



Taylor Pittsburgh Mfg., Inc.
PO Box 1200
305 Commerce Drive
Winfield, Alabama 35594
205-487-3202

233-S-ATV-180 OPERATION AND PARTS MANUAL



TO THE DEALER:

The Seeder / Spreader assembly and proper installation to the tractor is the responsibility of the TAYLOR PITTSBURGH dealer. Read manual instructions and safety rules. Make sure all items on the Pre-delivery and Delivery Check Lists are completed before releasing equipment to the owner.

TO THE OWNER:

Read this manual before operating your TAYLOR PITTSBURGH seeder / spreader. The information presented will prepare you to do a better and safer job. Keep this manual handy for ready reference. Require all operators to read this manual carefully and become acquainted with all the adjustment and operating procedures before attempting to operate. Replacement manuals can be obtained from your dealer or by call 1-205-487-3202, in the USA and CANADA only.

The seeder / spreader you have purchased has been carefully engineered and manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and upkeep. Lubricate the unit as specified. Observe all safety information in this manual and safety decals on the seeder/spreader and tractor.

For service, your authorized TAYLOR PITTSBURGH dealer has trained mechanics, genuine TAYLOR PITTSBURGH service parts, and the necessary tools and equipment to handle all your needs.

Provide your model number and serial number to your dealer to obtain correct repair parts.

LIMITED WARRANTY

TAYLOR PITTSBURGH MFG., INC., the manufacturer, warrants only to the Original Purchaser that this equipment, under normal use and service, will be free from defects in material and workmanship for one (1) year from date of purchase providing this equipment is purchased for individual and not for commercial use. Warranty for commercial use is 90 days. This warranty does not apply to any equipment which has been damaged or which has been subjected to abuse, misuse, negligence, abnormal wear and tear, alterations, tampering, or failure to follow operating instructions. This warranty does not cover any product or parts not manufactured by Taylor Pittsburgh Mfg., inc.

Under this warranty, the manufacturer will repair or replace any part which the manufacturer determines has failed during the period of the warranty due to defects in material and workmanship. After approval by the manufacturer, the equipment or defective part must be returned to Taylor Pittsburgh Mfg., Inc., Winfield, AL 35694

PURCHASER'S EXCLUSIVE REMEDY FOR BREACH OF WARRANTY, OTHER DEFECT, OR CONDUCT GIVING RISE TO LIABILITY SHALL BE THE REPAIR OR REPLACEMENT OF THE PRODUCT SOLD, AND THE MANUFACTURER UNDER NO CIRCUMSTANCES SHALL BE LIABLE FOR ECONOMIC LOSS OR INCIDENTAL OR CONSEQUENTIAL DAMAGES, THE MANUFACTURER DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY AND FITNESS FOR PURPOSE.

Taylor Pittsburgh Mfg., Inc., reserves the right to make improvements and changes in specifications without notice or obligation to modify previously sold units.

This manual describes the proper assembly procedures for your seeder / spreader and furnishes operating and maintenance recommendations to help you obtain long and satisfactory service.

TO THE PURCHASER

This manual contains valuable information about your new Taylor Pittsburgh ATV Seeder/Spreader. It has been carefully prepared to give you helpful suggestions for operating, adjusting, servicing and ordering repair parts.

Keep this manual in a convenient place for quick and easy reference. Study it carefully. You have purchased a dependable and sturdy spreader, but only by proper care and operation can you expect to receive the service and long life designed and built into it.

Sometime in the future your spreader may need new parts to replace those that are worn or broken. If so, go to your dealer and provide him with the model and part number.

Customer Information

Name _____

Purchased From _____

Date Purchased _____

Model No. _____

Serial No. _____

It is the purchaser and/or operator's responsibility to....

- I Read and understand the information contained in this manual.**
- I Operate, lubricate, assemble and maintain the equipment in accordance with all instructions and safety procedures in this manual.**
- I Inspect the equipment and replace or repair any parts that are damaged or worn which under continued operation would cause damage, wear to other parts, or cause a safety hazard.**
- I Return the equipment or parts to the authorized Taylor Pittsburgh dealer, from where it was purchased, for service or replacement of defective parts that are covered by warranty. (The Taylor Pittsburgh Factory may inspect equipment or parts before warranty claims are honored.)**
- I Payment of all costs incurred by the dealer for traveling to or transporting the equipment for warranty inspection and or claims.**

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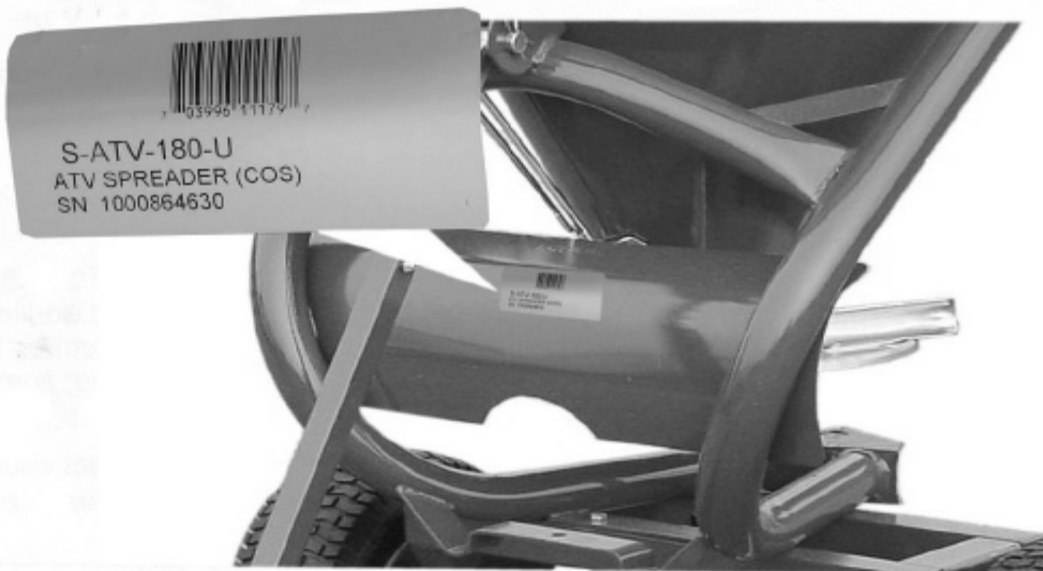
INFORMATION ON THE MACHINE

The models in this manual have been designed and made exclusively allowing the distribution of solid, granular fertilizers and seeds in the field. Their use is particularly made for gardening and golf courses but can be used in many more places. These machines are usually used in daylight. If you need to use the spreader at night or poor visibility, you must use the lighting system of your tractor or some other source to operate safely.

