# **Explanation of the Groundhog MAX ATV/UTV Disc plow** Table of Contents for this document page 1

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#### BE SURE TO REFERENCE THE GROUNDHOG MAX OWNERS MANUAL A MANUAL IS PACKAGED IN THE BOX

**DISCLAIMER notes**; There are a few machines up and down the spectrum of ATV/UTV's that:

- This product will not fit on due to the way the frame or hitch assembly is made.
- A few stock 2-inch receivers will not allow the Groundhog Max to plug in and pin properly. It may be the way the unit is made stock or something that was bought aftermarket that restricts clearance of the plow (mufflers, braces, etc.).

  An example: Some 2021 Polaris Ranger mufflers are directly above the 2-inch receiver.

  A way to work around this would be to cut off the excess "up/down adjustment" not needed for your unit. This would allow needed clearance. Call us with any questions.
- Some units come with a 2-inch receiver that is poorly made, or constructed out of weak metal. You could brace these as necessary and/or plow less aggressive.

  We have "listed" some links to buy aftermarket ATV/UTV hitches. This is just a "listing" not a recommendation. You determine which is best for your ATV/UTV. Call us for assistance.

## 1. HOW IT WORKS AND WHY ITS EASY

The Groundhog MAX ATV/UTV Disc Plow turns your ATV/UTV into a hard-driving Plow with ease of use & lower cost in mind! Turns a 2-man job into a FUN solo DIY! This plow was designed to plow anywhere your ATV/UTV can go.

This "one man" operation has many features that make it a "new concept" from other ATV/UTV plows on the market. It works because you utilize

the weight of the ATV/UTV (700 to 1500 lbs.) and the rider (200 lbs.) to put direct down pressure on the plow. With "less steel" on the ground and more weight you get a more aggressive cut. You ride on the plow as if you have a 5th wheel.

#### Plowing speeds are twice as fast as a normal pull behind plow!

Plowing speeds on a pull behind are 2-3 mph while the Groundhog is 5-7+ mph. It's less stressful on the ATV/UTV than pulling a 300lbs+ or more in loose dirt at low speeds. The Groundhog's versatility/maneuverability also allows you to backup with plow engaged as well.

# The Groundhog MAX's concept allows it to fit and be used on a lot more years/makes/models of ATV's. It allows you to use smaller "cc" air cooled only ATVs in 2- or 4-wheel drive.

- You can plow from 4-7mph, so you and your machine will stay cooler
- It puts less stress on your machine, because ATVs were not designed to pull heavy weight at low speeds without overheating.
- Works with independent rear suspension and straight axle setups
- Works with Direct Belt and chain driven machines.
- Fits most ATV's, Four Wheelers, Side by Sides and UTV's

#### This plow "CAN FIT" Basically any power source and machine.

Disclaimer: There are a few machines up and down the spectrum of ATV/UTV's that may have something in the way of it installing the plow into the hitch properly. It may be either the way it is made from stock or something that was bought aftermarket (mufflers/braces/etc.).

The plow is basically fully assembled (requires installing (1) 5/8 bolt/nut) takes 2 minutes.

#### Keep in mind the very expensive (pull behind ATV plows) and "do it all in one pass plows"

These require to be pulled with a larger/stronger400CC/liquid cooled unit. Also, your food-plot needs to be very accessible for you to get the plow there on a big trailer. Level ground and great soil conditions are needed before you even use this large slow plow.

# If you are considering the Groundhog MAX as your plowing solution and think it is too good to be true and if you are somewhat skeptical ...

- A. The easiest thing to do to learn about the Groundhog MAX is to call Tech Support 800-566-1691. Or 877-522-3364; Get your questions answered promptly.
- **B.** All replacement parts are available.

# **EASY...Imagine the possibilities!**

#### Plow It ...Plant it...Bag it!

Easy on your wallet-Low cost! Saves time, gas, and money!

Easy to assemble (basically fully assembled only install 1 bolt & 2 pins).

Easy to load and transport to your property. No trailer hassles.

Easy access allows you to plow anywhere your ATV goes (Imagine the possibilities).

Easy to use-no need to add/carry. Works from hilltops to bottom lands.

Easy and fun-Plowing speeds (3-7+mph) twice as fast as pull-behinds.

Easy to maneuver in tight spots-use plow allows you to reverse while engaged.

Easy on the machine-less stress-allows use of lower cc. Use 2- or 4-wheel drive.

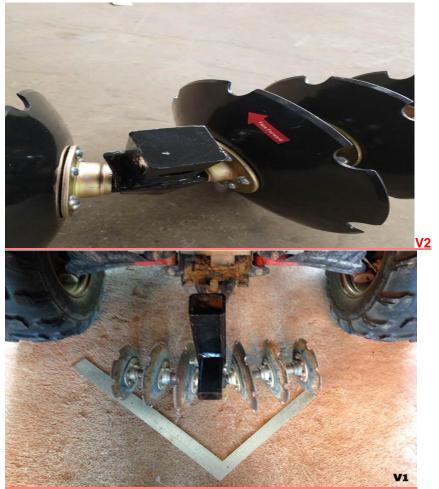
Easy maintenance-dry, wipe off, spray down with WD-40.

