

# OWNER'S/ OPERATOR'S MANUAL

## MODEL NO.'s

**FC-5**

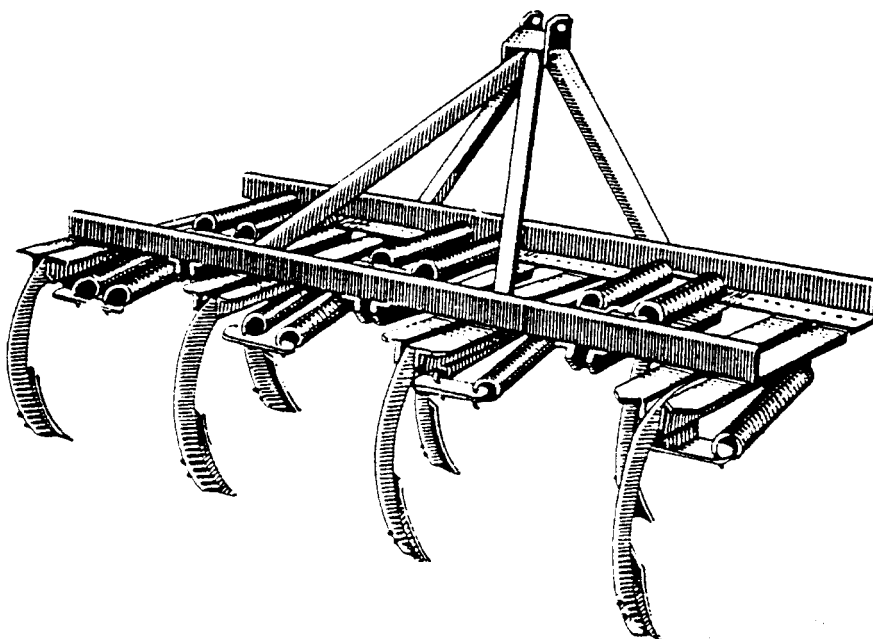
**FC-7**

**FC-9**

### **CAUTION**

For Safe Operation  
Read Rules And  
Instructions Carefully

SINO LEEINGLES, PIDA AYUDA  
A AIGUIEN QUE SI LO LEA  
PARA QUE LE TRADUZCA LAS  
MEDIDAS DE SEGURIDAD.



# FC SERIES FIELD CULTIVATOR

**Safety Instructions**  
**Tractor Preparation**  
**Operating Instructions**

**Assembly & Mounting**  
**Maintenance**  
**Repair Parts**

### **CAUTION**

#### **THE FOLLOWING SAFETY PRECAUTIONS SHOULD BE THOROUGHLY UNDERSTOOD BEFORE ATTEMPTING TO BEGIN ASSEMBLING THIS MACHINE**

1. Select an area for assembly that is clean and free of any debris which might cause persons working on the assembly to trip.
2. Do not lift heavy parts or assemblies. Use crane, jack, tackle, fork trucks or other mechanical devices.
3. Preview the assembly instructions in your operator's manual before proceeding further.
4. If the assembly instructions call for parts or assemblies to be blocked up, use only blocking material that is in good condition and is capable of handling the weight of the assembly to be blocked. Also insure that the blocking material is on a clean, dry surface.
5. Never put hands, or any part of body, under blocked up assemblies if at all possible.
6. After completing assembly, thoroughly inspect the machine to be sure that all nuts, bolts, hydraulic fittings or any other fastened assemblies have been thoroughly tightened.
7. Before operating the machine, thoroughly read the operation section of your operator's manual.
8. Before operating, read the maintenance section of your operator's manual to be sure that any parts requiring lubrication, such as gearboxes, are full, to avoid any possible damage.
9. **Before operating equipment – If you have any questions regarding the proper assembly or operation, contact your dealer or representative.**

# To the Owner/Operator/Dealer

All implements with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes the potential hazards and follows reasonable safety practices. The manufacturer has designed this implement to be used with all its safety equipment properly attached to minimize the chance of accidents.

## BEFORE YOU START!!

**Read the safety messages on the implement and shown in your manual.**

**Observe the rules of safety and common sense!**



### THIS SYMBOL MEANS

- ATTENTION!
- BECOME ALERT!
- YOUR SAFETY IS INVOLVED!

