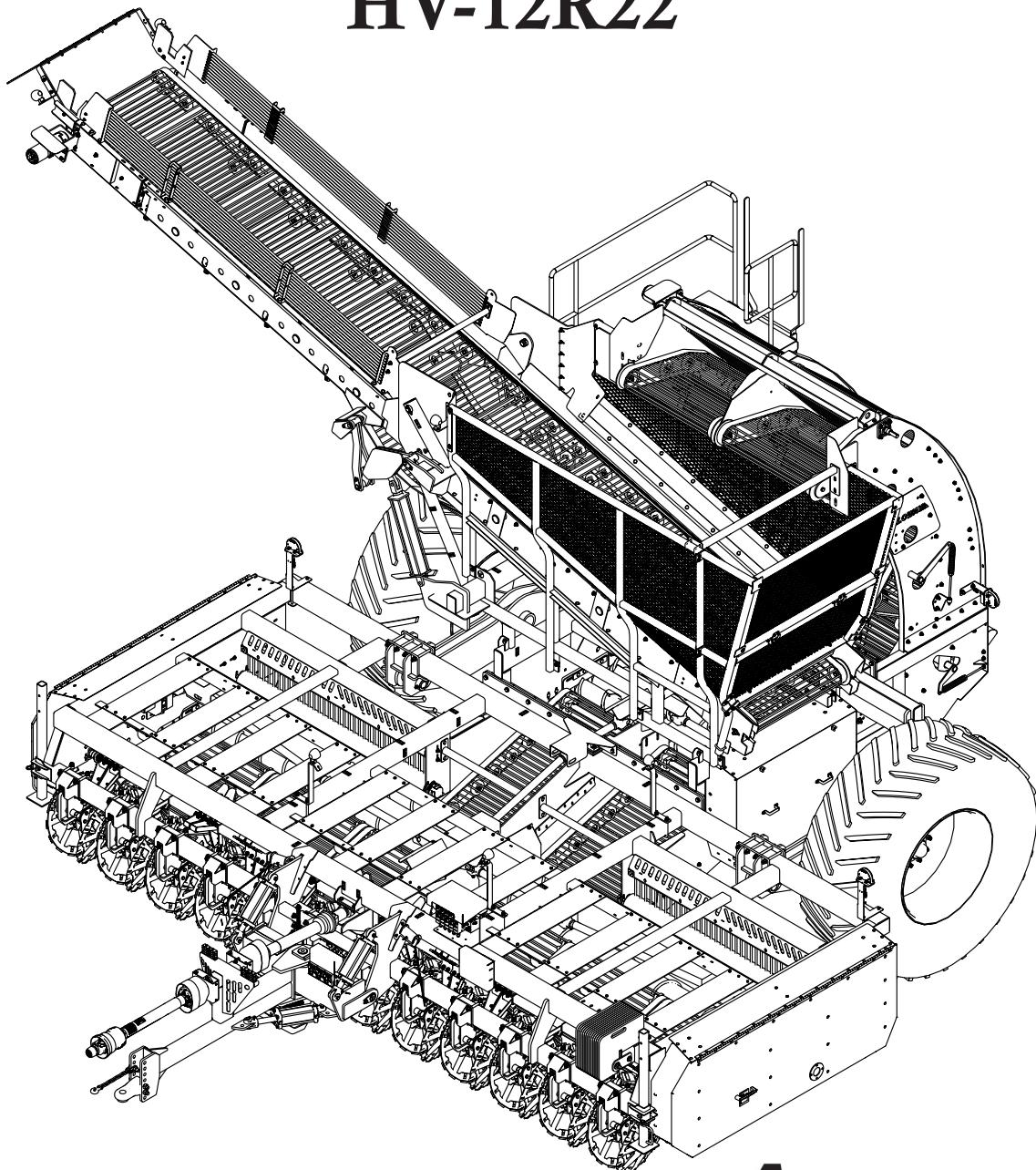


**RIGID
BEET HARVESTER
2024
HV-12R22**



ALLOWAY 

OPERATOR'S MANUAL

TO THE DEALER:

Assembly and proper installation of this product is the responsibility of the Alloway dealer. Read manual instructions and safety rules. Make sure all items on the Dealer's Pre-Delivery and Delivery Check Lists in the Operator's Manual are completed before releasing equipment to the owner.

The dealer must complete the Warranty Registration included in this manual. Both dealer and customer must sign the registration which certifies that all Dealer Check List items have been completed. The dealer is to return the prepaid postage portion to Alloway, give one copy to the customer, and retain one copy.

Note: Warranty credit is subject to this form being completed and returned.

TO THE OWNER:

Read this manual before operating your Alloway equipment. The information presented will prepare you to do a better and safer job. Keep this manual handy for ready reference. Require all operators to read this manual carefully and become acquainted with all the adjustment and operating procedures before attempting to operate. Replacement manuals can be obtained from your dealer.

The equipment you have purchased has been carefully engineered and manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and upkeep. Lubricate the unit as specified. Observe all safety information in this manual and safety decals on the equipment.

For service, your authorized Alloway dealer has trained mechanics, genuine Alloway service parts, and the necessary tools and equipment to handle all your needs.

Use only genuine Alloway service parts. Substitute parts will void the warranty and may not meet standards required for safe and satisfactory operation. Record the model number and serial number of your equipment in the spaces provided:

Model: _____ **Date of Purchase** _____

Serial Number: (see Safety Decal section for location) _____

Provide this information to your dealer to obtain correct repair parts.

Throughout this manual, the term **IMPORTANT** is used to indicate that failure to observe can cause damage to equipment. The terms **CAUTION**, **WARNING** and **DANGER** are used in conjunction with the Safety-Alert Symbol, (a triangle with an exclamation mark), to indicate the degree of hazard for items of personal safety.



This Safety-Alert Symbol indicates a hazard and means
ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.



WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed.



CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

IMPORTANT

Indicates that failure to observe can cause damage to equipment.

NOTE

Indicates helpful information.

ALLOWAY

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GENERAL INFORMATION

The purpose of this manual is to assist you in operating and maintaining your Beet Harvester. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance. These instructions have been compiled from extensive field experience and engineering data. Some information may be general in nature due to unknown and varying operating conditions. However, through experience and these instructions, you should be able to develop procedures suitable to your particular situation.

The illustrations and data used in this manual were current at the time of printing, but due to possible inline production changes, your machine may vary slightly in detail. We reserve the right

to redesign and change the machines as may be necessary without notification.

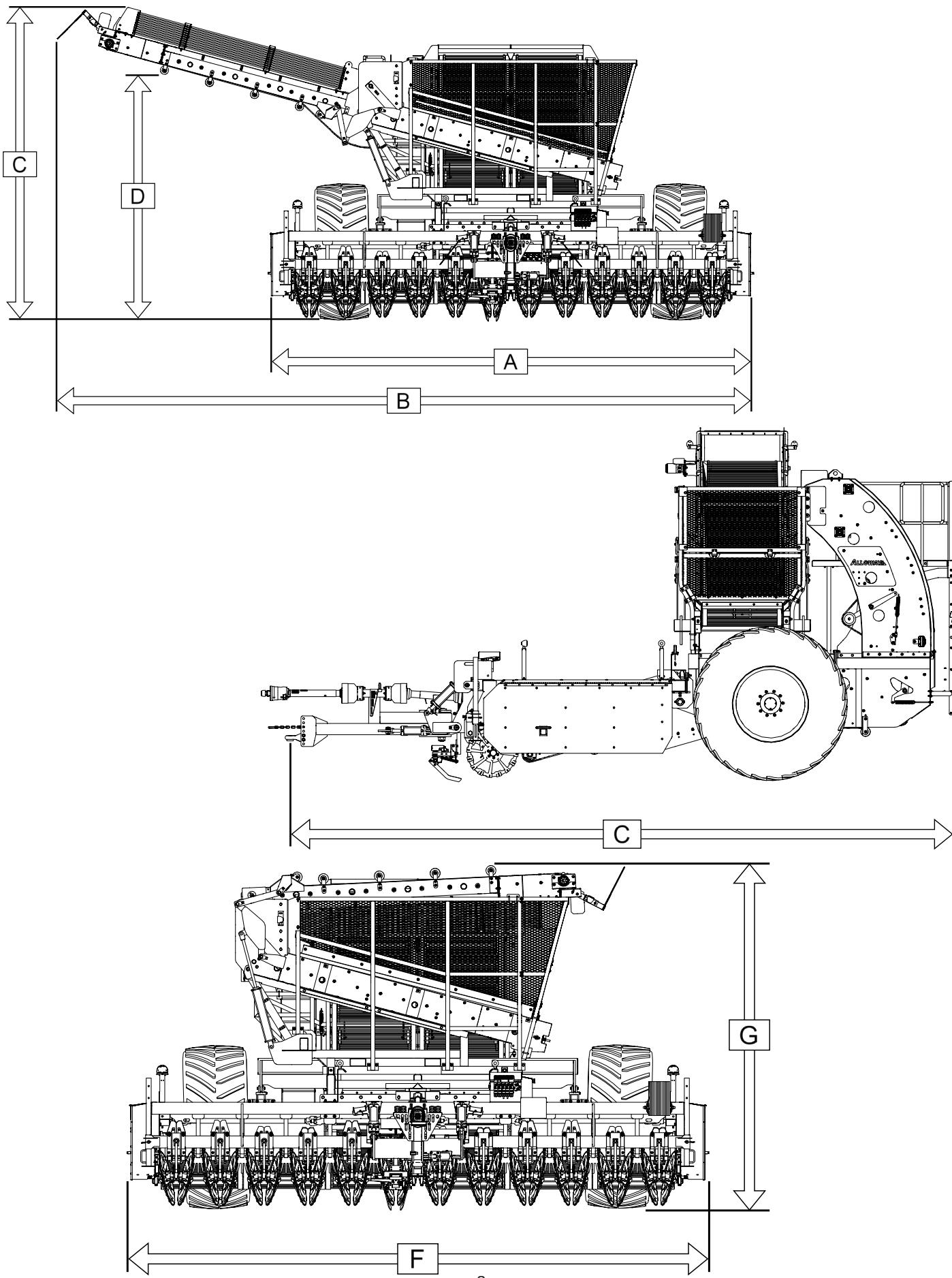


WARNING

- Some illustrations in this manual show the Beet Harvester with safety shields removed to provide a better view. The Beet Harvester should never be operated with any safety shielding removed.

Throughout this manual, references are made to right and left direction. These are determined by standing behind the equipment facing the direction of forward travel.

SPECIFICATIONS



SPECIFICATIONS

Model	12 Row 22
A. Operation Width	24 ft 4 in (7.41m)
B. Overall Width	34 ft 10 in (10.62m)
C. Operation Height	15 ft 6in (4.22m)
D. Truck Height Clearance	12 ft - 13 ft (3.65m-3.96m)
E. Overall Length	29 ft 4 in (8.94m)
F. Transport Width	24 ft 3.5 in (7.40m)
G. Transport Height	14 ft 2 in (4.32m)
Gearbox	275 HP
Tractor Min PTO	285 HP
Hydraulic Min	60 gal (227.13L)
Belt Elevator Chain	Dual 42 in
1/2" Elevator Chain Rods	50/56 mm Pitch
Tank Capacity	5 Tons
Tractor PTO Speed	1000 RPM
Belt System	6B Power Band
Elevator Drive	Hydraulic
Grab Roll Bed	Rock Protected
Grab Rolls Adjustable	2- short, 3-Full Length, 3-Rear
Grab Roll Option	Plastic
Grab Roll Composition	Steel
Belted Chain	6 x 40.75" x 34 Links
Front Hook Chain Option	6 x 40.75" x 33 Links
Front Hook Chain Dia.	1/2" or 5/8"
Digger Struts	Adjustable Cushion
Tongue Weight (Drawbar)	10,000 lbs (4536kg)
Weight Empty	39,000 lbs (17690kg)
Wheel Struts	2 Flotation Tires
<u>Main Wheels</u>	
Tire Type	2
Tire Pressure	800/70R38
Tire Load Capacity	23 psi (159 kPa)
	17,100lbs (7756 kg)

CHECK LISTS

PRE-DELIVERY CHECK LIST (DEALER'S RESPONSIBILITY)

Inspect the equipment thoroughly after assembly to ensure it is set up properly before delivering it to the customer.

The following check lists are a reminder of points to inspect. Check off each item as it is found satisfactory or after proper adjustment is made.

- Check that all safety decals are installed and in good condition. Replace if damaged.
- Check that shields and guards are properly installed and in good condition. Replace if damaged.
- Check that PTO shaft is properly installed.
- Properly attach implement to tractor and make all necessary adjustments.
- Check all bolts to be sure they are tight.
- Check wheel bolts for proper torque.
- Check that all cotter pins and safety pins are properly installed. Replace if damaged.
- Check and grease all lubrication points as identified in "Service, lubrication information."
- Check the level of gearbox fluids before delivery. Service, if required, as specified in the "Service, lubrication information."
- Check that tractor hydraulic reservoir has been serviced and that hydraulic system and all functions have been operated through full cylinder stroke to purge air from system.
- Check that all digger wheel pinch points are set to 1-3/4".
- After pressurizing and operating all harvester functions, stop tractor and make sure there are no leaks in the hydraulic system. Follow all safety rules when checking for leaks.

DELIVERY CHECK LIST (DEALER'S RESPONSIBILITY)

- Show customer how to make adjustments and select proper PTO speed.
- Show customer how to make adjustments.
- Instruct customer how to lubricate and explain importance of lubrication.
- Point out the safety decals. Explain their meaning and the need to keep them in place and in good condition. Emphasize the increased safety hazards when instructions are not followed.
- Present Operator's Manual and request that customer and all operators read it before operating equipment. Point out the manual safety rules, explain their meanings and emphasize the increased safety hazards that exist when safety rules are not followed.
- Show customer how to make sure driveline is properly installed and that spring-activated locking pin or collar slides freely and is seated in groove on tractor PTO shaft.
- Show customer the safe, proper procedures to be used when mounting, dismounting, and storing equipment.
- Explain to customer that when equipment is transported on a road or highway, safety devices should be used to give adequate warning to operators of other vehicles.
- Explain to customer that when equipment is transported on a road or highway, a Slow Moving Vehicle (SMV) sign should be used to provide adequate warning to operators of other vehicles.
- Explain to customer that when towing on a public road to comply with all state and local lighting/ marking laws and to use a safety tow chain.
- Make customer aware of optional equipment available so that customer can make proper choices as required.
- Point out all guards and shields. Explain their importance and the safety hazards that exist when not kept in place and in good condition.



SAFETY RULES

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator.

In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

It has been said "*The best safety device is an informed, careful operator.*" We ask you to be that kind of an operator.

The designed and tested safety of this equipment depends on it being operated within the limitations as explained in this manual.

TRAINING

- Safety instructions are important! Read all attachment and power unit manuals; follow all safety rules and safety decal information. (Replacement manuals are available from dealer or, in the United States. Failure to follow instructions or safety rules can result in serious injury or death.
- If you do not understand any part of this manual and need assistance, see your dealer.
- Know your controls and how to stop engine and attachment quickly in an emergency.
- Operators must be instructed in and be capable of the safe operation of the equipment, its attachments and all controls. Do not allow anyone to operate this equipment without proper instructions.
- Keep hands and body away from pressurized lines. Use paper or cardboard, not body parts to check for leaks. Wear safety goggles. Hydraulic fluid under pressure can easily penetrate skin and will cause serious injury or death.
- Make sure that all operating and service personnel know that in the event hydraulic fluid penetrates skin, it must be surgically removed as soon as possible by a doctor familiar with this form of injury, or gangrene, serious injury or death will result. **CONTACT A PHYSICIAN IMMEDIATELY IF FLUID ENTERS SKIN OR EYES. DO NOT DELAY.**

- Do not allow children or untrained persons to operate equipment.

PREPARATION

- Check that all hardware is tight and properly installed. Always tighten to torque chart specifications.
- Air in hydraulic systems can cause erratic operation and allows loads or equipment components to drop unexpectedly. Before operating or allowing anyone to approach the equipment, purge any air in the system by operating all hydraulic functions several times after connecting equipment, connecting hoses, or doing any hydraulic maintenance.
- Make sure all hydraulic hoses, fittings and valves are in good condition and not leaking before starting power unit or using equipment. Check and route hoses carefully to prevent damage. Hoses must not be twisted, bent sharply, kinked, frayed, pinched, or come into contact with any moving parts. Operate moveable components through full operational range to check clearances. Replace any damaged hoses immediately.
- Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing and head.
- Ensure implement is properly attached, adjusted and in good operating condition.
- Make sure spring-activated locking pin or collar slides freely and is seated firmly in tractor PTO spline groove.
- Before starting tractor, check all equipment driveline guards for damage and make sure they rotate freely on all drivelines. Replace any damaged guards. If guards do not rotate freely on drivelines, repair and replace bearings before operating.

(Safety Rules continued on next page)



SAFETY RULES

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



(Safety Rules continued from previous page)

- Power unit must be equipped with ROPS or ROPS CAB and seat belt. Keep seat belt securely fastened. Falling off power unit can result in death from being run over or crushed. Keep foldable ROPS systems in "locked up" position at all times.
- Connect PTO driveline directly to tractor PTO shaft. Never use adapter sleeves or adapter shafts. Adapters can cause driveline failures due to incorrect spline or incorrect operating length and result in personal injury or death.
- Remove accumulated debris from this equipment, tractor and engine to avoid fire hazard.
- Ensure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)
- Ensure shields and guards are properly installed and in good condition. Replace if damaged.
- A minimum 20% of tractor and equipment weight must be on tractor front wheels with attachments in transport position. Without this weight, tractor could tip over causing personal injury or death. The weight may be attained with a loader, front wheel weights, ballast in tires or front tractor weights. When attaining the minimum 20% weight on the front wheels, you must not exceed the Roll Over Protection Structure (ROPS) weight certification. Weigh the tractor and equipment. Do not estimate.
- Make sure hydraulic hoses and cylinders are fully purged of air before operating. Keep all persons away and fill the system by raising and lowering all functions several times. Air in the system can allow components to fall unexpectedly.
- Never go underneath equipment lowered to the ground or raised, unless it is properly blocked and secured. Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak down, hydraulic system failures, mechanical failures or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death. Follow Operator's Manual instructions for working underneath and blocking requirements, or have work done by a qualified dealer.
- Do not operate equipment while under the influence of alcohol or drugs.
- Operate only in daylight or good artificial light.
- Avoid contact with electrical wires.
- Keep hands, feet, hair and clothing away from equipment while engine is running. Stay clear of all moving parts.
- Always comply with all state and local lighting and marking requirements.
- No riders are allowed on equipment.
- Power unit must be equipped with ROPS or ROPS CAB and seat belt. Keep seat belt securely fastened. Falling off power unit can result in death from being run over or crushed. Keep foldable ROPS systems in "locked up" position at all times.
- Always sit in tractor seat when operating controls or starting engine. Securely fasten seat belt, place transmission in neutral, engage brake and ensure all other controls are disengaged before starting tractor engine.
- Operate tractor PTO at RPM speed stated in "Specifications" section.

OPERATIONAL SAFETY

- Do not allow other people in the area when operating, attaching, removing, assembling or servicing equipment.
- Keep bystanders away from equipment.

(Safety Rules continued on next page)



SAFETY RULES

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



(Safety Rules continued from previous page)

- Operate only in daylight or good artificial light.
- Avoid contact with electrical wires.
- Keep hands, feet, hair and clothing away from equipment while engine is running. Stay clear of all moving parts.
- Always comply with all state and local lighting and marking requirements.
- No riders are allowed on equipment.
- Power unit must be equipped with ROPS or ROPS CAB and seat belt. Keep seat belt securely fastened. Falling off power unit can result in death from being run over or crushed. Keep foldable ROPS systems in "locked up" position at all times.
- Always sit in tractor seat when operating controls or starting engine. Securely fasten seat belt, place transmission in neutral, engage brake and ensure all other controls are disengaged before starting tractor engine.
- Operate tractor PTO at RPM speed stated in "Specifications" section.
- Do not operate tractor PTO during transport.
- Look down and to the rear and make sure area is clear before operating in reverse.
- Do not operate on steep slopes.
- Do not stop, start or change directions suddenly on slopes.
- Watch for hidden hazards on the terrain during operation.
- Stop tractor and implement immediately upon striking an obstruction. Turn off engine, remove key, inspect and repair any damage before resuming operation.
- Truck boom lock must be engaged when truck boom is in operating position. Do not operate unloader conveyor unless boom lock is engaged and in good repair. Hydraulic system

leak down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.

- Always connect safety chain from implement to towing vehicle when transporting.
- **AVOID INJURY OR DEATH FROM POWER LINES:**
 - Stay away from power lines.
 - Electrocution can occur without direct contact.
 - Check clearances before raising implement.
 - Do not leave the operator's seat if any part of the tractor or implement contacts electric lines.
- Before dismounting tractor, disengage tractor PTO power to implement, lower front lift cylinders so that lifter wheels are on the ground. Operate valve control levers to release any hydraulic pressure. Stop engine, set parking brake, remove key and unfasten seat belt.
- Before performing any service or maintenance, disengage power to implement, lower front lift cylinders so that lifter wheels are on the ground, lower truck boom, lower 3-point hitch. Operate valve control levers to release any hydraulic pressure. Stop engine, set parking brake, remove key and unfasten seat belt. Disconnect driveline from tractor PTO. Chock (block) front and rear of implement wheels.
- Before working underneath a raised implement, read and follow all operator's manual instructions and safety rules. Implement must be attached to tractor, lift cylinder locks must be installed, and lift cylinders lowered against locks. Hydraulic system leak down, hydraulic system failures, or movement of control levers can cause equipment to drop unexpectedly and cause severe injury or death.

(Safety Rules continued on next page)



SAFETY RULES

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



(Safety Rules continued from previous page)

MAINTENANCE SAFETY

- Service and maintenance work not covered in OWNER SERVICE must be done by a qualified dealership. Special skills, tools and safety procedures may be required. Failure to follow these instructions can result in serious injury or death.
- Before dismounting tractor, disengage tractor PTO power to implement, lower front lift cylinders so that lifter wheels are on the ground. Operate valve control levers to release any hydraulic pressure. Stop engine, set parking brake, remove key and unfasten seat belt.
- Before performing any service or maintenance, disengage power to implement, lower front lift cylinders so that lifter wheels are on the ground, lower truck boom, lower 3-point hitch. Operate valve control levers to release any hydraulic pressure. Stop engine, set parking brake, remove key and unfasten seat belt. Disconnect driveline from tractor PTO. Chock (block) front and rear of implement wheels.
- Before working underneath a raised implement, read and follow all operator's manual instructions and safety rules. Implement must be attached to tractor, lift cylinder locks must be installed, and lift cylinders lowered against locks. Hydraulic system leak down, hydraulic system failures, or movement of control levers can cause equipment to drop unexpectedly and cause severe injury or death.
- Do not modify or alter or permit anyone else to modify or alter the equipment or any of its components in any way.
- Before performing any maintenance on the beet harvester. Do not work in or under the holding tank with the tank bottom in the raised (unload) position. Hydraulic system leak down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.
- Before performing any maintenance on the beet harvester, the truck boom must be fully lowered into the transport position. Do not work on harvester with truck boom in any intermediate position. Hydraulic system leak down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.
- Your dealer can supply original equipment hydraulic accessories and repair parts. Substitute parts may not meet original equipment specifications and may be dangerous.
- Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing and head.
- Do not allow other people in the area when operating, attaching, removing, assembling or servicing equipment.
- Never go underneath equipment lowered to the ground or raised, unless it is properly blocked and secured. Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak down, hydraulic system failures, mechanical failures or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death. Follow Operator's Manual instructions for working underneath and blocking requirements, or have work done by a qualified dealer.
- Ensure implement is properly attached, adjusted and in good operating condition.
- Never perform service or maintenance with engine running.
- Make sure hydraulic hoses and cylinders are fully purged of air before operating. Keep all persons away and fill the system by raising and lowering all functions several times. Air in the system can allow components to fall unexpectedly.
- Keep all persons away from operator control area while performing adjustments, service or maintenance.

(Safety Rules continued on next page)



SAFETY RULES

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



(Safety Rules continued from previous page)

- Make certain all movement of implement components has stopped before approaching for service.
- Tighten all bolts, nuts and screws to torque chart specifications. Check that all cotter pins are installed securely to ensure equipment is in a safe condition before operating.
- Ensure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)
- Ensure shields and guards are properly installed and in good condition. Replace if damaged.
- Do not disconnect hydraulic lines until engine is stopped, tractor is properly secured, equipment and all components are lowered to the ground, and system pressure is released by operating all valve control levers.

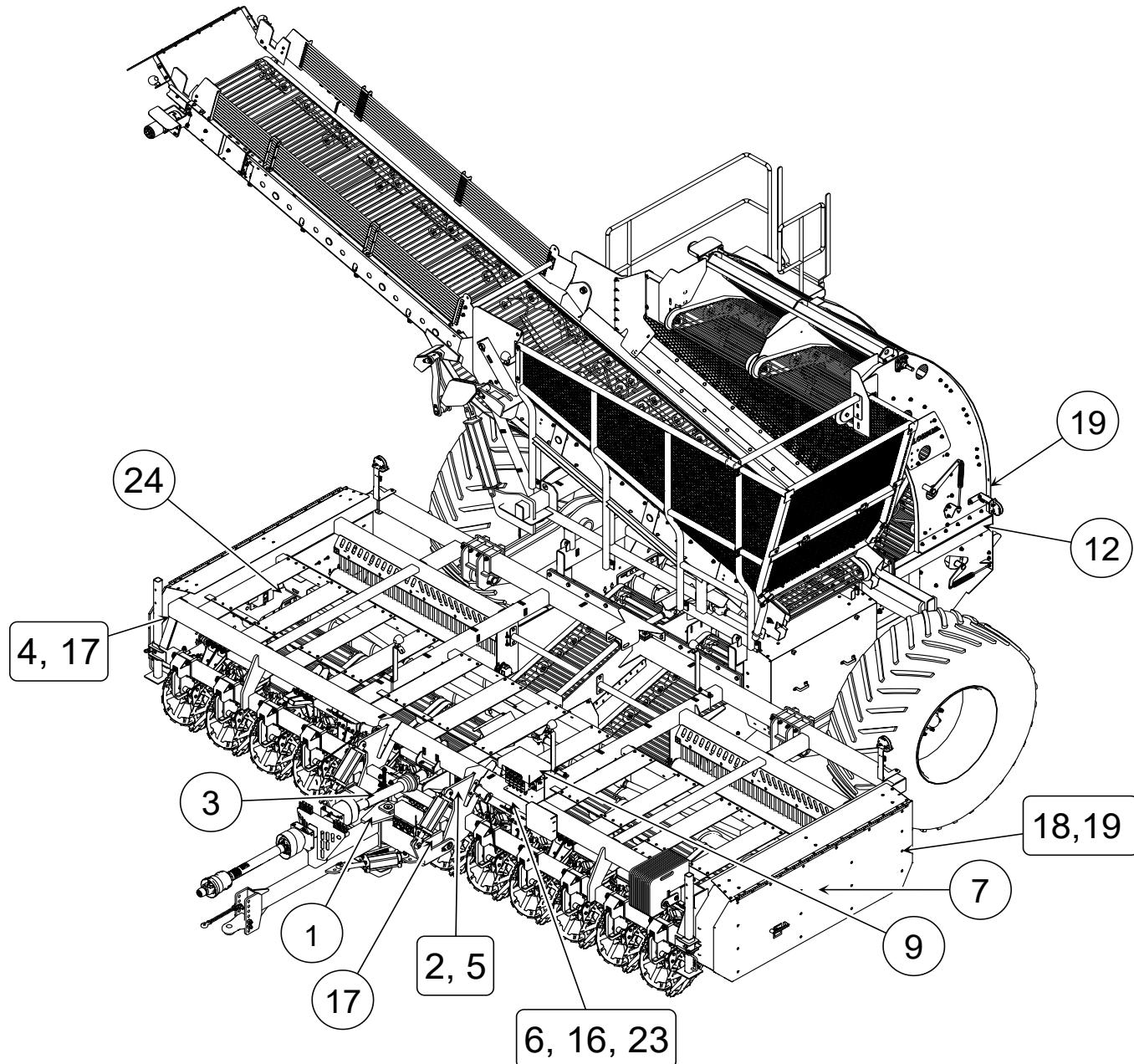
STORAGE

- For storage, disengage tractor PTO power to harvester, lower front lift cylinders so that lifter wheels are on the ground, lower truck boom, lower 3-point hitch. Operate tractor valve control levers to release any hydraulic pressure. Stop engine, set parking brake, remove key and unfasten seat belt. Remove driveline from tractor PTO. Chock (block) front and rear of harvester wheels.
- Keep children and bystanders away from storage area.



SAFETY & INSTRUCTIONAL DECALS

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!
Replace Immediately If Damaged!



(Safety Decals continued on next page)



SAFETY & INSTRUCTIONAL DECALS

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

Replace Immediately If Damaged!



(Safety Decals continued from previous page)



1. 506-3-0196 Rotating Driveline Warning



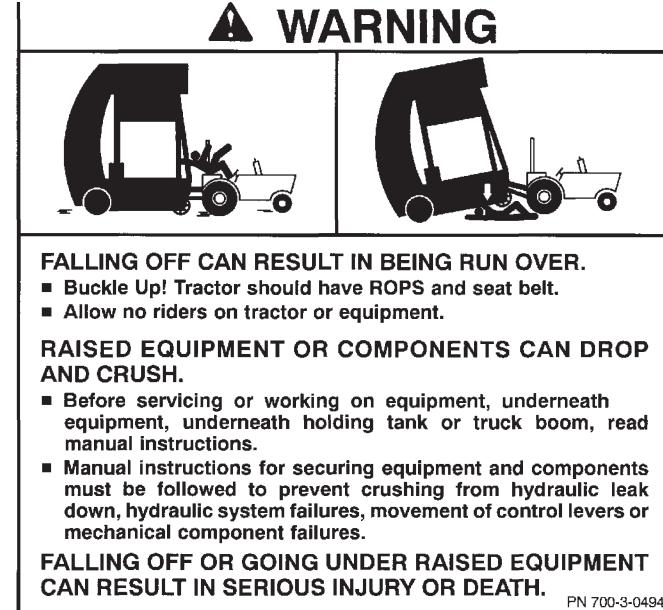
2. 700-3-0519 PTO Speed Warning



4. 200-3-1366 Serial Number Tag



3. 903-17456 Driveline Safety Sign



5. 700-3-0494 Fall Hazard Warning

(Safety Decals continued on next page)



SAFETY & INSTRUCTIONAL DECALS

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

Replace Immediately If Damaged!



(Safety Decals continued from previous page)

⚠ WARNING

TO AVOID SERIOUS INJURY OR DEATH:

- Read Operator's Manual before operating, servicing or repairing equipment. Follow all safety rules and instructions. (Manuals are available from dealer or, in the United States and Canada, call 1-800-319-6637.)
- Keep all guards in place, properly secured and in good condition. Replace if damaged.
- Operate from tractor seat only.
- Do not allow any other persons in the area when operating.
- Before dismounting tractor:
 - Disengage PTO.
 - Lower equipment and all raised components.
 - Stop engine, remove key and engage brake.
 - Operate hydraulic valve levers to release any pressure.
 - Allow no children or untrained persons to operate the equipment.

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.

PN 700-3-0493

⚠ WARNING

ROTATING DRIVE HAZARDS

- Before opening drive guard:
 - Disengage PTO drive,
 - Lower equipment to ground,
 - Stop engine, remove key and engage brake,
 - Operate valve levers to release any hydraulic pressure,
 - Wait for all rotation to stop,
 - Disconnect driveline from tractor PTO.
- Before starting tractor:
 - Close drive cover and secure,
 - Keep guard in good condition.

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.

7. 700-3-0495 Rotating Drive Hazard



⚠ WARNING

HIGH PRESSURE HYDRAULIC OIL LEAKS CAN PENETRATE SKIN RESULTING IN SERIOUS INJURY, GANGRENE OR DEATH.

- Check for leaks with cardboard; never use hand.
- Before loosening fittings: lower load, release pressure, and be sure oil is cool.
- Consult physician immediately if skin penetration occurs.

9. 506-3-0195 Hydraulic Pressure Warning

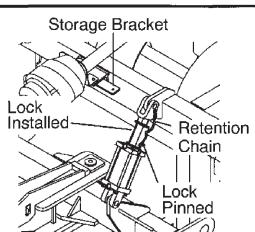


⚠ WARNING

RAISED EQUIPMENT CAN DROP AND CRUSH.

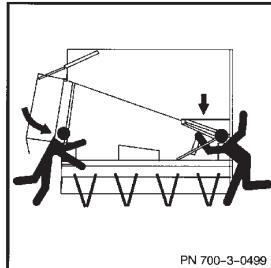
- Install both cylinder locks before transporting or working underneath raised harvester.
- Locks must be installed correctly, kept in good condition, and stored on harvester.
- Read and follow manual instructions.

FAILURE TO FOLLOW INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.



CYLINDER LOCKS

10. 700-3-0498 Cylinder Lock Warning



⚠ WARNING

RAISED EQUIPMENT CAN DROP AND CRUSH.

- Truck boom and holding tank must be lowered before leaving tractor, or before servicing or storing harvester.
- Lowering components prevents crushing from hydraulic leak down, hydraulic system failures, movement of control levers or mechanical component failures.

FAILURE TO FOLLOW INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.

11. 700-3-0499 Raised Equipment Warning

(Safety Decals continued on next page)



SAFETY & INSTRUCTIONAL DECALS

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

Replace Immediately If Damaged!



(Safety Decals continued from previous page)



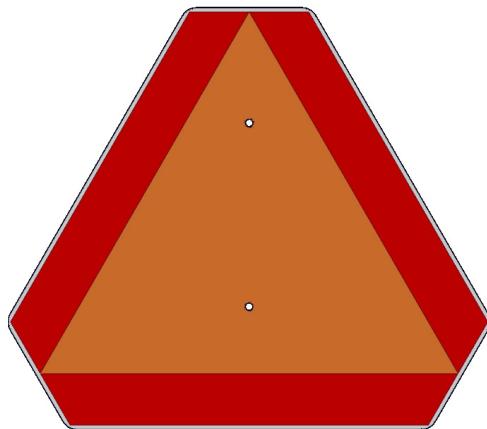
12. 700-3-0497 Elevator Chain Warning

BOOM LOCK MUST BE ENGAGED WHEN TRUCK BOOM IS RAISED TO OPERATING POSITION:

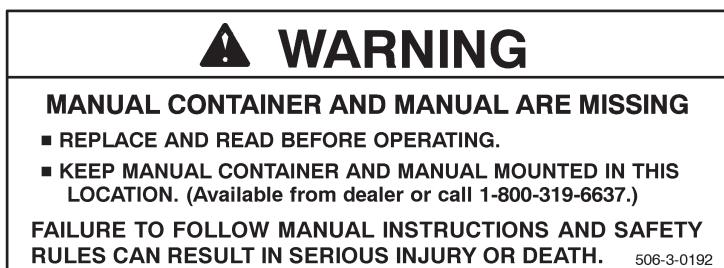
1. Read manual and follow all instructions and safety rules.
2. Lock pin must be in lowered position.
3. Hydraulically raise truck boom.
4. Boom lock must fully rotate into engaged position as shown.
5. Check and do not operate unless boom lock is fully engaged and in good repair.

BOOM LOCK MUST BE RELEASED BEFORE TRUCK BOOM CAN BE LOWERED:

1. Read manual and follow all instructions and safety rules.
2. Hydraulically raise truck boom to full up position to remove boom weight from boom lock.
3. Stand behind truck boom and raise lock pin handle to raised position as shown.
4. Hydraulically lower truck boom to transport position.
5. The lock pin will automatically reset to the lowered position as the truck boom is lowered. If lock pin does not reset, have unit repaired before operating.

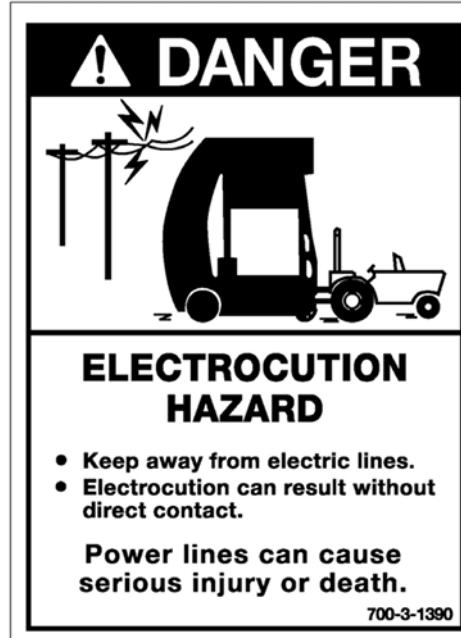


13. 500-3-1696 SMV Sign



14. 506-3-0192 Manual Container Warning

15. 700-3-0644 Boom Lock Warning



16. 700-3-1390 Electrocution Hazard

(Safety Decals continued on next page)



SAFETY & INSTRUCTIONAL DECALS

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

Replace Immediately If Damaged!



(Safety Decals continued from previous page)



17. 200-3-4004 Amber Reflector 9 x 2



18. 200-3-4034 Orange Fluorescent Reflector 9 x 2



19. 200-3-4005 Red Reflector 9 x 2



20. 506-3-0195 High - Pressure Fluid Hazard

Center (x2) - PN: 902-15134

ALLOWAY HV-12R22

Size: 37.8" x 2.4"

21. 902-15134 Center Elevator Alloway Decal

(x4) - PN: 902-15123

ALLOWAY

Size: 12" x 1.83"

22. 902-15123 White Alloway Decal

CAUTION	PRECAUCION
<ol style="list-style-type: none"> 1. Read Operator's Manual before starting. 2. Stop tractor engine, place all controls in neutral, lower machine to the ground, set park brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing, or unplugging. 3. Keep all guards and access doors closed and secured before operating. 4. Keep hands, feet, hair, and clothing away from moving parts. 5. Do not allow riders. 6. Do not enter rotor area when engine is running. 7. Never exceed a safe travel speed when transporting. 8. Use hazard flashers when transporting. 9. Use drawbar pin with retainer and attach safety pin. 10. Wear appropriate hearing protection for prolonged exposure to excessive noise. 11. Review safety instructions annually. 	<ol style="list-style-type: none"> 1. Lee el Manual del Operario antes de empezar. 2. Pare el motor del tractor, ponga todos los controles en neutro, baje la máquina hasta el suelo, ponga el freno de estacionamiento, quite la llave del encendido, y espere a que todas las piezas móviles hayan parado antes de dar servicio, hacer ajustes, reparaciones, o de desatascar. 3. Mantenga cerrados y asegurados todos los protectores y las compuertas antes de poner a funcionar la máquina. 4. Mantenga retirados de las piezas móviles, las manos, los pies, el pelo, y la ropa. 5. No permita que nadie vaya con usted en la máquina. 6. No entre en el área del rotor mientras el motor está en marcha. 7. Nunca sobrepase la velocidad segura cuando viaja con la máquina. 8. Use luces intermitentes de aviso cuando viaja con la máquina. 9. Use el pasador de la barra de tiro con fiador y enganche la cadena de seguridad. 10. Use un protector apropiado para los oídos cuando esté expuesto a ruido excesivo por un tiempo prolongado. 11. Revise anualmente las instrucciones de seguridad.

50630977-A

23. 500-3-0977 Caution Manual Warning



24. 100-3-1367 Safety Guard

(x4) - PN: 902-15124

HIGH VOLUME

Size: 24" x 2"

25. 902-15124 High Volume Decal



Left (x1) - PN: 902-15132

Size: 72" x 8"

26. 902-15132 Alloway LH Door Decal



Right (x1) - PN: 902-15133

Size: 72" x 8"

27. 902-15133 Alloway RH Door Decal

PN : 700-5-0020 (2024)

OPERATION

Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator.

In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

It has been said "*The best safety device is an informed, careful operator.*" We ask you to be that kind of an operator.

you must not exceed the Roll Over Protection Structure (ROPS) weight certification. Weigh the tractor and equipment. Do not estimate.



WARNING

- Ensure all safety decals are installed. Replace if damaged. (See Safety Decals section for location.)
- Ensure shields and guards are properly installed and in good condition. Replace if damaged.
- Do not allow other people in the area when operating, attaching, removing, assembling or servicing equipment.

■ Keep bystanders away from equipment.

■ Never go underneath equipment lowered to the ground or raised, unless it is properly blocked and secured. Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak down, hydraulic system failures, mechanical failures or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death. Follow Operator's Manual instructions for working underneath and blocking requirements, or have work done by a qualified dealer.



WARNING

- Operators must be instructed in and be capable of the safe operation of the equipment, its attachments and all controls. Do not allow anyone to operate this equipment without proper instructions.
- Do not allow children or untrained persons to operate equipment.



CAUTION

- Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing.



WARNING

- Make sure spring-activated locking pin or collar slides freely and is seated firmly in tractor PTO spline groove.
- Before starting tractor, check all equipment driveline guards for damage and make sure they rotate freely on all drive-lines. Replace any damaged guards. If guards do not rotate freely on drivelines, repair and replace bearings before operating.
- A minimum 20% of tractor and equipment weight must be on tractor front wheels with attachments in transport position. Without this weight, tractor could tip over causing personal injury or death. The weight may be attained with a loader, front wheel weights, ballast in tires or front tractor weights. When attaining the minimum 20% weight on the front wheels,



CAUTION

- Operate only in daylight or good artificial light.
- Avoid contact with electrical wires.



WARNING

- Keep hands, feet, hair and clothing away from equipment while engine is running. Stay clear of all moving parts.
- Always comply with all state and local lighting and marking requirements.
- No riders are allowed on equipment.
- Power unit must be equipped with ROPS or ROPS CAB and seat belt. Keep seat belt securely fastened. Falling off power unit can result in death from being run over or crushed. Keep foldable ROPS systems in "locked up" position at all times.

Operation Continued

PRE-OPERATION CHECK LIST

(OWNER'S RESPONSIBILITY)

To assure safe and efficient operation it is essential, that each machine operator read and understand the operating procedures and related safety requirements outlined in this manual.

Complete the Pre-Operation Checklist before initial operation, after the first hour of field operation, and before each shift thereafter.

- Review and follow all safety rules and safety decal instructions on pages 4 through 11.
- Check that all safety decals are installed and in good condition. Replace if damaged.
- Check that all shields and guards are properly installed and in good condition. Replace if damaged.
- Check that all hardware and cotter pins are properly installed and secured.
- Check alignment and spacing of digger wheels.
- Check alignment of grab rolls and remove any obstructions.
- Check that elevator chains, rollers and tensioners move freely and without obstruction
- Check tractor and harvester tire pressures. Service as necessary.
- Check that boom lock is in good repair. Do not operate unless boom lock is fully engaged when truck boom is raised.
- Check that equipment is properly and securely attached to tractor.
- Make sure driveline spring-activated locking collar slides freely and is seated firmly in tractor PTO spline groove.
- Before starting tractor, check all equipment driveline guards for damage and make sure they rotate freely on all drivelines. Replace any damaged guards. If guards do not rotate freely on drivelines, repair and replace bearings before operating.
- Do not allow riders.
- Check and keep all bystanders away from equipment working area.
- Check all lubrication points and grease as instructed in "Service, lubrication information". Make sure the PTO slip joint is lubricated and that the gearbox fluid levels are correct.
- Set tractor PTO at correct rpm for your equipment.
- Check that all hydraulic connections are correct and all hydraulic control movements function as described in the Operator's Manual.
- Check that all hydraulic hoses and fittings are in good condition and not leaking before starting tractor. Check that hoses are not twisted, bent sharply, kinked, frayed or pulled tight. Replace any damaged hoses immediately.
- Raise and lower equipment to make sure air is purged from hydraulic cylinders and hoses.
- Make sure tractor 3-point lift links do not interfere with hydraulic hoses or driveline throughout full turning range.
- Make sure tractor ROPS or ROPS CAB and seat belt are in good condition. Keep seat belt securely fastened during operation.
- Before starting engine, operator must be in tractor seat with seat belt fastened. Place transmission in neutral or park, engage brake and disengage tractor PTO.

Operation Continued

HARVESTER COMPONENTS

The harvester consists of several components which will be referred to throughout this manual. They are as follows:

- 1. Center frame:** This is the base structure to which all components of the harvester are attached.
- 2. Hitch:** Located on the front of the harvester, it is used to attach the harvester to a tractor. Hydraulic cylinders connect the Hitch to the Main Frame and are used to control the working depth and harvester steering.
- 3. Lifter struts:** Lifter struts are attached to the center frame of the harvester to align with each row of to remove the beets from the soil.
- 4. Paddle shaft:** Shaft and paddle assemblies rotate through each lifter wheel assembly directing all materials from between the lifter wheels onto the grab roll bed.

5. Front Barrier: Structure attached to the front of the wings to keep beets from falling out.

6. Rear Barrier: Located on the back of the center frame to keep beets from falling out the back while allowing easy access to the inside of the frame.

7. Grab Rolls: Pairs of counter-rotating cleaning rolls to remove soil and debris from the beets while moving beets to the vertical elevator.

8. Chain Bed: Chain that carries beets from lifter wheels to the grab roll bed

9. Holding tank: Beet holding area. Beets are dropped into the tank until truck arrives.

10. Truck boom: The foldable conveyor extension on the top right of the harvester used to convey beets to the truck.

11. Vertical elevator: Structure comprised of two powered belted chains moving the beets vertically from the grab rolls to the top of the holding tank.

12. Row Finder: Keeps the Harvester digger wheels centered on the beets.

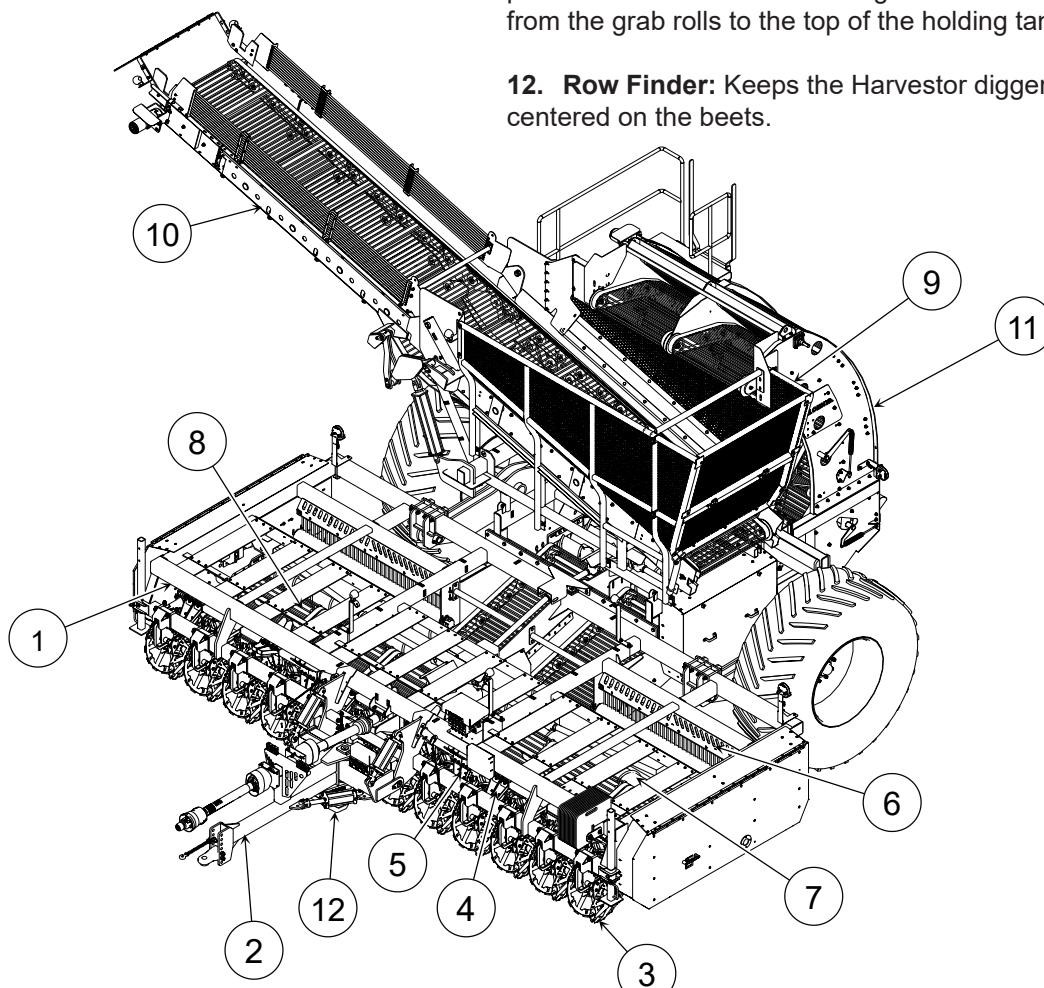


Figure 1. Beet Harvester Components

Operation Continued

EQUIPMENT MATCHING

<u>Harvester</u>	<u>Minimum HP</u>
8 ROW 22" HV	250 HP
8 ROW 30"	275 HP
12 ROW 22"	285 HP

Use the above guidelines to select a tractor with adequate power and weight to operate the harvester.

Use tractor manufacturer ASAE HP ratings for tractor matching.

TRACTOR BALLAST

The tractor should be equipped with manufacturer's maximum allowable front end ballast for operational and transport stability.

TIRE REQUIREMENTS

The loaded beet harvester will transfer 4000 to 6000 lbs. of static weight to the tractor drawbar. Tractor tires must be of adequate capacity to carry the additional load.

See your tractor operator's manual for selecting tires of the proper capacity and the correct air pressure required.

Dual tractor wheels set to the correct row spacing may be used to increase load capacity.

Tractor tire spacing must be adjusted to match the harvester row spacing.

PTO



WARNING

- **Connect PTO driveline directly to tractor PTO shaft. Never use adapter sleeves or adapter shafts. Adapters can cause driveline failures due to incorrect spline or incorrect operating length and result in personal injury or death.**

Tractor must be equipped with a 1000 rpm PTO shaft. The harvester may be equipped with either a 1-3/8"-21 or 1-3/4"-20 spline driveline to match the tractor output shaft without using adapters.

The harvester may be equipped with optional CV driveline.

HITCH REQUIREMENTS

The drawbar length must be adjusted to a minimum of 16" to 18" between the end of the tractor PTO shaft and the center of the hitch pin.

IMPORTANT

- **Fasten support chains so that they support the drawbar equally.**
- **Raise the three-point hitch only high enough to support the drawbar. Do not bend the drawbar or hitch components.**

HYDRAULIC SYSTEM

Each outlet requires a minimum flow of 7-12 GPM at 2000 psi.

On certain tractors using a pressure/flow compensated system, a load sensing line may be required for proper hydraulic system operation. Consult your tractor dealer for the specific requirements of your tractor hydraulic system.

If not equipped with Hydraulic Manifold

The tractor must be equipped with a minimum of six operator controlled remote outlets and one power-beyond circuit or seven operator controlled remote outlets if a power-beyond is not available.

- Tractor remote valve (1) supplies hydraulic power to the Hydraulic drive motor on Boom Unload Conveyor.
- Tractor remote valve (2) supplies hydraulic power to the Hydraulic drive motor on inside chain of the Rear Elevator
- Tractor remote valve (3) supplies hydraulic power to the Hydraulic drive motor on outside chain of the Rear Elevator
- Tractor remote valve (4) supplies hydraulic power for the depth control/transport cylinders on the hitch.

Operation Continued

- Tractor remote valve (5) supplies hydraulic power to the Boom lift/lower cylinders.
- Tractor remote valve (6) supplies hydraulic power to the row finder override.
- Tractor remote valve (7) or power-beyond circuit supplies hydraulic power to row finder.

If equipped with Hydraulic Manifold

The tractor must be equipped with a minimum of four operator controlled remote outlets and one power-beyond circuit or five operator controlled remote outlets on a closed center or pressure/flow compensated hydraulic system.

