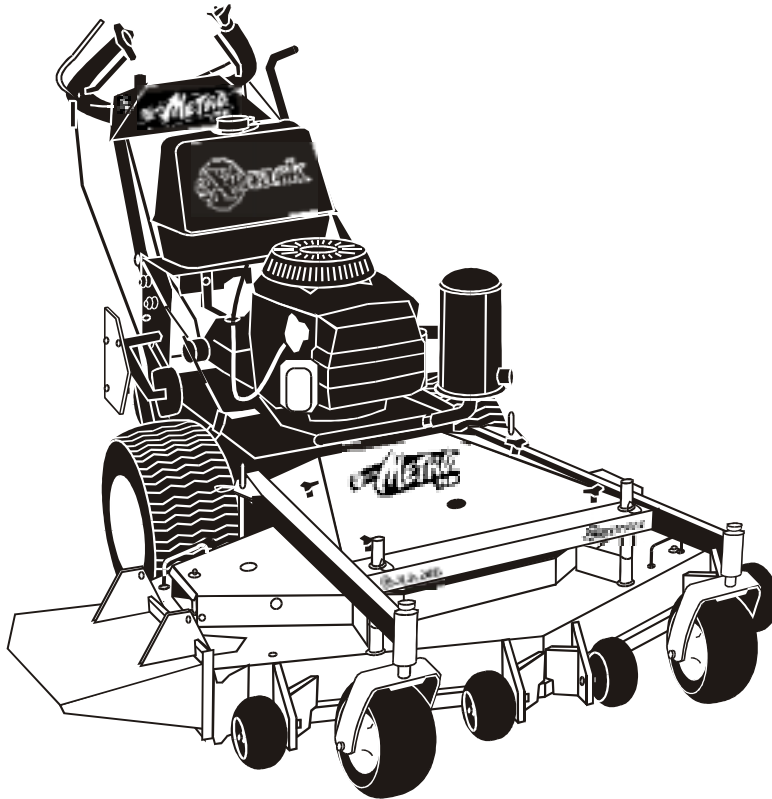


For Serial Nos.
320,000 & Higher



PARTS MANUAL

METRO[®] 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 next to the fuel tank on the top left hand side of the fuel tank support. 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

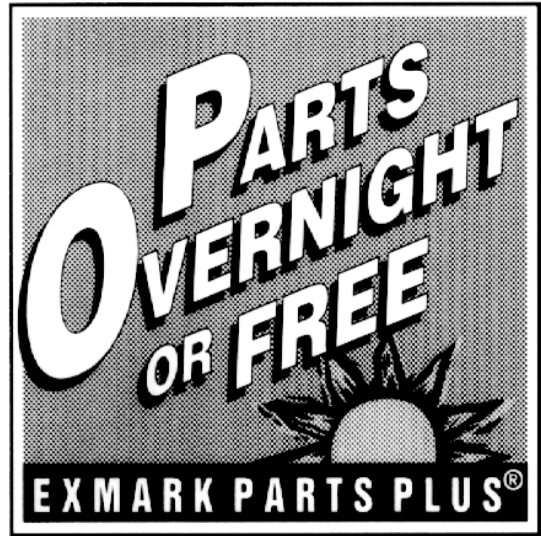
EFFECTIVE DATE: September 1, 1995

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 48 contiguous 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>
Decals	8
Engine Deck Group	9-12
48" Mower Deck	5-6
Mower Deck Cutter Housings	7
36" Mower Deck	3-4
Upper Handles & Controls, ECS.....	13-14
Wiring Diagram.....	15

