<u>MODEL:</u> 73-70805 TREE FARM MOWER 44 MC400

# **P/PARTS MANUAI**



MAN 4158497 Rev. A 3-2007

#### CALIFORNIA Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

# 

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

#### Californie Proposition 65 Avertissement

Les échappements des moteurs diesel et certains de leurs composés sont reconnus par l'Etat de Californie pour être cancérigènes, provoquer des défauts congénitaux et d'autres dangers en matière de reproduction.

# 

L'émission du moteur de ce matériel contient des produits chimiques que l'Etat de Californie considère être cancérigènes, provoquer des défauts congénitaux et d'autres dangers en matière de reproduction.

# California Advertencia de la Proposicion 65

El estado de California hace saber que los gases de escape de los motores diesel y algunos de sus componentes producen cáncer, defectos de nacimiento y otros daños en el proceso de reproducción humana.

# 

El estado de California hace saber que los gases de escape de este producto contienen productos quÍmicos que producen cáncer, defectos de nacimiento y otros daños en el proceso de reproducción humana.

#### CALIFORNIA Proposition 65 Warning

Battery posts, terminals, wiring insulation, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. WASH HANDS AFTER HANDLING.



#### **IMPORTANT MESSAGE**

Thank you for purchasing this Schiller Grounds Care, Inc. product. You have purchased a world class product, one of the best designed and built anywhere.

This product comes with an Owner/Operator's Manual. The useful life and good service you receive from this product depends to a large extent on how well you read and understand this manual. Treat this product properly and adjust it as instructed, and it will give you many years of reliable service.

See a Schiller Grounds Care, Inc. dealer for any service or parts needed. Schiller Grounds Care, Inc. service ensures that you continue to receive the best results possible from Schiller Grounds Care, Inc. products. You can trust Schiller Grounds Care, Inc. replacement parts because they are manufactured with the same high precision and quality as the original parts.

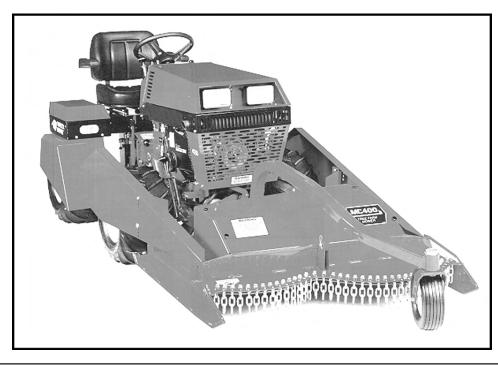
Schiller Grounds Care, Inc. designs and builds its equipment to serve many years in a safe and productive manner. For longest life, use this product only as directed in the manual, keep it in good repair and follow safety warnings and instructions. You'll always be glad you did.

#### Schiller Grounds Care, Inc. One Bob Cat Lane Johnson Creek, WI 53038-0469

TABLE OF CONTENTS	FIGURES	PAGE
INTRODUCTION / SPECIFICATIONS		2
SAFETY		
ASSEMBLY INSTRUCTIONS		5
INSTALLATION		6
OPERATION		
SERVICE		
PARTS SECTION		
MAIN DECK		
FRAME AND HITCH PARTS		
FRONT WHEEL SHIELDS	FIGURE 3	
REAR WHEEL SHIELDS		
GEARBOX (D)	FIGURE 5	

#### DESCRIPTION

The Model MC400 Tree Farm Mower is designed to fit the 420 tractor equipped with standard tires or optional 20 X 8.00-10 turf type tires. The mower is easy to attach and detach in a minute or less allowing interchange with many other front mounted attachments. Cutting height is controlled by the front caster wheel. Exceptional visibility and maneuvering is possible with this front mounted design mower. Shielded tractor wheels keep the unit from damaging the lower branches of young trees or shrubs. Two mowing blades discharge grass to the rear and enable the mower to cut tall grass. This is an ideal unit for mowing between closely spaced rows of trees or shrubbery.



#### **SPECIFICATIONS**

Mower Overall Width	
Cutting Width	
Overall Length	
Rear Fender Width with 20 X 8.00-10 turf tires	
Rear Fender Width with standard tires	
Cutting Height	
Mower Drive	PTO Belt
Spindle Drive	Gearbox and 2 V-belts
Spindle Bearings	1" Ball Bearings
Blades	
Discharge	Rear
Caster Wheel	10 X 3.5, Semi-pneumatic
Weight	

#### NOTICE !!!

Unauthorized modifications may present extreme safety hazards to operators and bystanders and could also result in product damage.

