

40" COMMERCIAL MOWER OPERATOR'S MANUAL

FORM NO: 44614 (10-87)

DRIVE PART NO: 44611
DECK PART NO: 37896

PRINTED IN USA
\$3.00

Instructions for Safe Operation

NOTE

Read this manual carefully and learn to operate and service your 40" Commercial Mower before using it.

To keep the warranty, the 40" Commercial Mower must be maintained and operated as directed in this manual.

All references to "left-side", "right-side", "front", and "back" are given from the operator's position.

Use the serial number to ensure prompt and correct service when ordering parts, requesting service or making inquiries.

DRIVE SERIAL NUMBER: _____

DECK SERIAL NUMBER: _____



Look for this symbol to point out important safety precautions. It means -- ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED.

CONTENTS

1. INSTRUCTIONS FOR SAFE OPERATION
2. OPERATING INSTRUCTIONS
3. SERVICE INSTRUCTIONS
4. STORAGE
5. SOLVING PROBLEMS
6. SET-UP INSTRUCTIONS
7. ILLUSTRATED PARTS AND PARTS LIST
8. SPECIFICATIONS
9. WARRANTY



SECTION 1

Instructions for Safe Operation

Improper use of this equipment can injure people and damage the equipment. People using or servicing this equipment must read and follow the instructions in this manual.

It is important to understand that this manual and any other Gravely instruction manuals do not cover every possible danger. It is impossible for Gravely to know all possible dangers in operating and servicing the equipment.

The purchaser must give these instructions to the people operating and maintaining this equipment. These people must use eye and foot protection.

1.1 Preparation:

1. Read this manual and the tractor manual carefully.
2. Learn the location and function of all controls.
3. Learn how to use the controls to stop the wheels and mower quickly.
4. Use caution with gasoline. Gasoline is very flammable. Keep it in a clean and tight container away from flames or hot items. Never put gasoline in the fuel tank while the engine is running or hot. Clean up spilled gasoline before starting engine.
5. Be certain that all shields, guards, and interlock switches are in the correct positions.
6. Never permit children to operate the tractor and mower.
7. Inspect area to be mowed and remove all material which could be thrown by the mower.
8. Before starting the engine, put the PTO control lever in the "OFF" position and the gear shift lever in the neutral "N" position.
9. When hauling the equipment, connect the chassis to the transporting vehicle. Never connect from control levers, rods, or like items that could be damaged.
10. Replace all parts that become damaged or lost.
11. Be certain that the operator presence controls work correctly before operating the mower.

1.2 Operation:

1. Wear foot and eye protection. Do not wear loose clothing.
2. Do not use the equipment in the dark without adequate lighting.
3. Keep the equipment in good condition. Maintain it as directed in this manual.
4. USE ONLY GRAVELY ACCESSORIES AND ATTACHMENTS.
5. Do not overspeed the engine. Do not override the governor.
6. Keep away from moving parts.
7. Keep people and animals away from the operating area.
8. Do not let people other than the operator near the operating equipment.
9. Use a slow speed and engage the direction control lever slowly when operating on slopes.
10. Look for and keep away from hazards.
11. After hitting an object, stop the equipment and engine. Check for damage. Repair any damage before operating.
12. Look behind when operating in reverse. Look for people and hazards.
13. Operate only from the operator's position, just behind the handlebars. Never walk between the handlebars.
14. Travel across, not up and down, slopes.
15. If there is a sudden change in the sound or vibration of the equipment, stop the engine and check for damage. Repair any damage or failure before continuing operation.
16. Never run the engine indoors except to move it outside. Exhaust fumes are dangerous.
17. Go slowly on slick surfaces.
18. Follow traffic laws when operating on or near a road.
19. Before making adjustments or servicing, move the PTO to "OFF," turn the ignition switch to "OFF," and wait until all moving parts completely stop.
20. Before leaving the operator's position, put the PTO control in the "OFF" position and turn the ignition key to the "OFF" position. Move the direction control lever to forward position.

SECTION 2

Operating Instructions

- 2.1 Read the tractor Operator's Manual and this Operator's Manual before operating.
- 2.2 After the engine is warm and running smoothly, move the throttle lever to the "SLOW" position.
- 2.3 Put Hi-Lo gear control in the "NEUTRAL" position.
- 2.4 Briskly move the PTO control to the "ON" position.
- 2.5 Move the throttle lever to the "FAST" position.
- 2.6 Move the Hi-Lo gear control to the desired position.
- 2.7 Put the direction control lever in the desired position.
- 2.8 Use the lower gears for rough heavy moving and until you are familiar with the equipment.