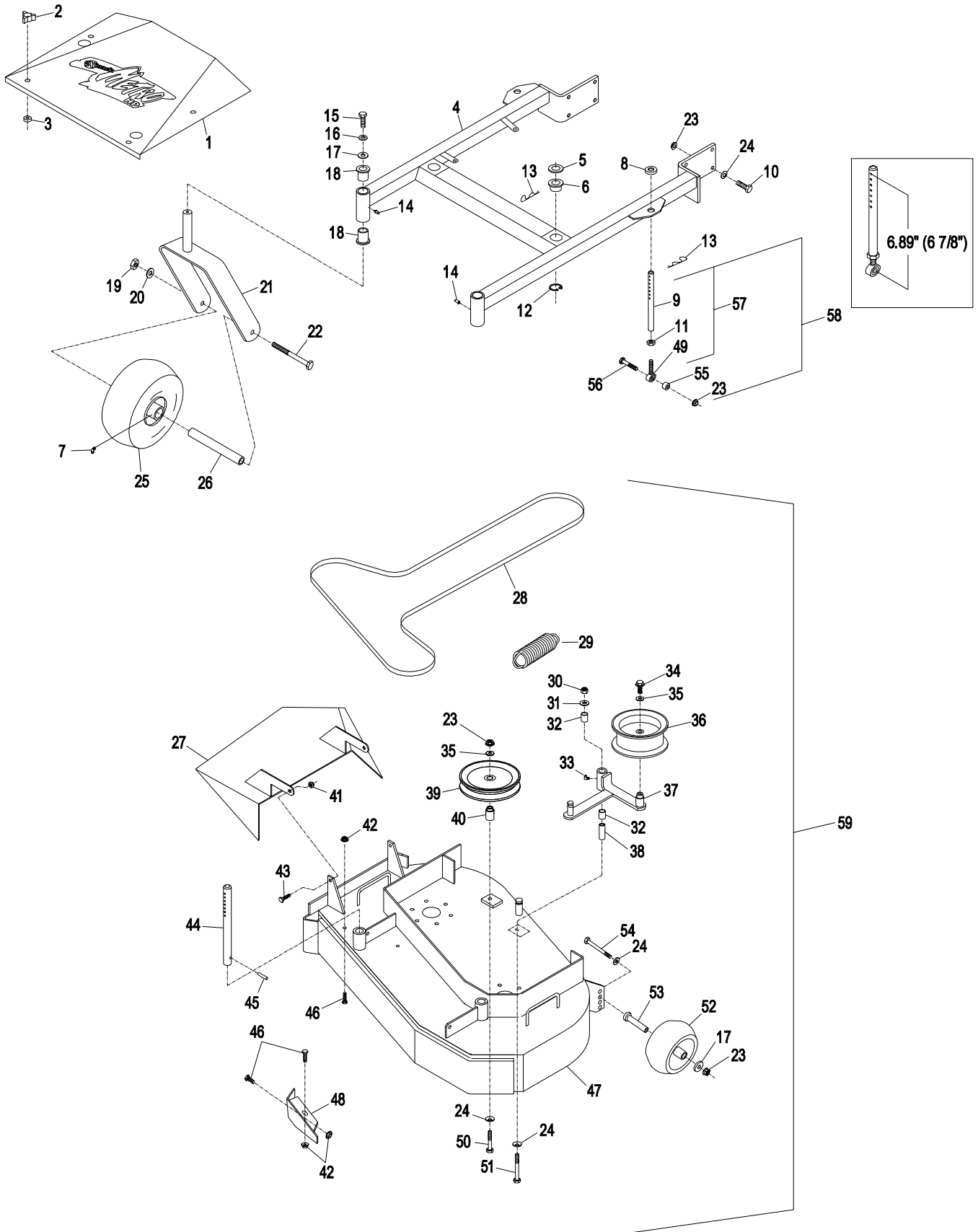
36" MOWER DECK

Ref. No.	Part No.	Description	Qty. Req'd.	Ref. No.	Part No.	Description	Qty. Req'd.
1	1-414435	Shield, belt w/decals.....	1	31	3256-4	Washer, Flat Std 3/8	1
	1-413098-01	Shield, belt	1	32	1-513034	Pivot Bearing	2
2	1-323385	Knob, belt shield.....	4	33	302-40	Zerk, 90 degree ¼-28.....	1
3	1-323417	Washer, belt shield	4	34	3234-11	Bolt, Hex Whizlock 3/8-16x1	1
4	1-414309	Support wld w/bushings&decals...	1	35	3256-24	Washer, Flat 3/8 SAE.....	2
	1-412108-01	Support weldmemt.....	1	36	1-413099	Pulley, Idler	1
5	1-413425	Spacer, Front Deck Support.....	2	37	1-412134-03	Arm, weldmt	1
6	1-513336	Bushing, deck support.....	2		1-414144	Arm, weldmt w/bushings	1
7	302-61	Zerk, 45 degree ¼-28.....	2	38	1-603384	Bushing, Idler Pivot	1
8	1-323539	Spacer.....	2	39	1-613098	Pulley, Idler	1
9	1-413525	Link, Deck Support.....	2	40	1-413113	Bushing, Idler	1
10	323-7	Screw, Hex Cap 3/8-16 x 1 1/4 ...	8	41	3296-29	Nut, Nyloc 5/16-18.....	2
11	3219-3	Nut, Reg Hex 3/8-24	2	42	32128-20	Nut, Whizlock 5/16-18.....	3
12	32120-33	Ring, Retaining	2	43	322-5	Screw, Hex Cap 5/16-18 x 1	2
13	1-806009	Hairpin, Cotter .177 #206	4	44	1-603001	Rod, Deck Support.....	2
14	302-52	Zerk, Straight 1/8.....	2	45	1-806332	Rollpin, 1/4x1 ½.....	2
15	323-6	Screw, Hex Cap 3/8-16x1	2	46	322-2	Screw, Hex Cap 5/16-18 x 5/8	3
16	3253-5	Washer, 3/8 heavy spring	2	47	1-414383	Deck weldmt w/decals, discharge Baffle & support rods	1
17	1-373034	Washer, Swivel.....	3		1-412104-01	Deck weldmt.....	1
18	1-303514	Bearing, Flange.....	4	48	1-522480-01	Baffle, discharge	1
19	3217-9	Nut, Reg Hex ½-13	2	49	1-613204	Ball Joint.....	2
20	3253-7	Washer, Lock Hlcl Spg ½ Reg	2	50	323-13	Screw, Hex Cap 3/8-16 x 2 3/4 ...	1
21	1-522143-01	Caster weldment.....	2	51	1-800805	Screw, Hex Cap 3/8-16 x 3 ½ G8	1
22	325-20	Screw, Hex Cap ½-13x6	2	52★	1-603299	Roller, antiscalp.....	1
23	3290-357	Nut, Whizlock 3/8-16.....	12	53	1-603602	Bushing, roller	1
24	98-5975	Washer, Disc Spring 3/8	11	54	98-5961	Screw, Hex Cap 3/8-16x4 Gr. 8 ..	1
25	103-1224	Tire & Wheel Asm(semi-pneumatic).	2	55	1-603050	Bushing Spacer	2
	1-513809	Roller Bearing	2	56	323-9	Screw, hex Cap 3/8-16x1 3/4	2
❖	103-2170	Bushing (semi-pneumatic).....	4	57▲	1-414521	Link, Assembly	2
26■	103-2169	Spacer (semi-pneumatic)	2	58	1-611216	Kit, Link Assembly.....	2
27	103-2431-01	Chute weldment, discharge	1	59*	103-0320	Assembly,Cutting deck complete	1
28	1-413094	Belt, deck drive.....	1	60□	103-2171	Kit,semi-pneumatic wheel replacement....	1
29	1-633151	Spring, extension	1				
30	3296-39	Nut, Nyloc 3/8-16.....	1				

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

- ▲ Link assembly nominal length is 6.89" (or approximately 6 7/8") between center of ball joint and center of furthest hole. See diagram on next page. Initially adjust both links to this dimension, then adjust to where both links are equally supporting rear of mower deck by lengthening one link and shortening the other by equal amounts.
- ❖ Bushing for semi-pneumatic caster tires can be identified by a groove on the face.
- Front caster spacer for semi-pneumatic caster tires can be identified by yellow zinc plating.
- Kit 103-2171 used to install semi-pneumatic casters on machines originally fitted with pneumatic casters. Includes 103-1224 & 103-2169. Order 2 per machine.
- * Complete cutting deck assembly also includes the complete cutter housing assemblies & blades.
- ★ Kit 103-3168 includes antiscalp roller, bushing, and mounting hardware.

