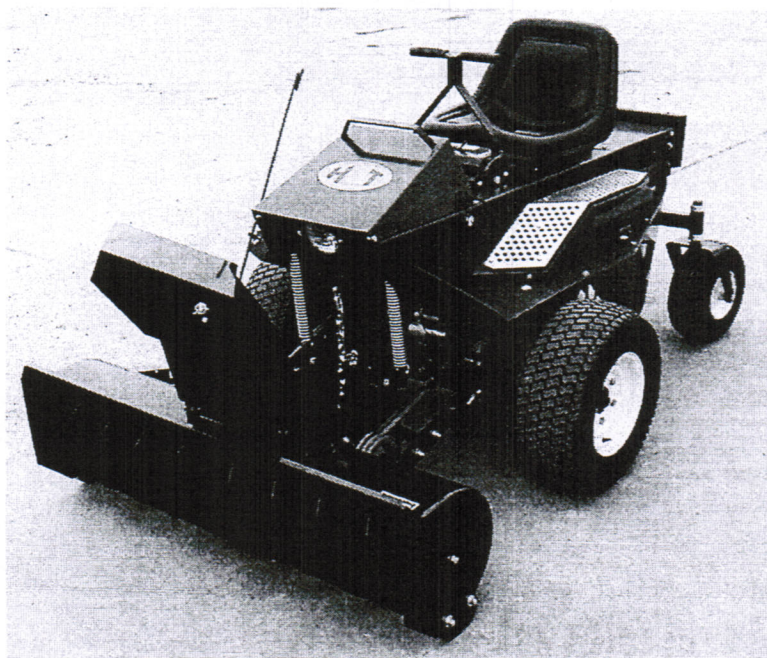




**DEINES  
MANUFACTURING  
CORPORATION**

# **DST- 48 SNOWBLOWER**

**OPERATORS / PARTS MANUAL**



**SERIAL# A12336 & UP**



**IMPORTANT:** The safety messages-contained in this manual are to be used together with the Safety Messages appearing in the tractor operator's manual. Be sure to review both carefully before operating the tractor snow caster combination



**CAUTION:** Regard your snowblower as a piece of power equipment and be sure this is understood by all who operate it.



**CAUTION:** Keep the area of operation clear of all persons particularly small children



**CAUTION:** Never allow children or young teenagers to operate the tractor and snowblower.



**CAUTION:** Stop the engine and disengage attachment drive clutch when the tractor is unattended.



**CAUTION:** Be sure you know how to stop the tractor and auger at a moments notice.



**CAUTION:** Give complete undivided attention to the job at hand.



**CAUTION:** Check the tractor and caster to make certain both are in good operating condition.



**CAUTION:** Disengage attachment drive clutch when someone approaches.



**CAUTION:** Fill gas tank out of doors and avoid spilling gasoline.



**CAUTION:** Extreme caution should be exercised under slippery conditions. Reduce forward speed. Install tire chains for added traction.





**WARNING:** Contact by any part of the body with the rotating snow caster auger can result in serious injury.

Extra care should be used around exposed areas such as the auger and discharge chute.

**ALWAYS:**

1. Disengage the attachment drive clutch.
2. Shut off tractor engine.
3. Set parking brake and wait for all motion to stop.  
**BEFORE** approaching or allowing anyone else to approach the front of the tractor to:
  1. Clear the auger or discharge chute.
  2. Change position of chute deflector.
  3. Service or adjust snowblower or tractor.



**CAUTION:** Disengage attachment drive clutch when transporting.



**CAUTION:** Disengage the attachment drive clutch when starting the engine and when transporting the snow caster. Before the first snowfall, the area in which snow removal is to take place should be cleared of all stones, sticks, etc., which might be picked up by the snowblower. **OBSTACLES SUCH AS DRIVEWAY MARKERS, WATER OR GAS SHUT OFFS, ETC. SHOULD BE MARKED SO THEIR LOCATION UNDER THE SNOW ARE VERY OBVIOUS.**



**CAUTION:** do not allow anyone other than the operator to ride on the tractor or to be towed behind.



**CAUTION:** Never direct snow discharge at people or buildings.

**IMPORTANT:** Always install new decals whenever the old decals are destroyed, lost, painted over or illegible. When individual parts are replaced that have decals attached be sure to install a new decal with the new part. Replacement decals are available from your Deines Manufacturing Dealer.

