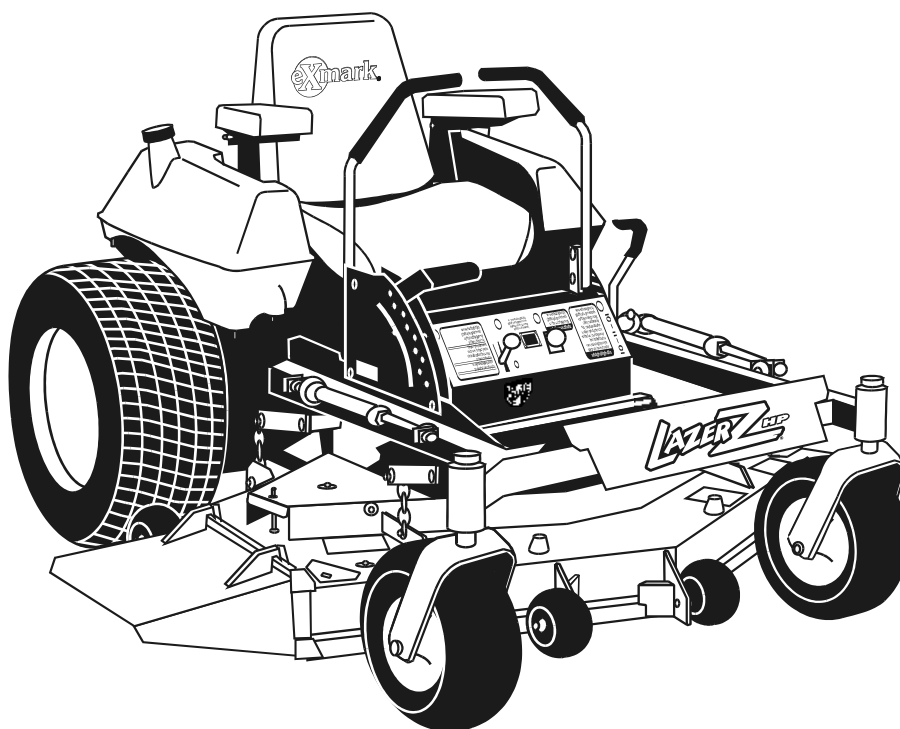




PARTS MANUAL

# LAZER Z<sup>®</sup> HP

**CONGRATULATIONS** on the purchase of your new Exmark mower. This product has been carefully designed and manufactured to give you a maximum amount of dependability and years of trouble-free operation. If additional information is needed, or should you require trained mechanic service, contact your authorized Exmark equipment dealer or distributor. If you need to order replacement parts from your dealer, always give the model number and serial number of your mower as well as the part number, description and quantity of the part needed.

The Serial No. plate is located on the right side of the console. For ease of ordering and reference, we suggest that you record the information requested in the following identification table.

Place Model No. and Serial No. Label Here  
(Included in Literature Pack)  
or Fill in Below

Model No. \_\_\_\_\_

Serial No. \_\_\_\_\_

Engine Model No. and Spec. No. (Code) \_\_\_\_\_

Engine Serial No. (E/No) \_\_\_\_\_

Date Purchased \_\_\_\_\_

Part No. 103-3016

## EXMARK PARTS PLUS® PROGRAM

**EFFECTIVE DATE: September 1, 1995**

### Program

If your Exmark dealer does not have the Exmark part in stock, Exmark will get the parts to the dealer the next business day or the part will be FREE\* Guaranteed!!

### ***How the Program Works***

1. If dealer does not have part in stock for a "down" unit at the time of request by customer, the dealer contacts his distributor by 1:00 p.m., local time, and requests Exmark Parts Plus® shipment of six (6) line items or less.
2. Distributor ships part(s) to dealer or customer, as requested by dealer, same day, overnight UPS. Distributor bills dealer for part and freight charges where applicable.
3. If distributor does not have the part(s) in stock to satisfy Exmark Parts Plus® order, he contacts Exmark by 3:00 p.m., central time, with an Exmark Parts Plus® order of six (6) line items or less.
4. If order is received by 3:00 p.m. central time, Exmark ships part(s) direct to dealer or customer, as requested by distributor, same day, overnight UPS. Exmark bills the distributor for parts and shipping charges, where applicable.
5. The customer pays for the part and freight if it is shipped under the Exmark Parts Plus® and if it arrives in accordance to the program.
6. Who pays for the part and freight if it fails to arrive overnight in accordance to the program?
  - A. Under any circumstance the customer does not pay.
  - B. If the part does not arrive overnight due to:
    1. The dealer not submitting the Exmark Parts Plus® order to his Exmark distributor by 1:00 p.m., the dealer pays for the part and freight.
    2. The Distributor being unable to ship the part the same day or not submitting the Exmark Parts Plus® order to Exmark by 3:00 p.m., central time, the Distributor pays for the part and freight.
    3. Exmark being unable to ship the part and the Exmark parts order is received by 3:00 p.m., central time, Exmark pays for the part and freight.
    4. If the part does not arrive overnight due to the shipper (UPS), the shipper pays for the freight and Exmark pays for the part.



**The following restrictions apply** -- The Exmark Parts Plus® Program is available only through participating Exmark Dealers and applies only to orders submitted on this program Monday through Thursday. Parts Plus service is available only in the contiguous 48 United States. UPS has initiated a Saturday delivery program to many areas of the continental United States and can be requested for an overnight shipment on Friday to be delivered Saturday. The next day air charge, plus the Saturday delivery fee will be the responsibility of the purchaser. Exmark Mfg. will assume no responsibility for Saturday delivery shipments. To qualify, all Exmark Parts Plus® orders must be received by Exmark by 3:00 p.m., central time. Orders must be six (6) line items or less. Exclusions from the Exmark Parts Plus® Program are: Any wholegood or accessory in its entirety, engines and engine replacement parts, 5-speed Peerless transmissions and 5-speed transaxles, hydraulic or hydrostatic wheel motors, cutter decks and engine decks or any item exceeding United Parcel Service size and weight restrictions.

Due to UPS restrictions, aerosol spray paint is considered a hazardous material and cannot be shipped via UPS next day or Second Day Air.

Exmark Manufacturing stocks a limited supply of parts for transaxles, pumps and wheel motors. These parts can be ordered for Next Day Air shipment but will not be guaranteed per the Parts Plus Program.



**READ OPERATOR'S MANUAL BEFORE  
OPERATING OR SERVICING EXMARK EQUIPMENT.**

## **TABLE OF CONTENTS**

| <b><u>Description</u></b>                      | <b><u>Page</u></b> |
|------------------------------------------------|--------------------|
| 44" and 48" Deck Group .....                   | 3-4                |
| 52" Deck Group.....                            | 5-6                |
| Decal Group .....                              | 16                 |
| Electrical Diagram(s).....                     | 21-22              |
| Electrical Group.....                          | 19-20              |
| Electrical Logic Schematic(s) .....            | 23-24              |
| Engine Group (Kawasaki 17hp) .....             | 15                 |
| Engine Group (Kohler & Kawasaki 19-23hp) ..... | 17-18              |
| Front Frame Group .....                        | 7-8                |
| Fuel Group .....                               | 10                 |
| Hydraulic Group .....                          | 13-14              |
| Main Frame Group .....                         | 9                  |
| Motion Control Levers .....                    | 12                 |
| Park Brake Group .....                         | 11                 |

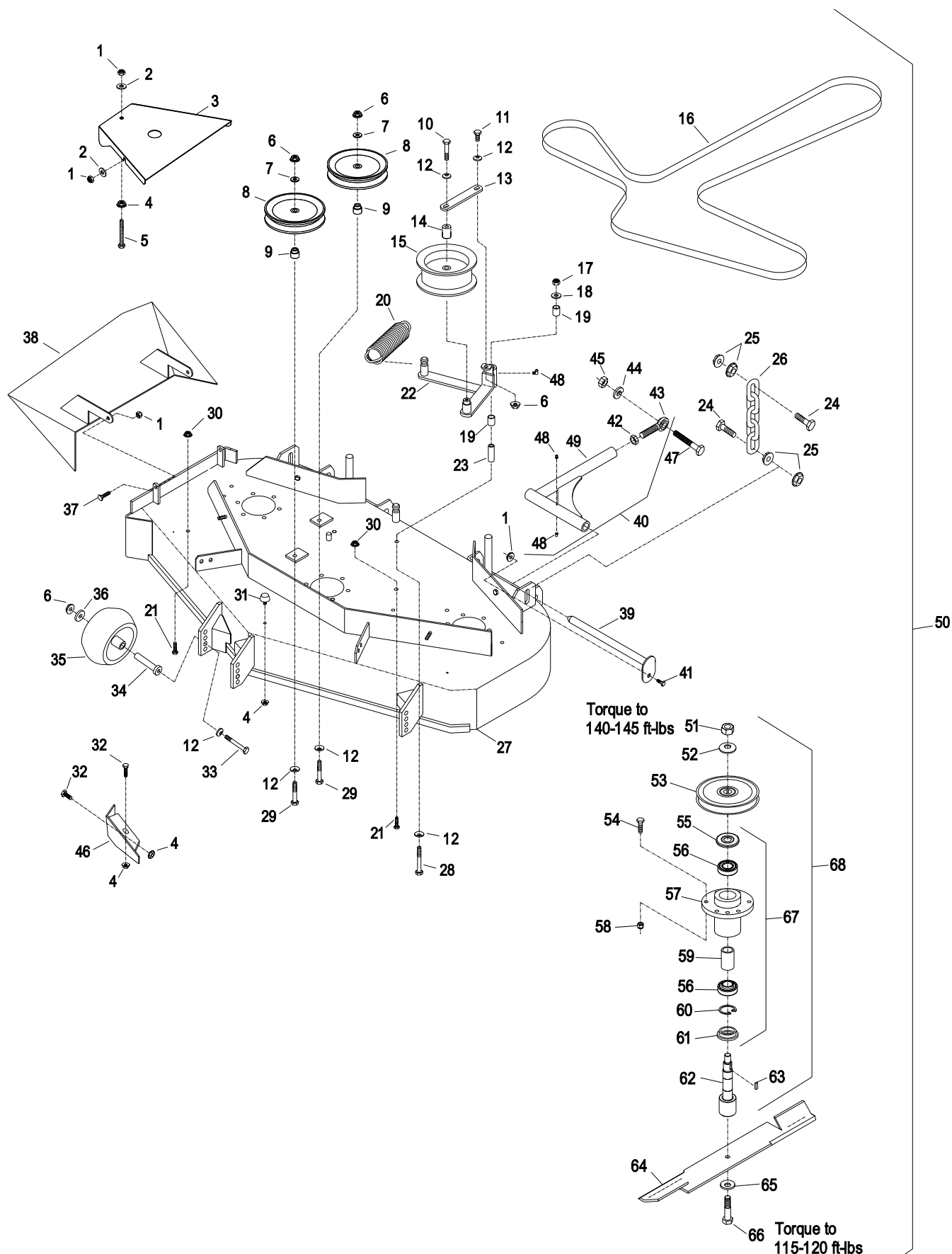
## 44" and 48" DECK GROUP

| Ref. No. | Part No.    | Description                      | Qty. Req'd. | Ref. No. | Part No.    | Description                      | Qty. Req'd. |
|----------|-------------|----------------------------------|-------------|----------|-------------|----------------------------------|-------------|
| 1        | 3296-29     | Nut, nyloc 5/16-18.....          | 10          | 37       | 322-5       | Screw, 5/16-18 x 1 .....         | 2           |
| 2        | 3256-3      | Washer, 5/16 std flat.....       | 6           | 38       | 1-402106-01 | Chute wldmt, discharge .....     | 1           |
| 3        | 103-2970-01 | Shield, belt .....               | 2           | 39       | 1-632199-01 | Pin wldmt, deck strut .....      | 2           |
| 4        | 32128-20    | Nut, whizlock 5/16-18.....       | 5           | 40       | 103-1081    | Strut wldmt, assembly .....      | 2           |
| 5        | 1-800017    | Bolt, 5/16 x 3 1/4 tap .....     | 2           | 41       | 322-3       | Screw, 5/16-18 x 3/4 .....       | 2           |
| 6        | 3290-357    | Nut, whizlock 3/8-16.....        | 6           | 42       | 3219-6      | Nut, 5/8-18 .....                | 2           |
| 7        | 3256-24     | Washer, 3/8 SAE flat.....        | 2           | 43       | 1-633029    | Spherical rod end.....           | 2           |
| 8        | 1-613098    | Pulley, Idler .....              | 2           | 44       | 3253-8      | Washer, lock 5/8 .....           | 2           |
| 9        | 1-413113    | Bushing, Idler .....             | 2           | 45       | 3217-11     | Nut, 5/8-11 .....                | 2           |
| 10       | 323-11      | Screw, 3/8-19 x 2 1/4 .....      | 1           | 46       | 1-522480-01 | Baffle, discharge .....          | 1           |
| 11       | 323-6       | Screw, 3/8-16 x 1 .....          | 1           | 47       | 1-800344    | Screw, 5/8-11 x 6 .....          | 2           |
| 12       | 98-5975     | Washer, disc spring 3/8 .....    | 8           | 48       | 302-19      | Zerk, 1/4-18 straight.....       | 5           |
| 13       | 1-653189    | Plate, Belt guide .....          | 1           | 49       | 103-1072-01 | Strut wldmt.....                 | 2           |
| 14       | 1-653190    | Spacer.....                      | 1           | 50       | 1-654550    | Deck complete service (44")..... | 1           |
| 15       | 1-413099    | Pulley, Idler .....              | 1           |          | 1-654551    | Deck complete service (48")..... | 1           |
| 16       | 1-413308    | Belt, deck drive (48") .....     | 1           | 51       | 3217-46     | Nut, 3/4-16 heavy.....           | 3           |
|          | 1-413093    | Belt, deck drive (44") .....     | 1           | 52       | 103-2802    | Washer, disc spring 3/4 .....    | 3           |
| 17       | 3296-39     | Nut, nyloc 3/8-16.....           | 1           | 53+      | 1-653099    | Sheave, blade drive (44") .....  | 3           |
| 18       | 3256-4      | Washer, 3/8 std flat.....        | 1           | +        | 1-413425    | Sheave, blade drive (48") .....  | 3           |
| 19       | 1-513034    | Bearing, pivot.....              | 2           | 54       | 323-7       | Screw, 3/8-16 x 1 1/4 .....      | 18          |
| 20       | 1-633151    | Spring, extension .....          | 1           | 55+      | 103-1330    | Guard, bearing top .....         | 3           |
| 21       | 321-1       | Screw, 1/4-20 x 3/8 (48").....   | 4           | 56+      | 103-2477    | Bearing, ball .....              | 6           |
|          | 321-1       | Screw, 1/4-20 x 3/8 (44").....   | 2           | 57       | 1-323532    | Housing, bearing.....            | 3           |
| 22       | 1-652192-01 | Idler arm wldmt .....            | 1           | 58       | 3296-32     | Nut, 3/8-16 nyloc.....           | 18          |
|          | 1-654193    | Idler arm wldmt w/bushings .     | 1           | 59       | 103-2534    | Spacer, bearing.....             | 3           |
| 23       | 1-603384    | Bushing, idler pivot.....        | 1           | 60       | 32120-8     | Snap Ring .....                  | 3           |
| 24       | 1-800811    | Screw, 7/16-14 x 1 1/2 .....     | 8           | 61       | 103-2535    | Spacer, guard bottom .....       | 3           |
| 25       | 32128-37    | Nut, whizlock 7/16-14.....       | 16          | 62+      | 103-2787    | Spindle .....                    | 3           |
| 26       | 1-633447    | Chain, deck lift .....           | 4           | 63       | 1-807268    | Key, machine .....               | 3           |
| 27       | 1-651312    | Deck wldmt (1-652311-01)         |             | 64       | 103-2529    | Blade, notched (44").....        | 3           |
|          |             | w/decals (48") .....             | 1           |          | 103-2509    | Blade, low lift (44").....       | 3           |
|          | 1-654175    | Deck wldmt (1-652124-01)         |             | □        | 103-2519    | Blade, mulching (44") .....      | 3           |
|          |             | w/decals (44").....              | 1           |          | 103-1579    | Blade, solid (44") .....         | 3           |
| 28       | 3253-7      | Screw, 3/8-16 x 3 1/2 .....      | 1           |          | 103-2527    | Blade, notched (48").....        | 3           |
| 29       | 323-13      | Screw, 3/8-16 x 2 3/4 .....      | 2           |          | 103-2507    | Blade, low lift (48").....       | 3           |
| 30       | 32128-33    | Nut, whizlock 1/4-20 (48") ..... | 4           | □        | 103-2517    | Blade, mulching (48") .....      | 3           |
|          | 32128-33    | Nut, whizlock 1/4-20 (44") ..... | 2           |          | 103-1577    | Blade, solid (48") .....         | 3           |
| 31       | 1-543963    | Bumper, rubber .....             | 1           | 65       | 103-0865    | Washer, disc spring 5/8 .....    | 3           |
| 32       | 322-2       | Screw, 5/16-18 x 5/8 .....       | 2           | 66       | 103-0862    | Screw, 5/8-18 x 2 3/4 gr 8.....  | 3           |
| 33       | 98-5961     | Screw, 3/8-16 x 4 gr 8.....      | 3           | 67       | 103-2547    | Cutter housing assembly .....    | 3           |
| 34       | 1-603602    | Bushing, roller .....            | 3           | 68♦      | 103-3220    | Cutter Housing Complete (44") .. | 3           |
| 35★      | 1-603299    | Roller, anti-scalp .....         | 3           | ♦        | 103-3221    | Cutter Housing Complete (48") .. | 3           |
| 36       | 1-373034    | Washer, swivel.....              | 3           |          |             |                                  |             |

Exmark red touch up spray paint – P/N 1-850337

- Requires installation of Micro-Mulch accessory for proper mulching. Mulch kit P/N MK443(44"), MK483(48")
- ✚ Apply Mobil HTS grease (or a food-grade anti-sieze) between the spindles & bearings and spindles & sheaves and under top bearing guard. DO NOT use a copper or nickel based anti-sieze.
- ★ Kit 103-3168 includes antiscalp roller, bushing, and mounting hardware.
- ♦ Complete cutter housings also include items 65 & 66.