THIS SAFETY ALERT SYMBOL IDENTIFIES IMPORTANT SAFETY WARNING MESSAGES. CAREFULLY READ EACH WARNING MESSAGE THAT FOLLOWS. FAILURE TO UNDERSTAND AND OBEY A SAFETY WARNING, OR RECOGNIZE A SAFETY HAZARD, COULD RESULT IN AN INJURY OR DEATH TO YOU OR OTHERS AROUND YOU. THE OPERATOR IS ULTIMATELY RESPONSIBLE FOR THE SAFETY OF HIMSELF, AS WELL AS OTHERS, IN THE OPERATING AREA OF THE TRACTOR AND ATTACHED EQUIPMENT.

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## UNDERSTAND SIGNAL WORDS

Note the use of the signal words **DANGER**, **WARNING** and **CAUTION** with the safety messages. The appropriate signal word for each has been selected using the following guidelines:

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

**WARNING:** Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, 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 practices.

If you have questions not answered in this manual or require additional copies or the manual is damaged, please contact your dealer or the manufacturer directly.

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## IMPORTANT SAFETY INFORMATION!














Working with unfamiliar equipment can lead to careless injuries. Read this manual, and the manual for your tractor, before assembly or operating, to acquaint yourself with the machines. It is the implement owner's responsibility, if this machine is used by any person other than yourself, is loaned or rented, to make certain that the operator, prior to operating:

1. Reads and understands the operator's manuals.
2. Is instructed in safe and proper use.



The use of this equipment is subject to certain hazards which cannot be protected against by mechanical means or product design. All operators of this equipment must read and understand this entire manual, paying particular attention to safety and operating instructions, prior to using. If there is something in this manual you do not understand, ask your supervisor, or your dealer, to explain it to you.

## SAFETY INSTRUCTIONS (continued)

-  All equipment is potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes potential hazards and follows reasonable safety practices.
-  When the use of hand tools is required to perform any part of assembly, installation, adjustment, maintaining, repairing, removal, or moving the implement, be sure the tools used are designed and recommended by the tool manufacturer for that specific task.
-  Personal protection equipment including safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, or moving the implement.
-  Always use two people to handle heavy, unwieldy components during assembly, installation, removal, or moving the implement.
-  Never place any part of your body where it would be in danger if movement should occur during assembly, installation, operation, maintaining, repairing, removal, or moving the implement.
-  Never place yourself between the tractor and implement while implement is in operation.
-  Do not work under a raised implement unless it is securely blocked or held in position. Do not depend on the tractor hydraulic system to hold the implement in place.
-  A heavy load can cause instability of the tractor. Use extreme care during travel. Slow down on turns and watch out for bumps. The tractor may need front counter-weights to counter-balance the weight of the implement.
-  Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription medications.
-  Do not allow others to ride on the tractor with an operator. Riders are subject to injury such as being struck by foreign objects or being thrown off. Riders obstruct the operator's view resulting in unsafe operation. **Never allow anyone to ride on the implement!**
-  Do not allow anyone who is not familiar with the safety rules and operation instructions to use this implement.
-  Never allow children to operate or be around equipment.
-  Use stabilizer bars, adjustable sway chains, or sway blocks on your tractor lift arms to keep the implement from swinging side to side. Adjust as tightly as practical for best performance.

## SAFETY INSTRUCTIONS (continued)



Keep alert and watch the front as well as the rear when working with equipment.



When maneuvering close to buildings or passing through narrow areas, be sure to allow sufficient clearance for the implement and tractor.



Do not operate close to ditches or creeks. Slow down when operating over rough ground.



Always be sure the implement is in the fully raised position when in transport.



When removing, or adjusting equipment, be sure that your feet are never under the implement.



Be careful to avoid catching the implements on stumps or other immovable objects.



Use extra care when working on slopes.



Avoid excessive speed during operation.



Make implement adjustments only when the implement is attached to the tractor.



Before you operate the field cultivator, check over all pins, bolts and connections to be sure all are securely in place. Replace any damaged or worn parts immediately.



Always ease the tractor into the load. It may be necessary to raise implement slightly and then lower to desired working depth when tractor is moving.



Watch for and avoid hidden obstructions, i.e., buried pipes, rocks, concrete piers, uneven concrete slabs, stumps, etc., when operating equipment.



