

SMITHCO

Wayne, Pennsylvania 19087

PARTS MANUAL

**G-STAR
MODEL # 9430**

**For Customer Service
Call: (888) 422-5173**

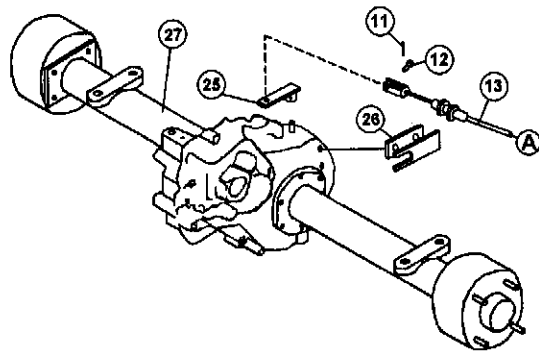
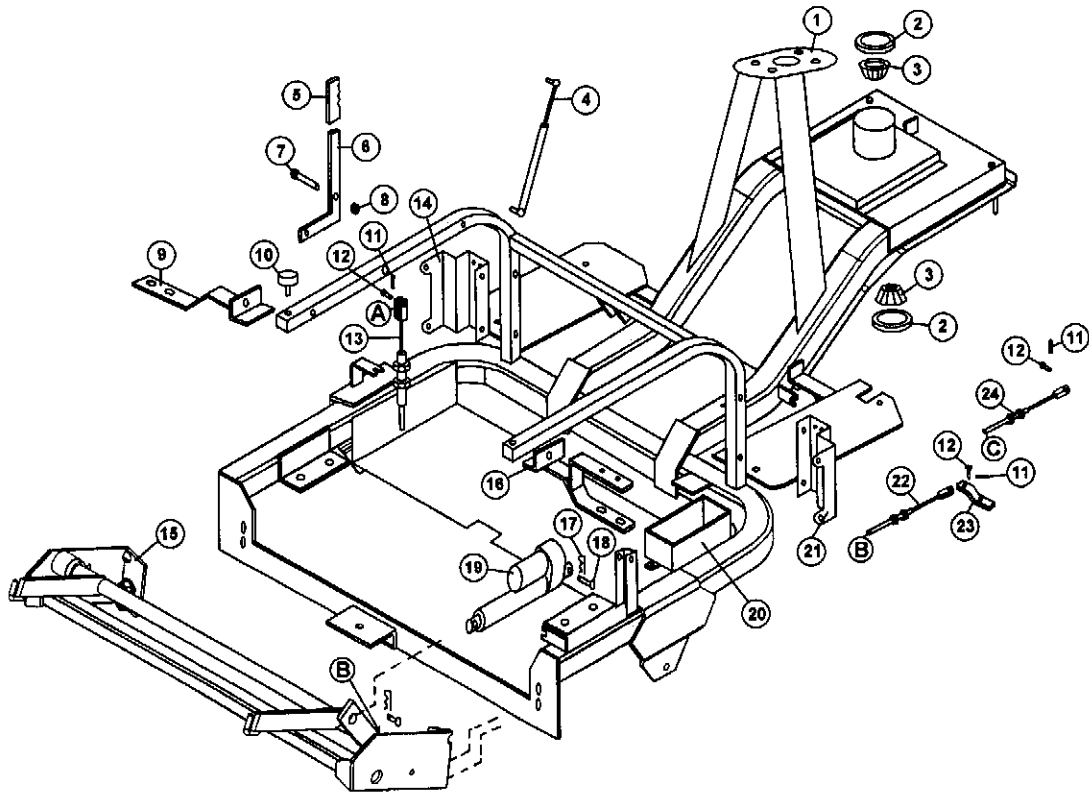
Starting Serial # G343

June, 2005

TABLE OF CONTENTS

| <u>TITLE</u> | <u>PAGE</u> |
|--|-------------|
| Parts | |
| Main Frame..... | 3-4 |
| Drive Assembly..... | 5-6 |
| Steering Assembly..... | 7-8 |
| Brake Linkage..... | 9-10 |
| Body..... | 11-12 |
| Wiring..... | 13-14 |
| Accessories | |
| 13-298 Fan Rake..... | 15-16 |
| 13-438 Rake with Finishing Blades..... | 17-19 |
| 13-606 Rake with Lexan Blades..... | 20-22 |
| 26-007 Professional Infield Finisher..... | 23-24 |
| 26-008 Flex Action Field Finisher..... | 25-28 |
| 42-008 Sand Cultivator..... | 29-30 |
| 42-010 Construction Leveling Blade..... | 31-32 |
| 42-011 Sand Plow..... | 33-35 |
| 42-026 Tournament Rake..... | 36-38 |
| 42-128 Tournament Rake..... | 39-41 |
| 42-178 Infield Scarifier with Vertical Blades..... | 42-44 |
| 42-179 Infield Scarifier with Chisel Blades..... | 45-48 |
| 42-185 Drag Mat Kit..... | 49-50 |
| 42-401 Manual Lift..... | 51-53 |

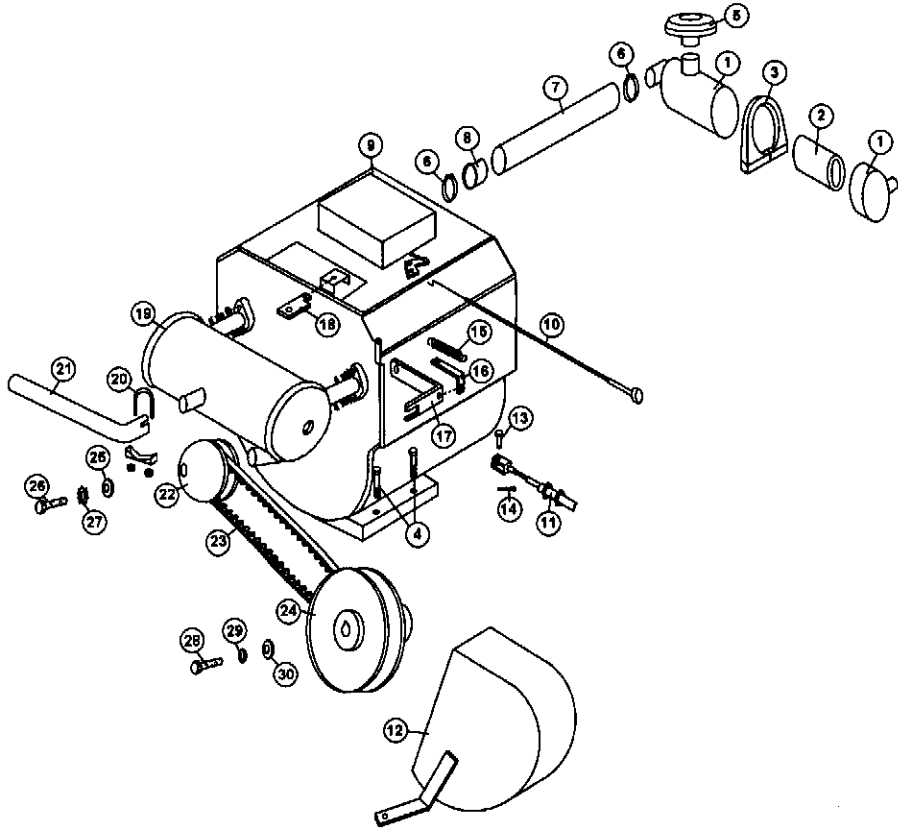
9430 MAIN FRAME DRAWING



9430 MAIN FRAME PARTS LIST

| REF.# | PART# | DESCRIPTION | QTY. |
|-------|-----------|-----------------------------|------|
| 1 | 943-101 | Main Frame | 1 |
| 2 | 932-022 | Seal | 2 |
| 3 | 932-023 | Bearing | 2 |
| 4 | 41-128 | Gas Shock | 1 |
| 5 | 2550 | Reverse Handle Grip | 1 |
| 6 | 943-102 | Shift Lever | 1 |
| 7 | 400-029 | ½" Bolt 3" | 1 |
| 8 | 400-112 | ½" Locknut | 1 |
| 9 | 943-123 | Oil Tank Bracket Rear Left | 1 |
| 10 | 730-038 | Rubber Mount | 2 |
| 11 | 720-079 | 3/32" x ¾" Cotter Pin | 4 |
| 12 | 720-078 | 5/16" x 1" Clevis Pin | 4 |
| 13 | 832-503 | Speed Boss Cable | 1 |
| 14 | 943-113 | Left Oil Tank Bracket | 1 |
| 15 | 943-140 | Lift Assembly | 1 |
| 16 | 943-122 | Gas Tank Bracket Rear Right | 1 |
| 17 | 400-307 | Hitch Pin #16 | 2 |
| 18 | 40-396 | Clevis Pin ½" x 2" | 2 |
| 19 | 706-075 | Actuator | 1 |
| 20 | 942-040 | Battery Box | 1 |
| 21 | 943-112 | Front Gas Tank Bracket | 1 |
| 22 | 832-503 | Speed Boss Cable | 1 |
| 23 | 732-118 | Speed Boss Lever | 1 |
| 24 | 943-135-1 | 72" Accelerator Cable | 1 |
| 25 | 932-028 | Axle Shift Arm | 1 |
| 26 | 932-029-1 | Shift Cable Support | 1 |
| 27 | 943-103 | Axle Assembly | 1 |

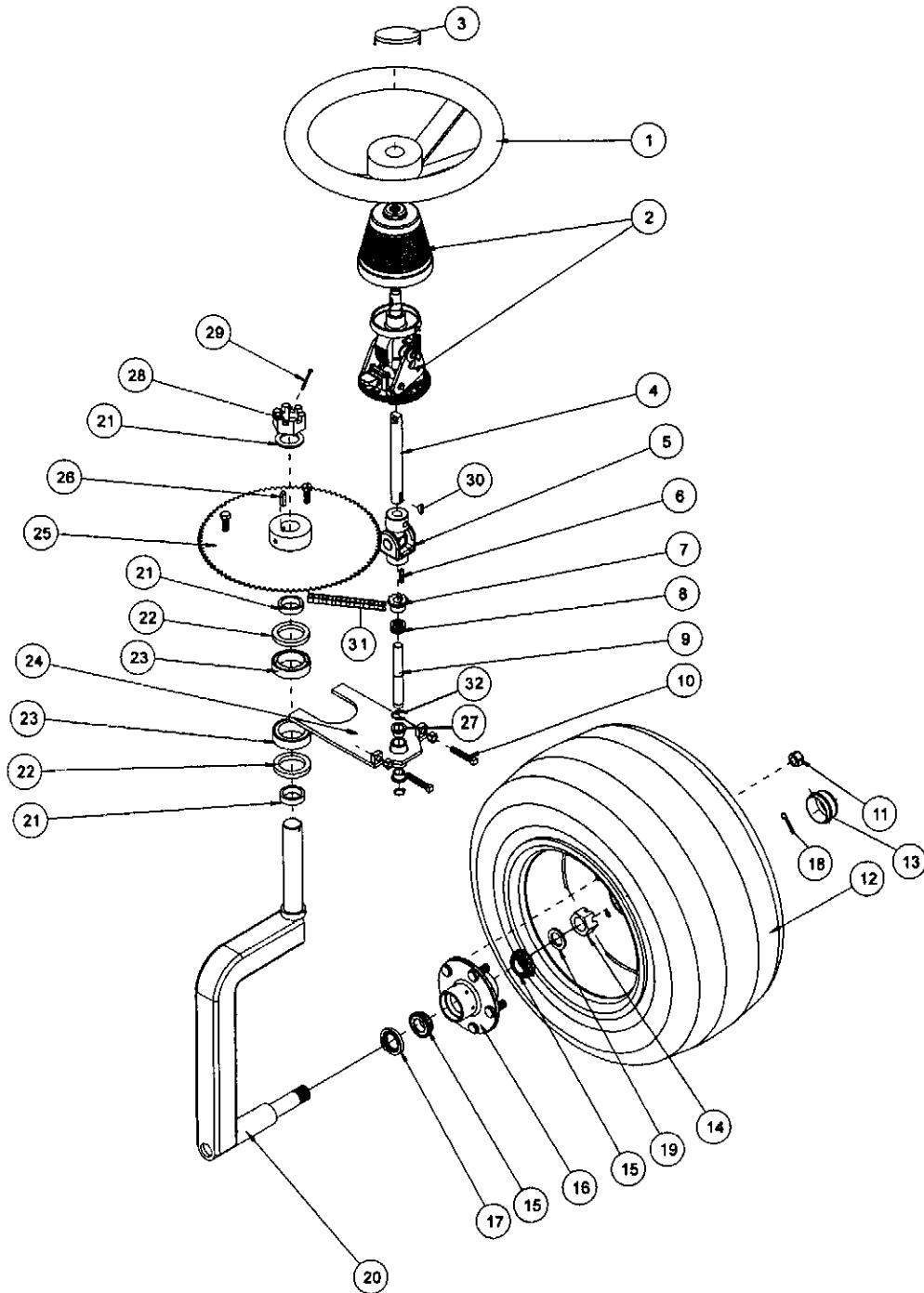
9430 ENGINE DRIVE ASSEMBLY DRAWING



9430 ENGINE DRIVE ASSEMBLY PARTS LIST

| REF.# | PART# | DESCRIPTION | QTY. |
|-------|-----------|----------------------------|------|
| 1 | 943-118 | Air Cleaner | 1 |
| 2 | 943-118-1 | Air Filter | 1 |
| 3 | 943-119 | Mounting Ring | 1 |
| 4 | 400-005 | 5/16" x 1 3/4" Bolt | 4 |
| 5 | 943-120 | Intake Cap | 1 |
| 6 | 709-308 | 1 1/2" Hose Clamp | 2 |
| 7 | 943-121 | Air Cleaner Hose | 1 |
| 8 | 943-125 | Hose Insert | 1 |
| 9 | 943-100 | 16 HP Vanguard Twin Engine | 1 |
| 10 | 943-126 | Choke Cable | 1 |
| 11 | 943-135-1 | 72" Accelerator Cable | 1 |
| 12 | 943-136 | Belt Guard | 1 |
| 13 | 720-078 | 5/16" x 1" Clevis Pin | 1 |
| 14 | 720-079 | 3/32" x 3/4" Cotter Pin | 1 |
| 15 | 1071 | Idler Tension Spring | 1 |
| 16 | 943-144 | Throttle Return Bracket | 1 |
| 17 | 943-143 | Throttle Cable Bracket | 1 |
| 18 | 943-142 | Throttle Bracket | 1 |
| 19 | 943-115 | Muffler | 1 |
| 20 | 943-146 | 1 1/8" Muffler Clamp | 1 |
| 21 | 943-145 | Tail Pipe | 1 |
| 22 | 932-005 | Drive Clutch | 1 |
| 23 | 932-008 | Belt | 1 |
| 24 | 932-006 | Driven Clutch | 1 |
| 25 | 400-310 | 7/16" Flat Washer | 1 |
| 26 | 400-330 | 3/8" x 2 1/2" Bolt | 1 |
| 27 | 400-268 | 3/8" Lockwasher | 1 |
| 28 | 400-324 | 1/2" x 2 1/2" Bolt | 1 |
| 29 | 400-210 | 1/2" Lockwasher | 1 |
| 30 | 400-204 | 1/2" Flat Washer | 1 |

