

OWNERS MANUAL

**Model No.
45-02212**

CAUTION:
Read Rules for
Safe Operation
and Instructions
Carefully



38" LAWN SWEEPER

- Assembly
- Operation
- Maintenance
- Repair Parts

RULES FOR SAFE OPERATION

Any power equipment can cause injury if operated improperly or if the user does not understand how to operate the equipment. Exercise caution at all times, when using power equipment.

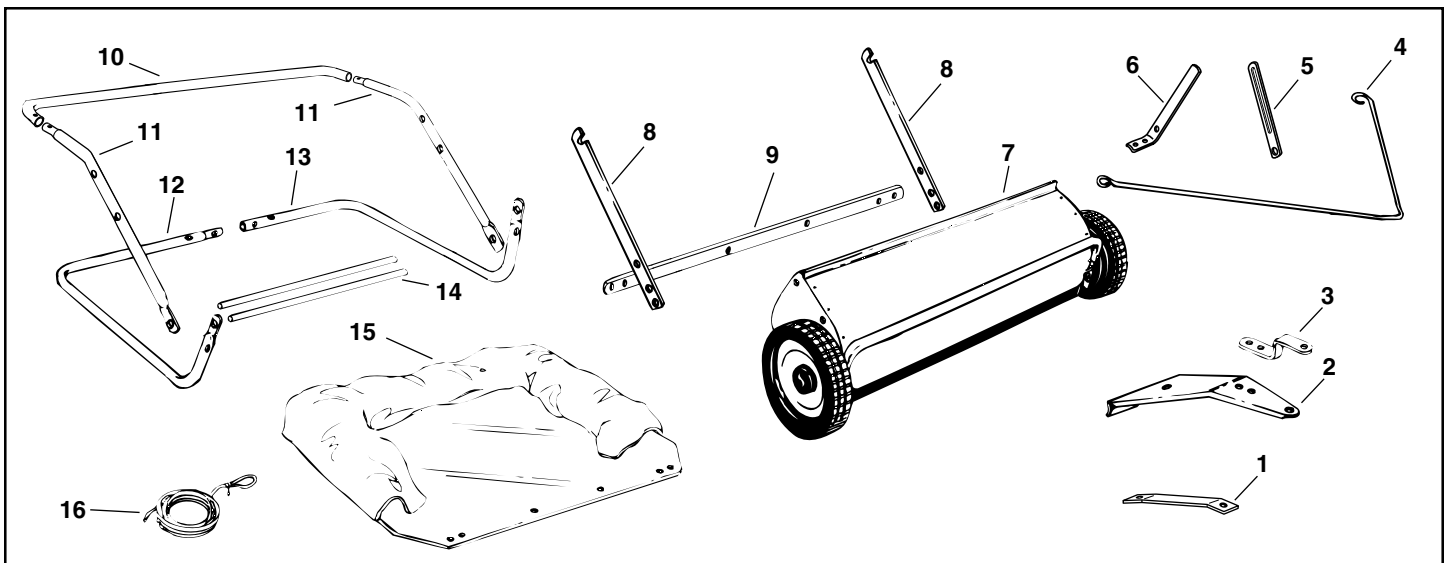
- Read the vehicle and sweeper owners manuals and know how to operate your vehicle and sweeper before using this sweeper attachment. Always instruct other users before they operate the sweeper.
- Do not permit children to operate sweeper.
- Do not permit anyone to ride on sweeper.
- Never attach the hopper rope to any part of your body or clothing! Never hold onto the rope while towing the sweeper! Attach the rope to the towing vehicle to keep it away from wheels and rotating parts.
- Operate the sweeper at reduced speed on rough terrain, near ditches and on hillsides to prevent loss of control.
- Vehicle braking and stability may be affected with the attachment of this sweeper. Do not fill sweeper to maximum capacity without checking the capability of the towing vehicle to safely pull and stop with the sweeper attached. **Stay off of steep slopes.**
- Stop and inspect vehicle and sweeper for damage after striking an object. Repair any damage before continuing operation.
- Keep sweeper away from fire. Excessive heat can damage the brushes and hopper bag and could cause the bag and its contents to burn.
- Before storing the sweeper, always empty the hopper bag to avoid spontaneous combustion.
- Follow maintenance and lubrication instructions as outlined in the maintenance section of this manual.



Look for this symbol to point out important safety precautions. It mean--**Attention!!**
Become alert!! Your safety is involved.

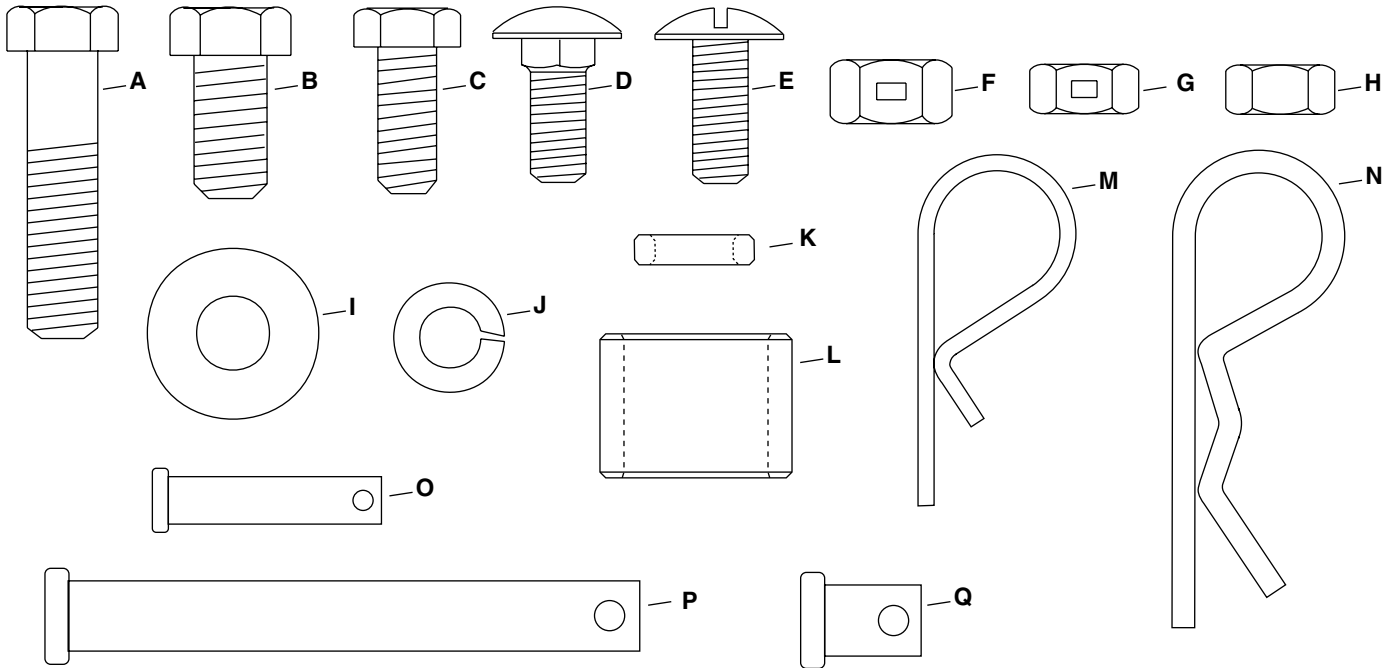
CARTON CONTENTS

1. Tongue Brace
2. Hitch Tongue
3. Hitch Bracket
4. Brace Rod
5. Height Adjustment Strap
6. Height Adjustment Handle
7. Sweeper Housing Assembly
8. Hopper Mount Arms (2)
9. Bag Frame Strap
10. Upper Hopper Tube
11. Side Hopper Tubes (2)
12. Lower Hopper Tube, Right Hand
13. Lower Hopper Tube, Left Hand
14. Bag Support Rods (2)
15. Hopper Bag
16. Rope

