      | 09699010       | 2   | EA  |       | CAM BLOCK                      |
| 8      | 10289008       | 1   | EA  |       | CAM LIFT ASSY                  |
| 9      | 10289083       | 1   | EA  |       | SPOUT PLATE WLDMNT 5P, 1-1/2   |
| 10     | 10289257       | 5   | EA  |       | EXTENSION SPOUT 90° 1-1/2"     |
| 11     | 10289364       | 1   | EA  | A     | ASSY - VLV PROD 5P, 4-3/4"C/L  |
| 12     | 10289901       | 1   | EA  | A     | PORTABLE AUTO ANSWER CORE      |
| 13     | 10289905       | 1   | EA  |       | PORTABLE AUTO ANSWER FRAME     |
| 14     | 10289913       | 1   | EA  |       | COVER HALF - OPP               |
| 15     | 10289916       | 1   | EA  |       | COVER HALF                     |
| 16     | HB050-16C-00SS | 4   | EA  |       | NUT JAM 1"-8NC SS              |
| 17     | PD10289        | 1   | EA  | A     | PNEUMATICS ASSY                |
| 18     | VS1-012        | 5   | EA  | A     | SPOUT C/O 1" VERT DEL/BUNA OR  |



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MECHANICAL PARTS LISTING

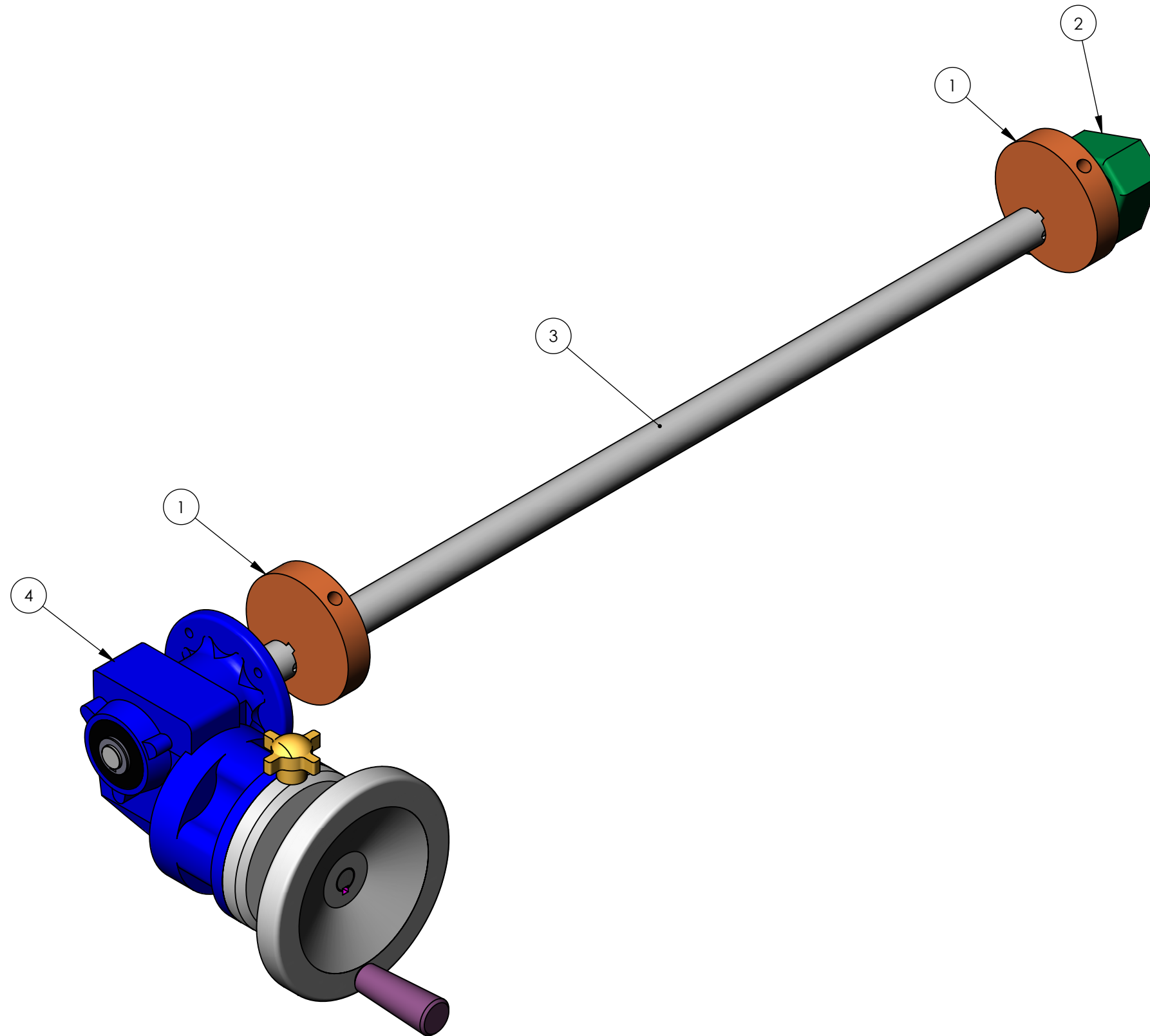
PORTABLE AUTO ANSWER

10289003

NOTES:

A. SEE SEPERATE PARTS LISTING

SHEET 3 OF 3



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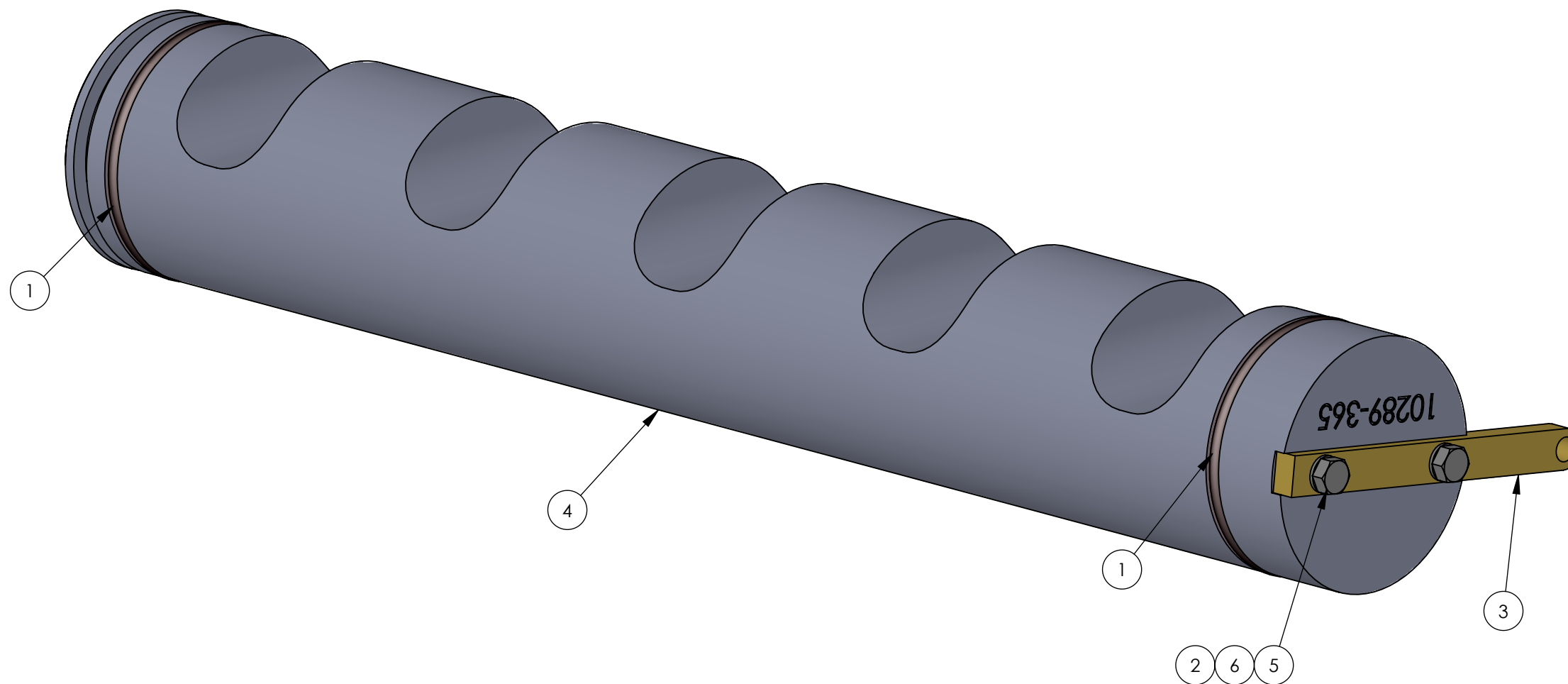
## MECHANICAL PARTS LISTING

### CAM LIFT ASSY

**10289008**

SHEET 1 OF 2





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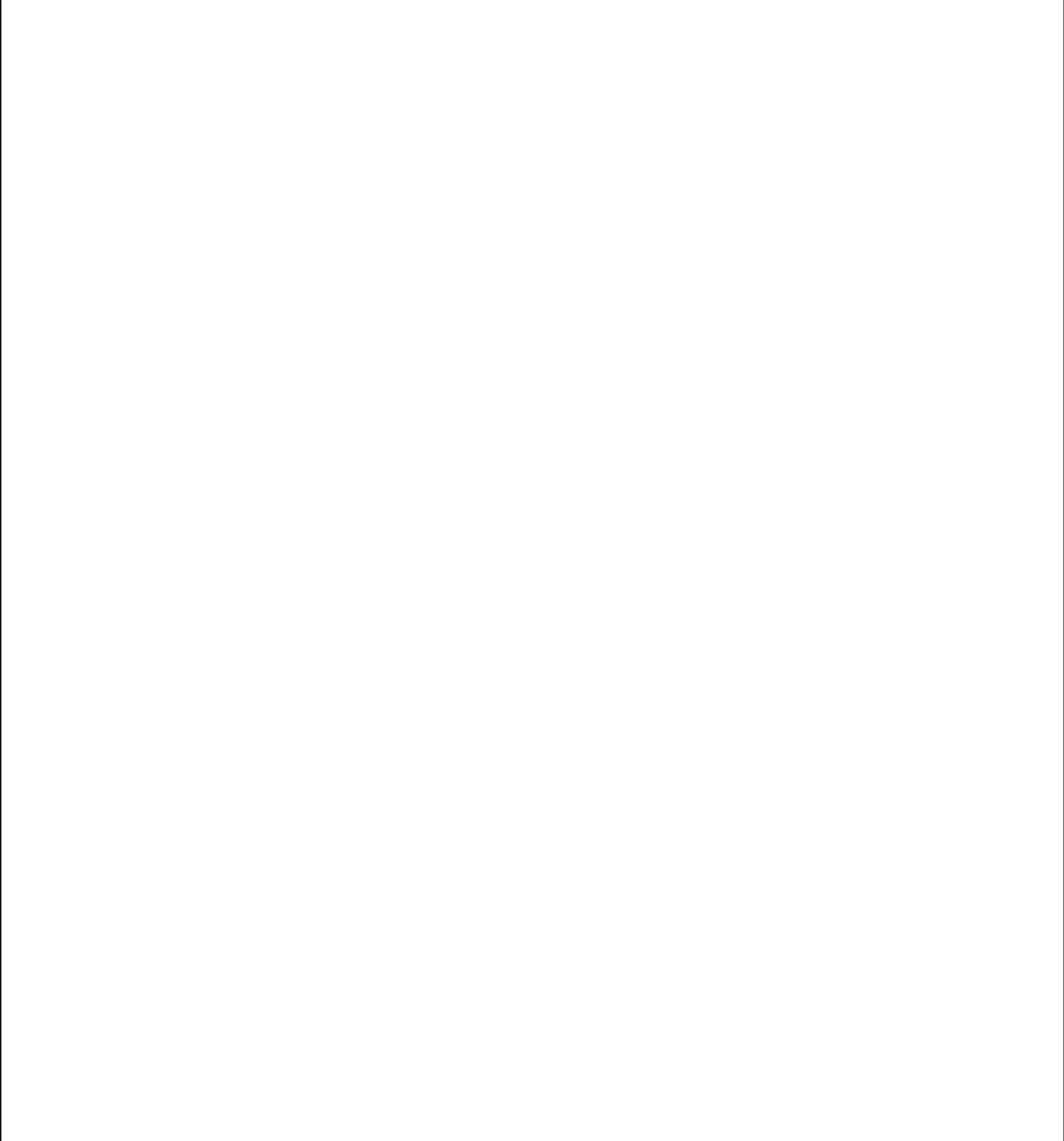
## MECHANICAL PARTS LISTING