# 44" and 48" DECK GROUP



## 52" DECK GROUP

| Ref. No. | Part No.    | Description                                | Qty. Req'd. | Ref. No. | Part No.    | Description                      | Qty. Req'd. |
|----------|-------------|--------------------------------------------|-------------|----------|-------------|----------------------------------|-------------|
| 1        | 3296-29     | Nut, nyloc 5/16-18 .....                   | 10          | 36       | 1-373034    | Washer, swivel .....             | 5           |
| 2        | 3256-3      | Washer, 5/16 std flat .....                | 6           | 37       | 322-5       | Screw, 5/16-18 x 1 .....         | 2           |
| 3        | 103-2970-01 | Shield, belt .....                         | 2           | 38       | 1-652375-01 | Chute wldmt, discharge .....     | 1           |
| 4        | 32128-20    | Nut, whizlock 5/16-18 .....                | 7           | 39       | 1-632199-01 | Pin wldmt, deck strut .....      | 2           |
| 5        | 1-800017    | Bolt, 5/16 x 3 1/4 tap .....               | 2           | 40       | 103-1081    | Strut wldmt, assembly .....      | 2           |
| 6        | 3290-357    | Nut, whizlock 3/8-16 .....                 | 8           | 41       | 322-3       | Screw, 5/16-18 x 3/4 .....       | 2           |
| 7        | 3256-24     | Washer, 3/8 SAE flat .....                 | 2           | 42       | 3219-6      | Nut, 5/8-18 .....                | 2           |
| 8        | 1-613098    | Pulley, Idler .....                        | 2           | 43       | 1-633029    | Spherical rod end .....          | 2           |
| 9        | 1-413113    | Bushing, Idler .....                       | 2           | 44       | 3253-8      | Washer, lock 5/8 .....           | 2           |
| 10       | 323-11      | Screw, 3/8-19 x 2 1/4 .....                | 1           | 45       | 3217-11     | Nut, 5/8-11 .....                | 2           |
| 11       | 323-6       | Screw, 3/8-16 x 1 .....                    | 1           | 46       | 1-602913-01 | Baffle, discharge .....          | 1           |
| 12       | 98-5975     | Washer, disc spring 3/8 .....              | 10          | 47       | 1-800344    | Screw, 5/8-11 x 6 .....          | 2           |
| 13       | 1-653189    | Plate, Belt guide .....                    | 1           | 48       | 302-19      | Zerk, 1/4-18 straight .....      | 5           |
| 14       | 1-653190    | Spacer .....                               | 1           | 49       | 103-1072-01 | Strut wldmt .....                | 2           |
| 15       | 1-413099    | Pulley, Idler .....                        | 1           | 50       | 1-654552    | Deck complete service .....      | 1           |
| 16       | 1-653368    | Belt, deck drive .....                     | 1           | 51       | 3217-46     | Nut, 3/4-16 heavy .....          | 3           |
| 17       | 3296-39     | Nut, nyloc 3/8-16 .....                    | 1           | 52       | 103-2802    | Washer, disc spring 3/4 .....    | 3           |
| 18       | 3256-4      | Washer, 3/8 std flat .....                 | 1           | 53+      | 1-653386    | Sheave, blade drive .....        | 3           |
| 19       | 1-513034    | Pivot, Bearing .....                       | 2           | 54       | 323-7       | Screw, 3/8-16 x 1 1/4 .....      | 18          |
| 20       | 1-633151    | Spring, extension .....                    | 1           | 55+      | 103-1330    | Guard, bearing top .....         | 3           |
| 21       | 321-1       | Screw, 1/4-20 x 3/8 .....                  | 4           | 56+      | 103-2477    | Bearing, ball .....              | 6           |
| 22       | 1-652192-01 | Idler arm wldmt .....                      | 1           | 57       | 1-323532    | Housing, bearing .....           | 3           |
|          | 1-654193    | Idler arm wldmt w/bushings .....           | 1           | 58       | 3296-32     | Nut, 3/8-16 nyloc .....          | 18          |
| 23       | 1-603384    | Bushing, idler pivot .....                 | 1           | 59       | 103-2534    | Spacer, bearing .....            | 3           |
| 24       | 1-800811    | Screw, 7/16-14 x 1 1/2 .....               | 8           | 60       | 32120-8     | Snap Ring .....                  | 3           |
| 25       | 32128-37    | Nut, whizlock 7/16-14 .....                | 16          | 61       | 103-2535    | Spacer, guard bottom .....       | 3           |
| 26       | 1-633447    | Chain, deck lift .....                     | 4           | 62+      | 103-2787    | Spindle .....                    | 3           |
| 27       | 1-654478    | Deck wldmt (1-652418-01)<br>w/decals ..... | 1           | 63       | 1-807268    | Key, machine .....               | 3           |
| 28       | 1-800805    | Screw, 3/8-16 x 3 1/2 .....                | 1           | 64       | 103-2528    | Blade, notched .....             | 3           |
| 29       | 323-13      | Screw, 3/8-16 x 2 3/4 .....                | 2           |          | 103-2508    | Blade, low lift .....            | 3           |
| 30       | 32128-33    | Nut, whizlock 1/4-20 .....                 | 4           | □        | 103-2518    | Blade, mulching .....            | 3           |
| 31       | 1-543963    | Bumper, rubber .....                       | 2           |          | 103-1578    | Blade, solid .....               | 3           |
| 32       | 322-2       | Screw, 5/16-18 x 5/8 .....                 | 3           | 65       | 103-0865    | Washer, disc spring 5/8 .....    | 3           |
| 33       | 98-5961     | Screw, 3/8-16 x 4 gr 8 .....               | 5           | 66       | 103-0862    | Screw, 5/8-18 x 2 3/4 gr 8 ..... | 3           |
| 34       | 1-603602    | Bushing, roller .....                      | 5           | 67       | 103-2547    | Cutter housing assembly .....    | 3           |
| 35★      | 1-603299    | Roller, anti-scalp .....                   | 5           | 68♦      | 103-3222    | Cutter Housing Complete .....    | 3           |

Exmark red touch up spray paint – P/N 1-850337

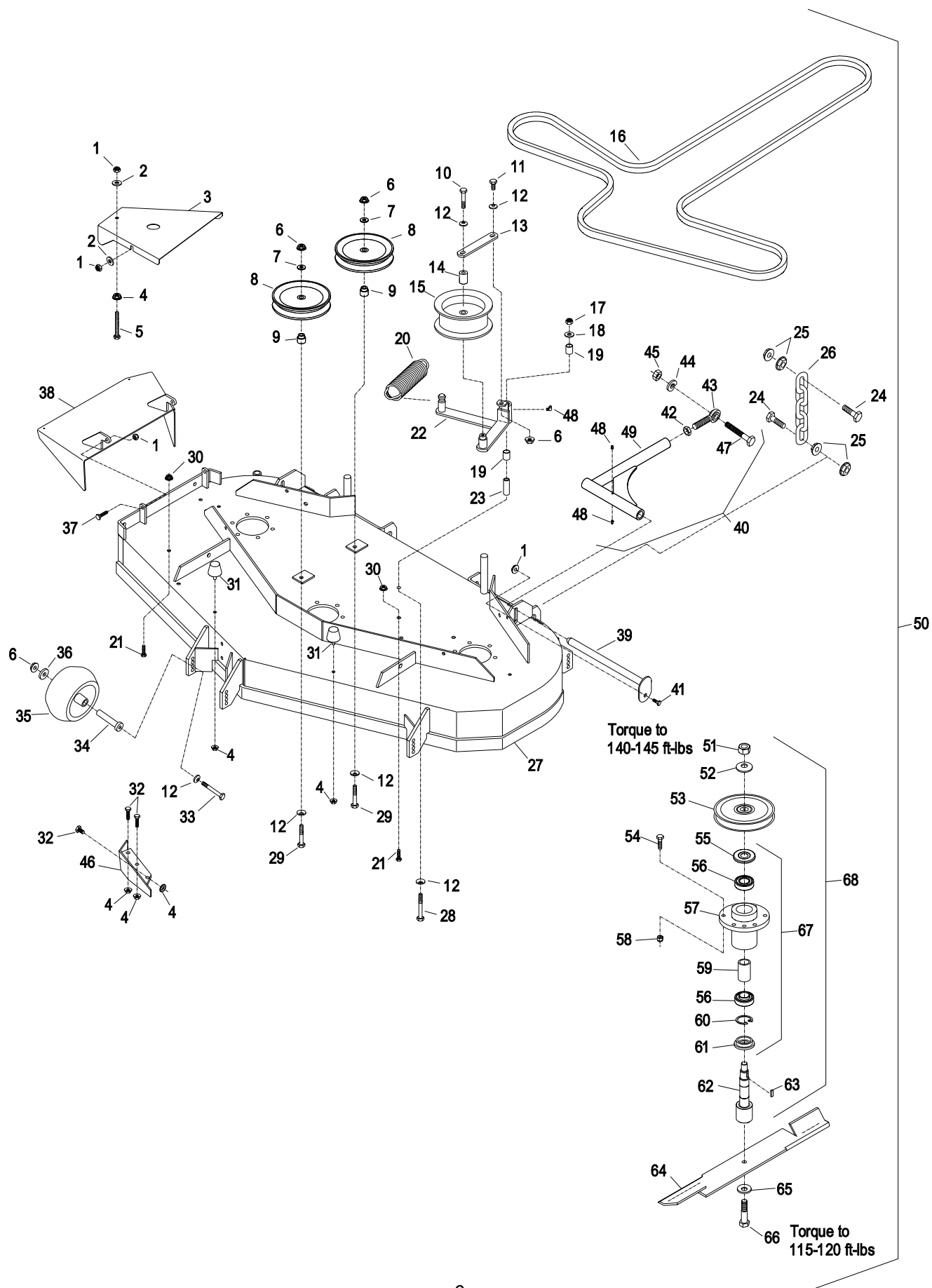
□ Requires installation of Micro-Mulch accessory for proper mulching. Mulch kit P/N MK523(52")

+ Apply Mobil HTS grease (or a food-grade anti-sieze) between the spindles &amp; bearings and spindles &amp; sheaves and under top bearing guard. DO NOT use a copper or nickel based anti-sieze.

★ Kit 103-3168 includes antiscalp roller, bushing, and mounting hardware.

♦ Complete cutter housings also include items 65 &amp; 66.