9430 STEERING ASSEMBLY DRAWING

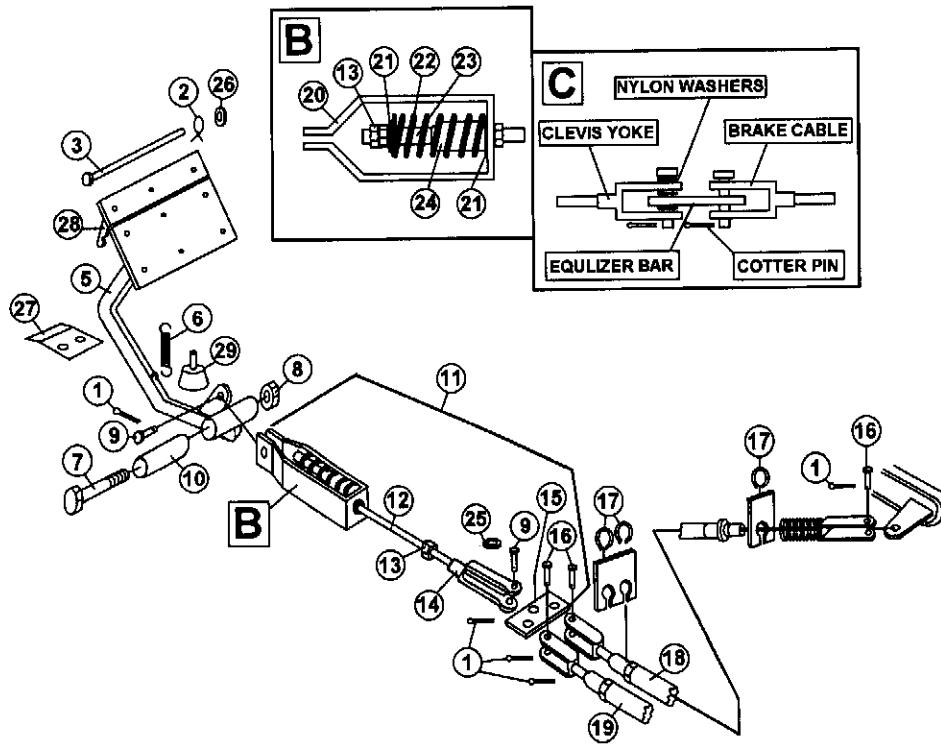


9430 STEERING ASSEMBLY PARTS LIST

| REF.# | PART# | DESCRIPTION | QTY. |
|-------|-----------|----------------------------------|------|
| 1 | 720-046 | Steering Wheel | 1 |
| 2 | 832-028 | Tilt Steering | 1 |
| 3 | 720-046-1 | Steering Wheel Cap | 1 |
| 4 | 943-021 | Upper Steering Shaft | 1 |
| 5 | 932-035 | U-Joint | 1 |
| 6 | 1088 | 3/16" x 1" Key | 2 |
| 7 | 932-030 | Steering Sprocket 10T | 1 |
| 8 | 40-166 | Machine Bushing 5/8 x 14GA | 3 |
| 9 | 932-034 | Bottom Steering Shaft | 1 |
| 10 | 932-067 | Adjuster Bolt | 2 |
| 11 | 1187 | Lug Nut | 4 |
| 12 | 932-020 | Wheel & Tire | 1 |
| 13 | 2024 | Grease Cap | 1 |
| 14 | 709-126 | Spindle Nut | 1 |
| 15 | 2028 | Tapered Bearing | 2 |
| 16 | 2027-1 | Hub Only | 1 |
| 17 | 709-171 | Seal | 1 |
| 18 | 720-043 | Cotter Pin 1/8" x 1 1/2" | 1 |
| 19 | 2013 | Spindle Washer | 1 |
| 20 | 932-021 | Front Fork | 1 |
| 21 | 932-024 | Spacer | 3 |
| 22 | 932-022 | Seal | 2 |
| 23 | 932-023 | Bearing | 2 |
| 24 | 932-043 | Chain Adjuster Bracket | 1 |
| 25 | 932-031 | Steering Sprocket 96T | 1 |
| 26 | 1517 | 1/4" Key | 1 |
| 27 | 932-051 | Oilite Bushing 5/8" ID x 3/4" OD | 2 |
| 28 | 932-042 | Thick Slotted Hex Nut 1 1/4 - 12 | 1 |
| 29 | 720-043 | Cotter Pin 1/8" x 1 1/2" | 1 |
| 30 | 740-023 | Woodruff Key 3/16" x 3/4" | 1 |
| 31 | 932-032 | Steering Chain #35 x 100 Pitch | 1 |
| 32 | 932-050 | Retainer Ring 9/16 External | 2 |

9430 BRAKE LINKAGE DRAWING

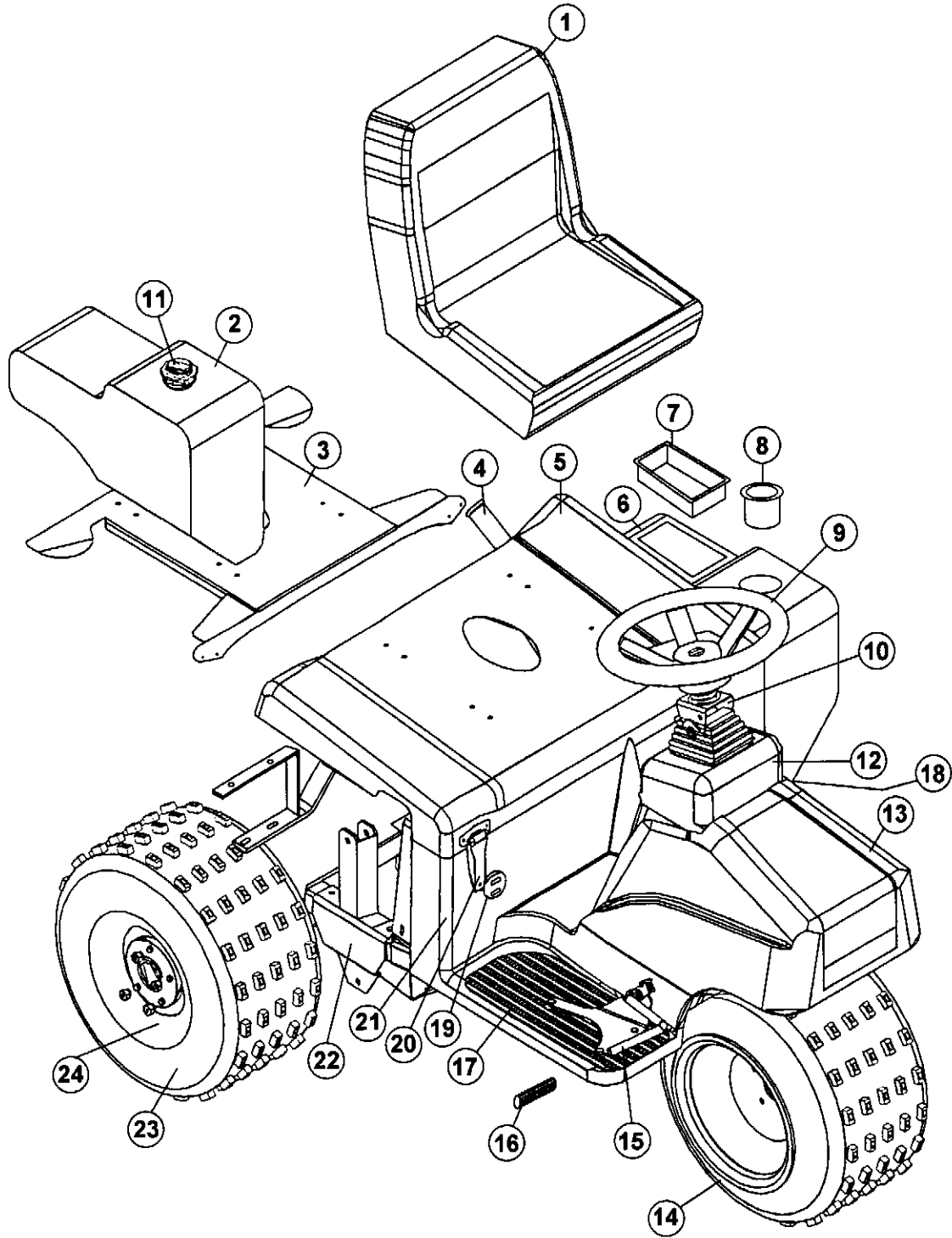
BRAKE LINKAGE



9430 BRAKE LINKAGE PARTS LIST

| REF.# | PART# | DESCRIPTION | QTY. |
|-------|----------|---------------------------------------|------|
| 1 | 720-079 | Cotter Pin 3/32" x 3/4" | 5 |
| 2 | 732-019 | Hill Brake Spring | 2 |
| 3 | 732-021 | Pin | 1 |
| 5 | 732-046 | Brake Pedal Assy. Less Pads | 1 |
| 6 | 40-199 | Idler Spring | 1 |
| 7 | 400-029 | 1/2" - 13 x 3" Bolt | 1 |
| 8 | 400-112 | 1/2" - 13 Locknut 2-Way | 1 |
| 9 | 720-078 | Clevis Pin 5/16" x 1" | 2 |
| 10 | 720-009 | Bronze Bushing 1/2" ID x 11/16 OD x 2 | 1 |
| 11 | 943-020 | Compensating Link Assembly | 1 |
| 12 | 943-139 | Brake Rod | 1 |
| 13 | 400-118 | 5/16" Hex Nut x 24 Thread | 3 |
| 14 | 11-101-1 | Linkage Yoke 24 Thread | 1 |
| 15 | 732-052 | Equalizer Bar | 1 |
| 16 | 720-087 | Clevis Pin 5/16" x 3/4" | 3 |
| 17 | 730-240 | Brake Cable Retaining Clip 1/2" | 4 |
| 18 | 730-028 | Brake Cable Right (Long) | 1 |
| 19 | 730-029 | Brake Cable Left (Short) | 1 |
| 20 | 732-048 | Brake Yoke Housing | 1 |
| 21 | 400-202 | 5/16" Flat Washer | 2 |
| 22 | 732-050 | Compression Spring | 1 |
| 23 | 732-049 | Brake Tube | 1 |
| 24 | 732-051 | Nylon Bushing | 1 |
| 25 | 732-053 | Nylon Washer | 3 |
| 26 | 732-022 | Push Nut | 1 |
| 27 | 932-017 | Latch Bracket | 1 |
| 28 | 943-147 | Upper Brake Pad | 1 |
| 29 | 732-008 | Rubber Stud Bumper | 1 |

9430 BODY ASSEMBLY DRAWING

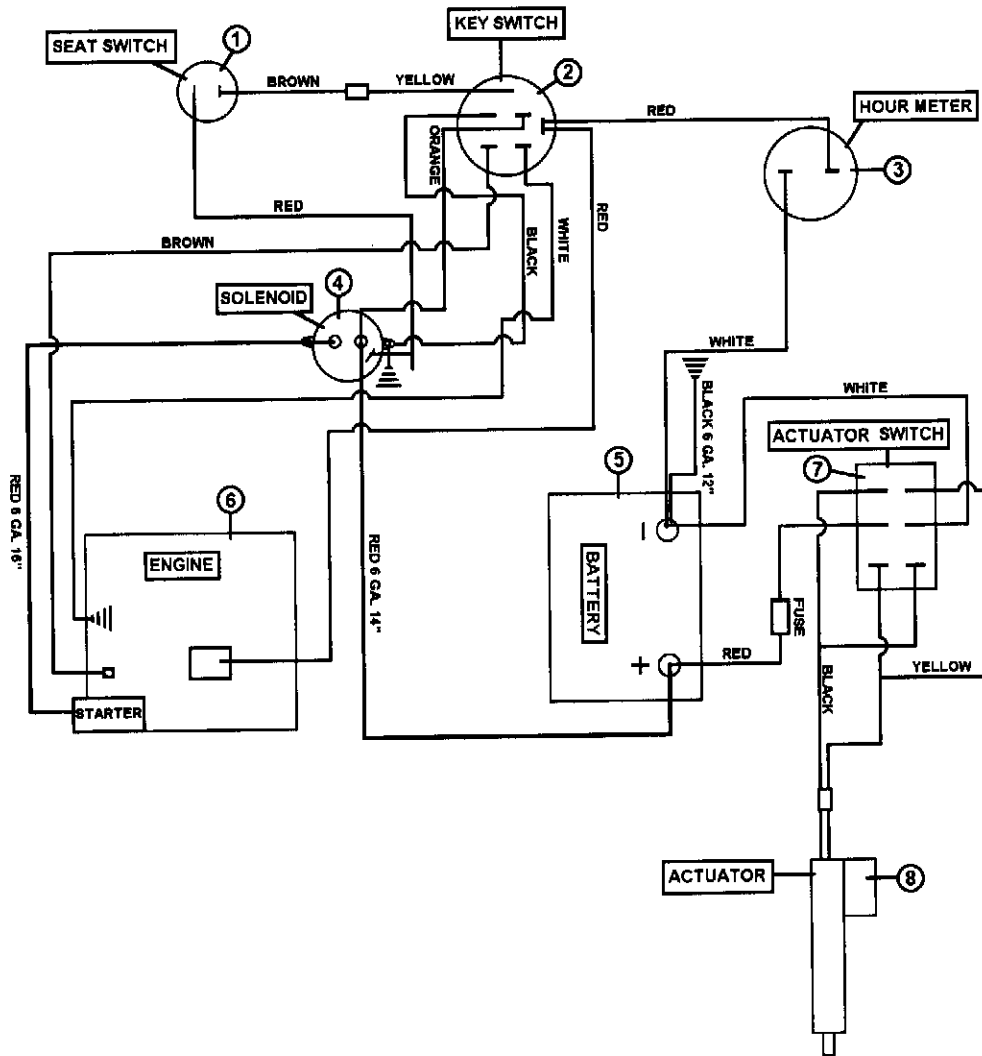


9430 BODY ASSEMBLY PARTS LIST

| REF.# | PART# | DESCRIPTION | QTY. |
|-------|-----------|-------------------------|------|
| 1 | 832-123 | Low-Back "SMITHCO" Seat | 1 |
| 2 | 943-110 | Gas Tank | 1 |
| 3 | 943-105 | Seat Plate | 1 |
| 4 | 943-132 | Rake Holder | 1 |
| 5 | 943-109 | Rear Cover | 1 |
| 6 | 943-111 | Tool Box | 1 |
| 7 | 943-117 | Tray | 1 |
| 8 | 943-116 | Cup Holder | 1 |
| 9 | 730-046 | Steering Wheel | 1 |
| 10 | 832-028 | Tilt Steering & Boot | 1 |
| 11 | 943-113 | Gas Cap | 1 |
| 12 | 943-108 | Console | 1 |
| 13 | 943-107 | Nose Cone | 1 |
| 14 | 932-020 | Wheel & Tire | 3 |
| 15 | 943-124 | Foot Pedal Assembly | 1 |
| 16 | 943-127 | Accelerator Pedal Pad | 1 |
| 17 | 943-128 | Right Floor Mat | 1 |
| 18 | 943-129 | Left Floor Mat | 1 |
| 19 | 720-084 | Hour Meter | 1 |
| 20 | 730-058 | Hinge | 2 |
| 21 | 943-106 | Floorboard | 1 |
| 22 | 943-101 | Frame | 1 |
| 23 | 932-020-1 | Tire | 3 |
| 24 | 2026 | Wheel | 3 |

9430 WIRING DIAGRAM

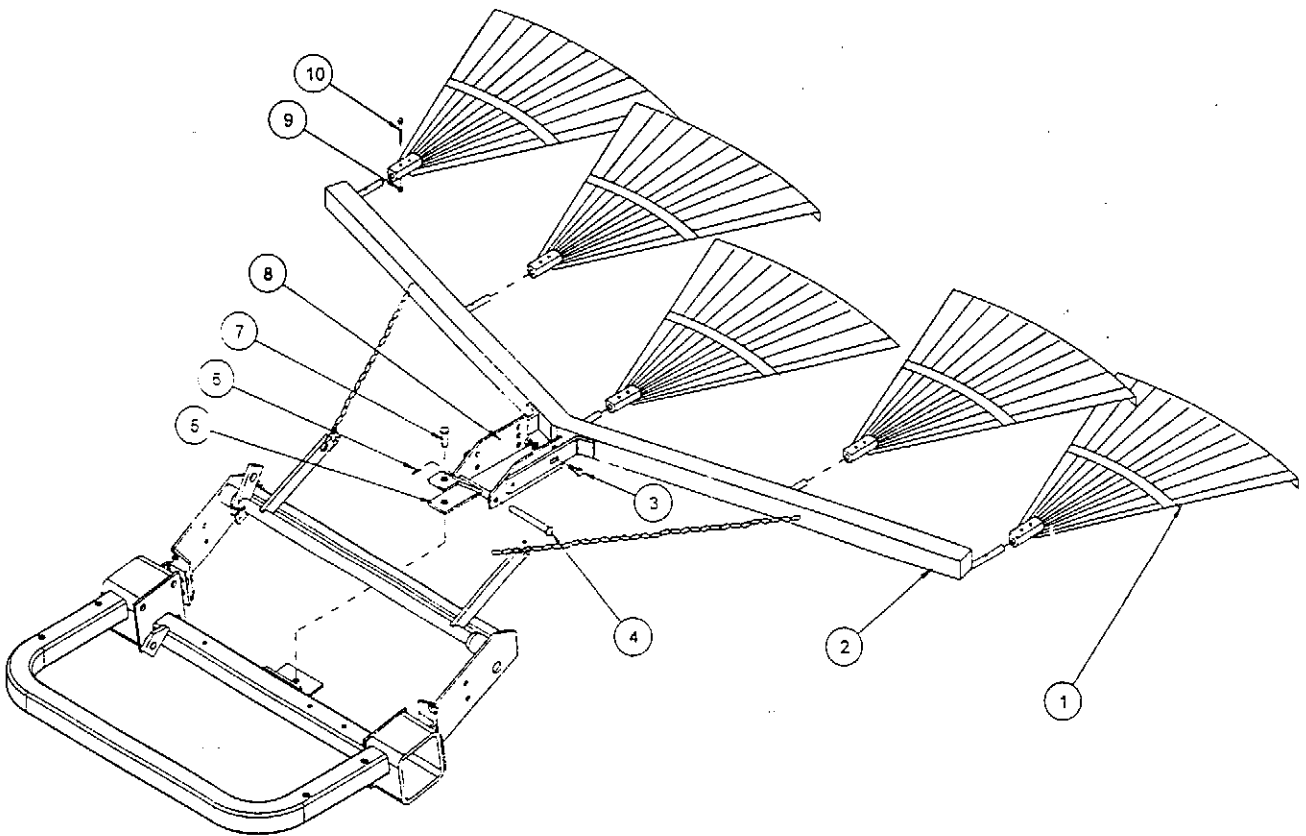
9430 WIRING DIAGRAM



9430 WIRING DIAGRAM PARTS LIST

| <u>REF.#</u> | <u>PART#</u> | <u>DESCRIPTION</u> | <u>QTY.</u> |
|--------------|--------------|--------------------|-------------|
| 1 | 932-119 | Seat Switch | 1 |
| 2 | 932-071 | Key Switch | 1 |
| 3 | 720-084 | Hour Meter | 1 |
| 4 | 932-072 | Solenoid | 1 |
| 5 | 720-076 | Battery | 1 |
| 6 | 943-100 | Engine | 1 |
| 7 | 720-220 | Actuator Switch | 1 |
| 8 | 706-075 | Actuator | 1 |
| 9 | 943-029 | Wiring Harness | 1 |

