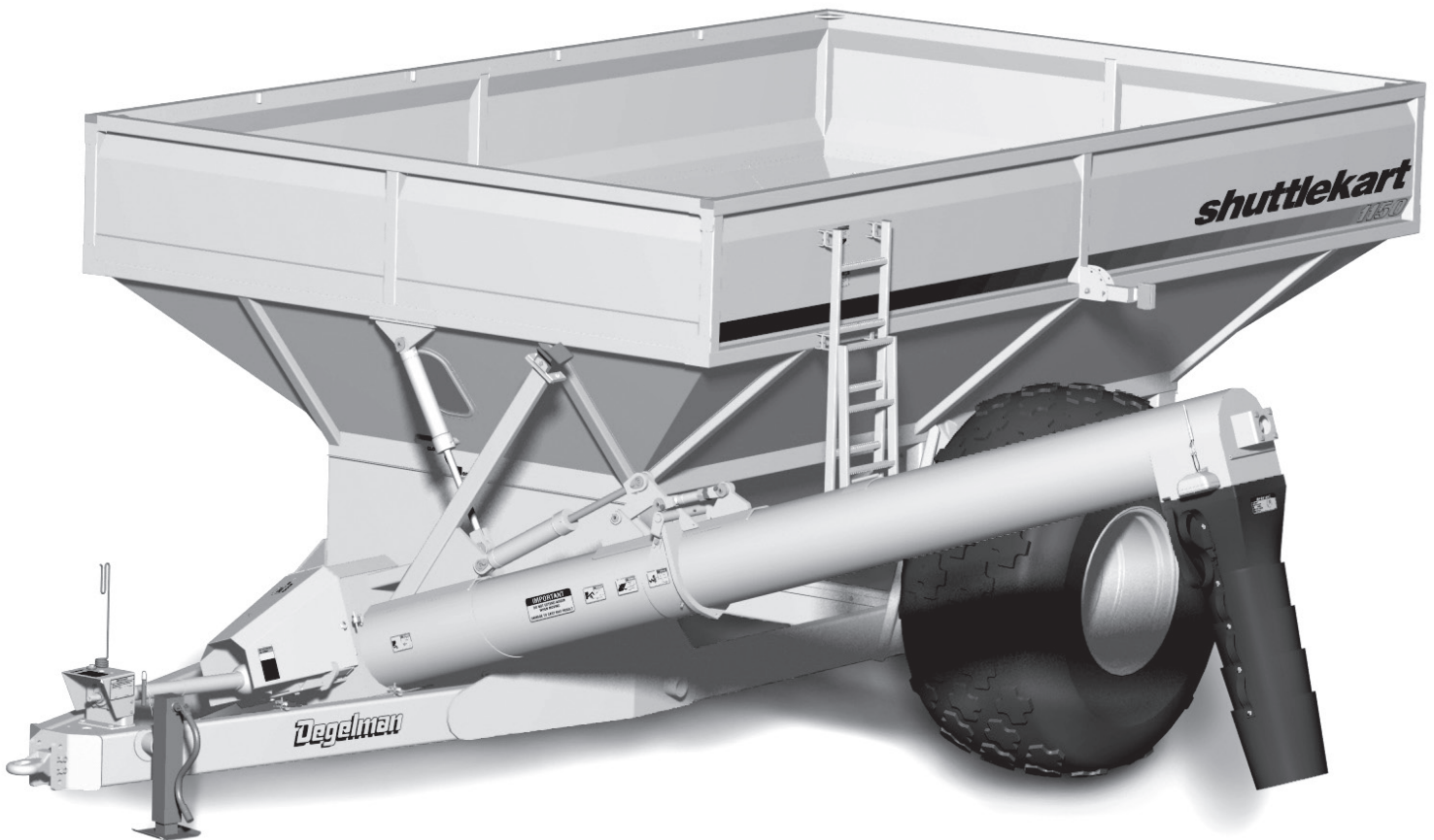


Degelman

**OPERATOR & PARTS
MANUAL**

shuttlekart[®]

1150



shuttlekart[®]

142912 v1.2

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**SHUTTLEKART
1150**

shuttlekart®

1150

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shuttlekart[®]

1150



CONGRATULATIONS on your choice of a Degelman Shuttlekart[®] to complement your farming operation. It has been designed and manufactured to meet the needs of a discerning agricultural market for effective short distance grain transport, enhancing harvest and seeding operations. Use this manual as your first source of information about this machine.

Safe, efficient and trouble free operation of your Degelman Shuttlekart[®] requires that you and anyone else who will be operating or maintaining it, read and understand the Safety, Operation, Maintenance and Troubleshooting information contained within this manual.

Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your Degelman Dealer if you need assistance, information, or additional copies of the manual.

OPERATOR ORIENTATION - The directions left, right, front and rear, as mentioned throughout the manual, are as seen from the tractor drivers' seat and facing in the direction of travel.

Why is **SAFETY** important to **YOU**?

3 **BIG** Reasons:

- **Accidents Can Disable and Kill**
- **Accidents Are Costly**
- **Accidents Can Be Avoided**



SAFETY ALERT SYMBOL

The **Safety Alert Symbol** identifies important safety messages applied to the Shuttlekart® and in this manual. When you see this symbol, be alert to the possibility of **injury or death**. Follow the instructions provided on the safety messages.

The **Safety Alert Symbol** means:

ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!

SIGNAL WORDS

Note the use of the Signal Words: **DANGER**, **WARNING**, and **CAUTION** with the safety messages. The appropriate Signal Word has been selected using the following guidelines:



DANGER: Indicates an imminently hazardous situation that, if not avoided, **WILL** result in death or serious injury if proper precautions are not taken.



WARNING: Indicates a potentially hazardous situation that, if not avoided, **COULD** result in death or serious injury if proper precautions are not taken.



CAUTION: Indicates a potentially hazardous situation that, if not avoided, **MAY** result in minor or moderate injury if proper practices are not taken, or, serves as a reminder to follow appropriate safety practices.

SAFETY

YOU are responsible for the safe operation and maintenance of your Degelman Shuttlekart®. **YOU** must ensure that you and anyone else who is going to operate, maintain or work around the Shuttlekart® be familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practices that should be adhered to while operating this equipment.

Remember, **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

- Shuttlekart® owners must give operating instructions to operators or employees before allowing them to operate the Shuttlekart®, and at least annually thereafter per OSHA regulation 1928.51.
- The most important safety device on this equipment is a SAFE operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. All accidents can be avoided.
- A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- Think SAFETY! Work SAFELY!

GENERAL SAFETY

1. Read and understand the Operator's Manual and all safety signs before operating, maintaining or adjusting the Shuttlekart®.



2. Install and properly secure all shields and guards before operating. Use hitch pin with a mechanical locking device.

3. Have a first-aid kit available for use should the need arise and know how to use it.

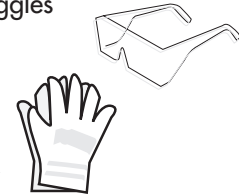


4. Have a fire extinguisher available for use should the need arise and know how to use it.



5. Wear appropriate protective gear. This list includes but is not limited to:

- A hard hat
- Protective shoes with slip resistant soles
- Protective glasses or goggles
- Heavy gloves
- Wet weather gear
- Hearing protection
- Respirator or filter mask



6. Clear the area of people, especially small children, and remove foreign objects from the machine before starting and operating.

7. Do not allow riders.

8. Stop tractor engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.

9. Review safety related items with all operators annually.

OPERATING SAFETY

1. Read and understand the Operator's Manual and all safety signs before using.
2. Stop tractor engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
3. Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
4. Do not allow riders on the Shuttlekart® or tractor during operation or transporting.
5. Keep all shields and guards in place when operating.
6. Clear the area of all bystanders, especially children, before starting.
7. Do not operate machine on steep side hills or slopes.
8. Be careful when working around or maintaining a high-pressure hydraulic system. Ensure all components are tight and in good repair before starting.
9. Clean all reflectors, lights and the SMV sign before transporting on a highway or public road. Be sure to check with local highway authorities and comply with their lighting requirements.

MAINTENANCE SAFETY

1. Review the Operator's Manual and all safety items before working with, maintaining or operating the Shuttlekart®.
2. Stop the tractor engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
3. Keep hands, feet, clothing and hair away from all moving and/or rotating parts.
4. Clear the area of bystanders, especially children, when carrying out any maintenance and repairs or making any adjustments.
5. Place safety stands or large blocks under the frame before removing tires or working beneath the machine.
6. Be careful when working around or maintaining a high-pressure hydraulic system. Wear proper eye and hand protection when searching for a high pressure hydraulic leak. Use a piece of wood or cardboard as a backstop when searching for a pin hole leak in a hose or a fitting.
7. Always relieve pressure before disconnecting or working on hydraulic system.

HYDRAULIC SAFETY

1. Always place all tractor hydraulic controls in neutral before dismounting.
2. Make sure that all components in the hydraulic system are kept in good condition and are clean.
3. Replace any worn, cut, abraded, flattened or crimped hoses and metal lines.
4. Do not attempt any makeshift repairs to the hydraulic lines, fittings or hoses by using tape, clamps or cements. The hydraulic system operates under extremely high-pressure. Such repairs will fail suddenly and create a hazardous and unsafe condition.
5. Wear proper hand and eye protection when searching for a high-pressure hydraulic leak. Use a piece of wood or cardboard as a backstop instead of hands to isolate and identify a leak.
6. If injured by a concentrated high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin surface.
7. Before applying pressure to the system, make sure all components are tight and that lines, hoses and couplings are not damaged.



- Think SAFETY! Work SAFELY

TRANSPORT SAFETY

1. Read and understand ALL the information in the Operator's Manual regarding procedures and SAFETY when operating the Shuttlekart® in the field/yard or on the road.
2. Check with local authorities regarding machine transport on public roads. Obey all applicable laws and regulations.
3. Always travel at a safe speed. Use caution when making corners or meeting traffic.
4. Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transport authorities are in place, are clean and can be seen clearly by all overtaking and oncoming traffic.
5. Keep to the right and yield the right-of-way to allow faster traffic to pass. Drive on the road shoulder, if permitted by law.
6. Always use hazard warning flashers on tractor when transporting unless prohibited by law.
7. Always use a pin with provisions for a mechanical retainer and a safety chain when attaching to a tractor or towing vehicle.

TIRE SAFETY

1. Failure to follow proper procedures when mounting a tire on a wheel or rim can produce a blow out which may result in serious injury or death.
2. Do not attempt to mount a tire unless you have the proper equipment and experience to do the job.
3. Have a qualified tire dealer or repair service-man perform required tire maintenance.

Safety

SPECIFIC DANGER AREAS

⚠ DANGER - SUFFOCATING

Extreme danger of suffocating exists while loading or unloading your Shuttlekart®.



⚠ DANGER - ROTATING CHAIN

Extreme Danger of amputation exists around rotating chains and sprockets. Keep fingers, hair, loose clothing etc. clear of moving parts.



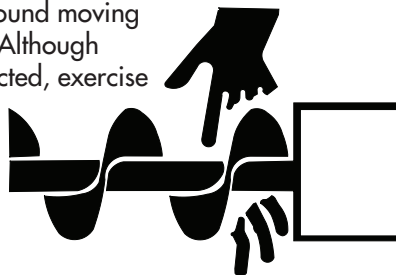
⚠ DANGER - ROTATING PARTS

Extreme Danger of death or amputation exists around rotating PTO components. Keep fingers, hair, loose clothing etc. clear of moving parts.



⚠ WARNING - MOVING AUGER

Danger exists around moving auger flighting. Although augers are protected, exercise caution around moving auger components.



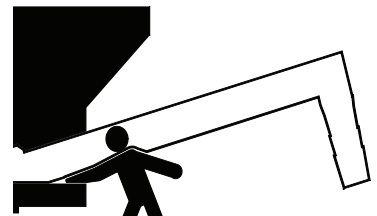
⚠ WARNING - FOLD LADDER

Danger of falling exists from unfolded ladder. Never allow children to play on the ladder. Always fold ladder when not using it.



⚠ WARNING - CRUSHING DANGER

Danger of crushing limbs exists when pivot auger is moving to lowered position. Keep limbs clear of area between auger and cart frame.



⚠ WARNING - NO RIDERS

Under no circumstances should this machine ever have riders. Keep all bystanders, especially children, clear of this machine during use.



⚠ CAUTION - PIVOTING AUGER

Danger exists while pivot auger is moving. Clear area of all bystanders while setting pivoting auger. Exercise caution wherever you see this graphic.



⚠ CAUTION - PINCHING DANGER

Danger exists of pinching in the following areas: Folding Auger, Flow Control Gate. Clear area of all bystanders while unfolding auger and setting flow control gate.



SAFETY SIGN-OFF FORM

A sign-off sheet is provided for your record keeping to show that all personnel who will be working with the equipment have read and understand the information in the Operator's Manual and have been instructed in the safe operation of the equipment.

[illegible]

Operation

TO THE NEW OPERATOR OR OWNER

The Degelman Shuttlekart® is designed to transport grain into and out of locations where a grain truck or semi may have difficulty. Unloading may then be achieved into a truck trailer or grain hopper.

It is the responsibility of the owner or operator to read this manual carefully to learn how to operate the machine safely, and how to set it to provide maximum efficiency. Safety is everyone's business. By following safe operating practices, a safe environment is provided for the operator and bystanders.

The manual will take you step-by-step through your working day. By following the operating instructions in conjunction with a good maintenance program your machine will provide many years of trouble-free service.

PRINCIPLES OF OPERATION

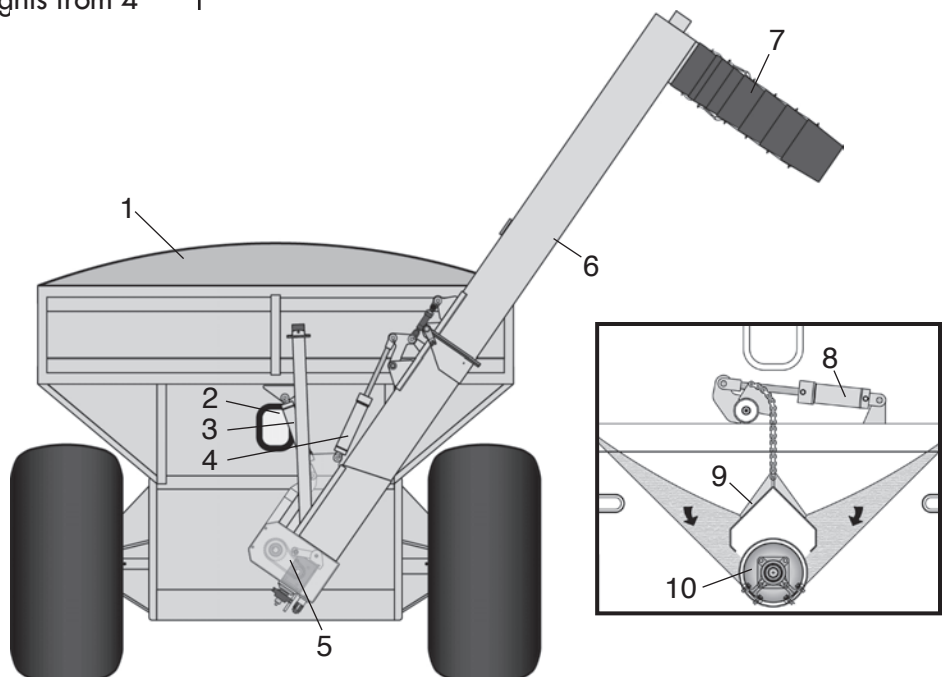
The Shuttlekart® 1150 can transport up to 1150 bushels of grain into and out of fields. Augers are driven with PTO. The unloading auger and drive system are pivoted with a 3" x 16" hydraulic cylinder - giving heights from 4' to 14' (1219 to 4267 mm).



OPERATING SAFETY

1. Read and understand the Operator's Manual before starting.
2. Stop engine, place all controls in neutral, set park brake and remove ignition key before servicing, adjusting or repairing.
3. Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
4. Do not allow riders.
5. Clear the area of bystanders, especially small children.
6. Stay well back from machine when operating. Keep others away.

1. Grain Tank
2. Viewing Window
3. Auger Pivot Cylinder
4. Auger Fold Cylinder
5. Auger Transition Box
6. Pivoting Auger
7. Auger Spout
8. Flow Control Cylinder
9. Flow Control Gate
10. Horizontal Auger



Operation

BREAK-IN

Although there are no operational restrictions on the Shuttlekart® when it is new, there are some mechanical checks that must be done to ensure the long term integrity of the unit. When using the machine for the first time, follow this procedure:

⚠ IMPORTANT: *It is extremely important to follow all of the Break-In procedures especially those listed in the "Before using" section below to avoid damage:*

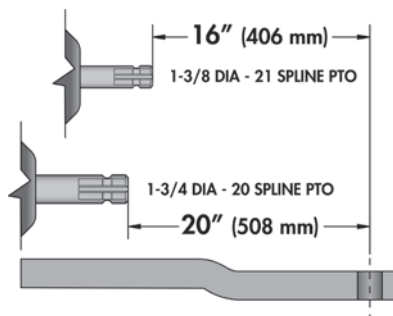
A. Before using:

1. Read Safety Info. & Operator's Manual.
2. Complete steps in "Pre-Operation Checklist".
3. Lubricate all grease points.
4. Check all bolt tightness.
5. Check tires. Inflate to **45 PSI (310 kPa)**.

B. After operating for 2 hours:

1. Check all hardware. Tighten as required.
2. Check all hydraulic system connections. Tighten if any are leaking.

⚠ IMPORTANT: *Be sure to set tractor drawbar to appropriate distance shown. Failure to do so can result in driveline damage.*



⚠ IMPORTANT: Do not use on a tractor equipped with a PTO shaft adapter to prevent mismatching of PTO speeds and over telescoping of the driveline.

PRE-OPERATION CHECKLIST

It is important for both personal safety and maintaining the good mechanical condition of the machine that this pre-operational checklist be followed.

Before operating the machine and each time thereafter, the following areas should be checked off:

1. Lubricate the machine per the schedule outlined in the "Maintenance Section".
2. Use only a tractor with adequate power to pull the Shuttlekart® under ordinary operating conditions. Minimum: **250 HP (186 KW)**
3. Use only a tractor equipped with 1000 RPM PTO. Set drawbar distance to correct setting as shown:
(Distance from end of PTO shaft to center of drawbar pin hole)
16" (406 mm) - 1-3/8 DIA - 21 Spline
20" (508 mm) - 1-3/4 DIA - 20 Spline

⚠ IMPORTANT: Do not use on a tractor equipped with a PTO shaft adapter to prevent mismatching of PTO speeds and over telescoping of the driveline.

4. Ensure that the machine is properly attached to the tractor using a drawbar pin with provisions for a mechanical retainer. Make sure that a retainer such as a Klik pin is installed.

NOTE: *It is important to pin the draw bar in the central location only.*

5. Tires are shipped from factory at only 25 PSI (172 kPa) for ease of towing. Inflate to **45 PSI (310 kPa)** before using.
6. Ensure that a safety chain on the hitch is installed.
7. Check oil level in the tractor hydraulic reservoir. Top up as required.
8. Inspect all hydraulic lines, hoses, fittings and couplers for tightness. Tighten if there are leaks. Use a clean cloth to wipe any accumulated dirt from the couplers before connecting to the tractor's hydraulic system.

Operation

HOOK-UP / UNHOOKING

The Shuttlekart® should always be parked on a level, dry area that is free of debris and foreign objects. Follow this procedure to hook-up:

1. Clear the area of bystanders and remove foreign objects from the machine and working area.
2. Make sure there is enough room to back the tractor up to the trailer hitch.
3. Start the tractor and slowly back it up to the hitch point.
4. Stop the tractor engine, place all controls in neutral, set park brake and remove ignition key before dismounting.
5. Use the trailer jack to raise or lower the hitch to align with the drawbar.
6. Install a drawbar pin with provisions for a mechanical retainer such as a KLIK pin. Install the retainer.
7. Install a safety chain between the tractor and the hitch.
8. Connect the hydraulics. To connect, proceed as follows:
 - Use a clean cloth or paper towel to clean the couplers on the ends of the hoses. Also clean the area around the couplers on the tractor. Remove the plastic plugs from the couplers and insert the male ends.
- Be sure to match the pressure and return line to one valve bank.
9. Raise the hitch jack and rotate it 90° to place in its stowed position.
10. When unhooking from the tractor, reverse the above procedure.

HITCH CLEVIS ADJUSTMENT

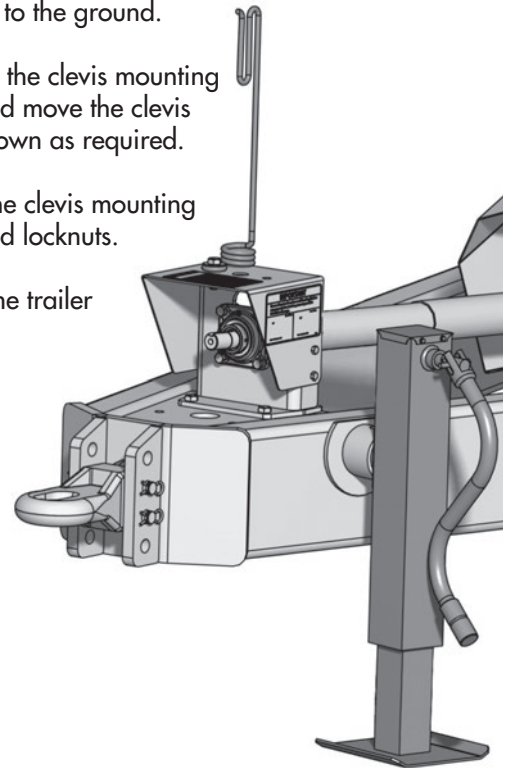
ADJUSTABLE HITCH CLEVIS

Refer to Figure 3. To adjust the hitch clevis location, hook-up the tractor to the trailer hitch, following the procedure in section "HOOK-UP/UNHOOKING". Stand back and check to see if the trailer hitch is parallel to the ground.

Remove the clevis mounting bolts and move the clevis up or down as required.

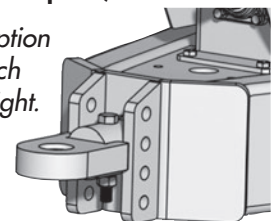
Install the clevis mounting bolts and locknuts.

Lower the trailer hitch.



FIXED HITCH TONGUE (Scale Option)

NOTE: If the weigh scales option was purchased, the front hitch tongue will be at a fixed height.



Operation

LOADING

The Shuttlekart® 1150 is designed to hold and transport 1150 bushels of grain safely. Before loading, however, take the following precautions:

1. Clear immediate area of all bystanders.
2. Be sure all cleanouts are closed.
3. Be sure flow control gate is completely closed.

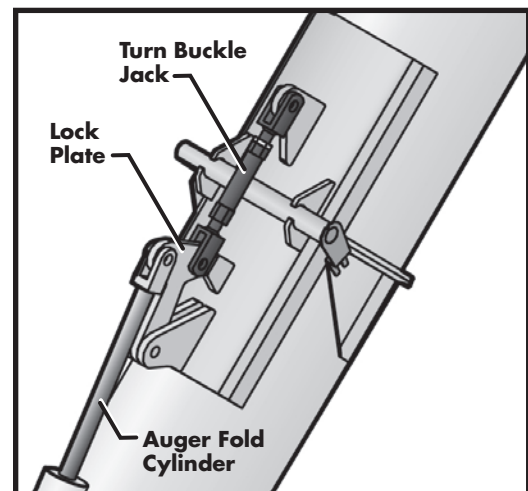
UNLOADING

UNFOLDING PIVOT AUGER

The pivot auger is unfolded simply by extending the auger fold cylinder. In time, however, the turn buckle jack at the auger joint will have to be adjusted (see adjustments).