Schiller Grounds Care, Inc. strongly warns against, rejects and disclaims any modifications, add-on accessories or product alterations that are not designed, developed, tested and approved by Schiller Grounds Care, Inc. Engineering Department. Any Schiller Grounds Care, Inc. product that is altered, modified or changed in any manner not specifically authorized after original manufacture-including the addition of "after-market" accessories or component parts not specifically approved by Schiller Grounds Care, Inc.-will result in the Schiller Grounds Care, Inc. Warranty being voided.

Any and all liability for personal injury and/or property damage caused by any unauthorized modifications, add-on accessories or products not approved by Schiller Grounds Care, Inc. will be considered the responsibility of the individual(s) or company designing and/or making such changes. Schiller Grounds Care, Inc. will vigorously pursue full indemnification and costs from any party responsible for such unauthorized post-manufacture modifications and/or accessories should personal injury and/or property damage result.



This symbol means: **ATTENTION! BECOME ALERT!** 

Your safety and the safety of others is involved.

#### Signal word definitions:

The signal words below are used to identify levels of hazard seriousness. These words appear in this manual and on the safety labels attached to Schiller Grounds Care, Inc. machines. For your safety and the safety of others, read and follow the information given with these signal words and/or the symbol shown above.

# **A**DANGER

**DANGER** indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.

# 

**WARNING** indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

# 

**CAUTION** indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices or property damage.

# CAUTION

**CAUTION** used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, MAY result in property damage

Schiller Grounds Care, Inc. SERIAL NUMBER

One Bobcat Lane Johnson Creek, WI 53038 U.S.A. Phone: 920-699-2000 920-699-3683 Fax

MODEL NUMBER

**MODEL NUMBER:** This number appears on sales literature, technical manuals and price lists.

**SERIAL NUMBER:** This number appears only on your mower. It contains the model number followed consecutively by the serial number. Use this number when ordering parts or seeking warranty information.

#### **GENERAL SAFETY**

- 1. Read and understand the Owner's Manual before attempting to operate this machine.
- 2. Operate all controls from the operator's seat. NO RIDERS.
- 3. Keep all shields in place and safety switches adjusted properly.
- 4. Do not leave equipment unattended. STOP the engine and remove the key.
- 5. Do not allow minors or the inexperienced to operate this machine.
- 6. Keep people and pets a safe distance away from machine using power driven attachments. Injury could result from flying debris.

O	PERATING SAFETY	
1.	<b>STOP ENGINE</b> to make repairs or adjustments. Do not attempt to work on unit or attachments with the engine running.	KEEP HANDS AND FEET AWAY FROM ROTATING BLADES.
2.	Before leaving the operator's seat:	
	Disengage mower drive.	BE ALERT FOR DEBRIS IN THE PATH OF THE MOWER. STICKS, STONES AND OTHER
	Set Parking brake.	OBJECTS CAN CAUSE SERIOUS DAMAGE TO THE ATTACHMENT.
	Stop Engine.	



- 1. Remove mower from crate.
- 2. Remove top shield and remove bag of small fastener parts. Separate according to size.
- 3. If optional 20 X 8.00-10 turf-type tires are being used, move each wheel hub in toward the center of the tractor a distance of 3/4 inch or a total distance of 1-1/2 inches from the end of the axle. Mount optional tires in the usual manner.
- 4. Remove the drive pulley shield and install drive belt Part No. 81-A040. Replace shield. Attach the mower to the tractor quick-hitch front lift in the usual manner.
- 5. Fill gearbox to 1/8" pipe plug on front of gearbox with 80/90 gear oil.
- To install front skirts Mount directly on deck mounts using a 3/8 x 3/4 flange bolt and nut at the front. When using standard tires, fasten skirts to rear of mower at desired height with 2" spacers and 5/16 X 2-3/4 bolts and nuts on each side. If optional 20 x 8.00-10 tires are used, fasten skirts to rear of mower at desired height using two 5/16 X 3/4 bolts and nuts on each side. (See Parts Figure 3)
- 7. To install rear wheel skirts Remove front and rear fenders saving the bolts and nuts. Replace the fenders with the skirts using the same bolts and nuts. Two sets of mounting holes are provided. One set is for narrow setting with the 20 x 8.00-10 turf-type tires. The other set of holes is for use with standard bar type tires. (See Photo 5 and Parts Figure 4) Install support brackets from parts package to tread plate using the same bolts which fastened the fenders to tread plate. Attach brackets to skirts with 1/4 x 3/4 flange bolts and nuts.
- 8. Do not use both bar tires and turf tires at the same time. This is important because the tires are not the same size and the rolling radius is different. Different size tires could cause premature failure of the transaxles.

