



SRT, SRD, SRM

TILLER

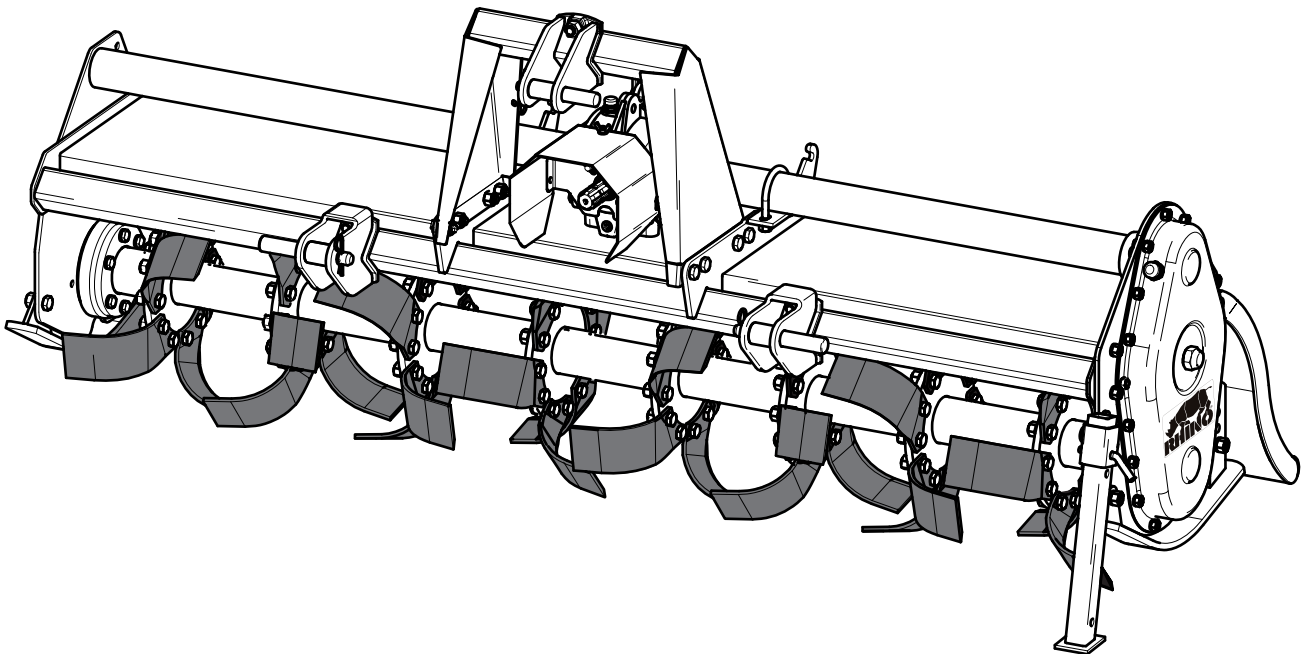
PUBLISHED 02/12

PART NO. 00788293

OPERATOR'S & PARTS MANUAL



This Operator's Manual is an integral part of the safe operation of this machine and must be maintained with the unit at all times. READ, UNDERSTAND, and FOLLOW the Safety and Operation Instructions contained in this manual before operating the equipment. C01-Cover



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¡ATENCIÓN!
LEA EL INSTRUCTIVO



Si No Lee Ingles, Pida
Ayuda a Alguien
Que Se Lo Lea Para Que le
Traduzca Las
Medidas de Seguridad

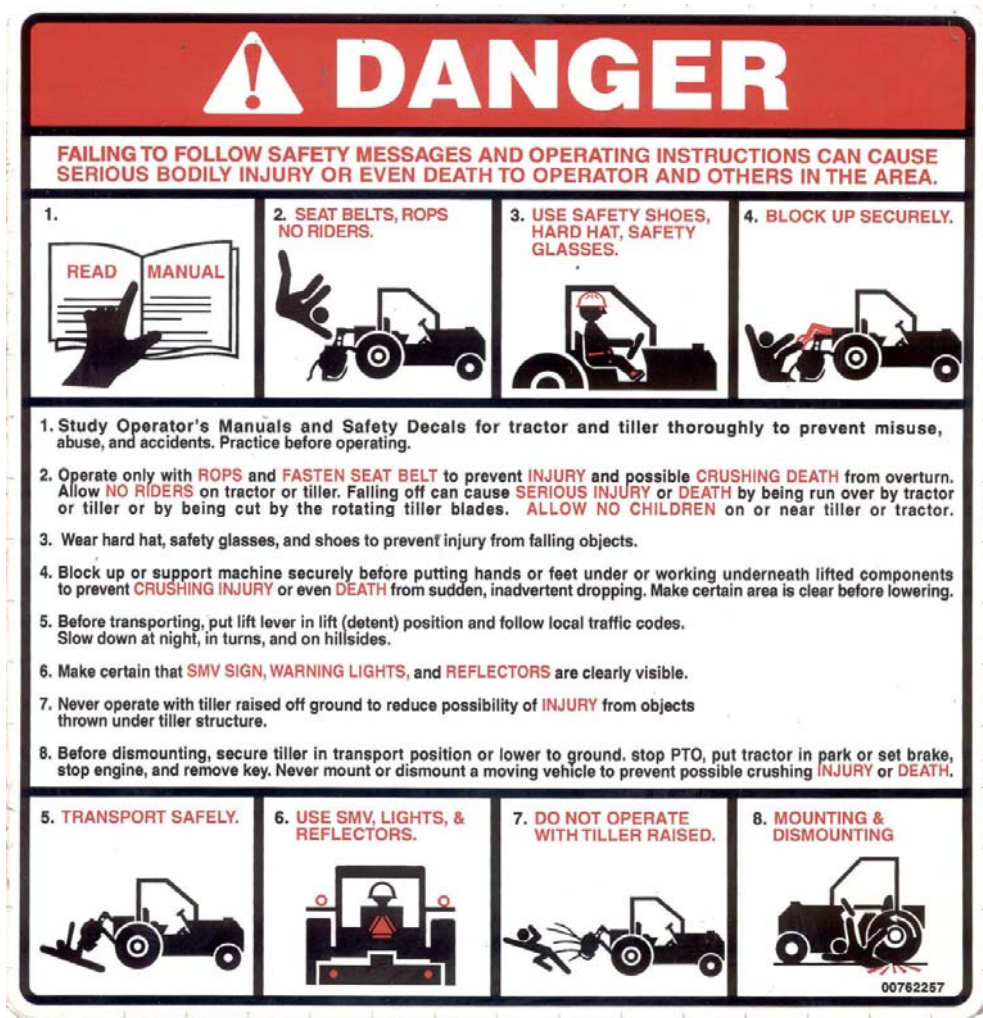
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To the Owner/Operator/Dealer

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!



WARRANTY INFORMATION:

Read and understand the complete Warranty Statement found in this Manual. Fill out the Warranty Registration Form in full and return it to within 30 Days. Make certain the Serial Number of the Machine is recorded on the Warranty Card and on the Warranty Form that you retain

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SAFETY SECTION

SAFETY

General Safety Instructions and Practices

A careful operator is the best operator. Safety is of primary importance to the manufacturer and should be to the owner/operator. Most accidents can be avoided by being aware of your equipment, your surroundings, and observing certain precautions. The first section of this manual includes a list of Safety Messages that, if followed, will help protect the operator and bystanders from injury or death. Read and understand these Safety Messages before assembling, operating or servicing this Implement. This equipment should only be operated by those persons who have read the manual, who are responsible and trained, and who know how to do so responsibly.



The Safety Alert Symbol combined with a Signal Word, as seen below, is used throughout this manual and on decals which are attached to the equipment. The Safety Alert Symbol means: "ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!" The Symbol and Signal Word are intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this equipment.

Practice all usual and customary safe working precautions and above all---remember safety is up to YOU. Only YOU can prevent serious injury or death from unsafe practices.



Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR VERY SERIOUS INJURY.



Indicates an imminently hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.



Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.



Identifies special instructions or procedures that, if not strictly observed, could result in damage to, or destruction of the machine, attachments or the environment.

NOTE: *Identifies points of particular interest for more efficient and convenient operation or repair.* (SG-1)

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards. (SG-2)



Always maintain the safety signs in good readable condition. If the safety signs are missing, damaged, or unreadable, obtain and install replacement safety signs immediately. (SG-5)

SAFETY

⚠ DANGER

Never operate the Tractor or Implement until you have read and completely understand this Manual, the Tractor Operator's Manual, and each of the Safety Messages found in the Manual or on the Tractor and Implement. Learn how to stop the tractor engine suddenly in an emergency. Never allow inexperienced or untrained personnel to operate the Tractor or Implement without supervision. Make sure the operator has fully read and understood the manuals prior to operation.



⚠ WARNING

Operate this Equipment only with a Tractor equipped with an approved roll-over-protective system (ROPS). Always wear seat belts. Serious injury or even death could result from falling off the tractor--particularly during a turnover when the operator could be pinned under the ROPS. (SG-7)



⚠ DANGER

BEFORE leaving the tractor seat, always engage the parking brake and/or set the tractor transmission in parking gear, disengage the PTO, stop the engine, remove the key, and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never dismount a Tractor that is moving or while the engine is running. Operate the Tractor controls from the tractor seat only. (SG-9)



⚠ DANGER

Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in serious injury or death. (SG-10)



⚠ DANGER

Never allow children to operate, ride on, or come close to the Tractor or Implement. Usually, 16-17 year-old children who are mature and responsible can operate the implement with adult supervision, if they have read and understand the Operator's Manuals, been trained in proper operation of the tractor and Implement, and are physically large enough to reach and operate the controls easily. (SG-11)



⚠ WARNING

Do not mount or dismount the Tractor while the tractor is moving. Mount the Tractor only when the Tractor and all moving parts are completely stopped. (SG-12)



⚠ WARNING

Do not modify or alter this Implement. Do not permit anyone to modify or alter this Implement, any of its components or any Implement function. (SG-8)

SAFETY

SAFETY

Operator Safety Instructions and Practices

WARNING

The operator and all support personnel should wear hard hats, safety shoes, safety glasses, and proper hearing protection at all times for protection from injury including injury from items that may be thrown by the equipment. (SG-16)



CAUTION

PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS! Tractors with or without an Implement attached can often be noisy enough to cause permanent hearing loss. We recommend that you always wear hearing protection if the noise in the Operator's position exceeds 80db. Noise over 85db over an extended period of time will cause severe hearing loss. Noise over 90db adjacent to the Operator over an extended period of time will cause permanent or total hearing loss. **NOTE:** *Hearing loss from loud noise [from tractors, chain saws, radios, and other such sources close to the ear] is cumulative over a lifetime without hope of natural recovery.* (SG-17)



WARNING

Always read carefully and comply fully with the manufacturer's instructions when handling oil, solvents, cleansers, and any other chemical agent. (SG-22)



DANGER

KEEP AWAY FROM ROTATING ELEMENTS to prevent entanglement and possible serious injury or death. (SG-24)



DANGER

Never allow children to play on or around Tractor or Implement. Children can slip or fall off the Equipment and be injured or killed. Children can cause the Implement to shift or fall crushing themselves or others. (SG-25)

WARNING

Be sure you have adequate knowledge of the property you will be working on. Take time to make yourself aware of any area underground lines or cables. Contact with buried lines or cable could result in **serious injury or death.** (STL-1)

DANGER

Do not put hands or feet under Tiller deck. Blade Contact can result in serious injury or even death. Stay away until all motion has stopped and the decks are securely blocked up. (STL-3)



SAFETY



WARNING Extreme care should be taken when operating near loose objects such as gravel, rocks, wire, and other debris. Inspect the area before tilling. Foreign objects should be removed from the site to prevent machine damage and/or bodily injury or even death. Any objects that cannot be removed must be clearly marked and carefully avoided by the operator. Stop operating immediately if blades strike a foreign object. Repair all damage and make certain rotor and blades are in good condition before resuming operation. (STL-5)

Equipment Operation Safety Instructions and Practices



DANGER NEVER use drugs or alcohol immediately before or while operating the Tractor and Implement. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the Tractor or Implement, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Equipment safely. NEVER knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SG-27)



DANGER Operate the Tractor and/or Implement controls only while properly seated in the Tractor seat with the seat belt securely fastened around you. Inadvertent movement of the Tractor or Implement may cause serious injury or death. (SG-29)



DANGER Do not operate the implement while wearing loose fitting clothing. Entanglement of the clothing with the rotating elements can result in serious injury or even death. Stay clear of all rotating elements at all times. (SSP-03)



DANGER Start tractor only when properly seated in the Tractor seat. Starting a tractor in gear can result in injury or death. Read the Tractor operators manual for proper starting instructions. (SG-13)



DANGER Never run the Tractor engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous to your health. (SG-23)

SAFETY



Do not exceed the rated PTO speed for the Implement. Excessive PTO speeds can cause Implement driveline or blade failures resulting in serious injury or death. (SG-26)



Operate the Tractor and/or Implement controls only while properly seated in the Tractor seat with the seat belt securely fastened around you. Inadvertent movement of the Tractor or Implement may cause serious injury or death. (SG-29)



There are obvious and hidden potential hazards in the operation of this Implement as in all power-driven or pulled equipment. REMEMBER! This machine is often operated in rough terrain conditions that include grass, weeds, gullies, holes, slopes, hidden obstructions and the like. Serious injury or even death may occur unless care is taken to assure the safety of the operator and bystanders in the area. Do not operate this machine with anyone in the immediate area. Stop operating if anyone comes within 25 feet of the equipment. (STL-4)



Many varied objects, such as wire, cable, rope, or chains, can become entangled in the rotating parts of the Implement. These objects could then swing outside the housing at greater velocities than the blades. Such a situation is extremely hazardous and could result in serious injury or even death. Inspect the area for such objects before working in the area. Remove any such objects from the site. Never allow the implement to contact such objects. (STL-6)

Transporting Safety Instructions and Practices



This Implement may be wider than the Tractor. Be careful when operating or transporting this equipment to prevent the Implement from running into or striking sign posts, guard rails, concrete abutments or other solid objects. Such an impact could cause the Implement and Tractor to pivot violently resulting in loss of steering control, serious injury, or even death. Never allow the Implement to contact obstacles. (S3PT-12)



Be particularly careful when transporting the Implement with the Tractor. Turn curves or go up hills only at a low speed and using a gradual steering angle. Rear mounted implements move the center of gravity to the rear and remove weight from the front wheels. Make certain, by adding front ballast, that at least 20% of the tractor's weight is on the front wheels to prevent rearing up, loss of steering control or Tractor tip-over. Slow down on rough or uneven surfaces to prevent loss of steering control which could result in property damage or possible injury. Do not transport unless 3-Point lift lever is fully raised and in the latched transport position. Dropping implement in transport can cause serious damage to the tractor and/or Implement and possibly cause the operator or others to be injured or killed. (S3PT-02)

SAFETY

SAFETY

Maintenance and Service Safety Instructions and Practices



WARNING

The rotating parts of this machine continue to rotate even after the PTO has been turned off. The operator should remain in his seat for 60 seconds after the brake has been set, the PTO disengaged, the tractor turned off, and all evidence of rotation has ceased. (S3PT-10)

“Wait a minute...Save a life!”



DANGER

Never crawl under a raised Implement supported solely by the Tractor 3-Point hitch. Release of the control lever or mechanical failure will result in the Implement falling and possible injury or death. Always securely block up the Implement before crawling underneath to perform repairs and service. (S3PT-19)



WARNING

Do not operate this Equipment with hydraulic oil or fuel leaking. Oil and fuel are explosive and their presence could present a hazard. Do not check for leaks with your hand! High-pressure oil streams from breaks in the line could penetrate the skin and cause tissue damage including gangrene. To check for a hose leak, SHUT the unit ENGINE OFF and remove all hydraulic pressure. Wear oil impenetrable gloves, safety glasses and use Cardboard to check for evidence of oil leaks. If you suspect a leak, REMOVE the HOSE and have it tested at a Dealer. If oil does penetrate the skin, have the injury treated immediately by a physician knowledgeable and skilled in this procedure. (SG-15)



DANGER

Make sure the PTO shield, integral driveline shields, and input shields are installed when using PTO-driven equipment. Always replace any shield if it is damaged or missing. (S3PT-8)



WARNING

Relieve hydraulic pressure prior to doing any maintenance or repair work on the Implement. Place the Implement on the ground or securely blocked up, disengage the PTO, and turn off the tractor engine. Push and pull the Remote Cylinder lever in and out several times prior to starting any maintenance or repair work. (S3PT-09)



DANGER

Always disconnect the main PTO Driveline from the Tractor before performing service on the Implement. Never work on the Implement with the tractor PTO driveline connected and running. Rotating Parts, Blades or Drivelines could turn without warning and cause immediate entanglement, injury or death. (S3PT-11)



WARNING

Always maintain the safety signs in good readable condition. If the safety signs are missing, damaged, or unreadable, obtain and install replacement safety signs immediately. (SG-5)

SAFETY

⚠ DANGER

Never work under the Implement, the framework, or any lifted component unless the Implement is securely supported or blocked up to prevent sudden or inadvertent falling which could cause serious injury or even death. (SG-14)



⚠ WARNING

Never attempt to lubricate, adjust, or remove material from the Implement while it is in motion or while tractor engine is running. (SG-20)

⚠ WARNING

Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order. (SG-21)



⚠ WARNING

Perform service, repairs and lubrication according to the maintenance section. Ensure the unit is properly lubricated as specified in the lubrication schedule and all bolts and nuts are properly torqued. Failure to properly service, repair and maintain this Implement in good operating condition could cause component failure and possible serious injury or even death. (SG-35)

⚠ WARNING

Use caution and wear protective gloves when handling sharp objects such as blades, knives, and other cutting edges. Be alert to worn component surfaces which have sharp edges. Sharp surfaces can inflict severe laceration injuries if proper hand protection is not worn. (SG-37)

PARTS INFORMATION

Rhino products are designed utilizing specifically matched system components to ensure optimum equipment performance. These parts are made and tested to Rhino specifications. Non-genuine "will fit" parts do not consistently meet these specifications. The use of "will fit" parts may reduce equipment performance, void warranties, and present a safety hazard. Use genuine Rhino parts for economy and safety. (SPRM-2)

SEE YOUR RHINO DEALER

SAFETY

WARNING

Transport only at speeds where you can maintain control of the equipment. Serious accidents and injuries can result from operating this equipment at high speeds. Understand the Tractor and Implement and how it handles before transporting on streets and highways. Make sure the Tractor steering and brakes are in good condition and operate properly.



Before transporting the Tractor and Implement, determine the proper transport speeds for you and the equipment. Make sure you abide by the following rules:

Test the tractor at a slow speed and increase the speed slowly. Apply the Brakes smoothly to determine the stopping characteristics of the Tractor and Implement. As you increase the speed of the Tractor the stopping distance increases. Determine the maximum transport speed not to exceed 20 mph (30 kph) for transporting this equipment.

Test the equipment at a slow speed in turns. Increase the speed through the turn only after you determine that the equipment can be operated at a higher speed. Use extreme care and reduce your speed when turning sharply to prevent the tractor and implement from turning over. Determine the maximum turning speed for you and this equipment before operating on roads or uneven ground.



Only transport the Tractor and Implement at the speeds which allow you to properly control the equipment.

Be aware of the operating conditions. Do not operate the Tractor with weak or faulty brakes or worn tires. When operating down a hill or on wet or rain slick roads, the braking distance increases: use extreme care and reduce your speed. When operating in traffic always use the Tractor's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy. (SG-19)

WARNING

Only tow the Implement behind a properly sized and equipped Tractor which exceeds the weight of the Implement by at least 20%. DO NOT tow the Implement behind a truck or other type of vehicle. Never tow the Implement and another Implement connected in tandem. Never tow the Implement at speeds over 20 MPH. (STI-06)



WARNING

Your driving vision may be reduced or impaired by the tractor, cab, or implement. Before driving on public roadways identify any limited vision areas, and make adjustments to your operating position, mirrors, and the implement transport position so that you can clearly see the area where you will be traveling, and any traffic that may approach you. Failure to maintain adequate vision of the public roadway and traffic can result in serious injury or even death. (STI-10)

SAFETY



Make certain that the “Slow Moving Vehicle” (SMV) sign is installed in such a way as to be clearly visible and legible. When transporting the Equipment use the Tractor flashing warning lights and follow all local traffic regulations. (SG-6)



In wet conditions where there is a likelihood of material collecting on the Implement, make certain that this material is removed before traveling on public roadways. (STL-7)

Storage and Parking Safety Instructions and Practices



Never leave the Tractor and Implement unattended while the Implement is in the lifted position. Accidental operation of lifting lever or a hydraulic failure may cause sudden drop of unit with injury or death by crushing. To properly park the implement when disconnecting it from the tractor, lower the stand and put the retaining pin securely in place, or put a secure support under the A-Frame. Lower the implement carefully to the ground. Do not put hands or feet under lifted components. (S3PT-1)



Always shut the Tractor completely down, place the transmission in park, and set the parking brake before you or anyone else attempts to connect or disconnect the Implement and Tractor hitches. (S3PT-15)



To prevent tipping of Implement when stored in folded position, use carrying wheels or adequate stands on center frame. (S3PT-6)

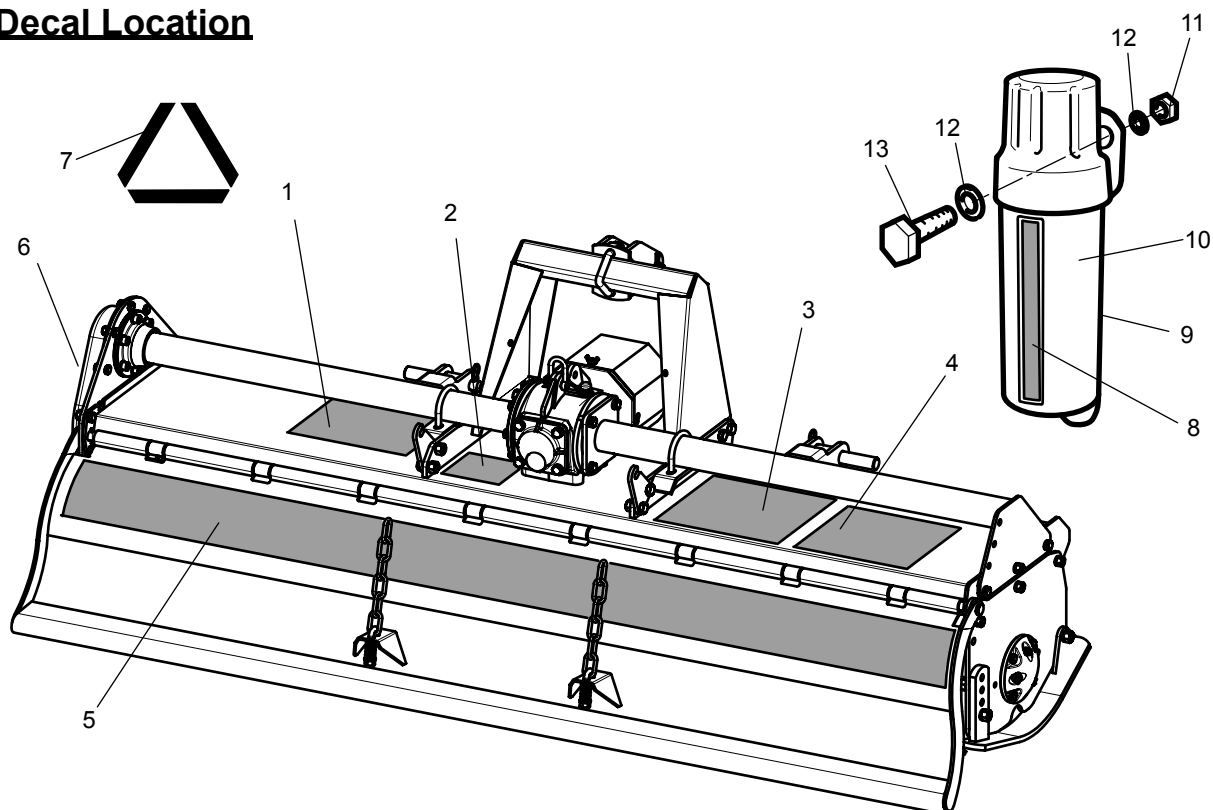
Concluding Safety Instructions and Practices

In addition to the design and configuration of this Implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the Tractor and Equipment Manuals. Pay close attention to the Safety Signs affixed to the Tractor and Equipment. (SG-18)

SAFETY

SAFETY

Decal Location



ITEM	PART NO.	QTY	TYPE	DESCRIPTION
1.	00762257	1	Danger	Driveline shield missing Serial
2.	No code	1	Serial N.	plate RHINO tiller Operator's
3.	00762257	1	Danger	manual inside Maintain
4.	00756494	1	Warning	shields and deflector Rhino -
5.	00787001	1	Logo-name	Rhino - SRT 40
5.	00787002	1	Logo-name	Rhino - SRT 48
5.	00787003	1	Logo-name	Rhino - SRT 55
5.	00787982	1	Logo-name	Rhino - SRT 65
5.	00787983	1	Logo-name	Rhino - SRT 73
5.	00788091	1	Logo-name	Rhino - SRD 63
5.	00788092	1	Logo-name	Rhino - SRD 73
5.	00788093	1	Logo-name	Rhino - SRD 83
5.	00788126	1	Logo-name	Rhino - SRM 81V
5a.	00787010	1	Logo	Rhino
5b.	00788123	1	Name	SRM 91V
6.	49696	1	Logo	RHINO
7.	03200347	1*	Reflect	Slow Moving Vehicle
8.	00776481	1	Instruct	Operator's Manual Inside
9.	00776031	1		Canister, Operator,s manual
10.	00762174	1		Operator's manual
11.	02959924	1		Lock nut
12.	00024100	1		Flat Washer
13.	10058000	3		Bolt

*Provided by Tractor Manufacturer

SAFETY

Decal Description

DANGER! Failing to obey safety messages and operating instructions can cause serious bodily injury or even death to the operator and others in the area.