- Tractor remote valve (1) supplies hydraulic power to the hydraulic drive motor on Boom Unload Conveyor
- Tractor remote valve (2) supplies hydraulic power to the Hydraulic drive motor on inside chain of Rear Elevator
- Tractor remote valve (3) supplies hydraulic power to the hydraulic drive motor on outside chain of Rear Elevator
- Tractor remote valve (4) supplies hydraulic power to the hydraulic manifold
- Tractor remote valve (5) or power-beyond circuit supplies hydraulic power to row finder.

ALLOWAY <i>Rigid Harvester Hose Labeling System</i>	
Control Valve	Black
Boom Motor	Gold
Outer Elevator Motor	Green
Inner Elevator Motor	Blue
Rear Struts	Red
Rowfinder	Silver

ELECTRICAL SYSTEM

The tractor must be equipped with a SAE J560a 7-pin electrical connector. This will provide power for turn signals, warning flashers, and operating power for the optional rear steering selector switch.

The harvester is equipped with warning flashers and turn signals located on each corner. Warning lights must be functional whenever the harvester is transported on public highways.

See your tractor operator's manual for instructions on warning light and turn signal operation.

If warning lights and turn signals do not function correctly, see your Alloway dealer.

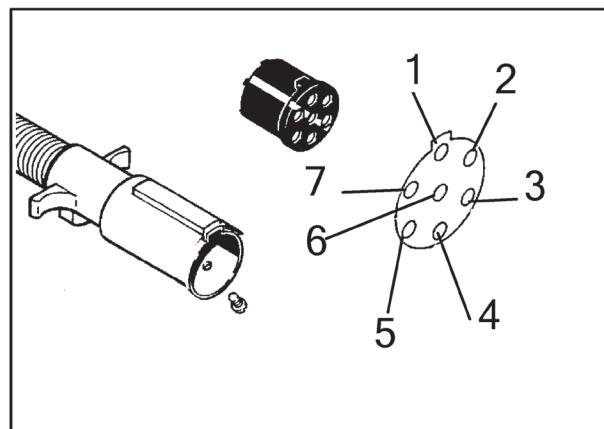


Figure 2. 7-Pin Electrical Connector

Position	Wire Color	Wire Function
1	White	Ground
2	Brown	Tail and Running Lights
3	Green	Right Turn and Hazard
4	Red	Stop Lamps
5	Yellow	Left Turn and Hazard
6	Black	Clearance / Marker
7	Blue	Auxiliary Circuit

Operation Continued

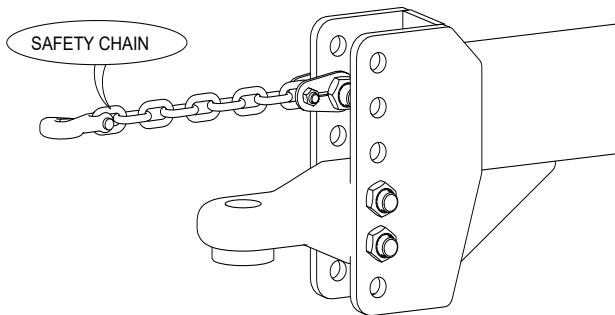


Figure 3. Safety Chain

ATTACHING HARVESTER TO THE TRACTOR

Make sure there are no bystanders between tractor and harvester.

Carefully back up, until the Pin on the tractor is directly in line with the harvester clevis ring.

Stop engine, set parking brake, wait for all moving parts to stop and remove ignition key before dismounting.

Clean the hydraulic couplers and fittings to avoid oil contamination.

Connect the hydraulic hoses which control the front hitch cylinders to the tractor. Connect these hoses so that moving the control lever forward lowers the harvester (raises the hitch tongue) and moving the control lever rearward raises the harvester (lowers the hitch tongue).

Attach the safety chain to the drawbar support of the tractor. Attach Hydraulic Lines. Insert the 7-pin male harvester electrical cable into the tractor female connector.

The unloader conveyer motor is operated by tractor remote valve. Connect the hoses originating at the harvester so that moving lever forward causes the boom conveyor motor to run forward.

The Rear Elevator conveyer motor is operated by tractor remote valve. Connect the hoses originating

at the harvester so that moving lever forward causes the beets to run into the tank.

Check the harvester PTO shaft for smooth telescoping action. Attach the harvester PTO shaft to the tractor PTO shaft. Make sure the locking collar is fully engaged in the lock groove of the tractor PTO.

Hydraulically raise front of the harvester, stop engine, set park brake, wait for all moving parts to stop and remove ignition key before dismounting.

Install transport locks on depth control cylinders.

UNHOOKING THE HARVESTER FROM THE TRACTOR

Locate the harvester on a hard level surface. Make sure area is free of bystanders.

Lower machine with the tractor hydraulics from tractor seat, until machine is resting in a level and stable position on the lifter wheels. Planks or blocking of a suitable size may be used to prevent the harvester from sinking into the soil or damaging the floor surface.

Stop the engine, set parking brake, remove ignition key and wait for all moving parts to stop before dismounting the tractor.

Block the rear wheels of the harvester to prevent the harvester from rolling.

Disconnect PTO shaft from tractor. Disconnect the safety tow chain. Disconnect the electrical cable from the tractor and store in a safe and secure position on the hitch. Remove Pin from hitch.

Lower the hitch to the full extension of the lift cylinders. Stop the engine, release hydraulic pressure in all remotes, set parking brake, remove ignition key and wait for all moving parts to stop before dismounting the tractor.

Disconnect all hydraulic lines and the electrical connector.

FIELD OPERATION

Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator.

In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

It has been said "*The best safety device is an informed, careful operator.*" We ask you to be that kind of an operator.

RAISING AND LOWERING THE HARVESTER

The harvester lift cylinders are attached to the harvester tongue and are used to raise the front of the harvester out of the ground. The lift cylinders are connected to tractor hydraulic outlet.

Harvester hydraulic connections should be made so that moving tractor control lever forward lowers the harvester and moving lever rearward raises the harvester.

Transport locks are included and must be installed whenever the harvester is attached to the tractor when not involved in digging operations.

DEPTH STOPS AND TRANSPORT LOCKS

Digging depth is controlled with two hydraulic lift cylinders on the hitch. Adjustable stops are provided on these cylinders which are used to set and retain the desired machine working depth. These stops must be adjusted so both cylinders have the same stop length.

Adjust cylinder depth stops by turning stop nut. Lengthening stop will raise harvester out of the ground for shallower operation. Shortening the stop will lower the harvester into the ground for deeper operation.

Transport locks are included and must be installed whenever the harvester is attached to the tractor when not involved in digging operations.

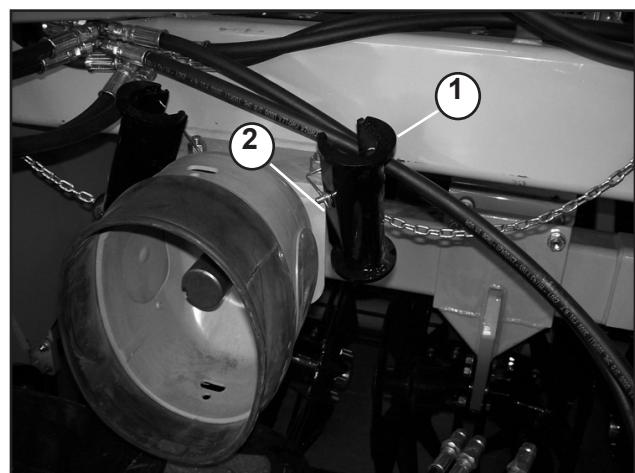
To install transport locks, depth stops must be adjusted equally. Raise harvester completely. Set tractor park brake, turn off tractor engine, remove key and exit tractor cab. Working from beside the lift cylinders, remove transport lock from storage bracket and install transport lock over cylinder rod. Install lock

The Alloway harvester will give best performance only if properly set for individual field conditions. These setting requirements may change with changes in soil moisture, density and beet varieties. The following explains operation and adjustment of the machine. Check with your dealer or Alloway for special conditions.

pin in transport lock to hold lock in place on cylinder rod. Install transport lock for both lift cylinders



Figure 4. Depth Stops



Transport locks should be attached to the storage brackets whenever locks are removed for digging operation. Replace any lost or damaged transport lock component immediately. Recommended operating depth is between 2" and 3" measured from cleared undisturbed soil to the bottom of the cut trench behind the harvester.

Field Operation Continued

ELECTRICAL CONTROL SYSTEM

The electrical control system gives the operator the ability to move the boom up/down, hitch up/down and the hitch left/right. The operator also can control the rpm speeds of the boom, inner elevator chain and outer elevator chain.



Figure 6. Display

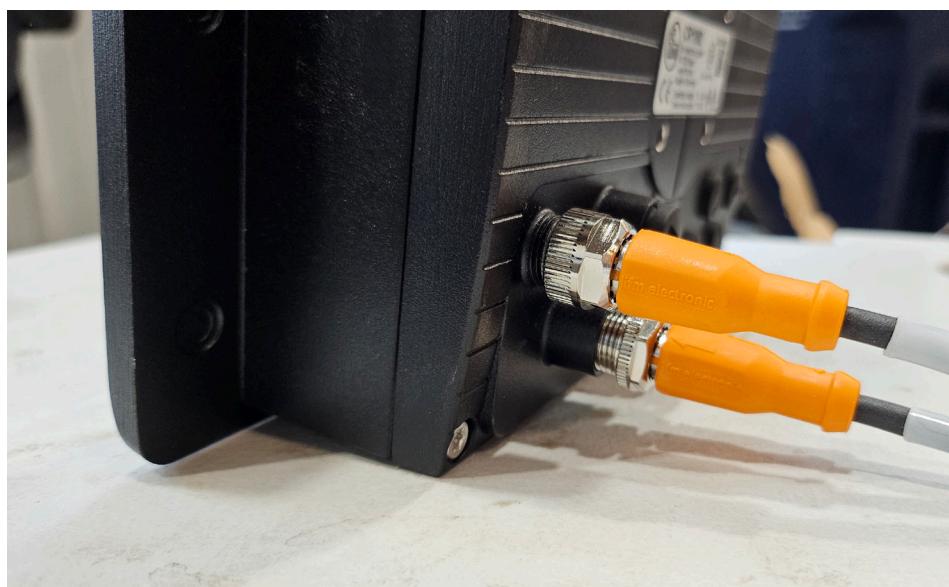


Figure 7. Display Connections

Field Operation Continued

3-5 FUNCTION STACK MANIFOLD

The 3-5 function stack valve works with the electrical control system to bring the number of remotes required down. The valve is equipped with a manual override button that can be pushed in with a screwdriver to operate the functions. The front button will extend the cylinder and the rear button will retract cylinders. The valve is also equipped with a flow control knob that can be turned in or out to adjust hydraulic flow.

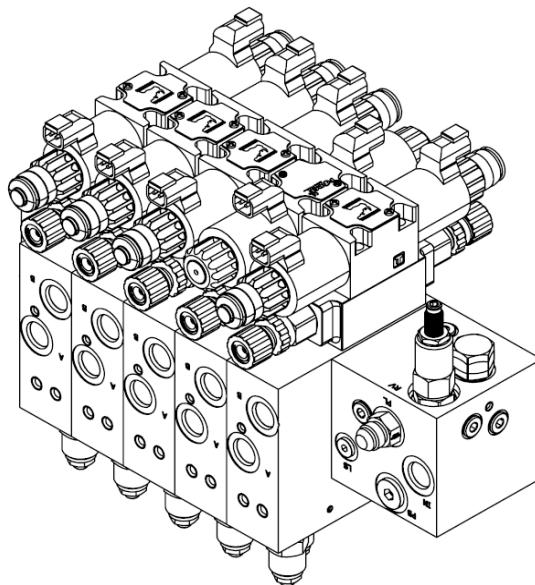


Figure 8. Stack Valve Overview

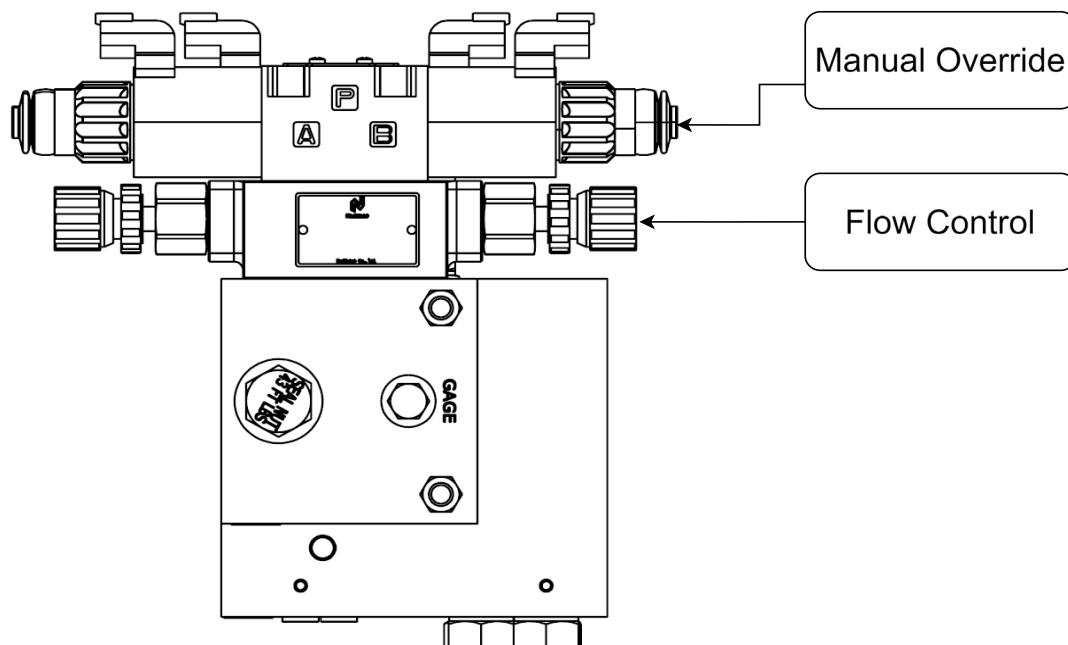


Figure 9. Stack Valve Override

Field Operation Continued

Drive Motor

The harvester is equipped with three drive motors, one on the boom and two on the elevator. These motors drive the belted chain that moves the beets from the harvester to the truck. The motor is equipped with a speed sensor that programs the rpm output shown on the DISPLAY of the electrical control system. This speed can be adjusted by using the buttons on the CAN PAD.

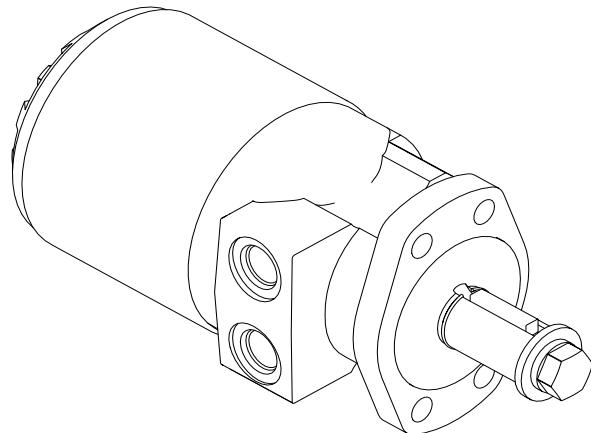


Figure 10. Drive Motor

Motor Control Valve

The motor control valve works with the electrical control system allowing the operator to control rpm speed of the belted chain. There is one control valve for each motor. Each is equipped with a flow control dial.

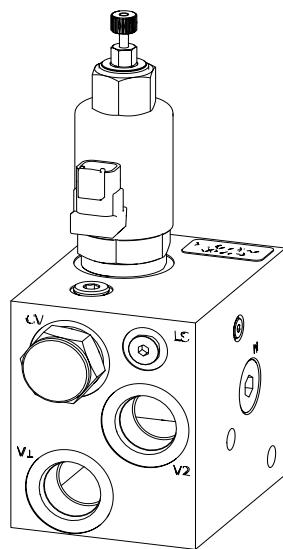


Figure 11. Motor Control Valve

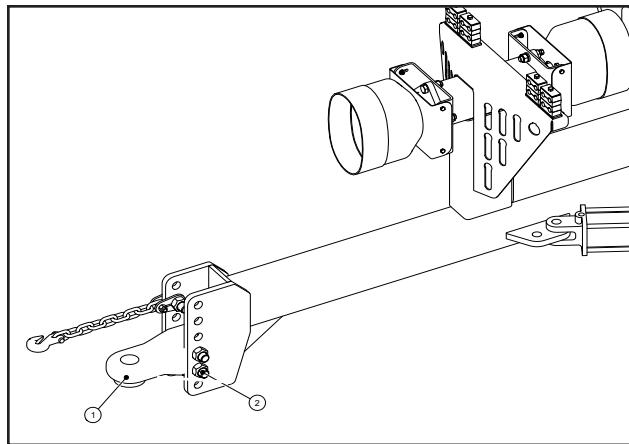
Field Operation Continued

HITCH RING HEIGHT ADJUSTMENT

IMPORTANT

- When operating in rocky conditions, the lift circuit should be placed in "float" position to allow the harvester to raise over rocks without lifting the tractor.

Leveling may be adjusted by moving the hitch bull pull attached to the harvester tongue up or down.



1. Adjustable Hitch Bull Pull 2. Hitch Adjustment Bolts

Figure 12. Hitch Bull Pull Adjustment

CHAIN BED AND GRAB ROLL ADJUSTMENT

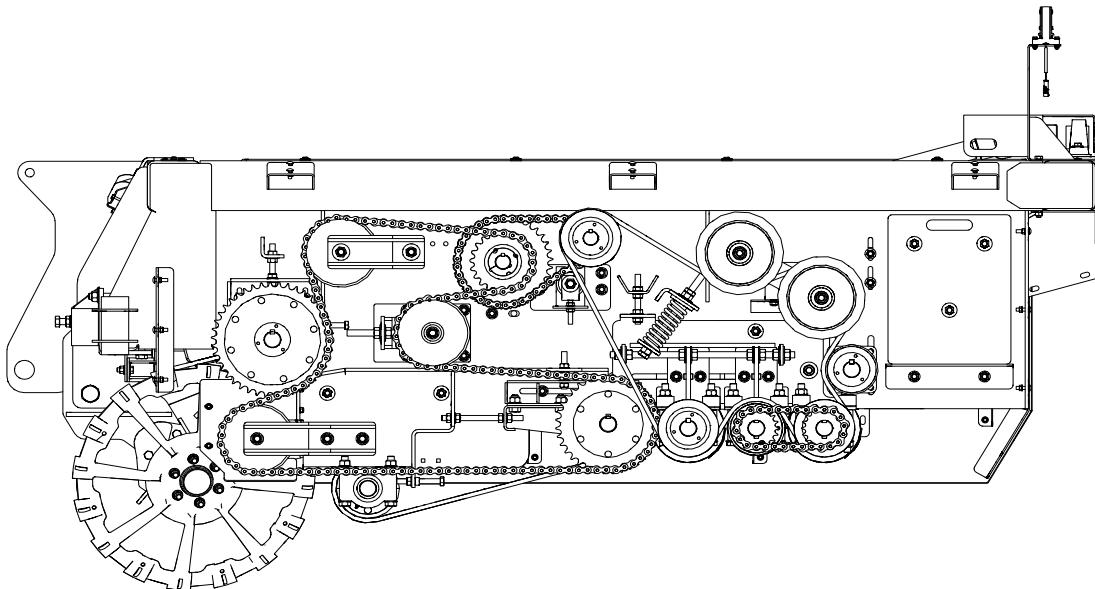


Figure 13. Grabrolls Adjustment

Adjust Chain Bed spacing between lifter wheels and Chain Bed by adjusting Pivot Bracket with adjusting bolt. Maintain a minimum distance of approximately 1/2" between lifter wheels and Chain Bed.

Cleaning capacity of harvester can be adjusted by raising or lowering adjustable grab roll bed. Front of side sheet may be lowered to allow beets more time on grabroll bed for better cleaning. Front of side may be raised if less cleaning time is required.

Field Operation Continued

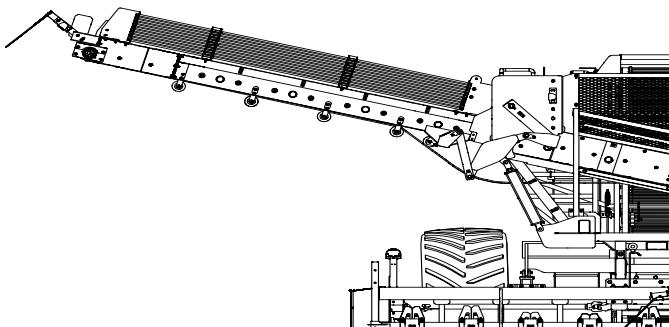


Figure 14. Truck Boom in Extended Operating Position

EXTEND TRUCK BOOM TO OPERATING POSITION

Using the arrows on the CAN PAD under boom, push the down arrow (BOOM DN) to retract boom cylinders. This will rotate truck boom completely to field position. Manifold remote must be engaged.

Truck boom must be fully extended before operating truck boom conveyor.

Confirm that truck boom cylinders are fully retracted and outer section of boom is lowered to rest point before operating conveyor.

IMPORTANT

- Operate unload conveyer only with truck boom fully extended. Hydraulic pressure on boom cylinders must be relieved . Make sure all people and equipment are clear of the boom area.

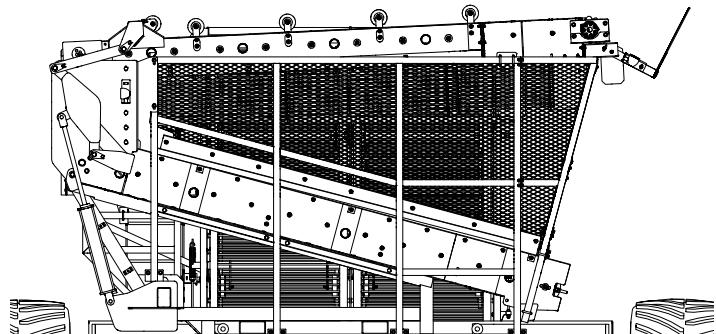


Figure 15. Truck Boom in Folded Transport Position

FOLD TRUCK BOOM TO TRANSPORT POSITION

Make sure all people and equipment are clear of boom area.

Using the arrows on the CAN PAD under boom, push the up arrow (BOOM UP) to extend boom cylinders. This will rotate truck boom completely to transport position. Manifold remote must be engaged.

ADJUST TRUCK BOOM MOTOR SPEED

Adjust truck boom motor speed using the CAN PAD. Start tractor and activate truck boom motor. Observe truck boom conveyor and adjust by pushing the up and down arrows on the CAN PAD to increase or decrease speed.

Field Operation Continued

ROW FINDER

Automatic steering by the row finder requires constant hydraulic pressure at the automatic steering valve. Hydraulic power for the row finder is provided by the tractor power-beyond kit or tractor remote set for continuous operation.

Make sure the row finder assembly is level and the feeler arms are aligned with the center of the lifter wheels on the finder row.

With the harvester set at operating depth, adjust the row finder feeler arms to run as lightly on the soil as possible.

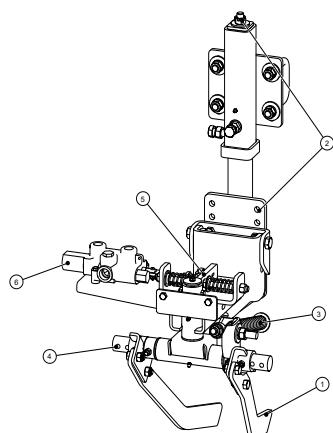
Adjust the spacing between feeler arms to the approximate diameter of beets at ground level.

Adjust the length of the valve control rod to center the feeler arms on the lifter wheel strut.

Adjust the auxiliary centering springs to the same position as the centering spring in the row finder valve spool. It is generally most effective to adjust the row finder on level ground.

IMPORTANT

- Before backing up, raise harvester completely. The row finder may be damaged if it is allowed to contact the ground while backing.



1. Feeler Arms
2. Row Finder Height Adj
3. Feeler Arm Tensioner
4. Feeler Arm Adjustment
5. Steering Control Rod
6. Hydraulic Valve

Figure 16. Row Finder

ROW FINDER OVERRIDE

A row finder override control is powered by manifold control valve. This provides manual control of the steering system and can be used to override the row finder.

Using the arrows on the CAN PAD under HITCH LT/RT, this will override the row finder left or right. Manifold remote must be engaged.

PTO ENGAGEMENT

Set the tractor throttle to idle before engaging or disengaging the PTO.



WARNING

- Connect PTO driveline directly to tractor PTO shaft. Never use adapter sleeves or adapter shafts. Adapters can cause driveline failures due to incorrect spline or incorrect operating length and result in personal injury or death.

GRAB ROLLS

The grab roll bed is a series of counter-rotating roll pairs which help to clean the beets and move them to the elevator. The gap between roll pairs is adjustable for different cleaning requirements.

The grab roll bed is equipped with a system of cushions to help absorb shocks and permit small stones or other debris to pass between the grab rolls.

It is important to have an even space on the left and right sides of the harvester between the pairs of grab rolls; however, the individual pairs can have different gaps to accommodate conditions. For example a wide gap may be helpful on the first pair of rollers to expel excessive soil, and a narrow gap on the last pair may save tails. All grab rolls are adjustable except the rear spiral roller is fixed.

Field Operation Continued

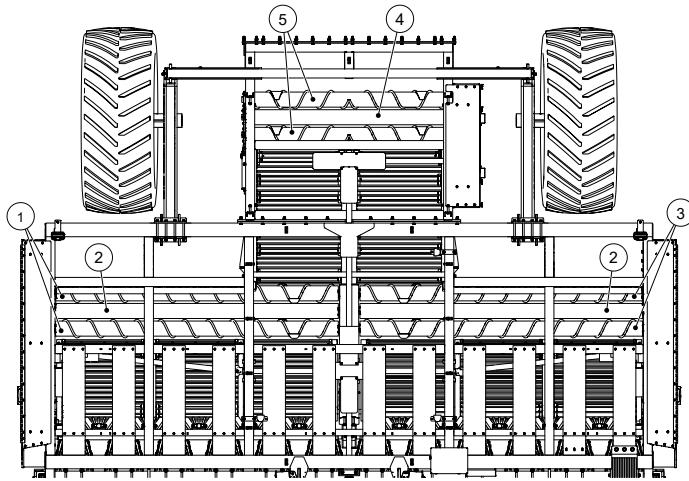


Figure 17. Grab Rolls

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-0608	FRONT SPIRAL GRAB ROLL WELD RH - 1222 PLASTIC	2
2	700-2-0900	SMOOTH GRAB ROLL WELD WING - LONG 1222 PLASTIC	2
3	700-2-0939	FRONT SPIRAL GRAB ROLL WELD LH - 1222 PLASTIC WING	2
4	700-2-1766	SMOOTH PLASTIC GRABROLL-REAR FRAME-12R RIGID	1
5	700-2-1767	SPIRAL PLASTIC GRABROLL-REAR FRAME-12R RIGID	2

GRAB ROLL BED RODS

The grab roll rods are located at the rear of the roll bed, they keep beets from spilling out the back directing them towards the elevator. They may be removed for access to the bed.

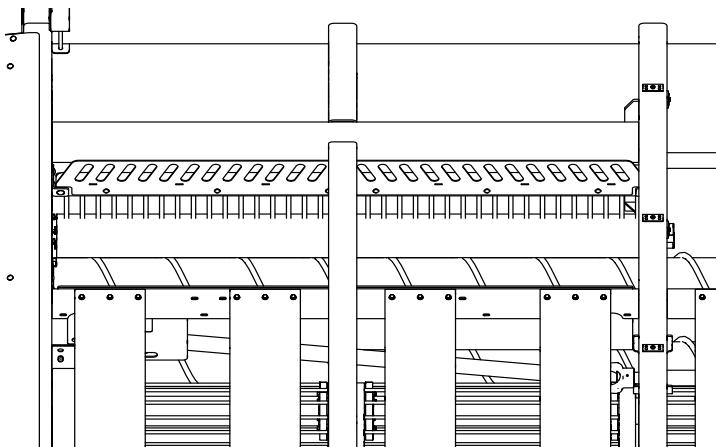


Figure 18. Grab roll bed rods

LIFTER WHEELS

The pinch point width should be uniform across all rows of the harvester. The pinch point width can be adjusted by adding or removing pairs of spacers at each lifter wheel.

Pinch point should be set to **1-3/4"** to start season and adjust as needed for tonnage.

Raise harvester and install transport locks (see Blocking Method, page 33).

Spacers are available in two half sections or one full sections. Available in thickness of **1/8", 1/4" and 3/8"**.

To remove or add spacers, loosen lifter wheel nuts and remove the bolts retaining each spacer. Install or remove spacers as required to set the desired width and re-tighten the wheel nuts to 100 lb-ft. (without wheel cushions). With wheel cushions, tighten wheel nuts to compress wheel spring assemblies **1/4"** from their free height.

Spacers must be installed as pairs. Multiple spacer pairs may be used at each wheel to increase the pinch point width.

WHEEL SCRAPERS

Wheel scraper blades are adjustable for digging conditions. To adjust scraper blades, loosen retaining bolts and slide scraper blades to place the scraper closer to the wheel or away from the wheel. Retighten scraper retaining bolts.

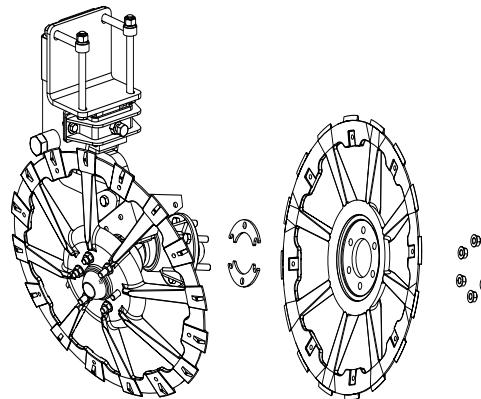


Figure 19. Install Lifter Wheel Spacers

Field Operation Continued

LIFTER TABS

Under certain digging conditions, beets may fall through the spokes of the lifter wheels during operation. This condition may require the installation of tabs on the lifter wheels.



Figure 20. Scrapers and Tabs

FLEXING LIFTER STRUTS (Optional)

Flex struts are available for the lifter wheel struts for operation in rocky conditions.

Flex cushions on the lifter wheels will reduce damage to the lifter wheels in rocky conditions.

When operating in rocky conditions, the lift circuit should be run in "float" to allow the harvester to raise over rocks without lifting the tractor.

IMPORTANT

- **When operating in rocky conditions, the lift circuit should be placed in "float" position to allow the harvester to raise over rocks without lifting the tractor.**

PADDLE SHAFT

The paddle shaft provides a set of rotating paddles between each set of lifter wheels. Beets are moved onto the chain bed by the rotating paddles. The height of the paddle shaft may be raised or lowered to obtain the correct clearance for the harvesting conditions. With flex struts installed, the paddle shaft must be placed in the uppermost position to maintain adequate clearance between the paddle shaft and the lifter wheels. Keep front and rear paddle deflectors in place and in good condition; replace if damaged or missing.

VERTICAL ELEVATOR

A dual chain elevator moves the beets from the grab roll bed to the holding tank. A combination of straight and offset rods is used in the elevator to provide a pocket for carrying beets.

As the elevator fills with beets, spring loaded tensioner arms allow the chains to operate correctly. Tension adjustment springs for the outer chain are located on the both sides of the elevator. Tension adjustment spring for the inner chain is located on the right side of the elevator.

Elevator chains may be run at different speeds using the DISPLAY and CAN PAD to increase or decrease each chain individually. Elevator drive motors are equipped with sensors. These sensors give a RPM readout on the display. RPM speeds can be set as needed based on field conditions.

Field Operation Continued

TRANSPORTING

Follow instructions in “Fold Truck Boom to Transport Position” to place truck boom in retracted position.

Raise the machine and insert the transport locks on the hitch lift cylinders.

Transport locks must be installed whenever the harvester is transported.

Replace any lost or damaged transport lock component immediately.

Do not transport the harvester with beets in the holding tank.

Make sure reflectors, lights and the SMV sign are clean and clearly visible to other traffic.

Do not allow riders.

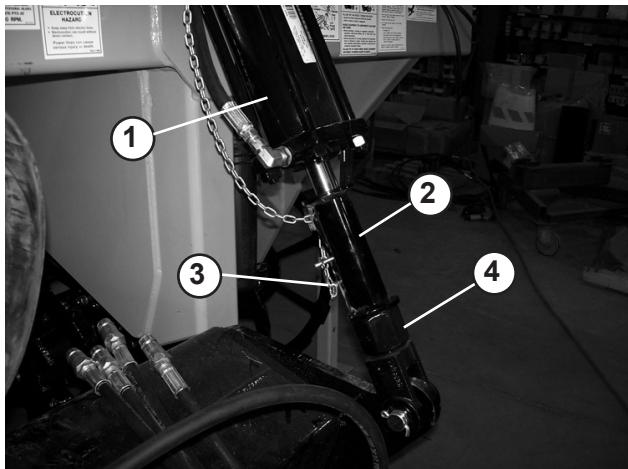
Use hazard flashers on the tractor and harvester when transporting.

Never exceed safe travel speed, slow down when making turns and traveling on rough roads or shoulders.

Only use a tractor of the recommended size and weight for transporting.

Lock foot brake pedals for even application during road travel.

Do not exceed 10 mph transport speed.



1. Lift Cylinder	2. Transport Lock
3. Lock Pin	4. Adjustable Depth Stop

Figure 21. Transport Locks Installed

Field Operation Continued

STORAGE



WARNING

- For storage, disengage tractor PTO power to harvester, lower front lift cylinders so that lifter wheels are on the ground, lower truck boom, lower 3-point hitch. Operate tractor valve control levers to release any hydraulic pressure. Stop engine, set parking brake, remove key and unfasten seat belt. Remove driveline from tractor PTO. Chock (block) front and rear of harvester wheels.



CAUTION

- Keep children and bystanders away from storage area.

After the season's use, the machine should be thoroughly inspected and prepared for storage. Repair or replace any worn or damaged components to prevent any unnecessary down time at the start of the next season.

To insure a long, trouble free life, this procedure should be followed when preparing the unit for storage.

Clear the area of bystanders.

Thoroughly wash the machine using a pressure washer to remove all dirt, mud, debris or residue.

Check the rotating components for damage or entangled material. Repair or replace damaged parts. Remove any entangled material.

Inspect all hydraulic hoses, fittings, lines and couplers. Tighten any loose fittings. Replace any hose that is cut, nicked or abraded or is separating from the crimped end of the fitting.

Change the oil in the gearbox.

Lubricate all grease fittings. Make sure that all grease cavities have been filled with grease to remove any water residue from the washings.

Touch up all paint nicks and scratches to prevent rusting.

Move to storage area.

Select an area that is dry, level and free of debris. Unhook from tractor.

Place PTO shaft on hitch to keep PTO off the ground.

Store the machine in an area away from human activity.

Do not allow children to play on or around the stored machine.

OWNER SERVICE

Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator.

In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

It has been said "*The best safety device is an informed, careful operator.*" We ask you to be that kind of an operator.

The information in this section is written for operators who possess basic mechanical skills. Should you need help, your dealer has trained service technicians available. For your protection, read and follow all safety information in this manual.



WARNING

- Before dismounting tractor, disengage tractor PTO power to implement, lower front lift cylinders so that lifter wheels are on the ground. Operate valve control levers to release any hydraulic pressure. Stop engine, set parking brake, remove key and unfasten seat belt.
- Before performing any service or maintenance, disengage power to implement, lower front lift cylinders so that lifter wheels are on the ground, lower truck boom, lower 3-point hitch. Operate valve control levers to release any hydraulic pressure. Stop engine, set parking brake, remove key and unfasten seat belt. Disconnect driveline from tractor PTO. Chock (block) front and rear of implement wheels.
- Before working underneath a raised implement, read and follow all operator's manual instructions and safety rules. Implement must be attached to tractor, lift cylinder locks must be installed, and lift cylinders lowered against locks. Hydraulic system leak down, hydraulic system failures, or movement of control levers can cause equipment to drop unexpectedly and cause severe injury or death.



WARNING

- Never perform service or maintenance with engine running.
- Do not disconnect hydraulic lines until engine is stopped, tractor is properly secured, equipment and all components are lowered to the ground, and system pressure is released by operating all valve control levers.
- Keep all persons away from operator control area while performing adjustments, service or maintenance.



CAUTION

- Always wear relatively tight and belted clothing to avoid entanglement in moving parts. Wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing and head.



WARNING

- Never go underneath equipment lowered to the ground or raised, unless it is properly blocked and secured. Never place any part of the body underneath equipment or between moveable parts even when the engine has been turned off. Hydraulic system leak down, hydraulic system failures, mechanical failures or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death. Follow Operator's Manual instructions for working underneath and blocking requirements, or have work done by a qualified dealer.

Owner Service Continued

BLOCKING METHOD FOR LIFTER WHEELS AND ROW FINDER SERVICE

The only approved blocking devices for this harvester are the cylinder transport locks supplied with the unit. The harvester must be located on a hard level surface and the transport locks properly installed. Do not use a transport lock or retaining pin which is bent or damaged. Replace any damaged or lost transport lock component immediately.

Do not work underneath harvester unless it is properly attached to the tractor and blocked securely. When properly attached, the unit will be anchored to minimize front-to-rear movement.

Before blocking, ensure harvester is securely attached to tractor. Truck boom must be fully lowered into transport position. Do not work on harvester with truck boom in any intermediate position. Raise harvester completely, set park brake, shut off engine, remove key, and chock tractor wheels. Without going under the harvester, carefully install transport locks and retaining pins. Start tractor and lower harvester onto transport locks. Cylinder depth stops must be set equally before installing transport locks. Disconnect PTO driveline before performing any maintenance on the harvester.

TRUCK BOOM SERVICE



WARNING

- Before performing any maintenance on the beet harvester, the truck boom must be fully lowered into the transport position. Do not work on harvester with truck boom in any intermediate position. Hydraulic system leak down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.

- Truck boom lock must be engaged when truck boom is in operating position. Do not operate unloader conveyor unless boom lock is engaged and in good repair. Hydraulic system leak down, hydraulic system failures, mechanical failures, or movement of control levers can cause equipment to drop or rotate unexpectedly and cause severe injury or death.

Before working on truck boom or any components on the right side of the harvester, the truck boom must be fully lowered into transport position. Do not work on harvester with truck boom in any intermediate position.

LUBRICATION

Figure 22 (Page 34) shows the lubrication points. The accompanying chart gives the frequency of lubrication in operating hours, based on normal conditions. Severe or unusual conditions may require more frequent lubrication.

Do not let excess grease collect on or around parts, particularly when operating in sandy areas.

Use SAE multi-purpose high temperature grease, or SAE multi-purpose lithium based grease.

Use a lithium grease of No. 2 consistency with a MOLY (molybdenum disulfide) additive for all locations. Be sure to clean fittings thoroughly before attaching grease gun. When applied according to the lubrication chart, one good pump of most guns is sufficient. Do not over grease. Grease the telescoping driveline. Daily lubrication of the PTO slip joint is necessary or damage to U-joints, gearboxes, tractor PTO and/or harvester driveline can result. Close and secure all removable covers and guards before operating harvester.

Owner Service Continued

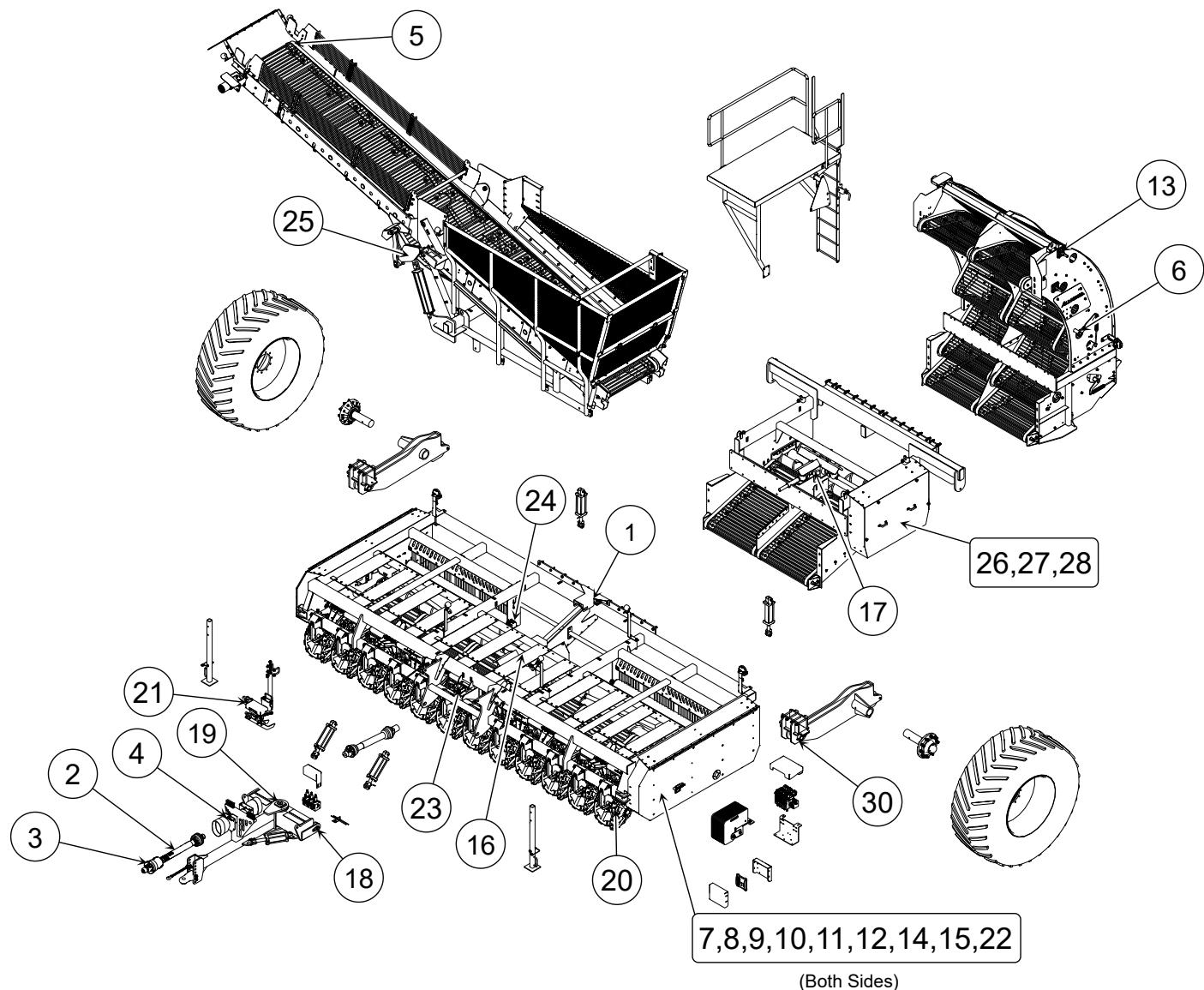


Figure 22. Lubrication Locations

Owner Service Continued

LUBRICATION CHART

ITEM NO.	DESCRIPTION	FREQUENCY	NUMBER	PUMPS
1	U-Joint	24 hrs	2(std) or 3(CV)	2
2	Slip-Joint	24 hrs	1	2
3	Cv-Joint (Optional)	24 hrs	1	2
4	Hitch Bearings	24 hrs	2	2
5	Boom Shaft Bearings	24 hrs	2	1
6	Elevator Tensioner Pivots	8 hrs	2	1
7	Main Grab Roll Bearings	24 hrs	12	2
8	Pillow Block Drive Bearings	24 hrs	2	2
9	Second Drive Bearings	Yearly	2	2
10	Main Drive Bearings	24 hrs	2	2
11	Paddle Shaft Primary Drive	24 hrs	4	2
12	Paddle Shaft Bearings	24 hrs	4	2
13	Elevator Shaft Bearings	24 hrs	4	2
14	Chain Bed Shaft Bearings	24 hrs	4	2
15	Idler Pulley Hubs	24 hrs	2	1
16	Main Gearbox: Check 80/90 Lube Level	24 hrs	1	1/2 FULL
17	Rear Gearbox: Check 80/90 Lube Level	24 hrs	1	1/2 FULL
18	Hitch Lift Pivots	8 hrs	2	2
19	Hitch Steering Pivots	8 hrs	1	2
20	Lifter Wheel Bearings	24 hrs	1 (each wheel)	1
21	Row Finder Pivot Shafts	24 hrs	2	2
22	Jumper Shaft Bearings	24 hrs	2	2
23	PTO Carrier Bearings	24 hrs	1	2
24	Short Grab Roll Bearings	24 hrs	4	2
25	Boom Fold Pivots	24 hrs	6	1
26	Rear Chain Bed Bearings	24 hrs	2	2
27	Rear Grabroll Bearings	24 hrs	6	2
28	Rear Drive Bearings	24 hrs	1	2
29	Struts	24 hrs	2	2

Owner Service *Continued*

Lubrication Service Record

NOTE: See prior pages for details.
Copy this page to continue service record.

✓ = CHECK
L = LUBRICATE

C = CHANGE
R = REPACK

Owner Service Continued

MAINTENANCE

Before performing any maintenance or inspections on the harvester, shut off the tractor, set the parking brake, release all hydraulic system pressure with the tractor hydraulic controls and remove the key from the tractor.

GRAB ROLL DRIVE BELT ADJUSTMENT

Open grab roll side door. Tighten the tension spring adjustment bolt so as to show approximately 1/8" gap between each of the spring coils.

BELT REPLACEMENT (NEW BELT)

To remove belt, loosen the idler spring.

Install belt over grab roll sheaves as shown in Figure 23.

Route belt around drive sheaves and idlers as shown in Figure 26. Do not pry belt over sheaves as damage to the belt may result.

Tighten idler spring until belt does not slip under full load operation. Close and secure grab roll side door.

PADDLE SHAFT CHAIN

Adjust drive chains by moving idler sprocket until chain has 3/8" slack in the long side of the chain.

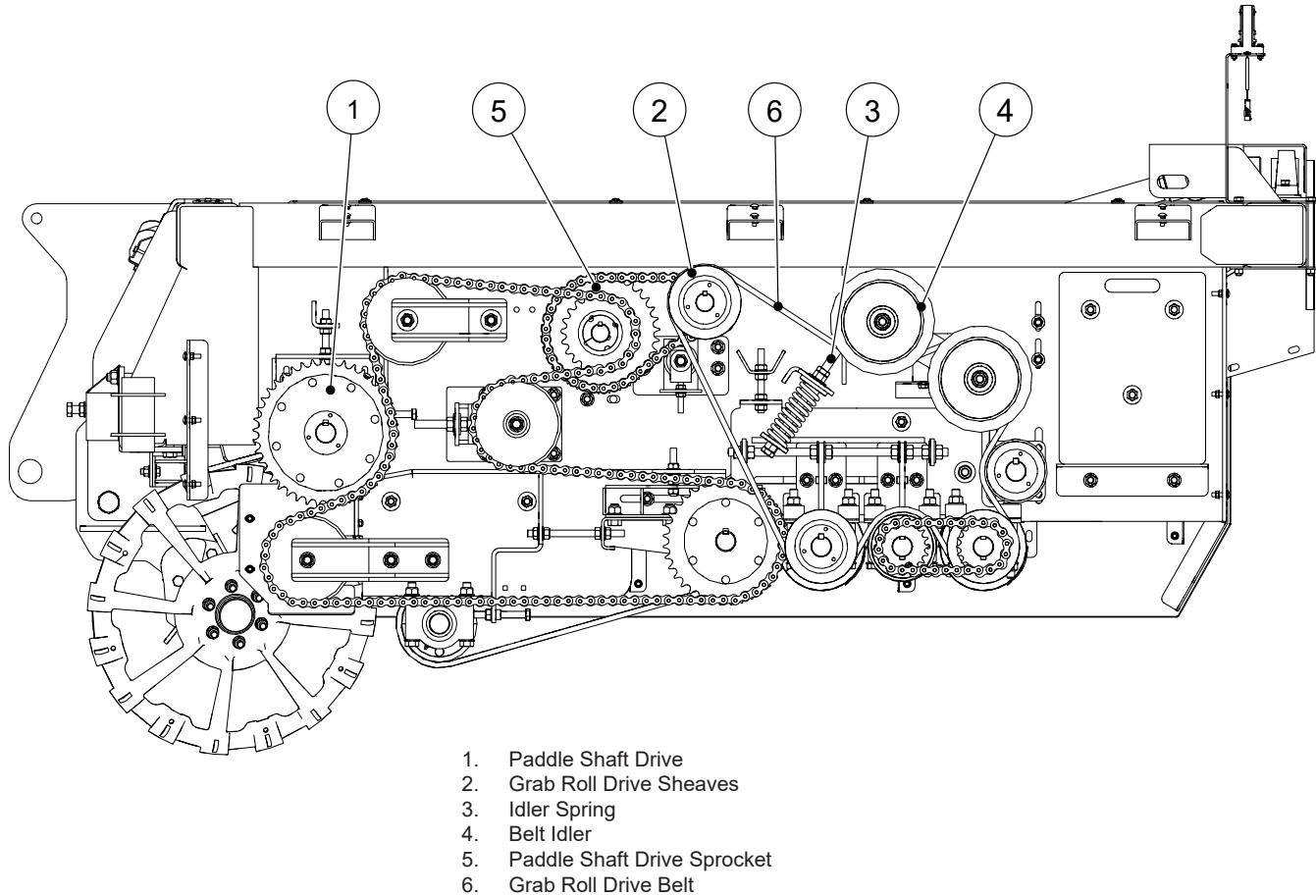


Figure 23. Grab Roll Drive

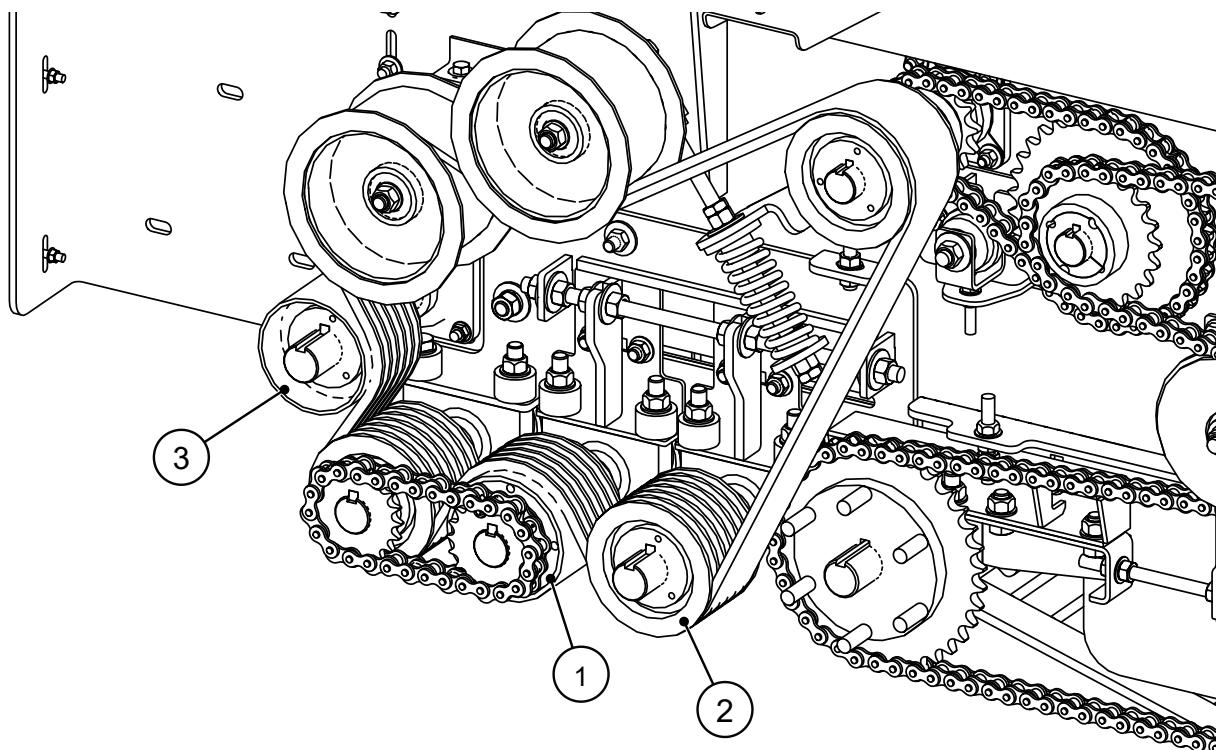
Owner Service Continued



Figure 24. Drive Chain Adjustment



Figure 25. Elevator Motors



1. Grab Roll Reverser (Smooth)
2. Grab Roll Drive Sheave (Grooved)
3. Grab Roll Sheave (Smooth)

Figure 26. Belt Routing

Owner Service Continued

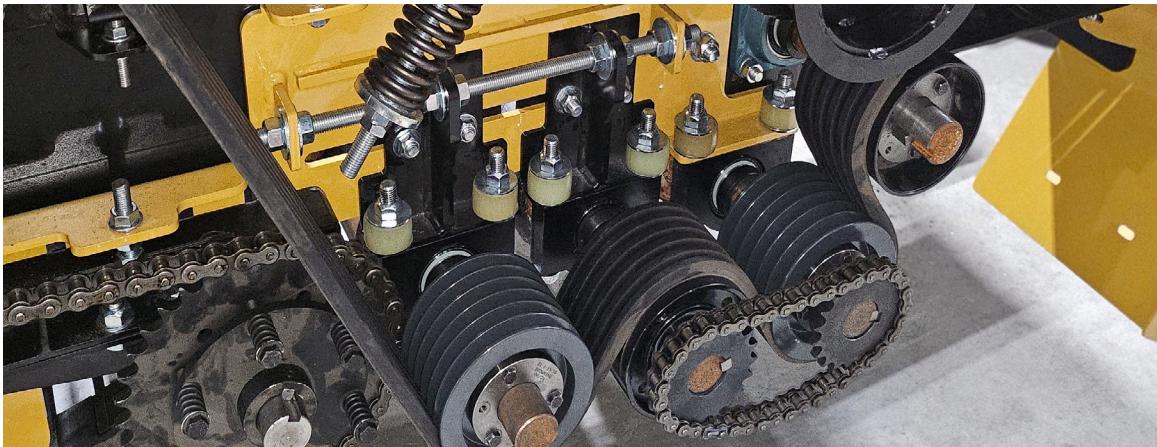


Figure 27. Grab Roll Cushions

BED CHAIN ADJUSTMENT

To adjust bed chain open front door (both sides). Loosen bolts on bearing. Tighten or loosen adjusting bolt to allow 1/2" gap between Bed Chain and lifter wheels. Retighten Hardware.

