

# Multivator

## ROW CROP CULTIVATOR



## OPERATOR'S MANUAL & PARTS LIST

**MODELS: FL, FLA**



**10784 INDUSTRIAL PARKWAY  
MARYSVILLE, OH 43040  
614.873.4620  
[www.forddistributing.com](http://www.forddistributing.com)**



## **SAFETY PRECAUTIONS**

**READ THIS OPERATOR'S MANUAL CAREFULLY!** Read and understand these safety precautions before operating the Multivator. Only responsible properly trained individuals should be allowed to operate the machine. The operator should be familiar with the controls, all safety precautions and all potential hazards.

**Never allow children to operate the Multivator. Do not permit anyone to ride on the Multivator. Do not carry riders on the tractor.**

### **OPERATION**

- 1. Follow all safety decals on the machine. Keep them clean and replace them if they become worn and hard to read.**
- 2. Never leave tractor or Multivator unit running unattended.**
- 3. Do not modify the machine in any way unless authorized by Ford Distributing, Inc. Unauthorized modifications to the machine could result in machine damage and/or personal injury.**
- 4. Keep the operating area clear of all persons – particularly small children and pets. Inspect the operating area before using the Multivator and remove any obstacles which could damage the machine, or become entangled in the blades.**
- 5. Use only attachments or accessories designed for your Multivator.**
- 6. Do not operate the Multivator without all guards, shields and other safety devices correctly installed.**
- 7. Never use an unshielded PTO shaft, and always attach the shield retainer chain to the tractor or Multivator.**
- 8. Do not allow bystanders behind the Multivator when in operation. Rocks may be thrown to the rear.**
- 9. Do not operate the universal drive joint at an angle greater than 35°, or vibration and damage could result.**
- 10. Do not till across the face of slopes. Use extreme caution when turning on slopes.**



## **SAFETY PRECAUTIONS**

- 11. Operate the Multivator only when you have good visibility. Make sure your feet are properly placed on the footrests and keep a firm grip on the steering wheel.**
- 12. Be careful not to touch tractor or Multivator parts which may be hot from operation. Allow parts to cool first.**
- 13. Whenever leaving the tractor and Multivator unattended, disengage the PTO, shift into neutral, set the parking brake, lower the machine, stop the engine and remove the ignition key.**
- 14. Always disengage power to the Multivator when transporting or when not in use.**

## **MAINTENANCE AND STORAGE**

- 1. Never adjust, clean, repair or grease the Multivator or tractor with the tractor engine running. Stop the engine, disengage the PTO and remove the ignition key whenever you are not at the operating controls.**
- 2. Do not crawl under the Multivator when it is in a raised position. Never rely on tractor hydraulics to hold the machine in a raised position. Always provide support with blocks before adjusting, cleaning, repairing or greasing the machine.**
- 3. Check tightness of bolts, nuts, spring pins and clip pins frequently to ensure a safe working condition.**
- 4. Follow the daily lubrication and periodic maintenance procedures as described in the Operator's Manual.**
- 5. When storing the Multivator, make sure it is securely blocked in a safe, level position.**
- 6. Follow proper maintenance and repair schedules to keep unit in safe working order.**
- 7. Always use proper protective equipment when working on unit.**



## **SPECIFICATIONS**

### **POWER RANGE**

**FL/FLA : 15-50 PTO Horsepower**

### **TRACTOR REQUIREMENTS**

**540 RPM standard rotation PTO  
Category I or II three point hitch**

### **TRANSMISSION**

**By shielded PTO shaft assembly to single speed gearbox for use with 540 RPM tractor PTO.**

**Friction disc slip clutch is available for extremely rugged or stony conditions.**

**Input shaft on Multivator gearbox is 1-3/8" 6 spline.**

### **FINAL DRIVE**

**Power to rotor and blades is by heavy duty roller chain in sealed oil bath drive case assembly.**

**FL/FLA uses 60H (12B) equivalent chain**

### **ROTOR AND BLADES**

**Multivator heads are equipped with four blades per flange. Blades are forged from chrome alloy steel, heat treated and shaped to take minimum power with maximum tillage ability.**



## **SPECIFICATIONS**

### **DEPTH CONTROL**

**The frame height is controlled by front mounted gauge wheels. Depth is controlled by adjusting the gauge wheel height via the screw jack assembly.**

**Spring tension on the tillage heads provides positive down pressure to keep tillage heads at maximum depth while allowing the heads to float over undulations and stones. In hard soil conditions, spring tension may be increased to provide more down pressure. In stony conditions spring tension may be eased to allow for more flotation.**

### **GROUND SPEED**

**Ground speed is governed by power and soil conditions. Hard ground will require lower travel speeds to maintain smooth operation. Good ground conditions with reasonable moisture will allow travel speeds of 4-5 mph. Light ground conditions, shallow cultivation or a second pass will allow travel speeds of 5-6 mph.**

### **OPTIONAL FERTILIZER KIT**

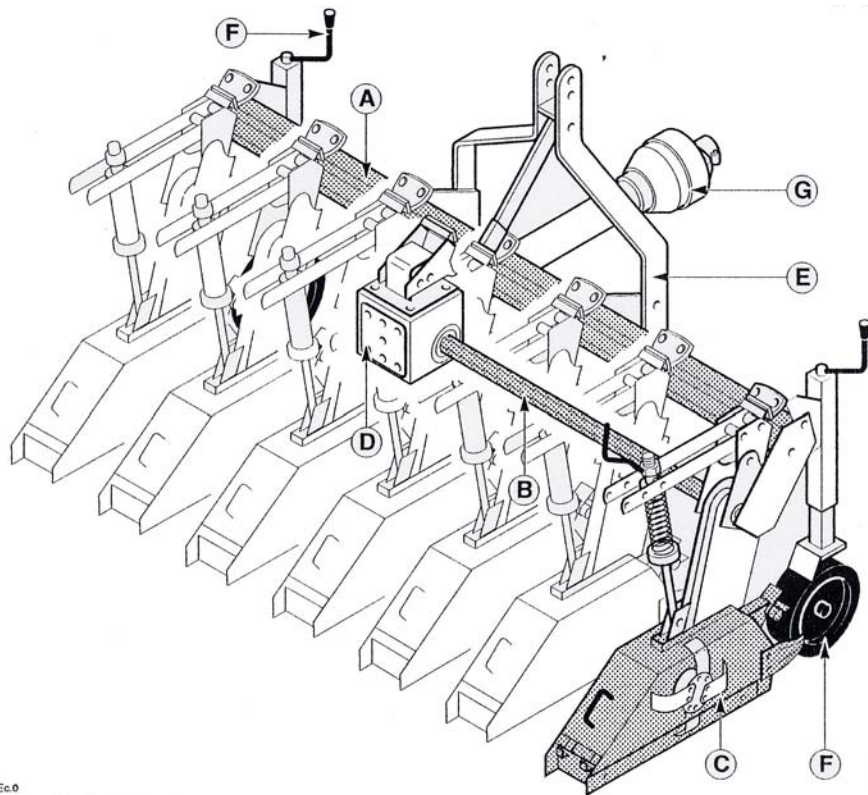
**Dry granular fertilizer capacities:  
40" hopper – approximately 350 lbs.  
60" hopper – approximately 500 lbs.  
80" hopper – approximately 650 lbs.**

**Sufficient downspouts are provided to allow for multiple row requirements. Fertilizer drive is by 2 V-belts and 3 pulleys. Drive pulley is mounted to same hexagonal shaft which power tillage heads.**

