



SnowBlowerImpellerKit.com™

Impeller Blade Modification Kits
For Two-Stage Snow Blowers
Throw snow farther and more efficiently!

Snow Blower Impeller Kit™
Modifies Two-stage snow blowers

For Kit Model #s

(1/4") SBIK141,143,144,145,146

(3/8") SBIK381,383,384,385,386

The Problem:

If your TWO-STAGE snow blower's discharge chute keeps clogging up when you try to move very heavy or wet snow or slush, it is probably because of a large gap or space between the impeller blades (the 2nd set of vertical blades behind the main front horizontal auger blades) and the cylindrical chamber in which it rotates. This "gap" allows snow and slush to slip by the blades and build up around the impeller and in the discharge chute clogging it. This gap also decreases the efficiency of the impeller's ability to propel the snow up the chute resulting in less throwing distance. This problem is well known to people with two-stage snow blowers, and the easy and the quick, inexpensive fix is to modify the impeller blades by adding a strip of reinforced rubber to each one of them to eliminate this gap. It is HIGHLY recommended that you install a Snow Blower Impeller Kit™ on each blade however, because only modifying some but not all of the blades will cause a harmonic imbalance in the spinning impeller which could easily cause excessive wear on the impeller shaft bearing resulting in very costly repairs! *If you have a single-stage snow blower, or your gap is less than 1/4" or greater than 5/8", you probably don't need or can't use this fix.*

The Solution:

Install this Snow Blower Impeller Kit™ on to your two-stage snow blower and never fear another snow fall again!

- *Virtually eliminate the "clogged chute" syndrome when moving wet or heavy snow!*
- *Dramatically increase the snow throwing distance of your snow blower!*
- *Depending on how handy you are, this kit can be installed in 1-2 hours without too much difficulty!*

LifeTime Guarantee! *If you are ever dissatisfied with our product, you can return it for a full refund of your purchase price provided the kit is undamaged and unmodified! Guarantee void if NOT purchased directly from SBIK or an SBIK authorized re-seller.*

*BTW - You can easily make an extra \$50-\$100 by modifying your friends, neighbors and relative's snow blowers with this kit.

Each Snow Blower Impeller Kit™ contains the following Top Quality, "Made in the USA" materials:

- (1)1/4" or 3/8" thick rubber paddle (2"W x 5"L)- (you trim to fit as needed)
 - Made from Styrene Butadiene Skirtboard rubber (SBR rubber)
 - Pre-punched oval mounting holes for mounting flexibility
 - SBR rubber with minimum tensile strength of 725 PSI (5 MPA)
 - Hard rubber with a Shore A durometer of 75 ± 5
 - Temp Range: -20° F to +170° F
- (1) metal strap with holes - 1 3/8"W x 3 3/4"L
 - Punched flat bar grade 5 steel, 1/16"thick
- (3) bolts (5/16-18 x 1 in. coarse thread) w/ 5/16-18 lock nuts (use 1/2" wrench & socket)
 - Hex bolts & Hex lock nuts nylon insert, grade 5 steel
- (1) self-tapping screw (#14 x 1) (not shown in picture to right)
 - Sheet metal screw, Hex washer head self drilling, grade 5 steel
- Instruction Sheet & FAQs



Materials required for installation include:

Two-Stage Snow Blowers require(1) Snow Blower Impeller Kit™ for every impeller blade.

1/3/4/5/6 Blade Kits available to meet your needs!

- * Corded drill w/6-12"L 3/8" pilot point drill bit. (Cordless drills are not powerful enough)
- * 6-12" socket extension w/ 1/2" socket (for self-tapping screws)
- * a little bit of oil to lubricate drill bit tip while drilling
- * ratchet set w/1/2" socket ,1/2" open end wrench and 3' brace of some kind (like a 1x3)
- * utility knife, hacksaw (if necessary)
- * not included in kit

Make sure you read our FAQs and review our drawing of installed kit prior to installation!

To see real-life examples of this modification before you attempt this on your own snow blower, go to YouTube.com, search for "Snow Blower Impeller Kit™" or some variation on this theme and watch the videos. You will be amazed at what you see!

