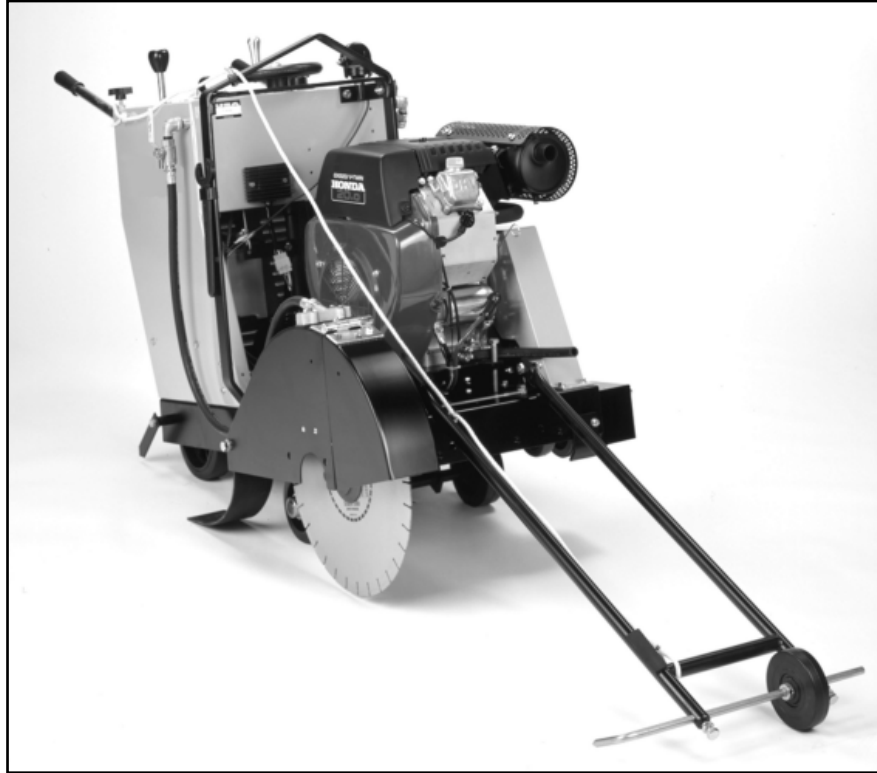


**OPERATING INSTRUCTIONS AND PARTS LIST
INSTRUCCIONES DE OPERACIÓN Y LISTA DE PIEZAS**



ECONOLINE II

For Models Equipped with
14", 18", AND 24" Blade Guards

This document supersedes all
earlier versions of 0A7714.

TARGET

DECAL DESCRIPTIONS AND LOCATIONS DESCRIPCIÓN DE CALCOMANÍAS Y UBICACIONES



P/N 046457

Location: Above Cowl On Water Safety Switch



P/N 160004

Location: Inside Cowl

GREASE BEARINGS DAILY DE LAGERS DAGELIJKS SMEREN ENGRASAR LOS RODAMIENTOS A DIARIO
LAGER TÄGLICH FETTEN GRAISSER LES ROUEMENTS CHAQUE JOUR INGRASSARE I CUSCINETTI OGNI GIORNO

040570

P/N 040570

Location: Top, Front Of Frame



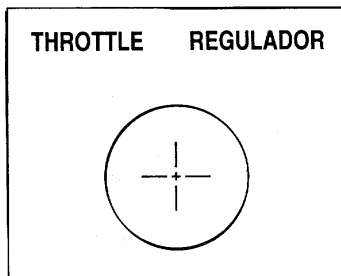
P/N 163246

Location: Rear Of Frame



P/N 167952

Location: Rear of Cowl



P/N 176242

Location: Top of Cowl



P/N 176223

Location: Rear of Cowl



P/N 046128 Decal, Warning
Qty 1

Location: Blade Guard



P/N 176203

Location: Rear of Cowl

DECAL DESCRIPTIONS AND LOCATIONS DESCRIPCIÓN DE CALCOMANÍAS Y UBICACIONES



P/N 187695
Decal, Target (1/2" Tall Letters)
Qty 1
Location: On Control Panel Decal,
LH Top Corner



P/N 187691
Decal, Target www.targetblue.com
Qty 1
Location: Front Of Cowl,
Near Serial Number Plate



P/N 187683
Decal, Target Econoline II
Qty 2
Location: LH & RH Side Of Cowl



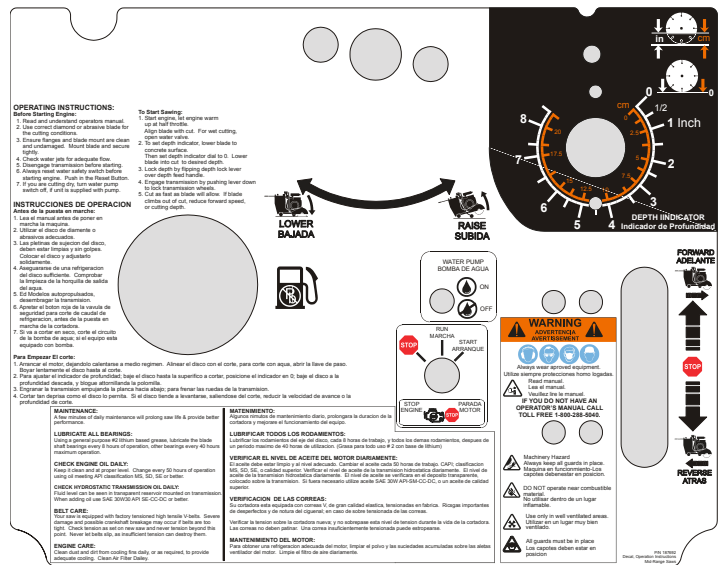
P/N 189732
Decal, Target (1" Tall Letters)
Qty 1
Location: Rear Panel



P/N 187697
Decal, Target TW-1.00 (1" Tall Letters)
Qty 1
Location: Blade Guard (Black Paint)



P/N 190083
Decal, Diesel (After February 2001)
Qty 1 (Diesel Engine Models Only)
Location: Top of Cowl



P/N 187692
Decal, Control Panel, Mid-Range Saw
Qty 1
Location: Top of Cowl

Decals For Early Models (Before February 2001):

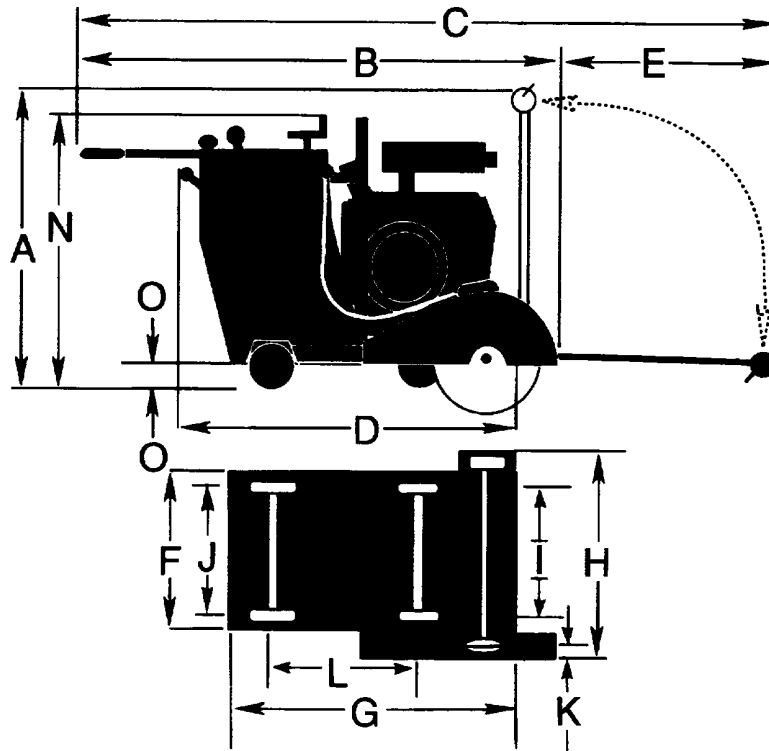


P/N 167129 Decal, Diesel
Location: Top of Cowl
Note: For Diesel Version Only, For Use With P/N 176186
Control Panel Decal.



P/N 176456 Decal Unleaded Fuel Only
Location: Top of Cowl
Note: For Gasoline Engine Models Only. For Use With
P/N 176186 Control Panel Decal

SAW DIMENSIONS [20" (500mm) Shown]



ITEM	DESCRIPTION	Inches	Metric
A	Height to Pointer Up Position	46-3/8	117,8 cm
B	Minimum Saw Length (Handles In, Pointer Up, Guard Up)	65	165,1 cm
C	Maximum Overall Length (Handles Extended, Pointer Down)	94	238,8 cm
D	Saw Length, Handles Off, Guard Up	50	127 cm
E	Pointer Extension	29	73,7 cm
F	Frame Width	20	50,8 cm
G	Frame Length	38	96,5 cm
H	Saw Width	27-3/4	70,5 cm
I	Front Axle Length	17-3/4	45,1 cm
J	Rear Axle Length	17-3/4	45,1 cm
K	Blade to Wall	3-1/4	82,6 mm
L	Wheel Base Length	19	48,3 cm
M	Blade Shaft Maximum Height	12-1/4	31,1 cm
N	Height to Crank Handle	38	96,5 cm
O	Minimum Free Height (Rear)	1-3/4	4,5 mm
	Crated Dimension: (L x H x W)	57-1/2 x 33 x 49	146 x 83,8 x 124,5 cm

EC II SPECIFICATIONS

MODEL NO:	18W	20KC	20H	24H	25KC	20D	15E
14"/20" Items Numbers:	C20012	C20020	C20069	C20076	C20024	C20032	C20039
w/ Water Pump:	C20013	C20021	C20070	C20077	C20025	C20033	----
24" Items Numbers:	N/A	C20083	C20079	C20092	C20075	N/A	N/A
w/ Water Pump:	N/A	C20084	C20080	C20081	C20082	N/A	N/A

STANDARD SAW FEATURES

Maximum Blade Guard Capacity:	--	24" (600mm)	24" (600mm)	24" (600mm)	24" (600mm)	--	--
Bladeshaft RPM:	N/A	2008	2008	2008	2008	N/A	N/A
Max. Depth Of Cut: w/24" Blade	--	9-1/2" (24cm)	9-1/2" (24cm)	9-1/2" (24cm)	9-1/2" (24cm)	--	--
Bladeshaft RPM:	N/A	2008	2008	2008	2008	N/A	N/A
Maximum Blade Guard Capacity:	20" (500mm)	20" (500mm)	20" (500mm)	20" (500mm)	20" (500mm)	20" (500mm)	20" (500mm)
Bladeshaft RPM:	2650	2620	2620	2620	2620	2650	2510
Max. Depth Of Cut: w/20" Blade	7-1/2" (19cm)	7-1/2" (19cm)	7-1/2" (19cm)	7-1/2" (19cm)	7-1/2" (19cm)	7-1/2" (19cm)	7-1/2" (19cm)
Max. Depth Of Cut: w/14" Blade	4-1/2" (11,4cm)	4-1/2" (11,4cm)	4-1/2" (11,4cm)	4-1/2" (11,4cm)	4-1/2" (11,4cm)	4-1/2" (11,4cm)	4-1/2" (11,4cm)
Bladeshaft RPM:	2650	2620	2620	2620	2620	2650	2510

Arbor Size: 1" with drive pin, blade can be mounted on either side of saw.

Blade Shaft: 1-3/16" diameter.

Blade Shaft Bearings: Dual self-aligning pillow block ball bearings.

Blade Shaft Drive: (4) premium 3VX V-belts

Blade Control: Raise / Lower with positive lock-type hand crank, screw feed with vertical grip.

Blade Coolant: Water; Dual water spray tubes; Water supply connector located on left side of saw; Control valve on right side of cowl.

Axles: **Front** 1" Diameter; raises and lowers cutting head.
Rear 1" Diameter; drives wheels when transmission is engaged.

Wheels: **Front** 6" x 2" x 1"; roller bearings, solid rubber tires, neoprene grease seals, pressure lubrication fittings provided.
Rear 8" x 3" x 1"; roller bearings, solid rubber tires, neoprene grease seals, pressure lubrication fittings provided.

Transmission: Hydrostatic drive; direct V-belt drive from engine.
Control Speed Quadco linear controller.
Infinite speed 1 to 130 FPM, forward and reverse.

Chassis: Welded box section construction

Weight (lb.) Crated:	736	605	605	608	610	677	625
Uncrated:	691	560	560	563	565	632	580
Add for:							
Pump	10	10	10	10	10	10	10
Deluxe Spotlight	7	7	7	7	7	7	7
Weight Kit	26	26	26	26	26	26	26
Outer Flange Assy	5	5	5	5	5	5	5
Tie Down Bracket Kit	5	5	5	5	5	5	5

Specifications are subject to change without notice.