13-298 FAN RAKE ATTACHMENT DRAWING



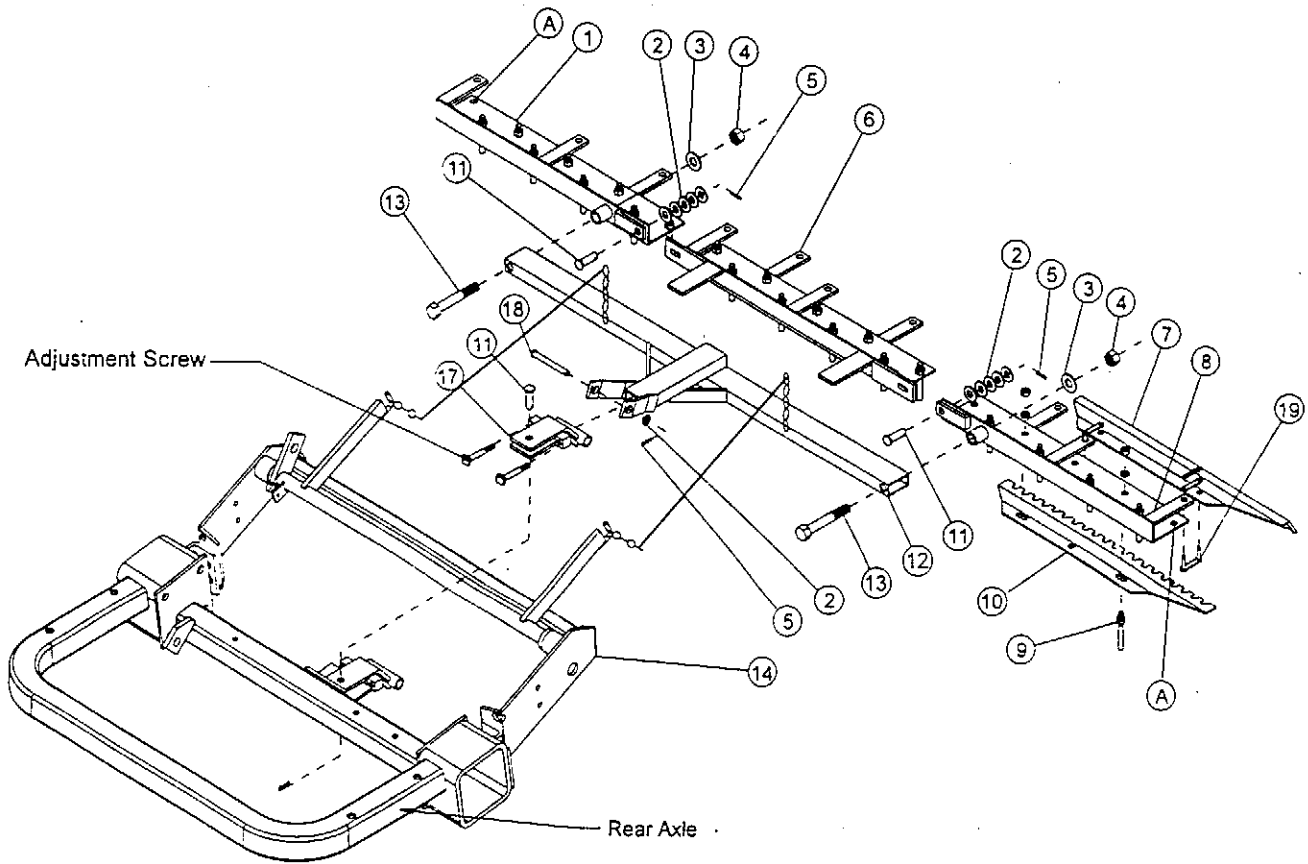
13-298 FAN RAKE ATTACHMENT PARTS LIST

| REF# | PART# | DESCRIPTION | QTY. |
|------|--------------|--------------------------|------|
| 1 | 13-310 | Rake | 5 |
| 2 | 13-306 | Frame | 1 |
| 3 | HB-38-16-100 | Bolt 3/8 – 16 x 1 | 4 |
| | HN-38-16 | Nut 3/8 – 16 | 4 |
| | HWL-38 | Lockwasher 3/8 | 4 |
| 4 | HCP-12-450 | Clevis Pin 1/2 x 4 1/2 | 1 |
| 5 | 19-107 | Drawbar | 1 |
| 6 | HP-18-100 | Cotter Pin 1/8 x 1 | 1 |
| 7 | HCP-12-150 | Clevis Pin 1/2 x 1 1/2 | 1 |
| | HHP-18 | Bridge Pin 1/8 | 1 |
| 8 | 13-307 | Hitch | 2 |
| 9 | HNCL-14-20 | Center Lock Nut 1/4 - 20 | 5 |
| 10 | HB-14-20-200 | Bolt 1/4 - 20 x 2 | 5 |

INSTALLATION INSTRUCTIONS

1. Remove the complete rake assembly from the trap rake. Replace the clevis pin and bridge pin in the hitch for future use with the rake.
2. Assemble hitch (Ref 8) to frame (Ref 2) using hardware (Ref 3). Assemble drawbar (Ref 5) to the hitch using clevis pin (Ref 4) and cotter pin (Ref 6), as shown. The different holes in the hitch are for adjusting the angle of the rakes.
3. Assemble the five rakes (Ref 1) to the frame using the bolt and center lock nuts (Ref 9 and 10). Slide the fan rake assembly under the rear of the trap rake to the hitch. Attach the drawbar to the hitch using the clevis pin and the bridge pin (Ref 7).
4. Hook the chains from the frame to the hooks on the rake lift.

13-438 RAKE ASSEMBLY WITH FINISHING BLADES DRAWING



13-438 RAKE ASSEMBLY WITH FINISHING BLADES PARTS LIST

| REF.# | PART# | DESCRIPTION | QTY. |
|--------------|--------------|---|-------------|
| 1 | 13-441 | Right Rake | 1 |
| 2 | HMB-12-14 | Machine Bushing ½ x 14GA | 11 |
| 3 | HMB-58-14 | Machine Bushing 5/8 x 14GA | 2 |
| 4 | HNCL-58-11 | Lock Nut 5/8 – 11 | 2 |
| 5 | HP-18-100 | Cotter Pin 1/8 x 1 | 3 |
| 6 | 13-440 | Center Rake | 1 |
| 7 | 13-443 | Finishing Blade | 5 |
| 8 | 13-439 | Left Rake | 1 |
| 9 | 13-445 | Rake Teeth Kit (includes 25 studs and hardware) | 1 |
| 10 | 13-442 | Groomer Blade | 3 |
| 11 | HCP-12-150 | Clevis Pin ½ - 1 ½ | 3 |
| | HHP-18 | Bridge Pin 1/8 | 1 |
| 12 | 13-365 | Drawbar | 1 |
| 13 | HB-58-11-400 | Bolt 5/8 – 11 x 4 | 2 |
| 14 | 42-024 | Rake Lift (part of machine) | 1 |
| 17 | 13-647 | Hitch | 1 |
| 18 | HCP-12-450 | Clevis Pin ½ x 4 ½ | 1 |
| 19 | 13-417 | Connector Link | 10 |

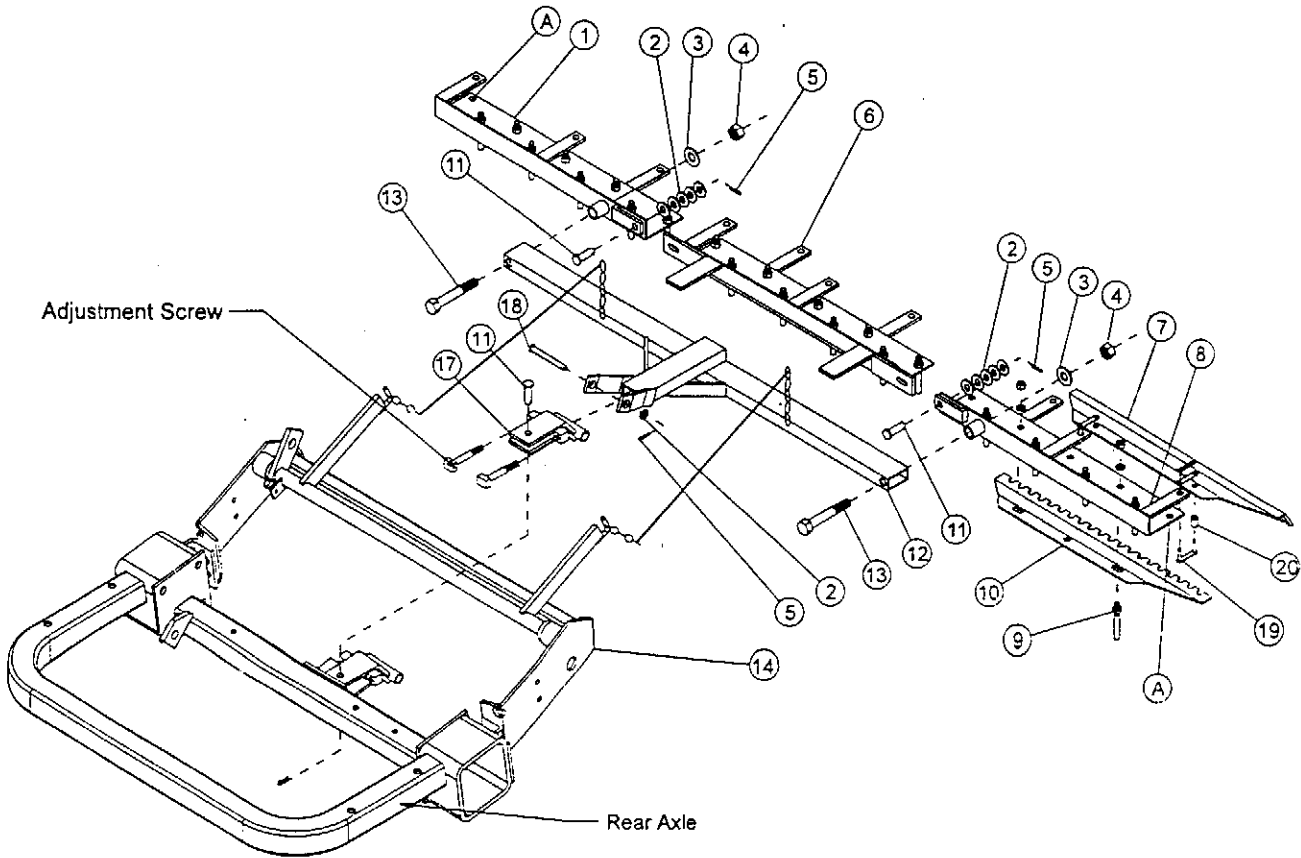
13-438 INSTALLATION INSTRUCTIONS

1. Attach drawbar (Ref 12) to hitch (Ref 17) using clevis pin, machine bushing and cotter pin (Ref 18, 2 and 5).
2. Bolt rake teeth (Ref 9) to frames, keeping all the same length. Leave the two outside holes on right and left rake open (Ref A).
3. Lay out rake frames (Ref 1, 6 and 8). Connect them using clevis pin, machine bushing and cotter pin (Ref 11, 2 and 5).
4. Attach drawbar to left and right frames using bolt, machine bushing, and nut (Ref 13, 3 and 4).
5. Attach five finishing blades (Ref 7) to the tabs of the rake frames using connector link (Ref 19). Blades may be mounted with saw tooth up or down, depending on the desired finish of the sand trap.
6. Attach the rake hitch (Ref 17) to trap rake hitch on the rear axle using a clevis pin and bridge pin (Ref 11).
7. The end links of chain on the drawbar are to be hooked to the hooks of the trap rake lift (Ref 14).
8. With the rake on the ground pull the rake to the right side until it is 2-3 inches from the tire.
9. Using the adjustment screw on the right, adjust the screw until it hits the trap rake hitch, located on rear axle. Lock jam nut so adjustment will not change.
10. Repeat steps 8 and 9 on left side.
11. Turn machine on and test for operation of rake assembly by raising and lowering the rake assembly. Also with rake down, turn sharp corners to check that rake does not touch wheels.
12. **NOTE:** Test rake in sand to assure tire tracks are covered by the rake when turning sharp corners in either direction. If there are tire tracks, readjust using the adjusting screws on the hitch, so the rake comes closer to the tire.

GROOMER BLADES – GOLF COURSE USE ONLY.

1. Place the three groomer blades (Ref 10) under to three rake assemblies (Ref 1, 6 and 8).
2. Center blades below rear most row of rake teeth. The blade is designed to miss the outside two "teeth" and fit around the center "tooth".
3. Remove the two "teeth" that line up with slots of each groomer blade. Move blade up and into position and reattach "teeth". Blade thickness should be accounted for by shortening the "teeth" and equal length.

13-606 RAKE ASSEMBLY WITH LEXAN BLADES DRAWING



13-606 RAKE ASSEMBLY WITH LEXAN BLADES PARTS LIST

| REF.# | PART# | DESCRIPTION | QTY. |
|-------|--------------|---|------|
| 1 | 13-441 | Right Rake | 1 |
| 2 | HMB-12-14 | Machine Bushing ½ x 14GA | 11 |
| 3 | HMB-58-14 | Machine Bushing 5/8 x 14GA | 2 |
| 4 | HNCL-58-11 | Lock Nut 5/8 – 11 | 2 |
| 5 | HP-18-100 | Cotter Pin 1/8 x 1 | 3 |
| 6 | 13-440 | Center Rake | 1 |
| 7 | 13-605 | Lexan Rake Blade | 5 |
| 8 | 13-439 | Left Rake | 1 |
| 9 | 13-445 | Rake Teeth Kit (includes 25 studs and hardware) | 1 |
| 10 | 13-442 | Groomer Blade | 3 |
| 11 | HCP-12-150 | Clevis Pin ½ - 1 ½ | 3 |
| | HHP-18 | Bridge Pin 1/8 | 1 |
| 12 | 13-365 | Drawbar | 1 |
| 13 | HB-58-11-400 | Bolt 5/8 – 11 x 4 | 2 |
| 14 | 42-024 | Rake Lift (part of machine) | 1 |
| 17 | 13-647 | Hitch | 1 |
| 18 | HCP-12-450 | Clevis Pin ½ x 4 ½ | 1 |
| 19 | 13-417 | Connector Link | 10 |
| 20 | 18-272 | Nylon Bushing | 10 |

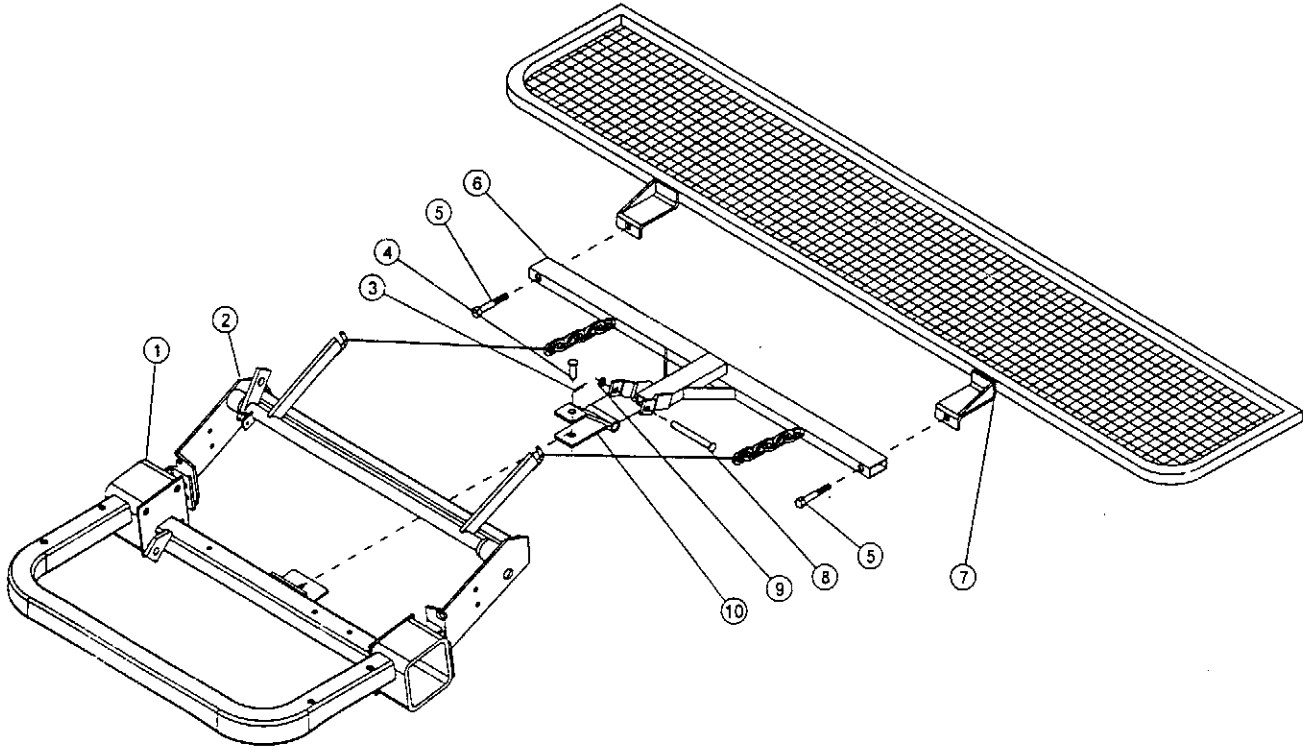
13-606 INSTALLATION INSTRUCTIONS

1. Attach drawbar (Ref 12) to hitch (Ref 17) using clevis pin, machine bushing and cotter pin (Ref 18, 2 and 5).
2. Bolt rake teeth (Ref 9) to frames, keeping all the same length. Leave the two outside holes on right and left rake open (Ref A).
3. Lay out rake frames (Ref 1, 6 and 8). Connect them using clevis pin, machine bushing and cotter pin (Ref 11, 2 and 5).
4. Attach drawbar to left and right frames using bolt, machine bushing, and nut (Ref 13, 3 and 4).
5. Attach five Lexan rake blades (Ref 7) to the tabs of the rake frames using connector link (Ref 19) and nylon bushings. Blades may be mounted with saw tooth up or down, depending on the desired finish of the sand trap.
6. Attach the rake hitch (Ref 17) to trap rake hitch on the rear axle using a clevis pin and bridge pin (Ref 11).
7. The end links of chain on the drawbar are to be hooked to the hooks of the trap rake lift (Ref 14).
8. With the rake on the ground pull the rake to the right side until it is 2-3 inches from the tire.
9. Using the adjustment screw on the right of the hitch, adjust the screw until it hits the trap rake hitch, located on rear axle. Lock jam nut so adjustment will not change.
10. Repeat steps 8 and 9 on left side.
13. Turn machine on and test for operation of rake assembly by raising and lowering the rake assembly. Also with rake down, turn sharp corners to check that rake does not touch wheels.
14. **NOTE:** Test rake in sand to assure tire tracks are covered by the rake when turning sharp corners in either direction. If there are tire tracks, readjust using the adjusting screws on the hitch, so the rake comes closer to the tire.