36" MOWER DECK



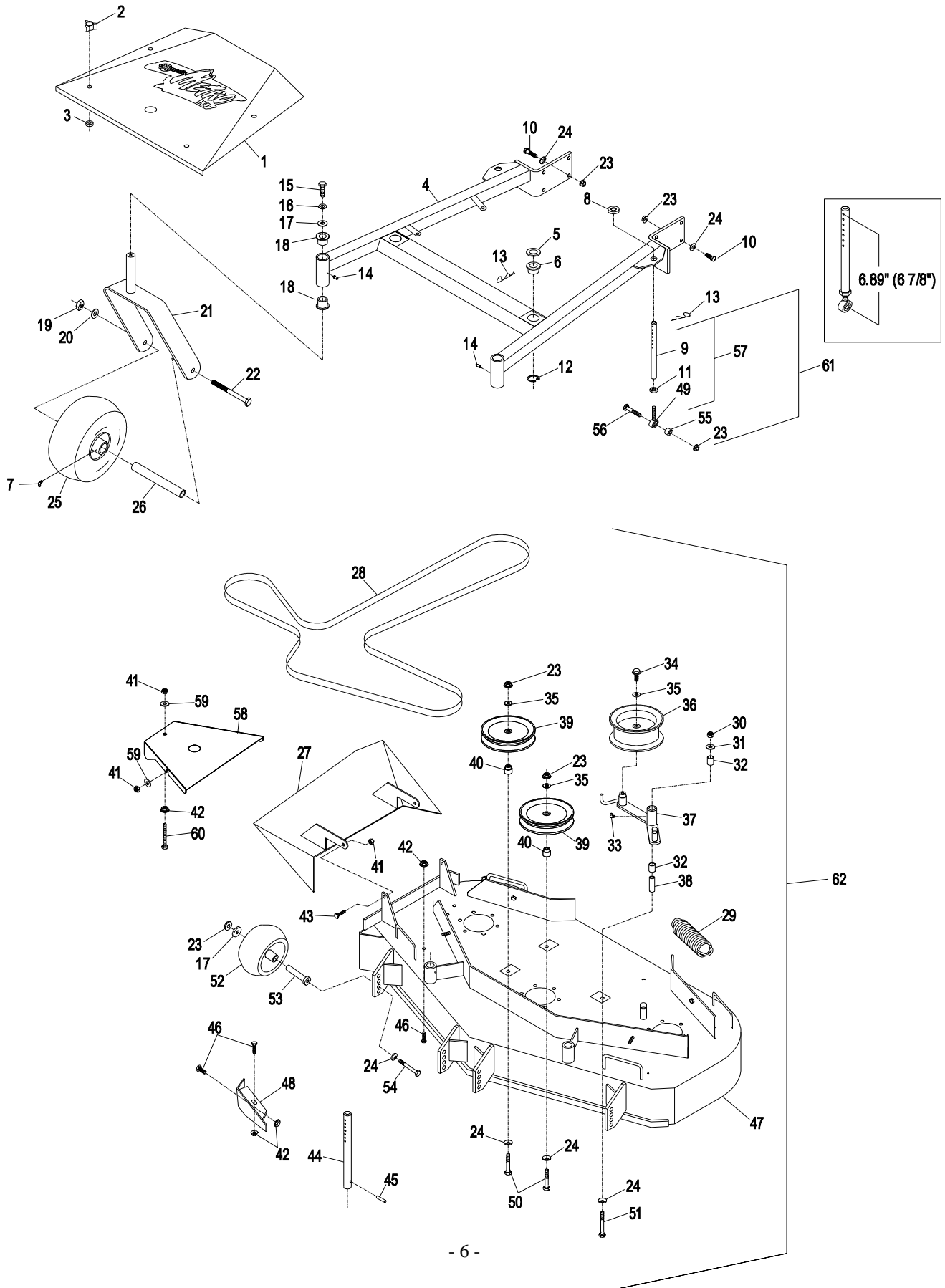
48" MOWER DECK

Ref. No.	Part No.	Description	Qty. Req'd.	Ref. No.	Part No.	Description	Qty. Req'd.
1	1-414436	Shield, belt w/decals	1	33	302-40	Zerk, 90 degree 1/4-28.....	1
	1-413101-01	Shield, belt	1	34	3234-11	Bolt, Hex Whizlock 3/8-16x1	1
2	1-323385	Knob, belt shield.....	4	35	3256-24	Washer, Flat 3/8 SAE.....	3
3	1-323417	Washer, belt cover	4	36	1-413099	Pulley, Idler.....	1
4	1-414310	Support wld w/bushings & decals	1	37	1-412394-03	Arm, weldmt	1
	1-412110-01	Support weldmt.....	1		1-414398	Arm, weldmt w/bushings.....	1
5	1-413425	Spacer, Front Deck Support.....	2	38	1-603384	Bushing, Idler Pivot	1
6	1-513336	Bushing, deck support.....	2	39	1-613098	Pulley, Idler	2
7	302-61	Zerk, 45 degree 1/4-28	2	40	1-413113	Bushing, Idler	2
8	1-323539	Spacer.....	2	41	3296-29	Nut, Nyloc 5/16-18.....	8
9	1-413525	Link, Deck Support.....	2	42	32128-20	Nut, Whizlock 5/16-18	5
10	323-7	Screw, Hex Cap 3/8-16 x 1 1/4	8	43	322-5	Screw, Hex Cap 5/16-18 x 1	2
11	3219-3	Nut, Reg Hex 3/8-24.....	2	44	1-603001	Rod, Deck Support.....	2
12	32120-33	Ring, Retaining	2	45	1-806332	Rollpin, 1/4x1 1/2.....	2
13	1-806009	Hairpin, Cotter .177 #206	4	46	322-2	Screw, Hex Cap 5/16-18 x 5/8	3
14	302-52	Zerk, Straight 1/8.....	2	47	1-414384	Deck weldmt w/decals, discharge Baffle & support rods	1
15	323-6	Screw, Hex Cap 3/8-16x1	2		1-412106-01	Deck weldmt.....	1
16	3253-5	Washer, 3/8 heavy spring.....	2	48	1-522480-01	Baffle, discharge	1
17	1-373034	Washer, Swivel.	6	49	1-613204	Ball Joint.....	2
18	1-303514	Bearing, Flange.....	4	50	323-13	Screw, Hex Cap 3/8-16 x 2 3/4 ...	2
19	3217-9	Nut, Reg Hex 1/2-13.....	2	51	1-800805	Screw, Hex Cap 3/8-16 x 3 1/2 G8	1
20	3253-7	Washer, Lock Hlcl Spg 1/2 Reg	2	52	1-603299	Roller, antiscalp.....	4
21	1-522143-01	Caster weldment.....	2	53	1-603602	Bushing, roller	4
22	325-20	Screw, Hex Cap 1/2-13x6	2	54	98-5961	Screw, Hex Cap 3/8-16x4 Gr. 8 ..	4
23	3290-357	Nut, Whizlock 3/8-16.....	16	55	1-603050	Bushing Spacer	2
24	98-5975	Washer, Disc Spring 3/8	15	56	323-9	Screw, hex Cap 3/8-16x1 3/4	2
25	103-1224	Tire & Wheel Asm (semi pneumatic)	2	57	1-414521	Link, Assembly	2
	1-513809	Roller Bearing.....	2	58	103-2970-01	Shield, Belt	2
❖	103-2170	Bushing (semi-pneumatic)	4	59	3256-3	Washer, Flat Std 5/16	6
26	103-2169	Spacer (semi-pneumatic).....	2	60	1-800017	Bolt, Hex Tap 5/16-18 3 1/4	2
27	103-2431-01	Chute weldment, discharge	1	61	1-611216	Kit, Link Assembly.....	2
28	1-413093	Belt, deck drive.....	1	62*	103-0321	Assembly,Cutting deck complete	1
29	1-633151	Spring, extension	1	63	103-2171	Kit,semi-pneumatic wheel replacement...	1
30	3296-39	Nut, Nyloc 3/8-16	1				
31	3256-4	Washer, Flat Std 3/8	1				
32	1-513034	Pivot Bearing.....	2				

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

- ◆ Link assembly nominal length is 6.89" (or approximately 6 7/8") between center of ball joint and center of furthest hole. See diagram on next page. Initially adjust both links to this dimension, then adjust to where both links are equally supporting rear of mower deck by lengthening one link and shortening the other by an equal amount.
- ❖ Bushing for semi-pneumatic caster tires can be identified by a groove on the face.
- Front caster spacer for semi-pneumatic caster tires can be identified by yellow zinc plating.
- Kit 103-2171 used to install semi-pneumatic casters on machines originally fitted with pneumatic casters. Includes 103-1224 & 103-2169. Order 2 per machine.
- * Complete cutting deck assembly also includes the complete cutter housing assemblies & blades.
- ⊛ Kit 103-3168 includes antiscalp roller, bushing, and mounting hardware.

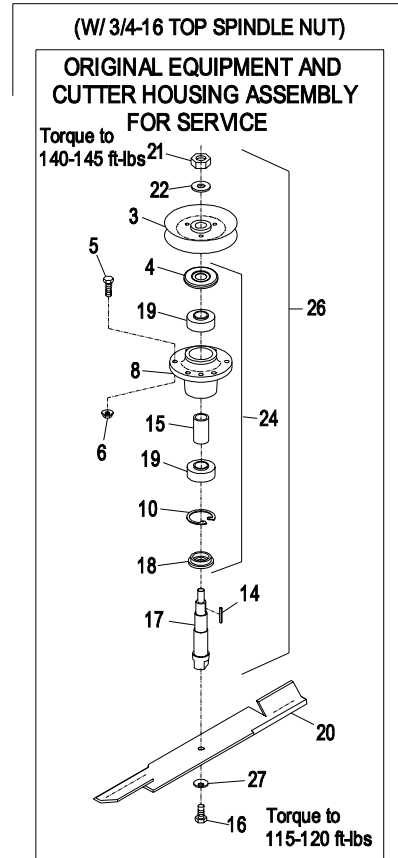
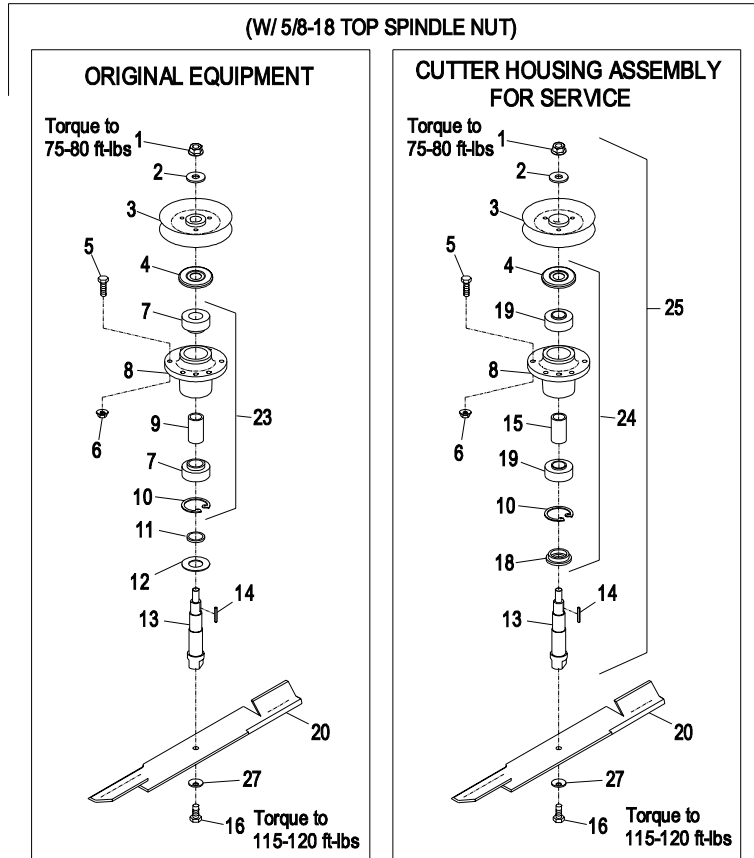
48" MOWER DECK