Never operate tractor and implement under trees with low hanging limbs. Operators can be knocked off the tractor and then run over by the implement.



Operating spring loaded cultivator shanks may suddenly fling rocks and clods. Keep all bystanders 25 feet away and operator must wear safety glasses.



When driving the tractor and equipment on the road or highway under 20 mph (32 kph) at night or during the day, use flashing amber warning lights and a slow moving vehicle (SMV) identification emblem.



Reduce speed when transporting mounted implements to avoid bouncing and momentary loss of steering control.



Do not exceed 20 mph (32 kph). Reduce speed on rough roads and surfaces.

# INSTRUCTIONS

## TRACTOR REQUIREMENTS AND PREPARATION

The model FC Field Cultivators can be used on both Category I tractors (30 hp and larger) and Category II tractors.

Model	# Shanks	Approx. H.P. Req.
FC-5	5	30 - 35
FC-7	7	35 - 45
FC-9	9	45 - 60

NOTE: Actual horsepower required will depend on type of soil, operating depth, soil moisture, and operating speed.

It is recommended that only tractors with wide front axles be used with this implement. Tricycle front wheel arrangements are inherently unstable and tractor roll-over accidents are more likely to occur.

The tractor also needs lift arm stabilizer bars or sway blocks to control side movement of the implement.

Check the tractor's 3 pt. hydraulic system. Refer to your tractor operator's manual or dealer for any adjustments necessary to put the hydraulic system in good working order. (I&T shop manuals will list most specifications and adjustment instructions – available from most farm equipment dealers.)

Be sure tires and rims are in good condition. Inflate tires to the proper recommended air pressure.

It is recommended that a ROPS (Roll-Over Protection Structure) and a seat belt be installed on all tractors. Contact your local dealer for a ROPS for your tractor.



**Be sure tractor is in good condition. Read all the safety precautions and make sure all tractor operators are familiar with the safety rules of operation.**

The operator is responsible for the safe operation of the implement. The operator must be properly trained. Operators should be familiar with the implement and tractor and all safety practices before starting operation. Read all safety rules.

## ASSEMBLY AND MOUNTING

Refer to the repair parts drawing in this manual to get an idea of how the parts need to be assembled for each individual implement model.

The holes in the frame angle will allow the shanks to be located at different spacing.

NOTE: All shanks must be symmetrically spaced.

Insert the draw pins into the ball sockets in the lower lift arms of the tractor 3 pt. hitch. Lock in place with linch pins (not furnished.)

Attach the mast of the 3 pt. main frame by installing the tractor center link (toplink) with a topline pin (not furnished.)

Adjust the topline assembly to obtain the correct angle of the implement. Check the tractor 3 pt. lift arms and adjust to level the implement from side to side.



**Read manual before operating.**

## SAFETY TRAINING

- Know your controls and how to stop tractor and engine quickly in an emergency. **READ THIS MANUAL AND THE ONE PROVIDED WITH YOUR TRACTOR.**
- To avoid accident or injury, do not allow anyone to operate this equipment without proper instructions. Any person who operates this equipment must be instructed in and be capable of the safe operation of the tractor implement and all controls.
- Do not allow children to operate this machine.



**A heavy load can cause instability in driving a tractor. Make sure the front of the tractor is properly counterbalanced with weights. Always drive slowly - especially around turns. An unstable tractor could steer badly and possibly tip over, causing injury or death.**

# INSTRUCTIONS (continued)

## OPERATION

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The designed and tested safety of this machine depends on it being operated within the limitations as explained in this manual. Be familiar with and follow all safety rules in the manual, on the implement and on the tractor.

The safe operation of this machine is the responsibility of the owner/operator. The operator should be familiar with the field cultivator and tractor and all safety practices before starting operation. Read the safety rules.

Never let anyone stand between the rear of the tractor and the implement while the tractor is backing up to connect to the implement. Always stand to the side until tractor has come to a complete stop and the brakes set or the tractor shift placed in "PARK".

Attaching the field cultivator to the tractor increases the overall length of the working unit. Allow additional clearance for the implement to swing when turning.

Check for ditches, stumps, holes, or other obstacles that could upset tractor or damage cultivator.

For proper operation, level the field cultivator by adjusting the tractor linkage. This will assure that the cultivator will run level.