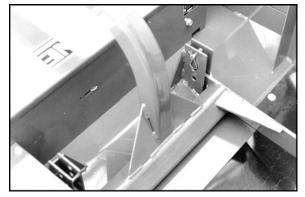


#### ATTACHING MOWER TO TRACTOR:

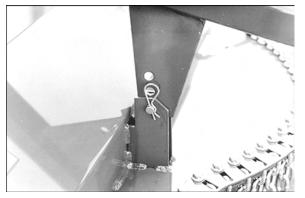
- 1. Operate latch control to open hitch latches.
- 2. Drive tractor into position aligning the quick hitch.
- 3. Be sure both latches engage fully and are laced in the locked position.

NOTE: Stop engine! Do not attempt to install drive belt with engine running.

- 4. Release idler assembly to facilitate easy installation of the drive belt.
- 5. Put belt over drive pulleys and engage idler assembly.
- 6. Set mower to desired cutting height by moving the 3 clevis pins at the 3 attaching points of the support frame. See photos below for front and rear height adjustment.
- 7. Start engine and engage PTO slowly to prevent shock load on mower components.
- 8. Mow with front lift lever in "FLOAT" position only.



**REAR HEIGHT ADJUSTMENT** 



FRONT HEIGHT ADJUSTMENT

# **OPERATION**



Observe all Safety Decals.

Keep all Shields in place.

Do not operate mower with other persons in the area. Irregularities in ground surface can permit foreign material to be propelled from beneath deck to cause serious injury or death.

Before leaving tractor, move Forward - Reverse control to neutral position, disengage PTO, set parking brake, lower mower deck and stop engine.

Remove key from ignition if maintenance procedures are to be performed or tractor is to be left unattended.

#### **OPERATING INSTRUCTIONS**

- Set mower cutting height. See Installation Page 6.
- Mow with front lift lever in "FLOAT" position only.
- Engage PTO slowly at low engine r.p.m.

- Mower is designed to operate at full throttle for heavy mowing, but 3/4 throttle is adequate for average conditions.

- Set mower blade speed with the throttle and control ground speed with the Forward - Reverse control lever.

- Trimming can be done along either side of the mower deck. Wheel shields keep the unit from damaging the lower branches of young trees.

- Use extreme caution when operating on hills.
- A roll bar is recommended.
- Mow up and down hills whenever possible.
- A rear weight bar with 2 weights is recommended.



The mower deck is enclosed on all sides to prevent foreign material from being propelled from beneath deck toward operator or bystanders. Keep all shields in place!



#### MAINTENANCE

#### Daily maintenance:

Visual inspection for loose parts and accumulation of grass and dirt. Clean accumulation of grass clippings from beneath deck daily for better mowing performance. Keep blades sharp. Check the tips of the blades for wear.

#### 25 hour maintenance:

In addition to daily maintenance, grease caster, slip yoke and all bearings. Remove top shield and grease spindle bearings. Grease the spindle bearings beneath the deck also. **Do not overgrease.** 

Check gearbox oil level, fill to 1/8" pipe plug on front of gearbox with 80/90 gear oil.

#### **Annual Maintenance:**

In addition to daily and 25 hour maintenance, check the drive belts for cracks or wear. Rotate each spindle to check for roughness which would indicate bearing wear. Remove and sharpen blades, clean and wash deck prior to storage. The acid in grass clippings causes premature corrosion and rusting of mower parts.

#### **ADJUSTMENTS**

#### Sharpening blades:

Be careful while sharpening blades that the corners of the blade do not become rounded at the tips. This reduces the blades overlap and will cause skipping. While sharpening, it is essential to ensure the balance of the blades is maintained to prevent vibration. Blade bolt torque should be 75-85 foot pounds. Rotate blades after re-installing to check for bent or bowed blades and blade alignment.

