



Parts Manual

Mfg. No: 7800849-04

CP215520HV, 21" 5.5 GTP Steel Deck
Commercial Series 20



7061201 - 21" Recycling Steel Deck Plug Kit.	
7061200 - 21" Recycling Steel Deck Cover Kit.	

Not For
Reproduction

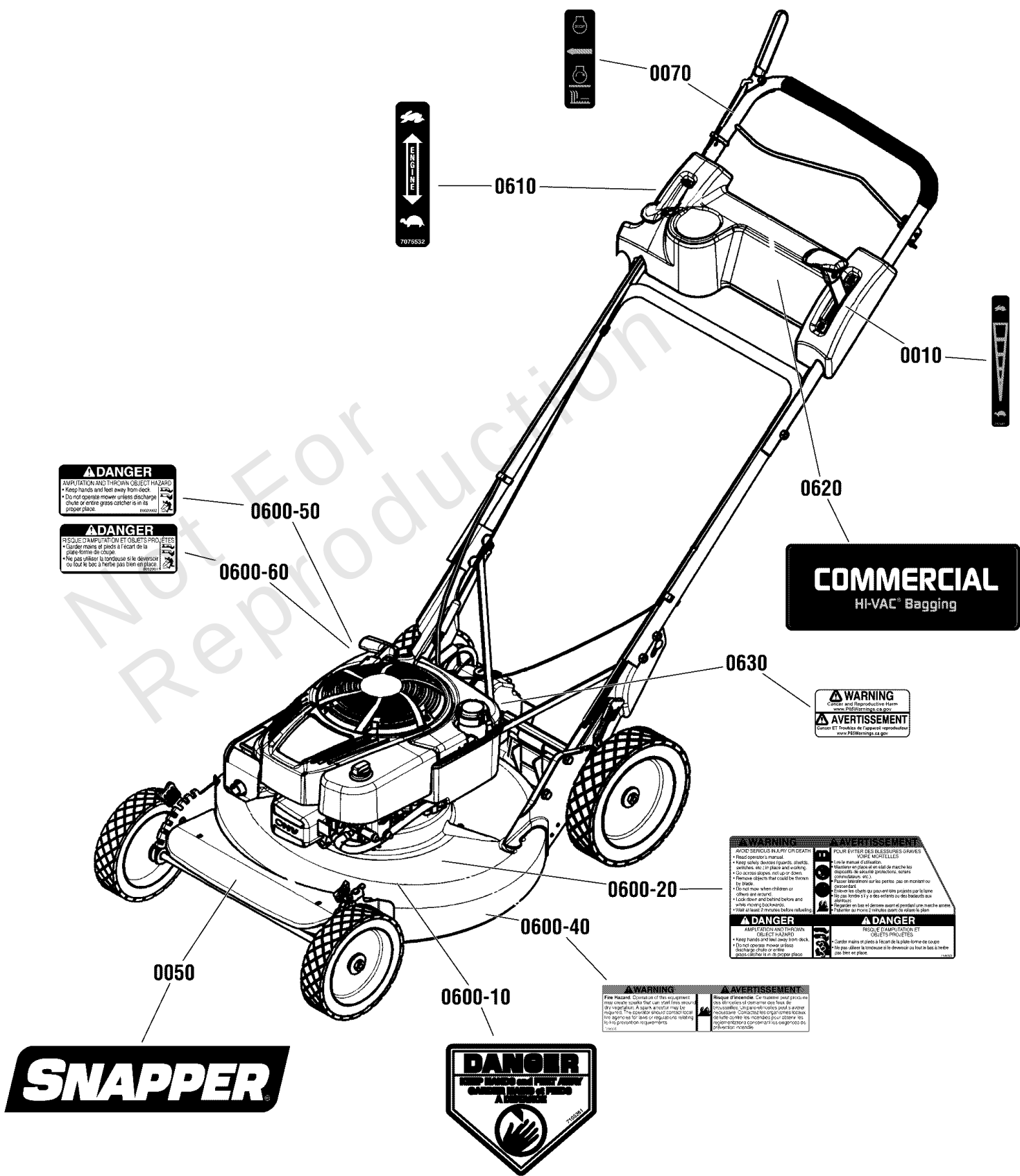
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Decals