**ASSY - VLV PROD 5P, 4-3/4"C/L**

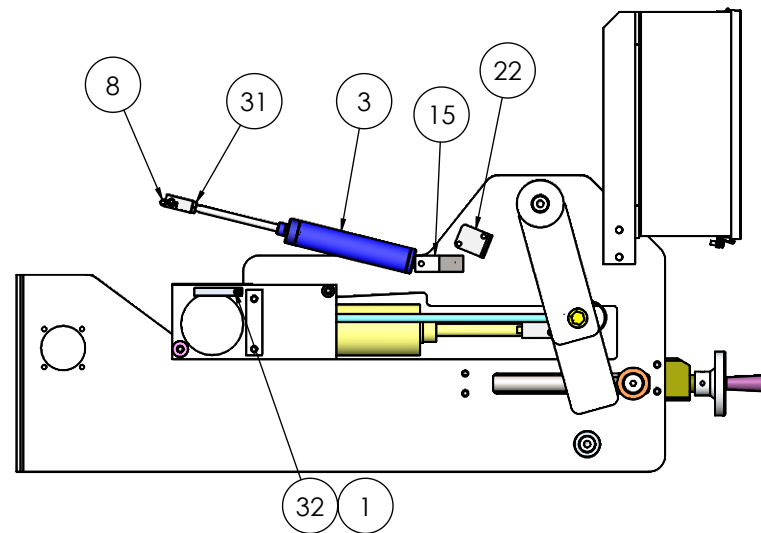
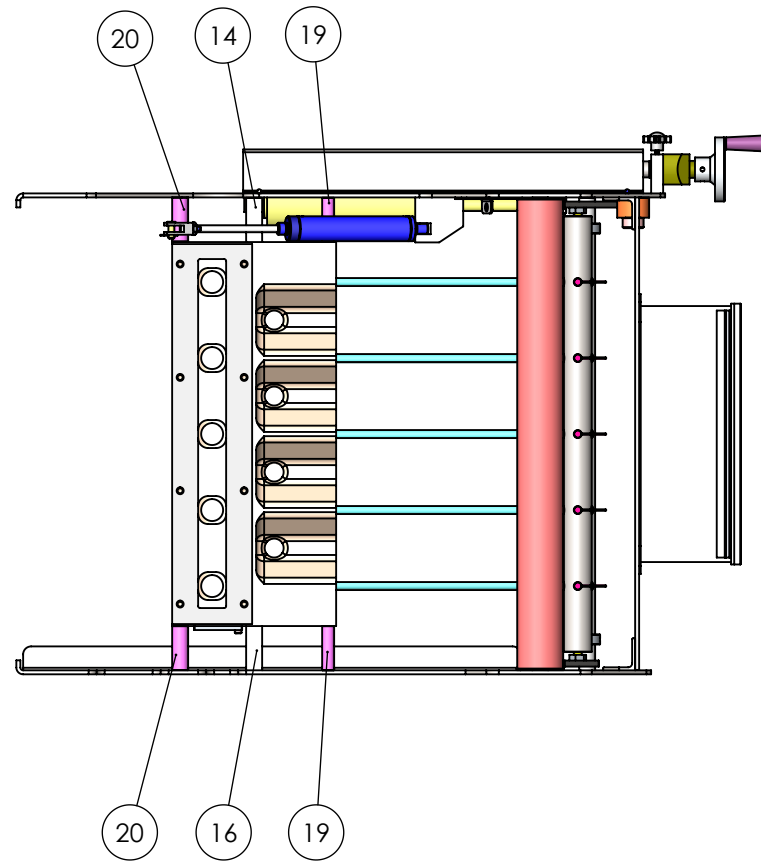
**10289364**

SHEET 1 OF 2

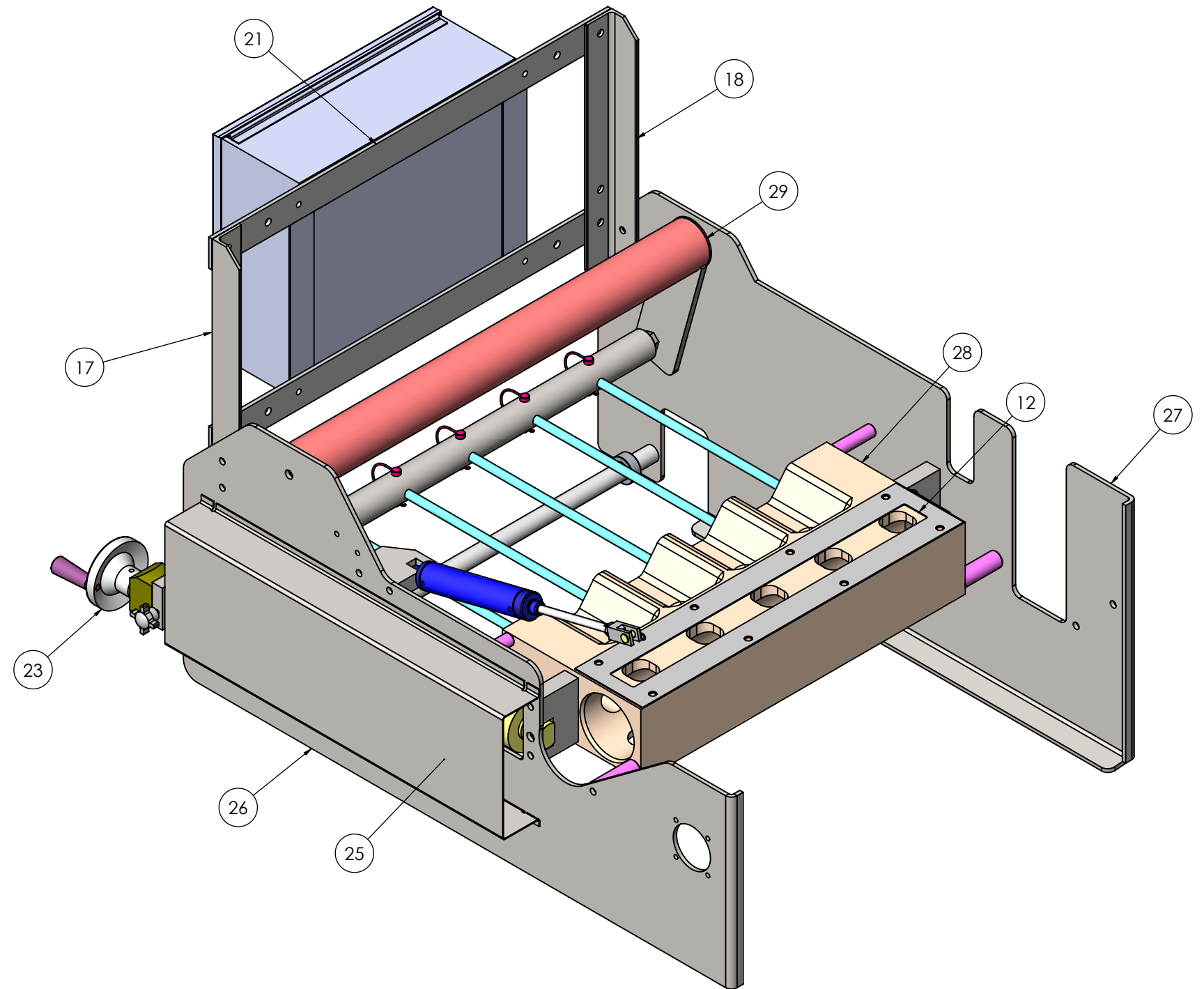
| ITEM # | PART #         | QTY. | U/M | NOTES | DESCRIPTION                        |
|--------|----------------|------|-----|-------|------------------------------------|
| 1      | 09180-693      | 2    | EA  |       | O-RING, 341 BUNA FDA               |
| 2      | 09190587       | 2    | EA  |       | HELICOIL 5/16-18 UNC x .938"L      |
| 3      | 09443005       | 1    | EA  |       | BAR, PROD VLV                      |
| 4      | 10289365       | 1    | EA  |       | PROD VLV 5 PORT DELRIN             |
| 5      | HB010-5C-8SS   | 2    | EA  |       | BOLT HXHD HVY 5/16-18x1L SS        |
| 6      | HB160-05--00SS | 2    | EA  |       | WASHER 5/16" AERONAUTICAL (AN 960) |



|                                                                                                                                                                                                                                                                                                                                  |                                                                                                           |                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|



**VIEW w/SIDE PLATE REMOVED**

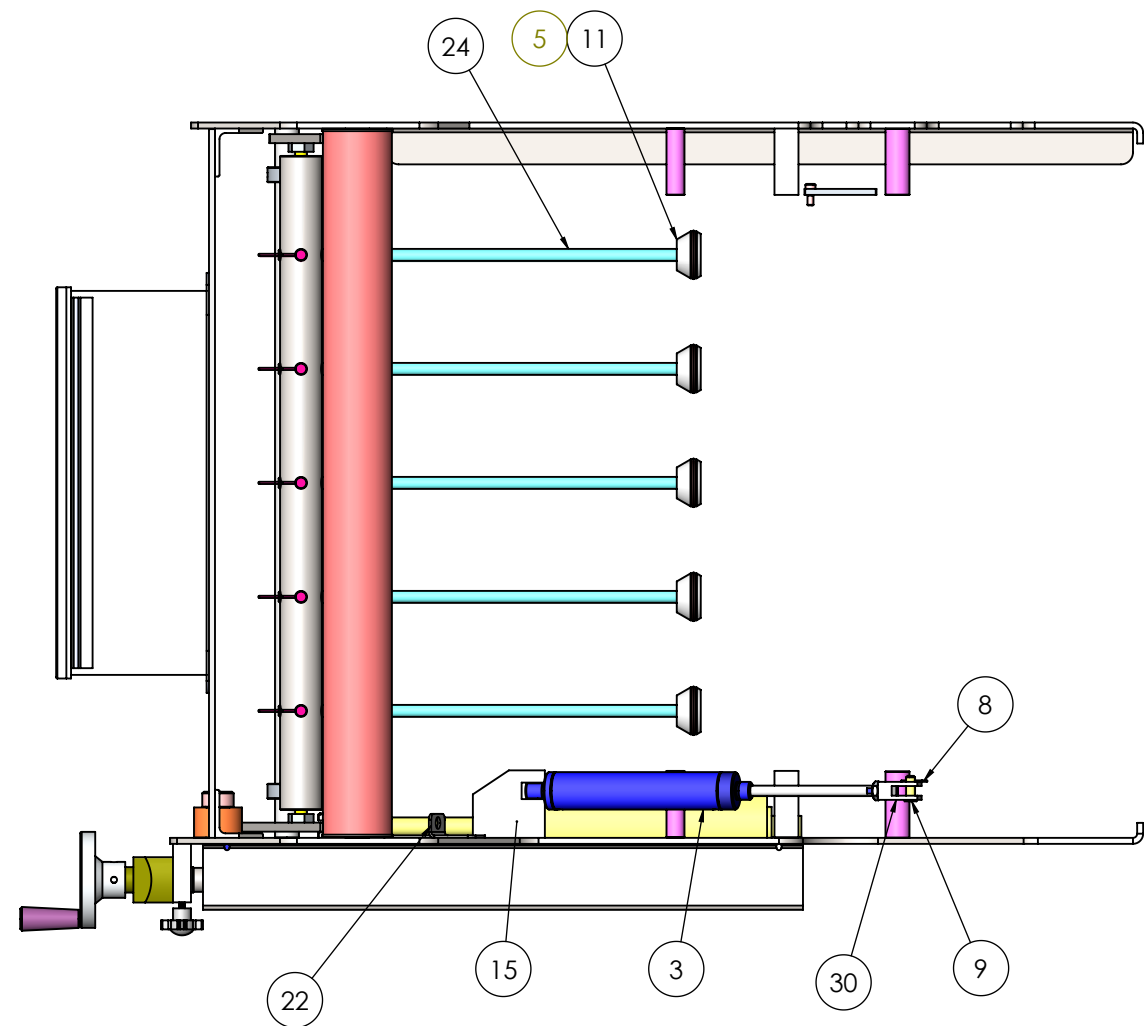


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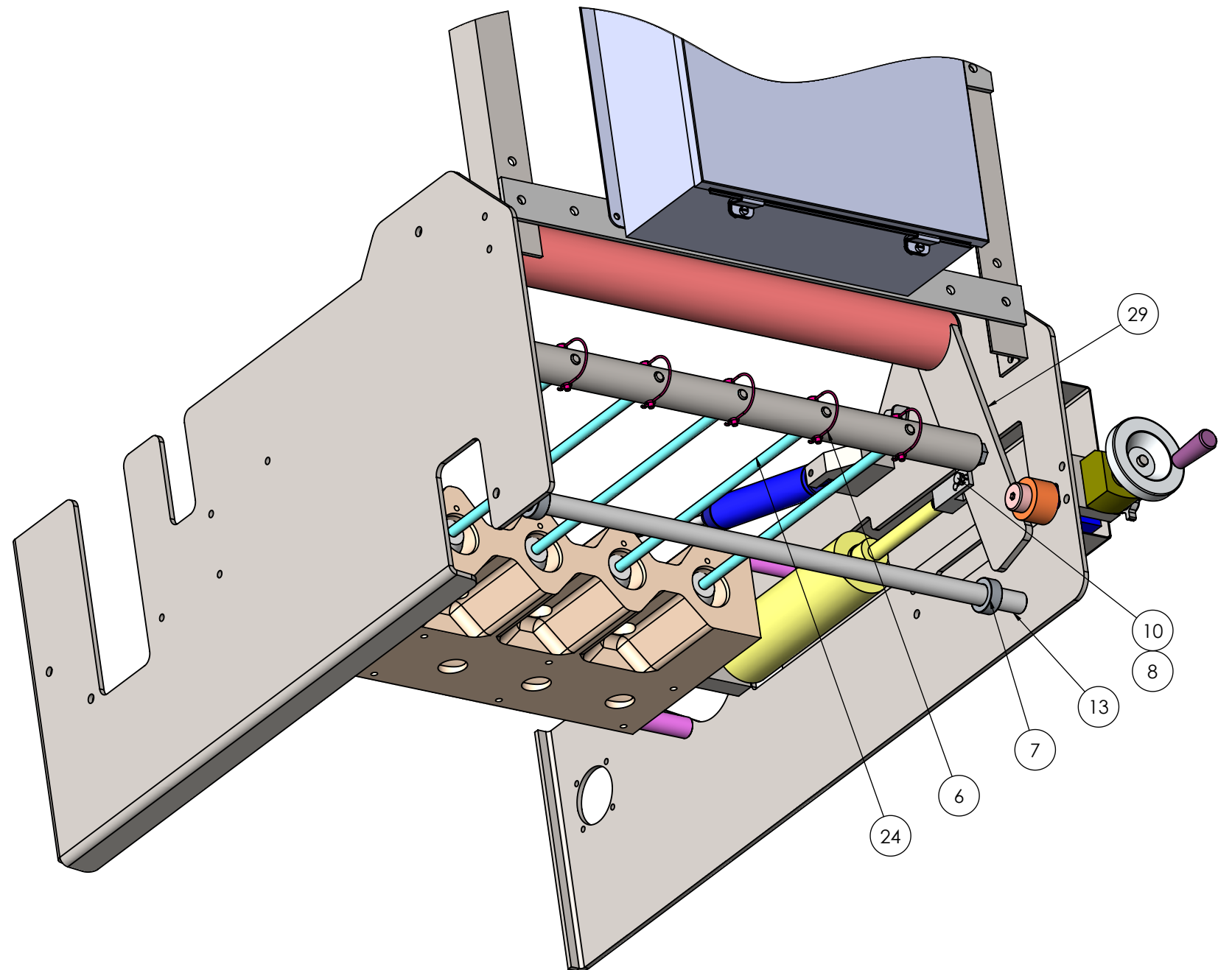
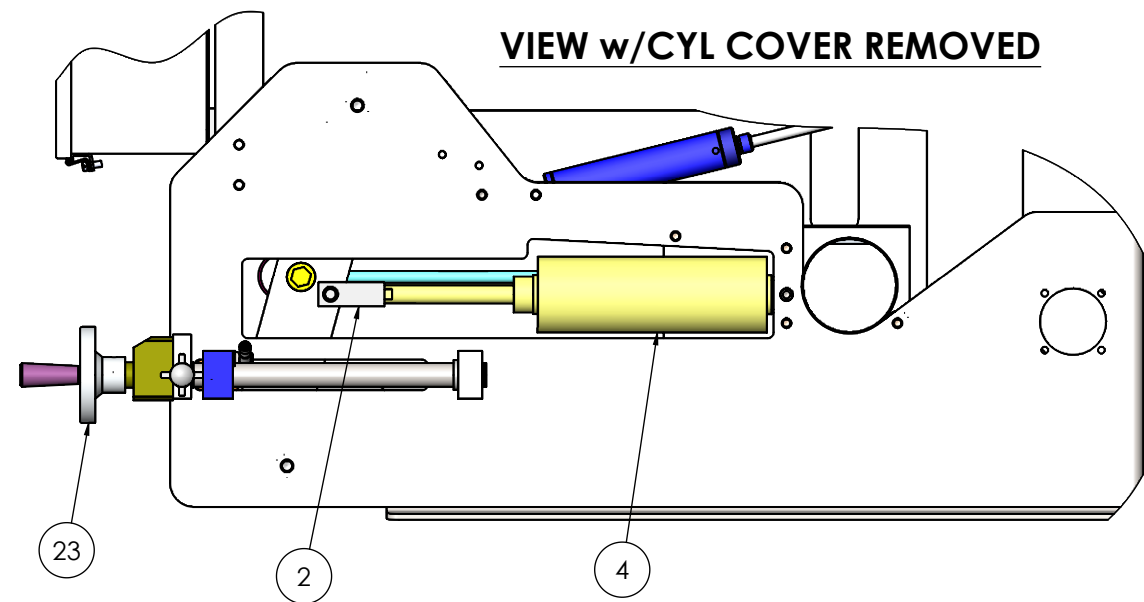
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**MECHANICAL PARTS LISTING**  
**PORTABLE AUTO ANSWER CORE**  
**10289901**

