HAYBUSTER®

CMF-425™ VERTICAL MIXER

S.N. UP TO 0011

Operating Instructions and Parts Reference

DURATECH® INDUSTRIES

PO Box 1940, Jamestown, ND 58402-1940

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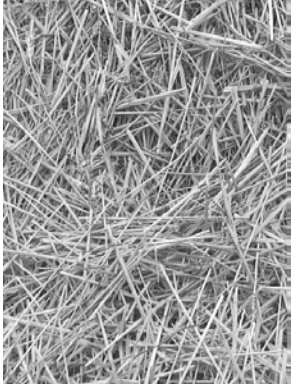

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CMF-425™ VERTICAL MIXER

S.N. UP TO 0011

Operating Instructions and Parts Reference

DuraTech Industries International Inc. (DuraTech Industries) has made every effort to assure that this manual completely and accurately describes the operation and maintenance of the *CMF-425*™ as of the date of publication. DuraTech Industries reserves the right to make updates to the machine from time to time. Even in the event of such updates, you should still find this manual to be appropriate for the safe operation and maintenance of your unit.

This manual, as well as materials provided by component suppliers to DuraTech Industries are all considered to be part of the information package. Every operator is required to read and understand these manuals, and they should be located within easy access for periodic review.

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Foreword

All personnel must read and understand the following sections before operating the *CMF-425 VERTICAL MIXER.*

Appropriate use of unit\Introduction

Your model CMF-425 is designed to cut, mix and distribute feed rations including baled forage. It is designed for all bale sizes and ration moisture contents.

To avoid possible damage to the machine and risk of injury to the operator, consult with a DuraTech Industries International, Inc. (DuraTech Industries) representative before attempting to mix and distribute materials other than livestock forage.

The CMF-425 is used to mix hay and forage with grain and other supplements to feed livestock. The front conveyor with optional left, right or tandem discharge makes distribution of forage mix easier.

Statement of Misuse

This vertical mixer is not to be used for any purpose other than for which it is intended as explained in the operator's manual, advertising material and other pertinent written material prepared by DuraTech Industries. Any machine subject to misuse may cause personal injury or death, and void manufactures warranty.

Purpose

The purpose of this owner's manual is to explain maintenance requirements and routine adjustments for the most efficient operation of your CMF-425. There is also a trouble shooting section that may help in case of problems in the field. Any information not covered in this manual may be obtained from your dealer.

Special Note: When reference is made as to front, rear, right hand or left hand of this machine, the reference is always made from standing at the rear end of the machine and looking towards the hitch. Always use serial number and model number when referring to parts or problems. Please obtain your serial number and write it below for your future reference.

MODEL: CMF-425 VERTICAL MIXER SERIAL NO_____

How to use this manual

Manual organization

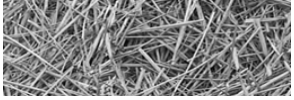
This manual is organized into the following parts:

- **Part 1:** Operating Manual explains how to set up, use and maintain the CMF-425 VERTICAL MIXER.

    1. Section 1: Safety
    2. Section 2: Dealer Preparation
    3. Section 3: Operation
    4. Section 4: Lubrication
    5. Section 5: Troubleshooting
    6. Section 6: Options
    7. Section 7: Maintenance

- **Part 2:** Parts Reference contains diagrams of each assembly, with the part number of each part. A key on the facing page contains a description of the part and the quantity used.

    1. The **parts reference** section can be found towards the back of this manual behind **Appendix B**.

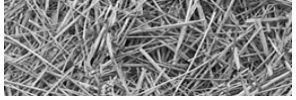


Dealer responsibilities

- Read Section 2, “Dealer Preparation,” and perform the tasks outlined. Also perform a pre-operation inspection as described in Section 3.
- Upon delivery of the unit to the customer, it is your responsibility to conduct a training session on the safe operation of the unit for primary operator(s). You must also conduct a “walk-around” inspection of all safety instructional decals on the machine itself. Decals are illustrated in **Part 2: Parts Reference**.
- Complete and return the Warranty Registration Card. Receipt of this form is required to activate the warranty. **Appendix A** provides details of the warranty.

Operator responsibilities

- Operator is responsible for his safety.
- Operator is also responsible for the safety of others near the machine.
- Review Section 2, “Dealer Preparation,” to verify that the machine has been prepared for use.
- Thoroughly review sections 1 and 3, which explain normal operation of the machine, and section 4, which explains maintenance requirements.
- Note the important safety information in the Forward and Section 1, “Safety”
- Keep copies of all manuals in a readily accessible location for future reference



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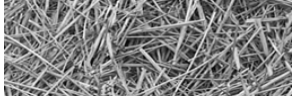

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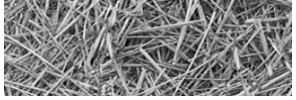

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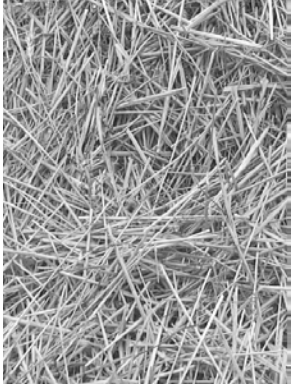

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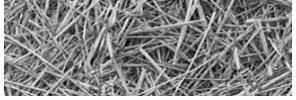
S.N. UP TO 0011

PART 1: Operating Instructions



Section 1: Safety

The safety of the operator is of great importance to DuraTech Industries. We have provided decals, shield and other safety features to aid you in using your machine safely. In addition, we ask you to be a careful operator who will properly use and service your Haybuster equipment.

WARNING: FAILURE TO COMPLY WITH SAFETY INSTRUCTIONS THAT FOLLOW WITHIN THIS MANUAL COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH. BEFORE ATTEMPTING TO OPERATE THIS MACHINE, CAREFULLY READ ALL INSTRUCTIONS CONTAINED WITHIN THIS MANUAL. ALSO READ THE INSTRUCTION MANUAL PROVIDED WITH YOUR TRACTOR.

THIS MACHINE IS NOT TO BE USED FOR ANY OTHER PURPOSE OTHER THAN THOSE EXPLAINED IN THE OPERATOR'S MANUAL, ADVERTISING LITERATURE OR OTHER DURATECH INDUSTRIES WRITTEN MATERIAL PERTAINING TO THE CMF-425.

1.1 Safety-alert symbols

Decals are illustrated in **Part 2: Parts Reference.**

The safety decals located on your machine contain important and useful information that will help you operate your equipment safely.

To assure that all decals remain in place and in good condition, follow the instructions below:

- Keep decals clean. Use soap and water - not mineral spirits, adhesive cleaners and other similar cleaners that will damage the decal.
- Replace all damaged or missing decals. When attaching decals, surface temperature of the machine must be at least 40° F (5° C). The surface must be also be clean and dry.
- When replacing a machine component to which a decal is attached, be sure to also replace the decal.

DuraTech Industries uses industry accepted **ASAE** standards in labeling its products for safety and operational characteristics.

Safety-Alert Symbol

Read and recognize safety information. Be alert to the potential for personal injury when you see this safety-alert symbol.

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

DANGER:
Signal word - White Lettering/Red Background
Safety Alert Symbol - White Triangle/Red Exclamation Point

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

WARNING:
Signal word - Black Lettering/Orange Background
Safety Alert Symbol - Black Triangle/Orange Exclamation Point

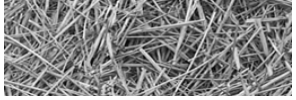
CAUTION: Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

CAUTION:
Signal word - Black Lettering/Yellow Background
Safety Alert Symbol - Black Triangle/Yellow Exclamation Point

This manual uses the symbols to the right to denote important safety instructions and information.

The **DANGER**, **WARNING** and **CAUTION** symbols are used to denote conditions as stated in the text above. Furthermore, the text dealing with these situations is surrounded by a box with a white background, will begin with **DANGER**, **WARNING**, or **CAUTION**.

The **INFORMATION** symbol is used to denote important information or notes in regards to maintenance and use of the machine. The text for this information is surrounded by a box with a light grey background, and will begin with either **Important** or **Note**.



1.2 Operator - personal equipment

THE OPERATOR

Physical Condition

You must be in good physical condition and mental health and not under the influence of any substance (drugs, alcohol) which might impair vision, dexterity or judgment.

Do not operate a **CMF-425 VERTICAL MIXER** when you are fatigued. Be alert - If you get tired while operating your **CMF-425 VERTICAL MIXER,** take a break. Fatigue may result in loss of control. Working with any farm equipment can be strenuous. If you have any condition that might be aggravated by strenuous work, check with your doctor before operating

Proper Clothing

Clothing must be sturdy and snug-fitting, but allow complete freedom of movement. Avoid loosefitting jackets, scarfs, neckties, jewelry, flared or cuffed pants, unconfined long hair or anything that could become entangled with the machine.

Protect your hands with gloves when handling flail and sections. Heavyduty, nonslip gloves improve your grip and protect your hands.

Good footing is most important. Wear sturdy boots with nonslip soles. Steel-toed safety boots are recommended.

To reduce the risk of injury to your eyes never operate a **CMF-425 VERTICAL MIXER** unless wearing goggles or properly fitted safety glasses with adequate top and side protection.

Tractor noise may damage your hearing. Always wear sound barriers (ear plugs or ear mufflers) to protect your hearing. Continual and regular users should have their hearing checked regularly.

1.3 Machine safety labels

The safety decals located on your machine contain important information that will help you operate your equipment. Become familiar with the decals and their locations.

DANGER: ROTATING DRIVELINE, CONTACT CAN CAUSE DEATH, KEEP AWAY!

DO NOT OPERATE WITHOUT

- ALL DRIVELINE GUARDS, TRACTOR AND EQUIPMENT SHIELDS IN PLACE
- DRIVELINES SECURELY ATTACHED AT BOTH ENDS
- DRIVELINE GUARDS THAT TURN FREELY ON DRIVELINE

6500085

DANGER

- ROTATING PARTS CAN ENTANGLE OR STRIKE PEOPLE, RESULTING IN DEATH.
- NEVER ENTER A MIXER/FEEDER WHILE IN OPERRATION.
- OPERATE THE MIXER/FEEDER FROM THE OPERATOR'S SEAT ONLY.

6500383

WARNING: HIGH-PRESSURE FLUID HAZARD

To prevent serious injury or death:

- Relieve pressure on system before repairing or adjusting or disconnecting.
- Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
- Keep all components in good repair.

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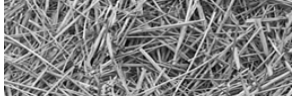
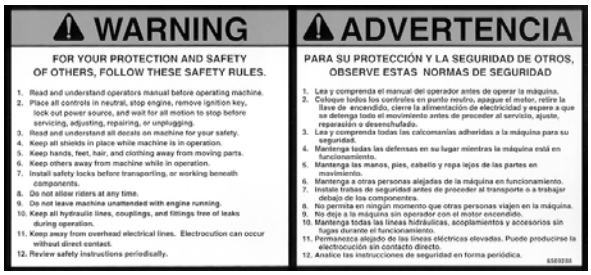


WARNING: PINCH POINT STAY BACK

6500339

WARNING: FOR YOUR PROTECTION AND SAFETY OF OTHERS, FOLLOW THESE SAFETY RULES.

1. Read and understand operators manual before operating machine.
2. Place all controls in neutral, stop engine, remove ignition key, lock out power source, and wait for all motion to stop before servicing, adjusting, repairing, or unplugging.
3. Read and understand all decals on machine for your safety.
4. Keep all shields in place while machine is in operation.
5. Keep hands, feet, hair, and clothing away from moving parts.
6. Keep others away from machine while in operation.
7. Install safety locks before transporting, or working beneath components.
8. Do not allow riders at any time.
9. Do not leave machine unattended with engine running.
10. Keep all hydraulic lines, couplings, and fittings free of leaks during operation.
11. Keep away from overhead electrical lines. Electrocution can occur without direct contact.
12. Review safety instructions periodically.



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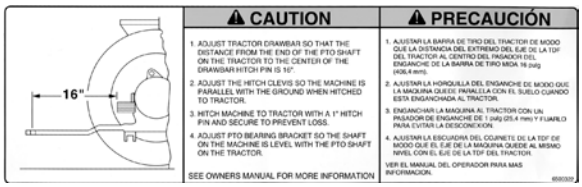
CAUTION:

1. ADJUST TRACTOR DRAWBAR SO THAT THE DISTANCE FROM THE END OF THE P.T.O. SHAFT ON THE TRACTOR TO THE CENTER OF THE DRAWBAR HITCH PIN IS 16".
2. ADJUST THE HITCH CLEVIS SO THE MACHINE IS PARALLEL WITH THE GROUND WHEN HITCHED TO TRACTOR.
3. HITCH MACHINE TO TRACTOR WITH A 1" HITCH PIN AND SECURE TO PREVENT LOSS.
4. ADJUST PTO BEARING BRACKET SO THE SHAFT ON THE MACHINE IS LEVEL WITH THE PTO SHAFT ON THE TRACTOR.



6500322

- Replacement decals can be purchased from your Haybuster dealer.

1.4 Shielding

Shields are installed for your protection. Keep them in place, and replace damaged shields.

figure 1.1
PTO driveline sheild

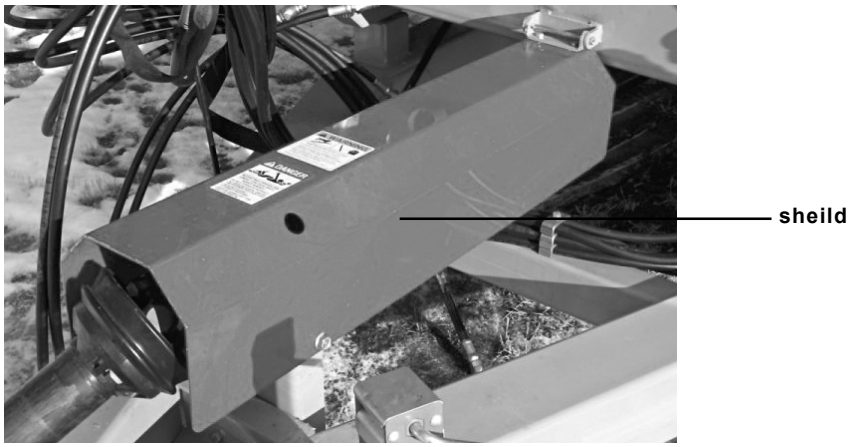
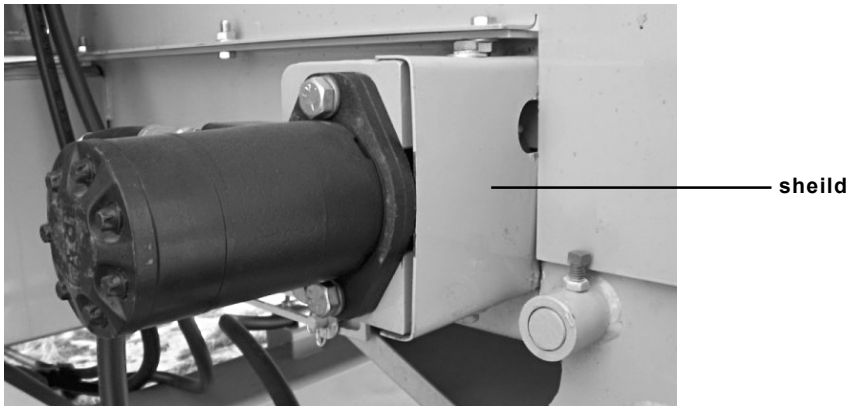
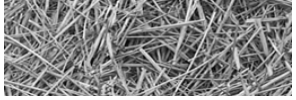


figure 1.2
Orbit motor auger drive sheild





1.5 Safety review section

BEFORE OPERATING

- **Read and follow all instructions contained in:**

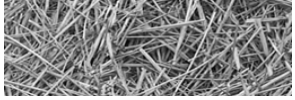
  1. This CMF-425 operator's manual
  2. Tractor operator's manual
  3. Decals on the CMF-425

Note: Additional copies of the above mentioned materials can be obtained from your dealer.

- Allow only responsible, properly instructed individuals to operate your machine. Provide proper training and carefully supervise inexperienced operators.
- Use a tractor which meets the tractor requirement contained within this manual. Additional weights may be necessary.
- Make sure all bystanders and other workers are clear before starting the tractor and CMF-425.
- Make no modifications to the machine unless specifically recommended or requested by DuraTech Industries.
- Check periodically for breaks or unusual wear and make any necessary repairs.
- Securely attach to towing unit. Use high strength, appropriately sized hitch pin with a mechanical retainer.
- If required install P.T.O. safety chain, check local regulations regarding safety chain requirements.
- Be sure that there are no tools lying on or in the CMF-425.
- Because it is possible that your CMF-425 may be used in dry areas or the presence of combustibles, special precautions should be taken to prevent fires and fire fighting equipment should be readily available.
- Do not allow anyone to stand between the tongue or hitch and the towing vehicle when backing up to the CMF-425.

DURING OPERATION

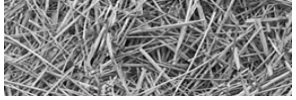
- Be sure the tractor operator is the only person riding on the tractor.
- Never allow riders on the machine at any time.
- Keep all bystanders, pets and livestock clear of work area.
- Keep hands and clothing clear of moving parts.
- Never enter the CMF-425 while in operation. Rotating parts can entangle or strike people, resulting in personal injury or death.
- Operate the CMF-425 from the operator's seat only.



- Power takeoff shafts must be locked in place with protective P.T.O. shields in place.
- Do not exceed load capacity of the CMF-425. **(See loading instructions in Section 3.7)**
- Do not clean, lubricate or adjust your CMF-425 while it is moving.
- Periodically clean the equipment to prevent buildup of dry combustible materials.
- Be especially observant of the operating area and terrain – watch for holes, rocks other hidden hazards. Always inspect the area prior to operation.
- Be extra careful when working on inclines.
- Pick the most level route possible when transporting across fields. Avoid the edges of ditches or gullies and steep hillsides.
- Never leave the CMF-425 running unattended.
- As a precaution, always check the hardware on the CMF-425 following every 100 hours of operation. Correct all problems. Follow the maintenance safety procedures.

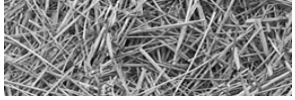
DURING SERVICE & MAINTENANCE

- Before working on or near the CMF-425 for any reason, including servicing, cleaning, unplugging or inspecting machine, use normal shut down procedures unless instructed differently in this manual.
- Never work on or near the CMF-425 unless engine is shut off, and all power drives and PTO are disengaged. Always follow normal shutdown procedures.
- Check periodically and tighten any loose bolts or connections.
- Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. DuraTech Industries will not claim responsibility for use of unapproved parts and/or accessories and other damages as a result of their use. If equipment has been altered in any way from its original design, DuraTech Industries does not accept any liability for injury or warranty.
- If it is necessary to operate the tractor engine indoors for more than a few seconds, be sure to provide enough ventilation to remove the tractor exhaust fumes.
- Hydraulic fluid escaping under pressure can be invisible and have enough force to penetrate the skin. When searching for a suspected leak, use a piece of wood or cardboard rather than your hands. If injured, seek medical attention immediately to prevent serious infection.
- Relieve all pressure in the hydraulic system before disconnecting the hose or performing other work on the system. Make sure all connections are tight and the hose is in good condition before applying pressure to the system.
- Replace all shields and guards after servicing and before moving.



1.6 Towing/road transport

- Use good judgment and drive slowly over rough or uneven terrain.
- Avoid loose fill, rocks and holes; they can be dangerous for equipment operation or movement. Allow for unit length when making turns.
- Be sure tractor brakes are properly adjusted and foot pedals are locked together.
- Check your state laws regarding the use of light, slow moving vehicle signs, safety chain and other possible requirements.



Section 2: Dealer Preparation

2.1 Pre-delivery inspection

Instructions: Before delivering the machine, check the following items carefully and make corrections when necessary. Place an "X" in the box after each item has been checked and found to be acceptable.

- ❑ Check machine for missing items or damage in transit.
- ❑ Check for loose bolts
- ❑ Check all hydraulic components for leaks or damage.
- ❑ Check lug bolts for tightness.
- ❑ Check tires for proper air pressure.
- ❑ Check condition of tire rims
- ❑ Check machine for proper lubrication.
- ❑ Check all shields for proper installation and condition.
- ❑ Check condition of all decals.
- ❑ Check all phases of operation.
- ❑ Check gearbox oil levels.

Section 3: Operation

To insure long life and economical operation, we highly recommend the operator of the CMF-425 be thoroughly instructed in the maintenance and operation of the machine. There is no substitute for a sound preventative maintenance program and well trained operator.

Prior to starting the engine of the tractor, we recommend the operator make a visual inspection of the unit. This can be done as the lubrication is being carried out. Any items that are worn, broken, missing or needing adjustment must be serviced accordingly before operating the CMF-425.

3.1 Pre-starting inspection instructions

WARNING: Before inspecting the machine, use the normal shut-down procedure in Section 3.11**.**

Check the following:

- ❑ Hydraulic components for leaks or damage.

Warning: Hydraulic fluid escaping under pressure can be almost invisible and can have sufficient force to penetrate the skin. When searching for suspected leaks, use a piece of wood or cardboard rather than your hands. If injured, seek medical attention immediately to prevent serious infection or reaction.

- ❑ Check for loose bolts, worn or broken parts.
- ❑ Lug nuts for tightness.
- ❑ Condition of tire rims.
- ❑ Tires for proper air pressure.
- ❑ Installation and condition of shields.
- ❑ Installations of slow moving vehicle (SMV) sign if required.
- ❑ Condition of decals.
- ❑ Gearbox oil levels.

3.2 Setup and Adjustments

3.2.1 Hitch Adjustments

The hitch is adjustable so that the machine is parallel to the ground when attached to the tractor drawbar. This is accomplished by removing the two mounting bolts and reinstalling them with the hitch at the proper height. The distance from the end of the P.T.O. shaft on the tractor to the center of the drawbar hitch pin hole should be 16" (41cm), and the height from the top of the drawbar to the centerline of the P.T.O, should be 8".

figure 3.1
Hitch adjustments

The hitch pin should be of proper diameter to prevent movement and length to extend through all components of the hitch. The pin should be secured with a hairpin clip or suitable device to prevent the loss of the pin.

3.2.2 Jack

An adjustable jack is provided with the machine to support the hitch when the machine is disconnected from the tractor. The jack must only be used on firm, level ground or similar base to prevent it from sinking.

Warning: Never unhook the CMF-425 with material in tub.

When unhooking the machine remove the jack pin and move the jack from the storage location to the hitch position and reinstall the pin. Crank the jack until the hitch is no longer supported by the drawbar of the tractor. The hitch pin now can be removed.

Warning: Never use the jack without reinstalling the jack pin.

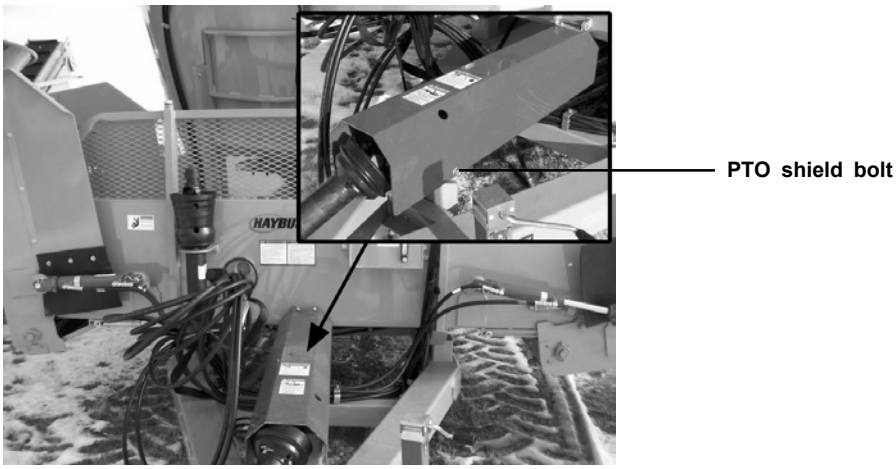
When hooking up the machine, install a proper hitch pin and secure it with a hairpin clip or comparable device, crank the jack until the foot of the jack is fully raised. Remove the jack pin and relocate the jack to the storage location. Reinstall the jack pin.

3.2.3 P.T.O. Shield

Warning: Before lifting the P.T.O. shield be sure to follow the normal shut down procedure. Be certain that the tractor is shut off and all rotating components of the machine have come to a complete stop before lifting shield. Loose clothing is discouraged, and long hair should be restrained whenever working on P.T.O. shafts.

To raise the P.T.O. shield, remove the bolts from the front of the shield and lift the shield. If it does not pivot freely look for build up of debris or other obstructions at the pivot point. Do not force the shield, as damage to the shield may occur.

figure 3.2
Raising the P.T.O. shield



3.2.4 Hydraulic Cylinder and Valve

All cylinder and valve hose connections should be tight and leak free. If the area near a hose connection becomes oily or dirty, repairs should be made to seal the leak. Hoses should be free of cracks or cuts to ensure safe operation. Cylinder seal kits are available from your dealer to repair a leaky cylinder. Pin connections should be free of excessive wear. If pins become worn they should be replaced. Also check yokes and mounts for cracks and wear.

Warning: Hydraulic fluid escaping under pressure can be almost invisible and can have sufficient force to penetrate the skin. When searching for suspected leaks, use a piece of cardboard or wood rather than your hands. If injured seek qualified medical attention immediately to prevent serious infection or reaction.

3.2.5 Tires and Rims

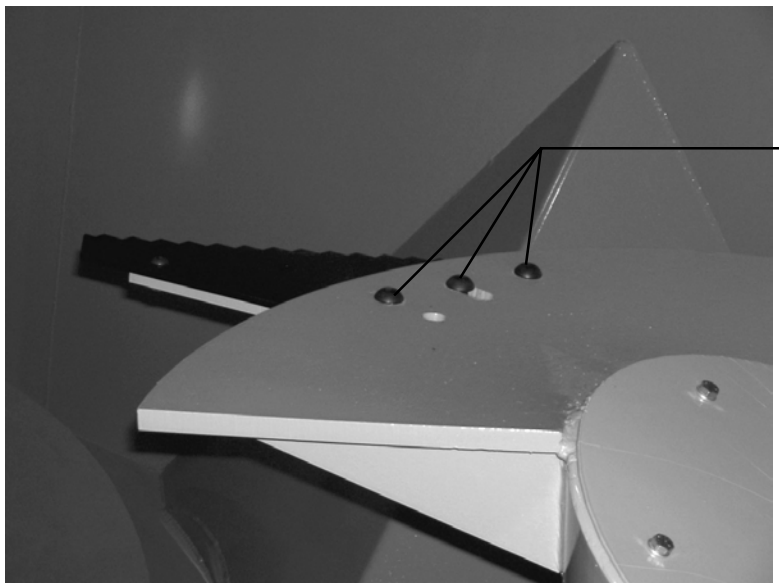
Tires should be inflated to 40 PSI and should be free of cuts or cracks. There should also be adequate tread and no visible cords, wires or tread separation. Tires must also be of proper load rating, speed rating and size.

