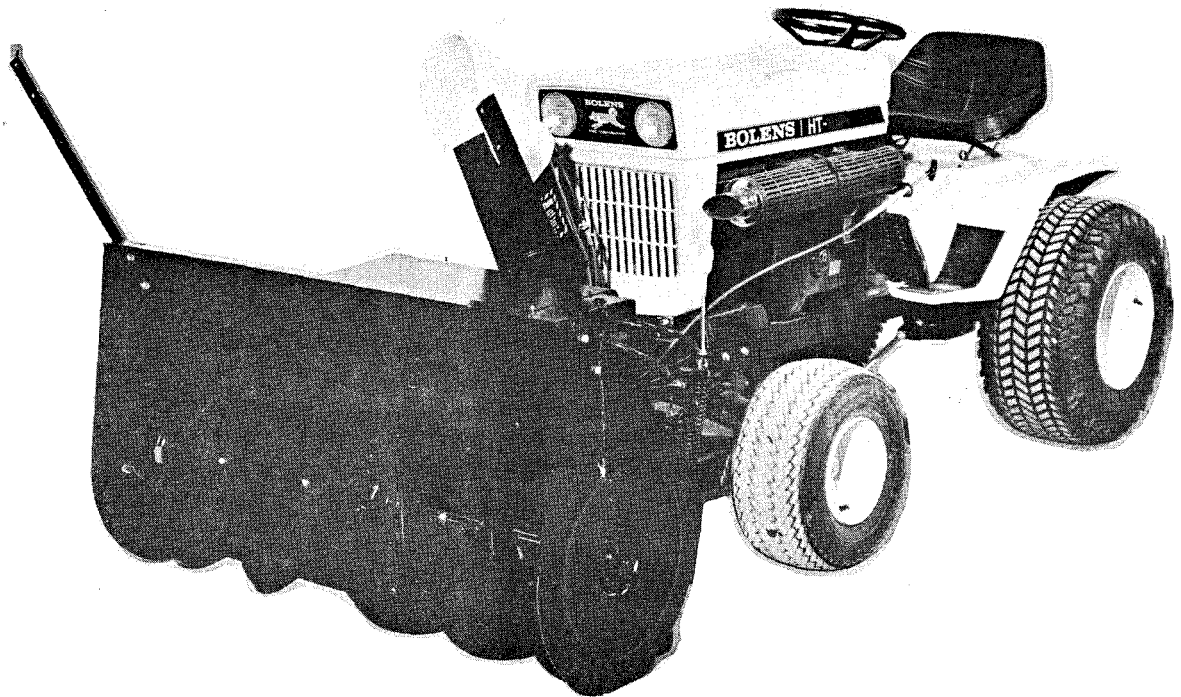


BOLENS[®]
FMC CORPORATION[®]

SNOW THROWER

48 INCH

MODEL 18148-01



OWNER OPERATION AND MAINTENANCE MANUAL

PORT WASHINGTON, WISCONSIN U.S.A.

TO THE OWNER

This is an operational and general maintenance manual only and does not cover major repair. All major repair work must be performed by an authorized BOLENS DEALER or the factory guaranty is void. Bolens equipment is carefully engineered to give good performance if properly operated and maintained. Keep your equipment clean and lubricate it as prescribed in this manual. Periodically inspect your unit and perform any upkeep maintenance necessary.

Your dealer is obligated by the factory to completely assemble and service new equipment prior to first delivery, and thoroughly explain and demonstrate its operation. He will repair or replace any parts which fail due to defective material and/or workmanship during the guaranty period, and also provide future repair service and supply genuine Bolens repair parts.

IN EVENT OF ANY PROBLEM OR PARTS REQUIRED ALWAYS CONTACT YOUR DEALER. DO NOT RETURN PARTS TO THE FACTORY. WE REQUIRE PRIOR FACTORY APPROVAL ON RETURNS, AND APPROVALS ARE ISSUED ONLY TO BOLENS DEALERS OR DISTRIBUTORS.

AVOID ACCIDENTS **BE A SAFE OPERATOR**

To read reports from all over the country is to be convinced that a large number of accidents can be prevented only by the operator anticipating the result before the accident is caused and doing something about it. No power equipment can be safer than the man who is at the controls. If accidents are to be prevented — and they most certainly can be prevented — operators must accept their full measure of responsibility.

It is true that the designer, the manufacturer and the safety engineer can help, but their combined efforts can be wiped out by a single careless act.

