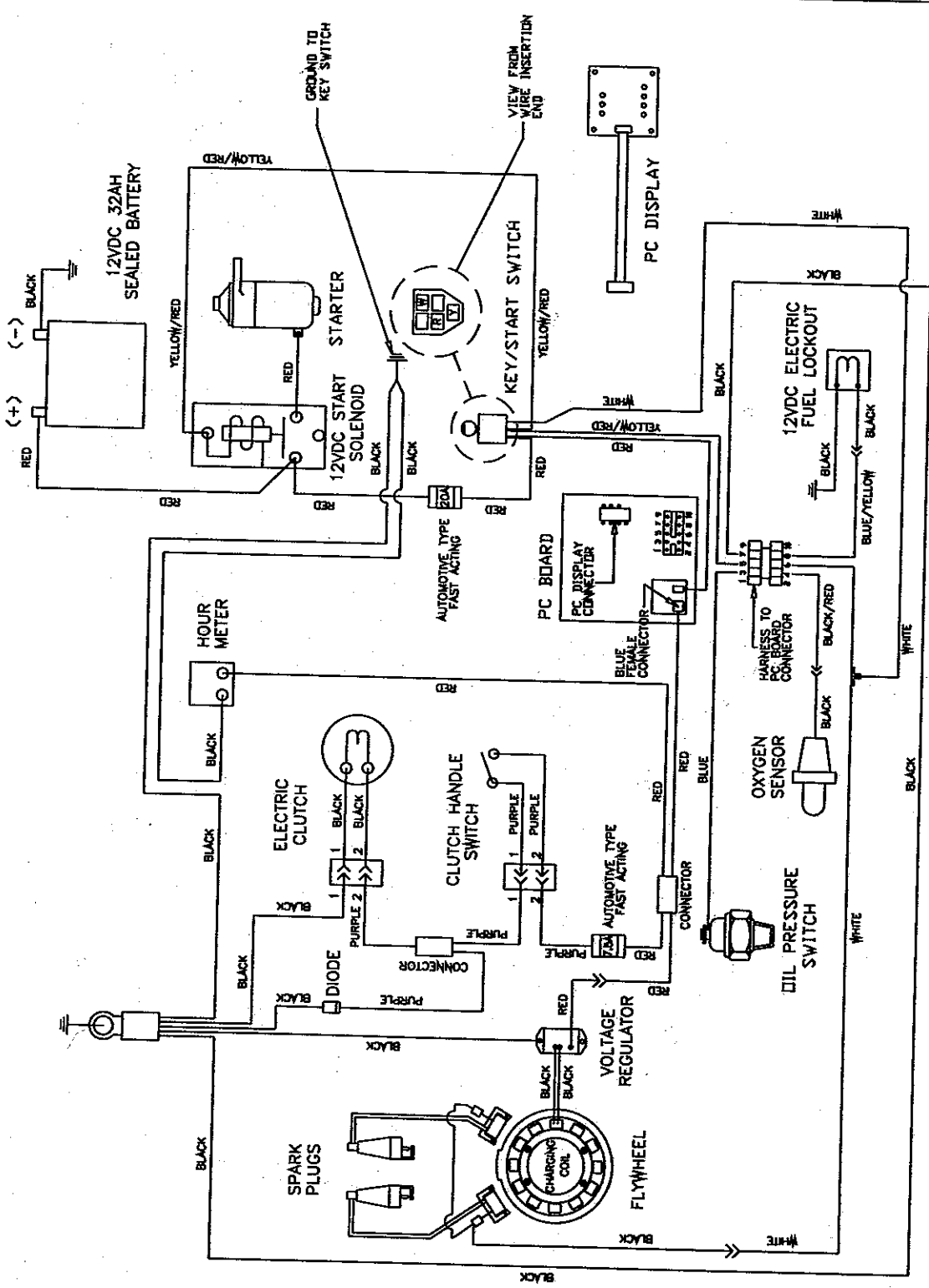


Wiring Diagram/Schematic: ST21KWA/E, ST24KWA/E, T28KWA/E

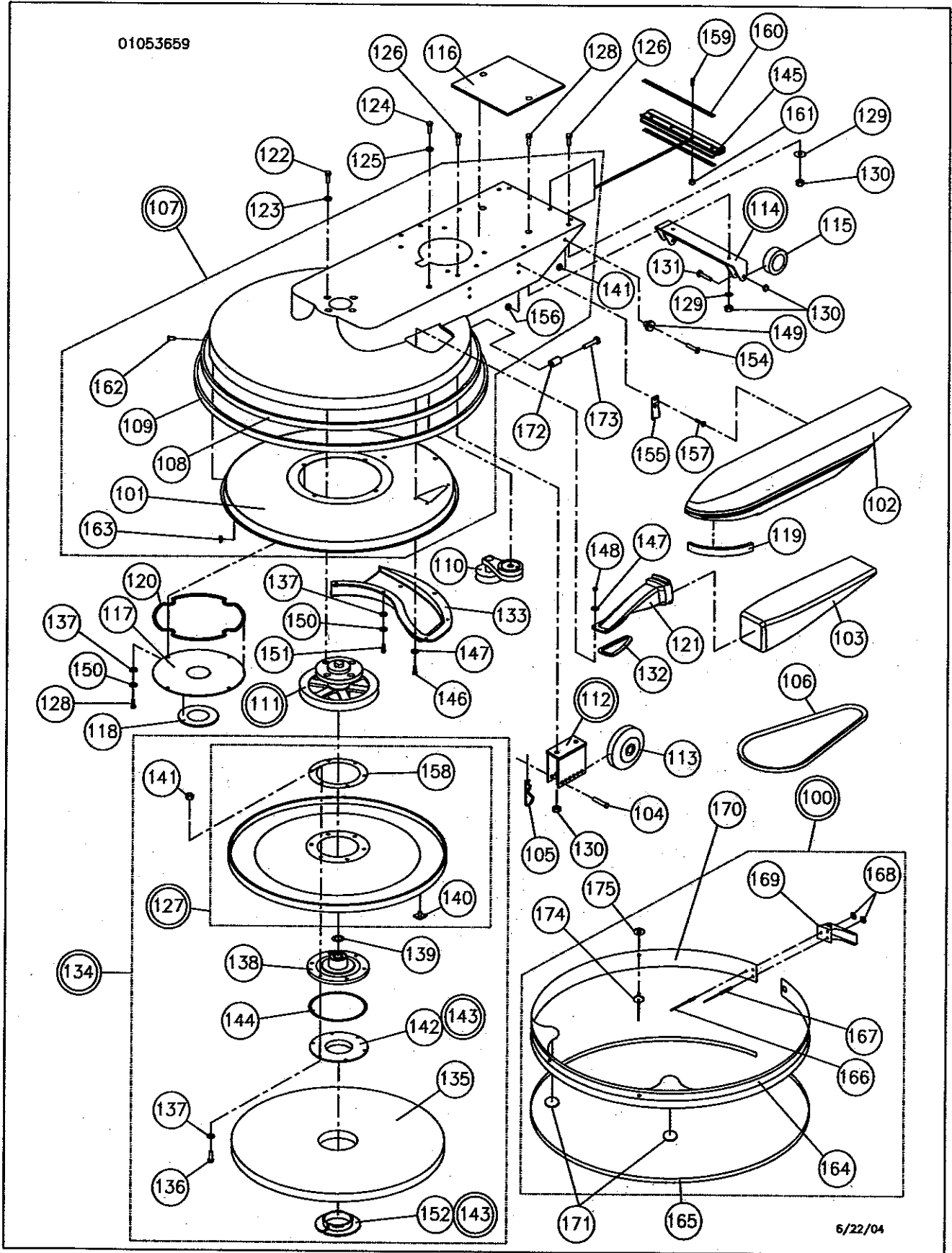


**ELECTRICAL SCHEMATIC
SAFE SENSE**

REV. C

RF003700

Deck Sub-Assembly: SpeedStar



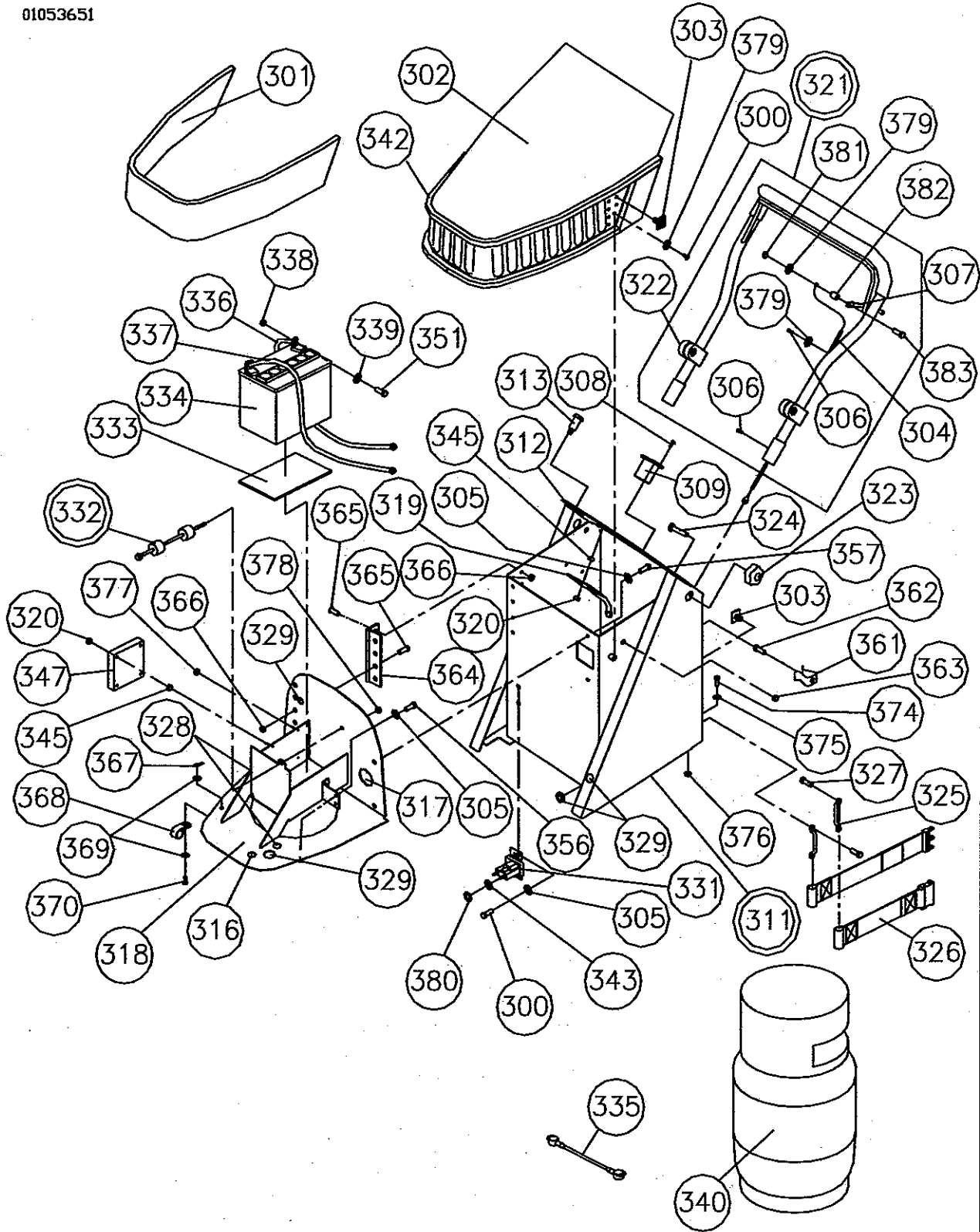
Deck Sub-Assembly: SpeedStar

REF	PART#	DESCRIPTION	QTY	REF	PART#	DESCRIPTION	QTY
100	MP139200	Skirt, Steel, 21", Assy	1	134	MP032600	Padholder, 21", Complete Asm.	1
	MP139300	Skirt, Steel, 24", Assy	1		MP047500	Padholder, 24", Complete Asm.	1
	MP139400	Skirt, Steel, 28", Assy	1		MP032500	Padholder, 28", Complete Asm.	1
101	MP125200	Liner, Shroud, 21" ST, Machined	1	135	PD006021	Pad, 21", Blue Blend	1
	MP073300	Liner, Shroud, 24" ST, Machined	1		PD006024	Pad, 24", Blue Blend	1
	MP066801	Liner, Shroud, 28" ST, Machined	1		PD006028	Pad, 28", Blue Blend	1
102	MP067400	Cover, Bag, Vacuum, ST	1	136	NB9319	Screw, Cap, BH, 1/4-20 x 1 1/4	6
103	MP065300	Bag, Vacuum, ST	1	137	NB3350	Washer, Flat, 1/4"	14
104	MP038100	Pin, Clevis, 3/8 x 2-1/8	2	138	TB1012	Flexi Disc, w/Lip (21")	1
105	LX2105	Clip, Hitch, Pin	2		TB1210	Flexi Disc, w/out Lip (24" & 28")	1
