

424 SERIES HORIZONTAL MIXER OPERATION & MAINTENANCE MANUAL



**TRUCK
MOUNTED**



Kirby Manufacturing
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**TRAILER
MOUNTED**

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KIRBY MANUFACTURING, INC.
NON-TRANSFERRABLE LIMITED WARRANTY

GENERAL TERMS AND CONDITIONS:

KIRBY MANUFACTURING, INC. (henceforth referred to as KMI), hereby warrants to the original purchaser of a newly manufactured KMI product, that all new KMI products are guaranteed against defects in materials or manufacture under normal use for a period of one year (1) or duty cycle of 3000 hours (whichever comes first) from the original in-service date.

Improper Activity will void this limited warranty. "Improper Activity" includes any, and all, of the following: Installation by anyone other than KMI or its authorized agent, improper installation, use/operation/maintenance other than in accordance with KMI's instructions, tampering, neglect or damage by the application of force, acts of vandalism, accidents, misuse, abuse, repair/alteration or adjustment by anyone other than KMI or its authorized agent.

FOR THE WARRANTY TO BE IN EFFECT: The warranty registration form must be signed, dated and submitted to KMI within 15 days of the delivery date by the end user. If not returned, the warranty period begins from the date the equipment was invoiced to the dealer.

This warranty is subject to any existing conditions of supply which may directly affect our ability to obtain materials or manufacture replacement parts. This warranty shall in no way make KMI liable for personal injuries or damages, loss of time or expense of any kind either direct or indirect resulting from part failure or defect.

KIRBY MANUFACTURING, INC. DISCLAIMS ALL OTHER WARRANTIES, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO AGENT OR EMPLOYEE OF KIRBY MANUFACTURING, INC IS AUTHORIZED TO EXTEND ANY OTHER WARRANTY OR OBLIGATION. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

WARRANTY PROVISIONS: During the warranty period (12 months or 3,000 hours), KMI will repair or replace parts of the product that prove defective because of improper material or workmanship, under normal use and maintenance. This warranty is subject to the following provisions:

1. Labor is covered for a period of 90 days from the original in-service date, except defects in workmanship, which is covered for the entirety of the warranty (12 months or 3,000 hours).
2. Labor will be paid at the dealer's standard hourly rate.
3. KMI will pay for standard ground shipping of parts within 90 days of the original in-service date.
 - a. The shipping carrier will be at the discretion of KMI.
 - b. All priority shipping is the responsibility of the dealer or customer.

4. All warranty work requires a KMI warranty claims form to be filled out and returned with all required documentation.
5. Warranty forms must be requested within 48 hours of the first business day after the repair.
6. All warranty claims must be submitted within 30 days of the warranty claim form date.
7. Replacement parts will have a 90-day warranty or the remainder of the KMI warranty period, whichever is longer. Parts must be installed by an authorized dealer or agent of KMI.
8. Any removed parts must be marked with serial number of the unit, date of repair and warranty number.
9. Parts must be held by the dealer upon request of KMI for 30 days.
10. Parts may be requested by KMI to be returned to KMI or a supporting vendor.
 - a. Supporting vendor - A return goods authorization (RGA) and warranty claim number will be issued.
 - b. KMI - Warranty claim number will be issued.
11. If deemed defective by KMI, parts with an RGA/Warranty claim number will be reimbursed, replaced or credited back to the dealer at the net dealer cost.
12. Parts invoice for warranty goods received will be requested with warranty. If a part is purchased outside of KMI proof of purchase will be required for reimbursement.
13. The following are not covered under this warranty:
 - a. Overtime, freight and travel.
 - b. Rental fees for loaner equipment to the end customer.
 - c. Other out of pocket expenses incurred during downtime.
 - d. Overnight/priority shipping.
 - e. Damages or repairs to tractors used with KMI equipment.
 - f. Truck and all truck parts/components (truck mounted models).
 - g. Normal wear and tear for normal replacement parts, cutting knives, exterior finish, chains, hydraulic oil & filters, belts, sprockets, u-joints etc.
 - h. Scale Systems have their own warranty and are not included in Kirby's limited warranty coverage. The warranty stated by the scale manufacturer will be honored by KMI. This does not include any freight, service calls or loaner unit for the specified repair. Scale warranty is outlined in the Scale System's owner's manual.
 - i. All parts requiring periodical maintenance, that have not been (but not limited to):
 - Greased (bearings, PTO & driveline u-joints).
 - Nuts and bolts tightened.
 - Chains adjusted.
 - Oil changed.
 - Filter changed.
 - Hydraulic hoses tightened.
14. Tires, wheels and batteries have a limited warranty of 3 months from the date of original sale and warranty acceptance form. This includes oil seals for the axle hub. This does not include any flats or damage caused by negligent use or foreign objects.
15. Electrical switches and controls installed by KMI are covered against defect in workmanship for a period of one year under normal use. Part component switches are covered for 30 days.

PRODUCT IMPROVEMENTS: KMI reserves the right to make improvements and changes in material and / or design of its products with no obligation to incorporate such improvement into previously manufactured equipment.

DEALERS RESPONSIBILITIES

1. Instruct the customer in the safe operation and servicing of the unit.
2. Review the owner's manual with the customer and ensure the customer understands the complete operation, service, safety procedures and warranty of the unit.
3. Ensure customer signs and sends warranty registration to KMI within 15 days of delivery of unit.
4. Customer should be advised to have failed parts repaired or replaced immediately upon failure and that continued use could result in additional damage and excessive wear, voiding the warranty.
5. Follow correct warranty procedures including but not limited to notifying warranty department at KMI (209-723-0778) and submitting completed warranty claim form to KMI within the specified time as set forth under the "Warranty Provisions" section.
6. Perform warranty and service repairs.
7. **ALL DEALERS MUST WARRANTY THEIR TECHNICIAN'S WORK TO THE PURCHASER AND MUST INDEMNIFY KMI FROM SUCH CLAIMS.**

DELAYED WARRANTY REPAIRS

Warranty repairs should be scheduled and performed as soon as possible after notification of the dealer to KMI. There may be extenuating circumstances that require the availability of repair parts necessary to complete the repairs. In those cases, the dealer must notify KMI, in writing of the extenuating circumstance and advise that the continued use of the product will not add to the warranty claim. These claims, pre-approved by KMI, will then be processed as if the product is still within the warranty period.

DENIED CLAIMS

Dealers will be notified of a denied claim in writing that will state the reason for the denial. The dealer has the right to appeal this claim and must do so within 30 days of notification of denial. If there has been no appeal within the 30-day period, the claim will be considered closed.

Questions or comments? Contact Us:

Kirby Manufacturing, Inc.
P.O. Box 989
Merced, CA – 95341-0989
PH: (209) 723-0778
Fax: (209) 723 -3941
Email: rwallace@kirbymfg.com

OPTIONAL EXTENDED WARRANTY

As a onetime offer, KMI offers the owner of a newly manufactured Kirby feed mixer the option to purchase an extended warranty policy. This extended warranty policy offers a total of 3 years of coverage (one-year standard warranty plus two years beyond the standard warranty). This extended warranty policy must be purchased at the time of equipment sale and will go into effect upon initial equipment start-up. A completed extended warranty acceptance documentation is required for the extended warranty to be in effect.

This extended warrant policy covers the replacement parts itemized below:

1. Hydrostatic hydraulic pumps
2. Hydraulic motors for planetary
3. Planetary gearboxes

The following items are NOT covered under this extended warranty:

1. Hydraulic auxiliary pump (pump for door ram and discharge motor)
2. Hydraulic Oil
3. Hydraulic Cooling systems including hydraulic fan motors.

The general terms and conditions of the standard warranty also apply to the extended warranty in addition to the special terms and conditions as listed below. This policy requires the equipment owner to take and send in oil samples at predetermined time intervals or **have an authorized Kirby Service agent maintain and record all service schedules according to owner's manual.**

These time intervals are as follows:

1. Gearbox oil samples every 6 months or 1,000 hours whichever comes first. (plus initial sample taken 50 hours after start-up)
2. Hydraulic system oil samples every 3 months or 500 hours, whichever comes first.

These samples are to be sent in by the equipment owner to "WEARCHECK" laboratories for analysis. "WEARCHECK" laboratories will analyze the samples and send a complete report to the equipment owner stating the condition of the oil, as well as make recommendations about any concerns they may see regarding the condition of the oil. It is the equipment owner's responsibility to maintain the best oil condition in accordance with "WEARCHECK" laboratories recommendations.

(Note: sample bottles are pre-addressed to "WEARCHECK" laboratories. It is the equipment owner's responsibility to pay all mail charges to send samples to "WEARCHECK" laboratories)

Proration with limitations of the planetary gearbox with extended warranty

Shaft seals and O-rings of the planetary gearbox are warranted for only one year and not subject to the proration of the planetary. Prices based on suggested list price of planetary.

1. 1 to 12 months or 3,000 hours of usage, KMI at its sole discretion will replace or repair (parts and labor) defective gearbox. Included are shaft seals and O-rings (100% replacement with labor cost)
2. 13 to 24 months or 6,000 hours of usage, KMI at its sole discretion will replace or repair (parts and labor) (75% of cost replacement and 75% of labor cost).
3. 25 to 36 months or 9,000 hours of usage, KMI at its sole discretion will replace or repair (parts and labor) (50% of cost replacement and 50% of labor cost).

Equipment owner's responsibilities to maintain warranty:

1. Purchase all sample bottles when purchasing equipment
Mechanically driven unit: 7 sample kits
Hydraulically driven unit; 20 sample kits
4. Perform regular maintenance as specified in the Operation and Maintenance Manual
5. Take and send oil samples into WEARCHECK per time intervals stated above
6. Review oil reports and take corrective actions per WEARCHECK recommendations
7. All warranty claims must be accompanied with hard copies of the WEARCHECK reports

Any replacement provided under this warranty will be warranted for the remainder of the warranty period applicable to the product in which it is installed or which it replaces.

OPTIONAL EXTENDED WARRANTY

Business Name: _____ Date: _____

Model Type: _____ Serial No: _____

1.0 SAFETY PROCEDURES

When inspecting the machine ***all power must be shut off*** and secured.

Do not attempt to work on machine when machine is running.

Caution must be used when checking rotating parts under power. It is advisable to have two (2) persons present when checking for safety. The second person should be positioned by a stop switch so the machine can be stopped immediately in case of an emergency.

Do not leave machine unattended while in operation.

Be sure all guards and safety devices are in place.

Scale service requires special cautions-**See section 9**

Caution: The tractor power take-off (PTO) drive line should be removed from the tractor and the key removed prior to servicing or working on the mixer unit.

Caution: The truck engine should be shut off and keys removed and P.T.O. disengaged when servicing or working on the mixer unit.

SAFE OPERATIONS:

Operation of this mixer/feeder shall be limited to competent and experienced personnel. In addition, anyone who will operate or work around a mixer/feeder must use good common sense. To be qualified, they must also know and meet all other qualifications, such as:

1. Some regulations specify that no one under the age of sixteen (16) may operate power machinery. It is your responsibility to know what these regulations are in your area and/or situation.
2. Current OSHA regulations state in part: At the time of initial assignment and at least annually thereafter, the employer shall instruct **EVERY** employee in the safe operation and servicing of all equipment with which the employee is or will be involved.
3. Unqualified persons are to **STAY OUT OF THE WORK AREA.**
4. A person who is qualified to operate the machinery should be trained in and/or have read and understood all operating and safety procedures.

FAILURE TO READ THIS MIXER/FEEDER MANUAL AND ITS SAFETY INSTRUCTIONS ARE A MISUSE OF THE EQUIPMENT.

SAFETY

IMPORTANT SAFETY PRECAUTIONS

These operating and maintenance instructions contain safety information to:

- make you aware of the hazards associated with the machine
- inform you of the risk of injury associated with those hazards
- tell you how to avoid or reduce the risk of injury.

TAKE NOTE: THE BELOW SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.



**THIS SYMBOL MEANS:
-ATTENTION
-BECOME ALERT
-YOUR SAFETY IS INVOLVED**

SIGNAL WORDS: Note the use of the signal words **DANGER**, **WARNING**, and **CAUTION** with the safety messages. The appropriate signal word for each has been selected using the following guidelines:

DANGER: Indicates an imminently hazardous situation that, if not avoided, will result in serious injury or death. This signal word is to be limited to the **most** extreme situations typically for machine components which, for functional purposes, cannot be guarded.

WARNING: Indicates a potentially hazardous situation that, if not avoided, will result in serious injury or death, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION: Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

If you have questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer or Kirby Manufacturing, P.O. Box 989, Merced, California; Phone number (209)-723-0778.



OPERATING PRECAUTIONS & INSTRUCTIONS

- A. Check to see that no obstructions are present in the mixer prior to start up.
- B. Before loading, run the mixer empty and check all operations.
- C. **Do not overload the mixer.**
Maximum load is 15,000LB for 16' FT. *single axle* mixer.
Maximum load is determined by weight, **not** volume.
- D. Be sure all shields are in place before operation.
- E. Use common sense when operating equipment.

ALWAYS REMEMBER SAFETY FIRST: The careful operator is the best operator. Most accidents are caused by human error.

Certain precautions must be observed to prevent the possibility of injury or death.



DO NOT ALLOW PERSONNEL OTHER THAN THE TRAINED AND QUALIFIED OPERATOR NEAR THE MACHINE.



NEVER START MACHINE UNTIL ALL GUARDS AND SAFETY SHIELDS ARE IN PLACE.



DO NOT CLEAN, ADJUST OR LUBRICATE THE MACHINE WHILE IT IS IN MOTION, (ALWAYS turn off and remove keys prior to performing maintenance on the machine)



BEFORE STARTING TRACTOR ENGINE, BE SURE PTO SHIELDS TURN FREELY.



LOOSE CLOTHING SHOULD NOT BE WORN BY ANYONE NEAR THE MACHINE

EQUIPMENT SAFETY GUIDELINES

Safety is a key concern when designing and developing a new piece of equipment. Designers and manufacturers build in as many safety features as possible. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury, study the following precautions and insist those working with you, or for you, follow them. Perform regular safety audits to ensure adherence.

In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.

Replace any **CAUTION, WARNING, DANGER** or instruction safety decal that is not readable or is missing.

Do not attempt to operate this equipment under the influence of drugs or alcohol.

Review the safety instructions with **ALL** users annually.

This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible adult familiar with farm machinery and trained in this equipment's operations. Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.

To prevent injury or death, use a tractor equipped with a Roll Over Protective System (ROPS). Do not paint over, remove or deface any safety signs or warning decals on your equipment. Observe all safety signs and practice the instructions on them.

Never exceed the limitations of a piece of machinery, in its ability to do a job, or to do so Safely! If in question - **DON'T TRY IT!**

LIGHTING AND MARKING

It is the responsibility of the customer to know the lighting and marking requirements of the local highway authorities and to install and maintain the equipment to provide compliance with the regulations. Add extra lights when transporting at night or during periods of limited visibility.

 **KEEP ALL SHIELDS IN PLACE**

Do not operate mixer/feeder without safety shields in place.

Rotating parts can crush or dismember causing personal injury or death.

Disconnect PTO driveline before removing shields for adjustment or service.



 **OPERATE MIXER/FEEDER SAFELY**

Rotating parts can entangle or strike people, resulting in personal injury or death.

Never enter a mixer/feeder while in operation.

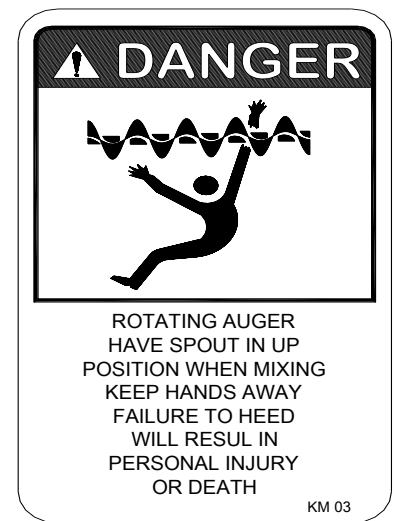
Operate the mixer/feeder from the operator's seat only.

Do not exceed load capacity of the mixer/feeder. (See loading instructions).

Reduce speed when turning or traveling on rough terrain.

Avoid traveling over or near loose fill, rocks, ditches or holes.

Keep transmissions in gear when traveling downhill.



 **KEEP RIDERS OFF MIXER/FEEDER**

Keep riders off.

Riders are subject to injury such as being struck by foreign objects, falling into the mixer and by being thrown off. Riders also obstruct the operator's view, resulting in the machine being operated in an unsafe manner.



 **STAY CLEAR OF ROTATING DRIVELINES**

Entanglement in rotating driveline can cause serious injury or death.

Keep tractor master shield and driveline shields in place at all times. Make sure rotating shields turn freely.

Wear close fitting clothing. Stop the engine and be sure PTO driveline is stopped before making adjustments, connections, or cleaning out PTO driven equipment.



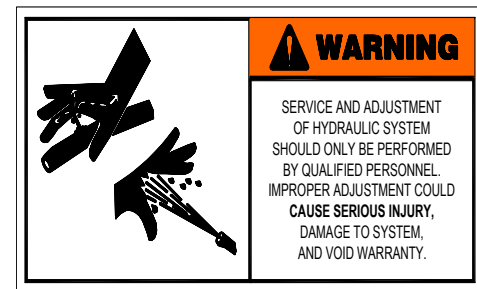
 **AVOID HIGH-PRESSURE FLUIDS**

Escaping fluid under pressure can penetrate the skin causing serious injury or death.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source.



PREPARING TRACTOR FOR TRAILER MIXER

IMPORTANT: Drive components can be damaged from excessive speed. Do not operate tractor at speeds in excess of recommended PTO rpm.

This feed mixer may be equipped with either a 1000 RPM or a 540 RPM driveline.

Match tractor PTO with the feed mixer driveline.

IMPORTANT: To prevent driveline damage, adjust tractor drawbar to recommended setting. Disengage power to tractor PTO before turning tractor.

Remove clevis if equipped. Turn offset drawbar down.
Adjust drawbar length.

ADJUST TRAILER HITCH CLEVIS

Mixer should be approximately level when attached to tractor.



SAFETY DECAL CARE

Keep safety decals and signs clean and legible at all times.

Replace safety decals and signs that are missing or have become illegible.

Replaced parts that displayed a safety sign should also display the current sign.

Safety decals or signs are available from your dealer or Kirby Manufacturing.

REPLACEMENT SAFETY DECALS

Immediately replace all and any worn or damaged Safety Decals. When ordering replacement decals please provide the unit's serial and model number.

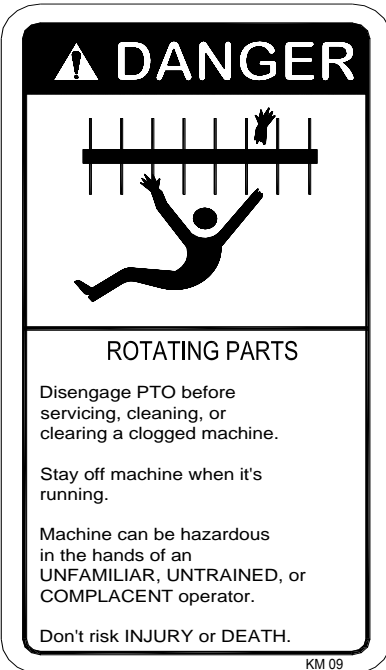


Figure A
DANGER: Rotating Parts
Part No. KM-09



Figure B
WARNING: Run-Away Hazard
Part No. W-300

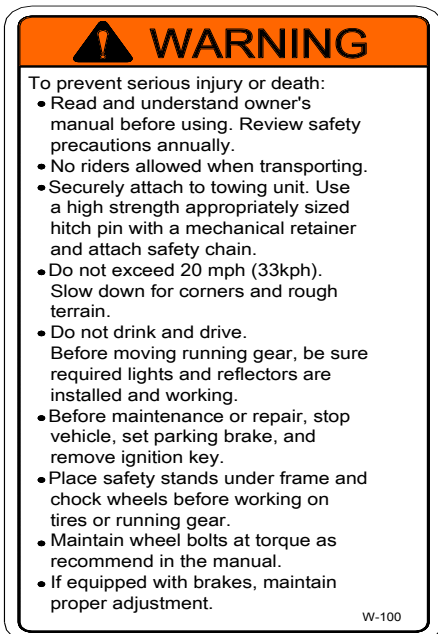


Figure C
WARNING: To prevent Serious Injury
Part No. W-100



Figure D
WARNING: Crushing Hazard
Part No. W-200

 **REPLACEMENT SAFETY DECALS; (cont.)**



Figure E
DANGER: use only authorized
 Part No. KM-02



Figure F
WARNING: service and adjust
 Part No. W-100



Figure G
IMPORTANT: auger bolts must be kept
 Part No. N/A



Figure H
IMPORTANT: keep area between
 Part No. N/A

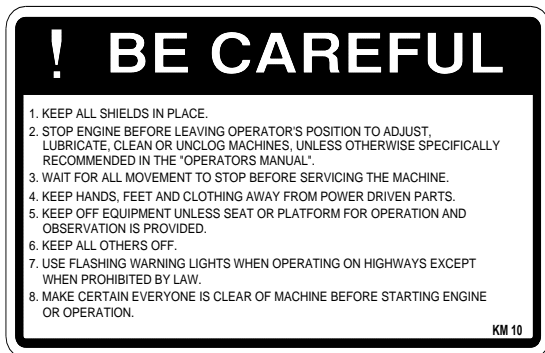


Figure I
BE CAREFUL: keep all shield in place
 Part No. KM-10



Figure J
Danger: beware of moving parts
 Part No. KM-01

 **REPLACEMENT SAFETY DECALS; (cont.)**



Figure K
DANGER: drive shaft
Part No. KM-07

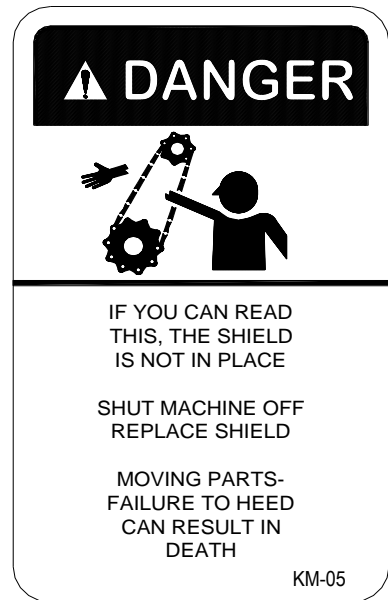


Figure L
DANGER: if you can read this
Part No. KM-05

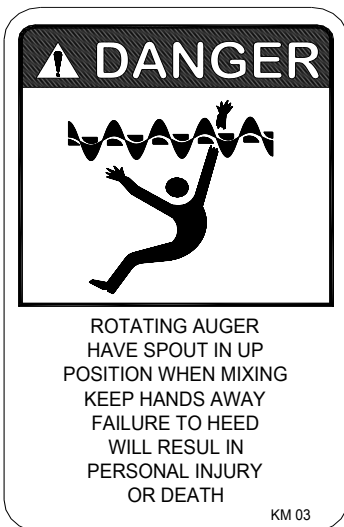


Figure K
DANGER: rotating auger
Part No. KM-03



Your best assurance against accidents is a careful and responsible operator. If there is any portion of this manual or function you do not understand, contact your dealer or Kirby Manufacturing.



BEFORE OPERATION

Carefully study and understand this manual. Note: it is the responsibility of the owner to train all current, new and future operators of the equipment. If assistance is needed, please contact Kirby Manufacturing.

Do not wear loose-fitting clothing which may catch in moving parts.

Always wear protective clothing and substantial shoes.

Keep wheel lug nuts or bolts tightened to specified torque.

Assure that agricultural implement tires are inflated to the proper pressure.

Prior to operating the equipment, give the equipment a visual inspection for any loose bolts, worn parts or cracked welds, and make necessary repairs. Follow the maintenance safety instructions included in this manual.

Be sure that there are no tools lying on or in the mixer/feeder.

Do not use the unit until you are sure that the area is clear, especially of children and animals. Always check inside of mixer prior to starting it up.

Because it is possible that this mixer/feeder may be used in dry areas or the presence of combustibles, special precautions should be taken to prevent fires and firefighting equipment should be readily available.

Don't hurry the learning process or take the unit for granted. Ease into it and become familiar with your new mixer/feeder.

Practice operation of your mixer/feeder and its attachments. Completely familiarize yourself and other operators with its operation before using.

Securely attach to towing unit. Use a high strength, appropriately sized hitch pin with a mechanical retainer.

Do not allow anyone to stand between the tongue or hitch and the towing vehicle when backing up to the mixer/feeder.



DURING OPERATION

Beware of bystanders, **particularly children!** Always look around to make sure that it is safe to start the engine of the towing vehicle or move the unit. This is particularly important with higher noise levels and quiet cabs, as you may not hear people shouting.

NO PASSENGERS ALLOWED - Do not carry passengers anywhere on, or in, the tractor or equipment, except as required for operation.

Keep hands and clothing clear of moving parts.

Do not clean, lubricate or adjust your mixer/feeder while it is running.

Be especially observant of the operating area and terrain - watch for holes, rocks or other hidden hazards. Always inspect the area prior to operation.

Do not operate on steep slopes as overturn may result.

Operate up and down (not across) intermediate slopes. Avoid sudden starts and stops.

Pick the most level possible route when transporting across fields. Avoid the edges of ditches or gullies and steep hillsides.

Be extra careful when working on inclines.

Periodically clear the equipment of hay, feed, twine or other materials to prevent buildup of dry combustible materials.

Maneuver the tractor or towing vehicle at safe speeds.

Avoid overhead wires or other obstacles. Contact with overhead lines could cause serious injury or death.

Avoid loose fill, rocks and holes; they can be dangerous for equipment operation or movement. Allow for unit length when making turns.

Do not walk or work under raised components or attachments unless securely positioned and blocked.

Keep all bystanders, pets and livestock clear of the work area.

Operate the towing vehicle from the operator's seat only.

Never stand alongside of the unit with engine running. Never attempt to start engine and/or operate machine while standing alongside of unit.



DURING OPERATION; (CONT.)

Never leave a running mixer/feeder unattended.

As a precaution, always check the hardware on mixer/feeder prior to operating the equipment. Correct all problems. Follow the maintenance safety procedures.



FOLLOWING OPERATION

Following operation, or when unhitching, stop the tractor or towing vehicle, set the brakes, disengage the PTO and all power drives, shut off the engine and remove the ignition keys.

Store the unit in an area away from human activity.

To prevent damage to the equipment and injury to livestock, do not park equipment where it will be exposed to livestock for long periods of time.

Do not permit children to play on or around the stored unit.

Make sure parked machine is on a hard, level surface and engage all safety devices.

Wheel chocks should be used to prevent unit from rolling.



HIGHWAY AND TRANSPORT OPERATIONS

Adopt safe driving practices:

Keep the brake pedals latched together at all times. Never use independent braking with machine in tow as loss of control and/or upset of unit can result.

Always drive at a safe speed relative to local conditions and ensure that your speed is low enough for an emergency stop to be safe and secure. Keep speed to a minimum.

Reduce speed prior to turns to avoid the risk of overturning.

Avoid sudden uphill turns on steep slopes.

Always keep the tractors or towing vehicle in gear to provide engine braking when going downhill. Do not coast.



HIGHWAY AND TRANSPORT OPERATIONS; (CONT.):

Comply with state and local laws governing highway safety and movement of farm machinery on public roads.

Use approved accessory lighting, flags and necessary warning devices to protect operators of other vehicles on the highway during transport (day and night).

The use of flashing amber lights is acceptable in most localities. However, some localities prohibit their use. Local laws should be checked for all highway lighting and marking requirements.

When driving the tractor and mixer/feeder on the road or highway under 20 MPH (40 KPH) at night or during the day, use flashing amber warning lights and a slow-moving vehicle (SMV) identification emblem.

Plan your route to avoid heavy traffic.

Be a safe courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc.

Be observant of bridge loading ratings. Do not cross bridges rated lower than the gross weight at which you are operating.

Watch for obstructions overhead and to the side while transporting.

Always operate mixer/feeder in a position to provide maximum visibility at all times.

Make allowances for increased length and weight of the mixer/feeder when making turns, stopping the unit, etc.



PERFORMING MAINTENANCE

Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.

Make sure there is plenty of ventilation. Never operate the engine of the towing vehicle in a closed building. The exhaust fumes may cause asphyxiation.

Before working on the mixer/feeder, stop the towing vehicle, set the brakes, and disengage the PTO and all power drives, shut off the engine and remove the ignition keys.

Be certain all moving parts on attachments have come to a complete stop before attempting to perform maintenance.



PERFORMING MAINTENANCE;(CONT.):

Always use a safety support and block the wheels. Never use a jack to support the machine.

Always use the proper tools or equipment for the job at hand.

Use extreme caution when making adjustments.

When disconnecting hydraulic lines, shut off hydraulic supply and relieve all hydraulic pressure.

Never use your hands to locate hydraulic leaks on attachments. Use a small piece of cardboard or wood. Hydraulic fluid escaping under pressure can penetrate the skin.

Openings in the skin and minor cuts are susceptible to infection from hydraulic fluid. If injured by escaping hydraulic fluid, see a doctor at once. Gangrene can result. Without immediate treatment, serious infection and reactions can occur.

Replace all shields and guards after servicing and before moving.

After servicing, be sure all tools, parts and service equipment are removed.

Do not allow grease or oil to build up on any step or platform.

Never replace hex bolts with less than grade five (5) bolts unless otherwise specified.

Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications.

Kirby Manufacturing will not claim responsibility for use of *unapproved parts* and/or accessories and other damages because of their use. This will void your warranty.

If equipment has been altered in any way from original design, Kirby Manufacturing does not accept any liability for injury or warranty.

A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this mixer/feeder.

2.0 MIXER STRUCTURE AND TRAILER

- Observe for cracks in metal and welds in mixer chamber, trailer frame, and axle assembly and around discharge door and chute. Re-weld as necessary.
- Observe trailer hitch for
 - (I) Cracked welds. Re-weld as necessary.
 - (II) Bent or worn. Replace or repair as necessary.
- Observe that all bolts are in place and that all setscrews are properly seated. Replace or tighten as required.
- Observe for hydraulic oil leaks. Repair any leaks.
- Trailer mount only. Observe trailer tires:
 - (I) For cuts or punctures in tires.
 - (II) Check for proper inflation using pressure gauge.(fill to the maximum pressure rating shown on side of tire)
- Observe wheel hubs and bearings.
 - (I) Check for oil seal leaks. Replace if seal leaks.
 - (II) Check wheel hubs for proper bearing tightness. Tighten as required.
 - (III) Observe oil level in cap, oil must be level with bottom of filler hole. Fill with proper lubricant to over flow.

3.0 MAIN AUGERS, SHAFTS, AND BEARINGS

CAUTION! THE MIXER MUST BE SHUTDOWN FOR THE FOLLOWING CHECKS

- Observe auger flighting, in mixing chamber
 - (I) Bent, deformed, or worn to less than 25% of new thickness.
 - (II) Replace flighting as necessary.
 - (III) Check blades on mixer replace when worn
- Observe mixing chamber, sides and ends.
 - (I) Walls and ends should be straight, not bulging in appearance. This condition can result from over loading or foreign objects present in ration.
 - (II) Look for signs of excessive wear
- Observe tractor drive line and mixer drive line for bent shafts.
 - (I) insure all shields are in place and operational (sliding without restrictions)

4.0 SPROCKET AND CHAINS

- Observe chain for properly seating on sprocket. Use caution while observing mixer while in operation. Look for chain jerking motion, when chain wraps around sprocket. Jerking motion may indicate:
 - (I) Misalignment of chain and sprocket. Realign
 - (II) Worn or loose chain. Replace worn chain.
 - (III) Loose chain idlers. Reposition and tighten idler.
 - (IV) Bent shafts. Replace with new shafts.

- Observe sprocket tooth wear pattern.
 - (I) Tooth worn on sides indicates misalignment. Realign sprocket.
 - (II) Tooth worn to a sharp point indicates loose or worn chain. Adjust sprockets
 - (III) Tooth worn to cup at base indicates excessive load on chain. Adjust sprockets

- Observe sprockets for the following.
 - (I) Main key sheared or shearing. Replace key.
 - (II) Main setscrews loose or missing. Tighten or replace.
 - (III) Movement or signs of movement of sprockets on shaft. Tighten or replace.
 - (IV) Alignment - Using a straight bar, insure that both sprocket faces are in full contact with the edge of the bar.

5.0 GEAR BOXES

- Main planetary drive.
 - (I) Check for loose mounting bolts.
 - (II) Observe for leaks.

- Two speed gearboxes
 - (I) Observe shaft seals for leaks. Replace seals.
 - (II) Check for loose bolts that secure gearbox to mounting bracket.
 - (III) Check for misalignment to other components: U-joints. Shear hub
 - (IV) Check input shaft, movement indicates worn bearings. Replace.
 - (V) Check out put shaft for movement, realign and tighten set screws.
 - (VI) Check to see that the oil is level with the filler plug located on the side of this gearbox. Fill to overflow.
 - (VII) Check tightness of gearbox mounting bolts.

- Check shifting lever and cables. Adjust cable for optimum engagement in both *high* and *low* speed selections on gearbox.

- For regular service, refer to the “*Preventive Maintenance and Lubrication Schedule*” located in **Section 8** of the manual.

6.0 DRIVELINES AND POWER TAKEOFFS

- Tractor PTO driveline
 - (I) Shields must be secured by locking devices
 - (II) Shields must slide freely.
 - (III) Check shields for damage.
 - (IV) Driveline shafts must slide freely, binding may cause false readings on the scale system. Lubricate all shaft splines.
 - (V) U-joints cross & yoke must fit tight in the bearing cups and have zerker fittings for lubrication.

- Truck mounted mixer PTO's
 - (I) Observe for oil leaking around PTO shaft seal. Replace seal.
 - (II) Check PTO for loose bolts holding PTO to transmission or engine crank shaft. Tighten bolts.
 - (III) Check U-joints, bearings, yokes, and set bolts. Replace worn parts and tighten all bolts.
 - (IV) Lubricate driveline "U" joints as per the "*Preventive Maintenance and Lubrication Schedule*"

- Mixer drive line.
 - (I) Check for loose or missing set screws or lock collars in pillow block bearings and driveline yokes. Tighten or replace lock collars set screws.
 - (II) Check for loose or missing bolts in pillow block bearings. Tighten or replace.
 - (III) Observe driveline under operation. **CAUTION STAY CLEAR OF ALL MOVING PARTS, DO NOT WEAR LOOSE CLOTHING!!**
 - (IV) Check for vibration, worn bearings, bad U-joint bearings, or bent shaft. Replace worn or damaged parts.
 - (V) Observe for linear movement through bearings, this is indicated by unpainted surface of shaft exposed on each side of bearing locking collar. Realign and tighten loose locking bolts.
 - (VI) Observe for loose set screws or PTO shaft not slipping in sleeve, causing end thrust load on the bearings.
 - (VII) Check for bent shaft. Replace and grease as per lubrication schedule.

7.0 MAIN HYDRAULIC SYSTEM

STATIONARY AND TRUCK MOUNTED HORIZONTAL MIXERS

QUICK REFERENCE INFORMATION

Thank you for your investment in a Kirby hydraulic driven mixer. With proper care and service, you can extend the life of the hydraulic system.

Your system is equipped with a Sauer-Sundstrand Series 90 axial piston pumps, a Parker/VOAC variable displacement hydraulic motor Series V12 and a comer planetary gearbox.

To ensure hydraulic system efficiency only fresh, clean oil should be added to the hydraulic tank. **ALL** hydraulic oil that is added to the system **must be filtered** through a 10-micron filter to ensure oil cleanliness. If any lines are damaged, unfastened or replaced, **extreme** care must be taken to prevent dirt from entering the hydraulic system. All open lines should be capped. Filter indicator should be checked regularly, and the filters should be replaced if indicated, or as hours of use require. When replacing the filters always replace O-ring on canister.

Kirby Manufacturing recommends that only authorized *Kirby* filters be used for replacement. The filters used must be at least a 10-micron filter. Oil specifications are Pennzoil AW68.

It is critical that proper maintenance and filter changes be made on a regular basis. Warranty is based on the regular maintenance of your system. Not changing your oil and filters properly and within the time frame given **WILL VOID YOUR WARRANTY**. All filters should be kept clean and free of foreign contaminants when replacing to avoid oil contamination.

All hydraulic filters and all planetary gearbox oil should be changed after the first **initial 50 hours** of use. Thereafter, all hydraulic filters should be changed every 500 hours. Use the reservoir filter gauges, located on the top of the hydraulic fluid reservoir, to help determine when the next filter change is necessary.

The first oil change on the planetary gearboxes should occur after **50 hours** of use. Thereafter, oil changes should occur every **1,000 hours**.

Procedure for changing the oil in the planetary gearbox:

1. First, run unit to warm oil in gear boxes
2. To drain the planetary gearbox oil, place a bucket under the planetary gearbox to catch the used oil, unscrew the plug from the bottom of the gearbox. Let the oil from the gearbox drain into the bucket.
3. Take two plugs out of the side of the gearbox. The plugs should be opposite of each other. Place an air hose to one of the side plugs. Using compressed air (no more than 20 psi.) gently force the oil out the bottom of the gearbox. **Note:** Excessive air pressure could damage the top output seal of the gearbox.
4. To fill the gearbox, re-attach the *plug* to the bottom of the gearbox.
5. Add oil through one of the open side plugs with a hand pump (approx. 3 gallons), until oil comes out of the other open side plug.
6. Re-place both side plugs. You have successfully changed the oil in the gearbox.

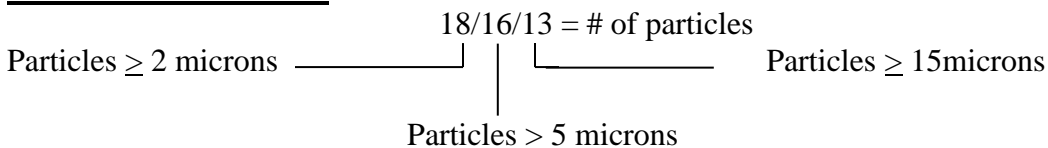
Recommended oil for this gearbox is **PENNZOIL MULTI-PURPOSE GEARLUBE 4140, GRADE SAE-85W-140 with “EP” (Extreme Pressure) additive** (for other oil choices see the additional specification listed below)

If you have opted for the “*Extended Warranty*”, you will be provided with oil sampling kits. You should use these kits when pulling oil samples on your equipment. It is crucial that oil samples be pulled in accordance to the provided schedule. **YOUR WARRANTY WILL BE VOID IF ONE OIL SAMPLING TEST IS MISSED.**

Once your oil sample is sent in and analyzed, the information will then be sent back to you. This information will provide you with valuable information on the condition and maintenance of your hydraulic system. It is your (the customer’s) responsibility to maintain the oil cleanliness to the specifications provided. **OIL SAMPLING SHOULD BE DONE WITH EVERY OIL FILTER CHANGE, INCLUDING THE FIRST 50 HOURS.**

After you receive your fluid analysis report, you should check it to ensure that it meets or exceeds the specifications stated. For hydraulic oil the “cleanliness code” specifications are as follow: Your hydraulic oil should be in the 18/16/13 range. Any sampling that is lower than this is good; any sampling that is higher is an indication that your oil is not clean and thus will reduce the life expectancy of your system. You must **immediately** change your hydraulic filters and oil and run the unit for 50 hours and take another sample.

ISO CODE MEANING



If you have opted for the “*Extended Warranty*”, you will receive all the necessary oil sampling kits when you receive your equipment. It is the customer’s responsibility to pull the oil samples and send them in for analysis. All mail charges will be paid by the customer.

We suggest that you buy your next set of change of filters. It will require two (2) in-tank element part # 7950 and a charge pump filter # 7956. We recommend that you NEVER use paper element filters. Kirby offers a high efficiency, and high capacity Microglass III type.

Oil temperature, cooling system and low fluid volume shut-down

Your unit is equipped with a hydraulic oil temperature readout (optional read-out) and hydraulic oil cooling system.

Normal operating temperature range of your system depends on ambient temperature and duty cycle. The range should vary between 150 and 180 degrees Fahrenheit.

An automatic hydraulic shut-off for the system is set at 190 degrees Fahrenheit. If the hydraulic oil reaches the 190-degrees mark, the hydraulic system will automatically shut down.

You will still be able to drive your truck (truck mounted models), but the system will not come back on until the oil cools down. If this failure occurs and you are unable to find the cause, call *Kirby Mfg. Inc* 209-723-0778 for further assistance.

Your system has a hydraulic oil cooling system equipped with fan(s), which automatically will turn on when the oil temperature reaches 120 degrees. The radiator for this system should be cleaned on a **daily basis**. **NOTE**: be careful not to damage cooling fins on radiator when using compressed air to blow out radiator. You should periodically physically check the fans to ensure they are working when the hydraulic fluid temperature is above 120 degrees.

Your unit is also equipped with a low volume hydraulic sensor in the hydraulic fluid reservoir. If for any reason, there is a loss of hydraulic fluid in the system the unit will automatically shut down. For truck mounted units with front mounted pumps, the truck engine must not be started. **SEVERE DAMAGE** will occur to the hydraulic system if you run the truck engine after the hydraulic system has automatically shut down.

A check of the system should be made to determine the cause of the low volume shut-down. If for whatever reason, your unit is not equipped with the “automatic shut-down” feature and you have a major loss of hydraulic fluid in the system, you **must** shut down the truck engine **immediately** or the hydraulic system will be **severely damaged**.

GENERAL CHECK LIST

- Observe all fittings, pipes, tubes, and hoses for leakage. Tighten as needed.
- Observe oil level in main tank. On truck mount or stationary units, the dipstick capacity allowed is 95 liters. (25 gallons)
- On tractors, the maximum pump capacity required to operate the mixer is 53 liters per minute (14 gpm) @ 2200 P.S.I. The minimum pump capacity required to operate the mixer is 46 liters per minute (12 gpm) @ 2200 P.S.I.
- Manifold block specification is 53 liters per minute (14 gpm) @ 3000 P.S.I. **Caution: do not exceed these limits.**
- Manifold relief valve is factory set @ 2200 P.S.I. for maximum safety to the system.
- Manifold needle valve controls the speed at which the door opens. It may be adjusted as needed.
- Discharge conveyor motor specification, maximum 57 liters per minute (15 gpm) @ 1700 P.S.I.
- Discharge conveyor motor under normal operation requires a minimum of 46 liters per minute (12 gpm) to a maximum of 53 liters per minute (14 gpm) to provide adequate unload speed. The speed is controlled through the discharge flow control valve located on the mixer.
- Stalling of the discharge conveyor motor may be caused by the loss of oil pressure (P.S.I.) to the motor, due to incorrect adjustment of relief valve, or worn pump/ motor.
- Slow speed of discharge conveyor motor may be caused by the loss of oil flow from the pump source to the motor, due to worn pump or restricted flow in the tractor hydraulic system/hydraulic hoses.
- Truck mount and Stationary mixers have 12-volt solenoid valves to operate conveyor motor and hydraulic door. Solenoids may be shifted manually by inserting 1/8" shaft into the hole at each end of solenoid. This method will determine if the 12-volt power supply or the switches are defective. This method can also be used to determine if the solenoid is struck or otherwise defective resulting in a problem with the operation of the discharge.
- For service see preventive maintenance and lubrication schedule in **Section 8.**

8.0 LUBRICATION AND PREVENTATIVE MAINTENANCE

- Main auger bearings.
 - (I) Trailer mount planetary gearbox has a top bearing that needs lubrication. **Lubricate this bearing every 140 hours!**
 - (II) Check to see that all grease lines and grease zerks are in place and in good working order, not plugged, loose or kinked.
 - (III) Pump grease using a standard hand pump one (1) pump for each bearing. Always be sure the machine is operating, and the bearings are rotating to ensure that they take grease. **CAUTION: DO NOT OVER GREASE. THIS SHOULD BE A TWO MAN OPERATION. ENSURE ALL SAFETY PRECAUTIONS ARE TAKEN.**
 - 1. BEWARE OF ALL MOVING PARTS.**
 - 2. DO NOT WEAR LOOSE FITTING CLOTHING**
 - 3. BEWARE OF THE PTO**

- Discharge conveyor bearings.
 - (I) There are three pillow block bearings on the drive end of the discharge conveyor
 - (II) Which have grease zerks that need greasing once a week
 - (III) Check that all grease lines and grease zerks are in place and in good working order, not plugged, loose or kinked.
 - (IV) Pump grease using a standard hand pump grease gun 3 to 4 times for each bearing. Always be sure the machine is operating, and the bearings are rotating to ensure that they take grease. **CAUTION: DO NOT OVER GREASE. THIS SHOULD BE A TWO MAN OPERATION. ENSURE ALL SAFETY PRECAUTIONS ARE TAKEN.**
 - 1. BEWARE OF ALL MOVING PARTS.**
 - 2. DO NOT WEAR LOOSE FITTING CLOTHING**
 - 3. BEWARE OF THE PTO**

- Power takeoff. U-joints and slip sleeves.
 - (I) Follow safety procedures. **DO NOT** service while the tractor is running, or the PTO is engaged or in motion.
 - (II) Key should be removed from tractor or truck before attempting to grease the PTO, U-Joints & Yokes.
 - (III) U-joints (crosses and yokes) must be tight in the bearing cups.
 - (IV) Bearings are greased through zerk grease fittings. Pump grease using a standard hand pump grease gun until you observe grease coming out of **ALL FOUR** CUPS OF THE U-JOINT bearings.