GRAB ROLL ADJUSTMENT

Before working on any components on the right side of the harvester, the truck boom must be fully lowered into transport position with hydraulic pressure relieved or locked in unload position with boom locks installed. Do not work on harvester with truck boom in any intermediate position.

It is important to have an even space on the left and right sides of the harvester between the pairs of grab rolls; however, the individual pairs can have different gaps to accommodate conditions. For instance a wide gap may be helpful on the first pair of rolls to get rid of a lot of soil, and a narrow gap on the last pair may save tails. Rear Spiral roll is fixed in the grab roll bed.

Loosen the grabroll adjustment weldment by loosening the two nuts, use the threaded rod to move the grab roll forward or backward. Adjust both sides of each roll pair to the same gap. When all roll pairs are adjusted to the desired gap, tighten all bolts to specifications in Bolt Torque Chart.

Check grab roll drive belt tension and adjust if necessary. (See Grab Roll Drive Belt on page 37)

LIFTER STRUT ADJUSTMENT

Lifter struts should be adjusted to match the row spacing of the beets being harvested. When struts are moved, paddles must be adjusted to prevent contact between paddles and lifter wheels.

Raise harvester and install transport locks (See Blocking Method).

Use the adjustment bolt to change pitch of lifter wheel. When moving strut, it may be necessary to loosen paddle support on paddle shaft to allow strut to be moved.

Measure to confirm correct row spacing and tighten to specifications in Bolt Torque Chart. Tighten optional flex strut cushion bolt to 100 lbs./ft.

Adjust paddles and paddle shaft

LIFTER TABS

Harvesting small beets may require the use of optional lifter tabs.

Raise harvester and install transport locks.

Under certain digging conditions, beets may fall through the spokes of the lifter wheels during operation. This condition may require the installation of tabs on the lifter wheels.

Place tabs in slot and install bolt/nut tighten to specifications in Bolt Torque Chart.

Owner Service Continued

PADDLE SHAFT ADJUSTMENT

The paddle shaft may be adjusted to provide proper movement of beets onto the chain bed. Paddle assemblies are adjustable side-to-side to maintain an equal gap between lifter wheels. The paddle shaft may be adjusted vertically to move paddles closer to the lifter wheels. The paddle assemblies must be adjusted after any movement of lifter wheels or struts. When using flex struts, paddle shaft must be raised to the uppermost position so that wheels cannot contact paddle shaft when strut is moved rearward by contact with a rock.

Raise harvester and install transport locks (see Blocking Method, page 33). Loosen paddle assemblies on paddle shaft and adjust so that each paddle is centered between the lifter wheels.

Tighten paddle assembly bolts to specifications in Bolt Torque Chart.

Loosen paddle shaft bearing housings and lift or lower shaft to provide 2-1/2" clearance between paddle shaft and lifter wheels. With flex struts installed, paddle shaft must be placed in the uppermost position. Clearance must be at least 2-1/2" to allow for strut movement.

Tighten paddle shaft bearing housings to specifications in Bolt Torque Chart.



Figure 28. Paddle Shaft

Owner Service Continued

ELEVATOR CHAIN CROSS ROD REPLACEMENT

Elevator chains have a combination of straight and offset rods which are spaced for maximum performance. Truck boom conveyer has all straight rods. Do not operate the harvester with loose, bent or missing cross rods. Replace rods with the type removed. Install offset rods with the offset away from the beets.

Remove rivets attaching rod to belt. Use caution to avoid damaging the belt.

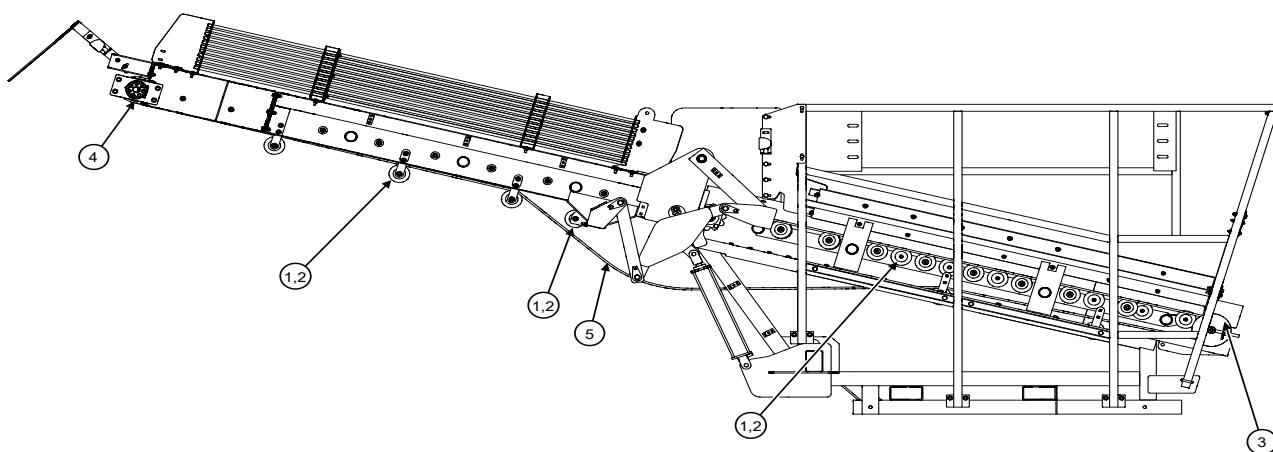
Attach replacement rod to belt using bolts and threaded back-plate. Make sure offset portion of rod is away from the beets.

ELEVATOR CHAIN ROUTING AND ROLLER LOCATION (Figure 30 & Figure 31)

Roller location and elevator chain routing must be correct to provide proper tension during operation. Replace any damaged or missing rollers using the correct type specified.



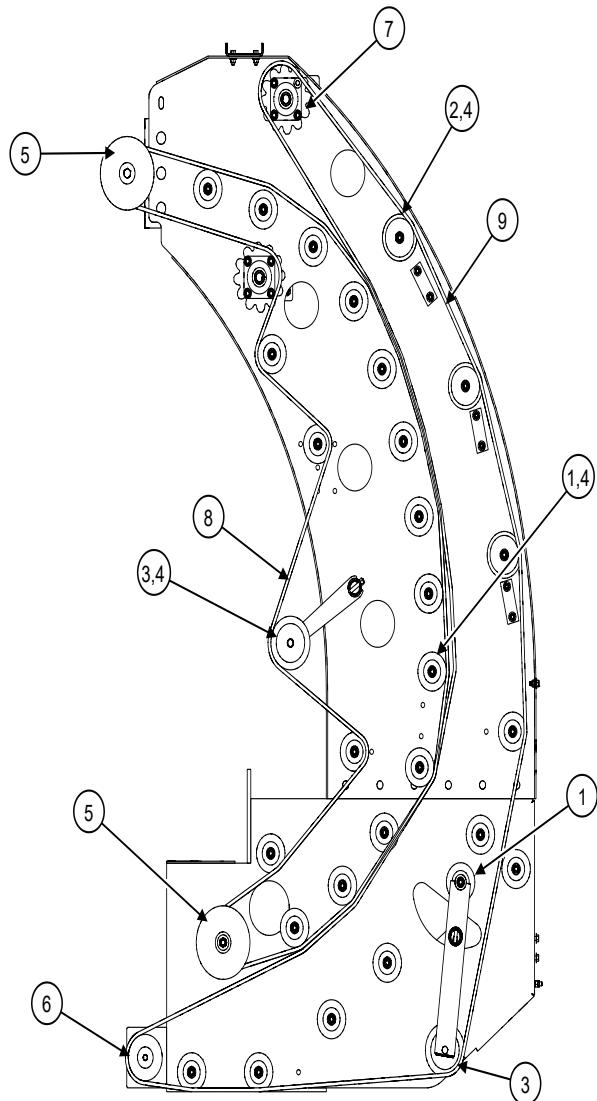
Figure 29. Elevator Cross Rods



- 1. 5" Smooth Roller
- 2. Standoff
- 3. 6.5" Flanged Roller
- 4. 10 Tooth, 50mm, 1-3/4" Sprocket
- 5. Chain (Belted)

Figure 30. Roller Components (Tank/Boom)

Owner Service Continued



1. 5" Roller	2. 6" Roller
3. 7" Roller	4. Standoff
5. 6.5" Flanged Nose Roller	6. 6" Nose Roller
7. 12 Tooth, 50mm, 1-3/4" Sprocket	8. Inner Chain (Belted)
9. Outer Chain (Belted)	

Figure 31. Roller Components (Elevator)

Owner Service Continued

ELECTRICAL SYSTEM

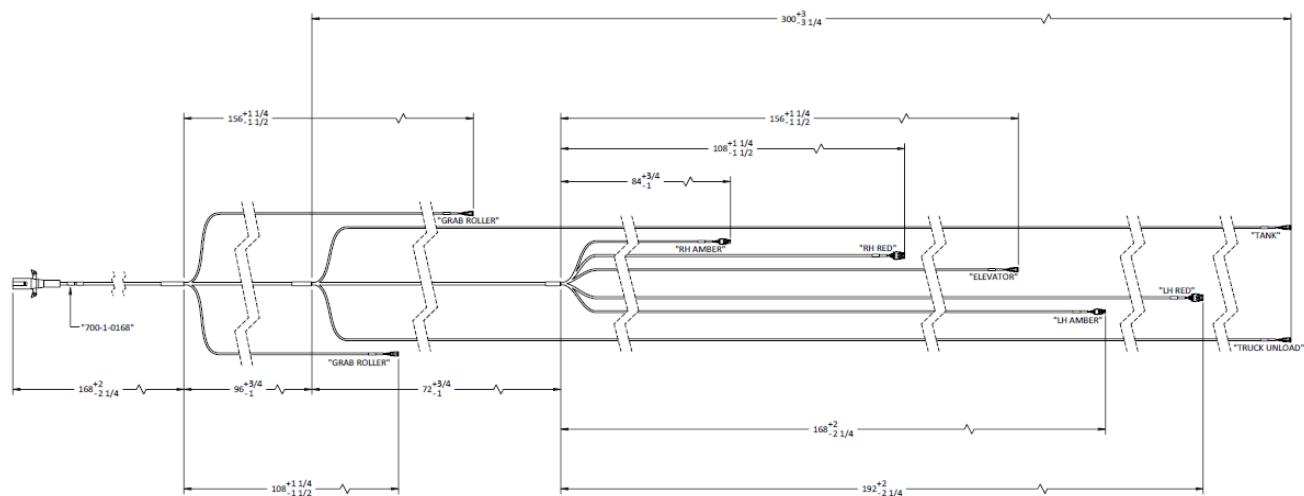


Figure 32. Harvester Light Wire Harness

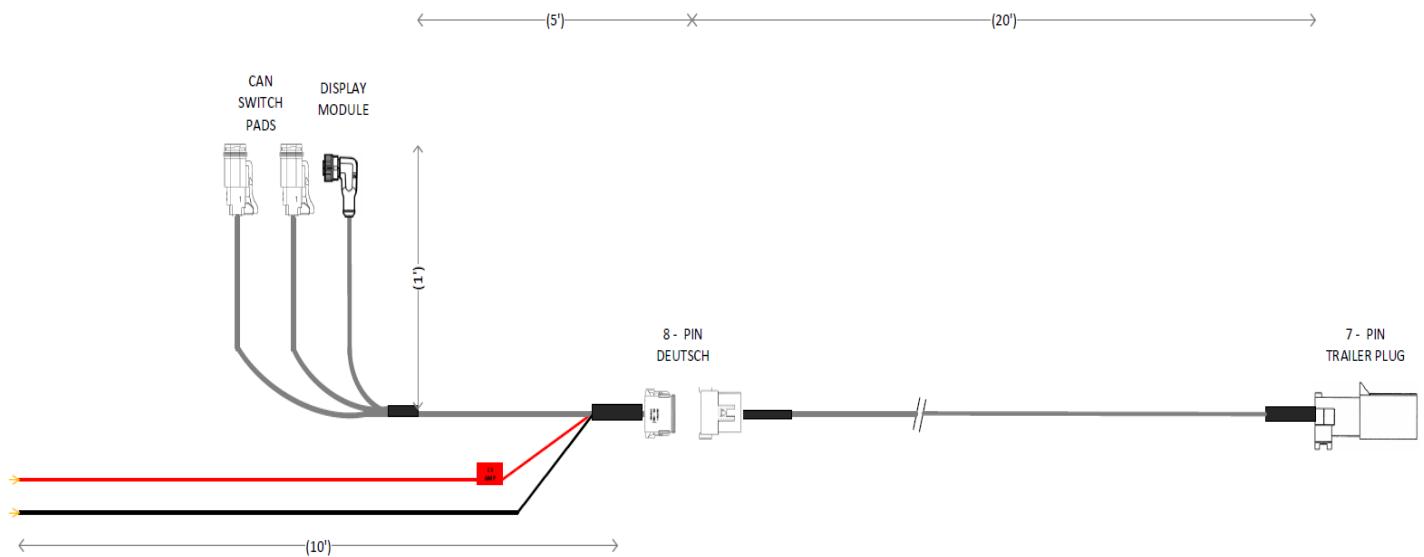


Figure 33. Control System Harness

Owner Service Continued

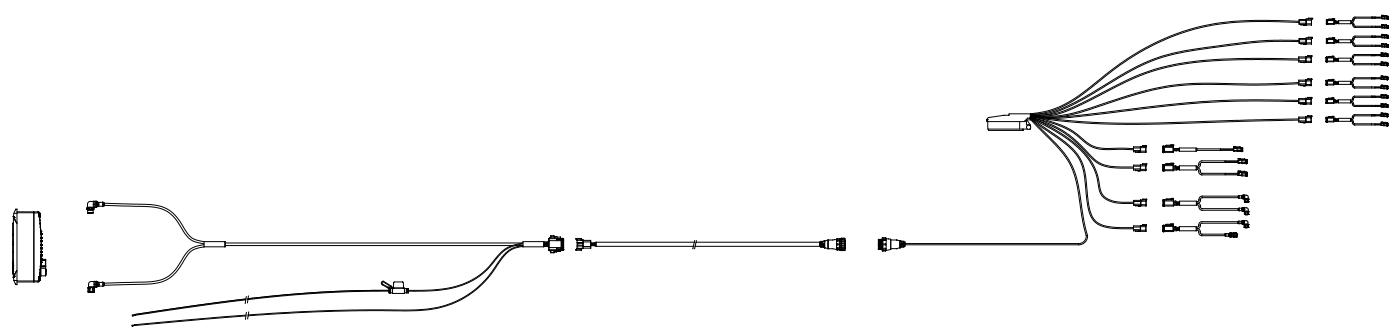


Figure 34. Control System Harness

Owner Service *Continued*

DAILY SERVICE

Inspect all drive belts for slippage, damage or accumulation of foreign materials. Adjust and clean as necessary.

Inspect all drive chains and adjust as necessary.

Inspect paddle shaft for loose or missing paddles and hardware.

Inspect grab roll bed for alignment, spacing, and roll damage. Check that grab roll shock cushions are in good condition.

Inspect the elevator and unloader structures for missing or damaged rollers. Inspect unloader chain rollers on the tank bottom for damage or wear; replace if necessary.

Inspect hydraulic system for leaking or damaged components. Replace or repair leaking fittings immediately.

Inspect all conveyor chains for loose or missing cross rods. Check the splices on each belted chain, tighten chain as necessary.

Inspect lifter wheels and struts for alignment, loose or missing components, and proper setting.

Check tractor and harvester tire pressure. Service as necessary.

ANNUAL SERVICE

Inspect PTO driveline components for wear or damage and repair as necessary.

Inspect all gearboxes for leaks or damage, and repair.

Drain and replace all gearbox lubricant and clean breathers.

Repack lifter wheel bearings and replace any worn or damaged components.

Inspect chain bed for damaged or bent chain and replace if necessary.

Inspect paddle shaft bearings, paddles, and deflectors. Replace as necessary.

Inspect grab rolls for proper alignment, bent rolls, or damaged flighting and replace if necessary. Inspect grab roll drive belts, sheaves and tighteners; repair any damaged components.

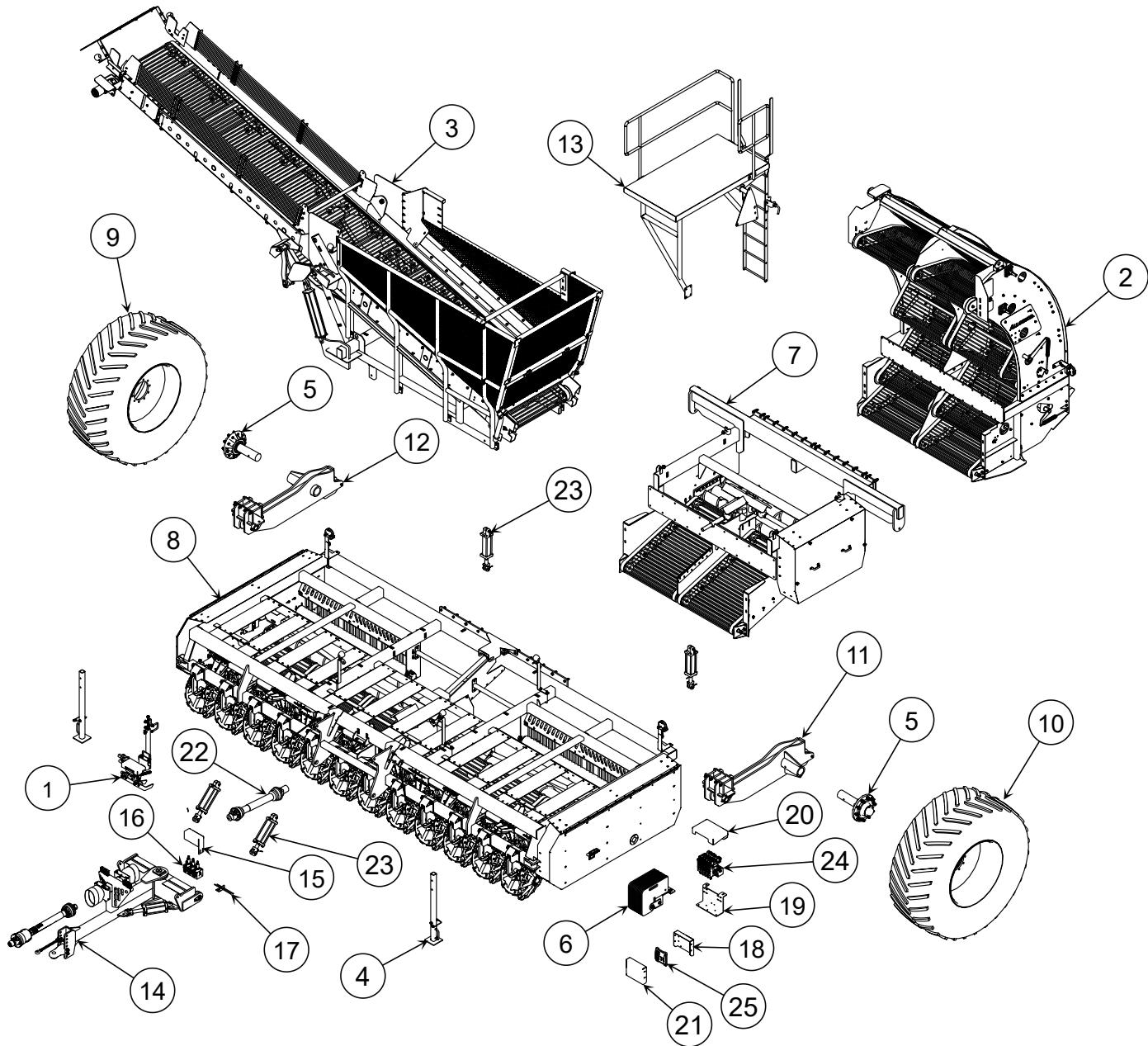
Inspect transport cylinder locks; replace any worn or damaged component.

Repack carrier wheel bearings and replace any damaged components.

12R22 HV RIGID BEET HARVESTER

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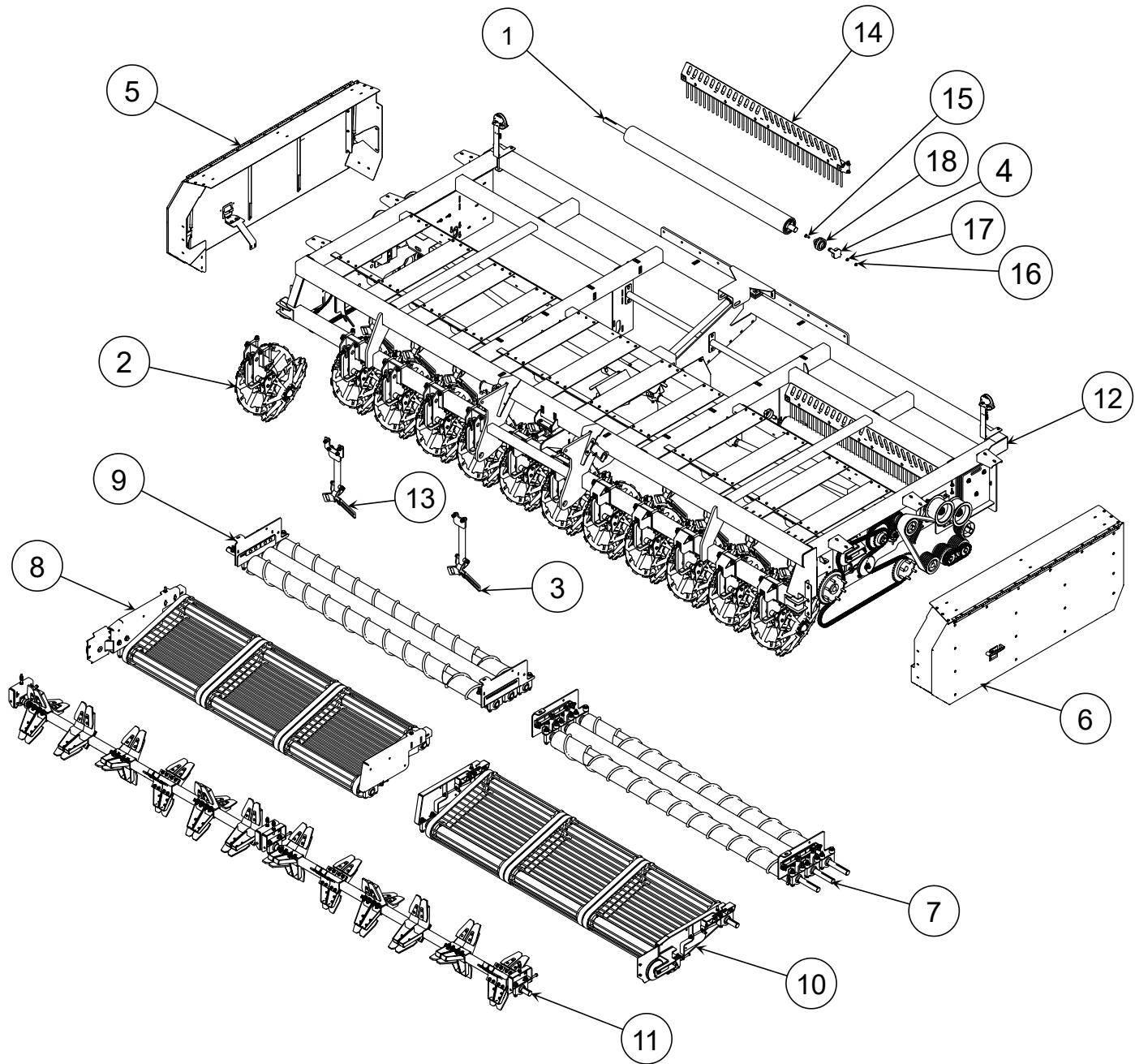
12R22/8R30 RIGID HARVESTER
700-2-1715 / 700-2-1815
(MAIN COMPONENTS DRAWING)



12R22/8R30 RIGID HARVESTER
700-2-1715 / 700-2-1815
(MAIN COMPONENTS BILL OF MATERIALS)

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-1-0094	HYD ROW FINDER- HARVESTER	1
2	700-2-0886	DUAL ELEVATOR ASSEMBLY-SHORT	1
3	700-2-1335	TANK & CONVEYOR ASSY - 12R	1
4	700-2-1638	PARKING STAND WELDMENT- 8R/12R RIGID	2
5	700-2-1639	SPINDLE-HUB ASSM 10-BOLT 13.18" BC	2
6	700-2-1665	WEIGHT BRACKET ASSY	1
7	700-2-1707	REAR BODY FRAME ASSEMBLY-12R	1
8	700-2-1714	HARVESTER FRAME ASSEMBLY- 12R RIGID	1
9	700-2-1789	TIRE ASSY LH- 800/70R38	1
10	700-2-1790	TIRE ASSY RH- 800/70R38	1
11	700-2-1800	STRUT MOUNT ASSY LH-12R RIGID	1
12	700-2-1801	STRUT MOUNT ASSY RH-12R RIGID	1
13	700-2-1840	ELEVATOR PLATFORM ASSY - 12R	1
14	700-2-1869	HITCH ASSY-12R	1
15	700-3-4218	COVER- MOTOR VALVE	1
16	700-3-4226	ANGLE- MOTOR CONTROL VALVE MOUNT- 8R	2
17	700-3-4227	THREADED ROD- MOTOR CONTROL VALVE- 8R	2
18	700-3-4670	GEN 2 CONTROLLER COVER MOUNT	1
19	700-3-4690	VALVE MOUNT-8R/12R	1
20	700-3-4691	VALVE COVER-8R/12R	1
21	700-3-4698	GEN 2 CONTROLLER COVER	1
22	903-18424	PTO SHAFT 1-3/4" - W/OVERRUN CLUTCH	1
23	905-21416	CYLINDER, 4" X 10" 3000PSI	4
24	905-98097	ASSY, MOTOR CONTROL MANIFOLD	1
25	905-98152	IFM CR710S CONTROLLER	1

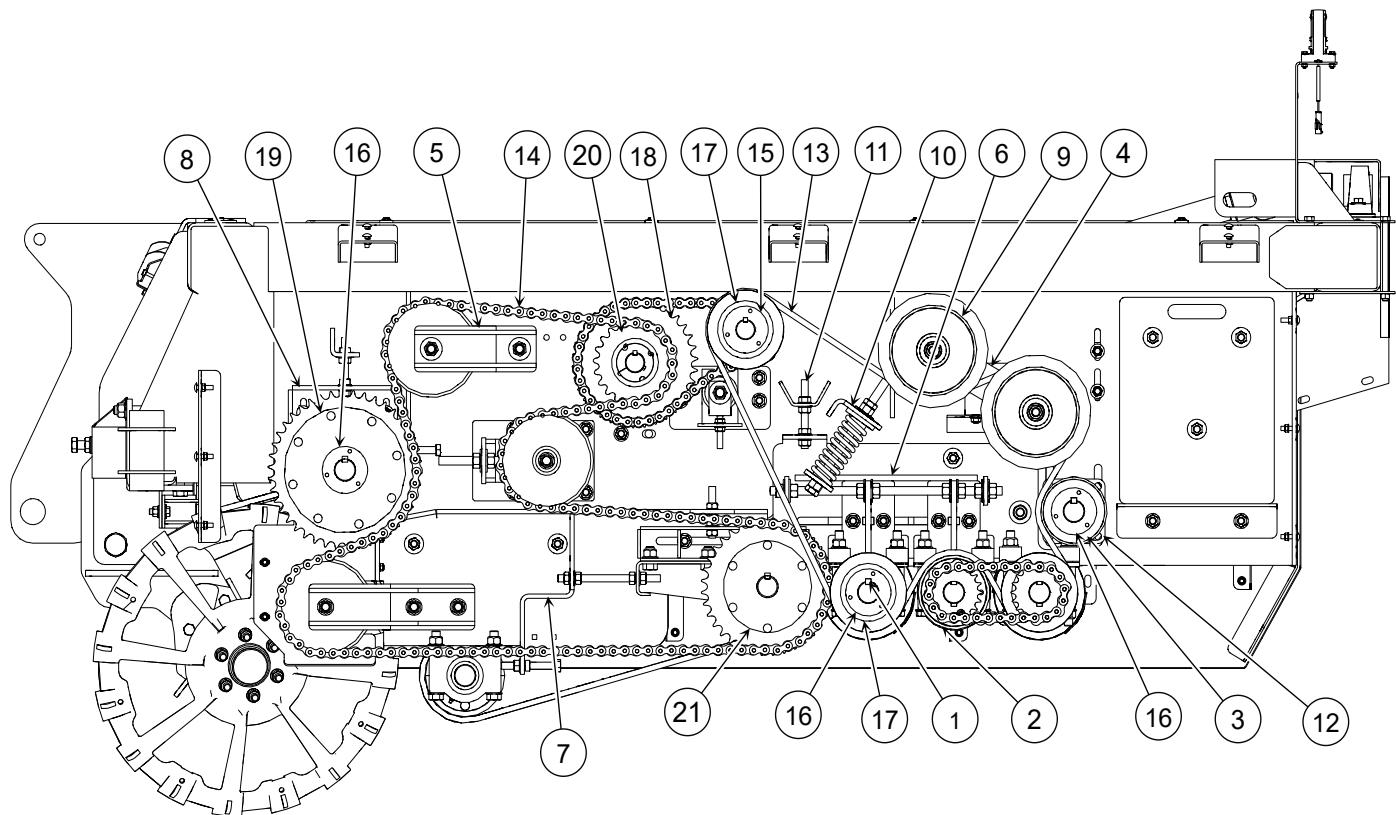
FRAME ASSY 12R22
700-2-1714
(MAIN COMPONENTS DRAWING)



FRAME ASSY 12R22
700-2-1714
(MAIN COMPONENTS BILL OF MATERIALS)

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-0926	SHORT SMOOTH GRAB ROLL ASSY - 1222 PLASTIC	2
2	700-2-1353	DIGGER WHEEL ADJUSTABLE CUSHION STRUT ASSY	12
3	700-2-1514	FRONT BARRIER MOUNT ASSY- 8R/12R RIGID	8
4	700-2-1556	BEARING CAP WELD- 4 BOLT	2
5	700-2-1626	RH BELT BOX ASSY - 8R/12R RIGID	1
6	700-2-1630	LH BELT BOX ASSY - 8R/12R RIGID	1
7	700-2-1704	GRAB ROLL ASSY LH- 12R RIGID	1
8	700-2-1705	CHAIN BED ASSY RH- 12R RIGID	1
9	700-2-1710	GRAB ROLL ASSY RH- 12R RIGID	1
10	700-2-1711	CHAIN BED ASSY LH- 12R RIGID	1
11	700-2-1712	PADDLE SHAFT ASSEMBLY- 12R22	1
12	700-2-1713	BODY FRAME WELD- 12R RIGID	1
13	700-2-1754	FRONT BARRIER MOUNT BOLT ON ASSY-12R	2
14	700-2-1762	REAR BARRIER ASSY-12R RIGID	2
15	900-01786	CARRIAGE BOLT 5/8 NC X 2 NC	4
16	900-06013	NUT, HH, 5/8-11, ZP	4
17	900-11015	WASHER, LOCK, 5/8, ZP	8
18	901-01456	BEARING, 1-15/16" ID, 2-BOLT FLANGE, F2BSXR115	2

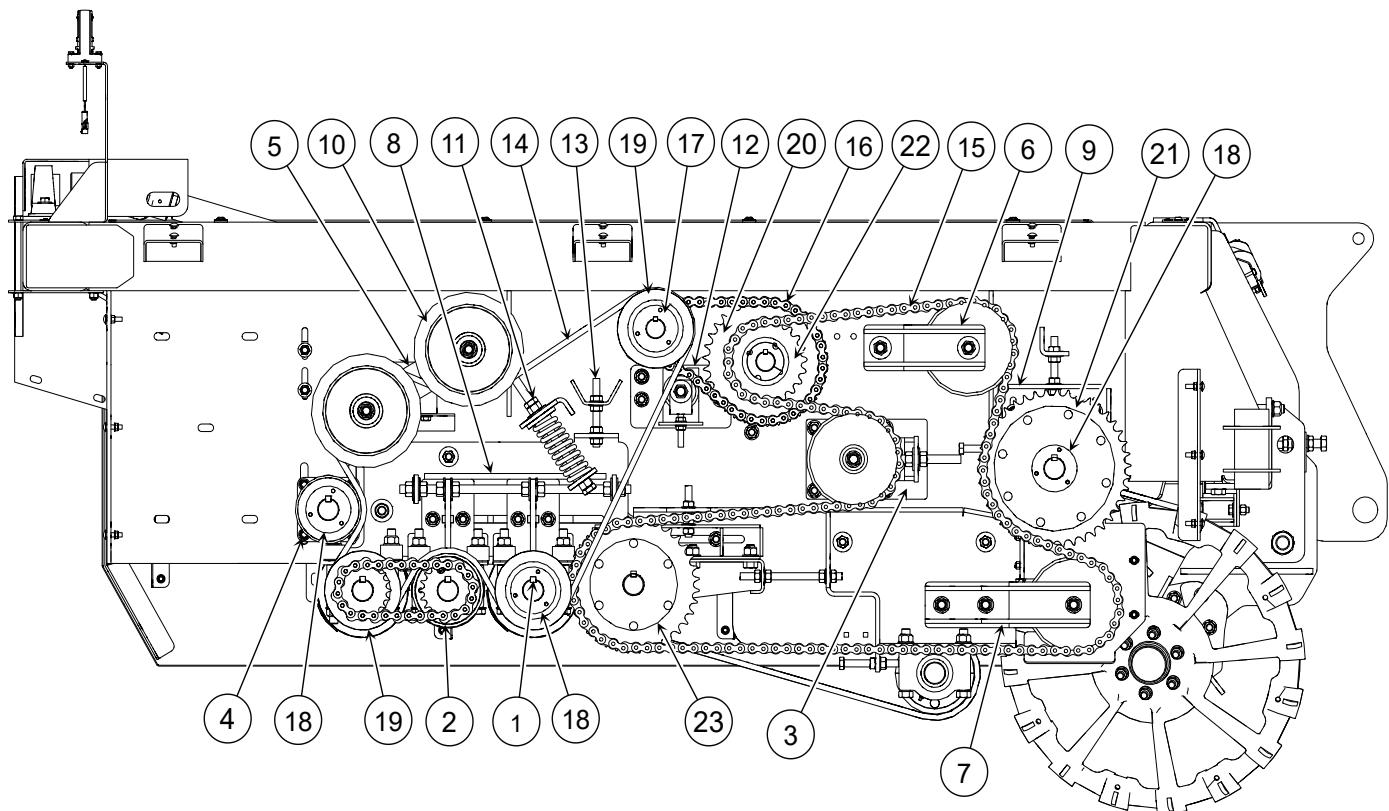
FRAME ASSY
700-2-1714
(DRIVES LH DRAWING)



FRAME ASSY
700-2-1714
(DRIVES LH BILL OF MATERIALS)

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	500-3-1662	KEY - 1/2 X 2-1/2 SQUARE	10
2	700-2-1492	PULLEY ASSEMBLY- REVERSE GRABROLL	2
3	700-2-1583	PULLEY WELDMENT- 6" 8R22	2
4	700-2-1595	PIVOT ARM AND BASE ASSY- PULLEY TENSIONER	2
5	700-2-1597	UPPER IDLER SUPPORT ASSY	2
6	700-2-1704	GRAB ROLL ASSY LH- 12R RIGID	1
7	700-2-1711	CHAIN BED ASSY LH- 12R RIGID	1
8	700-2-1712	PADDLE SHAFT ASSEMBLY- 12R22	1
9	700-2-1729	ASSY, 8 IN 6 RIB IDLER PULLEY - 5" W	4
10	700-2-1747	COMPRESSION SPRING ASSEMBLY	2
11	700-3-4090	THREADED ROD- 5/8" X 6.00" LONG	4
12	901-01282	BEARING - 1-15/16 4-BOLT (F4B-SXR-115-FF)	2
13	903-01463	BELT, 6B116	2
14	903-03227	DRIVE CHAIN #80, 86 LINKS- 8R/12R RIGID	2
15	903-08419	TYPE Q1 HUB 1-3/4 BORE	4
16	903-08452	TYPE Q1 HUB 1-15/16 BORE	7
17	903-08498	PULLEY- 6TB66 Q1	6
18	903-11104	SPROCKET 80BTL34H (2517 HUB)	2
19	903-11105	#80 42 TOOTH TORQUE LIMITER	2
20	903-11108	SPROCKET #80 BTL22 (2517)	2
21	903-11147	SPROCKET- TORQUE LIMITER- 36 TOOTH-1-15/16"	2

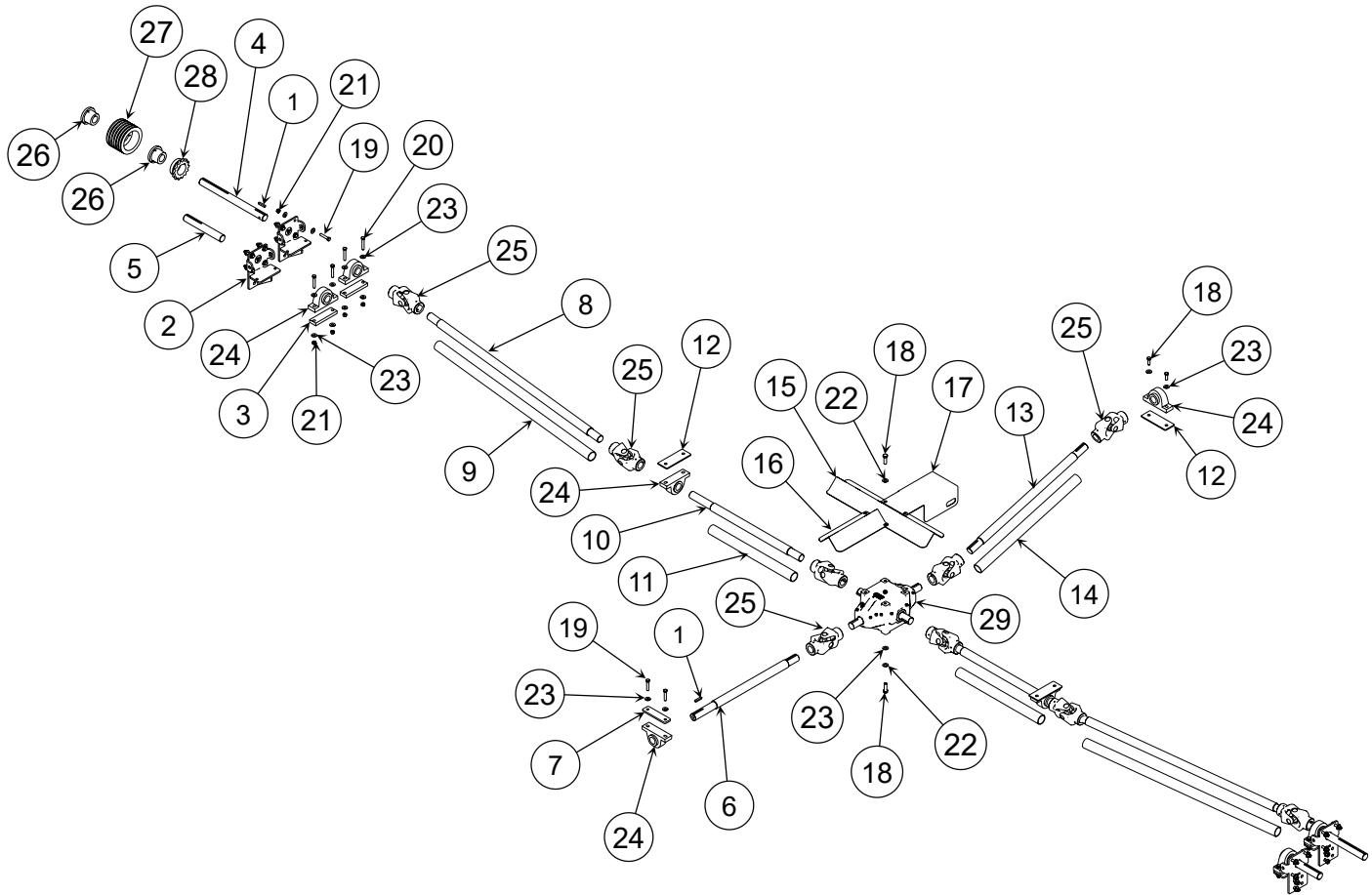
FRAME ASSY
700-2-1714
(DRIVES RH DRAWING)



FRAME ASSY
700-2-1714
(DRIVES RH BILL OF MATERIALS)

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	500-3-1662	KEY - 1/2 X 2-1/2 SQUARE	10
2	700-2-1492	PULLEY ASSEMBLY- REVERSE GRABROLL	2
3	700-2-1577	CHAIN TENSIONER MOUNT ASSY- 8R22	2
4	700-2-1583	PULLEY WELDMENT- 6" 8R22	2
5	700-2-1595	PIVOT ARM AND BASE ASSY- PULLEY TENSIONER	2
6	700-2-1597	UPPER IDLER SUPPORT ASSY	2
7	700-2-1705	CHAIN BED ASSY RH- 12R RIGID	1
8	700-2-1710	GRAB ROLL ASSY RH- 12R RIGID	1
9	700-2-1712	PADDLE SHAFT ASSEMBLY- 12R22	1
10	700-2-1729	ASSY, 8 IN 6 RIB IDLER PULLEY - 5" W	4
11	700-2-1747	COMPRESSION SPRING ASSEMBLY	2
12	700-2-1759	CHAIN TENSIONER ASSY-12R RIGID	2
13	700-3-4090	THREADED ROD- 5/8" X 6.00" LONG	4
14	903-01463	BELT, 6B116	2
15	903-03227	DRIVE CHAIN #80, 86 LINKS- 8R/12R RIGID	2
16	903-03228	JUMPER CHAIN, 23 LINKS- 8R	2
17	903-08419	TYPE Q1 HUB 1-3/4 BORE	4
18	903-08452	TYPE Q1 HUB 1-15/16 BORE	7
19	903-08498	PULLEY- 6TB66 Q1	6
20	903-11104	SPROCKET 80BTL34H (2517 HUB)	2
21	903-11105	#80 42 TOOTH TORQUE LIMITER	2
22	903-11108	SPROCKET #80 BTL22 (2517)	2
23	903-11147	SPROCKET- TORQUE LIMITER- 36 TOOTH-1-15/16"	2

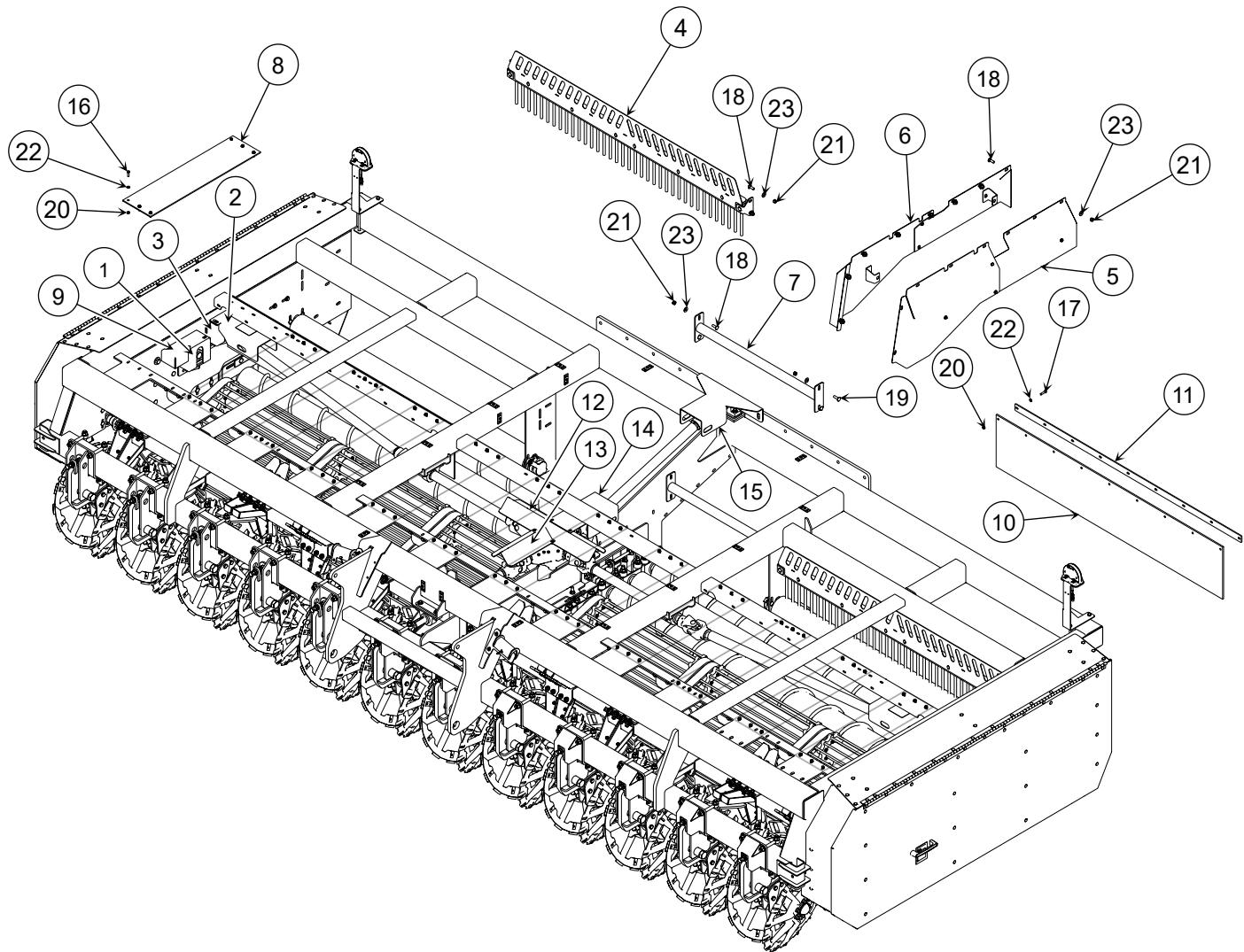
FRAME ASSY
700-2-1714
(DRIVELINE DRAWING)



FRAME ASSY
700-2-1714
(DRIVELINE BILL OF MATERIALS)

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	100-3-3333	KEY - 3/8 X 3/8 X 2	18
2	700-2-1536	BEARING MOUNT PLATE WELDMENT- JUMPER	4
3	700-3-3934	BEARING SPACER- JUMPER	4
4	700-3-4022	SIDE DRIVE SHAFT- 8R22	2
5	700-3-4025	JUMPER SHAFT- 8R22	2
6	700-3-4141	FRONT DRIVE SHAFT- 8R/12R	1
7	700-3-4155	FRONT BEARING PLATE- 8R	1
8	700-3-4343	CROSS DRIVE SHAFT- 12R RIGID	2
9	700-3-4344	CROSS DRIVE SHAFT SHIELD- 12R RIGID	2
10	700-3-4456	CROSS DRIVE SHAFT SHORT- 12R RIGID	2
11	700-3-4457	CROSS DRIVE SHAFT SHIELD SHORT- 12R RIGID	2
12	700-3-4459	BEARING MOUNT SHIM-12R RIGID	3
13	700-3-4463	REAR DRIVE SHAFT- FRONT FRAME-12R RIGID	1
14	700-3-4464	REAR SHAFT SHIELD-FRONT FRAME-12R RIGID	1
15	700-3-4574	GEARBOX U-JOINT COVER A-12R	1
16	700-3-4575	GEARBOX U-JOINT COVER B-12R	1
17	700-3-4576	GEARBOX U-JOINT COVER C-12R	1
18	900-01225	1/2 NC X 1-1/2 HEX BOLT GR 5	10
19	900-01233	1/2 X 2-1/2 NC HEX BOLT GRD 5	2
20	900-01237	BOLT HEX 1/2-13 X 3	8
21	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	6
22	900-11013	WASHER, LOCK 1/2	8
23	900-11035	1/2 FLAT WASHER	14
24	901-01272	BRG 1.75 PILLOW BLOCK (ECCENTRIC LOCK COLLAR)	4
25	903-05034	U-JOINT - 1.75 KEYED 44R	9
26	903-08419	TYPE Q1 HUB 1-3/4 BORE	4
27	903-08498	PULLEY- 6TB66 Q1	2
28	903-11132	SPROCKET, H80Q14	2
29	903-15601	GEARBOX 1.857:1 SUPERIOR MODEL 680ACF005835	1