106	MP8070	Belt, BX-46 (21")	1	139	NB5700	Washer, .755 x 1.005 x .060, S.S.	1
	MP8049	Belt, BX-49 (24")	1	140	MP8310	Velcro Stud (Padholder)	76
	MP041000	Belt, BX-56 (28")	1		MP8310	Velcro Stud (Hood)	12
107	MP034101	Deck, ST21KWA, Painted, Comp.	1	141	NB3275	Nut, Lock, 1/4	7
	MP067200	Deck, ST24KWA, vacuum	1	142	MP073100	Retainer, Pad, Center-Lok II, Top (24" & 28" only)	1
	MP067300	Deck, ST28KWA, w/vac, Pntd., Comp. 1	1	144	MP066300	Ring, Spacer, Center-Lok II (24" & 28" only)	1
108	MP8300	Velcro, Hook, 1" w/Adh, 21"	2.1 yd	145	MP084700	Molding, Bumper, RokBak	1
		24"	2.3 yd	146	MX1025	Screw, Pan HD, 10-24 x 3/4	3
		28"	2.4 yd	147	NB9645	Washer, Flat, #10	6
109	MP139600	Felt, Polyester, 29 oz Black, 21"	6.25'	148	NB9735	Nut, Lock, 10-24, Nylon	3
		24"	7'	149	MP079800	Stud, Support, Cover, Bag, Dust	1
		28"	8'	150	NB6110	Washer, Lock, 1/4"	7
110	MP071800	Tensioner, Belt, w/4" Pulley	1	151	NB6530	Screw, Cap, HH, 1/4 - 20 x 1	3
111	MP107700	Spindle, w/6.75" Pulley, Asm. (21")	1	152	MP073200	Retainer, Pad, Center-Lok II, Bottom (24" & 28" only)	1
	MP7235	Spindle, w/7.25" Pulley, Asm. (24")	1	154	NB9319	Screw, Cap, BH 1/4-20 x 1 1/4	1