The correct setting for the turnbuckle jack is determined as follows:

1. Extend auger fold cylinder.
2. As auger moves into unfolded position, listen for the sound of the lock plate clicking into place. There should be an distinctly audible "click" of steel on steel as unfolding finishes.
3. If the lock plate does not click or the click is barely audible, you will need to adjust the turnbuckle jack. - See Adjustments Section.



Operation

SETTING UNLOAD HEIGHT

Unloading height is set by extending or retracting the auger pivot cylinder. Unloading range is from approximately 4' to 14' (1219 to 4267 mm).

⚠ IMPORTANT: Exercise extreme caution while setting, loading or unloading the Shuttlekart®. The following dangerous situations exist: Drowning, rotating driveline, rotating auger and crushing or pinching due to moving pivot auger.

UNLOADING

The Flow Control Gate

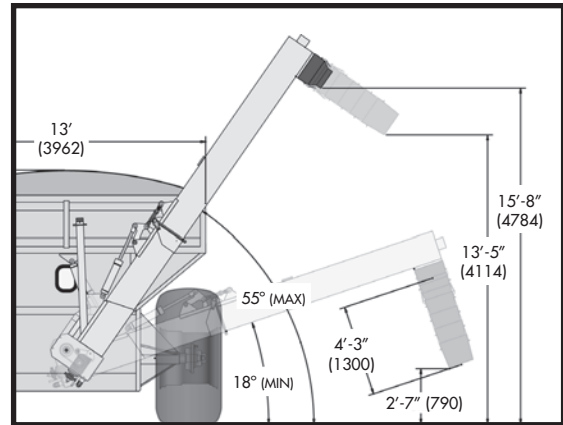
The flow control gate effectively regulates the amount of grain moving into the horizontal auger. It is adjusted by extending or retracting the 3" x 8" hydraulic cylinder shown.

The degree to which the gate is open can be seen on the OPEN/CLOSED gauge at the front of the Shuttlekart®.

Use the following procedure for unloading:

1. Position Shuttlekart® and truck/auger as desired.
2. Start augers running BEFORE opening flow control gate. Commence unloading.
3. If unloading slows or stalls it may be due to overloading the augers. Lower flow control as required.
4. If augers are loaded before running and cannot start, it may be necessary to close off the flow control gate and allow some grain to pass through cleanouts until the augers can start running.

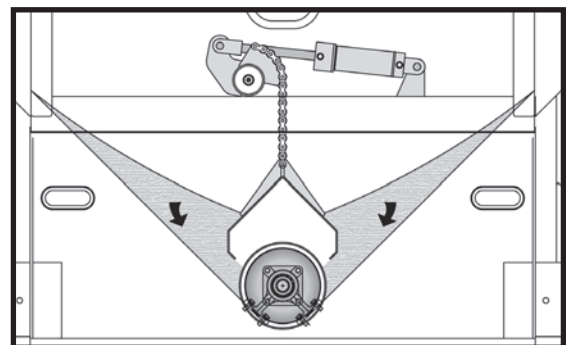
⚠ IMPORTANT: To avoid damage to the Shuttlekart® and unloading auger, do not drive or transport with a fully loaded unloading auger. Always close flow control gate and allow auger to clean out if stopping auger during unloading.



WARNING



1. Pivoting auger may cause injury if caution is not exercised.
2. Stay clear of pivoting auger while in motion.



CLOSED

OPEN

Operation

TRANSPORT

NOTE: Shuttlekart® is created primarily for transporting grain from the field to either a truck or bin. It is not recommended that it be used to haul grain extensive distances.

Use the following guidelines while transporting the Shuttlekart®:

1. MAXIMUM RECOMMENDED TRANSPORT SPEED: 30 km/h or 19 mph. (Road Conditions. Field speeds may be lower.)
2. Fully raise and fold pivot auger into transport position.
3. Be sure hazard lights are flashing and SMV decal is visible.
4. Use a safety chain.
5. Fold retractable ladder.
6. Be sure cleanouts are closed.

⚠ IMPORTANT: UNDER NO CIRCUMSTANCES SHOULD THERE EVER BE RIDERS WHILE THE SHUTTLEKART® IS IN TRANSPORT.

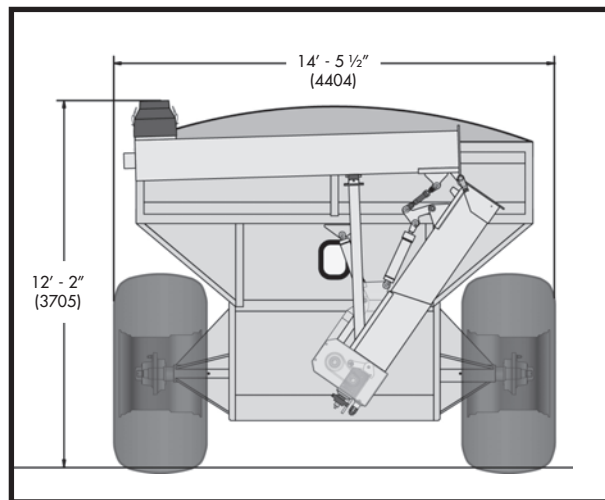


⚠ IMPORTANT: To avoid damage to the Shuttlekart® and unloading auger, do not drive or transport with a fully loaded unloading auger. Always close flow control gate and allow auger to clean out if stopping auger during unloading.



TRANSPORT SAFETY

1. Use only a drawbar pin with a mechanical retainer, and a safety chain.
2. Clean the SMV sign, lights and reflectors before starting.
3. Always use hazard flashing lights on tractor.
4. Travel at a safe speed. Use care when making corners or meeting traffic.



Operation

CLEANOUT

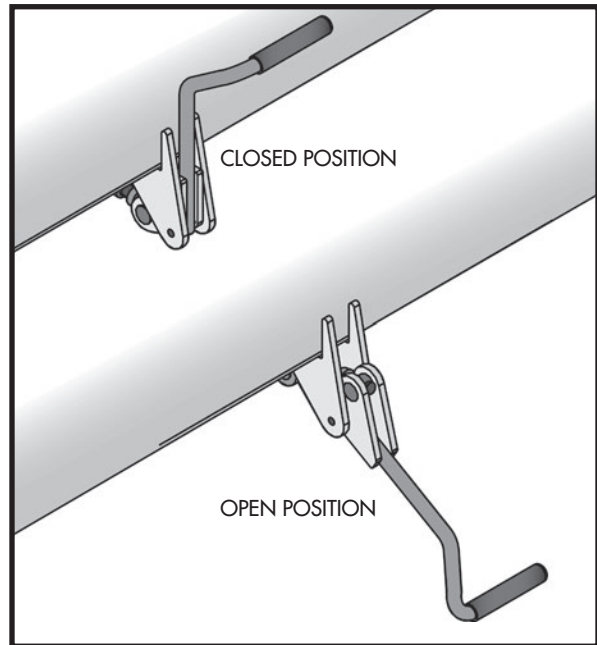
Cleanout is achieved in two ways. There are two cleanout doors that run the full length of the horizontal auger, and there is a cleanout door at the bottom of the auger transition box.

1. The bottom cleanout doors are controlled by a pair of over-centre lever handles. Open and closed positions are as shown. The door should close quite firmly, but not so firm that one person cannot close it.

NOTE: *If grain is escaping through these cleanout doors, it may be necessary to re-adjust the mechanism to assure proper closing. (See Adjustments Section).*

2. The transition box cleanout consists of a plate that slides in and out of the auger transition box. It is locked into place by the 3/8" x 1-1/4" bolt shown.

NOTE: *Be sure to replace 3/8" bolt firmly after cleanout has been completed.*



STORAGE

Since the unit can be used in extremely adverse conditions during the season, the machine should be carefully prepared for storage to ensure that all dirt, mud, debris and moisture has been removed.

Follow this procedure when preparing to store:

1. Wash the entire machine thoroughly using a water hose or pressure washer to remove all dirt, mud, debris or residue.
2. Inspect all parts to see if anything has become entangled in them. Remove the entangled material.
3. Lubricate all grease fittings to remove any moisture in the bearings.
4. Inspect all hydraulic hoses, fittings, lines and couplers. Tighten any loose fittings. Replace any hose that is badly cut, nicked or abraded or is separating from the crimped end of the fitting.
5. Touch up all paint nicks and scratches to prevent rusting.
6. Oil the exposed rams on the hydraulic cylinder to prevent rusting.
7. Open cleanouts to allow any moisture to escape and prevent freezing over winter.
8. Select an area that is dry, level and free of debris.



STORAGE SAFETY

1. **Store in an area away from human activity.**
2. **Do not allow children to play on or around the stored unit.**
3. **Be sure retractable ladder is up.**

Service & Maintenance

SERVICE

LUBRICANTS

1. Grease: Use an SAE multipurpose grease with extreme pressure (EP) performance. Also acceptable is an SAE multipurpose lithium base grease.
2. Oil: The Shuttlekart® 1150 is equipped with an automatic oiler that lubricates the chains. It is activated when the flow control cylinder is used. It is important to maintain the level of oil in the reservoir to ensure it functions properly.

IMPORTANT: Use new 30 weight oil. In cold weather use a SAE 10 or a mixture of two parts oil with one part diesel fuel. A more detailed recommendation is as follows:

Below 20 °F (Below -7 °C) - SAE 10
20-40 °F (-7 to 4 °C) - SAE 20
40-100 °F (4 to 38 °C) - SAE 30
100-120 °F (38 to 49 °C) - SAE 40
120-140 °F (49 to 60 °C) - SAE 50

3. Storing Lubricants: Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants.

GREASING

Use the Maintenance Checklist provided to keep a record of all scheduled maintenance:

1. Use only a hand-held grease gun for all greasing.
2. Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt.
3. Replace and repair broken fittings immediately.
4. If fittings will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.
5. Inject grease until you see grease being expelled from the bearing or bushing areas.



MAINTENANCE SAFETY

1. Read Operator's Manual before servicing, or maintaining machine.
2. Stop tractor engine, set park brake and remove ignition key before servicing, adjusting, repairing or maintaining.
3. Be careful when working around or maintaining a high pressure hydraulic system. Wear the proper hand and eye protection when searching for a pin hole leak in a hose or fitting.
4. Place safety stands or large blocks under the frame before removing the tires or working beneath the machine.

MAINTENANCE CHECKLIST

Weekly - 40 Hours

- Grease Driveline Components
- Grease Cylinder Pins
 - Flow Control Cylinder
 - Auger Fold Cylinder
 - Auger Pivot Cylinder
- Check automatic oiler reservoir level

Seasonal - 200 Hours

- Oil chains during first start-up of season or after long periods of inactivity
- Grease all Bearings Units
 - Horizontal Auger - front and rear
 - Pivot Auger - top and bottom
 - PTO Bearing by hitch
- Grease Folding Auger Hinge Pin and components

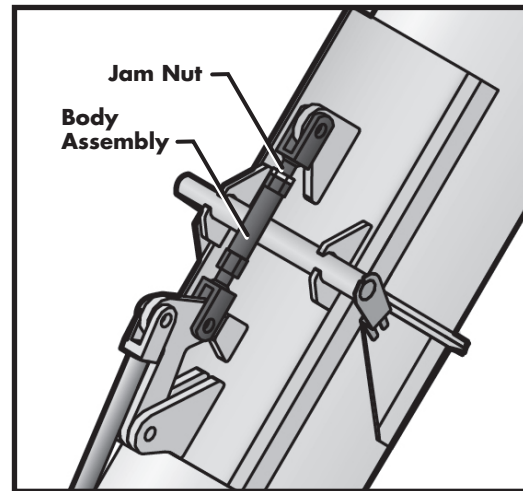
ADJUSTMENTS

ADJUSTING TURNBUCKLE JACK

As time goes on, it will be necessary to tighten the joint on the folding auger. This procedure should be done once annually.

1. Refer to Figure 12. Loosen Jam Nut from body assembly.
2. To adjust length of turnbuckle jack, turn the body assembly in small increments until desired length is reached.

NOTE: *It may only be necessary to lengthen the jack a small amount. A quarter turn at a time will likely be sufficient.*

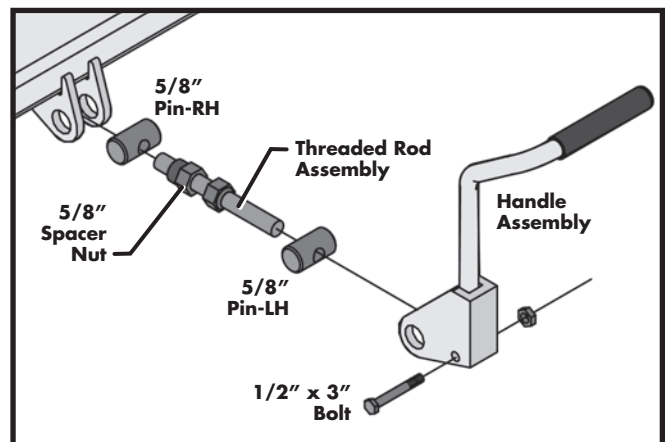


ADJUSTING CLEANOUT DOORS

As time goes on, it may be necessary to tighten the cleanout doors. This procedure should be done once annually.

1. Refer to Figure 13. Open cleanout mechanism.
2. Loosen 5/8" Spacer Nut.
3. To tighten door, turn threaded rod assembly towards the LH 5/8" Pin. Be sure 5/8" Spacer Nut is tightened when finished.
4. To loosen door, turn threaded rod assembly towards the RH 5/8" Pin. Be sure 5/8" Spacer Nut is tightened when finished.

NOTE: *It may only be necessary to adjust the cleanout door a small amount. A quarter to half turn of the threaded rod assembly at a time will likely be sufficient.*



Service & Maintenance

BOLT TORQUE

CHECKING BOLT TORQUE

The tables shown below give correct torque values for various bolts and capscrews. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

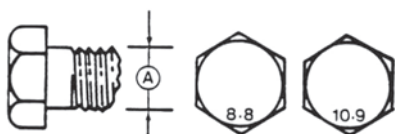
IMPERIAL TORQUE SPECIFICATIONS

BOLT DIAMETER "A"	BOLT TORQUE			
	N.m	SAE 5 (ft-lb)	N.m	SAE 8 (ft-lb)
1/4"	12	(9)	16	(12)
5/16"	24	(18)	34	(25)
3/8"	41	(30)	51	(45)
7/16"	63	(50)	95	(70)
1/2"	101	(75)	149	(110)
9/16"	150	(110)	210	(155)
5/8"	210	(155)	290	(215)
3/4"	365	(270)	520	(385)
7/8"	590	(435)	840	(620)
1"	895	(660)	1250	(930)



METRIC TORQUE SPECIFICATIONS

BOLT DIAMETER "A"	BOLT TORQUE			
	N.m	8.8 (ft-lb)	N.m	10.9 (ft-lb)
M3	.5	(.4)	1.8	(1.3)
M4	3	(2.2)	4.5	(3.3)
M5	6	(4)	9	(7)
M6	10	(7)	15	(11)
M8	25	(18)	35	(26)
M10	50	(37)	70	(52)
M12	90	(66)	125	(92)
M14	140	(103)	200	(148)
M15	225	(166)	310	(228)
M20	435	(321)	610	(450)
M24	750	(553)	1050	(774)



HYDRAULIC FITTING TORQUE

TIGHTENING FLARE TYPE TUBE FITTINGS *

1. Check flare and flare seat for defects that might cause leakage.
2. Align tube with fitting before tightening.
3. Lubricate connection and hand tighten swivel nut until snug.
4. To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body and with the second tighten the swivel nut to the torque shown.

* The torque values shown are based on lubricated connections as in reassembly.

Tube Size OD (in.)	Nut Size Across Flats (in.)	Torque Value*		Recommended Turns to Tighten (After Finger Tightening)	
		(N.m)	(lb-ft)	(Flats)	(Turns)
3/16	7/16	8	6	1	1/6
1/4	9/16	12	9	1	1/6
5/16	5/8	16	12	1	1/6
3/8	11/16	24	18	1	1/6
1/2	7/8	46	34	1	1/6
5/8	1	62	46	1	1/6
3/4	1-1/4	102	75	3/4	1/8
7/8	1-3/8	122	90	3/4	1/8

Service & Maintenance

HYDRAULIC CYLINDER REPAIR

When cylinder repair is required, clean off unit, disconnect hoses and plug ports before removing cylinder.

NOTE: Complete rebuilt cylinders may be available.
Contact your dealer for further information.

DISASSEMBLY

1. Loosen lock ring and turn off end cap.
2. Carefully remove piston, rod and cap combination.
3. Disassemble piston from rod by removing lock nut.

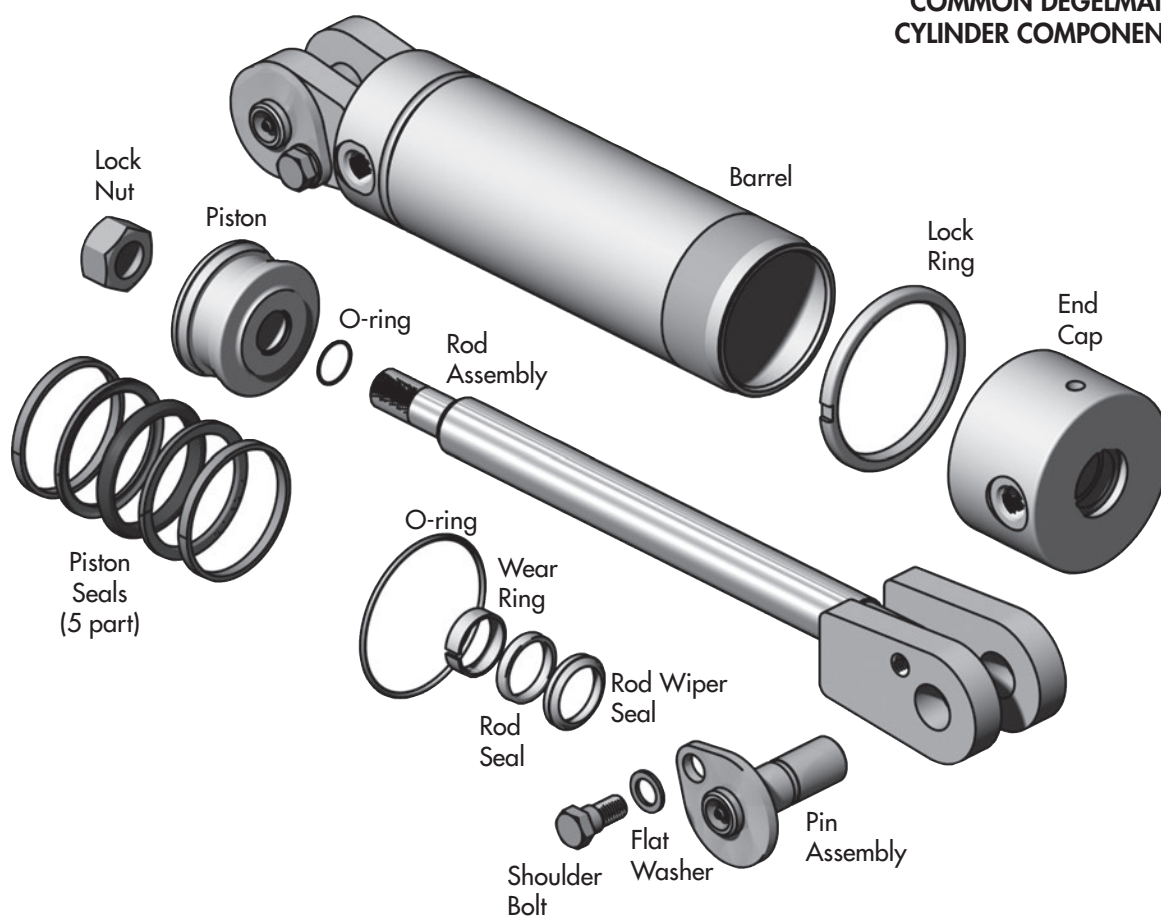
NOTE: DO NOT clamp rod by chrome surface.

4. Slide off end cap.
5. Remove seals and inspect all parts for damage.
6. Install new seals and replace damaged parts with new components.

ASSEMBLY

1. Reinstall rod through end cap.
2. Secure piston to rod with lock nut.
Torque to 225 ft-lb (305 N·m).
3. With cylinder body held gently in a vise, insert piston and rod combination using a slight rocking motion.
4. Thread lock ring fully onto barrel.
5. Turn end cap fully against lock ring then back off end cap to align ports.
6. Tighten lock ring against end cap using a punch and hammer.

COMMON DEGELMAN CYLINDER COMPONENTS



Service & Maintenance

WHEEL HUB REPAIR

⚠ IMPORTANT: Be sure to block up unit securely before removing tires.

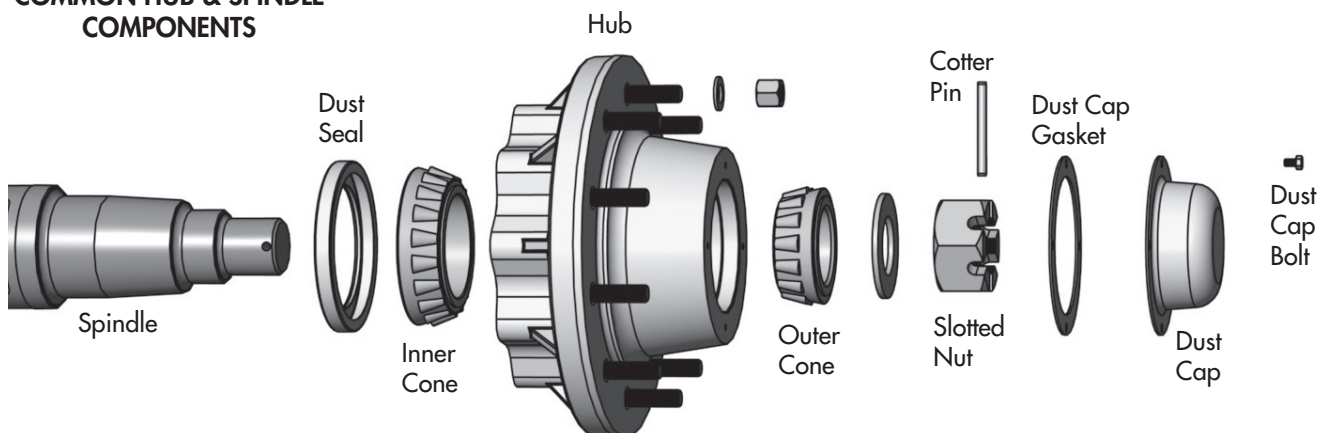
DISASSEMBLY

1. Un-bolt dust cap.
2. Remove cotter pin from nut.
3. Remove nut and washer.
4. Pull hub off spindle.
5. Dislodge the inner cone bearing and dust seal.
6. Inspect cups that are press fitted into hub for pits or corrosion and remove if necessary.
7. Inspect and replace defective parts with new ones.