VIEW w/HEAD & CYL COVER REMOVED



VIEW w/CYL COVER REMOVED



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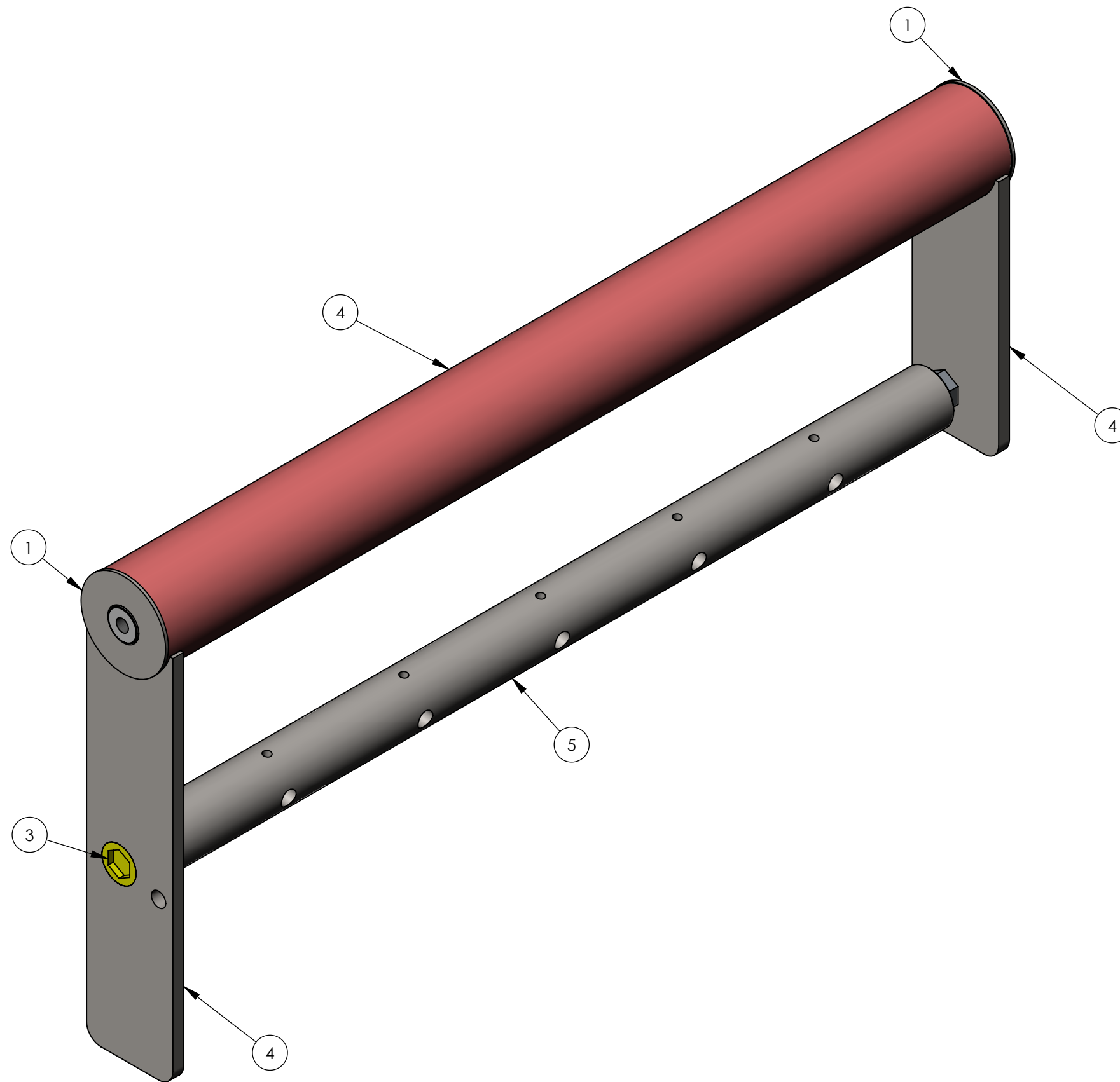
MECHANICAL PARTS LISTING

PORTABLE AUTO ANSWER CORE

10289901

SHEET 2 OF 3





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## MECHANICAL PARTS LISTING

### LEVER ARM ASSY

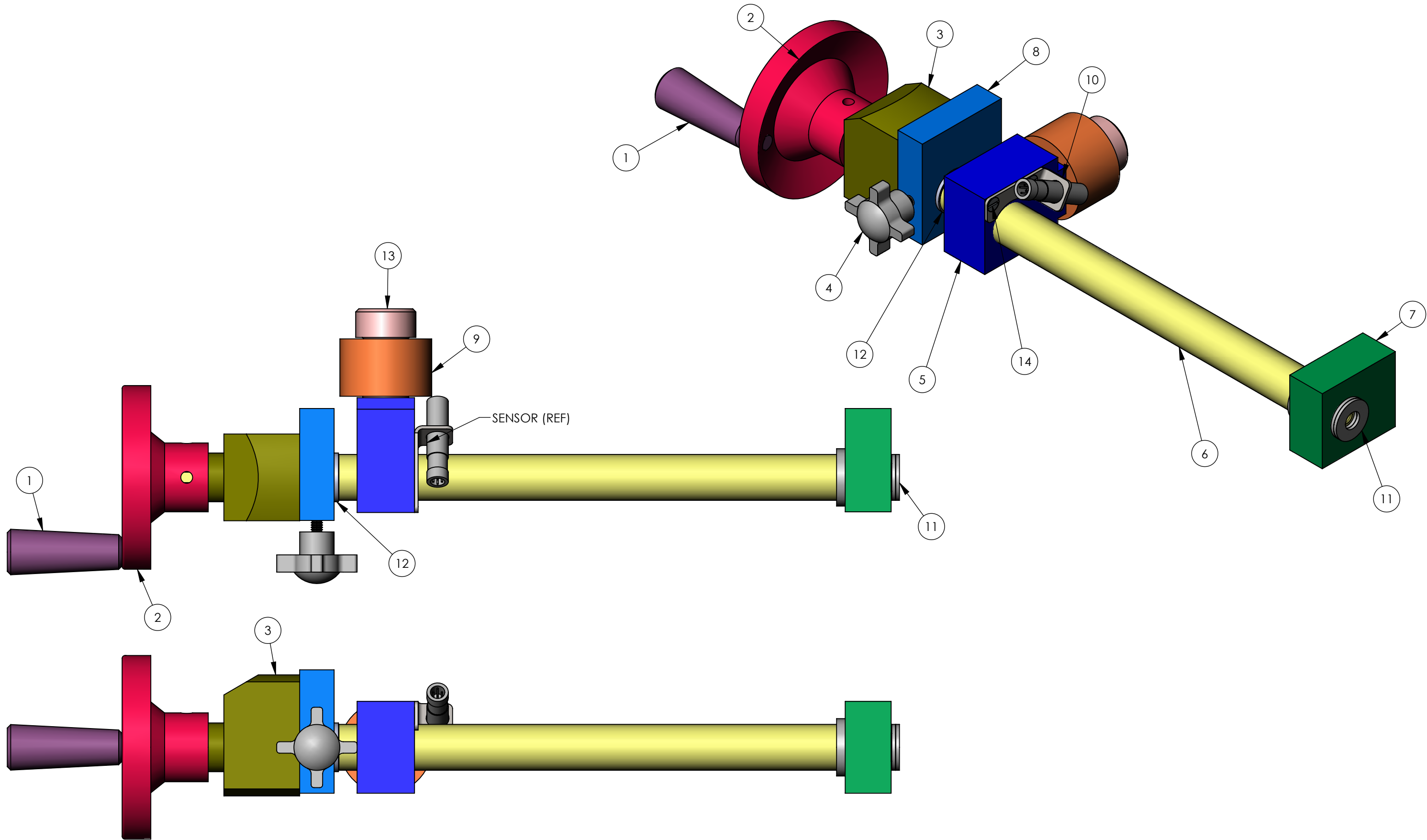
**10289902**

SHEET 1 OF 2

| ITEM # | PART #   | QTY. | U/M | NOTES | DESCRIPTION         |
|--------|----------|------|-----|-------|---------------------|
| 1      | 09699021 | 2    | EA  |       | Pipe Pivot Bushing  |
| 2      | 09699022 | 1    | EA  |       | PIVOT SHAFT         |
| 3      | 09699099 | 2    | EA  |       | Pivot Screw         |
| 4      | 10266028 | 1    | EA  |       | PIVOT ARM WELDMENT  |
| 5      | 10289017 | 1    | EA  |       | STRONG BACK BAR, 5P |

|  |
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|  |
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|                                                                                                                                                                                                                                                                                                                          |                                                                                            |                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|



| ITEM # | PART #         | QTY. | U/M | NOTES | DESCRIPTION                     |
|--------|----------------|------|-----|-------|---------------------------------|
| 1      | 09190125       | 1    | EA  |       | HANDLE 3/8-16 NC                |
| 2      | 09190180       | 1    | EA  |       | HAND WHEEL, 4", 1/2B            |
| 3      | 09190563       | 1    | EA  |       | POSITION INDICATOR              |
| 4      | 09190676       | 1    | EA  |       | KNOB HAND 1/4"NCx1"L SS         |
| 5      | 10266038       | 1    | EA  |       | STROKE ADJ BLOCK                |
| 6      | 10266041       | 1    | EA  |       | Stroke Adjust Rod               |
| 7      | 10266044       | 1    | EA  |       | STROKE ADJ BSH BLOCK            |
| 8      | 10266049       | 1    | EA  |       | MOUNTNG TAB STROKE INDICATOR    |
| 9      | 10266054       | 1    | EA  |       | STROKE BUMPER                   |
| 10     | 10266902       | 1    | EA  |       | PROX MNT BRKT, NEW AUTO ANSWER  |
| 11     | HB040-06--00SS | 2    | EA  |       | FLAT WASHER, 3/8" SS            |
| 12     | HB040-08--00SS | 1    | EA  |       | FLAT WASHER, 1/2" SS            |
| 13     | HB080-16-12SS  | 1    | EA  |       | SHLDR BOLT 1 x 1-1/2"L SS       |
| 14     | HB210-02C-04SS | 2    | EA  |       | MCH SCRW F HD SLOT 8-32x1/2L SS |



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MECHANICAL PARTS LISTING

S.A.R. Assembly

10266005

NOTES:

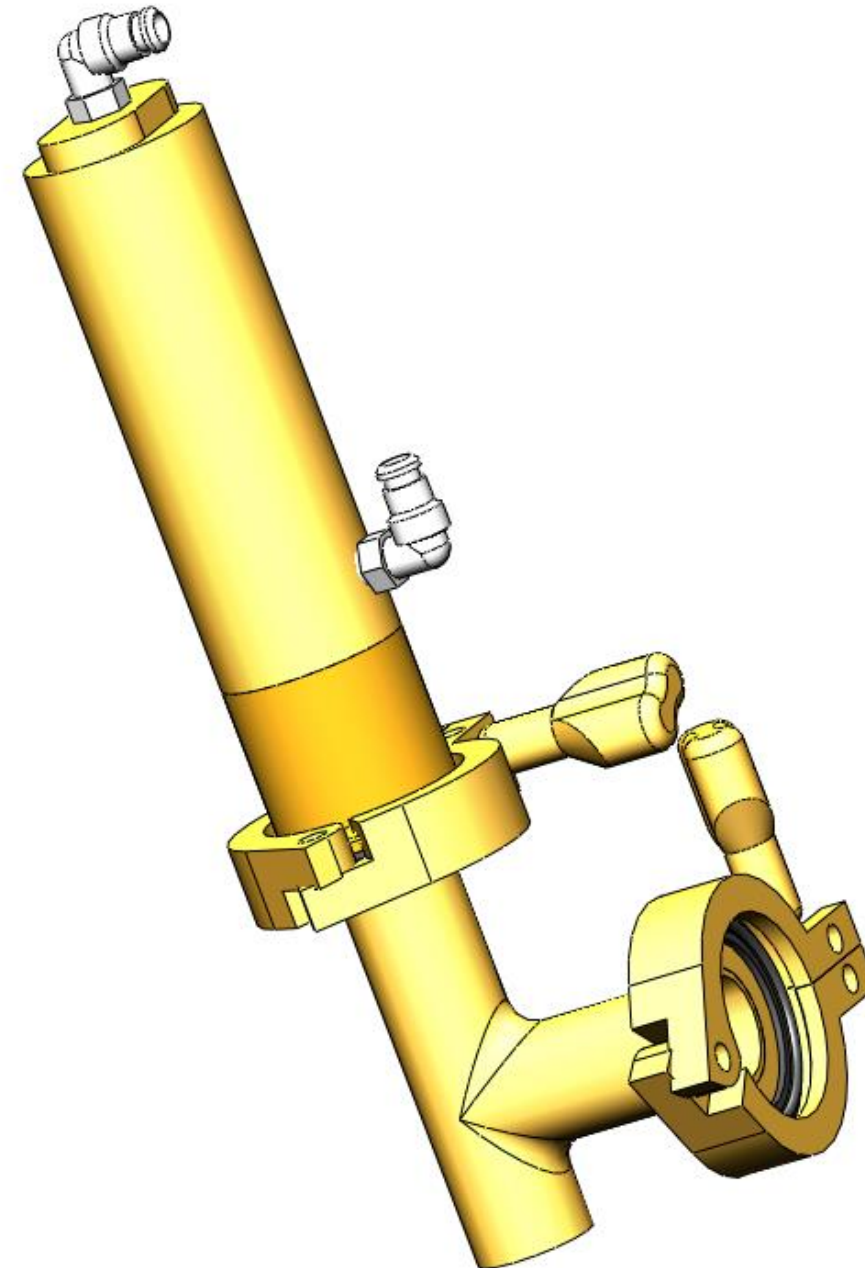
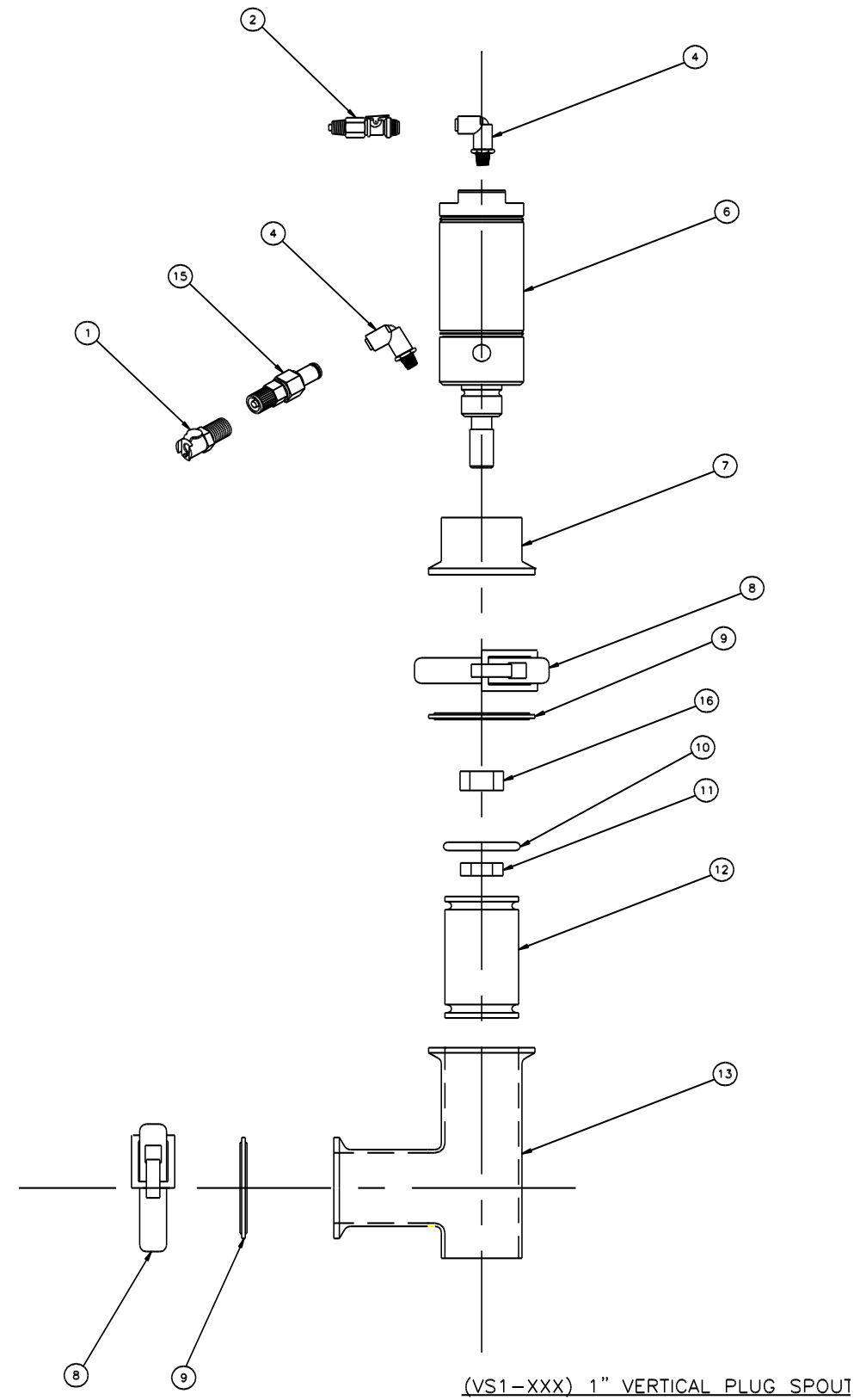
A.

SEE SEPERATE PARTS LISTING

SHEET 2 OF 2



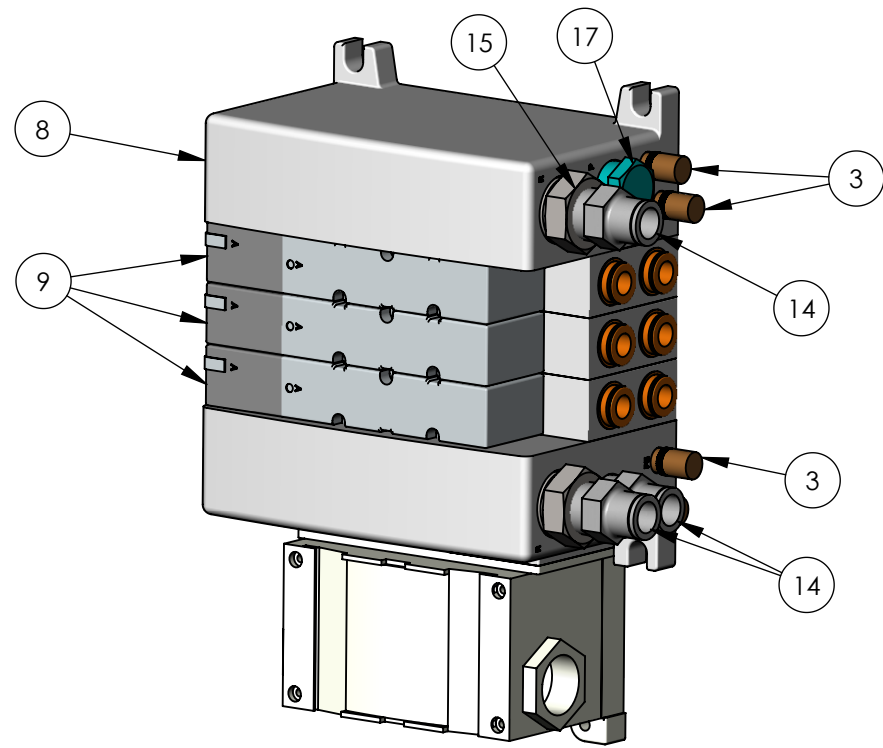
STANDARD PARTS LISTING  
1" VERTICAL PLUG SPOUT  
VS1-012



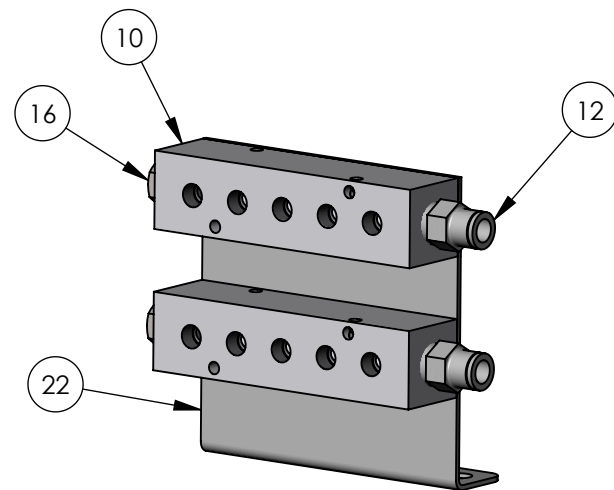


**STANDARD PARTS LISTING**  
**1" VERTICAL PLUG SPOUT**  
**VS1-012**

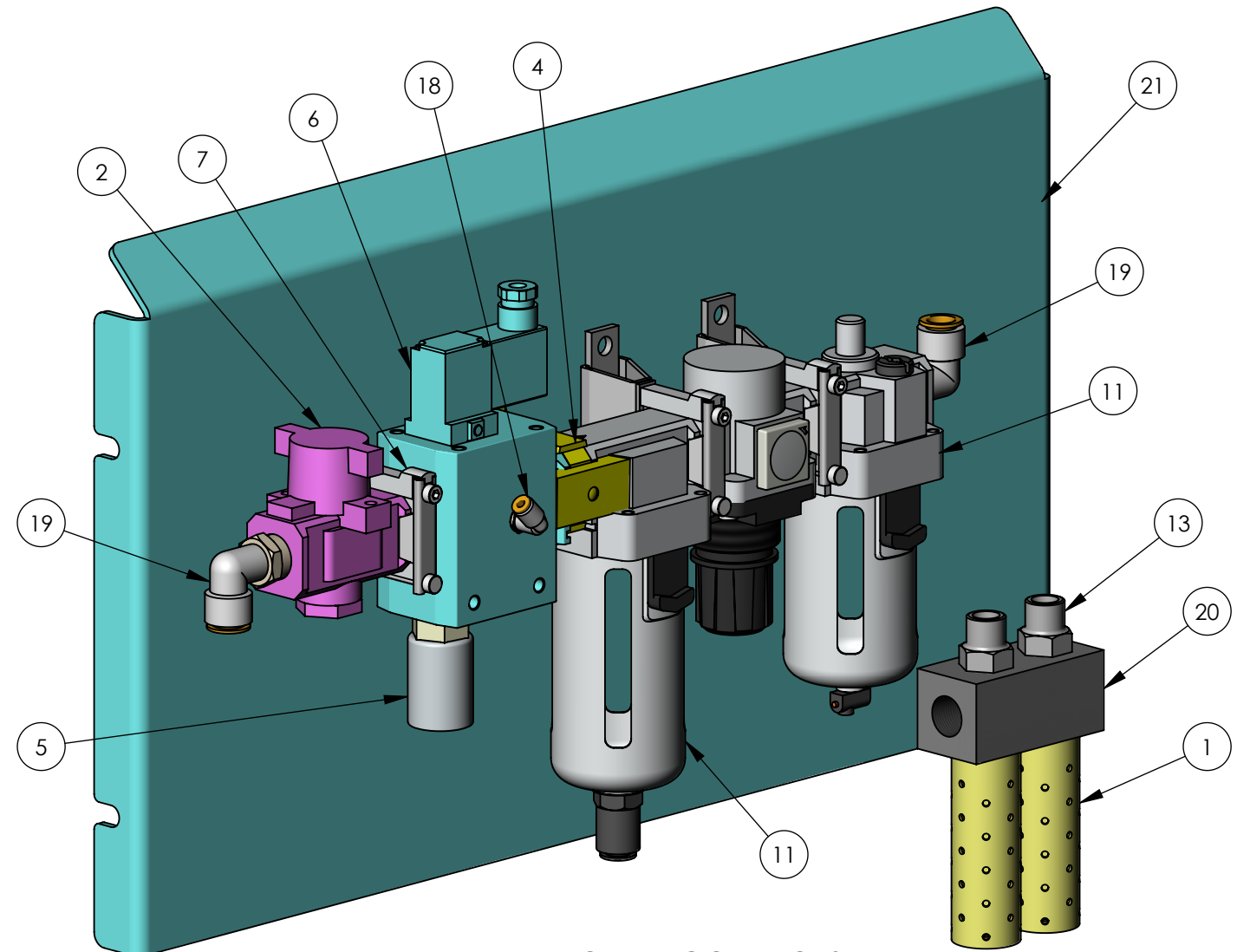
| <i>ITEM.</i> | <i>NOTES:</i> | <i>QTY</i> | <i>U/M</i> | <i>PART NO.</i> | <i>DESCRIPTION</i>        |
|--------------|---------------|------------|------------|-----------------|---------------------------|
| 01           |               | 1          | EA         | 09192-037       | QUICK DISCONNECT          |
| 02           |               | 1          | EA         | 09192-049       | QUICK DISCONNECT          |
| 04           |               | 2          | EA         | 09192-007       | FITTING, ELBOW            |
| 06           |               | 1          | EA         | 09155-168       | CYLINDER, AIR 1-1/2"Bx2"S |
| 07           |               | 1          | EA         | 09062-091       | ADAPTER, CYLINDER         |
| 08           |               | 2          | EA         | 09190-045       | CLAMP, 1-1/2" TRI H/D     |
| 09           |               | 2          | EA         | 09190-051       | GASKET, 1-1/2" TRI        |
| 10           |               | 2          | EA         | 09180-614       | ORING, BUNA               |
| 11           |               | 1          | EA         | HB050-07F-00SS  | NUT, JAM                  |
| 12           |               | 1          | EA         | 09062-089       | VALVE, SPOUT DELRIN       |
| 13           |               | 1          | EA         | 09062-195       | SPOUT HOUSING TEE         |
| 15           |               | 1          | EA         | 09192-038       | QUICK DISCONNECT          |
| 16           |               | 2          | EA         | 09062-090       | STOP, STROKE              |



