

**PHOENIX-22
CYLINDRICAL TRACTION DRIVE
FLOOR SCRUBBER**



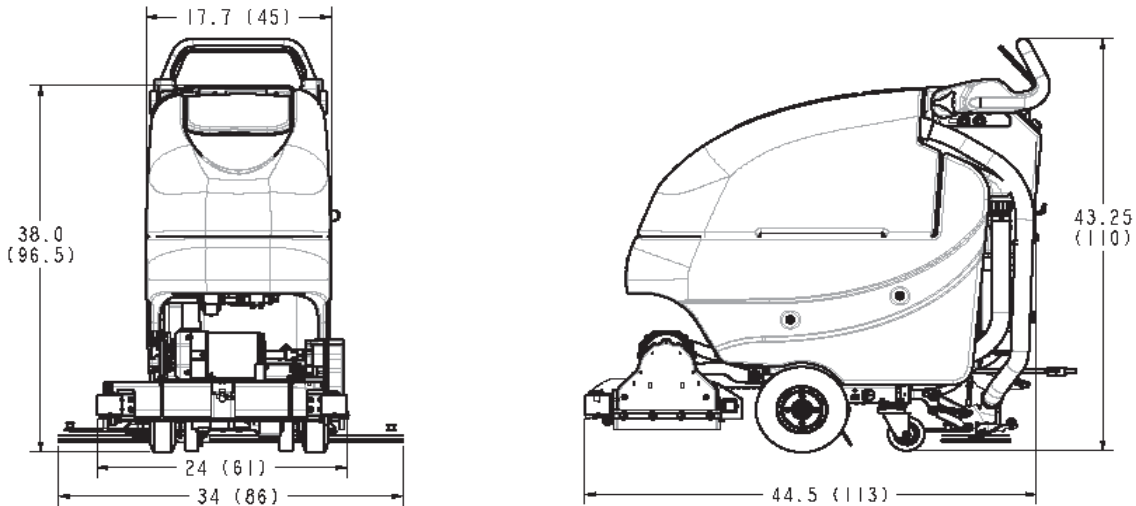
Technical Specifications



Model *Phoenix 22 Traction Drive Cylindrical*

Model No. 3336074QP

| | |
|--------------------------------|---|
| Current (Max) | 40 amps |
| Battery Capacity (Lead Acid) | 140Ah @20 hr |
| Battery Capacity (Gel) | 95Ah @20 hr |
| Sound Level | 69 dBA |
| Cleaning path width | 20 in (51 cm) |
| Squeegee width | 34 in (86 cm) |
| Productivity (Traction Drive) | 27,280 ft ² /hr (2,534 m ²) |
| Working speed (Traction Drive) | 3.1 mph (5 km per hr) |
| Rated voltage | 24 volts |
| Vacuum flow | 65 cfm (110 m ³ /hr) |
| Vacuum waterlift | 45 inches (112mbar) |
| Vacuum power | .60 HP (450 W) |
| Brush type | Cylindrical |
| Brush motor(s) power | 3/4 HP (560W) |
| Number of brushes | 2 |
| Brush RPM | 600 RPM |
| Solution capacity | 12 Gal (45 liters) |
| Recovery capacity | 13 Gal (49 liters) |
| Working Grade | 2% |
| Weight with batteries | 370 lbs (168 kg) |
| Weight without batteries | 235 lbs (107 kg) |
| Dimensions (LxWxH) | 44.5 x 24.0 x 38.0 (113.0 x 61.0 x 96.5 cm) |
| Drive Motor Power | 1/5 HP (150W) |

