

**DOZER BLADE**

**OPERATOR MANUAL**

**SWB**

**Models**  
**SWB08**  
**SWB09**



**Part Number**  
**4350-2160-03**



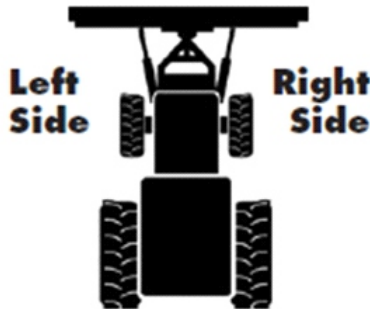
# INTRODUCTION

READ THIS MANUAL carefully to learn how to operate and service your machine correctly. Failure to do so could result in personal injury or equipment damage.

THIS MANUAL MUST BE CONSIDERED a permanent part of your machine and should remain with the machine when you sell it.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalents. Use only correct replacements and fasteners.

LEFT and RIGHT SIDE is determined looking at the direction of the machine.



4350-2160-03 (Rev. 21/08/20)





## **TO OUR CUSTOMERS:**

*Congratulations for acquiring a Garfield product®.*

*We are confident in your excellent decision to purchase Garfield equipment, and are honored to have you as our valued customer.*

*Your dealership shall make the technical pre-delivery of your equipment, and a trained technician shall provide you maintenance and operation instructions contained in this manual. Get in contact with your dealership representative if you have questions regarding your equipment or need specialized help.*

*We recommend that you read this manual before operating this equipment. Therefore, the time you take to learn about all maintenance features, adjustments and recommendations will result in the long and efficient life of your equipment. This equipment is covered by a warranty duration provided by your Garfield authorized dealer at the purchase or technical delivery of the same.*

*Garfield® is a Brand of Tecnomec Agrícola, S.A. de C.V., Aguascalientes, México.*

*The Dozer Blade, Consists of a blade connected to a pivot/main frame assembly. Typically, this assembly mounts to a front hanger bracket along with side or rear axle brackets that are bolted securely onto the frame of your Skid Steer.*

*The blade is attachable/detachable with a simple HQT (Hydraulic Quick-Tach) mounting system and hydraulic hook-up. The Dozer Blade has three hydraulically controlled ranges of motion: lift, angle & tilt.*



**Lift**



**Angle**



**Tilt**

# GENERAL INDEX

INTRODUCTION . . . . .	!!
GENERAL INFORMATION . . . . .	01
SPECIFICATIONS . . . . .	06
SAFETY RULES . . . . .	07
SAFETY DECALS . . . . .	12
OPERATION . . . . .	17
MAINTENANCE . . . . .	25
RECOMMENDATIONS . . . . .	28
SOLUTIONS FOR CERTAIN SETBACKS . . . . .	30
ASSEMBLY . . . . .	31
PARTS INDEX . . . . .	38
BOLT TORQUE CHART . . . . .	47
WARRANTY . . . . .	50

# GENERAL INFORMATION

## OPERATOR'S MANUAL

*If this manual is lost or destroyed, a new copy can be requested to:*

TECNOMEC AGRICOLA S.A. DE C.V.  
Carr. a Paso Blanco, Km 2 No. 400  
Col. Vista Hermosa, Jesús María  
Aguascalientes, México. C.P. 20905  
Tel. 01 (449) 922 47 66, 922 47 60  
Fax 01 (449) 922 47 67

**Dozer Blades SWB08 and SWB09, are designed to work safely, nevertheless, please consider the following:**

Read this manual carefully to understand proper handling and maintenance of your Dozer Blade.

Write down its serial number in the warranty section to recover the machine in case of theft.

Keep this manual in a safe place. Do not keep it in the machine.

A careful operator is the best guarantee against any accident since improper operation of this machinery may cause serious injuries or, even, death.

Before operating please make sure there are no individuals around the Dozer Blade.

Be careful when making adjustments and prevent accidents when handling the components of the Dozer Blade.

To achieve a more efficient and higher-quality fallow, it's important to read and execute the adjustment & operation instructions of your Dozer Blade, since: a well lubricated implement, with the appropriate adjustments, saves time, labor and fuel.

Once finishing your work, clean and inspect your disc Dozer Blade to detect any possible flaw.

## GENERAL INFORMATION

Tecnomec Agrícola offers original spare parts through authorized dealers. Our trained personnel, is well versed on methods to service your equipment. If you need additional information or custom assistance, please contact your Bison authorized dealership or directly to TECNOMEC AGRÍCOLAS.A. DE C.V.

### **YOUR AUTHORIZED DISTRIBUTOR TECNOMEC AGRÍCOLA, S.A. DE C.V.**

IT IS THE POLICY OF TECNOMEC AGRÍCOLA TO CONTINUOUSLY IMPROVE ITS PRODUCTS AND RESERVES THE RIGHT TO MAKE CHANGES TO ITS SPECIFICATIONS OR DESIGN WITHOUT INCURRING IN THE OBLIGATION TO APPLY THEM TO UNITS ALREADY SOLD.

CURRENT MODELS MAY VARY IN SOME DETAILS GIVEN CONTINUOUS IMPROVEMENT TO WHICH OUR PRODUCTS ARE SUBJECT.

\*Some pictures show equipment that is not necessarily included as part of the standard machine.



# INSPECTION LIST

## PRE-DELIVERY INSPECTION MADE BY BISON DEALERSHIP

Once the Dozer Blade has been adjusted completely, check and ensure that it is ready for proper operation prior to deliver to customer. The following checklist is a reminder of checkpoints. Verify that each point is satisfactory and recheck, once all proper adjustments have been made.

- Make sure the Dozer blade has been assembled correctly.
- The bolts are properly tightened. Other hardware has been tightened to the recommended torque.
- Lubricate the points where required.
- The Dozer Blade reverses correctly on both sides.
- The hydraulic cylinder's are positioned correctly.
- Make sure all decals are set correctly. Replace them if necessary.

Assembly Date\_\_\_\_\_ Technician Name and Signature\_\_\_\_\_



# INSPECTION LIST

## DELIVERY BY BISON DEALERSHIP

The following list is an important reminder to be transmitted directly to the customer at the moment the dozer blade is delivered.

Check each point once it was duly explained to the customer.