### **ROTOR SPEEDS AT 540 RPM PTO SPEED**

**FL/FLA            368 RPM**

### MACHINE DESCRIPTION



D15.014 Ec.0

**A. Toolbar**

**B. Hex Drive Shaft**

**C. Tillage Heads**

**D. Gearbox**

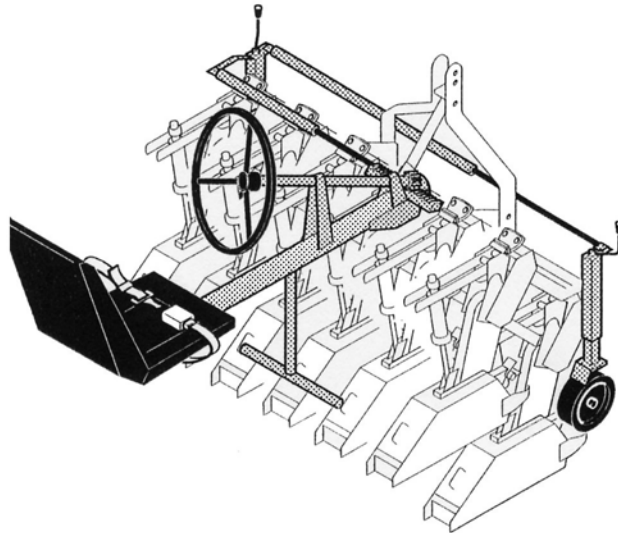
**E. Three Point Hitch**

**F. Gauge Wheels**

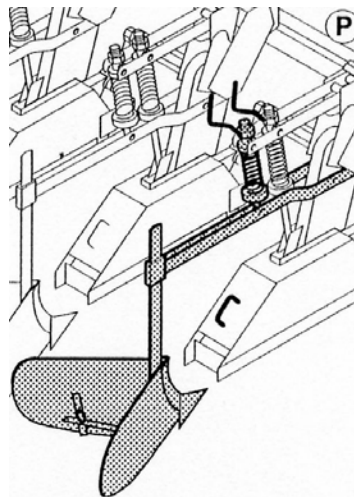
**G. PTO Shaft**

### MACHINE DESCRIPTION

#### Steering Guide

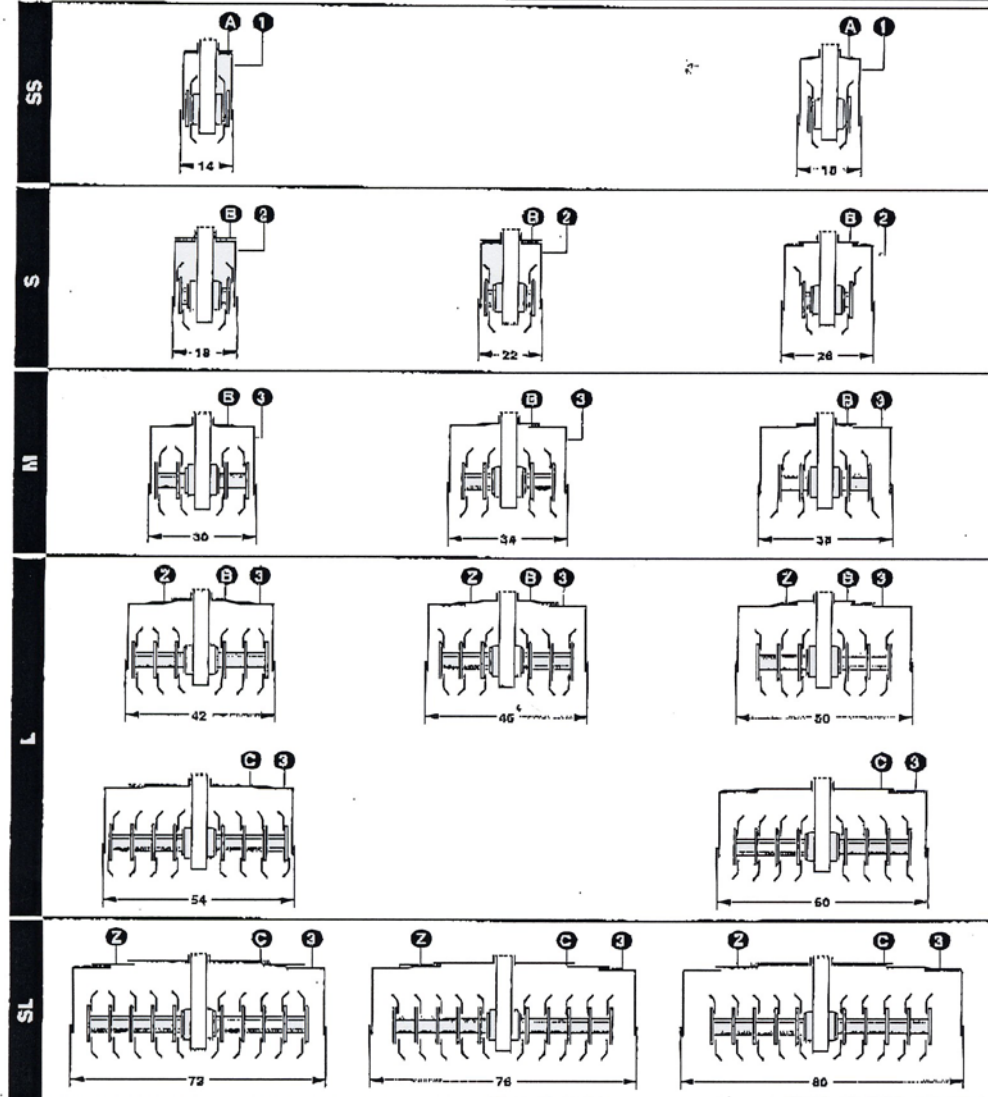


#### Ridger Assembly





## BLADE CONFIGURATION FL & FLA



REFERENCE	PART NUMBER	DESCRIPTION
B	41016002	Narrow Center Shield
C	41016003	Wide Center Shield
2	41025202	Narrow Side Shield R.H.
2	41025402	Narrow Side Shield L.H.
3	41025203	Wide Side Shield R.H.
3	41025403	Wide Side Shield L.H.
Z	31007001	Extension Shield

**\*\*Not pictured: extra narrow center shield – 410160001; right hand extra narrow shield – 410252001; left hand extra narrow shield – 410254001.**

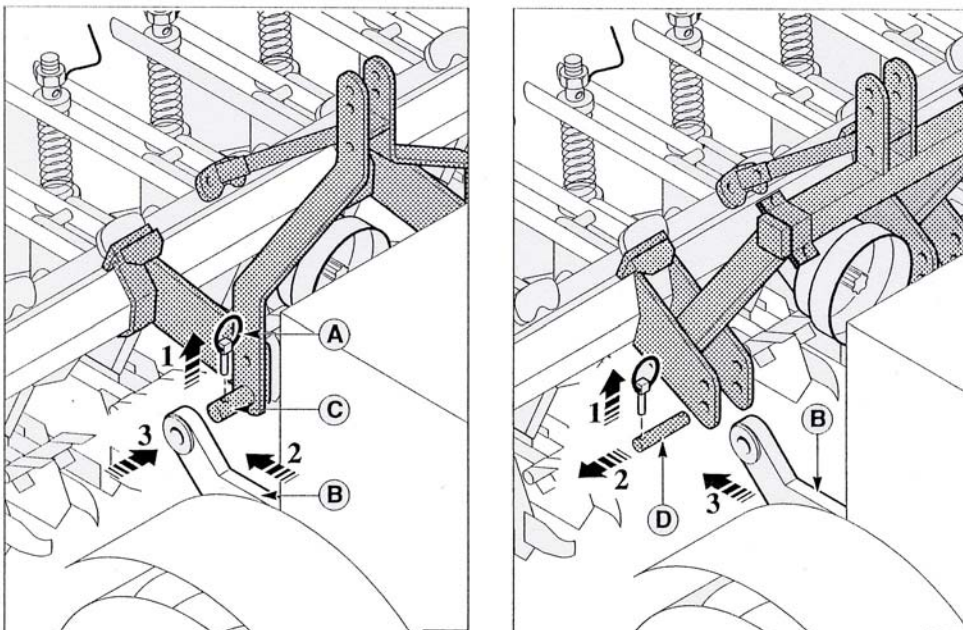
### MOUNTING MACHINE TO TRACTOR

1. Ensure that the tractor PTO is set for 540 rpm.
2. Stabilizers must be used on 3 point hitch arms to limit side sway.
3. A lift stop must be fitted to the hydraulic lift lever to prevent over lifting of the Multivator while in operation.

When lifting the Multivator during normal operation, ground clearance of 6-8" under the blades is completely adequate. Under no circumstances should the Multivator be raised to the point where damage to the universal joints on the PTO shaft occurs.



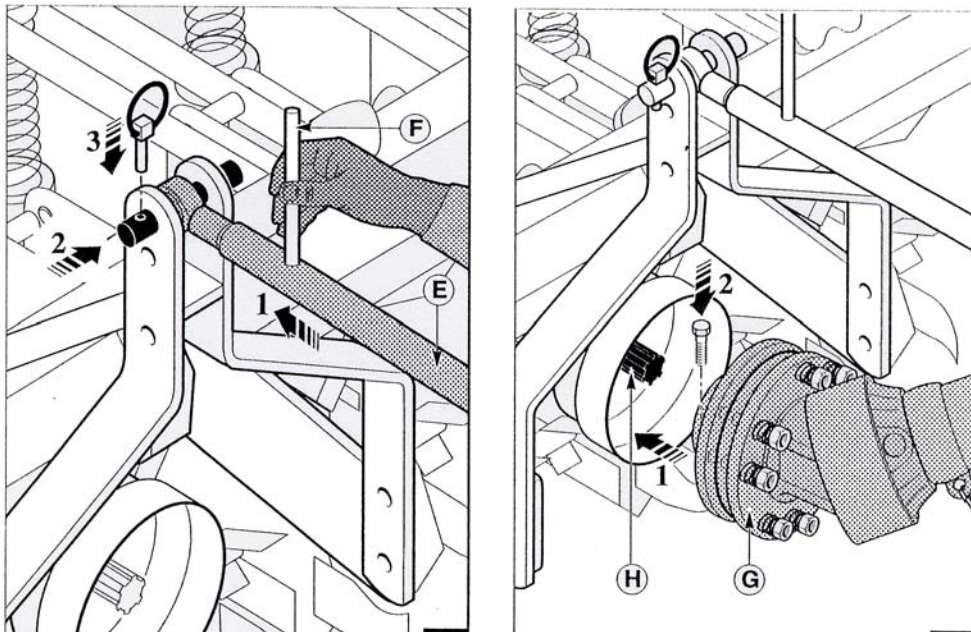
**Never operate the machine with the universal joints at an angle greater than 35°. Excessive wear and damage will result!**



4. Back the tractor up to the hitching points on the Multivator. Stop a few inches away and set the tractor hitch arms to the height of the Multivator hitch pins. Shut off the tractor engine.

## TECHNICAL INFORMATION

5. Remove the split pins (A). Roll Multivator into position and insert the hitch arms (B) into the pins (C). Reinsert split pins (A) to lock pins into position. If machine is equipped with removable hitch pins, pins must be removed before fitting the tractor arms into position.



6. Position tie rod (E) as shown above. Connect tie rod to machine from tractor's third point. Rotate adjustment handle (F) in either direction until machine is in a level position. Adjust the tractor top (E) link so that the Multivator frame is tilted to the rear approximately  $5^\circ$  from vertical. This ensures that the leading edge of the tiller shield is higher than the trailing edge and will not plow into the ground. Make this adjustment with the machine resting on the ground.
7. Connect the PTO shaft assembly (G) to the Multivator gearbox input shaft (H). Connect the other end of the PTO shaft assembly to the tractor PTO shaft. Ensure that the quick disconnect pins snap into place on both shafts.