SECTION 3

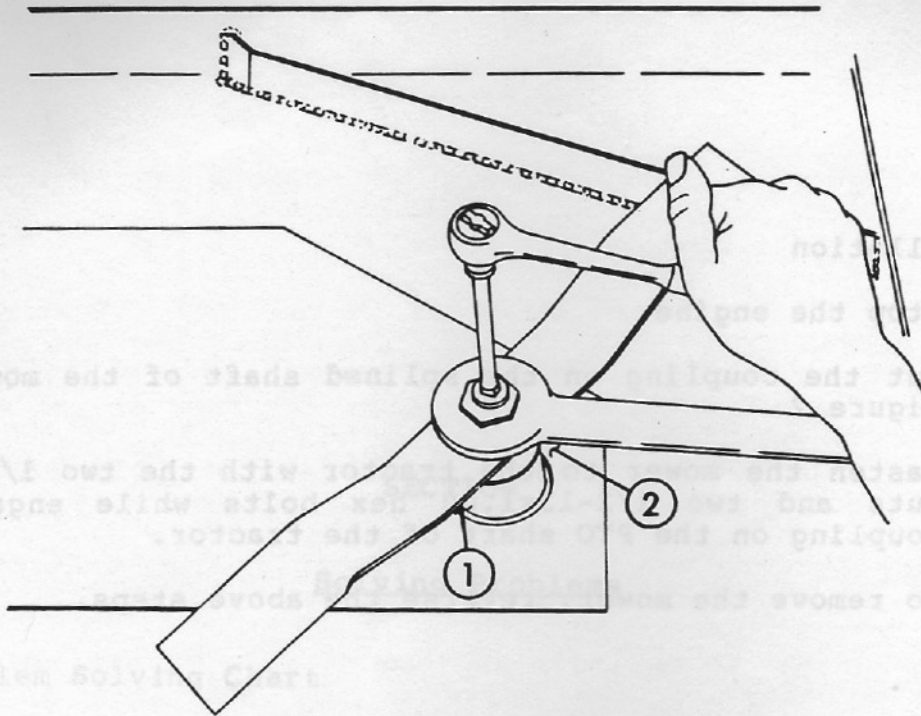
Service Instructions

3.1 Lubrication

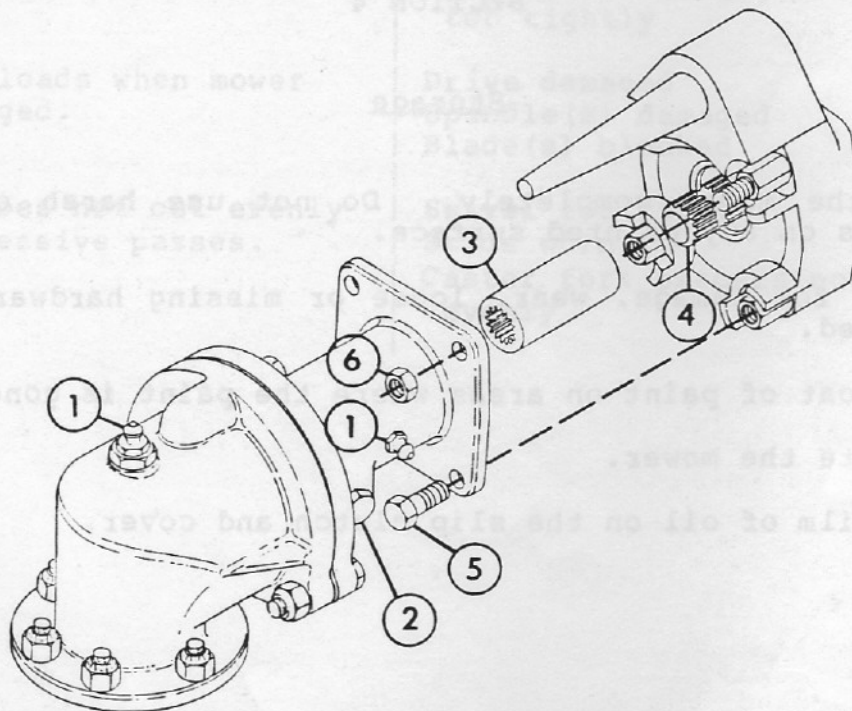
1. Every eight hours of operation grease the spindle assemblies. The lube fitting is under the deck. Clean the fitting and apply a multi-purpose grease until it comes out of the grease fitting vent. See Figure 1.
2. Every eight hours of operation grease the gauge wheels and caster fork weldments, clean the lube fittings and apply a multi-purpose grease until it comes out of the bearing.
3. Every forty hours of operation clean the lubrication fittings on the gear housing and swivel casting. See Figure 2. Add multi-purpose grease until it shows between the swivel casting and quick hitch casting on the tractor.