	MP7240	Spindle, w/8.75" Pulley, Asm. (28")	1	155	NB017200	Clip, Belt	2
112	MP068300	Bracket, Wheel, ST21, Asm.	2	156	NB9710	Nut, Keps, 8-32, Zinc	4
	MP064900	Bracket, Wheel, ST24, Asm.	2	157	NB9810	Screw, 0.164-32 x 5/8 Blk, C. Sunk	4
	MP069000	Bracket, Wheel, Extended, 28"	2	158	MP081300	Padholder Stress Relief Ring	1
113	MP105300	Wheel, 5", Performa, Flat Tread, Grey	2	159	NB020700	Screw, Phillips, Pan, 6-32 x 1	4
114	MP042900	Bracket, Wheel, Rear, Asm.	1	160	MP035300	Band, Clamp, Skirt	2
115	MP038700	Wheel, 3", Grey	2	161	NB020800	Nut, Lock, Nylon, 6-32	4
116	MP038900	Tank Pad	1	162	NB038700	Rivet, Pop, 3/16" x 3/8" head x 1/2	10
117	MP125300	Cover, Pulley, ST21KWA	1	163	NB9645	Washer, Flat, #10	10
	MP073400	Cover, Pulley, ST24KWA	1	164	MP139700	Edging, Skirt (Top, 21")	4.08'
	MP068600	Cover, Pulley, ST28KWA	1			(Top, 24")	5.02'
118	MP065000	Seal, Spindle, 1.01"ID x 3.75"OD (21")	1			(Top, 28")	6.07'
	MP065100	Seal, Spindle, 2.415"ID x 4.5"OD (24" & 28")	1	165	MP139800	Edging, Skirt (Bottom, 21")	6.03'
119	MP047800	Seal, Foam, 3/8" T x 3/4" W	1			(Bottom, 24")	7.10'
120	MP075200	Foam, Skinned, 1/2" x 38" x 1/4" T	1			(Bottom, 28")	8.14'