# 52" DECK GROUP



## FRONT FRAME GROUP

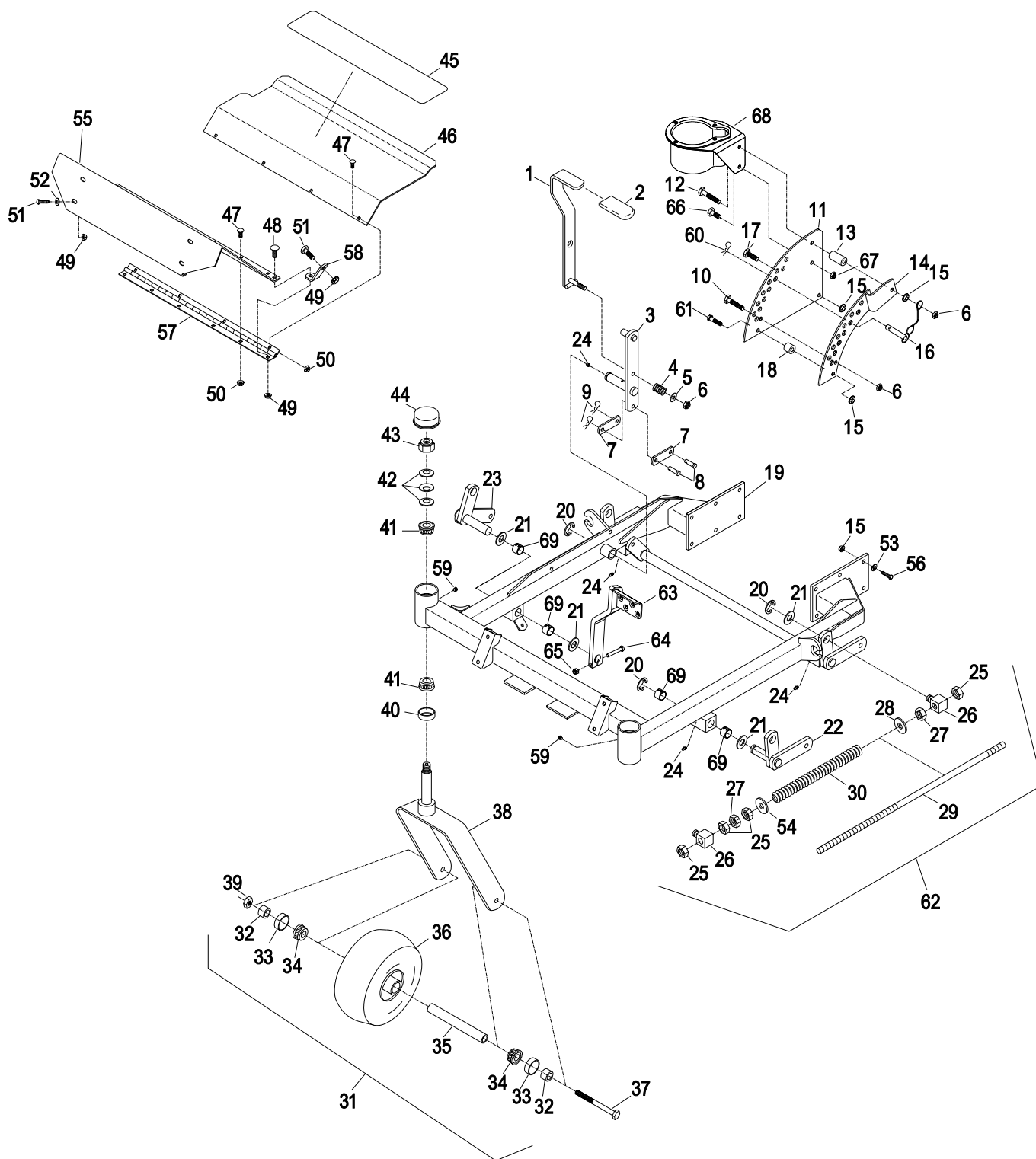
| Ref. No. | Part No.    | Description                       | Qty. Req'd. | Ref. No. | Part No.    | Description                         | Qty. Req'd. |
|----------|-------------|-----------------------------------|-------------|----------|-------------|-------------------------------------|-------------|
| 1        | 103-2081    | Asm, lever w/grip (103-2078-03)   | 1           | 35       | 1-633579    | Spacer, front caster .....          | 2           |
| 2        | 1-633295    | Grip, lift lever .....            | 1           | 36       | 103-0064    | Wheel & tire assy.....              | 2           |
| 3        | 1-652027-03 | Arm wldmt, deck lift.....         | 1           |          | 1-633002    | Tire, 13x5.0-6 4 ply .....          | 2           |
| 4        | 1-633325    | Spring, compression.....          | 1           |          | 103-0070    | Wheel.....                          | 2           |
| 5        | 3256-24     | Washer, 3/8 SAE .....             | 1           | 37       | 325-36      | Screw, 1/2-13 x 7 1/2.....          | 2           |
| 6        | 3296-39     | Nut, nyloc 3/8-16 (44").....      | 3           | 38       | 1-632511-01 | Caster wldmt.....                   | 2           |
|          | 3296-39     | Nut, nyloc 3/8-16 (48"&52")..     | 2           | 39       | 3296-45     | Nut, nyloc 1/2-13 (light thin)..... | 2           |
| 7        | 1-633068    | Arm, deck lift.....               | 2           | 40       | 1-543511    | Seal, grease.....                   | 2           |
| 8        | 1-808284    | Clevis, pin 3/8 x 1 .....         | 2           | 41       | 1-543509    | Bearing cone, tapered roller ...    | 4           |
| 9        | 1-806003    | Hairpin, cotter .....             | 2           |          | 1-543508    | Bearing cup, tapered roller ....    | 4           |
| 10       | 323-9       | Screw, 3/8-16 x 1 3/4 .....       | 1           | 42       | 1-633508    | Washer, spring disk .....           | 6           |
| 11       | 1-653230-01 | Plate, deck lift .....            | 1           | 43       | 3296-51     | Nut, nyloc 3/4-10.....              | 2           |
| 12       | 323-13      | Screw, 3/8-16 x 2 3/4 .....       | 1           | 44       | 1-543513    | Cap, grease .....                   | 2           |
| 13       | 1-633082    | Bushing, lift lever .....         | 1           | 45       | 1-633553    | Pad, anti-skid .....                | 2           |
| 14       | 1-652235-01 | Plate wldmt, deck lift.....       | 1           | 46       | 103-3428    | Asm, floorpan(99-3869-01)           |             |
| 15       | 3290-357    | Nut, whizlock 3/8-16 .....        | 15          |          |             | w/pad & decals.....                 | 1           |
| 16       | 1-633097    | Hitch pin w/lanyard .....         | 1           | 47       | 3229-10     | Bolt, carriage 1/4-20 x 1/2.....    | 10          |
| 17       | 323-6       | Screw, 3/8-16 x 1 .....           | 1           | 48       | 3230-1      | Bolt, carriage 5/16-18 x 3/4. ...   | 2           |
| 18       | 1-413088    | Bushing, lift lever .....         | 1           | 49       | 32128-20    | Nut, whizlock 5/16-18 .....         | 8           |
| 19*      | 103-1991-01 | Asm, front frame 44" .....        | 1           | 50       | 32128-33    | Nut, whizlock 1/4-20 (44").....     | 10          |
| *        | 103-2460-01 | Asm, front frame 48" .....        | 1           |          | 32128-33    | Nut, whizlock 1/4-20 (48"&52")..    | 11          |
| *        | 103-1994-01 | Asm, front frame 52" .....        | 1           | 51       | 322-3       | Screw, 5/16-18 x 3/4 (44"&48")...6  |             |
| 20       | 32151-103   | E-ring (44").....                 | 7           | 52       | 3256-3      | Washer, 5/16 SAE flat(44"&48") 4    |             |
|          | 32151-103   | E-ring (48"&52") .....            | 6           | 53       | 98-5975     | Washer, 3/8 disc spring .....       | 12          |
| 21       | 3256-29     | Washer, 7/8 SAE flat (44")....    | 6           | 54       | 3256-27     | Washer, 5/8 SAE flat .....          | 2           |
|          | 3256-29     | Washer, 7/8 SAE flat(48"&52") 7   |             | 55       | 103-3451    | Asm, flrpan front (99-3868-01)      |             |
| 22       | 1-652013-01 | Shaft wld, deck lift LH.....      | 1           |          |             | w/decals .....                      | 1           |
| 23       | 1-652014-01 | Shaft wld, deck lift RH (44").... | 1           | 56       | 323-7       | Screw, 3/8-16 x 1 1/4.....          | 12          |
| ◇        | 103-1674-01 | Shaft wld, deck lift RH(48"&52")1 |             | 57       | 1-653049    | Hinge, floorpan (piano) .....       | 1           |
| 24       | 302-19      | Zerk, 1/4-28 straight .....       | 5           | 58       | 99-3870-01  | Bracket, floorpan .....             | 2           |
| 25       | 3217-11     | Nut, 5/8-11 regular .....         | 8           | 59       | 1-811010    | Plug.....                           | 2           |
| 26       | 1-633441    | Swivel, deck mount .....          | 4           | 60       | 1-806005    | Hairpin, cotter (service only)...1  |             |
| 27       | 3218-6      | Jam nut, 5/8-11 .....             | 4           | 61       | 323-8       | Screw, cap HH3/8-16 x 1 1/2..1      |             |
| 28       | 1-805517    | Washer, 5/8 std flat .....        | 2           | 62       | 103-1987    | Asm, deck lift spring.....          | 1           |
| 29       | 1-653011    | Rod, deck lift.....               | 2           | 63◇      | 103-1673-01 | Wld, foot lift assist lever.....    | 1           |
| 30       | 1-653009    | Spring, deck support .....        | 2           | 64◇      | 322-10      | Screw, 5/16-18 x 2 .....            | 1           |
| 31       | 103-0068    | Caster wheel assy.....            | 2           | 65◇      | 1-803013    | Nut, torque 5/16-18.....            | 1           |
| 32       | 1-633581    | Spacer, bearing .....             | 4           | 66◇      | 321-2       | Screw, 1/4-20 x 1/2.....            | 1           |
| 33       | 103-0063    | Seal, bearing .....               | 4           | 67◇      | 3296-59     | Nut, nyloc 3/8-16 light thin .....  | 1           |
| 34       | 1-633585    | Bearing cone .....                | 4           | 68◇      | 103-2437    | Asm, cup holder.....                | 1           |
|          | 1-633584    | Bearing, cup .....                | 2           | 69       | 103-1982    | Bushing, spring .....               | 4           |

Exmark red touch up spray paint – P/N 1-850337

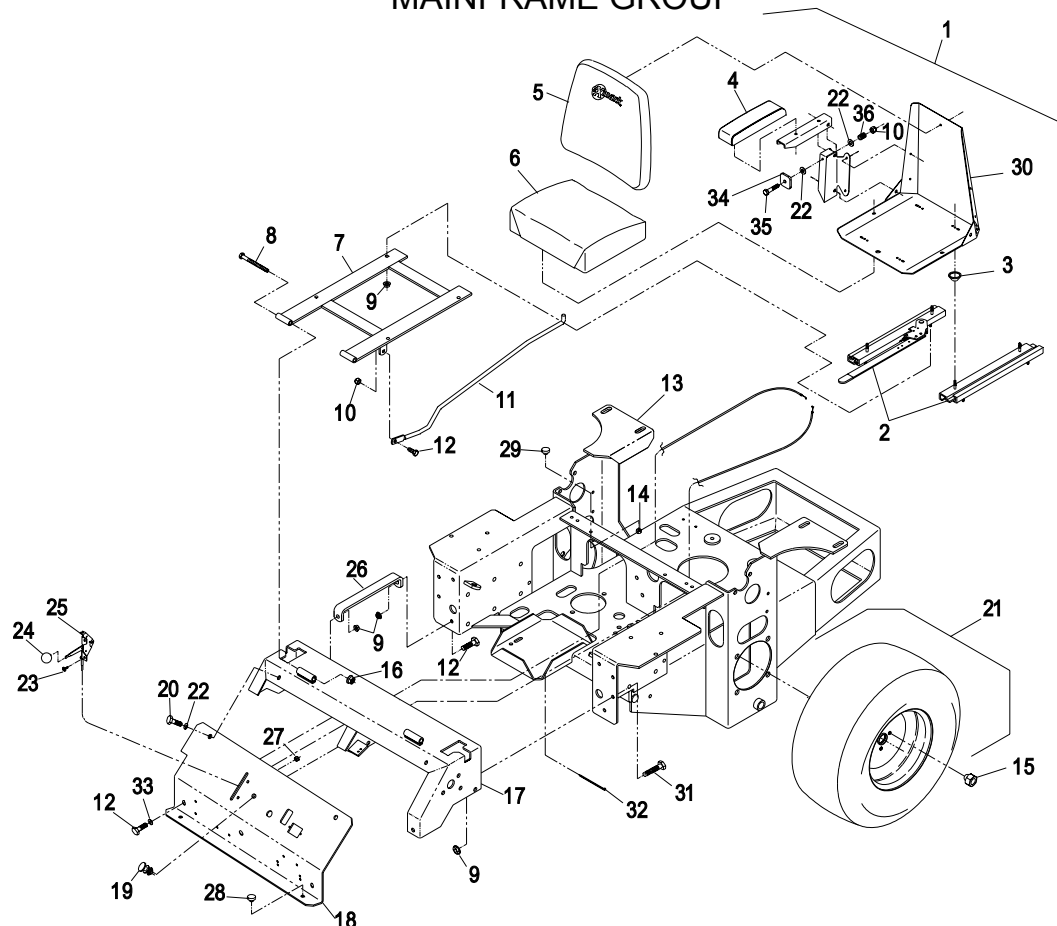
\* Includes frame weldment plus items 22, 23 &amp; 63 (item 63 not included with 44").

◇ Standard on 48" and 52" units. Optional on 44" units (Cup holder kit P/N 1-641284, Deck lift assist kit P/N 103-1675).

## FRONT FRAME GROUP



## MAINFRAME GROUP

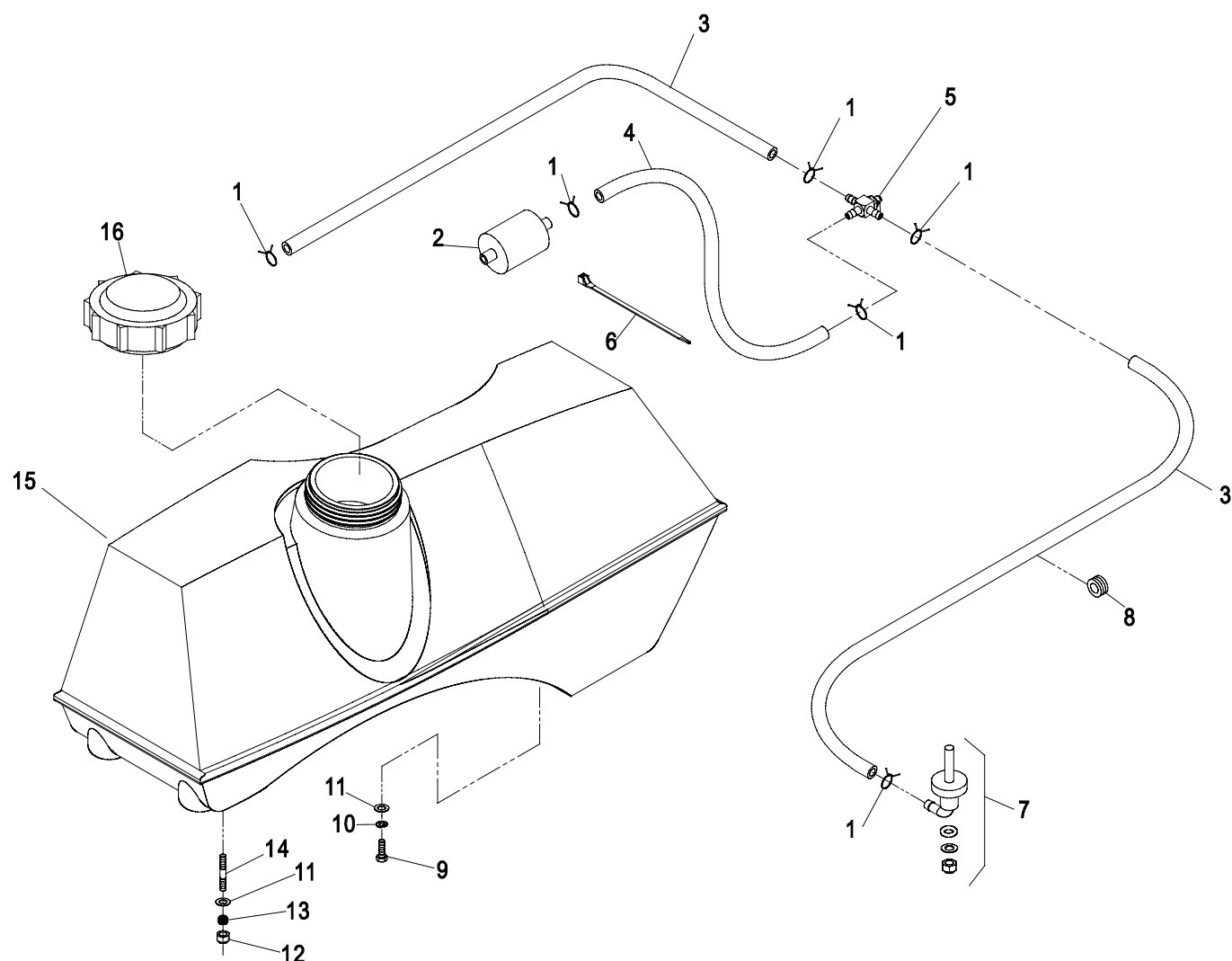


| Ref. No. | Part No.    | Description                    | Qty. Req'd. | Ref. No. | Part No.    | Description                     | Qty. Req'd. |
|----------|-------------|--------------------------------|-------------|----------|-------------|---------------------------------|-------------|
| 1        | 103-0465    | Seat, complete w/armrests .    | 1           | 20       | 322-3       | Screw, 5/16 -18 x 3/4.....      | 3           |
| 2        | 1-643255    | Track, seat (4" adjust.).....  | 1           | 21       | 103-2769    | Wheel/tire assy (44"deck).....  | 2           |
| 3        | 1-543401    | Spacer, seat track.....        | 2           |          | 103-2770    | Wheel/tire assy(48"&52"deck)... | 2           |
| 4        | 103-0292    | Cushion, armrest (RH).....     | 1           |          | 1-653158    | Wheel (44" deck) .....          | 2           |
| *        | 103-0291    | Cushion, armrest (LH) .....    | 1           |          | 1-653161    | Wheel (48" & 52" deck).....     | 2           |
| 5        | 103-0289    | Cushion, backrest.....         | 1           |          | 103-2771    | Tire, 24 x 9.5-12 4 ply .....   | 2           |
| 6        | 103-0290    | Cushion, seat .....            | 1           | 22       | 3256-23     | Washer, flat 5/16 SAE .....     | 6           |
| 7        | 1-632187-03 | Frame, seat mount .....        | 1           | 23       | 1-807513    | Bolt, carriage #10-24x1/2 ..... | 2           |
| 8        | 323-39      | Screw, 3/8-16 x 5.....         | 2           | 24       | 1-513592    | Ball, (red) throttle cable..... | 1           |
| 9        | 32128-20    | Nut, whizlock 5/16-18.....     | 12          | 25       | 103-3086    | Control, throttle (Koh) .....   | 1           |
| 10       | 3296-29     | Nut, nyloc 5/16-18.....        | 3           |          | 1-633696    | Control, throttle (Kaw).....    | 1           |
| 11       | 103-1731    | Rod, seat hold up.....         | 1           | 26       | 1-653089-03 | Bracket, instrument panel....   | 1           |
| 12       | 322-5       | Screw, 5/16-18 x 1 .....       | 3           | 27       | 3296-2      | Nut, nyloc #10-24.....          | 2           |
| 13       | 103-3429    | Asm,mainframe(103-2917-03)     |             | 28       | 1-513658    | Bumper .....                    | 2           |
|          |             | w/decals .....                 | 1           | 29       | 1-523420    | Bumper, rubber .....            | 2           |
| 14       | 3296-42     | Nut, nyloc 1/4-20.....         | 2           | 30       | 1-633859    | Seat frame .....                | 1           |
| 15       | 242-50      | Nut, wheel 1/2-20.....         | 8           | 31       | 322-2       | Screw, 5/8-18 x 5/8.....        | 6           |
| 16       | 3296-39     | Nut, nyloc 3/8-16.....         | 2           | 32       | 1-303335    | Tie, plastic.....               | 1           |
| 17       | 103-3452    | Asm,console(103-2197-03)       |             | 33       | 3256-3      | Washer, flat std 5/16.....      | 2           |
|          |             | w/decals .....                 | 1           | 34       | 103-0284    | Tab.....                        | 2           |
| 18       | 103-0724    | Panel,instrument (103-1194-03) |             | 35       | 322-7       | Screw, HHC 5/16-18x1 1/2.....   | 2           |
|          |             | w/decals .....                 | 1           | 36       | 1-633349    | Spring.....                     | 2           |
| 19       | 103-3085    | Control,choke (push-pull)(Koh) | 1           |          |             |                                 |             |
|          | 1-603336    | Control,choke (push-pull)(Kaw) | 1           |          |             |                                 |             |