POWER SOURCE

	18W	20KC	20H	24H	25KC	20D
Engine:	Wisconsin Gas Engine	Kohler Command Gas Engine	Honda Gas Engine	Honda Gas Engine	Kohler Command Gas Engine	Hatz Diesel Engine
Specifications:	TJD Inline 2-Cyl.	CH20S V-Twin OHV	GX620 V-Twin OHV	GX670 V-Twin OHV	CH25S V-Twin OHV	2G30 Inline 2-cyl.
Max. Horsepower:	18	20	20	24	25	20
Displacement: cu in (litres)	53.9 (0.88)	38 (0.62)	37.5 (0.62)	40.9 (0.67)	44 (0.72)	55.65 (0.91)
Bore: inch (mm)	3.25 (83)	3.03 (77)	3.03 (77)	3.03 (77)	3.27 (83)	3.46 (88)
Stroke: inch (mm)	3.25 (83)	2.64 (67)	2.60 (66)	2.83 (72)	2.64 (67)	2.24 (57)
Cylinders / Stroke:	2/4	2/4	2/4	2/4	2/4	2/4
Fuel Capacity: gal (litres)	2.5 (9.46)	2.5 (9.46)	2.5 (9.46)	2.5 (9.46)	2.5 (9.46)	2.5 (9.46)
Oil Capacity: pint (litres)	7 (3.3)	4 (1.9)	3 (1.5)	3 (1.5)	4.2 (2.0)	5.25 (2.5)
Air Filter:	Oil Bath	Dry Type, Dual Element	Dry Type, Canister	Dry Type, Canister	Dry Type, Dual Element	Oil Bath
Starter:	Electric	Electric	Electric	Electric	Electric	Electric
Coolant:	Air	Air	Air	Air	Air	Air

ELECTRIC MODELS:

	15E*
Motor:	Leeson
Specifications:	Electric
Rated HP:	15
Voltage:	230-460 VAC
Phase:	3 Phase
Cycles:	60 Hz.
F.L. Amp Rating:	36/18
RPM:	3450
Frame Size:	215T

*15E does not include power switch.

Specifications are subject to change without notice.

FIGURE 1 - FRAME GROUP

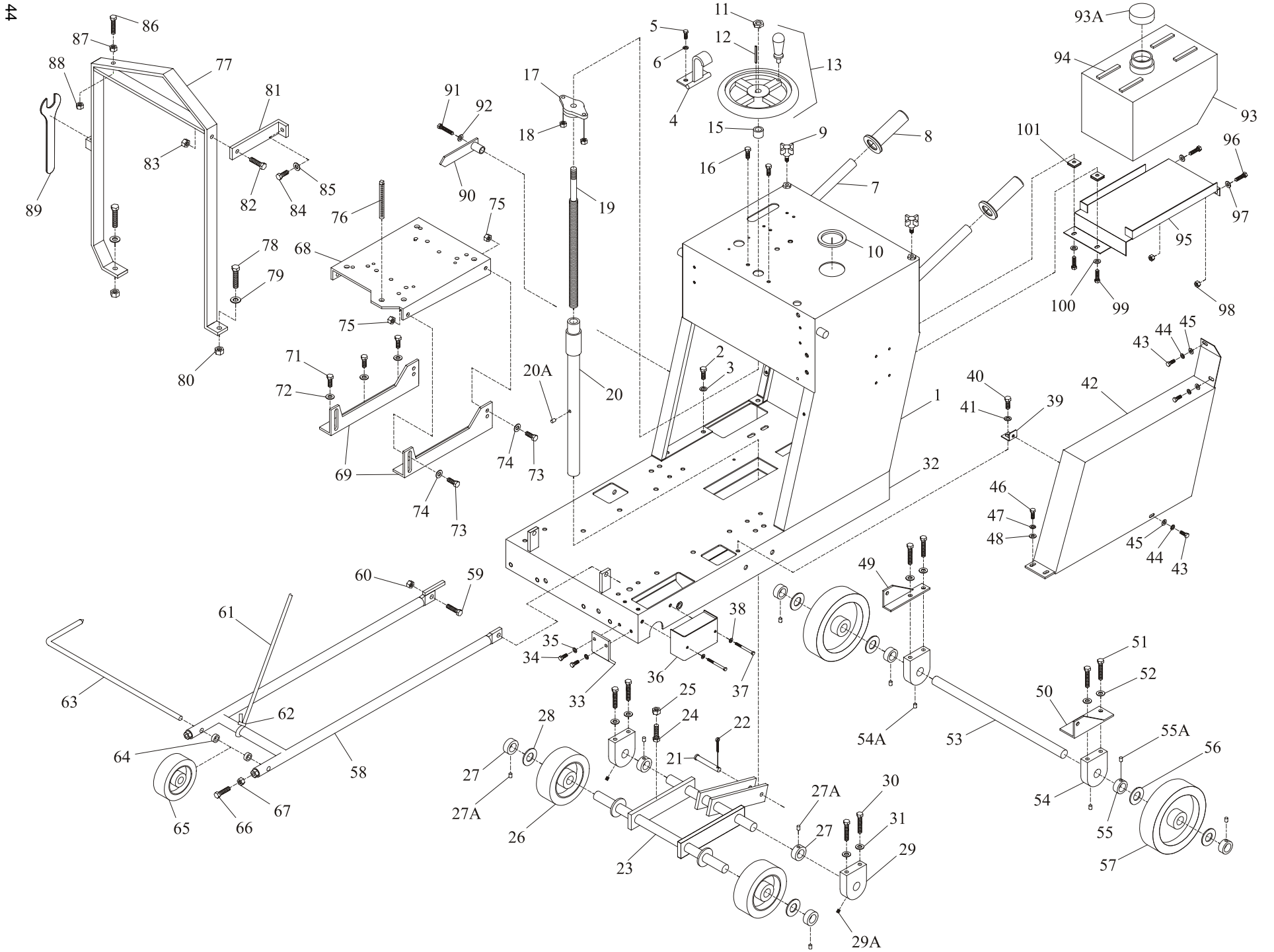


FIGURE 1 PARTS LIST

DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)	DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)
*1	176010	1	Cowl Weldment	56	046402	4	Special Flat Washer, 1" OD
*2	139749	6	Capscrew, Hex Hd. M10 x 1.5 x 25mm	57	043280	2	Wheel, 8"
*3	162004	6	Lockwasher, Split M10	*58	167423	1	Pointer, Front
4	043341	1	Depth Control Lock	*59	167564	2	Capscrew, Hex Hd. M12 x 1.75 x 45mm
*5	163688	2	Capscrew, Hex Hd. M6 x 1.0 x 16mm	*60	139742	2	Locknut, Fiber, M12 x 1.75
*6	163689	2	Lockwasher, Split M6	61	043201	1	Cord, Sash (120" Long)
7	176139	2	Handle Bar	62	043203	3	Clamp, Sash Cord
8	139568	2	Handle Grip	63	160196	1	Rod, Front Pointer
9	166038	2	Handle Knob, 3/8"-16 UNC	64	060735	2	Set Collar Assembly, 1/2" (Incl. Item 64A)
10	176179	1	Grommet, Fuel Tank	64A	-----	2	Set Screw
11	020099	1	Locknut, Flex, 5/8"-18	65	163582	1	Wheel, 5"
12	020087	1	Woodruff Key (ANSI #506)	*66	172306	2	Capscrew, Hex Hd. M12 x 1.75 x 40mm
13	043331	1	Hand Wheel Assembly	*67	173010	2	Nut, Thin, M12 x 1.75
14	-----	-----	-----	68	176023	1	Engine Base
15	176175	1	Spacer	*69	176021	2	Engine Mounting Bracket
*16	047792	2	Capscrew, Hex Hd. M10 x 1.5 x 30mm	70	-----	-----	-----
17	043321	1	Flanged Bearing, 5/8" Bore	*71	139749	6	Capscrew, Hex Hd. M10 x 1.5 x 25mm
*18	139748	2	Locknut, Fiber, M10 x 1.5	*72	162004	6	Lockwasher, Split, M10
19	176174	1	Feed Screw	*73	139741	4	Capscrew, Hex Hd. M12 x 1.75 x 30mm
20	043301	1	Feed Screw Cover	*74	173042	4	Washer, Flat, M12
20A	049924	1	Grease Fitting, 90°	*75	139742	4	Locknut, Fiber, M12 x 1.75
21	176137	1	Clevis Pin, 1/2" x 2-5/8"	*76	167439	1	Set Screw, Sq Hd. M12 x 1.75 x 100mm
22	020616	1	Cotter Pin, 1/8" x 1-1/2"	77	176082	1	Lift Bail
23	176097	1	Front Axle Weldment	*78	139741	2	Capscrew, Hex Hd. M12 x 1.75 x 30mm
*24	139749	1	Capscrew, Hex Hd. M10 x 1.5 x 25mm	*79	173042	2	Washer, Flat, M12
*25	176222	1	Nut, M10 x 1.5	*80	139742	2	Locknut, Fiber, M12 x 1.75
26	043250	2	Wheel, 6"	81	176086	1	Brace, Lift Bail (Short)
27	048078	4	Set Collar Assembly, 1" (Incl. Item 27A)	176084	1	Brace, Lift Bail (Long) (Wisc. & Hatz only)	
27A	-----	4	Set Screw	*82	167558	1	Capscrew, Hex Hd. M12 x 1.75 x 45mm
28	046402	2	Special Flat Washer, 1" ID	*83	139742	1	Locknut, Fiber, M12 x 1.75
29	176025	2	Pivot Block	*84	139744	1	Capscrew, Hex Hd. M10 x 1.5 x 20mm
29A	041175	2	Grease Zerk	*85	162004	1	Lockwasher, Split, M10
*30	176200	4	Capscrew, Hex Hd. M10 x 1.5 x 60mm	*86	139766	1	Capscrew, Hex Hd. M10 x 1.5 x 45mm
*31	162004	4	Lockwasher, Split, M10	*87	139750	1	Nut, Hex, M10 x 1.5
*32	176077	1	Frame Weldment	*88	139748	1	Locknut, Fiber, M10 x 1.5
33	164839	1	Sheave Guard	89	043650	1	Wrench
*34	197227	2	Capscrew, Hex Hd. M8 x 1.25 x 20mm	90	047091	1	Pointer, Rear
*35	020785	2	Lockwasher, Split, M8	*91	164968	1	Capscrew, Hex Hd. M10 x 1.5 x 50mm
36	167387	1	Shaft Guard	*92	162004	1	Lockwasher, Split, M10
*37	167553	2	Capscrew, Hex Hd. M8 x 1.25 x 100mm	93	176093	1	Fuel Tank, 2.5 Gallons (Incl. Item 93A)
*38	173019	2	Lockwasher, M8 (External Tooth)	93A	-----	1	Cap, Fuel Tank
*39	167433	1	Belt Guard Mounting Clip	94	174028	8	Foam Stripping
*40	139744	1	Capscrew, Hex Hd. M10 x 1.5 x 20mm	95	176050	1	Bracket, Fuel Tank
*41	162004	1	Lockwasher, Split, M10	*96	197227	2	Capscrew, Hex Hd. M8 x 1.25 x 20mm
42	176056	1	Short Belt Guard Ass'y (Honda & Kohler)	*97	173059	2	Washer, Flat, M8
	176064	1	Tall Belt Guard Ass'y (Wisc. & Hatz)	*98	139738	2	Locknut, Fiber, M8 x 1.25
*43	139761	3	Capscrew, Hex Hd. M6 x 1.0 x 20mm (For Short Guard Only)	*99	139753	2	Capscrew, Hex Hd. M8 x 1.25 x 30mm
	139761	2	Capscrew, Hex Hd. M6 x 1.0 x 20mm (For Tall Guard Only)	*100	173059	2	Washer, Flat, M8
				*101	167555	2	U-Nut, M8 x 1.25
*44	163689	3	Lockwasher, Split, M6 (Short Gd.)	DECALS (NOT SHOWN)			
	163689	2	Lockwasher, Split, M6 (Tall Gd.)	--	176186	1	Decal, Operating Instructions
*45	139746	3	Washer, Flat, M6 (Short Gd.)	--	052130	1	Decal, Target
	139746	2	Washer, Flat, M6 (Tall Gd.)	--	176202	2	Decal, Econoline II
*46	197227	2	Capscrew, Hex Hd. M8 x 1.25 x 20mm	--	167952	1	Decal, Transmission Engage
*47	020785	2	Lockwasher, Split, M8	--	163515	2	Decal, Target With Stripe
*48	173059	2	Washer, Flat, M8	--	176203	1	Decal, Hour Meter
49	176032	1	RH Transmission Pivot Point	--	176223	2	Decal (Caution Keep Shield In Place)
50	176030	1	LH Transmission Pivot Point	--	176226	1	Engine Kill Switch (Wisc TJD Only)
*51	176200	4	Capscrew, Hex Hd. M10 x 1.5 x 60mm	--	176242	1	Decal, Throttle (20HP Diesel Only)
*52	162004	4	Lockwasher, Split, M10	--	167129	1	Decal, Diesel (20HP Diesel Only)
53	176028	1	Rear Axle Shaft	--	040570	1	Decal, Grease Bearing Daily
54	176025	2	Pivot Block	--	164887	1	Decal, Alignment Adjustment
54A	020553	2	Set Screw, Socket Hd. 1/4"-28 x 1/4"	--	176456	1	Decal, Unleaded Fuel Only
55	048078	2	Set Collar Assembly, 1" (Incl. Item 55A)	--	167129	1	Decal, Fuel-Diesel
55A	-----	2	Set Screw				