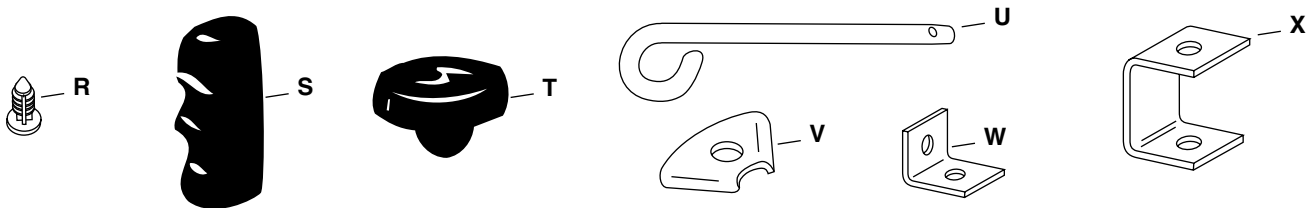


HARDWARE PACKAGE CONTENTS

SHOWN FULL SIZE



NOT SHOWN FULL SIZE



REF.	QTY.	DESCRIPTION	REF.	QTY.	DESCRIPTION
A	1	Hex Bolt, 3/8" x 1-1/2"	M	6	Hair Cotter Pin, 3/32"
B	5	Hex Bolt, 3/8" x 3/4"	N	1	Hair Cotter Pin, 1/8"
C	1	Hex Bolt, 5/16" x 3/4"	O	2	Clevis Pin, 1/4" x 1-1/8"
D	3	Carriage Bolt, 5/16" x 3/4"	P	2	Clevis Pin, 3/8" x 3"
E	1	Truss Head Bolt, 5/16" x 3/4"	Q	2	Clevis Pin, 3/8" x 1/2"
F	6	Hex Lock Nut, 3/8"	R	3	Plastic Plug, 1/4"
G	3	Hex Lock Nut, 5/16"	S	1	Grip
H	1	Hex Nut, 5/16"	T	1	Knob, Plastic
I	3	Washer, 5/16"	U	1	Hitch Pin
J	1	Lock Washer, 5/16"	V	1	Brace Rod Clip
K	1	Pivot Spacer	W	1	Angle Bracket
L	2	Hitch Spacer	X	2	Bag Retainer

ASSEMBLY INSTRUCTIONS

TOOLS REQUIRED FOR ASSEMBLY

- (1) Screwdriver
- (1) Adjustable Wrench
- (1) 9/16" Open End or Box End Wrench
- (1) 1/2" Open End or Box End Wrench

Note: Right hand (R.H.) and left hand (L.H.) are determined from the operators position while seated on the tractor.

ASSEMBLY OF SWEEPER

1. Remove the sweeper, the loose parts and the hardware package from the carton. Lay out the parts and hardware as shown on pages 3 and 4.
2. Remove the 5/16" hex nuts, 5/16" lock washers and 5/16" flat washers from the two 5/16" x 1-3/4" carriage bolts as shown in figure 1. Assemble the hitch tongue to the sweeper, reusing the same two carriage bolts, flat washers, lock washers and hex nuts. **Do not tighten at this time.**

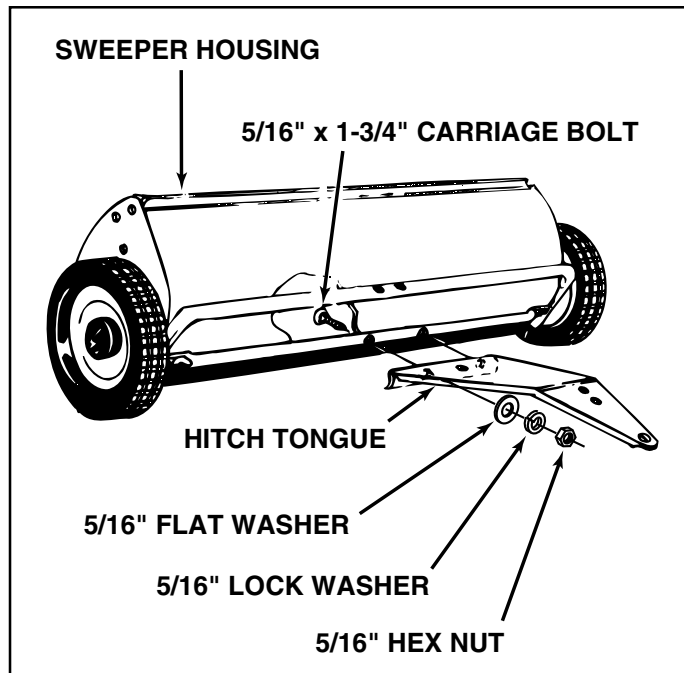


FIGURE 1

3. Attach the brace rod to the square holes in the sweeper housing using two 5/16" x 3/4" carriage bolts, 5/16" flat washer and 5/16" hex lock nuts. Place bolts heads on inside of sweeper housing. **Do not tighten at this time.** See figure 2.

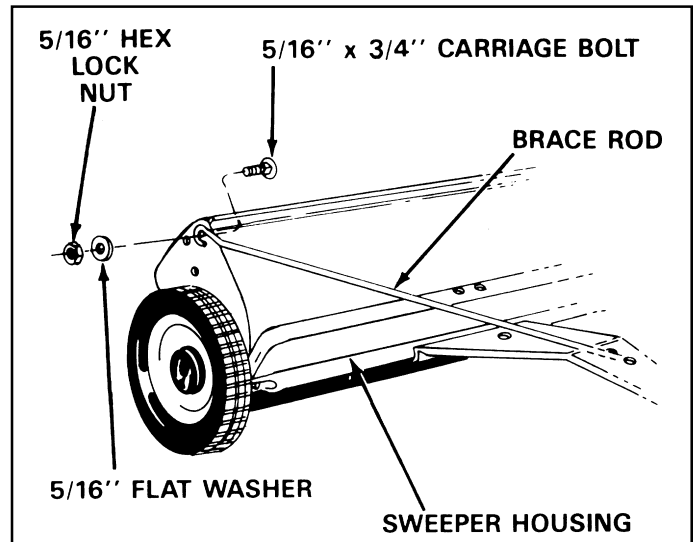


FIGURE 2

NOTE: Before assembling the hitch bracket to the hitch tongue, refer to figure 3 below and to page 10 to determine which hitch position is required for your towing vehicle.

4. Assemble a 3/8" x 3/4" hex bolt through the rear hole in the hitch bracket and the hitch tongue. Secure with a 3/8" hex lock nut but **do not tighten yet.** Next, assemble the brace rod, the hitch bracket and the hitch brace to the front hole in hitch tongue. Secure with the brace rod clip, a 3/8" x 1-1/2" hex bolt and a 3/8" hex lock nut. **Do not tighten yet.** See figure 3.

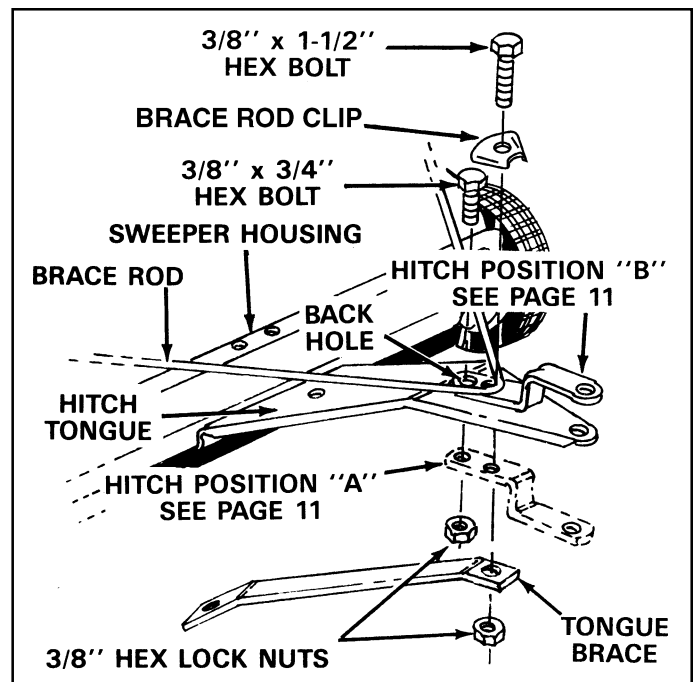


FIGURE 3

5. **Tighten** (do not overtighten) the two hex nuts used to secure the hitch tongue in figure 1, making sure the brace rod is under the brace rod clip and pulled back tight against the bolt. See figures 1,2 and 3. Now **tighten** all other bolts assembled so far.
6. Remove the two 5/16" hex nuts, 5/16" lock washers and 5/16" curved washers from the height adjustment tube. Assemble the height adjustment handle to the two curved head bolts in the height adjustment tube. Push the handle to the left and secure with the two 5/16" lock washers, 5/16" curved washers and 5/16" hex nuts which you removed. See figure 4.
7. Assemble the grip onto the height adjustment handle. See figure 4.