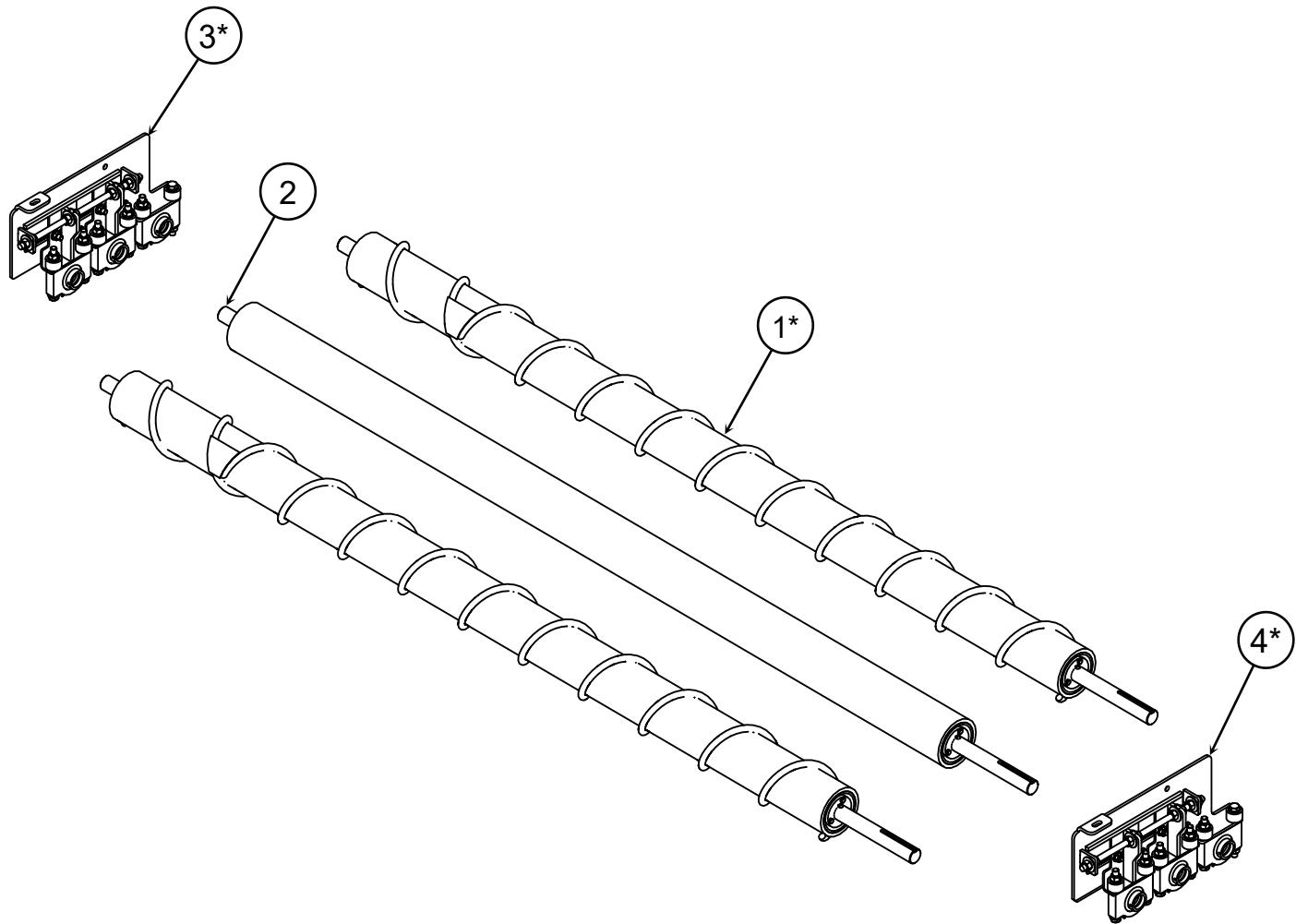
FRAME ASSY
700-2-1714
(RUBBER AND BARRIER DRAWING)



FRAME ASSY
700-2-1714
(RUBBER AND BARRIER BILL OF MATERIALS)

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1642	INNER BEARING COVER WELDMENT- 8R/12R	2
2	700-2-1643	U-JOINT SHIELD W/ DECAL 8R	2
3	700-2-1656	INNER BEARING COVER REAR WELDMENT RH- 8R/12R	1
4	700-2-1762	REAR BARRIER ASSY-12R RIGID	2
5	700-2-1778	FRONT COVER ASSY LH- 12R RIGID	1
6	700-2-1779	FRONT COVER ASSY RH- 12R RIGID	1
7	700-2-1784	CROSS PIPE WELDMENT-FRONT FRAME-12R RIGID	2
8	700-3-4073	OUTSIDE PADDLE COVER UHMW- 8R/12R RIGID	12
9	700-3-4276	GREASE HOSE COVER RH- 8R/12R	1
10	700-3-4348	RUBBER FLAP- 12R RIGID	2
11	700-3-4349	PLATE- RUBBER HOLD-12R RIGID	2
12	700-3-4574	GEARBOX U-JOINT COVER A-12R	1
13	700-3-4575	GEARBOX U-JOINT COVER B-12R	1
14	700-3-4576	GEARBOX U-JOINT COVER C-12R	1
15	700-3-4583	REAR U-JOINT SHIELD-12R	1
16	900-01111	3/8NC X 1-1/4 HEX BOLT GR 5	72
17	900-01113	3/8NC X 1-1/2 HEX BOLT GR 5	18
18	900-01751	BOLT, CRG, 1/2-13 X 1-1/2, GR5 ZP	4
19	900-01752	CARRIAGE BOLT 1/2 NC X 1 3/4 GD 5 ZP	10
20	900-06139	3/8 NC FLANGED WHIZ NUT	114
21	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	6
22	900-11033	FLAT WASHER 3/8 ZP	90
23	900-11035	1/2 FLAT WASHER	10

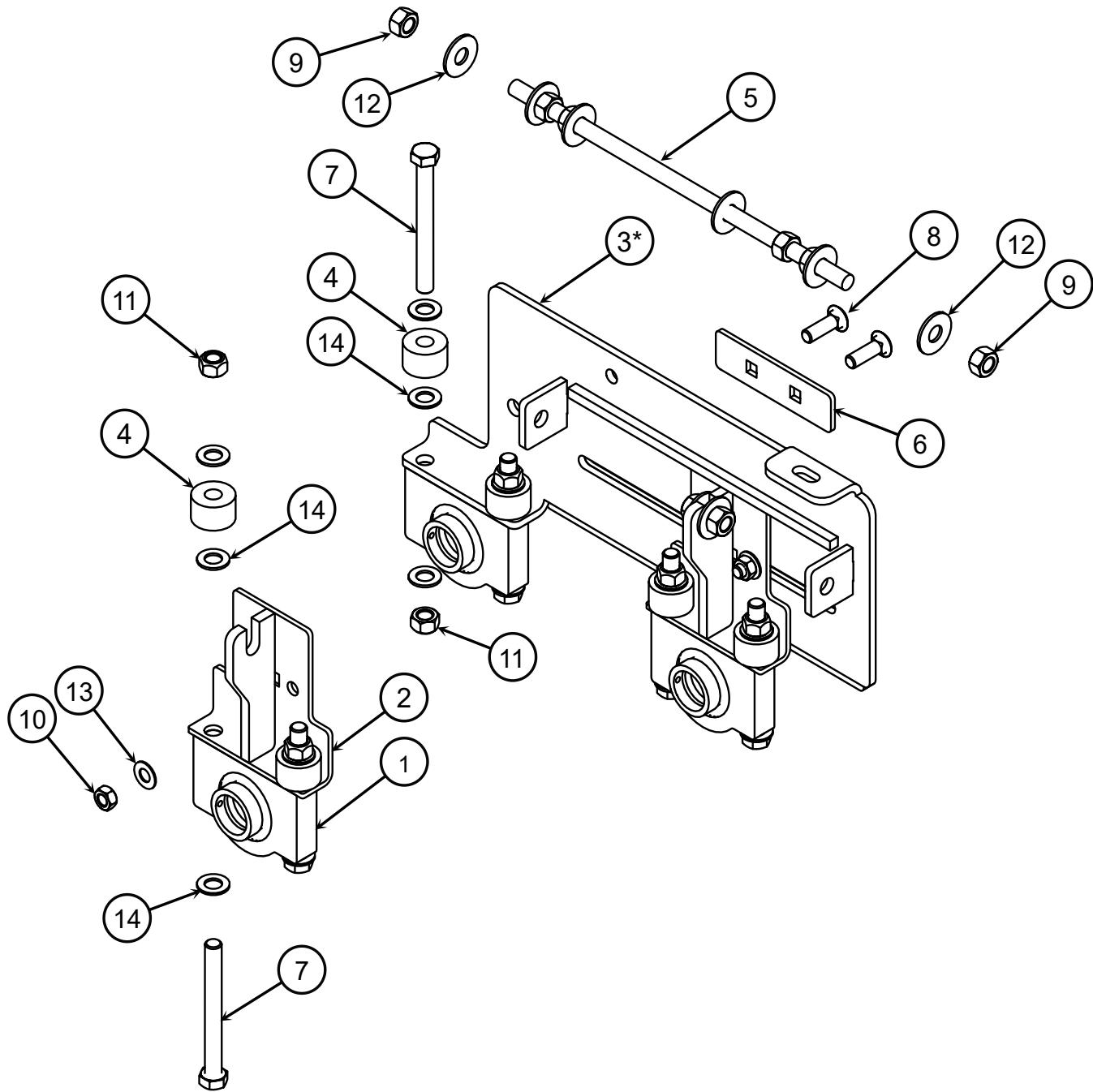
GRAB ROLL ASSY
RH 700-2-1710 / LH 700-2-1704
DRAWING



GRAB ROLL ASSY
RH 700-2-1710 / LH 700-2-1704
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1-1	700-2-0608	FRONT SPIRAL GRAB ROLL WELD RH - 1222 PLASTIC	2
1-2	700-2-0939	FRONT SPIRAL GRAB ROLL WELD LH - 1222 PLASTIC WING	2
2	700-2-0900	SMOOTH GRAB ROLL WELD WING - LONG 1222 PLASTIC	1
3-1	700-2-1686	GRAB ROLL SIDE PLATE ASSY RH-12R RIGID	1
3-2	700-2-1688	GRAB ROLL SIDE PLATE ASSY LH-12R RIGID	1
4-1	700-2-1783	GRAB ROLL CENTER PLATE ASSY RH-12R RIGID	1
4-2	700-2-1781	GRAB ROLL CENTER PLATE ASSY LH-12R RIGID	1

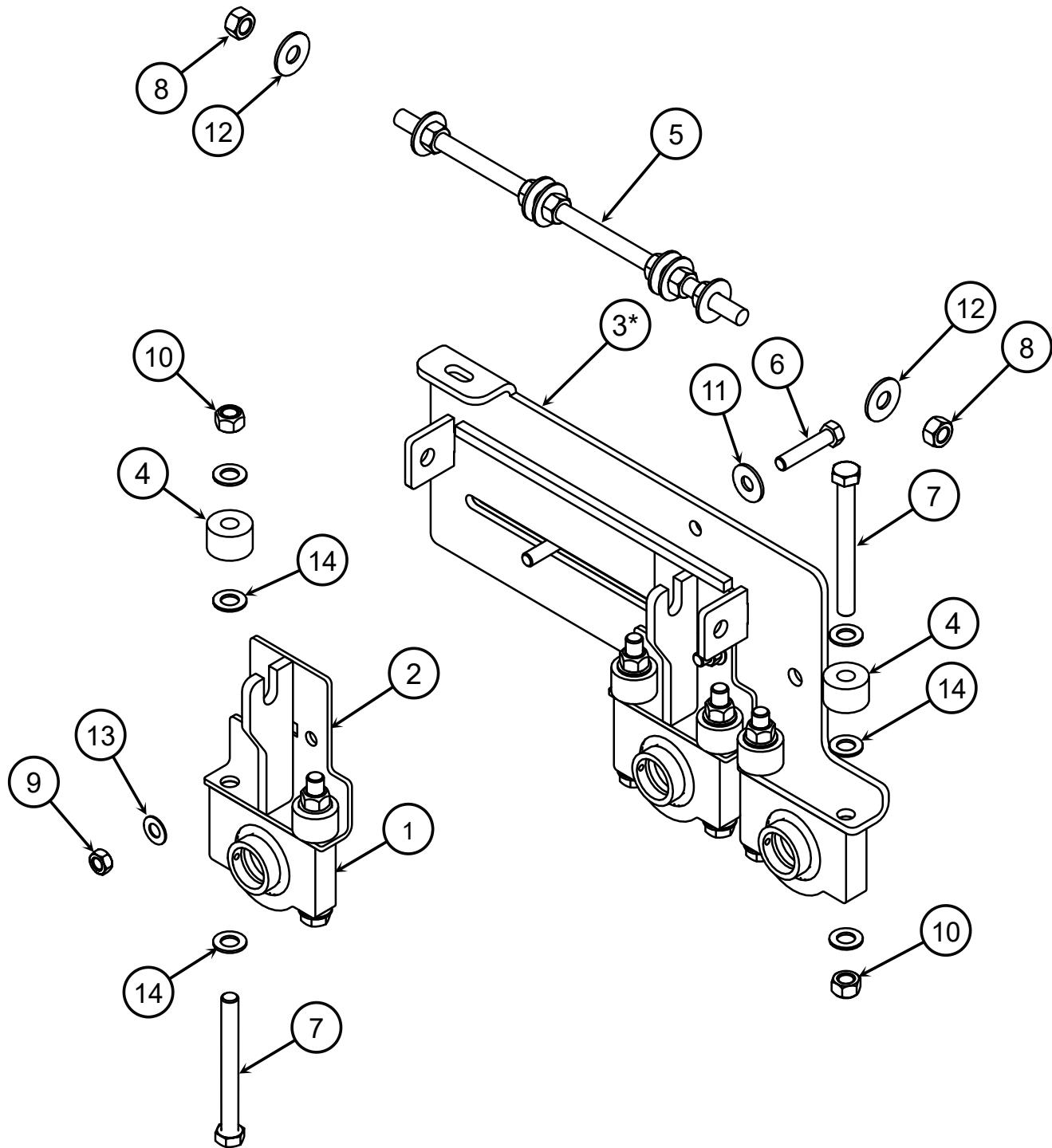
GRAB ROLL SIDE PLATE ASSY
RH 700-2-1686 / LH 700-2-1688
DRAWING



GRAB ROLL SIDE PLATE ASSY
RH 700-2-1686 / LH 700-2-1688
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-0377	BEARING BLOCK ASSY - 1.93	3
2	700-2-1540	GRAB ROLL SIDE ADJUSTMENT WELDMENT	2
3-1	700-2-1685	GRAB ROLL SIDE PLATE WELD RH- 12R RIGID	1
3-2	700-2-1687	GRAB ROLL SIDE PLATE WELD LH- 12R RIGID	1
4	700-3-3457	CUSHION	6
5	700-3-4336	ADJUSTMENT ROD- GRAB ROLL-12R RIGID	1
6	700-3-4590	BACKER MOUNT PLATE- GRABROLL	2
7	900-01431	HEX BOLT - 3/4 NC X 7 GR5	6
8	900-01786	CARRIAGE BOLT 5/8 NC X 2 NC	4
9	900-06015	NUT, HH, 3/4-10, ZP	8
10	900-06508	NUT HEX 5/8 UNC TOP LOCK	4
11	900-06510	3/4 NUT, HEX TOP LOCK	6
12	900-11038	3/4" FLAT WASHER	8
13	900-11088	WASHER, FLAT, SAE, 5/8, ZP	4
14	905-09066	WASHER, SAE 3/4"	18

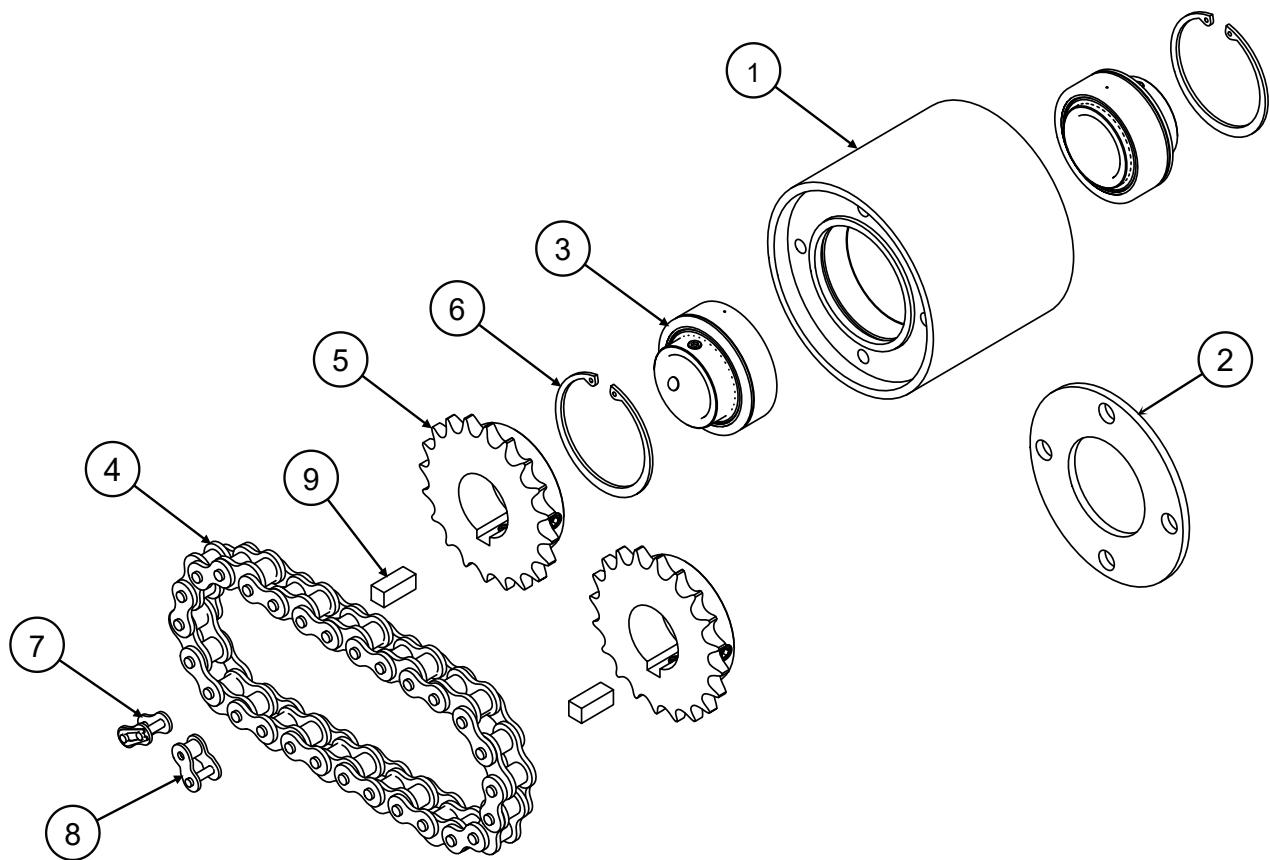
GRAB ROLL CENTER PLATE ASSY
LH 700-2-1781 / RH 700-2-1783
DRAWING



GRAB ROLL CENTER PLATE ASSY
LH 700-2-1781 / RH 700-2-1783
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-0377	BEARING BLOCK ASSY - 1.93	3
2	700-2-1540	GRAB ROLL SIDE ADJUSTMENT WELDMENT	2
3-1	700-2-1780	GRAB ROLL CENTER PLATE WELD LH- 12R RIGID	1
3-2	700-2-1782	GRAB ROLL CENTER PLATE WELD RH- 12R RIGID	1
4	700-3-3457	CUSHION	6
5	700-3-4336	ADJUSTMENT ROD- GRAB ROLL-12R RIGID	1
6	700-3-4590	BACKER MOUNT PLATE- GRABROLL	2
7	900-01431	HEX BOLT - 3/4 NC X 7 GR5	6
8	900-01786	CARRIAGE BOLT 5/8 NC X 2 NC	4
9	900-06015	NUT, HH, 3/4-10, ZP	8
10	900-06508	NUT HEX 5/8 UNC TOP LOCK	4
11	900-06510	3/4 NUT, HEX TOP LOCK	6
12	900-11038	3/4" FLAT WASHER	8
13	900-11088	WASHER, FLAT, SAE, 5/8, ZP	4
14	905-09066	WASHER, SAE 3/4"	18

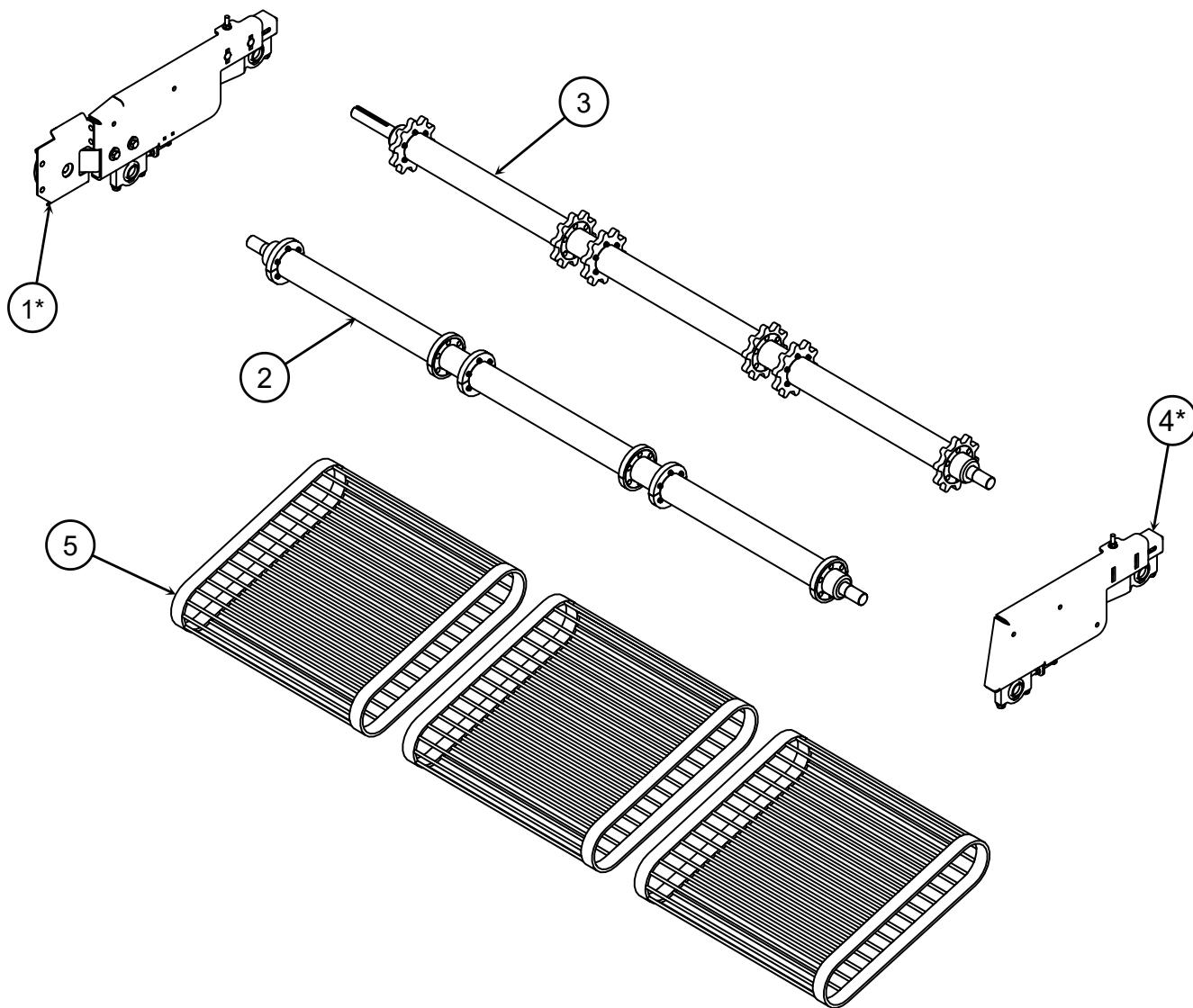
PULLEY ASSY-REVERSE GRABROLL
700-2-1492
Drawing



PULLEY ASSY-REVERSE GRABROLL
700-2-1492
Bill Of Materials

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1491	PULLY WELDMENT- REVERSE GRABROLL	1
2	700-3-3834	OUTER PLATE- PULLEY SMOOTH REVERSE GRABROLL	1
3	901-01446	BEARING, 1-15/16"	2
4	903-03223	REVERSER CHAIN- #60 CHAIN 21 LINKS	1
5	903-11139	SPROCKET, 60BS20 1-15/16"	2
6	903-18486	SNAP RING- 3.5" OD	2
7	903-03062	RS-60 CONNECTING LINK	1
8	903-03089	OFFSET LINK #60-1	1
9	100-3-3330	KEY - 1/2 X 1-1/4" SQUARE	2

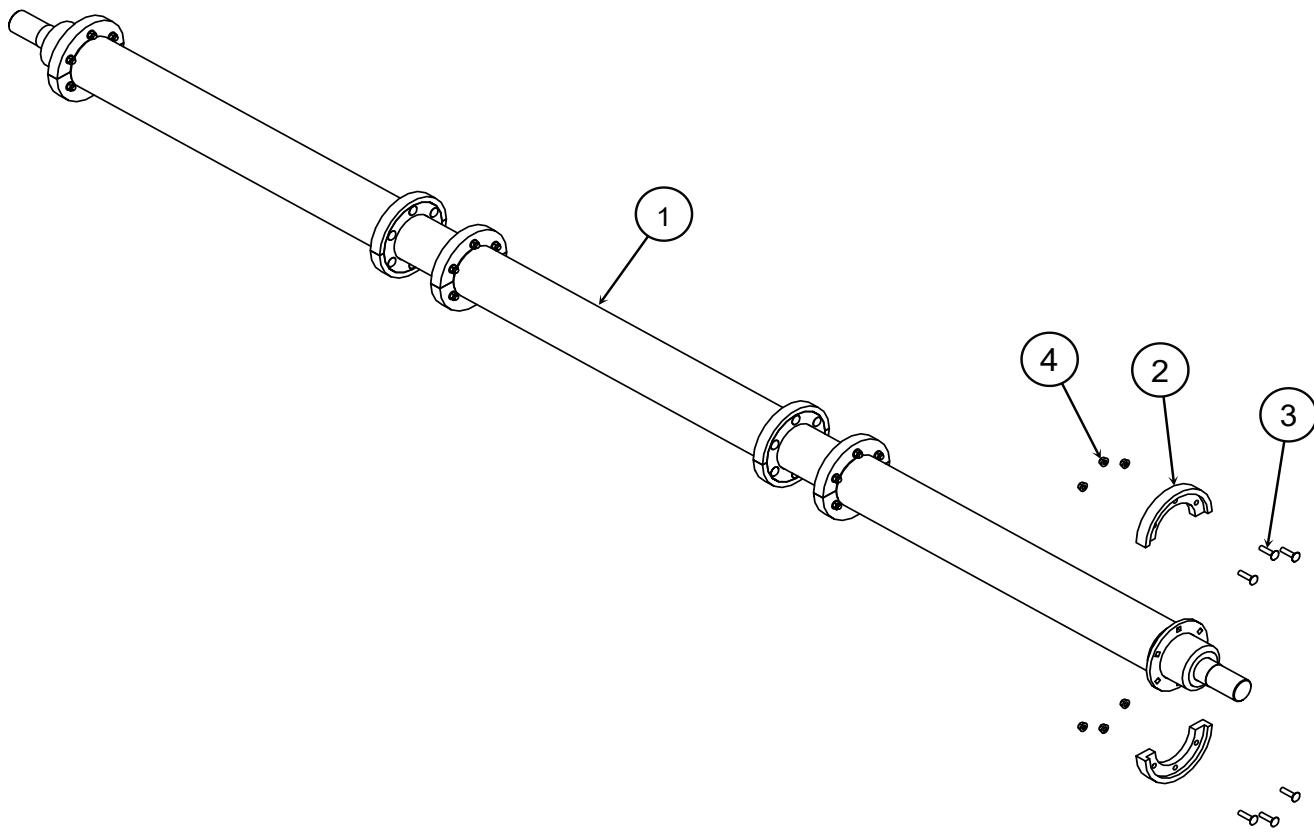
CHAIN BED ASSY
RH 700-2-1705 / LH 700-2-1711
DRAWING



CHAIN BED ASSY
RH 700-2-1705 / LH 700-2-1711
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1-1	700-2-1679	CHAIN BED CENTER PLATE ASSY RH- 12R RIGID	1
1-2	700-2-1680	CHAIN BED CENTER PLATE ASSY LH- 12R RIGID	1
2	700-2-1772	FRONT CHAIN BED TUBE ASSY HD-12R RIGID	1
3	700-2-1774	FRONT DRIVE TUB ASSY-CHAIN BED-12R RIGID	1
4-1	700-2-1875	CHAIN BED SIDE PLATE ASSY RH- 12R	1
4-2	700-2-1873	CHAIN BED SIDE PLATE ASSY LH- 12R RIGID	1
5	903-03230	BELTED CHAIN-FRONT CHAIN BED-12R RIGID	3

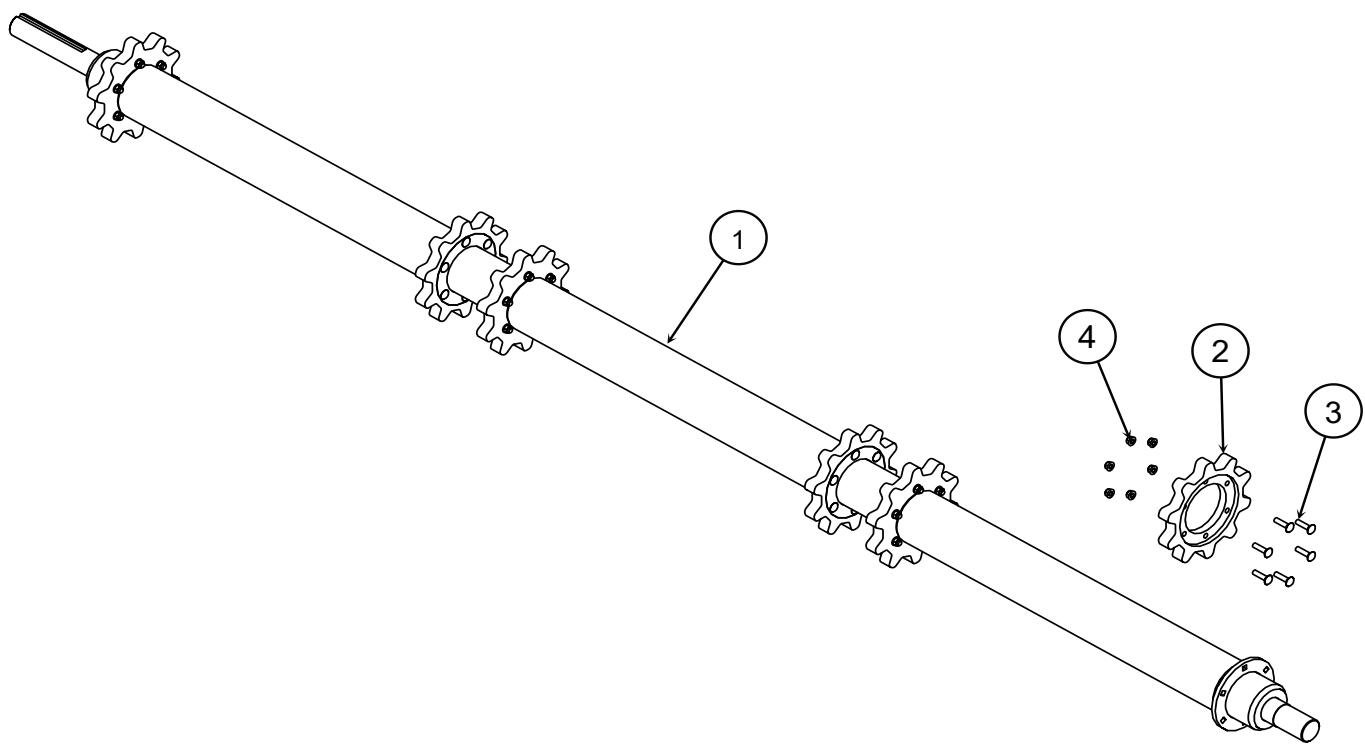
FRONT CHAIN TUBE ASSY
700-2-1772
DRAWING



**DRIVE TUBE ASSY
700-2-1772
BILL OF MATERIALS**

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1771	FRONT CHAIN BED TUBE WELD HD-12R RIGID	1
2	700-3-3884	SMOOTH ILDER HALF- BOLT ON FRONT CHAIN BED	12
3	900-01697	CARRIAGE BOLT 3/8 NC X 1-1/2 ZP	36
4	900-06139	3/8 NC FLANGED WHIZ NUT	36

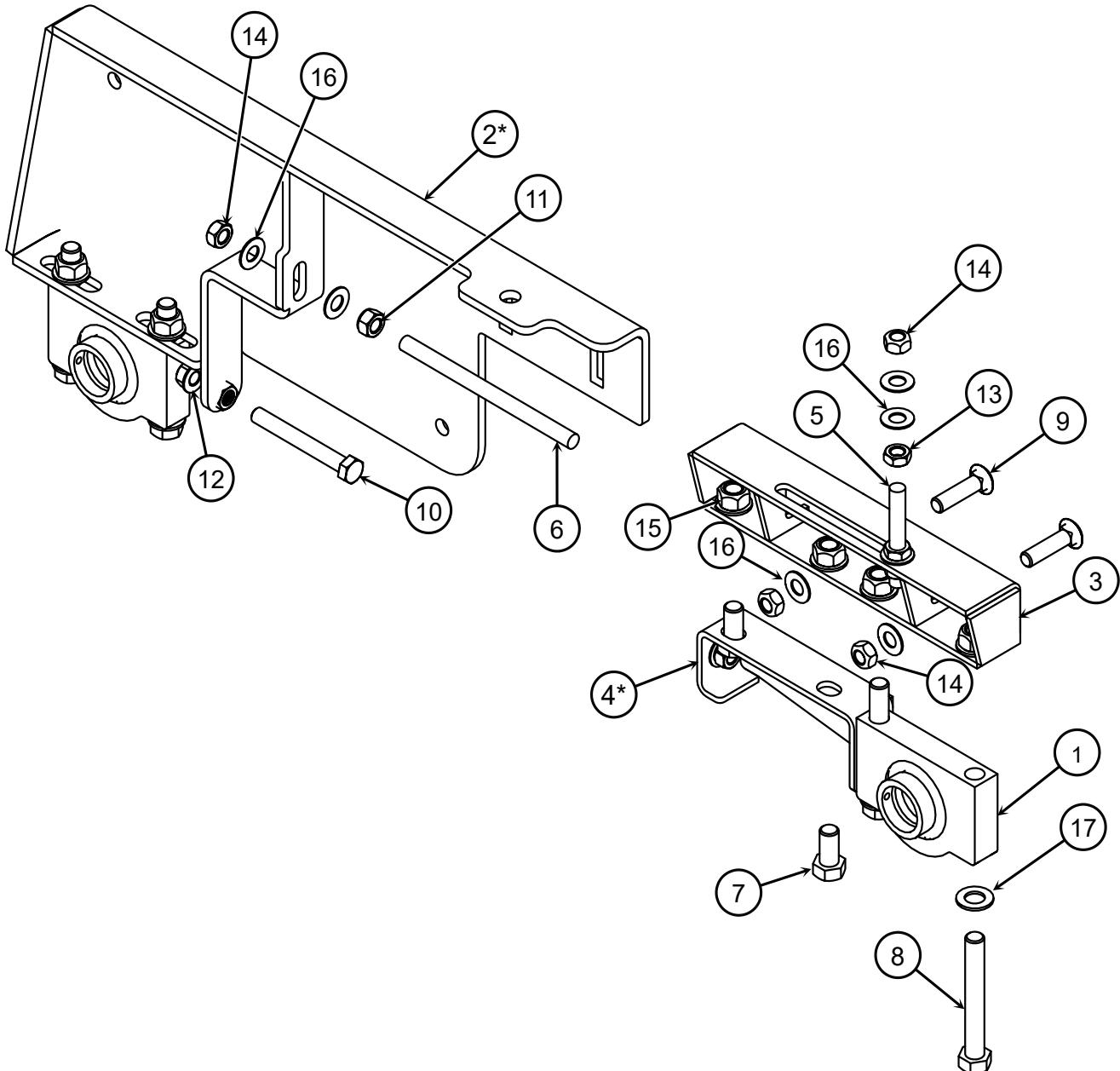
FRONT DRIVE TUBE ASSY
700-2-1774
DRAWING



**FRONT TUBE ASSY
700-2-1774
BILL OF MATERIALS**

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1773	FRONT DRIVE TUBE WELD-CHAIN BED-12R RIGID	1
2	700-3-0809	SPROCKET - BED CHAIN	6
3	900-01697	CARRIAGE BOLT 3/8 NC X 1-1/2 ZP	36
4	900-06139	3/8 NC FLANGED WHIZ NUT	36

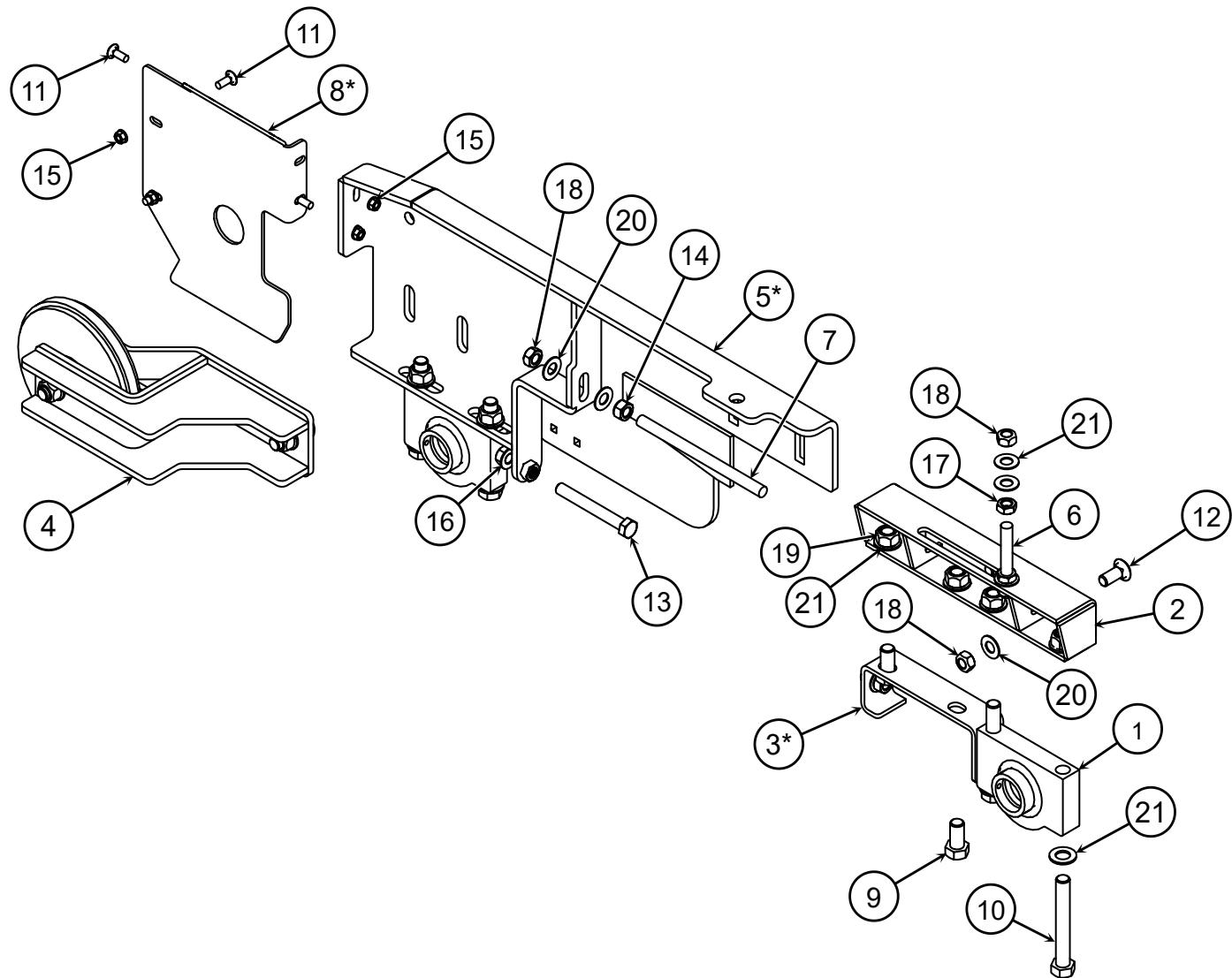
CHAIN BED CENTER PLATE ASSY
LH 700-2-1680 / RH 700-2-1679
DRAWING



CHAIN BED CENTER PLATE ASSY
LH 700-2-1680 / RH 700-2-1679
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-0377	BEARING BLOCK ASSY - 1.93	2
2-1	700-2-1683	CHAIN BED CENTER PLATE WELD LH-12R RIGID	1
2-2	700-2-1684	CHAIN BED PLATE WELD RH-12R RIGID	1
3	700-2-1755	CHAIN BED ADJUSTMENT WELD-12R	1
4-1	700-2-1756	CHAIN BED ADJUSTMENT SUPPORT WELD LH-12R	1
4-2	700-2-1757	CHAIN BED ADJ SUPPORT WELD RH-12R RIGID	1
5	700-3-4396	THREADED ROD- 5/8" X 4.5" LONG	1
6	700-3-4437	CHAIN BED ADJUSTMENT ROD	1
7	900-01399	3/4-NC X 1-1/2 HEX BOLT	2
8	900-01425	HEX BOLT - 3/4NC X 5-1/2 GR5 ZP	4
9	900-01788	CARRIAGE BOLT 5/8 NC X 2-1/2 NC	2
10	900-03478	BOLT, HEX CAP 5/8 X 6 UNC FT ZP	1
11	900-06013	NUT, HH, 5/8-1 1 , ZP	3
12	900-06145	5/8 WHIZ NUT	1
13	900-06280	NUT HEX JAM 5/8 UNC	2
14	900-06508	NUT HEX 5/8 UNC TOP LOCK	5
15	900-06510	3/4 NUT, HEX TOP LOCK	6
16	900-11088	WASHER, FLAT, SAE, 5/8, ZP	10
17	905-09066	WASHER, SAE 3/4"	10

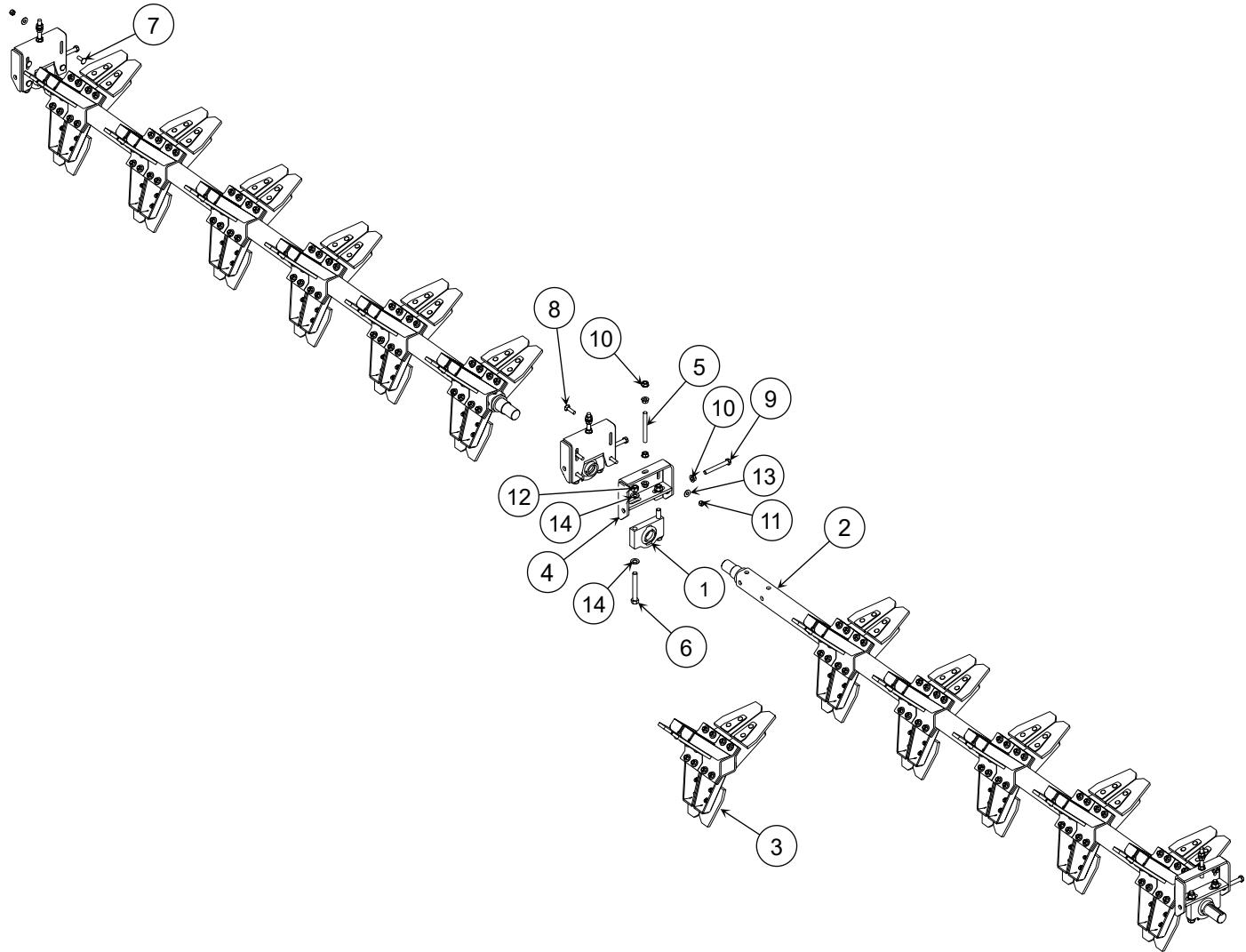
CHAIN BED SIDE PLATE ASSY
LH 700-2-1873 / RH 700-2-1875
DRAWING



CHAIN BED CENTER PLATE ASSY
LH 700-2-1873 / RH 700-2-1875
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-0377	BEARING BLOCK ASSY - 1.93	2
2	700-2-1755	CHAIN BED ADJUSTMENT WELD-12R	1
3-1	700-2-1756	CHAIN BED ADJUSTMENT SUPPORT WELD LH-12R	1
3-2	700-2-1757	CHAIN BED ADJ SUPPORT WELD RH-12R RIGID	1
4	700-2-1871	BOTTOM IDLER SUPPORT ASSY	1
5-1	700-2-1872	CHAIN BED PLATE WELD LH- 12R	1
5-2	700-2-1874	CHAIN BED SIDE PLATE WELD RH-12R	1
6	700-3-4396	THREADED ROD- 5/8" X 4.5" LONG	1
7	700-3-4437	CHAIN BED ADJUSTMENT ROD	1
8-1	700-3-4667	CHAIN BED SIDE WALL COVER LH	1
8-2	700-3-4668	CHAIN BED SIDE WALL COVER RH	1
9	900-01399	3/4-NC X 1-1/2 HEX BOLT	2
10	900-01425	HEX BOLT - 3/4NC X 5-1/2 GR5 ZP	4
11	900-01695	CARRIAGE BOLT 3/8 NC X 1 ZP	4
12	900-01784	CARRIAGE BOLT 5/8 NC X 1-1/2	2
13	900-03478	BOLT, HEX CAP 5/8 X 6 UNC FT ZP	1
14	900-06013	NUT, HH, 5/8-11, ZP	3
15	900-06139	3/8 NC FLANGED WHIZ NUT	4
16	900-06145	5/8 WHIZ NUT	1
17	900-06280	NUT HEX JAM 5/8 UNC	2
18	900-06508	NUT HEX 5/8 UNC TOP LOCK	5
19	900-06510	3/4 NUT, HEX TOP LOCK	6
20	900-11088	WASHER, FLAT, SAE, 5/8, ZP	10
21	905-09066	WASHER, SAE 3/4"	10

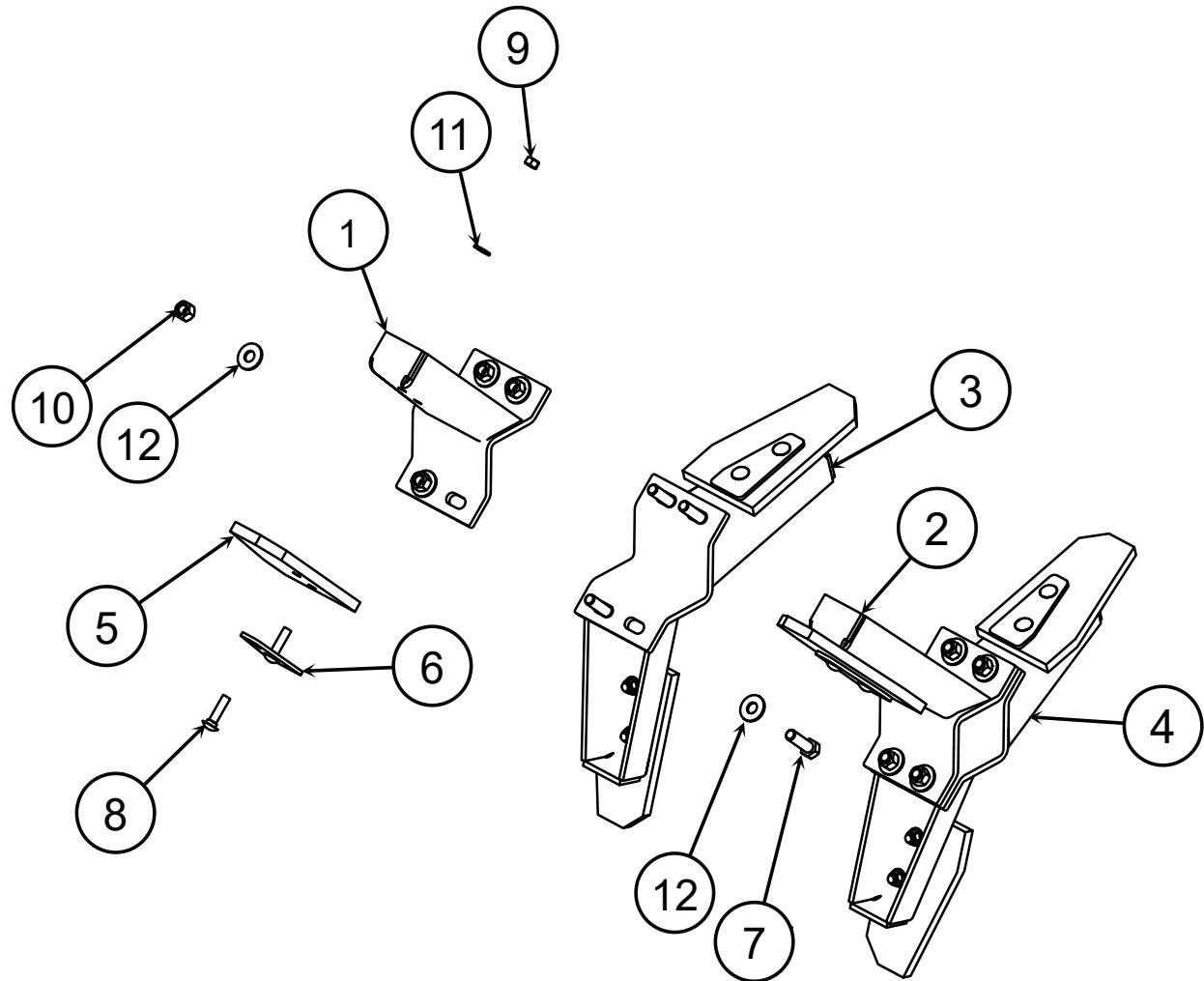
PADDLE SHAFT ASSY 12R22
700-2-1712
DRAWING



PADDLE SHAFT ASSY 12R22
700-2-1712
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-0377	BEARING BLOCK ASSY - 1.93	4
2	700-2-0566	PADDLE TUBE WELD - 1222 WING	2
3	700-2-1480	SPLIT PADDLE SHAFT ASSEMBLY	12
4	700-2-1760	PADDLE SHAFT BEARING MOUNT WELD-12R RIGID	4
5	700-3-4090	THREADED ROD- 5/8" X 6.00" LONG	4
6	900-01425	HEX BOLT - 3/4NC X 5-1/2 GR5 ZP	8
7	900-01751	BOLT, CRG, 1/2-13 X 1-1/2, GR5 ZP	8
8	900-01753	BOLT, CRG, 1/2" NC X 2", GR5 ZP	4
9	900-03478	BOLT, HEX CAP 5/8 X 6 UNC FT ZP	4
10	900-06145	5/8 WHIZ NUT	20
11	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	12
12	900-06510	3/4 NUT, HEX TOP LOCK	8
13	900-11035	1/2 FLAT WASHER	12
14	905-09066	WASHER, SAE 3/4"	16

