

SMITH[®] Rotary Eraser

3A7570A

EN

For removal of materials from flat horizontal concrete and asphalt surfaces. For use with compatible universal quick-attach systems from major skid steer manufacturers. For professional use only.

Model X1.G20 - (Hydraulic-Low Flow)

1000 psi (69 bar, 6.9 MPa) Inlet Fluid Maximum Working Pressure

Model X3.G40 - (Hydraulic-High Flow)

2000 psi (138 bar, 3.8 MPa) Inlet Fluid Maximum Working Pressure

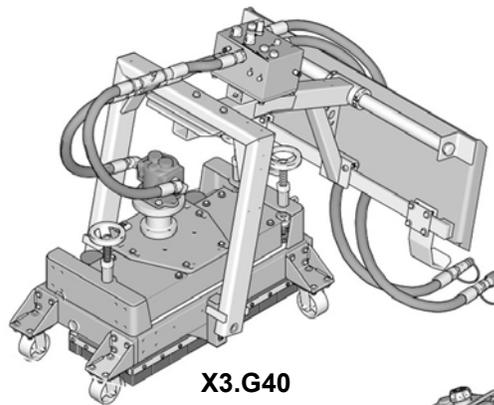
Model X3.K25 - (Gas - 25HP Kohler)

Related Manuals:	
24 590 54	Kohler Owner's Manual

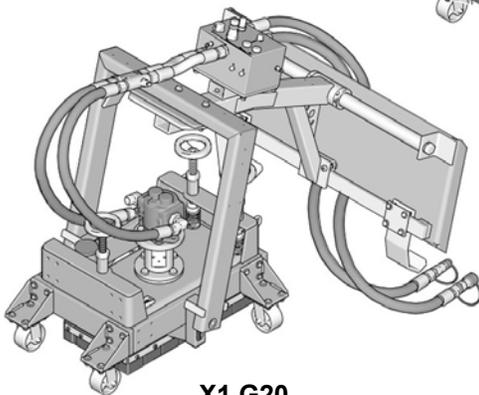


Important Safety Instructions

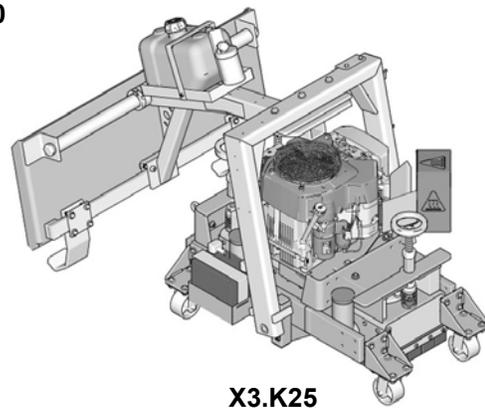
Read all warnings and instructions in this manual before using the equipment. Be familiar with the controls and the proper usage of the equipment. Save these instructions.



X3.G40



X1.G20



X3.K25

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Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

 <h1 style="margin: 0;">WARNING</h1>	
 	<p>DUST AND DEBRIS HAZARD</p> <p>Grinding concrete and other surfaces with this equipment can create dust that contains hazardous substances. Grinding can also create flying debris.</p> <p>To reduce the risk of serious injury:</p> <ul style="list-style-type: none"> • Control the dust to meet all applicable workplace regulations. • Wear protective eye wear and a properly fit-tested and government approved respirator suitable for the dust conditions. • Use equipment only in a well-ventilated area. • Grinding equipment must be used only by trained personnel who understand the applicable workplace regulations.
  	<p>ENTANGLEMENT AND MOVING PARTS HAZARD</p> <p>Moving parts can pinch, cut or amputate fingers and other body parts.</p> <ul style="list-style-type: none"> • Keep clear of moving parts. • Stop cutter rotation before raising equipment more than 1/2 inch (1.3 cm) above work surface. Do not operate cutters when equipment is raised more than 1/2 inch (1.3 cm). • Do not operate equipment with protective guards or covers removed. • Do not wear loose clothing, jewelry or long hair while operating equipment. • Before checking or servicing equipment, disconnect hydraulic supply/return lines (hydraulic models) or black battery cable and both spark plug wires (gas model).
	<p>BURN HAZARD</p> <p>Cutters and engine can become very hot during operation. To avoid severe burns, do not touch hot equipment. Wait until equipment has cooled completely.</p>
	<p>EQUIPMENT MISUSE HAZARD</p> <p>Misuse can cause death or serious injury.</p> <ul style="list-style-type: none"> • Do not operate the unit when fatigued or under the influence of drugs or alcohol. • Do not leave the work area while equipment is energized. Turn off all equipment when equipment is not in use. • Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only. • Do not alter or modify equipment. • Use equipment only for its intended purpose. Call your distributor for information. • Keep children and animals away from work area. • Comply with all applicable safety regulations. • Maintain a safe operating distance from other people in the work area. • Avoid any pipes, columns, openings, or any other objects protruding from work surface.

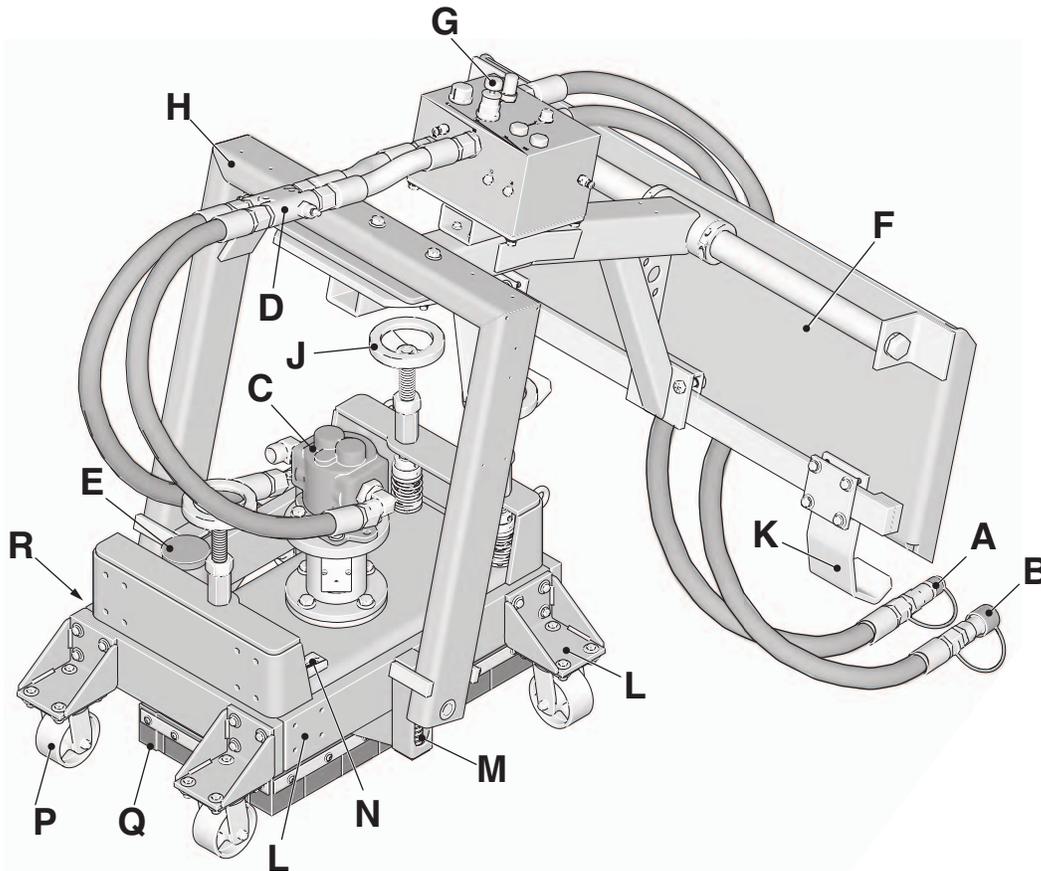


WARNING

  	<p>SKIN INJECTION HAZARD</p> <p>High-pressure fluid from hose leaks, or ruptured components will pierce skin. This may look like just a cut, but it is a serious injury that can result in amputation. Get immediate surgical treatment.</p> <ul style="list-style-type: none"> • Inspect hose before each use for cuts, bulges, kinks or any other damage. • Replace damaged hose immediately. • Replace hoses proactively at regular intervals based on your operating conditions. • Tighten all fluid connections before operating the equipment. • Keep clear of leaks. • Do not stop or deflect leaks with your hand, body, glove, or rag. • Never exceed hose Maximum Pressure or Temperature ratings. • Only use chemicals that are compatible with hose materials. See Technical Specifications in this manual. Read Safety Data Sheets (SDSs) and fluid and solvent manufacturer's recommendations.
 	<p>FIRE AND EXPLOSION HAZARD</p> <p>Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion:</p> <ul style="list-style-type: none"> • Use equipment only in well ventilated area. • Do not fill fuel tank while engine is running or hot; shut off engine and let it cool. Fuel is flammable and can ignite or explode if spilled on hot surface. • Do not top off or overfill tank. • Do not run engine near spilled gasoline or while fuel cap is removed. • Keep work area free of debris, including solvent, rags and gasoline. • Keep a fire extinguisher in work area.
	<p>CARBON MONOXIDE HAZARD</p> <p>Exhaust contains poisonous carbon monoxide, which is colorless and odorless. Breathing carbon monoxide can cause death.</p> <ul style="list-style-type: none"> • Do not operate in an enclosed area.
	<p>BATTERY HAZARD</p> <p>Lead-acid batteries produce explosive gases and contain sulfuric acid that can cause severe burns. To avoid sparks and injury when handling or working with a lead-acid battery:</p> <ul style="list-style-type: none"> • Read and follow the battery manufacturer's warnings. • Exercise caution when working with metallic tools or conductors to prevent short circuits and sparks. • Keep all sparks, flames, and cigarettes away from batteries. • Always wear protective eyewear and protective equipment for face, hands, and body. • If you have direct contact with battery fluid, flush with water and consult a physician immediately. • Installation and maintenance must be performed by knowledgeable personnel only.
 	<p>PERSONAL PROTECTIVE EQUIPMENT</p> <p>You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, inhalation of dust or chemicals, burns, and hearing loss. This equipment includes but is not limited to:</p> <ul style="list-style-type: none"> • Protective eye wear. • Protective shoes. • Gloves. • Hearing protection. • Properly fit-tested and government approved respirator suitable for the dust conditions.

Component Identification

X1.G20 (Hydraulic - Low Flow)



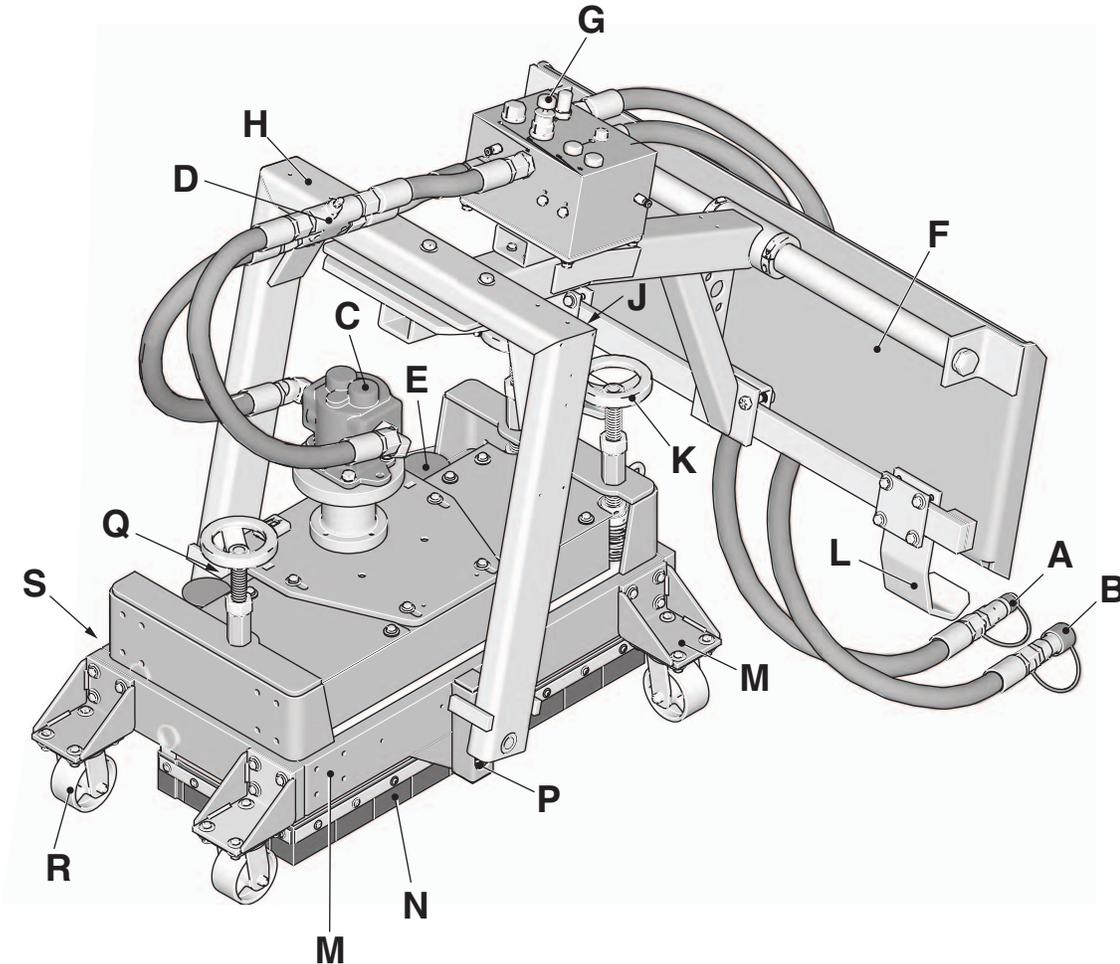
Component	
A*	Hydraulic Supply Line (male quick-connect)
B*	Hydraulic Return Line (female quick-connect)
C	Hydraulic Pump
D	Cushion Valve
E	Vacuum Port
F	Universal Quick Attach Mount Plate
G	Cutter Speed Control
H	U-bar
J	Cutter Height Control Knobs (3x)

Component	
K	Universal Quick Attach Mount Support Legs
L	Wheel Mount Location (side)
M	U-bar Spring
N	Tachometer
P	Caster Wheels
Q	Dust/Debris Skirt
R	Serial ID Label

* Connection type: Flat Face - ISO 16028

Component Identification

X3.G40 (Hydraulic - High Flow)



ti37705a

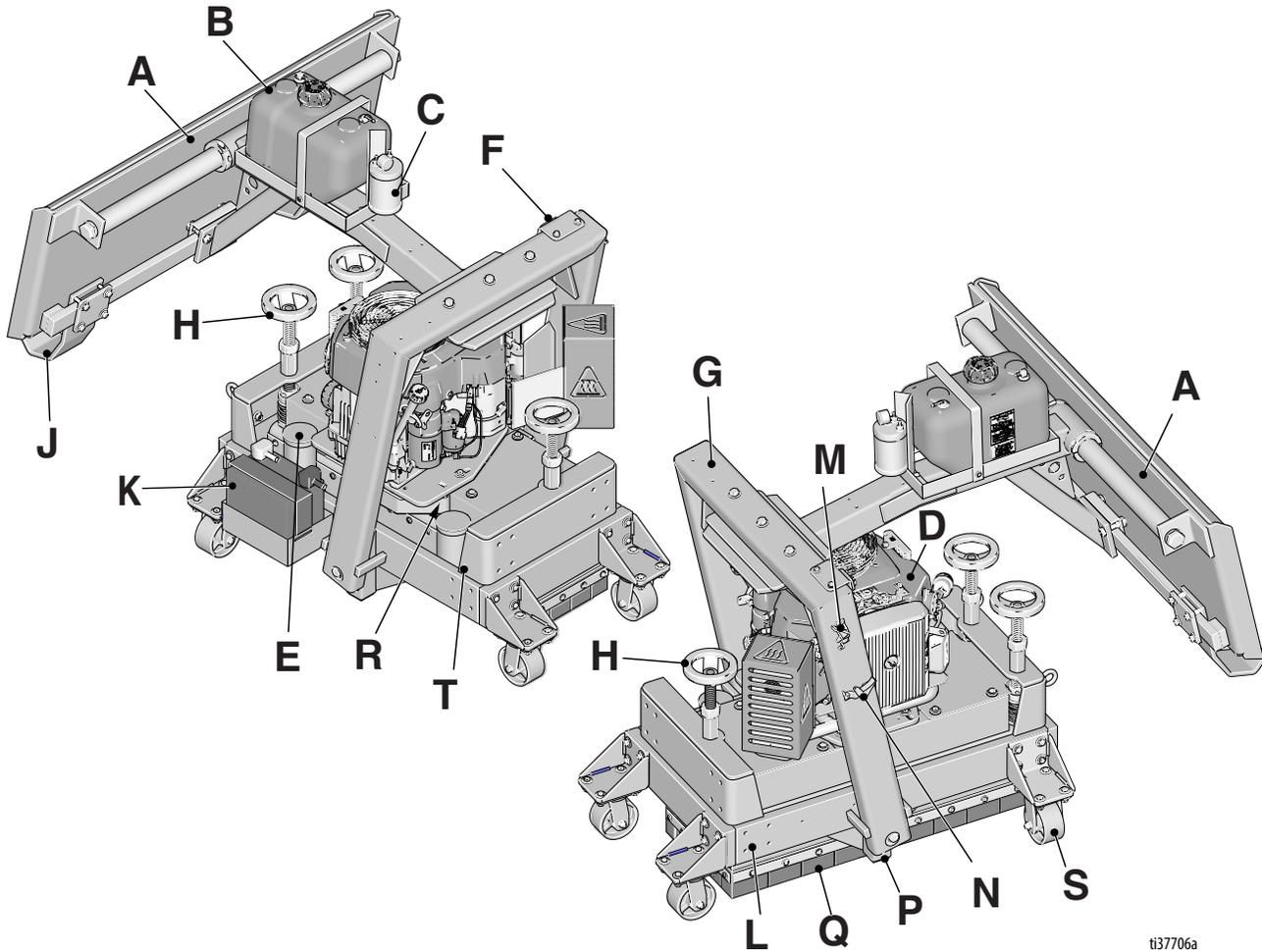
Component	
A*	Hydraulic Return Line (male-quick connect)
B*	Hydraulic Supply Line (female-quick connect)
C	Hydraulic Pump
D	Cushion Valve
E	Vacuum Ports (2x)
F	Universal Quick Attach Mount Plate
G	Cutter Speed Control
H	U-bar
J	Tachometer

Component	
K	Cutter Height Control Knobs (3x)
L	Universal Quick Attach Mount Support Legs
M	Wheel Mount Location (side)
N	Dust/Debris Skirt
P	U-bar Spring
Q	Belt Tension
R	Caster Wheels
S	Serial ID Label

* Connection type: Flat Face - ISO 16028

Component Identification

X3.K25 (Gas)



ti37706a

Component	
A	Universal Quick Attach Mount Plate
B	Gas Tank
C	Emission Canister
D	Engine
E	Vacuum Ports (2x)
F	Tachometer
G	U-bar
H	Cutter Height Control Knobs (3x)
J	Universal Quick Attach Mount Support Legs

Component	
K	Battery Box
L	Wheel Mount Location (side)
M	Throttle (Speed) Control
N	Choke Control
P	U-bar Spring
Q	Debris Skirt
R	Belt Tension
S	Caster Wheels
T	Serial ID Label

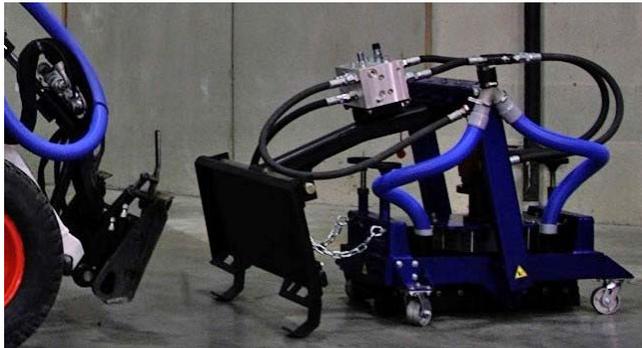
Setup

				
CRUSH HAZARD				
To avoid serious injury or death, never work under the equipment unless it is securely supported by safety stands or blocks.				