It is said that "the best kind of safety device is a careful operator." We ask you to be that kind of person.

NATIONAL SAFETY COUNCIL

GENERAL SAFETY PRECAUTIONS



Preventing accidents is the responsibility of every equipment operator. The following general safety precautions must be fully understood and followed by every operator of this equipment. Review them frequently and **NEVER TAKE CHANCES. BE CAREFUL BEFORE, DURING AND RIGHT AFTER USE OF ANY POWERED EQUIPMENT. ACCIDENTS CAN BE PREVENTED.**

1. STUDY YOUR MANUAL. KNOW YOUR UNIT BEFORE OPERATING IT. TAKE TIME TO OPERATE UNIT IN THE SAFEST MANNER.
2. CHILDREN SHALL NOT BE ALLOWED TO OPERATE VEHICLE AT ANY TIME. THE AVERAGE CHILD IS NOT CAPABLE OF COPING WITH THE INTRICACIES OF OPERATING A POWER TOOL.
3. Do not carry passengers. The passengers could fall off vehicle receiving injuries.
4. Do not allow adults to operate vehicle without proper instructions including all safety instructions. In doing so, you will be sure they know how to operate unit properly and also are aware of all the safety precautions.
5. Before starting the engine, disengage the P.T.O. and set the PARKING BRAKE, to prevent unit from being started in gear.
6. Never operate tractor with SNOW THROWER or any other attachment having moving parts when any child, other persons or pets are in the travel path, discharge area or general working area. Items or objects such as wire, stones, small toys and etc. can be ejected at high velocity out of the discharge chute.
7. Should the chute become plugged due to overload, disengage the P.T.O., shut off the engine and dislodge the packed snow WITH A STICK.
8. NEVER ATTEMPT TO CLEAR ROTOR OR CHUTE WITH HANDS OR FEET, OR WHILE ROTOR IS TURNING, AS INJURY COULD RESULT.
9. Disengage rotor and shut off engine if anyone approaches unit. This will help eliminate possible injury to bystanders.
10. The operator should always bear in mind that objects can be thrown by this machine. Care should be exercised to provide proper chute direction and deflector cap adjustment to avoid throwing snow and possible foreign material at bystanders, autos, windows, pets, etc.
11. Engine must be stopped and P.T.O. disengaged when cleaning, servicing, adjusting, repairing or installing attachments on tractor. This will help prevent injury from moving parts.
12. Adjust height of scraper edge to clear gravel or crushed rock surface, to avoid throwing stones and gravel accidentally.
13. Keep tractor and attachments free of excess grease, oil and dirt. The unit will operate cooler, be easier to maintain, and safer to operate.
14. Do not mount or leave vehicle while it is in motion or actual operation, nor leave vehicle unattended while engine is running. Injury to the operator or a tractor run away could occur.
15. Never wear loose clothing when operating unit. Loose clothing can get caught in moving parts and cause severe injuries.
16. Always look back to be certain no one is in the way before using reverse. This will avoid the possibility of running over any bystanders or pets who might be in the area in back of the vehicle.

