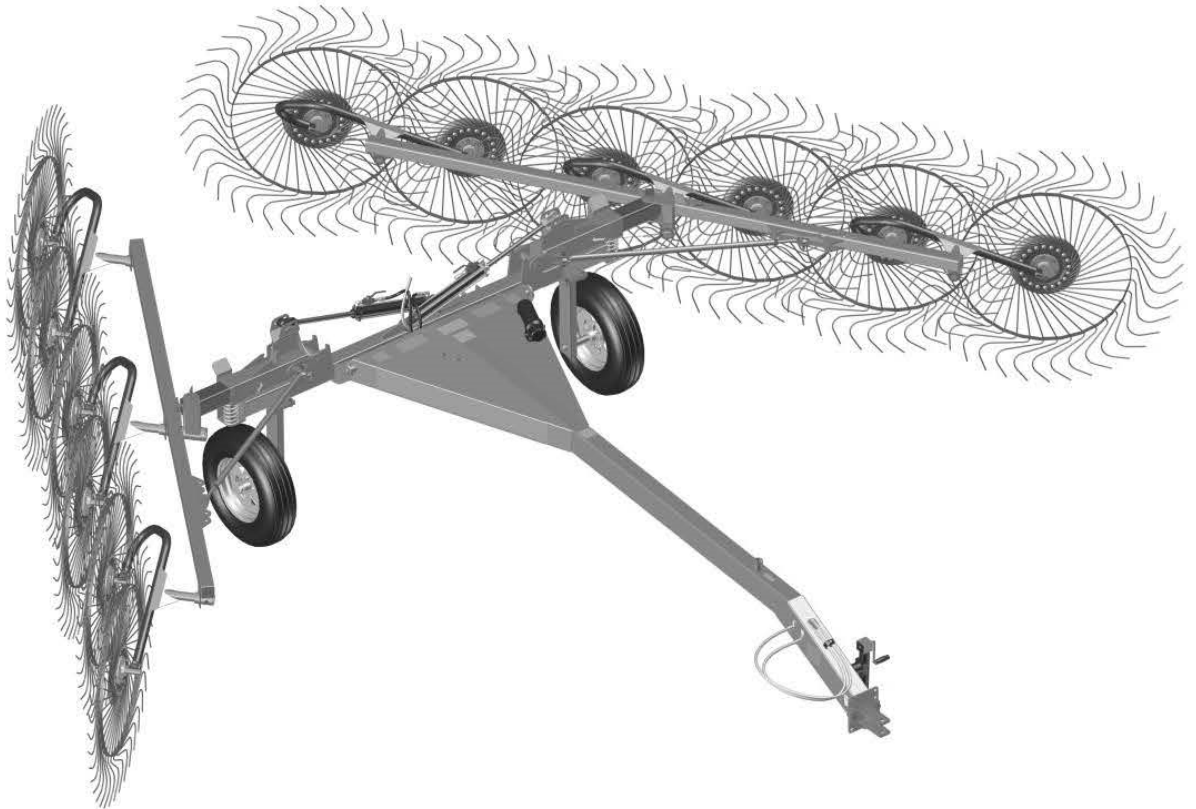


H&S PARTS BOOK

AR2112 RAKE



Revision #03
Starting Ser. #716054

Part #67833
HSMFG0417

P.O. BOX 768, MARSHFIELD, WI 54449
(715) 387-3414 FAX (715) 384-5463
www.hsmfgco.com

CONTENTS

| | |
|---|-------|
| Instructions For Ordering Parts - About Improvements. | 1 |
| Figure 1 - Frame Components. | 2-3 |
| Figure 2 - Slider and Components. | 4-5 |
| Figure 3 - Hub Assembly. | 6-7 |
| Figure 4 - Rake Beam and Components. | 8-9 |
| Figure 5 - Rake Wheel Assembly. | 10-11 |
| Figure 6 - Optional Kicker Wheel. | 12-13 |
| Figure 7 - Hydraulics. | 14-15 |
| Figure 8 - Hydraulic Cylinder | 16-17 |
| Figure 9 - Optional Wind Guard | 18-19 |
| Parts Notes. | 20 |

INSTRUCTIONS FOR ORDERING PARTS

All service parts should be ordered through your authorized H&S dealer. They will be able to give you faster service if you will provide them with the following

1. Model & Serial number is located on the left, rear main frame of your unit.
2. All reference to left or right apply to the machine as viewed from the rear.
3. Parts should not be ordered from illustration only. Please order by complete part number.
4. If your dealer has to order parts - give shipping instructions:

VIA truck - large pieces (please specify local truck lines)

VIA United Parcel Service (include full address)

| | |
|-------------------|----------------------|
| H&S MFG. CO. INC. | |
| MARSHFIELD, WIS. | |
| MOD. NO. | <input type="text"/> |
| SER. NO. | <input type="text"/> |
| DESCR. | <input type="text"/> |

PLEASE RECORD NUMBERS FOR YOUR UNIT FOR QUICK REFERENCE

ABOUT IMPROVEMENTS

H&S IS CONTINUALLY STRIVING TO IMPROVE IT'S PRODUCTS

We must therefore, reserve the right to make improvements or changes whenever it becomes practical to do so without incurring any obligation to make changes or additions to the equipment previously sold.