Connect Rotary Eraser to Skid Steer

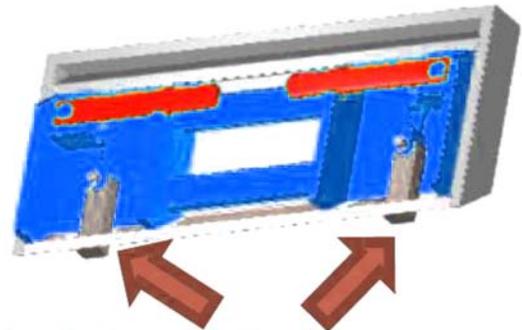
The following instructions are generic. Due to the differences in attachment mounting and attachment methods among various brands of skid steers, refer to your skid steer owners manual for attachment connection instructions specific to your skid steer.

Verify that the hydraulic hoses are clear from the front of the Universal Quick Attach Mount Plate and that the mounting plate is free from dirt and debris. When clear, move the skid steer close to the Universal Quick Attach Mount Plate. Tilt skid steer plate adapter forward to align coupling point with the upper part on the Universal Quick Attach Mount Plate and raise skid steer plate adapter slightly.



Connect Skid Steer to Universal Quick Attach Mount Plate

When the top edge of the skid steer plate adapter is seated in the top part of the Universal Quick Attach Mount Plate, curl the skid steer tilt function back until the Universal Quick Attach Mount Plate is flat against the skid steer plate adapter. Lock down the skid steer plate adapter levers. Before operating the Rotary Eraser, verify that the skid steer lock pins are fully engaged through the latch slots on the Universal Quick Attach Mount Plate.



Check Skid Steer Lock Pin Engagement

Wipe off any dirt or dust from the male and female Hydraulic Return/Supply Lines with a clean rag before attaching hoses, to keep contaminants from entering the hydraulic system. Connect the Rotary Eraser Hydraulic Return/Supply Lines to the auxiliary circuit connectors on the skid steer.

Cutter Head Installation



CRUSH HAZARD

Turn off skid steer, remove key, engage parking brake, and block wheels before you service your machine. To avoid serious injury or death, never work under the equipment unless it is securely supported by safety stands or blocks.

HYDRAULIC MODELS

To avoid injury from unexpected start up, disconnect the Hydraulic Supply/Return Lines before you service your machine.

GAS MODEL

To avoid injury from unexpected start up, disable engine as follows: 1) Disconnect both spark plug wires. 2) Disconnect negative (-) battery cable from battery.

Model X1.G20 uses one rotary head. Models X3.G40 & X3.K25 use multiple rotary heads to increase forward speed or width in the removal of traffic lines or surface preparation. Regardless of the type of head chosen, correct head installation and adjustment will ease removal and ensure a long cutter life.

If cutter heads are not assembled, see **Cutter Head Removal**, page 15.

1. Raise the Rotary Eraser to a height where the cutters are easily accessible. Support the Rotary Eraser with blocks or safety stands.
2. Install the number of heads desired (from one to three) on the spindles using either a 24mm socket or a wrench. It is recommended to use an impact wrench if available.

Caster Wheel Positions

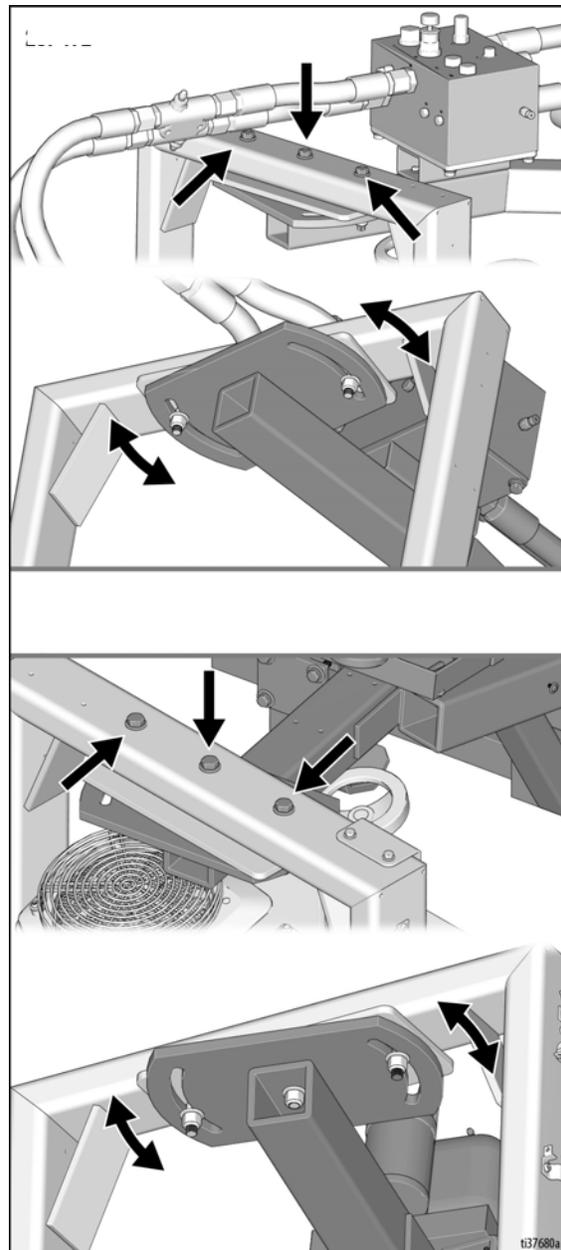
The four wheel assemblies can be mounted in the front, rear, or on either side of the Rotary Eraser, depending upon surface conditions, and to prevent debris buildup.

Set Width of Cut (Models X3.G40 & X3.K25)

Models X3.G40 & X3.K25 allow the Rotary Eraser to be swiveled up to 30° either left or right to increase the cutting path width.

Loosen the center swivel bolt at the end of the attachment arm and then loosen the outer two bolts using two 3/4" sockets or wrenches. Swivel the Rotary Eraser either right or left to the desired angle and re-tighten the bolts.

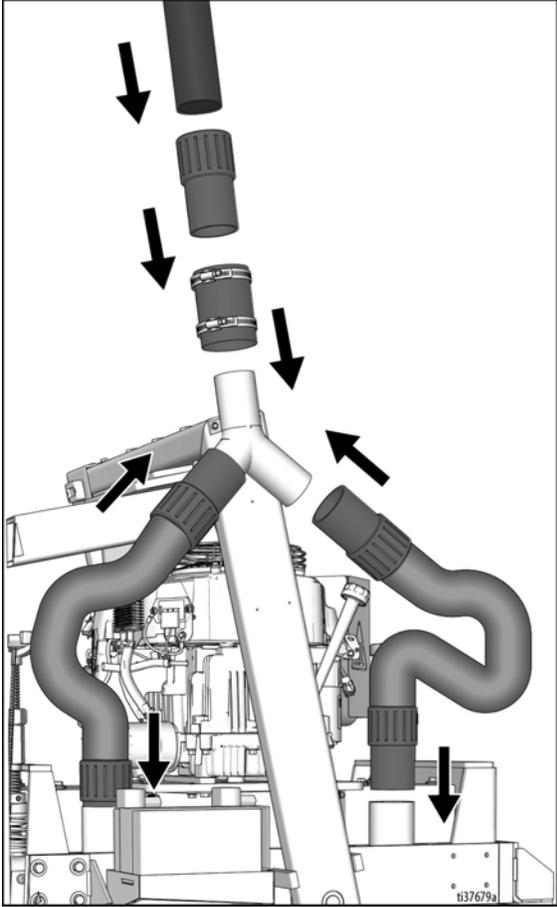
NOTE: You may wish to elevate the leading edge side of the cutters just slightly to increase erasing capacity.



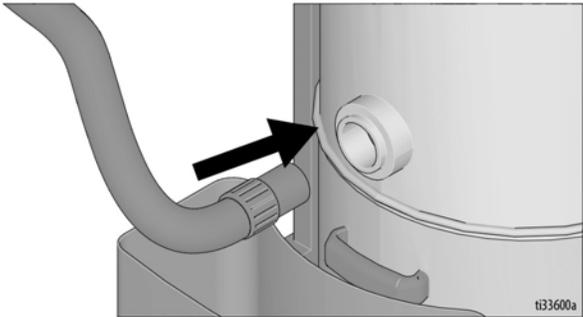
Dust Control

Vacuum Attachment

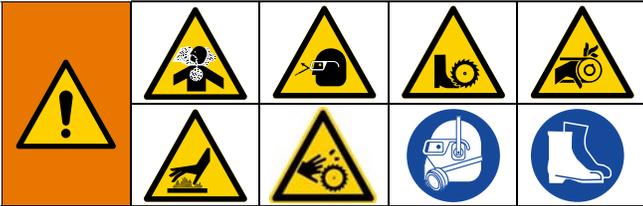
- 1. If using a vacuum, attach vacuum hose to the vacuum ports on the Rotary Eraser.



- 2. Attach vacuum hose to the inlet port on the Cyclone Separator (optional) or vacuum.



Operation



NOTICE

Do not start Rotary Eraser while cutter head is in contact with the work surface. Doing so can cause damage to the cutters.

Rotary Eraser Start Up

Check the surrounding area for bystanders and clear them before starting the skid steer or Rotary Eraser. Before turning on Hydraulic Supply/Return Lines (X1.G20 & X3.G40) or starting engine (X3.K25), perform the following:

- Read and understand gas engine manual.
- Make sure all guards are in place and secure.
- Make sure all mechanical fasteners are secure.
- Inspect for damage to engine and other exterior surfaces.
- Inspect work area to locate any pipes, columns, deck inserts, or other objects protruding from work surface. Avoid these objects during operation.

Engine Start (Gas)

1. Raise the Rotary Eraser off of the work surface slightly (~0.5 inch, 1.3 cm) to ensure the cutters do not put grooves in the work surface when starting the engine. This can be achieved by using the lift feature on the skid steer.
- If you cannot elevate the Rotary Eraser initially to start the engine, you can turn the Cutter Height Control Knobs counterclockwise to provide the cutter clearance.
- If the hydraulics of the skid steer do not maintain the cutter clearance, put a couple of pieces of 1/4" plywood or some other suitable shim under the wheels to raise the cutters off of the work surface. This allows the Rotary Eraser to be started above the work surface, then rolled off of the wood (or shim) to begin line removal.

2. Open the fuel shutoff on the gas tank and then place the Throttle Control lever at the "fast" position.
3. Move the Choke Control lever to closed.
4. Turn Key Switch to start the engine.
5. After the engine starts, move Choke Control lever to open.
6. Set Throttle Control to desired setting. Refer to **Set Cutter Speed**, page 13.

If the Engine Does Not Start (Gas)

- Check engine for proper gas and oil levels.
- Check the spark plugs. Make sure socket areas are clean and clear of debris, and the proper gap is set. Replace if needed.
- Battery might be dead.
- If engine still does not start, refer to the engine manual.

Motor Start (Hydraulic)

1. Raise the Rotary Eraser off of the work surface slightly (~0.5 inch, 1.3 cm) to ensure the cutters do not put grooves in the work surface when starting the engine. See **Step 1** under **Engine Start (Gas)**, page 12, for more details.
2. Start the skid steer and engage the auxiliary circuit.
3. Adjust speed as required using the Cutter Speed Control. Refer to **Set Cutter Speed**, page 13.

When Operating...

The U-bar should always be positioned perpendicular to the work surface and never at an angle towards or away from the driver. The U-bar has two terrain floating or planing springs to allow the operator to float over high spots or apply some down pressure to plane through high spots. After sufficient warm up time, turn on vacuum, begin forward motion and lower the Rotary Eraser simultaneously.

NOTE: If you stop the forward motion, the Rotary Eraser should be raised to prevent surface damage.

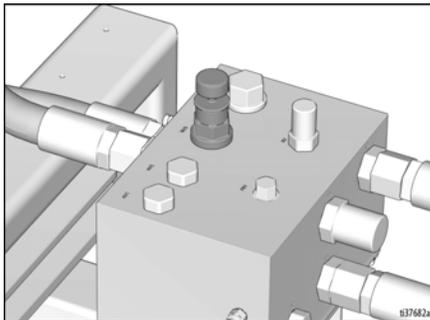
Set Cutter Speed

				
Rotating cutters can severely injure feet. Keep feet clear of cutters.				

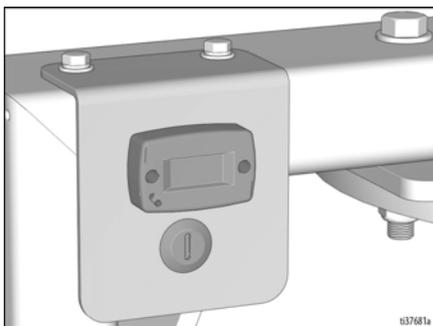
1. Set the skid steer parking brake.
2. Raise the Rotary Eraser off of the work surface slightly (~0.5 inch, 1.3 cm) to ensure the cutters do not put grooves in the work surface when starting the engine. See **Step 1** under **Engine Start (Gas)**, page 12, for more details.
3. Allow the hydraulic motor/gas engine to warm up for a minute or two and then set the correct RPM for the cutters you have installed. Refer to **Recommended Speeds**, page 13, and **Set Cut Depth**, page 13.

NOTICE
Incorrect setting of RPM will damage cutters or the drive belt.

4. **Hydraulic Models (X1.G20 & X3.G40):** Observe the tachometer to ensure speed of the cutters matches the **Recommended Speeds** for best cutter life. Adjust as required using the Speed Control Knob.



Gas Model (X3.K25): After engine warms up, adjust Throttle Control lever and observe tachometer to ensure engine speed of the cutters matches the **Recommended Speeds** for best cutter life.



Recommended Speeds

For best performance and cutter life, try to maintain the following speeds read at the Tachometer:

Tachometer Speed		
	Cutter Type	
Model	Carbide Cutters	Wire Brush
X1.G20	2000-2200	800-1000
X3.G40	2000-2400	1400-1600
X3.K25	3200-3400	1400-1600

Set Cut Depth

				
Rotating cutters can severely injure feet. Keep feet clear of cutters.				

Set cutter depth just deep enough to do the job. Too much pressure will wear the cutters out faster and leave a much more severe cut on the surface.

X1.G20: Cutters should be parallel to the work surface when engaged. The cutting circle left by the Rotary Eraser should be an even circle.

X3.G40 & X3.K25: Add slightly more pressure to the rear cutters than the front cutters by turning the rear Cutter Height Control Knobs clockwise two turns. This will allow the front cutters to remove the material and the rear to finish the job.

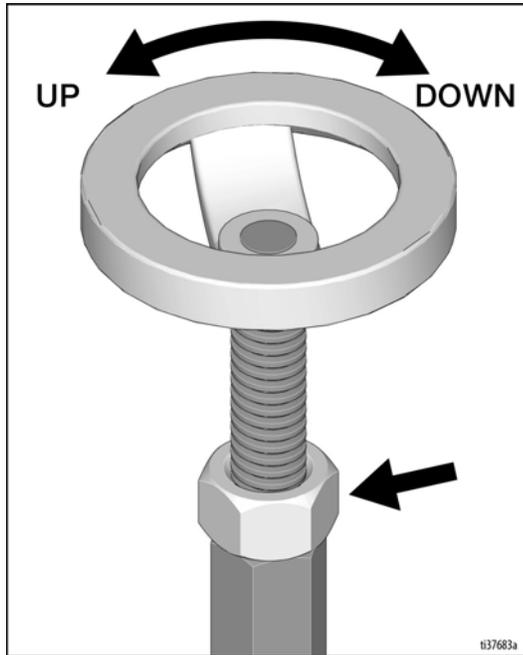
NOTE: Excess down pressure creates excess wear on all moving parts. The Rotary Eraser's weight should be sufficient enough to hold the cutter heads against the work surface. Should the desired results not meet your expectations, consider resetting the Rotary Eraser RPM to the correct speed or reducing forward motion speed.