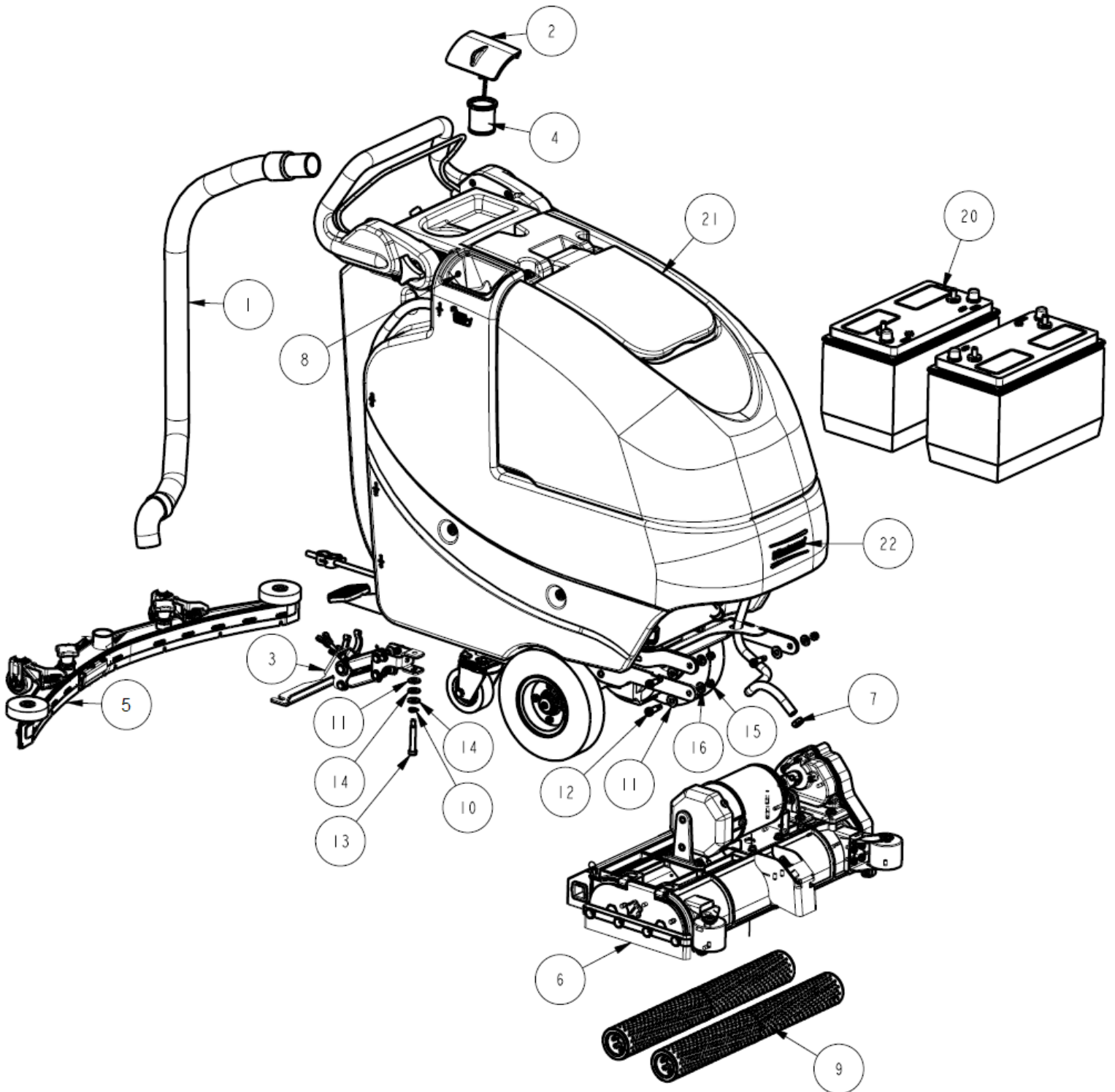


For Safety When Servicing or Maintaining Machine

- Stop on level surface.
- Disconnect the power to the machine by pulling the red Battery Connector located under the recovery tank near the batteries.
- Avoid moving parts. Do not wear loose jackets, shirts, or sleeves when working on machine.
- Avoid contact with battery acid. Battery acid can cause burns. When working on or around batteries, wear protective clothing and safety glasses. Remove metal jewelry. Do not lay tools or metal objects on top of batteries.
- Do not clean machine with a pressure washer.
- Authorized personnel must perform repairs and maintenance. Use Minuteman supplied replacement parts.