FIGURE 1
FRAME COMPONENTS

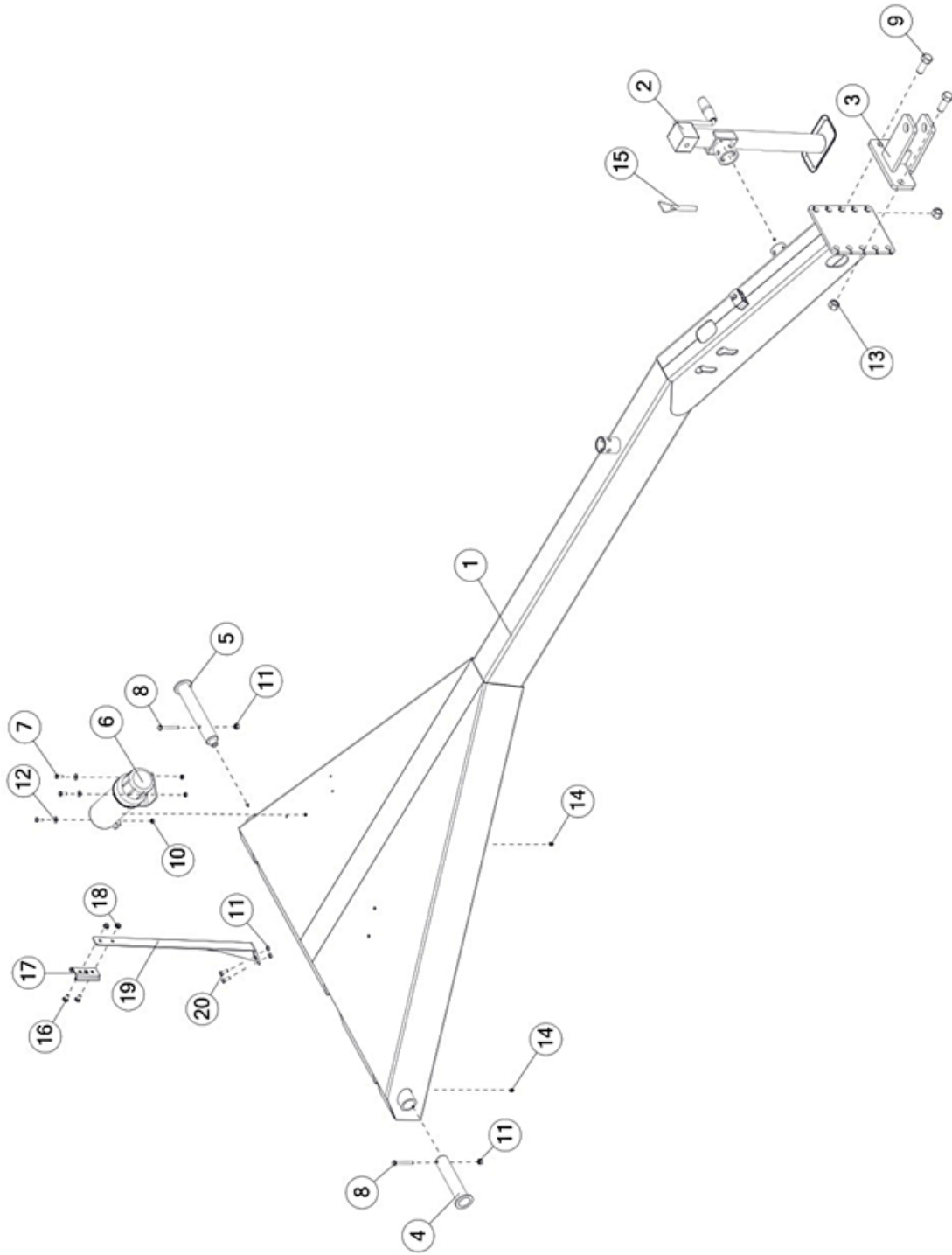


FIGURE 1

FRAME COMPONENTS

| <u>ITEM</u> | <u>QTY</u> | <u>PART #</u> | <u>DESCRIPTION</u> |
|-------------|------------|---------------|------------------------------------|
| 1 | 1 | 69907 | MAIN FRAME WITH DECALS |
| 2 | 1 | BFR753 | JACK, SIDEWIND,2000# |
| 3 | 1 | 10ERWE06 | CLEVIS |
| 4 | 1 | 10WR7 | ASSY, PIVOT ARM PIN |
| 5 | 1 | 0240WE05 | ASSY, PIVOT ARM PIN |
| 6 | 1 | S522 | MANUAL HOLDER |
| 7 | 3 | YBHH08100 | BOLT, HEX, 1/4-20 X 3/4, G5, ZC |
| 8 | 2 | YBHH10080 | BOLT, HEX, 5/16-18 X 2-1/2, G5, ZC |
| 9 | 2 | YBHH24018 | BOLT, HEX, 3/4-10 X 2, G8, ZY |
| 10 | 3 | YNRL08005 | NUT, HEX, 1/4-20, LKRS, A, ZC |
| 11 | 4 | YNRL10005 | NUT, HEX, 5/16-18, LKRS, A, ZC |
| 12 | 3 | YWFL08005 | WASHER, FLAT, 1/4 USS |
| 13 | 2 | YNRL24005 | NUT, HEX, 3/4-10, LKRS, A, ZC |
| 14 | 2 | G89 | ZERK, 1/4"-28 STRAIGHT |
| 15 | 1 | 12N117 | PIN, 0.56, 5.19, JACK |
| 16 | 2 | YBCR10030 | BOLT, CARR, 5/16-18 X 3/4, G5, ZC |
| 17 | 1 | F97 | SMV BRACKET |
| 18 | 2 | YNSF10006 | NUT, FLG, 5/16-18, LKSF, CH, ZC |
| 19 | 1 | 75209 | BRACKET WELDMENT |
| 20 | 2 | YBHH10105 | BOLT, HEX, 5/16-18 X 3/4, G5, ZC |

