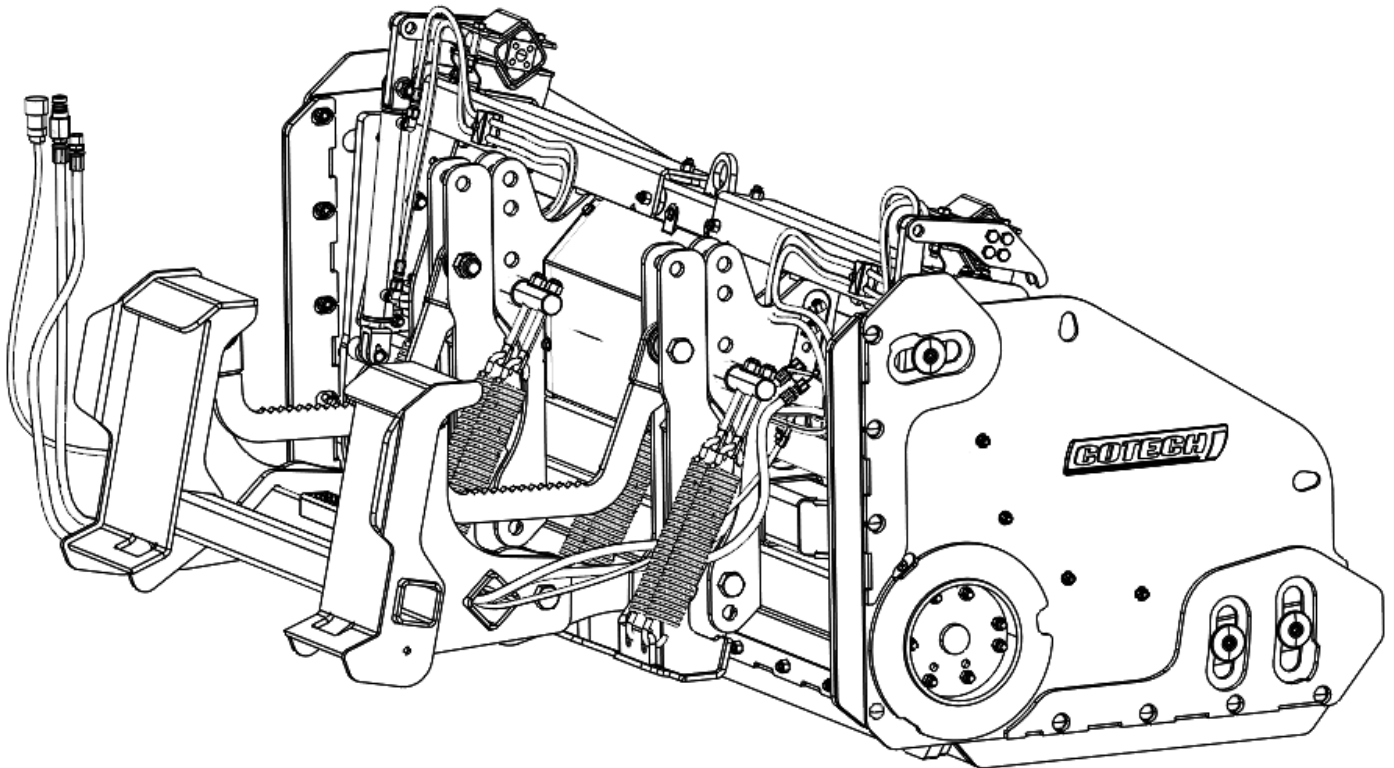


# USER GUIDE

MU-PPCR-SKST-2023

# **COTECH**

## **PPCR-SKST SNOW PLOW**



**READ THIS MANUAL CAREFULLY AND KEEP IT  
AT HAND AT ALL TIMES**

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# INTRODUCTION

## **TO THE PURCHASER**

All products are designed to give safe, dependable service if they are operated and maintained according to instructions. **Read and understand this manual before operation, and keep it in your files for further reference.**

This manual has been prepared to assist the owner and operators in the safe operation and suitable maintenance of the equipment. The information is applicable to products at the time of manufacture and does not include modifications made afterwards.

Read and understand this operator's manual before attempting to put equipment into service. Familiarize yourself with the operating instructions **AND ALL THE SAFETY RECOMMENDATIONS** contained in this manual and those labeled on the equipment and on the machine. Follow the safety recommendations and make sure that those with whom you work follow them.

## **TO THE DEALER**

Give this manual to the owner upon delivery of the equipment.

## **TO THE PURCHASER AND THE DEALER**

### **Illustrations**

The illustrations may not necessarily reproduce the full detail and the exact shape of the parts or depict the actual models, but are for reference only.

### **Direction Reference**

All references to right and left, forward or rearward are from the operator seat.

*To assist your dealer in handling your needs, please record hereafter the model number and serial number of your equipment and machine. It is also advisable to supply them to your insurance company. It will be helpful in the event that equipment or machine is lost or stolen*

### **Product Category**

**MODEL:** \_\_\_\_\_

**SERIAL NUMBER:** \_\_\_\_\_

**DATE OF PURCHASE:** \_\_\_\_\_

**DEALER NAME:** \_\_\_\_\_

**DEALER TELEPHONE NUMBER:** \_\_\_\_\_





## GENERAL SAFETY INFORMATION


All products are designed to give safe, dependable service if they are operated and maintained according to instructions. **Read and understand this manual before operation.** It is the owner's responsibility to be certain anyone operating this product reads this manual, and all other applicable manuals, to become familiar with this equipment and all safety precautions. Failure to do so could result in serious personal injury or equipment damage. If you have any questions, consult your dealer.

### **SAFETY FIRST**

This symbol, the industry's "Safety Alert Symbol", is used throughout this manual and on labels on the machine itself to warn of the possibility of personal injury. Read these instructions carefully. It is essential that you read the instructions and safety regulations before you attempt to assemble or use this unit.

 **DANGER :** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

 **WARNING :** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION :** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

**IMPORTANT :** Indicates that equipment or property damage could result if instructions are not followed.

**NOTE :** Gives helpful information.

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The Product(s) described in this Publication are designed and manufactured only for the country in which they are initially wholesaled by Cotech. Cotech does not provide parts, warranty or service for any Product which is re-sold or retailed in any country other than the country for which the Product(s) were designed or manufactured.



# GENERAL SAFETY INFORMATION

## **Children**

Tragic accidents can occur if the operator is not alert to the presence of children. Children are generally attracted to machines and the work being done. Never assume children will remain where you last saw them

1. Keep children out of the operating area and under the watchful eye of another responsible adult.
2. Be alert and turn machine off if children enter the work area.
3. Before and when backing, look behind for small children.
4. Never carry children while operating the machine. They may fall off and be seriously injured or interfere with the safe operation of the machine.
5. Never allow children to play on the machine or attachment even when the machine is turned off.
6. Never allow children to operate the machine even under adult supervision.
7. Use extra care when approaching blind corners, shrubs, trees, or other obstructions that might hide children from sight.

## **Before Operation**

1. Read and understand both the machine AND implement operator's manual before using the snowblower. Know how to operate all controls and how to stop the unit and disengage the controls quickly. Lack of knowledge can lead to accidents.
2. Park the machine/implement on level ground, set the parking brake, lower the implement to the ground, place all control levers in neutral, shut off the engine and remove the ignition key and allow the rotating parts to stop BEFORE making any implement adjustments, repairs or inspections.
3. Keep clear of all rotating parts. Do not put hands or feet under, or into snowblower and subframe with engine running.
4. For your safety, do not work under any hydraulically supported machine elements, they may creep down, suddenly drop or be accidentally lowered. Do not use loader, quick hitch, or an implement as a jack for servicing.
5. Do not operate the machine/implement that is defective or has missing parts. Make sure that all recommended maintenance procedures are completed before operating the unit.
6. Keep the machine/implement clean. Snow, dirt or ice build-up can lead to malfunction or personal injury from thawing and refreezing in garage. Inspect and clean every rotating parts.
7. Do not modify or alter this implement or any of its components, or any implement function without first consulting your dealer. The manufacturer will not claim responsibility for fitment of unapproved parts and/or accessories and any damages as a result of their use.
8. Verify that all machine/implement safety protective devices are in place. Shields, guards and covers must be correctly installed at all times. When necessary to remove these for servicing, cleaning, or repair work, they must be reinstalled immediately.
9. Always make sure all implement components are properly installed and securely fastened.
10. Check that all machine/implement drivelines are in good working order.
11. Check for moving parts excessive wear regularly. ALWAYS USE GENUINE PARTS WHEN REPLACEMENT PARTS ARE REQUIRED.
12. Prior to operation, clear work area and mark all curbs, pipes, etc. that cannot be moved.
13. Inspect the machine/implement after striking any foreign object to assure that all machine/implement parts are safe and secure and not damaged.
14. Handle fuel with care, as it is highly flammable. Use approved fuel container.
15. Never add fuel to a running engine or a hot engine.
16. Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors. Replace fuel cap securely and wipe up spilled fuel. Always refuel using a properly grounded system.



## GENERAL SAFETY INFORMATION

17. Check all machine controls regularly and adjust where necessary. Make sure that the brakes are evenly adjusted. Periodically check all nuts and bolts for tightness, especially wheel hub and rim nuts.
18. Make sure the machine is counterweighted and has tire chains for better traction and stability as recommended by your dealer. Weights provide the necessary balance to improve stability, traction and steering. Use only those recommended by your dealer.
19. Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable noises.