Note: Unless noted otherwise, use the standard torque specifications

Mfg. No: 7800849-04



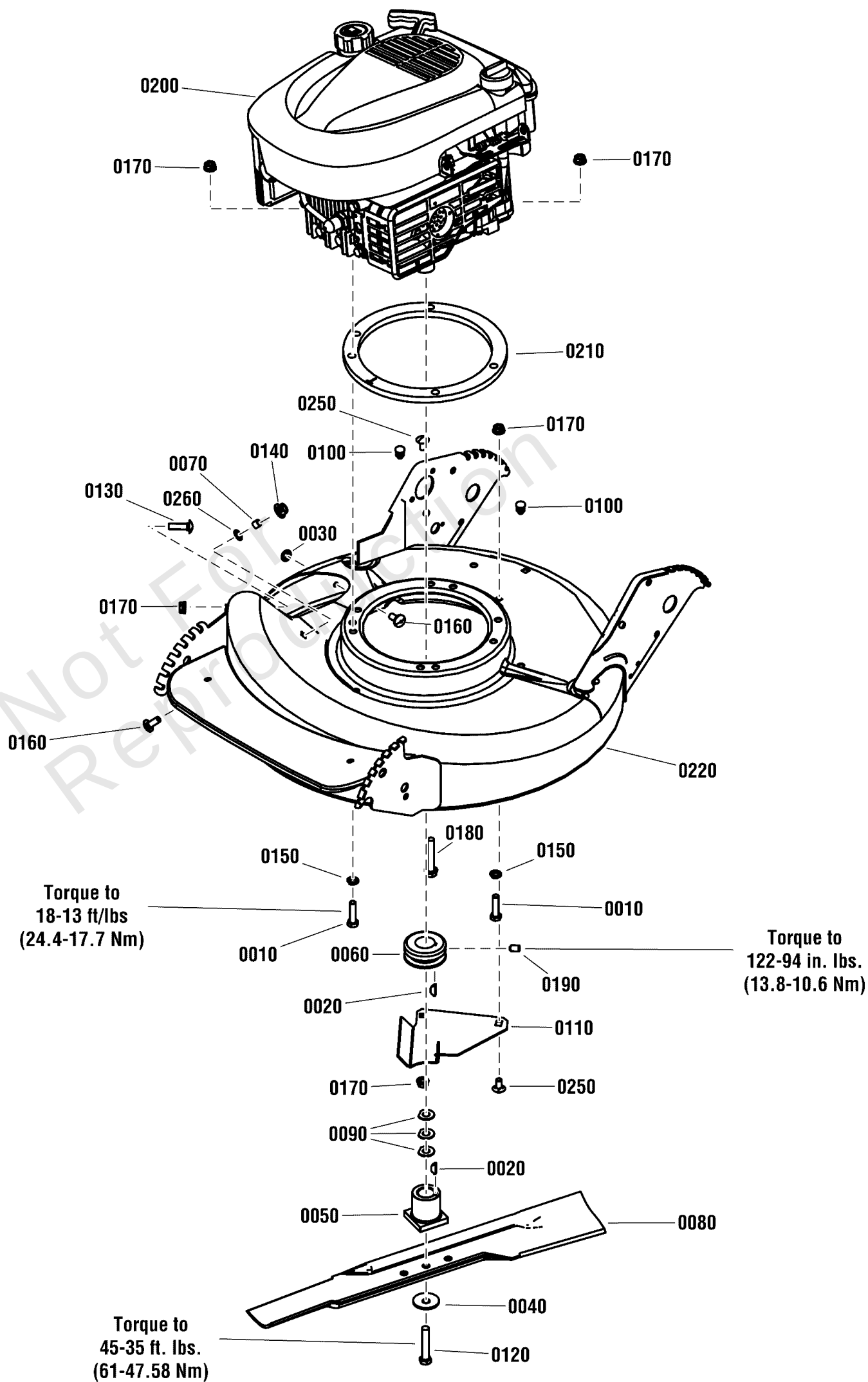
Decals

REF NO	PART NO	QTY	DESCRIPTION
0010	7075471YP	1	DECAL, Speed Shift
0050	7104148YP	1	DECAL, Logo, Snapper, 7.88"
0070	7029782MA	1	DECAL, OPC Bail, International Symbols
0600	7106353YP	1	DECAL, Sheet, WBM Compliance
0600-10	7105261YP	1	DECAL, CPSC, Cut Finger, French/English
0600-20	-----	1	DECAL, Warning/Danger, English/French -(Included on Decal Sheet #7106353YP)
0600-40	-----	1	DECAL, Spark Arrestor, English/French -(Included on Decal Sheet #7106353YP)
0600-50	-----	1	DECAL, Danger, English -(Included on Decal Sheet #7106353YP)
0600-60	-----	1	DECAL, Danger, French -(Included on Decal Sheet #7106353YP)
0610	7075524YP	1	DECAL, Throttle Control, KVV
0620	PER - 770114	1	DECAL, HI-VAC Bagging, Commercial
0630	84002303	1	LABEL, WARNING

Deck, Engine & Blade Group

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Deck, Engine & Blade Group

REF NO	PART NO	QTY	DESCRIPTION
0010	703299	2	SCREW, 5/16-24 X 1.25, Hex Head Cap, GR5, Zinc/Clear
0020	7010783YP	1	KEY, HI-PRO, #505
0030	703297	1	RETAINER, 5/16 X .625, Push Nut, GR 5, Zinc/Clear
0040	7012063	1	WASHER, Cone
0050	7012927YP	1	HUB, Blade, 7/8" ID
0060	7021822YP	1	PULLEY, Engine, 1" ID X 2-1/8" OD, Yellow
0070	7024340SM	1	SPACER, .375 OD X .316 ID X .305 L
0080	7026691BZYP	1	BLADE, 21" L, .97" Standard Lift
0090	7044770YP	3	SPACER, .874 OD X .385 ID X .060 L, YZ
0100	7046780SM	4	PLUG, Hole, .44" OD
0110	7074568YP	1	COVER, Belt, Zinc/Clear
0120	703999	1	SCREW, 3/8-24 X 2, Hex Head Cap, GR5
0130	704002	1	BOLT, 5/16-18 X 1.125, Carriage, ZC/CL
0140	704001	1	NUT, 5/16-18 Large Flange Center Lock, ZC/CL
0150	703116	2	WASHER, .32 X .58 X .08, Split Lock, Zinc/Clear
0160	703185	2	BOLT, Carriage, 5/16-18 X 3/4
0170	703409	4	NUT, Serrated Lock Flange, 5/16-18
0180	704062	1	BOLT, Serrated Flanged Head, 5/16-18 X 2.0
0190	704003	1	SCREW, 5/16-18 X .50, Hex Socket Head, Phosp/Oil
0200	GXV160-UH2A1AS	1	* ENGINE, 5.5 GTP Honda Comm Tier III, Model GXV160UH2-A1AS Code 649061 -(Model GXV160UH2-A1AS Code 649061)
0210	7300969AYP	1	RING, Engine Spacer
0220	7500549DYP	1	WELDMENT, Deck, 21", Self-Propell, HV (Red w/Decals)
0250	703447	2	BOLT, 5/16-18 X .625, Carriage, GR5, Zinc/Clear
0260	704015	1	WASHER, Flat, 5/16

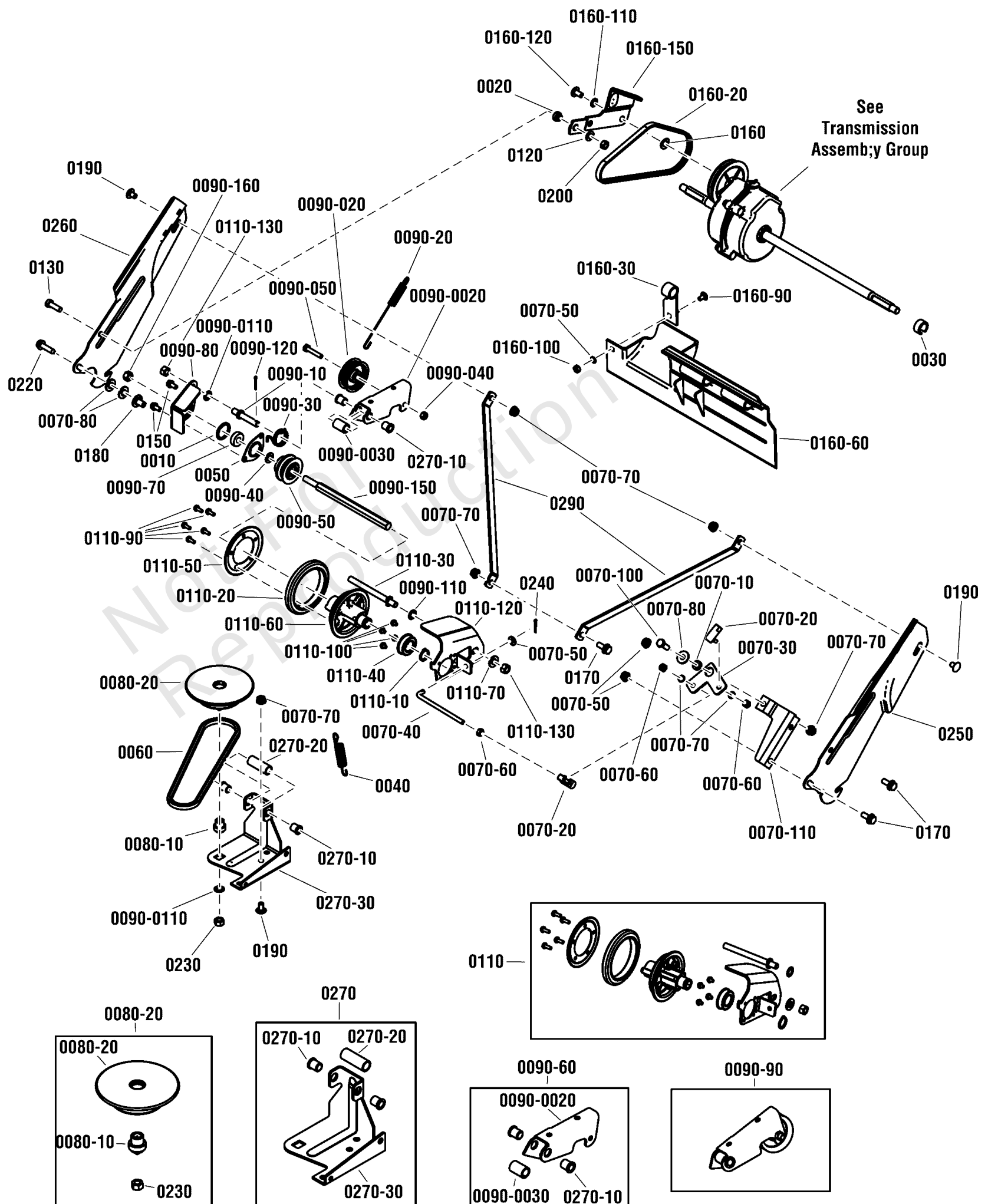
Footnotes:

NOTE: * Purchase engine parts from engine manufacturer dealer.

