

# OPERATING INSTRUCTIONS AND PARTS LIST

# Ariens



## TRACTOR

5 H.P.

7 H.P.

### AFTER SERIAL NUMBERS

MODEL 10965 - SERIAL NO. - 007201

MODEL 10962 - SERIAL NO. - 006001

MODEL 10954 - SERIAL NO. - 003001

MODEL 10942 - SERIAL NO. - 000001



### ⚠ SAFETY MESSAGE ⚠

The product for which you have requested information or replacement parts is not a current product. The replacement models incorporate product designs, safety features, safety instructions or warnings which represent the latest "State Of The Art" developments. For your safety and those around you please contact your nearest Ariens/Gravely Dealer for a demonstration of the current product safety provisions and features.

**PRICE \$.25**

## WARRANTY

Ariens Company hereby warrants to the original retail purchaser all new products of its own manufacture to be free from defects in material and workmanship, for a period of one year except when used commercially or for rental purposes in which case the warranty period shall be for 45 days from date of original purchase, subject to the following exceptions:

1. Engine parts and service must be handled by the respective engine manufacturer.

No warranty will be extended on belts, tires, throttle controls, friction discs, or any other items subject to normal wear.

No warranty is extended to any equipment which has been misused, neglected or damaged by accident. Ariens Company shall not be responsible for damage in transit or handling by any common carrier, and under no circumstances, within or without the warranty period, will the Company be liable for damages for loss of use, or damages resulting from delay, or any consequential damages.

Any transportation charges incurred on any equipment claimed defective, which shall include time and expense of the distributor

or dealer for pickup, and/or return of the equipment, shall be borne by the purchaser.

Ariens Company reserves the right to incorporate any changes in design into its products without obligation to make such changes on units previously manufactured.

### DISCLAIMER OF FURTHER WARRANTY

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, ORAL OR WRITTEN, IN FACT OR BY OPERATION OF LAW, NOR SHALL THERE BE A WARRANTY OR MERCHANTABILITY, ON ANY OF THE COMPANY'S PRODUCTS EXCEPT AS OTHERWISE EXPRESSLY STATED ABOVE. IN NO EVENT SHALL THE COMPANY BE LIABLE FOR ANY INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES SUCH AS LOSS OF ANTICIPATED PROFITS OR OTHER ECONOMIC LOSS IN CONNECTION WITH OR ARISING OUT OF THE EXISTENCE, FURNISHING, FUNCTIONING, OR THE ULTIMATE CONSUMER'S USE OF ANY PRODUCT SUPPLIED BY THE COMPANY.

# OPERATING INSTRUCTIONS

## NOTE

When tractor is to be used with lawn attachments, the air cleaner is to be installed in place of the heater box.

### 1. ENGINE

Complete instructions for the operation, lubrication, and proper care of the engine will be found on the instruction plate attached to the engine fan housing and in the manufacturer's instruction book packed with the engine. Do not attempt to start the engine before following the manufacturer's recommendations for servicing the engine.

### 2. TRACTOR CLUTCH

a. The clutch operating handle mounted on the left handle bar serves to disengage the clutch so that the shift control lever may be moved to any one of the four forward speeds or reverse position.

b. When the clutch operating handle is squeezed together, the shift control lever may be moved to the desired position. Releasing the handle will cause the machine to move in the direction and at the speed selected.

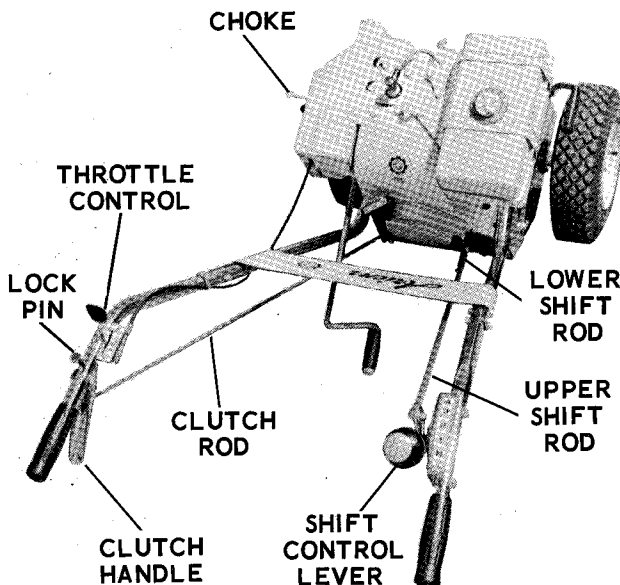


Figure 1

c. A locking device is provided on the clutch operating handle to hold the handle in the non-operating position. The lock is released by a light squeeze on the handle.