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## INTRODUCTION

This operator's manual is for Deines DST 48 Model snowblower. This operator's manual Includes:

- A. Safety rules.
- B. Installation procedure
- C. Operating procedure
- D. Maintenance
- E. Adjustments
- F. Disassembly parts drawings & descriptions

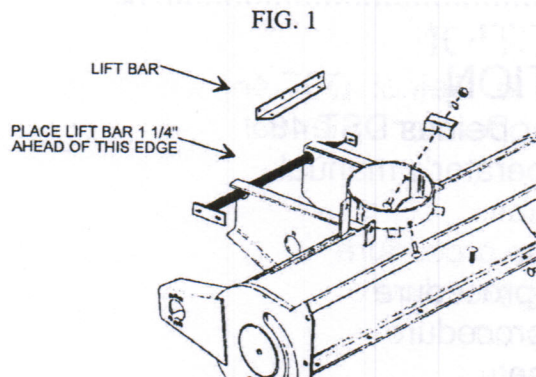


## DECK REMOVAL AND SNOWBLOWER INSTALLATION

### DECK REMOVAL:

Refer to your mower owner's manual.

1. Remove the mower deck by loosening and removing bolts #5 on page 28 of the tractor manual.
2. Remove the deck drive belts #16 on page 27 of the tractor manual.
3. Remove the two bolts that hold the tractor hood down to the dash panel. Raise the hood up to its most open position.
4. Release the deck tension springs and let the springs drop down.
5. Remove the deck lift chain #30 on page 24 from the deck lift tube #19 on page 28 of the tractor manual.
6. Remove the front half of both the RH and LH pusharms. See #9 & 21 on page 28 of the tractor manual.
7. Install the new snowblower pusharms.



#4 on page 10 in the snowblower manual with the draw bolt installed.

8. Place the lift bar 1 1/4 " ahead of the rear edge of the snowblower frame as shown in Fig. 1. Clamp the lift bar in place and drill an 11/32 hole in the frame on both sides and secure with a 5/16 x 1 HHCS lockwasher and nut.

9. Install the snowblower drive sheave onto the snowblower input shaft. See below.

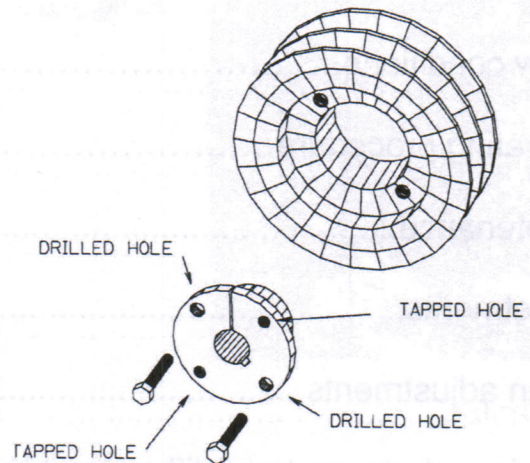


FIG. 2

Align drilled holes in the bushing flange with tapped holes in the sheave hub. Insert cap screws through drilled holes in the bushing flange and thread loosely in the tapped holes in the sheave. Position assembly on the shaft. Be sure to place the key in the keyway on the shaft. Do not tighten but leave the sheave and hub sit on the shaft for the moment.

10. Move the snowblower up to the pusharms and slip the drive belts over the drive sheave that has just been placed onto the snowblower drive shaft. Attach the snowblower to the pusharms with 4 each 3/8 x 1 1/4 HHCS using a flat washer, lockwasher and nut on each.