3.2 Adjustments

1. Mower Swivel - adjust the swivel bolt just loose enough so that the mower will follow the contour of the ground. See Figure 2.
2. After the mower is mounted to the tractor, level the mower by arranging the spacers on the caster wheel forks.
3. Blade Removal/Installation - remove the mower and turn upside down. Hold the spindle with a 3/8" socket drive and remove the nut with a Gravelly wrench (part number 15367) or equivalent. Reverse the procedure for installation. See Figure 1. Hold the spindle with a 3/8" socket drive. Tighten the nut to a torque of 100 ft.-lb. Use of the nut on top of the spindle to hold the spindle will misadjust the bearings. This will result in bearing failure.
4. Cutting Height - arrange the collars above and below the spindle to adjust the cutting height. Adjust both blades alike.
5. Belt Removal/Installation - remove the belt covers. Unhook one end of each spring. Remove the drive. Remove the belts. Reverse the procedure to install the belts.



- 1 - Grease Fitting Vent
 - 2 - Grease Fitting
- FIGURE 1



- 1 - Lubrication Fitting
- 2 - Swivel Adjustment
- 3 - Coupling
- 4 - PTO Shaft
- 5 - 1/2-13 Hex Bolt
- 6 - 1/2-13 Lock Nut

FIGURE 2

3.3 Installation

1. Stop the engine.
2. Put the coupling on the splined shaft of the mower. See Figure 2.
3. Fasten the mower to the tractor with the two 1/2-13 lock nuts and two 1/2-13x1.00 hex bolts while engaging the coupling on the PTO shaft of the tractor.
4. To remove the mower, reverse the above steps.

SECTION 4

Storage

- 4.1 Clean the mower completely. Do not use harsh or abrasive cleaners on any painted surface.
- 4.2 Inspect for damage, wear, loose or missing hardware. Repair as needed.
- 4.3 Put a coat of paint on areas where the paint is gone.
- 4.4 Lubricate the mower.
- 4.5 Put a film of oil on the slip clutch and cover.

SECTION 5

Solving Problems

5.1 Problem Solving Chart

1. Mower slow in heavy cutting without loading engine.	Slip clutch not adjusted or damaged Loose or damaged belts
2. Belt(s) squeal and smoke.	Spindle(s) damaged Blade(s) blocked Spindle(s) bearings adjusted too tightly
3. Engine loads when mower is engaged.	Drive damaged Spindle(s) damaged Blade(s) blocked
4. Mower does not cut evenly on successive passes.	Swivel too tight Skids worn Caster fork spacers not adjusted evenly

SECTION 6

Set-Up Instructions

- 6.1 Remove the drive and deck assembly from the cartons.
- 6.2 Remove the belt covers.
- 6.3 Mount the idlers on the studs as in the deck illustration. The short sleeve goes next to the high rotor and the tall sleeve goes next to the low rotor. Set the idlers on the studs with the extended sleeve down. Work from the rear of the mower.
- 6.4 Set the belts as in Figures 3 and 4 (low belt first). This belt positioning is important for ease of assembly.
- 6.5 Hook the springs to the idler assembly from underneath. See Figures 3 and 5 and deck illustration.
- 6.6 Set the drive in position on the deck. Do not bolt it down. Slip the belts on the drive pulley and then on the rotor (spindle) pulleys. Let the idlers float at this time. See solid lines in Figure 5.
- 6.7 Bolt the drive to the deck. The two carriage bolts are inserted from under the deck. See deck illustration. Be sure that the heads seat properly in the deck. The three hex bolts are inserted from the top. Start all bolts before tightening.
- 6.8 From the side of the deck pull the spring hooks into the spring holes as shown in Figures 4 and 5.
- 6.9 Replace the belt covers.
- 6.10 Install the bushings in the caster wheels and bolt the wheels in the caster forks.

