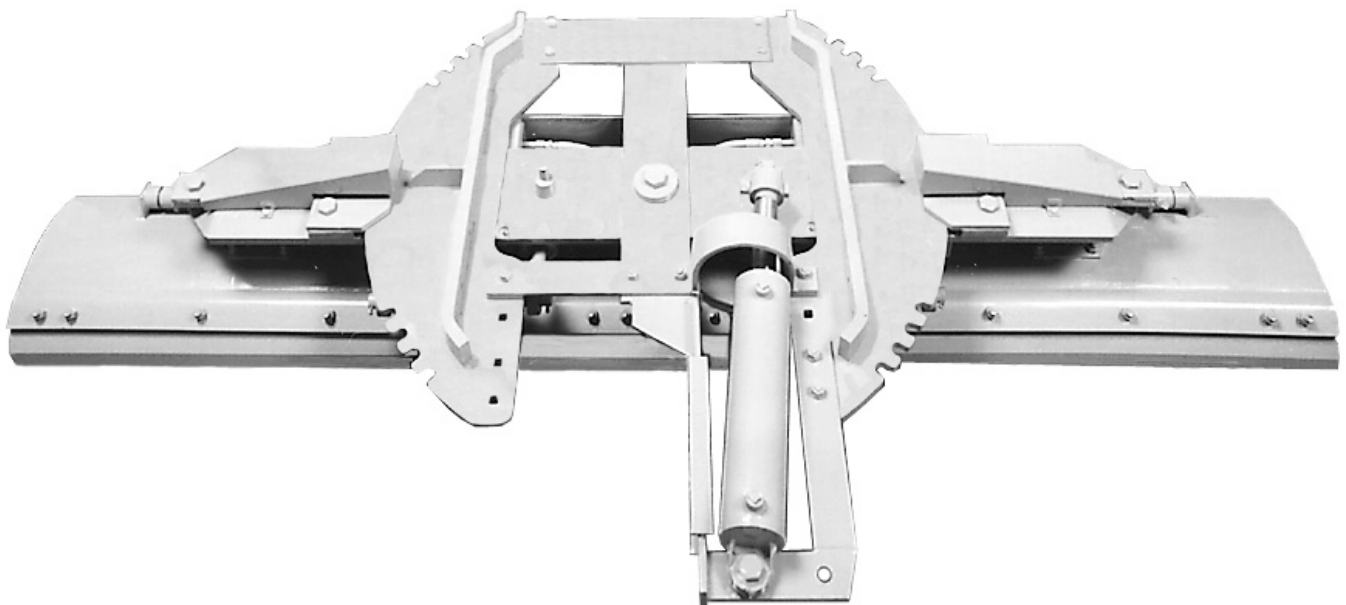




# MS44 SCRAPER

## Installation and Parts Manual



### MONROE SNOW & ICE CONTROL

A Division of Monroe Truck Equipment

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05050753  
12/6/2006



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## SAFETY INSTRUCTIONS

- Read all installation, safety and maintenance instructions completely before operating this equipment.
- Keep all personnel clear of moving parts while scraper is being operated.
- Lower the scraper blade to full down position, apply emergency brake and stop engine before leaving the vehicle to inspect scraper.
- Do not operate truck in reverse with scraper blade in down position!
- Do not operate a scraper in need of maintenance! Repair immediately!
- While operating this equipment use common sense, use caution, be alert and be safety-conscious.
- Do not disconnect hydraulic hoses/fittings with scraper blade in raised position unless properly blocked up.

### CYLINDER OPERATING SAFETY PROCEDURES

- ✓ Operating pressure on the **down side** of the curl or raise/lower cylinders should not exceed 400 psi. The relief valve we furnish is factory preset. It must be installed on the down side of all scrapers. **Changing the pressure may cause damage to the cylinder, possible injury, and will void the warranty.**
- ✓ System pressure should not exceed 1000 psi for the power reverse cylinder(s) or 1850 psi for the upside of the curl cylinders. High pressure systems require additional relief valves (not furnished). **Exceeding these pressures may cause damage to the cylinder, possible injury, and will void the warranty.**

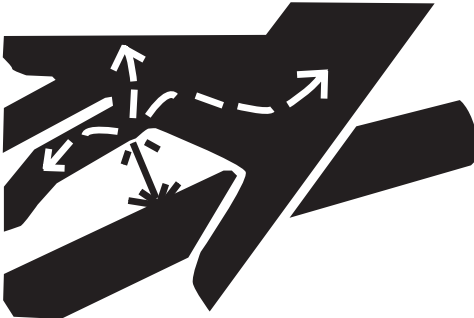
**AVOID HIGH-PRESSURE FLUIDS**

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high pressure fluids.

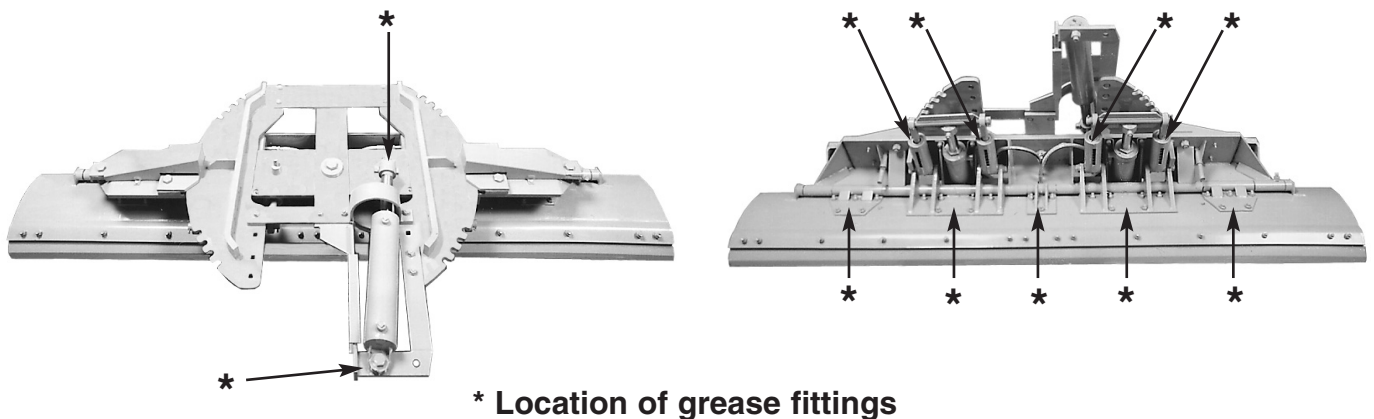
If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.



# MAINTENANCE INSTRUCTIONS

## In Season:

- Check for loose bolts and nuts daily, and re-torque before use. (Failure to inspect equipment on a daily basis may seriously affect safety and/or efficiency.)
- Lubricate all grease fittings every ten hours of normal use and more frequently under heavy use. (See diagram below for locations.)
- Check all hydraulic fittings for tightness on a regular basis.
- Check cutting edge for wear. Do not let cutting edge wear closer than  $\frac{1}{2}$ " to  $\frac{3}{8}$ " from moldboard.
- Due to the nature of use and environment this scraper is operating in, damage and wear may occur at anytime. Therefore, **Monroe Truck Equipment** recommends the end user establish and follow a daily inspection routine before using this scraper.



## Off Season: *(If Applicable)*

- Use care when disconnecting hydraulic lines to assure that no dirt or foreign objects enter the hydraulic system. Use caps to cover hydraulic hose fittings and insert plugs into hydraulic ports.
- Hydraulic cylinders should be fully retracted when stored during the off season to prevent damage or corrosion. The remaining exposed shaft surface should be coated with a thick grease to prevent corrosion, which must be removed before returning to regular service.
- Check mounting bolts for wear and/or damaged threads and replace before re-mounting.

# INSTALLATION INSTRUCTIONS

**NOTICE:** This "Safety Check" ✓ symbol is a reminder to follow all safety messages and precautions involved when installing or operating the MS44 Scraper. It means to be **CAREFUL, ALERT** and **SAFETY CONSCIOUS!!!**

1. Clear the truck frame for mounting space necessary for scraper. You will need 24" of ground clearance for the entire area where the moldboard travels, and 3" clearance above the circle.
2. **FOR 2-PIECE CIRCLE ONLY** - Take the left-hand and right-hand circle pieces (A,B) and lay them out with flat side on a level floor. (The front of the circle is the end with two holes.) Put the "T" bar (C) in between the two circle assemblies, making sure the leg with the big hole is level on the floor with the circle assemblies. That puts the other leg of the "T" on top of the circle assemblies. Put four of the flat head bolts through the holes, so the head is on the bottom of the circle assemblies (D). **DO NOT TIGHTEN YET.**

At this point, choose which side the power reverse cylinder fits into best. If both sides are open it is best to mount cylinder on the same side it discharges to. Install the circle crossbar (E) (Manual Reverse uses a flat piece of metal, Power Reverse has a semi-circle in one end). The radius points up and goes on the same side as the reverse cylinder. All the bolts for attaching the "T" bar on the circle assemblies must be flat head bolts (F). Measure holes across and diagonally to check for squareness and level accuracy - **TIGHTEN BOLTS.**

## Power Reverse, Single Cylinder Assembly

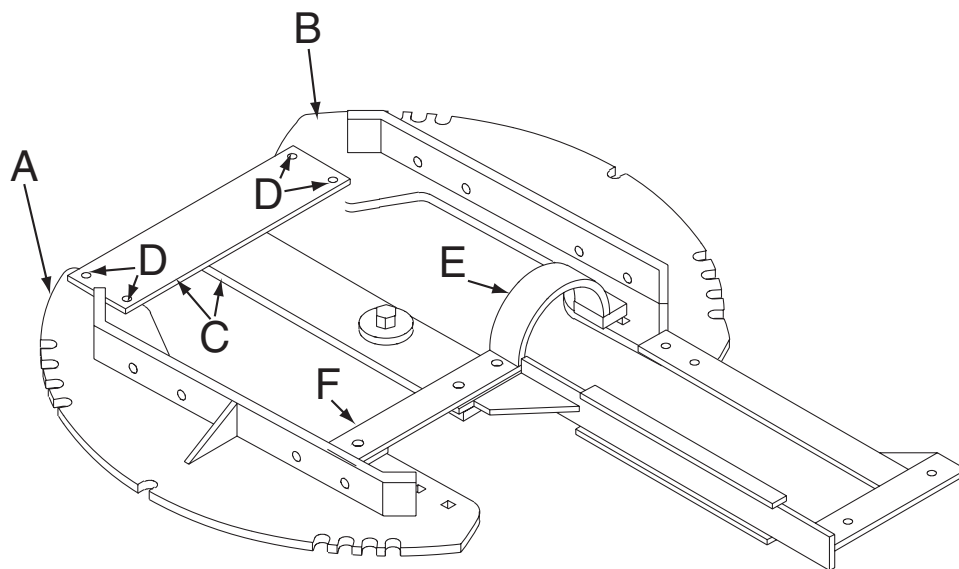


Figure 1

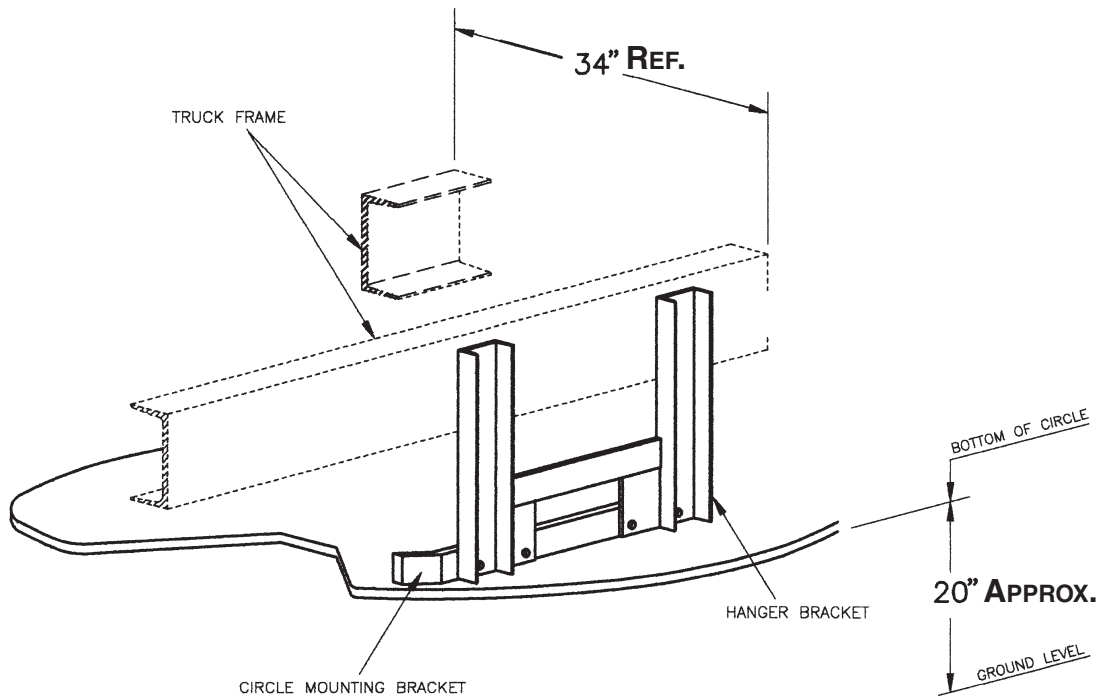
# INSTALLATION INSTRUCTIONS

3. Slide the assembled circle under the truck and raise it into position. The distance from the bottom of the circle assembly to the ground should be approximately 20" (Figure 2). Be sure to square it off the truck frame, not the ground, as some truck frames are not parallel to the ground. ✓ **Stay clear of area beneath circle until it is safely and securely supported. Use Caution!**
4. Move the circle hanger brackets into position. *Note:* The mounting brackets on the circle assembly for the hanger brackets are spaced at 34". Any frame width more than 34" will require the shims we provide. These shims are to be installed between the mounting bracket on the circle assembly and the hanger brackets (Figure 3). Shim equally on both sides.
5. Bolt the hanger brackets (and shims if needed) onto the circle mounting bracket.
6. Locate the hanger brackets on the truck frame in the proper position for the length of the moldboard you have (Figure 4). Clamp the hanger brackets in place.
7. Check all measurements to make sure scraper is located correctly. *Note:* Be sure to square circle assembly off the frame and not off the ground!
8. Drill (6-8)  $\frac{13}{16}$ " diameter holes through each side of the truck frame and hanger brackets and bolt the circle hangers into place with  $\frac{3}{4}$  x  $3\frac{1}{2}$  bolts, top lock nuts & washers included in mounting kit.
9. Raise the hangerboard/moldboard assembly into place. Bolt the circle hold down weldments in place, and install the center bolt. Tighten the center bolt until the hangerboard/ moldboard assembly pivots freely through its entire arc. Install the cotter pin through the slotted nut. **Warning:** It is very important that the hangerboard/ moldboard assembly pivots freely through its entire arc. If everything is mounted level and square, this is easily achieved. If there is a slight problem, a small amount of adjustment in most bolt holes is available. ✓ **Stay clear of area beneath hangerboard/moldboard assembly until it is safely and securely supported. Use Caution!**
10. After everything is installed and adjusted so that the hangerboard/moldboard assembly pivots freely, install the reversing cylinder(s) and plumb (Figure 4). Fasten the rear portion of the cylinder support bracket to the frame or a cross-member. (2 straps and a gusset, tack-welded together, are furnished.) Install the cylinder support bracket so the short leg is between the cylinder and the circle, with the bolt going through the hole.

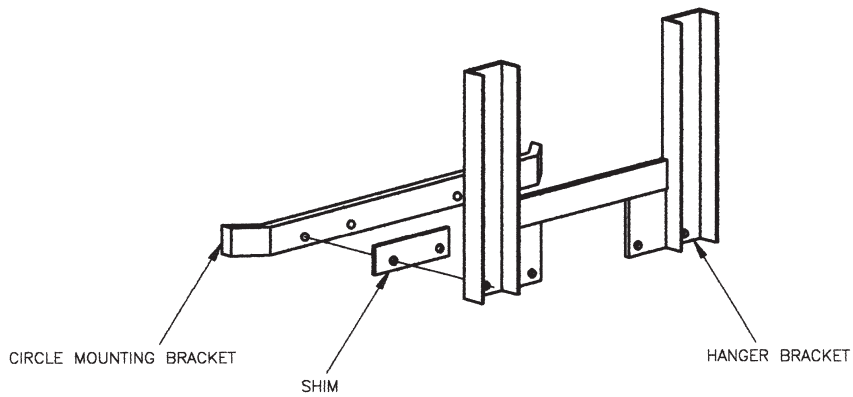
The proper valve for the power angle cylinder is a three position, four-way valve, which requires a hold position in neutral. A single reversing cylinder would require a manual pin lock kit, spring lock kit, or hydraulic lock kit to hold the scraper in the angled position and relieve the reversing cylinder of additional stress. The valve for the curl or blade lift is also a three position, four-way.