FIGURE 2 - ENGINE & BLADESHAFT GROUP

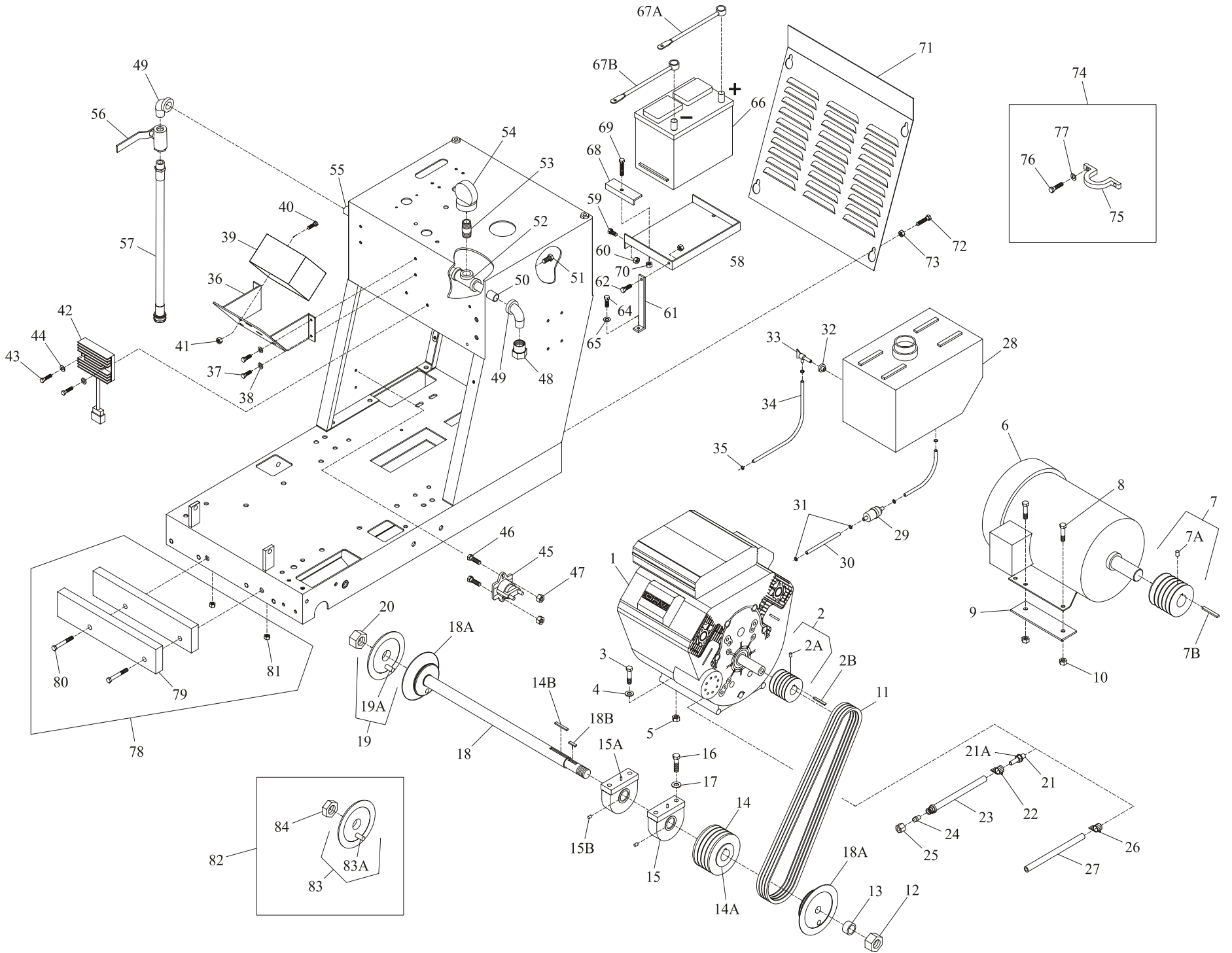


FIGURE 2 PARTS LIST (Items 1 - 30)

(Rev 07August2002)

DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)	DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)
1	176291	1	Engine, 18 HP Wisc TJD (18W)	13	048732	1	Thread Protector Sleeve
1A	-----	1	Muffler (18W Only)	14	043101	1	Pulley, 4GR3V4.12-SH (14" / 20")
--	183035	1	Engine, 20 HP Hatz Diesel (20 Hatz)	--	176353	1	Pulley, 4GR3V4.75-Type A1 (24")
--	190092	1	Engine, 20 HP Honda (See Note 1)	14A	043065	1	Hub, 1-3/16" Bore (14" / 20")
--	196033	1	Engine, 24 HP Honda (24H)	---	176354	1	Hub, SDS Tapered-1.188" (24")
--	176197	1	Engine, 20 HP Kohler Command (20KC)				(Item 14A is NOT included w/ Item 14)
--	176196	1	Engine, 25 HP Kohler Command (25KC)	14B	020067	1	Key, 1/4" Sq. x 1-1/4" Lg
2	176224	1	Pulley, 4GR3V3.65 w/SS (18W-14"/20")	15	043021	2	Bearing, Bladeshaft (includes 15B)
--	176076	1	Pulley, Taper 3.65 4GR3V (20 Hatz-14"/20")	15A	164243	2	Grease Fitting
--	176220	1	Pulley, 4GR3V3.00-1.00 w/SS (20H-14"/20")	15B	-----	4	Set Screw
--	176229	1	Pulley, 4G3V3.00-1.13 w/SS (20KC-14"/20", 25KC-14"/20")	16	176136	4	Capscrew, Hex Hd. 7/16"-14 x 2-1/2"
--	167889	1	Pulley, 4GR3V2.65-1.00 w/SS (20H-24")	17	020787	4	Lockwasher, Split, 7/16"
--	167942	1	Pulley, 4GR3V2.65-1.13 w/SS (20KC-24", 24H-24", 25KC-24")	18	176095	1	Blade Shaft
2A	020540	2	Setscrew, Socket Hd. 1/4"-20 x 1/4" (18W, 20H, 20KC & 25KC)	18A	045863	2	Inner Collar-4.50" O.D. (14" / 20")
2B	176184	1	Key, 3/8" Sq. x 2-1/4" (18W Only)	---	167187	2	Inner Collar-5.00" O.D. (24")
--	020071	1	Key, 1/4" Sq. x 2-1/4" (20H, 20KC, 24H, 25KC)	18B	043054	2	Key, Round End
*3	167558	4	Capscrew, Hex Hd. M12 x 1.75 x 45mm (18W Only)	19	043040	1	Outer Collar w/ Dowel Pin (14" / 20")
*--	139765	4	Capscrew, Hex Hd. M10 x 1.5 x 40mm (20 Hatz Only)	--	167367	1	Outer Collar w/ Dowel Pin (24")
*--	139766	4	Capscrew, Hex Hd. M10 x 1.5 x 45mm (18W, 20KC & 25KC Only)	19A	020304	1	Pin, Dowel, .375" Dia x 1.50" Long
*4	173014	4	Washer, Flat, M10 (20H Only)	20	020017	1	Nut, Hex, 1.00-14UNF (LH)
*5	139742	4	Locknut, Fiber, M12 x 1.75 (18W Only)	21	020819	1	Fitting, 3/8NPT x 3/8 Barb (18W, 20KC, 25 KC)
*--	139748	4	Locknut, Fiber, M10 x 1.5 (20 Hatz, 20H, 20KC & 25KC Only)	--	161176	1	Fitting, 90° 14NPT x 3/8 Barb (20Hatz)
6	176286	1	Electric Motor, 15 HP Leeson (15L)	*21A	167138	1	Fitting, M14 x 1.5 x 1/4NPT (20Hatz)
7	176290	1	Pulley, 4G3V14L - 1 w/ SS (15L)	22	020049	1	Clamp, Hose
7A	020540	2	Setscrew, 1/4"-20 x 1/4" Lg (15L)	23	167308	1	Hose Assy, Oil Drain, 10" Lg (18W, 20KC, 25KC)
7B	020071	1	Key, 1/4" Sq x 2-1/4" Lg (15L)	--	167304	1	Hose Assy, Oil, Drain 12" Lg (20Hatz)
*8	139765	4	Capscrew, Hex Hd. M10 x 1.5 x 40mm	24	167306	1	Cap, Blanking
9	176287	2	Spacer, Motor	25	167622	1	Nut, Tube
*10	139748	4	Locknut, Fiber, M10 x 1.5	26	020051	1	Clamp, Hose (20H Only)
11	163858	4	V-Belt, 3VX450 (18W-14"/20")	27	020967	1	Hose, 1/2" ID x 12" Lg
--	045398	4	V-Belt, 3VX475 (20 Hatz-14"/20")	28	REF	--	Fuel Tank (See Fig 1, Item 93)
--	172281	4	V-Belt, 3VX400 (20H-14"/20", 24H-24")	29	045639	1	Filter, Fuel (See Note 2)
--	163857	4	V-Belt, 3VX425 (20KC-14"/20", 25KC-14"/20", 15L-14"/20")	30	043744	1	Fuel Line, 1/4" x 36" (18W)
--	163857	4	V-Belt, 3VX425 (20KC-24", 25KC-24")	--	176243	1	Fuel Line, 5/16" x 45" (20 Hatz)
--	172281	4	V-Belt, 3VX400 (20H-24")	--	164503	1	Fuel Line, 5/16" x 37" (20H, 24H, 20KC & 25KC)
12	020018	1	Nut, Hex, 1.000-14UNF (RH)				

Notes:

1. P/N 176651 Engine, 20 hp Honda is replaced by P/N 190092 Effective March 2001.

To Retrofit the new Engine (190092) onto an older machine, P/N's 190094 Positive Battery Cable, and P/N 190093 Wiring Harness Must be used.

The Part Number of the Engine can be identified by the ENGINE Serial Number (as shown on the engine):

P/N 176651 (Engine S/N 100 0001 - 200 0000)

P/N 190092 (Engine S/N 200 0001 & Greater) (Built March 2001)

2. 045639 Filter used for all models except 20H after S/N 200 0000 and except 24H. See Honda dealer for 20H and 24H filters.

FIGURE 2 - ENGINE & BLADESHAFT GROUP

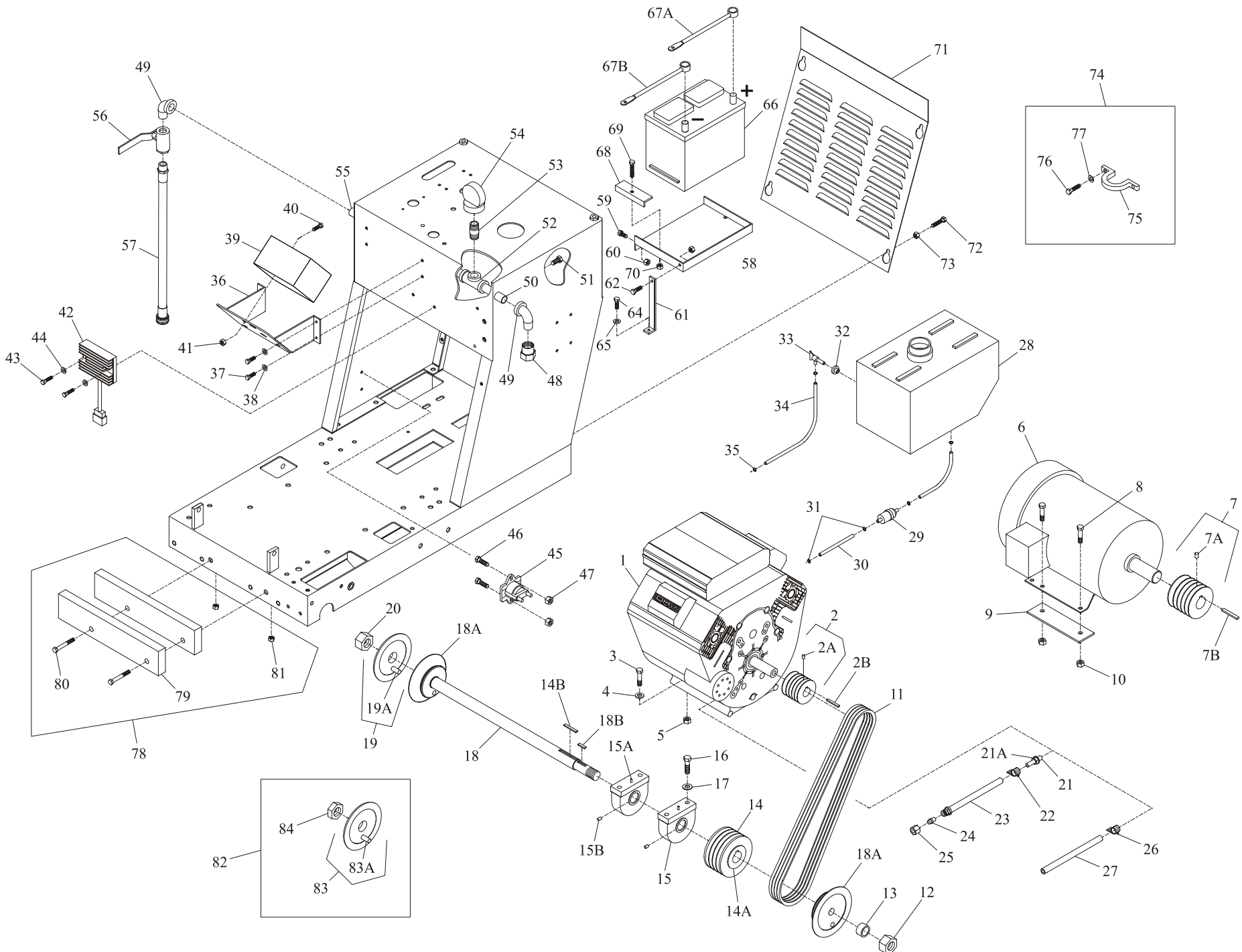


FIGURE 2 PARTS LIST (Items 31 - 85)