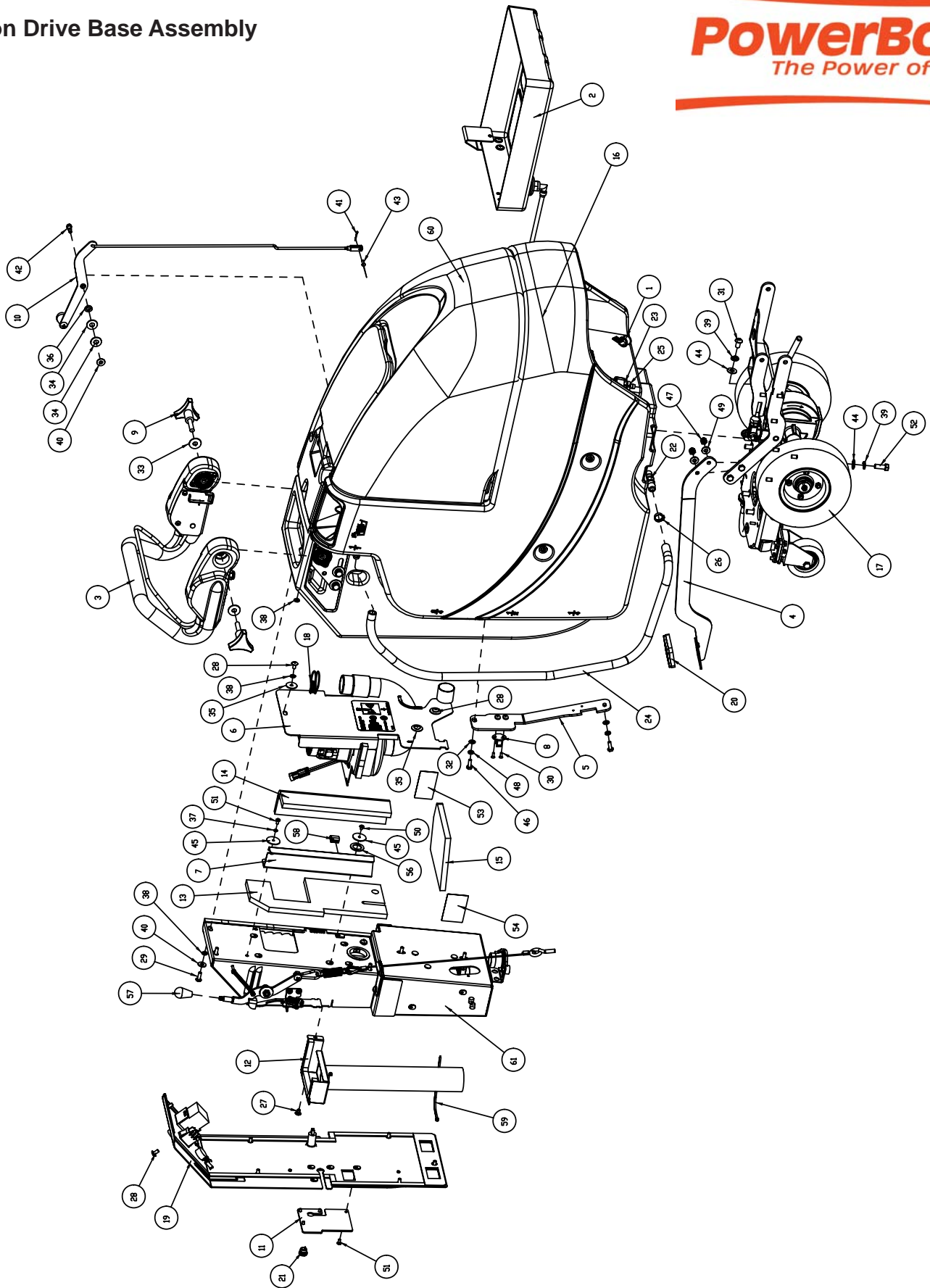
Table of Contents

| | |
|---|----|
| Main Assembly | 1 |
| Main Assembly BOM | 2 |
| Traction Drive Base Assembly | 3 |
| Traction Drive Base Assembly BOM | 4 |
| Base Assembly | 5 |
| Chassis Assembly | 6 |
| Chassis Assembly BOM | 7 |
| Solution Tank Assembly | 8 |
| Recovery Tank Assembly | 9 |
| Recovery Tank Assembly BOM | 10 |
| Handle Assembly | 11 |
| Pump Assembly | 12 |
| Solution Valve Assembly | 12 |
| Battery Tray Assembly | 13 |
| Electrical Box Assembly | 14 |
| Electrical Box Assembly BOM | 15 |
| Electrical Box Cover Assembly | 16 |
| Vac Motor Assembly | 17 |
| 20" Cyl. Deck Assembly | 18 |
| Cylindrical Scrubdeck | 19 |
| Cylindrical Scrubdeck BOM | 20 |
| Cylindrical Scrubdeck SubAssy I - Idler Support | 21 |
| Cylindrical Scrubdeck SubAssy II - Gear Support | 22 |
| Rear Squeegee Assembly | 23 |
| Squeegee Mechanism Assembly | 24 |
| Wiring Diagrams | 25 |
| Wiring Diagram Reference List | 28 |
| WARRANTY | 29 |



| BILL OF MATERIAL | | | |
|------------------|----------|-------|--|
| ITEM | PART NO. | REQ'D | DESCRIPTION |
| 1 | 172010 | 1 | HOSE, CLEAR VAC W/ 45 CUFF |
| 2 | 172018 | 1 | SOLUTION TANK LID ASSY |
| 3 | 172150 | 1 | SQUEEGEE LIFT MECH ASSY |
| 4 | 172159 | 1 | FILTER, FILL PORT |
| 5 | 172230PB | 1 | SQUEEGEE, 34" (860) |
| 6 | 172325 | 1 | CYL DECK ASSY |
| 7 | 450076 | 1 | CLAMP-CRIMP 185R SS |
| 8 | 711118 | 1 | SCR-ST-A 10 X .75 SS |
| 9 | 172320-1 | 1 | 20" CYL BRUSH, NYLON, BLUE, (SET OF 2) |
| 10 | 711523 | 1 | WSR-WAVE .37X .68 X .08 |
| 11 | 711569 | 4 | WSR-FLT .390 X .880 X .062 NYL |
| 12 | 712081 | 3 | SHOULDER BLT 5/16-18 X 3/8 X .75 |
| 13 | 712143 | 1 | BLT-SHLD 3/8 X 2.0, 5/16-18 |
| 14 | 712301 | 2 | WSR-FLAT .37 X .87 X .06 |
| 15 | 712683 | 3 | NUT, HEX 5/16-18 NYLOC SS |
| 16 | 712772 | 3 | WSR-FLAT .344 x .75 x .06 SS |
| 17 | 3343890 | 2 | DECAL-PHOENIX 22 (NOT SHOWN) |
| 18 | 740164-1 | 1 | JUMPER CABLE ASSY, RED 4G 12" |
| 19 | 747649 | 1 | CABLE ASSY, BATTERY |
| 20 | 956140 | 2 | BATTERY, 12V 140AH |
| 21 | REF ONLY | 1 | CYL BASE ASSY-120V CHARGER |
| 22 | 3334902 | 1 | DECAL-SMALL MACHINE POWERBOSS |
| 23 | 172008 | 1 | SOLUTION TANK LID |
| 24 | 172123 | 1 | CHAIN, BEADEDSS W / EYELETS |
| 25 | 712145 | 1 | SCR-PAN HD HI/LO 6-19 X .37 SS |
| 26 | 828062 | 1 | CABLE TIE LARGE |

