

# OPERATING INSTRUCTIONS

# Ariens

## ⚠ 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.



## SNO-THRO

5 H.P.

7 H.P.

### AFTER SERIAL NUMBERS

MODEL 910965 - SERIAL NO. - 000001

MODEL 910962 - SERIAL NO. - 000001

MODEL 910954 - SERIAL NO. - 000001

MODEL 910942 - SERIAL NO. - 000001

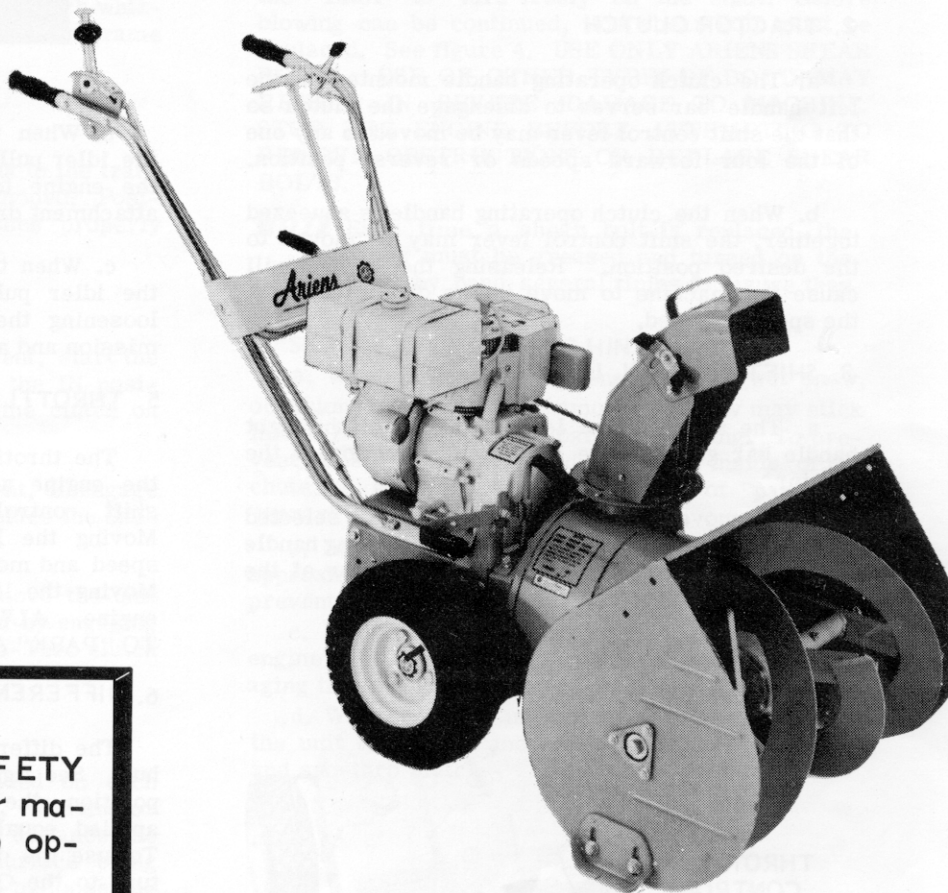
### SCOOP MODELS

MODEL 910995 - SERIAL NO. - 000001

MODEL 910955 - SERIAL NO. - 000001

## IMPORTANT

Be sure to read the OPEI SAFETY BOOKLET - packed with your machine - before attempting to operate your new Sno-Thro.



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.
2. A 90 day warranty will be extended on belts, tires, throttle controls, friction discs, or any other items subject to normal wear.
3. 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.

It is the consumer's responsibility for: (1) Normal maintenance as greasing, gear case lubrication, minor adjustments, etc. (2) Transportation of any Ariens product to and from the place the war-

ranty work is performed.

Ariens warranty WILL NOT APPLY to any products repaired or altered by anyone other than an Authorized Service Distributor or Authorized Service Dealer.

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 products supplied by the company.