GROOMER BLADES – GOLF COURSE USE ONLY.

1. Place the three groomer blades (Ref 10) under to three rake assemblies (Ref 1, 6 and 8).
2. Center blades below rear most row of rake teeth. The blade is designed to miss the outside two "teeth" and fit around the center "tooth".
3. Remove the two "teeth" that line up with slots of each groomer blade. Move blade up and into position and reattach "teeth". Blade thickness should be accounted for by shortening the "teeth" an equal length.

26-007 PROFESSIONAL INFIELD FINISHER DRAWING



26-007 PROFESSIONAL INFIELD FINISHER PARTS LIST

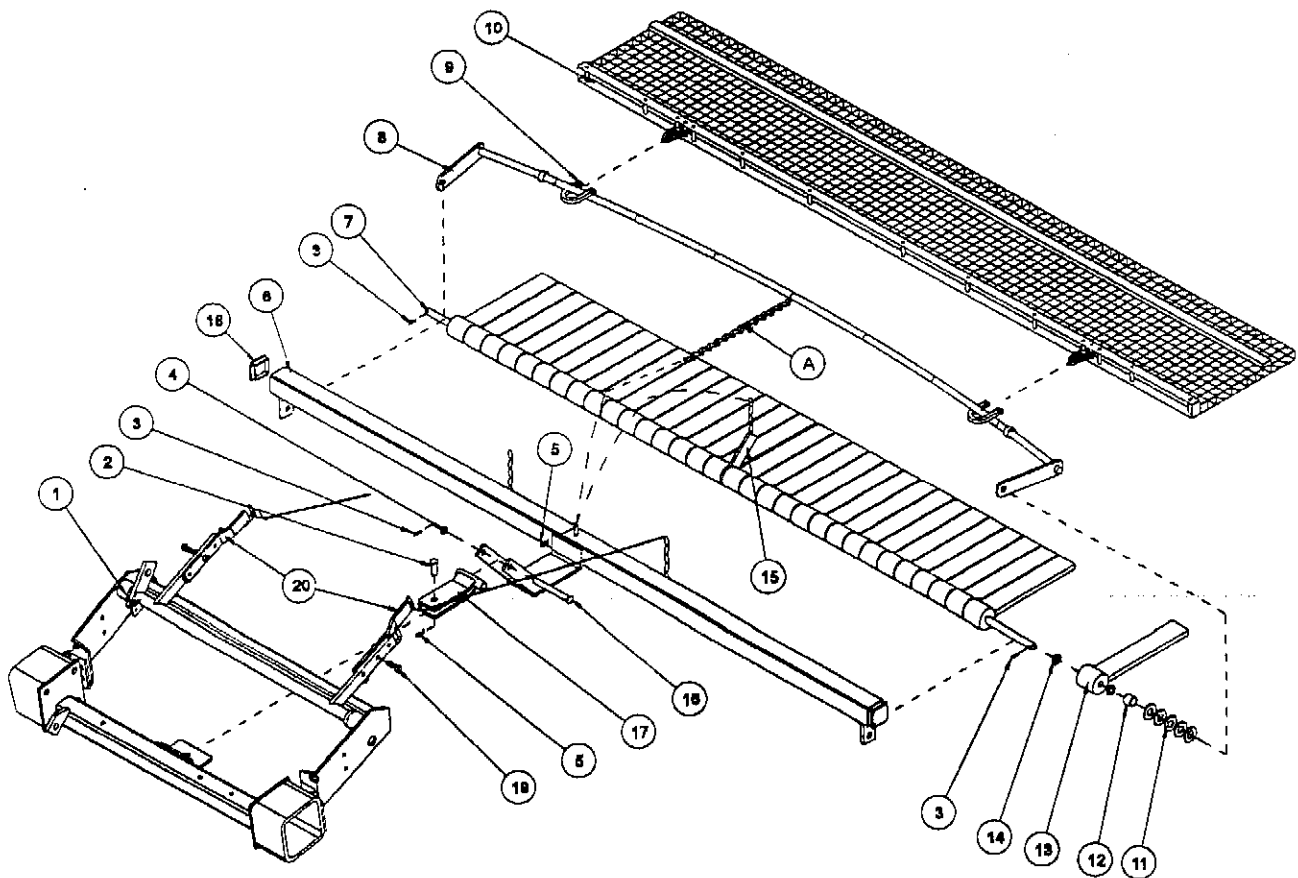
| REF# | PART# | DESCRIPTION | QTY. |
|------|--------------|--------------------------------|------|
| 1 | | Rear Axle (part of main frame) | 1 |
| 2 | 42-024 | Rake Lift | 1 |
| 3 | HP-18-100 | Cotter Pin 1/8 x 1 | 1 |
| 4 | HCP-12-150 | Clevis Pin 1/2 x 1 1/2 | 1 |
| 5 | HB-58-11-300 | Bolt 5/8 – 11 x 3 | 2 |
| | HNCL-58-11 | Center Lock Nut 5/8 – 11 | 2 |
| 6 | 13-365 | Drawbar | 1 |
| 7 | 26-045 | Leveling Screen | 1 |
| 8 | HCP-12-450 | Clevis Pin 1/2 x 4 1/2 | 1 |
| 9 | HMB-12-14 | Machine Bushing 1/2 x 14GA | 1 |
| 10 | 19-107 | Hitch | 1 |
| 11 | HHP-18 | Bridge Pin 1/8 | 1 |

INSTALLATION INSTRUCTIONS

The Professional Field Finisher is used for smoothing and leveling fields to professional standards.

1. Attach leveling screen (Ref 7) to drawbar (Ref 6) using two bolts (Ref 5) and center lock nuts.
2. Attach hitch (Ref 10) to drawbar (Ref 6) using clevis pin (Ref 8), machine bushing (Ref 9) and a cotter pin (Ref 3).
3. Mount Professional Field Finisher to the hitch on the trap rake with a clevis pin (Ref 4) and bridge pin (Ref 11).
4. Hook chains from finisher to rake lift arms.
5. **NOTE:** When assembled properly, rake will angle down from front to back. If front of finisher is not higher than the back, damage will result to infield.

26-008 FLEX ACTION FIELD FINISHER DRAWING

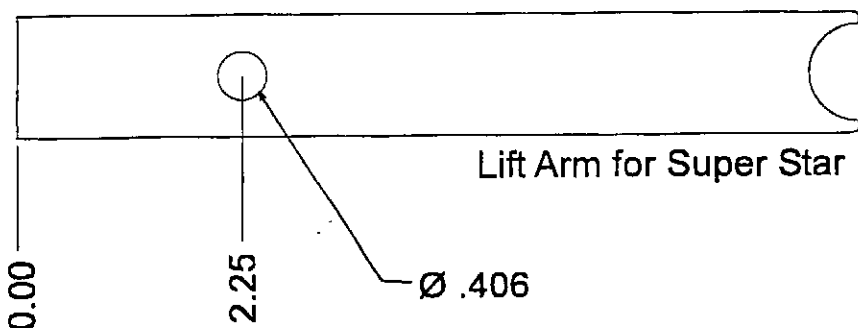
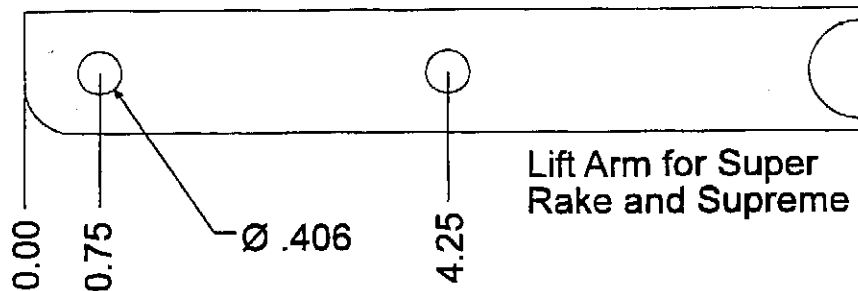


26-008 FLEX ACTION FIELD FINISHER PARTS LIST

| REF# | PART# | DESCRIPTION | QTY. |
|------|--------------|-------------------------------|------|
| 1 | | Rake Lift (Part of Trap Rake) | 1 |
| 2 | HCP-12-150 | Clevis Pin 1/2 x 1 1/2 | 1 |
| 3 | HP-18-100 | Cotter Pin 1/8 x 1 | 3 |
| 4 | HMB-12-14 | Machine Bushing 1/2 - 14GA | 1 |
| 5 | HHP-18 | Bridge Pin 1/8 | 2 |
| 6 | 26-046 | Frame | 1 |
| 7 | 26-049 | Mounting Bar | 1 |
| 8 | 26-047 | Leveler Bar | 1 |
| 9 | 21-060 | 3/8 Chain Clevis | 2 |
| 10 | 26-115 | Mesh Finisher | 1 |
| 11 | HBM-58-14 | Machine Bushing 5/8 x 14GA | 10 |
| 12 | 11-040 | Spacer 3/4" | 2 |
| 13 | 26-041 | Rasp Flail | 32 |
| 14 | HW-58 | Washer 5/8 | 32 |
| 15 | 26-048 | Flail Bar Strap | 1 |
| | HB-38-16-100 | Bolt 3/8 - 16 x 1 | 1 |
| | HNCL-38-16 | Center Lock Nut 3/8 - 16 | 1 |
| 16 | HCP-12-450 | Clevis 1/2 x 4 1/4 | 1 |
| 17 | 19-107 | Hitch | 1 |
| 18 | 18-297 | Cap Plug | 2 |
| 19 | HB-38-16-125 | Bolt 3/8 - 16 x 1 1/4" | 4 |
| | HNTL-38-16 | Lock Nut 3/8 - 16 | 4 |
| 20 | 26-116 | Right Extension Arm | 1 |
| | 26-117 | Left Extension Arm | 1 |

RAKE LIFT ARM HOLE PLACEMENT

If the Lift Arms on the Rake Lift are not drilled, use the following dimensions to drill .406 holes to mount the extension arms to.



26-008 INSTALLATION INSTRUCTIONS

1. Install flail bar (Ref 15) strap to center of mounting bar (Ref 7) with chain on top of flail bar strap and mounting bar bent away from you. Apply a light coat of lubricant to overall length of mounting bar.
2. Install one rasp flail (Ref 13) with knobby side down adjacent to sides of flail bar strap (Ref 15). Now install a flat washer (Ref 14) so it sits adjacent with the outside of the rasp flail. Continue to install flails with knobby sides down with washers between until you have 16 flails and washers on each side of bar strap. Force all flails tightly toward bar strap.
3. After all 32 flails have been installed, place on spacer (Ref 12) to each end of mounting bar adjacent to washer.
4. Install leveler bar (Ref 8) to mounting bar, with curved leveler bar resting on top on the smooth sides of flails. If all flails and washers do not fit snugly at this time, remove leveler bar and install enough machine bushings to ensure a snug fit. Then reinstall leveler bar.
5. Lay the frame (Ref 6) on the floor or bench with weld tabs facing up. Install ends of assembled mounting bar, with knobby sides of flails up, into welded tabs on each end of frame and secure with cotter pin (Ref 3).
6. Install flail bar strap (Ref 15) to center tab on frame with 3/8 – 16 x 1 bolt and 3/8 – 16 center lock nut. Loose fit is required. Do not over tighten.
7. Flip assembly over so knobby sides of flails are now facing down. Install hitch (Ref 17) to frame with clevis pin (Ref 16) and cotter pin (Ref 3). The hitch should be attached to the frame as shown.
8. Install bar strap chain over welded pin on frame. Install leveler bar chain on to pin and secure in place with bridge pin. Use last bridge pin and clevis pin to hitch field finisher to your machine.
9. Add extension arms (Ref 20) to rake lift. Use the center hole and only (2) 1 ¼ bolts (Ref 19).

OPERATING INSTRUCTIONS

Running attachment with all flails down, flat on the surface, will provide a leveling function. Running attachment partially raised and flails at a 20° - 40° angle in relation to the level surface, will provide a finishing function. The flails increase down pressure for desired finish. Drive in wide circular patterns and increase or decrease ground speed to achieve desired finish.

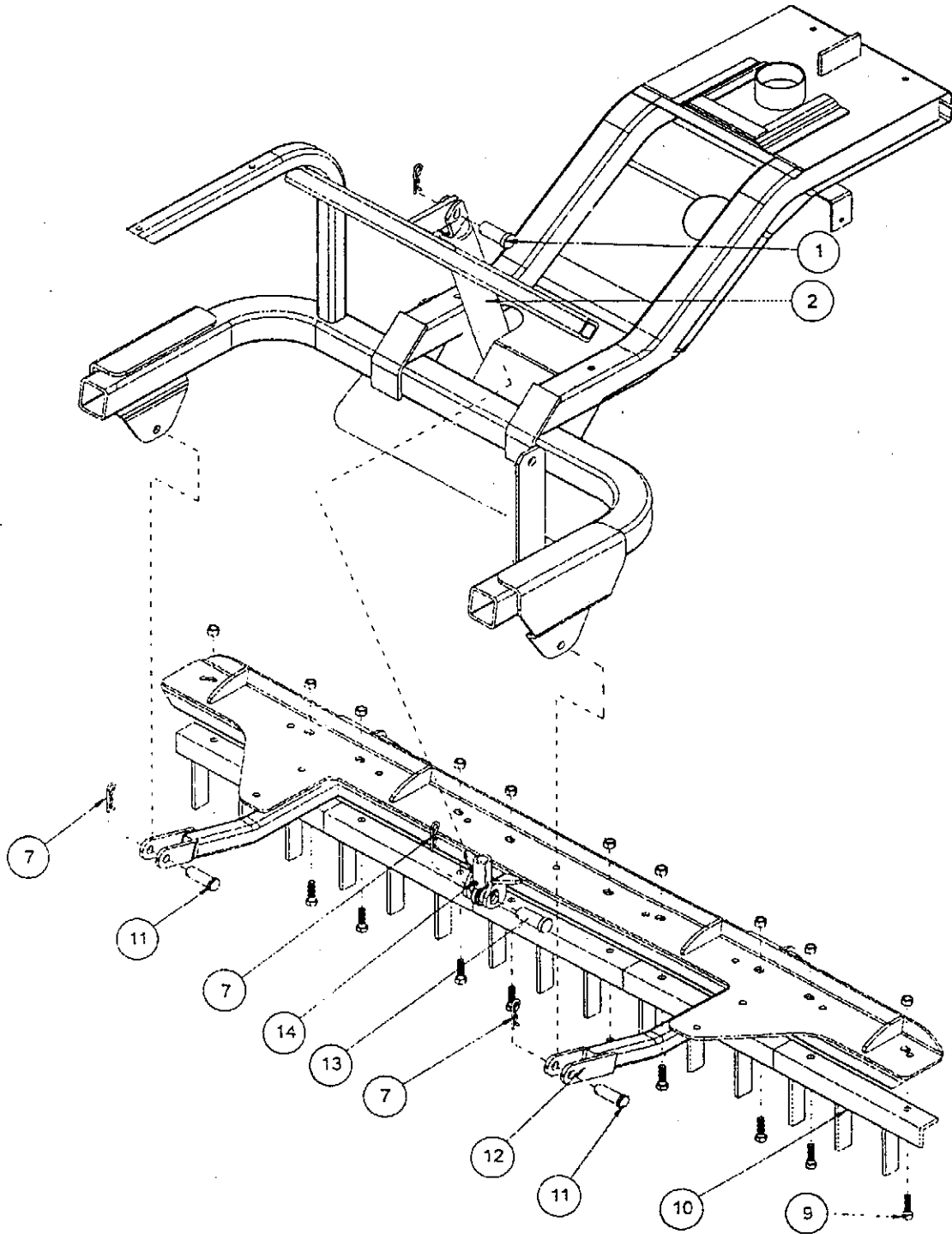
26-008 INSTALLATION INSTRUCTIONS (Continued)

MESH FINISHER

To get a smoother finish, install a Mesh Finisher onto your Flex Action Field Finisher.