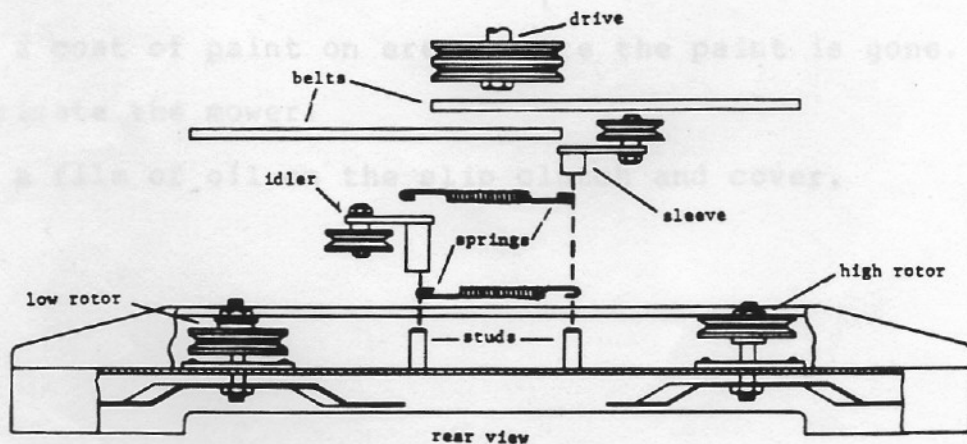


FIGURE 3

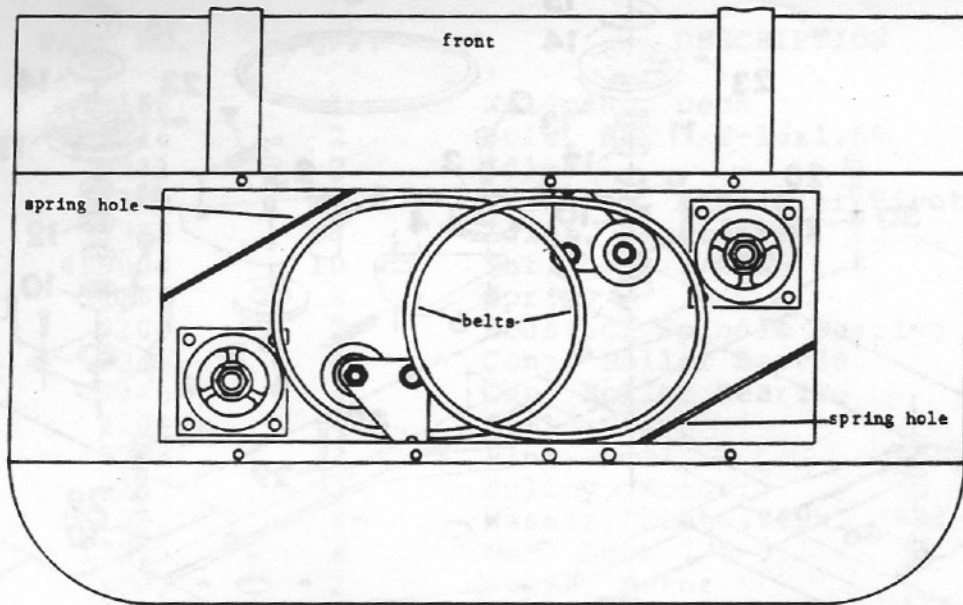