Rims must be free of cracks and rust pitting. Lug bolts must also be tight. Inspect the area around the lug bolts. If rust develops this is a sign of loose lug bolts. Check wheel bearings and seals, replace and grease as use requires.

3.2.6 Knives

Your new CMF is setup with seven knives on each auger, the top two knives in each auger have two positions, in or out. When processing tough hay the knives should be in the out position to better attack the long stem hay. Having the knives in the out position increases the horsepower requirements. Alternatively, knives can be removed if the ration does not require much processing and/or over-processing is a possibility. Ingredient condition and rations will determine the optimum layout.

figure 3.3
Knife position adjustments, knives in the 'outside' position



3.2.7 Vertical knives

The purpose of the vertical knives is to create restriction to the flow of material around the tub and provide a shear point for the auger knives. The further into the tub the vertical knives are set the shorter the final stem length will be. The vertical knives also can affect the horsepower demand, which may be important depending on tractor size. Start using your CMF with the knives at neutral or one hole in and adjust as necessary.

figure 3.4
Vertical knife adjustments, shown with knife in the neutral position

3.2.8 Free motion automatic clutch

Torque protection is built into the PTO driveline with two free motion automatic clutches. These clutches are located on each driveline immediately before each gearbox. When overload occurs the clutch disengages and does not reengage until the driveline speed is reduced to near zero. The clutch makes a loud click when it disengages.

3.2.9 Scale Indicator

The indicator for the four-point scale should be mounted on the indicator mount located on top of the main conveyor. The mount can be mounted in the left or right side of the conveyor. The indicator is powered by a 12 volt battery located under the tub on the left side of the frame.

figure 3.5
EZ-2000 scale indicator

3.2.10 Two-Speed Gearbox (Option)

The two-speed gearbox is available on the CMF-425 for operators who want more control of their mixing speeds, want to reduce overall horsepower requirements, or prefer to turn off mixer while transporting a loaded mixer. The two-speed gearbox has two speeds, low and high. Pictures in **Section 6.5,** show lever in two positions in both gear selections.

3.2.11 Extension Conveyor Spouts (Option)

Spouts are available with or without magnets. Spouts are adjustable in three hole positions on sides. Point spout down further when running the conveyor extensions at higher angles to avoid material build up on the end of the conveyor. When running conveyor at lower angles, direct spouts so that the magnets are positioned further into the flow of material. Pictures of available spouts can be found in **Sections 6.2 and 6.3**.

3.3 Hitching the CMF-425

Warning: Do not operate the CMF-425 unless the tractor complies with the following requirements:

- Tractor has a minimum of 110 horsepower. (without two-speed option)
- Tractor has rollover protective structure and seatbelts.
- Tractor's hydraulic system has at least (2) two-way valves, and a minimum flow of 12 GPM @ 1500 psi.
- To assure adequate braking and steering control while in transport, the tractor must have a weight greater than or equal to 2/3 weight of the CMF-425 and any mix it will transport at speeds more than 10 MPH. ((Max CMF 14,855 lbs. + max load 13,500 lbs) x (0.67) =18,998 lbs.)
- 1-3/8" 21-spline P.T.O. shaft

To hitch the CMF-425 to the tractor, perform the following steps:

1. Adjust the tractor drawbar so that the distance from the end of the P.T.O. shaft on the tractor to the center of the drawbar hitch pin hole should be 16" (41 cm), and the height for the top of the centerline of the P.T.O. should be 8". Refer to figure 3.6

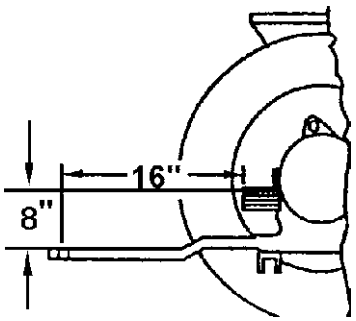


figure 3.6
Safe P.T.O. distance

2. Hitch the CMF-425 to the tractor drawbar. Adjust the hitch so the machine is parallel with the ground.
3. The hitch pin should be sized to prevent excessive movement, and should extend through all components of the hitch. The pin should be secured with a hairpin clip or suitable device to prevent the loss of the pin.
4. Raise the jack. Pull the lock pin and store in transport position.
5. Attach the P.T.O. shaft to the tractor P.T.O. shaft. Depress coupling and slide the coupling onto the splined shaft. Make sure the spring loaded safety catch is properly seated.

6. This machine is set up to operate on 1000 rpm only!

7. If required, install the safety chain. Check local regulations regarding safety chain requirements. Refer to figure 3.7

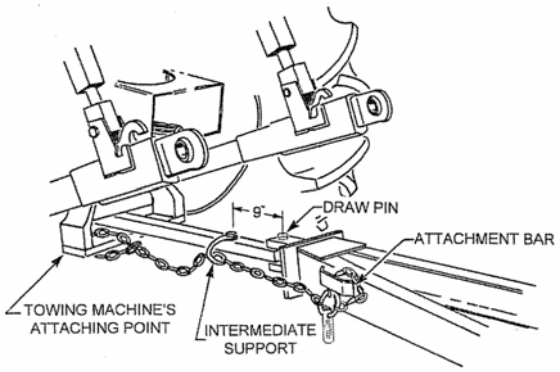


figure 3.7
Safety chain installation

8. Connect the two hydraulic hoses from the hydraulic door cylinder to one set of hydraulic couplers on the tractor. Connect the two hydraulic hoses from the discharge conveyor to the second set of hydraulic couplers on the tractor. Connect the two hydraulic hoses from the extension conveyor to the third set of hydraulic couplers on the tractor.

9. If equipped with a rear door and/or second extension conveyor, connect the two hydraulic hoses from each to the fourth and/or fifth hydraulic couplers on the tractor.

3.4 Unhitching the CMF-425

To unhitch the CMF-425, perform the following steps:

Warning: Never unhook the CMF-425 with material in tub.

1. Follow normal shut-down procedure.

2. Lower jack and secure. Raise the tongue off the tractor draw bar.

3. Place wheel chocks under wheels to keep from rolling.

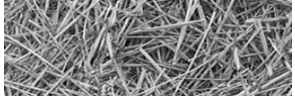
4. Detach the P.T.O. shaft from the tractor.

5. Cycle the hydraulic control levers to release any pressure in the hydraulic hoses.

6. Detach the hydraulic hoses.

7. Remove the safety chain, if installed.

8. Remove the hitch pin.



3.5 Operation precautions and instructions

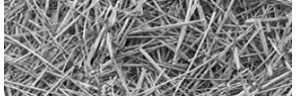
- Make sure there are no bystanders in the way.
- Before loading, run the mixer empty and check all operations.
- Do not overload the mixer. Maximum load is 13,500 lbs. Maximum load is determined by weight, not volume.
- Be sure all shields are in place before operation.
- Use common sense when operating.
- Never attempt to climb on the CMF while the tractor is running.

3.6 Starting the machine

1. Park machine on a hard level surface keeping the driveline as straight as possible.
2. Close the mixer door.
3. If the scale indicator is not at zero, re-zero indicator per the scale indicator manufacturer's instructions.
4. If equipped with two-speed gearbox option, select mixing gear desired.
5. Engage the tractor PTO and increase engine RPM to desired mixing speed.

3.7 Loading and processing

1. Load baled products and materials that require processing first. The center core of round bales will be the toughest to process. Allow enough processing time to adequately process roughage.
2. Set vertical knives per adjustment section.
3. Do not over process as processing continues through the mixing stage.
4. Load silage and/or other high moisture products next.
5. Load dry ingredients.
6. Load liquid supplements last.
7. Allow three to four minutes of mixing time after last ingredient.
8. ALL PROCESSING AND MIXING TIMES WILL VARY.
9. Do not overload the CMF, maximum capacity is 13,500 lbs.



3.8 Unloading

To unload the CMF-425, perform the following steps:

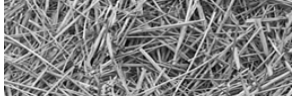
1. If possible, move the mixer to the unloading site while finishing the mixing stage to avoid the need for loaded PTO start-up.
2. Align CMF with bunk and lower the conveyor extension to desired angle (if equipped).
3. Engage the chain conveyor; chain speed is controlled using the auxiliary valve flow control on the tractor.
4. If the augers are not already engaged, engage the PTO.
5. Open the tub door and proceed along the bunk. Engine speeds around 1500 rpm are usually adequate when the tub is full, however engine should be run at rated speed to clean out the tub and provide even feed flow when the tub is near empty. If equipped with two-speed gearbox, turn off mixer and shift to high speed and re-engage to achieve maximum clean out RPM. Most new tractors have P.T.O. brakes which will require the tractor to be turned off before the two- speed can be shifted.

3.9 Storing the CMF-425 mixer/feeder

Warning: When preparing machine for storage, use normal shut-down procedure.

To prepare the CMF-425 for storage, perform the following steps:

1. Clean all mud, dirt, grease and other foreign material from the exterior and interior of the machine. Wash the complete machine. To inhibit rusting repaint places where bare metal is exposed.
2. Place the jackstand in the down and in locked position. Place wheel chocks under wheels if needed to keep machine from rolling. If possible, store the machine in a dry, protected place. (If it is necessary to store the machine outside, cover it with waterproof canvas, plastic, or other suitable protective material.)
3. Coat exposed lift cylinder rods with grease. Oil chains on conveyors. Lubricate thoroughly according to lubrication instructions. Repack wheel bearings.
4. Check the machine for any worn or broken parts. By ordering parts now, you will avoid delays when it is time to remove the machine from storage. When ordering parts always specify machine serial number and the part number of the replacement part. Part numbers can be found in the parts section of this manual.



3.10 Removing the CMF-425 from storage

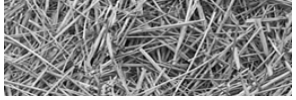
To remove the CMF-425 from storage, perform the following steps:

1. Remove all protective coverings.
2. Remove blockings from under the CMF-425. Check tire pressure.
3. Lubricate machine in accordance with lubrication instructions found in this manual.
4. Check the conveyor chain tension.
5. Check all hydraulic hoses for deterioration and, if necessary, replace. Tighten any loose bolts, nuts and hydraulic fittings.
6. Follow pre-starting inspection instructions.

3.11 Normal shut-down procedure

Warning: For your safety and the safety of others, you must use the following normal shut-down procedure before leaving the tractor controls unattended for any reason, including servicing , cleaning, or inspecting the CMF-425. A variation of the following procedure may be used if so instructed within this manual or your tractor manual or if an extreme emergency requires it.

1. Disengage P.T.O.
2. Place transmission in park or set park brake.
3. Shut off machine and remove key.
4. Wait for all movement to stop.
5. Engage tractor park brake, turnoff and remove key engine prior to entering the tub and/or making any adjustments to CMF.



Section 4: Lubrication

The operator should make a check of all grease fittings on the unit before beginning to operate it so as to become familiar with their location and correct service schedule.

Warning: Use normal shut-down procedure (Section 3.11) before lubricating the machine.

4.1 Lubrication

Use only a high quality, #2 multi-purpose grease when lubricating the unit. Make sure all fittings and the nozzle of the grease applicator are clean before applying the grease. If grease fittings are missing, replace them immediately.

Lubricate with grease every fifty (50) hours of operating time.

1. P.T.O. universal joints – 7 places

   1a. As many as seven (7) pumps of grease are required to purge all cross and bearing lube point with fresh grease.

2. Telescoping shafts – 2 places

   2a. Telescoping members require enough grease to maintain a smooth sliding action. When telescoping members become contaminated with dirty grease, they should be inspected and cleaned to insure smooth operation.

   2b. Shield components should be lubed and inspected to insure all components are in working condition or are replaced if damaged. A properly maintained shield will inhibit dirt from contaminating telescoping members.

3. P.T.O stand bearing – 1
4. Conveyor bearings - 2
5. Extension conveyor bearings – 2 each
6. Automatic clutches – Two places – 1 pump only. *Be careful **not** to over grease.*

figure 4.1
P.T.O. Universal joint
(1 of 7)

figure 4.2
P.T.O. Universal joint
(2 & 3 of 7)

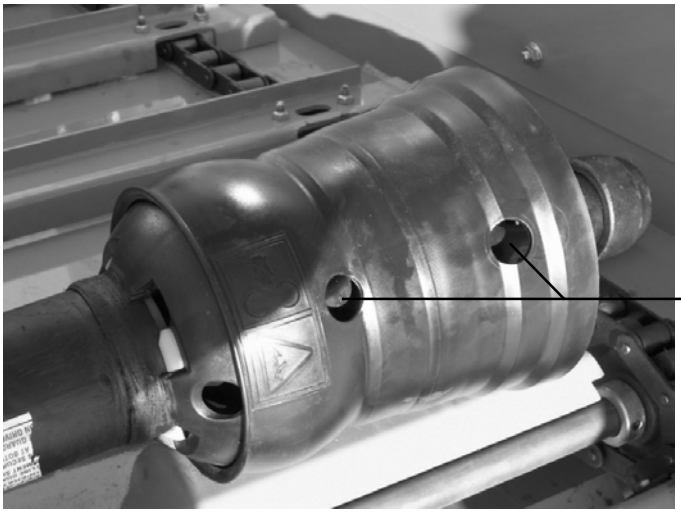


figure 4.3
P.T.O. Universal joint
(4 of 7), and P.T.O stand
bearing (1 of 1)

figure 4.4
P.T.O. Universal joint (5 of 7), and automatic clutch

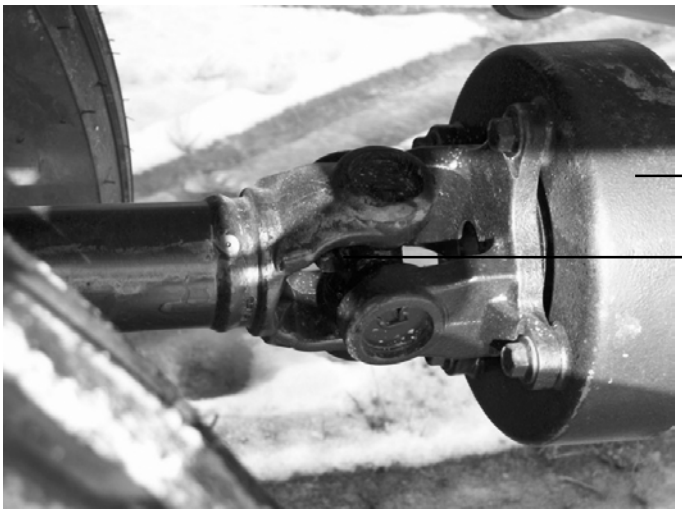
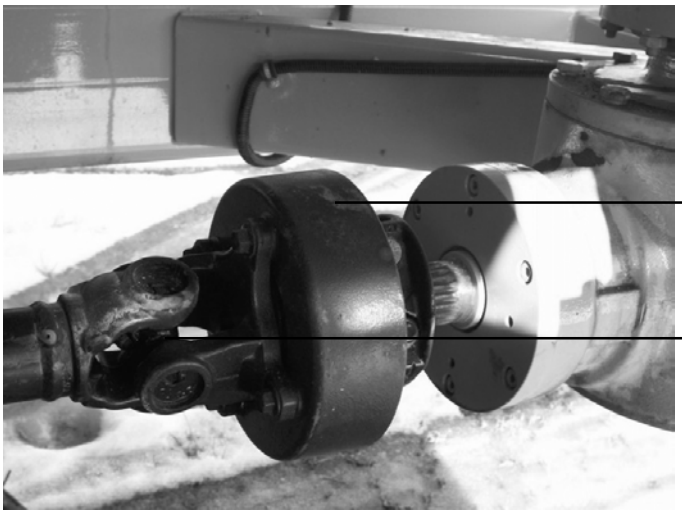


figure 4.5
P.T.O. Universal joint (6 of 7)

figure 4.6
P.T.O. Universal joint (7 of 7), and automatic clutch



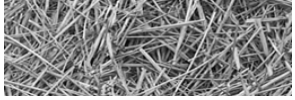


figure 4.7
Conveyor bearings lubrication point (1 of 2)

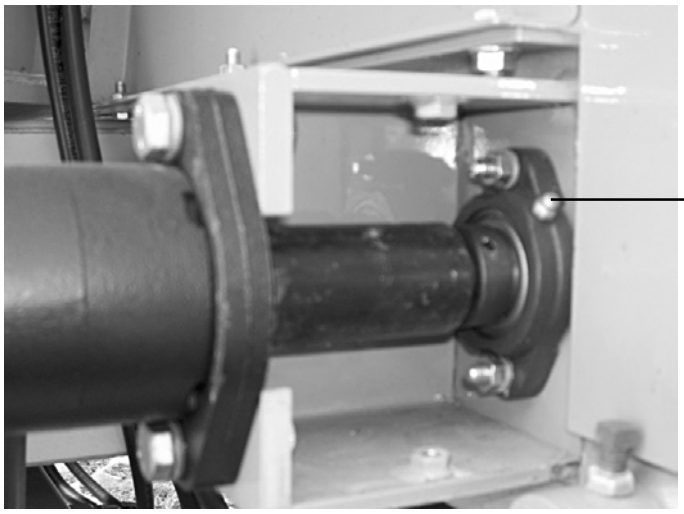


figure 4.8
Extention conveyor bearings lubrication point (1 of 4)

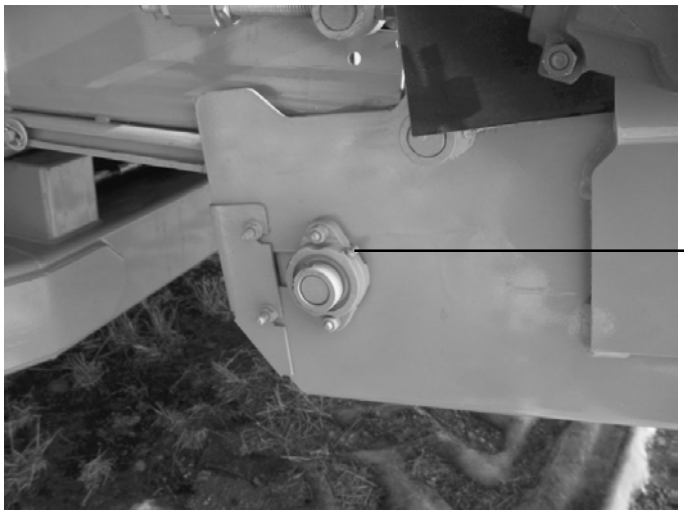
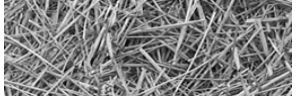


figure 4.9
Telescoping P.T.O. shaft



4.1 Lubrication cont.

Wheel bearings: repack annually

Gearbox: Grease 20-30 pumps every 250 hours (each gearbox), located on the bottom of the tub in front of the left tires.

Chains: Oil conveyor chains every 15 hours.

When to change oil in gearboxes:

- After the first 50-100 hours of operation, drain initial oil, preferably when box is warm. There after oil should be changed every 1500 hours or 12 months, whichever comes first. If machine usage is severe or more than 10 loads per day, it is advisable to change the oil every 1000 hours or 6 months. Inspect and wash oil reservoir breather cap as needed. Air dry before reinstalling. Fill each gearbox with approximately 5 ½ gallons of EP150 or 80w-90 GL-5 weight Gear Lube. ***RR-USA recommends using synthetic oil in their gearbox.*** Monitor the oil level in the reservoir daily. Oil level should be in the middle of the sight gauge. The working temperature must not exceed (90 degrees C) 194 degrees F max. Proper lubrication is essential for efficient running and long life of the unit as a whole. It is also important to select the correct type of oil to ensure the long life of the gear reducer.

Procedure for changing oil in gearboxes (*see chart 4.1 on the following page***):**

1. Remove magnetic drain plug from the bottom of the right angle gearbox and clean the magnet if it has any metal on it. Return plug to the gearbox before filling.
2. Disconnect the lube lines from the top of the gearboxes at the tee fitting. Disconnect the other lube lines from the bottom of the gearboxes at the other tee.
3. To fill, connect (-8)3/4" MJIC fitting to hose connected to the right angle box and place overflow hose in a pan. Pump oil into the gearbox until it runs out of the overflow hose. Reconnect hoses to the correct tee fittings. Repeat for rear gearbox. The tee fitting to the right angle will need to be capped after the front gearbox is filled.
4. Fill reservoir and continue to monitor reservoir levels during operation so that oil remains half-way up in sight gauge or higher, allow for more expansion in warmer climates.
5. Two-speed gearbox should be half full of oil so that oil is present in sight gauge. Follow same maintenance schedule and use the same oils as recommended above for vertical gearboxes.
6. Any brand of 80w-90 gear oil with a GL-5 rating may also be used; *RR_USA recommends use of synthetic oils.*

Recommendation: Prior to starting each day it is advisable to check the oil level of gearboxes at the sight gauge.

Contact information for:

ConocoPhillips Lubricants: Telephone: 1-800-255-9556 (Technical Hotline)
Email: conocolubricants@conophillips.com

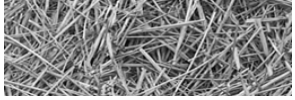
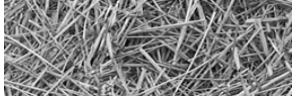


chart 4.1
lubrication chart for reduction gears

Ambient Temperature	-4 F - +41 F -20 C - +5 C	-41 F - +104F +5 C - +40 C	+86 F - +149 F +30 C - ++65 C	+104 F- +149 F +40 C - +65 C
Viscosity				
ISO VG	100	150	220	320
E/50 C	7.3	10.8 -12.5	15 -18	22 - 26
AGIP	BLASIA 100	BLASIA 150	BLASIA 220	BLASIA 320
BP-MACH	ENERGOL GR-HP100	ENERGOL GR-HP150	ENERGOL GR-HP220	ENERGOL GR-HP320
CASTROL	ALPHA SP 100	ALPHA SP 150	ALPHA SP 220	ALPHA SP 320
CHEVRON	NL GEAR COMPOUND 100	NL GEAR COMPOUND 150	NL GEAR COMPOUND 220	NL GEAR COMPOUND 320
ELF	REDUCTELF SP 100	REDUCTELF SP 150	REDUCTELF SP 220	REDUCTELF SP 320
ESSO	SPARTAN EP 100	SPARTAN EP 150	SPARTAN EP 220	SPARTAN EP 320
FINA	GIRAN 100	GIRAN 150	GIRAN 220	GIRAN 320
IP	MELLANA 100	MELLANA 150	MELLANA 220	MELLANA 320
MOBIL	----	MOBILGEAR 629	MOBILGEAR 630	MOBILGEAR 632
SHELL	OMALA EP 100	OMALA EP 150	OMALA EP 220	OMALA EP 320
TOTAL	CARTER EP 100	CARTER EP 150	CARTER EP 220	CARTER EP 320

4.2 General appearance

Clean all mud, dirt, grease and other foreign material from the exterior of the machine. Wash the entire machine. Repaint places where bare metal is exposed.