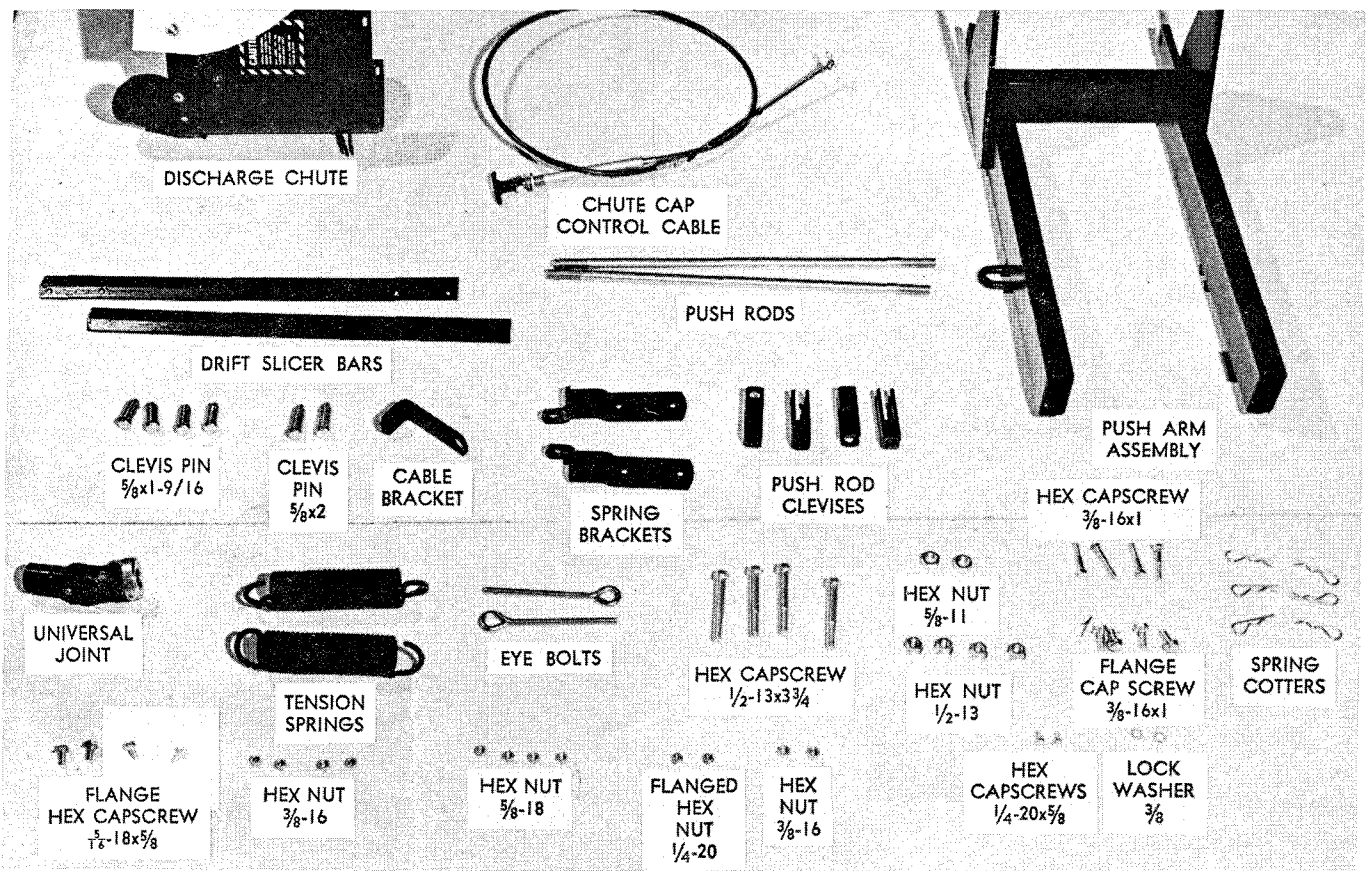


FIGURE 1

MODEL NUMBER

To ensure prompt service when repairs or adjustments are required, your Bolens Dealer must have the following information:

For your own personal reference, fill in the space provided below.

Model Number of Snow Thrower _____

Serial Number of Snow Thrower _____

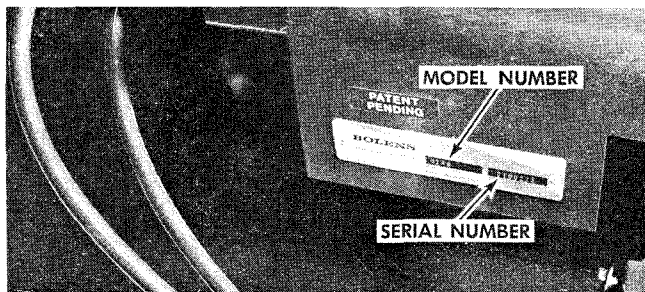


FIGURE 2

Your Bolens Dealer has available a Parts List for your unit. He can identify any parts you may require and furnish genuine factory replacements.

ASSEMBLY

The rotor housing is shipped completely assembled. After

removing the Snow Thrower from its crate proceed as follows:

1. Attach the push arm assembly to the rear of the Snow Thrower with four hex head capscrews 1/2-13 x 3-3/4 and Flange Whiz lock nuts 1/2-13. See figure 3.