The tractor 3 pt. hydraulic lift system should be set to transfer most of the field cultivator's weight and draft to the tractor to maximize traction (There may not be a 3 pt. Draft control on some small or older tractors – Refer to Tractor Owner's Manual.)

Set hydraulic lift control arm stop for the operating depth.

The deeper you operate the cultivator, the more tractor horsepower and traction will be required.

In very hard soil or in dry conditions (or with a small tractor), it may not be possible to operate the cultivator at the desired depth. In these cases, it may be necessary to make several passes. (Increase the depth with each pass until the desired depth is reached.)

The best "shattering" action will be realized at forward speed of 2½ to 4 miles per hour. It is not recommended to exceed 5 MPH as it will only increase fuel consumption, horsepower required, and wear on the tractor and implement.

NOTE: Do not make turns with the field cultivator in the ground. Damage to cultivator will occur. Always raise implement and lower after turn is made.

Do not attempt to operate the field cultivator when soil is wet. Wet soil will not shatter or break up and you will compact the soil.

It is suggested that when you make several passes across a field that you operate the field cultivator diagonal to the direction of the first pass.

The points of the field cultivator are reversible. When the first point wears back, remove the bolts, reverse the point and reinstall the bolts.

Do not let the point wear back so far that wear occurs on the lower shank body.

## TROUBLE – SHOOTING

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### **PROBLEM: Tractor will not pull implement**

1. Insufficient horsepower – Use larger, heavier tractor.
2. Soil too wet – Let soil dry.
3. Soil too hard and dry – Wait for rain.
4. Points too dull – Replace points.
5. Insufficient traction – (See tire slippage below)
6. Attempting to operate too deep – Reduce depth setting and make several passes, gradually increasing depth.

### **PROBLEM: Excessive tractor tire slippage**

1. Tractor too small – Use larger, heavier tractor.
2. Insufficient traction – Dual rear tire or add ballast, increase draft control, operate at shallower depth.
3. Operating too deep – See #6 above.

### **PROBLEM: Excessive point wear**

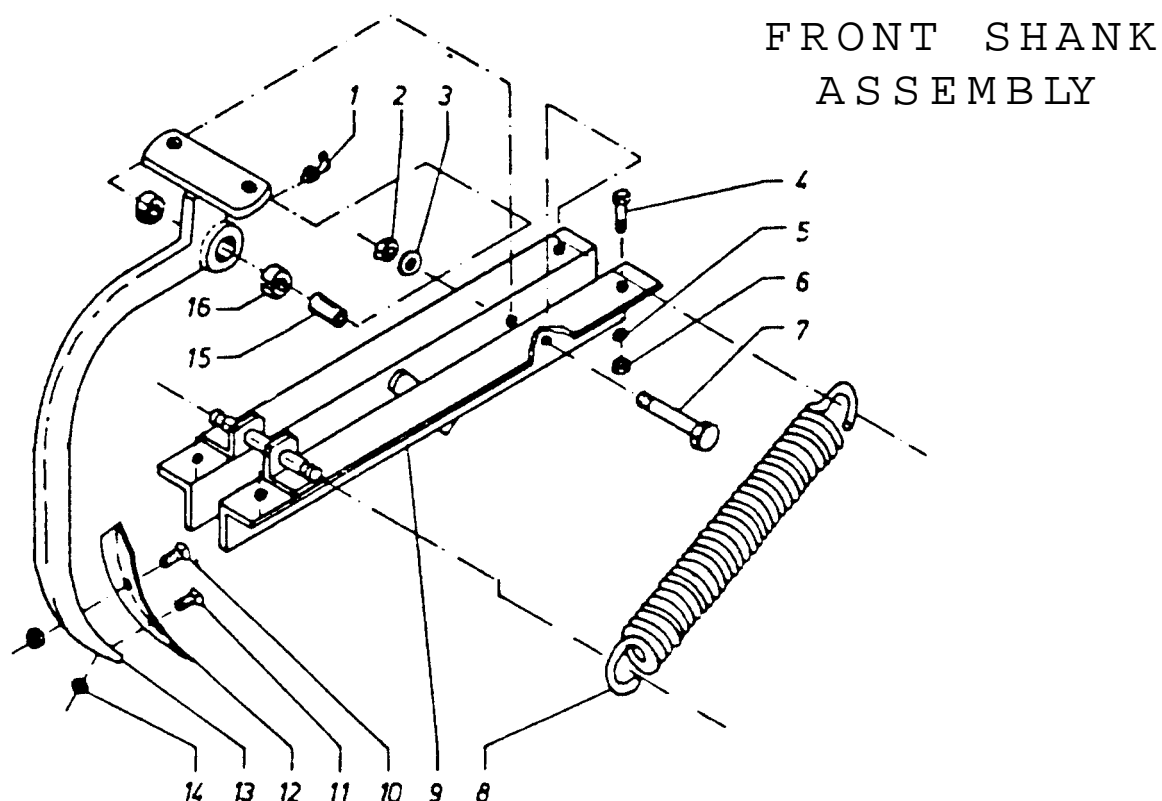
1. Soil too dry – Wait for rain.
2. Abrasive soil – Consider having points hard surfaced by local welder.
3. Operating too fast – Reduce forward speed.