P/N 00762257



DANGER! Guard Missing, Do Not Operate. If you see this decal, Do Not Operate the mower until the shield has been replaced.

Rotating Driveline Keep Away, Contact can cause death.

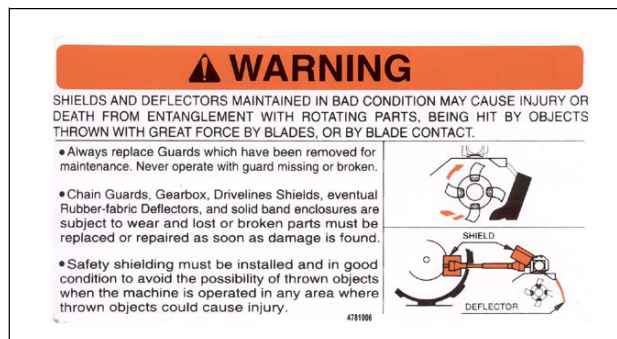
DANGER! Make certain that drivelines are correct length and are securely attached.

P/N 00756494



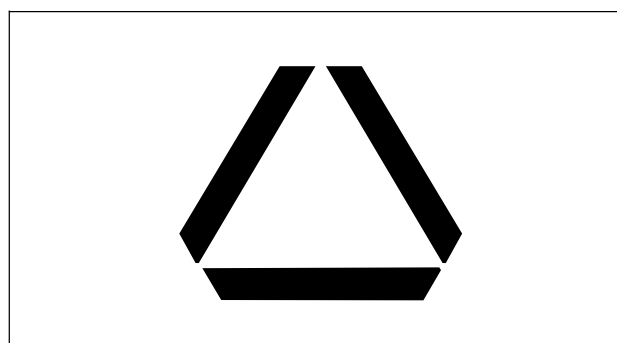
WARNING! Failure to use and maintain shields and deflectors in good condition may lead to injury or death from entanglement with rotating parts. Being hit by objects thrown with great force by blades, or by blade contact.

P/N 00725739



Slow Moving Vehicle Decal. Keep SMV reflector clean and visible. DO NOT transport or operate without the SMV.

P/N 03200347



SAFETY

Logo Product Name: Rhino
P/N 49696



Model name:SRT40
P/N 00787001



Model name:SRT48
P/N 00787002



Model name:SRT55
P/N 00787003



Model name:SRT65
P/N 00787982



Model name:SRT73
P/N 00787983



Model name:SRD63
P/N 00788091



SAFETY

SAFETY

SAFETY

Model name:SRD73
P/N 00788092



Model name:SRD83
P/N 00788093



Model name:SRM81V
P/N 00788126



Model name: RHINO
P/N 00787010

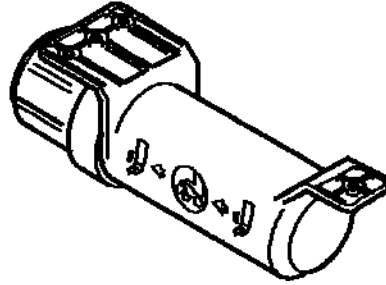


Model name:SRM91V
P/N 00788123



SAFETY

Read Operator's Manual! The operator's manual is located inside this canister. If the manual is missing order one from your dealer.



SAFETY

SAFETY

Federal Laws and Regulations

This section is intended to explain in broad terms the concept and effect of federal laws and regulations concerning employer and employee equipment operators. This section is not intended as a legal interpretation of the law and should not be considered as such.

Employer-Employee Operator Regulations

U.S. Public Law 91-596 (The Williams-Steiger Occupational and Health Act of 1970) OSHA

This Act Seeks:

“...to assure so far as possible every working man and woman in the nation safe and healthful working conditions and to preserve our human resources...”

DUTIES

Sec. 5 (a) Each employer-

(1) shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees;

(2) shall comply with occupational safety and health standards promulgated under this Act.

(b) Each employee shall comply with occupational safety and health standards and all rules, regulations and orders issued pursuant to this Act which are applicable to his own actions and conduct.

OSHA Regulations

OSHA regulations state in part: “At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in the safe operation and servicing of all equipment with which the employee is, or will be involved.”

Employer Responsibilities:

To ensure employee safety during Tractor and Implement operation, it is the employer’s responsibility to:

1. Train the employee in the proper and safe operation of the Tractor and Implement.
2. Require that the employee read and fully understand the Tractor and Implement Operator's manual.
3. Permit only qualified and properly trained employees to operate the Tractor and Implement.
4. Maintain the Tractor and Implement in a safe operational condition and maintain all shields and guards on the equipment.
5. Ensure the Tractor is equipped with a functional ROPS and seat belt and require that the employee operator securely fasten the safety belt and operate with the ROPS in the raised position at all times.
6. Forbid the employee operator to carry additional riders on the Tractor or Implement.
7. Provide the required tools to maintain the Tractor and Implement in a good safe working condition and provide the necessary support devices to secure the equipment safely while performing repairs and service.
8. Require that the employee operator stop operation if bystanders or passersby come within 25 feet.

Child Labor Under 16 Years of Age

Some regulations specify that no one under the age of 16 may operate power machinery. It is your responsibility to know what these regulations are in your own area or situation. (Refer to U.S. Dept. of Labor, Employment Standard Administration, Wage & Home Division, Child Labor Bulletin #102.)

INTRODUCTION SECTION

INTRODUCTION

These Tillers are designed with care and built with quality materials by skilled workers. Proper assembly, maintenance, and operating practices, as described in this manual, will help the owner/operator get years of satisfactory service from the machine.

The purpose of this manual is to familiarize, instruct. The Assembly Section instructs the owner/operator in the correct assembly of the Tiller using standard and optional equipment.

Careful use and timely service save extensive repairs and costly downtime losses. The Operation and Maintenance Sections of the manual train the owner/operator how to work the Tiller correctly and attend to appropriate maintenance. The Trouble Shooting Guide helps diagnose difficulties with Tiller and offers solution to the problems.

Safety is of primary importance to the owner/operator and to the manufacturer. The first section of this manual includes a list of Safety Messages, that, if followed, will help protect the operator and bystanders from injury or death. Many of the Safety Messages will be repeated throughout the manual. The owner/operator/dealer should know these Safety Messages before assembly and be aware of the hazards of operating this Tiller during assembly, use, and maintenance. The Safety Alert Symbol combined with a Signal Word, as seen below, is intended to warn the owner/operator of impending hazards and the degree of possible injury faced when operating this machine.



Indicates an imminently hazardous situation that, if not avoided, WILL result in DEATH OR VERY SERIOUS INJURY.



Indicates an imminently hazardous situation that, if not avoided, COULD result in DEATH OR SERIOUS INJURY.



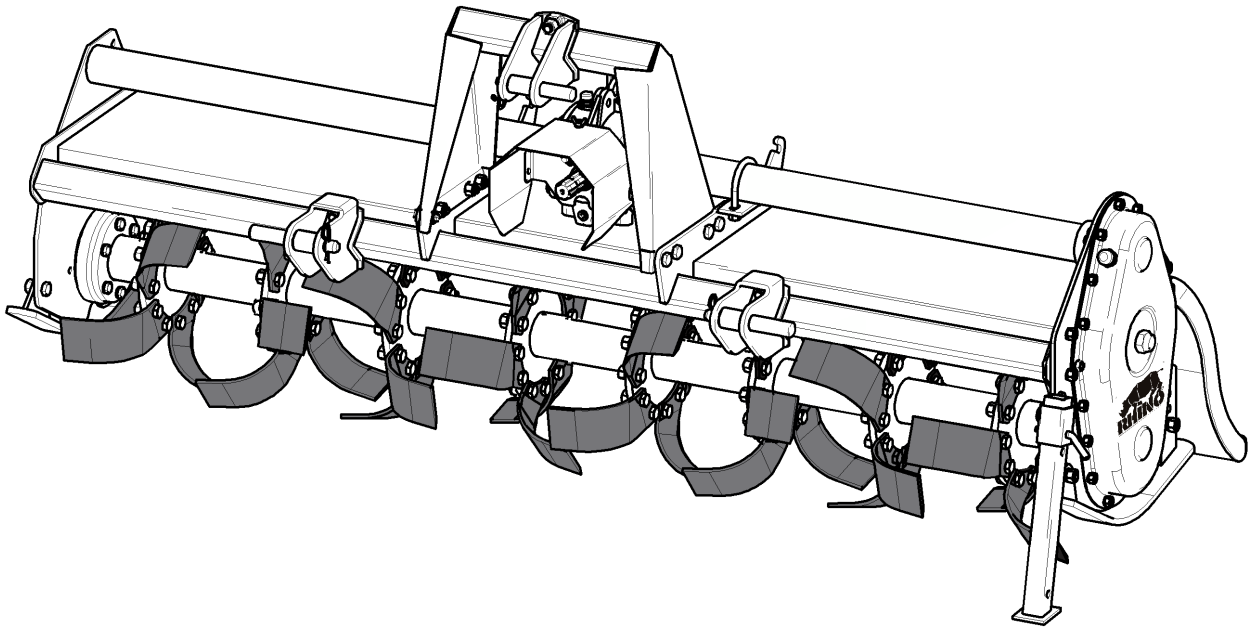
Indicates an imminently hazardous situation that, if not avoided, MAY result in MINOR INJURY.



For Non-Agricultural use, OSHA, ASAE, SAE, and ANSI standards require the use of Chain Guards, Deflectors, or Solid Skirts at all times. The implement manufacturer strongly recommends the use of Chain Guards or Rubber Deflectors for Agricultural purposes as well, to reduce the risk of property damage, serious bodily injury, or even death from objects thrown out by or from contact with the Cutting Blades.

INTRODUCTION

INTRODUCTION



The SRT40 requires between 10HP - 20 HP with adequate front end weight.

The SRT48 requires between 10 HP - 20 HP with adequate front end weight.

The SRT55 requires between 15 HP - 35 HP with adequate front end weight.

The SRT65 requires between 20 HP - 35 HP with adequate front end weight.

The SRT73 requires between 20 HP - 35 HP with adequate front end weight.

The SRD63 requires between 35 HP - 60 HP with adequate front end weight.

The SRD73 requires between 35 HP - 60 HP with adequate front end weight.

The SRD83 requires between 35 HP - 60 HP with adequate front end weight.

The SRM81V requires between 40 HP - 70 HP with adequate front end weight.

The SRM91V requires between 40 HP - 70 HP with adequate front end weight.



At least 20% of the tractor's total weight must be on the front tires with the implement lifted to provide adequate traction at safe steering under good conditions. Slow down on hills, rough terrain and curves.

Front and rear, and left and right are determined by the normal direction of travel (the same as on your automobile).

INTRODUCTION

Attention Owner/Operator

BEFORE OPERATING THIS MACHINE:

1. Carefully read the Operator's Manual, completely understand the Safety Messages and instructions, and know how to operate correctly both the tractor and Tiller.
2. Fill out the Warranty Card in full. Be sure to answer all questions including the Serial Number of the Tiller. Mail promptly using the return envelope included with the Operator's Manual.

NOTE: Warranties are honored only if completed "Owner's Registration and Warranty" forms are received by Alamo Group within thirty days of delivery of the Tiller.

3. Record the Tiller Model and Serial Numbers on the Warranty page at the end of the Operator's Manual. Keep this as part of the permanent maintenance file for the Tiller.

IMPORTANT

For your safety and to guarantee optimum product reliability, always use Genuine RHINO replacement parts. The use of inferior "will-fit" parts will void Warranty of your RHINO implement and may cause premature or catastrophic failure which can result in serious injury or death. If you have any questions concerning the repair parts you are using, contact Rhino, 1020 S. Sangamon Ave., Gibson City, Illinois 60936 A Member of Alamo Group



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ASSEMBLY SECTION

Assembly Section 3-1

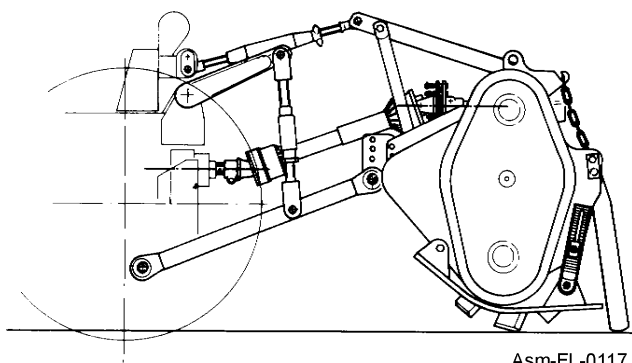
ASSEMBLY

DRIVELINE ATTACHMENT

Before starting assembly, make certain that all paint, dirt, and grease are removed from gearbox shaft. To ease assembly apply a light coat of grease to splines and assemble. Do not assemble a driveline without a shield.

Slip Clutch Driveline

Attach the slip clutch end of the driveline to the gearbox input shaft securely. Make certain that the slip clutch is fully onto the input shaft splines. Tighten the locknuts alternately until they have reached the proper torque. Refer to Torque Chart in Maintenance Section.



Asm-FL-0117

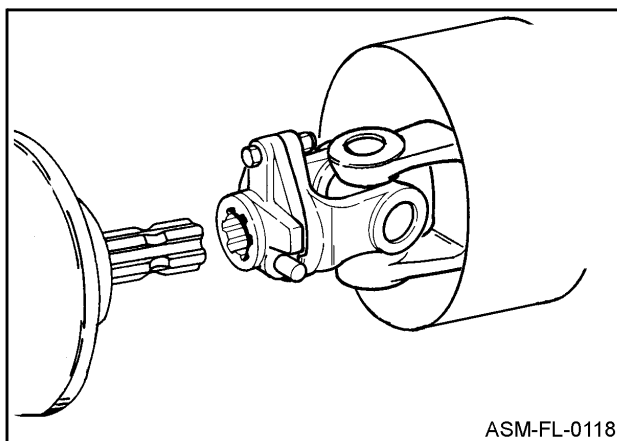
ATTENTION

Do not operate PTO until All Slip Clutches are properly adjusted and checked to make certain that **NONE ARE FROZEN** and that **ALL WILL SLIP** under excessive load. See Operator's Manual for complete instructions.

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Shear Bolt Driveline

Attach the Driveline to the Input Shaft on the Gearbox by depressing the Lock Pin on the Driveline Shear Pin Yoke and pushing the Yoke onto the Gearbox Shaft until the Lock Pin snaps out to the original position. Install Grade 2 (only) shear bolt. Use of a stronger shear pin than Grade 2, will result in driveline failure and will void warranty



ASM-FL-0118

OPERATION SECTION

Operation Section 4-1

OPERATION

RHINO SRT, SRD, SRM OPERATION INSTRUCTIONS

The Tiller is manufactured with quality material by skilled workers. This implement is ideal in horticultural, agricultural, or commercial applications, especially for landscapers, rental yards, vineyards, vegetable farms, and nurseries. The implement is equipped with protective deflectors to prevent objects being thrown from the implement by the blades, however, no shielding is 100% effective. All shields, guards, and deflectors equipped on the unit must be maintained on the implement in good operational condition.

It is the operator's responsibility to be knowledgeable of all potential operating hazards and to take every reasonable precaution to ensure oneself, others, animals, and property are not injured or damaged by the implement, tractor, or a thrown object. Do not operate the implement if passersby, pets, livestock, or property are directly in front or to the rear of the unit.

This section of the Operator's Manual is designed to familiarize, instruct, and educate safe and proper implement use to the operator. Pictures contained in this section are intended to be used as a visual aid to assist in explaining the operation of a implement tiller. Some pictures may show shields removed for purposes of clarity. **NEVER OPERATE** this implement without all shields in place and in good operational condition. The operator must be familiar with the implement and tractor operation and all associated safety practices before operating the implement and tractor. Proper operation of implement, as detailed in this manual, will help ensure years of safe and satisfactory use of the implement.

IMPORTANT: To avoid implement damage, retorque all bolts after the first 10 hours of operation. Refer to the Torque Chart at the end of the Maintenance Section to ensure bolts are properly tightened.

READ AND UNDERSTAND THE ENTIRE OPERATING INSTRUCTIONS AND SAFETY SECTION OF THIS MANUAL AND THE TRACTOR MANUAL BEFORE ATTEMPTING TO USE THE TRACTOR AND IMPLEMENT. If you do not understand any of the instructions, contact your nearest authorized dealer for a full explanation. Pay close attention to all safety signs and safety messages contained in this manual and those affixed to the implement and tractor. *OPS-U- 0001*

READ, UNDERSTAND, and FOLLOW the following Safety Messages. Serious injury or death may occur unless care is taken to follow the warnings and instructions stated in the Safety Messages. Always use good common sense to avoid hazards. (SG-2)



OPERATION

1. Standard Equipment and Specifications

SRT Series

	SRT40	SRT48	SRT55	SRT65	SRT73
Tilling Width	40"	48"	55"	65"	73"
Overall Width	45"	53"	62"	66"	77"
Type of Knives	"c"	"c"	"c"	"c"	"c"
Knives Per Flange	4	4	4	6	6
Number of Flanges	4	5	6	8	9
Tilling Depth (Max.)	6"	6"	6"	6"	6"
Skid Shoe Settings	4	4	4	3	3
implement Swing Diameter	14"	14"	14"	15"	15"
Rated Rotor Speed(RPM)	250	250	250	240	240
Gearbox Housing	Cast	Cast	Cast	Cast	Cast
Deck Thickness	0.157"	0.157"	0.157"	0.157"	0.157"
End Plate Thickness	0.232"	0.232"	0.232"	0.232"	0.232"
Req. Tractor (HP)	10-20	10-20	15-35	30-40	30-40
Driveline Size	Cat 4 EUROCARDAN	Cat 4 EUROCARDAN	Cat 4 EUROCARDAN	Cat 4 EUROCARDAN	Cat 4 EUROCARDAN
Gearbox	Friction disc clutch	Friction disc clutch	Friction disc clutch	Friction disc clutch	Friction disc clutch
Rotor Drive Type	Chain	Chain	Chain	Chain	Chain
Hitch	CAT I	CAT I	CAT I	CAT I	CAT I
Weight (Approx.)	241 lbs	318 lbs	430 lbs	462 lbs	495 lbs

*Ratings based on actual field performance.

SRD Series

	SRD63	SRD73	SRD83
Tilling Width	63"	73"	83"
Overall Width	67"	77"	87"
Type of Knives	"c"	"c"	"c"
Knives Per Flange	6	6	6
Number of Flanges	6	7	8
Tilling Depth (Max.)	7"	7"	7"
Skid Shoe Settings	4	4	4
implement Swing Diameter	19"	19"	19"
Rated Rotor Speed(RPM)	216	216	216
Gearbox Housing	Cast	Cast	Cast
Deck Thickness	0.157"	0.157"	0.157"
End Plate Thickness	0.31"	0.31"	0.31"
Req. Tractor (HP)	35-60	35-60	35-60
Driveline Size	Cat 6 EUROCARDAN	Cat 6 EUROCARDAN	Cat 6 EUROCARDAN
Gearbox	Friction disc clutch	Friction disc clutch	Friction disc clutch
Rotor Drive Type	Gear	Gear	Gear
Hitch	CAT I-II	CAT I-II	CAT I-II
Weight (Approx.)	855 lbs	948 lbs	1025 lbs

OPERATION

SRM Series

	SRM81V	SRM91V
Tilling Width	81"	91"
Overall Width	87"	96"
Type of Knives	"c"	"c"
Knives Per Flange	6	6
Number of Flanges	8	9
Tilling Depth (Max.)	7"	7"
Skid Shoe Settings	4	4
implement Swing Diameter	20"	20"
Rated Rotor Speed(RPM)	185-208-235-266	185-208-235-266
Gearbox Housing	Cast	Cast
Deck Thickness	0.157"	0.157"
End Plate Thickness	0.31"	0.31"
Req. Tractor (HP)	40-70	40-70
Driveline Size	Cat 6 EUROCARDAN	Cat 6 EUROCARDAN
Gearbox	Friction disc clutch	Friction disc clutch
Rotor Drive Type	Gear	Gear
Hitch	CAT I-II	CAT I-II
Weight (Approx.)	981 lbs	992 lbs

*Ratings based on actual field performance.

*Ratings based on actual field performance.



Operating this implement in an application for which it is not designed and/or operating the implement with the wrong size Tractor can cause implement component damage and equipment failure resulting in possible serious or death.

OPERATION

2. OPERATOR REQUIREMENTS

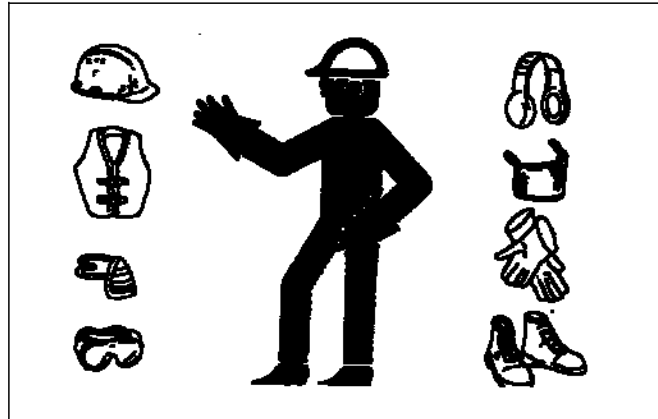
Safe operation of the unit is the responsibility of a qualified operator. A qualified operator has read and understands the implement and tractor Operator's Manuals and is experienced in implement and tractor operation and all associated safety practices. In addition to the safety messages contained in this manual, safety signs are affixed to the implement and tractor. If any part of the operation and safe use of this equipment is not completely understood, consult an authorized dealer for a complete explanation.

If the operator cannot read the manuals for themselves or does not completely understand the operation of the equipment, it is the responsibility of the supervisor to read and explain the manuals, safety practices, and operating instructions to the operator.

Safe operation of equipment requires that the operator wear approved Personal Protective Equipment (PPE) for the job conditions when attaching, operating, servicing, and repairing the equipment. PPE is designed to provide operator protection and includes the following safety wear:

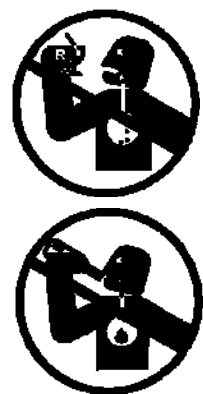
PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Protective Eye Glasses, Goggles, or Face Shield
- Hard Hat
- Steel Toe Safety Footwear
- Gloves
- Hearing Protection
- Close Fitting Clothing
- Respirator or Filter Mask (depends on operating conditions) OPS-U-0002



⚠ DANGER

NEVER use drugs or alcohol immediately before or while operating the Tractor and Implement. Drugs and alcohol will affect an operator's alertness and coordination and therefore affect the operator's ability to operate the equipment safely. Before operating the Tractor or Implement, an operator on prescription or over-the-counter medication must consult a medical professional regarding any side effects of the medication that would hinder their ability to operate the Equipment safely. NEVER knowingly allow anyone to operate this equipment when their alertness or coordination is impaired. Serious injury or death to the operator or others could result if the operator is under the influence of drugs or alcohol. (SG-27)



TRACTOR REQUIREMENTS

OPERATION

The tractor used to operate the implement must have the power capacity to lift, pull, and operate the Power Take Off (PTO) at the implement's rated speed while traveling at a ground speed between 2 and 5 MPH. Operating the implement with a tractor that does not meet the following requirements may cause tractor or implement damage and be a potential danger to the operator and passersby.

Tractor Requirements and Capabilities

- ASAE approved Roll-Over Protective Structure (ROPS) or ROPS cab and seat belt.
- Slow Moving Vehicle (SMV) emblem, lighting, PTO master shield
- Tractor Horsepower:
 - SRT Series: SRT40, SRT48 10-20 HP
 - SRT55 15-35 HP
 - SRT65, SRT73 30-50 HP
 - SRD Series 35-60 HP
 - SRM Series 40-70 HP
- Hitch- Lifting Capacity
 - SRT Series 241 lbs, 318 lbs, 430 lbs, 462 lbs, 496 lbs
 - SRD Series 855 lbs, 948 lbs, 1025 lbs
 - SRM Series 981 lbs, 992 lbs
- - 3-Point Hitch CAT I -CAT II
- Front End Weight As needed to maintain 20% weight on front axle
- Power Take Off..... 540 RPM 6-spline, 1-3/8" diameter output shaft

2.1 ROPS and Seat Belt

The tractor must be equipped with a Roll-Over-Protective-Structure (ROPS) (tractor cab or roll-bar) and seat belt to protect the operator from falling off the tractor, especially during a roll over where the driver could be crushed and killed. Only operate the tractor with the ROPS in the raised position and seat belt fastened. Tractor model not equipped with a ROPS and seat belt should have these life saving features installed by an authorized dealer. OPS-U- 0003



Operate this Equipment only with a Tractor equipped with an approved roll-over-protective system (ROPS). Always wear seat belts. Serious injury or even death could result from falling off the tractor--particularly during a turnover when the operator could be pinned under the ROPS. (SG-7)



2.2 Tractor Safety Devices

If transporting or operating the tractor and implement near a public roadway, the tractor must be equipped with proper warning lighting and a Slow Moving Vehicle (SMV) emblem which are clearly visible from the rear of the unit. Lights and a SMV emblem must be equipped directly on implements if the visibility of the tractor warning signals are obscured.