ASSEMBLY

1. If cups need replacing, be careful to install them gently and evenly into hub until they are fully seated.
2. Apply a thick wall of grease inside hub. Pack grease in cones.
3. Install dust seal as illustrated, and inner cone.
4. Position hub onto spindle and fill surrounding cavity with grease.
5. Assemble outer cone, washer and nut.
6. Tighten nut while rotating hub until there is a slight drag.
7. Turn nut back approximately 1/2 turn to align cotter pin hole with notches on nut.
8. Install cotter pin and bend legs sideways over nut.
9. Fill dust cap half full of grease and gently tap into position.
10. Pump grease into hub through grease fitting until lubricant can be seen from dust seal.

COMMON HUB & SPINDLE COMPONENTS



Troubleshooting

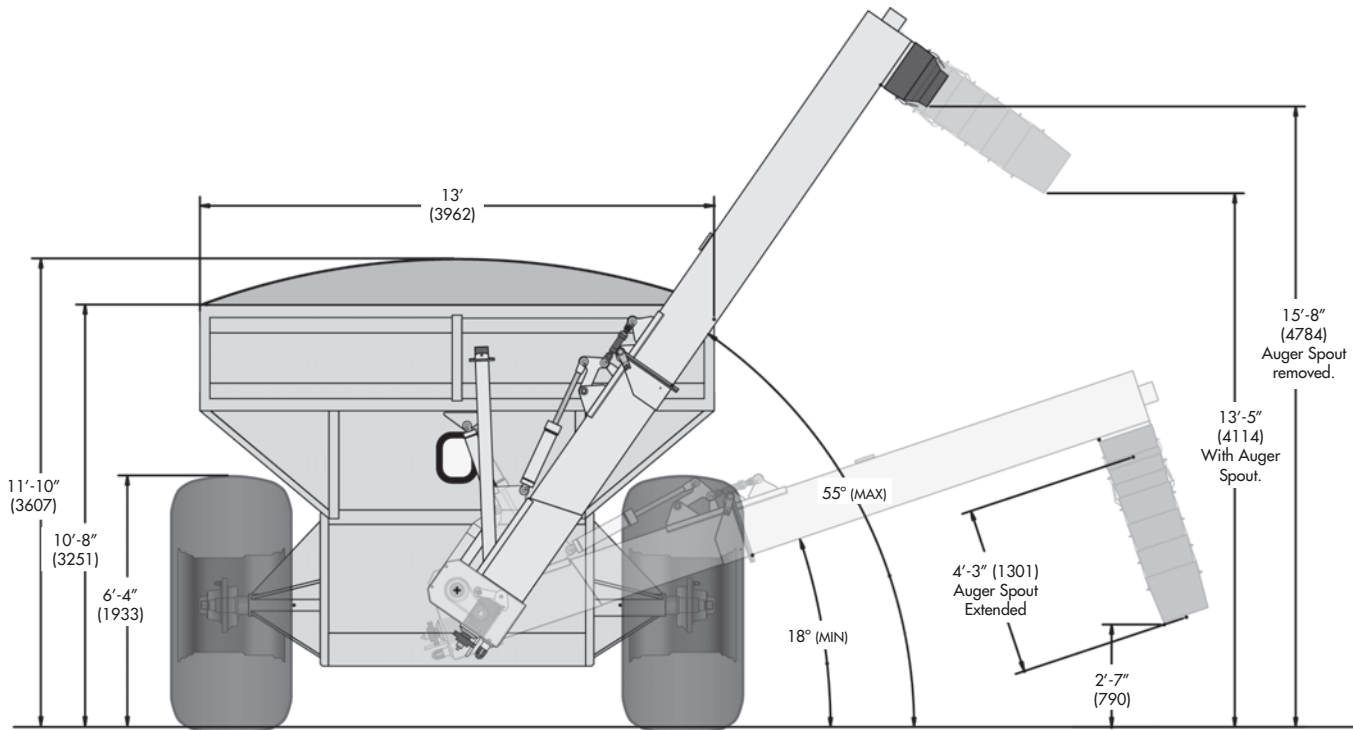
TROUBLESHOOTING

In the following section, we have listed some of the problems, causes and solutions that you may encounter. If you encounter a problem that is difficult to solve, even after having read through this troubleshooting section, please call your local dealer or distributor. Before you call, have this manual and the serial number from your unit ready.

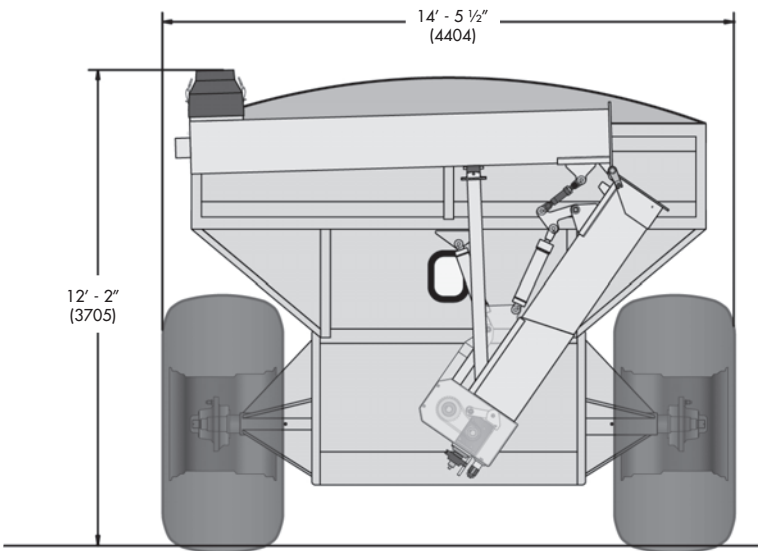
PROBLEM	CAUSE	SOLUTION
Hydraulics creep down during operation.	Tractor hydraulic leak.	To verify, raise auger half way up, disconnect at tractor. Observe if auger creeps down. If not repair tractor hydraulics.
	Damaged hose or fittings.	Search for leaks with a piece of paper (not by hand). Repair as necessary.
Oil accumulation on cylinder shaft.	Hydraulic cylinder leak.	Replace seals or damaged components.
	Oil bypassing seals.	Seal manufacturer advises that small amounts of oil getting past seals is desirable. If problem becomes excessive, replace seals.
Unload too slow. Unload stalls.	Augers may be overloaded.	When unloading, start auger before opening flow control gate. If grain is already in augers, it may be necessary to allow some of it to escape through the cleanout. (Note: <i>Do not drive with unloading auger full. Clean out unloading auger before all transport.</i>)
Grain escaping through cleanout.	Cleanout latch assembly too loose.	Tighten latch assembly annually. <i>See adjustments.</i>
	Neoprene seal may be worn or missing.	Replace as required.
Grain escaping through joint in pivot auger.	Neoprene seal may be worn or missing.	Replace as required.
	Pivot auger locking assembly too loose.	Tighten locking assembly annually. <i>See adjustments.</i>

Specifications

UNLOADING AUGER CONFIGURATIONS & GENERAL DIMENSIONS

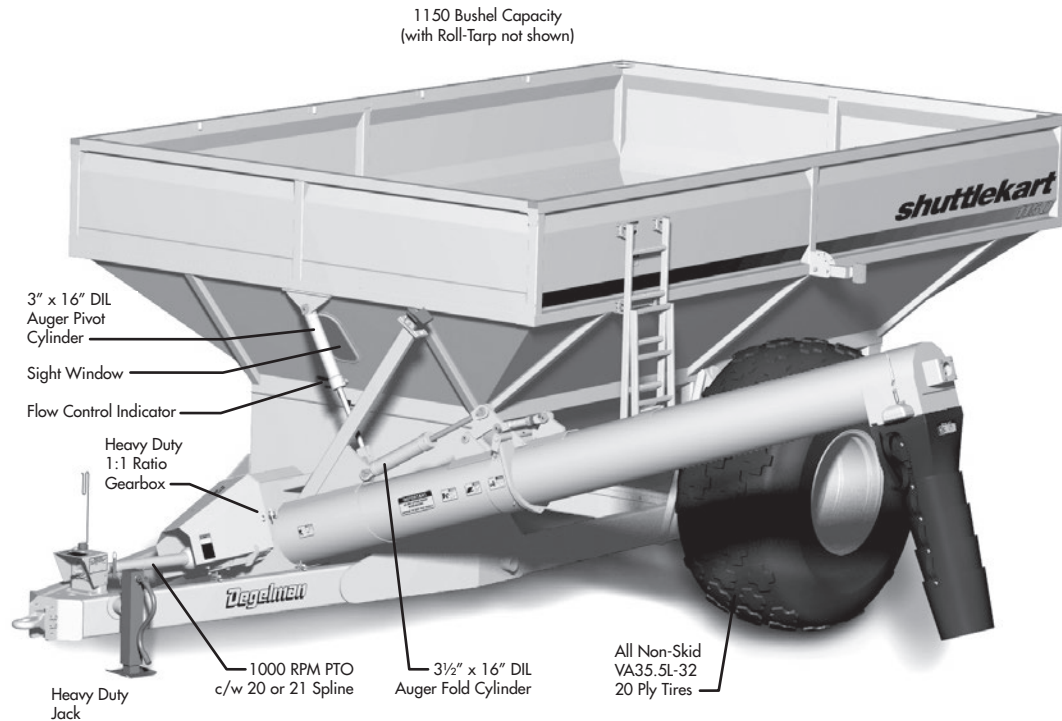


Fully Raised & Fully Lowered Positions



Folded/Transport Position

Specifications



SPECIFICATIONS

OTHER FEATURES AND SPECIFICATIONS

- 1150 Bushel Capacity
- Pivot Auger Design
- Self-Supporting Box Design
- Full Length Bottom Cleanout.
- Cleanout on transition box.
- Double #60 long life auger drive chain.
- Automatic Chain Oiler.
- Fully Shielded.
- Floating Bearing at end of unloading auger.
- Inside steps & catwalk.
- Integral frame/axle design.
- 4" x 10" x 3/8W frame material.
- Heavy Duty Jack.
- Self-adjusting chain tighteners.
- Auger Spout (Flexible/Removable).
- Auger Unloading Light.
- 200 bushels/minute unloading time (approx).
- Shut-off Flow Control Gate.
- Full Pitch 5/16" Flighting.
- Heavy Duty Gearbox & Driveline.
- Large Sight Glass.
- ANS VA35.5L-32 20 Ply Tires.
- High Frame Clearance.
- Heavy Duty Roll-Up Tarp Package.
- Fold-Away Ladder.
- Lighting Package.
- Optional Weigh Scales Package.

Warranty

2 Year **Limited Warranty - Agricultural Products**

Degelman Industries LP ("Degelman") warrants to the original purchaser of any new Degelman equipment, purchased from an authorized Degelman dealer, that the equipment will be free from defects in material and workmanship for a period of two (2) years from the date of delivery, for non-commercial use (including farm, institutional, government, and municipality) and (1) year from the date of delivery for commercial use. The obligation of Degelman to the purchaser under this warranty is limited to the repair or replacement of defective parts in the first year and to the provision, but not the installation of replacement parts in the second year. Degelman reserves the right to inspect any equipment or parts which are claimed to have been defective in material or workmanship.

This warranty limits its replacement or repair coverage to what is consistent with the warranty of Degelman's suppliers of purchased components.

Replacement or repair parts installed in the equipment covered by this limited warranty are warranted for ninety (90) days from the date of delivery of such part or the expiration of the applicable new equipment warranty period, which ever occurs later. Warranted parts shall be provided at no cost to the user at an authorized Degelman dealer during regular working hours. Warranted replacement parts will either be replaced or rebuilt at Degelman's discretion.

Disclaimer of implied warranties & consequential damages

This warranty shall not be interpreted to render Degelman Industries LP liable for injury, death, property damage or damages of any kind, whether direct, consequential, or contingent to property. Without limiting the generality of the foregoing, Degelman shall not be liable for damages resulting from any cause beyond its reasonable control, including, without limitation, loss of crops, any expense or loss of labour, supplies, rental machinery or loss of use.

No other warranty of any kind whatsoever, express or implied is made with respect to this sale; and all implied warranties of merchantability and fitness for a particular purpose which exceed the obligations set forth in this written warranty are hereby disclaimed and excluded from this sale. This exclusion shall not apply in any jurisdiction where it is not permitted by law.

This limited warranty shall not apply:

1. If, in the sole opinion of Degelman, the unit has been subjected to misapplication, abuse, misuse, negligence accident or incorrect off-site machine set-up.
2. To any goods that have sustained damage or deterioration attributable to a lack of routine maintenance (eg. Check and Re-torque of fastening hardware, Hydraulic fluid purities, drive train alignments, and clutch operation)
3. If parts not made or supplied by Degelman have been used in the connection with the unit, if, in the sole judgement of Degelman such use affects its performance, safety, stability or reliability.
4. If the unit has been altered or repaired outside of an authorized Degelman dealership in a manner which, in the sole judgement of Degelman, affects its performance, safety, stability or reliability.
5. To expendable or wear items such as (eg. Harrow tines, Rock Picker and Rock Rake wear teeth and replaceable bushings and pins.) and any other items that in the company's sole judgement are a wear item.

No employee or representative of Degelman Industries LP is authorized to change this limited warranty in any way or grant any other warranty unless such change is made in writing and signed by the Degelman Service Manager.

This limited warranty is subject to any future availability of supply, which may directly affect Degelman's ability to obtain materials or manufacture replacement parts.

Degelman reserves the right to make improvements in design or changes in specifications at any time, without incurring obligations to owners of equipment previously delivered.

This limited warranty is subject to compliance by the customer to the enclosed *Retail Customer's Responsibility Under Degelman Warranty*.

Make certain the warranty registration card has been forwarded to:

**Degelman Industries LP
Box 830 -272 Industrial Dr.
Regina, SK, Canada S4P 3B1**

Warranty

Retail Customer's Responsibility Under Degelman Warranty.

It is the retail customer and/or Operator's responsibility to read the Operator's Manual, to operate, lubricate, maintain and store the equipment in accordance with all instructions and safety procedures. Failure of the operator to read the operators manual is a misuse of this equipment.

It is the retail customer and/or operators responsibility to inspect the product and to have any part(s) repaired or replaced when continued operation would cause damage or excessive wear to other parts or cause safety hazard.

It is the retail customer's responsibility to deliver the product to the authorized Degelman dealer, from whom he purchased it, for service or replacement of defective parts, which are covered by warranty. Repairs to be submitted for warranty consideration must be made within forty-five days of failure.

It is the Retail Customer's responsibility for any cost incurred by the dealer for hauling of the product for the purpose of performing a warranty obligation or inspection.

WARRANTY INFORMATION

Make certain the warranty registration card has been forwarded to:

**Degelman Industries LP
Box 830 -272 Industrial Dr.
Regina, SK, Canada
S4P 3B1**

Always give your dealer the serial number of your Degelman product when ordering parts or requesting service or other information.

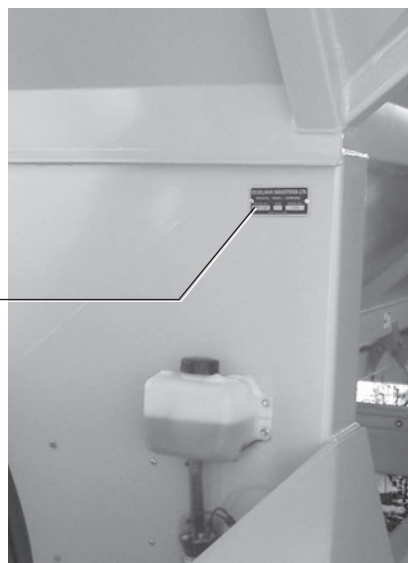
The serial number is located on the machine as shown in the diagram below. In the space provided record the model number, the serial number and the date of purchase to assist your dealer in providing you with prompt and efficient service.

SERIAL NUMBER: _____

MODEL NUMBER: _____

DATE OF PURCHASE: _____

Serial Number
Plate Location



shuttlekart®

1150

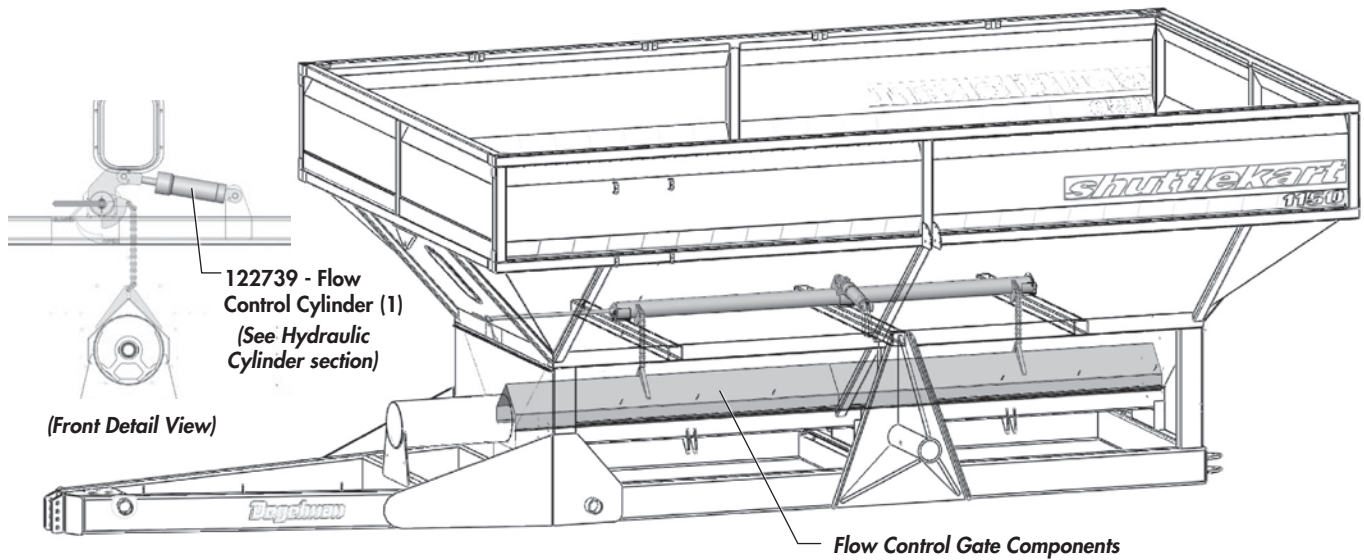
TABLE OF CONTENTS - PARTS SECTION

<i>Flow control gate components</i>	28
<i>Cleanout components</i>	29
<i>Horizontal auger components</i>	30-31
<i>Unloading auger components</i>	32-34
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<i>Automatic oiler</i>	41
<i>Hydraulic cylinders</i>	42
<i>Electrical wiring</i>	43-45
<i>Other components</i>	46-47
<i>Front hitch components</i>	48
<i>Weigh scales - Optional</i>	49
<i>Roll-up tarp</i>	50-51
<i>Hub / Spindle / Wheel components</i>	52

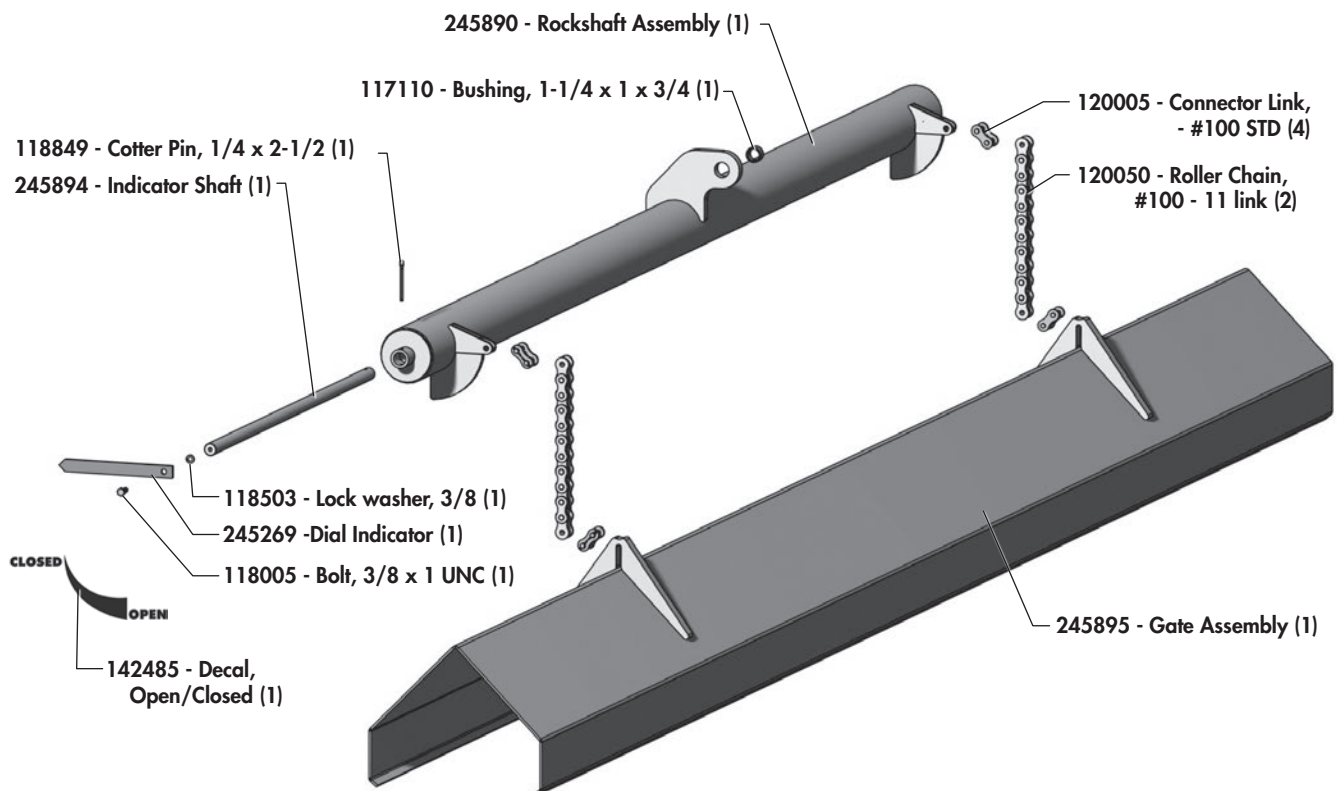


Flow Control Gate Components

FLOW CONTROL GATE LOCATION OVERVIEW

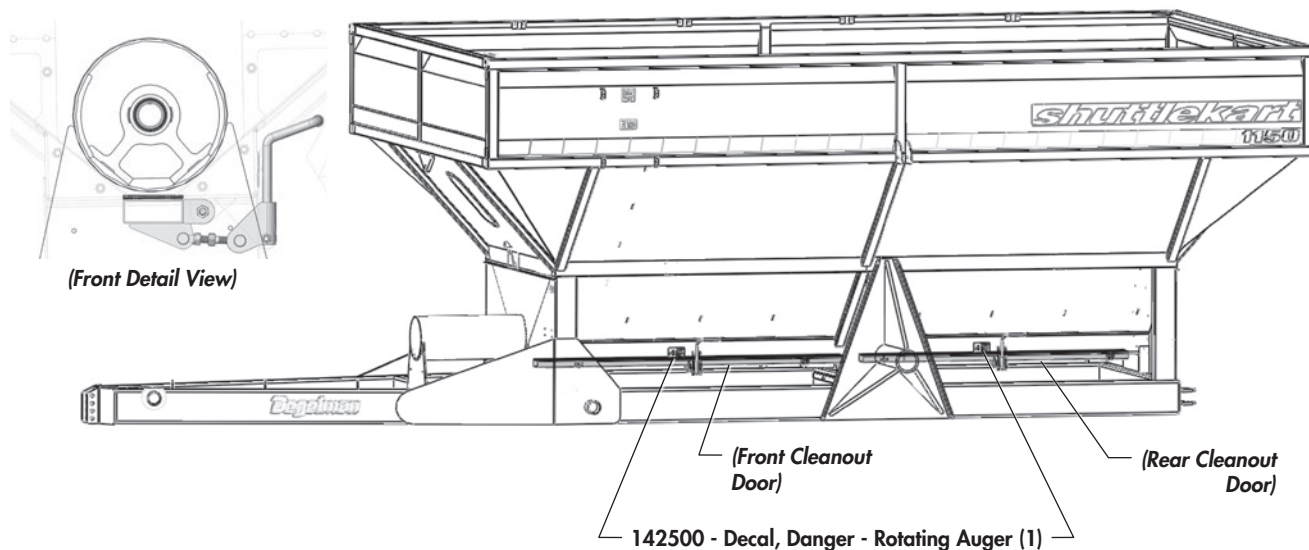


FLOW CONTROL GATE COMPONENTS



Cleanout Components

CLEANOUT DOORS LOCATION OVERVIEW



CLEANOUT DOORS

118447 - Lock nut, 5/8 GRC Unitorque (4)