Easy to store, stores inside-No ratchets to rust-no tires to dry rot and go flat.

## Things to Know before use

- Make sure the plow is facing in the proper direction before using. The plow has a slight arrow shape. The point should point backwards going away from the machine. See picture V1 and V2 below. A RED indicator arrow sticker is on the disc.
- 2. Make sure you start off less aggressive. Do not use too much weight because a lot of the cut is in turns and maneuverability no matter what machine you use. Normally you can find an adjustment hole that allows enough weight on the plow for it to work but allows you to run in 2-wheel drive. This allows for better steering too! Failure to do this can result in bending your hitch.
- 3. Be advised on the T-HEAD's functionality (piece with all 8 adjustment holes).
  - A. It can be turned up-side down during transport for ATV's that have lower ground clearance.
  - B. One side of the T-head is a 2" (that would plug into a standard 2" receiver (like is on a truck) and the opposite side is a 1 ½"for use with the Groundhog MAX hitch kit hardware only.
  - C. Up/down height adjustments can be made by sliding T-head up and down along the 10 ½ inch long piece with the side with 2 holes. This allows many combinations of settings. Have both rear tires parked up on a 4 x 4 block allowing to adjust up/down.
  - D. The 10 ½inch long tube has 1 hole on 1 side which is used to attach to the actual disc

#### assembly with 1 5/8" by 3" bolt/nut/washer.



The Groundhog MAX Disc plows many USES include...

**DEER/TURKEY/QUAIL/GAME** food-plots, ground disturbance for Turkey and Quail.

LANDSCAPERS-gardening, landscaping (small sod jobs). Zero turn mowers.

FIRE DEFENSE DISC PLOW-Firebreaks, weed control, fire defense

A GENERAL DISC PLOW FOR-motocross/tracks/roads/driveways/baseball infields/lake & beach shorelines

### PREPPERS DISC PLOW OR SURVIVILIST DISC PLOW. In an emergency

**RANCH & FARM**-Farm uses may be where a tractor is too large to get the job done or not available. Grooming horse areas. Vineyards, almond/pecan/peach trees and other orchards.

<u>DUCK PLOTS</u>-You are able to plow in wet conditions. Be sure to see a DIY clog fix for plowing in wet conditions page 14 below, on our website, and in GH manual (page 23). You can get to that piece of high ground back in the swamp or plow lake edges that normally you cannot get to with a standard disc plow. Duck seed blends are now available for wet lands.

<u>Think of your capabilities</u> of being able to put a food-plot anywhere you can take an ATV! You can get there at the speed of your ATV too. For guys putting in a food plots a couple of times a year the Groundhog MAX is a great solution.

All of this plow's uses and benefits appeal to sportsman, food-plotter, rancher, farmer, landscaper, gardener, prepper, survivalist, and many others. For the guys who own any power source like an ATV UTV and need to disc a little dirt for any reason this is a fun cost- effective way to go.

#### **IMAGINE THE POSSIBILITIES!**

#### **DOMINATE THE DIRT!!**

# Comparison to other disc plows

Compare cost MSRP \$349 to much more...

Compare the "FUN FACTOR" no fun poking along at 2-3 mph pulling a heavy pull behind type plow that you have added/strapped more weight on. You are concerned that this weight will tip it over, fall off, or make your unit overheat. You have to do this to try to get all that steel into the ground.

OR... using the Groundhog MAX an having some fun at 5-7+ mph doing donuts and figure eights (hopefully you and your unit staying a little bit cooler).

Compare ease of use...1 man operation...maneuverability...Plow on your schedule NO additional plow weights to fall off or needed to work.

Compare transporting...getting it to your property (no trailer if you have a truck).
Getting to remote sites on your property (versatility; anywhere you can get an ATV)

Compare inside storage to a (out in the elements to rust /rot)

Compare stress on your machine...air cool only 2 wheel works fine Other plows require at least 400cc liquid cooled

Proven product with Tech support and replacement parts (since 2007)