MOWER DECK CUTTER HOUSINGS

SERIAL NOS. 320,000 THRU 351,999

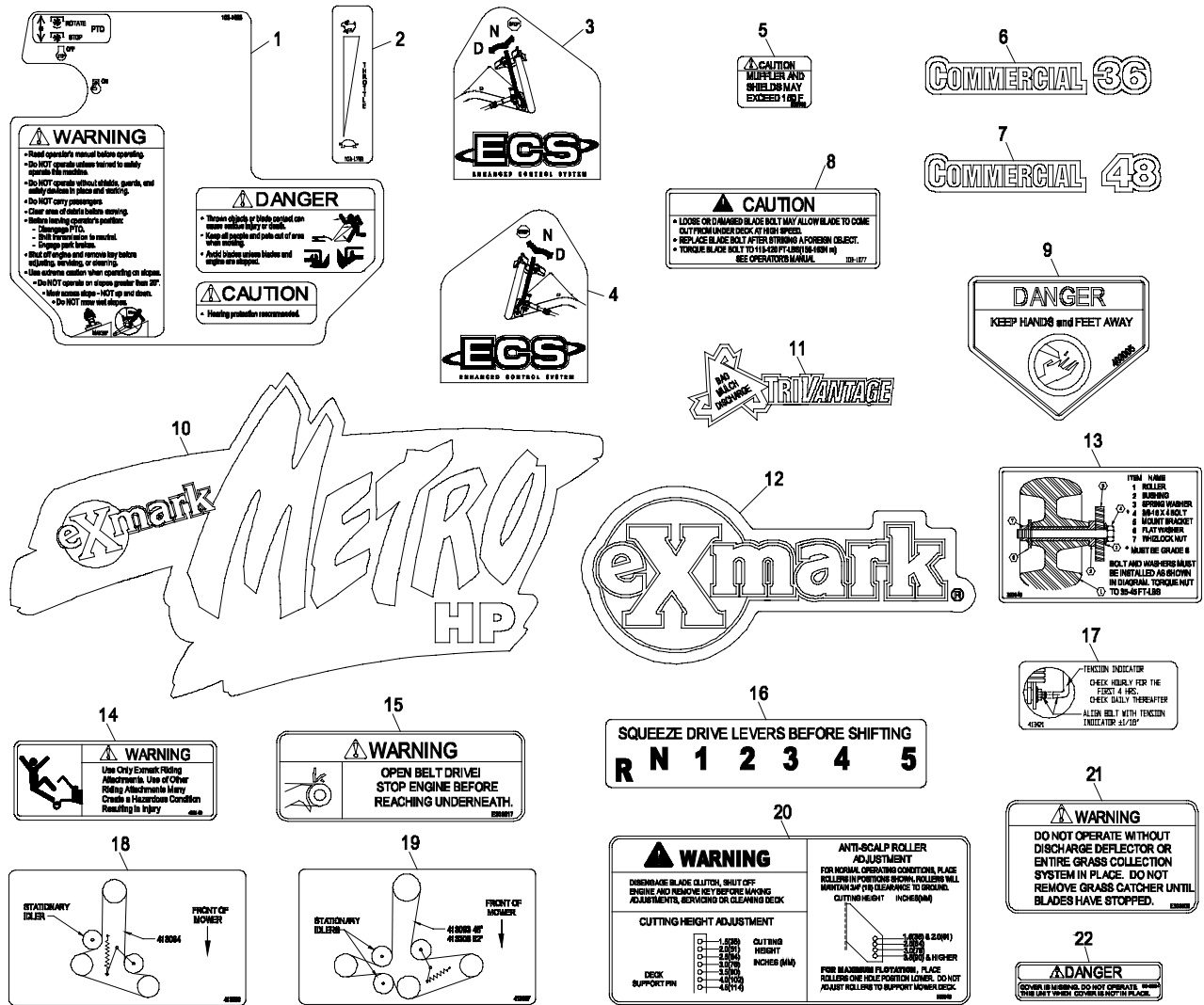
SERIAL NOS. 352,000 & ABOVE



Ref. No.	Part No.	Description	Qty. Req'd.*	Ref. No.	Part No.	Description	Qty. Req'd.*
1	32128-58	Nut, Flange 5/8-16.....	3	18	103-2535	Spacer, guard bottom	3
2	1-513208	Washer, disc spring 5/8	3	19+	103-2477	Bearing, ball.....	6
3+	1-413424	Sheave w/ hub.....	3	20	103-2528	Blade, 18.00 notched (36)	2
4+	103-1330	Guard, bearing top	3	◆	103-2518	Blade, 18.00 mulching (36).....	2
5	323-7	Screw, HH 3/8-16 x 1 1/4	18		103-2508	Blade, 18.00 low lift (36)	2
6	3296-39	Nut, Nyloc 3/8-16.....	18		103-1578	Blade, 18.00 solid (36).....	2
7+	1-513016	Bearing.....	6		103-2527	Blade, 16.25 notched (48)	3
8	1-323532	Housing, spindle.....	3	◆	103-2517	Blade, 16.25 mulching (48).....	3
9	1-323528	Spacer, bearing.....	3		103-2507	Blade, 18.00 low lift(48)	3
10	32120-8	Ring, snap	3		103-1577	Blade, 16.25 solid (48).....	3
11	1-323533	Spacer.....	3	21	3217-46	Nut, HH 3/4-16 heavy	3
12	1-633573	Guard, bearing bottom	3	22	103-2802	Washer, disc spring 3/4.....	3
13+	1-413330	Shaft, spindle	3	23▲		Housing w/brgs, spacer, & ring..	3
14	1-807268	Key, machine.....	3	24	103-2547	Cutter housing assembly	3
15	103-2534	Spacer, bearing.....	3	25	1-414335	Cutter housing complete.....	3
16	103-1026	Screw, HH 5/8-11 x 1 G8.....	3	26■	103-3207	Cutter housing complete.....	3
17+	103-2788	Shaft, spindle	3	27	1-513208	Washer, disc spring 5/8.....	3

- * Quantity shown for all parts is for 48" units which have three cutter housings. Make proper adjustments in quantity for 36" units which only have two cutter housings.
- ◆ Requires installation of Micro-Mulch accessory for proper mulching. Mulch kit P/N MK363(36"), MK483(48")
- + Apply Mobil HTS grease (or a food-grade antisieze) between the spindles & bearings and spindles & sheaves and under top bearing guard. DO NOT use a copper or nickel based antisieze.
- Complete cutter housing 103-3207 can be used on units w/ Serial Nos. 351,999 & lower. However, belt shields must be replaced by new shields w/ larger spindle holes. P/N 103-2970-01(2 req'd) for 48" units
- ▲ This Assembly is now serviced by kit number 103-2547. Complete cutter housings also include items 16 & 27.