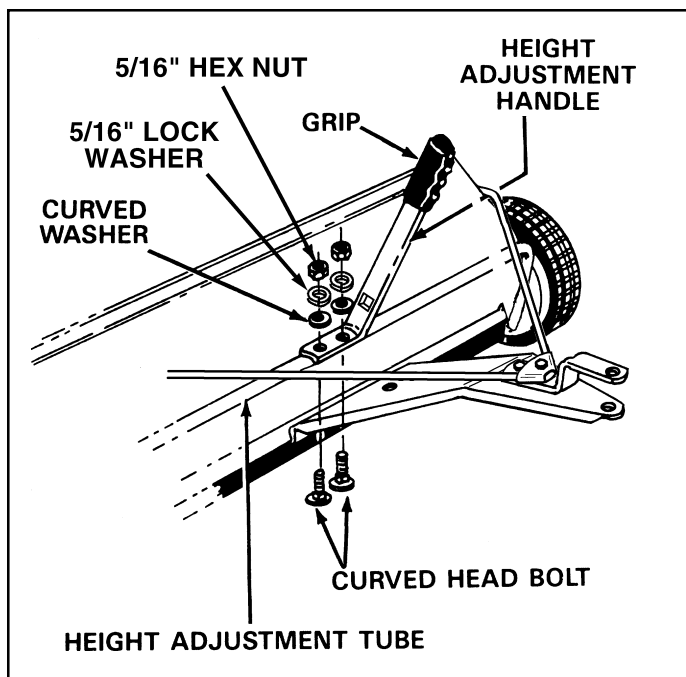


FIGURE 4

8. Place the short end of the angle bracket over the rear hole in the hitch tongue. Insert a 5/16" x 3/4" hex bolt down through the angle bracket, hitch tongue and the rear hole in the tongue brace. Secure with a 5/16" hex lock nut. See figure 5.
9. Place the pivot spacer into the hole in the height adjustment strap. Attach the strap and spacer to the angle bracket using the 5/16" x 3/4" truss head bolt, a 5/16" lock washer and a 5/16" hex nut. See figure 5.
10. Attach the slotted end of the height adjustment strap to the height adjustment handle by inserting a 5/16" x 3/4" carriage bolt first through the handle and then through the strap. Assemble a 5/16" washer and the plastic hand knob onto the bolt. See figure 5.

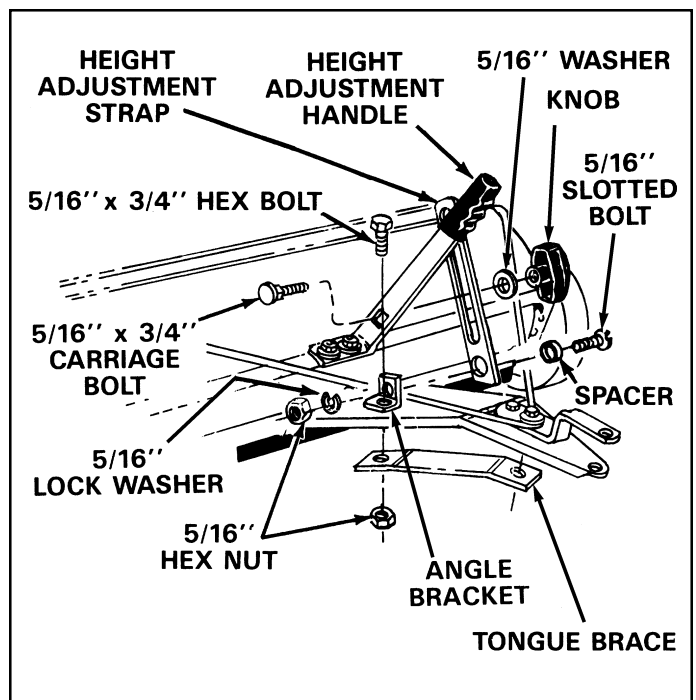


FIGURE 5

11. Assemble the two bag mount arms to the **outside** of the sweeper housing using four $3/8"$ x $3/4"$ hex bolts and $3/8"$ hex lock nuts. Use the **front** hole of the dual position holes in the side of the sweeper housing. The notched side of the bag mount arms **faces upward**. See figure 6.

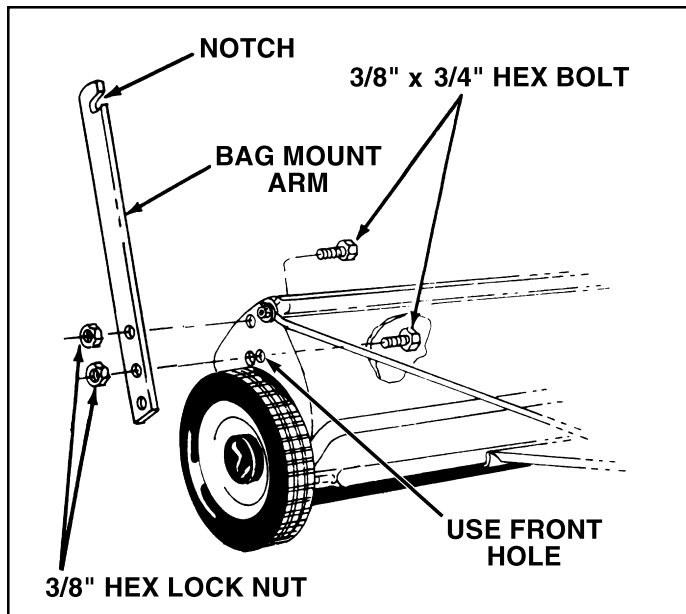


FIGURE 6

12. Assemble the hitch pin, the two hitch spacers and the $1/8"$ hair cotter pin to the hitch bracket and hitch tongue as shown in figure 7.

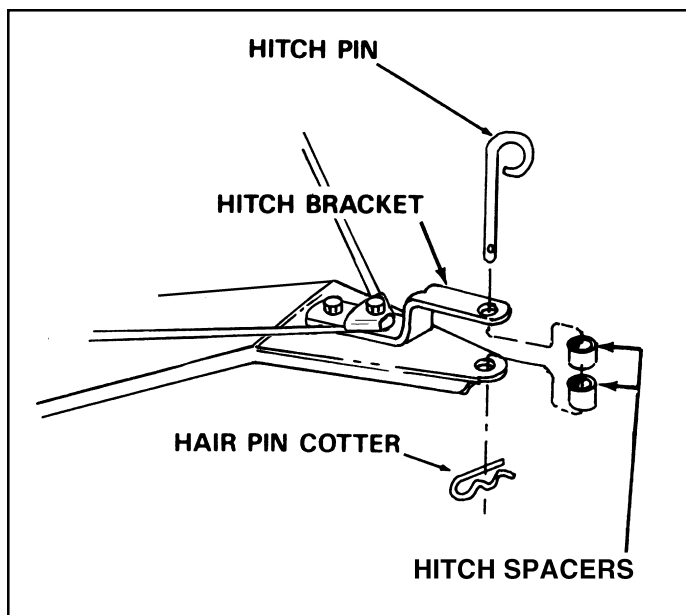


FIGURE 7

ASSEMBLY OF HOPPER BAG

1. Turn the upper hopper tube so that the middle brace holes face down as shown in figure 8. Slide the tube through the two loops sewn to the top rear seam inside the hopper bag.

IMPORTANT: The two holes in the middle of the upper hopper tube must face down to allow assembly of the support rods.

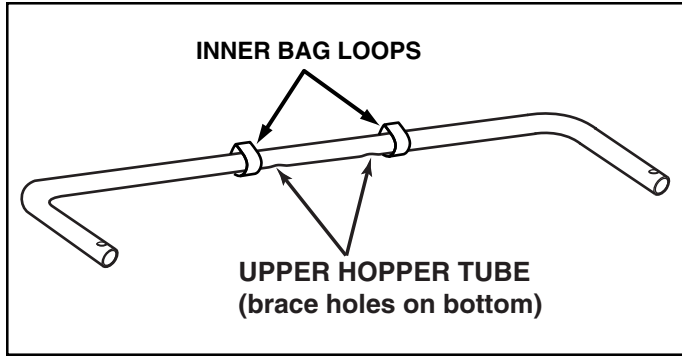


FIGURE 8

2. Insert the two side hopper tubes through the stitched flaps on each side of the hopper bag. See figure 9.
3. Assemble the ends of the upper hopper tube onto the ends of the side hopper tubes. Fasten together using plastic plugs. See figure 9.