A use different from described above is considered improper. Any modification made to the machine relieves the manufacturer from any responsibility of damages or injury that can be caused to operators, third parties, objects or the spreader.

NAME PLATE

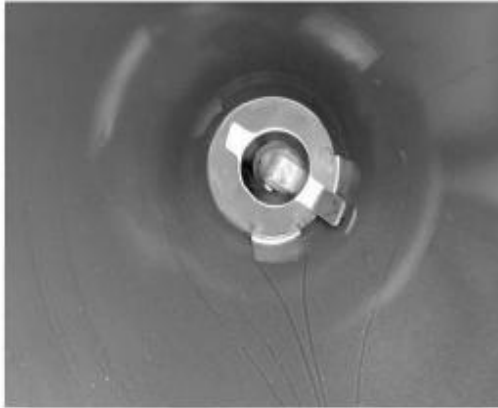
On the hopper of every spreader is a nameplate, which has the model number, serial number and bar code of your machine. When parts are required, it is necessary to refer to the plate for the model of spreader.



CHARACTERISTICS OF THE SPREADER

The pull type spreader has a fertilizer distributor made of stainless steel, a spreader disc with (4) adjustable vanes with (4) different settings, in order to obtain the maximum spreading precision and uniformity in the distribution, depending on the material to be spread.





The feeding of the disc is by gravity through an opening located at the bottom of the hopper, inside of which a mix/agitator is applied, in order to prevent formation of lumps in the fertilizer. A plate is put in front of the disc to prevent the spreading to the front side of the machine.

The fertilizer delivery is controlled by properly opening the shutters in the hopper bottom, through locking devices operated by levers. The fertilizer spreader and the agitator are connected through a gearbox with the wheels, so the speed of the disc is proportionate to the speed of the machine. The switching off and on of the spreading disc is made by putting or removing the split pin on the axle. The machine is connected with a ball hitch 1-7/8".



The hardness of the steel welded frame, together with the remarkable life of the hopper, helps to obtain a highest quality level of the pull type spreaders. The painting is made by an epoxy varnish with successive backing at 150 degrees Celsius with the application of the primer bath, assuring great protection and long life of the machine.



- A. REGULATING LEVER
- B. HOPPER
- C. DISTRIBUTOR VANES
- D. SPREADER DISC
- E. STEEL FRAME
- F. TIRES
- G. ROD FOR TONGUE ADJUSTMENT
- H. TONGUE
- I. 1-7/8" BALL HITCH

TECHNICAL DATA

S-ATV-180

Hopper Capacity (liters/gallons)	165 / 43,6
Weight of the Unit (kgs/lbs)	80 / 175
Width (wheel-wheel, outside) (meters/inches)	1,05 / 41"
Loading Height (meters/inches)	1,30 / 51"
Length (meters/inches)	1,50 / 59"
Hopper Width (meters/inches)	0,90 / 35"
Ball Hitch Diameter (cm/inches)	4,7625 / 1-7/8"
Tires (type/bar)	6,5 / 3,2
Spreading Width (meters/feet)	8 - 12 / 26' - 40'
Ground Cover Per Hour	From 27 to 55 ha/h From 7 to 15 acres/h



SAFETY

READ AND FOLLOW THE INSTRUCTIONS IN THIS MANUAL AND ESPECIALLY IN THE SAFETY SECTION. FAILURE TO DO SO CAN RESULT IN SERIOUS INJURY OR DEATH.

TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND THE SAFETY OF OTHERS.



THIS SYMBOL MEANS
ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED

SIGNAL WORDS:

The signal words **DANGER**, **WARNING** and **CAUTION** are used with the safety messages in this manual and with each safety signs. They are defined as follows:

DANGER: Indicates an immediate hazardous situation that, if not avoided, could result in serious injury or death. This signal word is to be limited to the most extreme situations typically for machine components that, for functional purposes, cannot be guarded.

WARNING: Indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION: Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practice.

If you have any questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer or King Kutter, Inc. P.O. Box 1200 Winfield, AL 35594 (205) 487-3202 or www.kingkutter.com

EQUIPMENT SAFETY GUIDELINES



- I Safety of the operator and by standards is one of the main concerns in designing and developing a spreader. However, every year accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions and insist those working with you, or for you, follow them.
- I In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be operated in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.
- I Replace any safety sign that is not readable or is missing. Copies of such safety signs is shown in this manual.
- I Never use alcoholic beverages or drugs that can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
- I **Under no circumstances should children under the age of 18 be allowed to work with this equipment. Do not allow persons to operate or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.** Review the safety instructions with all users annually.
- I This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible, properly trained and physically able person familiar with farm machinery and trained in this equipment's operations. If the elderly are assisting with farm work, their physical limitations need to be recognized and accommodated.
- I Use a tractor equipped with a Roll Over Protective System and seat belts. (ROPS)
- I Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question- **DON'T TRY IT.**
- I Do not modify the equipment in any way. Unauthorized modification could result in serious injury or death and may impair the function and life of the equipment.
- I In addition to the design and the confirmation of this implement, including safety signs and safety equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to safety messages and operation instruction in each of the appropriate sections of the tractor and seeder/spreader manuals. Pay close attention to the safety signs affixed to the tractor and the seeder.