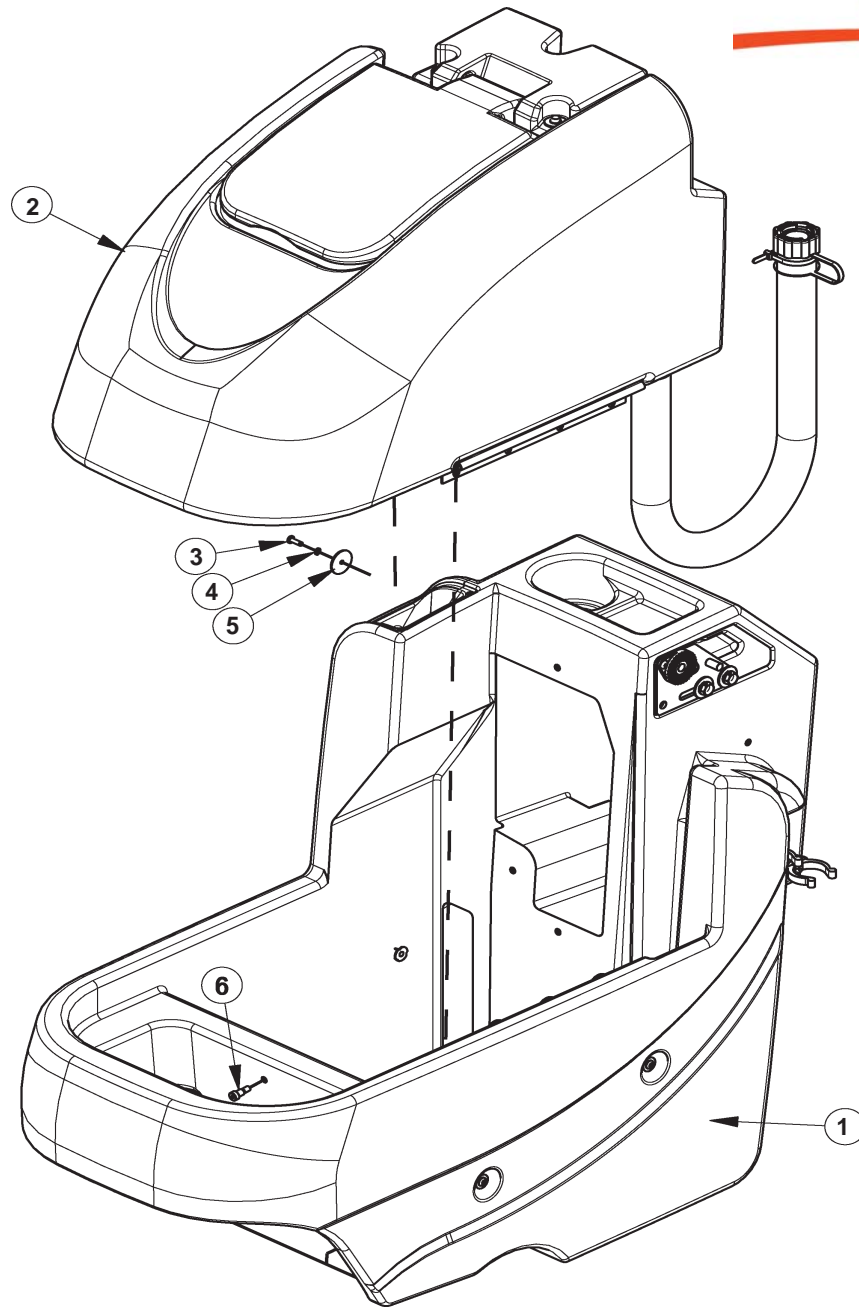
| OPTIONAL BRUSHES | | |
|------------------|----------|------------------|
| ITEM | PART NO. | DESCRIPTION |
| 9.1 | 172320-1 | BRUSH, 20" NYLON |
| 9.2 | 172320-2 | BRUSH, 20" POLY |
| 9.3 | 172320-3 | BRUSH, 20" GRIT |



