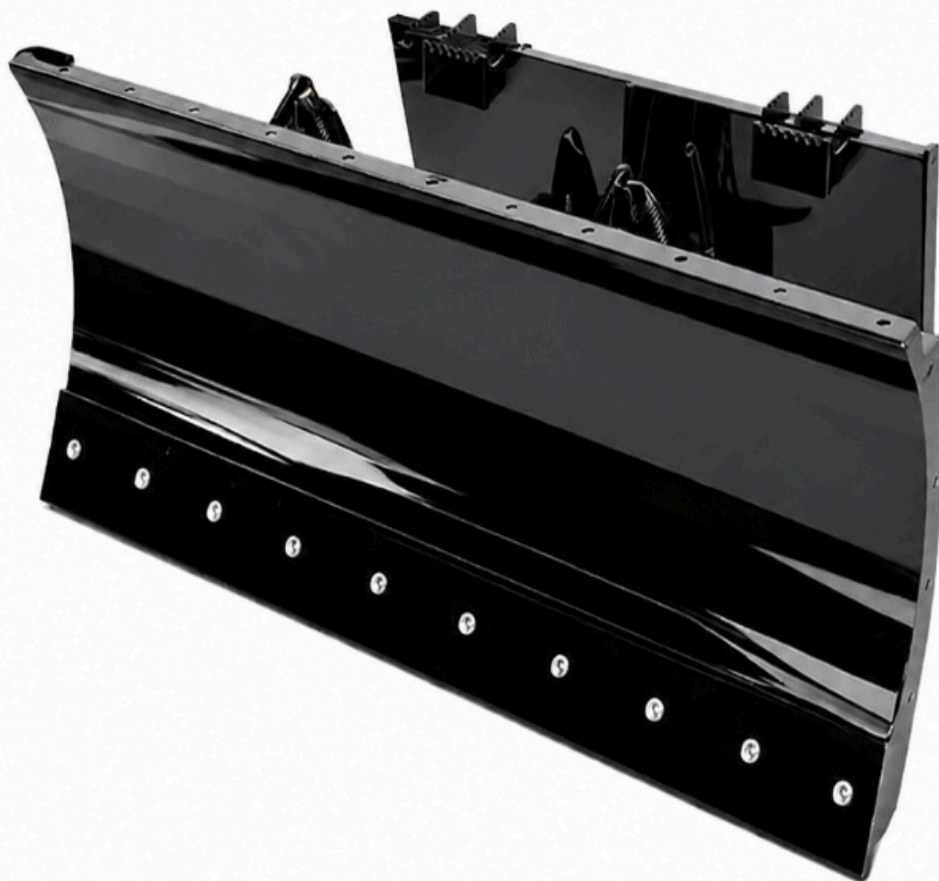




READY TO GO TO WORK™



**HSBX66 HYDRAULIC SNOW
BLADE**

**SSQA MOUNT - HYDRAULICALLY
CONTROLLED BLADE ANGLE**

— 66" HYDRAULIC SNOW BLADE —

TABLE OF CONTENTS

OVERVIEW

Introduction	3
Warranty	4

SAFETY

Safety Rules & Warnings	5
------------------------------------	----------

SETUP & CONFIGURATION

Specifications	6
Hydraulic System & Third-Function Requirements	7
Mounting to the Tractor	8

OPERATION

Understanding the Three Adjustments	9
Operating the Snow Blade	10
Techniques for Common Conditions	11

CARE & MAINTENANCE

Maintenance Schedule	12
Cutting Edge Replacement	13
Hydraulic System Service	14

REFERENCE

Part Numbers	15
Troubleshooting	16
First Use & Seasonal Storage	17
About Summit Tractors	18

INTRODUCTION


Thank you for purchasing your new Summit HSBX66 66" Hydraulic Snow Blade. This attachment is designed to deliver serious snow-clearing performance from the seat of your compact tractor — with full hydraulic control over blade height, angle, and tilt, all without leaving the cab.

The HSBX66 is built around the reality of compact tractor work: your property, your driveway, your schedule. Whether you are clearing a quarter-mile lane after an overnight storm or pushing back a heavy wet snowfall on a commercial lot, the HSBX66 gives you the control and durability to get the job done efficiently and safely.

At Summit Tractors, quality is at the heart of everything we do. Every attachment is built to Summit's exacting specifications and undergoes thorough inspection before leaving the facility. We use heavy-duty GR50 steel construction and proven hydraulic components rated for the demands of real working conditions — not just light-duty use.

Please read this entire manual before operating your HSBX66. Proper understanding of the attachment's three-axis hydraulic control system, correct tractor setup, and routine maintenance will directly affect your safety, the quality of your work, and the long-term life of the blade.

Summit Tractors Customer Support

 770-209-3390

 summittractors.com

REGISTER YOUR ATTACHMENT

Register your HSBX66 at summittractors.com to activate your warranty and receive product updates. Have your proof of purchase ready.

WARRANTY

Summit Tractors warrants the HSBX66 Hydraulic Snow Blade to be free from defects in material and workmanship for a period of **twelve (12) months** from the date of original purchase by the original purchaser.