FIGURE 4

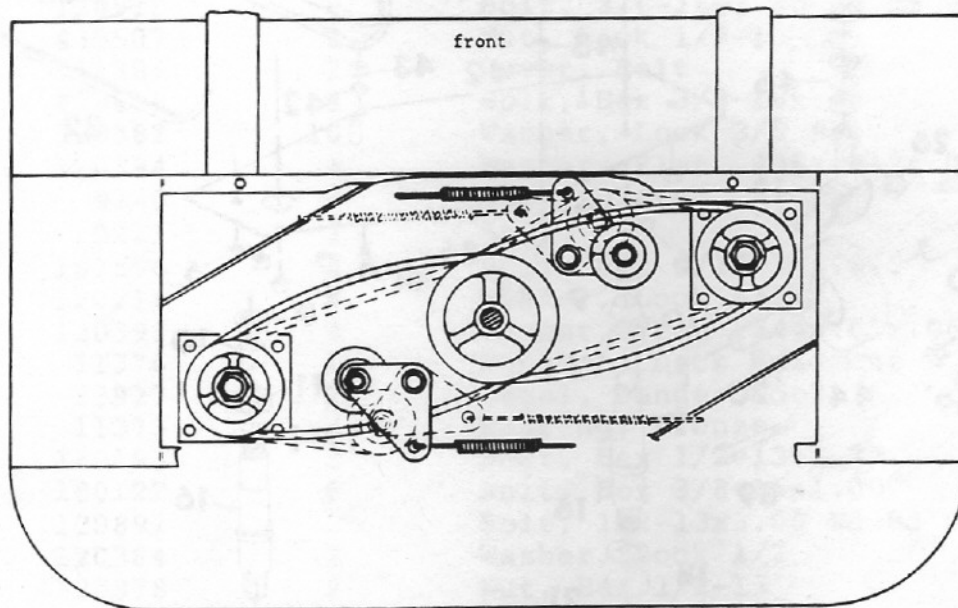
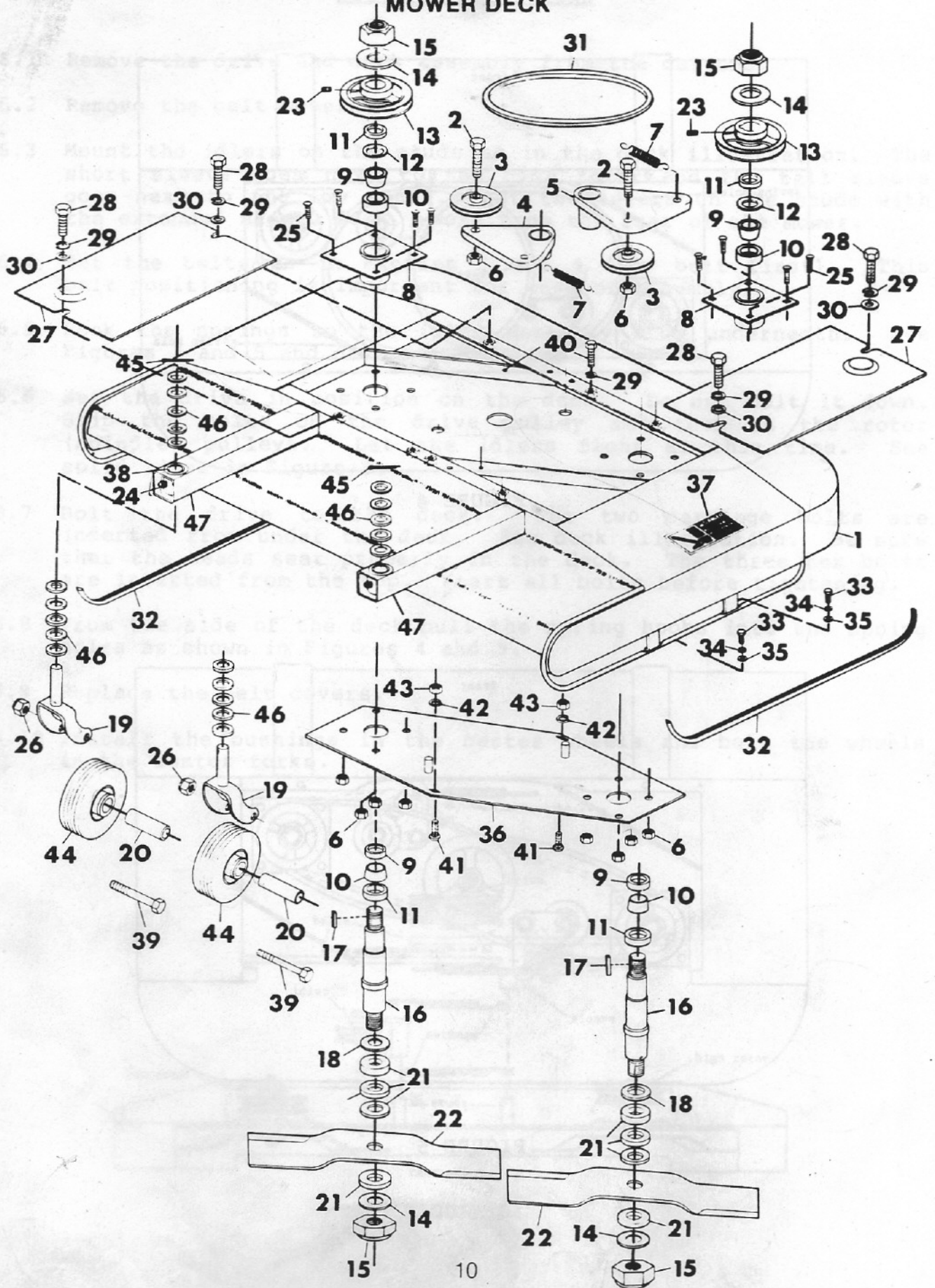