1. If the 26-008 flex action field finisher is on your machine, lower it to the ground. You may have to pull machine ahead slightly so the field finisher is lying flat on the ground or floor.
2. Lay mesh finisher behind field finisher with weight bar facing up and chain hooks towards field finisher.
3. Take the two chain clevis' and hook onto leveler bar and then through the chain hooks on mesh finisher. The clevis pin that comes with the chain clevis should go through the chain clevis, first link on chain hook (on the mesh finisher) and then through other side of the chain clevis. Insert the cotter pin.
4. Center the mesh finisher with flex action field finisher.
5. Raise lift on your machine to insure proper ground clearance before driving your machine.
6. (Ref A) Chain length is to control amount of mesh trailing behind flails for wet or dry conditions. For wet conditions: Shorten chains. For dry conditions: May use maximum amount of chain to make desired finish.

42-008 SAND CULTIVATOR DRAWING



42-008 SAND CULTIVATOR PARTS LIST

| REF.# | PART# | DESCRIPTION | QTY. |
|-------|--------------|--|------|
| 1 | 40-396 | Clevis Pin ½" x 2" | 1 |
| 2 | 932-061 | 12-Volt Actuator/500#/8" Stroke | 1 |
| * 7 | HHP-18 | Bridge Pin 1/8 | 3 |
| * 9 | HB-38-16-125 | Bolt 3/8 –16 x 1 ¼ | 10 |
| | HNTL-38-16 | Lock Nut 3/8 –16 | 10 |
| *10 | 42-038 | Tine Segment | 5 |
| *11 | HCP-12-175 | Clevis Pin ½ x 1 ¾ | 2 |
| *12 | 42-203 | Attachment Lift | 1 |
| *13 | 40-396 | Clevis Pin ½" x 2" | 1 |
| 14 | | Actuator Mounting Hole | 1 |
| * | 42-008 | Sand Cultivator (all other parts reference only) | |

INSTALLATION INSTRUCTIONS

1. Install actuator with (Ref 1 & 13).
2. Install wiring using the 9328 wiring diagram.
3. Tine Segments (Ref 10) should be bolted to the attachment lift (Ref 12). Attach the attachment lift to (Ref 12) attachment mount using (Ref 11 & 7) clevis pin and bridge pin.
4. Lift attachment lift up or extend cylinder so rod end (Ref 14) lines up with the holes on the center of the attachment lift. Use clevis pin and bridge pin (Ref 7 and 13) to fasten cylinder to sand cultivator.
5. Turn machine on and test for proper operation.

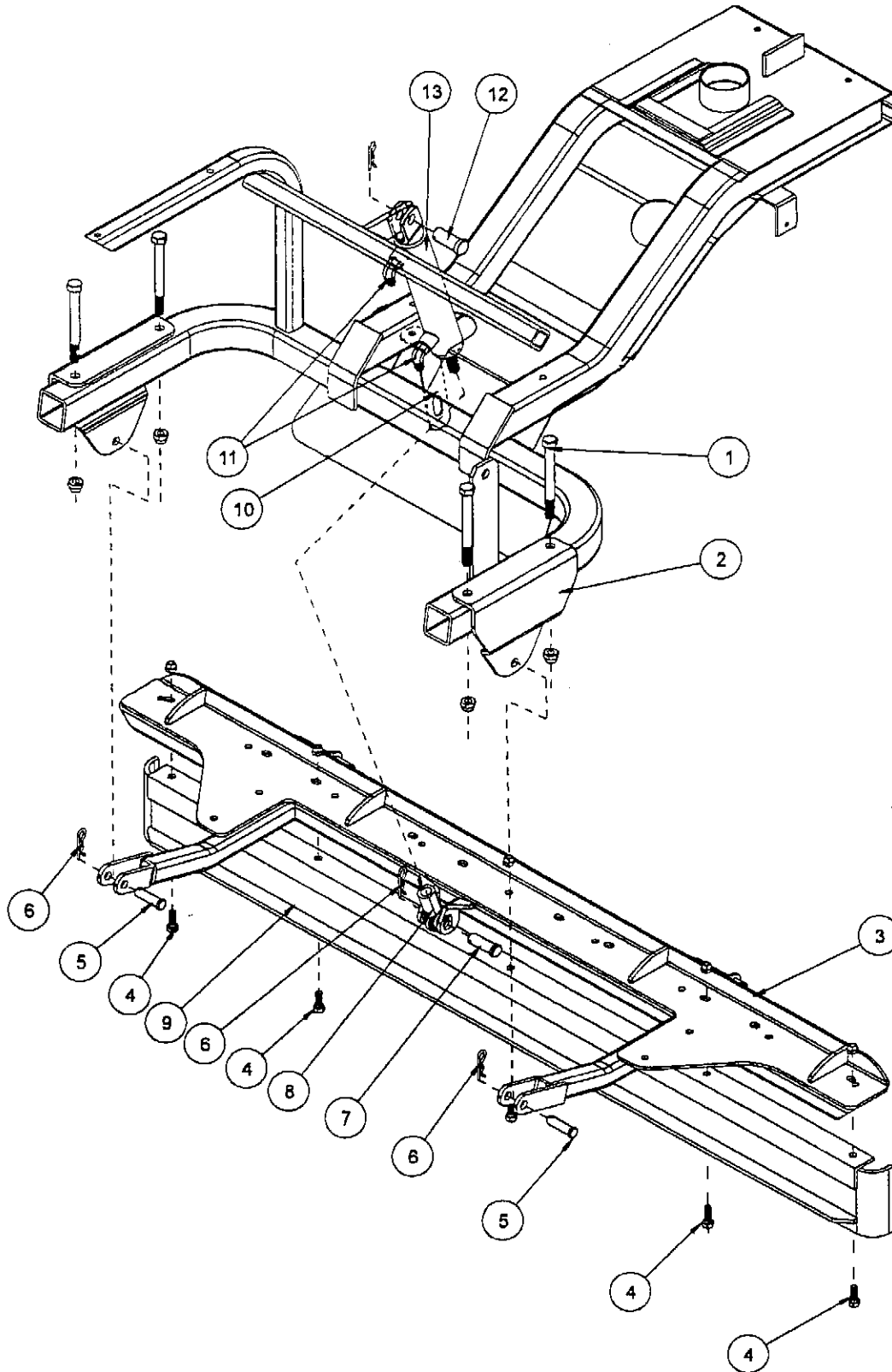
42-010 CONSTRUCTION LEVELING BLADE PARTS LIST

| REF.# | PART# | DESCRIPTION | QTY. |
|-------|--------------|--|------|
| *3 | 42-203 | Attachment Lift | 1 |
| *4 | HB-38-16-100 | Bolt 3/8 – 16 x 1 | 5 |
| | HNTL-38-16 | Lock Nut 3/8 – 16 | 5 |
| *5 | HCP-12-175 | Clevis Pin 1/2 x 1 3/4 | 2 |
| *6 | HHP-18 | Bridge Pin 1/8 | 3 |
| *7 | 40-396 | Clevis Pin 1/2" x 2 | 1 |
| 8 | 18-154 | Rod End | 1 |
| *9 | 42-097 | Leveling Blade | 1 |
| 10 | 42-217 | Cylinder Mount | 1 |
| 11 | 18-168 | 90° Elbow | 2 |
| 12 | 40-396 | Clevis Pin 1/2" x 2" | 1 |
| 13 | 932-061 | 12-Volt Actuator/500#/8" Stroke | 1 |
| * | 42-010 | Construction Leveling Blade (all other parts are reference only) | |

INSTALLATION INSTRUCTIONS

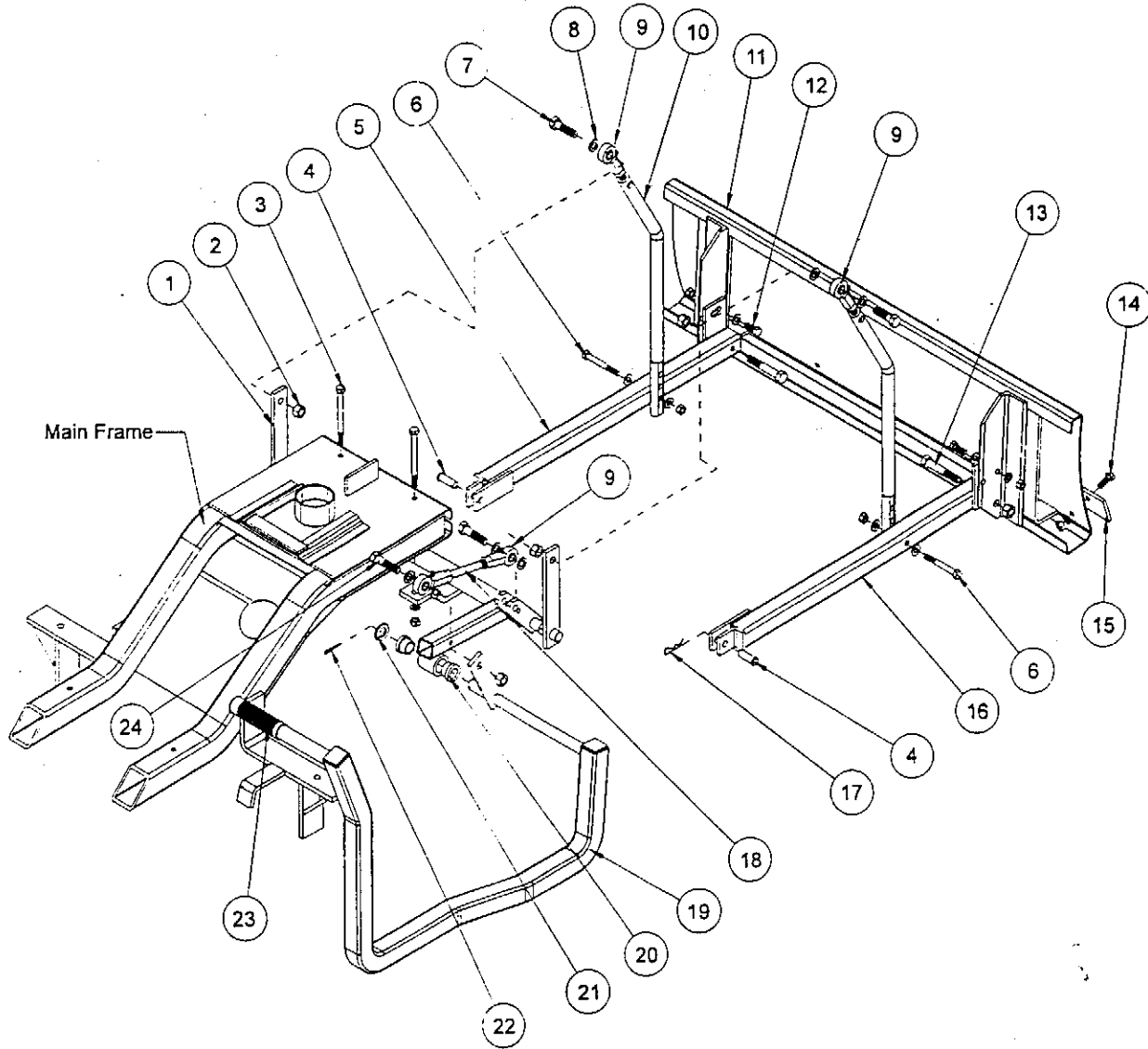
1. Install actuator with (Ref 7 & 12).
2. Install wiring using the 9328 wiring diagram.
3. Bolt leveling blade (Ref 9) to attachment lift (Ref 3) using five 3/8 – 16 x 1 bolts and five 3/8 – 16 lock nuts as shown on drawing.
4. Attach the attachment lift to attachment mount (Ref 3) using clevis pin and bridge pin (Ref 5 and 6).
5. Lift attachment lift up or extend cylinder so rod end (Ref 8) lines up with the holes on the center of the attachment lift. Use 5/8 x 2 1/2 clevis pin and bridge pin (Ref 6 & 7) to fasten cylinder to cultivator.
6. Turn machine on and test for proper operation.

42-010 CONSTRUCTION LEVELING BLADE DRAWING



42-011 - AB ALUMINUM SAND PLOW DRAWING

42-011 - SB STEEL SAND PLOW DRAWING



42-011 SAND PLOW PARTS LIST

| REF# | PART# | DESCRIPTION | QTY. |
|------|--------------|--|------|
| 1 | 42-092 | Lift Assembly (includes Ref#20) | 1 |
| 2 | HNTL-12-13 | Lock Nut ½ - 13 | 2 |
| 3 | HB-38-16-350 | Bolt 3/8 – 16 x 3 ½ (part of main frame) | 2 |
| | HWL-38 | Lock Washer 3/8 | 2 |
| | HN-38-16 | Nut 3/8 –16 | 2 |
| 4 | HCP-12-150 | Clevis Pin ½ x 1 ½ | 2 |
| 5 | 27-049 | Left Pusher Bar | 1 |
| 6 | HB-38-16-300 | Bolt 3/8 – 16 x 3 | 2 |
| | HW-38 | Washer 3/8 | 4 |
| | HNTL-38-16 | Lock Nut 3/8 –16 | 2 |
| 7 | HB-12-13-175 | Bolt ½ - 13 x 1 ¾ | 2 |
| 8 | HMB-12-14 | Machine Bushing ½ x 14GA | 8 |
| 9 | 80-006 | Rod End | 4 |
| | HNJ-12-20 | Jam Nut ½ - 20 | 4 |
| 10 | 27-073 | Lift Rod | 2 |
| 11 | 27-017 | Aluminum Sand Plow Blade | 1 |
| | 13-352 | Steel Sand Plow Blade | 1 |
| 12 | HB-38-16-100 | Bolt 3/8 – 16 x 1 | 2 |
| | HW-38 | Washer 3/8 | 2 |
| | HWL-38 | Lock Washer 3/8 | 2 |
| | HN-38-16 | Nut 3/8 – 16 | 2 |
| 13 | HB-12-13-300 | Bolt ½ - 13 x 3 | 2 |
| | HNTL-12-13 | Lock Nut ½ -13 | 2 |
| 14 | HB-38-16-100 | Bolt 3/8 – 16 x 1 | 4 |
| | HWL-38 | Lock Washer 3/8 | 4 |
| | HN-38-16 | Nut 3/8 –16 | 4 |
| 15 | 13-167 | Wear Blade | 1 |
| 16 | 27-050 | Right Pusher Bar | 1 |
| 17 | HHP-18 | Bridge Pin 1/8 | 2 |
| 18 | 42-094 | Rod | 1 |
| 19 | 42-093 | Lift Handle | 1 |
| 20 | 18-221 | Flange Bushing | 2 |
| 21 | HMB-34-14 | Machine Bushing ¾ - 14GA | 1 |
| 22 | HP-18-150 | Cotter Pin 1/8 x 1 ½ | 1 |
| 23 | 15-019 | Grip | 1 |
| 24 | HB-12-13-200 | Bolt ½ - 13 x 2 | 2 |

42-011 INSTALLATION INSTRUCTIONS

1. Assemble the pusher bars (Ref 5 and 16) to the plow (Ref 11) using hardware (Ref 12 & 13). There are 2 holes to bolt the hardware in. Using hole closest to the blade will result in a shallow cut, whereas using the hole furthest from the blade will result in a deeper cut. The slot on the pusher bar is for fine tuned adjustment.
2. Assemble the lift assembly (Ref 1) to the main frame using the two studs that are under the frame and below the front of the console.
3. Attach the lift handle (Ref 19) to the lift assembly using cotter pin and machine bushing (Ref 21 & 22). Using rod and yoke (Ref 18 & 9) attach the handle to the lift assembly.
4. Put rod ends (Ref 9) onto lift rods (Ref 10) with jam nut first. Adjust to equal lengths. Bolt lift rods to lift arms with ball joints to the outside. Bolt from outside with the ½" machine bushing between rod end and lift arm and the ½ - 13 nylon lock nut on the inside. Use (Ref 7) hardware.
5. Slide plow under machine and connect to machine. Use clevis pin and bridge pin (Ref 4 & 17).
6. Lift up the plow. Using the top hole in the lift rod as a starting point hook on the pusher bars. Use (Ref 6) hardware. The three holes in the lift rods are for adjusting the hand lever. The top hole moves the lever forward and holds the blade with the most clearance. Each hole down moves the lever to the rear of the machine and decreases blade clearance by approximately one inch.
7. For fine tuning of blade height off ground twist rod end (Ref 9) on rod (Ref 18). Twisting the rod end out will increase down pressure. Twisting the rod end onto the rod will decrease down pressure.