DECALS



Ref. No.	Part No.	Description	Qty. Req'd.	Ref. No.	Part No.	Description	Qty. Req'd.
1	103-1623	Decal, Console	1	13	1-323540	Decal, Roller Mounting.....	1
2	103-1798	Decal, Throttle	1	14	1-403143	Decal, Sulky Warning.....	1
3	103-2244	Decal, LH ECS Instruction....	1	15	1-303517	Decal, Belt Drive	1
4	103-2245	Decal, RH ECS Instruction ...	1	16	1-303518	Decal, Shifter.....	1
5	1-513746	Decal, Muffler	2	17	1-413421	Decal, Indicator	1
6	1-323411	Decal, Commercial 36.....	1	18	1-413206	Decal, Belt Routing(36").....	1
7	1-403131	Decal, Commercial 48.....	1	19	1-413327	Decal, Belt Routing(48").....	1
8	103-1077	Decal, Bolt Torque.....	1	20	1-553049	Decal, Mower deck.....	1
9	1-403005	Decal, Danger.....	2	21	1-303508	Decal, Discharge Warning	1
10	1-413371	Decal, MHP-swash	1	22	98-5954	Decal, Missing cover (36")	1
11	1-303520	Decal, TriVantage	1		98-5954	Decal, Missing cover (48")	3
12	103-1983	Decal, Exmark Logo	1		1-414395	Decal Kit.....	1

ENGINE DECK GROUP

Ref. No.	Part No.	Description	Qty. Req'd.	Ref. No.	Part No.	Description	Qty. Req'd.
1	103-1733	Grip Foam	1	43	1-603402	Spring, Extension.....	2
2	3296-6	Nut, Nyloc 3/8-24.....	1	44	1-323277	Idler, Wheel Drive	2
3	98-5975	Washer, Disc Spring 3/8	7	45	99-8664	Bolt, Hex Tap 3/8-16x3.....	2
4	1-323379	Washer, Shifter Lever	1	46	103-1618	Swivel, Short.....	2
5	1-323500	Transmission, Peerless.....	1	47	103-1700	Linkage, Brake	2
6	302-19	Zerk, Straight ¼-28 5/32.....	6	48	1-322125	Swivel, weldmt Brake Linkage	2
7	1-324340	Coupling, w/guard & zerk	2	49	1-513959	Wingnut, Nyloc 5/16	4
8	3257-5	Key Woodruff #9 3/4x3/16.....	3	50	1-412518-01	Deck, weldment Engine	1
9▲	1-323502	Shaft,Trans. Output 9 spline	2	51	32151-47	Ring, Klip 3/8.....	2
10	103-1606	Lever, Shift w/grip.....	1	52	1-323283	Spacer, Shield.....	4
11	1-303282	Switch, Neutral Start.....	1	53	103-1703-03	Arm, weldment RH (shown)...	1
12	9264964	Screw, Hex Tap 5/16-18x3/4....	4		103-1702-03	Arm, weldment LH	1
13	32128-20	Nut, whizlock 5/16-18.....	18	54	322-7	Screw,Hex Cap 5/16-18x1½ ..	2
14	1-323387-03	Plate, Shifter.....	1	55	3296-29	Nut, Nyloc 5/16-18	4
15	3230-1	Bolt, Carriage 5/16-18x3/4.....	2	56	323-39	Screw, Hex Cap 3/8-16x5	4
16	1-323389-03	Leg, Shifter Plate.....	2	57	1-413359-01	Shield, Wheel Drive	2
17	1-323526	Ball, Stainless Steel.....	1	58	322-6	Screw,Hex Cap 5/16-18x1¼ ..	8
18	1-805005	Washer, Lock Hlcl Spg 5/16.....	4	59	1-323261	Brake Drum.....	2
19	322-3	Screw, Hex Cap 5/16-18x3/4 ...	6	60	1-413331	Sheave, Wheel Drive w/offset	2
20	32151-62	Ring, Retaining.....	2	61	1-413332	Sheave, Wheel Drive	2
21▲	1-323252	Bearing, Transmission Shaft....	2	62	1-543511	Seal, Grease	2
22	3296-42	Nut, Nyloc ¼-20.....	4	63	1-543509	Cone, Bearing L44643	4
23	321-3	Screw, Hex Cap ¼-20x5/8	4	64	1-543508	Cup, Bearing L44610	4
24	1-323254	Flange, Output.....	2	65	1-413333	Wheel, Hub w/cups	2
25◇	1-803310	Screw, Set 5/16-18x3/8	2		1-633926	Stud, wheel (1 ½").....	8
26	1-413355-03	Sleeve, Axle	1	66	1-523157	Washer, Spacer	2
27▲	1-413334-03	Sheave, Transmission Output..	2	67	1-806800	Pin, Cotter 9/64x1 1/2.....	2
28	3290-357	Nut, Whizlock 3/8-16.....	20	68	1-809082	Nut, Slotted Hex	2
29	1-412376-03	Axle Weldment.....	2	69	1-543513	Cap, Grease	2
30	1-543556	Spacer, Wheel.....	2	70	1-413473	Wheel & Tire Assembly	2
31	1-413347	Bushing, Sleeve	4		1-413474	Tire 16x6.50 – 8	2
32	103-1695	Lever,Brake RH w/bush.(shown)	1		1-603715	Wheel	2
	103-1694	Lever,Brake LH w/bushings	1	71	242-50	Nut, Wheel ½-20	8
33	1-413344	Bushing, Pivot	2	72	1-413341	Belt, Wheel Drive Banded	2
34	3256-4	Washer, Flat Std 3/8.....	2	73	1-413510	Clip, Loom .50	2
35	323-10	Screw, Hex Cap 3/8-16x2	2	74	1-413511	Hanger, Drag Shield.....	2
36	1-803051	Nut, Push .38.....	2	75	103-1701	Linkage, Drive	2
37	323-9	Screw, Hex Cap 3/8-16x1 ¾	2	76	51-4220	Guard, coupler	1
38	1-323262	Brake Band	2	77	1-806003	Cotter, Hairpin .0585 #2.....	3
39	1-323307	Pin, Clevis	2	78	1-412358	Scraper, weldment	2
40	323-6	Screw, Hex Cap 3/8-16x1	6	79	1-413353	Pin, Threaded.....	2
41	3218-3	Nut, Jam 3/8-16.....	2	80	98-3259	Shield, Trailing.....	1
42	3296-39	Nut, Nyloc 3/8-16.....	6				

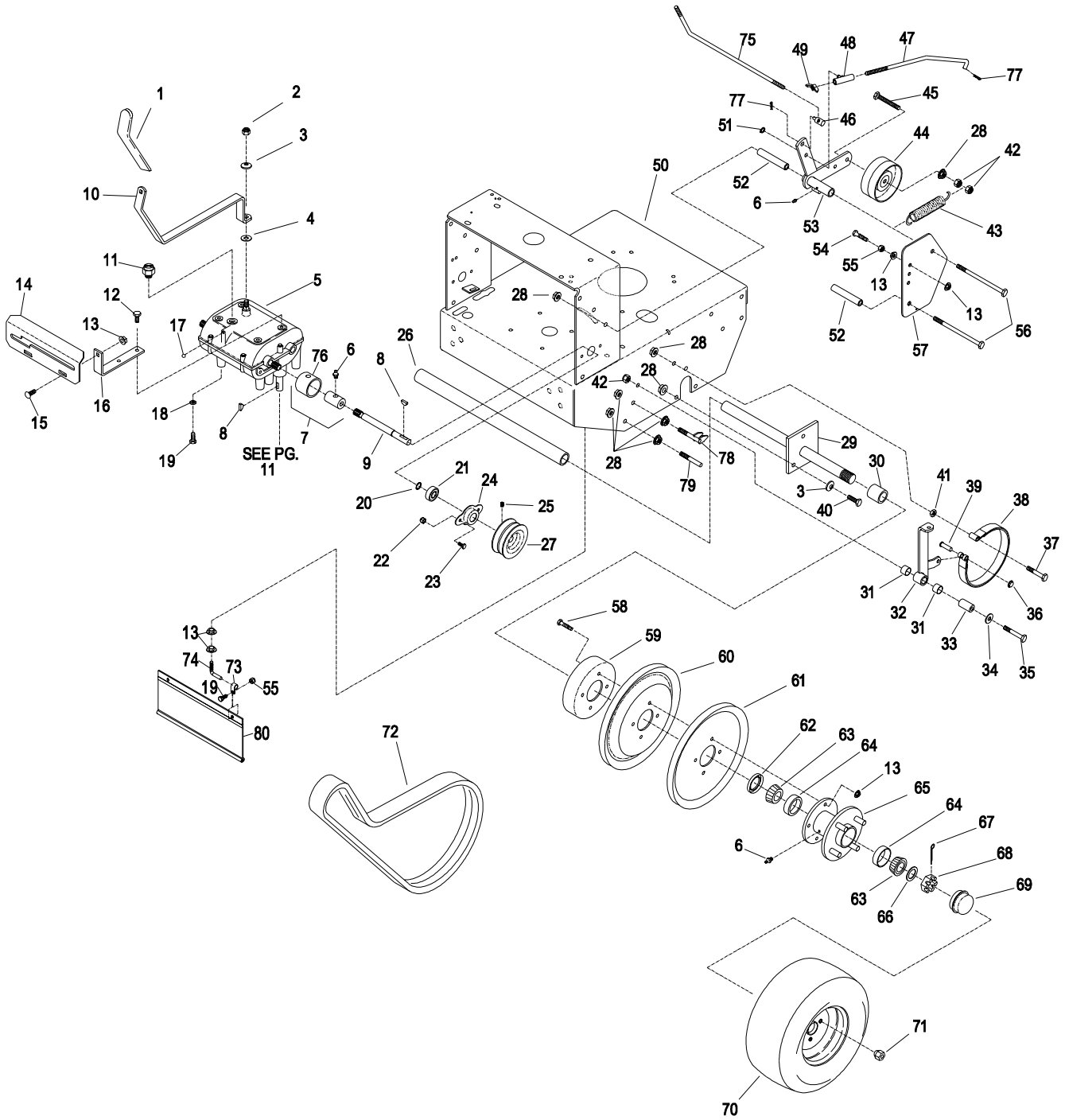
◇ Use Pro-lock (Nut type) Part No. 1-840022 (.5ml tube) on setscrew threads.