(08February2000)

DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)	DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)
31	020049	4	Clamp, Hose	*59	197227	2	Capscrew, Hex Hd. M8 x 1.25 x 20mm
32	164574	1	Grommet, Fuel Valve (20 HATZ Only)	*60	139738	2	Locknut, Fiber, M8 x 1.25
33	164509	1	Valve, Fuel Shut-off (20 HATZ Only)	61	176054	1	Brace, Battery Bracket
34	164504	1	Fuel Line, Return, 1/8" x 30" Lg (HATZ Only)	*62	197227	1	Capscrew, Hex Hd. M8 x 1.25 x 20mm
35	045641	2	Clamp, Hose Return (20 HATZ Only)	*63	139738	1	Locknut, Fiber, M8 x 1.25
36	176236	1	Bracket, Ctrl Box Mtg (20 HATZ Only)	*64	197227	1	Capscrew, Hex Hd. M8 x 1.25 x 20mm
*37	139761	4	Capscrew, Hex Hd. M6 x 1.0 x 20mm	*65	020785	1	Lockwasher, Split, M8
*38	163689	4	Lockwasher, Split, M6	66	043725	1	Battery, 12V Lead Acid
39	REF	--	(20HATZ) Engine Control Box	67A	REF	--	(+) Battery Cable (See Wiring Diagram)
*40	139761	3	Capscrew, Hex Hd. M6 x 1.0 x 20mm	67B	REF	--	(-) Battery Cable (See Wiring Diagram)
*41	139745	3	Locknut, Fiber, M6 x 1.0	68	048491	2	Bracket, Battery Hold Down
42	REF	--	(20H) Voltage Regulator (See Wiring Diagram)	*69	172507	2	Capscrew, Hex Hd. M8 x 1.25 x 50mm
*43	139740	2	Capscrew, Hex Hd. M6 x 1.0 x 25mm (20H)	*70	139738	2	Locknut, Fiber, M8 x 1.25
*44	163689	2	Lockwasher, Split, M6 (20H Only)	71	176088	1	Rear Shield
45	REF	--	(20H) Starter Solenoid (See Wiring Diagram)	*72	167478	4	Capscrew, Hex Hd. M8 x 1.25 x 25mm
*46	163688	2	Capscrew, Hex Hd. M6 x 1.0 x 16mm (20H)	*73	139738	4	Locknut, Fiber, M8 x 1.25
*47	139745	2	Locknut, Fiber, M6 x 1.0 (20H Only)	74	167568	1	Kit, Tie Down Bracket
48	045642	1	Fitting, 1/2NPT x GH Swivel w/ Filter	75	163977	3	Tiedown, Chain-Loop
49	020810	2	Street Elbow, 90° 1/2 NPT	*76	047792	6	Capscrew, Hex Hd. M10 x 1.5 x 30mm
50	020273	1	Pipe Nipple, 1/2-14 x 3 NPT	*77	173006	6	Lockwasher, M10 (External)
*51	139744	2	Capscrew, Hex Hd. M10 x 1.5 x 20mm	78	176125	1	Kit, Weight Bar
52	020730	1	Fitting, Pipe Tee, 1/2 NPT	79	176266	2	Weight Bar (13 lbs.)
53	020271	1	Pipe Nipple, 1/2-14 x 2 NPT	80	167444	2	Capscrew, Hex Hd. M12 x 1.75 x 75mm
54	REF	--	Water Safety Switch (See Wiring Diagram)	*81	139742	2	Locknut, Fiber, M12 x 1.75
55	176185	1	Pipe Nipple, 1/2-14 x 17-5/8 NPT	82	176292	1	Outer Collar Assy - 15/16" Cut (Optional)
56	040261	1	Valve, Ball, 1/2 NPT	83	043027	1	Outer Collar - 4.5 OD 15/16" Cut
57	176177	1	Water Hose Assembly	83A	020661	1	Pin, Dowel
58	176052	1	Battery Bracket	84	020181	1	Nut, Hex Jam Thin, 1-14
				85	176105	1	Blade Shaft Assy - Complete

FIGURE 3 – DRIVEMATIC GROUP

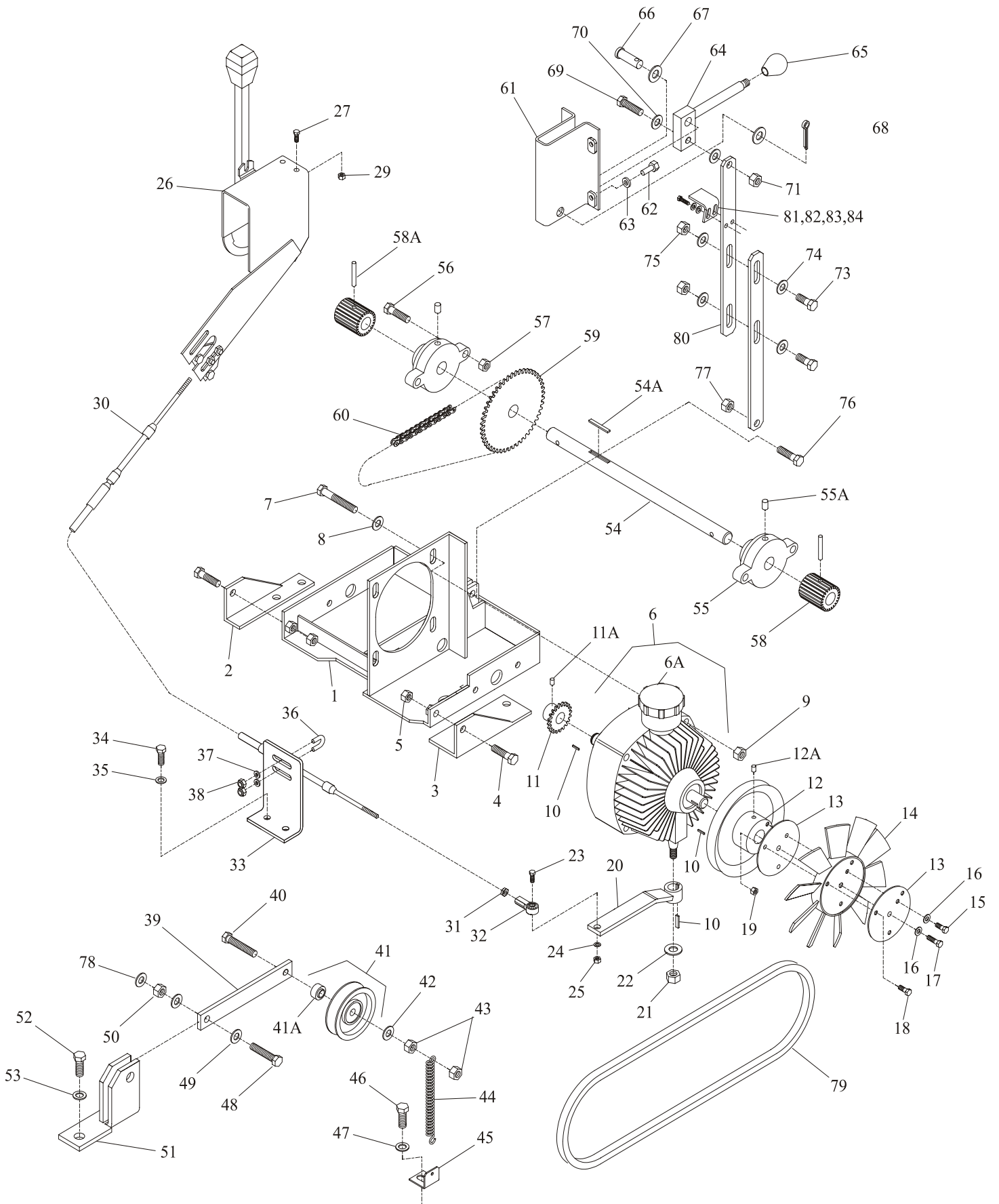


FIGURE 3 PARTS LIST

(24August2001)

DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)	DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)
1	176035	1	Transmission Base Plate	*50	139748	1	Locknut, Fiber, M10 x 1.5 ①
2	176032	1	RH Transmission Pivot Point	--	020136	2	Nut, Hex, 3/8"-16 ②
3	176030	1	LH Transmission Pivot Point	--	020168	1	Nut, Hex Jam, 3/8"-16 ③
*4	047792	2	Capscrew, Hex Hd. M10 x 1.5 x 30mm	51	176180	1	Bracket, Trans. Idler Arm ①
*5	139750	2	Nut, Hex, M10 x 1.5	*52	139744	1	Capscrew, Hex Hd. M10 x 1.5 x 20mm
6	046131	1	Transmission (includes item 6A)	*53	162004	1	Lockwasher, Split, M10
6A	048326	1	Oil Reservoir w/Cap and O-Ring	54	176042	1	Shaft, Transmission Drive
*7	139752	4	Capscrew, Hex Hd. M10 x 1.5 x 75mm	54A	020062	1	Key, 3/16" Sq. x 1-1/4"
*8	173014	4	Washer, Flat, M10	55	044161	2	Bearing, Flange, 3/4" Bore
9	139748	4	Locknut, Fiber, M10 x 1.5	55A	041175	2	Fitting, 90° Grease 1/4"-28 Thread
10	020085	3	Key, Woodruff (ANSI #404)	56	048740	4	Capscrew, Hex Hd. 3/8"-16UNC x 1-1/4"
11	041370	1	Sprocket w/ Setscrew (#35 12 Teeth)	57	020199	4	Locknut, Fiber, 3/8"-16
11A	020540	2	Setscrew, Socket Hd. 1/4"-20 x 1/4" (incl. w/ Item 11)	58	044181	2	Wheel, Drive
12	176135	1	Pulley, Trans. Drive w/ Setscrew	58A	020643	2	Pin, Roll, 1/4" DIA x 1-1/4"
12A	020540	2	Setscrew, Socket Hd. 1/4"-20 x 1/4" (incl. w/ Item 12)	59	041389	1	Sprocket w/ Setscrew (#35 48 Teeth)
13	163040	2	Plate, Fan Attachment	59A	020541	2	Setscrew, Socket Hd. 1/4"-20 x 3/8"
14	163105	1	Fan Blade	60	176178	1	Chain, Roller, #35, 60 Pitch
15	021423	1	Capscrew, Hex Hd. 1/4"-20 x 1/2"	61	176046	1	Bracket, Transmission Engagement
16	020776	2	Lockwasher, Split, 1/4"	*62	176201	4	Capscrew, Socket Btn Hd. M6 x 1.0 x 16mm
17	020370	1	Capscrew, Hex Hd. 1/4"-20 x 3/4"	*63	163689	4	Lockwasher, Split, M6
*18	172315	3	Capscrew, Hex Hd. M5 x 0.8 x 16mm	64	167791	1	Lever, Trans. Engagement
*19	172316	3	Locknut, Fiber, M5 x 0.8	65	041427	1	Knob, Trans. Lever, 3/8-16UNC
20	176166	1	Lever Weldment, Control	66	167843	1	Pin, Clevis, 1/2" DIA x 1-1/2" Lg
21	020199	1	Locknut, Fiber, 3/8"-16	67	020766	2	Washer, Flat, 1/2" SAE
*22	173014	1	Washer, Flat, M10	68	167035	1	Cotter Pin
*23	167484	1	Screw, Pan Hd. M4 x 0.7 x 20mm	*69	047792	1	Capscrew, Hex Hd. M10 x 1.5 x 30mm
24	020739	1	Washer, Flat, #10	*70	173014	2	Washer, Flat, M10
*25	167485	1	Locknut, Fiber, M4 x 0.7	*71	139748	1	Locknut, Fiber, M10 x 1.5
26	176173	1	Quadco Speed Controller	72	176044	2	Linkage, Trans. Engagement
*27	139761	4	Capscrew, Hex Hd. M6 x 1.0 x 20mm	*73	139749	2	Capscrew, Hex Hd. M10 x 1.5 x 25mm
*29	139745	4	Locknut, Fiber, M6 x 1.0	*74	173014	4	Washer, Flat, M10
30	164616	1	Cable, Speed Control	*75	139748	2	Locknut, Fiber, M10 x 1.5
31	136685	2	Nut, Hex Jam, #10-32	*76	167034	1	Capscrew, Hex Hd. M10 x 1.5 x 40mm
32	046591	1	Rod End 10-24	*77	139748	1	Locknut, Fiber, M10 x 1.5
33	176171	1	Bracket, Trans. Cable Control	78	020786	1	Lockwasher, Split, 3/8" (KC & Wisc Only)
*34	139761	2	Capscrew, Hex Hd. M6 x 1.0 x 20mm	79	176225	1	Belt, Accessory, A-51 (18W, 20HATZ, 20KC & 25KC)
*35	163689	2	Lockwasher, Split, M6	--	046220	1	Belt, Accessory, A-52 (20H)
*36	167477	1	U-Bolt, M5 x 0.8	--	047310	1	Belt, Accessory, 4L510 (15L)
*37	173047	2	Washer, Flat, M5				Transmission Disengagement Spring Group (Not shown on Diagram)
*38	172316	2	Locknut, Fiber, M5 x 0.8	*--	163688	1	Capscrew, Hex Hd. M6 x 1.0 x 16mm
39	176182	1	Idler Arm	*--	163689	1	Lockwasher, Split M6
--	176257	1	Idler Arm ②	--	163198	1	Spring, Compression, Stainless
*40	139766	1	Capscrew, Hex Hd. M10 x 1.5 x 45mm	--	160465	1	Clamp, Mounting
41	167764	1	Pulley, Idler (Incl. Item 41A)				
*41A	167762	1	Bushing, M10				
*42	173014	1	Washer, Flat, M10				
*43	139748	2	Locknut, Fiber, M10 x 1.5				
44	139102	1	Spring				
45	163259	1	Clip, Idler Spring				
*46	172028	1	Capscrew, Hex Hd. M8 x 1.5 x 16mm	①			USED ON (Hatz, Honda & Leeson)
*47	020785	1	Lockwasher, Split, M8	②			(20 & 25 HP Kohler Command Only)
*48	139744	1	Capscrew, Hex Hd. M10 x 1.5 x 20mm ①	③			(Wisc TJD Only)
--	020377	1	Capscrew, Hex Hd. 3/8"-16 x 1-1/2" ②				
--	172605	1	Capscrew, Hex Hd. 3/8"-16 x 1-3/4" ③				
49	020743	4	Washer, Flat, 3/8" ②				

