



## **Owner's Manual**

**For serial numbers beginning with:  
M3RA, M3RT, & H3RT & last 4 digits  
of 1200 through 1346**

**Go to Page: 47 for serial numbers with  
last 4 digits 1347 or higher and  
beginning with: H3RT, C4HT, C4HTG,  
C6HT, or C6HTG**



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**RCMR, INC.** (hereinafter referred to as "RCMR") hereby expressly warrants to the original first-use retail purchaser for a period of twelve months from the date of new product delivery that its model EZ RATION Processor will be free of defects in factory workmanship and material at the time of shipment from RCMR's manufacturing facility, Herington, Kansas.

RCMR will replace without charge for the part(s) covered by this express warranty which under normal use and service fails to conform to this warranty, provided RCMR, Inc., or RCMR's authorized dealer or distributor is duly notified of the failure and such part(s) are returned to RCMR, Inc., or the RCMR dealer or distributor, transportation charges prepaid, within the prescribed duration that this warranty is in effect. Replacement Parts- if they are for a machine still within its original 12 month warranty on parts - are warranted to be free of defects in materials and workmanship for a period of 90 days from the date of replacement installation. Parts obtained under the terms of this express warranty must be obtained from RCMR, Inc., or at an authorized RCMR dealer.

Warranty coverage is limited to replacing any part, at no charge for the part to the original customer. This express warranty does not include mileage or shipping or labor or expense for transporting the dealer's mechanic to or from the customer's machine, nor does it include mileage or expense for transporting the machine itself.

RCMR agrees to make available to the original purchaser whatever warranty benefits may be made available to RCMR by the mfg of components built by other companies but marketed in conjunction with RCMR products. Such components include hydraulic motors, control valves, fittings, and gearboxes.

This express warranty shall not apply to any part of said product in which in the judgment of RCMR has been subjected to misuse, abuse, negligence, accident, operation in excess of recommended capacities, has served its normal wear life, or which has been altered or repaired in any manner not authorized by RCMR. Furthermore, this warranty shall not cover any damage or malfunction due to failure to provide reasonable and necessary maintenance.

RCMR is constantly striving to improve its products and therefore reserves the right to change design, specifications and/or material without notice and without any obligation or liability on prior purchases.

**RCMR expressly limits the duration of any implied warranty of merchantability or implied warranty of fitness for a particular purpose which arises under state law to the duration RCMR's express warranty only (12 months from date of delivery to original retail purchaser on parts).**

RCMR shall not be liable for consequential damages or contingent liabilities including; but not limited to, loss of life, personal injury, loss of crops/livestock, loss due to fire or water property damage and consequential trade or other commercial loss arising out of the failure of RCMR's product.

This warranty gives you specific legal rights, and you may also have rights, which vary from state to state. If you have questions about this warranty contact Customer Service Manager, RCMR, Inc., PO BOX 140, Kim, Colorado 81049, Telephone (800) 242-9599.



### **EZ Ration Processor operating instructions.**

Here is a quick overview to help get started

- Your unit should have been dry run at the factory and all set screws and chains checked. A second check is always good and may catch anything that could have come loose during delivery. Check the PTO driveline where it connects to the PTO (truck mount) again after the first 25 to 50 hours of use and then regularly during maintenance.
- We always encourage everyone to give their new EZ Ration Processor a quick once over checking all set screws and chain tensions, and alignments, before they put the first bale on it. Also run the knives and floor chains. Make sure you have the hydraulic hoses paired up correctly (tractor pull models) and the floor chains and auger are working correctly. (see start up instruction procedures page)
- If you have a tractor pull EZ Ration Processor and the floors are not moving, make sure you have the hoses paired correctly, your tractor hydraulics on and the floors turned on at the control box. Make sure the control box on/off switch is on and lit up and the speed dial is turned up to 50% or more.
- If they are still not moving you are probably running the hydraulic fluid through the system backwards. At that point you need to change the direction with the hydraulic controls in the tractor or switch the hydraulic hoses, but make sure to keep them paired correctly.
- The two toggle switches in the lower left hand corner of the control box reverse the floor direction. (One for each side) The floors have to be turned on and speed dials turned up then activate the reverser switches. Note: The tractor pull version will not reverse the floor direction by reversing the flow of the hydraulic fluid with the control lever in the tractor.

- Note: This is very important on the tractor pull models. **Make sure and ALWAYS turn on the PTO before turning on the floors & make sure and ALWAYS turn off the floors before turning off the PTO.** It is also very important that the bales are set on the floor chains straight. If they are set on the floor chains at an angle they can get to pushing against each other as the bales on one floor chain pass the bales on the other floor chain. They can then wedge into the beater house and lock up.
- RCMR Part # 01-058 is a 667X - 6 tooth - 1 ¼ inch bore with a ¼ inch kwy - sprocket, this is the drive sprocket for the floor chains, it should be what breaks if the floors get jammed up or are left on and the beaters are shut off (trailer mounted models only) Again: always turn on the PTO first then turn on the floors and always shut off floors first and then the knives and cross conveyor on tractor pull models. A lot of customers will keep a spare 667X 6T 1 ¼ B sprocket (RCMR part # 01-058) on hand just in case, call us if you would like us to send you one. Also there is a shear bolt on the PTO right where it hooks to the tractor if something jams the beaters and something has to give this shear bolt should break (older models only).
- The Cross conveyor will typically squeak like a bearing is going out when it is being run dry --it is the slats dragging on the bottom -- and is ok--it will usually quit shortly after you start running hay through it.
- If you ordered a Knife hood extension, (for stacking mid-size bales) the extension will be sent but not installed for shipping height purposes. There will be two triangular formed pieces of metal with holes in the edges. Take the bolt out of the sides of the top plate on the beater housing and loosen those on the front. Install the two triangular metal pieces on each side and retighten the bolts.
- The control box has a fuse that is on the side of the box. It is sometimes pulled on truck mount models and taped on the top of the box. Make sure the fuse is properly inserted in the control box fuse receptacle.

We know you will find the EZ Ration Processor to be a  
huge asset in your operation.

Please don't hesitate to call if you have any questions  
1 800 242 9599



## Safety First

1. Read and understand both the tractor or truck Operator Manuals and these Operating Instructions prior to using the EZ Ration Processor. Lack of knowledge can lead to accidents
2. It is the owner's responsibility to make sure anyone operating the EZ Ration Processor reads and understands these operating instructions before operating the machine.
3. Review safety sticker, shield, and guard location diagram and make sure all stickers, shields, and guards are in place.
4. If any safety stickers, safety shields, or guard are missing replace immediately. (see page 16 for safety sticker placement) Contact RCMR, Inc. at RCMR, Inc. PO Box 140, Kim, CO 81049 or call 800 242 9599 for replacements.
5. Do not allow bystanders in the work or feeding area.
6. Make sure truck or tractor is shut off before servicing, adjusting, or cleaning the machine.
7. NEVER EVER attempt to clean, unclog, service, or adjust, the machine, with the machine, tractor, or truck running.
8. Make sure proper lights and signs are attached for your particular use.



## Operating Instruction

### Tractor Pull EZ Ration Processor

1. Tractor requirements – 120 Horsepower is recommended – 1000 speed PTO – 16 GPM hydraulic system
2. Make sure tractor hitch is adjusted correctly.
3. Make sure PTO is connected correctly.
4. Connect hydraulic hoses to tractor taking care to keep hydraulic hoses paired correctly.
5. Set up control box in the cab of the tractor to be used.
6. Connect the red wire to a good 12 volt source (11.5 volts will not work – testing source with volt meter is recommended) connecting direct to the positive battery terminal is recommended. There is a fuse in the control box.
7. Connect black wire to a good ground. (grounding it to the battery's negative terminal is recommended)
8. The blue wire in the power plug on the control box is provided as a fused power source for scale monitors. If you do not have scale monitors make sure it is covered good so as not to ground out on any ground source. (Do not remove as you may want to add scales later.)
9. Connect the wiring harness to the control box. Make sure the harness is connected correctly.
10. Before loading bales (with PTO off) make sure floor chains move forward when: a) tractor hydraulic lever is turned on or put in float position b) the floor on/off switch on the control box is turned on and lights up c) the speed control dial is turned to at least 50% or more

11. If the floors do not move you are running the hydraulic fluid through the system backwards. Either move the tractor hydraulic control lever the other direction or switch the hoses but keep them paired correctly.
12. If your EZ Ration Processor is equipped with a Grain Attachment use the same procedure to make sure the auger in the grain bin is turning correctly
13. The speed of the floor chains and the auger in the grain attachment are all controlled individually by adjusting the corresponding controls.
14. It is recommended that you start in the middle with each floor chain speed control dial then back off if less hay is required in the mix and increase the side that more hay is required of in the mix. Note: The numbers on the speed control dial may not directly correlate in ratio and speed depending on the tractor's hydraulics.
15. The tractor PTO turns on the cutting knives and the cross or delivery conveyor.
- 16. When Feeding always turn the PTO on then the Hydraulics.**
- 17. When Stopping always turn the Hydraulics off then the PTO**
18. When placing hay on the floor chains place it with strings out. Make sure bales are straight and not touching bales on the other floor chain in the middle.
19. Place hay of the same type on the same side. This will allow you to vary the blends of the roughage and create different blends for different classes of livestock with varying nutritional requirements.
20. Cut all strings on the front bale and all but one or two on the back bale (leave enough strings so hay doesn't fall off the back)
21. It is recommended that strings on the back bale are cut before it reaches the knives otherwise they will have to be cut off the knives later.
22. Care should be taken to not allow excessive string build up on the knives or around the bearings.

23. It is recommended that another bale be put on the floor chain to push last part of the last bale through the knives.
24. NEVER ATTEMPT TO PUSH HAY THROUGH THE KNIVES BY HAND
25. If the machine bogs or labors excessively the knives may have ate out a groove in the bale or a bale became lodged or wedged. Try reversing the floor chains until the hay becomes dislodged.
26. NEVER ATTEMPT TO DISLODGE BY HAND WITH THE TRACTOR, MACHINE, OR TRUCK RUNNING.
27. If excessive hay is being kicked back over the top try slowing down the floors, you are probably feeding in the hay faster than it can be processed.
28. The knives and cross/delivery conveyor are not on the scale system. For an accurate weight floors should be shut off and knives allowed to spin free of the bales and cross/delivery conveyor allowed to clean off. (scales move in 5 pound increments and 5 to 20 pound fluctuation considered normal when moved)
29. Your new EZ Ration Processor should be serviced after the first 5 to 10 hours of use (see service instruction pages) then regularly after each 50hrs of use. The knives should be reversed or changed after 250 hours of use or as needed; prior under heavy use.



## Operating Instruction

### Truck Mounted EZ Ration Processor

1. Truck PTO requirements –113% PTO for trucks with the MT 643 or MT653 Alison Transmission accepting an conventional or mechanically driven EZ Ration Processor – 113% PTO for truck with the MD 3500 and 4500 New World Series Alison Transmissions accepting a Hydraulic driven EZ Ration processor.
2. PTO needs to rotate counter clockwise (when standing at the back of the truck looking at the PTO shaft)
3. PTO turns on the knives and the cross or delivery conveyor and supplies the hydraulic fluid to run the floors. (floors cannot be run unless knives and conveyor are running too on mechanical model)
4. The speed of the floor chains and the auger in the grain attachment are all controlled individually by adjusting the corresponding controls on the control box mounted in the cab of the truck.
5. Electric flow control solenoid valves turn on and change the speed of the floor chains and the grain auger. When they are turned off the floors and the auger will stop even though the knives and cross conveyor will stay on if the PTO is still on.
6. The floors can only be reversed if the PTO is on, the floor on off switch is turned on, the speed dial is turned up and the reverse switch for that floor is turned on. (floors can be reversed individually)

7. It is recommended that you start in the middle with each floor chain speed control dial then back off if less hay is required in the mix and increase the side that more hay is required of in the mix. Note: The numbers on the speed control dial may not directly correlate in ratio and speed depending on differences in trucks, transmissions, RPM, and torque converter RPM lock up.
8. When placing hay on the floor chains place it with strings out. Make sure bales are straight and not touching bales on the other floor chain in the middle.
9. Place roughage of the same type on the same side. This will allow you to vary the blends of the roughage and create different blends for different classes of livestock with varying nutritional requirements.
10. Cut all strings on the front bale and all but one or two on the back bale (leave enough strings so hay doesn't fall off the back)
11. It is recommended that strings on the back bale are cut before it reaches the knives otherwise they will have to be cut off the knives later.
12. Care should be taken to not allow excessive string build up on the knives or around the bearings.
13. It is recommended that another bale be put on the floor chain to push last part of the last bale through the knives.
14. NEVER ATTEMPT TO PUSH HAY THROUGH THE KNIVES BY HAND
15. If the machine bogs or labors excessively the knives may have ate out a groove in the bale or a bale became lodged or wedged. Try reversing the floor chains until the hay becomes dislodged.
16. NEVER ATTEMPT TO DISLODGE BY HAND WITH THE TRACTOR, MACHINE, OR TRUCK RUNNING.

17. If excessive hay is being kicked back over the top try slowing down the floors, you are probably feeding in the hay faster than it can be processed.
18. The knives and cross/delivery conveyor are not on the scale system. For an accurate weight floors should be shut off and knives allowed to spin free of the bales and cross/delivery conveyor allowed to clean off. (scales move in 5 pound increments and 5 to 20 pound fluctuation considered normal when moved)
19. Your new EZ Ration Processor should be serviced after the first 5 to 10 hours of use (see service instruction pages) then regularly after each 50hrs of use. The knives should be reversed or changed after 250 hours of use or as needed; prior under heavy use.



## Maintenance and Lubrication Instruction

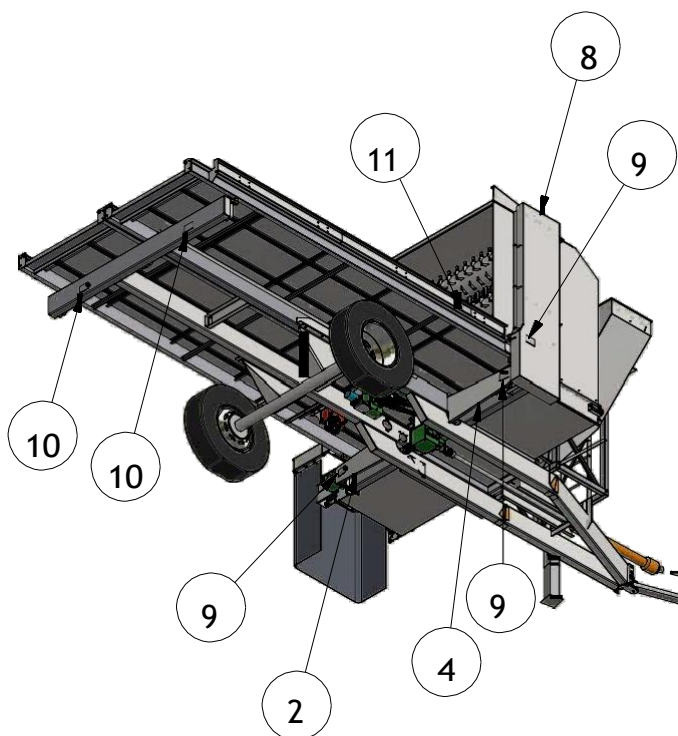
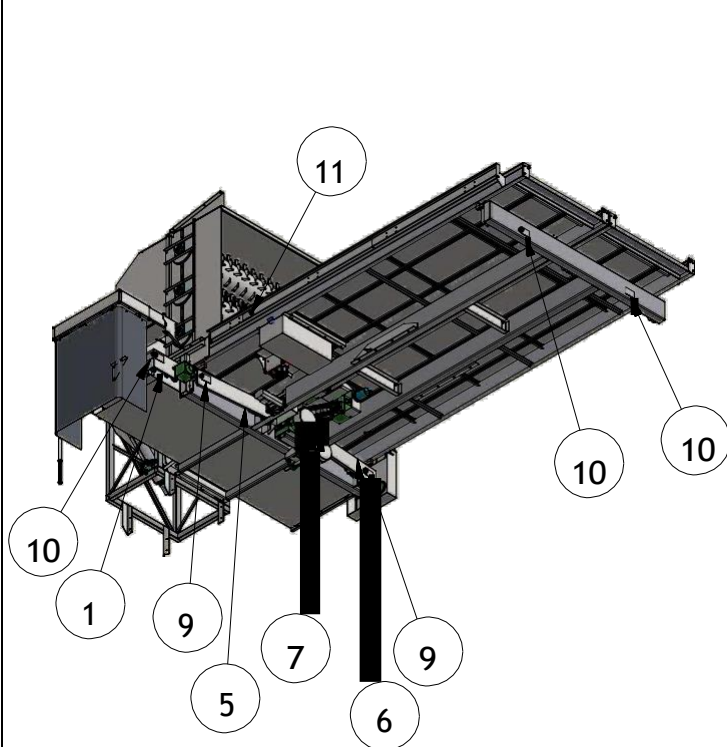
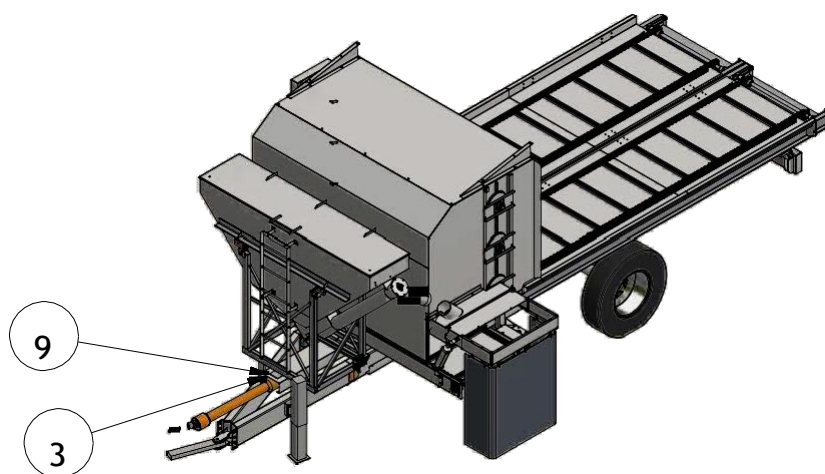
### EZ Ration Processor

1. Bearings should be greased every 50 hours
2. Check the oil level sight gauge on the hub of the tractor pull models. (daily visual inspection) It requires 80-90wt gear oil.(older models)
3. Superior Gearbox fluid (center T gear box and cross conveyor right angle gear box) should be changed after first 100 hours and then changed at 1000 hrs or every 12 months. Visually check for leaks daily. The Superior gearboxes require EP80-90wt gear oil. Fill approximately half full.
4. Grove Gearboxes (floor chain gear boxes) oil should be changed at 1000 hours or every 12 months. Visually check for leaks daily. The Grove Gearboxes hold approximately 3  $\frac{3}{4}$  pints or 60oz. Capacities vary somewhat with model and mounting position. Oil should rise to the bottom edge of level hole. Do not over fill. Use Amoco Worm Gear Oil or Cylinder oil #680 – Chevron Cylinder oil #460X or #680X- Exxon Cyclesstic TK-460 or TK-680 – Gulf Senate 460 or 680D - Mobil 680-W Super Cylinder – Shell Valvata J460 or J680- or compatible oils. Mobil SHC 643 is compatible with the oil shipped in the gearbox.
5. Check set screws in yokes on drivelines on a regular basis. (visual inspection)
6. Replace or turn sickle section on beaters as needed. (approximately 250 hours of use)

7. Avoid excessive twine build up on the knives. It is recommended to cut them off with a hot electrical iron/knife – Making sure truck or tractor is off and exercise extreme caution and care around sickle section they can cause severe cuts.
8. Regularly check idler sprockets on the knives drive chain. They should only take the slack out of the chain – they function much the same way a torsion axel does with rubber bushing in the middle to supply tension. They should be set at the 10 to 15 degree mark. Adjustments can be made using the supplied wrench on the square body portion supporting the tension arm and by loosening the nut holding the tensioner to the beater housing – retighten the nut to 120 ft-lbs after setting the correct degree of tension. The Idler sprocket should be aligned with the chain and the two sprockets on either end of the chain. (It can be moved up or down the all-thread bolt it is residing on to provide alignment)
9. Regularly check delivery or cross conveyor chain. (visual inspection) It should just touch bottom pan on the underside in the middle.
10. Regularly check floor chains. (visual inspection) They should touch carrier on bottom side 3 to 4 feet from back idler sprocket. Oil or grease chain links if left set out side during off season to allow links to move freely.
11. Regularly check hydraulic fluid level in hydraulic tank. (visual inspection) Add regular hydraulic fluid as needed. In extremely cold climates special hydraulic fluid engineered for extremely cold conditions may be required.

12. To tighten the floor drive chains, adjust gearbox position by loosening the 4 bolts on the top of the gearbox and then adjust gearbox position utilizing the tensioner bolt. Tighten the 4 bolts back down after making adjustment.

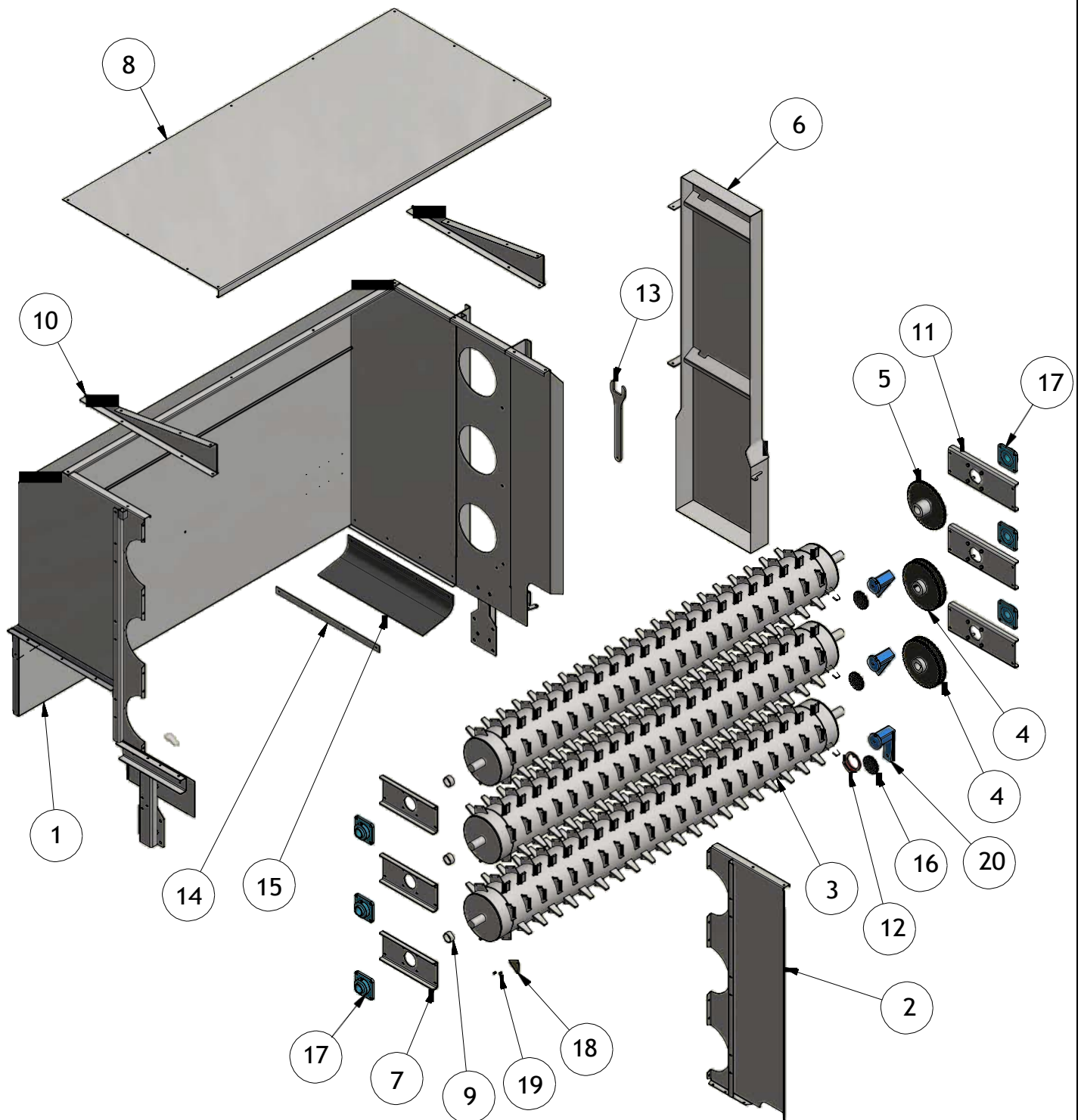
| ITEM | RCMR PN    | DESCRIPTION                                             | PART NUMBER |
|------|------------|---------------------------------------------------------|-------------|
| 1    | 487/22-067 | Shield over discharge conveyor chain and sprockets      | 573432-404  |
| 2    | 509/22-089 | Shield over discharge conveyor driveline (tractor pull) | 573433-543  |
| 3    | 470/22-050 | Shield over PTO driveline                               | 573433-544  |
| 4    | 510/22-090 | Shield over driveline to knife drums (tractor pull)     | 573433-545  |
| 5    | 456/22-036 | Shield over discharge conveyor driveline                | 573436-557  |
| 6    | 457/22-037 | Shield over driveline to knife drums                    | 573436-558  |
| 7a   | 462/22-042 | Drive Belt Cover outside                                | 573436-563  |
| 7b   | 463/22-043 | Drive Belt Cover inside                                 | 573436-564  |
| 8    | 432/22-012 | Knife Hood sprocket drive door/guard                    | 3rb-9109    |
| 9    | 416/21-038 | Sticker Guard                                           | 523003      |
| 10   | 418/21-030 | Sticker Moving                                          | 523004      |
| 11   | 417/21-029 | Sticker Rotating                                        | 523005      |



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Safety Sticker and Guard Location



