



Super 450 & 800

Care and Use Instructions



Serial Number _____

Date Manufactured _____

TEEMARK MANUFACTURING WARRANTY – TERMS OF SALE

Only the following conditions apply and shall be binding on the Seller regardless of any conditions contained in your inquiry or order. If the conditions stated herein are in any way unacceptable to you, please notify us at once; otherwise the following conditions will become the only conditions applicable to this transaction regardless of any conflicting terms or conditions contained in your inquiry or order.

1. **CONTRACT.** No order or quotation is binding on Seller and no contract is formed until Seller's formal acknowledgement of the order on Seller's own form is sent to Buyer. Any special terms or conditions noted on the face of Seller's quotation on which this order is based is incorporated herein by reference and made a part hereof as though specifically set forth herein.
2. **DELIVERY.** Without prejudice to any of Buyer's other rights hereunder, title and risk of loss shall fall to buyer on delivery of goods hereunder by Seller to carrier regardless of who bears the cost of freight. Seller shall not be liable for any delays in or failures of delivery due to acts of God or public authority, labor disturbances, accidents, fires, floods, extreme weather conditions, failure of and delays by carriers, shortages of materials, delays of a supplier due to causes beyond its control, or any other causes beyond the control of the Seller. Seller shall notify Buyer of any such delays as soon as it becomes apparent. In no event shall Seller be liable for consequential or special damage arising out of a delay in or failure of delivery.
3. **LIMITED WARRANTIES.** All goods sold hereunder are warranted to be free from defects in material and workmanship and/or to conform to applicable specifications, drawings, blueprints and/or samples. Seller's sole obligation under these warranties shall be to issue credit, repair or replace any item or part thereof which is proved to be other than as warranted. Seller shall have the sole right to determine whether such parts shall be repaired or replaced or whether credit shall be issued. No allowances shall be made for any labor charges of Buyer for replacement of parts, adjustments or repairs, or any other work unless advance, written authorization for such charges is given by Seller. In no event shall Seller be liable for collateral, consequential or contingent damages. If goods are claimed to be other than as warranted, Seller, upon notice promptly given, will either examine the goods at the Buyer's site or issue shipping instructions for return to Seller (transportation costs prepaid by Buyer), and if any goods are proved to be other than warranted, transportation costs (cheapest way) to and from Seller's plant will be borne by Seller and reimbursement or credit will be made for amounts so expended by Buyer. Every such claim for breach of the warranties herein contained shall be deemed to be Waived by the Buyer unless made in writing within 90 DAYS from the date of shipment of the goods to which such claims relates. These warranties shall not extend to any goods or parts thereof which have been subjected to misuse or neglect, damaged by accident, rendered defective by reason of improper installation or used for other than the express purpose for which it was designed and built, or by the performance of repairs or alterations outside of Seller's plant, except when performed under seller's specific authority. These warranties shall not apply to any goods or parts thereof furnished by Buyer or acquired from others at Buyer's request and/or to Buyer's specifications. In no event shall the Seller be liable for contingent or consequential damages. **This warranty is in lieu of all other warranties.**
4. **CHANGES IN SPECIFICATIONS OR DESIGN.** Should Buyer request that changes be made in the specifications or design relating to any goods, delivery dates and schedules shall be revised accordingly, if necessary, and an equitable adjustment, upward or downward, be made in price so far as warranted.
5. **TERMINATION, REDUCTION IN QUANTITY, RESCHEDULING DELIVERY.** In the event Buyer desires to terminate any part or all of the work to be done hereunder, reduce the quantity of goods ordered, or reschedule the delivery of any goods, fair compensation shall be made to the Seller. Seller shall recover without duplication the contract price for articles which have been completed, the actual costs incurred by Seller which are properly allocable or apportionable under recognized commercial accounting practices to terminated work (including cost of discharging liabilities) plus a reasonable profit, the increased cost incurred by Seller by reason of a revision in the delivery schedule.

6. **BUYER'S PROPERTY.** Any patterns, equipment or materials furnished by Buyer shall be used only in the production of goods ordered by Buyer and not otherwise, unless by Buyer's written consent. Seller agrees to exercise reasonable care with respect to such property while in its possession and control, but shall not be responsible for loss or damage occurring without its fault or negligence or for ordinary wear and tear. When, for two (2) consecutive years, no orders are received from the Buyer for a particular product, any tooling or equipment, whether owned by Buyer or Seller, required for producing such product, as well as any inventory of such product, may be destroyed by seller without notice to buyer or liability to Seller.
7. **PATENT INFRINGEMENT.** Seller shall defend and save harmless the Buyer from any claim that any product or article sold to the Buyer hereunder in and of itself infringes any United States letters patent by reason of its sale provided Seller is notified in writing within ten (10) days after such claim is made against the buyer and provided further that seller is permitted to defend the same in Buyer's name if action brought. If the product or articles sold to the buyer hereunder is manufactured by the Seller according to a design or specification furnished by the Buyer, the Buyer will defend and save harmless the Seller from any claim of infringement of any letters patent.
8. **PATENT AND DATA RIGHTS.** Seller will comply with all applicable federal, state and local laws, provided however, that the Seller will not be bound by Armed Services Procurement Regulation 9-202, Rights in Data: Defense procurement Circular #24, or any other regulation requiring the Seller to provide Technical data, either limited or unlimited, to any representative of the federal government or agency thereof, unless affirmatively and specifically agreed to in writing by the Seller.
9. **PROPRIETARY DESIGN.** Unless the design for the goods shall have been furnished by the Buyer to the Seller and used by the Seller in manufacturing the goods, the design of the products supplied to the Buyer are proprietary. The Buyer agrees not to reproduce these products or their design for his own use or for resale, except where necessary for maintenance of said goods.
10. **BUYER SPECIFIED SOURCES.** Where Buyer supplies parts and/or materials to be used in connection with the work to be performed and materials to be furnished by the Seller, subcontract work of any kind is performed for Seller by a source specified or selected by Buyer, Buyer assumes, and Seller is correspondingly relieved from all responsibility where the merchandise supplied by Seller is other than as warranted and where the reason therefore is due to the work performed by the source so specified or selected by Buyer or parts supplied by Buyer. Buyer further agrees that in such instances Buyer will defend, at no cost to Seller, every suit which shall be brought against Seller by reason of the defects in such parts supplied by Buyer or operations so subcontracted at Buyer's request.
11. **TAXES.** Sales and use taxes, payable by Buyer, which are presently or may hereafter be imposed by any taxing authority, are not included in the sales price; any direct or excise tax, payable by Seller, which may hereafter be imposed by any taxing authority, upon the manufacture, sale or delivery of products covered by this order, or any increase in rate of any such tax now in force, shall be added to the sale price. If not collected at time of payment of sale price, Buyer will hold Seller harmless.
12. **APPLICABLE LAW.** This contract shall be governed by the law of the State of Minnesota. The invalidity of any one clause or portion of this contract shall have no effect on the validity of any other section or portion thereof. Failure at any time of Seller to enforce any provision of this contract, or to exercise an option hereunder, or to require performance by Buyer of an provision hereof, shall in no way be construed as a waiver nor in any way affect the right of Seller to thereafter enforce each and every provision. A waiver by Seller of a term or condition hereof shall not be deemed a waiver of any other term or condition hereof or as a future waiver thereof. Sites of the contract shall be deemed Seller's corporate offices.
13. **PREVAILING TERMS.** Seller's standard terms of sale shall supplement and compliment Buyer's terms and conditions of sale, and both shall form the contract. However, if there is a conflict on content, interpretation, construction, or on any other points, between Buyer's and Seller's terms and conditions of sale, Seller hereby expressly rejects such conflicting terms and/or conditions of Buyer, and Seller's terms and conditions shall prevail and Buyer's acceptance of Seller's terms and conditions as set forth herein.

WARNING

EXPLOSION HAZARD

All TeeMark explosions proof can and drum crushers are manufactured in accordance with the National Electrical Code for **Class 1, Group D** hazardous locations.

It is the responsibility of the end user to properly install and operate the crusher in compliance with all local and national electrical codes for hazardous locations.

THIS MEANS

All sources of ignition must be a safe distance away from the crusher while it is being operated. (As determined by your insurance underwriter)

Sources of ignition include:

1. All forklift trucks. Propane, gas and electric powered.
2. All air compressors
3. Any motor control equipment not rated for hazardous locations (class 1, group D)
4. Any electrical equipment such as radios, tape players, etc.

Congratulations on choosing a TeeMark Super 450/800 Aerosol Crusher.

The Super 450/800 is designed to process all types of aerosol cans. The liquid contents of the cans are collected in a 55 gallon pail directly under the machine. The propellants and VOC's are collected and vented by means of a centrifugal blower system.

Your crusher has been thoroughly tested before leaving the factory.

SAFETY FEATURES

The Super 450/800 is equipped with a safety interlock system that is linked to the crushing chamber door. The interlock system prevents operator injury by stopping all functions of the machine in the event that the crushing chamber door is opened during the crushing process. In addition the blower motor and the hydraulic motor are electrically interlocked to prevent operation of the hydraulic motor without first starting the blower motor, and also to shut down the crusher motor in the event of a blower motor failure.

AIR HANDLING SYSTEM FEATURES

The Super 450/800 is designed to vent VOCs and propellant from the crushing chamber and the collection drum. A 24x24 bag filter (part #P04-0045) housed within the filtration cabinet filters particulates from the air stream. A pressure drop indicator (manometer) is provided to monitor filter condition. Filter should be changed when indicator rises to 0.10 gauge reading on the manometer. A centrifugal pressure blower will provide up to 500 cfm of particulate free air to be handled in accordance with local regulations.

ELECTRICAL CONNECTION

The explosion proof motors, motor controls, and connections on your crusher are UL listed and CSA certified for Class 1, Group D, Hazardous locations. It is up to the purchaser to have the final connections made by a licensed electrical contractor in compliance with the appropriate local and national electrical codes.

Super 450

Crusher Motor - Single Phase

1-1/2 hp, 115/230 volt, 16/8 FLA (full load amps) 60 Hz

Crusher Motor - Three Phase

1-1/2 hp, 230/460 volt, 5/2.5 FLA, 60Hz

Blower Motor – Single Phase

1 hp, 115/230 volt, 12/6 FLA, 60 Hz

Blower Motor – Three Phase

1 hp, 230/460 volt, 3.6/1.8 FLA, 60 Hz

Super 800

Crusher Motor

5 hp, 230/460 volt, 13/6.5 FLA, 60 Hz

Blower Motor

1 hp, 230/460 volt, 3.6/1.8 FLA, 60 Hz

(the motors stated above are the standards and you may have a different hp, volts, hertz, or phase)

CARBON FILTER PACKAGE

The optional Carbon Filtration Package consists of a 55 gallon carbon filter drum and is connected to the machine blower by a 4" flexible duct.