- Point out to the Customer that useful life of this or any other machine is dependent of proper lubrication as described on its Operator's Manual.
- Hand your Customer the Operator's Manual and fully explain all operations, lubrication and maintenance adjustments.
- Explain the importance of a proper and safe operation of the machine. Stress the importance of labels, since those prevent the operator from hazards due to unsafe operation procedures and conditions.
- Notify the Customer of accessories and options available.
- When the Dozer Blade is transported on roads or highways during the day or night, you should use lights or safety devices to alert other vehicle drivers. Advise the Customer about the local town traffic local rules. We recommend using slow-moving vehicle emblem (SMV).
- Show the Customer how to mount the implement.
- Explain to the Customer the serial number registration of the Dozer Blade, in the blank space provided at the end of the Operator's Manual.
- Fill out the Delivery and Warranty forms, listing the serial number of the implement.
- Explain the Warranty, and perform a release form where the Customer and Distributor agree upon.
- The machine has been delivered ready to use, the customer has been informed about all the operation and care of it.

Delivery Date \_\_\_\_\_ Name and signature \_\_\_\_\_

## OWNER'S REGISTRATION

Name \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Serial Number \_\_\_\_\_

Model Number \_\_\_\_\_

Purchase Date \_\_\_\_\_

# INSPECTION LIST

## POST-SALES INSPECTION

It's advised that the following items are constantly checked during first hours of operation.

- Fully check the machinery and certify there are no damaged parts. Repair or change if necessary.
- Check there are no loose or missing screws.
- If possible, operate the hammer mill to verify it is functioning properly.
- Check the Operator's Manual in full with your Customer; emphasize the importance of a regular and proper lubrication, as well as safety precautions.

Inspection Date \_\_\_\_\_ Name and Signature \_\_\_\_\_

## INSPECTION BEFORE EACH OPERATION

- Lubricate the points that are required daily and those that are required to lubricate at a recommended time.
- Make sure the hardware is not loose and that there are no damaged or missing parts.
- Verify that the stop screws have the same working length.
- Verify Skid Steer hitch is secure.

## SEASONAL INSPECTION

- Make sure the recommended lubrication has been done.
- Make sure that proper operation adjustments are made in the Dozer Blade for best results.
- Make sure the hydraulic sistem and cylinder are working properly.

# SPECIFICATIONS SWB08 / SWB09

Dozer blade developed for pushing, backfilling trenches and levelling jobs in construction, public works, road maintenance, gardening, etc.

The Dozer blade for skid steers has been designed with the most modern methods and built by skilled workers using quality materials.

SPECIFICATIONS		SWB08	SWB09
Angle both ways (hydraulic)	°	30	30
Tilt both ways (hydraulic)	°	15	15
Cushion valve (Damping valve)		ok	ok
Reversible cutting edge		ok	ok
Welded Cylinders		ok	ok
Hardened pins and bushings		ok	ok
Electric controller (Electrovalve with connection wiring.)		ok	ok
Trip override pin		ok	ok
Trip springs for snow removal		ok	ok
Skid Shoes		ok	ok
Universal attach frame for skid steer loader.		ok	ok
Pull angle width	Inches	83	109
Height	Inches	30	30

\* Tecnomec Agrícola, S.A. de C.V. reserves the right to make any changes deemed necessary to the specifications without prior notice.

# SAFETY RULES

## SAFETY RULES

This is the safety-alert symbol which means **ATTENTION! BE ALERT! YOUR SAFETY IS INVOLVED!** This safety alert symbol indicates important safety messages in this manual. When you see this symbol, carefully read the message below and be alert to the possibility of personal injury or death.



## DISTINGUISH SAFETY SIGNS

Whenever you see the words and symbols shown ahead and used in this manual, you **MUST** consider the instructions as they are related to personal safety.

**PELIGRO:** Indicates an imminently hazardous situation which, if not avoided, will result in **DEATH** or **SERIOUS INJURY**.

**WARNING:** Indicates a potentially dangerous situation, if not avoided could result in **DEATH** or **SERIOUS INJURY**.

**CAUTION:** Indicates a potentially hazardous situation which, if not avoided, could result in **MINOR INJURIES**.



**PELIGRO**



**ADVERTENCIA**



**PRECAUCIÓN**

## NOTE THE SAFETY MESSAGES

Before operating this equipment read all safety messages included in this manual and on your machine signs. It is **YOUR** responsibility to read and comprehend the safety section on this manual. Remember that **YOU** are key in following safety messages. Good safety practices not only protect you, but those who are nearby. Study all aspects of this manual and make them part of your safety program. Note that this section of security is only created for this type of equipment. Put into practice other procedures and above all usual precautions, **REMEMBER THAT SAFETY IS YOUR RESPONSIBILITY. YOU CAN AVOID SERIOUS INJURY OR DEATH.** This security section is meant to highlight some of the basic safety situations that may occur during normal operation and maintenance of this equipment, suggesting possible ways to handle these situations. This section does **NOT** replace the safety procedures that appear in other sections of this manual.

**NOTE:** This handbook covers general security practices for this equipment.



# SAFETY RULES

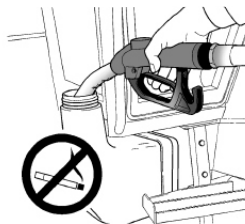
## PASSENGERS ARE NOT ALLOWED IN THE MACHINE

Only the operator is allowed on the machine. Passengers on machine are subject to injury such as being struck by foreign objects and being thrown off of the machine. Passengers also obstruct the operator's view, resulting in the machine being operated in an unsafe manner.



## HANDLE FUEL WITH SECURITY, AVOID FIRE

Handle fuel with care, it is flammable. Do not refuel while smoking or when close to flames or sparks. Always shut down the engine before refueling. Fill the tank outdoors. Prevent fires by keeping the machine free of trash, grease and dirt. Always clean up spilled



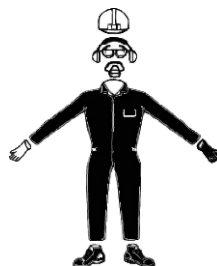
## BE PREPARED IN CASE OF EMERGENCY

Due to the flammable nature of many substances, there must be a fire extinguisher within reach of the operator. Have on hand a first-aid kit for minor cuts and scratches. Keep the local emergency numbers near you.



## WEAR APPROPRIATE CLOTHING

Avoid wearing loose fitting clothing, use proper safety equipment according to the type of work. The safe operation of the equipment requires full attention of the operator. Do not use headphones to listen music while traveling on roads..



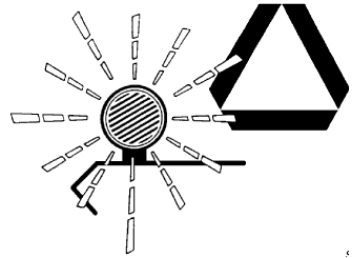
# SAFETY RULES

## USE SAFETY LIGHTS AND ACCESSORIES

Slow vehicles, tractors, dragged or suspended equipment may present a risk to be transported or towed by road and hard to be seen, especially at night. Avoid injuries or death which may result from a collision with other vehicles.