- Check all safety shields and ensure that all are in place.

9.0 LUBRICATION SCHEDULE

(Unless stated differently in this manual use the below chart as a general lubrication schedule/guideline when performing preventative maintenance on your equipment)

PM SERVICE	1 st 50 Hours	Every 140 Hours	Every 200 Hours	Every 500 Hours	Every 1000 Hours	Every 3 Months	Every 6 Months	Every 12 Months
Change oil in All gearboxes	X				X ⁽²⁾		X ⁽²⁾	
⁽¹⁾ Pull gearbox oil sample for analysis	X				X ⁽²⁾		X ⁽²⁾	
Change hyd. Oil & Send in samples								X
⁽¹⁾ Pull hydraulic oil sample for analysis	X			X ⁽³⁾		X ⁽³⁾		
Grease top Planetary Bearing		X						
Change hydraulic oil filters	X			X ⁽³⁾		X ⁽³⁾		
Grease all Mixer bearings			X					
Grease PTO, Drive Line & Slip Sleeve			X					
Check out Mixer			X					
Repack Wheel bearings								X

NOTE: For a more detailed Preventative Maintenance (PM) Schedule refer to the “Maintenance Schedule Checklist” located at the end of this chapter.

⁽¹⁾ If you have opted for the three (3) year “Extended Warranty Policy” on all major components, it is **required** that you sample oils on the frequencies stated in the “Extended Warranty Policy” section of this manual. This is necessary to **not** void the “Extended Warranty Policy” (see the “warranty section” of this manual for more details). Even if you have not chosen the “Extended Warranty Policy”, it is “best practices” to perform regular oils sampling and analysis for proper maintenance of the equipment.

⁽²⁾ 1000hrs or 6 months whichever comes first.

⁽³⁾ 500hrs or 3 months whichever comes first.

LUBRICATE TYPES:

<u>COMPONENTS</u>	<u>LUBRICATE NAME</u>	<u>LUBRICATE TYPE</u>	<u>LUBRICATE GRADE</u>
PLANETARY GEARBOX OIL (IMPORTANT!!)	SEE CHOICES A: 1,2, or 3 BELOW	SEE CHOICES A: 1,2, or 3 BELOW	SEE CHOICES A: 1,2, or 3 BELOW
PLANETARY GEARBOX TOP BEARING GREASE	SEE CHOICE B: BELOW	SEE CHOICE B: BELOW	SEE CHOICE B: BELOW
“TEE” AND 90° GEARBOX OIL (TRAILER ONLY)	SEE CHOICES A: 1,2, or 3 BELOW	SEE CHOICES A: 1,2, or 3 BELOW	SEE CHOICES A: 1,2, or 3 BELOW
BEARINGS AND DRIVE LINE YOKES GREASE	PENNZOIL	AW	NLGI #2
TWO SPEED SHIFTABLE GEARBOX OIL	SEE CHOICES A: 1,2, or 3 BELOW	SEE CHOICES A: 1,2, or 3 BELOW	SEE CHOICES A: 1,2, or 3 BELOW
HYDRAULIC SYSTEM OIL (TRUCK ONLY)	PENNZOIL	AW	68
HYDRAULIC MOTOR SPLINES (TRUCK ONLY)	SEE CHOICE C: BELOW	SEE CHOICE C: BELOW	SEE CHOICE C: BELOW

A. PLANETARY GEARBOX OIL CHOICES:

(ALSO, USE THIS GEAR OIL IN RIGHT ANGLE, TEE AND TWO SPEED GEARBOXES)

- 1.) MobilMobilube SHC 75W-90
- 2.) Chevron.....Chevron RPM Synthetic Gear Lubricant SAE 75W-90
- 3.) Texaco.....Texaco Syn-Star GL 75W-90
- 4.) Texaco ...Texaco multigear EP SAE 85W-140

* **IMPORTANT !!:** All gearbox oils **MUST** have an **EP** (“Extreme Pressure”) **additive**.

B. PLANETARY GEARBOX TOP BEARING GREASE:

** Use an NLGI Grade 2 grease with an **EP** (“Extreme Pressure”) **additive**.

C. COUPLING GREASE:

Texaco Coupling grease, CPS number 221912

Use when mating male and female splined shafts and coupling to reduce “*fretting*” of spline material.

Areas of application:

- between PTO spline connections
- between hydraulic motor splines and planetary input splines

PROCEDURE FOR SAMPLING AND CHANGING OILS:

The following information pertains to changing and sampling the oils in both the gearboxes and the hydraulic circuit (trucks only) on the mixer.

Note: Always make sure to change and sample oil immediately after the equipment has been in operation. This will ensure that the oils are warm which will allow them to flow more freely when there are being drained. Also, this will ensure that any particles that are in the oil will be in suspension while pulling an oil sample. **ALWAYS PARK EQUIPMENT ON A LEVEL SURFACE WHEN CHANGING OIL AND CHECKING OIL LEVELS.**

I. GEARBOXES:

A. Planetary Gearboxes, (truck and trailer):

Draining gearbox:

1. Locate drain plug on bottom of gearbox.
2. Wipe area clean around drain plug.
3. Place drain pan under gearbox drain plug.
4. Remove drain plug from bottom of gearbox.
5. While oil is draining out capture sample in clean sampling bottle.
6. Cap sampling bottle and completely fill-out information sheet
7. **SECURELY** replace plug when last of oil has drained from gearbox.

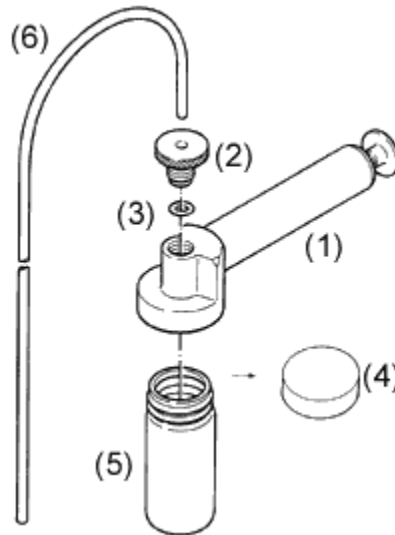
Filling gearbox:

1. Fill gearbox through fill hose, (note: since gear oil is thick and doesn't flow freely an oil dispensing pump system is needed when re-filling oil, dispensing pump pressure should **never** exceed 10 psi., so seals are not damaged).
2. **IMPORTANT:** gearbox is full **only** when oil starts to flow from the open plug on opposite side of fill hose.
3. At this point, stop adding oil to the gearbox and observe plug.
4. When the excess oil has stop flowing from the open plug opposite fill hose **SECURELY** replace cap
5. Run equipment, recheck oil levels and check for leaks
6. You have now successfully completed the oil changing process

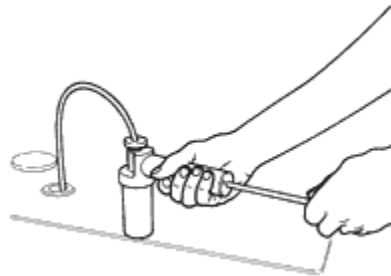
II. HYDRAULIC SYSTEM, (truck mount only):


BOTTLE SAMPLING PROCEDURE:

1. A representative oil sample should be drawn directly after the shut down before the filter.
2. Check whether the thread of the pump (1) is clean, if not please use a fluff-free cloth.
3. The sample can be taken quickly through the dip-stick opening. Please estimate the required tube length (use the dip-stick) and cut the end to an angle of approximately 45°.
4. Release the aluminium knurled screw (2) on the pump (1) so that you can insert the tube through the whole of the knurled screw.
5. Tighten the knurled screw (2). So the tube (6) will be fixed to the seal (3). The system is sealed now.
6. Screw the open sampling bottle (5) on the "VAMPIRE" pump (1).
7. Clean carefully the sample taking and avoid contamination of the tube.
8. Insert the end of the sampling tube through the inlet into the oil. The tube should not touch the bottom of the oil tank or oil pan.
9. Please hold the sampling bottle always vertically downwards (see picture).



10. Start pumping the oil into the bottle. Stop pumping early enough to prevent contamination of the pump by overflowing the bottle. Leave 1 cm of the bottle unfilled to allow the oil being shaken.
11. Loose the knurled screw to release the vacuum and remove the tube from the pump.
12. Unscrew the bottle and close it with the cap (4).



<h1>Maintenance Schedule</h1>												
equipment:		Horizontal mixer										
frequency:		100 hours, (approximately 1 week intervals); (UNLESS STATED OTHERWISE BELOW)										
MAJOR AREAS												
1. CUSTOMER INFO.												
	minor areas	item	description					check-off	follow-up required (y/n)			
	general	1	speak with equipment operators									
		2	speak with maintenance technicians									
2. HYDRAULIC SYSTEM												
	minor areas	item	description					check-off	follow-up required (y/n)			
	general	1	check for leaks; (hoses, fittings, seals, etc)									
		2	check oil levels, fill if needed (after pulling samples)									
		3	check pressure bypass settings & <u>record (where applicable)</u>									
		4	check for worn hoses & loose fittings									
		5	start mixer and check general operating parameters									
		6	check operations of hydraulic cylinders & motors									
3. MECHANICAL SYSTEM												
	minor areas	item	description					check-off	follow-up required (y/n)			
	general	1	are all guards in place, (notify customer if not)									
		2	start mixer and listen for unusual noises									
		3	look for worn/broken parts									
		4	lubricate all grease zert fittings and/or points of lubrication									
		5	check drive line shear pin									
	planetary gearbox	1	check oil levels, fill if needed; (pull oil sample and change oil every 1000 hrs, 1st oil change at 50 hrs)									
		2	pull and identify oil samples, (send out for testing)									
		3	is oil clear and free of contamination									
		4	check for leaks									
	bearings and drivelines	1	check tightness of all yokes and collars and tighten where needed									
		2	grease driveline bearings and universal joints									
	augers	1	check tightness of bolts and replace damaged bolts; GRD-8									
		2	check for damage & worn (75%) fighting									
		3	check for bent augers									
		4	bearings; check for wear, check bolt & setscrew tightness									
	mixing chamber	1	check wear on inside of mixing chamber, (floor & walls)									
		2	check stainless seams and for wear									

		3	check door operations, adjust if needed & lubricate			
		4	check hay bar of wear			
	drive component cabinet	1	check for wear on main drive chain			
		2	check for wear on sprockets, cupping, pointed teeth, etc.			
		3	check drive chain and sprocket alignment			
		4	check chain tightness and adjustment if needed			
		5	check oil level in cabinet and repair any oil leaks			
	gear boxes	1	check oil levels, fill if needed (after pulling sample)			
		2	check tightness of all mounting and yoke bolts			
		3	check for seal leaks and replace seals if needed.			
	PTO	1	check and grease shaft, (check set screws & locking collars)			
		2	check tightness of yokes			
		3	ensure guarding is in good working order			
4. WEIGH SYSTEM						
	minor areas	item	description	check-off	follow-up required (y/n)	
	general	1	check operations of scales			
		2	check for rotation of load cells and tighten alignment screw			
		3	check for damaged wiring			
		4	check and clean load cell mounting "V" brackets			
		5	check local support/truck frames for cracks			
		6	check to see if load cells are loose (i.e. not carrying the load)			
5. TEST MIXER'S OPERATIONS						
	minor areas	item	description	check-off	follow-up required (y/n)	
	general	1	"run-in" mixer for a period of time (15min+) to insure smooth operations. Walk around equipment and inspect all components for smooth operations			
ADDITIONAL NOTES AND COMMENTS:						
AFTER SERVICE IS COMPLETED; WRITE SERVICE DATE WITH YOUR INITIALS ON A STICKER AND PLACE ON UNIT NEXT TO SERIAL NUMBER ID PLATE.						

Maintenance Schedule



equipment:	Horizontal mixer (truck mount)				
frequency:	100 hours; approximately 1 week intervals; (UNLESS STATED OTHERWISE BELOW)				
	Customer	_____		Location	_____
	Date service performed	_____	Hours on unit	_____	_____
	Equipment ser. no.	_____	Service technician	_____	_____
MAJOR AREAS					
1. CUSTOMER INFO.					
	minor areas	item	description	check-off	follow-up required (y/n)
	general	1	Speak with equipment operators		
		2	Speak with maintenance technicians		
2. HYDRAULIC SYSTEM					
	minor areas	item	description	check-off	follow-up required (y/n)
	general	1	check for leaks; (hoses, fittings, seals, etc)		
		2	pull and identify oil samples, (every 1000 hrs)		
		3	check oil levels, fill if needed		
		4	change all oil filters, (every 1000 hrs)		
		5	change hydraulic oil, (every 4000 hrs.; approx. 1 year)		
		6	check pressure bypass settings & <u>record</u>		
		7	check for worn hoses		
		8	start mixer and listen for unusual noises		
		9	start mixer and check general operating parameters		
		10	check input power shaft; (lubricate yokes every 8 hrs)		
		11	check operations of hydraulic actuators		
		12	check and record pressures on pump (w/ load & w/o load)		
		13	check and record pressures on motor (w/ load & w/o load)		
3. MECHANICAL SYSTEM					
	minor areas	item	description	check-off	follow-up required (y/n)
	general	1	are all guards in place, (notify customer if not)		
		2	start mixer and listen for unusual noises		
		3	look for worn/broken parts		
		4	lubricate all grease zert fittings and/or points of lubrication		
	planetary gearbox	1	check oil levels, fill if needed; (pull oil sample and change oil every 1000 hrs, 1st oil change at 50 hrs)		
		2	pull and identify oil samples, (send out for testing)		
		3	is oil clear		

		4	grease top bearing every 8 hours			
	90 degree & "Tee" gearbox	1	check oil levels, fill if needed; (pull oil sample and change oil every 1000 hrs, 1st oil change at 50 hrs)			
		2	grease bearings; (2 locations per gear box)			
	augers	1	check backlash, (rotate auger backward & forward)			
		2	check for damage & wear on fighting			
		3	check knives for wear tightness			
	main tub	1	check wear on inside of tub, (floor & walls)			
		2	check stainless seams and wear			
		3	check door operations, adjust if needed & lubricate			
		4	check hay brake operations			
	cross conveyor	1	check for wear on chain assembly			
		2	check for wear on flooring			
		3	check drive system			
		4	check conveyor take-ups and adjust if needed			
		5	check operations of cross conveyor slide			
4. WEIGH SYSTEM						
(mechanical)	minor areas	item	description	check-off	follow-up required (y/n)	
		1	check operations of scales			
		2	check for rotation of load cells			
		3	check for damaged wiring			
		4	check and clean load cell mounting "V" brackets			
		5	check local support/truck frames for cracks			
		6	check to see load cells are loose (i.e. not carrying the load)			
ADDITIONAL NOTES AND COMMENTS:						
AFTER SERVICE IS COMPLETED; WRITE SERVICED DATE WITH YOUR INITIALS ON A STICKER						
AND PLACE STICKER ON UNIT NEXT TO SERIAL NUMBER ID PLATE.						
NOTE: The above maintenance program covers the operation of the mixer and does not include truck maintenance checks						
or safety checks. (other than guarding).						

10.0 ELECTRONIC SCALES AND LOADCELLS

CAUTION: DO NOT WELD ON EQUIPMENT. Scales must be disconnected from power source and/or battery before welding to prevent damage to micro-processor and strain gauges.

Observe (4) bolts on each load cell stabilizer bracket. They should move freely. Battery or 12-volt power supply must have a minimum of 12 volt-15volt for satisfactory operation of scale. **SEE SCALE MANUAL FOR PROPER OPERATION.**

Battery terminals, connections must be clean and corrosion free and kept tightened.

Loose connection to power or ground will interfere with scale.

Observe J-Box, load cell cables, and power cords for cuts, hanging loose or pulled too tight at the terminals and for loose connections. Correct these conditions.

CAUTION: DO NOT EXPOSE OPEN WIRES, J-BOX OR SCALE INSTRUMENTS TO DIRECT FORCE OF WATER. All entry points are water resistant but must not be subjected to direct force of water.

Scale instruments are very dependable, but microprocessors are sensitive to electrical interference.

- (I) For stationary mixer operated from commercial power, be sure to confirm that the power source is stable.
- (II) Check to eliminate the power supply as the source of a scale problem. To do this connect the scale directly to a separate charged 12-volt vehicle battery. If the scale problem goes away, the power source is the problem.
- (III) This method may also be used to trace or isolate many other glitches from unknown sources.

IMPORTANT: SCALE REPAIRS ARE BEST ACCOMPLISHED BY TRAINED AND QUALIFIED SCALE REPAIR PERSONNEL.

IMPORTANT: ELECTRICAL MOTORS, POWER SUPPLIES, AND CONTROL CABINETS MUST BE REPAIRED BY QUALIFIED SERVICE ELECTRICIANS.

11.0 EQUIPMENT OPERATIONS

Pre-Start up Check List (Ensure key is out of ignition and unit is not running)

Before operating your Kirby Mixer, make sure the following have been checked: Take appropriate action to correct any deficiencies.

Truck Mount

- Check that all guards are in place and secure
- Visually inspect all hydraulic lines for wear, fitting tightness and any hydraulic leaks
- Check hydraulic fluid level in hydraulic tank
- Visually inspect inside of mixer chamber for loose or missing blades, clear of any foreign objects, if lined with stainless steel check for wear
- Oil levels on planetary gearbox at the proper levels
- Hydraulic tank filter gauge reads green
- Charge pump filter glass ball at top reads green
- Discharge door is closed

Trailer Mount

- Check that all guards are in place and secure
- PTO lock collar of the mixer is properly locked into place on the output PTO of the tractor
- PTO guard for mixer PTO is on and shows no signs of damage
- Hydraulic lines are installed to the tractor's hydraulic remotes
- Visual inspect inside of mixer chamber for loose or missing blades, clear of any foreign objects, if lined with stainless steel check for wear
- Oil levels on planetary gearbox at the proper levels
- Visually inspect for any leaks from gearboxes
- Tires have proper inflation (fill to maximum pressure rating shown on side of tire)
- Discharge door is closed

Loading/Discharging Instructions

IMPORTANT - Idle engine speed down before engaging the Power Take Off (P.T.O) or engaging hydraulic augers by switch or T lever. Failure to do so could result in damage to the drive system.

Check operation of the following:

- Discharge door opens and closes
- Turn on scales and "0" balance or check procedure appropriate for your scale type and model (scale owner's manual)

The average mixing cycle is from 3 to 5 minutes with normal rations for a thorough and accurate mix. If possible, some mixing time can occur while traveling from the loading/mixing area to the feeding area. The correct length of time for your application will be found by experimentation.

The length cut of the hay you put into the mixer will be determined primarily by the following:

- Quality and type of hay
- How many and the sharpness of the cutting blades on your augers

- The speed of the augers (direct relationship with Engine RPM)
- Length of mixing time

Recommended RPM of mixer in a stationary position for mixing of ration (ensure all brakes are set when loading mixer)

Truck mount: 1,500 to 1,800 RPM truck engine speed

Trailer mount: 1,600 to 1,800 RPM tractor engine speed

- PTO speed 900 RPM; for tractors with the larger “1000 RPM PTOs”

- PTO speed 540 RPM; for tractors with the smaller “540 RPM PTOs”

Load hay first with mixer running at recommended RPM. If after a load you have determined that you hay needs to be cut shorter, you may want to check the RPM of the power source.

Always remove all twine, wire or wrappings from the bales before loading into the mixer.

NEVER THROW HAY BY HAND FROM THE STACK OR A PLATFORM INTO THE MIXER! The possibility of falling into the Mixer could result in serious injury or death.

Always use a loading device for all commodities loaded into the mixer.

You may continue to add the commodities with the recommendation of the following:

- Balance of grains or commodities keeping fragile commodities towards the end of the mix
- Concentrates or other dry ingredients of small quantity should be added to the middle of the loading sequence
- Silage, green chop, or other high moisture commodities
- Add wet ingredients last (water, whey, animal fat, molasses, liquid supplements)

Inspection of the mix may be made on the platform or ladder of the mixer. Caution should be taken that only one person at a time is viewing the load. **Only stand on mixer platform or ladder while mixer is stationary, (Never climb higher than the platform or ladder allow). Never stand/ride on the platform or ladder while mixer is being moved.**

NOTE: Whenever possible, leave augers running while traveling from the loading/mixing area to the feeding area. This will minimize packing of the feed mixture. On trucks mounted mixers, this can be done by not pulling the speed control handle all the way to the “OFF” position and leaving it a little forward of the “OFF” position. On trailer mounted mixers, this can be done by finding the best gear that will give you the desired ground speed you want, while at the same time allowing you to leave the PTO running at the slowest speed possible.

Discharging Instructions

The discharge rate of your mixers ration is controlled by two items:

- How far the discharge door is opened
- auger speed

On truck mounted units, the truck engine should be operated between 1500 and 1800 RPM to provide adequate hydraulic oil to operate the conveyor and door controls, and for the most effective mixer operation.

After you have engaged the tractor PTO when starting to discharge a full load, the engine of the tractor should be operating at 1800 RPM.

TWO SPEED SHIFTING, (TRUCK MOUNTED MIXER AND STATIONARY MIXER)

Your Kirby truck mount / stationary hydraulic drive mixer has a two-speed hydraulic motor coupled to each of the planetary gearbox drive of your mixing augers.

The speed of the auger is determined by two factors, one is rpm of the truck and the other is pressure required by the hydraulic system to keep the augers turning.

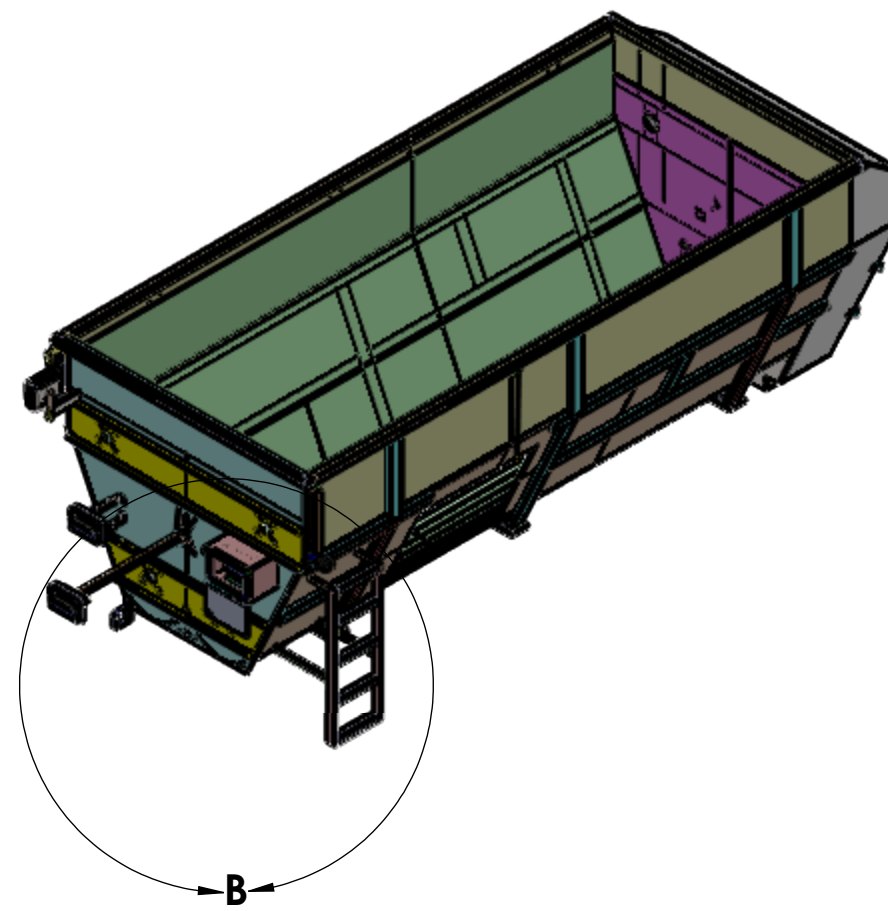
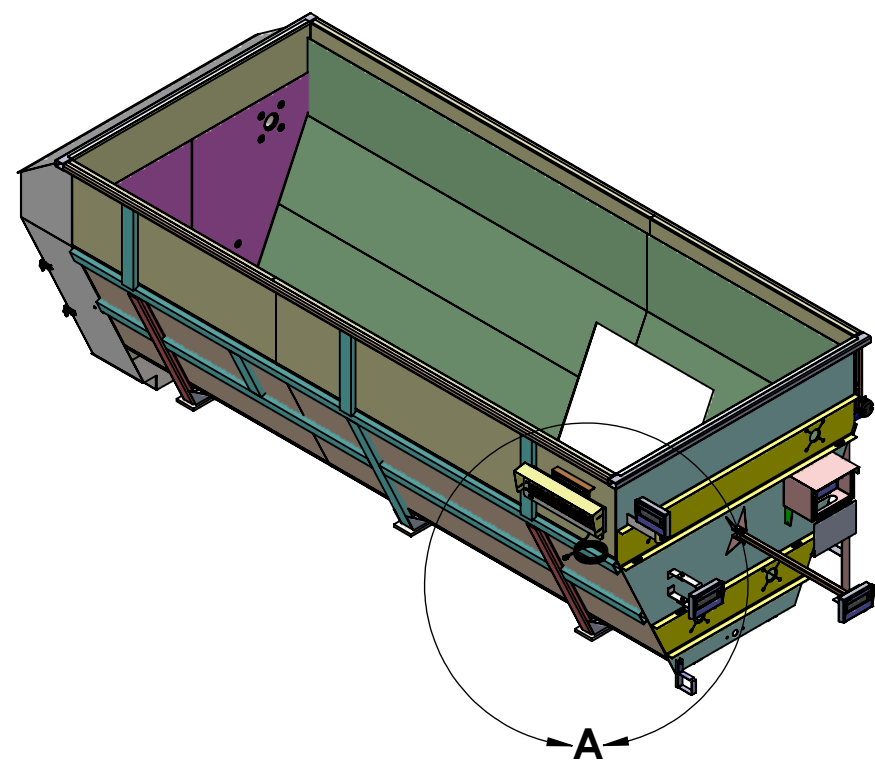
If your truck is mixing at 1800 rpm, your augers will be turning approximately 40 RPM. This is with an empty load and minimum pressure needed to turn the augers. If you were to load your hay first into the mixer the augers would be turning at approximately 40 RPM for faster cutting action. Once your load reaches a predetermined pressure (3,125psi) the augers will shift down to half the speed, (approximately 20 RPM). 3125 psi is the pressure that the hydraulic circuit experiences while in operation. This will reduce your power requirements and still give you an excellent mix.

Once you have discharged the load to a weight that produces less than 3,125psi in the hydraulic circuit the augers will automatically shift back to high speed to assist with a faster clean-out.

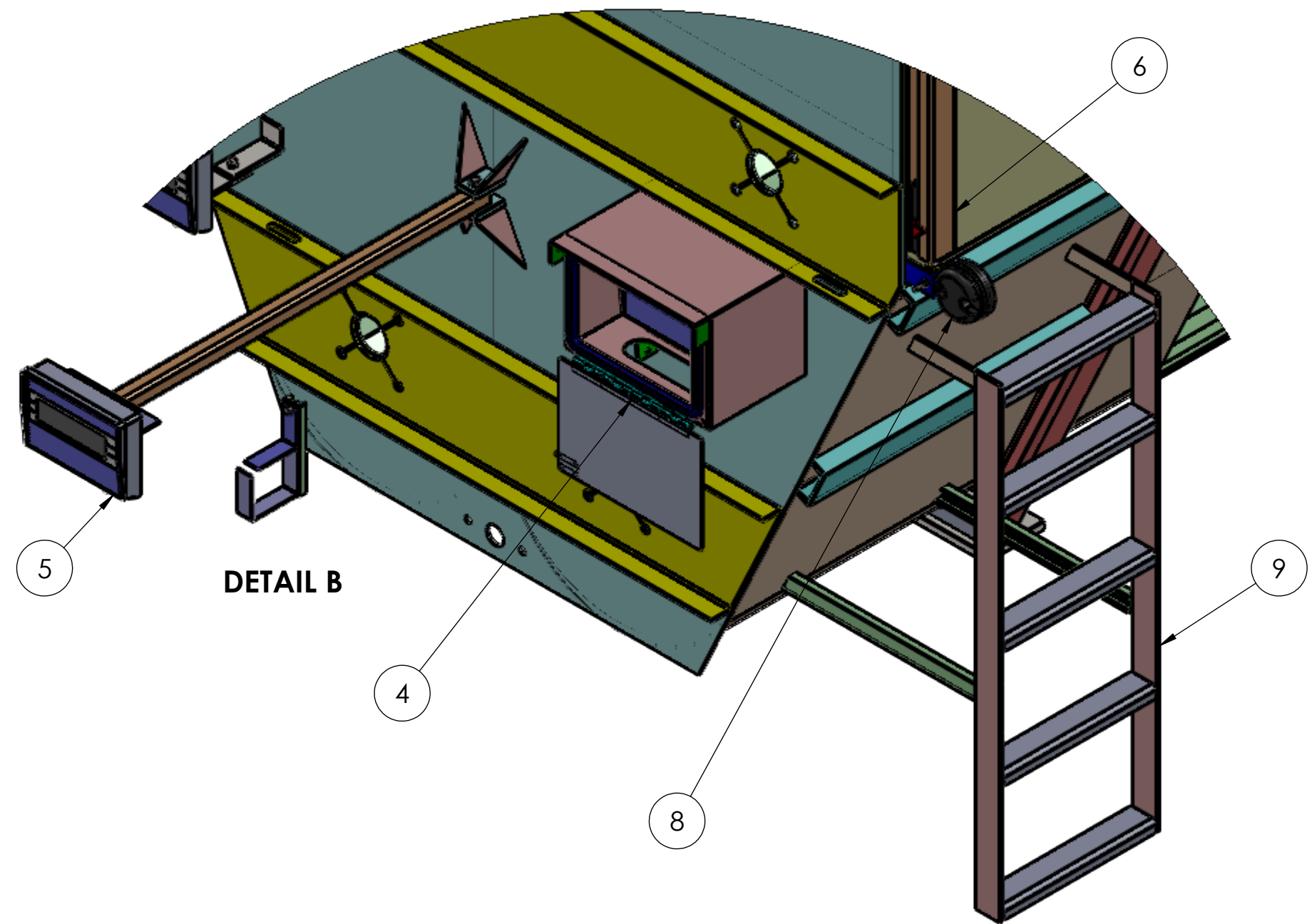
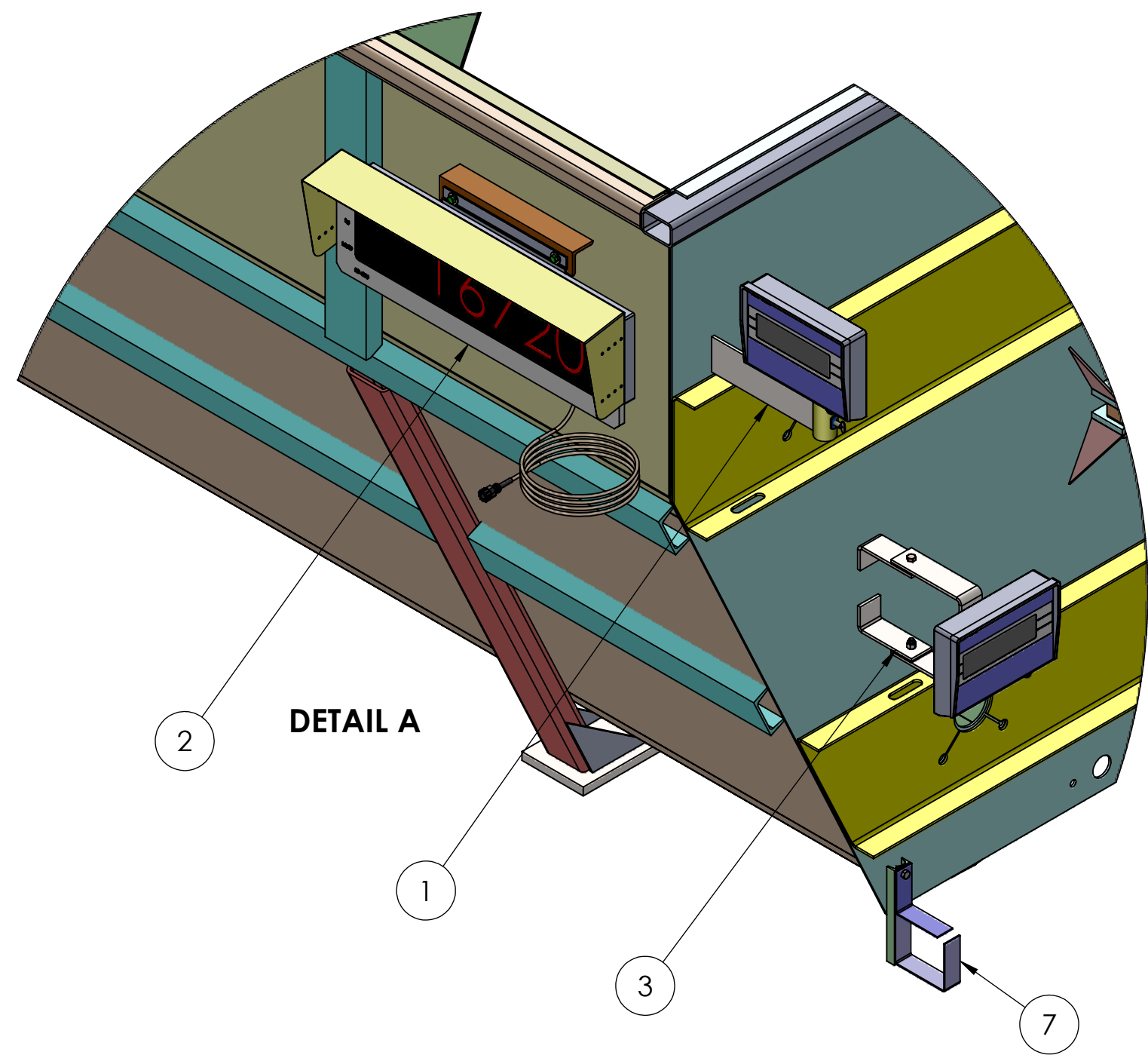
12.0 SPARE PARTS

<u>DRAWING</u>	<u>DESCRIPTION</u>
424-001A	MIXER BODY OPTIONS- I
424-001B	MIXER BODY OPTIONS - II
424-001C	MIXER BODY OPTIONS - III
424-002	BODY LINERS, STAINLESS STEEL
424-003	BULKHEAD, FRONT ASSEMBLY
424-004	GREASE LINE DETAIL, FRONT BULKHEAD
424-005	BULKHEAD, REAR DRIVE ASSEMBLY
424-006	GREASE LINE DETAIL, REAR BULKHEAD
424-007	OIL BATH CABINET & DOOR ASSEMBLY
424-008A	TRAILER, SINGLE AXLE 10', 12', 14' & 16'
424-008B	DRIVELINE, 10', 12', 14' & 16' TRAILER
424-008C	AXLE ASSEMBLY, 10-HOLE ON 11 ¼" BC
424-008D	HITCH ASSEMBLY OPTIONS
424-008E	GREASE LINE DETAIL, TRAILER BEARINGS
424-009A	TRUCK DRIVELINE PTO ASSEMBLY
424-009B	TRUCK DRIVELINE COMPONENTS
424-010	GEARBOX ASSEMBLY 1:1
424-011	GEARBOX ASSEMBLY 2:1 & 3:1
424-012A	DISCHARGE DOOR & AUGER ASSEMBLY
424-012B	DOOR & FRAME ASSEMBLY
424-012C	AUGER ASSEMBLY, 2-AUGER DISCHARGE
424-012D	FOLDING SPOUT, 2-AUGER DISCHARGE
424-012E	SPOUT & AUGER OPTIONS
424-012F	GREASE LINE DETAIL, DISCHARGE ASSEMBLY
424-013	AUGER ASSEMBLY w/ WELD ON KNIVES
424-014	AUGER ASSEMBLY w/ BOLT ON KNIVES
424-015	AGGRESSOR AUGER ASSEMBLY

424-016	HYDRAULICS, TRAILER
424-017	TANK, HYDRAULIC, 33 GALLONS
424-018	HYDRAULICS, TRUCK w/ MECHANICAL DRIVE
424-019	TRUCK CAB COMPONENTS
424-020A	ELECTRICAL SCHEMATIC – I
424-020B	ELECTRICAL SCHEMATIC - II



ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	SEE NOTE-1	DISPLAY MOUNT
2	1	SEE NOTE-1	DISPLAY MOUNT, RD4000
3	1	SEE NOTE-1	DISPLAY PIVOT MOUNT
4	1	SEE NOTE-1	DISPLAY BOX MOUNT
5	1	SEE NOTE-1	DISPLAY SWING ARM MOUNT
6	1	SEE NOTE-1	DOOR GAUGE ASSEMBLY
7	1	022043	BRACKET, PTO HANGER
8	1	4719L	FEED LIGHT, LED
9	1	22021	LADDER ASSEMBLY




NOTES: UNLESS OTHERWISE SPECIFIED

1 - SEE DRAWING NO. 424-001B & C FOR COMPONENT PART NUMBERS.

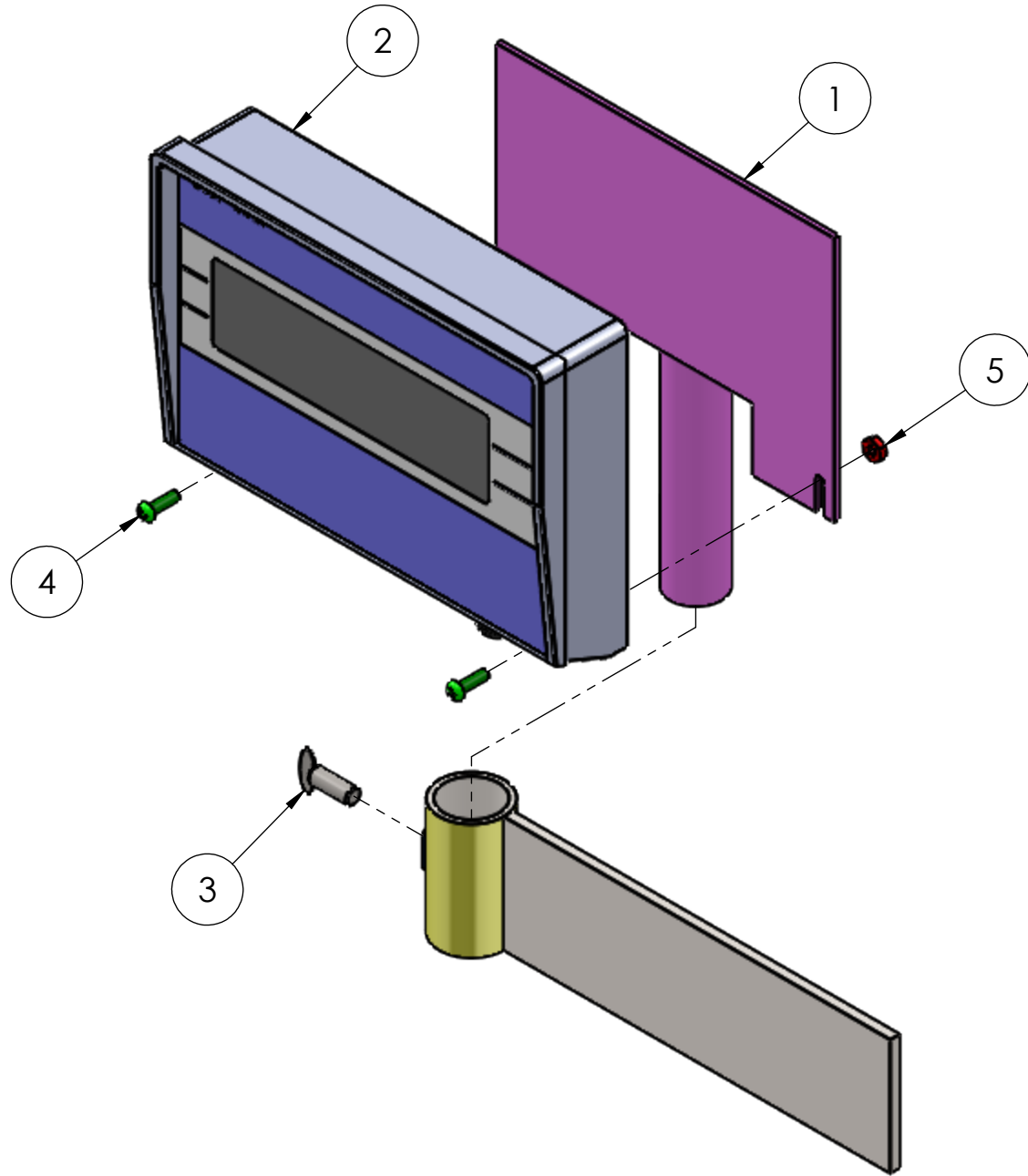
NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

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DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL ±
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		 DESCRIPTION MIXER BODY OPTIONS - I		
		JOB #: MATERIAL: SEE BOM MATERIAL P/N: FINISH: VENDOR: VENDOR P/N:				
DRAWN BY:	DATE	NAME		SIZE	PART NUMBER	REV.
DESIGNED BY:	2-28-18	MCCLURE		C	424-001A	-
APPROVED BY:				SCALE: 1:48	WEIGHT: lbs	SHEET 1 OF 1

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	21204	BRACKET, REMOTE DISPLAY MOUNTING
2	1	SEE NOTES	REMOTE DISPLAY, RD 2500V
3	1	10175	THUMB SCREW, 3/8" NC x 1" LG.
4	2	9080	SCREW, RD HD MACH. 12-24NC x 3/4" LG.
5	2	9084	NUT, HEX, MACH. 12-24 NC



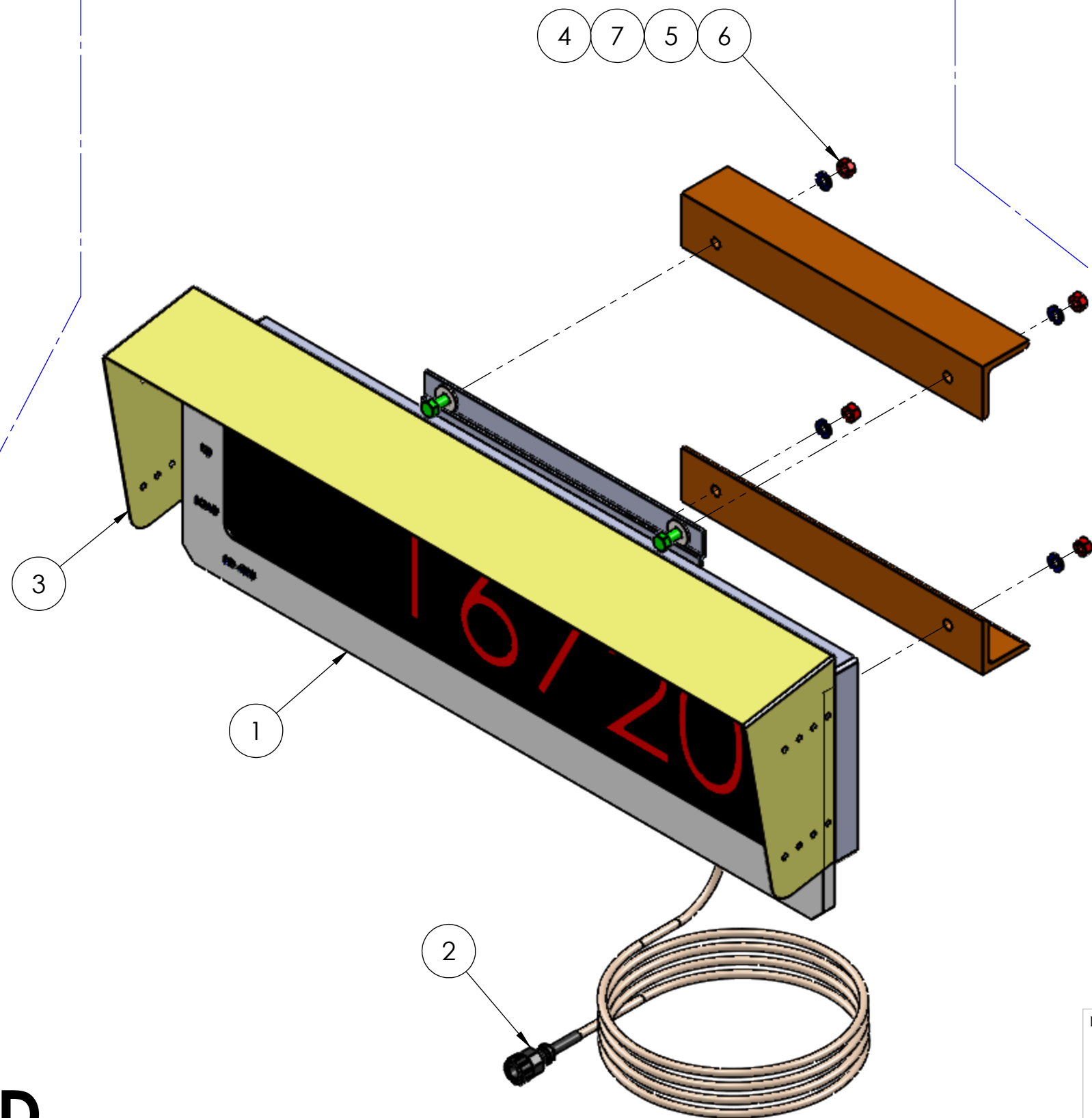
NOTES: UNLESS OTHERWISE SPECIFIED

- 1 - TO ORDER COMPLETE ASSEMBLY WITH DISPLAY AND CABLE, USE PART NO. 5204.
- 2 - TO ORDER COMPLETE ASSEMBLY WITH DISPLAY, CABLE, XMTR AND RCVR, USE PART NO. 5205.