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TITLE

**Rotor Hood**

DWG NO 3rb-9100

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# Rotor Hood

| ITEM | QTY | RCMR-PN    | DESCRIPT                                         | V-PN               |
|------|-----|------------|--------------------------------------------------|--------------------|
| 1    | 1   | 429/22-009 | Hood                                             | 3rb-9101           |
| 2    | 1   | 430/22-010 | Hood Side                                        | 3rb-9102           |
| 3    | 3   | 431/22-011 | Knife Drum                                       | 3rb-9103           |
| 4    | 2   | 79/01-093  | Sprocket 80-36 Double (for bottom 2 knife drums) | DS80C36 x 2 1/2kwy |
| 5    | 1   | 80/01-095  | Sprocket 80-36 Single (for top knife drum)       | 80C36 x 2 1/2 kwy  |
| 6    | 1   | 432/22-012 | Knife Hood sprocket drive door/guard             | 3rb-9109           |
| 7    | 3   | 433/22-013 | Bearing Mount                                    | 3rb-9125           |
| 8    | 1   | 434/22-014 | Knife Hood Top Plate                             | 3rb-9126           |
| 9    | 3   | 435/22-015 | Spacer                                           | 3rb-9132           |
| 10   | 2   | 436/22-016 | Knife hood extension right and left sides        | 3rb-9146 R/L       |
| 11   | 3   | 437/22-017 | Bearing Mount Drive Side                         | 3rb-9147           |
| 12   | 1   | 512/22-092 | Tensioner Lock                                   | 3rb-9150           |
| 13   | 1   | 438/22-018 | Wrench                                           | 573431-348         |
| 14   | 1   | 439/22-019 | Bar                                              | 573431-355         |
| 15   | 1   | 440/22-020 | Flap                                             | 573431-356         |
| 16   | 3   | 05/01-005  | Sprocket tension 3/4 bore Martin                 | 80BB12H            |
| 17   | 6   | 01/01-002  | Bearing 2" Bore                                  | UCF210-32          |
| 18   | 252 | 413/21-013 | Section                                          | NH26622            |
| 19   | 504 | 414/21-014 | Bolt Nut Sickle Section                          | NH86507777DS       |
| 20   | 3   | 25/01-025  | Love Joy Tensioner                               | SE38               |



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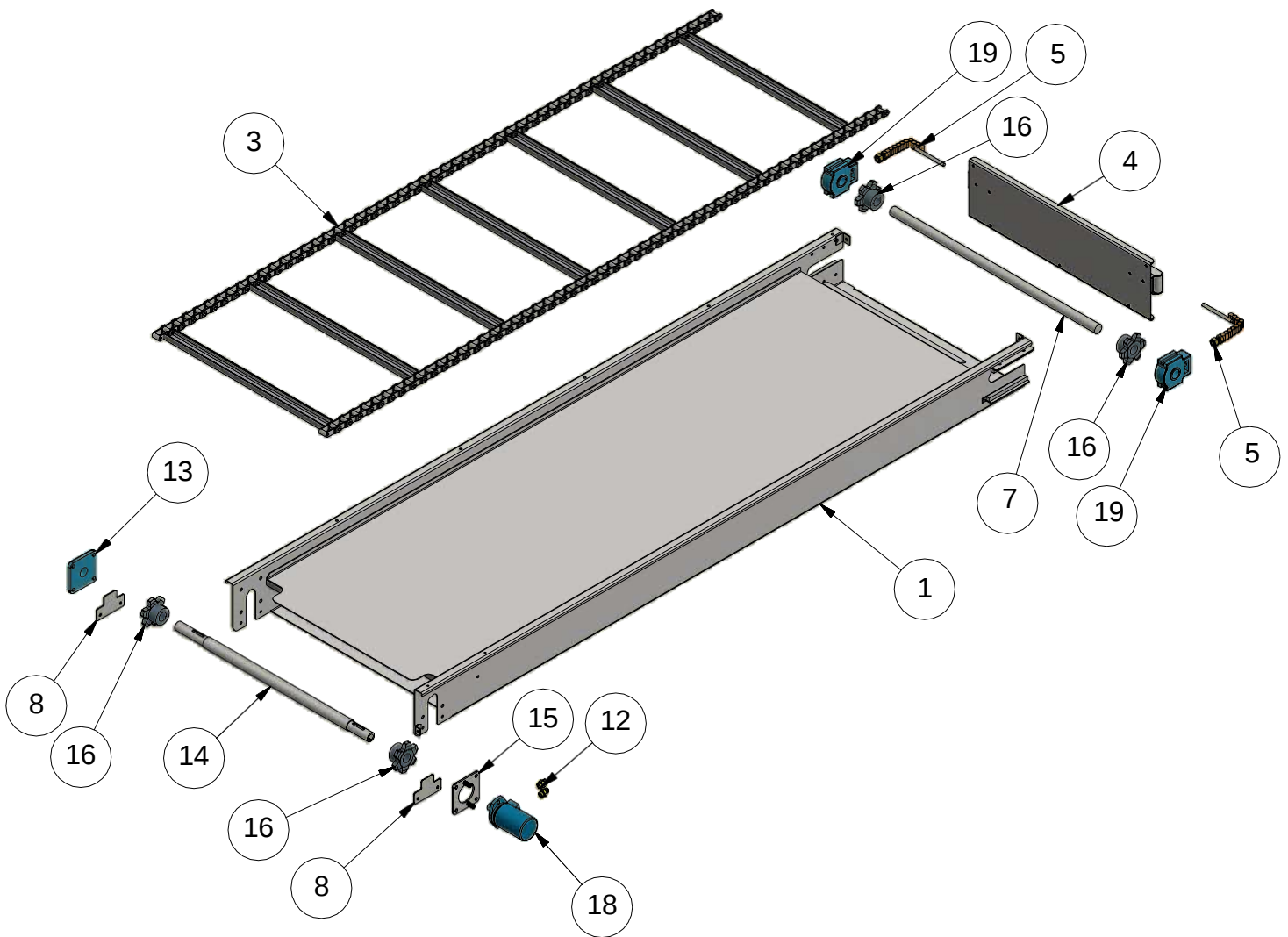
**Rotor Hood**

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## Hydraulic Drive



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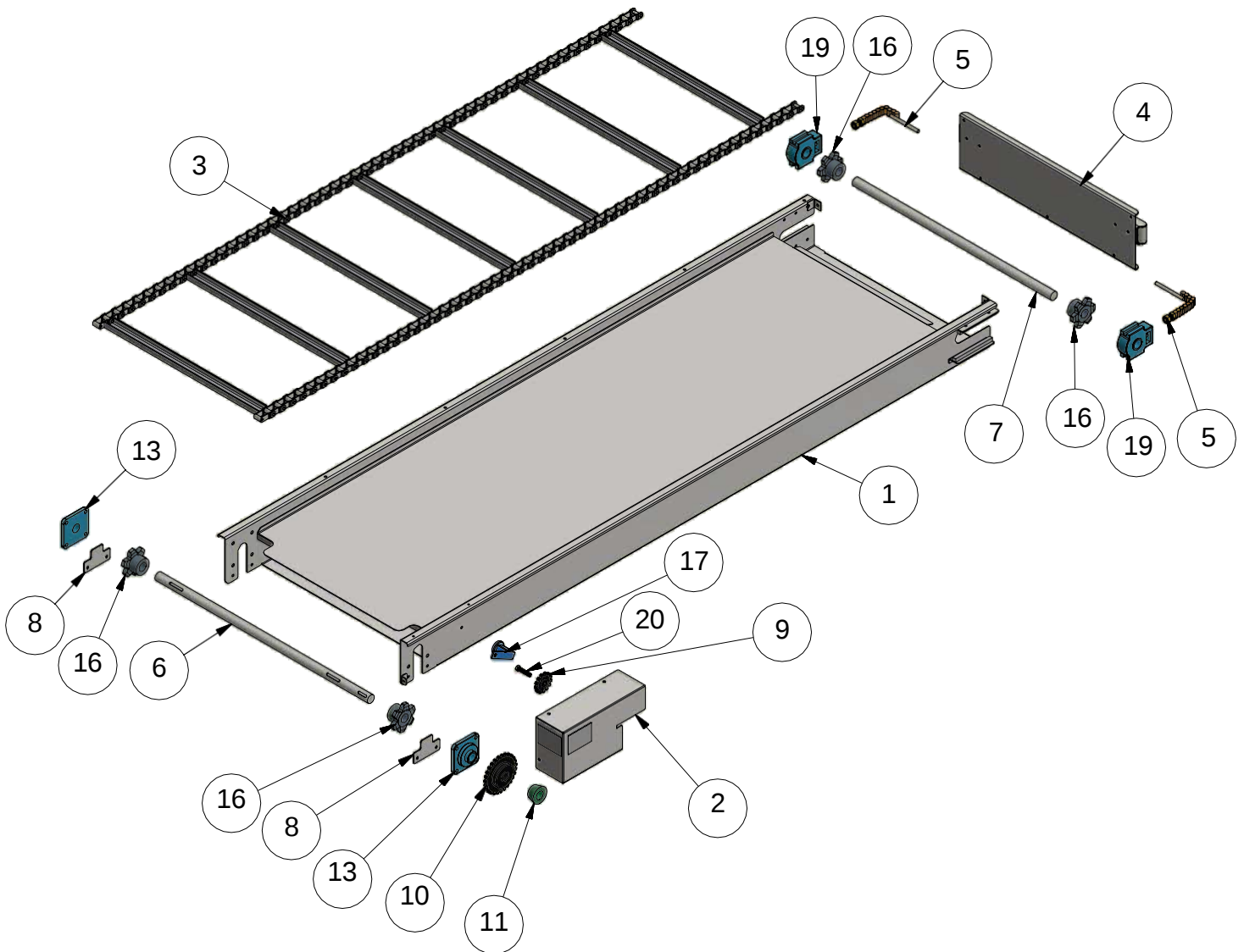
Cross Conveyor

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## Mechanical Drive



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Cross Conveyor

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# Cross Conveyor

| ITEM | QTY | RCMR-PN    | DESCRIPTION                                            | PART NUMBER             |
|------|-----|------------|--------------------------------------------------------|-------------------------|
| 1    | 1   | 486/22-066 | Frame                                                  | 573432-402              |
| 2    | 1   | 487/22-067 | Shield over discharge conveyor chain and sprockets     | 573432-404              |
| 3    | 1   | 415/21-017 | Conveyor Chain                                         | 573432-406              |
| 4    | 1   | 488/22-068 | End Plate                                              | 573432-407              |
| 5    | 2   | 489/22-069 | Tensioner                                              | 573432-408              |
| 6    | 1   | 490/22-070 | Head shaft discharge conveyor                          | 573432-421              |
| 7    | 1   | 491/22-071 | Tail shaft discharge conveyor                          | 573432-422              |
| 8    | 2   | 492/22-072 | Shield                                                 | 573432-441              |
| 9    | 1   | 83/01-097  | Idler sprocket 1/2 bore                                | 60BB13H X.5             |
| 10   | 1   | 27/01-027  | Sprocket driven                                        | 60BTB27                 |
| 11   | 1   | 24/01-024  | Taper Lock Bushing 1 1/2 bore 3/8kwy                   | 2012 Martin             |
| 12   | 2   | 325/09-032 | JIC to O-Ring Straight                                 | 6400_08_10              |
| 13   | 2   | 22/01-022  | 1 1/2 B Flange Bearing                                 | UCFX08-24               |
| 14   | 1   | 493/22-073 | RD-hyd-head-shaft-HY04 (round keyed/newer are splined) | 573445-410              |
| 15   | 1   | 494/22-074 | Bracket RD_hyd_head_shaft                              | HY06                    |
| 16   | 4   | 01/01-001  | Sprocket 6 tooth 1 1/2 bore                            | 667X 6t 1 1/2 B 3/8 kwy |
| 17   | 1   | 78/01-092  | Love Joy Tensioner                                     | SE18                    |
| 18   | 1   | 126/02-001 | 11.9cpr Hydraulic Motor                                | TB0195AS100AAAA         |
| 19   | 2   | 29/01-029  | Bearing Tail Shaft 1 1/2 bore                          | UCT208-24               |
| 20   | 1   | 540/23-020 | Bolt 1/2-13 X 2 1/2                                    | hhcs_5_13 x 2_5         |



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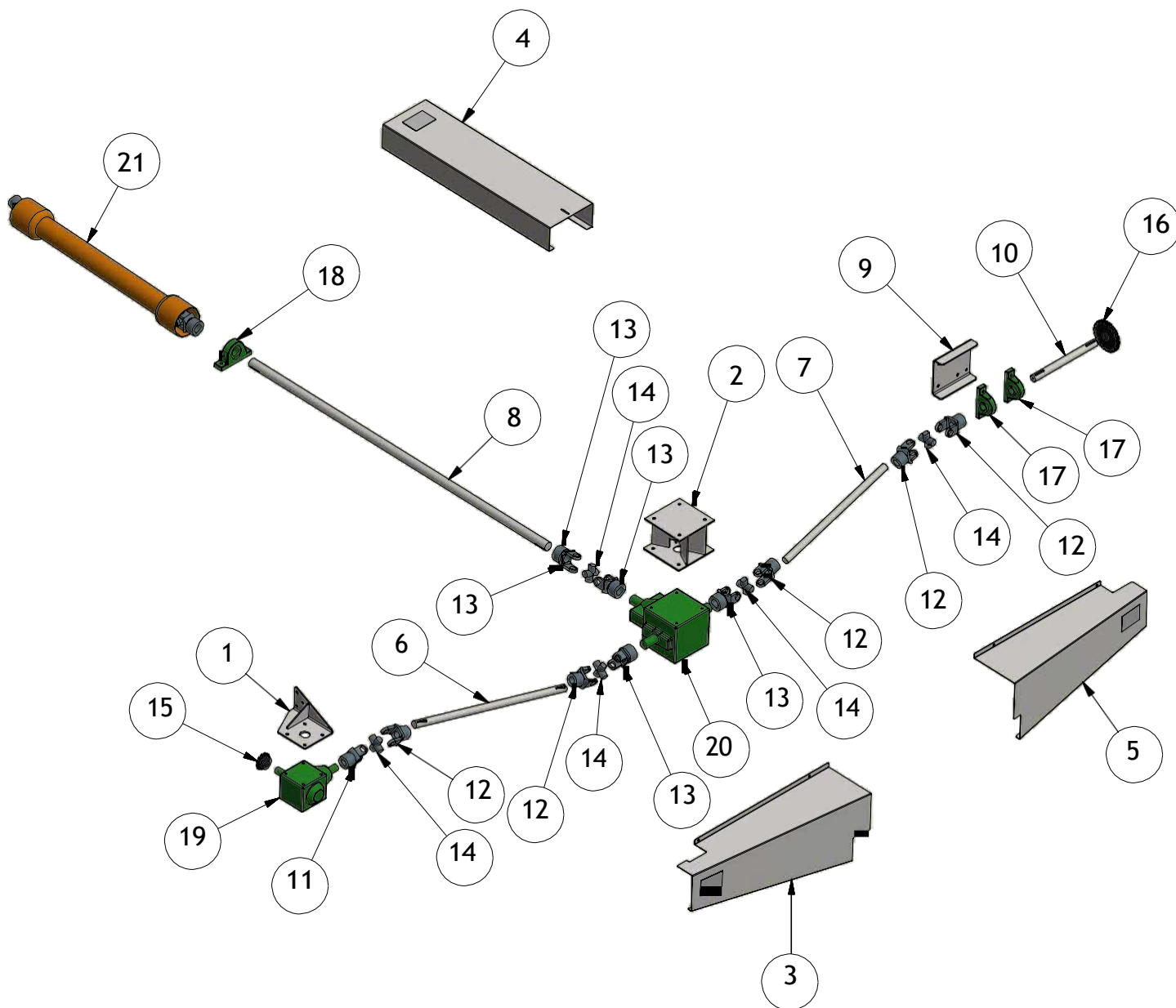
Cross Conveyor

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Trailer Drive System

DWG NO Trailer Drive

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# Trailer Drive Mechanical

| ITEM | QT | RCMR-PN    | DESCRIP                                                 | PART NUMBER         |
|------|----|------------|---------------------------------------------------------|---------------------|
| 1    | 1  | 453/22-033 | Bracket for cross conveyor gearbox                      | 573431-328          |
| 2    | 1  | 469/22-049 | Bracket above center gearbox                            | 573433-524          |
| 3    | 1  | 509/22-089 | Shield over discharge conveyor driveline (tractor pull) | 573433-543          |
| 4    | 1  | 470/22-050 | Shield over PTO driveline                               | 573433-544          |
| 5    | 1  | 510/22-090 | Shield over driveline to knife drums (tractor pull)     | 573433-545          |
| 6    | 1  | 471/22-051 | Shaft to cross conveyor gearbox                         | 573433-546          |
| 7    | 1  | 461/22-041 | Shaft from center gearbox to knife drum drive(trl)      | 573433-547          |
| 8    | 1  | 472/22-052 | Shaft                                                   | 573433-548          |
| 9    | 1  | 464/22-044 | Bracket                                                 | 573438-123          |
| 10   | 1  | 465/22-045 | Jack Shaft with tapped hole in the end                  | 573440-124          |
| 11   | 2  | 10/01-010  | Yoke 1 1/4 b kwy Neapco                                 | 184-3520-35N        |
| 12   | 7  | 09/01-009  | Yoke 1 3/8 b 5/16 kwy Neapco                            | 184-3522-35N        |
| 13   | 5  | 30/01-030  | 1 3/4 yoke 3/8 kwy                                      | 184-3528-35N        |
| 14   | 7  | 11/01-011  | Cross Neapco (u-joint)                                  | 302-3500-35N        |
| 15   | 1  | 14/01-014  | Sprocket 1 1/4 bore (drive)                             | 60BS12              |
| 16   | 1  | 82/01-096  | 18tooth 1 3/8bored to size 5/16 kwy 80 chain sprocket   | H80BG18F1 3/8       |
| 17   | 2  | 40/01-045  | 1 3/8 bore Pillow Block Bearing                         | UCP207-22           |
| 18   | 1  | 20/01-020  | 1 3/4 bore Pillow Block Bearing                         | UCP209-28           |
| 19   | 1  | 13/01-013  | Superior Gearbox 2:1 1 1/4 shaft                        | R500-9GGB-AO213     |
| 20   | 1  | 08/01-008  | Superior Center Gearbox 1.5:1 1 3/4 sft                 | 651 ACF-158         |
| 21   | 1  | 21/01-021  | PTO Driveline 60"                                       | 335-(60or48)-22-35N |



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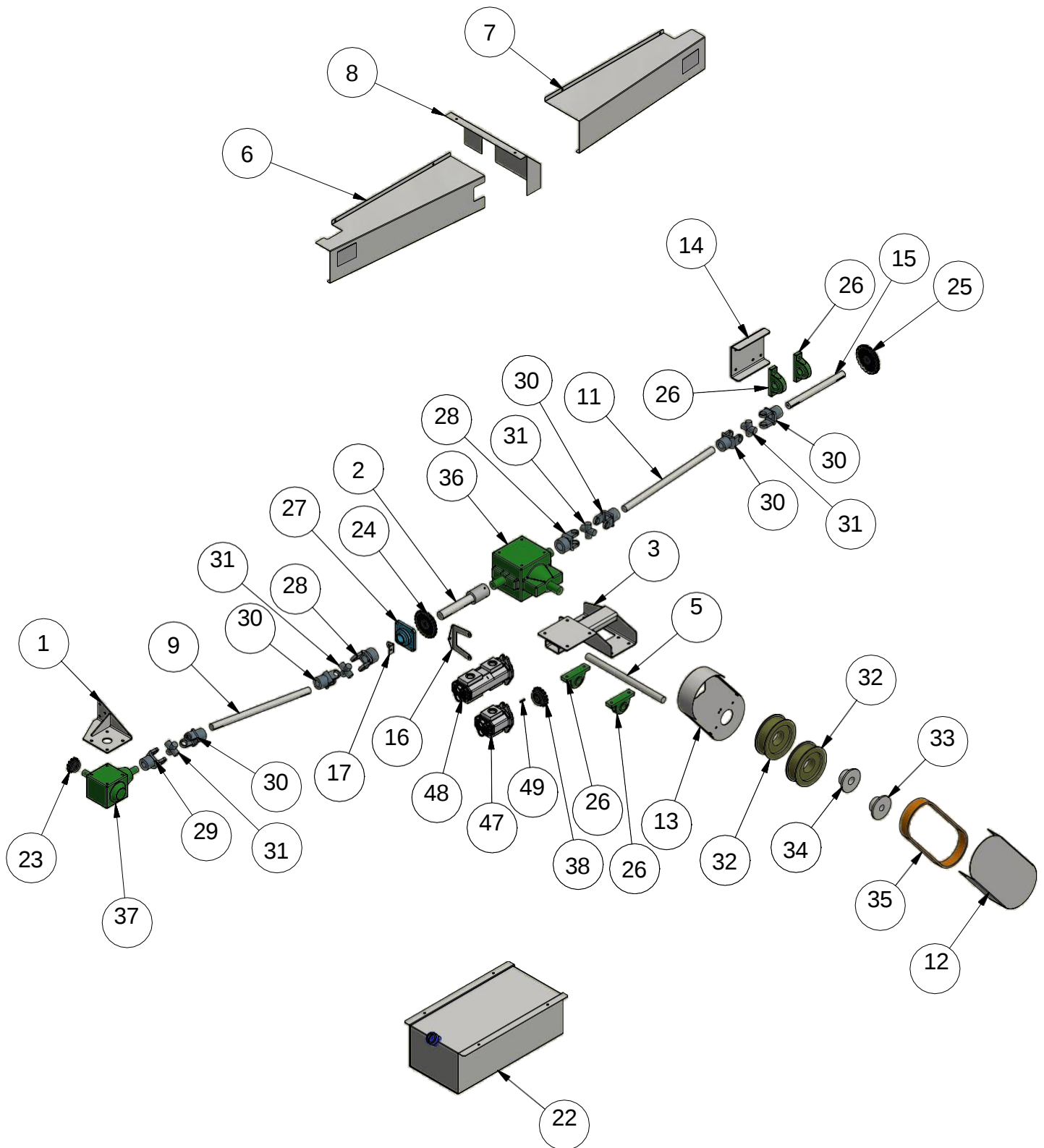
Trailer Drive System

DWG NO Trailer Drive

SHT 2 OF 2

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Serial Number 1264 and Lower



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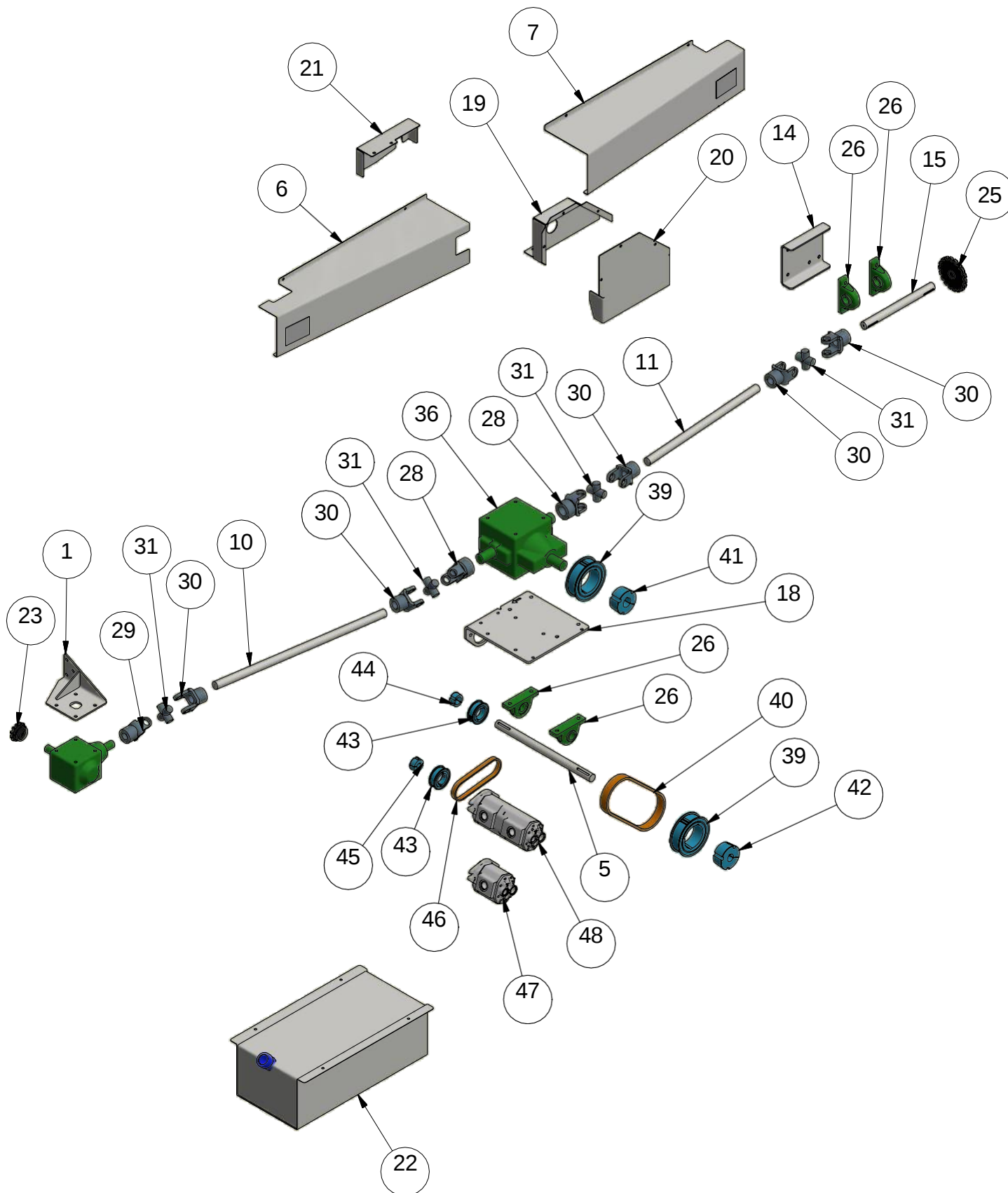
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Truck Drive Mechanical