The air coming off the Carbon Filter Drum must be vented either to an exhaust system or vented out of the building.

SUPER 450/800 ASSEMBLY INSTRUCTIONS

Tools required are two (2) 9/16 inch wrenches, two (2) ½ inch wrenches, one 7-16 inch wrench, level, hammer, pry bar, alignment punch, small clevis, short chain or lifting sling, and a fork lift or overhead crane. The machine weighs approximately 2300 pounds.

You will need approximately 8 feet of overhead clearance (more if using a forklift) to place the machine on the stand.

Dismantle crate and remove all the bolts fastening the machine and its components to the crate.

Remove the stand from the crate and position the stand in your desired location leaving ample room around the machine to maneuver the drum jack and drum. Your stand is equipped with leveling bolts; level the stand before continuing. Check your stand height for clearance; if a drum will not fit under the stand, the leveling bolts may be used to raise the stand. It is recommended that the stand be anchored to the floor using the holes provided in the pads on the legs. These anchor bolts should be 3/8 or ½ inch by 4-1/2 inch long.

Using the clevis and chain, attach them to the lift eye. Pick up the machine and lower it on to the stand with the door facing the front of the stand. Secure the machine to the stand using the 3/8-16 x 1-1/4 bolts provided.

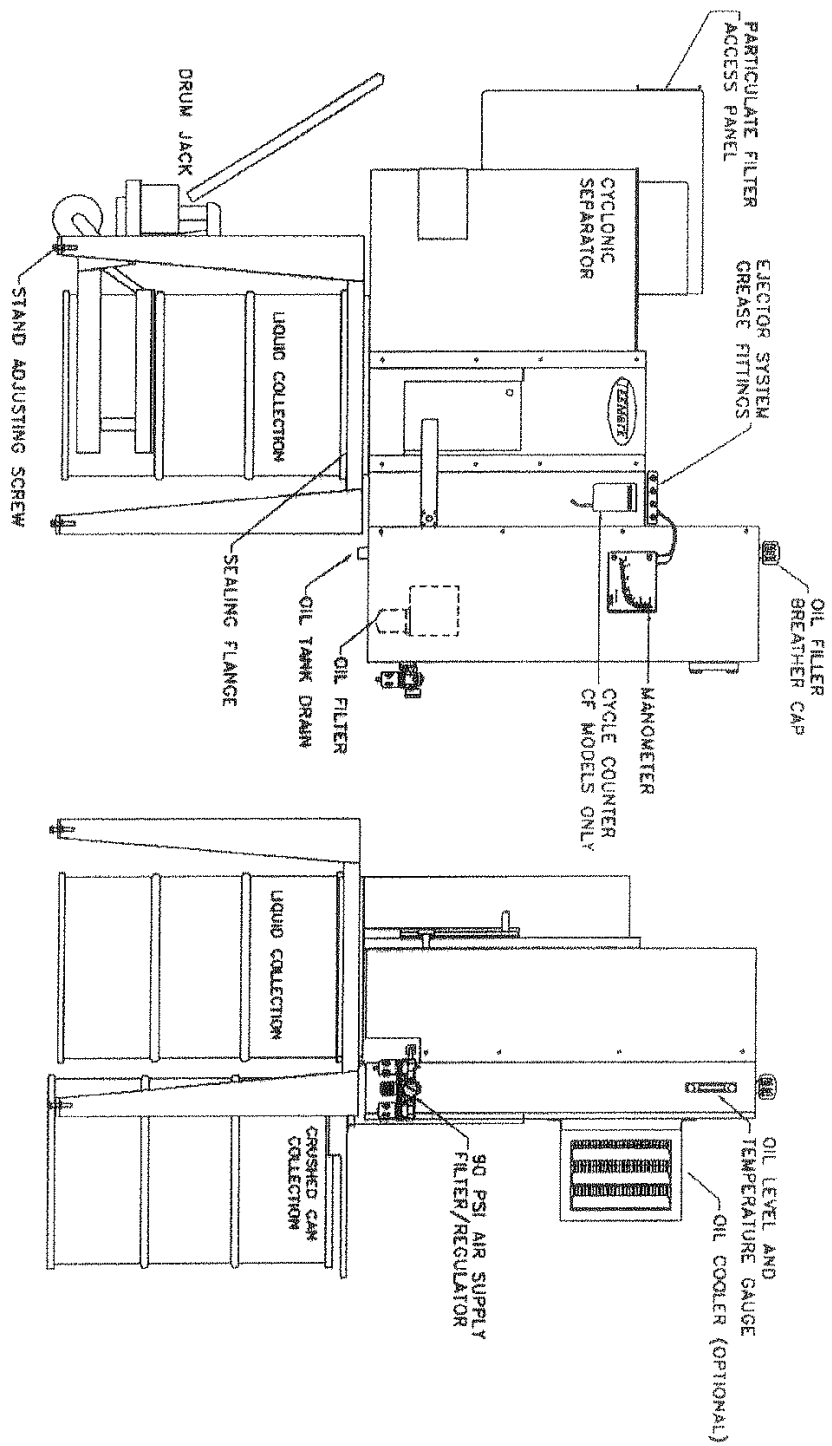
Attach the vapor collection bonnet to the bottom of the discharge chute using the 5/16-18 x 1-1/4 bolts, nuts, and washers.

The free standing filter cabinet assembly may be placed where convenient yet within reach of the flexible duct. The blower motor will need to be connected to the crusher control panel in accordance with national and local codes for Class 1 Div 2 hazardous locations.

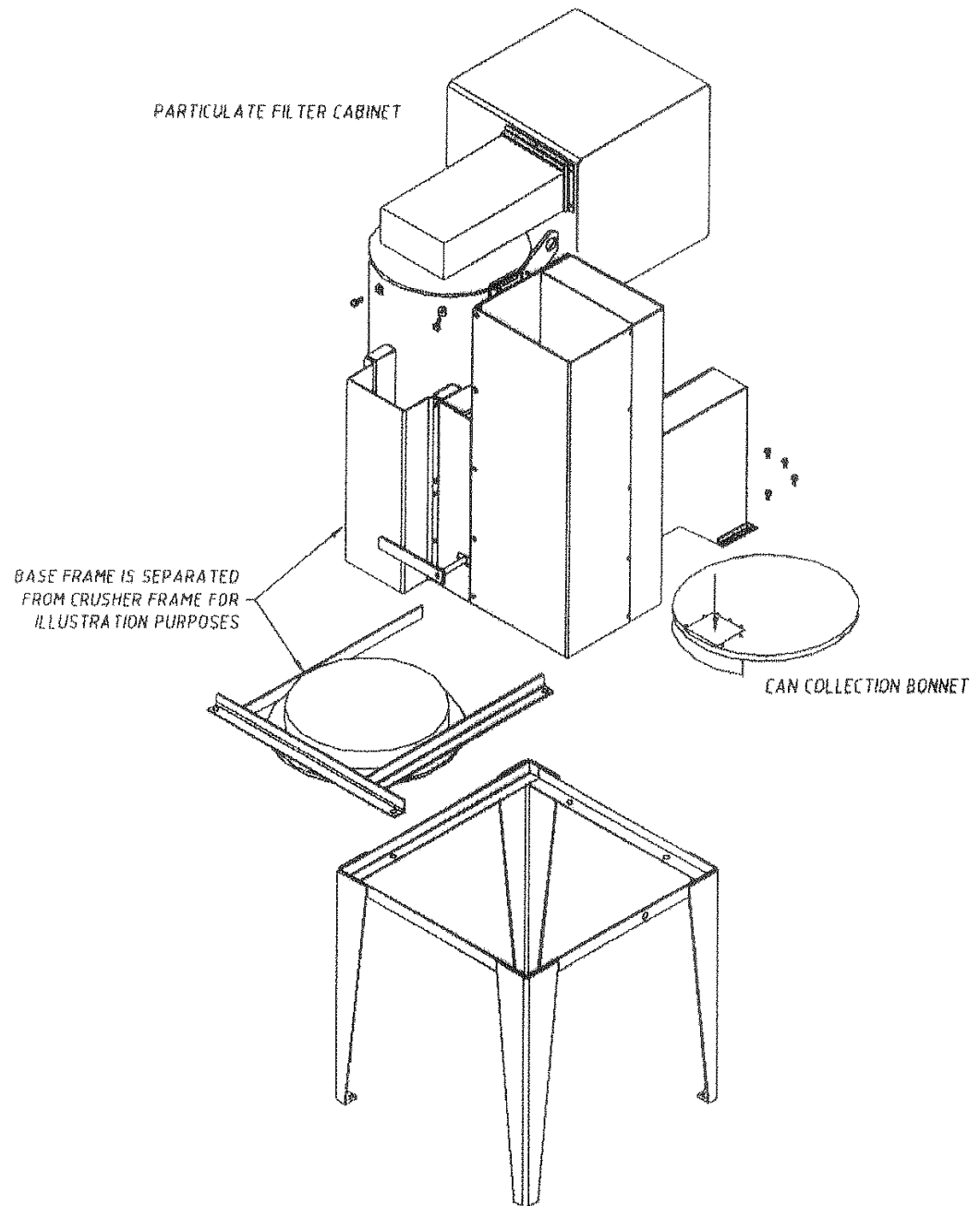
Final electrical connections should be made by a licensed electrical contractor in accordance with national and local codes for Class 1 Div 2 hazardous locations.

Connect air supply to the FRL, DO NOT exceed 90 psi.

After the machine is completely assembled and wired, you will need to fill and adjust the manometer, see instructions in the pages following.