Section 5: Troubleshooting

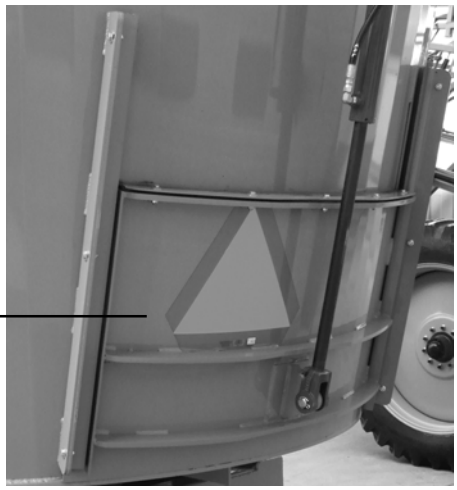
chart 5.1
Troubleshooting chart

Problem	Cause	Remedy
1.Spillage over tub	1. Vertical knives are in to far.	1. Pull knives out one notch at a time until material stops spilling.
	2. Auger speed is to fast.	2. Slow engine speed
	3. Tub is overfilled	3. Wait longer while processing first bale, before adding more hay or other ingredients. Allow more time to process bulky materials.
		4. Park on level ground.
2. Augers stopped turning	1. Automatic clutch disengaged because of shock loading	1. Disengage tractor PTO. Wait till driveshaft stops and reengage PTO. Clutch automatically reengages when driveline slows to near zero rpm. May need to shift
		Gearbox to low.
	2.Verify two-speed is engaged	2.Check lever position on two-speed gearbox,
		Forward-high speed
		Middle-neutral
		Back-low speed
3. Conveyor does not move	1. Conveyor plugged	1. Look for obstruction
	2. Chains to tight	2. Reduce chain tension
	3. Hoses uncoupled.	3. Make sure hoses are coupled properly.
4. Conveyor plugged at transition to extension	1. Extension conveyor running at to steep of an incline	1. Run extension conveyor at lowest height possible to reach the necessary bunk height.
	2. Conveyor stalls.	2. Running conveyor at steep angle, move spout to a more downward position.
5. Ration over processed	1. Processing continues through mixing stage	1. Add secondary ingredients that don't require processing to the batch sooner.
	2. To many knives	2. Take knives out.
	3. Vertical knives in to far	3. Pull vertical knives out further,
	4. Auger speed to fast	4. Reduce tractor engine rpm
6. Ration under processed	1. Not enough knives on the augers	1. Add knives
	2. Knives are dull	2. Replace knives
	3. Auger speed not fast enough	3. Increase auger speed, careful not to cause spillage.
	4. Vertical knives not in far enough	4. Push vertical knives in one notch.
7. Scale does not power up	1. Battery not charged	1. Charge the battery/replace if necessary.
	2. Loose battery connection	2. Tighten/clean connections at battery post.
	3.Battery power cable damaged	3. Repair/replace cable.
(Consult scale manufactures manual for all other information)	For 24 hour Tech service, Go to **digi-star.com** or **call 1-800-225-7695**	
8. Door is loose/does not seal	1. Door clamps out of adjustment	1. Readjust door clamps

Section 6: Options

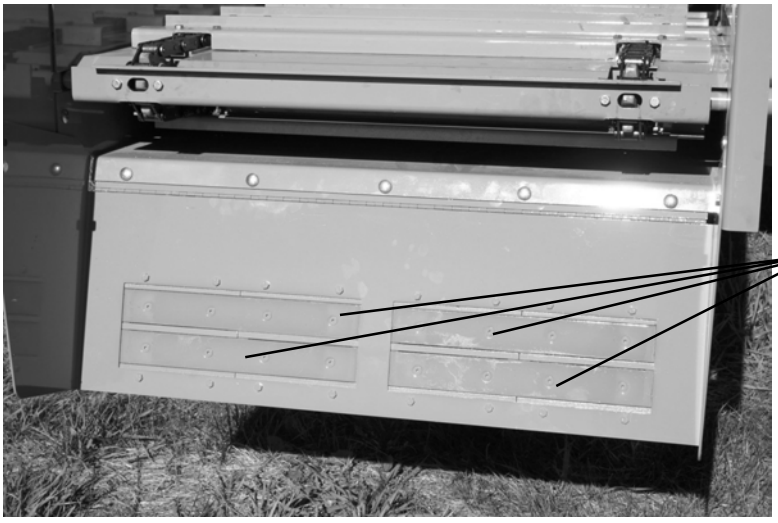
6.1 Rear bay door

figure 6.1
Optional rear door



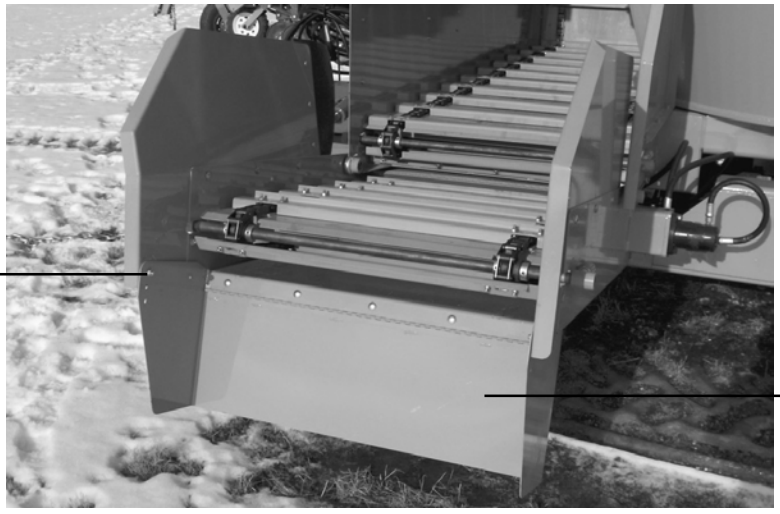
6.2 Magnetic extension spouts

figure 6.2
Magnetic extension spout



6.3 Non-magnetic extension spout

figure 6.3
Non-magnetic extension spout



6.4 Light Kit

figure 6.4
Optional light kit for the CMF-425

6.5 Two-Speed Gearbox

figure 6.5
Two speed gearbox in low speed position

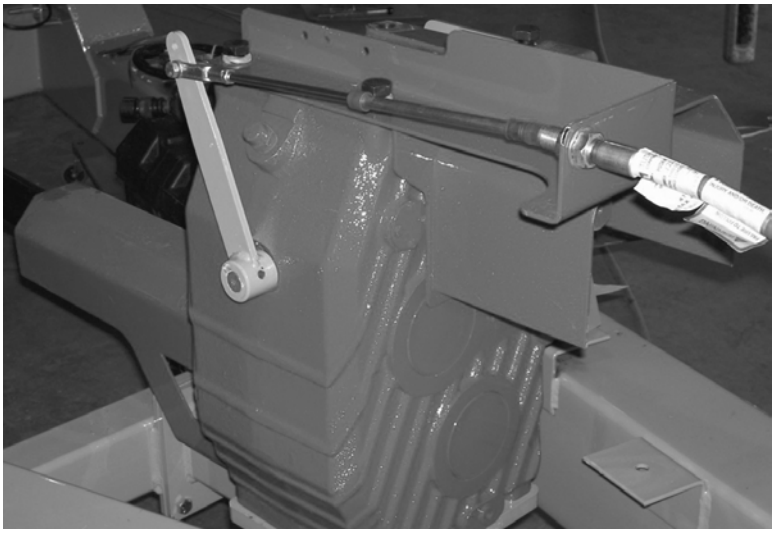
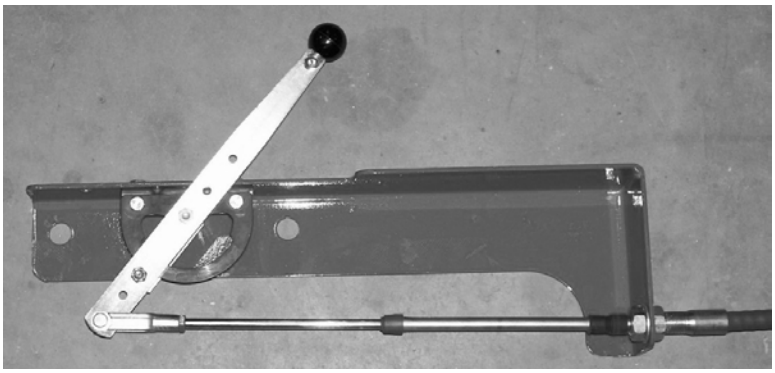


figure 6.6
Handle for two speed gearbox in low position



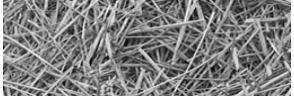


figure 6.7
Two speed gearbox in high position

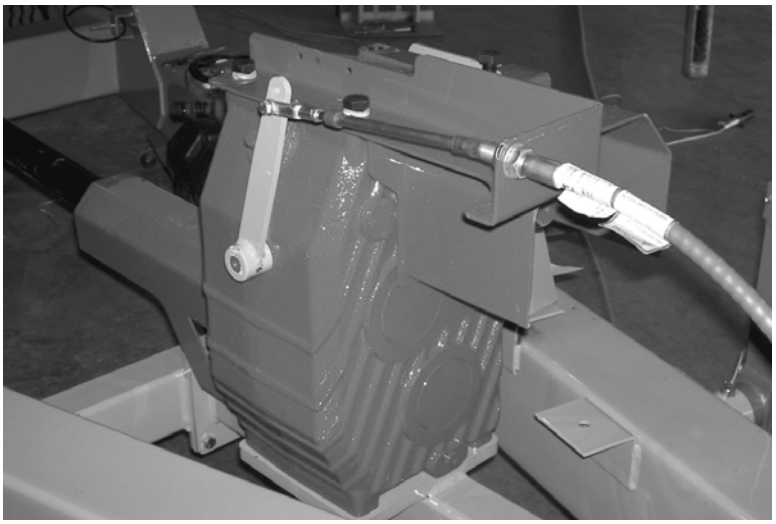
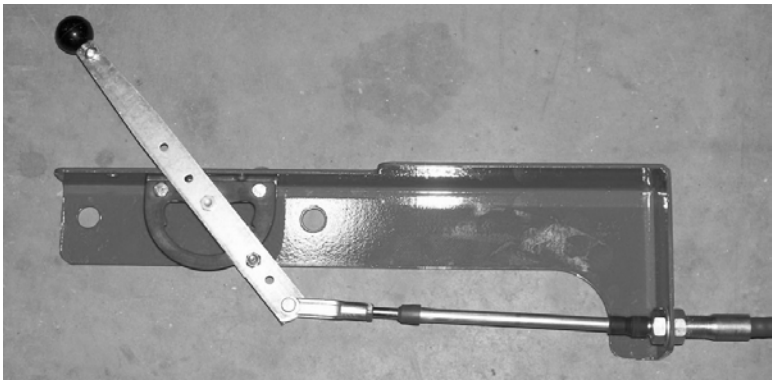
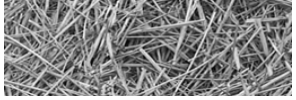


figure 6.8
Handle for two speed gearbox in high position





Section 7: Maintenance

7.1 Welding Procedure

CMF-425 welding procedures for machines with a weight scale

Precautions are required for welding on machines with electronic components. Electronic components including but not limited to: electronic scales.

Proper welding procedures are necessary with in order to avoid damage to the components, their sensors, and associated components.

When possible, remove the parts to be welded from the machine.

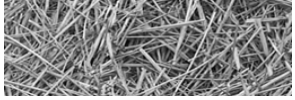
If not possible to remove the parts, follow the following procedure:

Note: Do not ground the welder to electrical components listed above, sensors, or wiring. Improper grounding can also damage bearings of hydraulic components. Clamp the ground cable from the welder to the part that will be welded. Place the clamp as close as possible to the weld. This will help reduce the possibility of damage.

1. Unhitch the CMF-425 from the tractor.
2. Disconnect the connectors from the electronic scale. Move the connectors to a position that will not allow the connectors to accidentally move back and make contact with any of the pins.
3. Connect the welding ground cable directly to the part that will be welded. Place the ground cable as close as possible to the weld in order to reduce the possibility of welding current damage to bearings, hydraulic components, and electrical components.

Note: If the electrical/electronic components are used as a ground for the welder, or electrical/ electronic components are located between the welder ground and the weld, current flow from the welder could damage the components.

4. Protect the wiring harnesses and hydraulic lines from welding debris and spatter.
5. Use standard techniques to weld the materials.



Appendix A: Warranty

DuraTech Industries International Inc., warrants to the original purchaser for one year from purchase date that this product will be free from defects in material workmanship when used as intended and under normal maintenance and operating conditions. This warranty is limited to the replacement of any defective part or parts if DuraTech Industries is notified within thirty (30) days or failure.

This warranty shall become void if in DuraTech Industries International, Inc's., judgment the machine has been subject to misuse, negligence, alterations, damaged by accident or lack of required maintenance, or if the product has been used for a purpose for which it was not designed.

All claims for warranty must be made through the dealer which originally sold the product and all warranty adjustments must be made through same.

This warranty does not apply to tires or bearings or any other trade accessories not manufactured by DuraTech Industries International Inc.'s. Buyer must rely solely on the existing warranty, if any, of these respective manufactures.

DuraTech Industries International Inc., shall **not** be held liable for damages of any kind, direct, contingent, or consequential to property under this warranty. DuraTech Industries International Inc., cannot be held liable for any damages resulting from causes beyond its control. DuraTech Industries International Inc., shall **not** be held liable under this warranty for loss of crops, or rental costs or any expense or loss for labor or supplies.

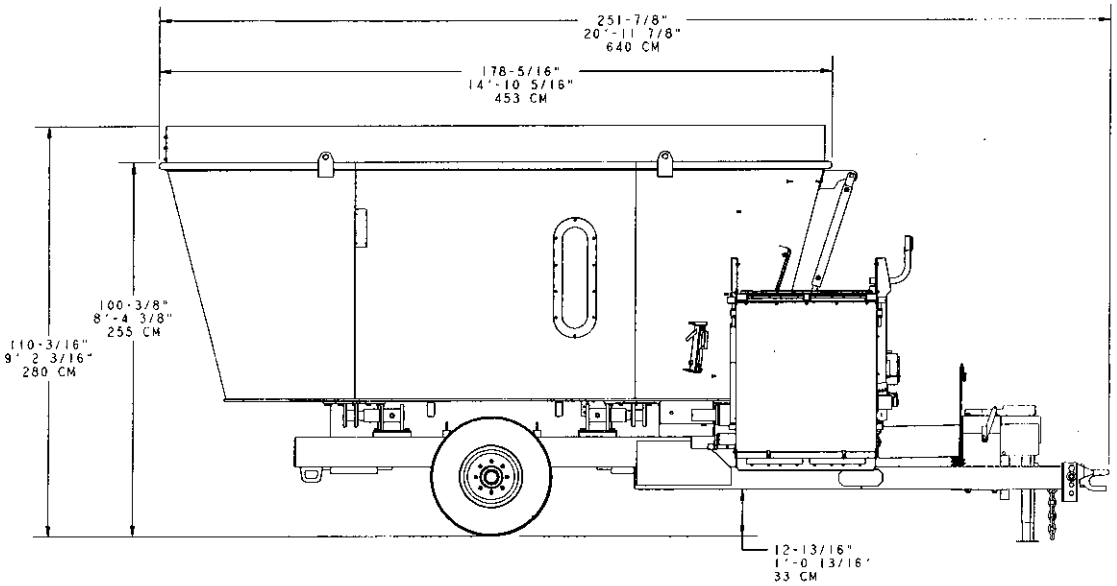
DuraTech Industries International Inc., reserves the right to make changes in material and/or design of this product at any time without notice.

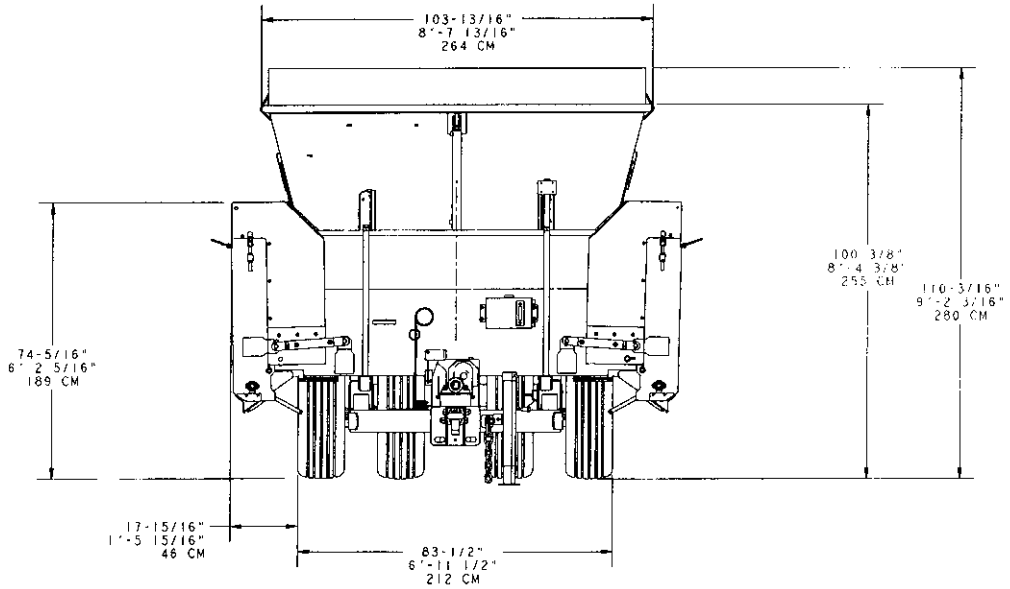
All other warranties made with respect to this product, either expressed or implied, are hereby disclaimed by DuraTech Industries International.

Appendix B: CMF-425 Specifications

General specifications

Max. Weight ..... 14,855 LBS
Overall length, including trailer ..... 251 7/8”
Overall width ..... 119 3/8”
Tractor P.T.O speed …(1-3/8” 21 spline) 1000
Minimum horsepower required 110
Mixing capacity, cu. ft 425/525
Max. Gross Weight ..... 28,500 LBS
Tires – size 12.5L-15FI
Loading height with extensions ..... 110 3/16”
Loading height without extensions ..... 100 3/8”



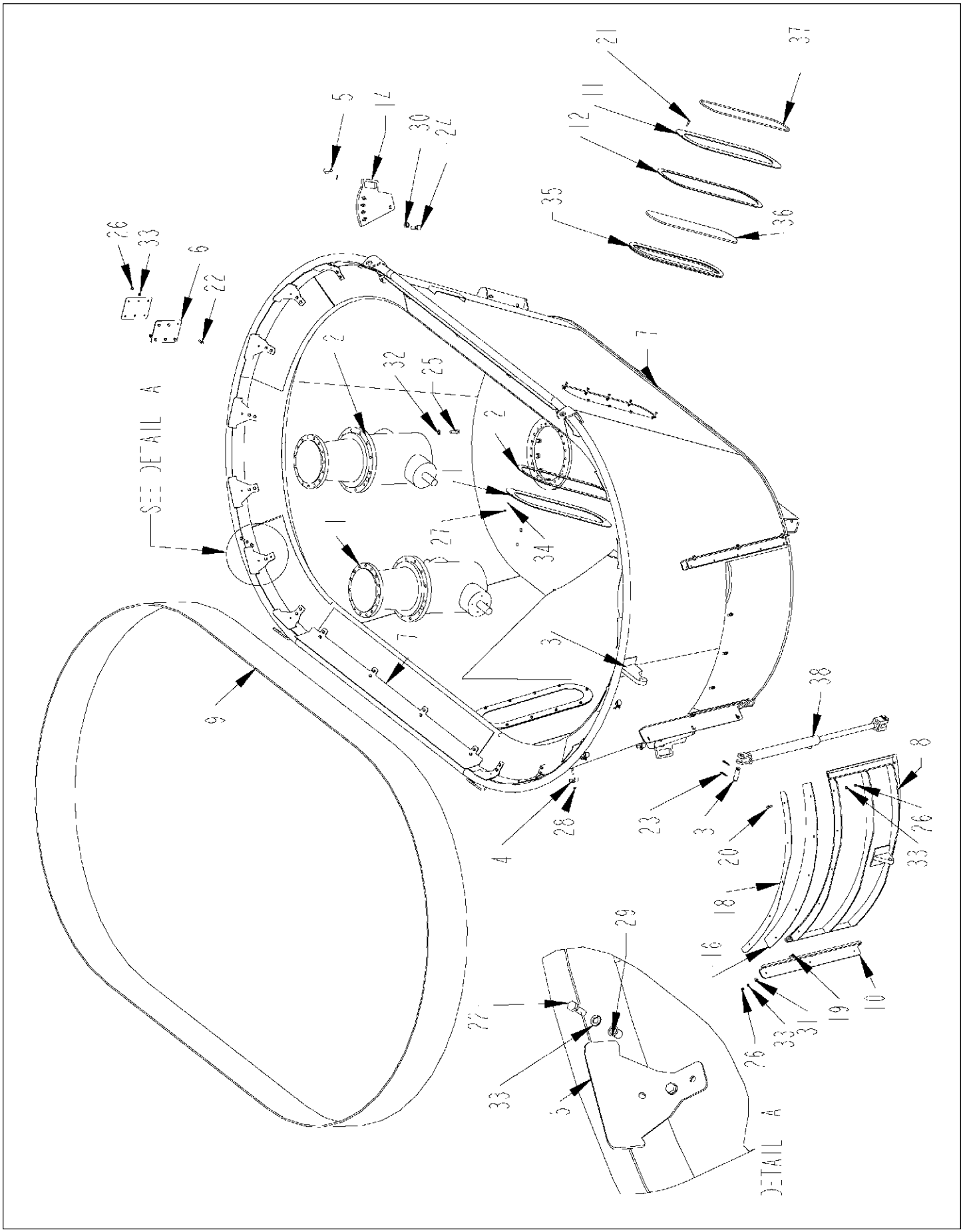


HAYBUSTER®

CMF-425™ VERTICAL MIXER

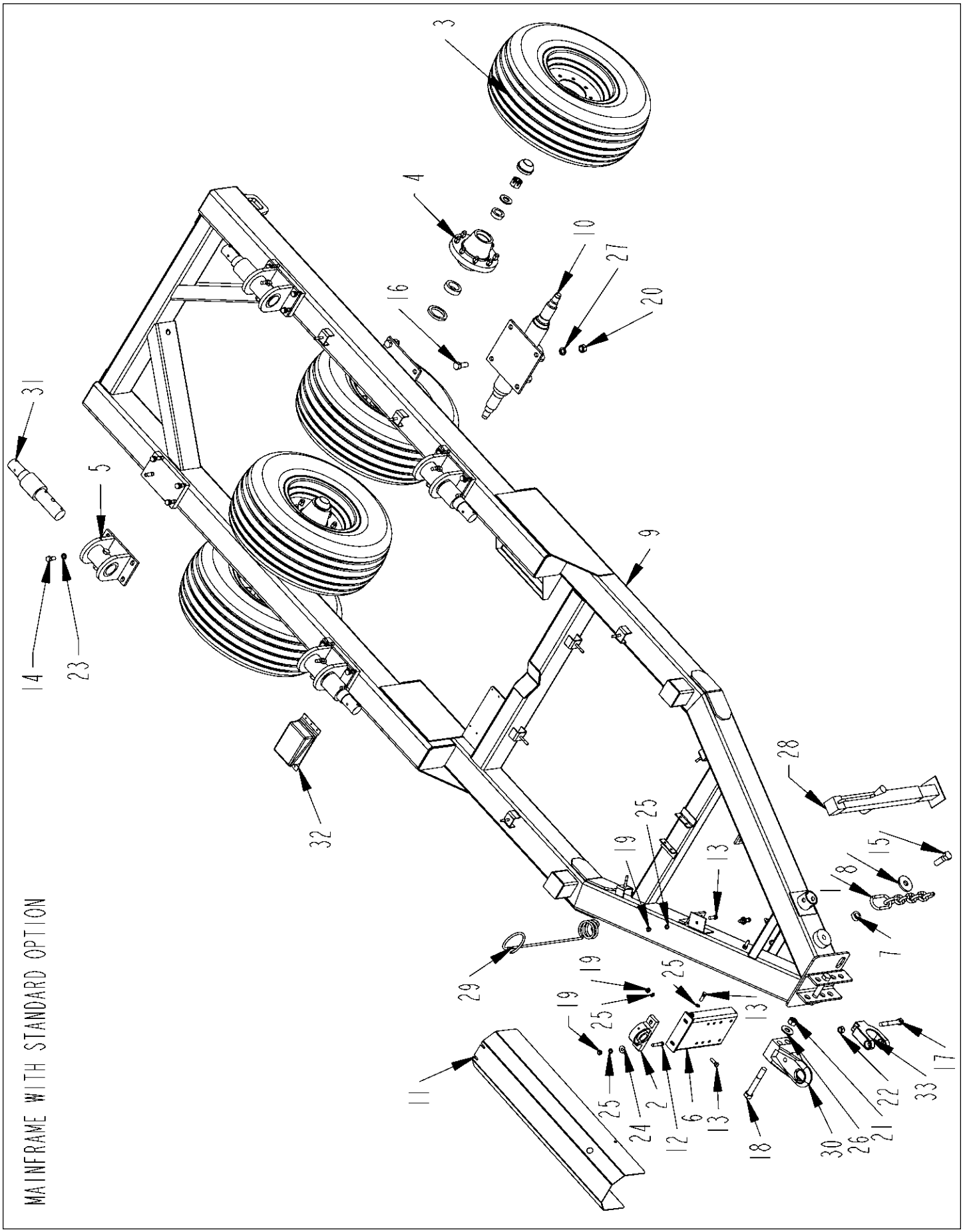
S.N. UP TO 0011

Part 2: Parts Reference


SEE DETAIL A
DETAIL A

TUB ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
1	3100202	1	GRBX\PLANETARY\DBL
2	3100203	1	GRBX\PLANETARY\SNGL
3	4100030	2	PIN 1" X 3-1/2" HYD. CYL.
4	4700776	5	CLMP\HOSE\3/8
5	4704181	2	PIN\LOCK\3/4X2-1/2
6	4704340	2	PL\CLMP\EXT\TUB
7	4704341	1	TUB\WELD\425
8	4704343	1	DOOR\TUB
9	4704344	1	BELT\12"\EXT\CMF
10	4704359	2	BRKT\DOOR\ASSY
11	4704372	4	PL\COVER\WNDW\CMF
12	4704373	4	PL\SPACER\COVER\WNDW\CMF
13	4704390	1	MNT\CYL\DOOR\FR\TUB\TMR
14	4704397	2	KNIFE\VERT\ASSY
15	4704537	16	CLAMP\END\BELT\TUB
16	4704539	1	BELT\DOOR\CMF425
17	4704541	2	CLAMP\SIDE\BELT\TUB\425
18	4704555	1	SH\WIPER\DOOR\425
19	4800003	6	BOLT\HEX\3/8X1
20	4800034	10	BOLT\HEX\3/8X1-1/2
21	4800081	20	BOLT\HEX\5/16X1-1/2
22	4800098	54	BOLT\HEX\3/8X1-1/4\NC
23	4800107	4	PIN\HAIR\1/8(#9)
24	4800115	2	BOLT\HEX\3/4X2-1/2
25	4800944	24	BOLT\HEX\M16XM50
26	4900002	17	NUT\HEX\3/8\NC
27	4900003	20	NUT\HEX\5/16\NC
28	4900076	5	NUT\FLG\SERR\3/8\NC
29	4900082	48	NUT\INSERT\3/8\.027X.150GR
30	4900139	2	NUT\TPLCK\3/4\GR8\NC
31	5000001	6	WASH\FLAT\3/8
32	5000003	24	WASH\LOCK\5/8
33	5000019	65	WASH\LOCK\3/8
34	5000022	20	WASH\LOCK\5/16
35	7501138	2	WEATHERSTRIP\2PC\1/4X3/8X69
36	7501139	2	WNDW\POLYCARB\8X30X3/8
37	7501223	2	WITHRTRP\1/4X3/8\LOCK
38	4100241	1	CYL\HYD\2"X24"\1-1/4"ROD