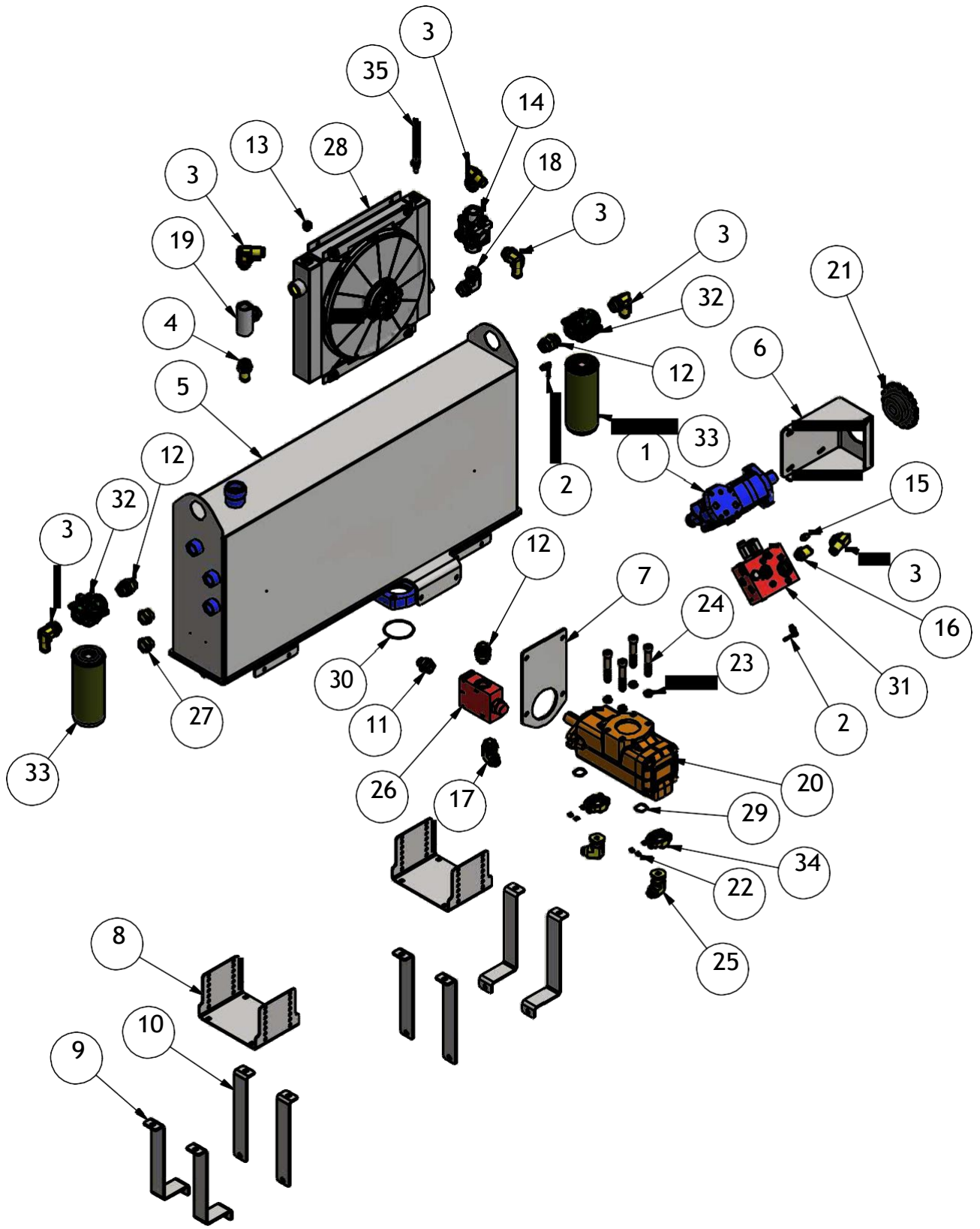
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REV 4a

| Parts List                                                                          |     |                                                                                                                                                               |                                                        |                                 |  |            |
|-------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------------|--|------------|
| ITEM                                                                                | QTY | RCMR-PN                                                                                                                                                       | DESC                                                   | PART NUMBER                     |  |            |
| 1                                                                                   | 1   | 453/22-033                                                                                                                                                    | Bracket for cross conveyor gearbox                     | 573431-328                      |  |            |
| 2                                                                                   | 1   | 396/20-065                                                                                                                                                    | Shaft and coupler 1 ¾ from center gearbox              | 573436-547                      |  |            |
| 3                                                                                   | 1   | 373/20-063                                                                                                                                                    | PTO Driveline to Gearbox bracket (truck)               | 573436-550                      |  |            |
| 4 n/s                                                                               | 2   | 506/22-086                                                                                                                                                    | Split shaft for torque limiter PTO driveline to pulley | 573436-551                      |  |            |
| 5                                                                                   | 1   | 455/22-035                                                                                                                                                    | 1 3/8" x 22"shaft -trk only -PTO driveline to Pulley   | 573436-551_01                   |  |            |
| 6                                                                                   | 1   | 456/22-036                                                                                                                                                    | Shield over discharge conveyor driveline               | 573436-557                      |  |            |
| 7                                                                                   | 1   | 457/22-037                                                                                                                                                    | Shield over driveline to knife drums                   | 573436-558                      |  |            |
| 8                                                                                   | 1   | 459/22-039                                                                                                                                                    | Shield over chain drive for hydraulic pump             | 573436-559                      |  |            |
| 9                                                                                   | 1   | 460/22-040                                                                                                                                                    | Shaft from center Gearbox to conveyor old style        | 573436-561                      |  |            |
| 10                                                                                  | 1   | 460/22-040                                                                                                                                                    | Shaft from center Gearbox to conveyor new style        | 573436-561_B                    |  |            |
| 11                                                                                  | 1   | 458/22-038                                                                                                                                                    | Shaft from center gearbox to knife drum drive(trk)     | 573436-562                      |  |            |
| 12                                                                                  | 1   | 462/22-042                                                                                                                                                    | Drive Belt Cover outside                               | 573436-563                      |  |            |
| 13                                                                                  | 1   | 463/22-043                                                                                                                                                    | Drive Belt Cover inside                                | 573436-564                      |  |            |
| 14                                                                                  | 1   | 464/22-044                                                                                                                                                    | Bracket for 2 pillow block bearings for jack shaft     | 573438-123                      |  |            |
| 15                                                                                  | 1   | 465/22-045                                                                                                                                                    | Jack Shaft with tapped hole in end                     | 573440-124                      |  |            |
| 16                                                                                  | 1   | 466/22-046                                                                                                                                                    | Bracket to hold hydraulic pump tight                   | 573440-145                      |  |            |
| 17                                                                                  |     | Not Used                                                                                                                                                      | xxxxxxx                                                | xxxxxx                          |  |            |
| 18                                                                                  | 1   | 515/22-095                                                                                                                                                    | Plate /bracket on bottom of center gearbox             | 573436-570                      |  |            |
| 19                                                                                  | 1   | 516/22-096                                                                                                                                                    | PTO dr to Gr Bx short belt cover inside                | 573436-571                      |  |            |
| 20                                                                                  | 1   | 517/22-097                                                                                                                                                    | PTO dr to Gr Bx short belt cover outside               | 573436-572                      |  |            |
| 21                                                                                  | 1   | 513/22-093                                                                                                                                                    | Cover for Belt Drive to Hyd Pump                       | 573436-573                      |  |            |
| 22                                                                                  | 1   | 468/22-048                                                                                                                                                    | Hydraulic tank (mechanical drive)                      | res3-711                        |  |            |
| 23                                                                                  | 1   | 14/01-014                                                                                                                                                     | Sprocket 1 1/4 bore 12tooth (drive)                    | 60BS12 1 ¼ bore                 |  |            |
| 24                                                                                  | 1   | 44/01-055                                                                                                                                                     | Sprocket 1 3/4 Bore 24tooth 3/8kwy                     | 60BS24 1 ¾ bore                 |  |            |
| 25                                                                                  | 1   | 82/01-096                                                                                                                                                     | Sprocket 1 3/8bored to size18tooth 5/16 kwy            | 80BS18 1 3/8 bore               |  |            |
| 26                                                                                  | 4   | 40/01-045                                                                                                                                                     | 1 3/8 bore Pillow Block Bearing                        | UCP207-22                       |  |            |
| 27                                                                                  | 1   | 46/01-057                                                                                                                                                     | Flange Bearing                                         | FC4-35-1 ¾                      |  |            |
| 28                                                                                  | 2   | 30/01-030                                                                                                                                                     | 1 3/4 Yoke 3/8 kwy                                     | 184-3528-35N                    |  |            |
| 29                                                                                  | 1   | 10/01-010                                                                                                                                                     | Yoke 1 1/4 b 1/4kwy Neapco                             | 184-3520-35N                    |  |            |
| 30                                                                                  | 5   | 09/01-009                                                                                                                                                     | Yoke 1 3/8 b 5/16 kwy Neapco                           | 184-3522-35N                    |  |            |
| 31                                                                                  | 4   | 11/01-011                                                                                                                                                     | Cross Neapco (u-joint)                                 | 302-3500-35N                    |  |            |
| 32                                                                                  | 2   | 35/01-041                                                                                                                                                     | Drive Pully                                            | P48-14M-55-E                    |  |            |
| 33                                                                                  | 1   | 37/01-042                                                                                                                                                     | Bushing (for P48-14M-55-E pulley)                      | EX 1 3/8 Bore                   |  |            |
| 34                                                                                  | 1   | 38/01-043                                                                                                                                                     | Bushing(for P48-14M-55-E pulley)                       | EX 1 3/4 Bore                   |  |            |
| 35                                                                                  | 1   | 57/01-066                                                                                                                                                     | Gates Poly Chain GT Carbon Belt                        | 14MGT-1400-37                   |  |            |
| 36                                                                                  | 1   | 08/01-008                                                                                                                                                     | Superior Center Gearbox 1.5:1 & 1 3/4 shafts           | 651 ACF-158                     |  |            |
| 37                                                                                  | 1   | 13/01-013                                                                                                                                                     | Superior Right Angle Gearbox 2:1 & 1 1/4 shafts        | R500-9GGB-AO213                 |  |            |
| 38                                                                                  | 1   | 43/01-054                                                                                                                                                     | Sprocket 7/8 Bore 16tooth (needs stepkey)              | 60BS16                          |  |            |
| 39                                                                                  | 2   | 116/01-200                                                                                                                                                    | Belt Sprocket 14P 38T 37W                              | 14MX-38-37                      |  |            |
| 40                                                                                  | 1   | 118/01-202                                                                                                                                                    | Timing Belt 994L 37W 71T                               | 14MGT-994-37                    |  |            |
| 41                                                                                  | 1   | 120/01-204                                                                                                                                                    | Bushing taper lock 1 ¾ B 3/8kwy                        | 3020 1 3/4                      |  |            |
| 42                                                                                  | 1   | 121/01-205                                                                                                                                                    | Bushing taper lock 1 3/8 B 5/16kwy                     | 3020 1 3/8                      |  |            |
| 43                                                                                  | 2   | 117/01-201                                                                                                                                                    | Belt Sprocket 8P 34T 21W                               | 8MX-34-21                       |  |            |
| 44                                                                                  | 1   | 122/01-206                                                                                                                                                    | Bushing taper lock 1 3/8B 5/16kwy                      | 1610 1 3/8                      |  |            |
| 45                                                                                  | 1   | 123/01-207                                                                                                                                                    | Bushing taper lock 7/8B1/4kwy(note key size)           | 1610 7/8                        |  |            |
| 46                                                                                  | 1   | 119/01-203                                                                                                                                                    | Timing belt 640L 21W 80T                               | 8MGT-640-21                     |  |            |
| 47                                                                                  | 1   | 217/02-099                                                                                                                                                    | Honor Single Pump (No Grain Attachment)                | #3GB6U360R                      |  |            |
| 48                                                                                  | 1   | 773/02-115                                                                                                                                                    | Geartek Double Pump (Grain Attachment)                 | GTK C20085R-5B-AMAAJ            |  |            |
| 49                                                                                  | 1   | 124/01-208                                                                                                                                                    | Step Key 1/4 to 3/16                                   | Step1/4 to 3/16                 |  |            |
|                                                                                     |     |                                                                                                                                                               |                                                        |                                 |  |            |
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|                                                                                     |     | DWG NO Truck Drive Mechanical                                                                                                                                 |                                                        | SHT 3 OF 3                      |  | DRAWN Paul |
|                                                                                     |     |                                                                                                                                                               |                                                        |                                 |  | REV 4a     |



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TITLE

Truck Drive System (Hydraulic)

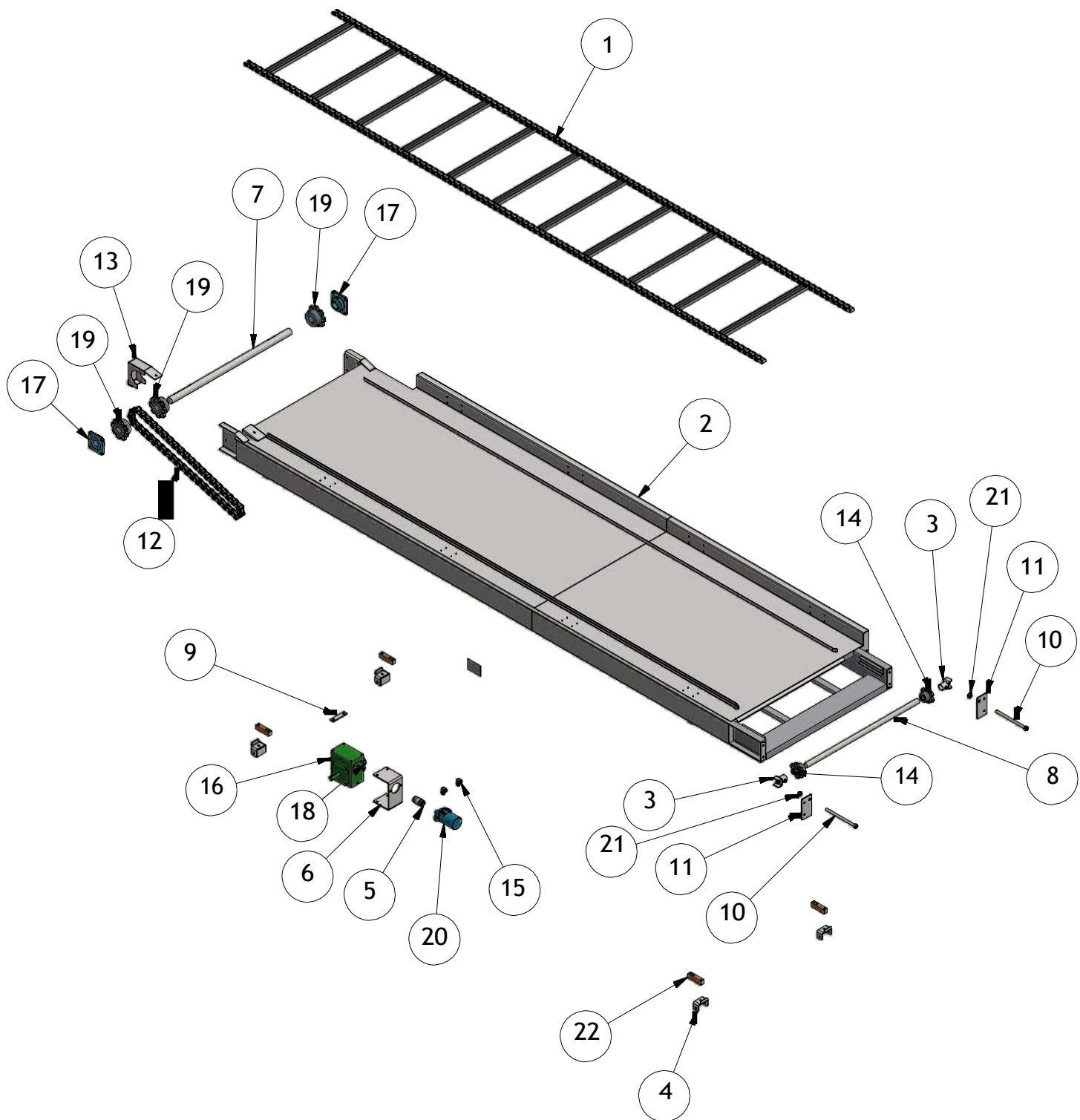
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| Hydraulic Truck Drive                                                              |     |                                                                                                                                                                                                                                  |                                                   |                                |            |
|------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------|------------|
| ITEM                                                                               | QTY | RCMR-PN                                                                                                                                                                                                                          | DESCRIPTION                                       | PART NUMBER                    |            |
| 1                                                                                  | 1   | 279/07-017                                                                                                                                                                                                                       | Hydraulic Motor 2000 series 2 speed               | 193-0389-001                   |            |
| 2                                                                                  | 2   | 298/09-005                                                                                                                                                                                                                       | Beaded Hose to O-Ring Elbow 90 degree             | 4601-04-04                     |            |
| 3                                                                                  | 6   | 300/09-007                                                                                                                                                                                                                       | Beaded Hose to O-Ring Elbow 90 degree             | 4601-16-16                     |            |
| 4                                                                                  | 3   | 301/09-008                                                                                                                                                                                                                       | Beaded Hose to O-Ring Straight                    | 4604-16-16                     |            |
| 5                                                                                  | 1   | 473/22-053                                                                                                                                                                                                                       | Hydraulic Reservoir (hydraulic drive)             | 573445-801                     |            |
| 6                                                                                  | 1   | 474/22-054                                                                                                                                                                                                                       | Hydraulic Motor Mounting Bracket for Knife Drive  | 573445-802                     |            |
| 7                                                                                  | 1   | 475/22-055                                                                                                                                                                                                                       | Torque Arm Hydraulic Pump Mounting Bracket        | 573445-824                     |            |
| 8                                                                                  | 2   | 476/22-056                                                                                                                                                                                                                       | Mount to truck frame for Hydraulic Reservoir      | 573445-826                     |            |
| 9                                                                                  | 4   | 477/22-057                                                                                                                                                                                                                       | Hold Down Angle for Mount for Hydraulic Reservoir | 573445-827                     |            |
| 10                                                                                 | 4   | 478/22-058                                                                                                                                                                                                                       | Hold Down Straight for Mount for Hydraulic Res    | 573445-828                     |            |
| 11                                                                                 | 1   | 326/09-033                                                                                                                                                                                                                       | JIC to O-Ring adapter                             | 6400-12-16                     |            |
| 12                                                                                 | 3   | 307/09-014                                                                                                                                                                                                                       | O-Ring Adjustable Union                           | 6403-NWO-16-16                 |            |
| 13                                                                                 | 2   | 309/09-016                                                                                                                                                                                                                       | O-Ring Hex Plug                                   | 6408-08                        |            |
| 14                                                                                 | 1   | 202/02-085                                                                                                                                                                                                                       | Thermal transfer by pass valve 85psi              | 65654- 85 -100degree           |            |
| 15                                                                                 | 1   | 317/09-024                                                                                                                                                                                                                       | JIC to O-Ring Elbow 90 degrees                    | 6801-04-04                     |            |
| 16                                                                                 | 1   | 321/09-028                                                                                                                                                                                                                       | JIC to O-Ring Elbow 90 degrees                    | 6801-12-12                     |            |
| 17                                                                                 | 1   | 322/09-029                                                                                                                                                                                                                       | JIC to O-Ring Elbow 90 degrees                    | 6801-12-16                     |            |
| 18                                                                                 | 1   | 314/09-021                                                                                                                                                                                                                       | O-Ring Adjustable Union Elbow 90 degrees          | 6807-16-16                     |            |
| 19                                                                                 | 1   | 327/09-034                                                                                                                                                                                                                       | O-Ring Branch Tee                                 | 6832-16-16-16                  |            |
| 20X                                                                                | 1   | 192/02-075                                                                                                                                                                                                                       | Vicker double pump (replaced with 211/02-093rs)   | 711-0199-032                   |            |
| 20                                                                                 | 1   | 211/02-093rs                                                                                                                                                                                                                     | Veljan dbl pump 1 1/4 rnd shaft (repls192/02-075) | VT6CCMW-B28-B17-WR00-D1-00     |            |
| 20                                                                                 | 1   | 210/02-093                                                                                                                                                                                                                       | Veljan dbl pump splined shaft (repls192/02-075)   | VT6CCMW-B28-B17-5R00-C1-00     |            |
| 21                                                                                 | 1   | 81/01-095                                                                                                                                                                                                                        | 16tooth 1 1/4 b 5/16 kwy bored to size Sprocket   | H80B16 x 1 1/4                 |            |
| 22                                                                                 | 8   | 527/23-007                                                                                                                                                                                                                       | Lock washer                                       | 90073A231                      |            |
| 23                                                                                 | 4   | 528/23-008                                                                                                                                                                                                                       | Lock washer                                       | 90073A240                      |            |
| 24                                                                                 | 4   | 530/23-010                                                                                                                                                                                                                       | SCHS bolt                                         | 91251A808                      |            |
| 25                                                                                 | 2   | 328/09-035                                                                                                                                                                                                                       | JIC to Flange Elbow 90 Code 61                    | FG6890 - 12 - 16               |            |
| 26                                                                                 | 1   | 283/07-021                                                                                                                                                                                                                       | Hydraforce priority flow regulator                | FR16-30F-16T-N/22.00           |            |
| 27                                                                                 | 2   | 193/02-076                                                                                                                                                                                                                       | 1 5/16-12 SAE sight window                        | LSW-A16                        |            |
| 28                                                                                 | 1   | 201/02-084                                                                                                                                                                                                                       | Thermal transfer cooler                           | MA-32-2-4A                     |            |
| 29                                                                                 | 2   | 531/23-011                                                                                                                                                                                                                       | O-ring                                            | O-ring-219                     |            |
| 30                                                                                 | 1   | 532/23-012                                                                                                                                                                                                                       | O-ring                                            | O-ring-237                     |            |
| 31                                                                                 | 1   | 281/07-019                                                                                                                                                                                                                       | Manifold Two Speed Hy Knife Motor                 | P16483-1                       |            |
| 32                                                                                 | 2   | 194/02-077                                                                                                                                                                                                                       | Filler head assembly hmk04 duramax                | P166088                        |            |
| 33                                                                                 | 2   | 200/02-083                                                                                                                                                                                                                       | Filter                                            | Don P164378                    |            |
| 34                                                                                 | 2   | 329/09-036                                                                                                                                                                                                                       | Split Flange kit code 61                          | SFK-16                         |            |
| 35                                                                                 | 1   | 203/02-086                                                                                                                                                                                                                       | Temp Switch SPST NO 3/4 SAE O-Ring(-8)WIRE LEADS  | NAS TT-E5A-120R-WL             |            |
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|                                                                                    |     |                                                                                                                                                                                                                                  |                                                   | Truck Drive System (Hydraulic) |            |
|                                                                                    |     | DWG NO 573445-800                                                                                                                                                                                                                |                                                   | SHT 2 OF 2                     | DRAWN Paul |
|                                                                                    |     |                                                                                                                                                                                                                                  |                                                   |                                | Page 27    |



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TITLE

Floor 4 Bale Right Side

DWG NO 573439-202

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**Floor 4 Bale Right**

| ITEM | QTY | RCMR-PM    | DESCRIPTION                                          | PART NUMBER           |
|------|-----|------------|------------------------------------------------------|-----------------------|
| 1    | 1   | 406/21-033 | Floor Chain 4-Bale (6-Bale RCMR#419/21-0336b)        | 573439-206            |
| 2    | 1   | 442/22-022 | Floor Weldment Right                                 | 573439-210            |
| 3    | 2   | 443/22-023 | Bracket for floor chain tensioner                    | 573439-213            |
| 4    | 4   | 445/22-025 | Bracket weigh bars pivot on                          | 573439-218            |
| 5    | 1   | 526/23-006 | Shaft Coupler floor drive hyd motor to gearbox       | 573439-219            |
| 6    | 1   | 446/22-026 | Bracket- Floor Motor Gearbox Mount                   | 573439-236            |
| 7    | 1   | 447/22-027 | Floor Chain Head Shaft                               | 573439-237            |
| 8    | 1   | 448/22-028 | Floor Chain Tail Shaft                               | 573439-239            |
| 9    | 1   | 449/22-029 | Spacer for front weigh bar brackets                  | 573439-242            |
| 10   | 2   | 539/23-019 | Adjuster Bolt for floor chain tensioner              | 573439-251            |
| 11   | 2   | 451/22-031 | Plate for floor chain tensioner                      | 573439-258            |
| 12   | 1   | 420/21-034 | Floor Chain Head Shaft Drive Chain 667X (right side) | 573439-283            |
| 13   | 1   | 452/22-032 | Shield over sprocket on head shaft                   | 573439-284            |
| 14   | 2   | 86/01-087  | Bronze Bushed Sprocket                               | 667X B6 1 1/2 bbs     |
| 15   | 2   | 319/09-026 | JIC to O-Ring Elbow 90                               | 6801-08-10            |
| 16   | 1   | 42/01-053  | Grove Gearbox 1 1/4- 1/4kwy                          | B830-60-L             |
| 17   | 2   | 02/01-002  | Flange Bearing 4 bolt 2in bore                       | UCF210-32             |
| 18   | 1   | 47/01-058  | 667X Sprocket steel (cast = RCMR# 747/01-058c)       | 667X 6T 1 1/4B 1/4kwy |
| 19   | 3   | 41/01-050  | Floor Chain Head Shaft Driven Sprocket               | 667X 8T 2B 1/2kwy     |
| 20   | 1   | 126/02-001 | 11.9cpr Parker Hydraulic Motor (floor chain drive)   | TB0195AS100AAAA       |
| 21   | 4   | 538/23-018 | Nut                                                  | hex nut 75-10         |
| 22   | 4   | 231/06-002 | SBS 5K LB (SE) Weigh Bar                             | 403477                |
| 22   | 4   | 505/22-085 | Dummy Weigh Bar                                      | 573439-261            |