118026 - Bolt, 5/8 x 2 UNC (4)

118420 - Lock nut, 1/2 UNC
Unitorque (2)

245246 - Handle Assembly (2)

118112 - Bolt, 1/2 x 3 UNC (2)

245255 - Pin, 5/8 UNC - LH (2)

245250 - Rod Assembly, Threaded (2)
(c/w 245252 - Spacer Nut, 5/8)

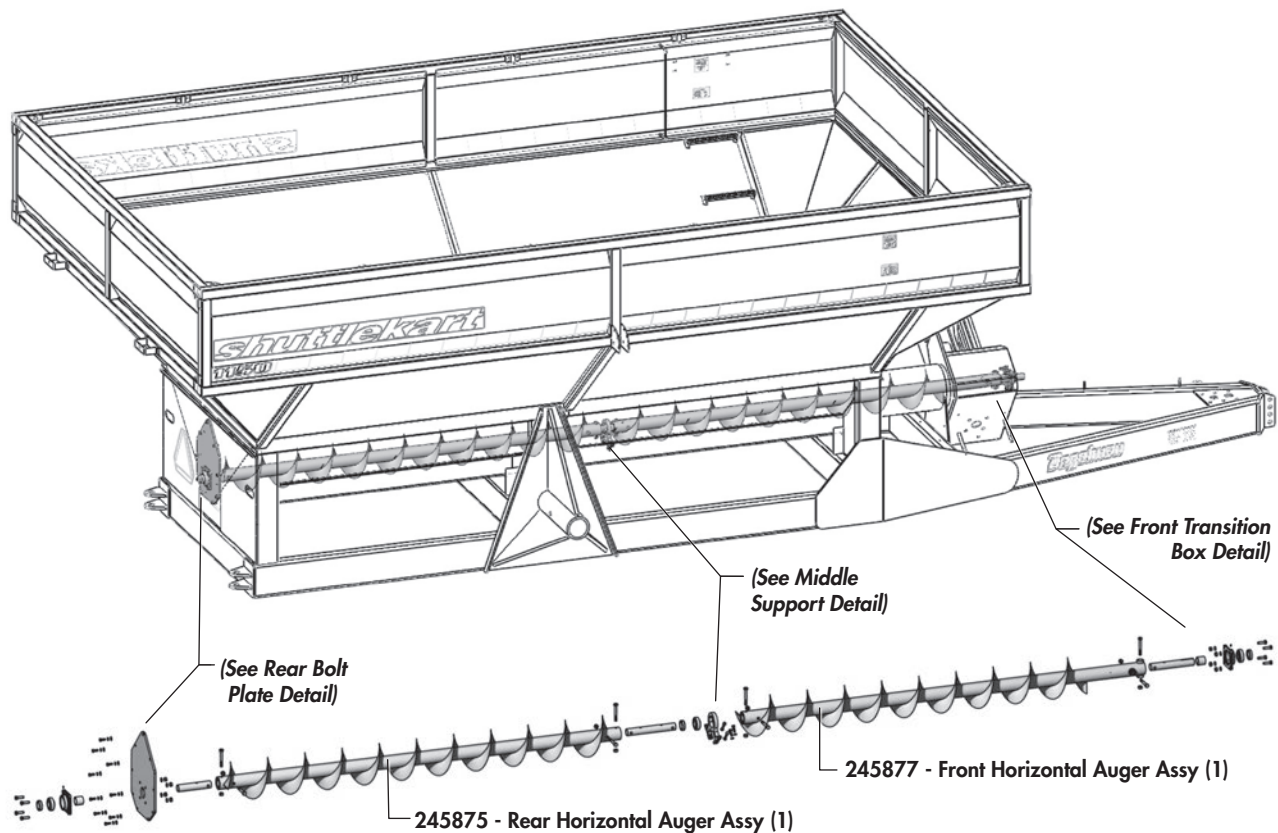
245254 - Pin, 5/8 UNC - RH (2)

245905 - Front Cleanout Door, 92-1/4 (1)
(c/w 245907 - Seal, 3/8 x 5)

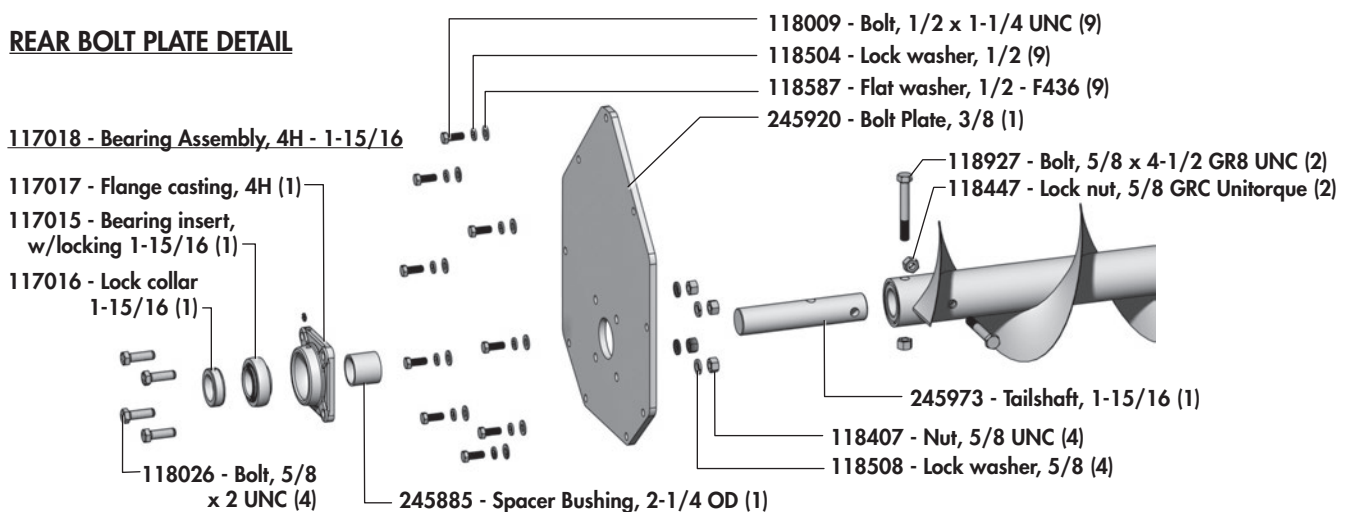
245900 - Rear Cleanout Door, 80 (1)
(c/w 245902 - Seal, 3/8 x 5)

Horizontal Auger Components

HORIZONTAL AUGER LOCATION OVERVIEW



REAR BOLT PLATE DETAIL



Horizontal Auger Components

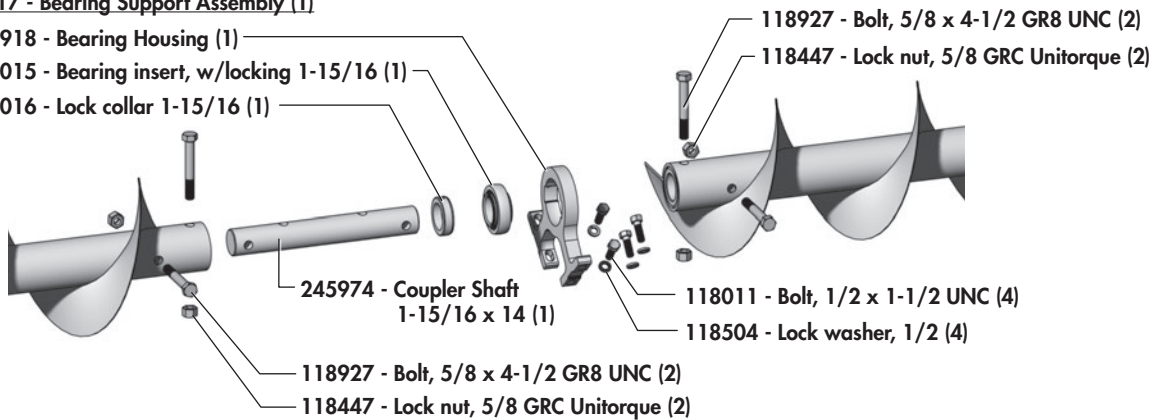
MIDDLE SUPPORT DETAIL

245917 - Bearing Support Assembly (1)

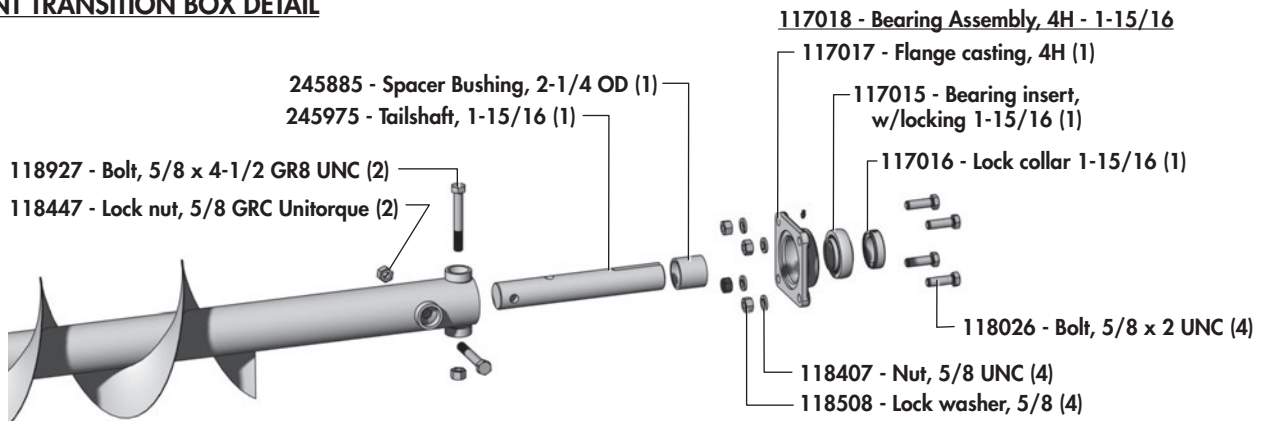
245918 - Bearing Housing (1)

117015 - Bearing insert, w/locking 1-15/16 (1)

117016 - Lock collar 1-15/16 (1)