WHAT IS COVERED

- ▶ Defects in materials or workmanship in the blade frame, hitch structure, and hydraulic cylinder
- ▶ Failure of welded joints under normal operating loads
- ▶ Defective hydraulic cylinder seals within the warranty period

WHAT IS NOT COVERED

- ▶ Normal wear items: cutting edge, wear skids, hydraulic hoses, paint and finish
- ▶ Damage from misuse, overloading, abuse, neglect, or accident
- ▶ Damage resulting from failure to follow operating or maintenance instructions in this manual
- ▶ Damage from unauthorized modifications, welding, or use of non-OEM parts
- ▶ Damage caused by operation outside the rated tractor or hydraulic specifications
- ▶ Damage from striking buried or hidden obstacles at operating speed
- ▶ Consequential or incidental damages of any kind
- ▶ Labor costs for removal, re-installation, or field repair

MAKING A WARRANTY CLAIM

Contact Summit Tractors within the warranty period at **770-209-3390** or at summittractors.com. Provide proof of purchase, a description of the defect, and photos if available. Summit Tractors reserves the right to repair or replace the defective component at its sole discretion.

⚠ IMPORTANT

Warranty is void if the attachment is modified, repaired by unauthorized personnel, or operated with non-approved components. Always use genuine Summit Tractors OEM replacement parts.

SAFETY RULES & WARNINGS

WARNING — READ BEFORE OPERATING

Failure to follow safety instructions could result in serious injury, death, or property damage. Read and understand this entire manual before operating. Keep this manual with the attachment at all times and review it with any operator who will use this equipment.

DANGER — HYDRAULIC INJECTION HAZARD

High-pressure hydraulic fluid escaping from a pinhole leak can penetrate skin and cause severe injury or death — even when it does not feel painful at the point of entry. **Never use your bare hand or fingers to check for hydraulic leaks.** Use a piece of cardboard or paper to locate leaks. Seek immediate medical attention if injection occurs. Inform the treating physician that hydraulic oil injection has taken place.

GENERAL SAFETY

- ▶ Only trained, authorized operators should use this attachment.
- ▶ Always wear appropriate PPE: safety glasses, work gloves, and work boots.
- ▶ Keep bystanders — especially children and animals — well clear of the work area at all times.
- ▶ Never operate under the influence of alcohol, drugs, or medications that impair judgment.
- ▶ Inspect the blade before every use. Do not operate if any component is bent, cracked, or damaged.
- ▶ Be aware of hidden obstacles under snow: rocks, curbs, stumps, and drainage covers can cause sudden violent blade contact.
- ▶ Reduce speed significantly in unfamiliar areas or where surface hazards may be hidden.

HYDRAULIC SAFETY

- ▶ Never disconnect hydraulic hoses while the system is under pressure.
- ▶ Always shut down the tractor and relieve hydraulic pressure before performing any service on the blade or hydraulic connections.
- ▶ Hydraulic fluid injected through the skin is a medical emergency — seek immediate medical attention. Use cardboard or paper to check for leaks, never your bare hand.
- ▶ Inspect hoses before each use. Replace any hose that is cracked, kinked, abraded, or leaking. Do not operate with a damaged hose.
- ▶ Keep hydraulic couplers clean when connecting to prevent contamination of the tractor's hydraulic system.

TRANSPORT & TRAVEL SAFETY

- ▶ Raise the blade to full transport height before traveling between areas.
- ▶ Never transport with the blade angled — always travel with the blade centered and raised.
- ▶ Reduce speed on slopes, uneven terrain, and around obstacles. A raised blade shifts the tractor's center of gravity forward.
- ▶ Never carry passengers on the tractor while operating snow removal equipment.

SPECIFICATIONS

BLADE DIMENSIONS

SPECIFICATION	VALUE
Blade Width	66 inches
Blade Height	24 inches
Blade Steel	3/16" high-strength steel
Cutting Edge	1/2" × 6" AR400 bolt-on
Angle Range	±30° left / right of center
Tilt / Curl Range	±10° forward / back
Approximate Weight	440 lbs

MOUNT & COMPATIBILITY

SPECIFICATION	VALUE
Mount Type	Skid Steer Quick Attach (SSQA)
Attachment Point	Front-end loader coupler
Tractor HP Range	25–60 HP
Min. Loader Lift Capacity	600 lbs at full height

HYDRAULIC REQUIREMENTS

SPECIFICATION	VALUE
Hydraulic Circuits Required	Third-function (angle) required; 4th function for tilt optional
Hydraulic Flow Required	4–8 GPM
Max. Operating Pressure	2,500 PSI
Cylinder Type — Angle	Double-acting, 2.5" bore × 12" stroke
Cylinder Type — Tilt	Double-acting, 2" bore × 8" stroke
Hose Fittings	1/2" Pioneer male quick-connect
Hydraulic Fluid	Use tractor manufacturer spec

PERFORMANCE

SPECIFICATION	VALUE
Max. Snow Depth (single pass)	12–16 inches (dry); 8–10 inches (wet/heavy)
Recommended Operating Speed	3–6 mph depending on conditions
Surface Compatibility	Gravel, asphalt, concrete (with skids set)

SPECIFICATIONS ARE NOMINAL

Actual performance will vary based on tractor hydraulic output, snow density, surface conditions, and operator technique. Always verify compatibility with your specific tractor model before operating.

HYDRAULIC SYSTEM & THIRD-FUNCTION REQUIREMENTS

The HSBX66 Snow Blade uses your tractor's hydraulic system to control blade angle and tilt independently from blade height. Understanding how your tractor's hydraulics interact with this attachment is essential for safe and effective operation.

