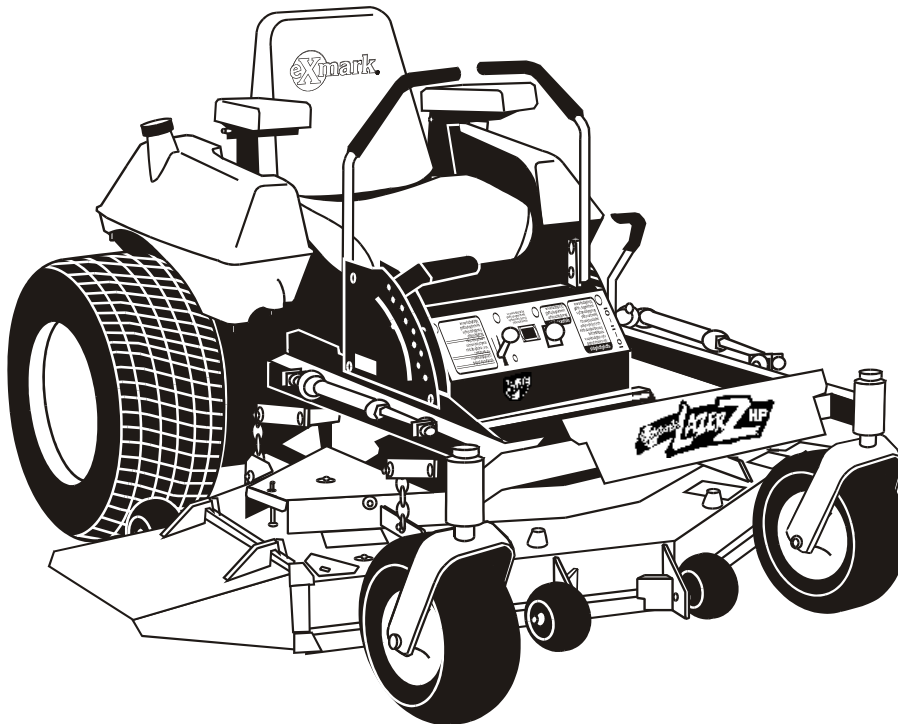


For Serial Nos.
320,000 & Higher



PARTS MANUAL

LAZER Z[®] 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 top front engine frame on the right hand side of the machine. 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 _____

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

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

44" and 48" DECK GROUP

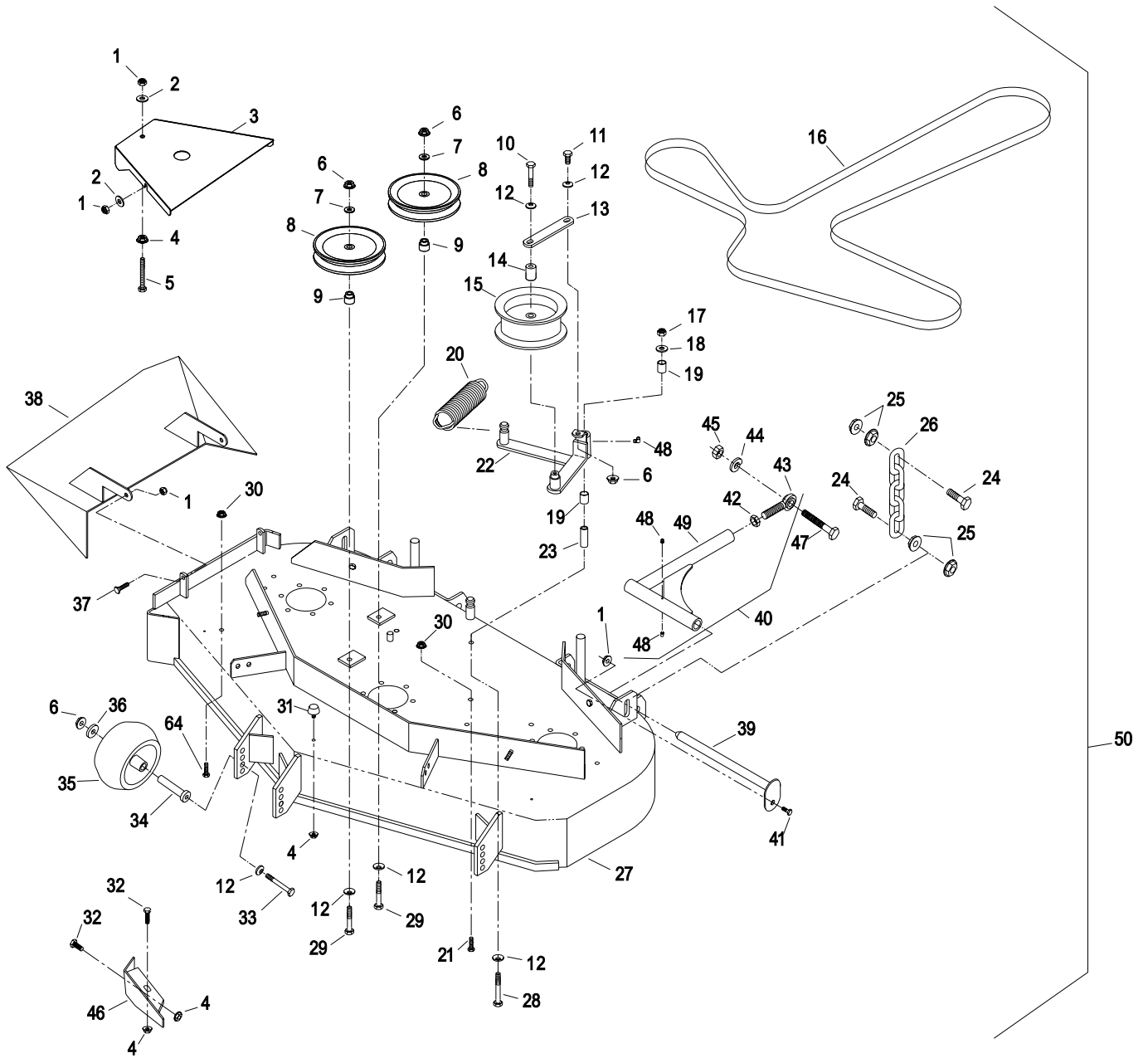
Ref. No.	Part No.	Description	Qty. Req'd.	Ref No.	Part No.	Description	Qty. Req'd.
1	3296-29	Nut, nyloc 5/16-18	10	27	1-651312	Deck wldmt (1-652311-01)	
2	3256-3	Washer, 5/16 std flat.....	6			w/decals (48")	1
3	103-2970-01	Shield, belt.....	2		1-654175	Deck wldmt (1-652124-01)	
4	32128-20	Nut, whizlock 5/16-18	5			w/decals (44").....	1
5	1-800017	Bolt, 5/16 x 3 ¼ tap.....	2	28	3253-7	Screw, 3/8-16 x 3 1/2.....	1
6	3290-357	Nut, whizlock 3/8-16	6	29	323-13	Screw, 3/8-16 x 2 3/4.....	2
7	3256-24	Washer, 3/8 SAE flat	2	30	32128-33	Nut, whizlock ¼-20 (48")	4
8	1-613098	Pulley, Idler	2		32128-33	Nut, whizlock ¼-20 (44")	1
9	1-413113	Bushing, Idler.....	2	31	1-543963	Bumper, rubber.....	1
10	323-11	Screw, 3/8-19 x 2 ¼	1	32	322-2	Screw, 5/16-18 x 5/8.....	2
11	323-6	Screw, 3/8-16 x 1.....	1	33	98-5961	Screw, 3/8-16 x 4 gr 8	3
12	98-5975	Washer, disc spring 3/8.....	8	34	1-603602	Bushing, roller.....	3
13	1-653189	Plate, Belt guide.....	1	35	1-603299	Roller, anti-scalp.....	3
14	1-653190	Spacer	1	36	1-373034	Washer, swivel	3
15	1-413099	Pulley, Idler	1	37	322-5	Screw, 5/16-18 x 1.....	2
16	1-413308	Belt, deck drive (48")	1	38	1-402106-01	Chute wldmt, discharge (44")(48")	1
	1-413093	Belt, deck drive (44")	1	39	1-632199-01	Pin wldmt, deck strut	2
17	3296-39	Nut, nyloc 3/8-16	1	40	103-1081	Strut wldmt, assembly	2
18	3256-4	Washer, 3/8 std flat.....	1	41	322-3	Screw, 5/16-18 x 3/4.....	2
19	1-513034	Bearing, pivot.....	2	42	3219-6	Nut, 5/8-18	2
20	1-633151	Spring, extension.....	1	43	1-633029	Spherical rod end	2
21	321-1	Screw, ¼-20 x 3/8 (48").....	4	44	3253-8	Washer, lock 5/8.....	2
	321-1	Screw, ¼-20 x 3/8 (44").....	1	45	3217-11	Nut, 5/8-11	2
22	1-652192-01	Idler arm wldmt.....	1	46	1-522480-01	Baffle, discharge.....	1
	1-654193	Idler arm wldmt w/bushings .	1	47	1-800344	Screw, 5/8-11 x 6.....	2
23	1-603384	Bushing, idler pivot	1	48	302-19	Zerk, ¼-18 straight	5
24	1-800811	Screw, 7/16-14 x 1 1/2.....	8	49	103-1072-01	Strut wldmt	2
25	32128-37	Nut, whizlock 7/16-14	16	50▽	1-654550	Deck complete service (44")	1
26	1-633447	Chain, deck lift	4	▽	1-654551	Deck complete service (48")	1

▽ Complete deck assembly includes mower deck cutter housing assemblies and blades (see page 7).