### **During Operation**

1. Never allow anyone to operate the machine and implement until they have read the manuals completely and are thoroughly familiar with their basic operation. Lack of operating knowledge can lead to accidents.
2. Do not allow anyone to ride on the machine/ implement at any time. The only one allowed is the operator that **MUST** sit in the driver seat.
3. Never allow anyone near the work area. The debris that can be thrown could cause serious personal injuries.
4. Never stand alongside of the implement while the engine is running.
5. Never operate the implement without safety protective devices in place. All machine/ implement shields, guards and covers must be correctly installed at all times.
6. Keep clear of all rotating parts. Do not put hands or feet under, or into the implement with engine running.
7. If the implement starts to vibrate abnormally, disengage the PTO, stop the engine immediately and check for cause. Excessive vibration is generally a sign of trouble.
8. Park the machine/ implement on level ground, place the transmission in neutral, set the parking brake, disengage the driving system, lower the equipment to the ground, place all levers including auxiliary control levers in neutral, shut off the engine and remove the ignition key **BEFORE LEAVING THE MACHINE**.
9. Always drive the machine at speeds compatible with safety, especially when operating over rough ground, crossing ditches, slippery surface or when turning.
10. Operate only with good visibility and during daylight hours, or when the area is well lit with bright artificial light.
11. Do not run the engine indoors except when starting engine and transporting attachment in or out of building. Carbon monoxide gas is colorless, odorless and deadly.
12. Exercise extreme caution when operating on or crossing a gravel drive, walks, or roads. Stay alert for hidden hazards or traffic.
13. Use extra caution when backing up.
14. Operate up and down (not across) intermediate slopes. Avoid sudden starts and stops.
15. Drive machine backwards up steeper slopes with the implement off. Then operate as you travel down the slope.
16. Never park the machine on a steep slope. Do not attempt to operate on steep slopes. If operating on slopes is necessary, exercise extreme caution when changing direction.
17. Disengage power to implement when transporting or when not in use..



# GENERAL SAFETY INFORMATION

## **MAINTENANCE**

### **ALWAYS USE GENUINE PARTS WHEN REPLACEMENT PARTS ARE REQUIRED**

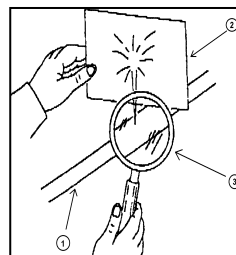
1. Keep the machine and blade properly maintained.
2. Park the machine/blade on level ground, set the parking brake, lower the blade to the ground, place all control levers in neutral, shut off the engine and remove the ignition key and allow the rotating parts to stop **BEFORE** making any blade adjustments
3. To avoid injury, do not service the blade when the tractor engine is running.
4. Keep the machine/blade clean. Snow, dirt or ice build-up can lead to malfunction or personal injury.
5. Always wear eye protection when cleaning or servicing the blade or frame
6. **DO NOT** service the machine while the engine is running or hot, or if the unit is in motion. Always lower blade to the ground. If necessary to service blade in raised position, securely support with stands or suitable blocking before working underneath. Do not rely on support devices already on the machine for your safety. They can settle suddenly or be accidentally lowered or an oil leak can occur.
7. The manufacturer will not assume responsibility for fitment of unapproved parts and/or accessories and any damages as a result of their use.
8. Make sure all shields and guards are securely in place following all service, cleaning, or repair work
9. Do not modify this blade or any of its components or operating functions. If you have questions concerning modifications, contact your dealer.
10. Do not operate a unit that is defective or has missing parts. Make sure that all recommended maintenance procedures are completed before operating the unit.

11. Check all controls regularly and adjust where necessary. Make sure that the brakes are evenly adjusted.
12. Periodically check all nuts and bolts for tightness, especially wheel hub and rim nuts.
13. Stop engine and relieve pressure before connecting or disconnecting hydraulic lines. Tighten all connections before starting engine or pressurizing lines.



**WARNING:** To avoid serious personal injury: Escaping hydraulic/diesel fluid under pressure can penetrate the skin causing serious injury.

- **Do not use your hands to check for leaks. Use a piece of cardboard or paper to search for leaks**



- (1) Hydraulic hose
- (2) cardboard
- (3) Magnifying glass

- **Stop engine and relieve pressure before connecting or disconnecting lines.**
- **Tighten all connections before starting engine or pressurizing lines.**
- **If any fluid is injected into the skin, obtain medical attention immediately or gangrene may result.**





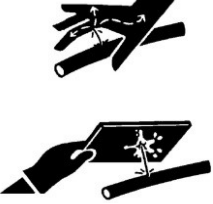
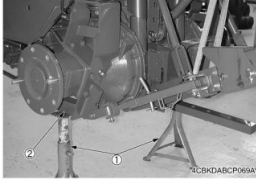

# GENERAL SAFETY INFORMATION

	<p><b>BEFORE YOU START SERVICE</b></p> <ul style="list-style-type: none"> <li>• Read all instructions and safety instructions in this manual and on your machine safety decals.</li> <li>• Clean the work area and machine.</li> <li>• Park the machine on a stable and level ground, and set the parking brake.</li> <li>• Lower the implement to the ground.</li> <li>• Stop the engine, then remove the key.</li> <li>• Disconnect the battery negative cable.</li> <li>• Hang a "DO NOT OPERATE" tag in the operator station.</li> </ul>		<p><b>No Smoking or Open Flames while Fueling</b></p> <ul style="list-style-type: none"> <li>• Fuel is extremely flammable and dangerous. Never smoke near fuel. If fuel is spilled on the machine, its engine, or electrical parts, it may cause a fire. If fuel is spilled, wipe it all up immediately.</li> <li>• Never smoke while filling the machine with fuel. And always tighten the fuel cap securely and wipe up any spilled fuel.</li> </ul>
	<ul style="list-style-type: none"> <li>• When performing maintenance on the equipment, hang the DO NOT OPERATE sign where it will be obvious from and around the driver's seat.</li> <li>• When performing maintenance or repairs, always lower attachments to the ground, stop the engine and secure the tracks with blocks.</li> <li>• When performing maintenance on the equipment, always disconnect the negative battery cable.</li> <li>• Before using tools, make sure you understand how to use them correctly and use tools in good condition and of the right size for the job.</li> </ul>		<ul style="list-style-type: none"> <li>• Before getting on/off of the machine, clean off around the steps so there is no mud on them. Always give yourself 3-point support when getting on/off the machine.</li> </ul> <p><b>CAUTION</b></p> <ul style="list-style-type: none"> <li>• 3-point support means using both legs and one hand or both hands and one leg as you climb up/down.</li> </ul>
	<p><b>START SAFELY</b></p> <ul style="list-style-type: none"> <li>• Do not do the procedures below when you start the engine. <ul style="list-style-type: none"> <li>– short across starter terminals</li> <li>– bypass the safety start switch</li> </ul> </li> <li>• Do not alter or remove any part of machine safety system.</li> <li>• Before you start the engine, make sure that all shift levers are in neutral positions or in disengaged positions.</li> <li>• Do not start the engine when you stay on the ground. Start the engine only from operator's seat.</li> </ul>		<ul style="list-style-type: none"> <li>• Do not remove the radiator cap when the engine operates, or immediately after it stops. If not, hot water can spout out from the radiator. Only remove the radiator cap when it is at a sufficiently low temperature to touch with bare hands. Slowly loosen the cap to release the pressure before you remove it fully.</li> </ul>
	<p><b>Starting the Machine Safely</b></p> <ul style="list-style-type: none"> <li>• Before starting the engine, always sit in the driver's seat and make sure the area is safe and clear.</li> <li>• As it is dangerous, never start the engine from anywhere but the driver's seat.</li> <li>• Always check and make sure control lever(s) are not engaged before starting the engine.</li> <li>• Never start the engine by hot-wiring the starter circuit. This is not only dangerous, but may damage the machine.</li> </ul>		<ul style="list-style-type: none"> <li>• The engine, muffler, radiator, hydraulic line, etc., have parts that remain very hot even after the engine has been stopped. Be sure to avoid these parts, as touching them can result in burns. Radiator coolant, hydraulic fluid and oil also remain hot. Therefore, do not attempt to remove caps and plugs, etc., before these fluids have sufficiently cooled.</li> <li>• Make sure the coolant temperature has dropped sufficiently before opening the radiator cap. Also, since the inside of the radiator is pressurized, when removing the cap, first loosen it to release the pressure before removing the cap completely.</li> </ul>
	<ul style="list-style-type: none"> <li>• Wear clothes appropriate for working on equipment. Do not wear loose-fitting clothes as they may catch on the machine controls.</li> <li>• When working on the equipment, use all safety gear, such as a helmet, safety glasses and shoes, that are required by law or regulation.</li> <li>• Never perform maintenance while drowsy or under the influence of alcohol or drugs.</li> </ul>		<ul style="list-style-type: none"> <li>• Grease is under high pressure inside the hydraulic cylinder. It is very dangerous to loosen a grease nipple quickly as it may shoot off. Always loosen grease nipples slowly.</li> <li>• And never face a grease nipple while loosening it.</li> </ul>
	<p><b>Be Ready for an Emergency</b></p> <ul style="list-style-type: none"> <li>• Keep a first-aid kit and fire extinguisher close at hand so you can use it when needed.</li> <li>• Keep emergency contact information for doctors, hospitals and ERs handy.</li> </ul>		<p><b>PREVENT A FIRE</b></p> <ul style="list-style-type: none"> <li>• Fuel is very flammable and explosive under some conditions. Do not smoke or let flames or sparks in your work area.</li> <li>• To prevent sparks from an accidental short circuit, always disconnect the battery negative cable first and connect it last.</li> <li>• The battery gas can cause an explosion. Keep the sparks and open flame away from the top of battery, especially when you charge the battery.</li> <li>• Make sure that you do not spill fuel on the engine.</li> </ul>
	<p><b>KEEP A GOOD AIRFLOW IN THE WORK AREA</b></p> <ul style="list-style-type: none"> <li>• If the engine is in operation, make sure that the area has good airflow. Do not operate the engine in a closed area. The exhaust gas contains poisonous carbon monoxide.</li> </ul>		<p><b>Dispose of Waste Fluids Properly</b></p> <ul style="list-style-type: none"> <li>• Never dispose of waste fluids on the ground, in the gutter, a river, pond or lake. Always dispose of hazardous substances like waste oil, coolant and electrolytic fluid in accordance with the relevant environmental protection regulations.</li> <li>• Keep the safety plates clean so they can be read. If a safety plate is damaged and comes off or becomes illegible, put a plate with the same warnings back in its place.</li> </ul>