SPLIT PADDLES SHAFT ASSY
700-2-1480
DRAWING



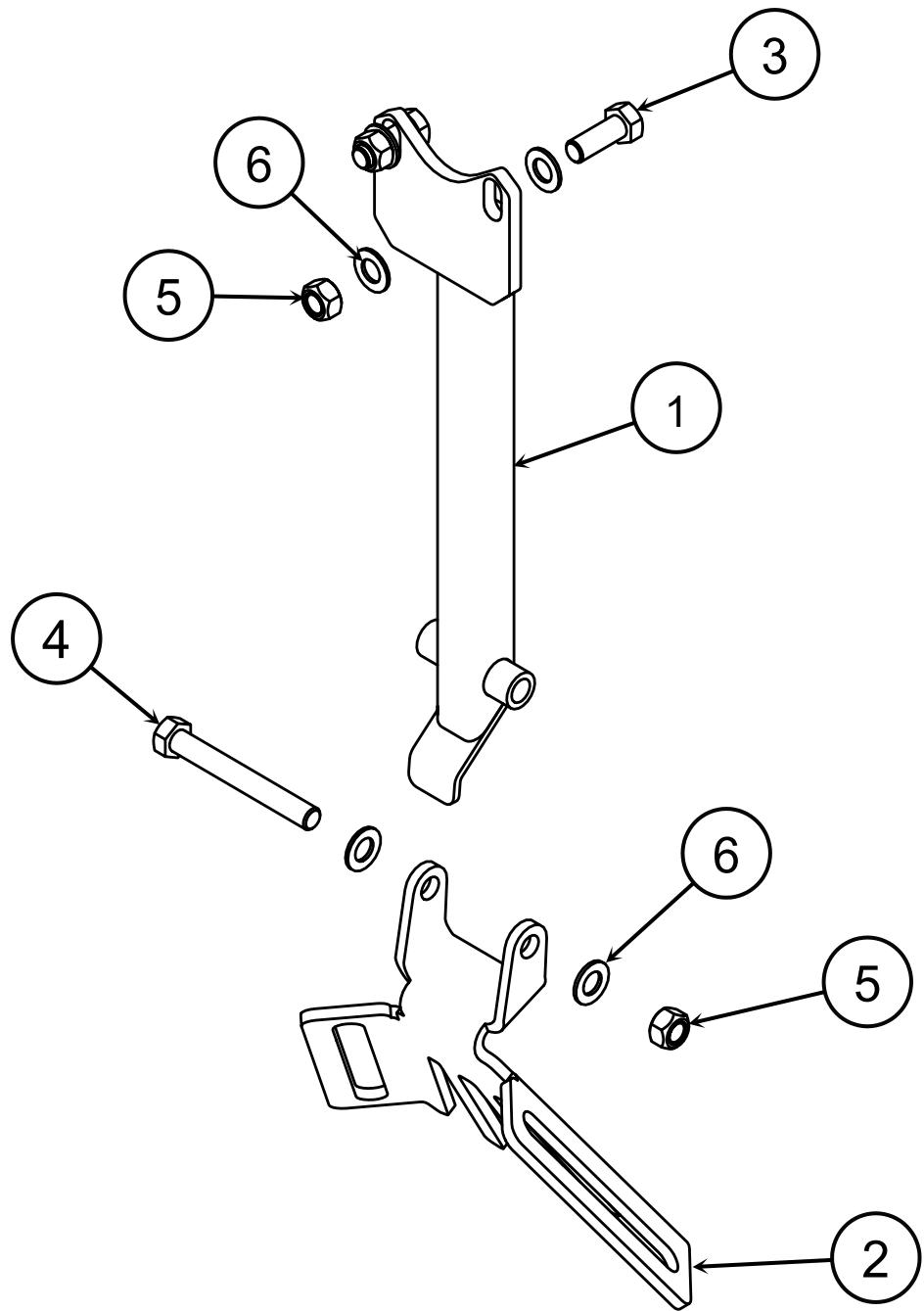
SPLIT PADDLES SHAFT ASSY
700-2-1480
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1476	PADDLE WELD- ONE PADDLE LH	1
2	700-2-1477	PADDLE WELD- ONE PADDLE RH	1
3	700-2-1478	PADDLE WELD- TWO PADDLES LH	1
4	700-2-1479	PADDLE WELD- TWO PADDLES RH	1
5	700-3-3790	SPLIT PADDLE SHAFT RUBBER	6
6	700-3-3791	SPLIT PADDLE SPACER	6
7	900-01227	BOLT HEX 1/2 X 1 3/4 GR 5 ZP	8
8	900-01697	CARRIAGE BOLT 3/8 NC X 1-1/2 ZP	12
9	900-06500	NUT HEX 3/8 TOP LOCK	12
10	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	8
11	900-11033	FLAT WASHER 3/8 ZP	12
12	900-11035	1/2 FLAT WASHER	16

FRONT BARRIER MOUNT ASSY 8R22/12R22

700-2-1514

DRAWING



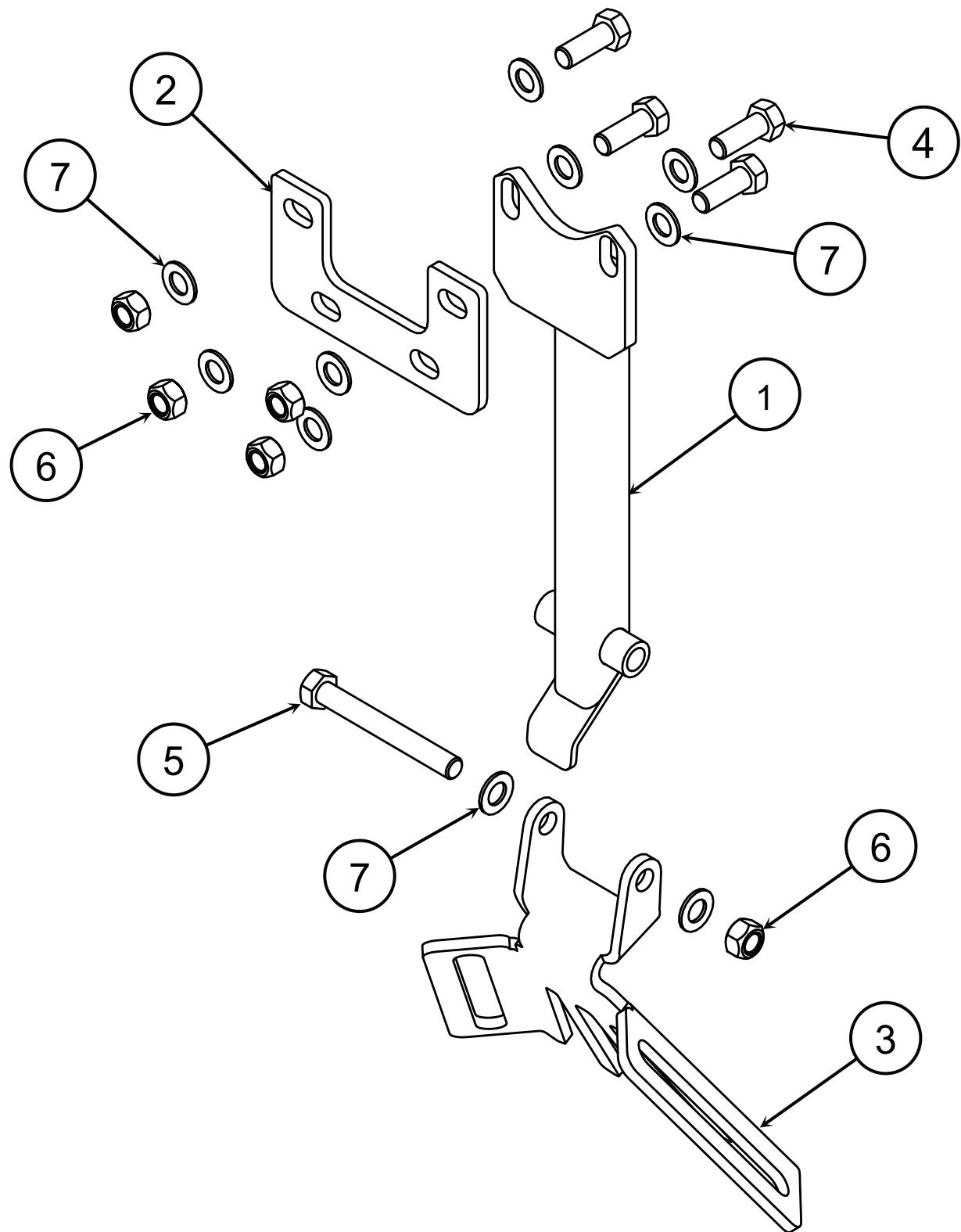
FRONT BARRIER MOUNT ASSY 8R22/12R22
700-2-1514
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1516	MOUNT WELD - FRONT BARRIER 8R/12R RIGID	1
2	700-3-3804	FRONT BARRIER BRACKET 12R22	1
3	900-01403	HEX BOLT - 3/4NC X 2 GR5 ZP	2
4	900-01427	HEX BOLT - 3/4NC X 6 GR5 ZP	1
5	900-06510	3/4 NUT, HEX TOP LOCK	3
6	905-09066	WASHER, SAE 3/4"	6

FRONT BARRIER MOUNT ASSY 12R22

700-2-1754

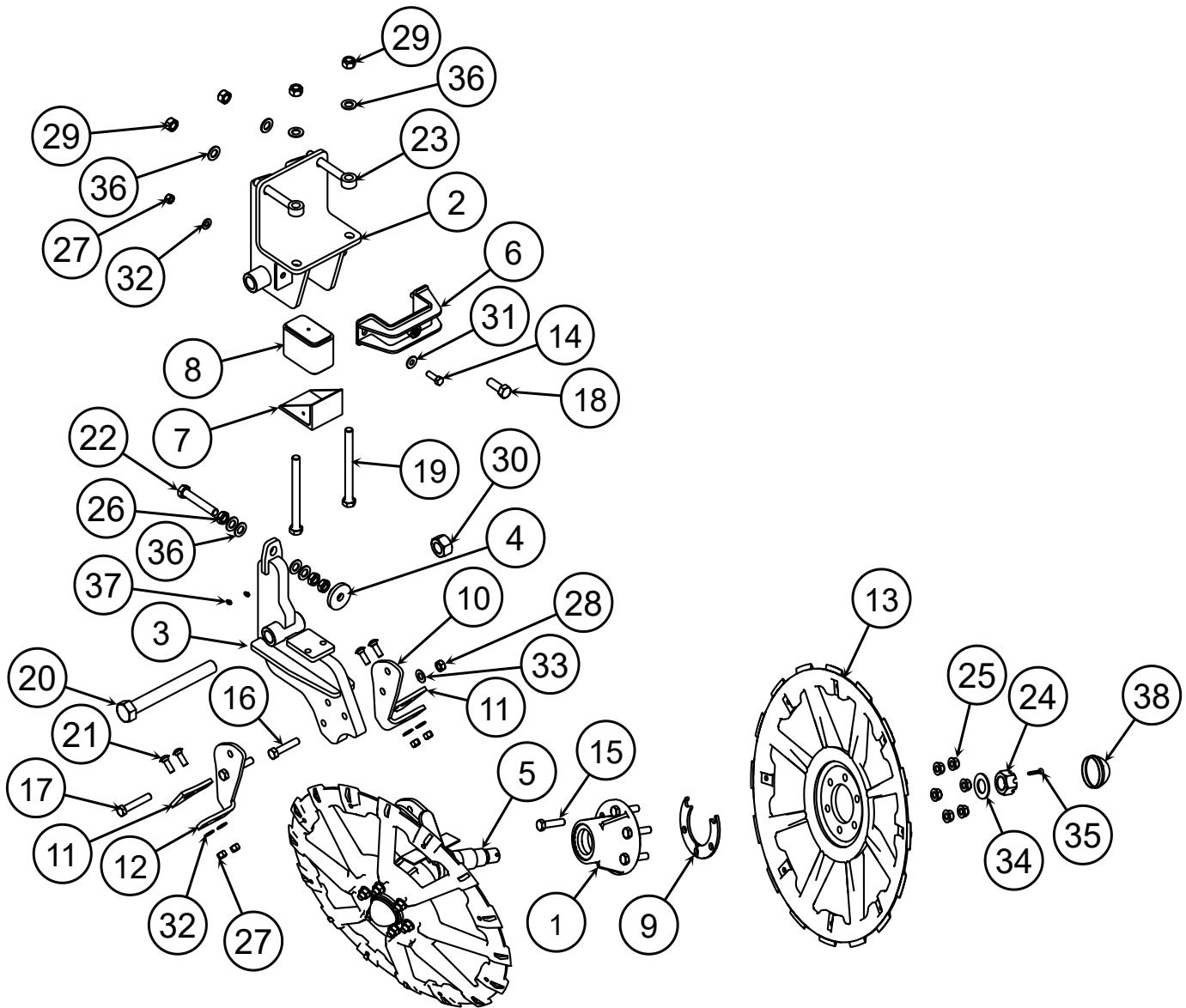
DRAWING



FRONT BARRIER MOUNT ASSY 12R22
700-2-1754
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-0733	MOUNT WELD - FRONT BARRIER	1
2	700-3-3804	FRONT BARRIER BRACKET 12R22	1
3	700-3-4432	BARRIER MOUNT-BOLT ON-12R	1
4	900-01403	HEX BOLT - 3/4NC X 2 GR5 ZP	4
5	900-01427	HEX BOLT - 3/4NC X 6 GR5 ZP	1
6	900-06510	3/4 NUT, HEX TOP LOCK	5
7	905-09066	WASHER, SAE 3/4"	10

**DIGGER WHEEL ASSY-ADJ CUSHION
700-2-1353
DRAWING**



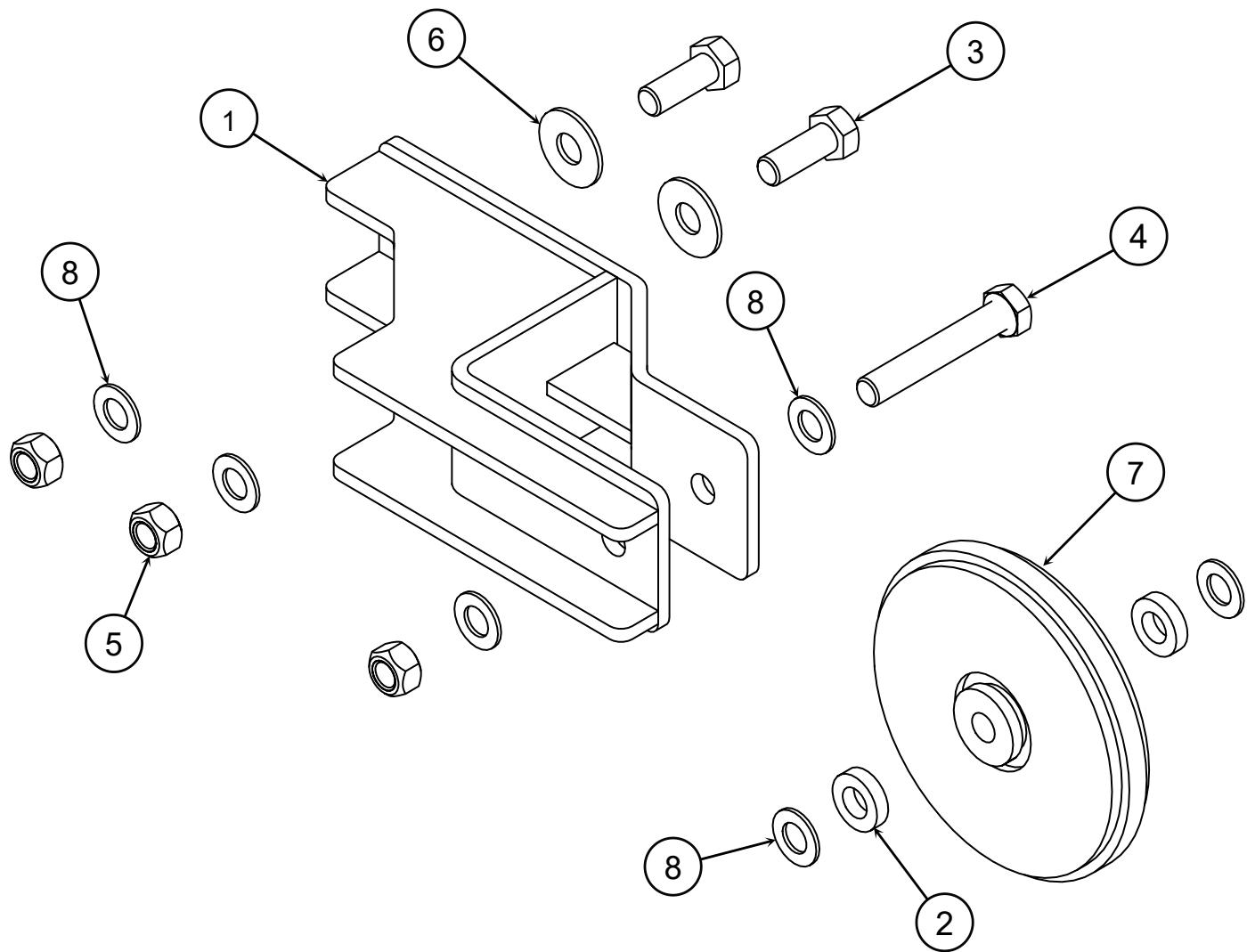
DIGGER WHEEL ASSY-ADJ CUSHION
700-2-1353
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-0410	HUB ASSY - DIGGER STRUT	2
2	700-2-1323	UPPER DIGGER WHEEL MOUNT WELD (2016)	1
3	700-2-1324	LOWER DIGGER WHEEL MOUNT WELD	1
4	700-2-1354	NUT/WASHER WELD - DIGGER WHEEL	1
5	700-2-1359	SPINDLE WELD - NARROW (1.25" PLATE) 2016- STANDARD	1
6	700-2-1526	CUSHION STOP WELDMENT	1
7	700-2-1527	CUSHION PRESSURE WELDMENT	1
8	700-2-1750	DIGGER WHEEL BLOCK WELDMENT	1
9	700-3-0447	LIFTER WHEEL SPACER - 1/4"	4
10	700-3-3863	FRONT SCRAPER MOUNT LH	1
11	700-3-3864	FRONT SCRAPER BLADE	2
12	700-3-3865	FRONT SCRAPER MOUNT RH	1
13	700-3-4573	LIFTER WHEEL MACHINED-2022	2
14	900-01225	1/2 NC X 1-1/2 HEX BOLT GR 5	2
15	900-01347	5/8" X 2-1/2 NC HEX BOLT	12
16	900-01353	5/8 NC X 3 HEX BOLT GRADE 5	1
17	900-01357	SCREW, CAP 5/8 X 3-1/2 UNC	2
18	900-01403	HEX BOLT - 3/4NC X 2 GR5 ZP	1
19	900-01437	BOLT, HH, 3/4-10 X 8-1/2, GR5 ZP	2
20	900-01623	HEX BOLT 1-1/4 X 11" NC	1
21	900-01751	BOLT, CRG, 1/2-13 X 1-1/2, GR5 ZP	4
22	900-03076	3/4-10 X 4.5 FULL THREAD HEX BOLT	1
23	900-03463	BOLT, EYE, 3/4" NC X 6"	2
24	900-06068	1-3/8 - 12 SLOTTED HEX NUT	2
25	900-06145	5/8 WHIZ NUT	12
26	900-06282	NUT HEX JAM 3/4 NC	3
27	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	6
28	900-06508	NUT HEX 5/8 UNC TOP LOCK	3
29	900-06510	3/4 NUT, HEX TOP LOCK	4
30	900-06518	TOP LOCK NUT - 1-1/4 NC	1
31	900-11035	1 /2 FLAT WASHER	2
32	900-11085	1 /2" FLAT WASHER, SAE	6
33	900-1 1088	WASHER, FLAT, SAE, 5/8, ZP	3
34	900-11 143	WASHER, FLAT 1-1/4" ZP (SAE)	2
35	900-23064	COTTER PIN - 1/4 X 2	2
36	905-09066	WASHER, SAE 3/4"	8
37	905-15024	ZERK 1/4-28 UNF STRAIGHT	2
38	905-98054	DUST CAP- 3.10 OD X 1.69 DP, CTD DC-26	2

BOTTOM IDLER SUPPORT ASSY 12R

700-2-1871

DRAWING



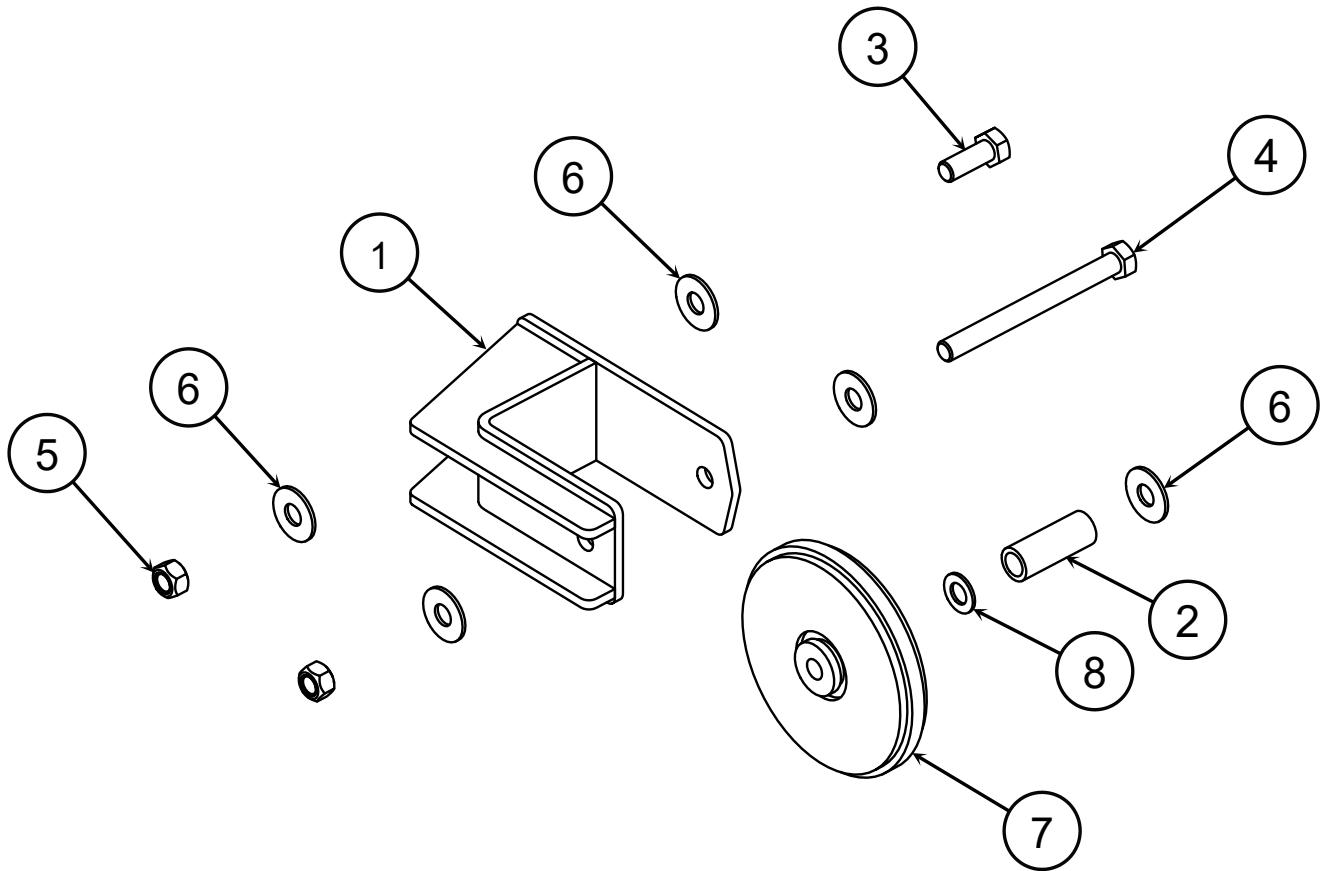
BOTTOM IDLER SUPPORT ASSY 12R
700-2-1871
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1870	BOTTOM IDLER SUPPORT WELDMENT 12R	1
2	700-3-4087	3/8" IDLER SPACER	2
3	900-01403	HEX BOLT - 3/4NC X 2 GR5 ZP	2
4	900-01421	3/4-10 X 4.5 HEX BOLT	1
5	900-06510	3/4 NUT, HEX TOP LOCK	3
6	900-11038	3/4" FLAT WASHER, USS	2
7	900-11023	8-1/2" IDLEMASTER TENSIONER - 3/4" BORE	1
8	905-09066	WASHER, SAE 3/4"	6

UPPER IDLER SUPPORT ASSY

700-2-1597

DRAWING



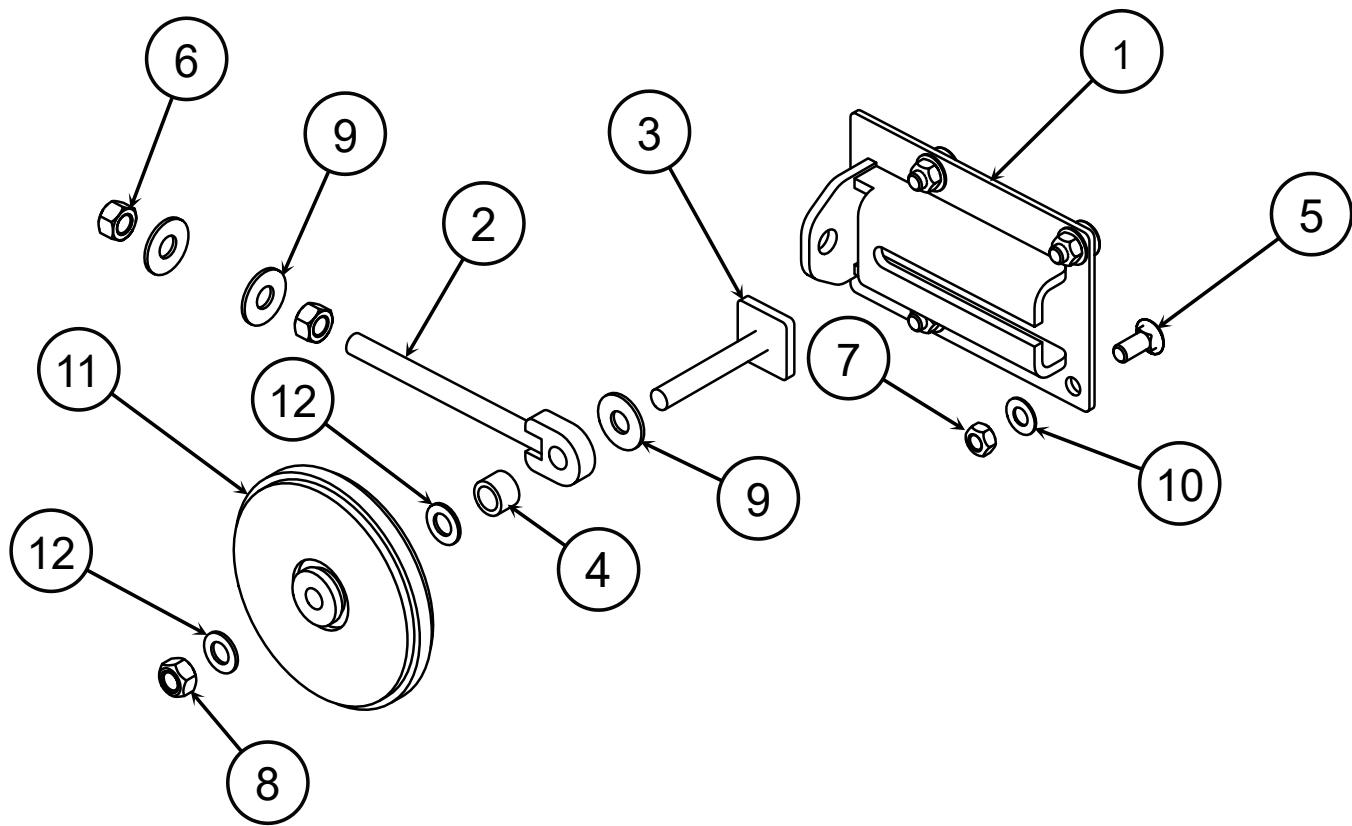
UPPER IDLER SUPPORT ASSY
700-2-1597
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1524	8" IDLER SUPPORT WELDMENT	1
2	700-3-4089	3-3/8" IDLER SPACER	1
3	900-01403	HEX BOLT - 3/4NC X 2 GR5 ZP	1
4	900-01435	3/4 NC X 8 HEX BOLT ZP	1
5	900-06510	3/4 NUT, HEX TOP LOCK	2
6	900-11038	3/4" FLAT WASHER	5
7	903-11123	8-1/2" IDLEMASTER TENSIONER - 3/4" BORE	1
8	905-09066	WASHER, SAE 3/4"	1

CHAIN TENSIONER MOUNT ASSY

700-2-1577

DRAWING



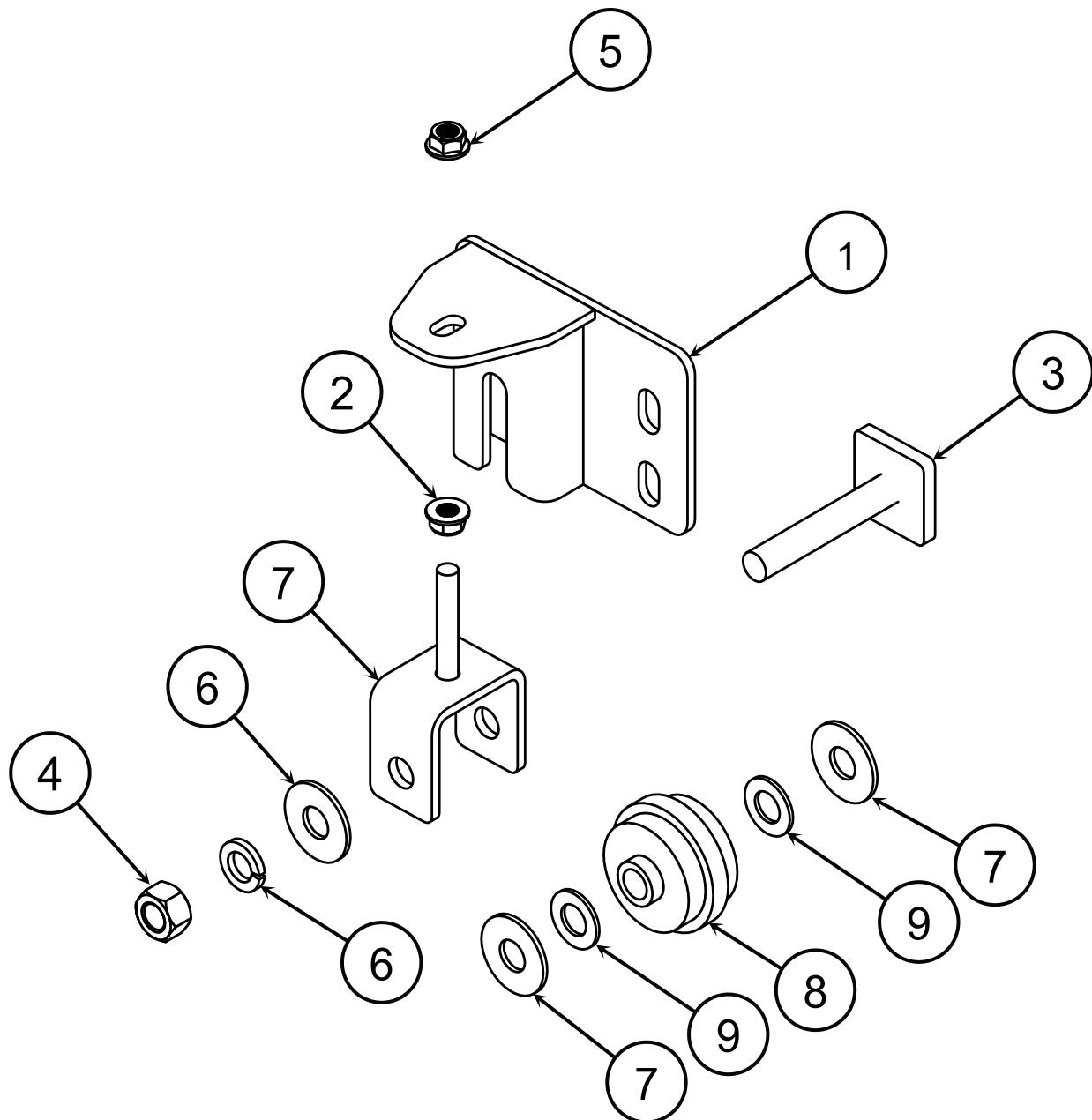
CHAIN TENSIONER MOUNT ASSY
700-2-1577
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1313	CHAIN TENSIONER MOUNT WELD	1
2	700-2-1745	EYE BOLT WELD- CHAIN TENSIONER	1
3	700-2-1828	SLIDE WELD- CHAIN MOUNT TENSIONER-LONG	1
4	700-3-4026	7/8" IDLER SPACER	1
5	900-01784	CARRIAGE BOLT 5/8 NC X 1-1/2	4
6	900-06015	NUT, HH, 3/4-10, ZP	2
7	900-06508	NUT HEX 5/8 UNC TOP LOCK	4
8	900-06510	3/4 NUT, HEX TOP LOCK	1
9	900-11038	3/4" FLAT WASHER	3
10	900-1 1088	WASHER, FLAT, SAE, 5/8, ZP	4
11	903-11123	8-1/2" IDLEMASTER TENSIONER - 3/4" BORE	1
12	905-09066	WASHER, SAE 3/4"	2

SMALL CHAIN TENSIONER ASSY

700-2-1609

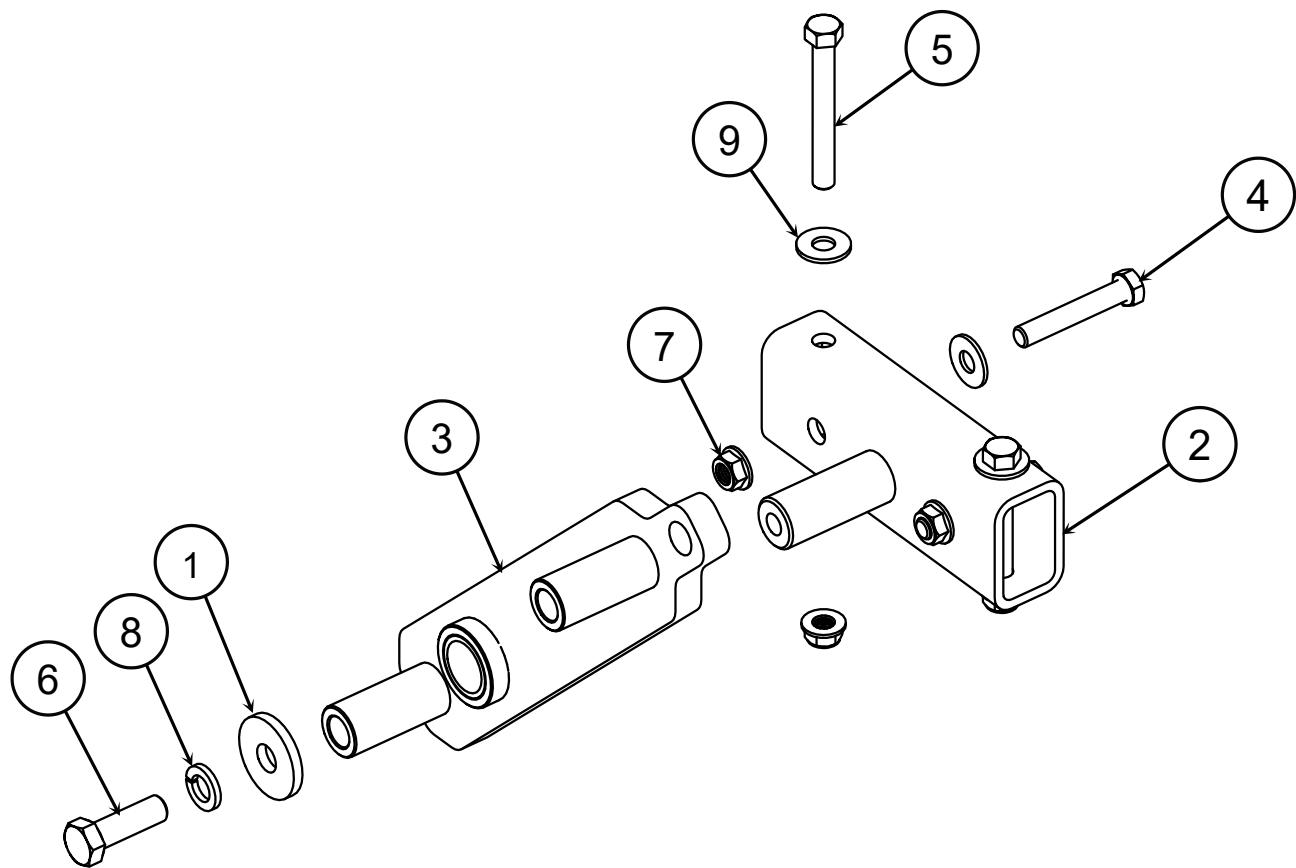
DRAWING



SMALL CHAIN TENSIONER ASSY
700-2-1609
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1608	CHAIN TENSIONER WELDMENT- 8R	1
2	700-2-1610	THREADED ROD WELDMENT-CHAIN TENSIONER 8R/12R	1
3	700-2-1744	SLIDE WELD- CHAIN TENSIONER	1
4	900-06015	NUT, HH, 3/4-10, ZP	1
5	900-06143	1/2 NC SPIRALOCK NUT ZP GR5	2
6	900-11017	WASHER, LOCK, 3/4, ZP	1
7	900-11038	3/4" FLAT WASHER	3
8	903-11106	3" IDLEMASTER TENSIONER	1
9	905-09066	WASHER, SAE 3/4"	2

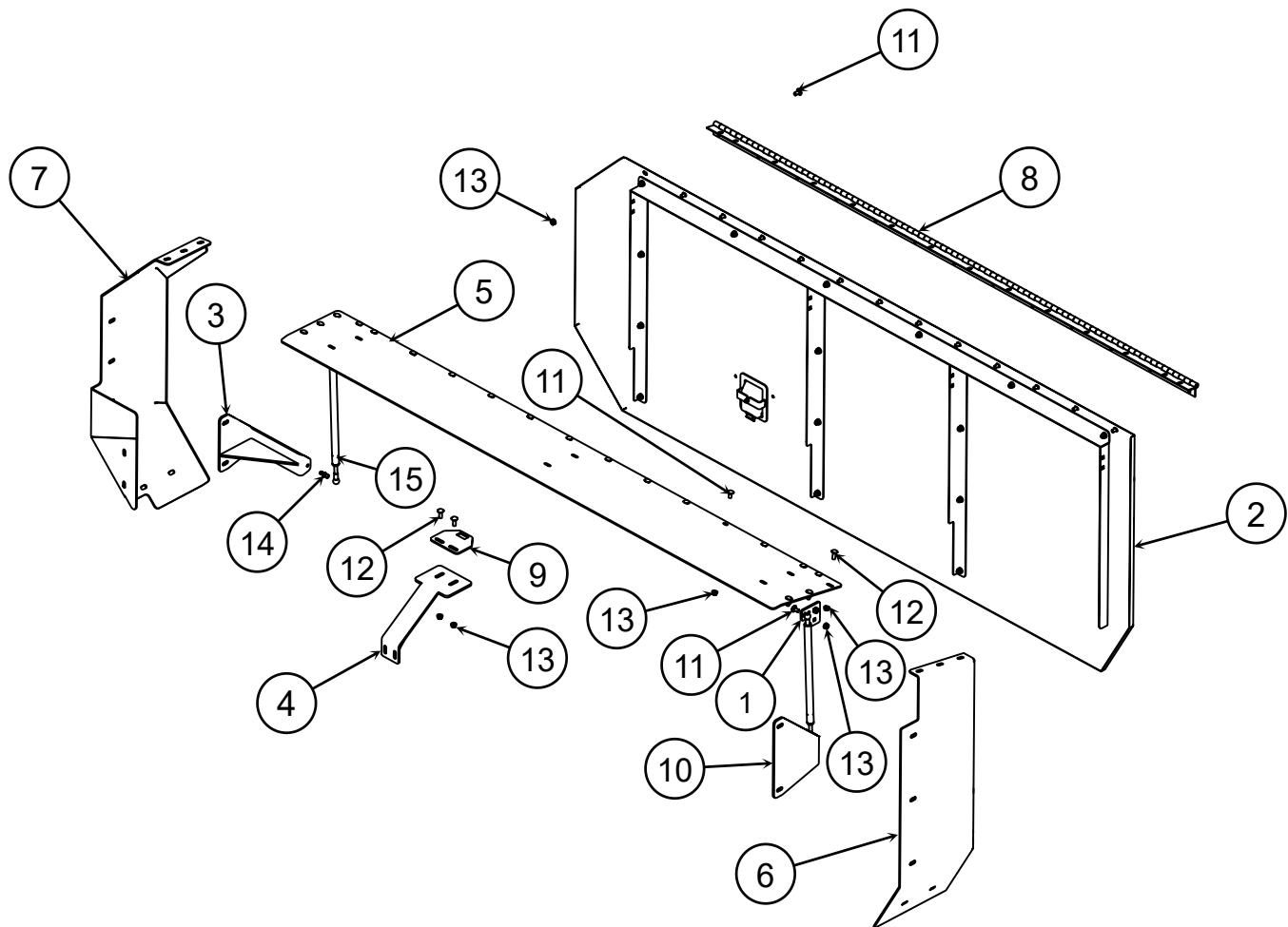
PIVOT ARM AND BASE ASSY
700-2-1595
DRAWING



PIVOT ARM AND BASE ASSY
700-2-1595
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	500-3-1246	SPECIAL WASHER	1
2	700-2-0721	PIVOT BASE WELD - HARVESTER	1
3	700-2-1692	ASSY, PIVOT ARM TENSIONER, SPACED- 8R	1
4	900-01237	BOLT HEX 1/2-13 X 3	2
5	900-01245	1/2 X 4 HEX BOLT GR5 ZP	2
6	900-01345	BOLT, HH, 5/8-11 X 2, GR5 ZP	1
7	900-06143	1/2 NC SPIRALOCK NUT ZP GR5	4
8	900-11015	WASHER, LOCK, 5/8, ZP	1
9	900-11035	1/2 FLAT WASHER	4

**RH BELT BOX ASSY
700-2-1626
DRAWING**



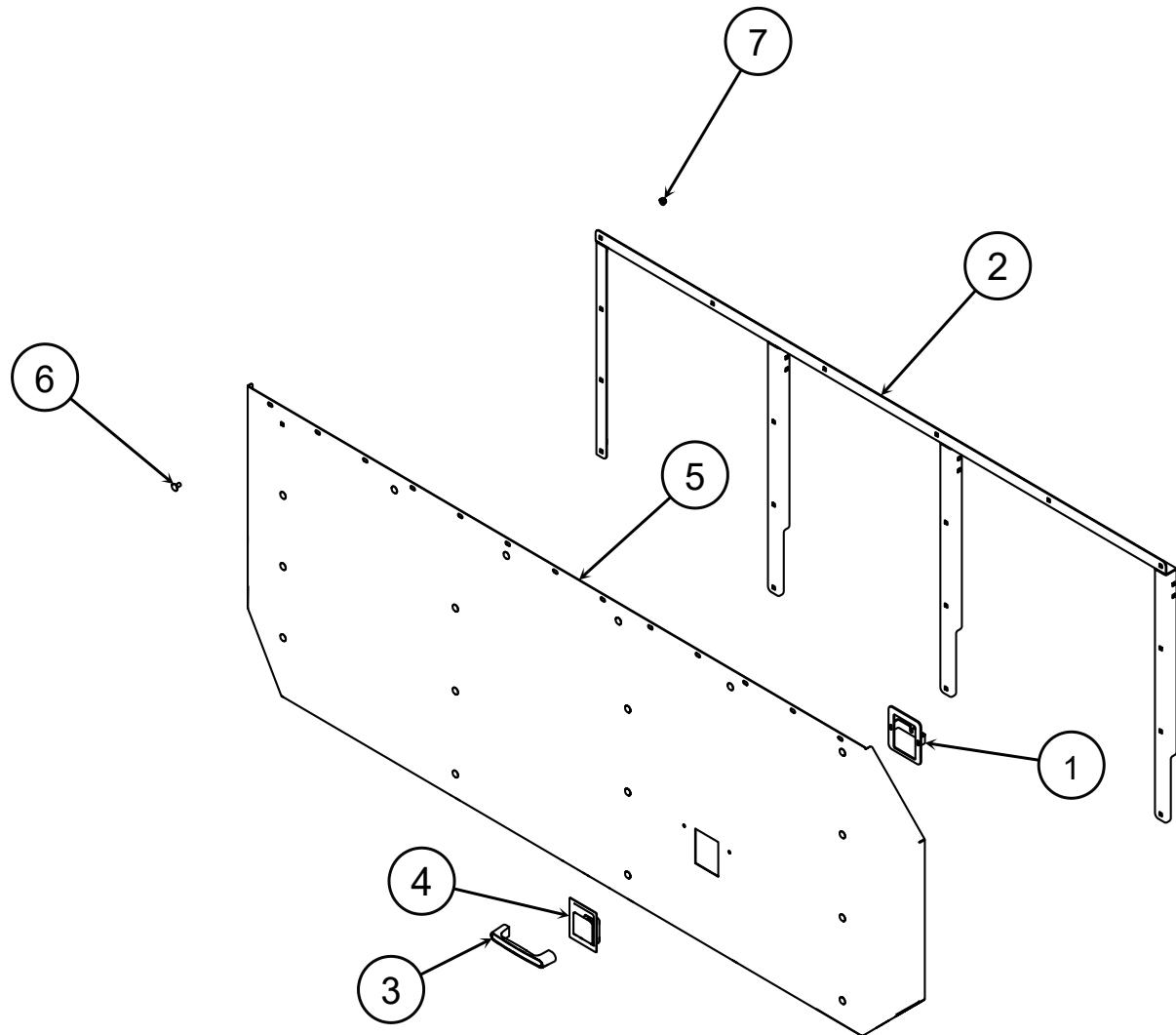
RH BELT BOX ASSY
700-2-1626
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	500-3-5086	PLATE- GAS SPRING MOUNT	2
2	700-2-1629	RH DOOR ASSY - 8R	1
3	700-2-1632	FRONT RH DOOR SHOCK MOUNT WELD - 8R	1
4	700-2-1743	DOOR LATCH MOUNT WELDMENT	1
5	700-3-4095	DOOR TOP SHEET RH - 8R	1
6	700-3-4096	DOOR BACK SHEET RH - 8R	1
7	700-3-4097	DOOR FRONT SHEET RH - 8R	1
8	700-3-4177	DOOR HINGE - 8R	1
9	700-3-4180	DOOR LATCH PLATE 2 - 8R	1
10	700-3-4184	REAR RH DOOR SHOCK MOUNT - 8R	1
11	900-01694	BOLT, CRG 3/8-16 X .75" GR5, ZP	31
12	900-01695	BOLT, CRG 3/8-16 X 1" GR5, ZP	8
13	900-06139	3/8 NC FLANGED WHIZ NUT	39
14	905-06026	BALL STUD, GAS SPRING 10" STROKE	4
15	905-06029	GAS SPRING 10" STROKE, 150 LBS	2

RH DOOR ASSY

700-2-1629

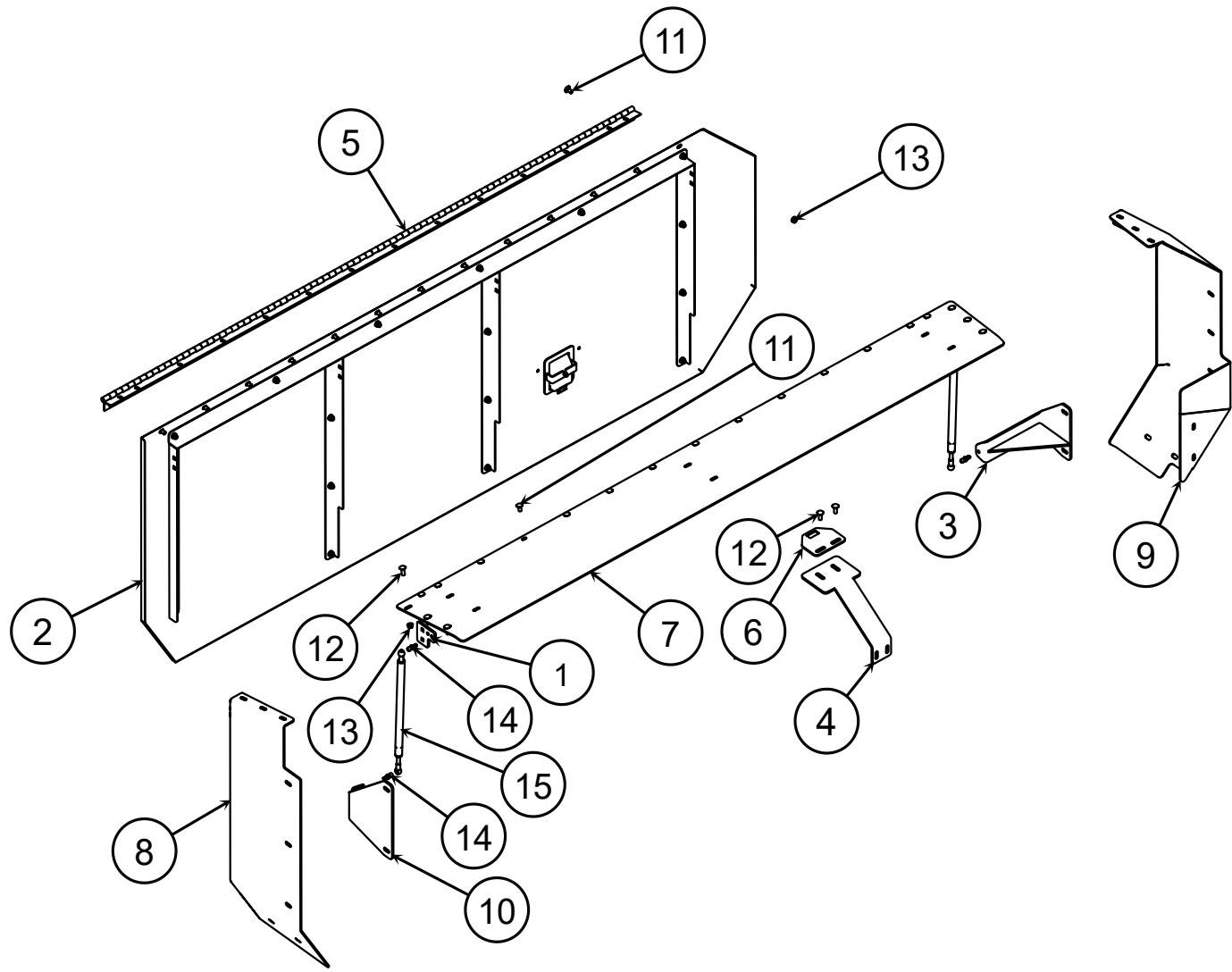
DRAWING



RH DOOR ASSY
700-2-1629
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	500-2-1844	LATCH HOLD WELDMENT-SOUTHCO	1
2	700-2-1628	DOOR STIFFENER WELD RH - 8R	1
3	700-3-3965	GRAB HANDLE - SOUTHCO #68-63-3	1
4	700-3-3966	PADDLE LATCH - SOUTHCO #64-10-301-90	1
5	700-3-4178	DOOR SHEET RH - 8R	1
6	900-01694	BOLT CRG 3/8-16 X .75" GR5, ZP	18
7	900-06139	3/8 NC FLANGED WHIZ NUT	18