### 3. SHIFT CONTROL LEVER

a. The shift control lever mounted on the right handle bar governs the speed and direction of the tractor.

b. To move the shift control lever to a selected position, squeeze the tractor clutch operating handle together, depress the button on the center of the shift control lever knob and move the lever.

### 4. ENGINE CLUTCH

a. The engine clutch is controlled by a lever mounted on the right hand side of the unit (figure 2) just forward of the engine.

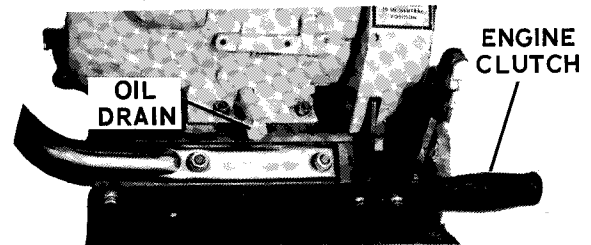


Figure 2

b. When the clutch control lever is pulled up, the idler pulley bears against the drive belt causing the engine to drive the tractor transmission and attachment drive.

c. When the clutch control lever is pushed down, the idler pulley moves away from the drive belt, loosening the belt and the operation of the transmission and attachment tends to stop.

### 5. THROTTLE CONTROL

The throttle control lever controls the speed of the engine and therefore, in conjunction with the shift control lever, the speed of the machine. Moving the lever toward FAST increases engine speed and moving it toward SLOW decreases speed. Moving the lever to the STOP position will stop the engine. ALWAYS MOVE THE THROTTLE LEVER TO "PARK" AFTER ENGINE HAS STOPPED.

### 6. CHOKE

A manual choke is provided which is operated by a lever projecting from the carburetor cover on the

left hand side of the engine. The lever can be placed in any one of four detent positions. Moving the lever toward the rear of the machine places it in the FULL CHOKE position. As it is moved forward, it will pass through the 3/4 CHOKE and 1/2 CHOKE positions to the NO CHOKE position fully forward.

## 7. ENGINE STARTING INSTRUCTIONS

### a. Manual Starting.

(1) Fill engine fuel tank with "regular" grade gasoline.

(2) Place engine clutch lever in down position and shift control lever in NEUTRAL.

(3) Place choke lever in FULL CHOKE position.

(4) At temperatures below 10° F., depress primer button and pull recoil starter slowly past compression one time. Release primer button.

### CAUTION

Do not use primer when temperature is above 10° F.

(5) Pull recoil starter handle quickly. When engine starts, move choke control lever to 3/4 CHOKE position (first notch). After 20 seconds, move choke control lever to 1/2 CHOKE position (second notch). After an additional 15 seconds, move choke control lever to NO CHOKE position.

(6) If engine does not start on first pull, move choke lever to 1/2 CHOKE position before pulling recoil starter a second time.

(7) If engine does not start by the fifth pull,

move choke lever to NO CHOKE position and pull starter twice. Repeat starting procedure. DO NOT REPRIME ENGINE BEFORE TRYING AT LEAST FIVE PULLS ON STARTER.

### b. Electric Starting.

(1) Plug the polarized cord from a 110 volt AC receptacle to the starter motor.

(2) Follow steps (1), (2), and (3) in MANUAL STARTING, paragraph a.

(3) Operate the switch on the starter motor.

(4) With the starter operating the engine, move the choke control lever to the FULL CHOKE position. As soon as the engine starts, release the switch and move the choke control lever to the 3/4 CHOKE position. After the engine has warmed up, move the choke to the NO CHOKE position and remove the cord.

### CAUTION

Do not depress the primer button when starting the engine with the electric starter.

## 8. DIFFERENTIAL LOCK

The differential lock is located on the left wheel hub. See figure 3. With the knob turned to the IN position, the differential is locked and power is applied equally to both wheels for snow removal. To use the differential, pull back on the knob and turn to the OUT position. This unlocks the differential for easy turning with the mower or vacuum attachments.

