

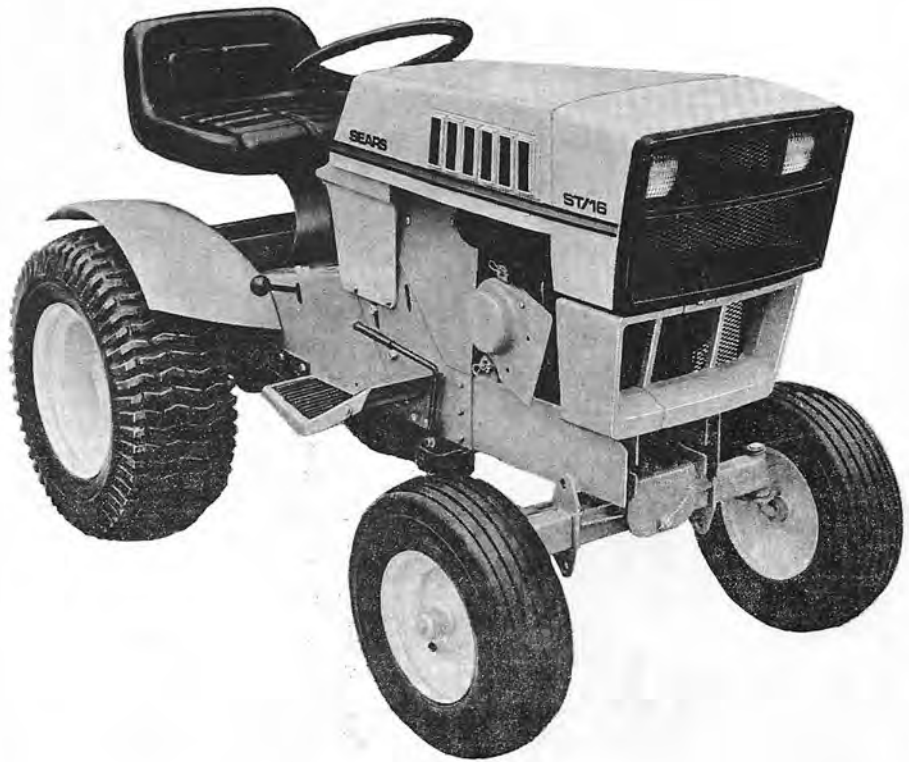
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Champion L-82

MODEL 143 630012

**Sears**

owners  
manual



MODEL NO.  
917.25740

## ST/16 GARDEN TRACTOR

- Assembly
- Operating
- Maintenance
- Repair Parts

Sears, Roebuck and Co., Chicago, Ill. 60607 U.S.A.  
and Simpsons Sears Limited, Toronto

PRINTED IN U. S. A.

## GUARANTEE

Your Tractor is guaranteed for one full year. If any defect in material or workmanship should appear during this time, simply contact our nearest Sears store or service center throughout the United States or Canada. We will make all necessary repairs, including parts and labor, at no charge to you. Tractors equipped with batteries: If battery proves defective and will not hold a charge, in exchange for the battery, we will: During the first 90 days-replace battery at no charge. After 90-days-replace battery, charging customer 1/12th of the price of the new battery for each full month from date of sale.

If the tractor is used for commercial or rental purposes, this guarantee applies for thirty days.

SEARS, ROEBUCK AND CO. - SIMPSON-SEARS LTD.

# SAFETY PAYS OFF

## IMPORTANT

### rules for safe operation

#### TRAINING

1. Read the Owners Manual carefully and fully familiarize yourself with the controls and proper use of your tractor as well as any attachment. Be prepared to stop the engine and powered attachment(s) on a second's notice. Only persons well acquainted with these Rules for Safe Operation should be allowed to use your tractor.
2. Do not allow children or young teenagers to start or operate your tractor.
3. Do not allow anyone in the area while operating your tractor. Keep the children and pets in the back yard while using it in the front yard. Keep a wary eye out for children or passers-by. Disengage the power to all attachments and stop the engine while they are in the vicinity of your tractor. Children, particularly, could get in the way of and injured by the tractor or an attachment.

#### PREPARATION

4. Do not operate the tractor when barefoot or wearing open sandals. Always wear substantial footwear, preferably steel-toed shoes. Also, do not wear loose fitting clothing that could get caught in moving parts.
5. Check your fuel supply before each use. Never remove the gas cap or fill the gasoline tank when the engine is running or while it is hot. When filling the fuel tank, leave space for

expansion, do not fill it to the brim and keep in mind that the heat of the sun can cause the gasoline to expand. Wipe off any spilled gasoline before starting the engine. Remember, gasoline is highly flammable and must always be handled with extreme care.

6. A tractor and all attachments are precision pieces of equipment, not playthings, therefore extreme caution must be exercised at all times.
7. Never attempt to operate a damaged tractor or attachment, always repair any damage before attempting to start or operate your tractor or attachment.
8. Never attempt to carry any passengers, their safety as well as your safety will be endangered.
9. Before attempting to start the engine of your tractor make sure the gear shift lever is in neutral and the power to all attachments is disengaged, then firmly apply the foot brake and be sure to release the parking brake. The parking brake must always be disengaged when you put the tractor in motion. If the tractor is operated with the parking brake engaged serious damage may result.
10. Each time before leaving the operator's seat, be absolutely sure the power to all attachments is disengaged, the parking brake is engaged, the gear shift lever is in neutral, the engine is shut off, the attachments and all moving parts have completely stopped and the ignition key is removed. Never leave the operator's seat with the engine or any powered attachment running. Always get on or off your tractor from the operator's left-hand side.

## rules for safe operation (cont.)

11. Always operate your tractor in daylight; dusk or dark - use your lights.
12. Operate your tractor at safe speeds on wet or slippery surfaces, where traction is unsure. Never at a speed which could cause a skid.

### OPERATION

13. Do not attempt to change the governor setting or overspeed the engine. The governor controls the engine speed and protects the engine from damaging, excessive speeds. Excessive engine speeds are dangerous.
14. When starting your engine on tractors equipped with a pull starter, stand firm and make sure your feet are well away from all powered attachments.
15. Never place your hands or feet in or under any powered attachment or near any moving parts while the tractor or any powered attachment is running.
16. Always disengage the power to all attachments, set the parking brake, shift into neutral, shut off the engine, make absolutely sure any powered attachment and all moving parts have completely stopped and remove the ignition key each time you dismount your tractor, even for a second. Children, yourself, other persons or pets may be endangered.
17. If your tractor or any attachment should inadvertently strike a foreign object, immediately disengage the power to the attachment, set the parking brake, shift into neutral, shut off the engine, make absolutely sure any powered attachment and all moving parts have completely stopped, remove the ignition key, disconnect the spark plug wire from the spark plug and keep the wire away from the plug to prevent injury or accidental starting, then thoroughly, inspect the tractor or attachment for any damage. Such damage must be repaired before restarting and operating the tractor or attachment.
18. If the tractor or any powered attachment should start to vibrate abnormally, place the control lever for powered attachments in the disengaged position, set the parking brake, shift into neutral, shut off the engine, make absolutely sure the powered attachment and all moving parts have completely stopped, remove the ignition key, disconnect the spark plug wire from the spark plug and keep it away from the plug to prevent injury or accidental starting, then check immediately for the cause of this vibration as vibration is generally a warning of trouble.
19. Before adjusting, cleaning, repairing or inspecting your tractor or any powered attachment, disengage the power to all attachments, set the parking brake, shut off the engine, make absolutely sure the powered attachments and all moving parts have completely stopped, remove the ignition key, disconnect the spark plug wire and keep it away from the spark plug to prevent injury or accidental starting.
20. Do not run the engine indoors because the engine exhaust fumes contain carbon monoxide which is a tasteless, odorless, deadly poison.
21. Never operate your tractor upon a terrace, slope or incline that is too steep to preserve good stability and control in order to prevent tipping or sideways upsets. Always operate a tractor up and down such an incline, at a slow speed, do not operate it across. Always exercise extreme caution when changing direction on inclines. Never attempt to operate your tractor on steep terraces, slopes or inclines with more than a 15 degree slope.
22. Do not start or stop suddenly when going up or down a terrace slope or incline. If it is necessary to stop your tractor upon an incline, do so firmly to prevent the tractor from picking up speed during declutching and before reaching the brake position. Do not shift gears while going up or down inclines. Choose a gear low enough to negotiate the incline without stopping and shifting gears. To reduce the speed of the tractor on an incline move throttle lever to slow.
23. Never attempt to operate your tractor or any attachments without the proper shields, guards, plates or other protective devices in place and fully functioning.
24. Before and while attempting to back up, look carefully to be absolutely sure that children, bystanders, pets, foreign objects or obstacles of any kind are not behind you.
25. Never allow anyone near the tractor or any attachment while they are operating.
26. Be sure to exercise special care when operating your tractor around fixed objects in order to prevent the tractor or any attachment from striking them. Never deliberately run a tractor or an attachment into or over any foreign objects.
27. Use care when pulling loads. Use only approved drawbar hitch points. Limit loads to those you can safely control. Do not turn sharply. Use counterweight or wheel weight(s) when suggested in the attachment Owners Manual.
28. Never shift gears to reverse your direction of travel until the tractor comes to a complete stop.
29. Always stay alert to avoid holes in the terrain and other hidden hazards. Tipping or sideways upsets can happen easily in holes or ditches. Use low gear on unfamiliar ground. If the tractor or any attachment becomes stuck in a hole, always disengage the power to all attachments before attempting to free it.
30. The use of any precision piece of power equipment requires your full concentration and attention to the job being done in order to prevent injury or damage.
31. Always disengage the power to all attachments when not actually in use such as when crossing a gravel drive, sidewalk or roadway or when transporting the tractor.



## rules for safe operation (cont.)

32. Watch out for traffic when crossing or near roadways.

### MAINTENANCE

33. Keep all nuts, bolts and screws tight in order to be sure that the tractor and any attachment is in safe working condition. Be sure the brake and all powered attachment controls are always in proper adjustment and repair. Check the attachment and engine mounting bolts at frequent intervals for proper tightness. Before performing any maintenance, always disengage the power to all attachments, set the parking brake, shift into neutral, shut off the engine, make absolutely sure the powered attachment and all moving parts have completely stopped, remove the ignition key, disconnect the spark plug wire from the spark plug and keep it away from the plug to prevent injury or accidental starting. The only exception to this rule is carburetor adjustment, page 12.

34. Keep the engine free from accumulations of grass, leaves or excessive grease as these accumulations are combustible and could result in a fire. Always keep your tractor and all attachments in good operating condition and make sure that all shields, guards, plates and other protective devices are in place. Give your tractor and all attachments the regular maintenance they need and have a competent serviceman make a thorough inspection of them at least once a year.

35. Do not store your tractor for prolonged periods (more than 30 days) with gasoline in the tank. Do not store your tractor or a gasoline container inside a building where fumes may reach an open flame or spark, they should be stored in a cool, dry place. Be sure to let the engine cool before storing in any enclosure. Always use an approved gasoline container for storing gasoline and keep your tractor, attachments and gasoline container in locked storage to prevent children from playing and tampering with them.

## introduction

This tractor has been designed, engineered and manufactured to give you the best possible dependability and performance.

Should you experience any problem you cannot easily remedy, please contact your nearest Sears, Roebuck or Simpsons Sears, Ltd. Store. They have well qualified, competent trained technicians and the proper tools to service or repair this unit.

It is important that the operator ALWAYS OBSERVE THE "RULES FOR SAFE OPERATION" as well as other instructions contained in this Manual. We have provided this Manual to help you operate your Tractor with utmost efficiency. We urge you to study this Manual so you will understand your new Tractor thoroughly before operating it. We suggest that you take care of your Manual so that it will be available for future reference should you need it.

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## assembly instructions

A letter in parenthesis in the following instructions refers to an arrow in the adjoining Figure (illustration), except when otherwise stated. When R.H. (Right Hand) or L.H. (Left Hand) is used, it should be understood to mean as if one were seated on the Tractor seat facing forward.

1. Remove battery. Cut banding holding Tractor to bottom of crate.
2. Your Tractor has been completely assembled at the factory except, to fill, charge and install the battery. The battery was shipped dry. Instructions are given on page 4 for filling, charging and installation.
3. Your Tractor was lubricated at the factory however, we suggest you follow the Lube Chart on page 10 before operation.

4. Tires were over-inflated for shipping purposes. Reduce air pressure to 12 lbs. in front tires and 6 lbs. in rear tires. This will improve traction and give you the comfortable ride you will want.
5. A plastic bag of parts was shipped with your Tractor and should be opened at this time. It will contain the following items:

- 1 - Battery Clamp
- 2 - Wing Nuts
- 2 - Battery Bolts
- 2 - Flat Washers

(These items hold battery in position on Tractor. They are used in steps 3 and 5, page 5).

- 2 - Hex Nuts

(They secure ground strap and positive cable to battery. They are used in steps 6 and 7, page 5).

- 2 - Ignition Keys

(We suggest one key be removed from the wiring and kept in a safe place. Position the second key in the Tractor ignition).

## fill and charge battery

**CAUTION: DO NOT ASSEMBLE BATTERY TO TRACTOR UNTIL BATTERY HAS BEEN FILLED AND CHARGED.**

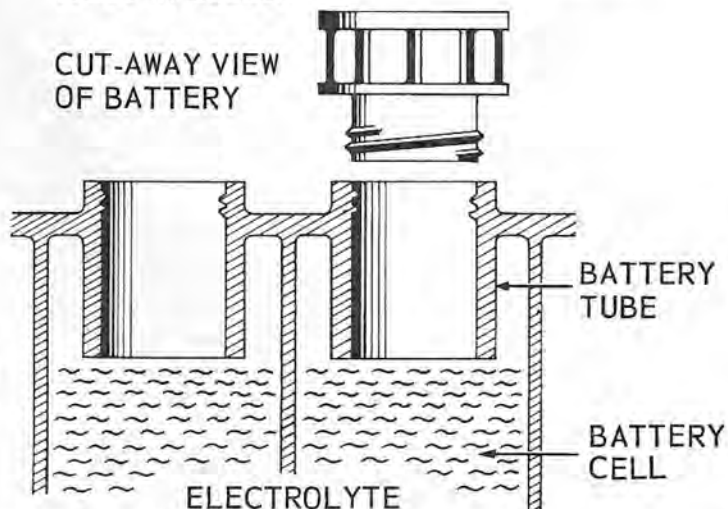
FILL BATTERY AS SHOWN  
DO NOT OVERFILL --  
CORRECT LEVEL IS BOTTOM OF  
TUBES IN CELLS.



FIG. 1

1. Fill battery with electrolyte and charge battery as outlined in instructions in battery container. NOTE: After filling cells, let battery stand for thirty (30) minutes. Recheck acid level, add more electrolyte if necessary, then charge battery at a rate not exceeding three (3) amperes for about 2½ hours. CORRECT LEVEL IS BOTTOM OF TUBES IN CELLS.

CUT-AWAY VIEW  
OF BATTERY



2808R-11.20. 72 FIG. 2

There will be an amount of electrolyte (acid) in the container after battery is filled. This should be disposed of and not used at a later date to refill Tractor or any other battery. Using a common 5 gallon polyethylene garbage can or pail, fill with a minimum of four inches of water. Avoid spillage on person or clothing, add left over electrolyte to water. Then sodium bicarbonate (baking soda) should be added and the mixture stirred or agitated until the addition of bicarbonate no longer causes foaming. Agitate with a wooden or plastic stake or stick only. It will now be safe to dispose of this down a regular sewage system. Since the product is well neutralized, no criticism from authorities should result.

It is preferable, where permissible, to burn the empty acid pak to prevent possible further contact with acid.

## battery installation

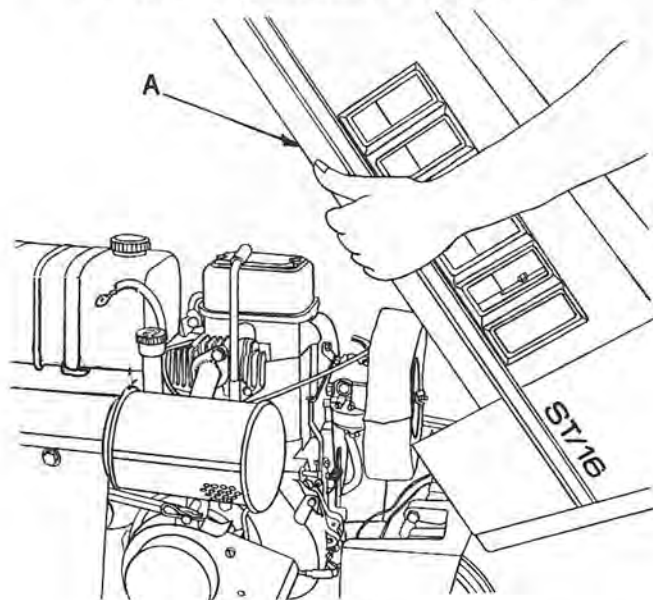


FIG. 3

2. To lift hood assembly (A), grasp each side of hood at rear and pull outward and upward. Lift hood to its extreme forward position.