\*Not Illustrated

Exmark black touch up spray paint – gloss black

## FUEL GROUP



| Ref. No. | Part No.        | Description                          | Qty. Req'd. | Ref. No. | Part No. | Description                | Qty. Req'd. |
|----------|-----------------|--------------------------------------|-------------|----------|----------|----------------------------|-------------|
| 1        | 1-303077        | Clamp, fuel line.....                | 6           | 9        | 322-3    | Screw, 5/16-18 x 3/4 ..... | 4           |
| 2♦       | <b>Kohler</b>   | Part No. 2405002 Fuel filter.....    | 1           | 10       | 1-805005 | Washer, lock 1/4 .....     | 4           |
|          | <b>Kawasaki</b> | Part No. 49019-7001 Fuel filter..... | 1           | 11       | 3256-23  | Washer, 5/16 SAE .....     | 8           |
| 3        | 1-543526        | Fuel line .....                      | 2           | 12       | 3296-47  | Nut, nyloc 5/16-18.....    | 4           |
| 4        | 103-0216        | Fuel line .....                      | 1           | 13       | 1-633349 | Spring, fuel tank.....     | 4           |
| 5        | 1-633347        | Valve, fuel.....                     | 1           | 14♦      | 1-633023 | Stud, fuel tank.....       | 4           |
| 6        | 1-303335        | Plastic tie (large) .....            | 1           | 15*★     | 103-2122 | Asm,tank fuel (LH).....    | 1           |
| 7▼       | 103-2605        | Fitting,fuel bulkhead w/strainer 2   |             | ★        | 103-2123 | Asm,tank fuel (RH).....    | 1           |
|          | 103-2784        | O-ring.....                          | 2           | 16       | 103-2107 | Cap, fuel tank.....        | 2           |
| 8        | 1-543296        | Grommet, fuel line .....             | 2           |          |          |                            |             |

\* Not Illustrated

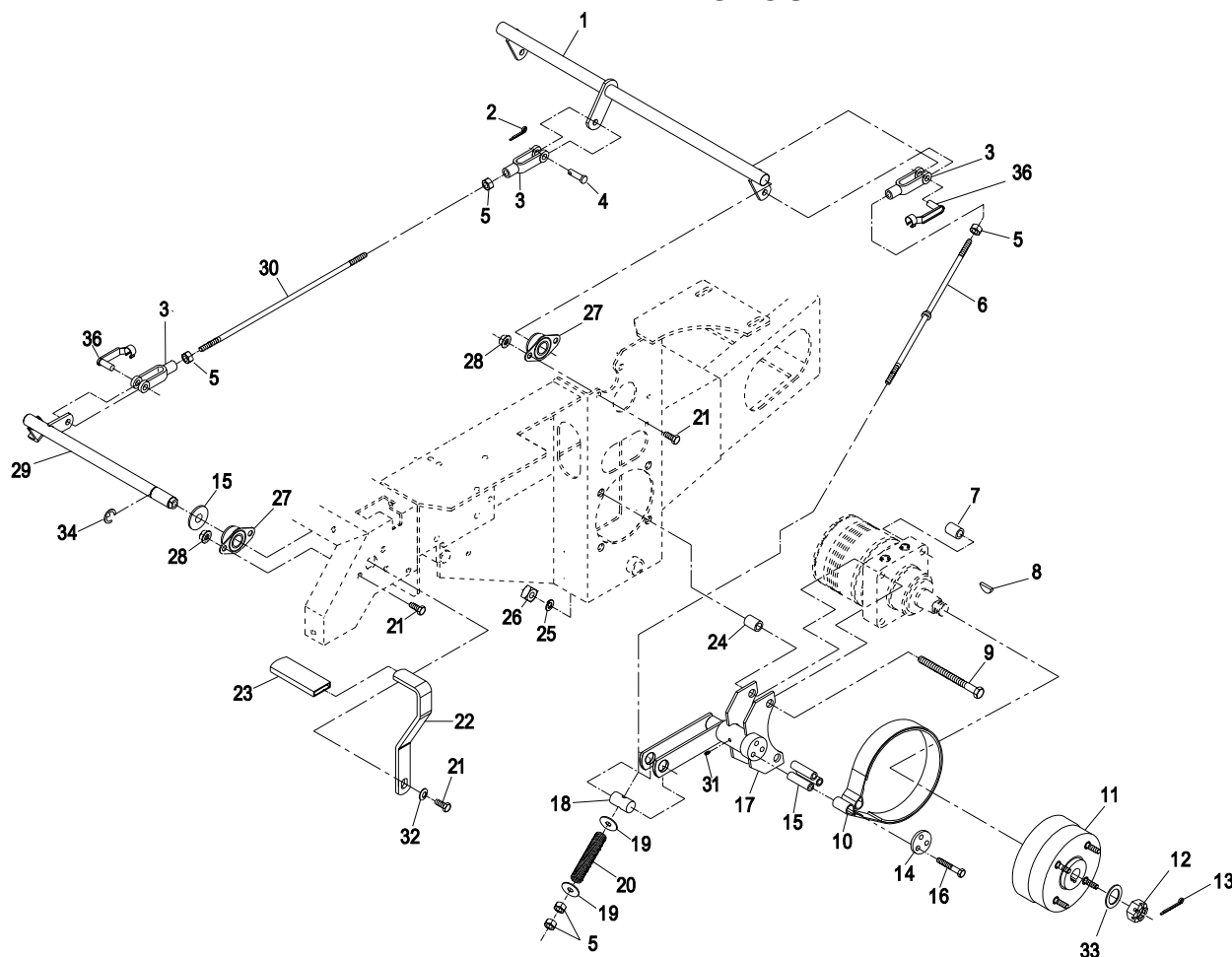
♦ Use Pro-Lock, Retaining Type (P/N 840023, .5ml tube) on stud threads going into tank.

◆ Refer to Engine Owner's Manual (Fuel filter **Must** be 15 Micron or smaller).

★ Includes tank, cap, fitting, and studs.

▼ Use Pro-Lock Nut Type (P/N 840022, .5ml tube) on fuel fitting.

## PARK BRAKE GROUP

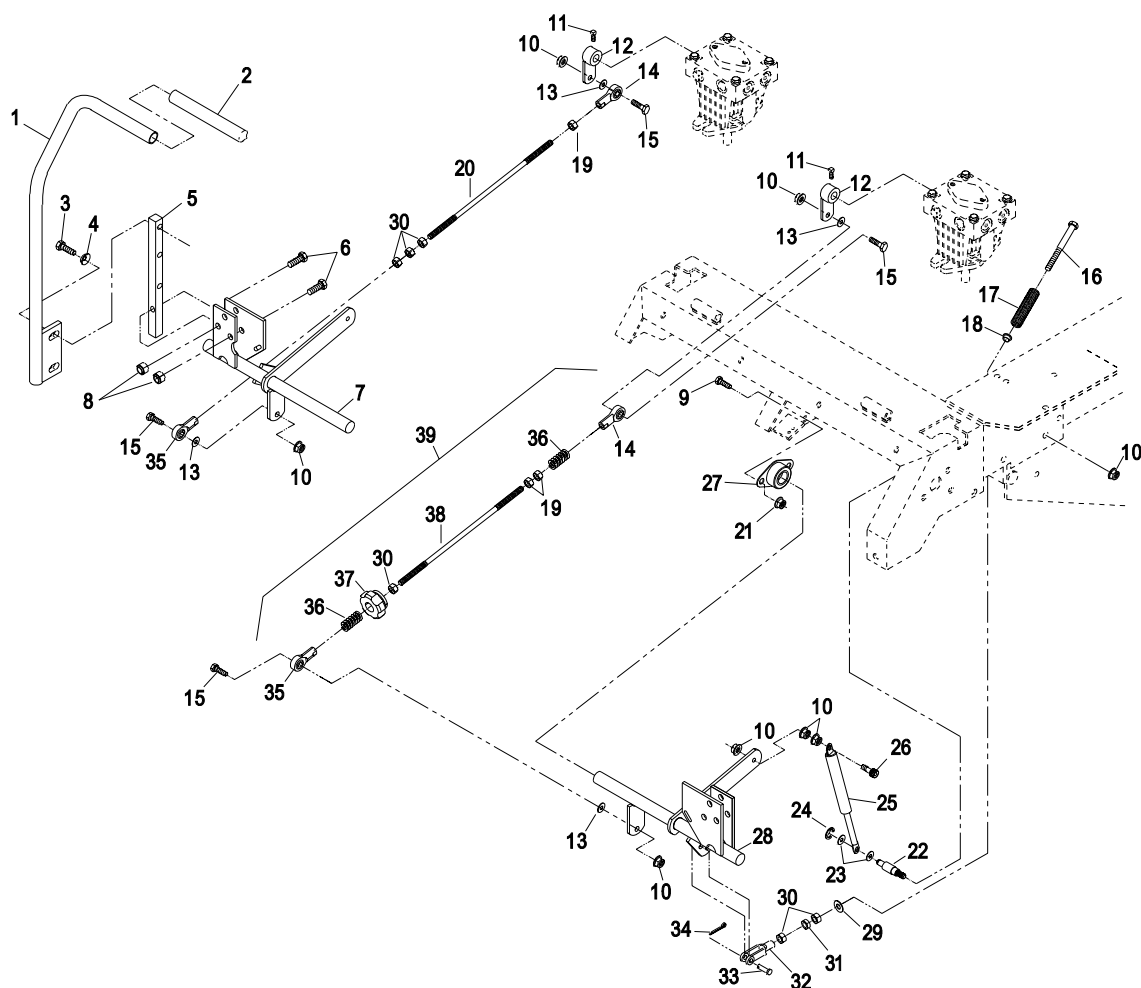


| Ref. No. | Part No.    | Description                      | Qty. Req'd. | Ref. No. | Part No.    | Description                   | Qty. Req'd. |
|----------|-------------|----------------------------------|-------------|----------|-------------|-------------------------------|-------------|
| 1        | 1-652073-03 | Crank wldmt, brake .....         | 1           | 18       | 1-633144    | Pin, trunion.....             | 2           |
| 2        | 3272-10     | Pin, cotter 1/8 x 3/4 .....      | 1           | 19       | 3256-4      | Washer, 3/8 std.....          | 4           |
| 3        | 1-633131    | Yoke .....                       | 4           | 20       | 1-633454    | Spring, brake rod .....       | 2           |
| 4        | 1-808285    | Pin, clevis 3/8 x 1 1/8 .....    | 1           | 21       | 323-4       | Screw, 3/8-16 x 3/4 .....     | 9           |
| 5        | 3219-3      | Nut, 3/8-24 .....                | 8           | 22       | 1-653074-03 | Lever, brake.....             | 1           |
| 6        | 103-0356    | Rod, brake.....                  | 2           | 23       | 1-633268    | Grip, brake lever .....       | 1           |
| 7        | 1-653068    | Spacer (long) 44"/48" deck ..    | 4           | 24       | 1-653069    | Spacer(short) 44"/48" deck .. | 4           |
| *        | 1-653380    | Spacer (long) 52" deck .....     | 4           | *        | 1-653381    | Spacer(short) 52" deck .....  | 4           |
| 8        | 3257-42     | Woodruff key, 5/16 x 1 .....     | 1           | 25       | 3253-7      | Washer, lock 1/2 .....        | 8           |
| 9        | 325-13      | Screw, 1/2-13x3.25 G5(44"&48").. | 8           | 26       | 103-0131    | Nut,sq.reg. 1/2-13UNC-2B ..   | 8           |
|          | 1-800348    | Screw, 1/2-13x4.25 G5 (52")...   | 8           | 27       | 1-633102    | Bearing, flange.....          | 4           |
| 10       | 103-0355    | Band, brake .....                | 2           | 28       | 3290-357    | Nut, whizlock 3/8-16 .....    | 8           |
| 11       | 103-0590    | Hub & drum w/studs, plated ..    | 2           | 29       | 103-3116    | Shaft wldmt, brake .....      | 1           |
|          | 1-633926    | Stud, wheel.....                 | 8           | 30       | 1-653061    | Linkage, brake handle .....   | 1           |
| 12       | 1-809036    | Nut, slotted 1.00-20 .....       | 2           | 31       | 1481        | Zerk, grease .....            | 2           |
| 13       | 1-806800    | Pin, cotter 9/64 x 1 1/2 .....   | 2           | 32       | 98-5975     | Washer, disc spring 3/8 ..... | 1           |
| 14       | 103-0374    | Retainer, brake band.....        | 2           | 33       | 1-523157    | Washer, spacer.....           | 2           |
| 15       | 103-0384    | Spacer .....                     | 6           | 34       | 32151-48    | Ring, retaining.....          | 1           |
| 16       | 322-9       | Screw, 5/16-18 x 1.75.....       | 6           | 35       | 103-2399    | Pin, spring clevis.....       | 3           |
| 17       | 103-0352-03 | Bracket, brake 44"/48" .....     | 2           |          |             |                               |             |
| *        | 103-0353-03 | Bracket, brake 52" .....         | 2           |          |             |                               |             |

\*Not Illustrated

Exmark black touch up spray paint – gloss black

## MOTION CONTROL GROUP



| Ref. No. | Part No. | Description                    | Qty. Req'd. | Ref. No. | Part No. | Description                  | Qty. Req'd. |
|----------|----------|--------------------------------|-------------|----------|----------|------------------------------|-------------|
| 1        | 103-0632 | Handle 103-0410-03 w/grip (RH) | 1           | 20       | 1-653046 | Link, pump control           | 1           |
| *        | 103-0631 | Handle 103-0409-03 w/grip (LH) | 1           | 21       | 3290-357 | Nut, whizlock 3/8-16         | 8           |
| 2        | 1-633257 | Grip, motion cntrl handle      | 2           | 22       | 1-653316 | Pin, Damper Anchor           | 2           |
| 3        | 323-6    | Screw, 3/8-16 x 1              | 4           | 23       | 3256-23  | Washer, 5/16 SAE             | 4           |
| 4        | 98-5975  | Washer, disc spring 3/8        | 4           | 24       | 32120-35 | E-ring                       | 2           |
| 5        | 103-0407 | Arm, control shaft             | 2           | 25       | 103-2913 | Damper                       | 2           |
| 6        | 323-9    | Screw, 3/8-16 x 1 3/4          | 6           | 26       | 1-403180 | Screw, 5/16-18x1 1/4 special | 4           |
| 7        | 103-2200 | Bracket, motion cntrl (RH)     | 1           | 27       | 1-633102 | Bearing, flanged             | 4           |
| 8        | 3296-39  | Nut, nyloc 3/8-16              | 6           | 28       | 103-2199 | Bracket, motion control(LH)  | 1           |
| 9        | 323-4    | Screw, 3/8-16 x 3/4            | 8           | 29       | 3256-2   | Washer, 1/4                  | 2           |
| 10       | 32128-20 | Nut, whizlock 5/16-18          | 12          | 30       | 3219-2   | Nut, 5/16-24                 | 8           |
| 11♦      | 1-803022 | Setscrew, 5/16 x 5/8           | 2           | 31       | 3220-2   | Nut, jam 5/16-24             | 2           |
| 12       | 1-653092 | Arm, pump control              | 2           | 32       | 1-303105 | Yoke                         | 2           |
| 13       | 3256-3   | Washer, 5/16 std               | 4           | 33       | 1-808280 | Pin, clevis 5/16 x 1         | 2           |
| 14       | 1-633152 | Ball joint (LH)                | 2           | 34       | 3272-5   | Pin, cotter 3/32 x 1/2       | 2           |
| 15       | 322-6    | Screw, 5/16-18 x 1 1/4         | 4           | 35       | 1-543017 | Ball joint (RH)              | 2           |
| 16       | 1-603737 | Bolt, (neutral return)         | 2           | 36       | 1-323245 | Spring, compression          | 2           |
| 17       | 1-603807 | Spring, (neutral return)       | 2           | 37       | 103-3060 | Knob, tracking               | 1           |
| 18       | 1-603735 | Bushing, nylon(revrse ind.)    | 2           | 38       | 103-3066 | Link, tracking rod           | 1           |
| 19       | 1-804524 | Nut, 5/16-24 (LH)              | 3           | 39       | 103-3063 | Asm, tracking                | 1           |

