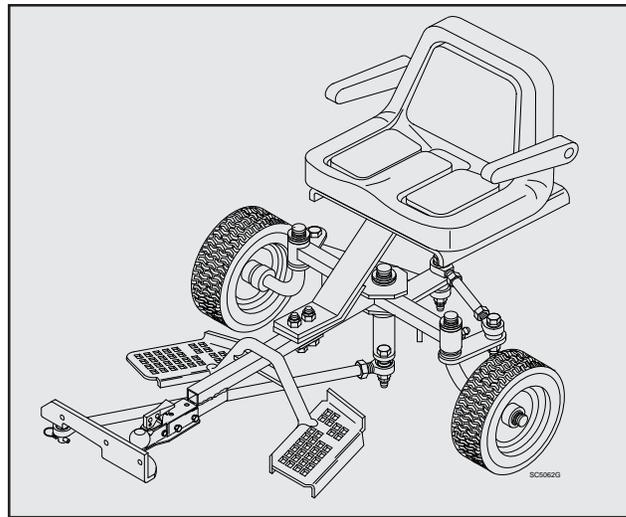


SCAG[®]

POWER EQUIPMENT

MODEL RS-ZT



THIS MANUAL CONTAINS THE OPERATING INSTRUCTIONS AND SAFETY INFORMATION FOR YOUR SCAG ACCESSORY. READING THIS MANUAL CAN PROVIDE YOU WITH ASSISTANCE IN MAINTENANCE AND ADJUSTMENT PROCEDURES TO KEEP YOUR ACCESSORY PERFORMING TO MAXIMUM EFFICIENCY. THE SPECIFIC MODELS THAT THIS BOOK COVERS ARE CONTAINED ON THE INSIDE COVER. BEFORE OPERATING YOUR MACHINE, PLEASE READ ALL THE INFORMATION ENCLOSED.

OPERATOR'S MANUAL



WARNING

FAILURE TO FOLLOW SAFE OPERATING PRACTICES MAY RESULT IN SERIOUS INJURY.

- * Keep all safety shields in place.
- * Before performing any maintenance or service, stop the machine and remove the spark plug wire.
- * If a mechanism becomes clogged, stop the engine before cleaning.
- * Keep hands, feet and clothing away from power-driven parts.
- * Read this manual completely as well as the Operator's Manual that came with your mower.
- * Keep others off the tractor (only one person at a time).

REMEMBER - YOUR MOWER IS ONLY AS SAFE AS THE OPERATOR!

Hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of the personnel involved in the operation, transport, maintenance, and storage of the equipment.

This manual covers the operating instructions
and illustrated parts list for:

RS-ZT with a serial number of 28570001-28579999

RS-ZT with a serial number of 3690001-3699999

RS-ZT with a serial number of 4610001-4619999

Always use the entire serial number listed on the serial number tag when referring to this product.

SCAG[®] POWER EQUIPMENT

TABLE OF CONTENTS

SUBJECT	PAGE
Introduction.....	1
Safety and Operating Instructions.....	1
Assembly Instructions.....	2 - 4
Hardware List.....	5
Illustrated Parts List.....	6 - 7
Limited Warranty Statement.....	Inside Back Cover



INTRODUCTION

This manual has been prepared to provide the information you need to correctly assemble, operate and maintain this attachment. Read it carefully and keep it for future reference. Should you ever need repair parts or service, contact your authorized Scag Service Dealer.

Any reference made in this manual concerning the RH or LH sides are determined with the operator in the normal operating position.

The replacement of any part on this product by other than the manufacturer's authorized replacement part may adversely affect the performance, durability or safety of this product.

SAFETY AND OPERATING INSTRUCTIONS

To avoid personal injury, it is imperative that all safety instructions be observed.

Your sulky was built to the highest standards in the industry. However, the use of a riding sulky, when attached to a walk behind mower, is **only as safe as the operator**. Carelessness or error on the part of the operator may result in serious bodily injury. Please read and follow these instructions on safe operation, and be certain anyone using this sulky is familiar with these rules.