#### **Blade alignment:**

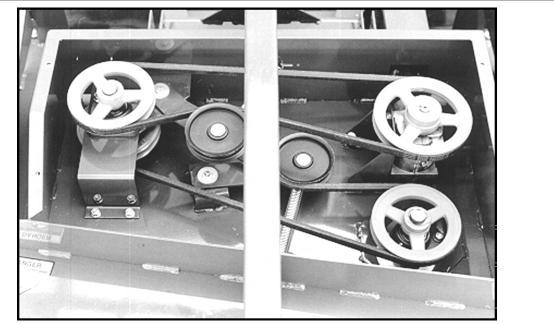
When installing sharpened blades or new blades be sure the mating surfaces are clean and the retaining washer is not bent. Check for bent blades by rotating blades until tips are near each other.

#### Leveling mower deck:

The front to rear and side to side leveling adjustment is provided by 3 clevis pins.

Example for low cutting: If rear pins are in the top hole, the front pin will be in the bottom hole.

If the rear pins are moved down one hole, the front pins will be moved up one hole.



#### **Changing Main Drive Belts**

- 1. Remove the top shield.
- 2. Release the idler springs and remove upper drive belt.
- 3. Remove the 4 bolts from the right spindle support. Tilt the support and remove the lower drive belt.

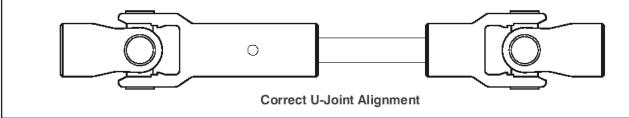
NOTE: This support will move far enough to allow the lower belt to be removed and installed without loosening any spindle bearings.

- 4. Install the new lower belt.
- 5. Re-install the right spindle support, and install the new upper belt.
- 6. Hook the idler springs to the idler arms, and replace the top shield.



#### ALIGNMENT OF U-JOINTS

Whenever the drive shaft u-joints are disconnected it is necessary to align the two u-joints when reconnecting the square shaft. It is possible to assemble the joints 90 degrees from correct alignment. Incorrect alignment will cause excessive vibration and shorten joint life. See diagram below.