We recommend using lights and safety accessories when driving on public roads. To improve visibility, use all the lights that the tractor has. Installing additional rotating warning lights is recommended. Verify that the pointing devices are in good condition.

Immediately replace safety accessories and signaling devices if lost or damaged..



## SAFE ACCESSORIES STORAGE

The accessories that are not stored properly can fall and cause injury or death.

Store any accessories or equipment safely, avoiding falling objects. Keep away unauthorized minors and adults in the area.



## DOZER BLADE TRANSPORTATION WITH SECURITY

For proper transport of the dozer blade do not use wheels less than 15- 1/2" to 38-5/8"

Transport the dozer blade at a maximum speed of 16 km / h (10 mph)

Be sure to use your seat belt if your tractor has a roll guard.

Reduce speed when transporting the dozer blade on uneven terrain.

Always transport the dozer blade at a speed that allows for proper control.

Use the front weights required on the tractor for good stability and efficient operation.



# SAFETY RULES

## CHECK THE HOSES FOR ANY DAMAGE:

Hydraulic hoses fail due to physical damage, bends, weather and exposure to the weather.

Periodically check the hoses.

Replace damaged hoses.

Avoid high pressure fluids:

Fluids leaking under pressure can penetrate the skin causing serious damage.

Relieve system pressure before making repairs, adjustments or disconnecting any hose. Tighten all connections before applying pressure to the system.

To locate an oil leak use a piece of cardboard, never expose any part of the body. Wear appropriate hand and eye protections.

If an accident occurs, see a doctor immediately. Any fluid inoculated under the skin must be removed surgically in a few hours, otherwise, an infection could cause causing gangrene. Doctors not familiar with this type of injury should refer to a medical source that has knowledge about them.



## SAFE MAINTENANCE

Become familiar with the maintenance procedures before carrying out the work.

The work area must be clean and dry. Do not perform any lubrication, repair or adjustment work of the Plow if it is engaged and with the tractor engine running. Put all tractor controls in neutral and disconnect all electrical functions. Lower the Plow to the ground, make sure there is no pressure in the hydraulic system, stop the tractor engine and remove the ignition key.

Carefully support all the elements of the implement that are raised for maintenance work.

All components must be in good condition and properly installed. Repair damage immediately. Change any worn or broken parts. Keep all implement components free of grease, oil and accumulated dirt.



# SAFETY RULES

## REMOVE PAINT BEFORE WELDING OR HEATING

Avoid inhalation of fume or potentially toxic dust.

Hazardous fumes can be generated when paint is heated by welding or when using a torch.

You must do all work outdoors or in a well-ventilated area.

Dispose all paint and solvent properly, when necessary.

Remove paint before welding or heating.

- If you sand or grind the paint, avoid breathing the dust. Wear a protective mask.

- In case of using solvent, clean the treated surface with water and soap before welding. Remove the solvent, paint containers and other flammable material nearby. Allow the fumes to disperse at least 15 minutes before welding or heating.



## PROTECTION AGAINST NOISE

Prolonged exposure to noise can affect hearing sense.

As a precaution, protect your ears with ear muffs or plugs.





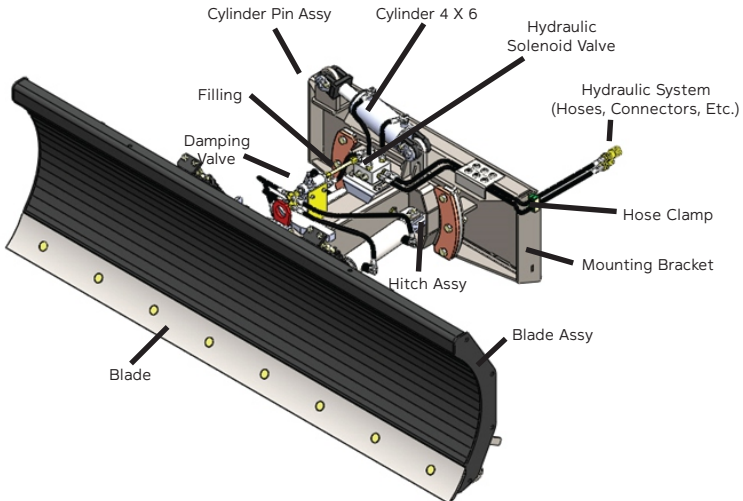
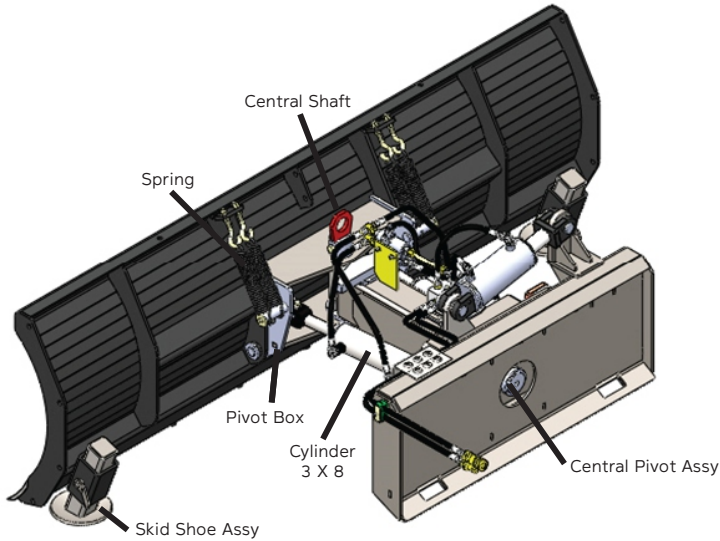
# OPERATION

## GENERAL INFORMATION

Throughout this manual, reference is made to various blade components.

The purpose of this page is to acquaint you with the various names of these components.

This knowledge will be helpful when reading through this manual or when ordering service parts.



# OPERATION

## SKID STEER PREPARATION

### 1. Wheel Spacing

**Important:** To avoid possible damage from over stressing Skid Steer axles, use no tire combination which results in overall width greater than the width of the angle blade.

**Important:** Before beginning operation, turn the wheel fully to the right and left to be sure there is sufficient clearance between the tires and the angling cylinders. If necessary, move the wheels to a wider setting to provide clearance. See your Skid Steer Operator's Manual.

### 2. Rear Wheel Weight and Tire Inflation:

Add necessary rear end weights for efficient operation and safety. Any of the cast-iron weights recommended for your Skid Steer or liquid in the tires, may be used for necessary ballast. Be sure the weight is distributed equally on each rear wheel.

Inflate front and rear tires to proper pressure as recommended in the Skid Steer Operator's Manual for heavy front-mounted implements.