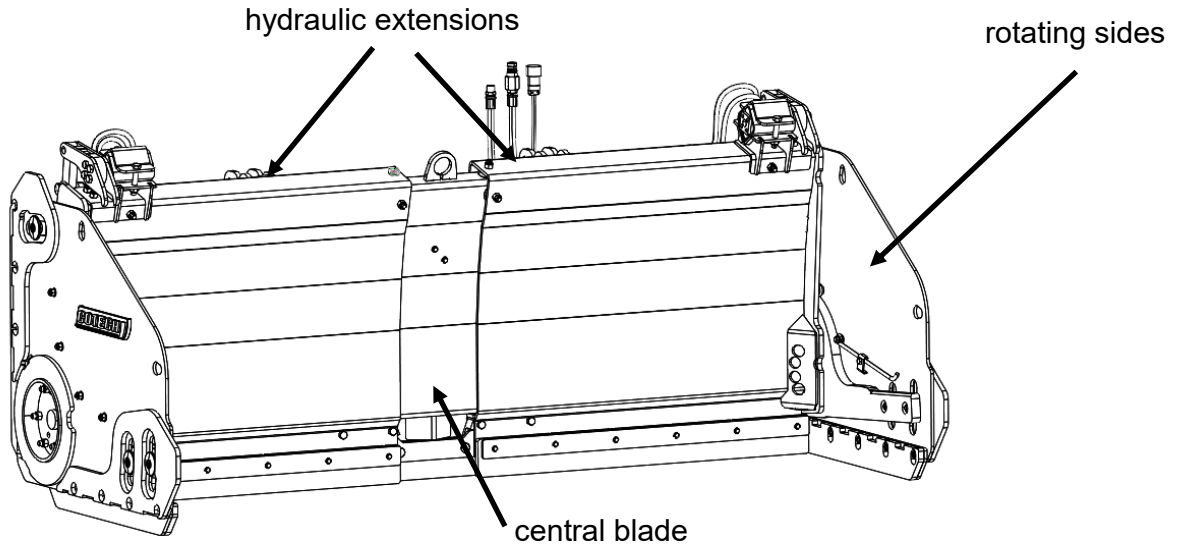


# GENERAL SAFETY INFORMATION

	<ul style="list-style-type: none"><li>• The pressure in the hydraulic circuit stays at pressure even after the engine stops. Before removing parts, such as hydraulic devices from the machine, first release the pressure. Please note that when releasing residual pressure, the machine itself and/or implements may move without warning, so be very careful when releasing the pressure.</li><li>• Oil gushing out under pressure is extremely dangerous as it may pierce your skin or your eyes. Similarly, oil leaking out of pinholes is not visible. So when checking for oil leaks, always wear safety glasses and gloves and use a piece of cardboard or a wood block to shield yourself from oil.</li></ul>		<ul style="list-style-type: none"><li>• When you need to access the underside of the machine for maintenance purposes, but sure to support the machine with a safety stand. Getting under the machine while supporting the machine by machine's own hydraulic cylinder or using a hydraulic jack can be extremely dangerous in the event of a hydraulic fluid leakage or similar mishap.</li></ul> <p>(1) Safety stand (2) Secure point for safety stand</p>
	<ul style="list-style-type: none"><li>• Do not open a fuel system under high pressure. The fluid under high pressure that stays in fuel lines can cause serious injury. Do not disconnect or repair the fuel lines, sensors, or any other components between the fuel pump and injectors on engines with a common rail fuel system under high pressure.</li><li>• Put on an applicable ear protective device (earmuffs or earplugs) to prevent injury against loud noises.</li><li>• Be careful about electric shock. The engine generates a high voltage of more than DC100 V in the ECU and is applied to the injector.</li></ul>		<ul style="list-style-type: none"><li>• Whenever it is necessary to open the engine covers or hood in order to service the machine, always prop them open.</li><li>• If it is absolutely necessary to run the engine while working on the machine, make sure you are clear of all rotating or moving parts. Also take care not to leave anything, such as tools or rags, near any moving parts.</li></ul>
	<ul style="list-style-type: none"><li>• Engage the loader control valve lock to prevent accidental actuation when the implement is not in use or during transport. Do not utilize the valve lock for machine maintenance or repair.</li><li>• Do not perform machine maintenance with loader in the air. If possible, follow loader instructions to remove loader before performing maintenance.</li><li>• If the machine has a backhoe, engage swing and boom locks.</li></ul>		

## DESCRIPTION

PPCR snow plows consist of two hydraulic extensions connected to a central blade. At the ends of each of the extensions is a rotating side. The hydraulic extensions make it possible to choose the width of action according to need. The rotating sides operated by a hydraulic cylinder allow the snow to be pushed or pulled.



The ability to quickly switch from pushing snow to pulling, increases productivity and versatility of the plow

- The rotating sides are very simple to use. No need for special training.
- The benefit of the sides rotating, is that you engage the full use of their capacity allowing you to move a higher volume of snow.
- The front extensions of the PPCR are reinforced to remain absolutely rigid when open, resulting in a seamless cleared pass
- The angled design is exclusive to Cotech. Its purpose is to minimize the risk of frost buildup allowing for continuous unhindered operation.

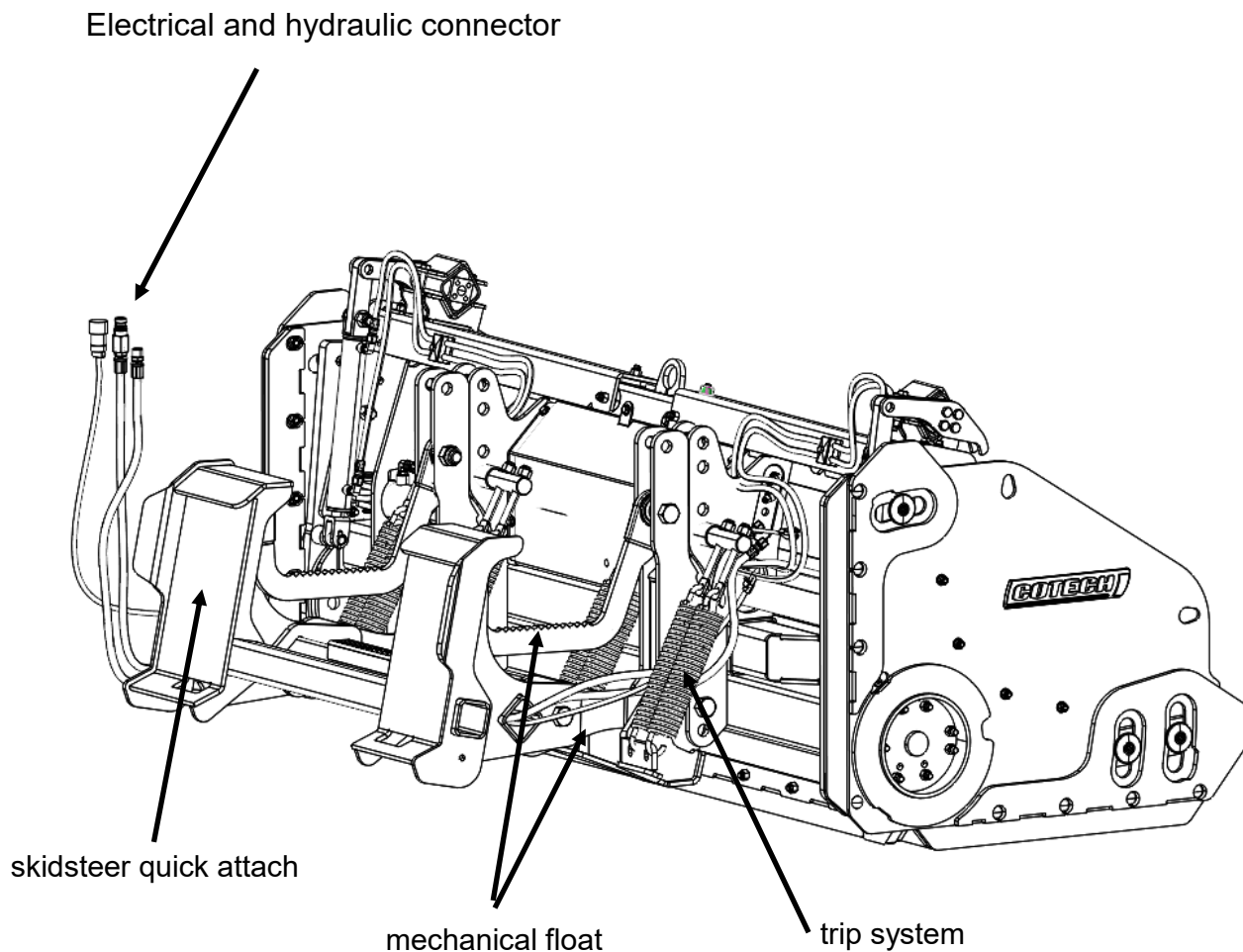
Using these snow plows with lighter or heavier equipment will affect safety, proper operation and warranty.

# DESCRIPTION

This snowplow is designed to be mounted on a skidsteer compact wheel or track loader.

The revolutionary PPCR-SKST skid steer attachment includes a mechanical float, a lateral float system and a trip system, all in a single mechanism

- It absorbs the acceleration and deceleration of the skid steer while keeping constant downward pressure
- It maintains constant pressure on the plow during the hopping motion of the skid steer
- Optimizes the traction of the skid steer;
- Makes the skid steer easier to use and maneuver
- Makes the skid steer more comfortable for the operator and improves visibility
- Improves the quality of scraping



# INSTALLATION

## MODEL vs MACHINE

PPCR type snow plows must be installed on the correct skid steer loader. Refer to the table below:

Model	HP min-max	Weight min-max (lbs)	Quick attach
PPCR30610-SKST	45-65	4 000 to 5 000	Skidsteer
PPCR30712-SKST	45-65	4 000 to 7 000	Skidsteer
PPCR34712HD-SKST	65-115	7 000 to 12 000	Skidsteer
PPCR34813HD-SKST	95-115	8 000 to 14 000	Skidsteer

## BEFORE FIRST USE

Check the oil level in the skid steer hydraulic system. Refer to your equipment's operation manual for instructions. Maintain the hydraulic oil level recommended by the manufacturer. Before checking the hydraulic oil level, make sure the hydraulic cylinders are full of oil. To do this, fully open and close the cylinders of the implements connected to the tractor 3-4 times.