# INSTALLATION DIAGRAMS

**Figure 2**



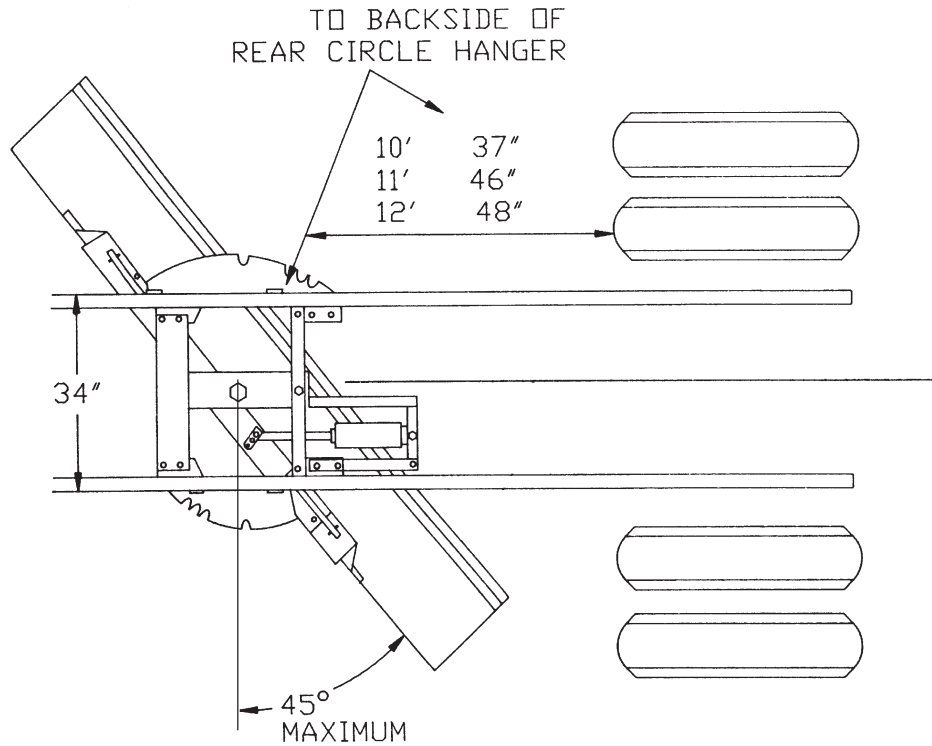
**Figure 3**





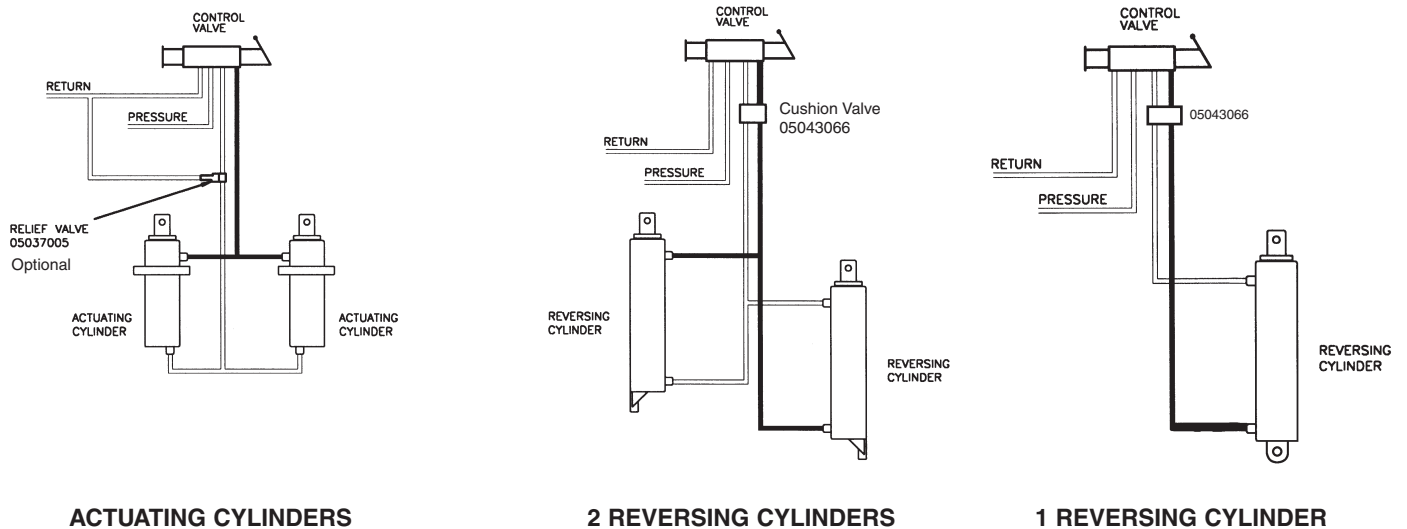
# INSTALLATION DIAGRAMS

**Figure 4**



**Figure 5**

These mounting instructions are intended as a guide to aid you in the installation of your **Monroe Scraper**. All dimensions noted in the instructions are approximate and may vary due to: make and model of chassis, tire size, type of suspension, spring deflection, customer preference, and interference caused by immovable attachments such as a transfer case. Ideally, the scraper should be mounted to get full usage of the cutting edge without wearing into the moldboard. **Monroe Truck Equipment** assumes no responsibility for improper installation, unless installed at a **Monroe Truck Equipment** location. Mounting location should be discussed by the end-user and the installer prior to installation in order to achieve the best possible installation.



# INSTALLATION INSTRUCTIONS

Operate all the functions on the scraper, check for oil leaks. ✓ **Stay clear of area beneath and near hangerboard/moldboard assembly while performing these operating tests. Use Caution!**

## CYLINDER OPERATING SAFETY PROCEDURES




- ✓ Operating pressure on the **down side** of the curl or raise/lower cylinders should not exceed 400 psi. The relief valve we furnish is factory preset. It must be installed on the down side of all scrapers. **Changing the pressure may cause damage to the cylinder, possible injury, and will void the warranty.**
- ✓ System pressure should not exceed 1000 psi for the power reverse cylinder(s) or 1850 psi for the upside of the curl cylinders. High pressure systems require additional relief valves (not furnished). **Exceeding these pressures may cause damage to the cylinder, possible injury, and will void the warranty.**

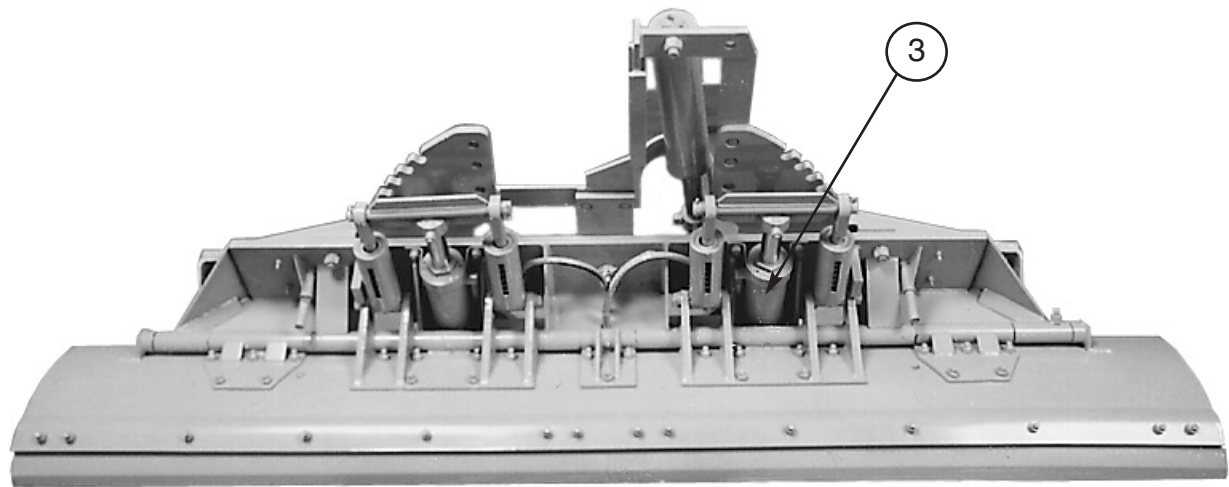
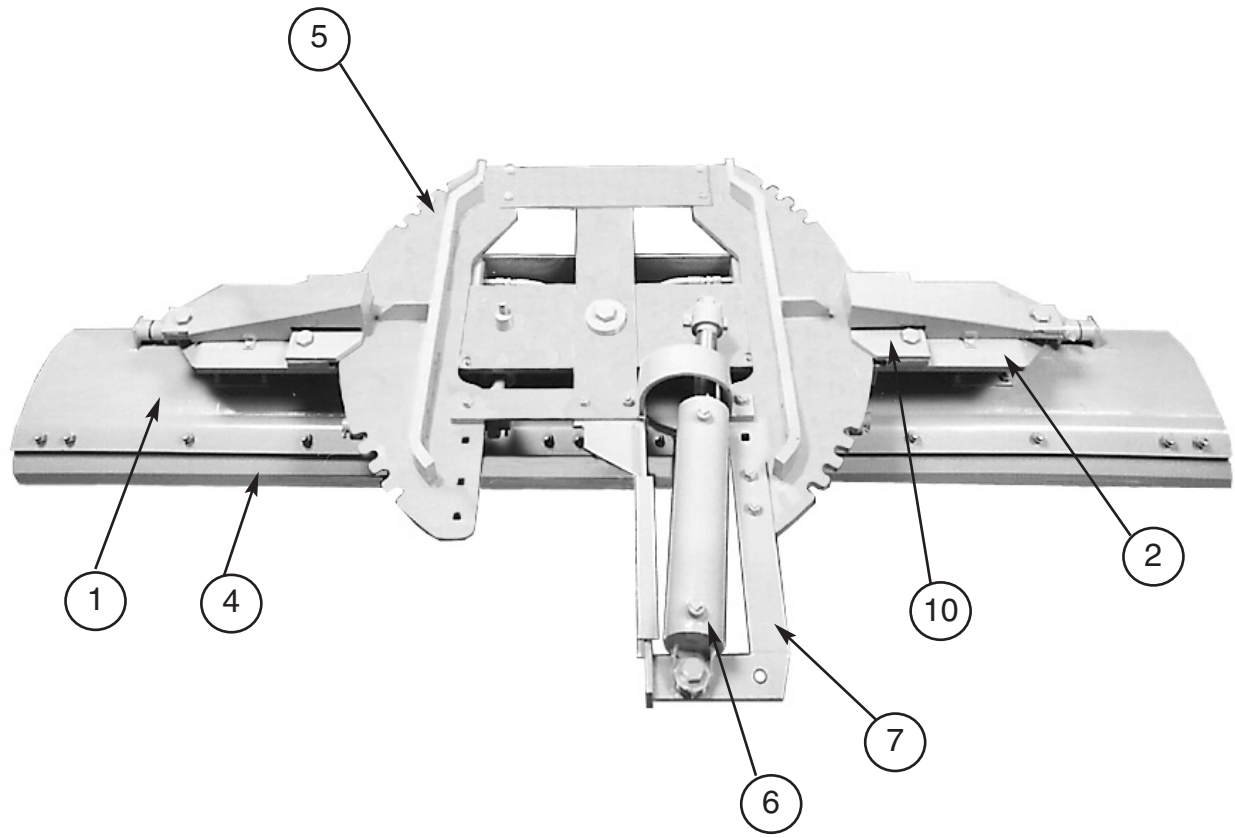
These mounting instructions are intended as a guide to aid you in the installation of your **Monroe Scraper**. All dimensions noted in the instructions are approximate and may vary due to: make and model of chassis, tire size, type of suspension, spring deflection, customer preference, and interference caused by immovable attachments such as a transfer case. Ideally, the scraper should be mounted to get full usage of the cutting edge without wearing into the moldboard. **Monroe Truck Equipment** assumes no responsibility for improper installation, unless installed at a **Monroe Truck Equipment** location. Mounting location should be discussed by the end-user and the installer prior to installation in order to achieve the best possible installation.

## GENERAL INFORMATION

- Location descriptions are noted in direction of travel. (i.e. front, rear, left and right.)
- Delivery of replacement parts is subject to our sales delivery terms.
- Use only **Monroe Truck Equipment** O.E.M. replacement parts. Failure to do so will void warranty.
- Replacement parts listed in this manual reflect our most common MS44 Scraper items. If you do not find the part you require, please call your distributor.
- **Monroe Truck Equipment** reserves the right to make revisions or alterations to this parts manual.

## TORQUE CHART

SIZE	 GRADE 2	 GRADE 5	 GRADE 8
1/4-20	50 IN-LBS	75 IN-LBS	9 FT-LBS
3/8-16	15 FT-LBS	23 FT-LBS	35 FT-LBS
1/2-13	35 FT-LBS	55 FT-LBS	80 FT-LBS
5/8-11	75 FT-LBS	110 FT-LBS	170 FT-LBS
3/4-10	130 FT-LBS	200 FT-LBS	280 FT-LBS
1-8	190 FT-LBS	480 FT-LBS	680 FT-LBS
1 1/4-7	380 FT-LBS	840 FT-LBS	1360 FT-LBS

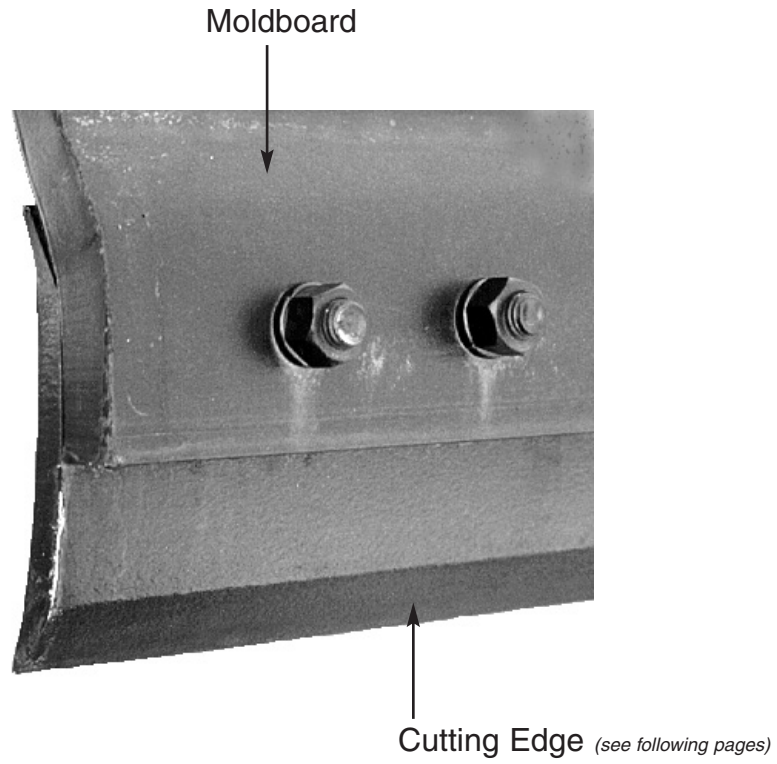


**STANDARD MS44 SCRAPER PARTS LIST**

<b>ITEM</b>	<b>QTY</b>	<b>PART #</b>	<b>DESCRIPTION</b>	<b>SEE PAGE</b>
1	1		Moldboard	12
2	1	05003120	Hangerboard Assembly	16-17
3	1		Actuating Cylinder	51
4	1		Cutting Edge	13-15
5	1		Circle Assembly	23
6	A/R	05002610	Reversing Cylinder	53
7	1		Reversing Kit	25
* 8	1		Hanger Bracket Assembly	27-30
* 9	1		Lock Assembly	31-32
10	1		Hold Down Assembly	34
*11	1		Mounting Kit	40-50

*\* Items are not shown on assembly and are shipped loose.*

# MOLDBOARD SUB-ASSEMBLY



ITEM	QTY	PART #	DESCRIPTION
1	1	05032003	Moldboard, 3/4" x 10'
	1	00075931	Moldboard, 1" x 15 x 10' <i>(Optional)</i>
2	1	05032004	Moldboard, 3/4" x 11'
3	1	05032005	Moldboard, 3/4" x 12'
	1	05032021	Moldboard, 1 x 15 x 12' <i>(Optional)</i>

## 10' Cutting Edge Kits

### CUTTING EDGE KIT ½ X 6 X 10'

ITEM	QTY	PART #	DESCRIPTION
1	2	05031113	Cutting Edge, ½" x 6" x 5', DBC
2	14	05014551	Bolt, ⅝-11 x 2½, G8, Dome Head, Plain
3	14	05020270	Nut, ⅝-11, G8, Hex, Zinc
4	14	05021383	Washer, ⅝, Heavy, Spring Lock, Zinc

### CUTTING EDGE KIT ⅝ X 8 X 10'

ITEM	QTY	PART #	DESCRIPTION
1	2	05031003	Cutting Edge, ⅝" x 8" x 5' DBC
2	14	05014551	Bolt, ⅝-11 x 2½, G8, Dome Head, Plain
3	14	05020270	Nut, ⅝-11, G8, Hex, Zinc
4	14	05021383	Washer, ⅝, Heavy, Spring Lock, Zinc

### CUTTING EDGE KIT ¾ X 6 X 10'

ITEM	QTY	PART #	DESCRIPTION
1	2	05031046	Cutting Edge, ¾" x 6" x 5' DBC
2	14	05014551	Bolt, ⅝-11 x 2½, G8, Dome Head, Plain
3	14	05020270	Nut, ⅝-11, G8, Hex, Zinc
4	14	05021383	Washer, ⅝, Heavy, Spring Lock, Zinc

### CUTTING EDGE KIT 10' CARBIDE

ITEM	QTY	PART #	DESCRIPTION
1	2	05031005	Cutting Edge, ⅝" x 5" x 5' DBC
2	14	05014551	Bolt, ⅝-11 x 2½, G8, Dome Head, Plain
3	14	05020270	Nut, ⅝-11, G8, Hex, Zinc
4	14	05021383	Washer, ⅝, Heavy, Spring Lock, Zinc

## 11' Cutting Edge Kits

### CUTTING EDGE KIT ½ X 6 X 11'

ITEM	QTY	PART #	DESCRIPTION
1	1	05031113	Cutting Edge, ½" x 6" x 5', DBC
2	1	05031114	Cutting Edge, ½" x 6" x 6', DBC
3	15	05014551	Bolt, ⅝-11 x 2½, G8, Dome Head, Plain
4	15	05020270	Nut, ⅝-11, G8, Hex, Zinc
5	15	05021383	Washer, ⅝, Heavy, Spring Lock, Zinc

### CUTTING EDGE KIT ⅝ X 8 X 11'

ITEM	QTY	PART #	DESCRIPTION
1	1	05031003	Cutting Edge, ⅝" x 8" x 5', DBC
2	1	05031004	Cutting Edge, ⅝" x 8" x 6', DBC
3	15	05014551	Bolt, ⅝-11 x 2½, G8, Dome Head, Plain
4	15	05020270	Nut, ⅝-11, G8, Hex, Zinc
5	15	05021383	Washer, ⅝, Heavy, Spring Lock, Zinc

### CUTTING EDGE KIT ¾ X 6 X 11'

ITEM	QTY	PART #	DESCRIPTION
1	1	05031046	Cutting Edge, ¾" x 6" x 5', DBC
2	1	05031047	Cutting Edge, ¾" x 6" x 6', DBC
3	15	05014551	Bolt, ⅝-11 x 2½, G8, Dome Head, Plain
4	15	05020270	Nut, ⅝-11, G8, Hex, Zinc
5	15	05021383	Washer, ⅝, Heavy, Spring Lock, Zinc

### CUTTING EDGE KIT 11' CARBIDE

ITEM	QTY	PART #	DESCRIPTION
1	1	05031107	Cutting Edge, ⅞" x 5" x 3', Carbide, DBC
2	2	05031007	Cutting Edge, ⅞" x 5" x 4', Carbide, DBC
3	17	05014551	Bolt, ⅝-11 x 2½, G8, Dome Head, Plain
4	17	05020270	Nut, ⅝-11, G8, Hex, Zinc
5	17	05021383	Washer, ⅝, Heavy, Spring Lock, Zinc