FIGURE 2
SLIDER & COMPONENTS

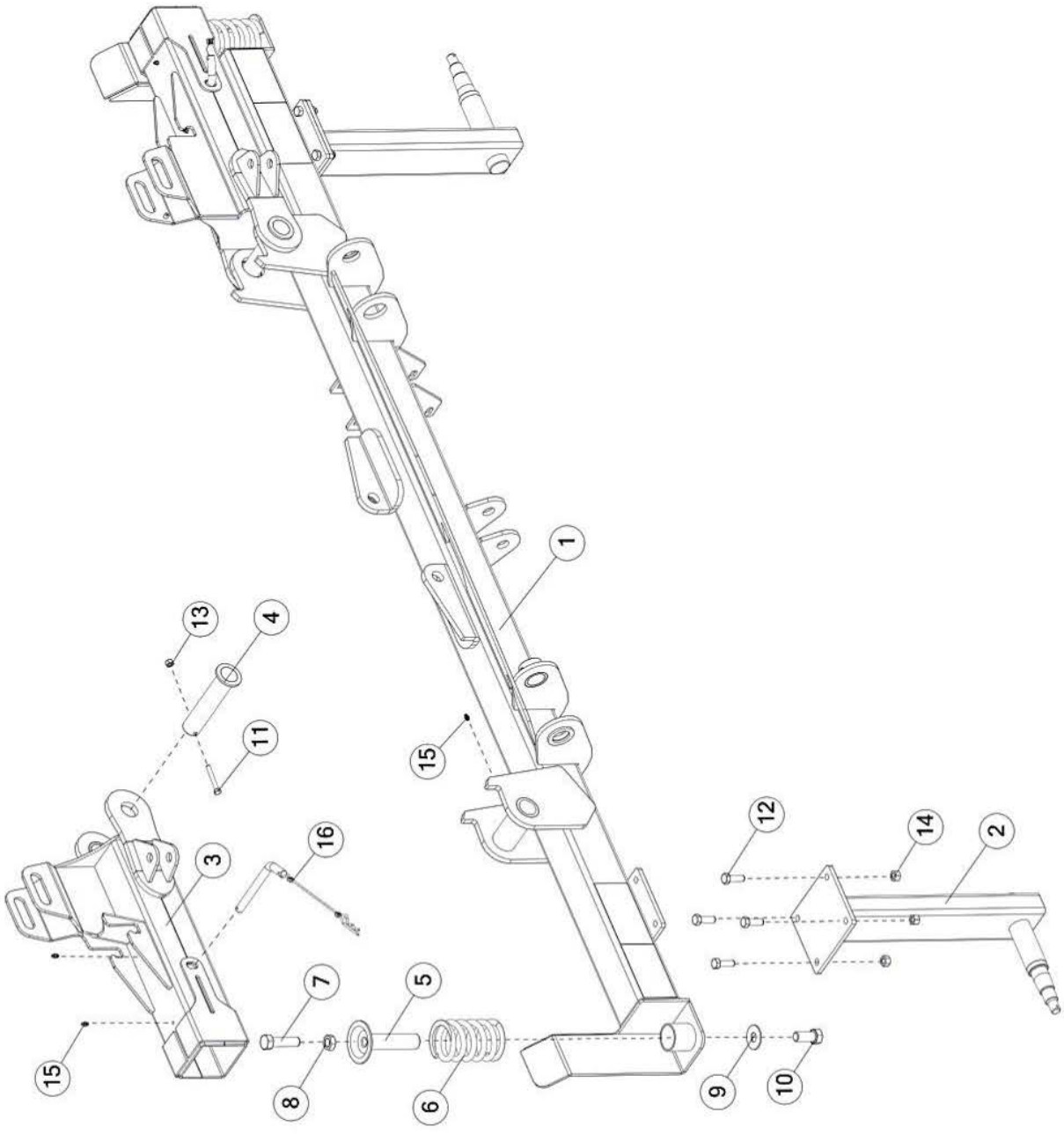


FIGURE 2

SLIDER & COMPONENTS

| <u>ITEM</u> | <u>QTY</u> | <u>PART #</u> | <u>DESCRIPTION</u> |
|-------------|------------|---------------|--|
| 1 | 1 | 69943 | BACK MAIN FRAME WITH DECALS |
| 2 | 2 | 10ERWE07 | AXLE WELDMENT |
| 3 | 1 | 69950 | ASSM, RIGHT SLIDE, WITH DECALS |
| * | 1 | 69949 | ASSM, LEFT SLIDER, WITH DECALS |
| 4 | 2 | 10WR7 | ASSY, PIVOT ARM PIN |
| 5 | 2 | 10ERWE05 | SPRING HOLDER |
| 6 | 2 | 12WR1 | SPRING |
| 7 | 2 | YBHH24042 | 3/4-10 X 2-3/4 GR. 5 TAP BOLT |
| 8 | 2 | YNJM24010 | HEX JAM NUT, 3/4-10 GR 2, ZINC |
| 9 | 2 | YWFL24005 | WASHER, FLAT, 3/4 USS |
| 10 | 2 | YBHH24014 | BOLT, 3/4-10 X 1-3/4" GR 5 |
| 11 | 2 | YBHH10080 | BOLT, 5/16 X 2-1/2 GR 5 |
| 12 | 8 | YBHH16030 | BOLT, 1/2 X 1-1/2 GR 5 |
| 13 | 2 | YNRL10005 | HEX NUT, REVERSIBLE-SIDE LOCK, 5/16-18 |
| 14 | 8 | YNRL16005 | HEX NUT, REVERSIBLE-SIDE LOCK, 1/2-13 |
| 15 | 6 | G89 | ZERK, 1/4"-28 STRAIGHT |
| 16 | 2 | 10ERAS01 | ARM SLIDER PIN ASSEMBLY |