1. Read this technical manual and the technical manual that is supplied with the machine this attachment is used on. A replacement manual is available by sending complete model and serial number to:
Scag Power Equipment
1000 Metalcraft Dr.
P.O. Box 152
Mayville, WI 53050
2. Do not operate this sulky on steep slopes.
3. Do not run over rocks, holes or other obstructions that may make the sulky unstable.
4. Always keep both hands on the steering controls when using the mower with the sulky attached.
5. When operating the mower in reverse, make certain that there are no obstructions behind you.
6. Have a first time operator practice driving the mower and sulky in an open, level area before operating under actual mowing conditions.
7. Before leaving the sulky seat:
 - Disengage blade clutch
 - Engage both neutral locks
 - Pull speed control lever to neutral
 - Apply the parking brake
 - Wait for all movement to stop

ASSEMBLY INSTRUCTIONS

-Note-

Before assembling and connecting this accessory to your machine, turn the engine off, remove the key, and remove the spark plug wire from the engine.

1. Remove all crating and packing materials. Lay out the mounting hardware according to the “where used” list on page 5.
2. Bolt the hitch bracket onto the rear of the engine deck using (3) three 3/8-16 x 1-1/4" bolts and (3) three 3/8-16 elastic stop nuts. The bolts must be installed from the inside facing out.

-Note-

If you are mounting the hitch bracket to an older machine with only two holes on the rear of the engine deck, you may use the hitch bracket to locate the third hole. Bolt the hitch bracket to the existing two holes and mark the third hole using a center punch. Unbolt the hitch bracket and drill a 13/32" hole at the mark for the third hole. You are now ready to mount the hitch bracket.

3. Mount the hitch ball onto the hitch bracket using the 3/4" lock washer and the 3/4"-16 hex nut.
4. Mount the wheel assemblies onto the wheel spindles. Place the 1" wheel spacers onto the wheel spindles, and install the "E" clip on to each of the wheel spindles.

-Note-

There will be more wheel spacers in the hardware package than you will use. Install the appropriate sized wheel spacers onto the wheel spindle to remove the back and forth movement of the wheel assemblies with the “E” clip installed.

5. Mount the sulky frame on the hitch ball and secure in place by pushing down the locking lever on the coupler.

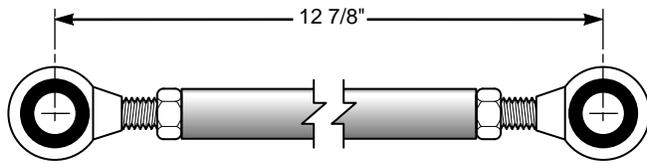
-Note-

When performing steps 5 through 8 keep in mind that the (3) three tie rods will have one end that has RH threads and one end that has LH threads.

Included in the hardware package are:

- (3) three LH threaded 1/2 x 1/2-20 ball joints.
- (3) three LH threaded 1/2-20 jam nuts.
- (2) two RH threaded 1/2 x 1/2-20 ball joints.
- (1) one RH threaded 5/8 x 1/2-20 ball joint.
- (3) three RH threaded 1/2-20 jam nuts.

6. Screw (2) two LH threaded 1/2-20 jam nuts onto (2) two LH threaded 1/2 x 1/2-20 ball joints.
7. Screw (2) two RH threaded 1/2-20 jam nuts onto the (2) two RH threaded 1/2 x 1/2-20 ball joints.
8. There are three tie rods included in the sulky assembly. The two shorter ones are the wheel tie rods and the longer one is the steering tie rod.
9. Screw the (2) two LH 1/2 x 1/2-20 ball joints with jam nuts into the LH threaded ends of the wheel tie rods. Screw the RH 1/2 x 1/2-20 ball joints with jam nuts into the other wheel tie rod ends.



WHEEL TIE ROD ADJUSTMENT

SC502G

Figure 1

10. On the (2) two wheel tie rods, adjust the ball joints on the tie rods so that you will get 12- 7/8" distance between the center of the holes on the ball joints. (See figure 1)
11. Tighten the (4) four jam nuts on the ball joints against the tie rod ends to prevent turning of the ball joints on the tie rods.
12. Bolt one end of a wheel tie rod above the lever on the left wheel spindle. Place a 1/2" ball joint spacer between the ball joint and wheel spindle lever. Secure using a 1/2-13 x 2" bolt and a 1/2-13 elastic stop nut. (See figure 2)