**UPPER CONTROLS**



**SPOUT CONTROLS**



**LOWER CONTROLS**



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**PNEUMATIC PARTS LISTING**

**PNEUMATICS ASSY**

**PD10289**

| ITEM # | PART #   | QTY | U/M | NOTES | DESCRIPTION                           |
|--------|----------|-----|-----|-------|---------------------------------------|
| 1      | 09155098 | 2   | EA  |       | MUFFLER M CANSTR                      |
| 2      | 09156546 | 1   | EA  |       | LOCKOUT VLV MANUAL 1/2"NPT OSHA       |
| 3      | 09156560 | 4   | EA  |       | MUFFLER 1/8"NPT                       |
| 4      | 09156563 | 1   | EA  |       | BRACKET "T" TYPE                      |
| 5      | 09156573 | 1   | EA  |       | MUFFLER 1/2"NPT SHOCK RES.            |
| 6      | 09156740 | 1   | EA  |       | VLV DUMP 24V SOL SOFT START           |
| 7      | 09157121 | 1   | EA  |       | CLAMP SPACER Y400                     |
| 8      | 09157125 | 1   | EA  |       | MANIFOLD VQC4000 x3 3/8"ONE-TCH       |
| 9      | 09157126 | 3   | EA  |       | VLV SOL 2POS SPRN RTRN 24VDC          |
| 10     | 09157484 | 2   | EA  |       | MANIFOLD 5 PORT 1/8"NPT x3/8"         |
| 11     | 09157662 | 1   | EA  |       | FILTER+REG+LUBR 1/2"NPT               |
| 12     | 09192089 | 2   | EA  |       | CONN HEXHD&SK T-M-NPT 3/8x3/8         |
| 13     | 09192093 | 2   | EA  |       | CONN HEXHD&SK T-M-NPT 1/2x1/2         |
| 14     | 09192093 | 3   | EA  |       | CONN HEXHD&SK T-M-NPT 1/2x1/2         |
| 15     | 09192484 | 2   | EA  |       | BSH REDUCER 3/4"-1/2"NPT S.S.         |
| 16     | 09192560 | 2   | EA  |       | PLUG PIPE 3/8"NPT HX HEAD SS          |
| 17     | 09192844 | 1   | EA  |       | PLUG PIPE 1/2"NPT HX HEAD S.S.        |
| 18     | 09193269 | 1   | EA  |       | FITTING PLUG-IN ELBOW 1/8NPT-5/32TUBE |
| 19     | 09193391 | 2   | EA  |       | FTG M ELBOW 1/2"NPT 1/2"OD TUBE       |
| 20     | 09228510 | 1   | EA  |       | MANIFOLD (4) 1/2NPT x (1) 3/8NPT      |
| 21     | 10289201 | 1   | EA  |       | PNEUMATICS MNT PANEL                  |
| 22     | 10289917 | 1   | EA  |       | MANIFOLD MNT BRKT                     |



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**PNEUMATIC PARTS LISTING**

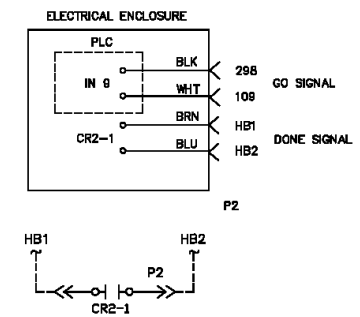
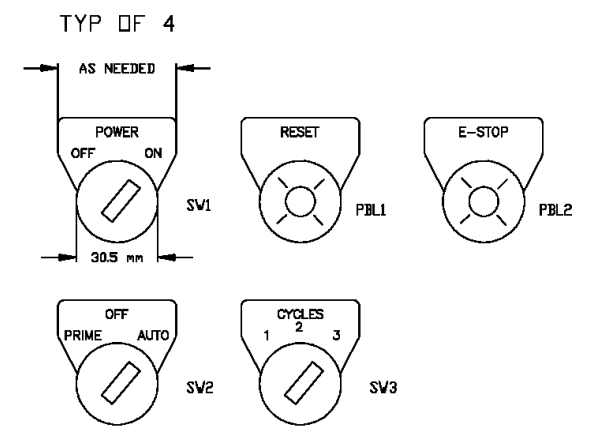
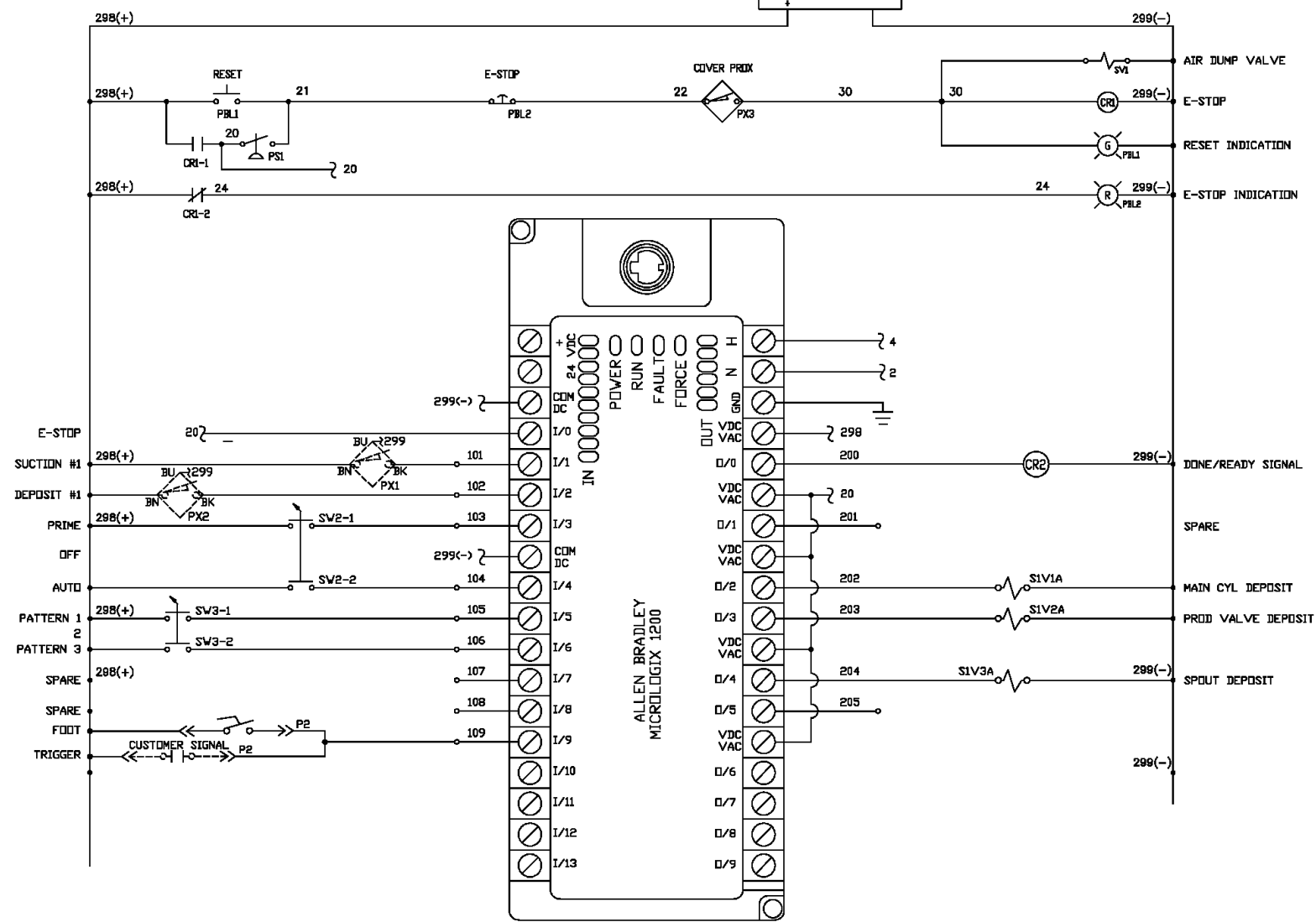
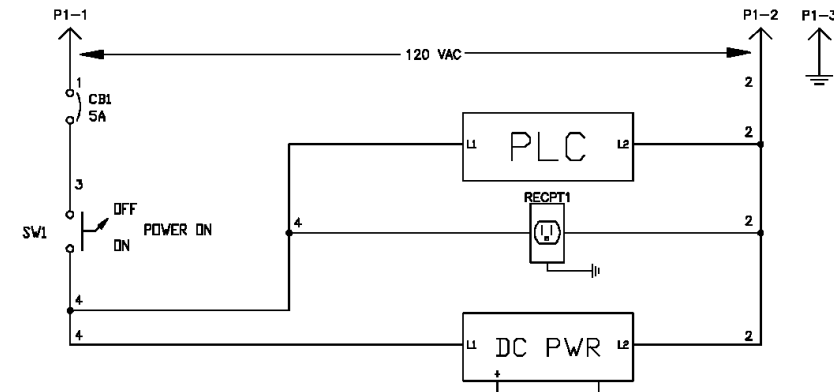
**PNEUMATICS ASSY**

**PD10289**

**NOTES:**

**A.** SEE SEPERATE PARTS LISTING

**SHEET 2 OF 2**



Bothell, WA 98021 | 425.885.1183

**ELECTRICAL ASSEMBLY**  
**5P-08 PORTABLE & SWIRLER ADD-ON**  
**ED10289 & ED10289-01**

**ED10289 - 5P-08 PORTABLE**

| ITEM # | PART #    | QTY | U/M | NOTES | DESCRIPTION                    |
|--------|-----------|-----|-----|-------|--------------------------------|
| CB1    | 09173-798 | 1   | EA  |       | CIRCUIT BRKR SUPP PROT 1P 5A   |
| CR1-2  | 09173-315 | 2   | EA  |       | RELAY SPDT 6A 24VDC COIL "TBR" |
| ENCL   | 09170-242 | 1   | EA  |       | ENCL ELEC 16"x14"x6" SS        |
| ENCL   | 09170-326 | 1   | EA  |       | PANEL BACK 16"x14"             |
| FS1    | 09170-076 | 1   | EA  |       | SWITCH FOOT ELECTRIC FOOTSWITC |
| LABEL  | LAB118    | 1   | EA  |       | LABEL PHEN. PRIME-OFF-AUTO     |
| LABEL  | LAB121    | 1   | EA  |       | LABEL PHEN. "E-STOP"           |
| LABEL  | LAB123    | 1   | EA  |       | LABEL PHEN. "RESET"            |
| LABEL  | LAB140    | 1   | EA  |       | LABEL PHEN. "CYCLES 1 2 3"     |
| LABEL  | LAB141    | 1   | EA  |       | LABEL PHEN. "POWER-ON/OFF"     |
| P1     | 09192-025 | 1   | EA  |       | PIGTAIL 3PIN M SJT16/3 13A 8'  |
| P2     | 09192-023 | 1   | EA  |       | CONN 4-PIN F 36" PIGTAIL MINI  |
| P2     | 09192-024 | 2   | EA  |       | CONN 4-PIN M 30FT STR MINI     |
| PBL1   | 09172-439 | 1   | EA  |       | BTTN PUSH ILLUM GREEN 24 VDC   |
| PBL2   | 09172-440 | 1   | EA  |       | BTTN PUSH/PULL MUSH ILLUM 24V  |
| PLC    | 09172-501 | 1   | EA  |       | PLC 1200 24 I/O 24VDC IN/RLY O |
| PWR1   | 09172-872 | 1   | EA  |       | PWR SUPP 30W 24VDC SLIM        |
| PX/PE  | 09172-211 | 2   | EA  |       | CONN F 4-PIN EURO DC 90° 12'   |
| PX/PE  | 09173-666 | 2   | EA  |       | CONN 5-PIN EURO F STRAIGHT 5M  |
| PX1-3  | 09172-515 | 3   | EA  |       | PROX DC 3WR SHLD12mm QD PNP SS |
| RECEPT | 09173-295 | 1   | EA  |       | RECEPT 110VAL 1 PIECE          |
| SW1    | 09170-426 | 1   | EA  |       | SWITCH SEL 2POS INO-INC BLK    |
| SW2-3  | 09171-528 | 2   | EA  |       | SWITCH SEL 3POS 2NO-NC MAINTD  |
| TERM   | 09173-775 | 3   | IN  |       | WIRE DUCT 2" DIN RAIL          |
| TERM   | 09174-010 | 40  | EA  |       | TERM CLAMP 2PORT 14-22AWG      |
| TERM   | 09174-011 | 2   | EA  |       | TERM CLAMP END PLATE ORANGE    |
| TERM   | 09174-012 | 5   | EA  |       | TERM CLAMP 4PORT 14-22AWG      |
| TERM   | 09174-013 | 1   | EA  |       | TERM CLAMP 4PORT END PLATE GRY |
| TERM   | 09174-014 | 2   | EA  |       | TERM CLAMP 4PORT GND           |
| TERM   | 09174-015 | 1   | EA  |       | TERM CLAMP JMPR 10 WAY         |
| TERM   | 09174-016 | 4   | EA  |       | TERM CLAMP DBL DECKR L/N       |
| TERM   | 09174-017 | 1   | EA  |       | TERM CLAMP DBL DECKR END PLATE |
| TERM   | 09174-018 | 1   | EA  |       | TERM CLAMP DBL DECK JMPR 10WAY |
| --     | 09192-517 | 6   | FT  |       | CONDUIT 3/4"                   |
| --     | 09192-521 | 2   | EA  |       | FTG CONDUIT 3/4"NPT STR        |
| --     | 09192-611 | 1   | EA  |       | NUT LOCK 3/8" CONDUIT STEEL    |
| --     | 09192-612 | 1   | EA  |       | RING SEALING 3/8" CONDUIT      |
| --     | 09192-934 | 1   | EA  |       | NUT LOCK 3/4" SEALING LIQUAT   |
| --     | 09193-510 | 1   | EA  |       | STRAIN RELIEF 3/8" (.197-.394) |
| --     | 09193-518 | 1   | EA  |       | STRAIN RELIEF 4-HOLE 3/4"      |