*** MEANS NOT SHOWN**

FIGURE 3 HUB ASSEMBLY

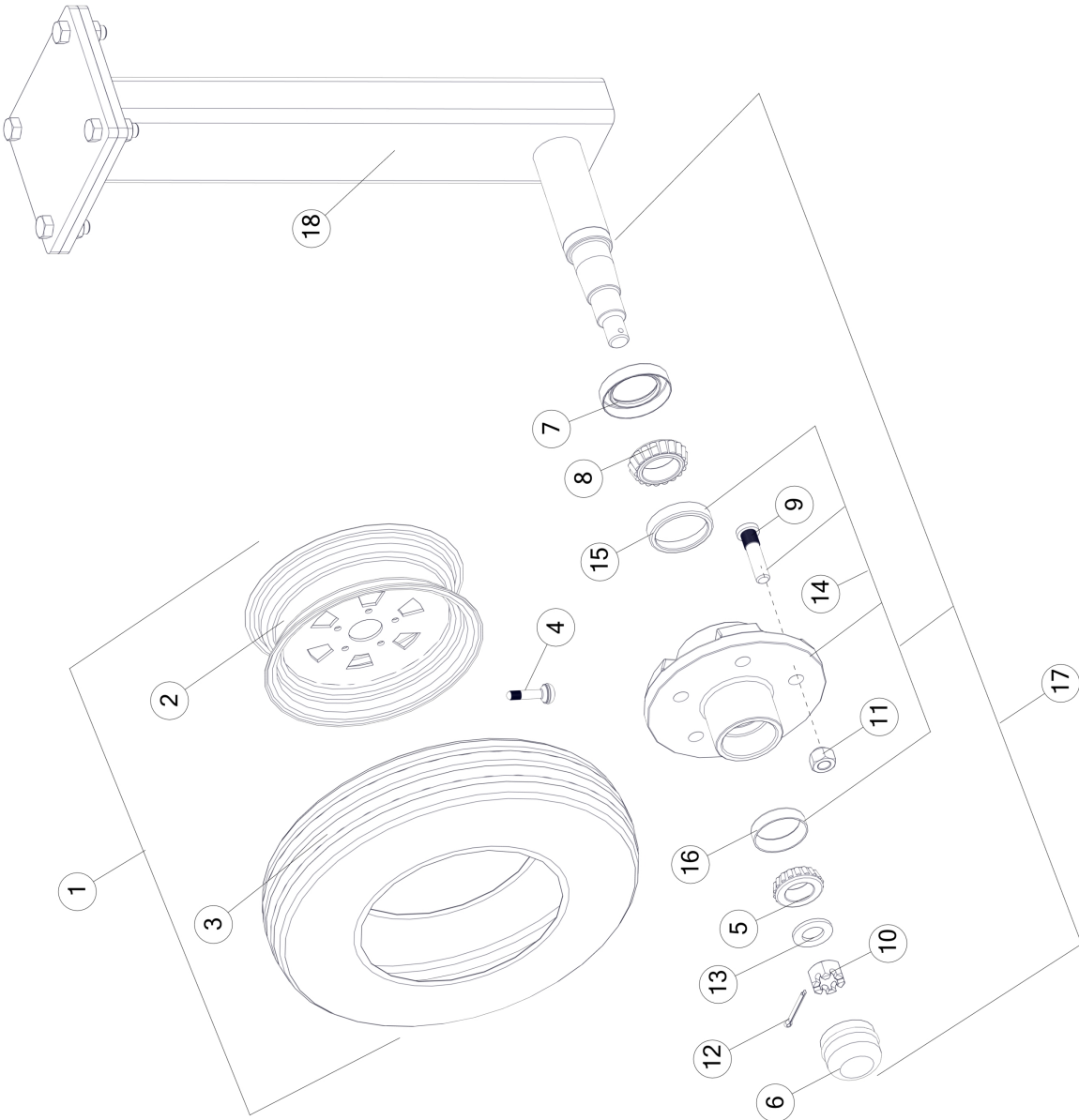


FIGURE 3

HUB ASSEMBLY

| <u>ITEM</u> | <u>QTY</u> | <u>PART #</u> | <u>DESCRIPTION</u> |
|-------------|------------|---------------|---|
| 1 | 2 | 8605 | 205/75D15 LRC BIAS TIRE ON 15X5 WHEEL (OFF-WHITE) |
| 2 | 2 | 8603 | RIM 15 X 5 5 BOLT |
| 3 | 2 | 8604 | 205/75D15 LRC TIRE |
| 4 | 2 | 72436 | VALVE STEM, 1-1/2" RUBBER |
| 5 | 2 | CAT10 | OUTER BEARING |
| 6 | 2 | CAT46 | CAP |
| 7 | 2 | CAT5 | GREASE SEAL |
| 8 | 2 | CAT6 | INNER BEARING |
| 9 | 10 | YBSD16018 | STUD BOLT SPECIAL KNURL OD |
| 10 | 2 | YNSL24010 | HEX NUT, SLOTTED, 3/4-16, |
| 11 | 10 | YNWL16005 | WHEEL NUT, 1/2"-20 UNF |
| 12 | 2 | YPCT05010 | COTTER PIN 5/32" X 1-1/2" |
| 13 | 2 | YWFL24010 | WASHER, FLAT, SAE 3/4, PLAIN |
| 14 | 2 | CAT8 | HUB, 545, 5 BOLT, 1250 LBS, WITH RACES |
| 15 | 2 | CAT7 | INNER RACE |
| 16 | 2 | BFR275 | RACE |
| 17 | 2 | 10WR49 | COMPLETE HUB |
| 18 | 2 | 10ERWE07 | AXLE WELDMENT |