11. Install the deck lift chain onto the center hole of the lift bar shown in Fig. 1.

12. Lift the snowblower with the deck lift lever or power lift to the highest position. Attach the spring to the lift bar using the outside holes.

13. Lower the snowblower and align the snowblower drive sheave, with the belts installed, in line with the sheaves on the electric clutch. Tighten the capscrews in the bushing flange of the sheave progressively and uniformly. Torque to a maximum of 8 foot pounds. Do not over torque.

14. Tension the bolts to the proper tension. See page 7 of the tractor manual.

15. Install the skid shoes. One will go on each end of the snowblower. By adjusting these skid shoes you can control the height of the snowblower in the down position. The skid shoes have slotted mounting holes for adjustment.

16. Install the discharge chute and deflector. Before using apply a little multi-purpose grease on the chute guides.

17. Install the spout handle and spout handle crank-pivot tab. See figure 3 below. Drill two 5/16 holes into the foot rest on the right hand side of the body as shown in figure 3. above.

18. Slide the crank pivot tab over the crank and bolt the pivot tab to the footrest with two 1/4 x 3/4 HHCS using a lockwasher and nut on each.

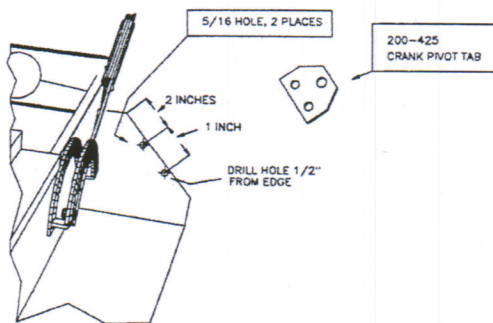


FIG. 3



## PREPARING FOR SNOW REMOVAL

To become familiar with the controls, operate the tractor and snowblower in a clear area before removing snow. The more familiar you become with the snowblower the better results you will have in its use.

A light coat of wax applied to the inside surfaces of the discharge chute and deflector will help to prevent snow and slush from sticking. The inside of the chute and deflector should be waxed several times during the snow removal season. Use any good commercial grade of paste wax or spray silicone which is available from your dealer or from your local hardware store.

Allow ample engine warm up time before starting snow removal.

Best results are obtained when snow is removed as soon as possible after it falls.

Check each item covered in the "Adjustments" and "Maintenance" sections of the manual before operating the snowblower.



**CAUTION: do not allow anyone other than the operator to ride on the tractor or to be towed behind.**

## METHOD OF SNOW REMOVAL

A definite pattern of operation is required to thoroughly clean the snow area. This pattern will avoid a second removal of snow and avoid blowing snow to right and left, as on a long driveway, it is advantageous to start in the middle. See Figure 4. Work from one end blowing snow to both sides without changing direction of the discharge chute. If snow can only be blown to one side of the driveway, start on the opposite side. See Figure 5. At the end of each succeeding pass, rotate the chute to the opposite side to maintain direction of throw into the same area.

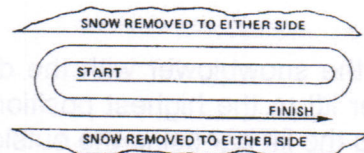


FIGURE 4

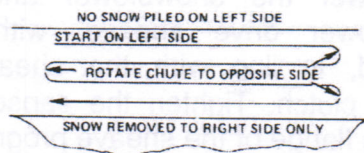


FIGURE 5

**CAUTION: Disengage the attachment drive clutch when starting the engine and when transporting the snow caster. Before the first snowfall, the area in which snow removal is to take place should be cleared of all stones, sticks, etc., which might be picked up by the snowblower. OBSTACLES SUCH AS DRIVEWAY MARKERS, WATER OR GAS SHUT OFFS, ETC. SHOULD BE MARKED SO THEIR LOCATION UNDER THE SNOW ARE VERY OBVIOUS.**

## SNOW CONDITIONS

Snow removal conditions vary so greatly from the first light fluffy snowfall to wet or heavy snow that operating instructions must be flexible. The operator must operate according to depth of snow, wind direction, temperature, and surface conditions.