IMPORTANT SAFETY INFORMATION

THE FOLLOWING SAFETY RECOMENDATIONS ARE FOR YOUR SAFETY. THEREFORE IT IS NECESSARY TO READ THEM CAREFULLY, MEMORIZING AND ALWAYS APPLYING THEM.

The present warnings in this manual regard exclusively the allowed uses and reasonably foreseeable dangers. All below instructions must be integrated by a common sense, experience worker to prevent accidents.

The spreader must be used by a single operator. The use of the spreader is forbidden to youngsters. All the listed instructions must be carefully respected. Changes to the spreader are not authorized by the manufacturer and exclude his responsibility.

Check the correct operation of the machine prior to each use.

General Advices

Read carefully this manual before proceeding to start, operate, or to perform maintenance on the spreader.

Watch, in addition to the warnings to this manual, all the safety, accident prevention rules and general rules.

The manual must always be handy, so as to consult it, in order to check the working cycle and safety information. In case of loss or damage, it will be necessary to get another copy.



ATTENTION

Any work of maintenance, regulation and cleaning must be done with the machine on the ground (in stable conditions), turning off pulling vehicle engine and removing the key.

ATTENTION! - WARNING!

The operator, during the period of use, maintenance, repair, handling or

storage of the machine, must wear safety shoes and safety gloves. Moreover, if it is necessary, that the operator must wear suitable hearing protection such as ear muffs or earplugs, dust masks and protective glasses.



During loading phase, there is the danger of powders inhalation produced by fertilizer mixing. It is suggested to use tractors with filters on the ventilation system of the cabin, to use suitable safety systems of breathing, like powder masks or masks with a filter.

The spreader is designed to be used by one operator at a time, who during the use must always stay in the pulling vehicle seat.

Never work with this machine if you are tired, sick, or after have taken drinks, drugs or medication.



DANGER! It is forbidden to climb or to transport someone when the spreader is in motion. Do not let anyone inside the hopper for any reason.

Keep the spreader clean from foreign bodies (debris, tools, miscellaneous), as they could damage the operations or the operator. Generally the fertilizers are rather corrosive. For this reason, it is important that no particle of fertilizer stay in the spreader for a long period of time. Clean the hopper and distributor after each use.

If during cleaning operations you use air or water with pressure, it is necessary to wear glasses and safety masks and keep animals and other people away during cleaning.

Before connecting machine to the pulling vehicle check that it is in good condition and that the brakes work properly, especially if working on sloping ground.

Unhook the machine from pulling vehicle only on level, compact ground (with hopper empty), checking that the spreader is stable.



WARNING!

During transport, operating, loading and spreading of fertilizers, the operator must follow all the label indications and particularly to the content of the written risks and precautions.



ATTENTION!

The manufacturer does not cover damages caused by improper use of the spreader.

The manufacturer is not responsible in case of:

- improper use of spreader, used by non trained person.
- serious deficiencies in the maintenance of spreader.
- changes or modifications that are not allowed.
- use of anything except original replacement parts.
- not observing partial or all of instructions.
- unusual cases.

OPERATION OF THE MACHINE

Make a check of the spreader before switching it on. Start to work only if spreader is in perfect condition.

Before using the spreader please be sure that all safety devices are correctly in place and in good working condition; in case of breakdowns or damages to the guards, please replace them immediately.



ATTENTION!

During work, please be sure there is no person or animals within 50 meters. When you work close to roads or public places, it is **ABSOLUTELY NECESSARY** to keep people away and to increase the precautions.



ATTENTION!

Anybody who comes up to the spreader while in use is in a danger area, therefore they become “AN EXPOSED PERSON”. The operator must prevent anyone from coming into the danger area and work with maximum caution. If someone comes up, stop spreader immediately.

- Before every use of the spreader, please always check the wear of the vanes and the spreader disc. Check that all screw and bolts are in and tight.
- The machine must never be unattended while moving.
- Always keep the machine in good operating condition and perform maintenance regularly.

TRANSFER ON THE ROAD

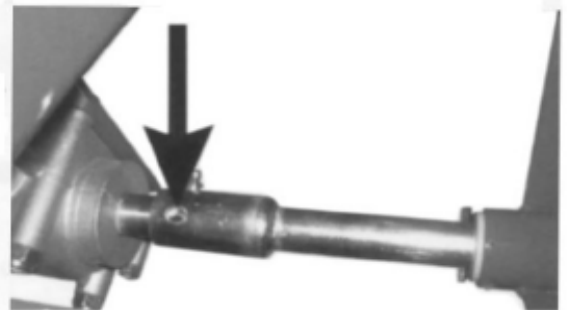


ATTENTION!

Please follow the Highway Code carefully that is in force for the country or state you are using spreader in. During transport on public roads it is necessary to empty the hopper.

Remember that during moving on public roads, special attention must be taken. refer to possible and special regulations noted on pulling vehicle manual, choosing the proper speed especially when the street is crowded, winding or sloping. If the spreader hides the back signal lights of pulling vehicle, it is necessary to put a light bar and/or some back signaling signs.

During transport on the road, the gearbox must not be engaged. Switch off the mechanical block from the axle, as shown in the picture to the right.



SAFETY SETTINGS



ATTENTION!

Be sure that the safety labels are readable. Clean them up using a cloth, water and soap. Replace damaged labels placing them in the right position.

The safety signs on the machine supply the most important indications: their observance helps your safeness.



1. ATTENTION!

Before doing any work or repair on the spreader, stop the engine of the pulling vehicle, remove the key, put on the parking brake and read the operator's manual carefully.