121	MP067600	Tube, Dust, SpeedStar	1	166	NB2643	Rivet, Pop, 1/8 x 1/4	1
122	NB6864	Bolt, Hex, 1/2 x 1 1/4, NC	4	167	NB023600	Rivet, Pop, 1/8 x 5/16	2
123	NB9269	Washer, Flat, 7/16	4	168	NB007100	Washer, Flat, #6	3
124	NB6044	Screw, Cap, 3/8 x 1 1/4	1	169	MP084100	Latch, Draw, Handle	1
125	NB3450	Washer, Flat, 3/8	5	170	MP141100	Skirt, Steel, 21", Painted	1
126	NB5282	Screw, BH, 5/16-18 x 1	10		MP141000	Skirt, Steel, 24", Painted	1
127	SA003900	Padholder, 21", w/Studs only	1		MP140900	Skirt, Steel, 28", Painted	1
	SA007800	Padholder, 24", w/Studs only	1	171	MP140000	Felt, Dot	2
	SA004000	Padholder, 28", w/Studs only	1	172	MP139900	Bushing, Skirt, Steel	1
128	NB3001	Screw, BH, 1/4-20 x 3/4	4	173	NB038800	Screw, Socket HD, 1/4-20 x 1 1/4 w/ Loctite	1
129	NB9267	Washer, Flat, 5/16	6	174	NB043900	Rivet, 3/16 x 1/2 x 5/8 HD Black	4
130	NB3265	Nut, Lock, 5/16	12	175	NB044000	Washer, Flat, 3/16, Black	4
131	NB000100	Screw, HH, 5/16-18 x 1 3/4	2				
132	MP065200	Seal, Tube, Dust	1				
133	MP064600	Scoop, Vacuum, SpeedStar, 21"	1				
	MP064700	Scoop, Vacuum, SpeedStar, 24"	1				
	MP064800	Scoop, Vacuum, SpeedStar, 28"	1				