WHAT IS THIRD-FUNCTION HYDRAULICS?

Most compact tractors have two standard hydraulic functions built in: the loader lift (raise/lower) and the bucket curl (tilt forward/back). "Third function" refers to an additional hydraulic circuit — typically added via a valve kit — that provides a third independent hydraulic output. On the HSBX66, the third function powers the blade angle cylinder, letting you push the blade left or right from the operator seat without dismounting.

⚠️ THIRD-FUNCTION KIT REQUIRED

The HSBX66 requires a third-function hydraulic kit installed on your tractor. If your tractor does not already have a third-function circuit, this kit must be installed before the blade can be operated. Contact your tractor dealer or Summit Tractors for compatible kits.

CONNECTING THE HYDRAULIC HOSES

- ▶ **Angle cylinder — Port A (Left):** Connect to the third-function "extend" output on the tractor's hydraulic control valve.
- ▶ **Angle cylinder — Port B (Right):** Connect to the third-function "retract" output.
- ▶ **Tilt cylinder — Port C & D:** Connect to a fourth-function circuit if equipped. If not equipped, tilt is set manually with the locking pin before operating.
- ▶ Always ensure couplers are fully seated and locked before pressurizing the system.
- ▶ Route hoses clear of all moving parts, pinch points, sharp edges, and heat sources.
- ▶ Provide adequate hose slack for the full range of blade travel — hoses must not go taut or kink at any position.

⚠️ REVERSED HOSE CONNECTIONS

If the blade angles in the direction opposite to the control input, the hoses are connected in reverse. Shut down the tractor, relieve system pressure completely, and swap the two angle hose connections. Always test blade direction at low engine RPM before clearing snow.

💡 OPERATING TIP — HYDRAULIC FLOW

Running the engine at 1,800–2,200 RPM provides optimal hydraulic flow and pressure for smooth blade response. Avoid running at maximum RPM for hydraulic control — it provides no additional benefit and increases wear on seals.

MOUNTING TO THE TRACTOR

The HSBX66 mounts to your tractor's front-end loader using a standard Skid Steer Quick Attach (SSQA) connection. The blade frame incorporates a full SSQA mounting plate — the same universal interface used across Summit's attachment lineup and compatible with any SSQA-equipped loader.

Tractor Requirement: Your tractor must have a front-end loader equipped with an SSQA quick-attach coupler. The HSBX66 is not compatible with pin-on (non-quick-attach) loader setups without a separate adapter plate.

ATTACHING THE BLADE — STEP BY STEP

1. Park the tractor on level ground. Lower the loader arms fully to the ground and tilt the coupler face forward (dump position) so the hooks are accessible and open.
2. Drive the tractor forward slowly and align the loader coupler with the SSQA plate on the blade. The top hooks of the coupler should engage the top rail of the SSQA plate first.
3. Curl the loader back (crowd/rollback) to draw the blade upward and seat the bottom locking bar against the bottom of the SSQA plate.
4. Engage the coupler locking mechanism — either a manual locking bar/pin or a hydraulic lock, depending on your loader model. Confirm the lock is fully engaged and the blade cannot separate from the coupler.
5. Raise the loader slightly off the ground and shake the attachment side-to-side by hand. There should be no movement at the coupler interface. If any play is detected, lower, re-seat, and re-lock before proceeding.
6. Connect the hydraulic hoses to the tractor's third-function couplers. Refer to Page 7 for correct port assignments. Ensure all couplers are fully seated and locked.
7. Route hoses along the loader arms and secure with tie straps or the loader's factory hose guides. Hoses must have adequate slack to move freely through the full loader range — raised, lowered, tilted forward and back — without going taut or binding.
8. Test blade angle at low RPM: actuate the third-function control and confirm the blade angles left and right correctly. If direction is reversed, shut down, relieve pressure, and swap the two hose connections per Page 7.

⚠ ALWAYS VERIFY THE COUPLER LOCK

Never operate with an unsecured attachment. A blade that separates from the loader at speed is a life-threatening hazard. Verify the locking mechanism is fully engaged after every attachment. Make it a habit to tug the blade by hand before each use.

HOSE ROUTING THROUGH LOADER RANGE OF MOTION

Walk the tractor through the full loader range — arms fully raised, fully lowered, tilted fully forward and back — while watching the hose routing. Hoses must not pull tight, kink, or contact any moving part at any loader position. Re-route and re-secure before operating if any interference is found.

UNDERSTANDING THE THREE ADJUSTMENTS

The HSBX66 gives the operator three independent controls over blade position. Mastering these three adjustments — and knowing when to use each one — is the key to getting clean, efficient results in any snow condition.

The three adjustments work together. A skilled operator uses all three in combination — not just one at a time. Set your tilt and angle before you start a pass, then make fine height adjustments with the loader arms as you go.

ADJUSTMENT 1 — BLADE HEIGHT (LOADER ARMS UP/DOWN)

What it does: Raises and lowers the entire blade using the tractor's front-end loader arm control. This is your primary control for setting cutting depth and for raising the blade to transport height between passes.