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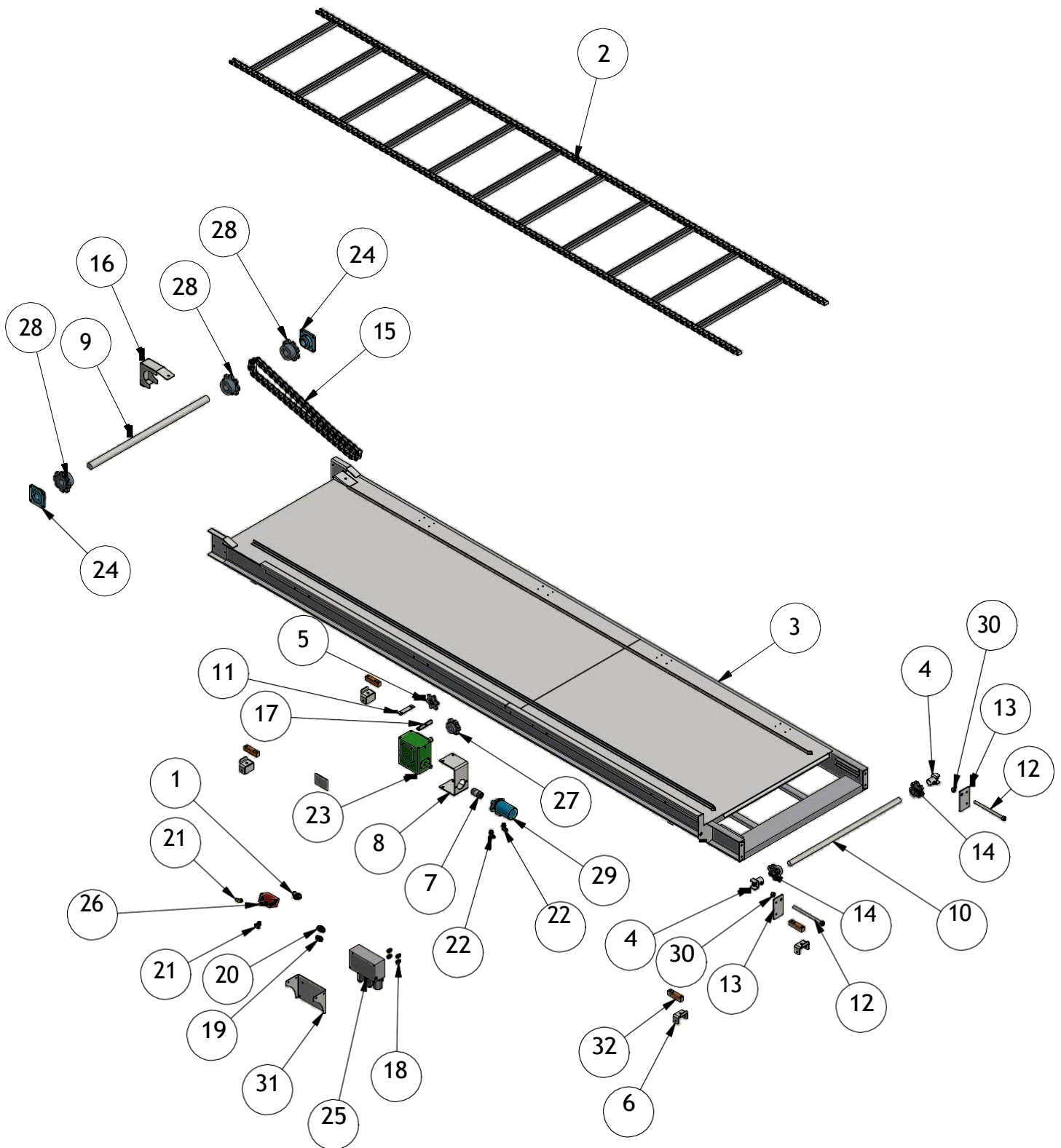
**Floor 4 Bale Right Side**

DWG NO 573439-202

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TITLE

Floor 4 Bale Left Side

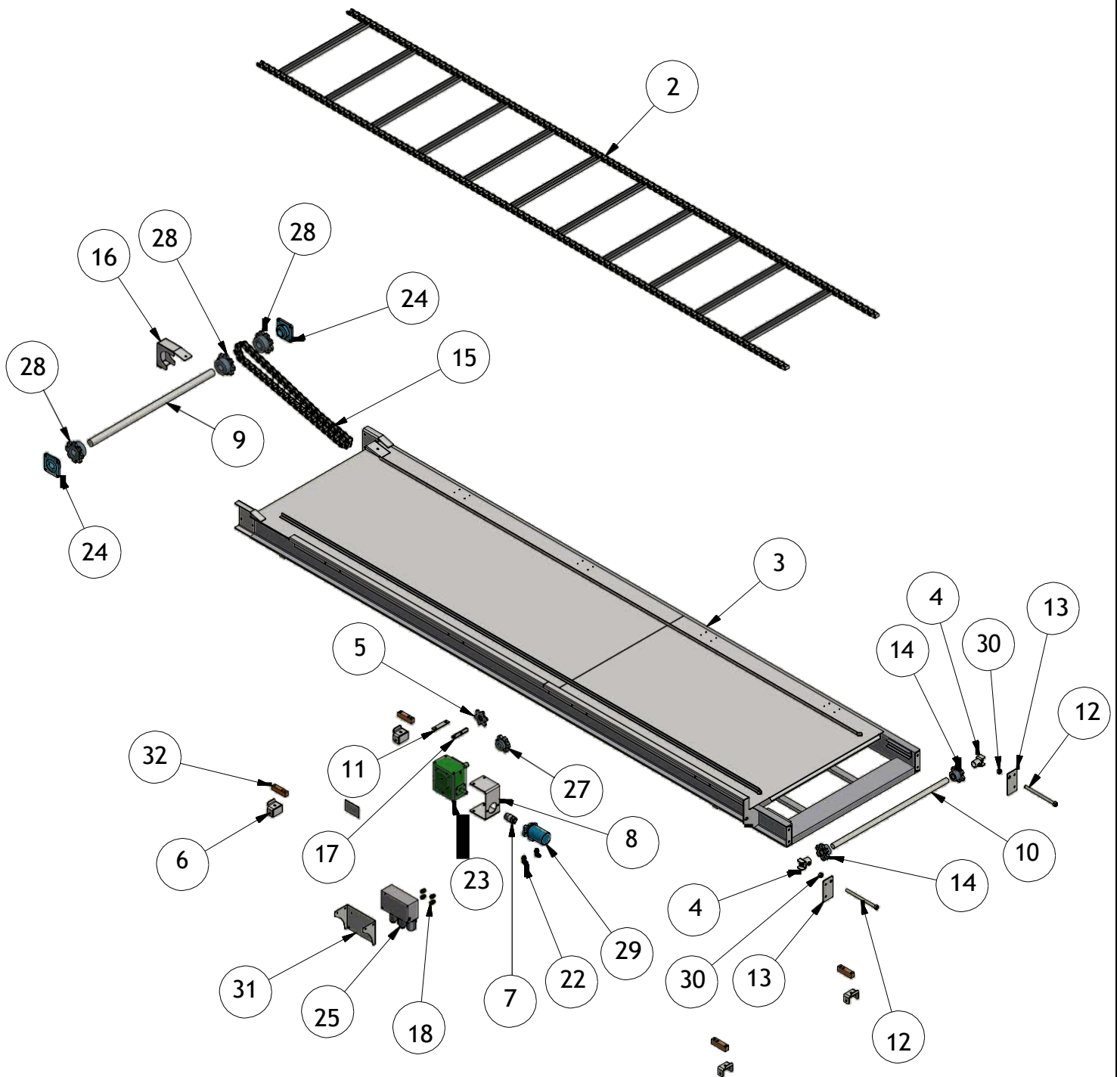
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Floor 4 Bale Left Side

Mechanical

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**Parts List**

| ITEM | QTY | RCMR-PN    | DESCRIPTION                                           | PART NUMBER           |
|------|-----|------------|-------------------------------------------------------|-----------------------|
| 1    | 2   | 299/09-006 | Beaded Hose to O-Ring Elbow 90                        | 4601-16-12            |
| 2    | 1   | 406/21-033 | 4-Bale Floor Chain (6-Bale RCMR#419/21-0336b)         | 573439-206            |
| 3    | 1   | 441/22-021 | Floor Weldment Left                                   | 573439-209            |
| 4    | 2   | 443/22-023 | Bracket for floor chain tensioner                     | 573439-213            |
| 5    | 1   | 444/22-024 | Idle Sprocket                                         | 573439-217            |
| 6    | 4   | 445/22-025 | Bracket weigh bars pivot on                           | 573439-218            |
| 7    | 1   | 526/23-006 | Shaft Coupler Hyd motor to gearbox                    | 573439-219            |
| 8    | 1   | 446/22-026 | Bracket- Floor Motor Gearbox Mount                    | 573439-236            |
| 9    | 1   | 447/22-027 | Floor Chain Head Shaft                                | 573439-237            |
| 10   | 1   | 448/22-028 | Floor Chain Tail Shaft                                | 573439-239            |
| 11   | 1   | 449/22-029 | Spacer for front weigh bar brackets                   | 573439-242            |
| 12   | 2   | 539/23-019 | Adjuster Bolt for floor chain tensioner               | 573439-251            |
| 13   | 2   | 451/22-031 | Plate for floor chain tensioner                       | 573439-258            |
| 14   | 2   | 86/01-087  | Bronzed bushed sprocket                               | 667X B6 1 1/2 bbs     |
| 15   | 1   | 467/22-047 | Floor chain head shaft drive chain 667X (left side)   | 573439-282            |
| 16   | 1   | 452/22-032 | Shield over sprocket on head shaft                    | 573439-284            |
| 17   | 1   | 514/22-094 | Bracket for idle/tension sprocket (only on Left side) | 573439-285            |
| 18   | 4   | 303/09-010 | JIC to O-Ring straight                                | 6400-08-08            |
| 19   | 1   | 304/09-011 | JIC to O-Ring straight                                | 6400-12-12            |
| 20   | 1   | 306/09-013 | O-Ring Adjustable Union                               | 6403-NOW-12-12        |
| 21   | 2   | 313/09-020 | JIC to O-Ring Elbow 90                                | 6801-08-08            |
| 22   | 2   | 319/09-026 | JIC to O-Ring Elbow 90                                | 6801-08-10            |
| 23   | 1   | 42/01-053  | Grove Gearbox 1 1/4- 1/4kwy                           | B830-60-L             |
| 24   | 2   | 02/01-002  | Flange Bearing 4 bolt 2in bore                        | UCF210-32             |
| 25   | 1   | 273/07-011 | Floor Manifold                                        | P15619-2              |
| 26   | 1   | 282/07-020 | Priority flow 8gpm and relief for conveyor            | P16532-2              |
| 27   | 1   | 47/01-058  | 667X Sprocket steel (cast = RCMR# 747/01-058c)        | 667X 6T 1 1/4B 1/4kwy |
| 28   | 3   | 41/01-050  | Floor Chain Head Shaft Driven Sprocket                | 667X 8T 2B 1/2kwy     |
| 29   | 1   | 126/02-001 | 11.9cpr Parker Hydraulic Motor (floor chain drive)    | TB0195AS100AAAA       |
| 30   | 4   | 538/23-018 | Nut                                                   | hex nut 75-10         |
| 31   | 1   | 508/22-088 | Bracket for Floor Manifold                            | res3-717              |
| 32   | 4   | 231/06-002 | SBS 5K LB (SE) Weigh Bar                              | 403477                |
| 32   | 4   | 505/22-085 | Dummy Weigh Bar                                       | 573439-261            |



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TITLE

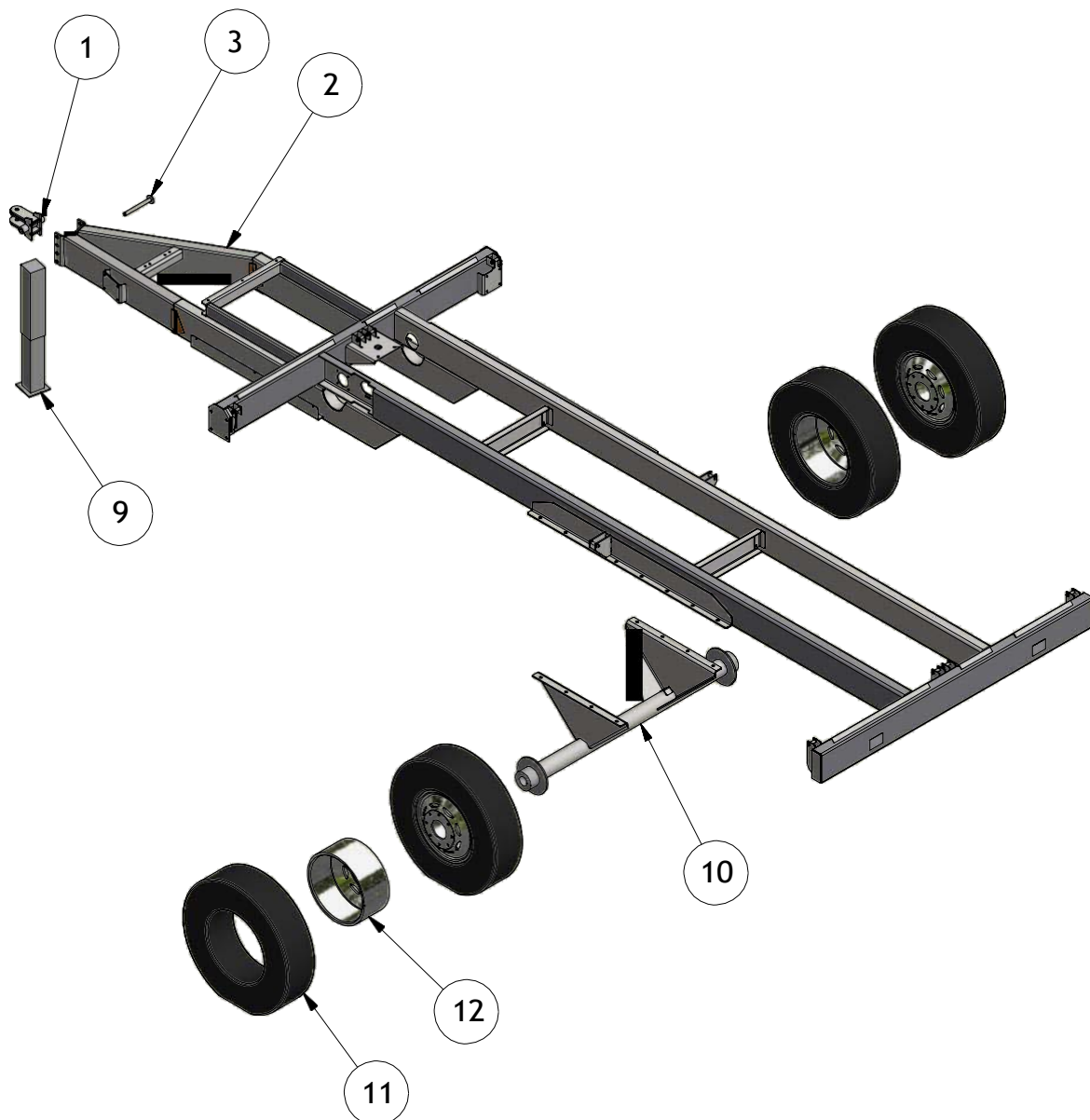
**Floor 4 Bale Left Side**

DWG NO 573439-201

SHT 3 OF 3

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Single Dual



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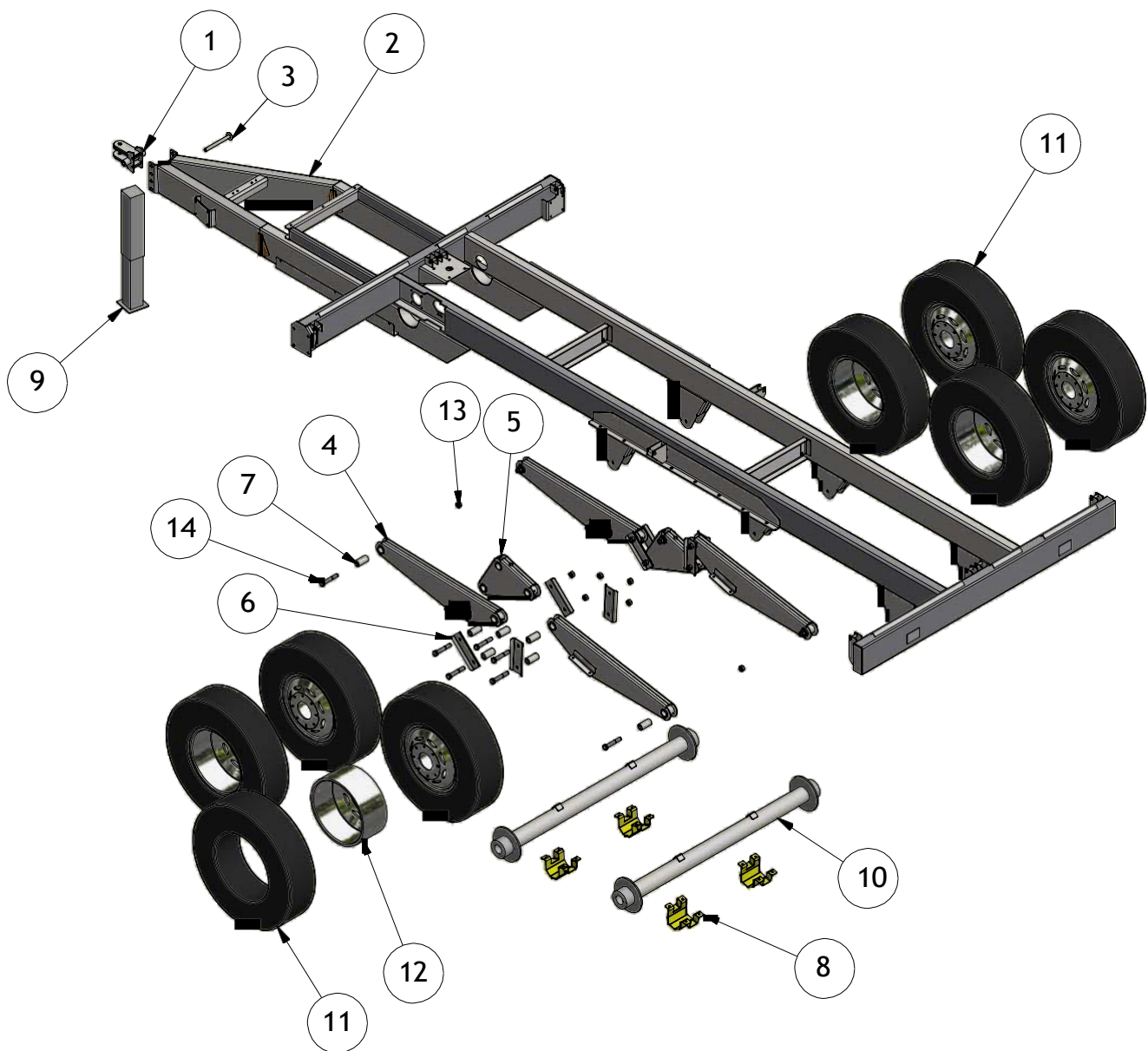
Frame Trailer 6 Bale

DWG NO 573440-185

SHT 1 OF 3

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Page 33



Tandem Dual



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Frame Trailer 6 Bale

DWG NO 573440-185

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Page 34

# Parts List

| ITEM | QTY | RCMR-PN    | DESCRIPTI                                                | PART NUMBER            |
|------|-----|------------|----------------------------------------------------------|------------------------|
| 1    | 1   | 421/22-001 | Hitch                                                    | 573433-528             |
| 2    | 1   | 423/22-003 | Tractor Pull Trailer Frame                               | 573433-534             |
| 3    | 1   | 422/22-002 | Pin to hold the adjustable hitch in place                | 573433-559             |
| 4    | 4   | 424/22-004 | Beam for tandem axle suspension system                   | 573433-565             |
| 5    | 4   | 425/22-005 | Equalizer for tandem axle suspension system              | 573433-566             |
| 6    | 8   | 426/22-006 | Link Plate for tandem axle suspension system             | 573433-567             |
| 7    | 14  | 427/22-007 | Bushing for tandem axle suspension system                | 573433-569             |
| 8    | 4   | 428/22-008 | Clamp to axle for tandem axle suspension system          | 573433-572             |
| 9    | 1   | 353/12-001 | Red Neck Drop Leg Jack                                   | 294020                 |
| 10   | 3   | 354/14-001 | Axle Dexter D200/hub face (Stud Piloted)                 | 76/idler/no flange oil |
| 11   | 12  | 361/10-002 | Tire                                                     | 11 22.5                |
| 12   | 12  | 352/10-001 | Red Neck Dual Bud Rims 22.5 X 8 ¼ (Stud Piloted)         | 330800                 |
| 13   | 14  | 521/23-001 | Nut                                                      | Hexnut-1 - 14          |
| 14   | 14  | 522/23-002 | Bolt                                                     | Hhcs-1x6-14            |
| 9    | 1   | 714/17-014 | HSID Drop Leg Jack                                       | TJD-12000-SPR2 12,000  |
| 10   | 3   | 701/17-001 | HSID Track Idler Axle 22,500 lb 77.5" Axle (Hub Piloted) | Hub & wheel spacers    |
| 11   | 12  | 703/17-003 | HSID Tire                                                | 11R22.5                |
| 12   | 12  | 710/17-010 | HSID Rim Dual (Hub Piloted)                              | 22.5 x 8 10-hole dual  |

Later models will have Hub Piloted Wheels and Axles



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TITLE

Frame Trailer 6 Bale

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SHT 3 OF 3

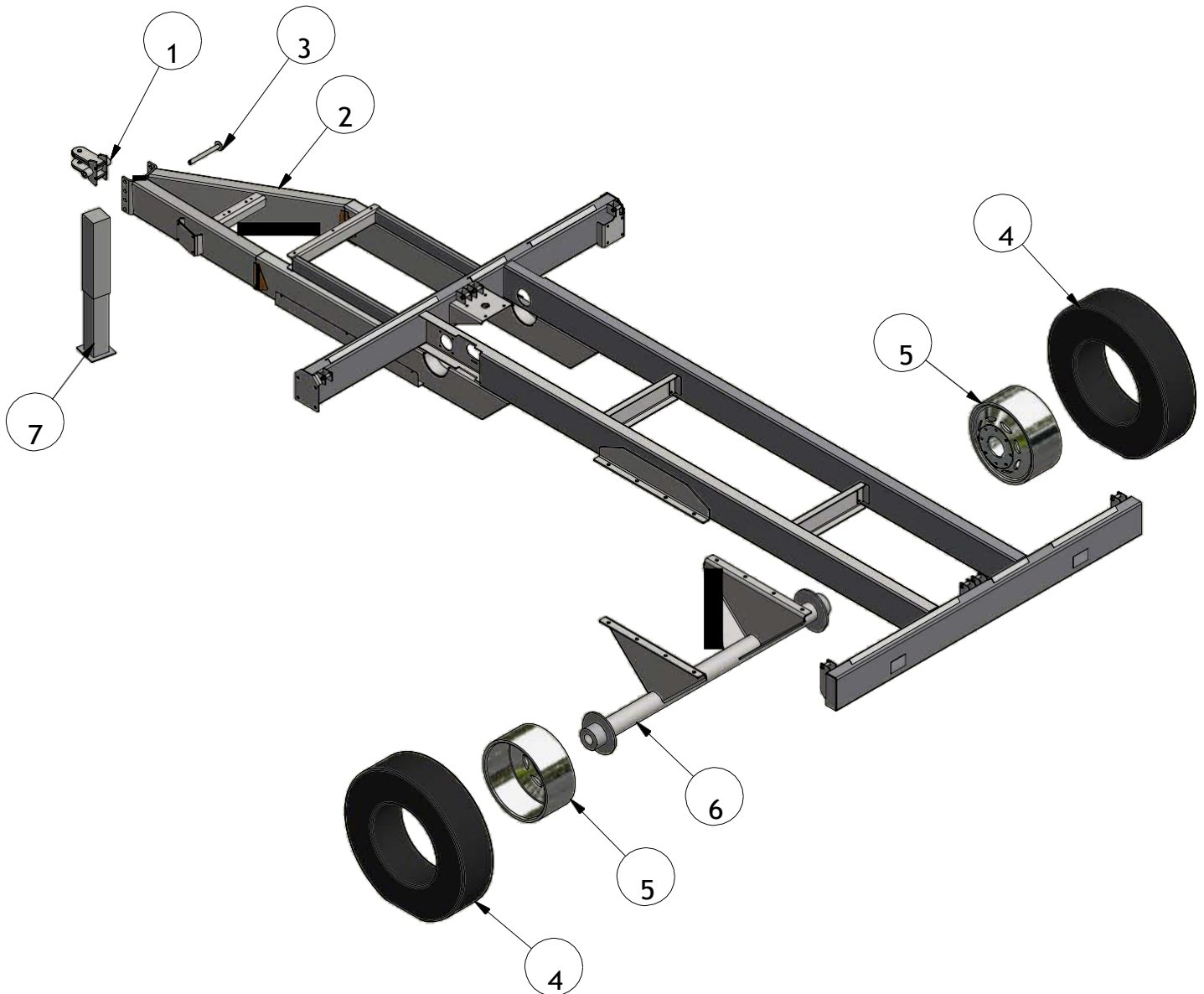
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Page 35

# Parts List

| ITEM | QTY | RCMR-PN    | DESCRIPTI                                                | PART NUMBER            |
|------|-----|------------|----------------------------------------------------------|------------------------|
| 1    | 1   | 421/22-001 | Hitch                                                    | 573433-528             |
| 2    | 1   | 423/22-003 | Tractor Pull Trailer Frame                               | 573433-534             |
| 3    | 1   | 422/22-002 | Pin to hold the adjustable hitch in place                | 573433-559             |
| 4    | 2   | 361/10-002 | Tire                                                     | 11 22.5                |
| 5    | 2   | 352/10-001 | Red Neck Dual Bud Rims 22.5 X 8 ¼ (Stud Piloted)         | 330800                 |
| 6    | 1   | 354/14-001 | Axle Dexter D200/hub face (Stud Piloted)                 | 76/idler/no flange oil |
| 7    | 1   | 353/12-001 | Red Neck Drop Leg Jack                                   | 294020                 |
| 7    | 1   | 714/17-014 | HSID Drop Leg Jack                                       | TJD-12000-SPR2 12,000  |
| 6    | 1   | 701/17-001 | HSID Track Idler Axle 22,500 lb 77.5" Axle (Hub Piloted) | Hub & wheel spacers    |
| 4    | 2   | 703/17-003 | HSID Tire                                                | 11R22.5                |
| 5    | 2   | 710/17-010 | HSID Rim Dual (Hub Piloted)                              | 22.5 x 8 10-hole dual  |