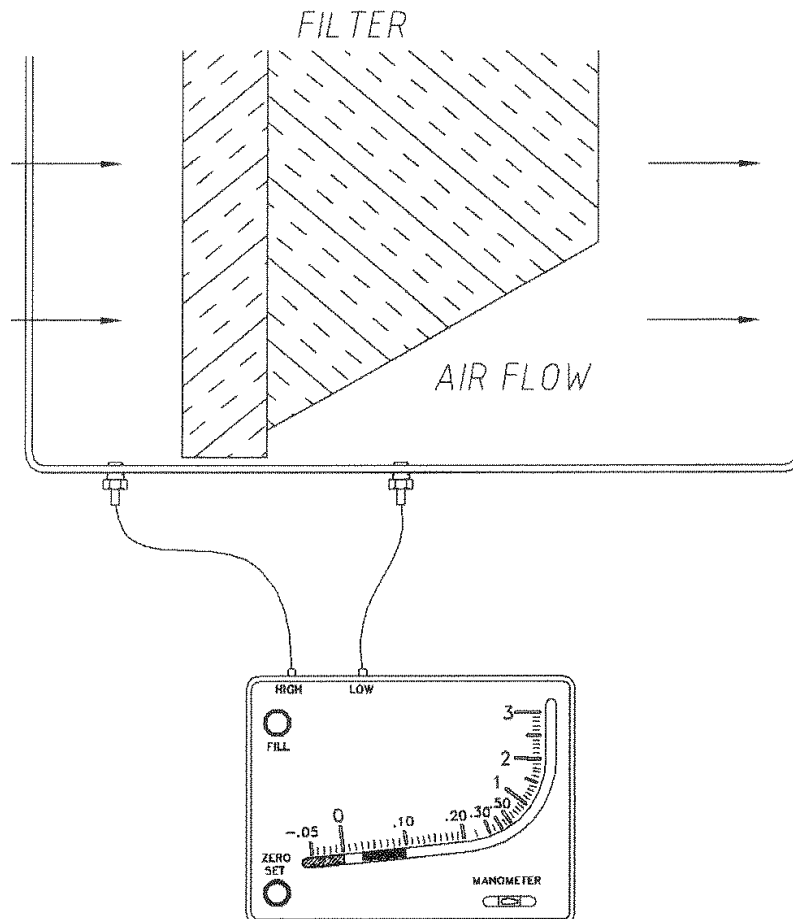


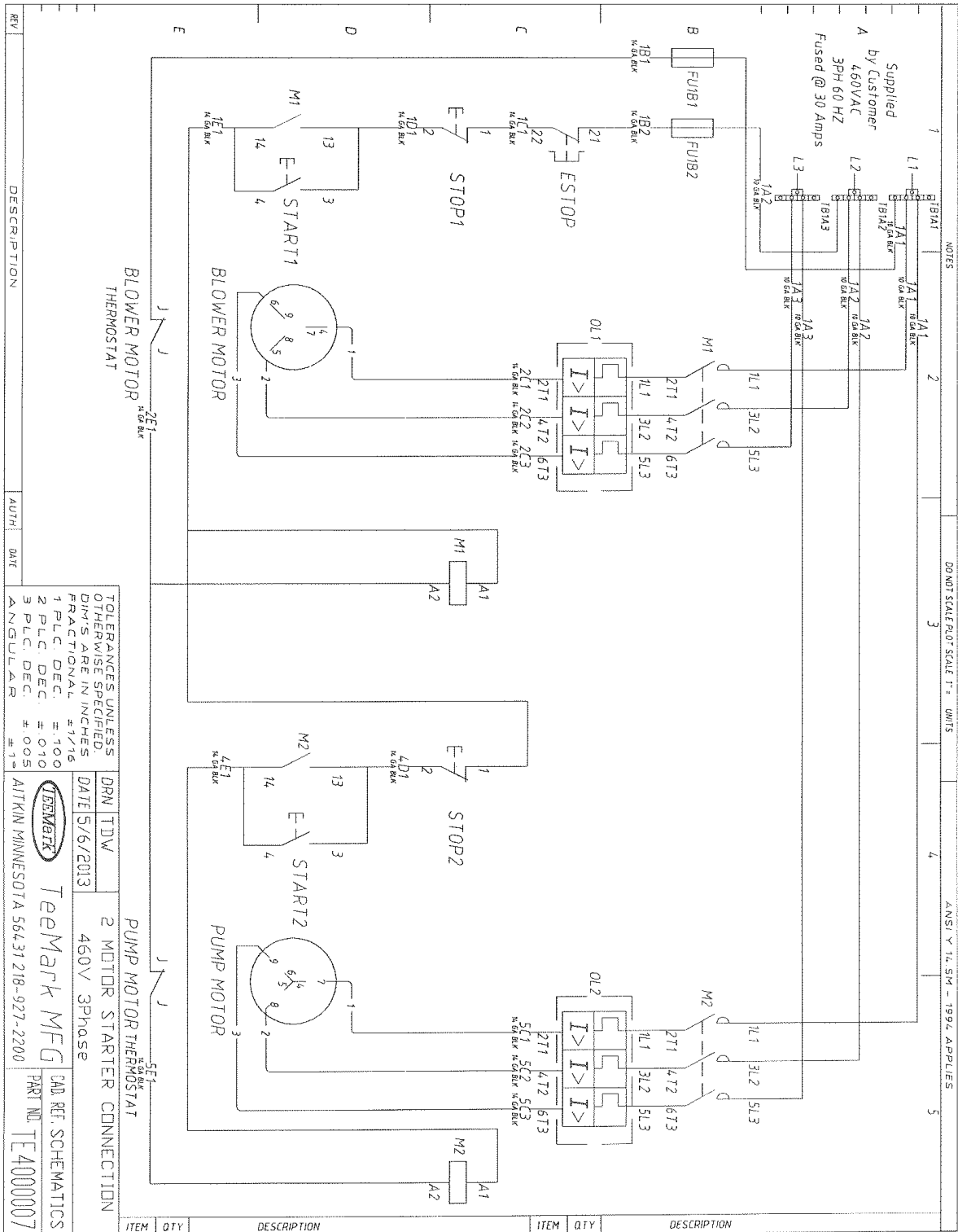
MACHINE ASSEMBLY



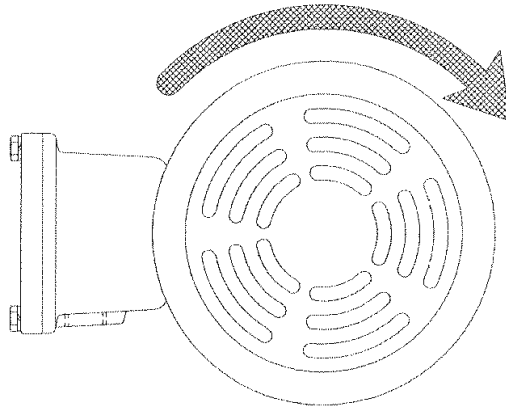
FILLING THE MANOMETER

Adjust the Manometer until the Level bubble is centered in the level vial. Turn the zero set knob counterclockwise until it stops, then turn clockwise 3 full turns. This puts zero in approximately the middle of the travel adjustment in either direction. Remove the fill plug and fill with gage fluid until fluid reaches zero on scale. Minor adjustments can be made to adjust zero by adjusting the zero-set knob. Replace fill plug. If gage is overfilled, remove excess by inserting pipe cleaner through the fill port to blot up excess oil





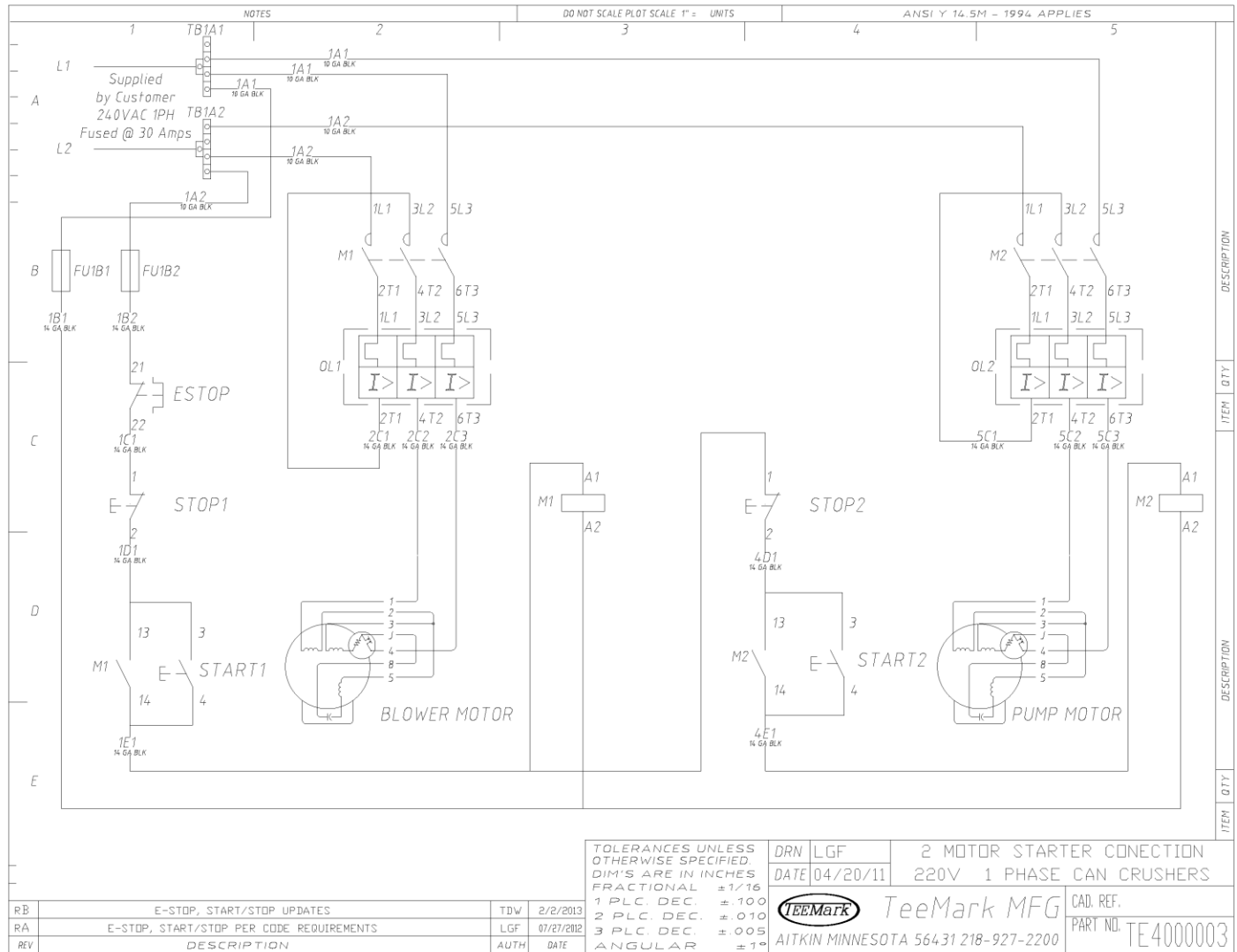
VERIFY CORRECT MOTOR ROTATION



CRUSHER MOTOR ROTATION
BLOWER MOTOR ROTATION

CLOCKWISE

VIEWED FROM THE FAN END OF THE
MOTOR



AIR REQUIREMENTS

The Super 450/800 uses less than 4 CFM and requires a maximum air pressure of 90 psi. All crushers are equipped with a filter/regulator (part # P01-0105). The pressure of the filter regulator must be set at 90 psi to insure proper machine performance.

HYDRAULIC FLUID

The hydraulic reservoir must be kept full to a level that is visible in the temperature/sight gauge throughout the complete ram cycle. Use a premium grade antiwear hydraulic oil, 150 viscosity grade 32 (mobile #DTE24 or equal). This is the same antiwear hydraulic fluid that is typically used in farm tractor and dump trucks. It should be available at most auto or farm supply stores. Total fluid capacity is approximately 20 US gallons.