HINDS-BOCK CORPORATION  
2122- 222<sup>nd</sup> ST. S.E. Bothell, WA 98021

**ELECTRICAL ASSEMBLY**  
**5P-08 PORTABLE**  
**ED10289**

**NOTES:**

**A.** SEE

**SHEET 2 OF 3**

**ED10289-01 - SWIRLER ADD ON**

| ITEM # | PART #    | QTY | U/M | NOTES | DESCRIPTION                    |
|--------|-----------|-----|-----|-------|--------------------------------|
| CB9-10 | 09173-812 | 1   | EA  |       | CIRCUIT BRKR SUPP PROT 2P 5A   |
| COOLER | 09173-131 | 1   | EA  |       | VORTEX COOLER SYS 4X 1700BTU/H |
| COOLER | 09173-678 | 1   | EA  |       | VORTEX COOLER SIDE MOUNT 4X LG |
| ENCL   | 09170-390 | 1   | EA  |       | ENCL ELEC 6"x4"x4" SS          |
| ENCL   | 09171-083 | 1   | EA  |       | PANEL BACK 6"x4"               |
| ETH    | 09173-270 | 1   | EA  |       | NETWORK PATCH CABLE 5FT        |
| PX/PE  | 09173-666 | 2   | EA  |       | CONN 5-PIN EURO F STRAIGHT 5M  |
| PX1-2  | 09172-515 | 2   | EA  |       | PROX DC 3WR SHLD12mm QD PNP SS |
| SERVO  | 09173-079 | 1   | EA  |       | MPF 16 GUAGE POWER CABLE 9m    |
| SERVO  | 09173-082 | 1   | EA  |       | MPF FEEDBACK CABLE 9m          |
| SERVO  | 09173-945 | 1   | EA  |       | SERVO KINETIX 300 15PIN MALE   |
| SERVO  | 09174-004 | 1   | EA  |       | SERVO KINETIX 5A 120/240 800W  |
| SERVO  | 09174-020 | 1   | EA  |       | SERVO KINETX 300 BRKOUT CBL 6' |
| TS1    | 09173-701 | 1   | EA  |       | THERMOSTAT FAN CNTRL 120/240   |
| --     | 09173-372 | 1   | EA  |       | EUROFAST CORDSET 10m           |



HINDS-BOCK CORPORATION  
2122- 222<sup>nd</sup> ST. S.E. Bothell, WA 98021

**ELECTRICAL ASSEMBLY  
SWIRLER ADD-ON  
ED10289-01**

**NOTES:**

**A.** SEE

**SHEET 3 OF 3**



# MSDS



**CHEVRON GST OIL**



**McGlaughlin Petrol-Gel**



**HINDS-BOCK CORPORATION**  
**2122 – 222ND STREET S.E. | BOTHELL, WA 98021 | 425.885.1183**



## SECTION I - Material Identity

---

Item Name

Part Number/Trade Name CHEVRON GST OIL ISO 32, 46, 68, 100

National Stock Number 9150PCPS253026

CAGE Code OAADI

Part Number Indicator A

MSDS Number 194653

HAZ Code B

---

## SECTION II - Manufacturer's Information

---

Manufacturer Name CHEVRON TEXACO GLOBAL LUBRICANTS

P.O. Box 4054

Street 60001 BOLLINGER CANYON RD

City SAN RAMON

State CA

Country US

Zip Code 94583

Emergency Phone 415-457-2022;800-424-9300(CHEMTREC)

Information Phone 800-231-0623/ 510-231-0623/ 800-414

## MSDS Preparer's Information

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Date MSDS Prepared/Revised 05MAY04

Date of Technical Review 02JUN92

Active Indicator Y

## Alternate Vendors

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## SECTION III - Physical/Chemical Characteristics

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Hazard Storage Compatibility Code NR

NRC License Number NR

Net Propellant Weight (Ammo) NR

Appearance/Odor CLEAR TO YELLOW LIQUID

Boiling Point ND

Melting Point NA

Vapor Pressure 0.01

Vapor Density NA

Specific Gravity 0.87

Decomposition Temperature NR

Evaporation Rate NA

Solubility in Water SOLUBLE

|                             |    |
|-----------------------------|----|
| Percent Volatiles by Volume | NR |
| Chemical pH                 | NR |
| Corrosion Rate              | NR |
| Container Pressure Code     | 1  |
| Temperature Code            | 4  |
| Product State Code          | L  |

---

## SECTION IV - Fire and Explosion Hazard Data

---

|                                  |                                                                                                                                                                                                                                                                    |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flash Point                      | 374                                                                                                                                                                                                                                                                |
| Flash Point Method               | COC                                                                                                                                                                                                                                                                |
| Lower Explosion Limit            | NA                                                                                                                                                                                                                                                                 |
| Upper Explosion Limit            | NA                                                                                                                                                                                                                                                                 |
| Extinguishing Media              | CARBON DIOXIDE, DRY CHEMICAL, FOAM AND WATER FOG                                                                                                                                                                                                                   |
| Special Fire Fighting Procedures | THIS MATERIAL WILL BURN ALTHOUGH IT IS NOT EASILY IGNITED.<br>LEAKS/RUPTURES IN HIGH PRESSURE SYSTEMS USING MATERIALS OF THIS TYPE<br>CAN CREATE A FIRE HAZARD WHEN IN THE VICINITY OF IGNITION SOURCES (EG<br>OPEN FLAME, PILOT LIGHTS, SPARKS, OR ELECTRIC ARCS) |
| Unusual Fire/Explosion Hazards   | NORMAL COMBUSTION FORMS CARBON DIOXIDE AND WATER VAPOR;<br>INCOMPLETE COMBUSTION CAN PRODUCE CARBON MONOXIDE                                                                                                                                                       |

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## SECTION V - Reactivity Data

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|                                    |                                                                      |
|------------------------------------|----------------------------------------------------------------------|
| Stability                          | YES                                                                  |
| Stability Conditions to Avoid      | STABLE                                                               |
| Materials to Avoid                 | STRONG OXIDIZING AGENTS, SUCH AS CHLORATES, NITRATES, PEROXIDES, ETC |
| Hazardous Decomposition Products   | NO DATA AVAILABLE                                                    |
| Hazardous Polymerization           | NO                                                                   |
| Polymerization Conditions to Avoid | WILL NOT OCCUR                                                       |

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## SECTION VI - Health Hazard Data

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|                                      |                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Route of Entry: Skin                 | YES                                                                                                                                                                                                                                                                                                                                                                                  |
| Route of Entry: Ingestion            | YES                                                                                                                                                                                                                                                                                                                                                                                  |
| Route of Entry: Inhalation           | YES                                                                                                                                                                                                                                                                                                                                                                                  |
| Health Hazards - Acute and Chronic   | [EYES] IRRITATION [SKIN] IRRITATION. ACCIDENTAL HIGH VELOCITY<br>INJECTION UNDER THE SKIN OF MATERIALS OF THIS TYPE MAY RESULT IN<br>SERIOUS INJURY. SEEK MEDICAL ATTENTION. [INHAL] MAY CAUSE<br>RESPIRATORY IRRITATION OR OTHER PULMONARY EFFECTS FOLLOWING<br>PROLONGED OR REPEATED INHALATION OF OIL MIST AT AIRBORNE LEVELS<br>[INGEST] NOT EXPECTED TO BE HARMFUL IF SWALLOWED |
| Carcinogenicity: NTP                 | NO                                                                                                                                                                                                                                                                                                                                                                                   |
| Carcinogenicity: IARC                | NO                                                                                                                                                                                                                                                                                                                                                                                   |
| Carcinogenicity: OSHA                | NO                                                                                                                                                                                                                                                                                                                                                                                   |
| Explanation of Carcinogenicity       | "NONE OF THE OILS REQUIRES A CANCER WARNING UNDER THE OSHA<br>HAZARDOUS COMMUNICATION STANDARD (29 CFR 1910.1200)                                                                                                                                                                                                                                                                    |
| Symptoms of Overexposure             | SEE ABOVE                                                                                                                                                                                                                                                                                                                                                                            |
| Medical Cond. Aggravated by Exposure | NONE SPECIFIED BY MANUFACTURER                                                                                                                                                                                                                                                                                                                                                       |

|                                |                                                                                                                                                                                                                                                                                                          |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Emergency/First Aid Procedures | [EYES] FLUSH W/ WATER FOR 15 MINUTES [SKIN] WASH W/ SOAP AND WATER, REMOVE CONTAMINATED CLOTHING, LAUNDER BEFORE REUSE [INHAL] REMOVE TO FRESH AIR. GET MED ATTN IF COUGHING OR RESPIRATORY DISCOMFORT OCCURS. [INGEST] DRINK PLENTY OF WATER. GET MEDICAL ATTENTION IMMEDIATELY. DO NOT INDUCE VOMITING |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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## SECTION VII - Precautions for Safe Handling and Use

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|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Steps if Material Released/Spilled | STOP THE SOURCE OF THE LEAK OR RELEASE. CLEAN UP RELEASES AS SOON AS POSSIBLE OBSERVING PRECAUTIONS IN EXPOSURE CONTROLS/PERSONAL PROTECTION. CONTAIN LIQUID TO PREVENT FURTHER CONTAMINATION OF SOIL, SURFACE WATER OR GROUNDWATER. CLEAN UP SMALL SPILLS USING APPROPRIATE TECHNIQUES SUCH AS ABSORBENT MATERIALS OR PUMPING. WHERE FEASIBLE AND APPROPRIATE, REMOVE CONTAMINATED SOIL. FOLLOW PRESCRIBED PROCEDURES FOR REPORTING AND RESPONDING TO LARGER RELEASES |
| Neutralizing Agent                 | NONE SPECIFIED BY MANUFACTURER                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Waste Disposal Method              | DISPOSE IN ACCORDANCE WITH FEDERAL, STATE, LOCAL REGULATIONS                                                                                                                                                                                                                                                                                                                                                                                                           |
| Handling and Storage Precautions   | DO NOT WELD, HEAT OR DRILL CONTAINER. RESIDUE MAY IGNITE W/EXPLOSIVE VIOLENCE IF HEATED SUFFICIENTLY                                                                                                                                                                                                                                                                                                                                                                   |
| Other Precautions                  | CAUTION] DO NOT USE PRESSURE TO EMPTY DRUM OR EXPLOSION MAY RESULT. AVOID PROLONGED OR FREQUENTLY REPEATED SKIN CONTACT W/MATERIAL. READ ENTIRE MSDS AND LABEL BEFORE USING PRODUCT                                                                                                                                                                                                                                                                                    |

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## SECTION VIII - Control Measures

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|                                 |                                                                                                                                                                                                              |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Respiratory Protection          | NO SPECIAL RESPIRATORY PROTECTION NORMALLY REQUIRED. IF OPERATING CONDITIONS CREATE AIRBORNE CONCENTRATIONS WHICH EXCEED RECOMMENDED EXPOSURE STANDARDS, USE OF A NIOSH/MSHA APPROVED RESPIRATOR IS REQUIRED |
| Ventilation                     | USE ADEQUATE VENTILATION TO KEEP AIRBORNE CONCENTRATIONS OF MATERIAL BELOW RECOMMENDED EXPOSURE STANDARD                                                                                                     |
| Protective Gloves               | IMPERVIOUS GLOVES (FP N)                                                                                                                                                                                     |
| Eye Protection                  | CHEMICAL WORKERS GOGGLES                                                                                                                                                                                     |
| Other Protective Equipment      | SKIN CONTACT CAN BE MINIMIZED BY WEARING PROTECTIVE CLOTHING                                                                                                                                                 |
| Work Hygienic Practices         | NONE SPECIFIED BY MANUFACTURER                                                                                                                                                                               |
| Supplemental Health/Safety Data | SPILL PROC:TECHNIQUES SUCH AS SORBENT MATERIALS OR PUMPING. WHERE FEASIBLE AND APPROPRIATE, REMOVE CONTAMINATED SOIL. FOLLOW PRESCRIBED PROCEDURES FOR REPORTING AND RESPONDING TO LARGER RELEASES           |

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## SECTION IX - Label Data

---

|                     |         |
|---------------------|---------|
| Protect Eye         | YES     |
| Protect Skin        | YES     |
| Protect Respiratory | YES     |
| Chronic Indicator   | NO      |
| Contact Code        | SLIGHT  |
| Fire Code           | UNKNOWN |

|                                |                                               |
|--------------------------------|-----------------------------------------------|
| Health Code                    | UNKNOWN                                       |
| React Code                     | UNKNOWN                                       |
| Specific Hazard and Precaution | NO TARGET ORGANS LISTED FOR CHRONIC EXPOSURES |

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#### SECTION X - Transportation Data

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Container Quantity 5  
Unit of Measure GL

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#### SECTION XI - Site Specific/Reporting Information

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Volatile Organic Compounds (P/G) .1306  
Volatile Organic Compounds (G/L) 15.651

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#### SECTION XII - Ingredients/Identity Information

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Ingredient # 01  
Ingredient Name DISTILLATES, PETROLEUM, HYDROTREATED HEAVY PARAFFINIC  
CAS Number 64742547  
Percent 100

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# McGlaughlin Petrol-Gel

## Material Safety Data Sheet

HB# 09192-054

CITGO Petroleum Corporation  
P.O. Box 4689  
Houston, TX 77210

MSDS No. 665200175  
Revision Date 6/14/2010

IMPORTANT: This MSDS is prepared in accordance with 29 CFR 1910.1200. Read this MSDS before transporting, handling, storing or disposing of this product and forward this information to employees, customers and users of this product.

### Emergency Overview

**Physical State** Semi-solid to solid (Smooth and adhesive)  
**Color** White. **Odor** Odorless

#### WARNING:

Injection under the skin can cause severe injury.  
Most damage occurs in the first few hours.  
Initial symptoms may be minimal.  
Hot grease will cause thermal burns upon contact.  
Spills may create a slipping hazard.

### Hazard Rankings

|               | HMIS | NFPA |
|---------------|------|------|
| Health Hazard | 1    | 1    |
| Fire Hazard   | 1    | 1    |
| Reactivity    | 0    | 0    |

\* = Chronic Health Hazard

### Protective Equipment

Minimum Recommended  
See Section 8 for Details



## SECTION 1. PRODUCT IDENTIFICATION

|                |                                                        |                                            |                |
|----------------|--------------------------------------------------------|--------------------------------------------|----------------|
| Trade Name     | McGlaughlin Petrol-Gel                                 | Technical Contact                          | (800) 248-4684 |
| Product Number | 665200175                                              | Medical Emergency                          | (832) 486-4700 |
| CAS Number     | Mixture.                                               | CHEMTREC Emergency<br>(United States Only) | (800) 424-9300 |
| Product Family | Lubricating grease                                     |                                            |                |
| Synonyms       | Lubricating grease;<br>CITGO® Material Code: 665200175 |                                            |                |

## SECTION 2. COMPOSITION

| Component Name(s)       | CAS Registry No.    | Concentration (%) |
|-------------------------|---------------------|-------------------|
| White mineral oil       | 8042-47-5           | 60 - 100          |
| Aluminum Complex Soap   | 68647-58-5          | 7 - 13            |
| Polyisobutylene         | 9003-27-4           | 5 - 10            |
| Proprietary Ingredients | Proprietary Mixture | 1 - 5             |

## SECTION 3. HAZARDS IDENTIFICATION

Also see Emergency Overview and Hazard Ratings on the top of Page 1 of this MSDS.