Later models will have Hub Piloted Wheels and Axles



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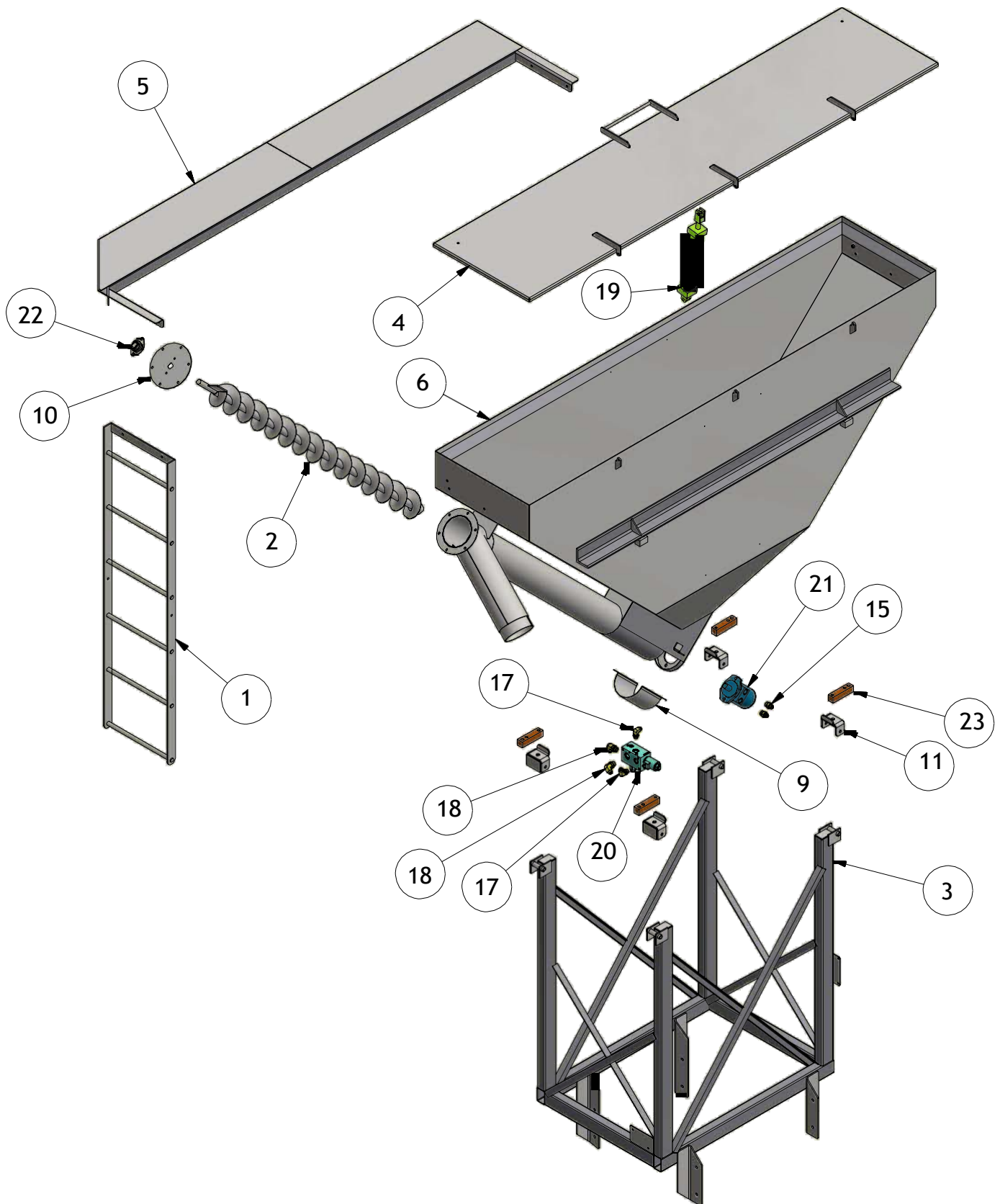
Frame Trailer 4 Bale

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## Mechanical Truck



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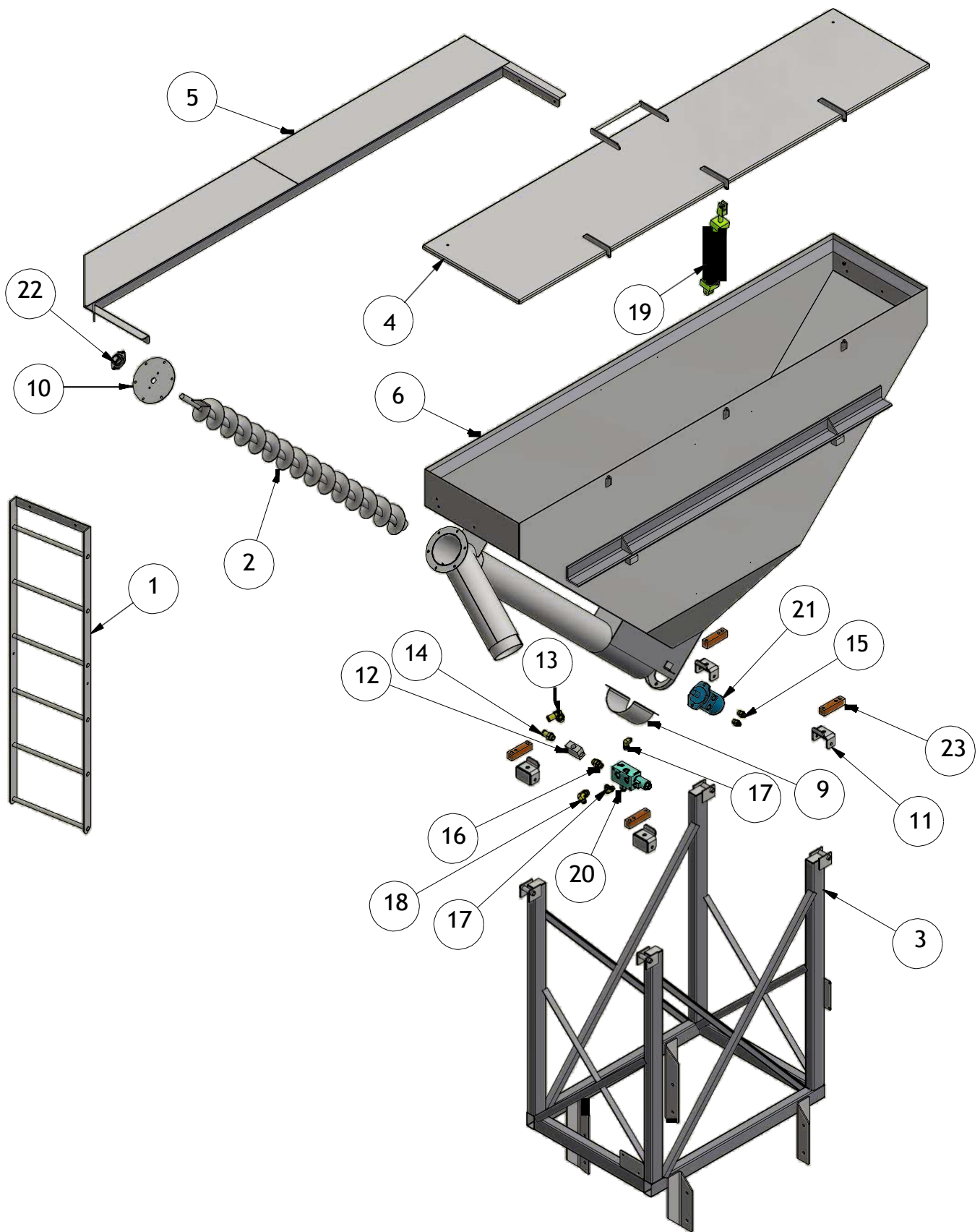
Grain Attachment

DWG NO 573434-600

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# Hydraulic Truck



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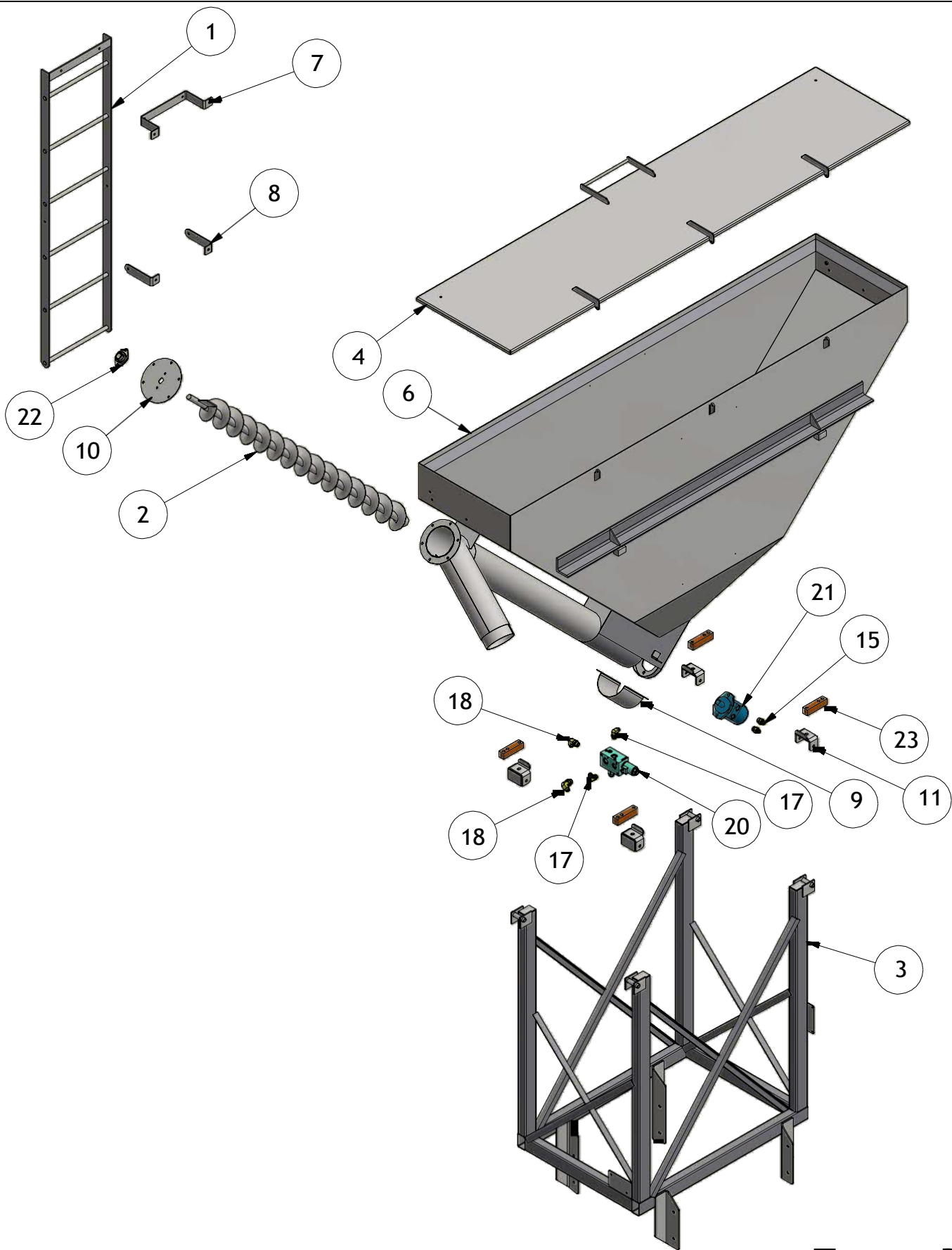
Grain Attachment

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## Tractor Pull



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Grain Attachment

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**Grain Attachment**

| ITEM | QTY | RCMR-PN    | DESCRIPTION                                                 | PART NUMBER      |
|------|-----|------------|-------------------------------------------------------------|------------------|
| 1    | 1   | 495/22-075 | Ladder                                                      | 573434-601       |
| 2    | 1   | 536/23-016 | Auger                                                       | 573434-602       |
| 3    | 1   | 496/22-076 | Frame stand for grain bin                                   | 573434-604       |
| 4    | 1   | 497/22-077 | Cover/Lid                                                   | 573434-605       |
| 5    | 1   | 498/22-078 | Platform on Grain Bin                                       | 573434-606       |
| 6    | 1   | 499/22-079 | Grain Bin Hopper                                            | 573434-607       |
| 7    | 1   | 500/22-080 | Ladder Bracket A (Tractor Pull)                             | 573434-631       |
| 8    | 2   | 501/22-081 | Ladder Bracket B (Tractor Pull)                             | 573434-632       |
| 9    | 1   | 502/22-082 | Auger clean out cover                                       | 573434-635       |
| 10   | 1   | 503/22-083 | Auger end cap plate                                         | 573434-651       |
| 11   | 4   | 445/22-025 | Bracket weigh bars pivot on                                 | 573439-218       |
| 12   | 1   | 199/02-082 | O-Ring Tee Coupling LDI SAE straight thread tee coupling    | 1060-12-12-12    |
| 13   | 1   | 299/09-006 | Beaded Hose to O-Ring Elbow 90                              | 4601-16-12       |
| 14   | 1   | 310/09-017 | Beaded Hose to O-Ring Straight                              | 4604-16-12       |
| 15   | 2   | 325/09-032 | JIC to O-Ring Straight                                      | 6400-08-10       |
| 16   | 1   | 312/09-019 | O-Ring Adjustable Union                                     | 6403-NWO-12-10   |
| 17   | 2   | 313/09-020 | JIC to O-Ring Elbow 90                                      | 6801-08-08       |
| 18   | 2   | 319/09-026 | JIC to O-Ring Elbow 90                                      | 6801-08-10       |
| 19   | 1   | 168/02-049 | Air Cylinder #1027 grain lid                                | B300 X 12        |
| 20   | 1   | 272/07-010 | F/T Manifold - Grain                                        | P15594-2         |
| 21   | 1   | 157/02-037 | Hydraulic Motor (different on later Hydraulic drive models) | TB0130AS100AAAA  |
| 22   | 1   | 537/23-017 | Bearing end of grain auger                                  | bearing 1in bore |
| 23   | 4   | 231/06-002 | SBS 5K LB (SE) Weigh Bar                                    | 403477           |
| 23   | 4   | 505/22-085 | Dummy Weigh Bar                                             | 573439-261       |



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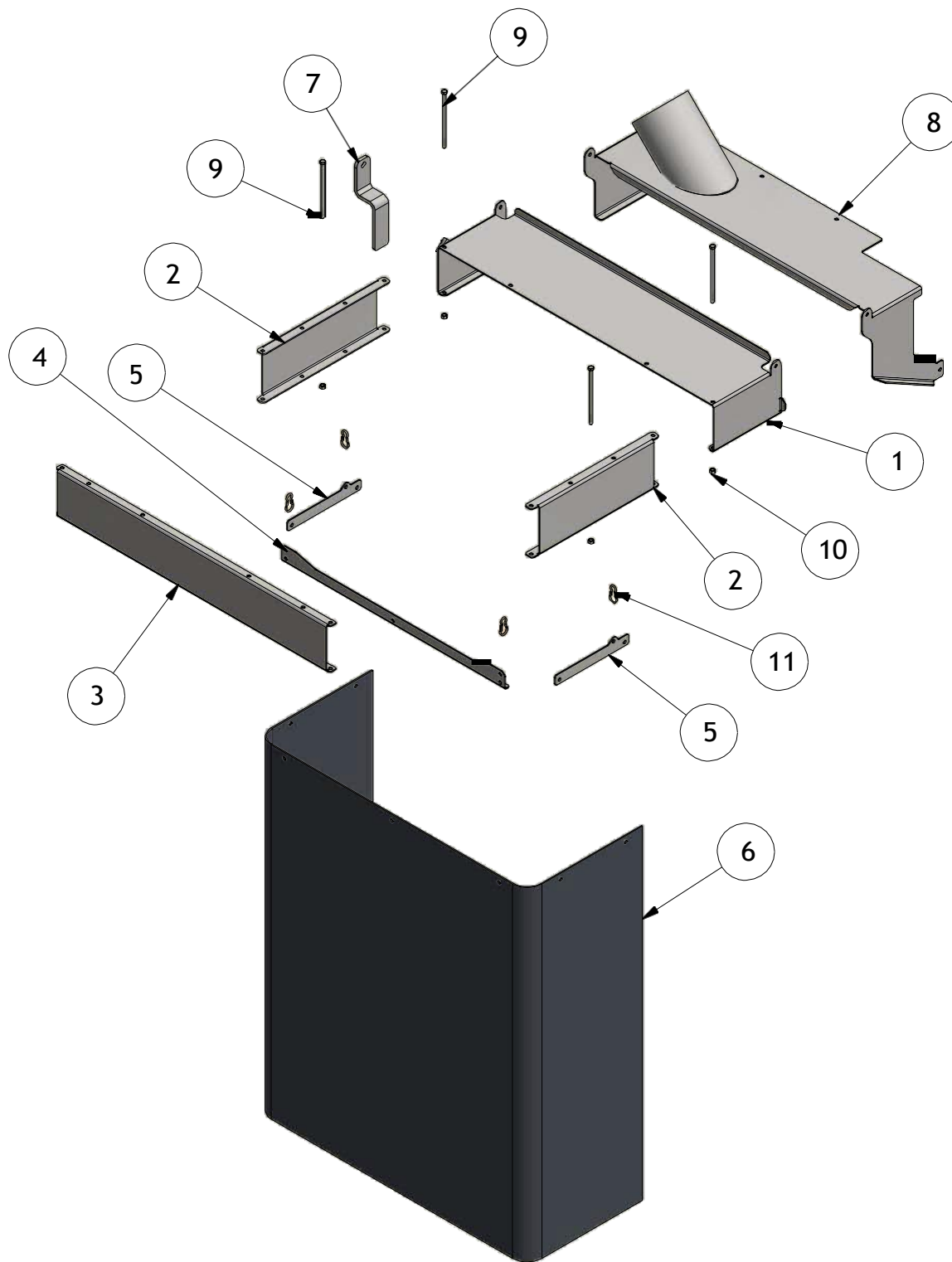
Grain Attachment

DWG NO 573434-600

SHT 4 OF 4

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TITLE

Discharge Hood

DWG NO  
573435-600-Dis-Hood

SHT 1 OF 2

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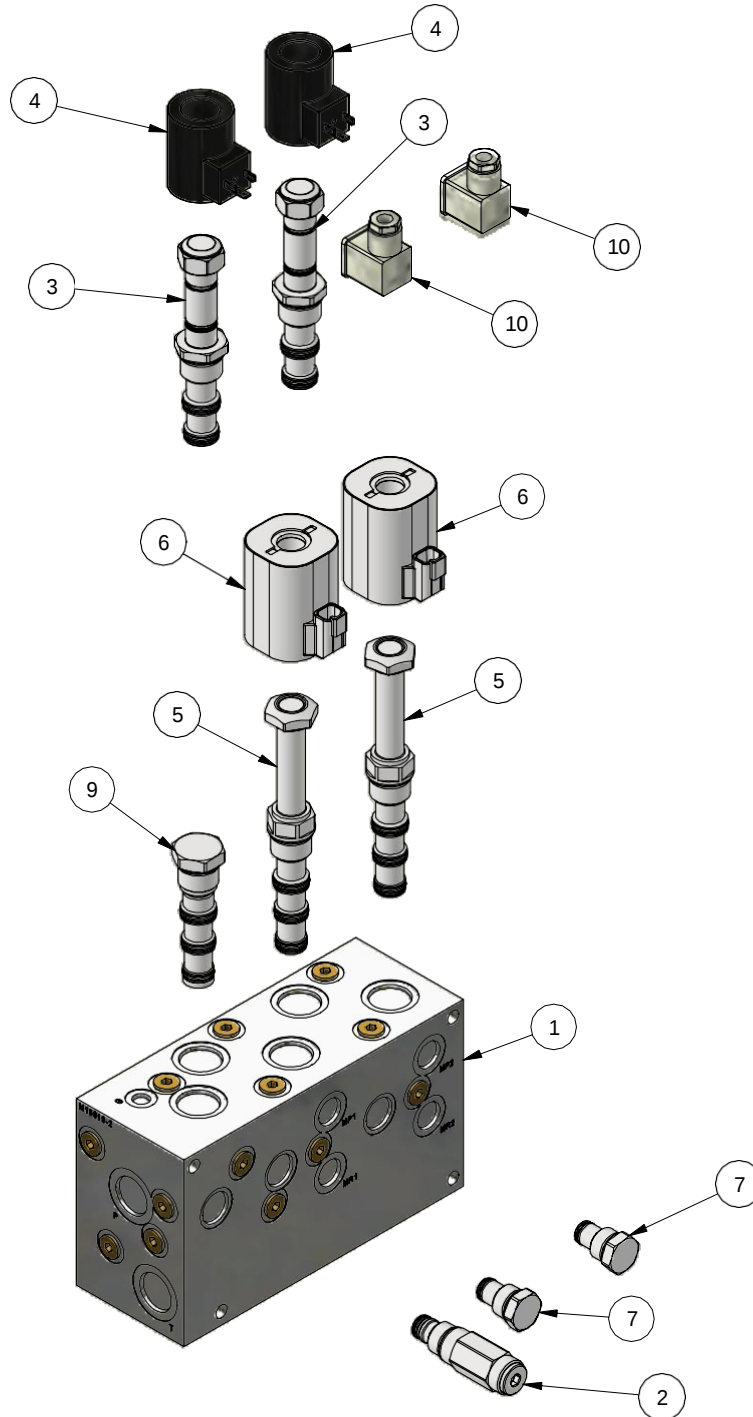
| Discharge Hood |     |            |                                                         |               |
|----------------|-----|------------|---------------------------------------------------------|---------------|
| ITEM           | QTY | RCMR-PN    | DESCRIPTION                                             | V-PART NUMBER |
| 1              | 1   | 479/22-059 | Middle Frame Discharge Hood                             | 573435-601    |
| 2              | 2   | 480/22-060 | Side Frame Discharge Hood                               | 573435-602    |
| 3              | 1   | 481/22-061 | Front Frame Discharge Hood                              | 573435-603    |
| 4              | 1   | 482/22-062 | Front Curtain Support                                   | 573435-604    |
| 5              | 2   | 483/22-063 | Side Curtain Support                                    | 573435-605    |
| 6              | 1   | 55/01-064  | Heavy Duty Rubber Curtain 4ft X 6ft                     | 573435-606    |
| 7              | 1   | 484/22-064 | Top Bracket for Air Cylinder                            | 573435-609    |
| 8              | 1   | 485/22-065 | Back Frame Discharge Hood                               | 573435-610    |
| 9              | 4   | 533/23-013 | Bolt                                                    | 375x7         |
| 10             | 4   | 534/23-014 | Nut                                                     | HexNut        |
| 11             | 4   | 535/23-015 | Chain quick link connects rubber curtain                | ¼ in          |
|                | 2   | 549/23-029 | Spring connects side frames to middle frame (Not Shown) | Heavy Duty    |