### **IMPORTANT**

The snow plow hydraulic system is pre-charged with oil meeting ISO 32 standard. To avoid contamination of the oil in your equipment, check and confirm that the types of oil used are compatible before plug in the snow plow.

# RUNNING-IN

Although there is no break-in specific to PPCR –SKST, there are mechanical checks that must be made to ensure the long term integrity of the unit. When using the machine for the first time, follow this procedure:

## A. Before using:

1. Read the operator's manual.
2. Grease all the points indicated in the “maintenance” section.
3. Make sure all bolts and screws are in place and tight.
4. Visually check for hydraulic leaks.

## B. After 2 hours of service and thereafter after 10 hours, 40 hours and 100 hours:

1. Check all hardware.
2. Make sure all bolts and screws are in place and tight.
3. Check all hydraulic connections and tighten them if necessary.
4. Follow the instructions in the maintenance section of the operator's manual.

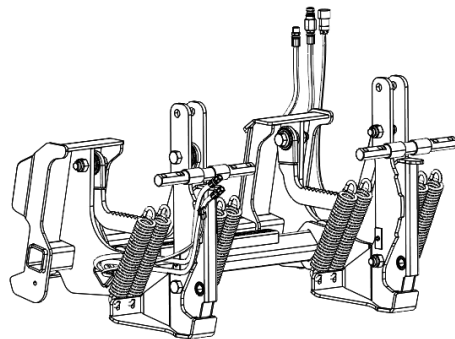
# IN COLD WEATHER

To ensure proper operation in cold weather (-5°C and less), before operating, open and close the scraper several times to warm the oil in the system.

# PRINCIPLE OF USE

PPCR series plows are designed to push and/or pull snow in a straight line. They allow you to maximize your snow removal operations by allowing you to adjust the width of the plow according to the space available to circulate. This function allows you to stretch the scraper in order to make fewer passes and thus save time. Depending on the amount of snow on the ground and the length of the terrain to be covered, you can adjust the width of the plow to maximize its efficiency.

The SKST attachment system with these snow plows are equipped with a two-point mechanical floating position. It is important to use this system when pushing the snow, it allows you to maintain perfect control over the operation of the equipment.



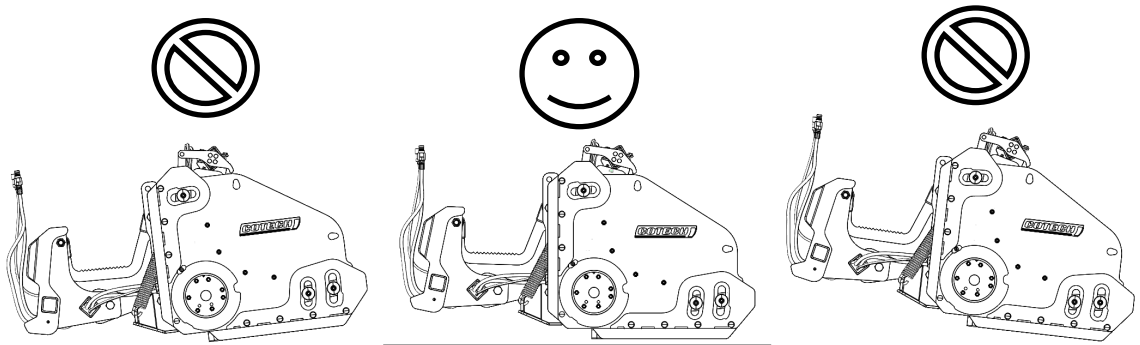
## IMPORTANT

Safe and effective use of this snow plow requires operators to read and understand the operation and safety procedures outlined in this manual.

# PRINCIPLE OF USE

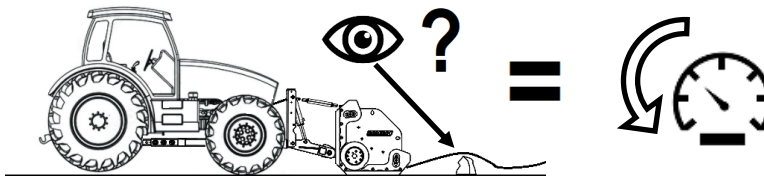
## IMPORTANT

Make sure that the blades of the PPCR plow are perpendicular to the ground. To exert ground pressure with the plow, adjust the blade height with the loader control lever.



## IMPORTANT

Remember that when driving or when plowing the snow plow is more susceptible to damage when the extensions are open. When plowing an unfamiliar space, you must take extra precautions such as traveling more slowly.

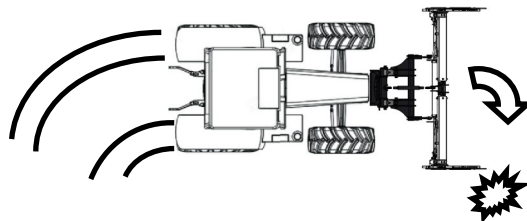


## IMPORTANT

To avoid damage to the snow plow, do not open or close the blade when it contains snow or the trigger mechanism is engaged.

## IMPORTANT

It is not recommended to make sharp turns during snow removal operations. In the event of a collision with an obstacle, you risk damaging the rotating sides.



## IMPORTANT

Never put pressure on the plow when one end is resting on a pavement or on an elevated surface because you will damage the blades, the extendable sides as well as the rotating sides of the plow.

# OPERATING SPEED



Operate the snow plow and equipment combination at a moderate operating speed. The safe operating speed is determined by the condition and size of the space to be cleared as well as the power and size of the equipment. However, it must not exceed 25 km/h (15 mph)



# MAINTENANCE

## SAFETY DURING MAINTENANCE

- Read operator's manual and understand all safety items before operating or servicing machine.
- Place the machine on the ground, stop the engine, place all controls in neutral, set the parking brake and remove the key from the ignition before servicing, adjusting or repairing.
- Clear the area of all bystanders and/or children when carrying out maintenance, repairs or adjustments.
- Use caution when working near or supporting a high pressure hydraulic system. Wear protective gloves and goggles when looking for leaks. Use a piece of wood or cardboard, but not your hand, high pressure oil can penetrate your skin. If this happens, you risk serious injury.
- Always relieve hydraulic pressure before disconnecting or working on the hydraulic system.
- Before applying pressure to the system, make sure all components are tight and lines, hoses and fittings are not damaged.

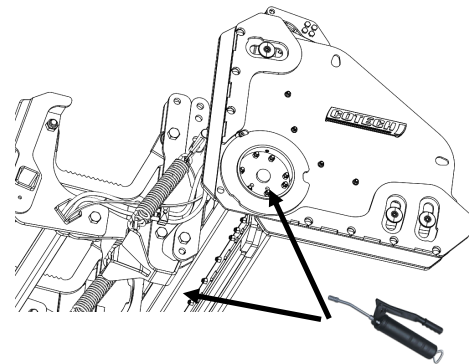
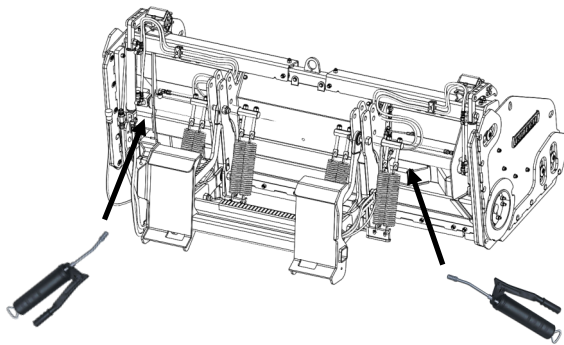
# COMPONENT CHECK

- Make sure all screws and bolts are tight. Check according to the following number of hours of use: 2, 10, 40, then every 200 hours of use.
- Refer to "Parts" section for grade and bolt length of replacement parts.
- Do not substitute lock nuts with a combination of nuts and lock washers.

## BEFORE EACH USE

Before using, check:

- That all greasing points are lubricated



- That the extension tubes are clean and lubricated
- That all components are firmly fixed.
- That the knives and hoes are in good condition.
- That the level of the hydraulic oil tank of the equipment is adequate.
- That all hydraulic connections are tight and tighten them if necessary

## AFTER EACH USE

- Remove all forms of snow, salt, calcium, sand, stone, etc. Washing snow removal equipment is the best way to improve the life of paint and hydraulic, electrical and mechanical components.

### IMPORTANT

Keep all the parts clean and do not forget to grease them using the grease nipples provided for this purpose.

### IMPORTANT

Replace worn or damaged parts with genuine Cotech parts.

### NOTE

For repairs, call a qualified technician at your dealership.

## STORAGE

At the end of the season, wash and inspect all major parts of the snow plow. Repair or replace worn or damaged components.

- Inspect all parts to see if anything is wrong. Repair or replace worn or damaged components.
- Lubricate all grease points to remove any moisture that may cause rust.
- Inspect all hydraulic hoses, fittings, lines and couplers. Tighten all fittings. Replace any cut, nicked or damaged hoses. Touch up scratches with paint to prevent rust.
- Grease exposed hydraulic cylinder rods to prevent rust.
- Select a dry, level, and debris-free location for storage.

# TROUBLESHOOTING

ISSUE	SOLUTION
Rotating sides do not rotate.	Check the electrical operation of the hydraulic selector.
	Check the hydraulic connections
Only one rotating side rotates	It is possible that a mechanical failure prevents the rotation. Check that the hydraulic cylinder is intact and that it is still well fixed to the panel. Check that a mechanical part is not deformed and that it prevents free rotation.
	Check the hydraulic connections
The two extensions do not close completely, but they close as much as the other	Check that there is no ice accumulation in the slide system. Melt as needed.
One of the two extensions does not close completely	It is possible that one of the seals of one of the cylinder pistons is defective. Check that the two cylinders close completely if the oil outlet is kept active for a few seconds.
	There is possibly an accumulation of ice in the slide system. Melt as needed.
	Inspect and if necessary replace the piston seals of the two cylinders.