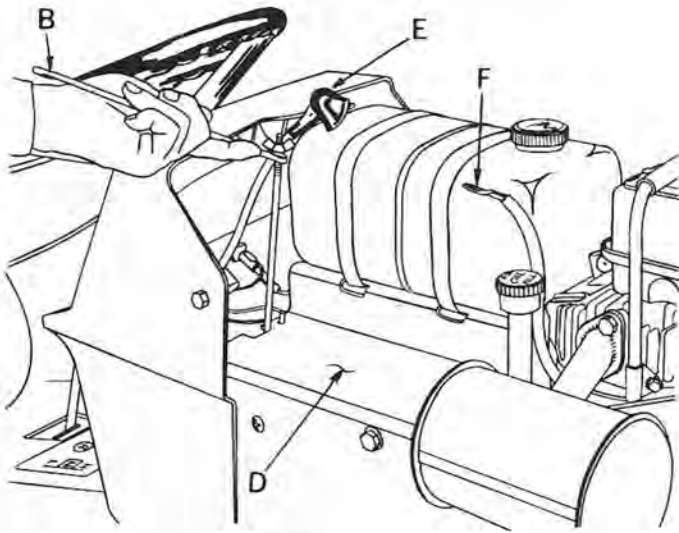


FIG. 4

3. Assemble clamp (B), to one of two battery bolts (C). Flat washer and wing nut above clamp as shown. Hook the bolt into rear of battery support (D). Turn clamp to the side as shown to allow positioning of battery.

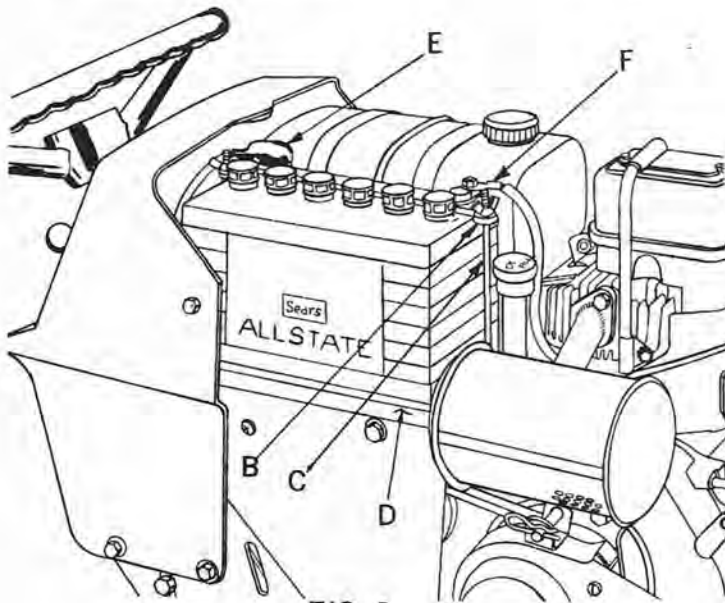


FIG. 5

4. Slide battery into position as shown, with terminals to center of Tractor.
5. Hook the battery bolt (C) into the front of the battery support (D). Assemble clamp (B), to bolt (C), with the remaining washer and wing nut. Tighten both wing nuts securely.
6. Connect cable and cover (E, Fig's. 4 and 5), to plus (+) terminal. Tighten with hex nut securely.
7. Connect ground cable (F, Fig's. 4 and 5), to negative (-) terminal. Tighten with hex nut securely.

### seat position

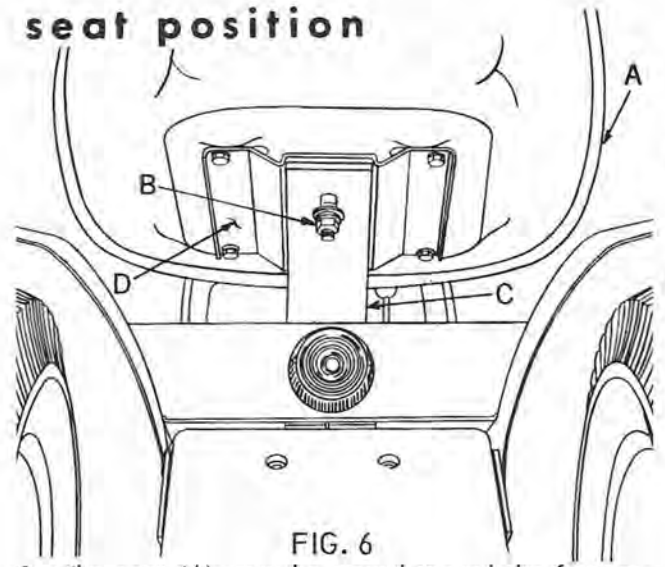


FIG. 6

1. The seat (A), may be moved toward the front or rear to give the most comfortable and safe operating position. To move the seat, loosen the nut (B), beneath the seat spring (C). Slide the seat to the position desired. Tighten nut securely. Make sure that the seat spring (C), has not twisted out of alignment with the seat plate (D).

### instructions before operating controls

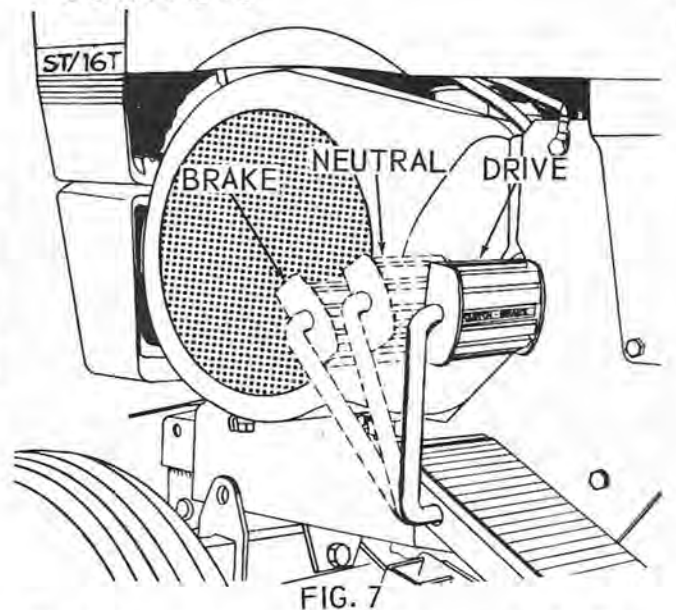


FIG. 7

The following controls are used to operate the Tractor:

1. Clutch and brake foot pedal is located on the left side foot rest. The foot pedal operates a combination brake and drive clutch. There are three positions of operation on the foot pedal.
  - a. The clutch is in DRIVE position when the pedal is all the way out (when the foot is removed from the pedal).
  - b. The clutch is in NEUTRAL when the pedal is depressed half way or more.
  - c. The BRAKE is on when the pedal is depressed all the way forward.



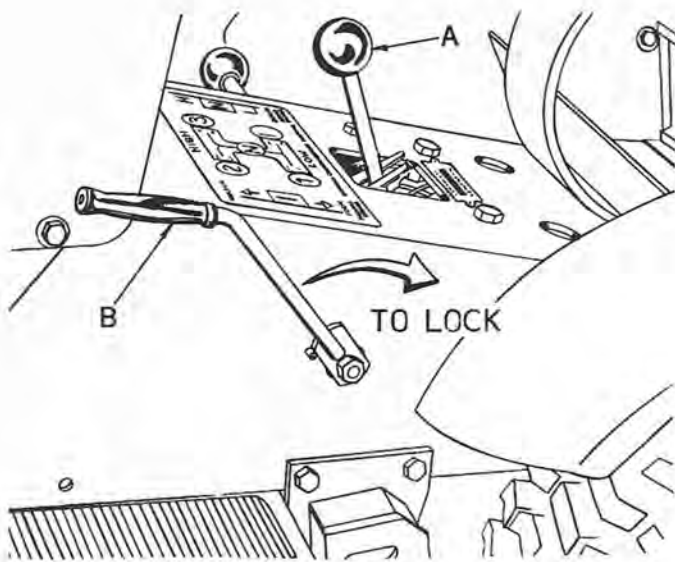


FIG. 8

2. The transaxle (transmission) gear shift lever (A), is located at front, center of seat.
  - a. The gear shift lever selects the FORWARD, NEUTRAL and REVERSE gears.
3. To engage parking brake, pull park brake lever (B), to rear (lock) position. To release parking brake, push lever (B), forward.

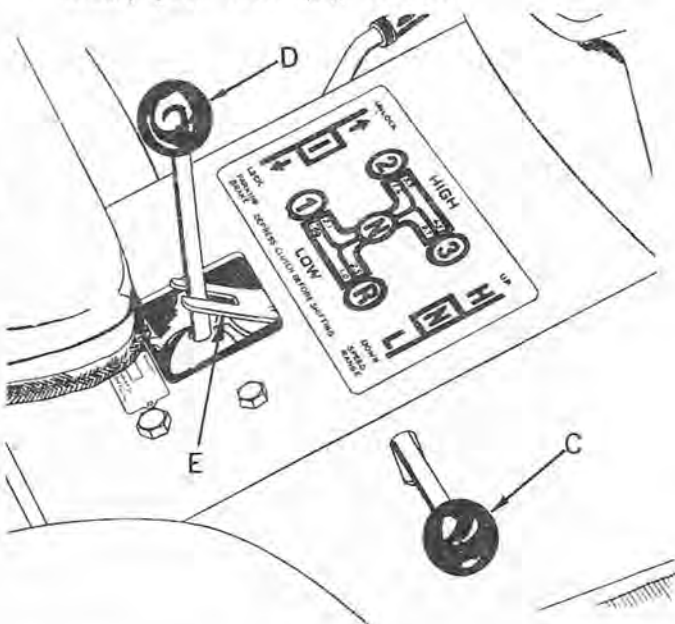


FIG. 9

4. The high-low range shift lever (C), is located on R.H. side of chassis, just forward of R.H. rear fender. The high-low range lever has 3 positions, up for high-range, center for neutral and down for low-range. There are 2 neutral positions in transmission, one on the gear shift lever (D), and one on the high-low range lever (C). Both levers must be engaged for Tractor to operate. Place both levers in neutral for pushing of Tractor or when Tractor is being towed. Refer to "Towing Tractor", page 7.

## fuel and lubricant

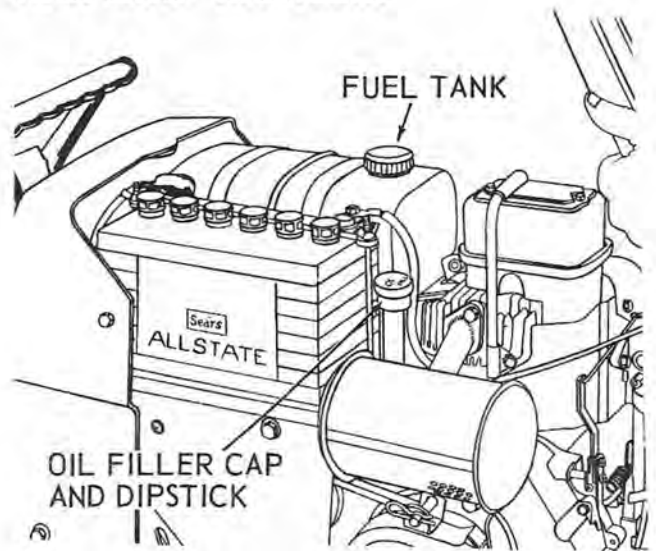


FIG. 10

1. Raise hood.
2. Engine crankcase is shipped with oil ready for use. However, check oil level before starting. If necessary, add oil to bring oil level up to full mark on the dipstick. Dipstick must be screwed in tight for checking oil level, and tractor should be level. NOTE: Do not fill above full mark on dipstick. Use Allstate S.A.E. 30 oil or equivalent for summer use. For winter use, below 32°, use Allstate Multi-grade oil S.A.E. 10W-30, 10W-40 or equivalent. Nothing should be added to the recommended oil. Make sure the oil used is a high quality detergent oil classified "for service MS, SD, SC or SE. Because of recent changes in the classifications, the oil container may show one or a combination of these recommended classifications. For extreme cold, below 0° F., use S.A.E. 5W-20.
3. Fill fuel tank with a good grade of fresh, CLEAN, regular gasoline. Wipe off all spilled fuel and oil.

## operating instructions

### how to start and stop

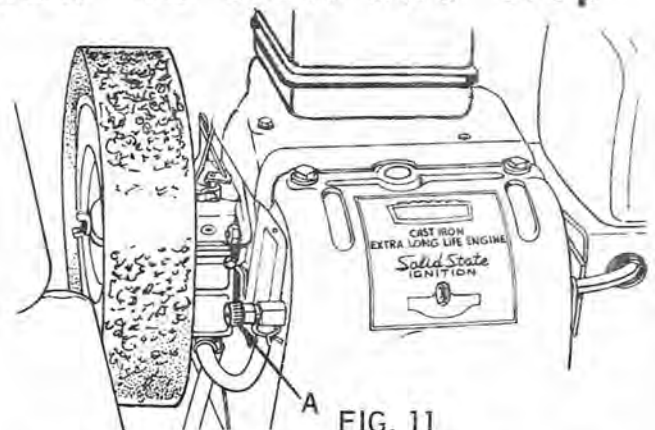


FIG. 11

1. Check to see that gasoline shut-off valve (A), is turned all the way open - counter-clockwise. NOTE: Turn by hand only. Close shut-off valve after each days use.

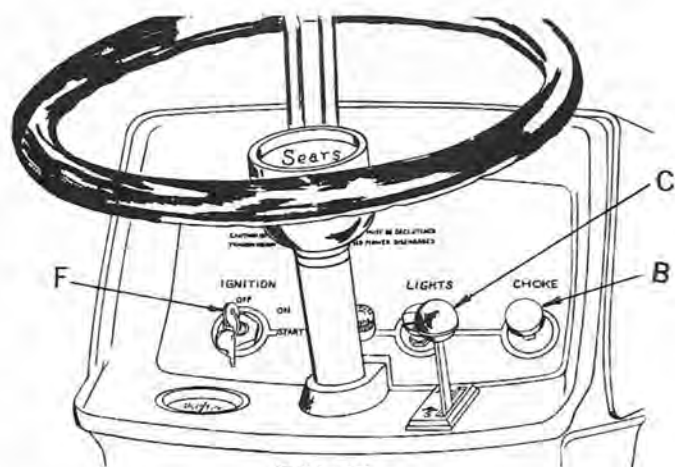


FIG. 12

2. Pull out choke control (B), to full choke position to start in cold weather.
3. Advance throttle control lever (C), to about 1/2 throttle.
4. This Tractor is equipped with two safety switches. One switch is located on the gear shift lever (D, Fig. 9, at point E). The other switch is located on attachment clutch lever (F, Fig. 18). The gear shift lever must be in neutral (center position). The attachment clutch lever must also be in disengaged (out), position for engine to start. Turn key (F), in ignition-starter switch clockwise to engage starter. When engine starts, release key. After engine starts, push in choke control (B), as engine warms up. Let engine warm up before applying load. CAUTION: Do not run starter continuously for more than 30 seconds at a time. If after several attempts, engine does not start, move throttle control (C), to fast position. Wait two minutes and try again.

NOTE: If attachment clutch lever (F, Fig. 18), interferes with attachment to be used, remove handle. CAUTION: First move handle to "OUT" position, then remove nut and handle. Save for use with attachment for which it is required.

5. To stop engine, turn ignition key (F), in a counter-clockwise direction to OFF position. Key should be removed to prevent unauthorized operation.