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

Exmark black touch up spray paint – Gloss Black

▲ Use antisieze compound between transmission output shafts & bearings and between transmission output shafts and sheaves.

ENGINE DECK GROUP



ENGINE DECK GROUP (CONT.)

Ref. No.	Part No.	Description	Qty. Req'd.	Ref. No.	Part No.	Description	Qty. Req'd.
1	323-11	Screw, 3/8-16 x 2-1/4	7	31	1-806003	Pin, Hair Cotter .0585 #2	1
2	3256-3	Washer, Flat Std 5/16	2	32	1-413282	Linkage, Lower	1
3	32128-20	Nut, Whizlock 5/16-18	11	33	1-414143	Link Pivot w/Bearing	1
4	1-413009-01	Plate, Guard	1	34	302-19	Zerk, Straight ¼-28	1
5 *	1-800521	Screw, Hex Cap 3/8-24x1G8 .	1	35	1-603044	Bushing, Idler Pivot	1
6	98-5975	Washer, Disc Spring 3/8	2	36	3231-6	Bolt, Carr. SSN 3/8-16x2	1
7	1-373034	Washer, Swivel	2	37	322-6	Screw, Hex Cap 5/16-18x1¼ ..	1
8	322-3	Screw, Hex Cap 5/16-18x3/4 .	1	38	321-6	Screw, Hex Cap ¼-20x1	2
9 ▲	1-412031	Sheave, w/drum (36")	1	39	32128-33	Nut, Whizlock ¼-20	4
▲	1-412028	Sheave, w/drum (48")	1	40	1-523498	Spring, Motion Control	1
10	1-807259	Key, Mach 1/4x1/4x1	1	41	1-303334	Washer, Disc Spring 5/16	5
11	1-412138-03	Pivot Pin weldment	1	42 *	3212-10	Screw, Hex cap 7/16-20x2 ½ ..	1
12	1-413062	Band, Brake Clutch	1	43	1-603610	Disc, Spring 7/16	2
13	3296-39	Nut, Nyloc 3/8-16	5	44	1-603609	Bushing, Clutch Keeper	1
14	1-413235	Washer, Spacer	1	45 ▲	1-413339	Sheave, Engine	1
15	1-413207	Pivot, Bearing	2	46	1-807264	Key, Machine ¼ x ¼ x 2 5/8 ..	1
16	1-412417-03	Arm weldment, Clutch	1	47	1-412325	Guide, Belt weldment	1
	1-414418	Clutch Arm w/Bearings	1	48	1-413096	Belt, Blade Clutch	1
17	1481	Zerk, ¼-28x45	1	49 ▲	1-323278	Sheave, Transmission	1
18 ▲	1-413111	Bearing, Clutch Shaft	2	50 *	3245-41	Screw, Set ¼-20x3/8	2
19	32120-8	Ring, Snap	2	51	3256-5	Washer, Flat Std 7/16	2
20	1-413012	Spacer, Bearing Clutch	1	52	3256-24	Washer, Flat SAE 3/8	1
21	1-523157	Washer, Spacer	1	53	1-323285	Idler, Transmission Drive	1
22	1-412011	Sheave w/shaft	1	54	323-8	Screw, Hex Cap 3/8-16x1 ½ .	2
23	1-413049-01	Plate, Clutch Pivot	1	55 ▲	103-1666	Sheave, Transmission Drive ..	1
24	3290-357	Nut, Whizlock 3/8-16	3	56	1-413340	Spacer, Crankshaft	1
25	3296-29	Nut, Nyloc 5/16-18	1	57	1-323280	Belt, Transmission Drive	1
26	1-213069	Washer, Strut	1	58	322-7	Screw, Hex Cap 5/16-18x1½ .	4
27	1-513113	Spring, Belt Tension	1	59 ☼	103-1965	Valve, oil drain	1
28	1-543007	Spacer, Clutch Anchor	1	60	103-1966	Adapter, M20-2.5 / 3/8 NPT ...	1
29	3256-4	Washer, Flat Std 3/8	1	61	103-1964	Hose, 24" oil drain	1
30	1-513034	Pivot, Bearing	2				

▲ Use anti-seize compound in the following locations:

- ◆ Between the sheave and the engine crankshaft.
- ◆ Between the sheave w/shaft and the bearing bores.
- ◆ Between the sheave w/shaft and the sheave w/drum.
- ◆ Between the transmission shaft and the sheave.

* Use Pro-lock (Nut type) Part No. 1-840022 (.5ml tube) in the following locations:

- ◆ On setscrew locations.
- ◆ On sheave retaining bolt in engine crankshaft.
- ◆ On sheave retaining bolt on clutch arm.

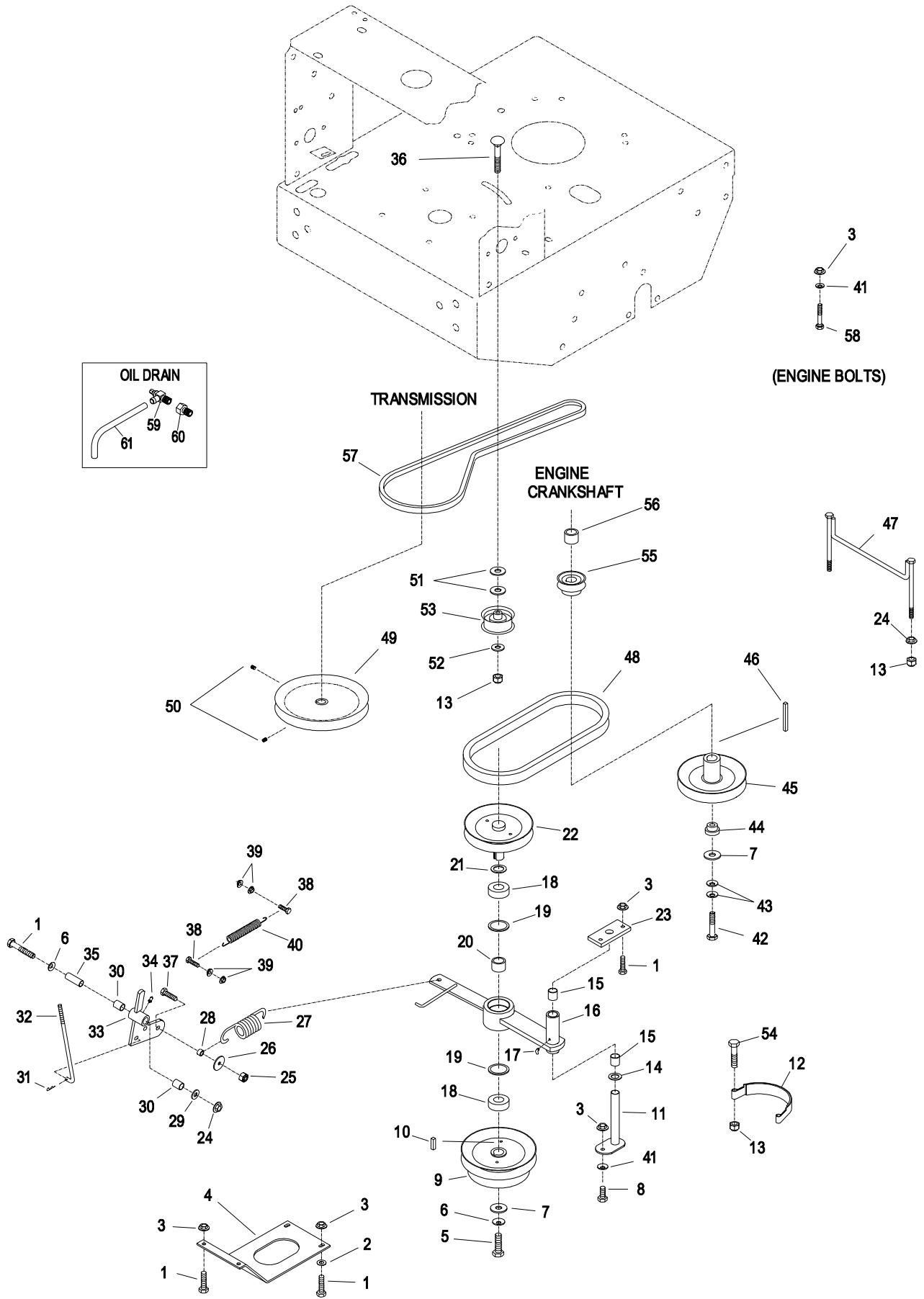
If engine deck has hole under fitting, hose is not required.