Exmark black touch up spray paint – gloss black

\* Not Illustrated

♦ Use Pro-Lock, Nut Type (P/N 1-840022, .5ml tube) on setscrews

## HYDRAULIC GROUP

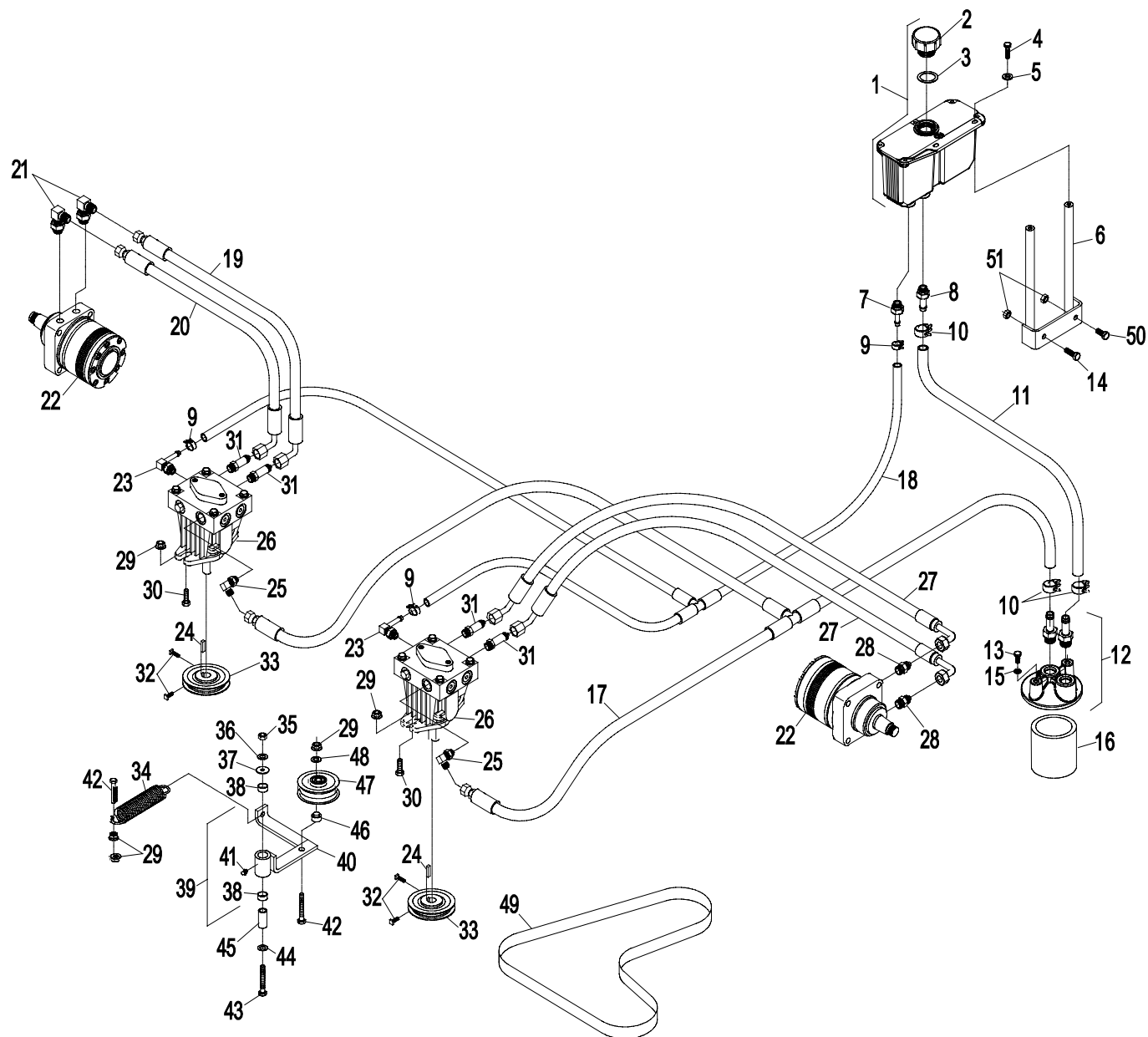
| Ref. No. | Part No.    | Description                        | Qty. Req'd. | Ref. No. | Part No.    | Description                           | Qty. Req'd. |
|----------|-------------|------------------------------------|-------------|----------|-------------|---------------------------------------|-------------|
| 1        | 103-1947    | Asm, reservoir w/ decal .....      | 1           | 26       | 103-1942    | Pump, hydro .....                     | 2           |
| 2        | 103-1948    | Cap, hydraulic reservoir.....      | 1           |          | 103-2664    | Kit,Input shaft 10A .....             | 1           |
| 3        | 103-1949    | Gasket, reservoir cap.....         | 1           |          | 103-2665    | Kit,Thrust bearing 10A .....          | 1           |
| 4        | 321-6       | Screw, 1/4-20 x 1.0 .....          | 2           |          | 103-2666    | Kit,Cylinder block 10A .....          | 1           |
| 5        | 3256-22     | Washer, flat SAE 1/4 .....         | 2           |          | 105-6184    | Kit,Overhaul seal .....               | 1           |
| 6        | 103-3071-03 | Wld,reservoir stand.....           | 1           |          | 103-2741    | Kit,Shock Valve 10A/10L .....         | 1           |
| 7        | 103-1801    | Adapter, straight .....            | 1           | 27       | 103-1680    | Hose, LH 44" & 48" .....              | 2           |
|          | 1-603921    | Boss O-ring .....                  | 1           |          | 103-1681    | Hose, LH 52" .....                    | 2           |
| 8        | 103-1912    | Adapter, straight .....            | 1           | 28       | 1-603991    | Adapter, straight (LH wheel motor) .. | 2           |
|          | 1-603921    | Boss O-ring .....                  | 1           |          | 1-603919    | Boss O-ring .....                     | 1           |
| 9        | 103-1716    | Clamp, hose (17/32) .....          | 3           |          | 1-603992    | Flare O-ring .....                    | 1           |
| 10       | 103-1988    | Clamp, hose (11/16) .....          | 3           | 29       | 3290-357    | Nut, whizlock 3/8-16 .....            | 7           |
| 11       | 103-3077    | Asm, supply hose .....             | 1           | 30       | 323-7       | Screw, 3/8-16 x 1 1/4 .....           | 4           |
| 12       | 103-2889    | Asm, filter head.....              | 1           | 31       | 103-1940    | Adapter, straight long .....          | 4           |
|          | 103-1912    | Adapter, straight .....            | 2           |          | 1-603920    | Boss O-ring .....                     | 1           |
|          | 1-603921    | O-ring.....                        | 1           |          | 1-603992    | Flare O-ring .....                    | 1           |
| 13       | 321-3       | Screw, 1/4-20 x 5/8 .....          | 2           | 32◇      | 1-803050    | Setscrew, .312-18 x .75 .....         | 4           |
| 14       | 322-5       | Screw, 5/16-18 x 1 .....           | 1           | 33       | 1-653156    | Sheave, pump drive 44" & 48" ...      | 2           |
| 15       | 1-805004    | Lockwasher.....                    | 2           |          | 1-413010    | Sheave, pump drive 52" .....          | 2           |
| 16       | 1-513211    | Element, oil filter .....          | 1           | 34       | 103-1767    | Spring, extension .....               | 1           |
| ▽        | 1-523541    | Element, oil filter (winter) ..... | 1           | 35       | 3296-39     | Nut, nyloc 3/8-16 .....               | 1           |
| 17       | 103-2930    | Asm, charge hose .....             | 1           | 36       | 98-5975     | Washer, disc spring .....             | 1           |
| 18       | 103-2357    | Asm, case drain hose .....         | 1           | 37       | 1-373034    | Washer, 7 Ga. x 1 1/4 O.D. ....       | 1           |
| 19       | 1-653187    | Hose, RH rear 44" & 48" .....      | 1           | 38       | 1-513034    | Bearing .....                         | 2           |
|          | 1-653437    | Hose, RH rear 52".....             | 1           | 39       | 1-654143    | Arm, idler w/ bearings .....          | 1           |
| 20       | 1-653186    | Hose, RH front 44" & 48" .....     | 1           | 40       | 1-652142-03 | Idler arm weldment .....              | 1           |
|          | 1-653436    | Hose, RH front 52".....            | 1           | 41       | 302-40      | Zerk, 90° 1/4-28 .....                | 1           |
| 21       | 1-633605    | Elbow, 90° (RH wheel motor) ....   | 2           | 42       | 323-9       | Screw, 3/8-16 x 1 3/4 .....           | 2           |
|          | 1-603919    | Boss O-ring .....                  | 1           | 43       | 323-13      | Screw, 3/8-16 x 2 3/4 .....           | 1           |
|          | 1-603992    | Flare O-ring .....                 | 1           | 44       | 3256-4      | Washer, 3/8 std flat .....            | 1           |
| 22       | 1-523328    | Wheel motor .....                  | 2           | 45       | 1-603044    | Bushing, idler pivot .....            | 1           |
|          | 1-000139    | Kit, bearing .....                 | 1           | 46       | 1-603496    | Bushing, idler .....                  | 1           |
|          | 1-000099    | Kit, seal .....                    | 1           | 47       | 1-603843    | Pulley, idler .....                   | 1           |
| 23       | 103-1799    | Elbow, 90° .....                   | 2           | 48       | 3256-24     | Washer, 3/8 SAE flat .....            | 1           |
|          | 1-603921    | Boss O-ring .....                  | 1           | 49       | 1-653163    | Belt, pump drive 44" & 48" .....      | 1           |
| 24       | 1-807272    | Key 5 x 5 x 25mm .....             | 2           |          | 1-653416    | Belt, pump drive 52" .....            | 1           |
| 25       | 103-1802    | Elbow, 90° .....                   | 2           | 50       | 322-3       | Screw, 5/16-18 x .75.....             | 1           |
|          | 1-603921    | Boss O-ring.....                   | 1           | 51       | 32128-20    | Nut, 5/16-18 whizlock .....           | 2           |

Exmark red touch up spray paint – P/N 1-850337

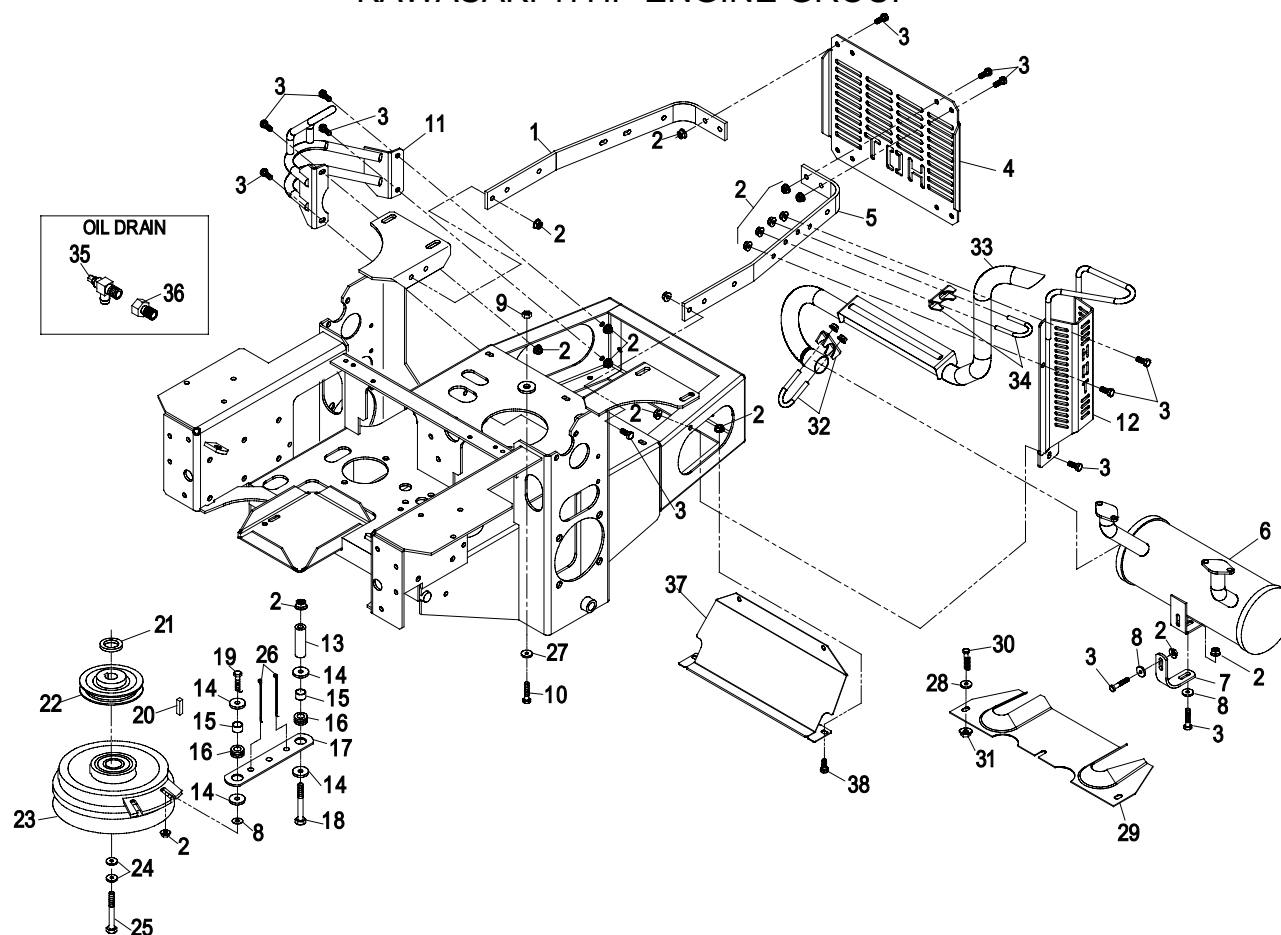
▽ Use only for operation below 32°F (0°C)

◇ Use Pro-Lock, Nut Type (P/N 1-840022, .5ml tube) on setscrews.