FIGURE 4 – BLADE GUARD ASSY

(Rev 26July2001)

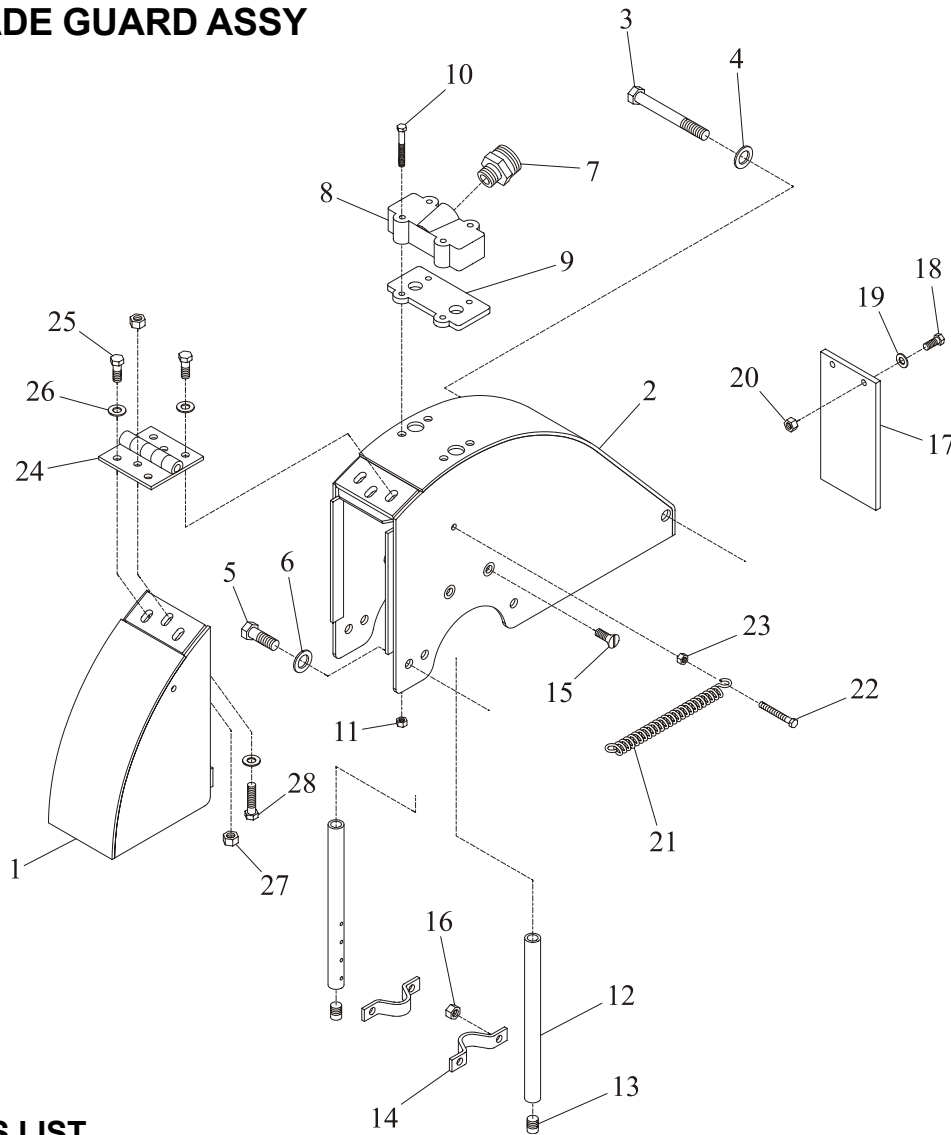


FIGURE 4 PARTS LIST

DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION	DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION
0	-----	1	Blade Guard Assy – 14" (Use 20")	14	049212	2	Clamp, Water Tube
--	190227	1	Blade Guard Assy – 20" Blue (3-6 Not Incl)	15	167818	4	Screw, Flat, Slot Hd. M6 x 1.0 x 16mm
--	176204	1	Blade Guard Assy – 20" Black (3-6 Not Incl)	16	139745	4	Locknut, Fiber, M6 x 1.0
--	190222	1	Blade Guard Assy – 24" Blue (3-6 Not Incl)	17	163275	1	Guard, Splash
--	183015	1	Blade Guard Assy – 24" Black (3-6 Not Incl)	18	139761	2	Capscrew, Hex Hd. M6 x 1.0 x 20mm
1	176232	1	Front Guard Weldment – 14" Black	19	139746	2	Washer, Flat, M6
--	176153	1	Front Guard Weldment – 20" Blue	20	139745	2	Locknut, Fiber, M6 x 1.0
--	176152	1	Front Guard Weldment – 20" Black	21	043145	1	Spring
--	176324	1	Front Guard Weldment – 24" Blue	22	139761	2	Capscrew, Hex Hd. M6 x 1.0 x 20mm
--	176323	1	Front Guard Weldment – 24" Black	23	172017	4	Nut, Standard Hex, M6 x 1.0
2	-----	1	Rear Guard (Not Available Use Item 0)	24	049154	1	Hinge
3	167531	1	Capscrew, Hex Hd. M12 x 1.75 x 130mm	25	167478	4	Capscrew, Hex Hd, M8 x 1.25 x 25mm
4	020788	1	Lockwasher, Split, 1/2"	26	173059	6	Washer, Flat, M8
5	139751	1	Capscrew, Hex Hd. M12 x 1.75 x 25mm	27	139738	6	Locknut, Fiber, M8 x 1.25
6	020788	1	Lockwasher, Split, 1/2"	28	197228	2	Capscrew, Hex Hd. M8 x 1.25 x 40mm
7	040275	1	Fitting, 3/8" NPT x 3/4" Male Garden Hose				24" Blade Guard Items Not Shown:
8	049196	1	Manifold	--	176402	1	Brace, Blade Guard
9	049206	1	Gasket, Manifold	--	139749	1	Capscrew, Hex Hd, M10 x 1.5 x 25mm
10	167551	4	Capscrew, Hex Hd. M6 x 1.0 x 40mm	--	162004	1	Lockwasher, Split, M10
11	139745	4	Locknut, Fiber, M6 x 1.0	--	173014	1	Washer, Flat, M10
12	167045	2	Water Tube – 14" Guard	--	166890	1	Capscrew, Hex Hd, M6 x 1.0 x 30mm
--	167046	2	Water Tube – 20" Guard	--	139746	1	Washer, Flat, M6
--	176330	2	Water Tube – 24" Guard	--	139745	1	Locknut, Fiber, M6 x 1.0
13	020864	2	Plug, 1/8" NPT Socket Hd – Brass				

FIGURE 5 – DEPTH INDICATOR ASSY

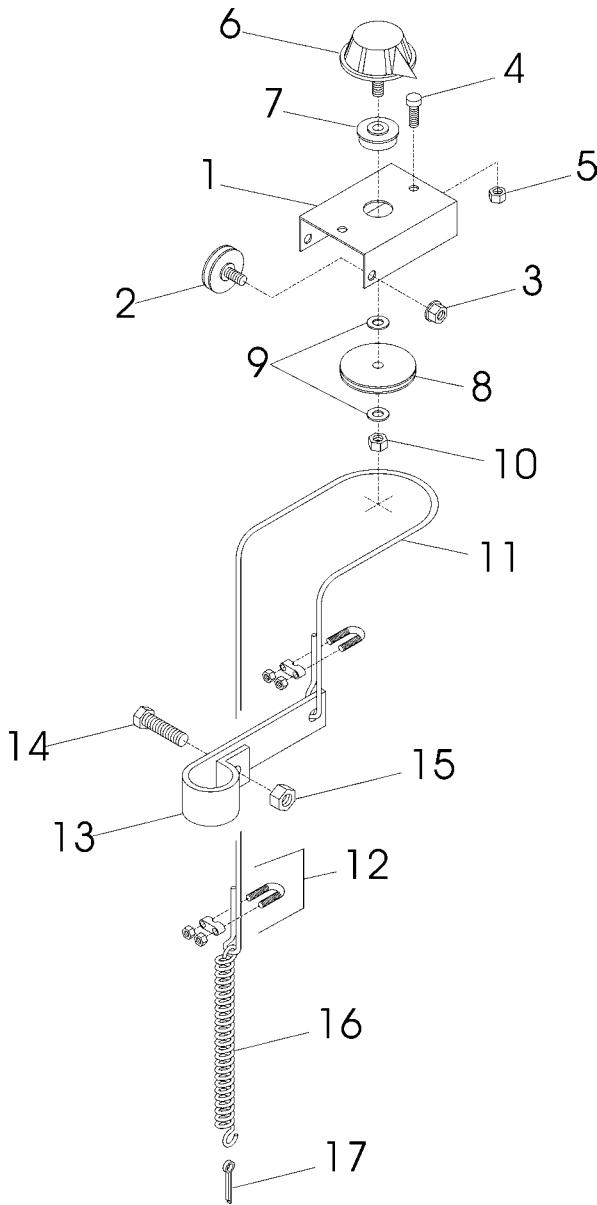


FIGURE 5 PARTS LIST

DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)
	176118	1	Depth Indicator Assy (Incl. Items 1-17)
1	043711	1	Mounting Bracket
2	030822	2	Pulley and Bearing Assy
3	032366	2	Locknut, 5/16"-18 (KEPS)
*4	172390	2	Capscrew, Socket Button Hd. M5 x .8 x 14mm
*5	172316	2	Locknut, Fiber, M5 x .8
6	163261	1	Knob, Depth Indicator
7	043696	1	Bearing, Flanged
8	043694	1	Pulley, Depth Indicator
9	020763	2	Washer, Flat, SAE 5/16"
10	020197	1	Locknut, Fiber, 5/16"-18
11	043697	1	Cable, 1/8" x 37" Long
*12	167477	2	Clamp, Cable 6.5mm with M5 Nuts
13	043702	1	Cable Connecting Arm
*14	139749	1	Capscrew, Hex Hd. M10 x 1.5 x 25mm
*15	139748	1	Locknut, Fiber, M10 x 1.5
16	043757	1	Spring, 8-1/4" LG x 3/8" OD
17	020619	1	Pin, Cotter, 3/16" x 1-1/2"

FIGURE 6 – DELUXE LIGHT KIT

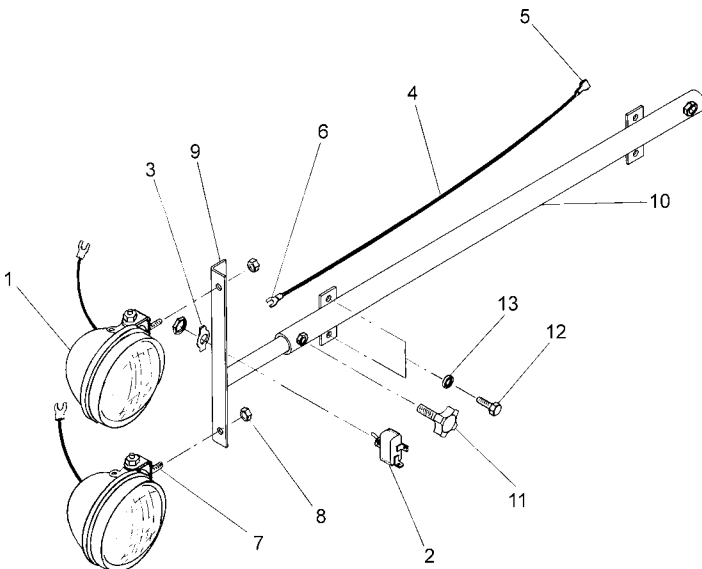


FIGURE 6 PARTS LIST

DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)
	176124	1	Kit, Deluxe Light Complete
1	0499919	2	Light
2	052120	1	Switch
3	090552	1	Plate, Switch
4	0499925	1	Wire, 16 GA x 36"
5	164370	1	Terminal, Male
6	046440	3	Terminal
*7	197227	2	Capscrew, Hex Hd. M8 x 1.25 x 20mm
*8	139738	2	Locknut, Fiber, M8 x 1.25
9	163758	1	Bar, Support
10	176141	1	Tube, Support
11	166038	1	Knob, 3/8" UNC Thread
*12	139761	4	Capscrew, Hex Hd. M6 x 1.0 x 20mm
*13	163689	4	Lockwasher, Split, M6