42-026 84" (213 CM) STAINLESS STEEL TOURNAMENT RAKE PARTS LIST

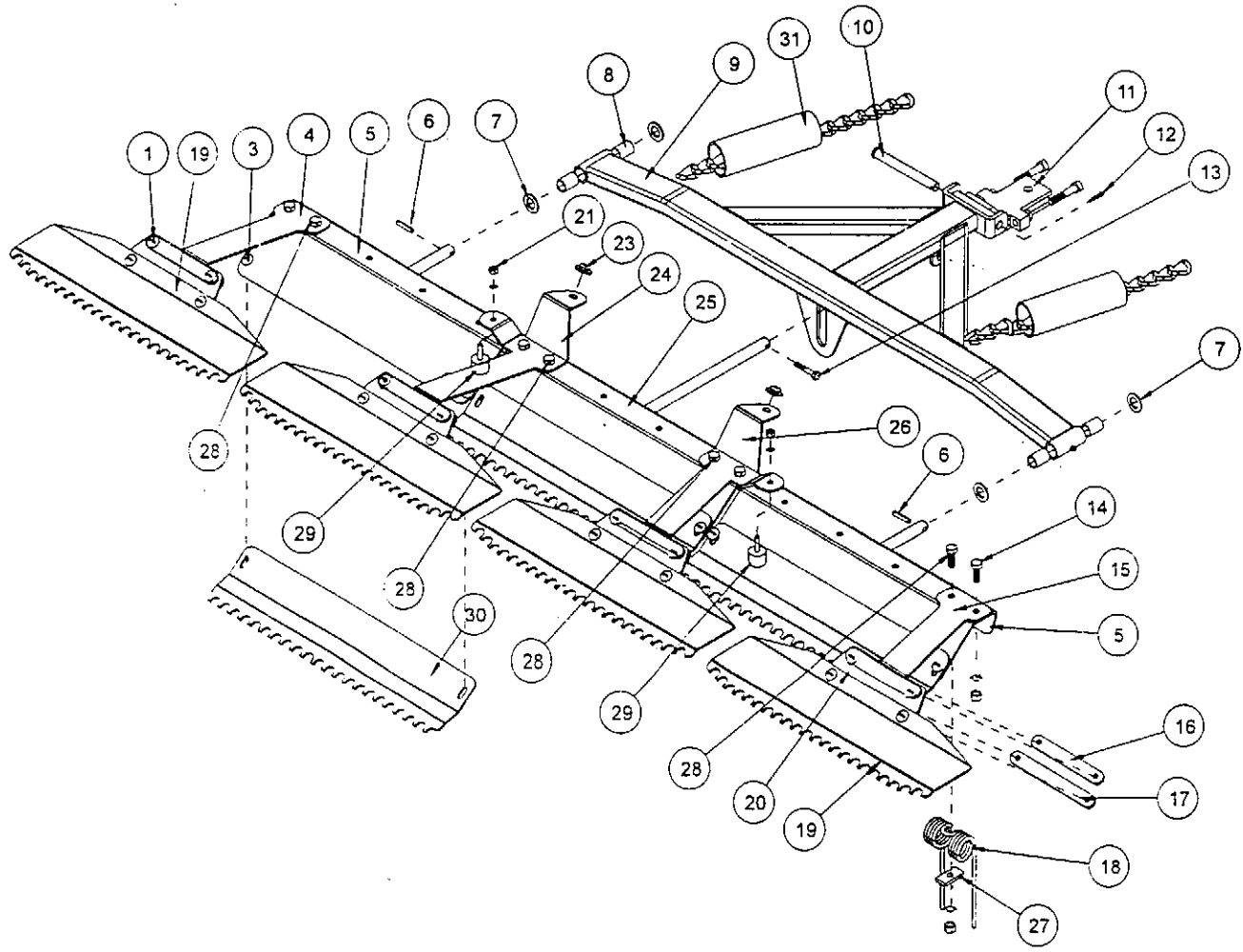
| REF.# | PART# | DESCRIPTION | QTY. |
|-------|-----------------|---|------|
| 1 | HSTS-516-18-100 | Stainless Truss Head Screw 5/16 – 18 x 1 | 16 |
| | HWL-516 | Lock Washer 5/16 | 16 |
| | HN-516-18 | Nut 5/16 – 18 | 16 |
| 2 | 42-104 | Finishing Blades | 4 |
| 3 | HSTS-516-18-075 | Stainless Truss Head Screw 5/16 – 18 x 3/4 | 6 |
| | HWL-516 | Lock Washer 5/16 | 6 |
| | Hn-516-18 | Nut 5/16 – 18 | 6 |
| 4 | 42-111 | Left Outside Mount | 1 |
| 5 | 42-102 | Outside Rake | 2 |
| 6 | HRP-14-100 | Roll Pin 1/4 x 1 | 2 |
| 7 | HMB-58-14 | Machine Bushing 5/8 x 14GA | 4 |
| 8 | 20-018 | Oilite Bushing (comes with 42-100) | 4 |
| 9 | 42-100 | Draw Bar | 1 |
| 10 | HCP-12-450 | Clevis Pin 1/2 x 4 1/2 | 1 |
| 11 | 13-647 | Hitch | 1 |
| | HSSQ-38-16-200 | Square Head Set Screw 3/8 –16 x 2 (adjustment screw) | 2 |
| | HN-38-16 | Nut 3/8 –16 | 2 |
| | HCP-12-150 | Clevis Pin 1/2 x 1 1/2 | 1 |
| | HHP-18 | Bridge Pin 1/8 | 1 |
| 12 | HP-18-100 | Cotter Pin 1/8 x 1 | 1 |
| 13 | HBS-14-20-150 | Stainless Steel Bolt 1/4 -20 x 1 1/2 | 1 |
| | HNTL-14-20 | Lock Nut 1/4 - 20 | 1 |
| 14 | HSTS-38-16-100 | Stainless Steel Truss Head Screw 3/8 – 16 x 1 | 12 |
| | HWL-38 | Lock Washer 3/8 | 12 |
| | HN-38-16 | Nut 3/8 –16 | 12 |
| 15 | 42-109 | Outside Towel Mount | 1 |
| 16 | 42-105 | Top Strap | 4 |
| 17 | 42-106 | Bottom Strap | 4 |
| 18 | 42-122 | Rake Spring | 12 |
| 19 | 42-103 | Groomer Blades | 3 |
| 20 | 42-107 | Matting | 4 |
| 21 | HNC-14-20 | Cap Nut 1/4 - 20 | 2 |
| | HWL-14 | Lock Washer 1/4 | 2 |
| 23 | 42-116 | Rubber Insert | 2 |
| 24 | 42-110 | Left Inside Mount | 1 |
| 25 | 42-101 | Center Rake | 1 |
| 26 | 42-108 | Inside Trowel Mount | 1 |
| 27 | 42-177 | Spring Holder | 12 |
| 28 | HSTS-38-16-125 | Stainless Steel Truss Head Screw 3/8 – 16 x 1 1/4 | 4 |
| | HWL-38 | Lock Washer 3/8 | 4 |
| | HN-38-16 | Nut 3/8 –16 | 4 |
| 29 | 15-013 | Rubber Bumper | 2 |
| 30 | 8892-6 | Hose Wrap | 2 |

42-026 INSTALLATION INSTRUCTIONS

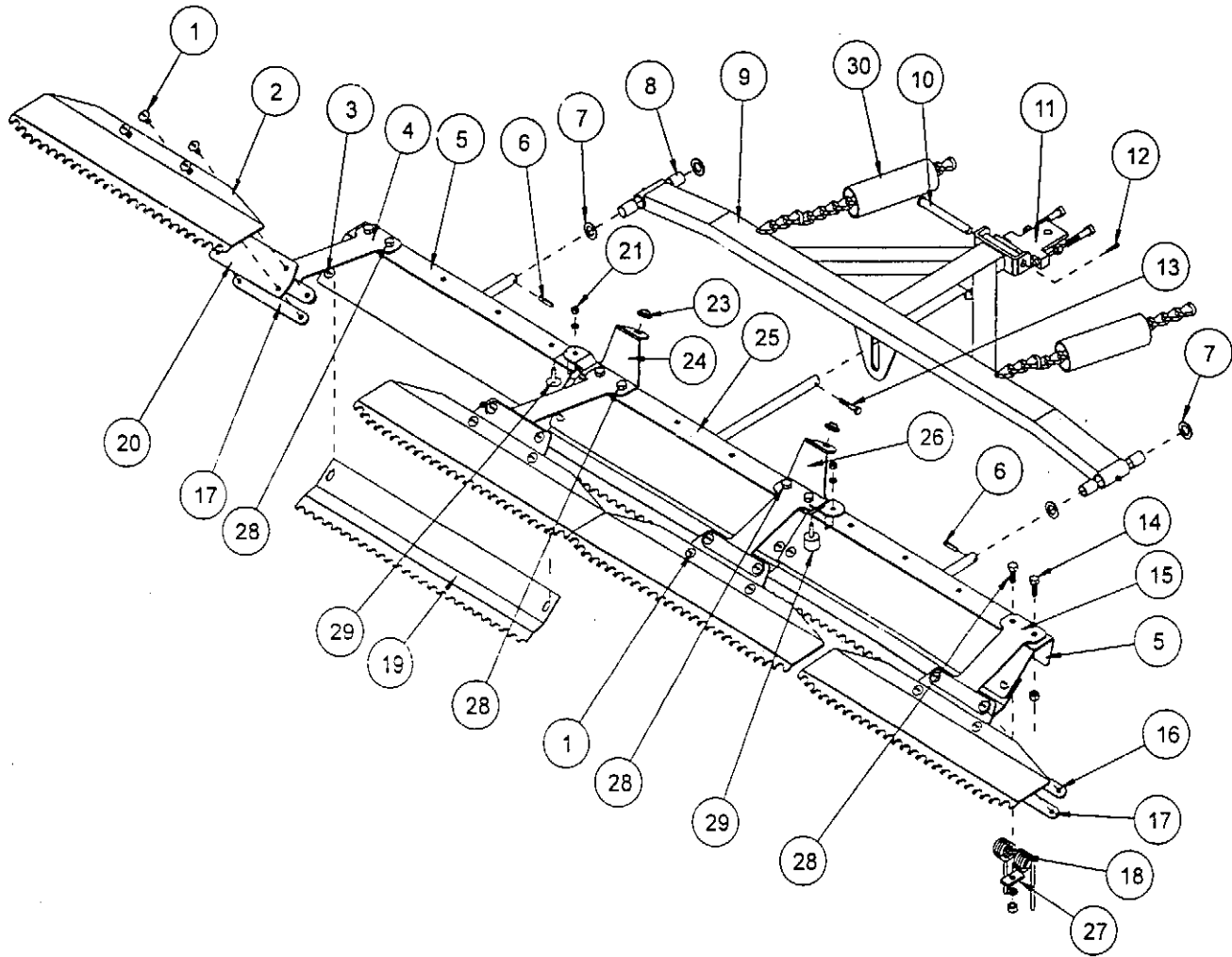
1. Attach drawbar (Ref 9) to hitch (Ref 11) using clevis pin (Ref 10) and cotter pin (Ref 12).
2. Bolt rake spring (Ref 18) to rake frames (Ref 5 & 25) using hardware (Ref 14). Leave the two outside holes on right, left, and center rake open.
3. Attach rubber bumper (Ref 29) using cap nut and lock washer (Ref 21). Attach the rubber inserts (Ref 23) to the inside mounts (Ref 24 & 26).
4. Attach the outside mount (Ref 4), the left inside mount (Ref 24), the outside trowel mount (Ref 15), and the inside trowel mount (Ref 26) to the outside and center rakes (Ref 5 & 25) as shown. Use the 1" stainless steel truss head screws (Ref 14) on the outside hole of each rake. Use the spring holder (Ref 27) and the 1 ¼" stainless steel truss head screws (Ref 28) to attach rake springs (Ref 18) to the rakes under the left outside and inside mounts and the outside and inside trowel mounts.
5. Slide a machine bushing onto outside rake frames then slide the outside rake frames (Ref 5) into the tubing on the end of the drawbar. Hold in place with another machine bushing and roll pin (Ref 6).
6. Attach center rake (Ref 25) to drawbar (Ref 9) as shown, using 1 ½ stainless steel bolts and lock nuts (Ref 13) with the shaft of the center rake between the tabs on the bottom of the drawbar.
7. Attach the matting (Ref 20) and the top strap (Ref 16) to the inside and outside mounts using stainless steel truss head screw 5/16 – 18 x 1 (Ref 1). Attach four finishing blades (Ref 2) to the matting on the inside and outside mounts with the stainless steel truss head screw 5/16 – 18 x 1 (Ref 1) going through the finishing blade, matting, and bottom strap (Ref 17).
8. Place the three groomer blades (Ref 19) under the three rake assemblies as shown, using (Ref 3).
9. Attach the rake lift to the trap rake hitch.
10. The end links of chain on the drawbar are to be hooked to the hooks of the trap rake lift.
11. With the rake on the ground pull the rake to the right side until it is 2-3 inches from the tire.
12. Using the adjustment screw on the right side of hitch, adjust the screw until it hits the trap rake hitch, located on rear axle. Lock jam nut so adjustment will not change.
13. Repeat steps 8 and 9 on left side.
14. Turn machine on and test for operation of rake assembly by raising and lowering the rake assembly. Also with rake down, turn sharp corners to check that rake does not touch wheels.

NOTE: Test rake in sand to assure tire tracks are covered by the rake when turning sharp corners in either direction. If there are tire tracks, readjust using the adjusting screws on the hitch, so the rake comes closer to the tire.

**42-128 72" (183 CM) STAINLESS STEEL TOURNAMENT RAKE
DRAWING**



**42-026 84" (213 CM) STAINLESS STEEL TOURNAMENT RAKE
DRAWING**



42-128 72" (183 CM) STAINLESS STEEL TOURNAMENT RAKE PARTS LIST

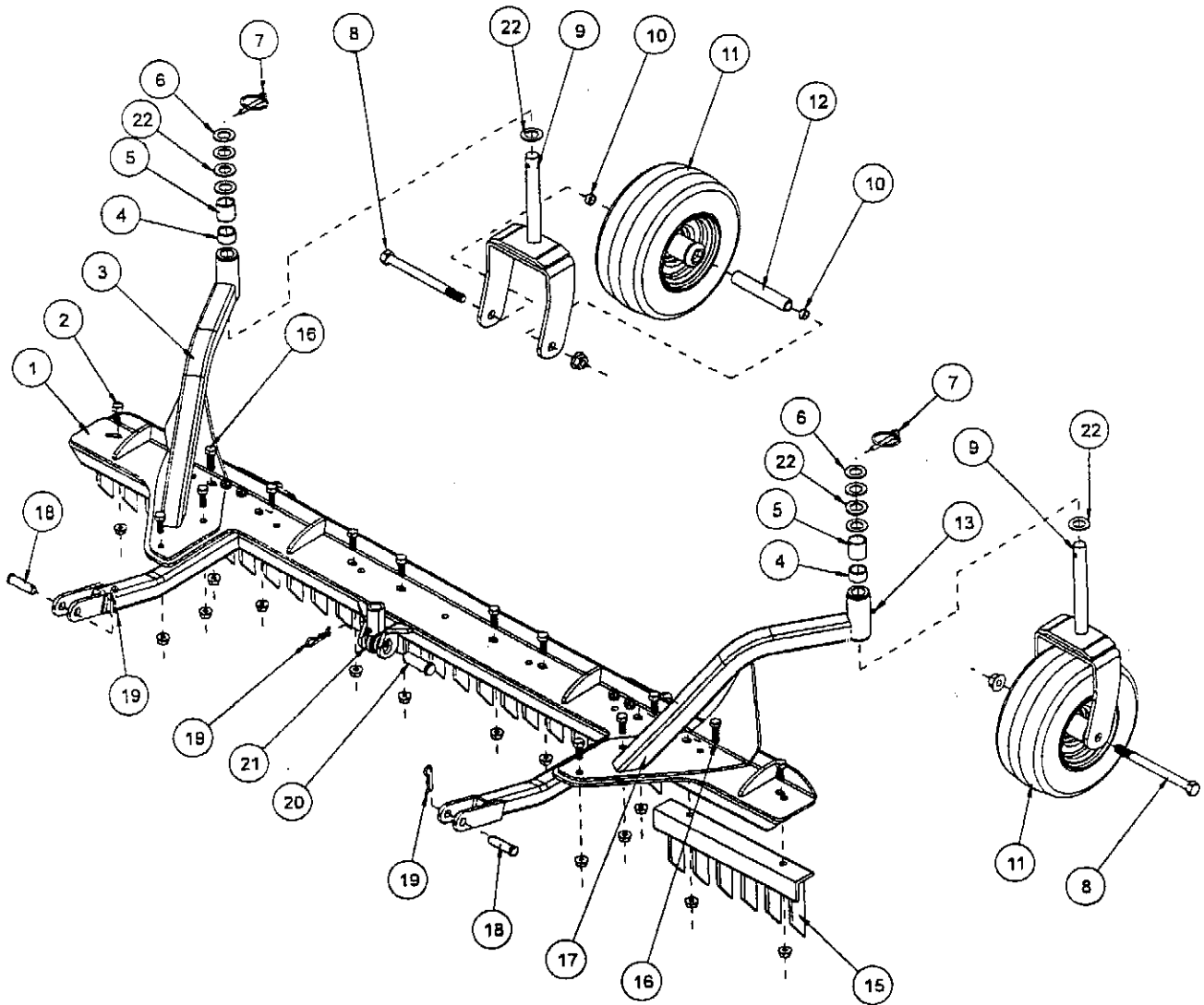
| REF# | PART# | DESCRIPTION | QTY. |
|------|-----------------|---|------|
| 1 | HSTS-516-18-100 | Stainless Steel Truss Head Screw 5/16-18 x 1 | 16 |
| | HWL-516 | Lock Washer 5/16 | 16 |
| | HN-516-18 | Nut 5/16 - 18 | 16 |
| 3 | HSTS-516-18-075 | Stainless Steel Truss Head Screw 5/16-18x3/4 | 6 |
| | HWL-516 | Lock Washer 5/16 | 6 |
| | HN-516-18 | Nut 5/16 - 18 | 6 |
| 4 | 42-111 | Left Outside Mount | 1 |
| 5 | 42-140 | Outside Rake | 2 |
| 6 | HRP-14-100 | Roll Pin 1/4 x 1 | 2 |
| 7 | HMB-58-14 | Machine Bushing 5/8 x 14GA | 4 |
| 8 | 20-018 | Oilite Bushing (comes with 42-141) | 4 |
| 9 | 42-141 | Draw Bar | 1 |
| 10 | HCP-12-450 | Clevis Pin 1/2 x 4 1/2 | 1 |
| 11 | 13-647 | Hitch | 1 |
| | HSSQ-38-16-200 | Square Head Set Screw 3/8 -16 x 2 (adjustment screw) | 2 |
| | HN-38-16 | Nut 3/8 -16 | 2 |
| | HCP-12-150 | Clevis Pin 1/2 x 1 1/2 | 1 |
| | HHP-18 | Bridge Pin 1/8 | 1 |
| 12 | HP-18-100 | Cotter Pin 1/8 x 1 | 1 |
| 13 | HBS-14-20-150 | Stainless Steel Bolt 1/4 -20 x 1 1/2 | 1 |
| | HNTL-14-20 | Lock Nut 1/4 - 20 | 1 |
| 14 | HSTS-38-16-100 | Stainless Steel Truss Head Screw 3/8 - 16 x 1 | 12 |
| | HWL-38 | Lock Washer 3/8 | 12 |
| | HN-38-16 | Nut 3/8 -16 | 12 |
| 15 | 42-109 | Outside Towel Mount | 1 |
| 16 | 42-105 | Top Strap | 4 |
| 17 | 42-106 | Bottom Strap | 4 |
| 18 | 42-122 | Rake Spring | 12 |
| 19 | 42-137 | Finishing Blades | 4 |
| 20 | 42-107 | Matting | 4 |
| 21 | HNC-14-20 | Cap Nut 1/4 - 20 | 2 |
| | HWL-14 | Lock Washer 1/4 | 2 |
| 23 | 42-116 | Rubber Insert | 2 |
| 24 | 42-110 | Left Inside Mount | 1 |
| 25 | 42-139 | Center Rake | 1 |
| 26 | 42-108 | Inside Trowel Mount | 1 |
| 27 | 42-177 | Spring Holder | 12 |
| 28 | HSTS-38-16-125 | Stainless Steel Truss Head Screw 3/8 - 16 x 1 1/4 | 4 |
| | HWL-38 | Lock Washer 3/8 | 4 |
| | HN-38-16 | Nut 3/8 -16 | 4 |
| 29 | 15-013 | Rubber Bumper | 2 |
| 30 | 42-138 | Groomer Blades | 3 |
| 31 | 8892-6 | Hose Wrap | 2 |

