

SWEEPSTER

M24 Series

**L4800, MRM & CTM
Mechanical Windrow Sweepers**

 **BRADCO**

 **FFC**

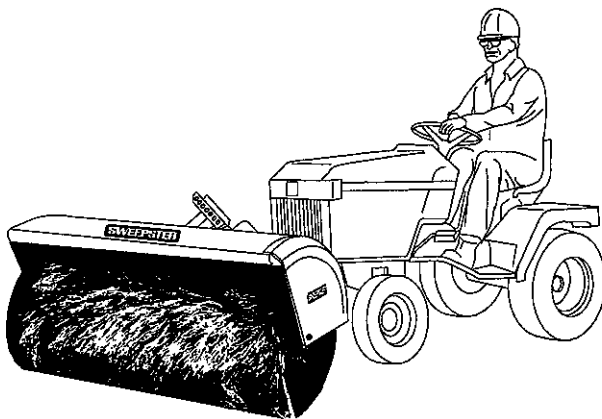
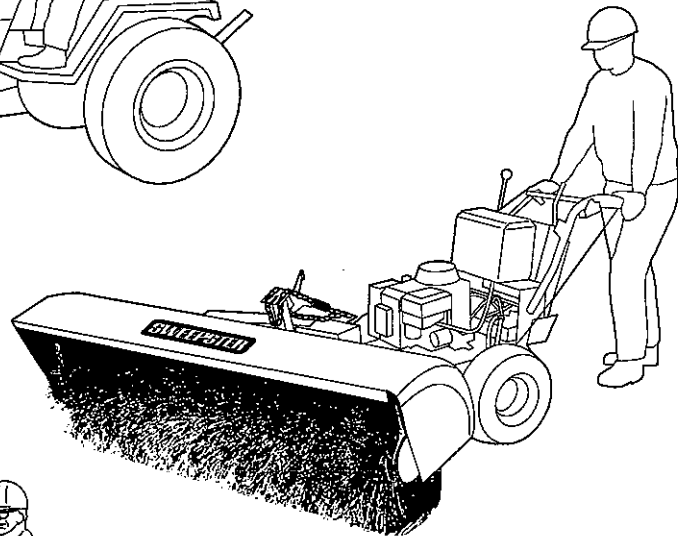
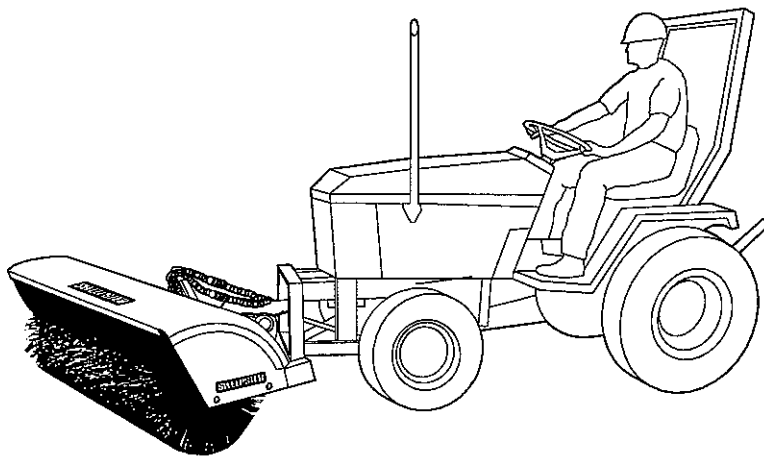
 **HARLEY**

 **MAJOR**

 **McMILLEN**

 **SWEEPSTER**

PALADIN LIGHT CONSTRUCTION



Sweepster Serial Number _____

Manual Number: 51-3000
Release Date: May 1998



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Introduction

Serial & Part Numbers

On your unit you will find a serial number plate and/or part number plate(s). The numbers on these plates are very important if you wish to order parts or accessories. For your convenience, record numbers in the appropriate spaces below.

SWEEPSTER	
Model #	Serial #
<input type="text"/>	<input type="text"/>
Empty	GVW
<input type="text"/>	<input type="text"/>
Dexter, MI 48130 1-800-456-7100	

SWEEPSTER	
Dexter, MI 48130 1-800-456-7100	
Part Number	Date
<input type="text"/>	<input type="text"/>

SWEEPSTER	
Dexter, MI 48130 1-800-456-7100	
Part Number	Date
<input type="text"/>	<input type="text"/>

SWEEPSTER	
Dexter, MI 48130 1-800-456-7100	
Part Number	Date
<input type="text"/>	<input type="text"/>

Introduction

Importance of this Manual



Read this manual before attempting to operate the equipment.

This operator's manual should be regarded as part of the sweeper. Suppliers of both new and secondhand sweepers are advised to keep documentation indicating that this manual was provided with the sweeper.

The manual contains information regarding installation, operation and maintenance required for this sweeper model and optional equipment. It also includes detailed parts lists.

Purpose of Sweeper

This sweeper is designed solely for use in construction cleanup, road maintenance, grounds maintenance, snow removal and similar operations. Use in any other way is considered contrary to the intended use. Compliance with and strict adherence to operation, service and repair conditions, as specified by the manufacturer, are also essential elements of the intended use.

This sweeper should be operated, serviced and repaired only by persons who are familiar with its characteristics and acquainted with relevant safety procedures.

Accident prevention regulations, all other generally recognized safety regulations and all road traffic regulations must be observed at all times.

Any modifications made to this sweeper may relieve the manufacturer of liability for any resulting damage or injury.

Safety Alert Symbol



This safety alert symbol indicates important safety messages in this manual. When you see this symbol, be alert to the possibility of injury. Carefully read the message that follows and inform other operators.

Contacting SWEEPSTER

If you have any questions about information in this manual or need to order parts, please call, write, FAX or e-mail SWEEPSTER.

SWEEPSTER, Inc.
2800 North Zeeb Road
Dexter, Michigan 48130
Phone: (734) 996-9116 • (800) 456-7100
FAX: (734) 996-9014
e-mail: sweep@sweepster.com

For help with installation, operation or maintenance procedures, contact our Technical Service Department. Direct product questions and parts orders to our Sales Department.

When ordering parts or accessories, be prepared to give the following information:

- Sweeper model, serial number and date of purchase
- Prime mover make and model
- Part number, description and quantity

Terms Used in Manual

Right-hand, left-hand, front and rear are determined from the operator's perspective (either the operator's seat or standing behind a walk-behind unit), facing forward in the normal operating position.

Prime mover refers to the tractor, truck, loader or tow vehicle that a sweeper is mounted on or towed by.

Optional Equipment

Installation instructions for optional equipment, if applicable, appear with parts lists in the back of the manual.

Specifications & Features

Due to continuous product improvement, specifications and features may change without notice.

Warranty

To validate the warranty for this unit, fill out the warranty card or warranty pages located at the back of this manual. Then, send this information to SWEEPSTER.




Safety Information

Read this Manual

Read all safety information in this manual. All operators must read and understand the entire contents of this manual before sweeping. General safety practices are listed on Safety Information pages and specific safety information is located throughout this manual.


Hazard Definitions

Four hazard classifications are used in this manual. They are

-  **CAUTION** – Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.
-  **WARNING** – Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
-  **DANGER** – Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

IMPORTANT – Used for instructions when machine damage may be involved.

Operation


-  **CAUTION** – A sweeper is a demanding machine. Only fully trained operators or trainee operators under the close supervision of a fully trained person should use this machine.

Before sweeping:

- Learn sweeper and prime mover controls in an off-road location.
- Be sure that you are in a safe area, away from traffic or other hazards.
- Check all hardware holding the sweeper to the prime mover, making sure it is tight.
- Make sure all hydraulic fittings and hardware are tight.
- Replace any damaged or fatigued hardware with properly rated fasteners.

- Check prime mover tire pressure before sweeping.
- Check tire ratings to be sure they match the prime mover load. Weigh the sweeper end of the prime mover, if necessary, to insure proper tire rating.
- Remove from the sweeping area all property that could be damaged by debris flying from the sweeper.
- Be sure all persons not operating the sweeper are clear of the sweeper discharge area.
- Always wear proper apparel such as a long-sleeve shirt buttoned at the cuffs; safety glasses, goggles or a face shield; ear protection; and a dust mask.

When sweeping, adhere to all government rules, local laws and other professional guidelines for your sweeping application.

-  **WARNING** – Never raise the sweeper more than a few feet off the ground. The sweeper can tip back or the prime mover can tip over causing death or serious injury.

Before leaving the operator's area for any reason – lower the sweeper to the ground, stop the prime mover engine, set the brakes and remove the key from the ignition.

Minimize flying debris – use the slowest brush speed that will do the job.

Keep hands, feet, hair and loose clothing away from all moving parts.

Leave the brush hood (shield) and all other shields and safety equipment in place when operating the sweeper and prime mover.


Be aware of the extra weight and width a sweeper adds. Reduce travel speed accordingly.

When sweeping on rough terrain, reduce speed to avoid "bouncing" the sweeper. Loss of steering can result.

Never sweep toward people, buildings, vehicles or other objects that can be damaged by flying debris.

Safety Information

Service & Repair


 **CAUTION** – Do not modify the sweeper in any way. Personal injury could result. If you have questions, contact your dealer or SWEEPSTER.

Repair or adjust the sweeper in a safe area, away from road traffic and other hazards.

Before adjusting or servicing the sweeper – lower the sweeper to the ground, stop the prime mover engine, set the brakes and remove the key from the ignition.

When working on or around the sweeper, lower it to the ground or secure it with transport chains or cylinder-stop locks.

Stop the prime mover engine and cycle control levers to release hydraulic pressure before servicing or adjusting sweeper hydraulic systems.

 **WARNING** – Escaping hydraulic fluid can have enough pressure to penetrate the skin, causing serious personal injury.

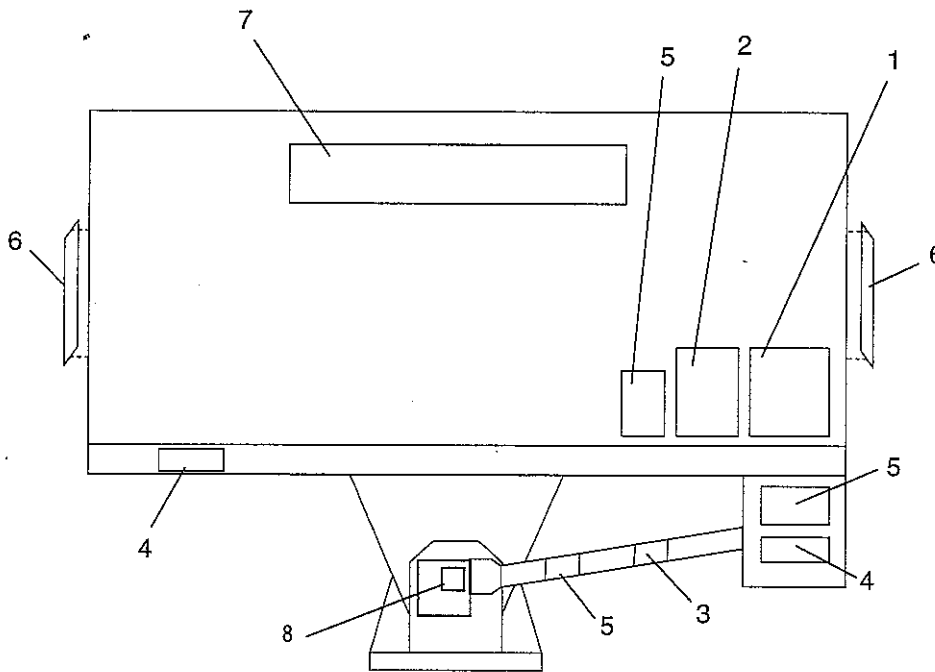
Safety Signs & Labels

Important

Always keep safety signs clean and readable, and always replace any damaged or missing safety signs with new ones from SWEEPSTER.

Safety signs and label locations are shown below. For representations of these safety signs and labels, refer to the next page.

Locations



Item	Part	Qty	Description
1.	50-0014-1	1	Label, Caution, Read Manl, Genl Safety
2.	50-0014-2	1	Label, Warning, Running Swpr & Eng
3.	50-0064-1	1	Label, Freq of Lube, Walterscheid, CVs (Walterscheid CV Shaft Only)
	50-0147	1	Label, Freq of Lube, Wsler, CV shafts (Weasler CV Shaft Only)
4.	50-0721	2	Label, Warning Crush Point
5.	50-0115	3	Label, Danger, Rot Drvline
6.	50-0184	2	Label, Small, Wht, SWEEPSTER
7.	50-0185	1	Label, Med, Wht, Logo
8.	50-0236	1	Label, Grbx, Hub City, Check Oil, Warranty Void

Safety Signs & Labels

Representations

CAUTION

DO NOT OPERATE SWEEPER WITHOUT READING THE OWNERS MANUAL AND OPERATING INSTRUCTIONS COMPLETELY AND BEING FAMILIAR WITH THE OPERATION OF THE SWEEPER. IF OPERATING INSTRUCTIONS ARE MISSING, CONTACT SWEEPSTER, INC.

- Personnel must be clear of brush and clear of all moving parts before operating sweeper.
- Never sweep toward people, buildings, cars, etc.
- Eye protection must be worn at all times by operator and anyone within the discharge area of the brush.
- Turn off engine and brush and allow all moving parts to stop before adjusting and servicing the sweeper.
- Keep polypropylene material away from intense heat and flames.
- No riders on sweeper or vehicle sweeper is mounted on.
- Do not operate sweeper or tractor unless PTO Guards and all shields are in place.
- All roof areas must comply with Federal OSHA Law Section 1926.503 on perimeter guarding before operating any SWEEPSTER Product on roof area.

DO NOT REMOVE! **SWEEPSTER**

SWEEPSTER, INC.
28024 ZECU ROAD
DEXTER, MI 48130
734-996-9116 1-800-456-7100

50-0014-1

1. 50-0014-1

WARNING

Running sweeper or engines can cause severe injury or death to dismantled operator or others. Keep others away from sweeper, lower and stop sweeper, stop engines, set brake before leaving seat or servicing.

50-0014-2

2. 50-0014-2

FREQUENCY OF LUBRICATION

• When used below 0°C (32°F) the outer tube must be greased to prevent freezing.

NOTE: The Centering Unit (A) Must Be Greased Every 4 Hours.

3. 50-0064

Frequency of Lubrication

NOTE: The Ball and Socket Zerk Must Be Greased Every 4 Hours

50-0147

3. 50-0147

WARNING

CRUSH HAZARD

Keep clear

50-0721 A

4. 50-0721

DANGER

ROTATING DRIVELINE
CONTACT CAN CAUSE DEATH
KEEP AWAY!

DO NOT OPERATE WITHOUT —

- ALL DRIVELINE, TRACTOR AND EQUIPMENT SHIELDS IN PLACE
- DRIVELINES SECURELY ATTACHED AT BOTH ENDS
- DRIVELINE SHIELDS THAT TURN FREELY ON DRIVELINE

50-0115

5. 50-0115

SWEEPSTER®

Dexter, MI 48130 (734) 996-9116 1-800-456-7100

6. 50-0184

SWEEPSTER®

Dexter, MI 48130 (734) 996-9116 1-800-456-7100

7. 50-0185

CAUTION

Avoid gearbox damage. Gearbox shipped without oil. Refer to manual for type and amount. Gearbox warranty void if repaired without authorization from SWEEPSTER or if disassembled prior to return to SWEEPSTER.

50-0236

8. 50-0236

Installation

Mounting Assembly

Install the mounting assembly (figure 1) on the tractor by following instructions enclosed with those parts. Then proceed to Drive Assembly or Brush Head Assembly if your sweeper has a mounting assembly that includes a gearbox.

Drive Assembly

NOTE – Some mounting assemblies include a gearbox. Skip to Installation: Brush Head Assembly if this applies to your sweeper.

1. Position the drive assembly (figure 1) in front of the mounting assembly with the gearbox up.
2. Place the rear of the drive assembly on the front of the mounting assembly. Install a 3/8-16 x 1 1/2 in. cap screw, flat washer, lock washer and nut in the center hole (figure 1), but do not tighten the hardware completely.

3. Install 2, 3/8-16 x 1 1/2 in. carriage bolts, flat washers, lock washers and nuts in the outer holes, but do not tighten the hardware.

NOTE – If the mounting assembly includes angles and an input drive shield, place angles on the holes before installing the hardware.

4. Connect the input driveline to the tractor and to the gearbox on the drive assembly. Follow instructions included with the mounting assembly.
5. Tighten the cap screw, flat washer, lock washer and nut.
6. Units with input drive shield – Place the input drive shield (figure 2) over the input driveline. Attach angle brackets to the input driveline shield. To make installation easier, put the washer, lock washer and nut toward the outside of the shield.

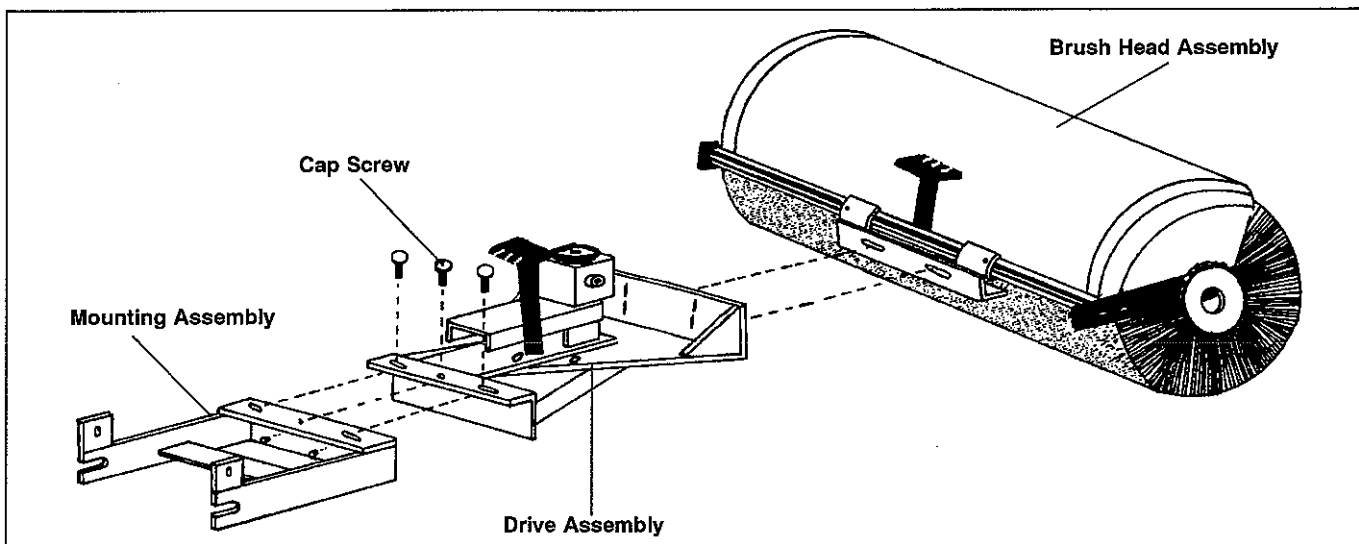


figure 1

Installation

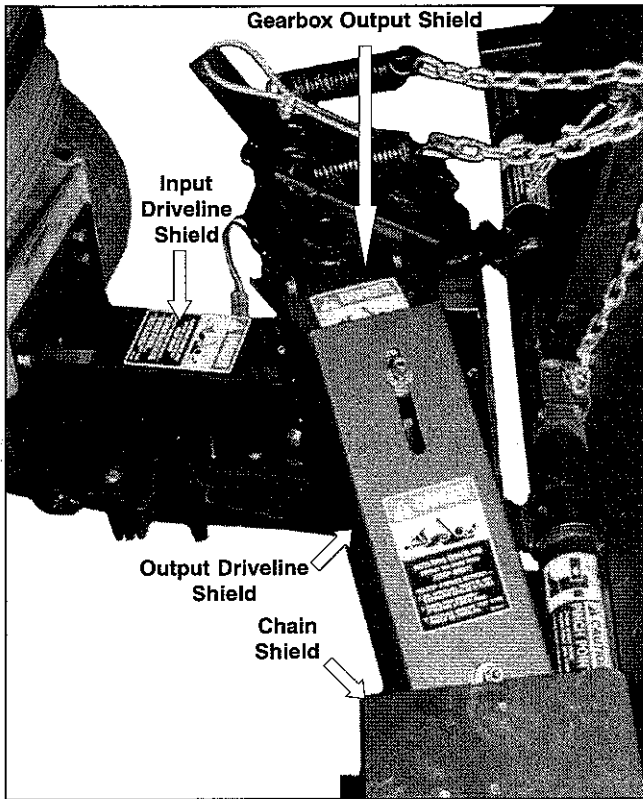


figure 2

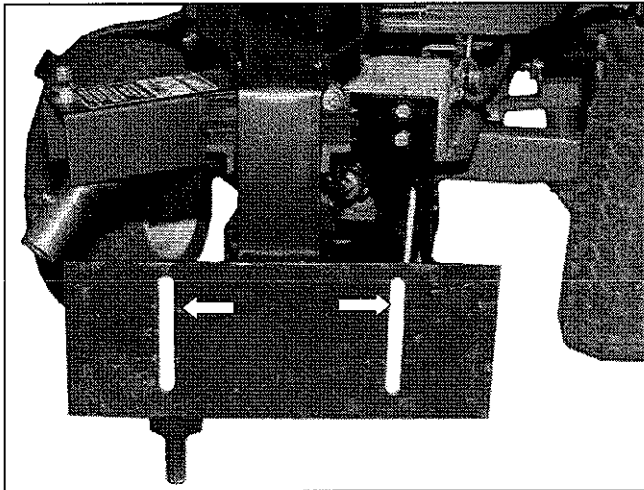


figure 3

Brush Head Assembly

1. After installing the mounting and drive assemblies, position the brush head assembly (figure 1) in front of the drive assembly.
2. Fasten the brush head assembly to the drive assembly using 2, 1/2-13 x 1 1/2 in. carriage bolts, flat washers, lock washers and nuts. Be sure to position the hardware as high as possible in the slots (figure 2).
3. Connect the output drive shaft to the gearbox shaft and to sprocket on the right-hand side of the brush head assembly. Tighten universal joint set screws.
 - If the sweeper has a telescoping drive shaft, it may need to be cut to length. Be sure to cut the same amount off both halves.
 - If the sweeper has a rectangular drive shaft and it is too long, shorten it by loosening the set screw on the universal joint mounted to the drive assembly gearbox and then sliding the drive shaft in.
4. Units with rectangular drive shaft – Install the output driveline shield (figure 2).
 - a. Place a washer and plastic bushing on the bolt welded to the output driveline shield. Place a washer and plastic bushing on the bolt welded to the gearbox output shield (figure 2).
 - b. Insert the bolt on the output driveline shield through the hole drilled in the chain shield. Insert the bolt on the gearbox output shield through the slot on the output driveline shield.
 - c. Place a washer and lock nut on both bolts; tighten.

NOTE – Do not overtighten lock nuts. The shield must be able to slide back and forth when the brush head is lowered and raised.

Installation

Spring-Chain Assembly, Transport Chain, Lift Cable

Follow the instructions that match your sweeper.

Spring-Chain Assembly & Transport Chain

Refer to figures 4 and 5.

1. Connect 2, 26-link chains and 2 springs to form a loop.
2. Place chains in the outside slots in the drive assembly upright and in the brush head assembly upright.
3. Place the 36-link transport chain in the center slot in the drive assembly and in the brush head assembly upright.
4. Slide a pin in the holes under the drive assembly upright and a pin in the holes under the brush head assembly. Insert a hairpin clip in each pin.

Spring-Chain Assembly & Lift Cable

Refer to figures 6 and 7.

1. Connect 2, 26-link chains and 2 springs to form a loop.
2. Place chains in the outside slots in the drive assembly upright and in the brush head assembly upright.
3. Route 1 end of the lift cable through the chain link welded to the brush head assembly upright. Loop the loose end around and secure it with a cable clamp (figure 8).

CAUTION – Install cable clamps as shown in figure 8; otherwise, the cable could slip, possibly damaging the sweeper or injuring the operator.

4. Loop the other end through the link on the drive assembly upright; secure it with a cable clamp.
5. Hook up the electric lift system or optional hydraulic lift system.
6. Raise the brush head assembly using the lift system. If the brush head assembly raises 4 in. (101 mm) off the ground, the lift cable is properly adjusted; otherwise, go to the next step.