Drive System, Self Propelled

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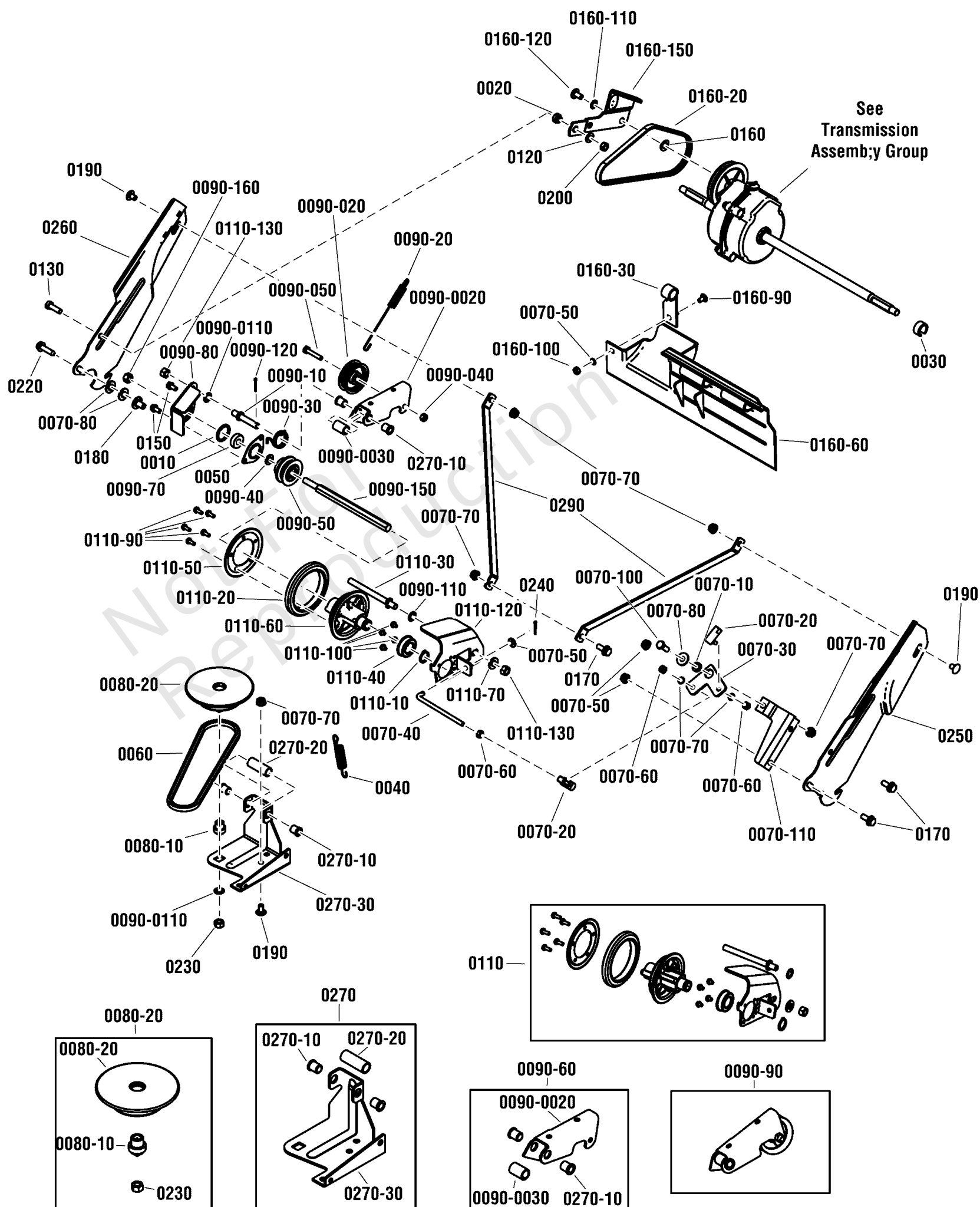
Drive System, Self Propelled

REF NO	PART NO	QTY	DESCRIPTION
0010	704008	1	O-RING, 1.0 ID X 1.25 OD X 0.125 Thk
0020	7012114SM	1	BUSHING, Differential Link
0030	704009	1	RING, Split, .68 x .93 x .44 (Black)
0040	7029025YP	1	SPRING, Extension, .58 x 3.2
0050	7031809YP	1	HOLDER, Bearing (Outer Half), ZC/CL
0060	7046784YP	1	BELT, Engine Drive (Stretch)
0070-10	703970	1	SPACER, .328 ID X .623 OD X .151 Thick
0070-20	7015753YP	2	BALL JOINT, 1/4-28
0070-30	7073913YP	1	BELL CRANK, Black Zinc
0070-40	7074145YP	1	LINK, Transfer (1/4-28 thread)
0070-50	703462	3	WASHER, Internal Tooth, 1/4
0070-60	703461	3	NUT, 1/4-28 Hex, GR5, Zinc/Clear
0070-70	703409	7	NUT, Serrated Lock Flange, 5/16-18
0070-80	7900022YP	3	WASHER, Flat, 7/8 x 21/64
0070-100	703408	1	SCREW, Hex Head Cap, 5/16-18 X 7/8, GR5
0070-110	7073822BMYP	1	BRACKET, Bell Crank
0080	7061275YP		KIT, Drive Disc, Steel (includes Disc, Bushing & Nut)
0080-10	703971	1	BUSHING, 0.385 ID X 0.925 OD X 1.018 Thk, ZC/CL
0080-20	7073528YP	1	DRIVE DISC, Steel (Includes Bushing)
0090-10	703836	1	STUD, 3/8-24 X 2.38, Single End, ZC/CL
0090-20	7012122YP	1	SPRING, Clutch, Adjustable Tension
0090-30	7012126YP	1	SPRING, Idler Torsion
0090-40	703946	1	WASHER, Flat
0090-50	7019383YP	1	PULLEY, Poly-V, 2" OD, .65" Wide, Steel
0090-70	7028014YP	1	BALL BEARING, Spherical O.D., .38 I.D.
0090-80	7031873YP	1	HOLDER, Bearing (Inner Half)
0090-90	7051921YP	1	ASSEMBLY, Clutch Idler (Pulley, Nut, Bolt, Bushings & Spacer)
0090-020	7012124YP	1	PULLEY, Flat Idler, .25 ID, 2.25 OD
0090-040	703972	1	NUT, 1/4-28 Hex Top Lock, GR 5, BZ
0090-050	703828	1	SCREW, 1/4-28 x 1-3/8" Hex Head Cap, Grade 5, CZ/CL
0090-060	7600173YP	1	KIT, Idler Arm, Bushing & Spacer Assembly
0090-0020	7032832AYP	1	ARM, Clutch Idler
0090-0030	703974	1	SPACER, Idler Arm (.500 ID x .970 Long), ZC/CL
0090-110	703930	3	WASHER, 3/8 Internal Tooth Lock, BZ
0090-120	703312	1	PIN, Cotter, 3/32 X 3/4
0090-150	7072284YP	1	SHAFT, Hex (3/8-24 thread, one end)
0090-160	703458	1	NUT, 3/8-24 Hex Center Lock, GR B, YZ
0110	7600109YP	1	ASSEMBLY, Driven Disc, Short, Commercial
0110-10	703975	1	RETAINING RING, 3/4" ID, ZC/CL
0110-20	704059	1	Disc, Rubber Driven, 3" ID
0110-30	703837	1	STUD, 3/8-24 X 4.5, Plate, ZC/CL
0110-40	7029027YP	1	BEARING, 3/4" ID, Ball, Commercial
0110-50	7031013YP	1	PLATE, Driven Tire Side
0110-60	7061276YP	1	KIT, Bushing & Hub Assembly
0110-70	703590	1	WASHER, .406
0110-90	704060	7	SCREW, Hex Washer Head, Self Tap, 10-24 x 1/2
0110-100	704061	4	SCREW, 10-32 x 1/4 Hex Washer Self-Tap, BZ
0110-120	7300977BMYP	1	THRUST PLATE, Short, Black
0110-130	703895	2	NUT, Hex, 3/8-24
0120	703350	1	WASHER, 5/16, Flat SAE, Zinc/Clear
0130	MT910828MA	1	BOLT, 5/16-24 X 1.00, HEX, ZC/CL