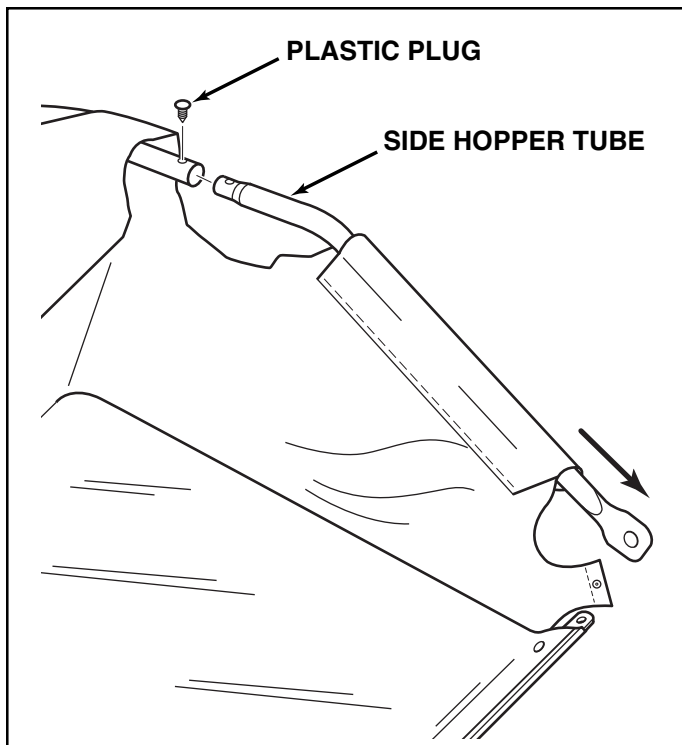


FIGURE 9

4. Fit the ends of the (RH) and (LH) lower hopper tubes together. Align the holes in the tubes and insert a plastic plug. See figure 10.

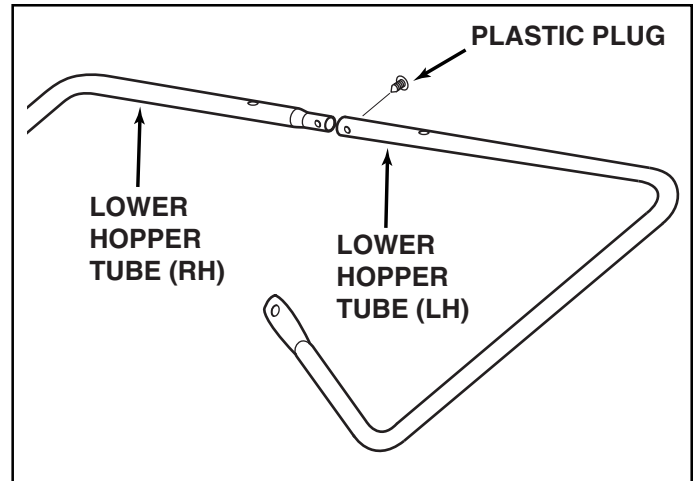


FIGURE 10

5. Place the assembled lower hopper tubes into the bottom of the hopper bag as. See figure 11.
6. Attach the ends of the lower hopper tubes to the **inside** of the side hopper tubes using two $3/8"$ x $1/2"$ clevis pins inserted from the inside, and two $3/32"$ hair cotter pins. See figure 11.

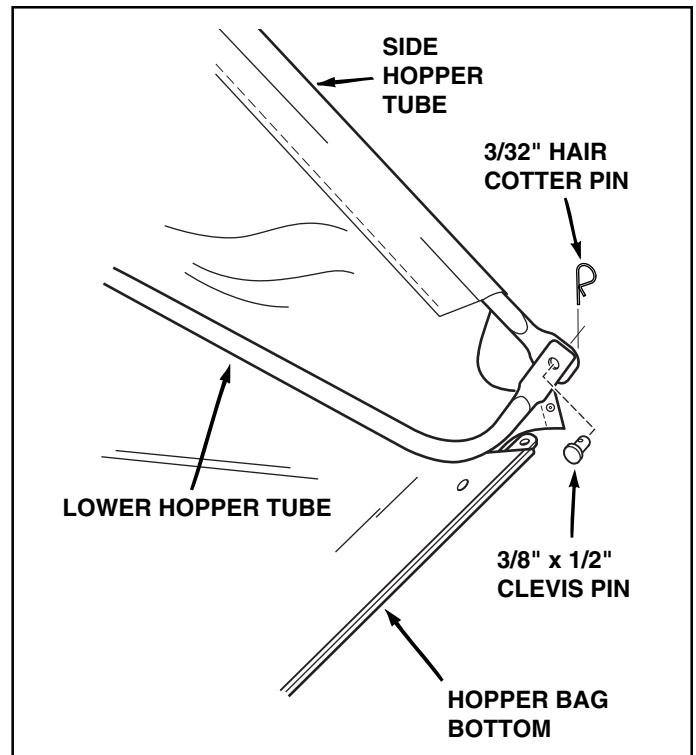


FIGURE 11

- Insert the bag frame strap into the stitched sleeve along the front edge of the bag bottom. See figure 12.
- Assemble the bag frame strap to the holes in the lower hopper tubes using two 1/4" x 1-1/8" clevis pins and 3/32" hair cotter pins. See figure 12.

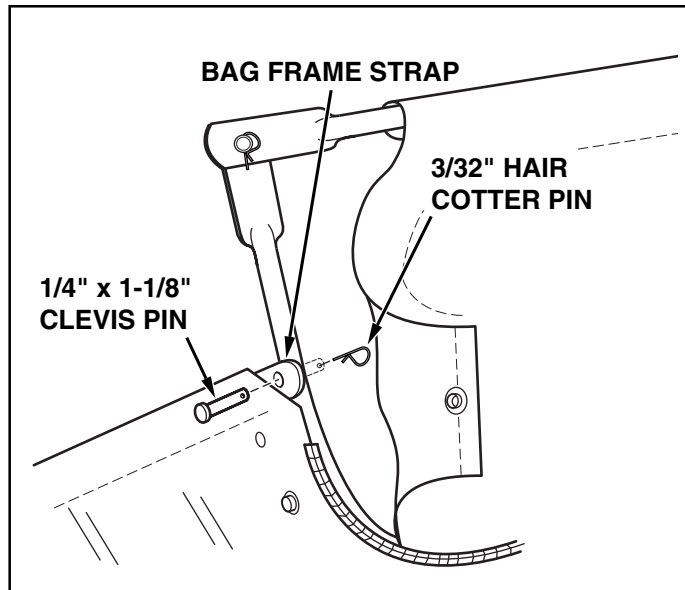


FIGURE 12

- Secure the bag corners around the lower hopper tubes by snapping the bag flaps to the bag bottom on both sides. See figure 13.

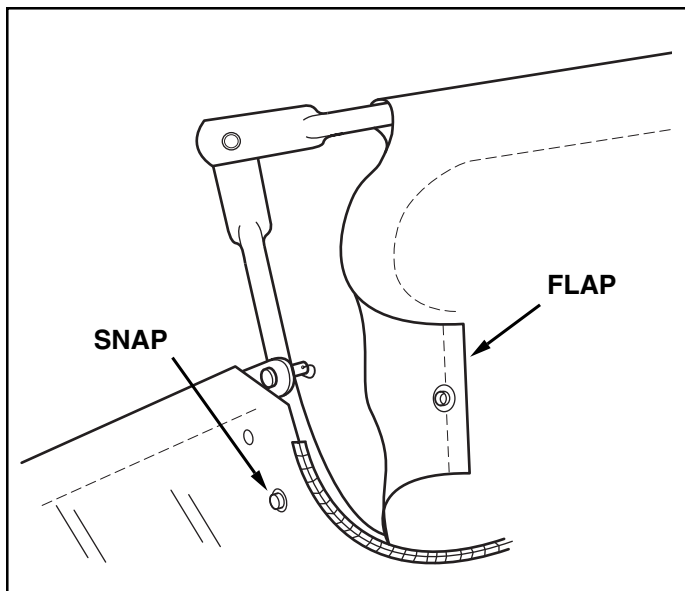


FIGURE 13

IMPORTANT: Do not over bend the support rods during the following step. Over bending will cause the spring steel rods to loose supporting tension.

- Assemble the two hopper support rods as shown in figure 14. Place the ends of the rod into the upper and lower hopper tubes, bending the rod just enough to fit into the holes in tubes.

HINT: Tip the hopper onto its back if you have trouble reaching in to install the support rods.

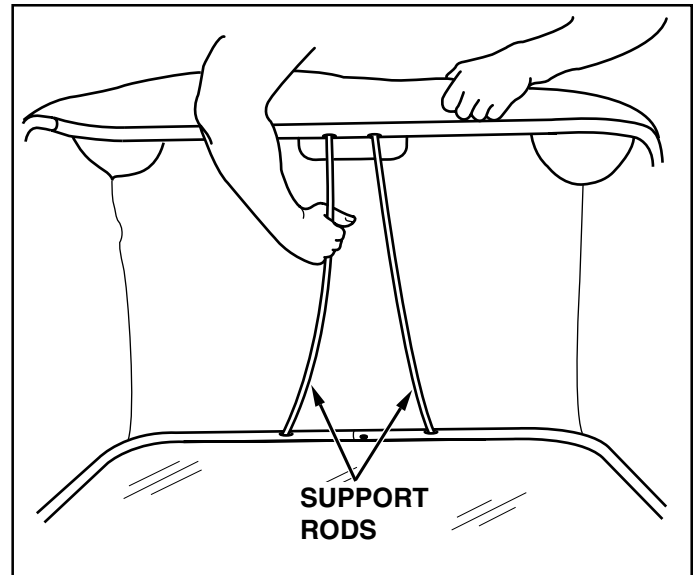


FIGURE 14

- Locate the **lower** hole in each side hopper tube. Pierce a hole through the hopper bag aligned with the lower hole in each side tube. See figure 15.