1. **Hydraulic Models (X1.G20 & X3.G40):** Turn off auxiliary circuit and wait until the Rotary Eraser cools off if it has been running.

Gas Model (X3.K25): Turn off engine and wait until the Rotary Eraser cools off if it has been running.

2. Loosen the jam nuts using a 1-5/8" wrench on the Cutter Height Control Knobs located on both ends of the Rotary Eraser.

3. Turn the Cutter Height Control Knobs counterclockwise about two turns to ensure the cutter head or heads do not contact the work surface.



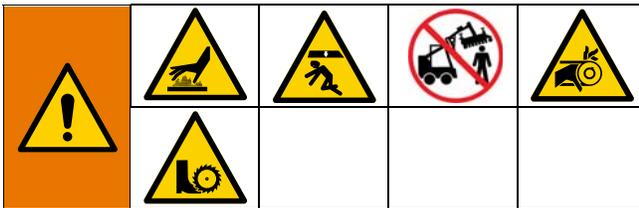
4. For the initial adjustment, fold the debris skirt upwards and tape it to the frame. This allows viewing the cutters when setting the height.
5. Begin adjusting the head or heads downward. Using a piece of thick paper, adjust until the head or heads are touching the paper evenly on all sides.
6. Turn the Cutter Height Control Knobs clockwise about two turns so the cutters touch the work surface with a slight force.

Disconnect Rotary Eraser from Skid Steer

The following instructions are generic. Due to the differences in attachment mounting and removal methods among various brands of skid steers, refer to your skid steer owners manual for proper attachment removal methods.

1. Set skid steer parking brake.
2. **Hydraulic Models (X1.G20 & X3.G40):** Turn off auxiliary circuit and place Rotary Eraser on the work surface.
Gas Model (X3.K25): Turn off engine and place the Rotary Eraser on the work surface.
3. **Hydraulic Models (X1.G20 & X3.G40):** Release hydraulic pressure in hoses, and disconnect auxiliary hoses.
4. Release the skid steer lock pins.
5. Start skid steer engine and detach Universal Quick Attach Mount Plate.

Repair



Avoid touching the cutter head(s) after use until they have completely cooled.

CRUSH HAZARD

To avoid serious injury or death, never work under the equipment unless it is securely supported by safety stands or blocks.

HYDRAULIC MODELS

To avoid injury from unexpected start up, always disconnect the Hydraulic Supply/Return Lines before you service your machine.

GAS MODEL

To avoid injury from unexpected start up, disable engine as follows: 1) Disconnect both spark plug wires. 2) Disconnect negative (-) battery cable from battery.

Cutter Head Removal

1. Raise the Rotary Eraser to a height where the cutters are easily accessible. Support Rotary Eraser with blocks or safety stands.
2. Remove the cutters from the spindles using either a 24mm socket or a wrench. It is recommended to use an impact wrench if available.

Cutter Head Replacement

1. Slide backing plate onto spindle shaft. Slide felt washer onto shaft into the ring in the backing plate.



2. Slide cutter assembly onto shaft up to the backing plate.



3. Slide felt washer onto the shaft into the space between the cutter edge and the bearing edge.



4. Slide outer bearing cover onto shaft against the felt washer.



5. Slide Belleville washer onto shaft against the outer bearing cover.

NOTE: The washer should bend outward.



6. Place hex nut onto shaft. Tighten so the nut is tight but the cutters can freely rotate on their bearings (if no rotation, the nut is too tight).



7. To install cutter heads, refer to **Cutter Head Installation**, page 10.

Drive Belt Replacement (Models X3.G40 & X3.K25)

Models X3.G40 & X3.K25 are equipped with a Poly Chain® GT2 (Gates Co.) drive belt or a multi groove (banded) “V” belt in a serpentine arrangement. This allows all three heads to turn in the same direction to minimize parts inventory of heads and drive components.

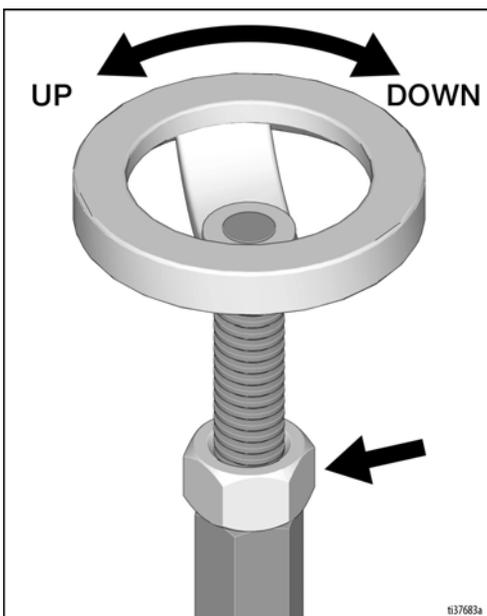
Tools required:

- 1 5/8” wrench
- 7/16” socket or wrench
- 1/2” socket or wrench (gas model)
- 9/16” socket or wrench
- 3/16” hex key

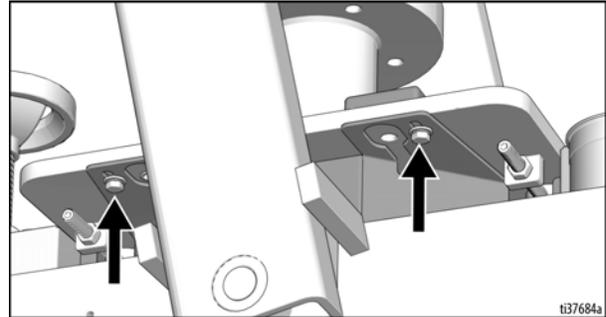
1. **Hydraulic Models (X1.G20 & X3.G40):** Turn off auxiliary circuit and wait until the Rotary Eraser cools off if it has been running.

Gas Model (X3.K25): Turn off engine. Disable engine as follows: 1) Disconnect both spark plug wires. 2) Disconnect negative (-) battery cable from battery.

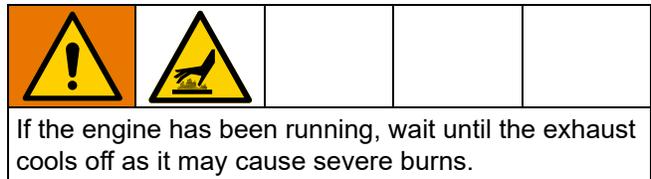
2. Raise the cutter heads off the work surface by turning the 3 Cutter Height Control Knobs all the way up. Loosen the jam nuts using the 1-5/8” wrench and raise the three elevating screws all the way up. This allows access to the button head screws holding the upper and lower covers on.



3. Remove the auxiliary belt cover over the engine pulley using a 7/16” socket or wrench.

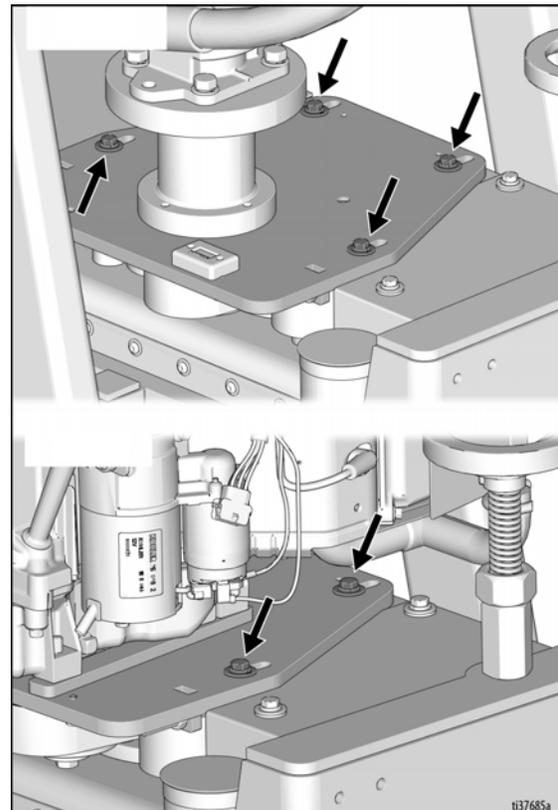


4. **Hydraulic Model (X3.G40):** Remove the main belt guards using a 9/16” socket or wrench.

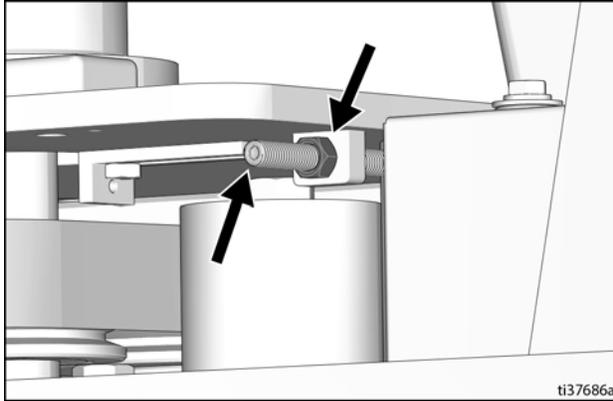


Gas Model (X3.K25): Remove the exhaust using a 1/2” socket or wrench to remove the U-bolts. Remove the belt guards using a 9/16” socket or wrench.

5. Once the belt guards are out of the way, remove the four motor plate screws using a 9/16” socket or wrench.



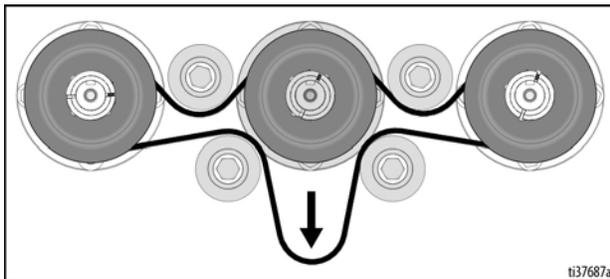
6. To loosen the tension on the belt, locate and loosen the two jam nuts on the adjusting screws for under the motor mount plate using a 9/16" socket or wrench and then using a 3/16" hex key back out the tensioning screws until the drive belt is completely loose.



7. **Hydraulic Model (X3.G40):** Lift the entire motor mount plate assembly off and set it aside to allow access to the drive belt.

Gas Model (X3.K25): Lift the engine plate up about 4". You may want to put blocks under the four corners of the cover to fix it in the raised position and hold up the engine. Or you can simultaneously lift and cock engine slightly so that the belt can be slid free from the pulley.

8. To install the new belt, remove the old belt and slide the new one around the three pulleys and four idlers. Tie a piece of string around the belt to pull it out towards the motor pulley at reassembly time.



9. Lower the engine and belt cover and as you lower it use the string to pull the belt over the motor pulley.
10. Using the tension screws begin to tighten the belt by moving the engine away from the center of the Rotary Eraser. Torque tensioning screws to 25-30 in-lbs (2.8-3.4 N·m).

11. **Hydraulic Model (X3.G40):** After the belt has been properly tightened, reconnect the Rotary Eraser to the skid steer and allow it to run for 15-20 seconds to allow the belt to set into the grooves of the pulleys correctly.

Gas Model (X3.K25): After the belt has been properly tightened, reconnect the black battery cable and both spark plug wires, and turn the starter button to rotate the engine 15-20 revolutions to allow the belt to set into the grooves of the pulleys correctly.

NOTICE

It is better to tension the belt tightly rather than loosely. Loose belts will cause the belt to ride out of the pulley grooves and break.

12. Reattach all the covers and the Rotary Eraser will be ready for operation. Periodic tensioning of the belt will ensure long belt life. Recheck belt tension again after 30 minutes of use.

Bearing Replacement (Models X3.G40 & X3.K25)

Note the assemblies are matched in sets which assures all three heads hit the working surface at the same time.

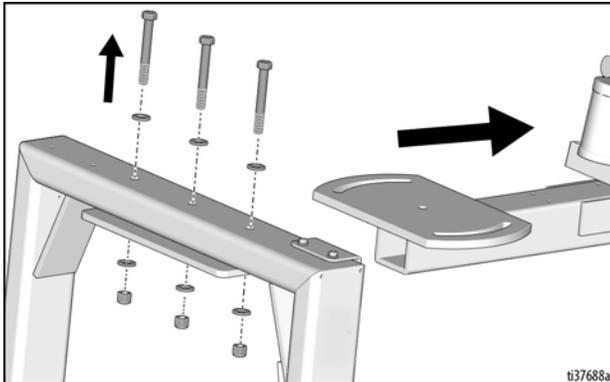
Tools required:

- Two 3/4" socket or wrench
- Flat head screw driver
- 3/16" hex key

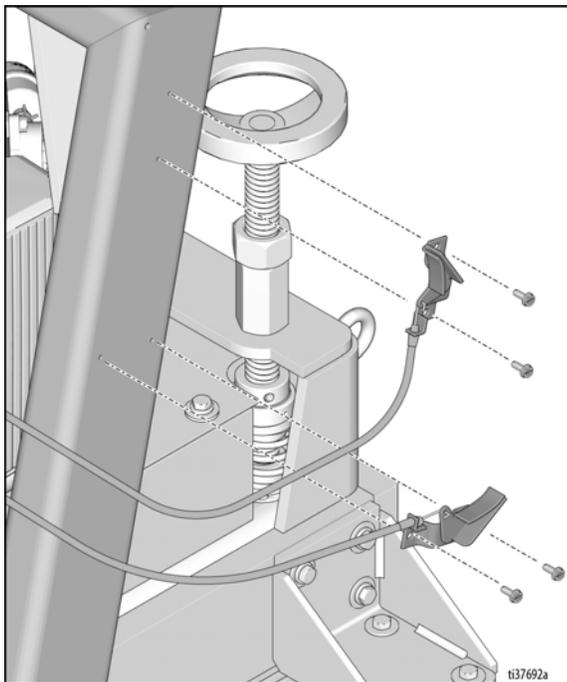
1. To access the bearing assemblies, follow **Drive Belt Replacement (Models X3.G40 & X3.K25)**, page 16. Remove the drive bearing assemblies.
2. If it has not been done, remove the cutter heads. Perform **Cutter Head Removal**, page 15, before proceeding.

3. **Hydraulic Model (X3.G40):** With the hydraulic hoses attached, remove the hydraulic motor and set it aside.

Gas Model (X3.K25): The Quick Attach Mount boom will have to be removed to allow the U-bar to be rotated to remove the engine. To do this, use the 3/4" socket or wrench to remove the 3 bolts attaching the U-bar to the Quick Attach Mount boom. Drain gas from the tank and carefully disconnect the gas lines to the engine before pulling the boom away.

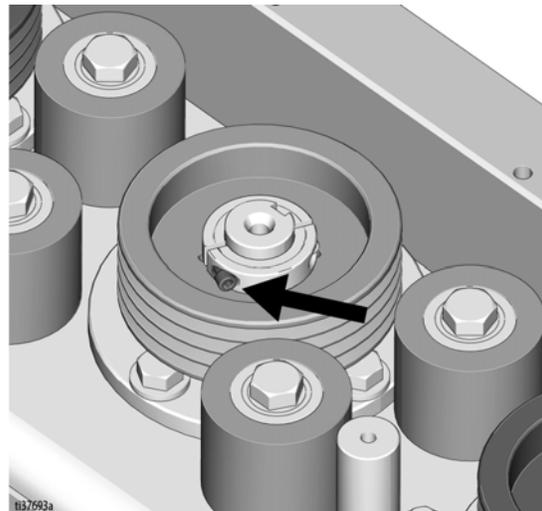


4. **Gas Model only (X3.K25):** Remove the throttle and choke levers from the U-bar using a flat head screw driver. Also disconnect the battery cables, at which point the U-bar can be rotated so the engine can completely be removed from the Rotary Eraser. It is recommended to use an engine lift or a hoist to lift the engine off the Rotary Eraser.

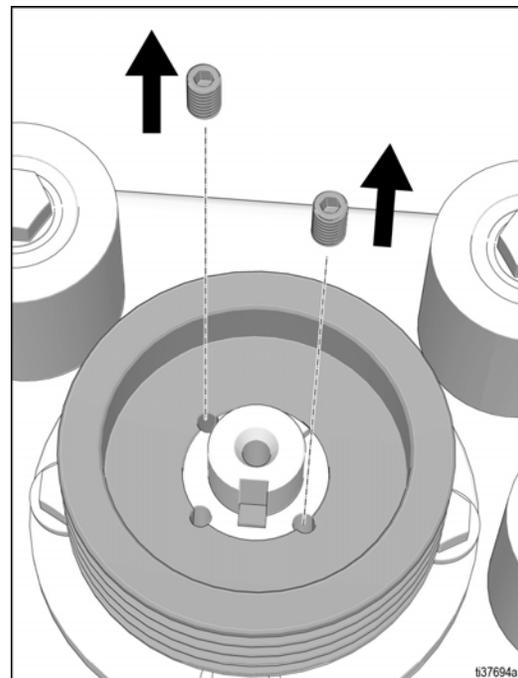


NOTE: At this point there is full access to the Rotary Eraser drive components to service them as needed.