Drive System, Self Propelled

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Drive System, Self Propelled

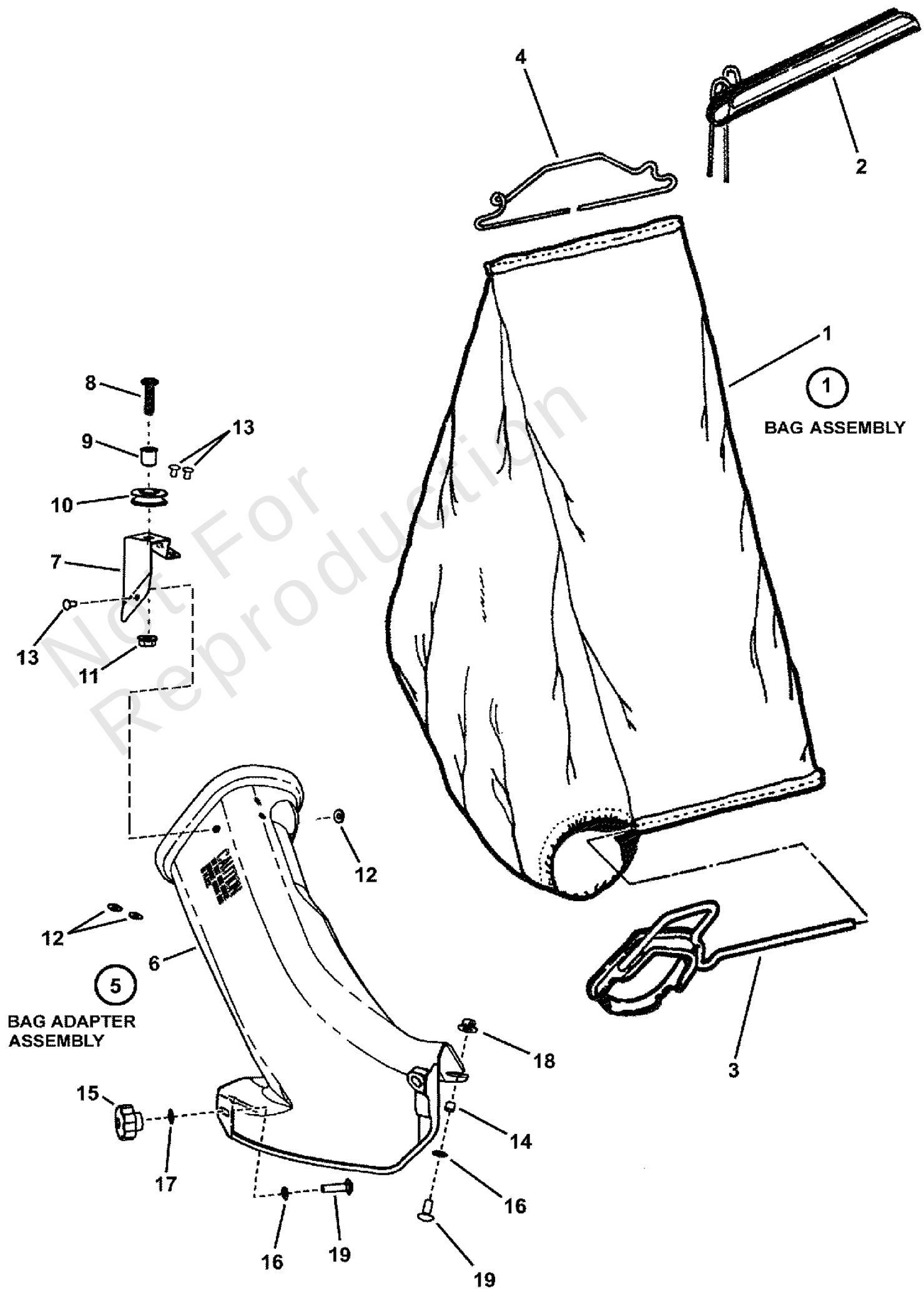
REF NO	PART NO	QTY	DESCRIPTION
0150	704130	2	SCREW, Hex Head, 1/4-20 X 1/2
0160	703940	1	WASHER, 0.445 ID X 0.780 OD X 0.025 Thk, Wave, ZC/CL
0160-20	7012354YP	1	BELT, Poly-V, Kevlar, V21
0160-30	7012616YP	1	SUPPORT, Foot Guard
0160-60	7029008YP	1	GUARD, Foot, P21 EURO, Long
0160-90	703978	1	BOLT, Carriage, Short Neck, 1/4-20 x 1/2, G5
0160-100	703127	1	NUT, Hex, 1/4-20
0160-110	7090391SM	1	WASHER, Internal Tooth, 5/16
0160-120	1753983YP	1	SCREW, Truss Head
0160-150	7034179BMYP	1	LINK, Differential, Commercial
0170	703354	3	SCREW, Flange, Whiz-Lock, 5/16-18 X 3/4
0180	703947	1	NUT, 5/16-18 X .625, Weld, ZC/CL
0190	703447	1	BOLT, 5/16-18 X .625, Carriage, GR5, Zinc/Clear
0200	703896	1	NUT, 5/16-24, Hex Center Lock, GR B, Zinc/Clear
0220	703167	1	SCREW, Hex Washer Head, Taptite, 5/16-18 x 1-1/4
0230	703457	1	NUT, 3/8-16, Hex, GR 5, Zinc/Clear
0240	1501125MA	1	GEAR, 9 Tooth
0250	7033985AYP	1	HANDLE, Lower, ADJ, LH
0260	7033986AYP	1	HANDLE, Lower, ADJ, RH
0270	7052987BMYP	1	ASSEMBLY, Deck Bracket, P21S
0270-10	703973	4	BUSHING, Flanged, .381 x .625 x .62, Metal, CZ/CL
0270-20	703941	1	SPACER, .50 ID X .650 OD X 1.750, Thk, ZC/CL
0270-30	7033774YP	1	BRACKET, Deck, P21S
0290	7046707BMYP	2	BRACE, HANDLE ECOAT