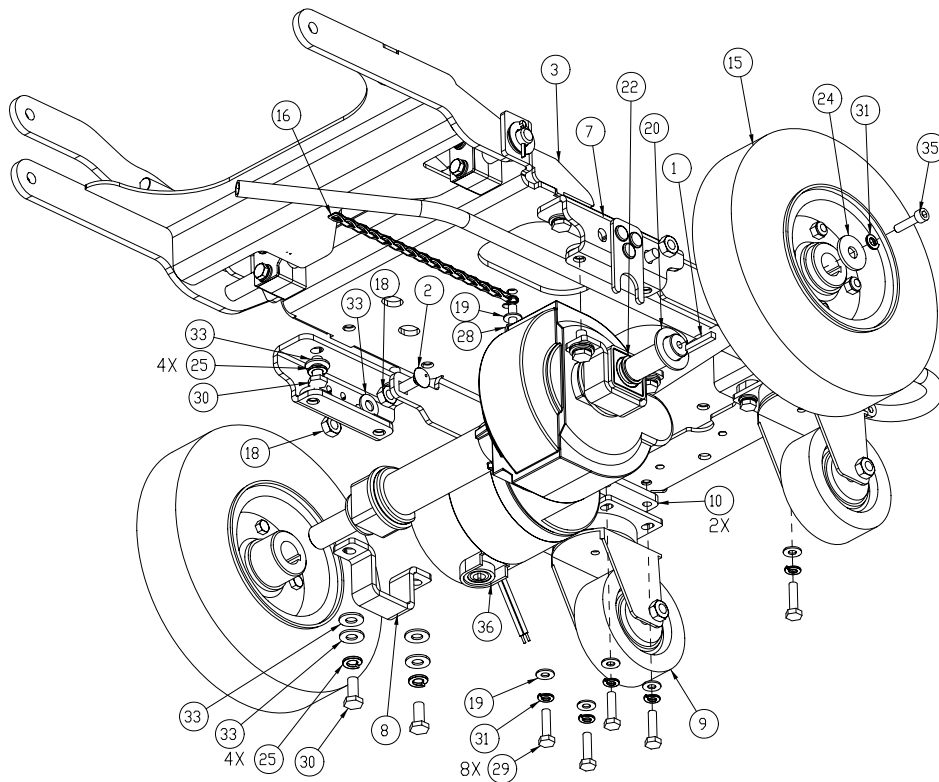
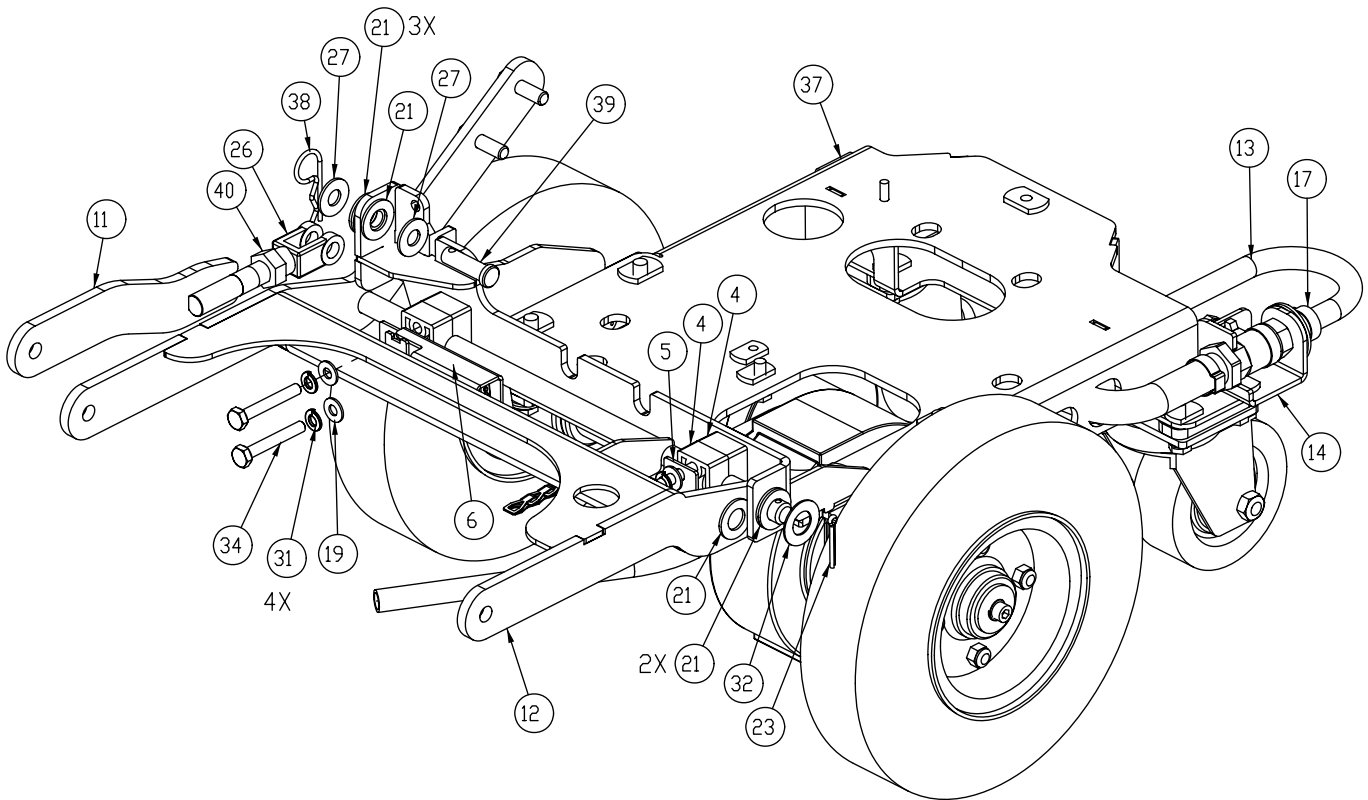
Traction Drive Base Assembly BOM