Maintain all manufacturer equipped safety shields and guards. Always replace shields and guards that were removed for access to connect, service, or repair the tractor or implement. Never operate the tractor PTO with the PTO master shield missing or in the raised position. OPS-U- 0004

OPERATION

2.3 Tractor Horsepower

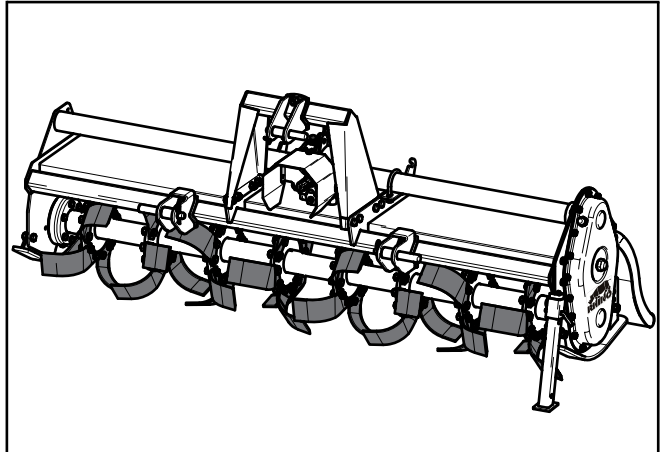
The power required to operate an implement is determined by the tractor PTO horsepower. For most operating conditions, implement requires a tractor with at least 10 HP. Operating the implement with a tractor that does not have adequate power may damage the tractor engine. Exceeding required HP may cause implement damage by overpowering the unit in heavy cutting conditions.

2.4 3-Point Hitch

The tractor 3-point hitch must be rated to lift at least 555 lbs.

Implements are designed to be mounted on a tractor with a CAT I and CAT II 3-point hitch. Refer to the tractor operator's manual for the category of the tractor being used. If the hitch does not conform to ASABE CAT I dimensions, the implement may not fit or raise properly. Consult an authorized dealer for possible modification procedures to mount non-conforming hitches.

Depending on the hitch category, certain size pins are used to attach the implement to the tractor. CAT I hitches require 7/8" lower and 3/4" upper diameter hitch pins, and CAT II hitches require 1-1/8" lower and 1" upper diameter hitch pins.



CAT I Implement / Hitch Specification

Width from outside to outside A-frame	26-7/8"
Quick hitch width inside lug to lug	27-1/8"
Height from bottom hitch pin to top pin.....	18"
Lower pin diameter.....	7/8"
Upper pin diameter.....	3/4"
Linch pin diameter.....	15/32"

CAT II Implement / Hitch Specification

Width from outside to outside A-frame	32-3/8"
Quick hitch width inside lug to lug	33-5/8"
Height from bottom hitch pin to top pin.....	19"
Lower pin diameter	1-1/8"
Upper pin diameter	1"
Linch pin diameter	15/32"

2.5 Front End Weight

A minimum of 20% total tractor weight must be maintained on the tractor front end at all times. Front end weight is critical to maintain steering control and to prevent the tractor from rearing up while driving. If the front end is too light, add weight until a minimum of 20% total weight is reached on the front tires. Front weights and weight carriers can be purchased through an authorized tractor dealership. OPS-U- 0005

2.6 Power Take Off (PTO)

The tiller is designed to operate at a PTO speed of 540 RPM.

OPERATION



DO NOT use a PTO adapter to attach a non-matching Implement driveline to a Tractor PTO. Use of an adapter can double the operating speed of the Implement resulting in excessive vibration, thrown objects, and blade and implement failure. Adapter use will also change the working length of the driveline exposing unshielded driveline areas. Serious bodily injury and/or equipment failure can result from using a PTO adapter. Consult an authorized dealer for assistance if the Implement driveline does not match the Tractor PTO. (S3PT-14)

3. GETTING ON AND OFF THE TRACTOR

Before getting onto the tractor, the operator must read and completely understand the implement and tractor operator manuals. If any part of either manual is not completely understood, consult an authorized dealer for a complete explanation. OPS-U- 0007



Do not mount or dismount the Tractor while the tractor is moving. Mount the Tractor only when the Tractor and all moving parts are completely stopped. (SG-12)



3.1 Boarding the Tractor

Use both hands and equipped handrails and steps for support when boarding the tractor. Never use control levers for support when mounting the tractor. Seat yourself in the operator's seat and secure the seat belt around you.

Never allow passengers to ride on the tractor or attached equipment. Riders can easily fall off and be seriously injured or killed from falling off and being ran over. It is the operator's responsibility to forbid all extra riders at all times. OPS-U- 0008



Never allow children to operate, ride on, or come close to the Tractor or Implement. Usually, 16-17 year-old children who are mature and responsible can operate the implement with adult supervision, if they have read and understand the Operator's Manuals, been trained in proper operation of the tractor and Implement, and are physically large enough to reach and operate the controls easily. (SG-11)



Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in serious injury or death. (SG-10)



OPERATION

3.2 Dismounting the Tractor

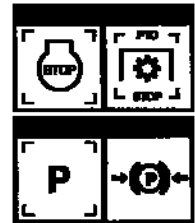
Before dismounting, park the tractor and implement on a reasonably level surface, apply the parking brake, idle the engine down, disengage the PTO, and lower the implement to the ground. Shut down the tractor engine according to the operator's manual, remove the key, and wait for all motion to completely stop. Never leave the seat until the tractor, its engine and all moving parts have come to a complete stop.

Use hand rails and steps when exiting the tractor. Be careful of your step and use extra caution when mud, ice, snow or other matter has accumulated on the steps or hand rails. Use all handrails and steps for support and never rush or jump off the tractor. OPS-U- 0009



BEFORE leaving the tractor seat, always engage the parking brake and/or set the tractor transmission in parking gear, disengage the PTO, stop the engine, remove the key, and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never dismount a Tractor that is moving or while the engine is running. Operate the Tractor controls from the tractor seat only.

(SG-9)



OPERATION

4. STARTING THE TRACTOR

The operator must have a complete understanding of the placement, function, and operational use of all tractor controls before starting the tractor. Review the tractor operator's manual and consult an authorized dealer for tractor operation instructions if needed.

Essential Tractor Controls:

- Locate the light control lever.
- Locate the engine shut off control.
- Locate the brake pedals and the clutch.
- Locate the PTO control.
- Locate the 3-point hitch control lever.
- Locate the hydraulic remote control levers.

Before starting the tractor ensure the following:

- Conduct all pre-start operation inspection and service according to the tractor operator's manual.
- Make sure all guards, shields, and other safety devices are securely in place.
- The parking brake is on.
- The PTO control lever is disengaged.
- The 3-point hitch control lever is in the lowered position.
- The hydraulic remote control levers are in the neutral position.
- The tractor transmission levers are in park or neutral.

Refer to the tractor owner's manual for tractor starting procedures. Only start the tractor while seated and belted in the tractor operator's seat. Never bypass the ignition switch by short circuiting the starter solenoid.

After the tractor engine is running, avoid accidental contact with the tractor transmission to prevent sudden and unexpected tractor movement. OPS-U-0028

OPERATION



Never run the Tractor engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous to your health. (SG-23)



Start tractor only when properly seated in the Tractor seat. Starting a tractor in gear can result in injury or death. Read the Tractor operators manual for proper starting instructions. (SG-13)



5. CONNECTING THE IMPLEMENT TO THE TRACTOR

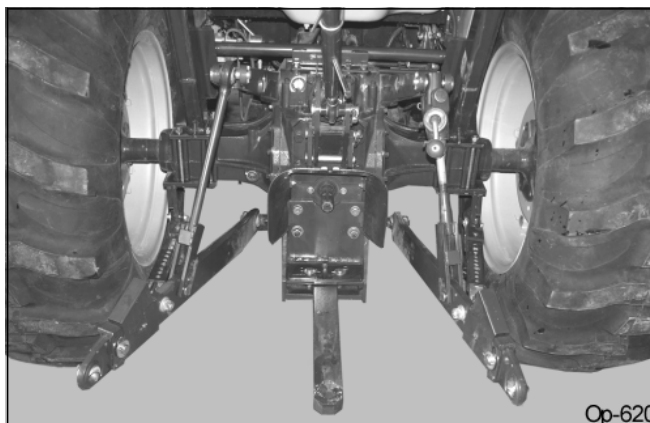
Use extreme caution when connecting the Implement to the tractor. The implement should be securely resting at ground level or setting on blocks. Keep hands and feet from under the implement deck and clear of pinch points between the tractor hitch arms and implement pins. OPS-T-0001



Always shut the Tractor completely down, place the transmission in park, and set the parking brake before you or anyone else attempts to connect or disconnect the Implement and Tractor hitches. (S3PT-15)

5.1 Connecting the Implement

1. Make sure the tractor is equipped with the correct PTO shaft. Change shafts if needed..
2. Shorten or remove the tractor drawbar to avoid interference when raising and lowering the implement.
3. Board the tractor and start the engine. Position the tractor to the implement with the 3-point lift arms positioned at the same height and to the outside of the implement hitch pins. **Note:** Set the 3-point lift control to "Position Control" so that the lift arms maintain a constant height when attaching the implement. See the tractor Operator's Manual for correct settings when attaching 3-point equipment.

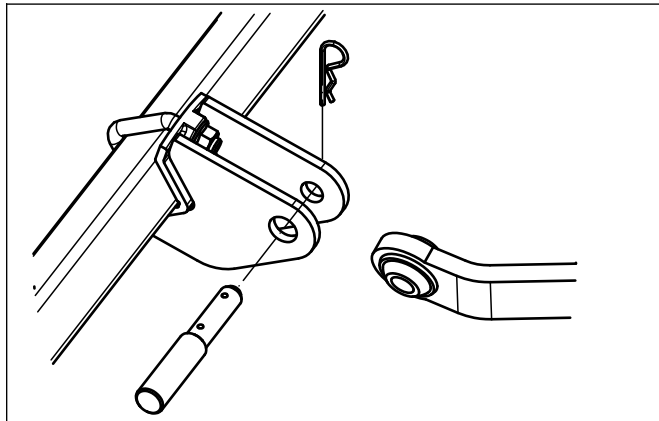
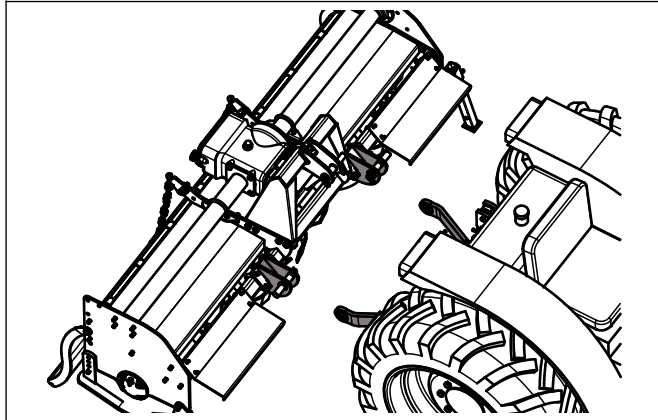


Op-620

OPERATION

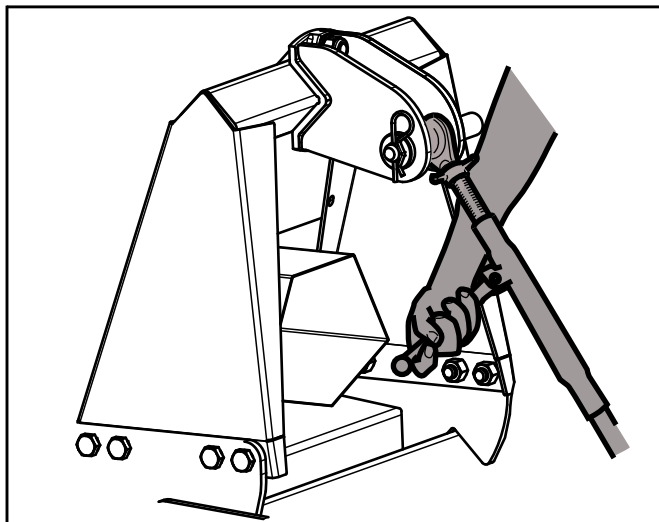
OPERATION

4. Turn off the tractor engine and dismount.
5. One lift arm at a time, align arm end hole between the set of A-frame lift lugs. Insert hitch pin through the lug and arm holes and insert retaining pin into hitch pin.
6. Walk around to opposite side and repeat procedure for remaining lift arm and hitch pin.
7. Extend or retract 3-point top link to align its end hole with the holes of the implements top link. Insert the top link hitch pin and insert retaining pin into hitch pin.
8. Adjust any lower link check chains, guide blocks, or sway blocks to prevent the implement from swaying side to side and possible contact with tractor rear tires.



5.2 Setting Implement Height

1. Park the tractor and implement on level ground.
2. Using the 3-point hitch control lever, position the front of the implement with its side skids 1" less off the ground than desired operational height. For example, for a 3" operational height, position the skids 2" from the ground. Set the 3-point control lever stop at this position to maintain this height when raising and lowering the implement.
3. Shut down the tractor and remove the key.
4. Level the implement deck front to rear by extending or retracting the 3-point top link.
5. Level the implement side to side by manipulating one lower lift arm length. On most tractors, at least one of the lift arms is designed to allow for manipulation of its length. Shortening or extending will allow for deck leveling from side to side. .
6. Securely block up the implement at this height.



OPERATION

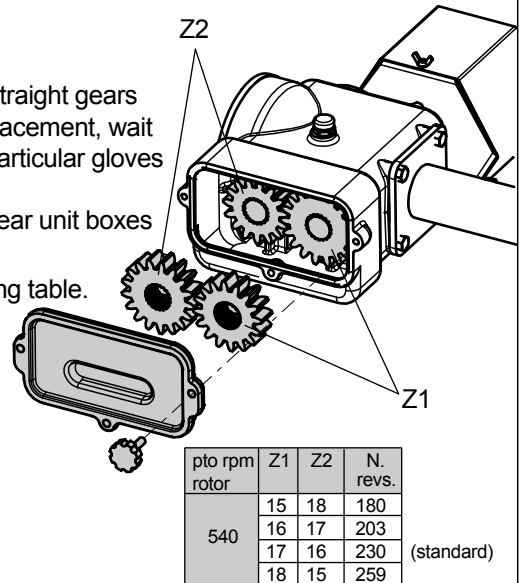
5.3 ROTATION SPEED CHANGE SRM 81V-91V

To modify the rotation speed of the rotor, the positions relative to the straight gears contained in the gear box must be exchanged. Before making the replacement, wait for the gear box to have cooled down and wear the relevant PPE, in particular gloves as there is a hands burning hazard present. To regulate or replace the gears torque, first remove the oil from the gear unit boxes as indicated in point 8.1.

Decide at what tractor rotation speed to work at, consulting the following table.

Decide at what tractor rotation speed to work at, consulting the following table.

Unscrew the 3 screws of the gears support lid . Inside there are 2 pins that support 2 reserve gears and (that do not work and are used to guarantee the other speeds). The gears are flush fitted onto two drive shafts. To change the speed, invert the 2 gears that work or replace the 2 reserve gears. Re-position the gears support lid and tighten the 3 screws again.



6. DRIVELINE ATTACHMENT

The driveline yoke and tractor PTO shaft must be dirt free and greased for attachment.

To connect the mower driveline to the tractor PTO output shaft, pull the driveline yoke collar back and align the grooves and splines of the yoke with those of the PTO shaft. Push the driveline yoke onto the PTO shaft, release the locking collar, and position the yoke until the locking collar balls are seated onto the PTO shaft. Push and pull the driveline back and forth several times to ensure a secure attachment. OPS-R-0003_D



WARNING

When attaching the Implement input driveline to the Tractor PTO, it is important that the connecting yoke spring activated locking collar slides freely and the locking balls are seated securely in the groove on the Tractor PTO shaft. Push and pull the driveline back and forth several times to ensure it is securely attached. A driveline not attached correctly to the Tractor PTO shaft could come loose and result in personal injury and damage to the Implement. (S3PT-17)

6.1 Driveline Length Check



WARNING

Before operating the Implement, check to make sure the Implement input driveline will not bottom out or become disengaged. Bottoming out occurs when the inner shaft penetrates the outer housing until the assembly becomes solid-it can shorten no more. Bottoming out can cause serious damage to the Tractor PTO by pushing the PTO into the Tractor and through the support bearings or downward onto the PTO shaft, breaking it off. A broken driveline can cause personal injury. (S3PT-18)

When fitting the implement to the tractor, the telescoping driveline must be inspected to ensure that at its most compressed position, the profiles do not “bottom out”, and when at its farthest extended position, there is sufficient engagement between the profiles to operate safely. At its shortest length, there must be at least a 1” clearance between each profile end and opposite profile universal joint. At its farthest operating extension, a minimum profile engagement of 9” must be maintained.

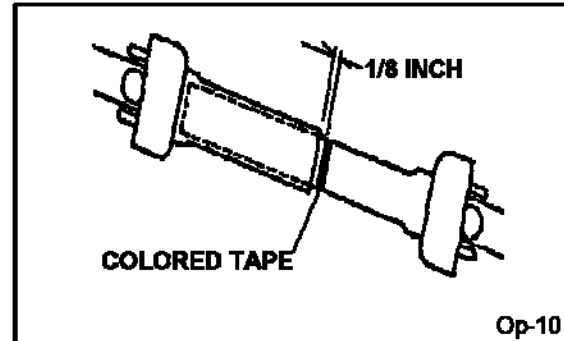
TILLER 02/12

Operation Section 4-12

OPERATION

“Bottoming Out” Check Procedure

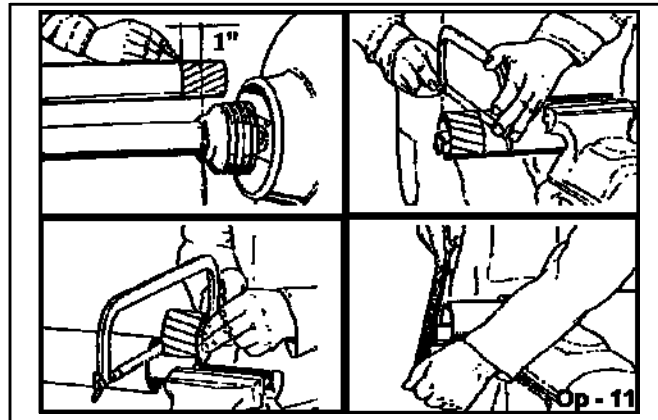
- Disconnect driveline from the tractor and slide the profiles together until fully compressed.
- Place a mark on the inner shield 1/8" from the end of the outer shield.
- Reattach the driveline to the PTO Shaft.
- With the PTO NOT TURNING, raise and lower the tiller and watch shaft movement.
- Raise the tiller and watch the driveline as it approaches the mark. If the distance between the mark and the end of the outer shield tube becomes less than 2" at any point, contact your local dealer or tech service for proper directions. OPS-T-0014



Driveline in maximum compressed position

Shorten the driveline profiles as follows:

- Remove the driveline from the tractor.
- Position the tiller (Lift Type - Raise and lower) to the point with the shortest distance between the tractor PTO shaft and implement gearbox. Shut down the tractor and securely block the tiller in this position.
- Pull driveline apart and reattach yoke to PTO shaft.
- Hold driveline sections parallel to one another and measure back 1" from yoke of each shaft and place mark on opposite section. Cut this length off with a saw.
- Round off all sharp edges and debur.
- Thoroughly grease then reinstall the driveline.
- Recheck for proper operation.



Engagement Check Procedure

- With the driveline attached, position the tiller to the point where the telescoping driveline is at its maximum extension. Completely shut down the tractor and secure in position.
- Mark the inner driveline shield 1/8" from the end of the outer shield.
- Disconnect the driveline from the tractor and separate the two driveline halves.
- Measure the distance from the mark to the end of the inner profile. This length is the amount the driveline profiles were engaged.
- If the engaged length is less than 6" for a non-CV driveline, the shaft is considered too short and should be replaced with a longer shaft. Consult an authorized dealer to purchase the required driveline length.

NOTE: When raising the tiller, at least 1" clearance must be maintained between the driveline and the tiller. If necessary, place an upper lift stop on the 3-point hitch control lever to limit the height the tiller can be raised.

OPS-T-0015

OPERATION

7. PRE-OPERATION INSPECTION AND SERVICE

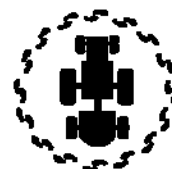
Before each use, a pre-operation inspection and service of the implement and tractor must be performed. This includes routine maintenance and scheduled lubrication, inspecting that all safety devices are equipped and functional, and performing needed repairs. DO NOT operate the unit if the pre-operation inspection reveals any condition affecting safe operation. Perform repairs and replacement of damaged and missing parts as soon as noticed. By performing a thorough pre-operation inspection and service, valuable down time and repair cost can be avoided. OPS-U-0029



Always disconnect the main PTO Driveline from the Tractor before performing service on the Implement. Never work on the Implement with the tractor PTO driveline connected and running. Rotating Parts, Blades or Drivelines could turn without warning and cause immediate entanglement, injury or death. (S3PT-11)



Periodically inspect all moving parts for wear and replace when necessary with authorized service parts. Look for loose fasteners, worn or broken parts, and leaky or loose fittings. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order. (SG-21)



OPERATION

7.1 Tractor Pre-Operation Inspection/Service

Refer to the tractor operator's manual to ensure a complete pre-operation inspection and scheduled service is performed according to the manufacturers recommendations. The following are some of the items that require daily service and inspection:

- Tire condition/air pressure
- Wheel lug bolts
- Steering linkage
- PTO shield
- SMV sign is clean and visible
- Tractor's lights are clean and functional
- Tractor Seat belt is in good condition
- Tractor ROPS is in good condition
- ROPS is in the raised position
- No tractor oil leaks
- Radiator free of debris
- Engine oil level and condition
- Engine coolant level and condition
- Power brake fluid level
- Power steering fluid level
- Fuel condition and level
- Sufficient lubrication at all lube points
- Air filter condition OPS-U-0030



7.2 Implement Pre-Operation Inspection/Service

Before each implement use, a complete inspection and service is required to ensure the implement is in a good and safe working condition. Damaged and/or broken parts should be repaired and/or replaced immediately. To ensure the implement is ready for operation, conduct the following. OPS-T-0002

The operator's manual and safety signs affixed on the unit contain important instructions on the safe and proper use of the equipment. Maintain these important safety features on the implement in good condition to ensure the information is available to the operator at all times.

- Ensure the manual canister is secured to the equipment with the operator's manual inside.
- Ensure all safety signs are in place and legible. Replace missing, damaged, and illegible decals. OPS-U- 0011



OPERATION

Tractor PRE-OPERATION Inspection



Tractor ID# _____

Make _____

Date: _____

Shift _____



Before conducting the inspection, make sure the tractor engine is off, all rotation has stopped and the tractor is in park with the parking brake engaged. Make sure the mower is resting on the ground or securely blocked up and all hydraulic pressure has been relieved.

OPERATION

Item	Condition at Start of Shift	Specific Comments if not O.K.
The flashing lights function properly		
The SMV Sign is clean and visible		
The tires are in good condition with proper pressure		
The wheel lug bolts are tight		
The tractor brakes are in good condition		
The steering linkage is in good condition		
There are no visible oil leaks		
The hydraulic controls function properly		
The ROPS or ROBS Cab is in good condition		
The seatbelt is in place and in good condition		
The 3-point hitch is in good condition		
The drawbar pins are securely in place		
The PTO master shield is in place		
The engine oil level is full		
The brake fluid level is full		
The power steering fluid level is full		
The fuel level is adequate		
The engine coolant fluid level is full		
The radiator is free of debris		
The air filter is in good condition		

Operator's Signature: _____

DO NOT OPERATE an UNSAFE TRACTOR or MOWER

OPERATION

Tiller PRE-OPERATION Inspection



Tiller ID# _____ Make _____

Date: _____ Shift _____



Before conducting the inspection, make sure the tractor engine is off, all rotation has stopped and the tractor is in park with the parking brake engaged. Make sure the blade is resting on the ground or securely blocked up and all hydraulic pressure has been relieved.

Item	Condition at Start of Shift	Specific Comments if not O.K.
The Operator's Manual is in the Canister on the Tiller		
All Safety Decals are in place and legible.		
The Hitch connection bolts & pins are tight.		
There are no cracks in Hitch.		
The Tiller deck is clear of mud, dirt and debris		
Chain guards/Deflectors are in place & in good condition		
Driveline/Gearbox shields are in good condition		
Driveline clutches are in good condition, not frozen		
Driveline telescoping members & u-joints are lubricated		
Driveline yokes are securely attached to PTO & Tiller		
Gearbox mounting bolts are tight		
Gearbox oil is at the proper level		
Tiller shaft bearings bolts are tight		
Bearings are lubricated		
Tiller tines are not chipped, cracked or bent		
Tiller tines are tight		
Rear deflector shield is in place and in good condition		

Operator's Signature: _____

DO NOT OPERATE an UNSAFE TRACTOR or IMPLEMENT

OPERATION

OPERATION

8. OPERATING THE TRACTOR AND IMPLEMENT

THE OPERATOR MUST COMPLETELY UNDERSTAND HOW TO OPERATE THE TRACTOR AND IMPLEMENT AND ALL CONTROLS BEFORE ATTEMPTING TO OPERATE. The operator must read and understand the Safety and Operation Sections of the implement and tractor operator's manuals. These manuals must be read and explained to any operator who cannot read. Never allow someone to operate the implement and tractor without complete operating instructions.

Before starting any operation, the operator must become familiar with the area to be worked in and any obstacles and hazards contained within to ensure safety to the operator, bystanders, and equipment. Special attention should be paid to foreign debris, rough terrain, steep slopes, and passersby and animals in the area. *OPS-U- 0015*



Many varied objects, such as wire, cable, rope, or chains, can become entangled in the rotating parts of the Implement. These objects could then swing outside the housing at greater velocities than the blades. Such a situation is extremely hazardous and could result in serious injury or even death. Inspect the area for such objects before working in the area. Remove any such objects from the site. Never allow the implement to contact such objects. (STL-6)

8.1 Foreign Debris Hazards

Before operating, inspect the area to make sure there are no foreign objects that the implement knives could hit or become entangled with. Remove all foreign objects and debris. If objects are too big to remove, mark them clearly and be sure to prevent the implement blades from contacting them.

If you hit a solid object or foreign debris, stop the implement and tractor at once. Immediately idle the engine speed and disengage the PTO. Wait for all implement rotating motion to stop, then raise the implement and move the tractor and implement off the object. Inspect the area and remove, or mark the location of the debris. Inspect the condition of the implement and make any needed repairs immediately. Make sure the knives are not damaged and the carrier is balanced before resuming operation.