## 12' Cutting Edge Kits

### CUTTING EDGE KIT ½ X 6 X 12'

ITEM	QTY	PART #	DESCRIPTION
1	2	05031114	Cutting Edge, ½" x 6" x 6', DBC
2	16	05014551	Bolt, ⅝-11 x 2½, G8, Dome Head, Plain
3	16	05020270	Nut, ⅝-11, G8, Hex, Zinc
4	16	05021383	Washer, ⅝, Heavy, Spring Lock, Zinc

### CUTTING EDGE KIT ⅝ X 8 X 12'

ITEM	QTY	PART #	DESCRIPTION
1	2	05031004	Cutting Edge, ⅝" x 8" x 6', DBC
2	16	05014551	Bolt, ⅝-11 x 2½, G8, Dome Head, Plain
3	16	05020270	Nut, ⅝-11, G8, Hex, Zinc
4	16	05021383	Washer, ⅝, Heavy, Spring Lock, Zinc

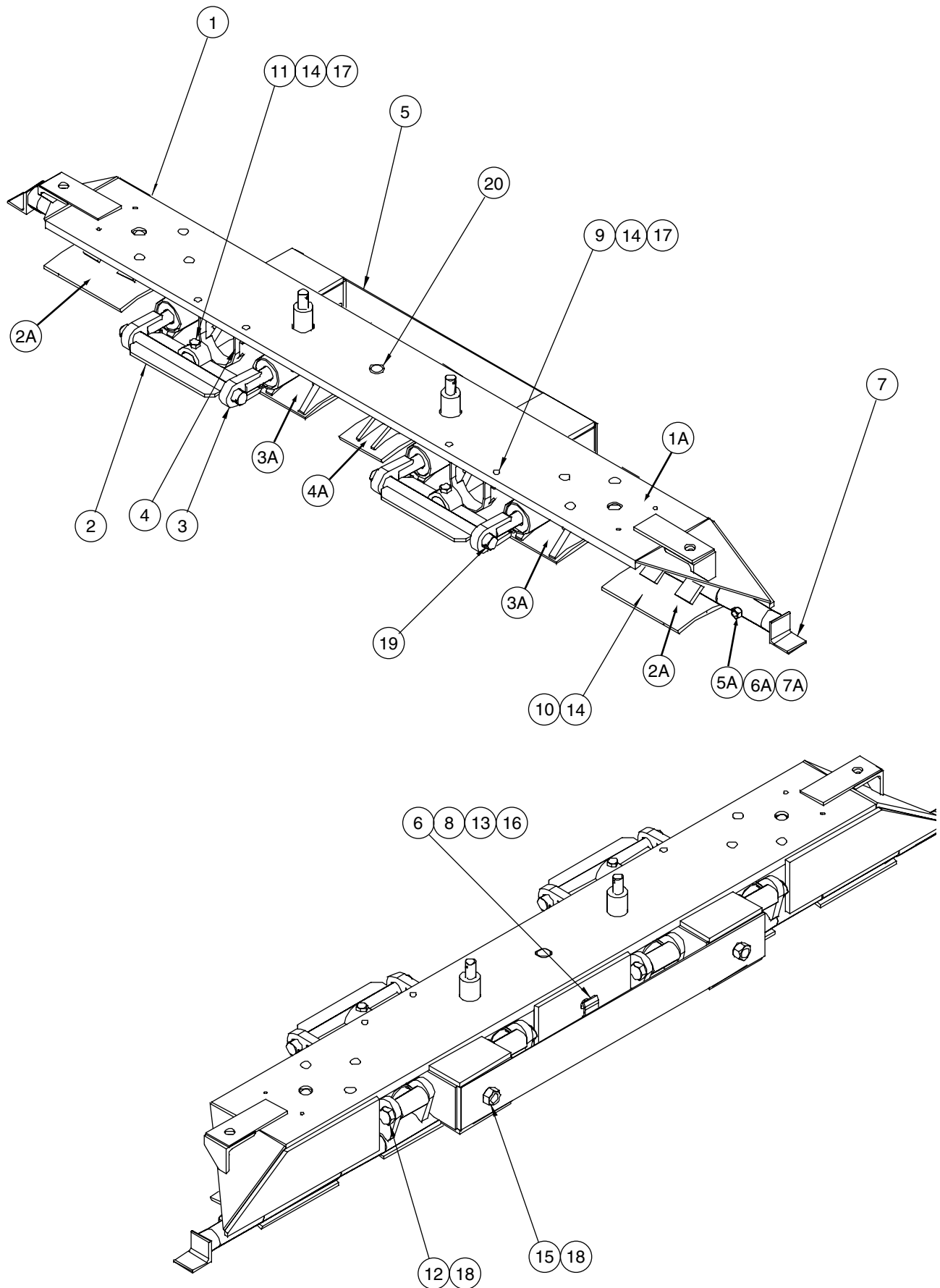
### CUTTING EDGE KIT ¾ X 6 X 12'

ITEM	QTY	PART #	DESCRIPTION
1	2	05031047	Cutting Edge, ¾" x 6" x 6', DBC
2	16	05014551	Bolt, ⅝-11 x 2½, G8, Dome Head, Plain
3	16	05020270	Nut, ⅝-11, G8, Hex, Zinc
4	16	05021383	Washer, ⅝, Heavy, Spring Lock, Zinc

### CUTTING EDGE KIT 12' CARBIDE

ITEM	QTY	PART #	DESCRIPTION
1	2	05031007	Cutting Edge, ⅝" x 6" x 6', DBC
2	18	05014551	Bolt, ⅝-11 x 2½, G8, Dome Head, Plain
3	18	05020270	Nut, ⅝-11, G8, Hex, Zinc
4	18	05021383	Washer, ⅝, Heavy, Spring Lock, Zinc

# 10',11' & 12' HANGERBOARD ASSEMBLY

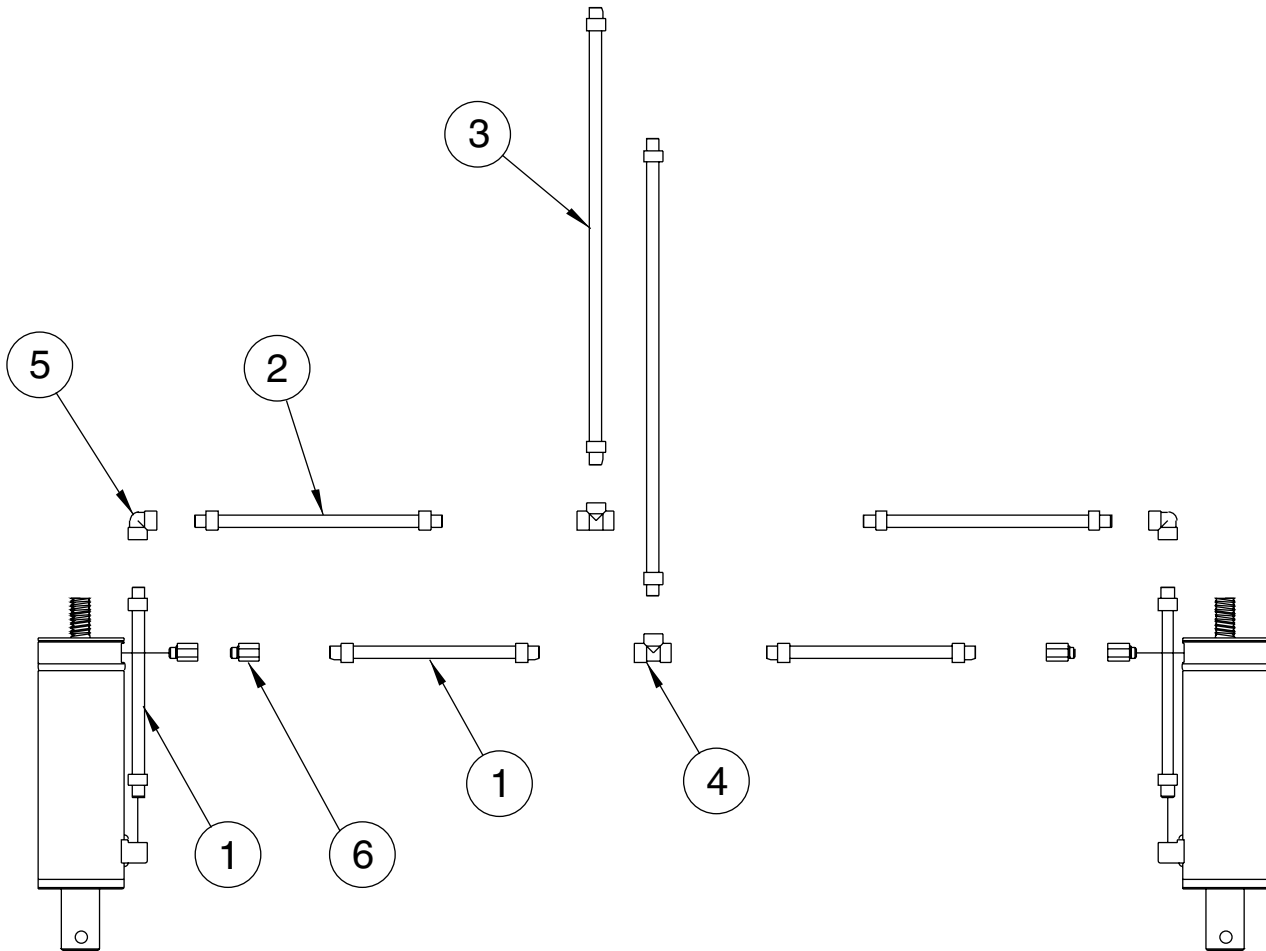


### 10', 11', 12' HANGERBOARD ASSEMBLY

Item	Qty.	Part Number	Description
1	1	00011180	HGRBD SUB ASSY,MS4412,3.0 <i>See Below</i>
1	1	00011181	HGRBD SUB ASSY,MS4410/11,3.0 <i>See Below</i>
2	2	00060177	ASSEMBLY, CYLINDER BRACKET
3	4	00060183	SHOCK ABSORBER ASSEMBLY <i>See Page 22</i>
4	2	00060192	STRAP, CYLINDER
5	1	00060199	PLATE, FRONT SUPPORT
6	1	00060370	CLAMP, HOSE
7	2	00060196	HINGE BRKT ASSEMBLY
8	1	05010648	BOLT .375-16 x 2.25 G8 HHCS ZC
9	4	05014701	BOLT .625-11 x 2.00 G8 FSHD ZC
10	31	05014549	BOLT .625-11 x 2.00 G8 DH PLN
11	2	05010747	BOLT .625-11 x 4.00 G8 HHCS ZC
12	4	05010821	BOLT 1.00-8 x 5.50 G8 HHCS ZC
13	1	05020266	NUT .375-16 G8 HEX ZC
14	31	05020270	NUT .625-11 G8 HEX ZC
15	2	05020273	NUT 1.00-8 G8 HEX ZC
16	1	05021365	WASHER .375 SPRING LOCK
17	6	05021383	WASHER .625 HVY SPRING LOCK
18	6	05021385	WASHER 1.00 HVY SPRING LOCK
19	4	05022006	PIN .250 X 2.00 COTTER
20	1	05050413	BUSHING,SPRING STEEL,1.25 IDx1.50 ODx1L
21	1	00112807	HOSE KIT,SCPR,MS4400 <i>See Page 18</i>

### HANGERBOARD SUB ASSEMBLY, MS44

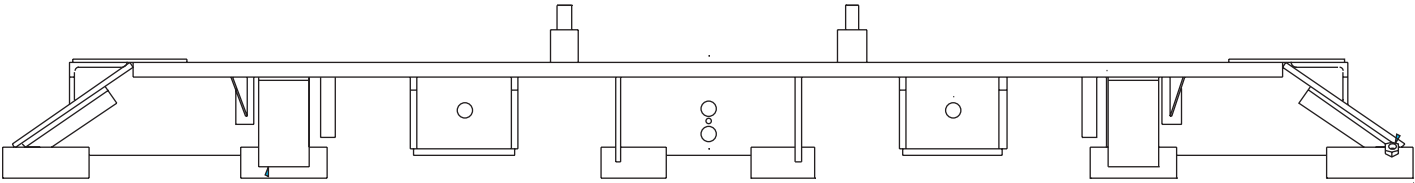
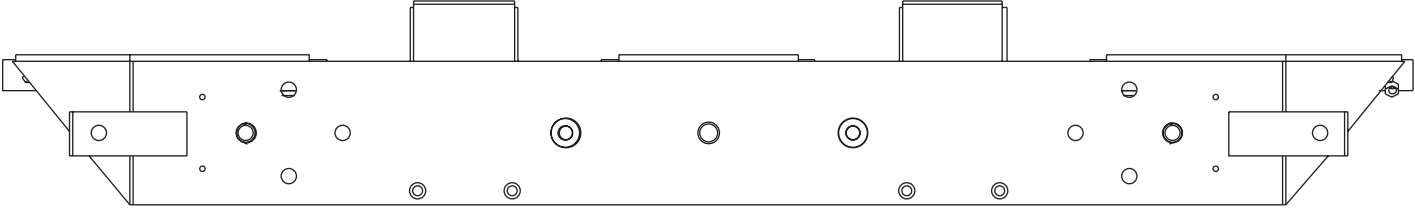
Item	Qty	Part Number	Description
1A	1	00060134 00060201	HANGERBOARD WELDMNT, MS4410/11 HANGERBOARD WELDMNT, MS4412, 3.0 <i>See Page 19</i>
2A	2	00060160	HINGE WELDMNT, END <i>See Page 19</i>
3A	2	00060166	HINGE WELDMNT, INTERMEDIATE <i>See Page 20</i>
4A		00060172	HINGE WELDMNT, CENTER, OUTER (QTY. 3 FOR 12', QTY 1 FOR 10' & 11') <i>See Page 20</i>
5A	1	00060195 00060206	CRR, 1.50 DIA X 101 CRR, 1.50 DIA X 125.0
6A	1	05015197	SCREW, .625-11 X 1.50, SQHSS
7A	1	05020122	NUT, .625-11, G2, JAM, ZINC



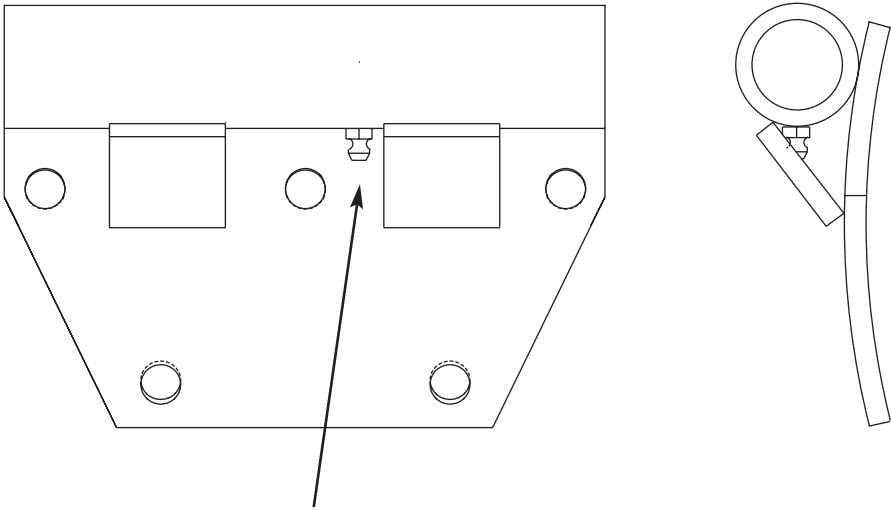
**00112807 HOSE KIT, SCRAPER, MS44**

Item	Qty	Part Number	Description
1	4	05044062	HOSE ASSEMBLY, .375" ID, 11" OAL, 2 WIRE
2	2	05044025	HOSE ASSEMBLY, .375" ID, 13" OAL, 2 WIRE
3	2	05037017	HOSE ASSEMBLY, .375" ID, 24" OAL, 2 WIRE
4	2	05037158	TEE ADAPTER, .375" FEMALE ALL 3
5	2	05038014	ELBOW, .375, 90°, FXF
6	4	05044061	HYD FITTING, ADAPTER, .5625" MORB

**00060134 HANGERBOARD WELDMENT, 10' & 11' (Shown)**  
**00060201 HANGERBOARD WELDMENT, 12'**

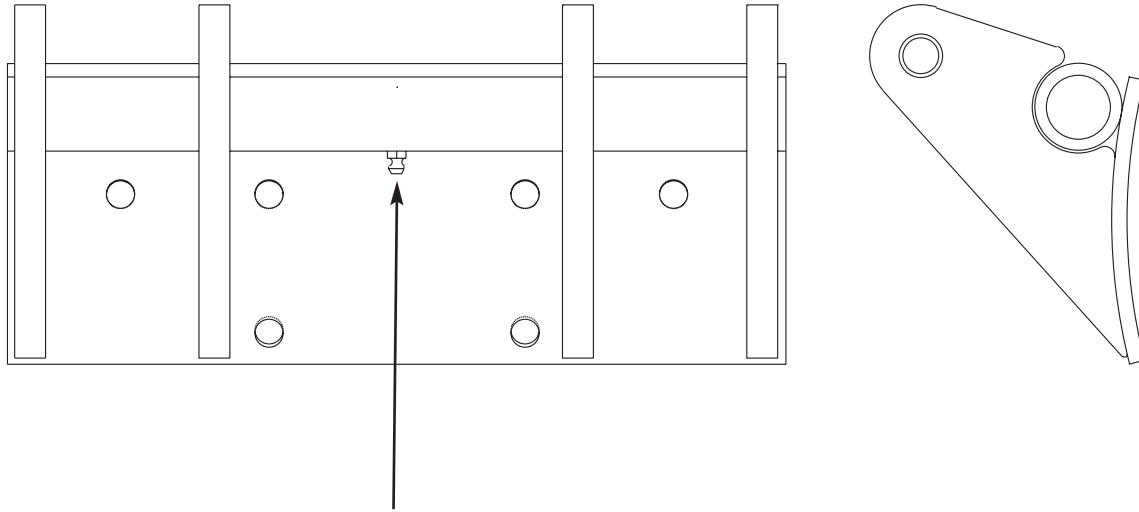


**00060160 HINGE WELDMENT, END**



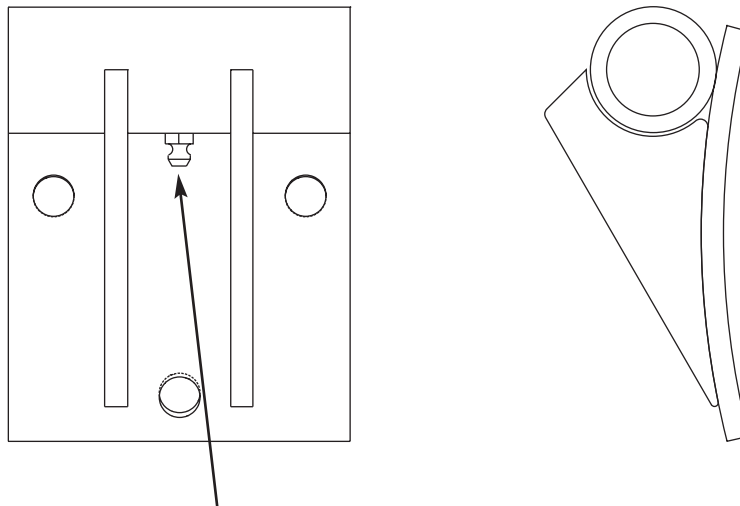
**05050003 Grease Zerk, 1/8 NPT, Straight**