Grass Bag & Adapter Group

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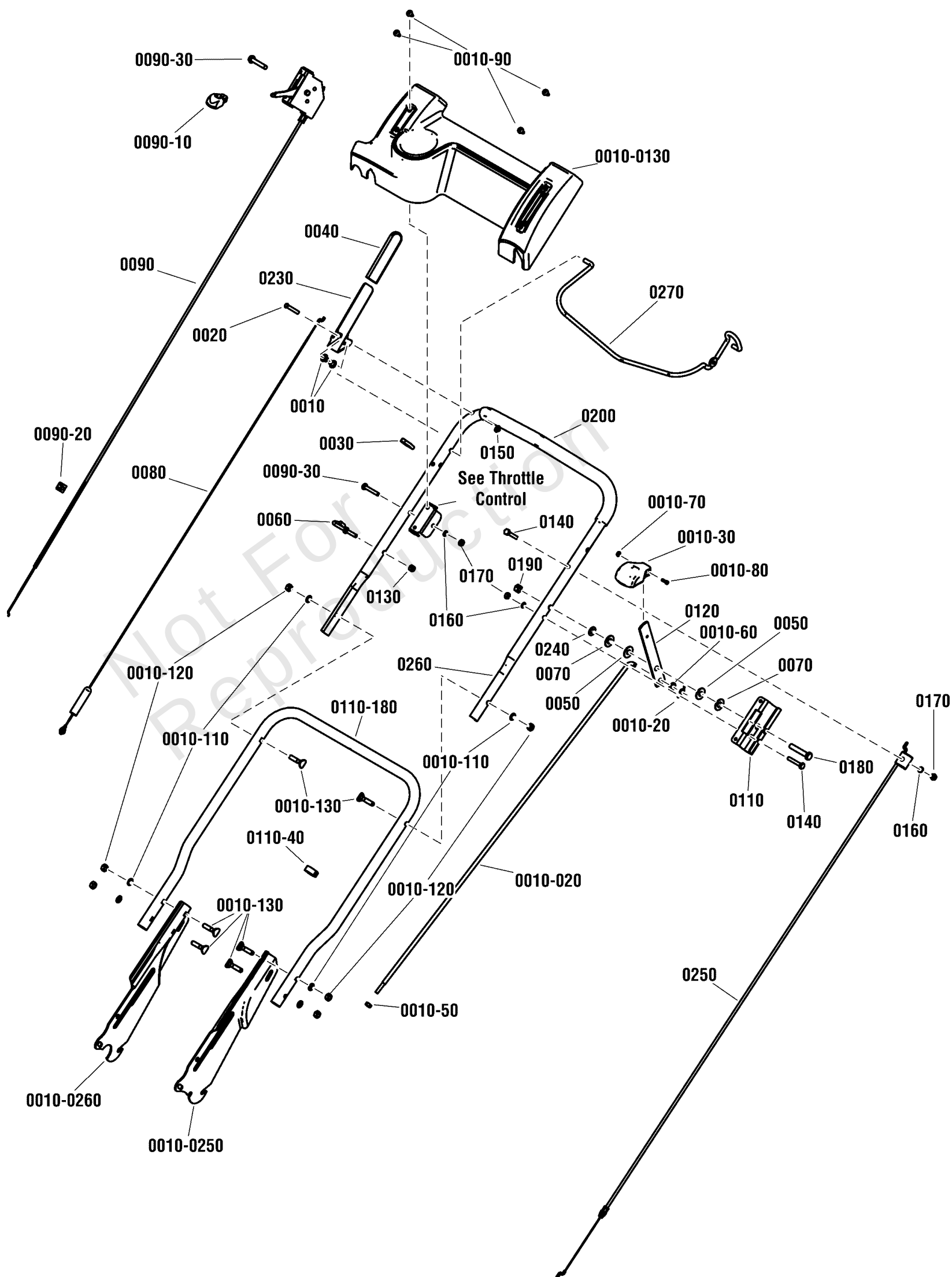
Grass Bag & Adapter Group

REF NO	PART NO	QTY	DESCRIPTION
1	-----	1	USE 7600176 Grass Bag Assembly, W/Slider, 10.75" W, 26" L, No Graphics -(Was 7103205)
2	7050711YP	1	ASSEMBLY, Slider
3	7042489AYP	1	WELDMENT, Bag Connector
4	7019247YP	1	WIRE, Rear Bag
5	7600117YP	1	KIT, Bag Adapter Assembly, W/pulley (Includes items 6 - 13) -(Was 7058037)
6	-----	1	USE 7600117, Bag Adapter -(Was 7047081)
7	7047082AYP	1	BRACKET, Rope Pulley
8	703570	1	CAPSCREW, Hex Head, 5/16-18 x 1 1/4 -(Was 7091984 or 80004616)
9	703973	1	BUSHING, Flanged, .381 x .625 x .62, Metal, CZ/CL -(Was 7012306 or 80005378)
10	7024228SM	1	PULLEY, Nylon, .75 ID, 1.3 OD
11	703409	1	NUT, Serrated Lock Flange, 5/16-18 -(Was 7091601 or 80002728)
12	703942	3	WASHER, 5/32 Flat, ZC/CL -(Was 7072107 or 80005393)
13	704032	3	RIVET, 3/16 x .344, Truss HD, ZC/CL -(Was 7013860 or 80005709)
14	7024340SM	1	SPACER, .375 OD X .316 ID X .305 L
15	7101022YP	2	KNOB, Fluted (5/16-18 thread) on side chute
16	703297	2	RETAINER, 5/16 X .625, Push Nut, GR 5, Zinc/Clear -(Was 028X64MA, 5025498, 7011791, 720372 or 80002734)
17	703936	2	WASHER, .325 ID X .850 OD X .041 Thk, Internal External Lock, Type A, ZC/CL -(Was 7090189 or 80005386)
17	703350	1	WASHER, 5/16, Flat SAE, Zinc/Clear -(Was 7091076, 7091088 or 80004405)
18	704001	1	NUT, 5/16-18 Large Flange Center Lock, ZC/CL -(Was 7090951 or 80005593)
19	703185	2	BOLT, Carriage, 5/16-18 X 3/4 -(Was 7091508 or 80004072)

Handle Group

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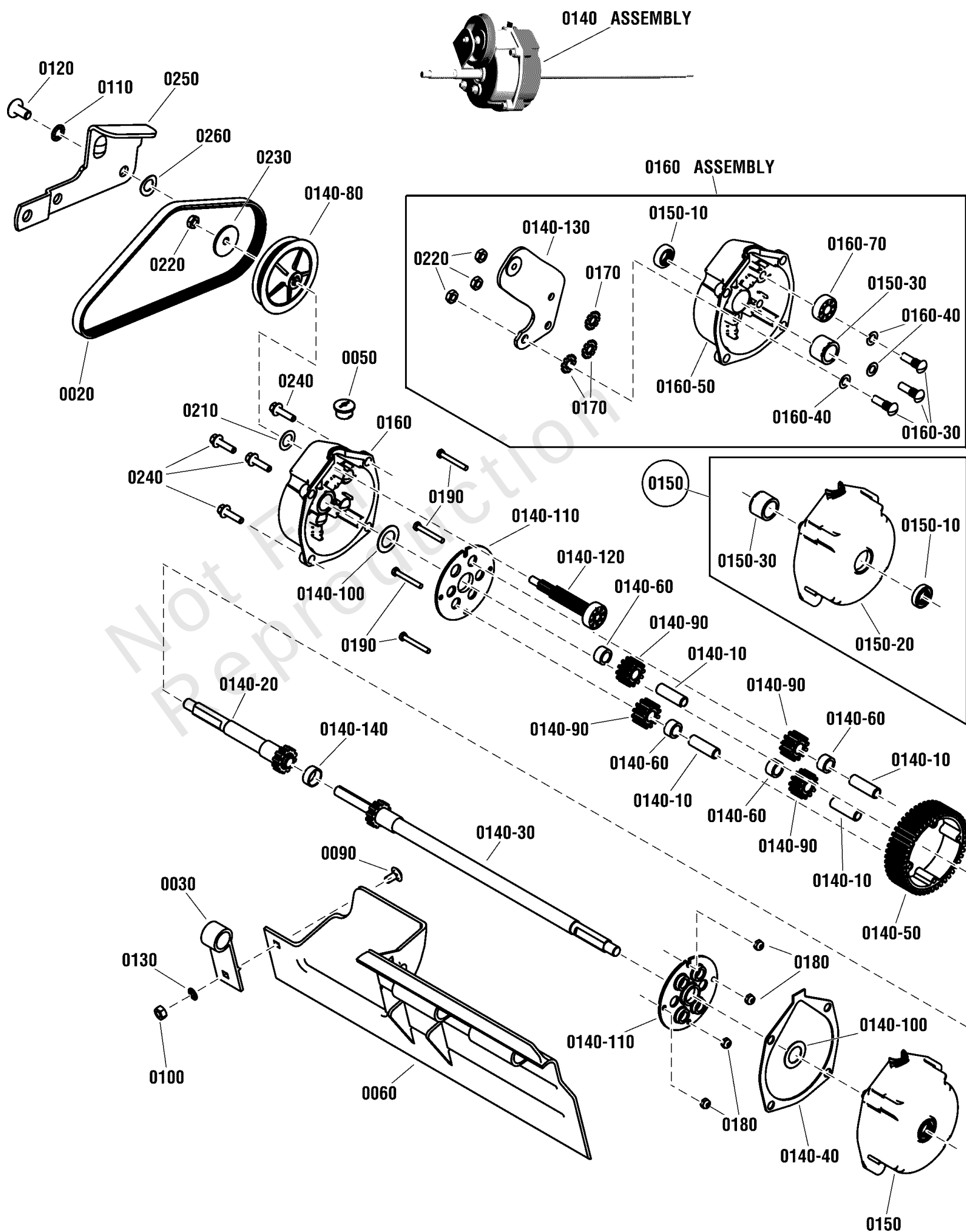
Handle Group