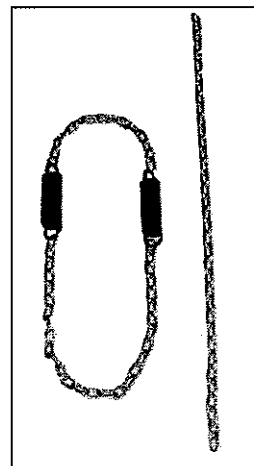


figure 4

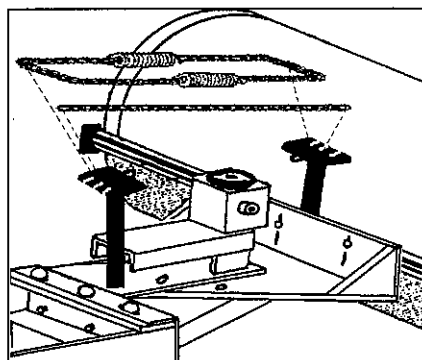


figure 5

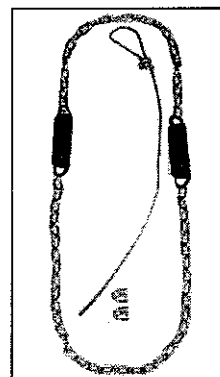


figure 6

Installation

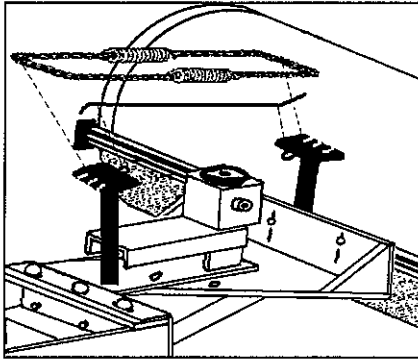


figure 7

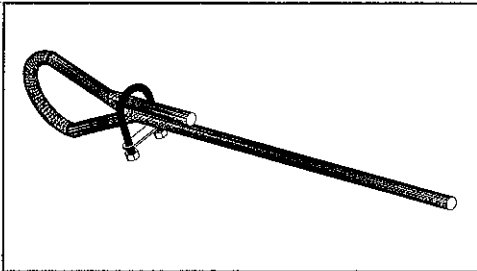


figure 8

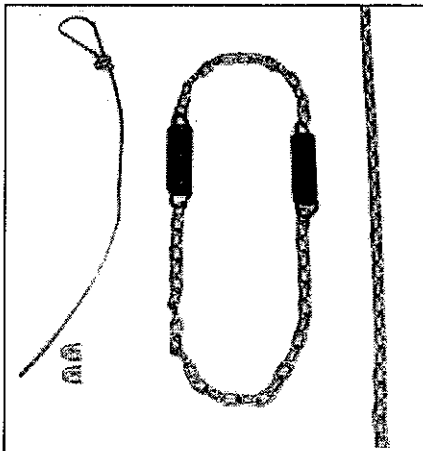


figure 9

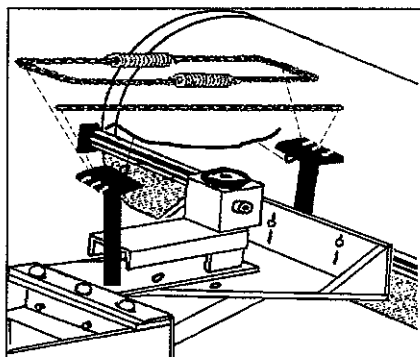


figure 10

7. Adjust the cable.

- If the brush head assembly does not raise enough, decrease the amount of cable between the uprights.
- If the brush head assembly raises too much, increase the amount of cable between the uprights.

Spring-Chain Assembly, Transport Chain & Lift Cable

Refer to figures 9 and 10.

1. Connect 2, 26-link chains and 2 springs to form a loop.
2. Place chains in the outside slots in the drive assembly upright and in the brush head assembly upright.
3. Route 1 end of the lift cable through the chain link welded to the brush head assembly upright. Loop the loose end around and secure it with a cable clamp (figure 8).

CAUTION – Install cable clamps as shown in figure 6; otherwise, the cable could slip, possibly damaging the sweeper or injuring the operator.

4. Loop the other end through the link on the drive assembly upright; secure it with a cable clamp.
5. Place the 36-link transport chain in the center slot in the drive assembly and in the brush head assembly upright.
6. Slide a pin in the holes under the drive assembly upright and a pin in the holes under the brush head assembly. Insert a hairpin clip in each pin.
7. Hook up the electric lift system or optional hydraulic lift system.
8. Raise the brush head assembly using the lift system. If the brush head assembly raises 4 in. (101 mm) off the ground, the lift cable is properly adjusted; otherwise, go to the next step.

Continued on the next page.

Installation

9. Adjust the cable.

- If the brush head assembly does not raise enough, decrease the amount of cable between the uprights.
- If the brush head assembly raises too much, increase the amount of cable between the uprights.

Spring Chain Assemblies & Lift Cable

Refer to figures 11 and 12.

1. Attach a spring to 1 end of each chain.
2. Hook the springs on the drive assembly upright.
3. Place chains on the brush head assembly upright using the outside slots. Slide a pin in the holes under the drive assembly upright to secure the spring-chain assemblies; insert a hairpin clip in the pin.
4. Route 1 end of the lift cable through the chain link welded to the brush head assembly upright. Loop the loose end around and secure it with a cable clamp (figure 8).

CAUTION – Install cable clamps as shown in figure 13; otherwise, the cable could slip, possibly damaging the sweeper or injuring the operator.

5. Loop the other end through the link on the drive assembly upright; secure it with a cable clamp.
6. Hook up the electric lift system or optional hydraulic lift system.
7. Raise the brush head assembly using the lift system. If the brush head assembly raises 4 in. (101 mm) off the ground, the lift cable is properly adjusted; otherwise, go to the next step.
8. Adjust the cable.
 - If the brush head assembly does not raise enough, decrease the amount of cable between the uprights.
 - If the brush head assembly raises too much, increase the amount of cable between the uprights.

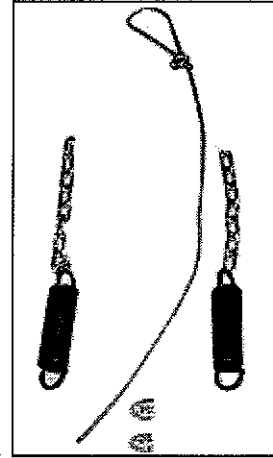


figure 11

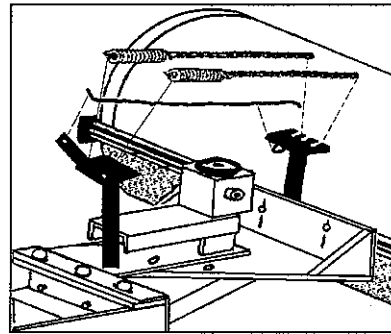


figure 12

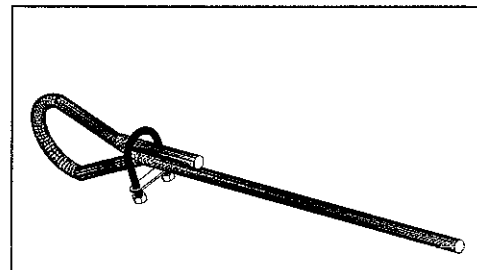


figure 13

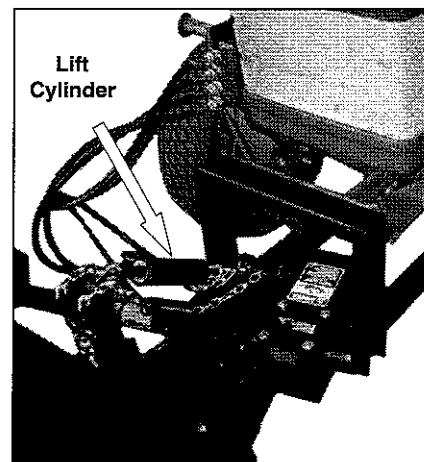


figure 14

Installation

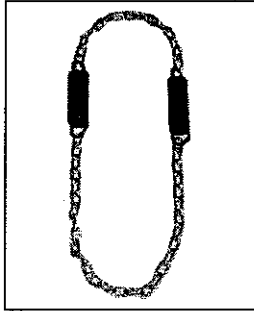


figure 15

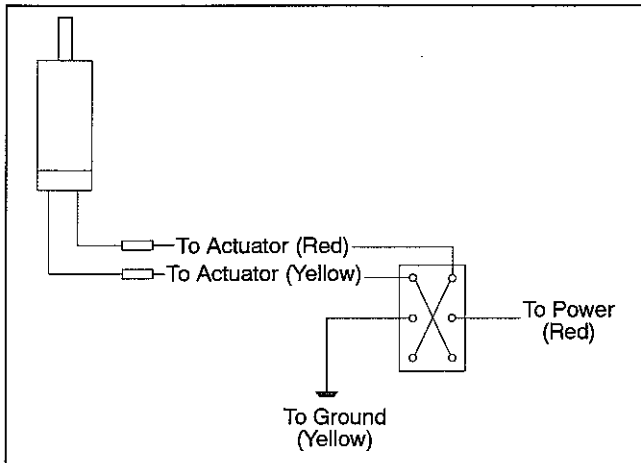


figure 16

Spring-Chain Assembly & Standard Hydraulic Lift

Figure 14 shows assemblies fully installed.

1. Connect 2, 26-link chains and 2 springs to form a loop (figure 15).
2. Place chains in the outside slots in the drive assembly upright and in the brush head assembly upright.
3. Attach adapter fittings to both cylinder ports, and install elbow fittings on adapter fittings. Then, attach hoses to the elbow fittings and install quick coupler fittings on the hoses.
4. Place a shackle on the rod end of the cylinder; then, attach the shackle to the brush frame upright.
5. Place a shackle on the barrel end of the cylinder and attach the chain to the shackle. Then, attach the chain to the center slot in the drive mounting assembly upright.
6. Connect quick coupler fittings to the front remote hydraulic outlets on the tractor.

7. Completely collapse the cylinder to check for adjustment.
 - If the brush head assembly lifts 4 in. (101 mm) off the ground, the hydraulic lift is properly adjusted.
 - If the brush head assembly does not lift 4 in. (101 mm) off the ground, adjust the chain. To raise the brush head assembly more, shorten the chain length between the cylinder and upright. To lower the brush head assembly, add to the chain length.

Electric Lift System

NOTE – Sweepers for commercial turf tractors and those with the hydraulic lift option do not use an electric lift system.

1. Locate a convenient, open area on the tractor dash to mount the lift switch.

IMPORTANT – Avoid damage to the prime mover. Before drilling, check behind the tractor dash to make sure that you will not drill into any wires or other objects.

2. Use a center punch to mark the lift switch location. Drill a pilot hole with a 1/4 in. bit; then, drill the finish hole with a 1/2 in. bit.

3. Insert the switch and secure it with a nut.

4. Route the control wires and connector to the front of the tractor. If necessary, strap or tape wires to the tractor frame to prevent them from hanging down.

IMPORTANT – Avoid wire damage. Keep wires away from hot and/or moving parts.

5. Connect the red wire to the tractor power supply. Connect the yellow wire to a good ground, preferably the battery ground or tractor frame (figure 16).

IMPORTANT – Avoid damage to the electric lift system. Add a 13-amp, 12-volt fuse in line if the power supply is not fused.

6. Connect the wires from the lift switch to the actuator.

NOTE – If it is necessary to replace a wire, use a 14-gauge or heavier wire.

Adjustments

Leveling

Level the sweeper after installation and before each use for even brush wear and efficient sweeping.

1. Drive the sweeper to a level, paved area.
2. Lower the brush head assembly into the sweeping position. Make sure the weight of the brush head assembly is on the spring-chain assemblies and the brush just touches the ground.
3. Level the drive assembly using a level (figure 17).
 - If the front of the drive assembly is high, turn the leveling screws in (to the right) to lower it.
 - If the front of the drive assembly is low, turn the leveling screws out (to the left) to raise it.

See figure 18 for leveling screw locations.

4. With the brush head assembly in the straight position, measure from each end of the brush frame to the ground.
5. Compare measurements.
 - If they are not equal, slide the low side of the brush head assembly up in the slots on the drive assembly. Repeat steps 4 and 5 until the measurements are equal. Tighten the hardware.
 - If they are equal, go to step 6 (2-way sweepers) or the sweeper is level (1-way sweepers).
6. 2-way sweepers only – Swing the brush head assembly to the right. Measure from each end of the brush frame to the ground. Then, swing the brush head assembly to the left. Measure from each end of the brush frame to the ground.
 - If all 4 measurements are the same, the brush head assembly is level.
 - If the measurements are not equal, refer to figures 19 and 20 for adjustments.

Repeat step 6 until the brush head assembly is level.

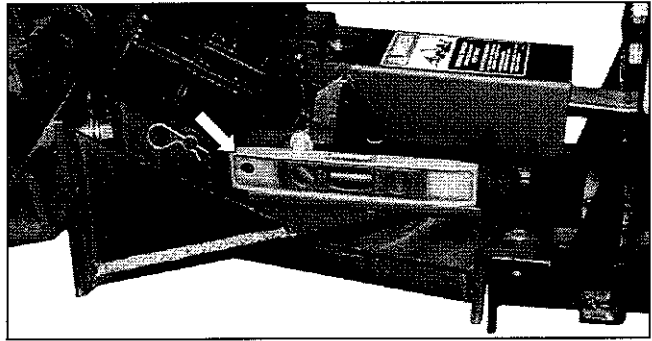


figure 17

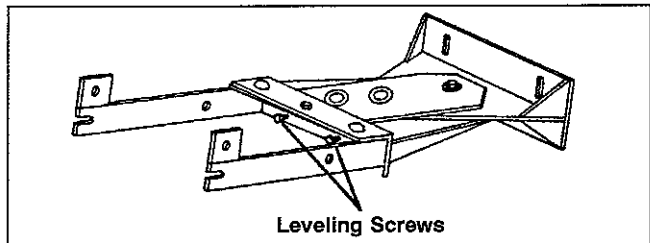


figure 18

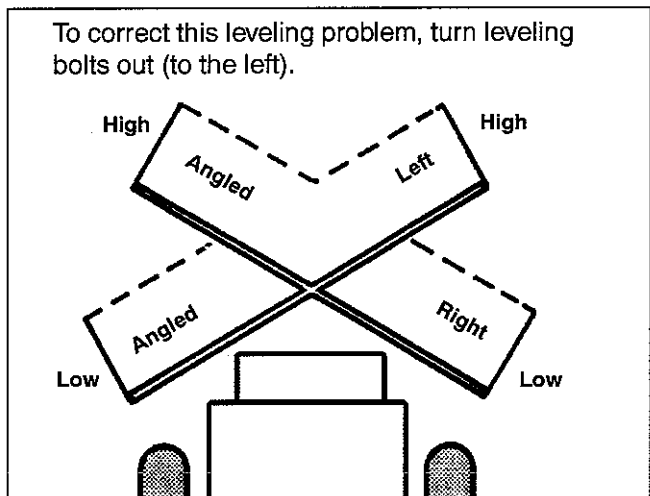


figure 19

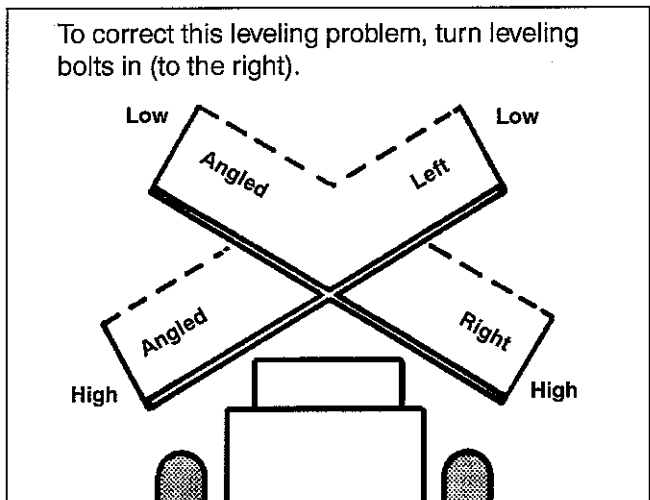


figure 20

Adjustments

Brush Pattern

A properly adjusted brush offers the best sweeper performance. To check brush pattern:

1. Move the sweeper to a dusty, flat surface.
2. Set the prime mover's parking brake and leave the engine running.
3. Start the sweeper at a slow speed; then, lower it so bristle tips touch the ground. Run the sweeper in a stationary position for 10-30 seconds.
4. Raise the sweeper and back away; switch off the sweeper and engine and remove the key. The brush pattern left in the dust should be 2-3 in. (51-76 mm) wide, running the length of the brush. Compare the swept area with figure 21.
5. Adjust the brush pattern as necessary.
 - a. Raise the brush head assembly with the electric lift system, optional hydraulic lift system or manually.

! WARNING – Avoid serious injury or death. Do not allow anyone to go near or touch the brush head assembly while the sweeper is running. Always stop the sweeper, shut off the prime mover engine and remove the key first.

- b. Adjust the spring-chain assembly (figure 22).
 - If the pattern is too wide, decrease the number of links between the uprights.
 - If the pattern is too narrow, increase the number of links between the uprights.

Transport Chain

The transport chain supports the weight of the brush head assembly during transport between work sites.

To adjust the transport chain for use between work sites:

1. Raise the sweeper.
2. Tighten the transport chain (figure 22).
3. Lower the sweeper so the transport chain supports the weight of the sweeper.

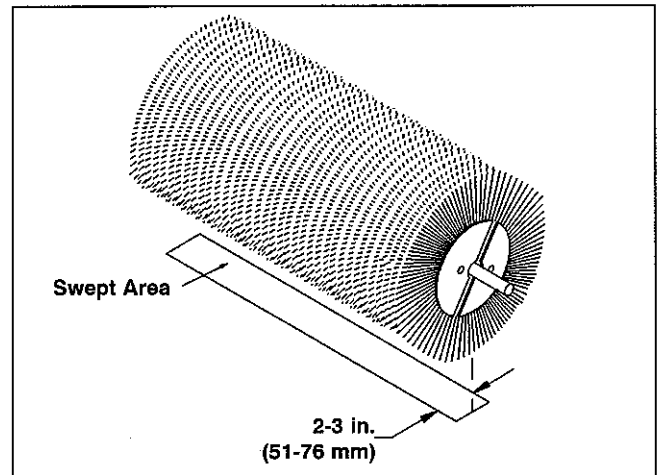


figure 21

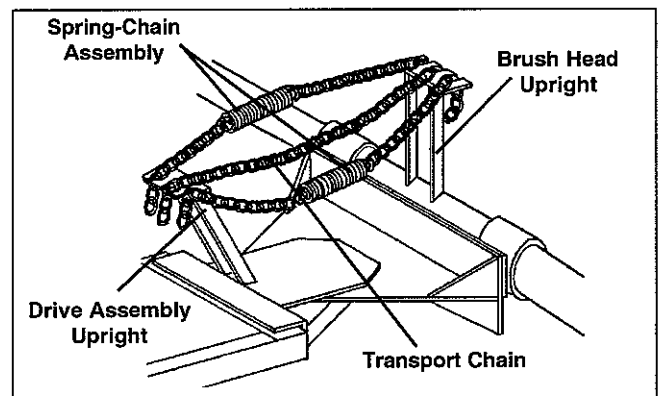



figure 22

Operation

Before Each Use

Perform daily maintenance as indicated in Maintenance: Schedule.

Run the prime mover and sweeper at a slow idle. Check for loose hardware or other problems and make corrections, if necessary, before using the sweeper.

 **WARNING** – Avoid serious injury. Check for objects that could harm the operator or others if thrown by the sweeper. Remove these items before sweeping.

Observe wind direction. Sweeping with the wind makes sweeping more effective and helps keep debris off the operator.

Directing Debris

Direct debris by angling the brush head in that direction.

The terms *swing* and *angle* are used interchangeably.

Manual Angle Kit with Tube Links

1. Remove the lock pin from links.
2. Position the brush head at the desired angle, aligning holes in the inner and outer link.
3. Insert and close the lock pin.

Manual Angle Kit with T-Pin

1. Pull up on the T-pin.
2. Position the brush head at the desired angle.
3. Allow the pin to spring back into place.

Optional Hydraulic Angle Kit

1. Start the prime mover.
 2. Position the brush head at the desired angle by using the valve control for swing function.
-

Sweeping

To sweep:

1. Manual angle kit only – Swing the brush head assembly the direction that you want to direct debris.
2. Start the prime mover at idle.
3. Engage the PTO.
4. Hydraulic angle kit only – Swing the brush head assembly the direction that you want to direct debris.
5. Lower the brush to the ground.
6. Increase prime mover engine rpms to sweeping speed.

IMPORTANT – Avoid damage to the prime mover PTO. Do not run the engine at speeds which make the PTO run faster than the recommended speed marked on the prime mover's tachometer.

7. Travel forward at 5 mph (8 kph) or less.

At the end of a run: slow engine and travel speeds, disengage the brush, raise the brush head assembly and then make the turn.

IMPORTANT – Avoid sweeper damage. When approaching obstacles, like utility poles or fire hydrants, slow engine and travel speeds to avoid hitting these hazards.

Operation

Operating Tips

IMPORTANT – Avoid sweeper damage. Do not ram into piles. Use a dozer blade for this type of job.

Brush, Engine & Travel Speeds

Vary brush, engine and travel speeds to match sweeping conditions.

Large Areas

When sweeping a large area, such as a parking lot, make a path down the middle and sweep to both sides. This reduces the amount of debris that the sweeper must sweep in the next pass.

Snow

Fast brush speeds and slow travel speeds are needed to sweep snow effectively. Start at 3/4 throttle and the lowest gear of the prime mover. For wet and/or deep snow, increase to almost full throttle. This helps keep snow from packing up inside the brush hood.

In deep snow you may need to make multiple passes to get down to a clean surface.

To keep snow from blowing back onto a swept area, always sweep so the wind is at your back or so it follows the brush angle.

Dirt & Gravel

To keep dust at a minimum, plan sweeping for days when it is overcast and humid or after it has rained. Also, sweep so the wind blows at your back or in the direction the brush head is angled.

Low brush speeds and moderate travel speeds work best for cleaning debris from hard surfaces. Brush speeds that are too fast tend to raise dust because of the aggressive sweeper action.

To sweep gravel, use just enough brush speed to “roll” the gravel, not throw it.

Heavy Debris

Travel slowly – less than 5 mph (8 kph).

Sweep a path less than the full width of the sweeper.

Increase engine speed if debris becomes very heavy.

Thatch

Low brush speeds and low prime mover speeds do the best thatching job.

To prevent the brush from pulling itself into the ground, adjust the spring-chain assembly so the bristle tips barely touch the grass.

If the brush pulls into the grass and stalls while sweeping, use the lift to raise the brush. Do not increase throttle to override a stall out.

Use a combination of brush speeds and ground speeds that rolls up a neat windrow.

To keep thatch from blowing back onto a swept area, sweep with the wind at your back or in the direction the brush is angled.

Storage

Brushes

IMPORTANT – Do not store the sweeper with weight on the brush. Weight will deform the bristles, destroying the sweeping effectiveness. To avoid this problem, place the sweeper on blocks or use optional stands.

Do not store polypropylene brushes in direct sunlight. The material can deteriorate and crumble before the bristles are worn out.

Keep polypropylene brush material away from intense heat or flame.

Maintenance

Maintenance Record

Use this log to record maintenance performed on the sweeper.

Date	Maintenance Procedure Performed	Performed By	Comments

Maintenance

Schedule

Part	Schedule			
	Daily	Every 8 Hours	Every 40 Hours	When Necessary
Brush Head Assembly – Check brush pattern; adjust as necessary. (See Adjustments: Brush Height.) Level brush head. (See Adjustments: Leveling.)		✓		
Drive Chain – Lubricate with oil or chain lubricant.			✓	
Drive Shaft – Lubricate universal joints with high-quality grease. Tighten universal joint set screws.		✓		
Electric Lift System – Inspect wires. Apply silicon spray to connections.			✓	
Gearbox – Check oil level; fill with SAE 80-90 weight oil. Inspect for oil leaks. Check end play in shafts. Clean shafts and vent plugs.			✓	
Hardware – Check for and tighten loose hardware.	✓			
Hydraulic Lift Option – Inspect hydraulic hoses and connections. Replace damaged or worn parts.			✓	
Mounting Assembly – Lubricate with high-quality grease.			✓	
Safety Signs – Clean to keep instructions readable.				✓
Swing Plate – Lubricate with high-quality grease.			✓	
Tractor Air Cleaner – Clean or replace following instructions in tractor owner's manual.				✓
V-Belt – Check tension. Replace any worn belts.		✓		

Maintenance

General

For best performance, regularly maintain your sweeper. Carefully follow the schedule on page 20 and other recommendations listed in this manual.

Lubricating Constant Velocity (CV) Drive Shaft

Lubricate with high-quality grease before starting work and after every 8 operating hours.

Clean and grease the drive shaft before each period of non-use.

To prevent freezing in winter, grease the shield tubes.

Lubricating Gearbox

After the first 100 operating hours, drain the oil and flush the gearbox with an approved, nonflammable, nontoxic solvent. Refill with oil.