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	5317	REMOTE DISPLAY, LED, RD 4000
2	1	5319	CABLE, RD4000 REMOTE, 33 FT. LG.
3	1	5316	VISOR, SST, W/SCREWS, RD4000
4	4	10106	BOLT- 5/16" NC GRD.5 x 1" LG.
5	4	10098	WASHER, LOCK- 5/16"
6	4	10090	NUT, HEX, 5/16" NC
7	4	10099	WASHER, FLAT, 5/16"
8	2	530-0002	ANGLE MOUNT, REMOTE DISPLAY

NOTES: UNLESS OTHERWISE SPECIFIED

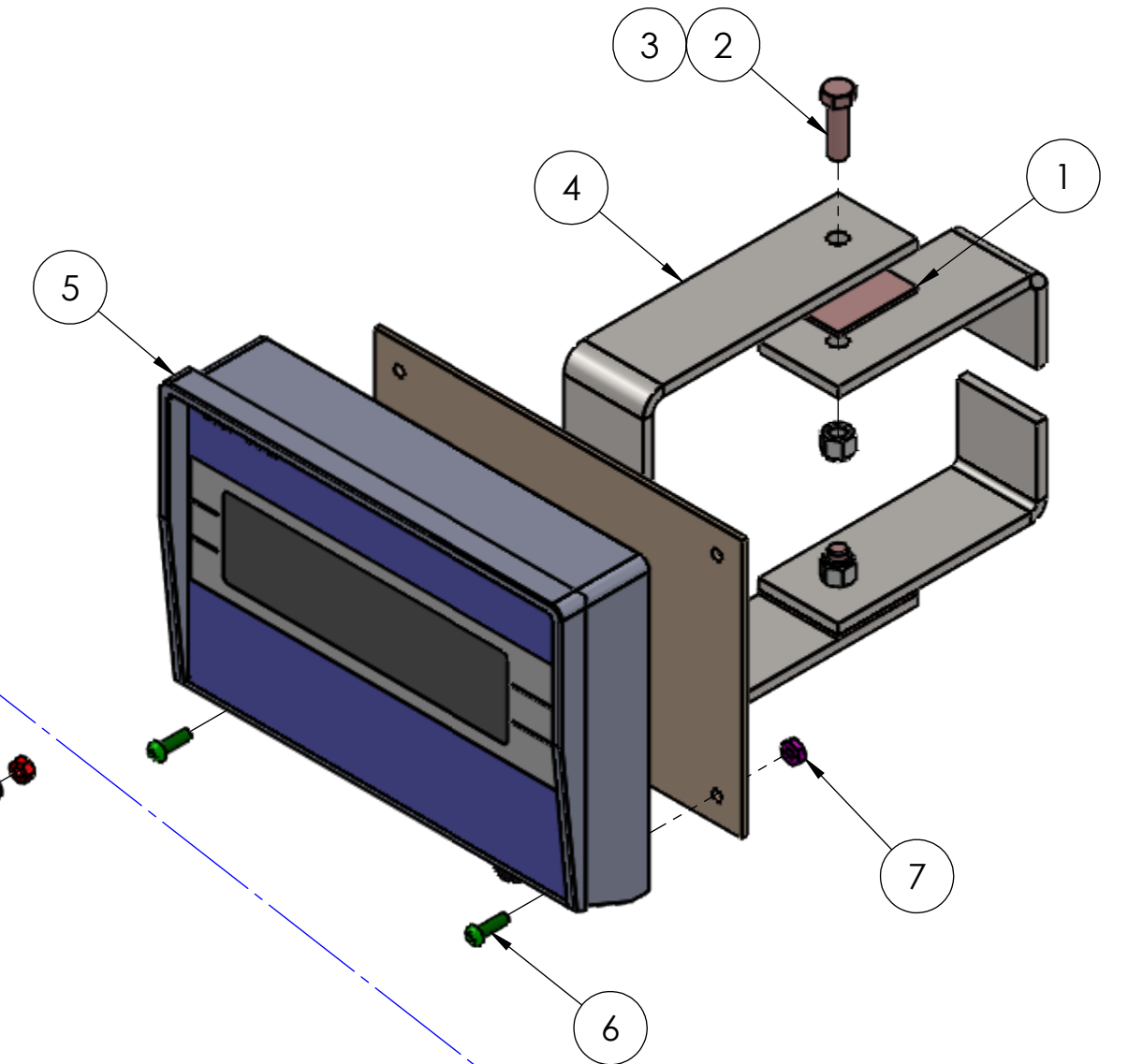
- 1 - TO ORDER COMPLETE ASSEMBLY WITH DISPLAY, CABLE AND VISOR, USE PART NO. 5314.
- 2 - TO ORDER COMPLETE ASSEMBLY WITH DISPLAY, CABLE, XMTR, RCVR AND VISOR, USE PART NO. 5315.



ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	2	6500	BELT, PIVOT PAD, 2' x 2" LG.
2	2	10186	BOLT, 3/8" NC x 1-1/4" LG.
3	2	10173	NUT, NYLOCK- 3/8" NC
4	1	SEE NOTE-1	SCALE PIVOT MOUNT
5	1	SEE NOTE-2 & 3	REMOTE DISPLAY, RD 2500V
6	2	9080	SCREW, RD HD MACH. 12-24NC x 3/4" LG.
7	2	9084	NUT, HEX, MACH. 12-24 NC

NOTES: UNLESS OTHERWISE SPECIFIED

- 1 - TO ORDER COMPLETE PIVOT ASSEMBLY, USE PART NO. 22046.
- 2 - TO ORDER COMPLETE ASSEMBLY WITH DISPLAY AND CABLE, USE PART NO. 5204.
- 3 - TO ORDER COMPLETE ASSEMBLY WITH DISPLAY, CABLE, XMTR AND RCVR, USE PART NO. 5205.



NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

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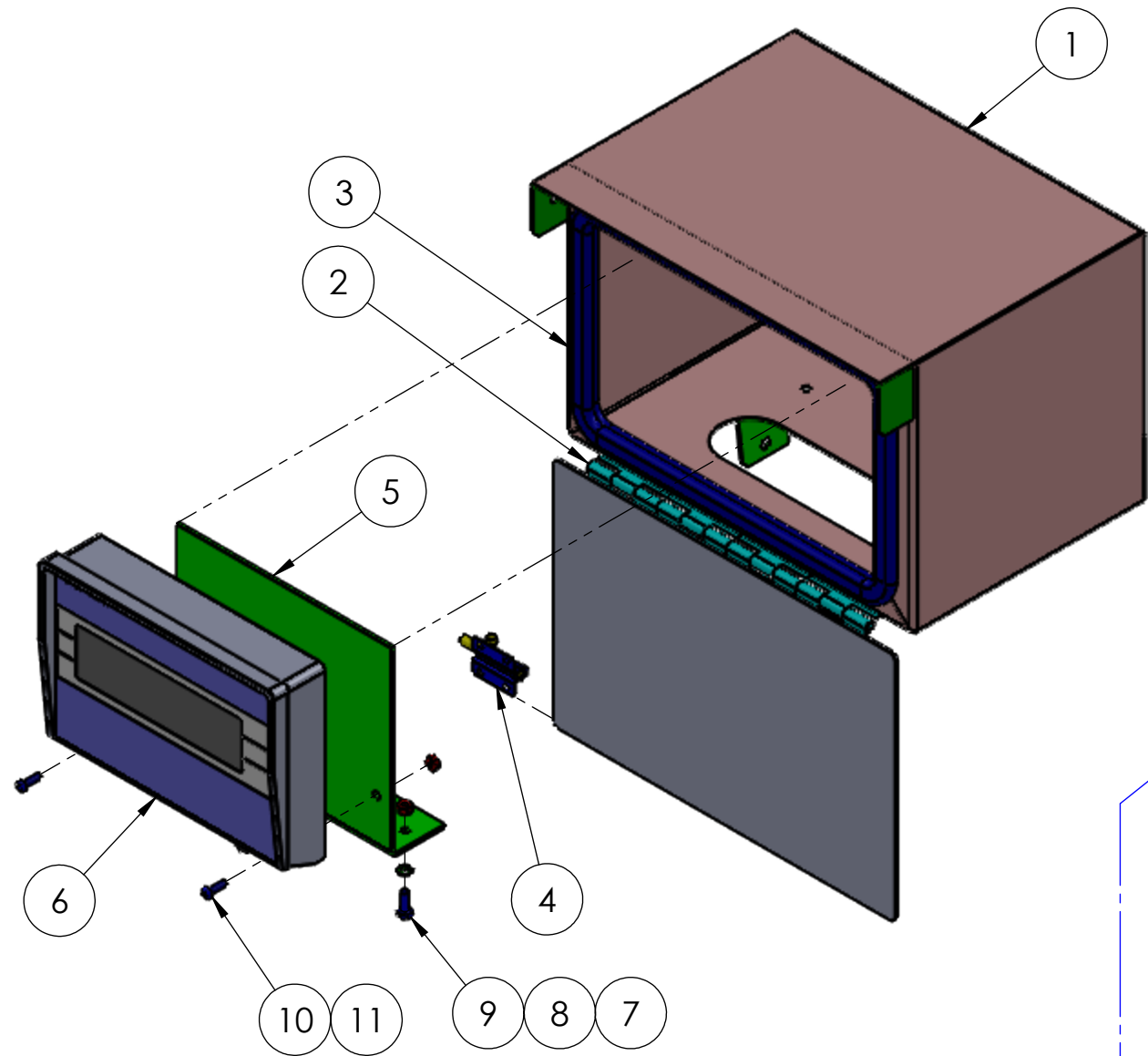
DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL ±
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		 DESCRIPTION MIXER BODY OPTIONS - II	
MATERIAL: SEE BOM		MATERIAL P/N:			
DRAWN BY:	DATE	NAME	FINISH:	SIZE	PART NUMBER
DESIGNED BY:	2-28-18	MCCLURE		C	424-001B
APPROVED BY:			VENDOR:	SCALE: 3/8	WEIGHT: 41.445 lbs
			VENDOR P/N:		SHEET 1 OF 1

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	SEE NOTE-1	WEATHER PROOF SCALE BOX
2	2	5654	PIANO HINGE
3	1	6530B	WEATHER STRIP, DOOR & SCALE BOX
4	1	5665	BARREL LATCH
5	1	21221	BRACKET, J-STAR, SCALE BOX
6	1	SEE NOTE-2 & 3	REMOTE DISPLAY, RD 2500V
7	2	10001	NUT- 1/4" NC
8	2	10009	WASHER, LOCK- 1/4"
9	2	10017	BOLT, HEX, 1/4" NC x 3/4"
10	2	9080	SCREW, RD HD MACH. 12-24NC x 3/4" LG.
11	2	9084	NUT, HEX, MACH. 12-24 NC

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	2	6942	PULLEY, 3/16" x 1 1/2"
2	1	21120	DISCHARGE DOOR INDICATOR WEIGHT
3	1	21121	DISCHARGE DOOR INDICATOR TUBE
4	1	6938	CABLE, 1/8" (CUT TO LENGTH)
5	2	6939	CABLE CLAMP 1/8"

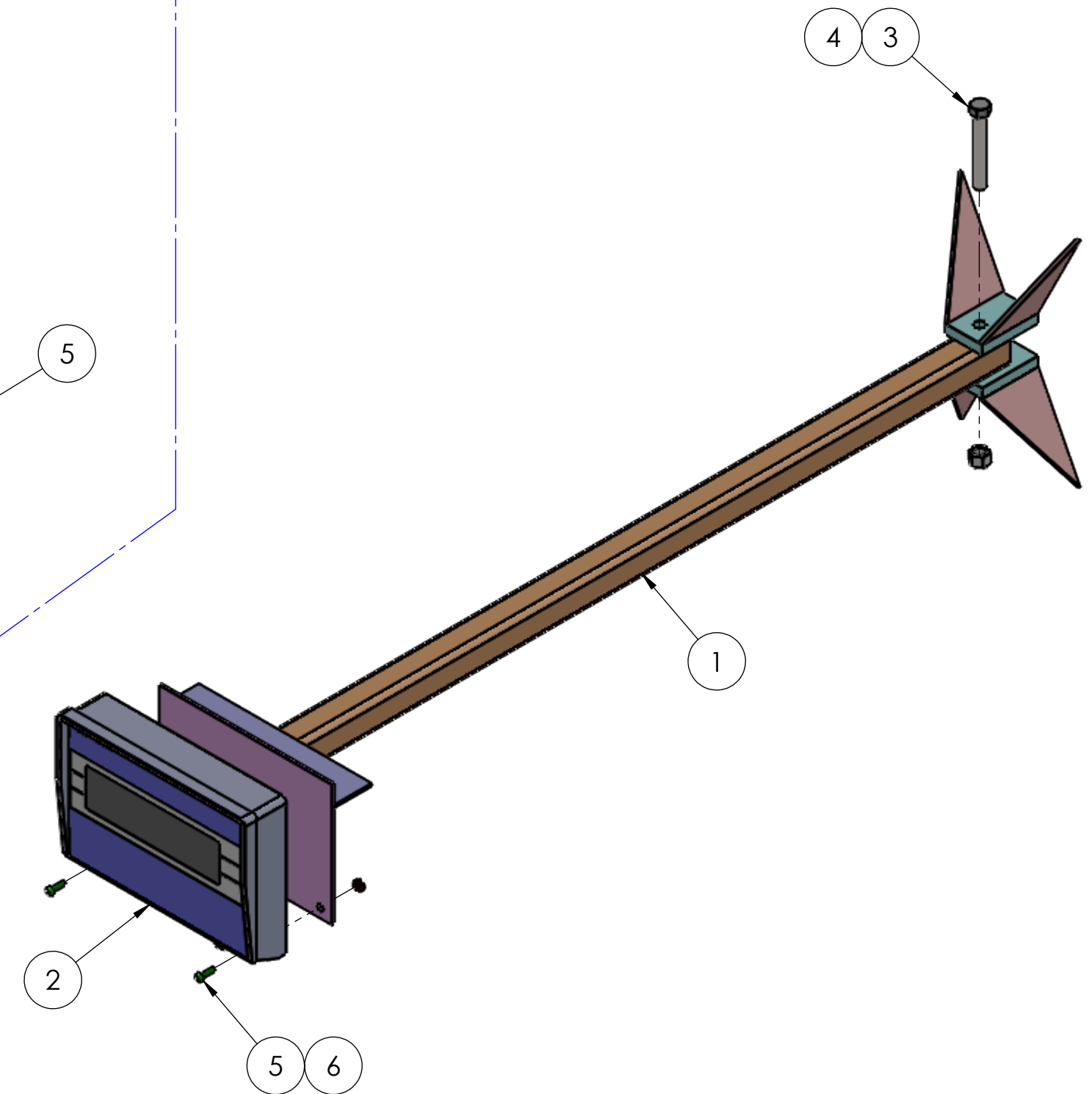
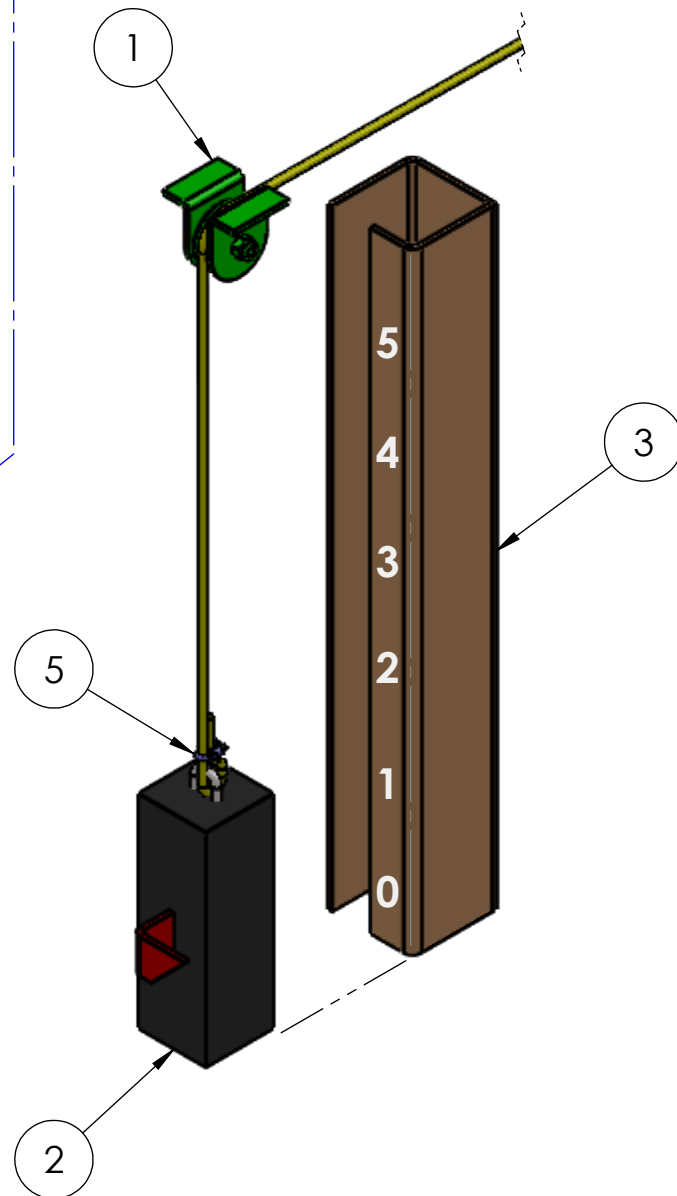
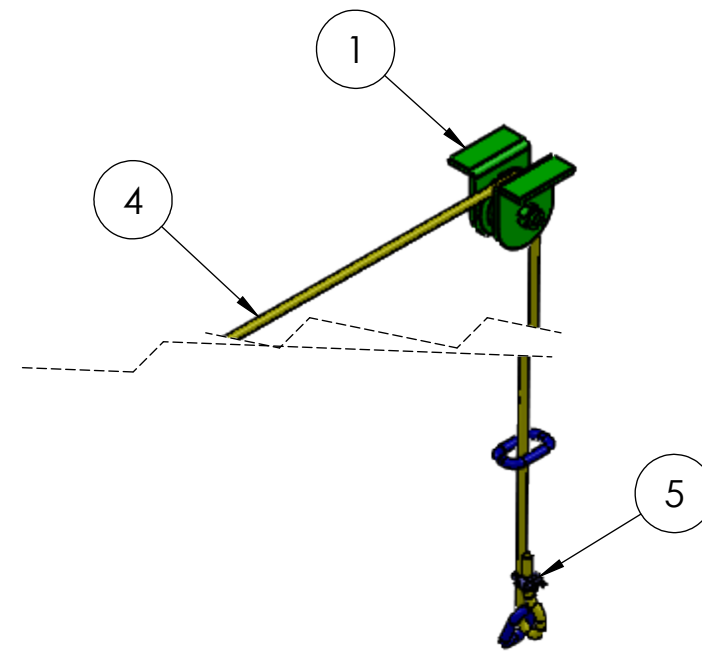
ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	SEE NOTE-1	SWIVEL ARM, SCALE
2	1	SEE NOTE-2 & 3	REMOTE DISPLAY, RD 2500V
3	1	10451	BOLT- 1/2" NC GR5 x 3 1/2" LG.
4	1	10392	NUT, NYLOCK- 1/2" NC
5	2	9080	SCREW, RD HD MACH. 12-24NC x 3/4" LG.
6	2	9084	NUT, HEX, MACH. 12-24 NC



NOTES: UNLESS OTHERWISE SPECIFIED

- 1 - TO ORDER COMPLETE BOX ASSEMBLY, USE PART NO. 22048.
- 2 - TO ORDER COMPLETE ASSEMBLY WITH DISPLAY AND CABLE, USE PART NO. 5204.
- 3 - TO ORDER COMPLETE ASSEMBLY WITH DISPLAY, CABLE, XMTR AND RCVR, USE PART NO. 5205.

NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS



NOTES: UNLESS OTHERWISE SPECIFIED

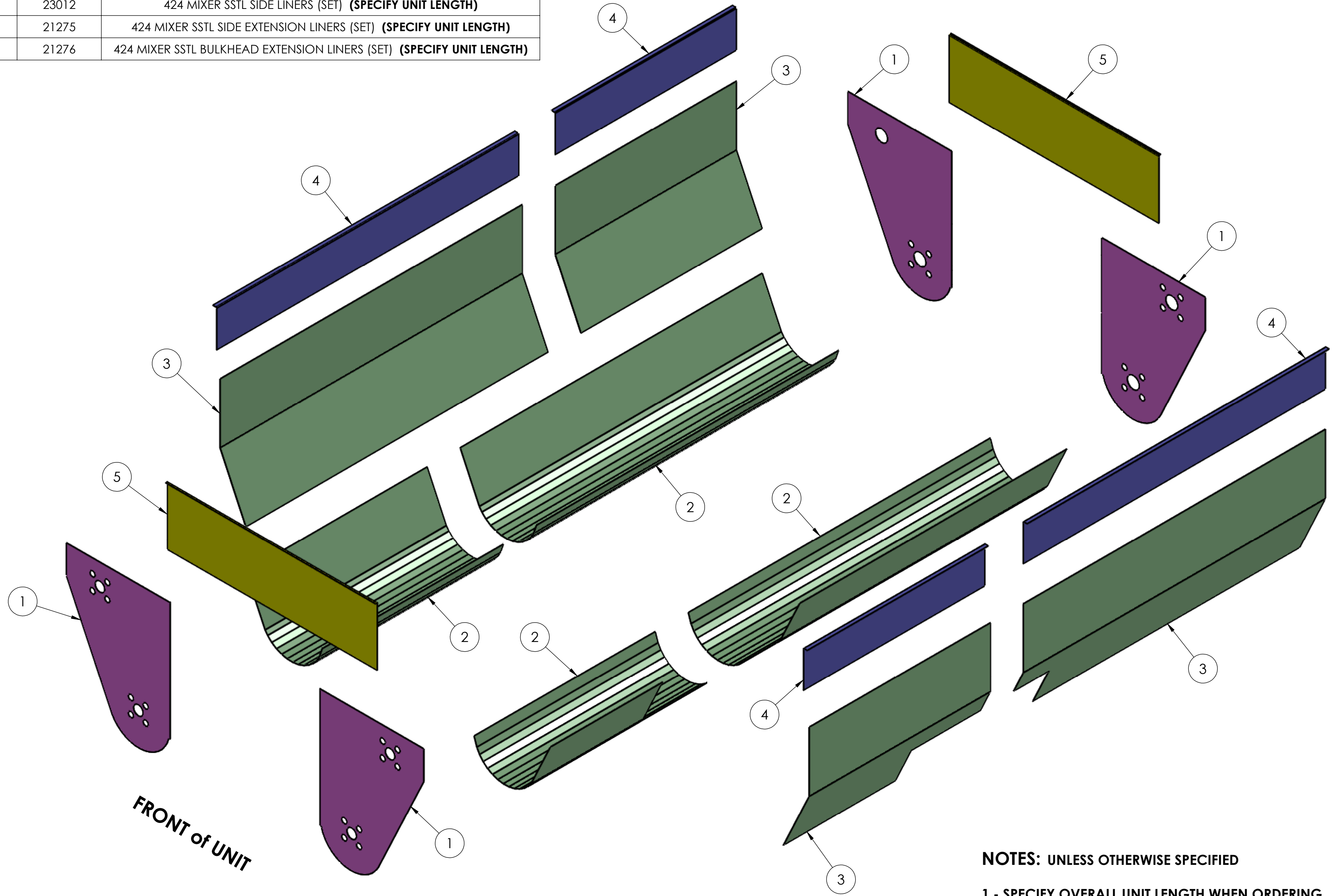
- 1 - TO ORDER COMPLETE SWIVEL ARM ASSEMBLY, USE PART NO. 22215.
- 2 - TO ORDER COMPLETE ASSEMBLY WITH DISPLAY AND CABLE, USE PART NO. 5204.
- 3 - TO ORDER COMPLETE ASSEMBLY WITH DISPLAY, CABLE, XMTR AND RCVR, USE PART NO. 5205.

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 TOLERANCES:
 FRACTIONAL ±
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941			
MATERIAL: SEE BOM		MATERIAL P/N:			
DESIGNED BY:	DATE:	NAME:	FINISH:	SIZE	REV.
DESIGNED BY:	2-28-18	MCCLURE		C	-
APPROVED BY:	2-28-18			PART NUMBER	
				424-001C	
				SCALE: 1:4	WEIGHT: 62.412093 lbs
					SHEET 1 OF 1

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	22005	424 MIXER SSSL FRONT/REAR BULKHEAD LINERS (SET)
2	1	23011	424 MIXER SSSL BOTTOM LINERS (SET) (SPECIFY UNIT LENGTH)
3	1	23012	424 MIXER SSSL SIDE LINERS (SET) (SPECIFY UNIT LENGTH)
4	1	21275	424 MIXER SSSL SIDE EXTENSION LINERS (SET) (SPECIFY UNIT LENGTH)
5	1	21276	424 MIXER SSSL BULKHEAD EXTENSION LINERS (SET) (SPECIFY UNIT LENGTH)



FRONT of UNIT


NOTES: UNLESS OTHERWISE SPECIFIED

1 - SPECIFY OVERALL UNIT LENGTH WHEN ORDERING TO DETERMINE CORRECT LENGTH COMBINATIONS.

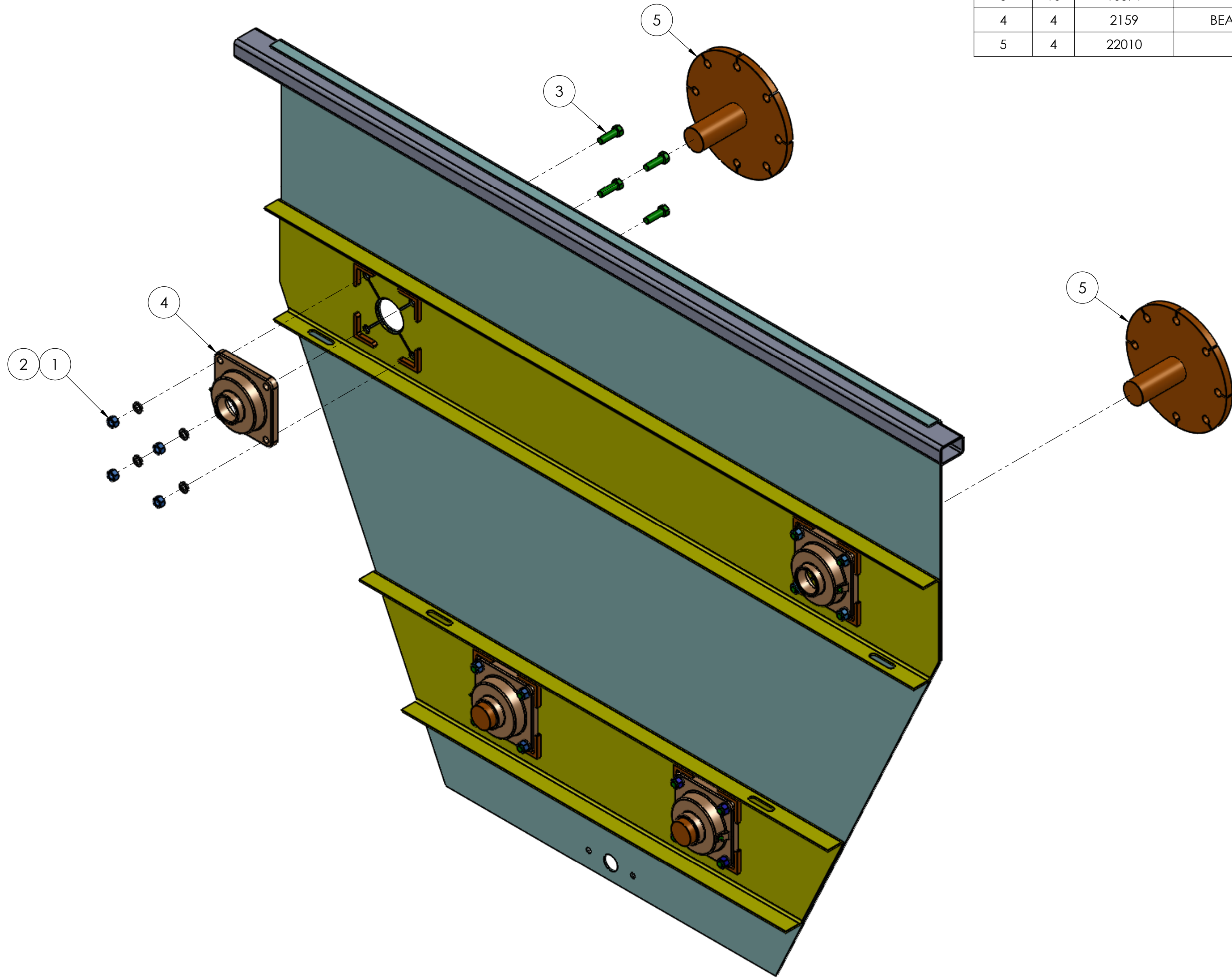
NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

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DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL: ±
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941				
		MATERIAL: SEE BOM				
DRIVEN BY:	DATE	NAME	FINISH:	SIZE	PART NUMBER	REV.
DESIGNED BY:	2-28-18	MCCLURE		C	424-002	-
APPROVED BY:			VENDOR:	SCALE: 1:20	WEIGHT: 1548.627 lbs	SHEET 1 OF 1

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	16	10550	NUT, 5/8" NC
2	16	10553	WASHER- 5/8" LOCK
3	16	10571	BOLT- 5/8" NC GR5 x 2"
4	4	2159	BEARING, 4-HOLE FLANGE, 2-7/16" BORE
5	4	22010	IDLER SHAFT ASSEMBLY



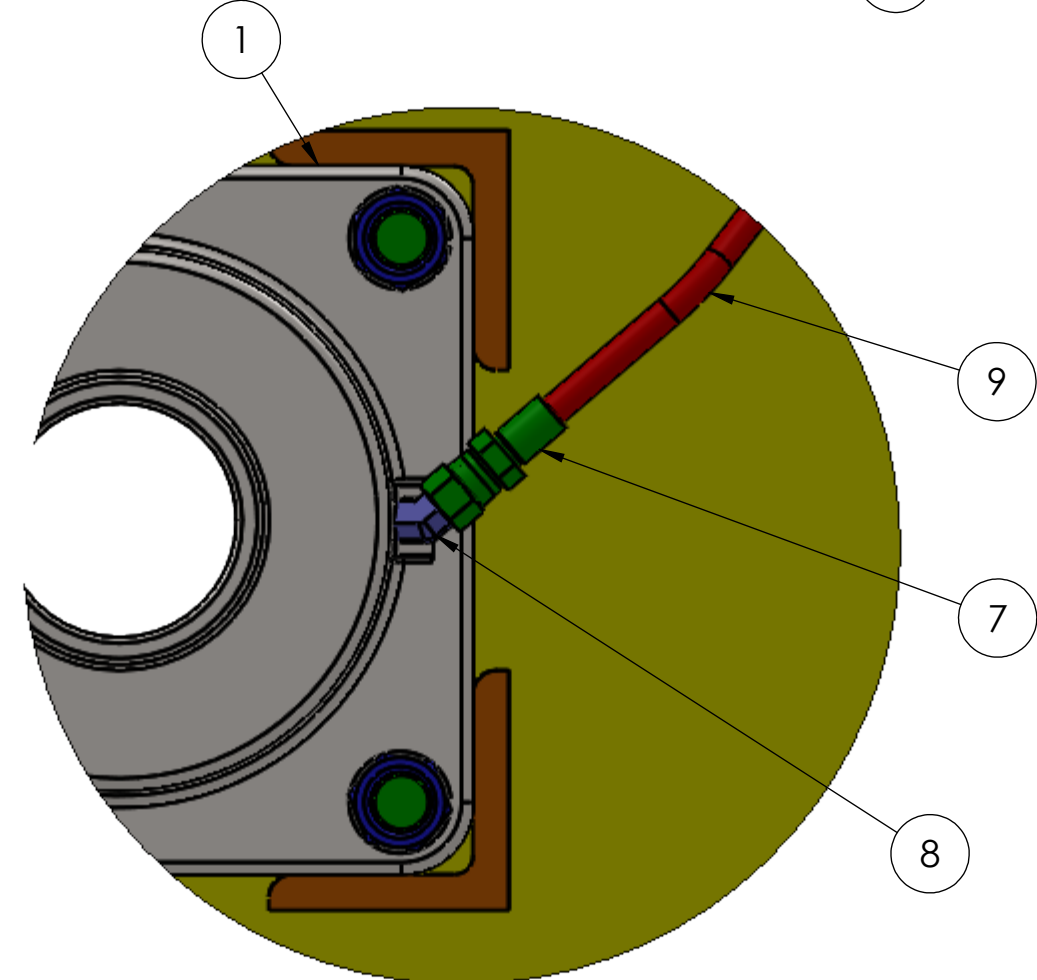
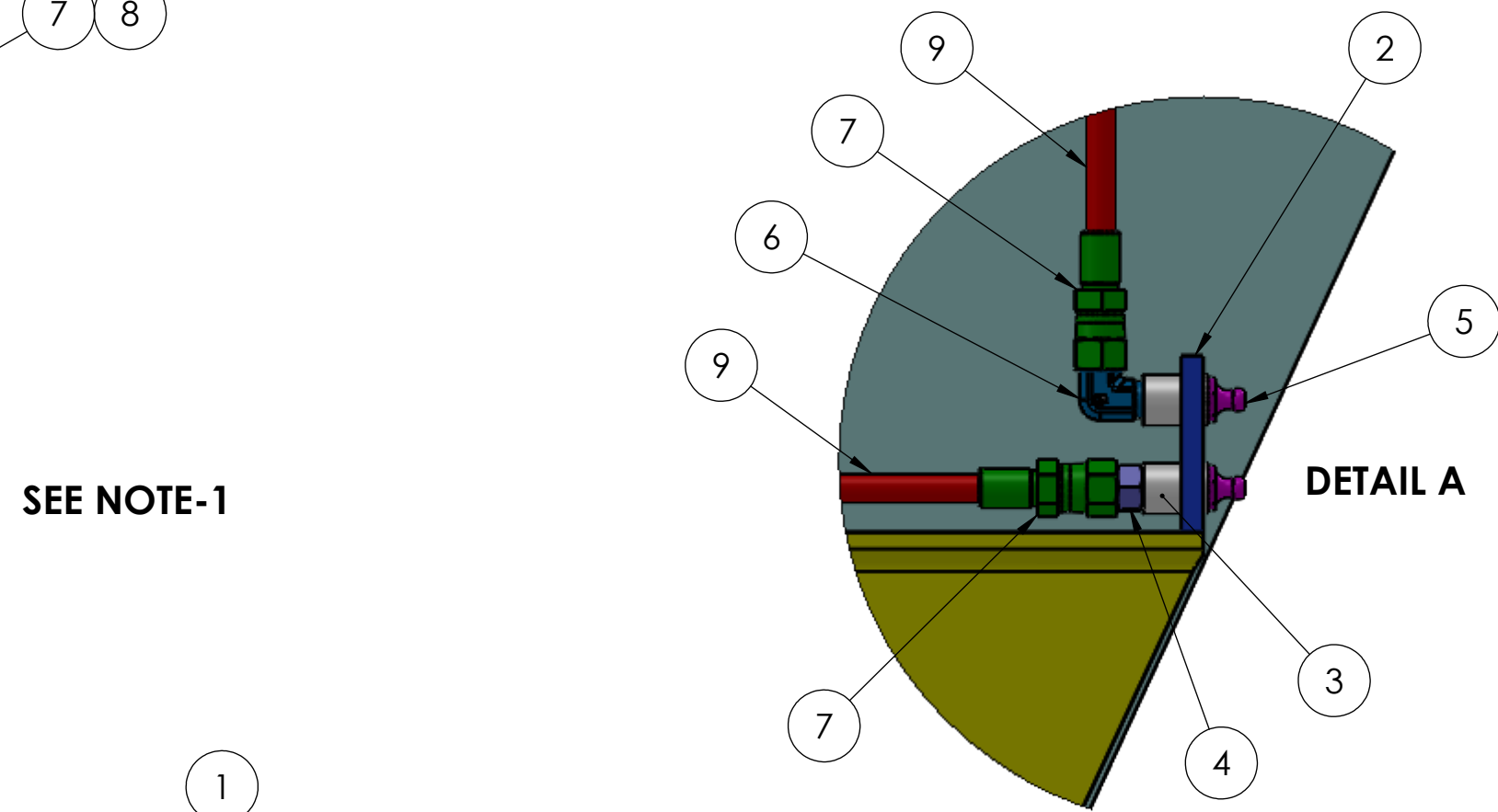
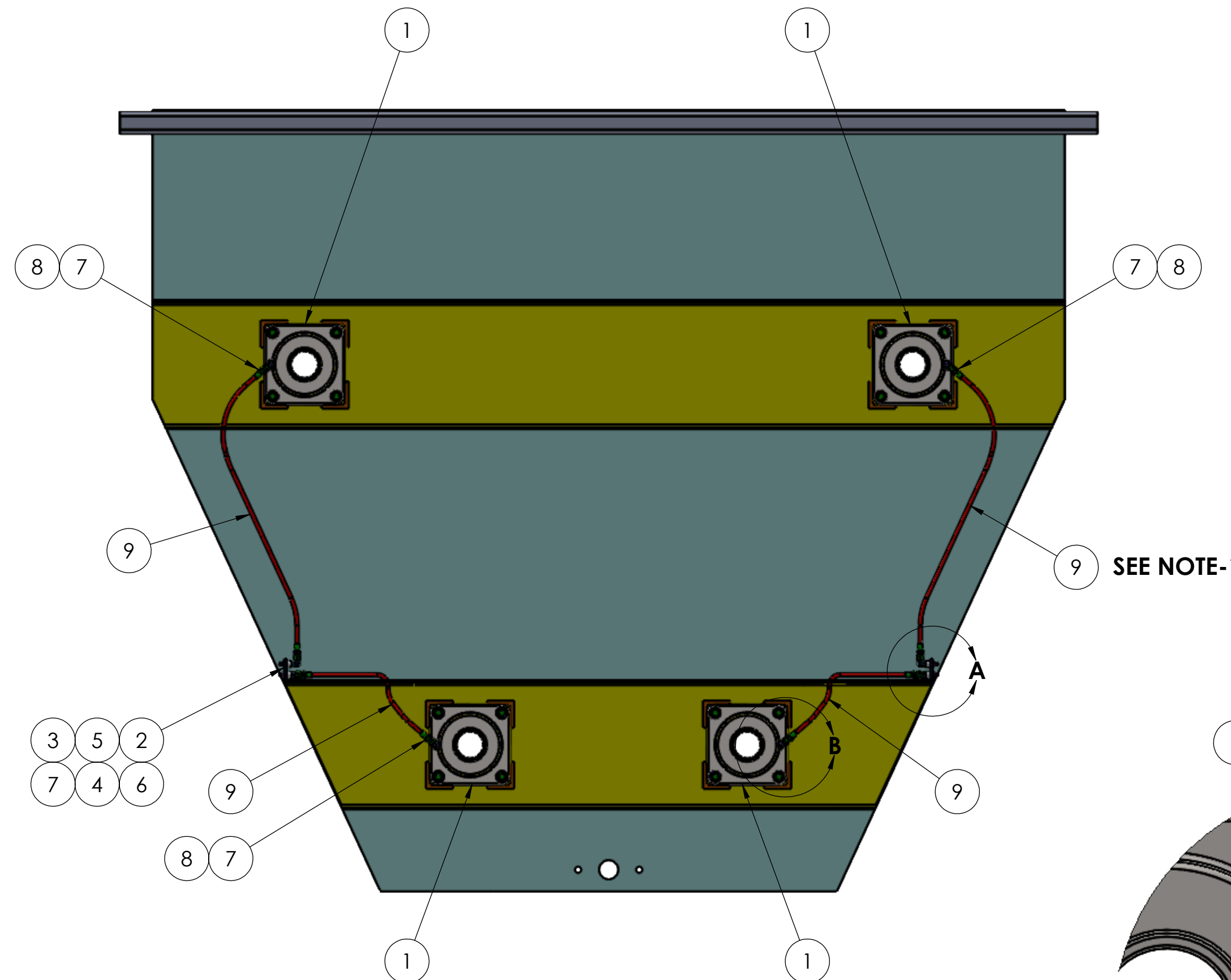
NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

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 FRACTIONAL ±
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		 DESCRIPTION BULKHEAD, FRONT ASSEMBLY		
JOB #:		MATERIAL: SEE BOM				
DRAWN BY:	DATE	NAME	FINISH:	SIZE	PART NUMBER	REV.
DESIGNED BY:	2-28-18	MCCLURE		C	424-003	-
APPROVED BY:			VENDOR:	SCALE: 1:7	WEIGHT: lbs	SHEET 1 OF 1

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	4	2159	BEARING, 4-HOLE FLANGE, 2-7/16" BORE
2	2	61134	BRACKET, GREASE FITTING, 2-POS.
3	4	9250	COUPLER, STRT. 1/8" NPTF
4	2	4 FTX-S	FITTING, 1/4" M JIC x 1/8" M NPTF
5	4	11310	GREASE ZERK, STR. 1/8" M NPTF
6	2	4-CTX-S	FITTING, 90°, 1/4" M JIC x 1/8" M NPTF
7	8	106CY-4-2	HOSE END, 1/8" x 1/4" F JIC, SWIVEL
8	4	4 VTX-S	FITTING, 45°, 1/4" M JIC x 1/8" M NPTF
9	4	HLB02	HOSE, 1/8" GREASE (CUT TO LENGTH)



NOTES: UNLESS OTHERWISE SPECIFIED

1 - GREASE LUBE LINES ARE OPTIONAL PER CUSTOMER REQUEST.

NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

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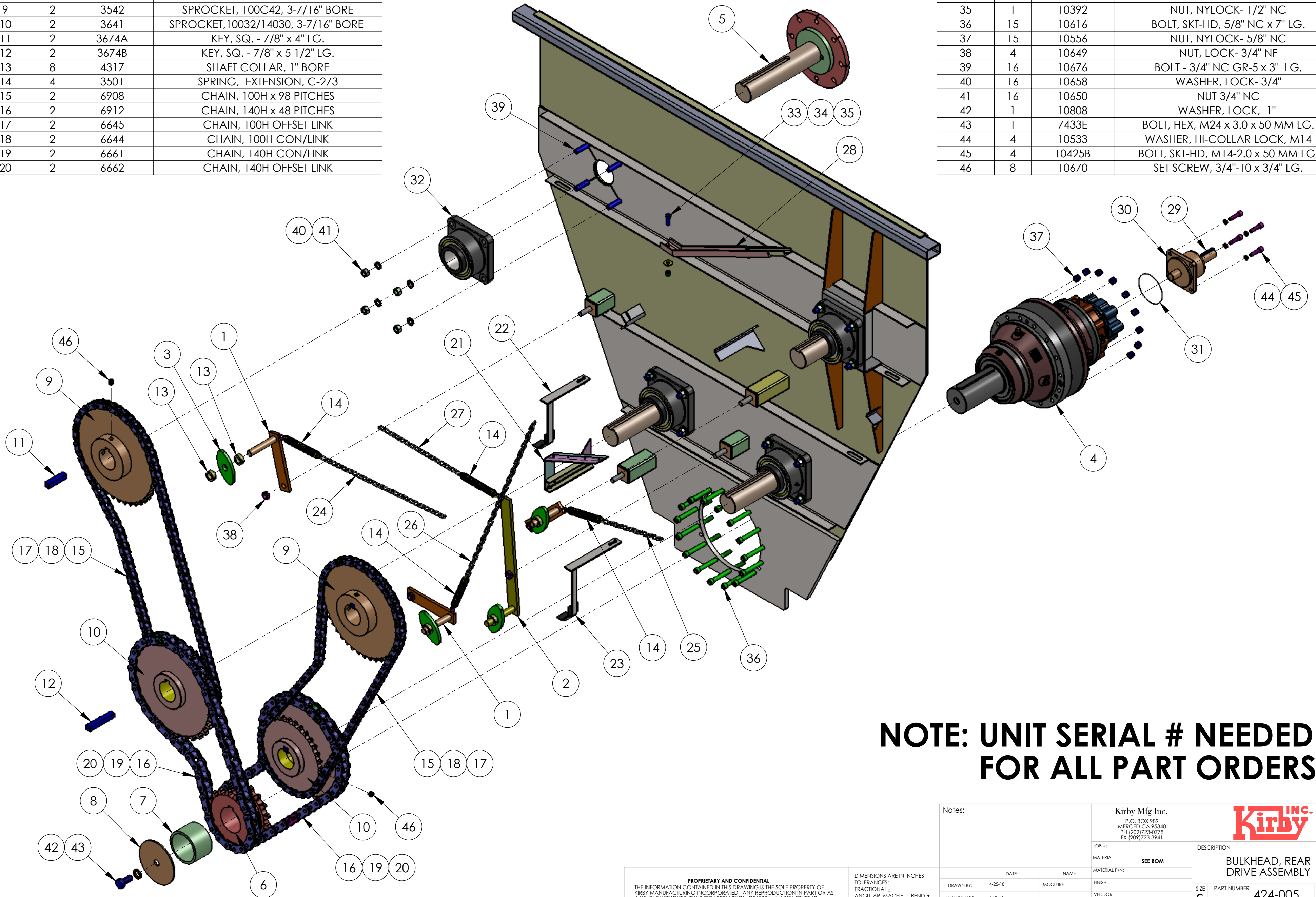
DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL ±
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941			
		MATERIAL: SEE BOM			
DRAWN BY: 3-1-18		DATE: 3-1-18		DESCRIPTION: GREASE LINE DETAIL, FRONT BULKHEAD	
DESIGNED BY: 3-1-18		NAME: MCCLURE		PART NUMBER: 424-004	
APPROVED BY:		FINISH:		REV: -	
		VENDOR:		SCALE: 1:10	
		VENDOR P/N:		WEIGHT: lbs	
				SHEET 1 OF 1	

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	3	21036	IDLER ARM
2	1	21038	IDLER ARM, MIDDLE
3	4	21041	CHAIN IDLER, FOOTBALL
4	1	7431	GEARBOX, PLANETARY, 20:1
5	4	22008	SHAFT, AUGER DRIVE
6	1	3639-COMER	SPROCKET, DS 140-A-17, 110 MM BORE
7	1	21039-COMER	COMER GEARBOX SPACER
8	1	192059	HOLD DOWN PLATE
9	2	3542	SPROCKET, 100C42, 3-7/16" BORE
10	2	3641	SPROCKET, 10032/14030, 3-7/16" BORE
11	2	3674A	KEY, SQ. - 7/8" x 4" LG.
12	2	3674B	KEY, SQ. - 7/8" x 5 1/2" LG.
13	8	4317	SHAFT COLLAR, 1" BORE
14	4	3501	SPRING, EXTENSION, C-273
15	2	6908	CHAIN, 100H x 98 PITCHES
16	2	6912	CHAIN, 140H x 48 PITCHES
17	2	6645	CHAIN, 100H OFFSET LINK
18	2	6644	CHAIN, 100H CON/LINK
19	2	6661	CHAIN, 140H CON/LINK
20	2	6662	CHAIN, 140H OFFSET LINK

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
21	1	22054	WIPER, OIL, TOP, (OPTIONAL)
22	1	22023	WIPER, OIL, (L/H) 424 MIXER
23	1	22024	WIPER, OIL, (R/H) 424 MIXER
24	1	6915	CHAIN, 3/16" COIL PROOF x 24" LG.
25	1	6915	CHAIN, 3/16" COIL PROOF x 12" LG.
26	1	6915	CHAIN, 3/16" COIL PROOF x 36" LG.

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
27	1	6915	CHAIN, 3/16" COIL PROOF x 18" LG.
28	1	22050	STOPPER, HATCH BACK DOOR
29	1	3693	KEY, SQ. 3/8" x 2 1/2" LG.
30	1	7391	INPUT ADAPTER, GEARBOX
31	1	7417	O-RING, GEARBOX ADAPTER
32	4	2173	BEARING, 4-HOLE FLANGE, 3 7/16" BORE
33	1	10411	BOLT - 1/2" NC GRD.5 x 1 1/2" LG.
34	1	10399	WASHER - 1/2" FLAT
35	1	10392	NUT, NYLOCK - 1/2" NC
36	15	10616	BOLT, SKT-HD, 5/8" NC x 7" LG.
37	15	10556	NUT, NYLOCK - 5/8" NC
38	4	10649	NUT, LOCK - 3/4" NF
39	16	10676	BOLT - 3/4" NC GR-5 x 3" LG.
40	16	10658	WASHER, LOCK - 3/4"
41	16	10650	NUT 3/4" NC
42	1	10808	WASHER, LOCK, 1"
43	1	7433E	BOLT, HEX, M24 x 3.0 x 50 MM LG.
44	4	10533	WASHER, HI-COLLAR LOCK, M14
45	4	10425B	BOLT, SKT-HD, M14-2.0 x 50 MM LG.
46	8	10670	SET SCREW, 3/4"-10 x 3/4" LG.



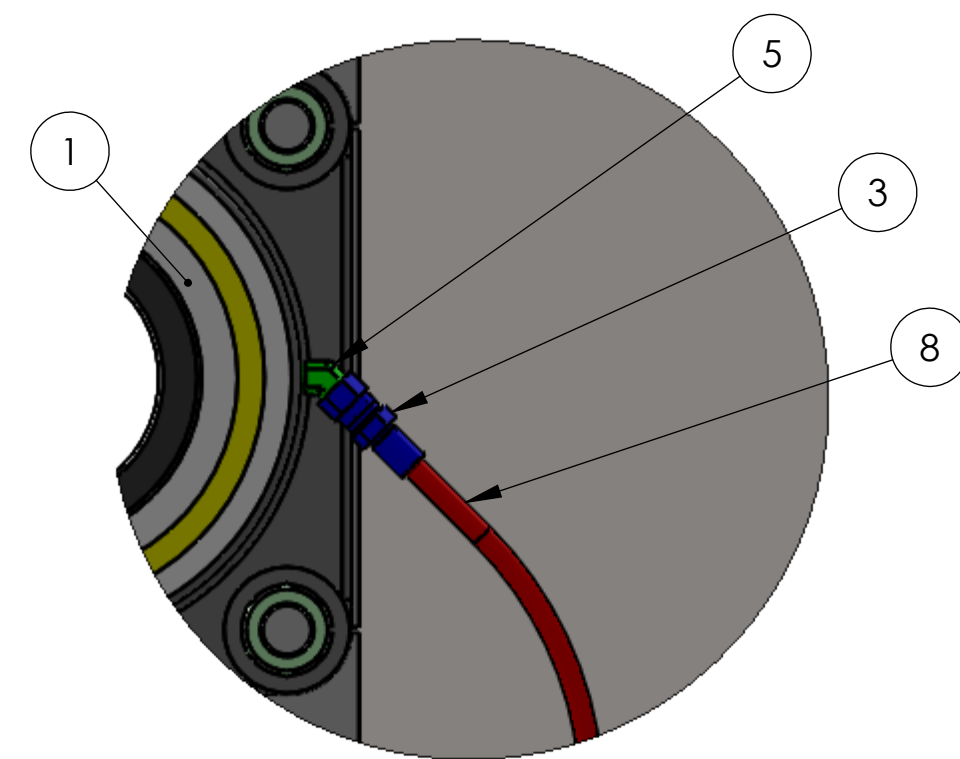
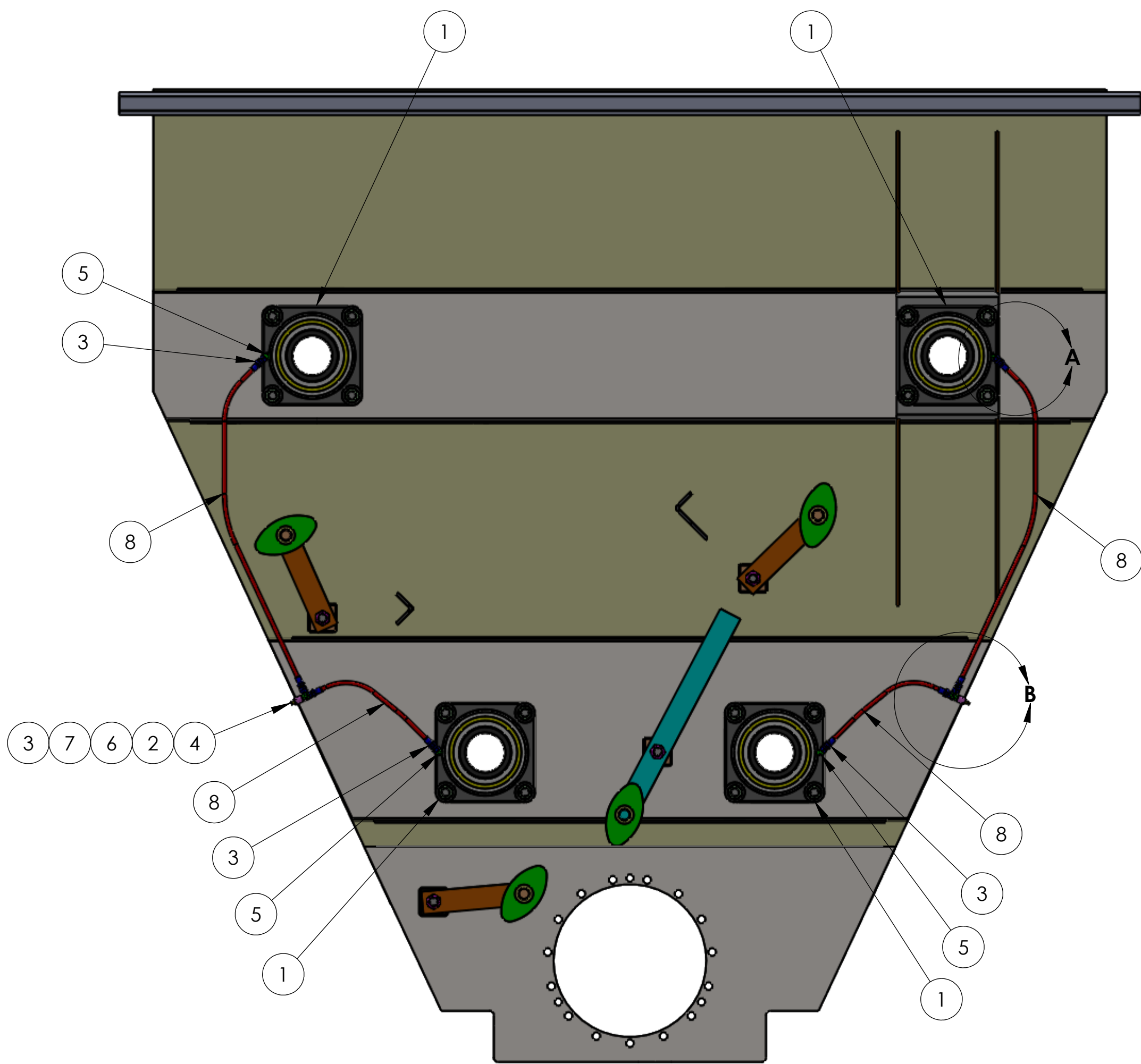
NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		 DESCRIPTION BULKHEAD, REAR DRIVE ASSEMBLY	
MATERIAL: SEE BOM		MATERIAL P/N:			
DRAWN BY:	DATE	NAME	FINISH:	SIZE	PART NUMBER
DESIGNED BY:	4-25-18	MCCLURE		C	424-005
APPROVED BY:			VENDOR:	SCALE: 1:10	WEIGHT: 1469.352232 lbs
			VENDOR P/N:		SHEET 1 OF 1

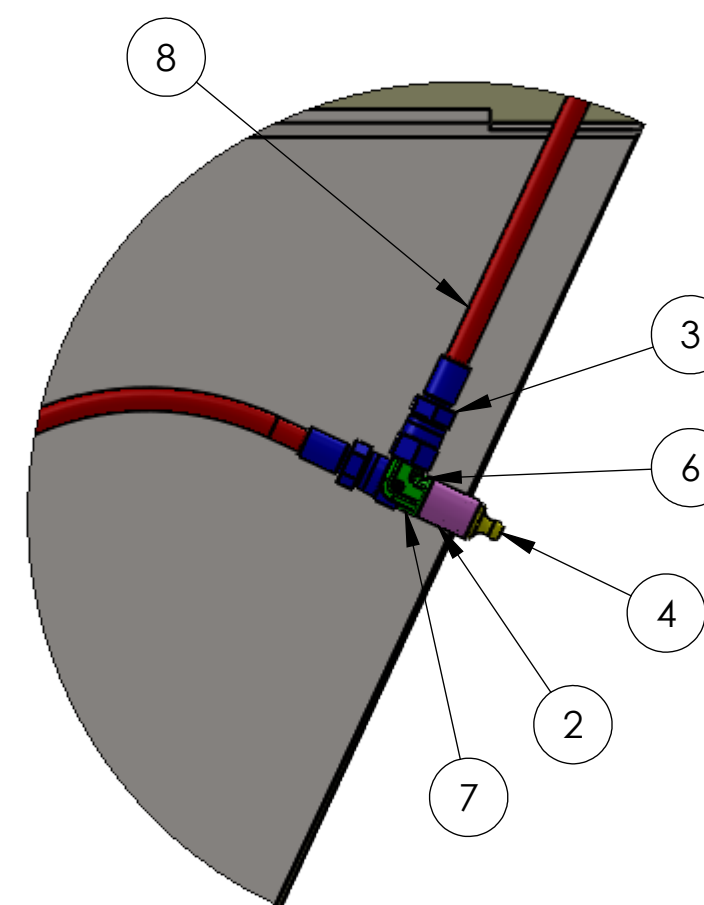
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 TOLERANCES:
 FRACTIONAL: ±
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	4	2173	BEARING, 4-HOLE FLANGE, 3 7/16" BORE
2	4	9250	COUPLER, STRT. 1/8" NPTF
3	8	106CY-4-2	HOSE END, 1/8" x 1/4" F JIC, SWIVEL
4	4	11310	GREASE ZERK, STR. 1/8" M NPTF
5	4	4 VTX-S	FITTING, 45°, 1/4" M JIC x 1/8" M NPTF
6	2	4-CTX-S	FITTING, 90°, 1/4" M JIC x 1/8" M NPTF
7	2	4 FTX-S	FITTING, 1/4" M JIC x 1/8" M NPTF
8	4	HLB02	HOSE, 1/8" GREASE (CUT TO LENGTH)



DETAIL A




DETAIL B

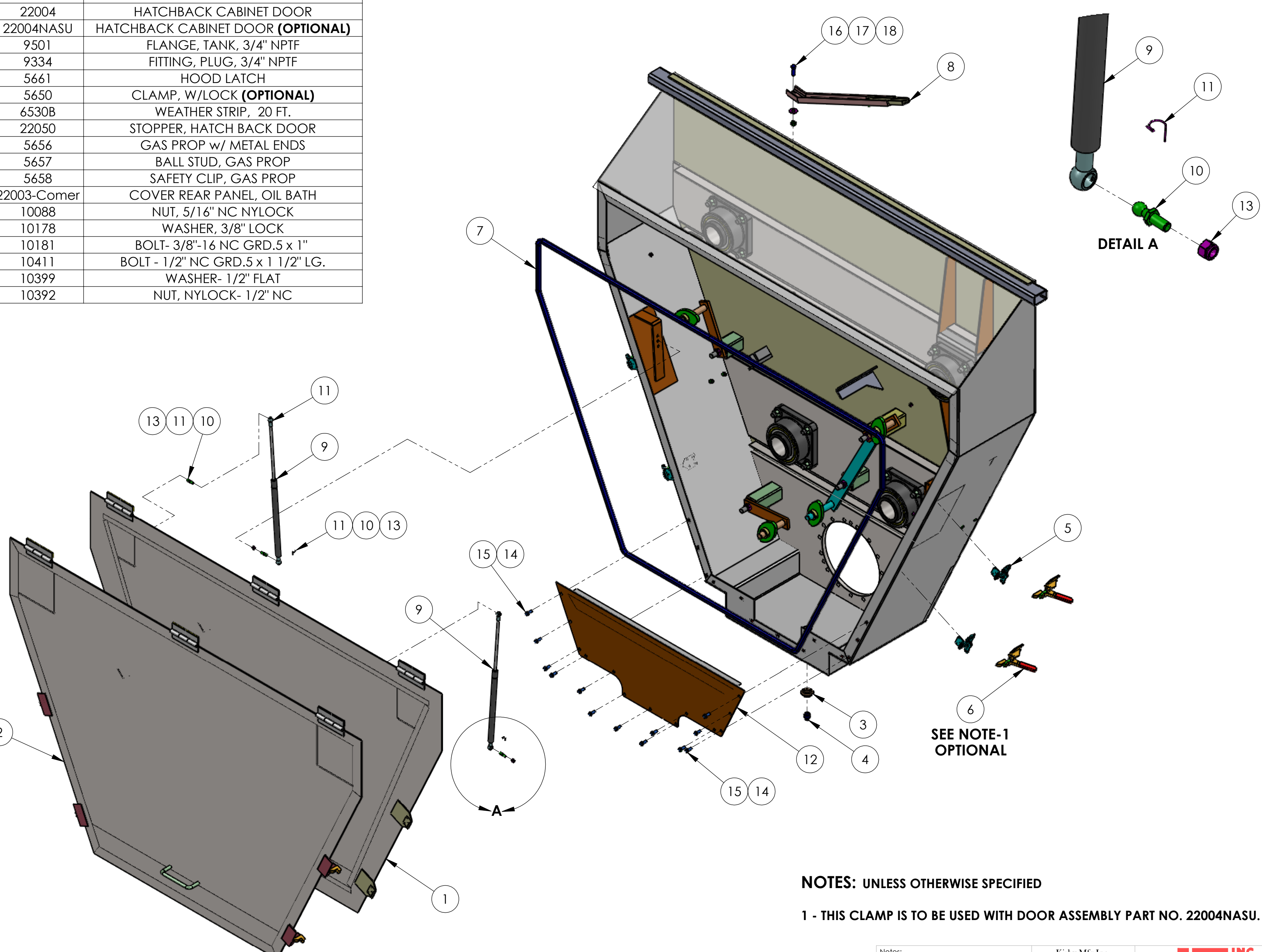
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 TOLERANCES:
 FRACTIONAL ±
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941			
		JOB #: MATERIAL: SEE BOM MATERIAL P/N:			
DRAWN BY:	DATE	NAME		FINISH:	DESCRIPTION GREASE LINE DETAIL, REAR BULKHEAD
DESIGNED BY:	DATE			VENDOR:	
APPROVED BY:				VENDOR P/N:	
		SIZE C	PART NUMBER 424-006	REV. -	SCALE: 1:9
		WEIGHT: 1226.499468 lbs		SHEET 1 OF 1	

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	22004	HATCHBACK CABINET DOOR
2	1	22004NASU	HATCHBACK CABINET DOOR (OPTIONAL)
3	1	9501	FLANGE, TANK, 3/4" NPTF
4	1	9334	FITTING, PLUG, 3/4" NPTF
5	4	5661	HOOD LATCH
6	4	5650	CLAMP, W/LOCK (OPTIONAL)
7	1	6530B	WEATHER STRIP, 20 FT.
8	1	22050	STOPPER, HATCH BACK DOOR
9	2	5656	GAS PROP w/ METAL ENDS
10	4	5657	BALL STUD, GAS PROP
11	4	5658	SAFETY CLIP, GAS PROP
12	1	22003-Comer	COVER REAR PANEL, OIL BATH
13	4	10088	NUT, 5/16" NC NYLOCK
14	13	10178	WASHER, 3/8" LOCK
15	13	10181	BOLT- 3/8"-16 NC GRD.5 x 1"
16	1	10411	BOLT - 1/2" NC GRD.5 x 1 1/2" LG.
17	1	10399	WASHER- 1/2" FLAT
18	1	10392	NUT, NYLOCK- 1/2" NC



SEE NOTE-1
OPTIONAL

SEE NOTE-1
OPTIONAL

NOTES: UNLESS OTHERWISE SPECIFIED

1 - THIS CLAMP IS TO BE USED WITH DOOR ASSEMBLY PART NO. 22004NASU.

NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

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TOLERANCES:
FRACTIONAL: ±
ANGULAR: ±0.030° BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

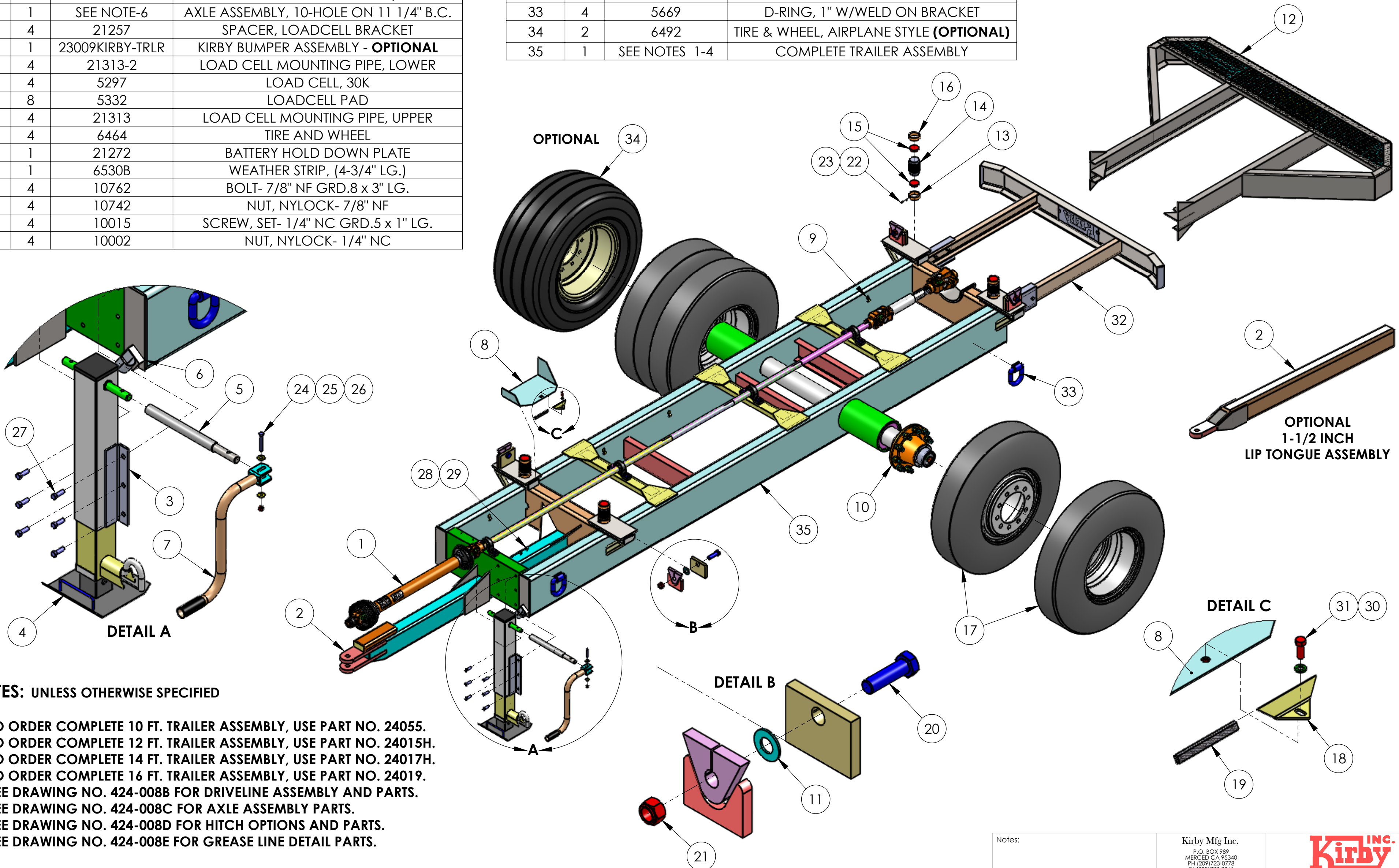
Notes:		
DRAWN BY:	DATE	NAME
DESIGNED BY:	4/26/2018	MCCLURE
APPROVED BY:		

Kirby Mfg Inc.
P.O. BOX 989
MERCED CA 95340
PH (209)723-0778
FX (209)723-3941

Kirby INC.	
DESCRIPTION	OIL BATH CABINET & DOOR ASSEMBLY
MATERIAL:	SEE BOM
MATERIAL P/N:	
FINISH:	
VENDOR:	
VENDOR P/N:	
SIZE	C
PART NUMBER	424-007
SCALE: 1:1	WEIGHT: 1413.537104 lbs
	SHEET 1 OF 1

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	SEE NOTE-5	DRIVELINE, 10', 12', 14' & 16' TRAILER
2	1	SEE NOTE-7	TONGUE ASSEMBLY & HITCHES
3	2	21071	LONG MOUNTING BRACKET - JACK STAND
4	1	5573	JACK STAND, W/HANDLE, 12000 LBS
5	1	21074	HAND CRANK HANDLE EXTENSION
6	1	21073	CRANK HANDLE HOLDER
7	1	5574	JACK CRANK
8	1	22041	BATTERY TRAY
9	8	5496	STEEL CONDUIT CLAMP- 1/2"
10	1	SEE NOTE-6	AXLE ASSEMBLY, 10-HOLE ON 11 1/4" B.C.
11	4	21257	SPACER, LOADCELL BRACKET
12	1	23009KIRBY-TRLR	KIRBY BUMPER ASSEMBLY - OPTIONAL
13	4	21313-2	LOAD CELL MOUNTING PIPE, LOWER
14	4	5297	LOAD CELL, 30K
15	8	5332	LOADCELL PAD
16	4	21313	LOAD CELL MOUNTING PIPE, UPPER
17	4	6464	TIRE AND WHEEL
18	1	21272	BATTERY HOLD DOWN PLATE
19	1	6530B	WEATHER STRIP, (4-3/4" LG.)
20	4	10762	BOLT- 7/8" NF GRD.8 x 3" LG.
21	4	10742	NUT, NYLOCK- 7/8" NF
22	4	10015	SCREW, SET- 1/4" NC GRD.5 x 1" LG.
23	4	10002	NUT, NYLOCK- 1/4" NC

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
24	1	10211	BOLT, 3/8" NC, GRD-5 x 2-1/2" LG.
25	2	10179	WASHER, 3/8" FLAT
26	1	10173	NUT, NYLOCK- 3/8" NC
27	6	10411	BOLT - 1/2" NC GRD.5 x 1 1/2" LG.
28	6	10398	WASHER, LOCK- 1/2"
29	6	10390	NUT 1/2" NC
30	1	10178	WASHER, 3/8" LOCK
31	1	10181	BOLT- 3/8"-16 NC GRD.5 x 1"
32	1	LP-0027	KIRBY BUMPER
33	4	5669	D-RING, 1" W/WELD ON BRACKET
34	2	6492	TIRE & WHEEL, AIRPLANE STYLE (OPTIONAL)
35	1	SEE NOTES 1-4	COMPLETE TRAILER ASSEMBLY



NOTES: UNLESS OTHERWISE SPECIFIED

- 1 - TO ORDER COMPLETE 10 FT. TRAILER ASSEMBLY, USE PART NO. 24055.
- 2 - TO ORDER COMPLETE 12 FT. TRAILER ASSEMBLY, USE PART NO. 24015H.
- 3 - TO ORDER COMPLETE 14 FT. TRAILER ASSEMBLY, USE PART NO. 24017H.
- 4 - TO ORDER COMPLETE 16 FT. TRAILER ASSEMBLY, USE PART NO. 24019.
- 5 - SEE DRAWING NO. 424-008B FOR DRIVELINE ASSEMBLY AND PARTS.
- 6 - SEE DRAWING NO. 424-008C FOR AXLE ASSEMBLY PARTS.
- 7 - SEE DRAWING NO. 424-008D FOR HITCH OPTIONS AND PARTS.
- 8 - SEE DRAWING NO. 424-008E FOR GREASE LINE DETAIL PARTS.

NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

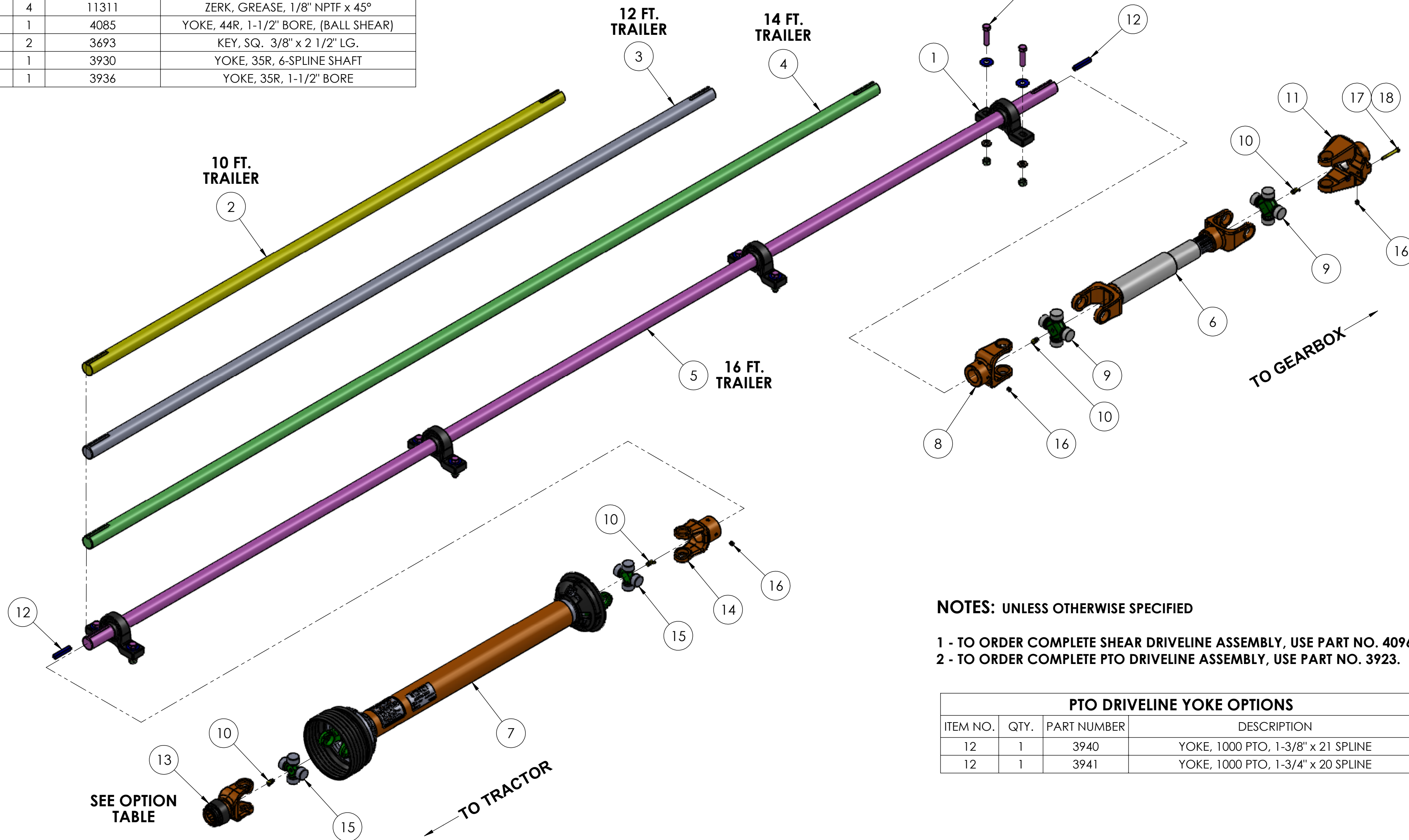
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 TOLERANCES:
 FRACTIONAL: ±
 ANGULAR: ±MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		
		JOB #: MATERIAL: SEE BOM MATERIAL P/N:		
DRAWN BY: 4/9/2018		NAME: MCCLURE		DESCRIPTION: TRAILER, SINGLE AXLE, 10', 12', 14' & 16'
DESIGNED BY: 4/9/2018		VENDOR:		SIZE: C PART NUMBER: 424-008A
APPROVED BY:		VENDOR P/N:		SCALE: 1:18 WEIGHT: 3751.395 lbs SHEET 1 OF 1

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	4	2047	BEARING, PILLOW BLOCK 1-1/2" BORE
2	1	133258-Comer	SHAFT, DRIVELINE 10' TRAILER
3	1	133260-COMER 12'	SHAFT, DRIVELINE 12' TRAILER
4	1	133260-COMER 14'	SHAFT, DRIVELINE 14' TRAILER
5	1	133260-COMER 16'	SHAFT, DRIVELINE 16' TRAILER
6	1	SEE NOTE-1	DRIVELINE WITH SHEAR HUB
7	1	SEE NOTE-2	PTO 540 DRIVELINE, 1.50 DIA. SHAFT
8	1	4087	YOKE, 44R, 1-1/2" BORE
9	2	4080	CROSS, U-JOINT, 44R
10	4	11311	ZERK, GREASE, 1/8" NPTF x 45°
11	1	4085	YOKE, 44R, 1-1/2" BORE, (BALL SHEAR)
12	2	3693	KEY, SQ. 3/8" x 2 1/2" LG.
13	1	3930	YOKE, 35R, 6-SPLINE SHAFT
14	1	3936	YOKE, 35R, 1-1/2" BORE

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
15	2	3980	CROSS, U-JOINT, 35R
16	6	10183	SET SCREW, 3/8" NC x 3/8" LG.
17	1	10042	BOLT, 1/4" NC GRD 8 x 2-1/4" LG.
18	1	10002	NUT, NYLOCK- 1/4" NC
19	8	10399	WASHER- 1/2" FLAT
20	8	10421	BOLT - 1/2" NC GR5 x 2" LG.
21	8	10398	WASHER, LOCK- 1/2"
22	8	10390	NUT 1/2" NC



NOTES: UNLESS OTHERWISE SPECIFIED

- 1 - TO ORDER COMPLETE SHEAR DRIVELINE ASSEMBLY, USE PART NO. 4096.
- 2 - TO ORDER COMPLETE PTO DRIVELINE ASSEMBLY, USE PART NO. 3923.

PTO DRIVELINE YOKE OPTIONS			
ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
12	1	3940	YOKE, 1000 PTO, 1-3/8" x 21 SPLINE
12	1	3941	YOKE, 1000 PTO, 1-3/4" x 20 SPLINE

NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

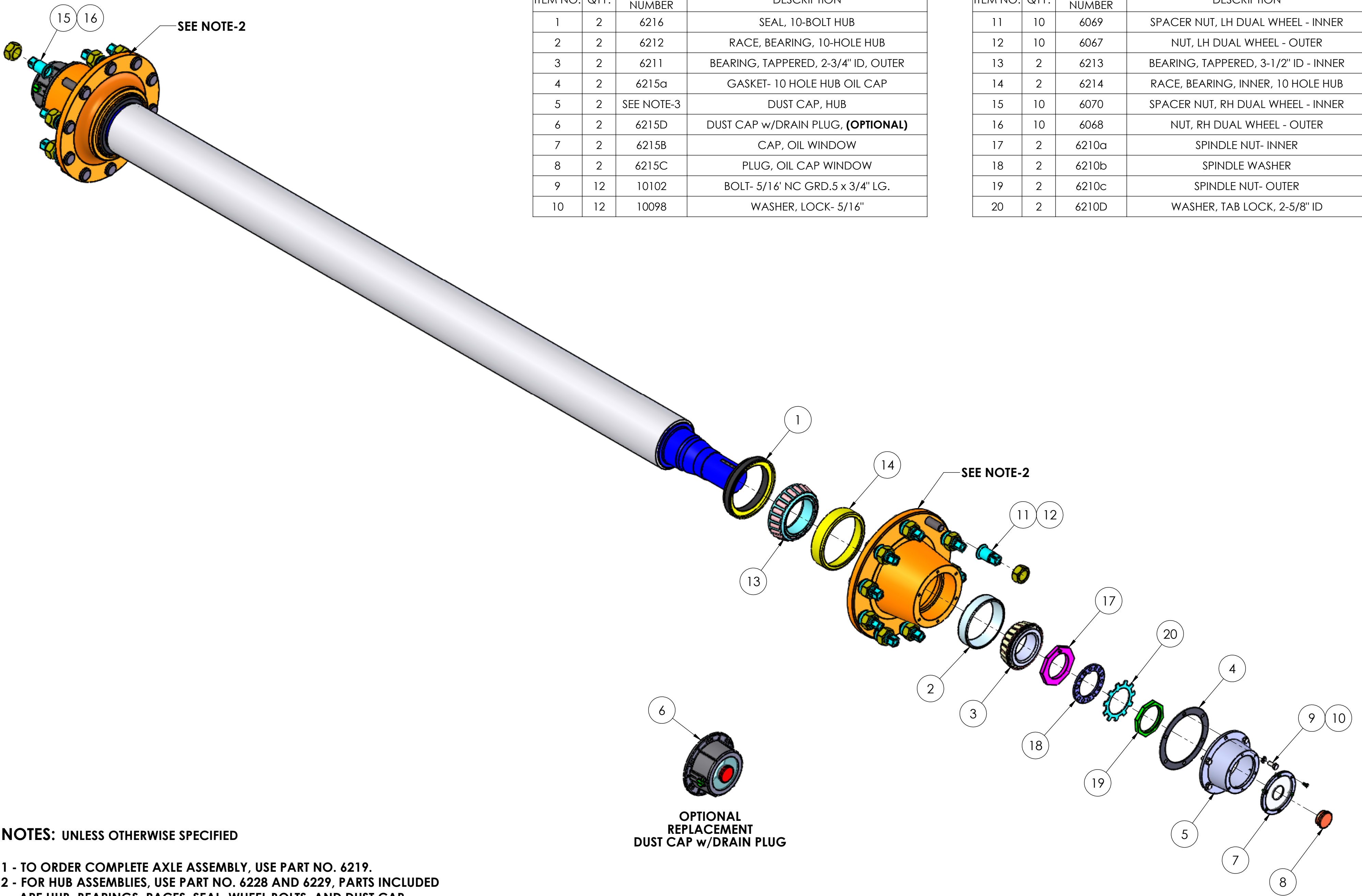
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 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		
JOB #:		MATERIAL: SEE BOM		
DRAWN BY: 4-10-18		NAME: MCCLURE		DESCRIPTION: DRIVELINE, 10', 12', 14' & 16' TRAILER
DESIGNED BY: 4-10-18		FINISH:		SIZE: C
APPROVED BY:		VENDOR:		PART NUMBER: 424-008B
		VENDOR P/N:		SCALE: 1:7.5 WEIGHT: lbs SHEET 1 OF 1

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	2	6216	SEAL, 10-BOLT HUB
2	2	6212	RACE, BEARING, 10-HOLE HUB
3	2	6211	BEARING, TAPERED, 2-3/4" ID, OUTER
4	2	6215a	GASKET- 10 HOLE HUB OIL CAP
5	2	SEE NOTE-3	DUST CAP, HUB
6	2	6215D	DUST CAP w/DRAIN PLUG, (OPTIONAL)
7	2	6215B	CAP, OIL WINDOW
8	2	6215C	PLUG, OIL CAP WINDOW
9	12	10102	BOLT- 5/16" NC GRD.5 x 3/4" LG.
10	12	10098	WASHER, LOCK- 5/16"

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
11	10	6069	SPACER NUT, LH DUAL WHEEL - INNER
12	10	6067	NUT, LH DUAL WHEEL - OUTER
13	2	6213	BEARING, TAPERED, 3-1/2" ID - INNER
14	2	6214	RACE, BEARING, INNER, 10 HOLE HUB
15	10	6070	SPACER NUT, RH DUAL WHEEL - INNER
16	10	6068	NUT, RH DUAL WHEEL - OUTER
17	2	6210a	SPINDLE NUT- INNER
18	2	6210b	SPINDLE WASHER
19	2	6210c	SPINDLE NUT- OUTER
20	2	6210D	WASHER, TAB LOCK, 2-5/8" ID



NOTES: UNLESS OTHERWISE SPECIFIED

- 1 - TO ORDER COMPLETE AXLE ASSEMBLY, USE PART NO. 6219.
- 2 - FOR HUB ASSEMBLIES, USE PART NO. 6228 AND 6229, PARTS INCLUDED ARE HUB, BEARINGS, RACES, SEAL, WHEEL BOLTS, AND DUST CAP.
- 3 - TO ORDER COMPLETE DUST CAP ASSEMBLY, USE PART NO. 6215.