MAINFRAME WITH STANDARD OPTION
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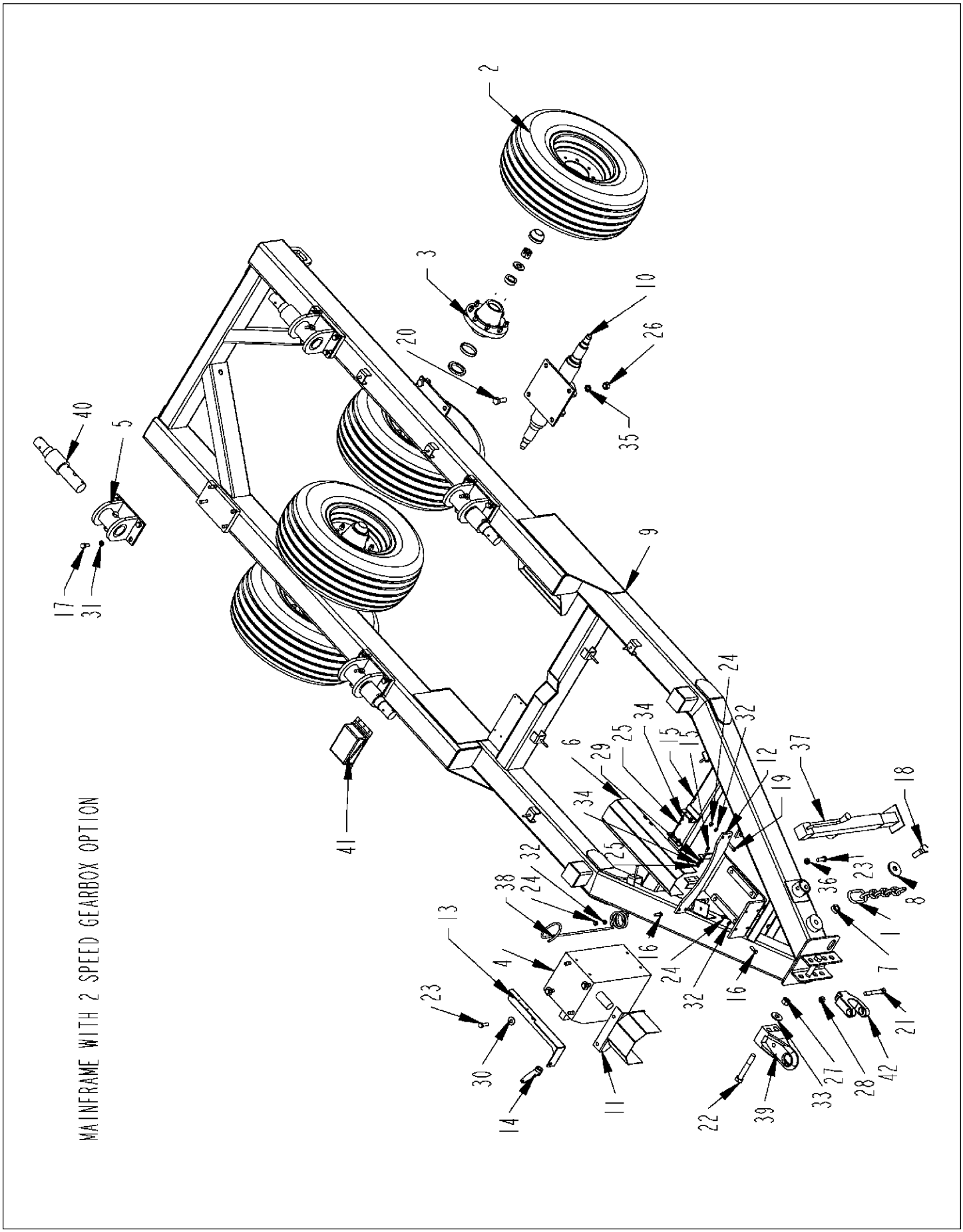
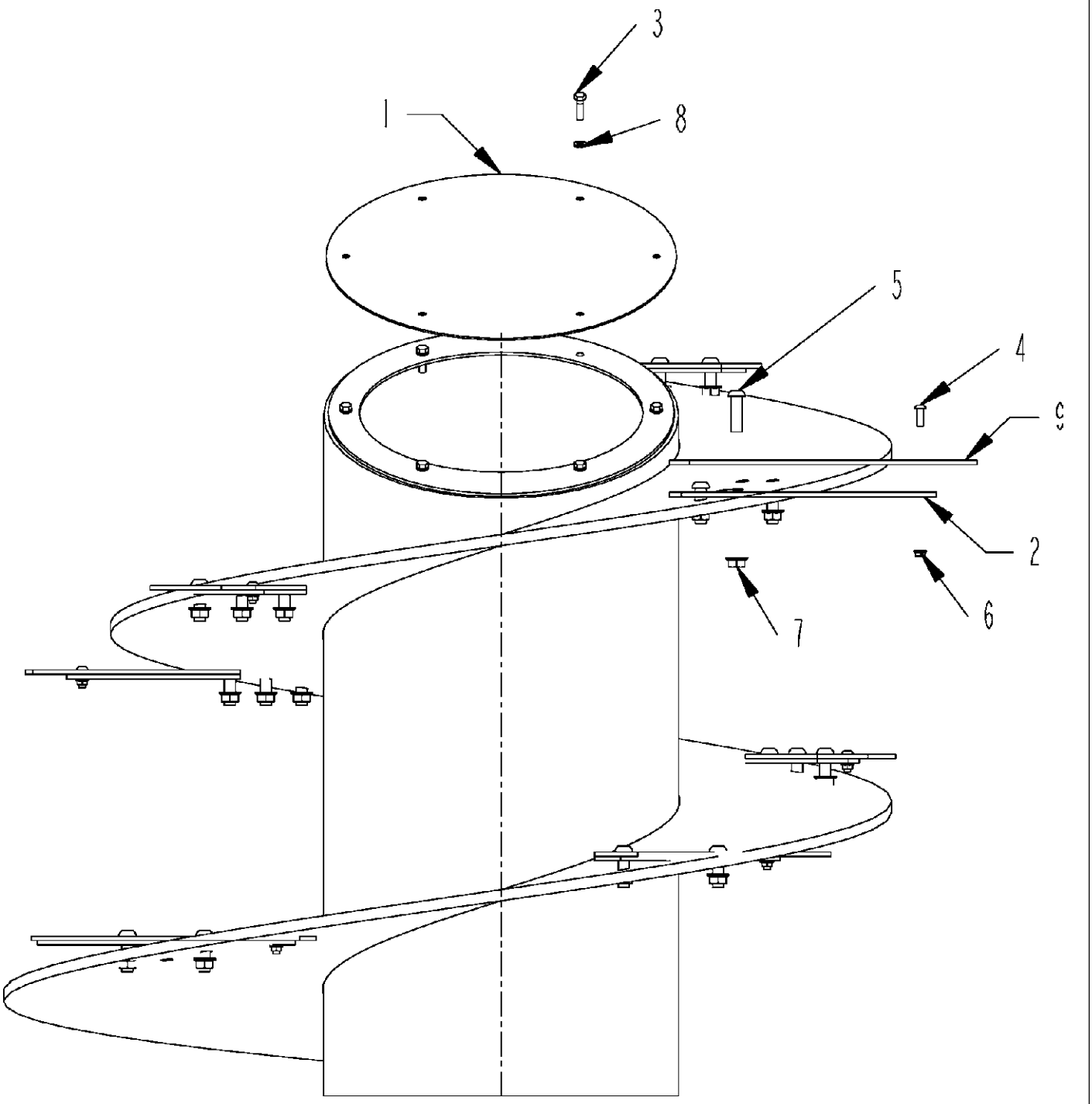
MAINFRAME WITH SINGLE SPEED GEAR BOX (STANDARD)

ITEM	PART NO.	QTY.	DESCRIPTION
1	1100255	1	CHAIN\SAFETY\AG\1/2"\40K_CAP
2	2000514	1	BRG\PB\1-3/4\2BOLT\MALLEABLE
3	2600853	4	WHL\ASSY\12.5L-15FI\F-PLY
4	2900140	4	HUB\ASSY\H817\8BOLT\8"B.C.\6"PILOT
5	4703989	4	MNT\LOADCELL\FRAME
6	4704173	1	MNT\BRG\D/S
7	4704337	1	BUSHING\MNT\CHAIN\SAFETY
8	4704338	1	WASHER\CHAIN\SAFETY
9	4704346	1	FRM\WELD\425
10	4704364	2	AXLE\ASSY\CMF425
11	4704381	1	PL\SHIELD\D/S
12	4800070	2	BOLT\HEX\1/2X2-1/2
13	4800082	7	BOLT\HEX\1/2X1-1/2
14	4800106	16	BOLT\HEX\5/8X1-1/2
15	4800140	1	BOLT\HEX\1X3\NC
16	4800470	8	BOLT\HEX\7/8X2-1/2\NC
17	4800492	1	BOLT\HEX\3/4X5-1/2\GR8\NC
18	4800919	2	BOLT\HEX\1X6-1/2\GR5\NC
19	4900001	7	NUT\HEX\1/2\NC
20	4900022	8	NUT\HEX\7/8\NC
21	4900127	2	NUT\TPLCK\1\NC
22	4900139	1	NUT\TPLCK\3/4\GR8\NC
23	5000003	16	WASH\LOCK\5/8
24	5000004	2	WASH\FLAT\1/2
25	5000006	13	WASH\LOCK\1/2
26	5000014	2	WASH\FLAT\1
27	5000106	8	WASH\LOCK\7/8
28	5800627	1	JACK\5000LB\SWIVEL-STYLE
29	7500170	1	HOSE MINDER
30	7500641	1	HITCH\BASE\#3\PPI\1"PIN
31	7500975	4	DIGI-STAR_2.5_CELL
32	7500978	1	2620 LOADCELL JUCTION BOX, 2000
33	7501216	1	HITCH\CLEVIS\PPI\1.25"PIN
			DRIVELINES (NOT SHOWN)
	3600494		PTO\242-22642\35E\W/CLTCH\9KFREE
	3600526		PTO\251-22660\44E\1-3/8CV
	3600531		PTO\252-23007\44E\18K_LIM


MAINFRAME WITH 2 SPEED GEARBOX OPTION

MAINFRAME WITH 2 SPEED GEAR BOX (OPTION)

ITEM	PART NO.	QTY.	DESCRIPTION
1	1100255	1	CHAIN\SAFETY\AG\1/2"\40K_CAP
2	2600853	4	WHL\ASSY\12.5L-15FI\F-PLY
3	2900140	4	HUB\ASSY\H817\8BOLT\8"B.C.\6"PILOT
4	3100212	1	GRBX\2SPD\1.8:1\RRUSA
5	4703989	4	MNT\LOADCELL\FRAME
6	4704124	1	SHLD\DRVLN\2SPD\GRBX
7	4704337	1	BUSHING\MNT\CHAIN\SAFETY
8	4704338	1	WASHER\CHAIN\SAFETY
9	4704346	1	FRM\WELD\425
10	4704364	2	AXLE\ASSY\CMF425
11	4704546	1	SHLD\DRVLN\2SPD\GRBX\FRNT
12	4704550	1	BRKT\2SPD\GRBX\425
13	4704552	1	BRKT\CBL\SHFT\2SPD\CMF
14	4704553	1	LNK\2SPD\CMF
15	4800003	6	BOLT\HEX\3/8X1
16	4800082	5	BOLT\HEX\1/2X1-1/2
17	4800106	16	BOLT\HEX\5/8X1-1/2
18	4800140	1	BOLT\HEX\1X3\NC
19	4800178	4	BOLT\HEX\1/2X1-3/4
20	4800470	8	BOLT\HEX\7/8X2-1/2\NC
21	4800492	1	BOLT\HEX\3/4X5-1/2\GR8\NC
22	4800919	2	BOLT\HEX\1X6-1/2\GR5\NC
23	4800944	7	BOLT\HEX\M16XM50
24	4900001	9	NUT\HEX\1/2\NC
25	4900002	6	NUT\HEX\3/8\NC
26	4900022	8	NUT\HEX\7/8\NC
27	4900127	2	NUT\TPLCK\1\NC
28	4900139	1	NUT\TPLCK\3/4\GR8\NC
29	5000001	2	WASH\FLAT\3/8
30	5000002	3	WASH\FLAT\5/8
31	5000003	16	WASH\LOCK\5/8
32	5000006	9	WASH\LOCK\1/2
33	5000014	2	WASH\FLAT\1
34	5000019	6	WASH\LOCK\3/8
35	5000106	8	WASH\LOCK\7/8
36	5000114	4	WASH\FLAT\5/8\EXTRTHK\GR8
37	5800627	1	JACK\5000LB\SWIVEL-STYLE
38	7500170	1	HOSE MINDER
39	7500641	1	HITCH\BASE\#3\PPI\1"PIN
40	7500975	4	DIGI-STAR_2.5_CELL
41	7500978	1	2620 LOADCELL JUCTION BOX, 2000
42	7501216	1	HITCH\CLEVIS\PPI\1.25"PIN
			DRIVELINES (NOT SHOWN)
	3600494	1	PTO\242-22642\35E\W/CLTCH 9K FREE
	3600560	1	PTO\44E\1-3/8CV\2SPEED OPTION
	3600561	1	PTO\44E\18K\AUTO\1-3/420T\2SPEED OPT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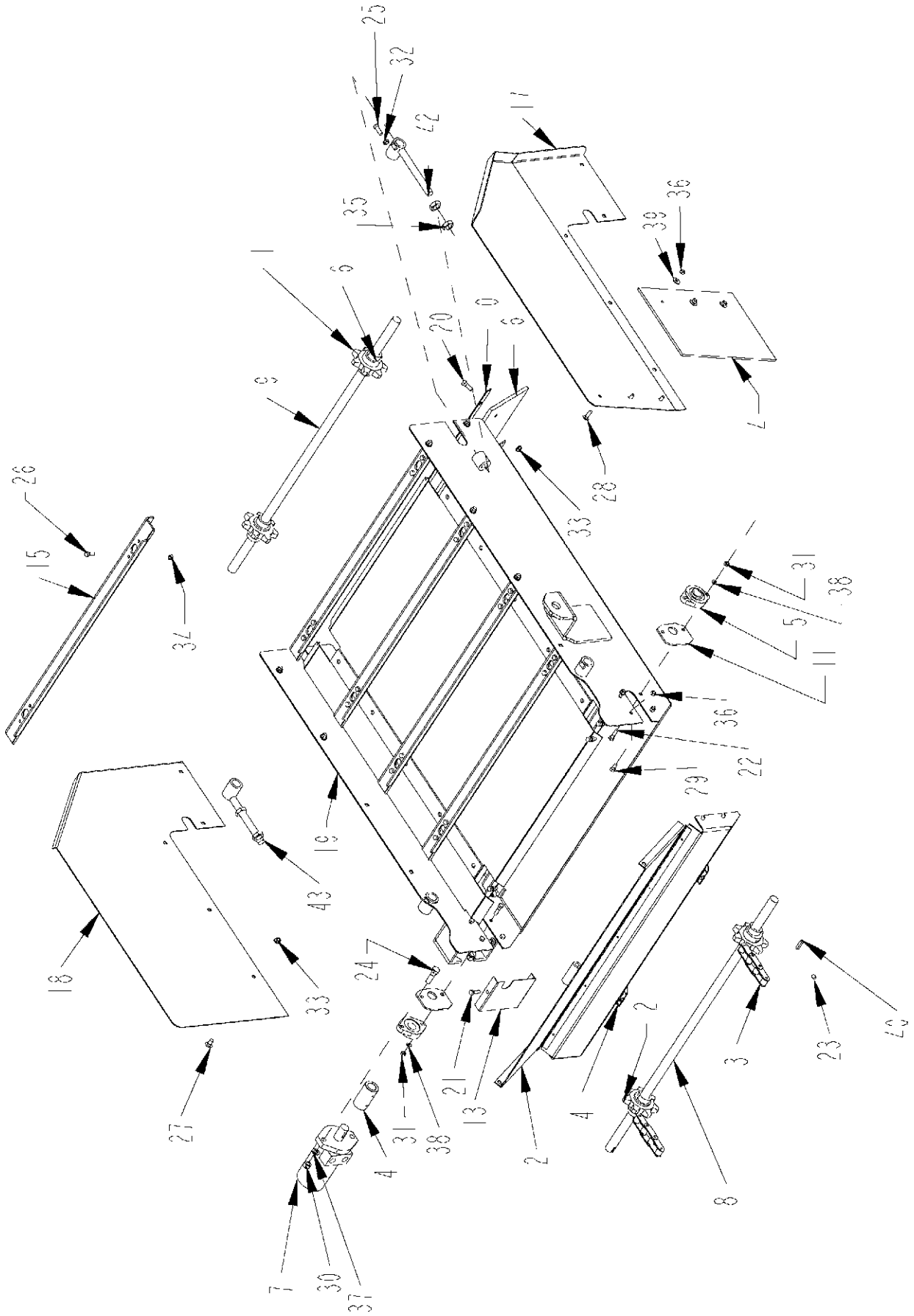
AUGER ASSEMBLY

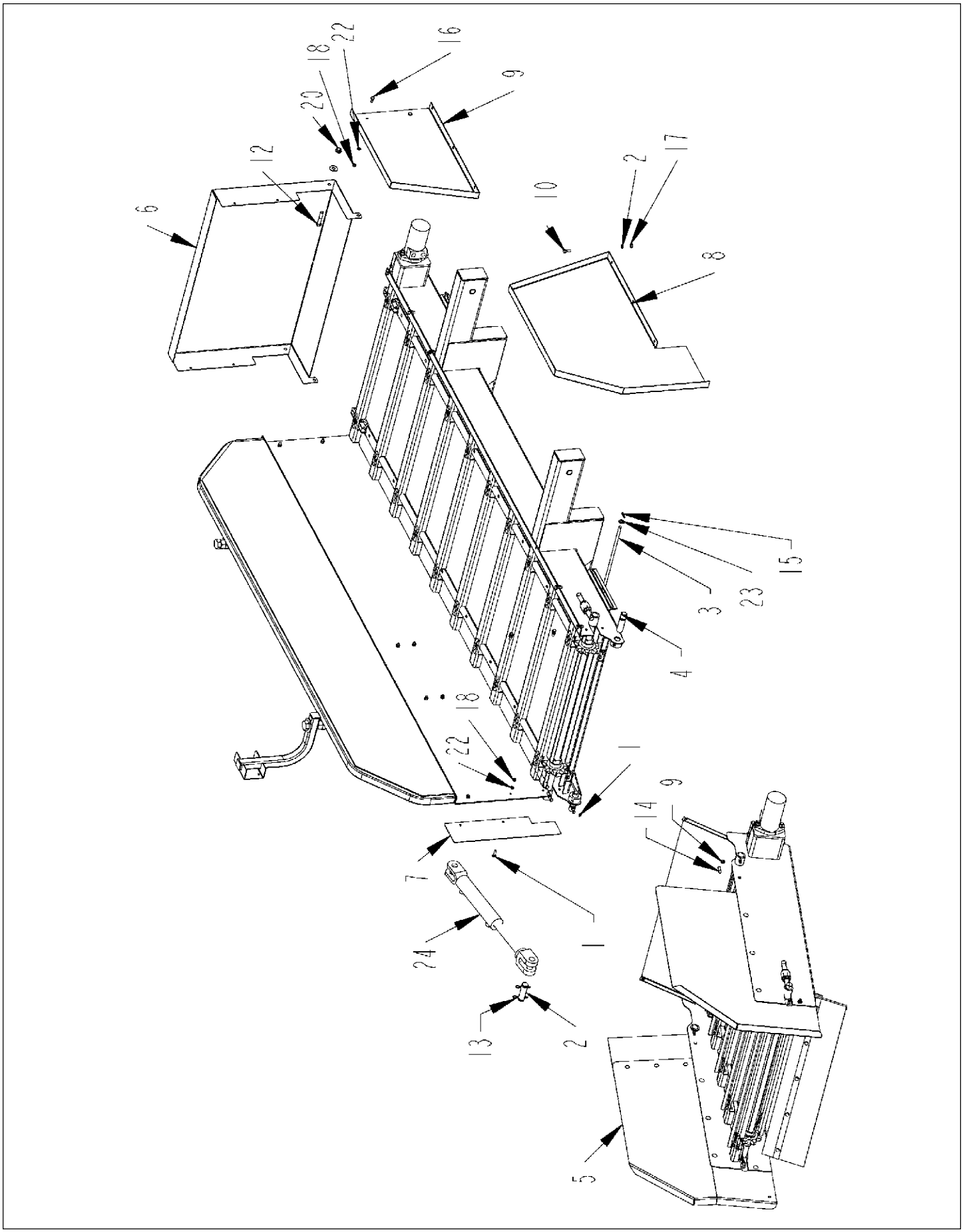
ITEM	PART NO.	QTY.	DESCRIPTION
1	4704314	1	PL\CAP\CYL\AUGER
2	4704365	7	PL\BACK\BLADE
3	4800098	6	BOLT\HEX\3/8X1-1/4\NC
4	4800244	7	SCR\BUT\ALN\3/8X1\NC
5	4800659	19	SCR\BUT\ALN\5/8X2\NC
6	4900090	13	NUT\FLG\3/8\NC
7	4900110	19	NUT\FLG\SERR\5/8\NC
8	5000019	6	WASH\LOCK\3/8
9	7501161	7	BLADE\CMF

LEFT HAND DISCHARGE CONVEYOR ASSEMBLY



LEFT HAND DISCHARGE CONVEYOR ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
1	1000088	2	SPKT\662\7\1\IDLER\CA
2	1000089	2	SPKT\662\7\1\1/4KW\DR
3	1100150	2	CHAIN\620CA\53\W/ATTCH
4	1400586	1	COUPLER\SHAFT\1" ID\3" LONG
5	2000310	2	BRG\FLG\CAST\1\2BOLT
6	2000809	8	CLLOR\SHFT\1\(SET)
7	3900025	1	MTR\HYD\17.9\H\A;MNT\7/8FOR\1SFT
8	4704319	1	SHFT\DRV\CNVYR
9	4704320	1	SHFT\IDLR\CNVYR
10	4704325	1	FLAT\WIPER\CNVYR
11	4704327	2	GUARD\CNVYR
12	4704328	1	PAN\TRANS\CNVYR
13	4704349	1	SHLD\CPLR\CNVYR
14	4704376	1	BELT\1/4X10X15-1/2
15	4704387	9	SLAT\CHAIN\EXT\CNVYR
16	4704391	1	BELT\DEFL\EXT\CNVYR
17	4704510	1	EXT\SIDE\CNVYR\IH
18	4704511	1	EXT\SIDE\CNVYR\LH
19	4704525	1	SIDE\LH\CNVYR\WELD\CMF
20	4800003	5	BOLT\HEX\3/8X1
21	4800013	2	BOLT\HEX\5/16X1
22	4800071	4	BOLT\HEX\5/16X1-1/4
23	4800143	4	SCR\SET\ALN\3/8X3/8\NC
24	4800178	2	BOLT\HEX\1/2X1-3/4
25	4800307	1	SCR\SET\SQ\3/8X1\NC
26	4800393	36	BOLT\HEX\5/16X7/8\GR8
27	4800394	8	BOLT\CRG\3/8X3/4\NC
28	4800473	3	BOLT\CRG\5/16X1\NC
29	4800643	4	BOLT\HEX\5/16X3/4
30	4900001	2	NUT\HEX\1/2\NC
31	4900003	4	NUT\HEX\5/16\NC
32	4900026	1	NUT\JAM\3/8\NC
33	4900090	13	NUT\FLG\3/8\NC
34	4900099	36	NUT\TPLCK\5/16\GR8\NC
35	4900104	4	NUT\JAM\3/4\NC
36	4900142	7	NUT\TPLCK\5/16\NC
37	5000006	2	WASH\LOCK\1/2
38	5000022	4	WASH\LOCK\5/16
39	5000023	3	WASH\FLAT\5/16
40	6200014	2	KEY\SQ\1/4X1-1/4
41	7501218	2	LATCH\DRAW\200LB
42	8100783	1	BRKT\SHAFT\IDLER\CNVYR
43	8101022	1	BRKT\SHAFT\IDLER\NO-TAP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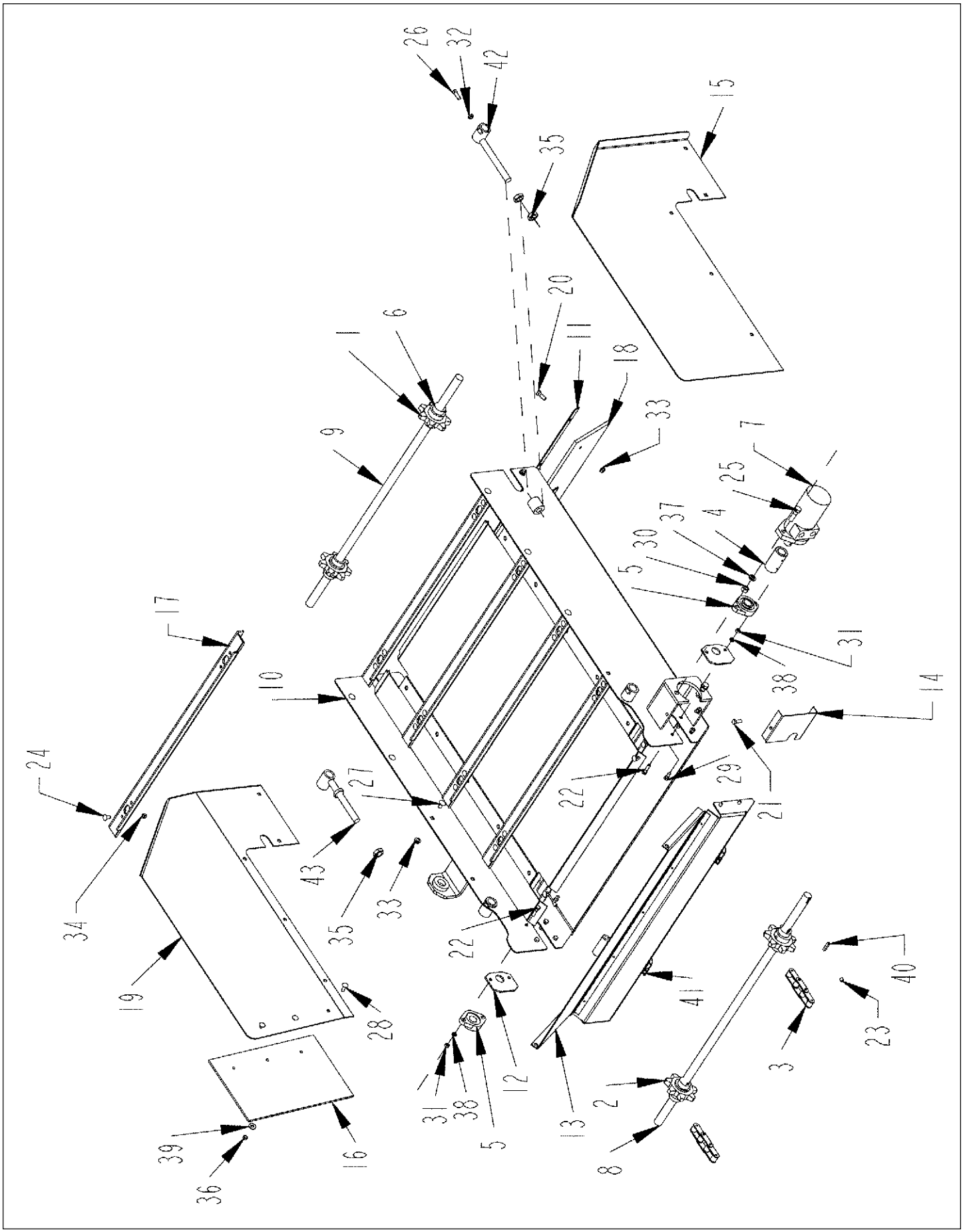
COMPLETE LEFT HAND DISCHARGE CONVEYOR ASSEMBLY