#### 3.HOW TO USE...GET STARTED...ATTACH...OPERATE...ADJUST...MAINTAIN

- A. <u>Back your rear tires up on a 4-inch like a piece of 4 x 4 wood</u> that spans the 2 rear tires). Easy to take a 4 x4 wood block and leave it at your food-plot. Use a 4-inch ramp if you prefer. Try to use something 4 inch because it makes it easier to correctly gauge your hole setting.
- B. While up on the blocks/ramp (put in park & lock the parking brake). Slide your fully assembled plow (T-head) into your ATV receiver and lock it in with the 1st tractor pin. Now pull the 2nd tractor pin out of the T-head. A good starting point for the up/down adjustment is (while your wheels are up on the 4-inch blocks) allow the disc assembly to slide down and touch the ground...then slide the disc assembly "back upwards 2 holes" re-install your tractor pin. As a descriptive note: Your rear wheels are up on the 4-inch blocks and when you adjust the plow this way... the discs do not touch the ground yet (they are an inch or two off the ground). When you back OFF the blocks though...they will touch and have weight on them to plow. DO NOT just "lift up" the machines rear end to install (this does not work) it only stretch's out your suspension These adjustment holes are in 1-inch increments. Only one tractor pin is needed in the T-head for locking the up/down adjustment in place. Remember this important adjustment note: The T-head can be turned right side up for machines with higher ground clearance or up-side down for machines with lower ground clearance.
- C. After you pick an adjustment hole option and pin it, back off the blocks/ramps... this is where you get your weight transfer to make the plow work. Now move the 4 x 4 block/ramps out of your way. Once you back off the 4-inch block you are now using the weight of the ATV (700+) and your weight (200) to put direct down force on the plow.
- D. Remember a side-by-side/UTV's weight is \*1200 lbs. to 1500 lbs. (double that of an ATV) **BE CAUTIOUS** to only use part of your weight. NOTE: On any unit always start out less aggressive
  - E. After some experimentation, you will determine which hole works best for your particular setup (sweet spot). Normally the next time you use the plow you can use the same hole adjustment setting unless some conditions have changed. NOTE: Another 2<sup>nd</sup> adjustment option some customers prefer is to set the adjustment hole to plow very light in the beginning... plow your spot...then back up on the ramps again... let it down another hole ...plow (adjust this way if

- needed). On either of these approaches you will "gradually" plow your plot down about 3-4 inches (deeper on turns). This height adjustment hole you use will vary according to your year, make, model, tires, etc. Start-off less aggressively and adjust if needed.
- F. Proper hole adjustment allows you to have plenty of weight on the plow but leave enough weight on the rear wheels so you can plow only using 2-wheel drive. This allows for easier steering because your front wheels are not pulling.
- G. REMEMBER-There is a lot of left to right play in the plow where the axle assembly goes into the up/down adjustment tube. This is intentional and allows the plow to float/adjust to uneven ground.
- H. Before starting to plow be sure the plow is facing in the right direction. See picture V1 V2 on this document \*\*The plow has a slight arrowhead shape. The point of the plow shape should face backwards away from the ATV/UTV. So, if you are squatting at the back of the machine the point should be pointing at your shoes. See red indicator arrow.
- I. According to the FOOD-PLOT's lay-out and its size and shape... Groundhog MAX plowing speeds range from 3-10 mph. Twice as fast as a Pull-Behind type plow!!! You never have to go to the trouble of adding/strapping on more weight either or worrying about the plow tipping over like you have to consider on a "Pull behind plow". Pull behinds also put a lot of stress on your machine and it may overheat.
- J. The time required to plow a spot will be determined by ground conditions (roots, rocks, grass systems, wet/dry, and ground clutter) ...the tougher the conditions the more passes you have to make. Plow in looping circles and figure eights, because a lot of the cut is in turning and maneuverability. Keep in mind that the gap between the middle discs will go away if you plow in this manner. Plowing straight works also. If you determine you are not using enough weight you can adjust the T-head down a hole.
- K. Discs...Sometimes do not spin freely/properly until after 5 minutes of use. Keep in mind that discs will not free spin like a bike wheel. After 15 minutes of use do a visual check of the plow, discs, and the hitch attachment. Adjust or tighten as necessary. There is some side-to-side play in each disc. Discs normally need no sharpening.
- L. Reverse...The plow can be backed up with the plow engaged (only use if necessary). It does not plow well in reverse (since the discs would face the wrong way). It also puts more pressure on your hitch.
- M. Transport mode...due to how the rear of some machines are laid out (racks, mufflers, frame etc.) transport mode does not work on all machine hitches. But another easy option is to strap the Groundhog MAX to the ATV front or back rack securely.

### 4.GENERAL INFORMATION CONCERNING HITCHES (COMPATABILITY)

# The plow is sold two ways: same plow in either box;

IMPORTANT NOTE for ATV's OWNERS-the majority of ATV's do NOT have a strong/square 2-inch receiver...they only have either a ¾inch utility hole or they have a weak 1 ¼inch square receiver that is too weak to use. Do not be concerned about this as you can rectify this buy either B 2 below or C 3 below. All manufactures are not referenced by name but concepts still apply.

(1). without a Hitch Kit in the box normally MSRP of \$349.99
(2). with a Hitch Kit in the box normally MSRP of \$399.99
From these "two" ...there are "five" install options for a hitch
See options A1 B2 C3 D4 E5 below (determined by your frame type)

# FIRST way is the Plow without a Hitch Kit MSRP \$349.

Option A 1 Fits units that already have a strong, square, 2" receiver (like on a truck).

**Option B 2** Fits "ANY" ATV (year 2000 and newer) if you buy a strong/square/forward bolted aftermarket 2" receiver online

These aftermarket hitches will be bought... year/make/model/manufacturer specific.