FIGURE 4
RAKE BEAM & COMPONENTS

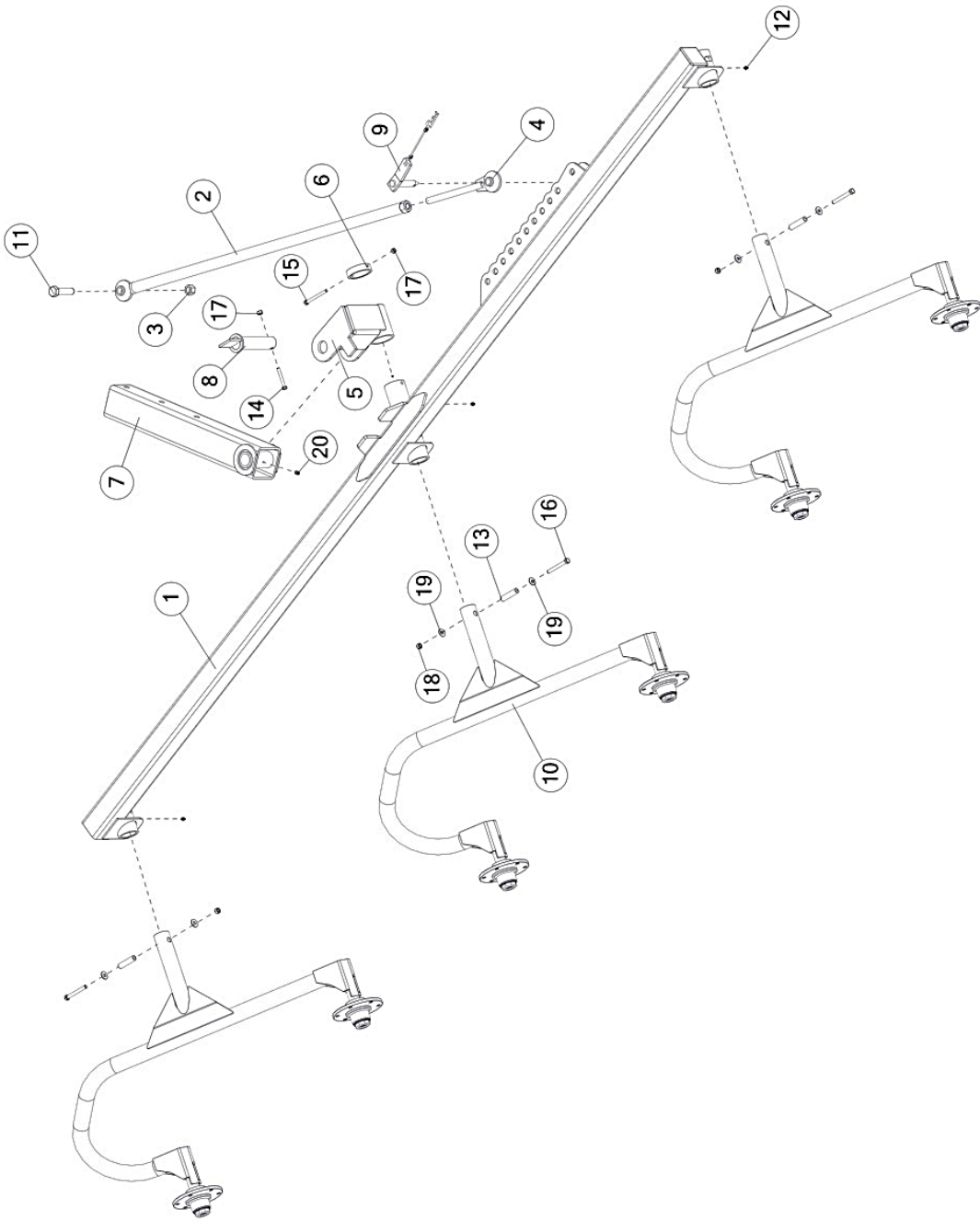


FIGURE 4

RAKE BEAM & COMPONENTS

| <u>ITEM</u> | <u>QTY</u> | <u>PART #</u> | <u>DESCRIPTION</u> |
|-------------|------------|---------------|--|
| 1 | 1 | 66771 | RAKE ARM WELDMENT, LH |
| * | 1 | 66780 | RAKE ARM WELDMENT, RH |
| 2 | 2 | 10WR31 | ASSY, LINK ROD |
| 3 | 2 | YNRL24005 | HEX NUT, REVERSIBLE-SIDE LOCK, 3/4-10 |
| 4 | 2 | 10WR9 | ASSY, ADJUSTING ROD |
| 5 | 1 | 12ERWE06 | RIGHT INTERMEDIATE LINKAGE PIVOT |
| * | 1 | 12ERWE05 | LEFT INTERMEDIATE LINKAGE PIVOT |
| 6 | 2 | 10WR8 | THRUST WASHER |
| 7 | 2 | 10WR34 | WLDMT, SLIDE ARM, RAKE, |
| 8 | 2 | 10WR6 | ASSY, RAKE BEAM PIN |
| 9 | 2 | 10ERAS20 | LANYARD, WIDTH LINK PIN ASSEMBLY |
| 10 | 3 | 71432 | WLDMT, CANE, DUAL, RH |
| * | 3 | 71436 | WLDMT, CANE, DUAL, LH |
| 11 | 2 | YBHH24050 | BOLT, 3/4 X 3 GR 5 |
| 12 | 8 | G89 | ZERK, 1/4"-28 STRAIGHT |
| 13 | 6 | 66247 | SPACER, TUBE |
| 14 | 2 | YBHH10080 | BOLT, 5/16 X 2-1/2 GR 5 |
| 15 | 2 | YBHH10110 | BOLT, 5/16 X 3-1/2 GR 5 |
| 16 | 6 | YBHH12155 | BOLT, 3/8-16 X 3-1/4 GR 5 |
| 17 | 4 | YNRL10005 | HEX NUT, REVERSIBLE-SIDE LOCK, 5/16-18 |
| 18 | 6 | YNRL12005 | HEX NUT, REVERSIBLE-SIDE LOCK, 3/8"-16 |
| 19 | 12 | YWFL12005 | WASHER, FLAT, 3/8 USS |
| 20 | 2 | RG21 | GREASE ZERK, 45 DEGREE |

*** MEANS NOT SHOWN**

FIGURE 5 RAKE WHEEL ASSEMBLY

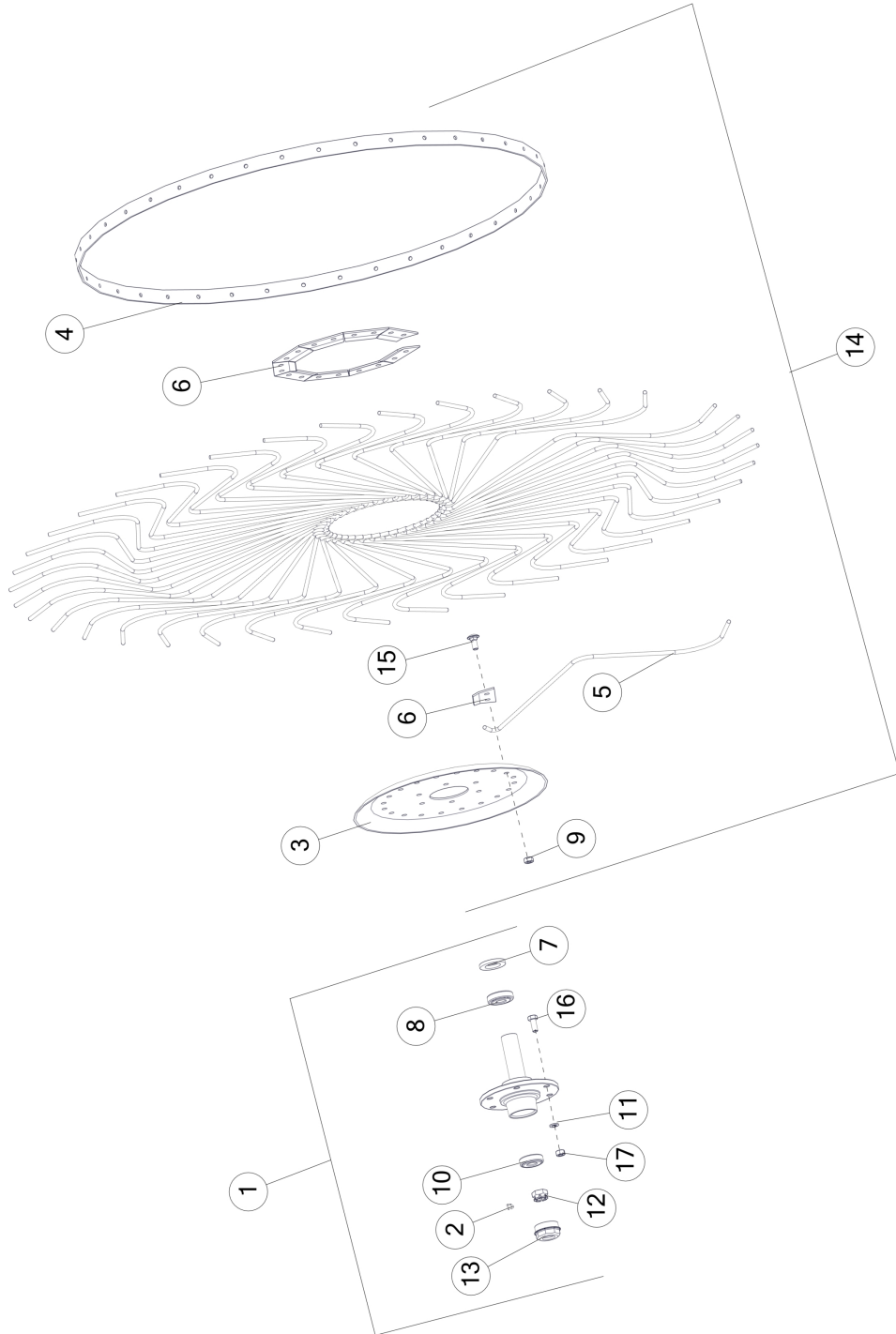


FIGURE 5

RAKE WHEEL ASSEMBLY

| <u>ITEM</u> | <u>QTY</u> | <u>PART #</u> | <u>DESCRIPTION</u> |
|-------------|------------|---------------|---|
| 1 | 12 | 1081 | RAKE WHEEL HUB COMPLETE AND SPINDLE |
| 2 | 12 | 1088 | CLIP, RETAINING |
| 3 | 12 | FR71 | RAKE WHEEL CENTER |
| 4 | 12 | FR72 | RAKE WHEEL OUTER RING |
| 5 | 480 | FR73 | 60" RAKE WHEEL TOOTH |
| 6 | 120 | FR74 | RAKE TOOTH CLIP |
| 7 | 12 | T163 | SEAL, 2.05 X 1.25 X .25 |
| 8 | 12 | 600012 | INNER BEARING AND RACE |
| 9 | 240 | YNLC76005 | NUT, LOCK, 10 MM |
| 10 | 12 | 600014 | OUTER BEARING AND RACE |
| 11 | 240 | YWLO76015 | WASHER, LOCK, M10 |
| 12 | 12 | T172 | NUT, HEX, 18MM - 1.5, CASTLE, G2, NF CAP, |
| 13 | 12 | T173 | HUB, RAKE WHEEL |
| 14 | 6 | FR70 | 60" RIGHT HAND RAKE WHEEL ASSEMBLY |
| * | 6 | FR69 | 60" LEFT HAND RAKE WHEEL ASSEMBLY |
| 15 | 240 | YBCR76005 | CARR. BOLT, 10MM X 25MM |
| 16 | 72 | YBHH76015 | BOLT, M10-1.5 (25MM) |
| 17 | 72 | YNHX76015 | NUT, HEX, M10-1.5, NA, CL10, ZC |