Always wear your seat belt securely fastened and only operate the tractor and implement with the ROPS in the raised position. If the tractor or implement hits a tree stump, rock, or bump, a sudden movement could throw you off the seat and under the tractor and/or implement. The seat belt is your best protection from falling off the tractor and the ROPS provides protection from being crushed during a tractor roll-over. *OPS-T-0003*



OPERATION



WARNING Extreme care should be taken when operating near loose objects such as gravel, rocks, wire, and other debris. Inspect the area before tilling. Foreign objects should be removed from the site to prevent machine damage and/or bodily injury or even death. Any objects that cannot be removed must be clearly marked and carefully avoided by the operator. Stop operating immediately if blades strike a foreign object. Repair all damage and make certain rotor and blades are in good condition before resuming operation. (STL-5)

8.2 Bystanders/Passersby Precautions

If a bystander comes within 300 feet of the tractor while the implement is being operated, stop the tractor at once, idle the engine and disengage the PTO. Do not engage the PTO again until all bystanders are well past the 300 foot distance. OPS-T-0004

8.3 Engaging the Power Take Off (PTO)

Before engaging the PTO, make certain that the area is clear of bystanders and passersby. The implement must be completely lowered and the deck positioned at a safe operating height. NEVER engage the PTO with the implement in the raised position.

Set the tractor engine speed at approximately 1,000 RPM before engaging the PTO. Shift the PTO control to the on position, and slowly increase the engine speed until the PTO is operating at the rated speed. If you hear unusual noises or see or feel abnormal vibrations, disengage the PTO immediately. Inspect the implement to determine the cause of the noise or vibration and repair the abnormality. OPS-U- 0027



DANGER Do not put hands or feet under Tiller deck. Blade Contact can result in serious injury or even death. Stay away until all motion has stopped and the decks are securely blocked up. (STL-3)



8.4 PTO RPM and Ground Speed

Ground speed for operating will depend upon the type of cultivation. Recommended speed for efficient implement performance is between 2 and 5 mph. Operate the implement at its full rated PTO speed to maintain knife speed for a clean operation. Refer to the tractor operator's manual or the tractor instrument panel for the engine speed and gear to provide the required PTO and desired ground speed. Make sure that the implement is operating at its full rated speed before entering the area. If it becomes necessary to temporarily regulate engine speed, increase or decrease the throttle gradually.

Ground speed is achieved by transmission gear selection and not by the engine operating speed. The operator may be required to experiment with several gear range combinations to determine the best gear and range which provides the most ideal performance from the implement and most efficient tractor operation. As the severity of operatin conditions increase, the ground speed should be decreased by selecting a lower gear to maintain the proper operating PTO speed. OPS-T-0006



WARNING Do not exceed the rated PTO speed for the Implement. Excessive PTO speeds can cause Implement driveline or blade failures resulting in serious injury or death. (SG-26)

OPERATION

8.5 Operating the Implement

Only operate the implement from the tractor operator's seat with the seatbelt securely fastened. The tractor must be equipped with a ROPS in the raised position or a ROPS cab.

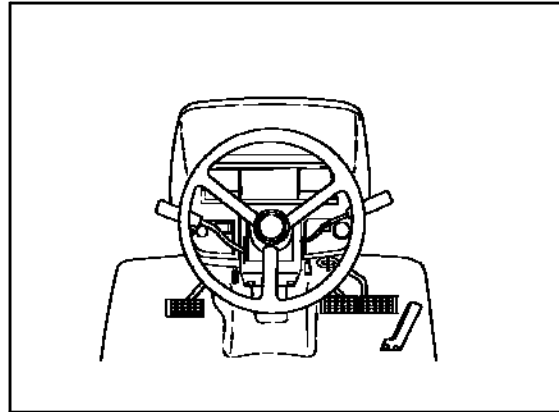
The implement is designed for horticultural, agricultural, or commercial applications cultivation. Maintained knives will produce a better cultivation and require less power. Travel at a speed that allows the implement sufficient time to cultivate the ground and maintain the PTO operating speed to prevent overloading the implement and tractor. Choose a driving pattern that provides the maximum pass length and minimizes turning.

Avoid operating in the reverse direction when possible. In situations where the implement must be backed to access areas, make sure there are no persons or other foreign debris behind the implement before operating in reverse. When operating in reverse, operate the tractor and implement at a reduced ground speed to ensure tractor and implement control is maintained. *OPS-T-0005*

8.6 Shutting Down the Implement

To shut down the implement, first bring the tractor to a complete stop. Then slow down the implement by reducing the engine speed before disengaging the PTO. Wait for all motion to stop before proceeding to drive or shut down the tractor.

Park the tractor on a level surface, place the transmission in park or neutral and apply the parking brake, lower the attached implement to the ground, shut down the engine, remove the key, and wait for all motion to come to a complete stop before exiting the tractor. *OPS-T-0007*



9. DISCONNECTING THE IMPLEMENT FROM THE TRACTOR

Before disconnecting the implement, the PTO must be disengaged and knife rotation at a complete stop. Move the implement to a level storage location and lower it to the ground. If the implement is not resting securely on the ground, block the implement up securely before attempting to disconnect it from the tractor.

Use extreme care to keep feet and hands from under the implement and clear of any pinch points caused by the tractor hitch arms and implement pins. *OPS-T-0008*



Never stand or allow another person to stand between a running Tractor and the Implement when disconnecting the Implement from the Tractor 3-point hitch.

OPERATION



Always shut the Tractor completely down, place the transmission in park, and set the parking brake before you or anyone else attempts to connect or disconnect the Implement and Tractor hitches. (S3PT-15)

To disconnect the implement, first extend the tractor 3-point hitch top link to remove tension on the top link hitch pin. When the pin is loose and easy to rotate, remove the pin from the implement. Next remove both lower hitch pins.

After disconnecting the 3-lift points, remove the implement driveline from the tractor PTO shaft. Lay the driveline down carefully to avoid damaging the driveline or its shield. Do not let the driveline fall into mud or dirt, which can contaminate the bearing and shorten the life of the driveline.

10. IMPLEMENT STORAGE

Properly preparing and storing the implement at the end of the season is critical to maintaining its appearance and to help ensure years of dependable service. The following are suggested storage procedures:

- Thoroughly clean all debris off the implement to prevent damage from rotting grass and standing water.
- Lubricate all implement grease points and fill gearbox oil levels as detailed in the maintenance section.
- Tighten all bolts and pins to the recommended torque.
- Check the implement for worn and damaged parts. Perform repairs and make replacements immediately so that the implement will be ready for use at the start of the next season.
- Store the implement in a clean, dry place with the implement housing resting securely on blocks or at ground level.
- Keep the driveline yoke from sitting in water, dirt and other contaminants.
- Use spray touch-up enamel where necessary to prevent rust and maintain the appearance of the implement.

It is critical that driveline clutches slip when an obstacle or heavy load is encountered to avoid implement and/or tractor damage. If the implement sits outside for an extended period of time or is exposed to rain and/or humid air, the clutch lining plates must be inspected to ensure they are not frozen together from rust or corrosion. If the implement has been exposed to such conditions, at the start of each operating season, and any time it is suspected that the slip clutch plates may be frozen together, readjust the slip clutch as detailed in Seasonal Clutch Maintenance of the maintenance section in this manual. OPS-T-0010



Never allow children or other persons to ride on the Tractor or Implement. Falling off can result in serious injury or death. (SG-10)



OPERATION

11. TRANSPORTING THE TRACTOR AND IMPLEMENT

Inherent hazards of operating the tractor and implement and the possibility of accidents are not left behind when you finish working in an area. Therefore, the operator must employ good judgement and safe operation practices when transporting the tractor and implement between locations. By using good judgement and following safe transport procedures, the possibility of accidents while moving between locations can be substantially minimized. *OPS-U- 0017*

12. DRIVING THE TRACTOR AND IMPLEMENT

Safe tractor transport requires the operator possess a thorough knowledge of the model being operated and precautions to take while driving with an attached implement. Ensure the tractor has the capacity to handle the weight of the implement and the tractor operating controls are set for safe transport. To ensure safety while driving the tractor with an attached implement, review the following. *OPS-U- 0012*



Never run the Tractor engine in a closed building or without adequate ventilation. The exhaust fumes can be hazardous to your health. (SG-23)

OPERATION

WARNING

Transport only at speeds where you can maintain control of the equipment. Serious accidents and injuries can result from operating this equipment at high speeds. Understand the Tractor and Implement and how it handles before transporting on streets and highways. Make sure the Tractor steering and brakes are in good condition and operate properly.



Before transporting the Tractor and Implement, determine the proper transport speeds for you and the equipment. Make sure you abide by the following rules:

Test the tractor at a slow speed and increase the speed slowly. Apply the Brakes smoothly to determine the stopping characteristics of the Tractor and Implement. As you increase the speed of the Tractor the stopping distance increases. Determine the maximum transport speed not to exceed 20 mph (30 kph) for transporting this equipment.

Test the equipment at a slow speed in turns. Increase the speed through the turn only after you determine that the equipment can be operated at a higher speed. Use extreme care and reduce your speed when turning sharply to prevent the tractor and implement from turning over. Determine the maximum turning speed for you and this equipment before operating on roads or uneven ground.

Only transport the Tractor and Implement at the speeds which allow you to properly control the equipment.

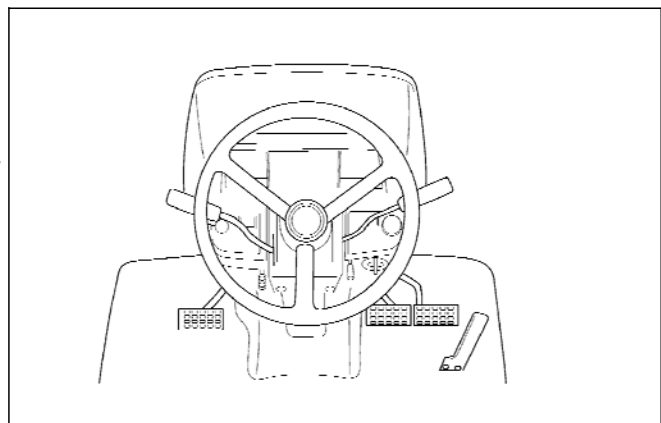
Be aware of the operating conditions. Do not operate the Tractor with weak or faulty brakes or worn tires. When operating down a hill or on wet or rain slick roads, the braking distance increases: use extreme care and reduce your speed. When operating in traffic always use the Tractor's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy. (SG-19)



OPERATION

Before transporting the tractor and implement, idle the tractor engine, disengage the PTO and wait for all implement moving parts to come to a complete stop. Once all implement parts are completely stopped, raise the implement to transport height.

NOTE: When raising the implement, maintain 1" clearance between the driveline and implement deck. If additional implement deck height is needed for transport, disconnect the driveline from the tractor and secure its end to the implement deck. The implement can then be raised to the maximum lift height. OPS-T-0011

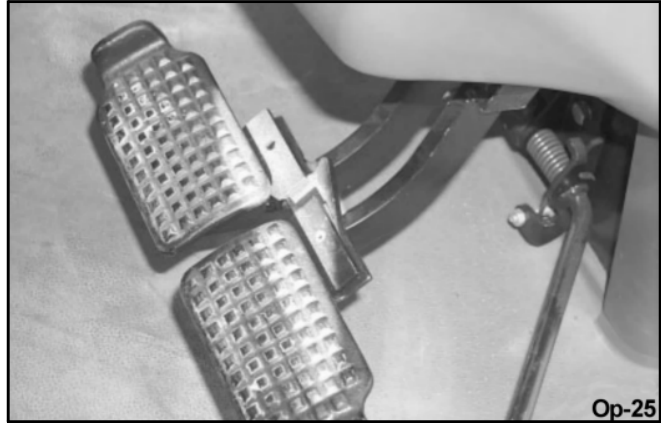


OPERATION

12.1 Brake and Differential Lock Setting

Make sure the tractor brakes are in good operating condition. Tractor brakes can be set to operate independently allowing single rear wheel braking action or locked together to provide simultaneous rear wheel braking. FOR MOST DRIVING AND OPERATING CONDITIONS, THE BRAKE PEDALS SHOULD BE LOCKED TOGETHER TO PROVIDE THE MOST EFFECTIVE BRAKING ACTION.

Always disengage the tractor differential lock when turning. When engaged the differential lock will prevent or limit the tractor from turning. During normal cutting conditions, locking the differential provides no benefit and should not be used. OPS-U- 0013



⚠ WARNING

Be aware of the operating conditions. Do not operate the Tractor with weak or faulty brakes. When operating down a hill or on wet or rain slick roads, the braking distance increases; use extreme care and reduce your speed in these conditions. When operating in traffic, always use the Tractor's flashing warning lights and reduce your speed. Be aware of traffic around you and watch out for the other guy.

If the tractor's hydraulic pump is not independent of the tractor PTO, or if the tractor PTO has to be run to have hydraulic power, disconnect the implement driveline from the tractor PTO output shaft. Secure the driveline to the implement deck to prevent driveline damage or loss during transport. OPS-T-0012



OPERATION

12.2 Transporting on Public Roadways

Extreme caution should be used when transporting the tractor and implement on public roadways. The tractor must be equipped with all required safety warning features including a SMV emblem and flashing warning lights to alert drivers of the tractor's presence. Remember that roadways are primarily designed for automotive drivers and most drivers will not be looking out for you, therefore, you must look out for them. Check your side view mirrors frequently and remember that vehicles will approach quickly because of the tractor's slower speed. Be extremely cautious when the piece of equipment that you are towing is wider than the tractor tire width and/or extends beyond your lane of the road.

Make sure that a proper size safety tow chain is secured between the tractor and implement before entering a public road. OPS-U- 0019



Make certain that the "Slow Moving Vehicle" (SMV) sign is installed in such a way as to be clearly visible and legible. When transporting the Equipment use the Tractor flashing warning lights and follow all local traffic regulations. (SG-6)



The SMV (Slow-Moving Vehicle) emblem is universal symbol used to alert drivers of the presence of equipment traveling on roadways at a slow speed. SMV signs are a triangular bright orange with reflective red trim for both easy day and night visibility. Make sure the SMV sign is clean and visible from the rear of the unit before transporting the tractor and implement on a public roadway. Replace the SMV emblem if faded, damaged, or no longer reflective. OPS-U- 0020



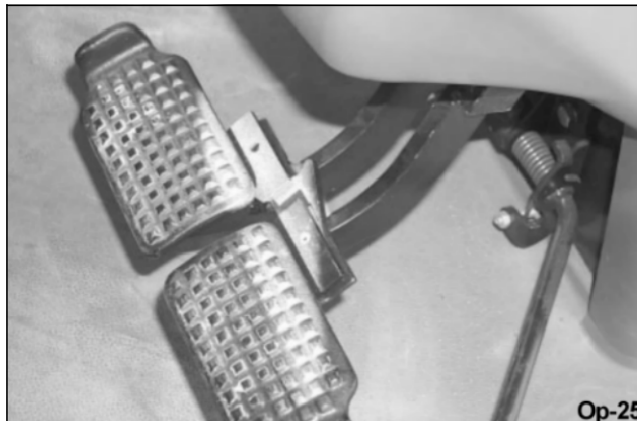
Make sure that all tractor flashing warning lights, headlights, and brake/tail lights are functioning properly before proceeding onto public roads. While newer model tractors have plenty of lighting to provide warning signals and operating lighting, most older models are only equipped with operating lights. Consult an authorized tractor dealer for lighting kits and modifications available to upgrade the lighting on older tractor models. OPS-U- 0021



OPERATION

When operating on public roads, have consideration for other road users. Pull to the side of the road occasionally to allow all following traffic to pass. Do not exceed the legal speed limit set in your country for agricultural tractors. Always stay alert when transporting the tractor and implement on public roads. Use caution and reduce speed if other vehicles or pedestrians are in the area. *OPS-T-0013*

Reduce speed before turning or applying the brakes. Ensure that both brake pedals are locked together when operating on public roads. *OPS-U- 0023*



12.3 Hauling the Tractor and Implement

Before transporting a loaded tractor and implement, measure the height and width dimensions and gross weight of the complete loaded unit. Ensure that the load will be in compliance with the legal limits set for the areas that will be traveled through. *OPS-U- 0024_AGCO*

Use adequately sized and rated trailers and equipment to transport the tractor and implement. Consult an authorized dealer to determine the proper equipment required. Using adequately sized chains, heavy duty straps, cables and/or binders, securely tie down both the front and rear of the tractor utilizing the proper tie down locations as specified by the tractor manufacturer. *OPS-U- 0025_AGCO*



OPERATION

13. TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	POSSIBLE REMEDY
Machine makes intermittent clicking noise	Loose knives Gear tooth damaged Chain damaged	Tighten knives Replace damaged gear Replace damaged chain link
PTO Vibrates	Worn universal joint Machine lifted too high Excessive trash wrapped on rotor	Replace universal joint Lower machine and readjust tractor lift stop Remove trash
Gearbox noise is noticeable and constant	May be normal or new machine Low oil level Worn gears	Allow time for break-in Add oil Replace gears
Rotors stop turning	Shear bolt sheared Slip clutch slipping Broken chain in chain box	Replace shear bolt Reduce load to Tiller or Adjust slip clutch Repair broken link
Machine skip or leaves crop residue	Badly worn blades Slip clutch slipping Ground speed too fast for conditions	Replace worn blades Adjust slip clutch or reduce load Reduce ground speed
Machine smells hot or begins to smoke	Trash wrapped around drive components Low oil level in gearbox Slip clutch slipping	Remove trash Add oil Reduce load to machine or adjust slip clutch
Oil leaking from gearbox	Damaged seals Gearbox overfilled	Replace seals Drain to proper level (1/2 full)
TILLER 02/12	Operation Section 4-27	

MAINTENANCE SECTION

Maintenance Section 5-1

MAINTENANCE

Before operating your Tiller, make sure it is properly lubricated and thoroughly inspected. Only a minimum of time and effort is required to regularly lubricate and maintain this machine to provide long life and trouble free operation.



Always disengage the PTO before raising the Tiller for transporting or making adjustments.

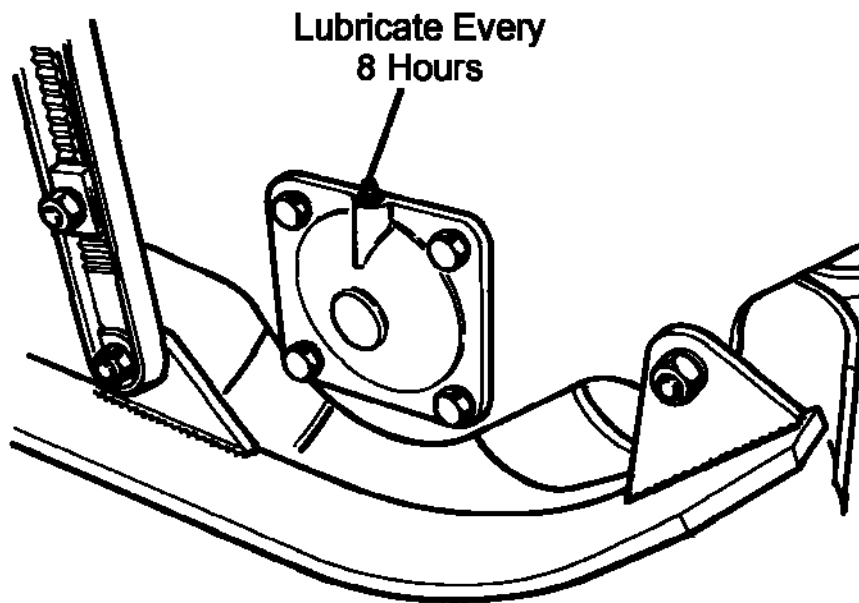
LUBRICATION INFORMATION

Do not let excess grease collect on or around parts, particularly when operating in sandy areas. Severe or unusual conditions may require more frequent lubrication.

Use an SAE multi-purpose, lithium-type grease for all locations shown. Be sure to clean the fitting thoroughly before using grease gun.

ROTOR BEARING HOUSING

Lubricate the Rotor Bearing Housing every 8 hours.

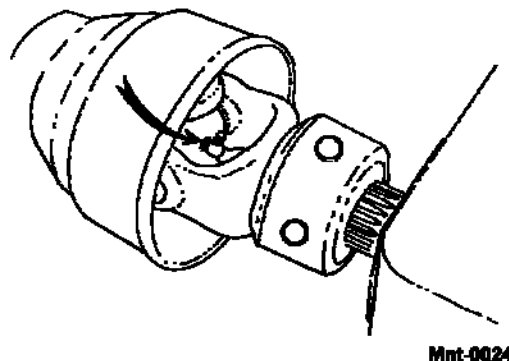


Mnt-T-0001

MAINTENANCE

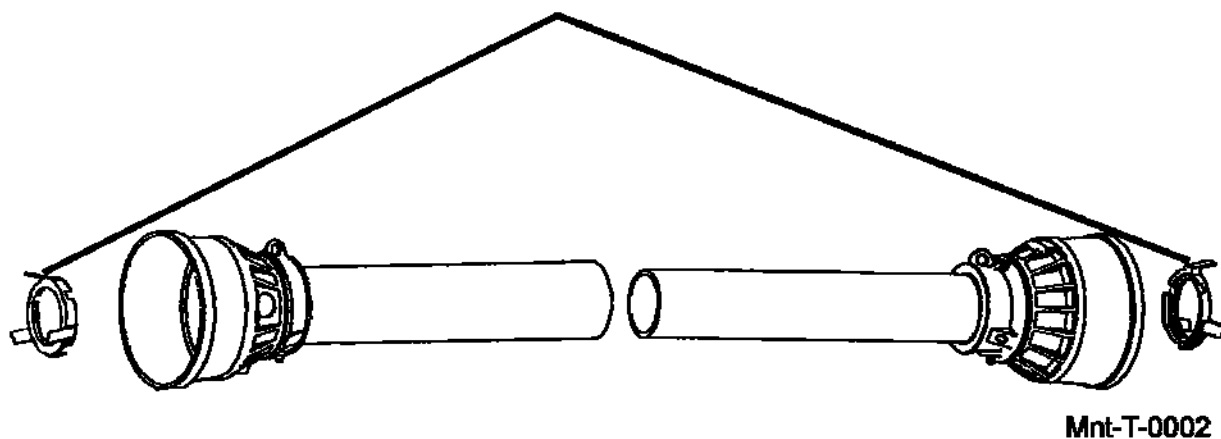
DRIVELINE LUBRICATION

Grease Fittings are located on the Cross Assembly of each U-Joint and on the telescoping tubes. Grease the U-Joint after each 8 hours of use. Do not force grease through the Needle Cup Assemblies. Grease the telescoping tubes after every 8 hours use. Some PTO-to-Hitch connections may necessitate cutting a hole in the shields to be able to align the Grease Fitting holes for lubrication. Lubricate the shield bearings every 16 hours. **Figure Mnt-0024.**



The Driveline Integral Shields should not become dented or otherwise damaged. The Integral Shield Assembly has a Nylon Bearing at each end and should turn freely. This nylon bearing should require lubrication every 8 hours.

NYLON BEARING



Make certain that the Driveline Integral Shields are free to telescope and rotate around the Driveline without binding.

MAINTENANCE

SLIP CLUTCHES

A Slip Clutch is incorporated in the PTO driveline. It is designed to slip, absorb the shock load, and protect the driveline.

Clutch torque setting is factory set. If clutch slips excessively, check friction discs for excessive wear. Discs are 1/8" thick when new. Replace after 1/32" wear.

To adjust slip clutch, first check length of springs as assembled on clutch. Length should be 1 inch. If not, adjust length of bolt to obtain proper spring length. If additional adjustment is required, tighten each bolt 1/2 turn.

NOTE! DO NOT tighten spring bolts over 1/2 turn at any adjustment. Excessive tightening can cause clutch to become frozen and not slip which could cause damage to tractor PTO, Drivelines, or Gearbox.

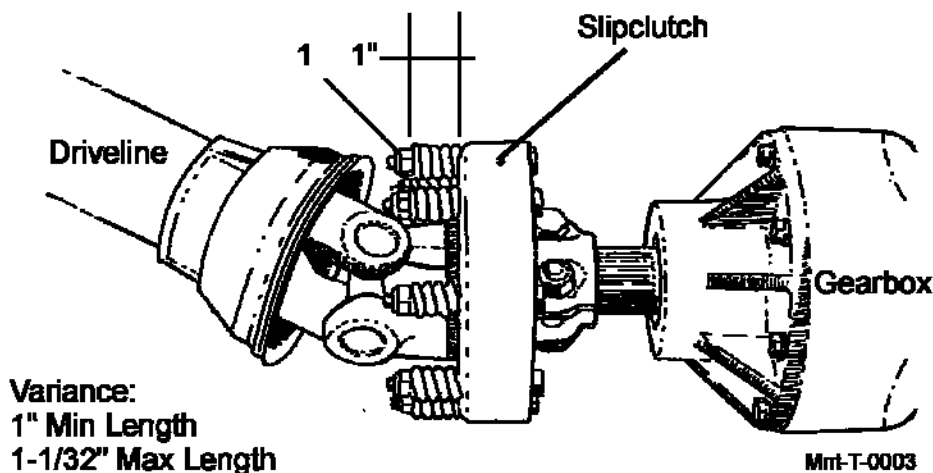
Avoid overheating of clutches caused by too long or too frequent slipping of the clutch since this can damage the friction plates and clutch parts. When checking slip clutch for overheating, do not touch with hand. Clutch could be extremely hot and cause severe burn.

SEASONAL CLUTCH MAINTENANCE

It is important that the clutches slip when an obstacle or load heavier than the clutch setting is encountered. Before using the implement each season, use the following procedure to make sure the clutch will slip and give the overload protection required.

1. Loosen nuts (1) **Figure Mnt-T-0003** until the spring is free, and then retighten approximately one turn.
2. Attach machine to tractor, set engine at approximately half throttle and quickly engage PTO. This procedure will break clutch facings loose and allow the proper torque to be maintained.
3. Return the nuts and bolts to their original position of 1" compressed spring length.