13. Bolt one end of the other wheel tie rod below the lever on the right wheel spindle. Place a 1/2" ball joint spacer between the ball joint and wheel spindle lever. Secure using a 1/2-13 x 2" bolt and a 1/2-13 elastic stop nut. (See figure 2)

14. Place the other end of the tie rod coming from the left wheel above the larger lever of the steering bellcrank located in the center of the sulky frame. Place the other end of the tie rod coming from the right wheel below the larger lever of the steering bellcrank. Place (2) two 1/2" ball joint spacers between the (2) two ball joints and the steering bellcrank lever. Secure using a 1/2-13 x 3 1/4" bolt and a 1/2-13 elastic stop nut. (See figure 2)

15. Screw the remaining LH and RH threaded 1/2-20 jam nuts onto the remaining two ball joints.

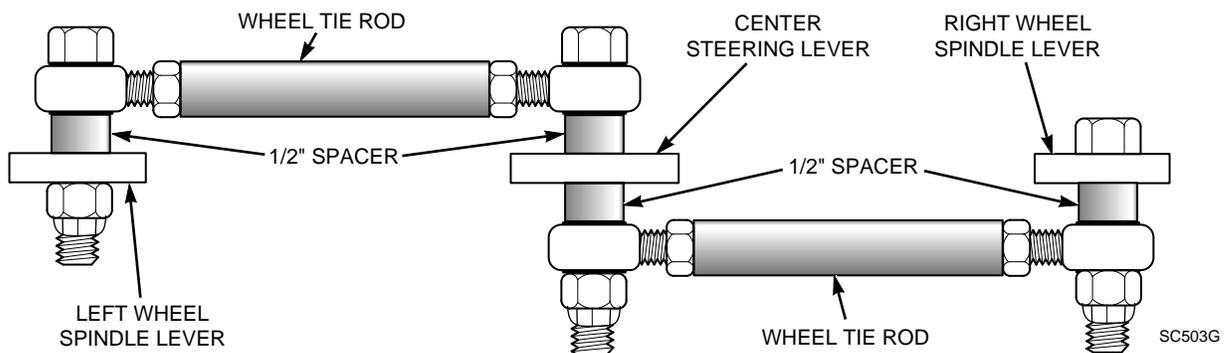


Figure 2

SC503G

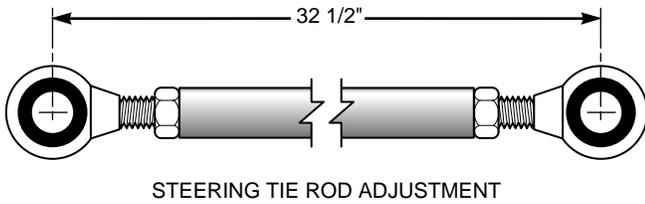


Figure 3

SC504G

16. On the steering tie rod, adjust the ball joints on the tie rod so that you will get 32-1/2" distance between the center to center holes on the ball joints. (See figure 3)
17. Tighten the jam nuts on the ball joints against the tie rod ends to prevent turning of the ball joints on the tie rods.
18. Connect the 1/2 x 1/2-20 end of the steering tie rod to the small lever on the steering bellcrank. Place a 1/2" spacer between the ball joint and steering lever and secure using a 1/2-13 x 2" bolt and a 1/2-13 elastic stop nut.
19. Mount the 5/8 x 1/2-20 end of the tie rod to the pin on the hitch bracket and secure with the small quick pin.
20. Mount the seat spring and reinforcement seat spring above the sulky frame and mount the lower support plate below the sulky frame. Secure using the (2) two 7/16-14 x 4" bolts, (2) two 7/16" flat washer and (2) two 7/16-14 elastic stop nuts.

-Note-

There are extra bolt holes to choose from when mounting the seat spring to the sulky frame and mounting the seat and seat plate to the seat spring. Choose the ones that will provide the most comfort for the individual users.

21. Mount the seat onto the seat plate. Place the (4) four 3/8" flat washers between the seat and plate. Secure using (4) four 5/16-18 x 3/4" bolts and (4) four 5/16" lock washers.
22. Mount the seat and seat plate to the seat spring using (2) two 3/8-16 x 1" bolts and (2) two 3/8" lock washers.
23. Attach the arm rests to the seat back and use set screws to adjust arm rests until they are horizontal.