At this point you may have determined that the PTO shaft assembly needs to be shortened. If you can connect the PTO shaft to the tractor and Multivator without shortening it, you must ensure that the PTO shaft will not bottom out during operation. This may occur when raising or lowering the Multivator. If the shaft bottoms out during operation damage may occur to the PTO shaft assembly, Multivator gearbox and the tractor PTO.

**Multivator**

## TECHNICAL INFORMATION

Following are 2 techniques for measuring for the correct length of PTO shaft:

- a. With the Multivator attached to the tractor, measure the horizontal distance from the input shaft on the gearbox to the tractor PTO shaft. Place the fully closed PTO shaft assembly on the ground and measure its overall length. If the PTO shaft assembly is shorter than the distance between the tractor PTO shaft and gearbox then you should not have to shorten it. If it is longer, then subtract the shorter measurement from the longer measurement. Add 1" to the difference. The result is the excess length that will need to be removed from each half of the PTO shaft assembly.
- b. With the Multivator attached to the tractor, separate the PTO shaft assembly into two halves and attach one half to the tractor and one half to the Multivator. Hold each half alongside each other and determine the excess length of each half of the PTO shaft assembly.

### PROCEDURE FOR CUTTING THE PTO SHAFT:

- a. Separate the PTO shaft into two halves.
- b. Using the measurement obtained above, shorten the plastic guarding using a hack saw.
- c. Using a chop saw, or a hack saw, shorten the steel profile tube by the same amount.
- d. Cut each half of the PTO shaft.
- e. De-burr the profile tubes.
- f. Grease and reassemble the PTO shaft.

### PRE-WORK INSPECTION

Before using your Multivator, perform the following checks and services each day. (See Maintenance section for further details.)

1. Check gearbox for sufficient oil. If oil is to be added, use SAE 140 EP gear oil.
2. Grease the PTO shaft sliding sections and universal joints.
3. Grease the gauge wheel axles.
4. Remove any trash or material wrapped around the rotor or the rotor bearing covers.
5. Check for loose blades. Tighten any blade bolts as necessary. Loose blade bolts can lead to broken blades.
6. Check all bolts on machine for tightness.

### SETTING DEPTH

Cultivation depth is controlled by raising or lowering the gauge wheels on the front of the tool bar. With the Multivator attached to the tractor, and with the blades resting on the ground, raise the gauge wheels to the desired cultivation depth. Typically, this will be between 1" and 4" deep.

### WORKING

Start the tractor engine and lift the Multivator clear of the ground. Six to eight inches should be sufficient height to lift the machine. Proceed to the work site and position the tractor for the first run.

Engage the tractor PTO, select a low gear, and move ahead slowly lowering the Multivator into the ground. Use at least  $\frac{3}{4}$  throttle when starting and increase to rated engine speed at 540 PTO rpm as the Multivator sets into the soil.

The Flow Rate Control Knob for the tractor hydraulics may need to be set to the "Slow" position to ensure gentle lowering of the machine into the ground. Also make sure that the three point hitch is set in the "Float" position.

**After a short working distance, stop the tractor and check your work to see that desired results are being obtained.**

### **RUNNING IN**

**For the first 10 hours of operation, run the Multivator easily. Do not allow the Multivator to lug the tractor down. Check the temperature of the gearbox and chaincase units to ensure that they are not operating at excessive heat levels. High temperatures can be an indication of a potential problem with a component, low oil levels, or possibly an assembly problem.**

### **GROUND SPEED**

**Ground speed is governed by power and soil conditions. Hard ground will require lower travel speeds to maintain smooth operation. Good ground conditions with reasonable moisture will allow speeds of 4-5 mph. Light ground conditions, shallow cultivation, or a second pass will allow travel speeds of 5-6 mph.**

### **ENGINE RPM**

**Try to operate at the rated engine speed to achieve 540 RPM PTO speed. Allowing the tractor to lug down continuously can result in damage to the tractor and the Multivator.**

### **SOIL TILTH CONTROL**

**Tilth is governed by forward speed and engine RPM. Slower forward speeds will give the finest possible finish. Higher forward speeds will give a cloddier or rougher finish.**

## HEADLAND PROCEDURE

Each time the headland is reached, lift the machine clear of the ground (6" to 8" maximum). With the blades rotating, turn the tractor for the next pass, and slowly lower the machine into the ground.

**DO NOT TURN THE TRACTOR WITH THE MULTIVATOR IN THE GROUND!**

## WORKING LIMITATIONS

It is very important that the Multivator be used in conditions that will not obviously damage the machine. The Multivator has the ability to handle small stones and other obstacles by "walking over" these obstacles and kicking them out behind the machine. The forward rotating blades, and free floating heads, allow for this action to occur.

Extremely rugged conditions will cause excessive wear and tear on blades, shielding, and working components of the machine, requiring more operator maintenance.

If the blades do not penetrate the soil easily, and you can not obtain more than 1" depth on a first pass with wheels clear of the ground, conditions may be too dry and hard. Continued use of the Multivator in such conditions will cause excessive wear on the drive train and will void any warranty consideration.

If considerable vibration, jumping, and shock loading is apparent, then the conditions are not suitable to work in.

If these conditions are unavoidable, then please adhere to the following guidelines:

- Try to irrigate, or wait until adequate soil moisture is present
- Use another tillage tool, such as a chisel shank or V-ripper, to relieve compaction before using the Multivator
- Relieve spring tension on the tiller heads to allow them to float more easily over obstacles
- Fit a safety clutch to the PTO drive line
- Increase the frequency of machine inspections during operation

- **Be attentive to the machine and any potential problems, particularly loose blade bolts, broken blades, and high fluid temperatures in the gearbox and chaincases**

### **ABRASIVE SOILS**

**Use in very abrasive soils will significantly reduce blade life. These soils are sandy or gravelly in nature.**

**Additional care should be taken to inspect the chaincase skid at regular intervals. The chaincase skid provides important protection to the chaincase, as well as eliminating the center untilled strip. The chaincase skid must be replaced when it is worn out.**

**Optional chaincase wearing shoes are available from the manufacturer. These wearing shoes bolt to the underside of the chaincase and provide an additional wearing surface. They may provide additional protection in very abrasive conditions.**

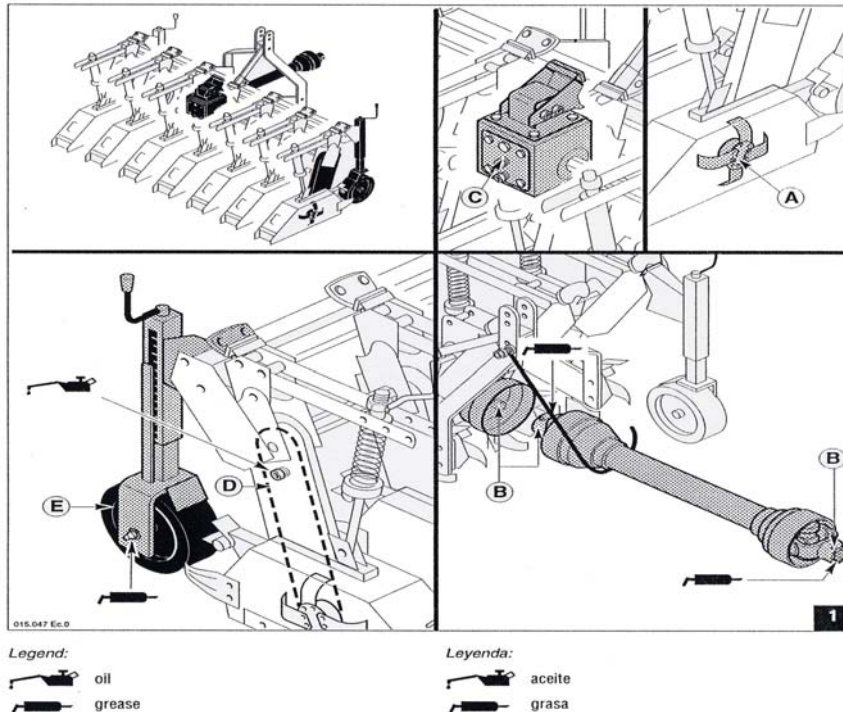
### **HEAVY TRASH CONDITIONS**

**In very tall weed growth, tough grass tilling, corn residue, stalky or vine type weeds, care should be taken to avoid excessive weed wrap on the blades and rotors. After using the Multivator, clean any residue from the tilling blades, particularly between the inner blade flanges and the chaincase.**

**If trash buildup is occurring on the shields, reposition the shields so they are angled down in the back and up in the front. This is accomplished by repositioning the brackets to which the shields are mounted.**

**If trash buildup is occurring on the center sweep, it may be necessary to remove the "wings" from the center sweep with a torch. The center sweep will then slice through the soil and trash. However, it should be remembered that removing the wings from the center sweep will reduce the effectiveness of the sweep for weed removal.**





### DAILY

<b>Blades (A)</b>	<b>Check for loose bolts and retighten.</b>
<b>Blade bolts, rotor bolts, flange bolts, shield bolts, clamp plate nuts</b>	<b>Check for loose bolts and retighten.</b>
<b>PTO universal joint bearings (B)</b>	<b>Grease universal joints and sliding sections of PTO shaft with quality grease.</b>
<b>Wheel bearings (E)</b>	<b>Grease with quality grease.</b>

### WEEKLY

<b>Gearbox (C)</b>	<b>Check oil level. Refill if necessary with SAE140EP.</b>
<b>PTO shaft</b>	<b>Clean shaft and check bearings.</b>
<b>Complete Machine</b>	<b>Clean machine for thorough inspection. Check all miscellaneous bolts and nuts to ensure tightness.</b>
<b>Chaincase</b>	<b>Check wearing skids and replace any worn skids as necessary.</b>

**\*\*After initial running period, (approximately 25 hours) drain the gearbox oil and replace. Some discoloration of the oil is normal.**

**\*\*On a monthly basis check the oil level in all chaincases. Remove fill plug to access oil level. Refill all that are necessary with SAE90 gear oil.**

**CHAIN ADJUSTMENT**

On models FL and FLA an automatic chain tensioner is supplied which eliminates the need for manual chain adjustment.