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

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

44" and 48" DECK GROUP



52" DECK GROUP

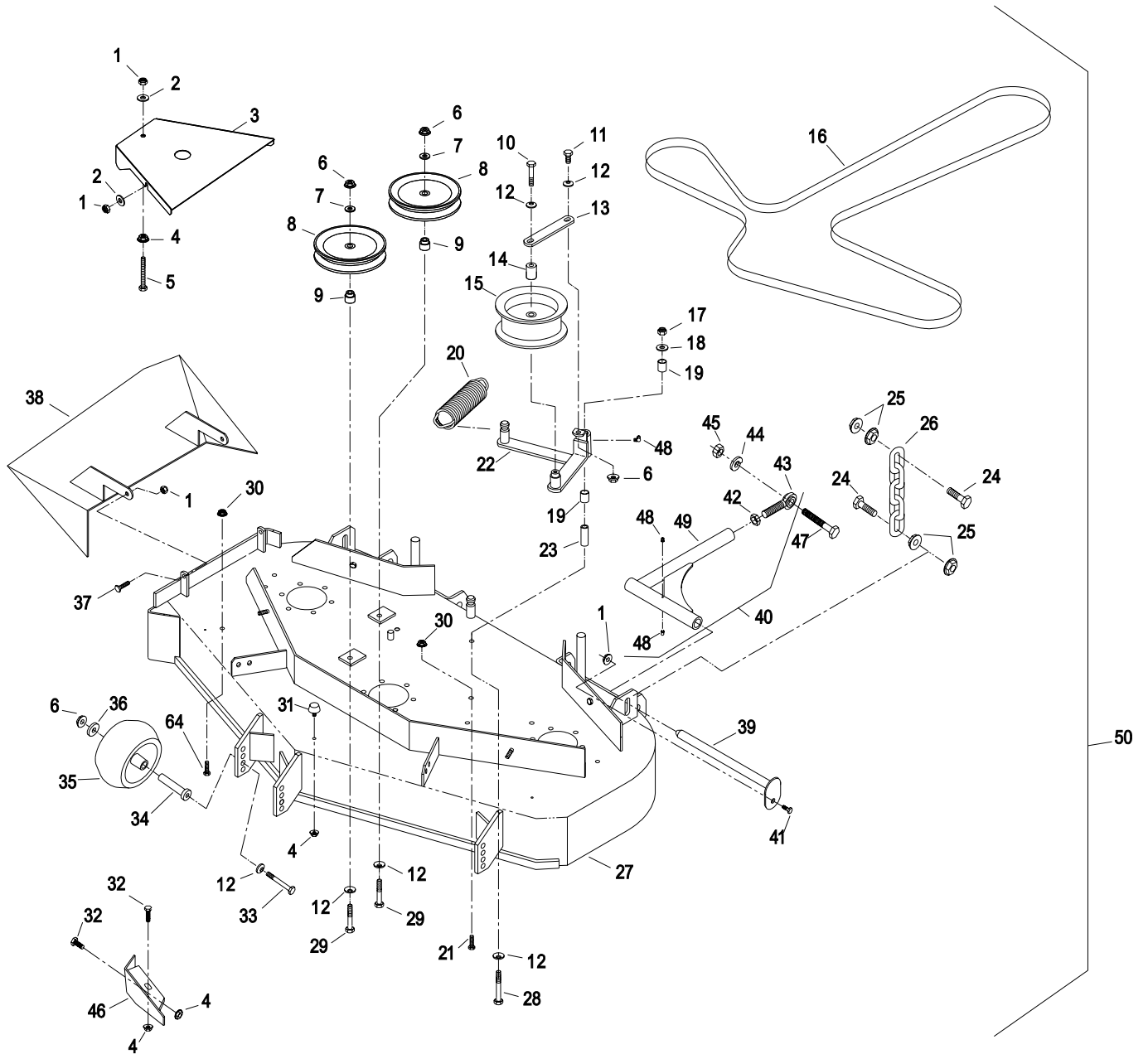
Ref. No.	Part No.	Description	Qty. Req'd.	Ref. No.	Part No.	Description	Qty. Req'd.
1	3296-29	Nut, nyloc 5/16-18.....	10	26	1-633447	Chain, deck lift.....	4
2	3256-3	Washer, 5/16 std flat.....	6	27	1-654478	Deck wldmt (1-652418-01)	
3	103-2970-01	Shield, belt.....	2			w/decals	1
4	32128-20	Nut, whizlock 5/16-18	7	28	1-800805	Screw, 3/8-16 x 3 1/2.....	1
5	1-800017	Bolt, 5/16 x 3 1/4 tap.....	2	29	323-13	Screw, 3/8-16 x 2 3/4.....	2
6	3290-357	Nut, whizlock 3/8-16	8	30	32128-33	Nut, whizlock 1/4-20	4
7	3256-24	Washer, 3/8 SAE flat	2	31	1-543963	Bumper, rubber.....	2
8	1-613098	Pulley, Idler	2	32	322-2	Screw, 5/16-18 x 5/8.....	3
9	1-413113	Bushing, Idler.....	2	33	98-5961	Screw, 3/8-16 x 4 gr 8	5
10	323-11	Screw, 3/8-19 x 2 1/4	1	34	1-603602	Bushing, roller.....	5
11	323-6	Screw, 3/8-16 x 1.....	1	35	1-603299	Roller, anti-scalp.....	5
12	98-5975	Washer, disc spring 3/8	10	36	1-373034	Washer, swivel	5
13	1-653189	Plate, Belt guide.....	1	37	322-5	Screw, 5/16-18 x 1.....	2
14	1-653190	Spacer.....	1	38	1-652375-01	Chute wldmt, discharge.....	1
15	1-413099	Pulley, Idler	1	39	1-632199-01	Pin wldmt, deck strut	2
16	1-653368	Belt, deck drive	1	40	103-1081	Strut wldmt, assembly	2
17	3296-39	Nut, nyloc 3/8-16.....	1	41	322-3	Screw, 5/16-18 x 3/4.....	2
18	3256-4	Washer, 3/8 std flat.....	1	42	3219-6	Nut, 5/8-18	5
19	1-513034	Pivot, Bearing.....	2	43	1-633029	Spherical rod end	2
20	1-633151	Spring, extension	1	44	3253-8	Washer, lock 5/8.....	2
21	321-1	Screw, 1/4-20 x 3/8	4	45	3217-11	Nut, 5/8-11.....	2
22	1-652192-01	Idler arm wldmt	1	46	1-602913-01	Baffle, discharge	1
	1-654193	Idler arm wldmt w/bushings	1	47	1-800344	Screw, 5/8-11 x 6.....	2
23	1-603384	Bushing, idler pivot	1	48	302-19	Zerk, 1/4-18 straight	5
24	1-800811	Screw, 7/16-14 x 1 1/2.....	8	49	103-1072-01	Strut wldmt	2
25	32128-37	Nut, whizlock 7/16-14	16	50▽	1-654552	Deck complete service	1

▽ Complete deck assembly includes mower deck cutter housing assemblies and blades (see page 7).

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

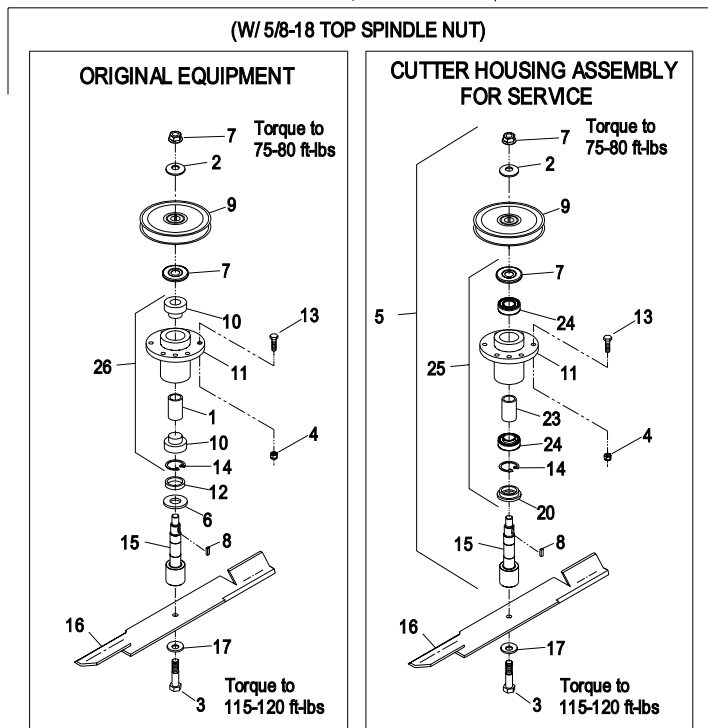
Exmark red touch up spray paint – P/N 1-850337

52" DECK GROUP

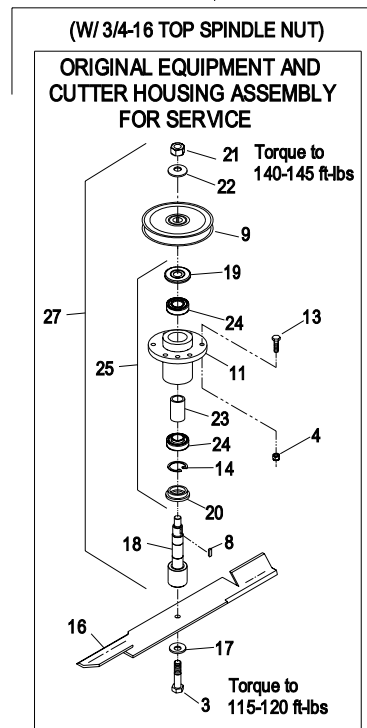


MOWER DECK CUTTER HOUSINGS

SERIAL NOS. 320,000 THRU 351,999



SERIAL NOS. 352,000 & HIGHER



Ref. No.	Part No.	Description	Qty. Req'd.	Ref. No.	Part No.	Description	Qty. Req'd.
1	1-323533	Spacer, shv/brg	3	16(cont)	103-1579	Blade, solid (44)	3
2	1-513208	Washer, disc spring.....	3		103-2527	Blade, notched (48).....	3
3	103-0862	Screw, 5/8-18x2 3/4 gr 8.....	3		103-2507	Blade, low lift (48).....	3
4	3296-39	Nut, 3/8-16 nyloc	18		103-2517	Blade, mulching (48)	3
5	103-1183	Cutter housing complete 44 ..	3		103-1577	Blade, solid (48)	3
	103-1105	Cutter housing complete 48 ..	3		103-2528	Blade, notched (52).....	3
	103-1184	Cutter housing complete 52 ..	3		103-2508	Blade, low lift (52).....	3
6	1-633573	Guard, Brg bottom.....	3		103-2518	Blade, mulching (52)	3
7	32128-58	Nut, Flange 5/8-18	3		103-1578	Blade, solid (52)	3
8	1-807258	Key, machine.....	3	17	103-0865	Washer, disc spring	3
9	1-653099	Sheave, blade drive 44	3	18	103-2787	Spindle	3
	1-413425	Sheave, blade drive 48	3	19	103-1330	Guard, bearing top	3
	1-653386	Sheave, blade drive 52	3	20	103-2535	Spacer, guard bottom	3
10	1-513016	Bearing	6	21	3217-46	Nut, HH 3/4-16 heavy	3
11	1-323532	Housing, bearing	3	22	103-2802	Washer, disc spring 3/4	3
12	1-323528	Spacer, bearing.....	3	23	103-2534	Spacer, bearing.....	3
13	323-7	Screw, HH cap 3/8x1 1/4	18	24	103-2477	Bearing, ball	8
14	32120-8	Snap Ring.....	3	25	103-2547	Cutter housing assembly	3
15	103-0957	Spindle	3	26		Housing w/ring, spacer, & brg	3
16	103-2529	Blade, notched (44).....	3	27	103-3220	Cutter Hsg Complete 44	3
	103-2509	Blade, low lift (44).....	3		103-3221	Cutter Hsg Complete 48	3
	103-2519	Blade, mulching (44)	3		103-3222	Cutter Hsg Complete 52	3

Requires installation of Micro-Mulch accessory for proper mulching. Mulch kit P/N MK483(48"), MK443(44"), or MK523(512")