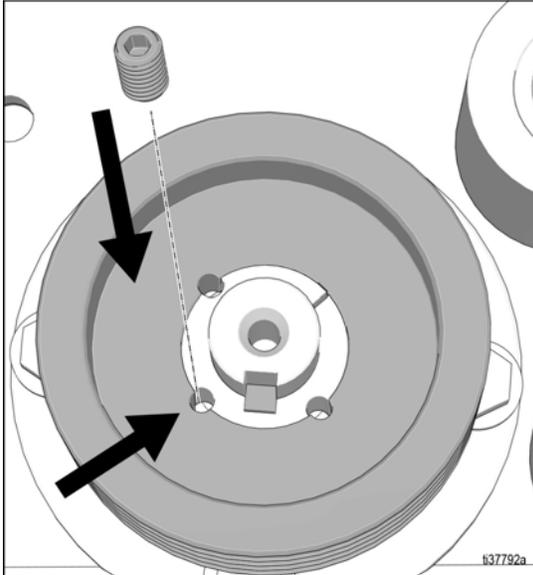
5. To service the main bearing housings, the drive pulleys must be removed. To do this use a 3/16" hex key to remove the collar.



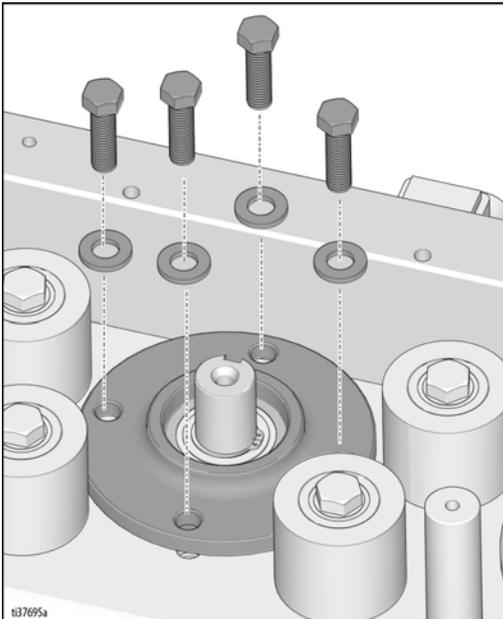
6. After the collar is removed, use the 3/16" hex key to remove the two set screws that are locking down the pulley.



7. Use one of the set screws and thread it into the middle hole to back out the bushing as shown below.



8. Lift off the pulley. Remove the four mounting bolts to the bearing assembly and lift out the assembly.



Bearing Replacement (Model X1.G20)

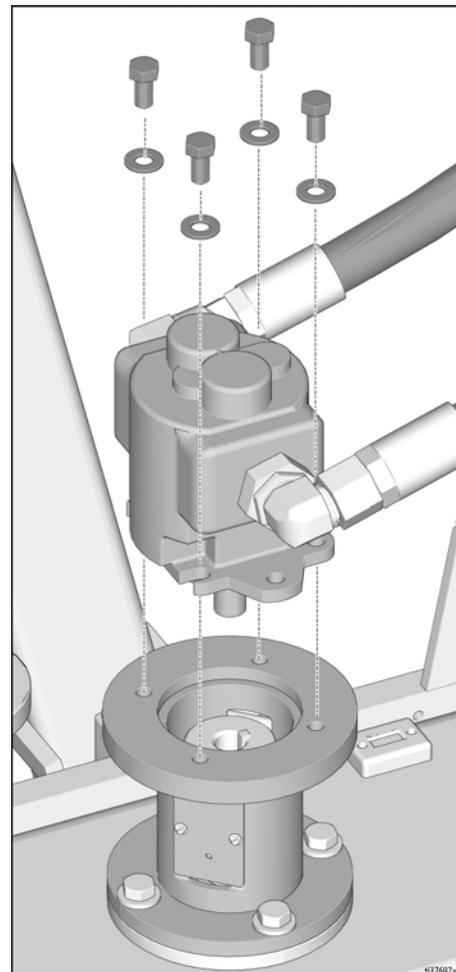
Tools required:

- Two 3/4" socket or wrench
- 9/16" socket or wrench

1. Turn off auxiliary circuit and wait until the Rotary Eraser cools off if it has been running.
2. To remove the drive bearing assembly, first follow **Cutter Head Removal**, page 15, to remove the cutter heads.

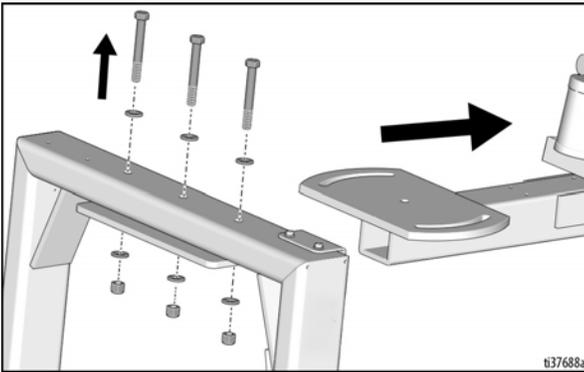
NOTE: It may be needed to completely remove the motor and Universal Quick Attach Mount Plate to have enough working room. This gives you access to the bearing assembly.

3. If it has not been done, remove the cutter heads. Perform **Cutter Head Removal**, page 15, before proceeding.
4. Start by removing the hydraulic motor from the motor adapter using the 9/16" socket or wrench.

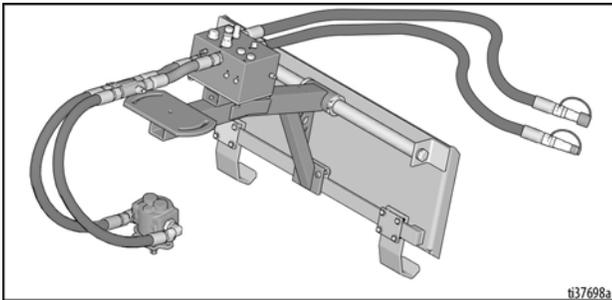


Repair

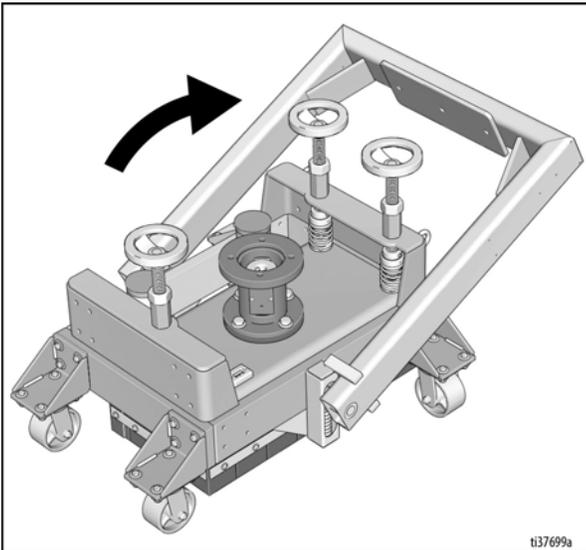
5. Remove the Quick Attach Mount boom from the U-bar using the 3/4" socket or wrench.



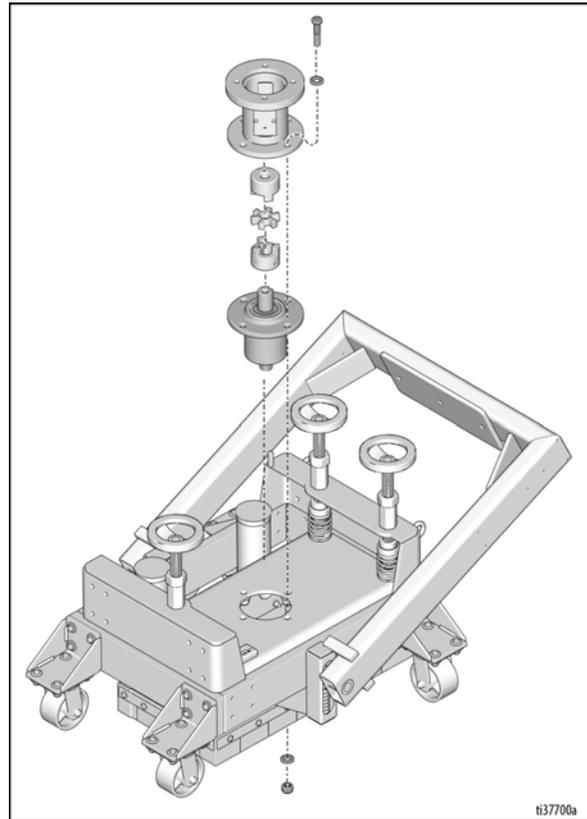
6. Remove the Quick Attach Mount and hydraulic assemblies from the Rotary Eraser and set aside.



7. Rotate the U-bar out of the way to allow removal of the entire drive bearing assembly.



8. Remove the bearing assembly using the 3/4" socket or wrench.



9. Install new bearing assembly using the reverse steps above to install.

Maintenance



Avoid touching engine and cutter head after use until they have completely cooled.

HYDRAULIC MODELS

To avoid injury from unexpected start up, always disconnect the hydraulic supply source before you service your machine.

GAS MODEL

To avoid injury from unexpected start up, disable engine as follows: 1) Disconnect both spark plug wires. 2) Disconnect negative (-) battery cable from battery.



CRUSH HAZARD

To avoid serious injury or death, never work under the equipment unless it is securely supported by safety stands or blocks.

The following steps should be performed to maintain proper operation and sustain the life of the Rotary Eraser.

BEFORE OPERATION:

- Visually inspect the entire Rotary Eraser for damage or loose connections.
- **X3.K25 only:** Check engine oil (see engine manual).
- Check bushings and cutters.
- Check cutter for uneven wear.

DAILY:

- Check all fasteners and re-tighten.
- Clean dust and debris from exterior of Rotary Eraser (do NOT use pressure washer or other high pressure cleaning equipment).
- Inspect dust skirts for damage. Repair or replace damaged skirts in order to help dust and debris containment.
- **X3.K25 only:** Check engine oil level and fill as necessary.
- **X3.K25 only:** Check and fill gas tank.
- **X3.K25 only:** Remove air filter cover and clean element. Replace element if necessary. Replacement elements can be purchased from your local engine dealer.

AFTER THE FIRST 20 HOURS OF OPERATION:

- **X3.K25 only:** Drain engine oil and refill with clean oil. See engine manual for correct viscosity.

EVERY 40-50 HOURS OF OPERATION:

- **X3.K25 only:** Change engine oil (see engine manual).
- Grease wheel bearings.

AS REQUIRED:

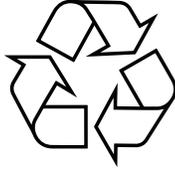
- **X3.G40 & X3.K25 only:** Check drive belt and tension and tighten or replace as needed.

For additional information about engine maintenance, see engine manual.

Recycling and Disposal

Rechargeable Battery Disposal

Do not place batteries in the trash. Recycle batteries according to local regulations. In the USA and Canada, call 1-800-822-8837 to find recycling location or go to www.call2recycle.org.



End of Product Life

At the end of the product's useful life, dismantle and recycle it in a responsible manner.

- Drain and dispose of fluids according to applicable regulations. Refer to the material manufacturer's Safety Data Sheet.
- Remove battery, tachometer, and other electronic components. Recycle according to applicable regulations.
- Do not dispose of electronic components with household or commercial waste. 
- Deliver remaining product to a recycling facility.

Troubleshooting

				
<p>HYDRAULIC MODELS</p> <p>To avoid injury from unexpected start up, always disconnect the Hydraulic Supply/Return Lines before you service your machine.</p> <p>GAS MODEL</p> <p>To avoid injury from unexpected start up, disable engine as follows: 1) Disconnect both spark plug wires. 2) Disconnect negative (-) battery cable from battery.</p>				

				
<p>CRUSH HAZARD</p> <p>To avoid serious injury or death, never work under the equipment unless it is securely supported by safety stands or blocks.</p>				

Problem	Cause	Solution
Cutters wearing unevenly/prematurely	Cutter head is too low	Raise the cutter head.
	Material build up	Clean the cutters.
	Bearings may be worn	Replace bearings.
	Wrong cutters for application	Contact Tech Services.
Excess Vibration	Bearings may be worn	Replace bearings.
	Drive shaft worn	Replace drive shaft.
	Improper cutter set-up	Contact Tech Services.
	Spindle contacting the work surface	Raise the cutter head.
	Wheels worn out	Replace the wheels.
Rotary Eraser jumps erratically	RPM is too low	Turn engine throttle or speed control to highest setting.
	Surface is severely uneven	Move to smoother surface.
Drive belt wearing prematurely	Belt not tensioned properly	Tension belt, see Drive Belt Replacement (Models X3.G40 & X3.K25) , page 16.
	Wrong belt	Order new belt.
Cutter Head Adjustment Handle will not turn	Threads are not greased	Clean and grease threads.
Cutters not spinning	Auxiliary hydraulics (X1.G20 & X3.G40)	Reverse direction of flow on skid steer auxiliary hydraulics. If not available, swap hydraulic hose ends.
	Hydraulic motor	Replace hydraulic motor.
	Bearing drive assembly	Replace drive assembly.
	Drive belt (X3.G40 & X3.K25)	Replace belt.

Parts - X1.G20 (Outer Frame)

 Torque to 28-30 ft-lbs
(37.9-40.7 N·m)

 Torque to 20-22 ft-lbs
(27.1-29.8 N·m)

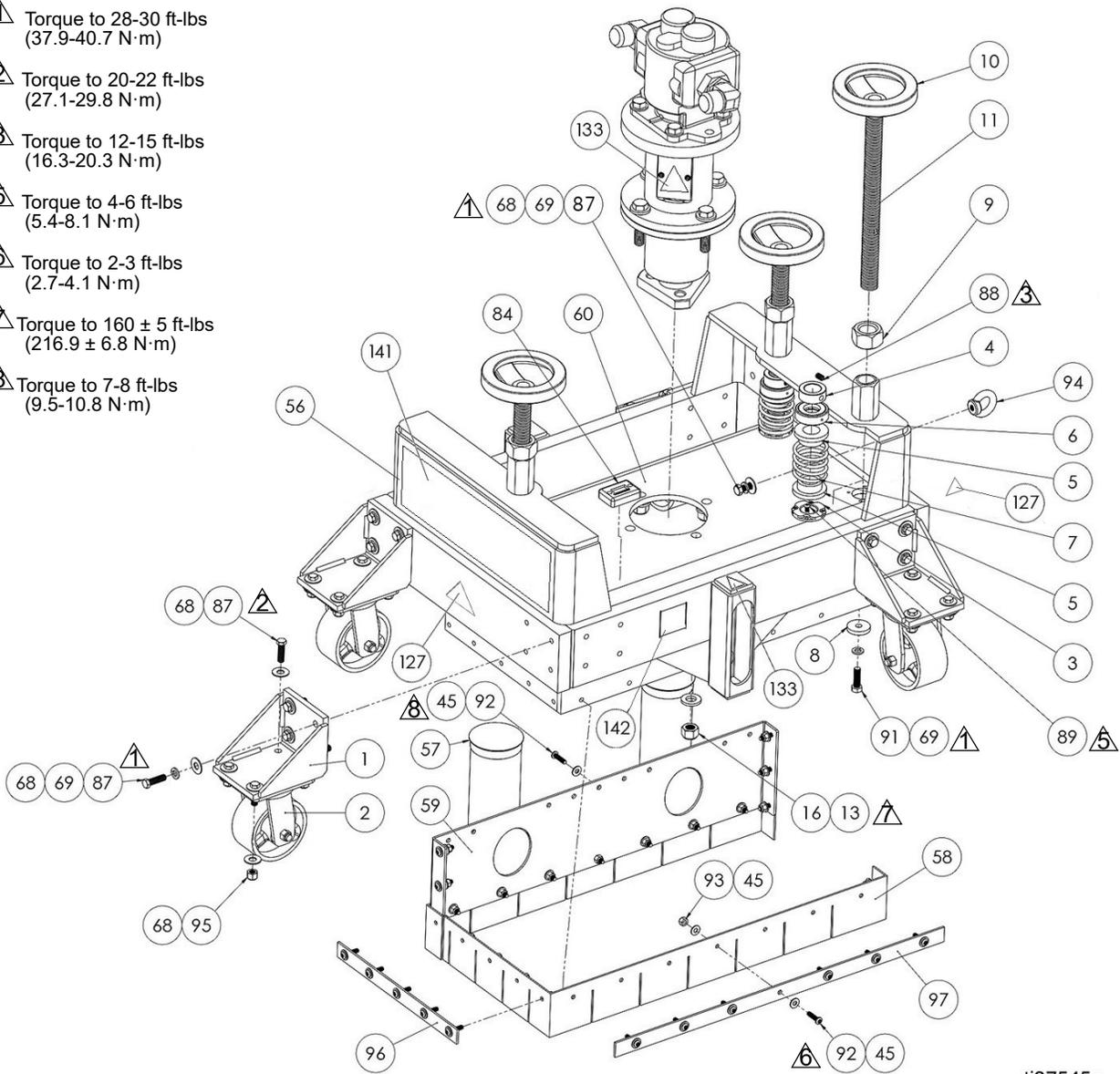
 Torque to 12-15 ft-lbs
(16.3-20.3 N·m)

 Torque to 4-6 ft-lbs
(5.4-8.1 N·m)

 Torque to 2-3 ft-lbs
(2.7-4.1 N·m)

 Torque to 160 ± 5 ft-lbs
(216.9 ± 6.8 N·m)

 Torque to 7-8 ft-lbs
(9.5-10.8 N·m)