**CHAINCASE LUBRICATION**

Each chaincase is supplied fully lubricated. Over time, lubricant will need to be replaced, and periodically the chaincase may need to be completely flushed and refilled.

Adding lubricant is done through the breather – fill plug located on the side of the chaincase. Chaincases should be filled approximately 1/3 full with good quality SAE90 gear oil. If too much oil is added to the chaincase you will notice oil escaping from the breather plug in a fine mist.

Another method of lubricating the chaincase is to pack the case completely with grease. This can be done when renovating old chaincases with worn components, as the grease helps to seal the chaincase from dirt.

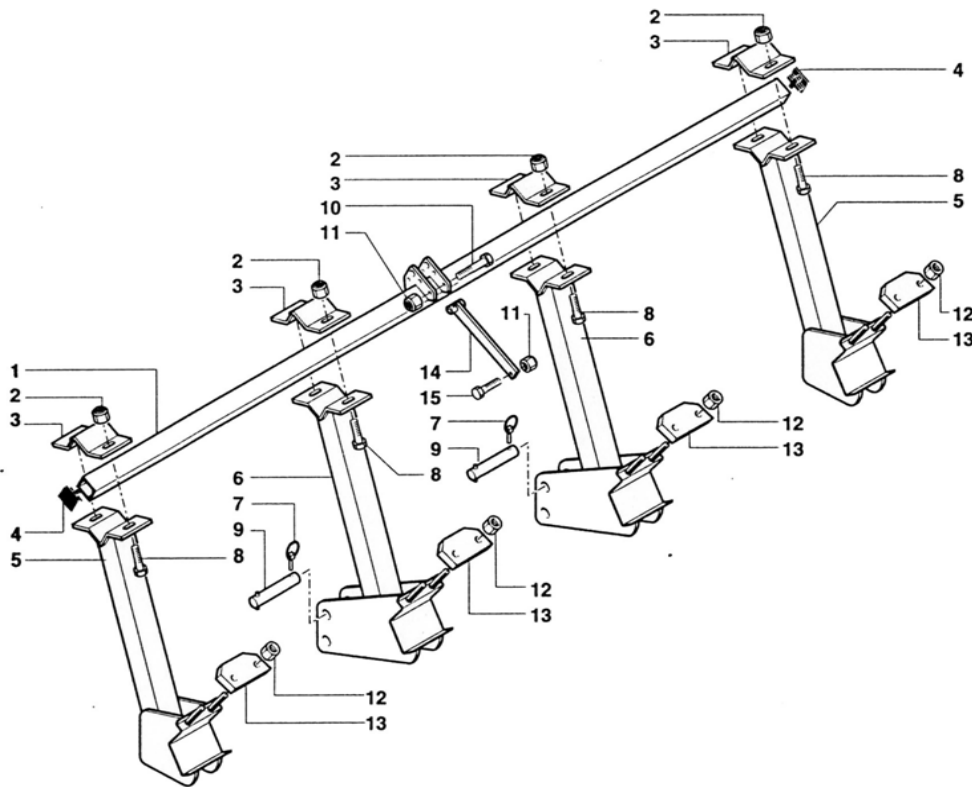
**ROTOR MAINTENANCE**

Remove flanges and draw bolt(s) on a yearly basis, preferably before the initial use for the season. Remove all foreign debris that has accumulated on flanges, blades, rotor, and dust covers. Inspect all flanges, draw bolts, metal dust covers, and oil seals. Replace any and all items with excessive wear. Be sure that oil seals are intact and not leaking chaincase oil.

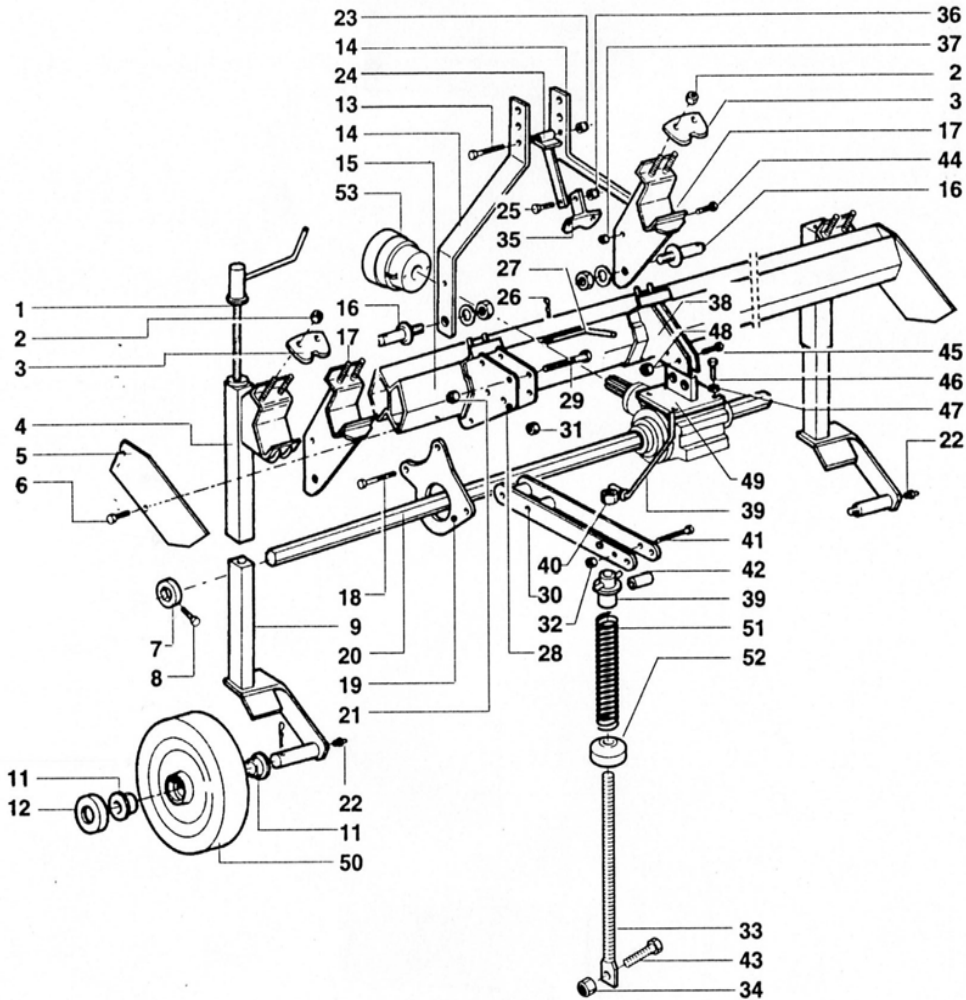


## TROUBLESHOOTING

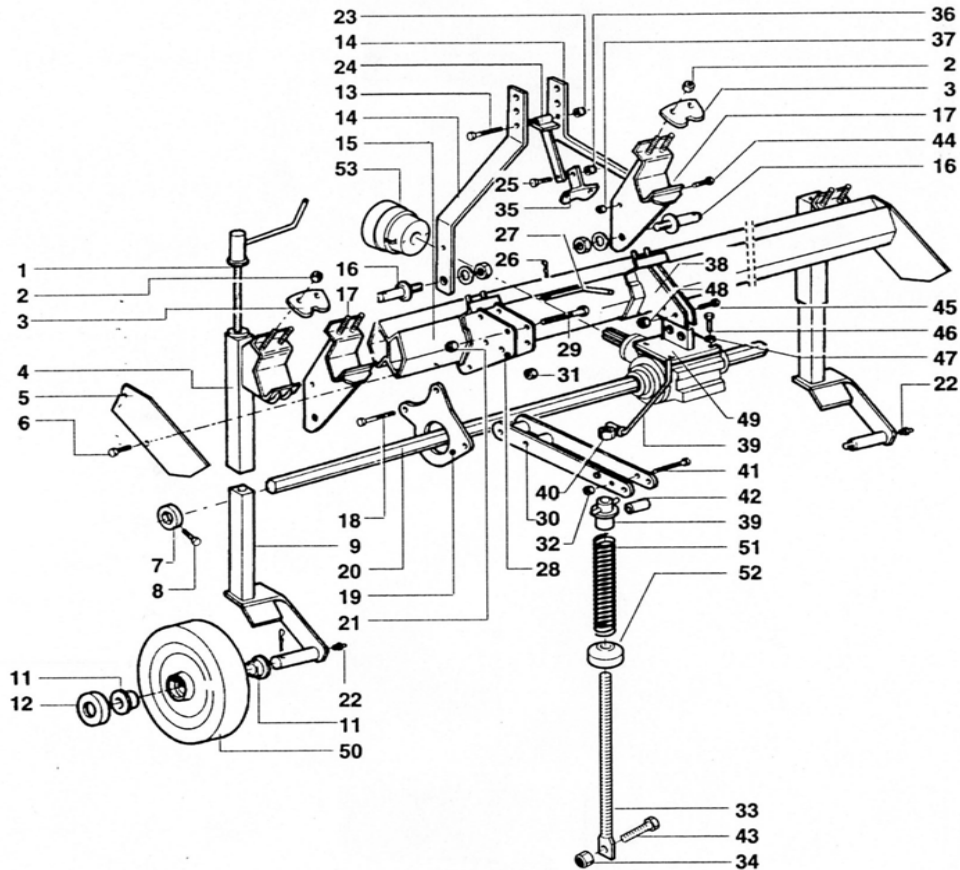
<b>PROBLEM</b>	<b>DIAGNOSIS</b>
<b>PTO shaft vibrates or chatters</b>	<b>Check for worn cross and bearing kits. Pay attention to lift height when machine is in use. Lifting machine too high puts the PTO at angles causing premature wear.</b>
<b>Gearbox noise is noticeable or constant.</b>	<b>Check oil level in gearbox. Make sure nothing is obstructing moving components tied to gearbox.</b>
<b>Intermittent clicking noise from rotors, chaincase or gearbox.</b>	<b>Check for loose blades. If noise persists check gearbox for damage to pinion gear or ring gear teeth. Clicking noises inside chaincase can indicate a worn chain skid. Replace as necessary.</b>
<b>Slapping noise from chaincase</b>	<b>Chain is too loose. If chain is worn it should be replaced or shortened if possible.</b>
<b>Hex drive shaft is rotating but blades are not.</b>	<b>This indicates a broken chain link inside the chaincase, broken or rounded off drawbolt.</b>
<b>Burning smell, or signs of excessive heat.</b>	<b>Usually caused by rotors which are not turning freely. Check for trash wrapped around rotor, especially between inner rotor and dust cover.</b>
<b>Blades won't penetrate average soil conditions</b>	<b>Check that blades are installed correctly. Blades or complete flange may have been installed backwards</b>
<b>Machine skips or does not cut all weed residue.</b>	<b>Check for worn blades. If blades are worn down to a sharp point, overlap will be lost and cutting ability will deteriorate. Replace worn blades</b>
<b>Machine vibrates while tilling</b>	<b>Check for bent flanges or a bent draw bolt.</b>