Following the first oil change, change oil after every 2,500 operating hours or 6 months, whichever comes first.

Replacing Safety Signs & Labels

For the safety of operators and others:

- Replace any missing or damaged labels before operating the sweeper.
- Replace any labels removed or damaged during sweeper repairs.
- Keep all safety labels clean and easily readable. Contact SWEEPSTER for replacement safety signs and labels. Part numbers and locations are found on page 8.

To replace a safety sign or label:

1. Clean and dry the area where the label will be applied.
 2. Peel the backing from the safety label.
 3. Apply the label to the surface.
 4. Rub lightly to smooth away any air bubbles or wrinkles and to adhere the label corners and edges.
-

Replacing Brush Sections

1. Remove the front bolt from inside the right-hand side of the brush frame. This allows you to remove the shield and right mounting bracket (figure 23).
2. Remove the rear screw from the right-hand side of the brush frame.
3. Remove the 2 bolts from inside the left-hand side of the brush frame (figure 24).
4. Pull the brush out of the brush frame.
5. Stand the brush on end and rest it on blocks.
6. Loosen screws on the retainer plate and take off the retainer halves (figure 25).
7. Remove old sections from the core.
8. Install new sections by doing the following.
 - a. Number the tubes on the core as 1, 2, and 3 (figure 26).
 - b. Slide the first section onto the core with the drive pins on both sides of tube 1. Make sure that drive pins (figure 27) face up.

NOTE – When using 1/2 poly-1/2 wire sections, place a poly section first and last on the core to prevent damage to the hood, driveline and frame.

- c. Place the second section on the core with drive pins on both sides of tube 2. Be sure drive pins face down.
- d. Slide the third section onto the core with drive pins around tube 3. Be sure drive pins face up.
- e. Slide sections on until the core is full, making sure to alternate the tubes used and the direction of the drive pins.

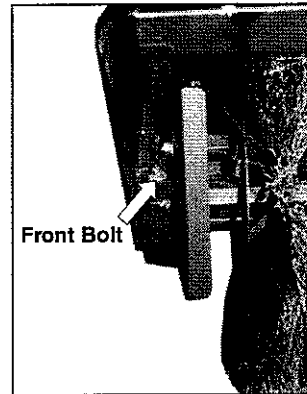


figure 23

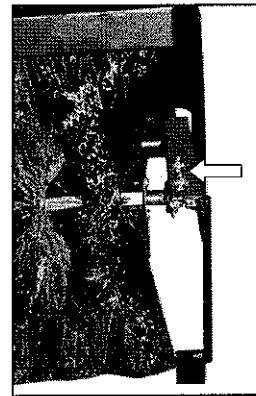


figure 24

Maintenance

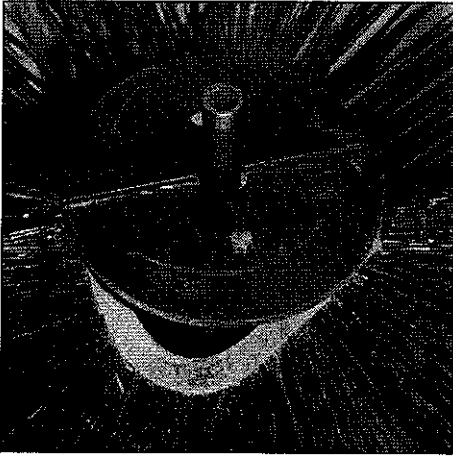


figure 25

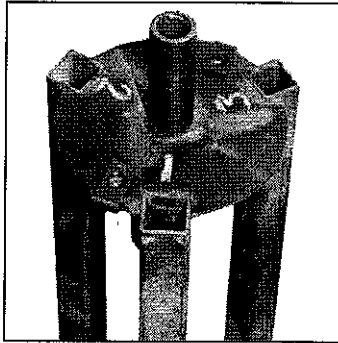


figure 26

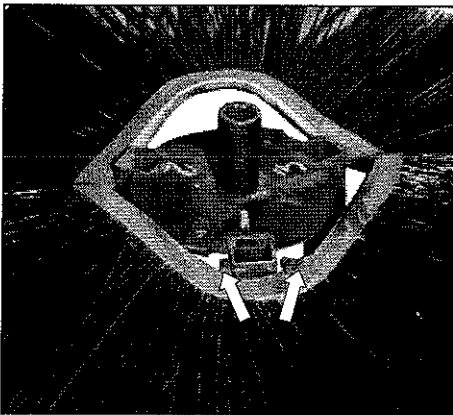


figure 27

9. Place the retainer halves on the brush and reinstall the screws.
 10. Position the brush in front of the brush hood.
 11. Reinstall the drive chain on the core sprocket.
 12. Slide the brush into the left-hand side of the brush frame. Reinstall the hardware but do not tighten completely.
 13. Slide the right-hand side of the brush into the brush frame. Reinstall the rear hardware but do not tighten.
 14. Replace the shield and reinstall the front bolt.
 15. Tighten the hardware on the left-hand side.
 16. Pull the drive chain tight; then, tighten the hardware on the right-hand side.
-

Troubleshooting

Brush Head Assembly

Problem	Possible Causes	Possible Remedies
Brush rotates wrong direction	<u>Gearboxes with 3 shafts</u> – gearbox flipped	Remove gearbox, switch breather cap and plug, and remount gearbox
	<u>Gearboxes with 2 shafts</u> – incorrect gearbox	Contact SWEEPSTER for replacement
Brush head assembly “bounces” when sweeping	Brush pattern needs adjustment	Adjust; see Adjustments: Brush Pattern
	Ground speed too fast and/or brush speed too slow	Find correct combination of ground and brush speeds
	Core is bent	Replace core
Brush wears unevenly	Brush head assembly is not level	Level brush head; see Adjustments: Leveling
Brush wears very quickly	Brush pattern not adjusted correctly	Adjust brush pattern; see Adjustments: Brush Pattern
	Brush speeds too high	Use slower brush speeds
Drive chain falls off repeatedly	Core not riding on sprocket	Align core
	Not enough tension on chain	Slide core forward

Gearbox

Problem	Possible Causes	Possible Remedies
Gearbox does not turn	Broken shaft or gear	Do not open a gearbox still under warranty; contact SWEEPSTER for replacement parts
Oil leaking from pinion housing, caps, cap screws or pipe plugs	Loose hardware	Retighten hardware or remove and coat with Loctite® before tightening; if necessary, replace gaskets
High internal operating temperature (above 200° F [93.33° C])	Damaged bearings	Replace bearings
	Oil level too low	Add oil
Excessive end play in shafts (.005 in. [1.3 mm] or more) when couplings are removed	Worn bearings	Remove gaskets between caps and gear case; replace if necessary
Excessive backlash	Worn gears	Adjust gears; replace, if necessary

Troubleshooting

Constant Velocity (CV) Drive Shaft

Problem	Possible Causes	Possible Remedies
End and/or inboard yoke ears spread	Drive shaft too long	Adjust drive shaft length; replace parts
	Axial forces too high – running above recommended rpm	Clean and grease profile tubes; replace parts; replace both tubes, if necessary
End yoke ears have pressure marks	Excessive bend angle when shaft rotates	Avoid running brush in raised position; switch off tractor PTO during cornering or when lifting the brush head; replace parts
End yoke bearing caps blued	Insufficient lubrication	Follow lubrication instructions; see Maintenance: Lubricating CV Drive Shaft; replace parts
Inboard yoke ears have pressure marks	Excessive bend angle when shaft rotates	Avoid running brush in raised position; switch off tractor PTO during cornering or when lifting the brush head; replace parts
	Drive shaft too long	Adjust drive shaft length
Inboard yoke bearing caps blued	Insufficient lubrication	Follow lubrication instructions; replace parts
Shield tube deformed and split on 1 side	Shield tube too short or no overlap at all when drive shaft is extended	Adjust shield tube length; replace parts
Shield tubes damaged	Shields contact components on tractor and/or sweeper	Allow more clearance; replace parts
Shield cone destroyed	Shield cone contacts components on tractor and/or sweeper	Allow more clearance; replace parts
Telescoping sections distorted	Overload caused by high starting and peak torques or blocking	Engage and disengage at idle; replace parts

Lift System

Problem	Possible Causes	Possible Remedies
Electric lift does not lift	Disconnected wires	Check and connect wires
	Switch failure	Replace switch; replace actuator, if necessary
Hydraulic lift does not lift	Disconnected hoses	Check and connect hoses
	Hydraulic pump failure	Contact dealer for service

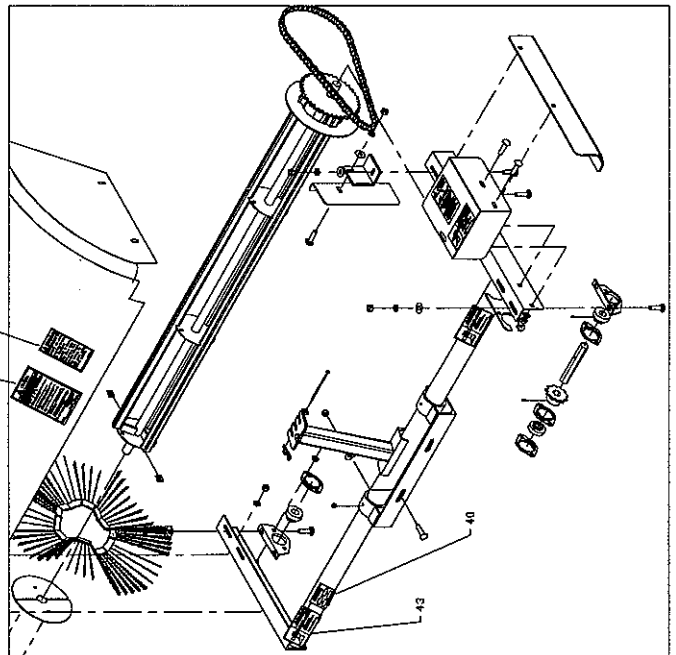
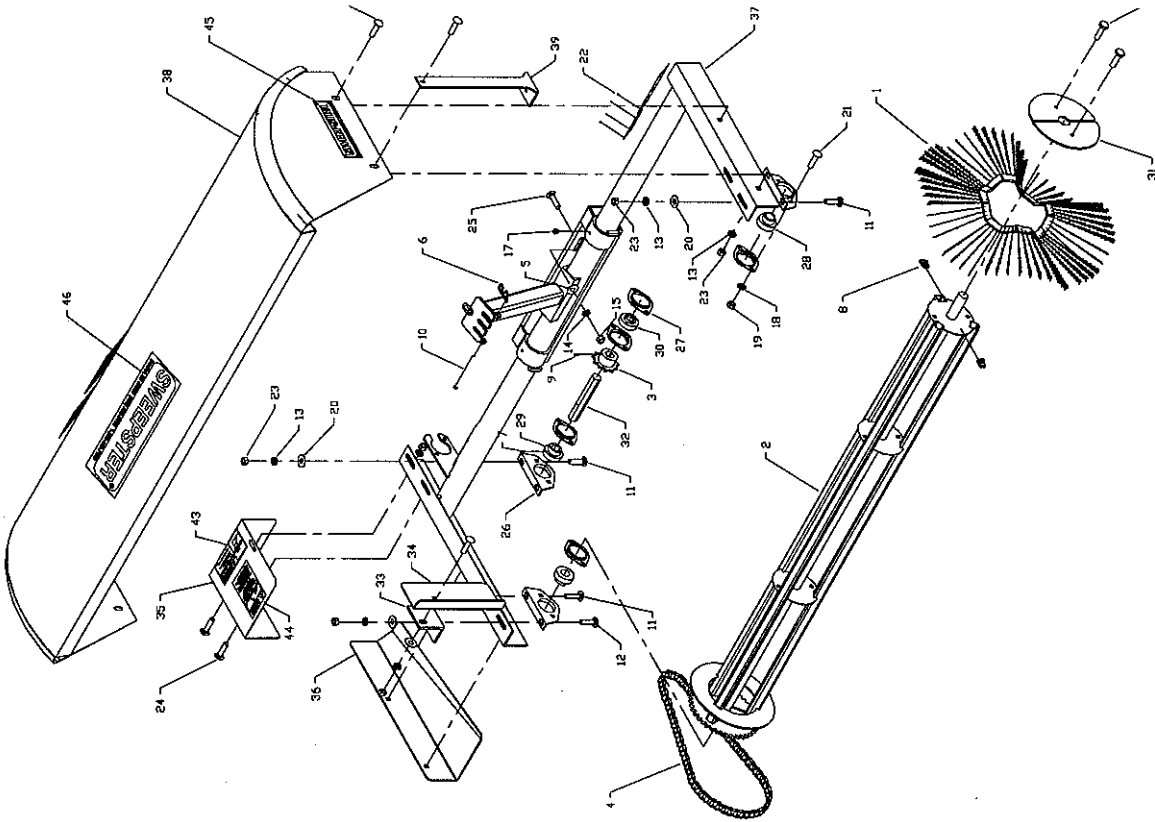
Brush Head Assembly

Item	Part	Qty	Description
1.	01-0001C	1	Set, Section, 24, Poly, Convoluted, 4
	01-0005C	1	Set, Section, 24, Wire, Convoluted, 4
	01-0013C	1	Set, Section, 24, Combination, Convoluted, 4
	01-0017C	1	Set, Section, 24, Poly, Convoluted, 5
	01-0018C	1	Set, Section, 24, Wire, Convoluted, 5
	01-0019C	1	Set, Section, 24, Combination, Convoluted, 5
	01-0537C	1	Set, Section, 24, Poly, Convoluted, 6
	01-0538C	1	Set, Section, 24, Wire, Convoluted, 6
	01-0539C	1	Set, Section, 24, Combination, Convoluted, 6
2.	01-0550	1	Core, 4
	01-0209	1	Core, 5
	01-0640	1	Core, 6
3.	06-0238	1	Sprocket, 50B 12 x 7/8 Hex
4.	06-0275	1	Chain, #50, 88 Links, with Master
5.	07-0156	2	Washer, Flat, 1/2
6.	07-0209	1	Clip, Hairpin, 16 gauge x 1-3/8
7.	07-0239	1	Pin, Spring, Lock, 3/16 x 1-1/4
8.	07-0240	2	Nut, Lock, Stamped, 5/16 x 18, Timmerman
9.	07-0002	1	Screw, Set, Gr2, 5/16-18 x 5/16
10.	07-1709	1	Pin, Clevis, 1/4 x 4-1/2
11.	07-1716	10	Bolt, Carriage, 3/8-16 x 1
12.	07-1717	1	Bolt, Carriage, 3/8-16 x 1-1/4
13.	07-1718	13	Washer, Lock, Split, 3/8
14.	07-1762	2	Washer, Lock, Split, 1/2
15.	07-1764	2	Nut, Hex, 1/2-13
16.	07-1973	2	Screw, Cap, 5/16-18 x 1-1/4
17.	07-3112	2	Fitting, Zerk, 1/4-28
18.	07-3273	8	Washer, Lock, Split, 5/16
19.	07-3278	8	Nut, Hex, 5/16-18
20.	07-3279	7	Washer, Flat, 3/8
21.	07-3438	8	Bolt, Carriage, 5/16-18 x 1
22.	07-3624	4	Tack, Metal

Item	Part	Qty	Description
23.	07-3654	13	Nut, Hex, 3/8-16
24.	07-3699	2	Bolt, Carriage, 3/8-16 x 3/4
25.	07-3708	2	Bolt, Carriage, 1/2-13 x 1-1/2
26.	08-0003	2	Flange, Bearing, PBS, Only
27.	08-0005	2	Flange, Bearing, 2 Hole
28.	08-0006	2	Bearing, 1 Round, with Collar, Only
29.	08-0034	1	Bearing, 7/8 Hex, with Hole
30.	08-0037	1	Bearing, 7/8 Hex, without Hub
31.	11-1804	1	Plate, Retainer, Section, Set
32.	11-3725-37	1	Shaft, Hex, 7/8 x 5, without Hole
33.	11-9604	1	Plate, Mounting, Shield, Brush Head
34.	11-9605	1	Shield, Drive, Core, Front
35.	11-9638-1	1	Shield, Drive, Core, Rear
36.	11-9611	1	Shield, Brush, Side, Right
37.	13-0011-1	1	Frame, Brush, 4, 1 Way
	13-0011-2	1	Frame, Brush, 5, 1 Way
	13-0011-3	1	Frame, Brush, 6, 1 Way
	11-9972-1	1	Frame, Brush, 4, 2 Way
	11-9972-2	1	Frame, Brush, 5, 2 Way
	11-9972-3	1	Frame, Brush, 6, 2 Way
38.	13-3558	1	Hood, 4
	13-3560	1	Hood, 5
	13-3563	1	Hood, 6
39.	13-8936	2	Plate, Shipping, Stand
40.	50-0004	1	Label, Plate, Serial Number
41.	50-0014-1	1	Label, Caution, Read Manual, General Safety
42.	50-0014-2	1	Label, Warning, Running Sweeper & Engine
43.	50-0721	3	Label, Warning Crush Hazard
44.	50-0115	1	Label, Danger, Rotating Driveline
45.	50-0184	2	Label, Small, White, SWEEPSTER
46.	50-0185	1	Label, Medium, White, Logo

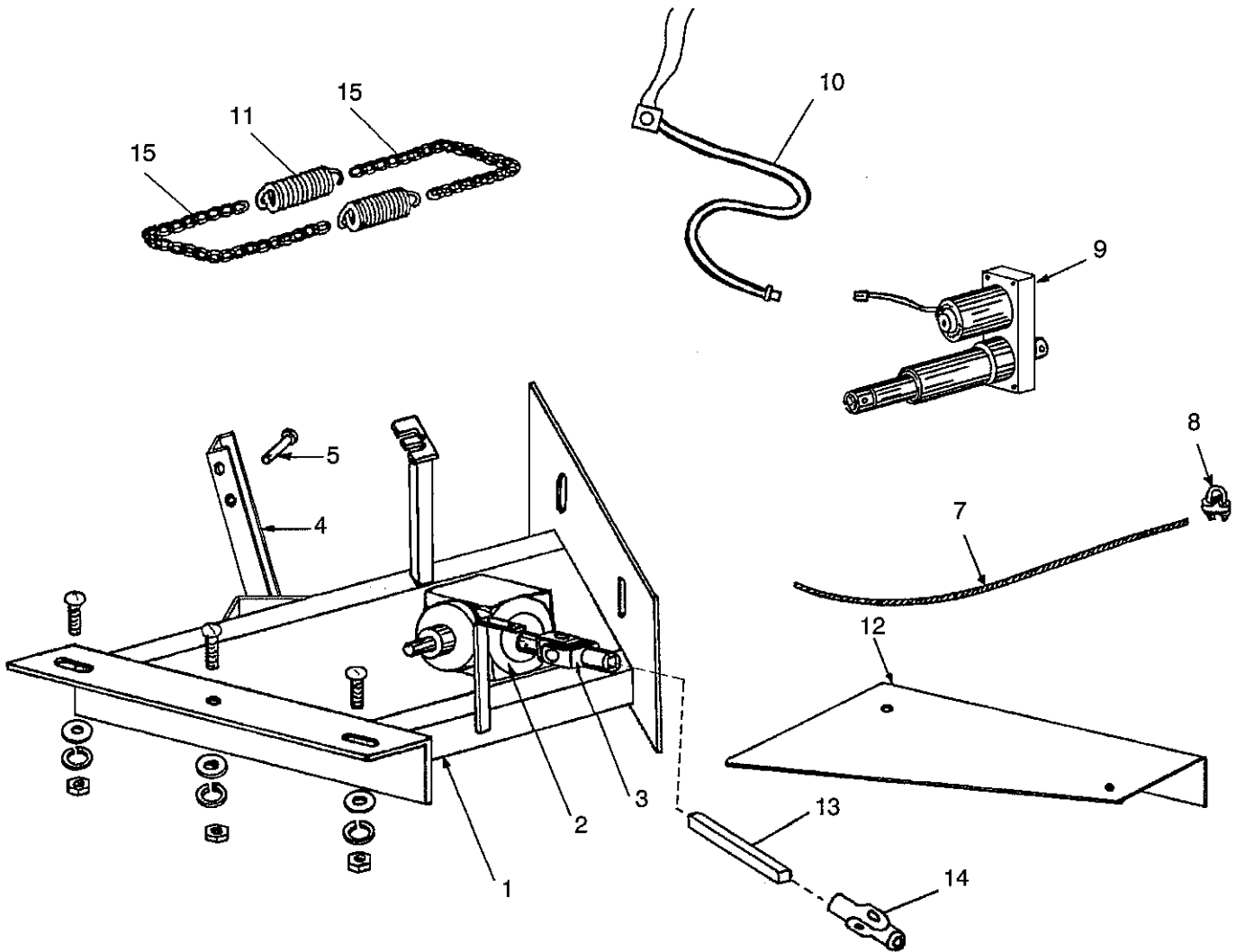
Brush Head Assembly

52-0340



Drive Assemblies, 1-Way

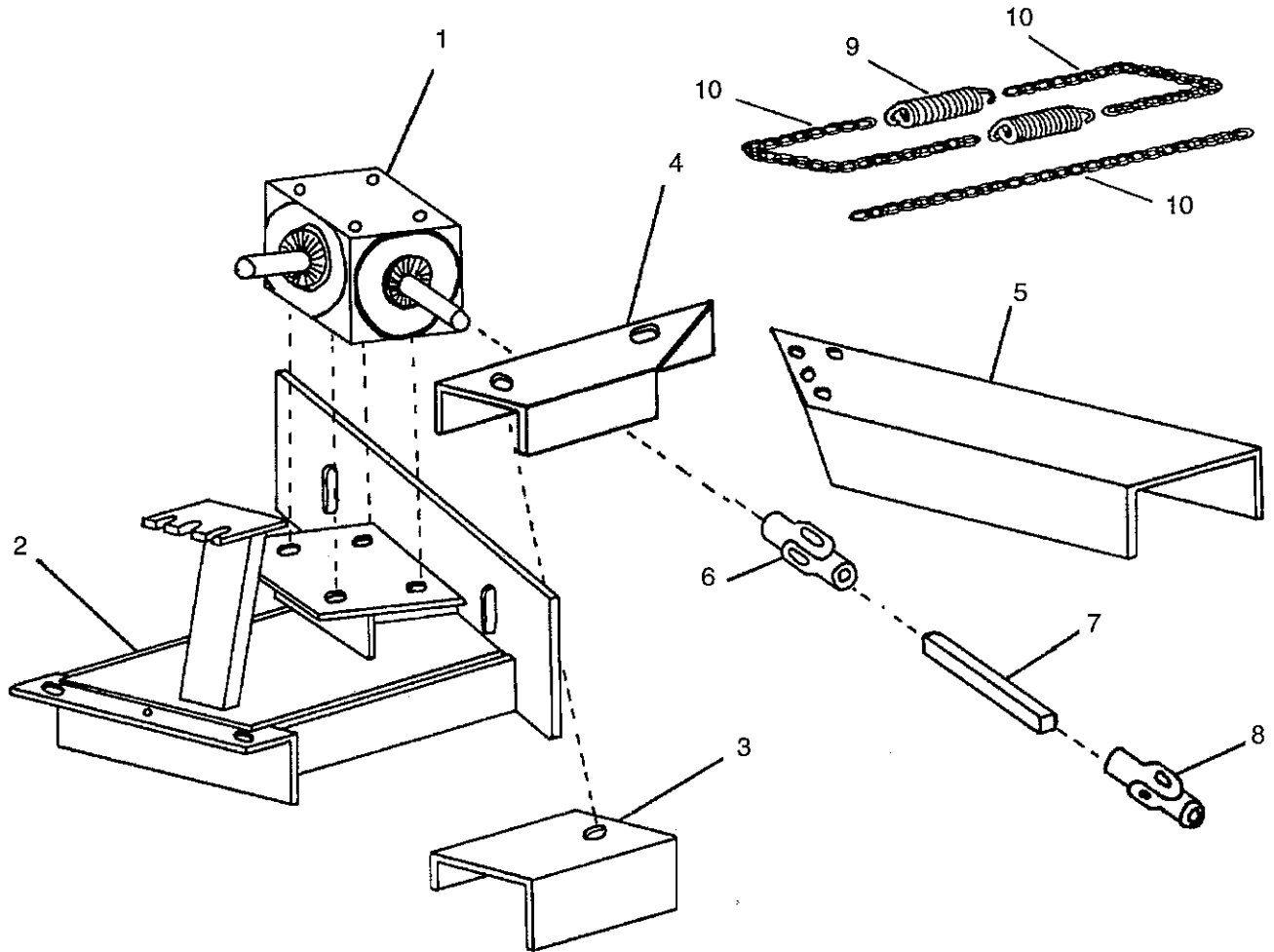
Assemblies 11-1727 & 11-1728



Item	Part	Qty	Description
1.	11-3001	1	Frame, Drive, 1-Way
2.	05-0003	1	Gearbox, Right-Hand, 7/8 Round-7/8 Round (11-1727)
	05-0004	1	Gearbox, Left-Hand, 3/4 Round-3/4Round (11-1728)
3.	05-1076	1	U-Joint, H7, Rectangular-3/4 Round
4.	11-1684	1	Arm, Lift
5.	07-0196	2	Pin, Clevis, 1/2 x 2
7.	11-7289	1	Cable, 3/16 x 32
8.	07-0214	2	Clamp, Cable, 3/16
9.	07-1660	1	Actuator, 450 lb
10.	11-1810	1	Wire Harness
11.	07-0237	2	Spring, Tension, 1-13/32 x 6
12.	11-1631	1	Shield, 1-Way
13.	11-1585	1	Shaft, Rectangular, 9
14.	05-0655	1	U-Joint, H7, Hex-Rectangular
15.	07-0314	2	Chain, 3/16, 15 Links