The auger speed and blowing distance are directly related to the engine speed. For maximum removal volume and distance, maintain high engine RPM (three-quarters to full governed throttle). Operating at lower throttle settings will increase fuel economy but will reduce blowing distance.

In extremely deep snow, raise snowblower into transport and remove top layer first. Lower the snowblower to the ground and repeat the process to remove the balance of snow.





**WARNING:** Contact by any part of body with the rotating snow caster auger can result in serious injury.

Extra care should be used around exposed areas such as the auger and discharge chute.

**ALWAYS:**

1. Disengage the attachment drive clutch.
2. Shut off tractor engine.
3. Set parking brake and wait for all motion to stop.  
**BEFORE** approaching or allowing anyone else to approach the front of the tractor to:

1. Clear the auger or discharge chute.

2. Change position of chute deflector.

3. Service or adjust snowblower or tractor.

**OPERATING PROCEDURE**

1. Whenever possible, discharge snow downwind.
2. Do not attempt to remove ice or hard packed frozen snow.
- 3 Always overlap each pass slightly to assure complete snow removal.
4. Use extreme care when freeing a frozen or stuck auger or chute. Always turn off the tractor first.

**ATTACHMENT DRIVE CLUTCH**

The snowblower is started and stopped with the drive clutch switch.

See your tractor Operator's Manual for correct use of your tractor controls.

**ATTACHMENT LIFT LEVER**

The snowblower is raised and lowered with the deck lift lever or power lift.

**CRANK FOR THE DISCHARGE CHUTE**

The discharge chute is rotated by turning the crank. This determines the direction of the discharge snow.

**DEFLECTOR FOR THE DISCHARGE CHUTE**

The deflector angle is changed by loosening the wing nuts and tilting it to the desired position and tightening the wing nuts. This controls the distance the snow is blown.

**TIRE CHAINS**



**CAUTION:** Extreme caution should be exercised under slippery conditions. Reduce forward speed. Install tire chains for added traction.

The use of tire chains is recommended for snow removal operations. The extra traction resulting gives the tractor operator maneuverability in handling heavy snow removal jobs. These accessories are sold by your dealer and are not included with the snowblower.

**MAINTENANCE**

Grease the discharge chute crank, chute base ring daily to keep the crank turning freely.

Once a month during season or every 25 operating hours, lubricate the auger drive chain with heavy duty chain lubricant, or equivalent.

At the end of the snow season, the following steps are recommended:

1. Remove the snowblower from the tractor following the procedure outlined in this manual.
2. Wash off any salt deposit which may have dried on the auger and chute. Paint or cover exposed metal with a light coat of oil.
3. Service the snowblower following lubrication above. Oil the auger drive chain thoroughly using chain lubricant to prevent rust from forming.
4. Store snowblower in a dry place.



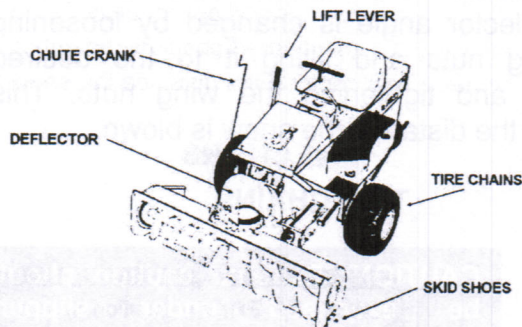


FIGURE 6

## SKID SHOES

The skid shoes have slotted mounting holes for adjustment. Use the following procedure to change the skid shoe height:

1. Raise the snowblower. Shut off the engine.
2. Place blocking under the snowblower cutting edge.
3. Loosen the bolts and raise or lower the skid shoes to the desired height.
4. Tighten the bolts.

Skid shoes raised: Snowblower cutting edge is very close to the surface.

Skid shoes lowered: Snowblower cutting edge raised above the surface. Use on uneven surfaces such as earth or gravel.