These aftermarket hitch kits you can buy are engineered to re-enforce and convert your existing hitch setup into a strong/square 2-inch receiver Most customers go this route. Most Honda and Polaris can go this route too if they prefer. These aftermarket hitches are year/make/model

specific and normally go back to about year 2000. Once this hitch is installed your ATV becomes Plug and Plow ready! BEWARE: The "cheap" 2-inch receivers that are attached to the utility hole with one bolt, or the "cheap" 2-inch receiver that slides into the weak 1 1/4-inch receiver they DO NOT WORK very well if used alone and will bend. To work at all they must be reinforced to make them stronger and off- set the "Up- pressure" of the plow. Use Common Sense when making your determination of which hitches are strong enough. Keep in mind the plow has "Up Pressure" not tongue weight

 CAUTION 2014-newer Honda's: Rancher and Foreman owners both should NOT buy our Groundhog MAX Kit version of the plow.

# SECOND WAY the Plow is sold includes a Groundhog MAX hitch receiver kit in box MSRP \$399.

Option C 3. is using the GH kit as your bolt on assembly receiver

Converts your existing ¾" utility hole or weak 1 ¼ "square receiver over to a strong square 2" Normally a bolt-on install. This hitch kit is for mostly Hondas/Polaris and some others. See 2 short hitch install videos for a Honda and a Polaris below.

If you do decide to buy and use the Groundhog MAX hitch kit... SEE the below tips below for installing the groundhog max hitch kit

Watch a video showing an install of the Groundhog MAX Hitch KIT on a Polaris.

https://www.youtube.com/watch?v=JJxr IBFvgo

- Watch a video showing an install of the Groundhog MAX Hitch KIT on a Honda
- https://www.youtube.com/watch?v=qkDGSrcVgno&t=11s
- Option D 4. DIY-If you determine you have to improvise and take extra steps not covered by using our bolt-on kit or if you cannot find a strong aftermarket kit that is available for your year/make/model...then your might have to DIY or go to a Fabricator (E below)
- Option E 5.-TAKE IT TO A FABRICATION SHOP OR A GOOD WELDER

  Normally they have the know-how and materials on hand that can be used for installing a hitch. You may need to provide the strong/square receiver hitch for them. Most Fab shops can normally provide bracing and install a braced hitch for \$35 to \$50.

### SEE BELOW INFO CONCERNING (BOTH DIY and FABRICATING)

Reasons for DIY or taking it to a FABRICATION SHOP (GOOD WELDER):

Older than year 2000 machines and some newer units may fall into the categories below...

- 1. Our GH hitch kit may not be able to be just "bolted on" or "at all" without extra steps.
- 2. You cannot find a strong/square aftermarket hitch for your year/make/model.

BE SURE TO TAKE NOTE that the plow has "up Pressure" not tongue weight and brace accordingly. Tack welds and strategically placed braces that offset "up pressure" work well.

Keep in mind that normally our long receiver tube can be drilled/notched etc. without making the tube too weak for use. Our kit is heavy duty ¼" wall steel. This makes our tube very strong. Use common sense and/or call us.

### CUSTOMER PROVIDED HARDWARE MAY OF MAY NOT BE REQUIRED.

(Braces, hose/pipe clamps, spacers, etc.)

If you DO NOT buy the Groundhog MAX hitch kit with your plow...

you can buy and fabricate a Collared 2-inch square receiver... in 6-inch long (\$19) and 12-inch-long versions (\$29) available at hardware stores

If you bought our Groundhog MAX plow with a GH kit you can use it yourself or take it to a Fabrication shop. If the bolt on application will not work for your unit... In most cases, you or the Fab shop can use this hardware for your hitch an install. The GH kit's hardware and hitch receivers can be utilized for providing a strong square hitch for your ATV.

## TIPS FOR INSTALLING THE GROUNDHOG MAX HITCH KIT

A Groundhog MAX hitch KIT can be purchased "separately" call 877-522-3364.

Normally this is a bolt on assembly for most Honda's and most Polaris. Some other machines too. On some model's you may need to buy and use hose clamps/pipe clamps/square u bolts to attach our long hitch tube to the bottom of your frame and on some models you would need to buy an aftermarket hitch. <a href="DISCLAIMER">DISCLAIMER</a>: There are machines that our Groundhog MAX hitch kit will not install on. We consider our hitch kit "somewhat universal" but it will not fit "all" the hundreds of years/makes/models of machines from back in the 1990's until today.

The Groundhog hitch receiver system is strong, as it runs under the machine and is (attached in 2 places). So, when you are running over roots, rocks, sticks, etc. you are pushing up on 20-inches of the machine's frame. As a note- the plow's T-head can be turned upside down or right side up.

Remember on this Hitch CONCEPT: Your primary anchor point is at the back... either utilizing the existing utility hole or the 1 ¼ assembly. Your secondary hookup on the front of the receiver tube only holds the tube level and keeps it from going L/R so it does not require much to secure it in place.