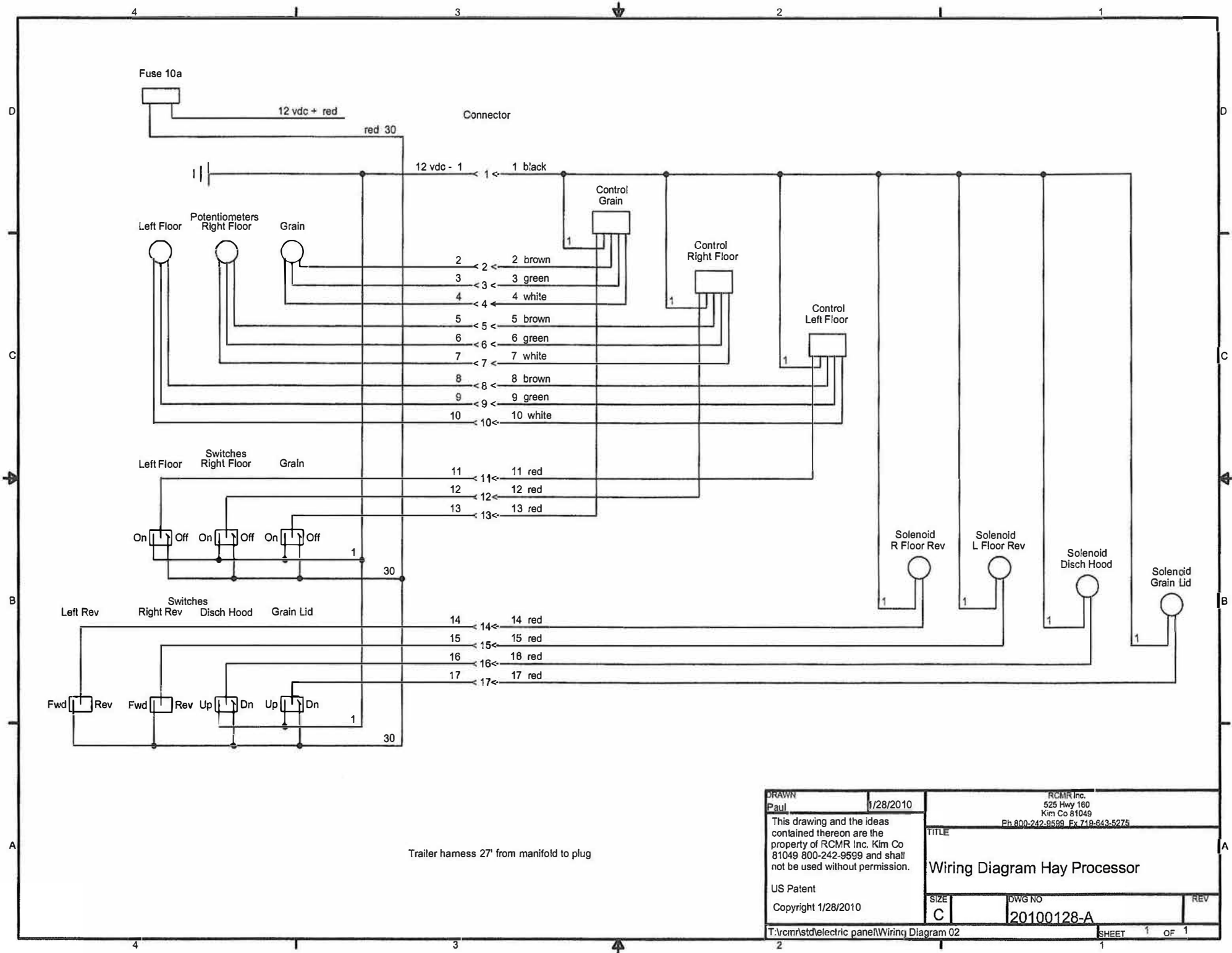
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|                               |            |               |         |
|-------------------------------|------------|---------------|---------|
| TITLE<br>Discharge Hood       |            |               |         |
| DWG NO<br>573435-600-Dis-Hood | SHT 2 OF 2 | DRAWN<br>Paul | Page 42 |

| ITEM | RCMR-PN    | QTY | DESCRIPTION                                                     | PART NUMBER             |
|------|------------|-----|-----------------------------------------------------------------|-------------------------|
| 1    | 263/07-001 | 1   | Manifold Body                                                   | M15619-2                |
| 2    | 264/07-002 | 1   | Relieve Valve                                                   | RV10-28H-0-N-35/10.00   |
| 3    | 265/07-003 | 2   | Proportional Flow Control valve (cartridge)                     | H/FPV72-30B-0-N-00      |
| 4    | 266/07-004 | 2   | Coil 70 Size 12 VDC Din connection (forward speed control coil) | H/F 6507612 12VDC       |
| 6    | 268/07-006 | 2   | Coil 12 Size ER 12 VDC Deutsch connection (reverser coil)       | H/F 4301212 12VDC       |
| 5    | 267/07-005 | 2   | Reverse Valve                                                   | H/F SV12-40R-0-N-00 4-W |
| 7    | 269/07-007 | 2   | Check Valve                                                     | H/F CV10-20-0-N-5       |
| Gold | 270/07-008 | 14  | Hollow Hex Plug -6 SAE O-ring (Gold in color in the drawing)    | 6HP5ON                  |
| 9    | 271/07-009 | 1   | Flow Divider                                                    | H/F FD52-45-0-N-44      |
| 10   | 274/07-012 | 2   | Proportional Controller 90HZ -EL Driver Econo PWM               | H/F 4000172             |



07-010  
P15619-2

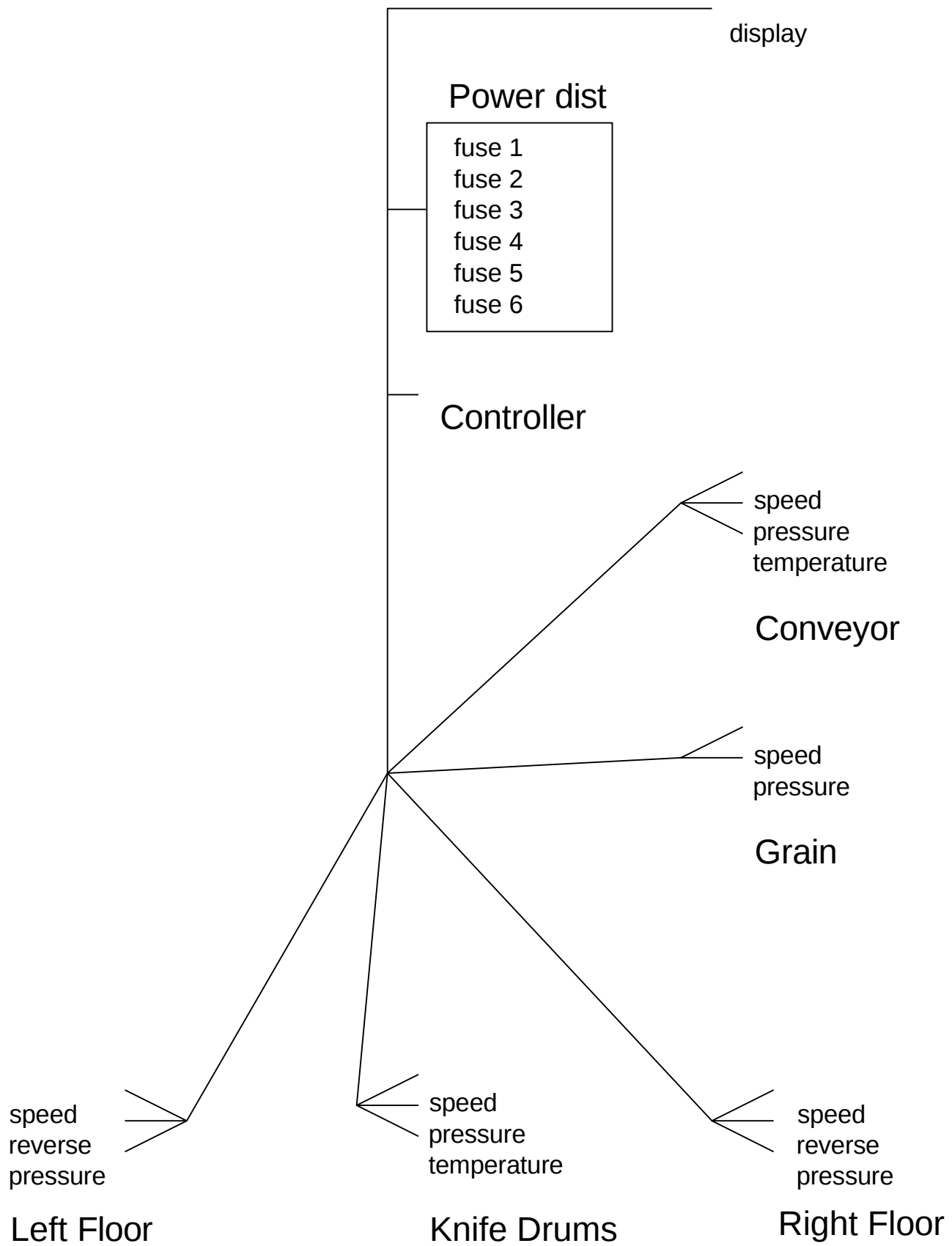


|                                                                                                                                                |  |           |  |                                                                             |                   |
|------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------|--|-----------------------------------------------------------------------------|-------------------|
| DRAWN<br>Paul                                                                                                                                  |  | 1/28/2010 |  | RCMR Inc.<br>525 Hwy 160<br>Kim Co 81049<br>Ph 800-242-9599 Fx 719-643-5275 |                   |
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| US Patent<br>Copyright 1/28/2010                                                                                                               |  |           |  | SIZE<br>C                                                                   | REV<br>20100128-A |
| T:\rcmr\std\electric panel\Wiring Diagram 02                                                                                                   |  |           |  | SHEET 1 OF 1                                                                |                   |



# Hydraulic Drive Computer Controlled Truck Model

Wiring Diagram



## Type of connectors used

### Display:

deutsch DTM06-12SA

### Controller:

molex 064320-1311 connector

molex 064320-1301 back shell

### Knife Drums:

deutsch DT06-2S speed

deutsch DT06-3S pressure

deutsch DT06-3S temperature

### Floor left:

deutsch DT06-2S speed

deutsch DT06-2S reverse

deutsch DT06-3S pressure

### Floor right:

deutsch DT06-2S speed

deutsch DT06-2S reverse

deutsch DT06-3S pressure

### Grain Attachment:

deutsch DT06-2S speed

deutsch DT06-3S pressure

### Discharge conveyor:

deutsch DT06-2S speed

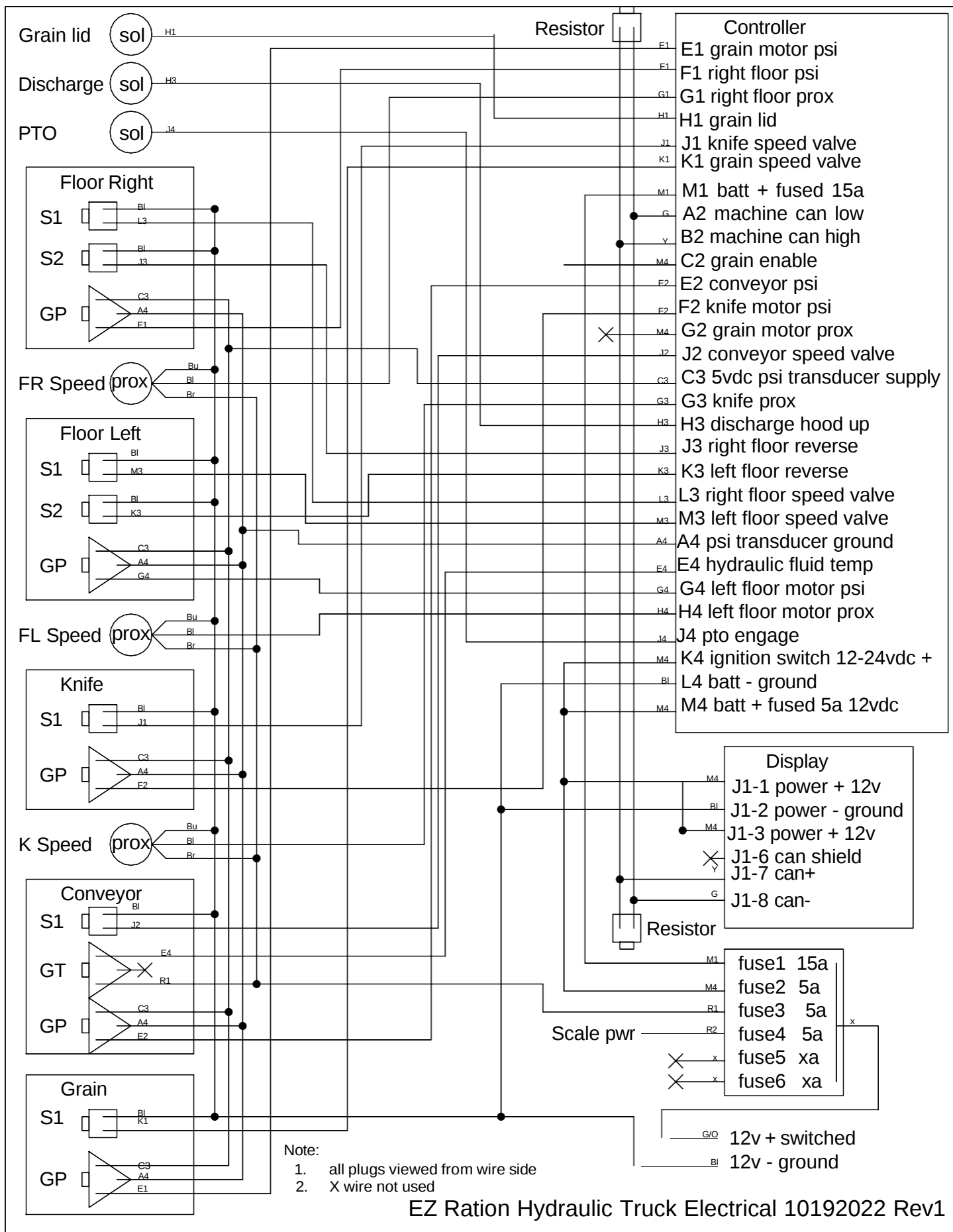
deutsch DT06-3S pressure

deutsch DT06-3S temperature

### CAN terminating resistor:

aptiv 15429045 GT 150 series connector 121 ohm terminating resistor

aptiv 13510085 GT 150 series 2 way female connector (harness end)

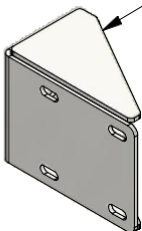


EZ Ration Hydraulic Truck Electrical 10192022 Rev1

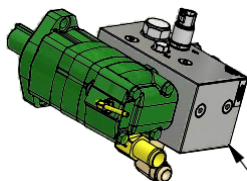
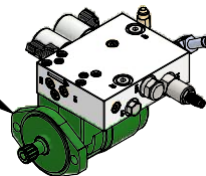
Sprocket



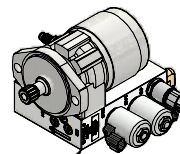
Bracket



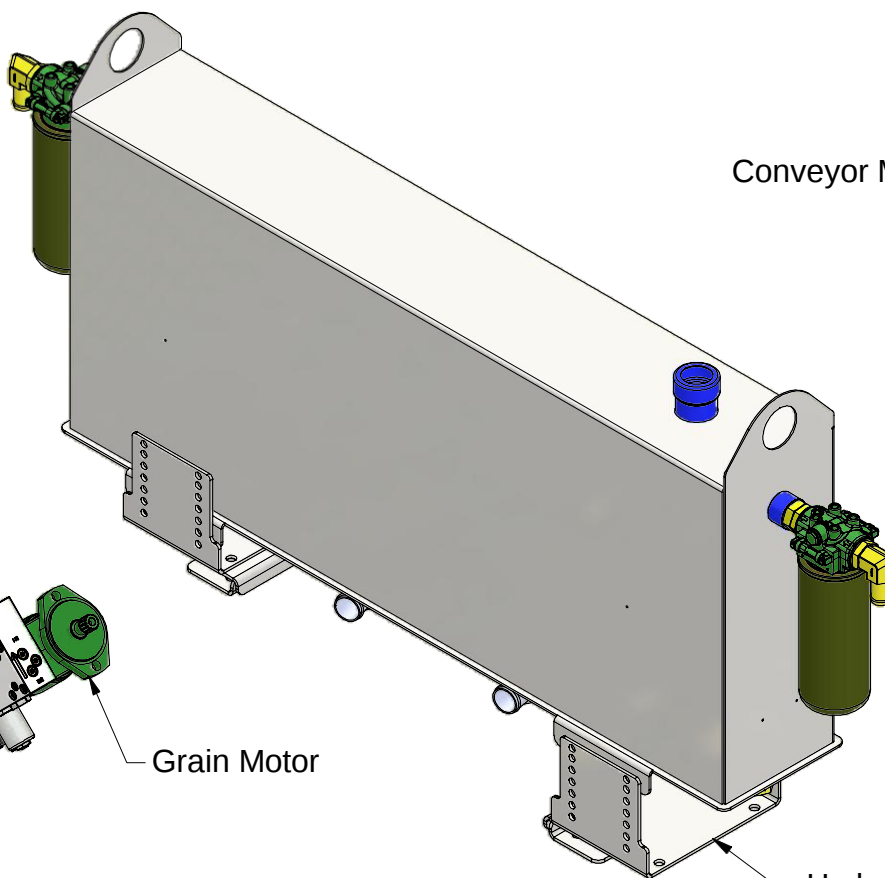
Floor Motor



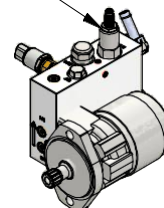
Knife Motor



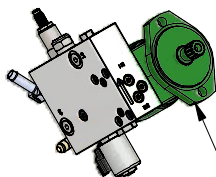
Floor Motor



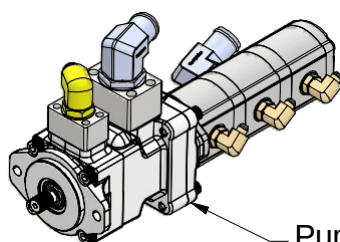
Conveyor Motor



Grain Motor



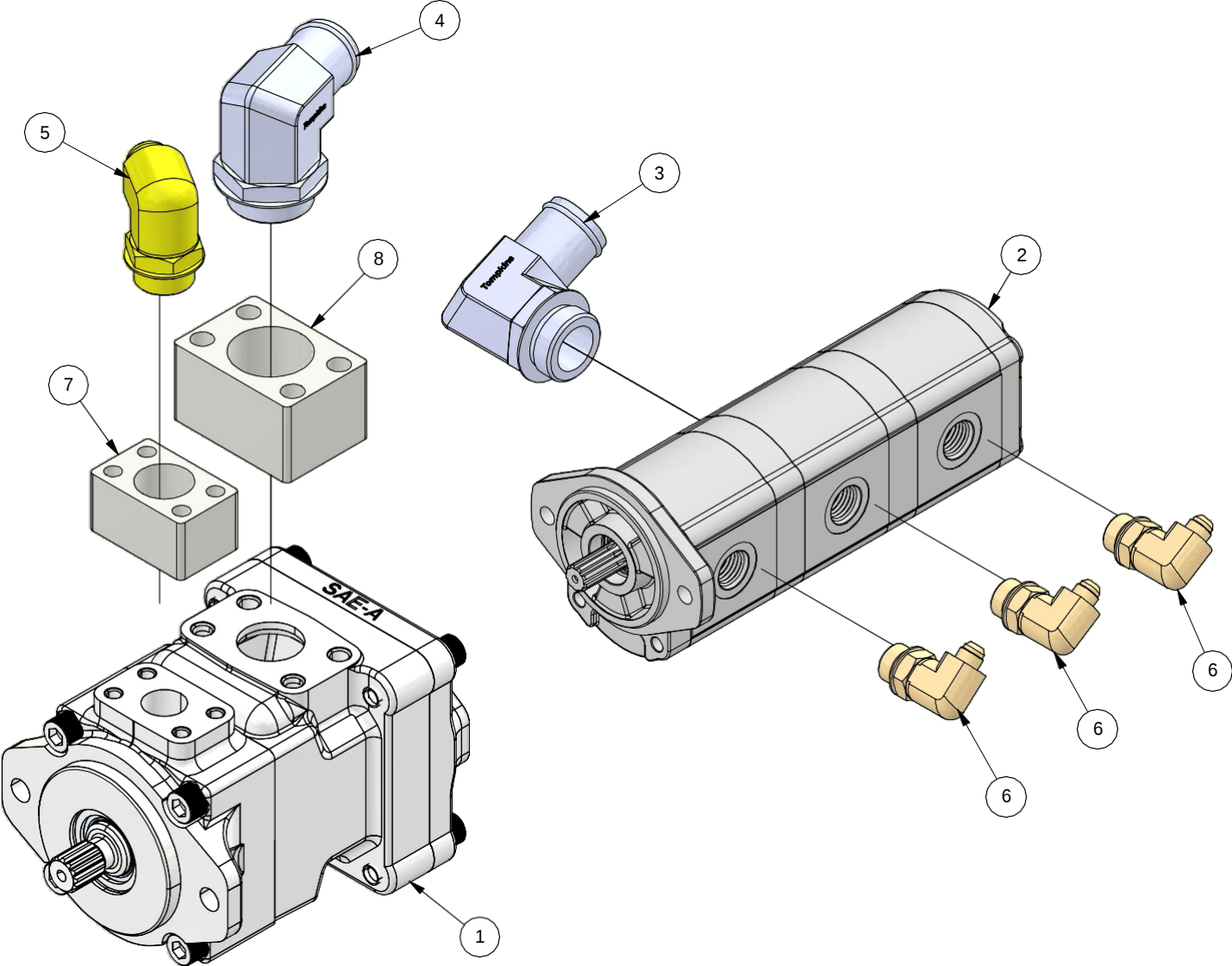
Hydraulic Tank



Pump

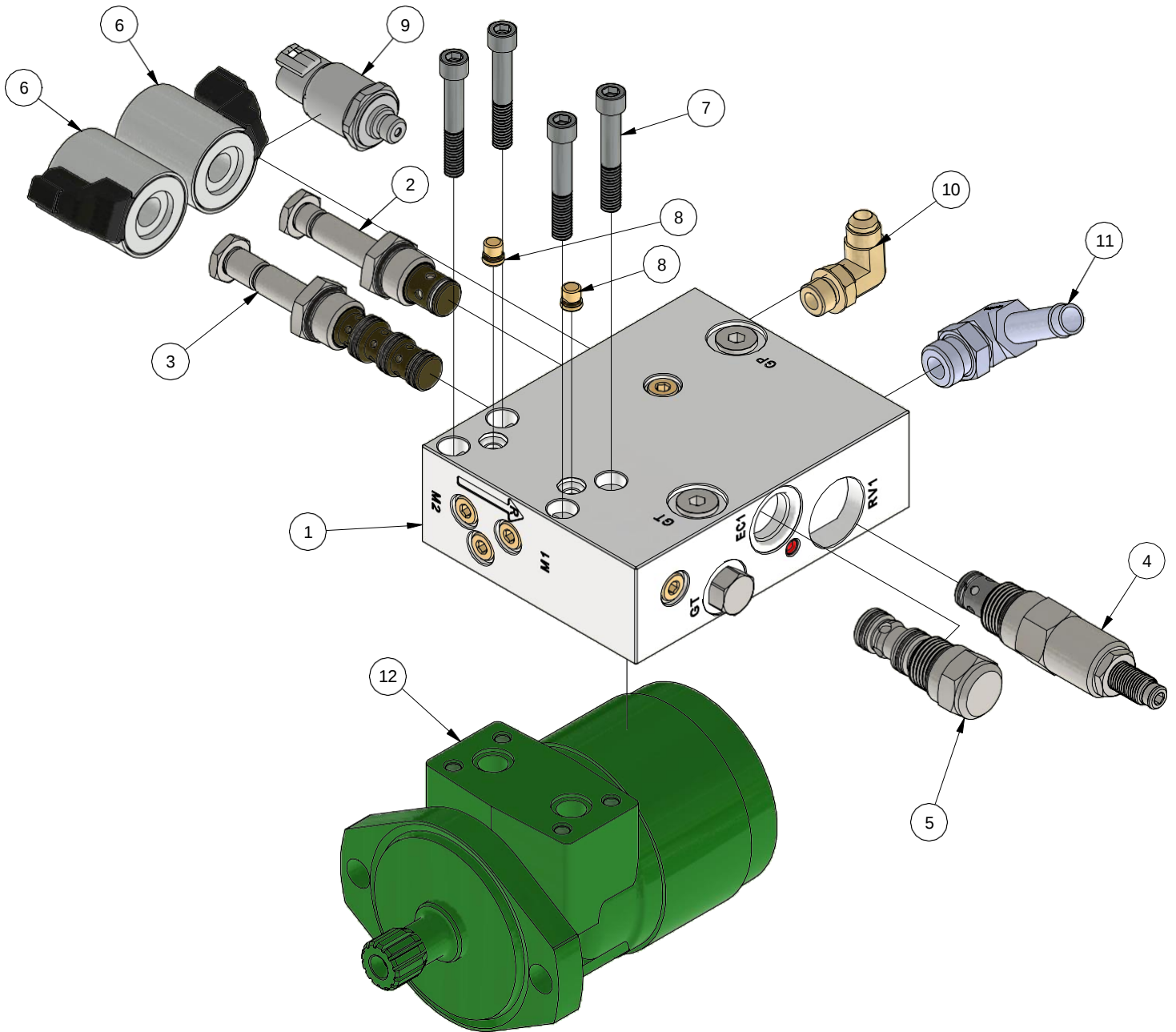
## Hydraulic Drive V3

| ITEM | QTY | RCMR-PN    | DESCRIPTION                             | PART NUMBER            |
|------|-----|------------|-----------------------------------------|------------------------|
| 1    | 1   | 212/02-094 | Veljan 4.84 cid vane through shaft pump | VT6CRM-B25-3R03-A10-A1 |
| 2    | 1   | 214/02-096 | Honor 3sec gear pump common inlet       | 2TG2AQ161616R          |
| 3    | 1   | 337/09-044 | Beaded Hose to O-Ring Elbow 90          | 4601-24-20             |
| 4    | 1   | 338/09-045 | Beaded Hose to O-Ring Elbow 90          | 4601-24-24             |
| 5    | 1   | 322/09-029 | JIC to O-Ring Elbow 90                  | 6801-12-16             |
| 6    | 3   | 673/09-048 | JIC to O-Ring Elbow 90                  | 6801-06-10             |
| 7    | 1   | 675/09-050 | O-Ring Flange Pad Code 61               | W46K-16-16             |
| 8    | 1   | 676/09-051 | O-Ring Flange Pad Code 61               | W46K-24-24             |