* MEANS NOT SHOWN

FIGURE 6

OPTIONAL - KICKER WHEEL

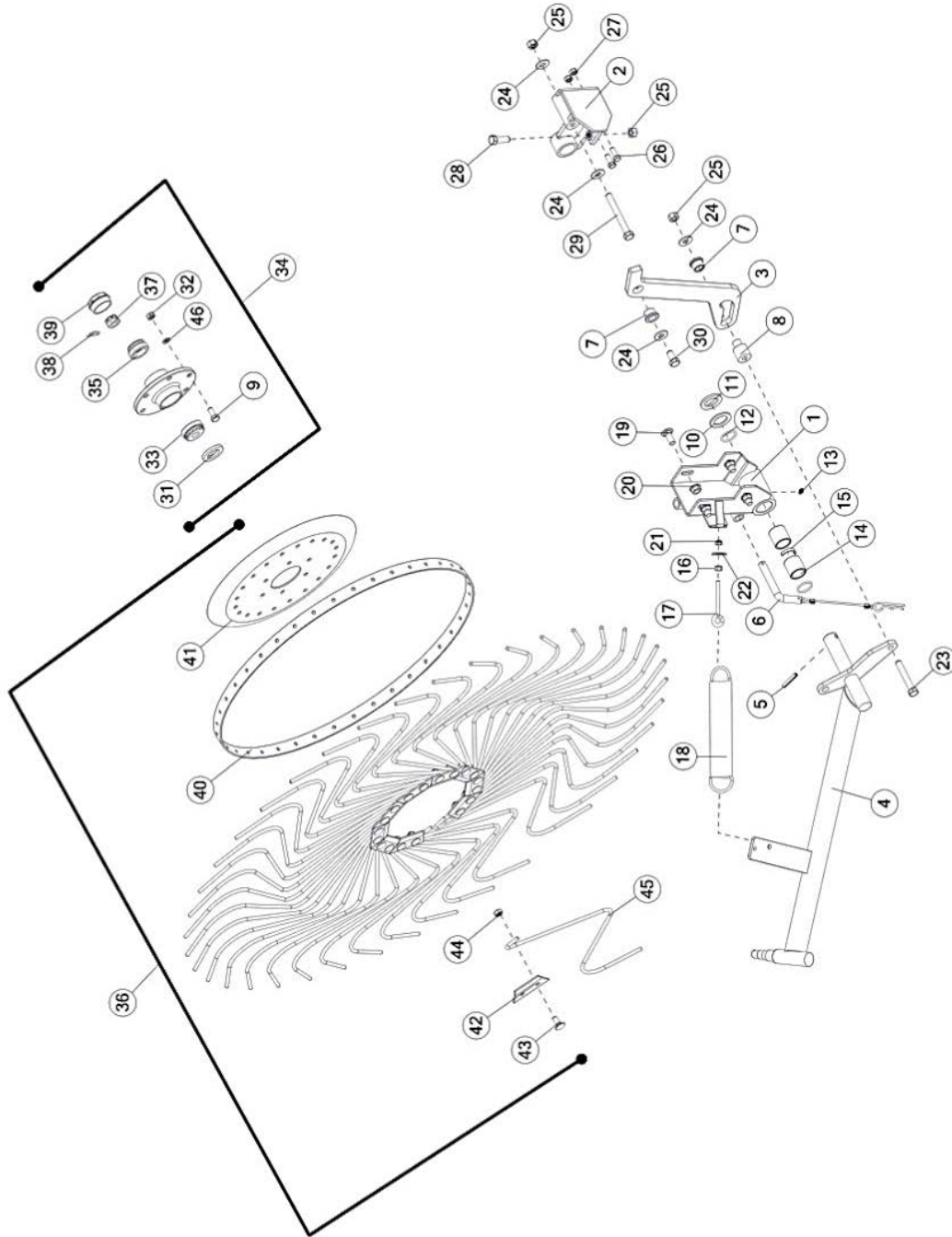


FIGURE 6

OPTIONAL - KICKER WHEEL

| <u>ITEM</u> | <u>QTY</u> | <u>PART #</u> | <u>DESCRIPTION</u> |
|-------------|------------|---------------|---|
| 1 | 1 | 0240WE04 | KICKER MOUNT WELD |
| 2 | 1 | 0240WE07 | KICKER STOP WELDMENT |
| 3 | 1 | 0240HF03 | KICKER LEVER LINK FRAME PIVOT |
| 4 | 1 | 0240WE03 | KICKER ARM WELD |
| 5 | 1 | YPEX10015 | EXPANSION PIN, 5/16" X 1-3/4" |
| 6 | 1 | 10ERAS08 | LANYARD, CANE PIN ASSEMBLY |
| 7 | 2 | 8579 | POLY PIVOT BEARING |
| 8 | 1 | 0240TU04 | KICKER PIVOT SPACER LOWER |
| 9 | 6 | YBHH76015 | BOLT, M10-1.5 (25MM) |
| 10 | 1 | BFR221 | POLY WASHER |
| 11 | 1 | BFR229 | WASHER |
| 12 | 2 | S99 | O-RING, 218 BUNA-N, 1.50 OD X 1.25 ID |
| 13 | 1 | G89 | ZERK, 1/4"-28 STRAIGHT |
| 14 | 2 | G16 | BRONZE BUSHING 1-1/2" X 1-1/4" X 1-1/2" |
| 15 | 1 | BFR230 | BEARING SPACER |
| 16 | 1 | YNHX10005 | HEX NUT, 5/16 GR 2 |
| 17 | 1 | YBTE10030 | TURNED EYE BOLT, 5/16 X 3 |
| 18 | 1 | BFR110 | KICKER WHEEL SPRING |
| 19 | 4 | YBCR16015 | CARR. BOLT, 1/2 X 1-1/4 GR 5 |
| 20 | 4 | YNSF16005 | HEX NUT, SERRATED FLANGED-LOCK, 1/2"-13 |
| 21 | 1 | YNNY10005 | HEX NUT, NYLON LOCKNUT, 5/16-18 |
| 22 | 1 | YWFL10010 | WASHER, FLAT, 5/16" SAE GR. 8 (YELLOW ZINC) |
| 23 | 1 | YBHH16120 | BOLT, 1/2 X 3-1/4 GR 5 |
| 24 | 4 | YWFL16005 | WASHER, FLAT, 1/2 USS |
| 25 | 2 | YNRL16005 | HEX NUT, REVERSIBLE-SIDE LOCK, 1/2-13 |
| 26 | 2 | YBHH12010 | BOLT, 3/8 X 1 GR 5 |
| 27 | 2 | YNRL12005 | HEX NUT, REVERSIBLE-SIDE LOCK, 3/8"-16 |
| 28 | 1 | YBHH16030 | BOLT, 1/2 X 1-1/2 GR 5 |
| 29 | 1 | YBHH16140 | BOLT, 1/2 X 4-1/2 GR 5 |
| 30 | 1 | YBHH16010 | BOLT, 1/2 X 1 GR 5 |
| 31 | 1 | T163 | SEAL, 2.05 X 1.25 X .25 |
| 32 | 6 | YBHH76015 | BOLT, M10-1.5 (25MM) |
| 33 | 1 | 600012 | INNER BEARING AND RACE |
| 34 | 1 | 1081 | RAKE WHEEL HUB AND SPINDLE |
| 35 | 1 | 600014 | BEARING AND RACE |
| 36 | 1 | 10WR17 | 49" RAKE WHEEL, ASSEMBLY |
| 37 | 1 | T172 | NUT, HEX, 18MM - 1.5, CASTLE, G2, NF |
| 38 | 1 | 1088 | CLIP, RETAINING |
| 39 | 1 | T173 | CAP, HUB, RAKE WHEEL |
| 40 | 1 | T177A | RAKE WHEEL OUTER RING |
| 41 | 1 | FR71 | RAKE WHEEL CENTER |
| 42 | 10 | FR74 | RAKE TOOTH CLIP |
| 43 | 20 | YBCR76005 | CARR. BOLT, 10MM X 25MM |
| 44 | 20 | YNHX76015 | HEX NUT, M10-1.5 |
| 45 | 40 | 10WR42 | 49" RAKE WHEEL TOOTH |
| 46 | 6 | YWLO76015 | WASHER, LOCK, M10 |