If you buy the plow with the kit, there is hardware included in the box. The main piece of the kit is (part 25) a 20-inch long...¼ wall thick...collared receiver tube. The kit includes various other hardware including bolts/nuts/washers...tongue straps...spacers. Also, included in the kit is a 9-inch-long extension tube (25A) that slides in the long receiver tube (part 25) to make it longer (to allow you to extend to a hole or cross member if needed). Note: Also, there is an additional "5 long receiver tube" (Figure 5 or part 17). Be careful if you use this receiver because it can only be "properly used" as a hitch receiver if it is DIY braced. Any bracing needs to offset some of the "Up pressure" the plow puts on the hitch setup. Part #'s and figures are shown in the GH manual. Note: Keep in mind that normally our long receiver tube can be drilled/notched etc. without making the tube too weak to use. Use common sense and/or call us. Our kit is heavy duty ¼" wall

#### tube. This makes our tube very strong.

REMEMBER; In some cases, you may need to "go buy" either strong hose/pipe clamps/strong nylon straps/tie wraps/square u bolts. These can be used to cinch the receiver tube up to the bottom of your frame/skid-plate. Your application may/may not need.

#### NOTE: The clamps/straps/square u bolts are not provided in the Groundhog hitch KIT;

BUT this hardware can many times be an easy fix for your hookup. Always install your spacers and washers where needed. It is always much stronger to tighten metal to metal to secure. The receiver tube does not have to be perfectly level nor does it have to be perfectly straight to plow...but get it as close as you can. The Groundhog MAX collared receiver tube is made out of steel. It has plenty of integrity and strength to be drilled/notched/altered etc. and still do the job.

#### GENERAL NOTES ON HOSE/PIPE CLAMPS-They should be approx. 1/2- inch wide

Hose/pipe clamps-these are like you would put on a car heater hose and screw down to tighten. Hose/pipe clamps-can be put together for longer lengths.

Hose/pipe clamps-can come wider as well. They also come in stainless steel for strength.

**GENERAL NOTES ON U bolts-**square or round u bolts are even stronger if they will work in your unit's hole pattern. Install the nuts/lock washers on the bolts on the top.

GENERAL NOTES ON STRAP TIES/NYLON STRAPS- should be at least-1/2- inch wide. But just basic standard issue versions have been used with success. They can be put together for longer lengths. They can come wider as well. They also come in industrial strength.

# 5.SPECS/KEY POINTS/REASONS FOR SUCCESSES

- 1. This <u>fully assembled product</u> <u>weighs 46lb.</u> and is made with high intensity heavy gauge ¼ wall steel. Very Durable.
- 2. Each disc has its own easy to replace, high-speed double-sealed, deep grooved ball bearings with a trash guard. Bearings are the same size on all discs. Replacement bearings are available at \$6 each. Normally ships same or next day...3-4-day shipping time.
- 3. The discs have anti-slide bolts and nuts for easy replacement of bearings if necessary.
- 4. <u>Graduated notched Discs</u> sizes are 8" 9" or 10" but all bearings are the same size. This assembly was the most aggressive setup for cutting "virgin" ground. This configuration was the most aggressive setup for plowing virgin ground.
- 5. Discs are mounted on a <u>% inch steel axle</u>. The axle itself is encased in a glove-fit 1" steel pipe between each disc blade creating a closed type system that does not require greasing.
- 6. Between each of the disc blades the axle itself is encased in a glove-fit 1-inch steel pipe.

  This creates a closed type system that does not require greasing.
- 7. As you are adjusting, you may notice a lot of left to right "play" in the plow where the axle assembly goes into the up/down adjustment tube. This is intentional and allows the plow to float and adjust to uneven ground.
- 8. <u>Adjustable height control</u>, in 1" increments on the T-HEAD allows you to use it on machines with either low or high ground clearance. <u>T-head can be flipped</u> to use for machines with either low or high ground clearance. One part has 2 holes and the "flappable" T-head part has eight holes for a total of 32 up/down adjustment holes.
- 9. <u>A 2-inch square hitch receiver is required</u> it can be purchased with a hitch kit in the box (for Honda and Polaris mostly). It can be purchased without a hitch kit in the box (\$50) cheaper. You would then buy an after-market hitch kit for your specific machine.
- 10. No need to add extra weight because you use the machine & rider's weight.

- 11. Comes with a 90-day manufacturer's warranty.
- 12. The plow is <u>basically maintenance free</u>. After use... wipe off...spray down with WD-40 or similar product. Secure and tighten any loose nuts.
- 13. There are No ratchets to mess with and no tires to dry rot and go flat. Easy to store inside.
- 14. Works with 2-wheel or 4-wheel drive. Works on lower CC "air cooled only" machines. You are plowing 4-7 mph so your smaller CC machine stays cool. The strain on your machine is far less than with a pull behind plow.
- 15. Works with independent rear suspension or straight axle setups.
- 16. Direct, Belt, or chain drive machines can work.
- 17. When new...the disc blades may not turn freely. After some use, they will spin properly but they do not free spin like a bike wheel.
- 18. If you want to keep your ball hitch while using the Groundhog receiver tube... Buy a Reese-type hitch in 1 ¼ to slide in and pin. It is a loose fit but as long as it has weight applied it works fine.