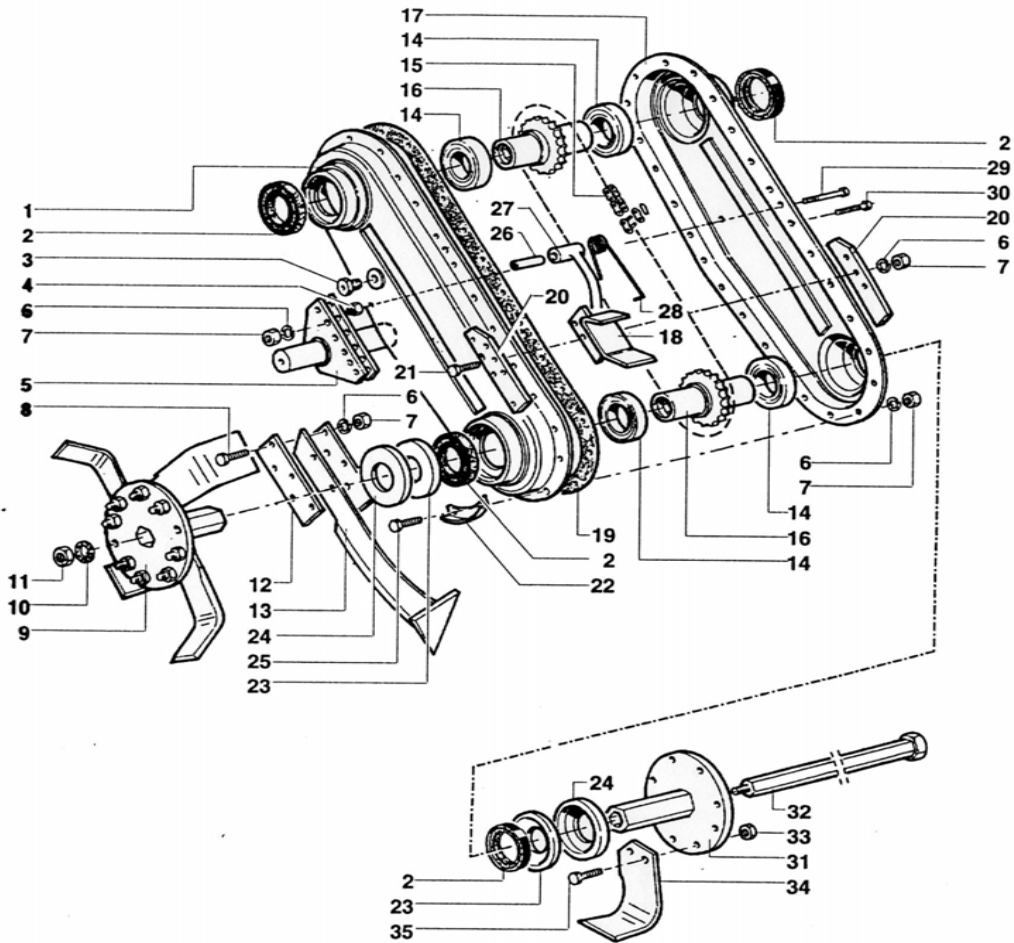
<u>No.</u>	<u>Part Number</u>	<u>Qty.</u>	<u>Description</u>
1	420610061	1	Top tube
2	103040072	8	M16 Locknut
3	350770012	4	Clamp plate
4	103120007	2	Plastic plug
5	410610084	2	Side support
6	410610075	2	Center support
7	101070002	2	Clip pin
8	103150128	8	Bolt M16x55
9	310560015	2	Hitch pin Cat I
10	103150109	1	Bolt M14x100
11	103040070	2	Locknut M14
12	103040022	8	Nut M12
13	310770002	4	Clamp plate
14	410680016	1	Link arm
15	103150098	1	Bolt M14x35
<b><u>Not Illustrated</u></b>			
	420610074	1	Top tube - short



<u>No.</u>	<u>Part Number</u>	<u>Qty.</u>	<u>Description</u>
1	500130004	2	Screw with handle
2	103040022	x	Nut M12
3	310770001	4	Clamp plate
4	410610014	2	Upper jack
5	310620004	2	End guard plate
6	103150034	x	Bolt M10x20
7	310020001	2	Locking ring 30mm
8	103150005	x	Bolt M8x16
9	410610015	2	Lower jack-FL
9	410610018	2	Lower jack-FLA
10	101020010	2	Split pin M5x60
11	102010002	4	Bushing
12	310550001	2	Dust cover
13	103150109	1	Bolt M14x100
14	310100006	2	Top mast arm
15	410650002	1	Tool bar 66"
15	410650004	1	Tool bar 90"
15	410650006	1	Tool bar 110"
15	410650007	1	Tool bar 130"
15	410650008	1	Tool bar 158"
16	101040002	2	Hitch pin Cat. 1 threaded
17	410610022	2	Hitch bracket
18	103150093	2	Bolt M12x110
19	310570018	2	Chaincase mounting plate
20	310080002	1	Hex bar 30mm - 66"
20	310080004	1	Hex bar 30mm - 90"
20	310080006	1	Hex bar 30mm-130"
20	310080007	1	Hex bar 30mm-158"
20	310080008	1	Hex bar 30mm-110"
21	103040068	1	Locknut M12
22	103090002	1	Grease zerk
23	103040070	1	Locknut M14
24	410680009	1	Link arm
25	103150101	1	Bolt M14x45
26	101020002	1	Split pin
27	310410001	1	Handle pin
28	410040001	1	Head clamp
29	103150090	1	Bolt M12x90
30	410090001	1	Head support arm



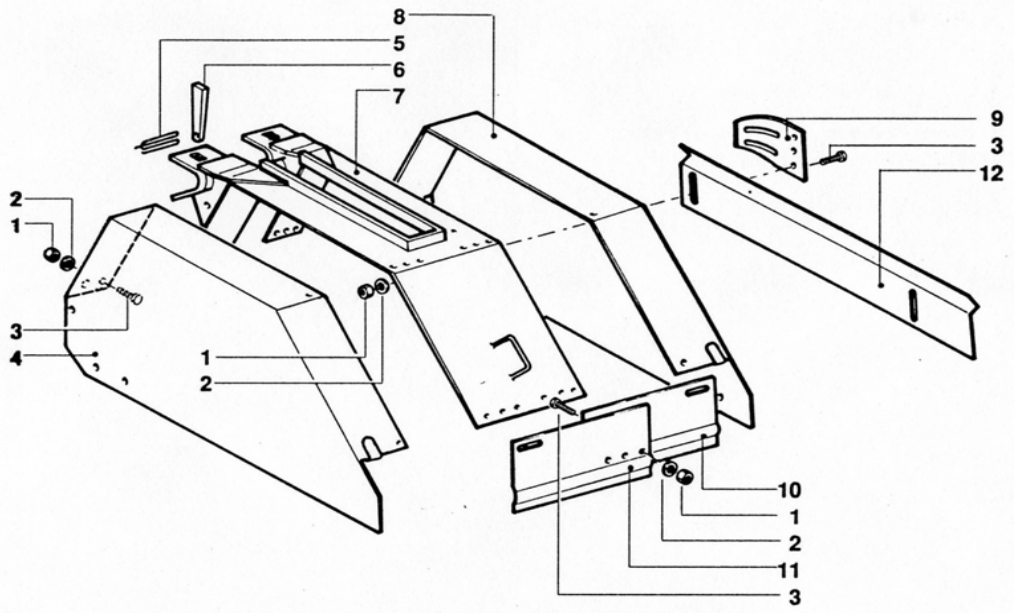
<u>No.</u>	<u>Part Number</u>	<u>Qty.</u>	<u>Description</u>
31	103040022	2	M12 Nut
32	103040008	1	M8 Nut
33	310820002	1	Threaded rod FL
33	310820002	1	Threaded rod FLA
34	103040064	1	M8 Locknut
35	410600001	1	T-clamp plate
36	103040070	1	M14 Locknut
37	103040070	2	M14 Locknut
38	410610021	1	Upper gearbox mounting plate
39	410490001	1	Spring guide
40	510130001	1	Handle with nut
41	103150029	1	Bolt M8x70
42	310210009	1	Spacer
43	103150011	1	Bolt M8x25
44	103150101	2	Bolt M14x45
45	103150081	2	Bolt M12x60
46	103150044	4	Bolt M10x30
47	103100008	4	Washer M10
48	103040068	2	M12 Locknut
49	410610057	1	Lower gearbox mounting plate
50	101050010	1	Wheel
51	310470001	1	Spring
52	410120001	1	Collar
53	101010002	1	PTO guard
<b><u>Not Illustrated</u></b>			
	310560002	2	Wheel axle