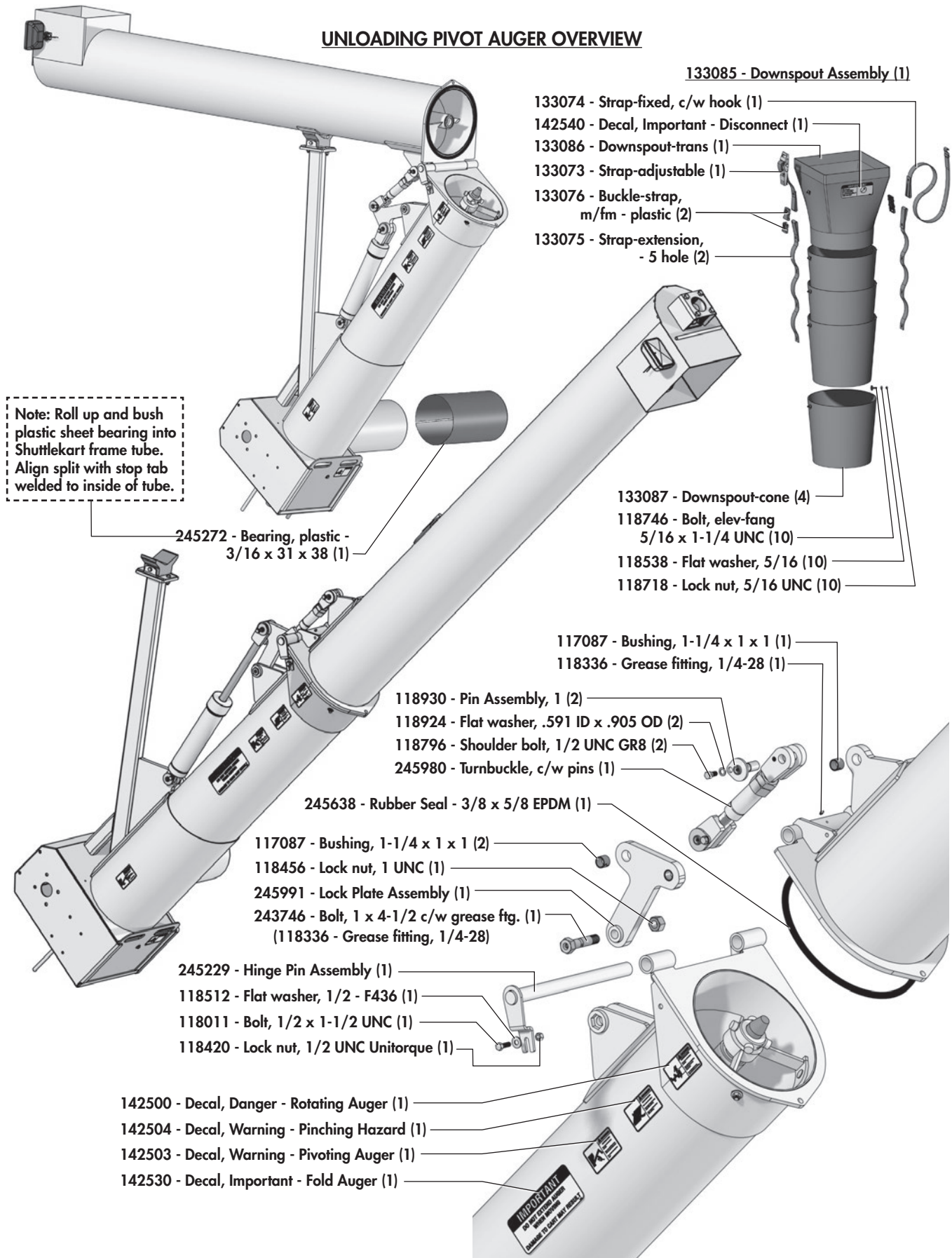


FRONT TRANSITION BOX DETAIL



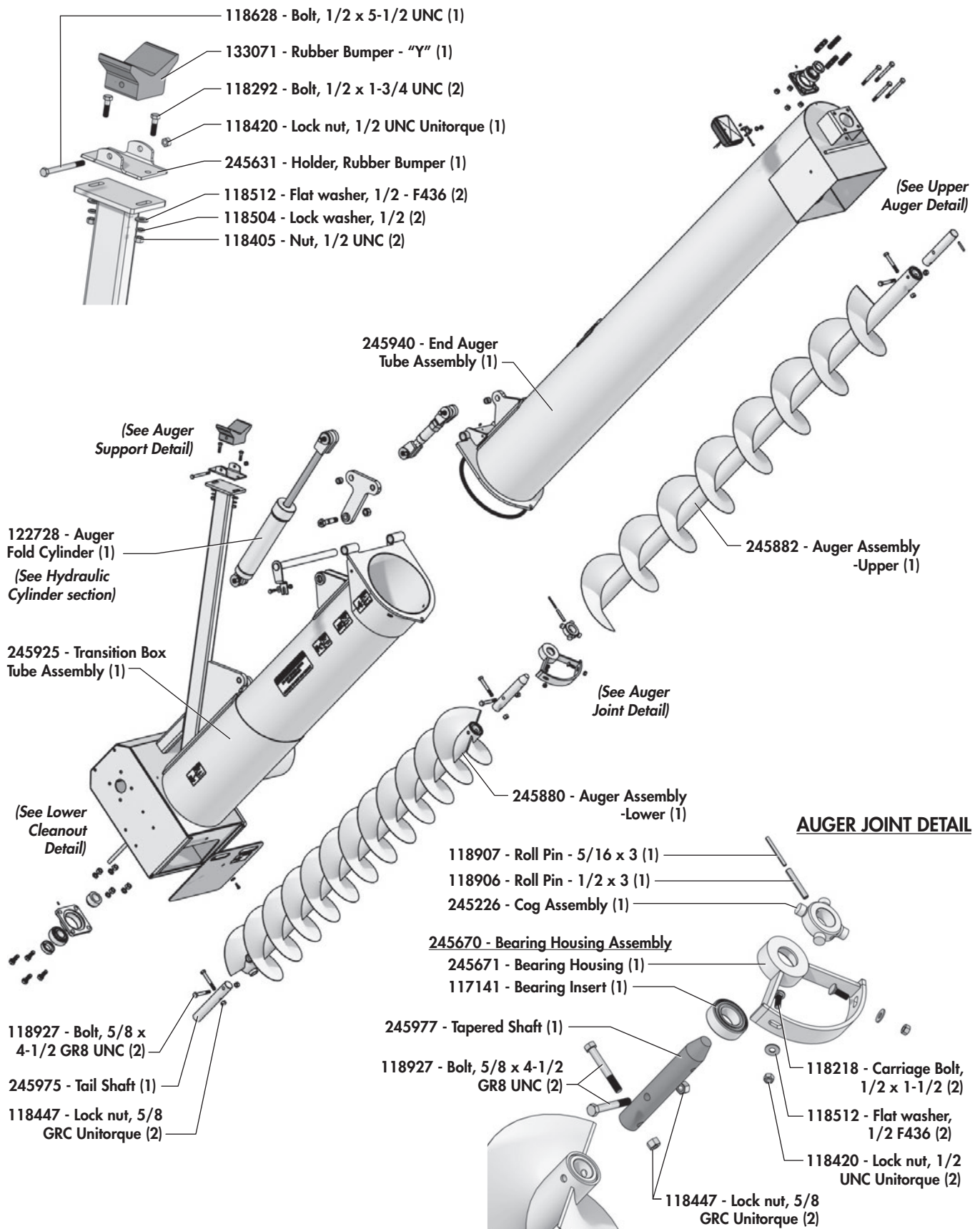
Unloading Auger Components

UNLOADING PIVOT AUGER OVERVIEW



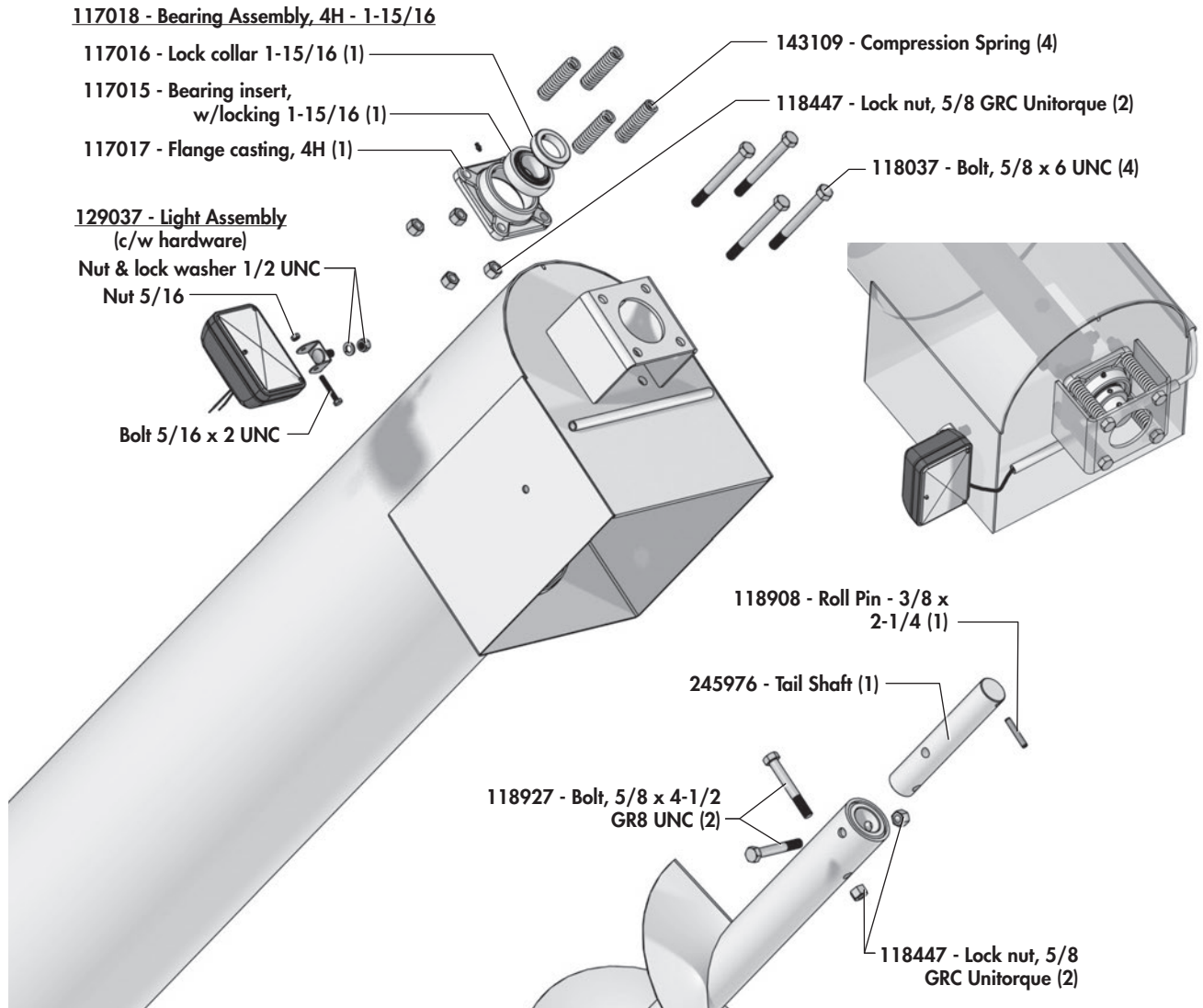
Unloading Auger Components

AUGER SUPPORT DETAIL

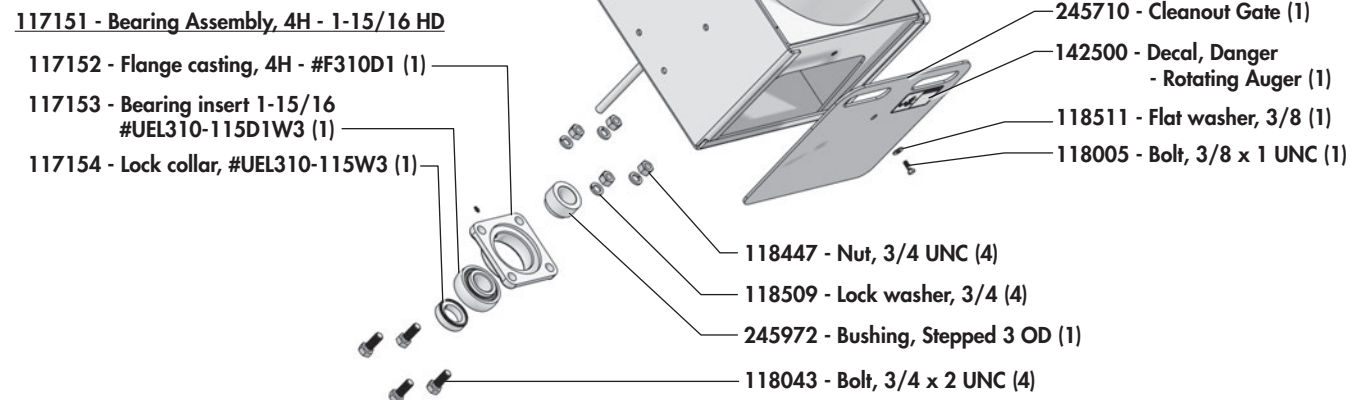


Unloading Auger Components

UPPER AUGER DETAIL

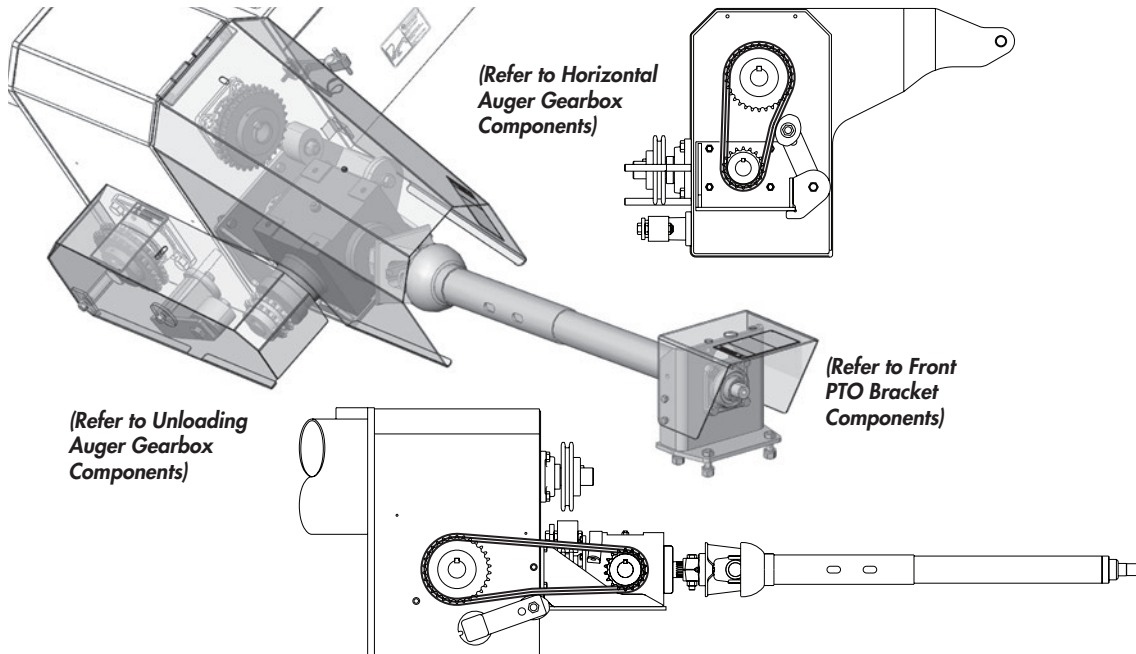


LOWER CLEANOUT DETAIL



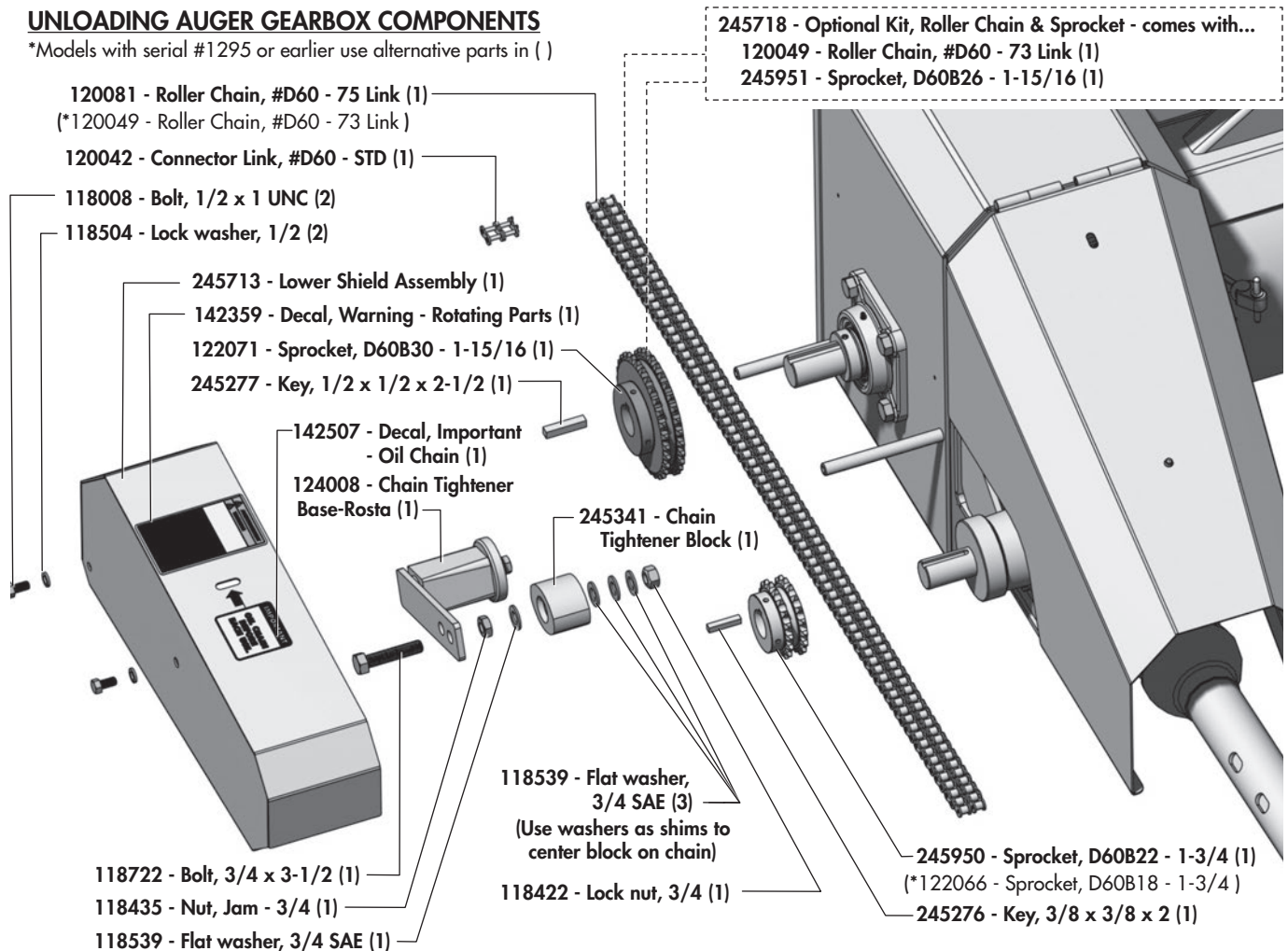
Driveline/Gearbox Components

DRIVELINE/GEARBOX LOCATION OVERVIEW



UNLOADING AUGER GEARBOX COMPONENTS

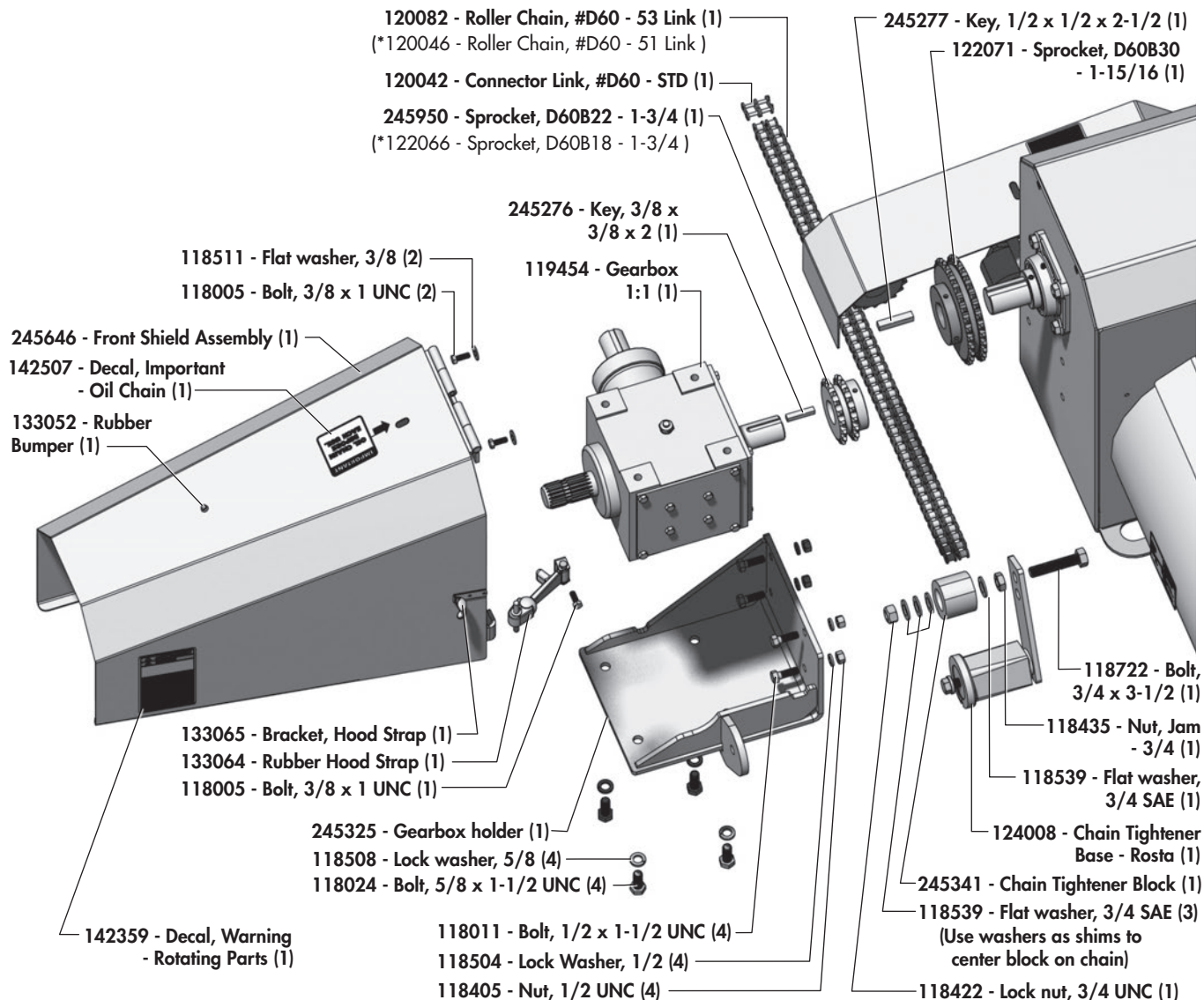
*Models with serial #1295 or earlier use alternative parts in ()



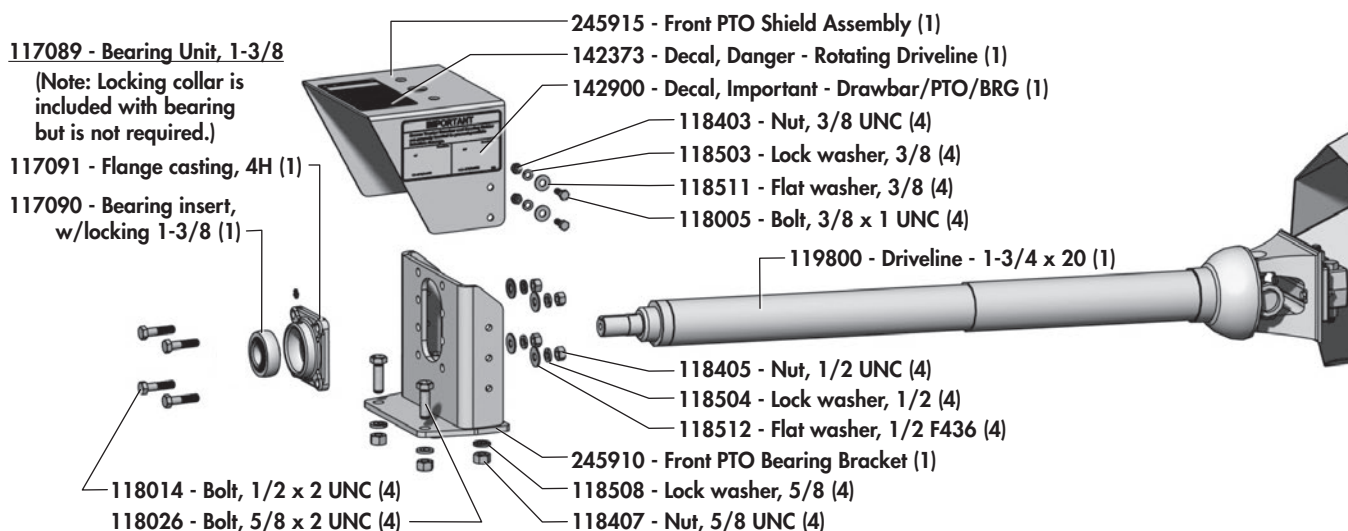
Driveline/Gearbox Components

HORIZONTAL AUGER GEARBOX COMPONENTS

*Models with serial #1295 or earlier use alternative parts in ()