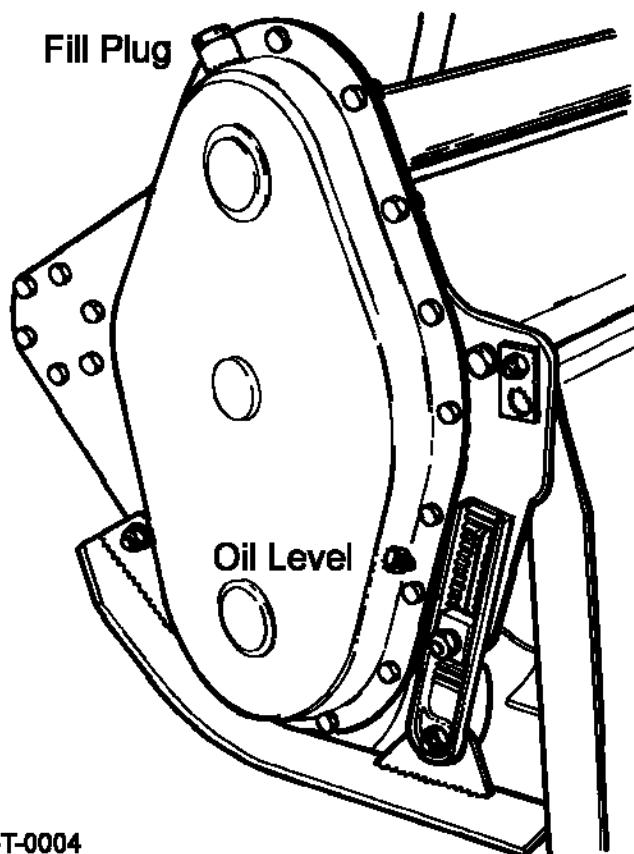
NOTE: If machine sits outside longer than 30 days and is exposed to rain and humid air, the clutches should be removed from machine and stored in dry area. Clutch facings will soak up moisture and cause the metal plates to rust badly. When this occurs, the break-away torque increases greatly and damage to gearbox, driveline, or tractor PTO can occur.



MAINTENANCE

OIL CHANGE

After about 500 hours of work the oil should be changed in both the central drive unit and side pan. **Figure 5.** Refill Central Drive and Side Pan with 90 EP Gear Oil to proper levels.



Mnt-T-0004

MAINTENANCE

MAINTENANCE

MAINTENANCE

REPLACEMENT OF LATERAL CHAIN TRANSMISSION ON SRT 40 & SRT 48

INSTRUCTIONS FOR THE REPLACEMENT OF THE LATERAL CHAIN TRANSMISSION ON THE SRT40 & SRT48 TILLERS:

1. Drain the oil from the Gearbox by removing the Drain plug located under the Gearbox.
2. Remove the support, located on the right side, from the Tiller and Gearbox by removing all the hardware.
3. Remove the bolt that attaches the Gearbox to the support on the left side.
4. When the Gearbox is removed, the ring Bevel Gear will remain attach to the Transmission Shaft. To remove the Bevel Gear, remove the Circlip attached to the Shaft.
5. To remove the Bevel Pinion, remove the Cover and Spacers from the Back of the Gearbox. Remove the Bevel Gear, remove the Circlip attached to the Shaft.
6. With a hammer, gently beat on the Head on the PTO so that the Bevel Pinion slides toward the inside of the Gearbox.
7. For Assembly, reverse the order. Make sure the Bevel Gears have the correct coupling tolerance. If necessary, add shims.

DISASSEMBLY OF GEARBOX ON SRT 40 & SRT 48

INSTRUCTIONS FOR DISASSEMBLING THE GEARBOX ON THE SRT40 & SRT48 TILLERS:

1. Drain the oil from the Gearbox by removing the Drain plug located under the Gearbox.
2. Remove the support, located on the right side, from the Tiller and Gearbox by removing all the hardware.
3. Remove the bolt that attaches the Gearbox to the support on the left side.
4. When the Gearbox is removed, the ring Bevel Gear will remain attach to the Transmission Shaft. To remove the Bevel Gear, remove the Circlip attached to the Shaft.
5. To remove the Bevel Pinion, remove the Cover and Spacers from the Back of the Gearbox. Remove the Bevel Gear, remove the Circlip attached to the Shaft.
6. With a hammer, gently beat on the Head on the PTO so that the Bevel Pinion slides toward the inside of the Gearbox.
7. For Assembly, reverse the order. Make sure the Bevel Gears have the correct coupling tolerance. If necessary, add shims.

MAINTENANCE

REPLACEMENT OF LATERAL CHAIN TRANSMISSION ON SRT55

INSTRUCTIONS FOR THE REPLACEMENT OF THE LATERAL CHAIN TRANSMISSION ON THE STR55 TILLERS:

1. Drain the oil from the Gearbox by removing the Drain plug located under the Gearbox.
2. Remove the support, located on the right side, from the Tiller and Gearbox by removing all the hardware.
3. Remove the bolt that attaches the Gearbox to the support on the left side.
4. When the Gearbox is removed, the ring Bevel Gear will remain attach to the Transmission Shaft. To remove the Bevel Gear, remove the Circlip attached to the Shaft.
5. To remove the Bevel Pinion, remove the Cover and Spacers from the Back of the Gearbox. Remove the Bevel Gear, remove the Circlip attached to the Shaft.
6. With a hammer, gently beat on the Head on the PTO so that the Bevel Pinion slides toward the inside of the Gearbox.
7. For Assembly, reverse the order. Make sure the Bevel Gears have the correct coupling tolerance. If necessary, add shims.

DISASSEMBLY OF GEARBOX ON SRT55

INSTRUCTIONS FOR DISASSEMBLING THE GEARBOX ON THE SRT55 TILLERS:

1. Drain the oil from the Gearbox by removing the Drain plug located under the Gearbox.
2. Remove the support, located on the right side, from
3. Remove the bolt that attaches the Gearbox to the support on the left side.
4. When the Gearbox is removed, the ring Bevel Gear will remain attach to the Transmission Shaft. To remove the Bevel Gear, remove the Circlip attached to the Shaft.
5. To remove the Bevel Pinion, remove the Cover and Spacers from the Back of the Gearbox. Remove the Bevel Gear, remove the Circlip attached to the Shaft.
6. With a hammer, gently beat on the Head on the PTO so that the Bevel Pinion slides toward the inside of the Gearbox.
7. For Assembly, reverse the order. Make sure the Bevel Gears have the correct coupling tolerance. If necessary, add shims.

MAINTENANCE

REPLACEMENT OF LATERAL CHAIN TRANSMISSION ON SRT65 & SRT 73

INSTRUCTIONS FOR THE REPLACEMENT OF THE LATERAL CHAIN TRANSMISSION ON THE SRT65 & SRT73 TILLERS:

1. Drain oil from Lateral Cover.
2. Remove all bolts from the lateral cover.
3. Remove the pin from the center of the transmission cover by removing the Hex Nut from the inside of the Tiller. Remove the Lateral Cover.
4. For the replacement of the upper & lower Gear, remove the Metal Rings that attach to the Shaft. Center Gear will slide out.
5. To remove the Bearings from the Center Gear, remove the Circlip that keep bearings in place.
6. To assemble, reverse the order. Replace the Gasket on the Lateral Cover.
7. Fill with oil until it is visible through the sight plug.

DISASSEMBLY OF GEARBOX X ON SRT65 & SRT73

INSTRUCTIONS FOR DISASSEMBLING THE GEARBOX ON THE SRT65 & SRT73 TILLERS:

1. Drain the oil from the Gearbox by removing the Drain plug located under the Gearbox.
2. Remove the support, located on the right side, from the Tiller and Gearbox by removing all the hardware.
3. Remove the bolt that attaches the Gearbox to the support on the left side.
4. When the Gearbox is removed, the ring Bevel Gear will remain attach to the Transmission Shaft. To remove the Bevel Gear, remove the Circlip attached to the Shaft.
5. To remove the Bevel Pinion, remove the Cover and Spacers from the Back of the Gearbox. Remove the Bevel Gear, remove the Circlip attached to the Shaft.
6. With a hammer, gently beat on the Head on the PTO so that the Bevel Pinion slides toward the inside of the Gearbox.
7. For Assembly, reverse the order. Make sure the Bevel Gears have the correct coupling tolerance. If necessary, add shims.

STORAGE

Your implement tiller represents an investment from which you should get the greatest possible benefit. Therefore, when the season is over, the tiller should be thoroughly checked and prepared for storage so that a minimum amount of work will be required to put it back into operation for the next season. The following are suggested storage procedures:

1. Thoroughly clean the tiller.
2. Lubricate the tiller as covered in Maintenance Section.
3. Tighten all bolts and pins to the recommended torque.
4. Check the tiller for worn or damaged parts. Make replacements immediately.
5. Store the tiller in a clean, dry place.
6. Use spray touch-up enamel where necessary to prevent rust and maintain the appearance of the tiller.

MAINTENANCE




PROPER TORQUE FOR FASTENERS

The chart lists the correct tightening torque for fasteners. When bolts are to be tightened or replaced, refer to this chart to determine the grade of bolts and the proper torque except when specific torque values are assigned in manual text.





RECOMMENDED TORQUE IN FOOT POUNDS UNLESS OTHERWISE STATED IN THE MANUAL *

NOTE: These values apply to fasteners as received from supplier, dry or when lubricated with normal engine oil. They do not apply if special graphited or molydisulphide greases or other extreme pressure lubricants are used. This applies to both UNF fine and UNC coarse threads.

Proper Torque values for bolts that are measured in Inches

Bolt Diameter	 Head Marking No Marks Grade Two Pound - Foot Value Dry	 Head Marking Three Lines Grade Five Pound - Foot Value Dry	 Head Marking Six Lines Grade Eight Pound - Foot Value Dry
1/4"	5.5	9	12.5
5/16"	11	18	26
3/8"	20	33	46
7/16"	32	52	75
1/2"	50	80	115
9/16"	70	115	160
5/8"	100	160	225
3/4"	175	280	400
7/8"	175	450	650
1"	270	675	975
1-1/8"	375	850	1350
1-1/4"	530	1200	1950
1-3/8"	700	1550	2550
1-1/2"	930	2100	3350

Proper Torque values for Metric bolts

Bolt Diameter	 Head Marking 4.8 Pound - Foot Value Dry	 Head Marking 8.8 or 9.8 Pound - Foot Value Dry	 Head Marking 10.9 Pound - Foot Value Dry	 Head Marking 12.9 Pound - Foot Value Dry
6mm	4.5	8.5	12	14.5
8mm	11	20	30	35
10mm	21	40	60	70
12mm	37	70	105	120
14mm	60	110	165	190
16mm	92	175	265	300
18mm	125	250	350	410
20mm	180	350	500	580
22mm	250	475	675	800
24mm	310	600	850	1000
27mm	450	875	1250	1500
30mm	625	1200	1700	2000

* To get Newton-Meters multiply pound-foot of torque by 1.356

SPARE PARTS SECTION

Spare parts section 6-1

PARTS ORDERING GUIDE

The following instructions are offered to help eliminate needless delay and error in processing purchase orders for the equipment in this section.

1. The Parts Section is prepared in logical sequence and grouping of parts that belong to the basic machine featured in this manual. Part Numbers and Descriptions are given to help locate the parts and quantities required.
2. The Purchase Order must include the name and address of the person or organization ordering the parts, who should be charged, and if possible, the serial number of the machine for which the parts are ordered.
3. The Purchase Order must clearly list the quantity of each part, the complete and correct part number (be sure to include all periods), and the basic name of the part.
4. The Manufacturer reserves the right to substitute parts where applicable.
5. Some parts are unlisted items which are special production items not normally stocked and are subject to special handling. Request a quotation for such parts before sending a Purchase Order.
6. The Manufacturer reserves the right to change prices without prior notice.

NOTE: Please refer to The Safety Section in the front of this Manual for the proper Part Number when ordering Replacement Safety Decals.



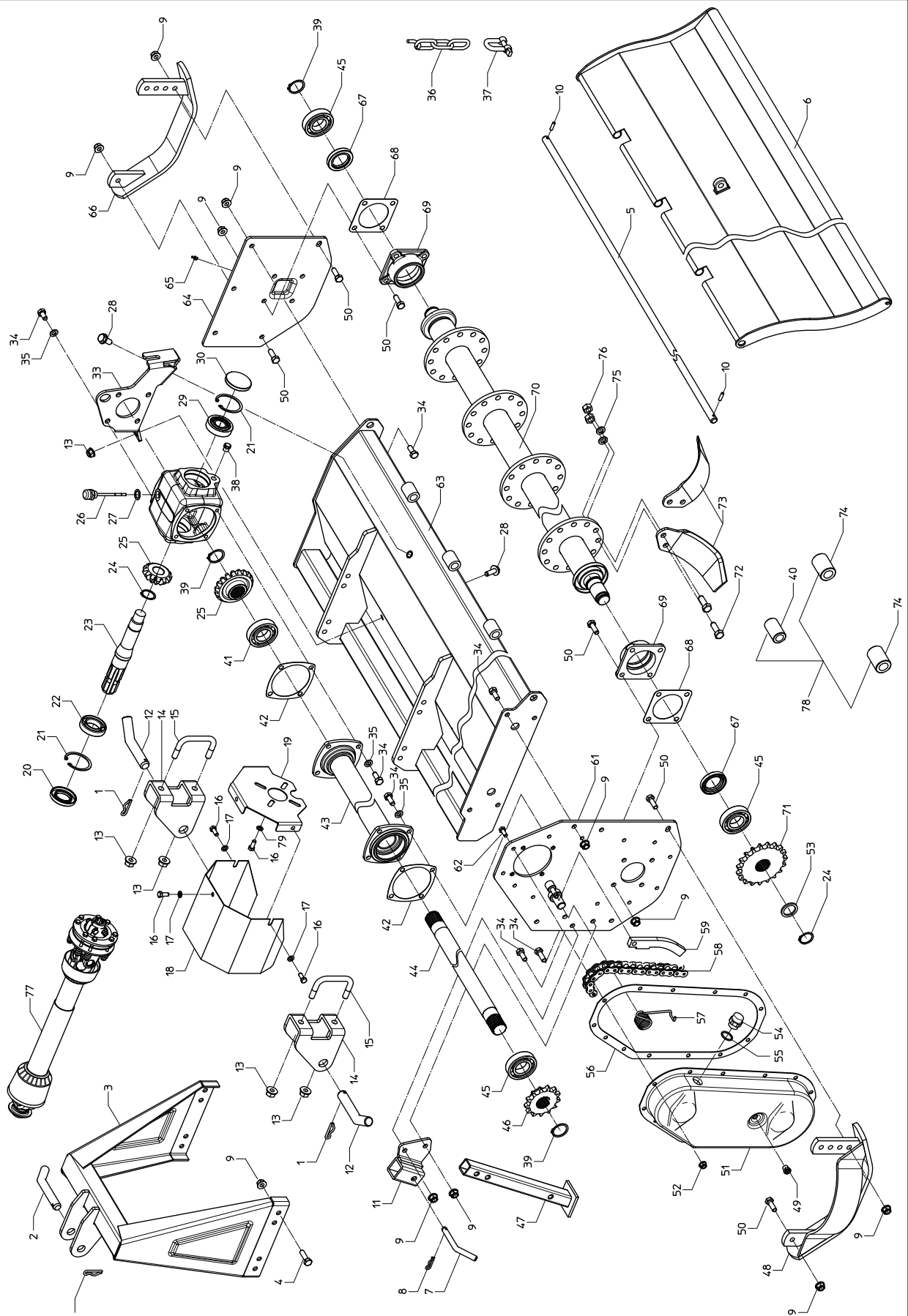
For maximum safety and to guarantee optimum product reliability, always use genuine Servis-Rhino Parts. The use of inferior replacement parts may cause premature or catastrophic failure which could result in serious injury or death. Direct any questions regarding parts to:



RHINO ®
1020 S. Sangamon Ave.
Gibson City, IL 60936
800-446-5158
Email: parts@servis-rhino.com

SRT 40 & SRT 48 PARTS LISTING

PARTS



TILLER 02/12

Parts Section 6-4

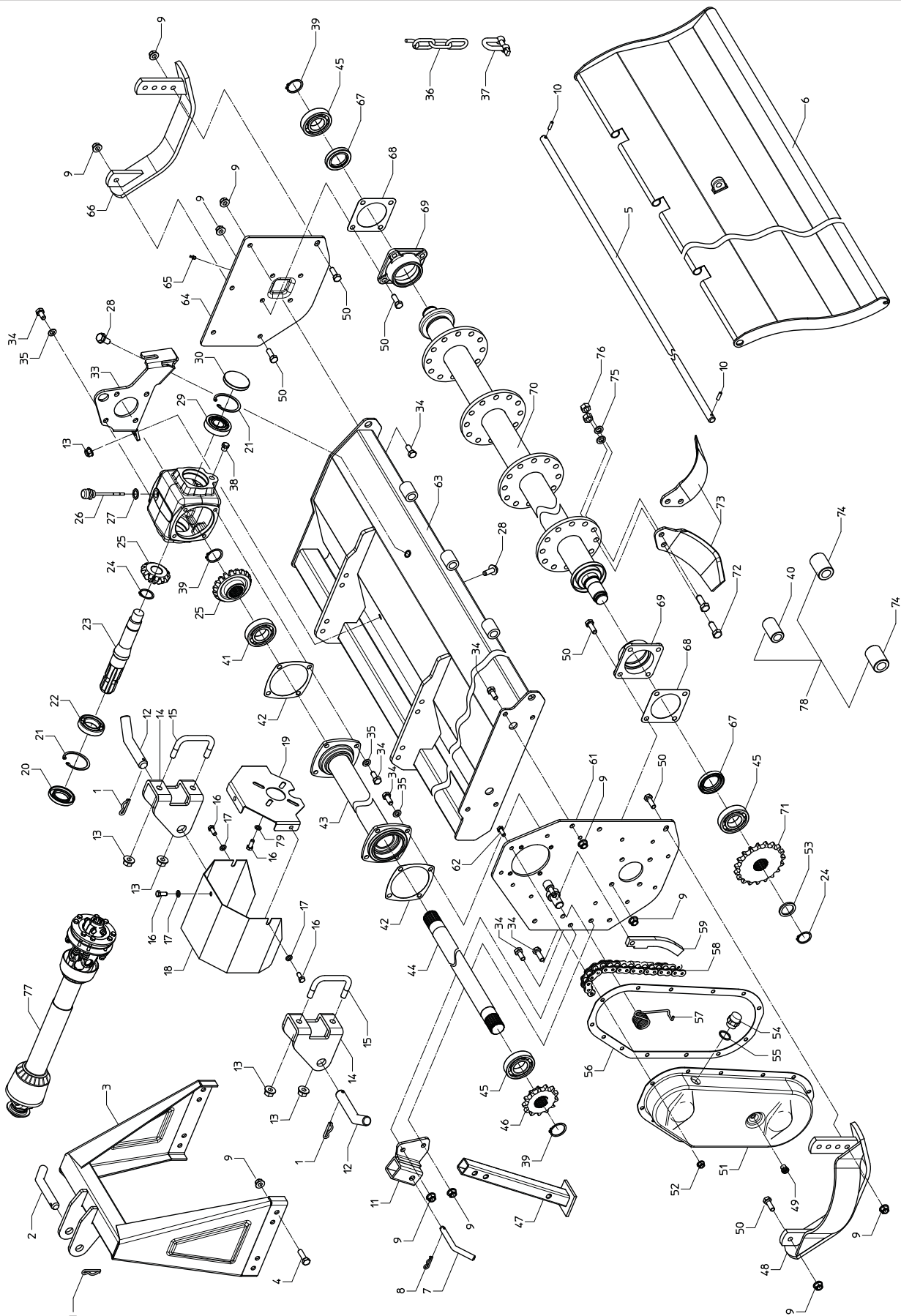
SRT 40 & SRT 48 PARTS LISTING

PARTS

ITEM	PART. NO.	QTY	DESCRIPTION
1	37107B13	3	HAI PIN, COTTER
2	00762333	1	PIN, A FRAME
3	00786568	1	BRACKET
4	61361168	8	SCREW UNI 5739 M10X35 8.8
5	00786569	1	ROD SRT-40
5	00786570	1	ROD SRT-48
6	00786571	1	REAR BOARD SRT-40
6	00786577	1	REAR BOARD SRT-48
7	00765550	1	PIN
8	00765549	1	COTTER PIN 3
9	00765676	29	STOP NUT M10 DIN 6927 8
10	70346	2	ROLL PIN 6X20
11	00773450	1	STAND LEG SUPPORT
12	00773780	2	PIN
13	00772648	5	STOP NUT M12X1.75 DIN 6927 8
14	00786573	2	LOWER HITCH CLEVIS
15	00786574	2	U-BOLT M12
16	61354C8	7	SCREW UNI 5739 M8X16 8.8
17	00786575	3	"SCHNORR" WASHER M8
18	00786576	1	SHIELD, DRIVELINE
19	00756406	1	SHIELD SUPPORT, DRIVELINE
20	3678204	1	OIL SEAL 35X62X10 PP
21	3236002	2	CIRCLIP INTERNAL 62 DIN 472
22	00786577	1	BEARING 6007
23	00753231	1	INPUT SHAFT
24	00777919	2	CIRCLIP EXTERNAL 30 DIN 471
25	00788220	1	GEARS KIT
26	00786579	1	OIL PLUG
27	701515C	1	WASHER M16
28	00786639	2	SCREW DIN 6921 M12X1.75X25 8.8 HEX FLG BOLT
29	00777584	1	BEARING, BALL 62X25X17
30	00786581	1	COVER 62
33	00786582	1	GEARBOX SUPPORT
34	6136868	21	SCREW UNI 5739 M10X25 8.8
35	02971997	12	"SCHNORR" WASHER M10
36	00767777	1	COVER CHAIN
37	00777924	1	HOOK 10
38	00762463	1	OIL SEAL PLUG M14X1.5
39	00763207	3	CIRCLIP EXTERNAL 35 DIN 471
40	00786641	1	QUICK HITCH (I CAT.) UPPER BUSHING
41	00754459	1	BEARING 6207 2RS
42	00786584	2	GASKET
43	00786585	1	SHAFT SUPPORT SRT-40
43	00786586	1	SHAFT SUPPORT SRT-48
44	00786587	1	OUTPUT SHAFT SRT-40 OFFSET MOD.
44	00786588	1	OUTPUT SHAFT SRT-48
45	00564800	3	BEARING 6207
46	00786589	1	DRIVING GEAR Z13
47	00764370	1	STAND LEG
48	00786590	1	LEFT SKID
49	00762419	1	OIL PLUG M14
50	00762398	12	SCREW UNI 5739 M10X30 8.8
51	00786592	1	CHAIN COVER
52	70093C	13	STOP NUT M8 DIN 6927 8
53	00786593	1	SHIM SPACER
54	00762417	1	OIL PLUG M22X1.5
55	701518C	1	WASHER M22
56	00762296	1	GASKET
57	00762352	1	CHAIN ADJUSTER SPRING
58	00762279	1	CHAIN ASA 60HE 46 MG
59	00762260	1	CHAIN ADJUSTER
61	00786594	1	TRANSMISSION SIDE PLATE
62	02958784	13	SCREW UNI 5739 M8X20 8.8
63	00786595	1	FRAME SRT-40
63	00786596	1	FRAME SRT-48
64	00786597	1	EXTERNAL PLATE FRAME