<u>No.</u>	<u>Part Number</u>	<u>Qty.</u>	<u>Description</u>
1	410552001	1	Chaincase half L.H. FL
1	410552015	1	Chaincase half L.H. FLA
2	109040004	4	Oilseal 65 x 45 x 10
3	320800001	1	Breather/Fill Plug
4	103040062	1	Locknut M6
5	410610020	1	Front shield support FL
5	410610056	1	Front shield support FLA
6	103100002	x	Washer M6
7	103040062	x	Locknut M6

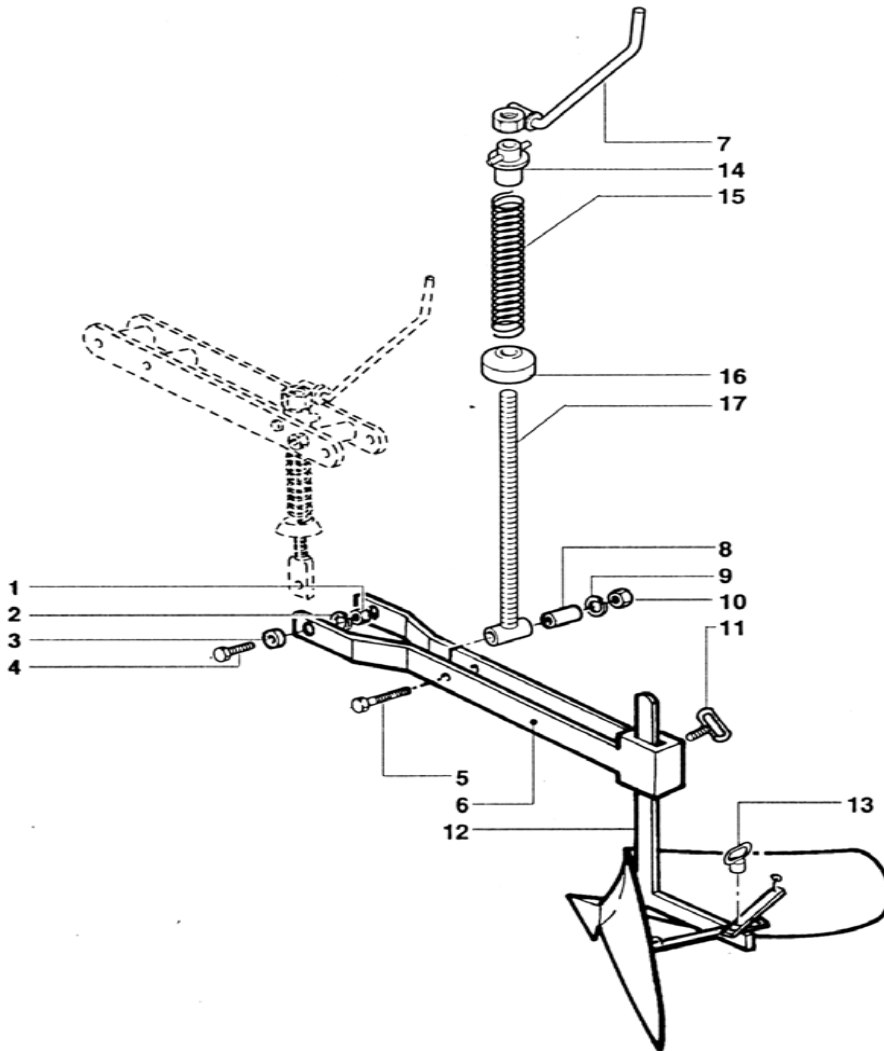
<u>No.</u>	<u>Part Number</u>	<u>Qty.</u>	<u>Description</u>
8	103140008	x	Bolt M6 x 25
9	510152002	1	Flange with blades L.H.
9	510154002	1	Flange with blades R.H.
10	103100042	1	Lock washer M18
11	103040044	1	Nut M18 x 1.5
12	310580005	2	Side depth skid plate FL
12	310580109	2	Side depth skid plate FLA
13	410590001	1	Depth skid
14	104010008	4	Bearing 6009
15	112020002	1	Chain 3/4" x 50P FL
15	112020004	1	Chain 3/4" x 62P FLA
16	310600002	2	Sprocket
17	410554001	1	Chaincase half R.H. FL
17	410554015	1	Chaincase half R.H. FLA
18	410030006	1	Rear shield support
19	310330001	1	Gasket FL
19	310330015	1	Gasket FLA
20	310580007	2	Plate FL
20	310580110	2	Plate FLA
21	103140008	x	Bolt M6 x 25
22	310620055	2	Optional chaincase protector
23	310550002	2	Dust cover
24	310210011	2	Spacer
25	103140008	x	Bolt M6 x 25
26	310090015	1	Bushing
27	410660002	1	Chain skid
28	310470007	1	Spring
29	103140013	1	Bolt M6 x 25
30	103140005	x	Bolt M6 x 16
31	410370002	1	Rotor flange less blades
32	410680010	1	Drawbolt 7-10" head
32	410680011	1	Drawbolt 12-15" head
32	410680012	1	Drawbolt 16-20" head
32	410680013	1	Drawbolt 20-24" head
32	410680014	1	Drawbolt 28-32" head
33	103040016	x	Locknut M10 x 1.25
34	116010015-L	x	Blade L.H. for extra narrow hear
34	116010015-R	x	Blade R.H. for extra narrow hea
34	111182-L	x	Blade L.H.
34	111182-R	x	Blade R.H.
35	111604	x	Blade bolt assembly

**Not Illustrated**  
 103100038 x Star washer for blade bolt



<u>No.</u>	<u>Part Number</u>	<u>Qty.</u>	<u>Description</u>
1	103040008	15	Nut M8
2	103100006	15	Washer M8
3	103150005	15	Bolt M8 x 16
4	410254001	1	Side shield-extra narrow L.H.
4	410254002	1	Side shield-narrow L.H.
4	410254003	1	Side shield-medium L.H.
5	300470018	2	Spring wire clip
6	300740001	2	Wedge pin
7	410160001	1	Center shield-extra narrow
7	410160002	1	Center shield-narrow
7	410160003	1	Center shield-wide
8	410252001	1	Side shield-extra narrow R.H.
8	410252002	1	Side shield-narrow R.H.
8	410252003	1	Side shield-medium R.H.
9	300620001	2	Plant guard
10	310622022	1	Trailing board R.H. 5.5-7" head
10	310622024	1	Trailing board R.H. 7-10" head
10	310622026	1	Trailing board R.H. 12-15" head
10	310622028	1	Trailing board R.H. 16-20" head
10	310622030	1	Trailing board R.H. 20-24" head
10	310622032	1	Trailing board R.H. 28-32" head
11	310624022	1	Trailing board L.H. 5.5-7" head
11	310624024	1	Trailing board L.H. 7-10" head
11	310624026	1	Trailing board L.H. 12-15" head
11	310624028	1	Trailing board L.H. 16-20" head
11	310624030	1	Trailing board L.H. 20-24" head
11	310624032	1	Trailing board L.H. 28-32" head
12	310622012	1	Side shield protector R.H.
12	310624012	1	Side shield protector L.H.

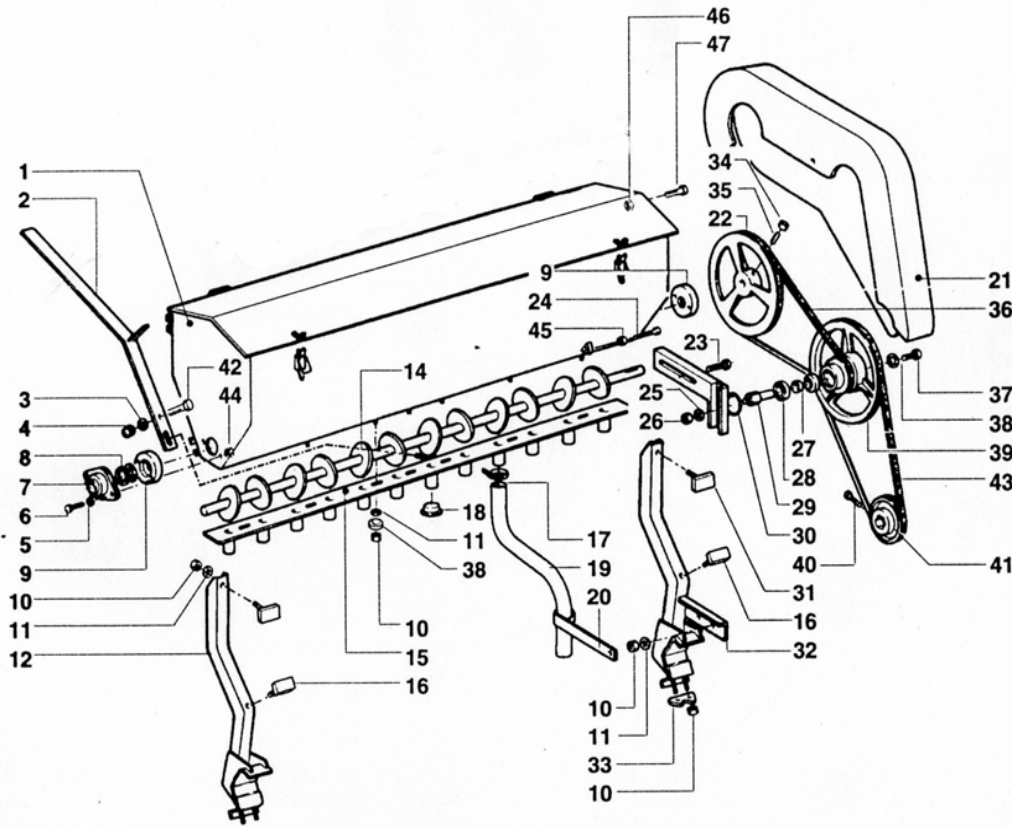




<u>No.</u>	<u>Part Number</u>	<u>Qty.</u>	<u>Description</u>
1	103040014	2	Nut M10
2	103100024	2	Lock washer M10
3	330090005	2	Bushing
4	103150047	2	Bolt M10 x 35
5	103150087	1	Bolt M12 x 80
6	430090004	1	Ridger arm FL
6	430090005	1	Ridger arm FLA
7	510130001	1	Handle with nut
8	310210009	1	Spacer
9	103100010	1	Washer M12
10	103040022	1	Nut M12
11	440270001	1	Special bolt
12	500230001	1	Ridger
13	440270002	1	Special nut
14	410490001	1	Spring guide
15	310470001	1	Spring
16	410120001	1	Collar
17	430680008	1	Threaded rod