REF NO	PART NO	QTY	DESCRIPTION
0010	7014343YP	2	BUSHING, Flanged, .27 ID, Nylon, Black
0010-20	704030	1	PIN, 5/16 X 1.044, Self-Locking Cotter, Zinc/Clear
0010-30	7075182YP	1	KNOB, Shift, Red
0010-50	703461	1	NUT, 1/4-28 Hex, GR5, Zinc/Clear
0010-60	703350	1	WASHER, 5/16, Flat SAE, Zinc/Clear
0010-70	703460	1	NUT, #8-32, Hex, Zinc/Clear
0010-80	703351	1	SCREW, #8-32 X 0.50, Machine Fillister Head, Zinc/Clear
0010-90	703961	4	SCREW, 1/4-20 X .550, T-30 Pan Head Torx, Self-Tap
0010-110	7090391SM	6	WASHER, 5/16, Internal Lock, Zinc/Clear
0010-120	703465	6	NUT, 5/16-18, GRB, Zinc/Clear
0010-130	704063	6	BOLT, 5/16-18 X 1.50, Carriage Head, Short Neck, ZC/CL
0010-020	7074133YP	1	ROD, Speed Control (35.5" L, 1/4-28 thread)
0010-0130	7106281YP	1	CONTROL PANEL, Propelled w/Throttle
0010-0250	7033985AYP	1	HANDLE, Lower, ADJ, LH
0010-0260	7033986AYP	1	HANDLE, Lower, ADJ, RH
0020	704031	1	PIN, 1/4 X 1.5", Clevis, ZC/CL
0030	7026219YP	1	CLAMP, 7/8" Double Cable
0040	7028407YP	1	GRIP, International Symbol, 4.6" Black
0050	704004	2	WASHER, .406 ID X 1.0 OD X .063 Thk, Flat Nylon
0060	7028488MA	1	GUIDE, 1/4-20, Rope, CL/ZC
0070	703964	2	WASHER, Flat
0080	7034604YP	1	CABLE, Clutch Control, 41.25" L
0090	7078026YP	1	CONTROL, Throttle, Honda, 50.81" L
0090-10	7075308YP	1	KNOB, Throttle, Red
0090-20	690798	1	CLAMP, Casing
0090-30	703588	1	SCREW, 1/4-20 X 1.75, GR 5 Zinc/Clear
0110	7074003YP	1	BRACKET, Shift, Black Zinc
0110-40	7023813SM	1	CLIP, Wiring Harness
0110-180	7106232AYP	1	HANDLE, Middle, Black
0120	7074113BMYP	1	LEVER, Shift
0130	703232	1	NUT, 1/4-20, Nylock, GR A, Zinc/Clear
0140	703234	3	SCREW, 1/4-20 X 1.5, Hex Head Cap, GR5, ZC/CL
0150	704005	1	NUT, 1/4, Push, Zinc/Clear
0160	703462	3	WASHER, 1/4 Internal Tooth Lock, YZ
0170	703127	2	NUT, Hex, 1/4-20, GR5
0180	703589	1	CAPSCREW, Hex Head, 3/8-16 x 2, G5
0190	703347	1	NUT, Hex Center Lock, 3/8-16, G5
0200	7023810YP	1	FOAM GRIP, 18.75"
0230	7074473BMYP	1	HANDLE, CLUTCH
0240	704006	1	WASHER, 3/8" ID x 3/4" OD, Belleville, Zinc/Clear
0250	7106309YP	1	CABLE, Control Zone, 55.5" L, Honda
0260	7106258AYP	1	HANDLE, Upper, 17.53" Wide, Black
0270	7106255AYP	1	BAIL, OPC, Over-the-Top, Black

Transmission Assembly

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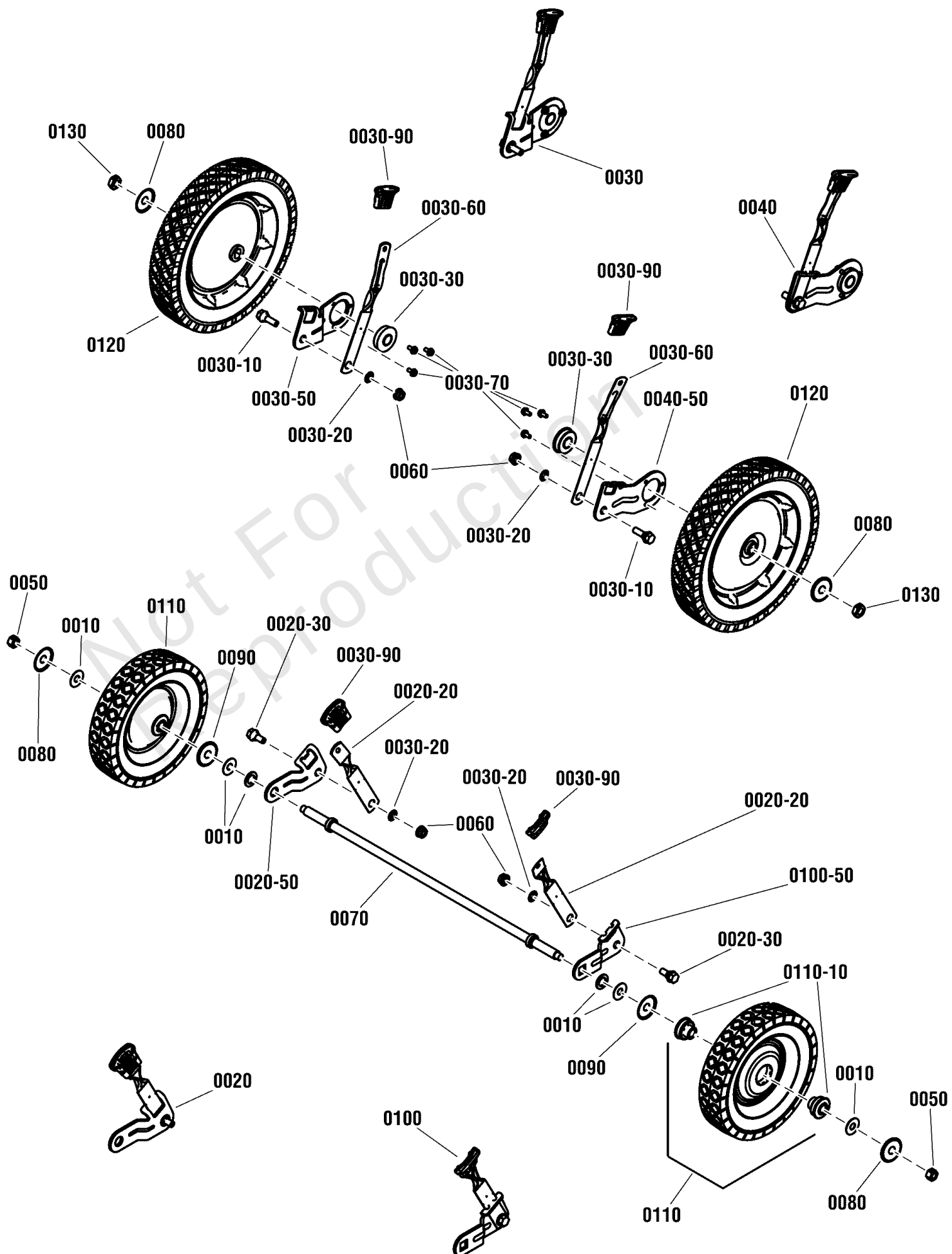
Transmission Assembly