### 3. Checking Hydraulic Oil Level:

Check the oil level in the Skid Steer hydraulic system daily. Refer to your Skid Steer operator's Manual for Instructions. Keep the oil supply up to the proper level. Before checking oil supply, fully extend and retract angle and lift cylinders 3 - 4 times and return the blade to the ground.

## DOZER BLADE PREPARATION

### BEFORE OPERATING THE MACHINE

Perform the following procedure before operating the Dozer Blade:

- Check that the hydraulic cylinder hoses and connections are in good condition.
- Make sure the hydraulic cylinder hoses do not hang below the main frame. Attach them with the hose holder clamp.
- Make sure there are no objects on the Dozer Blade and the Skid Steer.
- With the Dozer Blade hooked to the Skid Steer, raise the Dozer Blades lowly and make sure there is no interference. Then lower the Dozer Blade again.
- Make sure that the lift arms and center arm are properly adjusted (See Length of the lift connections in the Skid Steer preparation section on page 14).
- Check that the screws are properly adjusted. (See the torque table on page 47 and 48).
- Check that there are no loose, damaged or missing parts. Tighten or replenish as necessary.
- Lubricate the Dozer Blade as indicated in the maintenance section on pages 25.
- Make sure that the Dozer Blade reversal mechanism works correctly (See Verification of the reversal mechanism on page 29).

# MAINTENANCE

## LUBRICATION AND MAINTENANCE

**⚠ ATTENTION:** Being hit by the Dozer blade can cause serious injury or death

**⚠ ATTENTION:** To prevent unexpected machine movement: Before lubricating, adjusting or servicing the machine connected to the machine (skid steer), check the following steps:

- 1.- Park the Blade on a flat surface.
- 2.- Place the parking brake and transmission in the parking position.
- 3.- Turn off the Skid steer engine and remove the key.

## GREASE

Choose the most suitable type of grease based on the NLGI consistency and the temperatures that may be in the range until the next fat change.

You can use fats that meet the following standard: NLGI GC-LB consistency classification.

### Alternative and synthetic lubricants.

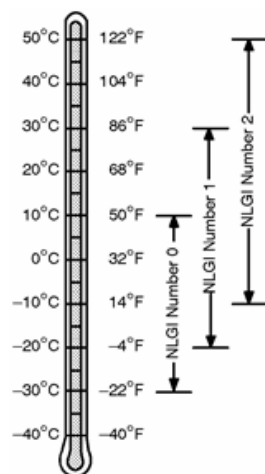
The conditions of certain geographical areas may require the use of lubricants or special lubrication techniques not listed in the operator's manual.

Some lubricants may not be available in the area. In this case, consult your dealer, who will provide you with the most up-to-date information and recommendations.

### Lubricant storage

Your equipment can operate at maximum efficiency, only if you use clean lubricant.

Use clean containers to handle all lubricants and store them in an area protected from dust and moisture.



# MAINTENANCE

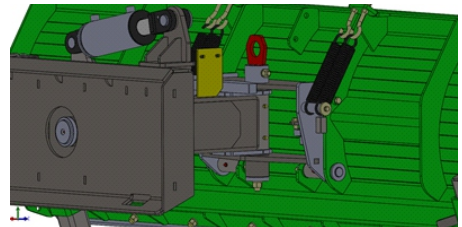
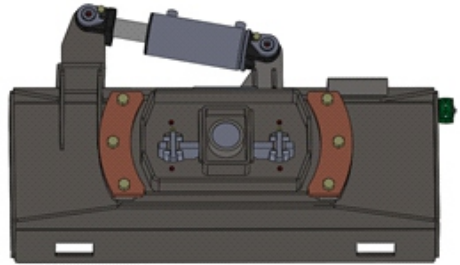
## LUBRICATION: APPLY GREASE IN THE FOLLOWING PLACE:

Apply grease in the indicated places ➡ at 16 hour intervals. Use a mechanical grease injector.

1.- Center pivot assy (one fitting grease)

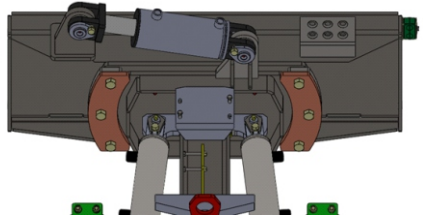


2.- Hitch assy (4 fitting grease)

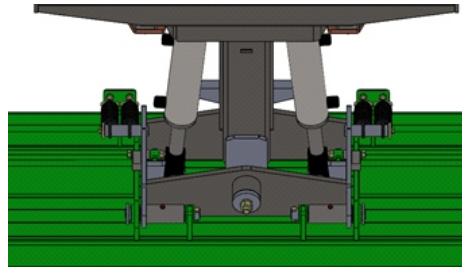


# MAINTENANCE

3.- Two fitting grease for each cilinder (6 fitting grease):



4.- Pivot box (two fittin grease):



## RECOMMENDATIONS

### STORAGE AT THE END OF EACH SEASON

The following storage procedure will help you to keep your blade in top condition. They will also help you get off to a good start the next time your blade is needed. We therefore strongly recommend that you take the extra time to follow these procedures whenever your blade will not be used for an extended period of time.

- 1.- Store the machine in a dry place.
- 2.- Thoroughly clean the Dozer Blade, grass or soil residues will be eventual deposits of moisture and will cause oxidation.
- 3.- Fully lubricate the machine according to the Lubrication section.
- 4.- Paint all the parts where the paint has been scraped off.
- 5.- Check for worn, lost or broken parts. Make a list of the spare parts that you will need in the following season and order them in a timely manner, in this way our distributor can expedite the delivery of your spare parts and install them during the recess time of your machine.
- 6 Replace decals if damaged or in unreadable condition.
7. Tighten all loose nuts and capscrews.
8. Coat the exposed portions of the cylinder rods with grease.
9. Connect the hydraulic couplers together to protect the hydraulic system from contaminates.
10. Touch up all unpainted and exposed areas with paint to prevent rust.
11. Store the blade in a dry and protected place. Leaving the blade outside will materially shorten its life.

**NOTE: Waxing of the front surface of the blade and moldboard will help**

### PREPARATION FOR THE BEGINNING OF EACH SEASON

- 1.- Fully lubricate the machine according to the Lubrication section.
- 2.- Clean the Dozer Blade completely.
- 3.- Tighten all bolts and nuts (See torque values in the torque specifications section).
- 4.- If major moving parts have been changed, give the necessary work settlement.
- 5.- Check that the hydraulic connections, valves and manual controller are in perfect condition.