## safe operating

1. Try your Tractor in a large, open space. Learn to start, stop and reverse.
2. Start the engine and put the throttle lever at about 1/3 throttle. Push down on foot pedal, move gear shift lever and range shift lever to speed desired. Release foot pedal slowly, and Tractor will start to move. After foot pedal is fully released (clutch engaged), move throttle lever to fast position. If ground travel is too fast, reduce throttle lever to about 1/2 throttle, depress foot pedal and shift to a slower ground travel speed. Always select a ground travel speed that will suit attachment being used and not overload the engine.
3. Do not shift gears while Tractor is moving.

4. To stop Tractor, push foot pedal all the way down and reduce throttle lever to about 1/2 throttle. Disengage power to attachment. Move gear shift lever to neutral, set parking brake lock and release foot pedal. Always check to make sure brake lock will hold Tractor secure. Shut-off and remove key from switch. This will prevent unauthorized operation. Keep key in a safe place out of reach of children. Never leave engine running with Tractor unattended.
5. Do not operate the Tractor in high gear going down hill. Do not turn sharp corners while going down hill. If it is necessary to stop Tractor while going down hill, do so quickly to prevent Tractor from picking up speed during the declutching to brake position.  
NOTE: The engine produces considerable braking action when throttled back to idling speed without declutching. This procedure is recommended before applying brake.  
DO NOT OPERATE TRACTOR ACROSS SLOPES. DO NOT OPERATE TRACTOR UP OR DOWN SLOPES WITH MORE THAN A 15 DEGREE SLOPE.
6. Do not shift gears while going up steep hills. Choose a low enough gear to climb hill without stopping and shifting gears. If it is necessary to stop while going up hill, do so quickly to prevent Tractor rolling backward. Before starting Tractor in motion going uphill, use one of the lowest gears. Reduce engine speed and engage clutch gradually to prevent Tractor from "rearing up".
7. Upsets can happen easily in ditches. Stay alert for holes or other yard hazards.
8. If tractor becomes mired in a hole, try to back out rather than driving forward.

## towing tractor

1. Place gear shift lever and range shift lever in neutral position. Tractor can then be towed at a reasonable safe speed not faster than 6 miles per hour.

## engine pulley grooves to use for your various attachments

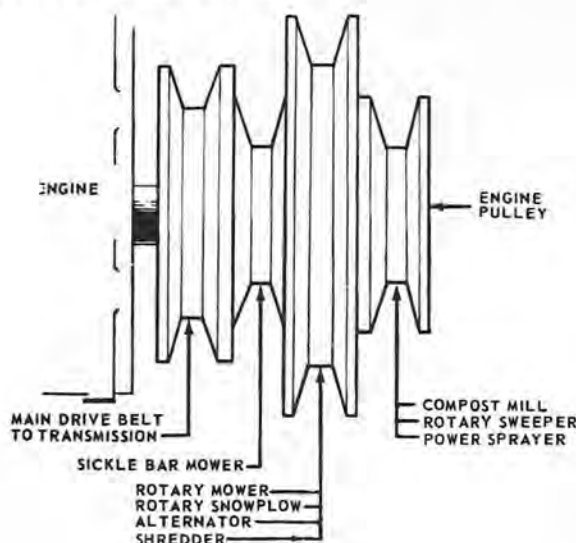


FIG. 13



# maintenance instructions air cleaner

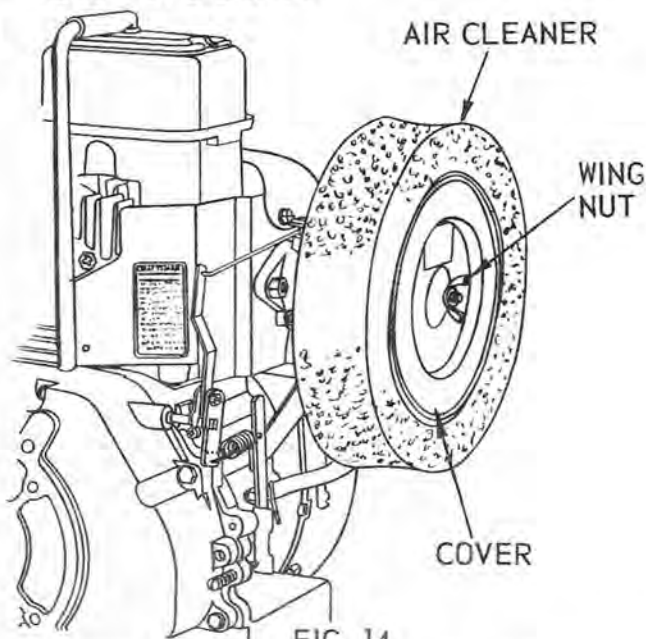


FIG. 14

Your engine is equipped with a dual type air cleaner. A dry type inner element and an outer foam filter pre-cleaner. The outer foam filter should be periodically removed and cleaned (at least every 25 hours of operation and more frequently under extremely dusty conditions), to maintain maximum engine performance.

1. Remove outer foam filter (no disassembly necessary), and wash in water and detergent.
2. Remove excess water by squeezing as a sponge and allow to dry thoroughly.
3. Coat foam filter with three (3) tablespoons of S.A.E. No. 30 engine oil. Knead into foam filter to spread. Wring excess oil from foam filter.
4. Re-install foam filter.



FIG. 15

Under extremely dusty conditions or if engine runs erratic after completing above procedures, the inner element must be replaced.

1. Remove wing nut and cover.
2. Separate inner element from outer foam filter pre-cleaner.
3. Replace inner element.
4. Re-assemble.

It is recommended that the inner element be replaced yearly.



FIG. 16

**NEVER RUN YOUR ENGINE WITHOUT AIR CLEANER COMPLETELY ASSEMBLED AND IN PLACE ON THE ENGINE.**

**NOTE:** Your engine carburetor breathes through the air cleaner. Your engine with a dirty air cleaner will have a very difficult time trying to do the same job as an engine with a clean one. If your air cleaner is only 50% efficient, it will reduce the efficiency of the engine by at least 1/3 of its horsepower rating. A dirty air cleaner will cause a premature buildup of carbon in the exhaust and cylinder area. There will also be a noticeable loss of power. The spark plug will also foul prematurely. It also raises the operating temperature of the engine and you can expect higher maintenance costs and a shorter engine life. **THE NUMBER ONE STEP OF YOUR MAINTENANCE PROGRAM SHOULD BE: KEEP THE AIR CLEANER CLEAN.**

**THIS TRACTOR HAS AN AIR COOLED ENGINE. AIR MUST BE ABLE TO CIRCULATE FREELY AROUND THE ENGINE, THROUGH THE STARTER SCREEN AND AIR CLEANER, AND OVER THE FINS OF THE CYLINDER BLOCK. KEEP THESE AREAS FREE OF ACCUMULATED DIRT AND TRASH OR THE ENGINE WILL OVERHEAT AND RESULT IN DAMAGE TO MOVING PARTS.**

## starter air screen

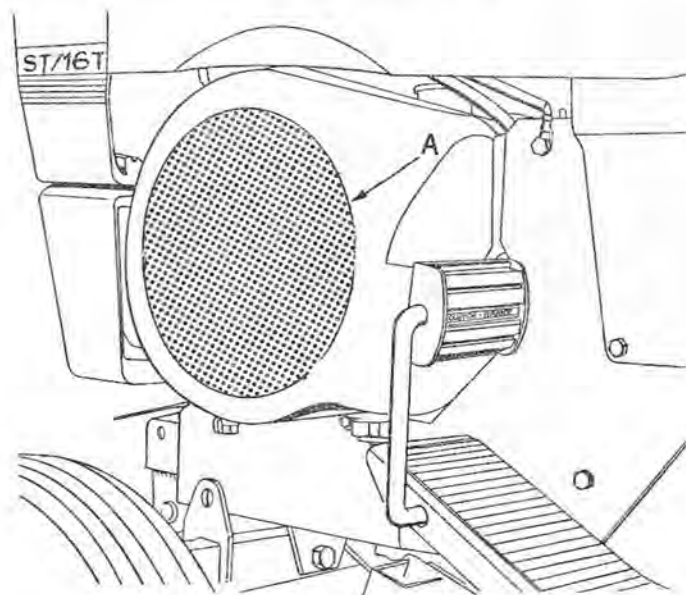


FIG. 17

The starter screen guard (A), and the starter rotating screen (located directly behind the starter screen guard), are designed to keep grass, chaff and leaves from entering the cooling system. They must be cleaned periodically. The cleaning of the screens will vary with the conditions in which the Tractor is used. They should not be allowed to become dirty. This would interfere with the cooling of the engine. Remove the screen guard (A), clean it and the starter rotating screen regularly.

## engine lubrication

STOP ENGINE AND WAIT SEVERAL MINUTES BEFORE CHECKING OIL LEVEL.

BE SURE TRACTOR IS ON LEVEL GROUND AND ENGINE IS STOPPED BEFORE CHECKING OIL LEVEL.

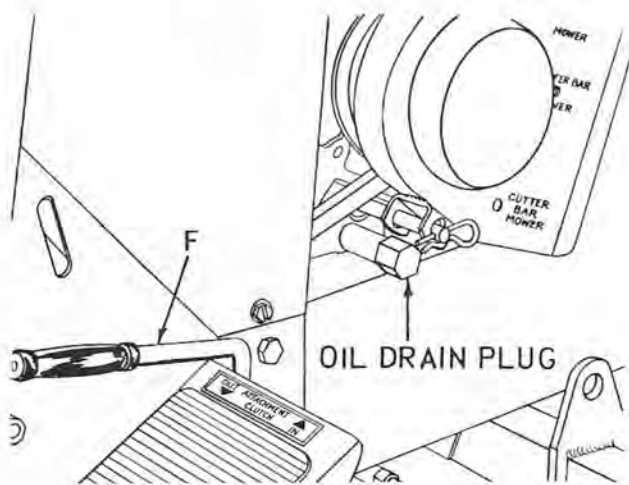
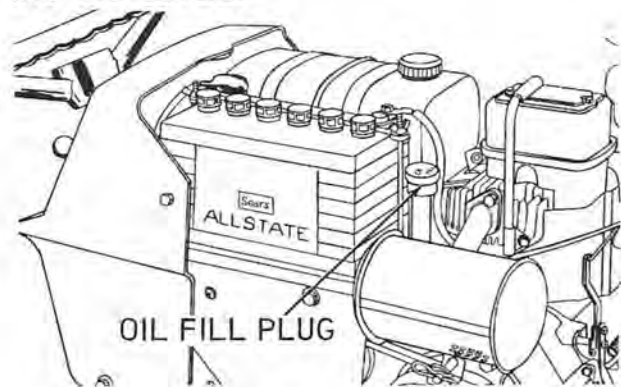


FIG. 18

1. Change oil in crankcase after FIRST 2 HOURS of operation. Engine should be warm when oil is changed.
2. To drain oil, unscrew oil drain plug at lower R. H. side of engine. Catch oil in suitable container.
3. Refill engine crankcase with oil as instructed under "Fuel and Lubricant", page 6. Capacity 3 pints. Check oil level after each 8 hours of operation and add oil, if necessary, to bring to correct level on dipstick.
4. After first oil change, oil should be changed after each 25 hours of operation. In extremely dirty or dusty conditions, change oil every 15 hours of operation.

**NOTE: THE BEST TIME TO DRAIN OIL IS AT THE END OF A DAY'S OPERATION AT WHICH TIME THE OIL IS HOT AND ALL DIRT AND FOREIGN MATERIAL IS SUSPENDED IN THE OIL.**

**IMPORTANT: BE EXTREMELY CAREFUL TO PREVENT DIRT OR FOREIGN PARTICLES FROM ENTERING THE ENGINE CRANKCASE OR TRANSMISSION WHEN CHECKING OIL LEVEL OR CHANGING OIL.**

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## transaxle (transmission) lubrication

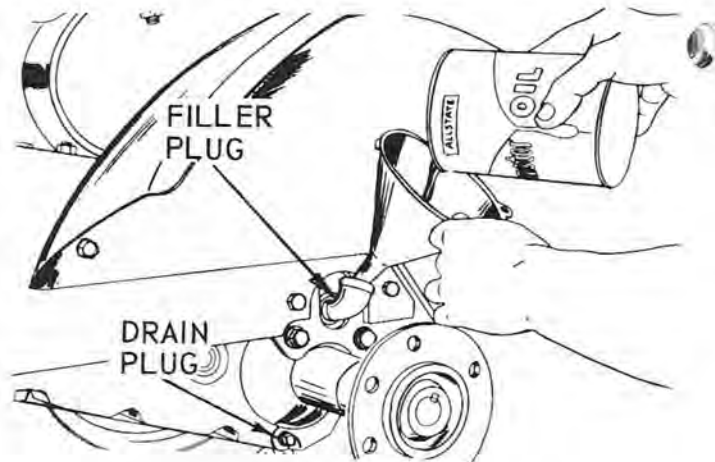


FIG. 19

Rear wheel is removed for illustrating.

1. Check oil in transaxle every 50 hours of operation. To check oil level, remove filler plug from transaxle. Oil level should be even with this plug.
2. Change oil in transaxle after 500 hours of operation. To drain, remove drain plug and catch oil in suitable container.
3. To fill transaxle, use 5 qts. of Allstate S.A.E. 30 motor oil for service MM or MS or equivalent. Fill through filler plug as shown.

**LOOK  
BEFORE  
BACKING...**



# Lubrication chart

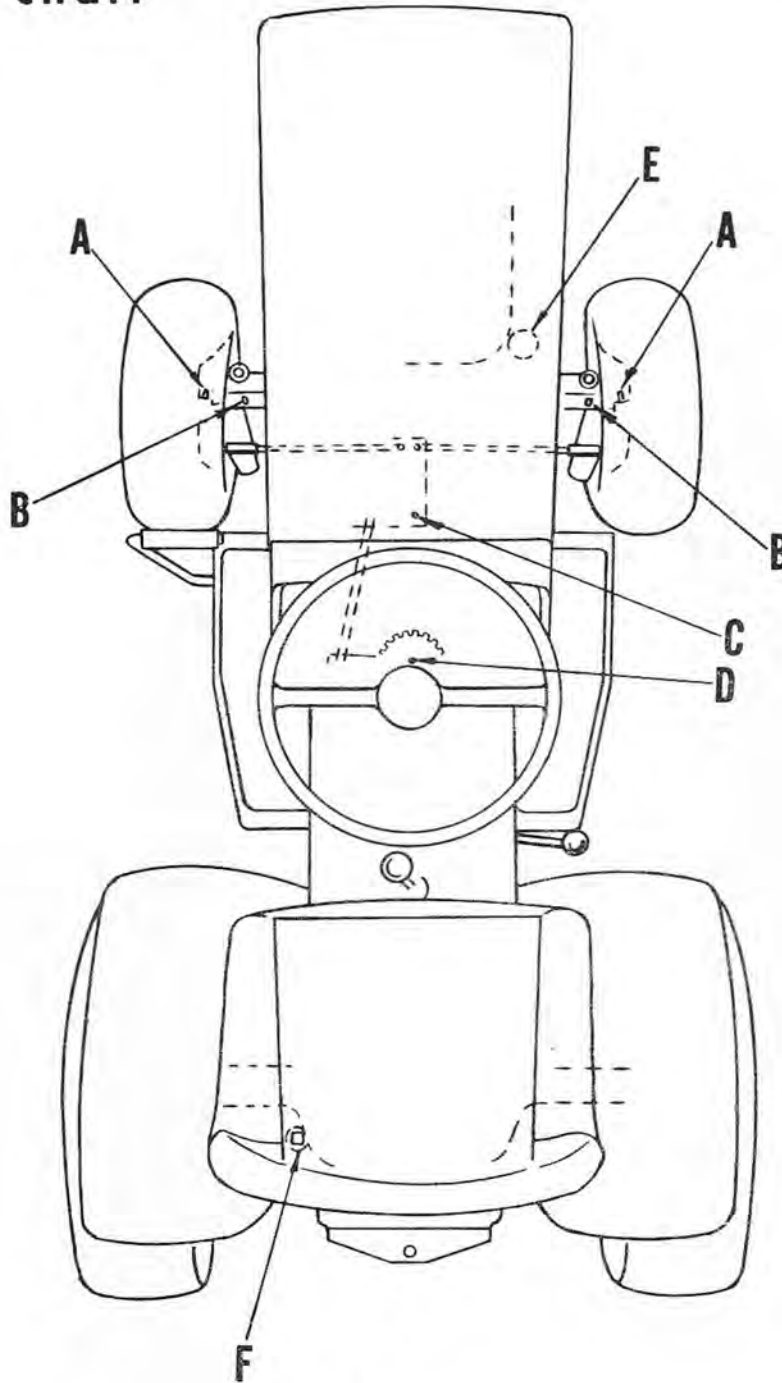


FIG. 20

There are only 6 grease fittings on your tractor. Give each grease fitting 2 shots of grease every 5 hours of operation. Use Sears All-purpose Lithium gun grease or equivalent.