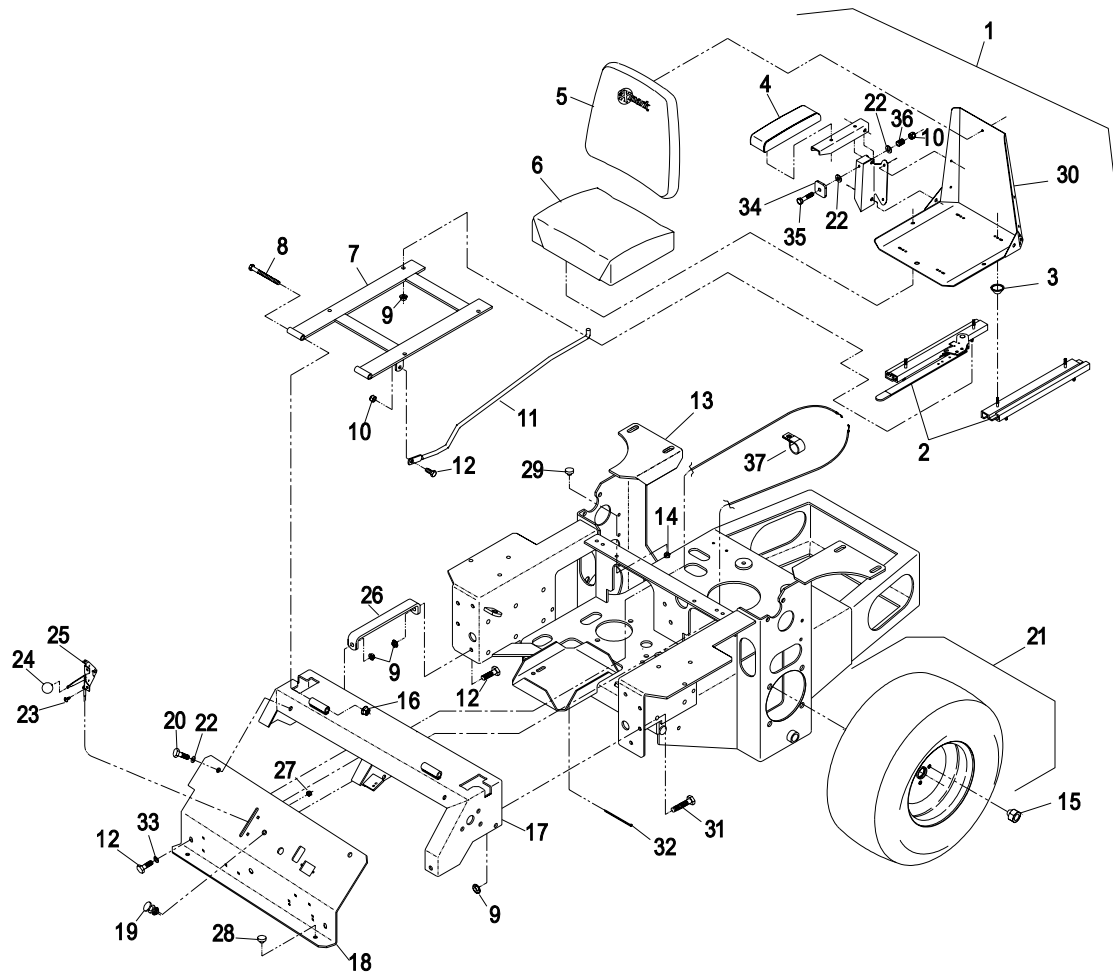
Apply Mobil HTS grease (or a food-grade antisieze) between the spindles & bearings and spindles & sheaves.

This Assembly is now serviced by kit number 103-2547.

Complete cutter housings also include Items 3 & 17.

Complete cutter housing assemblies can be used on decks with S/N 351,999 and lower. However, belt shields must be replaced with new shields with larger spindle holes. P/N 103-2970-01 (2 req'd).

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 ¾.....	3
2	1-643255	Track, seat (4" adjust.)	1	21	1-653010	Wheel/tire assy (44"deck)....	2
3	1-543401	Spacer, seat track.....	2		1-653159	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		1-653160	Tire, 23 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 #10-24x½ ...	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	1-633696	Cable, throttle	1
10	3296-29	Nut, nyloc 5/16-18	3	26	1-653089-03	Bracket, instrument panel	1
11	103-1731	Rod, seat hold up	1	27	3296-2	Nut, nyloc #10-24	2
12	322-5	Screw, 5/16-18 x 1.....	3	28	1-513658	Bumper	2
13	103-1944-03	Frame, engine deck	1	29	1-523420	Bumper, rubber	2
14	3296-42	Nut, nyloc ¼-20	2	30	1-633859	Seat frame	1
15	242-50	Nut, wheel ½-20	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	103-2197-03	Console wldmt, front	1	33	3256-3	Washer, flat std 5/16	2
18	103-0724	Panel,instrument w/decals (103-1194-03).....	1	34	103-0284	Tab	2
19	1-603336	Cable, choke	1	35	322-7	Screw,HHC 5/16-18x1½ ..	2
				36	1-633349	Spring	2
				37	1-643312	Clip,loom 1" (koh only)	1

*Not Illustrated

Exmark black touch up spray paint – gloss black

FRONT FRAME GROUP

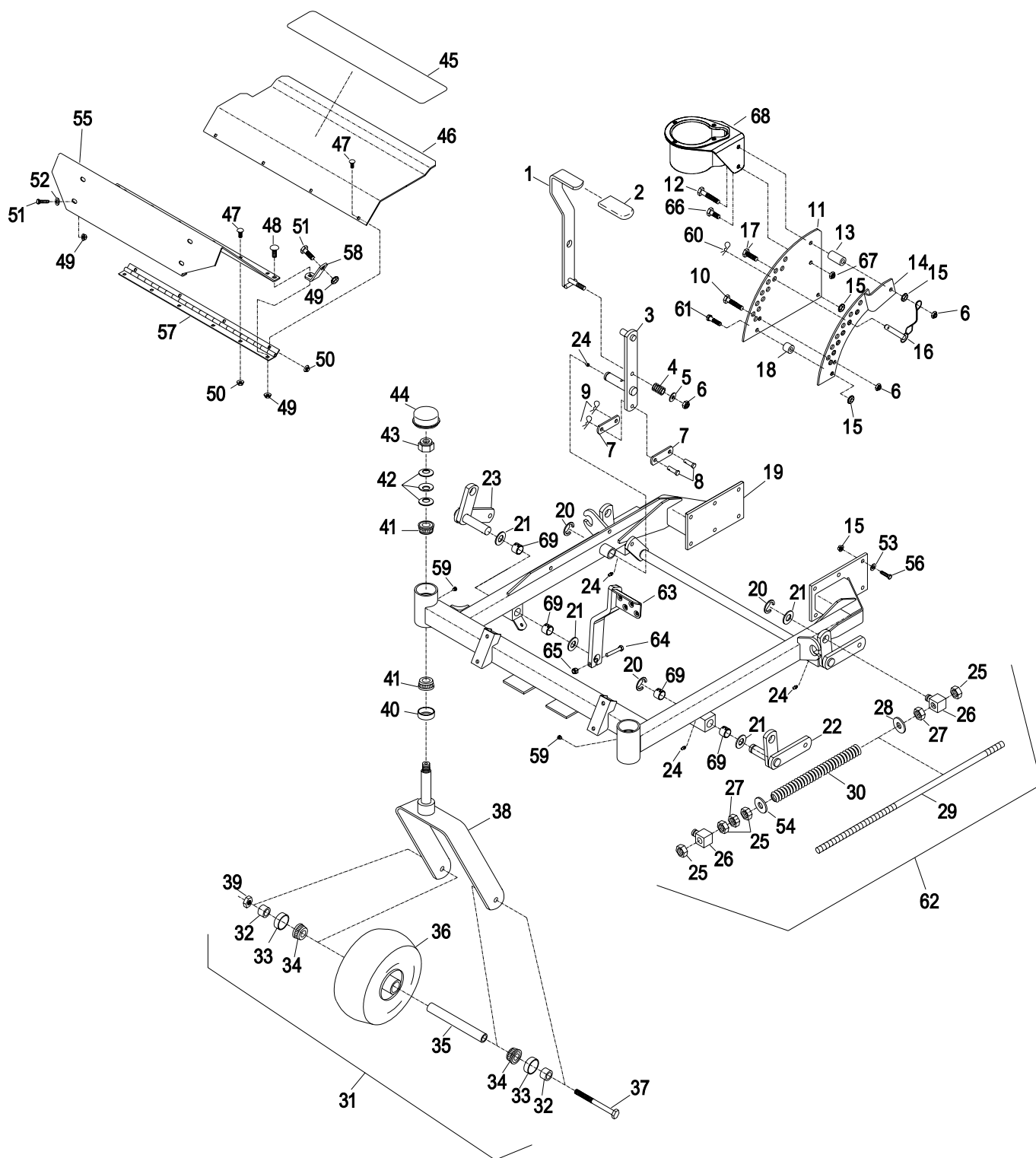
Ref. No.	Part No.	Description	Qty. Req'd.	Ref. No.	Part No.	Description	Qty. Req'd.
1	103-2081	Asm, lever w/grip (103-2078-03)	1	35	1-633579	Spacer, front caster	2
2	1-633295	Grip, lift lever	1	36	103-0064	Wheel & tire assy	2
3	1-652027-03	Arm wldmt, deck lift	1		1-633002	Tire, 13x5.0-6 4 ply.....	2
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	99-3869-01	Floorpan	1
15	3290-357	Nut, whizlock 3/8-16	15	47	3229-10	Bolt, carriage 1/4-20 x 1/2	10
16	1-633097	Hitch pin w/lanyard	1	48	3230-1	Bolt, carriage 5/16-18 x 3/4. ...	2
17	323-6	Screw, 3/8-16 x 1	1	49	32128-20	Nut, whizlock 5/16-18	8
18	1-413088	Bushing, lift lever	1	50	32128-33	Nut, whizlock 1/4-20 (44")	10
19*	103-1991-01	Asm, front frame 44"	1		32128-33	Nut, whizlock 1/4-20 (48"&52")..	11
*	103-2460-01	Asm, front frame 48"	1	51	322-3	Screw, 5/16-18 x 3/4 (44"&48") ..	6
*	103-1994-01	Asm, front frame 52"	1	52	3256-3	Washer, 5/16 SAE flat(44"&48")	4
20	32151-103	E-ring (44")	7	53	98-5975	Washer, 3/8 disc spring	12
	32151-103	E-ring (48"&52")	6	54	3256-27	Washer, 5/8 SAE flat	2
21	3256-29	Washer, 7/8 SAE flat (44") ...	6	55	99-3868-01	Floorpan, front	1
	3256-29	Washer, 7/8 SAE flat(48"&52")	7	56	323-7	Screw, 3/8-16 x 1 1/4	12
22	1-652013-01	Shaft wld,deck lift LH	1	57	1-653049	Hinge, floorpan (piano)	1
23	1-652014-01	Shaft wld,deck lift RH (44")....	1	58	99-3870-01	Bracket, floorpan	2
◇	103-1674-01	Shaft wld,deck lift RH(48"&52")	1	59	1-811010	Plug	2
24	302-19	Zerk, 1/4-28 straight	5	60	1-806005	Hairpin, cotter (service only) ..	1
25	3217-11	Nut, 5/8-11 regular	8	61	323-8	Screw, cap HH3/8-16 x 1 1/2 .	1
26	1-633441	Swivel, deck mount	4	62	103-1987	Asm, deck lift spring	1
27	3218-6	Jam nut, 5/8-11	4	63◇	103-1673-01	Wld, foot lift assist lever	1
28	1-805517	Washer, 5/8 std flat	2	64◇	332-10	Screw, 5/16-18 x 2	1
29	1-653011	Rod, deck lift	2	65◇	1-803013	Nut, torque 5/16-18	1
30	1-653009	Spring, deck support	2	66◇	321-2	Screw, 1/4-20 x 1/2	1
31	103-0068	Caster wheel assy	2	67◇	3296-59	Nut, nyloc 3/8-16 light thin	1
32	1-633581	Spacer, bearing	4	68◇	103-2437	Asm, cup holder	1
33	103-0063	Seal, bearing	4	69	103-1982	Bushing, spring	4
34	1-633585	Bearing cone	4				
	1-633584	Bearing, cup	2				