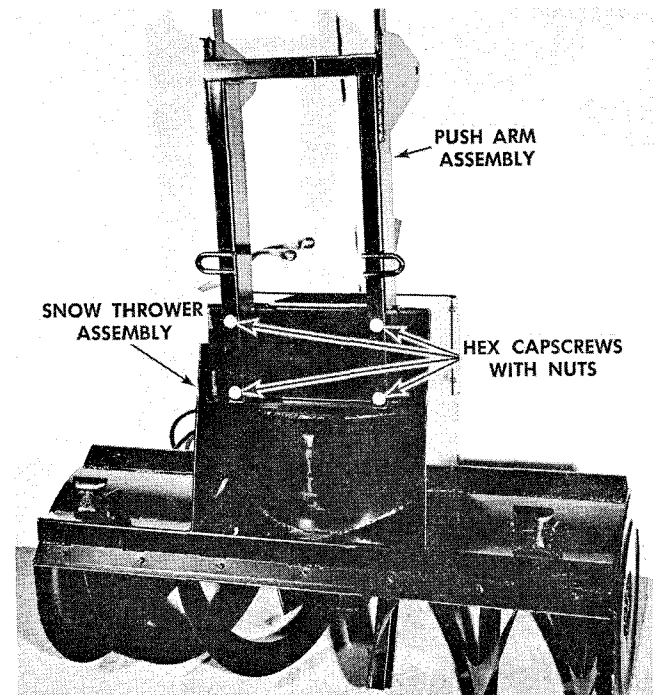


FIGURE 3

2. Remove five hex head Flange Whiz Lock capscrews 1/4-20 x 1/2 from discharge elbow. Position chute over discharge elbow, with opening facing the front and secure with five hex head capscrews removed above. These are thread cutting screws. Care should be taken to start them straight. See figures 4 and 5.

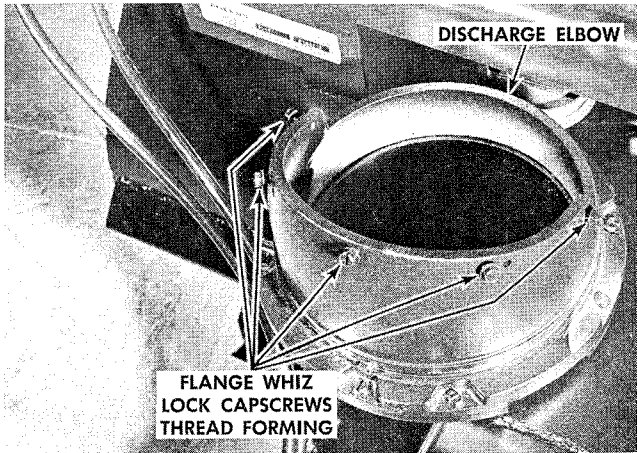


FIGURE 4



FIGURE 5

3. Drive tractor over rear of push arm assembly until front hitch points of tractor align with hitch points of push arm assembly. Secure to tractor with clevis pin 5/8 x 2 and spring cotter.

4. Place hex jam nut 5/8-11 onto one end of each push rod. Install clevis onto each end of push rods. Secure one clevis with jam nut and adjust other clevis so there is 26-1/2 inches between centers of clevis pin holes. See figure 6.

5. Install one end of push rod assembly onto rear of push arm assembly. Secure with clevis pin 5/8 x 1-9/16 and spring cotter. Install other end onto tractor lift arm and secure with clevis pin 5/8 x 1-9/16 and spring cotter. See figure 6. Adjust second push arm assembly so attachment lifts evenly. Secure with clevis pins 5/8 x 1-9/16 and spring cotters.

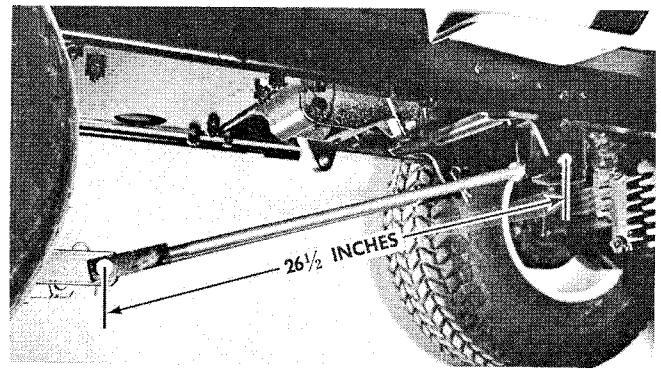


FIGURE 6

6. Apply a coating of grease over rectangular drive shaft of Snow Thrower and install universal joint onto shaft. Grease front P.T.O. shaft. Depress lock collar on universal joint and slide onto P.T.O. shaft until collar locks into locking groove. See figure 7.