- ▶ **Working position:** Lower the loader arms until the cutting edge contacts the surface and the wear skids just touch or barely clear the ground.
- ▶ **Float mode:** Many loaders offer a float position on the lift control — engaging it allows the blade to follow surface contours under its own weight without active downforce from the loader. Ideal for gravel driveways and uneven terrain where consistent light contact is needed.
- ▶ **Transport position:** Raise the loader arms fully before turning, reversing, or traveling between areas. Never travel with the blade at ground level.
- ▶ **Height as a depth limiter:** On hard-packed or icy surfaces, raising the blade slightly off full contact reduces the chance of the cutting edge catching and allows the blade to plane over the surface rather than dig in.

ADJUSTMENT 2 — BLADE ANGLE (THIRD-FUNCTION HYDRAULIC — LEFT / RIGHT)

What it does: Pivots the blade left or right up to 30° from center using the tractor's third-function hydraulic circuit. Angling the blade causes snow to roll off to one side as you push forward.

- ▶ **Angle right:** Snow rolls to the right — best for pushing snow toward a right-side windrow or clearing toward a ditch on the right.
- ▶ **Angle left:** Snow rolls to the left — best for clearing toward the left shoulder or building a left-side windrow.
- ▶ **Straight / centered:** Use for straight pushing into a pile, or when working in a confined area where angling would throw snow into an unwanted location.
- ▶ Adjust blade angle while moving to direct the snow discharge continuously — you do not need to stop to change the angle.

ADJUSTMENT 3 — BLADE TILT / CURL (FORWARD / BACK)

What it does: Pivots the face of the blade forward (rolling the cutting edge toward the ground) or backward (tilting the top of the blade away from the tractor). This controls how aggressively the blade attacks the snow and how snow rolls up and over the blade face.

- ▶ **Curled forward (aggressive):** The cutting edge leads more steeply into the snow — better for heavy, wet snow or for scraping ice and compacted layers.

Neutral / upright: Best for general purpose snow clearing in average conditions.

OPERATING THE SNOW BLADE

⚠ BEFORE EVERY USE

Walk the area to be cleared before starting. Identify any hidden obstacles — drain covers, curbs, rocks, hose bibs, and posts. Mark them with stakes or flags if possible. Striking a hidden obstacle at speed can cause sudden violent blade deflection and serious injury or equipment damage.

PRE-OPERATION CHECKLIST

- ▶ Inspect all hydraulic hose connections — confirm fully seated, no leaks
- ▶ Inspect cutting edge and wear skids — replace if worn below 3/8" remaining
- ▶ Check the SSQA coupler lock — confirm the locking bar or pin is fully engaged and the blade cannot separate from the coupler
- ▶ Confirm blade angle and tilt cylinders move freely through their full range
- ▶ Confirm hoses are routed clear of all moving parts
- ▶ Test blade angle left and right at low RPM before beginning work

SETTING UP FOR A PASS

1. Set the blade angle in the direction you want to discharge snow.
2. Set the blade tilt: neutral for average conditions, forward-curl for heavy/wet snow, tilted-back for light fluffy snow.
3. Lower the blade to working height. Confirm the cutting edge contacts or just clears the surface evenly across its full width.
4. Engage forward travel at a steady pace — begin with 3–4 mph and adjust based on snow depth and tractor capability.

DURING OPERATION

- ▶ Maintain a consistent, steady speed. Avoid sudden acceleration — it can overload the blade and tractor front axle.
- ▶ Adjust blade height continuously as needed to follow terrain changes.
- ▶ When approaching a windrow or pile, raise the blade just before contact to avoid sudden shock loading.
- ▶ On gravel or unpaved surfaces, raise the blade slightly and engage the loader float (if equipped) to allow the blade to follow the ground rather than dig in and pull gravel.
- ▶ Adjust blade angle while moving to direct snow continuously — no need to stop.
- ▶ If the blade rides up over heavy, wet snow instead of cutting through it, try curling the tilt slightly forward to make the cutting edge more aggressive.

ENDING A PASS

- ▶ Raise the blade to full transport height before turning or reversing.
- ▶ Center the blade angle before reversing — angled blades catch terrain features when backing up.
- ▶ When finished, lower the blade to the ground, shut down the tractor, and relieve hydraulic pressure before disconnecting.

TECHNIQUES FOR COMMON CONDITIONS

Snow conditions vary significantly in density, depth, and surface character. Adjusting your blade setup and technique for each situation will produce better results and reduce wear on both the blade and tractor.

LIGHT, FLUFFY SNOW (FRESH / DRY)

- ▶ Tilt the blade back slightly — allows snow to roll up and over the face rather than packing.
- ▶ Angle the blade 20–30° for efficient windrow discharge.
- ▶ Operate at the higher end of the speed range (5–6 mph) — snow volume is lower and resistance is minimal.
- ▶ Multiple light passes are rarely needed; one pass usually clears to the surface.

HEAVY, WET SNOW (DENSE / PACKING)

- ▶ Curl the blade tilt forward — the more aggressive cutting edge angle cuts into dense snow more effectively.
- ▶ Reduce forward speed to 2–4 mph — wet snow is significantly heavier and loads the tractor front axle harder.
- ▶ Consider pushing straighter (less angle) to reduce the tendency of heavy snow to pile up at the discharge end of the blade.
- ▶ Clear in narrower swaths — using two-thirds to three-quarters of the blade width reduces front axle load and keeps snow rolling cleanly off the discharge end.
- ▶ Watch tractor front axle lift — if the rear wheels are spinning or the front lifts, you are overloading. Reduce snow volume per pass.