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

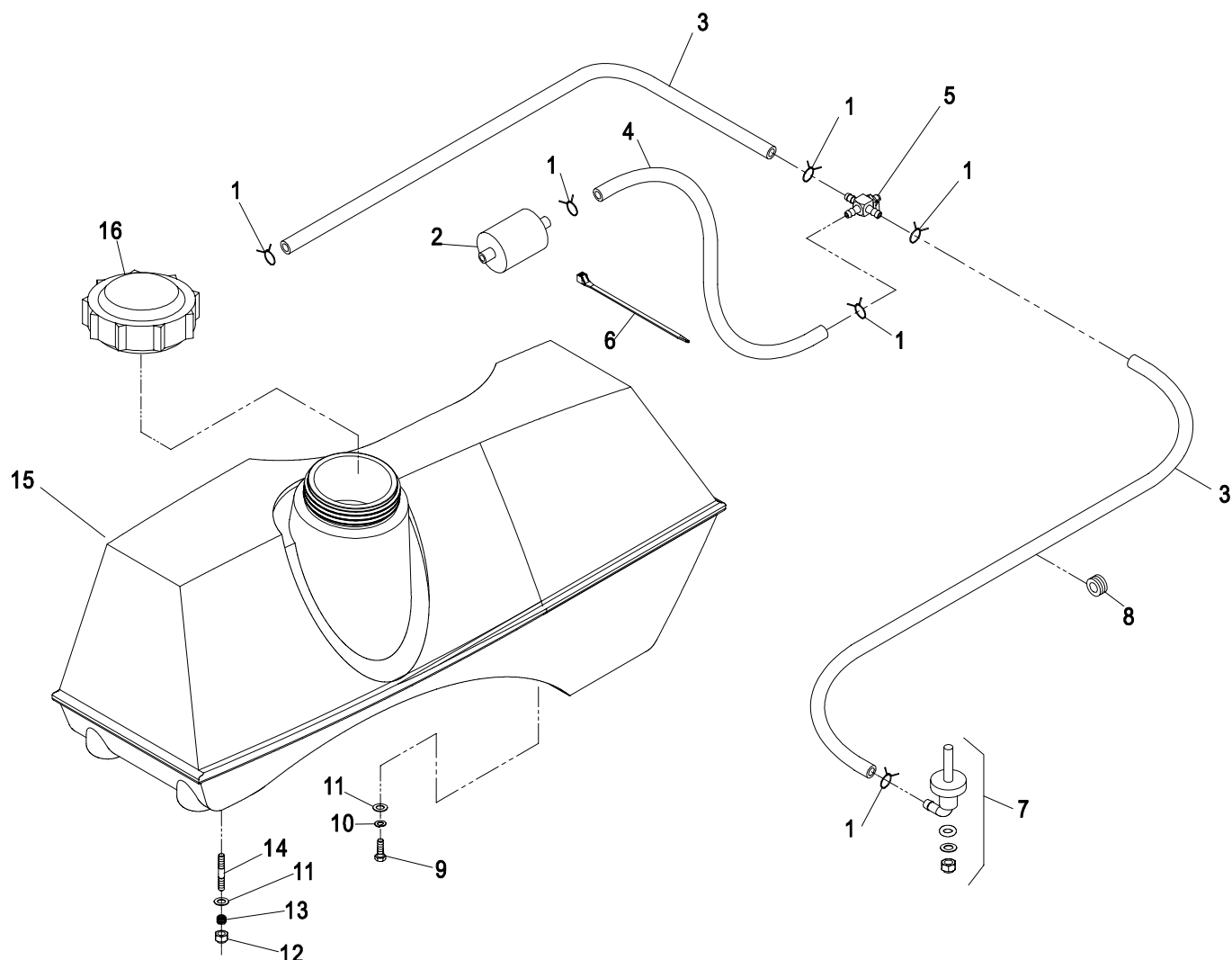
* Includes frame weldment plus items 22, 23 & 63 (item 63 not included with 44").

◇ 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



FUEL GROUP

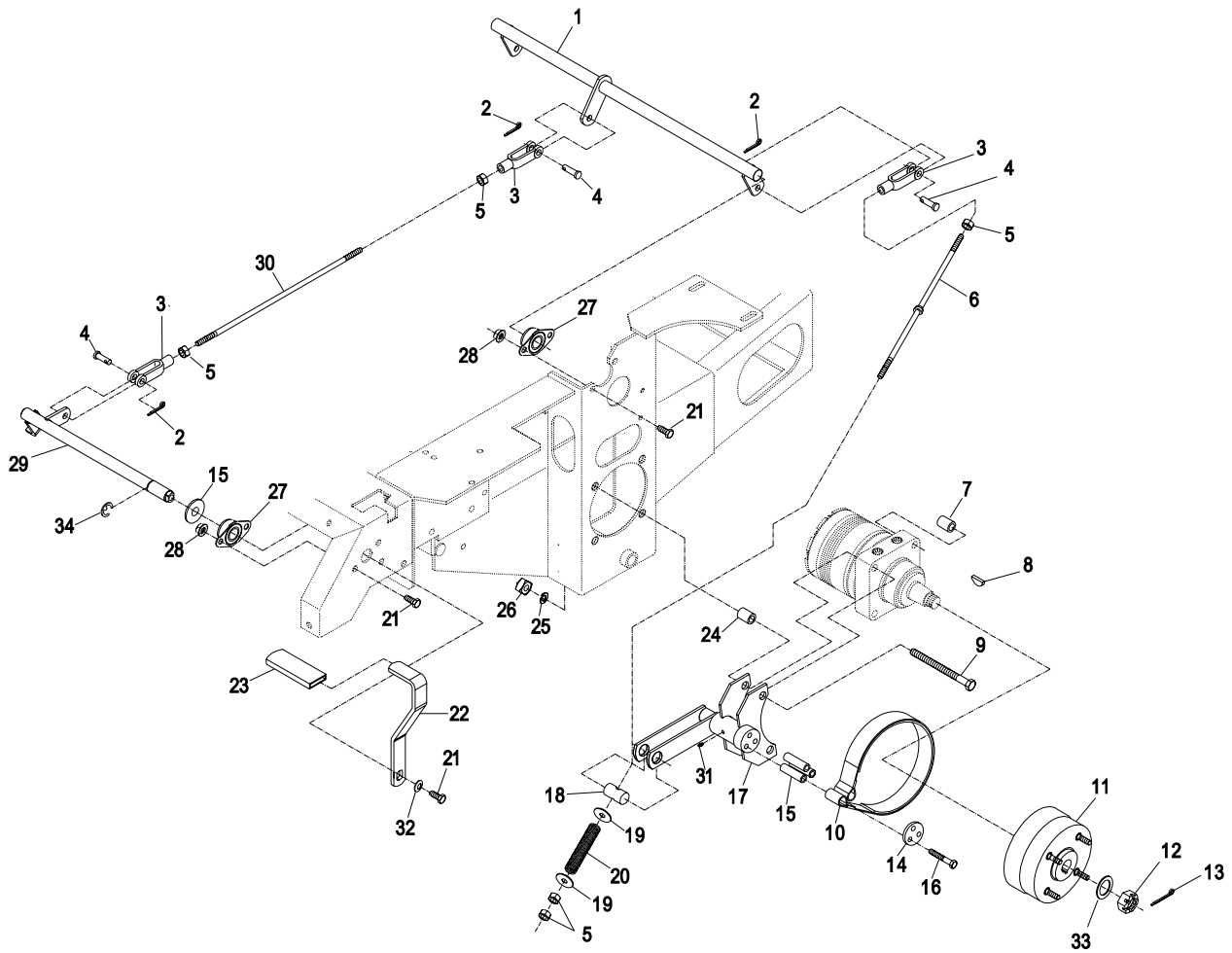


Ref. No.	Part No.	Description	Qty. Req'd.	Ref. No.	Part No.	Description	Qty. Req'd.
1	1-303077	Clamp, fuel line	6	9	322-3	Screw, 5/16-18 x 3/4.....	4
2	Kohler	Part No. 2405002 Fuel filter	1	10	1-805005	Washer, lock 1/4.....	4
	Kawasaki	Part No. 49019-7001 Fuel filter	1	11	3256-23	Washer, 5/16 SAE.....	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, Nut Type (P/N 840022, .5ml tube) on stud threads going into tank.
Refer to Engine Owner's Manual (Fuel filter **Must** be 15 Micron or smaller).