SRT 40 & SRT 48 PARTS LISTING

PARTS



TILLER 02/12

Parts Section 6-6

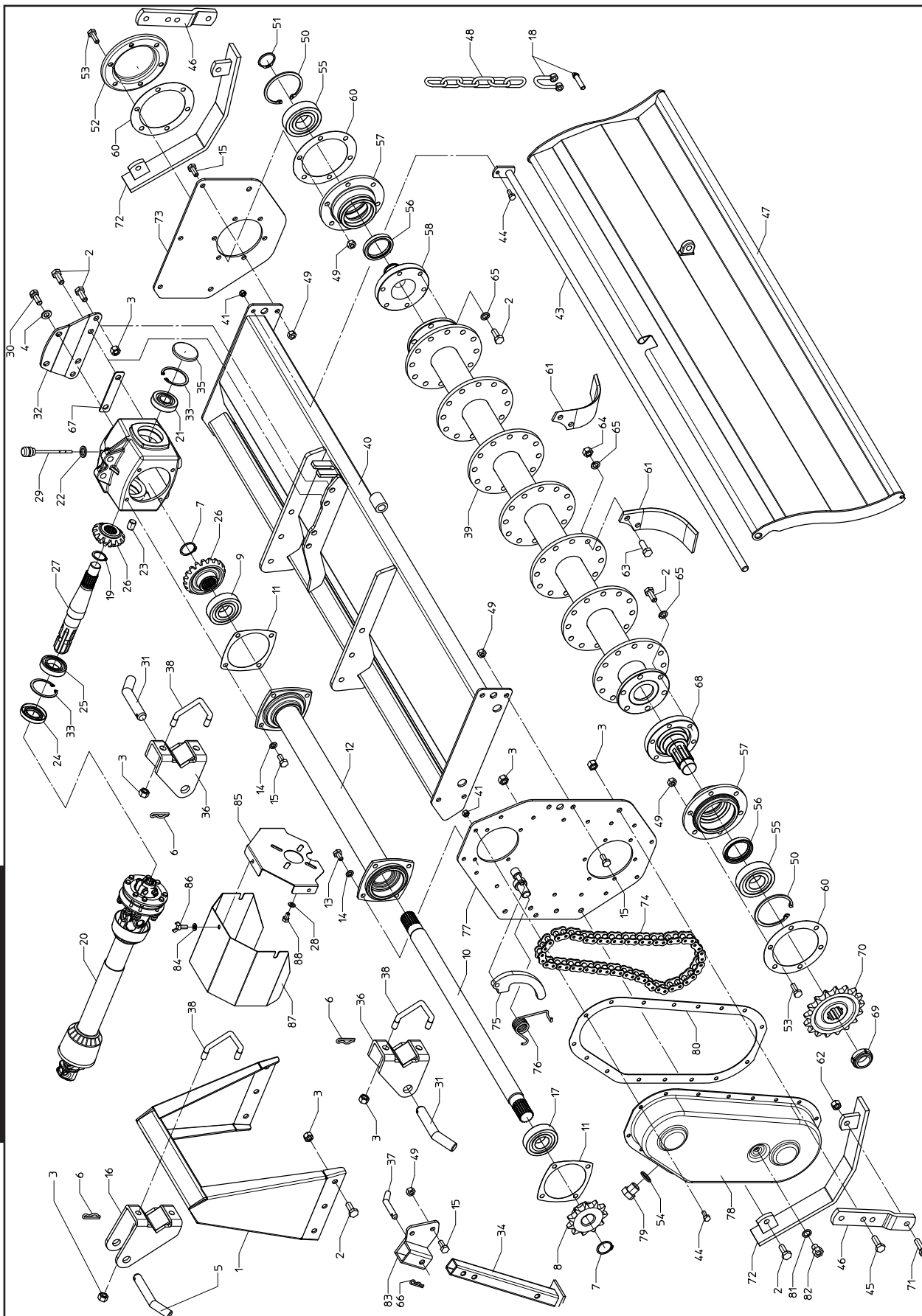
SRT 40 & SRT 48 PARTS LISTING

ITEM	PART. NO.	QTY	DESCRIPTION
65	001465	1	GREASE NIPPLE M6 UNI 7663-A
66	00786591	1	RIGHT SKID
67	00762342	2	OIL SEAL 40X62X10 PP
68	00762298	2	BEARING SUPPORT GASKET
69	00786598	2	BEARING SUPPORT
70	00786599	1	ROTOR SRT-40
70	00786600	1	ROTOR SRT-48
71	00762315	1	DRIVEN GEAR Z19
72	00786648	32 (SRT-40)	BLADE BOLT M12X30 8.8
72	00786648	40 (SRT-48)	BLADE BOLT M12X30 8.8 8
73	00786643	8 (SRT-40)	BLADES KIT
73	00786643	10 (SRT-48)	BLADES KIT
74	00786642	2	QUICK HITCH (I CAT.) LOWER BUSHING
75	00762420	32 (SRT-40)	LOCK WASHER M12
75	00762420	40 (SRT-48)	LOCK WASHER M12
76	00762371	32 (SRT-40)	NUT UNI 5587 M12
76	00762371	40 (SRT-48)	NUT UNI 5587 M12
77	00786645	1	DRIVELINE AX4 500/739 E1014013-E1334030 CP SE
78	00786640	1	QUICK HITCH (I CAT.) BUSHING KIT
79	701511C	4	WASHER UNI 6592 M8

PARTS

SRT 55 PARTS LISTING

PARTS



TILLER 02/12

Parts Section 6-8

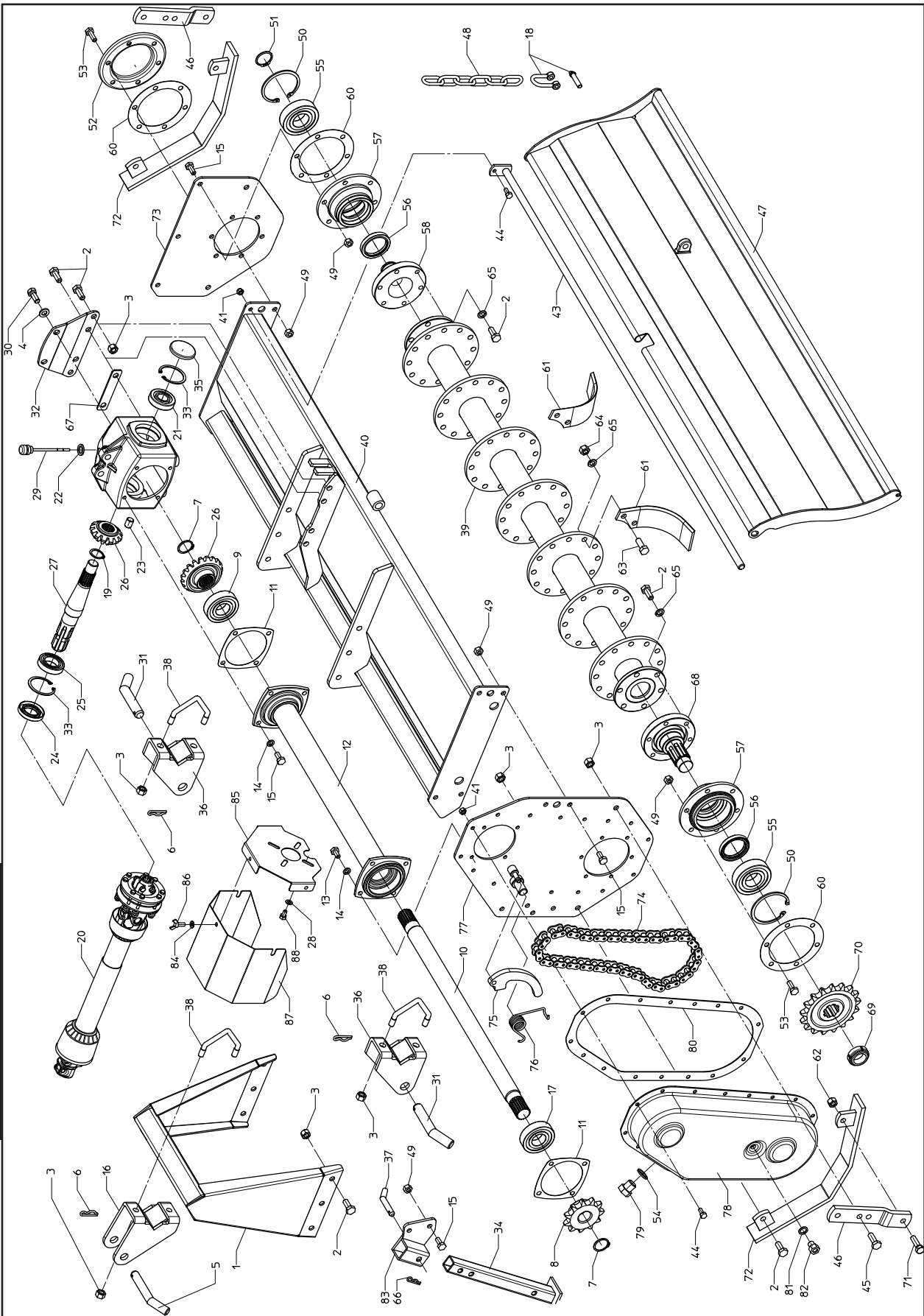
SRT 55 PARTS LISTING

PARTS

ITEM	PART. NO.	QTY	DESCRIPTION
1	00786601	1	A. FRAME
2	61377C8	24	SCREW UNI 5739 M12X30 8.8
3	00772648	18	STOP NUT M12X1.75 DIN 980 8
4	701513C	2	WASHER FIAT 10188 M12
5	00762333	1	PIN, TOP HITCH (CAT. I)
6	37107B13	3	COTTER PIN
7	00763207	2	CIRCLIP EXTERNAL
8	00762492	1	DRIVING GEAR Z11
9	3686002	1	BEARING 6307 2RS
10	00786602	1	OUTPUT SHAFT SRT-55
11	00786603	2	GASKET
12	00786604	1	SHAFT SUPPORT RST-55
13	00754764	4	SCREW UNI 5739 M10X20 8.8
14	701512C	8	WASHER FIAT 10188 M10
15	61368C8	13	SCREW UNI 5739 M10X25 8.
16	00786605	1	TOP HITCH CLEVIS
17	00753223	1	BEARING 6307
18	00777924	1	CLEVIS Ø8
19	00777919	1	CIRCLIP EXTERNAL
20	00786645	1	DRIVELINE
21	00777584	1	BEARING 30305
22	701515C	1	FLAT WASHE R M16
23	00786607	1	DRAIN PLUG M16
24	00756406	1	OIL SEAL
25	3236002	1	BEARING 6007
26	00788821	1	GEARS KIT
27	00786609	1	INPUT SHAFT Z6
28	701511C	4	WASHER UNI 6592 M8
29	00786611	1	PLUG WITH LEVEL M16
30	00762462	2	SCREW UNI 5739 M12X25 8.8
31	00773450	2	PIN, LOWER HITCH (CAT.)
32	00786612	1	GEARBOX PLATE SUPPOR
33	3678204	2	INTERNAL CIRCLIP D62 DIN 472
34	00764370	1	PARKING STAND LEG
35	00786581	1	CAP Ø62
36	00786613	2	LOWER HITCH CLEVIS
37	00765550	1	STOP PIN
38	00786614	3	"U" BOLT
39	00786615	1	ROTOR SRT-55
40	00786616	1	FRAME SRT-55
41	70093C	17	STOP NUT M8X1.25 DIN 980 8
43	00762474	1	D HINGE O R 1 2 4 3 2 0 0 4 3 44
44	02958784	17	SCREW UNI 5739 M8X20 8.8
45	02959661	2	SCREW UNI 5739 M12X35 8.8
46	00786618	2	SKID SUPPORT BAR
47	00786619	1	REAR BOARD SRT-55
48	00762277	1	CHAIN
49	00765676	21	STOP NUT M10X1.5 DIN 980 8
50	00762511	2	INTERNAL CIRCLIP Ø90 DIN 472
51	00762293	1	CIRCLIP EXTERNAL Ø40 DIN 471
52	00762477	1	BEARING COVER
53	00762398	12	SCREW UNI 5739 M10X30 8.8
54	701518C	1	GASKET M22
55	00762429	2	BEARING 6308
56	00762508	2	OIL SEAL
57	00762488	2	ROTOR SUPPOR
58	00762489	1	HUB, IDLER SIDE
60	00762330	3	GASKET
61	00786644	14	BLADES KIT
62	00772648	2	STOP NUT M12X1.75 DIN 980 8
63	00762397	56	BLADE BOLT M12X35 8.8
64	00762371	56	NUT M12
65	00762420	56+12	LOCK WASHER M12
66	00765549	1	COTTER PIN Ø3
67	00786620	1	GEAR BOX SPACER BAR
68	00762493	1	HUB, DRIVE SIDE

SRT 55 PARTS LISTING

PARTS



TILLER 02/12

Parts Section 6-10

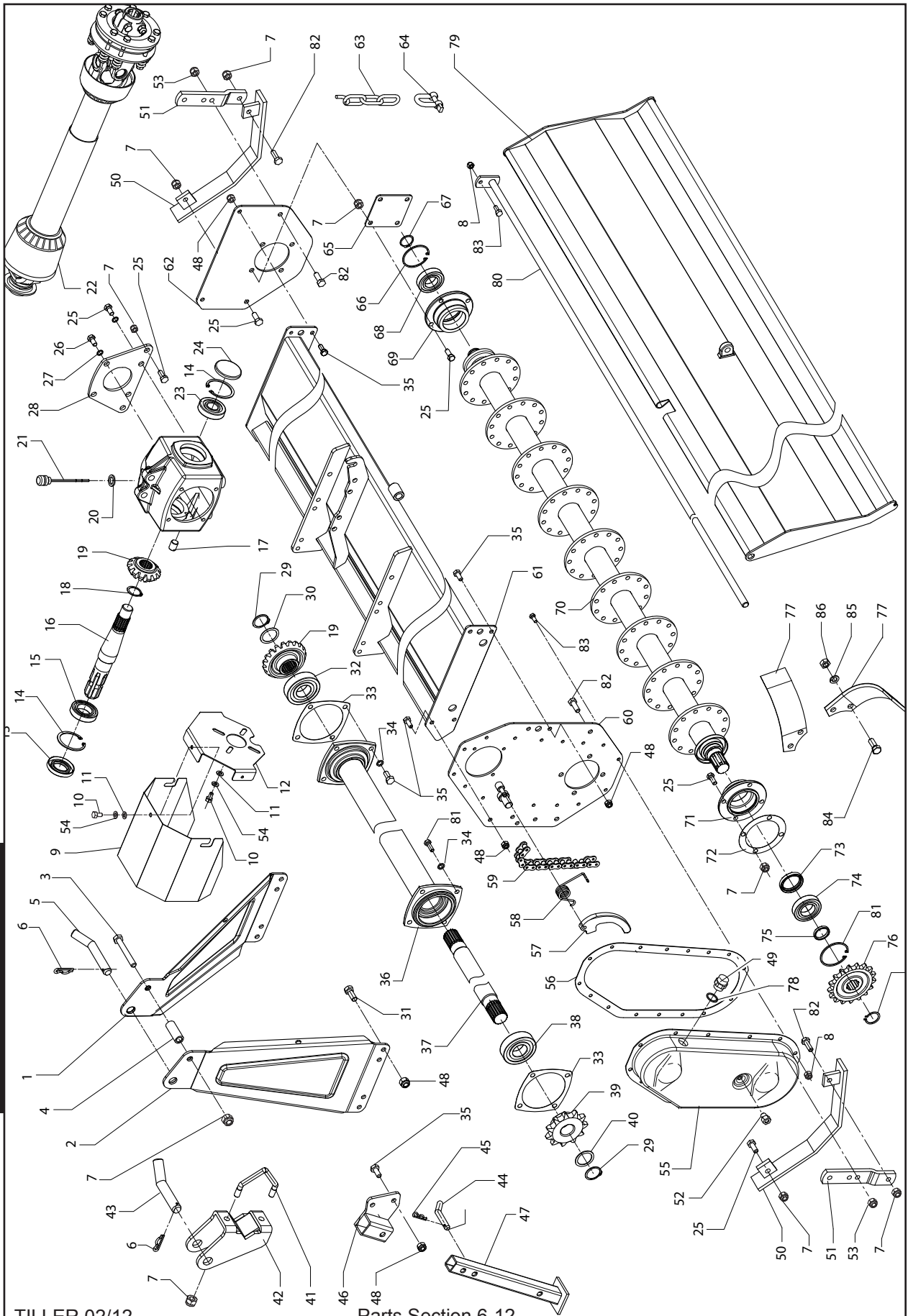
SRT 55 PARTS LISTING

ITEM	PART. NO.	QTY	DESCRIPTION
69	00762465	1	LOCKNUT M35 GUP TYPE
70	00762490	1	DRIVEN SPROKET Z17
71	61379C8	2	SCREW UNI 5739 M12X40 8.8
72	00762468	2	SKID
73	00786621	1	END PLATE, IDLER SIDE
74	00762514	1	CHAIN (ASA 80-S TYPE, 40 LINKS)
75	00762498	1	CHAIN ADJUSTER
76	00762352	1	SPRING
77	00786622	1	END PLATE, DRIVE SIDE
78	00786623	1	CHAIN COVER
79	00762417	1	PLUG M 22X1,5
80	00762496	1	GASKET
81	00785981	1	GASKET M14
82	00762419	1	LEVEL PLUG M14X1,5
83	00773780	1	PARKING STAND SUPPORT
84	00753231	3	"SCHNORR" WASHER M8
85	00786576	1	SUPPORT DRIVELINE SHIELD
86	02958784	3	SCREW UNI 5739 M8X20 8.8
87	00786575	1	SHIELD, DRIVELINE
88	61354C8	4	SCREW UNI 5739 M8X16 8.8

PARTS

SRT 65 & SRT 73 PARTS LISTING

PARTS



TILLER 02/12

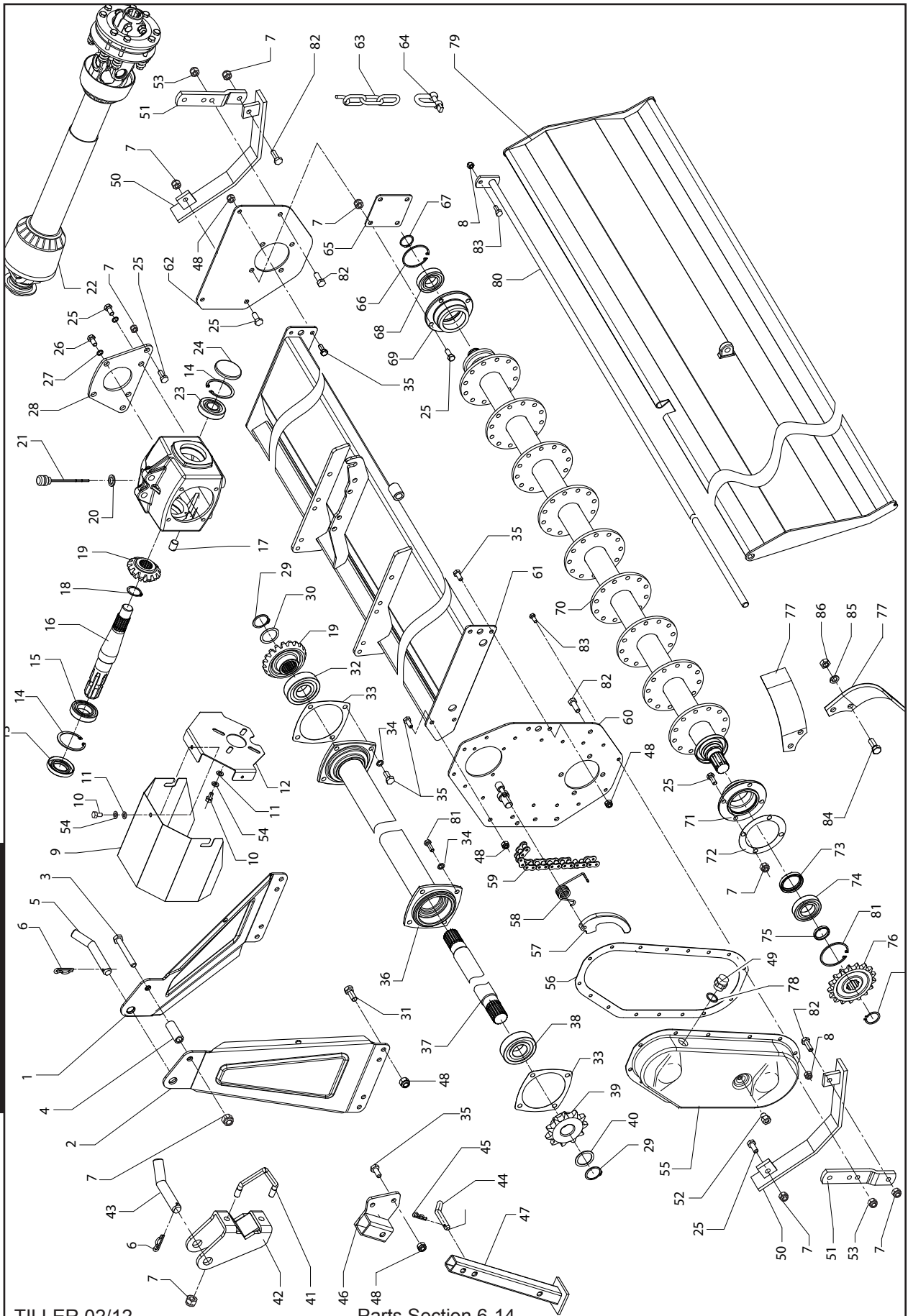
Parts Section 6-12

SRT 65 & SRT 73 PARTS LISTING

ITEM	PART. NO.	QTY	DESCRIPTION
1	00787984	1	RH A-FRAME
2	00787985	1	LH A-FRAME
3	00754518	1	SCREW M12X90 UNI 5739
4	00786633	1	SPACER, TOP HITCH
5	00762333	1	PIN, TOP HITCH (CAT.1)
6	37107B13	3	COTTER PIN Ø4
7	00772648	15	SELF LOCKING METAL NUT M12 DIN 980
8	70093C	17	SELF LOCKING METAL NUT M8 DIN 980
9	00786575	1	PTO GUARD
10	61354C8	5	SCREW M8X16 UNI 5739
11	701511C	4	WASHER M8 UNI 6592
12	00786576	1	SUPPORT, PTO GUARD
13	00756406	1	OIL SEAL 35X62X10 PP
14	3678204	2	INTERNAL CIRCLIP Ø62 DIN 472
15	3236002	1	BEARING 6007
16	00786609	1	PTO SHAFT 1 3/8" Z6
17	00786607	1	DRAIN PLUG M16
18	00777919	1	EXTERNAL CIRCLIP Ø30 DIN 471
19	00788821	1	GEARS KIT
20	701515C	1	GASKET M16 (AL/CU)
21	00786611	1	OIL LEVEL PLUG M16
22	00762398	1	DRIVE LINE
23	00777584	1	BEARING 30305
24	00786581	1	COVER 62X7
25	61377C8	14	SCREW M12X30 UNI 5739
26	00762462	2	SCREW M12X25 UNI 5739
27	00762420	4	WASHER Ø12 ZNB
28	00787986	1	GEARBOX CLAMPING PLATE
29	00763207	2	EXTERNAL CIRCLIP Ø35 DIN 471
30	00787987	2	SHIM, BEVEL GEAR
31	00786606	8	SCREW M10X30 ZNB UNI 5739
32	00787114	1	BEARING 6307 2RS
33	00786603	2	GASKET, EXTENSION TUBE
34	00755954	8	WASHER Ø10 FIAT 10188 C70
35	61368C8	16	SCREW M10X25 UNI 5739
36	00787988	1	EXTENSION TUBE SRT/65
36	00787989	1	EXTENSION TUBE SRT/73
37	00787990	1	SHAFT OUTPUT SRT/65
37	00787991	1	SHAFT OUTPUT SRT/73
38	00753223	1	BEARING 6307
39	00762492	1	DRIVING GEAR Z11
40	00787987	1	SHIM, BEVEL GEAR
41	00786614	2	U-BOLT M12
42	00787992	2	LOWER HITC H CLEVIS
43	00773450	2	PIN, LOWER HITCH (CAT.1)
44	00765550	1	PIN, STAND LEG ADJUSTMENT
45	00765549	1	COTTER PIN Ø3
46	00773780	1	STAND LEG SUPPORT
47	00764370	1	STAND LEG
48	00765676	16	SELF LOCKING METAL NUT M10 DIN 980
49	00762424	1	OIL PLUG M22X1,5
50	00762468	2	SKID
51	00786618	2	SKID ADJUSTING ROD
52	00788017	1	VISUAL PLUG M14X1,5
53	00787993	2	SELF LOCKING NUT M12 UNI 7473
54	701513C	5	WASHER Ø8 FIAT 10188
55	00786623	1	DRIVE COVER
56	00762496	1	GASKET, DRIVE COVER
57	00762498	1	CHAIN ADJUSTER
58	00762352	1	CHAIN ADJUSTER SPRING
59	00787994	1	DRIVE CHAIN (ASA 80-HE)
60	00787995	1	END PLATE, DRIVE SIDE
61	00787996	1	TILLER FRAME SRT/65
61	00787997	1	TILLER FRAME SRT/73
62	00787998	1	END PLATE, EXTERNAL SIDE
63	00762277	1	REAR BOARD CHAIN (USUAL 25 - 10 LINKS)