## HYDRAULIC GROUP



## KAWASAKI 17HP ENGINE GROUP

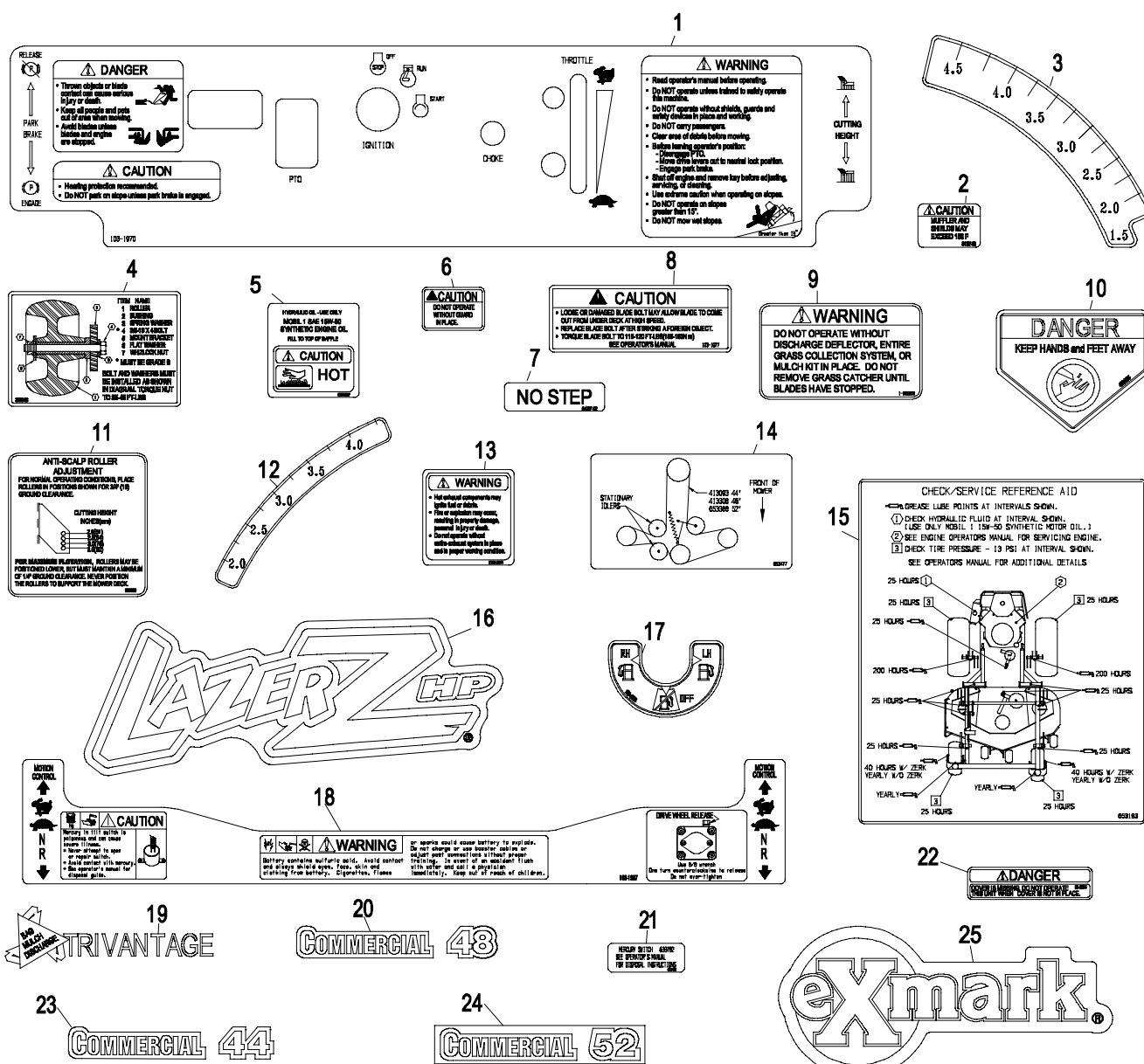


| Ref. No. | Part No.    | Description                     | Qty. Req'd. | Ref. No. | Part No.    | Description                        | Qty. Req'd. |
|----------|-------------|---------------------------------|-------------|----------|-------------|------------------------------------|-------------|
| 1        | 103-3078-03 | Strap wldmt, engine guard ..... | 1           | 22       | 1-653035    | Sheave, pump drive .....           | 1           |
| 2        | 32128-20    | Nut, whizlock 5/16-18 .....     | 25          | 23       | 103-0690    | Clutch .....                       | 1           |
| 3        | 322-3       | Screw, 5/16-18x3/4 .....        | 21          |          | 105-1670    | Pigtail, clutch .....              | 1           |
| 4        | 1-653095-03 | Shield, eng. Guard .....        | 1           |          | 103-3012    | Kit, brake pole module .....       | 1           |
| 5        | 103-3164-03 | Strap, engine guard .....       | 1           | 24       | 1-603610    | Washer, disc spring 7/16 .....     | 2           |
| 6        | 103-2745    | Muffler, kit .....              | 1           | 25♦      | 3212-12     | Screw, 7/16-20 x 3 .....           | 1           |
| 7        | 1-653196    | Bracket, muffler support .....  | 1           | 26       | 1-303335    | Plastic tie (large) .....          | 2           |
| 8        | 3256-3      | Washer, 5/16 std flat .....     | 1           | 27       | 1-303334    | Washer, spring disc .....          | 4           |
| 9        | 3296-29     | Nut, nyloc 5/16-18 .....        | 4           | 28       | 3256-23     | Washer, 5/16 SAE flat .....        | 3           |
| 10       | 322-9       | Screw, 5/16-18 x 1 3/4 .....    | 4           | 29       | 1-653565-03 | Shield, heat .....                 | 1           |
| 11       | 103-2564-03 | Guard,RH .....                  | 1           | 30       | 3230-1      | Bolt, carriage 5/16-18 x 3/4 ..... | 3           |
| 12       | 103-2566-03 | Guard,LH .....                  | 1           | 31       | 3296-29     | Nut, nyloc 5/16-18 .....           | 3           |
| 13       | 103-2614    | Bushing, seat mount .....       | 1           | 32       | 103-2630    | Clamp,1.25 .....                   | 1           |
| 14       | 1-613235    | Washer .....                    | 4           | 33       | 103-2599    | Tailpipe .....                     | 1           |
| 15       | 1-633545    | Spacer, grommet .....           | 2           | 34       | 103-2631    | Clamp,1.125 .....                  | 1           |
| 16       | 1-633630    | Grommet .....                   | 2           | 35▽      | 103-1965    | Valve, oil drain .....             | 1           |
| 17       | 1-633543-03 | Strap, clutch/brake .....       | 1           | 36       | 103-1966    | Adapter, M20-2.5 / 3/8 NPT .....   | 1           |
| 18       | 322-22      | Screw, 5/16-18 x 3 1/2 .....    | 1           | 37       | 103-2560-03 | Deflector, lower frame .....       | 1           |
| 19       | 322-6       | Screw, 5/16 NC x 1 1/4 .....    | 1           | 38       | 322-2       | Screw, 5/16-18 x .625 .....        | 2           |
| 20       | 1-807259    | Key .....                       | 1           | 39       | 1-653290    | Gasket .....                       | 2           |
| 21       | 103-2308    | Spacer, crankshaft .....        | 1           |          |             |                                    |             |

▽ Use a Teflon Pipe Sealant or equivalent on threads of drain valve.

♦ Use Pro-Lock, Nut Type (P/N 1-840022, .5ml tube) on clutch bolt.  
Exmark black touch up spray paint – gloss black

## DECAL GROUP



| Ref. No. | Part No. | Description                  | Qty. Req'd. | Ref. No. | Part No. | Description                 | Qty. Req'd. |
|----------|----------|------------------------------|-------------|----------|----------|-----------------------------|-------------|
| 1        | 103-1970 | Decal, Panel .....           | 1           | 14       | 1-653477 | Decal, Belt Routing .....   | 1           |
| 2        | 1-513746 | Decal, Muffler.....          | 2           | 15       | 1-653183 | Decal, Check Service .....  | 1           |
| 3        | 1-653140 | Decal, Deck Height.....      | 1           | 16       | 103-3142 | Decal, LHP Model.....       | 1           |
| 4        | 1-323540 | Decal, Roller Mounting ..... | 1           | 17       | 103-0262 | Decal, Fuel Valve.....      | 1           |
| 5        | 1-523552 | Decal, Hyd Tank/Hot Surface  | 1           | 18       | 103-1997 | Decal, Top Console .....    | 1           |
| 6        | 1-513748 | Decal, Guard.....            | 1           | 19       | 1-303520 | Decal, Trivantage.....      | 1           |
| 7        | 1-513742 | Decal, No Step.....          | 2           | 20       | 1-403131 | Decal, Commercial 48 .....  | 1           |
| 8        | 103-1077 | Decal, Bolt Torque .....     | 2           | 21       | 1-643401 | Decal, Mercury Switch ..... | 1           |
| 9        | 1-303508 | Decal, Discharge Warning.... | 1           | 22       | 98-5954  | Decal, Missing Cover .....  | 2           |
| 10       | 1-403005 | Decal, Danger .....          | 2           | 23       | 1-523417 | Decal, Commercial 44 .....  | 1           |
| 11       | 1-633922 | Decal, Anti-Scalp .....      | 1           | 24       | 1-403132 | Decal, Commercial 52 .....  | 1           |
| 12       | 1-653147 | Decal, Deck Height.....      | 1           | 25       | 103-2882 | Decal, Exmark Logo .....    | 1           |
| 13       | 103-2644 | Decal, Exhaust system .....  | 1           |          | 1-654520 | Decal Kit.....              | 1           |

# KOHLER & KAWASAKI 21-23HP ENGINE GROUP

| Ref. No. | Part No.    | Description                          | Qty. Req'd. | Ref. No. | Part No.    | Description                         | Qty. Req'd. |
|----------|-------------|--------------------------------------|-------------|----------|-------------|-------------------------------------|-------------|
| 1        | 103-3078-03 | Strap, engine guard .....            | 1           | 27       | 1-303334    | Washer, spring disc .....           | 4           |
| 2        | 32128-20    | Nut, whizlock 5/16-18 (44/48) ..     | 22          | 28       | 3256-23     | Washer, 5/16 SAE flat(44" & 48") .. | 4           |
|          | 32128-20    | Nut, whizlock 5/16-18 (52) .....     | 22          |          | 3256-23     | Washer, 5/16 SAE flat (52") .....   | 12          |
| 3        | 322-3       | Screw, 5/16-18x3/4 (44" & 48") ..... | 20          | 29       | 103-2740-03 | Shield, heat(except 17hp Kaw)...    | 1           |
|          | 322-3       | Screw, 5/16-18x3/4 (52") .....       | 12          | 30       | 33113-016   | Screw, HH M6-1 x 16 .....           | 2           |
| 4        | 33114-020   | Screw, HH M8-1.25 x 20 .....         | 1           | 31       | 33113-025   | Screw, HH M6-1 x 25 .....           | 1           |
| 5        | 103-3164-03 | Strap, engine guard .....            | 1           | 32       | 103-3107-03 | Counterweight, 60# (52") .....      | 1           |
| 6        | 103-3426    | Muffler, Kit (Koh) .....             | 1           | 33       | 322-7       | Screw, Cap HH 5/16-18x1 1/2(52")... | 8           |
| 7        | 1-805005    | Washer, lock 5/16 heavy .....        | 1           | 34▽      | 103-1963    | Valve, oil drain (Koh) .....        | 1           |
| 8        | 3256-3      | Washer, 5/16 std flat .....          | 1           | 35▽      | 103-1965    | Valve, oil drain (Kaw) .....        | 1           |
| 9        | 3296-29     | Nut, nyloc 5/16-18 (Kaw) .....       | 4           | 36       | 103-1966    | Adapter, M20-2.5 / 3/8 NPT(Kaw)     | 1           |
|          | 32128-20    | Nut, whizlock 5/16-18 (Koh) ....     | 4           | 37       | 103-2993-03 | Bracket,muffler KA LH .....         | 1           |
| 10       | 322-9       | Screw, 5/16-18 x 1 3/4 .....         | 4           | 38       | 103-2994-03 | Bracket,muffler KA RH .....         | 1           |
| 11       | 103-3218-03 | Wld,tailpipe guard .....             | 1           | 39       | 1-653291    | Gasket, (18-23 hp Koh) .....        | 2           |
| 12       | 103-3096    | Spacer .....                         | 1           | 40       | 103-3094-03 | Deflector,air KC LH .....           | 1           |
| 13       | 103-2614    | Bushing, seat mount .....            | 1           | 41       | 103-3095-03 | Deflector,air KC RH .....           | 1           |
| 14       | 1-613235    | Washer .....                         | 4           | 42       | 103-2987-03 | Bracket,muffler KC LH .....         | 1           |
| 15       | 1-633545    | Spacer, grommet .....                | 2           | 43       | 103-2988-03 | Bracket,muffler KC RH .....         | 1           |
| 16       | 1-633630    | Grommet .....                        | 2           | 44       | 33013-00    | Nut,hex M6-1 .....                  | 2           |
| 17       | 1-633543-03 | Strap, clutch/brake .....            | 1           | 45       | 33113-020   | Screw,HH M6-1 x 20 .....            | 2           |
| 18       | 322-22      | Screw, 5/16-18 x 3 1/2 .....         | 1           | 46*      | 1-805004    | Washer,lock 1/4 hvy .....           | 4           |
| 19       | 322-6       | Screw, 5/16 NC x 1 1/4 .....         | 1           | ▲        | 1-805004    | Washer,lock 1/4 hvy .....           | 3           |
| 20       | 1-807259    | Key .....                            | 1           | 47       | 103-3219-03 | Guard,rear LHP .....                | 1           |
| 21       | 103-2308    | Spacer, crankshaft .....             | 1           | 48       | 103-3427    | Muffler,kit 19-23 KA .....          | 1           |
| 22       | 1-653035    | Sheave, pump drive .....             | 1           | 49       | 103-3287-03 | Guard,muffler LH 52 .....           | 1           |
| 23       | 103-0690    | Clutch .....                         | 1           | 50       | 103-3288-03 | Guard,muffler RH 52 .....           | 1           |
|          | 105-1670    | Pigtail, clutch .....                | 1           | 51*      | 3229-10     | Screw,Carr 1/4-20x1/2 .....         | 6           |
|          | 103-3012    | Kit, brake pole module .....         | 1           | ▲        | 3229-10     | Screw,Carr 1/4-20x1/2 .....         | 4           |
| 24       | 1-603610    | Washer, disc spring 7/16 .....       | 2           | 52*      | 32128-33    | Nut,flange 1/4-20 .....             | 6           |
| 25♦      | 3212-12     | Screw, 7/16-20 x 3 (Kaw) .....       | 1           | ▲        | 32128-33    | Nut,flange 1/4-20 .....             | 4           |
| ♦        | 3212-10     | Screw, 7/16-20 x 2 1/2(Koh) ...      | 1           | 53       | 1-653313    | Gasket, (19-23 hp Kaw) .....        | 2           |
| 26       | 1-303335    | Plastic tie (large) .....            | 2           |          |             |                                     |             |

▽ Use a Teflon Pipe Sealant or equivalent on threads of drain valve.

♦ Use Pro-Lock, Nut Type (P/N 1-840022, .5ml tube) on clutch bolt.

Exmark black touch up spray paint – gloss black

\* Kohler units only

▲ Kawasaki 21-23HP units only

## Kohler Replacement Parts List

(Refer to Engine Owner's Manual)

Air cleaner filter inner element 2508304-S

Air cleaner filter outer element 2508301-S

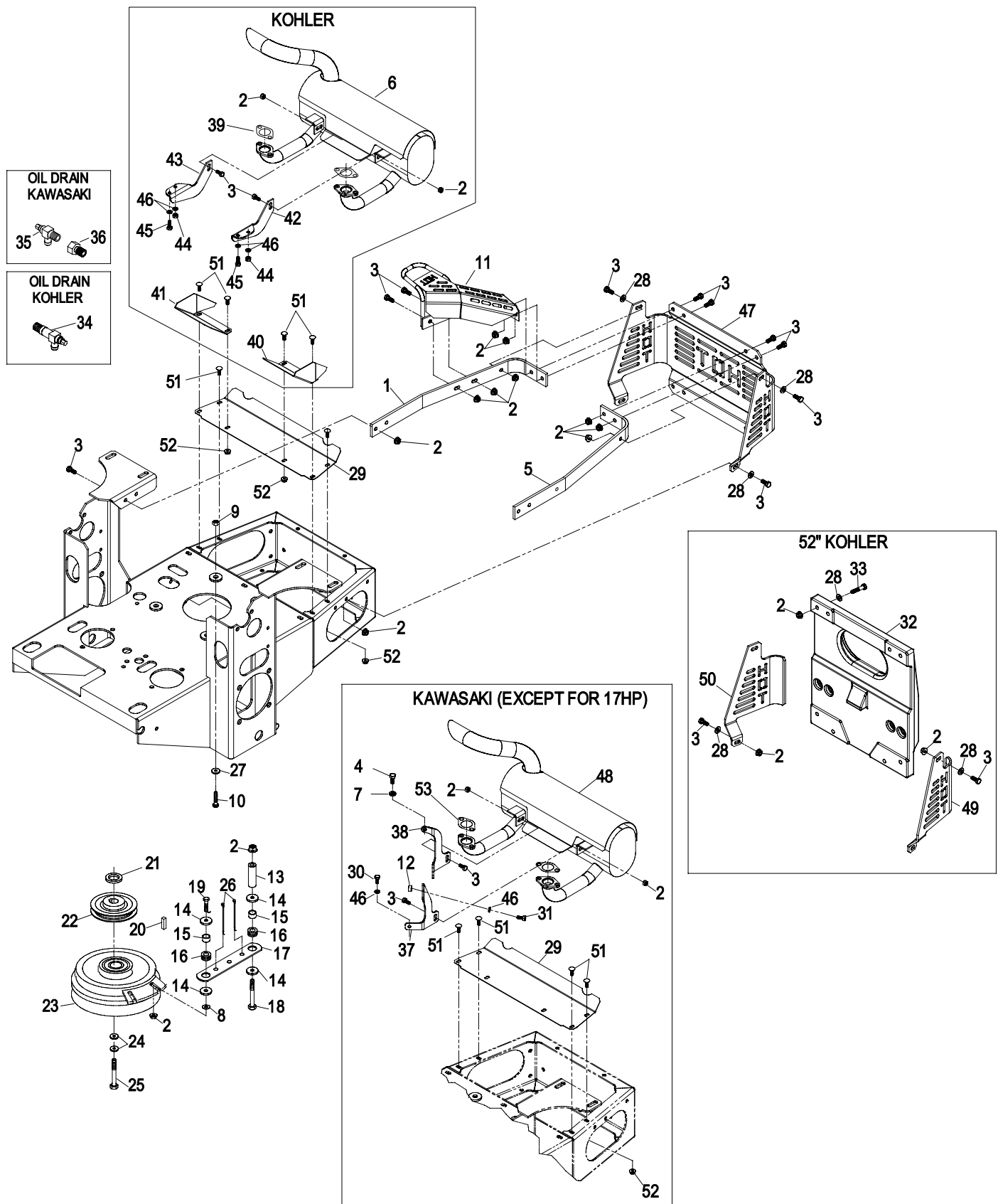
## Kawasaki Replacement Parts List (except 17 hp)