2. ATTENTION! - DANGER!

Possibility of throwing of material and/or objects, please do not come up to machine. Keep a safe distance of at least 50 meters (165 Ft.) from the machine.



3. ATTENTION! - DANGER!

It is forbidden to get inside the hopper or to transport someone with the machine.



4. ATTENTION!

Use the devices of individual protection required.



PULL TYPE SPREADER USE



ATTENTION! - Before use, please check that zerks are adequately greased (see page 21).



ATTENTION! - During the use of the spreader, please be sure there are not any persons or animals within 50 meters (165 Ft.). If someone comes up please stop immediately.

Recommendations for correct distribution

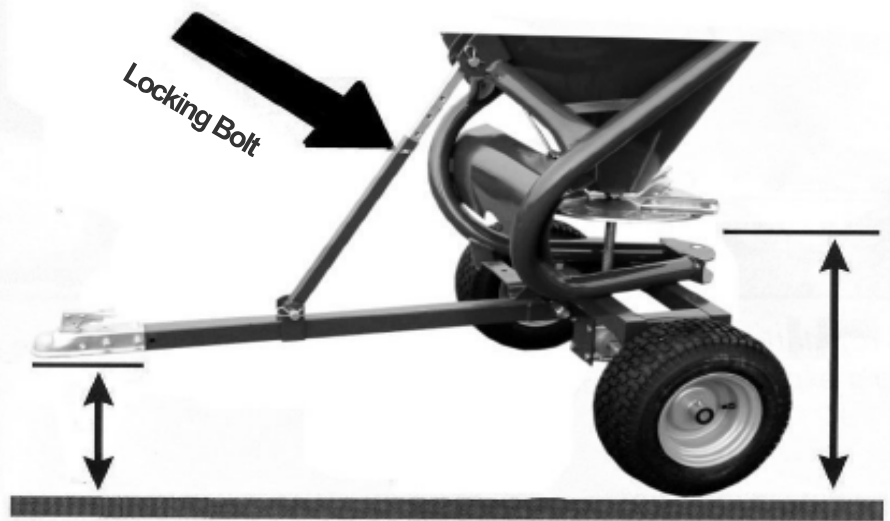
- Please always test lbs/acre you want to spread before starting to work.
- Use a fertilizer or seeds in perfect condition: a humid fertilizer cannot be spread uniformly and correctly.
- Avoid spreading fertilizer or seeds on windy days, in order to improve the uniformity of the distribution.

Connections

The pull type spreader can be hitched to every type of tractor or atv with 1-7/8" ball hitch providing it has the horsepower to pull it . To make the connection, it is necessary to put the ball hitch in the coupler on the pull type spreader, locking it pushing the lock handle towards the bottom. Check and regulate the length of the regulation tongue rod, so that the spreader disc is, as parallel as possible, to the ground in order to get a uniform distribution of the fertilizer or seed. Unscrew the locking bolt, as shown with the arrow in the picture below and move the rod to the position making unit parallel and lock the bolt in the new position.



Shaft Regulation Bar



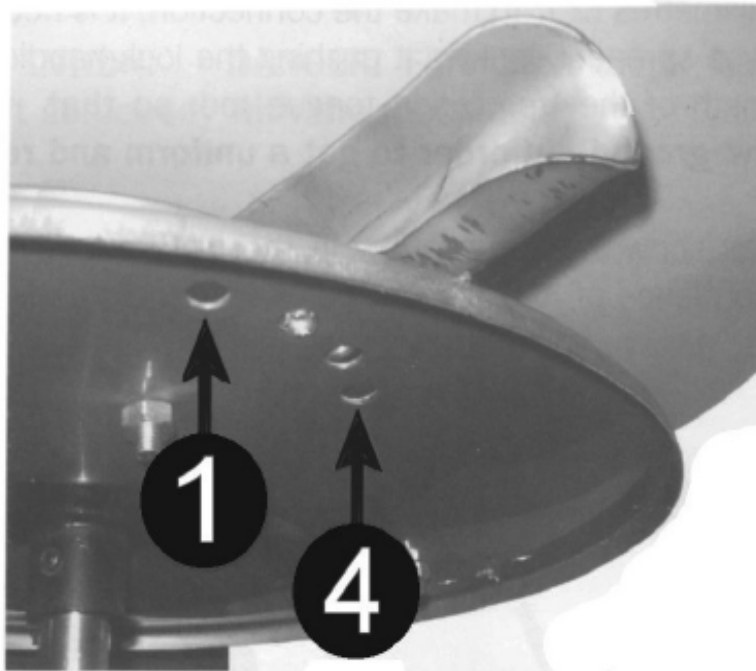
Correct position of the spreading disc.

Adjustments

It is not possible to have an exact spreading chart for equipment that makes use of the centrifugal force principle, the distributed quantity depends on the speed, on the radius of distribution, on the quality and humidity of the fertilizer or seed and roughness of the land. The fertilizer must always be stored and conserved adequately, so as to keep its physical characteristics unchanged. It is necessary to set the speed of the pull spreader, before starting the operation of distribution, trying, in the possible limits, to keep it constant for the total duration. The spreading chart contains the information, in order to determine the quantity to spread in a field; these must be completed by the experience and competent operator.

How To Adjust The Spreader Vanes

In order to assure an even distribution on both sides of the spreader, depending on the different specific weight of the material used, the vanes on the disc can be set to different positions. When all the vanes are put in hole 1 (Shown in picture), the distribution of the material is increased towards the left compared to the way the tractor is moving. But if you put the vanes in hole 4, the distribution will be more towards right. Moving vanes from position 1 to 4 on same speed there will be an increase in the distributing width. This regulation must be made compared to the type of material you are spreading and from experience.