## 00060166 HINGE WELDMENT, INTERMEDIATE



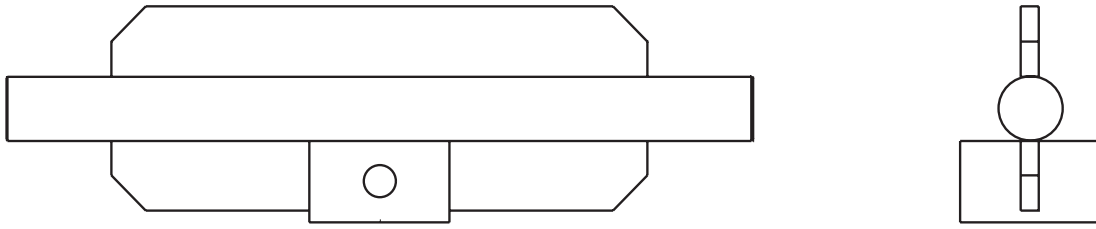
05050003 Grease Zerk, 1/8 NPT, Straight

## 00060172 HINGE WELDMENT, OUTER

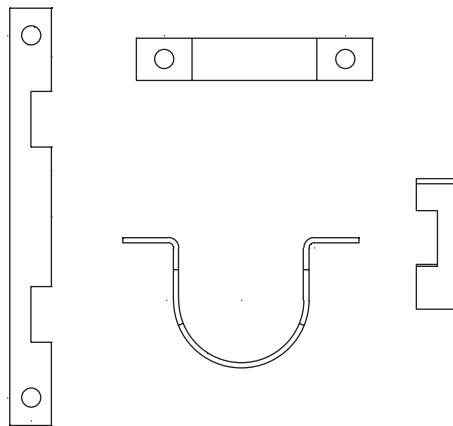


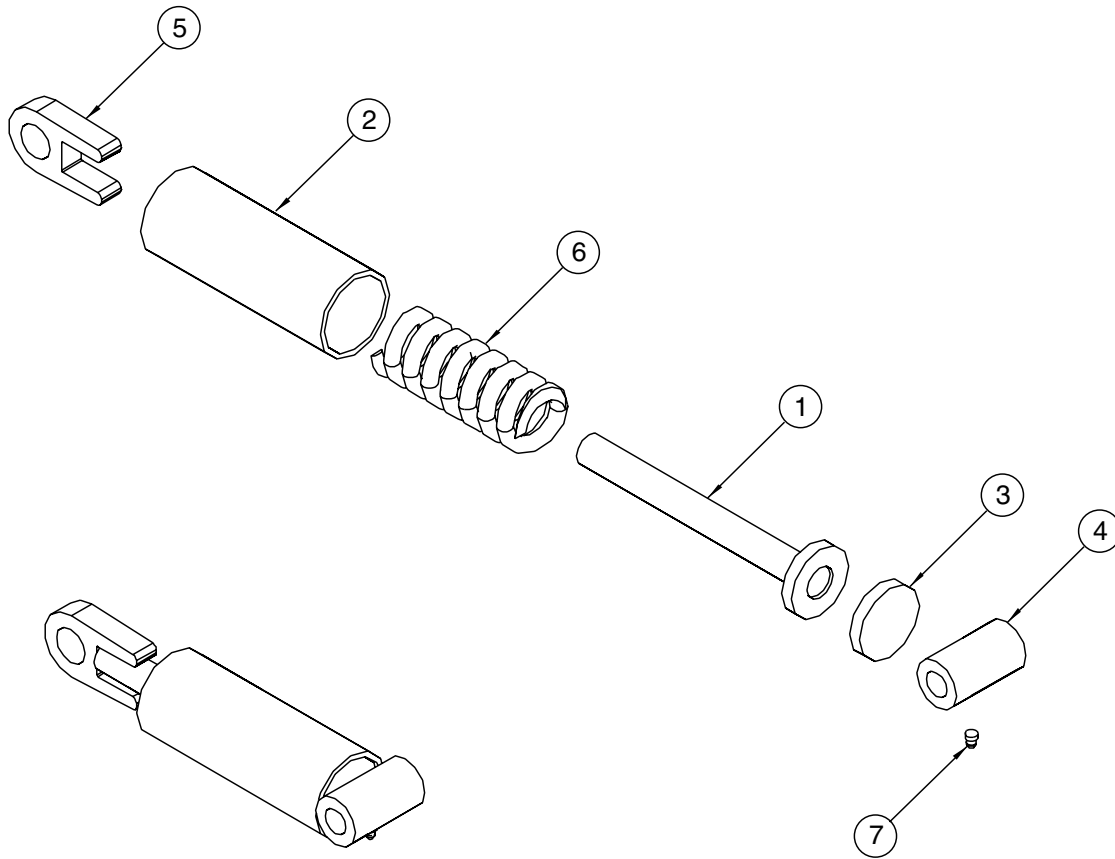
05050003 Grease Zerk, 1/8 NPT, Straight

**00060177 CYLINDER BRACKET WELDMENT**



**00060192 STRAP, CYLINDER**



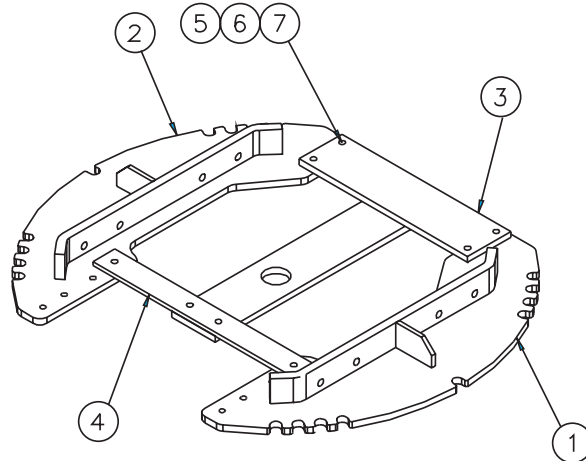


00060183 SHOCK ABSORBER ASSY,SCRAPER,MS44

Item	Qty.	Part Number	Description
1	1	00060573	SHAFT ASSY,MS44,SCRAPER
2	1	00060574	SPRING HOUSING ASSY,MS44,SCRAPER
3	1	00060185	DISK,.50 x 3.0 DIA
4	1	00060186	PIVOT TUBE,SCRAPER,MS44
5	1	00060190	ATTACHMENT EAR,SCPR,MS44
6	1	05035006	SPRING,COMP,2.875ODx7.75OAL,.625 WIRE
7	1	05050003	GREASE ZERK,.125 NPT STR



## CIRCLE ASSEMBLY, 2-PIECE



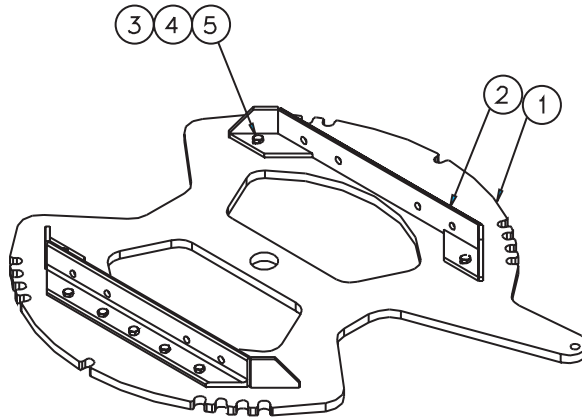
### CIRCLE ASSEMBLY ¾ X 52" , TWO PIECE

ITEM	QTY	PART #	DESCRIPTION
1	1	00060046	Circle Weldment, ¾ x 52", RH, MS
2	1	00060047	Circle Weldment, ¾" x 52", LH, MS
3	1	00060055	Bracket, Circle, ¾" x 52", 2 piece
4	1	00060103	Cross Member, Circle, 2 piece (For manual reverse only)
5	8	05014549	Bolt, ⅝-11 x 2, G8, Dome Head, Plain
6	8	05020270	Nut, ⅝-11, G8, Hex, Zinc
7	8	05021383	Washer, ⅝, Lock, Heavy, Zinc

### CIRCLE ASSEMBLY 1 X 52" , TWO PIECE

ITEM	QTY	PART #	DESCRIPTION
1	1	00060064	Circle Weldment, 1 x 52", RH, MS
2	1	00060065	Circle Weldment, 1 x 52", LH, MS
3	1	00060069	Bracket, Circle, 1 x 52", 2 piece
4	1	00060103	Cross Member, Circle, 2 piece (For manual reverse only)
5	8	05014551	Bolt, ⅝-11 x 2.5, G8, Dome Head, Plain
6	8	05020270	Nut, ⅝-11, G8, Hex, Zinc
7	8	05021383	Washer, ⅝, Lock, Heavy, Zinc

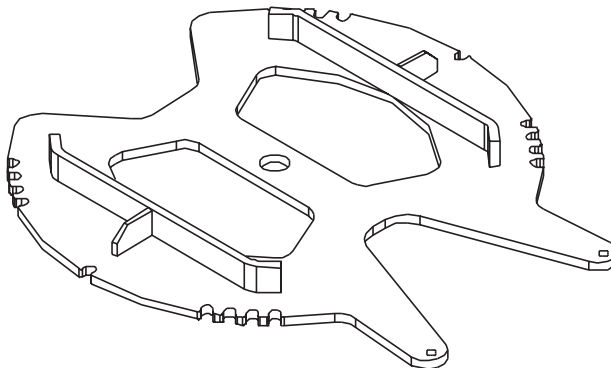
## CIRCLE ASSEMBLY, 1-PIECE



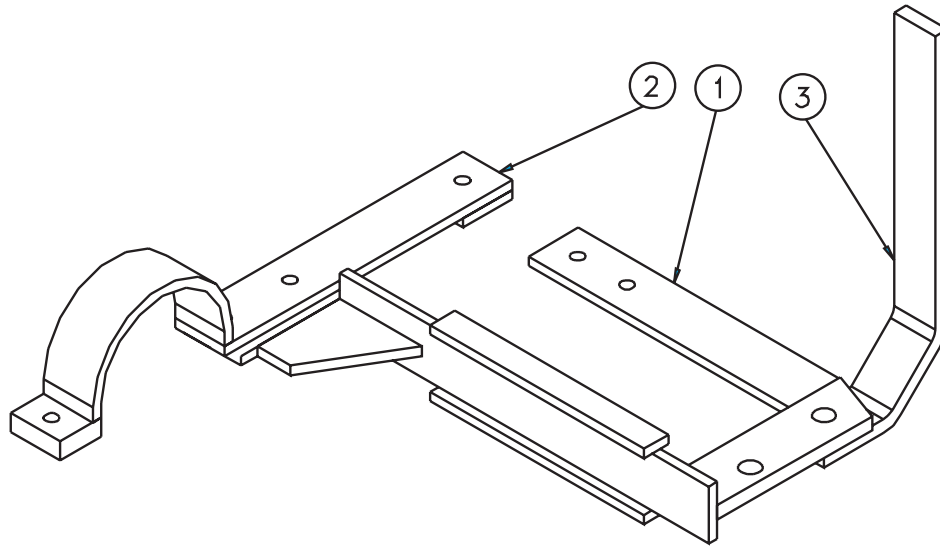
### CIRCLE ASSEMBLY 1 X 52", SINGLE-ARM

ITEM	QTY	PART #	DESCRIPTION
1	1	00060089	Circle Weldment, 1 x 52", MS
2	2	00060085	Bracket Weldment, Mounting, Circle
3	14	05010738	Bolt, 5/8-11 x 1 3/4, G8, HHCS, Zinc
4	14	05021383	Washer, 5/8, Lock, Heavy, Zinc
5	14	05021017	Washer, 5/8, Flat, MIL-CARB SAE

00060081 CIRCLE WELDMENT, 1 X 52", DOUBLE ARM, MS  
 00060979 CIRCLE WELDMENT 1 X 52", DOUBLE-ARM, AR

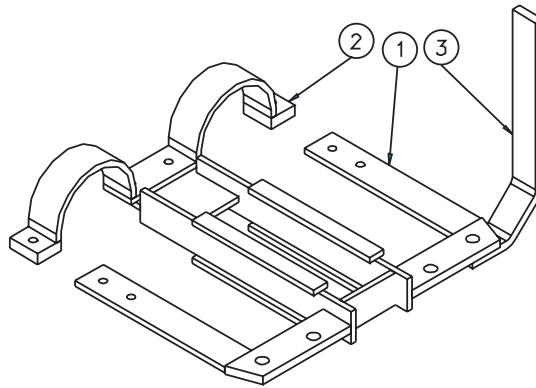


## Power Reversing Kit



### REVERSING KIT, CIRCLE, SINGLE, 2-PIECE

ITEM	QTY	PART #	DESCRIPTION
1	1	00060113	Bracket, Single, Reversing Cylinder, 2 piece
2	1	00060107	Cross Member Weldment, Single, Reversing Cylinder
3	1	00060097	Bracket, Circle Support, Rear Scraper

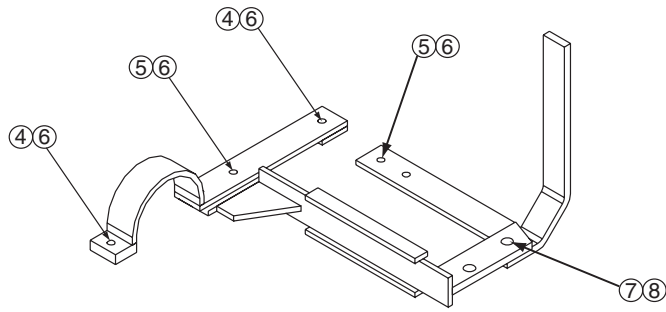


### REVERSING KIT, CIRCLE, DOUBLE, 2 PIECE

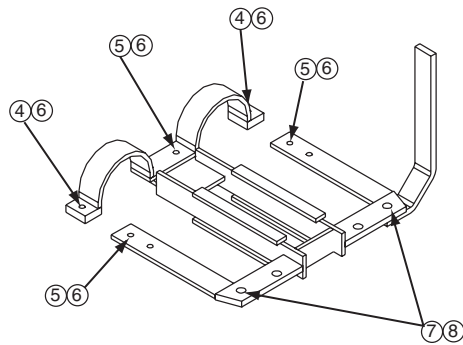
ITEM	QTY	PART #	DESCRIPTION
1	1	00060126	Bracket, Double, Reversing Cylinder, 2 piece
2	1	00060123	Cross Member Weldment, Double Reversing Cylinder
3	1	00060097	Bracket, Circle Support, Rear Scraper

# Reversing Kit, Bolts & Nuts

## Single Reversing



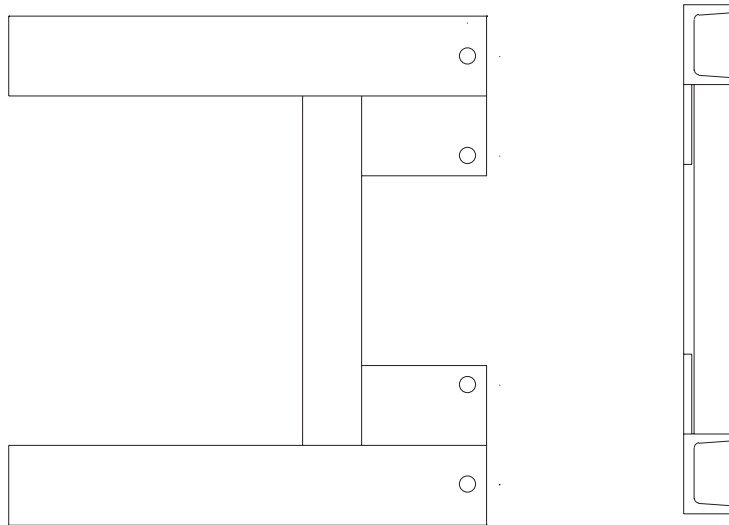
## Double Reversing



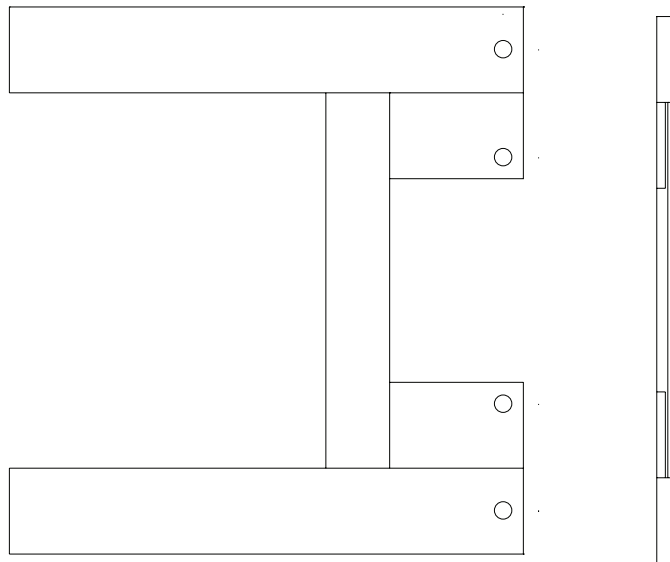
ITEM	SGL QTY	DBL QTY	PART #	DESCRIPTION
4	2	2	05010742	Bolt, $\frac{5}{8}$ - 11 x $2\frac{3}{4}$ , HHCS, Zinc
5	4	6	05010740	Bolt, $\frac{5}{8}$ - 11 x $2\frac{1}{4}$ , HHCS, Zinc
6	6	8	05020837	Nut, $\frac{5}{8}$ - 11, Top Lock, C&W
7	1	2	05020812	Bolt, 1-8 x $2\frac{1}{2}$ , HHCS, Zinc
8	1	2	05020834	Nut, 1-8, Top Lock, C&W