SRT 65 & SRT 73 PARTS LISTING

PARTS



TILLER 02/12

Parts Section 6-14

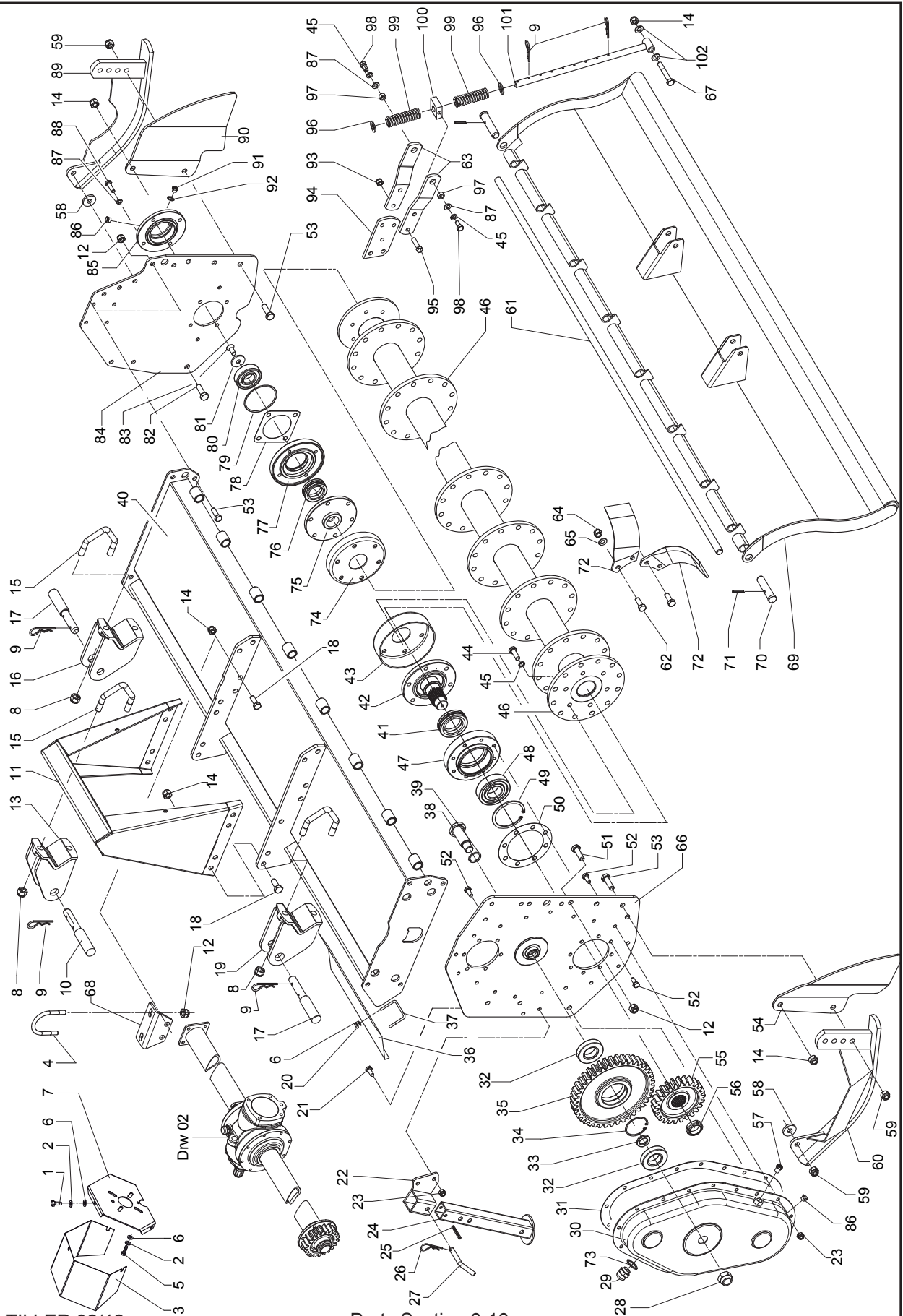
SRT 65 & SRT 73 PARTS LISTING

ITEM	PART. NO.	QTY	DESCRIPTION
64	00777924	1	HOOK Ø10
65	00788003	1	ROTOR COVER OUTER SIDE
66	00762511	2	INTERNAL CIRCLIP Ø90 DIN 472
67	00762293	2	EXTERNAL CIRCLIP Ø40 DIN 471
68	00788004	1	BEARING 6208
69	00788005	1	ROTOR BEARING MOUNT, EXTERNAL SIDE
70	00788006	1	ROTOR SHAFT (4/6 BLADES) SRT/65
70	00788007	1	ROTOR SHAFT (4/6 BLADES) SRT/73
71	00788008	1	ROTOR BEARING MOUNT, TRASMISSION SIDE
72	00788009	1	GASKET, BEARING MOUNT DRIVE SIDE
73	00762508	1	OIL SEAL 55X72X10 PP
74	00788010	1	BEARING 1209
75	00788011	1	SPACER ROTOR BEARING
76	00762490	1	DRIVEN GEAR Z17
77	00786644	24	KIT CURVED BLADES SRT/65
77	00786644	27	KIT CURVED BLADES SRT/73
78	00788012	1	OR 116 - 18.72X2,62
79	00788013	1	REAR BOARD, SRT/65
79	00788014	1	REAR BOARD, SRT/73
80	00788015	1	ROD, REAR BOARD SRT/65
80	00788016	1	ROD, REAR BOARD SRT/73
81	00786146	1	INTERNAL CIRCLIP Ø85
82	02959661	2	SCREW M12X35 ZNB UNI 5739
83	02958784	17	SCREW M8X20 ZNB UNI 5739
84	00762397	96 (SRT/65)	SCREW M12X35 ZNB UNI 5738
84	00762397	108 (SRT/73)	SCREW M12X35 ZNB UNI 5738
85	00762420	96 (SRT/65)	WASHER Ø 12 FIAT 10188
85	00762420	108 (SRT/73)	WASHER Ø 12 FIAT 10188
86	00762371	96 (SRT/65)	NUT M12 UNI 5587 ZNB
86	00762371	108 (SRT/73)	NUT M12 UNI 5587 ZNB

PARTS

SRD 63, SRD 73 & SRD 83 PARTS LISTING

PARTS



TILLER 02/12

Parts Section 6-16

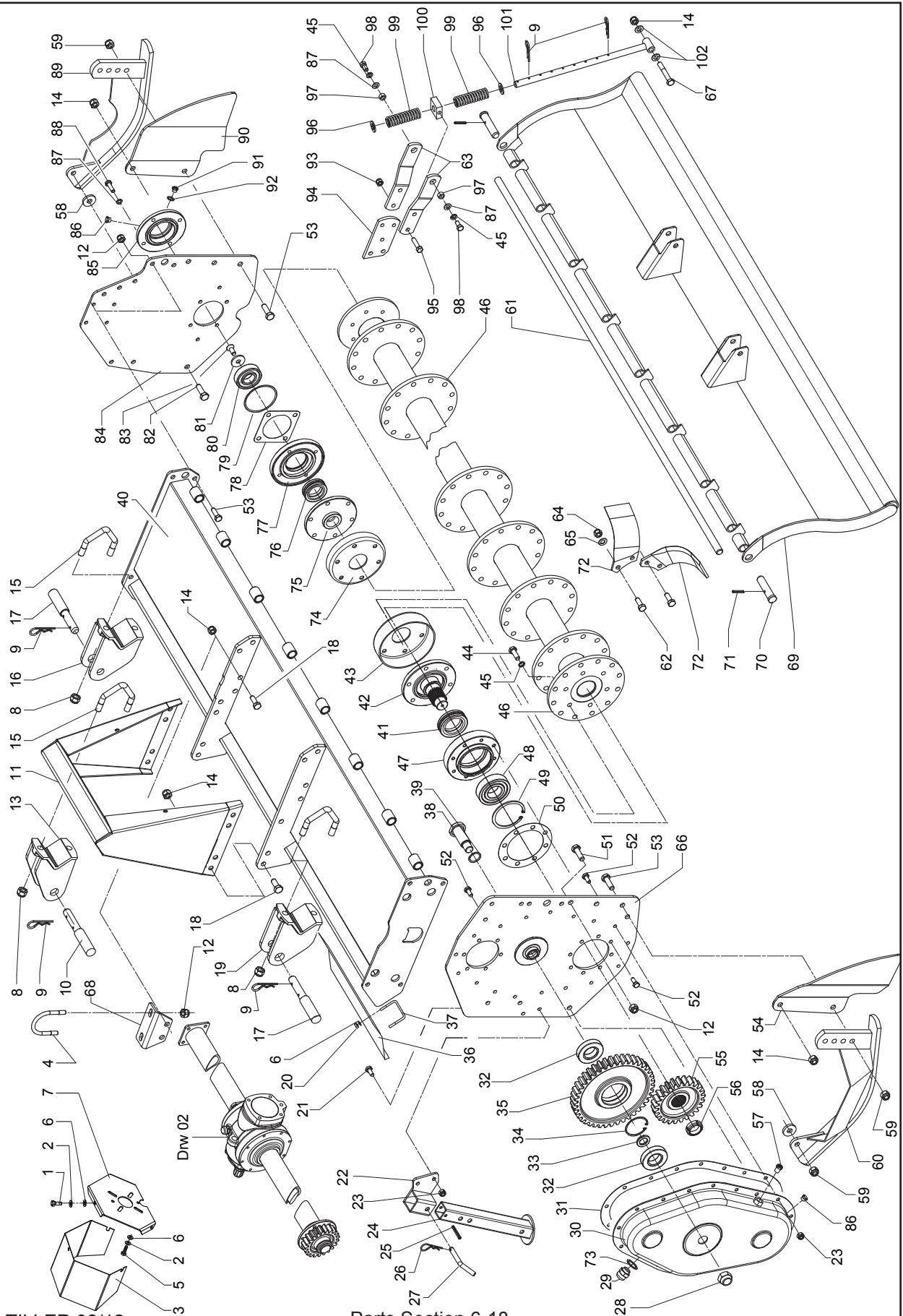
SRD 63, SRD 73 & SRD 83 PARTS LISTING

PARTS

ITEM	PART. NO.	QTY	DESCRIPTION
1	00788018	3	SCREW M8X16 UNI 5449 DIN 316
2	701611C	6	WASHER FIAT 10188 Ø8 ZNB LW, M8
3	00762480	1	SHIELD
4	00777905	2	U SCREW
5	613510C8	3	SCREW TE UNI5739 PG 8.8 M8X30 ZNB
6	701511C	6	WASHER UNI6592 140HV DI.08 ZNB
7	00788019	1	SHIELD SUPPORT PLATE
8	3038445	6	NUT DIN980 8 PG.016 ZNB M16X2 TLN
9	37107B13	3	COTTER PIN Ø4
10	00765527	1	PIN, TOP HI T CH (CAT.1/2)
11	00765530	1	TOP HITCH FRAME
12	00772648	8	NUT DIN980 8 PG.012 ZNB
13	00786000	1	TOP HITCH CLEVIS
14	70096C	12	NUT DIN980 8 PG.014 ZNB M14X2 TLN
15	00766906	3	"U" SCREW
16	00786001	1	LOWER HITCH CLEV I S, RH
17	00765533	2	PIN LOWE R HITCH (CAT.1/2)
18	61386C8	8	SCREW TE UNI5739 PG 8.8 M14X35 F-T DIN 933
19	00786002	1	LOWER HITCH CLEV I S, LH
20	70093C	1	NUT DIN 980 8 PG.008 ZNB
21	61368C8	6	SCREW TE UNI5739 PG 8.8 M10X25
22	00765555	1	STAND LEG SUPPORT
23	00765676	4	NUT DIN980 8 PG.010 ZNB
24	00765554	1	STAND LEG
25	703517W	1	ELASTIC PIN 8X55 DIN 1481
26	00765549	1	COTTER PIN Ø3
27	00765550	1	PIN, STAND LEG ADJUSTMENT
28	00788020	1	NUT UNI7474 HMAX 21MM PF M24X3
29	00762417	1	PLUG M 22X1,5
30	00788021	1	DRIVE COVER
31	00765631	1	GASKET
32	00752916	2	BEARING 30208
33	00788022	1	SPACER
34	00763210	1	INTERNAL CIRCLIP Ø80 DIN
35	00788023	1	INTERMEDIATE GEAR Z41
36	00788024	2	PROTECTIONE PLATE SRD/63
36	00788025	2	PROTECTIONE PLATE SRD/73
36	00788026	2	PROTECTIONE PLATE SRD/83
37	00788027	2	"U" BOLT M8
38	00788028	1	INTERMEDIATE GEAR PIN
39	00777914	1	O - RING 217
40	00788029	1	FRAME SRD/63
40	00788030	1	FRAME SRD/73
40	00788031	1	FRAME SRD/83
41	00765680	1	OIL SEAL GNL IM 5470
42	00765564	1	DRIVEN GEAR HUB
43	00762296	1	DUST COVER
44	02959661	12	SCREW TE UNI 5739 PG 8.8
45	00758672	12	WASHER FIAT 10188 C70 DI.12-LW M12
46	00777938	1	ROTOR SRD/63
46	00777928	1	FRAME SRD/73
46	00777929	1	FRAME SRD/83
47	00787068	1	HUB SUPPORT
48	00762427	1	BEARING 6309
49	00762294	1	CIRCLIP I Ø 100
50	00762301	1	GASKET
51	61388C8	4	SCREW TE M14X45 DIN953 F-T PG 8.8
52	61368C8	9	SCREW TE M10X25 DIN953 F-T PG 8.8
53	61385C8	4	SCREW TE M14X30 ZNB DIN953 F-T PG 8.8
54	00788032	8	LH SIDE EARTH SHIELD
55	00788031	1	DRIVEN GEAR Z25
56	00762465	1	SELF LOCKING METAL RING M35X1.5
57	00788017	1	OIL LEVEL PLUGM 14X1,5
58	00788035	2	SKID SPACER
59	00788036	12	NUT M14 ZNB DIN982
60	00788037	1	LEFT SKID

SRD 63, SRD 73 & SRD 83 PARTS LISTING

PARTS



TILLER 02/12

Parts Section 6-18

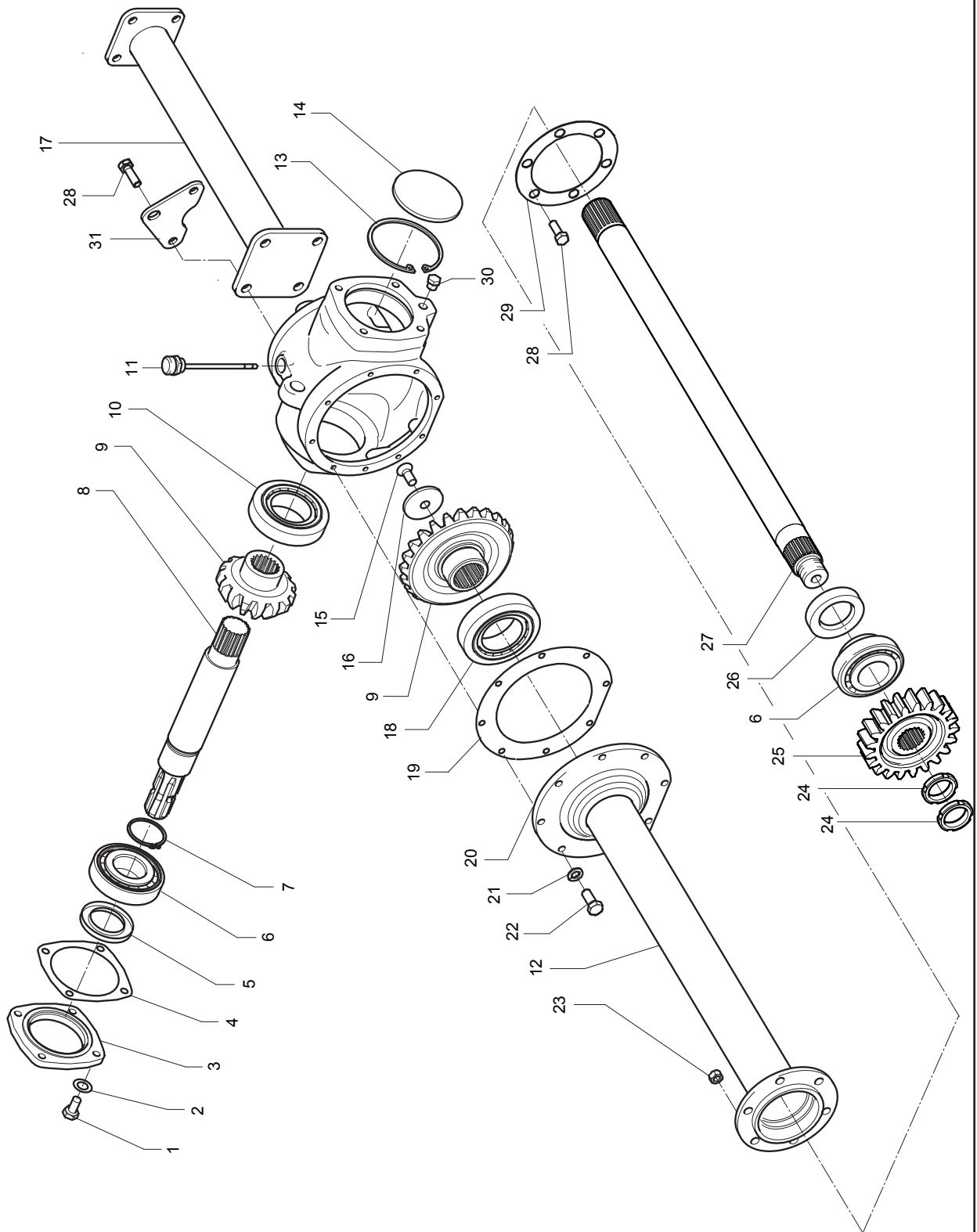
SRD 63, SRD 73 & SRD 83 PARTS LISTING

ITEM	PART. NO.	QTY	DESCRIPTION
61	00777916	1	COVER PIN SRD/63
61	00785980	1	COVER PIN SRD/73
61	00777917	1	COVER PIN SRD/83
62	00765681	72 (SRD/63)	SCREW DIN960 PF 8.8 M14X40FIL.20 ZNB
62	00765681	84 (SRD/73)	SCREW DIN960 PF 8.8 M14X40FIL.20 ZNB
62	00765681	96 (SRD/83)	SCREW DIN960 PF 8.8 M14X40FIL.20 ZNB
63	00788050	4	ARM ADJUSMENT BAR
64	00788054	72 (SRD/63)	NUT 8(6S) PF.M14 ZNB DIN6914
64	00788054	84 (SRD/73)	NUT 8(6S) PF.M14 ZNB DIN6914
64	00788054	96 (SRD/83)	NUT 8(6S) PF.M14 ZNB DIN6914
65	00754586	72 (SRD/63)	GROWER FIAT 10188 C70 DI.14 ZNB
65	00754586	84 (SRD/73)	GROWER FIAT 10188 C70 DI.14 ZNB
65	00754586	96 (SRD/83)	GROWER FIAT 10188 C70 DI.14 ZNB
66	00788039	1	TRASMISSION SIDE PLATE
67	610810C8	2	SCREW TE DIN 931 PG 8.8 M14X90 ZNB
68	00788040	2	ANGLE "U" BOLT MOUNTING
69	00788041	1	BONNET SRD/63
69	00788042	1	BONNET SRD/73
69	00788043	1	BONNET SRD/83
70	00777902	2	PIN
71	00777910	2	SPLIT PIN Ø6X36
72	00786221	18 (SRD/63)	KIT CURVE BLADE LEFT-RIGHT
72	00786221	21 (SRD/73)	KIT CURVE BLADE LEFT-RIGHT
72	00786221	24 (SRD/83)	KIT CURVE BLADE LEFT-RIGHT
73	00788012	1	OR 116 - 18.72X2,62
74	00765571	1	DUST COVER
75	00765572	1	ROTOR SUPPORT HUB
76	00765682	1	OIL SEAL GNL JD 5300
77	00765573	1	SUPPORT GNL
78	00765574	1	GASKET
79	00765575	1	O. RING 240
80	00753223	1	BEARING 6307
81	00777937	1	WASHER
82	71573C8	5	SCREW TSEI DIN 7991 PG 8.8 M12X30
83	61387C8	1	SCREW TE DIN 933 PG 8.8 M14X40 ZNB
84	00788044	1	EXTERNAL SIDE PLATE
85	00765683	1	BEARING SUPPORT
86	00762463	1	PLUG M 14X1,5
87	00755954	6	WASHER FIAT 10188 C70 DI.10
88	613611C8	4	SCREW TE UNI 5739 PG 8.8 M10X35 ZNB
89	00788038	1	RIGHT SKID
90	00788033	1	SIDE EARTH SHIELD-RH
91	00762463	1	PLUG M 14X1,5
92	00785981	1	WASHER Ø 14
93	00787993	4	NUT UNI 7473 8(6S) PG.M12 ZNB
94	007880458	2	ANCHOR ROD BRCAKET PLATE
95	00755901	4	SCREW TE M14X90 DIN 931 ZNB
96	701518C	4	WASHER DIN 125 FW140HV M22
97	00788046	4	SPACER
98	00762462	4	SCREW TE DIN 933 PG 8.8 M12X25 ZNB
99	00788047	4	ADJUSTEMENT ROD SPRING
100	00788048	2	BLOCK, ROD
101	00788049	2	COVER ADJUSTMENT ROD
102	00755940	4	WASHER DIN 125 FW 140HV M4 ZNB

PARTS

SRD 63, SRD 73 & SRD 83 PARTS LISTING

PARTS



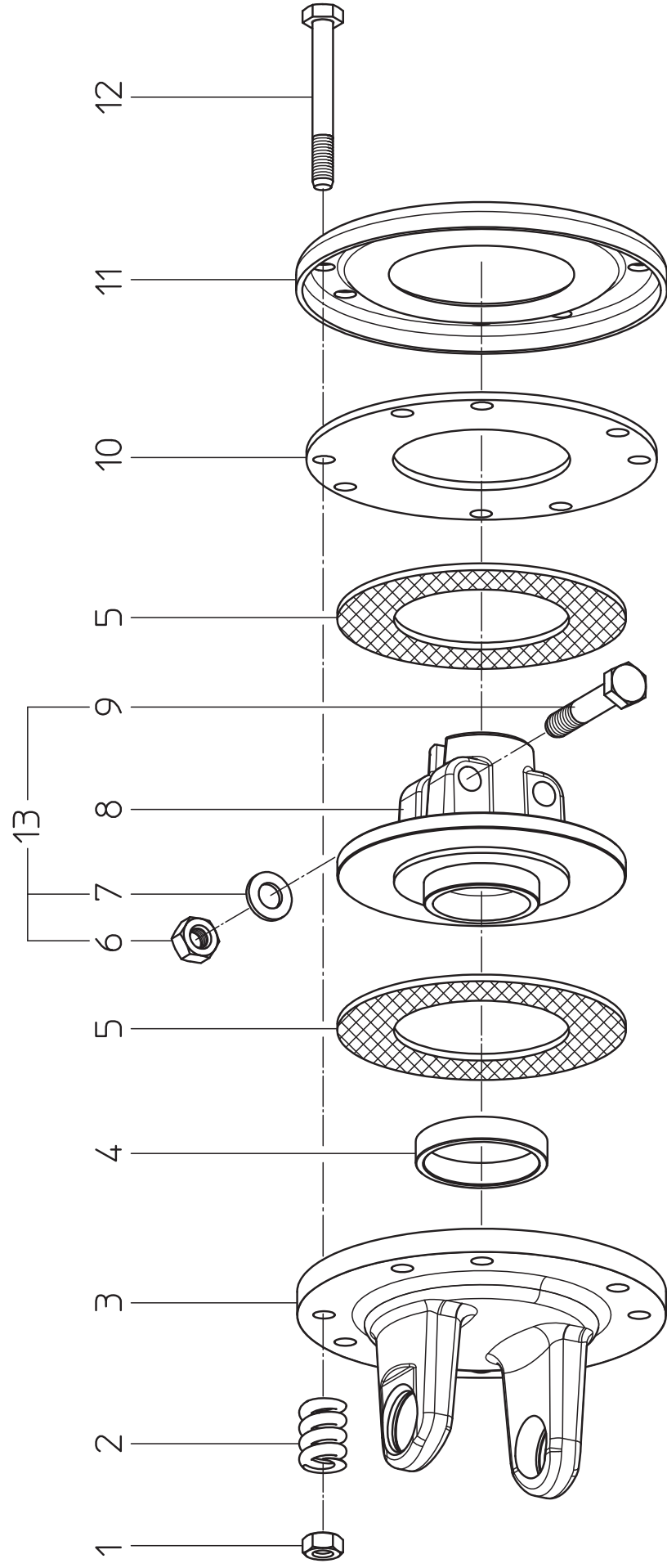
TILLER 02/12

Parts Section 6-20

SRD 63, SRD 73 & SRD 83 PARTS LISTING

ITEM	PART. NO.	QTY	DESCRIPTION
1	00762398	4	SCREW M10X30 UNI 5739
2	00755954	4	GROWER M10 UNI 1751
3	00788055	1	SUPPORT LAP
4	00788056	1	GASKET
5	00756644	1	OILSEAL D45XD80X10 DIN3760
6	50053364	2	BEARING 30309
7	6320045	1	EXTERNAL CIRCLIP Ø45 DIN 472
8	00788057	1	PINION SHAF T
9	00788288	1	BEVEL KIT
10	02980554	1	BEARING 32211
11	00788059	1	OIL LEVEL PLUG M22X1,5
12	00788272	1	SUPPORT OUTSIDE SRD/63
12	00788273	1	SUPPORT OUTSIDE SRD/73
12	00788274	1	SUPPORT OUTSIDE SRD/83
13	00762294	1	INTERNAL CIRCLIP Ø100 DIN 472
14	00763209	1	COVER Ø100
15	71583C8	1	SCREW TSEI M14X35 UNI 5933
16	00788060	1	BEVEL GEAR LOCKING WASHER
17	00788273	1	SUPPORT OUTSIDE SRD/73
17	00788274	1	SUPPORT OUTSIDE SRD/83
18	00777095	1	BEARING 32212
19	00788062	1	GASKET, EXTENSION TUBES
20	00788063	1	EXTENSION TUBE SRD/63
20	00788064	1	EXTENSION TUBE SRD/73
20	00788065	1	EXTENSION TUBE SRD/83
21	00753731	8	SCHONRR M8
22	61357C10	8	SCREW TE M8X22 UNI5739 PG10.9
23	00765676	6	SELF LOCK. METAL NUT M10 DIN980
24	00788066	2	LOCKING NUT KM M40X1.5 DIN981
25	00788067	1	DRIVING GEAR Z16
26	00762507	1	OILSEAL 72X45X10 DIN3760
27	00788068	1	SHAFT SRD/63
27	00788069	1	SHAFT SRD/73
27	00788070	1	SHAFT SRD/83
28	00762398	10	SCREW TE M10X30 UNI5739
29	00765590	1	GASKET, EXTENSION TUBES
30	00762463	1	PLUG M14X1,5
31	00788071	1	ATTACHMENT HOOK PLATE

PARTS



DET.	QTY	DESCRIPTION	EC NO.
1	8	SCREW NUT (FOR SPRING)	00765676
2	8	SPRING	00769136
3	1	FLANGE WITH YOKE	00769137
4	1	BUSHING	00762528
5	2	FRICTION DISC	00769120
6	2	SCREW NUT	00772648
7	2	SPRING WASHER	9100206
8	1	HUB WITH FLANGE	00769135
9	2	BOLT	00762532
10	1	INNER DISC	00769134
11	1	PRESSURE DISC	00769133
12	8	BOLT (FOR SPRING)	610611C8
13	1	"LOCKING BOLT" KIT REPLACEMENT	00788084