OIL FILTER

A medium pressure, high performance 10 micron (absolute) oil filter is standard on all TeeMark Crushers. It should be changed after every 500 hours of operation.

Oil Filter Part Number P02-0088

VALVE SETTINGS

All hydraulic and pneumatic valve components have been preset at the factory.

**DO NOT RE-ADJUST ANY VALVE SETTINGS
WITHOUT FIRST CONSULTING THE
MANUFACTURER.**

OPERATING INSTRUCTIONS

START UP PROCEDURE

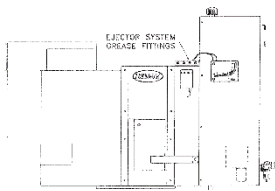
Make certain that all necessary electrical and air connections are made before proceeding.

INITIAL WARMUP

IT IS RECOMMENDED THAT ALL CRUSHER RUN IDLE FOR 5-10 MINUTES TO ALLOW THE HYDRAULIC OIL TO REACH OPERATING TEMPURATURE. THIS IS ESPECIALLY IMPORTANT WHEN AMBIENT TEMPERATURE IS BELOW 65 F

1. Position an empty 55-gallon drum under the sealing flange just below the crushing chamber using the drum jack that is supplied with the crusher. Raise the drum until it contacts the sealing flange. **DO NOT LIFT THE DRUM PAST THE POINT OF CONTACT WITH THE SEALING FLANGE, THIS COULD CAUSE DAMAGE TO THE CRUSHER.**
2. Place a second 55-gallon drum below the vapor bonnet, to collect the crushed cans.
3. Begin by pulling out the red e-stop button.
4. Start the blower by pushing blower start push button. *The blower motor and the crusher motor are interlocked to prevent the crusher from operating without the blower motor energized.*
5. Open the crushing chamber door.
6. Start crusher motor by pushing the crusher start push button
7. Place a can into the crushing chamber in an upright position centered over the piercer opening.
8. Close the crushing chamber door and the crushing cycle will begin automatically. The crushed can will be ejected automatically into the rear drum.
9. When the crushing cycle is complete the door will open automatically and the crusher is ready for the next crushing cycle.

DO NOT ATTEMPT TO OPEN THE DOOR BY HAND. THIS CAN RESULT IN A MALFUNCTION OF THE PNEUMATIC CONTROL SYSTEM.



Grease! There are four grease fittings on the crusher. These should receive one shot of grease every third shift.

KEEP A CLEAN MACHINE! Those who clean the crusher after each shift and prevent a buildup of dried paint, have better running machines than those who neglect this important task.

One method of cleaning involves saving the cans of thinner and other solvents until the end of the shift. This will clean the piercer area and the ejector bars. To remove a buildup of dried paint, a flat blade scraper works well as does a small pneumatic chisel.

Some crusher operators will apply a coating of grease to the inside of the crushing compartment this works well to prevent the buildup of paint.

RECOMMENDED PERIODIC MAINTENANCE

1. Change the hydraulic oil filter element every 500 hours; more often if your system is in an extremely dirty atmosphere.
2. Change the hydraulic oil completely every 5000 hours or 5 years of operation, whichever comes first.
3. Change air particulate filter (part number P04-0045) when the pressure drop indicator reaches .01 on the Manometer scale. (see picture on next page)
4. It is recommended that the piercer be sharpened periodically to prevent undue pressure buildup inside the cans.
5. Remember your machine is only as good as your maintenance.

MINOR TROUBLE SHOOTING

NOISY PUMP

1. Suction line blocked. Disassemble and clean.
2. Air entering suction side of pump. Check all joints and pump air shaft.
3. Low oil level
4. Pump badly worn, loose parts in pump case.
5. Suction line restricted
6. Pump high speed cut out adjusted to low.

LACK OF SYSTEM PRESSURE

1. Bad pump
2. Hydraulic component stuck in open position. Relief, 4-way, ect.
3. Coupling between pump and motor separated.
4. Line breakage

PUMP NOT DELIVERING OIL

1. Block suction
2. Air leak in suction line causing pump to lose prime
3. Pump rotation in wrong direction

ERRATIC MOTION IN CYLINDER

1. Air entrapped in oil due to excessive agitation. Oil will be cloudy in appearance.
2. Detent setting in auto cycle valve not working or adjusted too high.

Note: check motor amperage draw against nameplate. If it is too high, the problem is in system, eg. Relief valve set too high or pump or motor failing

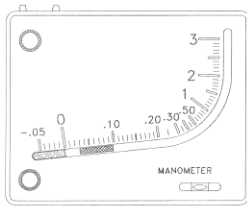
RESERVOIR TEMPERATURE EXCESSIVE (Over 140 Deg. F)

1. Relief valve set too high.
2. Detent setting in auto cycle valve not working or adjusted too high

*****CAUTION*****

Always turn the power off when servicing the crusher or when not in use.

MONITORING THE VAPOR CONTROL SYSTEM



The vapor control system consists of three major components. These are the filter cabinet, a centrifugal blower and a manometer. The manometer is a system monitoring device that will indicate two important conditions.

A gauge reading below .03 indicates a blower off or blower malfunction condition.

A gauge reading above .10 indicates a dirty or clogged particulate filter (part number P04-0045). To change air filter remove the filter access panel and slide out old filter. Replace the dirty filter with a new clean filter making sure that the filter edges are lying flat against the filter frame.

RETRACTING CYLINDER/SQUEEZE HEAD

In the event of the squeeze head becoming stuck at the bottom of the stroke, it may be necessary to retract the squeeze head manually.

1. On the front of the machine below the door shaft is a button marked manual retract.
2. With the hydraulic motor running, air supply turned on, and the door open.
3. Push in and hold the button, close the door and hold the button in until the cycle ends and the door opens.
4. The crusher is now set to resume normal crushing operations

Conditions that will cause the squeeze head to become stuck at the bottom of the stroke are

1. Inadequate power supply, causing the circuit breaker to trip when crusher reaches full crushing pressure.
2. Hydraulic system relief valve pressure drifts and causes the relief valve to open not allowing pressure valve to shift and retract the cylinder.
3. Interruption in the air supply.

BLOWER USE AND MAINTENANCE

All fans and blowers have rotating parts and pinch points. Severe personal injury can result if operated without guard.

Stay away from rotating equipment unless it is disconnected from its power source and all rotating parts have stopped moving.

No guarantee of any level of spark resistance is implied by spark resistant construction. It has been demonstrated that aluminum impellers rubbing on rusty steel may cause high intensity sparks.

Air stream material and debris or other system factors may also cause spark.

NOTE:

If wheel set screws are loosened and/or wheel is removed from shaft, set screws must be replaced.

Set screws cannot be used more than once. Use knurled, cup point set screws with a locking patch.

MINIMUM REQUIRED SETSCREW TORQUE=65 INCH/LBS

TeeMark Manufacturing, Inc. – 1132 Air Park Drive – Aitkin, MN 56431 – 1.800.428.9900

Blower Fan Malfunctions and Causes

VIBRATION AND NOISE

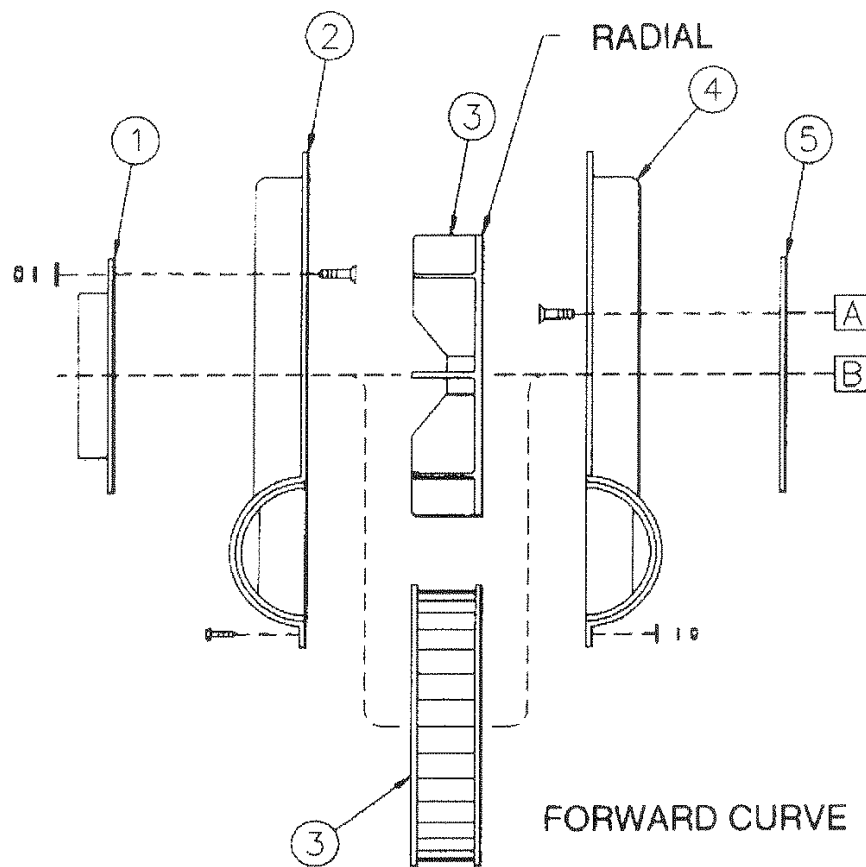
Misalignment of fan wheel
Foreign material in fan causing unbalance
Worn bearings
Damaged wheel or motor
Broken or loose bolts and set screws
Bent shaft
Worn coupling
Fan wheel or drive unbalanced
Loose dampers
Speed too high or fan rotating in wrong direction
Vibration transmitted to fan from some other source.

CAPACITY OR PRESSURE BELOW RATING

Dirt in bearings
Incorrect direction of wheel rotation
Excessive belt tension
Speed too slow
Dampers not properly adjusted

OVERLOAD ON MOTOR

Poor fan inlet or outlet conditions (elbows, restrictions)
Speed too high
Air leaks in system
Damaged wheel
Total resistance of system higher than anticipated
Wrong direction of wheel rotation
Wheel mounted backwards on shaft
Bearings improperly lubricated
Motor improperly wired
Defective motor
Motor must be tested by motor manufacturer



Replacement or spare parts may be ordered through your local Cincinnati Fan representative.

The following information should accompany parts orders:

1. Motor horsepower, frame size, motor speed, voltage, model number from motor nameplate, phase, cycle and enclosure.

Motor manufacturers catalog number.