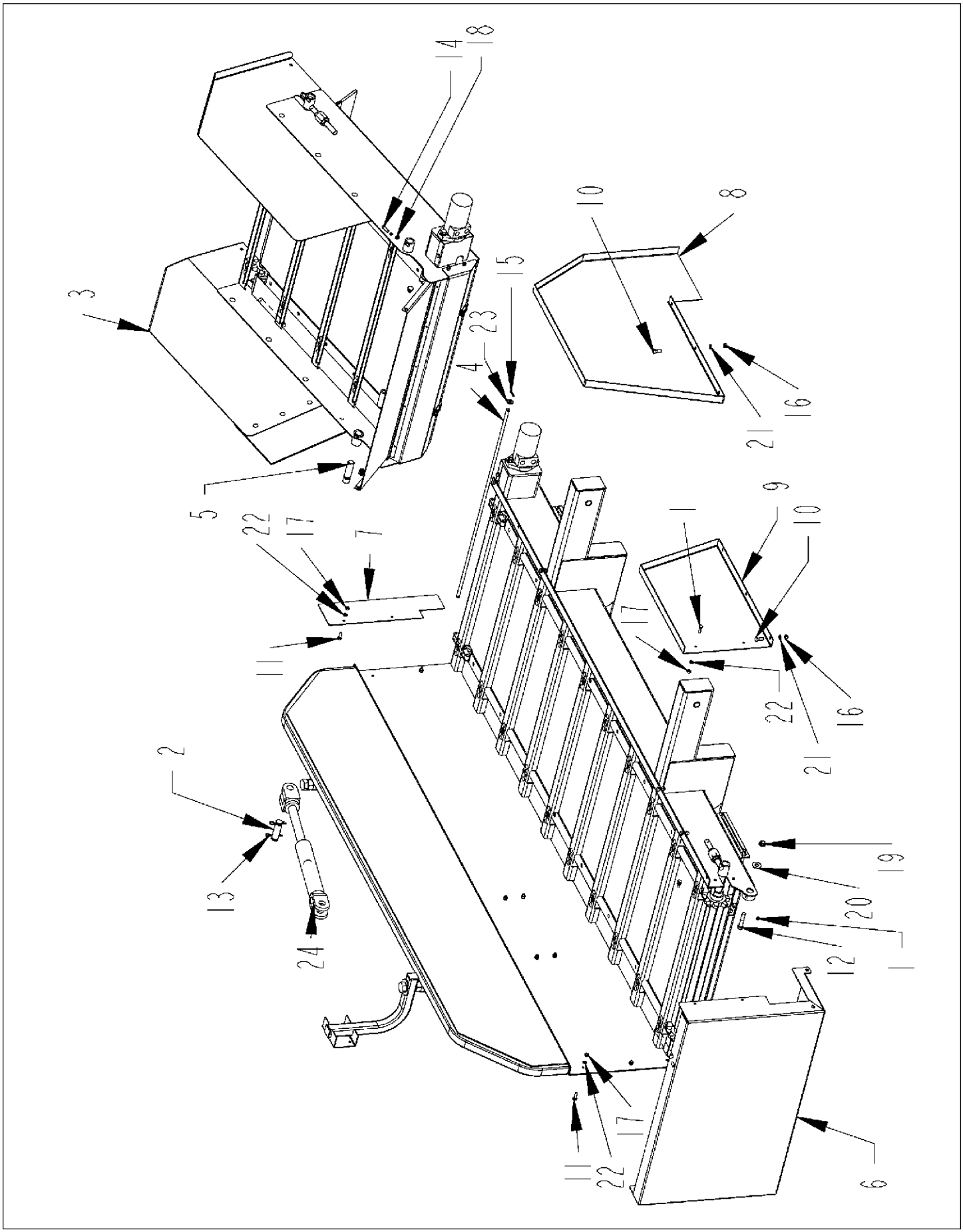
ITEM	PART NO.	QTY.	DESCRIPTION
1	3800043	4	FTG\LUB\1/8MPXZRK\SHORT
2	4100030	2	PIN 1" X 3-1/2" HYD. CYL.
3	4704329	2	ROD\TRANS\CNVYR
4	4704330	2	PIN\SIDE\CNVYR
5	4704335	1	SIDE\LH\CNVYR\ASSY
6	4704368	1	GUARD\WIND\CNVYR
7	4704375	1	PL\SHIELD\EXT\CNVYR
8	4704509	1	SHLD\TRANSITION\LEFT
9	4704519	1	EXT\RIGHT\SIDE\CNVYR
10	4800003	11	BOLT\HEX\3/8X1
11	4800013	14	BOLT\HEX\5/16X1
12	4800070	2	BOLT\HEX\1/2X2-1/2
13	4800107	4	PIN\HAIR\1/8(#9)
14	4800307	4	SCR\SET\SQ\3/8X1\NC
15	4800531	4	PIN\COT\3/16X3/4
16	4800643	6	BOLT\HEX\5/16X3/4
17	4900002	17	NUT\HEX\3/8\NC
18	4900003	20	NUT\HEX\5/16\NC
19	4900026	4	NUT\JAM\3/8\NC
20	4900133	2	NUT\FLG\1/2\NC
21	5000019	17	WASH\LOCK\3/8
22	5000022	20	WASH\LOCK\5/16
23	5000123	2	WASH\FLAT\7/16\EXTRTHK\GR8
24	4100210	1	CYL\HYD\2X8\1-1/4RD\WELDE

RIGHT HAND DISCHARGE CONVEYOR ASSEMBLY



RIGHT HAND DISCHARGE CONVEYOR ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
1	1000088	2	SPKT\662\7\1\IDLER\CA
2	1000089	2	SPKT\662\7\1\1/4KW\DR
3	1100150	2	CHAIN\620CA\53\W/ATTCH
4	1400586	1	COUPLER\SHAFT\1" ID\3" LONG
5	2000310	2	BRG\FLG\CAST\1\2BOLT
6	2000809	8	CLLOR\SHFT\1\(SET)
7	3900025	1	MTR\HYD\17.9\H\A;MNT\7/8FOR\1SFT
8	4704319	1	SHFT\DRV\CNVYR
9	4704320	1	SHFT\IDLR\CNVYR
10	4704323	1	SIDE\RH\CNVYR\WELD\CMF
11	4704325	1	FLAT\WIPER\CNVYR
12	4704327	2	GUARD\CNVYR
13	4704328	1	PAN\TRANS\CNVYR
14	4704349	1	SHLD\CPLR\CNVYR
15	4704374	1	EXT\SIDE\CNVYR\RH
16	4704376	1	BELT\1/4X10X15-1/2
17	4704387	9	SLAT\CHAIN\EXT\CNVYR
18	4704391	1	BELT\DEFL\EXT\CNVYR
19	4704508	1	EXT\SIDE\CNVYR\RH
20	4800003	5	BOLT\HEX\3/8X1
21	4800013	2	BOLT\HEX\5/16X1
22	4800071	4	BOLT\HEX\5/16X1-1/4
23	4800143	4	SCR\SET\ALN\3/8X3/8\NC
24	4800153	36	BOLT\CRG\5/16X3/4\NC
25	4800178	2	BOLT\HEX\1/2X1-3/4
26	4800307	1	SCR\SET\SQ\3/8X1\NC
27	4800394	8	BOLT\CRG\3/8X3/4\NC
28	4800473	3	BOLT\CRG\5/16X1\NC
29	4800643	4	BOLT\HEX\5/16X3/4
30	4900001	2	NUT\HEX\1/2\NC
31	4900003	4	NUT\HEX\5/16\NC
32	4900026	1	NUT\JAM\3/8\NC
33	4900090	13	NUT\FLG\3/8\NC
34	4900099	36	NUT\TPLCK\5/16\GR8\NC
35	4900104	4	NUT\JAM\3/4\NC
36	4900142	7	NUT\TPLCK\5/16\NC
37	5000006	2	WASH\LOCK\1/2
38	5000022	4	WASH\LOCK\5/16
39	5000023	3	WASH\FLAT\5/16
40	6200014	2	KEY\SQ\1/4X1-1/4
41	7501218	2	LATCH\DRAW\200LB
42	8100783	1	BRKT\SHAFT\IDLER\CNVYR
43	8101022	1	BRKT\SHAFT\IDLER\NO-TAP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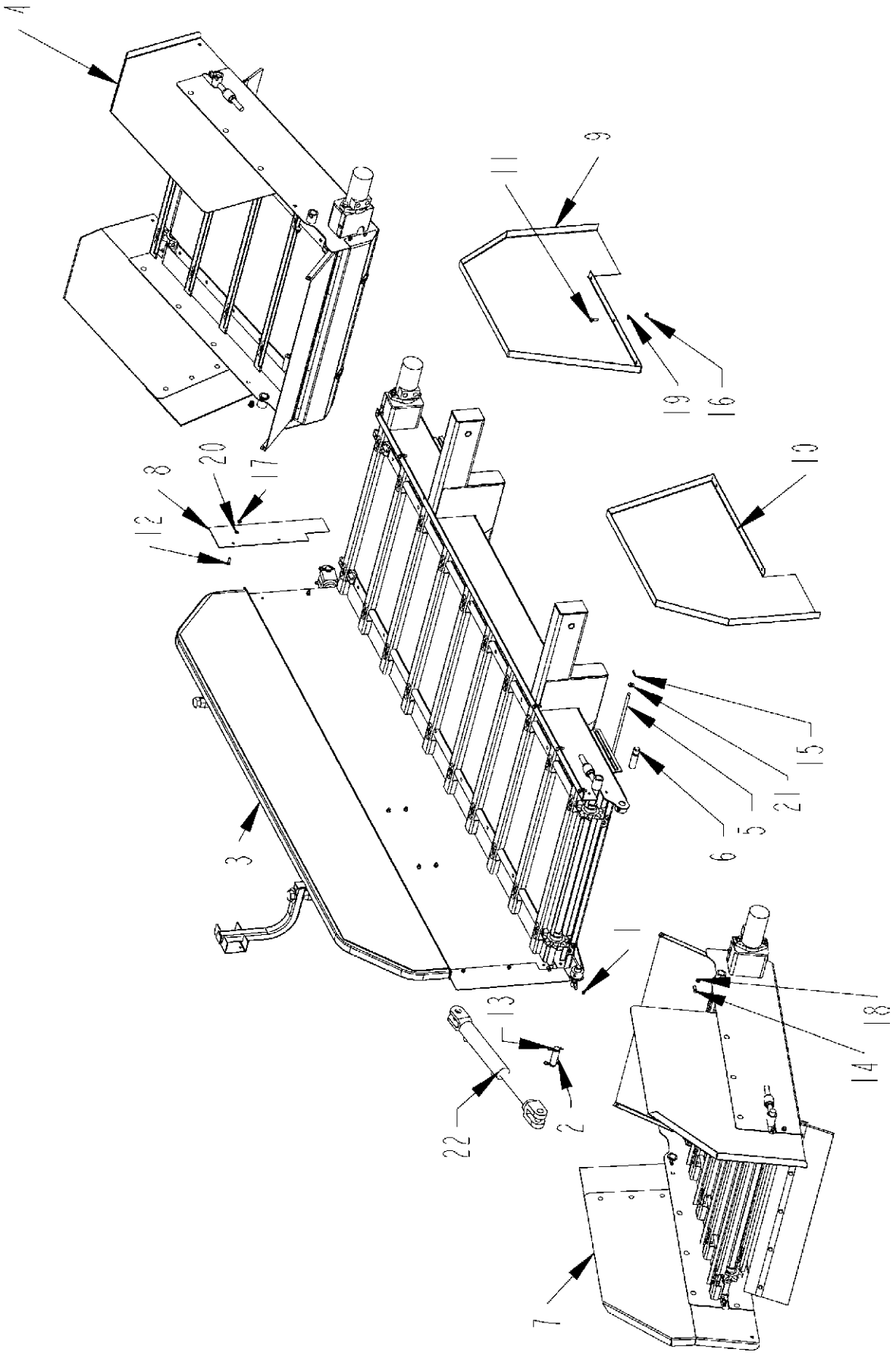
COMPLETE RIGHT HAND DISCHARGE CONVEYOR ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
1	3800043	4	FTG\LUB\1/8MPXZRK\SHORT
2	4100030	2	PIN 1" X 3-1/2" HYD. CYL.
3	4704321	1	SIDE\RH\CNVYR\ASSY
4	4704329	3	ROD\TRANS\CNVYR
5	4704330	2	PIN\SIDE\CNVYR
6	4704368	1	GUARD\WIND\CNVYR
7	4704375	1	PL\SHIELD\EXT\CNVYR
8	4704377	1	SHLD\TRANSITION\RIGHT
9	4704378	1	EXT\LEFT\CNVYR
10	4800003	11	BOLT\HEX\3/8X1
11	4800013	14	BOLT\HEX\5/16X1
12	4800070	2	BOLT\HEX\1/2X2-1/2
13	4800107	4	PIN\HAIR\1/8(#9)
14	4800307	4	SCR\SET\SQ\3/8X1\NC
15	4800531	6	PIN\COT\3/16X3/4
16	4900002	17	NUT\HEX\3/8\NC
17	4900003	18	NUT\HEX\5/16\NC
18	4900026	4	NUT\JAM\3/8\NC
19	4900133	2	NUT\FLG\1/2\NC
20	5000004	2	WASH\FLAT\1/2
21	5000019	17	WASH\LOCK\3/8
22	5000022	18	WASH\LOCK\5/16
23	5000123	2	WASH\FLAT\7/16\EXTRTHK\GR8
24	4100210	1	CYL\HYD\2X8\1-1/4RD\WELDE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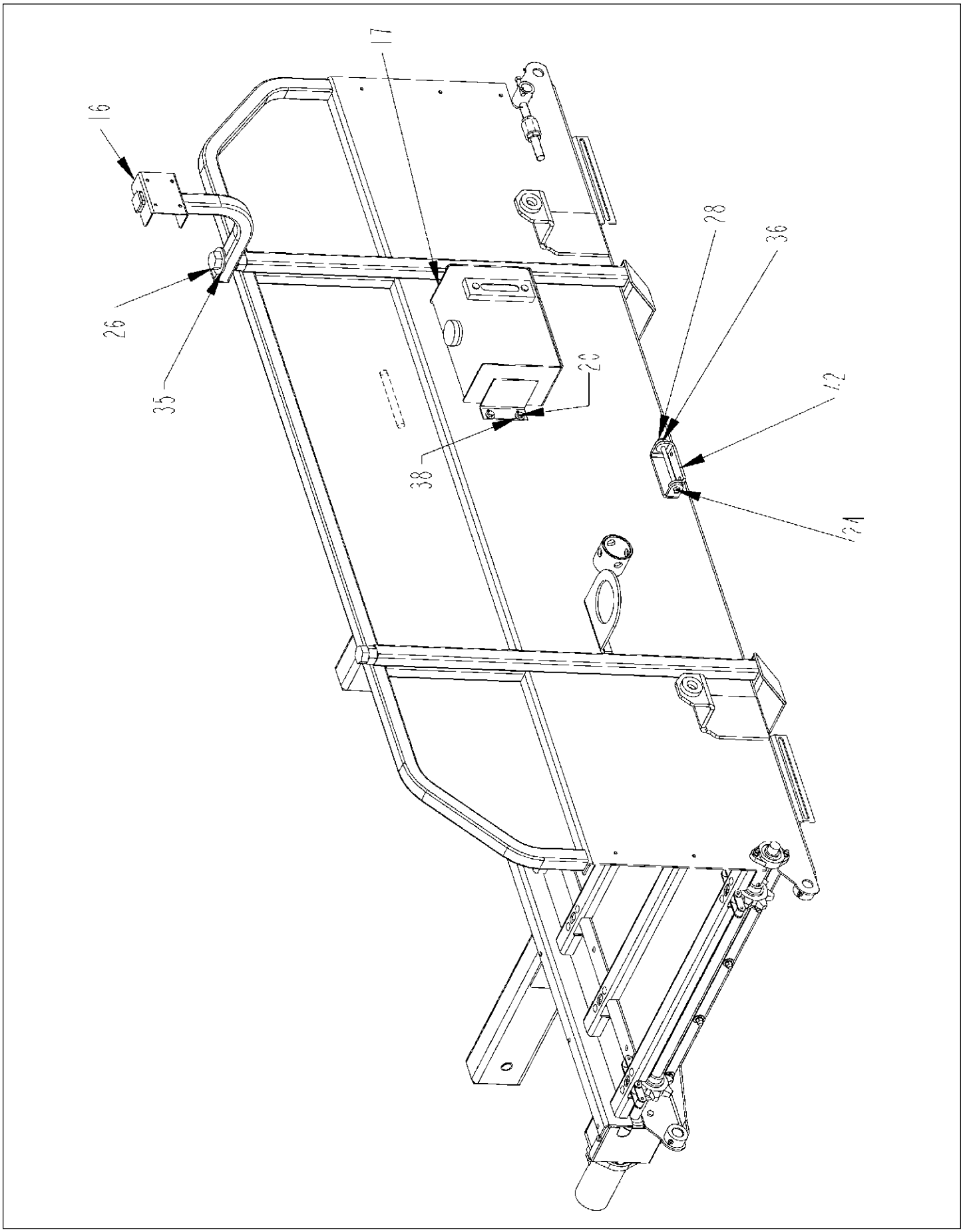
DUAL DISCHARGE CONVEYOR ASSEMBLY (OPTION)

ITEM	PART NO.	QTY.	DESCRIPTION
1	3800043	4	FTG\LUB\1/8MPXZRK\SHORT
2	4100030	4	PIN 1" X 3-1/2" HYD. CYL.
3	4704154	1	CNVYR\ASSY\TMR
4	4704321	1	SIDE\RH\CNVYR\ASSY
5	4704329	2	ROD\TRANS\CNVYR
6	4704330	4	PIN\SIDE\CNVYR
7	4704335	1	SIDE\LH\CNVYR\ASSY
8	4704375	2	PL\SHIELD\EXT\CNVYR
9	4704377	1	SHLD\TRANSITION\RIGHT
10	4704509	1	SHLD\TRANSITION\LEFT
11	4800003	16	BOLT\HEX\3/8X1
12	4800013	14	BOLT\HEX\5/16X1
13	4800107	8	PIN\HAIR\1/8(#9)
14	4800307	7	SCR\SET\SQ\3/8X1\NC
15	4800531	4	PIN\COT\3/16X3/4
16	4900002	17	NUT\HEX\3/8\NC
17	4900003	20	NUT\HEX\5/16\NC
18	4900026	7	NUT\JAM\3/8\NC
19	5000019	17	WASH\LOCK\3/8
20	5000022	20	WASH\LOCK\5/16
21	5000123	4	WASH\FLAT\7/16\EXTRTHK\GR8
22	4100210	2	CYL\HYD\2X8\1-1/4RD\WELDE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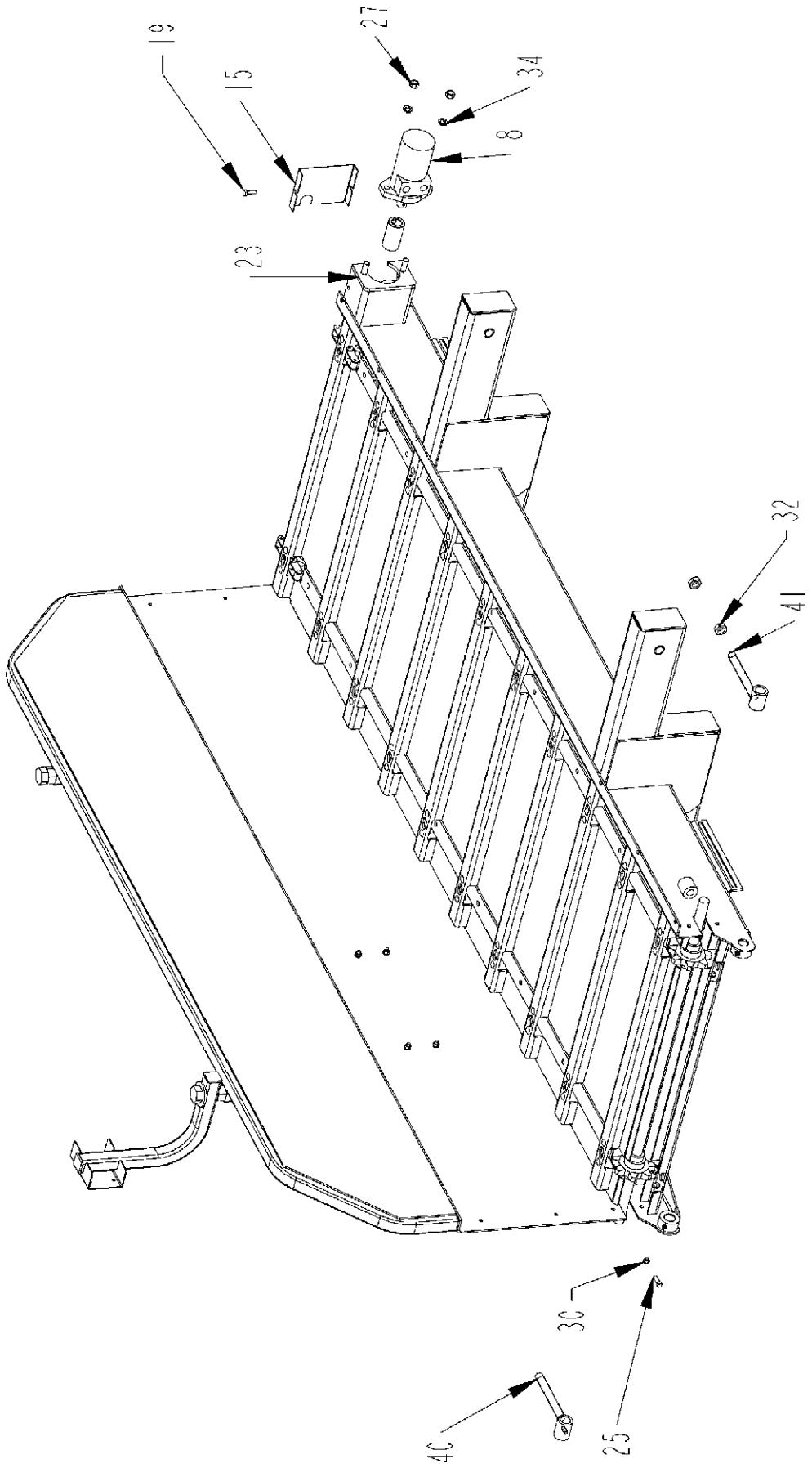
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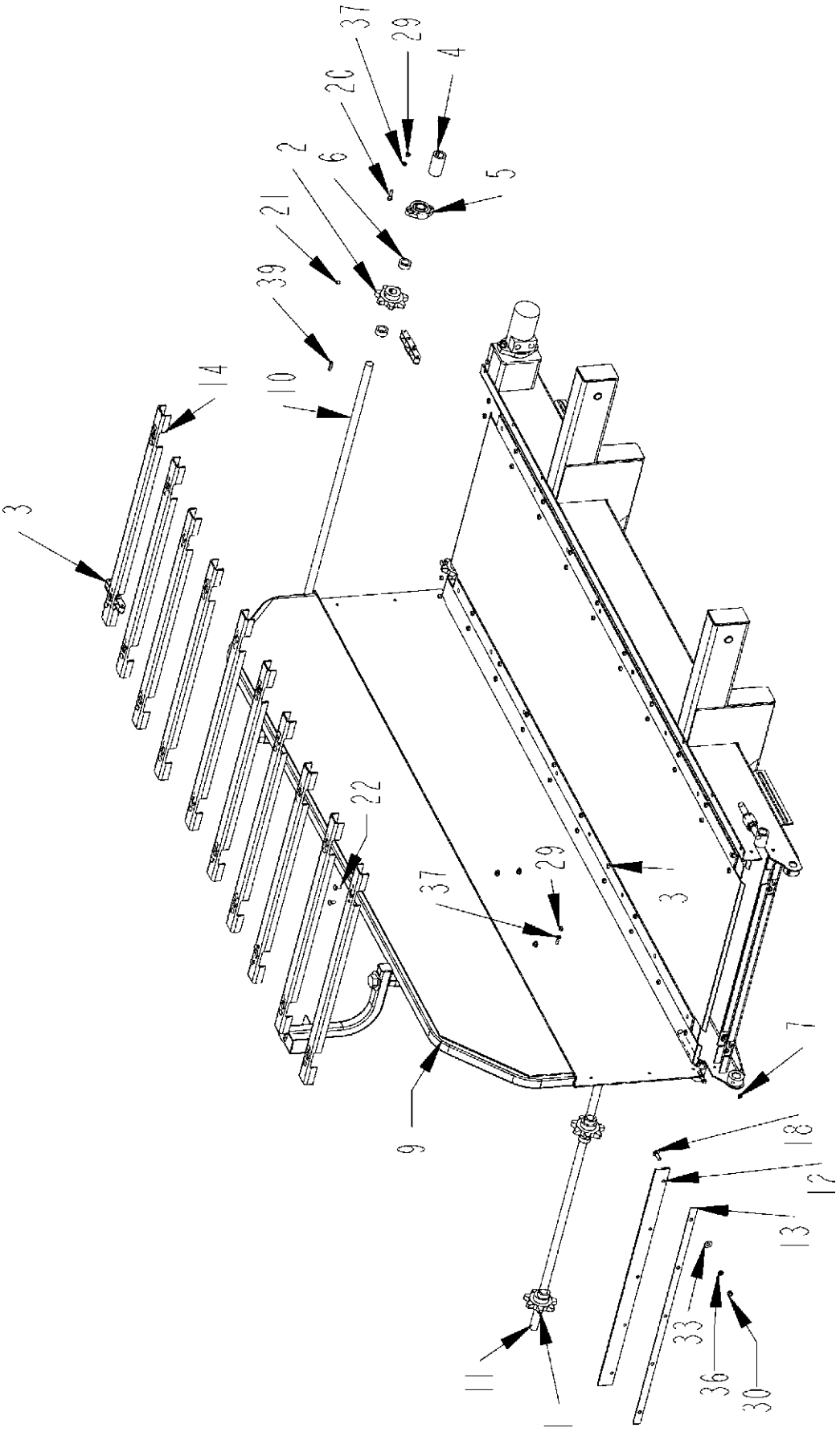
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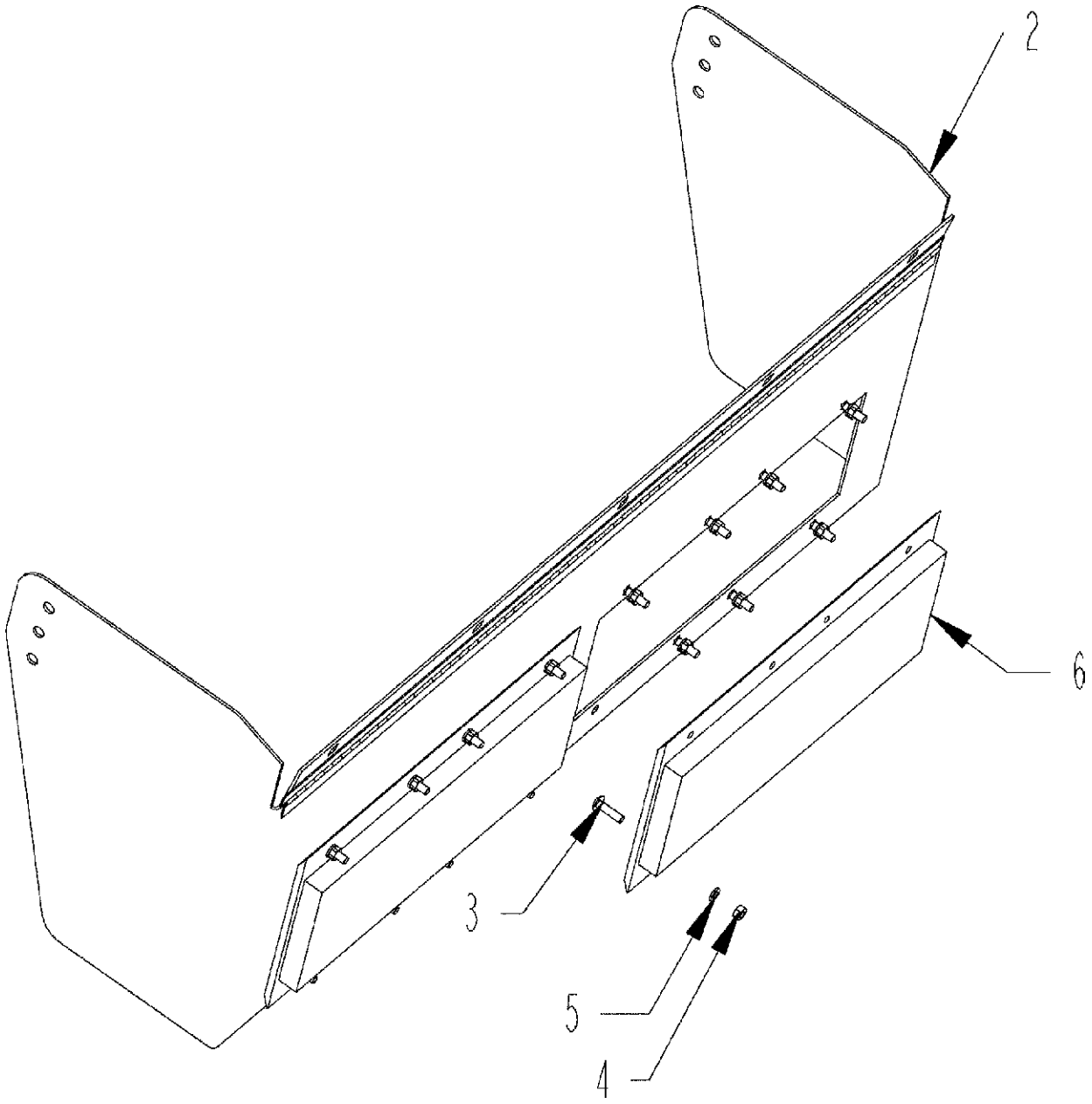
MAIN CONVEYOR ASSEMBLY PARTS LIST