# OPERATING INSTRUCTIONS — TRACTOR

**CAUTION** 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.

## 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.

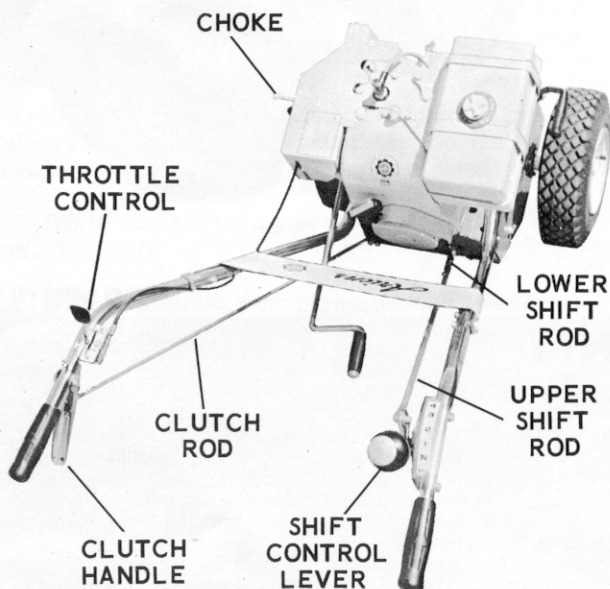


Figure 1

## 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.

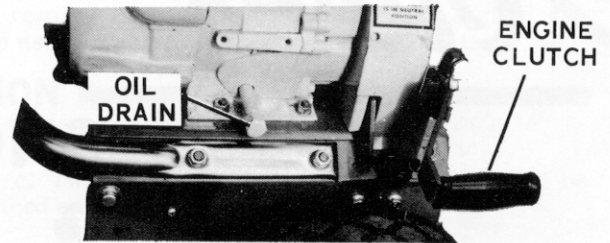


Figure 2

b. When the engine clutch 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 engine clutch 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. 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.

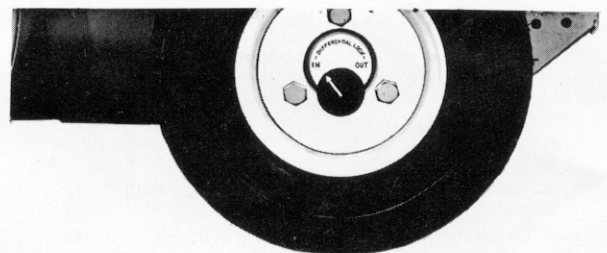


Figure 3

# OPERATING INSTRUCTIONS – SNO-THRO

## 1. ATTACHING

### a. Sno-Thro Attachment.

(1) Hook the notches in the lower portion of the Sno-Thro Attachment frame over the rod passing through the forward section of the tractor frame.

(2) Tip the two sections together, being sure the jaw clutch on the Sno-Thro Attachment is in the OUT position (counterclockwise).

(3) Insert and tighten the two 3/8-inch whiz-lock screws through the top of the tractor frame and into the Sno-Thro Attachment.

### b. Chute Control Rod.

(1) Fasten the chute control crank to the tractor handle bar with the hardware provided. Position the worm gear so that it meshes properly with the chute. Fasten securely.

## 2. OPERATION

a. To start the Sno-Thro Attachment, start the engine, place the Sno-Thro clutch in the IN position (clockwise) and engage the engine clutch on the tractor.

b. To stop the Sno-Thro Attachment, disengage the engine clutch on the tractor and place the Sno-Thro clutch in the OUT position.

c. The tractor may be used to move the unit with the Sno-Thro Attachment stopped by engaging the tractor clutch and leaving the Sno-Thro clutch in the OUT position.

## 3. RUNNERS

a. An adjustable runner is provided on each side of the blower housing (figure 4). Raising or lowering these runners controls the distance the scraper blade is held above the surface being cleared. Adjustment is accomplished by loosening the two nuts on each of the runners to the desired position and retightening the nuts. When blowing snow off concrete or other hard surfaces, these runners should be adjusted so that they are approximately 1/8-inch below the scraper blade. When blowing snow off gravel driveways or other gravel areas, adjust the runners so that they are 1-1/4-inches below the scraper blade.

b. In wet snow which packs easily, it may be necessary to remove the runners or turn them upside down so the scraper blade will scrape clean.