# COTECH LIMITED WARRANTY

## The Limited Warranty Period

The guarantee corresponds to the following table:

Item	Length of Guarantee
All parts fabricated by Cotech	1 year from the time the item is sold by an authorized dealer to the end user  1 year on all items stocked and not sold at the authorized dealership. This warranty ends at the time of the sale to the end user or 12 months after the billing date from Cotech, whichever comes first.
Replacement parts	90 days on all replacement parts. This period is limited by the initial warranty date of the equipment, whichever comes first.

### Limited Warranty Terms

- Cotech equipment will be repaired during the warranty period, free of charge, if the equipment malfunctions due to a defect caused by a design error, manufacturing, assembly or defective parts.
- Cotech's limited warranty to the end user is limited to the repair or replacement of the defective parts only.
- Cotech reserves the right to inspect any equipment or part that is the subject to a warranty claim.
- Repair or replacement of warranty parts must be performed by an authorized Cotech Dealer. Cotech will not pay the cost of transportation for replacement parts covered under warranty.
- Cotech will not cover the transportation costs for any replaced parts or repairs made at the Cotech factory.

### Exemptions from the Limited Warranty

#### The guarantee does not cover:

- Used equipment, unless they have not yet reached the expiry date of the initial warranty period.
- Equipment that, in Cotech's judgment, was used for the wrong application, sold for the wrong sized equipment, abused or installed improperly.
- Equipment that has been accidentally damaged or has not been properly maintained as recommended or in accordance with good practice.
- Connecting parts not provided by Cotech which, in the sole judgment of Cotech, would affect the performance, durability, safety or stability of equipment.
- Equipment that may have been modified or repaired without authorization outside the Cotech distributor network.
- Towing fees, service calls, fluid losses, etc.
- Wear parts such as the cutting edge, skid shoes, bearings, hydraulic hoses, etc. Unless they have a manufacturing defect or have been poorly assembled by Cotech.
- Liability for any damage (incidental or indirect) or injury, including but not limited to, loss of profits, lost time, equipment depreciation, replacement equipment rental fees or any other damages, business or personal.
- Damage caused by a natural disaster, such as a fire, flood, earthquake, etc.

#### The Warranty Claim Process goes as follows

- The Cotech dealer is responsible for making the claim on behalf of the end user and has 60 days to begin the claims process
- Claims must be made using the warranty claim form available on the Cotech website. The form is only accessible to authorized dealers.
- When the Cotech After-Sales Service receives the claim form, it will notify the dealer of the evaluation with 24hrs. If and when the claim is authorized, the dealer will receive a warranty order form. In the case of a refusal, the dealer will receive a brief email explaining the circumstances and reasoning behind the decision.
- Cotech allows minor repairs to be made by the dealer before the evaluation is completed. Minor repairs are defined by, but not limited to, the replacement of a hydraulic cylinders, hydraulic hoses, etc. Major repairs must be approved by Cotech if a warranty claim is going to be made. Major repairs are defined by, but are not limited to, replacement, repair or the modification to the structure or frame of the attachment.
- If required, defective parts may need to be returned to the Cotech factory. If this is the case, the shipping costs will be incurred by Cotech. The dealer is committed to keeping the parts and packing the parts for shipping at no additional cost.

#### The payment of compensation for warranty work

- Only the submission of the warranty claim form allows for compensation of parts or labor.
- Work performed by the dealer is reimbursed based on the hourly rate of the dealer, up to a maximum of \$ 100 / hour.
- The time allocated for each repair will be determined by Cotech and will be indicated on the Warranty Purchase Order. This time includes among other factors, but not exclusively, diagnosis, assembly and disassembly, cleaning, adjustments as well as the necessary workshop equipment used.
- Cotech dealers can manufacture their own hydraulic hoses. The Cotech guarantee will then be limited to the cost of the Cotech item. In addition, Cotech does not offer warranty on hydraulic hoses manufactured by the dealer.

#### Recurring problems

If a defect or a series of defects in materials cannot be corrected or corrected by Cotech during the warranty period, the period of Warranty will continue for the specific defect until the defect is resolved. This defect must have been previously reviewed by Cotech

#### Availability of parts

We are committed to offering Cotech dealers replacement parts for a period of at least 10 years after a model is discontinued. We do however encourage keeping certain spare parts on hand to expedite repairs or general maintenance.

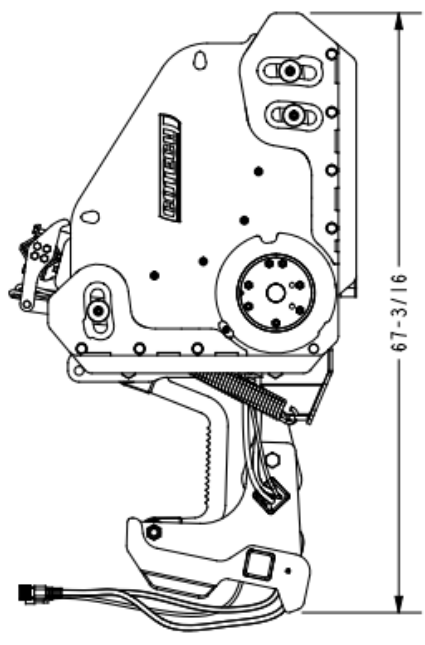
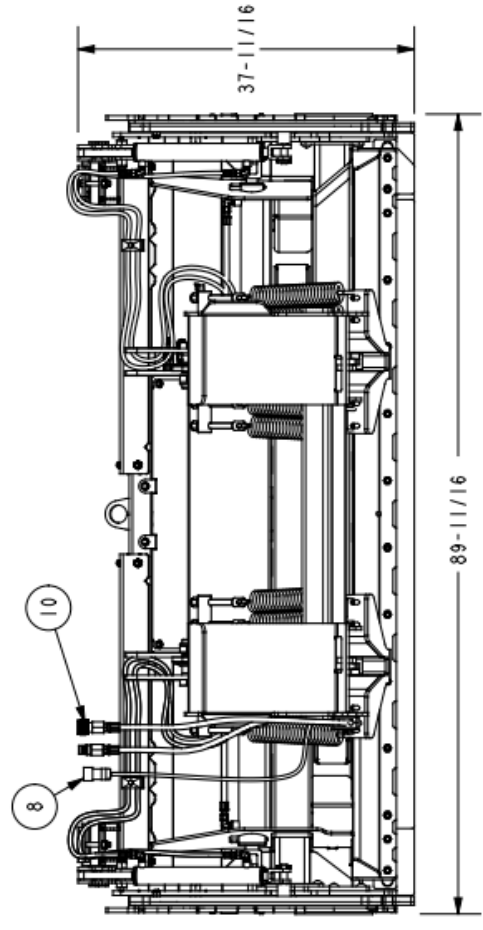
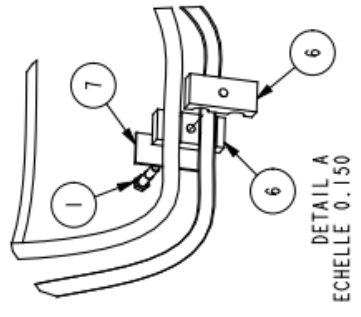
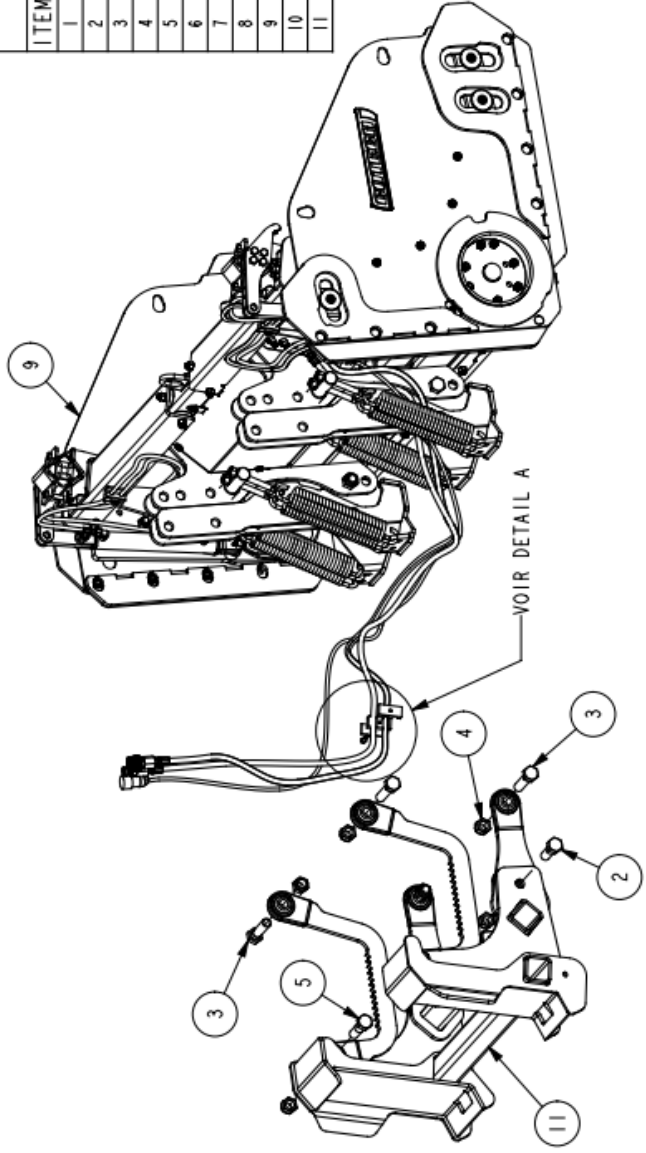
## PLAN OF PARTS

It should be noted that snow plow models have changed over the years. The serial number of your snow plow is essential to obtain the correct parts.