A - Front Wheels (2 fittings, both sides)

B - Front Spindles (2 fittings, both sides)

C - Steering Bell Crank

D - Steering Gear Sector and Arm

E - Check oil in engine crankcase at least every 8 hours of operation. Change oil every 25 hours of normal operation. In extremely dirty or dusty conditions, change oil every 15 hours of operation.

F - Check oil in transaxle (transmission) every 50 hours of operation. Change oil in transaxle every 500 hours of operation.

-- Apply several drops of oil to all pivot points every 5 hours of operation.



## transaxle (transmission) drive belt adjustment

A new belt will stretch after the first few hours of operation, then after initial stretch, adjustment is seldom necessary.

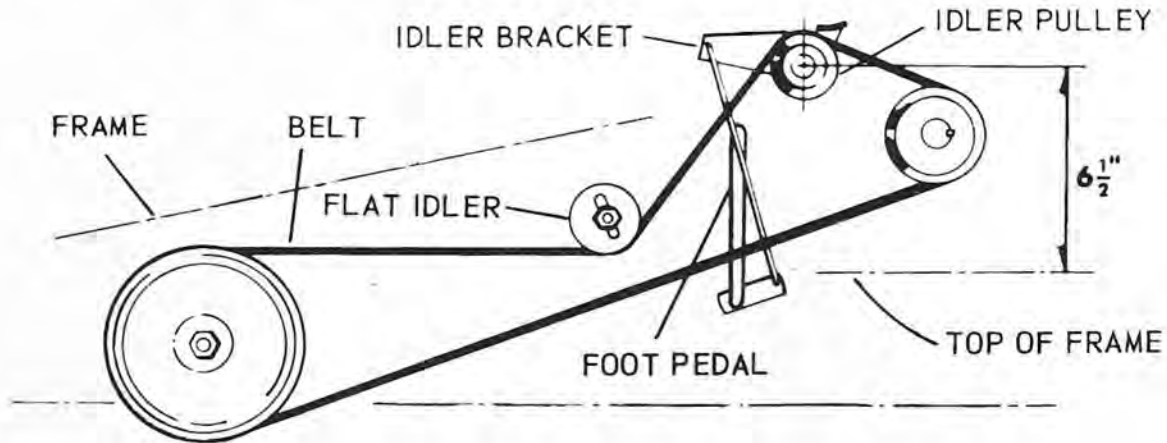


FIG. 21

1. Loosen bolt in flat idler and frame, and push idler and bolt down in slot of frame until center of idler pulley on idler bracket (just back of engine), is  $6\frac{1}{2}$  inches above frame as shown. Tighten bolt in flat idler and frame securely.

NOTE: Foot pedal should be in vertical or just back of vertical position with clutch engaged. New belts will stretch after a few hours of operation, then after initial stretch, adjustment is seldom necessary. Adjust belt after first 10 hours of operation.

## brake adjustment

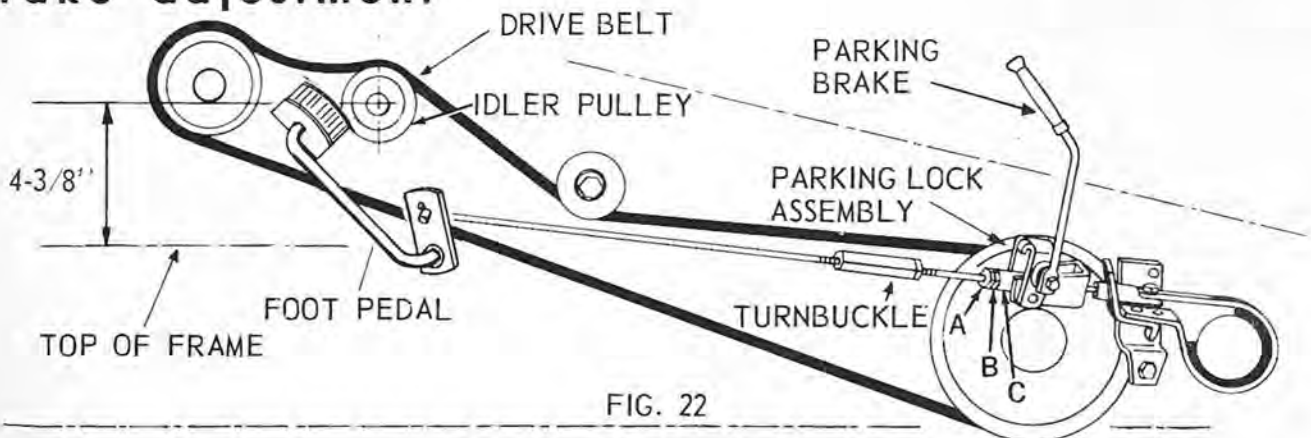


FIG. 22

To adjust brake, loosen nut back of turnbuckle and turn turnbuckle (clockwise when standing in front of tractor), one turn at a time until foot pedal has about 4 inches of travel from clutch engaged to full brake position, or center of idler is about  $4\frac{3}{8}$  above frame as shown.

Tab on idler bracket will deflect belt slightly. Tighten jam nut against turnbuckle to lock turnbuckle in position. Keep brake properly adjusted especially in hilly terrain.

## park brake lock adjustment

To tighten parking brake loosen hex nuts (A and B). Rotate parking lock lever to lock position. By hand press foot pedal forward to full brake position. While holding brake pedal forward tighten nut (B), against bushing (C), finger tight. Release foot pedal, and turn nut (B), back against bushing (C), two additional turns. Tighten nut (A), against nut (B), to lock in position. Place high-low lever in neutral position. Pull parking lock lever back (lock) position. Rear wheels of tractor should slide when tractor is pushed.

## carburetor adjustment

CAUTION: WHEN FOLLOWING STEPS 1 THRU 5 BELOW, USE EXTREME CARE TO AVOID CONTACT WITH MUFFLER OR MOVING PARTS TO PREVENT INJURY. ALSO, BELT GUARD MUST BE IN PLACE..

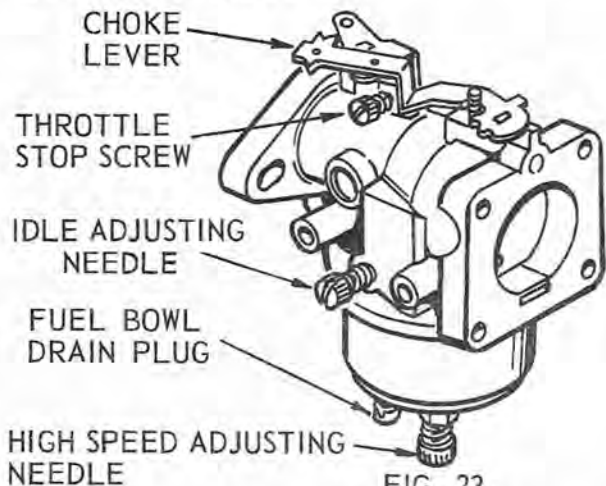


FIG. 23

DO NOT MAKE UNNECESSARY ADJUSTMENTS. FACTORY SETTINGS ARE CORRECT FOR YOUR TRACTOR. IF ADJUSTMENTS ARE NEEDED, PROCEED AS FOLLOWS:

1. High speed adjustment is pre-set at the factory (1¼ turns open) and it should not be necessary to re-adjust.
  2. Start engine.
  3. With throttle control lever in "F" fast position, adjust "Idle Adjusting Needle" one eighth (1/8) turn at a time clockwise or counterclockwise until engine runs smoothly. (1½ turns open).
  4. Move throttle control lever to "S" slow position, adjust "Throttle Stop Screw" to obtain correct idle speed. If necessary, re-adjust "Idle Adjusting Needle" by turning clockwise or counterclockwise as in step 3 until engine idles smoothly.
  5. Allow several seconds between each adjustment for engine carburetor to react to the new setting.
- CAUTION: Never attempt to change maximum engine speed. This is preset at the factory and can only be changed by a qualified Sears Service Technician who has the necessary equipment.

## spark plug

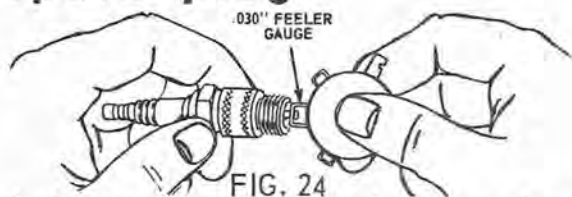


FIG. 24

1. Remove the spark plug each time you change oil and inspect it.
  - a. The electrodes should be kept clean and free of carbon. The presence of carbon or excess oil will greatly hinder proper engine performance.
  - b. If possible, check the spark plug gap (area between electrodes), using a wire feeler gauge. This specification should be .030.

2. If you need a new spark plug refer to "Repair Parts" section for proper replacement.
3. Before installing spark plug, coat threads lightly with graphite grease if possible, to insure easy removal next time the spark plug needs inspection.

## tires

Keep tires inflated to 12 pounds of air pressure in front; 6 pounds in rear.

Avoid stumps, stones, deep ruts and other hazards. Cuts in tires should be repaired immediately as neglect decreases the tire life. Keep tires free from oil and grease as both destroy rubber. After using the Tractor for spraying--insect control work--wash off any chemicals that may be on the tires.

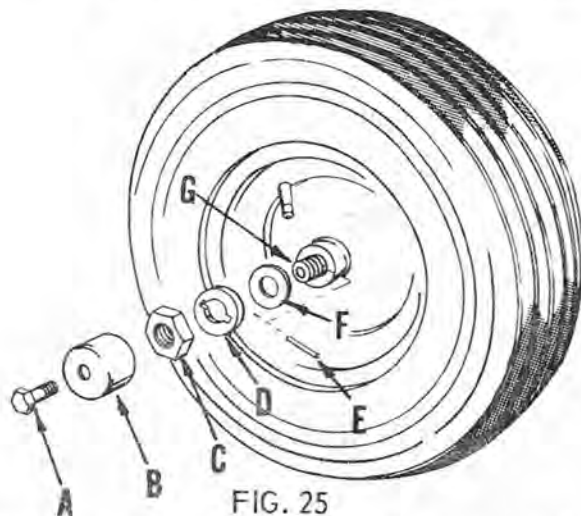


FIG. 25

To remove a front tire and wheel, proceed as follows:

1. Block up Tractor rocker bar (front axle) securely or use a Sears Tractor Jack.
2. Remove hex bolt (A), and dust cap (B).
3. Remove gripco nut (C), wear washer (D), pin (E), and washer (F), from spindle shaft assembly (G).
4. After tire is repaired, reverse above procedure for reassembly.

A rear wheel and tire is removed by removing the five hub bolts from wheel and hub. FIRST: Block up rear axle securely or use a Sears Tractor Jack. Sears or your local service station can repair your Tractor tire in the same manner as an automobile tire.

## how to start if battery is low

1. Connect quick-start battery cables or "jumpers" from your automobile 12 volt battery to the Tractor battery CAUTION: Connect positive (+) terminal to positive (+) terminal. This method of starting is only a means of emergency starting. Have Tractor battery recharged or replaced immediately.

# trouble shooting

## WILL NOT START

### POSSIBLE CAUSE

### POSSIBLE REMEDY

Dead battery .....  
Attachment clutch lever engaged .....  
Gear shift lever in gear .....  
No gasoline in fuel tank or carburetor .....

Recharge or replace battery.  
Move to "out" position.  
Shift into neutral position.  
Fill the tank with gasoline; open fuel shut-off valve.  
Check fuel line and carburetor.

## HARD TO START

Water in gasoline or old fuel .....  
Choked improperly. Flooded engine .....  
Dirty air cleaner .....  
Spark plug dirty or improper gap .....  
Defective battery .....  
Defective ignition or loose wiring .....

Drain fuel tank and carburetor. Use new fuel and dry spark plug.  
Push in choke, open throttle control and crank engine several times to clear out the gas.  
Remove and clean, refer to page 8.  
Clean, adjust the gap or replace. Refer to page 12.  
Replace.  
Check the wiring and spark plug.

## ENGINE MISSES OR LACKS POWER

Dirty starter air screen .....  
Partially plugged air cleaner .....  
Low oil level or dirty oil .....  
Improper carburetor adjustment .....  
Spark plug dirty, wrong gap or wrong type .....  
Engine overloaded .....  
Faulty ignition .....  
Oil in gasoline .....  
Poor compression .....

Clean screen over starter, see page 8. Be sure fins on cylinder head and around cylinder are clean.  
Remove and clean, refer to page 8.  
Check or change oil, see page 9.  
Refer to page 12.  
Clean, reset the gap or replace.  
Shift to a lower gear or reduce load.  
Check spark plug and for loose wires. If trouble cannot be corrected, contact Sears.  
Drain and refill gasoline tank and carburetor. Oil reduces the efficiency of the engine.  
Contact Sears.

## ENGINE OVERHEATS

Dirty starter air screen .....  
Low oil level or dirty oil .....  
Partially plugged muffler .....  
Poor fuel or too lean a mixture .....  
Partially plugged air cleaner .....  
Dirty engine .....

Clean screen over starter, see page 9.  
Check or change oil, see page 9.  
Remove muffler from engine and clean.  
Refer to page 12.  
Remove and clean, refer to page 8.  
Clean fins on cylinder head and around cylinder.

## NO LIGHTS

No head lights or tail light with light switch knob pulled out .....

Turn fuse holder on dashboard counterclockwise - check for burned out fuse.



## important battery care

Proper attention to the battery is of utmost importance.

The following points are recorded to help remind you to provide attention to the battery and gain full advantage of the usable life built into the battery and avoid costly replacement.

1. Check solution level in battery at least once each week. Add distilled water when required. Correct level is bottom of tubes in cells, refer to page 4. After adding water, run the engine so that the generator charge will mix the solution. **DO NOT OVERFILL.** Acid spilled from the battery will corrode choke control and throttle control casing and wire, Tractor paint, etc.
2. Keep the battery clean and dry at all times. Remove any collection of grease, corrosion or other substance from the battery.
3. Keep battery snug in its holder.
4. Keep vent caps tight and small vent holes in caps open.
5. If battery should become discharged or falls below a specific gravity of 1.225, remove battery and have it recharged.
6. When recharging, request service station to **SLOW CHARGE** the battery at a rate of 3 amperes. **FAST CHARGING IS NOT RECOMMENDED.**

## winter care--battery

1. If Tractor is not used regularly during winter months, the battery should be removed and stored in a cool, dry place above 50° F.
2. Battery should not be placed directly on cement as this will drain the battery.
3. If Tractor is used only infrequently during winter months, check battery at least once each thirty days to be sure a full charge is maintained.
4. A battery not fully charged can freeze, resulting in the necessity to replace.
5. A safe rule is to charge the battery monthly or at least test and recharge if below 1.225 specific gravity.
6. Recharge to bring the specific gravity to normal before replacing it in the Tractor after storage.

Please remember the necessity of proper winter care for the battery. Batteries not in use for several months and not kept fully charged, produce a sulphation of the plates which cannot be removed by recharging.

## storage instructions

In the event your Tractor is to be inoperative for periods in excess of 30 days - prepare for storage as outlined in the next column.

1. Drain fuel tank and carburetor by allowing the engine to run out of gasoline. Gasoline left in your engine will leave gum deposits and condensation in the carburetor and fuel tank. This makes fuel system inoperative and will result in hard or non-starting of the engine.
2. Lubricate cylinder by removing the spark plug. Pour one ounce of clean lubricating oil through the spark plug hole into the cylinder. Crank the engine slowly to spread oil and replace the spark plug.
3. Clean the engine and Tractor of all foreign matter.
4. Do not save or store gasoline over winter.

**STORE YOUR TRACTOR IN A DRY AND PROTECTED PLACE. LEAVING YOUR TRACTOR OUTDOORS, EXPOSED TO THE ELEMENTS, WILL RESULT IN MATERIALLY SHORTENING ITS LIFE.**

## general

1. Just as your automobile needs professional mechanical maintenance from time to time, so does your air cooled engine. Cleaning and adjustment of the carburetor and periodic replacement of the spark plug and ignition points is made necessary by **NORMAL** use.
2. Professional air cooled engine service is as close as your nearest Sears Store.
3. A yearly check-up or tune-up by Sears is a good idea to avoid breakdowns or delays.