REF NO	PART NO	QTY	DESCRIPTION
0020	7012354YP	1	BELT, Poly-V, V21
0030	7012616YP	1	SUPPORT, Foot Guard
0040	-----		GREASE, Darina 00 (Not Shown, Use 4oz. Max)
0050	703931	1	PLUG, Transmission Housing, .702 OD
0060	7029008YP	1	GUARD, Foot
0090	703978	1	BOLT, 1/4-20 X 1/2, Carriage, GR5 YZ
0100	703127	1	NUT, 1/4-20, G5 Zinc/Clear
0110	7090391SM	1	WASHER, 5/16, Internal Lock, Zinc/Clear
0120	1753983YP	1	SCREW, 5/16-18 x 5/8 Truss Head Torx
0130	703462	1	WASHER, 1/4 Internal Tooth Lock, YZ
0140	7053943YP	1	ASSEMBLY, Transmission, 21P
0140-10	7011110YP	4	SHAFT, Pinion, .471 OD, 1.5" Long
0140-40	7011774YP	1	GASKET, V21
0140-50	7012495YP	1	GEAR, 46T, V21
0140-60	703933	4	SPACER, .700 OD x .480 ID x .380 L, ZC/CL
0140-80	7019213YP	1	PULLEY, Poly-V (3.5 O.D.)
0140-90	7021115YP	4	GEAR, Pinion (12 Tooth, .625 Thick)
0140-100	7031965YP	2	WASHER, 1.25 X .765 X .03, Thrust, ZC/CL
0140-110	7031970YP	2	PLATE, Differential Gear, V21
0140-120	7050767YP	1	ASSEMBLY, Input Gear
0140-130	7051903AYP	1	WELDMENT, Differential Bracket
0140-140	703934	1	SPACER, .820 OD X .720 ID X .330 L
0140-20	7050830YP	1	ASSEMBLY, Short Axle
0140-30	7050831YP	1	ASSEMBLY, Long Axle
0150	7053939YP	1	ASSEMBLY, Left Housing
0150-10	7012314YP	2	SEAL, 5/8" ID
0150-20	7029033YP	1	HOUSING, Left Hand
0150-30	7029035YP	2	BEARING, Tapered, Differential Housing
0160	7051908YP	1	ASSEMBLY, Housing, Right Hand
0160-30	703935	3	BOLT, 5/16-24 x 1-1/8" Rib Neck, GR 5, ZC/BK
0160-40	7024442YP	3	GASKET, 5/8" O.D.
0160-50	7029034YP	1	HOUSING, Right Hand
0160-70	7073963YP	1	BEARING, Ball, 1.125 OD, .440 ID, 3.8 Wide
0170	703936	3	WASHER, .325 ID X .850 OD X .041 Thk, Internal External Lock, Type A, ZC/CL
0180	703937	4	NUT, #10-32, Nyloc, GR A, ZC/CL
0190	703938	4	SCREW, #10-32 x 1-1/2 Hex Head Cap GR5, ZC/CL
0210	703349	1	WASHER, .453 X .75 X .073, Flat, ZC/CL
0220	703459	4	NUT, 5/16-24, Hex Crown Lock, GR C, Zinc/Clear
0230	703939	1	WASHER, .32 ID x 1.40 OD x .10 Thk, Bellville, ZC/CL
0240	703833	4	SCREW, 1/4-20 x 1 Hex Washer Self-Tap, ZC/CL
0250	7034179BMYP	1	LINK, Differential, Commercial
0260	703940	1	WASHER, 0.445 ID X 0.780 OD X 0.025 Thk, Wave, ZC/CL

Wheels, Brackets & Latches

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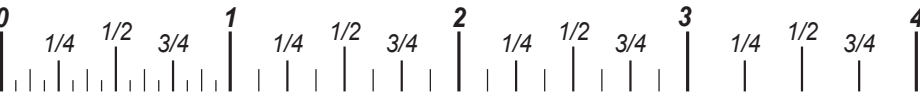
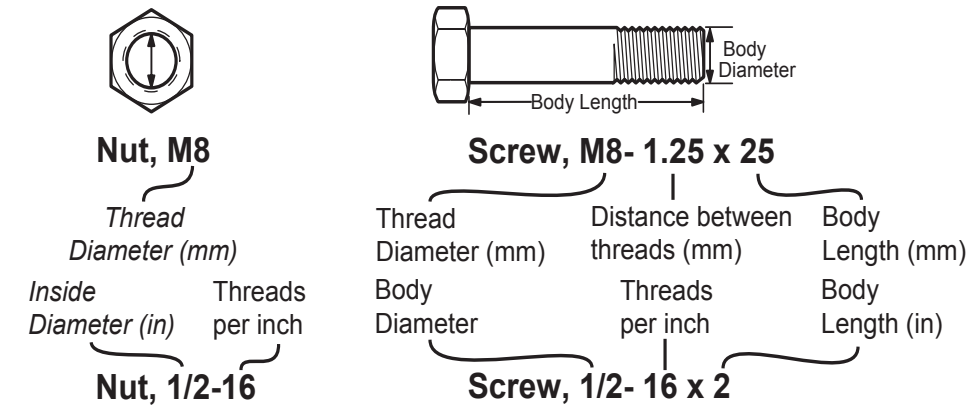
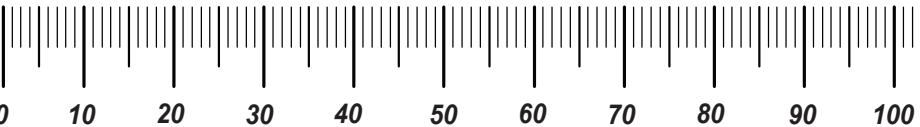
Wheels, Brackets & Latches