SP015300

Bulkhead Sub-Assembly: SpeedStar

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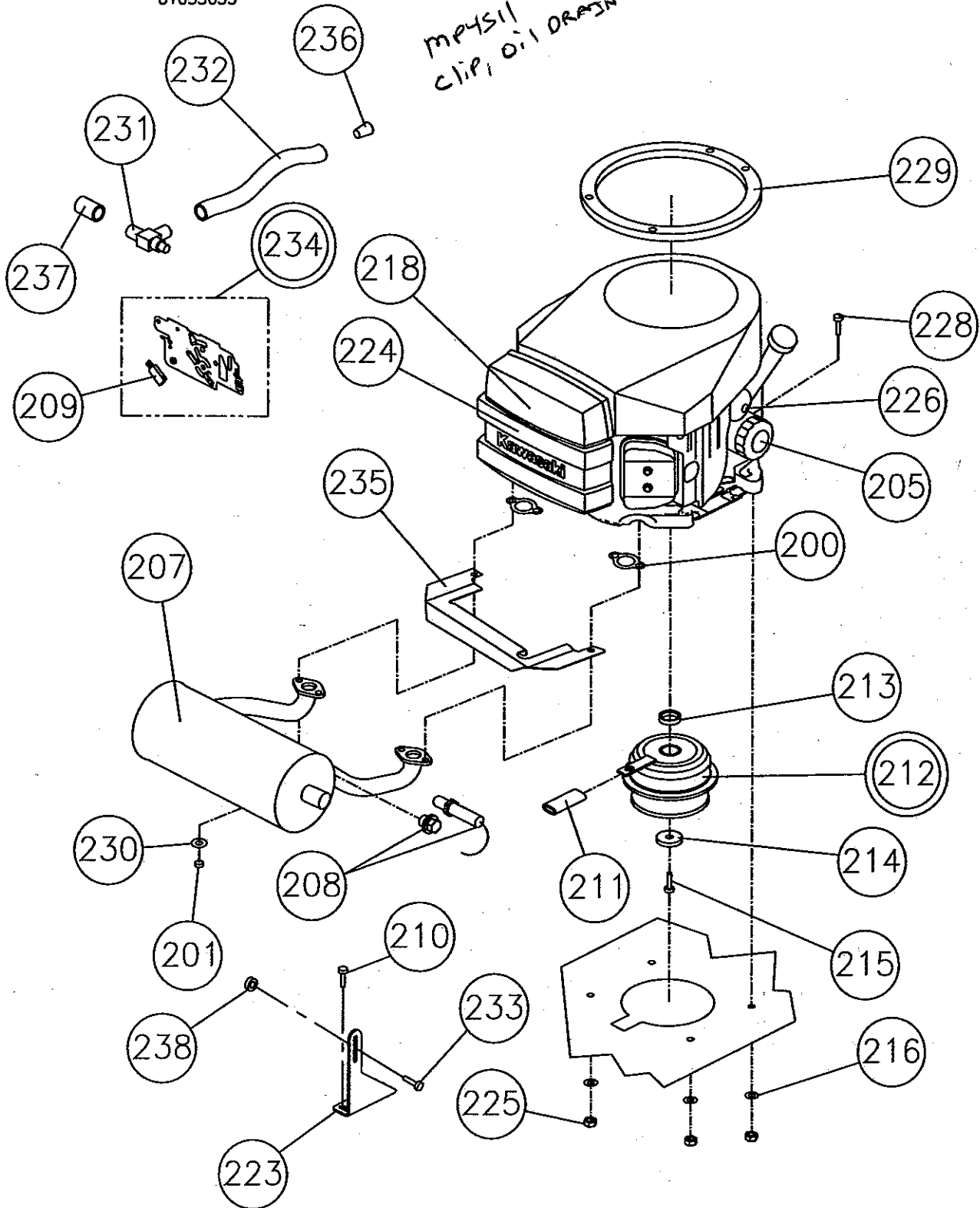
Bulkhead Sub-Assembly: SpeedStar