FIGURE 5

SECTION 7

Illustrated Parts and Parts Lists

MOWER DECK



MOWER DECK

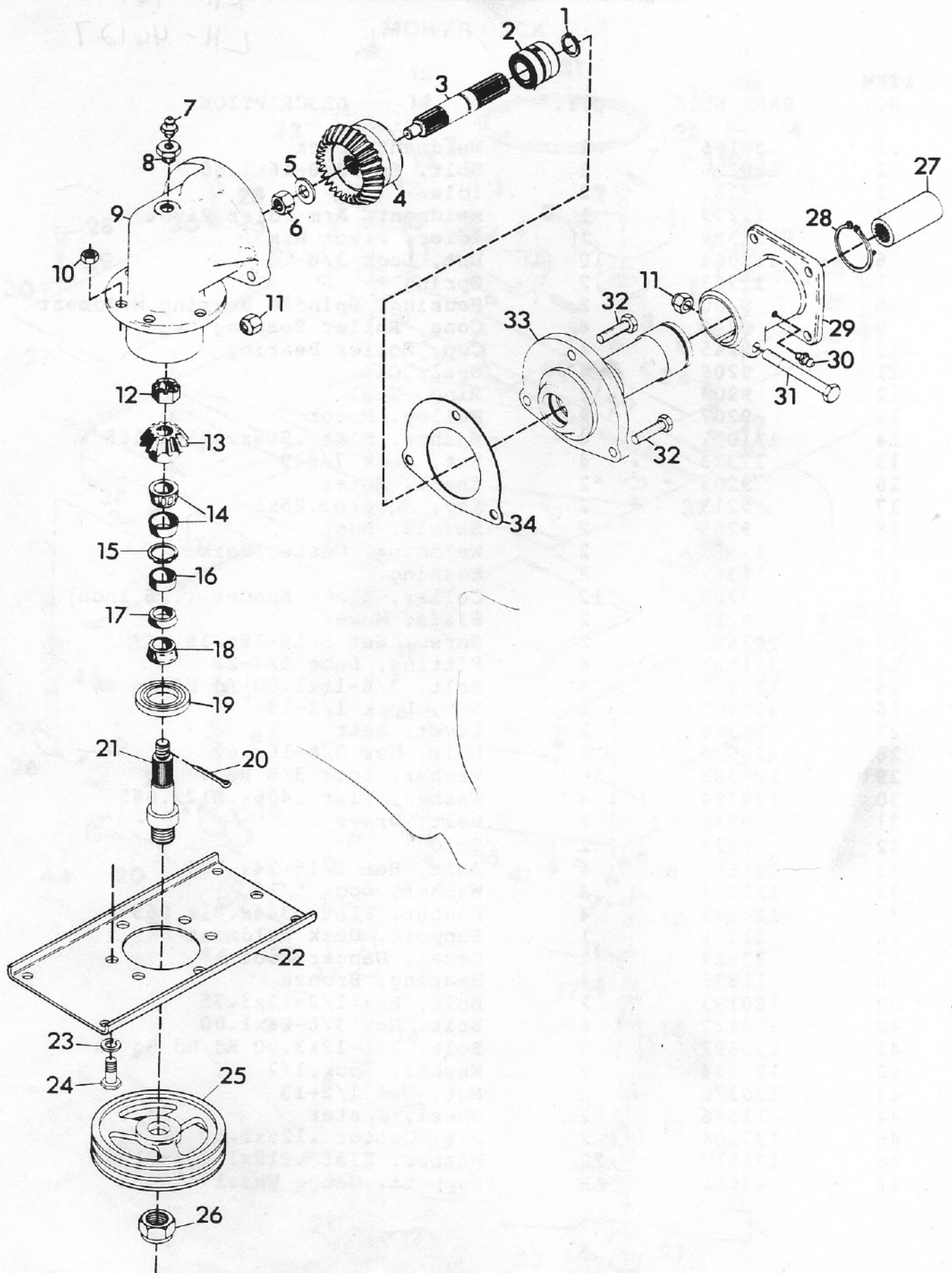
Spindle Asm

RH- 46126

LH- 46127

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	38166	1	Weldment, Deck
2	180126	2	Bolt, Hex 3/8-16x1.50
3	9231	2	Idler
4	11379	1	Weldment, Arm Idler Pivot
5	11382	1	Idler, Pivot Arm
6	456004	10	Nut, Lock 3/8-16
7	11263	2	Spring
8	9200	2	Housing, Spindle Bearing Weldment
9	9246	4	Cone, Roller Bearing
10	9245	4	Cup, Roller Bearing
11	9206	4	Seal, Oil
12	9204	2	Ring, Seal
13	9207	2	Pulley, Rotor
14	131001	4	Washer, Flat .969x2.250x.165
15	17313	4	Nut, Lock 7/8-9
16	9203	2	Shaft, Rotor
17	9213	2	Key, Square .25x1
18	9205	2	Shield, Dust
19	11385	2	Weldment, Caster Fork
20	11387	2	Bushing
21	9209	12	Collar, Blade Spacer (.25 Inch)
22	9212	2	Blade, Mower
23	102581	2	Screw, Set 5/16-18x.38
24	411027	4	Fitting, Lube 1/4-28
25	120915	8	Bolt, 3/8-16x1.00 Rd Hd Sq Nk
26	435507	2	Nut, Lock 1/2-13
27	11384	2	Cover, Belt
28	428638	4	Bolt, Hex 3/8-16x.62
29	120382	10	Washer, Lock 3/8 Reg.
30	120394	4	Washer, Flat .406x.812x.065
31	9240	2	Belt, Drive
32	9223	2	Skid
33	181596	4	Bolt, Hex 5/16-24x.875
34	120214	4	Washer, Lock 5/16
35	120393	4	Washer, Flat .344x.81x.065
36	11376	1	Support, Deck Weldment
37	33927	2	Decal, Danger Foot
38	11375	4	Bearing, Bronze
39	180193	2	Bolt, Hex 1/2-13x3.75
40	180122	6	Bolt, Hex 3/8-16x1.00
41	120897	2	Bolt, 1/2-13x3.00 Rd Hd Sq Nk
42	120384	2	Washer, Lock 1/2
43	120378	2	Nut, Hex 1/2-13