Installation Steps: (installation steps are the same for all SBIK kits)

The secret is to take off the snow blower's chute so you can easily reach each impeller blade (*for safety sake, make sure the auger drive is disengaged, the ignition key is off and you disconnect the spark plug first*). Get something to stick through the front auger that you can use to brace up the impeller blade while you work on it because you will be pushing down on it with the drill. You can use a 3 foot 1x3 but anything long and strong enough will work. The idea of course is to affix the rubber and backing brace onto the impeller blades so the gap between the impeller blade and impeller chamber wall is negated. Read our [FAQs](#) and See [Critical Install Tips](#) before beginning install)

1. Cut the rubber (utility knife) and metal straps (hacksaw) to "length" *if necessary*. "Length" is the flat part of the impeller blade on the "TOP" side, up to but not including the curl on the blade. The "TOP" side is the side where the blade curls up.
2. Place the rubber and metal brace in place on the **TOP** side (impeller spins clockwise when standing at controls) of the impeller blade so the edge of the rubber **barely** scrapes the impeller chamber wall (See Figure A & B). You want the rubber on the top side so it will push the snow rather than pull it up and out of the chute. Using a grease pencil or marker, mark the hole locations on the impeller blade where you will be drilling. **Hint: make sure the drilled holes will not interfere with the impeller blade's underside supporting bracket and that you will be able to securely attach a lock nut to the bolt through the blade!** Feel free to position the metal "back plate" so you can do so. The most important thing is to make sure the rubber **barely** scrapes the side-wall of the impeller chamber wall if at all. **Note: inspect the impeller chamber for any obstructions (like bolt heads, metal lips, etc.) that might interfere with the passage of the rubber paddles and adjust the paddle installation to avoid them if necessary.** It doesn't really matter if the "back plate" is completely parallel with the rubber strip because once it's bolted down, the rubber's not going anywhere.. If the impeller blade's underside supporting bracket will get in the way of a bolt, you can use a self-tapping screw in its place though *this is not as secure as a bolt and we do not recommend it unless absolutely necessary. If you choose to do this, do so at your own risk!*
3. Use a self-tapping screw to drill pilot holes (use included metal strap held in place with small spring clamps as template) which then can be drilled out for the bolts for permanent placement. Use a drill bit large enough (3/8") to accommodate the bolts. Stick a brace lever (like the three foot 1x3 mentioned above) through the front auger so you can brace up the impeller blade while you drill down on it. **Hint: Dip the drill bit's tip into oil each time before you drill into the impeller blade.** This will reduce friction and resulting heat buildup on the bit's tip and make the drilling go easier!
4. Once the holes are drilled, position the rubber strip with the metal back brace on the top side of the impeller blade and bolt it securely onto the blade making sure the edge of the rubber **barely** touches the impeller chamber wall (See Figure A & B). Repeat for each impeller blade and **do ALL of the blades. If you do not do ALL of the blades it WILL affect the harmonic balance of the impeller and eventually cause a bearing failure in the impeller shaft which is a big dollar repair job!** **Hint: After each blade install, hand rotate impeller (completely around the inside of the impeller chamber to check fit and adjust if necessary before proceeding on to next blade install.**
5. Re-attach the chute to the snow blower, reconnect spark plug, put away your tools and clean up. The whole job should take you between 1-2 hours depending on how handy you are. **The end result should look like this:**



Figure A



Figure B

Liability Disclaimer: At no time shall the manufacturer be held liable for any consequences, either direct or indirect, resulting from the purchase, installation or use of any product purchased from manufacturer. Manufacturer makes no warranty or guarantees, either expressed or implied, as to the specific results obtained through the installation of our products. Buyer agrees to purchase and use this product at their own risk. Customization made to this kit by the buyer will void the warranty & guarantee unless manufacturer advises and approves of proper customization procedure in writing prior to installation, or manufacturer customizes the kit to the buyer's written and approved specifications prior to shipping.

When the installation is complete, run your snow blower with the auger engaged for a couple of minutes to wear off any excess rubber and ensure a smooth fit. Do not worry about any increased load on the motor as the rubber wears in, it is negligible and will not compromise the motor in any way. If you do experience any auger slippage when trying to move snow, it's most likely the auger belt which is slipping and needs either adjustment or replacement. That's it!

When that's done, your snow blower will be all set to throw snow and slush farther and more efficiently!

By the way, you may be asking yourself why the manufacturers leave a gap between the impeller blades and the impeller chamber wall. The reason is that on machines with straight impeller shafts, the impeller shaft bearing wears over time and this wear causes some degree of "wobble" in the impeller's rotation. They leave a gap to accommodate this "wobble" if/when it happens and avoid a situation where you have metal scraping on metal which could cause significant damage to the impeller chamber wall and to the impeller itself. Since this modification uses rubber strips which wear down as they come in contact with the impeller chamber wall, any possible future "wobble" in the impeller's rotation is negated without compromising the snow blower's operational integrity or efficiency at moving snow and slush.