3. Fan serial and model numbers from the FAN nameplate and a complete description of the part.

An adequate stock of repair parts is

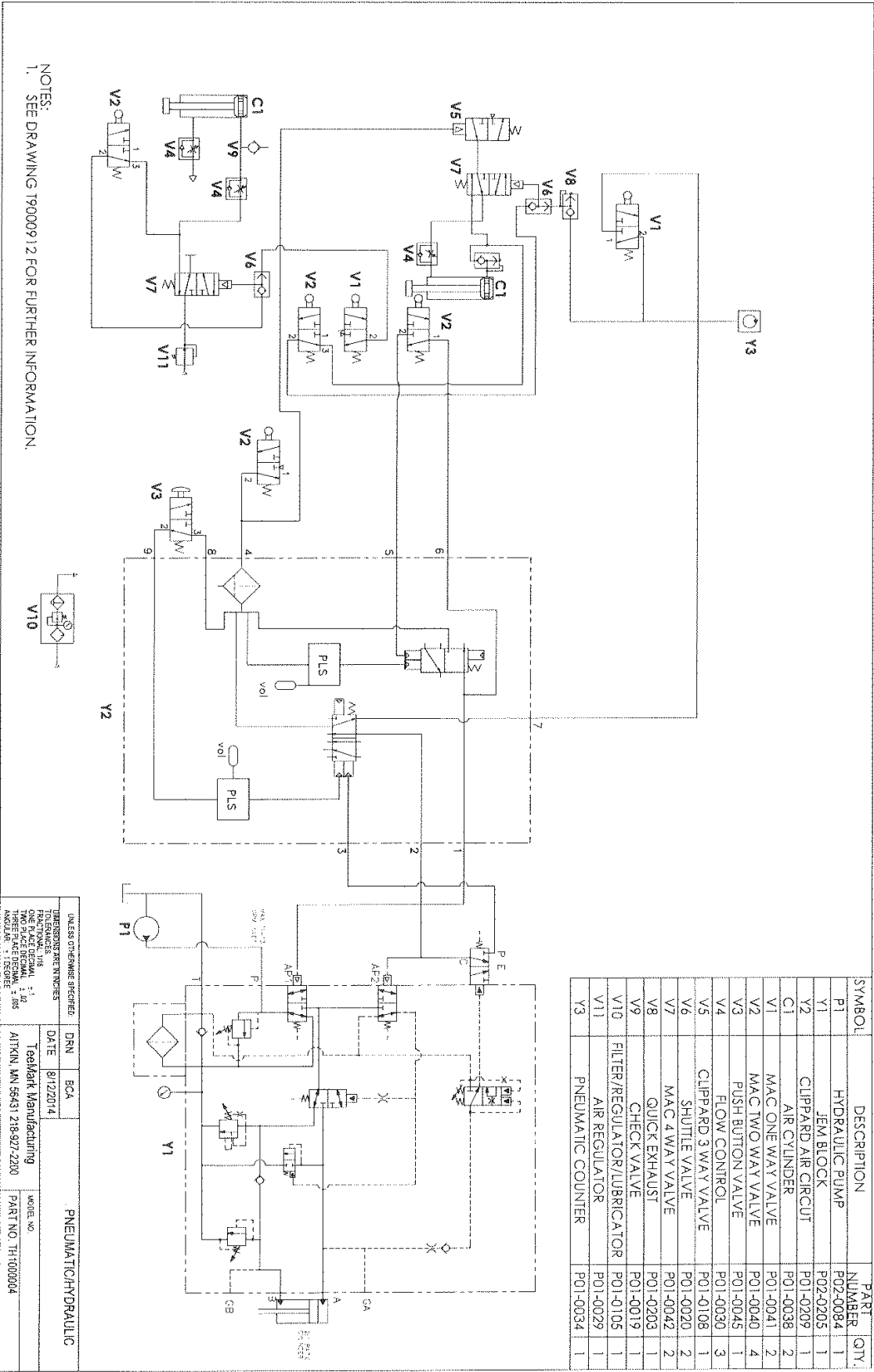
MODEL PB

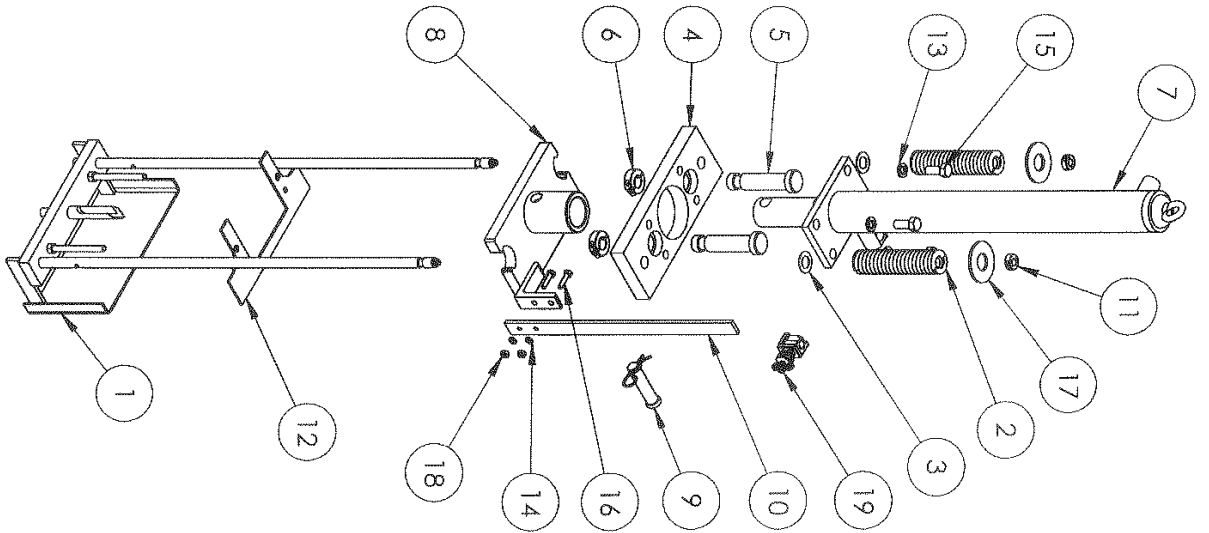
HOUSING/WHEEL COMPONENTS

1. Inlet side plate (if required).
2. Housing, inlet side.
3. Wheel (Radial or Forward Curve).
4. Housing, drive side.
5. Drive side plate (if required).

NOTE:

Rotation determined by viewing Motor from the fan end, not looking into inlet.

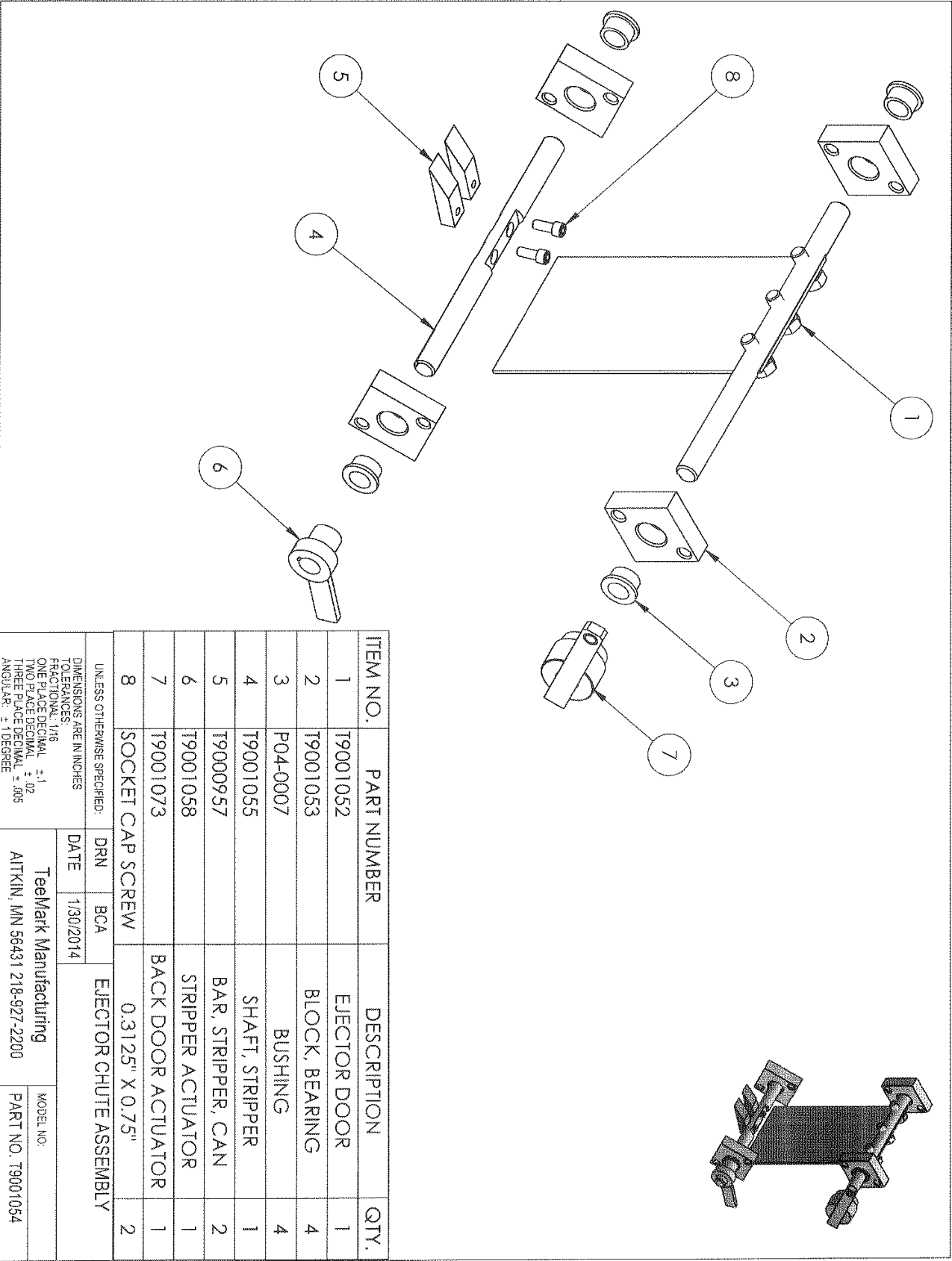


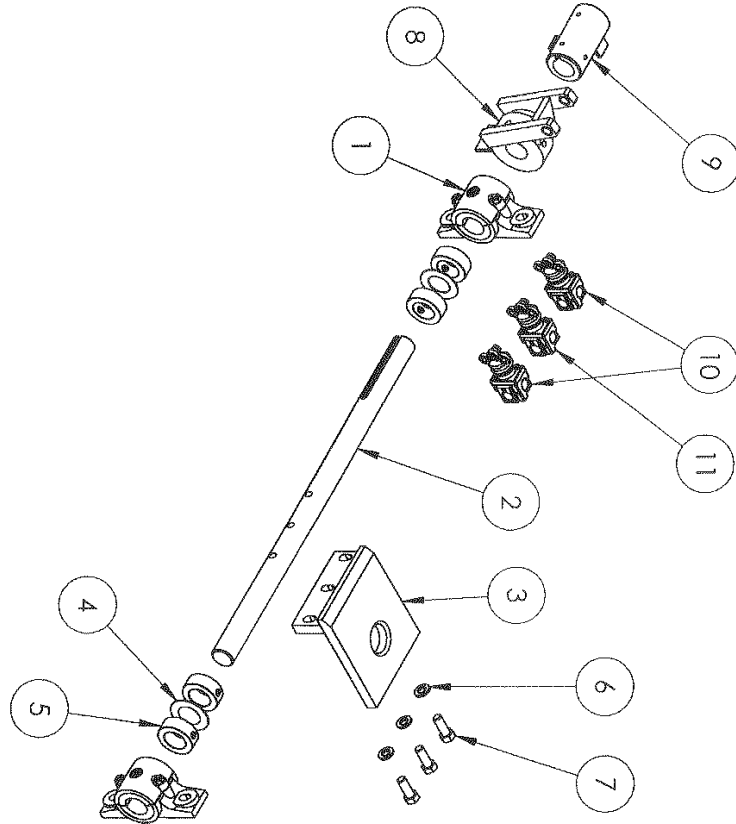
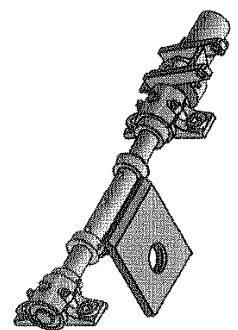