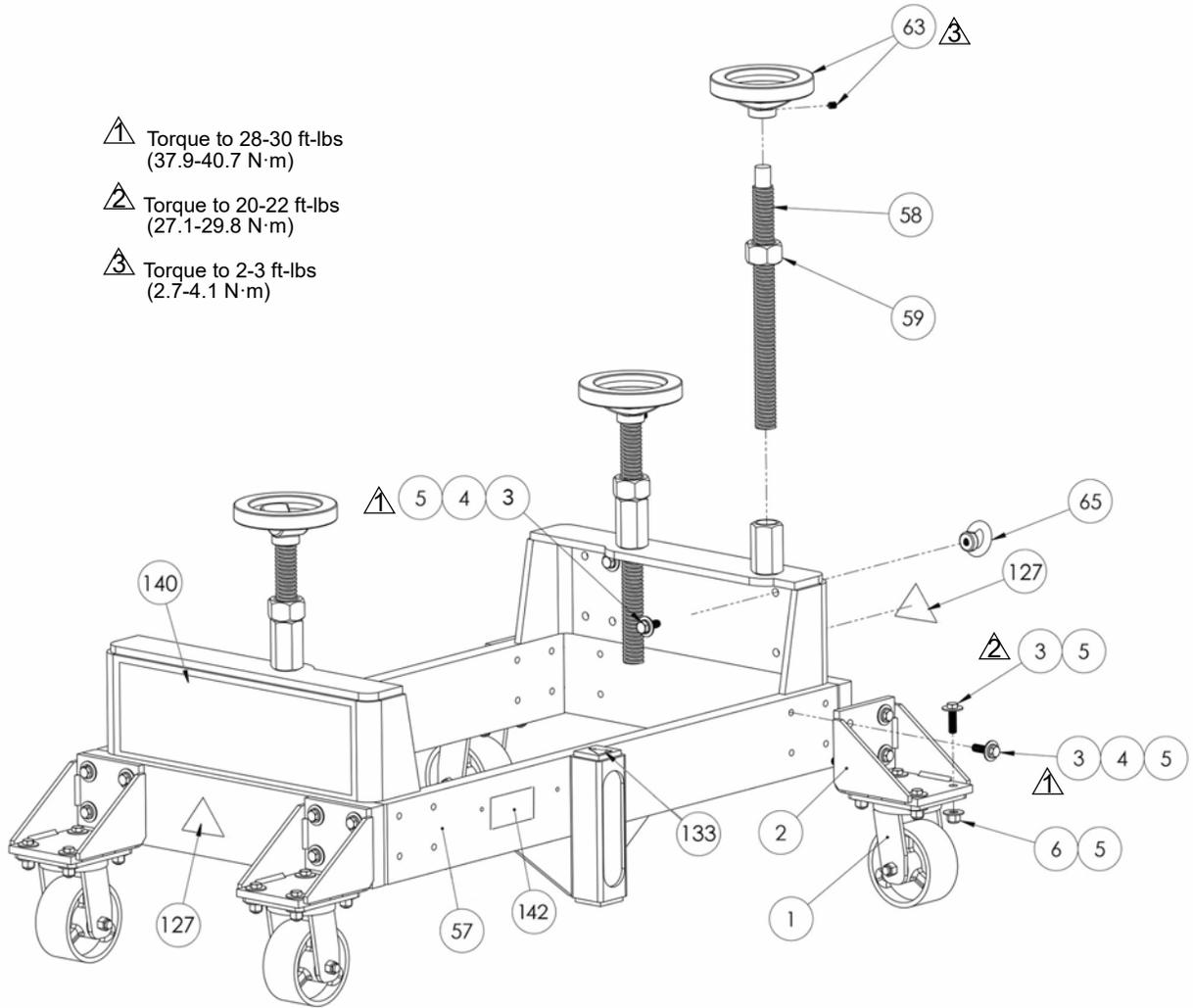
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Parts List - X1.G20 (Outer Frame)

Ref.	Part	Description	Qty.
1	18B046	MOUNT, caster	4
2	18B176	CASTER	4
3	18B160	BUSHING, bronze	3
4	18B161	SPRING, stop, lock collar	3
5	18B164	SPRING, lift, seat	6
6	18B165	BEARING, thrust	3
7	18B183	SPRING, height control	3
8	18B194	WASHER, jumbo	3
9	18B124	NUT, hex, acme	3
10	18B159	WHEEL, height	3
11	18B158	SCREW, height control	3
13	18B108	SPACER, hardened, 9/16"	8
16	NHN.562-12	NUT, nylock, 9/16-12	4
45	FLW.25	WASHER, flat, 1/4"	72
56	18B042	FRAME, outer	1
57	17W220	CAP, tube	2
58	18B151	SKIRT, rubber	1
59	18B035	GUARD, dust	1
60	18B038	FRAME, inner	1
68	FLW.375	WASHER, flat, 3/8"	58
69	SLW.375	WASHER, lock, 3/8"	29
84	18B188	TACHOMETER	1
87	HX-CS.375-16x1.25	BOLT, hex, head, 3/8-16 x 1.25"	34
88	SHSS.312-18x.5	SET, screw, 5/16-18 x 1/2"	3
89	BH-SCS10-32x.375	SCREW, button head, #10-32 x 3/8"	12
91	HX-CS.375-24x1.25	SCREW, hex, cap, 3/8-24 x 1.25"	3
92	BH-SCS.25-20x1.0	SCREW, button, head, 1/4-20 x 1"	34
93	NHN.25-20	NUT, nylock, 1/4-20	34
94	18B117	NUT, eye, 3/8-16	2
95	NHN.375-16	NUT, nylock, 3/8-16	16
96	18B154	RETAINER, front, skirt	1
97	18B152	STRIP, rubber hold, large	2
127▲	16C393	LABEL, warning, ISO cut foot hazard	2
133▲	15H108	LABEL, warning, pinch hazard	4
141	18B544	LABEL, brand, X1	1
142▲	19B269	LABEL, safety, crush	2

▲Replacement safety labels, tags, and cards are available at no cost.

Parts - X3.G40 (Outer Frame)



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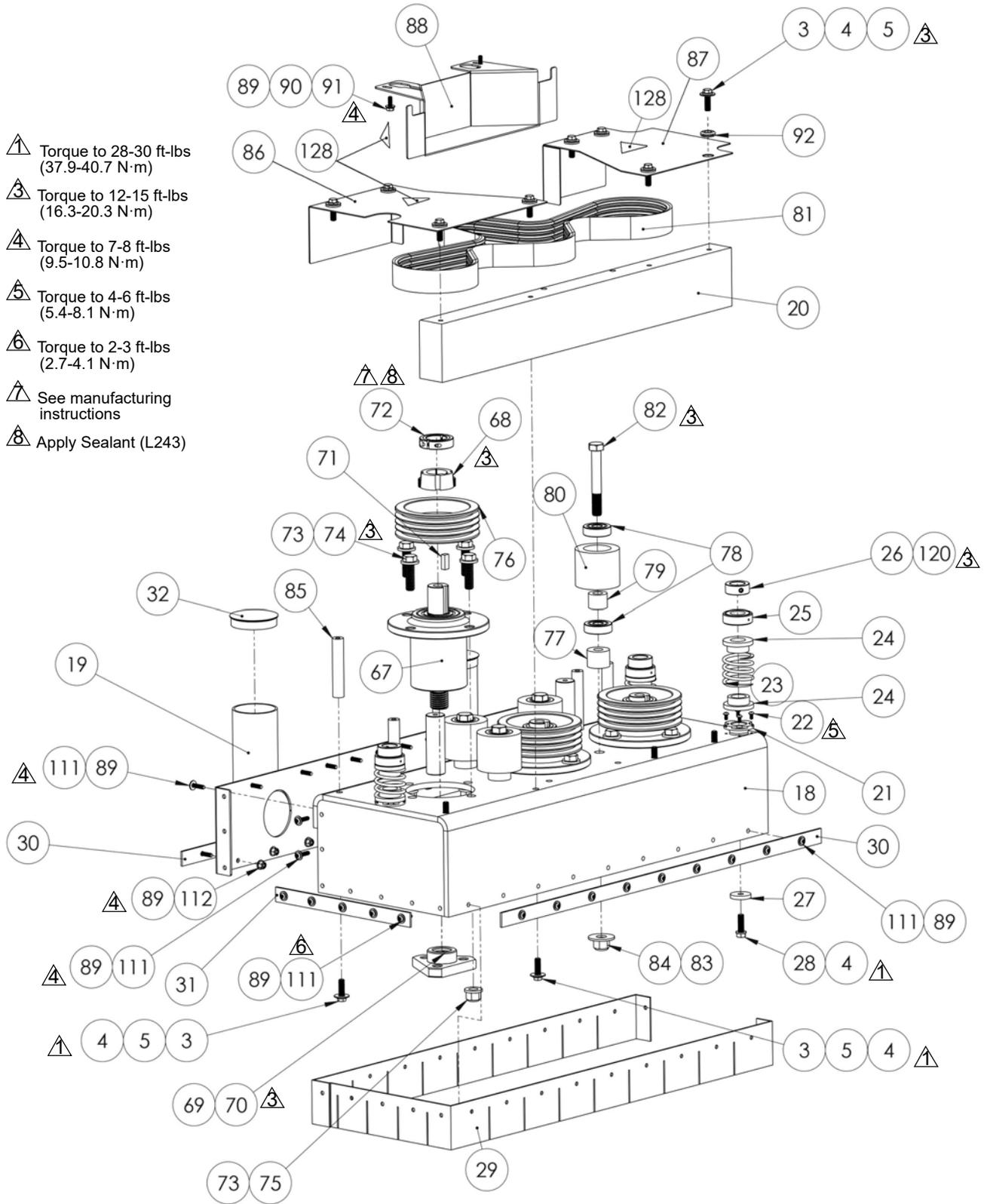
Parts List - X3.G40 (Outer Frame)

Ref.	Part	Description	Qty.
1	18B176	CASTER	4
2	18B046	MOUNT, caster	1
3	HX-CS.375-16x1.25	BOLT, hex head, 3/8-16 x1.25"	55
4	SLW.375	WASHER, lock, 3/8"	51
5	FLW.375	WASHER, flat, 3/8"	74
6	NHN.375-16	NUT, nylock, 3/8-16	16
57	18B044	FRAME, outer	1
58	18B158	SCREW, height, control	3
59	18B124	NUT, acme, hex, 1.0-5	3
63	18B159	WHEEL, height	3
65	18B117	NUT, eye, 3/8-16	2
127▲	16C393	LABEL, warning, ISO cut foot hazard	2
133▲	15H108	LABEL, warning, pinch hazard	2
140	18B546	LABEL, brand, X3	1
142▲	19B269	LABEL, safety, crush	2

▲Replacement safety labels, tags, and cards are available at no cost.

Parts - X3.G40 (Inner Frame)

-  Torque to 28-30 ft-lbs (37.9-40.7 N·m)
-  Torque to 12-15 ft-lbs (16.3-20.3 N·m)
-  Torque to 7-8 ft-lbs (9.5-10.8 N·m)
-  Torque to 4-6 ft-lbs (5.4-8.1 N·m)
-  Torque to 2-3 ft-lbs (2.7-4.1 N·m)
-  See manufacturing instructions
-  Apply Sealant (L243)

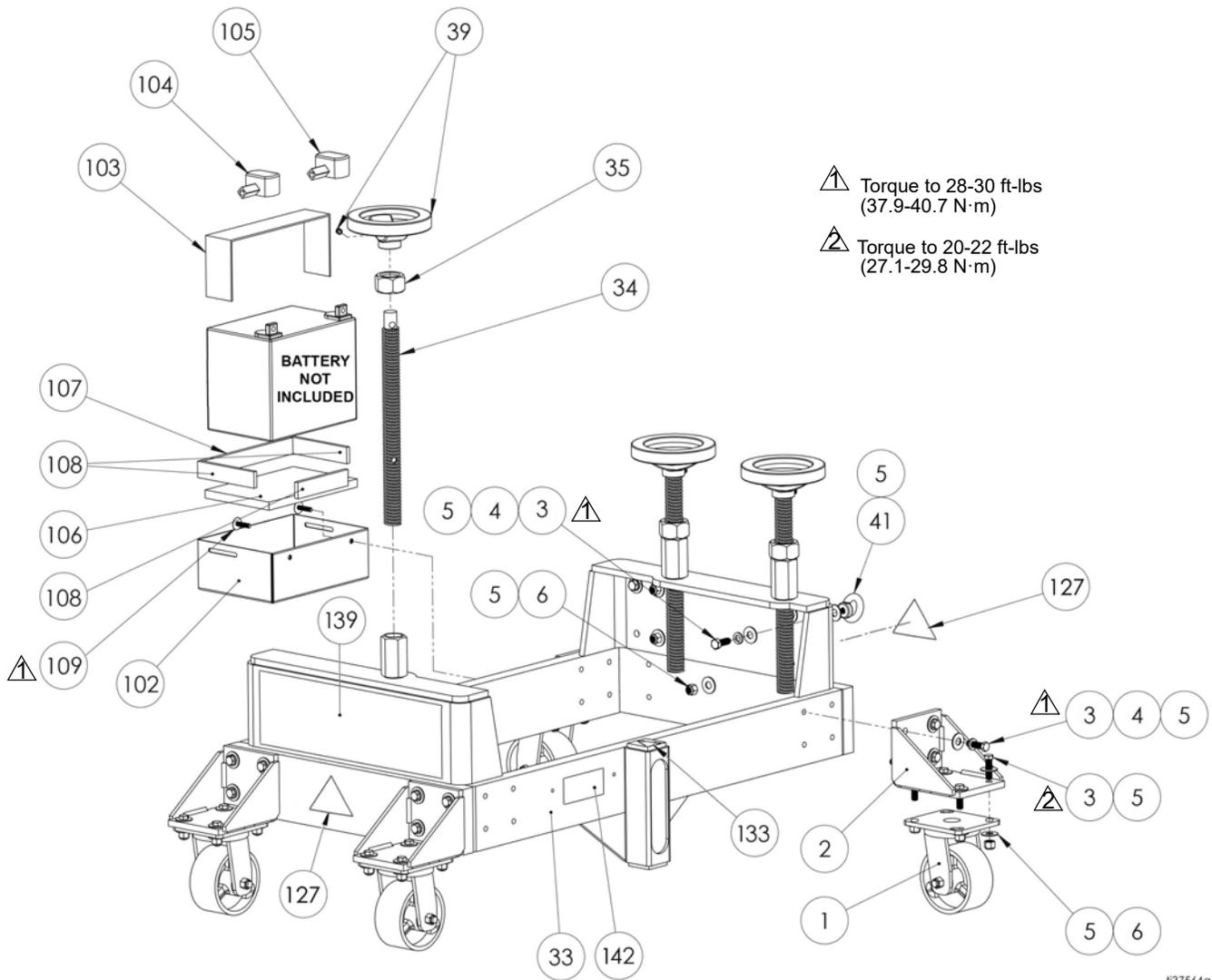


Parts List - X3.G40 (Inner Frame)

Ref.	Part	Description	Qty.
3	HX-CS.375-16x1.25	BOLT, hex head, 3/8-16 x1.25"	53
4	SLW.375	WASHER, lock, 3/8"	51
5	FLW.375	WASHER, flat, 3/8"	74
18	18B039	FRAME, inner	1
19	18B036	PLATE, inner frame, exhaust	1
20	18B193	WEIGHT, counter, internal	1
21	18B160	BUSHING, bronze	3
22	BH-SCS10-32x.375	SCREW, button head, #10-32 x 3/8"	12
23	18B183	SPRING, height, control	3
24	18B164	SEAT, lift, spring	6
25	18B165	BEARING, thrust	3
26	18B161	SPRING, stop, lock collar	3
27	18B194	WASHER, jumbo	3
28	HX-CS.375-24x1.25	SCREW, cap, hex, 3/8-24 x 1.25"	3
29	18B170	SKIRT, rubber	1
30	18B155	RETAINER, side skirt	2
31	18B154	RETAINER, front skirt	1
32	17W220	CAP, tube	2
67	17W238	BEARING, drive, housing, assy	3
68	18B180	BUSHING, taper lock, 35mm	4
69	17X259	CONNECTOR, hub, drive	3
70	SHSS.375-24x.5	SCREW, set, 3/8-24 x 0.5"	8
71	18B197	KEY, 8mm x 10mm x 1"	4
72	18B198	COLLAR, locking	3
73	18B108	SPACER, hardened 9/16"	24
74	HX-CS.562-12x2	SCREW, hex cap, 9/16-12 x 2"	12
75	NHN.562-12	NUT, nylock, 9/16-12	12
76	17X925	PULLEY, drive	3
77	18B174	SPACER, roller	4
78	18B115	BEARING	8
79	18B163	SPACER, belt idler	4
80	18B162	ROLLER, belt idler	4
81	18B177	BELT, drive	1
82	HX-CS.625-11x4.5	SCREW, hex cap, 5/8-11 x 4.5"	4
83	FLW.625	WASHER, flat, 5/8"	4
84	NHN.625-11	NUT, nylock, 5/8-11	4
85	18B167	SPACER, belt guard	4
86	18B029	GUARD, belt, front	1
87	18B028	GUARD, belt, rear	1
88	18B030	GUARD, center, belt	1
89	FLW.25	WASHER, flat, 1/4"	86
90	HX-CS.25-20x.75	SCREW, hex, cap, 1/4-20 x 0.75"	6
91	NHN.25-20	WASHER, lock, 1/4"	6
92	18B113	BUSHING, rubber, 3/4"	8
111	BH-SCS.25-20x1.0	SCREW, button head, 1/4-20 x 1"	40
112	NHN.25-20	NUT, nylock, 1/4-20	40
120	SHSS.312-18x.5	SCREW, set, 5/16-18 x 1/2"	3
128▲	16C394	LABEL, safety, warning, entangle	3

▲Replacement safety labels, tags, and cards are available at no cost.