FIGURE 7

HYDRAULICS

| <u>ITEM</u> | <u>QTY</u> | <u>PART #</u> | <u>DESCRIPTION</u> |
|-------------|------------|---------------|-----------------------------|
| 1 | 2 | 67148 | QUICK COUPLER |
| 2 | 1 | 70095 | HYD HOSE, 6, 214IN |
| 3 | 1 | 70096 | HYD HOSE, 6, 214IN |
| 4 | 1 | 70097 | HYD HOSE, 6, 20IN |
| 5 | 2 | 70094 | HYD HOSE, 6, 34IN |
| 6 | 2 | YNRL10005 | NUT HEX LKRS, 5/16 G5 |
| 7 | 2 | 66920 | HYD VALVE, COUNTERBALANCE |
| 8 | 1 | 60426 | HYD MANIFOLD |
| 9 | 1 | 56412 | HYD CYLINDER, REPHASE |
| * | 1 | 73227 | SEAL KIT |
| 10 | 3 | LW55 | CYLINDER PIN |
| 11 | 8 | YPCT06020 | COTTER PIN, 3/16 X 2 |
| 12 | 2 | YPCT07005 | COTTER PIN, 7/32 X 2 |
| 13 | 2 | 23N107 | CYLINDER PIN |
| 14 | 10 | 16SV136 | SHIM |
| 15 | 2 | YBHH10080 | BOLT, HEX 5/16 X 2-1/2 G5 |
| 16 | 2 | BFR33 | SHIM |
| 17 | 2 | 70113 | FITTING 90, 9/16ORB, 3/8NPT |
| 18 | 2 | 59235 | BALL VALVE, HIGH PRESSURE |
| 19 | 3 | CHM268 | FITTING 90, 6JIC, 6ORB |
| 20 | 2 | 70098 | HYD HOSE, 6, 30IN |
| 21 | 2 | 69969 | HYD CYLINDER, 2 X 16 |
| 22 | 2 | 1021 | DOUBLE T CLAMP, PLASTIC |
| 23 | 2 | 56563 | TOP PLATE CLAMP |
| 24 | 2 | 56568 | BOLT HEX 5/16 X 1-3/8 G5 |
| 25 | 2 | CHM278 | BLOCK CLAMP, PLASTIC |
| 26 | 1 | 72884 | CYLINDER PIN |
| 27 | 2 | YWFL08005 | WASHER FLAT, 1/4 USS |
| 28 | 1 | 72319 | WEAR SLEEVE |