42-128 INSTALLATION INSTRUCTIONS

1. Attach drawbar (Ref 9) to hitch (Ref 11) using clevis pin (Ref 10) and cotter pin (Ref 12).
2. Bolt rake spring (Ref 18) to rake frames (Ref 5 & 25) using hardware (Ref 14). Leave the two outside holes on right, left, and center rake open.
3. Attach rubber bumper (Ref 29) using cap nut and lock washer (Ref 21). Attach the rubber inserts (Ref 23) to the inside mounts (Ref 24 & 26).
4. Attach the left outside mount (Ref 4), the left inside mount (Ref 24), the outside trowel mount (Ref 15), and the inside trowel mount (Ref 26) to the outside and center rakes (Ref 5 & 25) as shown. Use the 1" stainless steel truss head screws (Ref 14) on the outside hole of each rake. Use the spring holder (Ref 27) and the 1 ¼" stainless steel truss head screws (Ref 28) to attach rake springs (Ref 18) to the rakes under the left outside and inside mounts and the outside and inside trowel mounts.
5. Slide a machine bushing onto outside rake frames then slide the outside rake frames (Ref 5) into the tubing on the end of the drawbar. Hold in place with another machine bushing and a roll pin (Ref 6).
6. Attach center rake (Ref 25) to drawbar (Ref 9) as shown, using 1 ½ stainless steel bolts and lock nuts (Ref 13) with the shaft of the center rake between the tabs on the bottom of the drawbar.
7. Attach the matting (Ref 20) and the top strap (Ref 16) to the inside and outside mounts using stainless steel truss head screw 5/16 – 18 x 1 (Ref 1). Attach four finishing blades (Ref 19) to the matting on the inside and outside mounts with the stainless steel truss head screw 5/16 – 18 x 1 (Ref 1) going through the finishing blade, matting, and bottom strap (Ref 17).
8. Place the three groomer blades (Ref 30) under the three rake assemblies as shown, using (Ref 3).
9. Attach the rake lift to the trap rake hitch.
10. The end links of chain on the drawbar are to be hooked to the hooks of the trap rake lift.
11. With the rake on the ground pull the rake to the right side until it is 2-3 inches from the tire.
12. Using the adjustment screw on the right side of hitch, adjust the screw until it hits the trap rake hitch, located on rear axle. Lock nut so adjustment will not change.
13. Repeat steps 8 and 9 on left side.
14. Turn machine on and test for operation of rake assembly by raising and lowering the rake assembly. Also with rake down, turn sharp corners to check that rake does not touch wheels.

NOTE: Test rake in sand to assure tire tracks are covered by the rake when turning sharp corners in either direction. If there are tire tracks readjust, using the adjusting screws on the hitch, so the rake comes closer to the tire.

42-178 SCARIFIER MOUNTING DRAWING



42-178 INFIELD SCARIFIER WITH VERTICAL BLADES PARTS LIST

| REF.# | PART# | DESCRIPTION | QTY. |
|-------|--------------|--|------|
| 1 | 42-203 | Attachment Lift Assembly | 1 |
| 2 | HB-38-16-100 | Bolt 3/8 – 16 x 1 | 12 |
| | HNTL-38-16 | Lock Nut 3/8 – 16 | 12 |
| 3 | 42-205 | Left Castor Wheel Bracket | 1 |
| | 18-221 | Bushing (part of 42-205) | 2 |
| 4 | 42-215 | Short Spacer | 2 |
| 5 | 42-214 | Long Spacer | 2 |
| 6 | HMB-34-14 | Machine Bushing 3/4 x 14GA | 2 |
| 7 | 42-539 | Lynch Pin 5/16 | 2 |
| 8 | HB-12-13-600 | Bolt 1/2 - 13 x 6 | 2 |
| | HNTL-12-13 | Lock Nut 1/2 - 13 | 2 |
| 9 | 42-204 | Castor Fork | 2 |
| 10 | 42-212 | Castor Wheel Spacer | 4 |
| 11 | 42-202 | Tire and Wheel | 2 |
| | 42-202-01 | Tire 9 x 3.5 x 4 Ply | 2 |
| | 42-202-02 | Wheel | 2 |
| 12 | 42-213 | Axle Bearing | 2 |
| 13 | HG-14-28-180 | Grease Fitting 1/4 - 28 x 180° (part of 42-205 and 42-206) | 2 |
| 15 | 26-042 | Tine Segment | 5 |
| 16 | HB-38-16-125 | Bolt 3/8 – 16 x 1 1/4 | 2 |
| | HNTL-38-16 | Lock Nut 3/8 – 16 | 2 |
| 17 | 42-206 | Right Castor Wheel Bracket | 1 |
| | 18-221 | Bushing (part of 42-205) | 2 |
| 18 | HCP-12-175 | Clevis Pin 1/2 x 1 3/4 | 2 |
| 19 | HHP-18 | Bridge Pin 1/8 | 3 |
| 20 | HCP-58-250 | Clevis Pin 5/8 x 2 1/2 | 1 |
| 21 | 18-154 | Rod End (part of machine) | 1 |
| 22 | HMB-34-10 | Machine Bushing 3/4 x 10GA | 8 |

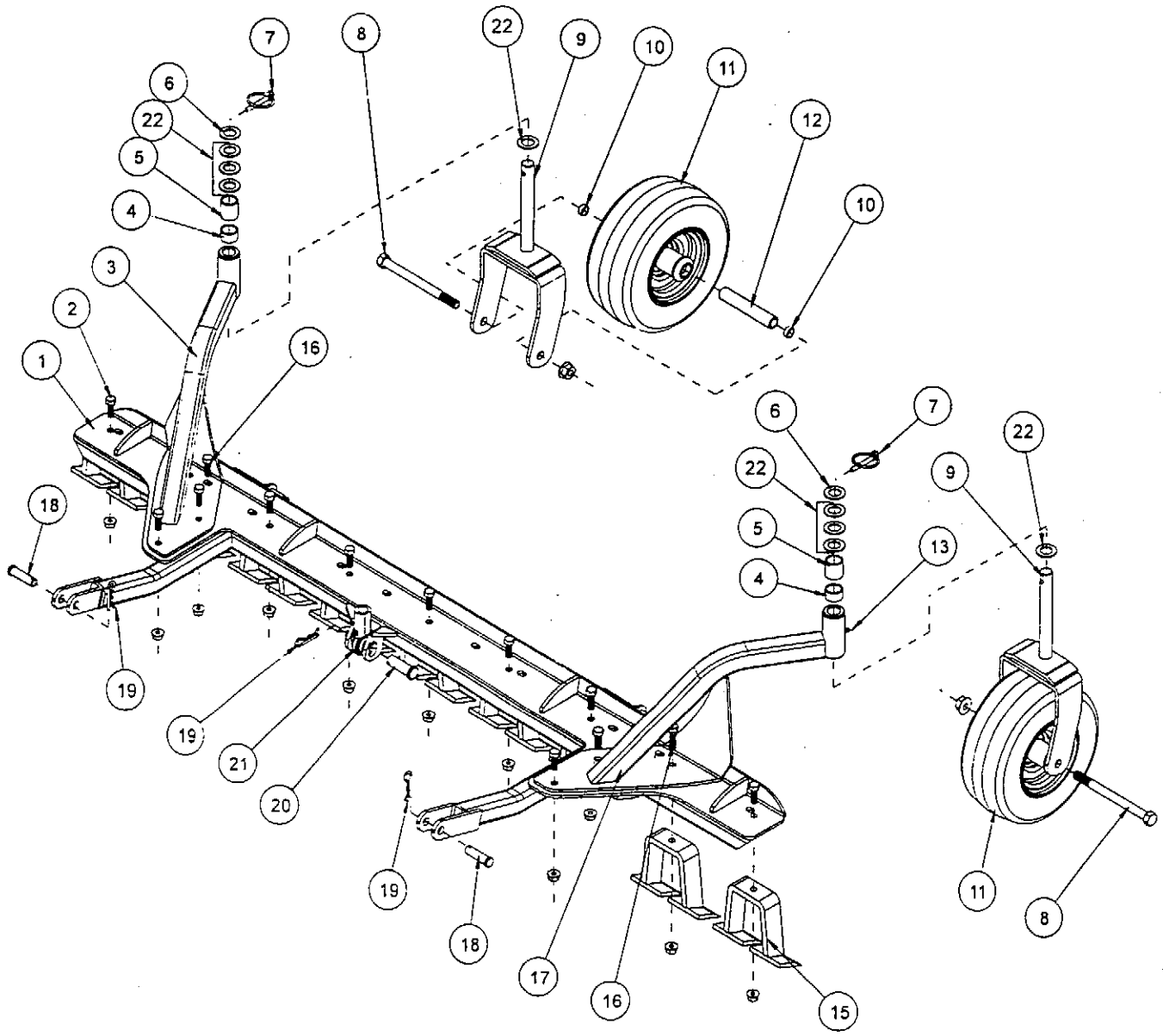
42-178 SCARIFIER MOUNTING PARTS LIST

| REF.# | PART# | DESCRIPTION | QTY. |
|-------|--------------|----------------------------------|------|
| 1 | HHP-18 | Bridge Pin 1/8 | 3 |
| 2 | 50-456 | Hydraulic Cylinder | 1 |
| 3 | HCP-58-175 | Clevis Pin 5/8 x 1 3/4 | 1 |
| 4 | HB-12-13-500 | Bolt 1/2 - 13 x 5 | 4 |
| | HNTL-12-13 | Lock Nut 1/2 - 13 | 4 |
| 5 | HCP-12-175 | Clevis Pin 1/2 - 1 3/4 | 2 |
| 6 | 18-154 | Rod End | 1 |
| 7 | 42-217 | Cylinder Mount (part of machine) | 1 |

INSTALLATION INSTRUCTIONS

1. Assemble the Scarifier as shown on previous page.
2. Remove the rod end (Ref 6) on the hydraulic cylinder (Ref 2) from the cylinder mount (Ref 7). Remove the cylinder mount (Ref 7) from the machine.
3. Place the handle and linkage onto the empty linkage port of the two bank valve on the machine.
4. Slide the Scarifier under the machine lining up the hydraulic cylinder and the center of the attachment lift assembly.
5. Extend hydraulic cylinder all the way down by pushing the lever forward.
6. Mount the rod end of the cylinder onto the attachment lift assembly and secure with a clevis pin and bridge pin.
7. Attach the arms on the attachment lift to the attachment mount on the machine and secure with clevis pin and bridge pin.
8. Turn machine on and test for proper operation.
9. Adjust castor wheels by placing the short or long spacer on the castor wheel fork before placing the castor wheel assembly into the castor wheel brackets. Be sure both castor wheels are adjusted to the same height.

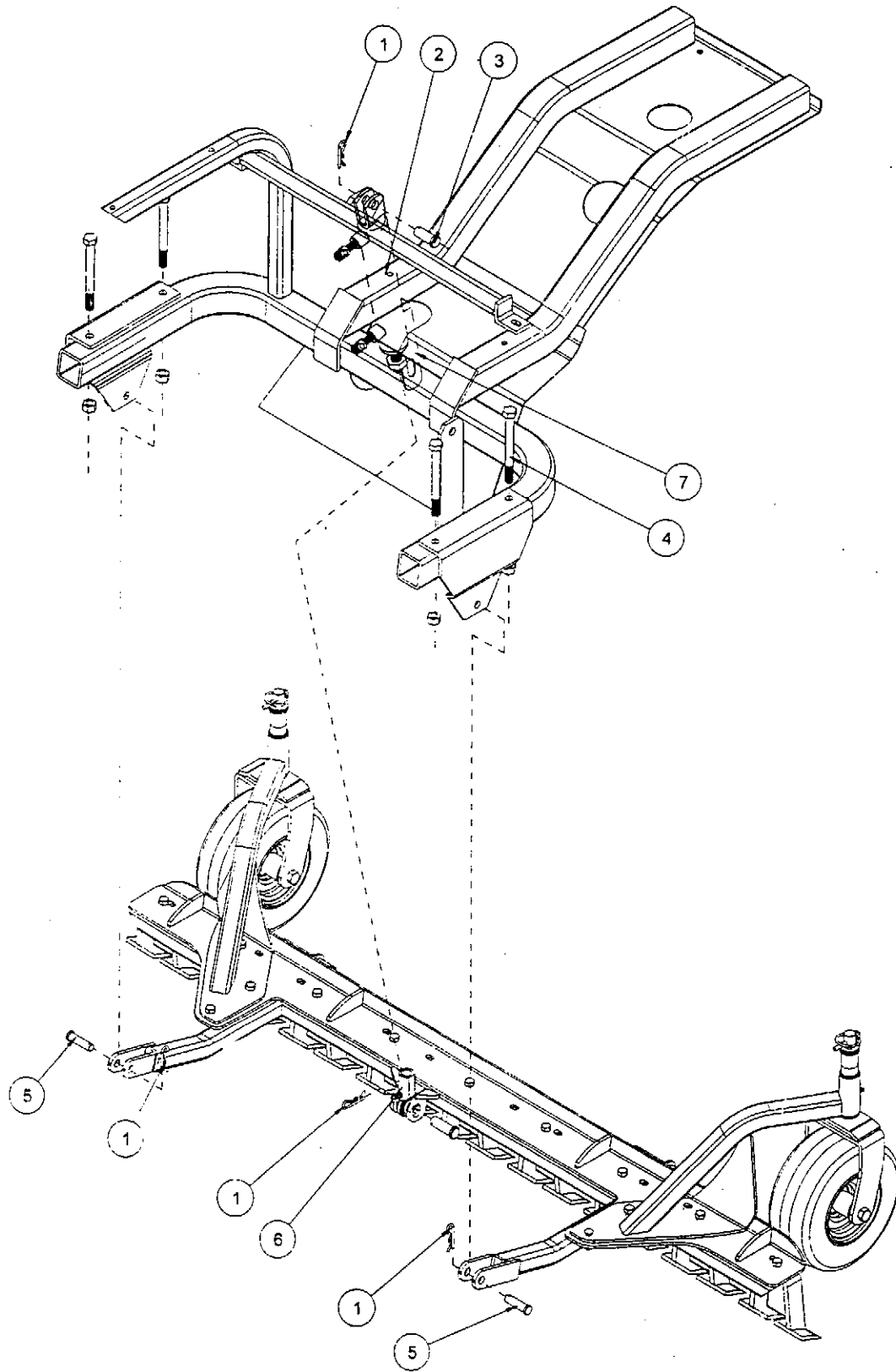
42-179 INFIELD SCARIFIER WITH CHISEL BLADES DRAWING