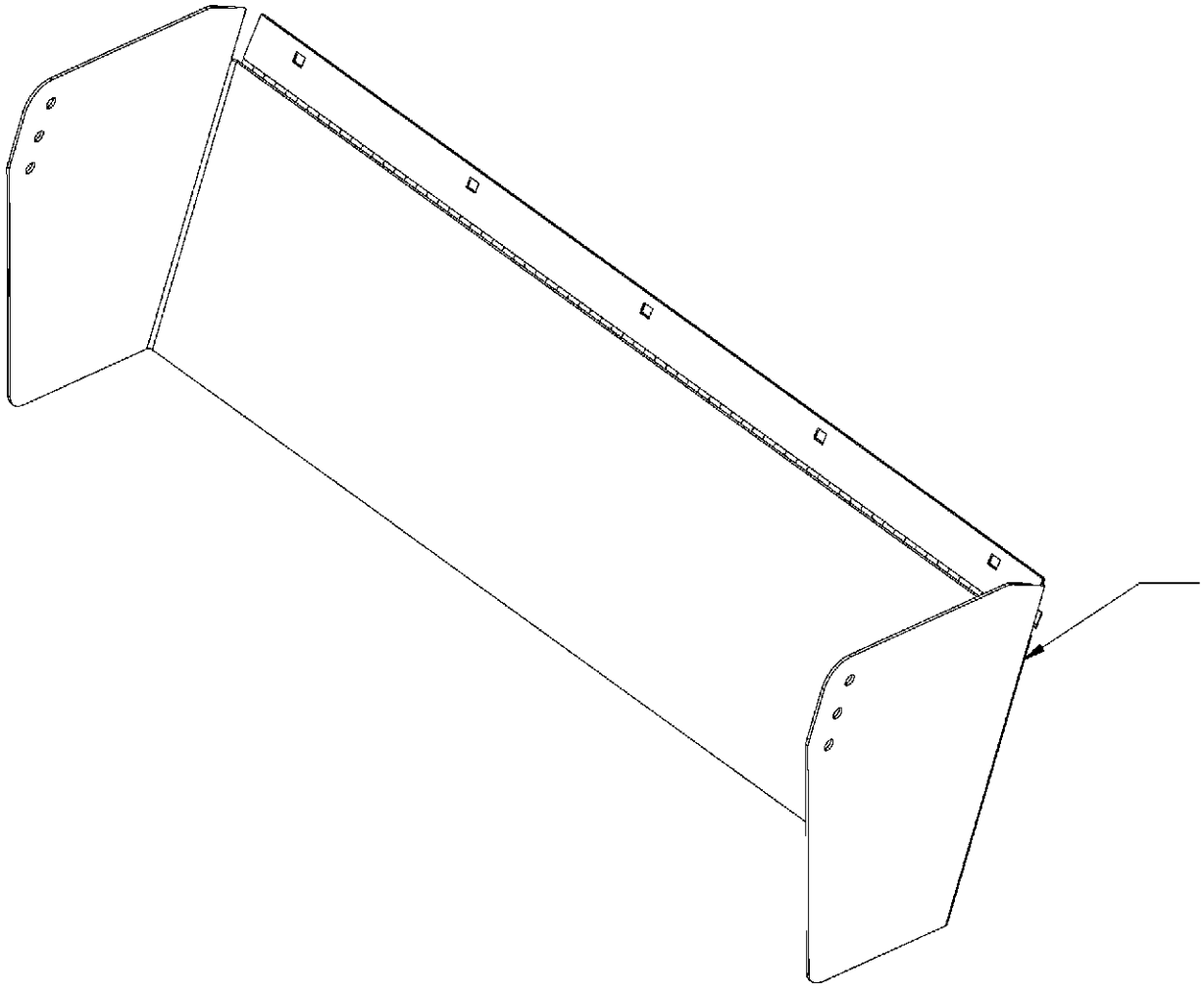
ITEM	PART NO.	QTY.	DESCRIPTION
1	1000088	2	SPKT\662\7\1\IDLER\CA
2	1000089	2	SPKT\662\7\1\1/4KW\DR
3	1100256	2	CHAIN\620CA\120\W/ATTCH
4	1400586	1	COUPLER\SHAFT\1" ID\3" LONG
5	2000310	2	BRG\FLG\CAST\1\2BOLT
6	2000809	8	CLLOR\SHFT\1\(SET)
7	3800043	4	FTG\LUB\1/8MPXZRK\SHORT
8	3900032	1	MOTOR\HYD\22.6\H\AMNT\7/8FOR\1SHFT
9	4703994	1	CNVYR\ASSY\TMR
10	4704319	1	SHFT\DRV\CNVYR
11	4704320	1	SHFT\IDLR\CNVYR
12	4704324	2	WIPER\CNVYR
13	4704325	2	FLAT\WIPER\CNVYR
14	4704326	20	SLAT\CHAIN\CNVYR\TMR
15	4704349	1	SHLD\CPLR\CNVYR
16	4704388	1	BRKT\IND\SCALE
17	4704506	1	TANK\HYD\ASSY\CMF
18	4800012	14	BOLT\CRG\3/8X1-1/4\NC
19	4800013	6	BOLT\HEX\5/16X1
20	4800071	4	BOLT\HEX\5/16X1-1/4
21	4800143	4	SCR\SET\ALN\3/8X3/8\NC
22	4800153	80	BOLT\CRG\5/16X3/4\NC
23	4800178	2	BOLT\HEX\1/2X1-3/4
24	4800210	1	BOLT\HEX\3/8X6
25	4800307	1	SCR\SET\SQ\3/8X1\NC
26	4800647	2	BOLT\HEX\1X4\NC
27	4900001	2	NUT\HEX\1/2\NC
28	4900002	15	NUT\HEX\3/8\NC
29	4900003	8	NUT\HEX\5/16\NC
30	4900026	1	NUT\JAM\3/8\NC
31	4900099	80	NUT\TPLCK\5/16\GR8\NC
32	4900104	4	NUT\JAM\3/4\NC
33	5000001	10	WASH\FLAT\3/8
34	5000006	2	WASH\LOCK\1/2
35	5000014	1	WASH\FLAT\1
36	5000019	15	WASH\LOCK\3/8
37	5000022	8	WASH\LOCK\5/16
38	5000023	4	WASH\FLAT\5/16
39	6200014	2	KEY\SQ\1/4X1-1/4
40	8100783	1	BRKT\SHAFT\IDLER\CNVYR
41	8101022	1	BRKT\SHAFT\IDLER\NO-TAP
42	8101076	1	MNT\SHLD\DRV

MAGNETIC CONVEYOR CHUTE ASSEMBLY

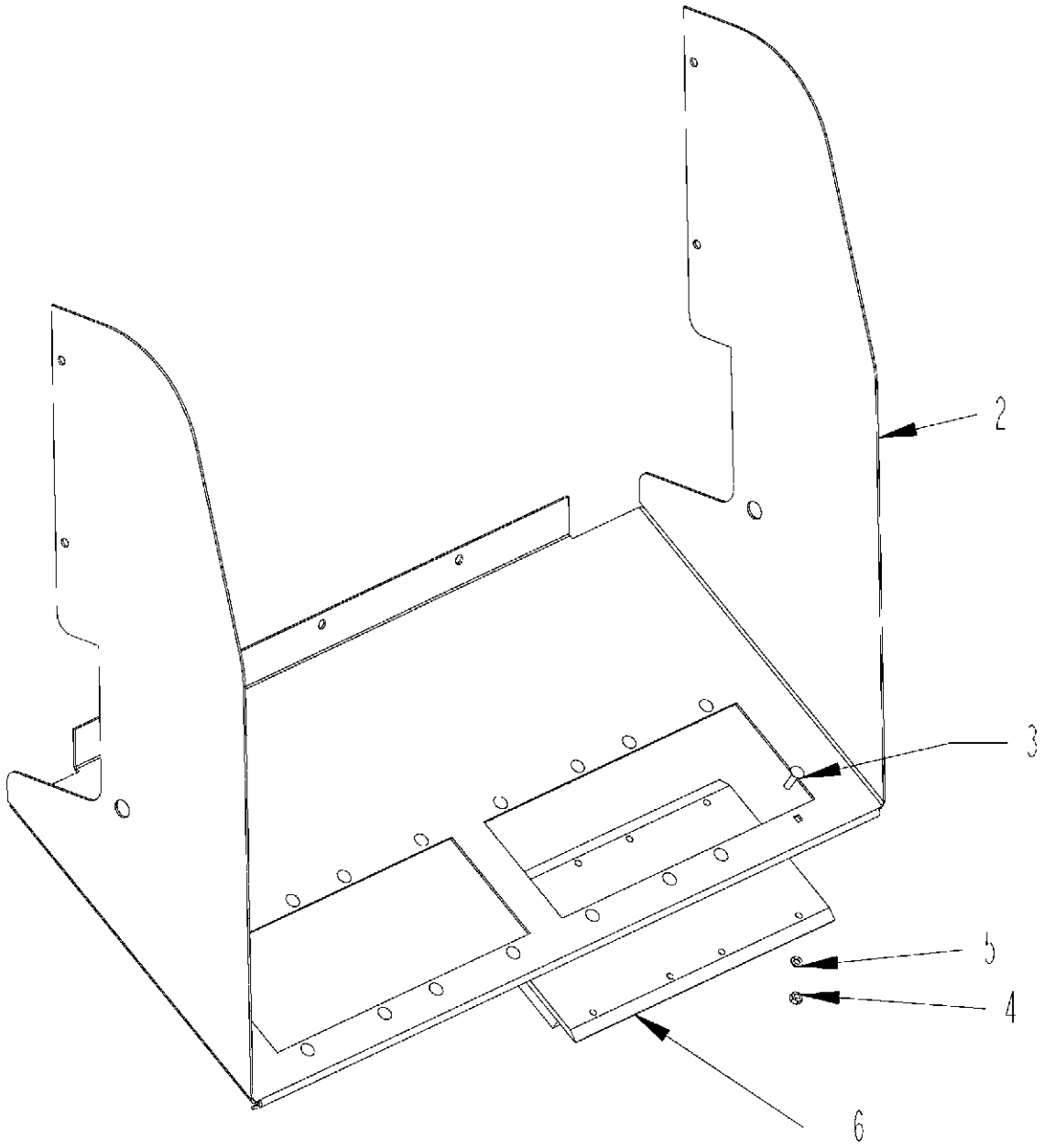


ITEM	PART NO.	QTY.	DESCRIPTION
1	4704355	1	KIT\MAG\CNVYR\CMF
2	4704357	1	CHUTE\MAG\CNVYR\WELD
3	4800214	16	BOLT\CRG\1/4X1\NC
4	4900009	16	NUT\HEX\1/4\NC
5	5000024	16	WASH\LOCK\1/4
6	7501149	2	MAG\CNVYR\CMF\7.5X15

ITEM	PART NO.	QTY.	DESCRIPTION
1	4704535	1	CHUTE\NON-MAG\CNVYR\WELD\EXTENSION CNVYR

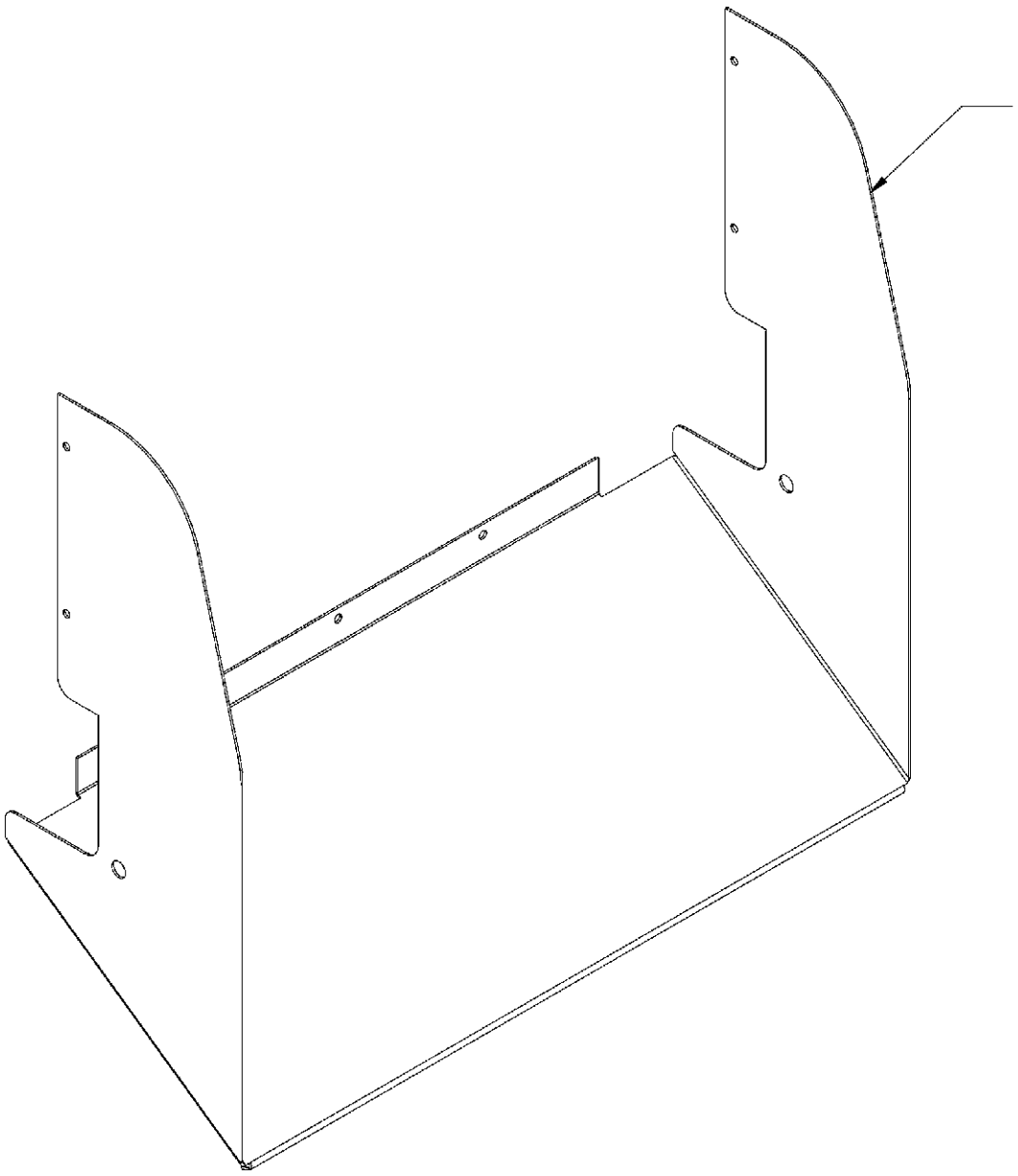


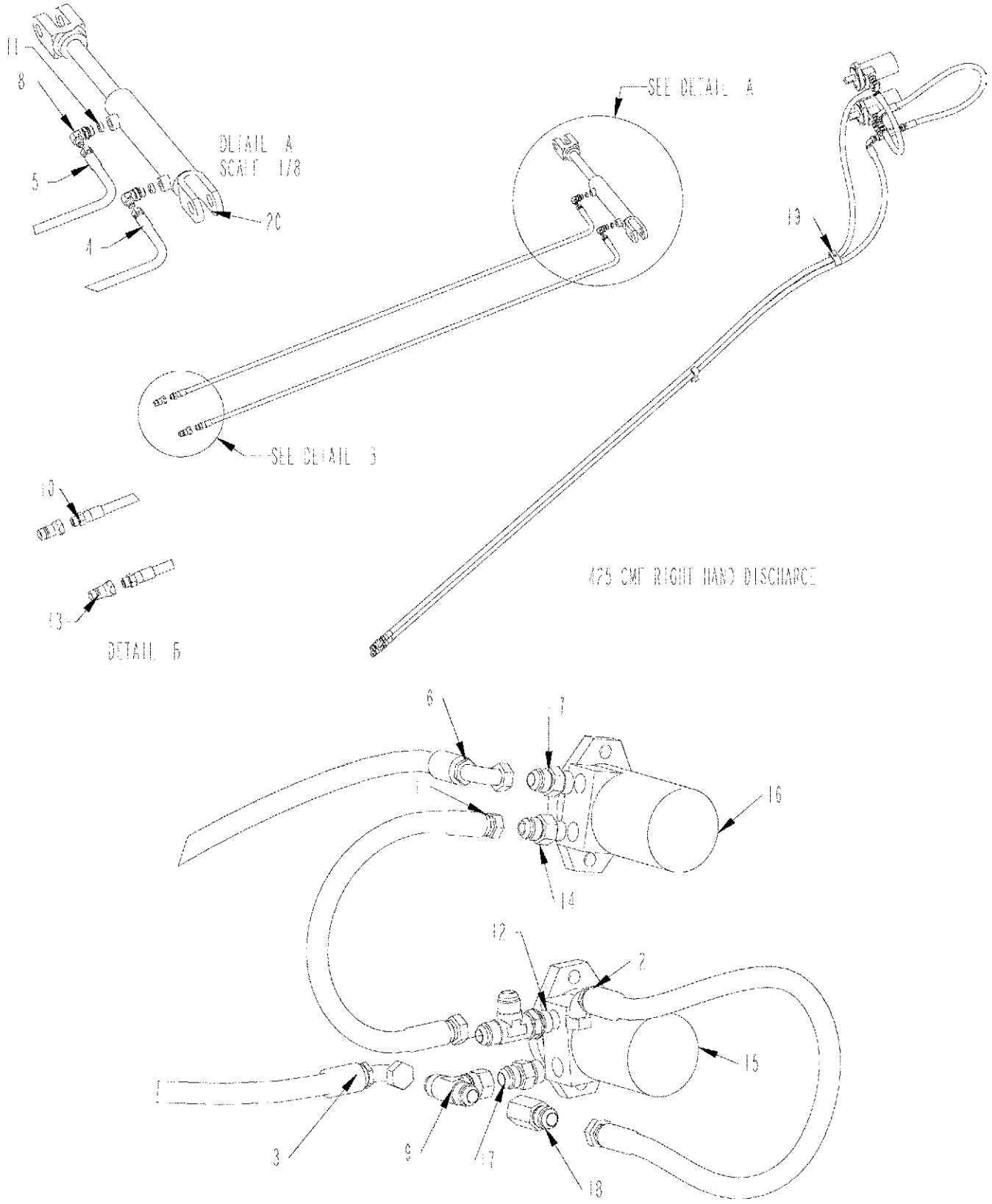
MAIN MANGNETIC CONVEYOR CHUTE ASSEMBLY



ITEM	PART NO.	QTY.	DESCRIPTION
1	4704366	1	CHUTE\ASSY\MAIN_CNVYR
2	4704548	1	PL\CHUTE\MAIN_CNVYR
3	4800214	16	BOLT\CRG\1/4X1\NC
4	4900009	16	NUT\HEX\1/4\NC
5	5000024	16	WASH\LOCK\1/4
6	7501149	2	MAG\CNVYR\CMF\7.5X15

ITEM	PART NO.	QTY.	DESCRIPTION
1	4704554	1	PL\CHUTE\MAIN_CNVYR




11
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DETAIL A
SCALE 1/8
SEE DETAIL A
SEE DETAIL B
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425 CMF RIGHT HAND DISCHARGE
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DETAIL B
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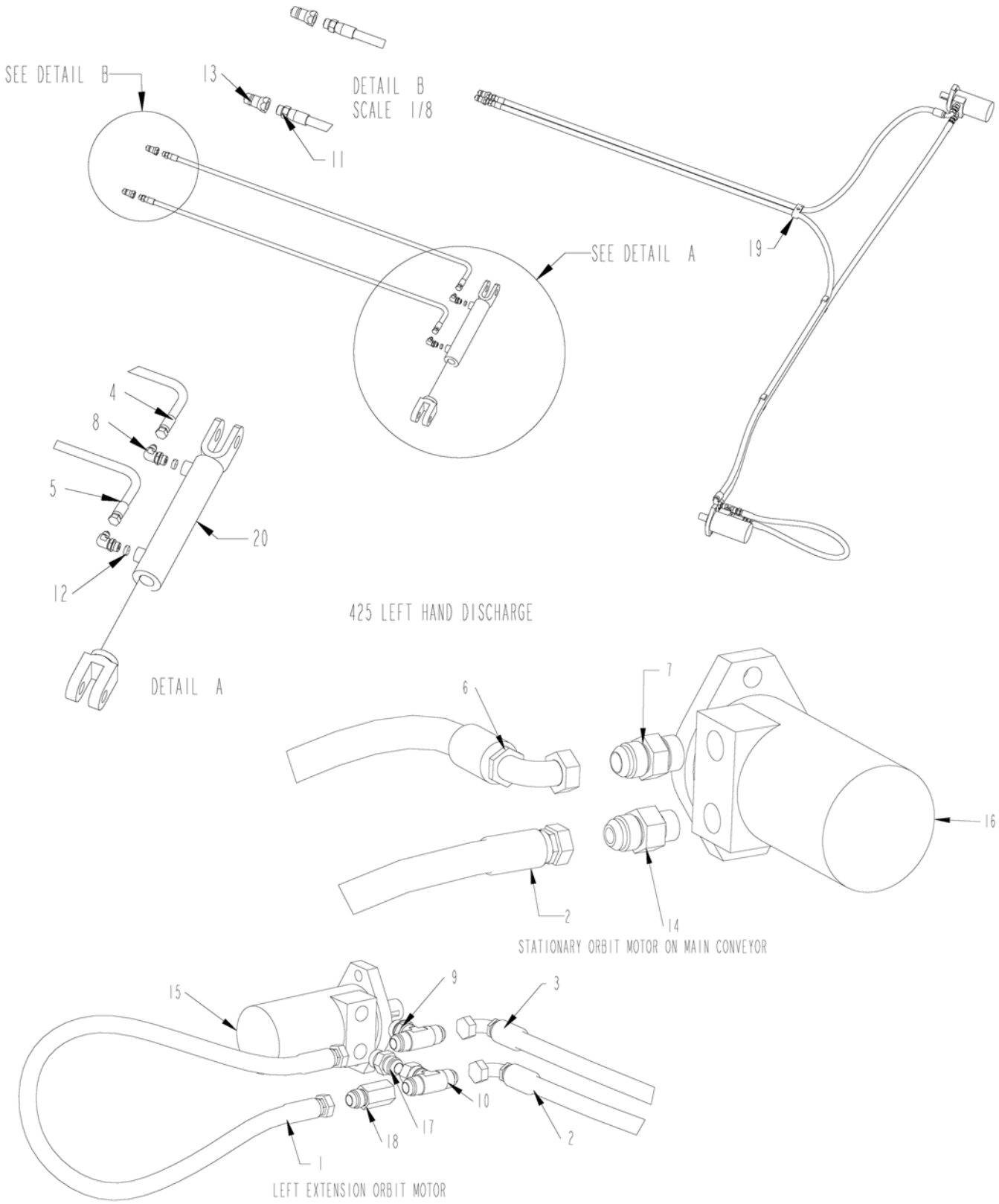
ITEM	PART NO.	QTY.	DESCRIPTION
1	425_CMF_RH_HOSE_12	1	BOTTOM PORT OF STATIONARY ORBIT MOTOR TO TOP PORT OF EXTENSION CNVEYOR ORBIT MOTOR
2	425_CMF_RH_HOSE_13	1	TOP PORT OF EXTENSION CONVEYOR ORBIT MOTOR TO BOTTOM PORT OF EXTENSION CONVEYOR ORBIT MOTOR
3	425_CMF_RH_HOSE_14	1	BOTTOM PORT OF EXTENSION CONVETOR ORBIT MOTOR TRACTOR
4	425_CMF_RH_HOSE_7	1	CYLINDER CAP END TO TRACTOR
5	425_CMF_RH_HOSE_8	1	CYLINDER ROD END TO TRACTOR
6	425_CMF_RH_HOSE_9	1	TOP PORT OF STATIONARY ORBIT MOTOR TO TRACTOR
7	3800448	1	FTG\7/8MORX7/8MJIC\ST
8	3800453	2	FTG\3/4MORX9/16MJIC\90
9	3800461	1	FTG\7/8MJIC7/8MJIC7/8FJICS\BR;TEE
10	3800681	4	FTG\3/4MORSX1/2BARB\PARKER
11	3800683	2	FTG\3/4MOR\ORFICE\0.0490"
12	3800686	1	\FTG\7/8MORX7/8MJICX7/8MJICRUN;TEE
13	3800694	4	FTG\3/4FOR\QUICK;CPLR\MALE
14	3800849	1	FRG\3/4MORX7/8MJIC\ADPT
15	3900025	1	MOTOR\HYD\17.9\H\AMNT\7/8FOR\1SHFT
16	3900032	1	MOTOR\HYD\22.6\H\AMNT\7/8FOR\1SHFT
17	4000288	1	FTG\7/8MORX7/8MJIC\ST\CHCK
18	4000293	1	VALVE\CHECK\7/8FJICX7/8MJIC
19	4700776	2	CLMP\HOSE\3/8
20	4100210	1	CYL\HYD\2X8\1-1/4RD\WELDE