ICY OR COMPACTED SNOW

- ▶ Curl the blade tilt fully forward — maximum cutting edge aggression is needed to break the surface.
- ▶ Add ballast weight to the rear of the tractor if available — more traction transfers to the blade.
- ▶ Use slow, deliberate passes. Do not rush — impact loading at speed on ice can damage the cutting edge and blade frame.
- ▶ On hard ice layers, the blade may skim rather than cut. A light application of sand or salt before blading is more effective than blade pressure alone.

GRAVEL DRIVEWAYS & UNPAVED SURFACES

- ▶ Set wear skids to hold the cutting edge 1/4 to 1/2 inch above the gravel surface to avoid pulling gravel.
- ▶ Engage loader float (if equipped) to allow the blade to follow the contour of the surface without digging in.
- ▶ Tilt the blade back slightly to reduce cutting aggressiveness on the surface.
- ▶ Slow down — lower speeds on gravel reduce the chance of the cutting edge catching a raised stone and causing a sudden hard stop.

CLEARING A DRIVEWAY — RECOMMENDED PATTERN

- ▶ Start at the center of the driveway and push snow to the right toward the right shoulder.
- ▶ Work in parallel passes from center toward each edge, always directing snow toward the outer edge.

MAINTENANCE SCHEDULE

Consistent maintenance protects your investment, extends service life, and ensures the blade is ready to perform when you need it most. Snow removal equipment is subjected to harsh conditions — moisture, road salt, impact, and temperature cycling — and requires dedicated attention.

BEFORE EVERY USE

- ▶ Verify SSQA coupler lock is fully engaged — tug blade by hand before operating
- ▶ Check hydraulic hoses for leaks, cracks, or abrasion
- ▶ Inspect cutting edge for wear — replace at 3/8" remaining
- ▶ Check wear skids — adjust or replace if worn
- ▶ Test blade angle and tilt at low RPM before working
- ▶ Walk the work area and mark hidden obstacles

EVERY 25 HOURS OF OPERATION

- ▶ Grease all Zerk fittings: blade center pivot, both cylinder pins, tilt pivot if equipped (4 fittings total)
- ▶ Inspect cylinder rods for scoring or oil seepage
- ▶ Re-torque all cutting edge and wear skid hardware
- ▶ Re-torque all hitch frame fasteners
- ▶ Check hose routing — confirm no chafing against tractor components

END OF EACH STORM / HEAVY USE

- ▶ Rinse the entire blade with fresh water to remove road salt and ice-melt chemicals
- ▶ Inspect cutting edge and skids — schedule replacement if needed before the next event
- ▶ Inspect SSQA mounting plate for cracks, deformation, or wear at the hook contact points
- ▶ Touch up any bare metal areas with rust-inhibiting spray paint

END OF SEASON / ANNUAL

- ▶ Thoroughly wash and dry the complete blade assembly
- ▶ Inspect all welds for cracks — do not weld without contacting Summit Tractors first
- ▶ Replace any hydraulic hoses showing cracking, kinking, or wear
- ▶ Replace cylinder rod seals if any leaking was observed during the season
- ▶ Grease all pivot points generously for off-season storage
- ▶ Paint all bare metal and touch up the full blade face to prevent rust
- ▶ Cap all hydraulic hose ends with dust caps
- ▶ Store on a flat, dry surface elevated off the ground on wood blocks

ROAD SALT IS THE ENEMY

CUTTING EDGE REPLACEMENT

The cutting edge is a consumable wear item and the most critical performance component on the blade. A sharp, properly maintained cutting edge cleans the surface efficiently and reduces stress on the entire blade structure. A worn edge forces the operator to push harder, increases tractor load, and risks damaging the blade face above the edge.

⚠ REPLACE BEFORE IT'S GONE

Do not wait until the cutting edge is fully worn. Replace when approximately 3/8" of material remains. Allowing the cutting edge to wear completely through will cause the mounting bolts to contact the surface, which can damage the blade face and create a dangerous situation where bolt heads catch on the ground.

CUTTING EDGE REPLACEMENT — STEP BY STEP

1. Lower the blade to the ground on a flat, stable surface. Shut down the tractor and relieve all hydraulic pressure.
2. Support the cutting edge from underneath — it is heavy and will drop when the bolts are removed.
3. Remove the cutting edge mounting bolts using the appropriate socket. Note: bolts may be rusted or seized after use in winter conditions. Apply penetrating oil and allow to soak for 15–30 minutes if needed.
4. Remove the worn cutting edge. Inspect the blade face mounting surface — clean off any rust, dirt, or debris with a wire brush.
5. Inspect the mounting holes in the blade face for elongation or damage. If holes are elongated, contact Summit Tractors before reinstalling.
6. Position the new cutting edge (Part No. HSBX66-004) against the blade face. Align all mounting holes.
7. Install new Grade 8 bolts, flat washers, and lock nuts (included with replacement edge). Start all bolts by hand before torquing.
8. Torque all bolts evenly in a cross pattern to 80–90 ft-lbs.
9. After the first hour of use with a new cutting edge, re-torque all bolts to account for initial seating.

ALWAYS USE GRADE 8 HARDWARE

The cutting edge experiences significant impact loading during operation. Never substitute lower-grade hardware. Grade 8 bolts and prevailing-torque lock nuts are required. Reuse of existing lock nuts is not recommended — they are designed for single use.