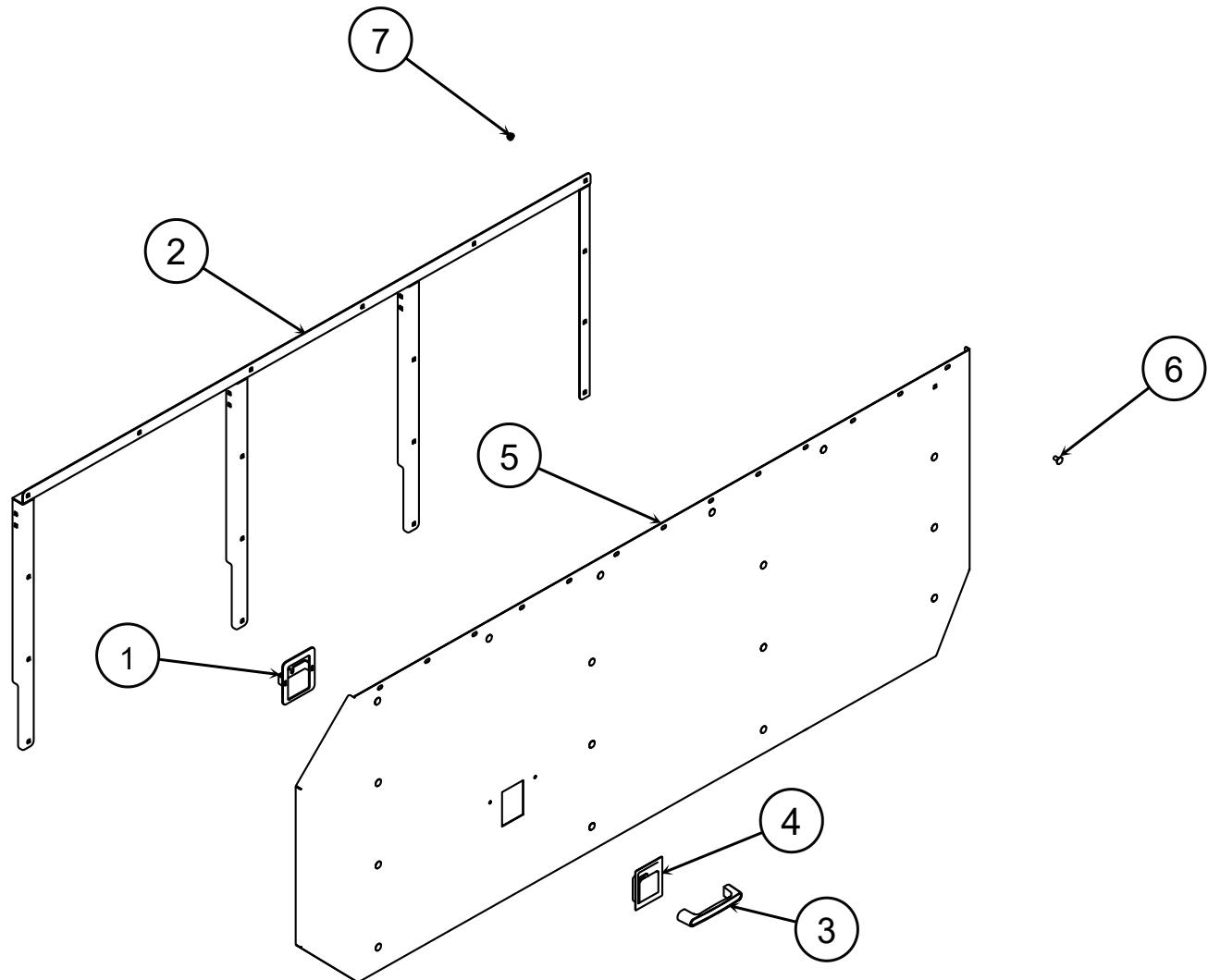
**LH BELT BOX ASSY
700-2-1630
DRAWING**



LH BELT BOX ASSY
700-2-1630
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	500-3-5086	PLATE- GAS SPRING MOUNT	2
2	700-2-1627	LH DOOR ASSY - 8R	1
3	700-2-1633	FRONT LH DOOR SHOCK MOUNT WELD - 8R	1
4	700-2-1743	DOOR LATCH MOUNT WELDMENT	1
5	700-3-4177	DOOR HINGE - 8R	1
6	700-3-4180	DOOR LATCH PLATE 2 - 8R	1
7	700-3-4187	DOOR TOP SHEET LH - 8R	1
8	700-3-4188	DOOR BACK SHEET LH - 8R	1
9	700-3-4189	DOOR FRONT SHEET LH - 8R	1
10	700-3-4194	REAR LH DOOR SHOCK MOUNT - 8R	1
11	900-01694	BOLT, CRG 3/8-16 X .75" GR5, ZP	28
12	900-01695	BOLT, CRG 3/8-16 X 1" GR5, ZP	8
13	900-06139	3/8 NC FLANGED WHIZ NUT	33
14	905-06026	BALL STUD, GAS SPRING 10" STROKE	4
15	905-06029	GAS SPRING 10" STROKE, 150 LBS	2

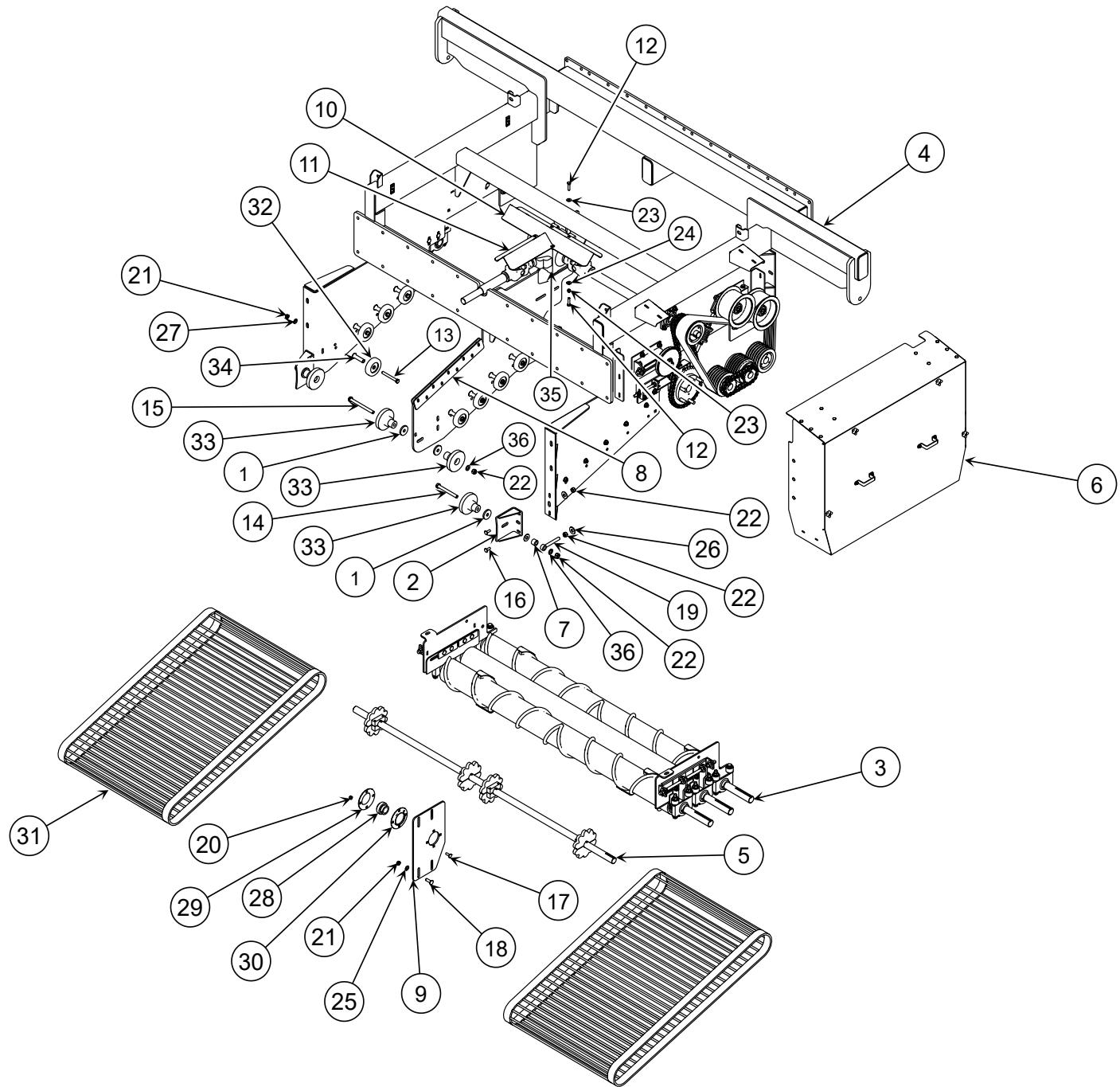
LH DOOR ASSY
700-2-1627
DRAWING



LH DOOR ASSY
700-2-1627
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	500-2-1844	LATCH HOLD WELDMENT-SOUTHCO	1
2	700-2-1631	DOOR STIFFENER WELD LH - 8R	1
3	700-3-3965	GRAB HANDLE - SOUTHCO #68-63-3	1
4	700-3-3966	PADDLE LATCH - SOUTHCO #64-10-301-90	1
5	700-3-4190	DOOR SHEET LH - 8R	1
6	900-01694	BOLT CRG 3/8-16 X .75" GR5, ZP	18
7	900-06139	3/8 NC FLANGED WHIZ NUT	18

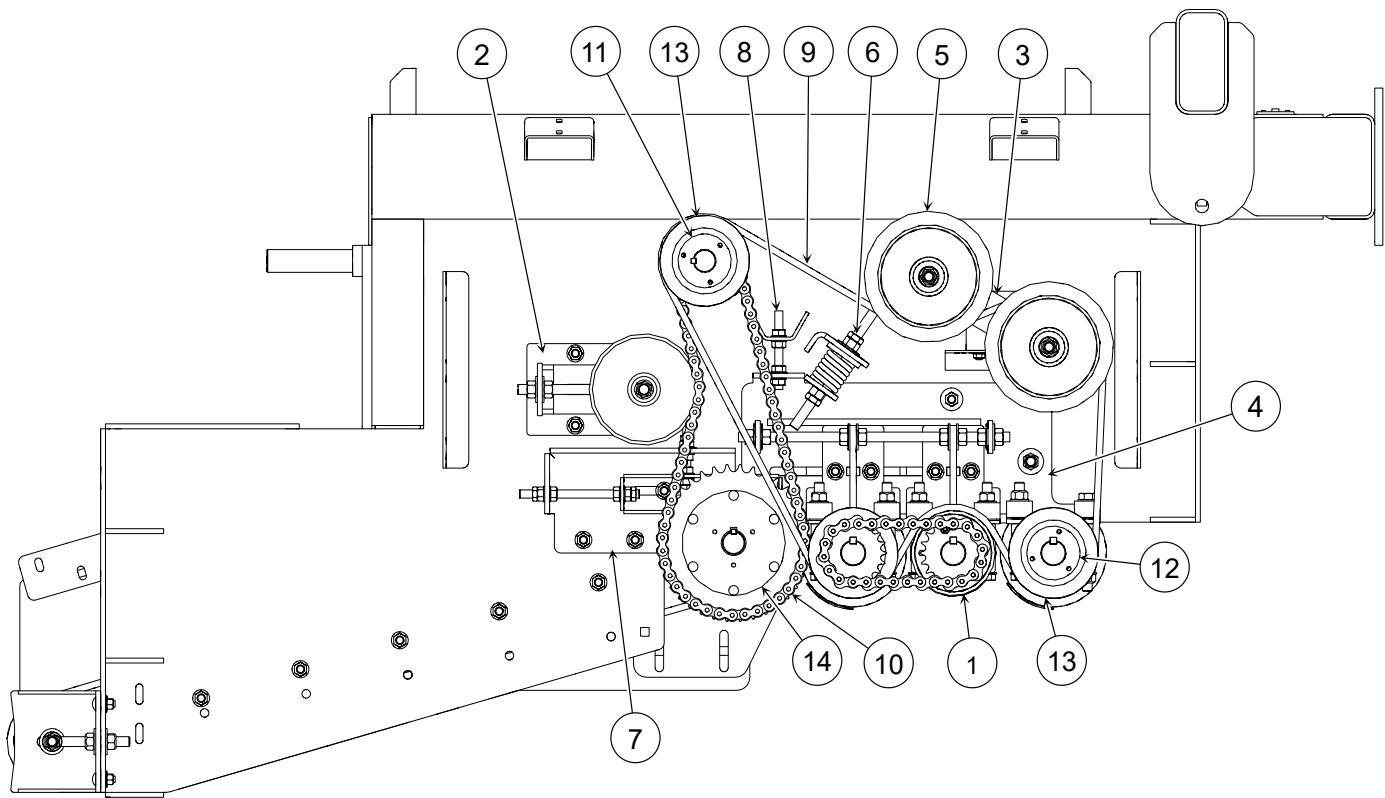
REAR BODY FRAME ASSY
700-2-1707
(MAIN DRAWING)



REAR BODY FRAME ASSY
700-2-1707
(MAIN BILL OF MATERIALS)

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	500-3-1463	WASHER	4
2	700-2-1598	OUTSIDE ROLLER MOUNT WELDMENT- 8R	2
3	700-2-1703	GRABROLL ASSY-REAR FRAME-12R RIGID	1
4	700-2-1706	REAR BODY FRAME WELD-12R RIGID	1
5	700-2-1770	DRIVE SHAFT ASSY-REAR CHAIN BED-12R RIGID	1
6	700-2-1794	DOOR ASSY-REAR FRAME-12R RIGID	1
7	700-3-4010	SPACER- LOWER ELEVATOR ROLLER	2
8	700-3-4491	CENTER BOLT PLATE-REAR FRAME-12R RIGID	2
9	700-3-4496	CENTER BEARING PLATE-REAR FRAME-12R RIGID	1
10	700-3-4574	GEARBOX U-JOINT COVER A-12R	1
11	700-3-4575	GEARBOX U-JOINT COVER B-12R	1
12	900-01225	1/2 NC X 1-1/2 HEX BOLT GR 5	8
13	900-01367	SCREW, CAP 5/8 X 5-1/2 UNC	10
14	900-01431	HEX BOLT - 3/4 NC X 7 GR5	2
15	900-01437	BOLT, HH, 3/4-10 X 8-1/2, GR5 ZP	1
16	900-01751	BOLT, CRG, 1/2-13 X 1-1/2, GR5 ZP	4
17	900-01753	BOLT, CRG, 1/2 NC X 2", GR5 ZP	4
18	900-01786	CARRIAGE BOLT 5/8 NC X 2 NC	6
19	900-03463	BOLT, EYE, 3/4" NC X 6"	2
20	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	12
21	900-06508	NUT HEX 5/8 UNC TOP LOCK	21
22	900-06510	3/4 NUT, HEX TOP LOCK	11
23	900-11013	WASHER, LOCK 1/2	8
24	900-11035	1/2 FLAT WASHER	16
25	900-11037	WASHER, FLAT, 5/8"	6
26	900-11038	3/4" FLAT WASHER, USS	10
27	900-11088	WASHER, FLAT, SAE, 5/8, ZP	15
28	901-01186	1-3/4 INSERT BRG NA-209-28	1
29	901-01312	FLANGE 4 HOLE 90mm PF210H	1
30	901-01313	FLANGE 4 HOLE 90mm PF210H LUBE	1
31	903-03257	BELTED CHAIN 56MM-REAR FRAME-12R RIGID	2
32	903-08433	5" RUBBER ROLLER	20
33	903-08435	NOSE ROLLER, 6"	4
34	903-08483	SPACER- 5/8" ID X 3.625"	20
35	903-15520	G-BOX - SUPERIOR	1
36	905-09066	WASHER, SAE 3/4"	9

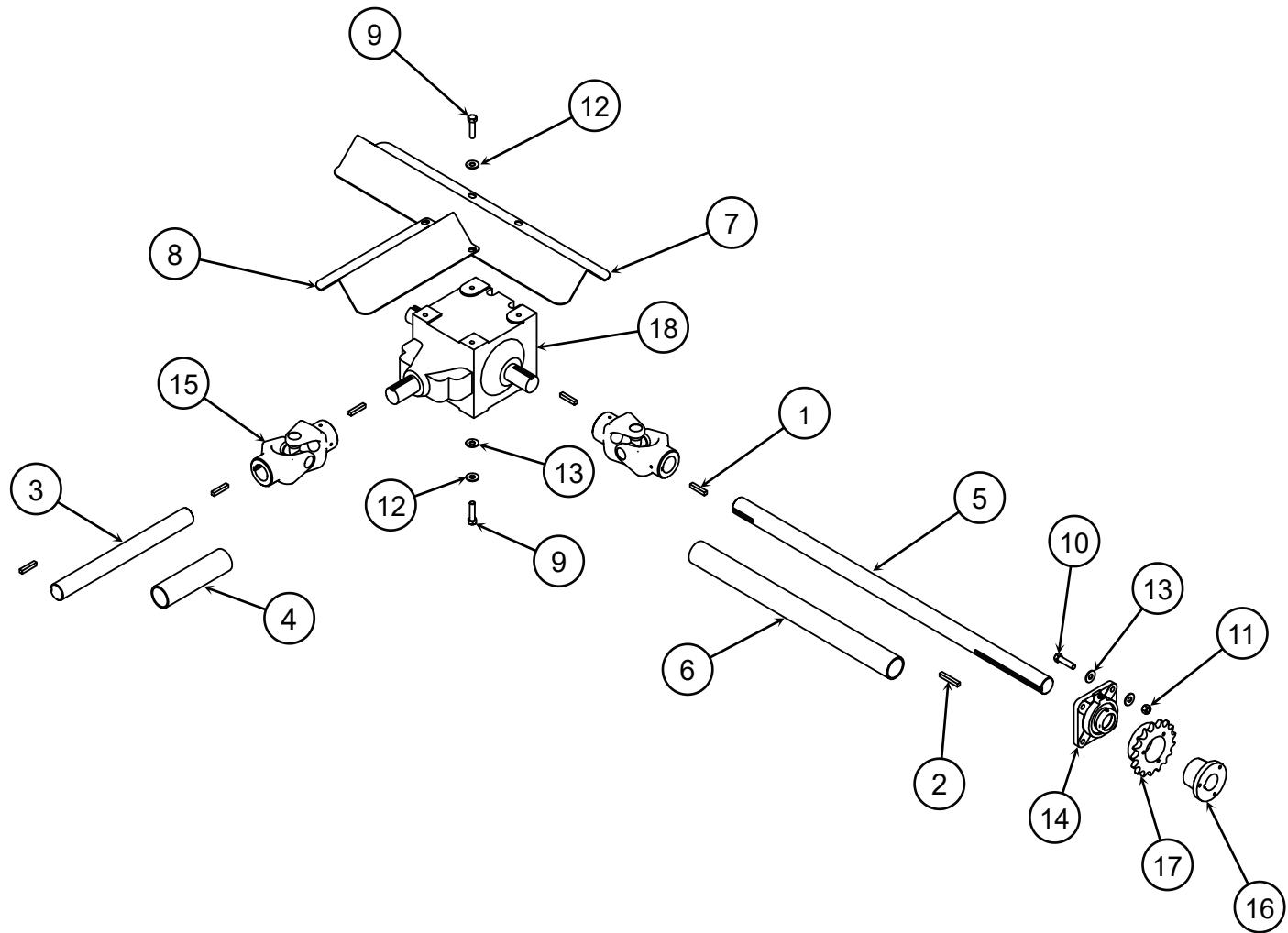
REAR BODY FRAME ASSY
700-2-1707
(DRIVES LH DRAWING)



REAR BODY FRAME ASSY
700-2-1707
(DRIVES LH BILL OF MATERIALS)

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1492	PULLEY ASSEMBLY- REVERSE GRABROLL	1
2	700-2-1577	CHAIN TENSIONER MOUNT ASSY- 8R22	1
3	700-2-1595	PIVOT ARM AND BASE ASSY- PULLEY TENSIONER	1
4	700-2-1703	GRABROLL ASSY-REAR FRAME-12R RIGID	1
5	700-2-1729	ASSY, 8 IN 6 RIB IDLER PULLEY - 5" W	2
6	700-2-1747	COMPRESSION SPRING ASSEMBLY	1
7	700-2-1787	CHAIN BED SIDE ASSY LH-REAR FRAME-12R RIGID	1
8	700-3-4090	THREADED ROD- 5/8" X 6.00" LONG	2
9	903-01464	BELT, 6B113	1
10	903-03234	CHAIN-REAR FRAME-12R RIGID-35 LINKS	1
11	903-08419	TYPE Q1 HUB 1-3/4 BORE	2
12	903-08452	TYPE Q1 HUB 1-15/16 BORE	2
13	903-08498	PULLEY- 6B68 Q1	3
14	903-11159	SPROCKET- TORQUE LIMITER- 36 TOOTH-1-3/4" BORE	1

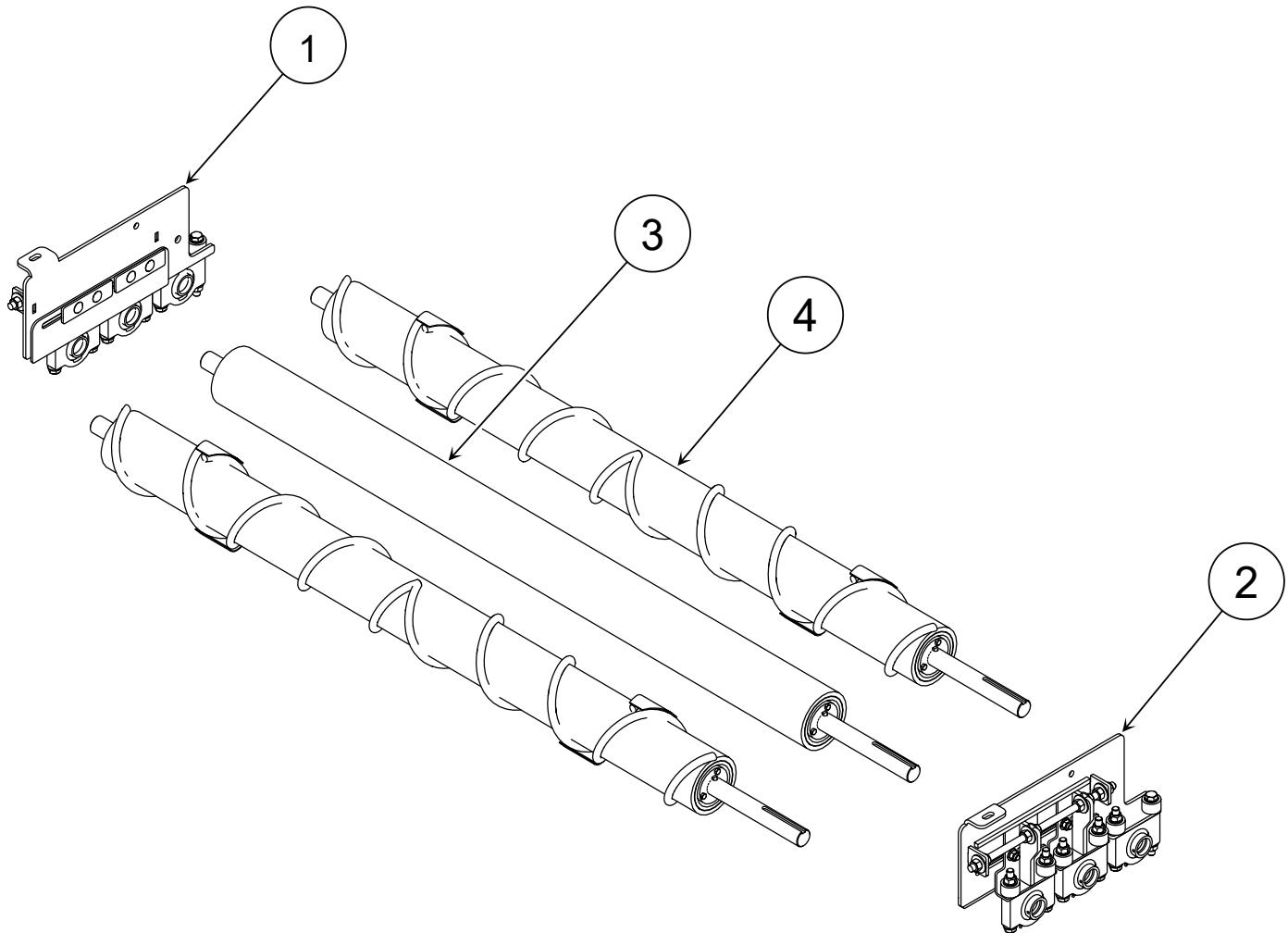
REAR BODY FRAME ASSY
700-2-1707
(DRIVELINE DRAWING)



REAR BODY FRAME ASSY
700-2-1707
(DRIVELINE BILL OF MATERIALS)

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	100-3-3333	KEY - 3/8 X 3/8 X 2	4
2	500-3-2167	3/8" X 2.5" KEY	1
3	700-3-4461	FRONT DRIVE SHAFT-REAR FRAME- 12R RIGID	1
4	700-3-4462	FRONT SHAFT SHIELD-REAR FRAME-12R RIGID	1
5	700-3-4465	CROSS DRIVE SHAFT-REAR FRAME-12R RIGID	1
6	700-3-4466	CROSS SHAFT SHIELD-REAR FRAME-12R RIGID	1
7	700-3-4574	GEARBOX U-JOINT COVER A-12R	1
8	700-3-4575	GEARBOX U-JOINT COVER B-12R	1
9	900-01225	1/2 NC X 1-1/2 HEX BOLT GR 5	8
10	900-01229	1/2-13 X 2 HEX BOLT GRD 5	4
11	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	4
12	900-11013	FLANGE 4 HOLE 90mm PF210H LUBE	8
13	900-11035	1/2 FLAT WASHER	12
14	901-01466	BEARING, 1-3/4" DODGE F4B-SXR-112	1
15	903-05034	U-JOINT - 1.75 KEYED 44R	2
16	903-08419	TYPE Q1 HUB 1-3/4 BORE	1
17	903-11109	SPROCKET #H80Q17 (Q1 HUB)	1
18	903-15520	G-BOX - SUPERIOR	1

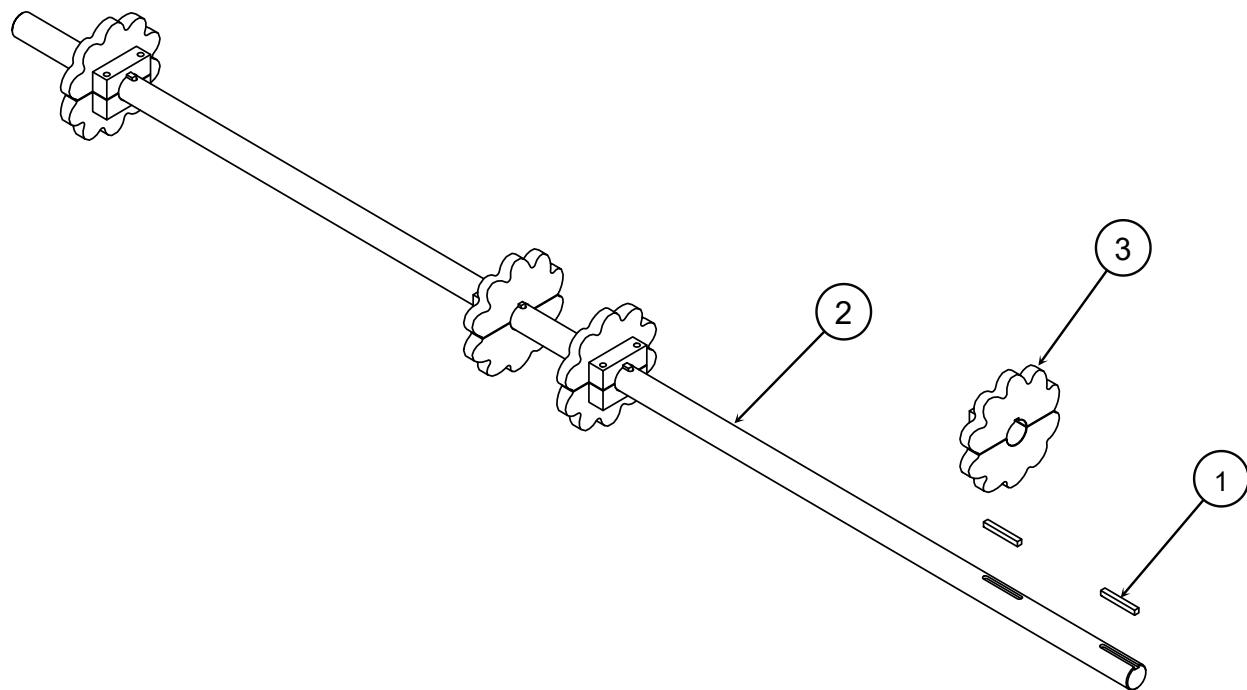
REAR GRABROLL ASSY
700-2-1703
(DRAWING)



**REAR GRABROLL ASSY
700-2-1703
(BILL OF MATERIALS)**

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1686	GRAB ROLL SIDE PLATE ASSY RH-12R RIGID	1
2	700-2-1688	GRAB ROLL SIDE PLATE ASSY LH-12R RIGID	1
3	700-2-1766	SMOOTH PLASTIC GRABROLL-REAR FRAME-12R RIGID	1
4	700-2-1767	SPIRAL PLASTIC GRABROLL-REAR FRAME-12R RIGID	2

REAR DRIVE SHAFT ASSY
700-2-1770
(DRAWING)



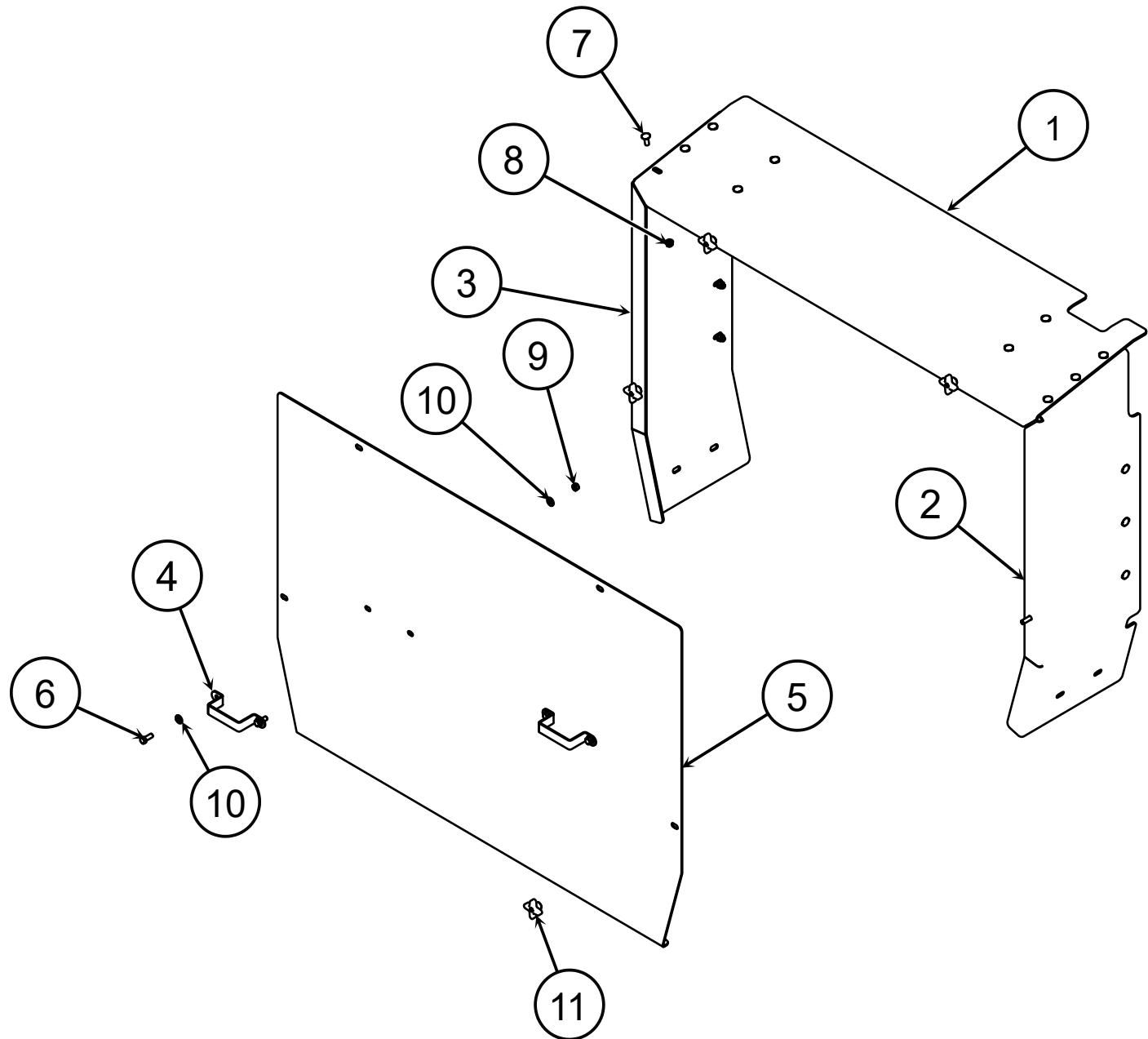
REAR DRIVE SHAFT ASSY
700-2-1770
(BILL OF MATERIALS)

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	120-3-0192	KEY 3/8 X 3/8 X 3	5
2	700-3-4467	DRIVE SHAFT-REAR CHAIN BED-12R RIGID	1
3	903-11173	SPROCKET, 56MM,10T,1-3/4B,3/8K, 1/2"RD	4

REAR FRAME DOOR ASSY

700-2-1794

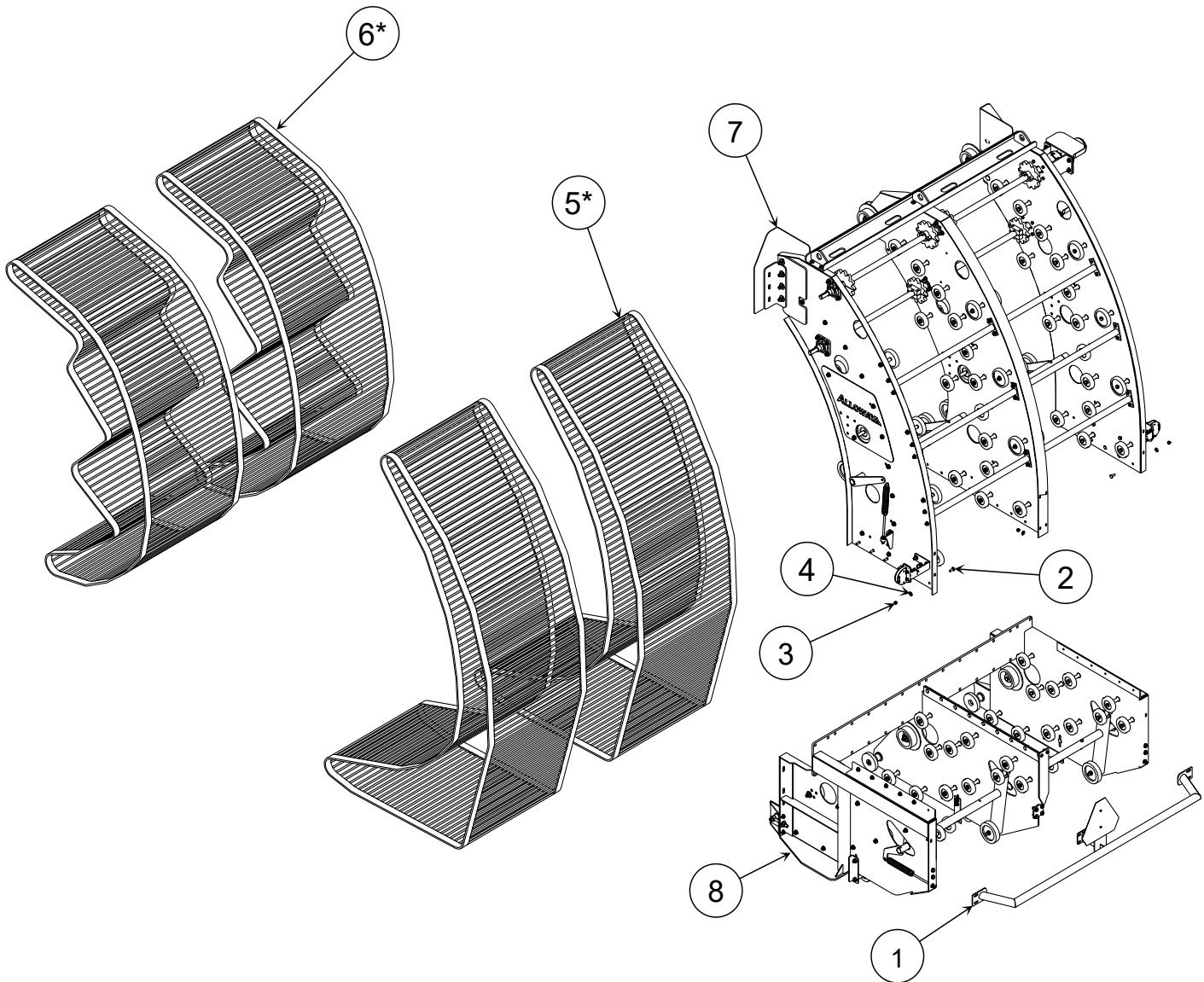
(DRAWING)



REAR FRAME DOOR ASSY
700-2-1794
(BILL OF MATERIALS)

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1791	TOP DOOR WELD-REAR FRAME-12R RIGID	1
2	700-2-1792	REAR DOOR WELD-REAR FRAME-12R RIGID	1
3	700-2-1793	FRONT DOOR WELD-REAR FRAME-12R RIGID	1
4	700-3-2515	SQ HANDLE 4" ID W/ MOUNT PLATE	2
5	700-3-4501	DOOR-REAR FRAME-12R RIGID	1
6	900-01109	BOLT HEX 3/8UNC X 1 GR 5	4
7	900-01695	CARRIAGE BOLT 3/8 NC X 1 ZP	16
8	900-06139	3/8 NC FLANGED WHIZ NUT	16
9	900-06500	NUT HEX 3/8 TOP LOCK	4
10	900-11033	FLAT WASHER 3/8 ZP	8
11	905-98148	IRON KNOB-3/8"-16	4

ELEVATOR ASSY
700-2-0886
(MAIN COMPONENTS DRAWING)

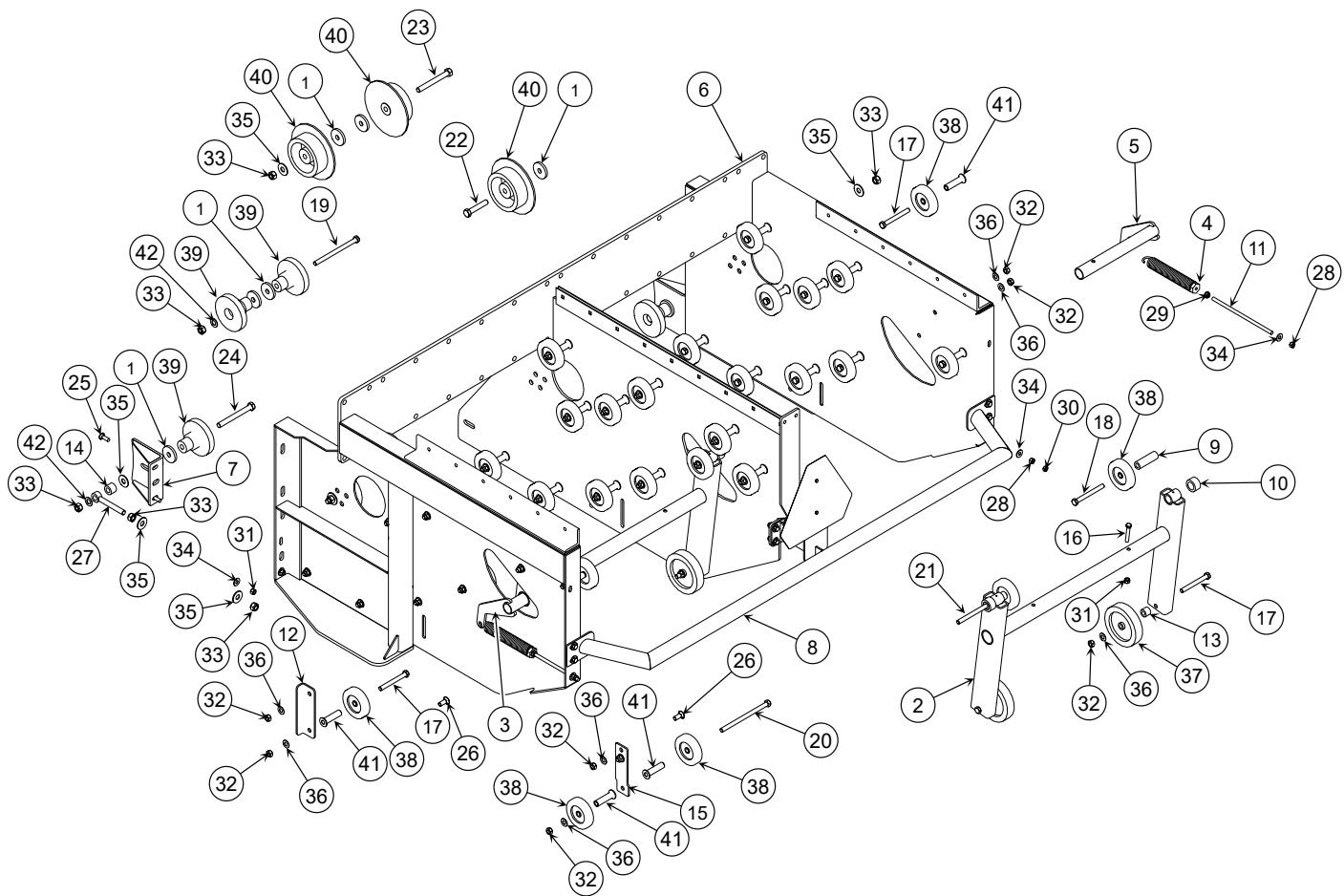


*OPTIONS AVAILABLE

ELEVATOR ASSY
700-2-0886
(MAIN COMPONENTS BILL OF MATERIALS)

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1694	ELEVATOR GUARD ASSY- 12R	1
2	900-01751	BOLT, CRG, 1/2-13 X 1-1/2, GR5 ZP	12
3	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	12
4	900-11035	1/2 FLAT WASHER	12
5-1	903-03169	BELTED CHAIN, OUTSIDE ELEVATOR - 192 LINKS AT 50MM	2
5-2	903-03263	BELTED CHAIN, OUTSIDE ELEVATOR - 172 LINKS AT 56MM	2
6-1	903-03170	BELTED CHAIN, INSIDE ELEVATOR - 165 LINKS AT 50MM	2
6-2	903-03264	BELTED CHAIN, INSIDE ELEVATOR - 148 LINKS AT 56MM	2
7	-	UPPER ELEVATOR	1
8	-	LOWER ELEVATOR	1

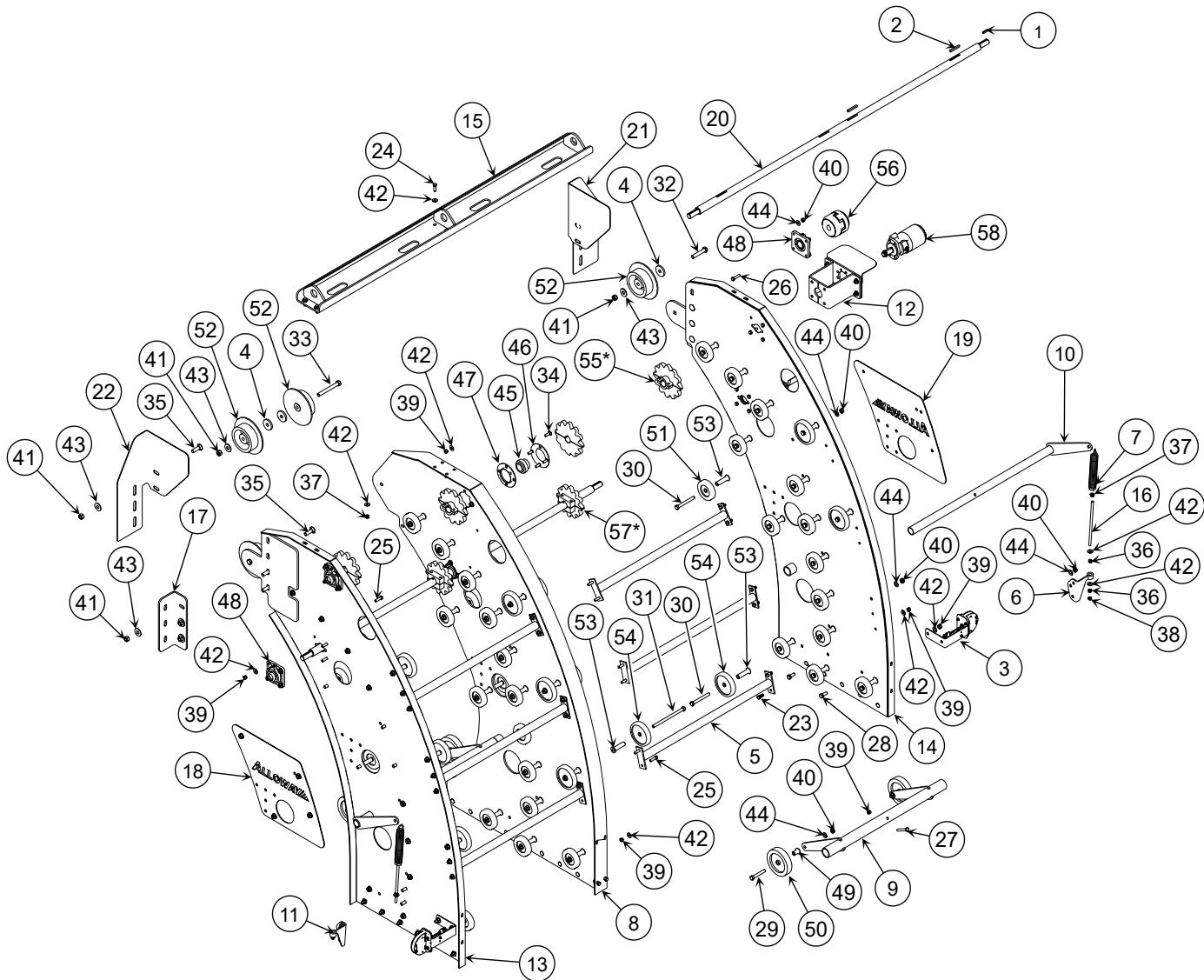
ELEVATOR ASSY
700-2-0886
(LOWER ELEVATOR DRAWING)



ELEVATOR ASSY
700-2-0886
(LOWER ELEVATOR BILL OF MATERIALS)

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	500-3-1463	WASHER, SAE 2-3/4"	12
2	700-2-0028	OUTSIDE ARM WELD	2
3	700-2-0381	TENSION ARM WELD (OUTSIDE)	1
4	700-2-0550	SPRING TENSIONER ASSEMBLY	4
5	700-2-0844	TENSION ARM WELD (RH OUTSIDE)	1
6	700-2-0909	REAR ELEVATOR MOUNT WELD - 12 ROW HARVESTER	1
7	700-2-1598	OUTSIDE ROLLER MOUNT WELDMENT- 8R	2
8	700-2-1694	ELEVATOR GUARD ASSY- 12R	1
9	700-3-0417	SLEEVE - OUTSIDE ARM	4
10	700-3-0547	SPACER - ELEVATOR H-WELD	4
11	700-3-1255	1/2-13 TENSION ROD	4
12	700-3-1709	STANDOFF BRACKET	4
13	700-3-1805	SPACER TUBE - ROLLER	4
14	700-3-4010	SPACER- LOWER ELEVATOR ROLLER	2
15	700-3-4603	BOTTOM CENTER STANDOFF BRACKET-12R	1
16	900-01237	BOLT HEX 1/2-13 X 3	2
17	900-01367	SCREW, CAP 5/8 X 5-1/2 UNC	60
18	900-01369	SCREW, CAP 5/8 X 6 UNC ZP	2
19	900-01381	SCREW, CAP 5/8 X 9 UNC	1
20	900-01385	BOLT, HH, 5/8 NC x 10, GR5, ZP	28
21	900-01389	BOLT, HH, 5/8 NC x 11, GR5, ZP	1
22	900-01419	3/4-10 X 4 HEX BOLT	4
23	900-01429	HEX BOLT - 3/4NC X 6-1/2 GR5 ZP	2
24	900-01431	HEX BOLT - 3/4 NC X 7 GR5	2
25	900-01751	BOLT, CRG, 1/2-13 X 1-1/2, GR5 ZP	33
26	900-01784	CARRIAGE BOLT 5/8 NC X 1-1/2	4
27	900-03463	BOLT, EYE, 3/4" NC X 6"	2
28	900-06009	NUT HEX 1/2 UNC	8
29	900-06143	1/2 NC SPIRALOCK NUT ZP GR5	4
30	900-06276	NUT, JAM, HEX HEAD, 1/2" NC, ZP	4
31	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	81
32	900-06508	NUT HEX 5/8 UNC TOP LOCK	105
33	900-06510	3/4 NUT, HEX TOP LOCK	21
34	900-11035	1/2 FLAT WASHER	93
35	900-11038	3/4" FLAT WASHER, USS	20
36	900-11088	WASHER, FLAT, SAE, 5/8, ZP	105
37	903-08425	7" CAST RUBBER WHEEL	8
38	903-08433	5" RUBBER ROLLER	104
39	903-08435	NOSE ROLLER, 6"	4
40	903-08437	6 INCH NOSE ROLLER	8
41	903-08483	SPACER- 5/8" ID X 3.625"	112
42	905-09066	WASHER, SAE 3/4"	3

**ELEVATOR ASSY
700-2-0886
(UPPER ELEVATOR DRAWING)**

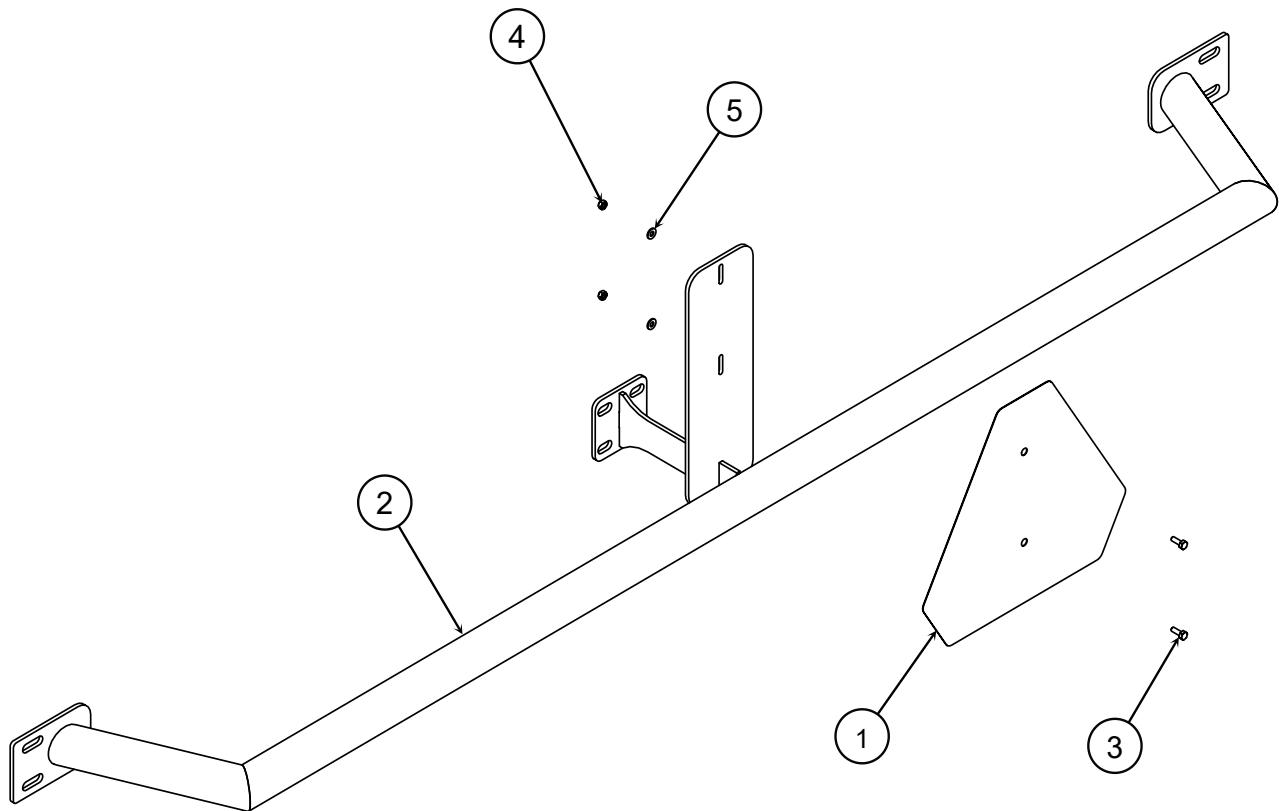


***OPTIONS AVAILABLE**

ELEVATOR ASSY
700-2-0886
(UPPER ELEVATOR BILL OF MATERIALS)