Sears, Roebuck and Co. or Simpsons-Sears Ltd. in Canada reserves the right to make any changes in design or improvements without imposing any obligation to install the same upon its items heretofore manufactured.



# repair parts

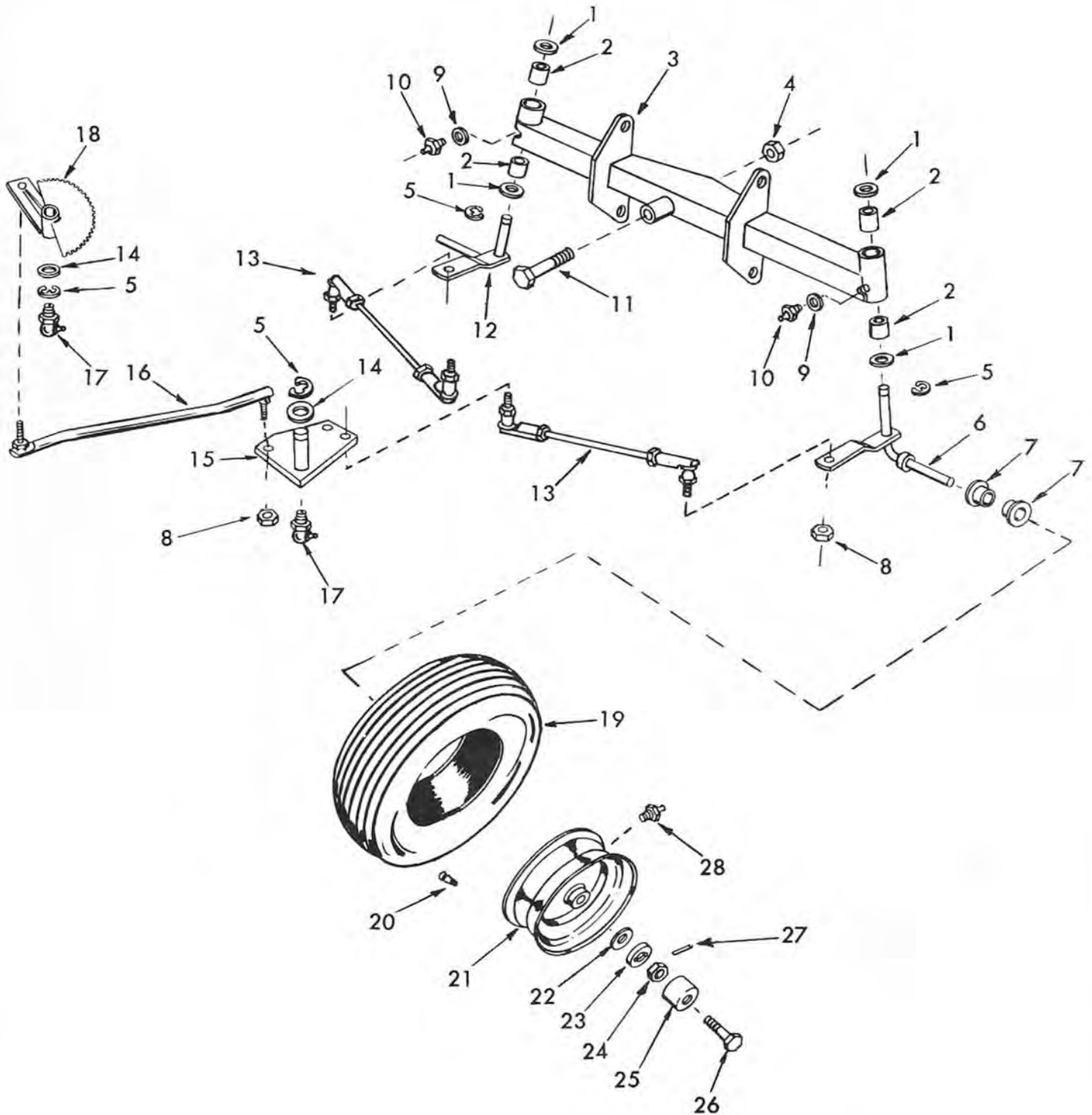
ST/16 TRACTOR--MODEL NUMBER 917.25740

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	2680R	Dashboard Panel	59	2689R	Bearing
2	634A605	Dashboard With Clips (Inc. Key No. 3, Does not Inc. Key No. 1)	60	1513P	Washer 13/32 x 13/16 x 16 Ga.
3	1998R	Dashboard Clip	61	1360R	Cover-R.H.
4	2794R	Grill Screen-Center	62	1361R	Tank and Battery Support Bracket-R.H.
5	2672R	Grill Screen-Upper	63	7218H1	Tank and Battery Support Bracket-L.H.
6	634A536	Hood Weldment	64	2789R	Cover-L.H.
7	2676R	Grill-Upper	65	634A603	Tank and Battery Support Weldment With Bearings
8	3651R	Decal-Grill	66	9770H	Fuel Tank Strap
9	3624R	Decal-Hood Strip	67	9768H	Fuel Tank
10	3300R	Decal-Sears	68	9769H	Fuel Tank Cap and Gauge
11	2674R	Grill Screen-L.H.	69	2796R	Choke Control
12	2677R	Grill-Lower	70	634A273B	Throttle Control Lever
13	2678R	Grill-Side	71	3747R	Grill Cable
14	2673R	Grill Screen-R.H.	72	1002P	Lockwasher 1/4
15	4939M	Retainer Spring	73	1506P	Washer 9/32 x 5/8 x 16 Ga.
16	640A45	Belt Guard Weldment	74	1505P	Washer 9/32 x 1/2 x 14 Ga.
17	3154P	Slotted Fillister Hd. Machine Screw 1/4-20 x 2 1/4	75	503P	Sq. Nut 1/4-20
18	8238H	Split Spacer	76	1004P	Lockwasher 3/8
19	347H	Huglock Nut	77	501P	Hex Nut 3/8-16
20	6485H	Hinge	78	1003P	Lockwasher 5/16
21	6433H	Front Channel Cover Support	79	504P	Hex Nut 5/16-18 UNC
22	9011H	Belt Retainer	80	1006P	Lockwasher #10
23	634A28	Front Channel Cover and Weld Bolts	81	505P	Hex Nut #10-24
24	634A544	Engine Mount Assembly	82	1517P	Washer 7/16 x 1 x 14 Ga.
25	634A493	Attachment Clutch Lever Assembly	83	9771H	Fuel Line Fitting
26	4379H	Handle Grip	84	1685H	Lock Nut
27	511P	Lock Nut 3/8-24 UNF	85	9521H	Drive Rivet
28	634A494	Hanger Weldment-R.H. Front	86	5394H	Lock Nut
29	1689E	Bushing	A	5551P	Hex Washer Hd. Thd. Cutting Screw 1/4-20 UNC x 1/2
30	1003P	5/16 Lockwasher	B	503P	Hex Nut 1/4-20
31	504P	5/16-18 UNC Hex Nut	C	3153P	Rd. Hd. Phillips Mach. Screw 1/4-20 x 1 1/4
32	5501P	Pan Head Phillips Thread Cutting Screw #10-24 UNC x 3/8 Type T	D	3027P	Hex Bolt 3/8-16 x 1 1/2
33	2249R	Safety Switch	E	3010P	Hex Bolt 5/16-18 x 3/4
34	634A492	Switch Bracket Assembly	F	3012P	Hex Bolt 5/16-18 x 1 1/4
35	634A491	Belt Tightener Arm and Idler Shaft	G	3023P	Hex Bolt 3/8-16 x 1
36	5999H	Spring Washer	H	4514P	Hex Socket Headless Set Screw C.P. 5/16-18 x 5/8
37	3013P	Hex Bolt 5/16-18 UNC x 1 1/2	I	3021P	Hex Bolt 3/8-16 UNC x 3/4
38	6479H1	Belt Guide Finger	J	505P	Hex Nut #10-24
39	1520P	Washer .469 I.D. x 1-1/8 x 11 Ga.	K	3122P	Slotted Truss Hd. Mach. Screw #10-24 x 3/8
40	6635H	Flat Idler	L	3137P	Hex Bolt 3/8-16 x 1 1/4 H.T.
41	1001P	Lockwasher 7/16	M	28P	Carriage Bolt 3/8-16 x 1 H.T.
42	500P	Hex Nut 7/16-14	N	3013P	Hex Bolt 5/16-18 x 1 1/2
43	634A101	Drawbar W/Weldnuts	O	5501P	Phillips Pan Hd. Thread Cutting Screw #10-24 x 3/8 Type T
44	634A543	Chassis Assembly W/Bearings	P	3022P	Hex Bolt 3/8-16 UNC x 7/8
45	2804R	Model Number Plate	Q	5554P	Phillips Pan Hd. Thread Cutting Screw #10-16 Hi-Lo Thd. x 1/2
46	634A355	Hanger Weldment-L.H. Front	R	3035P	Blunt Point
47	2702R	Shift Pattern Plate	S	3134P	Hex Bolt 7/16-14 x 1 1/4
48	1518P	Washer 15/32 x 11/16 x 16 Ga.	T	3115P	Hex Bolt 1/4-20 UNC x 5/8
49	3155P	Hex Bolt 7/16-14 x 2 1/2	U	3021P	Hex Bolt 3/8-16 UNC x 3/4
50	8704H1	Spacer	V	3023P	Hex Bolt 3/8-16 x 1
51	640A44	Mounting Plate and Guide Assembly	---	2017R	Maintenance Decal (Located on Underside of Hood)
52	634A104	Engine Pulley W/Set Screws (Inc. Key Letter H)	---	2808R	Owners Manual
53	9396E	Sq. Key 1/4 x 2			
54	2802R	Muffler			
55	2949R	Gasket-Muffler			
56	634A546	Engine, Craftsman 16 H.P. Model No. 143.630012			
57	704R	Air Inlet Screen			
58	503P	Hex Nut 1/4-20 UNC			



# repair parts

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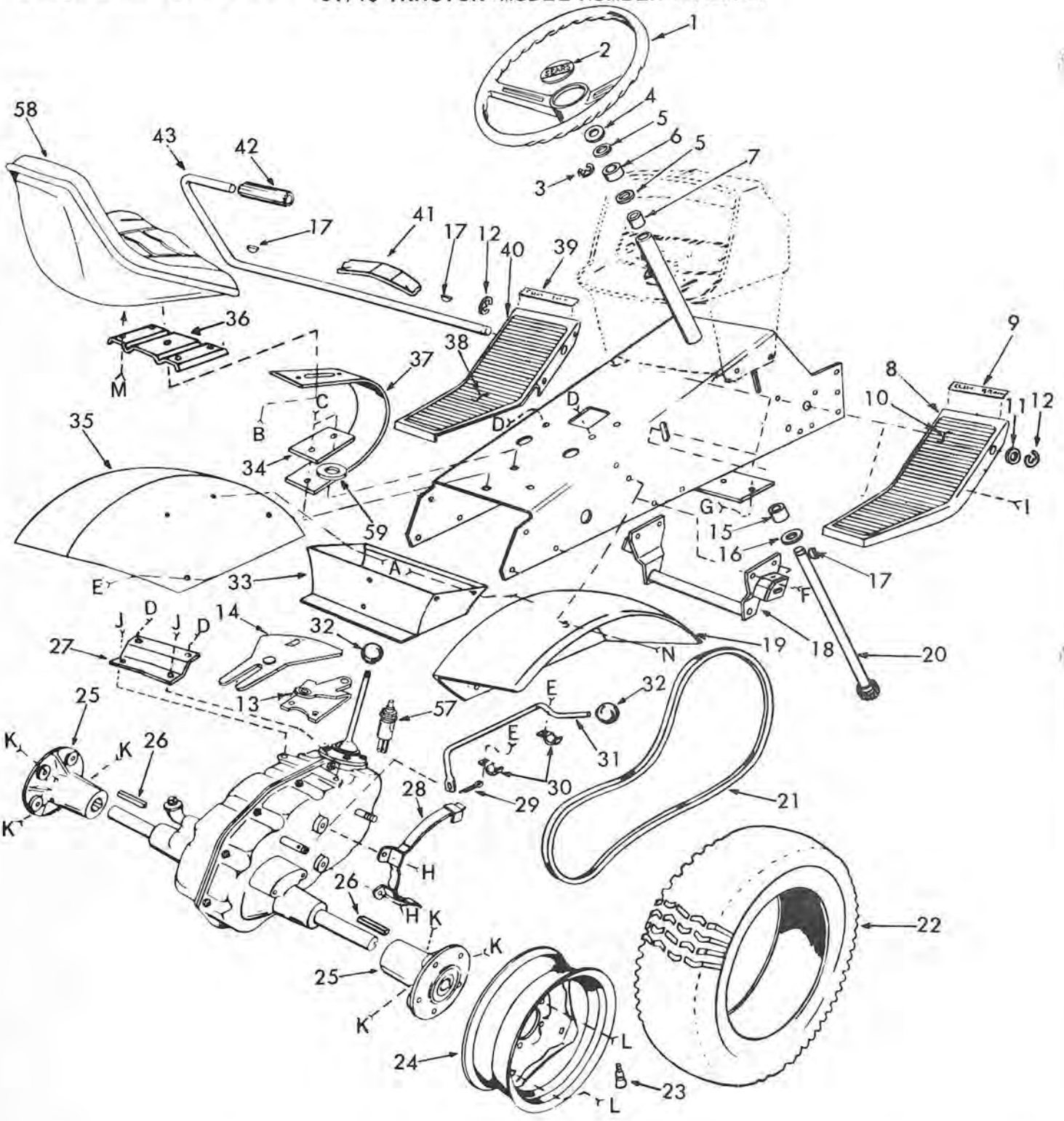
# repair parts

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KEY NO.	PART NO.	DESCRIPTION
1	1528P	Washer 13/16 x 1¼ x 14 Ga.
2	1309H	Bearing
3	634A521	Front Axle with Bearings (Inc. Key No. 2)
4	4764H	Huglock Nut 5/8-11 UNC
5	5000P	E-Ring
6	634A277	Spindle Complete-R.H.
7	9040H	Flanged Bearing
8	511P	Nylock Nut, 3/8-24 UNF
9	1505P	Washer 9/32 x ½ x 14 Ga.
10	6855M	Grease Fitting
11	2699R	Hex Bolt
12	634A278	Spindle Complete-L.H.
13	1808R	Tie Rod and Joints
14	1552P	Washer 49/64 x 1¼ x 16 Ga.
15	634A98	Steering Bell Crank Weldment
16	9318H	Drag Link and Joints
17	6842M	Grease Fitting
18	634A95	Steering Gear Sector and Arm
19	2795R	Front Tire-Tubeless
20	795R	Tire Valve
21	2891R	Front Wheel
22	1562P	Washer 25/32 x 1½ x 16 Ga.
23	8785H	Wear Washer
24	4831H	Elastic Nut ¾-16 UNF
25	8763H	Dust Cap-Outer
26	3008P	Hex Bolt 5/16-18 x ½
27	8798H	Roll Pin 5/32 x 1
28	6856M	Grease Fitting ¼-28 Taper Thread

# repair parts

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- |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>A</b> | <b>B</b> | <b>C</b> | <b>D</b> | <b>E</b> | <b>F</b> | <b>G</b> | <b>H</b> | <b>I</b> | <b>J</b> | <b>K</b> | <b>L</b> | <b>M</b> | <b>N</b> |
|          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| 44       | 47       | 50       | 52       | 50       | 50       | 54       | 55       | 50       | 52       | 56       | 55       | 55       | 50       |
| 45       | 48       | 51       | 53       | 51       | 51       |          |          |          |          |          |          |          | 51       |
| 46       | 49       |          |          |          |          |          |          |          |          |          |          |          |          |