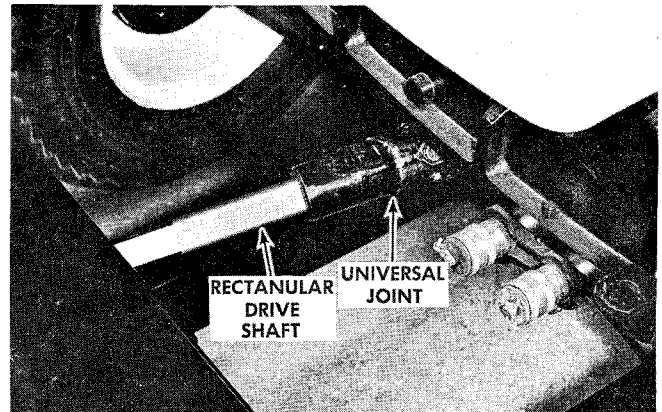


FIGURE 7

7. Remove the two hex head capscrews on each side of tractor bolster. Remove these capscrews one at a time, rear capscrew first. See figure 8. Position the bracket over this hole and install one hex Flange Whiz lock capscrew 3/8-16 x 1. Do not tighten at this time. Remove the front

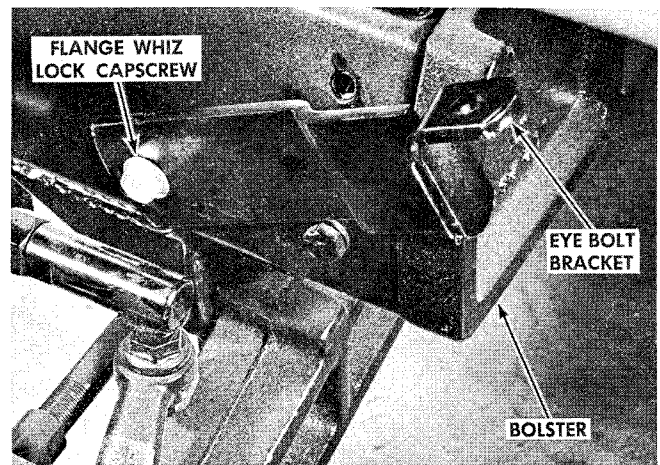


FIGURE 8

capscrew on that side. Position second hole of bracket over hole in bolster and install second hex Flange Whiz lock capscrew 3/8-16 x 1. Securely tighten both capscrews.

See figure 9. Install second bracket using the same procedure.

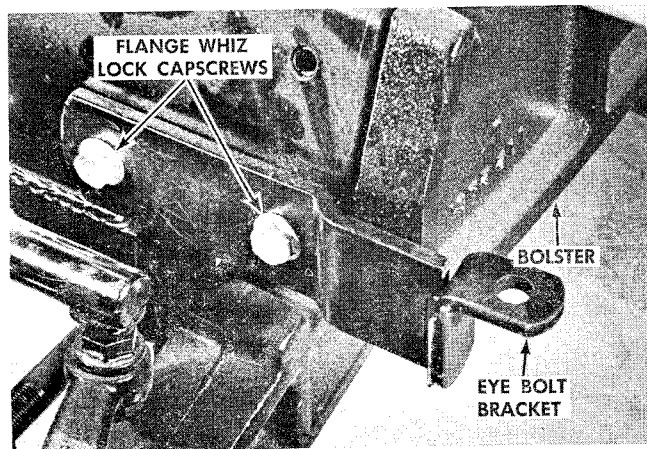


FIGURE 9

NOTE: There is a right and a left hand bracket. The eye bolt loop goes up as shown in figure 9 and the bend of the bracket is out away from the side of the tractor.

8. Hook one end of tension spring into eye in side of push arm frame. Hook other end of tension spring through eye bolt. Place eye bolt through spring bracket and secure with external lockwasher 3/8 and hex nut 3/8-16. Tighten nuts on both eye bolts all the way to the bottom of the thread. See figure 10.