ADJUSTING THE WEAR SKIDS

The wear skids protect the cutting edge from direct ground contact on hard surfaces and set the blade's minimum cutting depth. Adjust skid height whenever you install a new cutting edge or when changing from one surface type to another.

- ▶ **Paved surfaces (asphalt / concrete):** Set skids so the cutting edge just contacts the surface — typically flush with the bottom of the skid. This gives the cleanest scrape without gouging.
- ▶ **Gravel / unpaved surfaces:** Raise the skids so the cutting edge is 1/4 to 1/2 inch above the surface. This prevents pulling gravel and protects the cutting edge from impact with embedded stones.

HYDRAULIC SYSTEM SERVICE

The hydraulic cylinders, hoses, and fittings on the HSBX66 are designed for long service life with proper care. Hydraulic system failures are almost always preventable through routine inspection and prompt attention to early warning signs.

HOSE INSPECTION & REPLACEMENT

- ▶ Inspect hoses before every use. Look for: cracks in the outer jacket, kinks, abrasion wear through to the braid, bulging, or any sign of leakage at the fittings.
- ▶ Any hose with visible damage must be replaced before operating. A hose failure under pressure can cause hydraulic injection injuries or sudden loss of blade control.
- ▶ Replace hoses as a set (both angle hoses together) when one shows significant wear — they share the same age and usage cycles.
- ▶ Use only replacement hoses rated for the system pressure (minimum 3,000 PSI working pressure). Contact Summit Tractors for OEM replacement hoses (Part No. HSBX66-002).
- ▶ When routing new hoses, ensure a minimum bend radius of 5 inches. Tight bends will crack the hose jacket from the inside out.

CYLINDER INSPECTION & SEAL REPLACEMENT

- ▶ Inspect cylinder rods every 25 hours. The rod surface should be clean, smooth, and slightly oily. Heavy corrosion, scoring, or pitting will accelerate seal wear.
- ▶ A thin film of hydraulic oil on the rod is normal — it lubricates the rod seal. A running drip or accumulation of oil below the cylinder is a sign of seal failure.
- ▶ Wipe the cylinder rod clean after every use in dirty or salty conditions. A film of salt left on the rod will corrode the rod surface and destroy seals.
- ▶ Replace cylinder rod seals at the first sign of leaking (seal kits: HSBX66-010). Continuing to operate with a leaking cylinder will contaminate the tractor's hydraulic fluid.

⚠ HYDRAULIC CONTAMINATION

Dirt, water, or incompatible fluid introduced into the hydraulic system will damage cylinder seals, valve spools, and pump components throughout the entire tractor hydraulic circuit — not just the blade. Always use clean, dry, capped couplers. If the hydraulic fluid appears milky, cloudy, or discolored, consult your tractor dealer immediately.

GREASING THE PIVOT POINTS

The HSBX66 has four grease fittings (Zerk, 1/8" NPT) that must be serviced every 25 operating hours:

- ▶ **Blade center pivot pin** — the main horizontal pivot that allows the blade to angle left and right
- ▶ **Angle cylinder rod-end pin** — the pin connecting the cylinder rod to the angle arm
- ▶ **Angle cylinder base-end pin** — the pin at the cylinder mount on the blade frame
- ▶ **Tilt cylinder pivot pin** — if equipped with the tilt cylinder option

PART NUMBERS

Use the part numbers below when ordering replacement components. Contact Summit Tractors at **770-209-3390** or visit **summittractors.com** to order genuine OEM parts. Always provide your model number (HSBX66) and proof of purchase when ordering warranty-related parts.

WEAR ITEMS & CONSUMABLES

PART NO.	DESCRIPTION	QTY PER BLADE
HSBX66-004	Cutting Edge — AR400, 1/2" × 6" × 66", bolt-on	1
HSBX66-005	Wear Skid, Adjustable — bolt-on, pair	1 pair
HSBX66-011A	Cutting Edge Hardware Kit — Grade 8 bolts, washers, lock nuts	1 kit

HYDRAULIC COMPONENTS

PART NO.	DESCRIPTION	QTY PER BLADE
HSBX66-001A	Angle Cylinder Assembly — 2.5" bore × 12" stroke, double-acting	1
HSBX66-001B	Tilt Cylinder Assembly — 2" bore × 8" stroke, double-acting	1
HSBX66-002	Hydraulic Hose Set — 1/2", angle circuit, supply & return pair	1 set
HSBX66-003	Pioneer Coupler, Male 1/2" (hose end)	2
HSBX66-010A	Cylinder Rod Seal Kit — angle cylinder	1
HSBX66-010B	Cylinder Rod Seal Kit — tilt cylinder	1

FRAME & HARDWARE

PART NO.	DESCRIPTION	QTY PER BLADE
HSBX66-006	Blade Center Pivot Pin with Snap Rings	1
HSBX66-007	Cylinder Mount Pin Set with Snap Rings	1 set
HSBX66-008	SSQA Mounting Plate Assembly	1
HSBX66-009	Angle Arm / Push Bar Weldment	1
HSBX66-011	General Hardware Kit — Grade 8 Fasteners	1 kit
HSBX66-012	Warning / Safety Decal Set	1 set
HSBX66-013	Grease Fitting Set — Zerk, 1/8" NPT (4-pack)	1 set

USE GENUINE SUMMIT OEM PARTS

Always use genuine Summit Tractors OEM replacement parts. Non-approved parts may void your warranty and could result in premature failure or unsafe operation. When in doubt, call us: 770-209-3390.