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	T9000966	PIERCER CARRIAGE	1
2	P04-0003	PIERCER RETURN SPRING	2
3	P04-0006	WASHER	2
4	T9001048	PLATE, CYLINDER	1
5	T9000941	PIN, STOP	2
6	P05-0005	SHAFT COLLAR	2
7	P02-0134	HYDRAULIC RAM	1
8	T9000926	SQUEEZE HEAD	1
9	P07-0121	PIN, CLEVIS	1
10	T5000251	FLAG	1
11	P05-0003	SHAFT COLLAR	2
12	T9001047	PLATE, BAFFLE	1
13	LOCK WASHER	0.5"	4
14	LOCK WASHER	0.25"	4
15	BOLT	0.5" X 1.25"	4
16	BOLT	0.25" X 1.125"	2
17	WASHER	0.25"	2
18	NUT	0.25"	2
19	P01-0041	MAC VALVE	1

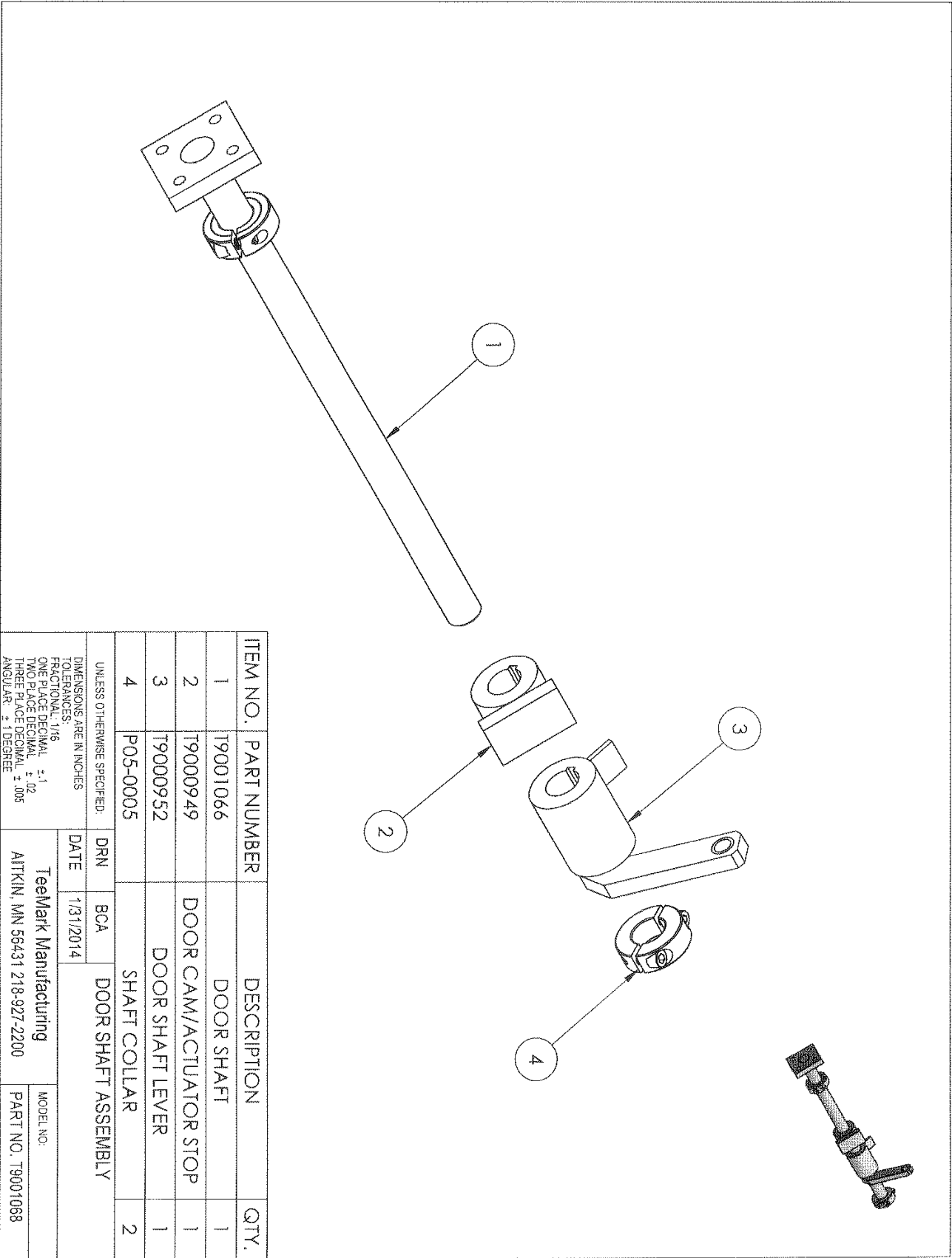
UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL: 1/16
 ONE PLACE DECIMAL: ± .1
 TWO PLACE DECIMAL: ± .02
 THREE PLACE DECIMAL: ± .005
 ANGULAR: ± 1 DEGREE

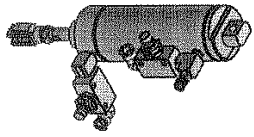
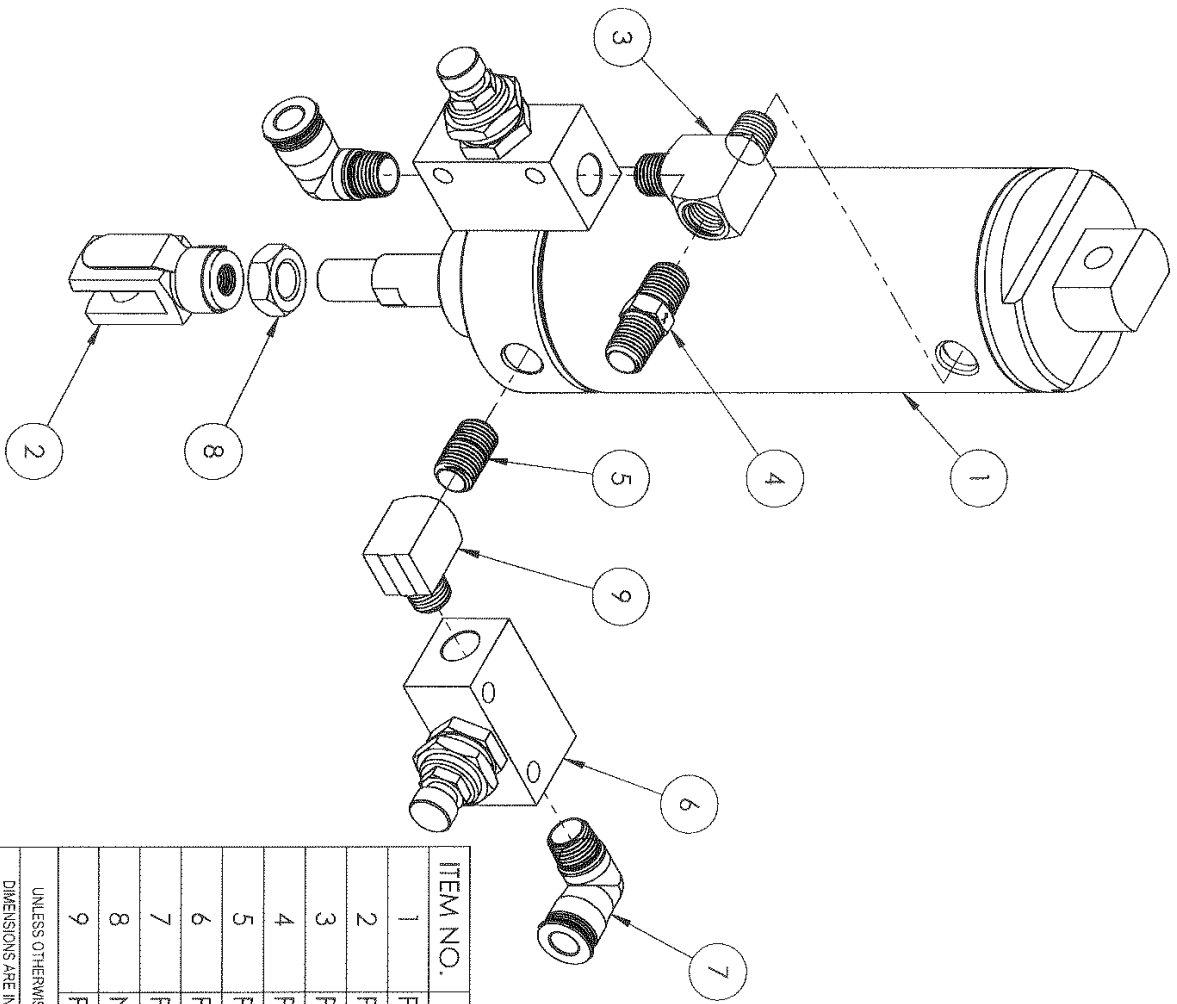
DRN
 DATE 1/28/2014
 BCA
 HYDRAULIC PIERCER ASSEMBLY
 TeeMark Manufacturing
 AITKIN, MN 56431 218-927-2200
 MODEL NO:
 PART NO. T9001049





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	P04-0017	BEARING	2
2	T9001059	SHAFT, EJECTOR	1
3	T9001061	EJECTOR PLATE	1
4	P04-0009	WASHER	2
5	P05-0006	SHAFT COLLAR	4
6	LOCK WASHER	0.375"	3
7	BOLT	0.375" X 1"	3
8	T9001076	EJECTOR ACTUATOR	1
9	T9001077	EJECTOR VALVE ACTUATOR HUB	1
10	P01-0040	MAC VALVE	2
11	P01-0041	MAC VALVE	1
EJECTOR PLATE ASSEMBLY			
UNLESS OTHERWISE SPECIFIED:			
DIMENSIONS ARE IN INCHES			
TOLERANCES:			
FRACTIONAL: 1/16			
ONE PLACE DECIMAL: ± .1			
TWO PLACE DECIMAL: ± .02			
THREE PLACE DECIMAL: ± .005			
ANGULAR: ± 1 DEGREE			
DATE		DRN	BCA
1/30/2014			
EJECTOR PLATE ASSEMBLY			
TeelMark Manufacturing			
AITKIN, MN 56431 218-927-2200			
MODEL NO. PART NO. T9001060			





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	P01-0038	AIR CYLINDER	1
2	P01-0109	CLEVIS	1
3	P01-0078	MALE TEE	1
4	P01-0019	MALE CHECK VALVE	1
5	P01-0082	NIPPLE	2
6	P01-0030	FLOW CONTROL VALVE	2
7	P01-0098	MALE ELBOW	2
8	NUT	0.5"	1
9	P01-0076	ELBOW	1

UNLESS OTHERWISE SPECIFIED:

DRN

BCA

DOOR AIR CYLINDER ASSEMBLY

DIMENSIONS ARE IN INCHES

DATE

1/28/2014

TeelMark Manufacturing

AITKIN, MN 56431 218-927-2200

MODEL NO.