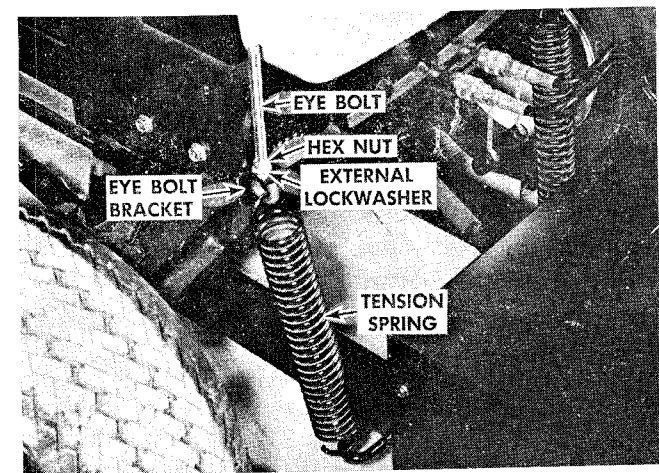


FIGURE 10

9. Loosen 7/16-20 hex nut on chute end of cable jacket. Slide the cable into the slot of the bracket on the chute. Bracket is to be between the two external lockwashers. See figure 11.

10. Tuck rubber deflector inside of chute cap. Leave chute cap all the way forward and push "T" handle in until cable stops. Remove small spring cotter and adjust terminal on end of cable and housing in bracket until pin of terminal freely enters bracket on chute cap. Secure terminal to cap with small spring cotter removed above. Secure hex nut against terminal and lock cable into bracket. See figure 11.

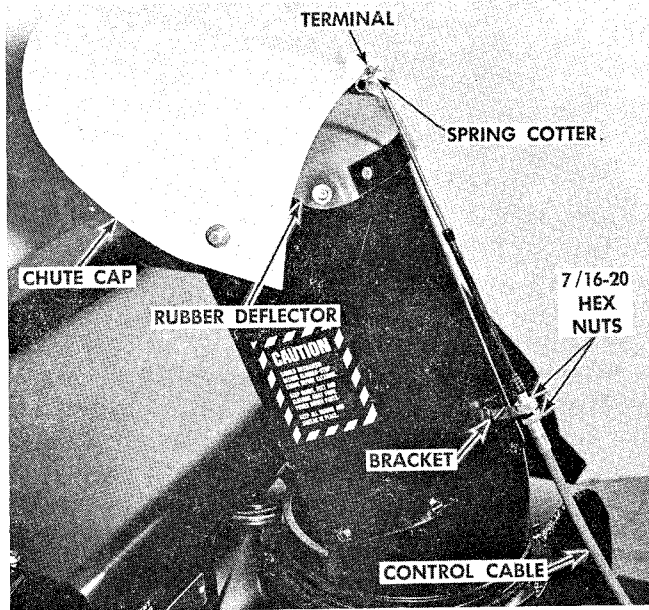


FIGURE 11

11. Layout and drill two .281 inch holes on the Left Hand side of the tractor cowl. See figure 12.

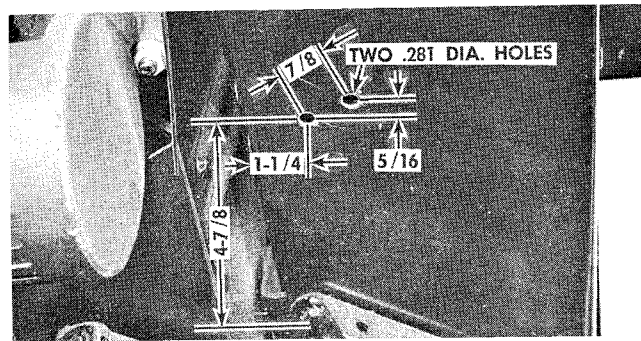


FIGURE 12

12. Secure control cable bracket to the side of the cowl with two hex head capscrews 1/4-20 x 5/8 and two Flange Whiz lock nuts 1/4-20.

13. Remove phillips head capscrew in center of "T" handle. Remove "T" handle and hex nut from cable. Install end of cable into long leg of cable bracket with the short leg of bracket towards handle. Secure with hex nut removed from cable and reinstall "T" handle. See figure 13.

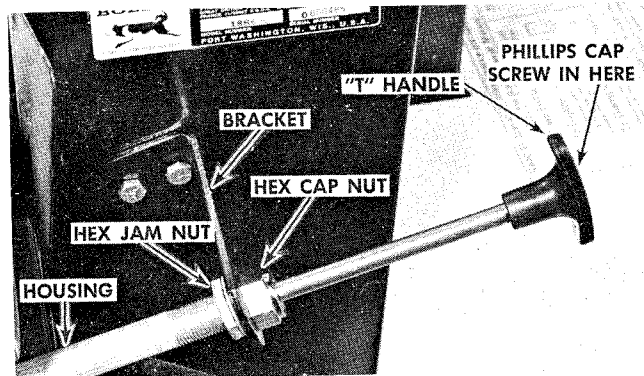


FIGURE 13

14. Check tire pressure in front tires. It is recommended that the front tire pressure is to be 12 P.S.I. when snow thrower is mounted on the tractor.