Major Route(s) of Entry Skin contact.

### Signs and Symptoms of Acute Exposure

**Inhalation** No significant adverse health effects are expected to occur upon short-term exposure at ambient temperatures. At elevated temperatures, product vapor may cause respiratory tract irritation. Repeated or prolonged overexposure to product mists can result in respiratory tract inflammation and an increased risk of infection.

**Eye Contact** This product can cause transient mild eye irritation with short-term contact with liquid sprays or mists. Symptoms include stinging, watering, redness, and swelling.

## McGlaughlin Petrol-Gel

|                                          |                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Skin Contact</b>                      | This material can cause mild skin irritation from prolonged or repeated skin contact. Injection under the skin can cause inflammation and swelling. Injection of pressurized hydrocarbons can cause severe, permanent tissue damage. Initial symptoms may be minor. Injection of petroleum hydrocarbons requires immediate medical attention. Skin contact with hot material may result in severe burns. |
| <b>Ingestion</b>                         | This material can cause a laxative effect. If swallowed in large quantities, this material can obstruct the intestine.                                                                                                                                                                                                                                                                                   |
| <b>Chronic Health Effects Summary</b>    | This product contains a petroleum-based mineral oil. Prolonged or repeated skin contact can cause mild irritation and inflammation characterized by drying, cracking, (dermatitis) or oil acne. Repeated or prolonged inhalation of petroleum-based mineral oil mists at concentrations above applicable workplace exposure levels can cause respiratory irritation or other pulmonary effects.          |
| <b>Conditions Aggravated by Exposure</b> | Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin                                                                                                                                                                                                                                                       |
| <b>Target Organs</b>                     | May cause damage to the following organs: skin.                                                                                                                                                                                                                                                                                                                                                          |
| <b>Carcinogenic Potential</b>            | This product is not known to contain any components at concentrations above 0.1% which are considered carcinogenic by OSHA, IARC or NTP.                                                                                                                                                                                                                                                                 |

OSHA Hazard Classification is indicated by an "X" in the box adjacent to the hazard title. If no "X" is present, the product does not exhibit the hazard as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).

| OSHA Health Hazard Classification |                          |              |                          | OSHA Physical Hazard Classification |                          |                  |                          |                |                          |
|-----------------------------------|--------------------------|--------------|--------------------------|-------------------------------------|--------------------------|------------------|--------------------------|----------------|--------------------------|
| Irritant                          | <input type="checkbox"/> | Sensitizer   | <input type="checkbox"/> | Combustible                         | <input type="checkbox"/> | Explosive        | <input type="checkbox"/> | Pyrophoric     | <input type="checkbox"/> |
| Toxic                             | <input type="checkbox"/> | Highly Toxic | <input type="checkbox"/> | Flammable                           | <input type="checkbox"/> | Oxidizer         | <input type="checkbox"/> | Water-reactive | <input type="checkbox"/> |
| Corrosive                         | <input type="checkbox"/> | Carcinogenic | <input type="checkbox"/> | Compressed Gas                      | <input type="checkbox"/> | Organic Peroxide | <input type="checkbox"/> | Unstable       | <input type="checkbox"/> |

## SECTION 4. FIRST AID MEASURES

Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid. For more specific information, refer to Exposure Controls and Personal Protection in Section 8 of this MSDS.

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Vaporization is not expected at ambient temperatures. This material is not expected to cause inhalation-related disorders under anticipated conditions of use. In case of overexposure, move the person to fresh air.                                                                                                                                                                                                                                                                                                 |
| <b>Eye Contact</b>  | Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water while occasionally lifting and lowering eyelids. Seek medical attention if excessive tearing, redness, or pain persists.                                                                                                                                                                                                                                                                                                         |
| <b>Skin Contact</b> | If burned by hot material, cool skin by quenching with large amounts of cool water. For contact with product at ambient temperatures, remove contaminated shoes and clothing. Wipe off excess material. Wash exposed skin with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists. Thoroughly clean contaminated clothing before reuse. Clean or discard contaminated leather goods. If material is injected under the skin, seek medical attention immediately. |
| <b>Ingestion</b>    | Do not induce vomiting unless directed to by a physician. Rinse out mouth with water. Never give anything by mouth to a person who is not fully conscious. Allow small quantities to pass through the digestive system. If large amounts are swallowed or irritation or discomfort occurs, seek medical attention immediately.                                                                                                                                                                                        |

## McGlaughlin Petrol-Gel

### Notes to Physician

SKIN: In the event of injection in underlying tissue, immediate treatment should include extensive incision, debridement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal.

INGESTION: Check for possible bowel obstruction with ingestion of large quantities of material.

## SECTION 5. FIRE FIGHTING MEASURES

|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                             |                              |          |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------|
| <b>NFPA Flammability Classification</b> | NFPA Class-III B combustible material.                                                                                                                                                                                                                                                                                                                                                                                      |                              |          |
| <b>Flash Point</b>                      | Open cup: >150°C (>302°F) (Estimated).                                                                                                                                                                                                                                                                                                                                                                                      |                              |          |
| <b>Lower Flammable Limit</b>            | No data.                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Upper Flammable Limit</b> | No data. |
| <b>Autoignition Temperature</b>         | No data.                                                                                                                                                                                                                                                                                                                                                                                                                    |                              |          |
| <b>Hazardous Combustion Products</b>    | Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur, aluminum, phosphorus and/or nitrogen.                                                                                                                                                                                                                                                                                            |                              |          |
| <b>Special Properties</b>               | Fight the fire from a safe distance in a protected location. Open any masses with a water stream to prevent reignition due to smoldering. Cool surface with water fog. Molten material can form flaming droplets if ignited. Water or foam can cause frothing. Use of water on product above 100° C (212° F) can cause product to expand with explosive force. Do not allow liquid runoff to enter sewers or public waters. |                              |          |
| <b>Extinguishing Media</b>              | Use dry chemical, foam, carbon dioxide or water fog. Water or foam may cause frothing. Carbon dioxide and inert gas can displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces.                                                                                                                                                                                                          |                              |          |
| <b>Protection of Fire Fighters</b>      | Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.                                                                                                                                                                                                   |                              |          |

## SECTION 6. ACCIDENTAL RELEASE MEASURES

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Slipping hazard; do not walk through spilled material. Stop leak if you can do so without risk. For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal. Contain large spills to maximize product recovery or disposal. Prevent entry into waterways or sewers. In urban area, cleanup spill as soon as possible. In natural environments, seek cleanup advice from specialists to minimize physical habitat damage. This material will float on water. Absorbent pads and similar materials can be used. Comply with all laws and regulations.

## SECTION 7. HANDLING AND STORAGE

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handling</b> | If this product is stored or applied in high-pressure systems such as grease guns or hydraulic lines, there is the potential for accidental injection into the skin and underlying tissues. Hydrocarbons injected into skin or underlying tissues are not readily removed by body fluids and can cause pain, swelling, chemical irritation, infection and tissue destruction. Early symptoms may be minimal. Workers must be aware of the significant hazards associated with a hydrocarbon injection injury. In the event of an injection injury, workers should seek medical treatment immediately. Avoid water contamination and elevated temperatures to minimize product degradation. Empty containers may contain product residues that can ignite |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## McGlaughlin Petrol-Gel

with explosive force. Do not pressurize, cut, weld, braze solder, drill, grind or expose containers to flames, sparks, heat or other potential ignition sources. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

### Storage

Keep container tightly closed. Store in a cool, dry, well-ventilated area. Store only in approved containers. Do not store with strong oxidizing agents. Do not store at elevated temperatures. Avoid storing product in direct sunlight for extended periods of time. Storage area must meet OSHA requirements and applicable fire codes. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers or waste residues of this product.

## SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Engineering Controls** Ventilation controls are not normally required under anticipated conditions of use. Provide exhaust ventilation or other engineering controls if airborne mists or vapors concentrations exceed recommended occupational exposure limits listed below. An eye wash station and safety shower should be located near the work-station.

**Personal Protective Equipment** Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required.



**Eye Protection** Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Wear goggles if splashing or spraying is anticipated. Wear goggles and face shield if material is heated above 125°F (51°C). Have suitable eye wash water available.

**Hand Protection** None required for incidental contact. Use gloves constructed of chemical resistant materials such as heavy nitrile rubber if frequent or prolonged contact is expected. Use heat-protective gloves when handling product at elevated temperatures.

**Body Protection** Use clean protective clothing if splashing or spraying conditions are present. Protective clothing may include long-sleeve outer garment, apron, or lab coat. If significant contact occurs, remove oil-contaminated clothing as soon as possible and promptly shower. Launder contaminated clothing before reuse or discard. Wear heat protective boots and protective clothing when handling material at elevated temperatures.

**Respiratory Protection** The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).

**General Comments** Use good personal hygiene practices. Wash hands and other exposed skin areas with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities, or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners. Since specific exposure standards/control limits have not been established for this product, the "Oil Mist, Mineral" exposure limits shown below are suggested as minimum control guidelines.

### Occupational Exposure Guidelines

#### Substance

#### Applicable Workplace Exposure Levels

## McGlaughlin Petrol-Gel

Oil Mist, Mineral

ACGIH (United States).

TWA: 5 mg/m<sup>3</sup>

STEL: 10 mg/m<sup>3</sup>

OSHA (United States).

TWA: 5 mg/m<sup>3</sup>

Stearates

ACGIH TLV (United States).

TWA: 10 mg/m<sup>3</sup> 8 hour(s).

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

|                          |                                                                         |       |                |                           |                        |
|--------------------------|-------------------------------------------------------------------------|-------|----------------|---------------------------|------------------------|
| Physical State           | Semi-solid to solid<br>(Smooth and<br>adhesive)                         | Color | White.         | Odor                      | Odorless               |
| Specific Gravity         | <1 (Water = 1)                                                          | pH    | Not applicable | Vapor<br>Density          | >10 (Air = 1)          |
| Boiling Range            | Not applicable.                                                         |       |                | Melting/Freezing<br>Point | Not available.         |
| Vapor Pressure           | <0.001 kPa (<0.01 mm Hg) (at 20°C)                                      |       |                | Volatility                | Negligible volatility. |
| Solubility in<br>Water   | Negligible solubility in cold water.                                    |       |                | Viscosity<br>(cSt @ 40°C) | Not available.         |
| Flash Point              | Open cup: >150°C (>302°F) (Estimated).                                  |       |                |                           |                        |
| Additional<br>Properties | NLGI Grade: 1.5<br>Thickener: Aluminum.<br>Texture: Smooth and adhesive |       |                |                           |                        |

## SECTION 10. STABILITY AND REACTIVITY

|                                        |                                                                                                                                         |                          |                        |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------|
| Chemical Stability                     | Stable.                                                                                                                                 | Hazardous Polymerization | Not expected to occur. |
| Conditions to Avoid                    | Keep away from extreme heat, sparks, open flame, and strongly oxidizing conditions.                                                     |                          |                        |
| Materials<br>Incompatibility           | Strong oxidizers.                                                                                                                       |                          |                        |
| Hazardous<br>Decomposition<br>Products | No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this MSDS. |                          |                        |

## SECTION 11. TOXICOLOGICAL INFORMATION

For other health-related information, refer to the Emergency Overview on Page 1 and the Hazards Identification in Section 3 of this MSDS.

|               |                                             |
|---------------|---------------------------------------------|
| Toxicity Data | White mineral oil                           |
|               | ORAL (LD50): Acute: >5000 mg/kg [Rat].      |
|               | DERMAL (LD50): Acute: >2000 mg/kg [Rabbit]. |

Low-viscosity and High-viscosity White Mineral Oils:

DRAIZE EYE, Acute: Non-irritating [Rabbit].

DRAIZE DERMAL, Acute: Non-irritating [Rabbit].

BUEHLER, Acute: Non-sensitizing [Guinea Pig].

28-Day DERMAL, Sub-Chronic: Non-irritating [Rabbit].

104-Week DERMAL, Chronic: No skin tumors at site of application [Mouse].

MUTAGENICITY:

Modified Ames Assay: Negative [Salmonella typhimurium].

in-vitro Lymphoma Assay: Negative or no toxicity [Mouse].

## McGlaughlin Petrol-Gel

Lifetime mouse skin painting studies indicated that white mineral oils are not mutagenic or carcinogenic. Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested.

### **Grease:**

Injection of pressurized hydrocarbons under the skin, in muscle or into the blood stream can cause irritation, inflammation, swelling, fever and mild central nervous system depression. Injection of pressurized hydrocarbons can cause severe, permanent tissue damage.

## SECTION 12. ECOLOGICAL INFORMATION

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ecotoxicity</b>        | Ecotoxicity data are not available for this product.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Environmental Fate</b> | An environmental fate analysis is not available for this specific product. Plants and animals may experience harmful or fatal effects when coated with petroleum products. Petroleum-based (mineral) lubricating oils normally will float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway may be sufficient to cause a fish kill or create an anaerobic environment. |

## SECTION 13. DISPOSAL CONSIDERATIONS

Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

Conditions of use may cause this material to become a "hazardous waste", as defined by federal or state regulations. It is the responsibility of the user to determine if the material is a "hazardous waste" at the time of disposal. Transportation, treatment, storage, and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR 260 through 40 CFR 271). State and/or local regulations may be more restrictive. Contact your regional US EPA office for guidance concerning case specific disposal issues. Empty drums and pails retain residue. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose this product's empty container to heat, flame, or other ignition sources. DO NOT attempt to clean it. Empty drums and pails should be drained completely, properly bunged or sealed, and promptly sent to a reconditioner.