FIGURE 7 – WATER PUMP KIT

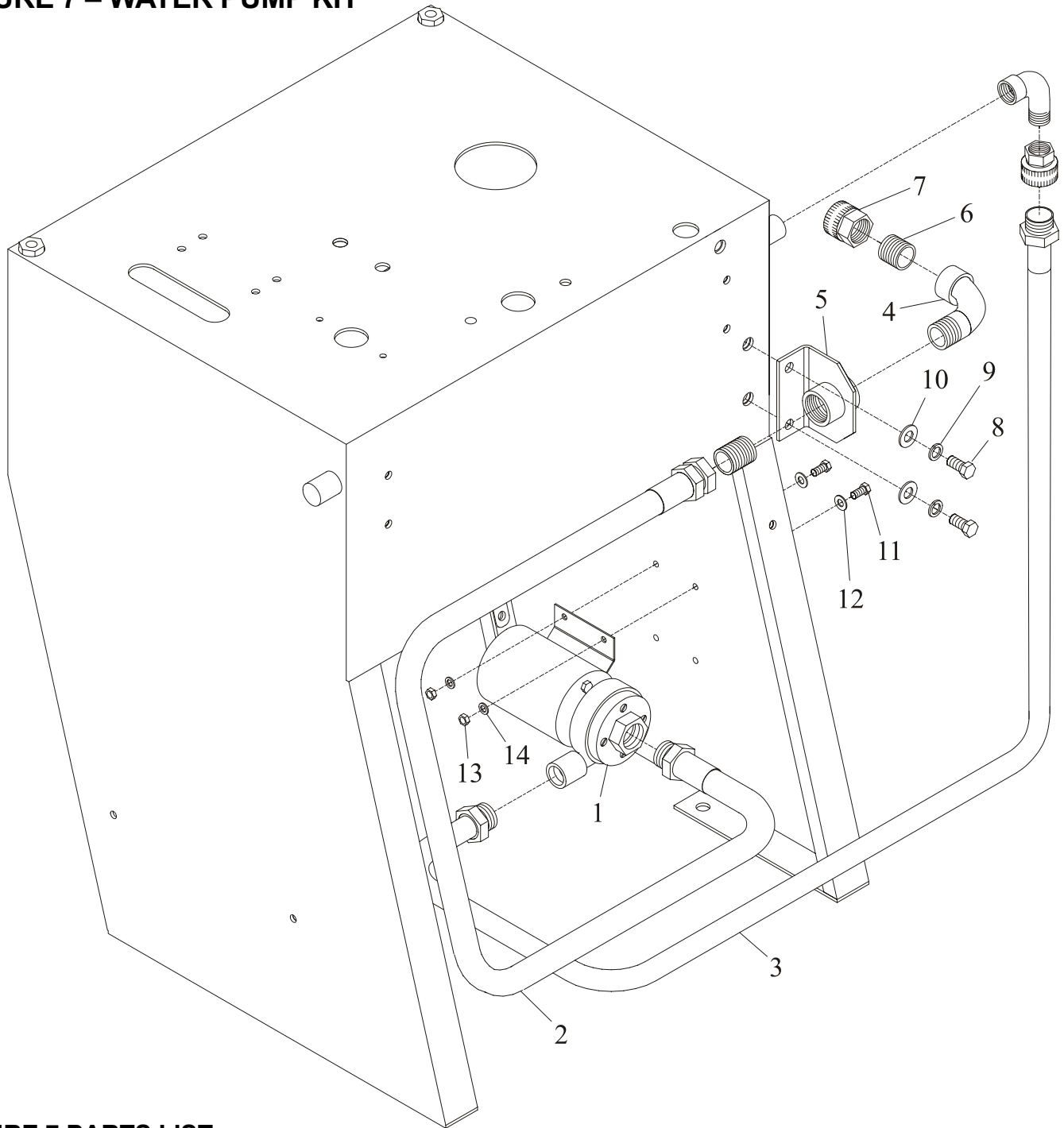


FIGURE 7 PARTS LIST

DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)	DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)
	167554	1	Water Pump Kit (Metric/English)	6	020296	2	Fitting, Nipple-Close 3/4" NPT
1	164977	1	Water Pump	7	045643	1	Swivel, with Filter (Incl. Items 7A-7B)
	-----	--	Replacement Water Pump Parts:	7A	040271	1	Swivel, Without Filter
1A	164083	1	Motor, Impeller, Gasket & Seal	7B	045640	1	Washer, Filter
1B	164580	1	Seal & Gasket Kit	*8	139744	2	Capscrew, Hex Hd. M10 x 1.5 x 20mm
1C	164578	1	Gasket Only		020322	2	Capscrew, Hex Hd. 3/8"-16 x 3/4"
1D	164579	1	Seal Only	*9	162004	2	Lockwasher, Split, M10
1E	164581	1	Impeller Only	*10	173014	2	Washer, Flat, M10
1F	164582	1	Motor Only	*11	139761	4	Capscrew, Hex Hd. M6 x 1.0 x 20mm
2	163770	1	Hose Assembly, 3/4" DIA (Inlet)	*12	139746	4	Washer, Flat, M6
3	163769	1	Hose Assembly, 1/2" DIA (Outlet)	*13	139745	4	Locknut, Fiber, M6 x 1.0
4	040273	2	Fitting, 90° Street Elbow, 3/4" NPT	14	020762	4	Washer, Flat, 1/4" SAE
5	163594	1	Bracket, Water Pump				

FIGURE 8 – WIRING DIAGRAM – WISCONSIN TJD

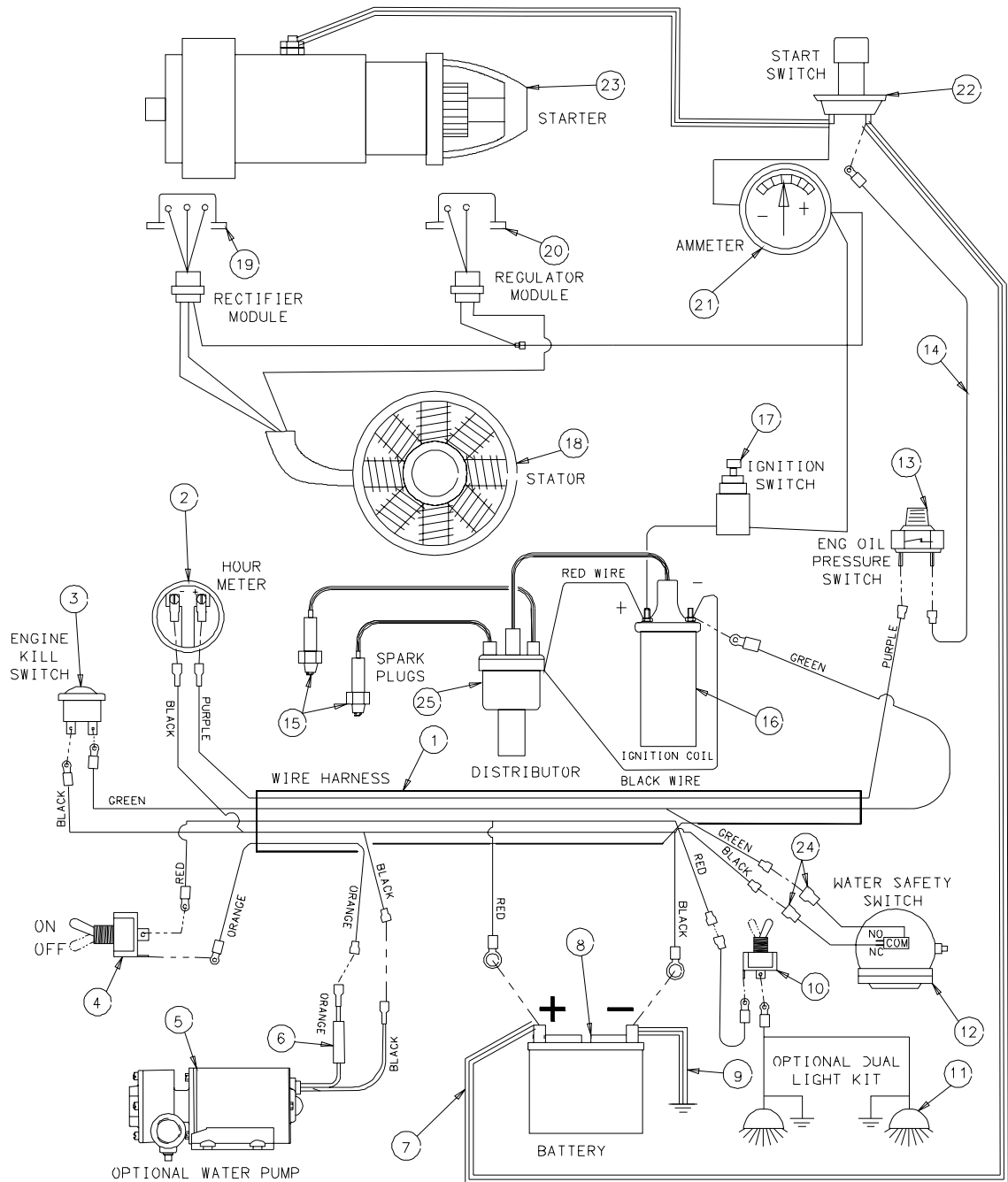


FIGURE 8 PARTS LIST

DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)	DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)
1	176191	1	Wiring Harness	13	166268	1	Switch, Engine Oil Pressure
2	163779	1	Gauge, Hour Meter	14	176227	1	Wire Lead
3	041317	1	Switch, Engine Kill	15	-----	2	Spark Plug
4	052120	1	Switch, Toggle – Water Pump	16	-----	1	Magneto (Wisc #Y79 Series FMX2B7)
5	167554	1	Water Pump Kit	17	-----	1	Switch, Ignition (Wisc # YC9F)
6	-----	1	Fuse, 10A	18	-----	1	Stator (Wisc # YB-82)
7	163180	1	Battery Cable, (+) Positive, 52" Red	19	-----	1	Rectifier Module (Wisc # YJ-68)
8	043725	1	Battery, 12V Lead Acid	20	-----	1	Regulator Module (Wisc # YJ-60)
9	117133	1	Battery Cable, (-) Negative, 26" Black	21	-----	1	Ammeter (Wisc # YE2)
10	052120	1	Switch, Toggle – Light Kit	22	-----	1	Switch, Start (Wisc # YC10A)
11	176124	1	Deluxe Light Kit	23	-----	1	Starter Assy (Wisc # EEA100)
12	043686	1	Switch, Water Safety	24	164370	2	Connector, Male Push-On