## MAINTENANCE

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1. Check all nuts and bolts and make sure they are tight.
2. Check points for wear and damage. Replace when necessary.
3. Grease shank bushings each 30 working hours.

# MODEL FC FIELD CULTIVATOR EXPLODED PARTS VIEW

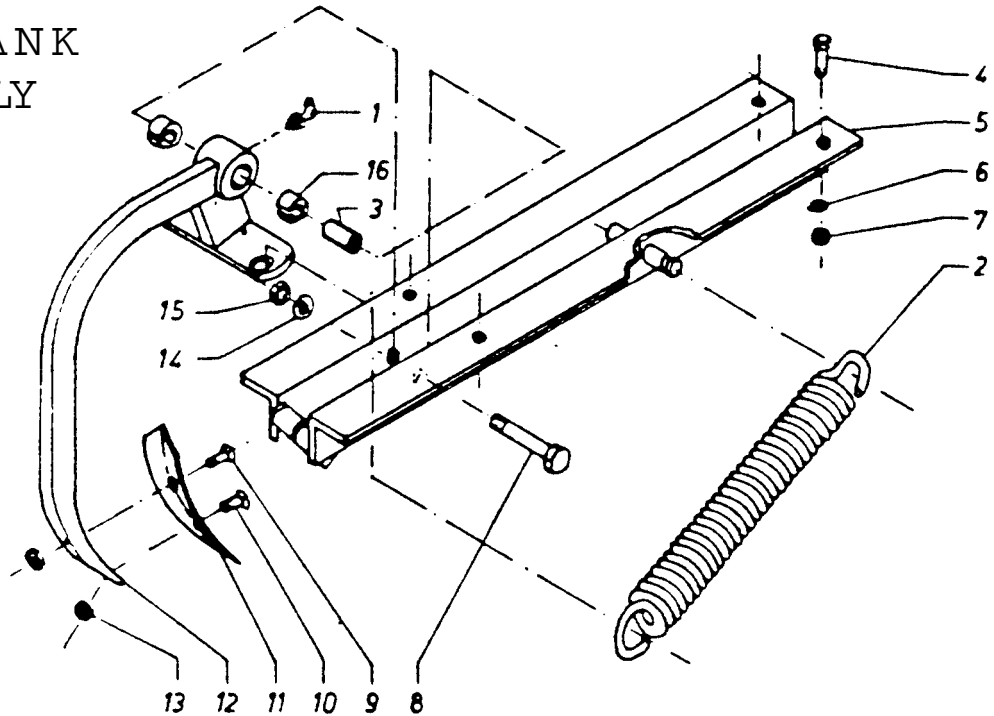


## FRONT SHANK ASSEMBLY PARTS LIST

Ref. No.	Worksaver Part No.	Description	Bal. Code No.	No. Req'd.
1	320066	Grease Nipple M6/45°	PN-76/M-86003	1
2	320067	Nut M16-8-B-Fe/Zn-9	PN-86/M-82144	1
3	320068	Spring Washer 16.3-Fe/Zn-9	PN-77/M-82008	1
4	320069	Bolt M12 x 35-8.8-Fe/Zn-9	PN-85/M-82105	4
5	320070	Spring Washer 12.2-Fe/Zn-9	PN-77/M-82008	4
6	320071	Nut M12-8-B-Fe/Zn-9	PN-86/M-82144	4
7	320072	Bolt M16 x 70-8.8-B-Fe/Zn-9	PN-85/M-82101	1
8	320093	Spring	1422/00-008/0	2
9	320094	Arm Holder Assembly (Front)	1422/00-042/0	1
10	320073	Conical Bolt AM10 x 50-5.8-C-Fe/Zn-9	PN-76/M-82402	1
11	320074	Conical Bolt AM10 x 45-5.8-C-Fe/Zn-9	PN-76/M-82402	1
12	320095	Point	1422/00-007/0	1
13	320096	Front Shank Assembly	1422/00-013/0	1
14	320075	Nut M10-8-B-Fe/Zn-9	PN-86/M-82144	2
15	320076	Bushing	1422/00-039/0	1
16	320077	Bushing	1422/00-038/0	2