# SOLUTIONS FOR CERTAIN SETBACKS

PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTION
<b>Blade angling or tilting too slowly.</b>	Cold oil.	Warm oil with engine at idle
	Engine speed too slow.	Open throttle.
	Restriction in diverter valve	Clean or Replace
	Oil leaking past cylinder packings.	Replace cylinder packings or cylinder new
	Electrical cables for the manual control lever are incorrectly connected	Check connection of electrical cables and if necessary correct wiring
<b>Blade fails to maintain angle or tilt.</b>	Broken or leaking hydraulic lines	Replace broken hose and check for leaks
	Oil leaking past cylinder packings	Replace cylinder packings or cylinder new
	Internal leak in diverter valve	Clean or Replace.
	Skid-steer relief too low	Adjust relief as per skidsteer manufacturer's instructions.
<b>Oil heating.</b>	Poor operating technique causing excessive oil flow.	Learn smooth operating methods.
<b>External leaking</b>	Cylinder seals damaged	Replace and Repair.
	Broken or loose hydraulic line.	Check for leaks and repair or replace.
<b>Blade functions in default circuit only.</b>	No electrical power to the blade diverter valve.	Check for proper connections in control box or auxiliary electrical circuit on the skid-steer
<b>Blade functions in default circuit only WITH power</b>	Blade diverter valve coil malfunctioning.	Repair or replace.
	Spool in valve sticking	Clean or replace.
<b>Blade fails to tilt or angle.</b>	Improper hose hook-up.	Check hydraulic diagram.
	Broken hydraulic line.	Check and Replace.
	Hydraulic couplers malfunctioning or noncompatible.	Check and Replace.

# ASSEMBLY

1.- The equipment arrives in a wooden structure protected with a plastic.

2.- Start by removing the protective plastic.



3.- Remove strap and woods upper part.



4.- With a forklift or crane, remove the blade assy from the wooden frame (using a sling).

5.- Cut the wires that support the ties to the wooden frame (use wire cutting pliers).





# ASSEMBLY

6.- Remove each of the white bundles (4 bundles wrapped with white protective material)



7.- Extract the hitch assy using a forklift and slings

**NOTE: be careful not to damage the hydraulic system (move it carefully).**

8.- Extract the mounting bracket, using a forklift and a sling



9.- Place each of the assemblies or parts that you removed in a free and clean place, if necessary use wood on the bottom of the parts to avoid damage to them.



# ASSEMBLY

10.- Remove the white protector from each assembly to facilitate handling, use a cutter to facilitate cutting.

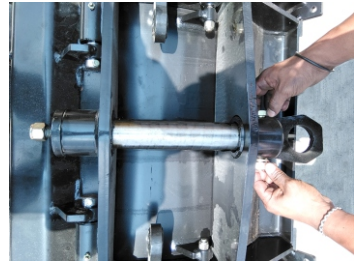
**NOTE: Be careful not to cut yourself and do not cut or damage parts, hoses, electrical cable, etc.**



11.- To start installing, place the "blade bracket" on wood as shown in the following image:



12.- Remove the "central shaft", removing the "5/8" hex bolt and 3/4 hex nut, as shown in the figure



13.- Place the "swing base" assembly on the blade assy, lean on a sling and a forklift or crane to support it, remove the "cylinder pin assy" by removing the 1/2" hex bolt, do this on both cylinders.



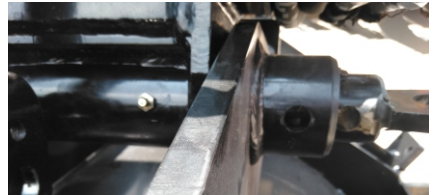
# ASSEMBLY

14.- Place the "hitch assy" on the "pivot box"



15.- Once the two assemblies are oriented, place the "central shaft" to join the two assemblies:

Before inserting the entire "central shaft", orient the hole where the "5/8 hex screw" goes, this will facilitate the assembly.



16.- Install the 5/8 "hex bolt and nut as well as the ?" hex nut.

**IMPORTANT:** the "hitch assy" assembly must always be supported with a sling and hoists.

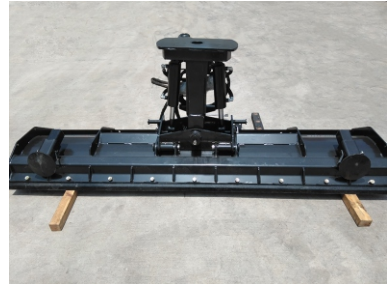


# ASSEMBLY

17.- Place the "cylinder pin assy" to hold the "cylinder 3 x 8" on the "pivot box", also secure it with the  $\frac{1}{2}$ " hex screw and  $\frac{1}{2}$ " lockwasher, do the same on both sides (for both cylinders).



18.- The "hitch assy" must be fixed (vertical) without having to support it.



19.- Take the "central pivot assy" assembly with a sling supporting it with a forklift or crane, as shown in the image:

**IMPORTANT: make sure it is safe for handling, it must also be in a horizontal position, as shown in the image.**



20.- Remove the hexagonal screws, nuts and lockwasher of  $\frac{3}{4}$ " that join the piece "filling" with the assembly "mounting bracket", it is only necessary to do this operation in one end of the "mounting bracket", this to facilitate the coupling of the assembly "mounting bracket" with the "hitch assy".



# ASSEMBLY

21.- Place the "mounting bracket" over the already assembled "hitch assy", do it slowly until the two bases (of both assemblies) coincide.



22.- Since the two bases are in contact, slightly move the "mounting bracket" to the left to fit correctly and to put the piece "filling"



23.- Put the "central pivot assy", do it carefully to avoid damage to your fingers or hands





## ASSEMBLY

24.- In order to install the 5/8" hexagonal screw that joins the "central pivot assy" with the "mounting bracket" and the "hitch assy" it is necessary to temporarily remove the "cylinder pin assy". Do it very carefully to avoid damage!



25.- Insert the 5/8" hex screw to secure the three assemblies and install the hex nut.



26.- Place the "cylinder pin assy", secure it with the 1/2" hexagonal screw and 1/2 locknut. Do it very carefully to avoid damage!



27.- Tilt the equipment in working position, use slings and a forklift, do it carefully to avoid damage or injury.



## ASSEMBLY

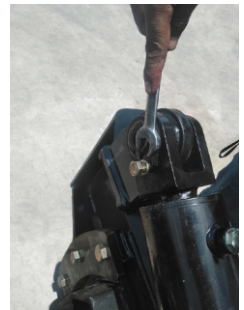
28.- Take the piece "Cylinder 4 x 6" and remove the "Cylinder pin assy" to install cylinder:



29.- Place the "cylinder 4 x 6" according to the following image.



30.- Secure the cylinder through the "cylinder pin assy" and the  $\frac{1}{2}$ " hex screw and  $\frac{1}{2}$ " lock washer.