PARK BRAKE GROUP

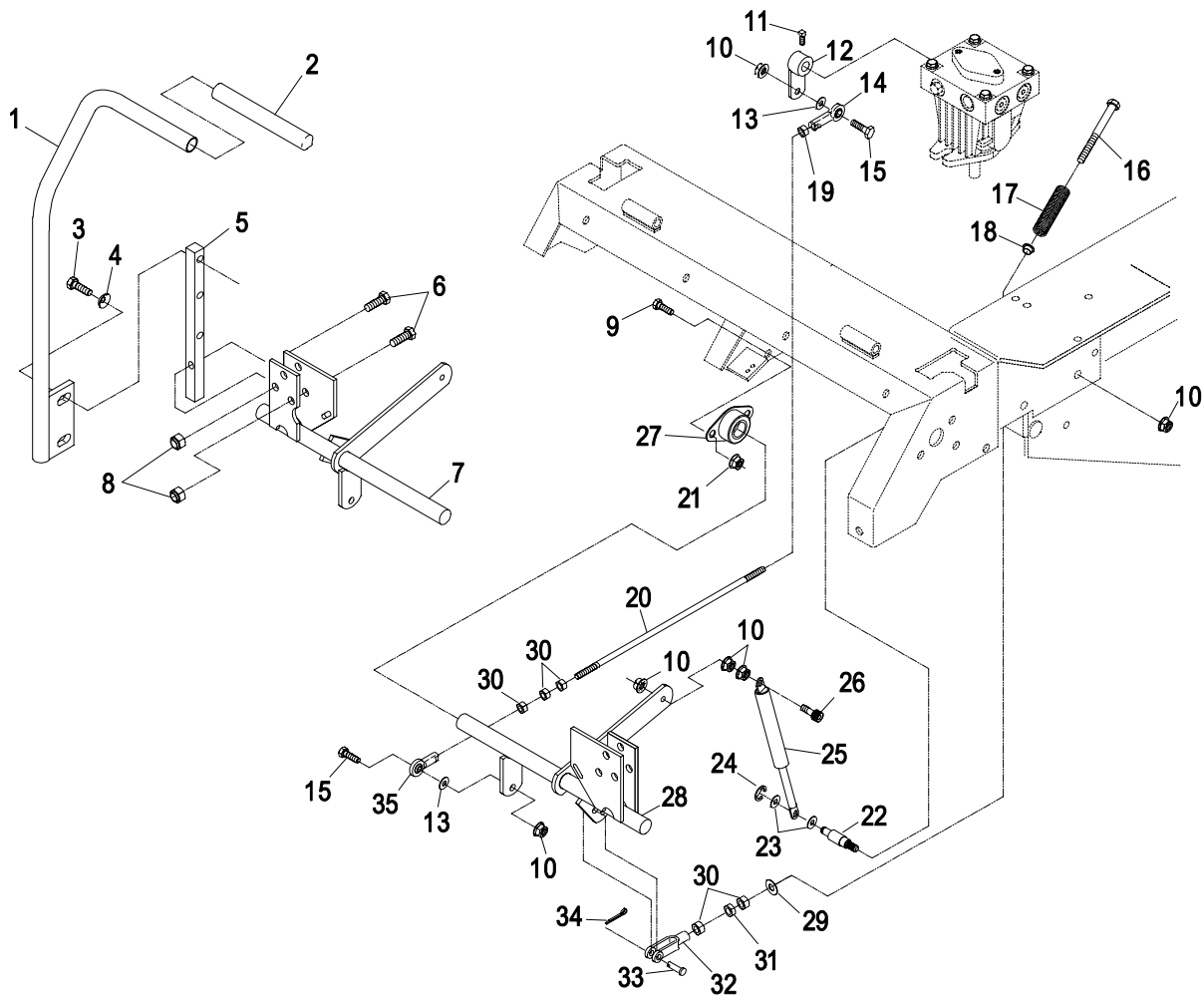


Ref. No.	Part No.	Description	Qty. Req'd.	Ref. No.	Part No.	Description	Qty. Req'd.
1	1-652073-03	Crank wldmt, brake.....	1	17	103-0352-03	Bracket, brake 44"/48".....	2
2	3272-10	Pin, cotter 1/8 x 3/4.....	4	*	103-0353-03	Bracket, brake 52".....	2
3	1-633131	Yoke.....	4	18	1-633144	Pin, trunion.....	2
4	1-808285	Pin, clevis 3/8 x 1 1/8.....	4	19	3256-4	Washer, 3/8 std.....	4
5	3219-3	Nut, 3/8-24.....	8	20	1-633454	Spring, brake rod.....	2
6	103-0356	Rod, brake.....	2	21	323-4	Screw, 3/8-16 x 3/4.....	9
7	1-653068	Spacer (long) 44"/48" deck ..	4	22	1-653074-03	Lever, brake.....	1
*	1-653380	Spacer (long) 52" deck	4	23	1-633268	Grip, brake lever.....	1
8	3257-42	Woodruff key, 5/16 x 1.....	1	24	1-653069	Spacer(short) 44"/48" deck..	4
9	325-13	Screw, 1/2-13x3.25 G5 (44"&48") ..	8	*	1-653381	Spacer(short) 52" deck.....	4
	1-800348	Screw, 1/2-13x4.25 G5 (52") ..	8	25	3253-7	Washer, lock 1/2.....	8
10	103-0355	Band, brake.....	2	26	103-0131	Nut, sq.reg. 1/2-13UNC-2B ..	8
11	103-0590	Hub & drum w/studs, plated...	2	27	1-633102	Bearing, flange.....	4
	1-633926	Stud, wheel.....	8	28	3290-357	Nut, whizlock 3/8-16.....	8
12	1-809036	Nut, slotted 1.00-20.....	2	29	1-652085	Shaft wldmt, brake.....	1
13	1-806800	Pin, cotter 9/64 x 1 1/2.....	2	30	1-653061	Linkage, brake handle.....	1
14	103-0374	Retainer, brake band.....	2	31	1481	Zerk, grease.....	2
15	103-0384	Spacer.....	6	32	98-5975	Washer, disc spring 3/8.....	1
16	322-9	Screw, 5/16-18 x 1.75.....	6	33	1-523157	Washer, spacer.....	2
				34	32151-48	Ring, retaining.....	1

*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 w/grip (RH).....	1	17	1-603807	Spring, (neutral return)	2
	103-0410-03	Handle, motion cntrl (RH) .	1	18	1-603735	Bushing,nylon(reverse ind.)2	
*	103-0631	Handle w/grip (LH)	1	19	1-804524	Nut, 5/16-24 (LH).....	2
*	103-0409-03	Handle, motion cntrl (LH)..	1	20	1-653046	Link, pump control	2
2	1-633257	Grip, motion cntrl handle... 2		21	3290-357	Nut, whizlock 3/8-16	8
3	323-6	Screw, 3/8-16 x 1	4	22	1-653316	Pin, Damper Anchor	2
4	98-5975	Washer, disc spring 3/8.....	4	23	3256-23	Washer, 5/16 SAE	4
5	103-0407	Arm, control shaft	2	24	32120-35	E-ring	2
6	323-9	Screw, 3/8-16 x 1 3/4	6	25	103-2913	Damper	2
7	103-2200	Bracket, motion cntrl (RH). 1		26	1-403180	Screw, 5/16-18x1¼ special4	
8	3296-39	Nut, nyloc 3/8-16	6	27	1-633102	Bearing, flanged	4
9	323-4	Screw, 3/8-16 x 3/4	8	28	103-2199	Bracket, motion control(LH) 1	
10	32128-20	Nut, whizlock 5/16-18.....	12	29	3256-2	Washer, 1/4	2
11♦	1-803022	Setscrew, 5/16 x 5/8.....	2	30	3219-2	Nut, 5/16-24.....	10
12	1-653092	Arm, pump control	2	31	3220-2	Nut, jam 5/16-24.....	2
13	3256-3	Washer, 5/16 std	4	32	1-303105	Yoke.....	2
14	1-633152	Ball joint (LH).....	2	33	1-808280	Pin, clevis 5/16 x 1.....	2
15	322-6	Screw, 5/16-18 x 1 1/4.....	4	34	3272-5	Pin, cotter 3/32 x 1/2.....	2
16	1-603737	Bolt, (neutral return)	2	35	1-543017	Ball joint (RH)	2

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, hydraulic reservoir	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	321-14	Screw, 1/4-20 x 2 3/4	2		103-2666	Kit, Cylinder block 10A	1
5	3256-22	Washer, flat SAE 1/4	2		105-6184	Kit, Overhaul seal	1
6	32128-33	Nut, whizlock 1/4-20	2		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)	2	29	3290-357	Nut, whizlock 3/8-16	7
11	103-1805	Asm, supply hose	1	30	323-7	Screw, 3/8-16 x 1 1/4	4
12 *	1-603720	Head, filter	1	31	103-1940	Adapter, straight long	4
13	32128-20	Nut, whizlock 5/16-18	2		1-603920	Boss O-ring	1
14	322-5	Screw, 5/16-18 x 1	2		1-603992	Flare O-ring	1
15	103-1804	Adapter, straight	1	32◇	1-803050	Setscrew, .312-18 x .75	4
16	1-513211	Element, oil filter	1	33	1-653156	Sheave, pump drive 44" & 48" ...	2
▽	1-523541	Element, oil filter (winter)	1		1-413010	Sheave, pump drive 52"	2
17	103-1803	Asm, charge hose	1	34	103-1767	Spring, extension	1
18	103-1800	Asm, case drain hose	1	35	3296-39	Nut, nyloc 3/8-16	1
19	1-653187	Hose, RH rear 44" & 48"	1	36	98-5975	Washer, disc spring	1
	1-653437	Hose, RH rear 52"	1	37	1-373034	Washer, 7 Ga. x 1 1/4 O.D.	1
20	1-653186	Hose, RH front 44" & 48"	1	38	1-513034	Bearing	2
	1-653436	Hose, RH front 52"	1	39	1-654143	Arm, idler w/ bearings	1
21	1-633605	Elbow, 90° (RH wheel motor)	2	40	1-652142-03	Idler arm weldment	1
	1-603919	Boss O-ring	1	41	302-40	Zerk, 90° 1/4-28	1
	1-603992	Flare O-ring	1	42	323-9	Screw, 3/8-16 x 1 3/4	2
22	1-523328	Wheel motor	2	43	323-13	Screw, 3/8-16 x 2 3/4	1
	1-000139	Kit, bearing	1	44	3256-4	Washer, 3/8 std flat	1
	1-000099	Kit, seal	1	45	1-603044	Bushing, idler pivot	1
23	103-1799	Elbow, 90°	2	46	1-603496	Bushing, idler	1
	1-603921	Boss O-ring	1	47	1-603843	Pulley, idler	1
24	1-807272	Key 5 x 5 x 25mm	2	48	3256-24	Washer, 3/8 SAE flat	1
25	103-1802	Elbow, 90°	2	49	1-653163	Belt, pump drive 44" & 48"	1
	1-603921	Boss O-ring.....	1		1-653416	Belt, pump drive 52"	1

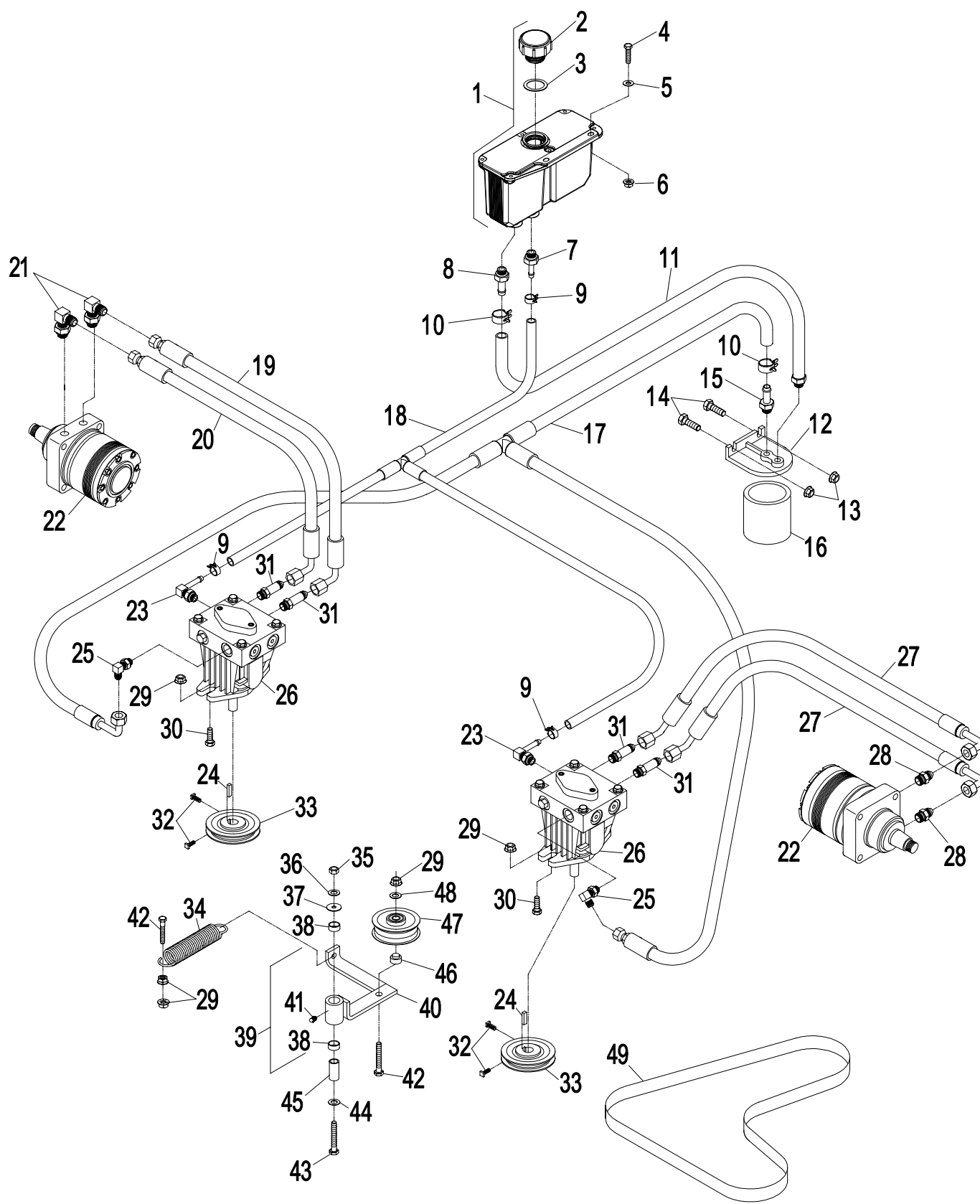
* Use Teflon Pipe Sealant or equivalent on filter head fittings.