FIGURE 9 – WIRING DIAGRAM – KOHLER COMMAND

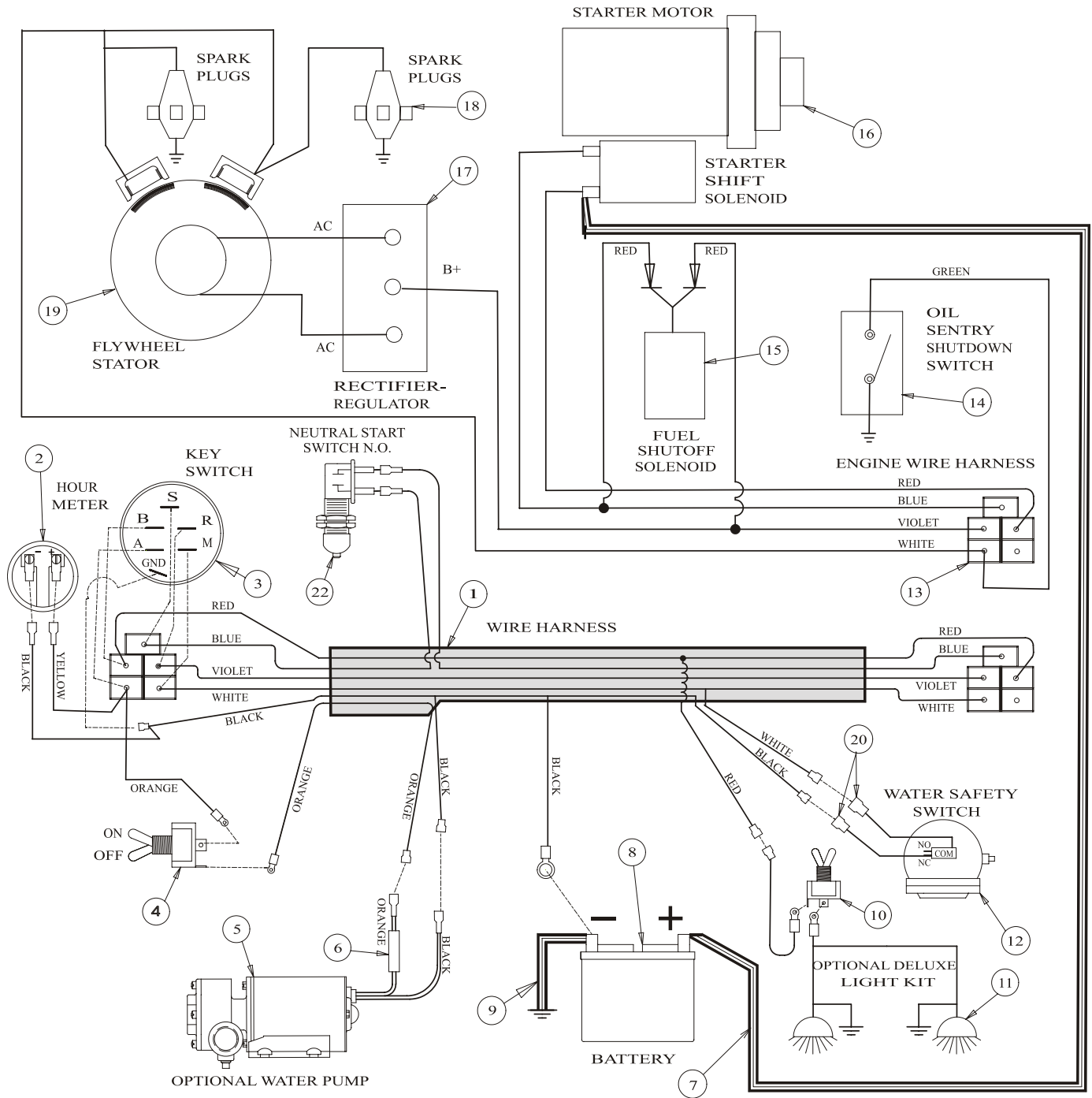


FIGURE 9 PARTS LIST

DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)	DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)
1	176228	1	Wiring Harness	13	-----	1	Engine Wire Harness
2	163779	1	Gauge, Hour Meter	14	-----	1	Switch, Oil Sentry Shut Down
3	167735	1	Keyswitch (Kohler # 25 099 04)	15	-----	1	Fuel Solenoid Shut Down
4	052120	1	Switch, Toggle – Water Pump	16	-----	1	Starter Assy
5	167554	1	Water Pump Kit	17	-----	1	Rectifier – Regulator
6	-----	1	Fuse, 10A	18	-----	2	Spark Plug
7	163180	1	Battery Cable, (+) Positive, 52" Red	19	-----	1	Flywheel Stator
8	043725	1	Battery, 12V Lead Acid	20	164370	1	Connector, Male Push-On
9	117133	1	Battery Cable, (-) Negative, 26" Black	---	176398	1	Neutral Start Switch
10	052120	1	Switch, Toggle – Light Kit	22	--	1	Neutral Safety Start Switch Trigger
11	176124	1	Deluxe Light Kit	23	046440	2	Forked Terminal
12	043686	1	Switch Water Safety				

FIGURE 10A - WIRING DIAGRAM - HONDA GX620 (Engine S/N 100 0001 - 200 0000)

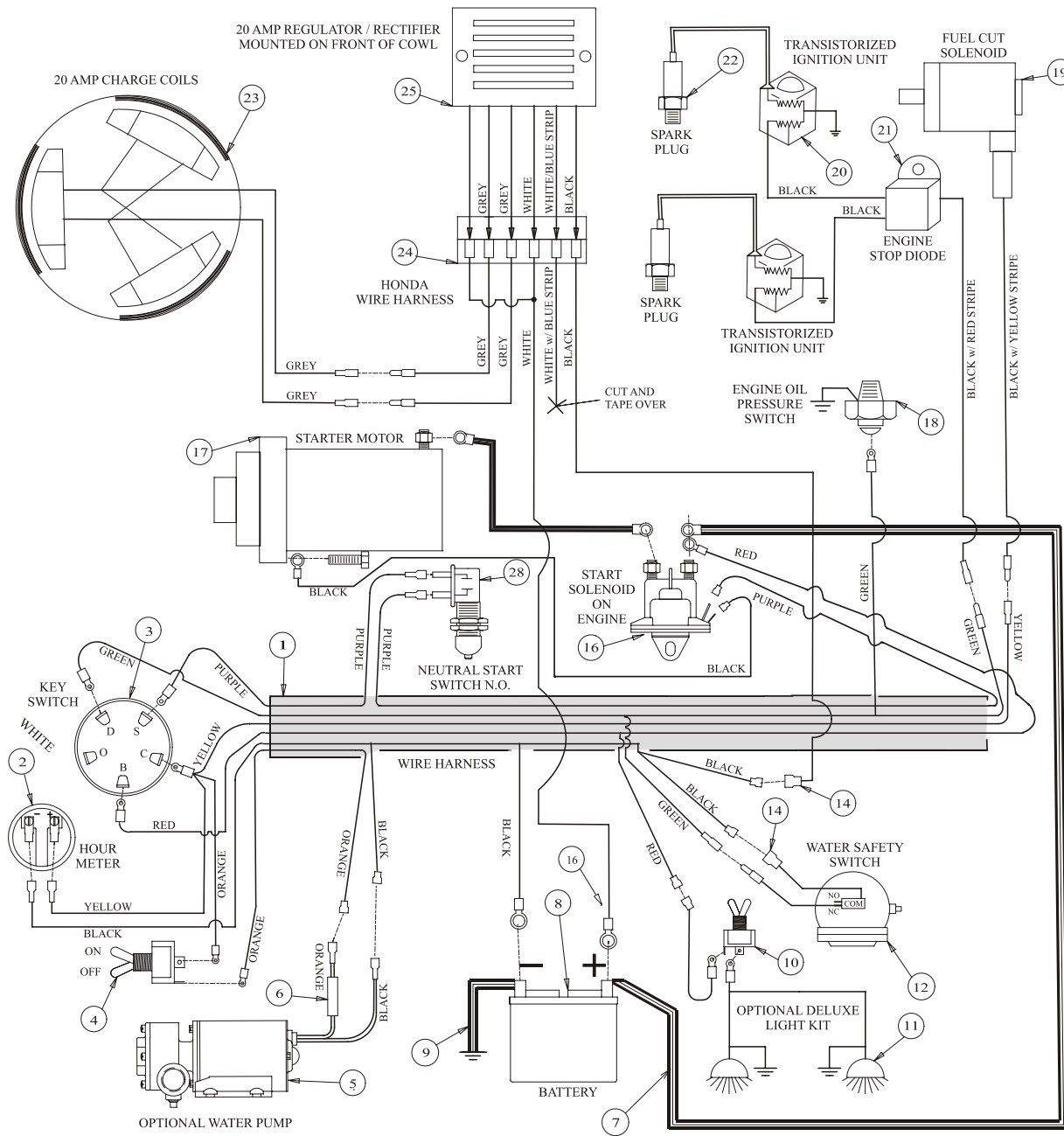


FIGURE 10A - PARTS LIST

DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)	DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)
1	176720	1	Honda Wiring Harness (For S/N's Shown)	16	-----	1	Solenoid, Starter
2	163779	1	Gauge, Hour Meter	17	-----	1	Motor, Starter
3	163830	1	Keyswitch, (Wisconsin # YC78D)	18	-----	1	Switch Engine Oil Pressure (Honda #37240-ZG3-E01)
4	052120	1	Switch, Toggle – Water Pump	19	-----	1	Fuel Solenoid Shut Down
5	167554	1	Water Pump Kit	20	-----	1	Transistorized Ignition Unit
6	-----	1	Fuse, 10A	21	-----	1	Engine Stop Diode
7	190092	1	Battery Cable, (+) Positive, 24" Red	22	-----	2	Spark Plug
8	043725	1	Battery, 12V Lead Acid	23	-----	1	Charging Coil, 20A (Honda # 31630-ZJ1-801)
9	163179	1	Battery Cable, (-) Negative, 40" Black	24	-----	1	Engine Wire Harness
10	052120	1	Switch, Toggle – Light Kit	25	-----	1	Rectifier-Regulator, 20A (Honda #31620-ZG5-003)
11	176124	1	Deluxe Light Kit	---	---	---	---
12	043686	1	Switch, Water Safety	28	176398	1	Neutral Safety Switch NO
13	176217	1	Connector, Male Plug (Hi-Line #SP 228)	---	---	---	---
14	164370	1	Connector, Male Push-On	29	046440	2	Forked Terminal
15	-----	---	---				

FIGURE 10B - WIRING DIAGRAM - HONDA GX620 (Effective Engine S/N 200 0001)

(July 18, 2003)

(Ref. Wiring Diag. 542182209)

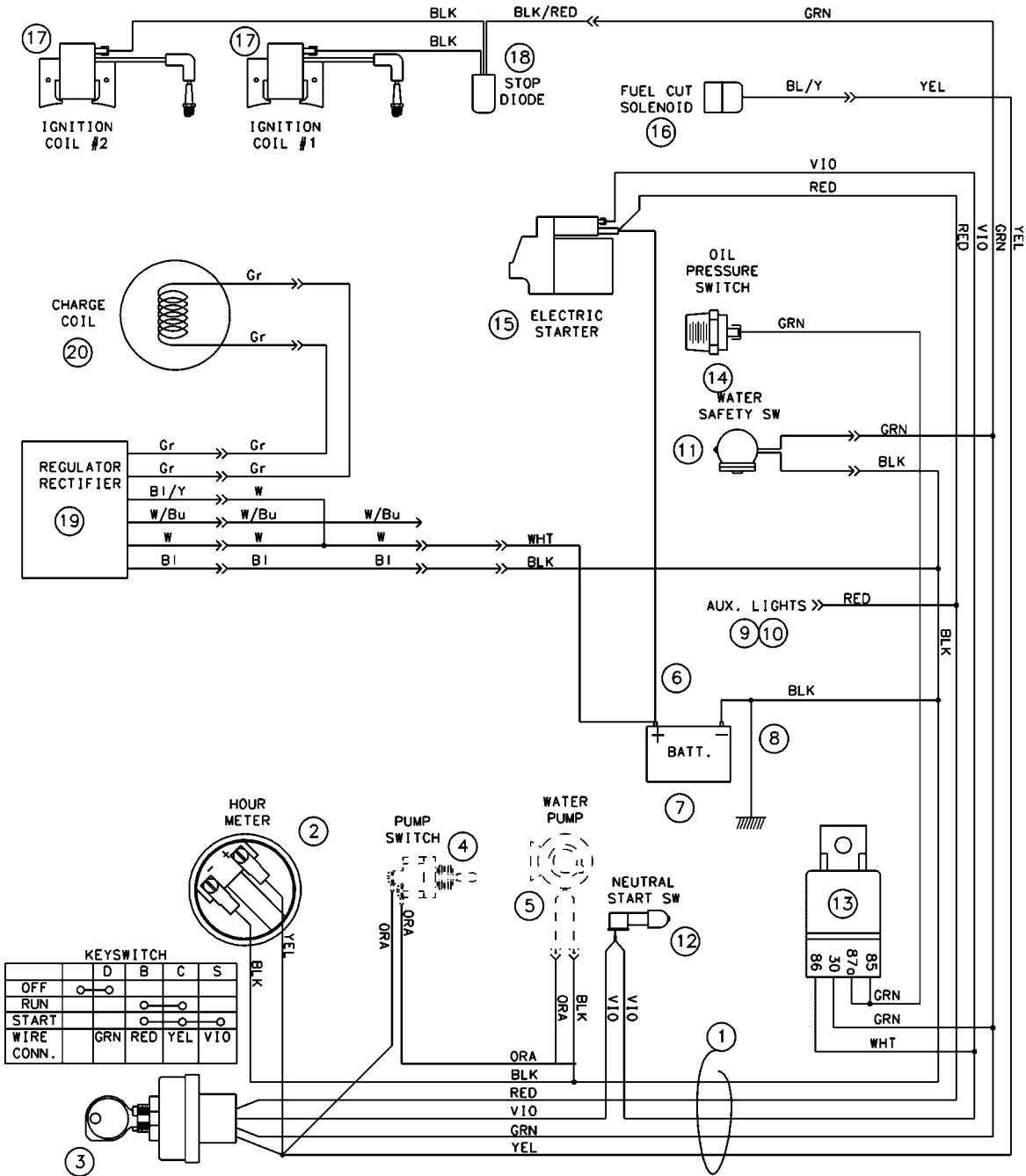
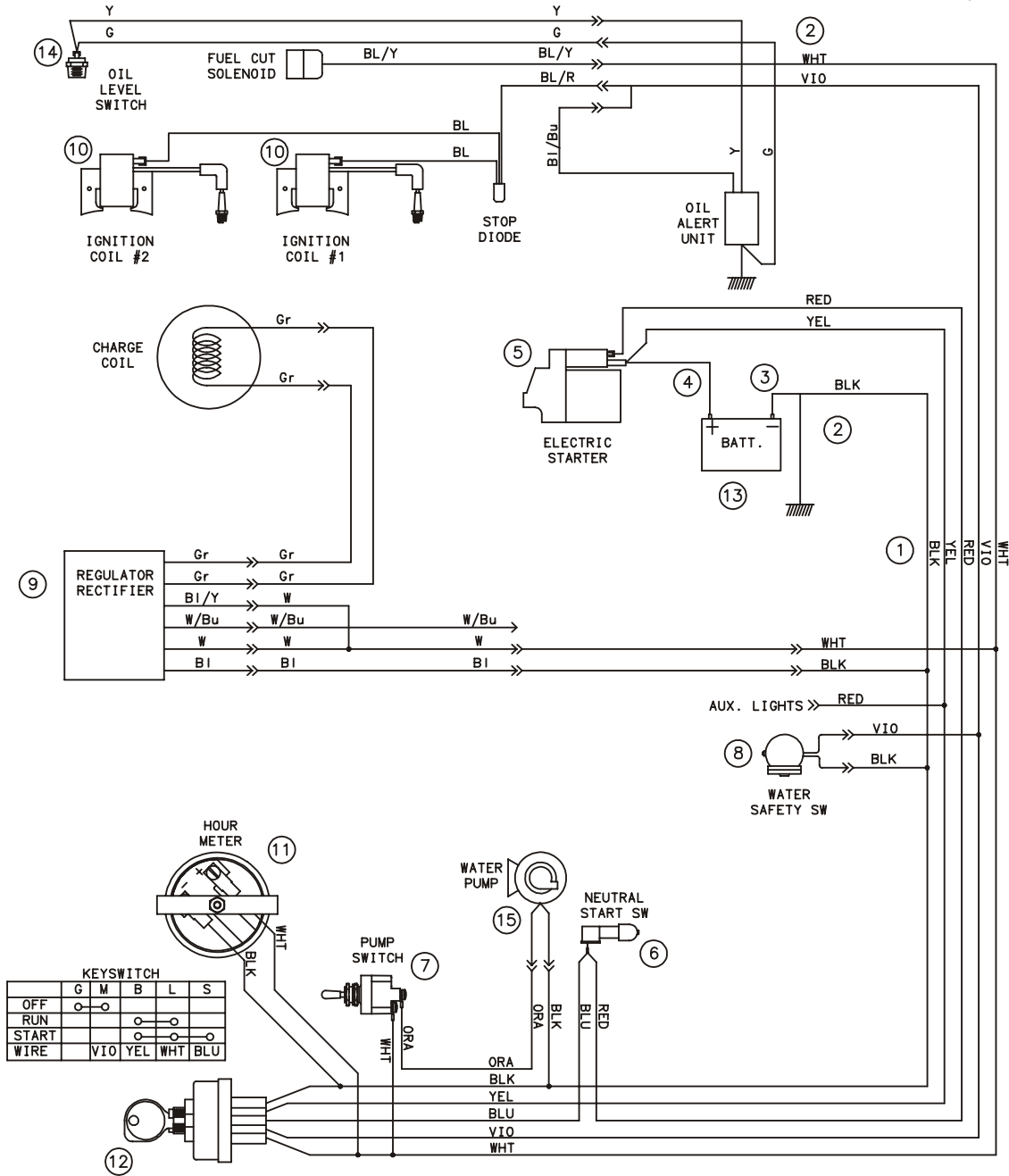