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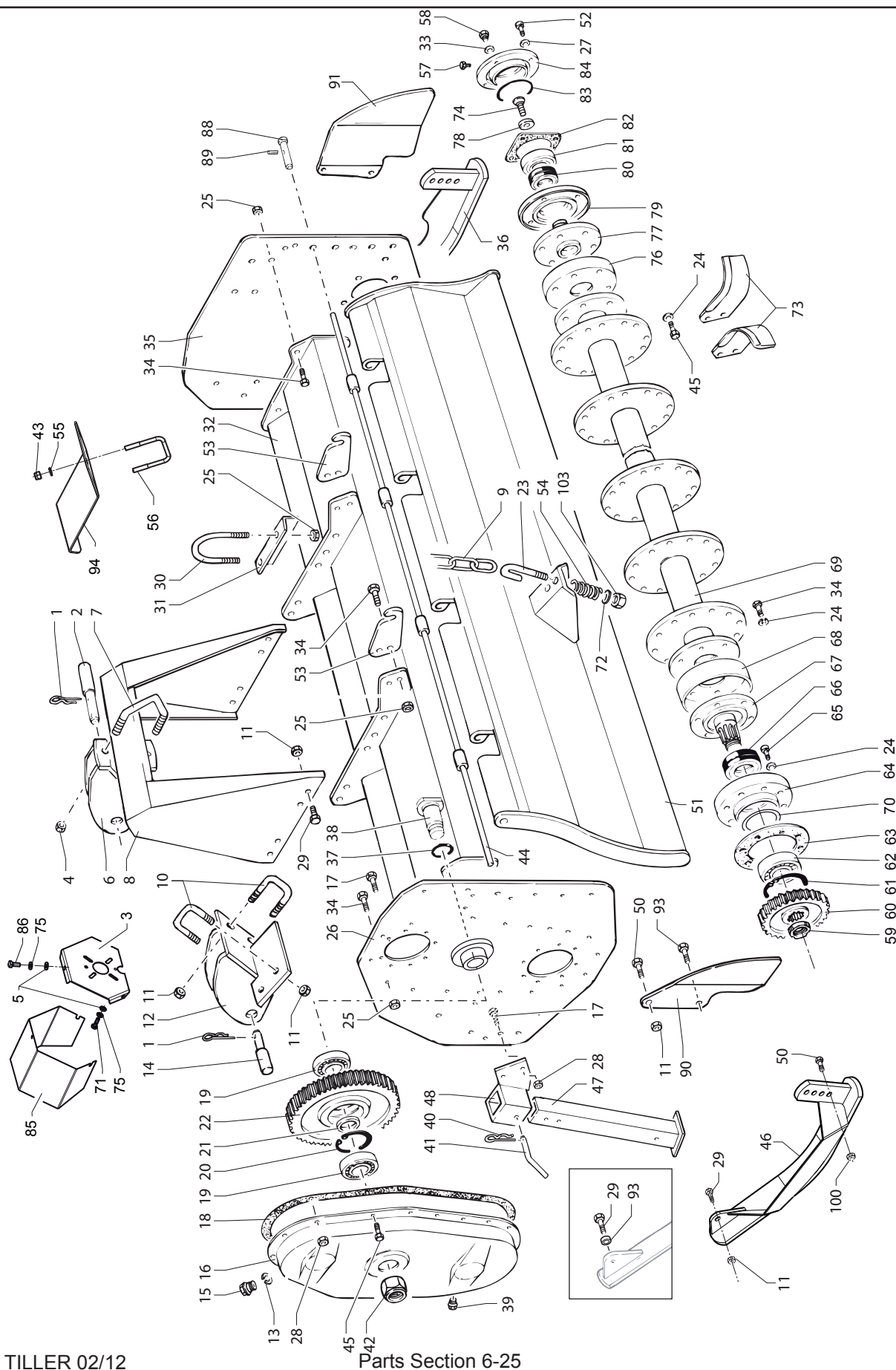


— c.da Saletti 66041 Atessa (CH) – Italy —

drawn: A. CAVALLETTI	date: 24/10/2006	
scale: n° A4	rev.: —	
part no.:		00763191

SRM 81V & SRM 91V PARTS LISTING

PARTS



TILLER 02/12

Parts Section 6-25

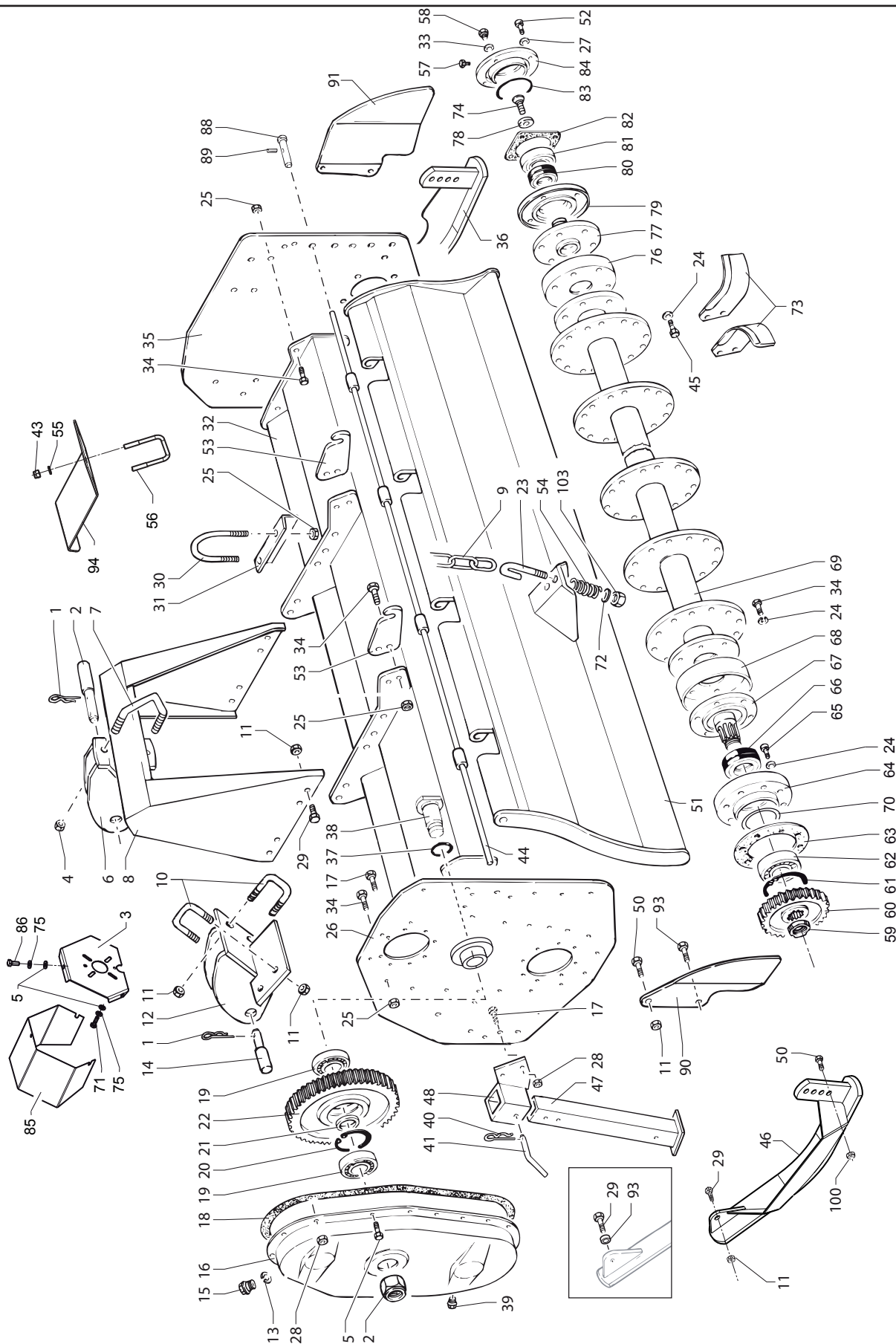
SRM 81V & SRM 91V PARTS LISTING

ITEM	PART. NO.	QTY	DESCRIPTION
1	00762332	3	SPLIT PIN Ø 4X80
2	00785969	1	PIN
3	00788019	1	PROTECTION SUPPORT
4	3038445	2	SELF LOCKING NUT M16 DIN 980
5	701511C	6	WASHER Ø 8 UNI 6592
6	00785970	1	PLATE
7	00766906	1	"U" SCREW
8	00765530	1	PLATE
9	00765557	2	CHAIN
10	00785971	4	"U" SCREW
11	70096C	20	NUT M14 DIN980
12	00785972	1	PLATE
12	00785973	1	PLATE
13	00788012	1	OR 116 - 18.72X2,62
14	00785974	2	PIN
15	00762424	1	PLUG M22X1,5
16	00788094	1	COVER TRASMISSION
17	61368C8	8	SCREW M10X1,5X25 UNI 5739
18	00765535	1	GASKET
19	00769938	19	BEARING 30210
20	00762511	1	CIRCLIP I Ø 90
21	00787062	1	SPACER
22	00765537	1	INTERMEDIATE GEAR Z=41
23	00765558	1	CHAIN PLATE
24	00762420	20	WASHER Ø12 FIAT 10188
25	00772648	6	NUT M12 DIN980
26	00787063	1	PLATE
27	00755954	4	WASHER Ø10 FIAT 10188
28	00765676	20	NUT M10 DIN980
29	61386C8	16	SCREW M14X2X35 UNI 5739
30	00765673	2	U SCREW
31	00765539	2	SUPPORT
32	00785976	1	FRAME SRM/80V
32	00785977	1	FRAME SRM/90V
33	00785981	1	SCREW M12X1,75X25 UNI 5739
34	02959661	26	SCREW M12X1,75X35 UNI 5739
35	00785979	1	EXTERNAL SIDE PLATE
36	00788095	1	RIGHT SKID
37	00762322	1	O. RING 220
38	0078897	1	PIN
39	00788017	1	PLUG M14X1,5
40	00765549	1	SPLIT PIN "R" Ø 3X60
41	00765550	1	PIN
42	00788098	1	SELF LOCKING NUT M33 PF UNI 7474
43	70093C	8	SELF LOCKING NUT M8 DIN 980
44	00777918	1	BONNET PIN SRM/80V
44	00787065	1	BONNET PIN SRM/90V
45	61377C8	26	SCREW M12X1,75X30 UNI 5739
46	00788096	1	LEFT SKID
47	00765554	1	FOOT
48	00765555	1	SUPPORT
49	00757196	2	SCREW M14X2X80 UNI 5737
50	61387C8	8	SCREW M14X2X40 UNI 5739
51	00785982	1	LONG COVER SRM/80V WITH CHAIN
51	00785984	1	LONG COVER SRM/90V WITH CHAIN RH
51	00785983	1	LONG COVER SRM/90V CHAIN LH
52	00762398	4	SCREW M10X1,5X30 UNI 5739
53	00778041	2	CHAIN PLATE
54	00765559	2	SPRING
55	701511C	4	WASHER Ø 8 UNI 6592
56	00788027	4	U-BOLT - M8 X 1.25
57	00762463	1	PLUG
58	00762419	1	PLUG

PARTS

SRM 81V & SRM 91V PARTS LISTING

PARTS



TILLER 02/12

Parts Section 6-27

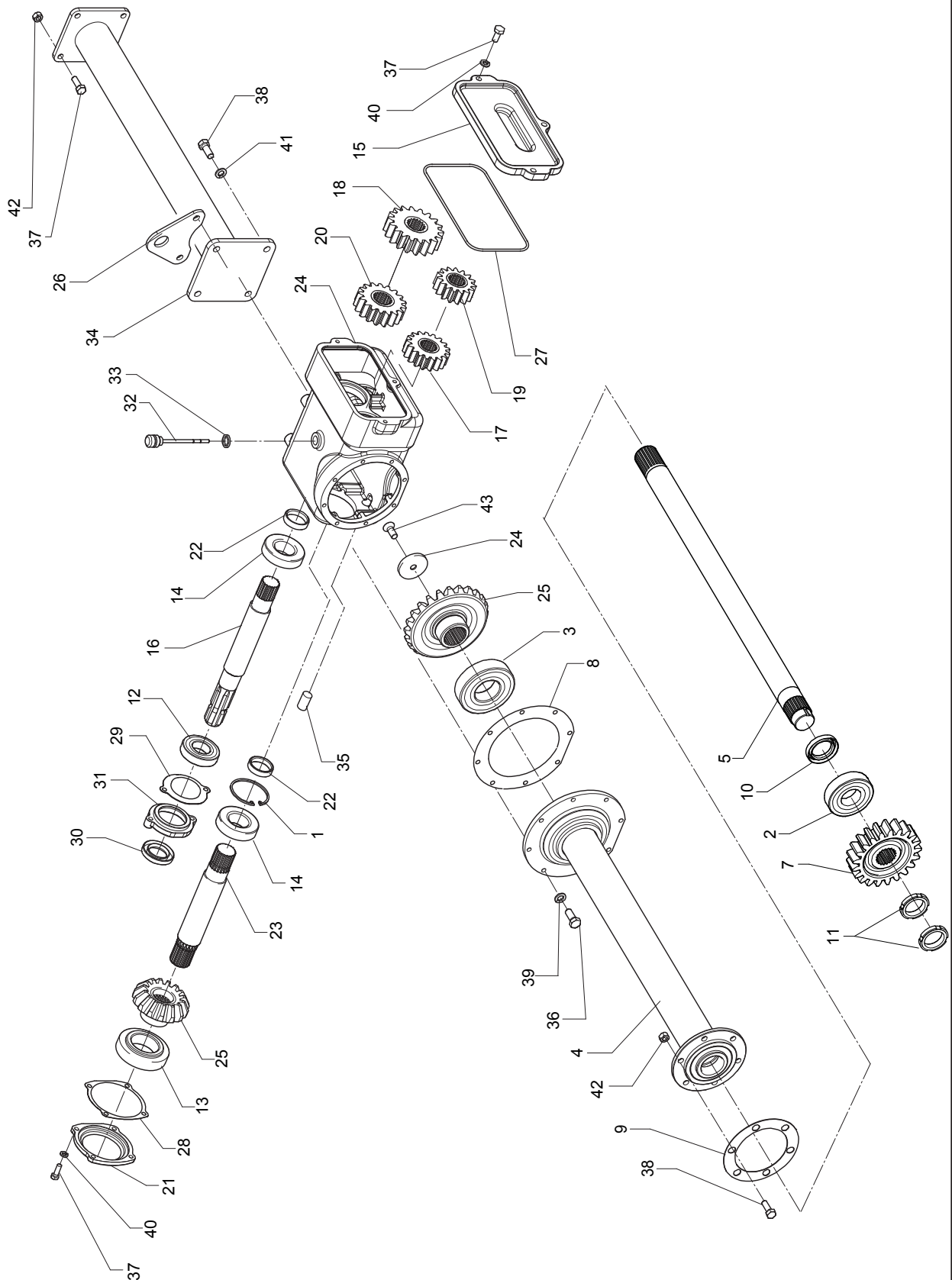
SRM 81V & SRM 91V PARTS LISTING

ITEM	PART. NO.	QTY	DESCRIPTION
59	00762465	1	SELF LOOKING NUT Ø 35X1,5 GUP
60	00762465	1	GEAR Z32
61	00762294	1	CIRCLIP I Ø 100
62	00787067	1	BEARING 21309
63	00762301	1	GASKET
64	00787068	1	SUPPORT
65	70816C8	16	SCREW TCEI M12X1,75X25 UNI 5931
66	00765647	1	OIL SEAL GNL 5470
67	00765564	1	HUB
68	00762296	1	DUST COVER
69	00785985	1	BLADES HOLDER ROTOR SRM80V
69	00785986	1	BLADES HOLDER ROTOR SRM/90V
70	00788099	1	ADJUST ROD
71	61354C8	3	SCREW M14X1,5X40
72	701513C	2	WASHER Ø 12 UNI 6592
73	00786220	24 SRM/80V	KIT CURVE BLADE SX-DX
73	00786220	27 SRM/90V	KIT CURVE BLADE SX-DX
74	71573C8	1	SCREW M12X1,75X30
75	701611C	6	ARM
76	00762296	1	DUST COVER
77	00765572	1	ROTOR SUPPORT HUB
78	00777937	1	WASHER
79	00777926	1	SUPPORT GNL
80	00765682	1	OIL SEAL GNL JD 5300
81	00753223	1	BEARING 6307
82	00765574	1	GASKET
83	00765575	1	O. RING 240
84	00777921	1	BEARING SUPPORT
85	00762480	1	JOINT PROTECTION
86	21354C8	3	SCREW M8X1,25X16
87	701611C	6	WASHER Ø 8 FIAT 10188
88	00777902	2	PIN
89	6330636	2	SPLIT PIN
90	0788032	1	LH SIDE EARTH-GUARD
91	0788033	1	RH SIDE EARTH-GUARD
92	00788035	2	SPACER
93	61388C8	4	SCREW M14X2X45 UNI 5739
94	00788100	2	CE FRONT GUARD SRM/80V
94	00788101	2	CE FRONT GUARD SRM/90V

PARTS

SRM 81V & SRM 91V PARTS LISTING

PARTS



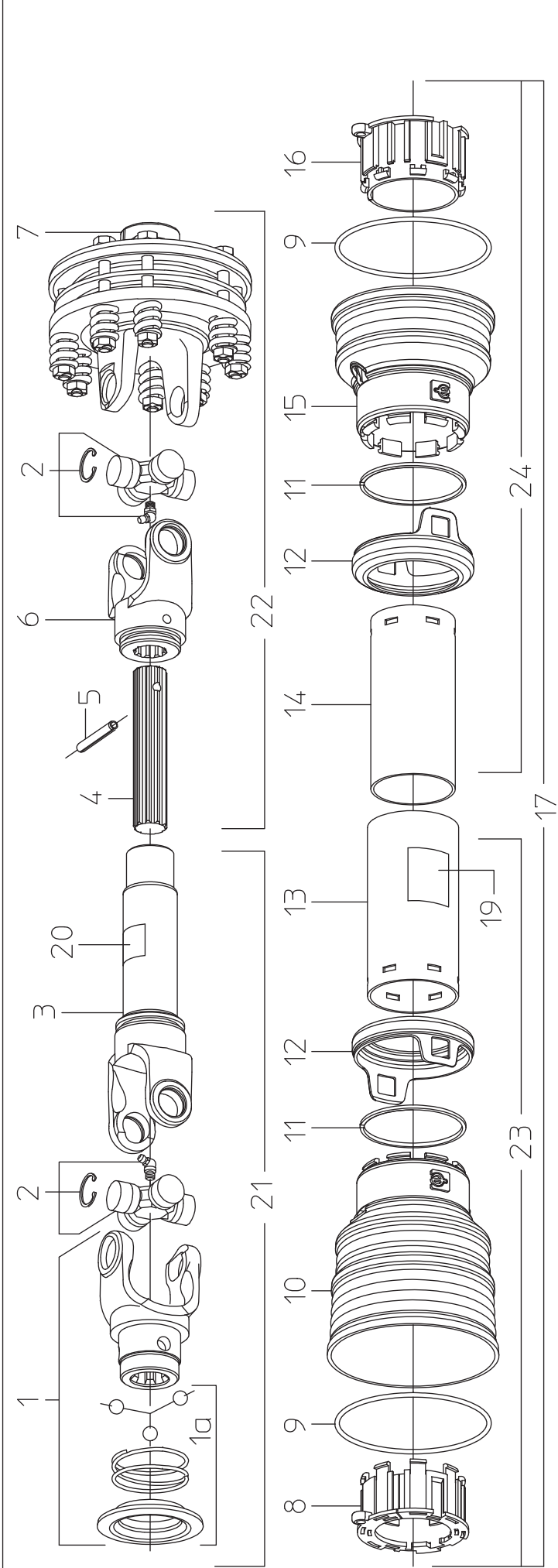
TILLER 02/12

Parts Section 6-29

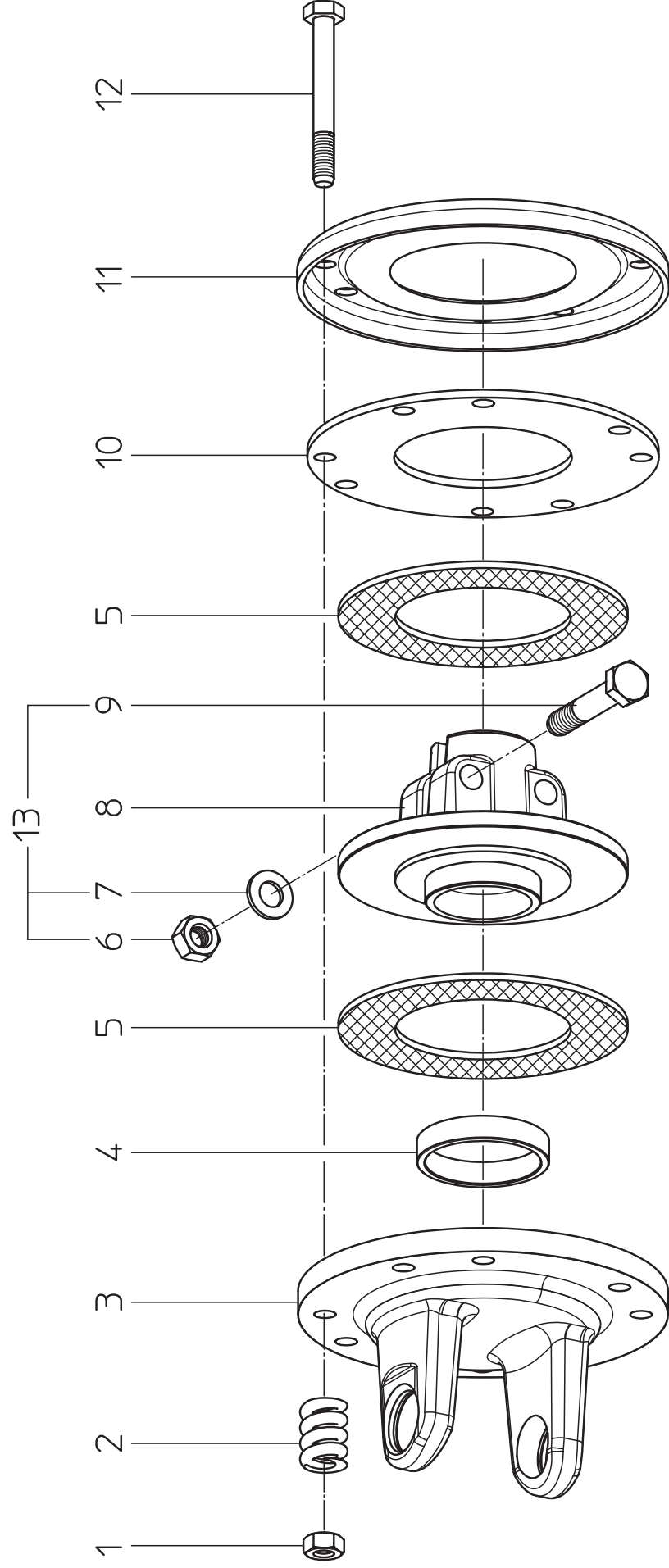
SRM 81V & SRM 91V PARTS LISTING

ITEM	PART. NO.	QTY	DESCRIPTION
1	00763210	1	INTERNAL CIRCLIP Ø80 DIN 472
2	50053364	1	BEARING 32209
3	00777095	1	BEARING 32212
4	00788102	1	EXTENSION TUBE SRM/80V
4	00788103	1	EXTENSION TUBE SRM/90V
5	00788104	1	SHAFT SRM/80V
5	00788105	1	SHAFT SRM/90V
6	00762463	1	PLUG M14X1.5
7	00788106	1	DRIVING GEAR Z21
8	00788067	1	GASKET, EXTENSION TUBES
9	00765590	1	GASKET, EXTENSION TUBE
10	00762507	1	OILSEAL 45X72X10PP DIN 3760 TIPO ASP
11	00788066	2	LOCKING NUT KM M40X1.5 DIN981
12	001722	1	BEARING 32207
13	2980554	1	BEARING 32211
14	00788107	2	BEARING 32208
15	00788108	1	GEARBOX COVER
16	00788109	1	PTO SHAFT INPUT
17	00788110	1	GEAR Z16
18	00788111	1	GE R Z18
19	00788112	1	GEAR Z15
20	00788113	1	GEAR Z17
21	00788114	1	PINION BEARING
22	00788115	2	SPACER
23	00788057	1	PINION SHAFT
24	00788060	1	BEVEL GEAR LOCKING DISC
25	00788288	1	GEARS KIT
26	00788071	1	HOOK LIFTING CHAIN
27	00788116	1	GASKET, GEARBOX CAP
28	00788117	1	GASKET, PINION CAP (SP 0.2 MM)
28	00788118	1	GASKET, PINION CAP (SP 0.3 MM)
28	00788119	1	GASKET, PINION CAP (SP 0.5 MM)
29	00788120	1	GASKET, PTO SHAFT
30	00756406	1	OIL SEAL 35X62X10 PP
31	00788121	1	PTO SHAFT BEARING
32	00788059	1	OIL LEVEL PLUG M22X1,5
33	701518C	1	GASKET M22 (AL/CU)
34	00785991	1	EXTENSION TUBE SRM/80V
34	00785992	1	EXTENSION TUBE SRM/90V
35	00762424	1	OIL PLUG M22X1.5
36	61357C10	8	SCREW M8X1.25X25 UNI 5739
37	61358C8	7	SCREW M8X25 UNI5739
38	61377C8	10	SCREW M12X30 UNI5739
39	00753231	8	SCHNORR M8
40	701611C	3	GROWER M8 UNI 1751
41	44860BH	4	SCHNORR M12
42	71583C8	4	SELF LOCK. METAL NUT M10 DIN 980
43	71583C8	1	SCREW TSEI M14X35 UNI 5933

PARTS



14	1	INNER TUBE SHIELD	1877026																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			</
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DET.	QTY	DESCRIPTION	EC NO.
1	8	SCREW NUT (FOR SPRING)	00765676
2	8	SPRING	00769136
3	1	FLANGE WITH YOKE	00769137
4	1	BUSHING	00762528
5	2	FRICTION DISC	00769120
6	2	SCREW NUT	00772648
7	2	SPRING WASHER	9100206
8	1	HUB WITH FLANGE	00769135
9	2	BOLT	00762532
10	1	INNER DISC	00769134
11	1	PRESSURE DISC	00769133
12	8	BOLT (FOR SPRING)	610611C8
13	1	*LOCKING BOLT* KIT REPLACEMENT	00788084

		customer:	Direct D.	customer part no.:	32210
				note:	weight [kg/lb]: ---/---
				title:	---



date:
24/10/2006

drawn:
A. CAVALLETTI

scale: no A4

rev.:
—

part no.:
00763191

— c.da Saletti 66041 Atesa (CH) — Italy —

rev. description name date

FD2/6 1 3/8" Z6



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TILLER**

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