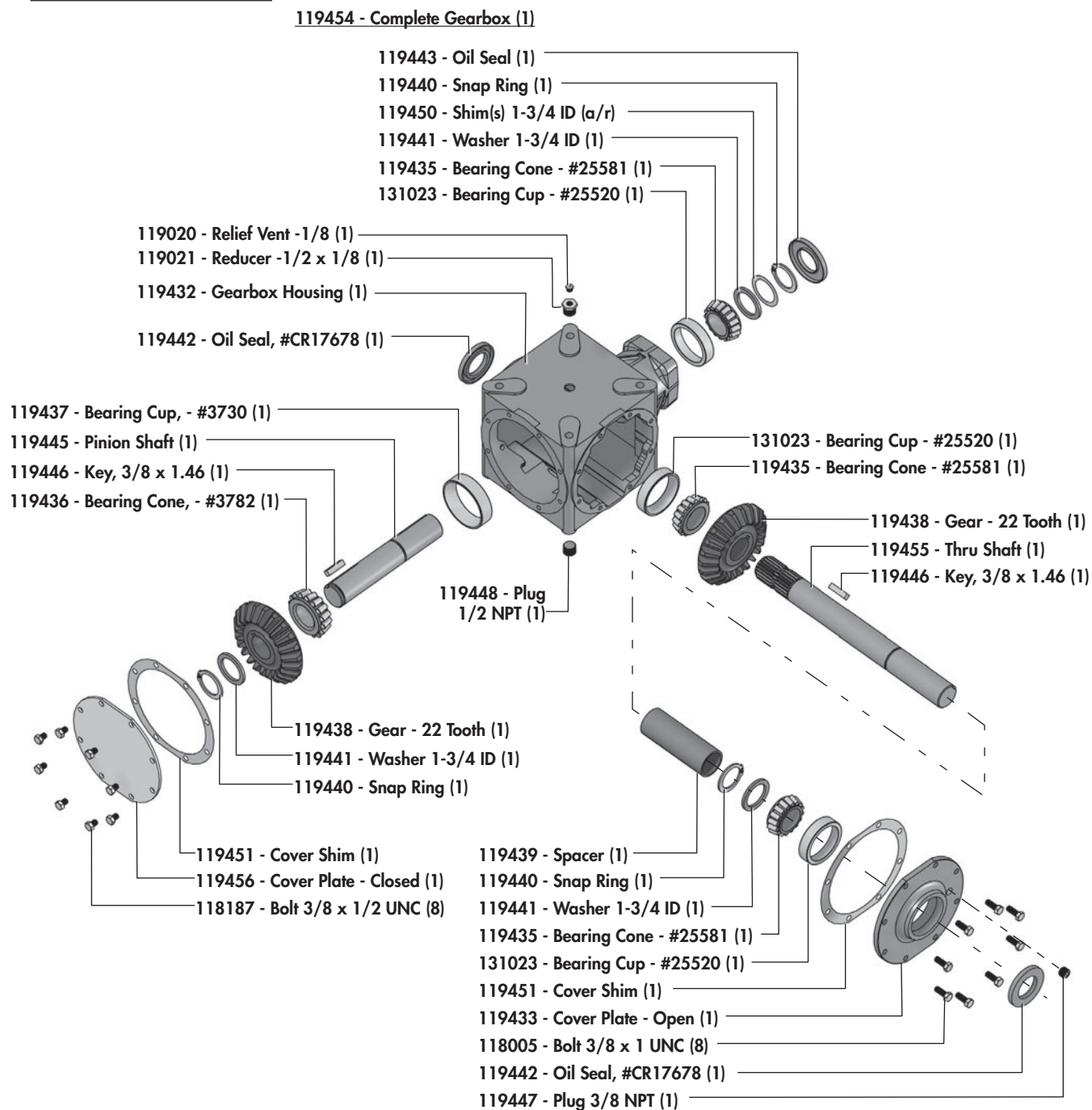


FRONT PTO BRACKET COMPONENTS



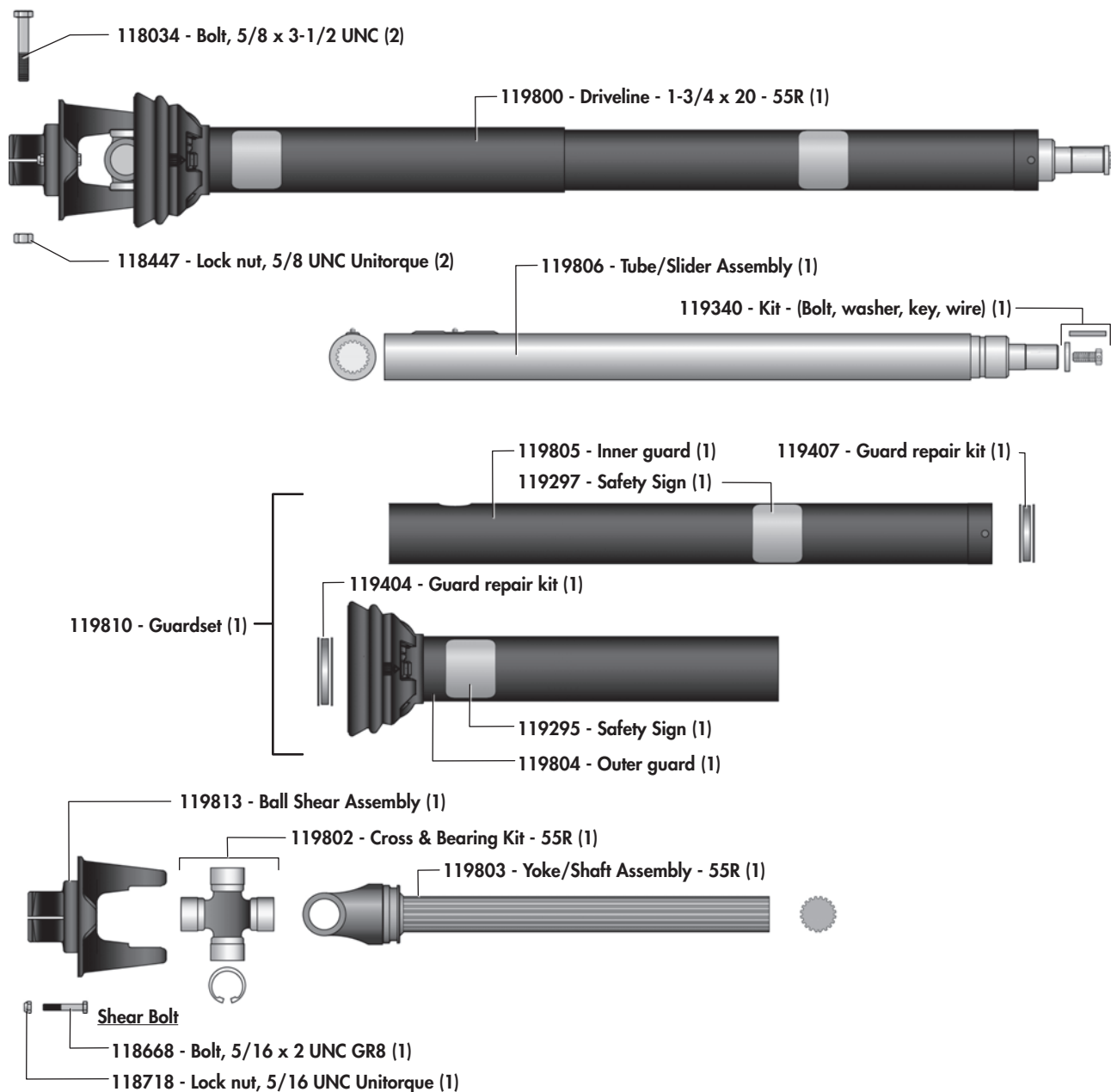
Driveline/Gearbox Components

GEARBOX COMPONENTS



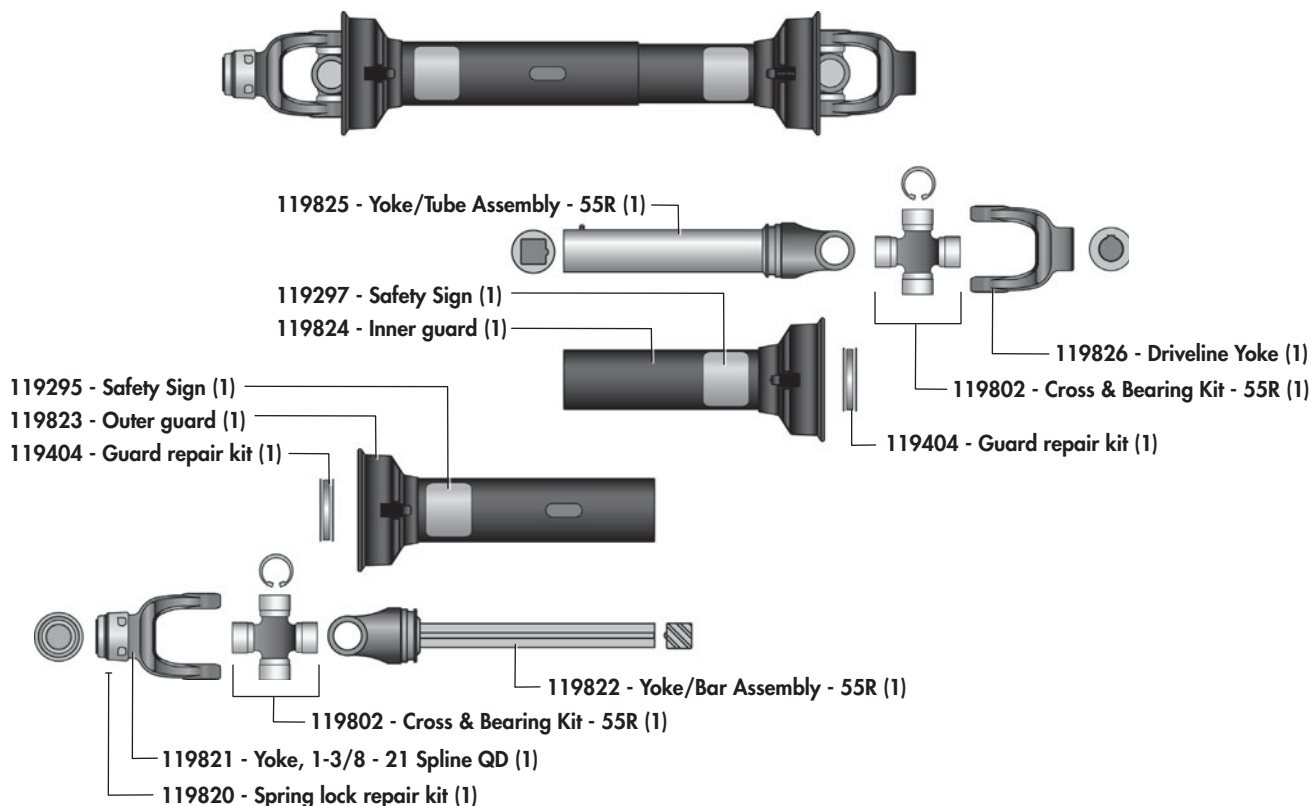
Driveline/Gearbox Components

GEARBOX DRIVELINE - 119800 - 1-3/4 x 20 Spline

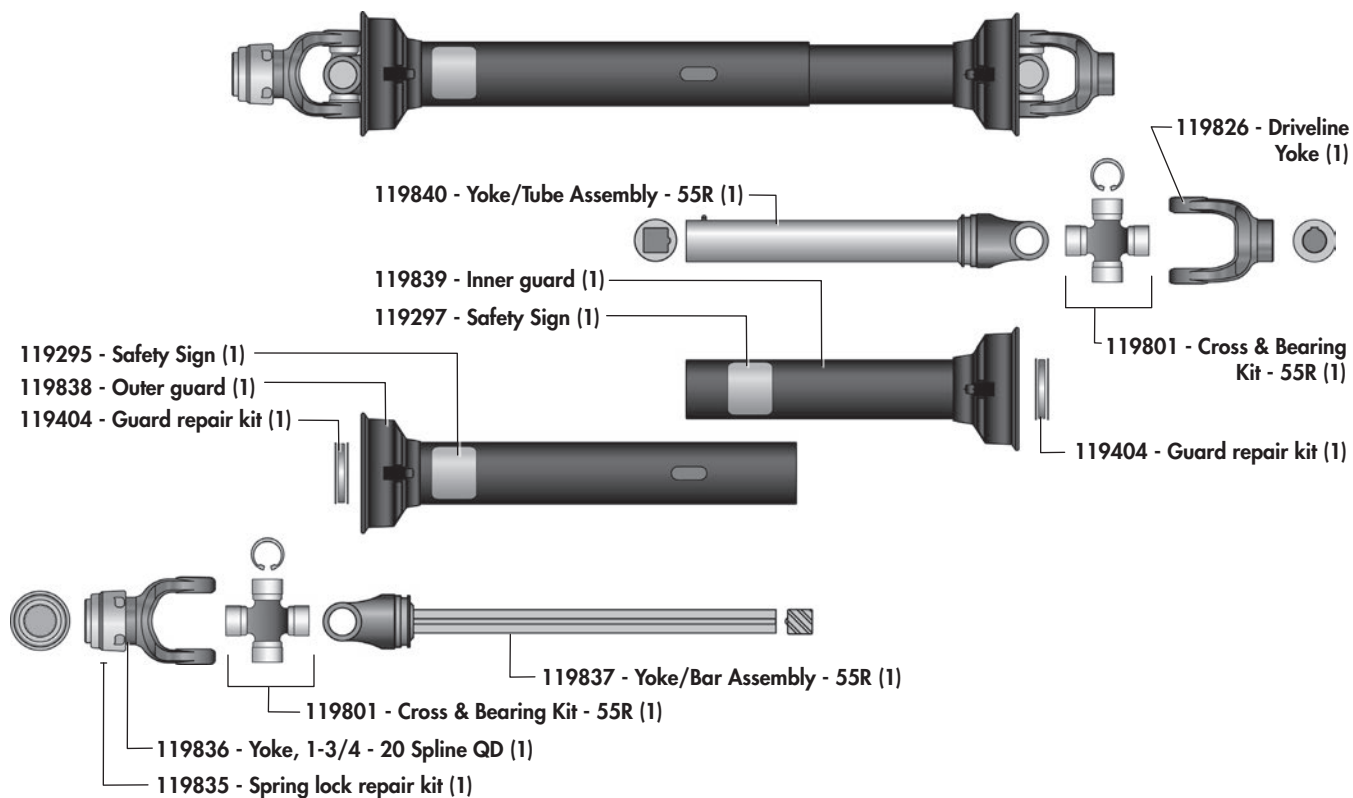


Driveline/Gearbox Components

FRONT DRIVELINE - 119815 - 1-3/8 x 21 Spline - Quick Disconnect

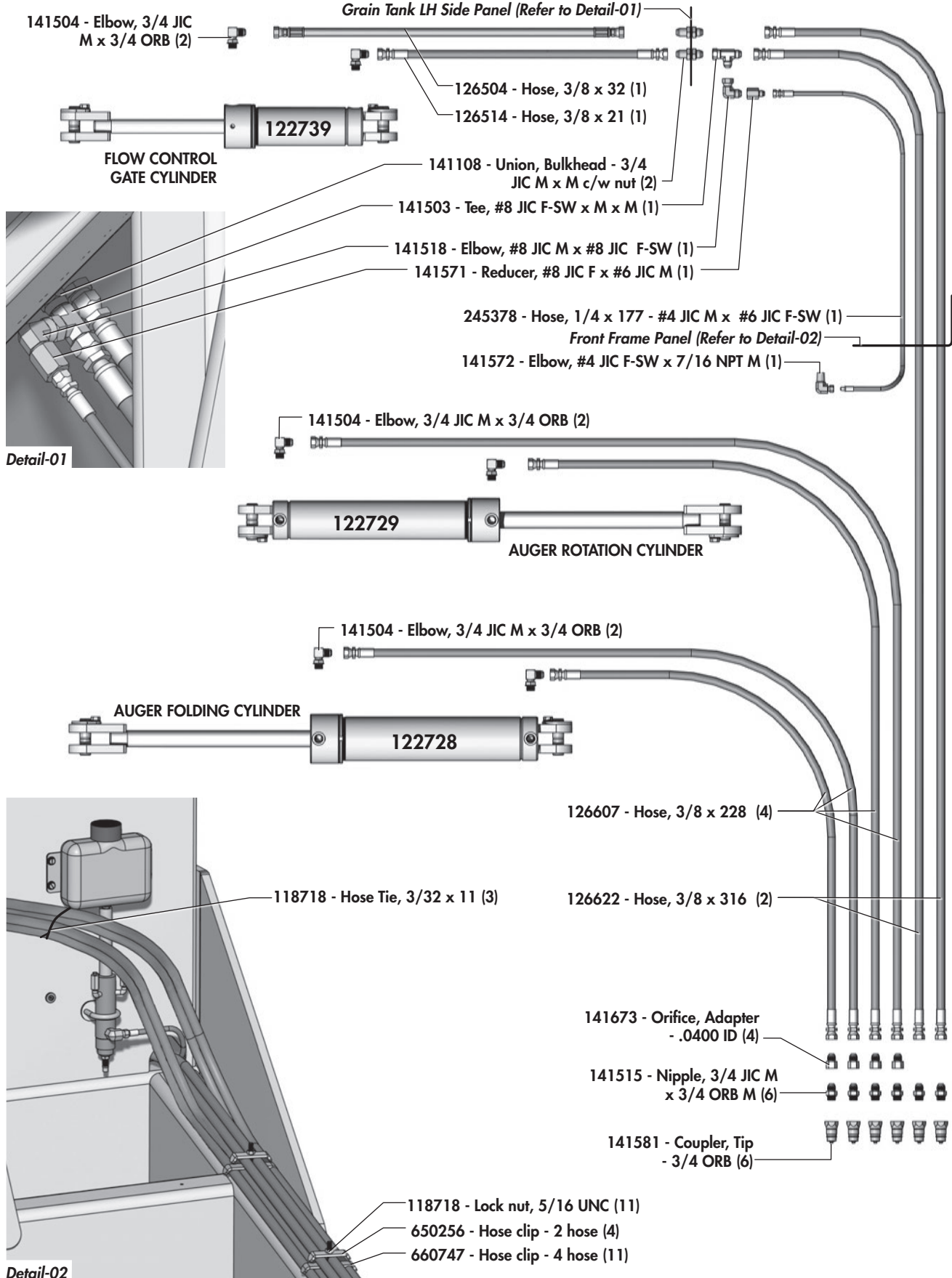


FRONT DRIVELINE - 119830 - 1-3/4 x 20 Spline - Quick Disconnect



Hydraulic Hoses & Routing

HOSE ROUTING COMPONENTS



Automatic Oiler

LUBE MINDER COMPONENTS

245995 - Lube Minder Kit (1)

245360 - Reservoir, Lube Minder (1)

245367 - Screw, 1/4-20 x 3/8 (4)

245368 - Hose clip, spring type (2)

245361 - Hose, 5/8 x 5-1/4 (1)

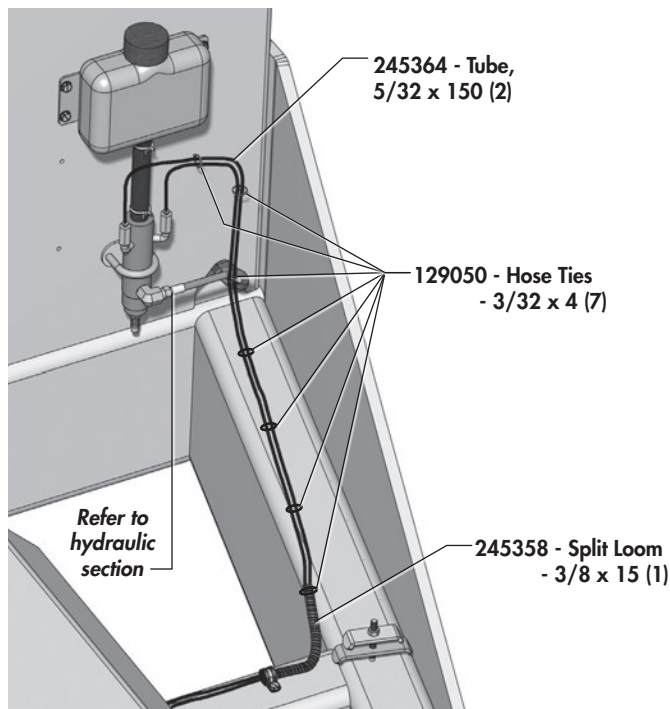
118427 - Nut 5/16, UNC (2)

118530 - Lock washer, 5/16 (2)

245356 - Spacer Plate (1)

245362 - Pump, Lube Minder (1)

245369 - U Bolt, 3/8 x 2 (1)



245358 - Split Loom - 3/8 x 15 (1)

(NOTE: Length of tubing between clamps must be 15" minimum for proper loop size.)

245367 - Screw, 1/4-20 x 3/8 (6)

129042 - Clamp, 3/8 rubber cushion (6)

118605 - Bolt, 5/8 x 1 UNC (2)

118508 - Lock washer, 5/8 (2)

245721 - Bracket, brush mount (1)
(245720 - Bracket, brush mount - models with serial #1295 or earlier)

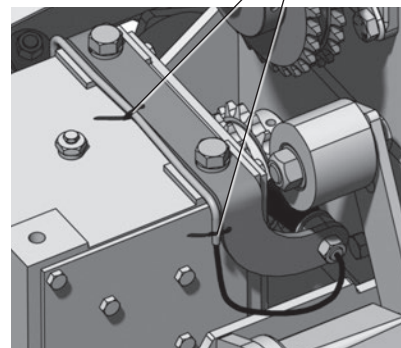
245366 - Tube, 1/4 x 3-1/2 (1)

245365 - Tube, 1/4 x 18 (1)

118433 - Nut, 1/2 UNF (2)

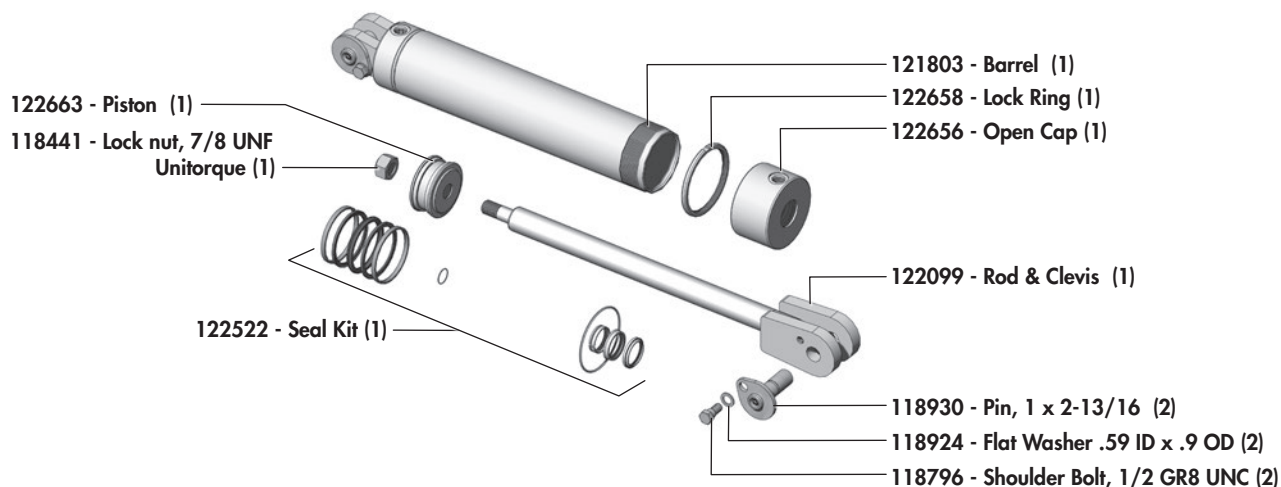
245370 - Brush, oil dispensing - c/w nut (2)

129050 - Hose Ties - 3/32 x 4 (3)

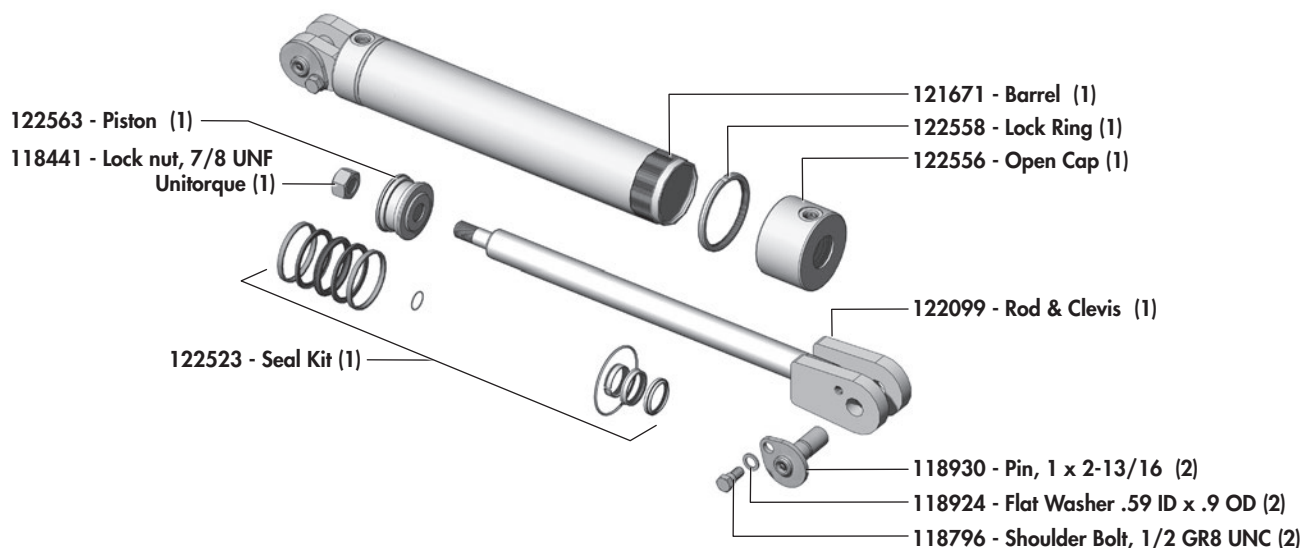


Hydraulic Cylinders

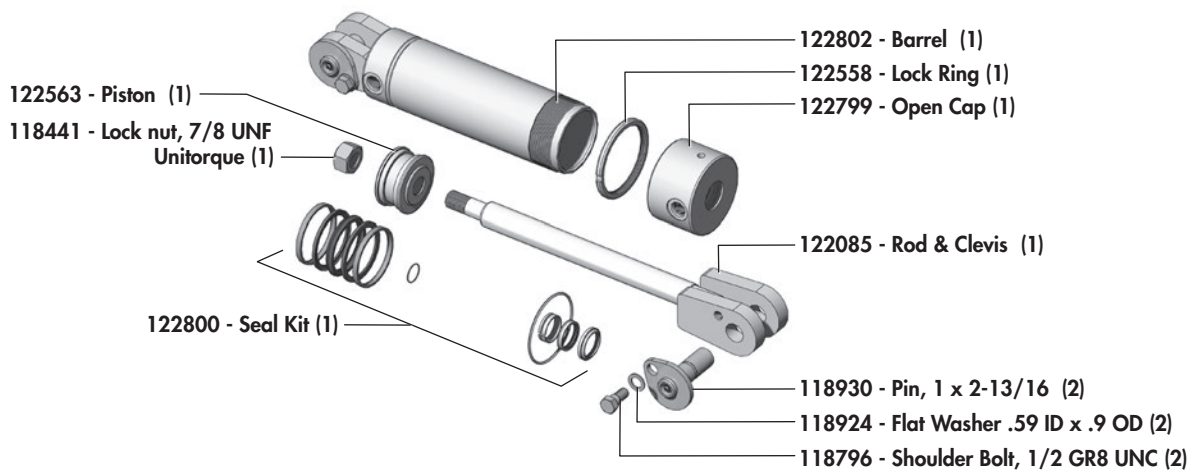
AUGER FOLDING CYLINDER - 122728 - 3-1/2 x 16 x 1-1/2