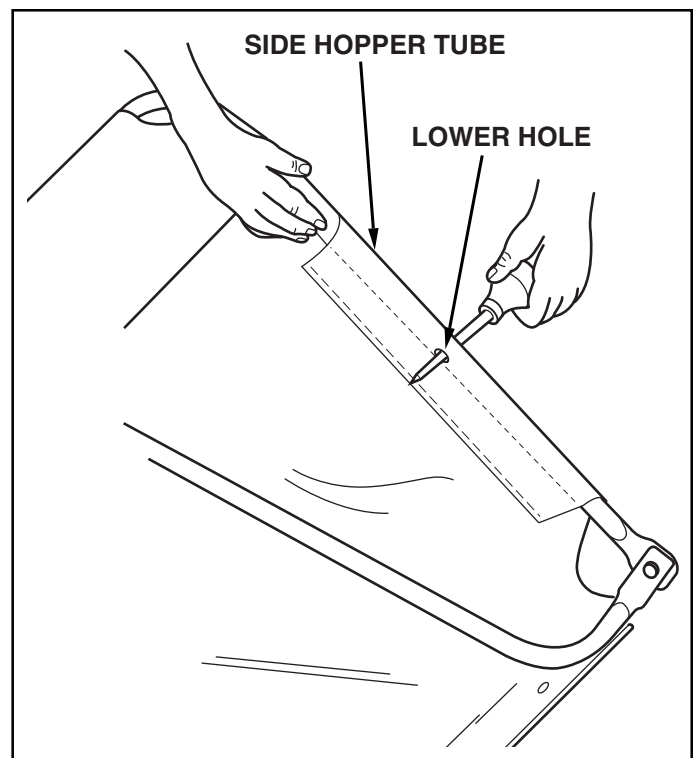


FIGURE 15

12. Insert the 3/8" x 3" clevis pins from the outside through the side tubes where the holes were pierced. Assemble the bag retainers onto the clevis pins and secure with 3/32" hair cotter pins. See figure 16.

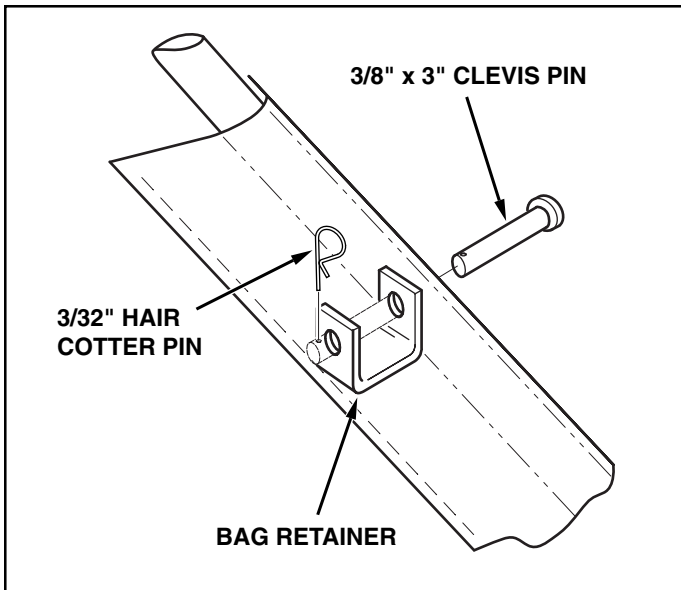


FIGURE 16

13. Secure the rope to the top center of the hopper bag frame as shown in figure 17.

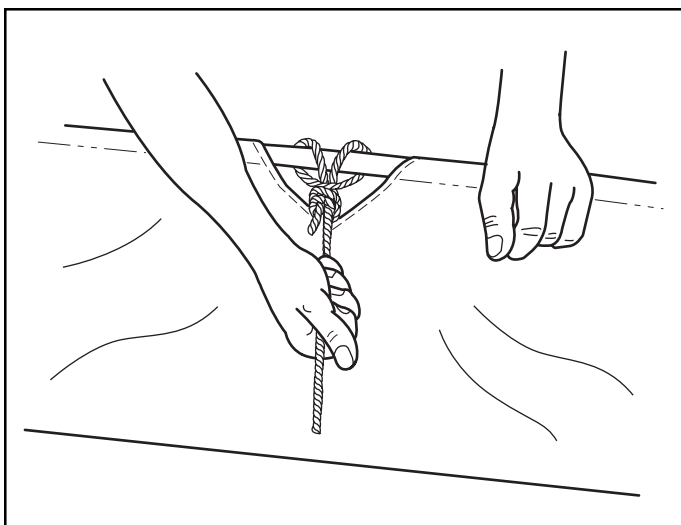


FIGURE 17

14. To assemble the hopper bag to the sweeper, pivot the bag retainers up and hook the clevis pins into the notches in the mount arms. Pivot the bag retainers down to lock the hopper bag onto the mount arms. See figure 18.

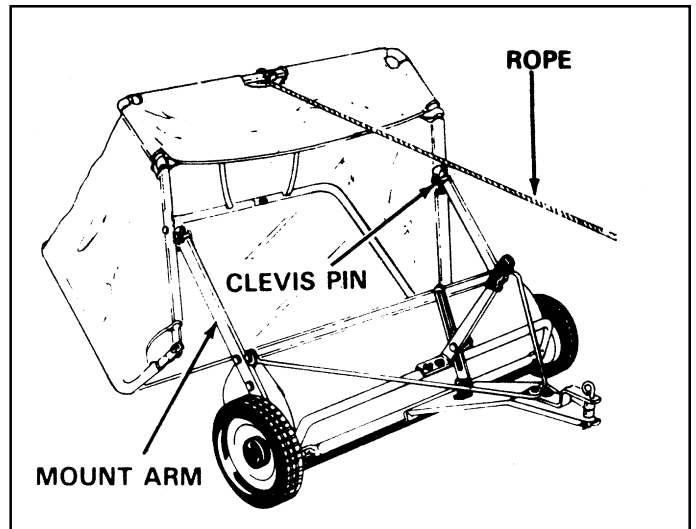


FIGURE 18

15. To remove the hopper bag from the sweeper, simply pivot the bag retainers upward and remove the bag. See figure 19.

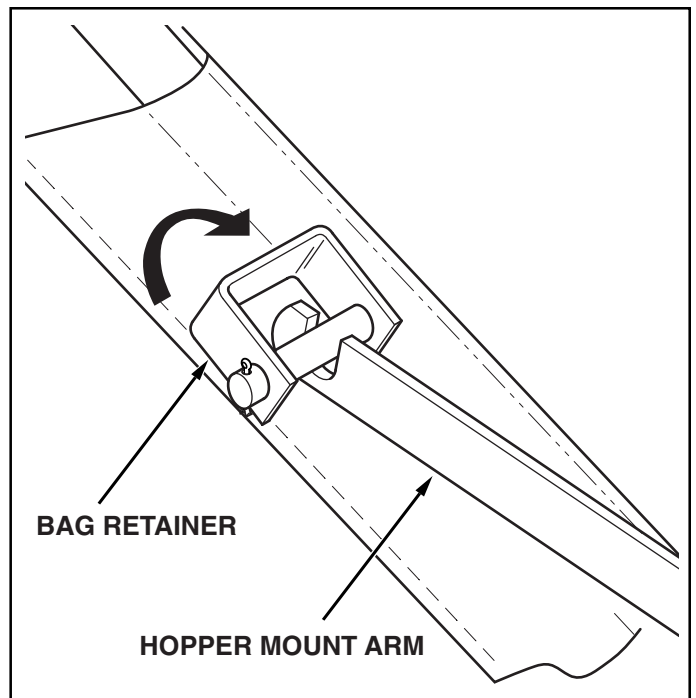


FIGURE 19

ATTACHING SWEEPER HITCH TO TRACTOR

1. Place the tractor and sweeper on a flat, level surface.
2. Set the sweeper height adjustment handle to about the middle of its adjustment range.
3. Attach the sweeper hitch to the tractor hitch, arranging the hitch spacers into one of the eight possible combinations shown in GROUP A and GROUP B diagrams below.

IMPORTANT: To obtain the best performance from your sweeper, arrange the hitch spacers so that the sweeper bag is approximately level with the ground and approximately 3" to 4" off the ground as shown in figure 20.