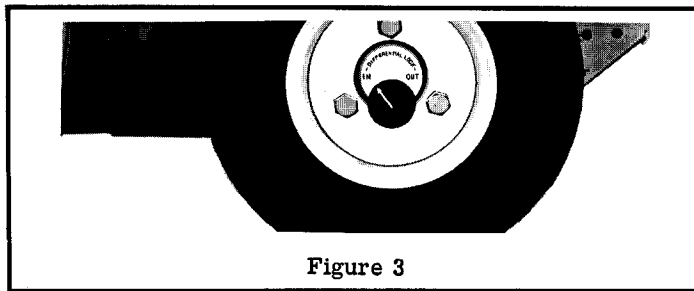


Figure 3

## SERVICE

### 1. GENERAL

Ariens dealers will provide any service which may be required to keep the tractor operating at peak efficiency. The tractor is equipped with the finest quality engine obtainable. However, should servicing be required, it can be obtained from an Ariens dealer or authorized engine manufacturer's service station. Consult an Ariens dealer for details.

### 2. ENGINE

Refer to the engine instruction book and nameplate on the engine for maintenance instructions. If repairs or service are needed for engine, see the nearest authorized engine service station.



### 3. FRICTION WHEEL REPLACEMENT

a. After considerable usage, it may be necessary to replace the friction wheel. To replace, proceed as follows:

- (1) Remove the bottom cover.
- (2) Remove the connecting link from the chain and remove the chain.
- (3) Remove left hand wheel by removing the three wheel bolts.
- (4) Remove the plate on the left hand side of the tractor frame.
- (5) Remove the locknut (1/2-20) on the right hand end of the hex shaft.
- (6) Remove the four locknuts holding on the bearing flange on the left hand side of the carrier.
- (7) Pull the hex shaft out of the right hand bearing and the left hand bearing out of the frame.
- (8) Remove hair pin from fork shaft through the slot on the right hand rear corner of the frame.
- (9) Hold clutch handle up and remove the fork shaft out the right side of the frame.
- (10) Remove cotter pin from the shift link.
- (11) Remove friction wheel assembly.
- (12) Remove snap ring, bearing and fork from the friction wheel hub.
- (13) Remove the five screws holding friction wheel to the hub.

#### b. Replacement of Friction Wheel.

- (1) After friction wheel is replaced, replace fork, bearing and snap ring.

- (2) Place friction wheel assembly in unit and fasten the shift link to shift lever with cotter pin.

- (3) Hold clutch handle up and insert fork shaft into position. Replace the hair pin.

- (4) Insert the hex shaft into carrier through the friction wheel hub. Be sure the inner bearing flange is still in position.

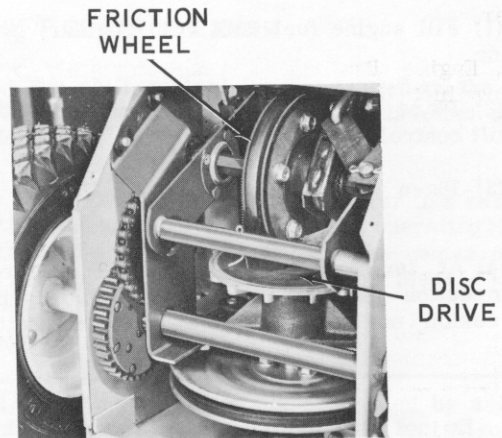


Figure 4

- (5) Replace the bearing and bearing flange. Fasten with the four nuts.

- (6) Replace the locknut on the end of the hex shaft.

- (7) Wrap chain around sprocket by pulling around with hook or wire. Replace connecting link and lock.

- (8) Replace bottom cover.

- (9) Replace the plate on the left hand side of the tractor frame.

- (10) Replace the left wheel.

## LUBRICATION

### 1. ENGINE

See manufacturer's instruction book for engine lubrication instructions.

#### NOTE

Use Ariens Sno-Thro oil 5W-20 for operation below 40° F. Use MS classification SAE-30 oil for operation above 40° F.

### 2. TRACTOR DRIVE

- a. At the start of each season grease the gears, hex and fork shaft, jaw coupling, and chains.