When the leading edges of the skid shoes wear, place the left skid shoe on the right side and the right skid shoe on the left side.

The skid shoes can be raised past the cutting edge by installing them with the offset to the outside. This will permit the cutting edge to be in contact with the ground surface. Use this method only when clearing hard level concrete or asphalt areas.

## DEFLECTOR

The deflector has a slotted hole on each side for adjustment. To change the angle of the deflector, loosen the wing nuts, tilt the deflector to the desired angle and tighten the wing nuts.

### Deflector tilted up:

Snow is cast higher and further from the tractor.

### Deflector tilted down:

Snow is cast lower and closer to the tractor.

## CUTTING EDGE

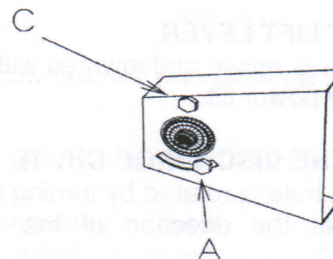
The cutting edge can be reversed when the leading edge wears down. Never let the cutting edge wear into the snowblower housing.

## DRIVE CHAIN ADJUSTMENTS

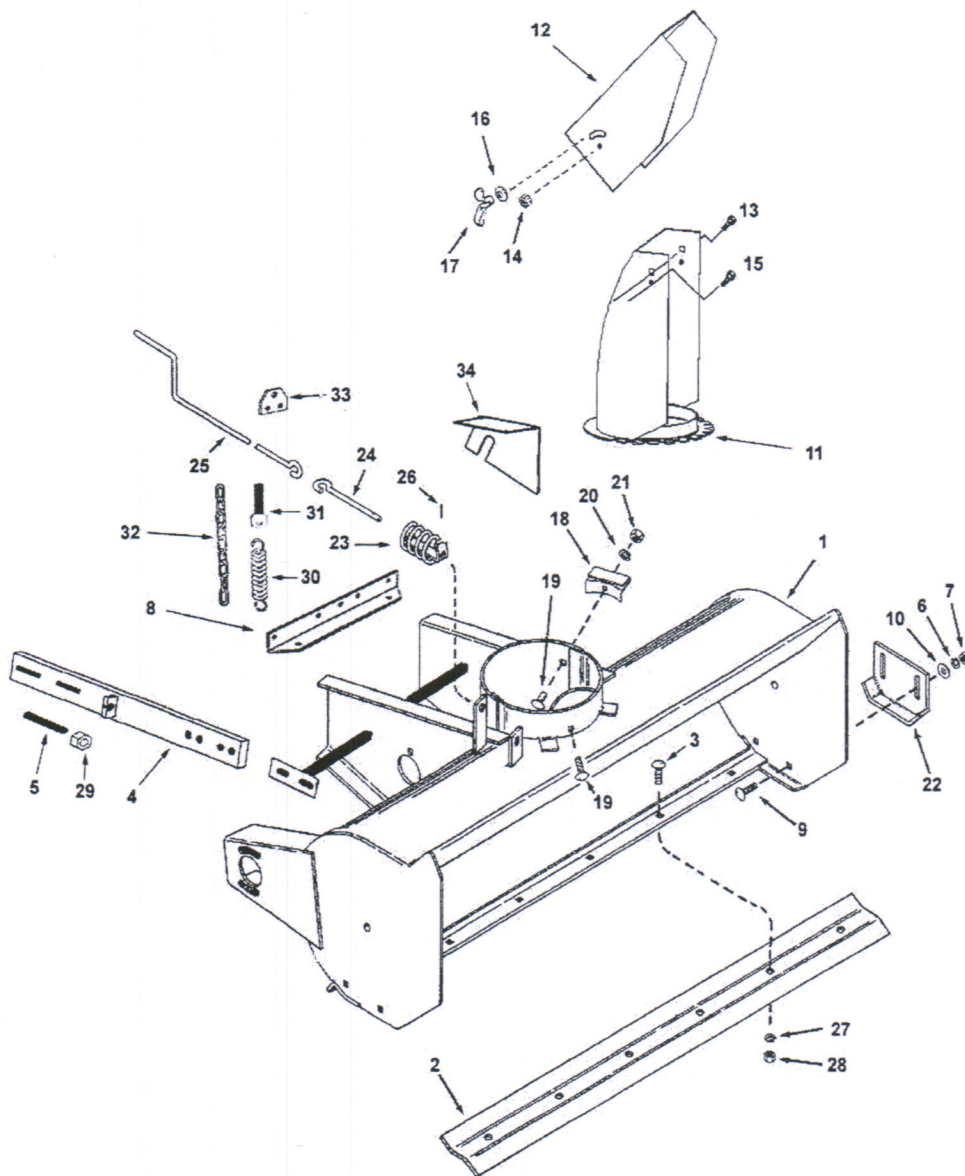
The chain has the proper tension when the lower strand has at least 1/8" of slack but does not contact the lower edge of the chain guard. Before checking the chain tension, manually rotate the auger until the chain is at its tightest position. (This will compensate for minor tolerance variations in the chain and sprocket.) Make this measurement when depressing the lower strand midway between the sprockets. Use "normal" finger pressure.