REF	PART#	DESCRIPTION	QTY	REF	PART#	DESCRIPTION	QTY
300	MX1025	Screw, Pan Hd, 10-24 x 3/4	2	342	MP038300	Battery Cover Molding	1
301	MP042500	Filter, Foam, Air, Intake	1	343	NB6110	1/4" Lock Washer	4
302	MP042400	Battery Cover	1	344	MP045500	Pipe Insulation, 1/2 I.D., 3/8 Wall	1
303	MP8310	Velcro Hook Studs	12	345	MP026300	#8 x .25 Spacer	8
304	MP106500	Cable, Throttle, Control	1	346	SS3505	Foam Seal	2
305	MX1115	Washer, 1/4" Star Lock	2	347	SA008600	SafeSense Module Kit	1
306	NB4382	Screw, Kwik Drill, 8 x 18 x 1/2	1	348	MP4500	Quick Rego Female Coupler	1
307	SA008200	Bail	1	349	MP4340	12" Regulator Hose	1
308	NB2643	Rivet, Pop, 1/8 x 1/4	4		MP4300	Hose, 18", Regulator (E Models)	1
309	TB9610	Hour Meter	1	350	MP4712	12V Fuelock	1
310	MP017900	Fuel Adjustment Assembly	1	351	NB9745	5/16"-18 x 3/4" Cap Screw	2
311	ST002200	Bulkhead Asm.	1	352	MP4320	48 x 6 Reg to Fuelock Fitting	1
312	IN1015	Trim, Battery Tray	1	353	MP027200	Fitting, 90 Deg. Elbow, 1/4 x 1/4 NPT	2
313	KC2509904	Switch, Starter	1	354	MP4325	3325 x 4 Reg to Fuelock Fitting	1
314	NB2470	3/8 Fuel Line	1	355	MP4331	54 x 6 Reg to Fuelock Fitting	1
315	NB7282	Hose, Clamp, No. 38	2	356	NB003200	1/4"-20 x 5/8" HH Bolt	2
316	MP044700	Plug, 3/4, Nylon, Black	1	357	NB3001	1/4"-20 x 3/4" BH Screw	2
317	NB6514	Grommet, 1-1/2 I.D. x 3/8 W x 1-3/4 O.D.	1	358	MP019500	1/8" NPT 1/4" Hose Barb	1
318	MP099300	Tray, Battery, Weld, Swing Out	1	359	NB2460	5/32" Vacuum Hose	1
	Not Shown:	NB024700 - Plug, Hole, Large	1	360	MP018900	1/8" NPT 3/8" Hose Barb	1
	Not Shown	NB024800 - Plug, Hole, Small	2	361	MP4511	Clip, Oil Drain	1
319	MP042800	Display Board	1	362	NB9200	Screw, Machine, Rd Hd, 6-32 x 5/8	1
320	NB010300	Nut, Nylon, 6-32	8	363	NB9530	Nut, Lock/Washer, 6-32	1
321	MP041800	Handle Assembly	1	364	MP093000	Hinge, Tray, Battery	1
322	MP042100	Block, Slide, Handle, Pivot	2	365	NB023700	Stud, 8-32 x 1/2	8
323	RV005100	Handle Knob	2	366	NB9710	Nut, Keps, 8-32, Zinc	8
324	NB010100	3/8-16 x 2 Carriage Bolt	2	367	NB8175	Pin, Presto, 3/32 x 1 5/8	1
325	RV009500	Footman Loop	2	368	NB8130	Clamp, 3/4" I.D., Retainer	1
326	MP041100	Tank Strap	1	369	NB3350	Washer, Flat, 1/4	2
327	NB010400	Screw, Phil. Oval HD, 10-24 x 5/8	4	370	NB024600	Pin, Clevis, 1/4 x 5/8	1
328	NB009800	3/8 I.D. x 1/8" Groove Grommet	3	371	MP098900	Fitting, 1/8" MPT x 1/8" FPT, 90°	1
329	NB009900	5/8 I.D. A 1/8 Groove Grommet	5	372	MP099000	Fitting, 1/8" FPT x 1/8" FTP, 90°	1
330	MP037900	Regulator, Nolf	1	373	MP099100	Fitting, 1/8 x 1/8 Nipple	1
331	MP6431	12V Solenoid	1	374	NB5282	Screw, BH 5/16 - 18 x 1	4
332	MP040400	Battery Retainer Assembly	1	375	NB9267	Washer, Flat, 5/16	4
333	SS1212	Battery Pad	1	376	NB3265	Nut, Lock, 5/16 - 18 NC	4
334	SS0012	Battery	1	377	NB013000	Caplug, 0.125" x 0.375"	1
335	MP043200	Starter Cable, 6"	1	378	NB3275	Nut, Lock, 1/4"	1
336	MP2011	Positive Battery Cable	1	379	NB9645	Washer, Flat, #10	3
337	MP2012	Negative Battery Cable	1	380	MX1045	Nut, Hex, 1/4 - 20	2
338	NB3260	5/16-18 Nut	2	381	NB9735	Nut, Lock, #10-24	1
339	NB6111	5/16 Lock Washer	2	382	NB028300	Bushing, Cable, Bail	1
340	MP021703	Painted Cylinder w/Decal	1	383	NB033300	Screw, BH #10-24 x 7/8	1
341	MP099700	Regulator Assembly	1				
	MP099701	Regulator Assembly (E Models)	1				