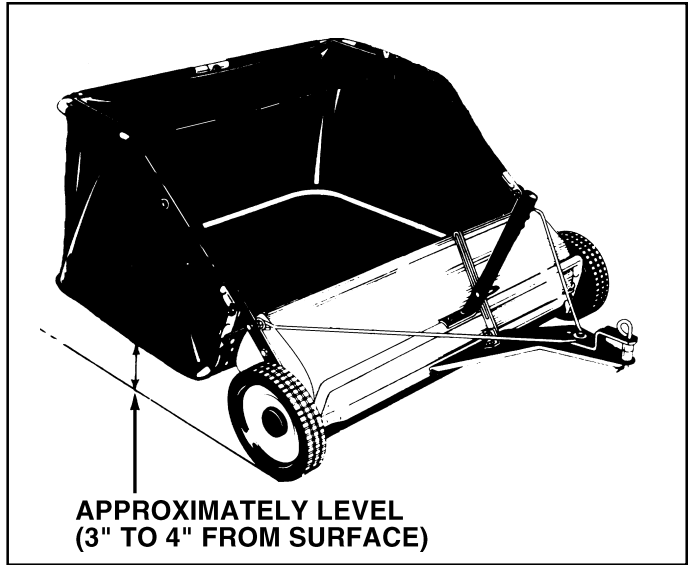
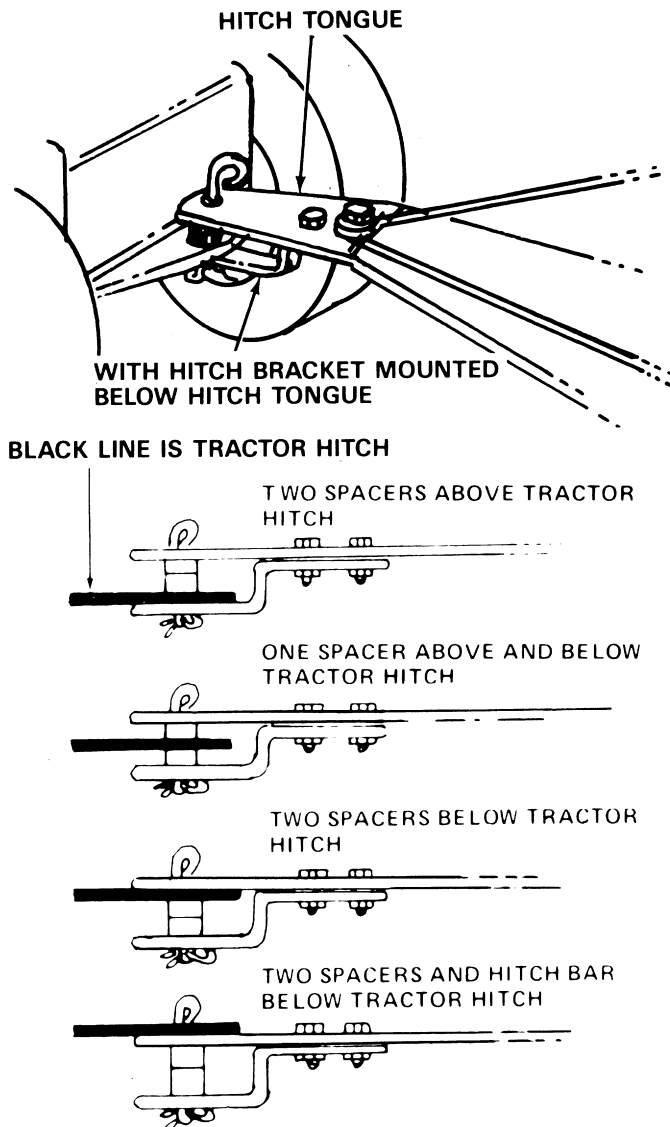
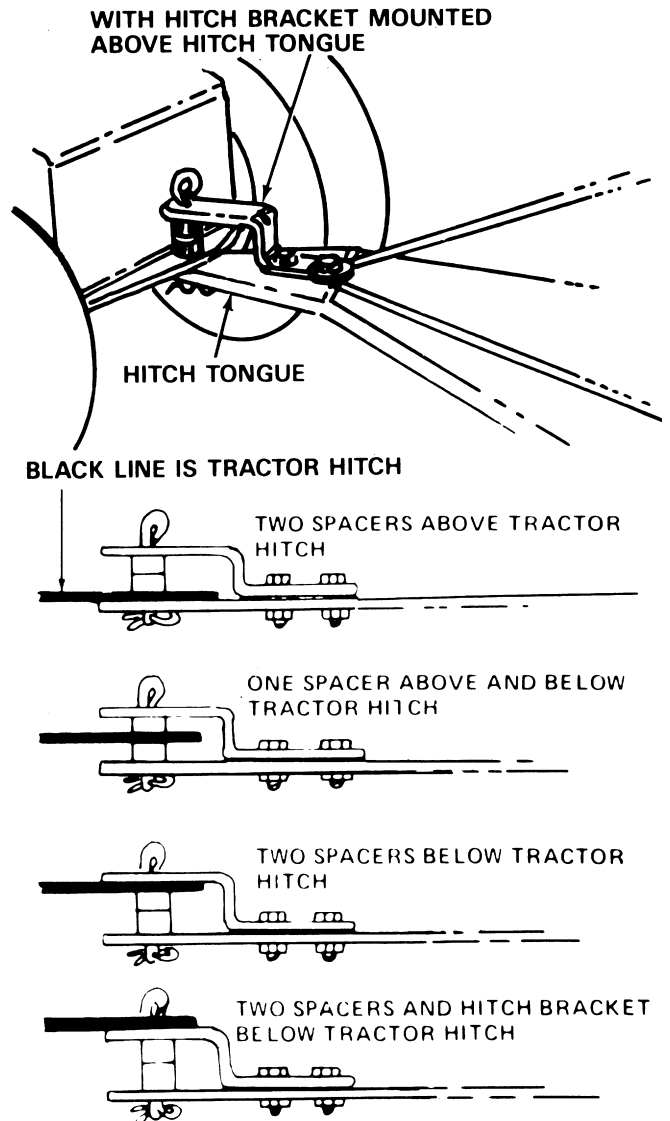


FIGURE 20

GROUP "A" - For riding mowers with 8" to 10-1/2" ground clearance to hitch.



GROUP "B" - For tractors with 10-1/2" to 13" ground clearance to hitch.



OPERATION

BRUSH HEIGHT ADJUSTMENT (see figure 21)

To avoid wheel skidding and for best sweeping performance, adjust the sweeper so that the brushes sweep about 1/2" down into the grass. Loosen the adjustment knob and push down on the height adjustment lever to raise the brushes or lift up on the lever to lower the brushes. Always mow the grass to an even height before sweeping.

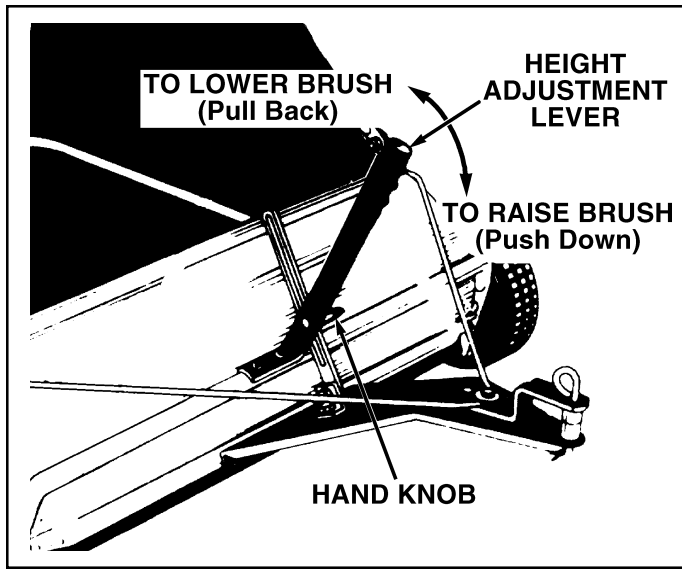


FIGURE 21

SWEEPING SPEED

Try a starting speed of approximately 3 m.p.h. (third gear on most tractors). Depending on the conditions, it may be necessary to adjust the tractor's speed in order to achieve best results.

DUMPING OF SWEEPER

Your sweeper can be dumped easily without getting off of the rider or tractor. Simply pull the rope forward to dump the hopper. Always empty the hopper after each use. Damp or wet grass or leaves will cause damage to the hopper if stored for a long period of time.



CAUTION: Never attach the hopper rope to any part of your body or clothing! Never hold onto the rope while towing the sweeper! Attach the rope to the towing vehicle, keeping it away from wheels and rotating parts.



CAUTION: Keep sweeper away from fire. Excessive heat can damage the brushes and hopper bag and could cause the bag and its contents to burn.