SEE DETAIL B
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DETAIL B
SCALE 1/8
SEE DETAIL A
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425 LEFT HAND DISCHARGE
DETAIL A
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STATIONARY ORBIT MOTOR ON MAIN CONVEYOR
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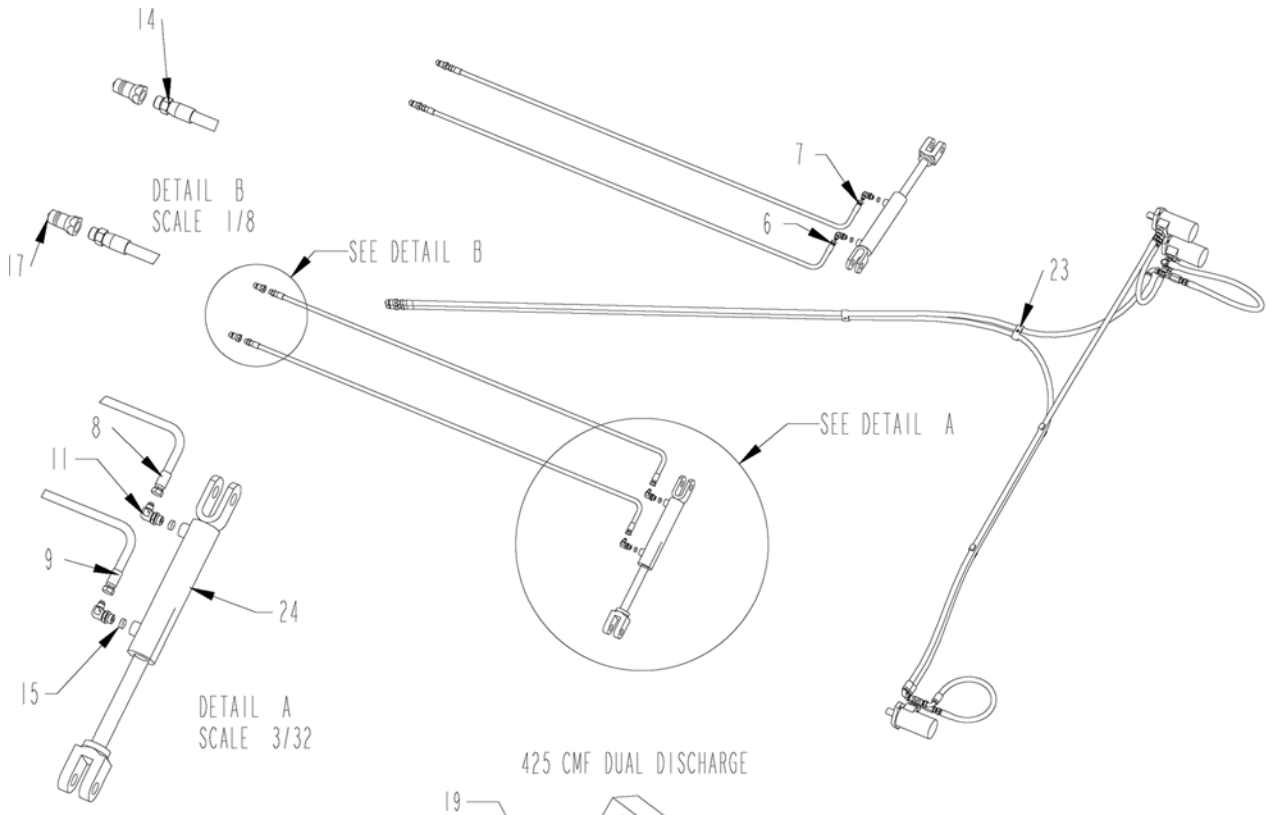
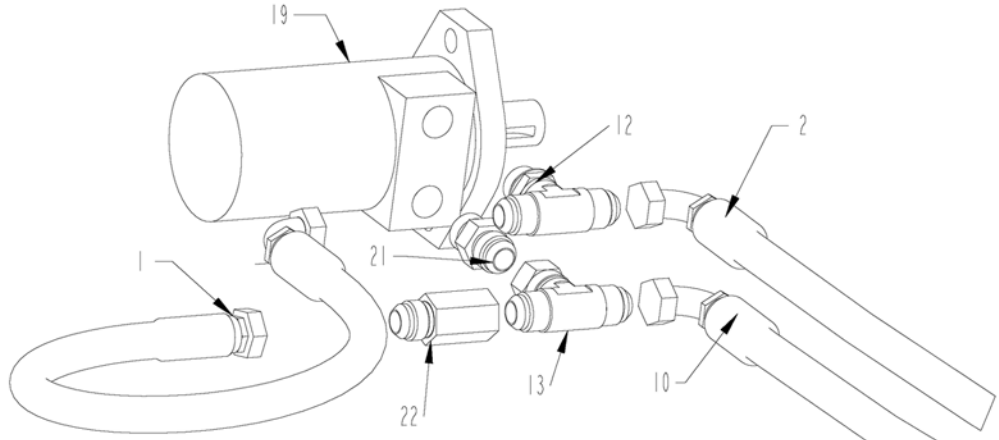
LEFT EXTENSION ORBIT MOTOR

LEFT HAND DISCHARGE CONVEYOR HYDRAULICS

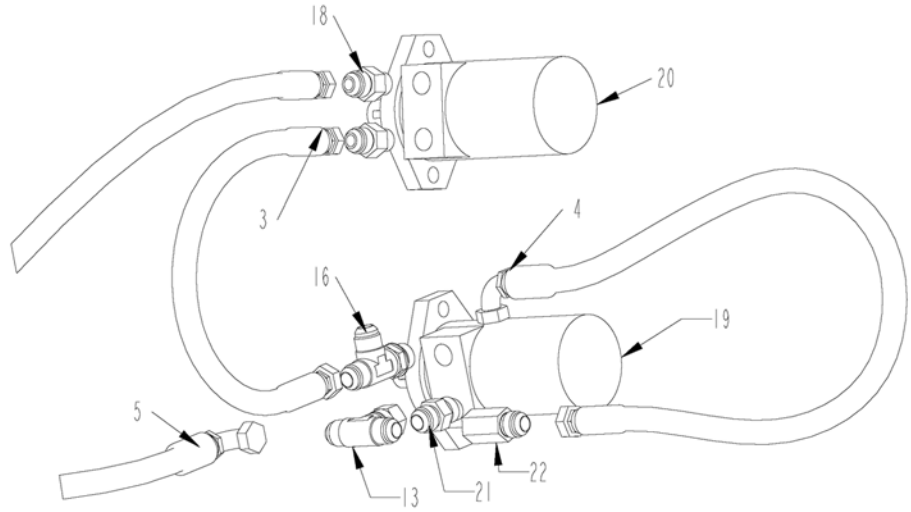
ITEM	PART NO.	QTY.	DESCRIPTION
1	425_CMF_LH_HOSE_10	1	TOP PORT OF EXT. CONVEYOR ORBIT MOTOR TO BOTTOM PORT OF EXT. CONVEYOR ORBIT MOTOR
2	425_CMF_LH_HOSE_11	1	BOTTOM PORT OF EXT. CONVEYOR ORBIT MOTOR TO BOTTOM PORT OF STATIONARY ORBIT MOTOR
3	425_CMF_LH_HOSE_14	1	TOP PORT OF EXT. CONVEYOR TO TRACTOR
4	425_CMF_LH_HOSE_5	1	CYLINDER CAP END TO TRACTOR
5	425_CMF_LH_HOSE_6	1	CYLINDER ROD END TO TRACTOR
6	425_CMF_LH_HOSE_9	1	TOP PORT OF STATIOARY ORBIT MOTOR TO TRACTOR
7	3800448	1	FTG\7/8MORX7/8MJIC\ST
8	3800453	2	FTG\3/4MORX9/16MJIC\90
9	3800460	1	FTG\7/8MJICX7/8MJICX7/8MOR\BR;TEE
10	3800461	1	FTG\7/8MJIC7/8MJIC7/8FJICS\BR;TEE
11	3800681	4	FTG\3/4MORSX1/2BARB\PARKER
12	3800683	2	FTG\3/4MOR\ORFICE\0.0490"
13	3800694	4	FTG\3/4FOR\QUICK;CPLR\MALE
14	3800849	1	FRG\3/4MORX7/8MJIC\ADPT
15	3900025	1	MOTOR\HYD\17.9\H\AMNT\7/8FOR\1SHFT
16	3900032	1	MOTOR\HYD\22.6\H\AMNT\7/8FOR\1SHFT
17	4000288	1	FTG\7/8MORX7/8MJIC\ST\CHCK
18	4000293	1	VALVE\CHECK\7/8FJICX7/8MJIC
19	4700776	3	CLMP\HOSE\3/8
20	4100210	1	CYL\HYD\2X8\1-1/4RD\WELDE



425 CMF DUAL DISCHARGE



LEFT EXTENSION CONVYOR OBIT MOTOR



STATIONARY ORBIT MOTOR AND RIGHT EXTENSION ORBIT MOTOR

ITEM	PART NO.	QTY.	DESCRIPTION
1	425_CMF_DUAL_HOSE_10	1	BOTTOM PORT OF LEFT EXT. CONVYOR ORBIT MOTOR TO TOP PORT OF LEFT EXT. CONVEYOR ORBIT MOTOR
2	425_CMF_DUAL_HOSE_11	1	TOP PORT OF LEFT EXT. CONVEYOR ORBIT MOTOR TO TOP PORT OF STATIONARY ORBIT MOTOR
3	425_CMF_DUAL_HOSE_12	1	BOTTOM PORT OF STATIONARY ORBIT MOTOR TO TOP PORT TO RIGHT EXT, CONVEYOR ORBIT MOTOR
4	425_CMF_DUAL_HOSE_13	1	TOP PORT OF RIGHT EXT. CONVEYOR ORBIT MOTOR TO BOTTOM PORT OF RIGHT EXT. CONVEYOR ORBIT MOTOR
5	425_CMF_DUAL_HOSE_14	1	BOTTOM PORT OF RIGHT EXT. CONVEYOR TO TRACTOR
6	425_CMF_DUAL_HOSE_5	1	RIGHT CYLINDER CAP END TO TRACTOR
7	425_CMF_DUAL_HOSE_6	1	RIGHT CYLINDER ROD END TO TRACTOR
8	425_CMF_DUAL_HOSE_7	1	LEFT CYLINDER CAP END TO TRACTOR
9	425_CMF_DUAL_HOSE_8	1	LEFT CYLINDER ROD END TO TRACTOR
10	425_CMF_DUAL_HOSE_9	1	BOTTOM PORT OF LEFT EXT. CONVYOR TO TRACTOR
11	3800453	4	FTG\3/4MORX9/16MJIC\90
12	3800460	1	FTG\7/8MJICX7/8MJICX7/8MOR\BR;TEE
13	3800461	2	FTG\7/8MJIC7/8MJIC7/8FJICS\BR;TEE
14	3800681	6	FTG\3/4MORSX1/2BARB\PARKER
15	3800683	4	FTG\3/4MOR\ORFICE\0.0490"
16	3800686	1	FTG\7/8XMORX7/8MJICX7/8MJICRUN;TEE
17	3800694	6	FTG\3/4FOR\QUICK;CPLR\MALE
18	3800849	2	FRG\3/4MORX7/8MJIC\ADPT
19	3900025	2	MOTOR\HYD\17.9\H\AMNT\7/8FOR\1SHFT
20	3900032	1	MOTOR\HYD\22.6\H\AMNT\7/8FOR\1SHFT
21	4000288	2	FTG\7/8MORX7/8MJIC\ST\CHCK
22	4000293	2	VALVE\CHECK\7/8FJICX7/8MJIC
23	4700776	4	CLMP\HOSE\3/8
24	4100210	2	CYL\HYD\2X8\1-1/4RD\WELDE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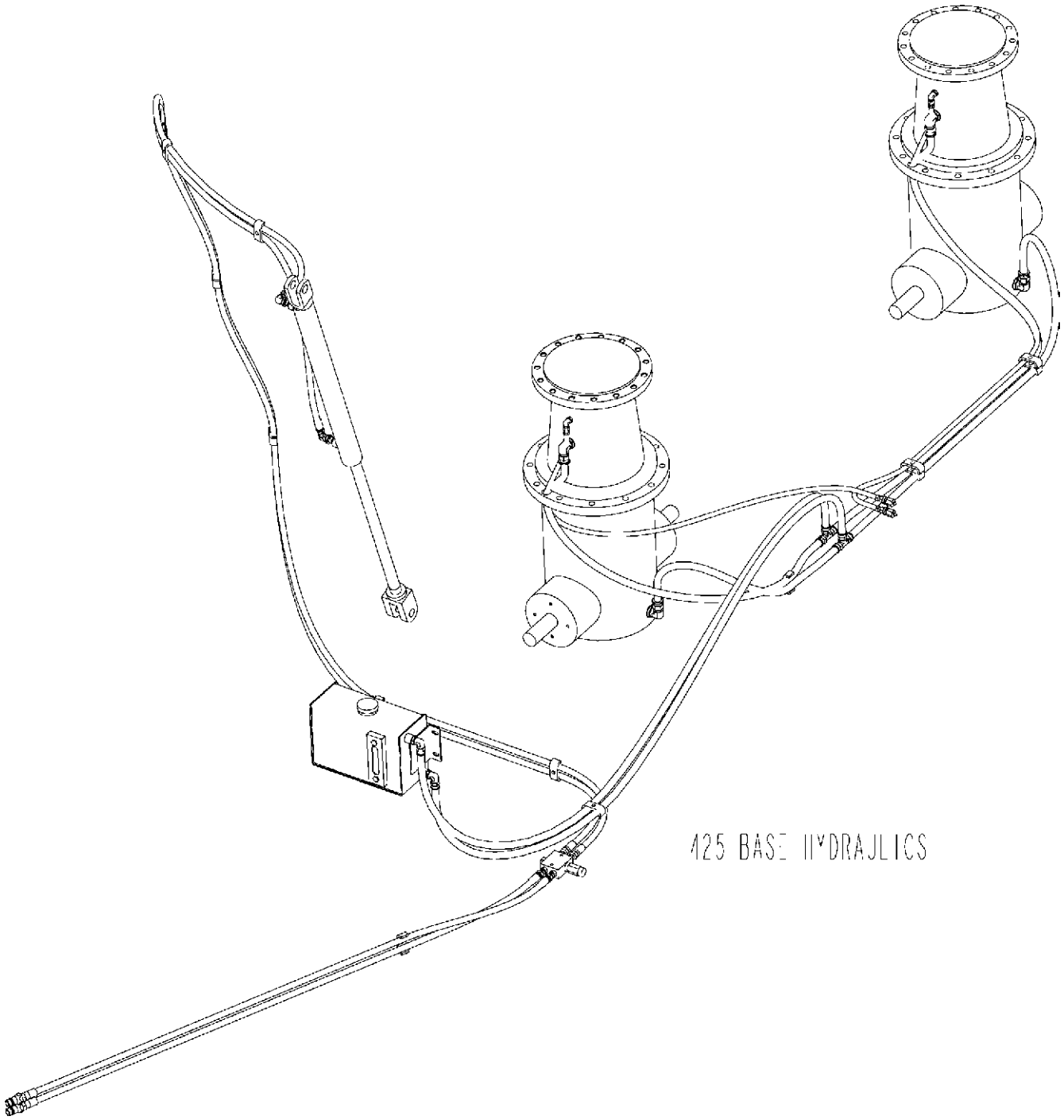
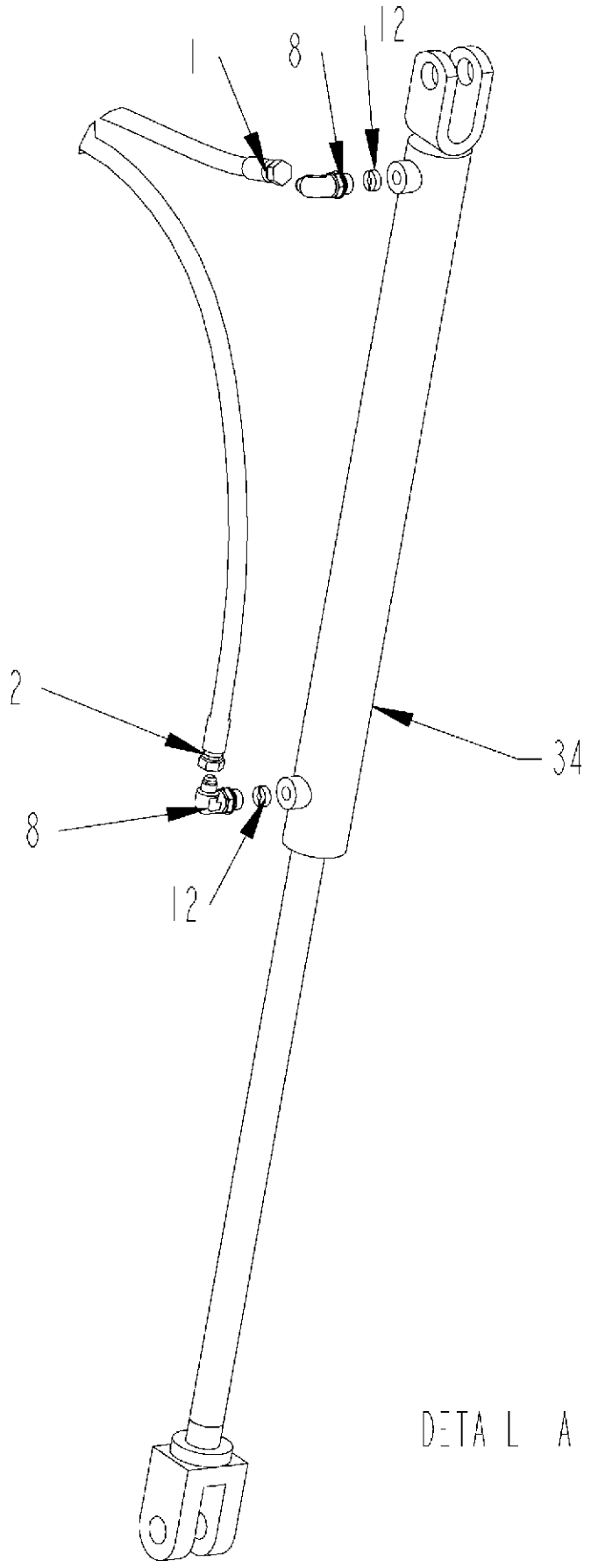
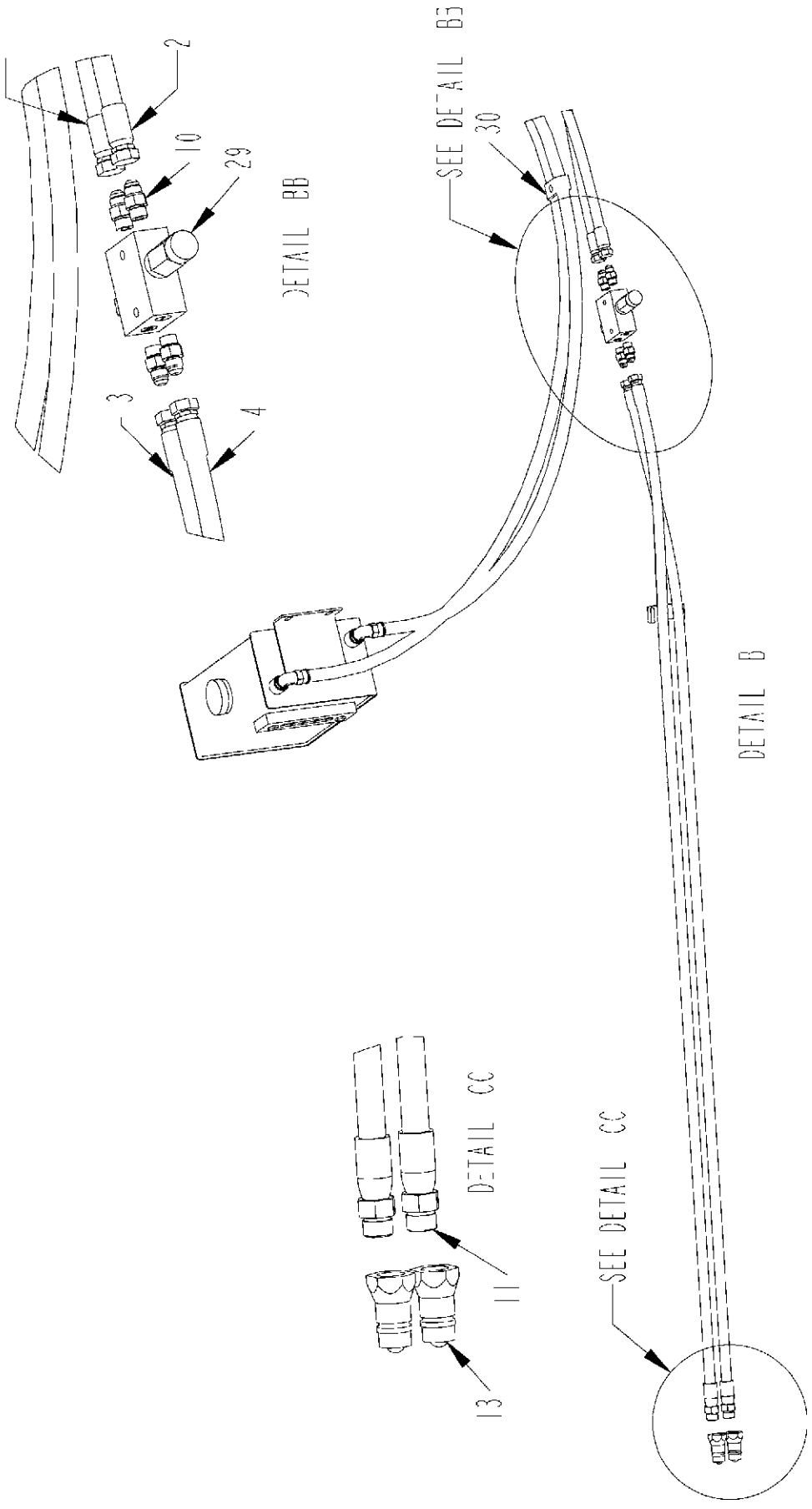
BASE HYDRAULIC SCHEMATIC



BASE HYDRAULICS - DETAIL A

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DETAIL BB
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SEE DETAIL B5
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DETAIL B
DETAIL CC
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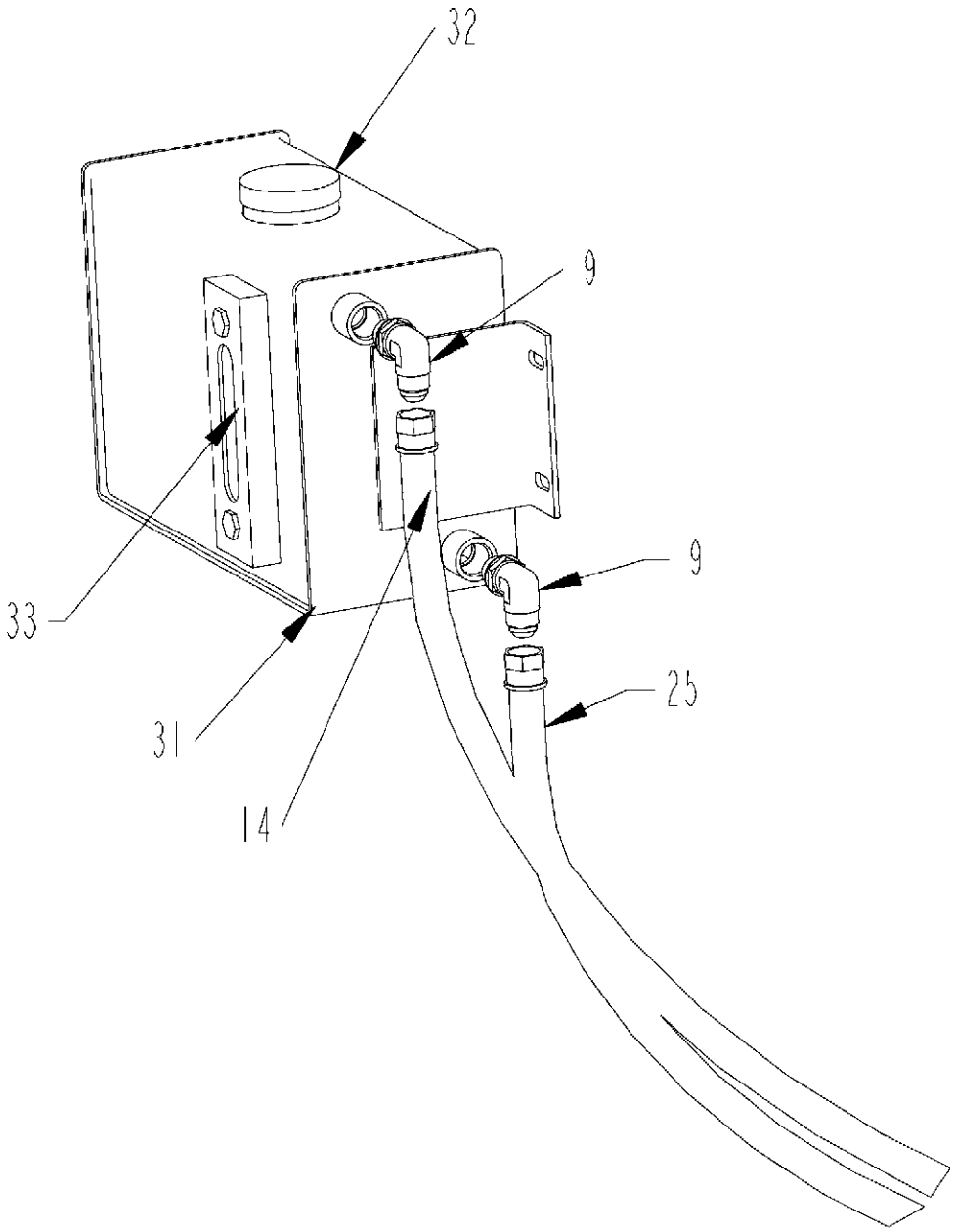
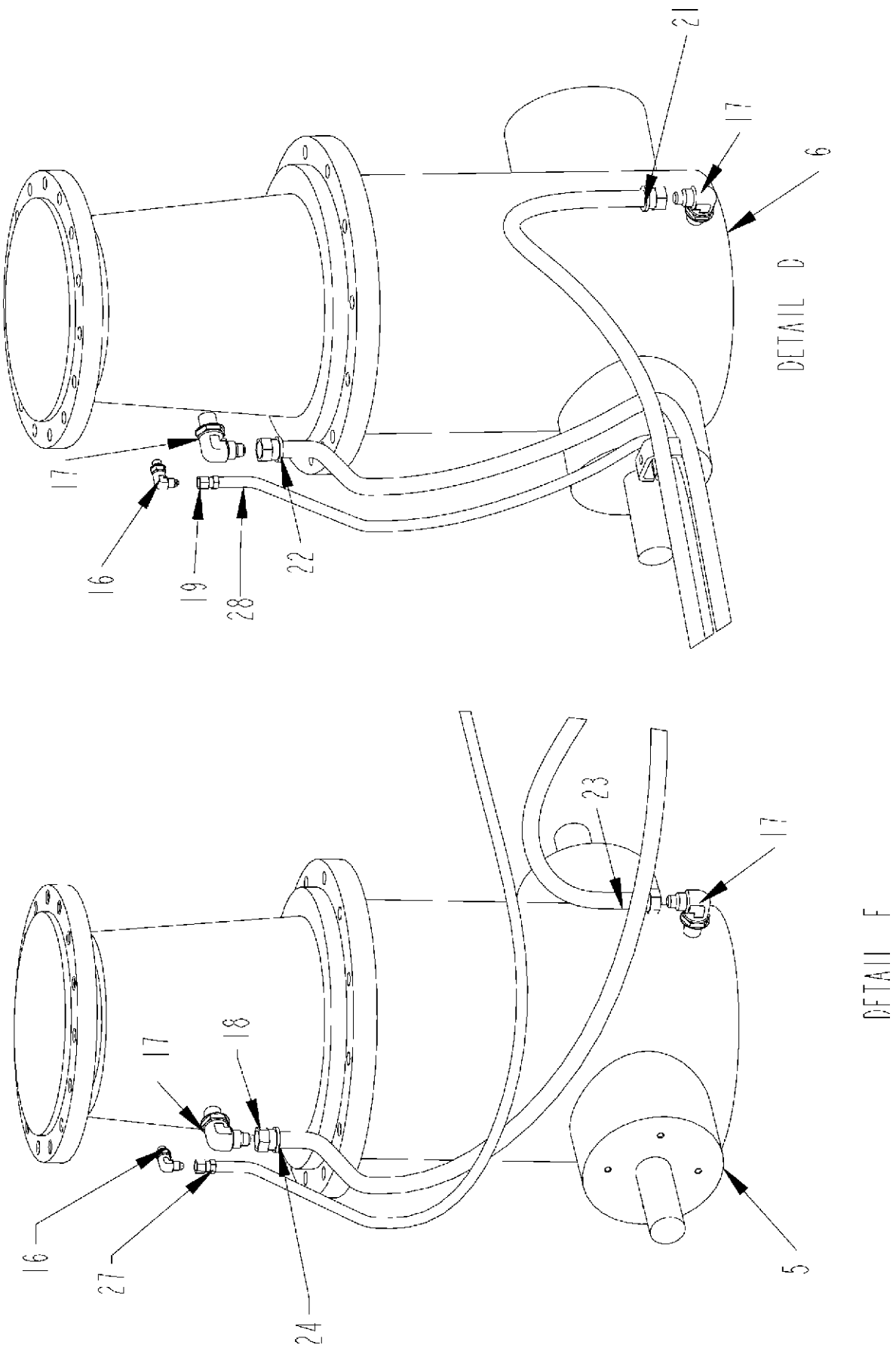
SEE DETAIL CC