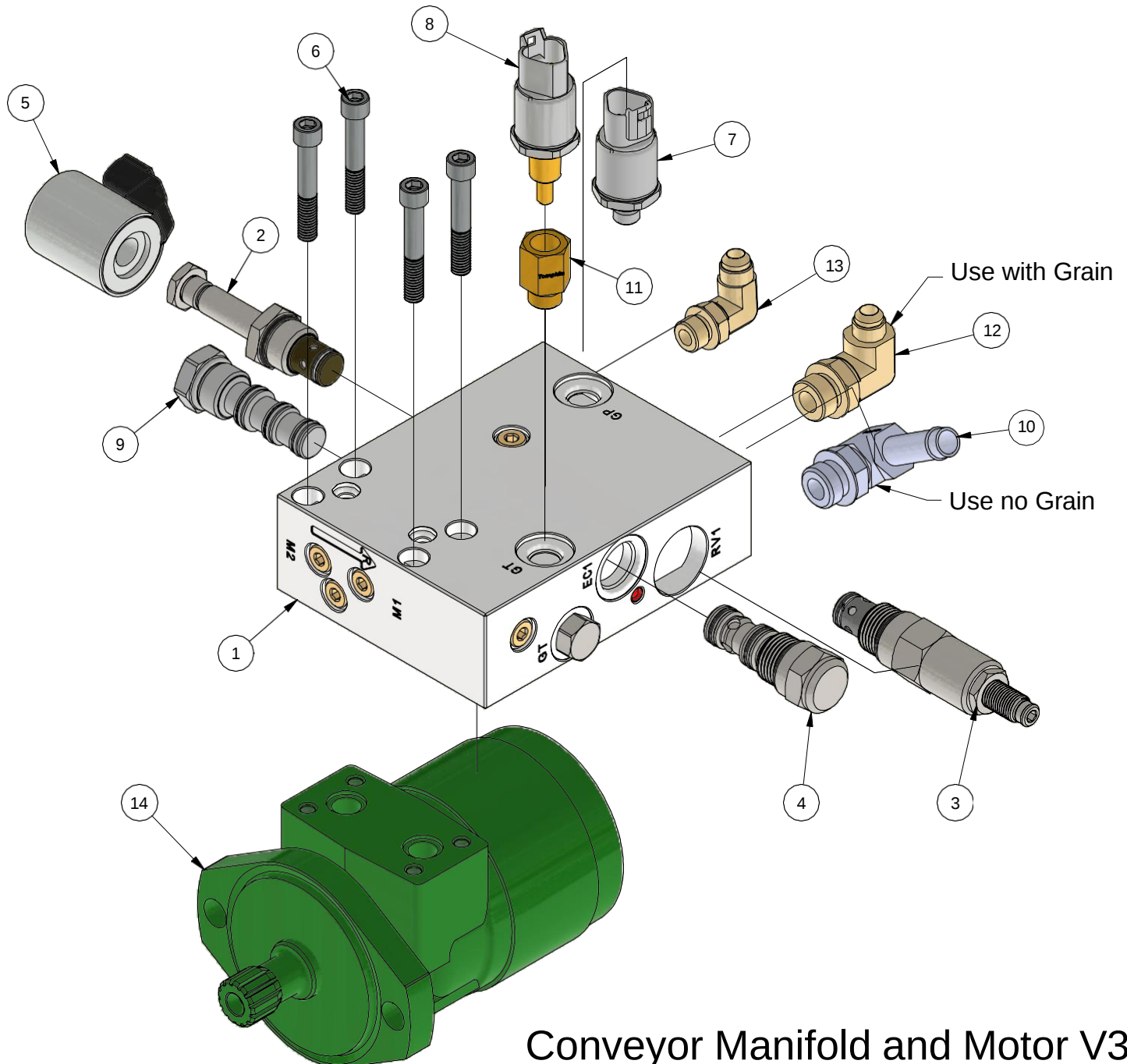
Pump V3

| ITEM | QTY | RCMR-PN    | DESCRIPTION                    | PART NUMBER               |
|------|-----|------------|--------------------------------|---------------------------|
| 1    | 1   | 783/07-103 | Manifold Body                  | M17042-3                  |
| 2    | 1   | 782/07-102 | Speed Valve                    | ESV1-10-C-0-00-CV         |
| 3    | 1   | 787/07-107 | Reverse Valve                  | SV1-10-4-0-00-CV          |
| 4    | 1   | 785/07-105 | Relief Valve                   | RV1-10-S-0-30-10-CV       |
| 5    | 1   | 781/07-101 | Logic Valve                    | DPS2-10-P-F-0-160-CV      |
| 6    | 2   | 784/07-104 | Solenoid 12VDC Coil            | MCSCJ012DN000010-CV       |
| 7    | 4   | 786/07-106 | Bolt                           | SHCS 31-18-2.000- Grade 8 |
| 8    | 2   | 780/07-100 | Plug                           | EpcO Plug-22S-S02         |
| 9    | 1   | 797/07-117 | Pressure Transducer            | HDA 847K-R-6000-000       |
| 10   | 1   | 672/09-047 | JIC to O-Ring Elbow 90         | 6801-06-06                |
| 11   | 1   | 336/09-043 | Beaded Hose to O-Ring Elbow 90 | 4601-08-08                |
| 12   | 1   | 215/02-097 | Parker Hydraulic Motor         | TB0100AM280AAAA           |

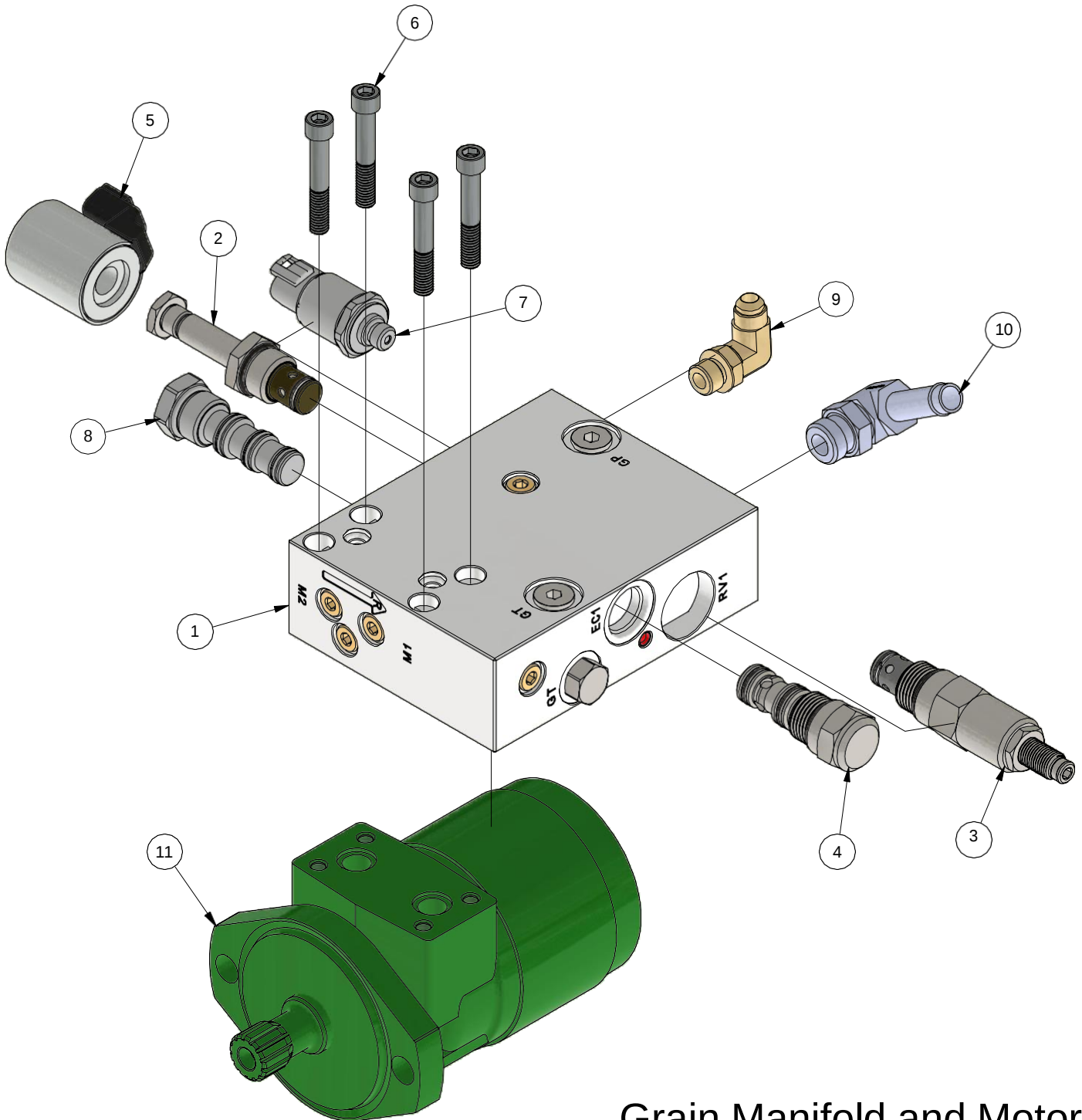


## Floor Manifold and Motor V3

| ITEM | QTY | RCMR-PN    | DESCRIPTION                        | PART NUMBER               |
|------|-----|------------|------------------------------------|---------------------------|
| 1    | 1   | 783/07-103 | Manifold Body                      | M17042-3                  |
| 2    | 1   | 782/07-102 | Speed Valve                        | ESV1-10-C-0-00-CV         |
| 3    | 1   | 785/07-105 | Relief Valve                       | RV1-10-S-0-30-10-CV       |
| 4    | 1   | 781/07-101 | Logic Valve                        | DPS2-10-P-F-0-160-CV      |
| 5    | 1   | 784/07-104 | Solenoid 12VDC Coil                | MCSCJ012DN000010-CV       |
| 6    | 4   | 786/07-106 | Bolt                               | SHCS 31-18-2.000- Grade 8 |
| 7    | 1   | 797/07-117 | Pressure Transducer                | HDA 847K-R-6000-000       |
| 8    | 1   | 795/07-115 | Temperature Sensor                 | HTT 828K-A-012-001        |
| 9    | 1   | 806/07-126 | Cavity Plug                        | 5291410 in                |
| 10   | 1   | 336/09-043 | Beaded Hose to O-Ring Elbow 90     | 4601-08-08                |
| 11   | 1   | 678/09-053 | Male O-Ring to Female Pipe adapter | 6405-06-04                |
| 12   | 1   | 697/09-072 | JIC to O-Ring Elbow 90             | 6801-06-08                |
| 13   | 1   | 672/09-047 | JIC to O-Ring Elbow 90             | 6801-06-06                |
| 14   | 1   | 215/02-097 | Parker Hydraulic Motor             | TB0100AM280AAAA           |



| ITEM | QTY | RCMR-PN    | DESCRIPTION                    | PART NUMBER               |
|------|-----|------------|--------------------------------|---------------------------|
| 1    | 1   | 783/07-103 | Manifold Body                  | M17042-3                  |
| 2    | 1   | 783/07-102 | Speed Valve                    | ESV1-10-C-0-00-CV         |
| 3    | 1   | 785/07-105 | Relief Valve                   | RV1-10-S-0-30-10-CV       |
| 4    | 1   | 781/07-101 | Logic Valve                    | DPS2-10-P-F-0-160-CV      |
| 5    | 1   | 784/07-104 | Solenoid 12VDC Coil            | MCSCJ012DN000010-CV       |
| 6    | 4   | 786/07-106 | Bolt                           | SHCS 31-18-2.000- Grade 8 |
| 7    | 1   | 797/07-117 | Pressure Transducer            | HDA 847K-R-6000-000       |
| 8    | 1   | 806/07-126 | Cavity Plug                    | 5291410 in                |
| 9    | 1   | 672/09-047 | JIC to O-Ring Elbow 90         | 6801-06-06                |
| 10   | 1   | 336/09-043 | Beaded Hose to O-Ring Elbow 90 | 4601-08-08                |
| 11   | 1   | 219/02-101 | Parker Hydraulic Motor         | TB0130AM280AAAA           |



## Grain Manifold and Motor V3

DWG #: Truck Hydraulic V3

P17042\_3

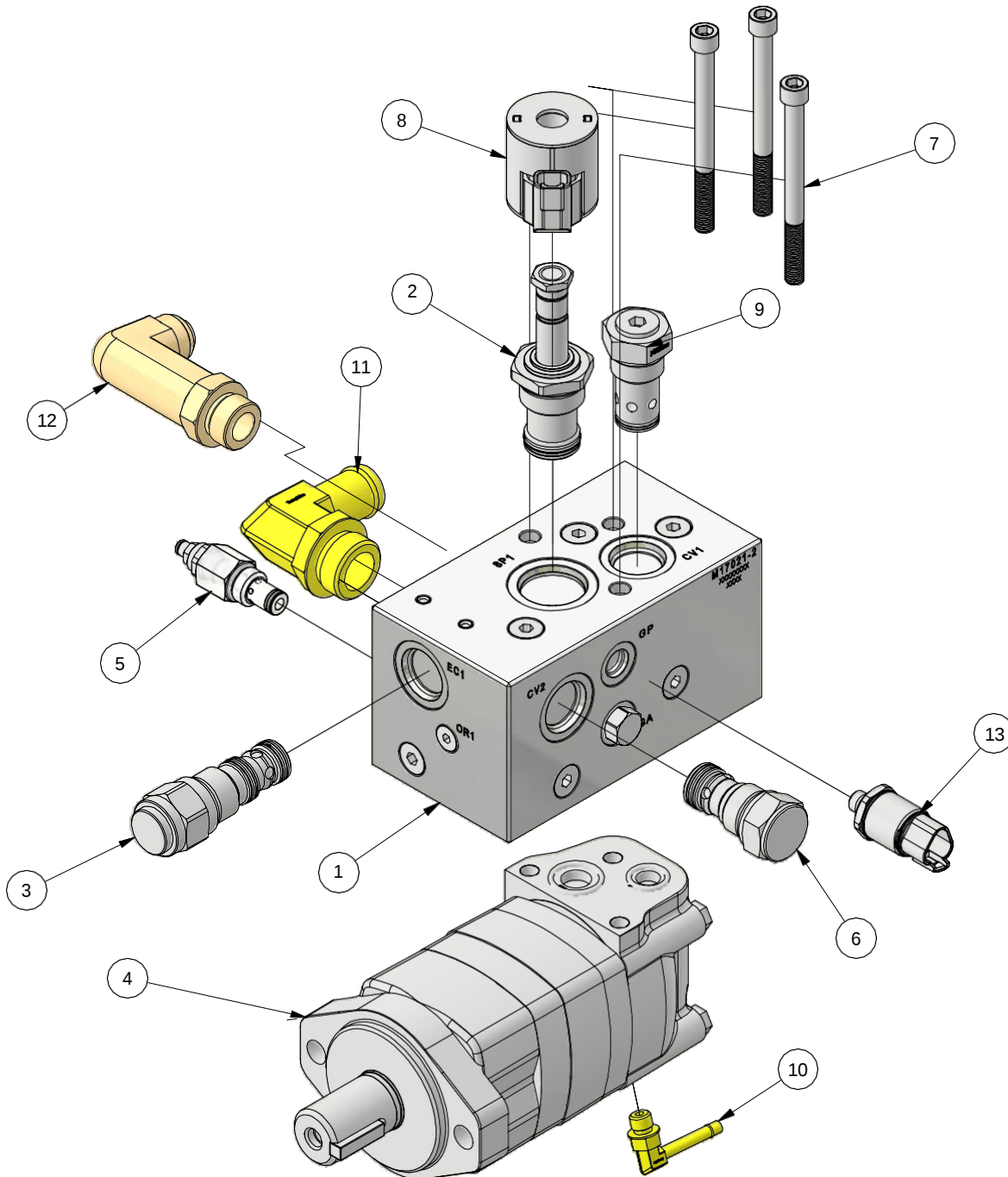
SHEET  
5 OF 7

REV 2

PG 51

\\SERVER1\Inventor\CUSTOMERS\RCMR\Standard Square\presentation\Truck Hydraulic V3.idw CREATED: 11/29/2022

| ITEM | QTY | RCMR-PN    | DESCRIPTION                    | PART NUMBER                       |
|------|-----|------------|--------------------------------|-----------------------------------|
| 1    | 1   | 798/07-118 | Knife Manifold Body            | M17021-2-Standard                 |
| 2    | 1   | 799/07-119 | Speed Valve                    | SP16-20-0-N-00                    |
| 3    | 1   | 800/07-120 | Logic Valve                    | DPS2-12-P-F-0-160-CV              |
| 4    | 1   | 642/07-065 | 2K Hydraulic Motor             | M02080AC02AB010ABAAF-104-3475-006 |
| 5    | 1   | 801/07-121 | Relief Valve                   | 44608-4000                        |
| 6    | 1   | 802/07-122 | Check Valve                    | CV11-12-P-0-5-CV                  |
| 7    | 3   | 803/07-123 | Bolt                           | SHCS 38-16-4.500-Grade 8          |
| 8    | 1   | 804/07-124 | Solenoid 12VDC Coil            | Coil 10 Size ER-4303712           |
| 9    | 1   | 805/07-125 | Check Valve                    | 1812                              |
| 10   | 1   | 298/09-005 | Beaded Hose to O-Ring Elbow 90 | 4601-04-04                        |
| 11   | 1   | 300/09-007 | Beaded Hose to O-Ring Elbow 90 | 4601-16-16                        |
| 12   | 1   | 674/09-049 | JIC to O-Ring Elbow 90         | 6801-LL-12-12                     |
| 13   | 1   | 797/07-117 | Pressure Transducer            | HDA 847K-R-6000-000               |



## Knife Manifold and Motor V3

DWG #: Truck Hydraulic V3

P17021\_2

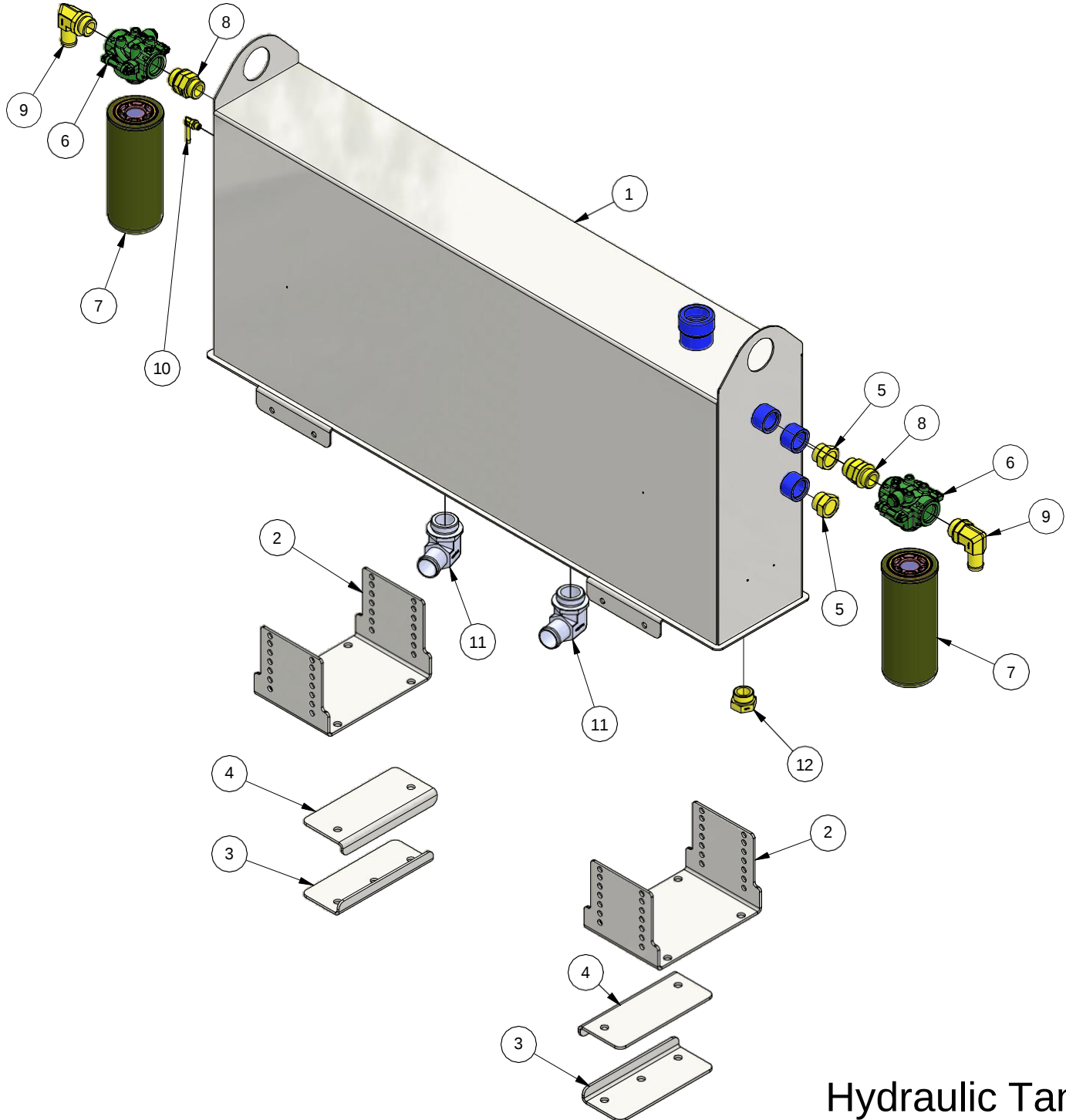
SHEET  
6 OF 7

REV 2

PG 52

\\SERVER1\Inventor\CUSTOMERS\RCMR\Standard Square\presentation\Truck Hydraulic V3.idw CREATED: 11/29/2022

| ITEM | QTY | RCMR-PN    | DESCRIPTION                                  | PART NUMBER    |
|------|-----|------------|----------------------------------------------|----------------|
| 1    | 1   | 473/22-053 | Hydraulic Reservoir                          | 573445-801     |
| 2    | 2   | 476/22-056 | Mount to truck frame for Hydraulic Reservoir | 573445-826     |
| 3    | 2   | 595/23-074 | Hydraulic tank to frame clamp lower          | 573445-837     |
| 4    | 2   | 596/23-075 | Hydraulic tank to frame clamp upper          | 573445-838     |
| 5    | 2   | 193/02-076 | Sight Window 1 5/16-12 SAE                   | LAW-A16        |
| 6    | 2   | 194/02-077 | Filler head assembly hmk04 Duramax           | P166088        |
| 7    | 2   | 200/02-083 | Filter                                       | Don P164378    |
| 8    | 2   | 307/09-014 | O-Ring Adjustable Union                      | 6403-NOW-16-16 |
| 9    | 2   | 300/09-007 | Beaded Hose to O-Ring Elbow 90               | 4601-16-16     |
| 10   | 1   | 298/09-005 | Beaded Hose to O-Ring Elbow 90               | 4601-04-04     |
| 11   | 2   | 338/09-045 | Beaded Hose to O-Ring Elbow 90               | 4601-24-24     |
| 12   | 1   | 316/09-023 | O-Ring Hex Plug                              | 6408-16        |



## Hydraulic Tank V3

DWG #: Truck Hydraulic V3

573445-804

SHEET  
7 OF 7

REV 2

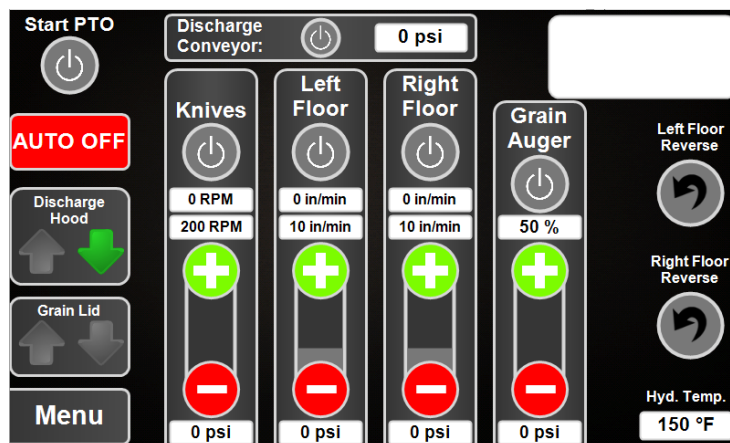
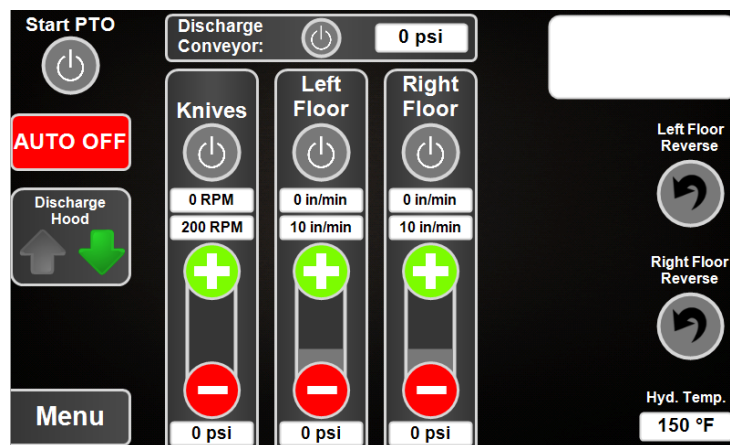
PG 53

\\SERVER1\Inventor\CUSTOMERS\RCMR\Standard Square\presentation\Truck Hydraulic V3.idw CREATED: 11/29/2022

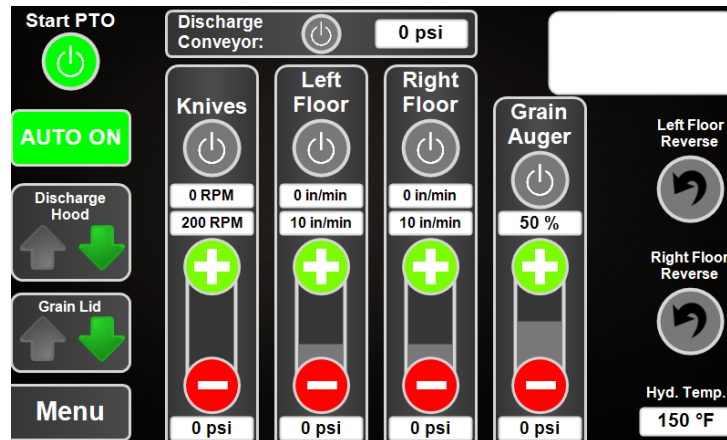
# EZ Ration Processor Computer Control Screen

## User's Manual

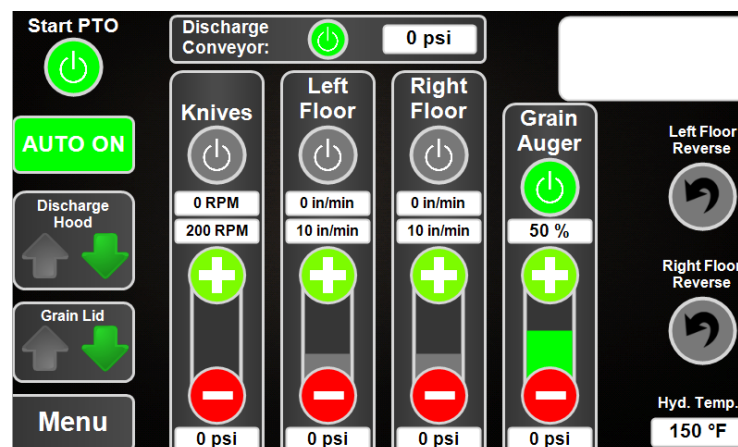
- When you turn the key on or start the truck, the first screen that will come up will look like this (if you have a Grain Attachment it will look like the second screen)