Drive Assemblies, 1-Way

Assemblies 11-17224 & 11-17229



Item	Part	Qty	Description
1.	05-1113	1	Gearbox, 1:1, Left-Hand (11-17229)
	05-1114	1	Gearbox, 1:1, Right-Hand (11-17224)
2.	11-9216	1	Frame, Drive, 1-Way
3.	13-2823	1	Shield, Drive, Extension, 1-Way
4.	11-9214	1	Shield, Drive, Input
5.	11-9215	1	Shield, Drive, Output
6.	05-0926	1	U-Joint, H7, Rectangular-1 Round
7.	11-1585	1	Shaft, Rectangular, 9
8.	05-0655	1	U-Joint, H7, Hex-Rectangular
9.	07-0237	2	Spring, Tension, 1-13/32 x 6
10.	07-0387	3	Chain, 3/16, 26 Links

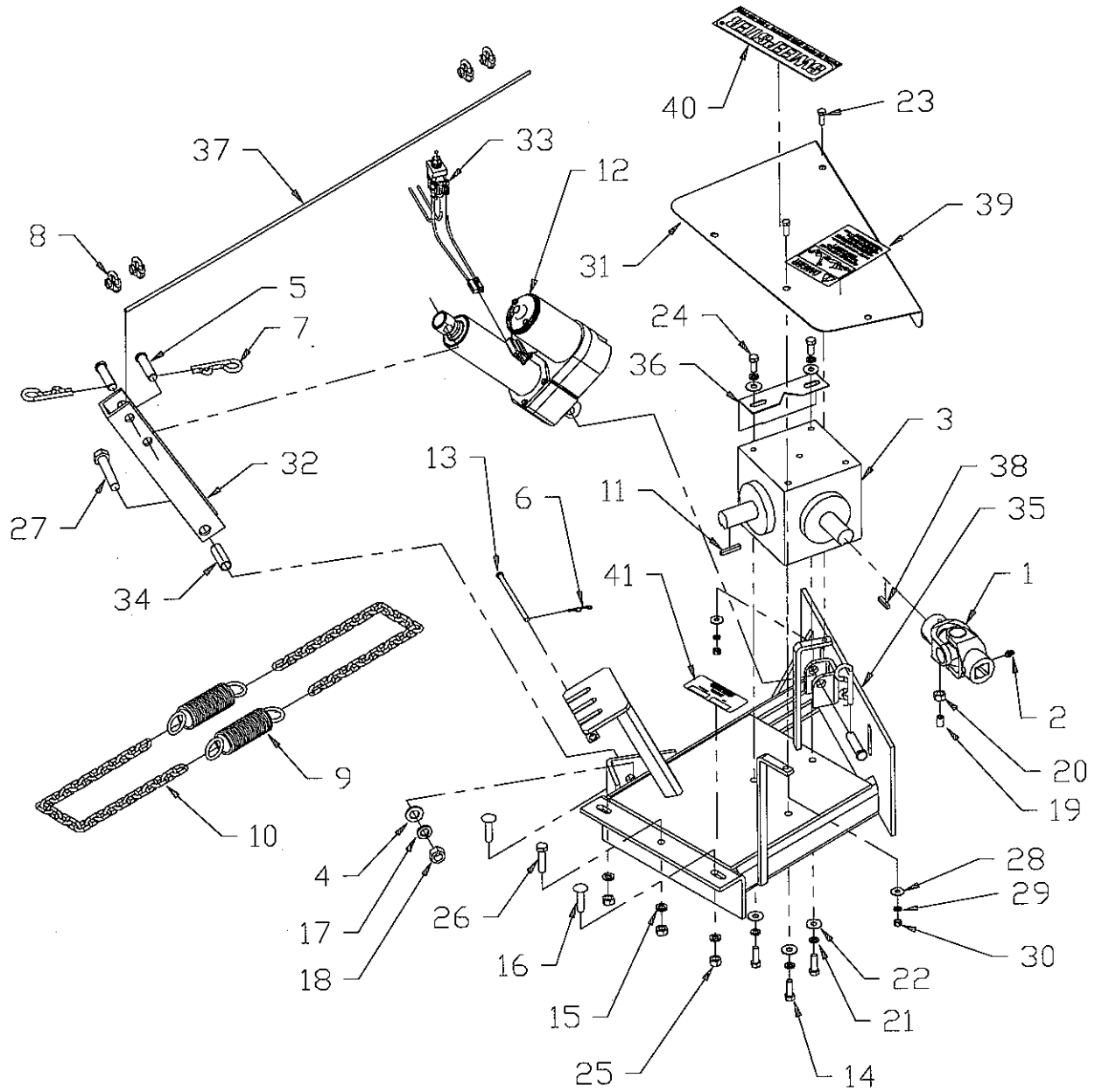
Drive Assemblies, 1-Way

Item	Part	Qty	Description
1.	05-0656	1	U-Joint, H7, Rectangular-7/8 Round, 3/16 Keyway
2.	05-0763	1	Fitting, Zerk, 1/4-28
3.	05-1145	1	Gearbox, 3:1, T-Style, 3-Shaft, Left-Hand/Right-Hand
4.	07-0156	1	Washer, Flat, 1/2
5.	07-0196	3	Pin, Clevis, 1/2 x 2
6.	07-0209	1	Clip, Hairpin, 16 gauge x 1-3/8
7.	07-0210	3	Clip, Hairpin, 14 gauge x 1-3/4
8.	07-0214	4	Clamp, Cable, 3/16
9.	07-0237	2	Spring, Tension, 1-13/32 x 6
10.	07-0387	2	Chain, 3/16, 26 Links
11.	07-0677	1	Key, 3/16 x 1-1/4
12.	07-1660	1	Acuator, 450 lb
13.	07-1709	1	Pin, Clevis, 1/4 x 4-1/2
14.	07-1714	3	Screw, Cap, 5/16-18 x 1
15.	07-1718	3	Washer, Lock, Split, 3/8
16.	07-1730	2	Bolt, Carriage, 3/8-16 x 1-1/2
17.	07-1762	1	Washer, Lock, Split, 1/2
18.	07-1764	1	Nut, Hex, 1/2-13
19.	07-1882	1	Screw, Set, 3/8-16 x 5/8, Cup Point
20.	07-3272	1	Nut, Hex, Jam, 3/8-16
21.	07-3273	5	Washer, Lock, Split, 5/16
22.	07-3275	5	Washer, Flat, 5/16
23.	07-3432	2	Screw, Cap, 1/4-20 x 3/4
24.	07-3436	2	Screw, Cap, 5/16-18 x 3/4
25.	07-3654	3	Nut, Hex, 3/8-16
26.	07-3655	1	Screw, Cap, 3/8-16 x 1-1/2
27.	07-3674	1	Screw, Cap, 1/2-13 x 2-3/4
28.	07-4032	2	Washer, Flat, 1/4
29.	07-4038	2	Washer, Lock, Split, 1/4
30.	07-4039	2	Nut, Hex, 1/4-20
31.	11-1631	1	Shield, Drive, 1-Way
32.	11-1684	1	Arm, Lift, 11, Pivot Hole, 21/32
33.	11-1810	1	Wire Harness
34.	11-1945	1	Tube, Round, 5/8 x 16 gauge x 1-3/4
35.	11-3001	1	Frame, Drive, 1-Way
36.	11-3257	1	Shield, Drive, 1-Way
37.	11-7289	1	Cable, 3/16 x 32
38.	13-0518	1	Key, 3/16 x 1
39.	50-0115	1	Label, Danger, Rotating Driveline
40.	50-0184	1	Label, Small, White, Logo
41.	50-0249	1	Label, Plate, Part Number/Date

Drive Assemblies, 1-Way

Assembly 11-17142

52-0673



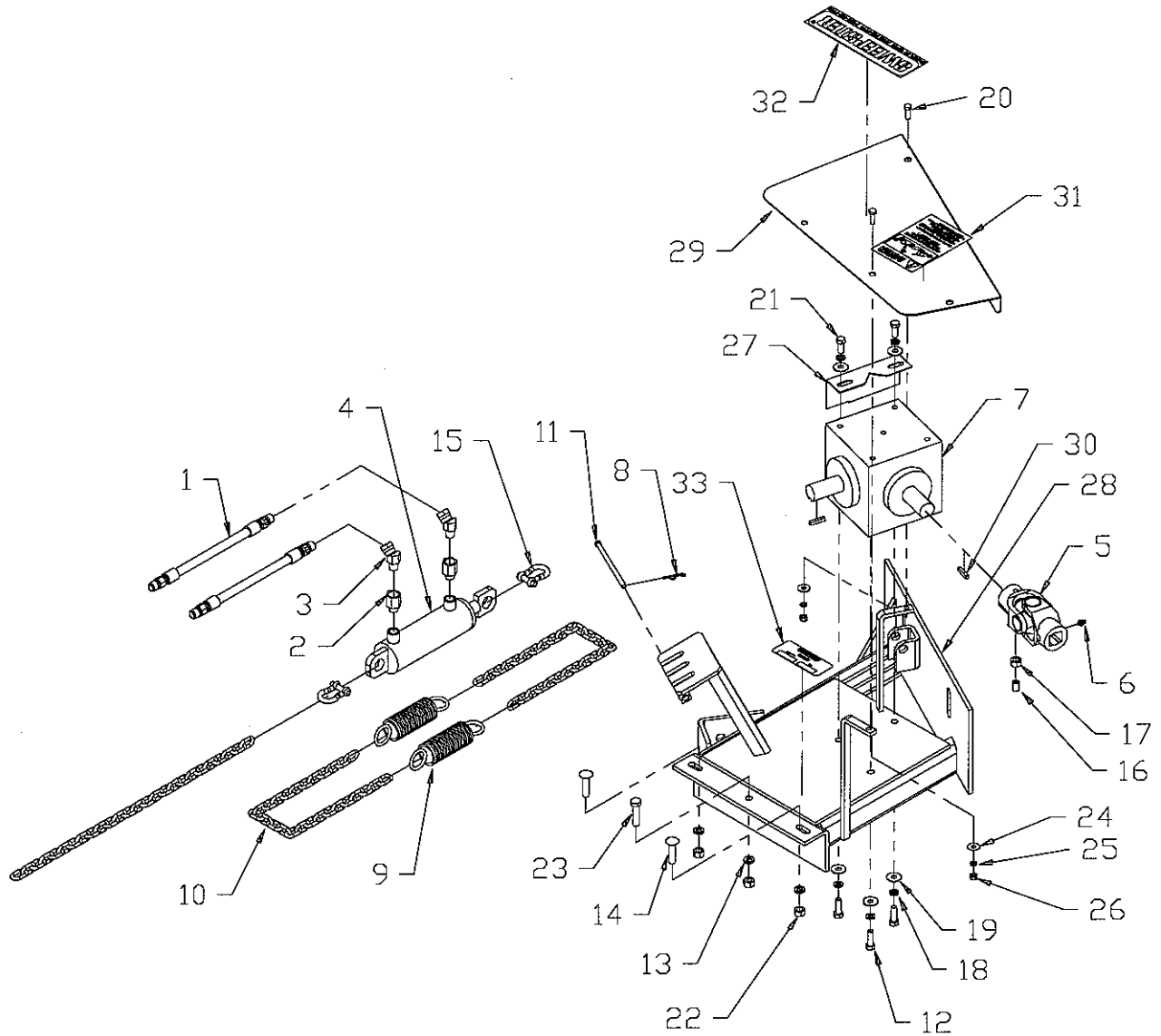
Drive Assemblies, 1-Way

Item	Part	Qty	Description
1.	03-0011	2	Hose, 1/4 x 36, 1 Wire, 1/4 MP
2.	03-0898	2	Fitting, Adapter, HP, 9/16 MOR-1/4 FP
3.	03-1053	2	Fitting, Elbow, HP, 45, 1/4 MP-1/4 FPS
4.	03-1851	1	Cylinder, 1-3/4 x 4 x 9, 9/16 O-Ring
5.	05-0656	1	U-Joint, H7, Rectangular-7/8 Round, 3/16 Keyway
6.	05-0763	1	Fitting, Zerk, 1/4-28
7.	05-1145	1	Gearbox, 3:1, T-Style, 3-Shaft, Left-Hand/Right-Hand
8.	07-0209	1	Clip, Hairpin, 16 gauge x 1-3/8
9.	07-0237	2	Spring, Tension, 1-13/32 x 6
10.	07-0387	3	Chain, 3/16, 26 Links
11.	07-1709	1	Pin, Clevis, 1/4 x 4-1/2
12.	07-1714	3	Screw, Cap, 5/16-18 x 1
13.	07-1718	3	Washer, Lock, Split, 3/8
14.	07-1730	2	Bolt, Carriage, 3/8-16 x 1-1/2
15.	07-1732	2	Shackle, Chain, 1/4, with Screw Pin
16.	07-1882	1	Screw, Set, 3/8-16 x 5/8, Cup Point
17.	07-3272	1	Nut, Hex, Jam, 3/8-16
18.	07-3273	5	Washer, Lock, Split, 5/16
19.	07-3275	5	Washer, Flat, 5/16
20.	07-3432	2	Screw, Cap, 1/4-20 x 3/4
21.	07-3436	2	Screw, Cap, 5/16-18 x 3/4
22.	07-3654	3	Nut, Hex, 3/8-16
23.	07-3655	1	Screw, Cap, 3/8-16 x 1-1/2
24.	07-4032	2	Washer, Flat, 1/4
25.	07-4038	2	Washer, Lock, Split, 1/4
26.	07-4039	2	Nut, Hex, 1/4-20
27.	11-1631	1	Shield, Drive, 1-Way
28.	11-3001	1	Frame, Drive, 1-Way
29.	11-3257	1	Shield, Drive, 1-Way
30.	13-0518	2	Key, 3/16 x 1
31.	50-0115	1	Label, Danger, Rotating Driveline
32.	50-0184	1	Label, Small, White, Logo
33.	50-0249	1	Label, Plate, Part Number/Date

Drive Assemblies, 1-Way

Assembly 11-17390

52-0671



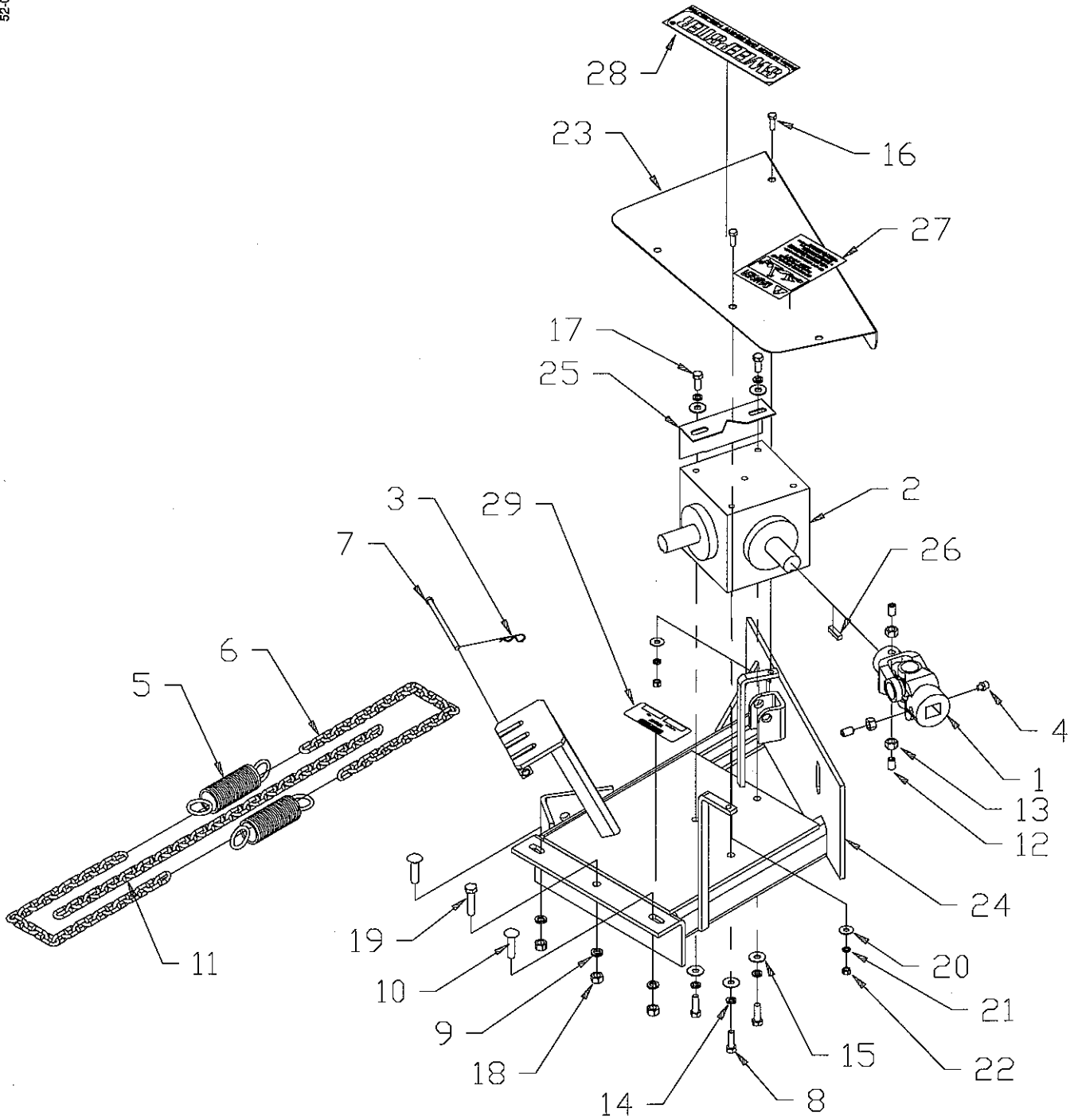
Drive Assemblies, 1-Way

Item	Part	Qty	Description
1.	05-0926	1	U-Joint, H7, Rectangular--1 Round
2.	05-1112	1	Gearbox, 3:1, Left-Hand
3.	07-0209	1	Clip, Hairpin, 16 gauge x 1-3/8
4.	07-0223	1	Fitting, Zerk, Straight, NPT
5.	07-0237	2	Spring, Tension, 1-13/32 x 6
6.	07-0387	2	Chain, 3/16, 26 Links
7.	07-1709	1	Pin, Clevis, 1/4 x 4-1/2
8.	07-1714	3	Screw, Cap, 5/16-18 x 1
9.	07-1718	3	Washer, Lock, Split, 3/8
10.	07-1730	2	Bolt, Carriage, 3/8-16 x 1-1/2
11.	07-1759	1	Chain, 3/16, 36 Links
12.	07-1882	3	Screw, Set, 3/8-16 x 5/8, Cup Point
13.	07-3272	3	Nut, Hex, Jam, 3/8-16
14.	07-3273	5	Washer, Lock, Split, 5/16
15.	07-3275	5	Washer, Flat, 5/16
16.	07-3432	2	Screw, Cap, 1/4-20 x 3/4
17.	07-3436	2	Screw, Cap, 5/16-18 x 3/4
18.	07-3654	3	Nut, Hex, 3/8-16
19.	07-3655	1	Screw, Cap, 3/8-16 x 1-1/2
20.	07-4032	2	Washer, Flat, 1/4
21.	07-4038	2	Washer, Lock, Split, 1/4
22.	07-4039	2	Nut, Hex, 1/4-20
23.	11-1631	1	Shield, Drive, 1-Way
24.	11-3001	1	Frame, Drive, 1-Way
25.	11-3257	1	Shield, Drive, 1-Way
26.	11-6526	1	Key, 1/4 x 1
27.	50-0115	1	Label, Danger, Rotating Driveline
28.	50-0184	1	Label, Small, White, Logo
29.	50-0249	1	Label, Plate, Part Number/Date

Drive Assemblies, 1-Way

Assemblies 11-17186 & 11-17187

52-0664



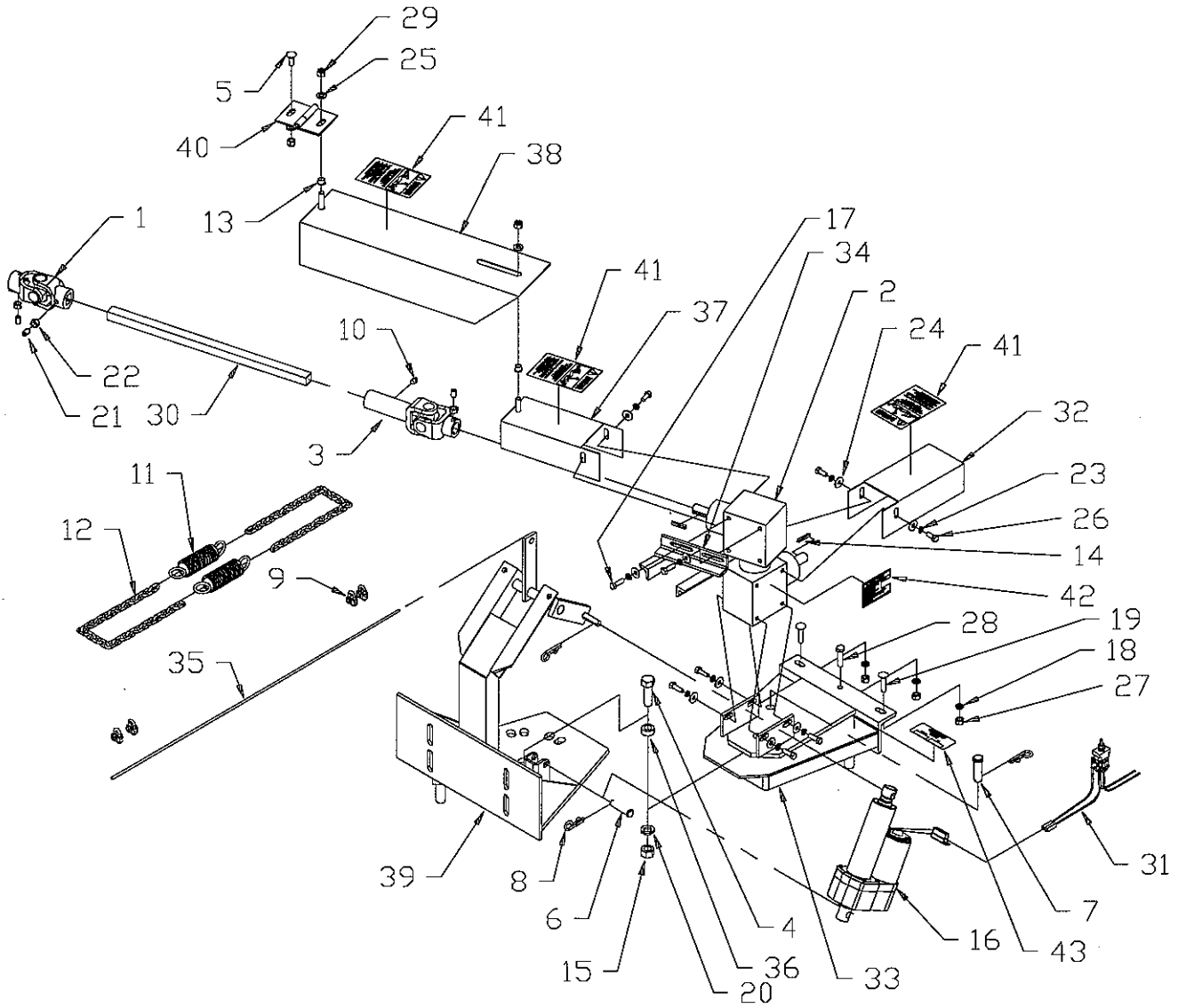
Drive Assemblies, 2-Way

Item	Part	Qty	Description
1.	05-0655	1	U-Joint, H7, Hex-Rectangular
2.	05-0668	1	Gearbox, 4:1, Right-Hand (11-17100)
	05-0669	1	Gearbox, 4:1, Left-Hand (11-17101)
3.	05-1075	1	U-Joint, H7, Rectangular-3/4 Round,
4.	07-0066	1	Screw, Cap, 5/8-11 x 2
5.	07-0108	1	Bolt, Carriage, 3/8 x 3/4
6.	07-0196	1	Pin, Clevis, 1/2 x 2
7.	07-0201	1	Pin, Clevis, 5/8 x 2
8.	07-0210	3	Clip, Hairpin, 14 gauge x 1-3/4
9.	07-0214	4	Clamp, Cable, 3/16
10.	07-0223	1	Fitting, Zerk, Straight, 1/8 NPT
11.	07-0237	2	Spring, Tension, 1-13/32 x 6
12.	07-0387	2	Chain, 3/16, 26 Links
13.	07-0557	2	Bushing, 17/32 x 13/32, Plastic
14.	07-0677	2	Key, 3/16 x 1-1/4
15.	07-1294	1	Nut, Hex, 5/8-11
16.	07-1660	1	Actuator, 450 lb
17.	07-1714	6	Screw, Cap, 5/16-18 x 1
18.	07-1718	3	Washer, Lock, Split, 3/8
19.	07-1730	2	Bolt, Carriage, 3/8-16 x 1-1/2
20.	07-1872	1	Washer, Lock, Split, 5/8
21.	07-1882	3	Screw, Set, 3/8-16 x 5/8, Cup Point
22.	07-3272	3	Nut, Hex, Jam, 3/8-16
23.	07-3273	9	Washer, Lock, Split, 5/16
24.	07-3279	3	Washer, Flat, 3/8
25.	07-3275	9	Washer, Flat, 5/16
26.	07-3436	3	Screw, Cap, 5/16-18 x 3/4
27.	07-3654	3	Nut, Hex, 3/8-16
28.	07-3655	1	Screw, Cap, 3/8-16 x 1-1/2
29.	07-4036	3	Nut, Hex, Nylock, 3/8-16
30.	11-1595	1	Shaft, Rectangular, 18
31.	11-1810	1	Wire Harness
32.	11-2460	1	Shield, U-Joint
33.	11-2461	1	Frame, Swing
34.	11-3804	1	Stop, Gearbox
35.	11-7289	1	Cable, 3/16 x 32
36.	11-7479	1	Bushing, 1 x 5/8 x 7/16
37.	11-7751	1	Shield, Drive, 2-Way
38.	13-0090	1	Shield, Stacked Gearbox
	13-0091	1	Shield, 2-Way
39.	13-0848	1	Plate, Swing, 2-Way, 3/8, for Stacked Gearbox
40.	13-4420	1	Hinge, 3-1/2 x 3, 1/4 diameter Pin, with Slots
41.	50-0115	2	Label, Danger, Rotating Driveline
42.	50-0236	1	Label, Gearbox
43.	50-0249	1	Label, Plate, Part Number/Date