AUGER ROTATING CYLINDER - 122729 - 3 x 16 x 1-1/2

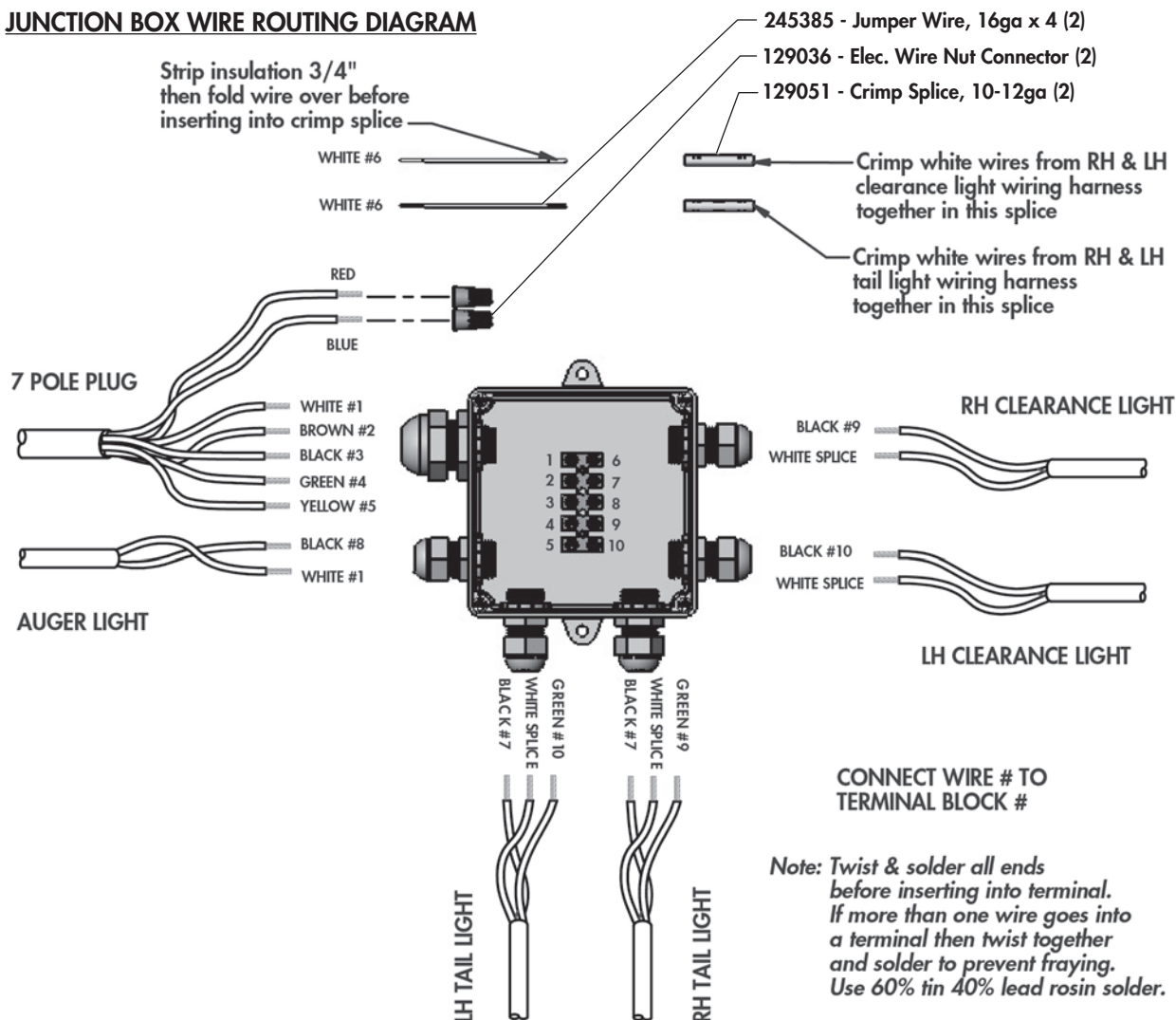


FLOW CONTROL CYLINDER - 122739 - 3 x 8 x 1-1/4



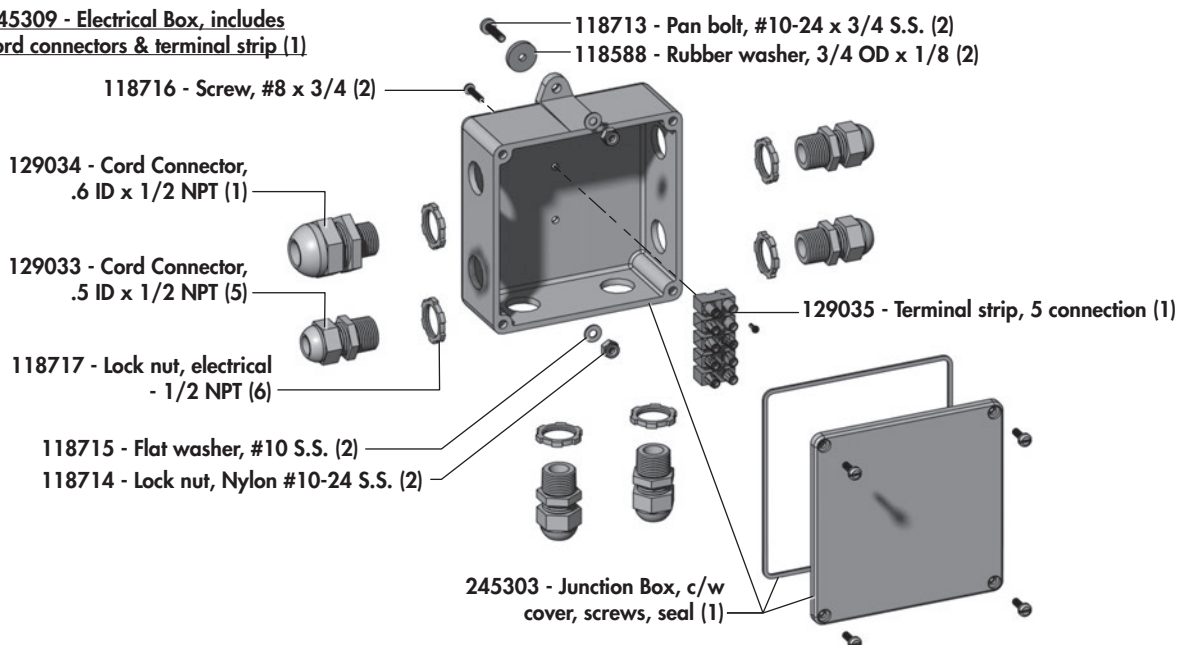
Electrical Wiring

JUNCTION BOX WIRE ROUTING DIAGRAM



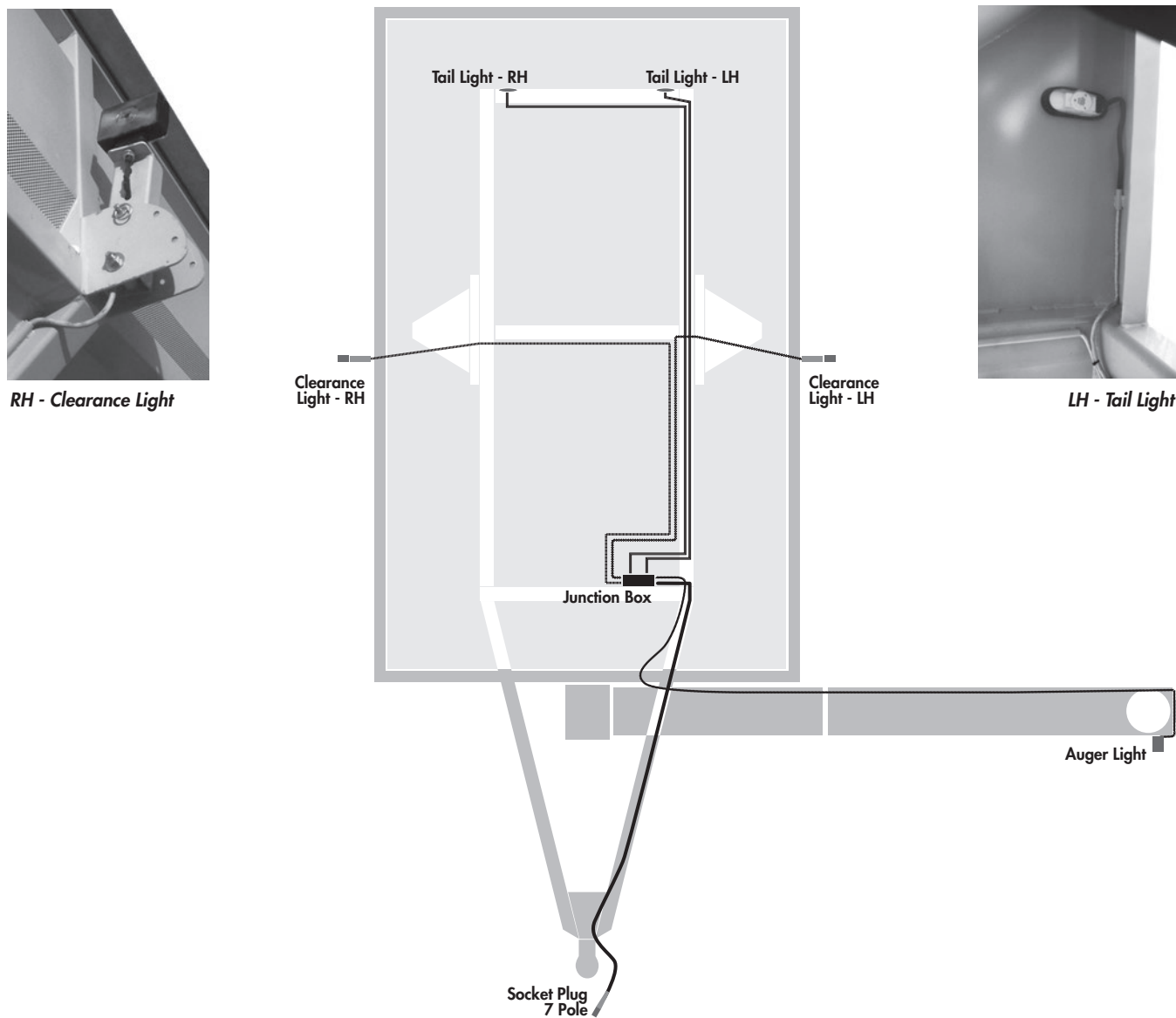
JUNCTION BOX COMPONENTS

245309 - Electrical Box, includes cord connectors & terminal strip (1)

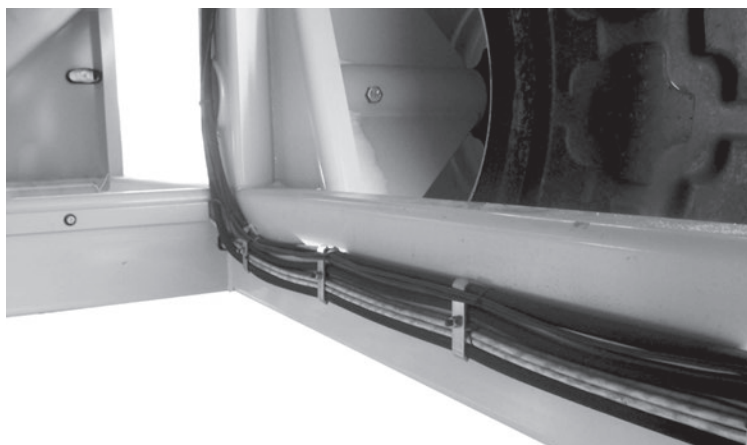


Electrical Wiring

WIRE ROUTING OVERVIEW



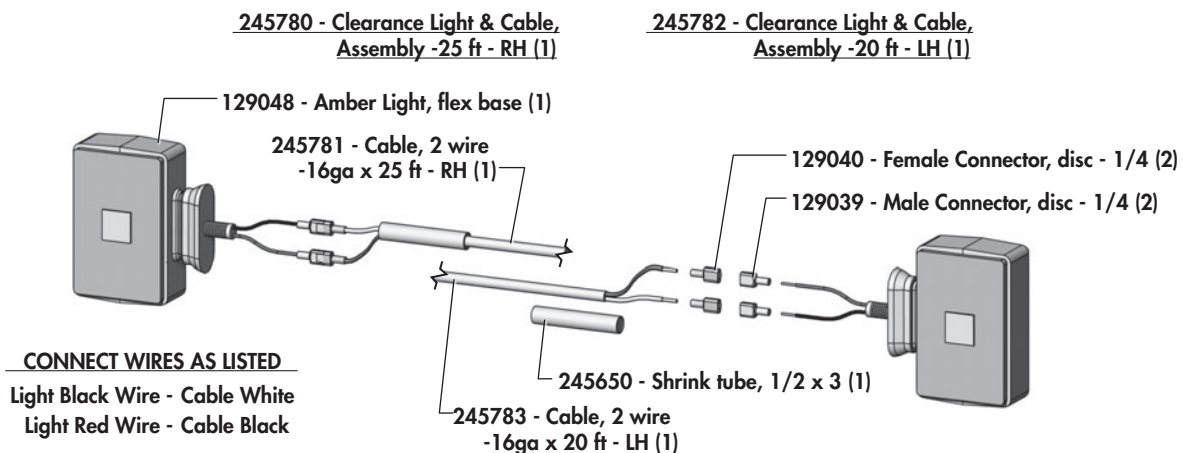
Junction Box



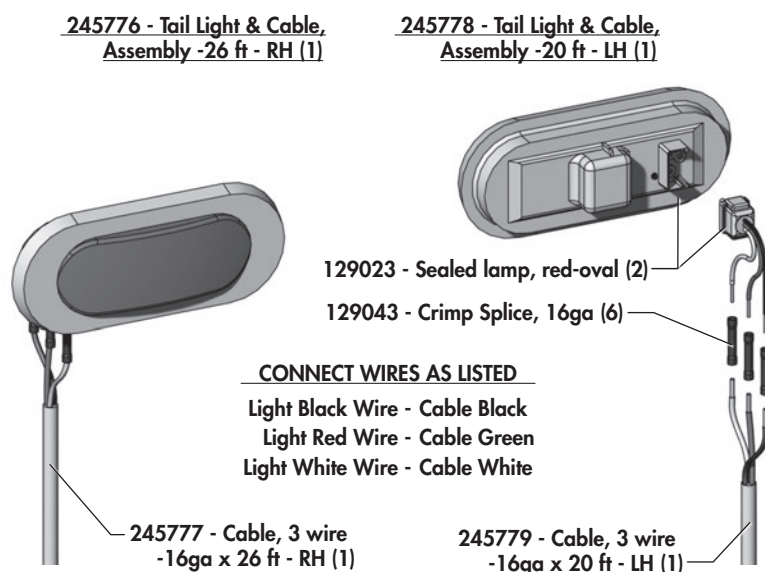
Wire Routing

Electrical Wiring

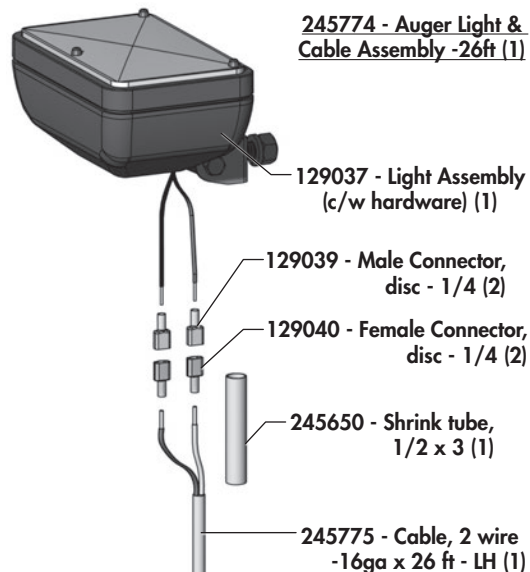
CLEARANCE LIGHT CONNECTION



TAIL LIGHT CONNECTION



AUGER LIGHT CONNECTION

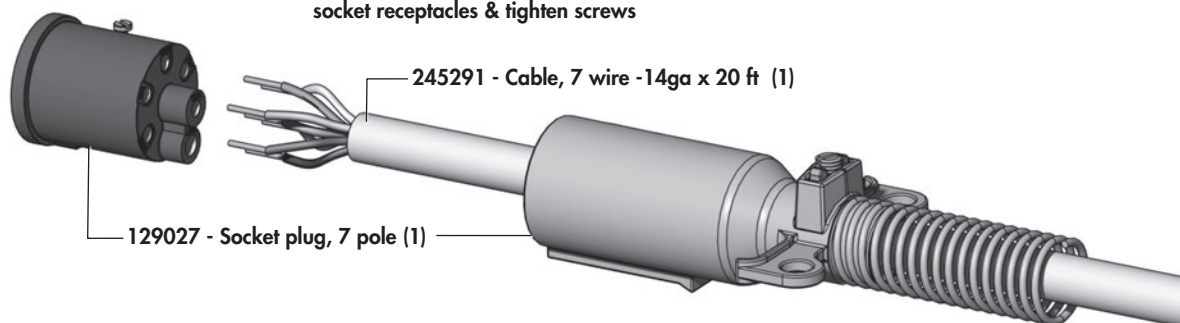


SOCKET PLUG CONNECTION

245290 - Socket Plug & Cable Assembly -7 pole 20ft (1)