Parts - X3.K25 (Outer Frame)



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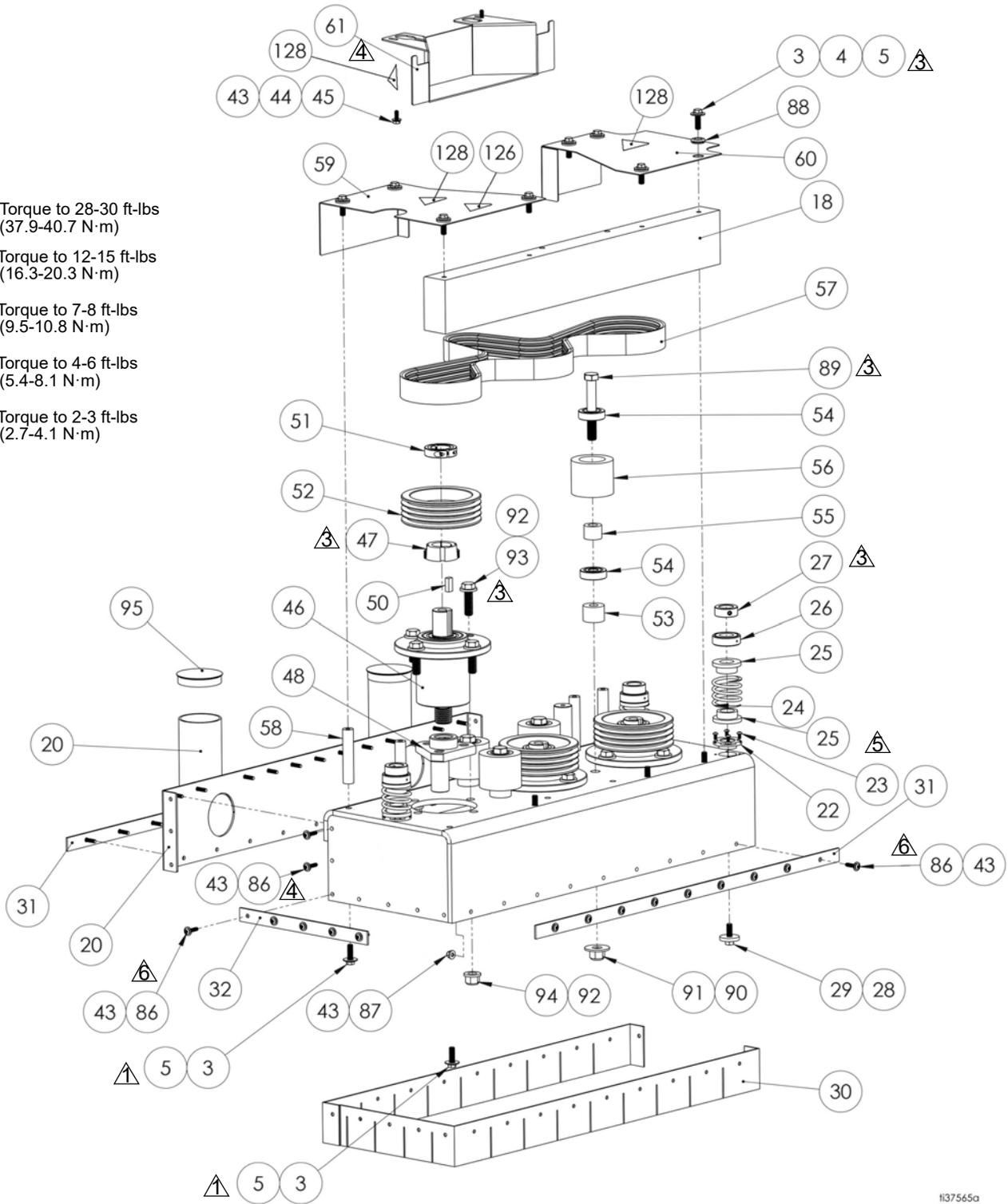
Parts List - X3.K25 (Outer Frame)

Ref.	Part	Description	Qty.
1	18B176	CASTER	4
2	18B046	MOUNT, caster	1
3	HX-CS.375-16x1.25	BOLT, hex head, 3/8-16 x 1.25"	58
4	SLW.375	WASHER, lock, 3/8"	53
5	FLW.375	WASHER, flat, 3/8"	88
6	NHN.375-16	NUT, nylock, 3/8-16	20
33	18B044	FRAME, outer	1
34	18B158	SCREW, height control	3
35	18B124	NUT, hex, acme	3
39	18B159	WHEEL, height	3
41	18B117	NUT, eye, 3/8-16	2
102	17Y121	BOX, battery	1
103	18A786	STRAP, Velcro, 2" x 24"	1
104	801958	PROTECTOR, battery terminal, red	1
105	801959	PROTECTOR, battery terminal black	1
106	18Y704	FOAM, urethane, 1/2"	1
107	18Y705	FOAM, urethane, 1/4"	1
108	18Y701	FOAM, urethane, 1/4"	3
109	LPMS.25-20x1.0	SCREW, low profile, 1/4-20 x 1"	2
127▲	16C393	LABEL, warning, ISO cut foot hazard	2
133▲	15H108	LABEL, warning, pinch hazard	2
139	18B546	LABEL, brand, X3	1
142▲	19B269	LABEL, safety, crush	2

▲Replacement safety labels, tags, and cards are available at no cost.

Parts - X3.K25 (Inner Frame)

-  Torque to 28-30 ft-lbs (37.9-40.7 N·m)
-  Torque to 12-15 ft-lbs (16.3-20.3 N·m)
-  Torque to 7-8 ft-lbs (9.5-10.8 N·m)
-  Torque to 4-6 ft-lbs (5.4-8.1 N·m)
-  Torque to 2-3 ft-lbs (2.7-4.1 N·m)



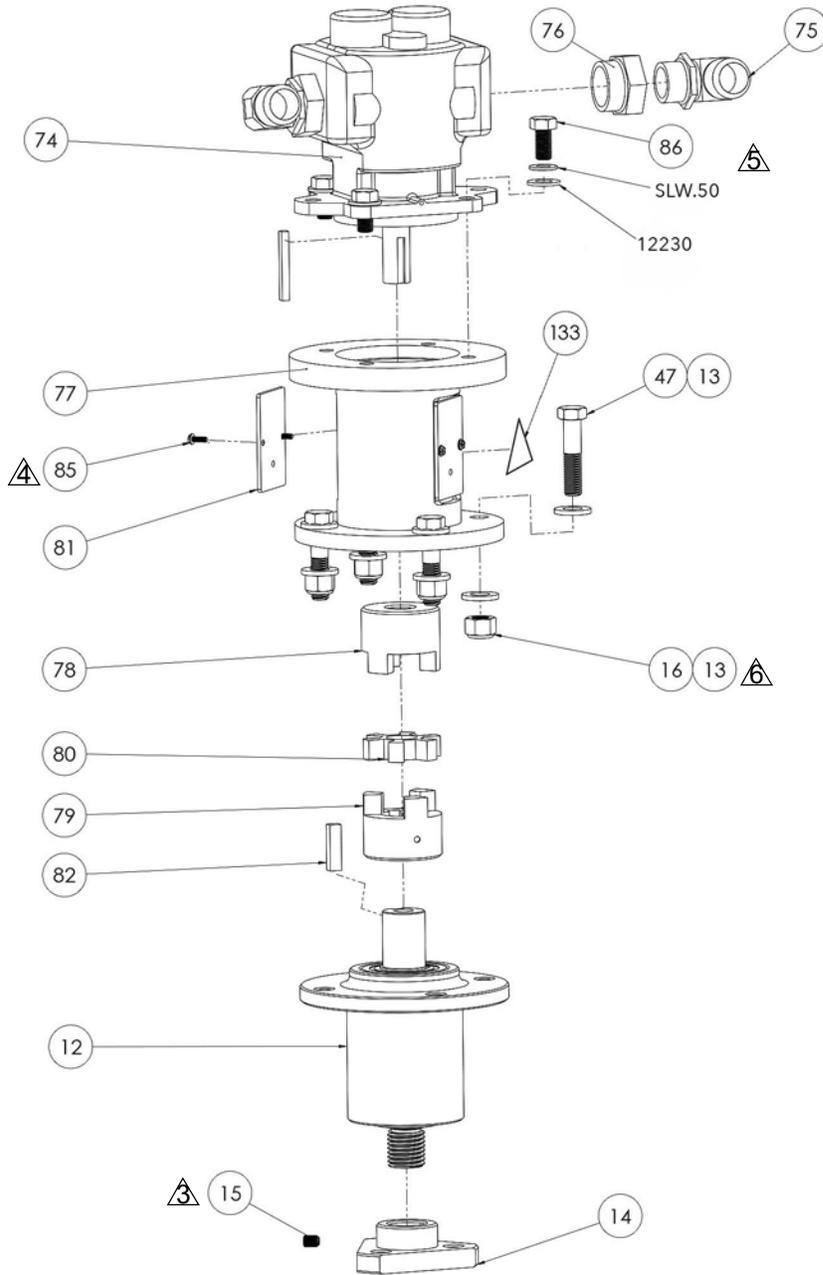
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Parts List - X3.K25 (Inner Frame)

Ref.	Part	Description	Qty.
3	HX-CS.375-16x1.25	BOLT, hex head, 3/8-16 x 1.25"	58
4	SLW.375	WASHER, lock, 3/8"	53
5	FLW.375	WASHER, flat, 3/8"	88
18	18B193	WEIGHT, counter, internal	1
20	18B036	PLATE, exhaust, inner, plate	1
22	18B160	BUSHING, bronze	3
23	BH-SCS10-32x.375	SCREW, button head, #10-32 x 3/8"	14
24	18B183	SPRING, height control	3
25	18B164	SEAT, lift, spring	6
26	18B165	BEARING, thrust	3
27	18B161	SPRING, stop, lock collar	3
28	18B194	WASHER, jumbo	3
29	HX-CS.375-24x1.25	SCREW, hex cap, 3/8-24 x 1.25"	3
30	18B170	SKIRT, rubber	1
31	18B155	RETAINER, side, skirt	2
32	18B154	RETAINER, front, skirt	1
43	FLW.25	WASHER, flat, 1/4"	82
44	SLW.25	WASHER, lock, 1/4"	2
45	HX-CS.25-20x.75	SCREW, hex cap, 1/4-20 x 3/4"	2
46	17W238	BEARING, drive, housing, assy	1
47	18B180	BUSHING, taper, lock, 35mm	3
48	17X259	CONNECTOR, hub, drive	3
50	18B197	KEY, 8mm X 10mm x 1"	3
51	18B198	COLLAR, locking	3
52	17X925	PULLEY, drive	3
53	18B174	SPACER, roller	4
54	18B115	BEARING	8
55	18B163	SPACER, belt idler	4
56	18B162	ROLLER, belt, idler	4
57	18B177	BELT, drive,	1
58	18B167	SPACER, belt, guard	4
59	18B029	GUARD, belt, front	1
60	18B028	GUARD, belt, rear	1
61	18B030	GUARD, belt, center	1
86	BH-SCS.25-20x1.0	SCREW, button head, 1/4-20 x 1"	40
87	NHN.25-20	NUT, nylock, 1/4-20	40
88	18B113	BUSHING, rubber, 3/4"	8
89	HX-CS.625-11x4.5	SCREW, hex cap, 5/8-11 x 4.5"	4
90	FLW.625	WASHER, flat, 5/8"	4
91	NHN.625-11	NUT, nylock, 5/8-11	4
92	18B108	SPACER, hardened, 9/16"	24
93	HX-CS.562-12x2	SCREW, hex cap, 9/16-12 x 2"	12
94	NHN.562-12	NUT, nylock, 9/16-12	12
95	17W220	CAP, tube	2
126▲	16D646	LABEL, warning, ISO hot surface	1
128▲	16C394	LABEL, warning, entangle hazard	3

▲Replacement safety labels, tags, and cards are available at no cost.

Parts - X1.G20 Motor & Drive



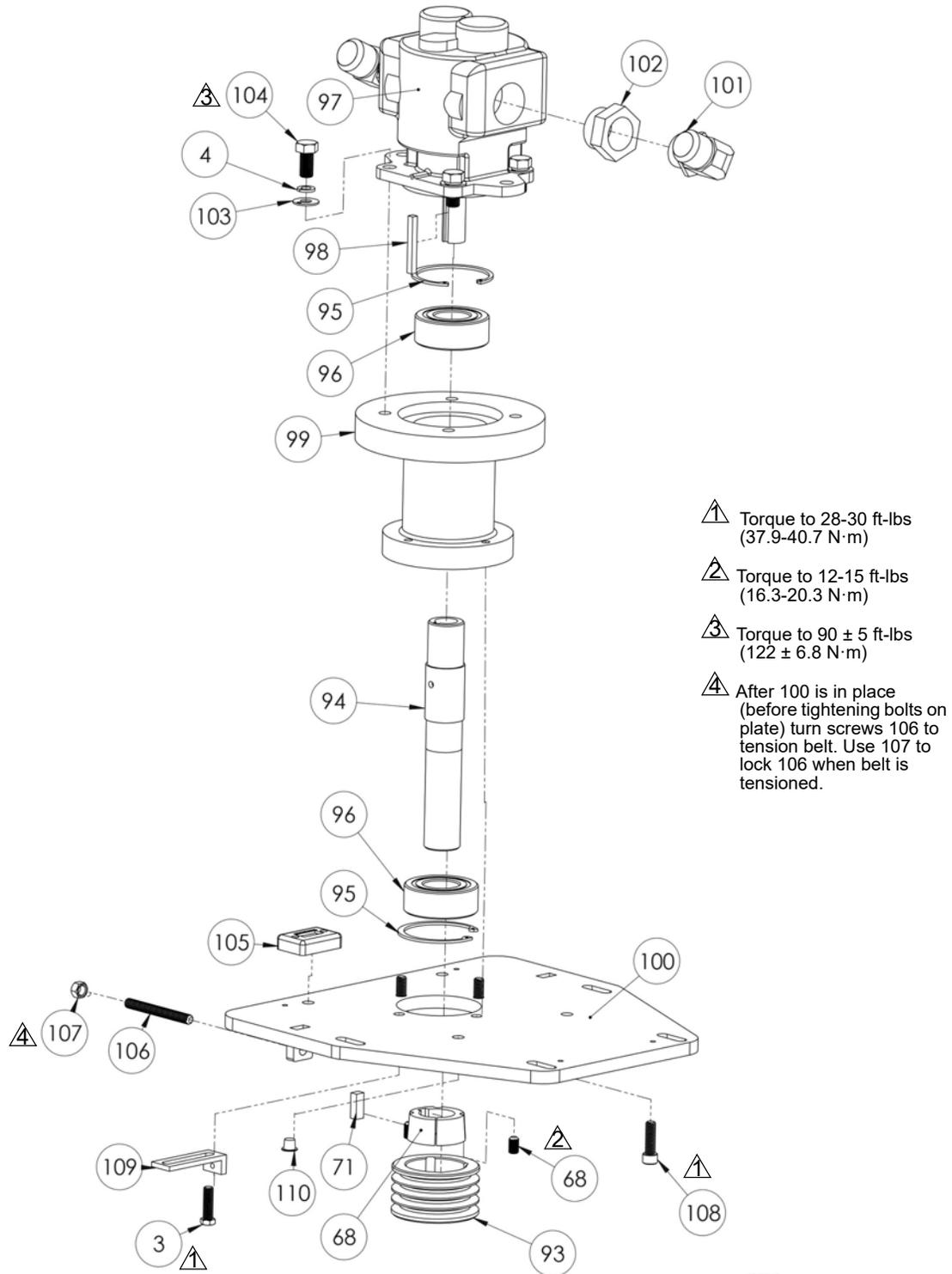
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Parts List - X1.G20 Motor & Drive

Ref.	Part	Description	Qty.
12	17W238	BEARING, drive, housing, assy	1
13	18B108	SPACER, hardened 9/16"	8
14	17X259	CONNECTOR, hub, drive	1
15	SHSS.375-24x.5	SCREW, set, 3/8-24 x 5"	3
16	NHN.562-12	NUT, nylock, 9/16-12	4
47	HX-CS.562-12x2.5	HX-CS.562-12 x 2.5"	4
52	FLW.50	WASHER, flat, 1/2"	10
74	18B146	MOTOR, hydraulic	1
75	18B140	FITTING, 90°	2
76	18B141	REDUCER, straight	2
77	18B034	HOUSING, motor	1
78	18B186	LOVEJOY, 7/8"	1
79	18B050	LOVEJOY, 1 3/8"	1
80	18B187	LOVEJOY, spider	1
81	18B064	GUARD	2
82	18B363	KEY, 8mm x 10mm x 1.75"	1
85	117501	SCREW, mach, slot hex wash hd	4
86	HX-CS.50-20x1.5	SCREW, cap hex, 1/2-20 x 1.5"	4
133▲	15H108	LABEL, safety, warning, pinch	2

▲Replacement safety labels, tags, and cards are available at no cost.