Drive Assemblies, 2-Way

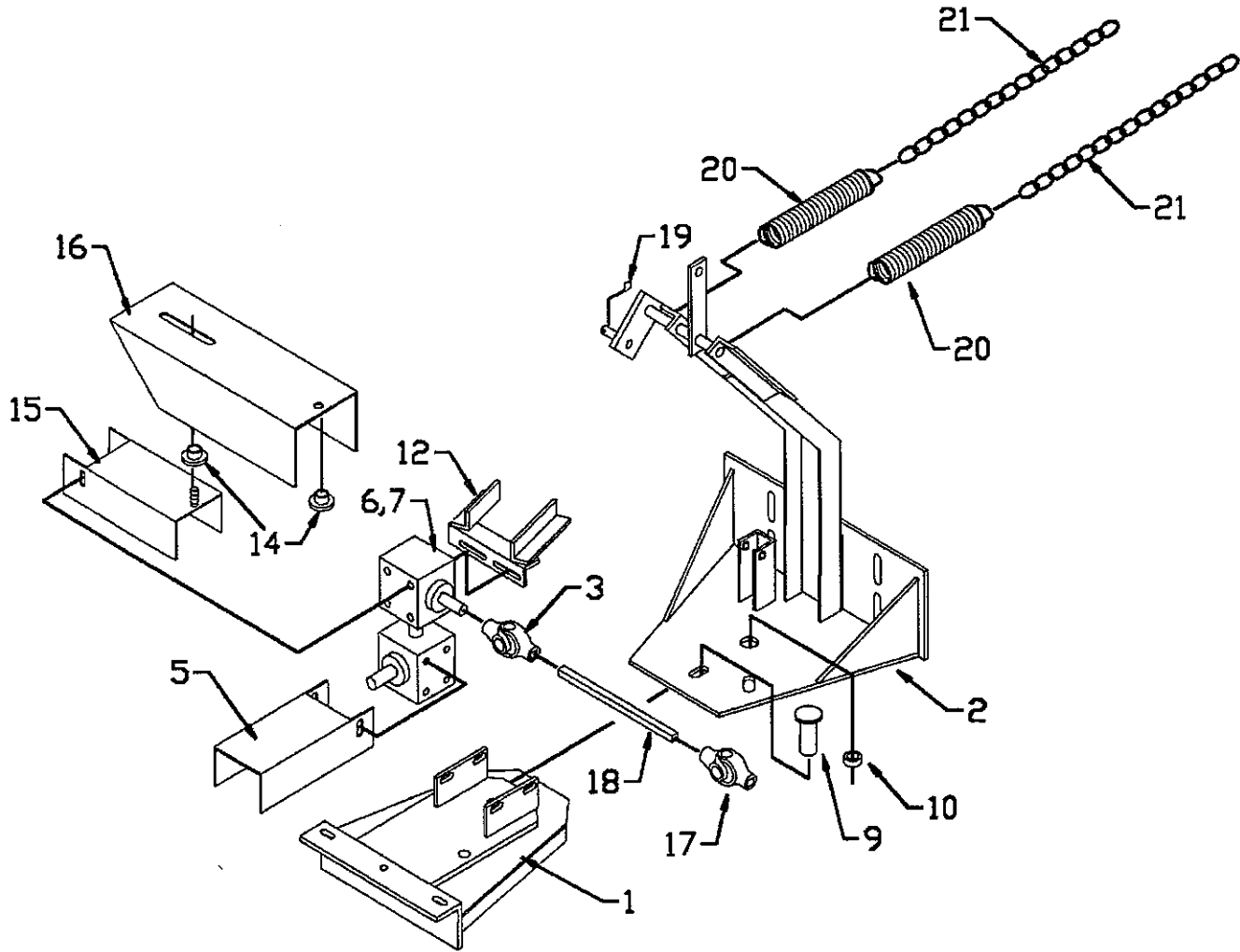
Assemblies 11-17100 & 11-17101

52-0688



Drive Assemblies, 2-Way

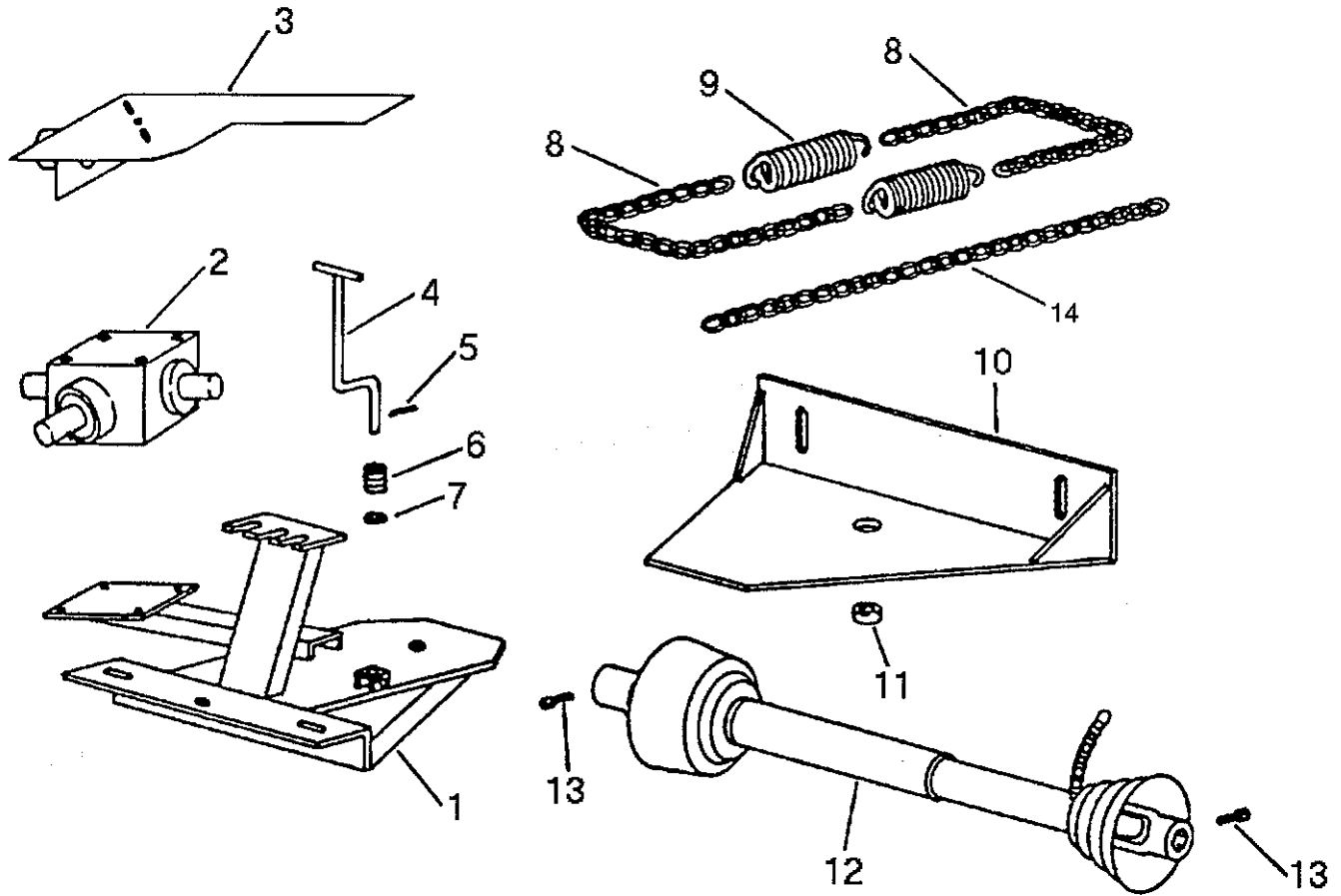
Assemblies 11-17102 & 11-17103



Item	Part	Qty	Description
1.	11-2461	1	Frame, Swing
2.	13-0848	1	Plate, Swing, 2-Way, 3/8
3.	05-0733	1	U-Joint, H3, Rectangular-Round, 3/4, Long Slip
5.	11-2460	1	Shield, U-Joint, 2-Way
6.	05-0668	1	Gearbox, Double, 4:1, Right-Hand (11-17102)
7.	05-0669	1	Gearbox, Double, 4:1, Left-Hand (11-17103)
9.	07-0201	1	Pin, Clevis, 5/8 x 2
10.	11-7479	1	Bushing, 1 x 5/8 x 7/16
12.	11-3804	1	Stop, Gearbox
14.	07-0557	2	Bushing, 17 x 13, Plastic
15.	11-7751	1	Shield, Drive, 2-Way
16.	13-0090	1	Shield, Stacked Box
	13-0091	1	Shield, 2-Way
17.	05-0655	1	U-Joint, H7, Hex-Rectangular
18.	11-1595	1	Shaft, Rectangular, 18
19.	07-0210	1	Clip, Hairpin, 14 gauge x 1-3/4
20.	07-0237	2	Spring, Tension, 1-13/32 x 6
21.	07-0387	2	Chain, 3/16, 26 Links

Drive Assemblies, 2-Way

Assemblies 11-17333 & 11-17334



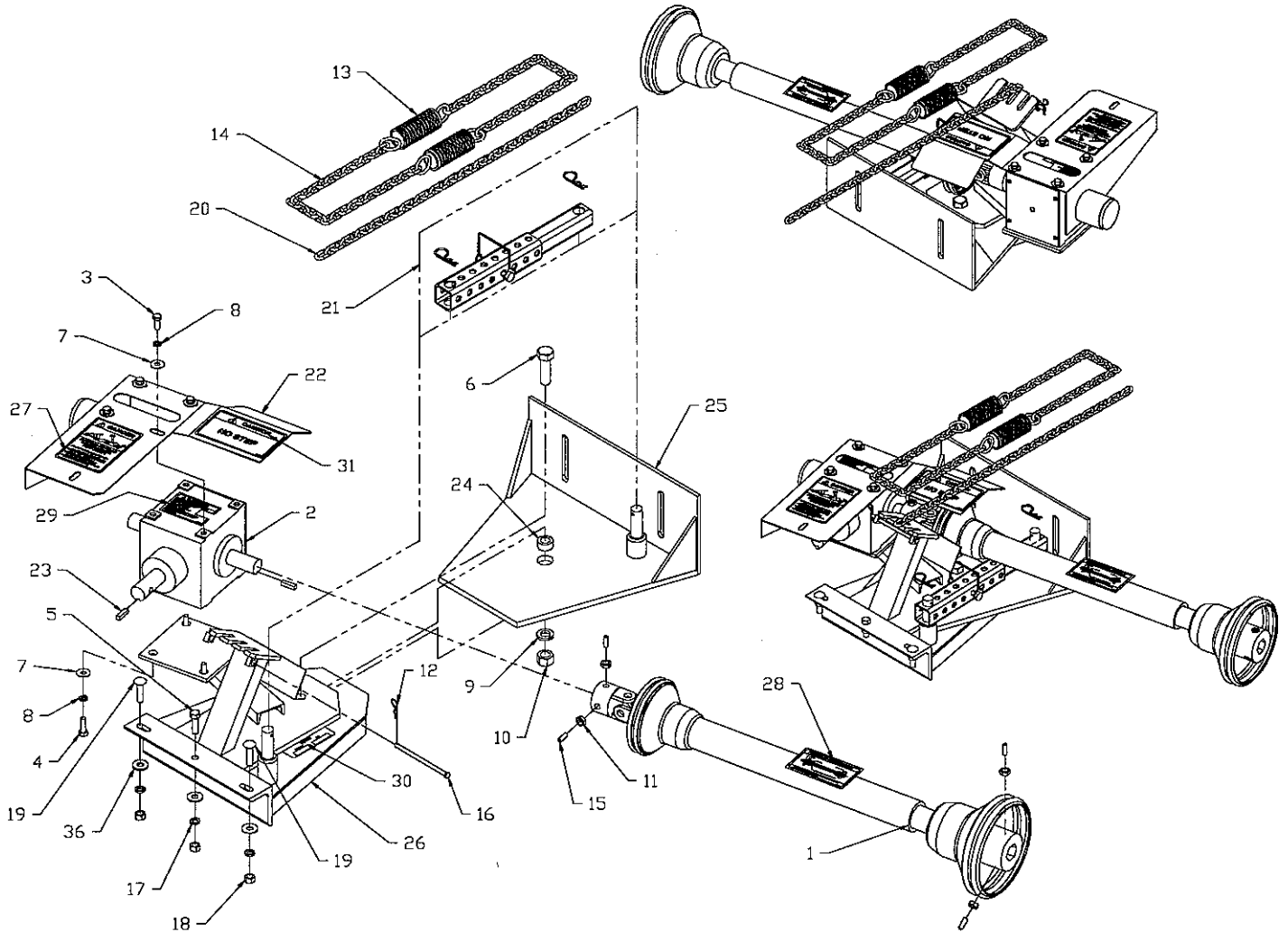
Item	Part	Qty	Description
1.	13-2200	1	Frame, Swing
2.	05-1112	1	Gearbox, 3:1, Left-Hand
3.	11-6493	1	Shield, Gearbox
4.	13-2204	1	Handle, Stop
5.	07-0203	1	Pin, Spring, Lock, 3/16 x 2-1/4
6.	07-0319A	1	Spring, Hitch, Quick
7.	07-1374	1	Washer, .625 x 1
8.	07-0387	2	Chain, 3/16, 26 Links
9.	07-0237	2	Spring, Tension, 1-13/32 x 6
10.	11-9968	1	Plate, Swing, 3:1, CV
11.	11-7479	1	Bushing, 1 x 5/8 x 7/16
12.	05-0983-1	1	Shaft, Telescoping, CV, 1 Round-7/8 Hex Output, 38-1/4 Extended
13.	07-1279	2	Screw, Set, 3/8-16 x 3/4
14.	07-1759	1	Chain, 3/16, 36 Links

Drive Assemblies, 2-Way

Item	Part	Qty	Description
1.	05-0983-1	1	Shaft, Telescoping, CV, 1 Round-7/8 Hex, Output, 38-1/4 Extended
2.	05-1112	1	Gearbox, 3:1, Left-Hand
3.	07-3436	4	Screw, Cap, 5/16-18 x 3/4
4.	07-1714	4	Screw, Cap, 5/16-18 x 1
5.	07-2116	1	Screw, Cap, 3/8-16 x 1-1/4
6.	07-0066	1	Screw, Cap, 5/8-11 x 2
7.	07-3275	8	Washer, Flat, 5/16
8.	07-3273	8	Washer, Lock, Split, 5/16
9.	07-1872	1	Washer, Lock, Split, 5/8
10.	07-1294	1	Nut, Hex, 5/8-11
11.	07-3272	4	Nut, Hex, Jam, 3/8-16
12.	07-0209	1	Clip, Hairpin, 16 gauge x 1-3/8
13.	07-0237	2	Spring, Tension, 1-13/32 x 6
14.	07-0387	2	Chain, 3/16, 26 Links
15.	07-1279	4	Screw, Set, 3/8-16 x 3/4
16.	07-1709	1	Pin, Clevis, 1/4 x 4-1/2
17.	07-1718	3	Washer, Lock, Split, 3/8
18.	07-3654	3	Nut, Hex, 3/8-16
19.	07-1730	2	Bolt, Carriage, 3/8-16 x 1-1/2
20.	07-1759	1	Chain, 3/16, 36 Links
21.	11-4371	1	Kit, Manual Angle, 24
22.	11-6493	1	Shield, Gearbox
23.	11-6526	2	Key, 1/4 x 1
24.	11-7479	1	Bushing, 1 x 5/8 x 7/16
25.	13-4206	1	Plate, Swing, Top Pin
26.	13-4465	1	Frame, Swing, 3:1, CV
27.	50-0115	1	Label, Danger, Rotating Driveline
28.	50-0147	1	Label, Frequency of Lubrication, CV Shafts
29.	50-0236	1	Label, Gearbox
30.	50-0249	1	Label, Plate, Part Number/Date
31.	50-0591	1	Label, Caution, No Step
36.	07-3279	3	Washer, Flat, 3/8

Drive Assemblies, 2-Way

Assemblies 11-17177 & 11-17182



Drive Assemblies, 2-Way

Item	Part	Qty	Description
1.	05-0983-1	1	Shaft, Telescoping, CV, 1 Round, 7/8 Hex, Output, 38-1/4 Extended
2.	05-1113	1	Gearbox, 1:1, Left Hand (11-17371)
	05-1114	1	Gearbox, 1:1, Right Hand (11-17372)
3.	07-0018	4	Screw, Cap, 3/8-16 x 1
4.	07-0066	1	Screw, Cap, 5/8-11 x 2
5.	07-0203	1	Pin, Spring, Lock, 3/16 x 2-1/4
6.	07-0209	1	Clip, Hairpin, 16 gauge x 1-3/8
7.	07-0237	2	Spring, Tension, 1-13/32 x 6
8.	07-0319A	1	Spring, Hitch, Quick
9.	07-0387	2	Chain, 3/16, 26 Links
10.	07-1294	1	Nut, Hex, 5/8-11
11.	07-1374	1	Washer, .625 x 1
12.	07-1709	1	Pin, Clevis, 1/4 x 4-1/2
13.	07-1718	6	Washer, Lock, Split, 3/8
14.	07-1730	2	Bolt, Carriage, 3/8-16 x 1-1/2
15.	07-1759	1	Chain, 3/16, 36 Links
16.	07-1872	1	Washer, Lock, Split, 5/8
17.	07-3279	6	Washer, Flat, 3/8
18.	07-3654	3	Nut, Hex, 3/8-16
19.	07-0041	1	Screw, Cap, 3/8-16 x 1-1/2
20.	07-0023	2	Screw, Cap, 3/8 x 3/4
21.	11-6526	2	Key, 1/4 x 1
22.	11-7479	1	Bushing, 1 x 5/8 x 7/16
23.	11-7622	1	Handle, Stop, Hustler, CV
24.	11-9968	1	Plate, Swing, CTM, CV
25.	13-3310	1	Frame, Mounting, 1:1
26.	13-3389	1	Shield, Frame
27.	50-0115	1	Label, Danger, Rotating Driveline
28.	50-0184	1	Label, Small, White, Logo
29.	50-0249	1	Label, Plate, Part Number/Date