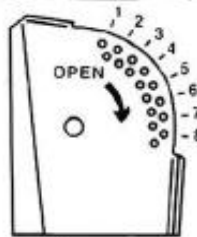
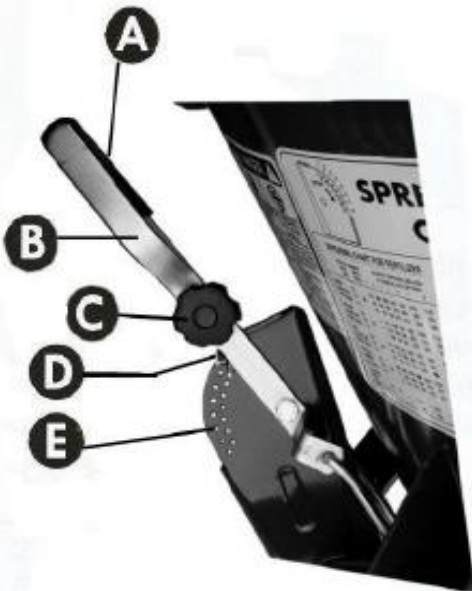


Spreading disc's vanes regulation

Such a regulation must be done in accordance with the material type that is used and the operators experience.

HOW TO ADJUST THE SPREADING

The material spreading is regulated through the regulation lever that moves the opening section on the bottom of the hopper. In order to carry out the regulation, after having consulted the spreading table, according to the type of material to spread and to the speed of pulling vehicle, it is necessary to move the lever "A" along the graduated scale "E" and locking it in the chosen position with pin "D".



SPREADING CHART

SPREADING CHART FOR FERTILIZER									SPREADING CHART FOR SEED					
	SPEED (MPH)	QUANTITY SPREAD IN LBS/ ACRE AT VARIOUS GATE SETTINGS								SPEED (MPH)	QUANTITY SPREAD IN LBS/ ACRE AT VARIOUS GATE SETTINGS			
		2	3	4	5	6	7	8	8.5		5	6	7	8
LARGE GRANULAR FERTILIZER	2.5	132	245	402	635	929	1014	1140	1248	3	0	46	129	268
	5.0	66	123	201	318	465	507	570	624	5	0	28	77	161
	7.5	44	82	134	212	310	338	380	416	7	0	20	55	115
MEDIUM GRANULAR FERTILIZER	2.5	—	311	448	709	925	1025	1118	1182	3	0	0	85	161
	5.0	—	156	224	365	463	513	559	591	5	0	0	51	97
	7.5	—	104	149	237	309	342	373	394	7	0	0	36	69
FINE GRANULAR FERTILIZER	2.5	112	189	322	529	747	842	963	1051	3	44	167	333	642
	5.0	56	95	166	265	374	421	482	526	5	26	100	200	385
	7.5	37	63	111	177	249	280	321	351	7	19	72	143	275
CRYSTAL (AMMON. SILPHATE)	2.5	226	368	560	890	1236	1354	1522	1632	3	30	131	311	660
	5.0	113	184	280	445	618	677	761	816	5	18	78	186	396
	7.5	75	123	187	297	412	451	507	544	7	13	56	133	283
THOMAS MEAL (BASIC SLAG)	4.0	—	—	571	—	1270	—	1685	—	3	0	25	81	186
	8.0	—	—	286	—	635	—	843	—	5	0	15	49	111
										7	0	11	35	80
WHEAT	3	0	46	129	268					7	0	20	55	115
ALFALFA & CLOVER	3	43	163	340	645					5	26	98	204	387
	7	19	70	146	277					7	19	70	146	277
FESCUE & RYEGRASS	3	0	0	85	161					5	0	0	51	97
	7	0	0	36	69					7	0	0	36	69
RED CLOVER	3	44	167	333	642					5	26	100	200	385
	7	19	72	143	275					7	19	72	143	275
KENTUCKY BLUE GRASS & BERMUDA GRASS	3	30	131	311	660					5	18	78	186	396
	7	13	56	133	283					7	13	56	133	283
SUDAN GRASS	3	0	49	131	271					5	0	25	79	163
	7	0	21	56	116					7	0	21	56	116
BARLEY	3	0	25	81	186					5	0	15	49	111
	7	0	11	35	80					7	0	11	35	80
RYE	3	0	25	81	186					5	0	15	49	111
	7	0	11	35	80					7	0	11	35	80

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In order to spread from both sides (ref. I), "A" and "B" levers must be in the same position, connected through grip handle "C". In order to carry out the spreading only through the left side (ref. II), it is necessary to disconnect the two levers removing the "C" grip handle, to set the lever "B" in the chosen position, given by spreading chart, and to bring the lever "A" towards the higher part (position 1) in order to close the shutter of the right side. In order to spread only to the right side (ref. III) you have to move lever "B" up, (in position 1) and regulate the quantity to spread with lever "A".



HOPPER LOADING

It is advised not to load the hopper manually but by using a lift or suitable mechanical means.



ATTENTION! The hopper must be loaded only after having hitched the spreader to a pull vehicle.

Do not drive for very long distances with a full load and do not put full bags on the material in the hopper during transport to the field or during working, in order not to overload the capacity of the machine and compress the material.



WARNING! During the operations of transport, loading and use of spreading materials, the operator must behave in compliance with the instructions on the labels of the product and in particular with the content of the sentences of risk and the precaution advices.

SPREADING OF THE MATERIAL IN THE FIELD

ATTENTION! - WARNING! The operator during the period of use, maintenance, repair, transport or storing the machine must wear accident prevention shoes and gloves. If it is necessary operator must wear headset, mask and glasses.

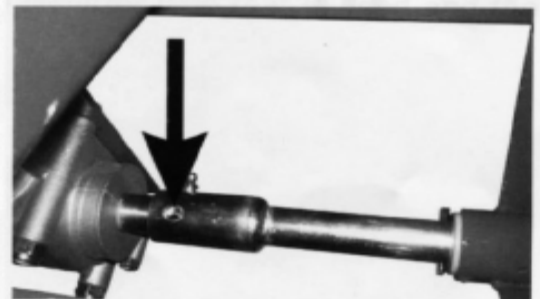


After having hitched spreader to pulling vehicle and carried out necessary precautions it is now possible to begin work.