42-179 INFIELD SCARIFIER WITH CHISEL BLADES PARTS LIST

| REF.# | PART# | DESCRIPTION | QTY. |
|-------|--------------|---|------|
| 1 | 42-203 | Attachment Lift Assembly | 1 |
| 2 | HB-38-16-125 | Bolt 3/8 – 16 x 1 1/4 | 11 |
| | HNTL-38-16 | Lock Nut 3/8 –16 | 11 |
| 3 | 42-205 | Left Castor Wheel Bracket | 1 |
| | 18-221 | Bushing (part of 42-205) | 2 |
| 4 | 42-215 | Short Spacer | 2 |
| 5 | 42-214 | Long Spacer | 2 |
| 6 | HMB-34-14 | Machine Bushing 3/4 x 14GA | 2 |
| 7 | 42-539 | Lynch Pin 5/16 | 2 |
| 8 | HB-12-13-600 | Bolt 1/2 - 13 x 6 | 2 |
| | HNTL-12-13 | Lock Nut 1/2 -13 | 2 |
| 9 | 42-204 | Castor Fork | 2 |
| 10 | 42-212 | Castor Wheel Spacer | 4 |
| 11 | 42-202 | Tire and Wheel | 2 |
| | 42-202-01 | Tire 9 x 3.5 x 4 Ply | 2 |
| | 42-202-02 | Wheel | 2 |
| 12 | 42-213 | Axle Bearing | 2 |
| 13 | HG-14-28-180 | Grease Fitting 1/4 -28 x 180° (part of 42-205 and 42-206) | 2 |
| 15 | 13-114 | Digger Blade | 9 |
| 16 | HG-38-16-150 | Bolt 3/8 – 16 x 1 1/2 | 2 |
| | HNTL-38-16 | Lock Nut 3/8 –16 | 2 |
| 17 | 42-206 | Right Castor Wheel Bracket | 1 |
| | 18-221 | Bushing (part of 42-205) | 2 |
| 18 | HCP-12-175 | Clevis Pin 1/2 x 1 3/4 | 2 |
| 19 | HHP-18 | Bridge Pin 1/8 | 3 |
| 20 | HCP-58-250 | Clevis Pin 5/8 x 2 1/2 | 1 |
| 21 | 18-154 | Rod End (part of machine) | 1 |
| 22 | HMB-34-10 | Machine Bushing 3/4 x 10GA | 8 |

42-179 SCARIFIER MOUNTING DRAWING



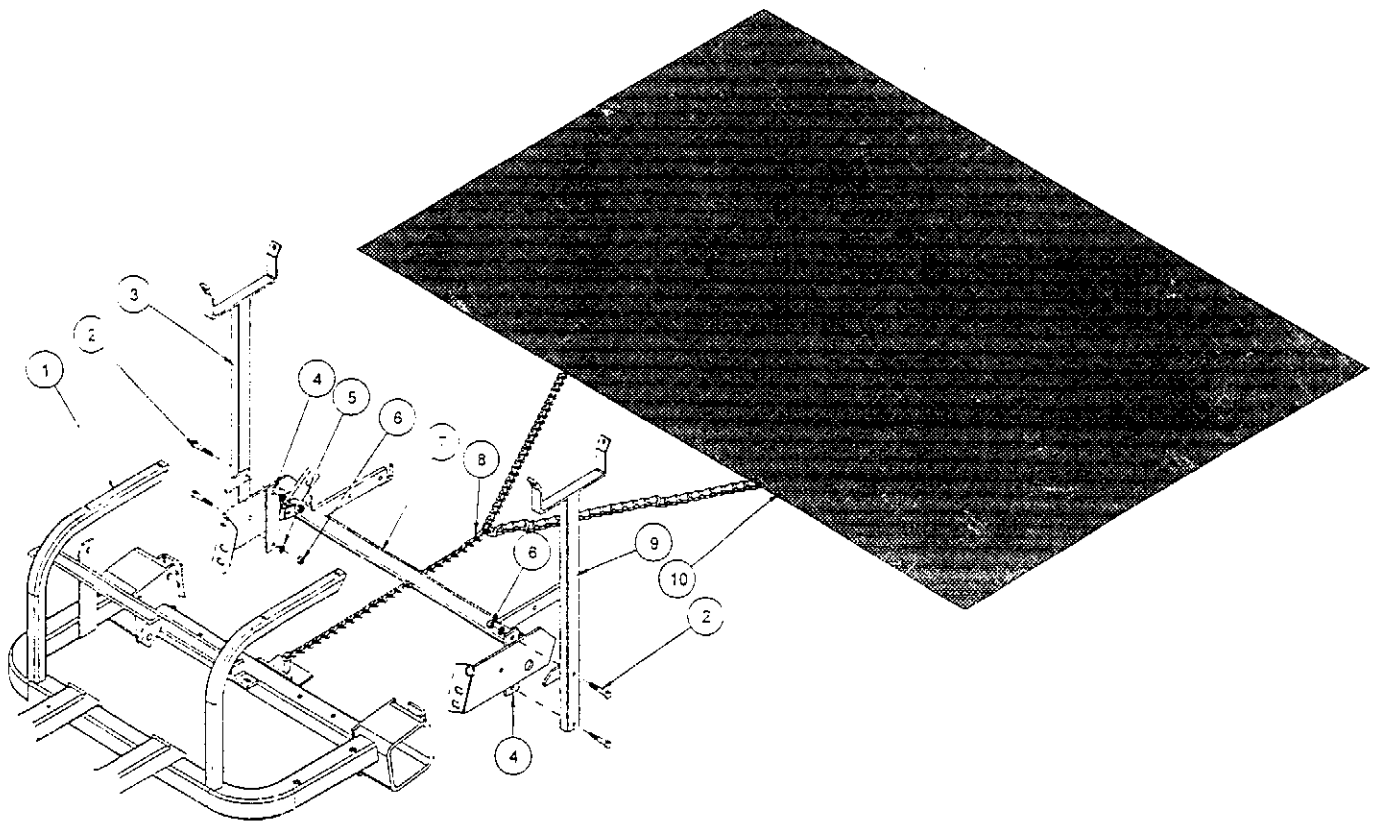
42-179 SCARIFIER MOUNTING PARTS LIST

| REF.# | PART# | DESCRIPTION | QTY. |
|-------|--------------|----------------------------------|------|
| 1 | HHP-18 | Bridge Pin 1/8 | 3 |
| 2 | 50-456 | Hydraulic Cylinder | 1 |
| 3 | HCP-58-175 | Clevis Pin 5/8 x 1 3/4 | 1 |
| 4 | HB-12-13-500 | Bolt 1/2 - 13 x 5 | 4 |
| | HNTL-12-13 | Lock Nut 1/2 -13 | 4 |
| 5 | HCP-12-175 | Clevis Pin 1/2 - 1 3/4 | 2 |
| 6 | 18-154 | Rod End | 1 |
| 7 | 42-217 | Cylinder Mount (part of machine) | 1 |

INSTALLATION INSTRUCTIONS

1. Assemble the Scarifier as shown on previous page.
2. Remove the rod end (Ref 6) on the hydraulic cylinder (Ref 2) from the cylinder mount (Ref 7). Remove the cylinder mount (Ref 7) from the machine.
3. Place the handle and linkage onto the empty linkage port of the two bank valve on the machine.
4. Slide the Scarifier under the machine lining up the hydraulic cylinder and the center of the attachment lift assembly.
5. Extend hydraulic cylinder all the way down by pushing the lever forward.
6. Mount the rod end of the cylinder onto the attachment mount on the machine and secure with clevis pin and bridge pin.
7. Attach the arms on the attachment lift to the attachment mount on the machine and secure with clevis pin and bridge pin.
8. Turn machine on and test for proper operation.
9. Adjust castor wheels by placing the short or long spacer on the castor wheel fork before placing the castor wheel assembly into the castor wheel brackets. Be sure both castor wheels are adjusted to the same height.

42-185 DRAG MAT KIT DRAWING



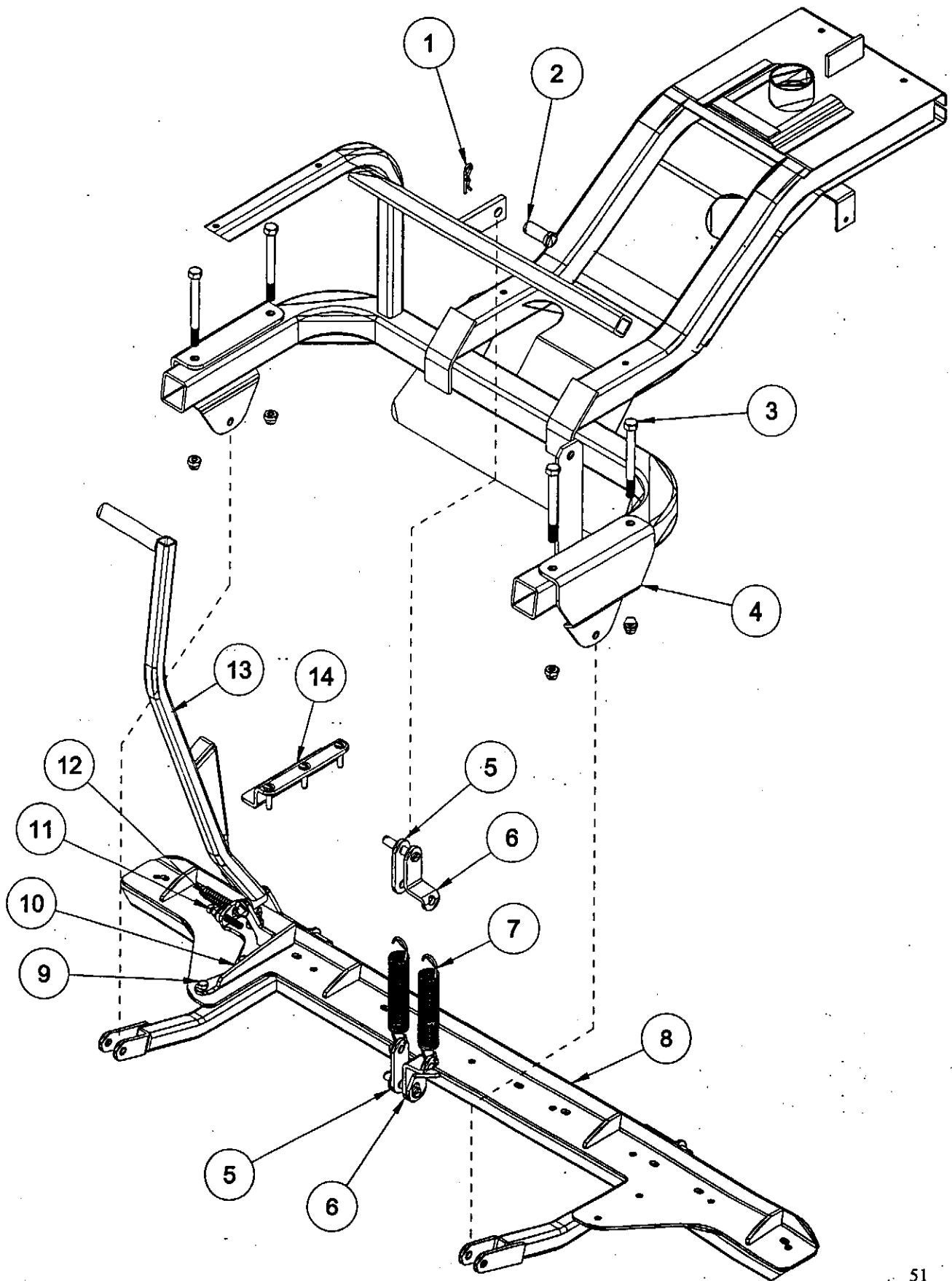
42-185 DRAG MAT KIT PARTS LIST

| REF# | PART# | DESCRIPTION | QTY. |
|------|--------------|-----------------------------|------|
| 1 | | Main Frame | 1 |
| 2 | HB-38-16-225 | Bolt 3/8 – 16 x 2 1/4 | 4 |
| 3 | 42-186 | Right Mat Carrier | 1 |
| 4 | 13-157 | Strap | 2 |
| 5 | HWL-38 | Lock Washer 3/8 | 4 |
| 6 | HN-38-16 | Nut 3/8 –16 | 4 |
| 7 | 42-024 | Rake Lift (part of machine) | 1 |
| 8 | 19-605 | Drag Mat Chain | 1 |
| | HHP-18 | Bridge Pin 1/8 | 1 |
| 9 | 42-187 | Left Mat Carrier | 1 |
| 10 | 19-601 | Steel Mat | 1 |

INSTALLATION INSTRUCTIONS

1. Looking from the rear of the unit, mount the mat carrier posts (Ref 3 & 9) outside the rear corner of the rake lift with the straps (Ref 4) on the inside of the rake lift side plate. Bolt into place with 3/8 – 16 x 2 ¼ bolts, lockwasher and nuts.
2. To carry the Drag Mat, roll it up and place it in the brackets of the mat carriers.
3. To use the Drag Mat, unroll the mat flat and hook it up to the hitch with the clevis pin in the chain and the bridge pin provided.

42-401 MANUAL LIFT DRAWING



42-401 MANUAL LIFT PARTS LIST

| REF# | PART# | DESCRIPTION | QTY. |
|------|-----------------|--|------|
| 1 | HP-18-100 | Cotter Pin 1/8" x 1" | 3 |
| 2 | HCP-12-250 | Clevis Pin 1/2" x 2 1/2" | 3 |
| | HW-12 | Washer 1/2" | 8 |
| 3 | | Bolt 1/2" – 13 x 5 | 4 |
| | | Lock Nut 1/2 - 13 | 4 |
| 4 | | Attachment Mount | 2 |
| 5 | 42-383 | Flat Spring Bracket | 2 |
| 6 | 42-384 | Offset Spring Bracket | 2 |
| 7 | 21-445 | Spring | 2 |
| 8 | | Attachment Lift | 1 |
| 9 | HB-38-16-125 | Bolt 3/8" – 16 x 1 1/4" | 3 |
| | HNTL-38-16 | Lock Nut 3/8" – 16 | 3 |
| 10 | 42-382 | Lift Handle Mount | 1 |
| 11 | HSSQ-38-16-250 | Square Head Set Screw 3/8" – 16 x 2 1/2" | 1 |
| 12 | HB-516-18-400 | Bolt 5/16" – 18 x 4" | 1 |
| | HW-516 | Washer 5/16" | 2 |
| | 11-055 | Die Spring | 1 |
| | HNFL-516-18 | Flange Whiz Lock Nut 5/16" – 18 | 1 |
| 13 | 42-381 | Attachment Lift Handle | 1 |
| | 15-019 | Round Grip | 1 |
| 14 | 42-385 | Handle Lock Bracket (Bolts to LH Floorboard) | 1 |
| | HSTP-516-18-150 | Phillips Machine Screw 5/16" – 18 x 1 1/2" | 3 |
| | HW-516 | Washer 5/16" | 3 |
| | HNTL-516-18 | Lock nut 5/16" – 18 | 3 |

41-401 MANUAL LIFT PACKING LIST

| PART# | DESCRIPTION | QTY. |
|--------|------------------------|------|
| 42-381 | Attachment Lift Handle | 1 |
| 42-382 | Lift Handle Mount | 1 |
| 42-385 | Handle Lock Bracket | 1 |

SMALL PARTS BAG

| PART# | DESCRIPTION | QTY. |
|-----------------|--|------|
| 11-055 | Die Spring | 1 |
| 15-019 | Round Grip | 1 |
| 21-445 | Spring | 2 |
| 42-383 | Flat Spring Bracket | 2 |
| 42-384 | Offset Spring Bracket | 2 |
| HB-38-16-125 | Bolt 3/8" – 16 x 1 1/4" | 3 |
| HB-516-18-400 | Bolt 5/16" – 18 x 4" | 1 |
| HCP-12-250 | Clevis Pin 1/2" x 2 1/2" | 3 |
| HNFL-516-18 | Flange Whiz Lock Nut 5/16" – 18 | 1 |
| HNTL-38-16 | Lock Nut 3/8" – 16 | 3 |
| HNTL-516-18 | Lock Nut 5/16" – 18 | 3 |
| HP-18-100 | Cotter Pin 1/8" x 1" | 3 |
| HSSQ-38-16-250 | Square Head Set Screw 3/8" – 16 x 2 1/2" | 1 |
| HSTP-516-18-150 | Phillips Machine Screw 5/16" – 18 x 1 1/2" | 3 |
| HW-12 | Washer 1/2" | 8 |
| HW-516 | Washer 5/16" | 5 |

LIMITED WARRANTY

SMITHCO warrants this product to be free from defects in material and workmanship under normal use for one year from the date of purchase by the original user. (60 days if product is used for rental purposes.) All warranty claims must be handled through a SMITHCO authorized dealer or by SMITHCO, INC. All transportation charges must be paid by the purchaser.

There is no further express warranty. All implied warranties, including those of merchantability and fitness for a particular purpose, are limited to one year. (60 days if product is used for rental purposes) from date of purchase by the original user, and, to the extent permitted by law any and all implied warranties are excluded and disclaimed after the expiration of such period.

All incidental and consequential damages, including pick-up and delivery of the unit, communication, mileage charges and/or rental of a replacement unit during repair, are not covered under this warranty, or is any loss of income and/or other loss resulting from the failure of the product to function due to a warranty defect.

The following items are not covered under the SMITHCO warranty and are warranted by their respective manufacturer.

- a) Engine and engine parts including starters, generators, alternator and filters.
- b) Transaxle, differentials, gear boxes, and mechanical pumps.
- c) Hydrostatic transmissions, hydraulic pumps and motors.
- d) Batteries
- e) Wheels and tires.

A copy of the warranty for the above items is furnished if necessary with each SMITHCO product.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion of limitations of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Federal law now requires disclosure of the warranty which applies to this product prior to the sale to a consumer. Please leave this statement attached to the product and allow the buyer to remove it after purchase.

SMITHCO
Wayne, Pennsylvania 19087