Parts - X3.G40 Motor & Drive

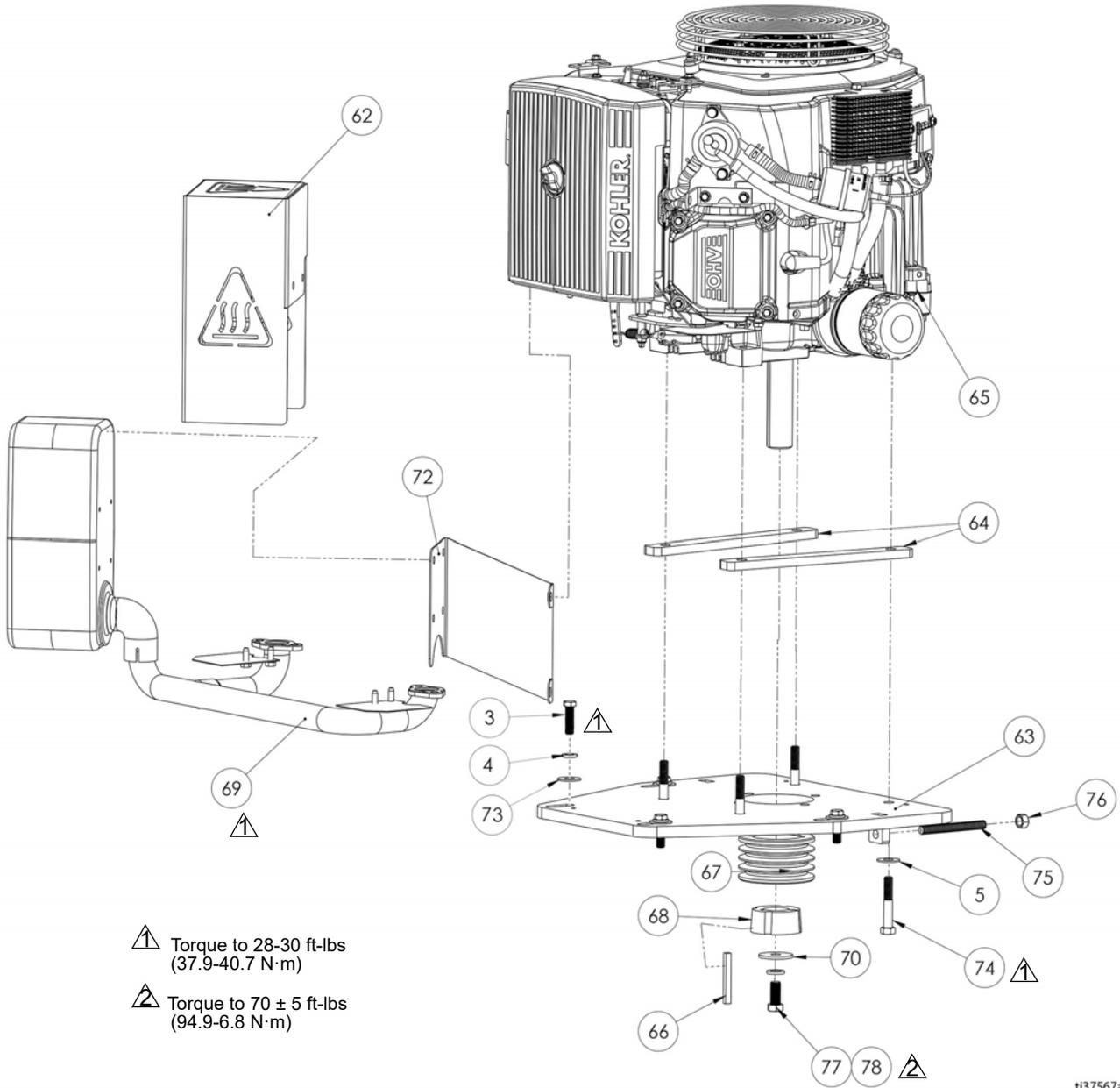


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Parts List - X3.G40 Motor & Drive

Ref.	Part	Description	Qty.
3	HX-CS.375-16x1.25	BOLT, hex head, 3/8-16 x1.25"	53
4	SLW.50	WASHER, lock, 1/2"	4
68	18B180	BUSHING, taper, lock, 35mm	4
71	18B197	KEY, 8mm X 10mm x 1"	4
93	17W966	PULLEY, engine, drive	1
94	18B037	SHAFT, drive	1
95	18B196	C-CLIP	2
96	18B185	BEARING	2
97	18B138	MOTOR, hydraulic	1
98	17W088	KEY, square, 2 1/4" x 1/4"	1
99	18B033	MOUNT, motor, hydraulic	1
100	18B032	PLATE, motor	1
101	18B140	FITTING, 90°	2
102	18B141	REDUCER, straight	2
103	17W218	WASHER, flat, 1/2"	4
104	HX-CS.50-20x1.5	SCREW, cap hex, 1/2-20 x 1"	4
105	18B188	TACHOMETER	1
106	SHSS.375-16x3.5	SCREW, set, 3/8-16 x 3 1/2"	2
107	HN.375-16	NUT, hex, 3/8-16	2
108	SHSS.375-16x1.25	SCREW, socket cap, 3/8-16 x 1 1/4"	3
109	18B201	BRACKET, tach mount	1
110	18B145	PLUG, fitting, #3	3

Parts - X3.K25 Engine & Drive

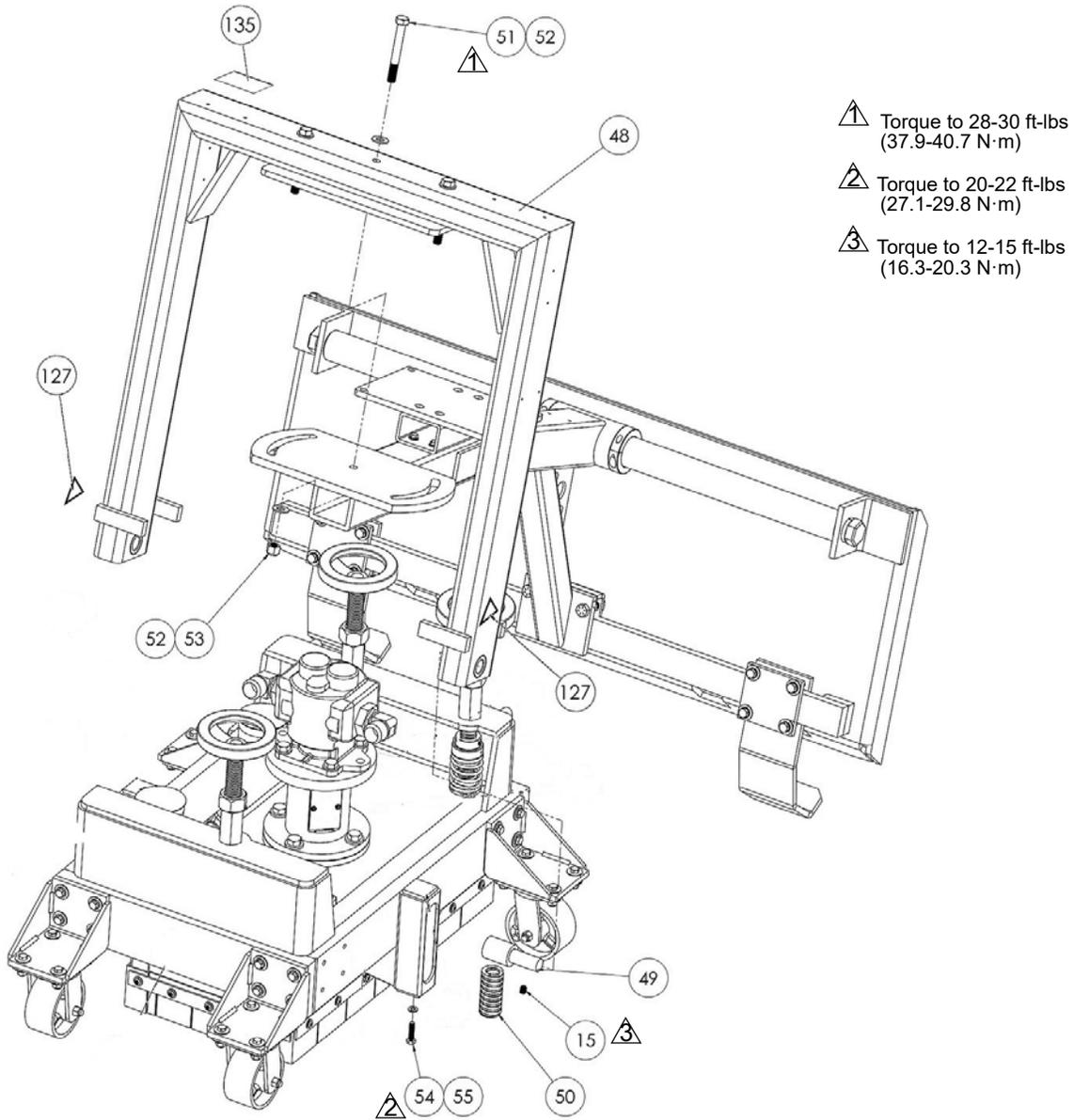


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Parts List - X3.K25 Engine & Drive

Ref	Part	Description	Qty	Ref	Part	Description	Qty
3	HX-CS.375-16x1.25	BOLT, hex head, 3/8-16x1.25"	52	69	18B119	KIT, muffler	1
4	SLW.375	WASHER, lock, 3/8"	49	70	18B179	PULLEY, stop	1
5	FLW.375	WASHER, flat, 3/8"	88	72	19B235	BRACKET, exhaust	1
62	18B750	MUFFLER, shield, heat	1	73	FLW.375G9	WASHER, flat, 3/8"	4
63	18B032	PLATE, motor	1	74	HX-CS.375-16x2.25	SCREW, hex cap, 3/8-16 x 1"	4
64	18B166	SPACER, engine, mount	2	75	SHSS.375-16x3.5	SCREW, set, 3/8-16 x 3 1/2"	2
65	18B121	ENGINE, Kohler 25HP	1	76	HN.375-16	NUT, hex, 3/8-16	2
66	17W088	KEY, square, 2 1/4" x 1/4"	1	77	HX.437-20x1.0	SCREW, hex cap, 7/16-20 x 1"	1
67	17W966	PULLEY, engine drive	1	78	SLW.437	WASHER, lock, 7/16"	1
68	18B181	BUSHING, drive, 1.125"	1				

Parts - X1.G20 / X3.G40 Universal Quick Attach Mount U-Bar



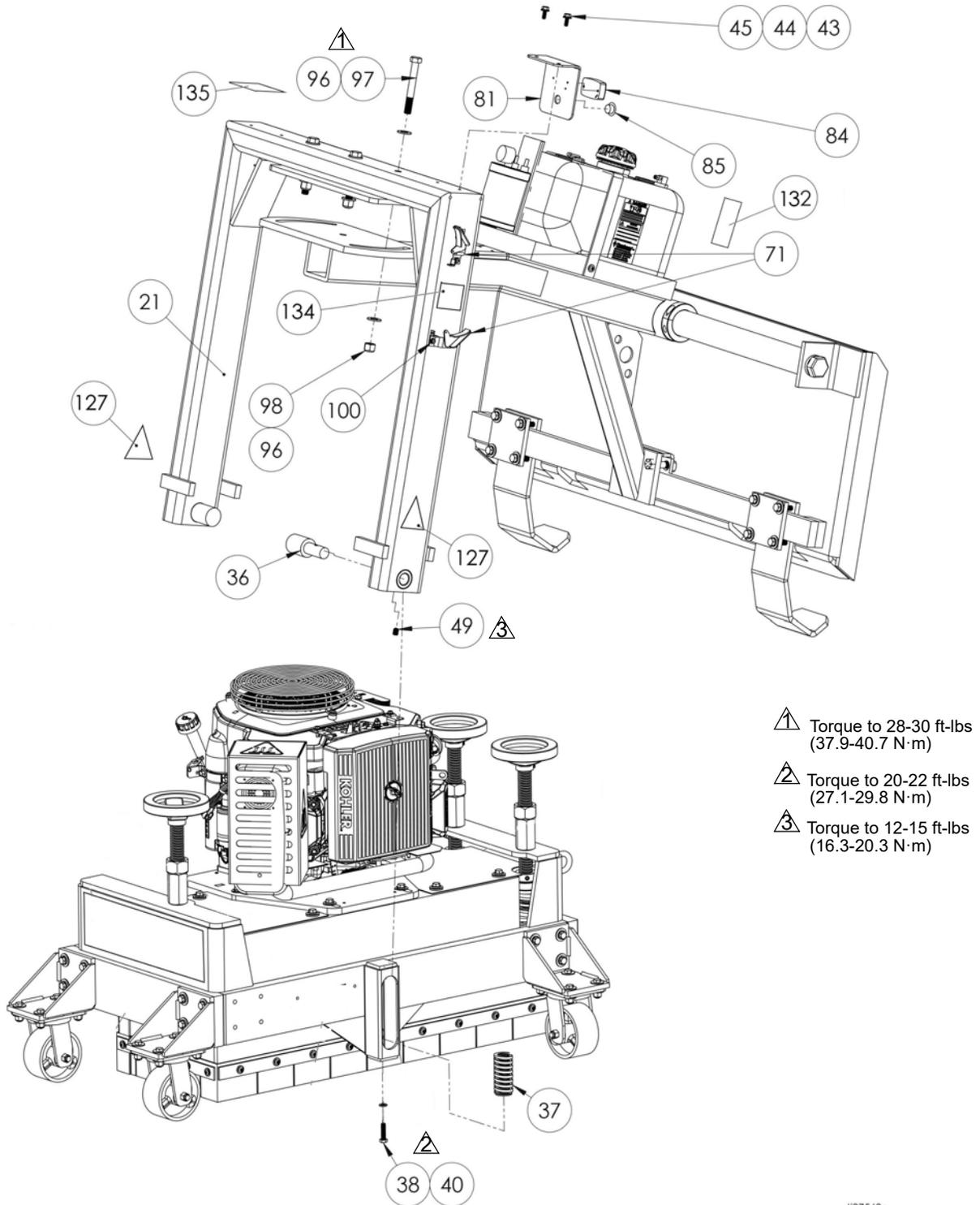
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Parts List - X1.G20 / X3.G40 Universal Quick Attach Mount U-Bar

Ref.	Part	Description	Qty.	Ref.	Part	Description	Qty.
15	SHSS.375-24x.5	SCREW, set, 3/8-24 x 0.5"	3	53	NHN.50-20	NUT, nylock, 1/2-20	3
48	18B040	U-BAR	1	54	HX-CS.312-18x1.25	SCREW, cap, hex, 5/16-18 x 1 1/4"	2
49	18B182	ROLLER, cam	2	55	SLW.312	WASHER, lock, 5/16"	2
50	18B157	SPRING, U-bar, assy	2	127▲	16C393	LABEL, warning, ISO cut foot hazard	2
51	HX-CS.5-20x4	SCREW, cap, hex, 1/2-20 x 4"	3	135▲	17W315	LABEL, safety, warning	1
52	FLW.50	WASHER, flat, 1/2"	10				

▲Replacement safety labels, tags, and cards are available at no cost.

Parts - X3.K25 Universal Quick Attach Mount U-Bar

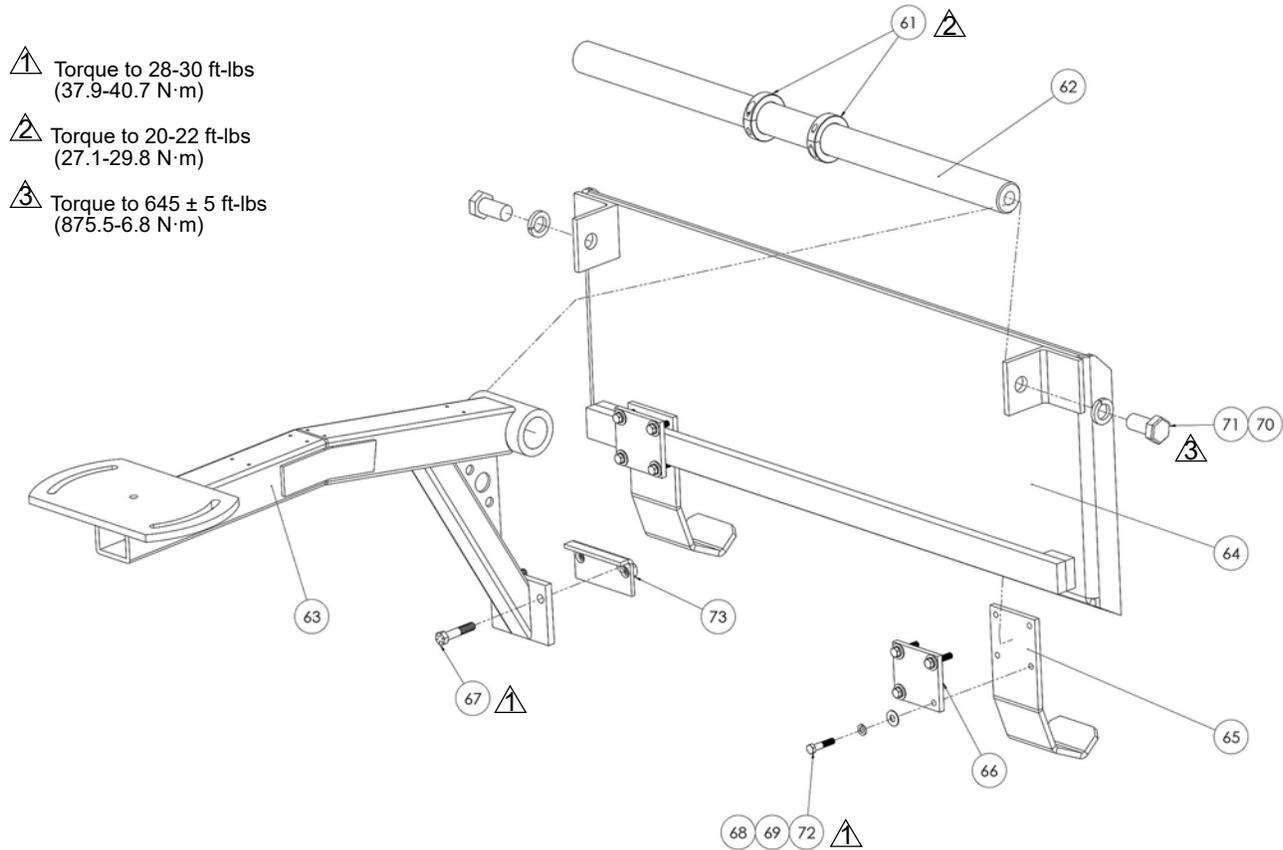


Parts List - X3.K25 Universal Quick Attach Mount U-Bar

Ref.	Part	Description	Qty.
21	18B040	U-BAR	1
36	18B182	CAM ROLLER	2
37	18B157	SPRING, U-bar, assy	2
38	HX-CS.312-18x1.25	SCREW, cap, hex, 5/16-18 x 1 1/4"	2
40	SLW.312	WASHER, lock, 5/16"	2
43	FLW.25	WASHER, flat, 1/4"	84
44	SLW.25	WASHER, lock, 1/4"	4
45	HX-CS.25-20x.75	SCREW, hex, cap, 1/4-20 x 0.75	8
49	SHSS.375-24x.5	SCREW, set, 3/8-24 x 0.5"	5
71	18B112	CABLE, throttle	2
81	18B202	SWITCH, starter, switch	1
84	17W284	TACHOMETER	1
85	18B120	SWITCH, key	1
96	FLW.50	WASHER, flat, 1/2"	6
97	HX-CS.5--20x4	SCREW, hex cap, 1/2-20 x 4"	3
98	NHN.50-20	NUT, nylock, 1/2-20"	3
100	FHX-CS10-32x.50	SCREW, hex self tap, 10-32 x 1/2"	4
127▲	16C393	LABEL, warning, ISO cut foot hazard	4
132▲	19Y703	LABEL, warning, fire & explosion	1
134	19B306	LABEL, gas throttle/choke	1
135▲	17W315	LABEL, safety, warning	1

▲Replacement safety labels, tags, and cards are available at no cost.