#### REASONS FOR GROUNDHOG MAX SUCCESS...

- 1. IT'S "WIDTH" AND COMPACT SIZE.
- 2. IT'S STAGGERED KNOTCHED DISCS SYSTEM IN 3 SIZES (BLADES ARE 8, 9, 10 INCH)
- 3. IT'S INTENTIONAL "LEFT TO RIGHT" PLAY WHERE THE AXLE ASSEMBLY BOLTS TO THE UP/DOWN ADJUSTMENT TUBE.
- 4. AN AXLE WORKS BETTER THAN DISCS THAT ARE JUST SUSPENDED ON HANGERS.
- 5. THIS WAS FOUND TO BE THE BEST "ATV POWER TO DISC/PLOW SIZE RATIO"

# IN 2010 WE MADE A "WIDER" GROUNDHOG MAX FOR ATV/MTV/ SIDE-BY-SIDES ... THE RESULTS WERE...

- a. IT HAD A PROBLEM BENDING HITCHES...
- b. IT DID NOT STEER OR MANEUVER AS WELL...
- c. RESTRICTED THE ATV'S PLOWING SPEEDS.
- d. PUT WAY MORE STRESS ON THE HITCH AND MACHINE.
- e. DID NOT "CUT/PLOW" AS AGGRESSIVELY...
- f. THE WIDER PLOW WAS BEHIND THE REAR WHEELS AND IT "NEGATED" THE NEEDED DIRECT DOWN PRESSURE...IT THEN WORKED AS A LEVER TO PUT MORE "UP PRESSURE" ON THE HITCH.

AFTER THE ABOVE COMPARISON WE STUCK WITH THE ORIGINAL GROUNDHOG MAX FOR BOTH ATV/UTV'S SO PRODUCTION WAS STOPPED ON ANYTHING WIDER.

#### BEWARE- DO NOT ACCEPT ANY "KNOCK OFF" SUBISTUTES FOR THE GROUNDHOG MAX.

Maintenance-Owner should check and tighten (if necessary) all hardware after the first half-hour of operation. The break in stage of the plow can cause minimal loosening of hardware. Retighten hardware as necessary.

After the first use, be sure to check the disc blades for side-to-side movement. Some side-to-side movement is normal. If there is excessive movement tighten the castle nut and repin. Discs sometimes do not spin properly until after approx. 5 minutes of use. Keep in mind that discs will not free spin like a bike wheel. You should continue to check this after each use to get the longest life out of your Groundhog MAX ATV / UTV Disc Plow. Discs do

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not need to be sharpened, oiled, or greased. Lightly spray down the complete unit with WD-40...if stored for any length of time.

#### **GROUNDHOG MAX YOUTUBE VIDEO CHANNELS ARE;**

Newer and more instructional videos

https://www.youtube.com/channel/UCoHwAU0B7zNVJi-Pf06nT4Q?view as=subscriber

Action videos and Independent product reviews https://www.youtube.com/user/GroundHogMAX

Customer support with replacement parts available <u>Tech Support 1-800-566-1691</u> Parts 1-877-522-3364 ...

# 6 Troubleshooting

# Reasons- for not working properly.

- 1) Reason-It is installed with the plow facing in the wrong direction. Happens frequently and is the reason sometimes why the hitch bends. The point of arrow shape on the plow should point away from the rear of the machine. If you are squatting at the rear of the machine plugging the plow in (It would point at your shoes). SEE picture V2 Above; NOTE there is physical "red" indicator arrow on a disc blade showing direction
- 2) Reason-The hitch has bent backwards at an angle either from the plow being installed backwards...trying to use too much weight...weak hitch setup...DIY...or some combination of these. In order for the plow to engage the ground properly it needs to set up vertically at a 90-degree angle (or as close as possible). The more it tilts back the less it engages the ground. It also needs to be as close to the back of the machine as possible.
- 3) Reason- You tried to manually pick up the rear of the machine to hook it up rather than backing up on the 4-inch blocks. This only stretches out your suspension and does not allow the machines weight to be used properly.
- 4) Reason- Unrealistic expectations...This is only an ATV/MTV not a Tractor. The harder the dry/wet ground is with roots, rocks, grass, sticks, ground-clutter etc. the more passes you may have to make. Plow in looping circles and figure eights as well as straight. Plowing speeds range about 5-7 mph according to how your food-plot is laid out.
- <u>Reason-\*IMPORTANT\*Do not use too much weight...</u> Try to set your machine so that you can pull the plow in 2-wheel drive. You are working to find the "sweet spot in adjustment" which allows enough weight on the plow to work, but enough weight is remaining on the rear 2 wheels to pull. This allows for much easier steering too. Adjust your plow accordingly. A lot of the cut in the plow is applied through turns and maneuverability. Using the proper weight is accomplished by the adjustment of the up/down tube the T-Head slides on. Failure to do this can result in bending your hitch.