**SERVICE NOTES:** 

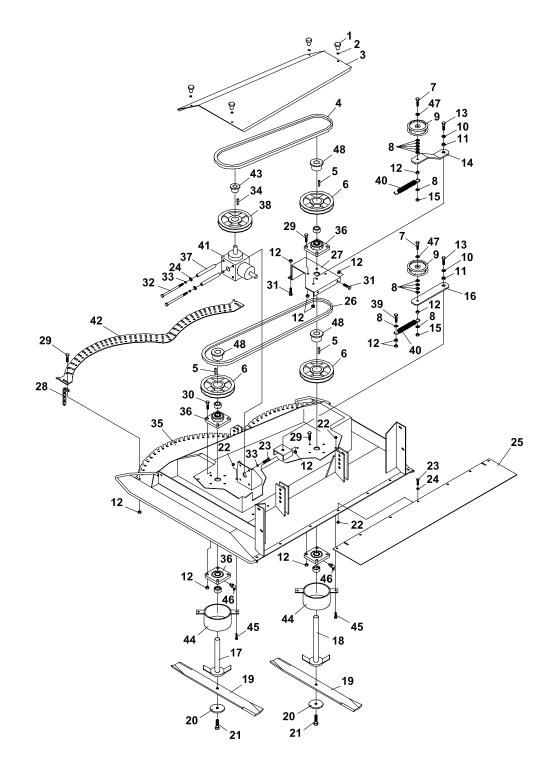


# PARTS SECTION

# **MAIN DECK**

# **FIGURE 1**





12

# **MAIN DECK**

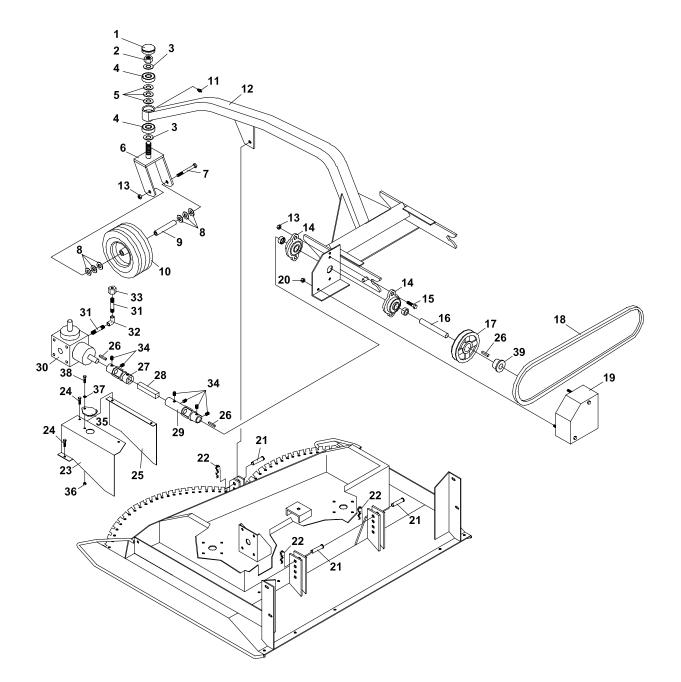
# TREE FARM MOWER

# **FIGURE 1**

ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	. DESCRIPTION	QTY
1-1	47-077	KNOB-SMALL WITH STUD	4	1-41	87-239	GEARBOX	1
1-2	64002-04	LOCKWASHER, EXT. 5/16	4	1-42	64-802.7	CHAIN RETAINER	1
1-3	60-611.7	SHIELD-TOP	1	1-43	83-H12	BUSHING-3/4	1
*	00-093	DECAL-OWNER'S MANUAL	. 1	1-44	80-249.7	GUARD-SPINDLE	2
*	00-195	DECAL-MODEL MC400	1	1-45	64139-08	BOLT-5/16-18X3/4 WLF	4
1-4	81-B063	BELT-B63	1	1-46	4139053	90 DEGREE GREASE ZER	<b>〈</b> 2
1-5	64164-10	1/4X1/4X1-1/4 MACH KEY	3	1-47	64163-61	WSHR .81X.406X16GA	2
1-6	83-BK65H	PULLEY	3	1-48	83-H16	BUSHING-1"	3
1-7	64123-82	BOLT-HEX 3/8-16X2-1/2	2				
1-8	64163-61	WSHR .81X.406X16GA	13				
1-9	83-029	FLAT IDLER-4-1/2"	2				
1-10	64-799	WASHER-13/32IDX1-9/32OI	2				
1-11	85-B29	BUSHING-IDLER ARM	2		* N	IOT ILLUSTRATED	
1-12	64141-4	NUT-WLF 3/8-16	60				
1-13	64123-50	BOLT-HEX 3/8-16X1	2				
1-14	40-315.7	IDLER ARM, DRIVE BELT	1				
1-15	64229-03	LOCKNUT-NYLON 3/8-16	2				
1-16	40-316.7	IDLER ARM-SPINDLE BELT	1				
1-17	80-245	SPINDLE-SHORT	1				
1-18	80-246	SPINDLE-LONG	1				
1-19	79-079	BLADE-22-7/8"	2				
1-20	99-B14	WASHER-1/4 X 1/2 ID X 3 O					
1-21	64123-39	BOLT-HEX 1/2-13X1-1/4	2				
1-22	64141-6	NUT, 5/16-18	11				
1-23	64123-54	BOLT, 5/16-18X3/4 HEX	11				
1-24	64163-02	WSR321/.328X.593/608X1					
1-25	44-114	DISCHARGE BELTING	1				
1-26	81-B064	BELT-B64	1				
1-27	64-801.7	SUPPORT-SPINDLE	1				
1-28		CHAIN-4 LINKS	38				
1-29	64139-24	BLT-WLF 3/8-16 X 1	46				
1-30	64123-87	BOLT-HEX 3/8-16X1-3/4	4				
1-31	64139-21	BLT-WLF 3/8-16X3/4	4				
1-32	90-532	BOLT-5/16 X 4	2 6				
1-33	64006-02	LOCKWASHER-5/16	0 1				
1-34	64164-11	KEY-3/16X3/16X1-1/4 SQ					
1-35 *	62-807.7 00-092	DECK-MAIN DECAL-HANDS AND FEET	1 2				
1-36		6 BEARING	2 4				
1-36	64-803	SPACER	4				
1-37	83-BK72H		2 1				
1-30	64123-70	BOLT-HEX 3/8-16X1-1/2	1				
1-39	41-052	SPRING EXTENSION	2				
1 40	71 002		2				