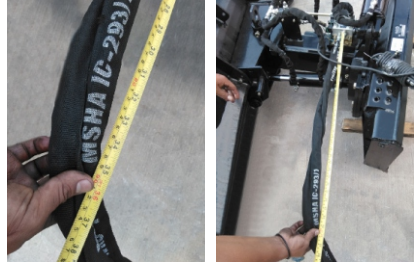


31.- Lay the hydraulic hoses according to the following picture. Tighten the hose connections to prevent oil leaks.



# ASSEMBLY

32.- Extend the main hoses, to hold them with a "hose clamp", the hose must be held at a distance of 36 inches from the base of the valve, as shown in the figure:



33.- Tighten the hose clamp taking care not to damage the hose protector or the hose itself:



34.- Remove the 3/8" hex screws that go in the "pivot box" to be able to place the "Spring"



35.- Place the "spring" with its hooks according to the following images, secure them with the nuts and bolts:

36.- Check that all hydraulic connections and hardware are in correct tightening.



37.- Lastly, check that all the elements that make up the equipment are in their correct place, complete and without damage. Clean the attachment regularly to prevent accumulation of dirt which is more difficult to remove. You may use a pressure washer and a mild detergent. Do not use strong solvents, and do not spray directly at the hydraulic components, or at the labels on the attachment.

Do not store the attachment directly against the ground; place it on blocks of wood or on a pallet, for example. For longer storage periods touch up the paint where needed, grease the lubrication points and oil the visible parts of the hydraulic cylinder shaft to prevent rust damage.





# PARTS INDEX

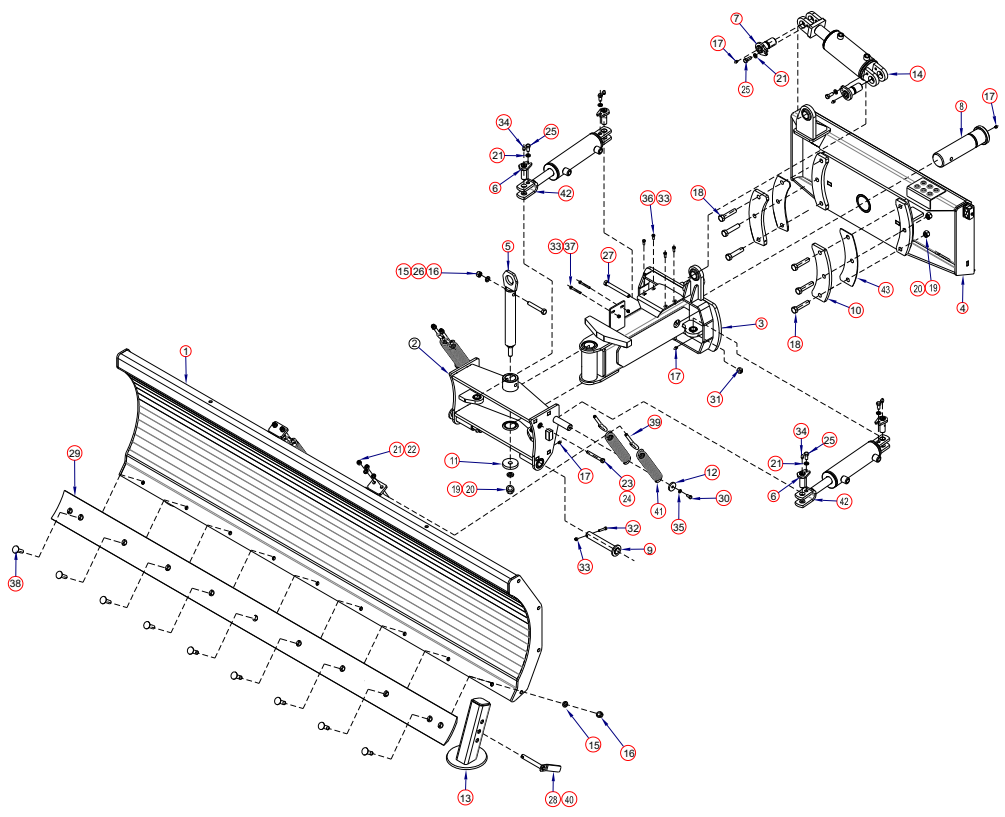
## DOZER BLADE

SWB08

SWB09

MAIN STRUCTURE PARTS DIAGRAM .....	29
LIST OF MAIN STRUCTURE PARTS .....	30
HYDRAULIC SYSTEM PARTS DIAGRAM .....	31
HYDRAULIC SYSTEM PARTS LIST .....	32