- ☼ Use Teflon Pipe Sealant or equivalent between oil drain valve and adapter.

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

Exmark black touch up spray paint – Gloss black

ENGINE DECK GROUP (CONT.)



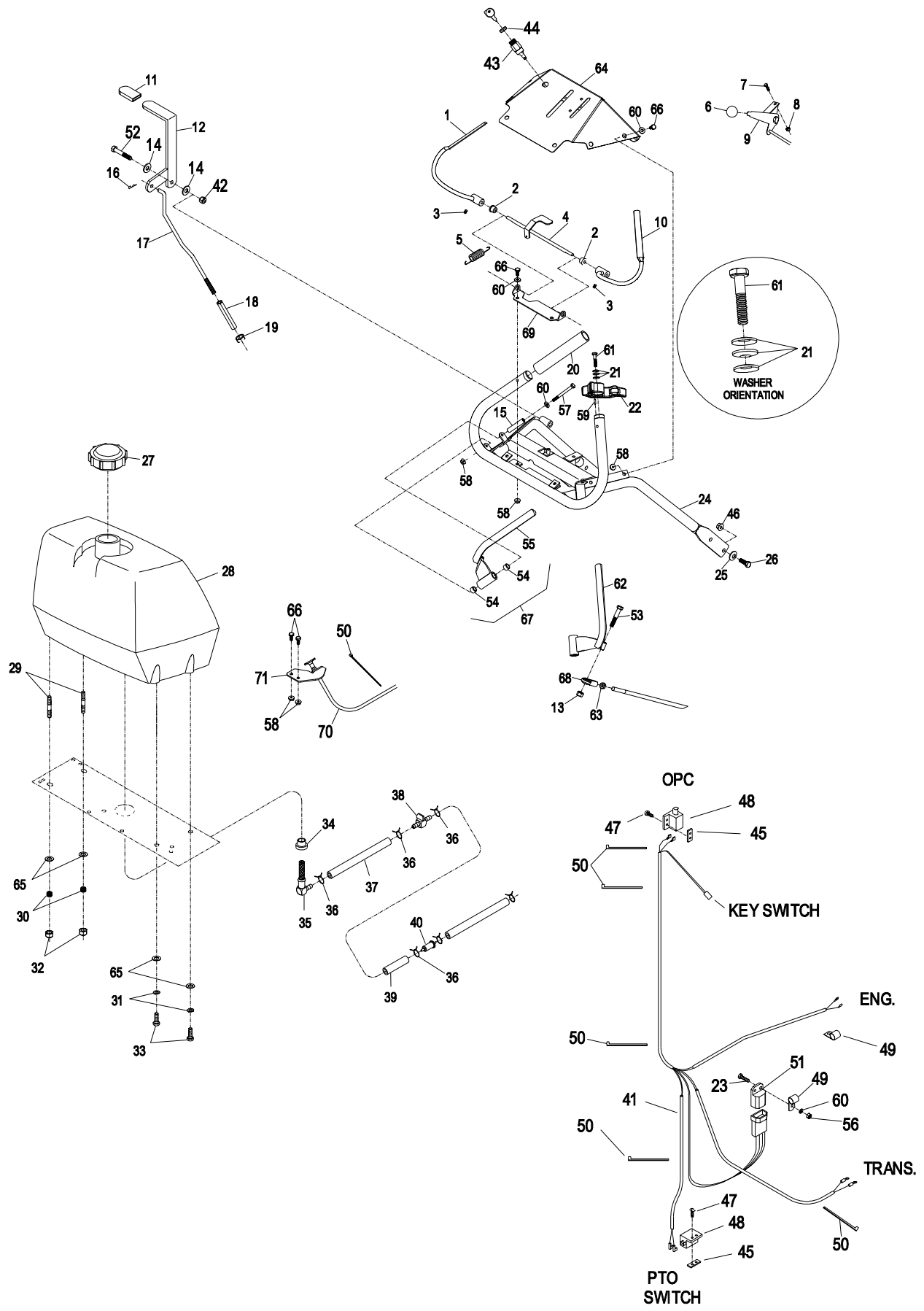
ECS UPPER HANDLES and CONTROLS

Ref. No.	Part No.	Description	Qty. Req'd.	Ref. No.	Part No.	Description	Qty. Req'd.
1∇	103-1566-03	Lever, weldment OPC LH.....	1	41▲	103-1710	Harness, Wiring	1
2	1-303365	Bushing, Nylon.....	2	42	3296-39	Nut, Nyloc 3/8-16	1
3◆	1-803322	Screw, Set .312-24x.312	2	43	1-403121	Switch, On/Off	1
4	103-0769-03	Rod weldment, OPC.....	1		1-603511	Key, ignition.....	1
5	1-303363	Spring, Actuator	1		103-2106	Key, Exmark logo.....	1
6	1-513592	Knob, Ball Red.....	1	44	103-0498	Nut, Ignition Switch	1
7	1-807513	Bolt, Carr. #10-24x1/2 G2.....	2	45	1-633181	Plate, Tapped.....	2
8	3296-2	Nut, Nyloc #10-24	2	46	3290-357	Nut, Whizlock 3/8-16.....	4
9	1-633696	Cable, Throttle Control	1	47	3290-500	Scrw,Mach CRPH 10-24x5/8	4
10∇	103-1567-03	Lever, weldment OPC RH	1	48	1-513051	Switch, Neutral Lockout.....	2
11	1-303020	Grip, Lever	1	49	1-323229	Clip, 3/8 Loom.....	2
12	1-414234	Clutch Lever w/Grip	1	50	1-303287	Tie, Plastic	5
13	3296-39	Nut, Nyloc 3/8-16	2	51	1-323430	Module, Wiring Harness	1
⊗	3296-29	Nut, Nyloc 5/16-18	2	52	323-11	Screw,3/8-16 x 2 1/4	1
14	3256-24	Washer, Flat SAE 3/8.....	2	53	323-10	Screw,3/8-16 x 2	2
15	103-0027	Spacer	2	⊗	322-9	Screw,5/16-18 x 1 3/4.....	2
16	1-806003	Pin, Hair Cotter .0585 #2	1	54	1-413152	Bearing	4
17	103-1149	Linkage, Upper	1	55	103-0771-03	Lever,drive LH	1
18	1-413279	Turnbuckle, 3/8-16 SS.....	1	⊗	103-2466-03	Lever,drive LH	1
19	3217-7	Nut, Reg Hex 3/8-16.....	1	56	321-4	Screw, Hex Cap 1/4-20x3/5.....	1
20	103-0815	Grip, Handle.....	2	57	321-14	Screw,1/4-20 x 2 3/4	2
21	1-303435	Washer, Disc Spring 1/4.....	6	58	32128-33	Nut,1/4-20 whizlock	12
22	103-1631	Latch, thumb LH	1	59	103-0464	Pin,1/8 x 1/2 spring	2
	103-1630	Latch, thumb RH (shown).....	1	60	3256-22	Washer,1/4 SAE flat	11
23	3296-42	Nut, Nyloc 1/4-20	3	61◆	103-0235	Screw,1/4-20 x 1 1/8 w/nylon	2
24	103-0770-03	Handle weldment.....	1	62	103-0772-03	Lever,drive RH	1
25	98-5975	Washer, Disc Spring 3/8.....	4	⊗	103-2465-03	Lever,drive RH	1