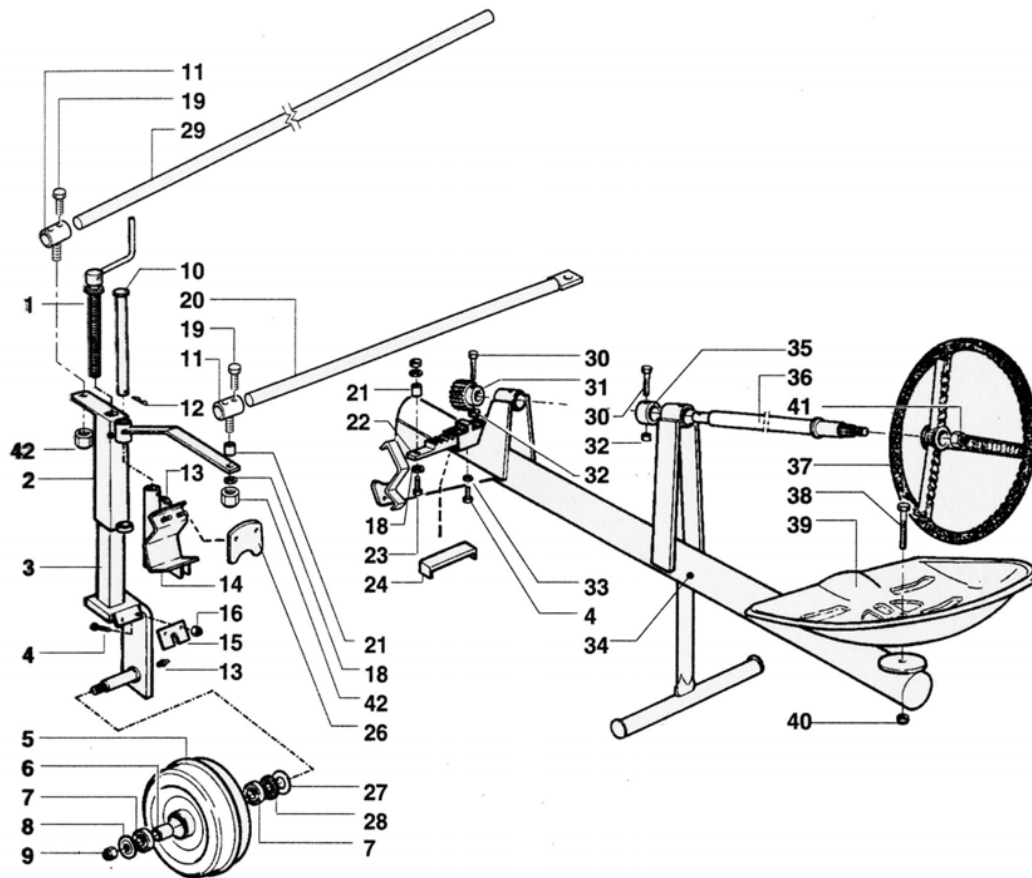
**Not Illustrated**

530010001	1	Bracket set FL
530010002	1	Bracket set FLA
530230002	1	Ridger assembly complete FL
530230003	1	Ridger assembly complete FLA
330590001	1	Weld on point
330030001	1	Weld on leading edge

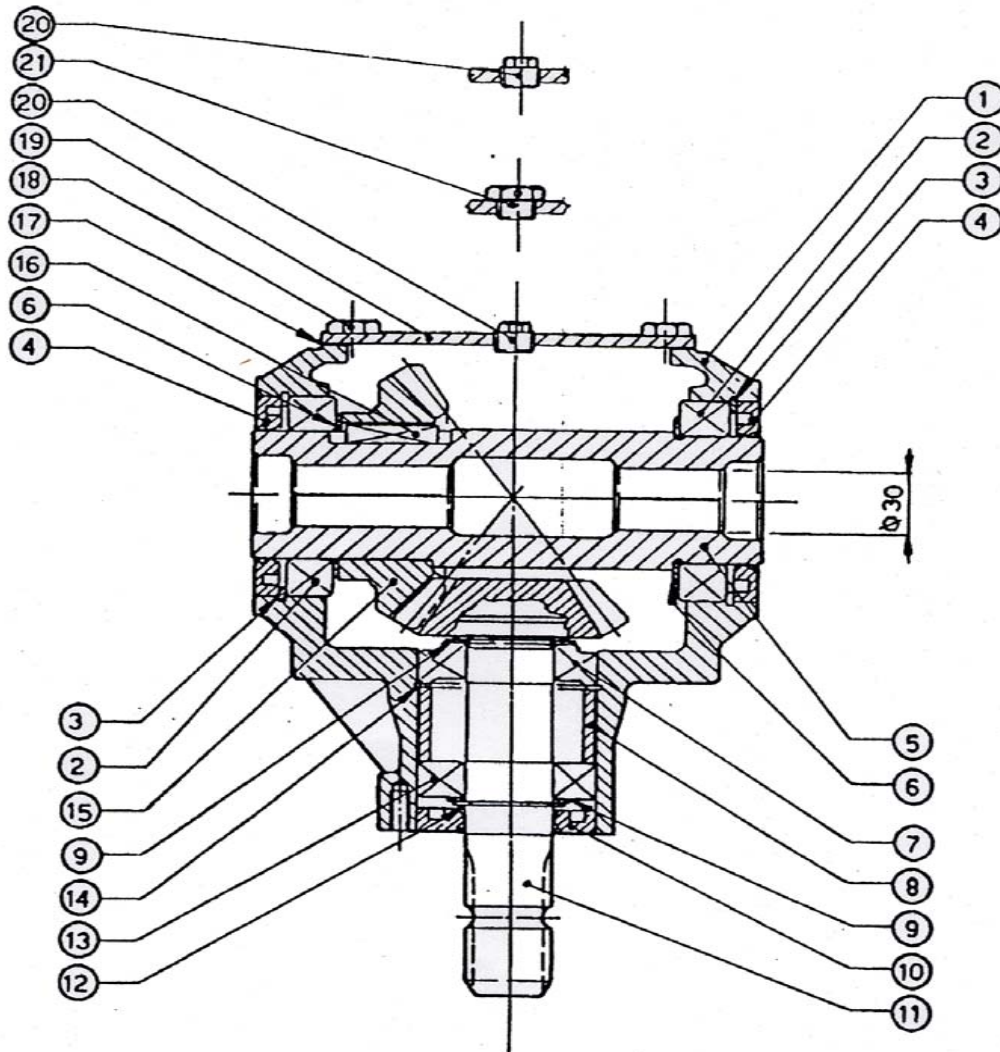


No.	Part Number	Qty.	Description
1	440140001	1	Fertilizer box 40"
1	440140002	1	Fertilizer box 60"
1	440140003	1	Fertilizer box 80"
2	440300001	1	Lever
3	103100014	1	Washer M16
4	103040072	1	Locknut M16
5	103100006	4	Washer M8

No.	Part Number	Qty.	Description
6	103150017	4	Bolt M8 x 35
7	104040002	2	Flange bearing
8	109020004	2	Felt seal
9	330250012	2	Bushing
10	103040068	6	Locknut M12
11	330090045	6	Bushing
12	430610046	1	Hopper support arm
14	440310001	1	Agitator 40"
14	440310002	1	Agitator 60"
14	440310003	1	Agitator 80"
15	440070001	1	Slide regulator 40"
15	440070002	1	Slide regulator 60"
15	440070003	1	Slide regulator 80"
16	440640001	4	Attaching pad
17	101030002	x	Hose clamp
18	103120006	x	Plastic plug
19	114010008	x	Hose (order per foot)
20	330580006	x	Hose guide
21	440450004	1	Drive guard
22	330630001	1	Hopper pulley
23	103150072	2	Bolt M12 x 35
24	103150200	1	Bolt M10 x 70
25	440610004	1	Idler pulley support
26	103040034	1	Nut M16
27	330210001	1	Spacer
28	104010002	2	Bearing 6205Z
29	330560001	1	Idler pulley axle
30	103010002	1	Snap ring
31	103100014	1	Washer M16
32	430610047	1	Hopper support drive
33	310770001	2	Clamp plate
34	103040014	1	Nut M10
35	103070002	1	Bolt M10 x 35
36	112030001	1	Belt A43
37	103150034	1	Bolt M10 x 20
38	330670001	1	Washer
39	330630002	1	Idler pulley
40	103070002	1	Set screw M10 x 35
41	310630003	1	Drive pulley 30 mm
42	103150125	1	Bolt M16 x 45
43	112030006	1	Belt A52
44	103040008	4	Nut M8
45	103040014	1	Nut M10
46	103040062	2	Locknut M6