# MAIN STRUCTURE PARTS DIAGRAM

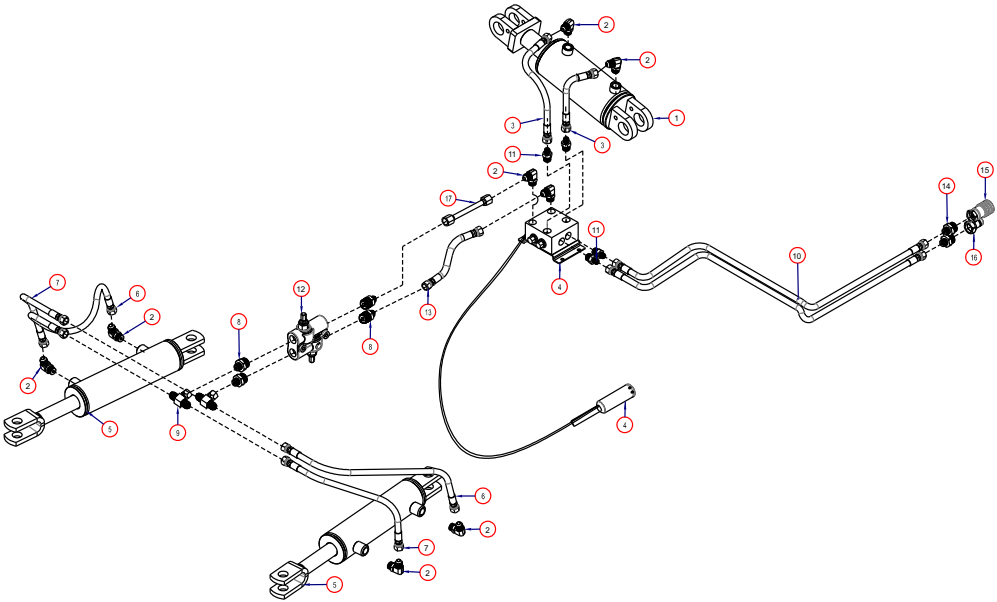


# LIST OF MAIN STRUCTURE PARTS

REF.	No. PARTE	DESCRIPTION	SWB08 (QTY)	SWB09 (QTY)
1	DB08020100W	8 BLADE ASSEMBLY	1	
1	DB09020100W	9 BLADE ASSEMBLY		1
2	DB08020200W	PIVOT BOX	1	1
3	DB08020300W	HITCH ASSEMBLY	1	1
4	DB08010300W	MOUNTING BRACKET	1	1
5	DB08010400W	CENTRAL SHAFT ASSEMBLY	1	1
6	DB08010600W	CYLINDER PIN ASSY	4	4
7	DB08011000W	CYLINDER PIN ASSY	2	2
8	DB08020500W	CENTRAL PIVOT ASSEMBLY	1	1
9	DB08020600W	BOX PIVOT PIN ASSEMBLY	2	2
10	DB08010001C	FIFTH STOP	2	2
11	DB08010002C	FLAT WASHER	1	1
12	DB08020002C	BOLT BUMPER SUPPORT	2	2
13	DB08010500W	SKID SHOE	2	2
14	4110-4061-01	CYLINDER 4 X 6 X 2	1	1
15	*	LOCK WASHER, 5/8	9	10
16	*	HEX NUT, 5/8 - 11	9	10
17	*	GREASE ZERK FITTING, 1/8	9	9
18	*	BOLT, 3/4 X 3 HHCS Gr5	6	6
19	*	LOCK WASHER, 3/4	7	7
20	*	HEX NUT, 3/4 - 10	7	7
21	*	LOCK WASHER, 1/2	10	10
22	*	HEX NUT, 1/2 - 13	8	8
23	*	BOLT, 1/2 X 4 HHCS Gr5	2	2
24	*	LOCK NUT, 1/2 - 13	2	2
25	*	BOLT, 1/2 X 1 HHCS Gr5	6	6
26	*	BOLT, 5/8 X 4 HHCS Gr5	1	1
27	*	BOLT, 5/8 X 6 HHCS Gr5	1	1
28	GB99010300W	SKID SHOES PIN	2	2
29	4370-1070-00	8 FT. CUTTING EDGE	1	
29	4370-1080-00	9 FT. CUTTING EDGE		1
30	*	BOLT, 3/8 X 3/4 HHCS Gr5	2	2
31	*	LOCK NUT, 5/8 - 11	1	1
32	*	BOLT, 5/16 X 1 3/4 HHCS Gr5	2	2
33	*	LOCK NUT, 5/16 - 18	8	8
34	*	90° GREASE ZERK FITTING, 1/8	6	6
35	*	LOCK WASHER, 3/8	2	2
36	*	BOLT, 5/16 X 3/4 HHCS Gr5	4	4
37	*	BOLT, 5/16 X 2 1/2 HHCS Gr8	2	2
38	*	PLOW BOLT, 5/8 X 2 Gr5	8	9
39	4210-1630-99	CLAMP ROD, 1/2 X 5.43	4	4
40	*	KLIK PIN, 3/8	2	2
41	4360-0034-00	TENSION SPRING, 0.31 X 11.5	4	4
42	4110-4045-01	CYLINDER 3 X 8 X 1 1/2	2	2
43	DB08010004C	SPACER	2	2

\* Standard Hardware; Obtain Locally

# HYDRAULIC SYSTEM PARTS DIAGRAM



# HYDRAULIC SYSTEM PARTS DIAGRAM

REF.	No. PARTE	DESCRIPTION	SWB08 (QTY)	SWB09 (QTY)
1	4110-4061-01	CYLINDER 4 X 6 X 2	1	1
2	4120-1159-50	ELBOW FITTING, 8ORBM-8JICM 90	8	8
3	4430-2492-48	HOSE, 6M3K-8JICF-8JICF-0.48	2	2
4	4110-1080-02	SOLENOID VALVE	1	1
6	4430-2492-84	HOSE, 6M3K-8JICF-8JICF-0.84	2	2
7	4430-2491-60	HOSE, 6M3K-8JICF-8JICF-0.60	2	2
10	4430-2493-00	HOSE, 6M3K-8JICF-8JICF-2.00	2	2
11	4120-1018-50	FITTING, 8JICM-8ORBM	4	4
12	4110-3035-00	CUSHION VALVE	1	1
14	4120-1030-50	FITTING, 8JICM-12ORBM	2	2
15	4110-6030-00	FEMALE QUICK COUPLER	1	1
16	4110-6031-00	MALE QUICK COUPLER	1	1
17	4120-1028-35	FITTING, 8JICM-12NPTM	4	4
18	4120-1180-30	TEE FITTING, 8JICM-8JICM-8JICF	2	2
19	4430-2491-32	HOSE, 6M3K-8JICF-8JICF-0.32	1	1
20	DB08020700A	TUBING HYDRAULIC LINE	1	1
21	4110-4045-01	CYLINDER 3 X 8 X 1 1/2	2	2

# TORQUE SCREW SPECIFICATIONS

## NON-METRIC BOLTS TIGHTENING SETTINGS (IN.)

Tamaño del perno	Grado 2		Grado 5		Grado 8	
	N·m	LB·FT	N·m	LB·FT	N·m	LB·FT
5/16-18	15	11	24	17	33	25
3/8-16	27	20	42	31	59	44
7/16-14	43	32	67	49	95	70
1/2-13	66	49	105	76	145	105
9/16-12	95	70	150	110	210	155
5/8-11	130	97	205	150	285	210
3/4-10	235	170	360	265	510	375
7/8-9	225	165	585	430	820	605
1-8	340	250	875	645	1230	910

### Identificación de pernos estándar



Grado 2  
Sin marcas



Grado 5  
3 Marcas



Grado 8  
6 Marcas

### GENERAL INFORMATION

#### Screw's Torque Values

Always replace bolts with others of the same grade. Metric screws have the class number marked on the head.

Tighten the screws according to the above table, unless the Operator's Manual indicates something different. Do not over tighten the screws, since this may cause failure during operation.

NOTE: DO NOT use these values if a different torque value, for an exact application, is specified. The given values are for general usage. Check periodically the tightening of the screws.

# TORQUE SCREW SPECIFICATIONS

## METRIC BOLTS TIGHTENING SETTINGS

Tamaño de pernos	Clase 5.8		Clase 8.8		Clase 10.9	
	N·m	LB·FT	N·m	LB·FT	N·m	LB·FT
M 5 x 0.8	4	3	6	5	9	7
M 6 x 1	7	5	11	8	15	11
M 8 x 1.25	17	12	26	19	36	27
M 10 x 1.5	33	24	52	39	72	53
M 12 x 1.75	58	42	91	67	125	93
M 14 x 2	92	68	145	105	200	150
M 16 x 2	145	105	225	165	315	230
M 18 x 2.5	195	145	310	230	405	300
M 20 x 2.5	280	205	440	325	610	450
M 24 X 3	480	355	760	560	1050	780

Identifique los pernos métricos por el número de la clase sellado en la cabeza o en la tuerca. Los números más altos indican mayor fuerza.