# FRAME AND HITCH PARTS

#### **FIGURE 2**



**TREE FARM** 

**MOWER** 

# FRAME AND HITCH PARTS

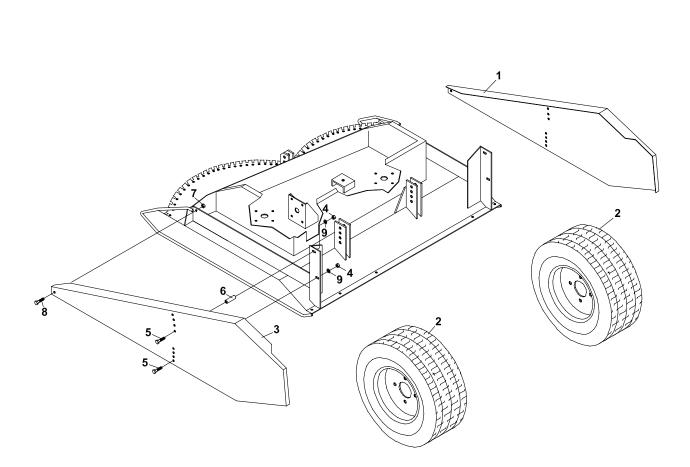
# TREE FARM MOWER

# **FIGURE 2**

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO	. DESCRIPTION	QTY
2-1 2-2 2-3 2-4 2-5 2-6 2-7 2-8 2-9 2-10	64163-06 55-Z9504A 64163-06 4132783.7 64123-93 64163-16 50-062	FRAME-CASTER WHEEL BLT-HEX 3/8-16X5 WASHER-41/64X1, 3/8X12 SHAFT-WHEEL WHL-10.25 X 3.25 CASTER BRG-ROLLER 5/8IDX1-3/8	2 3 1 1 6 1		64123-89 83-H12	BOLT-HEX 1/4-20X3/4	1 1 1
2-14	62-808.7 64141-4 55-FB23012 64123-70 80-248	FRAME-HITCH NUT-WLF 3/8-16 2 BEARING-2 BOLT FLANGE BOLT-HEX 3/8-16X1-1/2 SHAFT-DRIVE 3/4 X 5-1/2	1 3 2 1 1 1 1				
2-20 2-21 2-22 2-23 2-24 2-25 2-26 2-27	64188-32 02-PP0318 60-609.7		4				
2-28 2-29 2-30 2-31 2-32 2-33 2-34 2-35 2-36	87-239 29-109 29-068 24-042	SHAFT-DRIVE 3/4 SQ U-JOINT-SLIP YOKE GEARBOX PIPE NIPPLE-1/4 NPTX2-1/2 PIPE ELBOW-1/4 CAP-1/4 PIPE VENTED SET SCREW-3/8 X 3/8 COVER-ACCESS LOCKNUT-NYLON 1/4-20	1 1 2 2 1 1 6 1				