15. Remove the dust caps from the end of the hydraulic hoses and the connections on the front of the tractor. Plug the hoses into the hydraulic connections on the tractor. See figure 14.

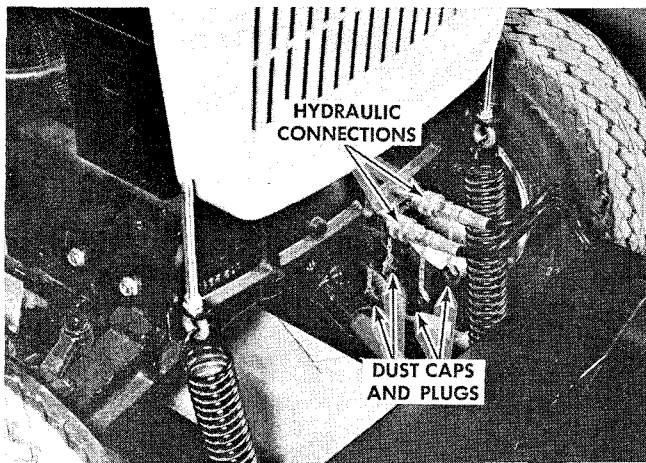


FIGURE 14

NOTE: Care should be taken to prevent dirt from entering the hydraulic hoses or connections when installing or removing hoses.

NOTE: A minimum rear end ballast of 400 pounds must be used (rear wheel weights and solution in the tires or rear wheel weights and a ballast box) on the tractor. Also tire chains must be installed on the tractor.

There is a pair of drift slicer bars furnished with the snow thrower. These mount on the upper outside of the rotor housing and are secured with two each of Flange Whiz lock capscrews 5/16-18 x 5/8 and hex nuts 5/16-18.

OPERATION

There are four controls for this Snow Thrower. They are as follows:

1. The tractor P.T.O. lever to engage and disengage power to the rotor and impeller.
2. The attachment Lift Valve to raise and lower Snow Thrower.
3. The auxiliary Hydraulic lift valve to control the direction of the chute.
4. The chute cap control cable to raise or lower discharge angle of the chute cap. Turn the "T" handle either Right or Left to unlock the control. Do not force the handle. When cap angle is set turn "T" handle 1/8th turn either Right or Left to lock in place. Do not force.

When using the Snow Thrower in light snow or in cleaning scattered remains, operate the tractor at a higher ground speed to maintain a stream of snow coming out of the chute. Small amounts of snow in intermittent intervals may cause a build up of snow in the chute resulting in eventual chute clogging.

NOTE: Operate unit at a slow constant travel speed when removing snow, rather than bucking the snow.

NOTE: If the unit is stored in heated quarters, allow it to cool to outside temperature, before operating. This will help prevent snow from sticking to the rotor housing, impeller and discharge chute.

CAUTION

1. Before starting the tractor, be sure the Snow Thrower is disengaged.
2. Under normal conditions always operate tractor with engine at full throttle and at a low ground speed to assure maximum power and casting distance.
3. Do not overload the Snow Thrower in deep snow, but rather reduce width of cut to maintain full engine RPM to effect full casting distance.
4. Should the Snow Thrower become overloaded, stop the forward motion until the unit has cleared and full engine RPM is evident.
5. Should the chute become plugged due to overload, disengage the rotor, shut off the engine and dislodge the packed snow WITH A STICK. NEVER ATTEMPT TO CLEAR ROTOR OR CHUTE WITH HANDS OR FEET, OR WHILE ENGINE IS RUNNING.

SKID SHOES

The skid shoes are mounted to the lower rear of the rotor housing. See figure 15. The mounting holes in the shoes are slotted so the unit can be raised to allow the scraper blade to clear most gravel or stone surfaces or lowered for cleaning a smooth surface.