# repair parts

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KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	2700R	Steering Wheel	36	1758R	Seat Plate
2	2701R	Steering Wheel Cap	37	9712H	Seat Spring
3	5003P	E-Ring	38	7235H	Foot Rest Pad-L.H.
4	1552P	Washer 49/64 x 1 1/4 x 16 Ga.	39	2266R	Decal-Clutch-Brake
5	9007H	Cap	40	634A112	Foot Rest W/Bolts-L.H.
6	5949H	Rubber Bushing	41	9008H	Spring
7	6468H	Bearing	42	8156H	Foot Pedal Cover
8	634A113	Foot Rest W/Bolts-R.H.	43	2785R	Foot Pedal Shaft
9	2267R	Decal-Attachment-Clutch	44	1506P	Washer 9/32 x 5/8 x 16 Ga.
10	7236H	Foot Rest Pad-R.H.	45	1002P	Lockwasher 1/4
11	1527P	Washer 21/32 x 7/8 x 16 Ga.	46	503P	Hex Nut 1/4-20 UNC
12	5001P	E-Ring	47	1560P	Washer 17/32 x 1 1/2 x 11 Ga.
13	634A535	Neutral Safety Support Assembly	48	1000P	Lockwasher 1/2
14	634A534	Neutral Safety Arm Assembly	49	502P	Hex Nut 1/2-13 UNC
15	4766H	Bearing	50	1004P	Lockwasher 3/8
16	1553P	Washer 57/64 x 1 1/4 x 16 Ga.	51	501P	Hex Nut 3/8-16
17	9858M1	Woodruff Key 3/16 x 5/8	52	1001P	Lockwasher 7/16
18	634A362	Hanger-Rear	53	500P	Hex Nut 7/16-14
19	8769H	Fender-R.H.	54	1531P	Washer 13/32 x 13/16 x 16 Ga.
20	640A30	Steering Shaft and Pinion	55	1003P	Lockwasher 5/16
21	6474H	V-Belt (Ground Drive)	56	508P	Hex Jam Nut 3/8-16
22	794R	Rear Tire	57	2329R	Neutral Safety Switch
23	795R	Tire Valve	58	3565R	Seat
24	2893R	Rear Wheel	59	1578P	Washer 3/4 x 1-1/8 x 11 Ga.
25	8778H	Wheel Hub-Rear	A	3003P	Hex Bolt 1/4-20 x 3/4
26	8327H	Sq. Key 1/4 x 3	B	52P	Bolt 1/2-13 x 1 1/4 Carriage Heat Treated
27	6459H	Transmission Bracket	C	20P	Sq. Neck Carriage Bolt
28	634A22A	Belt Guide			3/8-16 x 1
29	2511P	Cotter Pin 3/16 x 1	D	3034P	Hex Bolt 7/16-14 x 1
30	6442H	Shift Rod Bracket	E	3022P	Hex Bolt 3/8-16UNC x 7/8
31	6477H	Range Shift Rod	F	3023P	Hex Bolt 3/8-16 x 1
32	6364H	Control Knob	G	501P	Hex Nut 3/8-16 UNC
33	634A276	Tool Box Assembly	H	3010P	Hex Bolt 5/16-18 x 3/4
34	8141H	Seat Spring Reinforcement	I	3025P	Hex Bolt 3/8-16 x 1 1/4
35	8770H	Fender-L.H.	J	3034P	Hex Bolt 7/16-14 x 1
			K	4524P	Sq. Hd. Set Screw 3/8-16 x 1 1/4
			L	1304H	Hub Bolt
			M	3053P	Hex Bolt 5/16-18UNC x 5/8
					Plated
			N	19P	Sq. Neck Carriage Bolt
					3/8-16 UNC x 3/4



# repair parts

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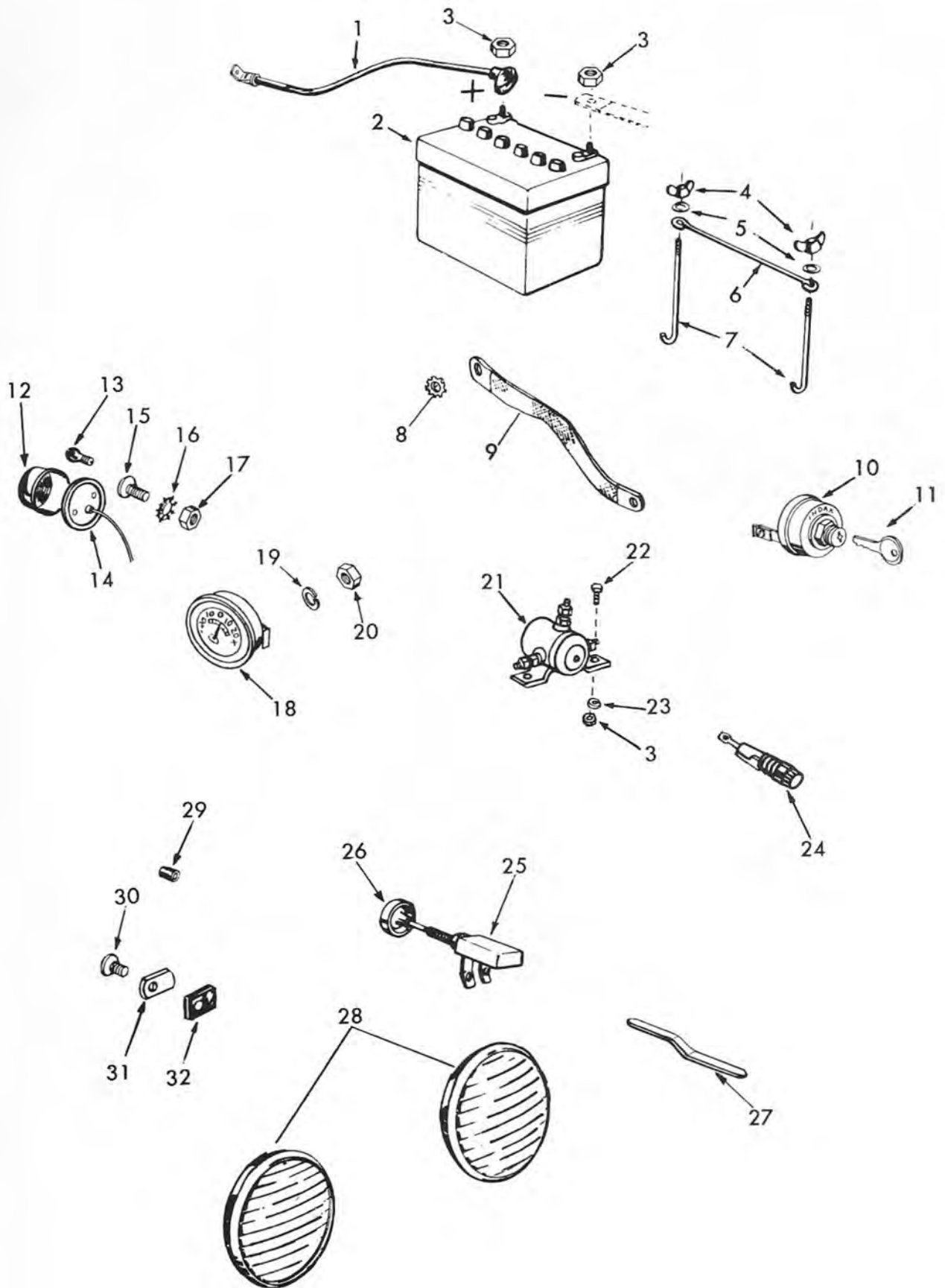
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KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	626A341	Parking Lock Handle Assembly	26	2228M1	Woodruff Key 3/16 x 3/4
2	4379H	Handle Grip	27	7648H1	Brake Drum
3	5999H	Spring Washer	28	7645H	Brake Lining
4	2221R	Parking Brake Spacer	29	634A168	Brake Bracket Assembly
5	634A489	Lock Bracket Assembly	30	634A167	Brake Band and Lining
6	1513P	Washer 13/32 x 13/16 x 16 Ga.	31	9071H	Huglock Nut 1/4-28 UNC
7	2263R	Spring Washer	32	626A365	Brake Rod Assembly
8	2201R	Bushing	33	2197R	Parking Brake Yoke
9	501P	Hex Nut 3/8-16 UNC	34	3256P	Hex Bolt 1/4 x 5/8-28 Heat Treated
10	6417H	Turnbuckle			
11	2202R	Brake Rod-Front	35	1003P	Lockwasher 5/16
12	2505P	Cotter Pin 1/8 x 3/4	36	1685H	Locknut 5/16-18
13	1513P	Washer 13/32 x 13/16 x 16 Ga.	37	1002P	Lockwasher 1/4
14	634A33A	Brake Arm Assembly	38	503P	Hex Nut 1/4-20
15	9858M1	Woodruff Key 3/16 x 5/8	39	1004P	Lockwasher 3/8
16	6406H	Clutch Rod	A	3052P	Hex Bolt 3/8-24 x 1 Pltd.
17	2514P	Cotter Pin 1/4 x 1	B	4501P	Sq. Hd. Set Screw C.P. 5/16-18 x 1/2
18	6486H	Spring	C	3159P	Hex Bolt 5/16-18 x 7/8
19	548P	Hex Jam Lock Nut 3/8-24 UNF	D	11P	Sq. Neck Carriage Bolt 1/4-20 x 5/8
20	634A538	Idler Bracket Assembly	E	3164P	Flat Hd. Machine Screw Undercut 3/8-16 x 3/4
21	634A86	Idler, Bolt and Nut (Inc. Key No's. 19 and A)	F	2004P	Rivet, Brass Tubular #4 x 1/4
22	4301H	Spring	G	3022P	Hex Bolt 3/8-16 x 7/8
23	626A31A	Steering Arm Assembly	H	548P	Lock Nut 3/8-24 UNF
24	9204H	Lock Nut 1/2-20 UNF			
25	6461H2	Transaxle (Transmission) Pulley			



# repair parts

ST/16 TRACTOR--MODEL NUMBER 917.25740



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# repair parts

ST/16 TRACTOR--MODEL NUMBER 917.25740

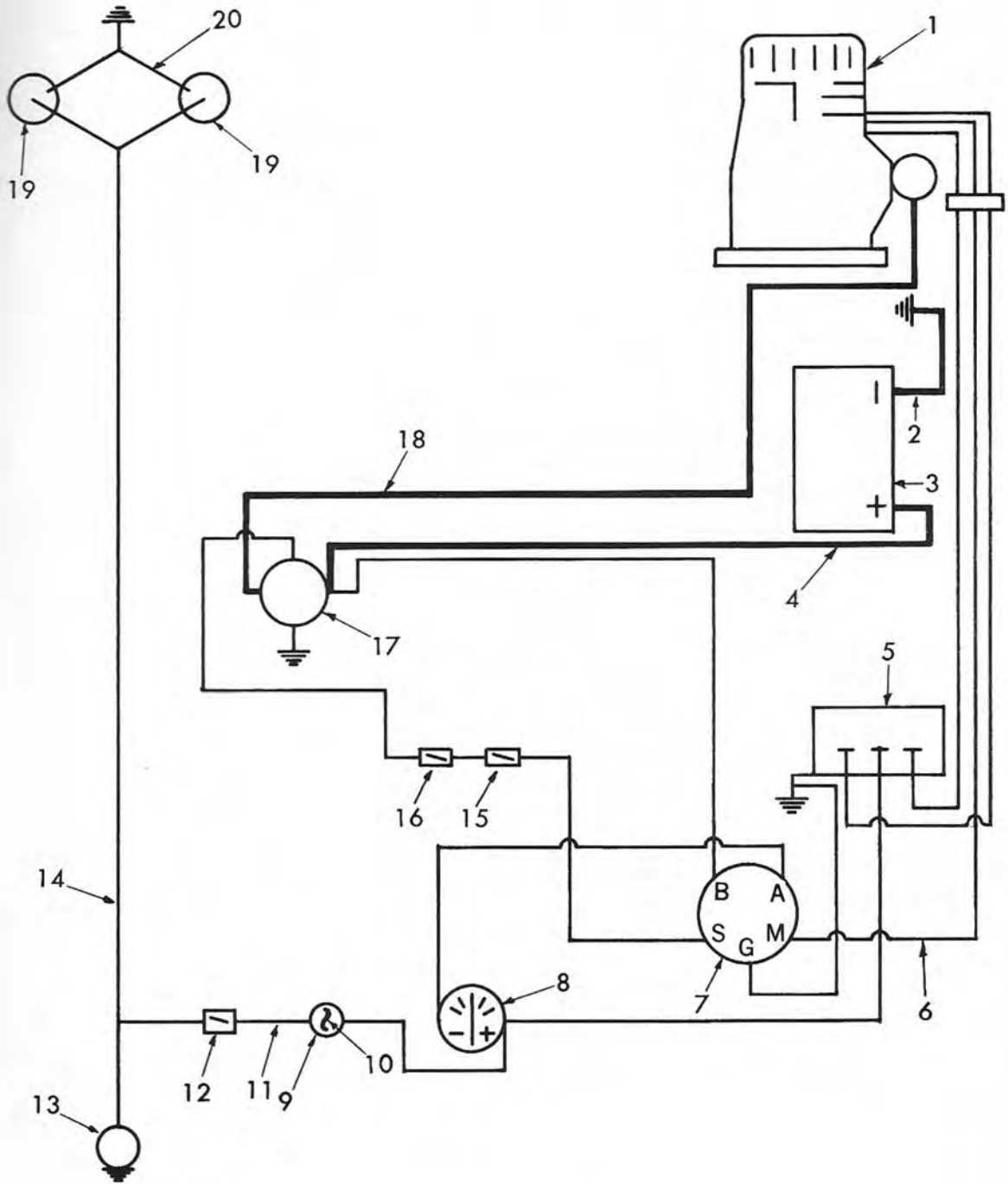
KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	634A490	Cable and Cover	16	1404P	Lockwasher #10 External
2	5111H3	Battery	17	505P	Hex Nut #10-24
3	503P	Hex Nut ¼-20 UNC	18	6987H2	Ammeter
4	3748M	Wing Nut	19	1006P	Lockwasher #10
5	1509P	Washer 5/16 x 3/4 x 16 Ga.	20	543P	Hex Nut #10-32 UNF
6	5110H	Battery Clamp	21	103R	Solenoid
7	5072H	Battery Bolt	22	3115P	Hex Bolt ¼-20 x 5/8
8	1402P	External Lockwasher	23	1002P	Lockwasher ¼"
9	2235R	Ground Cable	24	2211R	Fuse Holder
10	3492R	Starter Switch (Inc. Key No. 11)	25	5735H	Light Switch
11	7552H	Key	26	9267H	Knob, Light Switch
12	8292H	Lens (Tail Light) (Red)	27	2777R	Tie
13	8291H	Bulb (Tail Light)	28	7034H	Head Light
14	8293H	Housing (Tail Light)	29	9197H	Hose (On Grill-Headlight Locating Pins)
15	3073P	Slotted Truss Hd. Mach. Screw #10-24 x ½	30	*5554P	Phillips Pan Hd. Thread Cutting Screw #10-16 Hi-Lo Thread x ½ Blunt Point
			31	8768H	Mounting Clip
			32	8784H1	Rubber Spacer

FOR ADDITIONAL ELECTRICAL ITEMS REFER TO WIRING DIAGRAM - PAGES 25 AND 26

\*If you need the upper screw holding the ground wire order 5555P  
Phillips Pan Hd. Thread Cutting Screw #10-16 Hi-Lo Thread  
x 5/8 Blunt Point.