# HANGER BRACKET WELDMENT

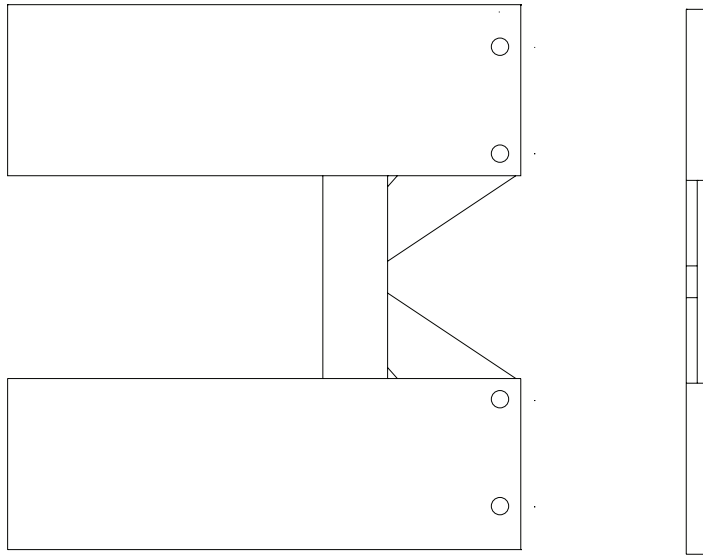
00060254 HANGER BRACKET WELDMENT, CHANNEL, 4 X 24 (2 REQUIRED)



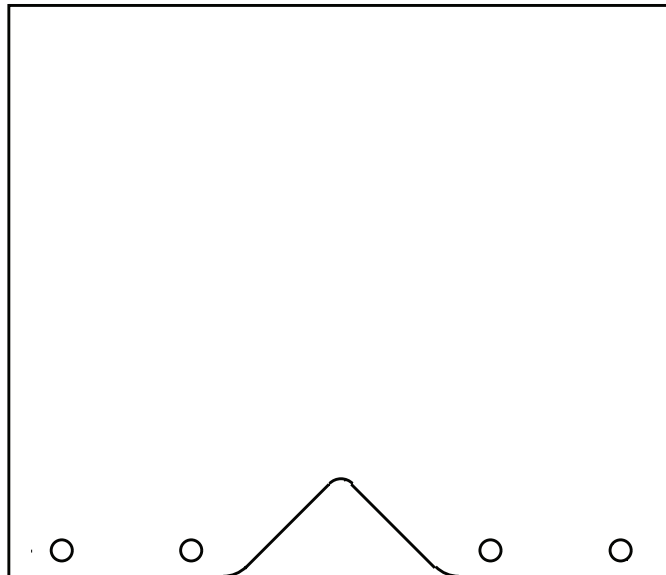
00060260 HANGER BRACKET WELDMENT, BAR, 4 X 24 (2 REQUIRED)



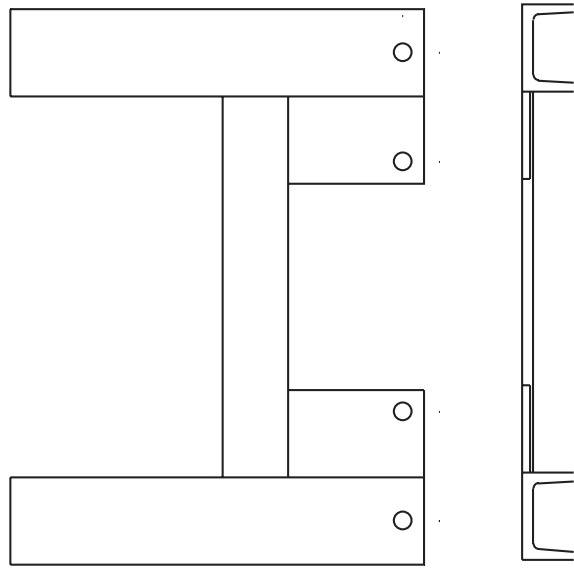
**00060263 HANGER BRACKET WELDMENT, BAR, 8 X 24 (2 REQUIRED)**



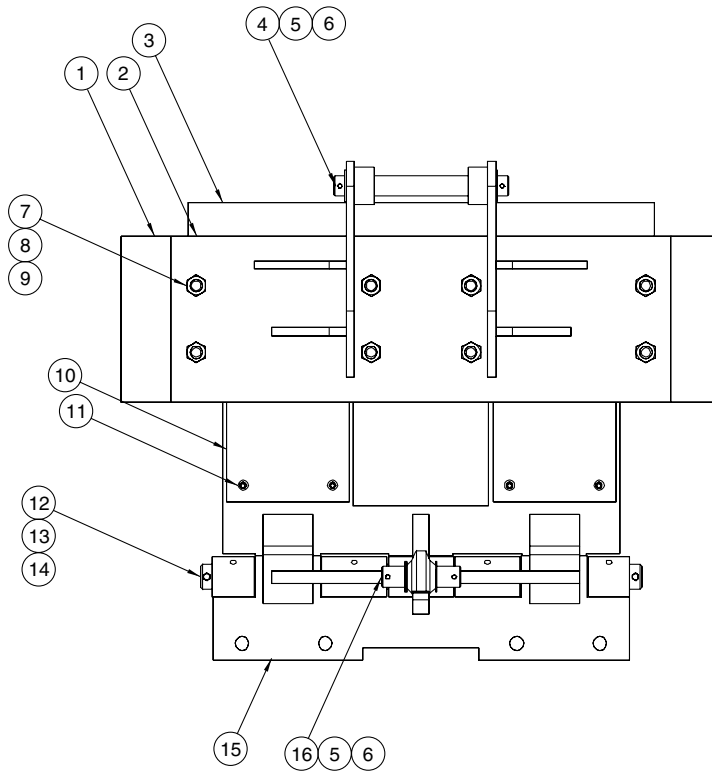
**00060870 HANGER BRACKET, PLATES, 22" (2 REQUIRED)**  
**00011595 HANGER BRACKET, PLATES, 28" (2 REQUIRED)**



**00012290 HANGER BRACKET WELDMENT,CHANNEL, 4 X 19 (2 REQUIRED)**

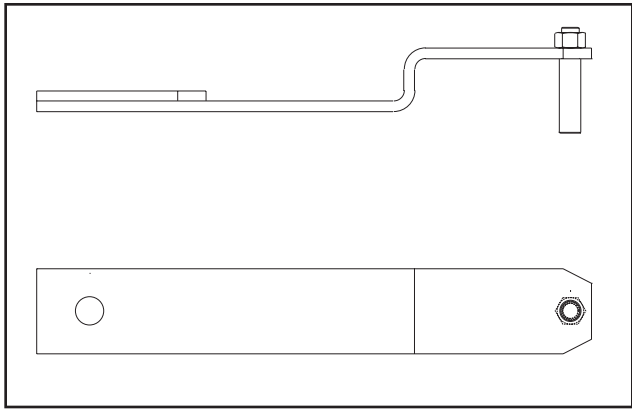


# HANGER BRACKET, ASSEMBLY, OSCILLATING SCRAPER

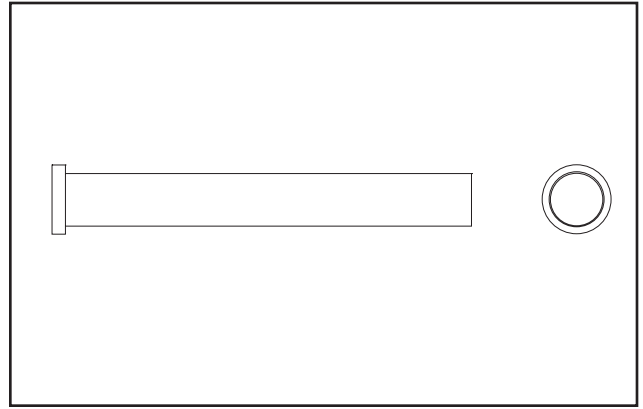


ITEM	QTY	PART #	DESCRIPTION
1	1	00011233	Mounting Bracket Weldment
2	1	00011228	Hanger Bracket Weldment, Outer
3	1	00011213	Side Plate Weldment
4	1	00022507	Pin, 1¼ DIA x 10¼
5	4	05022007	Pin, ¼ x 2½ Cotter
6	4	05021191	Bushing, 1⅞ OD x 1¼ ID
8	8	05010770	Bolt, ¾-10 x 3½, G8, HHCS, Zinc
9	8	05020271	Nut, ¾-10, G8, Hex, Zinc
10	8	05021384	Washer, ¾, Heavy, Locking
11	4	00011221	Insert, POLY
12	24	05017027	Screw, ⅝-18 X .5, Flat Head, MACH
13	1	00011220	Pin, 1½ DIA x 26½
14	2	05010597	Bolt, ¼-20 x 2, G8, HHCS, AC
15	2	05020899	Nut, ¼-20, Top Lock, Zinc
16	1	00011223	Hinge Weldment, Oscillating Hanger Bracket
17	1	00022506	Pin, 1¼ DIA x 4¾
18	1	05002791	Cylinder, 4x4, D.A. (See page 54)
19	7	05050003	Grease Zerk, ⅛ NPT, Straight
20	2	05050288	Grease Zerk, ¼ - 28, Straight

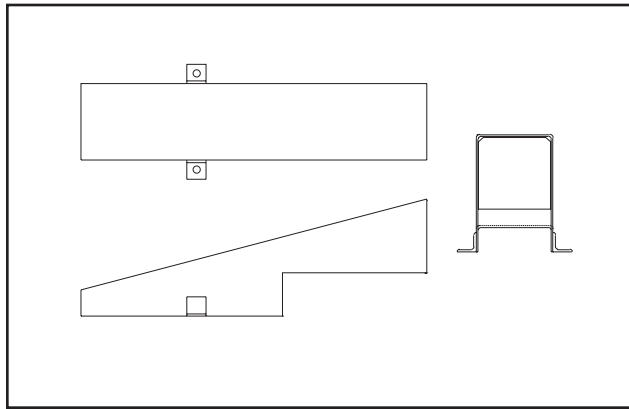




1



2



3

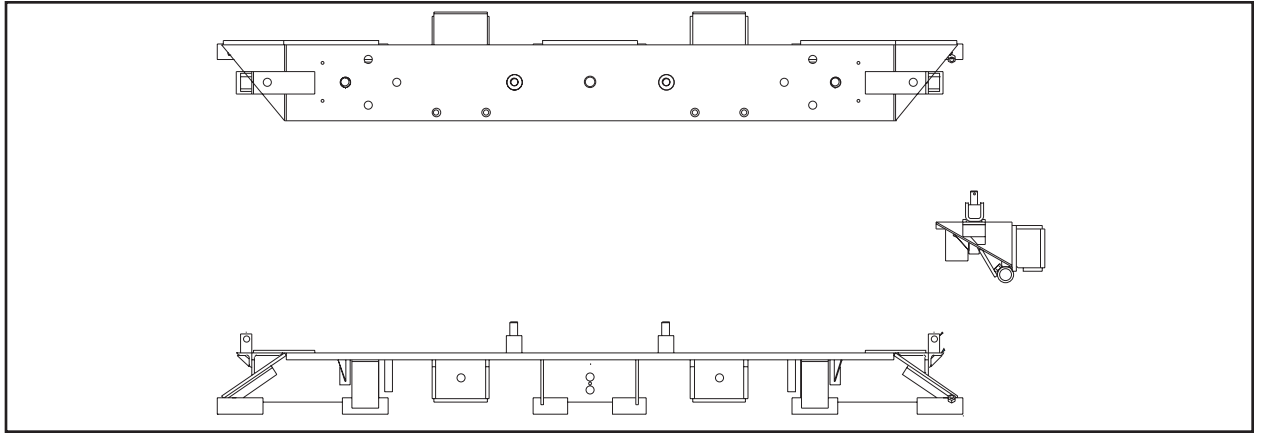
**SPRING LOCK ASSEMBLY**

ITEM	QTY	PART #	DESCRIPTION
1	2	00060328	Spring Weldment, 17"
2	2	00060591	Pin, 1 x 8, Push-Up
3	2	00060322	Cover Weldment, Spring Lock
4	4	05010647	Bolt, $\frac{3}{8}$ -16 x 2, G8, HHCS, Zinc
5	4	05020266	Nut, $\frac{3}{8}$ -16, G8, Hex, Zinc
6	2	05021365	Washer, $\frac{3}{8}$ , Lock, Zinc
7	2	05010812	Bolt, 1-8 2 $\frac{1}{2}$ , G8, HHCS, Zinc
8	2	05020273	Nut, 1-8, G8, Hex, Zinc
9	2	05021385	Washer, 1, Heavy, Lock, Zinc

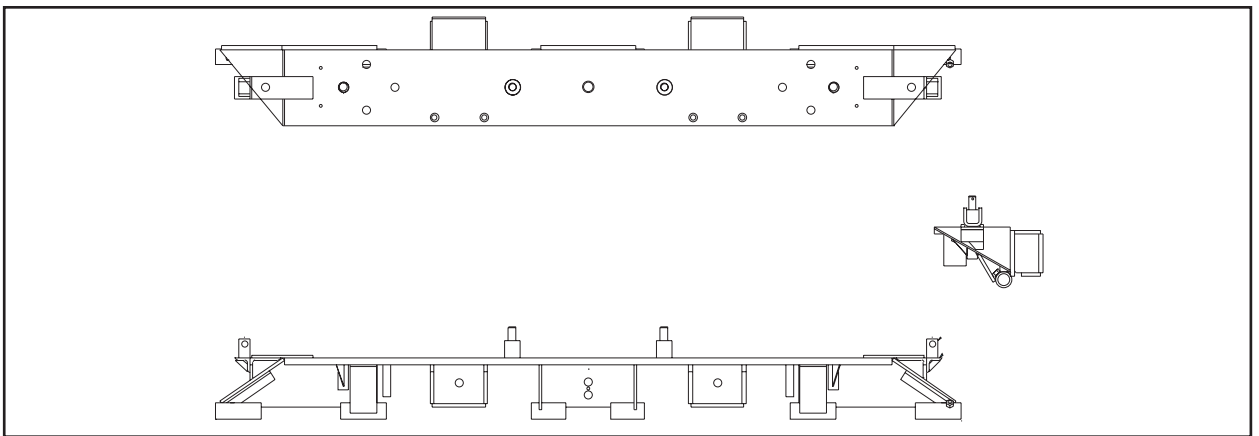
**00060641 HYDRAULIC LOCK, 10',11', ¼ CIRCLE**  
**00060915 HYDRAULIC LOCK, 10',11', 1 CIRCLE**  
**00060643 HYDRAULIC LOCK, 12', ¼ CIRCLE**  
**00060313 HYDRAULIC LOCK, 12', 1 CIRCLE**

ITEM	QTY	PART #	DESCRIPTION
1	1	00060342	Hangerboard Mod Weldment 10' & 11' (See following page)
	1	00060345	Hangerboard Mod Weldment, 12' (See following page)
2	2	00060309	Slide Weldment, Lock, ¼ Circle (See following page)
	2	00060642	Slide Weldment, Lock, 1 Circle (See following page)
3	2	05002567	Cylinder, 2 x 2, SA, Lock, (see page 57)
4	4	05022032	Pin, ¾ x 2¾, Clevis, Zinc
5	4	05022021	Pin, ½ x 1, Cotter
6	1	05037047	Adapter, STR, Swivel, ½ -18, ORB x ¾-18, Female
7	1	05037096	Adapter, 90° - Swivel, ¾ -18, Male x ¼-18, Female
8	2	05037097	Adapter, 90° - Swivel, ⅙ - 18, ORB x ¾-18, Female
9	1	05037143	Valve, Shuttle, ⅙ - ORB, Porting
10	1	05037158	Tee Adapter, ⅜" Female, (all 3)
11	3	05037159	Tee Adapter, Male Run ⅜" x (2) ⅜" Female
12	1	05037177	Valve, Flow Control Adjustable
13	2	05051412	Breather, ¼", ⅙ -18 O-Ring
14	2	00060307	Clevis, Hydraulic Lock (See following page)

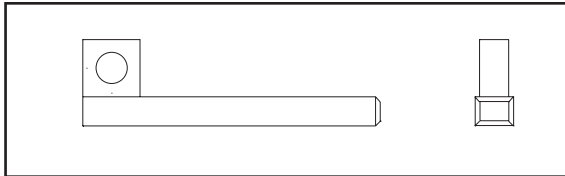
### Hangerboard Mod Weldment, 10' & 11'



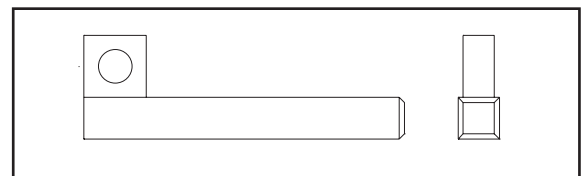
### Hangerboard Mod Weldment, 12'