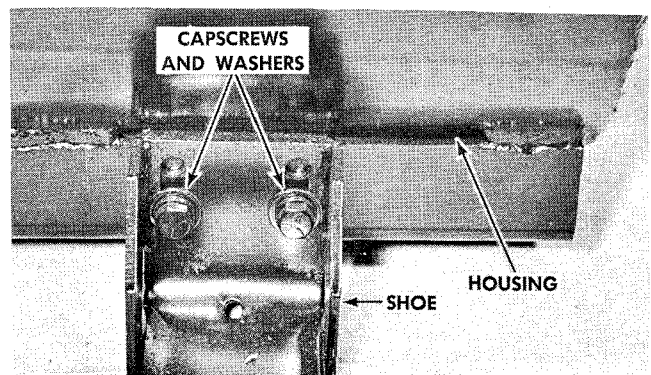


FIGURE 15

LUBRICATION

There is a grease fitting on each of the two rotor shafts. When a drive bolt shears, the grease fitting on that shaft should be lubricated with Bolens # 16020 Multi-purpose grease, before replacing drive bolt. See figure 16.

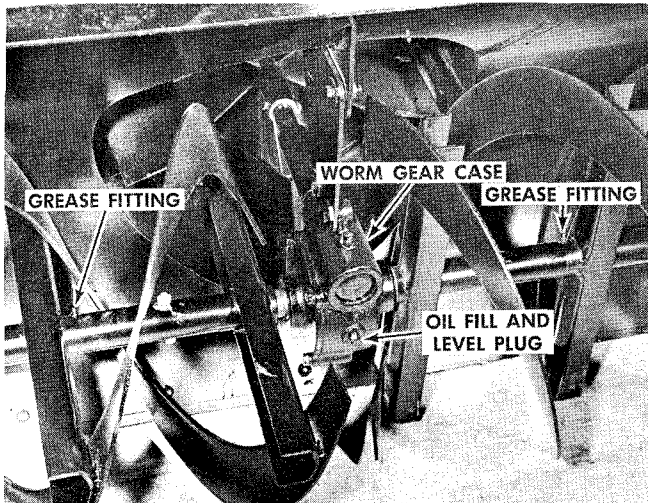


FIGURE 16

There is a fill and oil level plug on the upper Left Hand side of the impeller gear case. See figure 17. There is also a fill and oil level plug on the front of the rotor gear case. See figure 16. Check the oil level of both gear cases before using the Snow Thrower and every 25 hours of operation thereafter. Add Bolens # 16021 gear lubricant as necessary to maintain filler hole level.

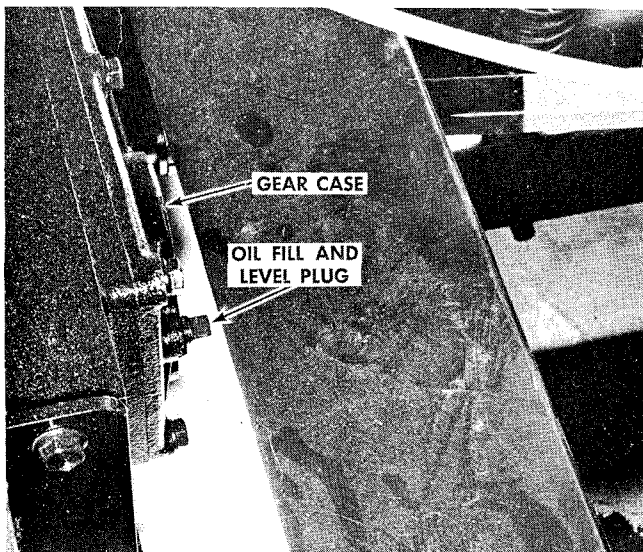


FIGURE 17

NOTE: Visually check for oil leaks. If any appear, check level of oil in gear case and add oil to bring to plug level. Have the oil leak repaired.

STORAGE

Before storing the unit or allowing it to stand in freezing weather, shut off the engine, remove snow from the rotor, impeller, around chute and chute control cylinder, as heavy icing could result in damage when attempting to restart unit. When stored for a long period of time, coat exposed unpainted parts with a light film of grease to prevent rusting.

Bolens reserves the right to change specifications, add improvements or discontinue the manufacture of any of its equipment without notice or obligation to purchasers of its equipment.

Bolens' approval of the use of attachments manufactured by other manufacturers is limited to assurance that such use will not void Bolens warranty on the Bolens equipment to which the outside manufactured attachments are adapted. The responsibility for the design, performance, durability, safety in operation, service repair availability, and warranty obligation remains with the outside manufacturer. Bolens specifically excludes from its warranty obligation all such outside manufactured attachments.

Bolens warranty will be voided if unapproved attachments are adapted to use with Bolens equipment and are so used.

John J. Bolens
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