Parts - X1.G20 / X3.G40 / X3.K25 Universal Quick Attach Mount Plate

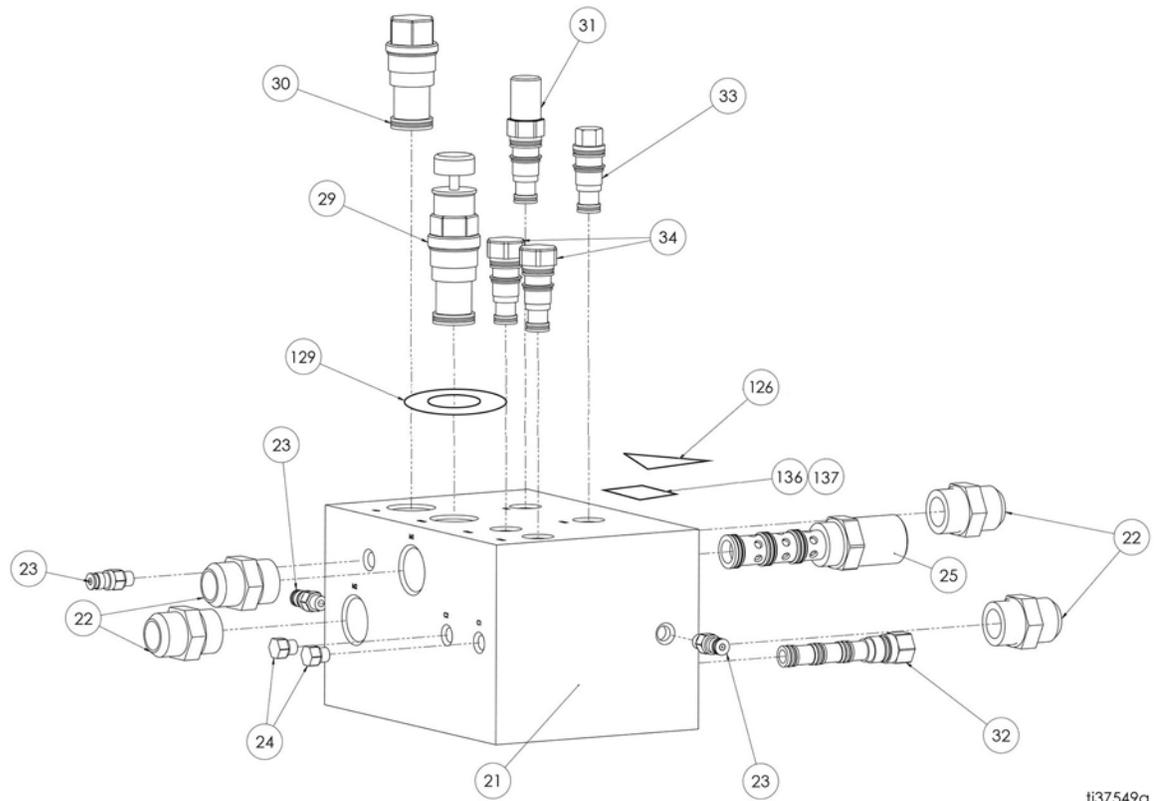


- ▲¹ Torque to 28-30 ft-lbs
(37.9-40.7 N·m)
- ▲² Torque to 20-22 ft-lbs
(27.1-29.8 N·m)
- ▲³ Torque to 645 ± 5 ft-lbs
(875.5-6.8 N·m)

Parts List - X1.G20 / X3.G40 / X3.K25 Universal Quick Attach Mount Plate

Ref.	Part	Description	Qty.
61	18B110	COLLAR, locking, 2" split	2
62	18B173	RAIL, slide	1
63	18B153	ARM, boom	1
64	18B116	PLATE, skid steer, mounting	1
65	18B199	LEGS, Quick Attach Mount	2
66	18B200	PLATE, legs, locking	2
67	HX-CS.50-13x2.5	SCREW, hex, cap, 1/2-13 x 2.5"	2
68	FLW.375	WASHER, flat, 3/8"	58
69	SLW.375	WASHER, lock, 3/8"	29
70	SLW1.0	WASHER, lock, 1"	2
71	HX-CS.1.00-8x2	SCREW, hex, cap, 1/8 x 2"	2
72	HX-CS.375-24x1.75	SCREW, hex, cap, 3/8-24 x 1.75"	8
73	18B156	NUT, lower, plate	1

Parts - X1.G20 / X3.G40 Manifold



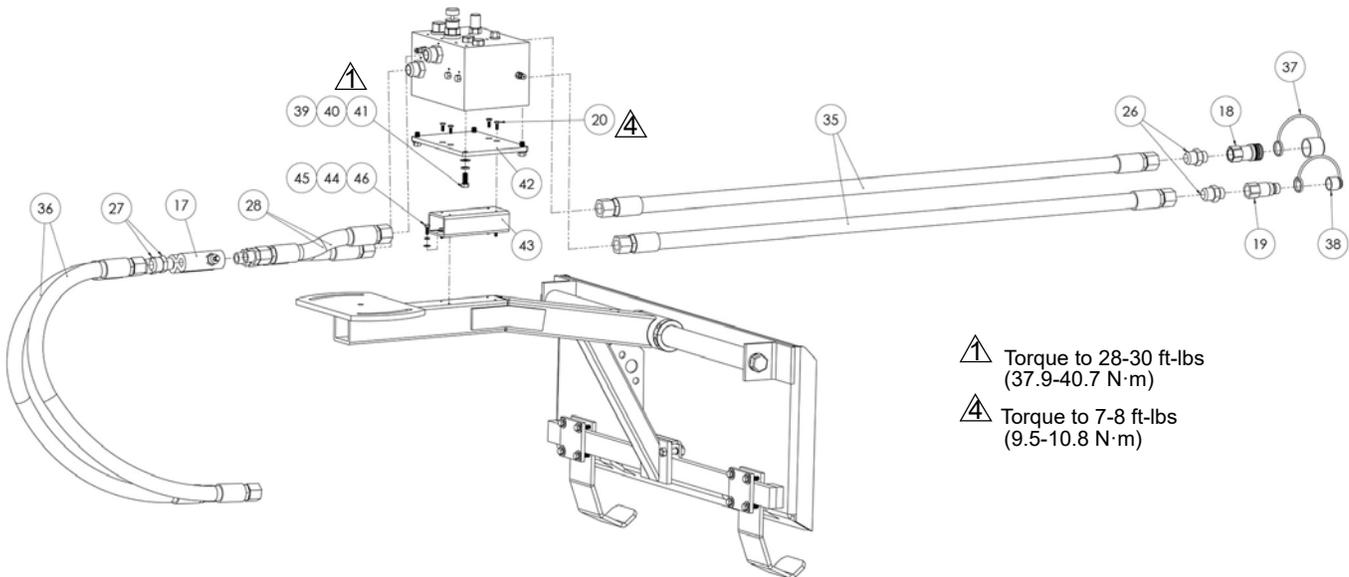
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Parts List - X1.G20 / X3.G40 Manifold

Ref.	Part	Description	Qty.
21	18B134	MANIFOLD, hydraulic	1
22	18B139	FITTING, straight	4
23	18B144	PORT, diagnostic	3
24	18B142	PLUG, hex, #4	2
25	18B135	CONTROL, pressure sensing, flow	1
29	18B136	VALVE, needle	1
30	18B137	VALVE, check	1
31	18B143	VALVE, pressure relief	1
32	18B148	PLUG, blanking	1
33	18B147	PLUG, blanking	1
34	18B149	PLUG, blanking	2
126▲	16D646	LABEL, warning, ISO hot surface	2
129	18B603	LABEL, flow control	1
136	18B772	LABEL, X1 pressure (X1.G20 only)	1
137	18B773	LABEL, X3 pressure (X3.G40 only)	1

▲Replacement safety labels, tags, and cards are available at no cost.

Parts - X1.G20 / X3.G40 Hydraulic Hoses



- Torque to 28-30 ft-lbs (37.9-40.7 N·m)
- Torque to 7-8 ft-lbs (9.5-10.8 N·m)

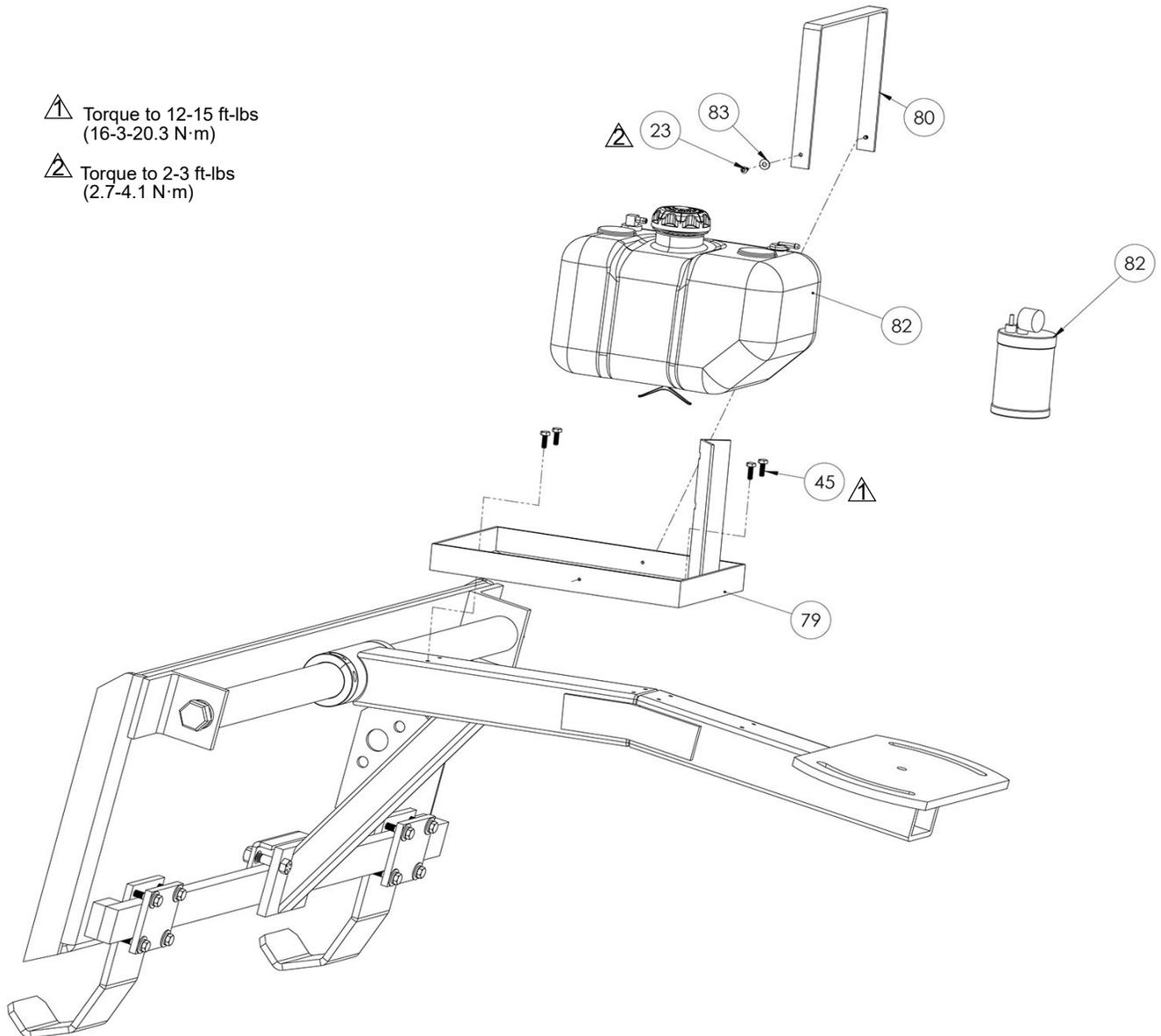
Parts List - X1.G20 / X3.G40 Hydraulic Hoses

Ref.	Part	Description	Qty.
17	18B190 - X1.G20	VALVE, cushion X1	1
17	18B189 - X3.G40	VALVE, cushion X3	1
18	18B191	FITTING, female, quick-connect	1
19	18B192	FITTING, male, quick-connect	1
20	FHSCS.25-20x.75	SCREW, flat, head, 1/4-20 x 3/4"	4
26	18B125	FITTING, straight	2
27	18B123	FITTING, straight	2
28	18B126	HOSE, hydraulic, 14"	2
35	18B128	HOSE, hydraulic, 60"	2
36	18B127	HOSE, hydraulic, 45"	2
37	18B538	COVER, dust, female	1
38	18B539	COVER, dust, male	1
39	FLW.437	WASHER, flat, 7/16"	4
40	SLW.437	WASHER, lock, 7/16"	4
41	HX-CS.437-14x1	SCREW, hex, cap, 7/16-14 x 1"	4
42	18B195	PLATE, manifold, support	1
43	18B175	BRACKET, manifold	1
44	NHN.25-20	WASHER, lock, 1/4"	4
45	FLW.25	WASHER, flat, 1/4"	72
46	HX-CS.25-20x.75	SCREW, hex, cap, 1/4-20 x 3/4"	4

Parts - X3.K25 Fuel Tank Assembly

 Torque to 12-15 ft-lbs
(16-3-20.3 N·m)

 Torque to 2-3 ft-lbs
(2.7-4.1 N·m)



Parts List - X3.K25 Fuel Tank Assembly

Ref. Part	Description	Qty.	Ref. Part	Description	Qty.
23	BH-SCS10-32x.375	14	79	18B171	1
	SCREW, button head, #10-32 x 3/8"		80	18B172	1
45	HX-CS.25-20x.75	4	82	19B339	1
	SCREW, cap hex, 1/4-20 x 3/4"		83	FLW10	2
				BRACKET, fuel tank, base	
				RETAINER, fuel tank	
				KIT, fuel tank & label	
				WASHER, flat, #10	

Technical Data

Rotary Eraser (Model X1.G20)		
	US	Metric
Inlet fluid working pressure	1000 psi	69 bar (6.9 MPa)
Standard flow delivery	15-25 gpm	57-95 l/min
Noise level		
Sound levels for this product are influenced by the type of skid steer, and the contribution of the sound from the Rotary Eraser cannot be adequately distinguished from the skid steer.		
Dimensions/Weight (unpacked)	US	Metric
Height	42 in.	107 cm
Length	57 in.	145 cm
Width	46 in.	117 cm
Weight	740 lb	336 kg

Rotary Eraser (Model X3.G40)		
	US	Metric
Inlet fluid working pressure	2000 psi	138 bar (13.8 MPa)
Standard flow delivery	24-40 gpm	91-151 l/min
Noise level		
Sound levels for this product are influenced by the type of skid steer, and the contribution of the sound from the Rotary Eraser cannot be adequately distinguished from the skid steer.		
Dimensions/Weight (unpacked)	US	Metric
Height	42 in.	107 cm
Length	60 in.	152 cm
Width	46 in.	117 cm
Weight	940 lb	426 kg

Rotary EraserX1.G20 (Model X3.K25)		
Noise level (dBa)*		
Sound power	106 dBa per ISO 3744	
Sound pressure	88 dBa measured at 3.1 feet (1m)	
*Does not include sound from the prime mover. See relevant manual for prime mover.		
Dimensions/Weight (unpacked)	US	Metric
Height	36 in.	91 cm
Length	60 in.	152 cm
Width	46 in.	117 cm
Weight	945 lb	429 kg

Notes
All trademarks or registered trademarks are the property of their respective owners.
To meet OSHA dust requirements: Models X3.G40 & X3.K25 & X3.K25: Recommend using SMITH MV5500. Model X1.G20 & X3.G40: Recommend using MV1000 or MV5500.

CALIFORNIA PROPOSITION 65



WARNING: This product can expose you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

SMITH Standard Warranty

SMITH warrants all equipment referenced in this document which is manufactured by SMITH and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by SMITH, SMITH will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by SMITH to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with SMITH's written recommendations.

This warranty does not cover, and SMITH shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-SMITH component parts. Nor shall SMITH be liable for malfunction, damage or wear caused by the incompatibility of SMITH equipment with structures, accessories, equipment or materials not supplied by SMITH, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by SMITH.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized SMITH distributor for verification of the claimed defect. If the claimed defect is verified, SMITH will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

SMITH's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

SMITH MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY SMITH. These items sold, but not manufactured by SMITH (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. SMITH will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will SMITH be liable for indirect, incidental, special or consequential damages resulting from SMITH supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of SMITH, or otherwise.

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Original instructions. This manual contains English.

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Revision A, April 2020