# **FRONT WHEEL SHIELDS**

# **FIGURE 3**



**TREE FARM** 

**MOWER** 

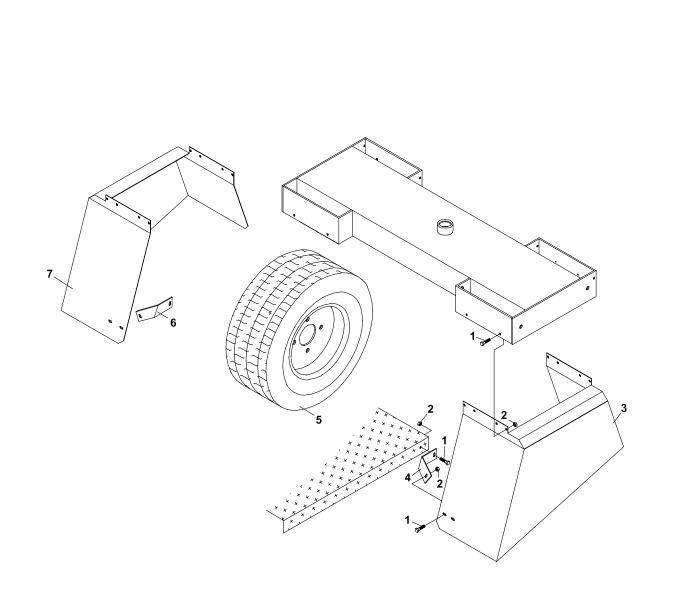
# **FRONT WHEEL SHIELDS**

# TREE FARM MOWER

#### **FIGURE 3**

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
3-1	60-522.7	SHIELD-R FRONT WHEEL	1				
3-2	53-073	WHEELASSY	4				
	(OPTIONAI	_)					
	53-090	TIRE ONLY-20 X 8.00-10	1				
	53-085	RIM ONLY FOR 53-073 WHL	_ 1				
3-3	60-521.7	SHIELD-LEFT FRONT WHL	1				
3-4	64141-6	NUT, 5/16-18	4				
3-5	64139-08	BOLT-5/16-18X3/4 WLF	4				
	64123-104	BOLT-5/16-18 X 2-3/4	4				
	(USE WITH	I 64-608 SPACER)					
3-6	64-608	SPACER	4				
	(USE WITH	I STANDARD BAR TIRES)					
			_				
3-7	64141-4	NUT-WLF 3/8-16	2				
3-8	64139-21	BLT-WLF 3/8-16X3/4	2				
3-9	64163-02	WSR321/.328X.593/.608X1	14				

# FIGURE 4



**TREE FARM** 

MOWER

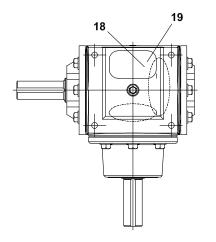
# **FIGURE 4**

\_

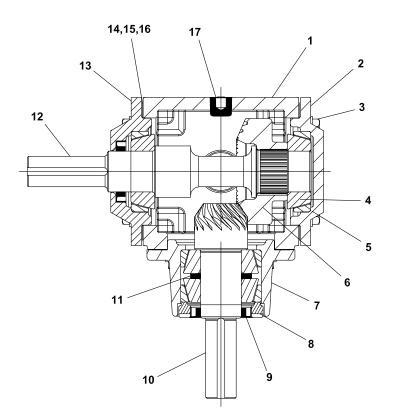
GUKE 4							
QTY	DESCRIPTION	PART NO.	ITEM	QTY	DESCRIPTION	PART NO.	ITEM
					BOLT-WLF 1/4-20X3/4 NUT-WLF 1/4-20 SHIELD-LEFT REAR WHEEI SHIELD BRACKET-LFT R WHEEL ASSEMBLY .)	64139-04 64141-2 60-529.7 64-643.7 53-073 (OPTIONAL	4-1 4-2 4-3 4-4 4-5
				1 1	TIRE ONLY-20 X 8.00-10 RIM ONLY	53-090 53-085	
					SHIELD BRACKET-RT REAF SHIELD-RT REAR WHEEL	64-644.7 60-528.7	4-6 4-7

# **FIGURE 5**





Not Illustrated 20



# **GEARBOX (D)**

# TREE FARM MOWER

# FIGURE 5

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
	87-239	GEARBOX					
5-1	87-CM00391	3 HOUSING	1				
5-2	87-CM05607	7 BLANK CAP	1				
5-3	87-CM41451	6 WHIZLOCK CAPSCRE	WS 18				
5-4	87-CM15009	4 BEARING CONE	4				
5-5	87-CM15010	2 BEARING CUP	4				
5-6	87-CM11006	4 GEAR (RH)	1				
5-7	87-CM05665	5 HUB	1				
5-8	87-CM05664	8 CAP	1				
5-9	87-CM30000	4 SEAL	2				
5-10	87-CM10996	7 INTEGRAL PIN (LH)	1				
5-11	87-CM41057	1 SPACER	1				
5-12	87-CM22942	7 THRU SHAFT	1				
5-13	87-CM05606	9 THRU CAP	1				
5-14	87-CM39299	3 GASKET015	A/R				
5-15	87-CM39300	9 GASKET005	A/R				
5-16	87-CM39301	7 GASKET003	A/R				
5-17	87-CM41000	1 PIPE PLUG-SOLID	3				
5-18	87-CM80287	6 I.D. TAG COVER	1				
5-19	87-CM80057	3 I.D. TAG	1				
5-20 *	87-CM80032	6 GEAR LUBE-(OZ.)	5				

#### **\*NOT ILLUSTRATED**

SCHILLER GROUNDS CARE, INC. ONE BOB-CAT LANE P.O. BOX 469 JOHNSON CREEK, WI 53038 920-699-2000 www.schillergc.com



BOB-CAT BUNTON RYAN STEINER