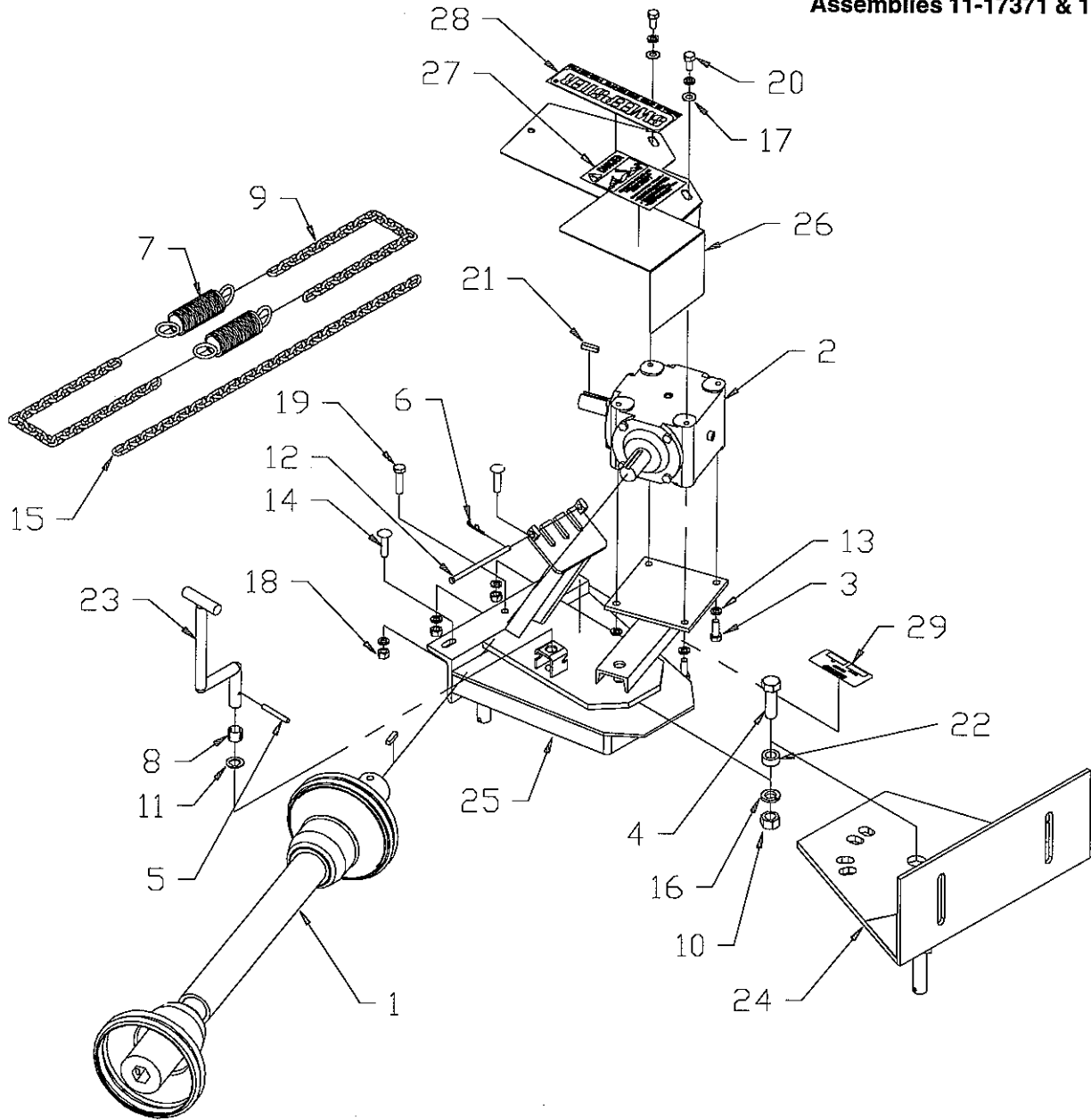
Not Shown

50-0236 1 Label, Gearbox

Drive Assemblies, 2-Way

Assemblies 11-17371 & 11-17372

52-0682



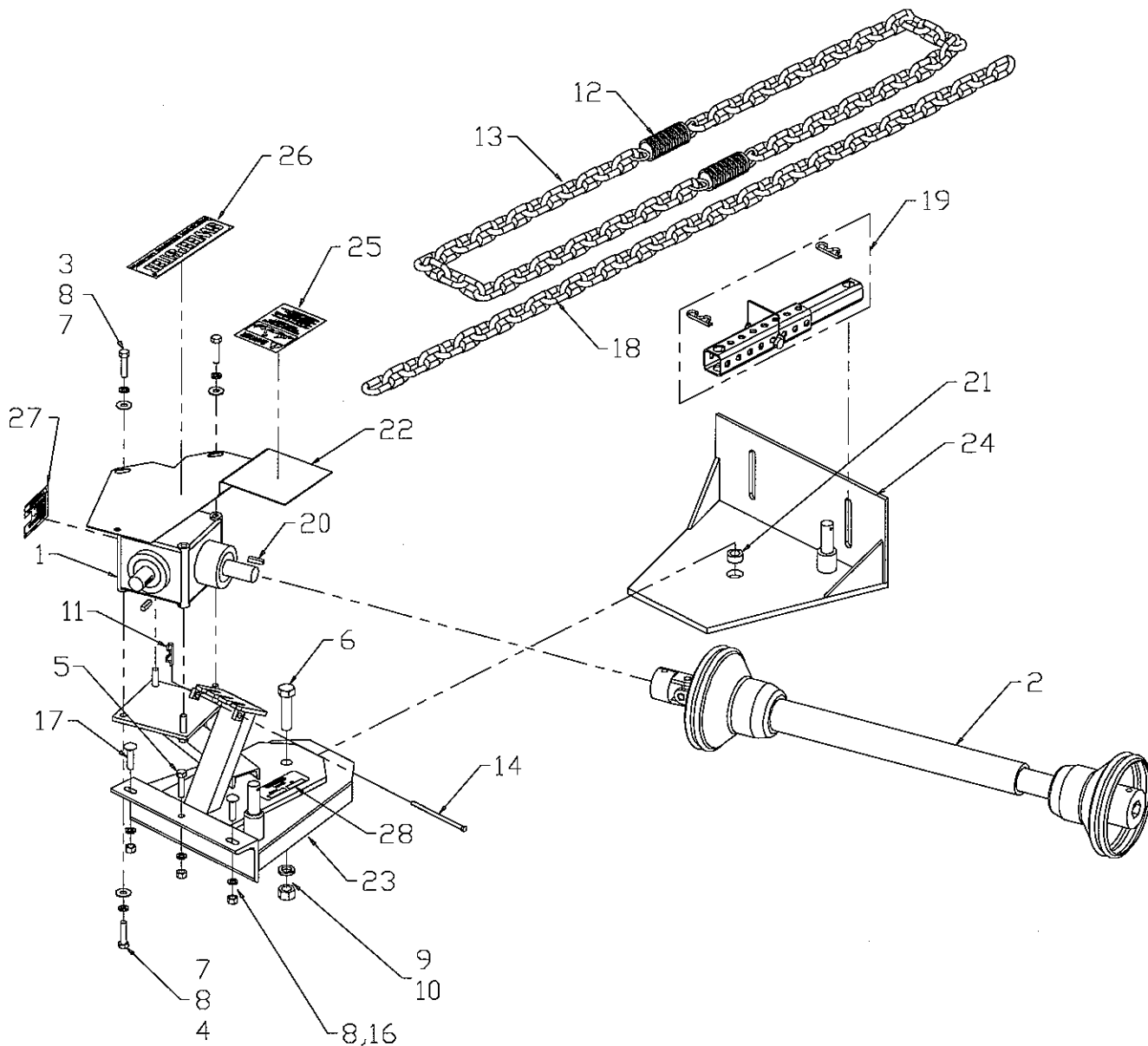
Drive Assemblies, 2-Way

Item	Part	Qty	Description
1.	05-1114	1	Gearbox, 1:1, Right-Hand
2.	05-0983	1	Shaft, Telescoping, CV, 1 Round-7/8 Hex, Output, 42-1/4 Extended
3.	07-4052	2	Screw, Cap, 3/8 x 3/4
4.	07-0018	4	Screw, Cap, 3/8-16 x 1
5.	07-2116	1	Screw, Cap, 3/8-16 x 1-1/4
6.	07-0066	1	Screw, Cap, 5/8-11 x 2
7.	07-3279	6	Washer, Flat, 3/8
8.	07-1718	3	Washer, Lock, Split, 3/8
9.	07-1872	1	Washer, Lock, Split, 5/8
10.	07-1294	1	Nut, Hex, 5/8-11
11.	07-0209	1	Clip, Hairpin, 16 gauge x 1-3/8
12.	07-0237	2	Spring, Tension, 1-13/32 x 6
13.	07-0387	2	Chain, 3/16, 26 Links
14.	07-1709	1	Pin, Clevis, 1/4 x 4-1/2
16.	07-3654	3	Nut, Hex, 3/8-16
17.	07-1717	2	Bolt, Carriage, 3/8-16 x 1-1/4
18.	07-1759	1	Chain, 3/16, 36 Links
19.	11-5819	1	Kit, Manual Angle, 24
20.	11-6526	2	Key, 1/4 x 1
21.	11-7479	1	Bushing, 1 x 5/8 x 7/16
22.	11-7949	1	Shield, CV
23.	13-1448	1	Frame, Swing
24.	13-4206	1	Plate, Swing, Top Pin
25.	50-0115	1	Label, Danger, Rotating Driveline
26.	50-0184	1	Label, Small, White, Logo
27.	50-0236	1	Label, Gearbox
28.	50-0249	1	Label, Plate, Part Number/Date

Drive Assemblies, 2-Way

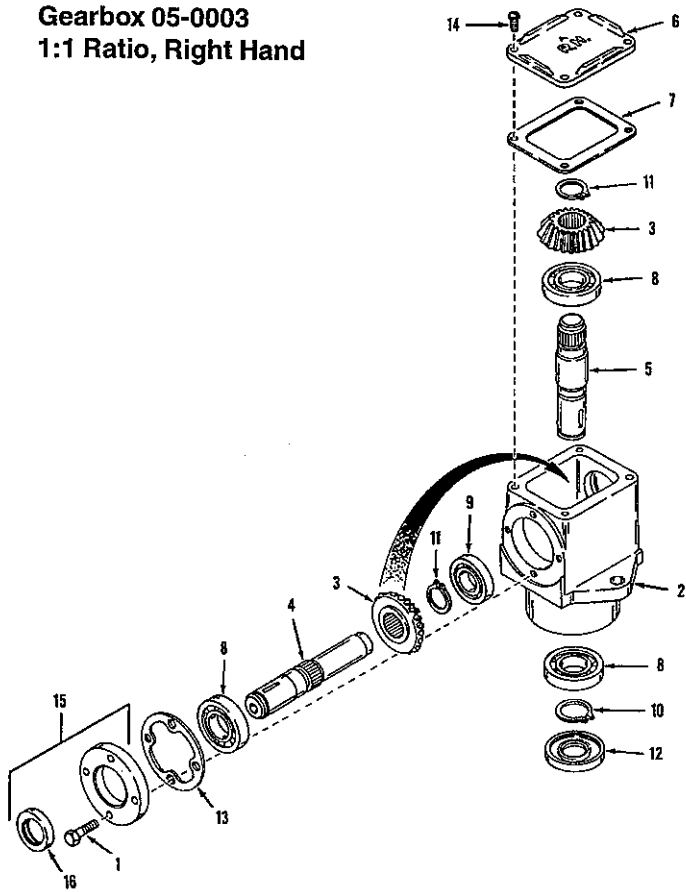
Assemblies 11-17198 & 11-17231

52-0318



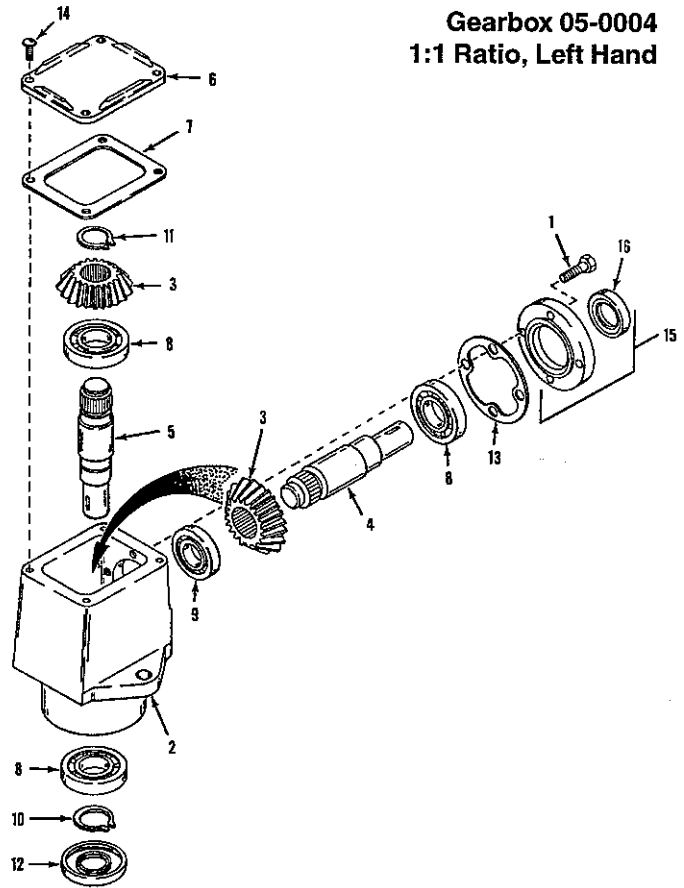
Gearboxes

Gearbox 05-0003
1:1 Ratio, Right Hand



Item	Part	Qty	Description
1.	05-0573	1	Screw
2.	05-0559	1	Housing
3.	05-0560	2	Gear
4.	05-0561	1	Shaft, Output, RH
5.	05-0562	1	Shaft, Input, RH
6.	05-0563	1	Cover
7.	05-0564	1	Gasket
8.	05-0565	3	Bearing
9.	05-0566	1	Bearing
10.	05-0567	1	Snap Ring
11.	05-0568	1	Snap Ring
12.	05-0569	1	Seal
13.	05-0570	1	Gasket
14.	05-0571	4	Screw
15.	05-0571A	1	Cap
16.	05-0572	1	Seal

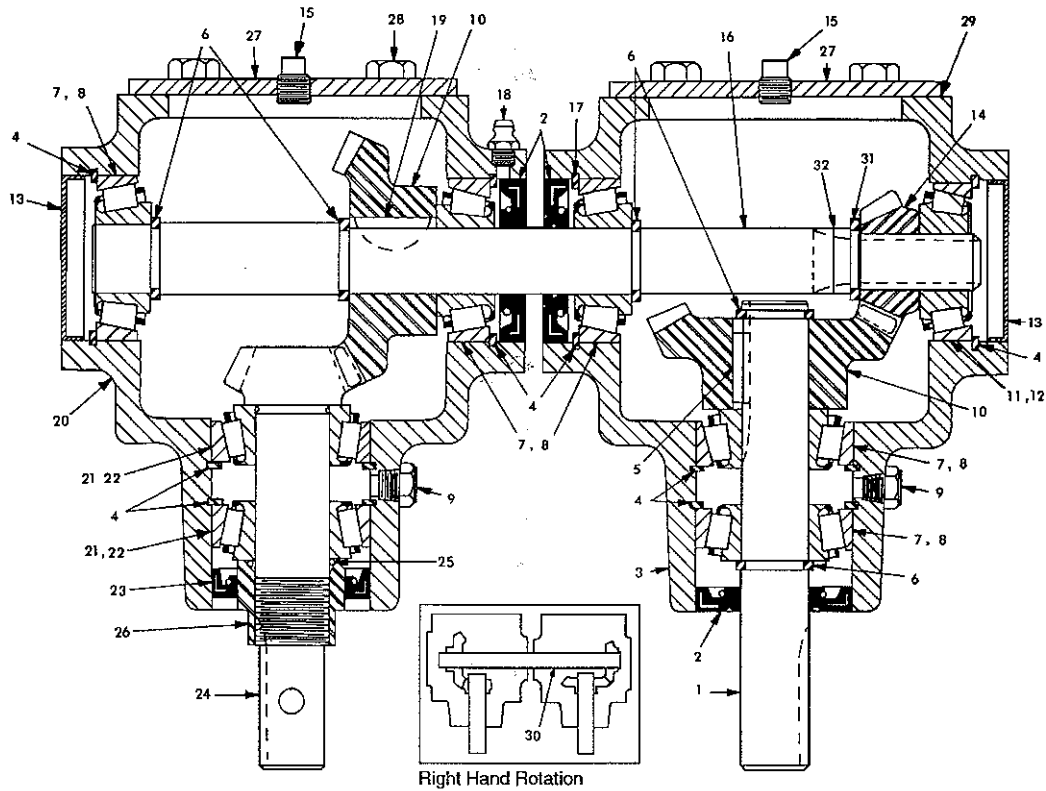
Gearbox 05-0004
1:1 Ratio, Left Hand



Item	Part	Qty	Description
1.	05-0573	1	Screw
2.	05-0559	1	Housing
3.	05-0560	2	Gear
4.	05-0575	1	Shaft, Output, LH
5.	05-0576	1	Shaft, Input, LH
6.	05-0563	1	Cover, LH
7.	05-0564	1	Gasket
8.	05-0565	3	Bearing
9.	05-0566	1	Bearing
10.	05-0567	1	Snap Ring
11.	05-0568	1	Snap Ring
12.	05-0569	1	Seal
13.	05-0570	1	Gasket
14.	05-0571	4	Screw
15.	05-0571A	1	Cap
16.	05-0572	1	Seal

Gearboxes

Gearboxes 05-0668 & 05-0669 (shown)
4:1 Ratio, Stacked

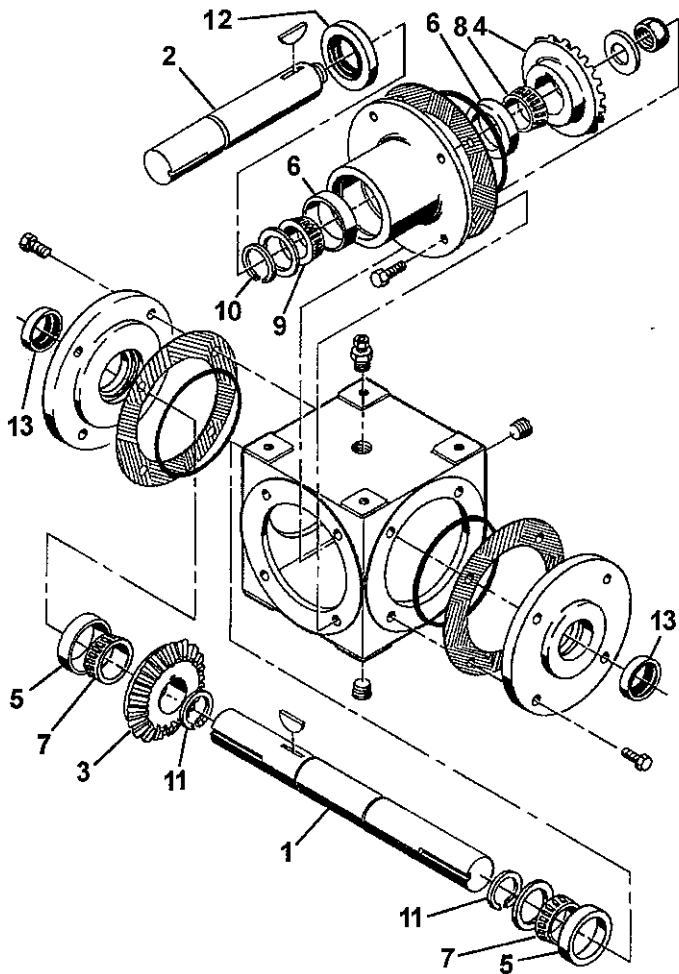


Item	Part	Qty	Description
1.	05-0759	1	Shaft, Output
2.	05-0766	3	Seal
3.	05-0745	1	Housing
4.	05-0757	8	Snap Ring
5.	07-0794	1	Key, 3/16 Square x 3/4
6.	05-0756	5	Snap Ring, 3/4
7.	05-0750	5	Bearing Cup
8.	05-0751	5	Bearing Cone
9.	05-0764	2	Plug, Vent
10.	05-0749	2	Bevel Gear
11.	05-0754	1	Bearing Cup
12.	05-0755	1	Bearing Cone
13.	05-0768	2	Cap
14.	05-0748	1	Bevel Gear, Splined
15.	03-1182-1	2	Plug, Fill-Level
16.	05-0760	1	Shaft, Cross (for Left Hand)

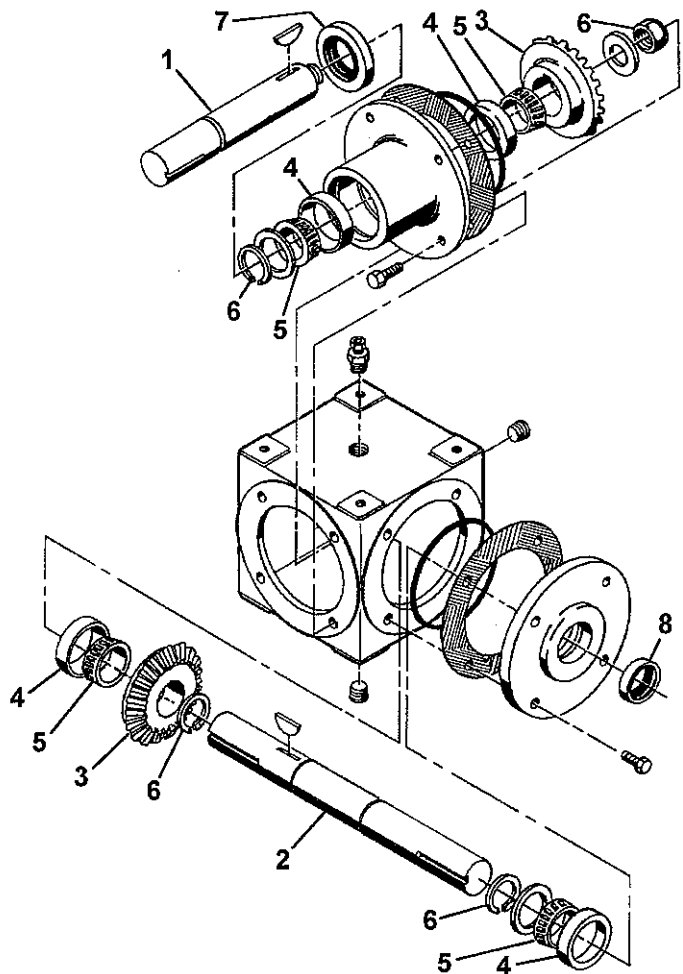
Item	Part	Qty	Description
17.	05-0770	1	Shim
18.	05-0763	1	Zerk Fitting
19.	07-0795	1	Key, Woodruff, Hard #11
20.	05-0744	1	Housing
21.	05-0752	2	Bearing Cup
22.	05-0753	2	Bearing Cone
23.	05-0767	1	Seal, Input
24.	05-0747	1	Shaft, Pinion
25.	05-0769	1	O-Ring
26.	05-0758	1	Stake Nut, Input
27.	05-0746	1	Cover
28.	05-0015	8	Cap Screw, 5/16-18x1/2
29.	05-0765	2	Gasket Cover
30.	05-0771	1	Shaft, Cross (for Right Hand)
31.	05-0832	1	Snap Ring
32.	05-0853	1	Spacer (for 05-0760 and 05-0771)

Gearboxes

Gearbox 05-1112
3:1 Ratio, Left Hand



Gearboxes 05-1113 (Left) & 05-1114 (Right)
1:1 Ratio



Item Part Qty Description

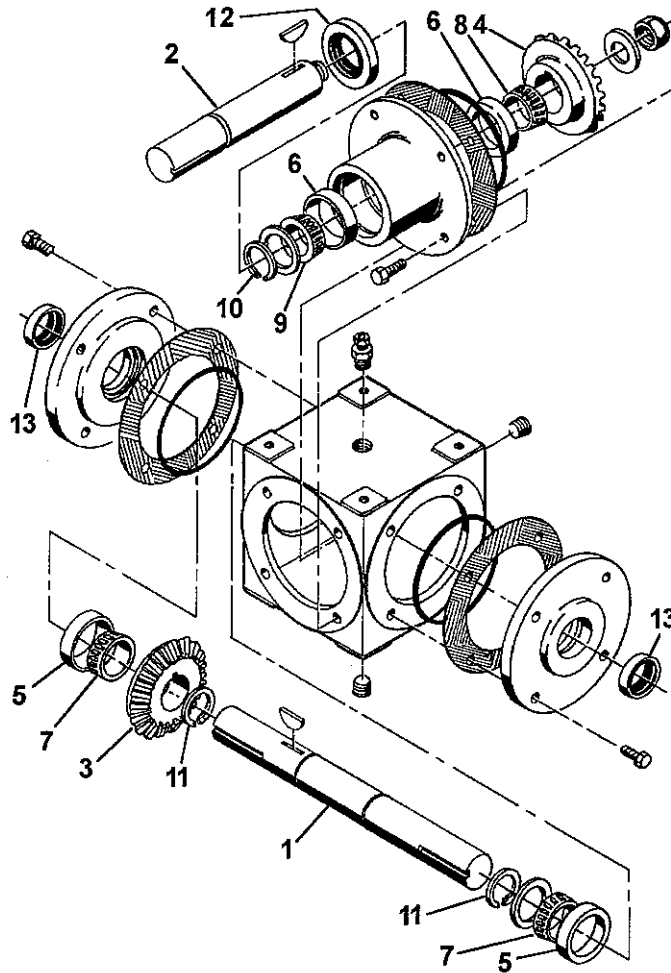
1.	05-1158	1	Shaft, Cross
2.	05-1159	1	Shaft, Pinion
3.	05-1160	1	Gear, St Bev, 42T
4.	05-1161	1	Gear, St Bev, 14T
5.	05-1162	2	Cup, Bearing
6.	05-1163	2	Cup, Bearing
7.	05-1164	2	Cone, Bearing
8.	05-1165	1	Cone, Bearing
9.	05-1166	1	Cone, Bearing
10.	05-1175	2	Ring, Snap
11.	05-1176	2	Ring, Snap
12.	05-1177	1	Seal, Front
13.	05-1178	2	Seal, Rear

Item Part Qty Description

1.	05-1137	1	Shaft, Pinion
2.	05-1157	1	Shaft, Cross (for 05-1113)
	05-1156	1	Shaft, Cross (for 05-1114)
3.	05-0503	2	Gear
4.	05-0506	4	Bearing, Race
5.	05-0507	4	Bearing
6.	05-1172	3	Ring, Snap
7.	05-1173	1	Seal
8.	05-1174	1	Seal

Gearboxes

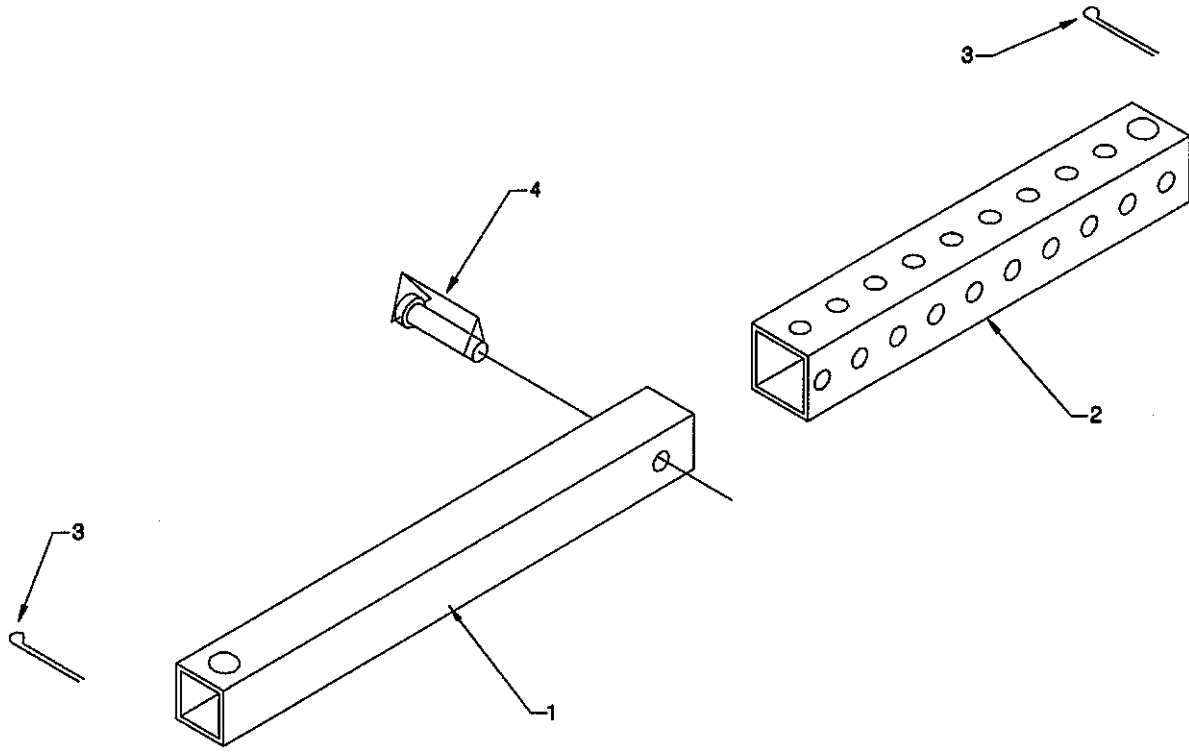
Gearbox 05-1145
3:1 Ratio, 3 Shaft



Item	Part	Qty	Description
1.	05-0776	1	Shaft, Cross
2.	05-0799	1	Shaft, Pinion
3.	05-0974	1	Gears, Set
4.	05-0974	1	Gears, Set
5.	05-1162	2	Cup, Bearing
6.	05-1163	2	Cup, Bearing
7.	05-1164	2	Cone, Bearing
8.	05-1165	1	Cone, Bearing
9.	05-1166	1	Cone, Bearing
10.	05-1175	2	Ring, Snap
11.	05-1176	2	Ring, Snap
12.	05-1177	1	Seal Front
13.	05-1178	2	Seal, Rear