DETAIL C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DETAIL D
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DETAIL F
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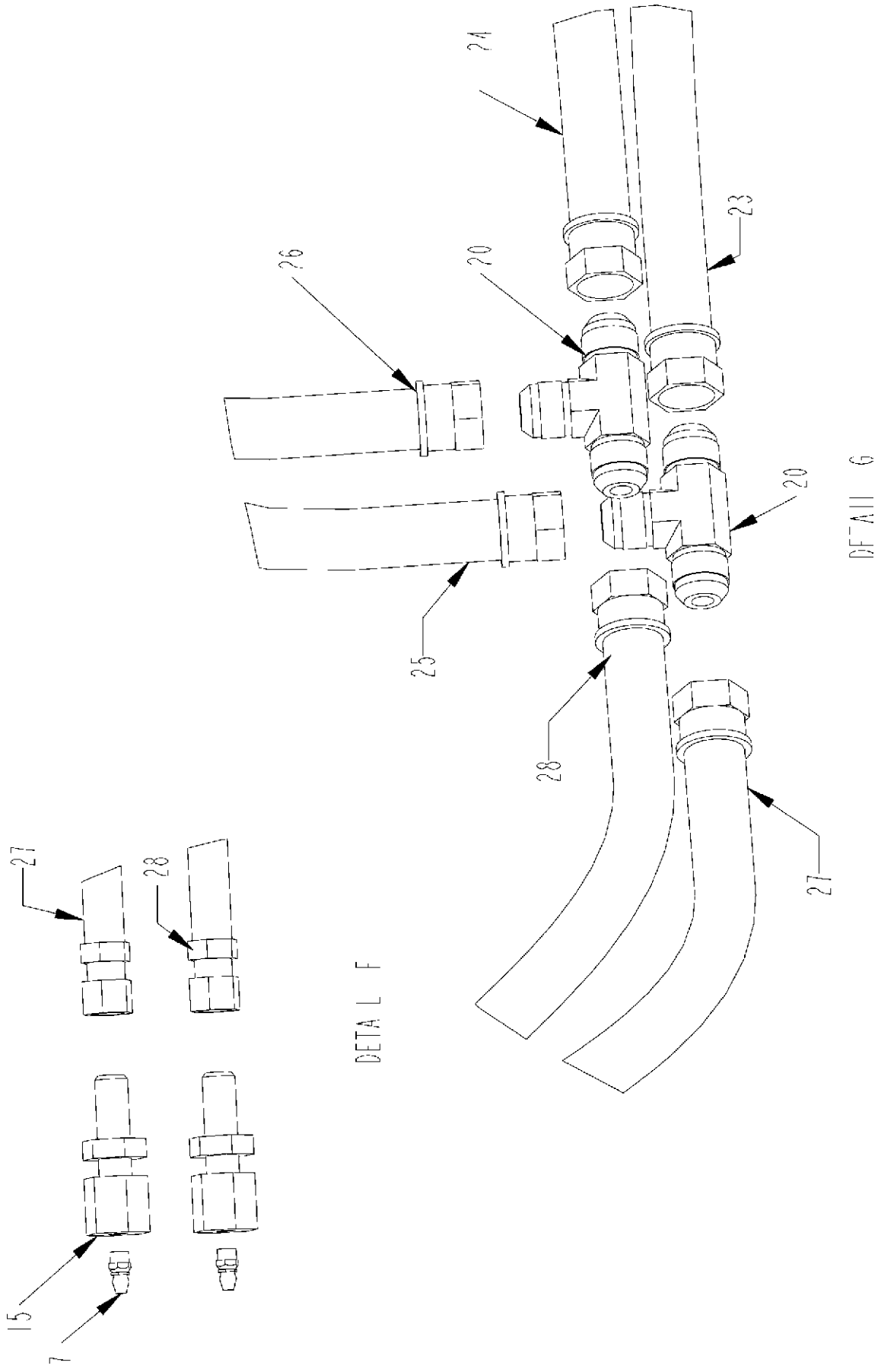
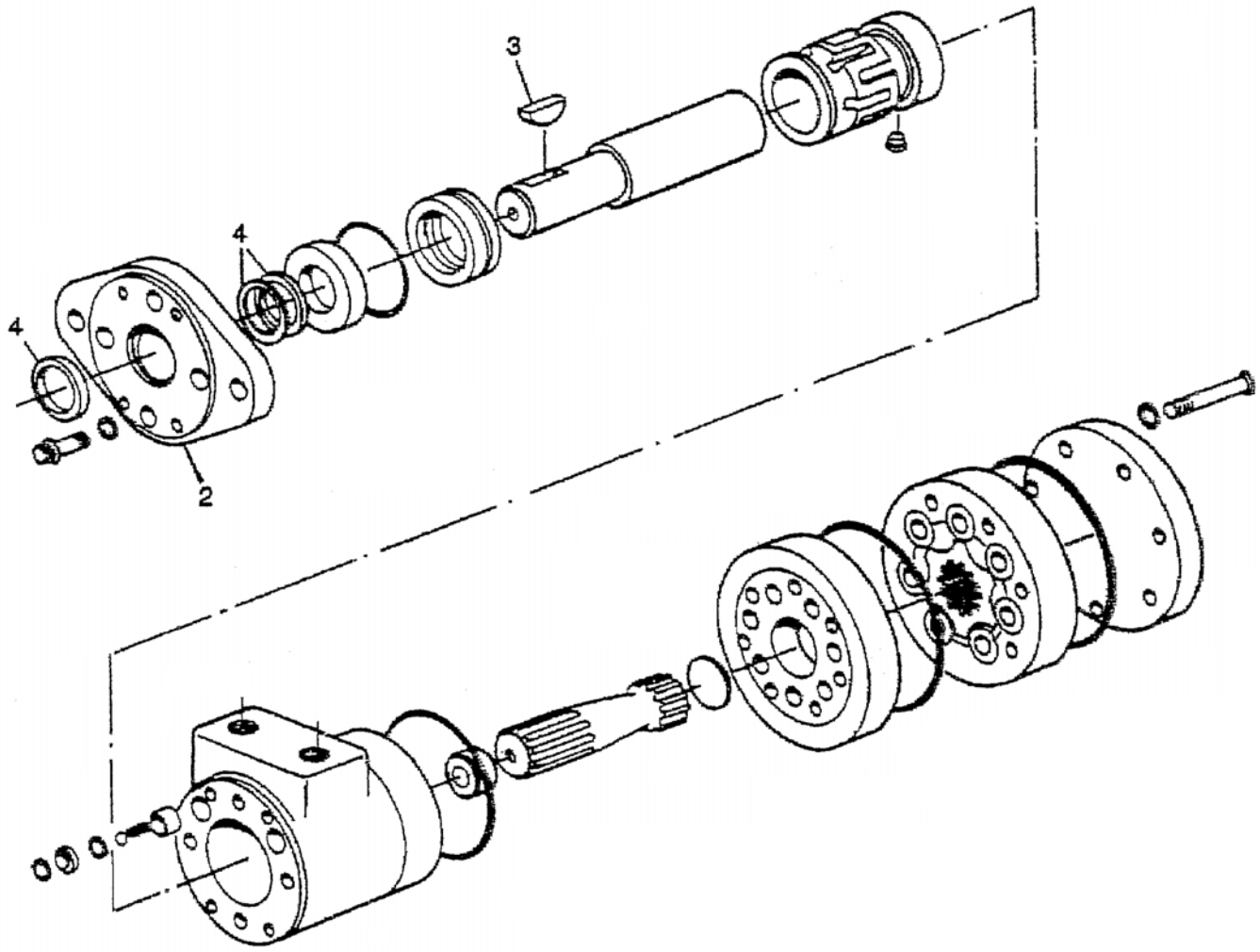
BASE HYDRAULICS - DETAIL E



BASE HYDRAULICS PARTS LIST

ITEM	PART NO.	QTY.	DESCRIPTION
1	425_CMF_BASE_HOSE_1	1	CYLINDER CAP END TO PRESSURE VALVE
2	425_CMF_BASE_HOSE_2	1	CYLINDER ROD END TO PRESSURE VAVLE
3	425_CMF_BASE_HOSE_3	1	PRESSURE VALVE TO TRACTOR
4	425_CMF_BASE_HOSE_4	1	PRESSURE VALVE TO TRACTOR
5	3100202	1	GRBX\PLANETARY\DBL
6	3100203	1	GRBX\PLANETARY\SNGL
7	3800082	2	FTG\LUB\1/4NFXZERK\ADAPT
8	3800453	2	FTG\3/4MORX9/16MJIC\90
9	3800537	2	FTG\3/4MORX3/4MJIC\90
10	3800631	4	FTG\9/16MORX9/16MJIC\ST
11	3800681	2	FTG\3/4MORSX1/2BARB\PARKER
12	3800683	2	FTG\3/4MOR\ORFICE\0.0490"
13	3800694	2	FTG\3/4FOR\QUICK;CPLR\MALE
14	3800826	8	FTG\3/4FJICX1/2SHLCK
15	3800861	2	FTG\7/8MJICX1/2FP\BULKHEAD
16	3800862	2	FTG\7/16MJICX#4BSPP
17	3800863	4	FTG\1-1/16MJICX#10BSPP
18	3800864	4	FTG\7/8FJICX1/2SHLCK
19	3800865	4	FTG\7/16FJICX1/8BARB\HEW/FERRULE
20	3800866	2	FTG\3/4MJICX3/4MJICX3/4MJIC\TEE
21	3800867	1	FROM BOTTOM OF REAR GEARBOX TO BOTTOM OIL LINE UNION
22	3800868	1	FROM TOP OF REAR GEARBOX TO TOP OIL LINE UNION
23	3800869	1	FROM BOTTOM OF FRONT GEARBOX TO BOTTOM OIL LINE UNION
24	3800870	1	FROM TOP OF FRONT GEARBOX TO TOP OIL LINE UNION
25	3800871	1	FROM BOTTOM OIL LINE UNION TO BOTTOM PORT OF OIL RESERVOIR
26	3800872	1	FROM TOP OIL LINE UNION TO TOP PORT OF OIL RESERVOIR
27	3800873	1	FRONT GEARBOX GREASE LINE TO TOP OF BRACKET
28	3800874	1	REAR GEARBOX GREASR LINE TO BOTTOM OF BRACKET
29	4000245	1	VALVE\RELIEF\CROSS\SINGLE
30	4700776	14	CLMP\HOSE\3/8
31	4704506	1	TANK\HYD\ASSY\CMF
32	7500275	1	CAP\VENTED\TANK\OIL
33	7501242	1	GAUGE\LEVEL\5\M12\NOTHERMOMETER
34	4100241	1	CYL\HYD\2"X24"\1-1/4"ROD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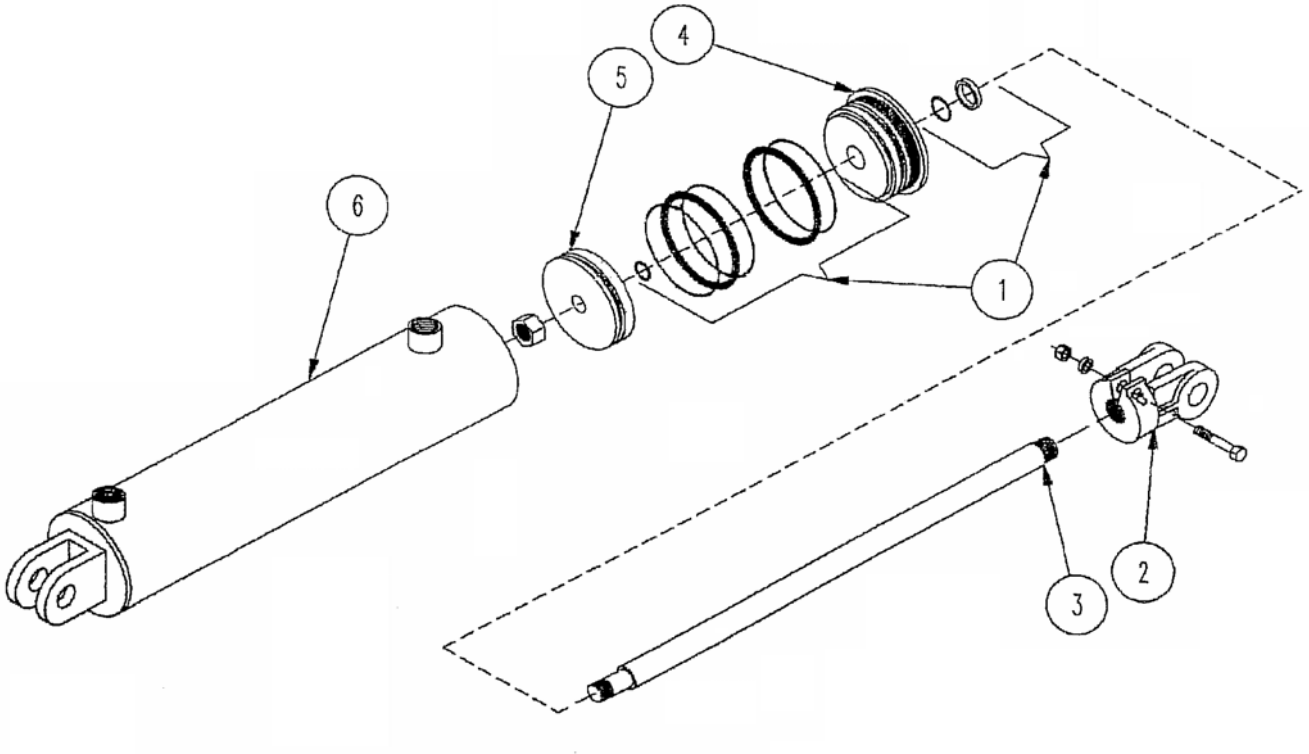
ORBIT MOTORS 3900025-3900032

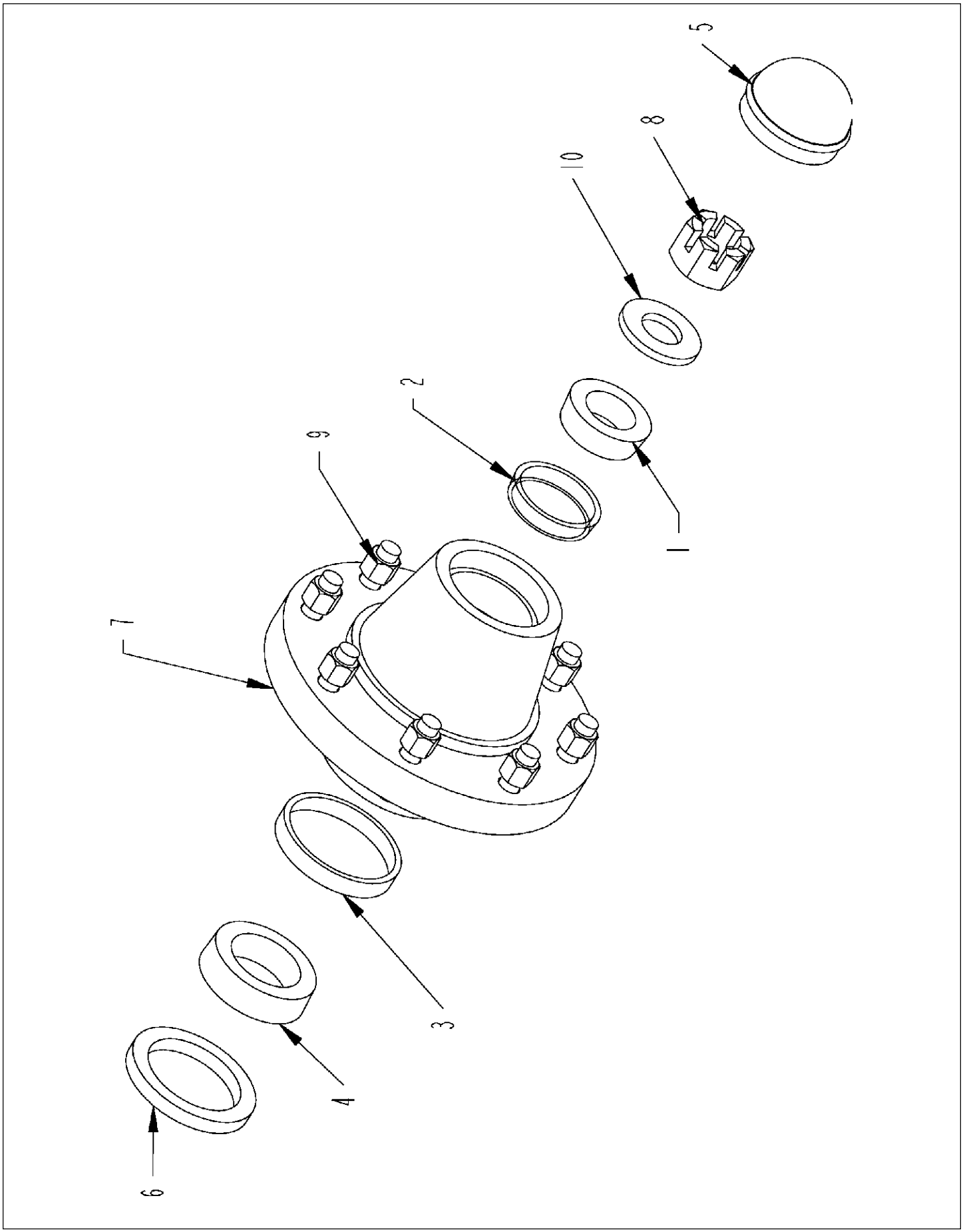
ITEM	PART NO.	QTY.	DESCRIPTION
1	3900025		MTR\HYD\17.9\H\A;MNT\7/8FOR O-RING THREAD
	3900032		MTR\HYD\101-1040\22.6CI O-RING
2	3900002	1	MOUNTING FLANGE
3	6200011	1	KEY\WDF\1/4X1\#15\808
4	7501038	1	UNISEAL KIT 007-009

HYDRAULIC CYLINDER ASSEMBLY



HYDRAULIC CYLINDER ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
	4100210		**CYL HYD 2X8\1-1/4RD\WELDED**
1	4100093		CYL\HYD\SEA;KIT\2X8
1	**4100241**		**CYL\HYD\2X24\1-1/4RD\3000PSI**
	4100228		SEAL\KIT\2\1-1/4RD\CTD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HUB ASSEMBLY

ITEM	PART NO.	QTY.	DESCRIPTION
1	2900125	1	HUB\H817\CONE\OUTER
2	2900126	1	HUB\H817\CUP\OUTER
3	2900127	1	CUP\INNER\WHL:HUB(48510
4	2900128	1	HUB\H817\CONE\INNER
5	2900130	1	CAP\DUST\H817
6	2900131	1	SEAL\GREASE\H817
7	2900140	1	HUB\ASSY\H817\8BOLT\8"B.C.\6"PILOT
8	4900053	1	NUT\CASTLE\1-1/4\NF
9	4900114	8	NUT\TAPER\WHEEL\5/8\NF
10	5000065	1	WASH\2.5OD\1.25ID\224

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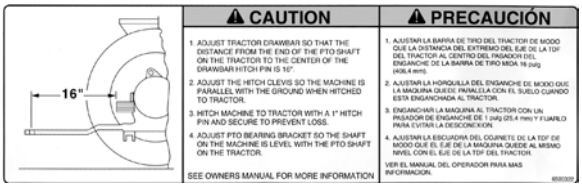

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CMF-425

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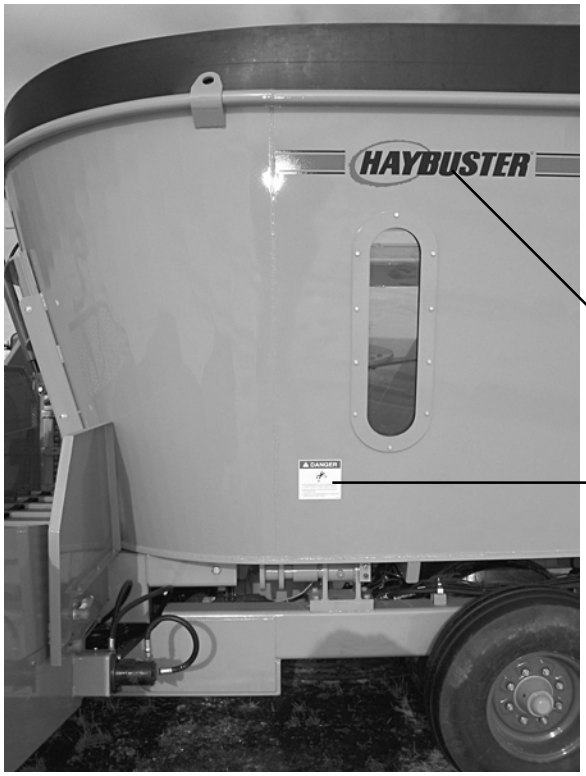
ITEM	PART NO.	QTY.	DESCRIPTION
1	6500020	4	DECAL\LOGO\HYBSTR\SNBRS\3
2	6500039	1	DECAL\INFO\S/N\DURATECH
3	6500085	1	DECAL\DNGR\ROTATING;DR-LNE
4	6500208	1	DECAL\WARN\GENERAL
5	6500220	1	DECAL\WARN\HI;PRESS;FLUID
6	6500253	1	DECAL\INFO\FLUID;LEVEL\
7	6500302	5'-8"	DECAL\LOGO\STRIP\3\RD&BLK
8	6500322	1	DECAL\CAUTION\ADJ.DRAWBAR
9	6500339	2	DECAL\WARN\PINCH;POINT
10	6500366	1	DECAL\SMV
11	6500376	1'-6"	DECAL\MISC\TAPE\RED
12	6500377	4'-6"	DECAL\MISC\TAPE\AMBER
13	6500383	2	DECAL\WARN\AUGER\MIXER
14	6500385	2	DECAL\LOGO\CMF425
	6500386		**DECAL\KIT\CMF\425**
	7500077	12 oz	Yellow Spray Paint
	7500092	Quart	Yellow Paint
	7500091	Gallon	Yellow Paint
	7500078	12 oz	Red Spray Paint
	7500105	Quart	Red Paint
	7500104	Gallon	Red Paint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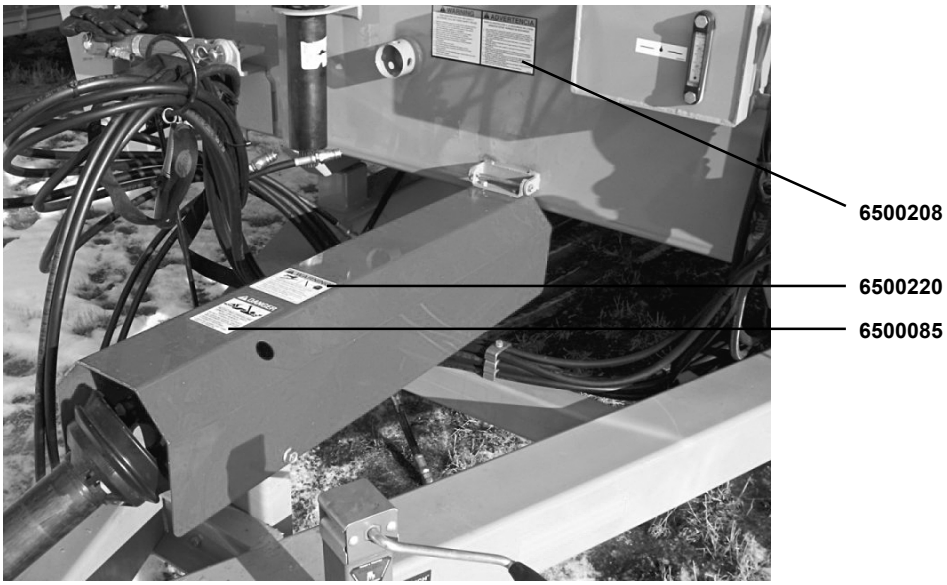
6500383


6500208
6500339 (4 LOCATIONS)
6500085
HAYBUSTER
6500339 (4 LOCATIONS)
6500039


6500208
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- Is the information clearly presented?
- Does the manual give you all the information you need to operate the equipment safely and effectively?
- Are the diagrams and illustrations correct?
- Do you need more illustrations?
- What features do you like most about the manual? What features do you like least?

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