REF NO	PART NO	QTY	DESCRIPTION
0010	703964	6	WASHER, 7/16" ID, 1" OD, .060 Thk, Flat, ZC/CL
0020	7600180YP	1	KIT, Front Wheel Arm Assembly, RH
0020-20	7012325YP	2	LATCH, Height
0020-30	703839	2	BOLT, 5/16-18 X .750, Hex Washer Head Shoulder, Zinc/Clear
0020-50	7031017YP	1	WHEEL ARM, Front, Round Hole, RH, Clear
0030	7054246YP	1	ASSEMBLY, Wheel Arm, Long, RR
0030-10	703840	2	BOLT, 5/16-18 X 1.0, Hex Washer Head .435 Dia. Shoulder, ZC/CL
0030-20	703297	4	RETAINER, 5/16 X .625, Push Nut, GR 5, Zinc/Clear
0030-30	7012312YP	2	BEARING, 9/16" ID
0030-50	7032722YP	1	ARM, Wheel, Right Rear, Zinc/Clear
0030-60	7035717YP	2	LATCH, Height Adjusting, (long)
0030-70	703967	6	SCREW, #10-32 x 3/8, Torx Hex Washer Head Self-Tap, ZC/CL
0030-90	7103793YP	4	GRIP, Height Latch, Black
0040	7054247YP	1	ASSEMBLY, Wheel Arm, Left Rear, Long
0040-50	7032723YP	1	ARM, Wheel, Left Rear, Zinc/Clear
0050	703348	2	NUT, 7/16-20, Hex Jam Center Lock, GR B, Zinc/Clear
0060	703409	4	NUT, Serrated Lock Flange, 5/16-18
0070	7021119YP	1	AXLE, V21
0080	7031960YP	4	HUBCAP
0090	7031121YP	2	HUBCAP, V21
0100	7600179YP	1	ASSEMBLY, Front Wheel Arm, LH
0100-50	7031016YP	1	WHEEL ARM, L.H. Front (Square Hole)
0110	7035727YP	2	WHEEL, 8 x 1.75 - Steel - D - Gray
0110-10	7011125YP	4	BEARING, 7/16" ID, Ball, Front Wheel
0120	7035726YP	2	WHEEL, 10 x 1.75, Steel-D, (Self Propelled) - Gray
0130	770537	2	NUT, 7/16-20, Hex Flanged Center Lock, ZC/CL

Hardware Identification & Torque Specifications

Torque Specification Chart								
FOR STANDARD METRIC MACHINE HARDWARE (Tolerance ± 20%)								
Property Class	 Class 5.6		 Class 8.8		 Class 10.9		 Class 12.9	
Size Of Hardware	in/lbs ft/lbs	Nm.	in/lbs ft/lbs	Nm.	in/lbs ft/lbs	Nm.	in/lbs ft/lbs	Nm.
M3	5.88	.56	13.44	1.28	19.2	1.80	22.92	2.15
M4	13.44	1.28	30.72	2.90	43.44	4.10	52.56	4.95
M5	26.4	2.50	60.96	5.75	5.97	8.10	7.15	9.7
M6	44.64	4.3	7.3	9.9	10.3	14	12.1	16.5
M7	5.2	7.1	12.1	16.5	16.9	23	19.9	27
M8	7.7	10.5	17.7	24	25	34	29	40
M10	15	21	35	48	50	67	59	81
M12	26	36	61	83	86.2	117	103	140
M14	42	58	101	132	136	185	162	220
M16	64	88	147	200	210	285	250	340
M18	89	121	202	275	287	390	346	470
M20	126	171	290	390	405	550	486	660
M22	169	230	390	530	559	745	656	890
M24	217	295	497	375	708	960	840	1140
M27	320	435	733	995	1032	1400	1239	1680
M30	435	590	995	1350	1401	1900	1681	2280
M33	590	800	1349	1830	1902	2580	2278	3090
M36	759	1030	1740	2360	2441	3310	2935	3980
M39	988	1340	2249	3050	3163	4290	3798	5150

The guides and ruler furnished below are designed to help you select the appropriate hardware.



Standard Hardware Sizing

When a washer or nut is identified as 1/2" (M8), this is the *Nominal size*, meaning the *inside diameter* is 1/2 inch (8mm metric thread diameter); if a second number is present it represents the *threads per inch* (distance between threads).

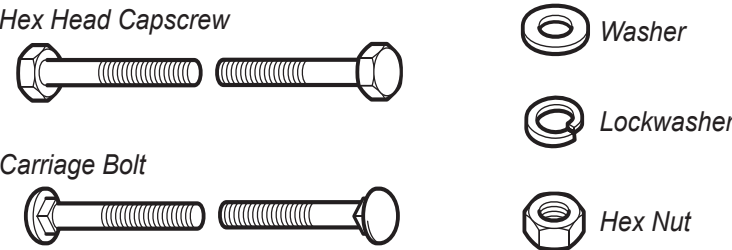
When bolt or capscrew is identified as 1/2 - 16 x 2" (M8 - 1.25 x 50), this means the *Nominal size*, or body diameter is 1/2 inch (8mm metric thread diameter), the second number, 16, represents the *threads per inch*, (*distance between threads*). The final number is the body length of the bolt or screw, 2 inches (50mm).

Torque Specification Chart						
FOR STANDARD MACHINE HARDWARE (Tolerance ± 20%)						
Hardware Grade	 SAE Grade 2		 SAE Grade 5		 SAE Grade 8	
Size Of Hardware	in/lbs ft/lbs	Nm.	in/lbs ft/lbs	Nm.	in/lbs ft/lbs	Nm.
8-32	19	2.1	30	3.4	41	4.6
8-36	20	2.3	31	3.5	43	4.9
10-24	27	3.1	43	4.9	60	6.8
10-32	31	3.5	49	5.5	68	7.7
1/4-20	66	7.6	8	10.9	12	16.3
1/4-28	76	8.6	10	13.6	14	19.0
5/16-18	11	15.0	17	23.1	25	34.0
5/16-24	12	16.3	19	25.8	29	34.0
3/8-16	20	27.2	30	40.8	45	61.2
3/8-24	23	31.3	35	47.6	50	68.0
7/16-14	30	40.8	50	68.0	70	95.2
7/16-20	35	47.6	55	74.8	80	108.8
1/2-13	50	68.0	75	102.0	110	149.6
1/2-20	55	74.8	90	122.4	120	163.2
9/16-12	65	88.4	110	149.6	150	204.0
9/16-18	75	102.0	120	163.2	170	231.2
5/8-11	90	122.4	150	204.0	220	299.2
5/8-18	100	136	180	244.8	240	326.4
3/4-10	160	217.6	260	353.6	386	525.0
3/4-16	180	244.8	300	408.0	420	571.2
7/8-9	140	190.4	400	544.0	600	816.0
7/8-14	155	210.8	440	598.4	660	897.6
1-8	220	299.2	580	788.8	900	1,244.0
1-12	240	326.4	640	870.4	1,000	1,360.0

NOTES

- These torque values are to be used for all hardware excluding: locknuts, self-tapping screws, thread forming screws, sheet metal screws and socket head setscrews.
- Recommended seating torque values for locknuts:
 - for prevailing torque locknuts - use 65% of grade 5 torques.
 - for flange whizlock nuts and screws - use 135% of grade 5 torques.
- Unless otherwise noted on assembly drawings, all torque values must meet this specification.

Common Hardware Types



Wrench & Fastener Size Guide

 1/4" Bolt or Nut Wrench—7/16"	 5/16" Bolt or Nut Wrench—1/2"	 3/8" Bolt or Nut Wrench—9/16"	 7/16" Bolt or Nut Wrench (Bolt)—5/8" Wrench (Nut)—11/16"	 1/2" Bolt or Nut Wrench—3/4"
M6 Bolt or Nut Wrench—10mm	M8 Bolt or Nut Wrench—13mm	M10 Bolt or Nut Wrench—17mm	M12 Bolt or Nut Wrench—19mm	M14 Bolt or Nut Wrench—22mm