#### MISTAKES to avoid.

1). Using a cheap \$20... 2-inch receiver converter that only bolts thru the utility hole. It will twist from side to side and bend your hitch. It would need to be reinforced/braced/welded to offset the plows up pressure.

2). Using a cheap 1 1/4" to a 2-inch converter that just sits on top of the 1 1/4 (the 1 1/4 is too weak

and will bend after a little use). It would need to be reinforced/braced/welded to offset the plows up pressure.

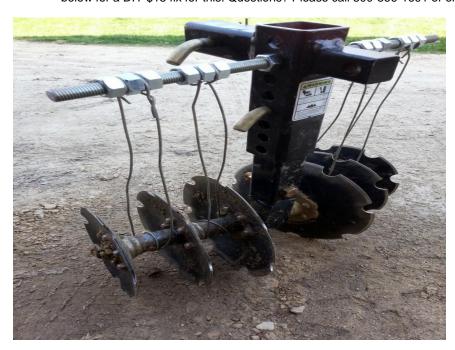
- 3). No extra weight needed... Having someone sit on the back with their legs hanging off.
- 4). Never reading or looking at the website, manual, or guidelines.
- 5). DIY installs-hook-ups not done properly.
- 6). Combination of some the above on a weaker hitch.
- 7.) There are very few potential issues with the actual plow but some issues with attaching it to some machines. Proper attachment to your machine is key.

**Note:** we have customers up and down the spectrum in mechanical knowledge, trying to install the plow on all sorts of power sources. All years/makes/models of machines...even back to 3- wheelers Some install them on lawn tractors, zero turn mowers, old jeeps, and small trucks. All these machines are in many different types of mechanical condition. Soil and weather conditions, dry/wet, grass/weed/tree root systems, and general ground clutter also factor in. **So, there will be varying degrees of how the plow works for your conditions.** 

**NOTE:** The plow works great if it is mounted properly to your machine. The hookup to your machine is critical. There are very few issues with the actual plow but some issues with attaching it to some machines. How it attaches to your machine is the key.

## 7.A DIY FIX FOR PLOW CLOGGING:

In normal plowing conditions this does not happen...But if your soil is dark/rich/clay based and the old "too wet to plow" comes into play...then in some locations and soil conditions the discs can sometimes pack in between the discs and turn them into "dirt wheels". To make the Max usable in these conditions... here is a DIY system to keep it cleaned out. Your Groundhog Max should work like a champ without clogging, and it is relatively inexpensive. I've attached a self-explanatory picture of the "fix." It consists of just a 19" long piece of 5/8" threaded steel rod, 14 nuts to thread onto the rod, and 4 pieces of heavy gauge fencing wire (loops the axle). See the pictures below for a DIY \$15 fix for this. Questions? Please call 800-566-1691 or email.





# 8. Frequently Asked Questions

#### 1. Will the plow work on my 2-wheel drive ATV/UTV?

**A:** Yes. The plow will work on most 2 x 4 ATV's and UTV's, but you cannot plow as aggressively. You need to leave some weight for traction on your rear wheels. Most times (even with a 4 x 4 unit) you can use it in 2-wheel drive only as it steers much easier.

### 2. Will the plow work on smaller CC machines that are only air-cooled?

**A. Yes**. This is a big benefit of the plow. Since there is a lot less strain on your ATV/UTV and you're are plowing at speeds of 4-7 mph air-cooled machines stay cooler. Remember the normal pull behind plow requires a 400 CC liquid cooled or larger (if you read their fine print). On any machine start off less aggressive the first time you plow. ATVs are not designed to pull heavy weight in loose dirt at a low speed (boring also).

- 3. Will the Groundhog work on both independent rear suspension and straight axle ATV's?

  A: Yes. We have tested it on both. Very little difference between the two in performance.
- 4. Can I use the plow if my ATV/UTV has a strong square factory hitch already?

  A: Yes. You would buy the NO KIT version of the plow. The plow is all you need. It becomes "Plug and Plow"
- 5. Can I use the plow if my ATV/UTV only has a factory 3/4 utility hole or just has a lightweight 1 1/4" hitch receiver (see 5A,B,C)
- 5 A: Yes. You can buy a strong, square, forward bolted, after-market 2-inch receiver online to strengthen your existing setup (basically all manufacturers' models newer than 2000). There are some exceptions. There are many links to buy your receiver hitch that are year, make, and model specific for your machine; For more information visit www.groundhogmax.com, reference the hitches/compatibility section, or call 800-566-1691. Once you have one of these hitch kits installed...the plow is all you need. It becomes "Plug and Plow". You would buy the NO KIT included version of the plow.
- 5 B. Yes. Another option for most years, makes, and models of Honda's and Polaris. Some Can Am's and some Bombardier. The Groundhog MAX is also available with a hitch

receiver kit included in the box. This kit allows you to convert and upgrade many existing (utility holes or weak 1 1/4" hitches) over to a strong forward bolted type hitch receiver. This Kit includes both a 21-inch long and a 5-inch-long collared hitch receiver tube and other hardware.