# MODEL FC FIELD CULTIVATOR EXPLODED PARTS VIEW

## REAR SHANK ASSEMBLY

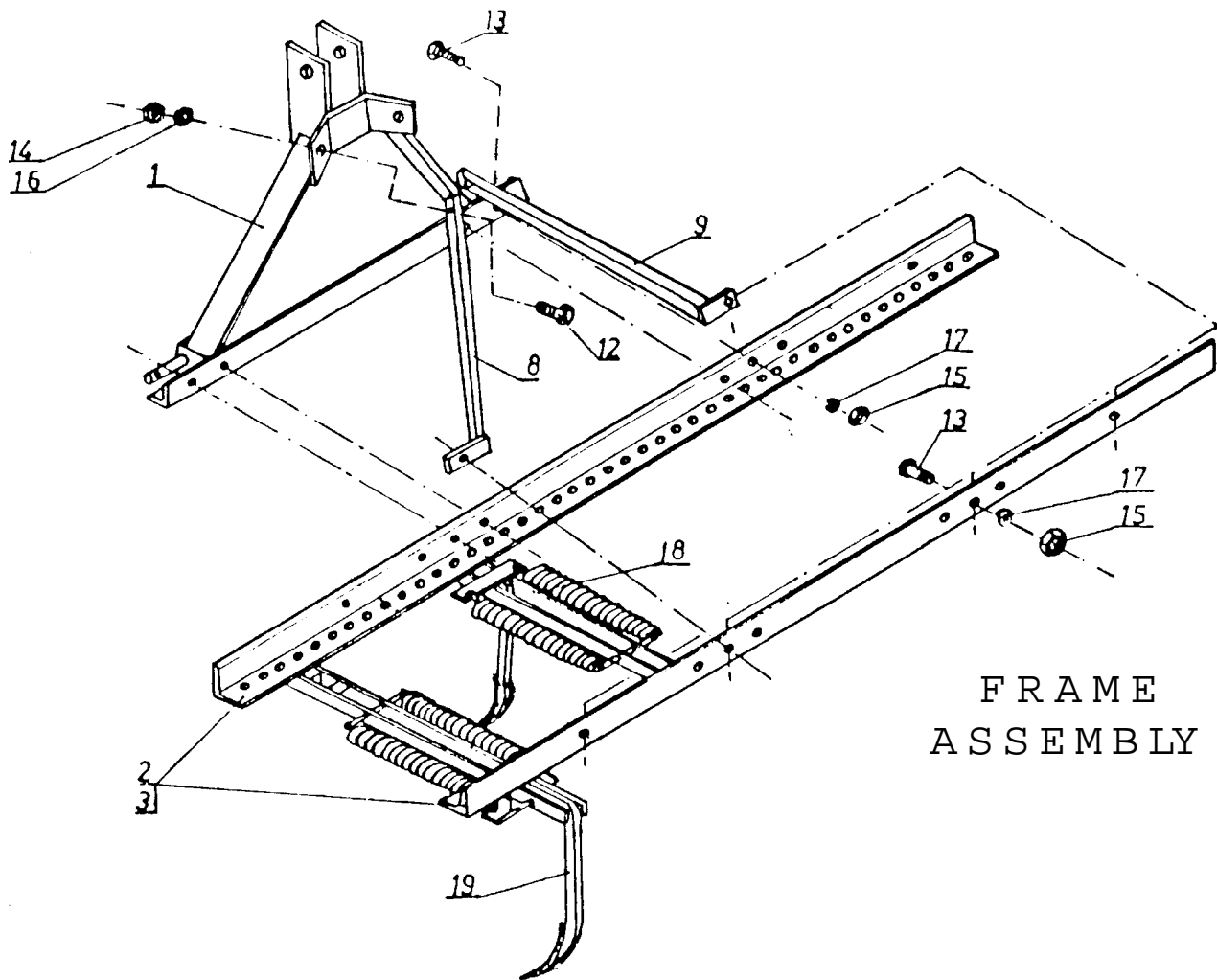


## REAR SHANK ASSEMBLY PARTS LIST

Ref. No.	Worksaver Part No.	Description	Bal. Code No.	No. Req'd.
1	320066	Grease Nipple M6/45°	PN-76/M-86003	1
2	320093	Spring	1422/00-008/0	2
3	320076	Bushing	1422/00-039/0	1
4	320069	Bolt M12 x 35-8.8-Fe/Zn-9	PN-85/M-82105	4
5	320098	Arm Holder Assembly (Rear)	1422/00-043/0	1
6	320070	Spring Washer 12.2-Fe/Zn-9	PN-77/M-82008	4
7	320071	Nut M12-8-B-Fe/Zn-9	PN-86/M-82144	4
8	320078	Bolt M16 x 85-9.8-B-Fe/Zn-9	PN-81/M-82101	1
9	320073	Conical Bolt AM10 x 50-5.8-C-Fe/Zn-9	PN-76/M-82402	1
10	320074	Conical Bolt AM10 x 45-5.8-C-Fe/Zn-9	PN-76/M-82402	1
11	320095	Point	1422/00-007/0	1
12	320099	Rear Shank Assembly	1422/00-014/0	1
13	320075	Nut M10-8-B-Fe/Zn-9	PN-86/M-82144	2
14	320068	Spring Washer 16.3-Fe/Zn-9	PN-77/M-82008	1
15	320067	Nut M16-8-B-Fe/Zn-9	PN-86/M-82144	1
16	320077	Bushing	1422/00-038/0	2



# MODEL FC FIELD CULTIVATOR EXPLODED PARTS VIEW



FRAME  
ASSEMBLY

## 3-POINT HITCH PARTS LIST

Ref. No.	Worksaver Part No.	Description	Bal. Code No.	Number Required		
				FC-5	FC-7	FC-9
1	320083	Cultivator Hitch	1422/00-015/0	1	1	1
2	320084	Frame Bar	1422/00-001/0	—	—	2