Engine Sub-Assembly: SpeedStar

01053653

mp4511
clip, OIL DRAIN



02-25-03

Engine Sub-Assembly: SpeedStar

REF	PART#	DESCRIPTION	QTY
200	KA110607006	Gasket	2
201	KA317R0800	Nut, 8mm	4
205	KA490652078	Oil Filter	1
207	MP107300	Muffler, Catalytic (17 HP)	1
208	MP018000	Oxygen Sensor (KWA models)	1
	MP015200	Oxygen Sensor Plug (KWC models)	1
209	MP036200	Switch, Micro, 12V, 15A	1
210	NB5282	Bolt, BH, 5/16-18 X 1	2
211	MP4790	Norprene Tubing	1
212	MP4787	Clutch, Model 5215-63	1
213	MP4800	Spacer, Clutch Top	1
214	MP4805	Spacer, Bottom Clutch	1
215	NB005800	Screw, HH, 7/16-20 x 1 1/2"	1
216	NB9267	Washer, Flat 5/16	4
218	KA110137001	Air Precleaner	1
223	MP120500	Muffler Bracket	1
224	KA110137006	Air Filter Element, Kawasaki, UL	1
225	NB3265	Nut, Lock, 5/16-18	3
226	MP019200	Oil Pressure Switch	1
228	NB000100	Screw, HH, 5/16-18 X 1 3/4"	4
229	MP043100	Engine Air Intake Seal	1
230	KA461F0800	Lock Washer	4
231	MP072300	Valve, Drain, Oil	1
232	MP4515	Tubing, Drain, Oil	25"
233	NB52816	Screw, BH, 1/4 - 20 x 1/2"	1
234	SA007900	Plate, Throttle, Repl. Bail Style Kit	1
235	MP043400	Manifold Heat Shield	1
236	NB1621	Caplug, K8, Red	1
237	KA590717004	Oil Drain Adapter	1
238	NB9545	Nut, Spinlock, 1/4 - 20	1

Specifications

ST21KWA(E)

Pad Size	21" (53,3 cm)
Pad Speed	2000 RPM
Width	23.5" (59,7 cm)
Length	58.5" (148,6 cm)
Engine	Kawasaki 17 HP
Starting	12 V Battery
Weight	215 lbs. (97,5 kg)
Handle	Bent Tube with Bail
Deck	Cast Aluminum
Vibration	Less than 2.5 m/s
Sound Level	87 dB(A)