TROUBLESHOOTING

If you experience a problem with your HSBX66, consult the table below before calling for support. Most issues have a straightforward solution. If the problem cannot be resolved, contact Summit Tractors at **770-209-3390**.

SYMPTOM	POSSIBLE CAUSE	REMEDY
Blade will not angle left or right	Hoses not connected; third-function not engaged on tractor; coupler not fully seated	Connect hoses fully; engage third-function lever; check that couplers click fully locked
Blade angles opposite to control input	Angle hoses connected in reverse (Port A/B swapped)	Shut down, relieve pressure, swap the two angle hose connections at the tractor coupler
Blade moves slowly or weakly	Insufficient tractor hydraulic flow or pressure; kinked hose; engine RPM too low	Run engine at 1,800–2,200 RPM; inspect and straighten all hoses; verify tractor delivers minimum 4 GPM
Blade drifts on its own after releasing control	Worn or bypassing tractor third-function valve	Consult tractor dealer — the issue is in the tractor's hydraulic valve, not the blade
Oil leaking from cylinder rod	Worn or damaged cylinder rod seal	Replace rod seal kit (HSBX66-010A or 010B). Do not operate until repaired.
Oil leaking at hose fitting	Loose fitting; damaged hose end	Relieve pressure; tighten fitting or replace hose set (HSBX66-002)
Blade digs into surface / cuts too aggressively	Loader tilt too far forward (nose-down); skids not set; loader float not engaged	Tilt loader back to level blade; set skids for surface type; engage loader float
Blade rides over snow / won't scrape	Loader tilt too far back (nose-up); blade tilt too far back	Tilt loader slightly forward to level blade; curl blade tilt slightly forward
Cutting edge bolts loosening during use	Impact vibration; insufficient torque; reused lock nuts	Replace with new Grade 8 lock nuts; torque to 80–90 ft-lbs; re-torque after first hour
Excessive bounce / chatter on hard surface	Forward speed too high; loader float not engaged; skids worn	Reduce speed; engage loader float; inspect and replace skids
Blade will not seat on SSQA coupler	Loader not fully dumped forward; coupler hooks misaligned; debris on mounting plate	Tilt coupler fully forward; re-approach slowly and squarely; clean SSQA plate contact surfaces
Squeaking or grinding at blade pivot	Dry or corroded center pivot pin	Grease center pivot Zerk fitting immediately; inspect pivot pin for wear or corrosion damage
Blade won't hold angle position (drifts under load)	Tractor third-function valve not holding; cylinder bypass	Test cylinder: if blade drifts even when hoses are disconnected, cylinder has internal bypass — replace cylinder (HSBX66-001A)

DO NOT WELD WITHOUT AUTHORIZATION

Do not attempt to repair cracked welds or bent frame components without contacting Summit Tractors first. Unauthorized structural repairs may void your warranty and could compromise the structural integrity of the blade under load.

FIRST USE & SEASONAL STORAGE

BEFORE YOUR FIRST USE — BREAK-IN CHECKLIST

Take 15 minutes on your first day to do these steps. They prevent the most common issues that show up in the first season of use.

- 1. Torque check all hardware.** Vibration during shipping can loosen fasteners. Go around the entire blade — hitch frame bolts, cutting edge bolts, skid bolts, cylinder pin snap rings — and confirm everything is at spec before you push a single scoop.
- 2. Cycle the blade angle 10 times end-to-end** at low engine RPM (1,000–1,200 RPM) before your first working pass. This circulates hydraulic fluid through the cylinder and hoses, purges trapped air, and seats the seals properly.
- 3. Grease all four Zerk fittings before first use** — they may arrive dry from storage. Pump until fresh grease appears at each pivot surface.
- 4. Set the loader tilt angle on flat ground.** With the blade lowered to working height, the blade face should be close to vertical — or very slightly nose-down (top tilted away from tractor). A true vertical or slight forward lean gives the best cutting contact. Adjust your loader tilt position and note it for reference before your first working pass.
- 5. Set the wear skids for your surface.** Ground contact for pavement; 1/4–1/2 inch clearance for gravel. This takes two minutes and protects your gravel surface all season.
- 6. Walk your clearing area.** Identify every obstacle — drain covers, curbs, hose bibs, decorative rocks, buried landscape edging. Mark anything questionable with a driveway stake before conditions get dark or snowy.
- 7. Test hydraulic direction at low RPM** before your first real pass. Angle left, then right. Confirm the blade moves the direction you expect. If reversed, swap hose connections per Page 7.

💡 AFTER THE FIRST HOUR

Re-torque cutting edge bolts to 80–90 ft-lbs after the first hour of operation. New hardware experiences initial seating — especially under the impact loads of snow clearing — and bolts will relax slightly from their initial torque value.

END-OF-SEASON STORAGE PREPARATION

Proper off-season storage is the single highest-return maintenance task you can do. A blade that goes into storage clean, protected, and greased comes out ready to work — one that doesn't go in and comes out with rust, seized pins, cracked hoses, and a replacement cutting edge needed immediately.