OPTIONAL REPLACEMENT DUST CAP w/DRAIN PLUG

NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

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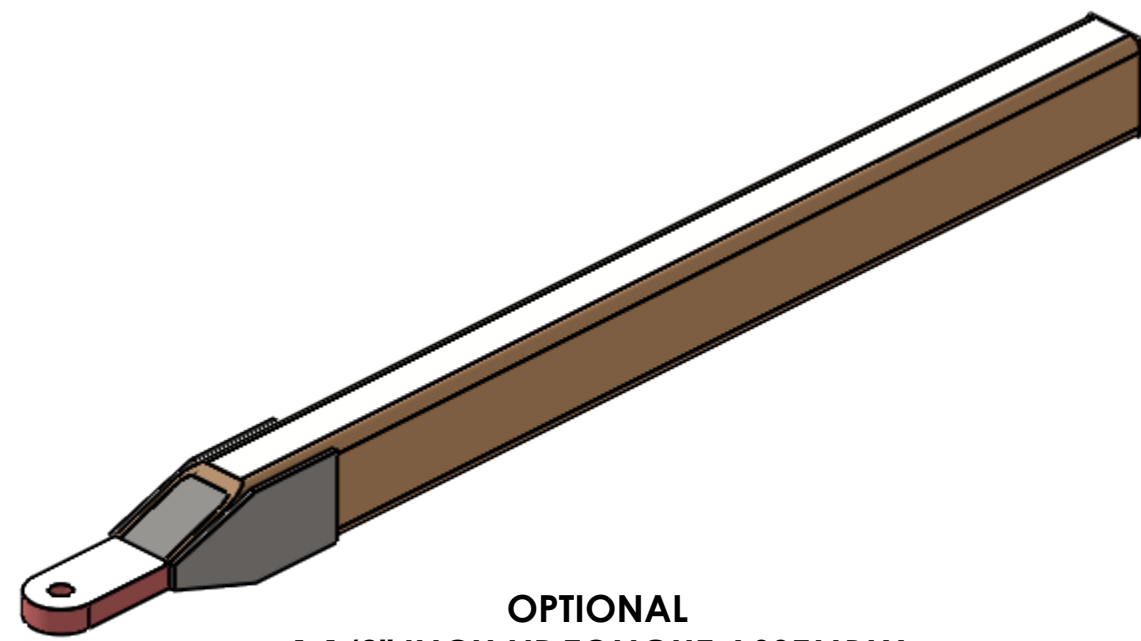
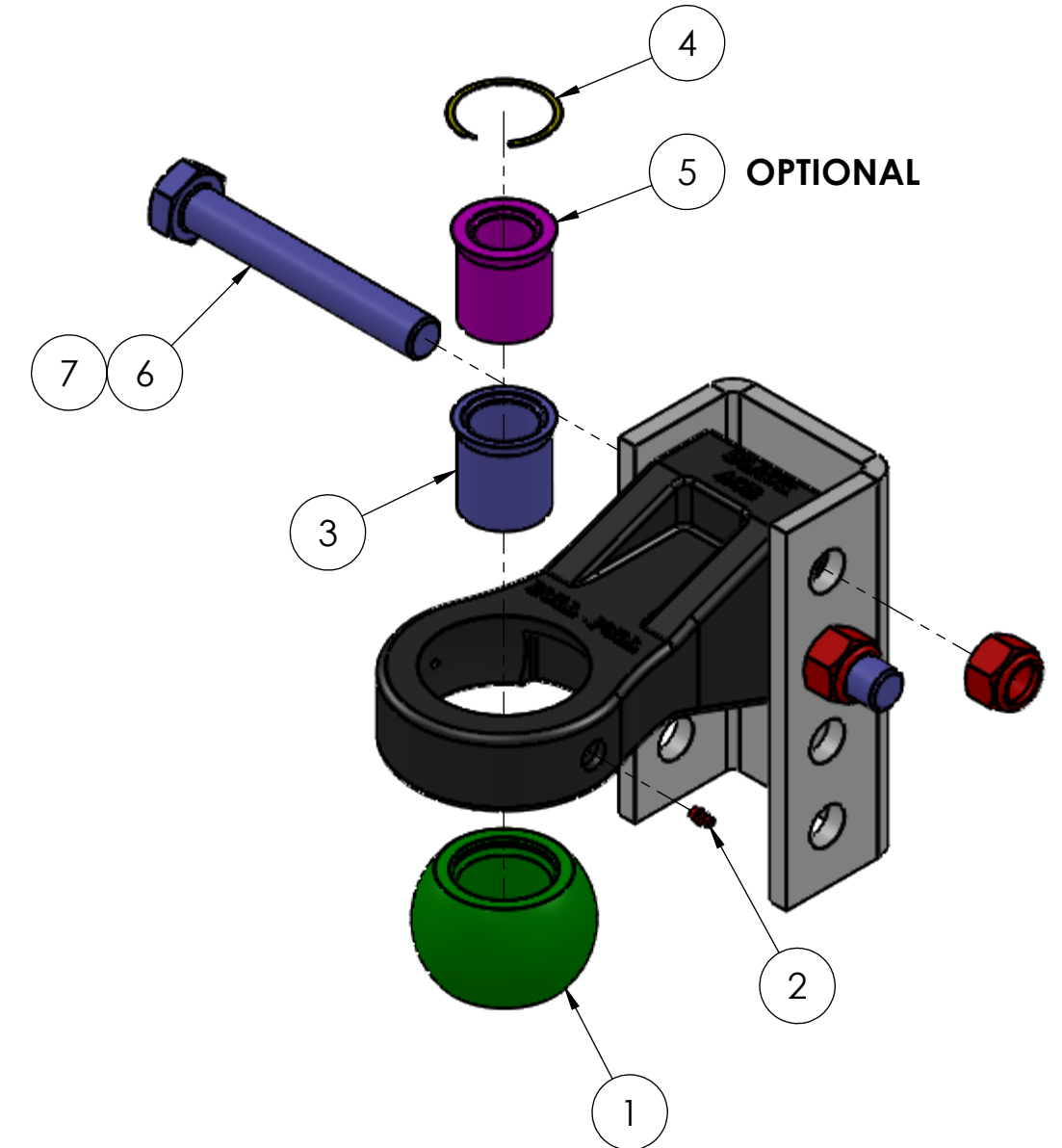
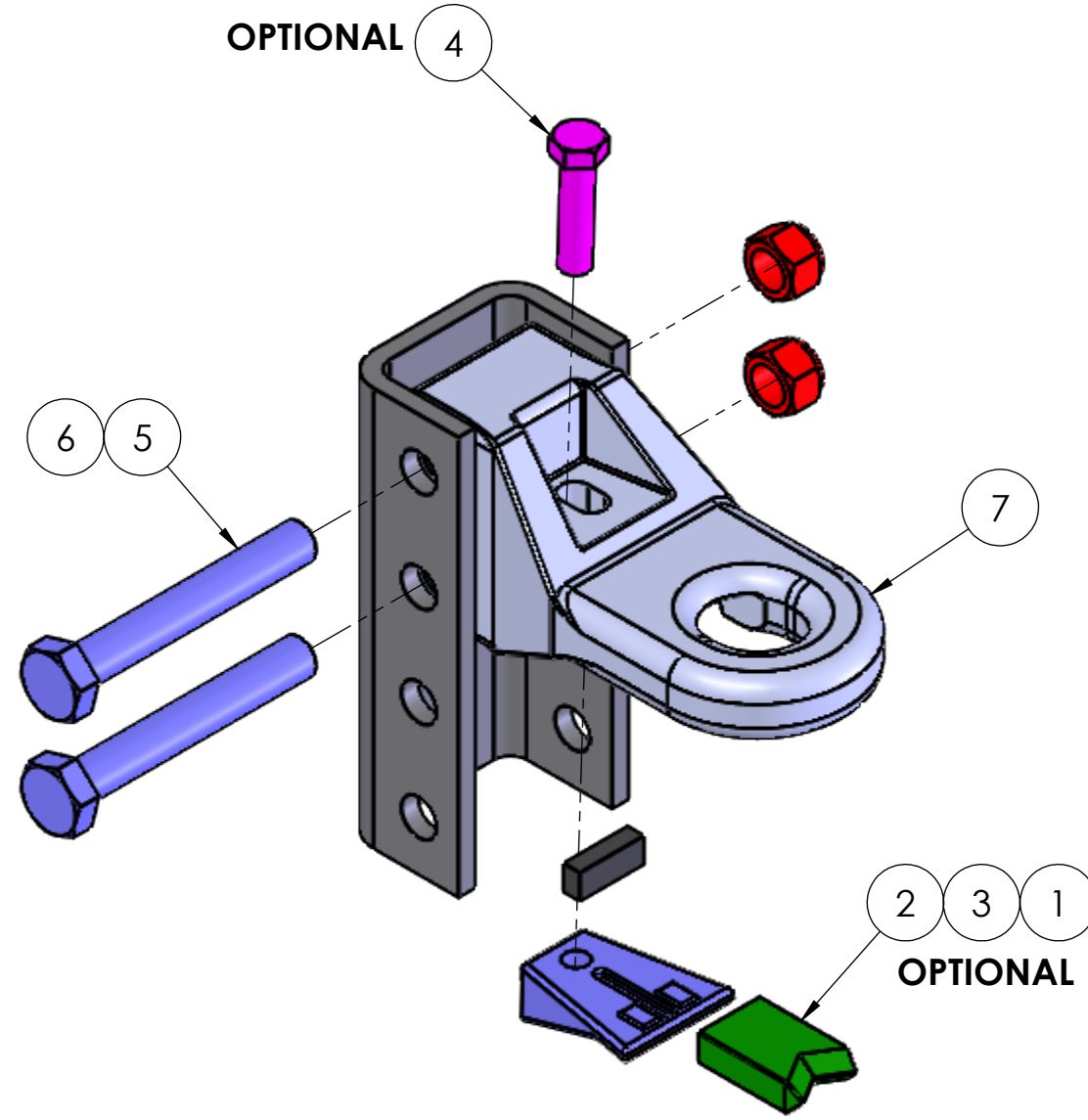
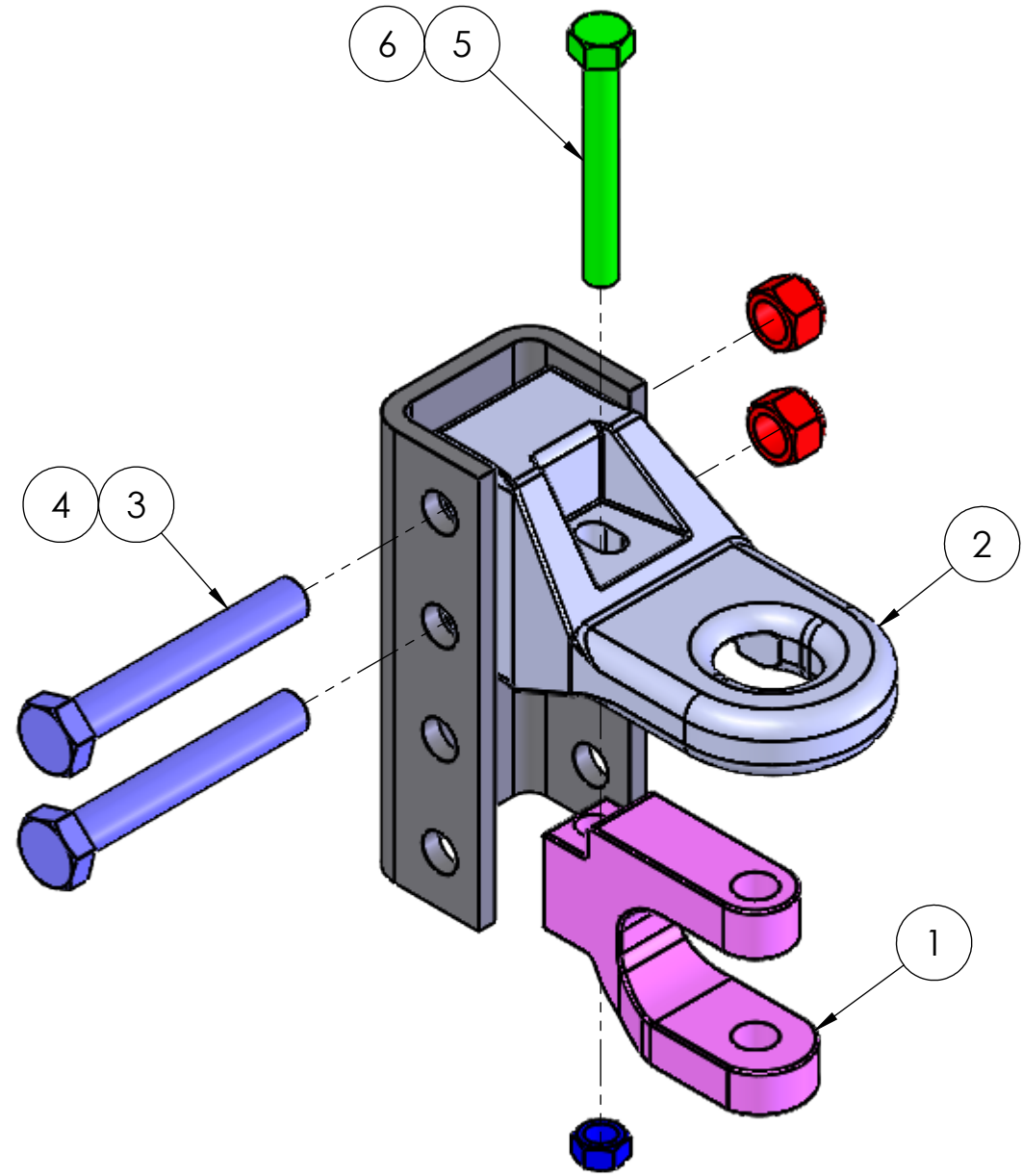
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Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941			
		JOB #:			
		MATERIAL: SEE BOM		DESCRIPTION AXLE ASSEMBLY, 10-HOLE ON 1 1/4" BC	
		MATERIAL P/N:		SIZE PART NUMBER C 424-008C	
DRAWN BY: 4-26-18		NAME: MCCLURE		FINISH:	
DESIGNED BY: 4-26-18		--		VENDOR:	
APPROVED BY:				VENDOR P/N:	
				SCALE: 1:6 WEIGHT: 356.801 lbs SHEET 1 OF 1	

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	5590B	CLEVIS, HITCH
2	1	5590A	HITCH BASE
3	2	10860	BOLT- 1" NC GRD.8 x 7" LG.
4	2	10802	NUT, 1" NC NYLON LOCK
5	1	5590D	BOLT, 3/4" NC GRD-8 x 6" LG.
6	1	5590E	NUT, LOCK- .750-10UNC HEX GR8

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	5590G	HITCH CUSHION, NEOPRENE
2	1	5590G	HITCH V-BLOCK
3	1	5590G	HITCH, TOP PLATE
4	1	10676	BOLT - 3/4" NC GR-5 x 3" LG.
5	2	10860	BOLT- 1" NC GRD.8 x 7" LG.
6	2	10802	NUT, 1" NC NYLON LOCK
7	1	5590A	HITCH BASE

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	5591A	HITCH BALL
2	2	11300	ZERK, GREASE- 1/4"-28 NF, STRAIGHT
3	1	5591B	HITCH BUSHING, 1-1/2" Ø PIN
4	1	5591F	SNAP RING, PULL BULL HITCH
5	1	5591E	HITCH BUSHING, 1-1/4" Ø PIN
6	2	10860	BOLT- 1" NC GRD.8 x 7" LG.
7	2	10802	NUT, 1" NC NYLON LOCK



OPTIONAL
1 1/2" INCH LIP TONGUE ASSEMBLY
12' TRAILER, USE PART NO. 22018B
14' TRAILER, USE PART NO. 22018
16' TRAILER, USE PART NO. 22018A

**TO ORDER COMPLETE HITCH ASSEMBLY,
 USE PART NO. 5591.**

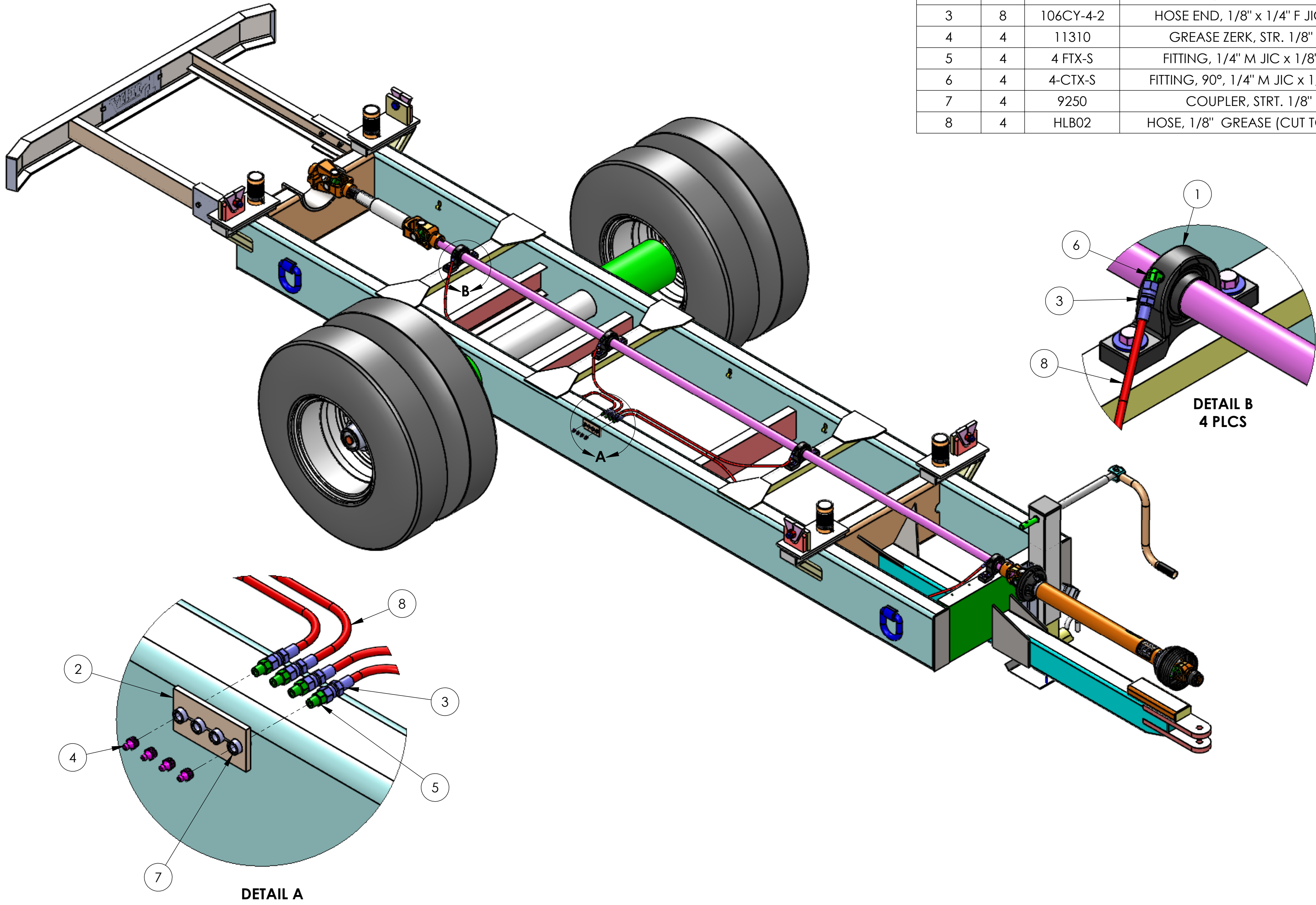
**NOTE: UNIT SERIAL # NEEDED
 FOR ALL PART ORDERS**

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DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL: ±
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941			
		JOB #: MATERIAL: SEE BOM MATERIAL P/N:			
DRAWN BY:	DATE	NAME	FINISH:	SIZE	DESCRIPTION
DESIGNED BY:	4-26-18	MCCLURE		C	HITCH ASSEMBLY OPTIONS
APPROVED BY:	4-26-18		VENDOR:	PART NUMBER	REV.
			VENDOR P/N:	424-008D	-
			SCALE: 1:4	WEIGHT: 49.284 lbs	SHEET 1 OF 1

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	4	2047	BEARING, PILLOW BLOCK 1-1/2" BORE
2	1	021231	MOUNT, GREASE FITTING 4-POS.
3	8	106CY-4-2	HOSE END, 1/8" x 1/4" F JIC, SWIVEL
4	4	11310	GREASE ZERK, STR. 1/8" M NPTF
5	4	4 FTX-S	FITTING, 1/4" M JIC x 1/8" M NPTF
6	4	4-CTX-S	FITTING, 90°, 1/4" M JIC x 1/8" M NPTF
7	4	9250	COUPLER, STRT. 1/8" NPTF
8	4	HLB02	HOSE, 1/8" GREASE (CUT TO LENGTH)



**DETAIL B
4 PLCS**

DETAIL A

NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

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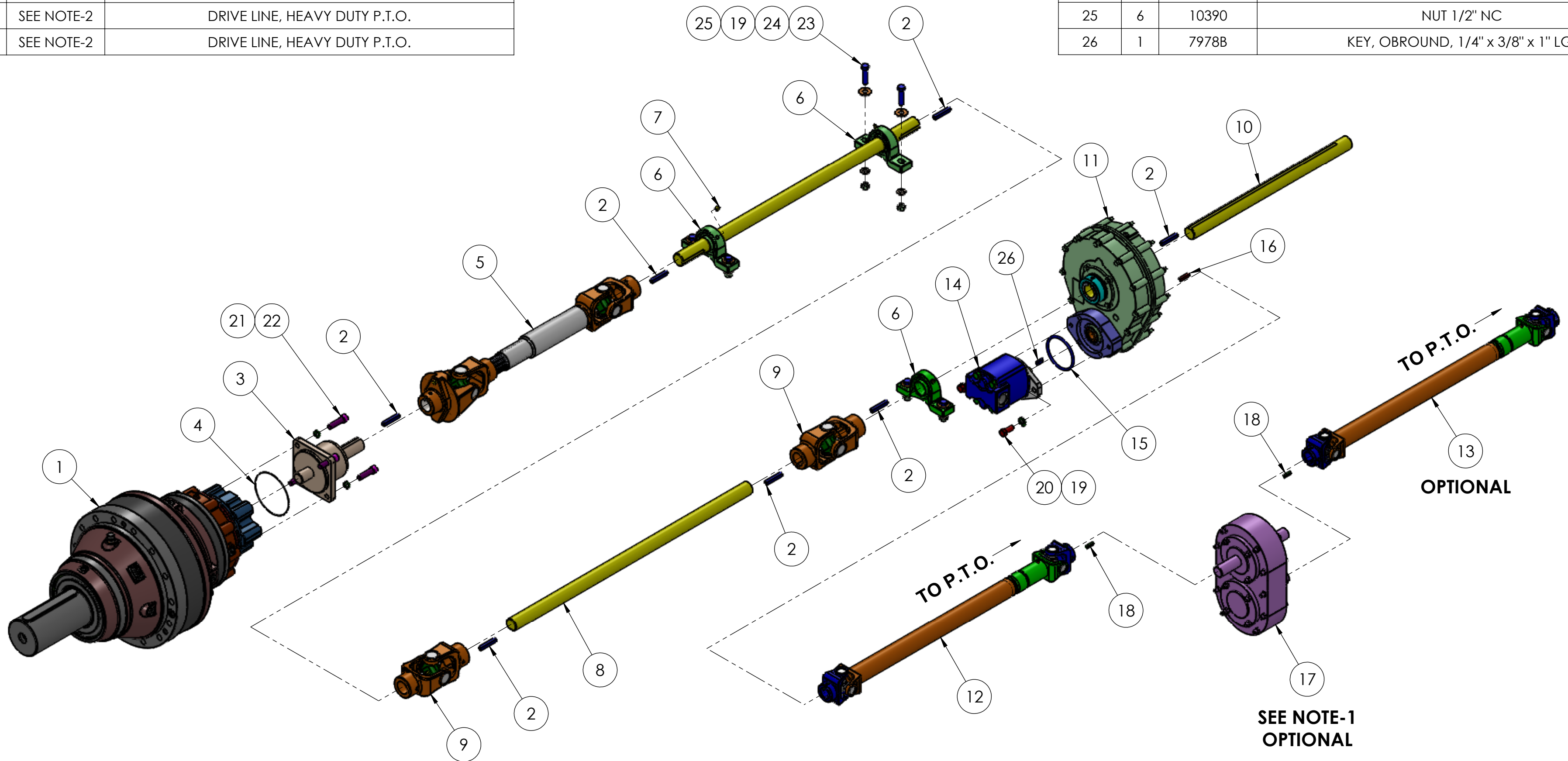
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ±
ANGULAR: MACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		
		JOB #: MATERIAL: SEE BOM MATERIAL P/N:		
DRIVEN BY:	DATE	NAME	FINISH:	DESCRIPTION GREASE LINE DETAIL, TRAILER BEARINGS
DESIGNED BY:	6/14/2018	MCCLURE	VENDOR:	SIZE C
APPROVED BY:			VENDOR P/N:	PART NUMBER 424-008E
			SCALE: 1:12	WEIGHT: 2815.460 lbs
				REV. -
				SHEET 1 OF 1

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	7431	GEARBOX, PLANETARY, 20:1
2	7	3693	KEY, SQ. 3/8" x 2 1/2" LG.
3	1	7391	INPUT ADAPTER, PLANETARY GEARBOX
4	1	7417	O-RING, INPUT ADAPTER
5	1	SEE NOTE-2	DRIVE LINE, 44N-W/SHEAR HUB
6	3	2047	BEARING, PILLOW BLOCK 1-1/2" BORE
7	3	11310	GREASE ZERK, STR. 1/8" M NPTF
8	2	12577	SHAFT, Ø 1-1/2" (ORDER BY LENGTH)
9	2	SEE NOTE-2	U-JOINT ASSEMBLY, 44R x 1-1/2" SHAFT
10	1	133098	SHAFT, TRUCK MOUNT MIXERS
11	1	SEE NOTE-2	GEARBOX REDUCER, 3:1
12	1	SEE NOTE-2	DRIVE LINE, HEAVY DUTY P.T.O.
13	1	SEE NOTE-2	DRIVE LINE, HEAVY DUTY P.T.O.

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
14	1	7891	PUMP, HYDRAULIC
15	1	7296GG	O-RING, MOUNTING FLANGE
16	1	3691	KEY 5/16" SQ x 1 1/2" LG.
17	1	7290	GEARBOX, REVERSE, 1:1
18	2	3685	KEY- 1/4" SQ. x 1 1/4" LG.
19	8	10398	WASHER, LOCK- 1/2"
20	2	10406	BOLT- 1/2" NC GRD.5 x 1 1/4" LG.
21	4	10533	WASHER, HI-COLLAR LOCK, M14
22	4	10425B	BOLT, SKT-HD, M14-2.0 x 50 MM LG.
23	6	10421	BOLT - 1/2" NC GR5 x 2" LG.
24	6	10399	WASHER- 1/2" FLAT
25	6	10390	NUT 1/2" NC
26	1	7978B	KEY, OBROUND, 1/4" x 3/8" x 1" LG.

**THIS SETUP MAY VARY
DEPENDING ON TRUCK USED**



NOTES: UNLESS OTHERWISE SPECIFIED

- 1 - THIS OPTIONAL 1:1 GEARBOX IS USED WITH REVERSE ROTATION P.T.O. ONLY.
- 2 - SEE DRAWING NO. 424-009B FOR INDIVIDUAL COMPONENT PART NUMBERS.

**NOTE: UNIT SERIAL # NEEDED
FOR ALL PART ORDERS**

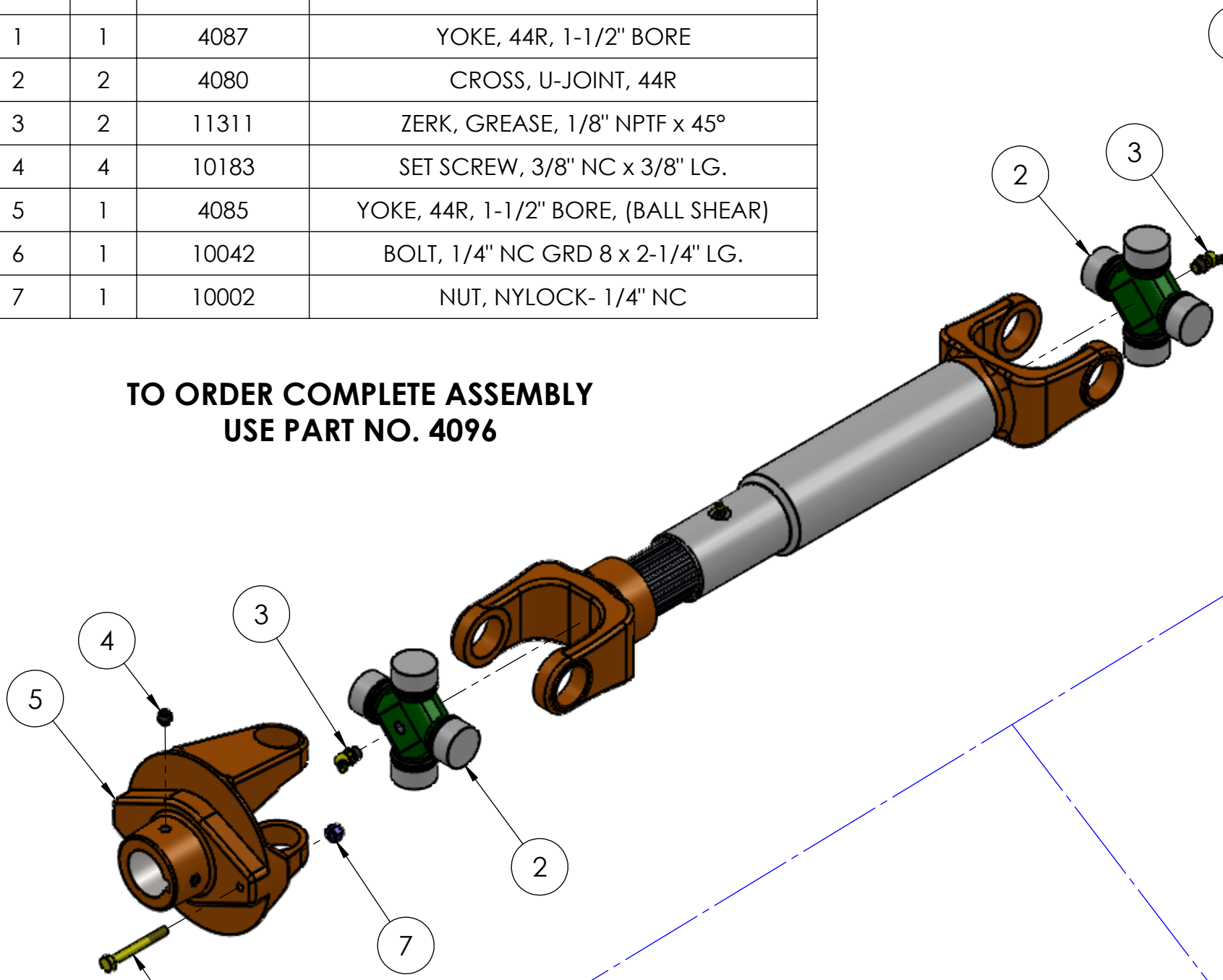
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DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ±
ANGULAR: MACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

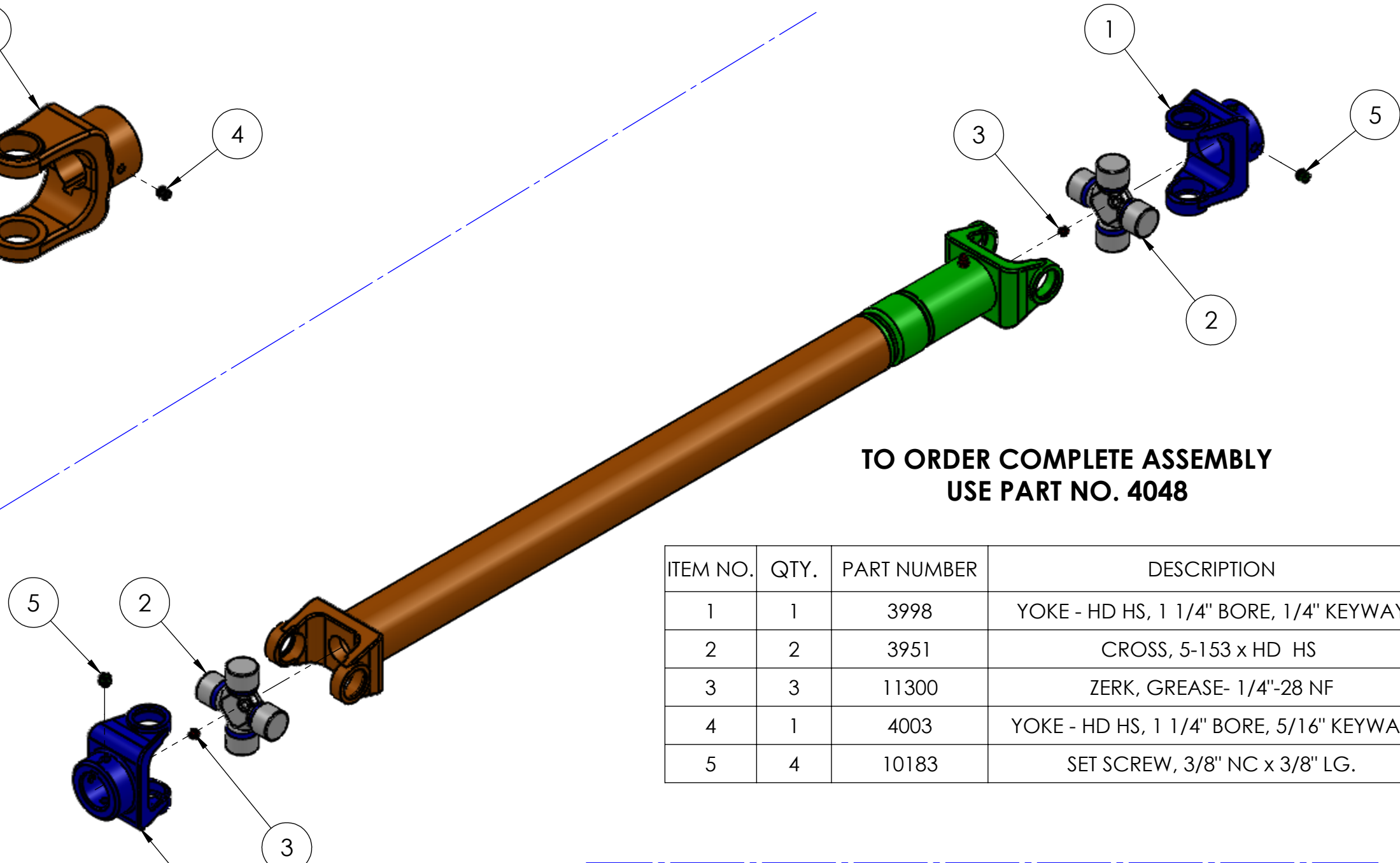
Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941			
		JOB #: MATERIAL: SEE BOM MATERIAL P/N: FINISH: VENDOR: VENDOR P/N:			
DESIGNED BY:	DATE:	NAME:	DATE:	DESCRIPTION:	REV.:
APPROVED BY:	4-26-18	MCCLURE	4-26-18	TRUCK DRIVELINE PTO ASSEMBLY	-
				SIZE:	PART NUMBER:
				C	424-009A
				SCALE: 1:9	WEIGHT: 344.2042 lbs
				SHEET 1 OF 1	

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	4087	YOKE, 44R, 1-1/2" BORE
2	2	4080	CROSS, U-JOINT, 44R
3	2	11311	ZERK, GREASE, 1/8" NPTF x 45°
4	4	10183	SET SCREW, 3/8" NC x 3/8" LG.
5	1	4085	YOKE, 44R, 1-1/2" BORE, (BALL SHEAR)
6	1	10042	BOLT, 1/4" NC GRD 8 x 2-1/4" LG.
7	1	10002	NUT, NYLOCK- 1/4" NC

**TO ORDER COMPLETE ASSEMBLY
USE PART NO. 4096**

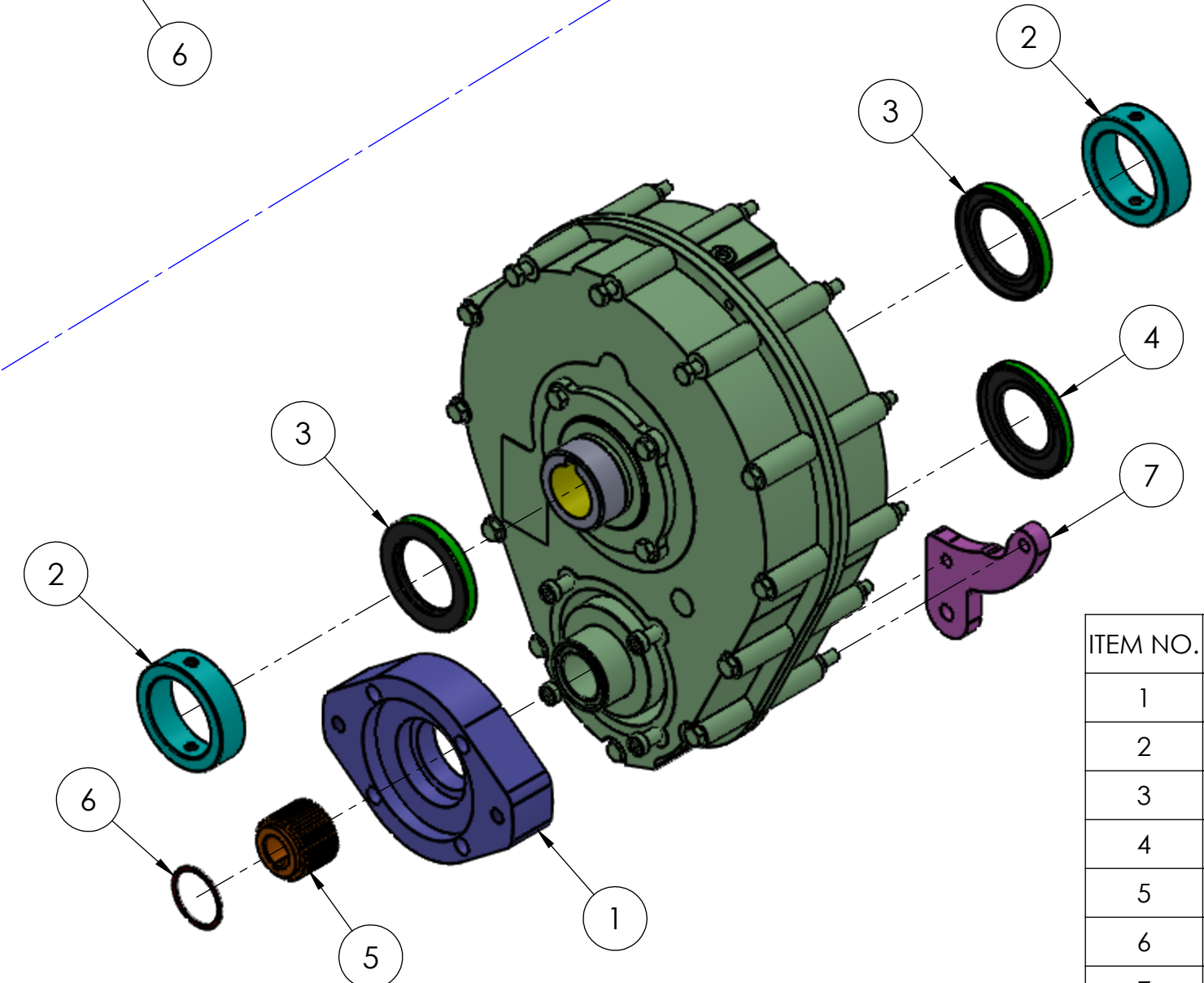


**TO ORDER COMPLETE ASSEMBLY
USE PART NO. 4048**



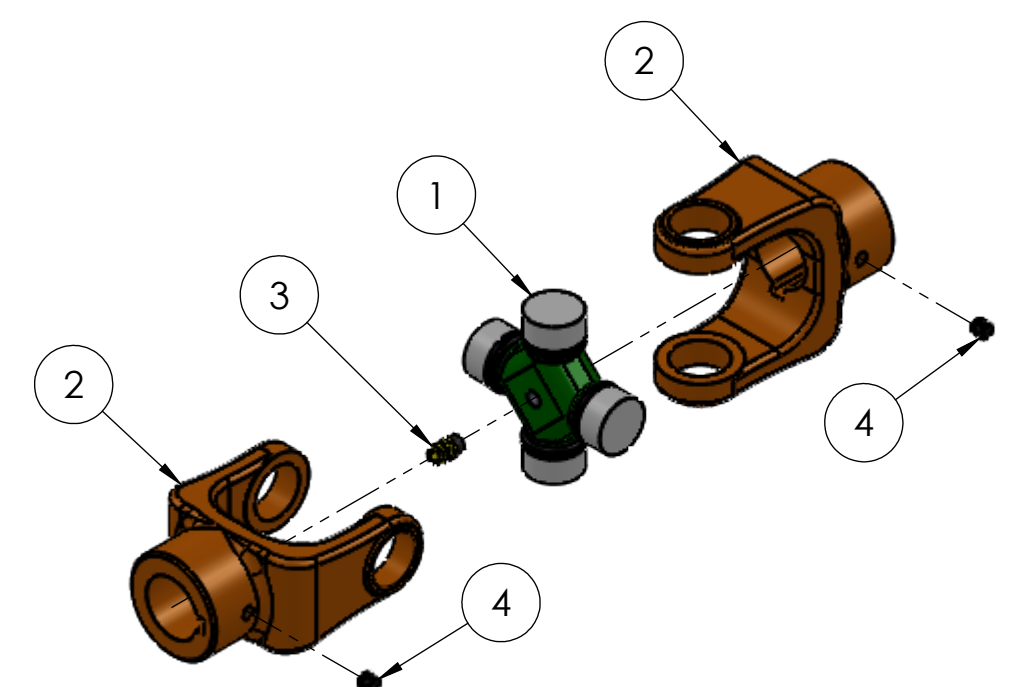
ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	3998	YOKE - HD HS, 1 1/4" BORE, 1/4" KEYWAY
2	2	3951	CROSS, 5-153 x HD HS
3	3	11300	ZERK, GREASE- 1/4"-28 NF
4	1	4003	YOKE - HD HS, 1 1/4" BORE, 5/16" KEYWAY
5	4	10183	SET SCREW, 3/8" NC x 3/8" LG.

**TO ORDER COMPLETE ASSEMBLY
USE PART NO. 7296**



ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	7296M	FLANGE, PUMP MOUNT
2	2	7296E	COLLOR, SHAFT LOCKING
3	2	7296EE	OIL SEAL, G.B. #22400
4	1	7296FF	OIL SEAL, G.B. 50x80x8
5	1	7296D	BUSHING, O.D. SPLINED x 7/8" BORE
6	1	7296AA	RETAINING RING, G.B.
7	1	7296G	PLATE, TORQUE, G.B.

**TO ORDER COMPLETE ASSEMBLY
USE PART NO. 4097**



ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	4080	CROSS, U-JOINT, 44R
2	2	4087	YOKE, 44R, 1-1/2" BORE
3	1	11311	ZERK, GREASE, 1/8" NPTF x 45°
4	4	10183	SET SCREW, 3/8" NC x 3/8" LG.