- b. The left hand wheel axle equipped with zerk fittings should be greased every 25 hours of operation.

- c. Two or three drops of light oil should be placed on the shift lever release rod.

# STORAGE INSTRUCTIONS

## 1. STORAGE SUGGESTIONS

Storage is very important to get long life and problem free operation from your Ariens Sno-Thro. The following items will help keep your Ariens Sno-Thro operating at peak efficiency next winter.

a. Engine. Drain gas tank completely by removing fuel line at the carburetor or fuel tank, whichever is easier.

b. Drain carburetor by pressing upward on bowl drain.

### CAUTION

Drain into container outdoors away from fire or flame.

c. Inside protection of engine for storage is performed by removing spark plug and pouring one fluid ounce of Ariens Sno-Thro oil 5W-20

through spark plug hole into cylinder. Crank engine without starting several times to spread oil over cylinder walls.

d. Change oil so the engine is ready for next Sno-Thro season. Use Ariens Sno-Thro oil 5W-20. When draining oil, always tip engine toward oil drain hole. Be sure oil drains completely. If engine is to be used for lawn mowing, use MS classification SAE 30 oil.

e. Grease hex and axle shaft, differential, jaw coupling, and chain.

f. Clean machine thoroughly. Repaint paint as required.

g. Check condition of tractor drive belt. Replace if necessary. Be sure pulleys are in line to prevent undue belt wear.

h. Check tire pressure (10-12 psi).

i. Check all parts for excessive wear. Order replacement parts now to avoid delay next winter.

## ACCESSORIES

### 1. DIFFERENTIAL KIT (10983)

A differential kit is available for the Model 10965 tractor. This kit provides easy maneuverability on corners. It is standard equipment on all 7 H.P. models as shown on page 5.

### 2. MAINTENANCE KIT (A10951)

A maintenance kit containing gear case oil, grease gun, five shear bolts and nuts and a set of tire chains is available for the 7 H.P. models 10962 and 10942 and for the 5 H.P. model 10965.

### 3. MAINTENANCE KIT (A10950)

A maintenance kit containing gear case oil, grease gun, five shear bolts and nuts and a set of tire chains is available for the 7 H.P. model 10954.

### 4. ELECTRIC STARTER (10996)

a. A 110 volt AC operated electric starter kit is available for the model 10965, 10962, 10954, and 10942 Sno-Thros. The kit consists of a 110 volt DC starter which mounts permanently on the engine.