ATTENTION! Before getting off of pulling vehicle and before every operation of maintenance, set the parking brake, turn off the engine and remove ignition key and wait until all moving parts have completely stopped.

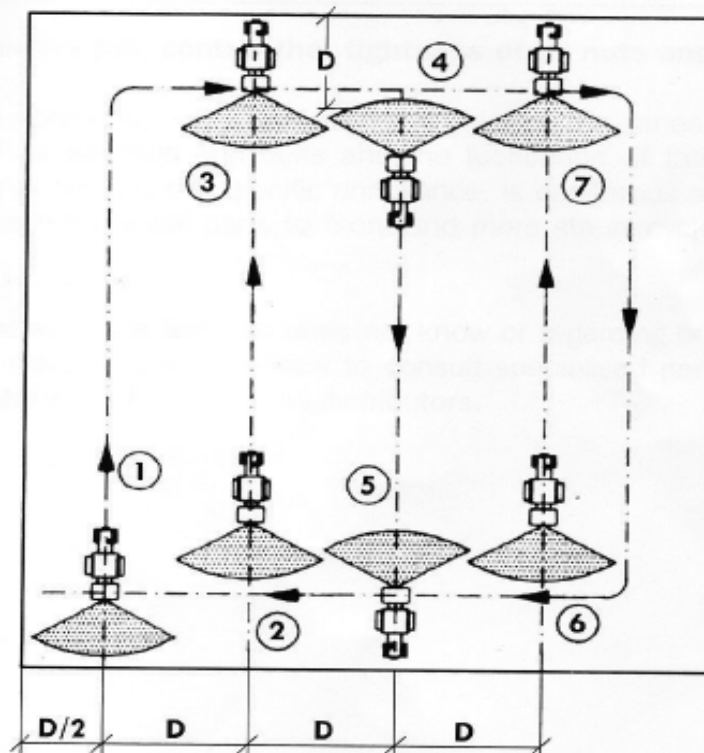
Engage the axle with the pin, so that the spreader can be set in action by the turning wheels, only when you are ready to start spreading.





Various ways exist to spread the material in the field. One of the simplest methods is, as follows:

- Position spreader at the beginning of the field you intend to fertilize or seed, to a distance ($D/2$) that is the half of the working width that is used (point 1);
- Driving in the field distributing the fertilizer or seed on all the perimeter;
- Stop at one distance (D) from the point 1, equivalent to the set working width (point 2);
- Beginning the spreading proceeding in line, straight to point 3.
- Turn and drive a D distance, equal to the working width (point 4);
- Repeat such procedure until all the field is covered.



SPREADING MISTAKES

Mistakes of use

- Drive speed;
- incorrect spreading width;
- The spreading disc is not in a horizontal position compared to the land;
- Drive speed is different to those suggested by the spreading tables, or speed is not suitable for that particular type of material;
- Drive mistakes, (lack of overlap of the spreading surfaces);
- Lack of cleaning of distributing vanes and disc.

Mistakes due to fertilizer

- Fertilizer of poor quality.
- Wet or excessively humid fertilizer;
- Incorrect fertilizer composition or it doesn't correspond to what is declared from the vendor.
- Presence of excessive lumps in fertilizer or with dimensions too large to go through exit.
- Foreign body in the fertilizer.

Mistakes due to the spreader

- Spreading exits clogged;
- Parts of the spreading disc worn or damaged.

GENERAL MAINTENANCE

The ordinary maintenance criteria we suggest are based on the company experience and on the advice and suggestions from customers. A good maintenance schedule keeps the operating costs of the spreader low and allows for a long spreader life.



ATTENTION! Whichever work of maintenance, regulation and cleaning must be carried out on the spreader on the ground (in stable conditions), engine turned off, brake on, ignition key off and removed.

In case of damage, the operator must stop the machine immediately, assess the problem and proceed only after problems are repaired. If pressured water or compressed air is used for the cleaning of the machine, it is necessary to protect yourself with proper glasses and/or protection masks and to remove people and/or animals from near machine. Do not use flammable liquids.



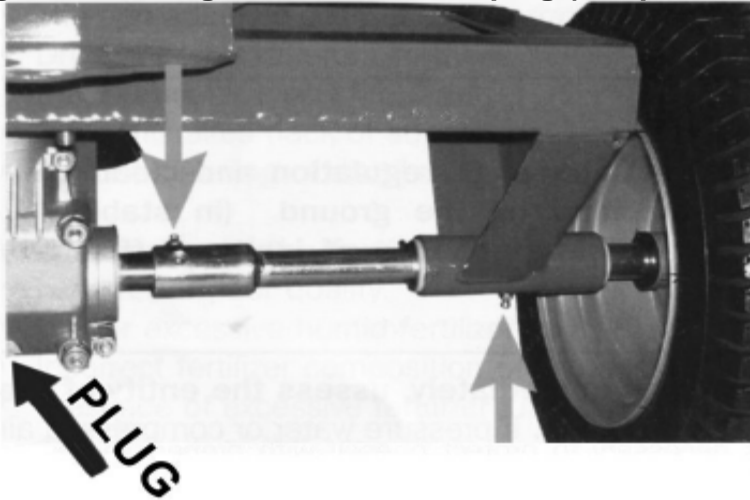
ATTENTION! For maintenance operations, always use the proper Individual Protection Devices (safety shoes and gloves) and to take all the accident protection steps for the type of operation to be performed.

Every 8 hours of operation, check the tightness of all nuts and bolts.