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

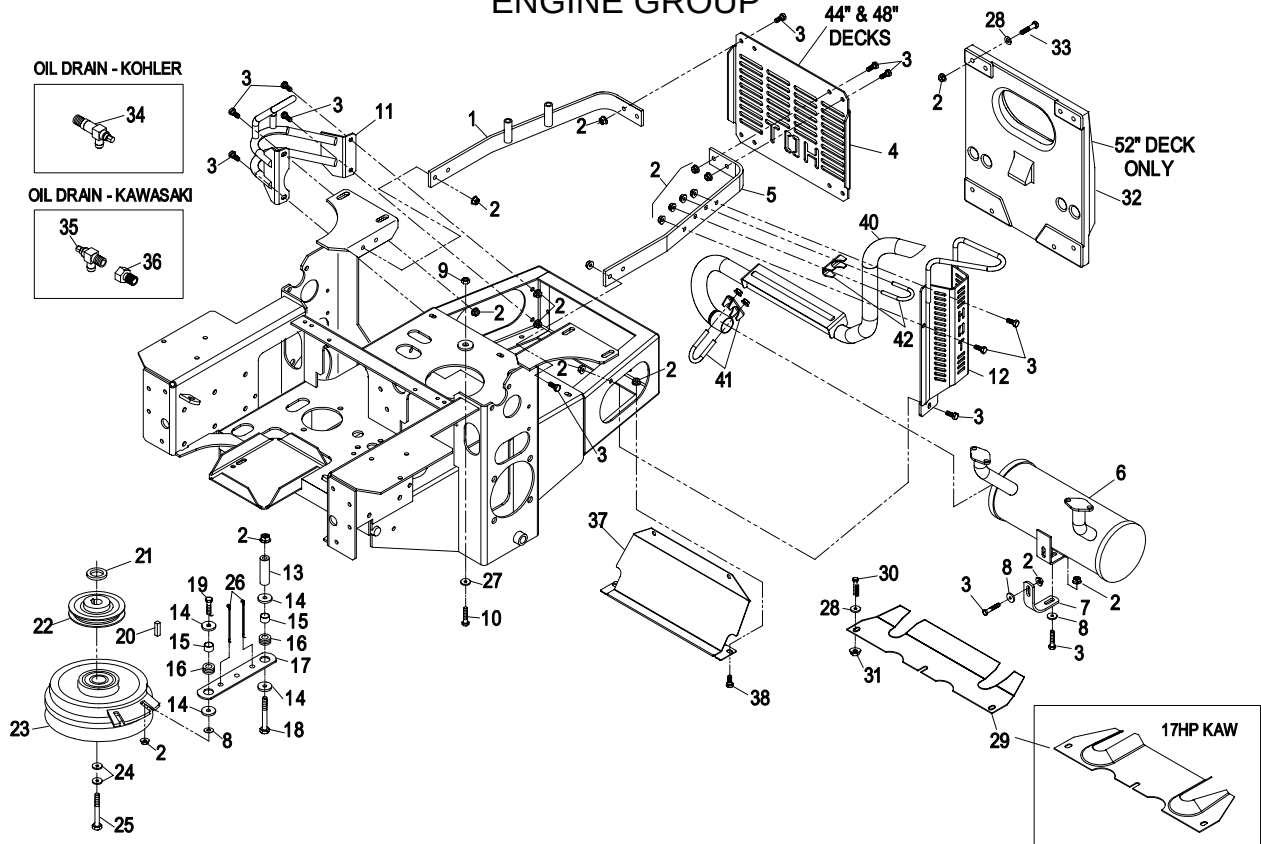
Exmark red touch up spray paint – P/N 1-850337

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

HYDRAULIC GROUP



ENGINE GROUP



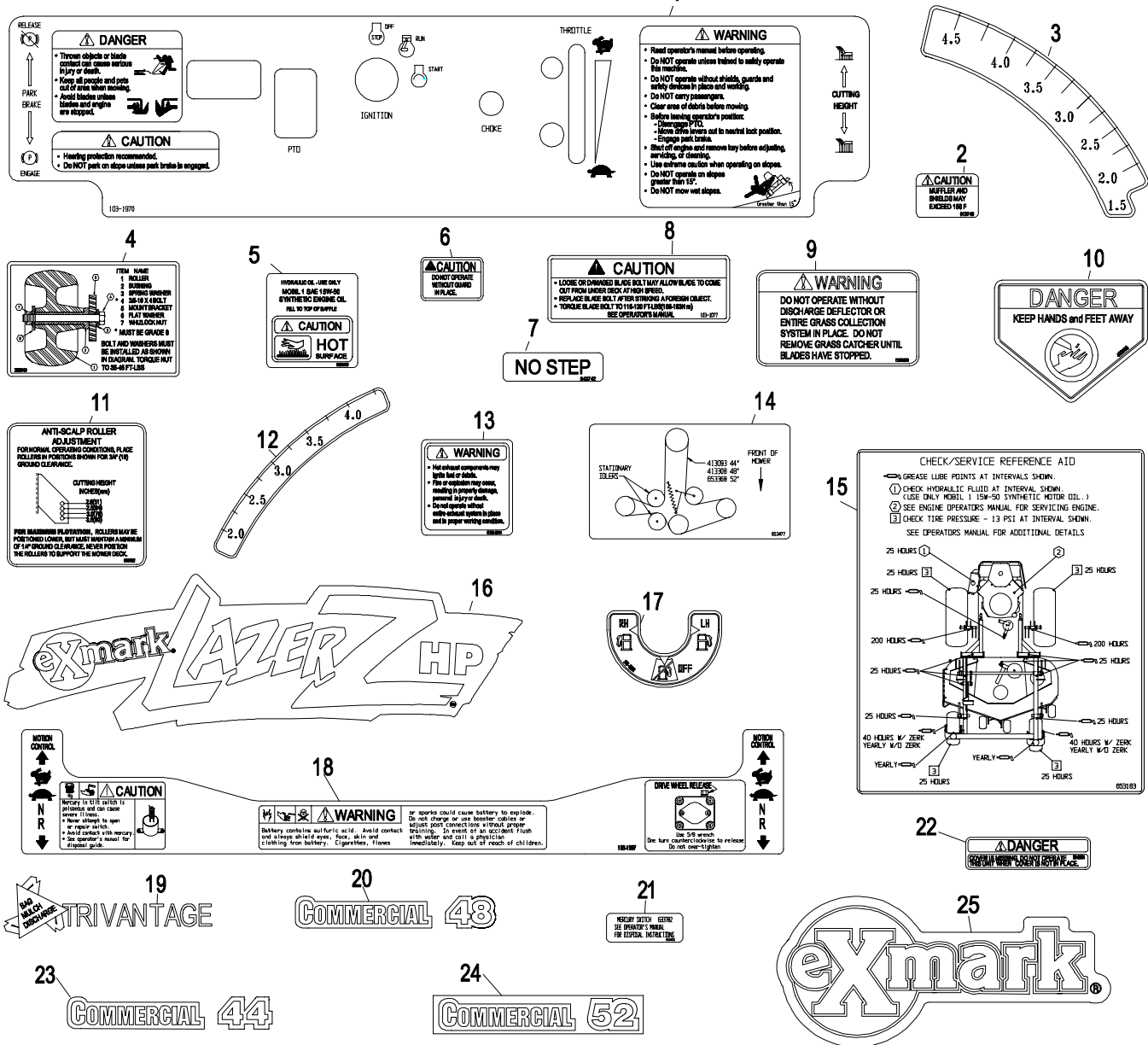
Ref. No.	Part No.	Description	Qty. Req'd.	Ref. No.	Part No.	Description	Qty. Req'd.
1	1-652146-03	Strap wldmt, engine guard	1	23	103-0690	Clutch	1
2	32128-20	Nut, whizlock 5/16-18 (44/48) ..	25		105-1670	Pigtail, clutch	1
	32128-20	Nut, whizlock 5/16-18 (52).....	27		103-3012	Kit, brake pole module	1
3	322-3	Screw, 5/16-18x3/4 (44\"&48\")	21	24	1-603610	Washer, disc spring 7/16.....	2
	322-3	Screw, 5/16-18x3/4 (52\").....	13	25♦	3212-12	Screw, 7/16-20 x 3 (Kaw)	1
4	1-653095-03	Shield, eng. guard (44\"& 48\") ..	1	♦	3212-10	Screw, 7/16-20 x 2 1/2(Koh)....	1
5	103-2751-03	Strap, engine guard.....	1	26	1-303335	Plastic tie (large).....	2
6	103-2745	Muffler, kit (17hp Kaw).....	1	27	1-303334	Washer, spring disc.....	4
	103-2746	Muffler, kit (18-23hp Koh)	1	28	3256-23	Washer, 5/16 SAE flat(44\"&48\") .	3
	103-2747	Muffler, kit (19-23hp Kaw).....	1		3256-23	Washer, 5/16 SAE flat (52\")	11
7	1-653196	Bracket, muffler support.....	1	29	1-653565-03	Shield, heat (17hp Kaw).....	1
8	3256-3	Washer, 5/16 std flat	1		1-653539-03	Shield, heat(except 17hp Kaw) ..	1
9	3296-29	Nut, nyloc 5/16-18 (Kaw)	4	30	3230-1	Bolt, carriage 5/16-18 x 3/4	3
	32128-20	Nut, whizlock 5/16-18 (Koh) ...	4	31	3296-29	Nut, nyloc 5/16-18	3
10	322-9	Screw, 5/16-18 x 1 3/4	4	32	1-653549	Counterweight, 60# (52\").....	1
11	103-2564-03	Guard,RH	1	33	322-7	Screw, Cap HH 5/16-18x1½(52\") ..	8
12	103-2566-03	Guard,LH	1	34▽	103-1963	Valve, oil drain (Koh)	1
13	103-2614	Bushing, seat mount	1	35▽	103-1965	Valve, oil drain (Kaw)	1
14	1-613235	Washer.....	4	36	103-1966	Adapter, M20-2.5 / 3/8 NPT(Kaw)	1
15	1-633545	Spacer, grommet	2	37	103-2560-03	Deflector, lower frame	1
16	1-633630	Grommet.....	2	38	322-2	Screw, 5/16-18 x .625 (52).....	4
17	1-633543-03	Strap, clutch/brake.....	1		322-2	Screw, 5/16-18 x .625 (44/48) ..	2
18	322-22	Screw, 5/16-18 x 3 1/2	1	39	1-653290	Gasket, (17 hp Kaw).....	2
19	322-6	Screw, 5/16 NC x 1 1/4	1		1-653291	Gasket, (18-23 hp Koh).....	2
20	1-807259	Key.....	1		1-653313	Gasket, (19-23 hp Kaw)	2
21	103-2308	Spacer, crankshaft	1	40	103-2599	Tailpipe	1
22	1-653035	Sheave, pump drive	1	41	103-2630	Clamp,1.25	1
				42	103-2631	Clamp,1.125	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.