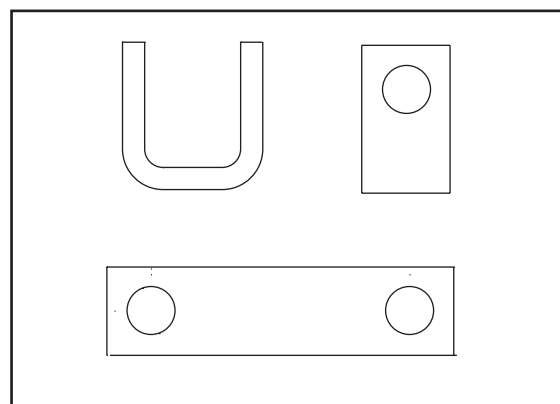
### Slide Weldment, Lock, ¼ Circle



### Slide Weldment, Lock, 1 Circle

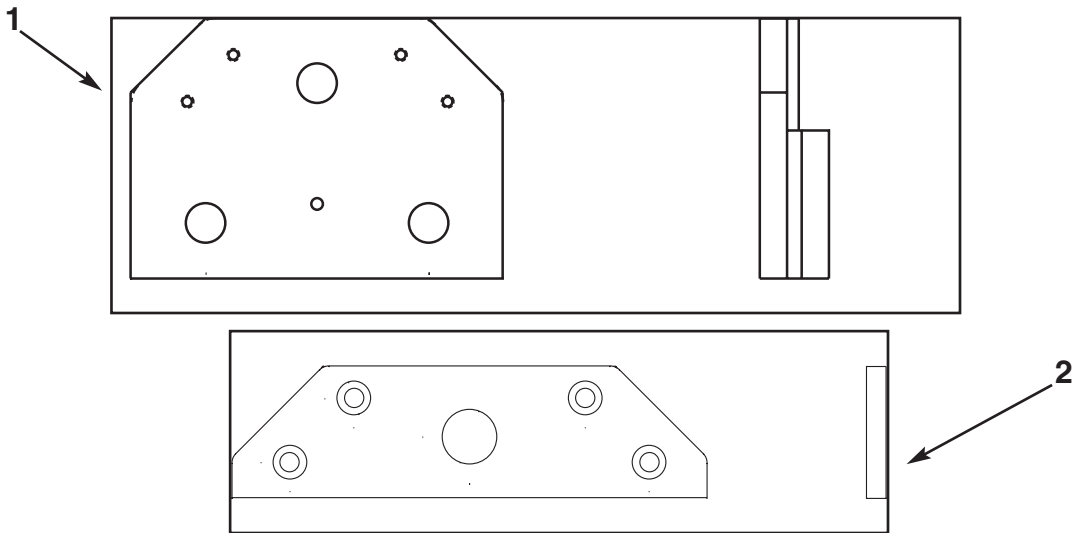
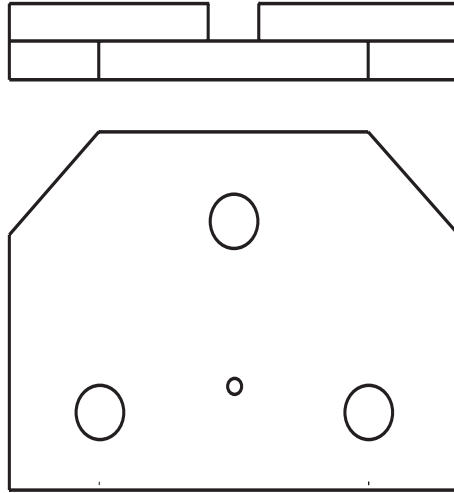


### Clevis, Hydraulic Lock



# HOLD DOWN ASSEMBLY

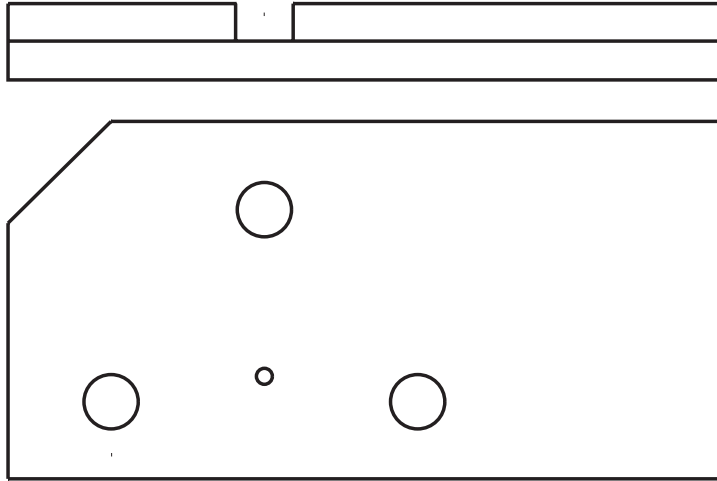
00060398 HOLD DOWN, SCRAPER,  $\frac{3}{4}$  X 10, 3.0  
 00060399 HOLD DOWN, SCRAPER, 1 X 10, 3.0



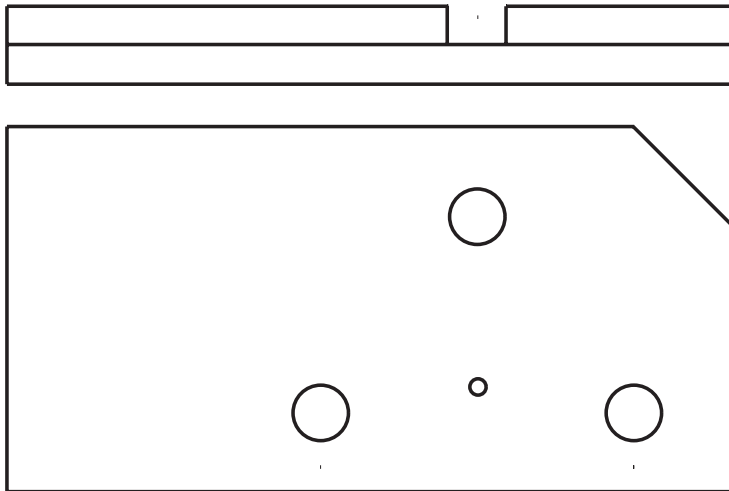
## HOLD DOWN, SCRAPER, $\frac{3}{4}$ X 10, POLY

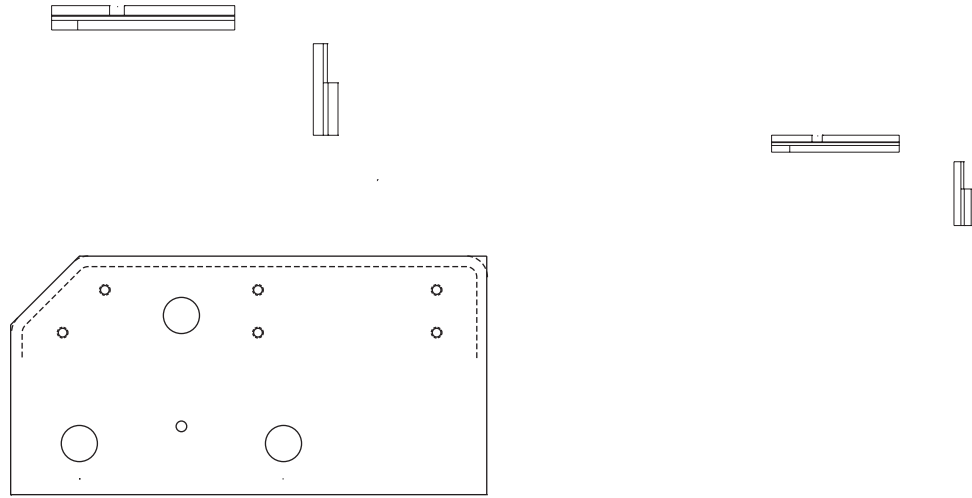
ITEM	QTY	PART #	DESCRIPTION
1	1	00060919	Hold Down, $\frac{3}{4}$ x 10
	1	00060920	Hold Down, 1x10
2	1	00060976	Insert, Poly
3	4	05016095	Screw, $\frac{5}{16}$ - 18 x $\frac{3}{4}$ , Flat Head, Zinc

00060923 HOLD DOWN SCRAPER, 3/4 X 14, RH  
00060925 HOLD DOWN SCRAPER, 1 X 14, RH



00060924 HOLD DOWN SCRAPER, 3/4 X 14, LH  
00060926 HOLD DOWN SCRAPER, 1 X 14, LH



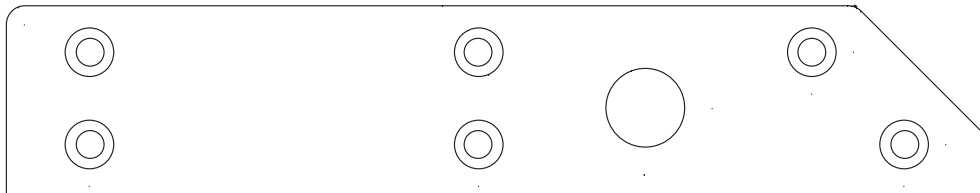


**Right Shown, Left Opposite**

- 00057948 HOLD DOWN, SCRAPER, 3/4 X 14, RH, POLY**
- 00057950 HOLD DOWN, SCRAPER, 1 X 14, RH, POLY**
- 00057949 HOLD DOWN, SCRAPER, 3/4 X 14, LH, POLY**
- 00057951 HOLD DOWN, SCRAPER, 1 X 14, LH, POLY**

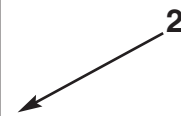
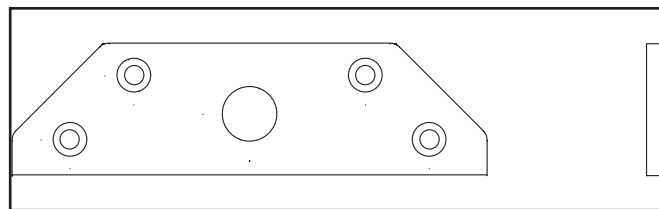
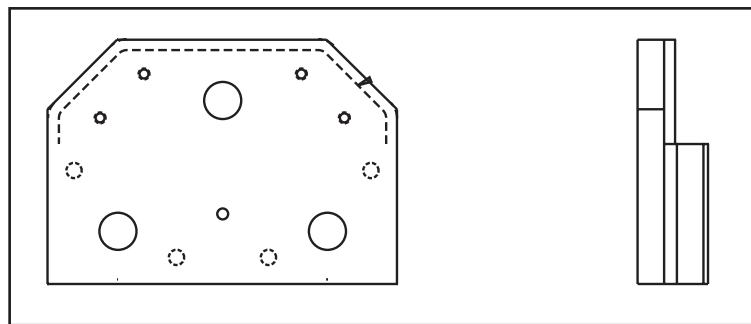
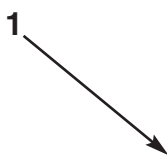
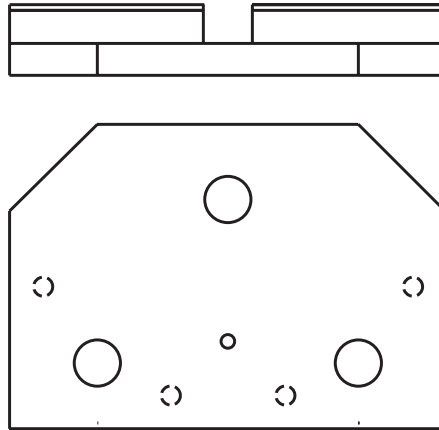
ITEM	QTY	PART #	DESCRIPTION
1	1	00060931	Hold Down, 3/4x14, Right
	1	00060933	Hold Down, 1x14, Right
	1	00060932	Hold Down, 3/4x14, Left
	1	00060934	Hold Down, 1x14, Left
2	1	00060972	Insert, RH, Poly (See below)
	1	00060973	Insert, LH, Poly (See below)
3	6	05016095	Screw, 5/16-18x3/4, Flat Head, Zinc

- 00060972 INSERT, RH, POLY (SHOWN)**
- 00060973 INSERT, LH, POLY (OPPOSITE)**



**Note:** When replacing polymer inserts, it is recommended that both left and right inserts be replaced at the same time.

00060073 HOLD DOWN SCRAPER, 3/4 X 10, 6.0  
 00060074 HOLD DOWN SCRAPER, 1 X 10, 6.0

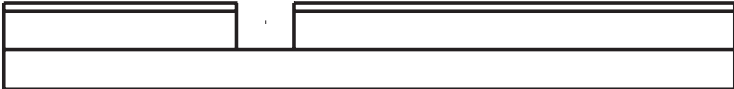


00057946 HOLD DOWN, SCRAPER, 3/4 X 10  
 00057947 HOLD DOWN, SCRAPER, 1 X 10

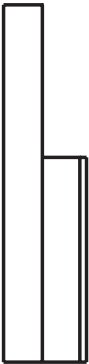
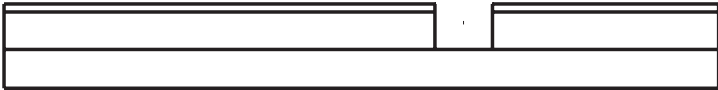
ITEM	QTY	PART #	DESCRIPTION
1	1	00060921	Hold Down, 3/4x10
	1	00060922	Hold Down, 1x10
2	1	00060976	Insert, Poly
3	4	05016095	Screw, 5/16-18x3/4, Flat Head, Zinc (not shown)

**Note:** When replacing polymer inserts, it is recommended that both left and right inserts be replaced at the same time.

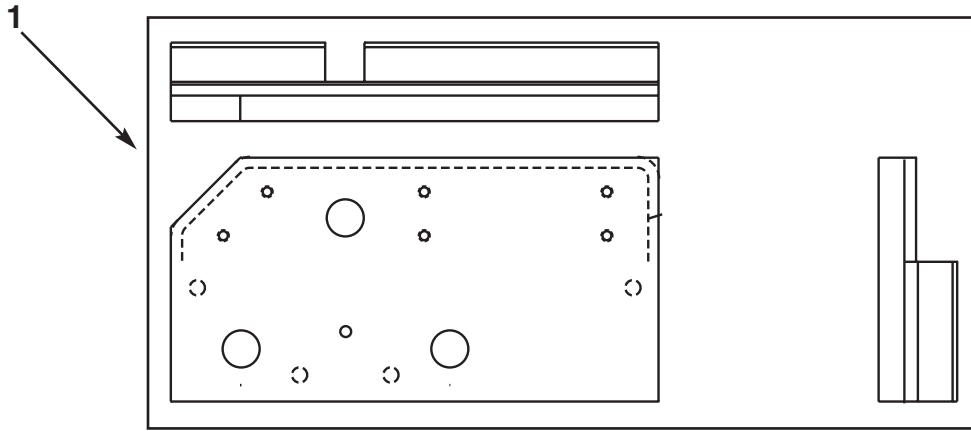
00060927 HOLD DOWN SCRAPER, 3/4 X 14, RH  
00060929 HOLD DOWN SCRAPER, 1 X 14,RH



00060928 HOLD DOWN SCRAPER, 3/4 X 14, LH  
00060930 HOLD DOWN SCRAPER, 1 X 14,LH



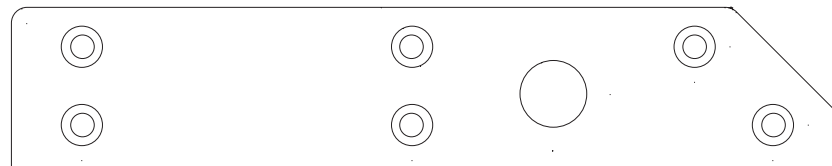




**00057952 HOLD DOWN, SCRAPER, 3/4 X 14, RH, POLY**  
**00057954 HOLD DOWN, SCRAPER, 1 X 14, RH, POLY**  
**00057953 HOLD DOWN, SCRAPER, 3/4 X 14, LH, POLY**  
**00057955 HOLD DOWN, SCRAPER, 1 X 14, LH, POLY**

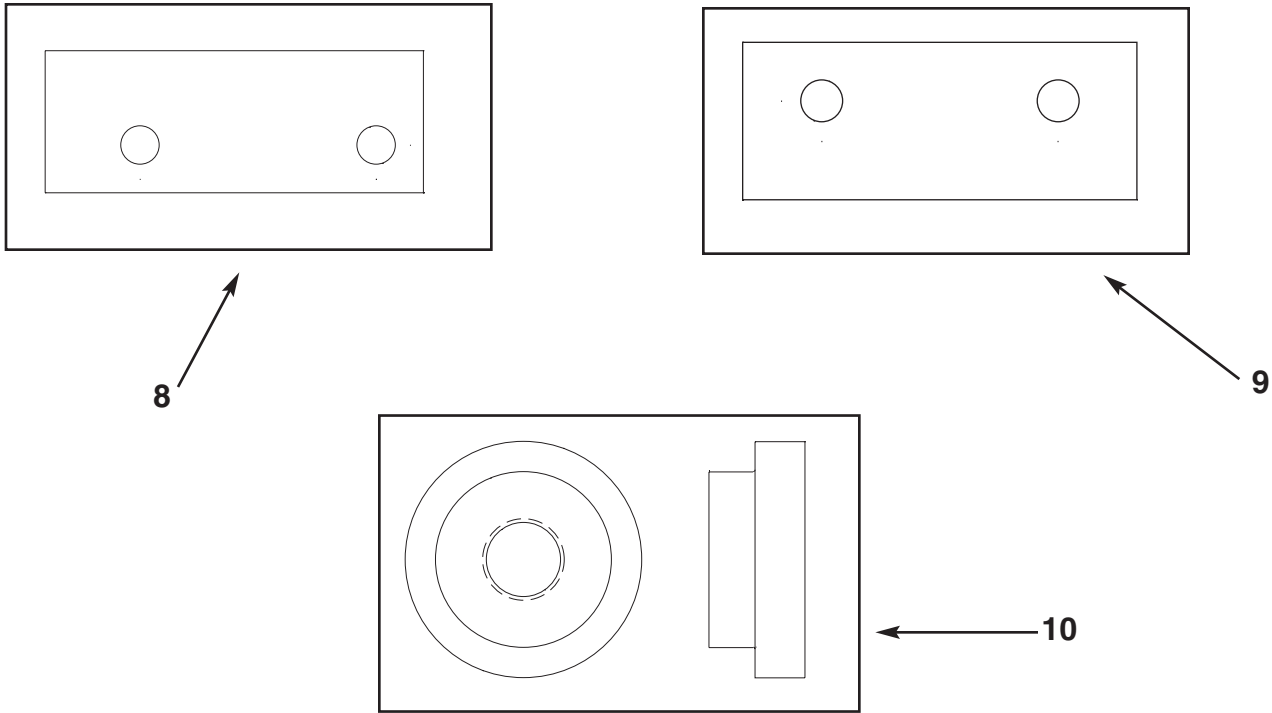
ITEM	QTY	PART #	DESCRIPTION
1	1	00060935	Hold Down, 3/4x14, RH
	1	00060937	Hold Down, 1x14, RH
	1	00060936	Hold Down, 3/4x14, LH
	1	00060938	Hold Down, 1x14, LH
2	1	00060972	Insert, RH, Poly (See below)
	1	00060973	Insert, LH, Poly (See below)
3	6	05016095	Screw, 5/16-18x3/4, Flat Head, Zinc (not shown)

**00060972 INSERT, RH, POLY (SHOWN)**  
**00060973 INSERT, LH, POLY (OPPOSITE)**



**Note:** When replacing polymer inserts, it is recommended that both left and right inserts be replaced at the same time.