(Refer to Engine Owner's Manual)

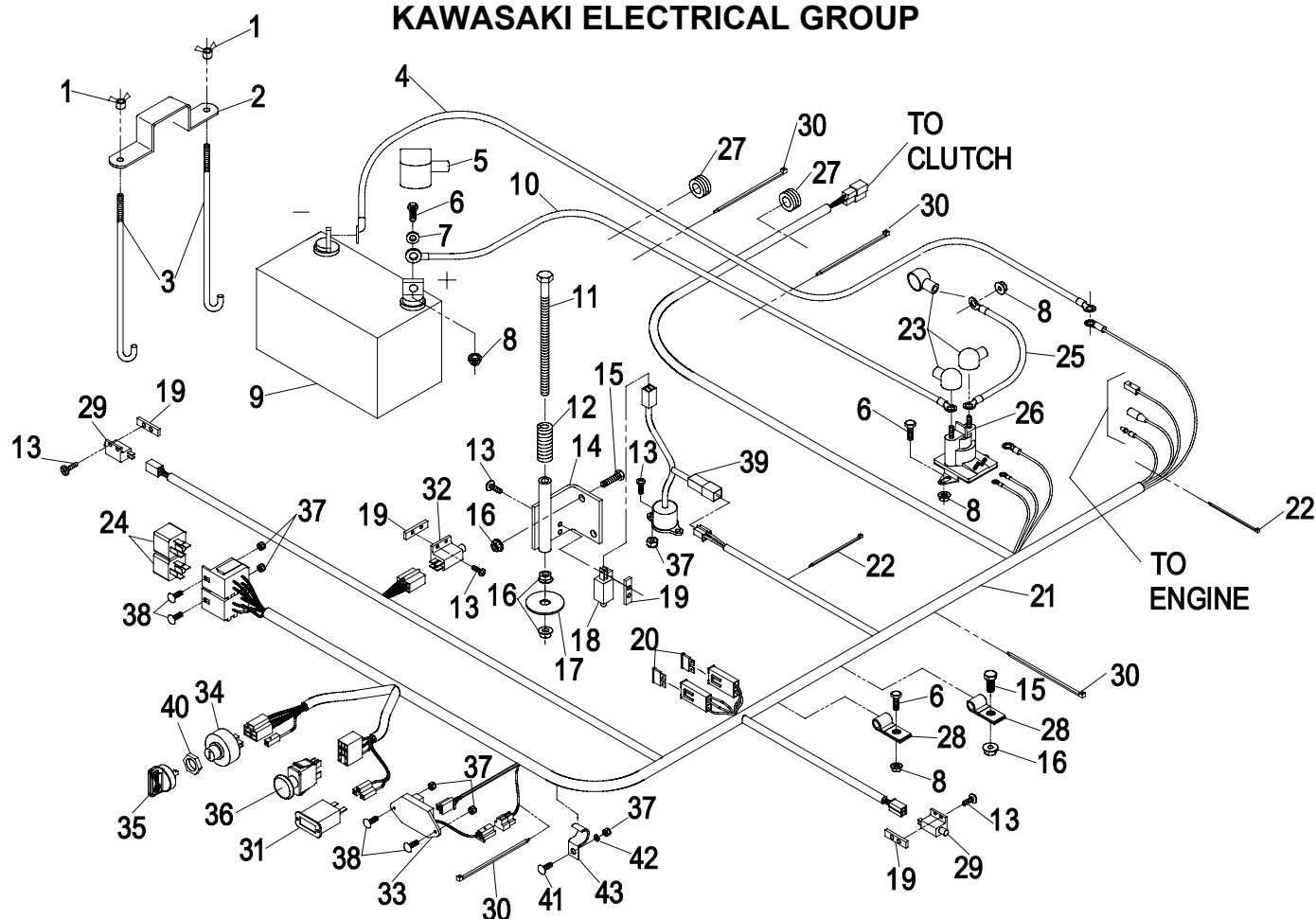
Air cleaner assembly 11010-7004

(Inner & outer elements)

## KOHLER & KAWASAKI 21-23HP ENGINE GROUP



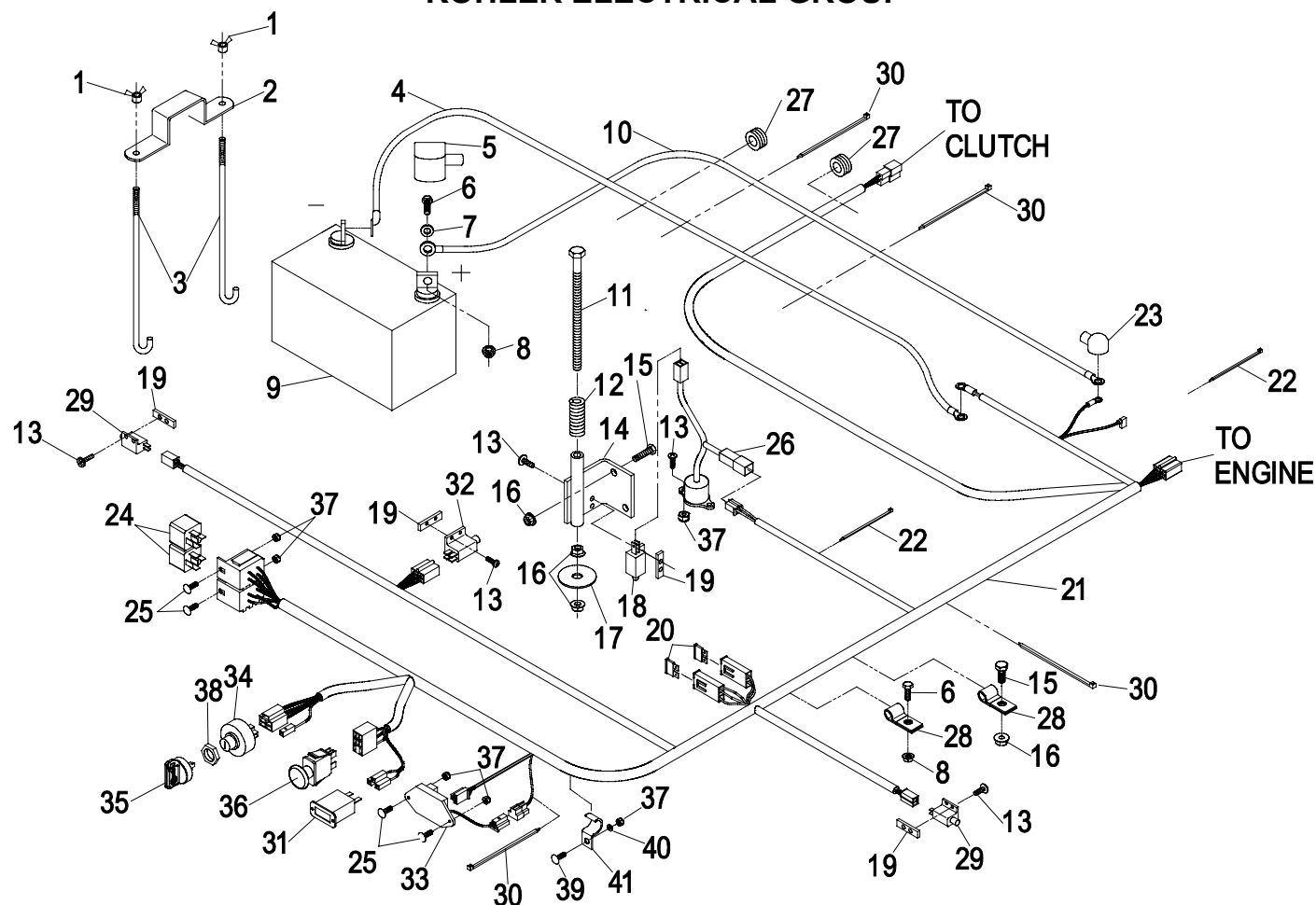
## KAWASAKI ELECTRICAL GROUP



| Ref. No. | Part No.    | Description                    | Qty. Req'd. | Ref. No. | Part No. | Description                      | Qty. Req'd. |
|----------|-------------|--------------------------------|-------------|----------|----------|----------------------------------|-------------|
| 1        | 1-543792    | Wingnut, nyloc 1/4-20 .....    | 2           | 23       | 1-543393 | Insulator, solenoid (+).....     | 3           |
| 2        | 1-633652-03 | Strap, battery holdown .....   | 1           | 24       | 1-643275 | Relay, 12 V.....                 | 2           |
| 3        | 1-633651    | Bolt, battery holdown.....     | 2           | 25       | 1-633306 | Cable, starter (+) .....         | 1           |
| 4        | 103-0705    | Cable, ground (-).....         | 1           | 26       | 1-513075 | Switch, 12V solenoid.....        | 1           |
| 5        | 1-543391    | Insulator, battery .....       | 1           | 27       | 1-543286 | Grommet .....                    | 2           |
| 6        | 321-4       | Screw, 1/4-20 x 3/4 .....      | 5           | 28       | 1-633396 | Clip, loom 5/8 .....             | 2           |
| 7        | 3256-2      | Washer, 1/4 flat .....         | 2           | 29       | 1-513051 | Switch, drive lever N.C.....     | 2           |
| 8        | 32128-33    | Nut, 1/4-20 whizlock .....     | 6           | 30       | 1-303335 | Plastic tie, large .....         | 4           |
| 9        | 103-0293    | Battery, 12V .....             | 1           | 31       | 1-513374 | Meter, engine hours .....        | 1           |
| 10       | 103-0707    | Cable, battery (+) .....       | 1           | 32       | 1-633111 | Switch, brake N.O./N.C.....      | 1           |
| 11       | 1-800282    | Screw, 5/16-18 x 7 .....       | 1           | 33       | 100-6186 | Module, seat delay .....         | 1           |
| 12       | 1-523415    | Spring, seat switch.....       | 1           | 34       | 103-0206 | Switch, ignition w/keys .....    | 1           |
| 13       | 3290-500    | Screw, #10-24 x 5/8 .....      | 10          | 35       | 103-2106 | Key, Exmark logo .....           | 1           |
| 14       | 1-652072-03 | Bracket wldmt, seat switch...1 |             |          | 1-603511 | Key, ignition.....               | 1           |
| 15       | 322-3       | Screw, 5/16-18 x 3/4 .....     | 3           | 36       | 1-633673 | Switch, blade.....               | 1           |
| 16       | 32128-20    | Nut, whizlock 5/16-18.....     | 5           | 37       | 3296-2   | Nut, nyloc #10-20.....           | 7           |
| 17       | 1-653036    | Washer.....                    | 1           | 38       | 1-807513 | Carriage Bolt, #10-24 x 1/2..... | 4           |
| 18       | 1-513152    | Switch, seat.....              | 1           | 39       | 1-633782 | Switch, Tilt.....                | 1           |
| 19       | 1-633181    | Plate .....                    | 4           | 40       | 103-0498 | Nut, Ignition .....              | 1           |
| 20       | 1-816001    | Fuse-20 amp .....              | 2           | 41       | 1-807533 | Bolt, carriage 10-24x5/8.....    | 1           |
| 21♦      | 103-0623    | Harness, wiring .....          | 1           | 42       | 3256-14  | Washer, #10 flat.....            | 1           |
| 22       | 1-303287    | Plastic tie, small .....       | 3           | 43       | 103-1193 | Clip, loom half .....            | 1           |

♦Use dielectric grease on all wiring harness connectors.