26	323-6	Screw, Hex Cap 3/8-16x2 1/2..	4	63	3220-3	Nut,3/8-24 jam	4
27	1-513508	Cap, Fuel Tank	1	64	103-2765	Console w/ decals	1
28	1-413179	Tank, Fuel Intermediate.....	1		103-0546-03	Wld,upper handle console	1
29∇	1-633023	Stud.....	2	65	3256-23	Washer,5/16 SAE flat	4
30	1-633349	Spring, Fuel tank.....	2	66	321-3	Screw,1/4-20 x 5/8	10
31	1-805005	Wshr,Lock Hlcl Spg 5/16 Hvy	2	67	103-1915	Asm,drive lever RH	1
32	3296-47	Nut, Nyloc 5/16-18	2		103-1916	Asm,drive lever LH	1
33	322-3	Screw, Hex Cap 5/16-18x3/4... 2		⊗	103-2513	Asm,drive lever RH	1
34	1-513645	Bushing, Fuel Valve	1	⊗	103-2514	Asm,drive lever LH	1
35	1-543277	Elbow w/Screen	1	68	103-0608	Joint,.375 ball end	2
36	1-303077	Clamp, Fuel line	4	⊗	103-2463	Joint,.31 ball end	2
37	1-603955	Hose, Fuel line 6".....	1	69	103-0489-03	Bracket,opc axle	1
38	1-603770	Valve, Fuel.....	1	70	103-1796	Cable,choke push/pull	1
39	1-303022	Hose, Fuel line 8.5"	1	71	103-1797-01	Bracket,choke cable	1
40	Kawasaki PN 41019-1055 w/6" fuel line						

Exmark black touch up spray paint - Gloss black

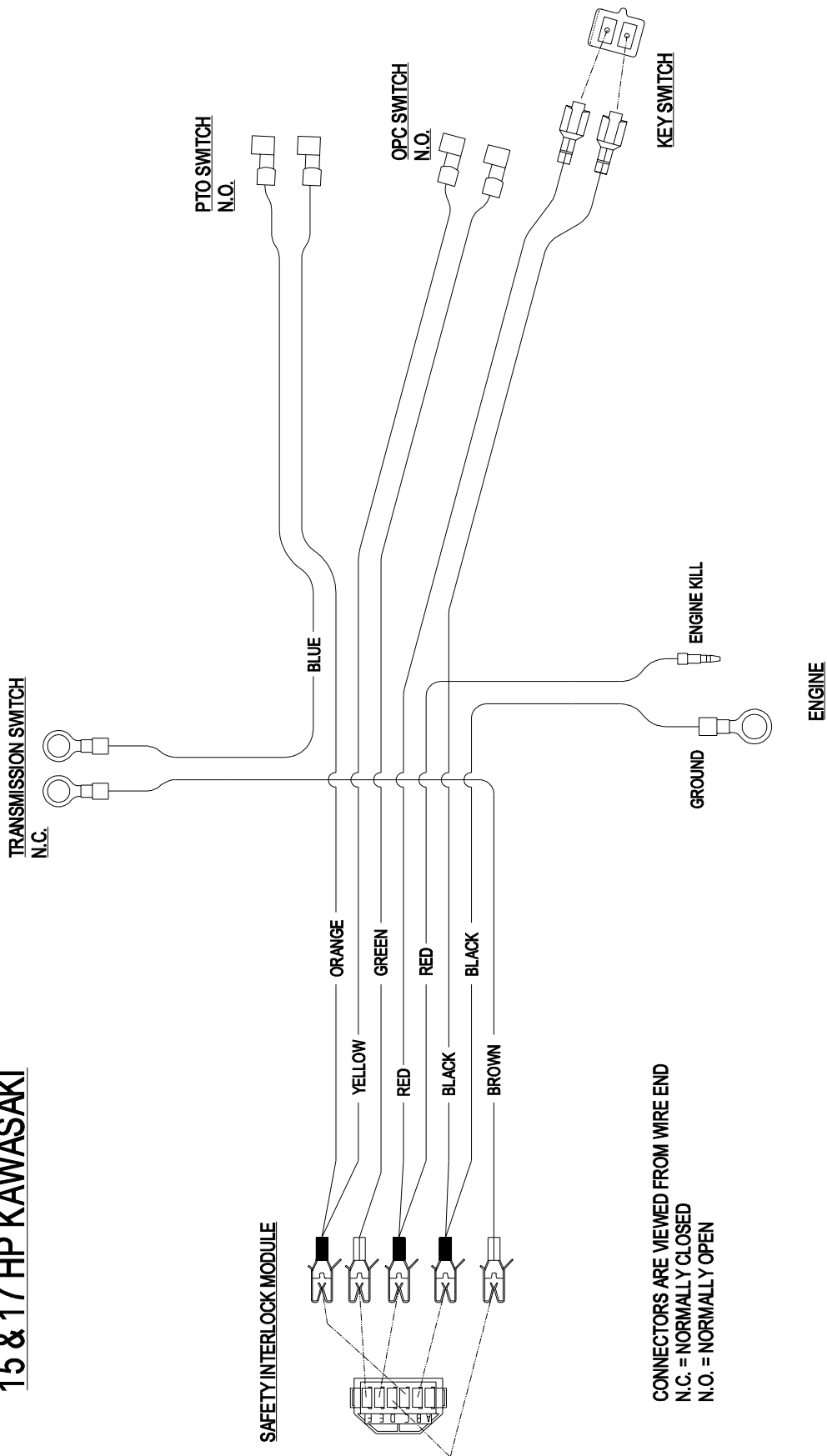
- ◆ Use Pro-Lock nut type, Part no. 1-840022 (.5cc tube) on setscrew threads and on thumb latch screws.
- ∇ Use Pro-Lock retaining type, Part no. 1-840023 (.5cc tube) on inside of bore of OPC hub and on fuel tank studs.
- ▲ Use dielectric grease on all electrical connectors.
For Serial Nos. 320,000 thru 328,024. It is recommended to upgrade these items with kits 103-2481(RH) and 103-2482(LH).
- ⊗ For Serial Nos. 328,025 & above.

ECS UPPER HANDLES and CONTROLS



WIRING DIAGRAM

15 & 17 HP KAWASAKI



CONNECTORS ARE VIEWED FROM WIRE END
 N.C. = NORMALLY CLOSED
 N.O. = NORMALLY OPEN

NOTES

NOTES

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

LAZER Z[®]

LAZER Z[®] HP

LAZER Z[®] XP

EXPLORER[®]

TURF RANGER[®]

TURF TRACER[®]

TURF TRACER[®] HP

VIKING HYDRO

METRO[®]

METRO[®] HP

SELF STEERING SULKY

ULTRA VAC[™]

GRASS CATCHER

MICRO-MULCH[™] ACCESSORY

©1997,1998, 1999, 2000, 2001, 2002
EXMARK MFG. CO. INC.
INDUSTRIAL PARK BOX 808
BEATRICE, NE 68310
ALL RIGHTS RESERVED

PART NO. 103-1714 Rev. B
(402) 223-6300
FAX (402) 223-5489
PRINTED IN U.S.A.