**NOTE: UNIT SERIAL # NEEDED
FOR ALL PART ORDERS**

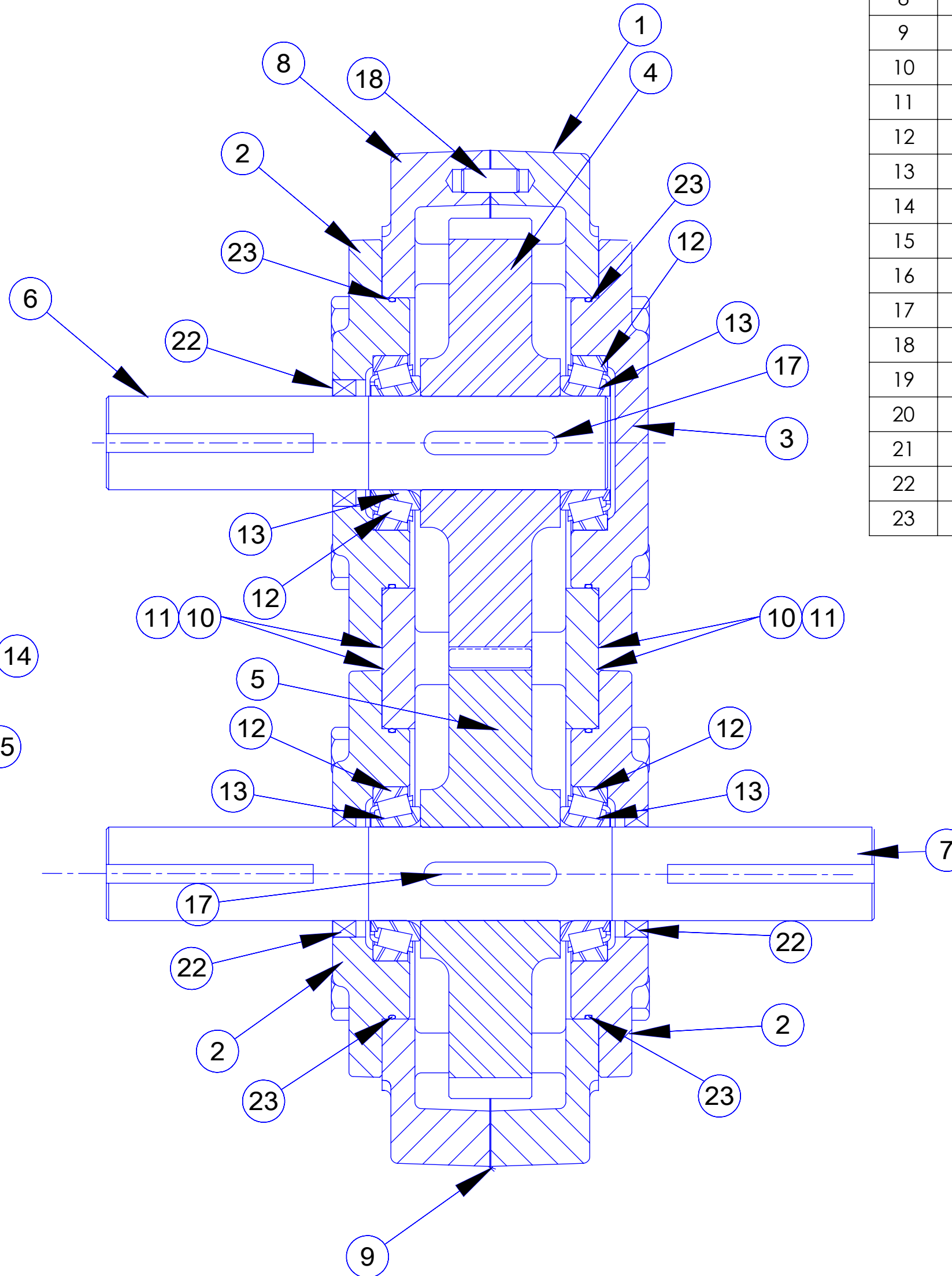
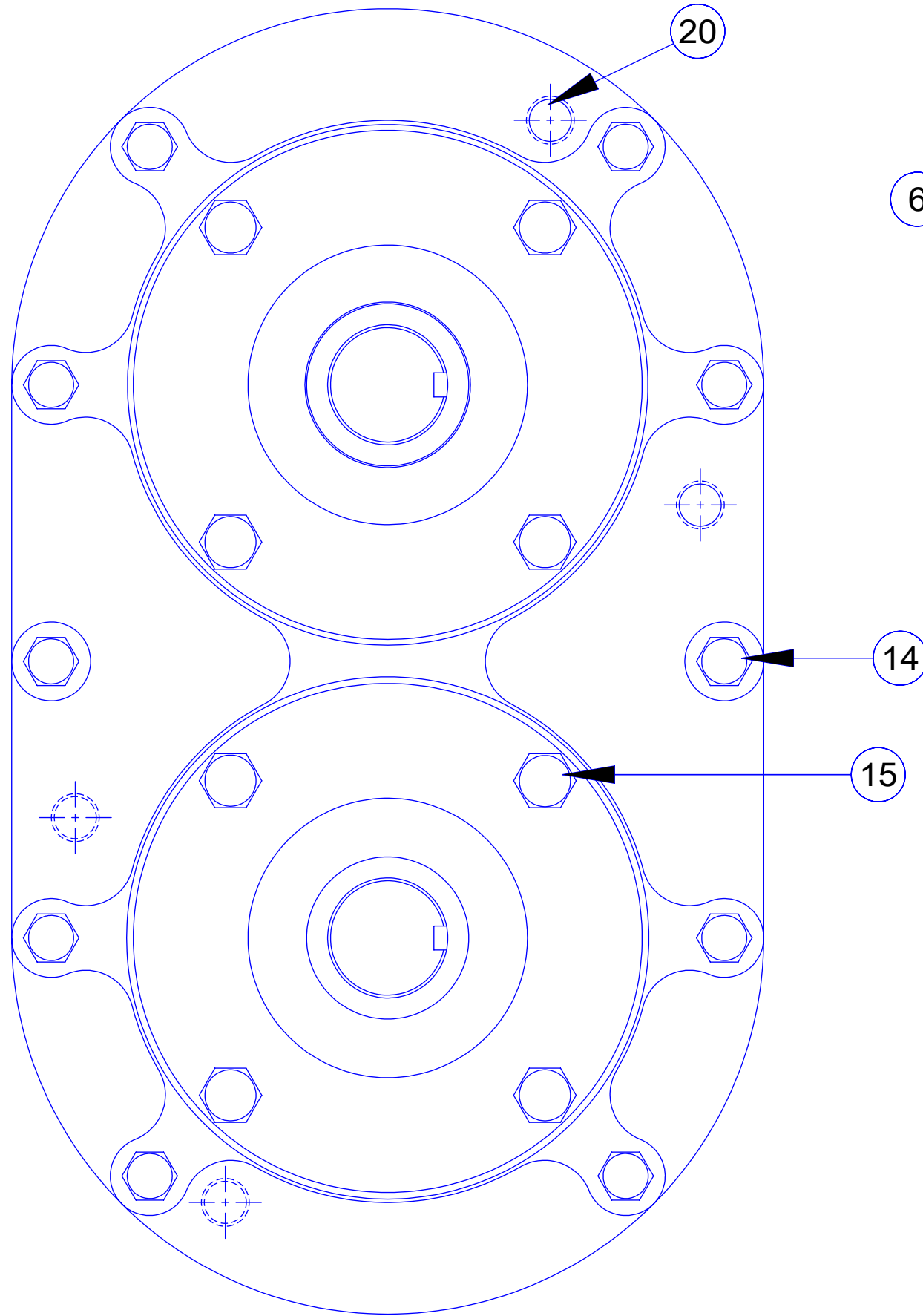
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TOLERANCES:
FRACTIONAL: ±
ANGULAR: MACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		
		JOB #: MATERIAL: SEE BOM MATERIAL P/N:		
DRAWN BY:	DATE	NAME	FINISH:	DESCRIPTION TRUCK DRIVELINE COMPONENT
DESIGNED BY:	4-26-18	MCCLURE	VENDOR:	SIZE C
APPROVED BY:			VENDOR P/N:	PART NUMBER 424-009B
			SCALE: 1:4	WEIGHT: 49.9340 lbs
			SHEET 1 OF 1	

**1:1 REVERSE
GEAR BOX
PART NO. 7290**

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	7290A	HOUSING, HALF
2	3	7290B	CAP, OPEN
3	1	7290C	CAP, CLOSED
4	1	7290D	GEAR, HEL LH
5	1	7290E	GEAR, HEL RH
6	1	7290F	SHAFT
7	1	7290G	SHAFT
8	1	7290H	HOUSING, HALF
9	1	7290I	GASKET
10	6	7290J	SHIM, RED
11	3	7290K	SHIM
12	4	6011	CUP, BEARING
13	4	6012	CONE, BEARING
14	10	7290N	SCREW, HEX CAP 5/16" NC x 3 1/4" LG. GR-5
15	16	7290O	SCREW, HEX CAP 3/8" NC x 1" LG. GR-5
16	10	7290P	NUT, HEX 5/16" NC
17	2	7290Q	KEY, SQ.
18	2	7290S	PIN, DOWEL
19	1	7290T	BUSHING, PIPE 1/4" x 1/8" NPT
20	3	7290U	PLUG, PIPE SOCKET 1/4" NPT
21	1	7290V	PLUG, VENTED 1/8" NPT 1-5 PSI BALL
22	3	7290W	SEAL
23	4	7290R	O-RING



**NOTE: UNIT SERIAL # NEEDED
FOR ALLPART ORDERS**

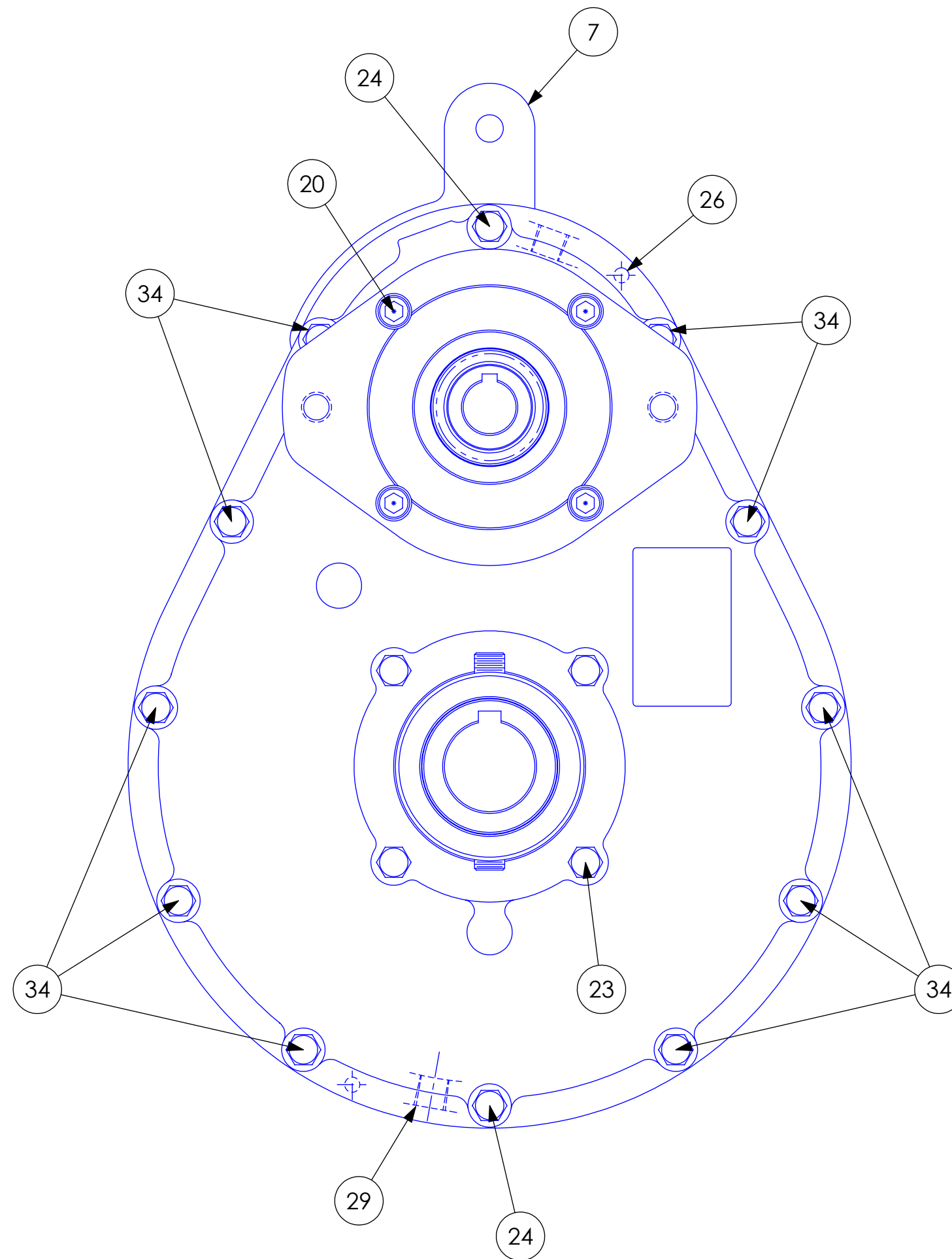
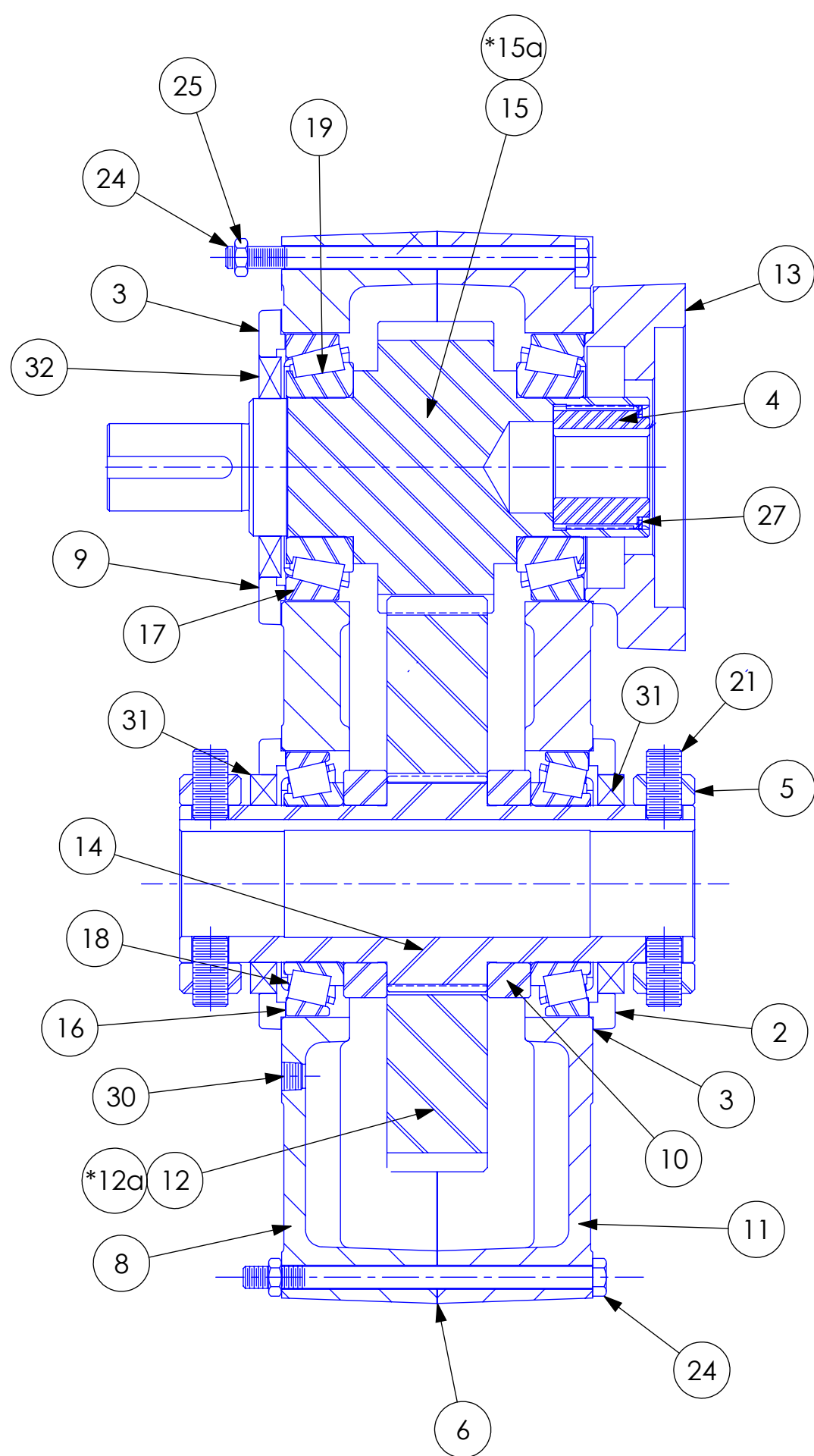
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FRACTIONAL: ±
ANGULAR: MACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		 DESCRIPTION GEARBOX ASSEMBLY, 1:1
JOB #:		MATERIAL P/N:		
DRAWN BY: 4-24-18		NAME: MCCLURE		FINISH:
CHECKED BY:		VENDOR:		SCALE: 1:1
APPROVED BY:		VENDOR P/N:		WEIGHT: lbs
SIZE: C		PART NUMBER: 424-010		REV.:
SCALE: 1:1		WEIGHT: lbs		SHEET 1 OF 1

**95HH- 3:1
GEAR BOX
PART NO. 7296**

**95HH- 2:1
GEAR BOX
PART NO. 7300**



ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	7296A	GASKET
2	2	7296B	CAP, OPEN
3	8	7296C	GASKET
4	1	7296D	BUSHING, 7/8" I.D.
5	2	7296E	COLLAR, LOCKING
6	1	7296F	GASKET
7	1	7296G	PLATE, TORQUE
8	1	7296H	HOUSING, HALF
9	1	7296I	CAP, OPEN
10	2	7296J	SPACER
11	1	7296K	HOUSING, HALF
12	1	7296L	GEAR, HEL RH for 3:1 G.B.
*12a	1	7300A	GEAR, HEL RH for 2:1 G.B.
13	1	7296M	FLANGE, MOTOR
14	1	7296N	SLEEVE, OUTPUT
15	1	7296O	GEAR, HEL LH for 3:1 G.B.
*15a	1	7300B	GEAR, HEL LH for 2:1 G.B.
16	2	7296P	CUP, BEARING
17	2	7296Q	CUP, BEARING
18	2	7296R	CONE, BEARING
19	2	7296S	CONE, BEARING
20	4	7296T	SCREW, SOCKET HD CAP 3/8" NC x 1 1/4" LG.
21	4	7296U	SCREW, SOCKET SET 1/2" NC x 1" LG.
22	4	7296V	SCREW, HEX CAP GR5 3/8" NC x 3/4" LG.
23	8	7296W	SCREW, HEX CAP GR5 5/16" NC x 3/4" LG.
24	2	7296X	SCREW, HEX CAP GR5 5/16" NF x 5" LG.
25	12	7296Y	NUT, HEX 5/16" NF
26	2	7296Z	PIN, DOWEL
27	1	7296AA	RING, RETAINING
28	1	7296BB	BREATHER, 3/8" NPT
29	2	7296CC	PLUG, PIPE SOCKET 3/8" NPT
30	2	7296DD	PLUG, PIPE SOCKET 1/8" NPT
31	2	7296EE	SEAL
32	1	7296FF	SEAL
33	1	7296GG	O-RING
34	10	10159	BOLT- 5/16" NF GRD.8 x 5 1/2" LG.

*** ITEMS LISTED BUT NOT SHOWN**


NOTES: UNLESS OTHERWISE SPECIFIED

**1 - ITEM #34 ARE REPLACEMENTS (LONGER BOLTS)
IN ORDER TO MOUNT TO KIRBY BRACKETS.**

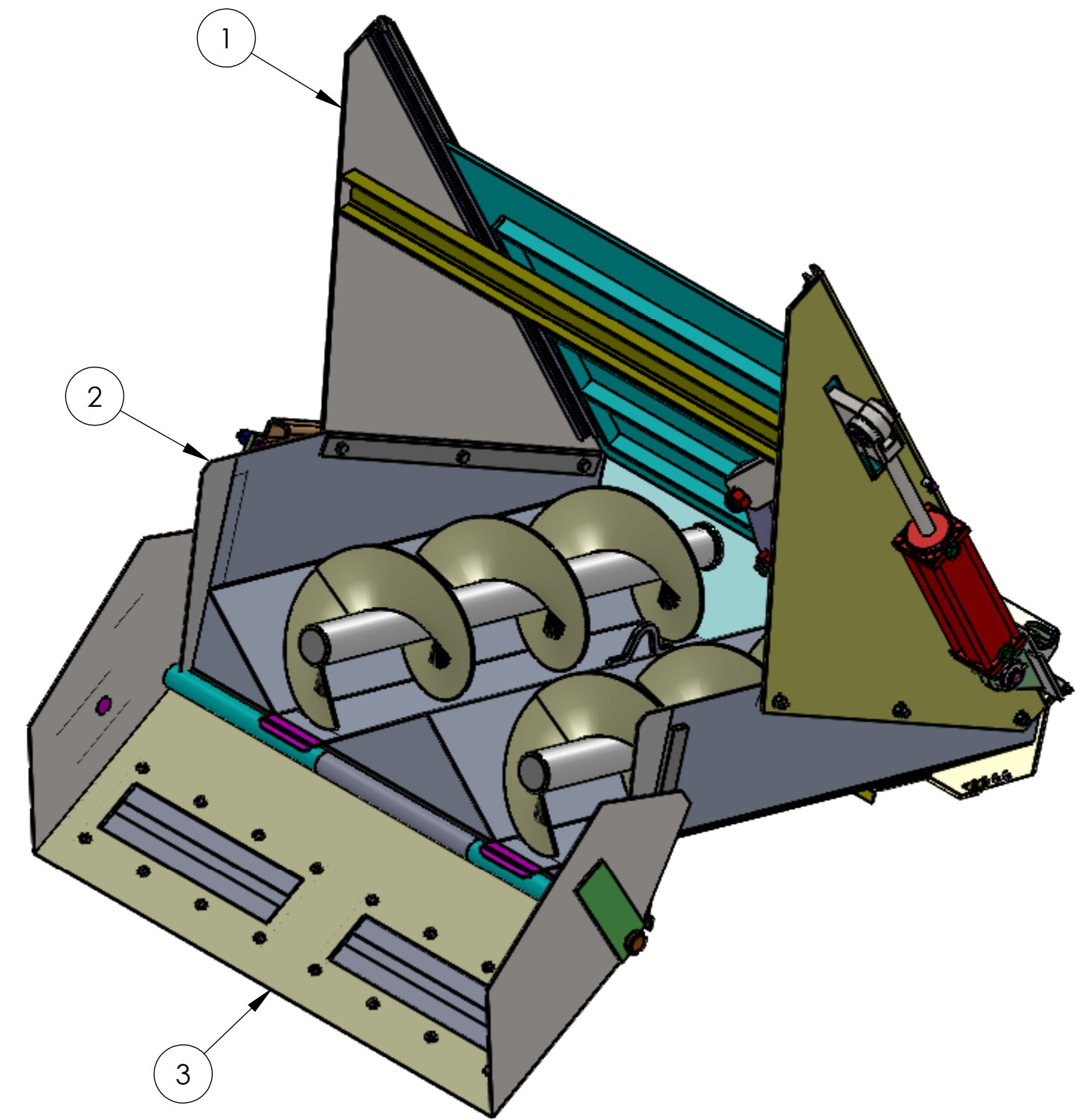
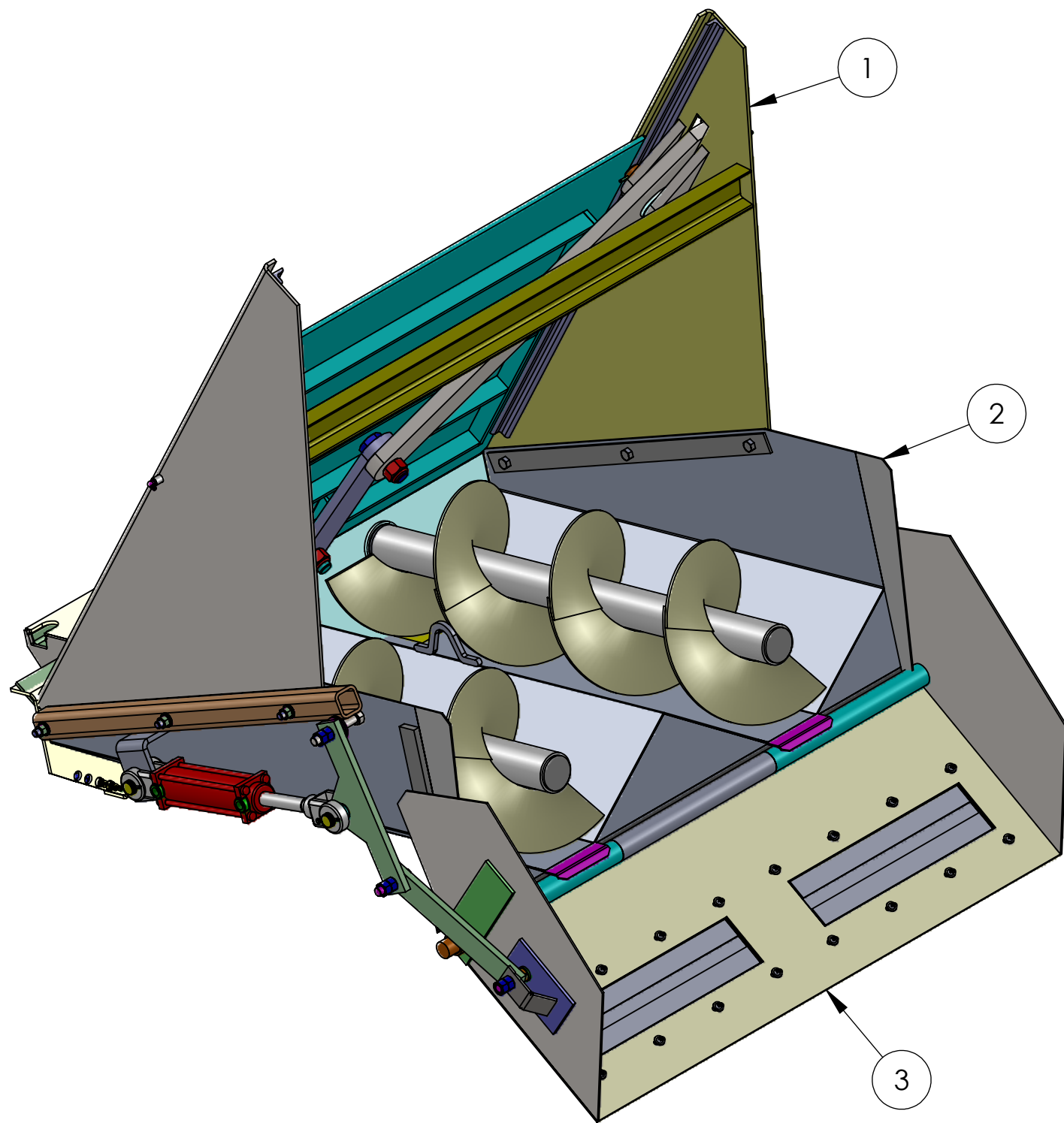
**NOTE: UNIT SERIAL # NEEDED
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TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		
		JOB #:		
		MATERIAL:		SIZE PART NUMBER 424-011 REV.
		MATERIAL P/N:		SCALE: 1:1 WEIGHT: lbs SHEET 1 OF 1
DRAWN BY:	DATE	NAME		
CHECKED BY:		FINISH:		
APPROVED BY:		VENDOR:		
		VENDOR P/N:		

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	SEE NOTE-1	DISCHARGE DOOR & FRAME ASSEMBLY
2	1	SEE NOTE-2	AUGER ASSEMBLY, 2-AUGER DISCHARGE
3	1	SEE NOTE-3	FOLDING SPOUT, 2-AUGER DISCHARGE



NOTES: UNLESS OTHERWISE SPECIFIED

- 1 - SEE DRAWING NO. 424-012B FOR COMPONENT PART NUMBERS.
- 2 - SEE DRAWING NO. 424-012C AND F FOR ASSEMBLIES & COMPONENT PART NUMBERS.
- 3 - SEE DRAWING NO. 424-012D AND E FOR COMPONENT PART NUMBERS.

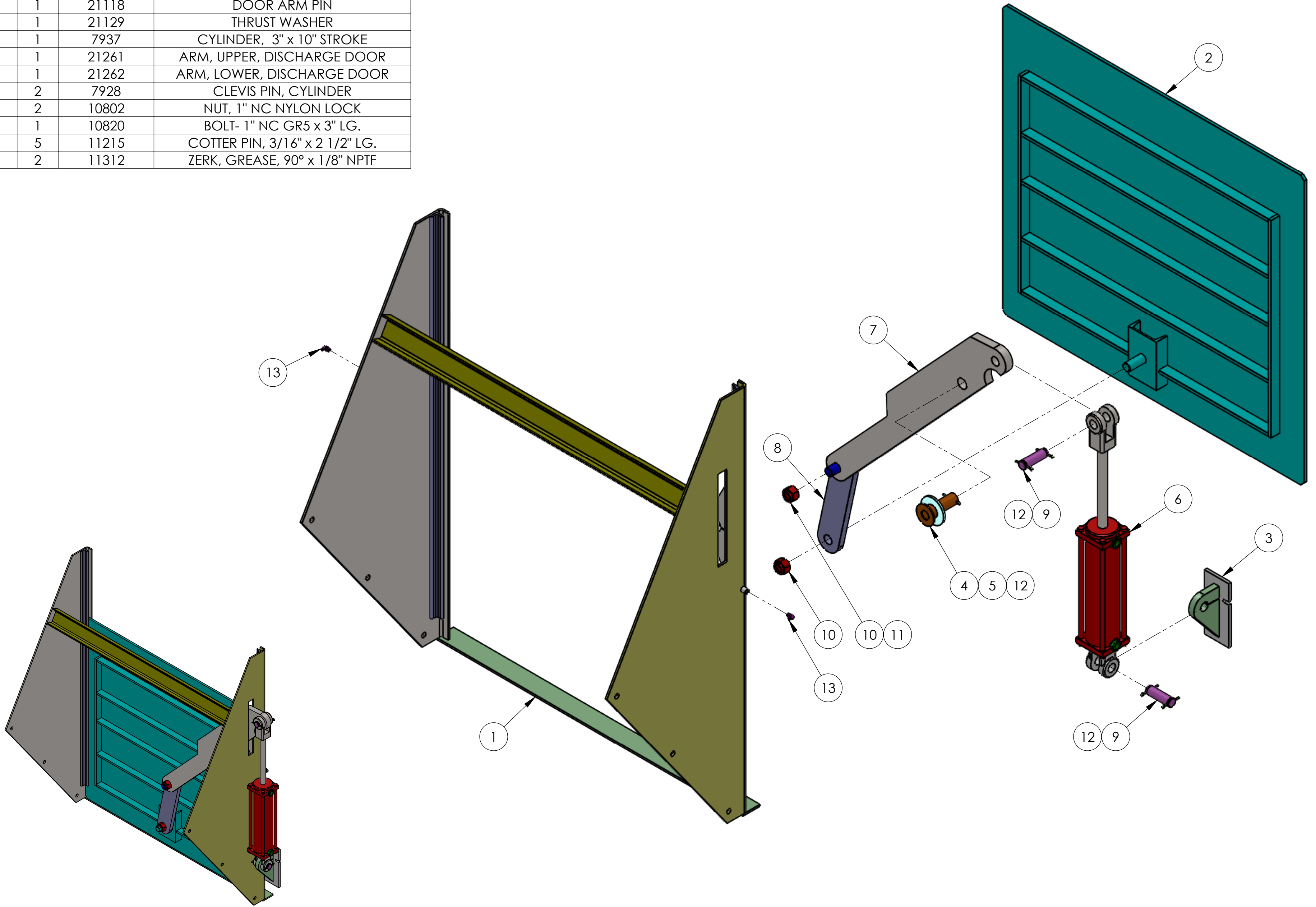
NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

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 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		 DESCRIPTION DISCHARGE DOOR & AUGER ASSEMBLY		
JOB #:		MATERIAL: SEE BOM				
DRAWN BY:	DATE	NAME	FINISH:	SIZE	PART NUMBER	REV.
DESIGNED BY:	4-27-18	MCCLURE		C	424-012A	-
APPROVED BY:			VENDOR:	SCALE: 1:10	WEIGHT: lbs	SHEET 1 OF 1
			VENDOR P/N:			

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	22071	DOOR FRAME ASSEMBLY
2	1	22070	DISCHARGE DOOR
3	1	21117	DOOR RAM MOUNT
4	1	21118	DOOR ARM PIN
5	1	21129	THRUST WASHER
6	1	7937	CYLINDER, 3" x 10" STROKE
7	1	21261	ARM, UPPER, DISCHARGE DOOR
8	1	21262	ARM, LOWER, DISCHARGE DOOR
9	2	7928	CLEVIS PIN, CYLINDER
10	2	10802	NUT, 1" NC NYLON LOCK
11	1	10820	BOLT- 1" NC GR5 x 3" LG.
12	5	11215	COTTER PIN, 3/16" x 2 1/2" LG.
13	2	11312	ZERK, GREASE, 90° x 1/8" NPTF



NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

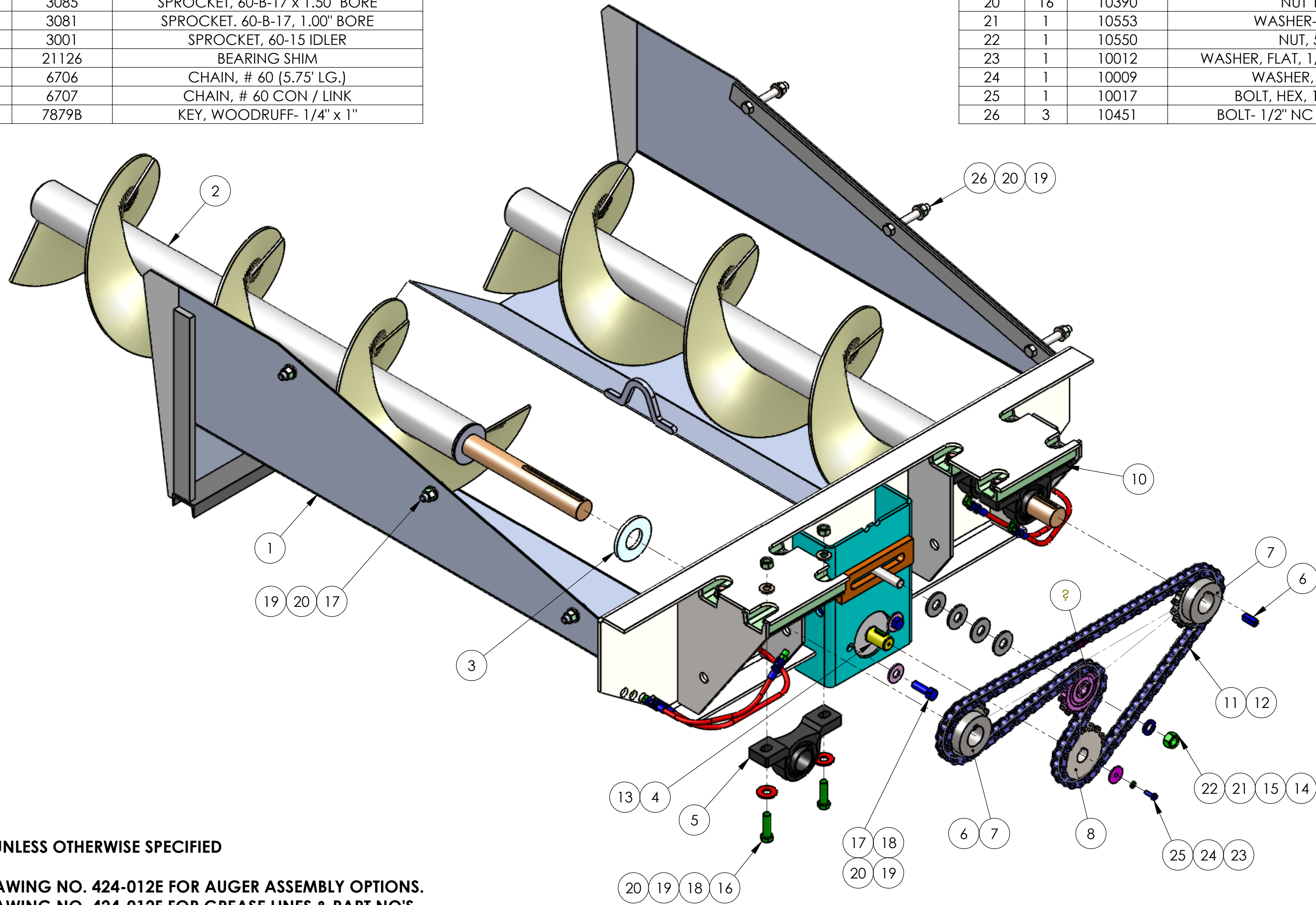
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 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		 DESCRIPTION DOOR & FRAME ASSEMBLY	
MATERIAL: SEE BOM		MATERIAL P/N:			
JOB #:	DATE	NAME	FINISH:	SIZE	REV.
DRAWN BY:	4-27-18	MCCLURE		C	-
DESIGNED BY:	4-27-18		VENDOR:	PART NUMBER	
APPROVED BY:			VENDOR P/N:	424-012B	
SCALE: 1:7			WEIGHT: 424 lbs	SHEET 1 OF 1	

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	23100-40	DISCHARGE SHELL, 40" - 2 AUGER
2	2	22037-1 1/2"	DISCHARGE AUGER, 40" LG.
3	2	21129	THRUST WASHER
4	1	7965	MOTOR, HYDRAULIC
5	4	2047	BEARING, PILLOW BLOCK 1-1/2" BORE
6	2	3694	KEY, SQ. 3/8" x 1 1/4" LG.
7	2	3085	SPROCKET, 60-B-17 x 1.50" BORE
8	1	3081	SPROCKET, 60-B-17, 1.00" BORE
9	1	3001	SPROCKET, 60-15 IDLER
10	4	21126	BEARING SHIM
11	1	6706	CHAIN, # 60 (5.75' LG.)
12	1	6707	CHAIN, # 60 CON / LINK
13	1	7879B	KEY, WOODRUFF- 1/4" x 1"

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
14	1	10581	BOLT - 5/8" NC GR-5 x 3" LG.
15	5	10552	WASHER, FLAT- 5/8"
16	8	10416	BOLT- 1/2" NC GRD.5 x 1 3/4" LG.
17	5	10411	BOLT - 1/2" NC GRD.5 x 1 1/2" LG.
18	10	10397	WASHER- 1/2" FLAT (HARDENED)
19	16	10398	WASHER, LOCK- 1/2"
20	16	10390	NUT 1/2" NC
21	1	10553	WASHER- 5/8" LOCK
22	1	10550	NUT, 5/8" NC
23	1	10012	WASHER, FLAT, 1/4" x 1-1/4" FENDER
24	1	10009	WASHER, LOCK- 1/4"
25	1	10017	BOLT, HEX, 1/4" NC x 3/4"
26	3	10451	BOLT- 1/2" NC GR5 x 3 1/2" LG.



NOTES: UNLESS OTHERWISE SPECIFIED

- 1 - SEE DRAWING NO. 424-012E FOR AUGER ASSEMBLY OPTIONS.
- 2 - SEE DRAWING NO. 424-012F FOR GREASE LINES & PART NO'S.

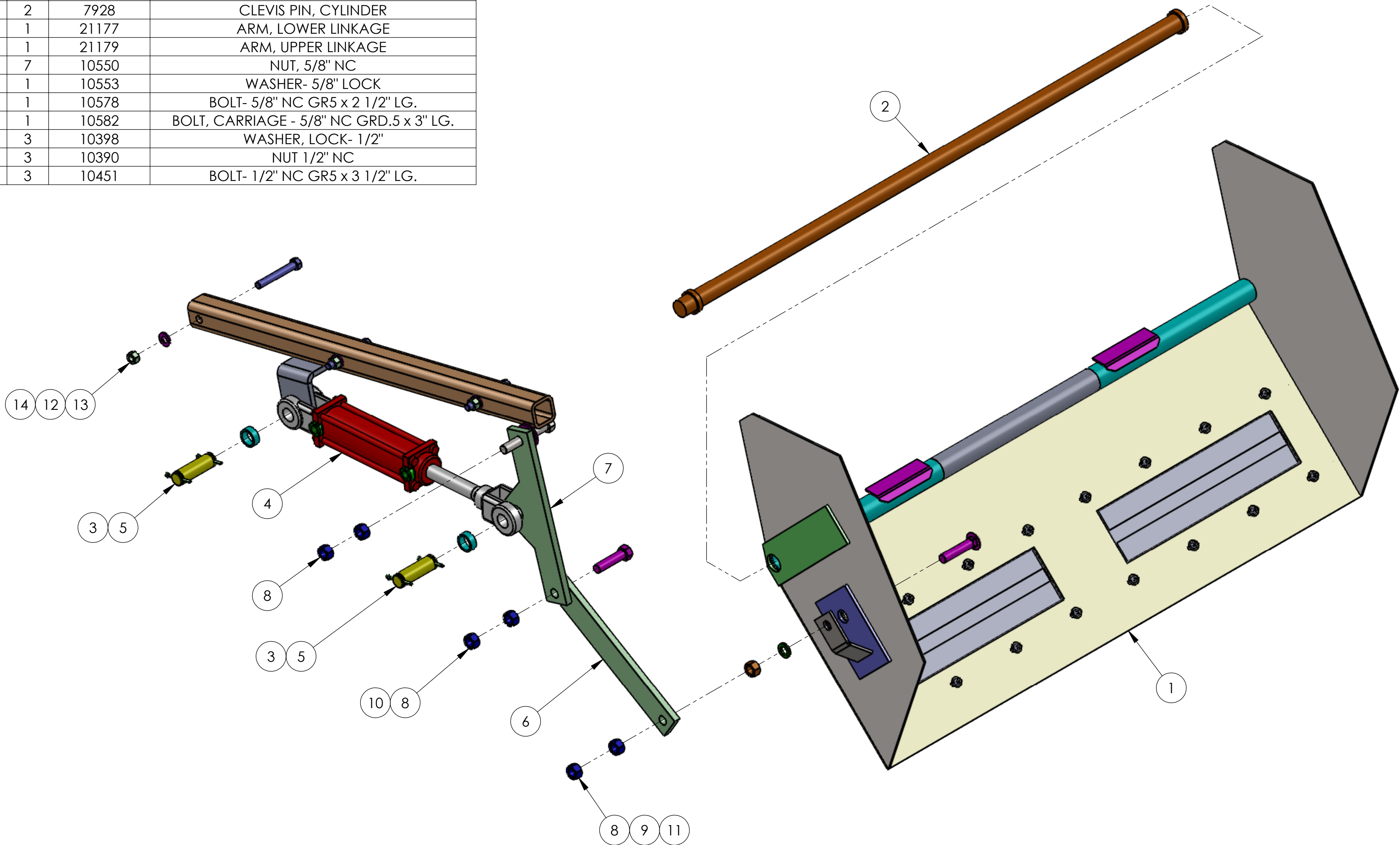
NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		
		JOB #: MATERIAL: SEE BOM MATERIAL P/N:		
DESIGNED BY:	DATE	NAME	FINISH:	DESCRIPTION AUGER ASSEMBLY, 2-AUGER DISCHARGE
DESIGNED BY:	4-27-18	MCCLURE		SIZE C
APPROVED BY:	4-27-18		VENDOR:	PART NUMBER 424-012C
			VENDOR P/N:	SCALE: 1:5
				WEIGHT: 341.570 lbs
				SHEET 1 OF 1

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DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ±
ANGULAR: MACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	SEE NOTE-1	FOLDING SPOUT ASSEMBLY
2	1	21186	HINGE PIN, SPOUT
3	4	11215	COTTER PIN, 3/16" x 2 1/2" LG.
4	1	7925	CYLINDER, 2" X 6" STROKE
5	2	7928	CLEVIS PIN, CYLINDER
6	1	21177	ARM, LOWER LINKAGE
7	1	21179	ARM, UPPER LINKAGE
8	7	10550	NUT, 5/8" NC
9	1	10553	WASHER- 5/8" LOCK
10	1	10578	BOLT- 5/8" NC GR5 x 2 1/2" LG.
11	1	10582	BOLT, CARRIAGE - 5/8" NC GRD.5 x 3" LG.
12	3	10398	WASHER, LOCK- 1/2"
13	3	10390	NUT 1/2" NC
14	3	10451	BOLT- 1/2" NC GR5 x 3 1/2" LG.



NOTES: UNLESS OTHERWISE SPECIFIED

1 - SEE DRAWING NO. 424-012E FOR SPOUT COMPONENT PART NUMBERS.

NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

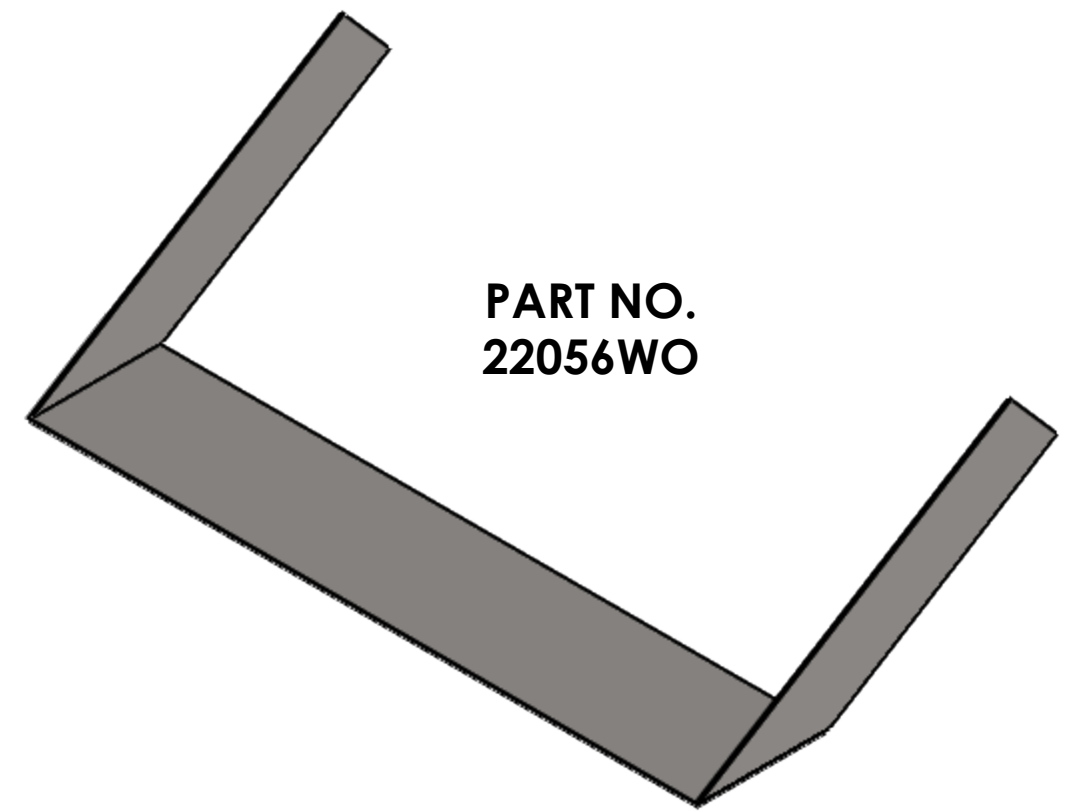
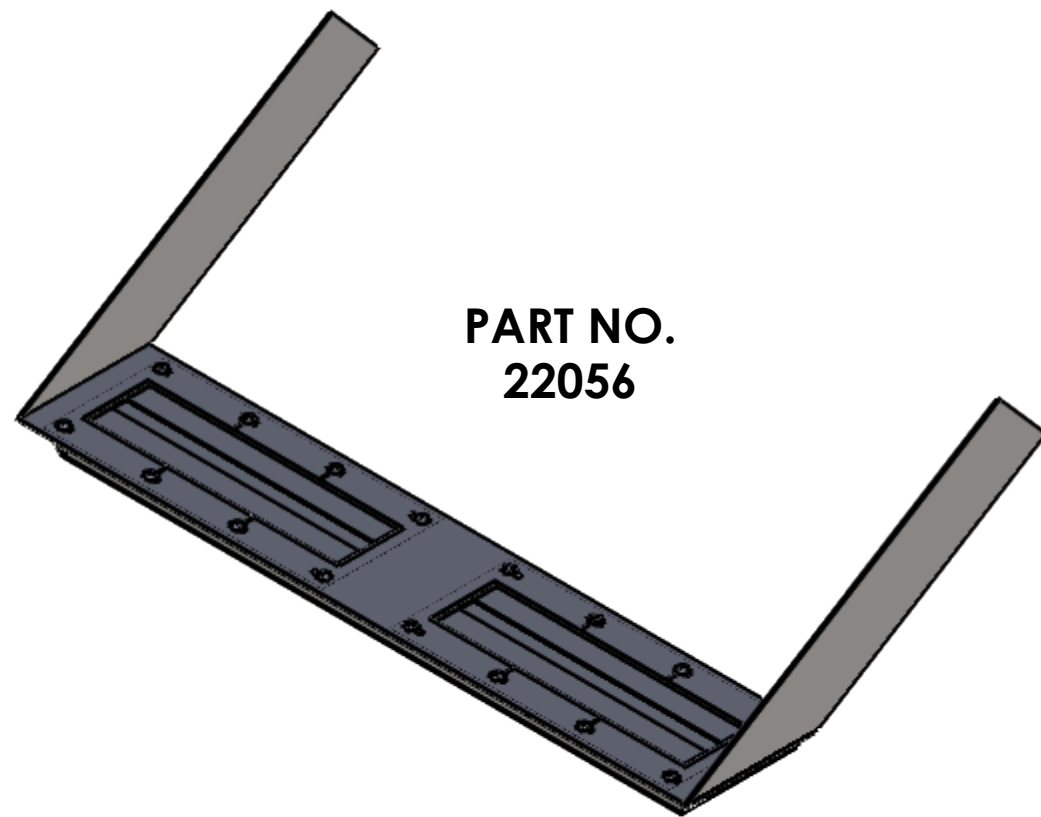
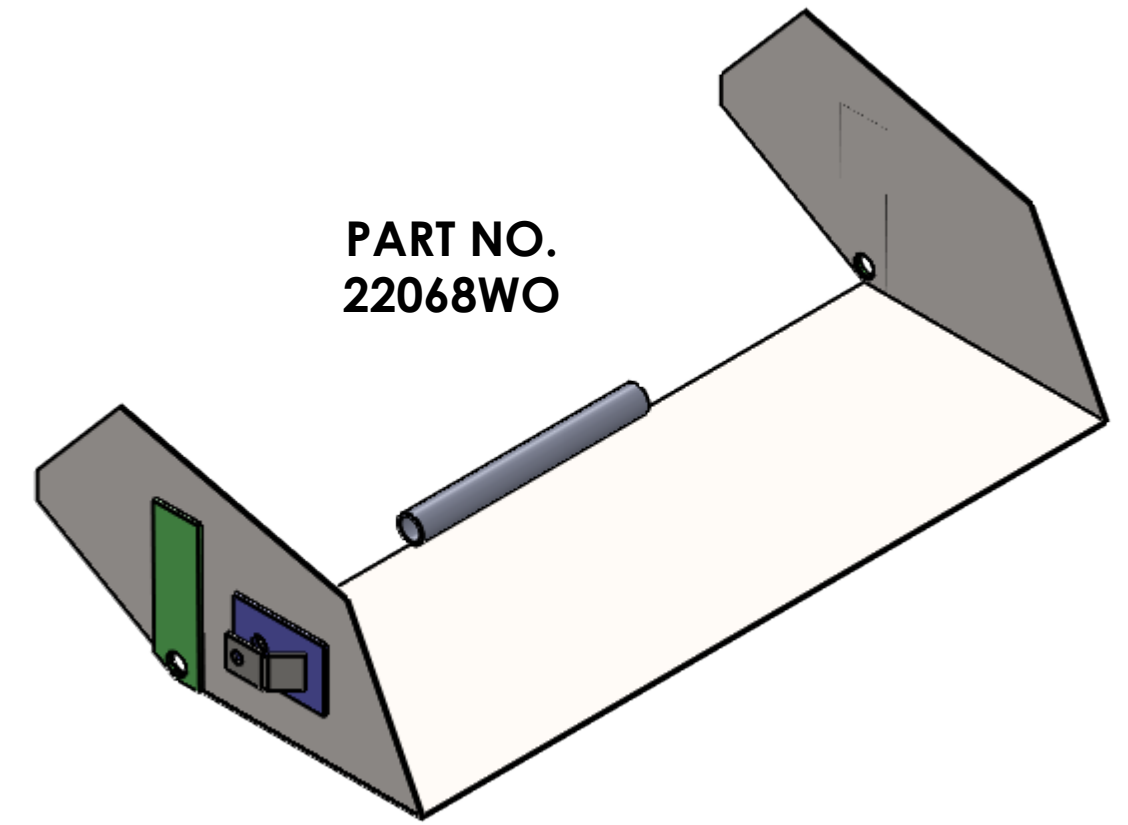
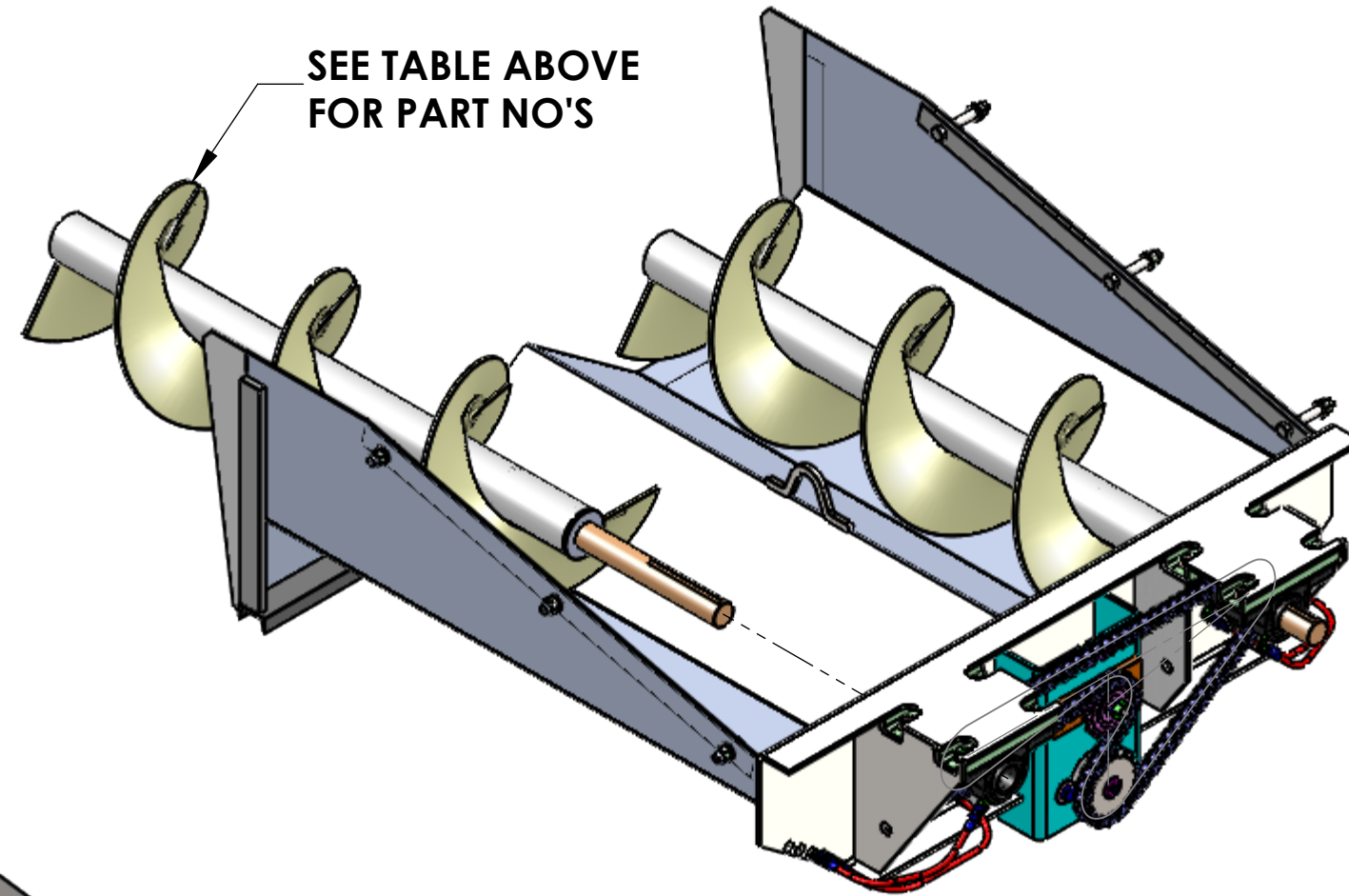
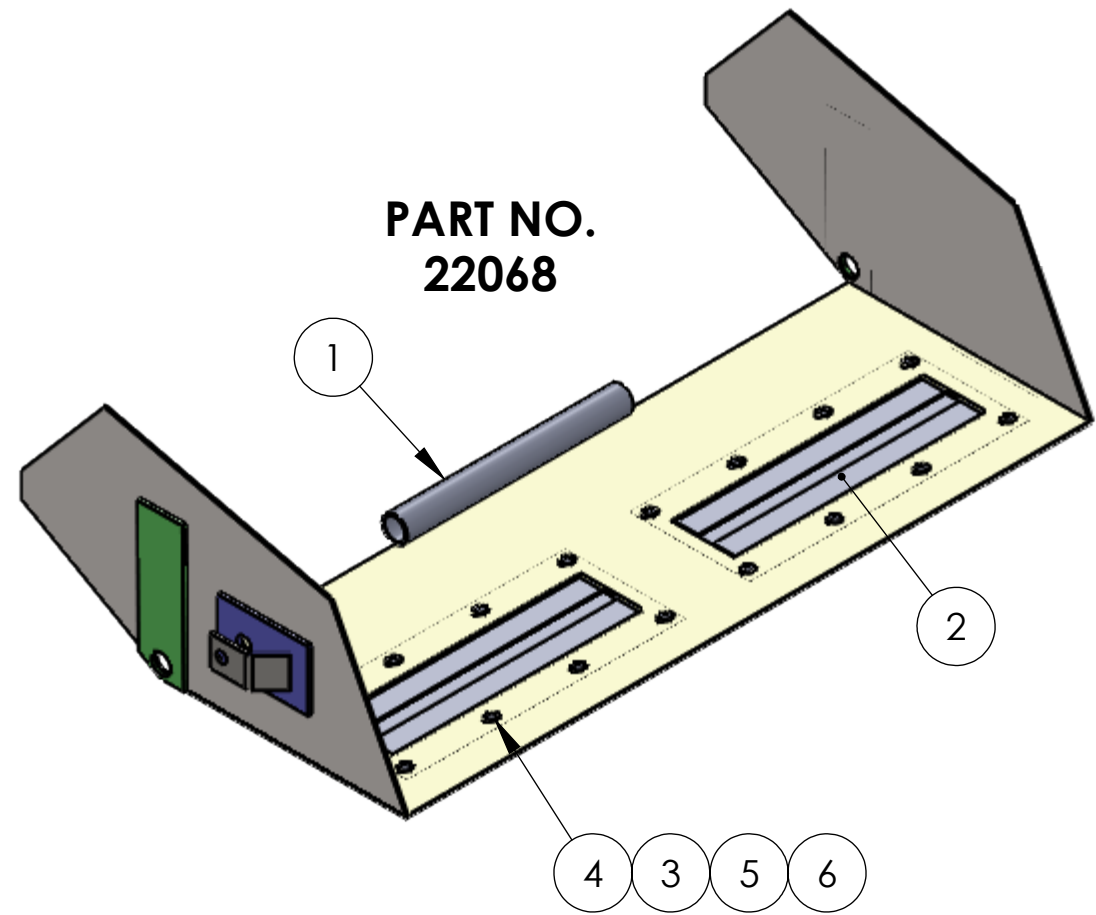
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DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL ±
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941			
		JOB #:			
		MATERIAL:		SEE BOM	
		MATERIAL P/N:			
		FINISH:			
DRAWN BY: 4-27-18		NAME: MCCLURE		VENDOR:	
DESIGNED BY: 4-27-18				VENDOR P/N:	
APPROVED BY:					
		SCALE: 1:5		WEIGHT: 164 lbs	
		PART NUMBER: 424-012D		REV: -	
		SHEET 1 OF 1			

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	22068-4	PIPE, CENTER SPOUT PIVOT
2	2	5511	MAGNET PLATE, 18 1/2"
3	16	10016	SCREW, RD HD, 1/4" NC x 3/4" LG.
4	16	10010	WASHER, FLAT- 1/4"
5	16	10009	WASHER, LOCK- 1/4"
6	16	10001	NUT- 1/4" NC

COMPLETE DISCHARGE ASSY PART NO.	LENGTH	FOLDING SPOUT W/MAGNETS	STATIONARY SPOUT W/MAGNETS	FOLDING SPOUT NO/MAGNETS	STATIONARY SPOUT NO/MAGNETS	AUGER PART NO.
24024-F	24 INCH	22068	22056	22068WO	22056WO	22035-1 1/2"
24028-F	35 INCH	"	"	"	"	22036-1 1/2"
24032-F	40 INCH	"	"	"	"	22037-1 1/2"
24024-S	24 INCH	"	"	"	"	22035-1 1/2"
24028-S	35 INCH	"	"	"	"	22036-1 1/2"
24032-S	40 INCH	22068	22056	22068WO	22056WO	22037-1 1/2"



NOTES: UNLESS OTHERWISE SPECIFIED

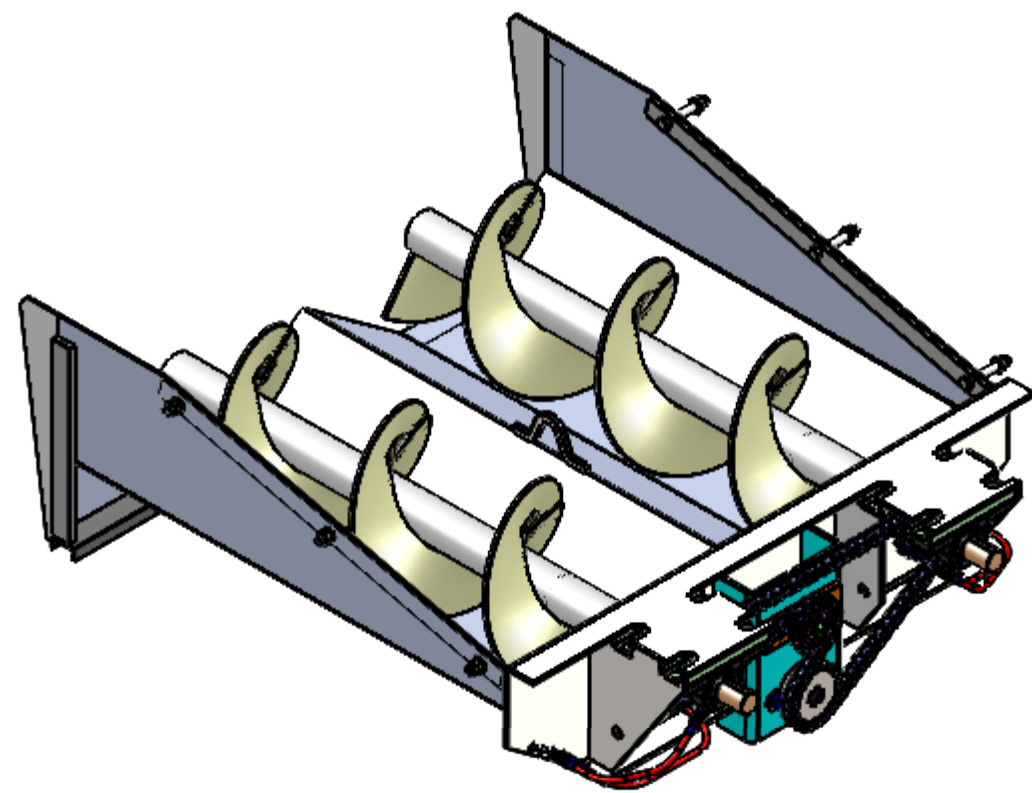
1 - SEE TABLE ABOVE FOR DISCHARGE AUGER PART NUMBERS.

NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

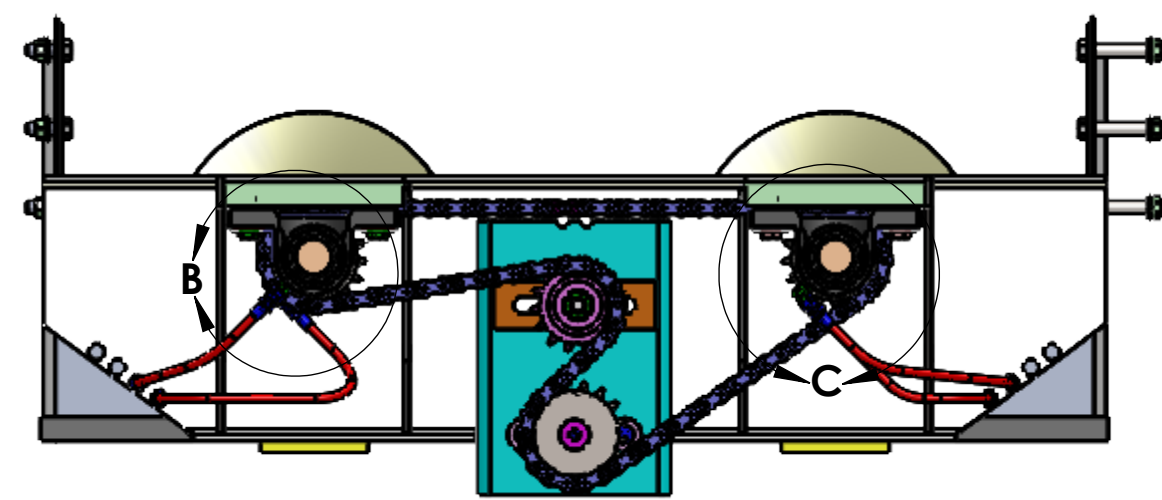
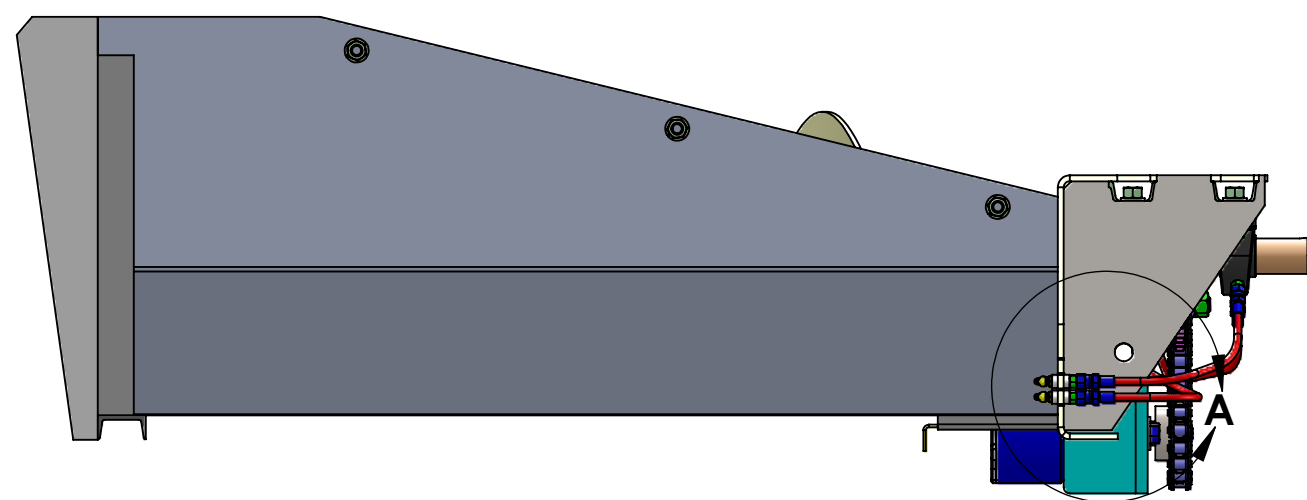
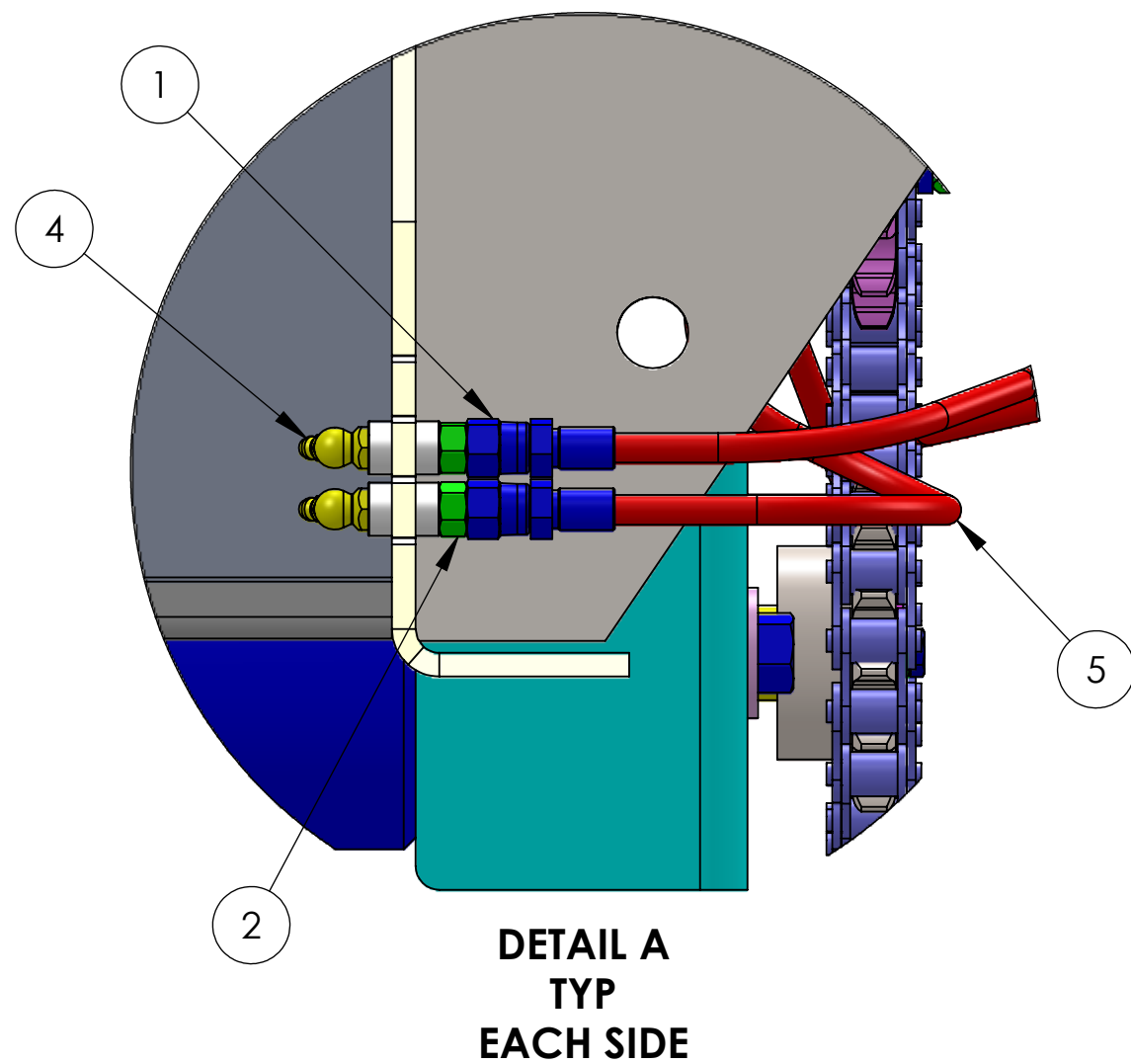
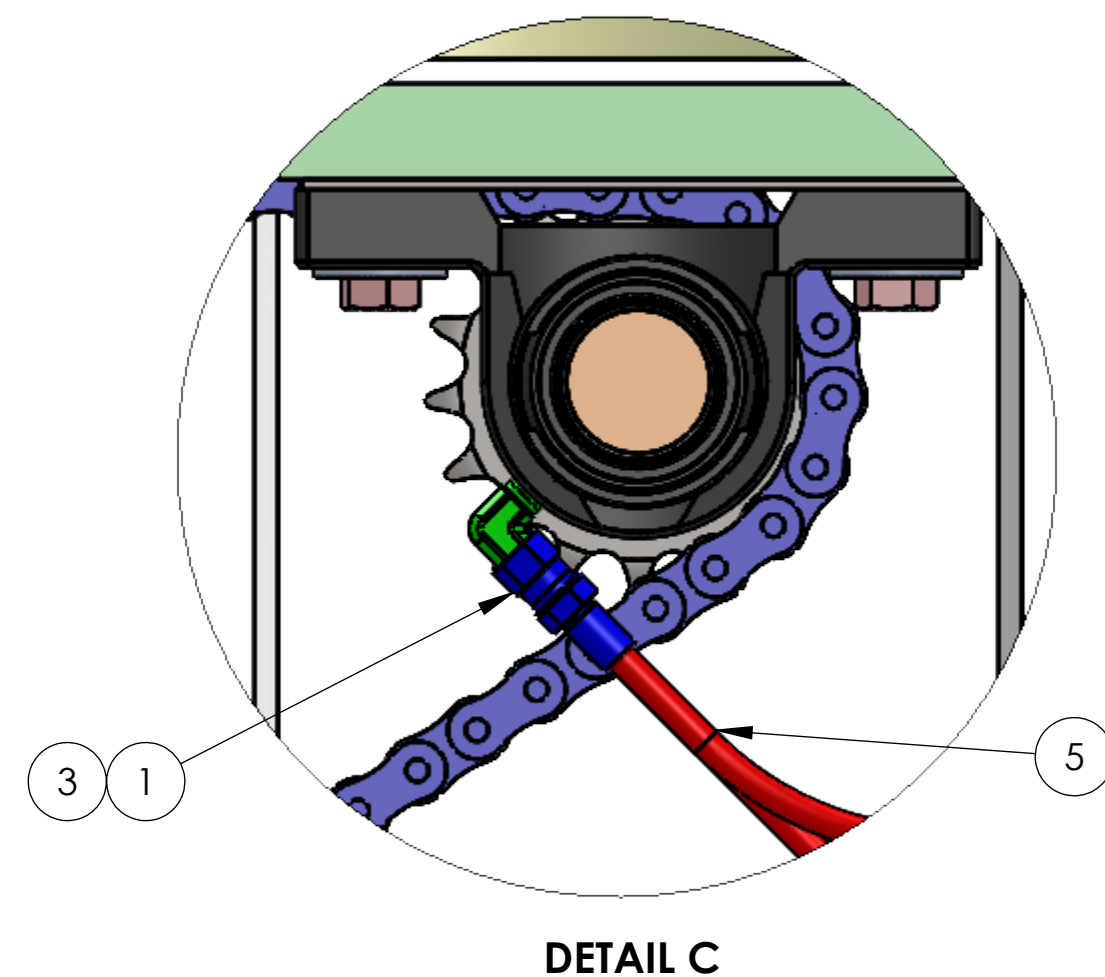
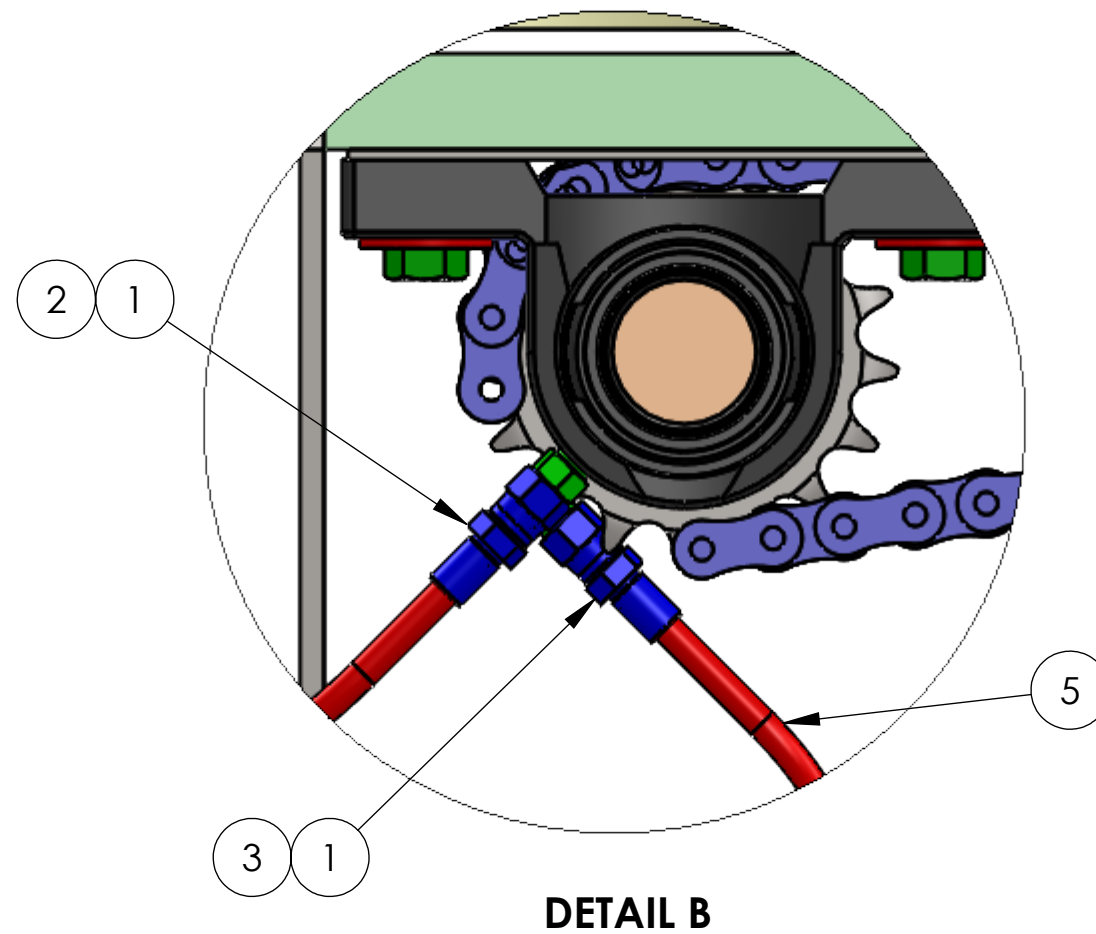
Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		 DESCRIPTION SPOUT & AUGER OPTIONS	
MATERIAL: SEE BOM		MATERIAL P/N:			
JOB #:	DATE	NAME	FINISH:	SIZE	PART NUMBER
DRAWN BY:	5-1-18	MCCLURE		C	424-012E
DESIGNED BY:	5-1-18		VENDOR:	SCALE: 1:12	WEIGHT: 341.560 lbs
APPROVED BY:			VENDOR P/N:		SHEET 1 OF 1

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DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL: ±
 ANGULAR: ±MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±



ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	8	106CY-4-2	HOSE END, 1/8" x 1/4" F JIC, SWIVEL
2	5	4 FTX-S	FITTING, 1/4" M JIC x 1/8" M NPTF
3	3	4-CTX-S	FITTING, 90°, 1/4" M JIC x 1/8" M NPTF
4	4	11311	ZERK, GREASE, 1/8" NPTF x 45°
5	4	HLB02	HOSE, 1/8" GREASE (CUT TO LENGTH)



NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

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DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ±
ANGULAR: MACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

Notes:

DATE	NAME
DRAWN BY: 5-1-18	MCCLURE
DESIGNED BY: 5-1-18	
APPROVED BY:	

Kirby Mfg Inc.
P.O. BOX 989
MERCED CA 95340
PH (209) 723-0778
FX (209) 723-3941

JOB #:
MATERIAL: SEE BOM
MATERIAL P/N:
FINISH:
VENDOR:
VENDOR P/N:

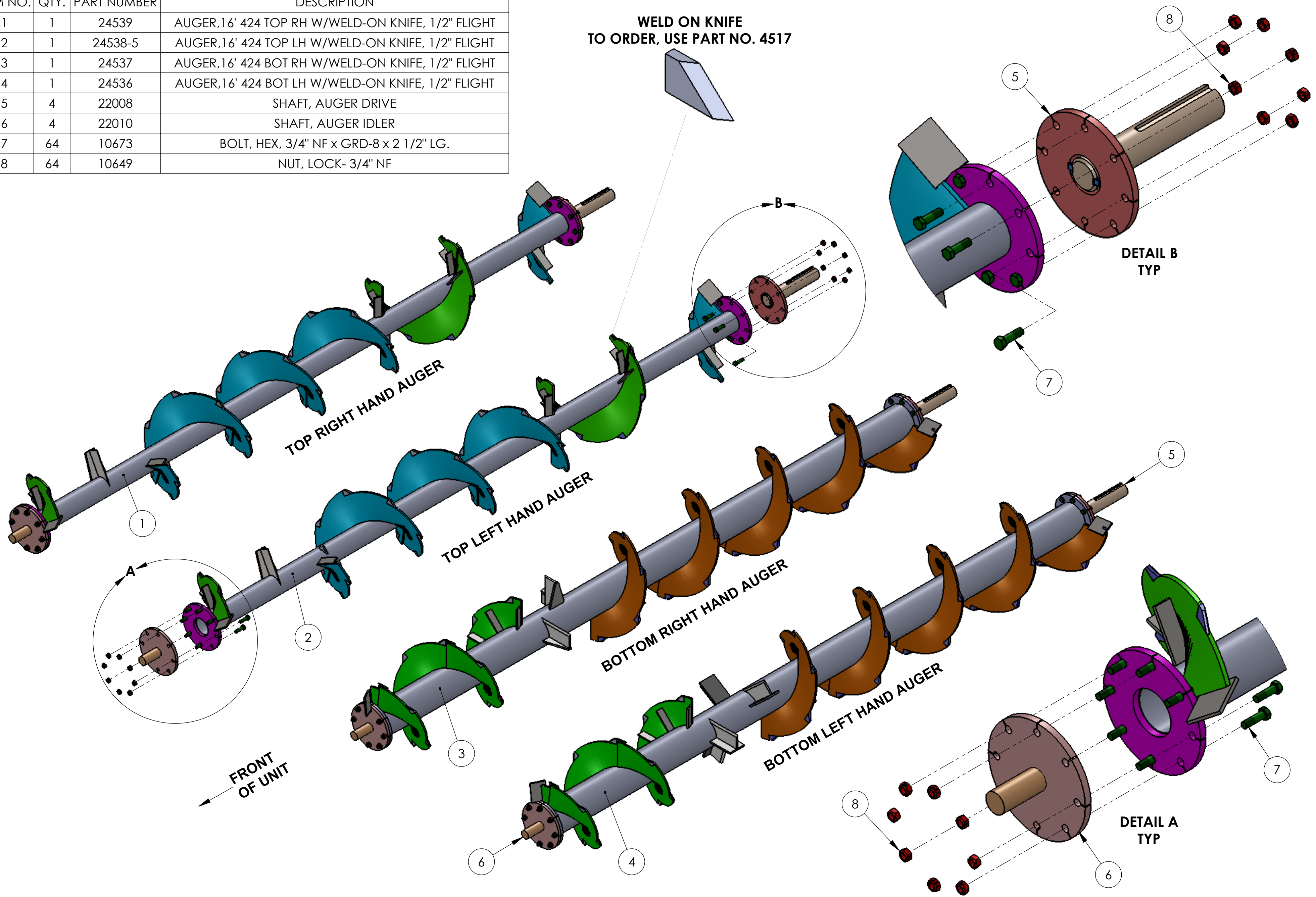
Kirby INC.

DESCRIPTION
GREASE LINE DETAIL,
DISCHARGE ASSEMBLY

SIZE PART NUMBER 424-012F REV. -
SCALE: 1:12 WEIGHT: 341.560 lbs SHEET 1 OF 1

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	24539	AUGER, 16' 424 TOP RH W/WELD-ON KNIFE, 1/2" FLIGHT
2	1	24538-5	AUGER, 16' 424 TOP LH W/WELD-ON KNIFE, 1/2" FLIGHT
3	1	24537	AUGER, 16' 424 BOT RH W/WELD-ON KNIFE, 1/2" FLIGHT
4	1	24536	AUGER, 16' 424 BOT LH W/WELD-ON KNIFE, 1/2" FLIGHT
5	4	22008	SHAFT, AUGER DRIVE
6	4	22010	SHAFT, AUGER IDLER
7	64	10673	BOLT, HEX, 3/4" NF x GRD-8 x 2 1/2" LG.
8	64	10649	NUT, LOCK- 3/4" NF

**WELD ON KNIFE
TO ORDER, USE PART NO. 4517**



**NOTE: UNIT SERIAL # NEEDED
FOR ALL PART ORDERS**

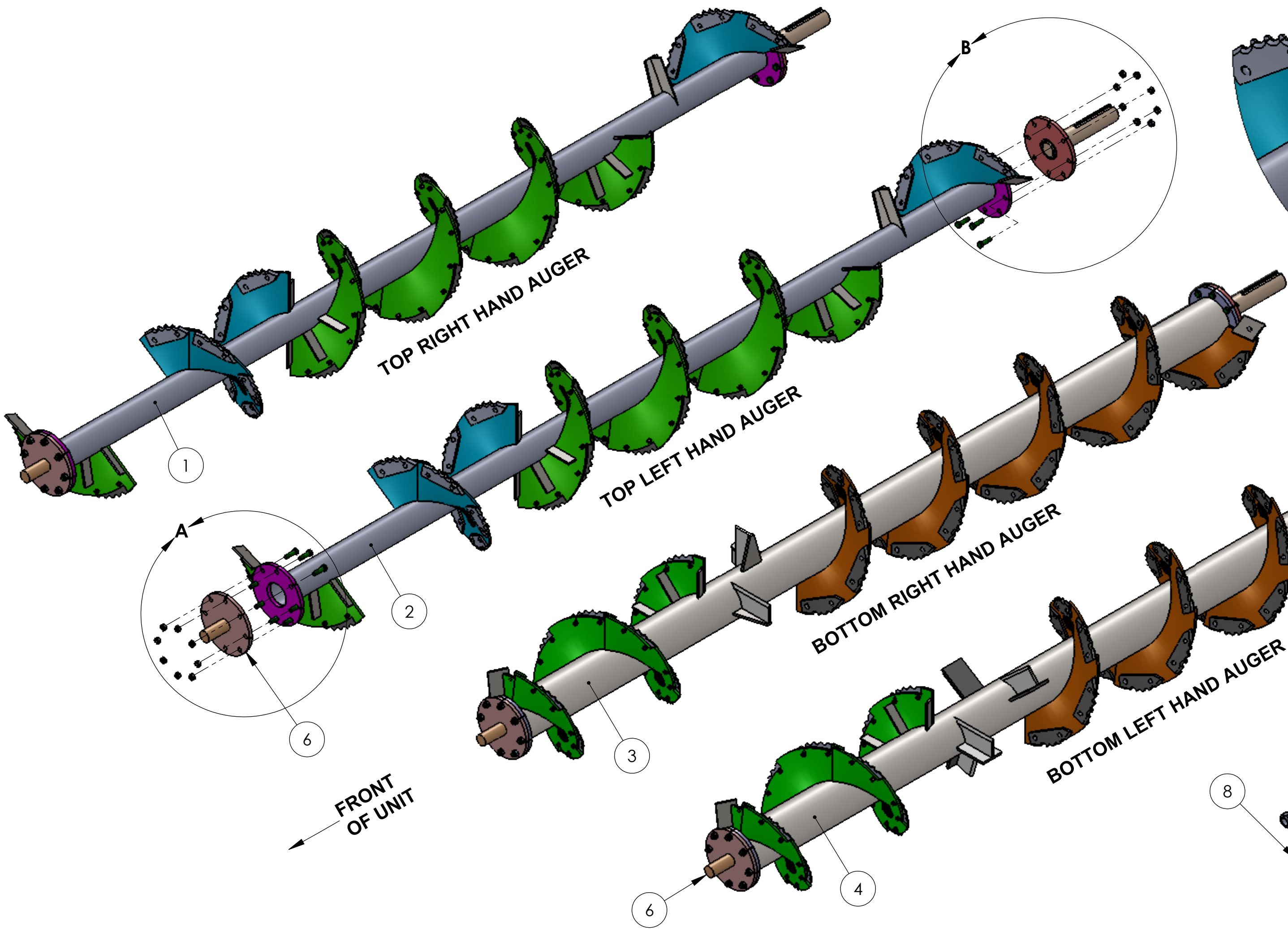
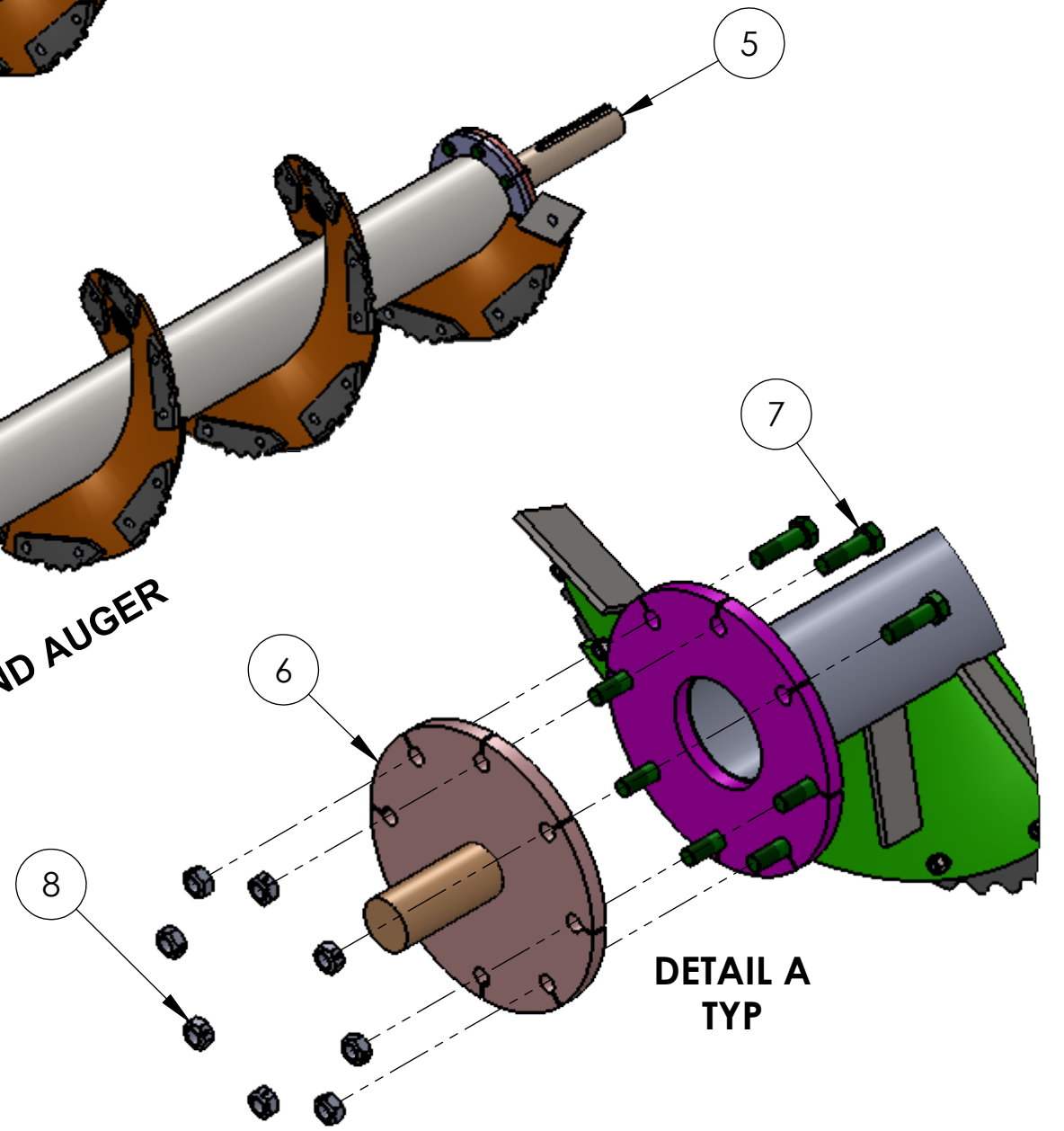
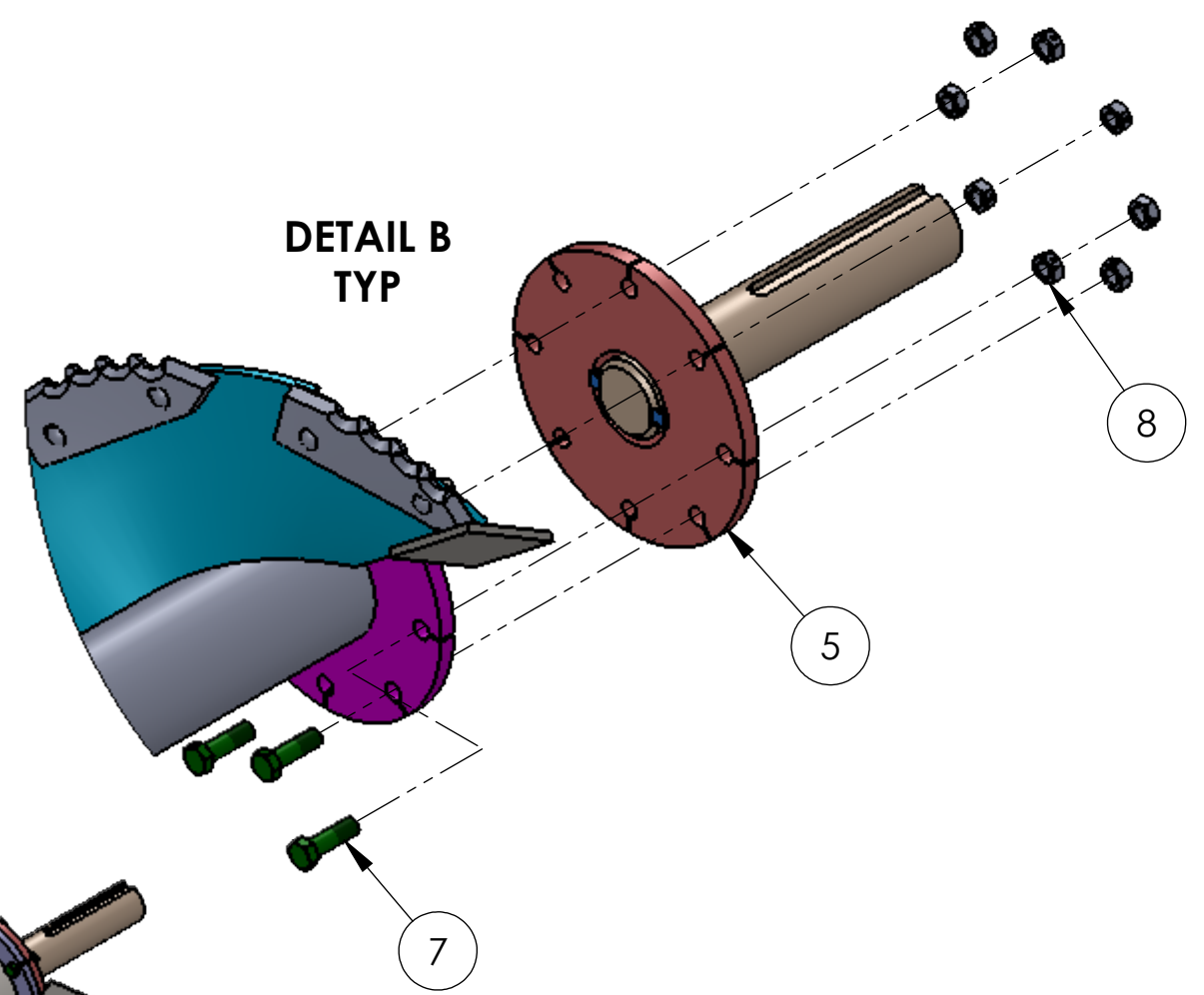
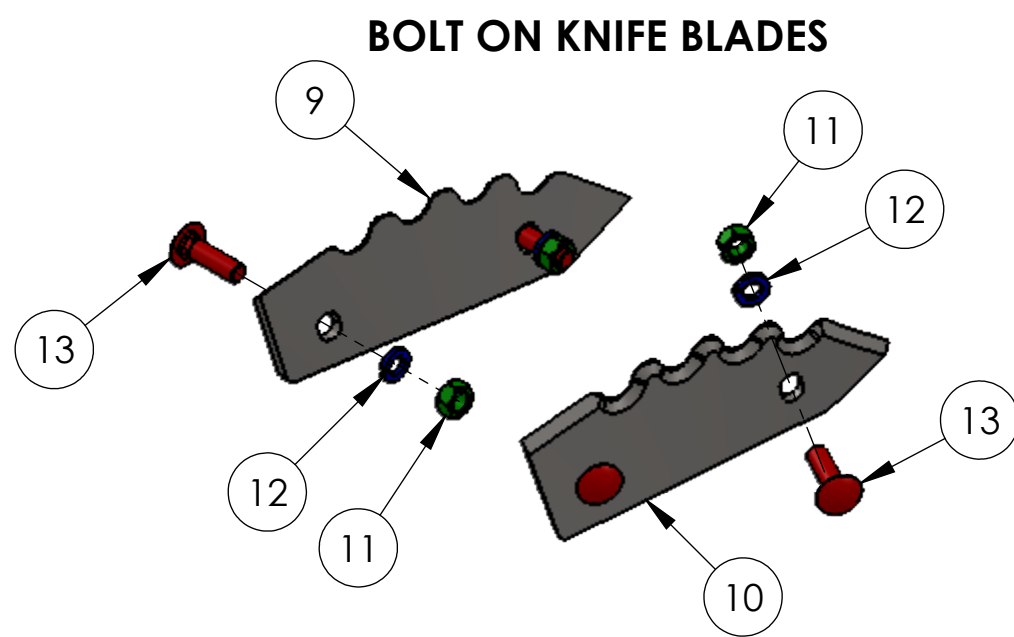
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DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ±
ANGULAR: MACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		Kirby INC.	
JOB #:		MATERIAL: SEE BOM		DESCRIPTION AUGER ASSEMBLY w/ WELD-ON KNIVES	
DRAWN BY: 5-2-18		NAME: MCCLURE		FINISH:	
DESIGNED BY: 5-2-18		VENDOR:		VENDOR P/N:	
APPROVED BY:		DATE:		SCALE: 1:16	
WEIGHT: 3637 lbs		PART NUMBER: 424-013		REV: -	
SHEET 1 OF 1					