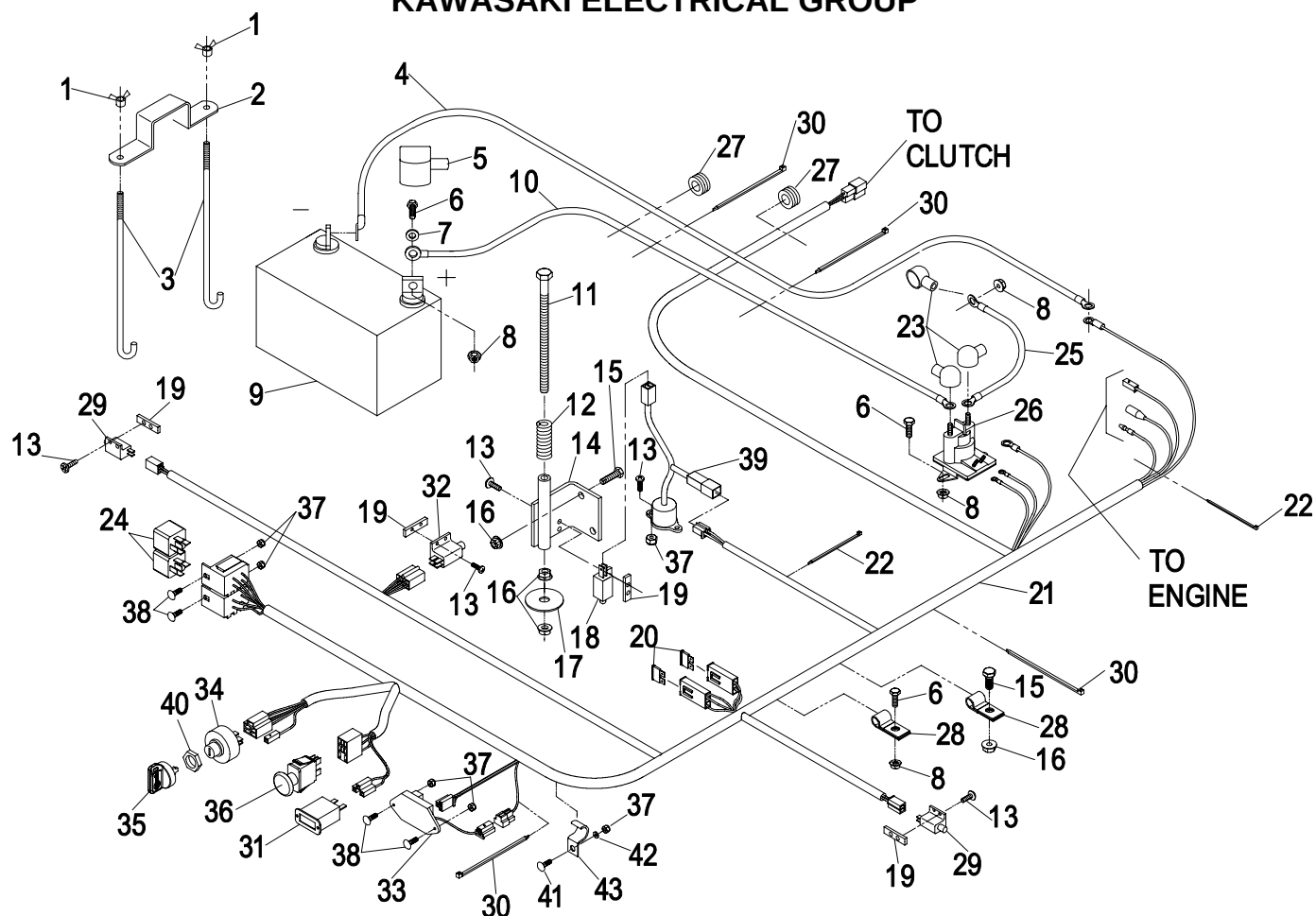
Exmark black touch up spray paint – gloss black

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	1-653139	Decal, Swash.....	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	103-1983	Decal, Exmark Logo	1
13	103-2644	Decal, Exhaust system.....	1		1-654520	Decal Kit	1

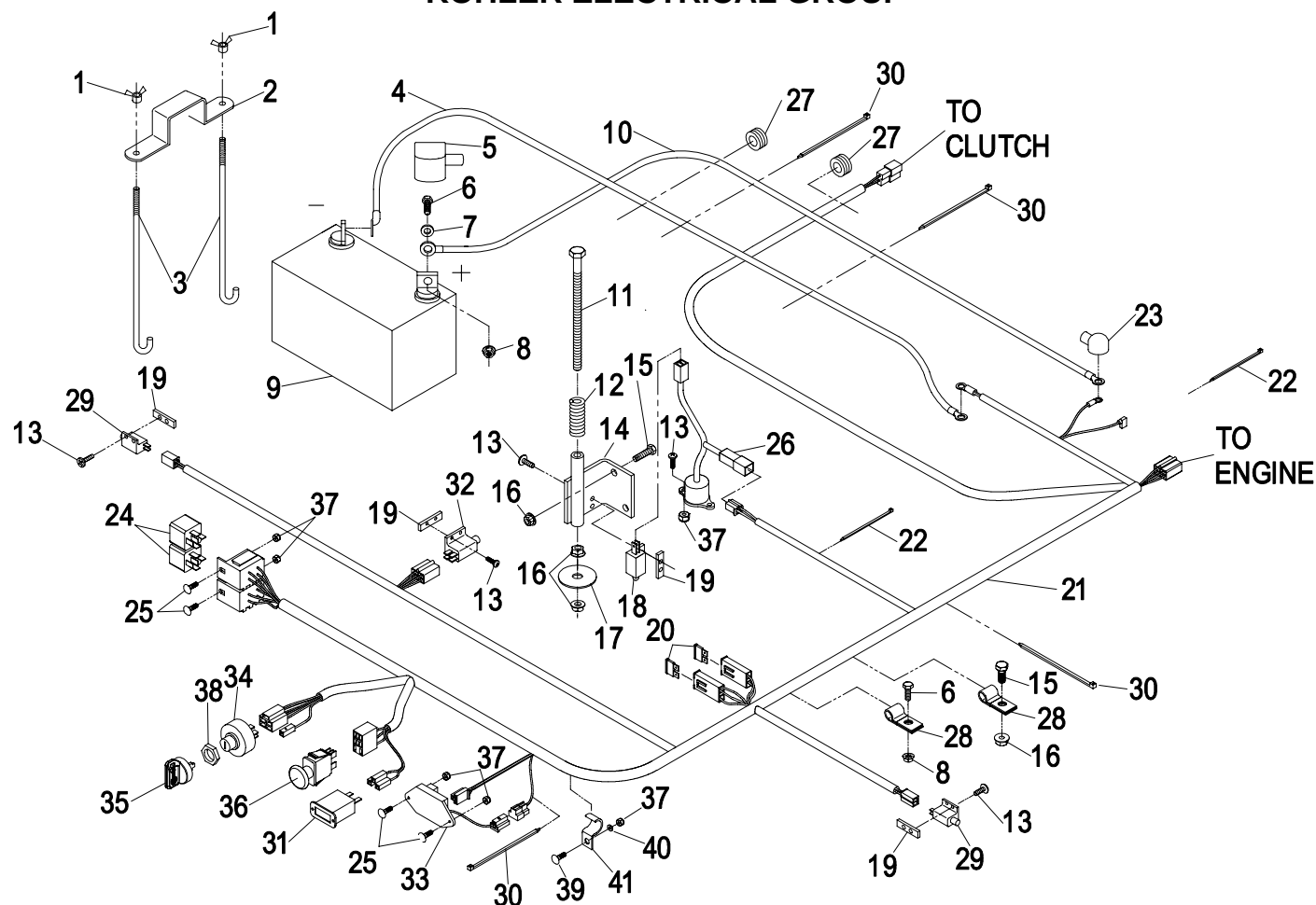
KAWASAKI ELECTRICAL GROUP



Ref. No.	Part No.	Description	Qty. Req'd.	Ref. No.	Part No.	Description	Qty. Req'd.
1	1-543792	Wingnut, nyloc ¼-20	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, ¼-20 x ¾.....	5	28	1-633396	Clip, loom 5/8.....	2
7	3256-2	Washer, ¼ flat	2	29	1-513051	Switch, drive lever N.C.	2
8	32128-33	Nut, ¼-20 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 ¾.....	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 ½.....	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.