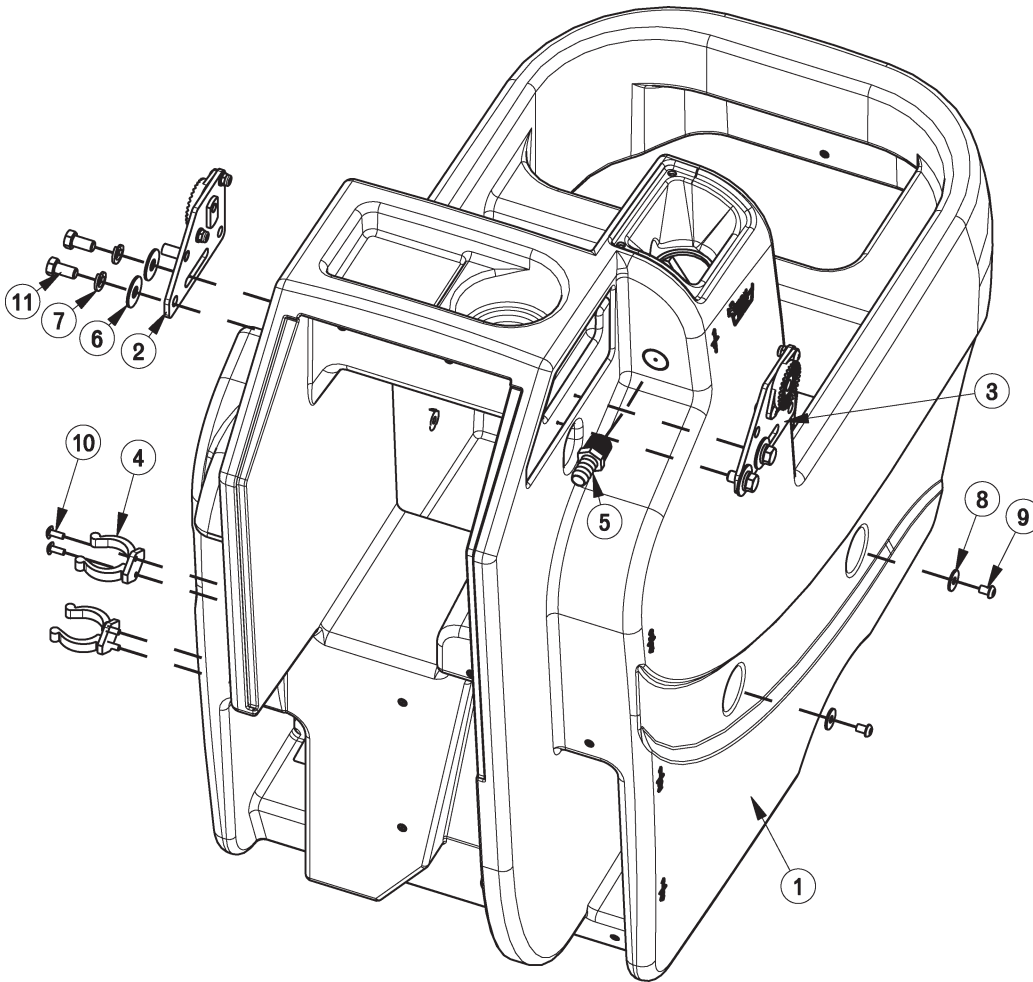
| BILL OF MATERIAL | | | | BILL OF MATERIAL CONT'D | | | |
|------------------|----------|-------|----------------------------------|-------------------------|----------|-------|--------------------------------|
| ITEM | PART NO. | REQ'D | DESCRIPTION | ITEM | PART NO. | REQ'D | DESCRIPTION |
| 1 | 82-54-A | 1 | CLAMP, MS21333-114 | 32 | 711504 | 2 | WSR-FLAT 1/4 ID SS |
| 2 | 172012 | 1 | BATTERY TRAY ASSY | 33 | 711507 | 2 | WSR-FLAT .37 X 1.12 X .06 |
| 3 | REF ONLY | 1 | TD HANDLE ASSY | 34 | 711508 | 2 | WSR-FLAT .44X 1.0X.08 |
| 4 | 172032 | 1 | LIFT PEDAL WMT | 35 | 711519 | 3 | WSR- FLAT .25 X 1.01 X .06 |
| 5 | 172036 | 1 | BKT, PEDAL STOP | 36 | 711523 | 1 | WSR-WAVE .37X .68 X .08 |
| 6 | 172050 | 1 | VAC MOTOR ASSY | 37 | 711543 | 1 | WSR-HELICAL #10 |
| 7 | 172055 | 1 | BKT, VAC AREA INSIDE COVER | 38 | 711544 | 9 | WSR-HELICAL 1/4 |
| 8 | 172065 | 1 | CLIP, FOR 1/2" ID HOSE | 39 | 711546 | 6 | WSR-HELICAL 3/8 |
| 9 | 172085 | 2 | KNOB, 3/8-16 STUD, 3 LOBE | 40 | 711575 | 6 | WSR-FLT .31x.75x..06ST |
| 10 | 172112 | 1 | SOL CONTROL ASSY | 41 | 711803 | 1 | COTTER PIN |
| 11 | 172129 | 1 | BKT, PWR CORD MOUNT | 42 | 712041 | 1 | BLT- SHLDR .31 X .375 X 1/4-20 |
| 12 | 172179 | 1 | CHARGER INLET ASSEMBLY | 43 | 712117 | 1 | CLEVIS PIN 3/16 |
| 13 | 172184 | 1 | FOAM COVER, REAR 1 | 44 | 712301 | 6 | WSR-FLAT .37 X .87 X .06 |
| 14 | 172185 | 1 | FOAM COVER, REAR 2 | 45 | 712312 | 2 | WSR-FLAT .187 X 1.25 |
| 15 | 172187 | 1 | FOAM COVER, FRONT 2 | 46 | 712562 | 2 | BOLT-HH 1/4-20X3/4 SS |
| 16 | 172305 | 1 | PUMP ASM CYL | 47 | 712683 | 2 | NUT, HEX 5/16-18 NYLOC SS |
| 17 | REF ONLY | 1 | CHASSIS ASM CYL | 48 | 712758 | 2 | WSR-HELICAL 1/4 SS |
| 18 | 172329 | 1 | CLAMP-HOSE 1.56" 102122 MURRAY | 49 | 712772 | 2 | WSR-FLAT .344 x .75 x .06 SS |
| 19 | 172330 | 1 | CYL ELEC BOX COVER ASSY | 50 | 712800 | 1 | SCR-MC 10-24 X .25 ST PL |
| 20 | 210142 | 1 | PEDAL PAD | 51 | 712810 | 5 | SCR-MC 10-24 X .37 ST PL |
| 21 | 293080 | 1 | STRAIN RELIEF-HEYCO 1207 | 52 | 713042 | 4 | BLT-HH 3/8-16 X 1 #5 |
| 22 | 342440 | 1 | FITTING, TEE 3/4MPT 1/2BARB | 53 | 715029 | 1 | DECAL-NAME PLATE SERIAL |
| 23 | 342441 | 1 | FITTING, MGHT X 3/8HB PP | 54 | 715047 | 1 | DECAL-CLEAR LAMINATE 2X3 |
| 24 | 430156 | 1 | HOSE, 1/2 X 42 CLEAR | 55 | 715950 | 1 | LABEL, PATENT NUMBERS |
| 25 | 450076 | 1 | CLAMP-CRIMP 185R SS | 56 | 717025 | 1 | WSR-FLAT 13/16ID X 1.25 X .08 |
| 26 | 450093 | 1 | CRIMP CLAMP 3/4" STEPLESS | 57 | 760592 | 1 | KNOB, OVAL TAPERED |
| 27 | 710177 | 1 | SCR-MC 1/4-20 X .37 ST PL | 58 | 809443 | 1 | CLIP-WIRE & CORD |
| 28 | 710178 | 10 | SCR-MC 1/4-20 X .50 TRUSS STPL | 59 | 828062 | 1 | CABLE TIE LARGE |
| 29 | 710380 | 5 | SCR-MC RD HD 1/4-20 X .75 STL PL | 60 | REF ONLY | 1 | BASE ASSY |
| 30 | 710530 | 2 | SCR-MC FL HD 8-32 X .50 BRS | 61 | 172075C | 1 | CYL ELEC BOX ASSY |
| 31 | 710985 | 2 | SCR-SC 3/8-16 X .62 ST PL | | | | |