44	11386	2	Wheel, Caster
45	137204	2	Pin, Cotter .125x1.50
46	131017	22	Washer, Flat .812x1.496x.134
47	44661	AR	Support, Gauge Wheel

MOWER DRIVE



MOWER DRIVE

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	22242	1	Ring, Retaining .937 Shaft
2	14640	1	Assembly, Bearing 1.000x1.980x1.243
3	32117	1	Shaft, Drive
4	22518	1	Gear, Bevel
5	33845	1	Washer, Flat .687x1.312x.122
6	13412	1	Nut, Lock 5/8-18
7	271434	1	Fitting, Lube 1/8 NPT
8	144044	1	Bushing, 1/2 Reducing Pipe
9	44618	1	Housing, Gear
10	120238	6	Nut, Jam 1/2-13
11	435507	3	Nut, Lock 1/2-13
12	125267	1	Nut, Slotted 5/8-18
13	22519	1	Pinion, Bevel
14	38199	1	Assembly, Bearing Cup and Cone
15	22497	1	Ring, Retaining 2.000 Bore
16	44617	1	Spacer
17	22524	1	Cup, Bearing
18	22523	1	Cone, Bearing
19	13171	1	Seal, Oil (Dual Lip)
20	119120	1	Pin, Cotter .094x1.25
21	44610	1	Shaft, Rotor
22	11367	1	Plate, Mounting
23	120384	6	Washer, Lock 1/2 Reg.
24	9229	6	Bolt, Hex Special
25	11364	1	Sheave, 1/2x6 Double Groove
26	11365	1	Nut, Special 1-14
27	32118	1	Coupling
28	32120	1	Ring, Retaining External 2.25 Shaft
29	32114	1	Casting, Swivel
30	411027	1	Fitting, Lube 1/4-28
31	180191	1	Bolt, Hex 1/2-13x3.25
32	180179	3	Bolt, Hex 1/2-13x1.75
33	32115	1	Housing, Shaft
34	32862	2	Shim, .005

SECTION 8

Specifications

Weight:	182 lbs. (82.6 kg)
Width:	42.0 in. (1067mm)
Height:	15.5 in. (394mm)
Length:	34.75 in. (883mm)
Width of Cut:	40 inches (1016mm)
Heights of Cut:	1.50 in. (44.4mm) to 3.75 in. (95.2mm)