## Mounting Kits



**00045869 MOUNTING KIT, SCRAPER  $\frac{3}{4}$ , MANUAL REVERSE, MANUAL LOCK**  
**00045870 MOUNTING KIT, SCRAPER 1 MANUAL REVERSE, MANUAL LOCK**

ITEM	QTY	PART #	DESCRIPTION
1	16	05010768	Bolt, $\frac{3}{4}$ -10 x 3 G8, HHCS, Zinc
2	16	05020849	Nut, $\frac{3}{4}$ -10, GC, Top Lock
3	16	05021018	Washer, $\frac{3}{4}$ , Flat, Mil-Carb, SAE
4	1	05037005	Valve, Relief, Gresen, JL50-400 (Optional)
5	1	05010820	Bolt, 1-8 x 5, G8, HHCS, Zinc
6	4	05020834	Nut, 1-8, GC, Top Lock
7	4	05021314	Washer, 1, Flat
8	4	00060258	Shim, Scraper, Hanger Bracket, 3 x 8x $\frac{1}{4}$ "
9	2	00060298	Shim, Scraper, Hold Down, 4 x 10 x $\frac{1}{8}$ "
10	1	05050036	Bushing, $\frac{3}{4}$ Flange, 3 OD x 1 $\frac{1}{4}$ ID, Center Pin
	1	05050035	Bushing, 1Flange, 3 OD x 1 $\frac{1}{4}$ ID, Center Pin
11	1	05010853	Bolt, 1 $\frac{1}{4}$ -7x4 $\frac{1}{2}$ , G8, HHCS, Zinc
12	1	05020835	Nut, 1 $\frac{1}{4}$ -7,GC, Toplock, C&W
13	1	05021316	Washer, 1 $\frac{1}{4}$ , Flat, Zinc
14	2	05022145	Pin, $\frac{7}{8}$ DIA x 5 $\frac{1}{4}$ , with Handles
15	2	05010595	Bolt, $\frac{1}{4}$ -20x1 $\frac{1}{2}$ , G8, HHCS, Zinc
16	2	05020899	Nut, $\frac{1}{4}$ -20, Top Lock, Zinc
17	2	05021305	Washer, $\frac{1}{4}$ , Flat, Zinc

00045879 MTG KIT,SCPR,.75-2PCx1,1CYL

Item	Qty.	Part Number	Description
1	16	05010768	BOLT .750-10 x 3.00 G8 HHCS ZC
2	17	05020849	NUT .750-10 GC TOPLOCK C&W
3	17	05021018	WASHER .750 FLAT MIL-CARB SAE
4	4	05010820	BOLT 1.00-8 x 5.00 G8 HHCS ZC
5	4	05021314	WASHER 1.00 FLAT ZC
6	4	00060258	SHIM,HANGER
7	2	00060298	SHIM,HOLD DOWN,10GA x 4.0 x 10.0
8	1	05051395	CARDBOARD,BOX,12.0x8.0x7.0
9	1	00060093	CLEVIS ASSY,REV,CYL,ROD
10	1	05022026	PIN .250 x 2.000 ROLL ZC
11	3	05021202	BUSHING,MACH,1.5x1x10GA,ZC
12	1	05010773	BOLT .750-10 x 4.50 G8 HHCS ZC
13	1	05010816	BOLT 1.00-8 x 3.50 G8 HHCS ZC
14	5	05020834	NUT 1.00-8 GC TOPLOCK C&W
15	2	05050006	BUSHING,1.0DIA
16	1	05050036	BUSHING,.75FLANGE,3.0ODx1.25ID
17	1	05010853	BOLT 1.25-7 x 4.50 G8 HHCS ZC
18	1	05020835	NUT 1.25-7 GC TOPLOCK C&W
19	1	05021316	WASHER 1.25 FLAT ZC
20	2	05014549	BOLT .625-11 x 2.00 G8 DH PLN
21	2	05020837	NUT .625-11 GC TOPLOCK C&W
22	2	05021311	WASHER .625 FLAT ZC
23	2	05022145	PIN .875 R zx 5.25 L W/HANDLE
24	2	05010595	BOLT .250-20 x 1.50 G8 HHCS ZC
25	2	05020899	NUT .250-20 TOPLOCK ZC
26	2	05021305	WASHER .250 FLAT ZC

00045871 MTG BOX,SCPR,.75-2PCx1,1CYL

Item	Qty.	Part Number	Description
1	16	05010768	BOLT .750-10 x 3.00 G8 HHCS ZC
2	17	05020849	NUT .750-10 GC TOPLOCK C&W
3	17	05021018	WASHER .750 FLAT MIL-CARB SAE
4	4	05010820	BOLT 1.00-8 x 5.00 G8 HHCS ZC
5	4	05021314	WASHER 1.00 FLAT ZC
6	4	00060258	SHIM,HANGER
7	1	05051395	CARDBOARD,BOX,12.0 x 8.0 x 7.0
8	1	00060093	CLEVIS ASSY,REV,CYL,ROD
9	1	05022026	PIN .250 x 2.000 ROLL ZC
10	3	05021202	BUSHING,MACH,1.5x1x10GA,ZC
11	1	05010773	BOLT .750-10 x 4.50 G8 HHCS ZC
12	1	05010816	BOLT 1.00-8 x 3.50 G8 HHCS ZC
13	5	05020834	NUT 1.00-8 GC TOPLOCK C&W
14	2	05050006	BUSHING,1.0DIA
15	1	05050036	BUSHING,.75FLANGE,3.0ODx1.25ID
16	1	05010853	BOLT 1.25-7 x 4.50 G8 HHCS ZC
17	1	05020835	NUT 1.25-7 GC TOPLOCK C&W
18	1	05021316	WASHER 1.25 FLAT ZC
19	2	05014549	BOLT .625-11 x 2.00 G8 DH PLN
20	2	05020837	NUT .625-11 GC TOPLOCK C&W
21	2	05021311	WASHER .625 FLAT ZC

00045872 MTG BOX,SCPR,1.0-2PCx1,1CYL

Item	Qty.	Part Number	Description
1	16	05010768	BOLT .750-10 x 3.00 G8 HHCS ZC
2	17	05020849	NUT .750-10 GC TOPLOCK C&W
3	17	05021018	WASHER .750 FLAT MIL-CARB SAE
4	4	05010820	BOLT 1.00-8 x 5.00 G8 HHCS ZC
5	4	05021314	WASHER 1.00 FLAT ZC
6	4	00060258	SHIM,HANGER
7	1	05051395	CARDBOARD,BOX,12.0x8.0x7.0
8	1	00060093	CLEVIS ASSY,REV,CYL,ROD
9	1	05022026	PIN .250 x 2.000 ROLL ZC
10	3	05021202	BUSHING,MACH,1.5x1x10GA,ZC
11	1	05010773	BOLT .750-10 x 4.50 G8 HHCS ZC
12	1	05010816	BOLT 1.00-8 x 3.50 G8 HHCS ZC
13	5	05020834	NUT 1.00-8 GC TOPLOCK C&W
14	2	05050006	BUSHING,1.0DIA
15	1	05050035	BUSHING,1.0FLANGE,3.0ODx1.25ID
16	1	05010853	BOLT 1.25-7 x 4.50 G8 HHCS ZC
17	1	05020835	NUT 1.25-7 GC TOPLOCK C&W
18	1	05021316	WASHER 1.25 FLAT ZC
19	2	05014551	BOLT .625-11 x 2.50 G8 DH PLN
20	2	05020837	NUT .625-11 GC TOPLOCK C&W
21	2	05021311	WASHER .625 FLAT ZC

**00045874 MTG BOX,SCPR,1.0SCx1,1CYL,RVS**

Item	Qty.	Part Number	Description
1	16	05010768	BOLT .750-10 x 3.00 G8 HHCS ZC
2	17	05020849	NUT .750-10 GC TOPLOC C&W
3	17	05021018	WASHER .750 FLAT MIL-CARB SAE
4	4	05010820	BOLT 1.00-8 x 5.00 G8 HHCS ZC
5	4	05021314	WASHER 1.00 FLAT ZC
6	4	00060258	SHIM,HANGER
7	1	05051395	CARDBOARD,BOX,12.0x8.0x7.0
8	1	00060093	CLEVIS ASSY,REV,CYL,ROD
9	1	05022026	PIN .250 x 2.000 ROLL ZC
10	3	05021202	BUSHING,MACH,1.5x1x10GA,ZC
11	1	05010773	BOLT .750-10 x 4.50 G8 HHCS ZC
12	1	05010819	BOLT 1.00-8 x 4.50 G8 HHCS ZC
12	1	05010816	BOLT 1.00-8 x 3.50 G8 HHCS ZC
13	5	05020834	NUT 1.00-8 GC TOPLOCK C&W
14	2	05050006	BUSHING,1.0DIA
14	2	05050006	BUSHING,1.0DIA
15	1	05050036	BUSHING,.75FLANGE,3.0ODx1.25ID
15	1	05050035	BUSHING,1.0FLANGE,3.0ODx1.25 ID
16	1	05010853	BOLT 1.25-7 x 4.50 G8 HHCS ZC
17	1	05020835	NUT 1.25-7 GC TOPLOCK C&W
18	1	05021316	WASHER 1.25 FLAT ZC

**00045876 MTG BOX,SCPR,1.0-2PCx2,2CYL**

Item	Qty.	Part Number	Description
1	16	05010768	BOLT .750-10 x 3.00 G8 HHCS ZC
2	18	05020849	NUT .750-10 GC TOPLOCK C&W
3	18	05021018	WASHER .750 FLAT MIL-CARB SAE
4	4	05010820	BOLT 1.00-8 x 5.00 G8 HHCS ZC
5	4	05021314	WASHER 1.00 FLAT ZC
6	4	00060258	SHIM,HANGER
7	2	00060298	SHIM,HOLD DOWN 10GAx4.0x10.0
8	1	05051395	CARDBOARD,BOX,12.0x8.0x7.0
9	2	00060093	CLEVIS ASSY,REV,CYL,ROD
10	2	05022026	PIN .250 X 2.00 ROLL ZC
11	6	05021202	BUSHING,MACH,1.5x1x10GA,ZC
12	2	05010773	BOLT .750-10 x 4.50 G8 HHCS ZC
13	2	05010816	BOLT 1.00-8 x 3.50 G8 HHCS ZC
14	6	05020834	NUT 1.00-8 GC TOPLOCK C&W
15	4	05050006	BUSHING,1.0 DIA
16	1	05050035	BUSHING,1.0FLANGE,3.0ODx1.25ID
16	1	05050036	BUSHING,.750 FLANGE,3.0ODx1.25 ID
17	1	05010853	BOLT 1.25-7 x 4.50 G8 HHCS ZC
18	1	05020835	NUT 1.25-7 GC TOPLOCK C&W
19	1	05021316	WASHER 1.25 FLAT ZC
20	4	05014549	BOLT .625-11 x 2.00 G8 DH PLN
20	4	05014551	BOLT .625-11 x 2.50 G8 DH PLN
21	4	05020837	NUT .625-11 GC TOPLOCK C&W
22	4	05021311	WASHER .625 FLAT ZC
23	1	05043066	VALVE,CUSHION,.875-14ORB,30GPM

**00045878 MTG BOX,SCPR,1.0SCx2,2CYL**

Item	Qty.	Part Number	Description
1	16	05010768	BOLT .750-10 x 3.00 G8 HHCS ZC
2	18	05020849	NUT .750-10 GC TOPLOCK C&W
3	18	05021018	WASHER .750 FLAT MIL-CARB SAE
4	4	05010820	BOLT 1.00-8 x 5.00 G8 HHCS ZC
5	4	05021314	WASHER 1.00 FLAT ZC
6	4	00060258	SHIM,HANGER
7	2	00060298	SHIM,HOLD DOWN,10GA x 4.0 x 10.0
8	1	05051395	CARDBOARD,BOX,12.0x8.0x7.0
9	2	00060093	CLEVIS ASSY,REV,CYL,ROD
10	2	05022026	PIN .250 x 2.00 ROLL ZC
11	6	05021202	BUSHING,MACH,1.5x1x10GA,ZC
12	2	05010773	BOLT .750-10 x 4.50 G8 HHCS ZC
13	2	05010819	BOLT 1.00-8 x 4.50 G8 HHCS ZC
13	2	05010816	BOLT 1.00-8 x 3.50 G8 HHCS ZC
14	6	05020834	NUT 1.00-8 GC TOPLOCK C&W
15	4	05050006	BUSHING,1.0DIA
16	1	05050036	BUSHING,.75FLANGE,3.0ODx1.25ID
16	1	05050035	BUSHING,1.0FLANGE,3.0ODx1.25ID
17	1	05010853	BOLT 1.25-7 x 4.50 G8 HHCS ZC
18	1	05020835	NUT 1.25-7 GC TOPLOCK C&W
19	1	05021316	WASHER 1.25 FLAT ZC
20	1	05043066	VALVE,CUSHION,.875-14ORB,30GPM



00045880 MTG BOX,SCPR,1.0-2PCx1,1CYL

Item	Qty.	Part Number	Description
1	16	05010768	BOLT .750-10 x 3.00 G8 HHCS ZC
2	17	05020849	NUT .750-10 GC TOPLOCK C&W
3	17	05021018	WASHER .750 FLAT MILP-CARB SAE
4	4	05010820	BOLT 1.00-8 x 5.00 G8 HHCS ZC
5	4	05021314	WASHER 1.00 FLAT ZC
6	4	00060258	SHIM,HANGER
7	2	00060298	SHIM,HOLD DOWN 10GA x 4.0 x 10.0
8	1	05051395	CARDBOARD,BOX,12.0x8.0x7.0
9	1	00060093	CLEVIS ASSY,REV,CYL,ROD
10	1	05022026	PIN .250 x 2.00 ROLL ZC
11	3	05021202	BUSHING,MACH,1.5x1x10GA,ZC
12	1	05010773	BOLT .750-10 x 4.50 G8 HHCS ZC
13	1	05010816	BOLT 1.00-8 x 3.50 G8 HHCS ZC
14	5	05020834	NUT 1.00-8 GC TOPLOCK C&W
15	2	05050006	BUSHING,1.0DIA
16	1	05050035	BUSHING,1.0FLANGE,3.0ODx1.25ID
17	1	05010853	BOLT 1.25-7 x 4.50 G8 HHCS ZC
18	1	05020835	NUT 1.25-7 GC TOPLOCK C&W
19	1	05021316	WASHER 1.25 FLAT ZC
20	2	05014551	BOLT .625-11 x 2.50 G8 DH PLN
21	2	05020837	NUT .625-11 GC TOPLOCK C&W
22	2	05021311	WASHER .625 FLAT ZC
23	2	05022145	PIN .875 R x 5.25 L W/HANDLE
24	2	05010595	BOLT .250-20 x 1.50 G8 HHCS ZC
25	2	05020899	NUT .250-20 TOPLOCK ZC
26	2	05021305	WASHER .250 FLAT ZC

00045882 MTG BOX,SCPR,1.0SCx1,1CYL,RVS MAN LCOK

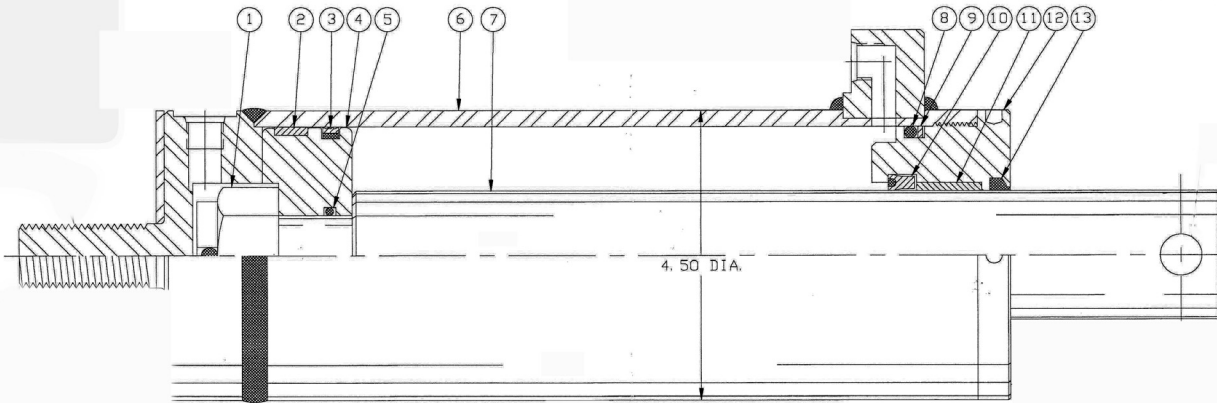
Item	Qty.	Part Number	Description
1	16	05010768	BOLT .750-10 x 3.00 G8 HHCS ZC
2	17	05020849	NUT .750-10 GC TOPLOCK C&W
3	17	05021018	WASHER .750 FLAT MIL-CARB SAE
4	4	05010820	BOLT 1.00-8 x 5.00 G8 HHCS ZC
5	4	05021314	WASHER 1.00 FLAT ZC
6	4	00060258	SHIM,HANGER
7	2	00060298	SHINM,HOLD DOWN,10GA x 4.0 x 10.0
8	1	05051395	CARDBOARD,BOX,12.0x8.0x7.0
9	1	00060093	CLEVIS ASSY,REV,CYL,ROD
10	1	05022026	PIN .250 x 2.00 ROLL ZC
11	3	05021202	BUSHING,MACH,1.5x1.0x10GA,ZC
12	1	05010773	BOLT .750-10 x 4.50 G8 HHCS ZC
13	1	05010819	BOLT 1.00-8 x 4.50 G8 HHCS ZC
14	5	05020834	NUT 1.00-8 GC TOPLOCK C&W
15	2	05050006	BUSHING,1.0DIA
16	1	05050035	BUSHING,1.0FLANGE,3.0ODx1.25ID
17	1	05010853	BOLT 1.25-7 x 4.50 G8 HHCS ZC
18	1	05020835	NUT 1.25-7 GC TOPLOCK C&W
19	1	05021316	WASHER 1.25 FLAT ZC
20	2	05022145	PIN .875 R x 5.25 L W/HANDLE
21	2	05010595	BOLT .250-20 x 1.50 G8 HHCS ZC
22	2	05020899	NUT .250-20 TOPLOCK ZC
23	2	05021305	WASHER .250 FLAT ZC