MAINTENANCE

CHECK FOR LOOSE FASTENERS

Before each use make a thorough visual check of the sweeper for any bolts and nuts which may have loosened. Retighten any loose bolts and nuts.

CHECK FOR WORN OR DAMAGED PARTS

After striking an object or at least once each season, check for and repair or replace any worn or damaged parts.

LUBRICATE BRUSH SHAFT BEARINGS

Lubricate the brush shaft bearings twice a year with a few drops of light weight oil. See figure 22.

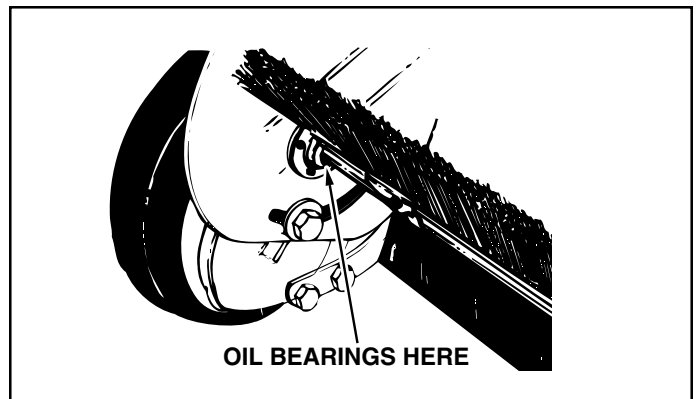


FIGURE 22

LUBRICATE WHEEL BEARINGS

Lubricate the wheel bearings once every season with a few drops of light weight oil. See figure 23.

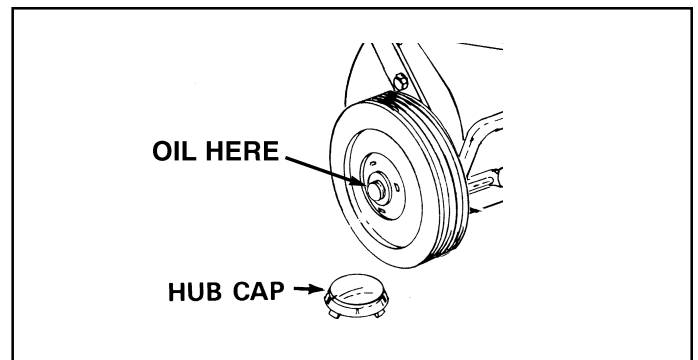


FIGURE 23

CLEAN SWEEPER

1. Clean sweeper housing with a soft brush or cloth.
2. Clean debris from hopper bag with a brush or broom.
3. Remove any material which has wrapped around brushes or ends of brush shaft.

CLEAN/LUBRICATE WHEEL GEARS

Every two years remove the wheels and clean the gears found inside the wheel housing. After cleaning, lubricate with an even coat of light grease. To remove the wheel, pop off the hub cap using a screwdriver, remove the lock nut and flat washer and then the wheel. See figure 24.

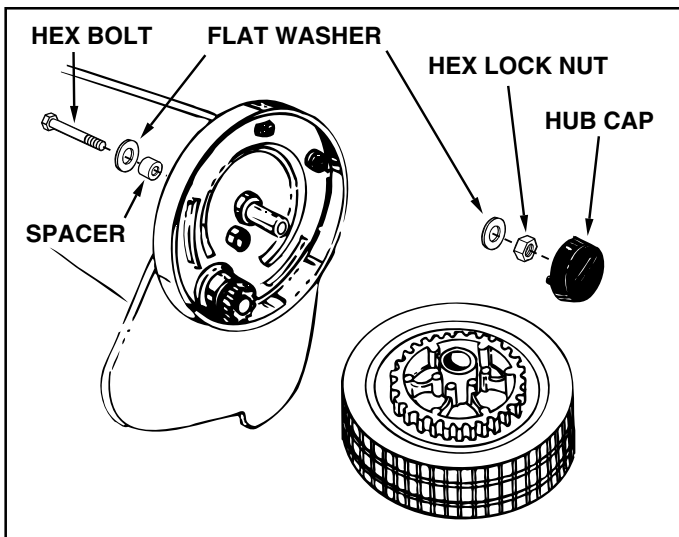


FIGURE 24

STORAGE



CAUTION: Before storing the sweeper, always empty the hopper bag to avoid spontaneous combustion.

1. Clean the sweeper and hopper bag thoroughly to help prevent rust and mildew.
2. To collapse the hopper bag for storage, remove the two hopper support rods from the rear of the hopper.
3. Store in a dry area.

SERVICE/ADJUSTMENTS

RATCHET GEAR/DRIVE PIN REPLACEMENT

IMPORTANT: Do not remove both wheels at the same time to avoid mixing of parts. (The R.H. and L.H. ratchet gears are not interchangeable.) **Make notes** on the position of washers and snap rings during disassembly.

1. Remove one wheel from the sweeper.
2. Remove the retaining rings and washers which hold the ratchet gear onto the brush shaft.
3. Remove the gear by sliding it off the brush shaft. (Look for the drive pin, which may fall out of the brush shaft when the ratchet gear is removed.) See figure 25.
4. To reassemble, insert the drive pin through the hole near the end of the brush shaft. Make sure the pin slides back and forth easily in the shaft.
5. Lightly grease the shaft and fill the ratchet gear with grease. Assemble the gear back onto the shaft.
6. Lightly grease the axle and the wheel's gear teeth and then reassemble the wheel. The brushes should rotate **only** during forward rotation of the wheel. If the brushes are driven (rotated) by reverse rotation of the wheel, either the RH and LH ratchet gears have been switched or the drive pin is jamming in the ratchet gear. Clean and lubricate the drive pin and the ratchet gear to prevent jamming.

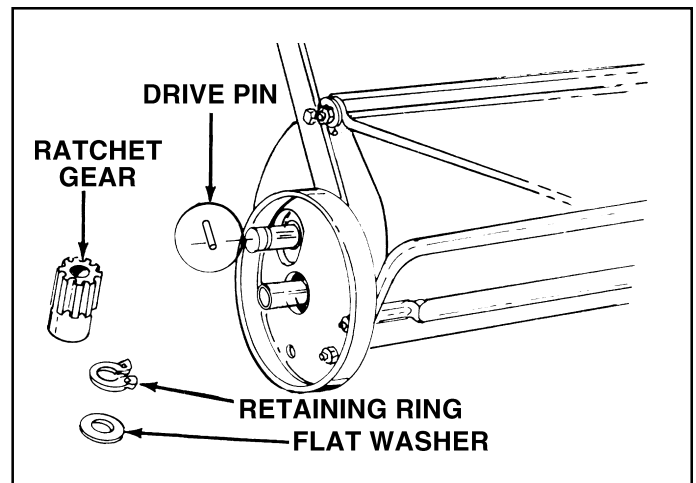


FIGURE 25

BRUSH REPLACEMENT

NOTE: Brush replacement should be done one brush at a time.

1. Remove the hopper bag from the sweeper.
2. Loosen the hex bolts and lock nuts on two single brush retainers which clamp one brush to the double brush retainers. **Do Not loosen** or remove the bolts which fasten the double brush retainers to the brush shaft. See figure 26.
3. Slide the brush out of the retainers, noting on which side of the brush the bristles overlap. See figure 26.
4. Install new brush, making sure the bristles overlap on the same side of the brush as before. See figure 26.