FIGURE 10B - PARTS LIST

DIAG LOC	PART NO.	QTY. REQ.	DESCRIPTION	DIAG LOC	PART NO.	QTY. REQ.	DESCRIPTION
1	542182208	1	WIRING HARNESS FOR HONDA 20 Hp	11	043686	1	SWITCH, WATER SAFETY
2	163779	1	GAUGE, HOUR METER	12	176398	1	SWITCH, NEUTRAL START
3	163830	1	KEYSWITCH	13	166708	1	RELAY, 12 VDC
4	052120	1	SWITCH, TOGGLE (OPTIONAL)	14		1	SWITCH OIL PRESSURE, HONDA
5	167554	-	WATER PUMP (OPTIONAL)	15		1	STARTER, HONDA
6	190092	1	CABLE, BATTERY, POSITIVE	16		1	FUEL SOLENOID, SHUT DOWN
7	043725	1	BATTERY, 12 VOLT	17		2	COIL, IGNITION, HONDA
8	163179	1	CABLE, BATTERY, NEGATIVE	18		1	ENGINE STOP DIODE, HONDA
9	052120	1	SWITCH, TOGGLE (WITH LIGHT KIT)	19		1	REGULATOR, HONDA
10	176124	1	DELUXE LIGHT KIT (OPTIONAL)	20		1	CHARGING COIL, 20A, HONDA

FIGURE 10C - WIRING DIAGRAM - HONDA GX670

(Rev 07August2002)



WIRING DIAGRAM FOR ECONOLINE II WITH 24 HP HONDA ENGINE

ITEM	PART NO	QTY	DESCRIPTION
1	182178	1	WIRING HARNESS FOR HONDA 24 Hp
2		1	WIRING HARNESS, HONDA ENGINE
3	163179	1	CABLE, BATTERY, NEGATIVE
4	163180	1	CABLE, BATTERY, POSITIVE
5		1	STARTER, HONDA
6	176398	1	SWITCH, NEUTRAL SAFETY
7	052120	1	SWITCH, TOGGLE
8	043686	1	SWITCH, WATER SAFETY
9		1	REGULATOR, HONDA
10		2	COIL, IGNITION, HONDA
11	163779	1	GAUGE, HOUR METER
12	177920	1	SWITCH, IGNITION
13	043725	1	BATTERY, 12 VOLT
14		1	OIL LEVEL, HONDA
15	167554	-	WATER PUMP (OPTIONAL)

FIGURE 11A PARTS LIST

DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)	DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION (*Denotes Metric Item)
1	176241	1	Hatz Diesel Wiring Harness	17	-----		Relay, 12V (Hatz # 502 777 01)
2	163779	1	Gauge, Hour Meter	18	-----		Alternator (Hatz # 502 836 00)
3	-----		Switch, Ignition (Hatz # 502 765 01)	19	-----		Diode - Complete (Hatz # 010 902 01)
4	052120		Switch, Toggle - Water Pump	20	-----		Diode - Complete (Hatz # 011 501 01)
5	167554		Water Pump Kit	21	-----		Wire - #2 To Lamp (Hatz # 010 321 00)
6	-----		Fuse, 10A	22	-----		Wire - Lamp To Switch (Hatz # 010 976 00)
7	117132		Battery Cable, (+) Positive, 30" Red	23	-----		Wire - #2 & #0 To Relay (Hatz # 008 528 01)
8	043725		Battery, 12V Lead Acid	24	-----		Diode - Complete (Hatz # 011 787 00)
9	117133		Battery Cable, (-) Negative, 26" Black	25	-----		Wire - Relay (Hatz # 011 786 00.824)
10	052120		Switch, Toggle - Light Kit	26	-----		Wire - Relay To Switch (Hatz # 010 921 00)
11	176124		Deluxe Light Kit	27	-----		Wire - #1 To Switch (Hatz # 010 887 00)
12	043686		Switch, Water Safety	28	-----		Wire - #3 To Relay (Hatz # 010 892 00)
13	-----		Starter Assy (Hatz # 400 008 10)	29	-----		Wire - #5 To #4 Terminal (Hatz # 033 568 00)
14	-----		Voltage Regulator (Hatz # 502 838 10)	30	177056		Terminal, Female
15	-----		Indicator Lamp, Battery (Hatz # 501 765 00)	31	164370		Terminal, Male
				---	--		---
15A	-----		Bulb, Lamp, 12V-2 (Hatz # 400 097 00)	33	176398	1	Neutral Safety Switch
16	-----		Terminal (Hatz # 501 607 00)		--	1	Neutral Safety Switch

FIGURE 11B – WIRING DIAGRAM – HATZ
(Effective w/ Serial Number 244690)

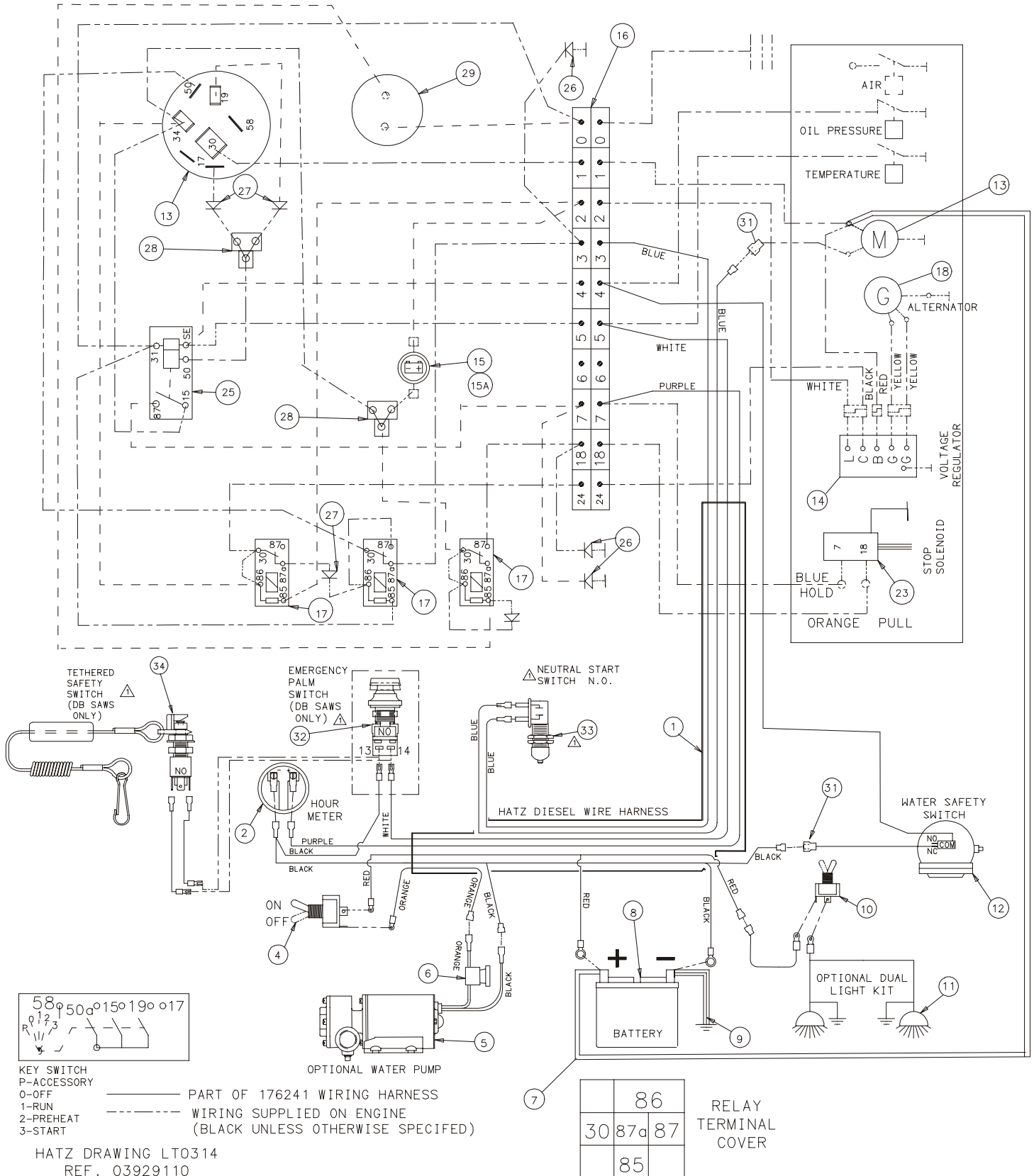


FIGURE 11B PARTS LIST

DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION	DIAG LOC.	PART NO.	QTY. REQ.	DESCRIPTION
1	176241	1	Hatz Diesel Wiring Harness	18	-----	1	Alternator (Hatz # 502 836 00)
2	163779	1	Gauge, Hour Meter	19	-----	--	-----
3	-----		Switch, Ignition (Hatz # 502 765 01)	20	-----	--	-----
4	052120	1	Switch, Toggle – Water Pump	21	-----	--	-----
5	167554	1	Water Pump Kit	22	-----	--	-----
6	-----		Fuse, 10A	23	-----	1	Stop Solenoid (Hatz # 0011 864 02)
7	117132	1	Battery Cable, (+) Positive, 30" Red	24	-----	1	Stop Solenoid (Hatz # Y2)
8	043725	1	Battery, 12V Lead Acid	25	-----	1	Time Delay Relay (Hatz # K4)
9	117133	1	Battery Cable, (-) Negative, 26" Black	26	-----	3	Diode IN4007 (Hatz # V2)
10	052120	1	Switch, Toggle Light Kit	27	-----	3	Diode IN4007 (Hatz # V1)
11	176124	1	Deluxe Light Kit	28	-----	2	Terminal Strip (Hatz # X2)
12	043686	1	Switch, Water Safety	29	-----	1	Capacitor (Hatz # C1)
13	-----	1	Starter Assy (Hatz # 400 008 10)	30	176259	2	Connector, Wire
14	-----	1	Voltage Regulator (Hatz # 502 838 10)	31	164370	2	Connector, Wire, Male
15	-----	1	Indicator Lamp, Battery (Hatz # 501 765 00)	32	-----	--	-----
15A	-----	1	Bulb, Lamp, 12V-2 (Hatz # 400 097 00)	33	176398	1	Neutral Safety Switch
16	-----	1	Terminal (Hatz # 501 607 00)		-----	1	Neutral Safety Switch
17	-----	1	Relay, 12V (Hatz # 502 777 01)				