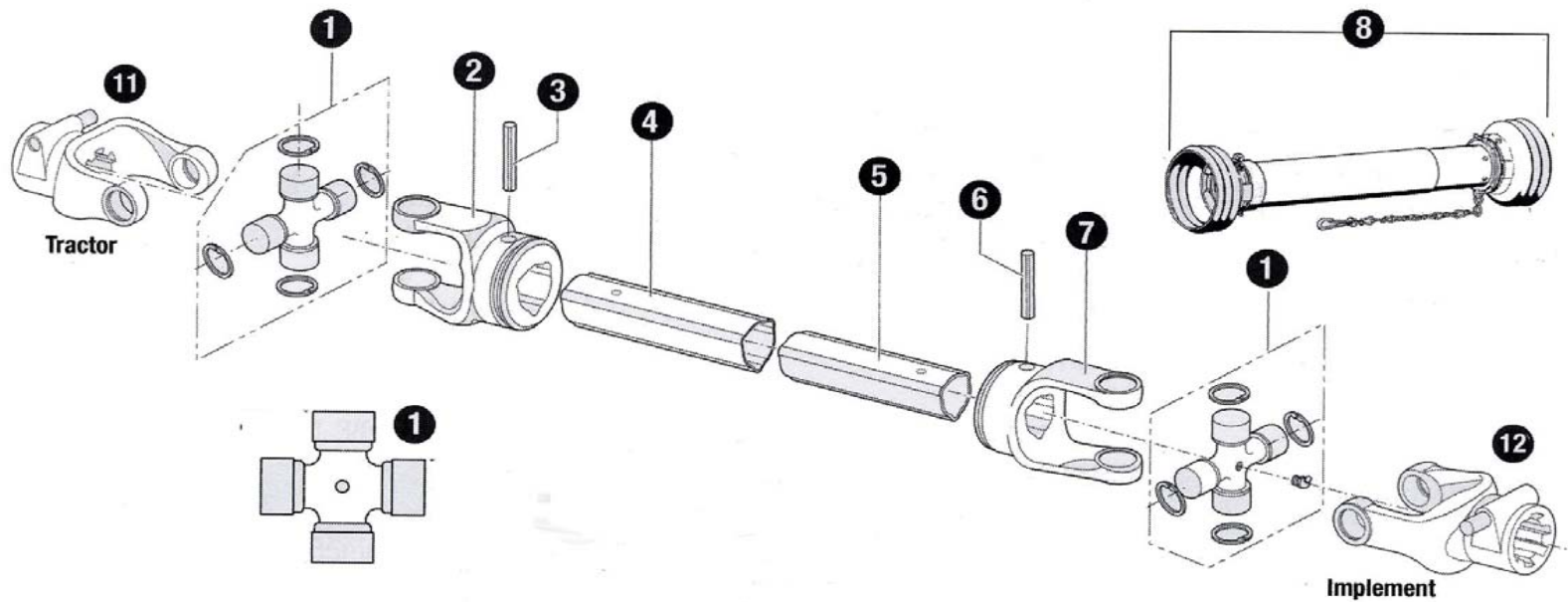


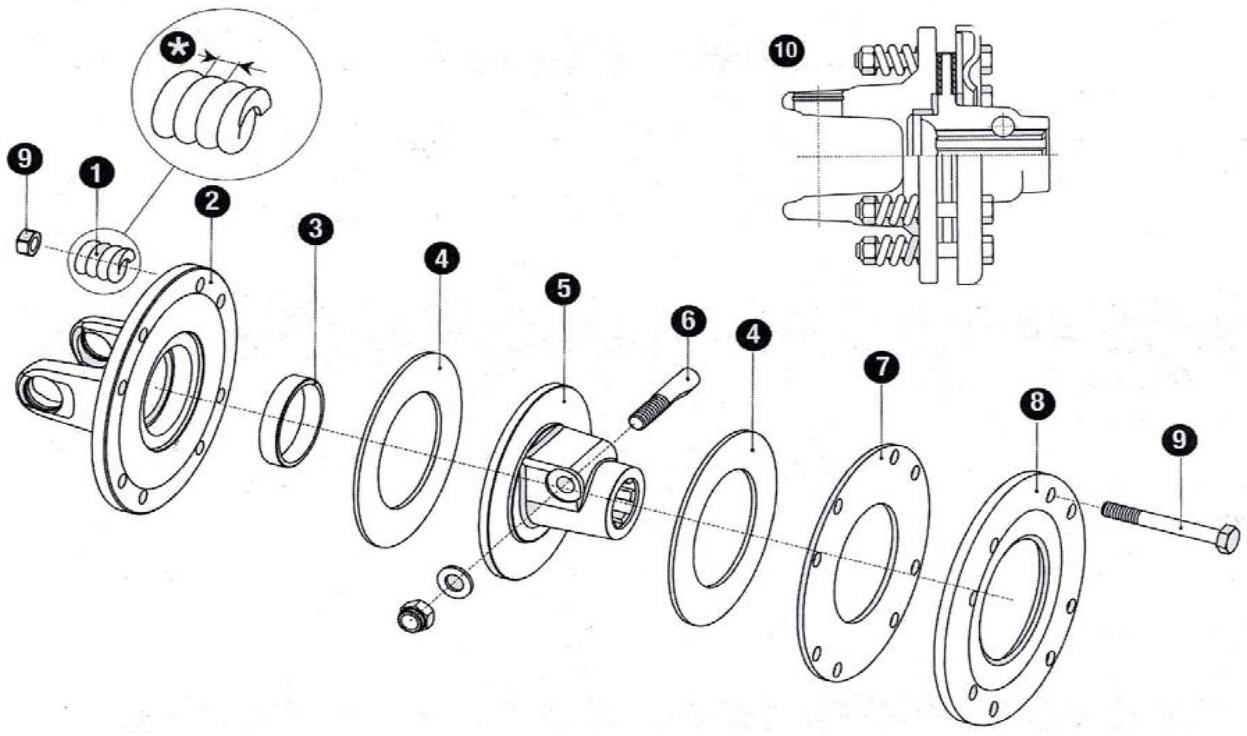
<u>No.</u>	<u>Part Number</u>	<u>Qty.</u>	<u>Description</u>
47	103140005	2	Bolt M6 x 16
1	500130004	2	Threaded height adjustment har
2	430610039	2	Support tube
3	430610048	2	Lower support FL
3	430610041	2	Lower support FLA
4	103150011	4	Bolt M8 x 25
5	101050002	2	Wheel
6	320210007	2	Spacer
7	104010002	4	Bearing 6025Z
8	320670005	2	Washer
9	103040072	2	Nut M16
10	440410001	2	Pin
11	440490008	3	Steering connection
12	101020002	2	Split pin
13	103090002	4	Grease zerk
14	430610040	2	Tool bar clamp
15	330570047	2	Wheel scraper plate
16	103040064	4	Nut M8
17	103040014	2	Nut M10
18	103100008	4	Washer M10
19	103150034	6	Bolt M10 x 20
20	440050006	1	Steering rod
21	330090013	3	Bushing
22	440180001	1	Rack gear
23	103150047	2	Bolt
24	440570006	1	Slide
25	440090014	1	Arm
26	310770001	3	Clamp bracket
27	109010004	2	Washer
28	109020004	2	Felt ring
29	330040045	1	Tie-rod
30	103140013	2	Bolt M6 x 50
31	330600001	1	Pinion gear
32	103040062	2	Nut M6
33	103040008	2	Nut M8
34	430650059	1	Frame
35	330090034	1	Bushing
36	430010001	1	Shaft
37	101080002	1	Steering wheel
38	103150112	1	Bolt M14 x 110
39	101060004	1	Seat
40	103040070	1	Nut M14
41	103040072	1	Nut M16



<u>No.</u>	<u>Part Number</u>	<u>Qty.</u>	<u>Description</u>
	112050024	1	Gearbox Assembly
1	0267030200	1	Gearbox housing
2	80100169	2	Bearing 6012
3	85201027	2	Internal Clip
4	0267710400	2	Oilseal 60x95x10
5	0267300100	1	Sleeve Hex 30
6	0248750000	2	Shim 60.3x71.7
7	80900026	1	Bearing 30207
8	0267710000	1	Spacer
9	0259750000	2	Shim 35.3x43
10	87100152	1	Oilseal 35x72x12
11	0267500100	1	Pinion shaft 15T
12	85100005	1	External circlip
13	80100025	1	Bearing 6207
14	85200131	1	Internal Clip
15	0267600000	1	Crownwheel 22T
16	84101028	1	Key 14x9x35
17	0267720000	1	Cover gasket
18	81100054	4	Hex bolt M10x20
19	0267130000	1	Cover
20	86500006	2	Plug 3/8"
21	0107710001	1	Oil filler plug

<u>No.</u>	<u>Part Number</u>	<u>Qty.</u>	<u>Description</u>
1	B41204	2	Cross and bearing kit
2	B204046851	1	Yoke-outer tube
3	B341038000	1	Roll pin P8x60
4	B125081500	1	Outer tube size 4
5	B125071500	1	Inner tube size 4
6	B34104800	1	Roll pin
7	B204051420	1	Yoke-inner tube
8	B5F04056F6	1	Complete PTO shield
11	B572040351	1	540 RPM Yoke
12	B572040351	1	540 RPM Yoke





<u>No.</u>	<u>Part Number</u>	<u>Qty.</u>	<u>Description</u>
1	B351022370	8	Spring
2	B253042001	1	Flange yoke size #4
3	B258005320	1	Bushing
4	B247000054	2	Friction disc
5	B515200311	1	Clutch hub
6	B408000060	1	Pin kit
7	B248220008	1	Drive plate
8	B248220007	1	Thrust plate
9	B432000006	8	Bolt & Nut
10	B637141001	1	Complete clutch assembly