ST28KWA(E)

Pad Size	28" (71,1 cm)
Pad Speed	1700 RPM
Width	30" (76,2 cm)
Length	58.25" (148 cm)
Engine	Kawasaki 17 HP
Starting	12 V Battery
Weight	225 lbs. (157 kg)
Handle	Bent Tube with Bail
Deck	Cast Aluminum
Vibration	Less than 2.5 m/s
Sound Level	87 dB(A)

ST24KWA(E)

Pad Size	24" (61 cm)
Pad Speed	1800 RPM
Width	26.25" (66,7 cm)
Length	58.5" (148,6 cm)
Engine	Kawasaki 17 HP
Starting	12 V Battery
Weight	220 lbs. (100 kg)
Handle	Bent Tube with Bail
Deck	Cast Aluminum
Vibration	Less than 2.5 m/s
Sound Level	87 dB(A)

Pioneer Eclipse

Limited Warranty

Burnishers - Scrubbing Machines - Stripping Machines

To Qualify for this warranty:

1. Machine must be registered at the time of purchase on a form provided by Pioneer Eclipse® Corporation. Your Pioneer Eclipse Distributor is responsible for the registration of your machine. Please cooperate with your Distributor in supplying necessary information on the card.
- 2) The machine must have been purchased from Pioneer Eclipse or an authorized Pioneer Eclipse Distributor.
- 3) This warranty extends to the original purchaser only and is not transferable to subsequent owners.

TIME PERIODS

TWO (2) YEAR WARRANTY - For the following models PE1700, Laser X, Magna 2000. Warranted to be free from defects in material and workmanship for a period of two (2) years from the date of purchase by the original owners. (See Exclusions.)

ONE (1) YEAR WARRANTY - For the following models SP, ST, BA, and the StarStrip 2400. Warranted to be free from defects in material and workmanship for a period of one (1) year from the date of purchase by the original owners. (See Exclusions.)

EXCLUSIONS (Not Covered by Warranty)

- 1) Parts that fail through normal wear by reason of their characteristics (cords, pads, bushes, belts, bumpers, body molding, skirting, squeegees or other consumable parts).
- 2) This warranty does not extend to parts affected by misuse, neglect, abuse or improper maintenance. All defective parts must be returned to the Distributor for credit.
- 3) Batteries warranted by battery manufacturer for (1) year.
- 4) Propane Engine warranted by engine manufacturer for *2 years (*Note: The engine warranty period can be extended to a four (4) years providing the customer uses only approved Kawasaki oil. Contact your Pioneer Eclipse distributor for more information regarding this optional extended warranty program.)
- 5) Valve train warranted by Pioneer Eclipse for (1) year.
- 6) Electric motors warranted by motor manufacturer.
- 7) Deck Frame warranted by Pioneer Eclipse for (5) years.

THE OBLIGATION OF PIONEER ECLIPSE CORPORATION

- 1) The obligation of Pioneer Eclipse under this warranty is limited to repairing or replacing, at its option, any part which is proven to be defective in material or workmanship under normal use for the applicable period stated above.
- 2) Warranty repairs will be made by your Pioneer Eclipse Distributor without charge for parts and labor.
- 3) Parts repaired or replaced under this warranty are warranted only during the balance of the original warranty period. All defective parts replaced under these warranties become the property of Pioneer Eclipse.

WARRANTY SERVICE

To obtain warranty service, take your machine and proof of purchase to any authorized Pioneer Eclipse Distributor. Pioneer Eclipse will not reimburse expenses for service calls or travel. For the Distributor in your area, call Pioneer Eclipse Customer Service Department at 800-367-3550 or 1-336-372-8080. If you are dissatisfied with the service that you receive, call or write Pioneer Eclipse Customer Service Department for further assistance.

DISCLAIMER OF CONSEQUENTIAL

PIONEER ECLIPSE DISCLAIMS ANY RESPONSIBILITY FOR LOSS OF USER TIME OF THE PIONEER ECLIPSE MACHINE OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGE EXCEPT AS STATED IN THE WARRANTY APPLICABLE TO EACH MACHINE. EXCEPT AS STATED IN SUCH WARRANTIES, THE COMPANY DOES NOT OTHERWISE WARRANT ANY MACHINE AND NO WARRANTY, EXPRESS, IMPLIED OR STATUTORY IS MADE BY THE COMPANY.

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