-Note-

A final adjustment may be required on the tie rods for the sulky wheels to be aligned straight with the SWZ machine and to have proper toe-in adjustment. To adjust the tie rods, loosen the two jam nuts and turn the tie rod tube to lengthen or shorten the tie rod. Retighten jam nuts.

24. The two sulky wheels should have a 1/16" toe-in adjustment. To make this adjustment, adjust the two wheel tie rods.
25. Start the engine and drive the mower with the sulky attached. If the sulky does not track straight behind the mower, you must adjust the steering rod so that the wheels are even with the mower.

-Note-

For operator comfort the handles on the SWZ should be raised to the highest position. Refer to the SWZ's technical manual for this adjustment.

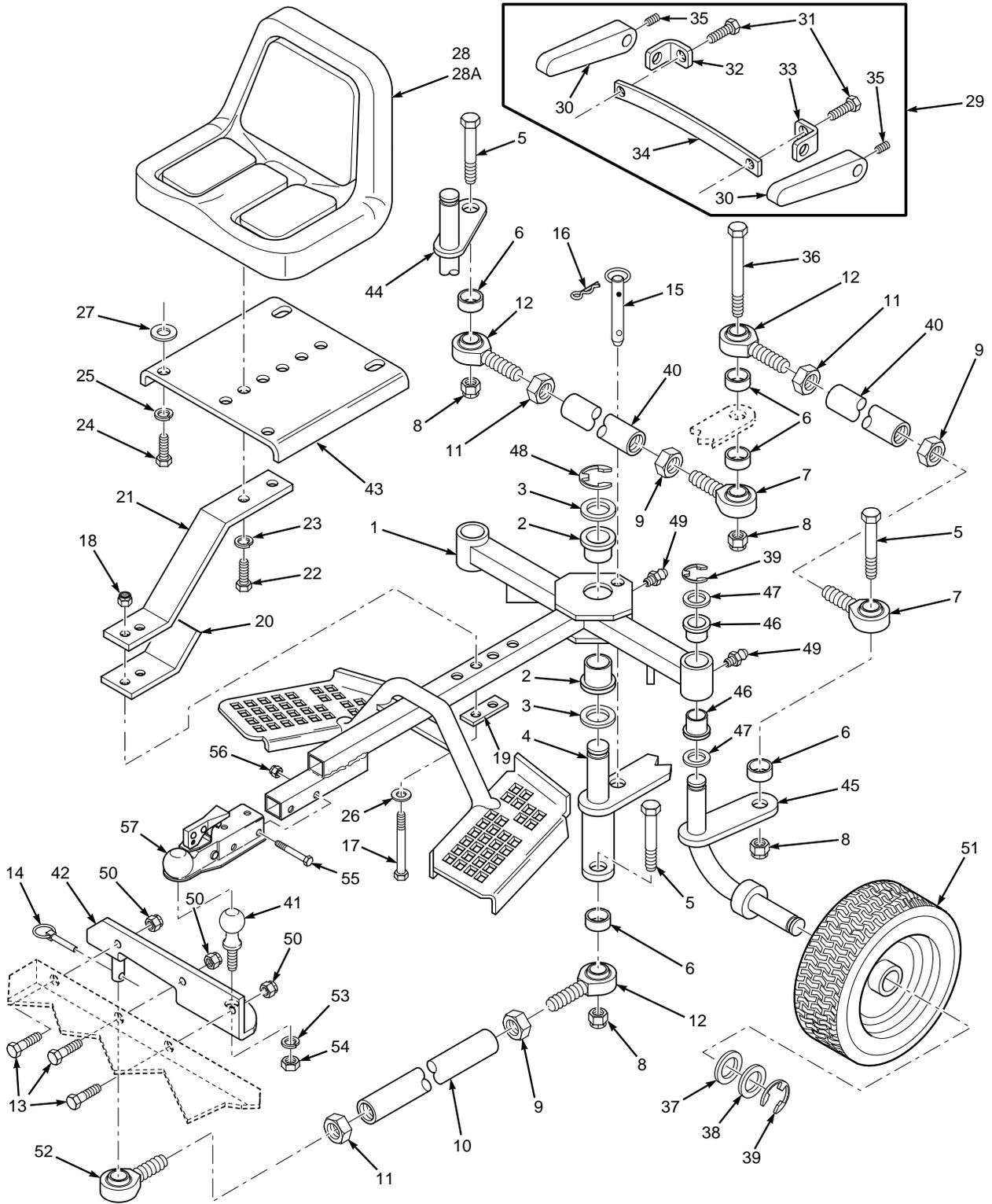
-Note-

To move the sulky when not attached to the mower, you must lock the wheels in a forward position. The wheels can be locked in the forward position by inserting the ring pin through the holes in the sulky frame and the steering bellcrank.

Where Used List

Part Number	Qty.	Description	Where Used