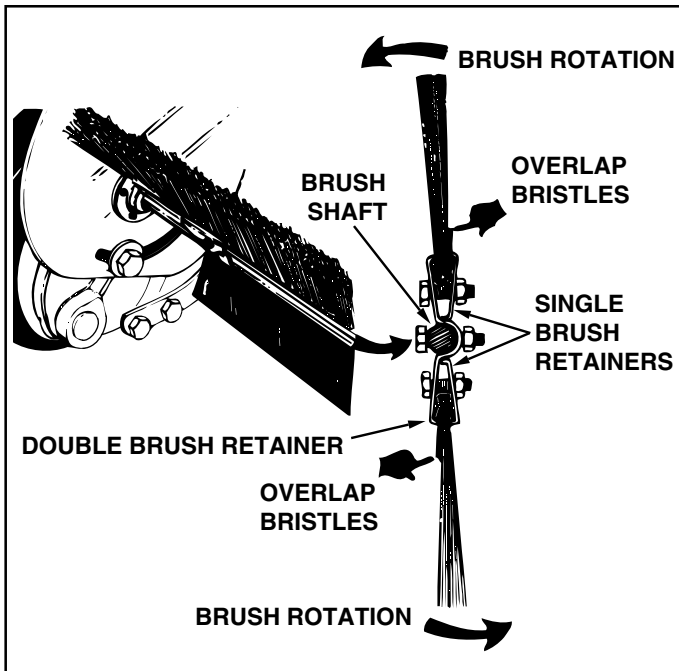
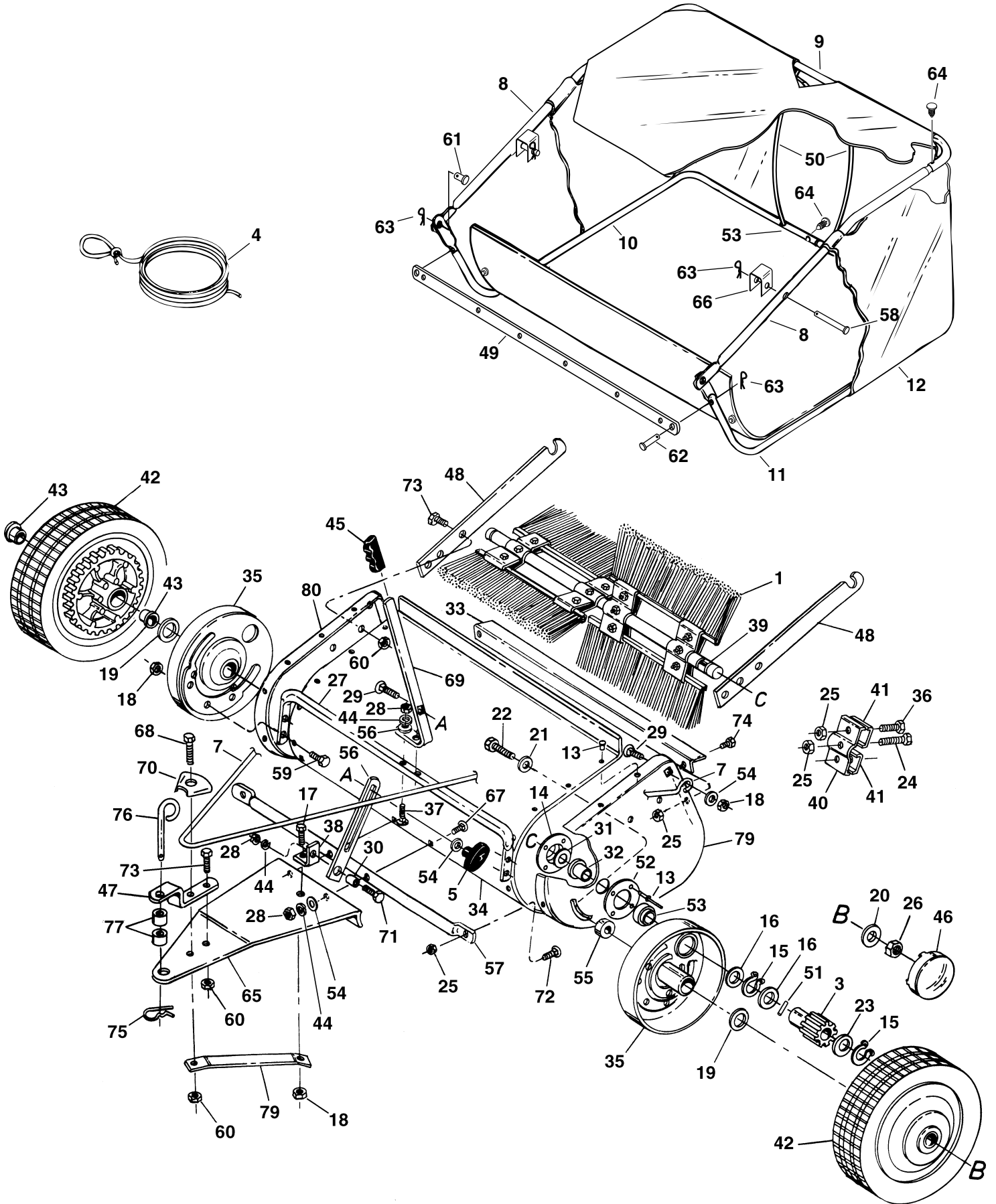


FIGURE 26

REPAIR PARTS FOR MODEL 45-02212 LAWSWEEPER



REPAIR PARTS FOR MODEL 45-02212 LAWSWEEPER

REF	PART NO.	QTY	DESCRIPTION	REF	PART NO.	QTY	DESCRIPTION
1	43905	4	Brush	41	23581	8	Brush Retainer (Single)
2	2692-6	1	Pinion Gear - R.H. (not shown)	42	44985	2	Wheel Ass'y.
3	2692-7	1	Pinion Gear - L.H.	43	45088	4	Wheel Bearing
4	43737	1	Hopper Rope	44	43086	5	Lock Washer 5/16" I.D.
5	43720	1	Height Adjustment Knob	45	43943	1	Grip
6	23851	1	Height Adjustment Strap	46	2674-32	2	Hub Cap
7	43958	1	Brace Rod	47	23014	1	Hitch Bracket
8	48466	2	Side Hopper Tube	48	23812	2	Bar Mount Arm
9	48469	1	Upper Hopper Tube	49	23352	1	Bag Frame Strap
10	43976	1	Lower Hopper Tube - R.H.	50	43926	2	Hopper Support Rod
11	43977	1	Lower Hopper Tube - L.H.	51	47046	2	Pin, Dowel
12	48403	1	Hopper Bag	52	23336	2	Washer, Special
13	C-9M5732	16	Pop Rivet	53	46219	2	Spacer .78 ID x 1-1/4 OD x .81 Lg
14	1629-56	2	Bearing Retainer	54	43081	6	Flat Washer 5/16 Std.
15	1650-21	4	Retaining ring .594 I.D.	55	44911	2	Spacer .39 ID x 1-1/4 OD x .50 Lg
16	44007	8	Flat Washer (Shim)	56	44695	2	Bowed Washer
17	43182	1	Hex Bolt 5/16-18 x 3/4" Lg.*	57	44904	1	Hitch Tube
18	43064	7	Hex Lock Nut 5/16-18 Thd.	58	43513	2	Clevis Pin 3/8" Dia. x 3" Lg.
19	44008	2	Flat Washer .783 x 1.125 x .025	59	44692	4	Hex Bolt 5/16-18 x 1/2" Lg.*
20	141	2	Flat Washer .38 x 1.25	60	43082	6	Hex Lock Nut 3/8-16 Thd.
21	141	2	Flat Washer .38 x 1.25	61	48366	2	Clevis Pin, 3/8" x 1/2" (Special)
22	44961	2	Hex Bolt 3/8-24 x 3-1/4 Lg.*	62	48365	2	Clevis Pin, 1/4" x 1-1/8" (Special)
23	44006	2	Flat Washer .596 x .859 x .025	63	43055	6	Hair Cotter Pin, #3 3/32"
24	43661	4	Hex Bolt 1/4-20 x 1" Lg.*	64	48402	3	Plastic Plug, 1/4"
25	43013	12	Hex Lock Nut 1/4-20 Thd.	65	23868	1	Tongue, Hitch
26	1038	2	Hex Lock Nut 3/8-24 Thd.	66	23354	2	Bag Retainer Clevis
27	44907	1	Height Adj. Tube	67	44215	2	Carriage Bolt 5/16-18 x 1-3/4"
28	43083	5	Hex Nut 5/16-18 Thd.*	68	43062	1	Hex Bolt 3/8-16 x 1-1/2" Lg.*
29	43080	3	Carriage Bolt 5/16-18 x 3/4" Lg.*	69	23850	1	Height Adj. Handle
30	23400	1	Bushing Spacer	70	24161	1	Clip, Brace Rod
31	R19212113	2	Washer, 5/8" SAE	71	43814	1	Sl. Truss Hd. Bolt 5/16-18 x 3/4"
32	44910	2	Brush Shaft Bushing	72	44950	2	Carriage Bolt 1/4-20 x 5/8" Lg.
33	23854	1	Rear Support Brace	73	43407	5	Hex Bolt 3/8-16 x 3/4" Lg.*
34	23849	1	Wrapper	74	43175	2	Hex Bolt 1/4-20 x 1/2" Lg.*
35	63027	2	Dust Cover Ass'y.	75	43343	1	Hairpin Cotter 5/32
36	43012	8	Hex Bolt 1/4-20 x 3/4" Lg.*	76	23353	1	Hitch Pin
37	44947	2	Curved Hd. Bolt 5/16-18 x 1-5/8	77	23368	2	Hitch Adjustment Tube
38	23869	1	Angle Bracket	78	23890	1	Tongue Bracket
39	24085	1	Brush Shaft	79	24951	1	End Plate, L.H.
40	23580	4	Brush Retainer (Double)	80	24950	1	End Plate, R.H.
					48352	1	Owners Manual

* Common hardware may be purchased locally.