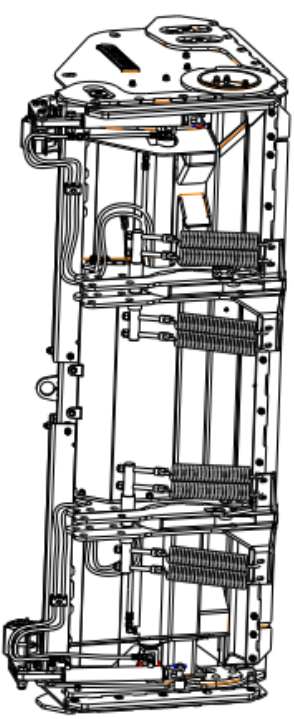
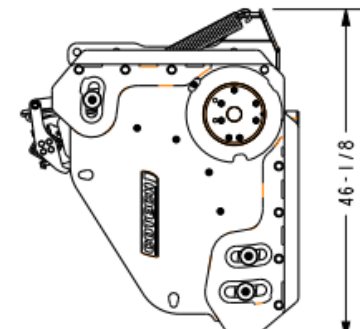
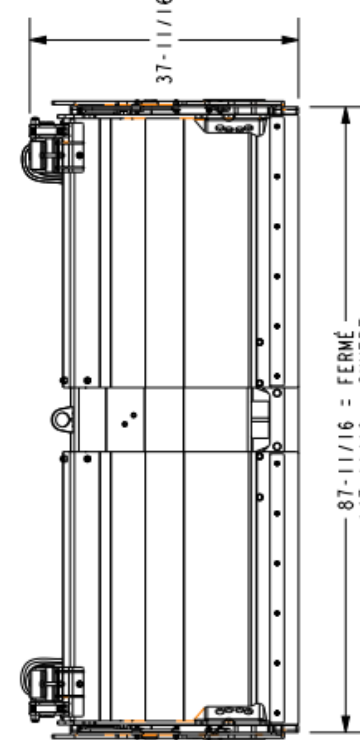
PPCR-SKST : Quick attach detail (ALL MODEL)

BILL OF MATERIAL			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PIB0075-450	5/16X1 3/4 HEX HD CAP SCREW GR 5 UNC PLTD
2	2	PIB0075-809	1X3 1/2 HEX HD CAP SCREW GR 5 UNC PLTD
3	4	PIB0075-812	1X4 1/2 HEX HD CAP SCREW GR 5 UNC PLTD
4	8	PIB0108-030	1-8 NYLON INSERT STOP NUT UNC PLTD
5	2	PIB0075-811	1X4 HEX HD CAP SCREW GR 5 UNC PLTD
6	2	PIHY-T3012C	PLASTIQUE SEUL BETA TWIN CLAMP HOSE 3/8"
7	1	PIHY-TC-3	TOP CLAMP DOUBLE HOSE 3/8
8	1	PIQU-INNV4215	HARNAIS 14" POUR GRATTE PPCR CONNECTEUR DEUTSCH 14 PINS
9	1	PPCR34712-HD-D-JA	GRATTE POUSSÉ-TIRÉ 34-7-12 HD, DÉCLENCHEUR, JAUNE, ACIER
10	1	SKST-PP-HYD	KIT HYDRAULIQUE SKST SUR GRATTE PP
11	1	SKST-PP-I	ATTACHE SKID POUR GRATTE PP



2	08/2021	S. BRISSON	MODIF. PRODUCTION 2021
REV	DATE	NOM	DESCRIPTION
NOTE:			REV.:
TITLE:			REV.:
VERSION			PART NO.:
OFFICIEL			PPCR34712-HD-JA-SKST
FIRST RELEASE			2
REV. BY:			SHEET:
DATE:			SHEET 1 OF 2
DESIGNED BY: S. DESAUNIER			SCALE: 0.050
DATE: Sep-21-20			APPROVED BY: E. COTE

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	CRE130-003	BANDE DE LIVRAI POUR CR
2	2	EXTN130-6-10-008	BONNETTE DE GLISSEMENT 10MM 2"x 5"
3	4	EXTN130-6-10-032	BRIDE EN NYLON L'AN BRESSORT
4	4	EXTN130-008	PIN DIA. X L 1/20
5	4	PIAC-PPR30-010	ASS. COUDEAU ACTIER DE COIE PPCR30
6	1	PIAG-PP-100	SABOT PP RH
7	1	PIAG-PP-200	SABOT PP LH
8	1	PIAG-PP30172-001	COUDEAU 4" EN ACTIER PARTIE CENTRALE
9	1	PIAG-PP30172-002	SHM COUDEAU 4" ACTIER PARTIE CENTRALE
10	2	PIAG-PP30172-003	COUDEAU 4" EN ACTIER POUR EXTENSION
11	4	P180-90128A114	1/2-13 x 1-1/4 UNC SOCKET HEAD SCREW ZINC PLTD
12	2	P180-90128A120	1/2-13 x 2 LG UNC SOCKET HEAD SCREW ZINC PLTD
13	2	P180015-321	1/4X3 1/4 HEX HD CAP SCREW GR 5 UNC PLTD
14	2	P180015-448	5/16X1 1/2 HEX HD CAP SCREW GR 5 UNC PLTD
15	1	P180015-450	5/16X1 3/4 HEX HD CAP SCREW GR 5 UNC PLTD
16	6	P180015-481	3/8X3/4 HEX HD CAP SCREW GR 5 UNC PLTD
17	8	P180015-493	1/2-13 x 1-1/4 UNC HD CAP SCREW GR 5 UNC PLTD
18	4	P180015-583	1/2X1 1/2 HEX HD CAP SCREW GR 5 UNC PLTD
19	4	P180015-590	1/2X3 HEX HD CAP SCREW GR 5 UNC PLTD
20	2	P180015-710	3/4X1 3/4 HEX HD CAP SCREW GR 5 UNC PLTD
21	2	P180015-710	3/4X2 3/4 HEX HD CAP SCREW GR 5 UNC PLTD
22	2	P180015-812	1/4 X 1/2 HEX HD CAP SCREW GR 5 UNC PLTD
23	2	P180108-014	1/4-20 NYLON INSERT STOP NUT UNC PLTD
24	8	P180108-018	3/8-16 NYLON INSERT STOP NUT UNC PLTD
25	8	P180108-022	1/2-13 NYLON INSERT STOP NUT UNC PLTD
26	8	P180108-024	5/8-11 NYLON INSERT STOP NUT UNC PLTD
27	6	P180108-026	3/4-10 NYLON INSERT STOP NUT UNC PLTD
28	2	P180108-030	1-8 NYLON INSERT STOP NUT UNC PLTD
29	18	P180118-022	1/2-13 TENSILOCK FLANGE NUT PLTD PUNCHED
30	16	P180131-581	1/2X1-1/4 CARRIAGE BOLT GR 5 UNC PLTD
31	10	P180131-583	1/2X1 1/2 CARRIAGE BOLT GR 5 UNC PLTD
32	14	P180131-585	1/2X1 3/4 CARRIAGE BOLT GR 5 UNC PLTD
33	5	P180131-586	1/2X2 CARRIAGE BOLT GR 5 UNC PLTD
34	3	P180131-588	1/2X2 1/2 CARRIAGE BOLT GR 5 UNC PLTD
35	6	P180131-589	1/2X2 3/4 CARRIAGE BOLT GR 5 UNC PLTD
36	14	P180131-589	1/2X2 3/4 PLW BOLT GR 5 UNC PLTD
37	8	P180131-649	3/8-16X1 1/4 F1A1 SOCKET CAP SCREW UNC PLTD
38	2	P180131-681	1/2-13X1 1/4 F1A1 SOCKET CAP SCREW UNC PLTD
39	12	P180131-683	1/2-13X1 1/2 F1A1 SOCKET CAP SCREW UNC PLTD
40	4	P180146-014	1/4 B.S. PLAIN STEEL WASHER 1 LB PLTD
41	22	P180146-018	3/8 B.S. PLAIN STEEL WASHER 1 LB PLTD
42	4	P180157-022	1/2 SPRING LOCK WASHER 1/2" PLTD
43	8	P180608-422	HEX M12-1.75 X 20MM
44	2	PIHY-F1510-S-90	CT. HYD. FEM. 1-1/2" X 10" - PORT SAE 6 - 90 DEG.
45	1	PIHY-F2030-SBP	CYLINDRE HYD. BYPASS FEM. 2" DIA X 30" PORT SAE 6
46	1	PIHY-F2530-SBP	CYLINDRE HYD. BYPASS FEM. 2 1/2" DIA X 30" -PORT SAE 6
47	4	PIHY-12009C	PLASTIQUE SEUL BETA TWIN CLAMP HOSE 1/4"
48	2	PIHY-13012C	PLASTIQUE SEUL BETA TWIN CLAMP HOSE 3/8"
49	2	PIHY-16-2	TOP CLAMP DOUBLE HOSE 1/4
50	1	PIHY-16-3	TOP CLAMP DOUBLE HOSE 3/8
51	8	P1001-30401753	EYE BOLT 5/8"-11 X 6 8 80
52	2	P1001-906924746	TWIN PLATED SLOT SPRING PIN Ø1/4" X 1-1/2"
53	2	P1001-91501120	UNITE BRESSORT EN CAOUTCHOUC 508x120mm
54	2	P1001-10001214	HARNAIS COMPOSITEUR D'EPH1 MALLER DIN
55	2	P1001-10001214	HARNAIS COMPOSITEUR D'EPH1 MALLER DIN
56	6	P1001-235-309	HARNIS COTTEUR PIN POUR SHAFT 778-1
57	6	P1001-504-650	GRATISSEUR 174-280UN
58	2	PP-001	RESSORT POUR DECLENCHEUR
59	2	PP-002	GLISSEUSE EXTENSION
60	6	PPCR-HD-001	GLISSEUSE NYLON
61	6	PPCR-HD-002	WASHER CUSTOM
62	1	PPCR34712-HD-D-RTO	KIT HOSES HYDRAULIQUE POUR GRATTE PPCR34712-HD-D
63	1	PPCR34712-HD-I	PUSH/PULL 34-7-12 HD
64	1	PPDCC34HD-1	DECLENCHEUR PP34HD
65	4	TR-100	TIGE BRESSORT DIA. 375
66	1	VALCOUWITZ-1	VALVE ELECTRO-HYDRAULIQUE 12V