### GENERAL INFORMATION

#### Screw's Torque Values

Always replace bolts with others of the same grade. Metric screws have the class number marked on the head.

Tighten the screws according to the above table, unless the Operator's Manual indicates something different. Do not over tighten the screws, since this may cause failure during operation.

NOTE: DO NOT use these values if a different torque value, for an exact application, is specified. The given values are for general usage. Check periodically the tightening of the screws.

# THEFT PREVENTION

## RECORD THE PRODUCT IDENTIFICATION NUMBER (P.I.N.)

The Serial Number Plate of the "Dozer blade" is located in the "Mounting Bracket" part.

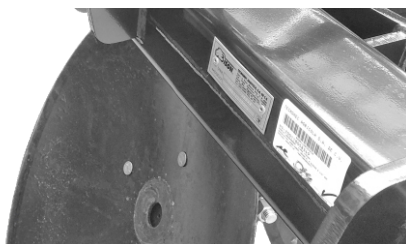
Write the serial number in the space in the box that appears on the guarantees section.

Mark the machine with your own unique system numbering.

Record the Product Identification Number (PIN) of the machine, as well as the main components. Include numbers (PIN) in all insurance documents, financing and warranty.

Your dealer will need this information to give you fast and efficient service when you order spare parts.

**IMPORTANT: Whenever necessary order spare parts for your Dozer Blade, it is It is important that you fully provide the 10 characters of the Serial Number. It's imperative meet this requirement.**



**TECNOMEC AGRICOLA, S.A. DE C.V.**  
Carr. a Paso Blanco Km. 2 # 400  
Col. Vista Hermosa C.P. 20900  
Jesús Ma. Aguascalientes, MEX  
Tel. (52) (449) 922 47 66 / 92 BISON  
Fax (52) (449) 922 47 67

No. SERIE

MODELO



## LIMITED WARRANTY

Please enter information below and save for future reference.

<b>AUTHORIZED DEALERSHIP:</b>	_____	<b>SALESMAN NAME:</b>	_____
<b>MACHINE MODEL:</b>	_____	<b>SERIAL NUMBER:</b>	_____
<b>END CUSTOMER NAME:</b>	_____	<b>PURCHASE DATE:</b>	____/____/____
<b>ADDRESS:</b>	_____	<b>PHONE NUMBER:</b>	(____) _____
	_____	<b>EMAIL:</b>	_____

**A. GENERAL PROVISIONS** - The warranties described below are provided by Tecnomec Agrícola, S.A. de C.V. (TECNOMECE) to the original purchasers of new agricultural products from TECNOMECE or authorized dealers for a period of one (1) year under agricultural use. Replacement or repair parts installed in the equipment covered by this limited warranty are warranted for ninety (90) days from the date of purchase of such part or the expiration of the applicable new equipment warranty period, whichever occurs later. Under these warranties, TECNOMECE will repair or replace, at its discretion, any covered part which is found to be defective in material or workmanship during the applicable warranty term. Warranty service must be performed by an authorized BISON dealer, which will use only new or remanufactured parts or components furnished by TECNOMECE.

Warranty service will be performed without charge to the purchaser for parts or labor. The purchaser will be responsible, however, for any service call and/ or transportation of product to and from the dealer's or service center's place of business, for any premium charged for overtime labor requested by the purchaser, and for any service and/or maintenance not directly related to any defect covered under the warranties below. At TECNOMECE's request, dealer will be responsible for returning the parts to TECNOMECE for evaluation.

**B. WHAT IS WARRANTED** - All parts of any new TECNOMECE product. TECNOMECE makes no warranty, express or implied, with respect to engines, batteries, tires or other parts or accessories not manufactured by TECNOMECE. Warranties for these items, if any, are provided separately by their respective manufacturers.

Each warranty term begins on the date of product delivery to the purchaser.

**C. WHAT IS NOT WARRANTED** TECNOMECE IS NOT RESPONSIBLE FOR THE FOLLOWING : (1) Used Products; (2) Any product that has been altered, modified, or used in connection with attachments in ways not approved by TECNOMECE; (3) Depreciation or damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow the product's OPERATOR MANUAL instructions, misuse, lack of proper protection during storage, or accident; (4) Normal maintenance parts and service, including, but not limited to, oil filters, coolants and conditioners, cutting parts, belts, brake and clutch linings.

Incidental or consequential losses, damages or expenses, arising directly or indirectly from the product, whether such claim is based upon breach of contract, breach of warranty, negligence, strict liability in tort or any other legal theory. Without limiting the generality of the foregoing, TECNOMECE specifically disclaims responsibility for any damages relating to (i) lost profits, business, revenues or goodwill; (ii) loss of crops; (iii) loss because of delay in harvesting; (iv) any expense or loss incurred for labor, supplies, substitute machinery or rental; or (v) any other type of damage to property or economic loss.

This Warranty is extended solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer this product to a third party, this Warranty does not transfer to the third party purchaser in any way. There are no third party beneficiaries of this Warranty.

**D. SECURING WARRANTY SERVICE** - To secure warranty services, the purchaser must (1) report the product defect to an authorized dealer and request repair within the applicable warranty term, (2) present evidence of the warranty start date, and (3) make the product available to the dealer or service center within 45 days.

**E. NO IMPLIED WARRANTY OR OTHER REMEDY - AGRICULTURAL PRODUCTS** - Where permitted by law, neither TECNOMECE nor any company affiliated with it makes any warranties, representations, or promises, express or implied as to the quality or performance, or freedom from defect of its agricultural products other than those set forth above, and NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE. IN NO EVENT WILL THE DEALER, TECNOMECE OR ANY COMPANY AFFILIATED WITH TECNOMECE BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

The only remedies the purchaser has in connection with the breach of performance of any warranty on TECNOMECE agricultural products are those set forth above.

**F. NO WARRANTY MODIFICATION** - No agent, representative, authorized dealer, distributor, service center, serviceperson, salesperson, other than an officer from TECNOMECE is authorized to alter, modify, or enlarge this Warranty.

**G.** If further information is needed; contact your selling dealer or the nearest branch office of TECNOMECE

**H. This Warranty is effective only if the warranty registration is electronically submitted to TECNOMECE by dealer within ten (10) days of retail purchase date.**

**For warranty services contact your BISON selling dealer.**

**PART NUMBER**  
**4350-2160-03**