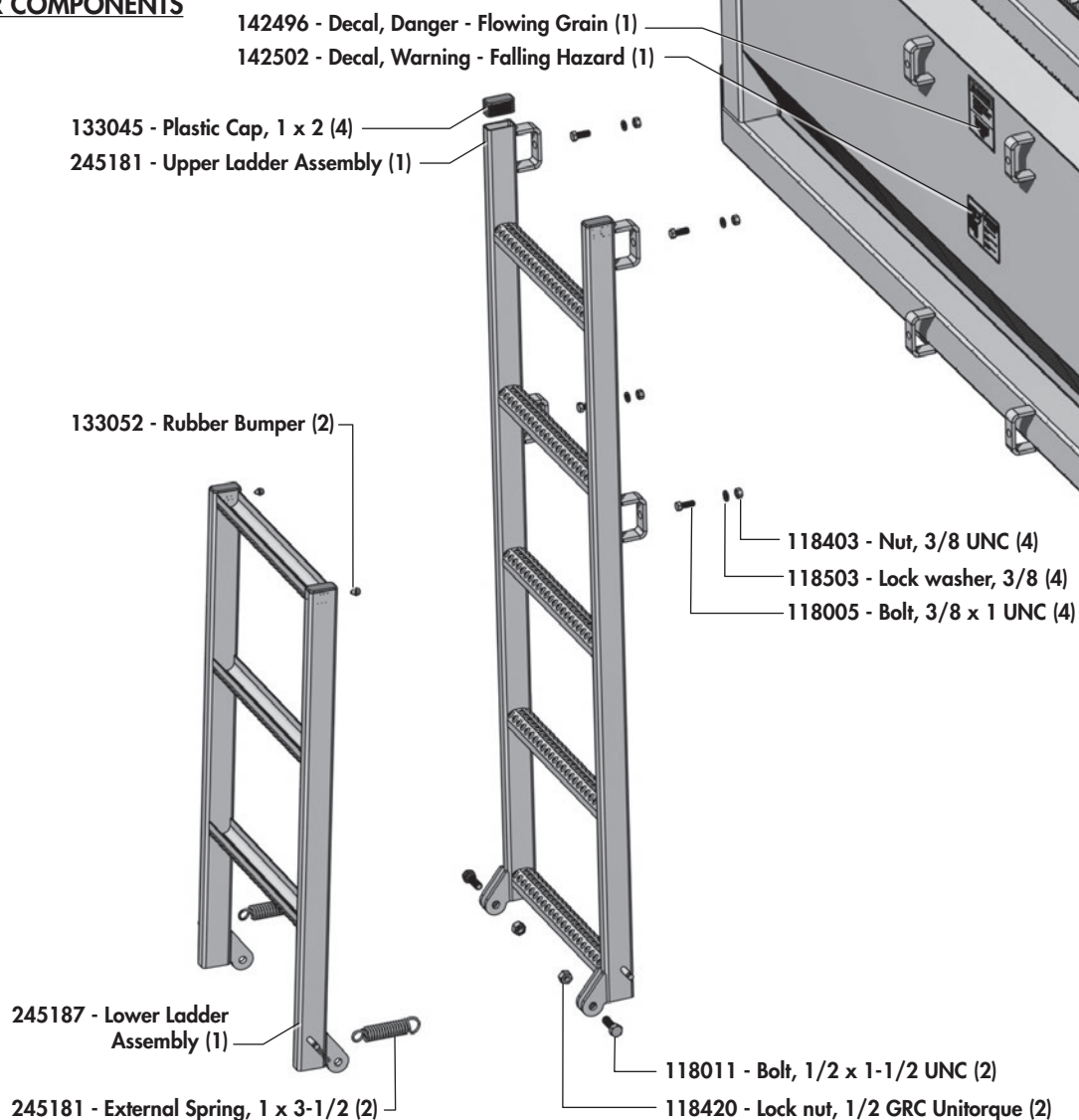
CONNECTING WIRES

Mate appropriate colour wires to socket receptacles & tighten screws

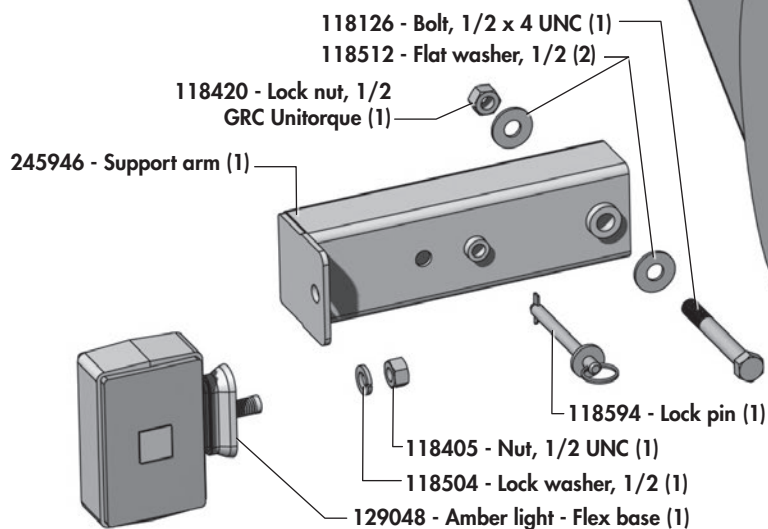


Other Components

FOLDING LADDER COMPONENTS

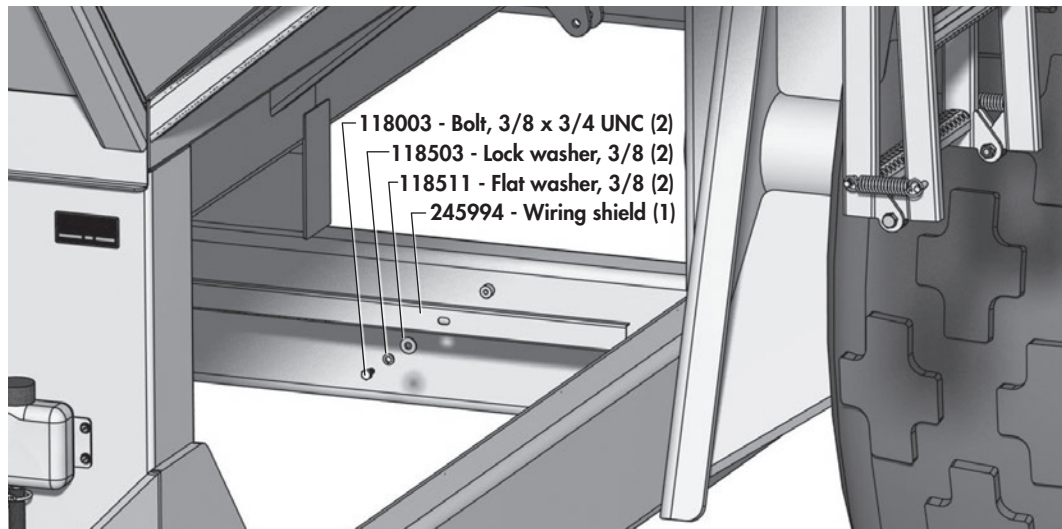


CLEARANCE LIGHT COMPONENTS

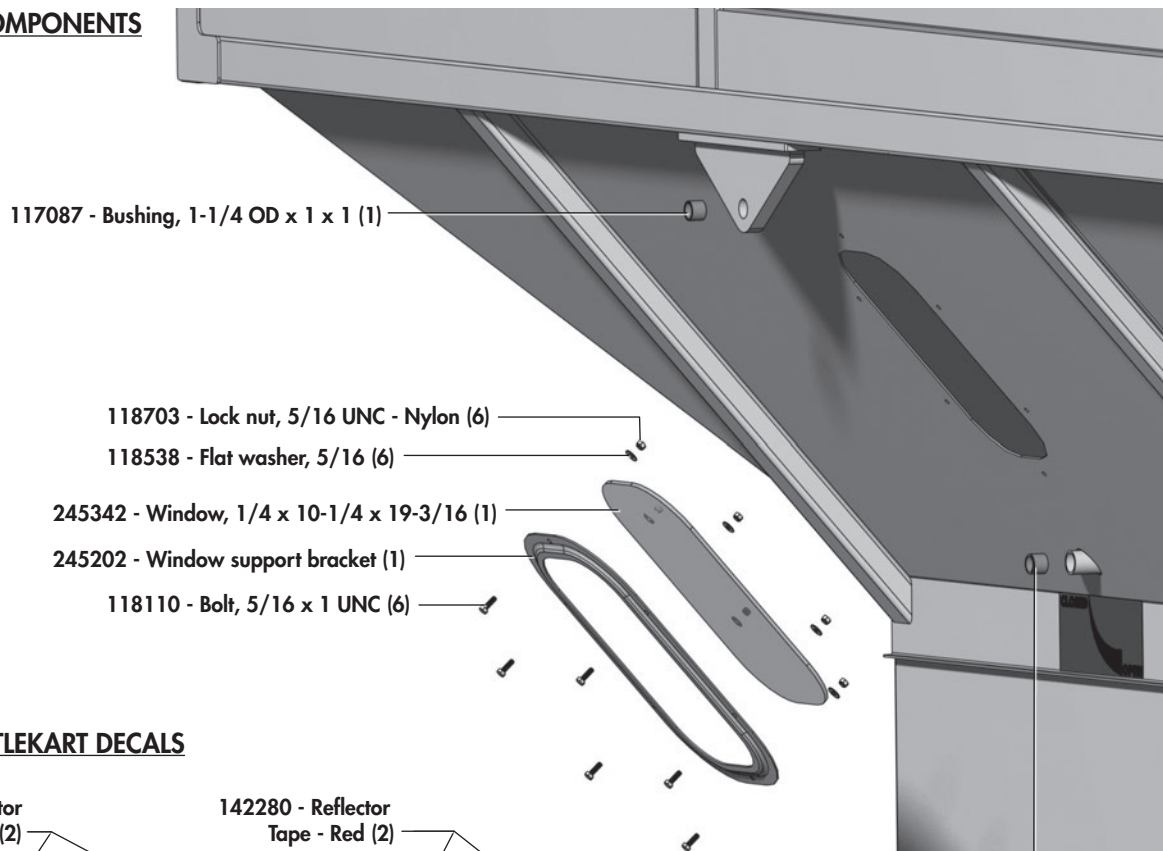


Other Components

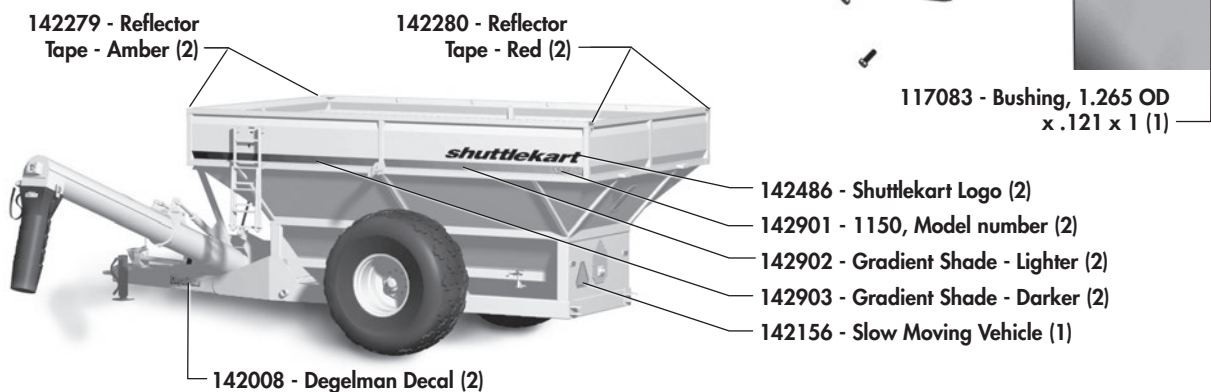
WIRE GUIDE SHIELD COMPONENTS



WINDOW COMPONENTS

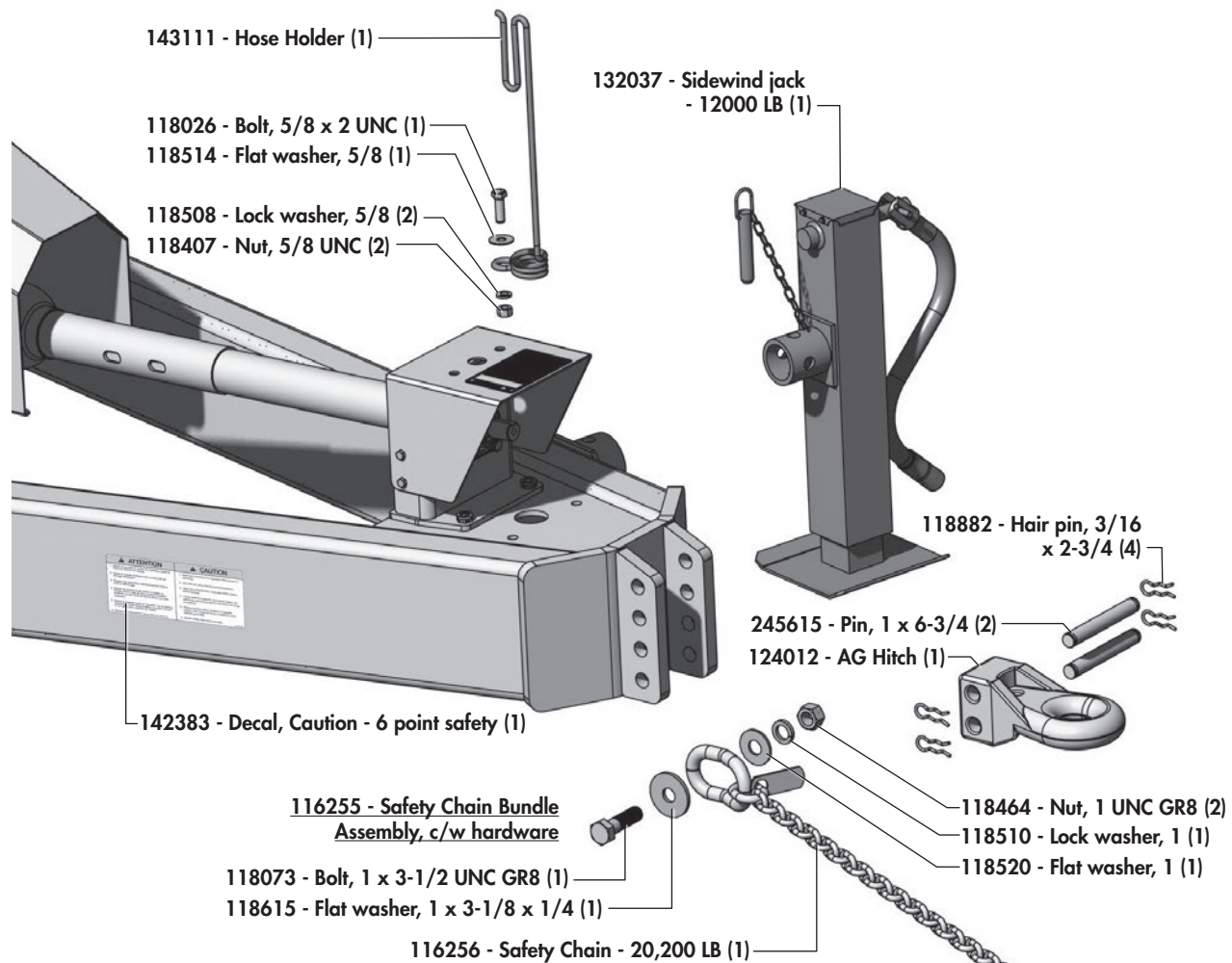


OTHER SHUTTLEKART DECALS

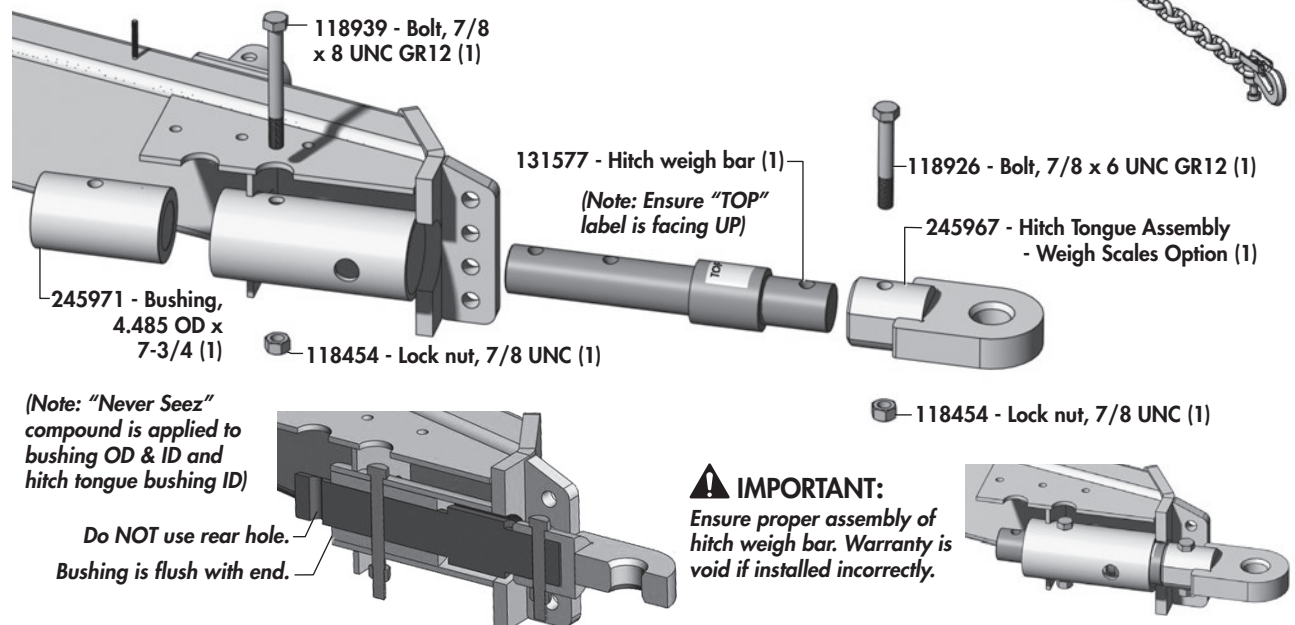


Front Hitch Components

FRONT HITCH TYPICAL COMPONENTS

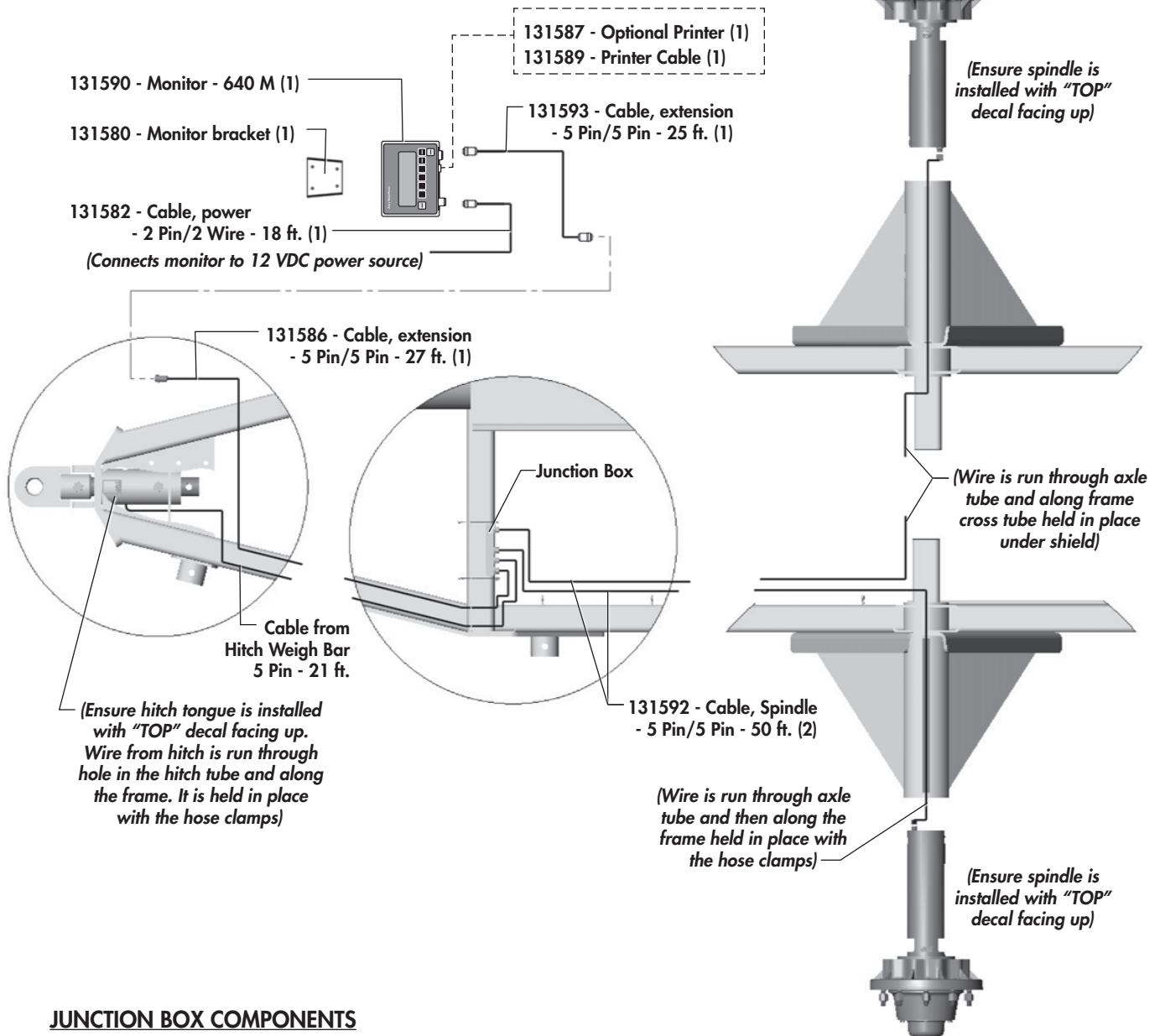


FRONT HITCH - WEIGH SCALE OPTION

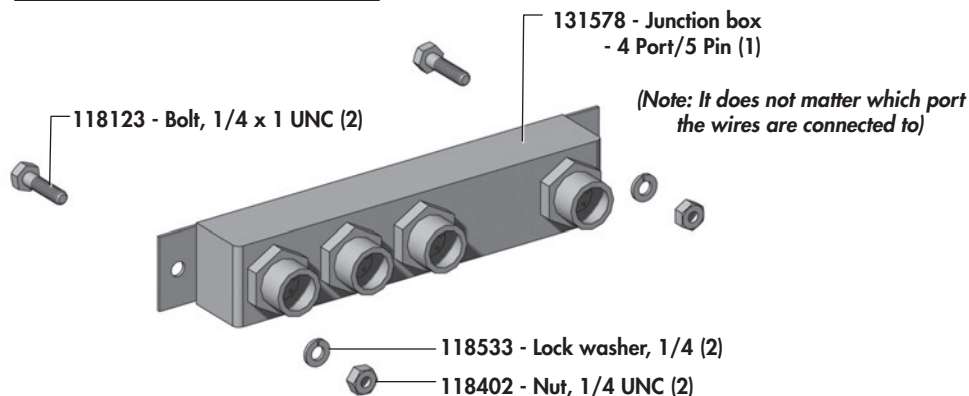


Weigh Scales - Optional

WIRE ROUTING AND COMPONENT DIAGRAM

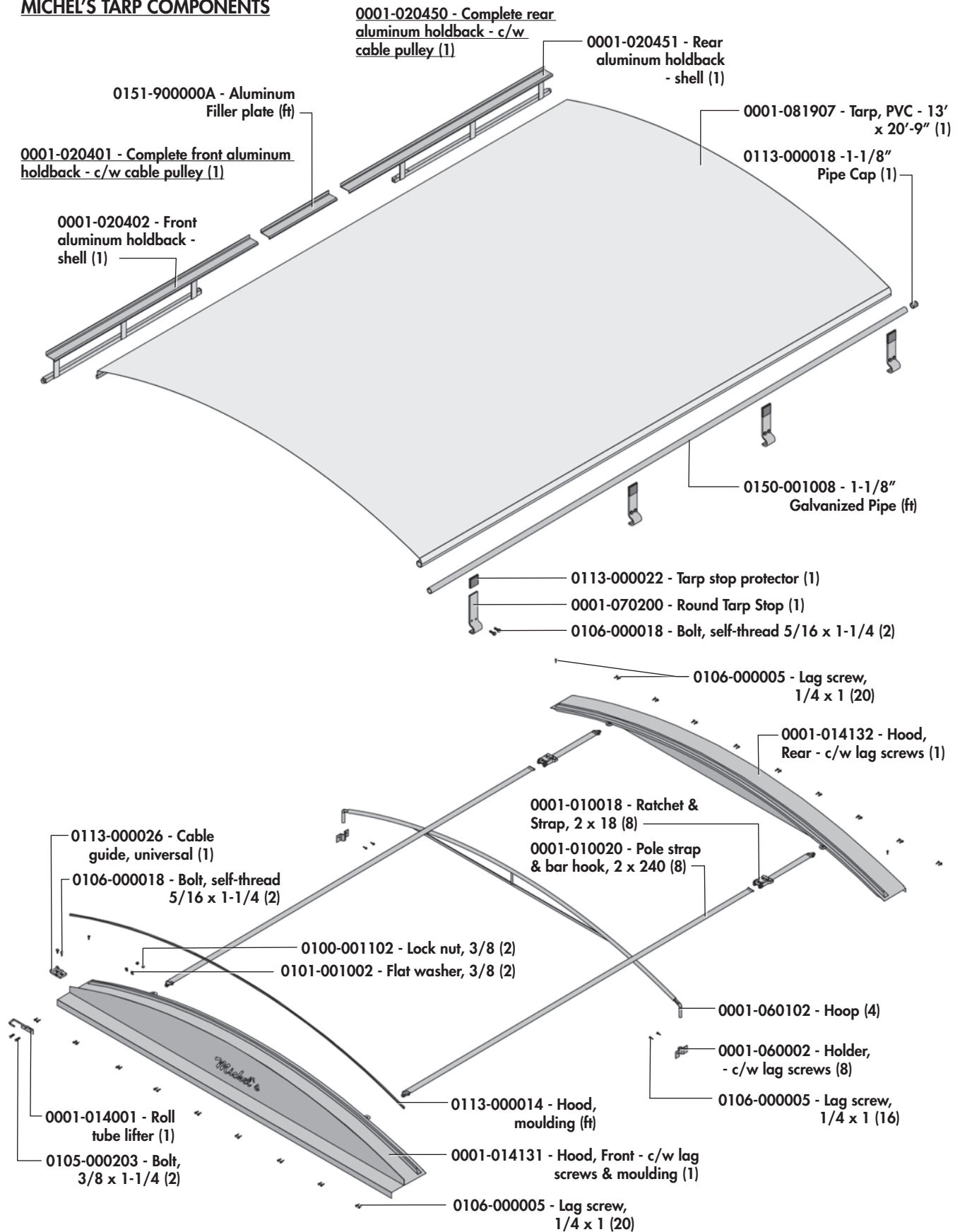


JUNCTION BOX COMPONENTS



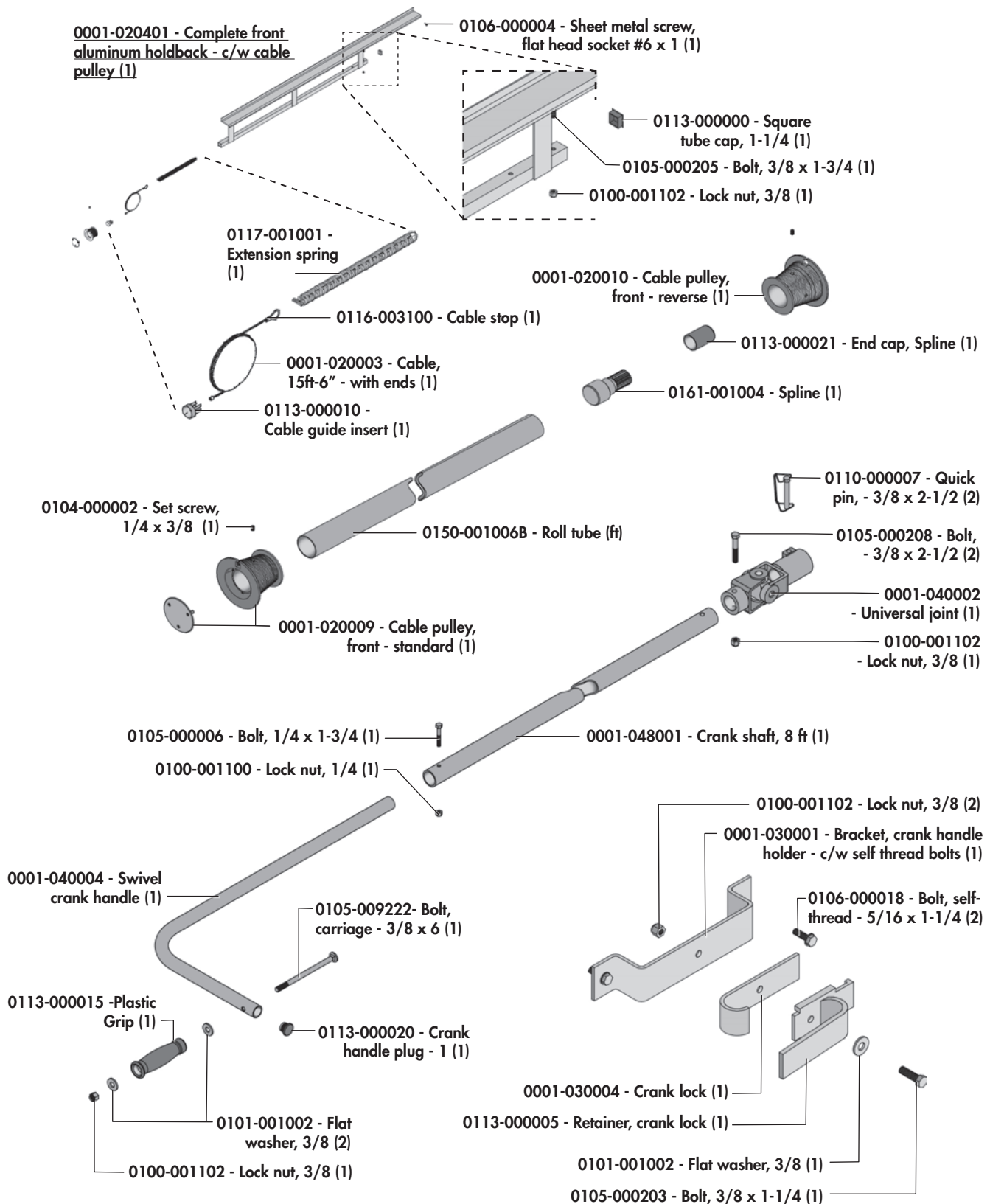
Roll-up Tarp

MICHEL'S TARP COMPONENTS



Roll-up Tarp

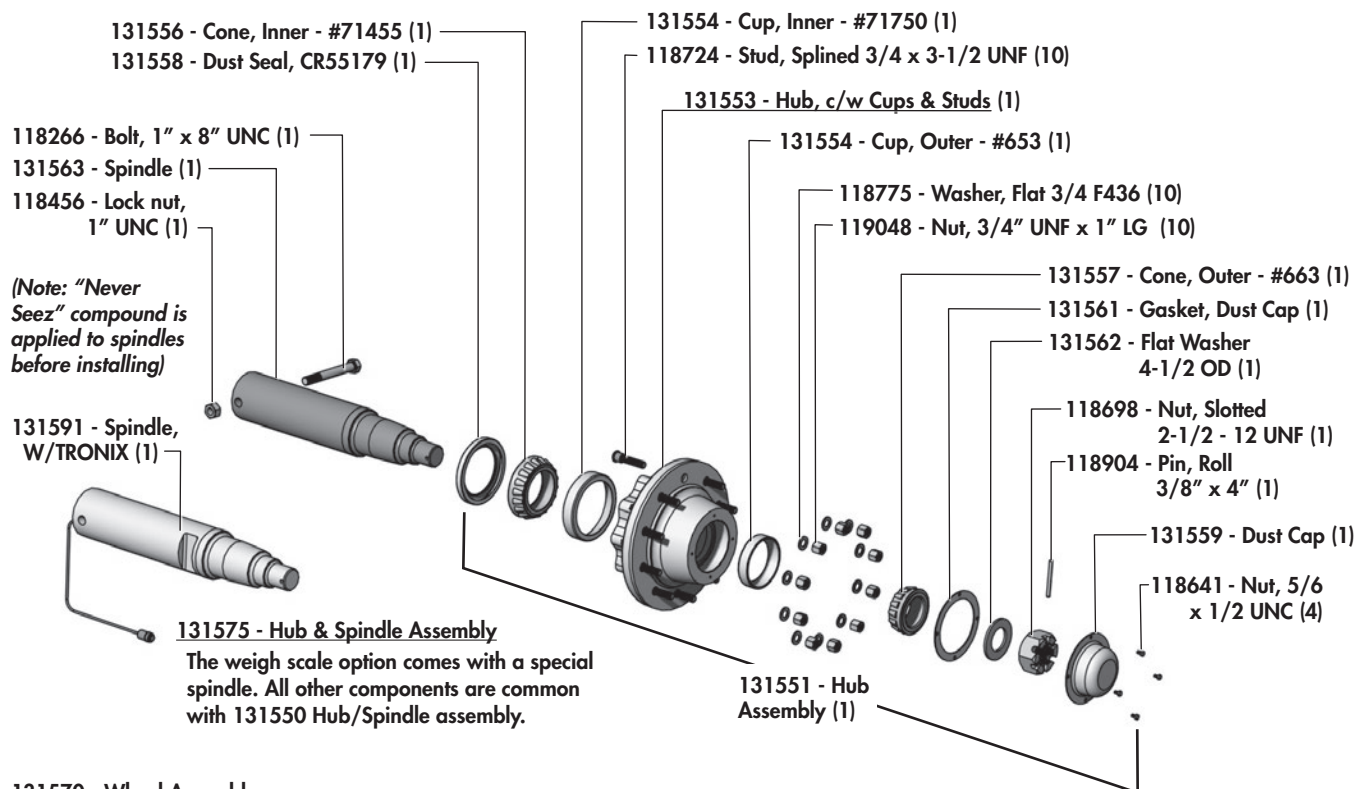
MICHEL'S TARP COMPONENTS



Hub/Spindle/Wheel Components

131550 - Hub & Spindle Assembly

Standard Hub/Spindle assembly.



131570 - Wheel Assembly