The chain will become progressively tighter by moving the bearing to the rear. See figure 7. Loosen bolts A and C. It is advisable to loosen the remaining bolts on the other two drive shaft bearings. Set the chain tension, then re-torque the mounting bolts A and C and then the remaining bolts.

FIGURE 7



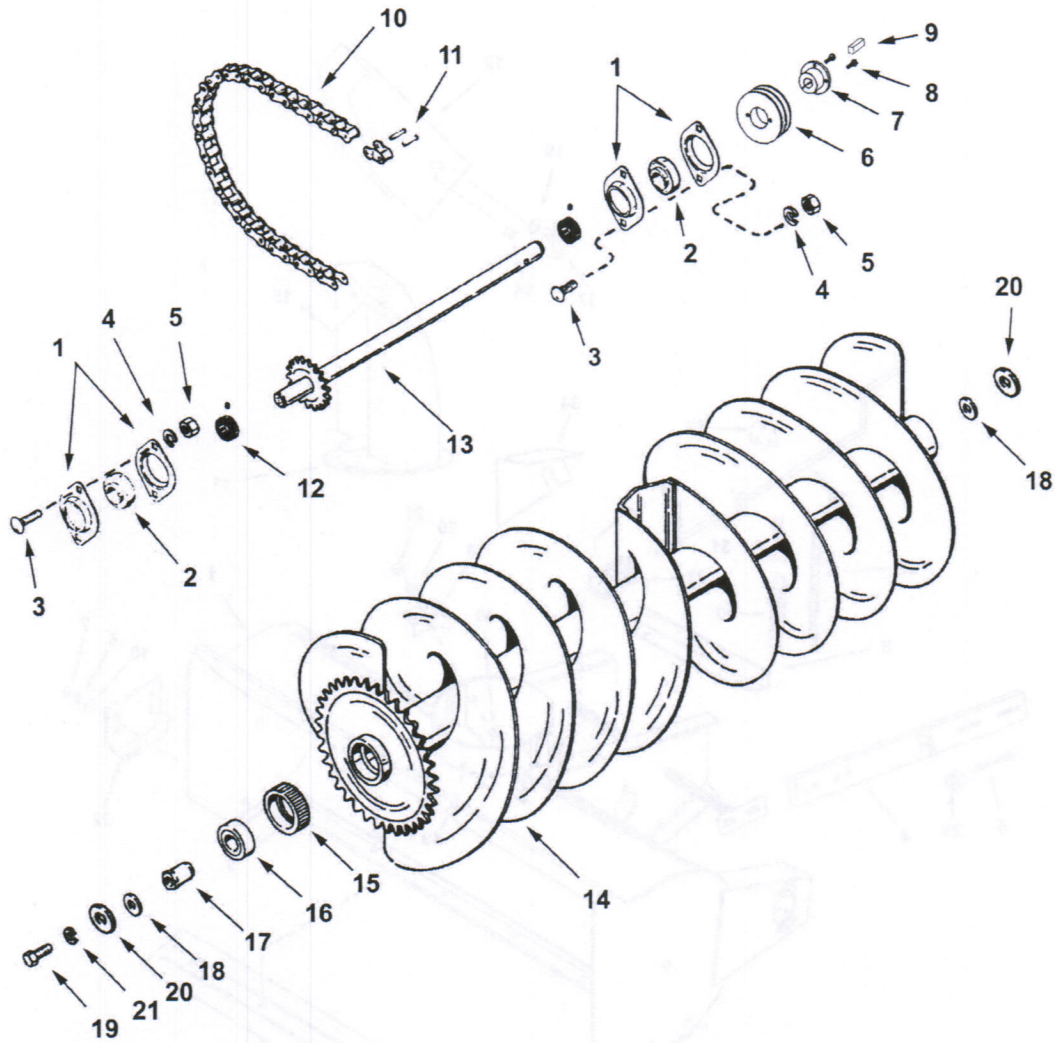
# HOUSING, CHUTE CONTROL AND LIFT ASSEMBLY