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	100-3-1317	KEY, 5/16" X 5/16" X 1-1/2"	2
2	120-3-0192	KEY 3/8 X 3/8 X 3	8
3	500-2-1777	LIGHT MOUNT ASSY-GROTE HALF MOON RED	2
4	500-3-1463	WASHER .78" X 2.75"	12
5	700-2-0023	SPREADER BAR WELD	6
6	700-2-0030	SPRING TENSIONER BRACKET (RH)	1
7	700-2-0550	SPRING TENSIONER ASSEMBLY	4
8	700-2-0948	CENTER SHEET WELD - REAR ELEVATOR 12 ROW	1
9	700-2-0949	TENSION ARM WELD OUTSIDE 12R	2
10	700-2-0950	TENSION ARM WELD INSIDE 12R	2
11	700-2-0972	SPRING TENSIONER BRACKET (LH)	1
12	700-2-1641	ELEVATOR MOTOR MOUNT ASSY	2
13	700-2-1726	SIDE SHEET WELDMNT LH- ELEVATOR	1
14	700-2-1727	SIDE SHEET WELDMNT RH- ELEVATOR	1
15	700-2-1833	TOP CHANNEL WELDMNT-ELEVATOR-12R	1
16	700-3-1255	1/2-13 TENSION ROD	4
17	700-3-2990	ELEVATOR ANGLE MOUNT	2
18	700-3-4298	ELEVATOR STIFFNER PLATE LH	1
19	700-3-4299	ELEVATOR STIFFNER PLATE RH	1
20	700-3-4354	DRIVE SHAFT -REAR ELEVATOR (12 ROW)	2
21	700-3-4601	TOP RH SIDE DEFLECTOR-ELEVATOR-12R	1
22	700-3-4602	TOP LH SIDE DEFLECTOR-ELEVATOR-12R	1
23	900-01223	BOLT, HEX HEAD, 1/2" X 1-1/4", GR5, ZP	12
24	900-01225	1/2 NC X 1-1/2 HEX BOLT GR 5	10
25	900-01227	BOLT HEX 1/2 X 1 3/4 GR 5 ZP	14
26	900-01229	1/2-13 X 2 HEX BOLT GRD 5	8
27	900-01241	BOLT, HH, 1/2-13 x 3-1/2, GR5 ZP	2
28	900-01341	HEX BOLT, 5/8 X 1-1/2 NC GR5 ZP	6
29	900-01361	HEX BOLT 5/8 - 11 X 4 GRADE 5	4
30	900-01367	SCREW, CAP 5/8 X 5-1/2 UNC	60
31	900-01385	BOLT, HH, 5/8 NC x 10, GR5, ZP	28
32	900-01419	3/4-10 X 4 HEX BOLT	4
33	900-01429	HEX BOLT - 3/4NC X 6-1/2 GR5 ZP	2
34	900-01751	HEX BOLT - 3/4 NC X 7 GR5	2
35	900-01813	CARRIAGE BOLT 3/4NC X 2-1/2"	8
36	900-06009	NUT HEX 1/2 UNC	8
37	900-06143	1/2 NC SPIRALOCK NUT ZP GR5	4
38	900-06276	NUT, JAM, HEX HEAD, 1/2" NC, ZP	4
39	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	81
40	900-06508	NUT HEX 5/8 UNC TOP LOCK	105
41	900-06510	3/4 NUT, HEX TOP LOCK	21
42	900-11035	1/2 FLAT WASHER	93
43	900-11038	3/4" FLAT WASHER, USS	20
44	900-11088	WASHER, FLAT, SAE, 5/8, ZP	105
45	901-01186	1-3/4 INSERT BRG NA-209-28	2
46	901-01312	FLANGE 4 HOLE 90mm PF210H	2
47	901-01313	FLANGE 4 HOLE 90mm PF210H LUBE	2
48	901-01466	BEARING, 1-3/4" DODGE F4B-SXR-112	4
49	903-08424	SPACER ROLLER STANDOFF	4
50	903-08425	7" CAST RUBBER WHEEL	8
51	903-08433	5" RUBBER ROLLER	104
52	903-08437	6 INCH NOSE ROLLER	2
53	903-08483	SPACER- 5/8" ID X 3.625"	112
54	903-08490	6" RUBBER ROLLER- AG PART #935R	12
55-1	903-11067	SPROCKET, 50MM,12T,1-3/4B,3/8K,1/2"RD	4
55-2	903-11173	SPROCKET, 56MM,10T,1-3/4B,3/8K, 1/2"RD	4
56	903-11148	COUPLING, LOVEJOY LH500 1-1/4" X 1-1/4"	2
57-1	903-11170	SPROCKET - 50MM,12T,1-3/4B,3/8K,1/2"RD, REV	4
57-2	903-11175	SPROCKET, 56MM,10T,1-3/4B,3/8K, 1/2"RD, REV	4
58	904-05283	MOTOR, HYDRAULIC TG 0530 SERIES	2

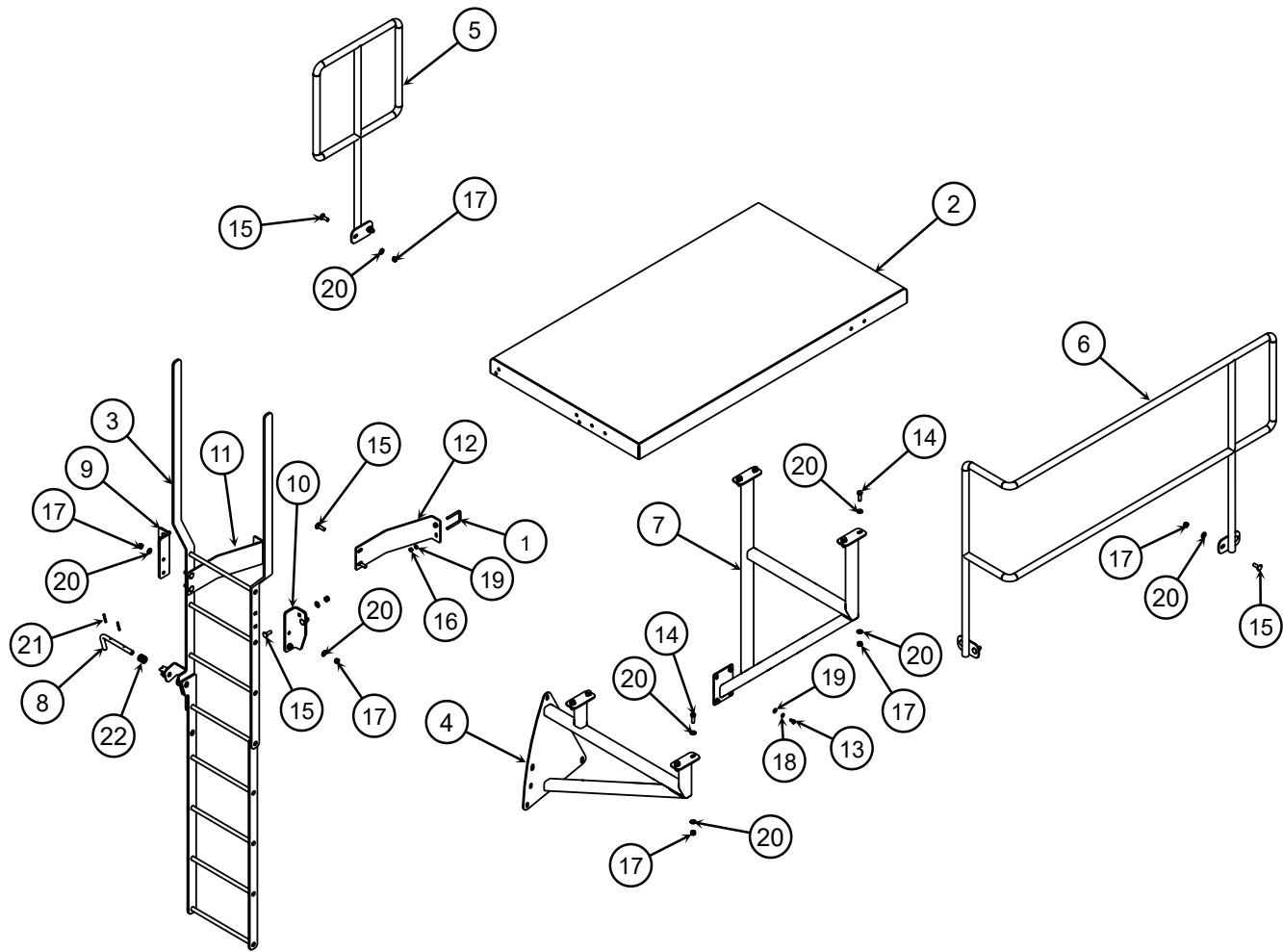
ELEVATOR GUARD ASSY
700-2-1694
DRAWING



**ELEVATOR GUARD ASSY
700-2-1694
BILL OF MATERIALS**

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	500-3-1696	SMV SIGN	1
2	700-2-1693	ELEVATOR GUARD WELDMENT- 12R	1
3	900-01005	BOLT, HEX 1/4-20 X .75" GR5, ZP	2
4	900-06001	NUT, HEX 1/4-20 GR5, ZP	2
5	900-11031	WASHER, FLAT 1/4" ZP	2

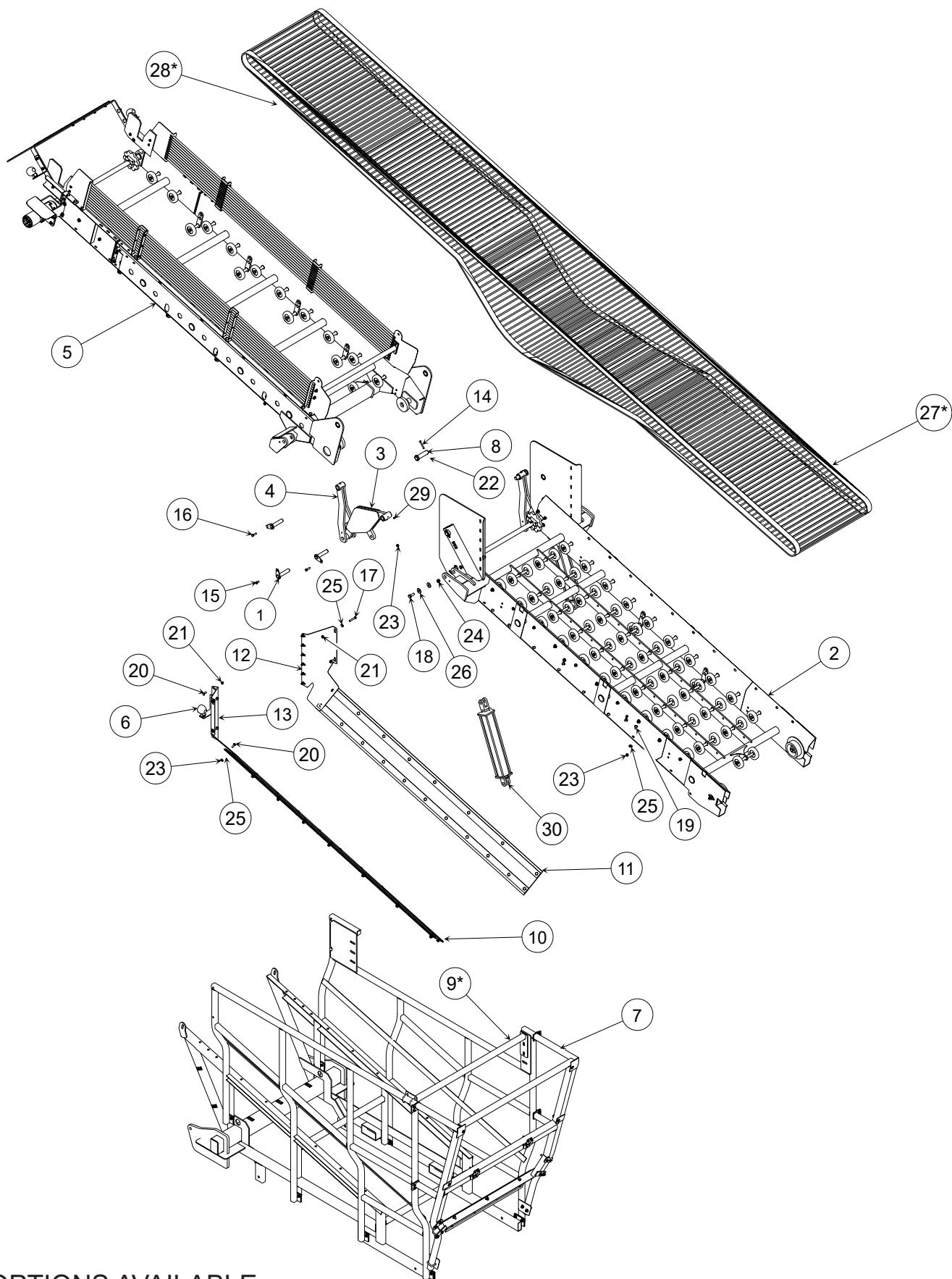
ELEVATOR PLATFORM ASSY
700-2-1840
DRAWING



ELEVATOR PLATFORM ASSY
700-2-1840
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	200-3-0283	U-BOLT, 3/8 NC X 2 X 3.25 LG	2
2	700-2-1646	ELEVATOR PLATFORM WELD - 8R/12R	1
3	700-2-1647	ELEVATOR PLATFORM LADDER WELD	1
4	700-2-1651	ELEVATOR PLATFORM SUPPORT WELD - 8R/12R	1
5	700-2-1653	HARVESTER SHORT RAILING WELD- 8R/12R	1
6	700-2-1654	HARVESTER LONG RAILING WELD-8R/12r	1
7	700-2-1841	ELEVATOR PLATFORM FRONT SUPPORT WELD -12R	1
8	700-3-4249	PIN-HARVESTER PLATFORM	1
9	700-3-4260	ELEVATOR PLATFORM LADDER MOUNT LH - 8R/12R	1
10	700-3-4261	ELEVATOR PLATFORM LADDER MOUNT RH - 8R/ 12R	1
11	700-3-4284	LADDER SUPPORT LH- PLATFORM	1
12	700-3-4285	LADDER SUPPORT RH- PLATFORM	1
13	900-01105	3/8-16 X .75" HEX BOLT	4
14	900-01225	BOLT, HEX 1/2-13 X 1.5" GR5, ZP	8
15	900-01751	BOLT, CRG 1/2-13 X 1.5" GR5, ZP	14
16	900-06500	NUT HEX 3/8 TOP LOCK	4
17	900-06504	NUT HEX 1/2 UNC	22
18	900-11011	WASHER LOCK 3/8"	4
19	900-11033	FLAT WASHER 3/8 ZP	8
20	900-11035	WASHER, FLAT 1/2" ZP	30
21	900-29182	1/4 X 2 ROLL PIN	2
22	905-14022	SPRING 1.25 OD X .105 WIRE X 4 LONG X 13.3 COILS	1

TANK AND BOOM ASSY
700-2-1335
DRAWING

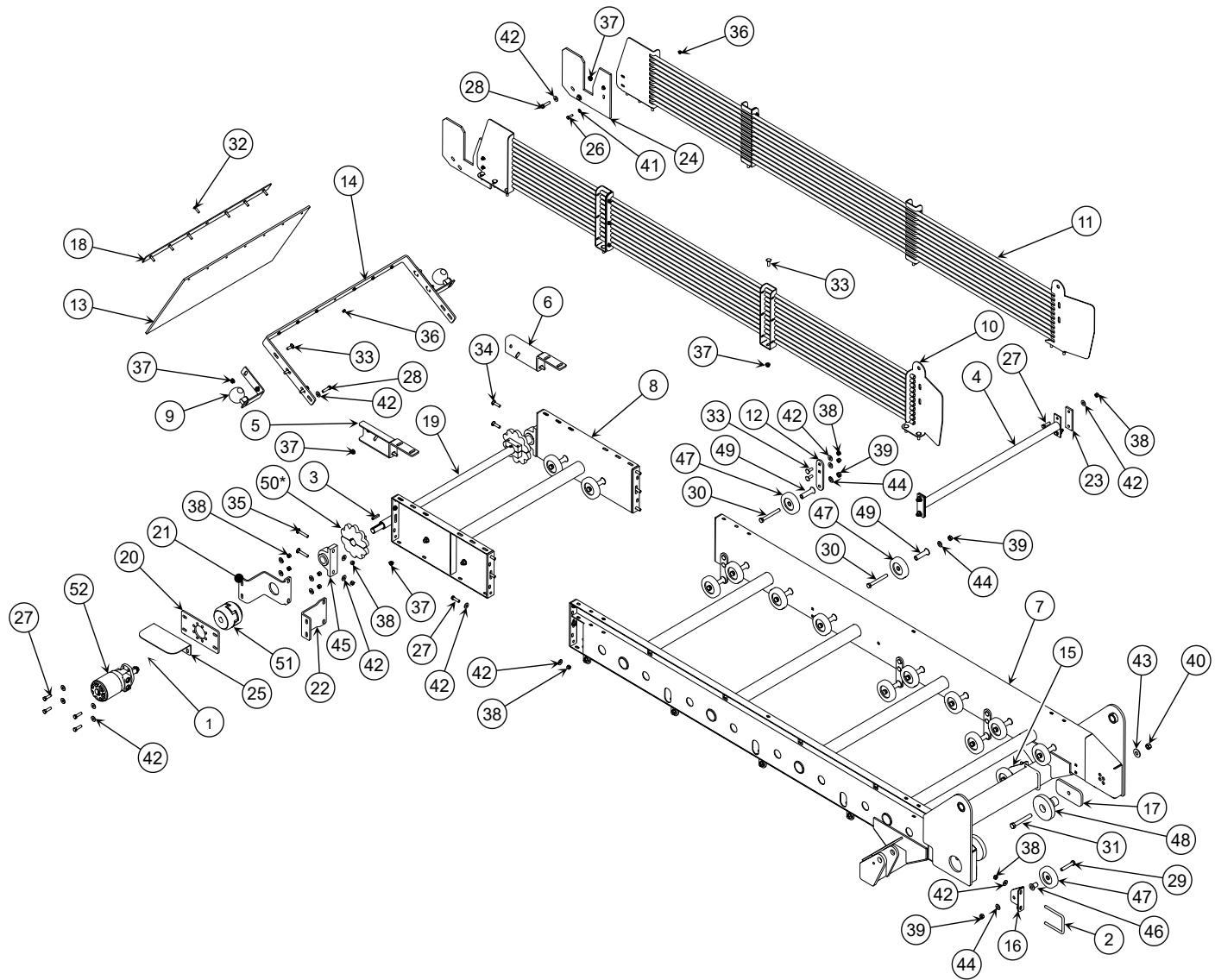


*OPTIONS AVAILABLE

TANK AND BOOM ASSY
700-2-1335
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	500-2-0684	1-1/4" PIN WELDMENT	6
2	700-2-0829	TANK BOTTOM ASSY - 12 ROW	1
3	700-2-0967	PUSH ARM WELD	2
4	700-2-0968	PIVOT BAR WELD - BOOM	2
5	700-2-1064	OUTER BOOM ASSY - 12 ROW	1
6	700-2-1161	LIGHT MOUNT TANK ASSY	1
7	700-2-1334	TANK HOPPER REMOVABLE - 12 ROW	1
8	700-2-1541	PIN WELDMENT- BOOM	2
9*	700-2-1695	REST TUBE ASSY- NO EXTENSION	1
10	700-2-1837	TANK UHMW ASSEMBLY- FRONT 12R	1
11	700-2-1838	TANK UHMW ASSEMBLY- BACK 12R	1
12	700-3-2594	CORNER GUSSET - HOPPER REAR	1
13	700-3-2595	CORNER GUSSET - HOPPER FRONT	1
14	900-01125	3/8NC X 3 HEX BOLT GR5 ZP	2
15	900-01221	BOLT HEX 1/2" X 1"	2
16	900-01227	BOLT HEX 1/2 X 1 3/4 GR 5 ZP	4
17	900-01237	BOLT HEX 1/2-13 X 3	4
18	900-01403	HEX BOLT - 3/4NC X 2 GR5 ZP	2
19	900-01750	CARRIAGE BOLT 1/2 NC x 1 1/4 GD 5 ZP	20
20	900-01751	BOLT, CRG, 1/2-13 X 1-1/2, GR5 ZP	12
21	900-06143	1/2 NC SPIRALOCK NUT ZP GR5	16
22	900-06500	NUT HEX 3/8 TOP LOCK	2
23	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	24
24	900-06510	3/4 NUT, HEX TOP LOCK	2
25	900-11035	1/2 FLAT WASHER	16
26	900-11038	3/4" FLAT WASHER	4
27-1	903-03182	BELTED CHAIN-TANK/BOOM, 50MM, 300 LINKS	1
27-2	903-03254	BELTED CHAIN-12R TANK/BOOM, 56MM, 268 LINKS	1
28-1	903-03237	BELTED CHAIN- TANK/BOOM, 50MM, 31 LINKS	1
28-2	903-03255	BELTED CHAIN- 12R TANK/BOOM, 56MM, 28 LINKS	1
29	905-15024	ZERK 1/4-28 UNF STRAIGHT	8
30	905-21417	HYD CYL - 4 BORE X 24 SROKE	2

BOOM ASSY
700-2-1064
DRAWING



*OPTIONS AVAILABLE

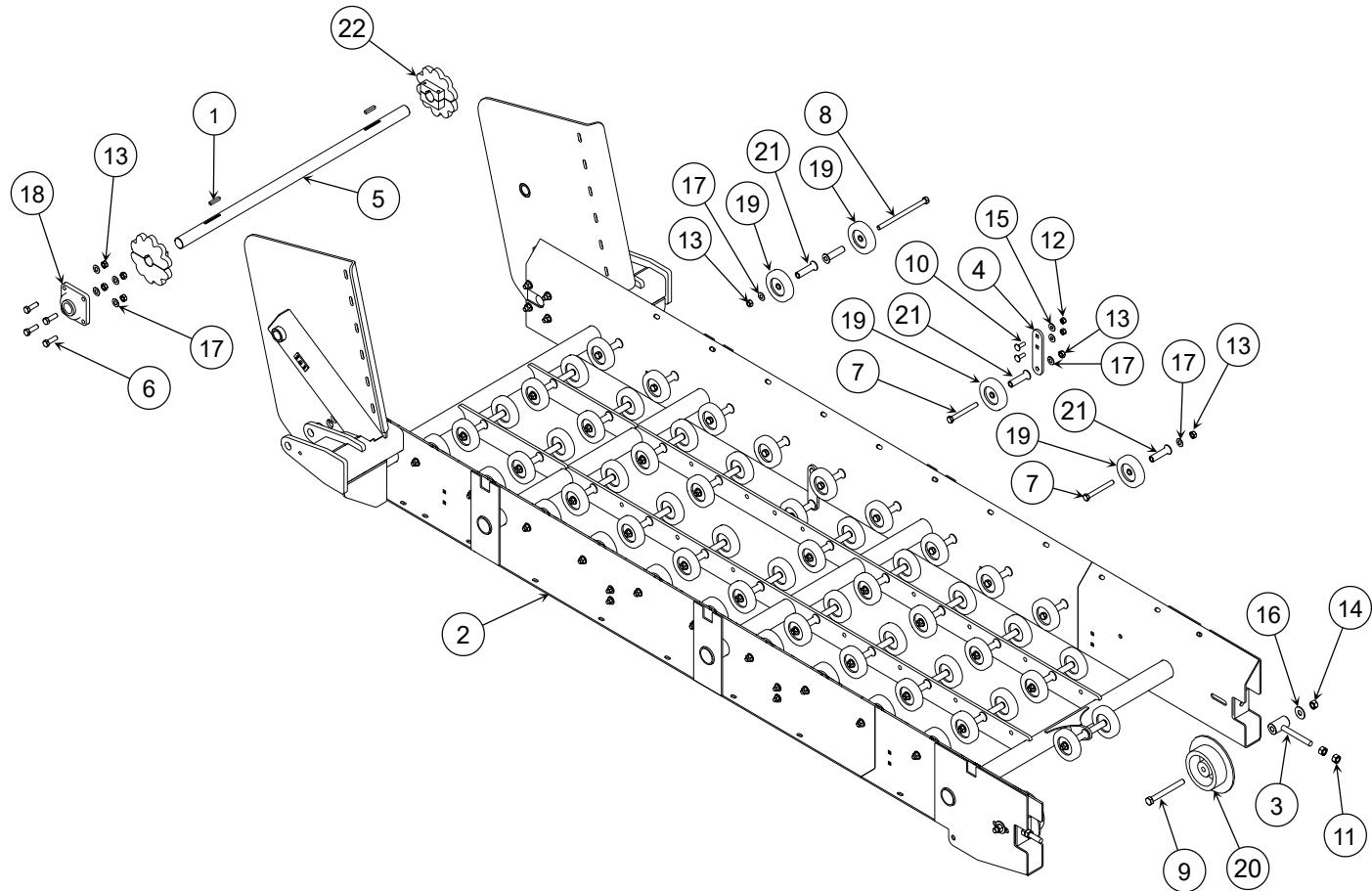
BOOM ASSY
700-2-1064
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	100-3-1317	KEY, 5/16" X 5/16" X 1-1/2"	1
2	100-3-2582	U-BOLT 1/2 X 4 X 5.5 LONG	2
3	100-3-3333	KEY - 3/8 X 3/8 X 2	2
4	700-2-0023	SPREADER BAR WELD	1
5	700-2-0992	BOOM STOP WELD - RH	1
6	700-2-0993	BOOM STOP WELD - LH	1
7	700-2-1065	BOOM EXTENSION - 12 ROW	1
8	700-2-1069	OUTER BOOM WELD - 12 ROW	1
9	700-2-1161	LIGHT MOUNT TANK ASSY	2
10	700-2-1675	SIDE RAIL ASSY LH- BOOM 12R22	1
11	700-2-1676	SIDE RAIL ASSY RH- BOOM 12R22	1
12	700-3-0230	ROLLER DROP STRAP	8
13	700-3-1220	RUBBER FLAP - BOOM	1
14	700-3-1860	DEFLECTOR BAR - BOOM	1
15	700-3-2973	BRACKET - RUBBER WHEEL MOUNT LH	1
16	700-3-2975	BRACKET - RUBBER WHEEL MOUNT RH	1
17	700-3-2993	EXTENSION PAD	2
18	700-3-3984	BACKER PLATE- BOOM RUBBER	1
19	700-3-4028	DRIVE SHAFT- BOOM	1
20	700-3-4214	PLATE- ELEVATOR MOTOR MOUNT	1
21	700-3-4219	BENT PLATE LH- BOOM MOTOR MOUNT	1
22	700-3-4220	BENT PLATE RH- BOOM MOTOR MOUNT	1
23	700-3-4317	CROSS BAR SPACER- BOOM	2
24	700-3-4591	RUBBER-BOOM DISCHARGE	2
25	700-3-4652	MOTOR SENSOR PROTECTOR	1
26	900-01111	3/8NC X 1-1/4 HEX BOLT GR 5	4
27	900-01227	BOLT HEX 1/2 X 1 3/4 GR 5 ZP	14
28	900-01229	1/2-13 X 2 HEX BOLT GRD 5	4
29	900-01357	SCREW, CAP 5/8 X 3-1/2 UNC	2
30	900-01367	SCREW, CAP 5/6 X 5-1K UNC	24
31	900-01425	HEX BOLT - 3/4NC X 5-1/2 GR5 ZP	2
32	900-01697	CARRIAGE BOLT 3/8 NC X 1-1/2 ZP	7
33	900-01751	BOLT, CRG, 1/2-13 X 1-1/2, GR5 ZP	36
34	900-01753	BOLT, CRG, 1/2 NC X 2", GR5 ZP	2
35	900-01757	BOLT, CRG, 1/2" NC X 3", GR5 ZP	2
36	900-06139	3/8 NC FLANGED WHIZ NUT	11
37	900-06143	1/2 NC SPIRALOCK NUT ZP GR5	24
38	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	38
39	900-06508	NUT HEX 5/8 UNC TOP LOCK	26
40	900-06510	3/4 NUT, HEX TOP LOCK	2
41	900-11033	FLAT WASHER 3/8 ZP	4
42	900-11035	1/2 FLAT WASHER	52
43	900-11038	3/4" FLAT WASHER, USS	2
44	900-11088	WASHER, FLAT, SAE, 5/8, 2P	26
45	901-01272	BRG 1.75 PILLOW BLOCK (ECCENTRIC LOCK COLLAR)	2
46	903-08424	SPACER ROLLER STANDOFF	2
47	903-08433	5" RUBBER ROLLER	26
48	903-08435	NOSE ROLLER, 6"	2
49	903-08483	SPACER- 5/8" ID X 3.625"	18
50-1	903-11068	SPROCKET - IOT 50MM PITCH 1.75 BORE	2
50-2	903-11173	SPROCKET, 56MM,10T,1-3/4B,3/8K, 1/2"RD	2
51	903-11148	COUPLING, LOVEJOY LH500 1-1/4" X 1-1/4"	1
52	904-05284	MOTOR, HYDRAULIC TG 0625 SERIES	1

TANK BOTTOM ASSY

700-2-0829

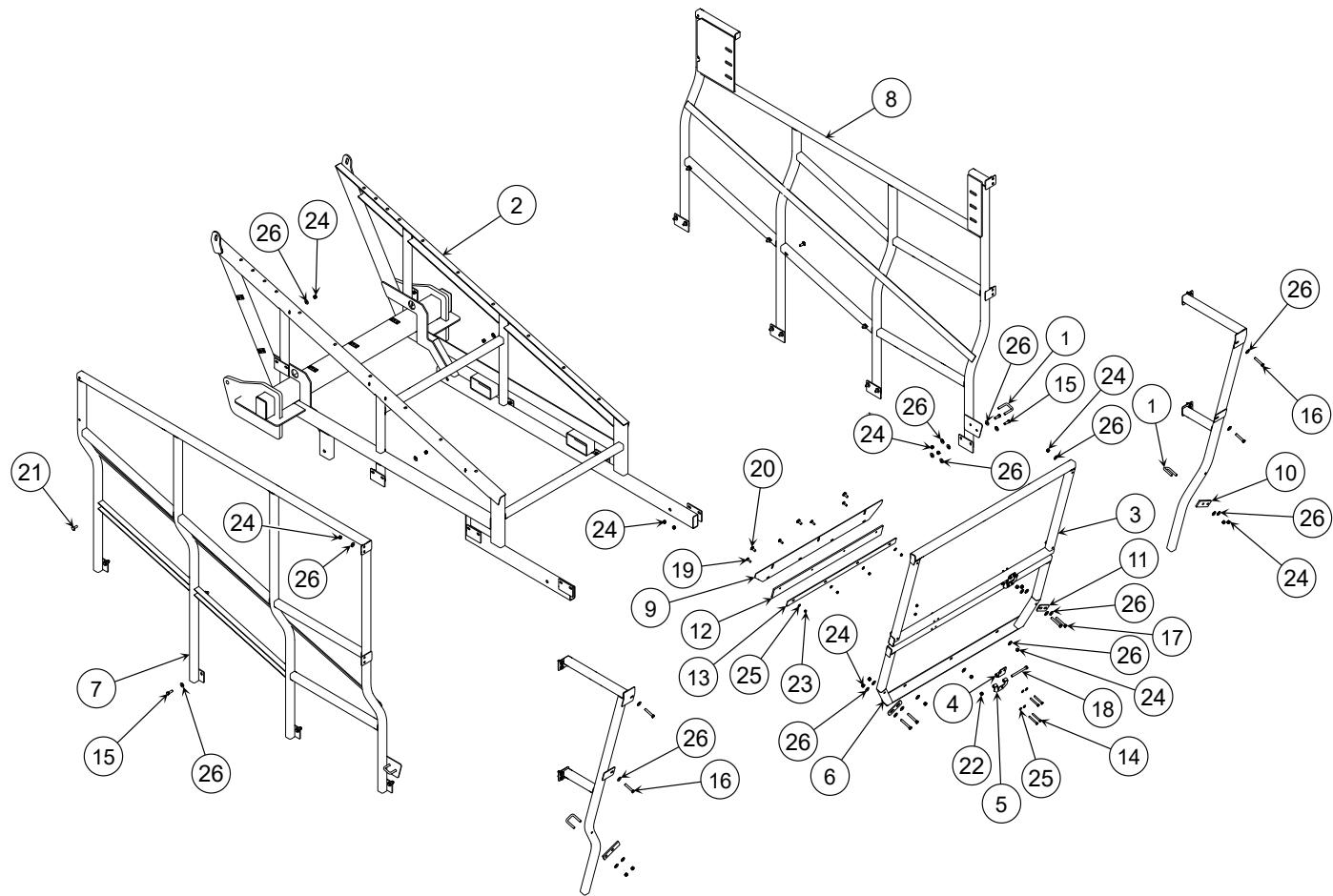
DRAWING



TANK BOTTOM ASSY
700-2-0829
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	100-3-3333	KEY - 3/8 X 3/8 X 2	2
2	700-2-0955	LOWER TANK WELD - SIDE TANK (2011)	1
3	700-2-1070	LOWER PULLEY TENSIONER	2
4	700-3-0230	ROLLER DROP STRAP	4
5	700-3-2768	DRIVE SHAFT - TANK	1
6	900-01345	BOLT, HH, 5/8-11 X 2, GR5 ZP	8
7	900-01367	SCREW, CAP 5/8 X 5-1/2 UNC	24
8	900-01385	BOLT, HH, 5/8 NC x 10, GR5, ZP	21
9	900-01431	HEX BOLT - 3/4 NC X 7 GR5	2
10	900-01751	BOLT, CRG, 1/2-13 X 1-1/2, GR5 ZP	8
11	900-06015	NUT, HH, 3/4-10, ZP	4
12	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	8
13	900-06508	NUT HEX 5/8 UNC TOP LOCK	53
14	900-06510	3/4 NUT, HEX TOP LOCK	2
15	900-11035	1/2 FLAT WASHER	8
16	900-11038	3/4" FLAT WASHER, USS	2
17	900-11088	WASHER, FLAT, SAE, 5/8, ZP	53
18	901-01185	BEARING - NANF 209-28 1.75	2
19	903-08433	5" RUBBER ROLLER	66
20	903-08437	6 INCH NOSE ROLLER	2
21	903-08483	SPACER- 5/8" ID X 3.625"	66
22-1	903-11068	SPROCKET, 50MM,10T,1-3/4B,3/8K, 1/2"RD	2
22-2	903-11173	SPROCKET, 56MM,10T,1-3/4B,3/8K, 1/2"RD	2

TANK HOPPER ASSY
700-2-1334
DRAWING



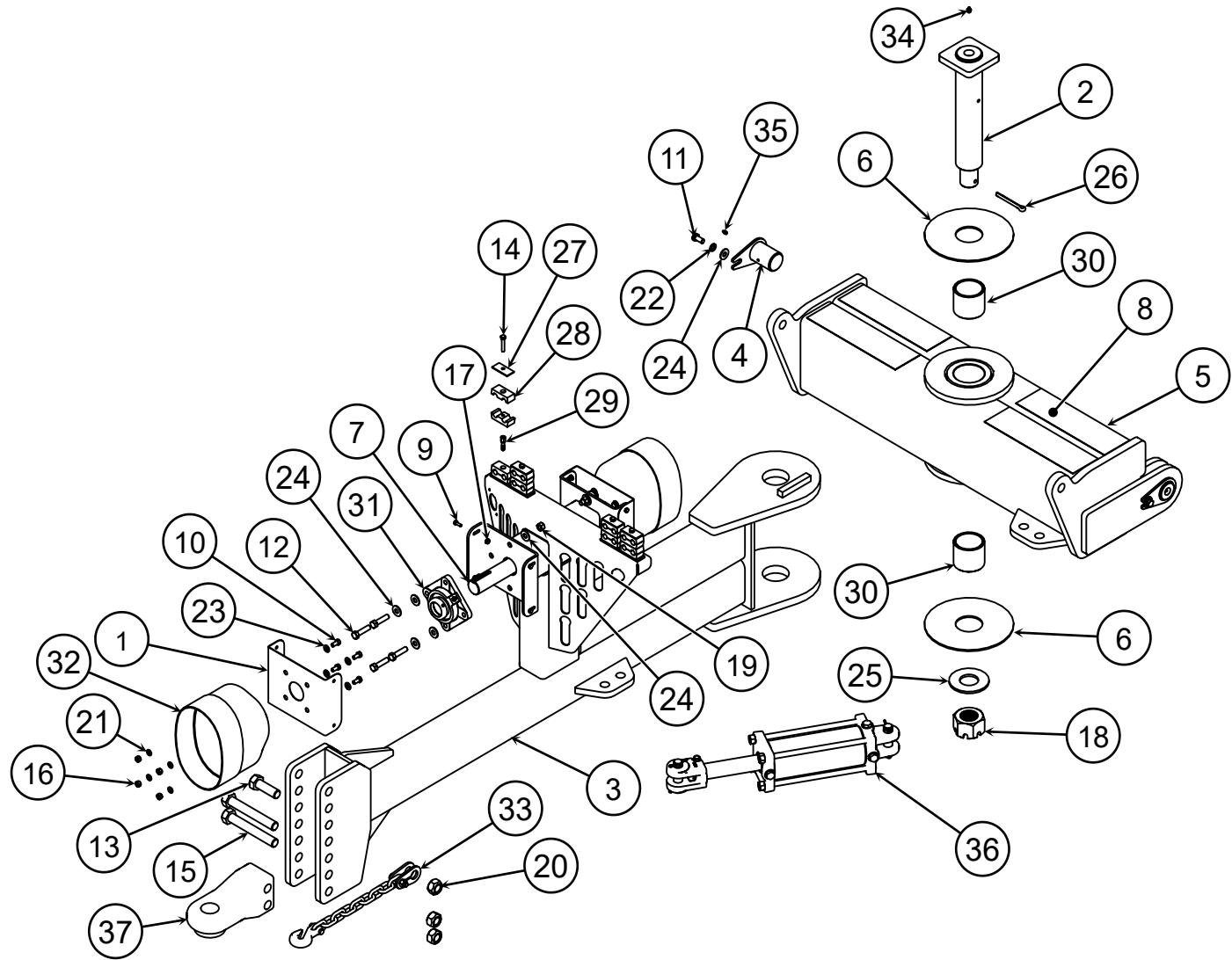
TANK HOPPER ASSY
700-2-1334
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	200-3-0801	U-BOLT, 1/2-13 X 2 X 3 LG	2
2	700-2-0966	UNDERCARRIAGE WELD - TANK	1
3	700-2-0977	TANK GATE- UPPER SIDE	1
4	700-2-0978	DOOR HINGE WELD - TANK	2
5	700-2-0979	LOWER HINGE BRACKET WELD	2
6	700-2-0980	HINGED GATE	1
7	700-2-1328	TANK HOPPER FRONT ASSY- 12 ROW (2016)	1
8	700-2-1333	TANK HOPPER BACK ASSY - 12 ROW (2016)	1
9	700-3-2593	RETRACTABLE GATE FOR DOOR	1
10	700-3-2917	BOLT PLATE - DOOR LOCK	2
11	700-3-3742	PLATE- BOLT ON TANK DOOR	2
12	700-3-3983	RUBBER- TANK GATE	1
13	700-3-4212	BACKER PLATE- GATE RUBBER	1
14	900-01125	3/8NC X 3 HEX BOLT GR5 ZP	8
15	900-01225	1/2 NCX 1-1/2 HEX BOLT GR 5	16
16	900-01237	BOLT HEX 1/2-13 X 3	4
17	900-01241	BOLT HH 1/2-13 X 3-1/2, GR5 ZP	4
18	900-01251	BOLT, HEX HEAD, 1/2-13 X 5-1/2, GR5 ZP	2
19	900-01696	BOLT, CRG, 3/8"-16 X 1 1/4", GR5, ZP	4
20	900-01750	CARRIAGE BOLT 1/2 NC X 1 1/4 GD 5 ZP	3
21	900-01751	BOLT, CRG, 1/2-13 X 1-1/2, GR5 ZP	8
22	900-06009	NUT HEX 1/2 UNC	2
23	900-06500	NUT HEX 3/8 TOP LOCK	12
24	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	39
25	900-11033	FLAT WASHER 3/8 ZP	20
26	900-11035	1/2 FLAT WASHER	63

HITCH ASSY 8R22

700-2-1869

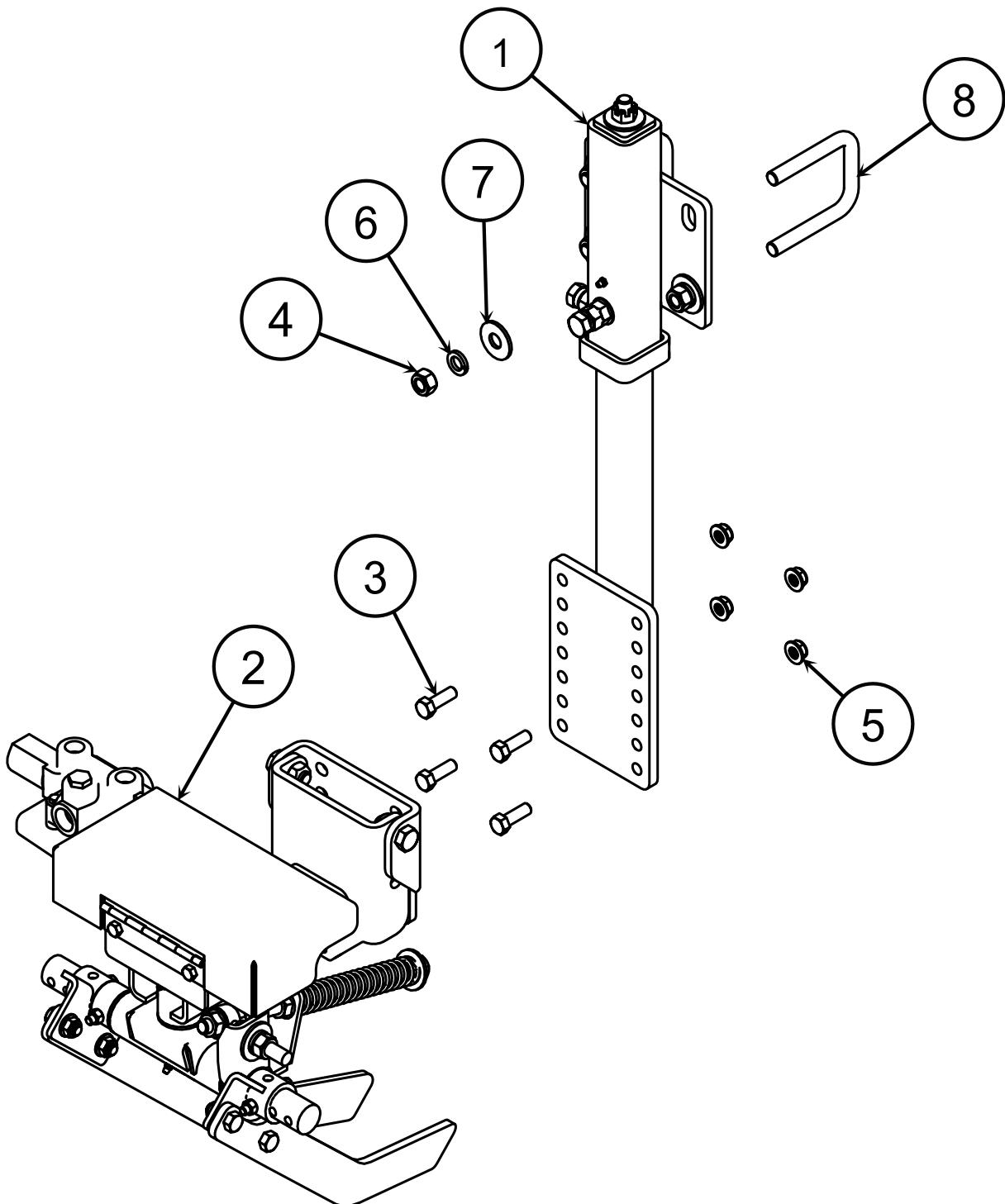
DRAWING



HITCH ASSY 8R22
700-2-1869
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	500-3-2164	GUARD BRACKET	2
2	700-2-0340	POLE PIN WELDMENT - HITCH	1
3	700-2-1567	FRONT HITCH WELDMENT 8R/12R	1
4	700-2-1570	PIN WELDMENT - HITCH MOUNT- 8R/12R RIGID	2
5	700-2-1868	INNER HITCH WELDMENT-12R	1
6	700-3-0741	THRUST WASHER - HITCH	2
7	700-3-2357	PTO TRANSFER SHAFT - 12 ROW HARVESTER	1
8	700-3-4019	ANTI-SKID STRIP HITCH 8R/12R	4
9	900-01005	1/4-20 X 3/4 ZP HEX BOLT	8
10	900-01105	3/8-16 X .75" HEX BOET	8
11	900-01221	BOLT HEX 1/2" X 1"	2
12	900-01229	1/2-13 X 2 HEX BOLT GRD 5	8
13	900-01519	BOET, HH, 1-8 X 3, GR5 ZP	1
14	900-02356	BOLT, HH 5/16 X 1-3/4, GR5 ZP	4
15	900-02930	BOLT, HH, 1-8 X 7, GR5 EP	2
16	900-06005	NUT HEX 3/8	8
17	900-06135	WHIZ NUT - 1/4- 20	8
18	900-06239	2" NC HEAVY HEX SLOTTED NUT GR5 ZP	1
19	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	8
20	900-06514	NUT, LOCK, 1" NC, TOR, ZP	3
21	900-11011	WASHER LOCK 3/8"	8
22	900-11013	WASHER, LOCK 1/2	2
23	900-11033	FLAT WASHER 3/8 ZP	8
24	900-11035	1/2 FLAT WASHER	18
25	900-11048	2 FLAT WASHER ZN	1
26	900-23084	RIN, COTTER, 3/8 X 3-1/2	1
27	900-31068	COVER PLATE	4
28	900-31069	CLAMP BODY - HOSE HOLDER	16
29	900-31071	BOLL STACKING 5/16 UNC	4
30	901-01344	SPLIT BUSHING - 3 ID X 3.5OD X 3 LONG	2
31	901-01466	BEARING, 1-3/4" DODGE F4B-SXR-112	2
32	903-18007	PTO BELL	2
33	905-07123	TOW CHAIN SAFETY 21,000 LB	1
34	905-15001	1/8 PTF STR GRS FTNG	1
35	905-15024	ZERK 1/4-28 UNF STRAIGHT	2
36	905-21465	CYLINDER, 4" X 8" 3000PSI	1
37	905-23023	HITCH TONGUE (BULL PULL) CAT4	1

HYD ROW FINDER- HARVESTER
700-1-0094
DRAWING



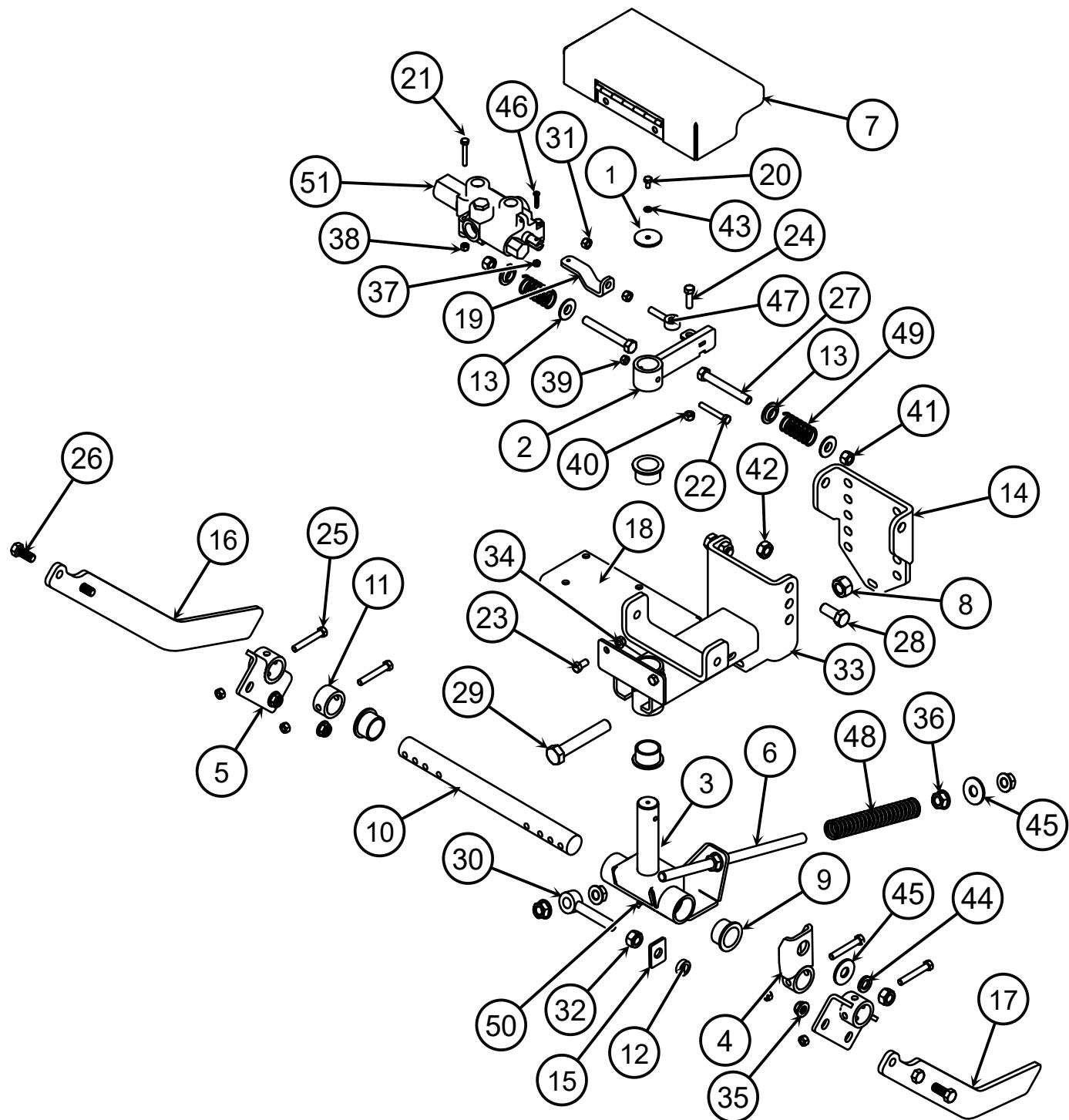
HYD ROW FINDER- HARVESTER
700-1-0094
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1037	ADJUSTABLE MOUTING ASSEBLY	1
2	700-2-1044	ROWFINDER ASSY	1
3	900-01225	1/2 NC X 1-1/2 HEX BOLT GR 5	4
4	900-06013	NUT, HH, 5/8-11, ZP	4
5	900-06143	1/2 NC SPIRALOCK NUT ZP GR5	4
6	900-11015	WASHER, LOCK, 5/8, ZP	4
7	900-11037	WASHER, FLAT, 5/8"	4
8	900-35026	U-BOLT 5/8NC x 3 INSIDE x 4-1/2 LONG x 1-1/2 THDS	2