# repair parts

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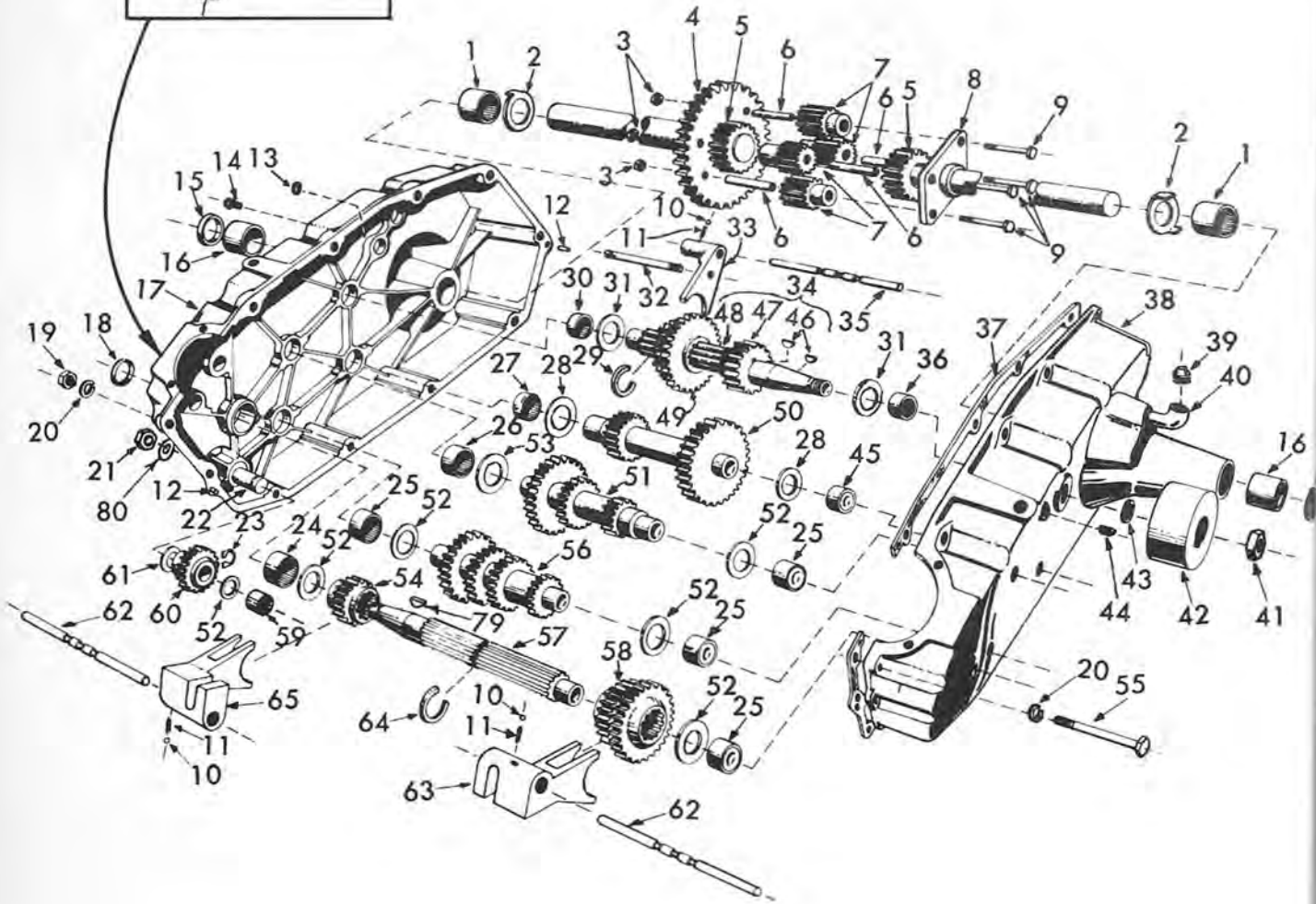
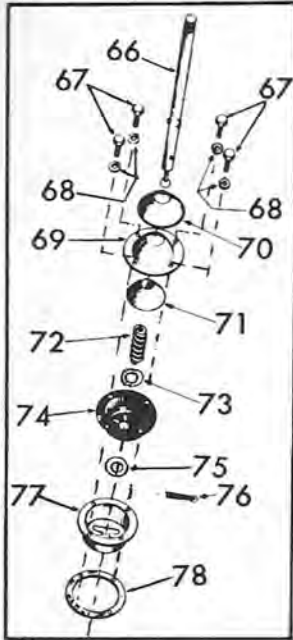
# repair parts

ST/16 TRACTOR--MODEL NUMBER 917.25740

KEY NO.	PART NO.	DESCRIPTION
1	634A546	Engine, Craftsman 16 H.P. Model No. 143.630012
2	2235R	Ground Cable
3	5111H3	Battery
4	634A490	Cable and Cover
5	672R	Rectifyer
6	3493R	Ignition Wire Harness
7	3492R	Starter Switch (Inc. Part No. 7552H)
8	6987H2	Ammeter
9	2211R	Fuse Holder
10	2212R	Fuse (15 Amps. Rating $\frac{1}{4}$ Dia. x $1\frac{1}{4}$ Long)
11	2228R	Electrical Wire
12	5735H	Light Switch
13	8089H	Tail Light
14	3773R	Lead Wire
15	2329R	Neutral Safety Switch
16	2249R	Attachment Safety Switch
17	103R	Solenoid
18	2226R	Battery Cable
19	7034H	Headlight
20	2894R	Ground Wire
--	7552H	Key-Starter Switch

# repair parts

ST/16 TRACTOR--MODEL NUMBER 917.25740



# repair parts

ST/16 TRACTOR--MODEL NUMBER 917.25740

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	3039R	Needle Bearing	40	4003P	90 Street Elbow 1/2 14 N.P.T.
2	6256H	Axle Thrust Washer	41	9204H	Lock Nut 1/2 - 20
3	7810H	Gripco Nut 3/8 - 24	42	7648H1	Brake Drum
4	8662H	Final Drive - Gear	43	6271H	Oil Seal
5	633A34	Axle Shaft and Gear	44	4001P	Pipe Plug 1/4 - 18 N.P.T.
6	6252H1	Bushing - Differential Pinion	45	8117H	Needle Bearing
7	8657H	Differential Pinion	46	2228M	Woodruff Key 3/16 x 3/4 H.T.
8	6263H1	Differential Carrier	47	8659H	4th. Reduction Pinion
9	3056P	Hex Bolt 3/8 - 24 x 3/4 1" Thread Length	48	6221H	3rd. Reduction Gear Shaft
10	7392M	Steel Ball	49	633A14	High - Low Range Gears and Hub
11	6272H	Spring - Shift Fork Detent	50	633A33	4th. Reduction Shaft and Gear
12	6277H	Dowel Pin	51	633A31	2nd. Reduction Shaft and Gear
13	6269H	Oil Seal	52	1370H	Thrust Bearing Race
14	5855H	Pressure Relief Valve	53	7395H	Thrust Bearing Race
15	4910H	Oil Seal	54	6231H	Low Speed Pinion
16	992R1	Sintered Iron Bearing	55	3087P	Hex Bolt 5/16 x 1 1/2 Grade 5 H.T.
17	633A28A	Gear Case Reverse Idler Shaft and Bearings R.H.	56	633A30	Speed Change Gears & Shaft
18	6270H	Oil Seal	57	6218H	Input Shaft
19	504P	Hex Nut 5/16 - 18	58	633A11	Intermediate and High Speed Pinions
20	1007P	Lock Washer 5/16 Extra Heavy	59	7397H	Needle Bearing - Caged
21	541P	Hex Jam Nut 7/16 - 20	60	633A24	Reverse Idler Gear & Bearing
22	7384H	Reverse Idler Shaft	61	7392H	Reverse Idler Thrust Washer
23	5001P	E Ring	62	6216H	Shift Fork Shaft
24	4894H	Needle Bearing	63	6261H	Shift Fork - L.H.
25	4895H	Needle Bearing	64	4926H	Snap Ring Crescent Type
26	7398H	Needle Bearing	65	6262H	Shift Fork R.H.
27	8117M	Needle Bearing	66	6213H1	Gear Shift Lever - Straight
28	7396H	Thrust Bearing Race	67	3010P	Hex Bolt 5/16 - 18 x 3/4
29	6276H	Snap Ring Crescent Type	68	1003P	Lock Washer 5/16
30	8118M	Needle Bearing	69	6254H1	Gear Shift Ball Cover
31	6266H	Thrust Bearing Race	70	4869H1	Gear Shift Cap
32	6215H	High - Low Range Shift Shaft	71	6259H	Shift Lever Guide Ball - Plain
33	6260H	Shift Fork, High - Low Range	72	4924H	Spring
34	633A32	3rd. Reduction Shaft and Gear (Inc. Key No's. 46,47 and 48)	73	1544P	Washer 15/32 x 59/64 x 16 Ga.
35	6217H	High - Low Range Shift Fork Shaft	74	6273H	Shift Mechanism Seal
36	8119M	Needle Bearing	75	1525P	Washer 9/16 x 15/16 x 12 Ga.
37	6275H	Gasket Gear Case	76	2505P	Cotter 1/8 x 3/4
38	633A27	Gear Case and Bearings L.H.	77	633A19	Gear Shift Gate & Reinforcement
39	4002P	Pipe Plug 1/2 14 N.P.T.	78	6274H	Gasket - Shift Ball Cover
			79	9858M1	Woodruff Key
			80	1167R	Sealing Washer
			-----	633A38	Transaxle Assembly Less Brake Drum

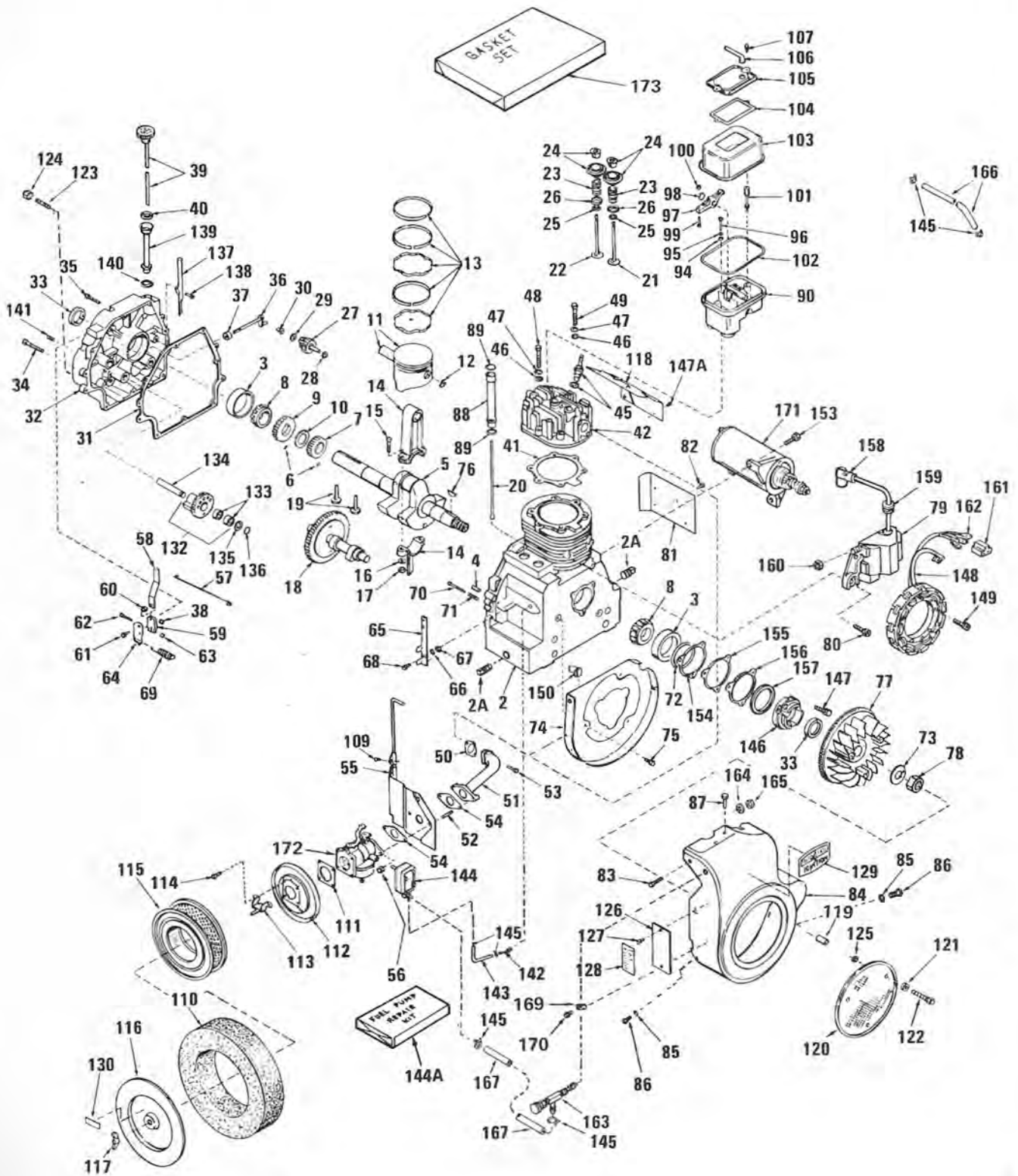


# repair parts

ST/16 TRACTOR--MODEL NUMBER 917.25740

## CRAFTSMAN 4-CYCLE ENGINE

MODEL NUMBER: 143.630012



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# repair parts

ST/16 TRACTOR--MODEL NUMBER 917.25740

## CRAFTSMAN 4-CYCLE ENGINE

MODEL NUMBER: 143.630012

KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
1	630012	Complete Engine	39	33469	Dipstick, Oil fill (Incl. No. 40)
2	33707	Cylinder Assy. (Incl. Nos. 2A, 4 & 33)	40	29985	"O" Ring
2A	28483	Plug, Oil drain	41	*33474	Gasket, Cylinder head
3	31928	Cup, Bearing	42	33465	Head, Cylinder
4	27652	Pin, Dowel	45	33657	Plug, Spark (Champion L-7 or equivalent)
5	33497	Crankshaft Assy. (Incl. Nos. 3 & 6 thru 10)	46	650690	Washer, Belleville
6	29783	Pin, Crankshaft gear	47	650691	Washer, Flat
7	31931	Gear, Crankshaft	48	650692	Screw, Hex hd. cap, 5/16-18 x 1-3/4
8	31932	Bearing, Tapered roller	49	650746	Screw, Hex hd. cap, 5/16-18 x 1-3/8
9	33498	Gear, Counterbalance weight	50	*33515	Gasket, Intake pipe
10	33499	Spacer	51	33475	Pipe, Intake
11	32238	Piston & Pin Assy. (Incl. 2 of No. 12) (Standard)	52	650749	Stud, Carburetor
11	32239	Piston & Pin Assy. (Incl. 2 of No. 12) (.010 oversize)	53	650512	Screw, Hex hd. cap Sems, 5/16-18 x 7/8
11	32240	Piston & Pin Assy. (Incl. 2 of No. 12) (.020 oversize)	54	*33476	Gasket, Carburetor
11	32621	Piston & Pin Assy. (Incl. 2 of No. 12) (.030 oversize)	55	33477	Baffle, Air extension
11	32622	Piston & Pin Assy. (Incl. 2 of No. 12) (.040 oversize)	56	650750	Nut & Washer, 5/16-24
12	31919	Ring, Piston pin retaining	57	33478	Link, Governor
13	32241	Ring Set, Piston (Standard)	58	31963	Lever, Governor
13	32242	Ring Set, Piston (.010 oversize)	59	31964	Clamp, Governor lever
13	32243	Ring Set, Piston (.020 oversize)	60	650518	Lockwasher, No. E. T.
13	32625	Ring Set, Piston (.030 oversize)	61	30312	Screw, Hex slotted washer hd., 10-32 x 1/2
13	32626	Ring Set, Piston (.040 oversize)	62	650428	Screw, Phil. fil. hd. mach., 10-24 x 7/8
14	33093A	Rod Assy., Connecting (Incl. Nos. 15, 16 & 17)	63	7975	Nut, Square, 10-24
15	32077	Bolt, Connecting rod	64	31965	Plate, Governor spring
16	26073	Washer, Connecting rod	65	31984A	Lever, Control
17	28264	Nut, Lock	66	28558	Washer, Wave
18	33470	Camshaft (Mech. Compression Release)	67	31966	Bushing, Lever
19	33472	Lifter, Valve	68	650597	Screw, Hex washer hd. mach., 10-24 x 5/8
20	33471	Rod, Push	69	31967	Spring, Governor
21	33505	Valve, Intake (Standard)	70	650591	Screw, Fil. Slotted hd. mach., 10-24 x 2
21	33645	Valve, Intake (1/32" oversize)	71	33099	Spring, Locking
22	33506	Valve, Exhaust (Standard)	72	*32599	"O" Ring
22	33646	Valve, Exhaust (1/32" oversize)	73	650666	Washer, Lock
23	33507	Spring, Valve	74	32579	Baffle, Blower housing
24	33508	Retainer & Cap Set, Keeper valve	75	650561	Screw, Phil. hex hd. Sems, 1/4-20 x 5/8
25	33509	"O" Ring	76	650592	Key, Flywheel
26	33510	Cap, Valve	77	610854	Flywheel
27	33473	Gear & Shaft Assy., Governor	78	650594	Nut, Flywheel
28	650745	Washer, Flat	79	610855	Magneto, Solid state (Incl. Nos. 158 thru 162)
29	30590A	Washer, Flat	80	650661	Screw, Phil. pan hd. Sems, 1/4-20 x 3/4
30	31948	Spool, Governor	81	33479	Extension, Blower housing
31	*31956	Gasket, Cylinder cover	82	30688	Screw, Hex hd. cap, 1/4-20 x 1/2
32	33779	Cover Assy., Cylinder (Incl. Nos. 33, 134 & 141)	83	650751	Screw, Phil. hex hd. w/conical-washer, 1/4-20 x 7/16
33	31950	Seal, Oil	84	33775	Housing, Blower
34	30564	Screw, Hex hd. cap Sems, 1/4-20 x 1	85	8274	Lockwasher, Split, 5/16
35	650492	Screw, Hex hd. Sems, 1/4-20 x 2-1/4	86	650595	Screw, Hex hd. cap, 5/16-24 x 3/8
36	32425	Rod Assy., Governor			
37	32426	Spacer, Governor rod			
38	29193	Ring, Retaining			