04001-08	4	Hex HD Bolt, 5/16-18 x 3/4"	(4) Seat to Plate
04001-19	2	Hex HD Bolt, 3/8-16 x 1"	(2) Seat Plate to Spring
04001-32	3	Hex HD Bolt, 3/8-16 x 1-1/4"	(3) Hitch Brkt to Mower
04001-22	2	Hex HD Bolt, 3/8-16 x 2-3/4"	(2) Coupler to Tongue
04001-89	2	Hex HD Bolt, 7/16-14 x 4"	(2) Seat Spring to Tongue
04001-72	3	Hex HD Bolt, 1/2-13 x 2"	(3) Tie Rod Ends
04001-90	1	Hex HD Bolt, 1/2-13 x 3-1/4"	(1) Tie Rod End
04040-11	2	Washer, 7/16"	(2) Seat Spring to Tongue
04041-11	4	Washer, 3/8-1-1/2" O.D.	(4) Seat to Plate
04041-14	4	Washer, 1.00-1-1/2" O.D.	(4) Spindles
04042-05	4	Washer, 1.00-1-3/4" O.D.	(4) Spindles
04030-03	4	Lockwasher, 5/16"	(4) Seat to Plate
04030-04	2	Lockwasher, 3/8"	(2) Seat to Plate Spring
04020-08	3	Nut, 1/2-20	(3) Tie Rod Ends
04020-15	3	Nut, 1/2-20 LH	(3) Tie Rod Ends
04021-09	5	Nut, 3/8-16 Elastic Stop	(3) Hitch Brkt to Mower (2) Coupler to Tongue
04021-07	4	Nut, 1/2-13 Elastic Stop	(4) Tie Rod Ends
04021-11	2	Nut, 7/16-14 Elastic Stop	(2) Seat Spring to Tongue
04050-08	2	1" "E" Clip	(2) Spindles
04062-01	1	Hair Pin Cotter, .094 x 1.625	(1) Ring Pin