- 1. Pressure-wash the entire blade** with fresh water. Pay particular attention to the hitch frame pockets, cutting edge mounting surface, skid bolt channels, and around all cylinder mounts — salt packs into these areas and causes accelerated corrosion. Let it dry completely before painting.
- 2. Touch up all bare metal** with a quality rust-inhibiting enamel or a spray can of Rust-Oleum. Focus on the cutting edge mounting face (exposed after cutting edge removal or wear), any chips or scratches in the blade face, and any bare spots on the hitch frame.
- 3. Grease all four Zerk fittings generously** — more than normal. The intent is to displace any moisture that entered the bearing areas during the season and lay down a thick protective layer for the off-season.
- 4. Wipe the cylinder rods with a light coat of oil** (hydraulic oil or any clean petroleum-based oil). This protects the rod surface from rust during storage. Some operators wrap the rods loosely with clean shop rags to keep dust off.

SUMMIT TRACTORS

Summit Tractors is an American brand built for the people who work the land. From compact tractors to a full lineup of premium attachments, every Summit product is engineered to deliver professional-grade capability at a price that makes sense for real working properties — whether you farm 5 acres or 500.

We designed the Summit lineup from the ground up, which means every attachment in our catalog is spec'd and built to work specifically with our tractors and the operators who depend on them. When you buy Summit, you get a complete system that works together.

AVAILABLE AT TRACTOR SUPPLY CO.

Summit Tractors and attachments are available at Tractor Supply stores nationwide and at tractorsupply.com — with ship-to-store delivery across the contiguous United States.

 **Customer Support: 770-209-3390**

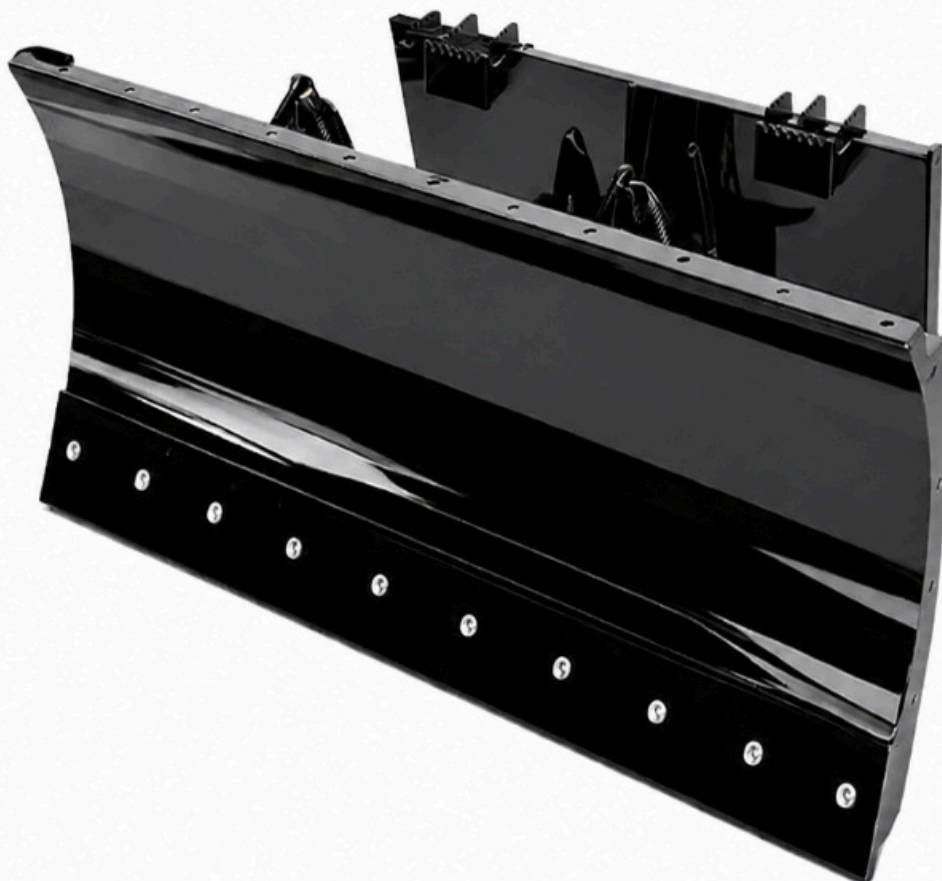
 summittractors.com

SUMMIT ATTACHMENT LINEUP

- ▶ **GX54** — SSQA Grapple, 54"
- ▶ **HSBX66** — Hydraulic Snow Blade, 66"
- ▶ **BBX60** — Box Blade, 60"
- ▶ **BPX60** — Brush Plow, 60"
- ▶ **LPX54** — Landscape Rake, 54"
- ▶ **RBX60** — Rear Blade, 60"
- ▶ **FMX60** — Finish Mower, 60"
- ▶ **RCX48** — Rotary Cutter, 48"
- ▶ **BHBX8** — Box Blade, 8'
- ▶ **PFX42** — Post Hole Digger
- ▶ **DTX1.5** — Disc Tiller, 5-disc
- ▶ **ICX50** — Cultivator, 50"
- ▶ **SPX60** — Subsoiler Plow, 60"
- ▶ **SSX500** — Snow Sweeper, 50"

READY TO GO TO WORK™

summittractors.com | 770-209-3390



**HSBX66 HYDRAULIC SNOW
BLADE**

**SSQA MOUNT - HYDRAULICALLY
CONTROLLED BLADE ANGLE**

66" HYDRAULIC SNOW BLADE

MODEL HSBX66 · GENUINE OEM PARTS & SUPPORT AVAILABLE

770-209-3390

summittractors.com