PART NO. T9001094

TOLERANCES:

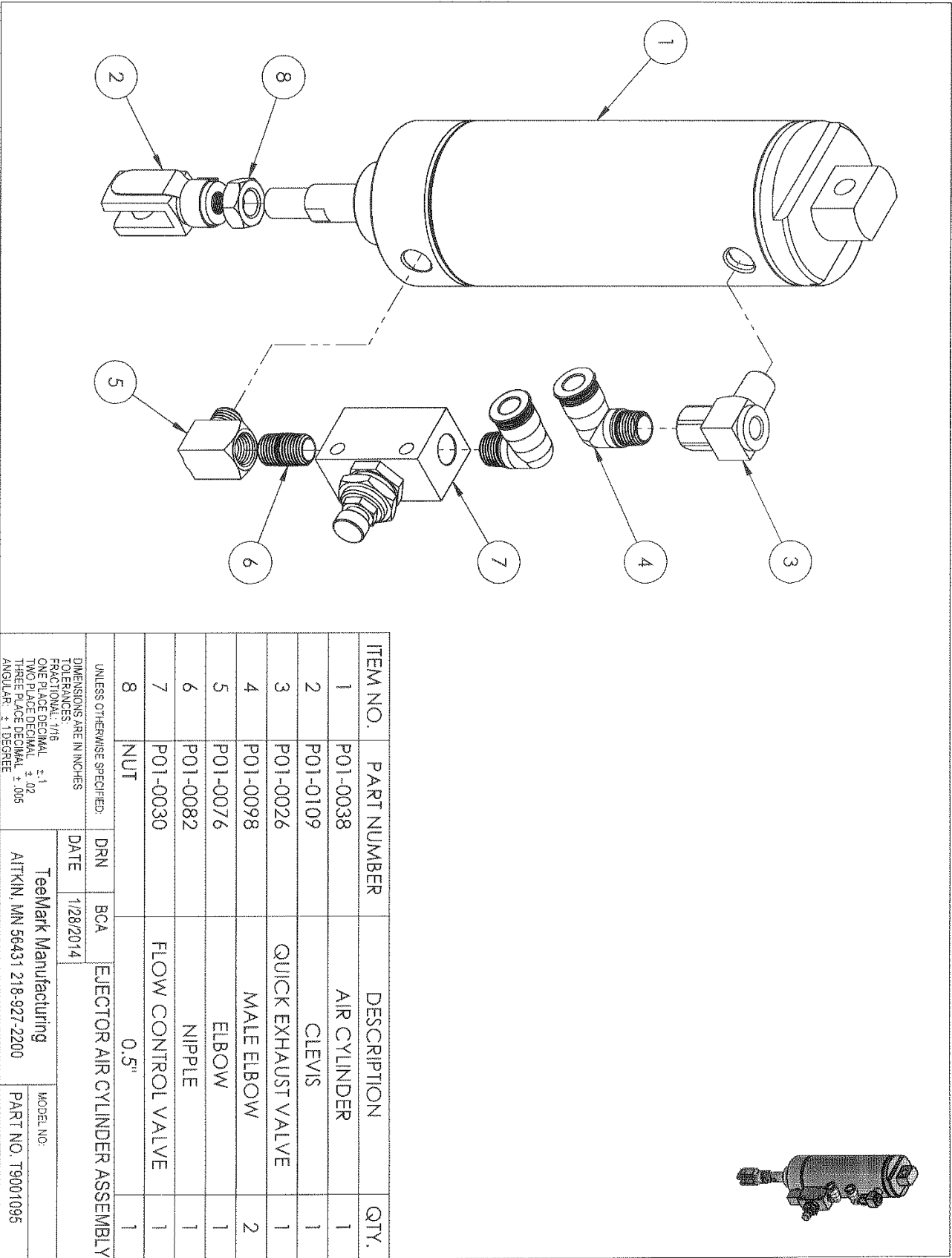
FRACTIONAL: 1/16

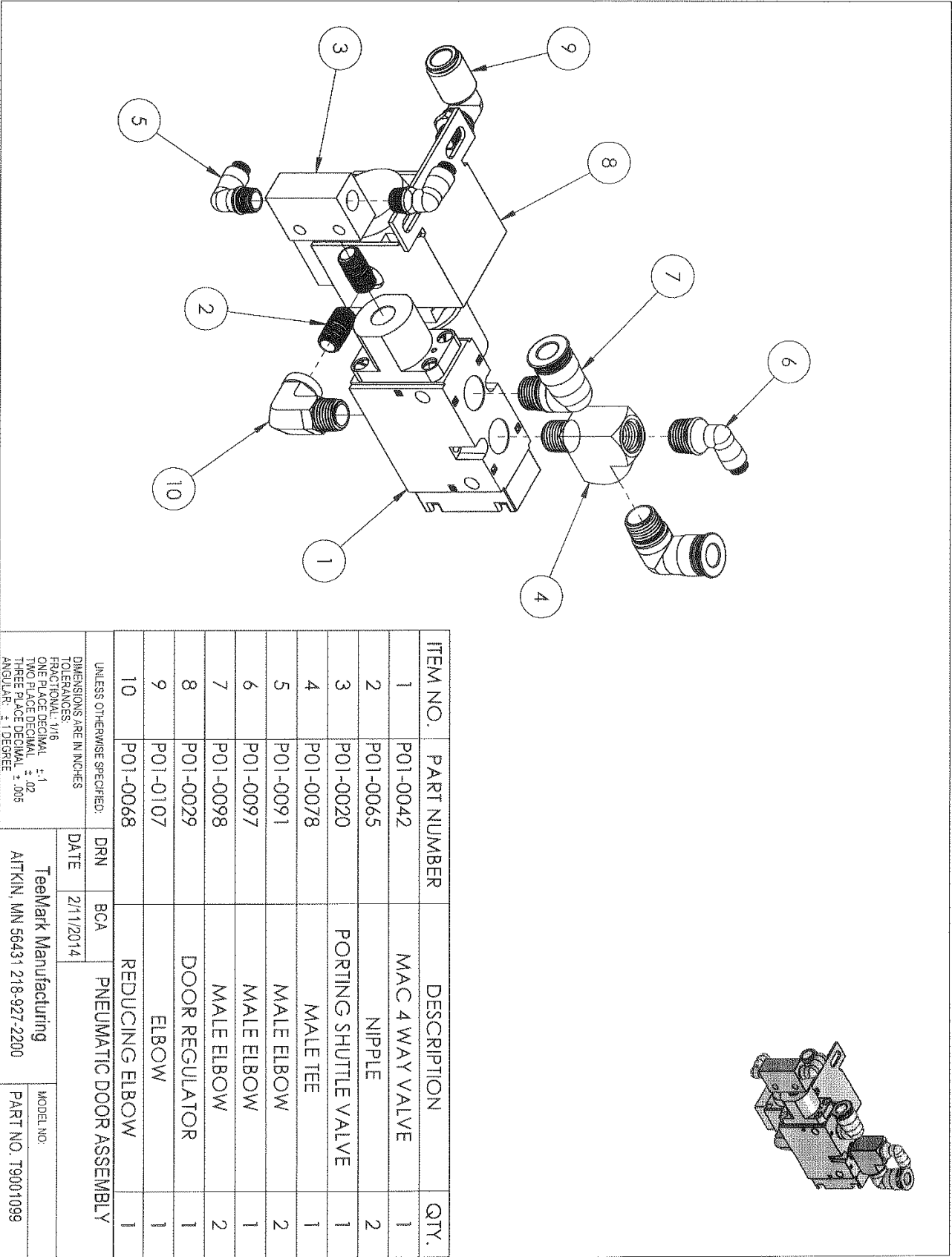
ONE PLACE DECIMAL: ± .1

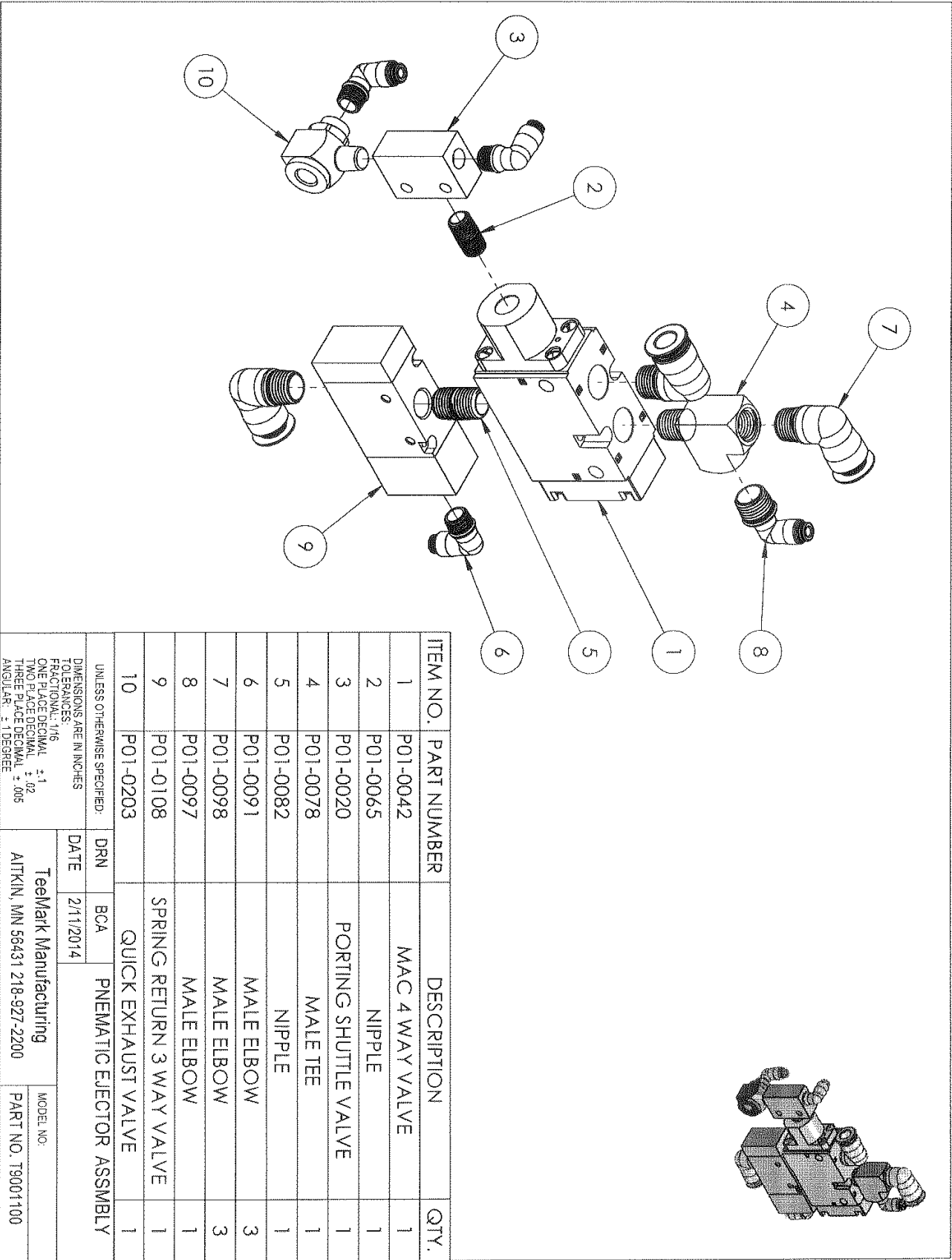
TWO PLACE DECIMAL: ± .02

THREE PLACE DECIMAL: ± .005

ANGULAR: ± 1 DEGREE







ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	T9001126	MOTOR	1
2	P02-0084	PUMP	1
3	T9001092	MOTOR MOUNT	1
4	P02-0020	ELBOW	1
5	P02-0001	HOSE COUPLING	1
6	P04-0024	COUPLING HUB	1
7	P04-0025	COUPLING HUB	1
8	P02-0348	PUMP MOTOR ADAPTER	1
9	P04-0028	COUPLING SPIDER INSERT	1

UNLESS OTHERWISE SPECIFIED:

TOLERANCES ARE IN INCHES

FRACTIONAL: 1/16

ONE PLACE DECIMAL: ±.1

TWO PLACE DECIMAL: ±.02

THREE PLACE DECIMAL: ±.005

ANGULAR: ± 1 DEGREE

<small>DRN</small>	<small>BCA</small>	MOTOR/PUMP ASSEMBLY
<small>DATE</small>	2/6/2014	

TeeMark Manufacturing

AITKIN, MN 56431 218-927-2200

MODEL NO:

PART NO. T9001119

HYDRAULIC CONTROL VALVE

All TeeMark can and aerosol crushers utilize an air/hydraulic valve body to control the hydraulic system. All of the hydraulic valves are housed within the valve body or “manifold.”

The system pressure, the crushing pressure, the relief and neutral shift pressures have been preset at the factory and thoroughly tested for proper performance. Over time certain conditions can contribute to irregularities in system performance.

Conditions such as contamination of the hydraulic fluid or breakdown of the hydraulic fluid due to excessive heat can contribute to the valves either wearing out or becoming sluggish.

Indications of a failing hydraulic system include the following

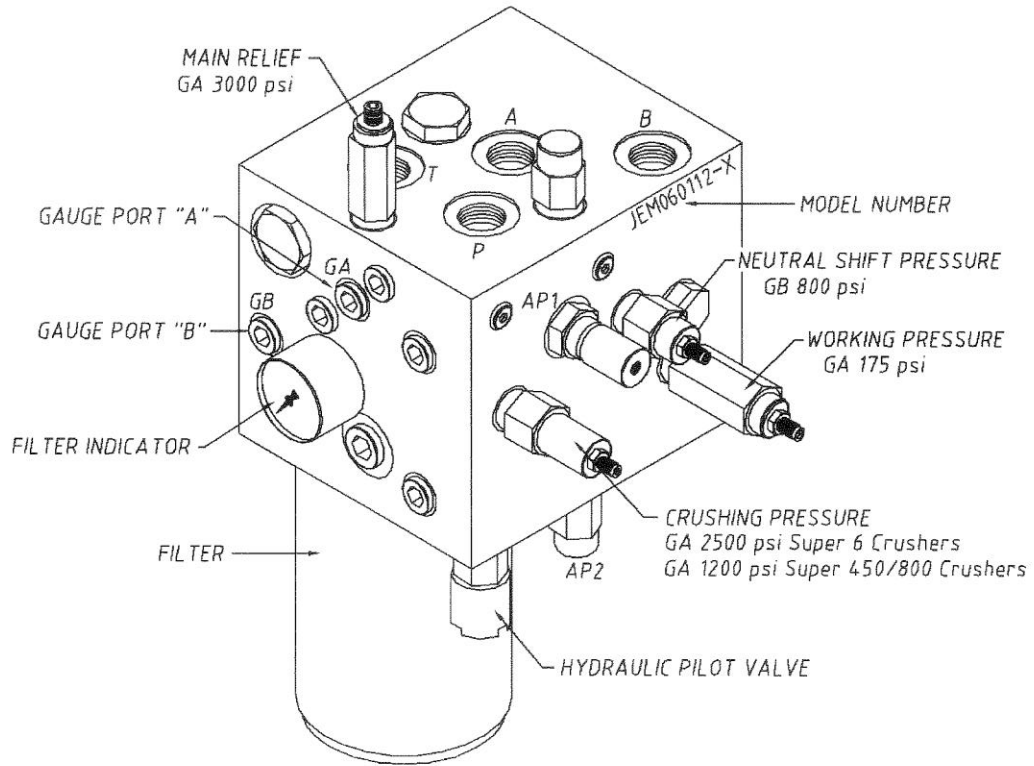
1. In adequate can compaction
2. Failure of the hydraulic cylinder to retract
3. Noticeable increase in cycle times
4. Motor stalling (this could also be due to a lack of adequate electrical current)
5. Erratic cylinder movement

**NO VALVE ADJUSTMENT
SHOULD BE ATTEMPTED
WITHOUT FIRST CONTACTING
THE MANUFACTURER**

The following page illustrates the valve body and its valve locations.

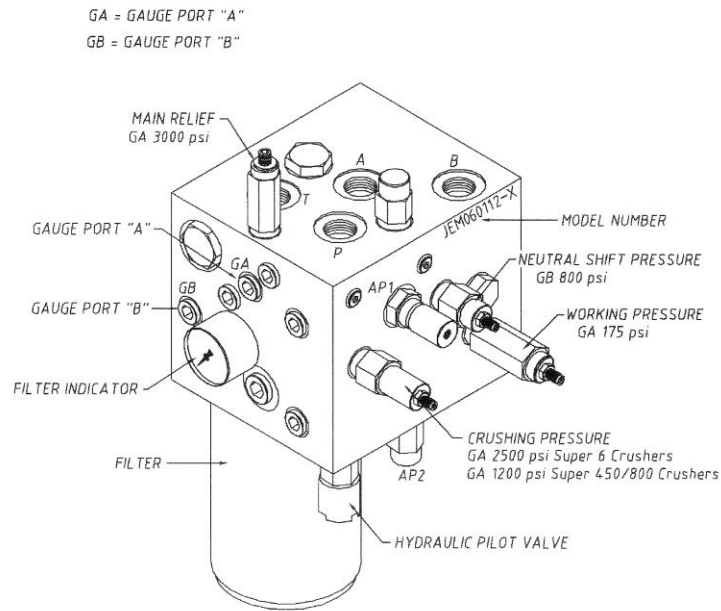
GA = GAUGE PORT "A"

GB = GAUGE PORT "B"



Port No	Description	Part #