*** MEANS NOT SHOWN**

FIGURE 8 HYDRAULIC CYLINDER

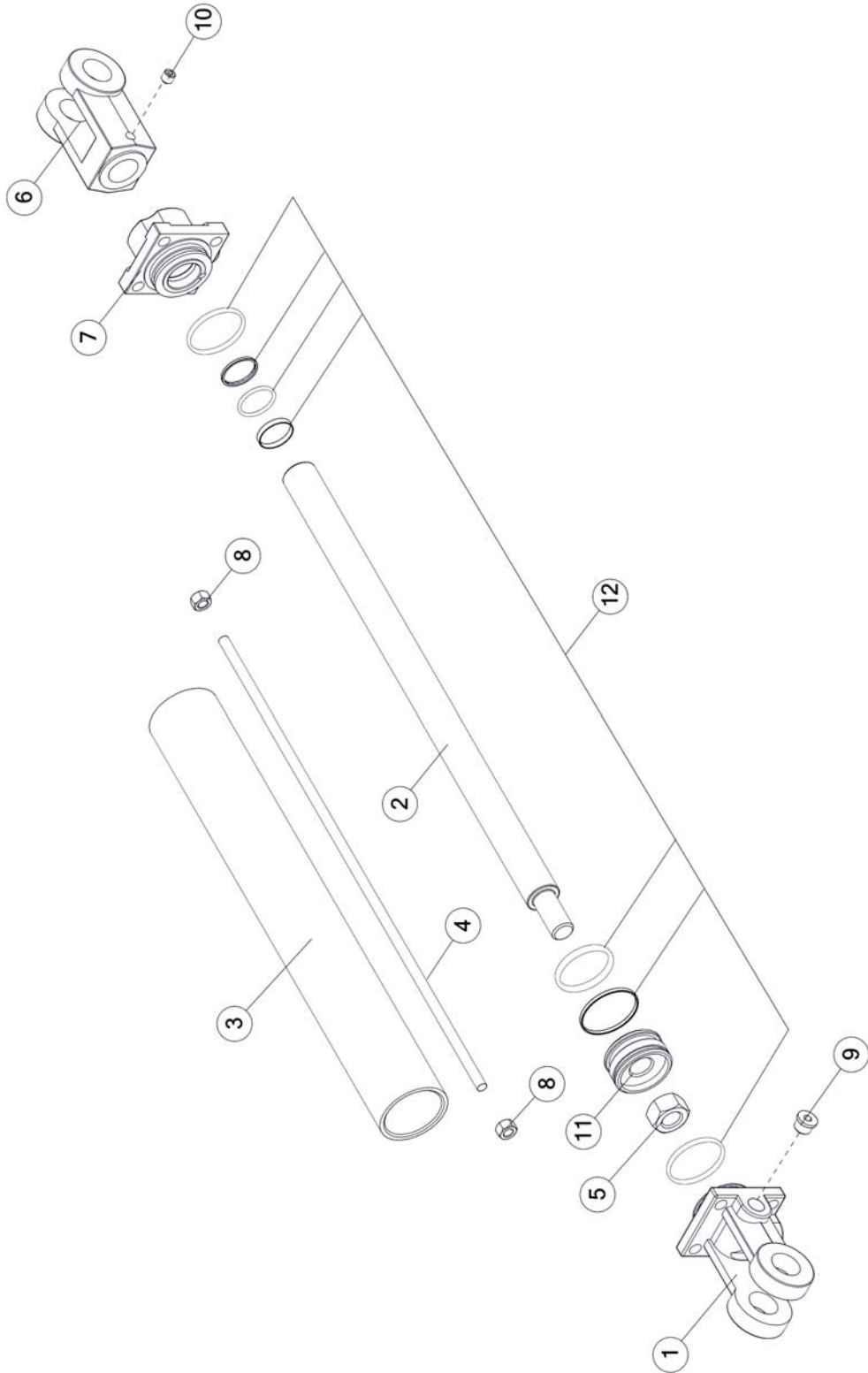


FIGURE 8

HYDRAULIC CYLINDER

| <u>ITEM</u> | <u>QTY</u> | <u>PART #</u> | <u>DESCRIPTION</u> |
|--------------------|-------------------|----------------------|---|
| 1 | 1 | 66932 | CLEVIS CAP FOR 2" CYLINDER |
| 2 | 1 | 23N145A | ROD |
| 3 | 1 | 23N146 | CYL. TUBE |
| 4 | 4 | 23N147 | SHAFT, RND, 0.33 X 20.19 |
| 5 | 1 | 23N148 | PISTON NUT |
| 6 | 1 | 23N150A | ROD CLEVIS |
| 7 | 1 | 66934 | ROD CAP FOR 2" CYLINDERS |
| 8 | 4 | YNHX12005 | HEX NUT, 3/8-16 GR 2 |
| 9 | 1 | SD270 | HOLLOW HEX PLUG 6 |
| 10 | 1 | YSSO12015 | SET SCREW, SOCKET, 3/8-24 X 3/8 |
| 11 | 1 | 56180 | PISTON FOR 2" CYLINDER |
| 12 | 6 | 56187 | SEAL KIT FOR 2" CYLINDER |
| - | 1 | 69969 | 2" X 16" HYDRAULIC CYLINDER WITH PINS 90 DEG TO ORB PORTS COMPLETE |

FIGURE 9
OPTIONAL - WIND GUARD

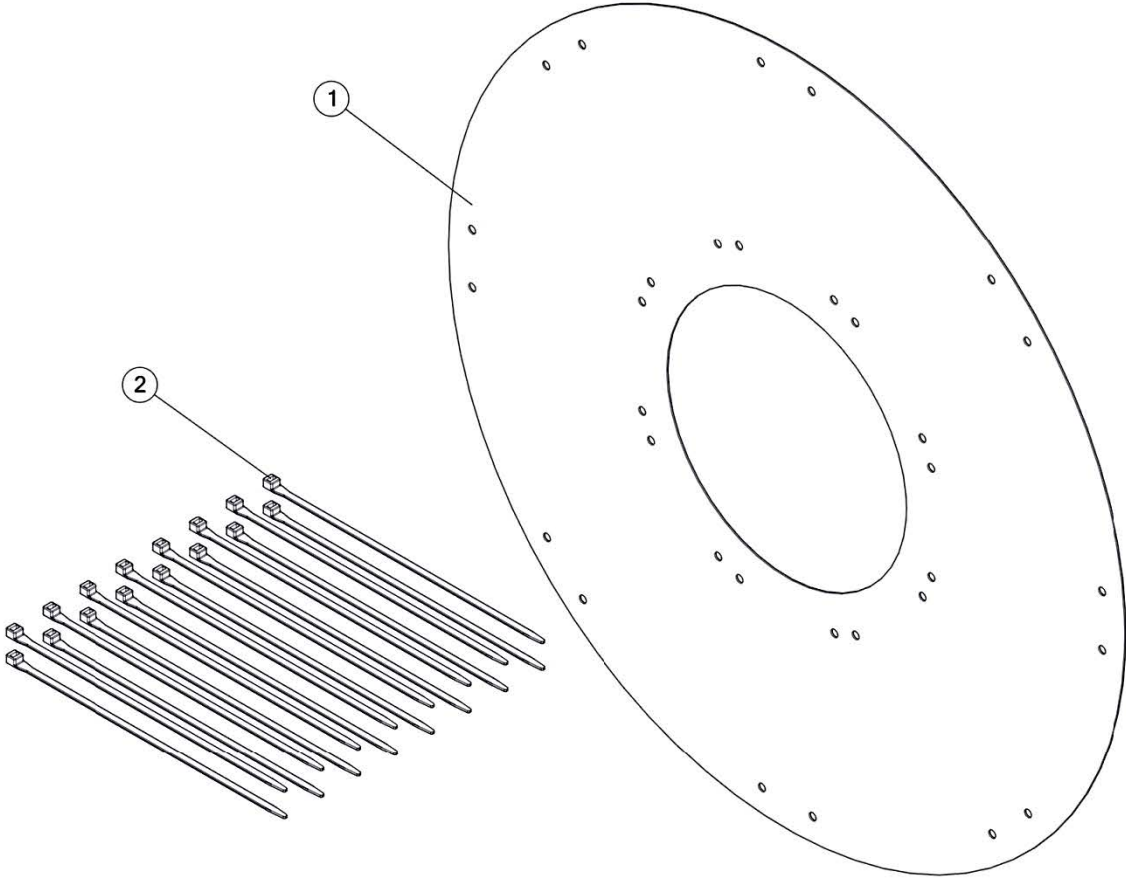
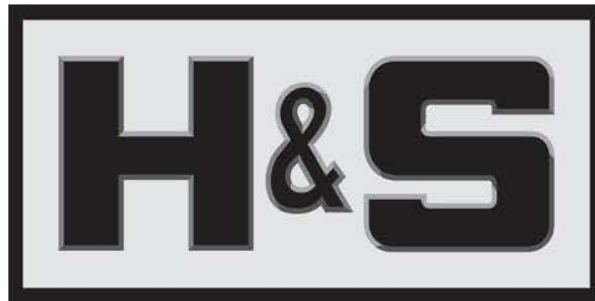


FIGURE 9
OPTIONAL - WIND GUARD

| <u>ITEM</u> | <u>QTY</u> | <u>PART #</u> | <u>DESCRIPTION</u> |
|--------------------|-------------------|----------------------|-------------------------------|
| 1 | 1 | 59039 | POLY WIND GAURD, FOR 60" RAKE |
| 2 | 16 | 57626 | 15 INCH 120# BLACK CABLE TIE |



**H&S Manufacturing products are approved for the
FEMA SEAL OF QUALITY**

**P.O. BOX 768, MARSHFIELD, WI 54449
(715) 387-3414 FAX (715) 384-5463
www.hsmfgco.com**