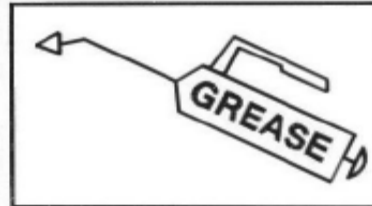
In case of unusual vibrations, check the wear of the vanes and spreading disc, the tightness of all nuts and bolts and lubrication of gearbox. The excessive vibration of the spreader, besides being annoying is dangerous and damaging for the entire structure, subjecting the mechanical parts to more and more stress. It may be necessary to seek the help of specialized personnel regarding some broken parts replacement that are not shown in this manual.

LUBRICATION

Before every use and after every 8 hours of use, grease the spreader. Be sure that the grease zerks are clean from dirt and debris before injecting with grease. Lubricate with (with a grade II type tube grease) at the points shown in the picture, both sides of axle. The unit comes with grease in the gearbox, there is a plug (see picture on left) on the bottom of the gearbox that



a flathead screwdriver will fit if you ever need to add grease. When adding grease to gearbox remove plug and pump full of grease.

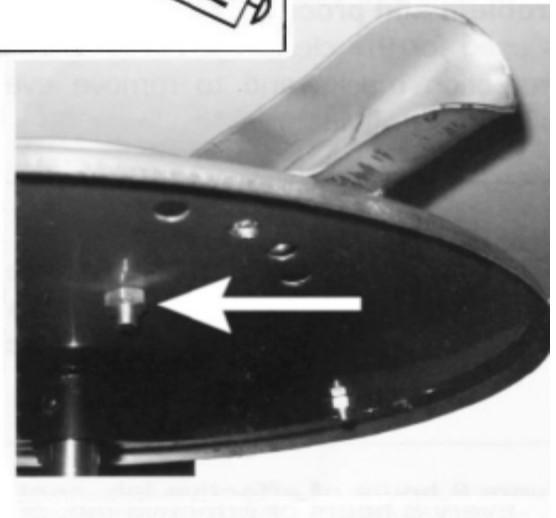


REPLACEMENT OF SPREADER VANES

In case the spreader vanes brake or get damaged, it is necessary to replace them with new ones. Unscrew the nut and replace the damaged vane. The nuts and bolts must be of the same type of those prescribed from the manufacturer.

STORAGE

Don't wait until you are ready to use the spreader to do the repairs and maintenance. It is best to repair and replace the damaged and broken parts before storing after last use. So it will be ready for next use.



Store the spreader in a sheltered place away from atmospheric agents and protect it in order to avoid deteriorations. The fertilizers are generally corrosive. For this reason it is important that no particles of fertilizer remains on any part of the spreader for long periods of time.

Before storing for long periods,

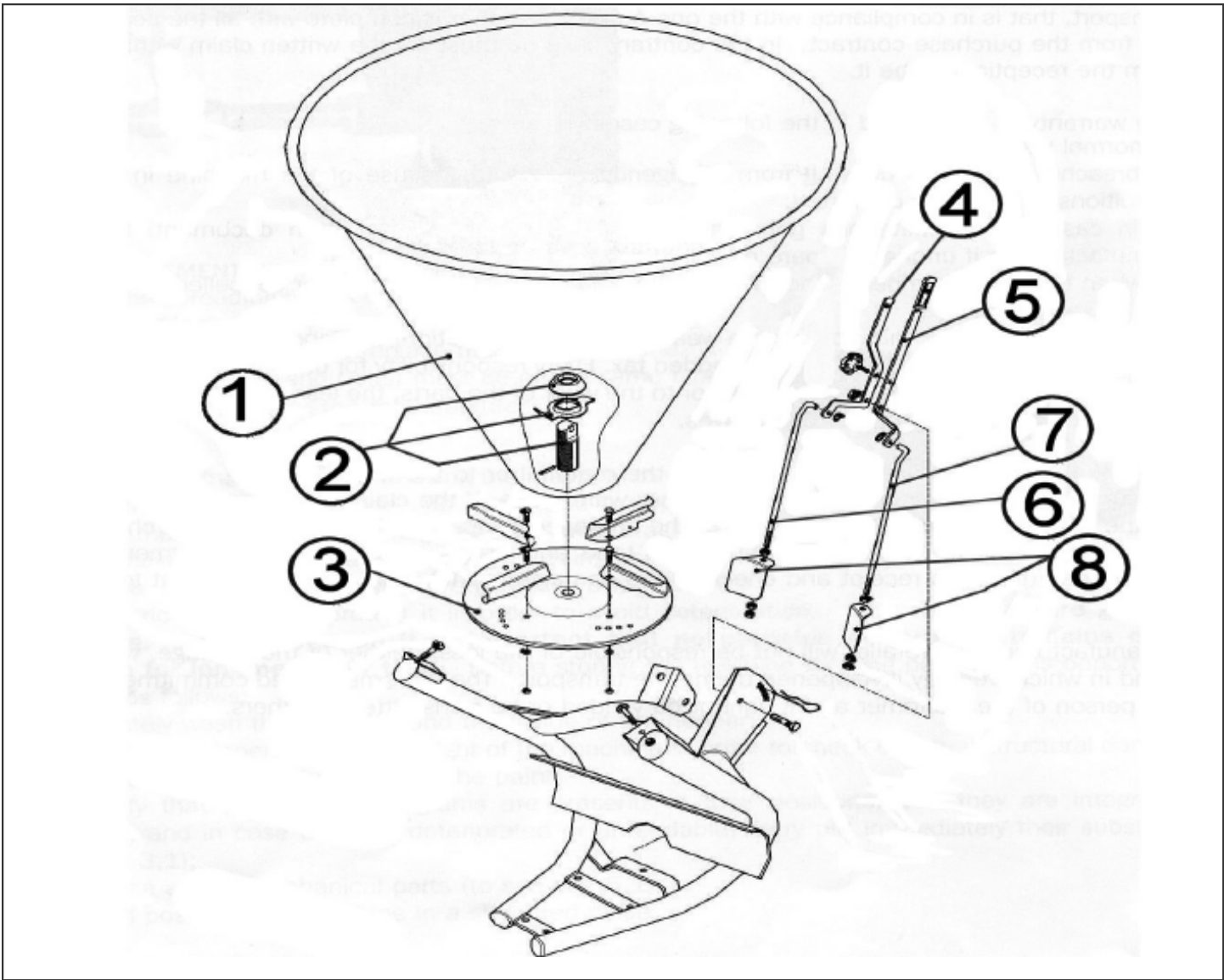
- thoroughly wash the spreader and especially inside the hopper and spreading disc;
- look over the spreader thoroughly and check for structural damages, looking for deep abrasions in the paint;
- verify that the safety signs are on the spreader and readable, In case they are torn and unreadable, replace with new ones.
- grease all mechanical parts.
- store spreader in a sheltered, dry place if possible.