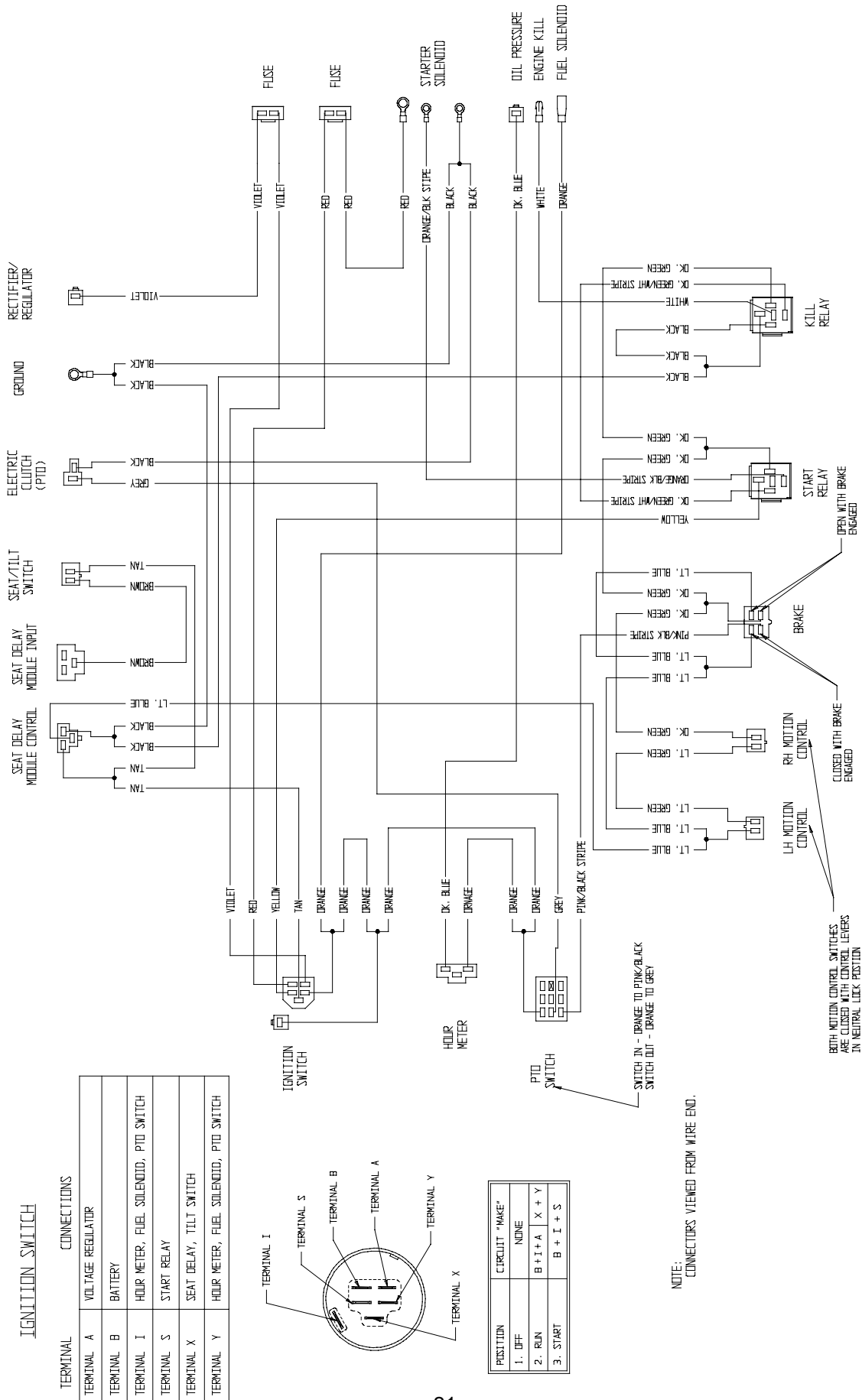
## KOHLER ELECTRICAL GROUP



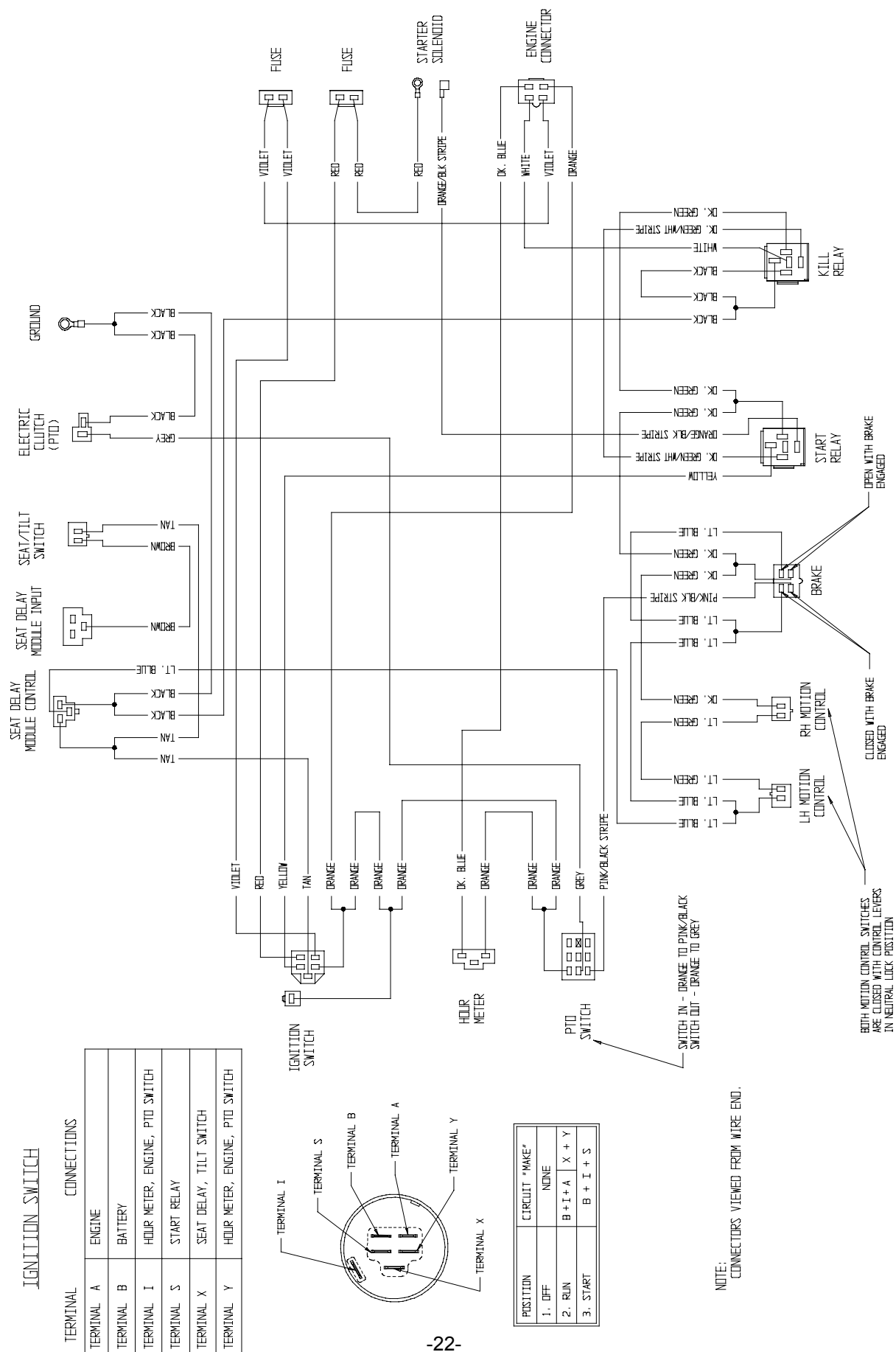
| Ref. No. | Part No.    | Description                   | Qty. Req'd. | Ref. No. | Part No. | Description                       | Qty. Req'd. |
|----------|-------------|-------------------------------|-------------|----------|----------|-----------------------------------|-------------|
| 1        | 1-543792    | Wingnut, nyloc 1/4-20 .....   | 2           | 22       | 1-303287 | Plastic tie, small .....          | 2           |
| 2        | 1-633652-03 | Strap, battery holdown .....  | 1           | 23       | 1-543393 | Insulator, solenoid (+).....      | 1           |
| 3        | 1-633651    | Bolt, battery holdown.....    | 2           | 24       | 1-643275 | Relay, 12 V.....                  | 2           |
| 4        | 103-0705    | Cable, ground (-).....        | 1           | 25       | 1-807513 | Carriage Bolt, #10-24 x 1/2 ..... | 4           |
| 5        | 1-543391    | Insulator, battery .....      | 1           | 26       | 1-633782 | Switch, Tilt.....                 | 1           |
| 6        | 321-4       | Screw, 1/4-20 x 3/4 .....     | 3           | 27       | 1-543286 | Grommet .....                     | 2           |
| 7        | 3256-2      | Washer, 1/4 flat .....        | 2           | 28       | 1-633396 | Clip, loom 5/8 .....              | 2           |
| 8        | 32128-33    | Nut, 1/4-20 whizlock .....    | 3           | 29       | 1-513051 | Switch, drive lever N.C.....      | 2           |
| 9        | 103-0293    | Battery, 12V .....            | 1           | 30       | 1-303335 | Plastic tie, large .....          | 4           |
| 10       | 1-523281    | Cable, battery (+) .....      | 1           | 31       | 1-513374 | Meter, engine hours .....         | 1           |
| 11       | 1-800282    | Screw, 5/16-18 x 7 .....      | 1           | 32       | 1-633111 | Switch, brake N.O./N.C.....       | 1           |
| 12       | 1-523415    | Spring, seat switch.....      | 1           | 33       | 100-6186 | Module, seat delay .....          | 1           |
| 13       | 3290-500    | Screw, #10-24 x 5/8 .....     | 10          | 34       | 103-0206 | Switch, ignition w/keys .....     | 1           |
| 14       | 1-652072-03 | Bracket wldmt, seat switch... | 1           | 35       | 103-2106 | Key, Exmark logo .....            | 1           |
| 15       | 322-3       | Screw, 5/16-18 x 3/4 .....    | 3           |          | 1-603511 | Key, ignition.....                | 1           |
| 16       | 32128-20    | Nut, whizlock 5/16-18.....    | 5           | 36       | 1-633673 | Switch, blade.....                | 1           |
| 17       | 1-653036    | Washer .....                  | 1           | 37       | 3296-2   | Nut, nyloc #10-20 .....           | 7           |
| 18       | 1-513152    | Switch, seat.....             | 1           | 38       | 103-0498 | Nut, Ignition .....               | 1           |
| 19       | 1-633181    | Plate .....                   | 4           | 39       | 1-807533 | Bolt, carriage 10-24x5/8.....     | 1           |
| 20       | 1-816001    | Fuse-20 amp .....             | 2           | 40       | 3256-14  | Washer, #10 flat.....             | 1           |
| 21♦      | 103-0595    | Harness, wiring .....         | 1           | 41       | 103-1193 | Clip, loom half .....             | 1           |

♦ Use dielectric grease on all wiring harness connectors.

## KAWASAKI ELECTRICAL DIAGRAM

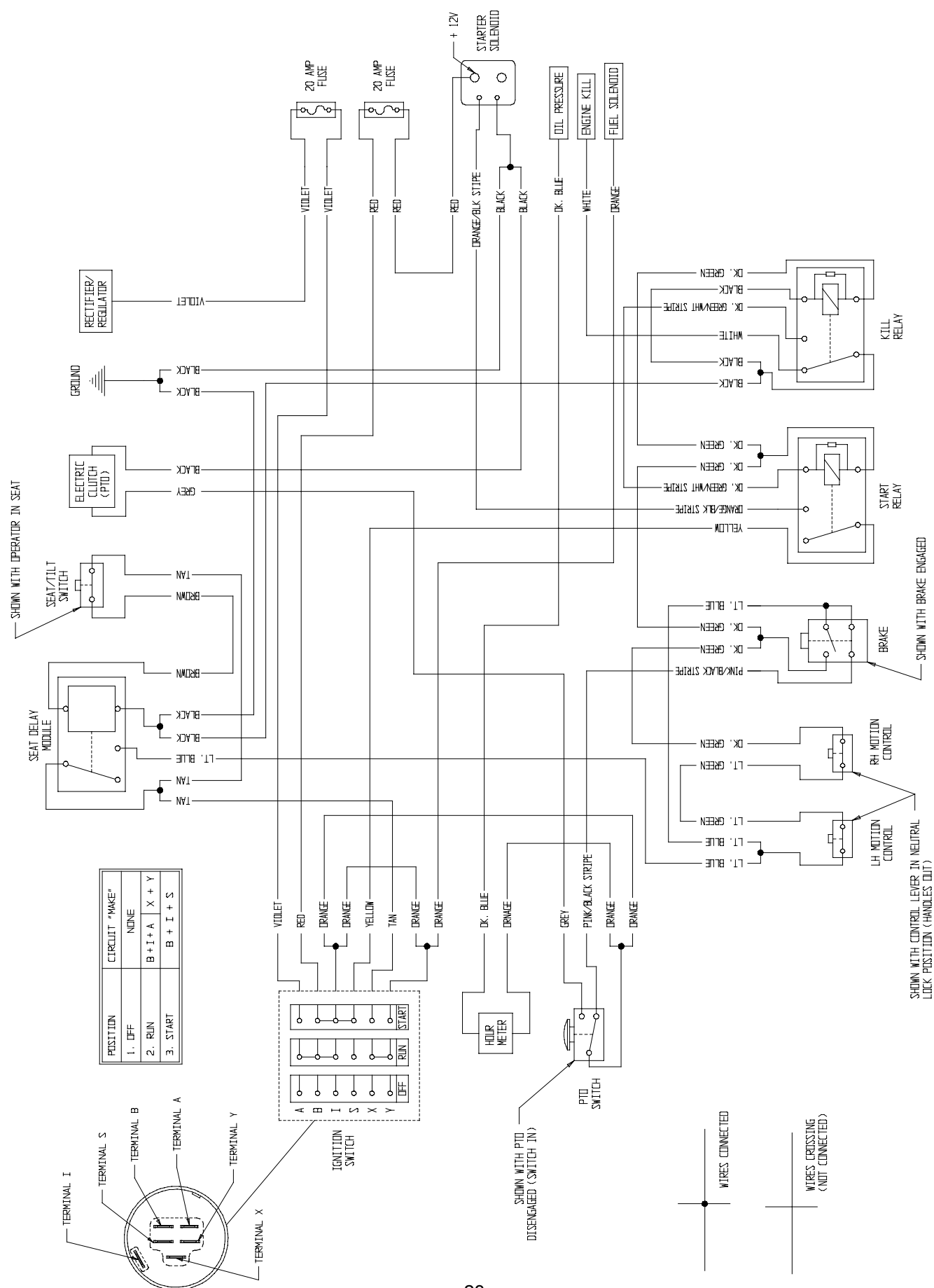


## KOHLER ELECTRICAL DIAGRAM

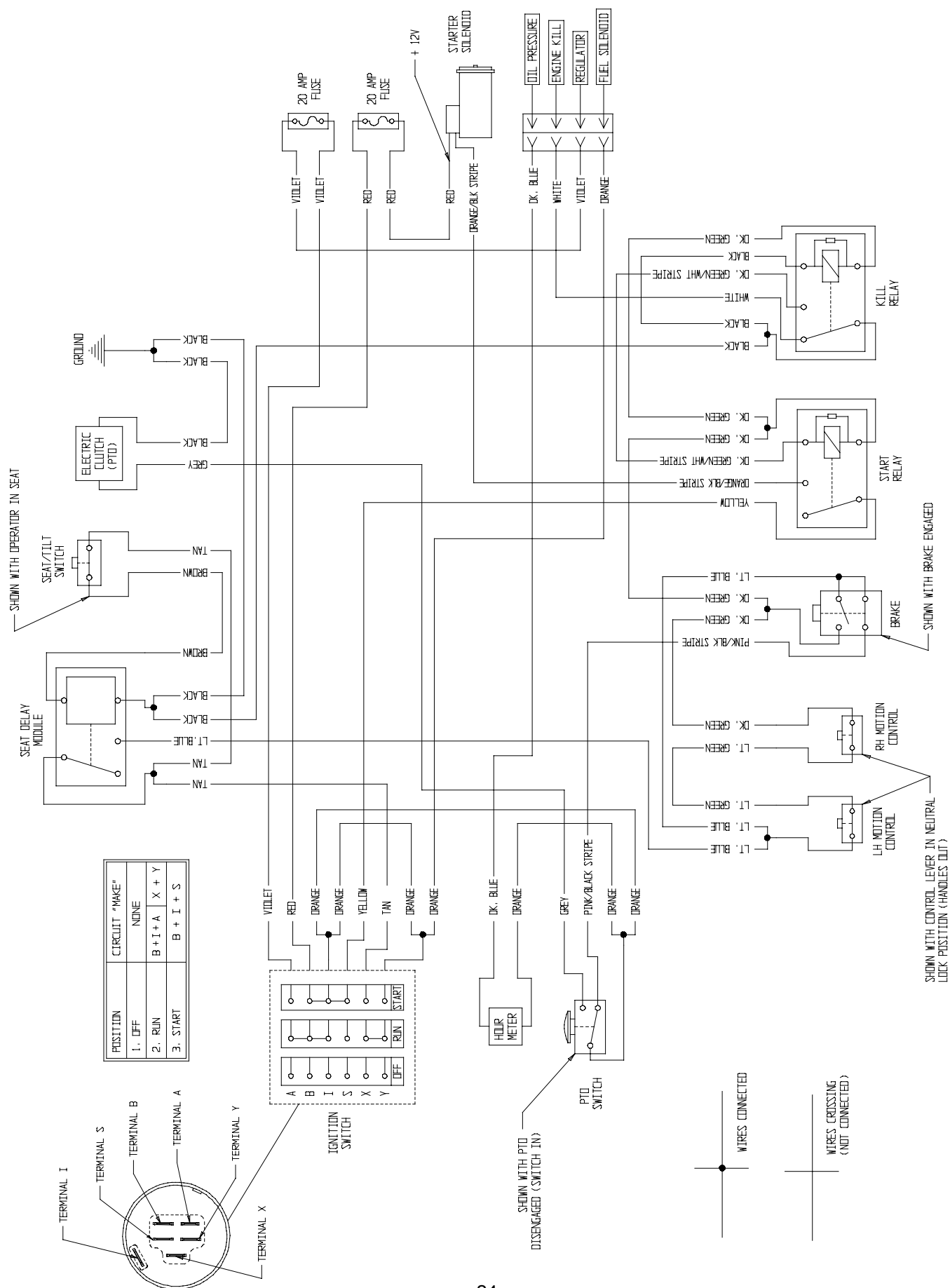


NOTE:  
CONNECTORS VIEWED FROM WIRE END.

## KAWASAKI ELECTRICAL LOGIC SCHEMATIC



## KOHLER ELECTRICAL LOGIC SCHEMATIC



## SERVICE RECORD

[illegible]

## NOTES

**SEE EXMARK'S COMPLETE  
LINE OF PRODUCTS FOR TURF CARE**

**LAZER Z<sup>®</sup>**

**LAZER Z<sup>®</sup> HP**

**LAZER Z<sup>®</sup> XP**

**TURF RANGER<sup>®</sup>**

**TURF TRACER<sup>®</sup>**

**TURF TRACER<sup>®</sup> HP**

**VIKING HYDRO**

**METRO<sup>®</sup>**

**METRO<sup>®</sup> HP**

**ULTRA VAC<sup>™</sup>**

**ULTRA VAC<sup>™</sup> QDS**

**SELF STEERING SULKY**

**GRASS CATCHER**

**MICRO-MULCH<sup>™</sup> ACCESSORY**

©1997 - 2002  
EXMARK MFG. CO. INC.  
INDUSTRIAL PARK BOX 808  
BEATRICE, NE 68310  
ALL RIGHTS RESERVED

PART NO. 103-3016  
(402) 223-6300  
FAX (402) 223-5489  
PRINTED IN U.S.A.