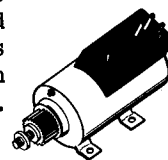
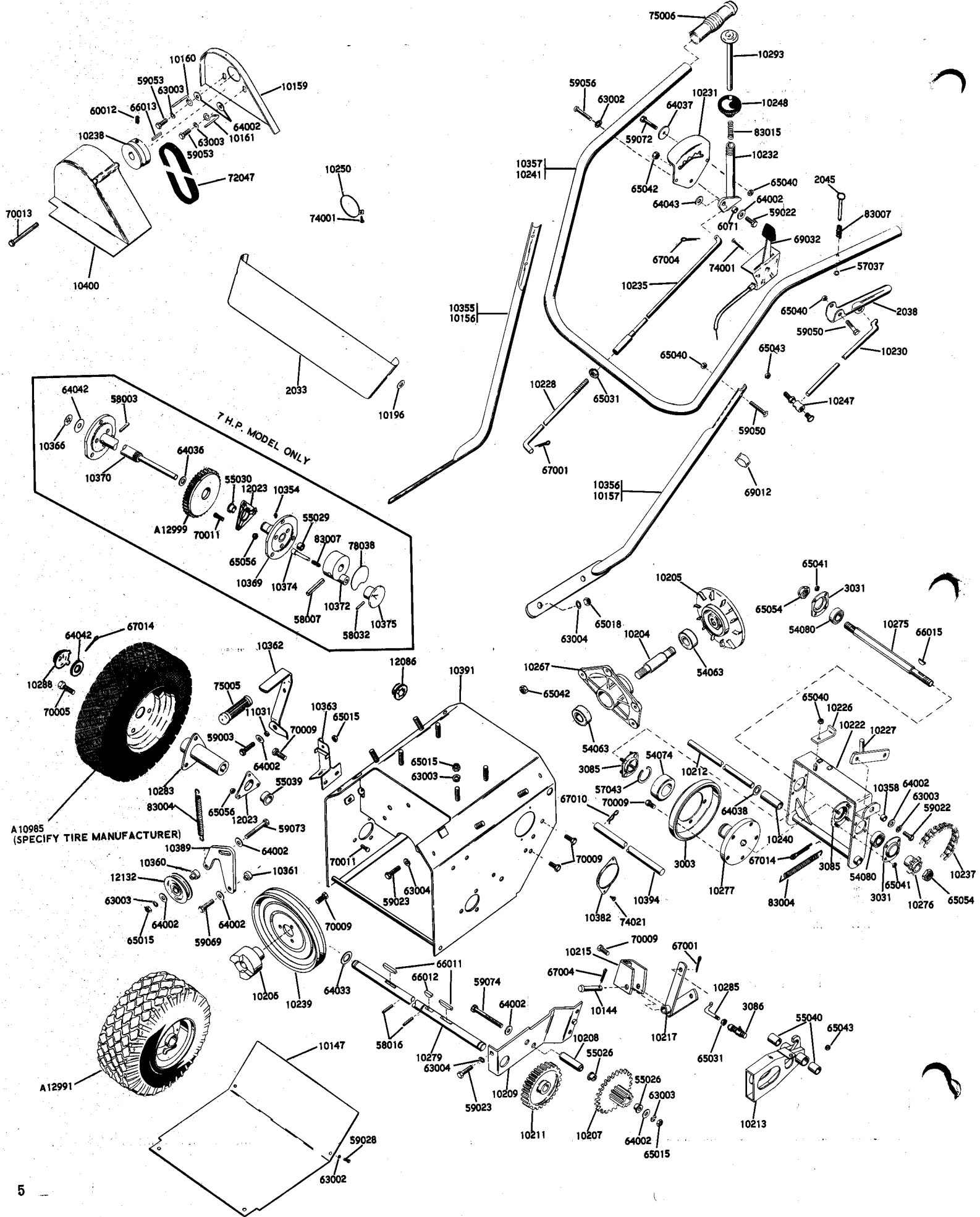


Figure 5

b. In operation, the polarized cord is plugged into a 110 volt AC receptacle and connected to the starter motor. Pressing the switch then operates the starter. When the engine has started, the cord is disconnected from the starter and the Sno-Thro operated in the usual manner.