## 4. SCRAPER BLADE

A scraper blade (figure 4) is provided along the bottom edge of the blower housing. During operation, this blade runs along the surface being

cleared, directing the snow into the rotor and insuring a clean surface. After considerable usage, this blade may wear and require replacement. The blade can be replaced by removing the carriage bolts holding it to the housing.

## 5. SHEAR BOLT REPLACEMENT

Occasionally a small object may enter the rotor and become jammed in the blades. When this occurs, the shear bolts, located on the shaft on which the rotor is mounted, will break and allow the rotor to turn freely on the shaft. Before blowing can be continued, this shear bolt must be replaced. See figure 4. USE ONLY ARIENS SHEAR BOLTS. USE OF OTHER TYPES OF BOLTS MAY RESULT IN SEVERE DAMAGE TO MACHINE. STOP THE ENGINE BEFORE ATTEMPTING TO REMOVE OBSTRUCTIONS OR REPLACE SHEAR BOLTS.

**NOTE** Each time a shear bolt is replaced, the rakes must be greased and turned on the shaft by hand several times to insure they do not bind.

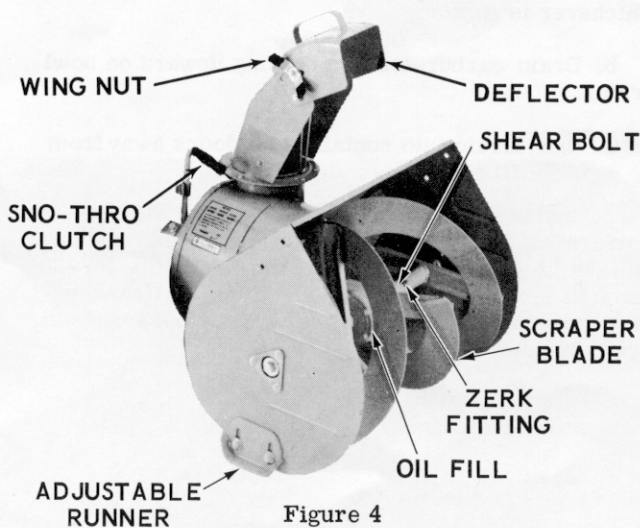
## 6. SNO-THRO OPERATING HINTS

a. When operating the Sno-Thro in wet snow, occasionally a sufficient amount of snow may stick inside the chute causing partial clogging. To prevent this, it is suggested that the inside of the chute be coated with a light layer of "paste" or "spray" wax.

b. After blowing snow, let the engine run for approximately 5 minutes to dry off the unit to prevent freezing of engine control parts.

c. Move throttle lever to park position after engine is stopped to lessen the possibility of damaging the control if freezing occurs.

d. When placing unit back in the garage, shift the unit to neutral and disengage the engine clutch and sno-thro clutch.



## SERVICE

### 1. GENERAL

Ariens dealers will provide any service which may be required to keep the Sno-Thro operating at peak efficiency. The Sno-Thro 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.

## 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. Use Ariens Moly Lithium grease.

b. The left hand wheel axle equipped with zerk fittings should be greased every 25 hours of operation. Use Ariens Moly Lithium grease.

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

### 3. BLOWER LUBRICATION

a. Grease the rake shaft periodically and each time a shear bolt is replaced.

b. Drain and refill the snow rotor gear case every 25 hours of operation. To drain and refill, remove drain plug and allow oil to drain. Tip machine back on handle bars. Remove filler plug. Pour the Ariens premium gear lubricant MP-90 into filler hole until it starts to run out of drain hole (approximately 5 ounces). Replace drain and filler plug.

## 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 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.

j. On the Sno-Thro, remove shear bolts and grease the rake shaft. Turn rakes on shaft several times by hand and replace shear bolts.