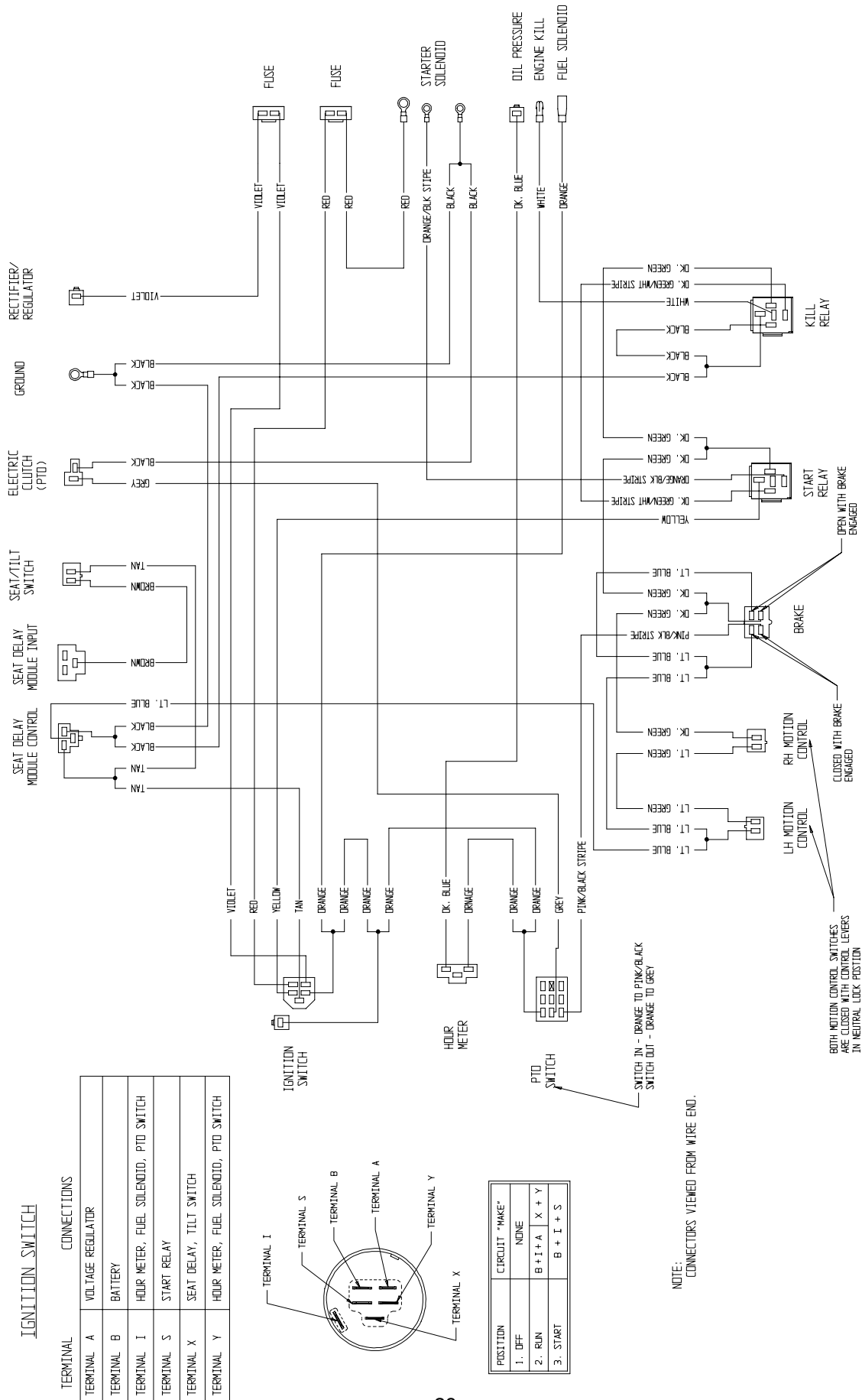
KOHLER ELECTRICAL GROUP



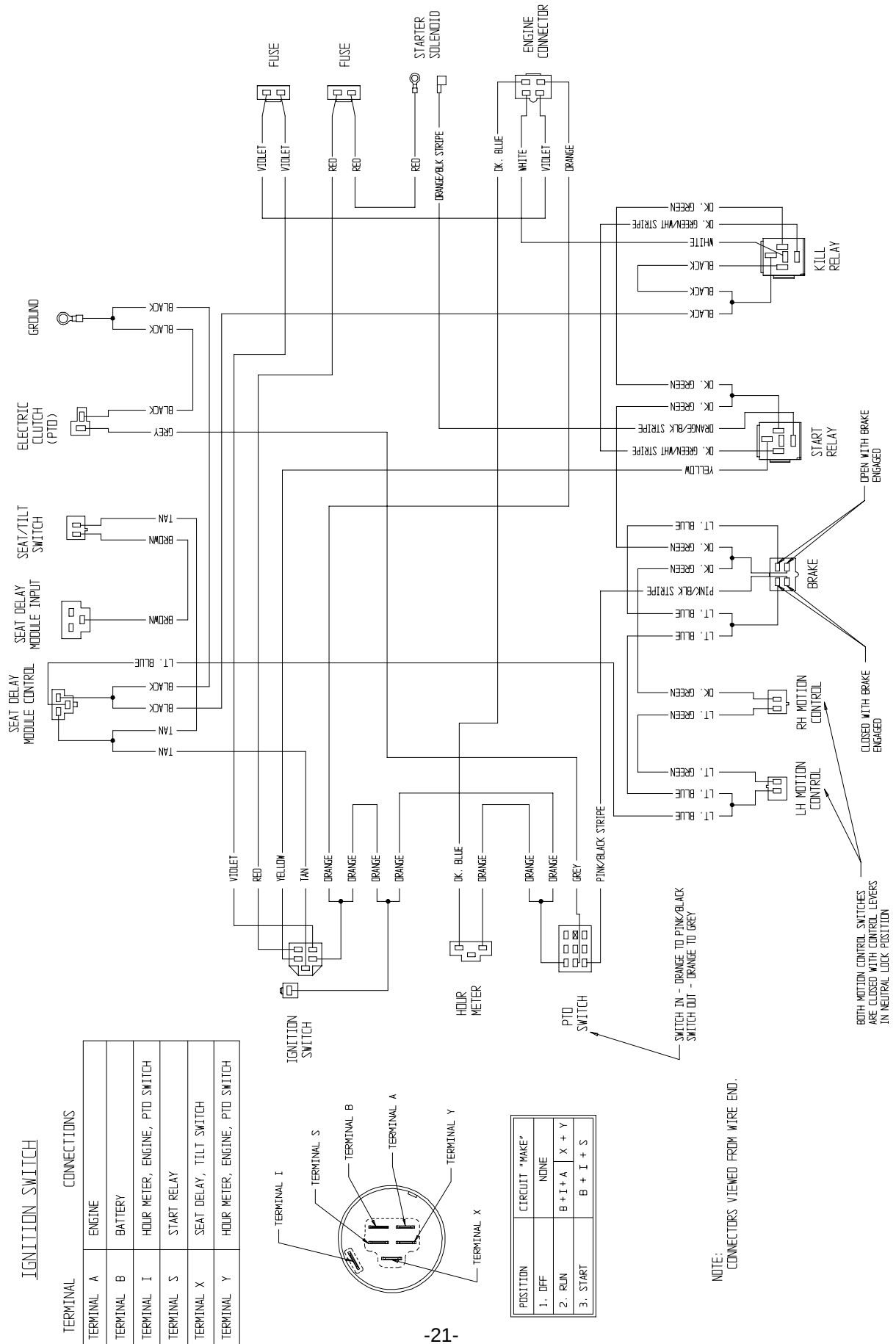
Ref. No.	Part No.	Description	Qty. Req'd.	Ref. No.	Part No.	Description	Qty. Req'd.
1	1-543792	Wingnut, nyloc 1/4-20	2	22	1-303287	Plastic tie, small	2
2	1-633652-03	Strap, battery holdown.....	1	23	1-543393	Insulator, solenoid (+).....	1
3	1-633651	Bolt, battery holdown	2	24	1-643275	Relay, 12 V	2
4	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.

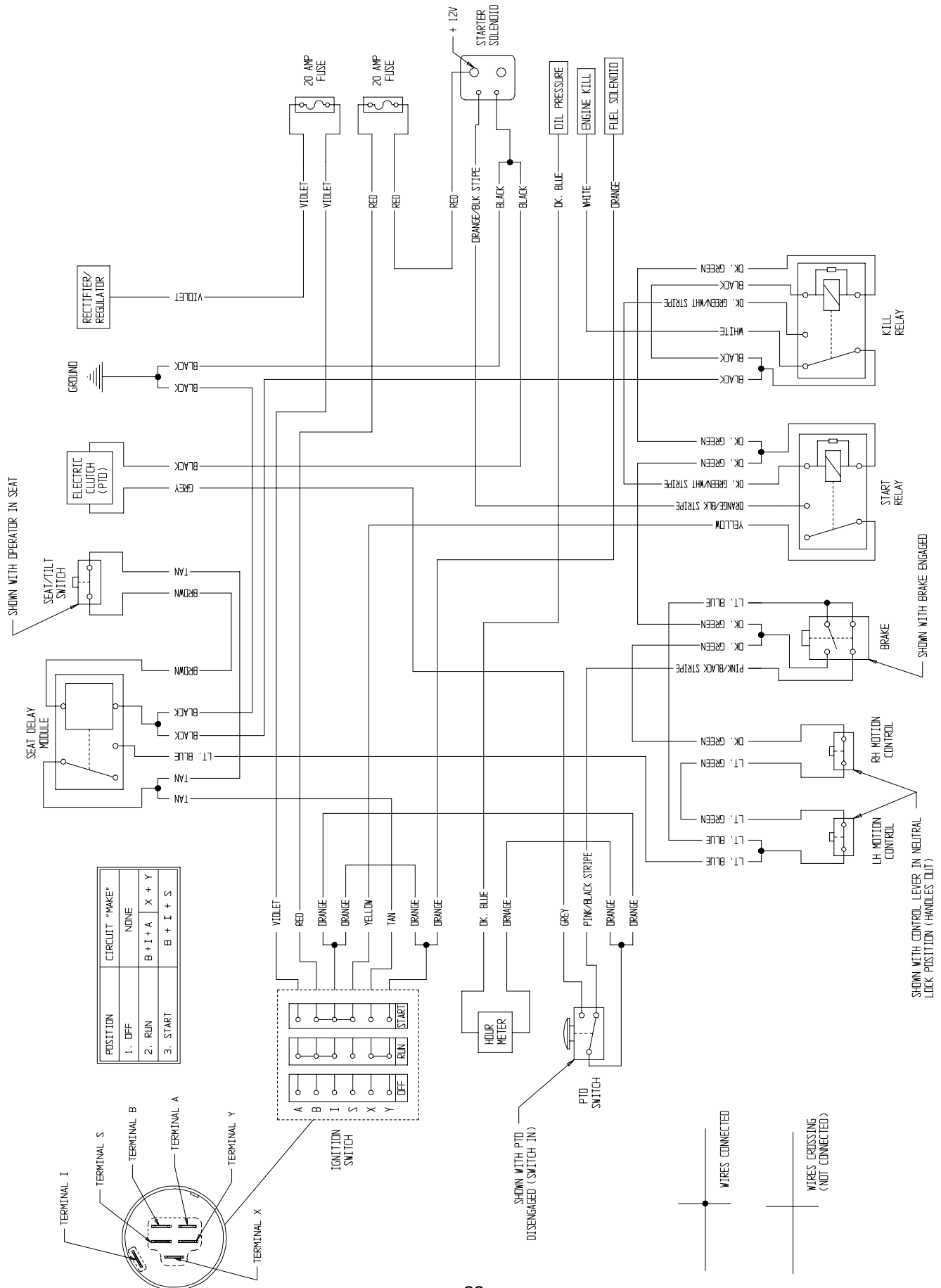
KAWASAKI ELECTRICAL DIAGRAM



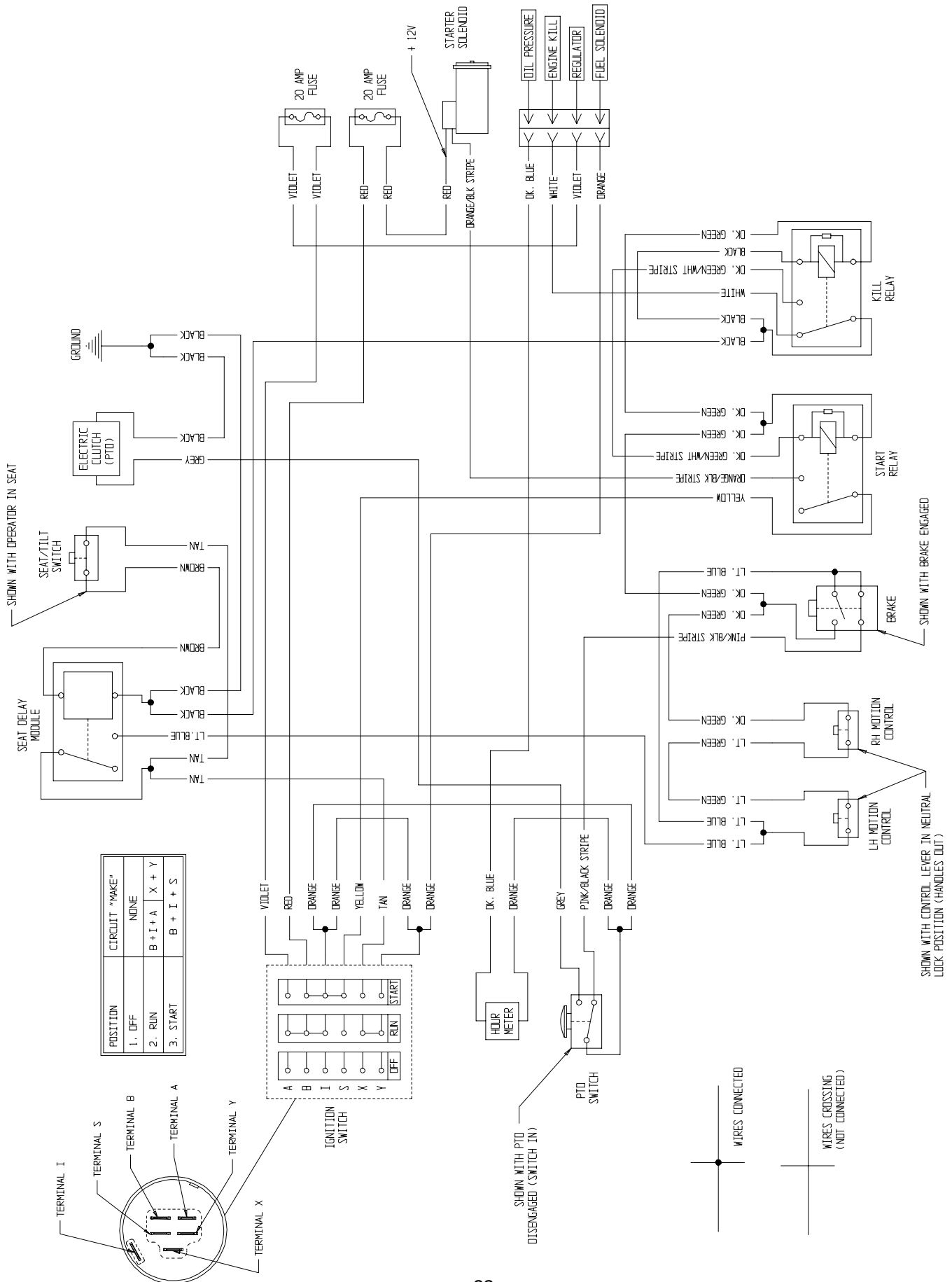
KOHLER ELECTRICAL DIAGRAM



KAWASAKI ELECTRICAL LOGIC SCHEMATIC



KOHLER ELECTRICAL LOGIC SCHEMATIC



NOTES

NOTES

SERVICE RECORD

[illegible]

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

LAZER Z[®]

LAZER Z[®] HP

LAZER Z[®] XP

TURF RANGER[®]

TURF TRACER[®]

TURF TRACER[®] HP

VIKING HYDRO

METRO[®]

METRO[®] HP

ULTRA VAC[™]

SELF STEERING SULKY

GRASS CATCHER

MICRO-MULCH[™] ACCESSORY

©1997 - 2001
EXMARK MFG. CO. INC.
INDUSTRIAL PARK BOX 808
BEATRICE, NE 68310
ALL RIGHTS RESERVED

PART NO. 103-1784 Rev C
(402) 223-6300
FAX (402) 223-5489
PRINTED IN U.S.A.