Part No.	Description	No. Req'd.				Part No.	Description	No. Req'd.			
		10965	10962	10934	10942			10965	10962	10934	10942
2033	Handle Bar Panel	1	1	1	1	55040	Bushing	2	2	2	2
2038	Clutch Handle	1	1	1	1	57037	Retaining Ring	1	1	1	1
2045	Clutch Lock Pin	1	1	1	1	57043	Snap Ring	1	1	1	1
3003	Friction Wheel	1	1	1	1	58003	Roll Pin - 3/16 x 1-1/4		1	1	1
3031	Bearing Flange	2	2	2	2	58007	Roll Pin - 1/4 x 1-1/4		1	1	1
3085	Bearing Flange	2	2	2	2	58016	Roll Pin - 3/16 x 1	2			
3086	Ball Joint	1	1	1	1	58032	Roll Pin - 3/32 x 1		1	1	1
6071	Spacer Bushing	1	1	1	1	59003	Cap Screw - 5/16-18 UNC x 1 H.H., Plated	1	1	1	1
10144	Clevis Pin	1	1	1	1	59022	Cap Screw - 5/16-18 UNC x 3/4 H.H., Z.P.	2	2	2	2
10147	Bottom Cover	1	1	1	1	59023	Cap Screw - 3/8-16 UNC x 3/4 H.H., Plated	4	4	4	4
10156	R. H. Lower Handle Bar	1				59028	Cap Screw - 1/4-20 UNC x 1/2 H.H., Plated	2	2	2	2
10157	L. H. Lower Handle Bar	1				59050	Cap Screw - 1/4-20 UNC x 1-1/2 H.H., Plated	5	5	5	5
10159	Inner Belt Guard	1	1	1	1	59053	Cap Screw - 5/16-24 UNF x 3/4 H.H., Z.P.	2	2	2	2
10160	R. H. Belt Finger	1	1	1	1	59056	Cap Screw - 1/4-20 UNC x 1-1/4 H.H., Plated	2	2	2	2
10161	L. H. Belt Finger	1	1	1	1	59069	Cap Screw - 5/16-18 UNC x 1-1/4 H.H., Plated	1	1	1	1
10196	Handle Bar Washer	2	2	2	2	59072	Cap Screw - 1/4-20 UNC x 1-1/2 H.H., H.T.	1	1	1	1
10204	Spindle	1	1	1	1	59073	Cap Screw - 5/16-18 UNC x 1-3/4 H.H., Plated	1	1	1	1
10205	Drive Plate	1	1	1	1	59074	Cap Screw - 5/16-18 UNC x 2-3/4 H.H., Plated	1	1	1	1
10206	Jaw Coupling	1	1	1	1	60012	Setcrew - 5/16-18 x 3/8 Nylock	2	2	2	2
10207	Pinion and Sprocket	1	1	1	1	63002	Lockwasher - 1/4 SAE Std., Plated	4	4	4	4
10208	Pinion Stub Shaft	1	1	1	1	63003	Lockwasher - 5/16 SAE Std., Plated	9	9	9	9
10209	Support Bracket	1	1	1	1	63004	Lockwasher - 3/8 SAE Std., Plated	8	8	8	8
10211	Spur Gear	1				64002	Washer - 5/16 Wrought Plated	10	10	10	10
10212	Bracket Pin	1	1	1	1	64033	Washer - .755 I.D. x 1.375 O.D. x .125 Plated	1			
10213	Sliding Fork	1	1	1	1	64036	Washer - .880 I.D. x 1.380 O.D. x .062	1	1	1	1
10215	Lever Bracket	1	1	1	1	64037	Washer - 9/32 I.D. x 1-1/4 O.D. x 1/16 Plated	1	1	1	1
10217	Transfer Lever	1	1	1	1	64038	Shim Washer - .505 I.D. x .880 O.D. x 24 Ga.	OR 2	OR 2	OR 2	OR 2
10222	Disc Bracket	1	1	1	1						
10226	Neutral Catch	1	1	1	1	64042	Washer - .751/.757 I.D. x 2 O.D. x 1/8	2	1	1	1
10227	Throwout Lever	1	1	1	1	64043	Washer - SAE 3/8-13/32 I.D. x 13/16 O.D. x 1/16 Plated	1	1	1	1
10228	Lower Shift Rod	1	1	1	1						
10230	Clutch Rod	1	1	1	1	65015	Nut - 5/16-18 Hex, Plated	7	7	7	7
10231	Shift Quadrant	1	1	1	1	65018	Nut - 3/8-16 Hex, Plated	4	4	4	4
10232	Shift Handle	1	1	1	1	65031	Nut - 5/16-24 Hex, Plated	2	2	2	2
10235	Shift Rod	1	1	1	1	65040	Locknut - 1/4-20 Hex, Plated	7	7	7	7
10237	Chain	1	1	1	1	65041	Locknut - #10-24 Plated	8	8	8	8
10238	Engine Sheave	1	1	1	1	65042	Locknut - 5/16-18 Hex, Plated	2	2	2	2
10239	Driven Sheave	1	1	1	1	65043	Locknut - 5/16-24 Hex, Plated	2	2	2	2
10240	Spacer	1	1	1	1	65054	Locknut - 1/2-20 Hex, Centerlock	2	2	2	2
10241	Upper Handle Bar	1				65056	Flange Whizlock Nut - 1/4-20 Plated	6	6	6	6
10247	Ball Joint	1	1	1	1	66011	Key	2			