A	CYLINDER EXTEND	
B	CYLINDER RETRACT	
P	PRESSURE (PUMP)	
T	RETURN TO TANK	
F	OIL FILTER	
GA	GAUGE PORT A	Working Pressure
		Crushing Pressue
GB	GAUGE PORT B	Retract Pressure
12	MAIN RELIEF VALVE	P02-0349
13	SYSTEM PRESSURE VALVE	P02-0092
14	CHECK VALVE	P02-0350
15	PILOT DIRECTIONAL VALVE	P02-0097
18	FILTER INDICATOR	P02-0089
20	HYDRAULIC PILOTED AIR VALVE	P02-0094
AP1	AIR PILOTED HYDRAULIC VALVE	P02-0121
21	SEQUENCE VALVE	P02-0131
22	KICK DOWN RELIEF VALVE	P02-0098
AP2	AIR PILOTED HYDRAULIC VALVE	P02-0093

Hydraulic Block Set-up Procedure



Install a 3,000 psi pressure gauge into the gauge port (GA) on the hydraulic block.

ADJUST WORKING PRESSURE:

This is the pressure seen while the ram is descending under no load.

Back the adjustment all the way out, then screw it back in full revolutions. Working Pressure should now be set at around 300 psi. Adjust until the Working Pressure is 200 to 300 psi.

ADJUST CRUSHING PRESSURE:

1. Increase crushing pressure vby several turns clockwise
2. Decrease main relief pressure by several turns counter clockwise
3. Close the door to cycle the machine and the ram should stall at the bottom
4. Increase the main relief to 2,200 psi
5. Back out the crushing pressure slowly until it trips
6. Increase master main relief by 2 full revolutions clockwise.

ADJUST NEUTRAL SHIFT:

Neutral shift pressure controls the point at which the machine shifts into neutral at the end of the cycle when the ram is up. If it is set too light, the ram will retract prior to crushing. Too heavy and th machine will continue to create pressure after the end of the cycle (with the door shut). You must disconnect the air to the door cylinder to check for load. You shoul dbne able to hear the difference when it trips at the end of the cycle with the door closed.

ADJUST SHIFT PRESSURE:

Shift pressure is adjusted to maximize cycle time while not overleading the motor.

Install an ammeter to one of the electrical lead.

With the ram descending under no load, adjust the shift pressure on the pump so that the amperage observed is 0.1 amps below the sull load amperage (FLA) rating on the motor plaque.