REF. #	PART#	DESCRIPTION	QTY.	REF. #	PART#	DESCRIPTION	QTY.
1	C26500	HOUSING	1	18	C15334	CHUTE BRACKET	3
2	C17776	BLADE	1	19	300-560	5/16 X 3/4 CAR. BOLT	3
3	300-411	1/4 X 3/4 HHCS	8	20	300-451	5/16 LOCK WASHER	3
4	200-431	LH & RH PUSHARM	2	21	300-453	5/16 HEX NUT	5
5	400-697	ADJUSTING BOLT	2	22	C17775	SKID	2
6	300-480	3/8 LOCKWASHER	4	23	C24640	COIL	1
7	300-484	3/8 HEX NUT	6	24	C24643	ROD	1
8	200-435	LIFT BAR	1	25	C24644	CRANK	1
9	300-464	3/8 X 1 CARR. BOLT	4	26	300-279	COTTER PIN	1
10	300-481	3/8 FLAT WASHER	4	27	300-431	1/4 LOCK WASHER	10
11	C15248	CHUTE	1	28	300-432	1/4 HEX NUT	10
12	C16940	DEFLECTOR	1	29	300-484	3/8 HEX NUT	6
13	300-464	3/8 X 1 CARR. BOLT	2	30	100-491	SPRING	2
14	300-436	1/4 LOCK NUT	2	31	100-488	EYE BOLT	2
15	300-411	1/4 X 3/4 HHCS	4	32	300-725	LIFT CHAIN	1
16	300-481	3/8 FLAT WAWSER	2	33	200-425	HANDLE TAB	1
17	C22774	WINGNUT	2	34	C16941	BELT GUARD	1



# AUGER AND DRIVE ASSEMBLY



REF. #	PART#	DESCRIPTION	QUANTITY
1	200-429	FLANGETTE	6
2	200-428	BEARING	3
3	300-560	5/16 X 3/4 CARR. BOLT	6
4	300-451	5/16 LOCK WASHER	6
5	300-453	5/16 HEX NUT	6
6	200-426	PULLEY	1
7	200-427	PULLEY HUB	1
8	300-411	1/4 X 3/4 HHCS	2
9	300-289	KEY	1
10	200-430	CHAIN	1
11	300-341	CONNECTING LINK	1
12		BEARING LOCKING COLLAR	WITH BEARING
13	200-424	SHAFT ASSEMBLY	1
14	C25853	AUGER	1
15	C25840	SLEEVE	2
16	C28971	BEARING	2
17	C25841	SHAFT	2
18	300-481	3/8 FLATWASHER	UAR
19	300-469	3/8 X 1 1/4 NF HHCS	2
20	300-173	SPECIAL WASHER	2
21	300-480	3/8 LOCKWASHER	2