SPARE PARTS

For the replacement of parts the customer must use original parts, ordering them from the manufacturer or an authorized dealer.

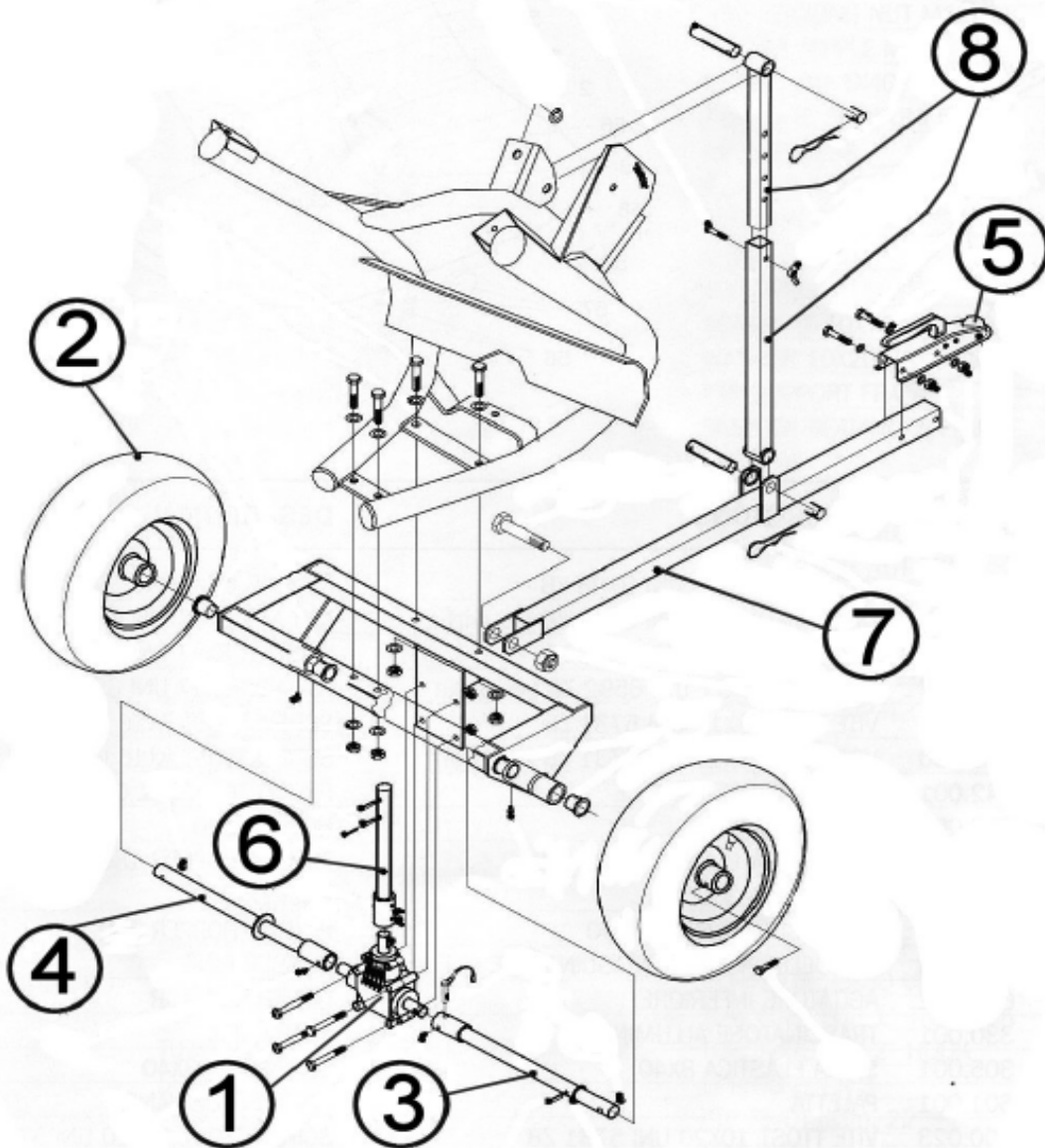
When ordering parts it is necessary to have your model number.

S-ATV-180 PARTS



Ref. No.	Part Name	Part Number
1	Hopper	900124
2	Lower Agitator Kit	509000
3	Spreader Disc w/ Blades	900004
4	Right Hand Shutter Lever - Long	900132
5	Left Hand Shutter Lever - Long	900131
6	Right Hand Lever Tie Rod	900123
7	Left Hand Lever Tie Rod	900121
8	Shutters - (1) Left & (1) Right	509001

S-ATV-180 PARTS



Ref. No.	Part Name	Part Number
1	Gearbox	900125
2	Tire 16 x 6.50- 8	900126
3	Left Axle	900127
4	Right Axle	900128
5	1-7/8' Ball Hitch	195169
6	Output Shaft w/ Bushing	900129
7	Tow Bar for 1-7/8" Hitch	900118
8	Tongue Rod	900119