RS-ZT SULKY



SC505G

RS-ZT SULKY

Ref. Part No. Number Description	Ref. Part No. Number Description
1 46879 Sulky Frame	29 48014-02 Arm Rest Kit
2 48100-01 Bronze Bearing	30 48014-03 Arm Rest
3 04041-17 Flat Washer	31 04001-08 Hex Head Bolt, 5/16-18 x 3/4"
4 45377 Steering Bellcrank	32 48014-04 Mounting Bracket, RH
5 04001-72 Hex Head Bolt, 1/2-13 x 2"	33 48014-05 Mounting Bracket, LH
6 43041 Ball Joint Spacer	34 48014-07 Back Strap
7 48542 Ball Joint (RH Thread), 1/2-20	35 * Set Screw, 3/8-16 x 3/4" Flat Point
8 04021-07 Elastic Stop Nut, 1/2-13	36 04001-90 Hex Head Bolt, 1/2-13 x 3-1/4"
9 04020-08 Hex Nut, 1/2-20	37 04042-05 Flat Washer, 1"
10 43207 Tie Rod, Long	38 04041-14 Flat Washer, 1"
11 04020-15 Hex Nut (L.H. Thread), 1/2-20	39 04050-08 "E" Clip, 1"
12 48664 Ball Joint (L.H. Thread), 1/2-20	40 43206 Tie Rod
13 04001-32 Hex Head Bolt, 3/8-16 x 1-1/4"	41 481395 Hitch Ball, 1-7/8"
14 04066-02 Quick Pin, 3/16" dia	42 45828 Hitch Bracket
15 04067-02 Ring Pin	43 45210 Seat Plate
16 04062-01 Hair Pin, .094 x 1.625	44 45378 Wheel Spindle, RH
17 04001-89 Hex Head Bolt, 7/16-14 x 4"	45 45379 Wheel Spindle, LH
18 04021-11 Elastic Stop Nut, 7/16-14	46 48100-08 Bronze Bearing
19 42968 Lower Support Plate	47 04041-14 Flat Washer
20 48648 Reinforcement Seat Spring	48 04050-12 "E" Clip
21 48649 Seat Support Spring	49 48114-04 Grease Fitting
22 04001-19 Hex Head Bolt, 3/8-16 x 1"	50 04021-09 Elastic Stop Nut, 3/8-16
23 04030-04 Lock Washer, 3/8"	51 48260-01 Wheel Assembly
24 04001-08 Hex Head Bolt, 5/16-18 x 3/4"	52 481394 Ball Joint (RH Thread) 5/8 x 1/2-20
25 04030-03 Lock Washer 5/16"	53 04030-08 Lockwasher, 3/4"
26 04040-11 Flat Washer, 7/16"	54 04020-21 Hex Nut, 3/4-16
27 04041-11 Flat Washer, 3/8"	55 04001-22 Hex Head Bolt, 3/8-16 x 2-3/4"
28 48592 Seat Assembly	56 04021-09 Elastic Stop Nut, 3/8 - 16
28A 48592-01 Seat	57 481396 Coupler, 1-7/8"

-Note-

Some of the hardware is common hardware and you may purchase it locally. Be sure that all bolts purchased locally are a grade 5.

LIMITED WARRANTY- COMMERCIAL ACCESSORY

Any part of the Scag commercial accessory manufactured by Scag and found, in the reasonable judgment of Scag, to be defective in material or workmanship, will be repaired or replaced by an Authorized Scag Service Dealer without charge for parts and labor.

The Scag accessory, including any defective part, must be returned to an Authorized Scag Service Dealer within the warranty period. The expense of delivering the accessory to the dealer for warranty work and the expense of returning it back to the owner after repair or replacement will be paid for by the owner. Scag's responsibility in respect to claims is limited to making the required repairs or replacements, and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any Scag machine. Proof of purchase will be required by the dealer to substantiate any warranty claim. All warranty work must be performed by an Authorized Scag Service Dealer.

This warranty is limited to 90 days from the date of original retail purchase for any Scag accessory that is used for commercial purposes, or any other income-producing purpose including rental use.

This warranty does not cover any accessory that has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in the Operator's Manual. The warranty does not apply to any damage to the accessory that is the result of improper maintenance, or to any accessory or parts that have not been assembled or installed as specified in the Operator's Manual.

The warranty does not cover any accessory that has been altered or modified. In addition, the warranty does not extend to repairs made necessary by normal wear, or by the use of parts or accessories which, in the reasonable judgment of Scag, are either incompatible with the Scag mower or adversely affect its operation, performance or durability. This warranty does not cover engines and electric starters, which are warranted separately by their manufacturer.

Scag Power Equipment reserves the right to change or improve the design of any accessory without assuming any obligation to modify any accessory previously manufactured.

All other implied warranties are limited in duration to the 90 day warranty period. Accordingly, any such implied warranties including merchantability, fitness for a particular purpose, or otherwise, are disclaimed in their entirety after the expiration of the appropriate ninety day warranty period. Scag's obligation under this warranty is strictly and exclusively limited to the repair or replacement of defective parts and Scag does not assume or authorize anyone to assume for them any other obligation. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Scag assumes no responsibility for incidental, consequential or other damages including, but not limited to, expense for gasoline, oil, expense of delivering the machine to an Authorized Scag Service Dealer and expense of returning it back to the owner, mechanic's travel time, telephone or telegram charges, rental of a like product during the time warranty repairs are being performed, travel, loss or damage to personal property, loss of revenue, loss of use of the mower, loss of time, or inconvenience. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

© 1998
SCAG POWER EQUIPMENT
DIVISION OF METALCRAFT OF MAYVILLE, INC

PART NO. 03029
PRINTED 6/98
PRINTED IN USA