3	320087	Frame Bar	1422/00-016/0	2	2	—
8	320089	Left Support Assembly	1422/00-021/0	1	1	1
9	320092	Right Support Assembly	1422/00-022/0	1	1	1
12	320079	Bolt M16 x 45-8.8-B-Fe/Zn-9	PN-85/M-82105	2	2	2
13	320069	Bolt M12 x 35-8.8-B-Fe/Zn-9	PN-85/M-82105	6	6	6
14	320067	Nut M16-8-B-Fe/Zn-9	PN-86/M-82144	2	2	2
15	320071	Nut M12-8-B-Fe/Zn-9	PN-86/M-82144	6	6	6
16	320068	Spring Washer 16.3-Fe/Zn-9	PN-77/M-82008	2	2	2
17	320070	Spring Washer 12.2-Fe/Zn-9	PN-77/M-82008	6	6	6
18	320081	Front Shank Section Assembly	1422/00-044/0	2	3	4
19	320082	Rear Shank Section Assembly	1422/00-045/0	3	4	5

# LIMITED WARRANTY

Worksaver warrants its implements, parts and accessories to be free from defects in materials and workmanship for a period of six (6) months from date of purchase for non-commercial, state, and municipalities'. Use ninety (90) days for commercial use from date of retail sale.

## **SPECIAL WARRANTY PROVISION**

Warranty shall only apply to defects in material and workmanship. In no case shall the manufacturer be liable to the purchaser for the bending or breakage of any part of the blade by abuse or misuse, such as striking hidden objects, grubbing stumps, or turning with the field cultivator engaged in the ground, whether intentional or unintentional.