SECTION 9

LIMITED FIVE-YEAR WARRANTY

1. This Limited Five-Year Warranty is issued by Gravely International, Inc., only to the original purchaser. If Gravely equipment is leased by Gravely, this Warranty shall extend also to the original lessee as if such lessee were the original purchaser.
2. Gravely warrants that all new equipment manufactured by Gravely ("Gravely Products") shall be free of defects in material and workmanship for the term described in paragraph 4, below. Except as hereinafter provided, this Warranty does not cover any engine, tires or battery forming a part of the Gravely Product. Engine and tires are covered by and subject to separate warranties of the manufacturers thereof.
3. In the event that any Gravely Product warranted hereunder shall be defective or fail to conform with this Warranty, Gravely shall, subject to the provisions hereof, pay for, or provide labor and materials for, the repair or replacement of such defective Gravely Product.
4. This Warranty is for five years (60 months) from purchase date for Gravely Products used exclusively for personal, family or household purposes, and two years (24 months) for products used for other purposes (commercial use), excluding rental firms. Gravely products used for rental purposes will be warranted for 90 days. Repair of Gravely Products after the second year (24 months from date of purchase) shall be subject to a \$50.00 deductible for each repair. (After two years, Gravely agrees to repair or replace defective Gravely Products used exclusively for personal, family or household purposes only to the extent that the cost of such warranty covered repair or replacement exceeds \$50.00.)

Batteries are warranted by Gravely for a period of twelve (12) months only. If a battery shall fail within twelve (12) months of purchase, the replacement cost thereof shall be prorated over a twelve-month term based upon the number of months since purchase.
5. To obtain Warranty Service on a Gravely Product (including any battery or other component not manufactured by Gravely), use this procedure:
 - a. Notify the Gravely dealer from whom you purchased the equipment.
 - b. If you have moved and it is not convenient to notify the selling dealer, notify the nearest Gravely dealer. You should supply this dealer with a copy of the bill of sale as proof of the date of purchase.
 - c. Make arrangements to have the equipment delivered to the dealer (refer to paragraph 6 a., below).
 - d. If you have any questions concerning the Gravely Limited Warranty, they should be referred to:

Gravely International, Inc.
One Gravely Lane
Clemmons, NC 27012
Attn: Customer Service Department
 - e. Warranty service on Gravely Products must be performed by an authorized Gravely dealer.
6. This Warranty does not cover the following:
 - a. Transportation to the Gravely dealership. (If the Gravely dealer provides transportation, he will charge for such service.)
 - b. Normal maintenance services and normal replacement of items such as spark plugs, belts, oil, oil filters, air filters, and mower, plow or cultivator blades, gauge wheels, skids and other wear items.
 - c. Any Gravely Product which has been altered or modified in any way.
 - d. Any repair or replacement occasioned by customer neglect or lack of proper maintenance. (The purchaser is responsible for making sure that Gravely Products are operated and serviced as directed in the applicable manual or service instruction. Incorrect use or maintenance will void this Warranty.)
 - e. Any repair occasioned by the use of any attachment not approved by Gravely. (The use of any such unapproved attachment will void this Warranty.)
7. GRAVELY MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES, OR WARRANTIES AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALL WARRANTIES ARE LIMITED IN DURATION TO THE TERMS SET OUT IN PARAGRAPH 4, ABOVE. GRAVELY SHALL HAVE NO LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE BREACH OF ANY WARRANTY, INCLUDING, BUT NOT LIMITED TO, LIABILITY FOR INCONVENIENCE, RENTAL OR PURCHASE OF REPLACEMENT EQUIPMENT, OR FOR LOSS OF PROFITS OR OTHER COMMERCIAL LOSS.
8. Some states do not allow limitations on how long an implied warranty lasts, so the above statement may not apply to you. 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.
9. This Warranty gives you specific legal rights, and you may have other rights which vary from state to state.
10. A Gravely product registration card is supplied with each Gravely Product. Please complete the card and return it to Gravely at the address listed on the card. The equipment registration card will be used by Gravely for:
 - a. Recording date of purchase.
 - b. Notification of owners in compliance with the Consumer Product Safety Act, should any notification be necessary.The return of such card is necessary for your warranty to be effective.
11. This Warranty is not subject to change or modification by anyone, including Gravely dealers and no Gravely dealer is authorized to make any representations or promises on Gravely's behalf.

 **GRAVELY.**

One Gravely Lane, Clemmons, NC 27012