Manual Angle Kit

Assembly 11-5819



Item	Part	Qty	Description
1.	13-4194	1	Tube, Link, In
2.	13-4193	1	Tube, Link, Out
3.	07-0210	2	Clip, Hairpin, 14 gauge x 1-3/4
4.	07-2105	1	Pin, Lock, 3/8 Square Bail

Option – Dirt Deflectors

Installation

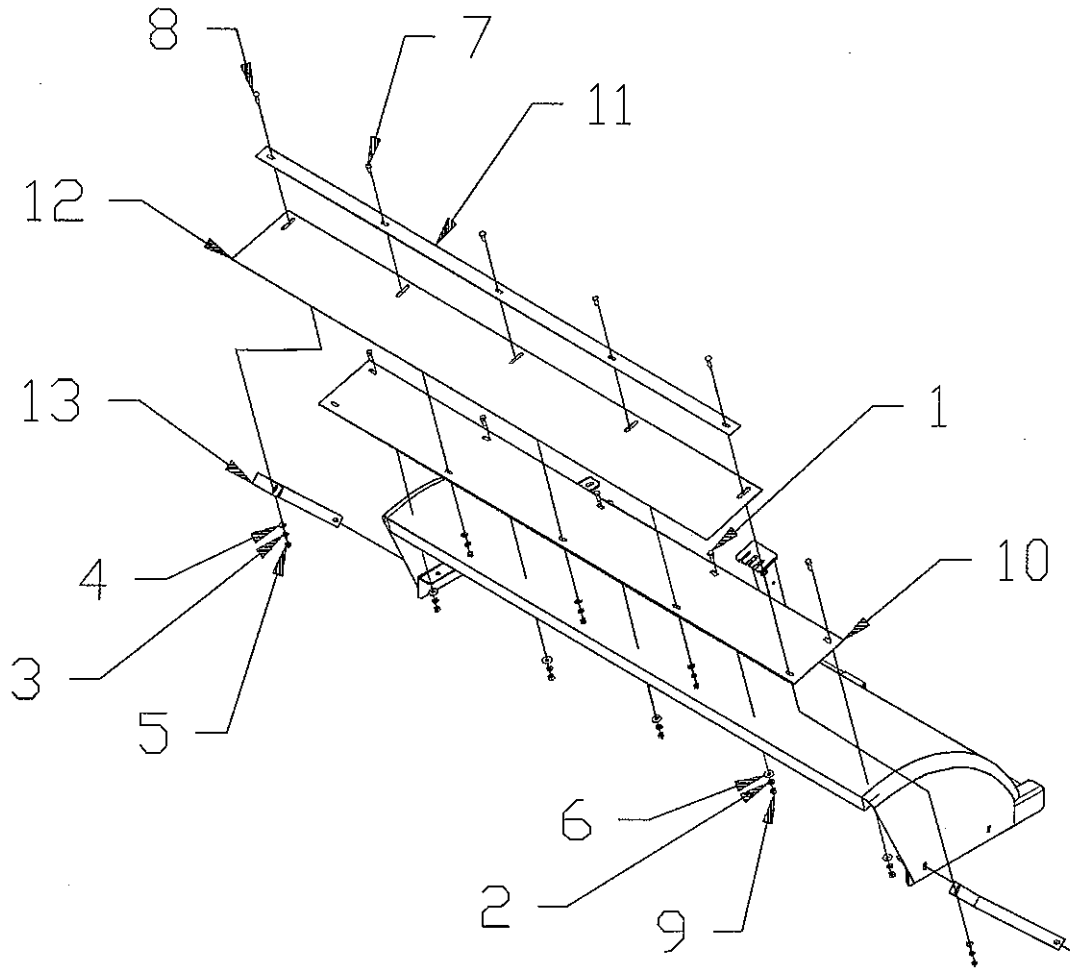
1. Clamp the extension plate to the front edge of the hood, centered from left to right. The top edge of the extension plate must be 2 in. (51 mm) from the bend in the hood.
 2. Transfer punch holes from the extension plate to the hood. Remove the extension plate and drill holes with a 13/32 in. bit.
 3. Place the rubber flap and then the retainer plate on the bottom edge of the extension plate. Insert 3, 5/16-18 x 1 in. carriage bolts in the middle 3 holes. Secure with lock washers and nuts.
 4. Attach the extension plate to the hood with 5, 3/8-16 x 1 in. cap screws, lock washers and nuts. Do not tighten the hardware.
 5. On one side of the sweeper, remove the front screw that secures the hood to the brush frame (figure 28). Secure the extension bracket to the brush frame with hardware just removed. Repeat on the other side of the sweeper.
 6. On both sides of the sweeper, attach extension brackets to outside holes in the extension plate and flap assembly. Use 2, 5/16-18 x 1 1/4 in. carriage bolts, lock washers and nuts.
 7. Tighten all hardware.
-



figure 28

Option – Dirt Deflectors

**For 6-ft (1.8-m) Sweepers
To order, ask for kit 11-5886.**



Item	Part	Qty	Description
1.	07-0018	5	Screw, Cap, 3/8-16 x 1
2.	07-1718	5	Washer, Lock, Split, 3/8
3.	07-3273	5	Washer, Lock, Split, 5/16
4.	07-3275	5	Washer, Flat, 5/16
5.	07-3278	5	Nut, Hex, 5/16-18
6.	07-3279	10	Washer, Flat, 3/8
7.	07-3438	3	Bolt, Carriage, 5/16-18 x 1
8.	07-3508	2	Bolt, Carriage, 5/16-18 x 1-1/4
9.	07-3654	5	Nut, Hex, 3/8-16
10.	13-8597	1	Plate, Hood Extension, 6 ft, M24/S24, Deflector
11.	13-8598	1	Plate, Retainer, Flap, 6 ft, M24/S24
12.	13-8599	1	Flap, 6 ft, M24/S24, Dirt Deflector
13.	13-8600	2	Bracket, Extension, Deflector, M24/S24

Option – Dirt Deflectors

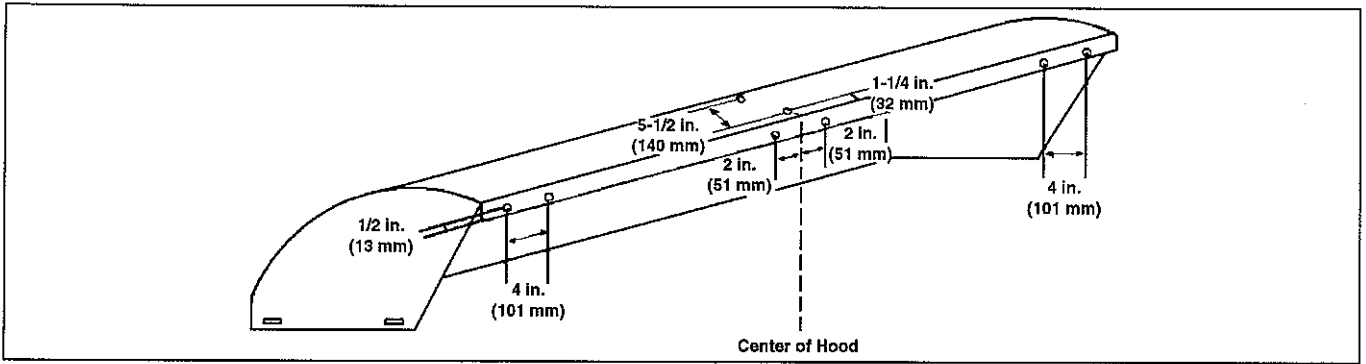


figure 29

Installation

1. Attach the single-slot side of each hinge to the underside of the deflector flap with a carriage bolt, flat washer, lock washer and nut. Center the bolts in the slots and tighten the hardware.
2. Drill eight 9/32 in. holes in the brush hood as shown in figure 29.
3. Fasten hinges to holes in the brush hood lip with six carriage bolts, flat washers, lock washers and nuts. Tighten the hardware.
4. Fasten the arm mounting and support plate to the brush hood. (The support plate goes inside the hood.) Use two carriage bolts, flat washers, lock washers and nuts.
5. Attach the arm to the arm mounting with a carriage bolt, washer, spring, bushing, washer and nut (figure 30).
6. Hook one end of the spring in the small slot on top of the adjustment arm; hook the other end of the spring over the gusset on the arm mounting (figure 31).

NOTE – Make sure the nut remains loose enough to allow the spring to put tension on the arm.

7. Hook the arm over the pin on the deflector.
8. Adjust the deflector for current sweeping conditions.
 - Use the highest position during snow removal. This helps prevent snow from building up inside the hood.
 - Place the deflector in the lowest position during dusty or wet conditions. This keeps swept material close to the brush.

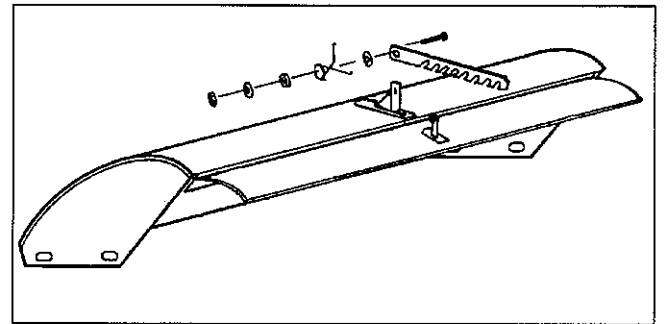


figure 30

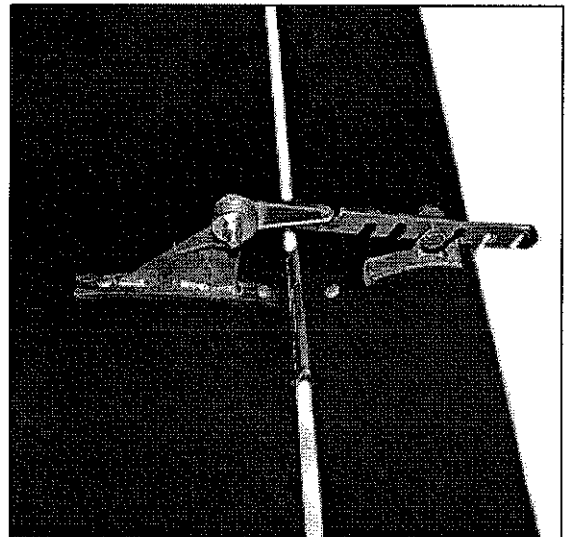
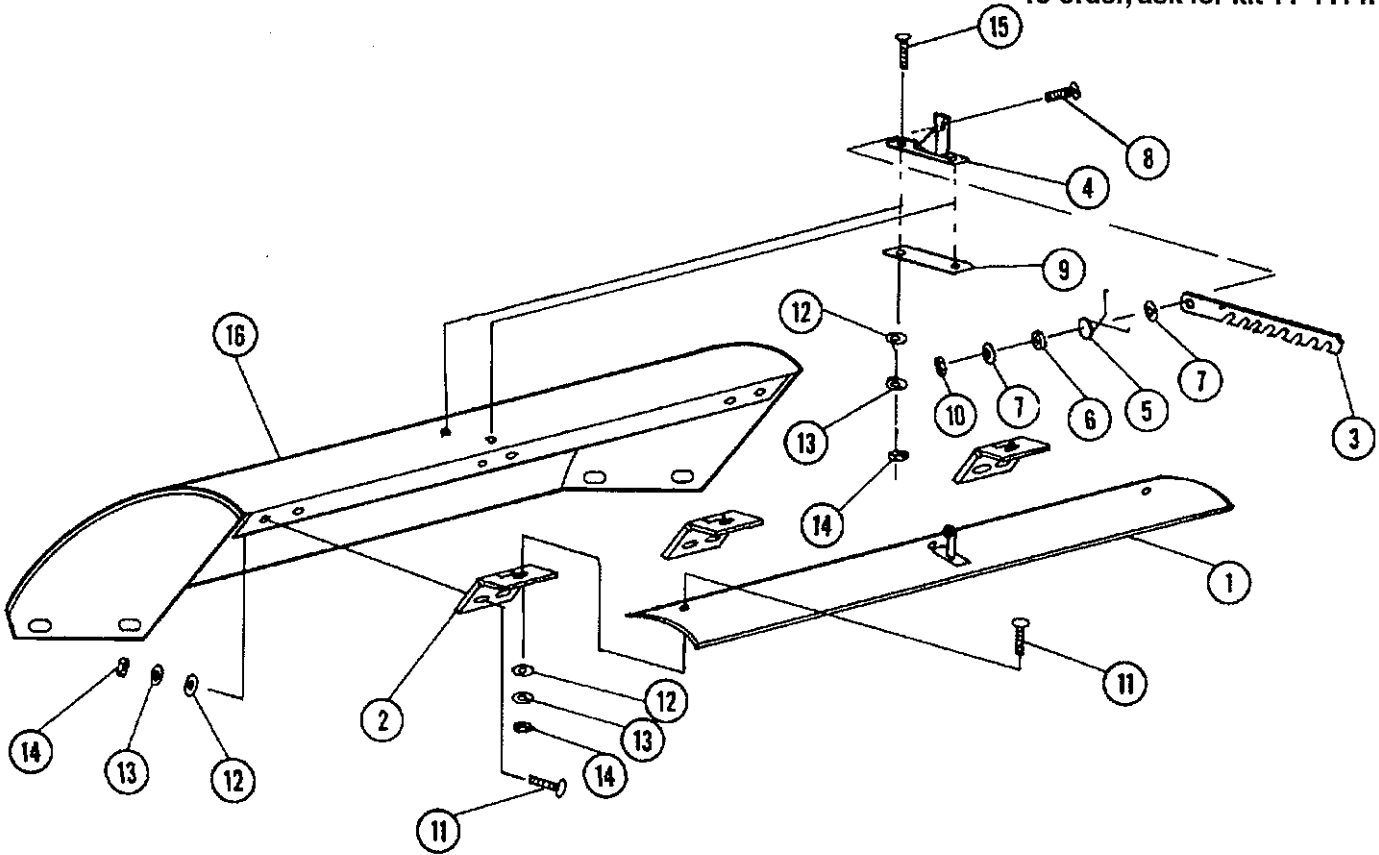


figure 31

Option – Dirt Deflectors

For 5-ft (1.5-m) Sweepers
To order, ask for kit 11-4414.



Item	Part	Qty	Description
1.	11-9612	1	Deflector, Hood
2.	11-9606	3	Hinge, Brush Head, Flap
3.	11-9608	1	Arm, Deflector, Lock
4.	11-9616	1	Arm, Mounting
5.	07-1408-1	1	Spring, Torsion, Hood
6.	11-9615	1	Bushing, 1-1/8 x 13/32 x 5/8
7.	07-1601	2	Washer, Flat, 13/32 x 1-1/2 x .051
8.	07-0111	1	Bolt, Carriage, 3/8 x 1-3/4
9.	11-9617	1	Plate, Support, Hood
10.	07-1249	1	Nut, Hex, 3/8-16
11.	07-0101	9	Bolt, Carriage, 1/4 x 3/4
12.	07-0152	11	Washer, Flat, 1/4
13.	07-0166	11	Washer, Lock, Split, 1/4
14.	07-0176	11	Nut, Hex, 1/4-20
15.	07-0102	2	Bolt, Carriage, 1/4-20 x 1

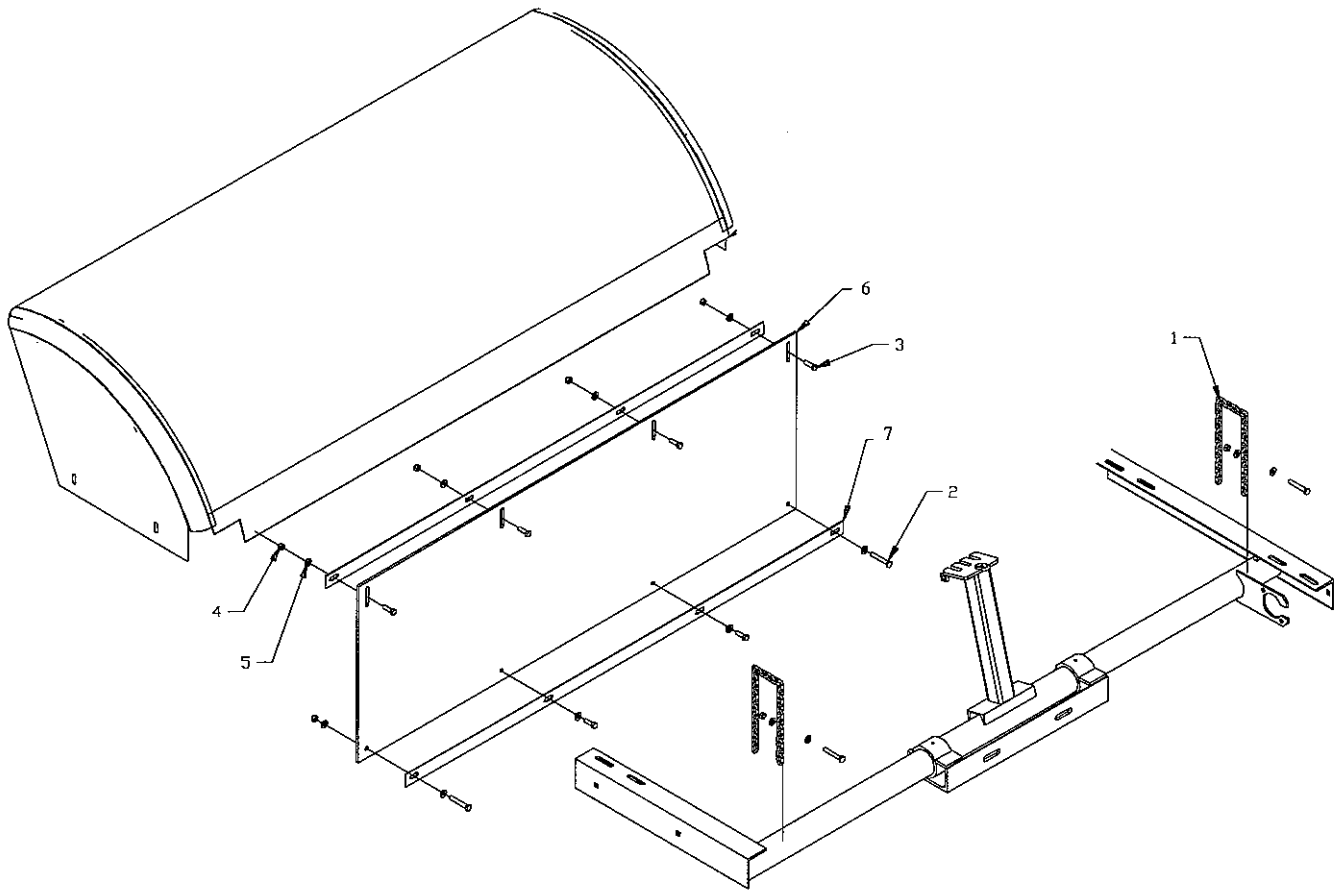
Option – Dirt Deflectors

Installation

1. Unpack parts and then compare them to the parts list. If you discover any shortages, contact SWEEPSTER or your dealer.
2. Clamp plate (13-7607) to rear of hood, 2 1/2 inches up from bottom and centered.
3. Transfer punch holes.
4. Remove plate and drill out holes using a 11/32 drill bit.
5. Bolt flap on hood. Place one plate (13-7607) between hood and rubber deflector (13-7606). Attach using (4) 5/16 x 1 screws, washers, and nuts.
6. Wrap chain around brush frame connecting one end of chain to the chain itself using (1) 5/16 x 2 screw, (2) washers, and (1) nut per chain.
7. Connect plate (13-7607) to bottom of rubber deflector using (2) 5/16 x 1 screws, (4) washers, and (2) nuts on the inner holes.
8. Attach bottom of chains to bottom outside holes of plate and deflector using (1) 5/16 x 2 screw, (2) washers, and (1) nut per side.

Option – Dirt Deflectors

For 5-ft (1.5-m) Sweepers
To order, ask for kit 11-5727.



Item	Part	Qty	Description
1.	07-0378	2	Chain, 3/16, 26 Links
2.	07-1698	4	Screw, Cap, 5/16-18 x 2
3.	07-1714	6	Screw, Cap, 5/16-18 x 1
4.	07-3270	10	Nut, Hex, Nylock, 5/16-18
5.	07-3275	16	Washer, Flat, 5/16
6.	13-7606	1	Flap, Deflector, RMRM 5
7.	13-7607	2	Plate, 14 Gauge x 1.25 x 52.0, W/Slots

Option – Hydraulic Angle Kit

Installation

Figure 32 shows the kit fully installed.

IMPORTANT – Avoid damage to the swing cylinder. Remove the manual angle T-pin before installing the hydraulic angle kit.

1. Remove the T-pin from the swing assembly by driving out the roll pin and lifting the pin.
2. Install adapter fittings on both cylinder ports.
3. Install the flow restrictor fitting (figure 32) on the rear adapter fitting. A restrictor fitting is necessary for proper operation and to prevent damage to the hydraulic swing kit.
4. Hook 1 hose to the restrictor fitting and 1 to the front adapter fitting.
5. Place the swing cylinder on pins welded to the swing assembly. Install a 3/4 in. flat washer and cotter pin on each swing assembly pin to secure the swing cylinder.
6. Connect hoses to the tractor hydraulics.

NOTE – Because of the numerous types of quick coupler fittings available, the user furnishes quick coupler fittings for this kit.