5 C. Note: Older than 2000 models may have to DIY or take to a fabrication shop to get your hitch setup. Our GH hitch does work on some of these older ones. Parts of our hitch kit can be used for the fabrication.

#### 6. How well is the product made? Specs

**A:** The product weighs 46 lbs. and is made with high intensity heavy gauge ¼ wall steel. Each disc has its own replaceable high-speed double-sealed, deep grooved bearings. The discs are installed with anti-slide bolts and nuts for easy replacement of bearings if necessary. All bearings are the same size. Discs are mounted on a ¾ inch axle. This axle is then encased in a glove-fit 1 inch steel pipe. This creates a closed system that does not require greasing. The Groundhog MAX ATV / UTV Disc Plow does not have ratchets. There are no tires to dry rot and go flat. It is practically maintenance free. Replacement parts are available 877-522-3364.

#### 7. How do I use the up/down adjustment tube to adjust the weight on the plow?

The T-head can be turned right side up for machines with high ground clearance and up-side down for machines with lower ground clearance. These adjustment holes are in 1-inch increments. A good rule of thumb is...if you back your ATV up on a 4" x 4" block (to get your rear wheels up) ...let the plow come down and touch the ground...then pull the plow upwards two holes and put your tractor pin in. Back off the 4 x 4 and you are ready to plow. You do not have to be too aggressive because a lot of the cutting is in the turns. Adjust If necessary. That's why we recommend looping circles and figure 8's if you can. Note: There is intentional play where the axle assembly goes into the up/down adjustment tube. 32 up/down adjustments

#### 8. Does the receiver hitch assembly have to be level and centered?

A: No. However, get as close to level and centered as possible.

# 9. <u>If I use the receiver hitch assembly can I still use my trailer ball and leave the receiver</u> on permanently?

A: Yes. After market Reese-type ball adapters are available. A 1 1/4" works fine. It is a lose fit but with weight present it will not rattle.

#### 10. Can I use reverse with the plow engaged?

**A: Yes, most models**, but it won't plow as well as going forward. Reverse gives you the maneuverability to plow in tight places like pulpwood roads, firebreaks, and between pine rows. Only use reverse if necessary as it puts more up pressure on your hitch.

#### 11. Does it work on hard, rocky, and / or rough ground?

**A: Yes.** If your terrain is "difficult" the plow will work. It just takes more passes. The plow works well on hard, dry, rocky, grassy or any combination terrain. These discs are very durable. For best results plow in a combination of oblong circles, figure eights, and back and forth. You have less steel on the ground but you have more down pressure (weight) ATV 800+ lbs. UTV 1200-1500 lbs. and your 200 lbs. as a rider. NO NEED TO ADD ANY EXTRA WEIGHTS.

# 12. Does the plow work in wet bottomland, clays, and gumbos?

**A: Yes.** The plow will not bog down like a typical pull behind plow. The ATV controls the plowing depth. Remember the old saying, "Too wet to plow"? Certain soil types may clog the discs when wet. However, most cases if your vehicle can go through you can plow it (since the machine controls the plowing depth. If you have problems with clogging go to the owners-manual page 23. You can call the Tech support at 1-800-566-1691 with questions.

#### 13. Is the product just for food plots?

**A: No.** In addition to food plots the plow is used for landscaping, preparing and maintaining firebreaks and weed control, grooming horse arenas, dirt tracks, beaches on lakes, trails, etc. In many cases it can be used to replace a tractor especially for discing smaller jobs.

#### 14. Can I leave the plow on my ATV / UTV while driving to my food plot site?

**A:** Yes, you can in most instances. We call this feature "transport position." However, every ATV/UTV is a little different. Here are some general guidelines: On some vehicles you simply flip the plow upside down and secure it in position with the tractor pin. On some vehicles flip the plow upside down, and adjust the plow head up or down until it clears the back of the vehicle by removing and replacing the tractor pin. Then simply secure it in position with the tractor pin. On some machines you may not be able to use transport position due to the design of the rear-end.

- 15. How is the Groundhog MAX Disc plow packaged and where is it in stores?
- A. BOX size is 12" x 12" x 22" strapped, full color, with sales points. Displayed inside not outside.
- **B**. Stores have them on inside shelves in their ATV section or their seed/feed/hunt section.
- C. Box with hitch kit included weighs 69 pounds. Box without kit weighs 46 pounds
- **16. Why is my specific ATV/UTV not listed?** There are too many (hundreds) of years, makes, models to really list. These change each year. We list some units but we explain it more by "hitch options" and "concepts of hook-up". UTV's normally come with a 2" hitch but most ATV's come with other setups.