ROWFINDER ASSY

700-2-1044

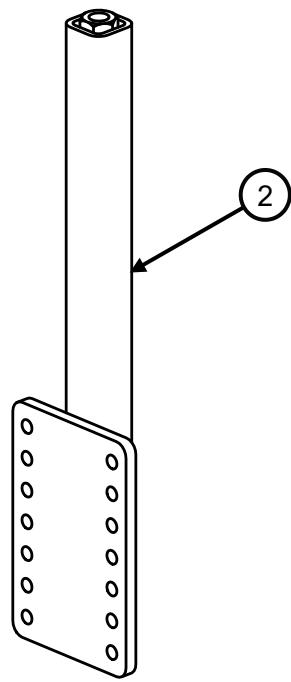
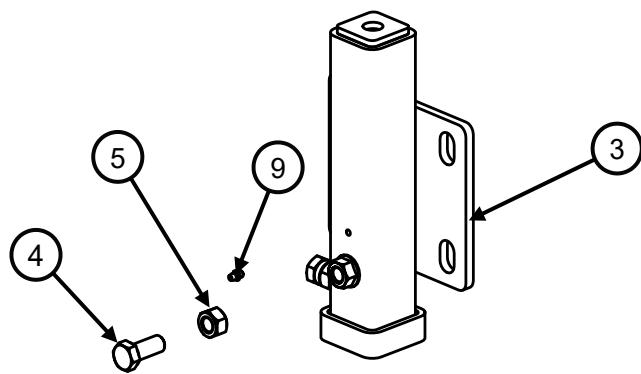
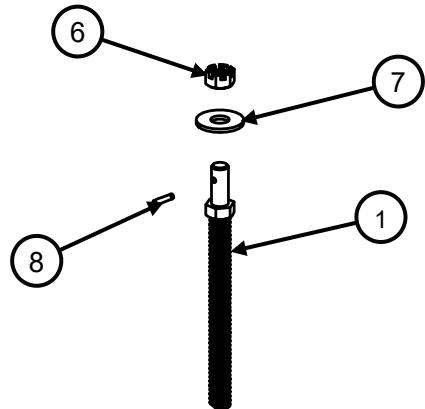
DRAWING



ROWFINDER ASSY
700-2-1044
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	500-3-2705	PLATE - DROP PLATE	1
2	700-2-0850	STEERING PADDLE WELD	1
3	700-2-0851	PIVOT WELD	1
4	700-2-0853	SPRING TENSIONER WELD	1
5	700-2-0854	FINGER MOUNT WELD	2
6	700-2-0856	THREADED ROD - ROW FINDER	1
7	700-2-0856	THREADED ROD - ROW FINDER	1
8	700-2-0908	TOP COVER - ROW FINDER (POWER BEYOND VALVE)	1
9	700-2-1043	PIVOT MOUNT WELD	1
10	700-3-0383	OILITE BUSHING - FF-1618-1	4
11	700-3-2170	SHAFT HORIZONTAL PIVOT	1
12	700-3-2182	TUBE-DOWN PRESURE BAR (PAINTED)	1
13	700-3-2183	BUSHING - DOWN PRESSURE SPRING	1
14	700-3-2185	COMPRESSION SPRING RETAINER	4
15	700-3-2186	INNER PIVOT BRACKET - ROW FINDER	1
16	700-3-2187	INSIDE WASHER - EYEBOLT	1
17	700-3-2188	FINGER - LH	1
18	700-3-2189	FINGER - RH	1
19	700-3-2345	VALVE MOUNT PLATE (POWER BEYOND VALVE)	1
20	700-3-2663	ADJUSTMENT PLATE - ROWFINDER (3/16" HOLE)	1
21	900-01001	.25 UNC X 1/2 BOLT	1
22	900-01015	1/4 NC X 1-3/4 HEX BOLT	3
23	900-01067	5/16-18 X 2-1/4 GR8 HEX BOLT ZP	1
24	900-01105	3/8-16 X .75" HEX BOLT	2
25	900-01121	3/8NC X 2-1/2 HEX BOLT GR 5	4
26	900-01223	BOLT, HEX HEAD, 1/2" X 1-1 /4" GR5, ZP	4
27	900-01245	1/2 X 4 HEX BOLT GR5 ZP	2
28	900-01341	HEX BOLT, 5/8 X 1-1/2 NC GR5 ZP	2
29	900-03076	3/4-10 X 4.5 FULL THREAD HEX BOLT	1
30	900-03465	EYE BOLT 5/8 X 3	1
31	900-06006	NUT, HEX HEAD 3/8 NF, ZP	2
32	900-06013	NUT, HH, 5/8-1 1 , ZP	2
33	900-06015	NUT, HH, 3/4-10, ZP	1
34	900-06139	3/8 NC FLANGED WHIZ NUT	2
35	900-06143	1/2 NC SPIRALOCK NUT ZP GR5	4
36	900-06145	5/8 WHIZ NUT	4
37	900-06446	NUT, NYLOCK, #10-24	1
38	900-06496	1/4-20 TOP LOCK HEX NUT	3
39	900-06498	5/16 TOP LOCK NUT	1
40	900-06500	NUT HEX 3/8 TOP LOCK	5
41	900-06504	NUT, LOCK, TOP, 1/2-13, GR C ZP	2
42	900-06508	NUT HEX 5/8 UNC TOP LOCK	2
43	900-11009	1/4 SPRING LOCK WASHER ZP	1
44	900-11015	WASHER, LOCK, 5/8, ZP	1
45	900-11037	WASHER, FLAT, 5/8"	2
46	900-19083	MACHINE SCREW, #10-24 x 1", PAN HEAD PHILIPS	1
47	903-05044	EYEBOLT - ROD END	1
48	905-14007	SPRING - .148 X 1.250 OD X 7.75 LONG	1
49	905-14022	SPRING 1.25OD X .105 WIRE X 4 LONG X 13.3 COILS	2
50	905-15024	ZERK 1/4-28 UNF STRAIGHT	2
51	905-98091	MONO BLOCK VALVE- RD-2508-T4-ESA1	1

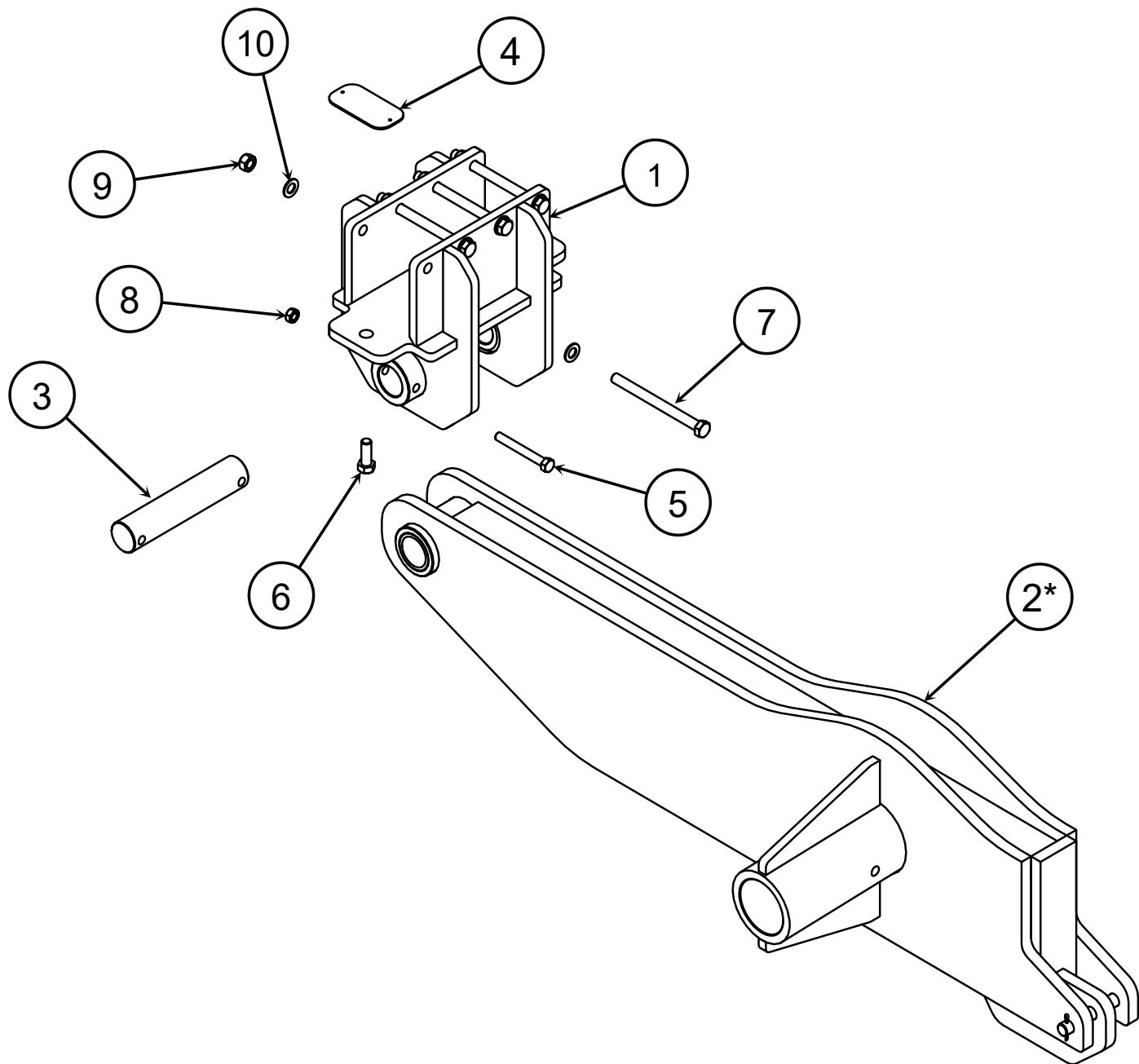
ADJUSTABLE MOUNTING ASSY
700-2-1037
DRAWING



ADJUSTABLE MOUNTING ASSY
700-2-1037
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	200-3-0283	U-BOLT, 3/8 NC X 2 X 3.25 LG	2
2	700-2-1645	LADDER PLATFORM REAR LEG WELDMENT - 8R	2
3	700-2-1646	ELEVATOR PLATFORM WELD - 8R/12R	1
4	700-2-1647	ELEVATOR PLATFORM LADDER WELD	1
5	700-2-1651	ELEVATOR PLATFORM SUPPORT WELD - 8R/12R	1
6	700-2-1653	HARVESTER SHORT RAILING WELD- 8R/12R	1
7	700-2-1654	HARVESTER LONG RAILING WELD-8R/12r	1
8	700-3-4105	6"X6" LIGHT MOUNT - 8R	2
9	700-3-4249	PIN-HARVESTER PLATFORM	1

REAR STRUT MOUNT ASSY 12R RIGID
LH 700-2-1800 / RH 700-2-7801
DRAWING



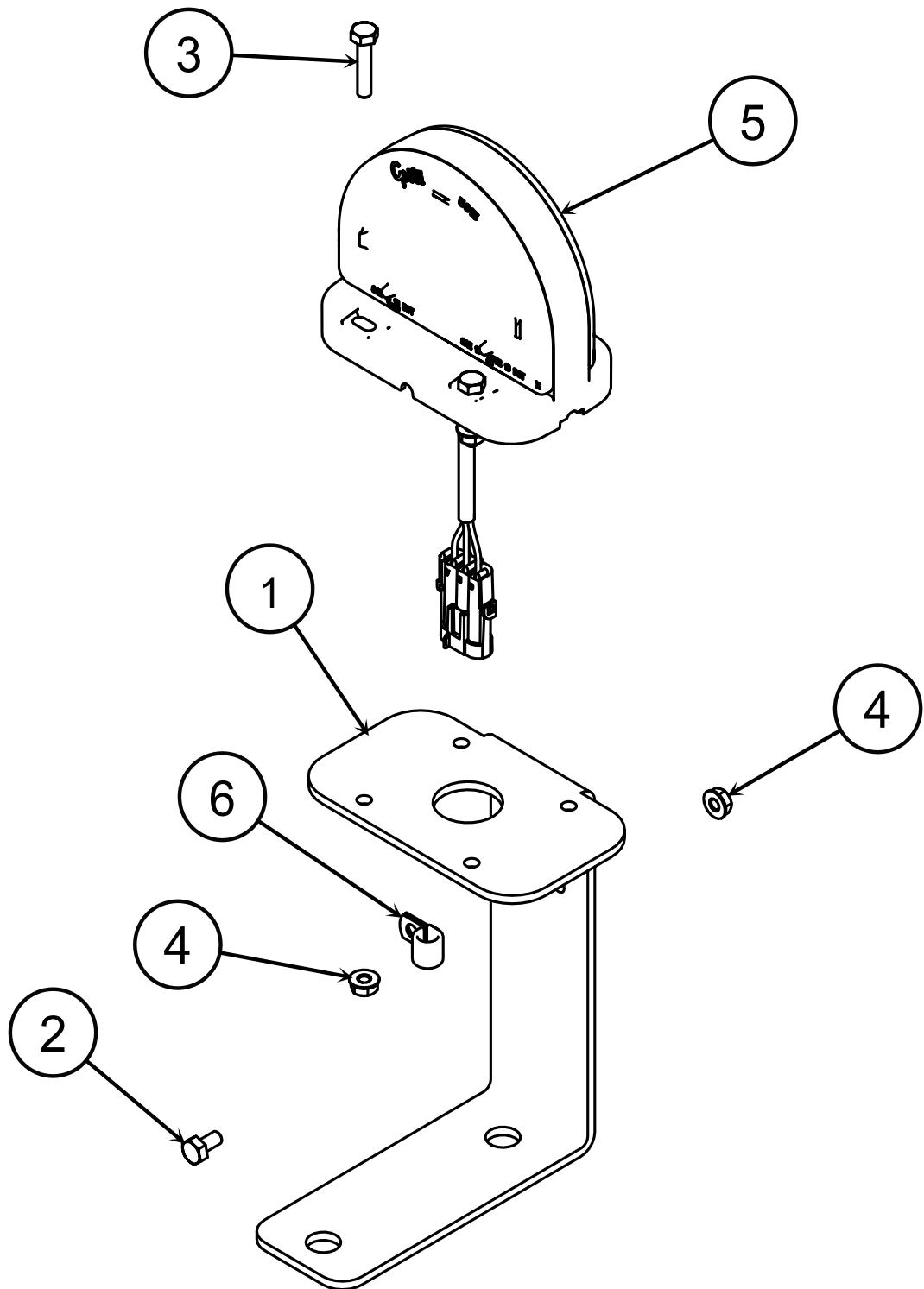
REAR STRUT MOUNT ASSY 12R RIGID
LH 700-2-1800 / RH 700-2-7801
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-2-1795	FRONT STRUT MOUNT WELDMENT-12R RIGID	1
2-1	700-2-1797	MAIN STRUT MOUNT ASSY LH-12R RIGID	1
2-2	700-2-1799	MAIN STRUT MOUNT ASSY RH-12R RIGID	1
3	700-3-4525	PIN-STRUT-12R RIGID	1
4	700-3-4529	SHIM-REAR STRUT-12R RIGID	1
5	900-01365	5/8" - 11 X 5" BOLT	2
6	900-01403	HEX BOLT - 3/4NC X 2 GR5 ZP	1
7	900-01439	HEX BOLT - 3/4 NC X 9 GR8 ZP	4
8	900-06508	NUT HEX 5/8 UNC TOP LOCK	2
9	900-06510	3/4 NUT, HEX TOP LOCK	4
10	905-09066	WASHER, SAE 3/4"	8

RED LIGHT ASSY

500-2-1777

DRAWING



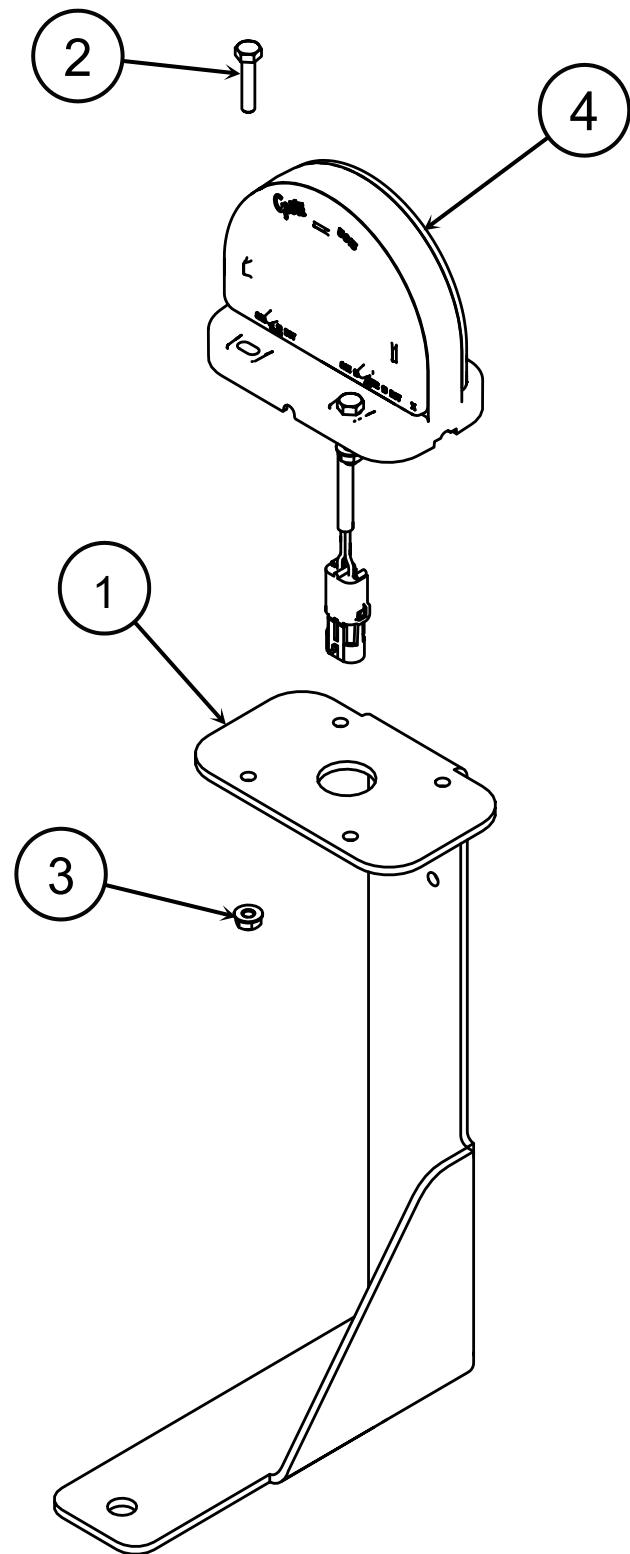
**RED LIGHT ASSY
500-2-1777
BILL OF MATERIALS**

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	500-3-5282	LIGHT MOUNT- GROTE HALF MOON	1
2	900-01001	BOLT, 1 /4" NC X 0.5"	1
3	900-01011	BOLT, HH1 1/4 X 1-1/4 G5 ZP	4
4	900-06135	WHIZ NUT - 1 /4 - 20	5
5	904-01364	GROTE, HALF MOON LIGHT- RED	1
6	904-01365	VIBRATION DAMPING LOOP CLAMP 3/8"	1

AMBER LIGHT ASSY

700-2-1625

DRAWING



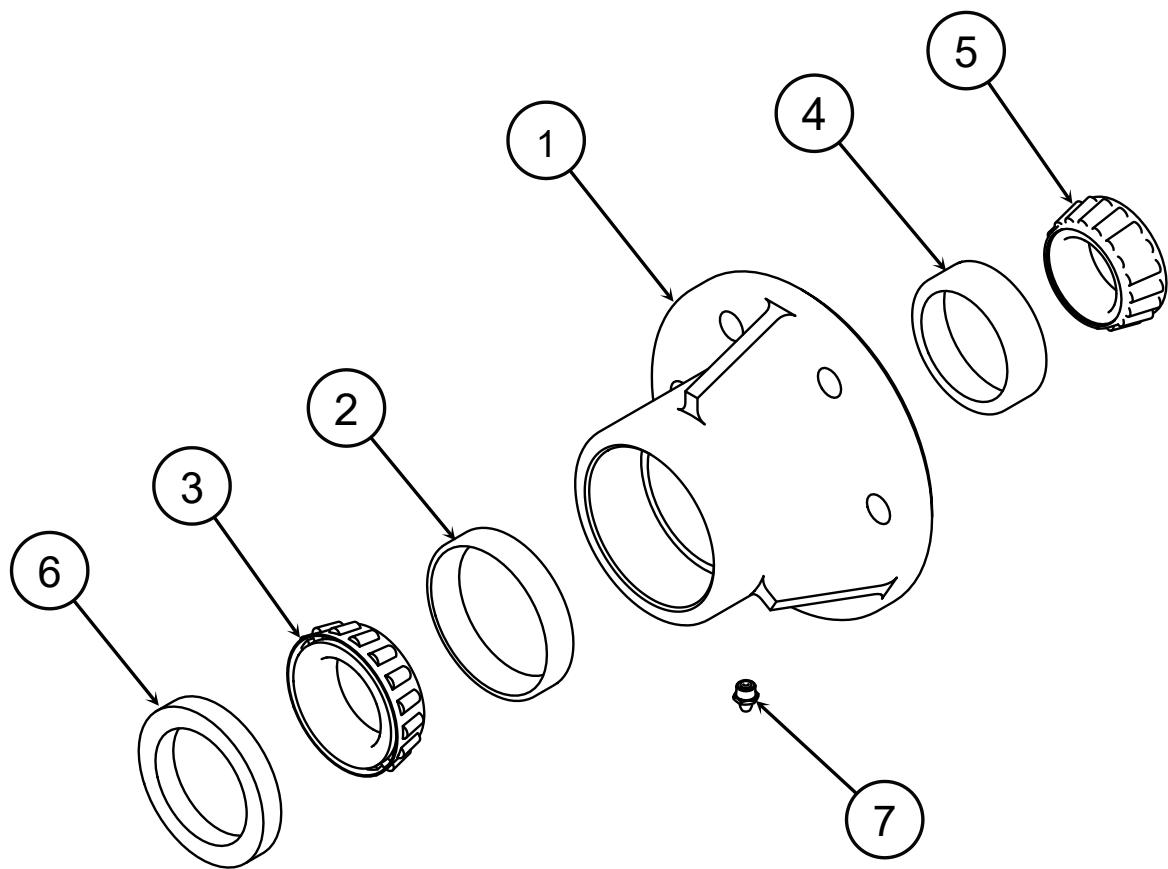
AMBER LIGHT ASSY
700-2-1625
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-3-4176	AMBER LIGHT BRACKET 8R	1
2	900-01011	BOLT, HH 1/4 X 1-1/4 G5 ZP	4
3	900-06135	WHIZ NUT - 1/4 - 20	4
4	904-01363	GROTE, HALF MOON LIGHT- AMBER	1

DIGGER STRUT HUB COMPONENTS

700-2-0410

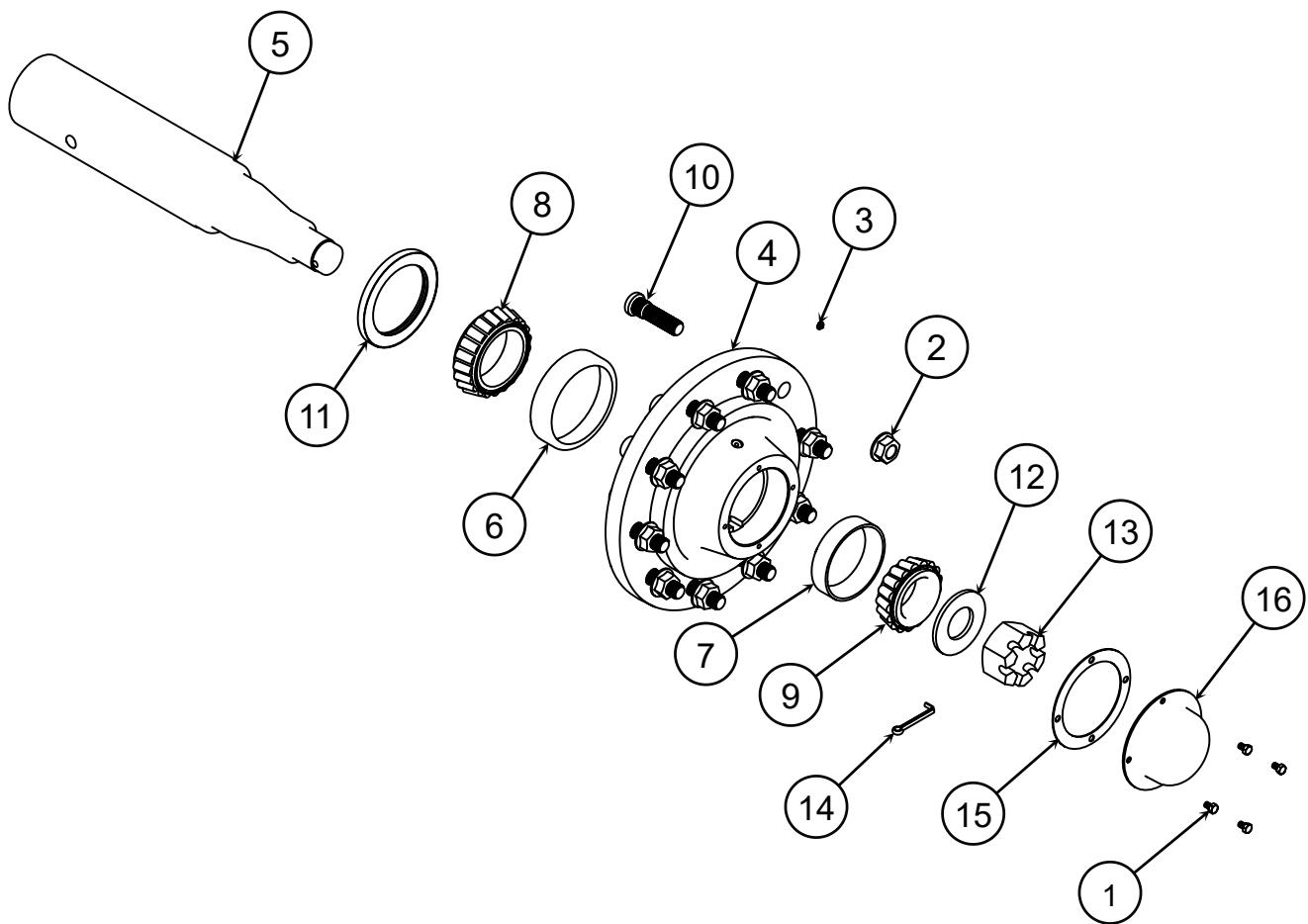
DRAWING



DIGGER STRUT HUB COMPONENTS
700-2-0410
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	700-3-0275	HUB - MACHINED (DIGGER)	1
2	901-01319	BEARING CUP #362A	1
3	901-01320	BEARING CONE #368A	1
4	901-01321	BEARING CUP #26823	1
5	901-01322	BEARING CONE #26884	1
6	901-09214	SEAL - NATIONAL #415302	1
7	905-15001	1/8 PTF STR GRS FTNG	1

WHEEL HUB COMPONENTS
700-2-1639
DRAWING

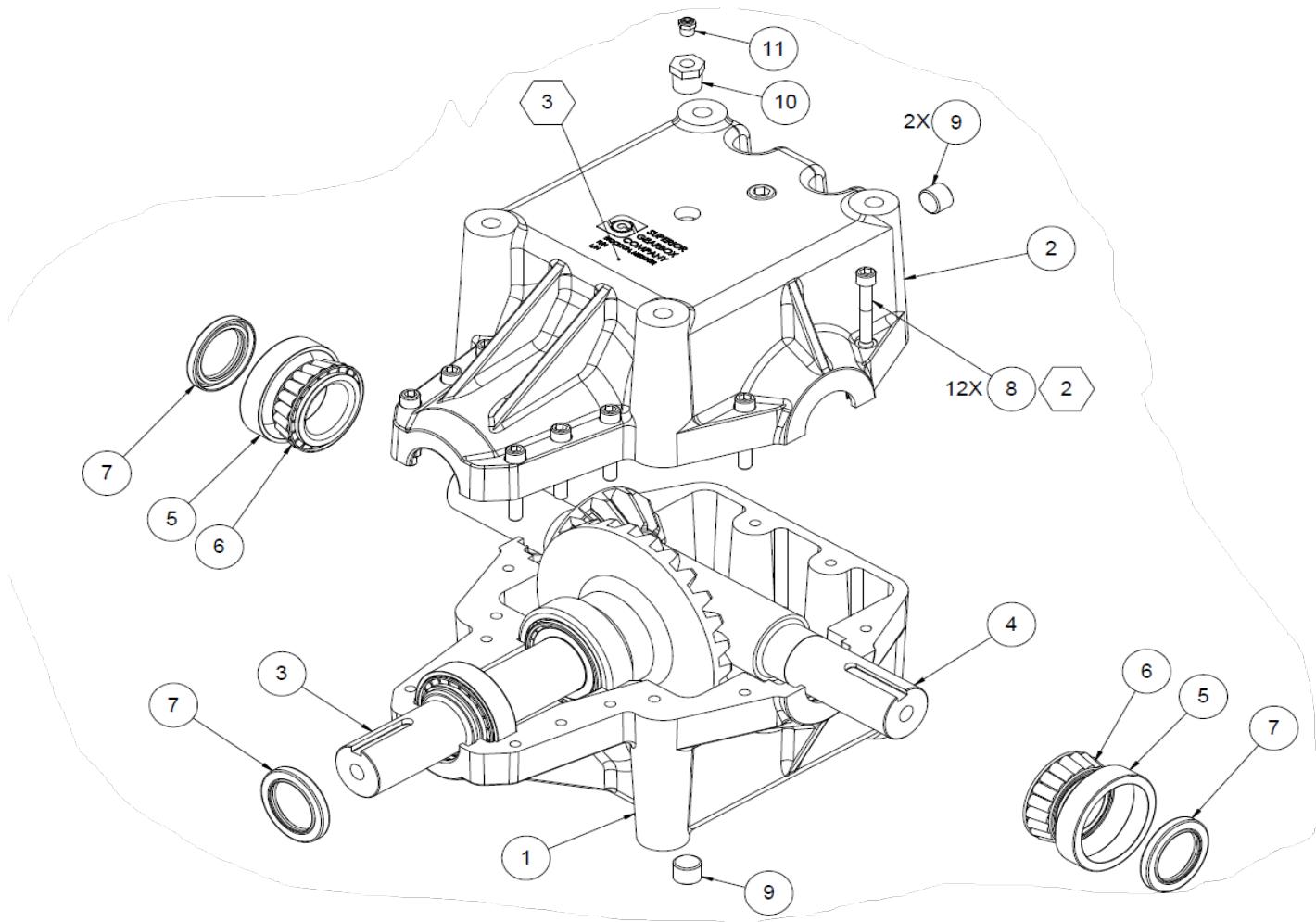


WHEEL HUB COMPONENTS
700-2-1639
BILL OF MATERIALS

ITEM NO.	PART NO.	DESCRIPTION	Qty.
1	900-02342	BOLT, 5/16" NC X 1/2"	4
2	900-06204	NUT, FLANGE 7/8"-14 UNF	10
3	905-15024	GREASE ZERK 1/4"-28 UNF STRAIGHT	1
4	905-98135	HUB - 10 BOLT x 13.19 BC x 11.04 PILOT H1021D	1
5	905-98136	SPINDLE S1020-A56	1
6	905-98137	INNER CUP TRB04629	1
7	905-98138	OUTER CUP TRB19801	1
8	905-98139	INNER CONE TRB16851	1
9	905-98140	OUTER CONE TRB29401	1
10	905-98141	WHEEL STUD 7/8"-14 UNF WB136	10
11	905-98142	SEAL SE55	1
12	905-98143	WASHER WA35	1
13	905-98144	HEX SLOTTED NUT WB65	1
14	905-98145	COTTER PIN MI-41	1
15	905-98146	RUBBER GASKET SE59	1
16	905-98147	DUST CAP DC28Z	1

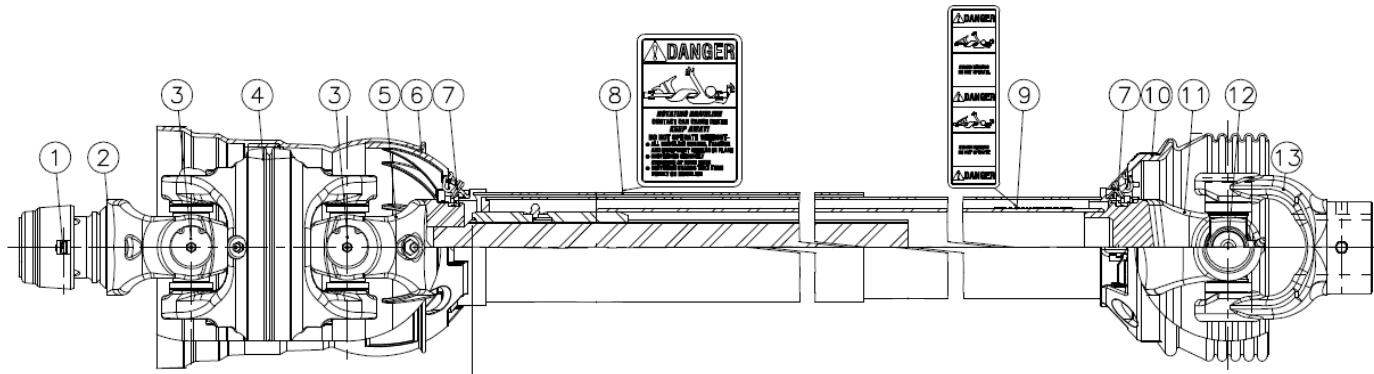
GEARBOX COMPONENTS

903-15581



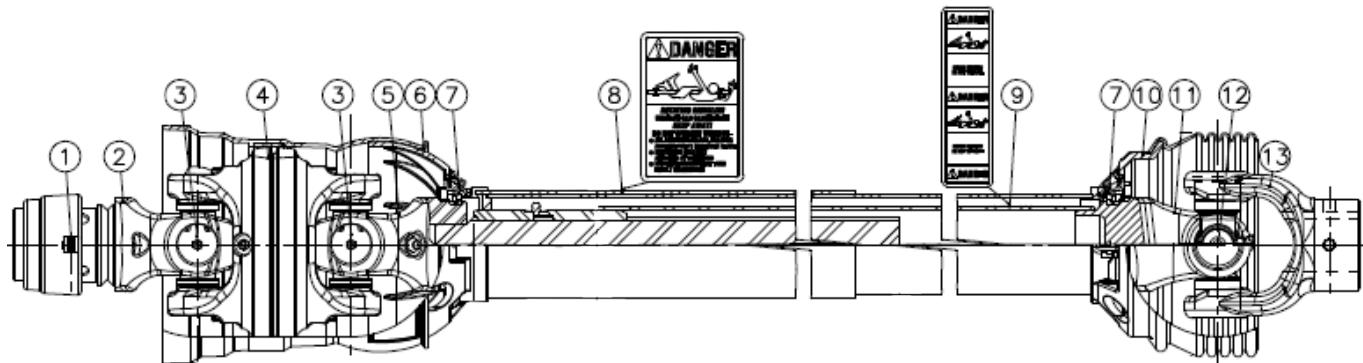
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	903-15582	HSG, R800 MACHINED TAP	1
2	903-15583	HSG, MACH R800 THRU +2-1/2 NPT	1
3	903-15584	SUBA, STUB SHAFT/GEAR R80 1.85	1
4	903-15585	SUBA, CROSS SHAFT/GEAR R80 1.8	1
5	901-01152	BEARING CUP	2
6	901-01328	BEARING CONE	2
7	901-09125	SEAL TC	3
8	900-03033	BOLT, 3/8" NC X 2-1/4 SHCS	12
9	905-03078	PLUG 1/2-14 NPT	3
10	903-15359	BUSHING 1/2 NPT TO 1/8 NPT	1
11	905-03080	PLUG, VENT 1/8-27 NPT	1
-	903-15581	GEARBOX SUPERIOR MODEL R800	-

1-3/8" PTO WWCV DRIVE SHAFT COMPONENTS (55 Series)
903-18411



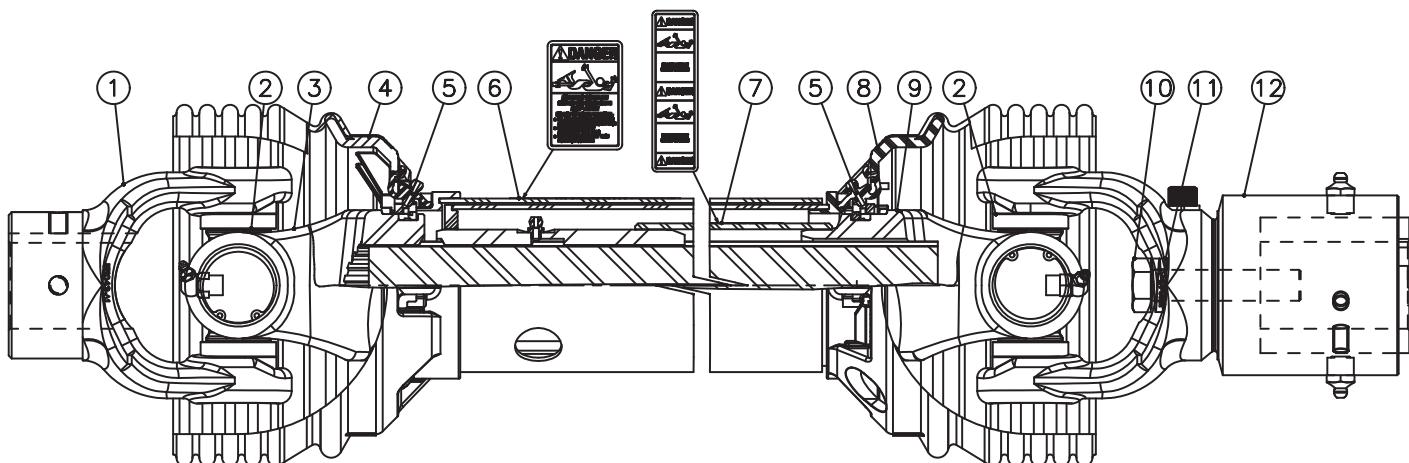
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	903-18106	SSL / AUTO-LOK REPAIR KIT	1
2	903-18334	WWCV AUTO-LOK YOKE ASSEMBLY	1
3	903-18328	AB8/AW24/CAT 6 80° EBL CROSS KIT	2
4	903-18329	WWCV CENTER HOUSING	1
5	903-18415	WWCV YOKE & SHAFT (1.69-20)	1
6	903-18248	GUARD REPAIR KIT	1
7	903-17455	SAFETY SIGN	1
8	903-18361	OUTER GUARD	1
9	903-18362	INNER GUARD	1
10	903-17456	SAFETY SIGN	1
11	903-18363	YOKE, TUBE & SLIP SLEEVE	1
12	903-17239	55E CROSS KIT	1
13	903-18364	YOKE	1
-	903-18411	WWCV PTO DRIVE SHAFT, 1-3/8", COMPLETE	-

1-3/4" PTO WWCV DRIVE SHAFT COMPONENTS (55 Series)



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	903-17772	SSL / AUTO-LOK REPAIR KIT	1
2	903-18327	WWCV AUOT-LOK YOKE ASSEMBLY	1
3	903-18328	AB8/AW24/CAT 6 80° EBL CROSS & BEARING KIT	2
4	903-18329	WWCV CENTER HOUSING	1
5	903-18418	WWCV YOKE & SHAFT (1.69-20)	1
6	903-18248	GUARD REPAIR KIT	1
7	903-17455	SAFETY SIGN	1
8	903-18371	OUTER GUARD	1
9	903-18372	INNER GUARD	1
10	903-17456	SAFETY SIGN	1
11	903-18373	YOKE, TUBE & SLIP SLEEVE	1
12	903-17239	55E CROSS & BEARING KIT	1
13	903-18364	YOKE	1
-	903-18412	WWCV PTO DRIVE SHAFT, 1-3/4", COMPLETE	-

HITCH JUMP DRIVE SHAFT COMPONENTS (55 Series)



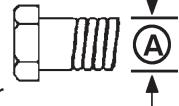
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	903-18364	YOKE	1
2	903-17239	55E CROSS KIT	2
3	903-18461	YOKE & SHAFT (1.69-20 SPLINE)	1
4	903-18462	OUTER GUARD	1
5	903-18248	GUARD REPAIR KIT	2
6	903-17455	SAFETY SIGN	1
7	903-17456	SAFETY SIGN	1
8	903-18463	INNER GUARD	1
9	903-18464	YOKE, TUBE, & SLIP SLEEVE	1
10	900-03117	BOLT, 5/8 NC x 3	1
11	900-11015	LOCK WASHER, 5/8	1
12	903-18382	OVERRUNNING CLUTCH ASM	1
-	903-18424	HITCH JUMP DRIVE SHAFT, COMPLETE	-

BOLT TORQUE CHART

SAE Series Torque Chart

Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application. Fasteners must always be replaced with the same grade as specified in the manual parts list.

Make sure fastener threads are clean and you properly start thread engagement.

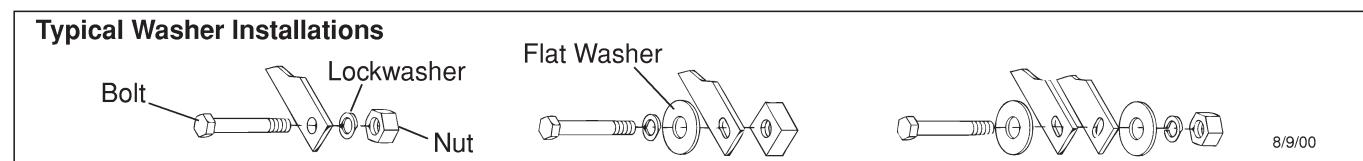
SAE Bolt Head Identification		 SAE Grade 2 (No Dashes)		 SAE Grade 5 (3 Radial Dashes)		 SAE Grade 8 (6 Radial Dashes)	
(A) Diameter (Inches)	Wrench Size	MARKING ON HEAD					
		SAE 2		SAE 5		SAE 8	
ft./lb.	(Nm)	ft./lb.	(Nm)	ft./lb.	(Nm)	ft./lb.	(Nm)
1/4"	7/16'	6	(8)	10	(13)	14	(18)
5/16"	1/2"	12	(17)	19	(26)	27	(37)
3/8"	9/16"	23	(31)	35	(47)	49	(67)
7/16"	5/8"	36	(48)	55	(75)	78	(106)
1/2"	3/4"	55	(75)	85	(115)	120	(163)
9/16"	13/16"	78	(106)	121	(164)	171	(232)
5/8"	15/16"	110	(149)	170	(230)	240	(325)
3/4"	1-1/8"	192	(261)	297	(403)	420	(569)
7/8"	1-5/16"	306	(416)	474	(642)	669	(907)
1"	1-1/2"	350	(475)	680	(925)	1020	(1383)
1-1/8"	1-11/16"	450	(610)	885	(1200)	Bolt Diameter	
1-1/4"	1-7/8"	600	(815)	1255	(1700)		
1-3/8"	2-1/16"	675	(915)	1620	(2200)		
1-1/2"	2-1/4'	920	(1250)	2200	(2900)		

Metric Series Torque Chart

Use only metric tools on metric hardware. Always tighten hardware to these values unless a different torque value or tightening procedure is listed for a specific application. Fasteners must always be replaced with the same grade.

Make sure fastener threads are clean and you properly start thread engagement.

(A) Diameter & Thread Pitch (Millimeters)	Wrench Size	COARSE THREAD				FINE THREAD				(A) Diameter & Thread Pitch (Millimeters)	Metric Bolt Head Identification		
		MARKING ON HEAD				MARKING ON HEAD							
		Metric 8.8		Metric 10.9		Metric 8.8		Metric 10.9					
		Nm	ft./lb.	Nm	ft./lb.	Nm	ft./lb.	Nm	ft./lb.				
6x1.0	10 mm	8	6	11	8	8	6	11	8	6x1.0	 Metric Grade 8.8		
8x1.25	13 mm	20	15	27	20	21	16	29	22	8x1.0			
10x1.5	16 mm	39	29	54	40	41	30	57	42	10x1.25			
12x1.75	18 mm	68	50	94	70	75	55	103	76	12x1.25			
14x2.0	21 mm	109	80	151	111	118	87	163	120	14x1.5			
16x2.0	24 mm	169	125	234	173	181	133	250	184	16x1.5			
18x2.5	27 mm	234	172	323	239	263	194	363	268	18x1.5			
20 x 2.5	30 mm	330	244	457	337	367	270	507	374	20x1.5			
22 x 2.5	34 mm	451	332	623	460	495	365	684	505	22 x 1.5			
24 x 3.0	36 mm	571	421	790	583	623	459	861	635	24 x 2.0			
30 x 3.0	46 mm	1175	867	1626	1199	1258	928	1740	1283	30 x 2.0			



ABBREVIATIONS

AG	Agriculture	NC	National Course
ASAE	American Society of Agricultural Engineers	NF.....	National Fine
ATF.....	Automatic Transmission Fluid	NPSM.....	National Pipe Straight Mechanical
BSPP.....	British Standard Pipe Parallel	NPT	National Pipe Tapered
BSPTM.....	British Standard Pipe Tapered Male	NPT SWF.....	National Pipe Tapered Swivel Female
CV	Constant Velocity	Nm.....	Newton Meter
CCW	Counter-Clockwise	OSHA...	Occupational Safety and Health Administration
CW	Clockwise	P	Pitch
DIA.....	Diameter	PBY	Power Beyond
EP.....	Extreme Pressure	psi.....	Pounds per Square Inch
F	Female	PTO.....	Power Take Off
FB.....	Female O-Ring Boss	QD.....	Quick Disconnect
FJ	Female Boss	RH.....	Right Hand
FJX.....	Female Swivel JIC	ROPS.....	Roll Over Protection Structure
FP.....	Female Pipe	RPM.....	Revolutions Per Minute
ft./lb.....	Foot Pound	RT.....	Right
GA.....	Gauge	SAE.....	Society of Automotive Engineers
GR (5, etc.)	Grade (5, etc.)	SMV	Slow Moving Vehicle
HHCS.....	Hex Head Cap Screw	UNC	Unified Coarse
HT.....	Heat Treated	UNF	Unified Fine
in.....	Inch	UNS.....	Unified Special
JIC	Joint Industry Council 37° Flare	ZP.....	Zinc Plate
kg.....	Kilogram		
km/h	Kilometers Per Hour		
lb.....	Pound		
LH.....	Left Hand		
LT.....	Left		
in.....	Inches		
m	Meter		
mm	Millimeter		
M	Male		
MB.....	Male O-Ring Boss		
MJ.....	Male JIC		
MJX.....	Male Swivel JIC		
MP.....	Male Pipe		
MPa.....	Mega Pascal		
MPH	Miles Per Hour		
N.....	Newton		

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WARRANTY

Please Enter Information Below and Save For Future Reference.

Date Purchased: _____ From (Dealer): _____

Model Number: _____ Serial Number: _____

ALLOWAY STANDARD, d/b/a ALLOWAY, warrants this product to be free from defect in material and workmanship for TWELVE (12) MONTHS COMMENCING ON THE DATE OF DELIVERY OF THE PRODUCT TO THE ORIGINAL PURCHASER.

Under no circumstances will this Warranty apply in the event that the product, in the good faith opinion of ALLOWAY, has been subjected to improper operation, improper maintenance, misuse, or an accident. This Warranty does not apply in the event that the product has been materially modified or repaired by someone other than ALLOWAY, a ALLOWAY authorized dealer or distributor, and/or a ALLOWAY authorized service center; This Warranty does not cover normal wear or tear, or normal maintenance items. **This Warranty also does not cover repairs made with parts other than those obtained through ALLOWAY.**

This Warranty is extended solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer this product to a third party, this Warranty does not transfer to the third party purchaser in any way. There are no third party beneficiaries of this Warranty.

ALLOWAY makes no warranty, express or implied, with respect to tires or other parts or accessories not manufactured by ALLOWAY. Their respective manufacturers, if any, provide warranties for these items, separately. ALLOWAY'S obligation under this Warranty is limited to, at ALLOWAY'S option, the repair or replacement, free of charge, of the product if ALLOWAY, in its sole discretion, deems it to be defective or in noncompliance with this Warranty. The product must be returned to ALLOWAY with proof of purchase within thirty (30) days after such defect or noncompliance is discovered or should have been discovered, routed through the dealer and distributor from whom the purchase was made, transportation charges prepaid. ALLOWAY shall complete such repair or replacement within a reasonable time after ALLOWAY receives the product. **THERE ARE NO OTHER REMEDIES UNDER THIS WARRANTY. THE REMEDY OF REPAIR OR REPLACEMENT IS THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY.**

THERE ARE NO WARRANTIES, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS WARRANTY. ALLOWAY MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, AND ALLOWAY SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY AND/OR ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

ALLOWAY shall not be liable for any incidental or consequential losses, damages or expenses, arising directly or indirectly from the product, whether such claim is based upon breach of contract, breach of warranty, negligence, strict liability in tort or any other legal theory. Without limiting the generality of the foregoing. Alloway specifically disclaims any damages relating to (i) lost profits, business, revenues or goodwill; (ii) loss of crops; (iii) loss because of delay in harvesting; (iv) any expense or loss incurred for labor, supplies, substitute machinery or rental; or (v) any other type of damage to property or economic loss.

This Warranty is subject to any existing conditions of supply, which may directly affect ALLOWAY'S ability to obtain materials or manufacture replacement parts.

No agent, representative, dealer, distributor, serviceperson, salesperson, or employee of any company; including without limitation, ALLOWAY, its authorized dealers, distributors, and service centers, is authorized to alter, modify, or enlarge this Warranty.

This Warranty is effective only if the warranty registration card is returned within ten (10) days.

Answers to any questions regarding warranty service and locations may be obtained by contacting:

Alloway
5650 13th Ave N, Ste A
Fargo, North Dakota 58102
701-356-4983

ALLOWAY 

WARRANTY

ALLOWAY STANDARD, d/b/a ALLOWAY, warrants this product to be free from defect in material and workmanship for a period of One (1) year, ninety (90) days for Service Parts, from the date of delivery of the product to the original purchaser.

Under no circumstances will this Warranty apply in the event that the product, in the good faith opinion of ALLOWAY, has been subjected to improper operation, improper maintenance, misuse, or an accident. This Warranty does not cover normal wear or tear, or normal maintenance items.

This Warranty is extended solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer this product to a third party, this Warranty does not transfer to the third party purchaser in any way. There are no third party beneficiaries of this Warranty.

ALLOWAY'S obligation under this Warranty is limited to, at ALLOWAY'S option, the repair or replacement, free of charge, of the product if ALLOWAY, in its sole discretion, deems it, to be defective or in noncompliance with this Warranty. The product must be returned to ALLOWAY with proof of purchase within thirty (30) days after such defect or noncompliance is discovered or should have been discovered, routed through the dealer and distributor from whom the purchase was made, transportation charges prepaid. ALLOWAY shall complete such repair or replacement within a reasonable time after ALLOWAY receives the product. **THERE ARE NO OTHER REMEDIES UNDER THIS WARRANTY. THE REMEDY OF REPAIR OR REPLACEMENT IS THE SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY.**

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ALLOWAY shall not be liable for any incidental or consequential losses, damages or expenses, arising directly or indirectly from the product, whether such claim is based upon breach of contract, breach of warranty, negligence, strict liability in tort or any other legal theory. Without limiting the generality of the foregoing, Alloway specifically disclaims any damages relating to (i) lost profits, business, revenues or goodwill; (ii) loss of crops; (iii) loss because of delay in harvesting; (iv) any expense or loss incurred for labor, supplies, substitute machinery or rental; or (v) any other type of damage to property or economic loss.

This Warranty is subject to any existing conditions of supply, which may directly affect ALLOWAY'S ability to obtain materials or manufacture replacement parts.

No agent, representative, dealer, distributor, service person, salesperson, or employee of any company, including without limitation, ALLOWAY, its authorized dealers, distributors, and service centers, is authorized to alter, modify, or enlarge this Warranty.

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Alloway
5650 13th Ave N, Ste A
Fargo, North Dakota 58102
701-356-4983

The logo for ALLOWAY. The word "ALLOWAY" is in a large, bold, black sans-serif font. The letter "Y" is stylized with three yellow diagonal bars extending from its right side, suggesting a plow or a series of steps.

PART NUMBER
700-5-0020

ALLOWAY

Quality • Innovation

Alloway Standard Industries
5650 13th Ave N, Ste A
Fargo, North Dakota 58102

Local/Intl: 1-701-356-4983
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Fax: 1-701-356-4985

SERIAL # _____

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