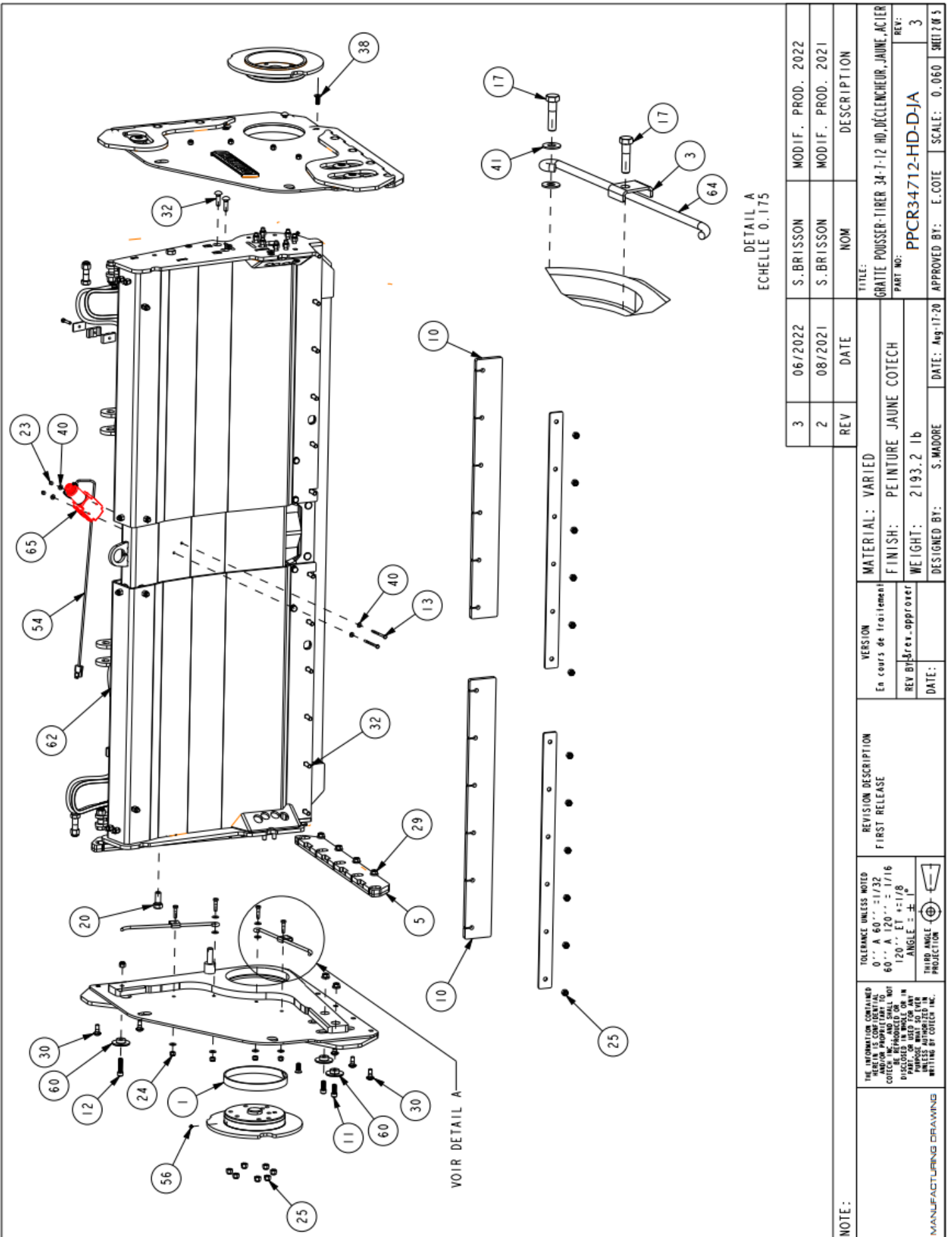
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147-11/16 = OUVERT

46-1/8

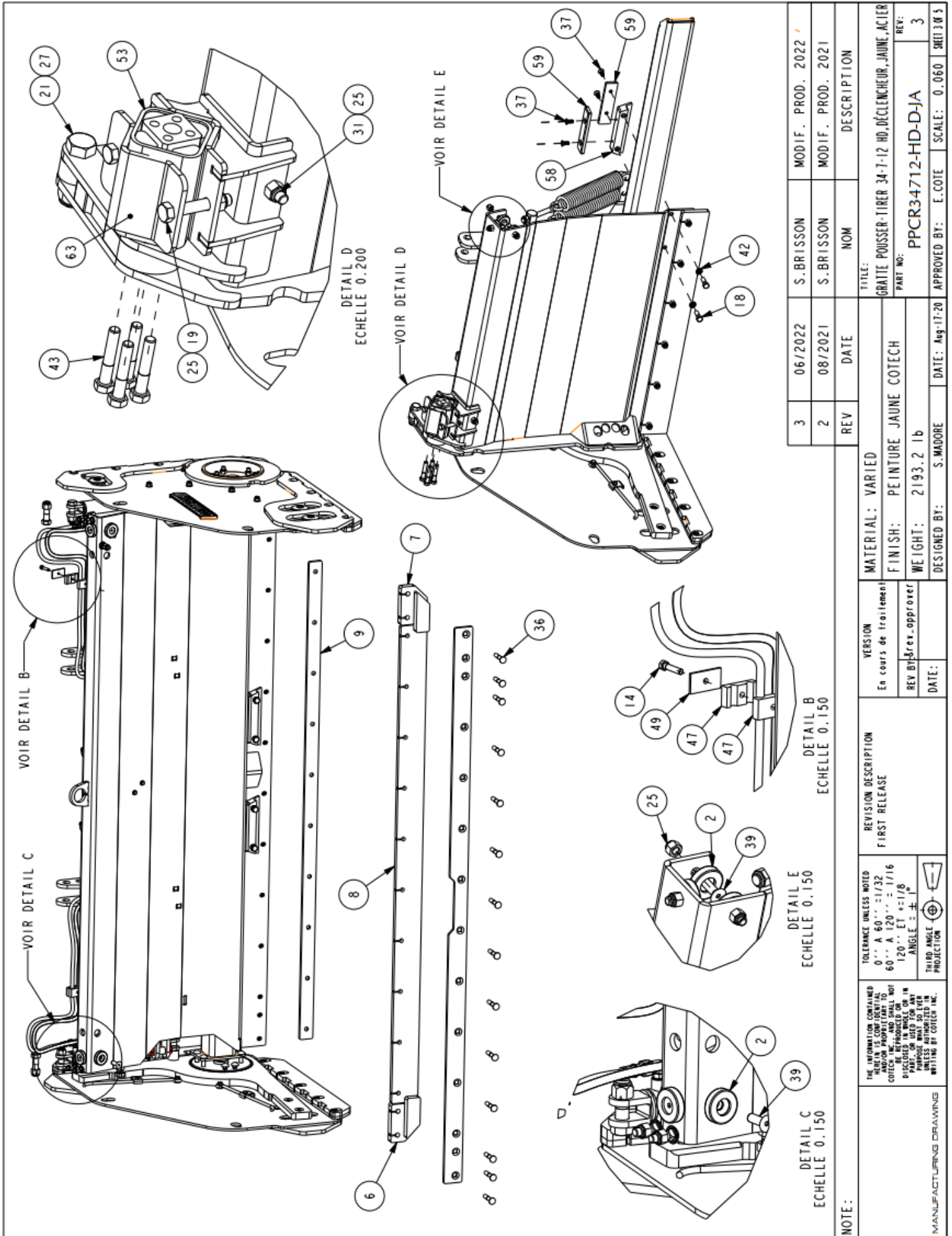
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REV	DATE	NOM	DESCRIPTION
3	06/2022	S. BRISSON	MODIF. PROD. 2022
2	08/2021	S. BRISSON	MODIF. PROD. 2021

NOTE: MATERIAL: VARIED  
FINISH: PEINTURE JAUNE COTECH  
WEIGHT: 2193.2 lb  
DESIGNED BY: S.MADORE DATE: Aug-13-20 APPROVED BY: E.COTE SCALE: 0.040 SHEET 1 OF 5







**DETAIL F**  
ECHELLE 0.250

**DETAIL H**  
ECHELLE 0.250

VOIR DETAIL H

REV	DATE	NOM	DESCRIPTION
3	06/2022	S. BRISSON	MODIF. PROD. 2022
2	08/2021	S. BRISSON	MODIF. PROD. 2021

TITLE:		MATERIAL: VARIED	
GRATTE POUSSER-TIRER 34-7-12 HD, DÉCLENCHEUR, JAUNE, ACIER		En cours de traitement	
PART NO: PPCR34712-HD-D-JA		REV Brix.approver	
APPROVED BY: S. MADORE		DATE:	
E. COTE		DATE: Aug-17-20	
SCALE: 0.055		SHEET 4 of 5	