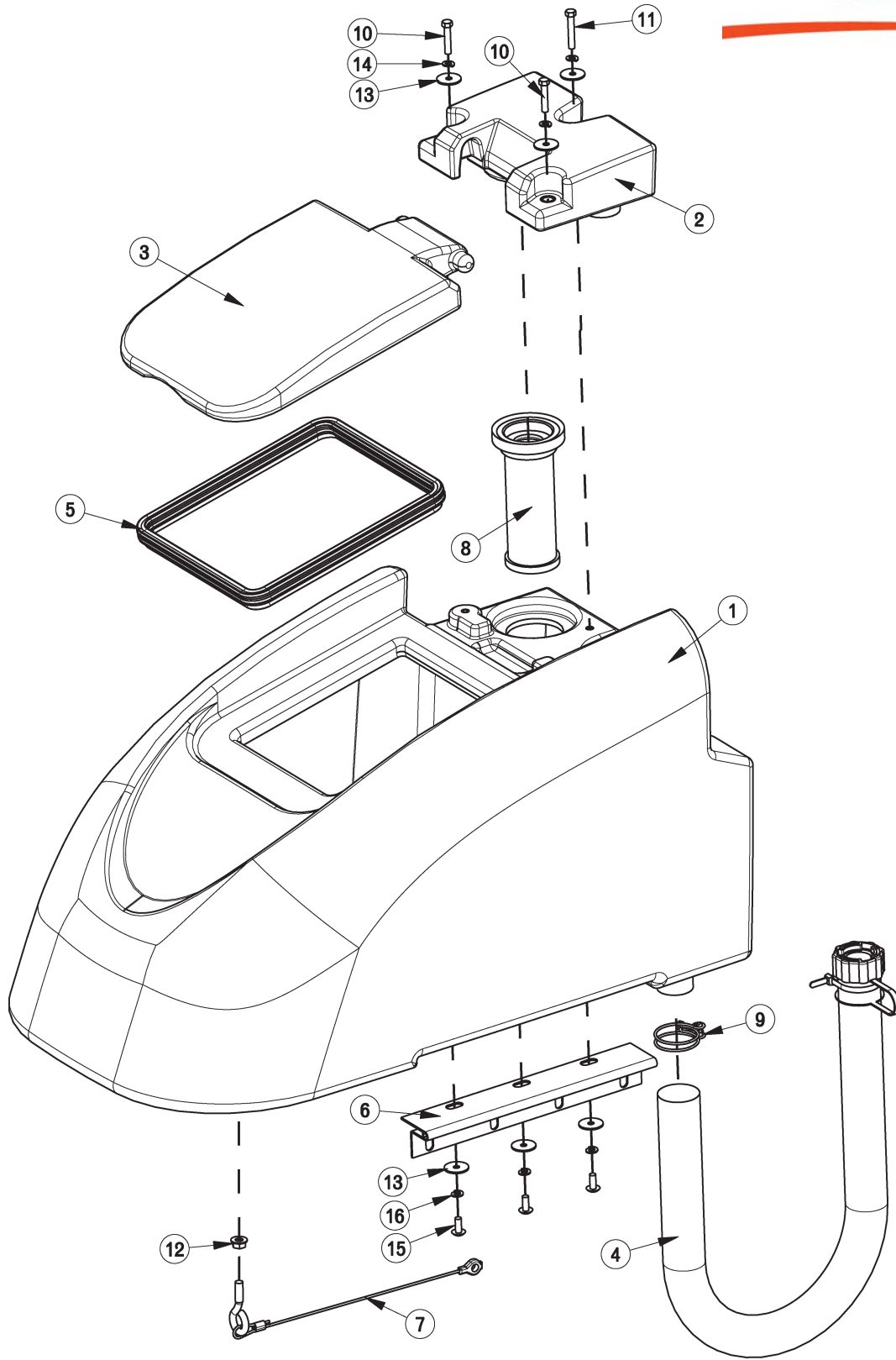
| BILL OF MATERIAL - 172001BASE | | | |
|-------------------------------|----------|-------|-------------------------------|
| ITEM | PART NO. | REQ'D | DESCRIPTION |
| 1 | 172013 | 1 | SOLUTION TANK ASSEMBLY |
| 2 | 172014HR | 1 | RECOVERY TANK ASSEMBLY |
| 3 | 712812 | 4 | SCR-MC 10-24 X .62 PPH ST PL |
| 4 | 711543 | 4 | WSR-HELICAL #10 |
| 5 | 712312 | 4 | WSR-FLAT .187 X 1.25 |
| 6 | 712041 | 1 | BLT- SHLDR 1/4-20 X .44 X .37 |