00018038 MTG BOX,SCPR,1.0SCx1,1CYL RVS

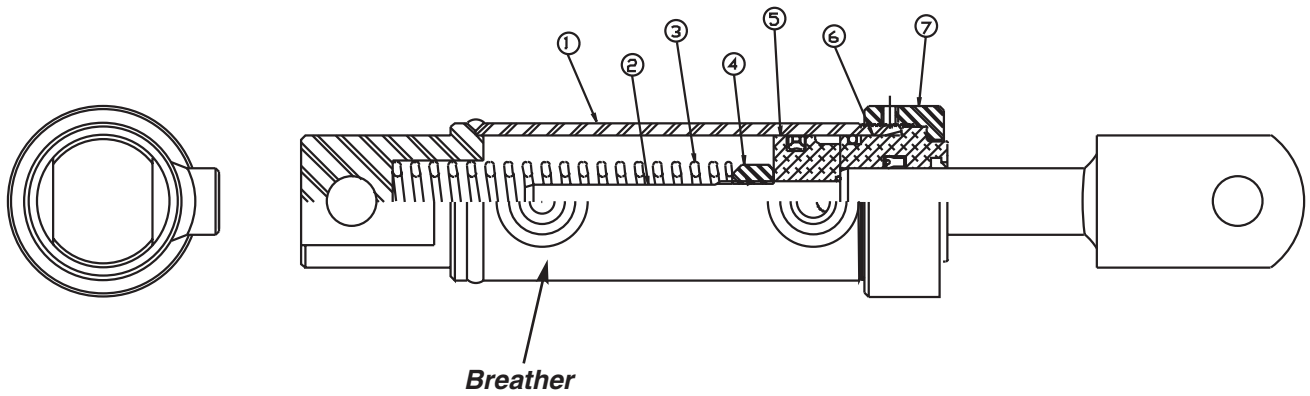
Item	Qty.	Part Number	Description
1	16	05010768	BOLT .750-10 x 3.00 G8 HHCS ZC
2	17	05020849	NUT .750-10 GC TOPLOCK C&W
3	17	05021018	WASHER .750 FLAT MIL-CARB SAE
4	4	05010820	BOLT 1.00-8 x 5.00 G8 HHCS ZC
5	4	05021314	WASHER 1.00 FLAT ZC
6	4	00060258	SHIM,HANGER
7	2	00060298	SHIM,HOLD DOWN 10GA x 4.0 x 10..0
8	1	05051395	CARDBOARD,BOX,12.0x8.0x7.0
9	1	00060093	CLEVIS ASSY,REV,CYL,ROD
10	1	05022026	PIN .250 x 2.00 ROLL ZC
11	3	05021202	BUSHING,MACH,1.5x1.0x10GA,ZC
12	1	05010773	BOLT .750-10 x 4.50 G8 HHCS ZC
13	1	05010819	BOLT 1.00-8 x 4.50 G8 HHCS ZC
14	5	05020834	NUT 1.00-8 GC TOPLOCK C&W
15	2	05050006	BUSHING,1.0DIA
16	1	05050035	BUSHING,1.0FLANGE,3.0ODx1.25ID
17	1	05010853	BOLT 1.25-7 x 4.50 G8 HHCS ZC
18	1	05020835	NUT 1.25-7 GC TOPLOCK C&W
19	1	05021316	WASHER 1.25 FLAT ZC

**05003120 CYLINDER, 4" BORE X 8" STROKE, DA**  
 $\frac{9}{16}$  - 18 SAE PORT

ITEM	QTY	PART #	DESCRIPTION
1	1	05003074	CASTLE NUT
2	1	05002955	WEAR RING
3	1	05002956	PSP SEAL
8	1	05002958	O-RING
9	1	05002959	BACKUP WASHER
10	1	05002525	POLYPAK
13	1	05002527	ROD WIPER



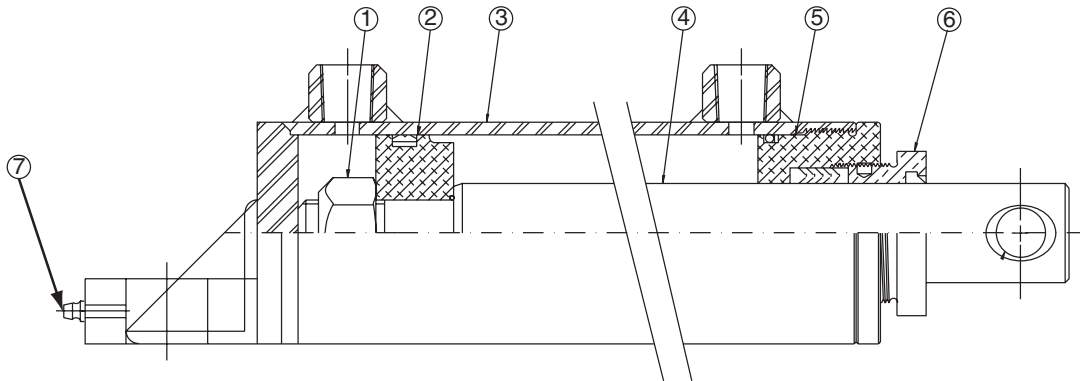
**05002567 CYLINDER, 2X2, SA LOCK**  
 $\frac{9}{16}$  - 18 SAE PORT



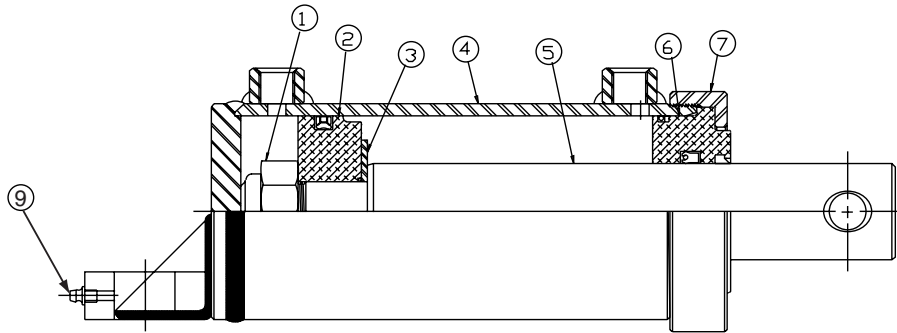
ITEM	QTY	PART #	DESCRIPTION
1	1	05002654	Case Weldment
2	1	05002655	Rod Weldment
3	1	05000093	Spring 1 <sup>13</sup> / <sub>64</sub> x 6
4	1	05000094	Lock Nut $\frac{5}{8}$ -18
5	1	05002656	Piston
6	1	05002657	Head
7	1	05002658	Thread Cap
8	1	05002648	Setscrew $\frac{1}{4}$ - 20
9	1	05002661	Seal Kit

**05002610 CYLINDER, 4 X 14.81, DA, NITRATED ROD**

ITEM	QTY	PART #	DESCRIPTION
1	1	05000022	Nut, Lock
2	1	05000023	Piston
3	1	05002629	Case
4	1	05002639	Rod
5	1	05000064	Head
6	1	05000063	Nut, Pack
7	1	05002438	Zerk, Drive-In
8	1	05002716	Plug, ½ NPT
	1	05000063	Seal Kit



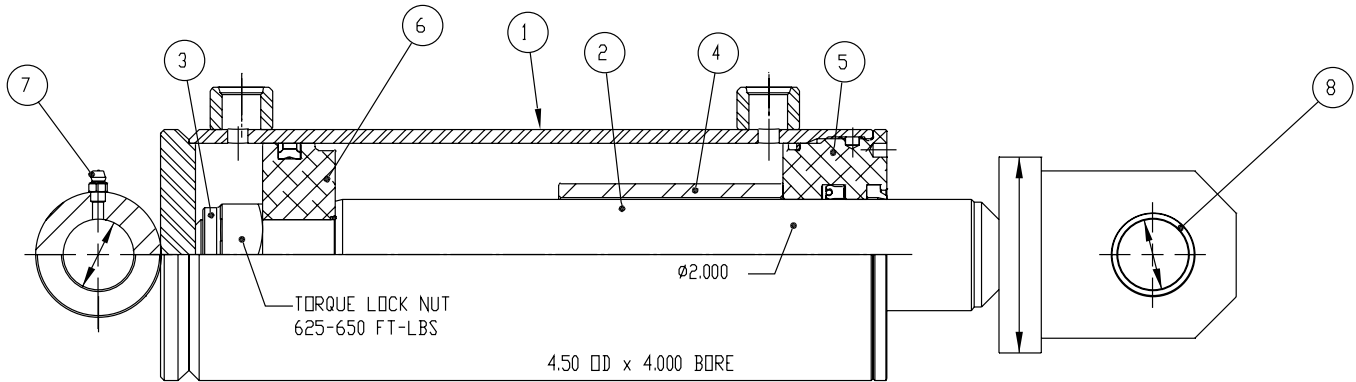
**05002566 Cylinder, 4 x 14.81, DA, Chrome Rod**  
**3/4 - 16 ORB Ports**



ITEM	QTY	PART #	DESCRIPTION
1	1	05000022	Nut, 1¼-12, Lock
2	1	05002625	Piston
3	1	05002222	Washer, Piston
4	1	05002682	Case Weldment
5	1	05002683	Rod Weldment
6	1	05002628	Head
7	1	05002196	Cap, Threaded
8	1	05002648	Screw, ¼-20, Set (Not Shown)
9	1	05002438	Zerk, Drive-In
	1	05002508	Seal Kit

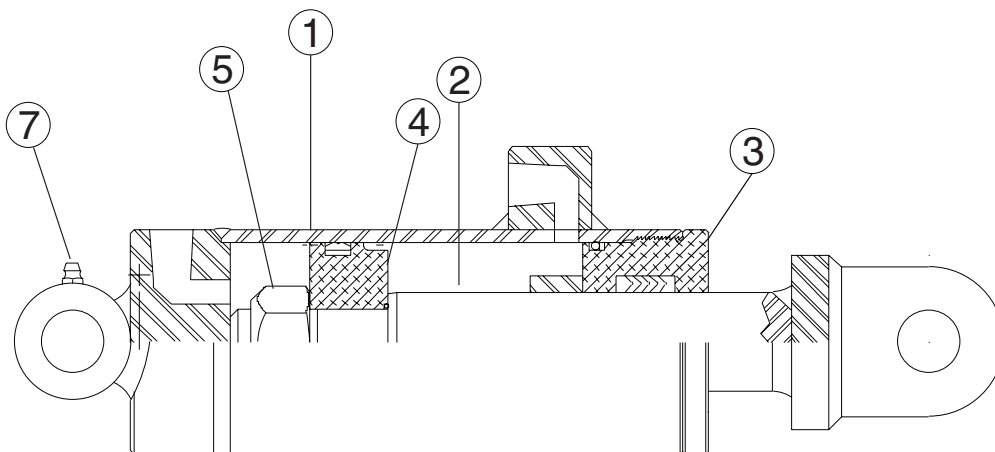
**05002791 CYLINDER, 4X4, DA, NIT, SCRAPER, OSCILLATING**

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	05002976	CASE WELDMENT
2	1	05002789	ROD WELDMENT
3	1	05000022	LOCK NUT
4	1	05002977	SPACER 4"
5	1	05002702	HEAD
6	1	05002625	PISTON GLAND
7	1	05002557	GREASE ZERK
8	2	05002790	HARDENED BUSHING
11	1	05002703	SEAL KIT

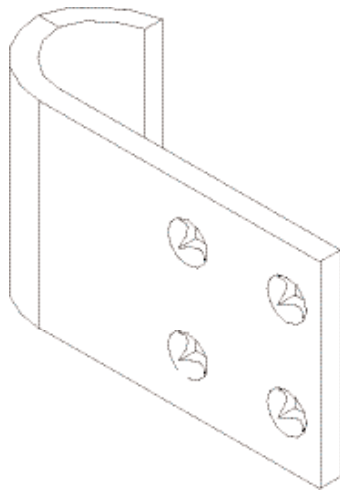


**05002365 CYLINDER, 4 X 8 DIA, NITRIDE**

ITEM	QTY	PART #	DESCRIPTION
1	1	05002366	Tube
2	1	05002367	Rod
3	1	05002368	Head
4	1	05002369	Piston
5	1	05002468	Lock Nut
6	1	05002470	Seal Kit
7	1	05002438	Zerk, Drive-In







**00039621 CURB GUARD ASSEMBLY**

ITEM	QTY	PART #	DESCRIPTION
1	1	05050000	Guard, 5/8 x 6
2	2	05014555	Bolt, 5/8 - 11 x 3 1/2, Dome Head Plain
3	2	05021383	Washer, 5/8, Lock, Zinc
4	2	05020284	Nut, 5/8 - 11, G8, Hex, Plain

**05037005 CUSHION VALVE (OPTIONAL)**



*Down pressure relief is required on all Monroe underbody scrapers. A 500PSI relief can be incorporated into the truck hydraulic system or a down pressure relief valve can be purchased with the underbody scraper. The relief valve must be installed to prevent premature failure of the actuating cylinders and/or the underbody scraper.*

## HOW TO ORDER PARTS

To order or inquire about replacement parts, please contact the **distributor** or **store** that the product was purchased through. To speed the information flow, please have the following information ready:

- Model Number
- Serial Number
- Part Number and/or description as per the parts manual
- Quantity needed

For further information about **Monroe Truck Equipment** replacement parts, please call 800-880-0109 and ask for **Snow & Ice Parts Sales**.

## RETURN POLICY

Merchandise returned to **Monroe Truck Equipment** must have a Warranty Service Request (WSR) form filled out completely and signed by authorized personnel. To get your WSR form, call 800-880-0109. For whole goods ask for **Snow & Ice Sales**. For replacement parts, ask for **Snow & Ice Parts Sales**. All returned items are subject to a 15% restocking fee and must be sent freight prepaid!

## MONROE TRUCK EQUIPMENT, INC. WARRANTY SNOW & ICE CONTROL PRODUCTS

**Monroe Truck Equipment, Inc.** warrants to the original purchaser, that if any part of the product proves to be defective in workmanship or material within **ONE YEAR** of the original installation, and is returned to us within 30 days of the discovered defect, we will (at our option) repair or replace the defective part. This warranty does not apply to damage resulting from misuse, neglect, accident, improper installation, normal wear items or lack of maintenance. This warranty is exclusive and supersedes all other warranties, whether expressed or implied. **Monroe Truck Equipment, Inc.** neither assumes, nor authorizes anyone to assume for it, any other obligation or liability in connection with this warranty and will not be liable for consequential damages.

All engines, pumps, motors, cylinders and valves are warranted by their manufacturer and not by **Monroe Truck Equipment, Inc.**. The manufacturer's warranty will apply to these parts. Electrical and hydraulic components are not to be disassembled without the express written permission of Monroe Truck Equipment. Use of replacement parts other than original equipment voids this warranty.

All defective parts returned must be accompanied by the model number, serial number, date installed, date of defect, description of defect, and the name of the distributor from whom it was purchased. All warranty claims must have prior written approval from **Monroe Truck Equipment, Inc.**

***Please return the warranty registration card that accompanies this manual to confirm receipt of this parts catalog and acknowledge the information contained within. Failure to return the attached card may result in a voided warranty.***



1051 West 7<sup>th</sup> Street  
Monroe, WI 53566  
608-328-8127 ~ Fax: 608-328-4278

## **Warranty Policy**

### **Uninstalled Parts and Equipment Provided by Monroe Truck Equipment**

Monroe Truck Equipment will provide the following limited warranty for a period of one year to the original purchaser of all uninstalled goods provided by Monroe Truck Equipment:

**LIMITED WARRANTY:** All goods provided by Monroe Truck Equipment (MTE) will be free from defects in material and workmanship for a period of one year from the date of purchase by the original purchaser. This limited warranty shall be the sole and exclusive remedy for any such product found to be defective. This limited warranty supercedes all previous warranties and is exclusive and in lieu of all other warranties, whether expressed or implied.

This limited warranty applies only to parts or accessories manufactured by MTE and/or provided by same. Except with respect to title, this limited warranty does not pertain to parts or accessories not manufactured and/or provided by MTE, regardless of whether such parts or accessories were selected and/or recommended by MTE. MTE will, as a service to the buyer, pass on any warranties received from the original manufacturer of MTE provided parts and/or accessories.

MTE will not under any circumstances be liable for any incidental or consequential damages whether in tort, contract, or otherwise, for any bodily injury, death, property damage, loss of use, or loss of income resulting from or in any way arising out of any goods provided by MTE, or their sale, use, or manufacture.

Any warranty claim deemed to be arising from the result of misuse, abuse, neglect, accident, improper installation, lack of maintenance, act of war (whether declared or otherwise), or act of God will be denied. Any repair or modification by the buyer or any third party, without the prior written consent of MTE, will void any possible warranty compensation. Any damage deemed to be the result of abnormal operation will not be compensated by this warranty.

Normal or special maintenance items such as fuels, fluids, tires, belts, hoses, filters, air cleaners, light bulbs, and any other items subject to normal wear and tear that are supplied in connection with goods provided by MTE are not allowed under this warranty.

All engines, pumps, cylinders, valves, and motors are warranted by their manufacturer and not by Monroe Truck Equipment. The manufacturer's warranty will apply to these parts. Electrical and hydraulic components are not to be disassembled without the express written consent of MTE. Any disassembly of MTE provided components without prior authorization will void the applicable warranty.

Monroe Truck Equipment shall be the sole and final determining authority as it applies to the administration of this warranty policy. Purchaser acknowledges receipt of Monroe Truck Equipment Warranty Policy and agrees to be bound by same.



**GLOBAL SOLUTIONS**  
ARMORED VEHICLES ~ SPORT TRUCK CONVERSIONS  
MUNICIPAL SNOW & ICE CONTROL ~ FIRE APPARATUS  
PICKUP TRUCK ACCESSORIES ~ TRUCK EQUIPMENT/MODIFICATIONS





1051 West 7<sup>th</sup> Street  
Monroe, WI 53566  
608-328-8127 ~ Fax: 608-328-4278

Any and all warranty claims must be forwarded to MTE within 10 days of defect discovery. A copy of the original Monroe Truck Equipment invoice as well as the manufacturer's model number, serial number, and date of installation must accompany all correspondence regarding said claims. MTE will, at their option, choose whether to repair or replace the defective part unless otherwise specified by the original manufacturer of said part.

### **Procedures for Warranty Claims Notification**

For submission of any warranty claim please contact Monroe Truck Equipment – Warranty Department at 800-356-8134

The following documentation will be needed when you call for initial warranty authorization:

1. A copy of the original MTE invoice.
2. Make, Model, and VIN or Serial Number of the equipment involved.
3. Part number and serial number of the part in question.
4. A complete description of the problem.

The following must accompany any claim submitted to Monroe Truck Equipment:

1. Documented photographs of any physical damage.
2. Inspection notes by MTE personnel or MTE authorized 3<sup>rd</sup> party.
3. Authorization number issued by Monroe Truck Equipment – Warranty Department.

**Defective parts must be returned to Monroe Truck Equipment (freight prepaid) within 30 days of issuance of Authorization Number.**

**Monroe Truck Equipment reserves the right to void any warranty for failure to comply with Monroe Truck Equipment Warranty Policy.**

**This policy is effective October 11, 2012**