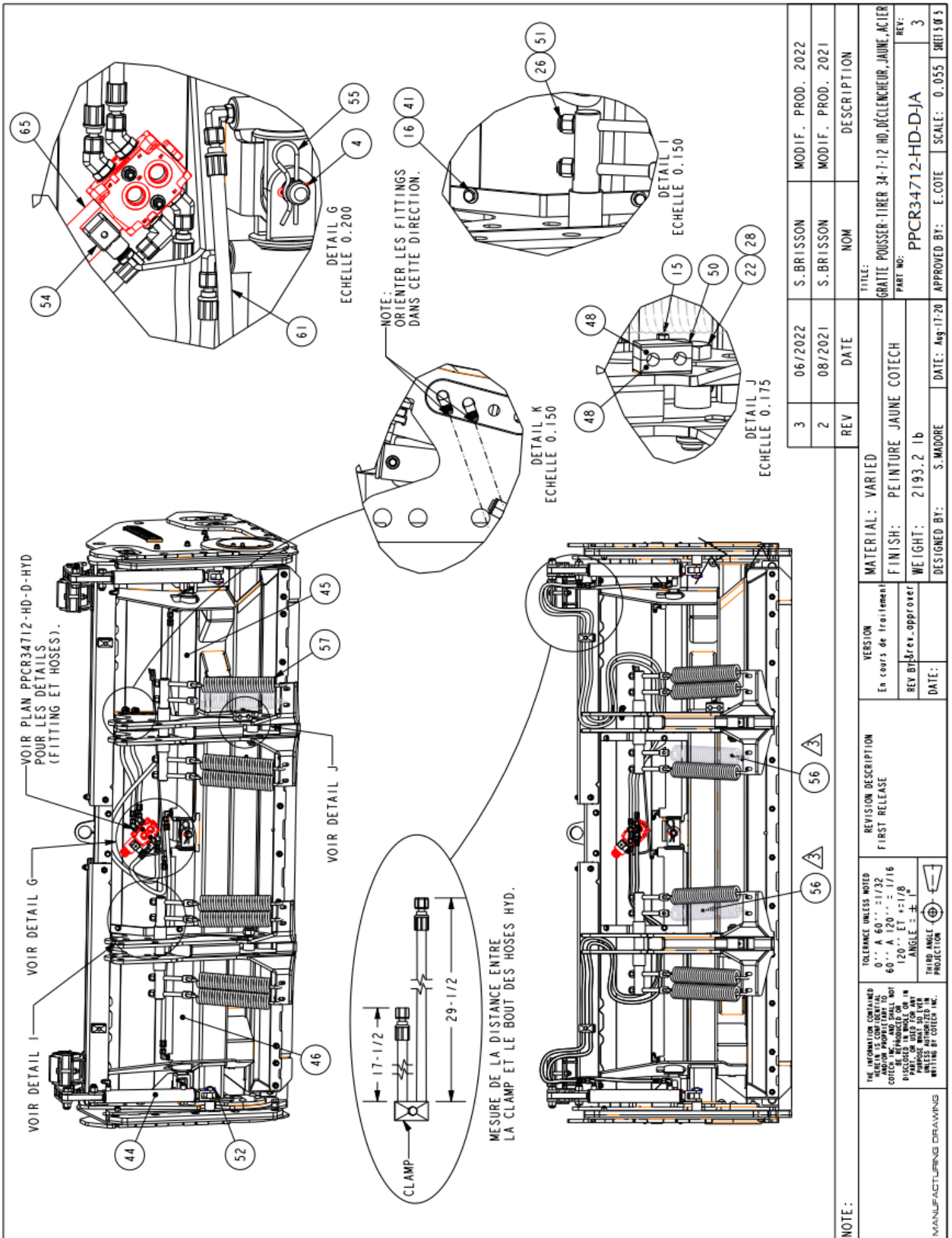
**NOTE:**

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TOLERANCE UNLESS NOTED:  
 0... A 60... ±1/32  
 60... A 120... ±1/16  
 120... ET ±1/8  
 ANGLE: ±1°

THIRD ANGLE PROJECTION

MANUFACTURING DRAWING



REV	DATE	NOM	DESCRIPTION
3	06/2022	S.BRISSON	MODIF. PROD. 2022
2	08/2021	S.BRISSON	MODIF. PROD. 2021

TITLE:		MATERIAL: VARIED	
GRATTE POUSSER-TIRER 34-7-12 HD, DÉCLENCHEUR, JAUNE, ACIER		En cours de traitement	
PART NO: PPCR34712-HD-D-JA		REV B/décl. approuver	
APPROVED BY: S.MADORE		DATE: Aug-17-20	
SCALE: 0.055		SHEETS OF 5	
REV: 3		WEIGHT: 2193.2 lb	
DESIGNED BY:		DATE:	

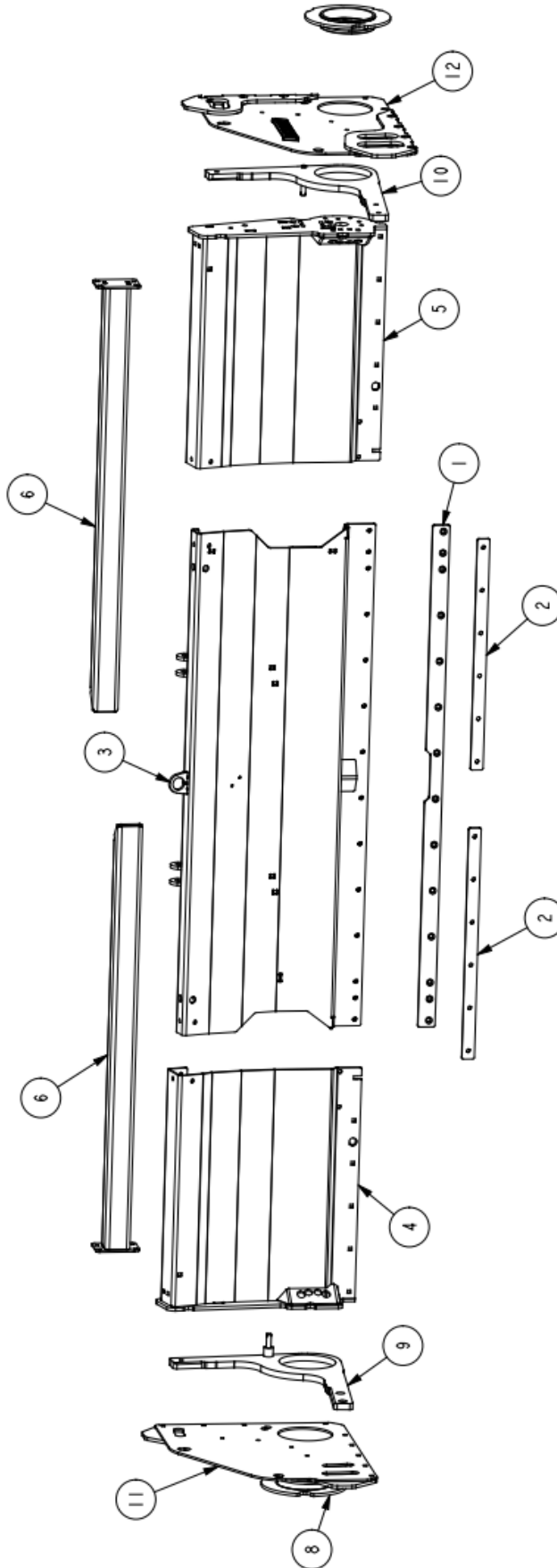
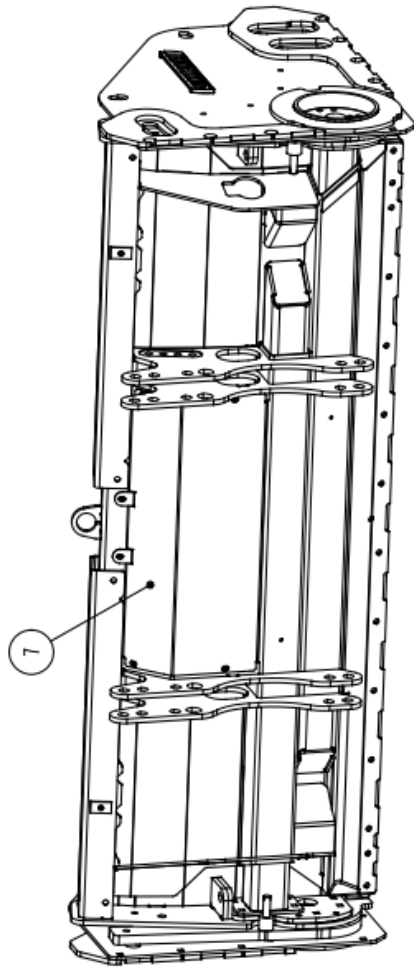
VERSION	REVISION DESCRIPTION
En cours de traitement	FIRST RELEASE

THE INFORMATION CONTAINED HEREIN IS CONFIDENTIAL AND/OR PROPRIETARY TO COITECH. IT IS TO BE DISCLOSED IN WHOLE OR IN PART ONLY TO THE PERSONS AUTHORIZED BY WRITING BY COITECH INC.	TOLERANCE UNLESS NOTED	THIRD ANGLE PROJECTION
	0... A 60... ±1/32 60... A 120... ±1/16 120... ET ±1/8	



BILL OF MATERIAL			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PP30712-001	BARRE DE GLISSIÈRE
2	2	PP30712-002	RENFORT DE COUPEAU EXTENSION
3	1	PP34712-HD-100	PARTIE CENTRALE
4	1	PP34712-HD-200	EXTENSION DROITE
5	1	PP34712-HD-300	EXTENSION GAUCHE
6	2	PP34712-HD-400	TUBE EXTENSION
7	1	PP34HD-004	COUVERT PP34HD
8	2	PPCR34HD-100	AXE DE ROTATION PPCR34HD
9	1	PPCR34HD-250	ASS. PIÈCE MOBILE DROITE
10	1	PPCR34HD-350	ASS. PIÈCE MOBILE GAUCHE
11	1	PPCR34HD-400	PANNEAU CÔTÉ DROIT
12	1	PPCR34HD-500	PANNEAU CÔTÉ GAUCHE



6	03/2022	S. BRISSON	ENLEVER PP-001
5	04/2021	S. BRISSON	MODIF. PPCR34HD-400, -500
REV	DATE	NOM	DESCRIPTION

MATERIAL: VARIED		VERSION	OFFICIEL
FINISH: N/A		REV BY: Srev_approver	DATE:
WEIGHT: 1465.5 lb		DESIGNED BY: S. MADORE	
DATE: Jui-16-19		APPROVED BY: E. COTE	
SCALE: 0.055		SHEET 1 of 2	
TITLE: PPCR34712-HD-I PART NO:			
PUSH/PULL 34-7-12 HD REV: 6			
REVISION DESCRIPTION FIRST RELEASE			
TOLERANCE UNLESS NOTED 0" A 60" = ±1/32 60" A 120" = ±1/16 120" ET ±1/8 ANGLE = ±1°			
THIRD ANGLE PROJECTION			
THE INFORMATION CONTAINED HEREIN IS CONFIDENTIAL AND NOT BE RELEASED OR DISCLOSED IN ANY MANNER WITHOUT THE WRITTEN AUTHORIZATION OF GOTECH INC.			