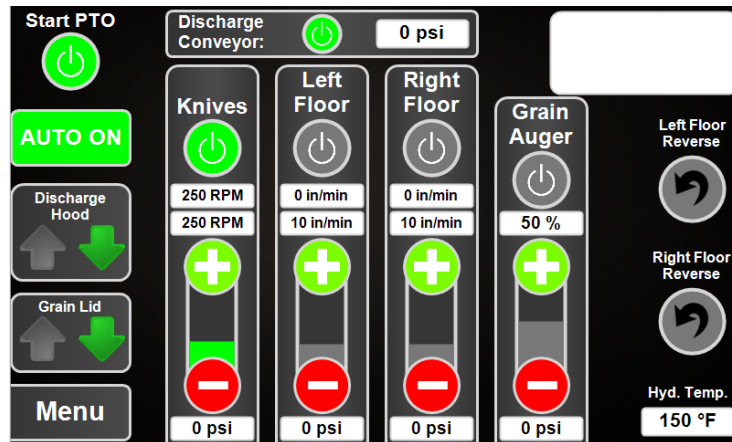
- No other functions will activate if the Power Start PTO button is not on and green in color
- Touch the Power Start PTO button will turn it green like the screen below - this starts the PTO and the Hydraulic pumps attached to it



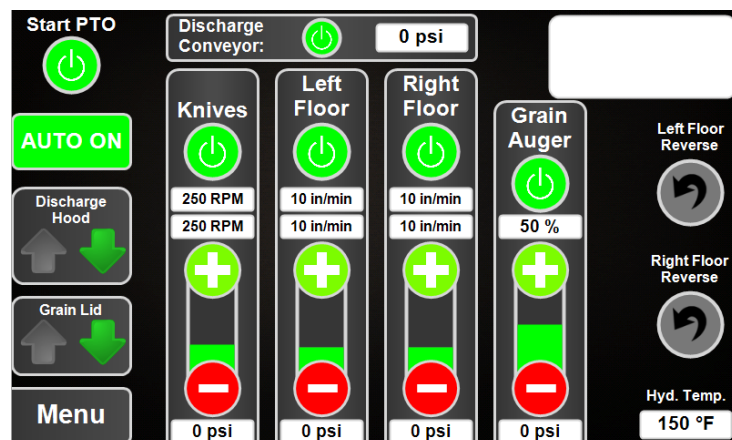
- If the Hydraulic Fluid Temperature reading in the lower left corner is below 32 degrees it will be orange in color and show a fault in the upper right hand message box
- Leave the PTO on and allow the PTO/Hydraulic pumps to run without starting any other functions until the Hydraulic fluid warms up to 32 degrees or higher
- If the Hydraulic Fluid Temp reading is 32 or higher touch the Power Start Discharge Conveyor button and it will turn green like screen below. This starts the Discharge Conveyor – The psi screen next to it will depict the current Hydraulic Pressure required to run it (*sometimes there will be a small one- or two-digit number depicted here if the PTO is on but not the Discharge Conveyor this is just the pressure created by hydraulic fluid circulating through the line*)



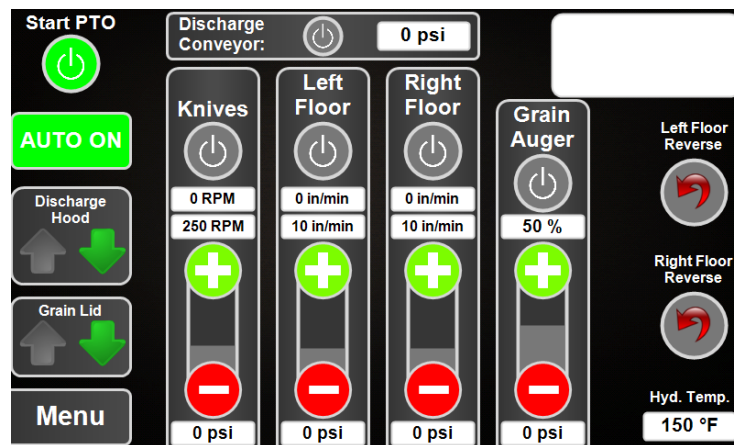
- Touching the Power button under Knives will turn it green like the screen below. This starts the Knives (*Knives will not start if both the PTO and the Discharge Conveyor buttons are not both on and green in color*)



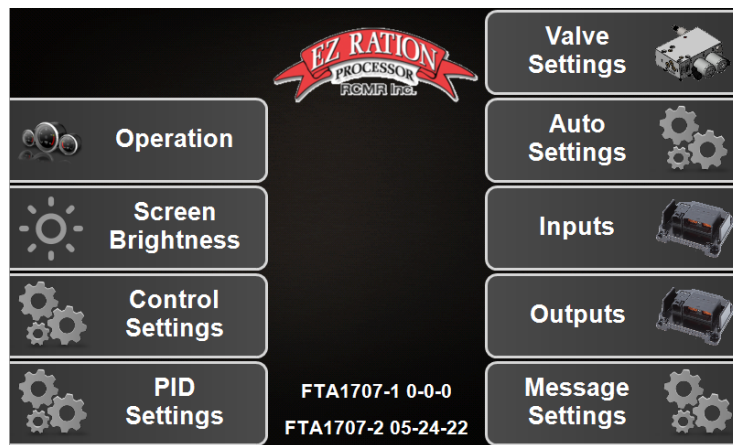
- Touching the Power button for the Knives, Left Floor, or Right Floor will turn them on - the button will be green when on
- The RPM number under the Knife Power button depicts the RPM setting for the knives (*higher is usually always better and generally should just be full on*)
- The second number indicates the actual RPM the knives are turning
- Touching the + or – buttons will change the RPM setting



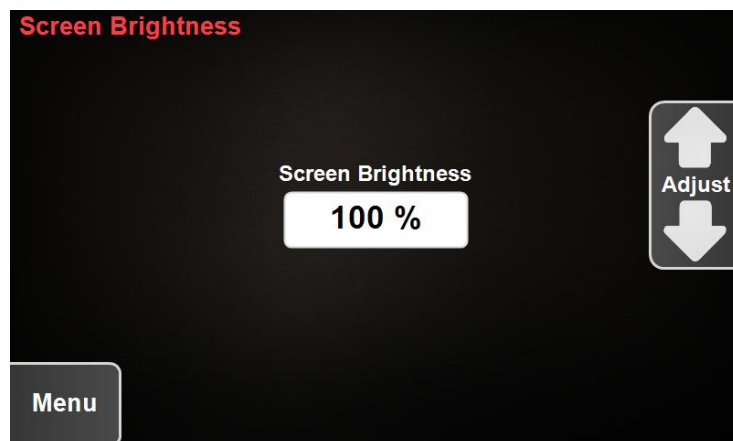
- The In/min number under the Floor Power buttons depicts the inches per minute setting for the floors
- The second number indicates the actual inches per minute the floors are moving – NOTE if this reading is 0 when the floors are on there is a sensor out of adjustment or malfunctioning. In this case the floors will revert to full on. Go to the control setting screen and change to manual control until the sensor has been put back in adjustment.
- Touching the + or – buttons will change the inches per minute setting
- The psi number below the Knives, Left Floor, Right Floor indicates the hydraulic pressure currently being used/required by each



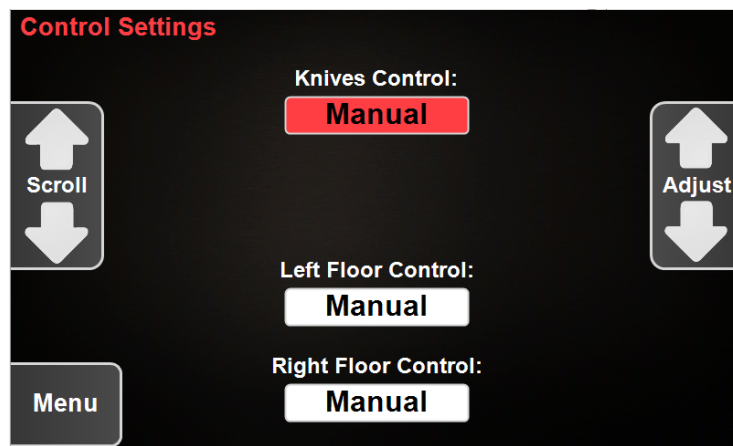
- Touching the Left Floor Reverse or Right Floor Reverse buttons will start that floor moving in reverse and the button will turn red when activated (*the PTO has to be on, but not the discharge conveyor or the knives, to reverse the floors*)
- The window in the upper right corner is a message box to indicate any problems and may tell you what screen to go to for more information on the issue



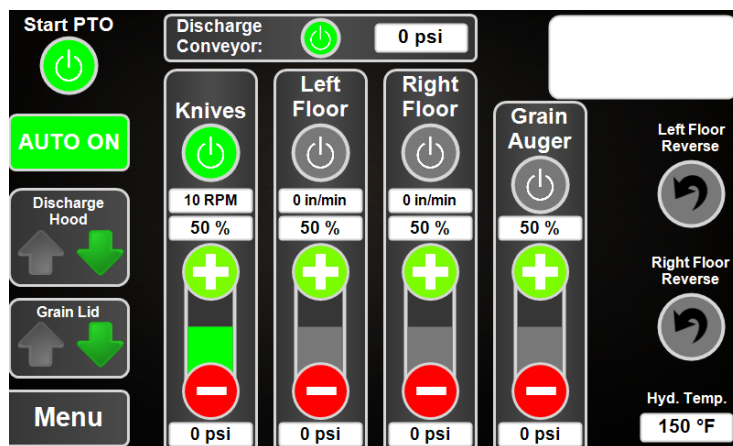
- Touching the Menu window will take you to the menu screen shown above
- Touching any of the screens listed will take you to that screen
- The letters and numbers in the bottom middle indicate the computer programing operating version you have
- Touching the Screen Brightness window will take you to the screen depicted below



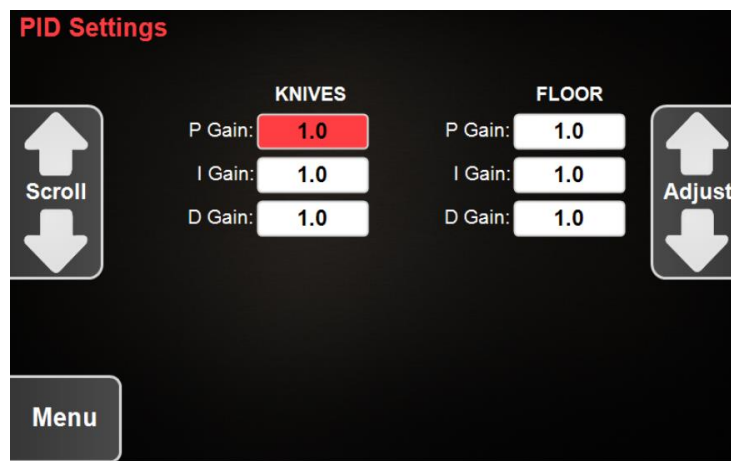
- This screen allows you to adjust the brightness of the screen
- Touching the Menu window will take you to back to the Menu
- Touching the Control Settings window will take you to the screen depicted below



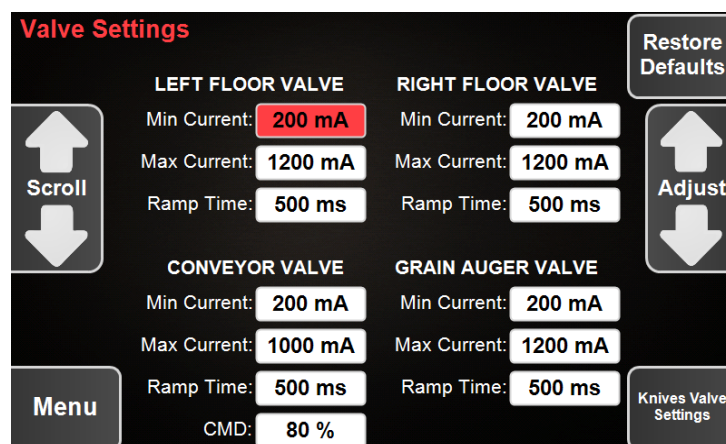
- These setting should be on **Auto** (not manual) which allows the computer to adjust the valve settings and keep the setting as constant as possible through varying engine RPM's
- However, in the rare case that a sensor giving feed back to the computer should malfunction that system will revert to full on. If it is noted that there is a sensor malfunction you should go to the control screen and turn that system controls to manual as depicted in the screen above. This will allow you to control the % of open of the valve manually and the screen will depict the % of on/off like the screen below rather than RPMs or in/min. This allows you to continue feeding with the machine until the bad sensor can be replaced



- Touching the PID Settings window will take you to the screen depicted below

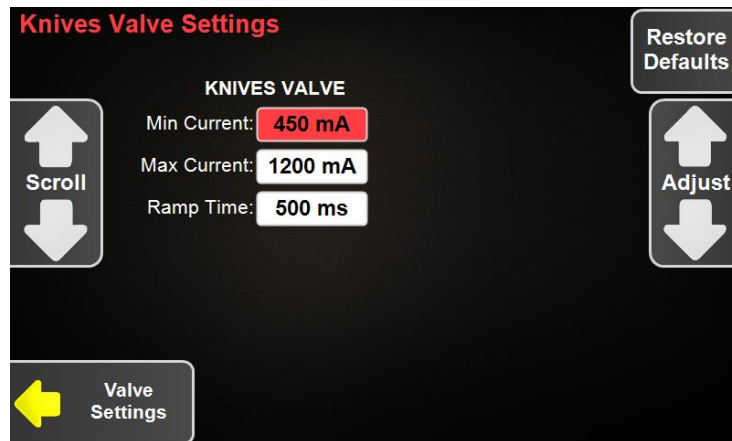


- The PID settings should be the same as depicted above and should not be changed unless recommended by an RCMR, Inc. engineer.
- The PID controller can use the three *control terms* of proportional, integral, and derivative influence on the controller output to apply accurate and optimal control. A PID controller continuously calculates an error value as the difference between a desired setpoint and a measured process variable and applies a correction based on the proportional, integral, and the derivative terms or values.
- These settings are use to help the computer automatically adjust the valves settings to maintain a consistent output or speed though out changes in the truck engine RPMs
- The Valve Setting Window/ Button takes you to the screen below

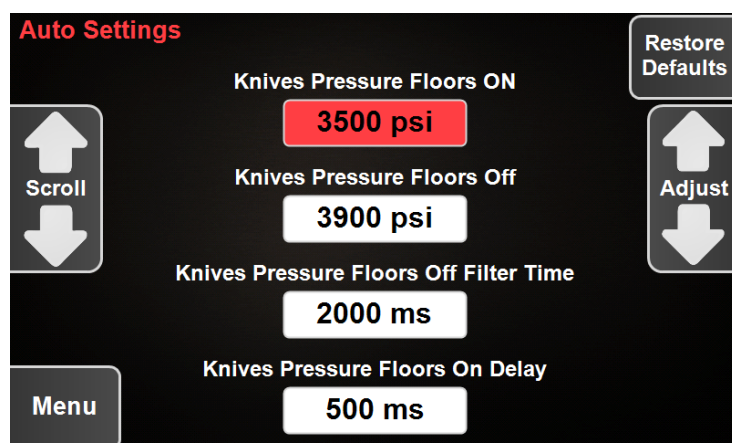


- The Grain Auger Valve Settings will not be present if you do not have a Grain Attachment

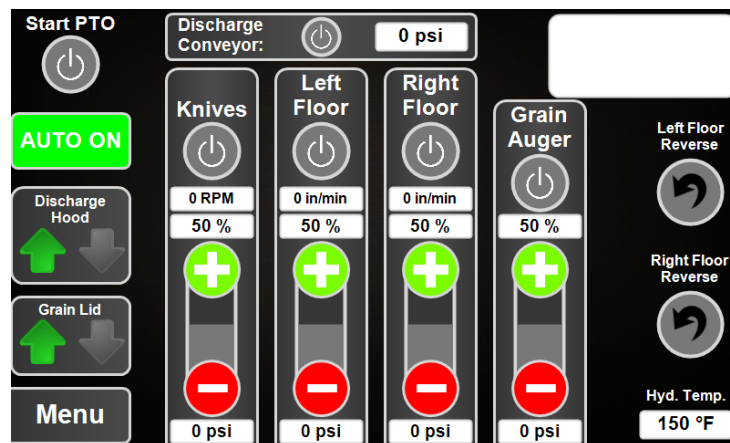
- Touching the Knife Valve Setting Window/Button will take you to the screen below and touching the Knife Valve Setting Window/Button with the arrow will take you back to the screen above



- The Min current setting is the minimal amount of current required to open the valve
- The Max current setting is amount of current required to open the valve fully
- The ramp time is how fast the valve opens or closes. This reduces wear and tare on the components
- The valve setting should be the same as depicted above and should not be changed unless recommended by an RCMR, Inc. engineer.
- The Auto Setting Window/ Button takes you to the screen below



- The Auto On Button on the operation screen depicted below turns this function on



- When the Auto On window is green this function is on
- This button performs two functions when it is on/green
- When it is on/green and you turn the PTO or the Discharge Conveyor button off then back on without killing the truck, it Automatically turns on or starts all the other functions that were running or on when you turn it off. i.e., auto-resume
- The second function is that it automatically pauses the floors to not over load the available horse power if the knives are fighting through a tough spot in the hay. As soon as the knives have got through the tough spot and resumed speed and torque the floors will automatically restart.
- The setting for this function should be preset at the factory to the most optimum settings. However, they can be adjusted on the Auto Settings screen shown above
- When the hydraulic pressure required to turn the knife drums reaches the psi depicted in the Knife Pressure Floors Off window for the length of time in

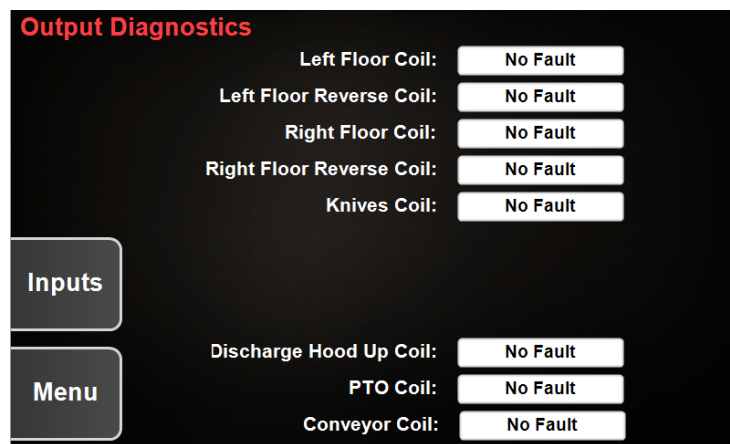
milliseconds depicted in the Knife Pressure Floors Off Filter Time it will stop both floor chains

- When the hydraulic pressure required to turn the knife drums drops to the psi depicted in the Knife Pressure Floors On window for the length of time in milliseconds depicted in the Knife Pressure Floors On Delay it will automatically restart both floor chains
- This is one of our Patent Pending features and can be a huge asset if feeding a feed source that is tough to process. It will automatically pause the floor before stalling the knife drums and restart the floors when the knives have regained the proper speed and torque and are able to resume processing the feed source.
- Hitting the Retore Default window will restore the factory defaults
- The Input Window/ Button takes you to the Diagnostic screen below

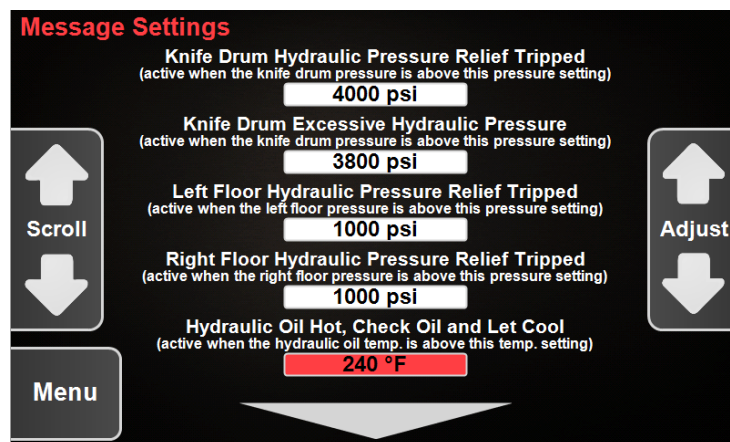
The image shows a diagnostic screen titled "Input Diagnostics" in red text. It features a table of sensor readings and fault indicators. On the left side, there are two buttons: "Outputs" and "Menu".

|                              |      | Fault                 |
|------------------------------|------|-----------------------|
| Left Floor Pressure Sensor:  | 0 mV | <input type="radio"/> |
| Right Floor Pressure Sensor: | 0 mV | <input type="radio"/> |
| Grain Auger Pressure Sensor: | 0 mV | <input type="radio"/> |
| Knives Pressure Sensor:      | 0 mV | <input type="radio"/> |
| Hydraulic Oil Temp Sensor:   |      | <input type="radio"/> |
| Conveyor Pressure Sensor:    |      | <input type="radio"/> |

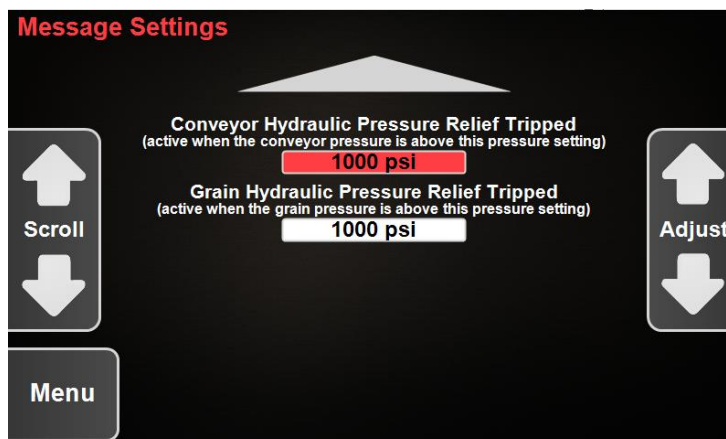
- If there is a defective sensor or a broken wire or connection going to the sensor that provides feedback for any of the functions listed, the fault circle beside that function will be lit up on this screen
- The Output Window/ Button on either the Menu screen or the Input screen shown above will take you to the Diagnostic screen below



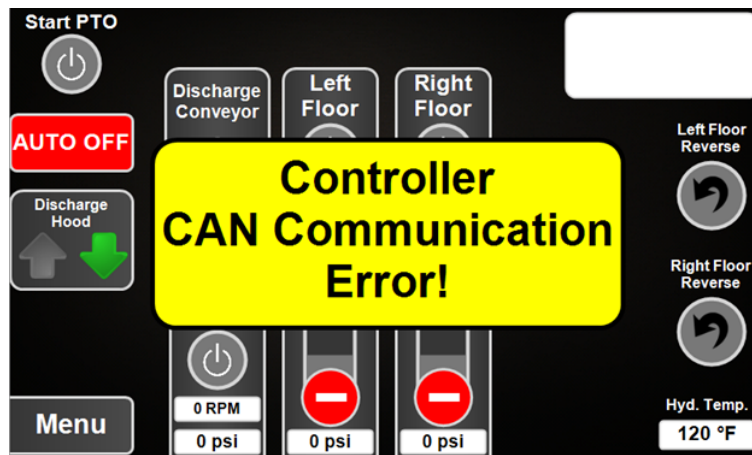
- If there is a bad coil or a broken wire going to the coil on any of the functions listed it will be indicated as an Open Circuit beside that function on this screen
- If an Open Circuit is indicated as a fault, check to make sure there are no broken wires going to the coil in that system and, if there are none, the coil is bad and needs to be replaced
- The Message Setting Window/ Button takes you to the screen below



- Touching the down arrow at the bottom of the screen takes you to the screen below (*if you do not have a Grain Attachment that relief pressure setting will not show up on this screen*)



- The settings on these screens are preset to indicate where the relief valves are set to trip in each system and should not be adjusted or the notification that the relief valve was tripped will not correlate with the actual pressure setting on the relief valve in that system



- If you see the Error message above it means the control screen lost connection to the controller mounted on the knife hood. Depicted in the picture below.

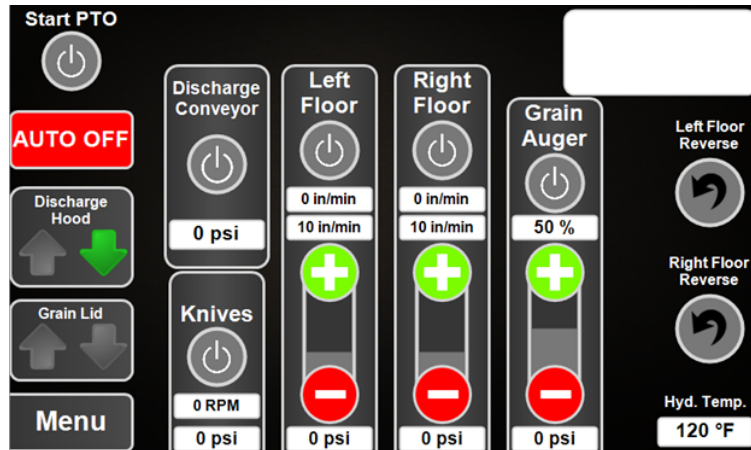


- Make sure there are some small lights flashing on the controller (red & Green) if not the controller lost power. Check for a good ground, broken wires or blown fuses.
- If there are small flashing lights on the controller then check for broken wires between the control screen and the controller, noting that it could be in the pins in the plug ins.
- The picture below depicts the sensor mounted on the floor drive motors.



- If the reading in the top window on the control screen in the floor column is zero and the floors are on (with a setting above zero), the sensor should be readjusted to be directly under the sprocket (if the sprocket has some wobble when spinning make sure the sensor is positioned in the middle of the wobble) and scary close to the sprocket, - within a fraction of an inch.
- If your sensors did not come with blue lock tight on the threads it is recommended that you put some on them to help maintain the correct positioning.

**If you have a later mode the control screen may look like the screen below**



- This model would have the knife speed always on high and eliminates a chance they could accidentally be turn down while trying to process hay.