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	24622	AUGER, 16' 424 TOP RH W/BOLT-ON KNIFE, 1/2" FLIGHT
2	1	24623	AUGER, 16' 424 TOP LH W/BOLT-ON KNIFE, 1/2" FLIGHT
3	1	24624	AUGER, 16' 424 BOT RH W/BOLT-ON KNIFE, 1/2" FLIGHT
4	1	24625	AUGER, 16' 424 BOT LH W/BOLT-ON KNIFE, 1/2" FLIGHT
5	4	22008	SHAFT, AUGER DRIVE
6	4	22010	SHAFT, AUGER IDLER
7	64	10673	BOLT, HEX, 3/4" NF x GRD-8 x 2 1/2" LG.
8	64	10649	NUT, LOCK- 3/4" NF

ITEM NO.	PART NUMBER	DESCRIPTION
9	4517A	(LH) KNIFE BLADE, BOLT-ON
10	4517B	(RH) KNIFE BLADE, BOLT-ON
11	10290	NUT- 7/16" NC
12	10298	WASHER, LOCK, 7/16"
13	10319	BOLT, CARRIGE- 7/16" NC x 1 1/2" LG.



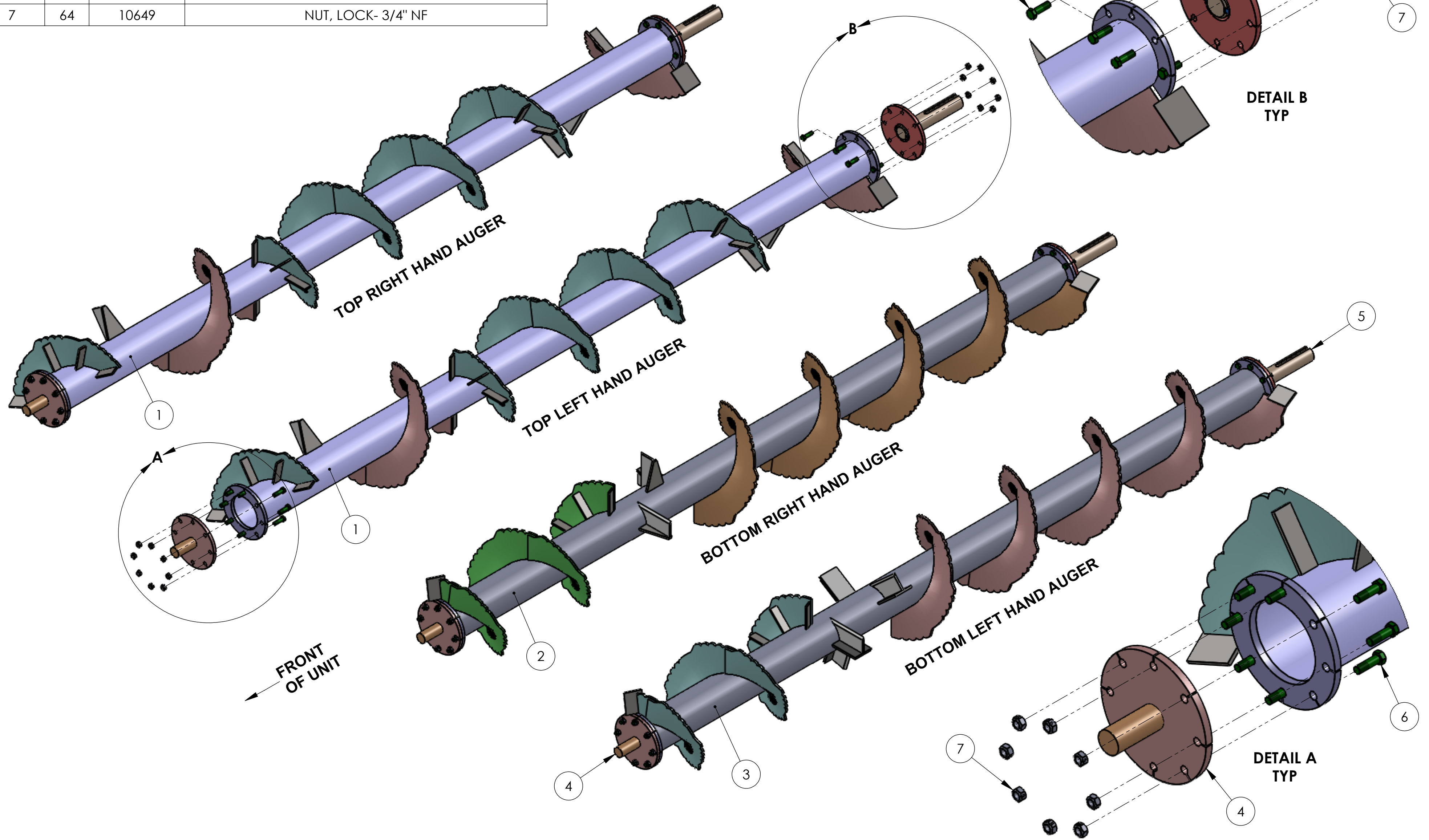
NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

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DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL ±
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209) 723-0778 FX (209) 723-3941			
		JOB #: MATERIAL: SEE BOM			
DRAWN BY: 5-2-18		NAME: MCCURE		DESCRIPTION: AUGER ASSEMBLY w/ BOLT-ON KNIVES	
DESIGNED BY: 5-2-18		VENDOR:		SIZE C PART NUMBER 424-014	
APPROVED BY:		VENDOR P/N:		SCALE: 1:16 WEIGHT: 4012 lbs SHEET 1 OF 1	

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	2	24582	AUGER, 16' AGGRESSOR, TOP RH & LH, 1/2" FLIGHT
2	1	24583	AUGER, 16' AGGRESSOR, BOT RH, 1/2" FLIGHT
3	1	24584	AUGER, 16' AGGRESSOR, BOT LH, 1/2" FLIGHT
4	4	22010	SHAFT, AUGER IDLER
5	4	22008	SHAFT, AUGER DRIVE
6	64	10673	BOLT, HEX, 3/4" NF x GRD-8 x 2 1/2" LG.
7	64	10649	NUT, LOCK- 3/4" NF

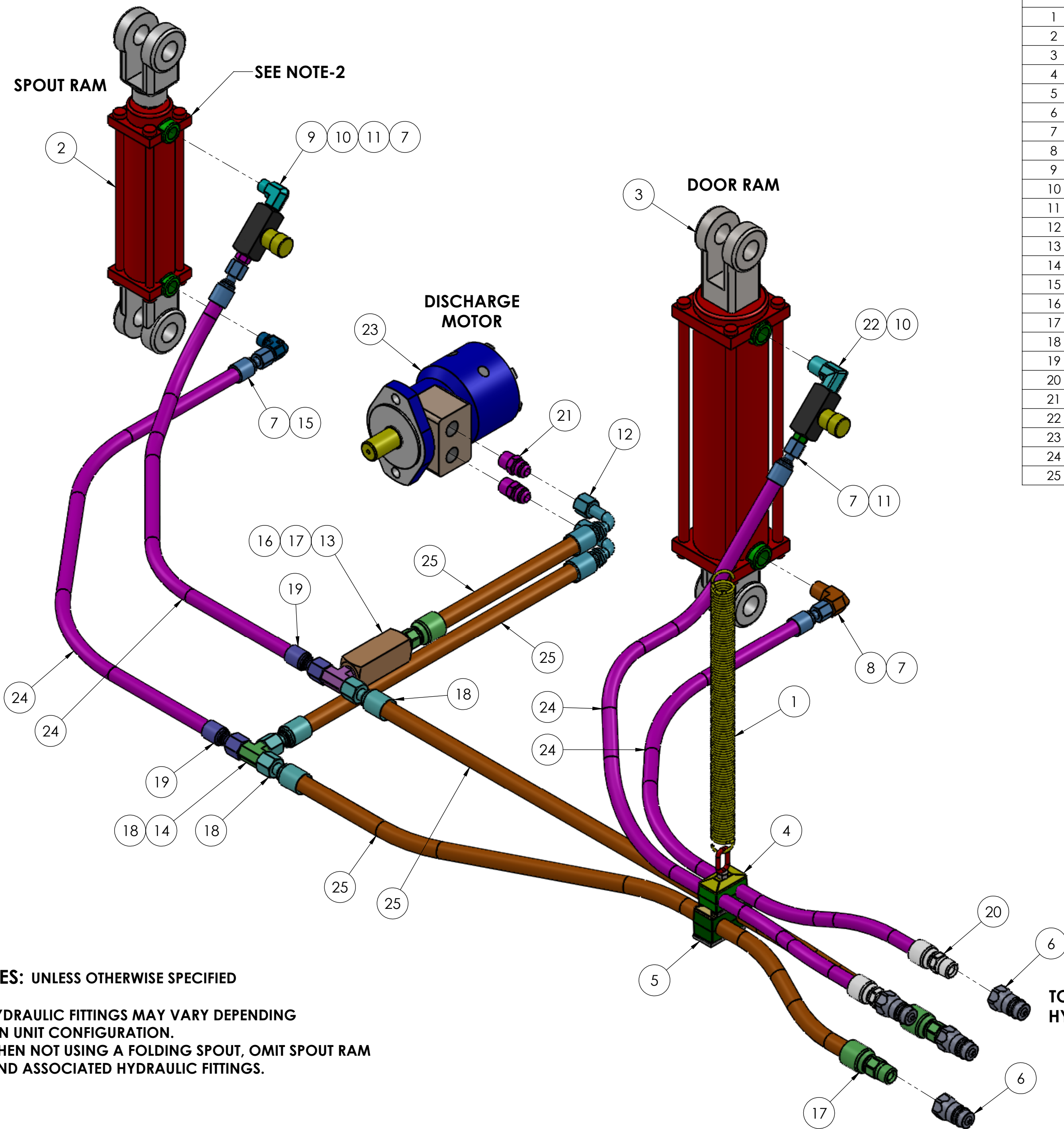


NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

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DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL: ±
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209) 723-0778 FX (209) 723-3941		 DESCRIPTION AGGRESSOR AUGER ASSEMBLY	
		JOB #: MATERIAL: SEE BOM MATERIAL P/N:			
DRAWN BY:	DATE	NAME		FINISH:	SIZE C PART NUMBER 424-015 REV. SCALE: 1:15 WEIGHT: lbs SHEET 1 OF 1
DESIGNED BY:	5-3-18	MCCLURE		VENDOR:	
APPROVED BY:				VENDOR P/N:	



ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	15101	SPRING, EXTENSION
2	1	7925	CYLINDER, 2" X 6" STROKE
3	1	7937	CYLINDER, 3" X 10" STROKE
4	1	8685	HOSE CLAMP, 3/8" DOUBLE
5	1	8687	HOSE CLAMP, 1/2" DOUBLE
6	4	8731	FITTING, COUPLER TIP, 1/2" F NPTF
7	4	10643-6-6	HOSE END, 3/8" x 3/8" FM JIC SWIVEL
8	1	6-8 CTX-S	FITTING, 90°, 3/8" M JIC x 1/2" M NPTF
9	1	3_8 CR-S	FITTING, 90°, 3/8" M NPTF x 3/8" M NPTF
10	2	7896	NEEDLE VALVE, 3/8" NPTF
11	2	6-6 FTX-S	FITTING, 3/8" MNPTF x 3/8" MJIC
12	2	13943-8-8	HOSE END, 90°, 1/2", x 1/2" FM JIC, SWIVEL
13	1	7897	CHECK VALVE 1/2" NPTF
14	1	8 JTX-S	FITTING- 1/2" MJIC UNION TEE
15	1	6-6 CTX-S	FITTING, 90°, 3/8" M JIC x 3/8" M NPTF
16	1	8-8-8 STX-S	FITTING, TEE, 1/2" M JIC x 1/2" M JIC x 1/2" M NPTF
17	3	10143-8-8	HOSE END, 1/2" x 1/2" M NPTF
18	3	10643-8-8	HOSE END, 1/2" FM JIC, SWIVEL
19	2	10643-8-6	HOSE END, 3/8" x 1/2" FM JIC
20	2	10143-8-6	HOSE END, 3/8" x 1/2" M NPTF
21	2	8-8 FTX-S	FITTING, 1/2" M JIC x 1/2" M NPTF
22	1	1_2 X 3_8 CR-S	FITTING, 90°, 1/2" MNPTF x 3/8" MNPTF
23	1	7965	MOTOR, HYDRAULIC
24	4	451TC-6-RL	HOSE, HYDRAULIC, 3/8" (CUT TO LENGTH)
25	4	451TC-8-RL	HOSE, HYDRAULIC, 1/2" (CUT TO LENGTH)

NOTES: UNLESS OTHERWISE SPECIFIED

- 1 - HYDRAULIC FITTINGS MAY VARY DEPENDING ON UNIT CONFIGURATION.
- 2 - WHEN NOT USING A FOLDING SPOUT, OMIT SPOUT RAM AND ASSOCIATED HYDRAULIC FITTINGS.

NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

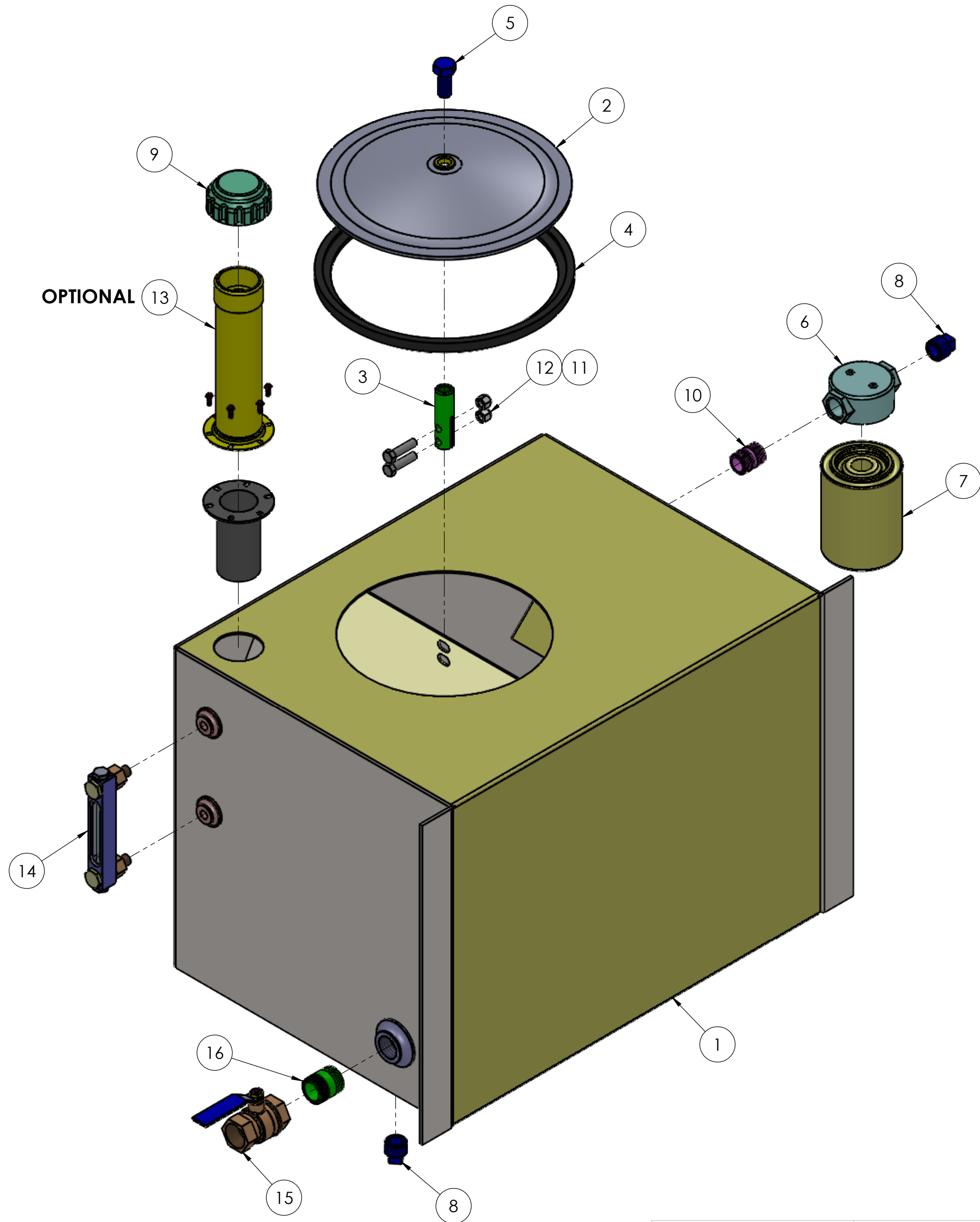
TO TRACTOR HYDRAULICS

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 FRACTIONAL ±
 ANGULAR: MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941				
		MATERIAL: SEE BOM				DESCRIPTION HYDRAULICS, TRAILER
DRAWN BY:	DATE	NAME	FINISH:	SIZE	PART NUMBER	REV.
DESIGNED BY:	5-3-18	MCCLURE		C	424-016	-
APPROVED BY:				SCALE: 9:32	WEIGHT: 93.7300 lbs	SHEET 1 OF 1

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	SEE NOTE-1	TANK, HYDRAULIC, 33 GAL.
2	1	SEE NOTE-2	TANK LID, 12" HYDRAULIC ASSEMBLY
3	1	7961C	ADAPTER, HYD. COVER & BAFFLE
4	1	7961D	GASKET, 12" HYD. END COVER
5	1	7961B	BOLT, HEX, 5/8" NC x 1 3/8" LG.
6	1	7903	FILTER HEAD, 3/4" SCREW-ON
7	1	7893	FILTER, 3/4" SCREW-ON
8	2	9334	FITTING, PLUG, 3/4" NPTF
9	1	7947	CAP FILLER/BREATHER (HYD)
10	1	9279	FITTING, NIPPLE, 3/4" NPTF
11	2	10191	BOLT, 3/8" NC GR5 x 1 1/2" LG.
12	2	10173	NUT, NYLOCK- 3/8" NC
13	1	7947B	FILLER NECK, 8" LG.
14	1	7951B	GAUGE, FLUID LEVEL , 5" TUBE
15	1	9527	VALVE, GATE, 1" BALL, 1"F/F NPTF
16	1	9284	FITTING, NIPPLE, 1" NPTF



NOTES: UNLESS OTHERWISE SPECIFIED

- 1 - TO ORDER COMPLETE TANK ASSEMBLY, USE PART NO. 22085.
- 2 - TO ORDER TANK LID ASSEMBLY, USE PART NO. 7961.
- 3 - HYDRAULIC FITTINGS MAY VARY DEPENDING ON UNIT CONFIGURATION.

NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

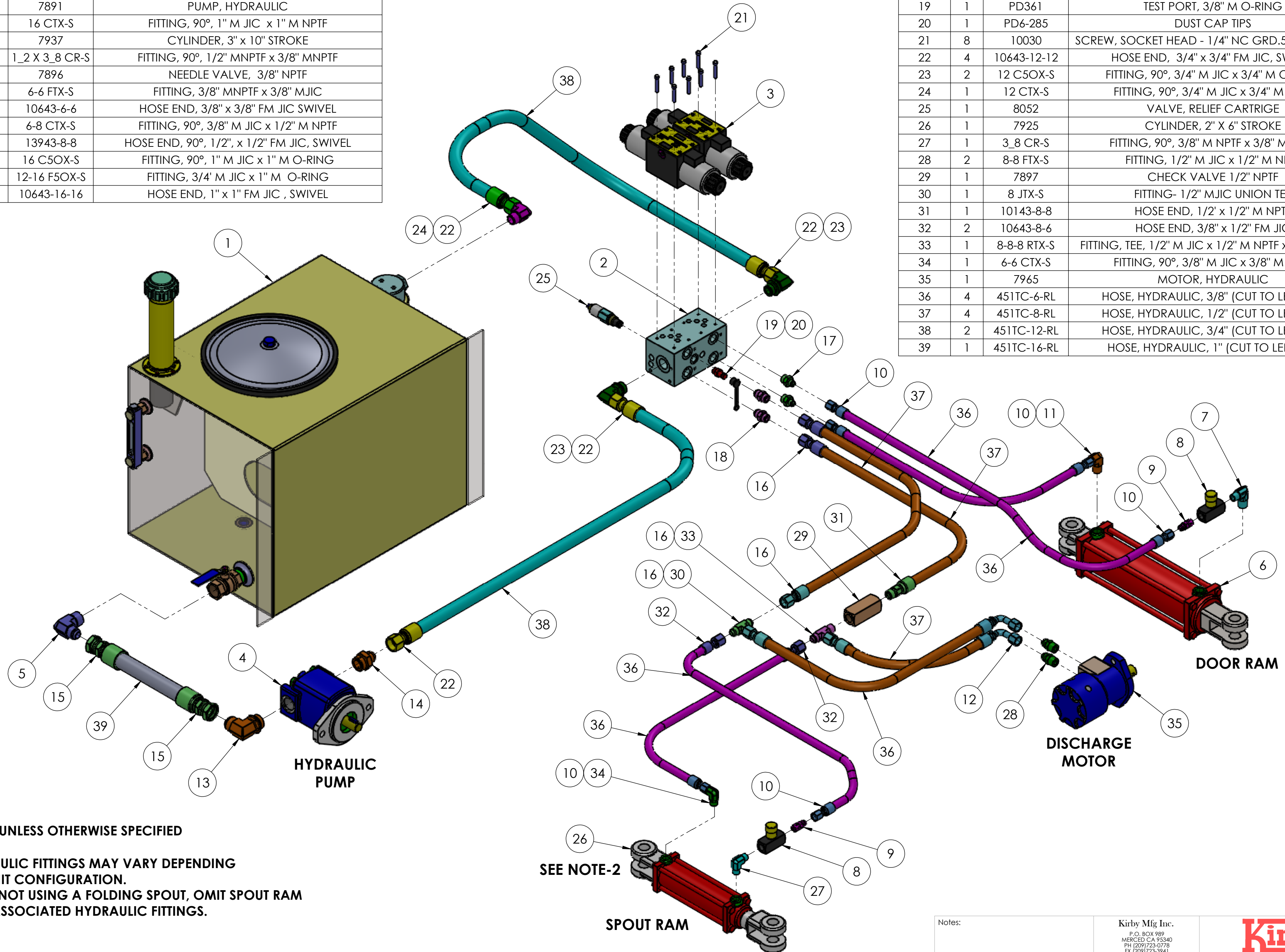
Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941			
		JOB #: MATERIAL: SEE BOM MATERIAL P/N:			
DESCRIPTION		TANK, HYDRAULIC, 33 GALLON		REV.	
DRAWN BY: 5-4-18		DATE: 5-4-18		NAME: MCCLURE	
DESIGNED BY: 5-4-18		APPROVED BY:		FINISH:	
VENDOR P/N:		VENDOR:		SCALE: 1:4	
PART NUMBER: 424-017		WEIGHT: lbs		SHEET 1 OF 1	

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 TOLERANCES:
 FRACTIONAL: ±
 ANGULAR: ±MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	22085	TANK, HYDRAULIC, 33 GALLONS
2	1	7945	MANIFOLD, 2-STAGE W/RELIEF
3	2	7894	VAVLE 4-WAY SOLENIOD
4	1	7891	PUMP, HYDRAULIC
5	1	16 CTX-S	FITTING, 90°, 1" M JIC x 1" M NPTF
6	1	7937	CYLINDER, 3" x 10" STROKE
7	1	1_2 X 3_8 CR-S	FITTING, 90°, 1/2" MNPTF x 3/8" MNPTF
8	2	7896	NEEDLE VALVE, 3/8" NPTF
9	2	6-6 FTX-S	FITTING, 3/8" MNPTF x 3/8" MJIC
10	6	10643-6-6	HOSE END, 3/8" x 3/8" FM JIC SWIVEL
11	1	6-8 CTX-S	FITTING, 90°, 3/8" M JIC x 1/2" M NPTF
12	2	13943-8-8	HOSE END, 90°, 1/2", x 1/2" FM JIC, SWIVEL
13	1	16 C5OX-S	FITTING, 90°, 1" M JIC x 1" M O-RING
14	1	12-16 F5OX-S	FITTING, 3/4" M JIC x 1" M O-RING
15	2	10643-16-16	HOSE END, 1" x 1" FM JIC , SWIVEL

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
16	5	10643-8-8	HOSE END, 1/2" FM JIC, SWIVEL
17	2	6-8 F5OX-S	FITTING, STRT. 3/8" M JIC x 1/2" M O-RING
18	2	8 F5OX-S	FITTING, STRT. 1/2" M JIC x 1/2" M O-RING
19	1	PD361	TEST PORT, 3/8" M O-RING
20	1	PD6-285	DUST CAP TIPS
21	8	10030	SCREW, SOCKET HEAD - 1/4" NC GRD.5 x 1 1/2" LG.
22	4	10643-12-12	HOSE END, 3/4" x 3/4" FM JIC, SWIVEL
23	2	12 C5OX-S	FITTING, 90°, 3/4" M JIC x 3/4" M O-RING
24	1	12 CTX-S	FITTING, 90°, 3/4" M JIC x 3/4" M NPTF
25	1	8052	VALVE, RELIEF CARTRIGE
26	1	7925	CYLINDER, 2" X 6" STROKE
27	1	3_8 CR-S	FITTING, 90°, 3/8" M NPTF x 3/8" M NPTF
28	2	8-8 FTX-S	FITTING, 1/2" M JIC x 1/2" M NPTF
29	1	7897	CHECK VALVE 1/2" NPTF
30	1	8 JTX-S	FITTING- 1/2" MJIC UNION TEE
31	1	10143-8-8	HOSE END, 1/2" x 1/2" M NPTF
32	2	10643-8-6	HOSE END, 3/8" x 1/2" FM JIC
33	1	8-8-8 RTX-S	FITTING, TEE, 1/2" M JIC x 1/2" M NPTF x 1/2" M JIC
34	1	6-6 CTX-S	FITTING, 90°, 3/8" M JIC x 3/8" M NPTF
35	1	7965	MOTOR, HYDRAULIC
36	4	451TC-6-RL	HOSE, HYDRAULIC, 3/8" (CUT TO LENGTH)
37	4	451TC-8-RL	HOSE, HYDRAULIC, 1/2" (CUT TO LENGTH)
38	2	451TC-12-RL	HOSE, HYDRAULIC, 3/4" (CUT TO LENGTH)
39	1	451TC-16-RL	HOSE, HYDRAULIC, 1" (CUT TO LENGTH)



NOTES: UNLESS OTHERWISE SPECIFIED

- 1 - HYDRAULIC FITTINGS MAY VARY DEPENDING ON UNIT CONFIGURATION.
- 2 - WHEN NOT USING A FOLDING SPOUT, OMIT SPOUT RAM AND ASSOCIATED HYDRAULIC FITTINGS.

NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

SEE NOTE-2

PROPRIETARY AND CONFIDENTIAL
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DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL: ±
 ANGULAR: ±MACH ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		Kirby INC.	
JOB #:		MATERIAL: SEE BOM		DESCRIPTION HYDRAULIC, TRUCK w/ MECHANICAL DRIVE	
DRAWN BY: 5-4-18		NAME: MCCLURE		FINISH:	
DESIGNED BY: 5-4-18		VENDOR:		PART NUMBER 424-018	
APPROVED BY:		VENDOR P/N:		SCALE: 1:6 WEIGHT: 288.6983 lbs SHEET 1 OF 1	



REMOTE DISPLAY
SEE NOTE-1 AND 2



JOYSTICK CONTROLLER
SEE NOTE-3

COMMON SPARE PARTS FOR JOYSTICK CONTROLLER

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	4745	CIRCUIT BREAKER, 10-AMP
2	1	4748	CIRCUIT BREAKER, 15-AMP
3	1	4746	SWITCH, RED, DUCK BILL
4	1	4747	SWITCH, AMBER, DUCK BILL
5	1	4665A	FUSE, BLADE, 30 AMP
6	1	4665C	FUSE, BLADE, 20 AMP
7	1	5489	JOYSTICK
8	1	22102F	ARMREST, JOYSTICK BOX
9	1	5484A	PUMP DRIVER CARD w/10K POT. & KNOB

NOTES: UNLESS OTHERWISE SPECIFIED

- 1 - TO ORDER COMPLETE ASSEMBLY WITH DISPLAY AND CABLE, USE PART NO. 5204.
- 2 - TO ORDER COMPLETE ASSEMBLY WITH DISPLAY, CABLE, XMTR AND RCVR, USE PART NO. 5205.
- 3 - TO ORDER COMPLETE JOYSTICK CONTROLLER ASSEMBLY, USE PART NO. 22088. FOR INDIVIDUAL COMPONENTS, USE SPARE PARTS LIST SHOWN ON DRAWING..

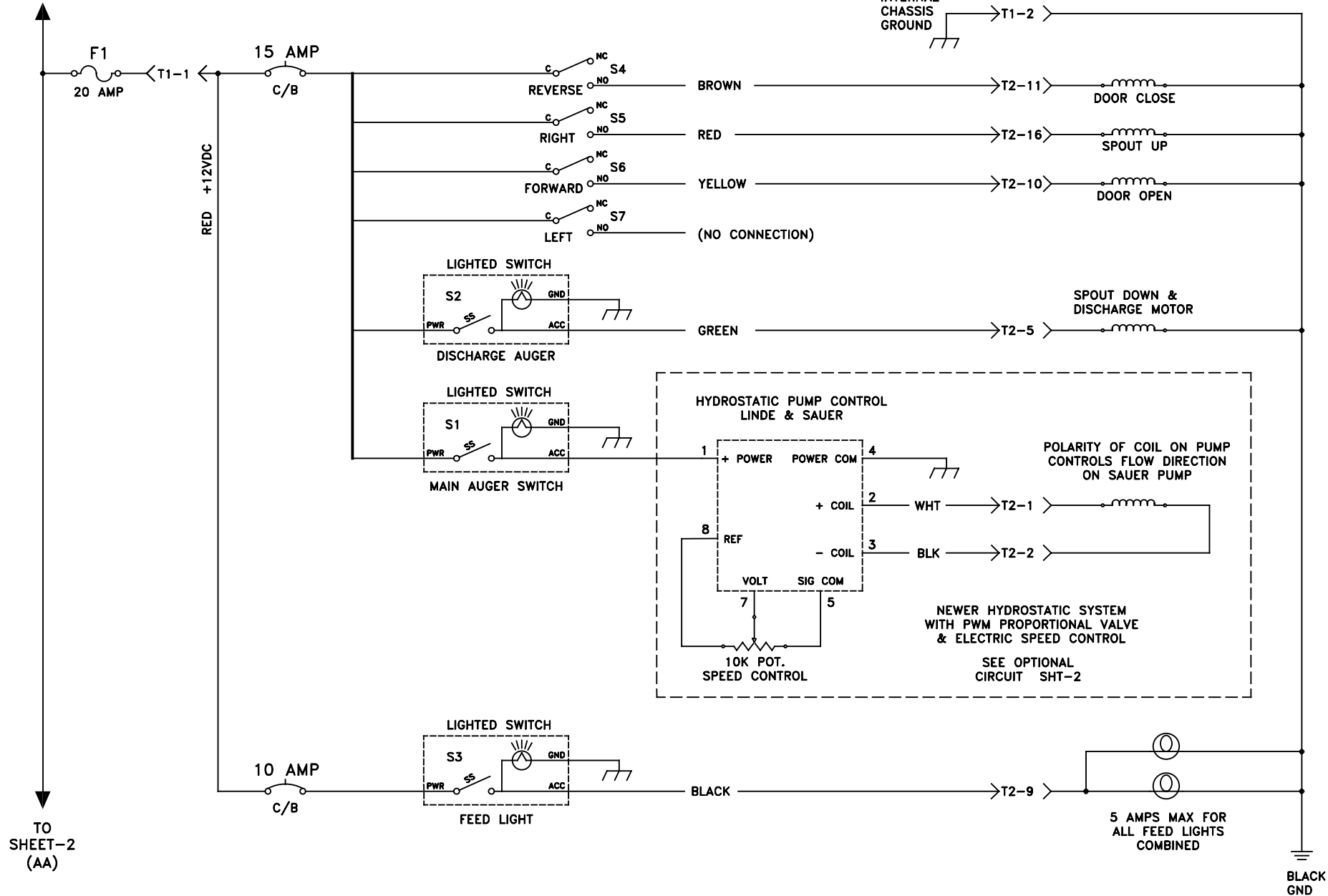
NOTE: UNIT SERIAL # NEEDED FOR ALL PART ORDERS

Notes:		Kirby Mfg Inc. P.O. BOX 989 MERCED CA 95340 PH (209)723-0778 FX (209)723-3941		 DESCRIPTION TRUCK CAB COMPONENTS	
JOB #:		MATERIAL P/N:			
DRAWN BY: 2-16-18		NAME: MCCLURE		FINISH:	
DESIGNED BY:		VENDOR:		SCALE: 1:2	
APPROVED BY:		VENDOR P/N:		PART NUMBER: 424-019	
				WEIGHT: lbs	
				SHEET 1 OF 1	

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DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ±
ANGULAR: MACH ± BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±

+12VDC

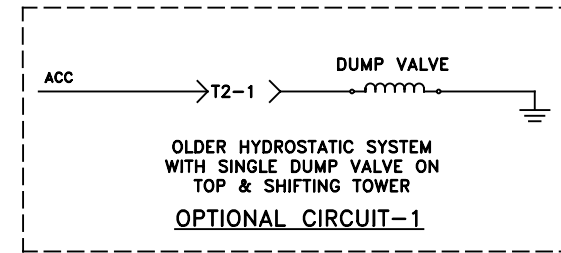
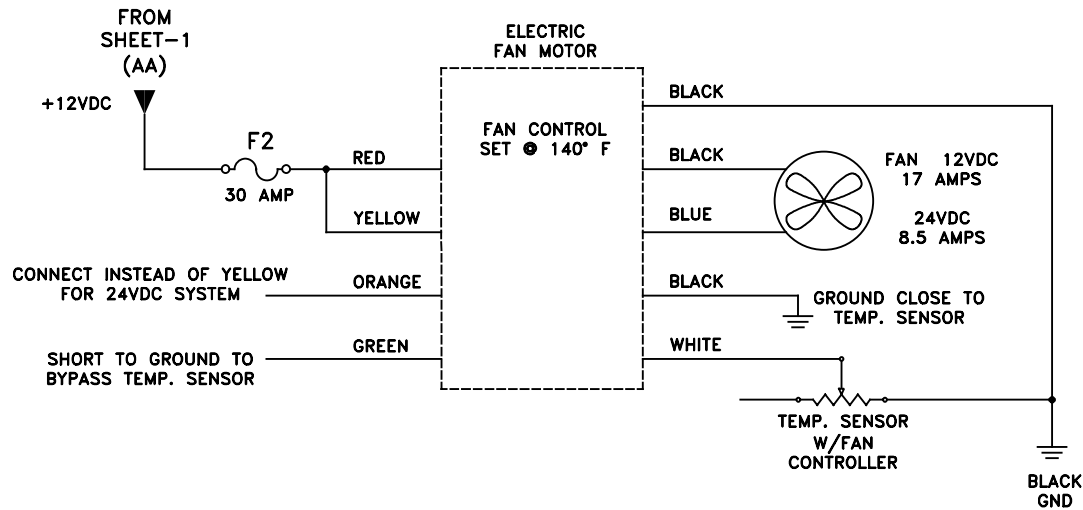


TO SHEET-2 (AA)

Notes:			Kirby Mfg Inc. P.O. BOX 989 NEWER, CA 92340 PH (909) 723-0776 FX (909) 723-2941		
JOB #:	DATE:	NAME:	MATERIAL:	DESCRIPTION:	
BROWN BY:	6-6-18	MCCLORE	FINISH:	ELECTRICAL SCHEMATIC HORIZONTAL MIXER - I	
DESIGNED BY:			VENDOR:		
APPROVED BY:			VENDOR P/N:		
SCALE: 1:1			WEIGHT: lbs	PART NUMBER: 424-020A	REV.:
				SHEET 1 OF 2	

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DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL ±
 ANGULAR MAX ± BEND ±
 TWO PLACE DECIMAL ±
 THREE PLACE DECIMAL ±



PIN #	COLOR & WIRE GA.	UNIT FUNCTION
1	WHITE 18 / 2	COIL (+)
2	BLACK 18 / 2	COIL (-)
3		
4		
5	GREEN 16 / 6	DISCHARGE
6		
7		
8		
9	BLACK 16 / 6	FEED LIGHT
10	YELLOW 16 / 6	DOOR OPEN
11	BROWN 16 / 6	DOOR CLOSED
12		
13		
14		
15		
16	RED 16 / 6	SPOUT UP
17		
18		
19	BLUE 16 / 6	SPOUT DOWN
20		
21		
22		
23		
24		

NOTES: UNLESS OTHERWISE SPECIFIED

1. SYMBOLS TO LEFT OF TERMINAL → > CONNECT TO CHASSIS GROUND INSIDE JOYSTICK.
2. COLORS ON TABLE REFER TO CONTROL CABLE ON UNIT SIDE TO SOLENOIDS & SWITCHES.

ROTATION /MOUNT	CURRENT SETTINGS	LINDE PUMP HAUFSF100(5484)	CURRENT SETTINGS	SAUER PUMP HAUFSF200(5484A)
CW REAR	400-800ma	COIL + PIN-1	0-80ma	COIL + PIN-C
		COIL - PIN-2		COIL - PIN-D
COIL + PIN-1		COIL + PIN-D		
COIL - PIN-2		COIL - PIN-C		
CCW FRONT				
CONNECTOR ON PUMP		(HIRSCHMANN)	(4-FLAT WEATHERPACK)	

SWITCH TABLE

LOCATION	12V PART NO.	24V PART NO.	FUNCTION
S1	4746	4714	MAIN AUGER SWITCH
S2	4747	4714	DISCHARGE AUGER
S3	4746	4714	FEED LIGHT
S4 - S7	5490	5490	ALL JOYSTICKS

Notes:

Kirby Mfg Inc.
P.O. BOX 989
NEWKUN CA 95340
PH (925)723-0778
FX (925)723-3941

Kirby INC.

JOB # _____
MATERIAL# _____
MATERIAL #/N# _____

DESCRIPTION
**ELECTRICAL SCHEMATIC
HORIZONTAL MIXER - II**

SCALE: 01 WEIGHT: lbs SHEET 2 OF 2

DESIGNED BY: DATE: 6-6-18 NAME: MCOLLURE TINSN
APPROVED BY: _____ VENDOR: _____
VENDOR P/N# _____

SIZE: PART NUMBER
C **424-020B** REV. _____

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DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ±
ANGULAR MATCH ±
BEND ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±