## **DISCLAIMER OF IMPLIED WARRANTIES & CONSEQUENTIAL DAMAGES**

Worksaver's obligation under this warranty, to the extent allowed by law, is in lieu of all warranties, implied or expressed, including implied warranties of merchantability and fitness for a particular purpose and any liability for incidental and consequential damages with respect to the sale or use of the items warranted. Such incidental and consequential damages shall include but not be limited to: transportation charges other than normal freight charges; cost of installation other than cost approved by Worksaver; duty; taxes; charges for normal service or adjustments; loss of crops or any other loss of income; rental of substitute equipment, expenses due to loss, damage, detention or delay in the delivery of equipment or parts resulting from acts beyond the control of Worksaver.

## **THIS WARRANTY SHALL NOT APPLY:**

1. If the unit has been subjected to misapplication, abuse, misuse, negligence, fire or other accident.
2. If parts not made or supplied by Worksaver have been used in connection with the unit, if, in sole judgement of Worksaver such use affects its performance, stability, or reliability.
3. If the unit has been altered or repaired outside of an authorized Worksaver dealership in a manner which, in the sole judgement of Worksaver affects its performance, stability or reliability.
4. To expendable or wear items such as points, shovels, and other items that in the company's sole judgement is a wear item.

NO EMPLOYEE OR REPRESENTATIVE OF WORKSAVER IS AUTHORIZED TO CHANGE THIS WARRANTY IN ANY WAY OR GRANT ANY OTHER WARRANTY UNLESS SUCH CHANGE IS MADE IN WRITING AND SIGNED BY WORKSAVER'S SERVICE MANAGER, POST OFFICE BOX 100, LITCHFIELD, ILLINOIS 62056-0100.

# SAFETY PRECAUTIONS

**MOST ACCIDENTS OCCUR BECAUSE OF NEGLIGENCE OR CARELESSNESS.  
AVOID NEEDLESS ACCIDENTS BY FOLLOWING ALL OF THE SAFETY PRECAUTIONS LISTED BELOW.**

- Machinery should be operated only by those who are responsible and are authorized to do so.
- Stop the engine, lower all equipment, lock the brakes, and remove the ignition key before dismounting from the tractor.
- Never stand between tractor and implement while tractor is being backed to hitch.
- Loose fitting clothing should not be worn, to avoid catching on various parts.
- Detach implement in area where children normally do not play.
- When performing adjustments or maintenance on an implement, first lower it to the ground or block it securely at a workable height.
- Only a qualified operator should be permitted on tractor when in operation; no riders allowed.
- Make certain everyone is in the clear before starting tractor or raising or lowering equipment.
- Operate the tractor and implement only while seated in the driver's seat.
- Reduce speed when transporting mounted implements to avoid bouncing and momentary loss of steering control.
- A heavy load can cause instability of the tractor. Use extreme care during road travel. Slow down on turns and watch out for bumps. Tractor may need front counterweights to counter-balance the weight of the implement.
- Reduce speed on hillsides or curves so there is no danger of tipping.
- Avoid driving too close to the edge of ditches or creeks.
- Do not transport implement on public roads without reflectors and slow moving vehicle emblem in daylight and with approved warning lights at night and other periods of poor visibility.
- Due to the width of some implements, use extra caution on highways, farm roads, and when approaching gates.
- Always be sure the implement is in the proper position for transport.
- Keep alert and watch the front as well as the rear when working with the implement.

## OWNER'S/ OPERATOR'S MANUAL

**MODEL NO.'s**  
**FC-5**  
**FC-7**  
**FC-9**

**WHEN ORDERING  
REPAIR PARTS,  
ALWAYS GIVE  
THE FOLLOWING  
INFORMATION:**

1. PART NUMBER
2. PART DESCRIPTION
3. MODEL NUMBER
4. NAME OF ITEM

APRIL 2001

**MAKE EVERY DAY  
A HOLIDAY  
FROM ACCIDENTS**

## **FC SERIES 3 PT. FIELD CULTIVATOR**

### **STATEMENT OF POLICY**

It is the policy of Worksaver to improve its products where it is possible and practical to do so. Worksaver reserves the right to make changes or improvements in design and construction at any time, without incurring the obligation to make these changes on previously manufactured units.

**WORKSAVER, INC.**

**P.O. BOX 100 LITCHFIELD, IL 62056-0100 (217) 324-5973**

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