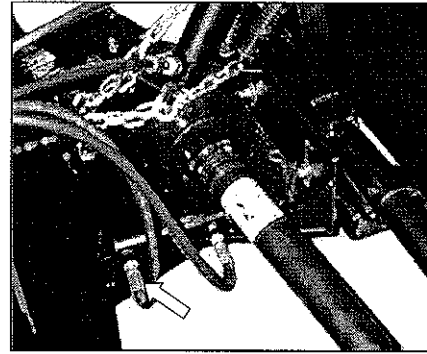
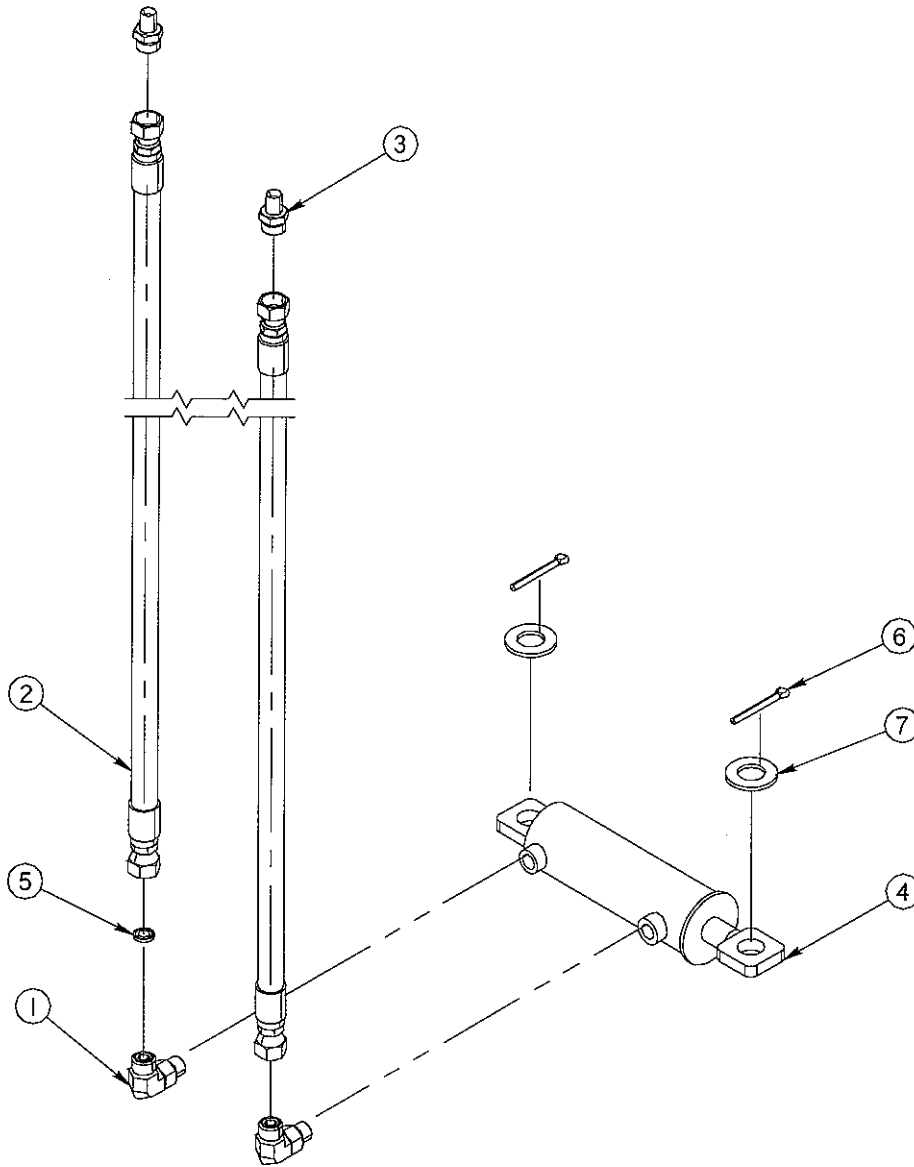


figure 32

OPTION — HYDRAULIC ANGLE KIT

To order, ask for kit 11-4191.



Ref	Part	Qty	Description
1.	03-2092	2	Fitting, Elbow, HP, 90°, 9/16MOR, 3/8MFS
2.	03-2093	2	Hose, 3/8 x 48, 1W, 3/8FFS, 3/8FFS
3.	03-2159	2	Fitting, Adapter, HP, 3/8MFS, 1/4MP
4.	03-3381	1	Cylinder, Hydraulic, 1 3/4 x 4 x 9, Polypac
5.	03-4668	1	Plate, Hydraulic, Orifice, .028, #6 O-ring Face Seal
6.	07-0206	2	Pin, Cotter, Gr2, 3/16 x 2
7.	07-1782	2	Washer, Flat, Gr2, 3/4, SAE, 1 1/2

Option – Hydraulic Lift Kits

Installation

Figure 33 shows the lift kit fully installed.

1. Remove the transport chain and/or electric lift, if installed.
2. Attach adapter fittings to both cylinder ports, and install elbow fittings on adapter fittings. Then, attach hoses to the elbow fittings and install quick coupler fittings on the hoses.
3. Place a shackle on the rod end of the cylinder; then, attach the shackle to the brush frame upright.
4. Place a shackle on the barrel end of the cylinder and attach the chain to the shackle. Then, attach the chain to the center slot in the drive mounting assembly upright.
5. Connect quick coupler fittings to the front remote hydraulic outlets on the tractor.
6. Completely collapse the cylinder to check for adjustment.
 - If the brush head assembly lifts 4 in. (101 mm) off the ground, the hydraulic lift is properly adjusted.
 - If the brush head assembly does not lift 4 in. (101 mm) off the ground, adjust the chain. To raise the brush head assembly more, shorten the chain length between the cylinder and upright. To lower the brush head assembly, add to the chain length.

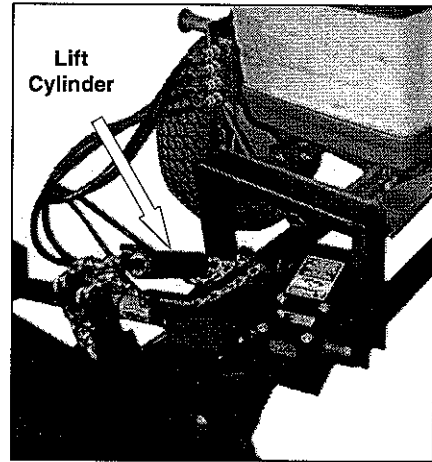
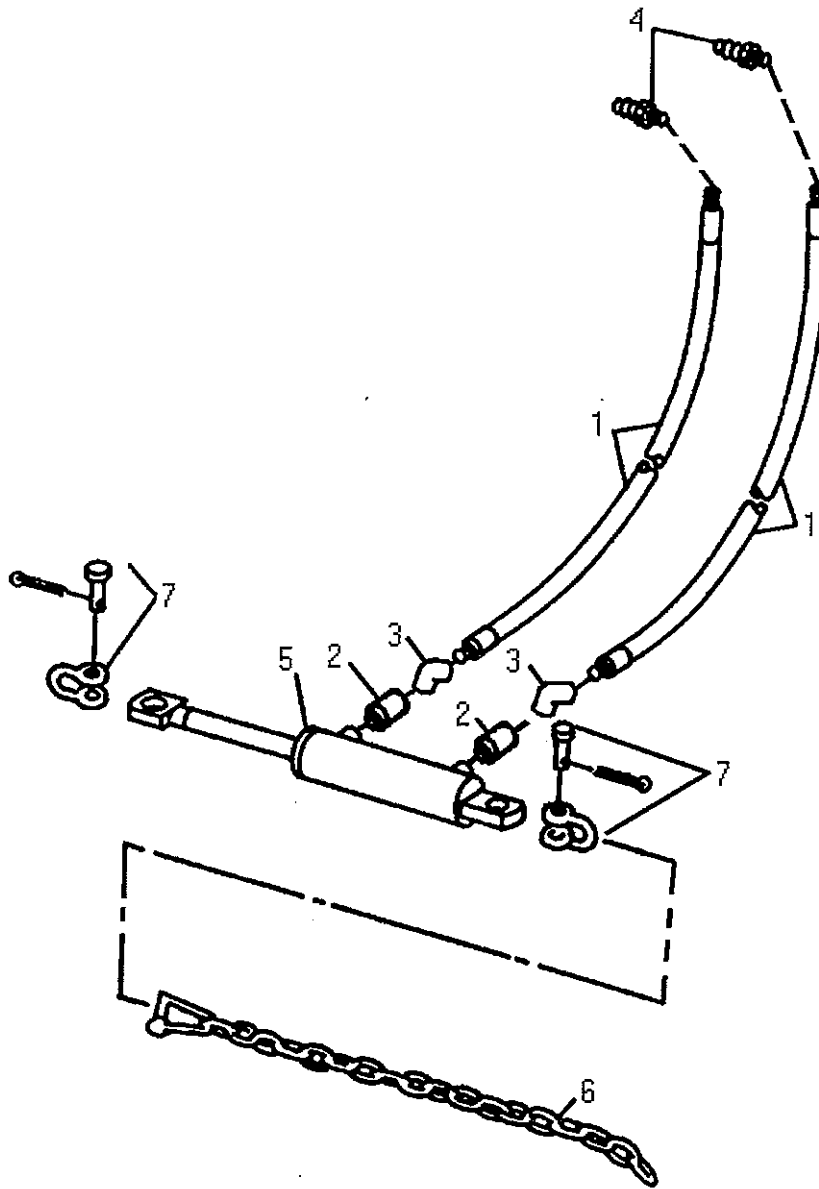


figure 33

Option – Hydraulic Lift Kits

To order, ask for kit 11-9250.



Item	Part	Qty	Description
1.	03-0011	2	Hose, 1/4 x 036, 1 Wire, 1/4 MP
2.	03-0898	2	Fitting, Adapter, HP, 9/16 MOR-1/4 FP
3.	03-1053	2	Fitting, Elbow, HP, 45, 1/4 MP-1/4 FP
4.	03-1423	2	Fitting, Quick Coupler, Male, 1/4 FP
5.	03-1851	1	Cylinder, 1-3/4 x 4 x 9, 9/16 O-Ring
6.	07-0387	1	Chain, 3/16, 26 Links
7.	07-1732	2	Shackle, Chain, 5/16, with Screw Pin

Option – Hydraulic Lift Kits

Installation

Figure 34 shows the lift system fully installed.

1. Remove the electric actuator and wiring if installed on the drive assembly.
2. Place the lift plate on the pin welded to the lift linkage. Clamp the plate. Center mark the hole. Remove the plate and drill a hole in the lift linkage with a $17/32$ in. bit.
3. Attach the lift plate to the lift linkage with a $1/2$ -13 x $1 1/4$ in. cap screw, flat washer, lock washer and nut. Slide a bushing onto the pin on the lift linkage and install a hairpin clip.
4. Place the rod end of the cylinder on the pin; secure with a hairpin clip.
5. Insert a bushing in the barrel end of the cylinder. Fasten the cylinder to the tab on the drive assembly using a pin and hairpin clip.
6. Install elbow fittings, hoses and quick coupler fittings on the cylinder.
7. Connect quick couplers to tractor remotes.
8. Lift and lower the sweeper to test cylinder functions.
9. Adjust the cable.
 - If the brush head assembly does not raise enough, decrease the amount of cable between the uprights.
 - If the brush head assembly raises too much, increase the amount of cable between the uprights.

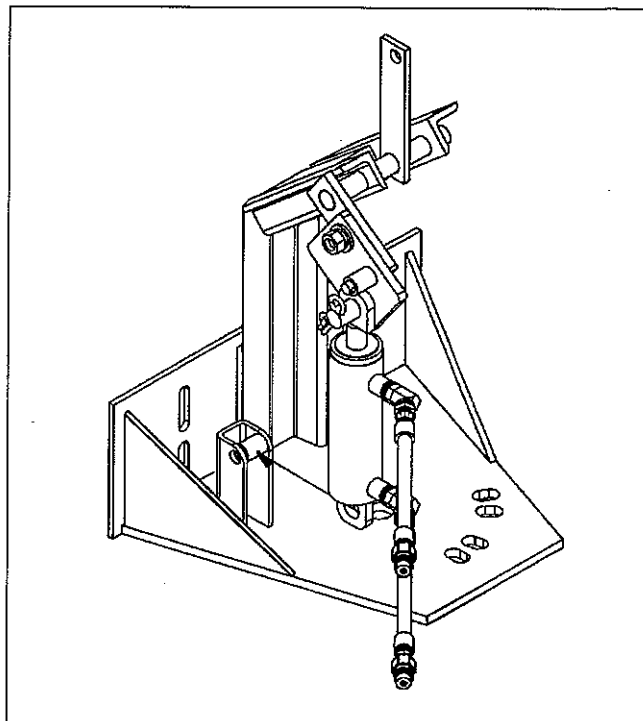
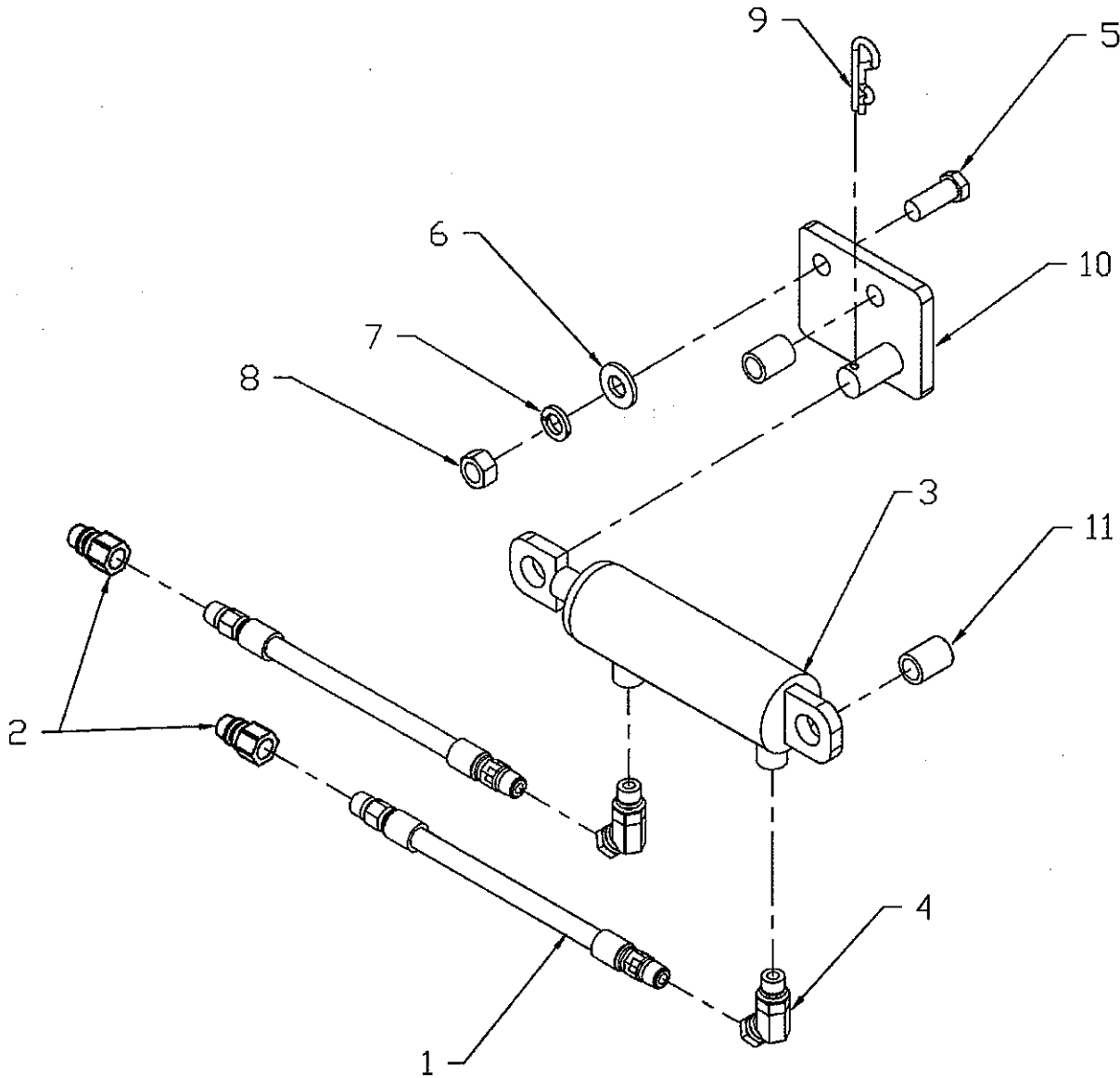


figure 34

Option – Hydraulic Lift Kits

For 11-17100 & 11-17101
To order, ask for kit 13-3149.



Item	Part	Qty	Description
1.	03-0011	2	Hose, 1/4 x 36, 1 Wire, 1/4 MP
2.	03-1423	2	Fitting, Quick Coupler, Male, 1/4 FP
3.	03-1851	1	Cylinder, 1-3/4 x 4 x 9, 9/16 O-Rings
4.	03-1884	2	Fitting, Elbow, HP, 45, 9/16 MOR-1/4 FPS
5.	07-0039	1	Screw, Cap, 1/2-13 x 1-1/4
6.	07-0156	1	Washer, Flat, 1/2
7.	07-0170	1	Washer, Lock, Split, 1/2
8.	07-1764	1	Nut, Hex, 1/2-13
9.	07-0210	1	Clip, Hairpin, 14 gauge x 1-3/4
10.	13-3132	1	Weldment, Lift, Hydraulic
11.	13-4168	1	Bushing, Spacer, Hydraulic Lift

Torque Values

Bolt Torque Specifications

Body Size Grade 5	Ft-lbs		Body Size Class 8.8	Ft-lbs
1/4 - 20	6 ± 1		M6 - 1.0	5 ± 1
- 28	7 ± 1		n/a	-
5/16 - 18	13 ± 3		n/a	-
- 24	14 ± 3		n/a	-
3/8 - 16	23 ± 5		M8 - 1.25	14 ± 3
- 24	26 ± 5		- 1.0	-
7/16 - 14	37 ± 8		M10 - 1.5	29 ± 6
- 20	41 ± 9		- 0.75	-
1/2 - 13	56 ± 11		M12 - 1.75	50 ± 10
- 20	63 ± 12		- 1.0	-
9/16 - 12	82 ± 14		M14 - 2.0	80 ± 14
- 18	91 ± 16		- 1.5	-
5/8 - 11	113 ± 20		M16 - 2.0	125 ± 22
- 18	127 ± 23		- 1.5	-
3/4 - 10	201 ± 26		n/a	-
- 16	223 ± 29		n/a	-
7/8 - 9	321 ± 41		M20 - 2.5	244 ± 31
- 14	355 ± 46		- 1.5	-
1 - 8	483 ± 62		M24 - 3.0	422 ± 54
- 12	528 ± 68		- 2.0	-

Body Size Grade 8	Ft-lbs		Body Size Class 10.9	Ft-lbs
1/4 - 20	9 ± 2		M6 - 1.0	8 ± 1
- 28	10 ± 2		n/a	-
5/16 - 18	18 ± 4		n/a	-
- 24	20 ± 4		n/a	-
3/8 - 16	32 ± 7		M8 - 1.25	20 ± 4
- 24	37 ± 8		- 1.0	-
7/16 - 14	52 ± 11		M10 - 1.5	40 ± 8
- 20	58 ± 12		- 0.75	-
1/2 - 13	80 ± 16		M12 - 1.75	69 ± 14
- 20	90 ± 18		- 1.0	-
9/16 - 12	115 ± 20		M14 - 2.0	110 ± 20
- 18	128 ± 23		- 1.5	-
5/8 - 11	159 ± 28		M16 - 2.0	173 ± 31
- 18	180 ± 32		- 1.5	-
3/4 - 10	282 ± 36		n/a	-
- 16	315 ± 41		n/a	-
7/8 - 9	454 ± 59		M20 - 2.5	337 ± 44
- 14	500 ± 65		- 1.5	-
1 - 8	681 ± 88		M24 - 3.0	583 ± 75
- 12	746 ± 97		- 2.0	-

Foot-pounds may be converted to Newton Meters by multiplying by 1.35582.

Foot-pounds may be converted to Inch-pounds by dividing by 12.

If the nut and screw are not the same grade, the lower grade will always be used.

NOTE – Nylock nuts are utilized when greater resistance to vibrating loose is required, and greater operating temperatures are not a factor. In addition, like lock nuts, nylock nuts have a safety feature that if the bolt does vibrate loose, the nut will remain on the screw. Install nylock nuts to the standard torque shown above.

Warranty Information

Warranty Registration
 Return form to: 1-734-996-9014



Warranty Registration Form and Delivery Inspection Report

IMPORTANT! Warranty Void if card is not returned with 10 days.
 All Applicable sections must be filled in.

This section to be filled out and signed by Dealer at time of delivery.

Warranty Registration

Customer's Name _____	Dealer's Name _____
Address _____	Address _____
City _____ State _____ Zip _____	City _____ State _____ Zip _____
Phone _____	CHECK ONE:
Loader / Tractor Model _____	Construction Use _____
Delivery Date _____	Agricultural Use _____
Model or Part # _____	Landscape Use _____
Serial # _____	Other: _____

Dealer Inspection (check items applicable)

- | | |
|---|---|
| <input type="checkbox"/> All Decals installed (see operator's manual) | <input type="checkbox"/> Review Operating and Safety Instructions |
| <input type="checkbox"/> Hydraulic fittings tight and free of leaks | <input type="checkbox"/> Guards and covers in place and secure |
| <input type="checkbox"/> Fasteners tight | <input type="checkbox"/> Does Product Function Properly |

I have thoroughly instructed the buyer on the above described equipment. This review included: The Operator's manual content, equipment care, adjustments, safe operation and applicable warranty policy.

Date _____ Dealer's Rep. signature _____

This section to be completed and signed by the customer

	1	2	3	4	5
	Excellent	Good	Average	Unsatisfactory	Poor
QUALITY ASSURANCE RATING					
Question:		Sweepster		Local Dealer	
Quality of Product: Appearance		_____			
Construction		_____			
Quality of Service		_____		_____	
Value (Priced Fairly)		_____		_____	
Does It perform as claimed		_____			

The above described equipment and Operator's Manual have been received by me and I have been thoroughly instructed as to care, adjustments, safe operation and applicable warranty policy.

Date: _____ Owner's signature _____

NOTE! Make one copy each for the dealer's and owner's records. Mail original to Sweepster.

Comments: _____

Sweepster, Inc.
 2800 N. Zeeb Rd.
 Dexter, MI 48130-9499
 800-456-7100
 fax 734-996-9014



SWEEPSTER ATTACHMENTS LLC

Limited 12 Month Warranty

Thank you for purchasing a Sweepster Attachments, LLC. product. Warranty protection is valid only when this Warranty Registration is completed and signed by the customer and dealer, and mailed to Sweepster Attachments, LLC. I hereby acknowledge that I have received a copy of the owners Limited Warranty and I accept the terms therein.

For a period of 12 months from the date of delivery of product to the original user, Sweepster Attachments, LLC. warrants each product to be free from manufacturing defects, subject to the limitations contained in this policy.

This warranty does not apply to defect caused, in whole or in part, by unreasonable use while in the possession of the user; including, but not limited to: failure to properly set up product; failure to provide reasonable and necessary maintenance; normal wear; routine tune ups or adjustments; improper handling or accidents; operation at speed or load conditions contrary to published specification; improper or insufficient lubrication; improper storage. This warranty is also not a guarantee that performance of each product will meet the expectations of the purchaser.

Sweepster Attachments, LLC. shall not be liable for consequential damages of any kind, including, but not limited to: consequential labor costs or transportation charges in connection with the replacement or repair of defective parts; lost time or expense which may have accrued because of said defects. In no event shall Sweepster Attachments, LLC.'s total liability hereunder exceed the product purchase price.

Sweepster Attachments, LLC. makes no warranty with respect to trade accessories or any component or accessory of the product which was not manufactured by Sweepster Attachments, LLC. including any purchased components of any kind. These are subject to the warranties of their respective manufacturers. The warranty will be considered void if the product or any part of the product is modified or repaired in any way not expressly authorized by Sweepster Attachments, LLC. or if closed components are disassembled prior to return. Closed components include, but are not limited to: gearboxes, hydraulic pumps, motors, cylinders, and actuators.

Our obligation under the warranty is expressly limited, at our option, to the replacement or repair at Sweepster Attachments, LLC or at a service facility designated by us, or such part or parts as inspection shall disclose to have been defective. We are not responsible for unauthorized repairs or replacements. Any implied or statutory warranties, including any warranty of merchantability or fitness for a particular purpose, are expressly limited to the duration of this written warranty. We make no other express or implied warranty, nor is anyone authorized to make any on our behalf. This warranty cannot be extended, broadened, or changed except in writing by an authorized officer of Sweepster Attachments, LLC.

Glossary – Terms & Abbreviations

brush head assembly – assembly that includes the core, hood and brush frame.

brush pattern – area of dirt removed from sweeping surface; with a properly adjusted sweeper, the pattern is the same width for the entire length.

caution – indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CV – constant velocity; usually refers to a drive shaft.

core – weldment that holds brush sections.

dirt deflector – kit made of metal and/or rubber parts designed to direct debris away from the operator.

drive assembly – portion of the sweeper that includes the gearbox; also allows the sweeper to angle.

hood – brush shield.

hydraulic angle kit – means of swinging the brush head assembly hydraulically.

important – used for instructions when machine damage may be involved.

in. – inches.

kph – kilometers per hour.

lb – pounds.

left-hand – side that is on the left when facing the normal forward direction of travel of the machine.

lift cylinder – means of raising the brush head assembly hydraulically.

mm – millimeters.

mph – miles per hour.

manual angle kit – means of swinging the brush head assembly mechanically.

mounting assembly – portion of the sweeper that attaches to the prime mover; designed specifically for each prime mover.

note – indicates supplementary information.

psi – pounds per square inch.

PTO – power take off; shaft on the prime mover used to drive attachments.

prime mover – refers to the tractor, truck, loader or other vehicle to which a sweeper is attached.

qty – quantity.

rpm – revolutions per minute.

retainer – removable plate or set of plates that keeps sections on the core.

right-hand – side that is on the right when facing the normal forward direction of travel of the machine.

section – single brush wafer.

section set – replacement brush wafers.

spring-chain assembly – assembly that helps keep the sweeper in proper adjustment yet allows it to pivot up and down.

stands – devices designed to keep the brush off the ground when the sweeper is dismounted.

swing cylinder – means of angling the brush head assembly hydraulically.

transport chain – chain that supports the weight of the brush head assembly during transport between work sites and during adjustment of the spring-chain assemblies.

warning – indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

windrow – pile of debris.

zerk – grease fitting.

Index

A

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