10248	Shift Ball	1	1	1	1	66012	Key - Woodruff #91	1			
10250	Cover	1	1	1	1	66013	Key - SAE 1035	1	1	1	1
10267	Bearing Housing	1	1	1	1	66015	Key - Woodruff #5	1	1	1	1
10275	Hex Shaft	1	1	1	1	67001	Cotter Pin - 3/32 x 3/4 Plated	2	2	2	2
10276	Sprocket	1	1	1	1	67004	Cotter Pin - 1/8 x 1 Plated	2	2	2	2
10277	Friction Disc Hub	1	1	1	1	67010	Hair Pin Cotter	1	1	1	1
10279	Axle Shaft	1				67014	Cotter Pin - 1/8 x 1-1/4 Plated	3	1	1	1
10283	Wheel Hub	2				69012	Cable Clamp	1	1	1	1
10285	Connecting Link	1	1	1	1	69032	Throttle Control	1	1	1	1
10288	Hub Cap	2	1	1	1	70005	Wheel Bolt - 1/2-20	6	6	6	6
10293	Shift Release Handle	1	1	1	1	70009	Flange Whizlock Screw - 5/16-18 x 1/2 Plated	14	14	14	14
10354	Zerk Fitting	1	1	1	1	70011	Ribbed Neck Bolt - 1/4-20 x 5/8 Plated	6	6	6	6
10355	R. H. Lower Handle Bar	1	1	1	1	70013	Belt Cover Bolt	1	1	1	1
10356	L. H. Lower Handle Bar	1	1	1	1	72047	Belt	1	1	1	1
10357	Upper Handle Bar	1	1	1	1	74001	Self-Tapping Screw - #10-12 x 1/2 Pan Head	3	3	3	3
10358	Spacer Bushing	1	1	1	1	74021	Tapitite - #10-24 x 1/4	4	4	4	4
10360	Bearing Spacer	1	1	1	1	75005	Grip	1	1	1	1
10361	Shoulder Spacer	1	1	1	1	75006	Grip	2	2	2	2
10362	Clutch Lever	1	1	1	1	78010	Helicon Patent Label (Not Illus.)	1	1	1	1
10363	Clutch Bracket	1	1	1	1	78011	Clutch Label (Not Illustrated)	1	1	1	1
10366	Push Nut	1	1	1	1	78013	Carburetor Cover Decal (Not Illus.)	1	1	1	1
10369	L. H. Axle	1	1	1	1	78016	Sno Shift Label (Not Illustrated)	1	1	1	1
10370	R. H. Axle Shaft	1	1	1	1	78034	Engine Decal - 5 H.P. (Not Illus.)	1	1	1	1
10372	Lockout Hub	1	1	1	1	78037	Engine Decal - 7 H.P. (Not Illus.)				
10373	Carburetor Cover (Not Illus.)	1	1	1	1	78038	Differential Lock Decal				
10374	Pin	1	1	1	1	83004	Spring	2	2	2	2
10375	Knob	1	1	1	1	83007	Spring	1	2	2	2
10382	Cover	2	2	2	2	83015	Spring	1	1	1	1
10389	Idler Arm	1	1	1	1						
10391	Tractor Frame	1	1	1	1						
10394	Fork Shaft	1	1	1	1						
10400	Outer Belt Guard	1	1	1	1						
11031	Spacer	1	1	1	1	A10985	Tire and Wheel Assembly consisting of: Req'd. per Wheel	2	2		2
12023	Bearing Support	2	2	2	2	71046	Tire (Carlisle)	1			
12086	Cap	1	1	1	1		OR				
12132	Idler	1	1	1	1	71049	Tire (Goodyear)	1			
A12999	Differential Assembly	1	1	1	1	71050	Tube	1			
54063	Ball Bearing	2	2	2	2	71052	Rim	1			
54074	Thrust Bearing	1	1	1	1						
54080	Ball Bearing	2	2	2	2	A12991	Tire and Wheel Assembly consisting of: Req'd. per Wheel			2	
55026	Bushing	2	2	2	2	71066	Tire	1			
55029	Bushing	2	2	2	2	71050	Tube	1			
55030	Bushing	2	2	2	2	71052	Rim	1			
55039	Flange Bushing	2									

# OUTDOOR POWER EQUIPMENT

by  
*Ariens*



**ROCKET VI TILLER**  
Two Speeds forward - Two Speeds reverse



**FAIRWAY LAWN MOWERS**  
5 & 6 H.P. Engines  
Recoil and Electric Start  
Models



**JET TILLERS**  
3, 4 & 5 H.P. Models



**300/III SNOW MOBILE**  
297 c.c. Engine  
Recoil and Electric Start Models



**SNO-THROS**  
4, 5, 6 & 7 H.P. Models



**MANORWAY TRACTOR**  
Recoil and Electric Start Models



**GRASS CATCHER**  
Available for all Mowers



**EMPEROR LAWN MOWERS**  
Recoil and Electric Start Models  
26" and 30" Mowers

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