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# repair parts

ST/16 TRACTOR--MODEL NUMBER 917.25740

## CRAFTSMAN 4-CYCLE ENGINE

MODEL NUMBER: 143.630012

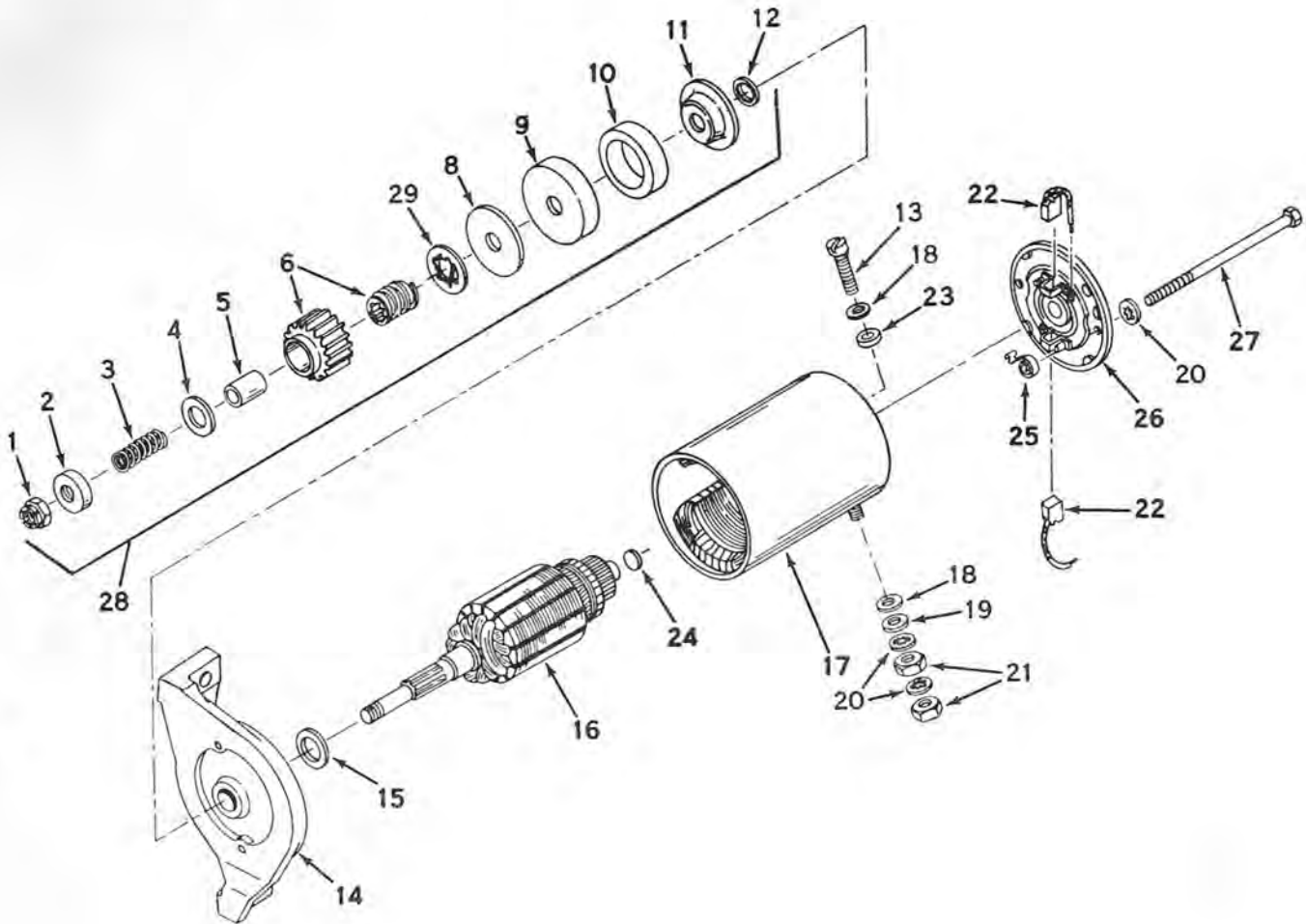
KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
87	650752	Screw, Phil. hex hd. Sems, 1/4-20 x 7/16	140	*29673	Gasket, Oil fill tube
88	33480	Tube, Push rod	141	9556	Plug
89	*33481	"O" Ring	142	32958	Fitting, Fuel pump
90	33482	Housing, Rocker arm	143	29774	Line, Fuel pump
94	*33484	"O" Ring	144	32959	Pump, Impluse Fuel
95	650168	Washer, Flat	144A	33010	Repair Kit, Impluse fuel pump
96	32610	Screw, Flanged hex hd., 1/4-20 x 29/32	145	26460	Clamp, Fuel line
97	33485	Arm, Rocker	146	32577	Cover, Cylinder (See Note 1)
98	33486	Ring, Retaining	147	650512	Screw, Hex hd. Sems, 5/16-18 x 7/8
99	650755	Screw, Adjusting	147A	650687	Screw, Phil. pan hd. self-tap, 10-32 x 5/16
100	650456	Nut, Hex	148	610747	Coil Assy., Alternator
101	650756	Stud, Rocker arm cover	149	650416	Screw, Rd. hd. Sems, 10-32 x 1
102	*33487	"O" Ring	150	29443	Clip
103	33488	Cover, Rocker arm			
104	*31958	Gasket, Breather	153	650512	Screw, Hex hd. Sems, 5/16-18 x 7/8
105	33489	Body Assy., Breather	154	*31970	Gasket, Shim (.003/.004 thick, see note 1)
106	33490	Tube, Breather	155	*31971	Gasket, Shim (.0035 thick, see note 1)
107	30102	Screw, Slotted pan hd. Sems, 10-32 x 5/8	156	*31972	Gasket, Shim (.005/.007 thick, see note 1)
109	650738	Screw, Phil. hex washer hd. thr'd cutting, 1/4-20 x 5/8	157	32031	Spacer, Steel (.010 thick, see note 1)
110	32906	Filter, Air	158	610118	Cover, Spark plug
111	*33492	Gasket, Air cleaner	159	610750	Grommet, Lead wire
112	33777	Bracket, Air cleaner	160	650124	Nut, Hex 10-32
113	33778	Bracket, Air cleaner	161	610819	Connector, Pyramid
114	650399	Screw, Phil. fil. hd. Sems, 10-32 x 5/8	162	610820	Terminal
115	32008	Element, Air cleaner	163	32961	Valve, Shutoff
116	32904	Cover, Air cleaner	164	32960	Washer, Lock
117	650513	Nut, Wing	165	8140	Nut
118	33495	Cover, Cylinder head	166	32342	Line, Fuel
119	32426	Spacer, Screen	167	32341	Line, Fuel
120	33776	Screen, Starter pulley	169	27793	Clip Conduit
121	27070	Washer, Flat	170	28942	Screw, Hex slotted hd. Sems, 10-32 x 3/8
122	650670	Screw, Phil. truss hd., 1/4-20 x 3/4	171	32817	Motor, Starter (12 Volt)
123	32438	Nipple, Pipe (oil drain)	172	631680	Carburetor
124	32154	Cap, Nipple	173	33516	Gasket Set (Incl. items marked *)
125	650675	Washer, Flat			
126	31345	Plate, Identification			
127	29309	Stud, Drive			
128	30592	Decal, Name & Instruction			
129	32730	Decal, Solid state			
130	32954	Decal, Air cleaner			
132	33500	Weight Assy., Counterbalance (Incl. 2 of No. 133)			
133	33501	Bearing, Needle			
134	33502	Shaft, Counterbalance			
135	33503	Washer, Thrust			
136	33504	Ring, Retaining			
137	33467	Tube Extension, Oil fill			
138	650744	Screw, Phil. fil. hd. Sems, 10-24 x 7/8			
139	33468	Tube Assy., Oil filler			

Note 1: Determine the gap between the cover and the machined surface on the cylinder, which can be from .001" up to .007", in which case no shim gaskets will be required. Use of gaskets must be limited to a combined total of .010" thick. Steel spacers must be used as required to eliminate crankshaft end play.

# repair parts

ST/16 TRACTOR--MODEL NUMBER 917.25740

## ELECTRIC STARTER MOTOR NO. 32817



KEY NO.	PART NO.	DESCRIPTION
	32817	Motor, Electric Starter
1	32483	Nut, Hex
2	32820	Stop, Pinion
3	32821	Spring, Anit-drift
4	32822	Washer, Pinion
5	32487	Sleeve, Anti-drift
6	32823A	Gear & Screw Shaft Assy.
8	32825	Washer, Thrust
9	32826	Cup, Cushion
10	32827	Cushion, Rubber
11	32828	Washer, Thrust
12	32829	Bushing, Thrust
13	32499	Bolt, Terminal
14	32830	Cap Assy., Drive end (Incl. bearing)
15	32831	Washer, Spacing (.039 thick)
15	32832	Washer, Spacing (.008 thick)
16	32833	Armature

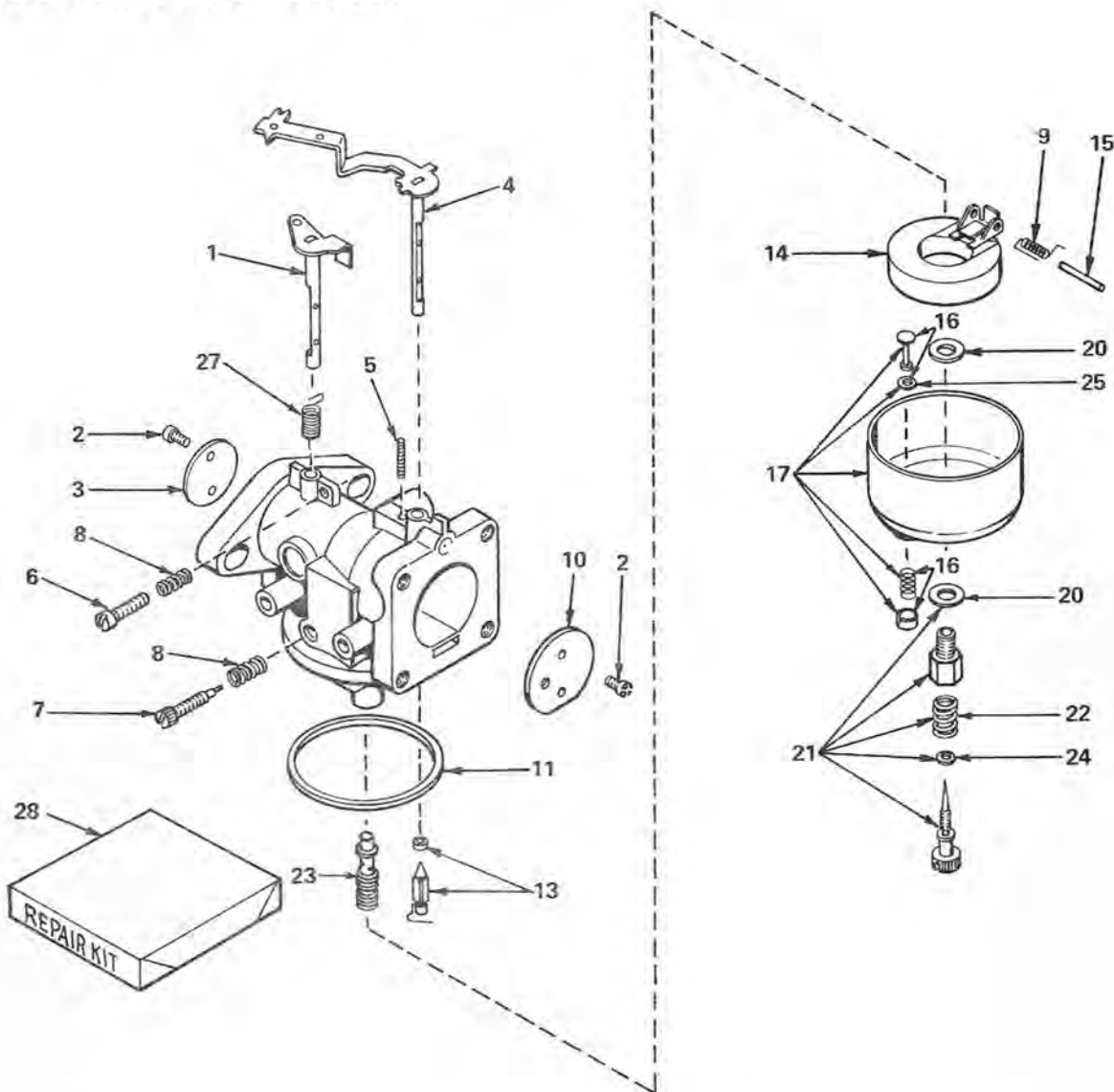
KEY NO.	PART NO.	DESCRIPTION
17	32834	Housing Assy. (Incl. pole shoes, field coils, terminal post, straight mounting bracket, Nos. 18 thru 21)
18	32500	Washer, Insulating
19	650168	Washer, Plain
20	650131	Washer, Lock
21	28710	Nut, Hex
22	32838	Brush & Spring Kit
23	32501	Bushing, Insulating
24	32509	Washer, Spacing
25	32837	Spring, Brush
26	32835	End cap Assy., Commutator
27	32836	Bolt, Thru
28	32819	Drive Assy., Complete (Incl. Nos. 1 thru 12 & 29)
29	32896	Stopper, Screw



# repair parts

ST/16 TRACTOR--MODEL NUMBER 917.25740

CARBURETOR NO. 631680



KEY NO.	PART NO.	DESCRIPTION
	631680	Carburetor
1	631681	Shaft & Lever Assy., Throttle
2	30357	Screw, Rd. hd., 6-32 x 3/16
3	631682	Shutter, Throttle
4	631683	Shaft & Lever Assy., Choke
5	27113	Spring, Choke stop
6	630605	Screw, Throttle adjusting
7	*27112	Needle, Idle adjusting
8	27114	Spring, Adjusting
9	31503	Spring, Float shaft
10	631684	Shutter, Choke
11	*27109	Gasket, Bowl-to-body
13	*631687	Valve, Seat & Spring Assy. (Incl. No. 9)
14	27105	Float

KEY NO.	PART NO.	DESCRIPTION
15	*27106	Shaft, Float
16	27136A	Stem Assy., Bowl drain (Incl. No. 25)
17	29170	Bowl & Drain Assy., (Incl. No. 16)
20	*27110	Gasket, Bowl-to-body
21	*631764	Needle Assy., Power adjusting (Incl. Nos. 20, 22 & 24)
22	630786	Spring, Adjusting needle
23	631685	Nozzle, Main
24	27544	"O" Ring
25	27554	Gasket, Drain stem
27	32096	Spring, Throttle return
28	631765	Repair Kit (Incl. items marked*)

- notes -

634x132

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**Sears**  
**owners**  
**manual**

The Model Number will be found on a plate attached to the rear of the Chassis Channel and to the front of the seat. Always mention the Model Number when requesting service or repair parts for your Garden Tractor.

All parts listed herein may be ordered through SEARS, ROEBUCK AND CO. or SIMPSONS-SEARS LIMITED. When ordering parts by mail, selling prices will be furnished on request or parts will be shipped at prevailing prices and will be billed accordingly.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION AS SHOWN IN THIS LIST.

1. The PART NUMBER
2. The PART DESCRIPTION
3. The MODEL NUMBER  
917.25740
4. The NAME OF ITEM—  
Garden Tractor



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Your new Tractor is used to provide power for operating or pulling a large variety of matched attachments. The air cooled engine transmits power to the rear wheels. The transmission is geared to provide all the travel speeds required for those attachments. Use the same care and attentiveness when operating your tractor as you would when driving your automobile.