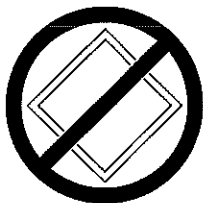
## SECTION 14. TRANSPORT INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.

|                             |                                                                                 |                      |                 |
|-----------------------------|---------------------------------------------------------------------------------|----------------------|-----------------|
| <b>US DOT Status</b>        | Not regulated by the U.S. Department of Transportation as a hazardous material. |                      |                 |
| <b>Proper Shipping Name</b> | Not regulated.                                                                  |                      |                 |
| <b>Hazard Class</b>         | Not regulated.                                                                  | <b>Packing Group</b> | Not applicable. |
|                             |                                                                                 | <b>UN/NA Number</b>  | Not regulated.  |
| <b>Reportable Quantity</b>  | A Reportable Quantity (RQ) has not been established for this material.          |                      |                 |

## McGlaughlin Petrol-Gel

### Placard(s)



### Emergency Response Guide No.

Not applicable.

### MARPOL III Status

Not a DOT "Marine  
Pollutant" per 49 CFR  
171.8.

**Oil:** The product(s) represented by this MSDS is (are) regulated as "oil" under 49 CFR Part 130. Shipments by rail or highway in packaging having a capacity of 3500 gallons or more or in a quantity greater 42,000 gallons are subject to these requirements. In addition, mixtures containing 10% or more of this product may be subject to these requirements.

## SECTION 15. REGULATORY INFORMATION

|                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>TSCA Inventory</b>                                                     | This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>SARA 302/304<br/>Emergency Planning<br/>and Notification</b>           | The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.                                                                                                                                                                                                                                                                                                                                                                            |
| <b>SARA 311/312 Hazard<br/>Identification</b>                             | <p>The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories:</p> <p>No SARA 311/312 hazard categories identified.</p>                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>SARA 313 Toxic<br/>Chemical Notification<br/>and Release Reporting</b> | This product contains the following components in concentrations above <i>de minimis</i> levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA: No components were identified.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>CERCLA</b>                                                             | The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. This product or refinery stream is not known to contain chemical substances subject to this statute. However, it is recommended that you contact state and local authorities to determine if there are any other reporting requirements in the event of a spill. |
| <b>Clean Water Act<br/>(CWA)</b>                                          | This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>California<br/>Proposition 65</b>                                      | This product is not known to contain any components for which the State of California has found to cause cancer, birth defects or other reproductive harm.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>New Jersey<br/>Right-to-Know Label</b>                                 | Petroleum Oil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Additional Remarks</b>                                                 | No additional regulatory remarks.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## McGlaughlin Petrol-Gel

### SECTION 16. OTHER INFORMATION

Refer to the top of Page 1 for the HMIS and NFPA Hazard Ratings for this product.

#### REVISION INFORMATION

Version Number 3.2  
Revision Date 6/14/2010

#### ABBREVIATIONS

|                    |             |                     |              |
|--------------------|-------------|---------------------|--------------|
| AP: Approximately  | EQ: Equal   | >: Greater Than     | <: Less Than |
| NA: Not Applicable | ND: No Data | NE: Not Established |              |

ACGIH: American Conference of Governmental Industrial Hygienists  
AIHA: American Industrial Hygiene Association  
IARC: International Agency for Research on Cancer  
NIOSH: National Institute of Occupational Safety and Health  
NPCA: National Paint and Coating Manufacturers Association  
EPA: US Environmental Protection Agency  
HMIS: Hazardous Materials Information System  
OSHA: Occupational Safety and Health Administration  
NTP: National Toxicology Program  
NFPA: National Fire Protection Association

#### DISCLAIMER OF LIABILITY

THE INFORMATION IN THIS MSDS WAS OBTAINED FROM SOURCES WHICH WE BELIEVE ARE RELIABLE. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESSED OR IMPLIED REGARDING ITS CORRECTNESS. SOME INFORMATION PRESENTED AND CONCLUSIONS DRAWN HEREIN ARE FROM SOURCES OTHER THAN DIRECT TEST DATA ON THE SUBSTANCE ITSELF. THIS MSDS WAS PREPARED AND IS TO BE USED ONLY FOR THIS PRODUCT. IF THE PRODUCT IS USED AS A COMPONENT IN ANOTHER PRODUCT, THIS MSDS INFORMATION MAY NOT BE APPLICABLE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION OR PRODUCTS FOR THEIR PARTICULAR PURPOSE.

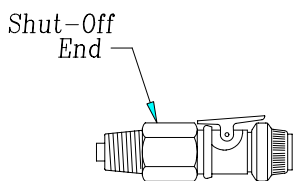
THE CONDITIONS OR METHODS OF HANDLING, STORAGE, USE, AND DISPOSAL OF THE PRODUCT ARE BEYOND OUR CONTROL AND MAY BE BEYOND OUR KNOWLEDGE. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.

\*\*\*\*\* END OF MSDS \*\*\*\*\*



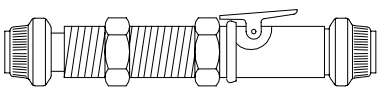
**HINDS-BOCK CORPORATION**  
**MISCELLANEOUS AIR FITTINGS**  
**"QUICK DISCONNECT" TYPE**

**SINGLE END SHUT-OFF**



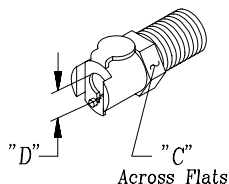
| PART #    | TUBE | PIPE THD.     | MODEL         |
|-----------|------|---------------|---------------|
| 09192-048 | 1/4  | 1/4           | 398P-4-4-BRSS |
| 09192-049 | 1/4  | 1/8           | 398P-4-2-CHRM |
| 09192-181 | 3/8  | 1/4           | 398P-6-4-CHRM |
| 09192-222 | 1/4  | 1/8 (Dbl s-o) | 398PD-4-2     |

**DOUBLE END SHUT-OFF**  
**Panel Mount**



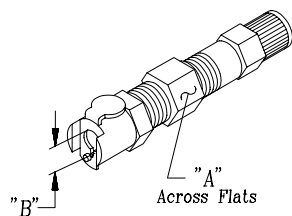
| PART #    | TUBE | THD      | MODEL          |
|-----------|------|----------|----------------|
| 09192-182 | 1/4  | 1/2-24   | 394PD-4-4 CHRM |
| 09192-183 | 3/8  | 11/16-24 | 398PD-6-6 CHRM |

**COUPLING BODIES**  
**Male pipe thread w/ shut-off**



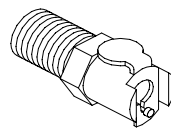
| PART #    | THD | HEX | C              | D    | MODEL      |
|-----------|-----|-----|----------------|------|------------|
| 09192-037 | 1/8 | 5/8 | 5/16           | 5/16 | MCD 10-02  |
| 09192-043 | 1/4 | 3/4 | 7/16           | 7/16 | LCD 100-04 |
| 09192-045 | 3/8 | 3/4 | 7/16           | 7/16 | LCD 100-06 |
| 09192-108 | 1/4 | 5/8 | 5/16           | 5/16 | MCD 10-04  |
| 09192-221 | 1/8 | 5/8 | 5/16(Str Thru) | 5/16 | MC 10-02   |

**COUPLING BODIES**  
**Panel Mount, Male Pipe Thread W/ Shut-Off**



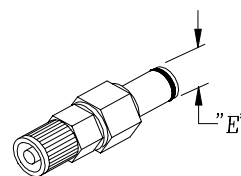
| PART #    | TUBE O.D. | HEX A | B    | FLOW | MODEL          |
|-----------|-----------|-------|------|------|----------------|
| 09192-115 | 3/8       | 3/4   | 7/16 | 1/4  | LCD 12-06      |
| 09192-119 | 1/4       | 5/8   | 5/16 | 1/4  | MCD 12-06      |
| 09192-184 | 3/8       | Poly  | Poly | 1/4  | PLCD 120-06-12 |

**KEYED COUPLING BODIES**  
**Male pipe thread w/ shut-off**



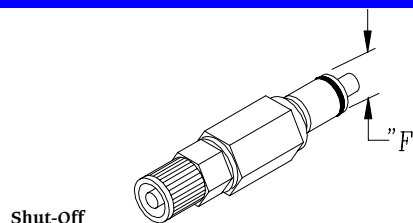
| PART #    | THD | COLOR  | MODEL        |
|-----------|-----|--------|--------------|
| 09192-175 | 1/8 | Orange | MCD-10-02 K1 |
| 09192-176 | 1/8 | Yellow | MCD-10-02 K2 |
| 09192-178 | 1/8 | Blue   | MCD-10-02 K3 |

**COUPLING INSERTS**  
**Straight through**



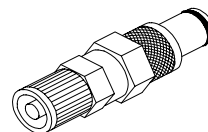
| PART #    | TUBE O.D. | E    | FLOW | MODEL     |
|-----------|-----------|------|------|-----------|
| 09192-038 | 1/4       | 5/16 | 1/8  | MC 20-04  |
| 09192-044 | 1/4       | 7/16 | 1/4  | LC 200-04 |
| 09192-046 | 3/8       | 7/16 | 1/4  | LC 200-06 |
| 09192-109 | 3/8       | 5/16 | 1/8  | MC 20-06  |
| 09192-171 | 5/32      | 5/16 | 1/8  | MC 20-025 |

**COUPLING INSERTS**



| PART #    | TUBE | F    | FLOW | MODEL         |
|-----------|------|------|------|---------------|
| 09192-116 | 3/8  | 7/16 | 1/4  | LCD 200-06    |
| 09192-122 | 1/4  | 7/16 | 1/4  | LCD 200-04    |
| 09192-185 | 3/8  | Poly | 1/4  | LCD 200-06-12 |
| 09192-232 | 1/4  | 5/16 | 1/8  | LCD 20-04     |

**KEYED COUPLING INSERTS**  
**Straight through**

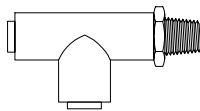


| PART #    | TUBE | COLOR  | MODEL       |
|-----------|------|--------|-------------|
| 09192-172 | 1/4  | Orange | MC 20-04 K1 |
| 09192-173 | 1/4  | Yellow | MC 20-04 K2 |
| 09192-174 | 1/4  | Blue   | MC 20-04 K3 |
| 09192-923 | 1/8  | Orange | MC 24-01 K1 |
| 09192-924 | 1/8  | Yellow | MC 24-01 K2 |
| 09192-925 | 1/8  | Blue   | MC 24-01 K3 |



**HINDS-BOCK CORPORATION**  
**MISCELLANEOUS TUBE FITTINGS**  
**"NICKEL PLATED BRASS" TYPE**

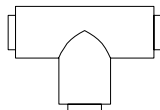
### Male Run Tee



**Tube to Tube to Male NPT**

| PART #    | Tube   | NPT |
|-----------|--------|-----|
| 09192-062 | 5/32 x | 1/8 |
| 09192-063 | 1/4 x  | 1/8 |
| 09192-064 | 1/4 x  | 1/4 |
| 09192-065 | 3/8 x  | 3/8 |
| 09192-066 | 3/8 x  | 1/2 |
| 09192-067 | 1/2 x  | 1/2 |

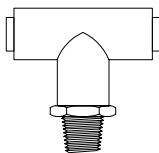
### Union Tee



**Tube to Tube To Tube**

| PART #    | Tube |
|-----------|------|
| 09192-068 | 5/32 |
| 09192-069 | 1/4  |
| 09192-070 | 3/8  |
| 09192-071 | 1/2  |

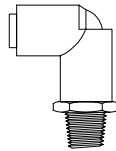
### Male Branch Tee



**Tube to Male NPT**

| PART #    | Tube   | NPT |
|-----------|--------|-----|
| 09192-072 | 5/32 x | 1/8 |
| 09192-073 | 1/4 x  | 1/8 |
| 09192-074 | 1/4 x  | 1/4 |
| 09192-075 | 3/8 x  | 1/4 |
| 09192-076 | 3/8 x  | 3/8 |
| 09192-077 | 1/2 x  | 1/2 |

### Male Elbow



**Tube to Male NPT**

| PART #    | Tube   | NPT   |
|-----------|--------|-------|
| 09192-303 | 5/32 x | 10-32 |
| 09192-078 | 5/32 x | 1/8   |
| 09192-079 | 5/32 x | 1/4   |
| 09192-007 | 1/4 x  | 1/8   |
| 09192-009 | 1/4 x  | 1/4   |
| 09192-080 | 1/4 x  | 3/8   |
| 09192-008 | 3/8 x  | 1/4   |
| 09192-081 | 3/8 x  | 3/8   |
| 09192-082 | 1/2 x  | 3/8   |
| 09192-083 | 1/2 x  | 1/2   |

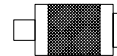
### Hex Head and Socket Male Connector



**Tube to Male NPT to Tube**

| PART #    | Tube   | NPT |
|-----------|--------|-----|
| 09192-084 | 5/32 x | 1/8 |
| 09192-085 | 5/32 x | 1/4 |
| 09192-086 | 1/4 x  | 1/8 |
| 09192-010 | 1/4 x  | 1/4 |
| 09192-087 | 1/4 x  | 3/8 |
| 09192-088 | 3/8 x  | 1/4 |
| 09192-089 | 3/8 x  | 3/8 |
| 09192-090 | 3/8 x  | 1/2 |
| 09192-091 | 1/2 x  | 1/4 |
| 09192-092 | 1/2 x  | 3/8 |
| 09192-093 | 1/2 x  | 1/2 |

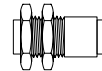
### 10-32 Male Connector (Seals or "O"Ring)



**Tube to Male UNF**

| PART #    | Tube   | NPT   |
|-----------|--------|-------|
| 09192-059 | 5/32 x | 10/32 |

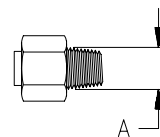
### Bulkhead Union



**Tube to Tube**

| PART #    | Tube |
|-----------|------|
| 09192-094 | 5/32 |
| 09192-095 | 3/16 |
| 09192-100 | 1/4  |

### Note:



"A" is equal to outside diameter of threads

| NPT   | A    |
|-------|------|
| 10-32 | 3/16 |
| 1/8   | 3/8  |
| 1/4   | 1/2  |
| 3/8   | 5/8  |
| 1/2   | 3/4  |



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