| BILL OF MATERIAL - 172315 | | | |
|---------------------------|-----------|-------|---------------------------------|
| ITEM | PART NO. | REQ'D | DESCRIPTION |
| 1 | 61-65-A | 2 | KEY, 3/16 X 1-3/4" |
| 2 | 70-516-16 | 2 | BLT-CAR 5/16-18 X 1.00 ZP |
| 3 | 172020 | 1 | MAIN FRAME WMT, E1720 |
| 4 | 172038 | 4 | BEARING BLOCK |
| 5 | 172039 | 1 | BEARING BLOCK PLATE |
| 6 | 172110 | 1 | DECK SWITCH ASSY |
| 7 | 172113 | 2 | BKT, TRANSAXLE MOUNT BASE |
| 8 | 172114 | 2 | BKT, TRANSAXLE MOUNT |
| 9 | 172167 | 2 | CASTER, 3-1/2 POLYURETHANE |
| 10 | 172192 | 2 | PLATE, 1/4" SPACER |
| 11 | 172204 | 1 | UPPER LIFT ARM WMT |
| 12 | 172205 | 1 | DECK LIFT WMT |
| 13 | 241097 | 1 | HOSE-WIRE REINF 3/8 X 31" |
| 14 | 172264 | 1 | SOLUTION VALVE ASSY |
| 15 | 200172-2 | 2 | WHEEL, 8.5" FOAM FILL |
| 16 | 281200 | 1 | DRAG CHAIN ASSY, FRAME |
| 17 | 450076 | 1 | CLAMP-CRIMP 185R SS |
| 18 | 711383 | 4 | NUT-HEX CLR LOC 5/16-18 |
| 19 | 711504 | 13 | WSR-FLAT 1/4 ID SS |
| 20 | 711512 | 2 | WSR-FLAT .75X1.37X.08 |
| 21 | 711592 | 7 | WSR-FLAT .506 X .9 X .064 NYL |
| 22 | 711715 | 2 | RETAINING RING EXT .75 |
| 23 | 711809 | 1 | COTTER PIN, 1/8 X 1.0 |
| 24 | 711855 | 2 | WSR-FLT .37X1.12X.10 STL Z HARD |
| 25 | 712140 | 8 | WSR-HELICAL 5/16 SS |
| 26 | 712265 | 1 | CLEVIS-YOKE, 1/2-20 W/ .375 PIN |
| 27 | 712301 | 2 | WSR-FLAT .37 X .87 X .06 |
| 28 | 712562 | 1 | BOLT-HH 1/4-20X3/4 SS |
| 29 | 712564 | 8 | BOLT-HH 1/4-20X1.00 SS |
| 30 | 712575 | 8 | BLT-HH 5/16-18 X .75 SS |
| 31 | 712758 | 14 | WSR-HELICAL 1/4 SS |
| 32 | 712760 | 1 | WSR-FLAT .56X1.06X.04 SS |
| 33 | 712772 | 14 | WSR-FLAT .344 x .75 x .06 SS |
| 34 | 713006 | 4 | BLT-HH 1/4-20 X 1 3/4 #5 |
| 35 | 717026 | 2 | SCR-SC SHCS M6X1.0 X 25 STL Z |
| 36 | 747606 | 1 | TRANSAXLE, ES1720 24V |
| 37 | 809444 | 1 | CLIP-CORD |
| 38 | 833374 | 1 | PIN, HAIRPIN COTTER 3/8 |
| 39 | 833833 | 1 | PIN-CLEVIS 3/8 X 1.25 |
| 40 | 3400449 | 1 | NUT-HEX JAM 1/2-20 ZP |



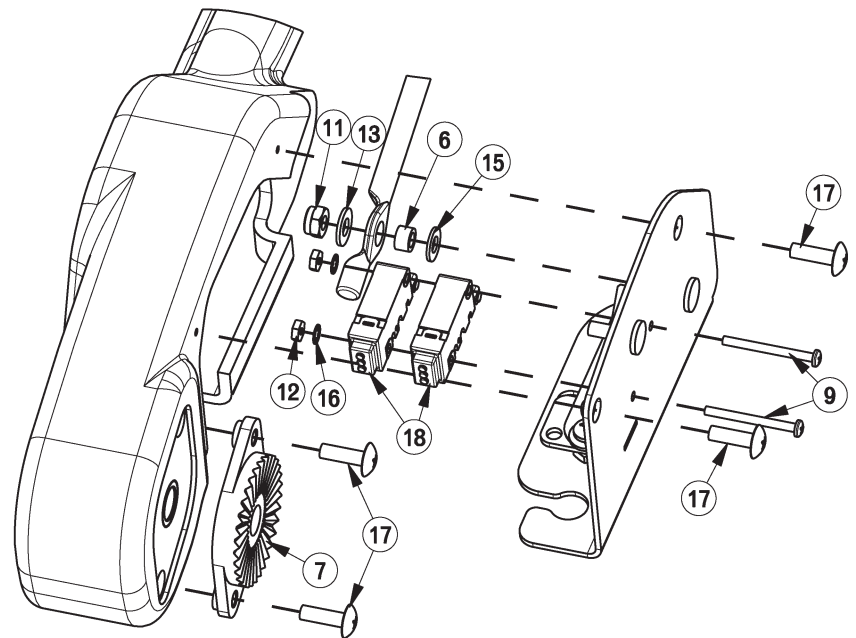
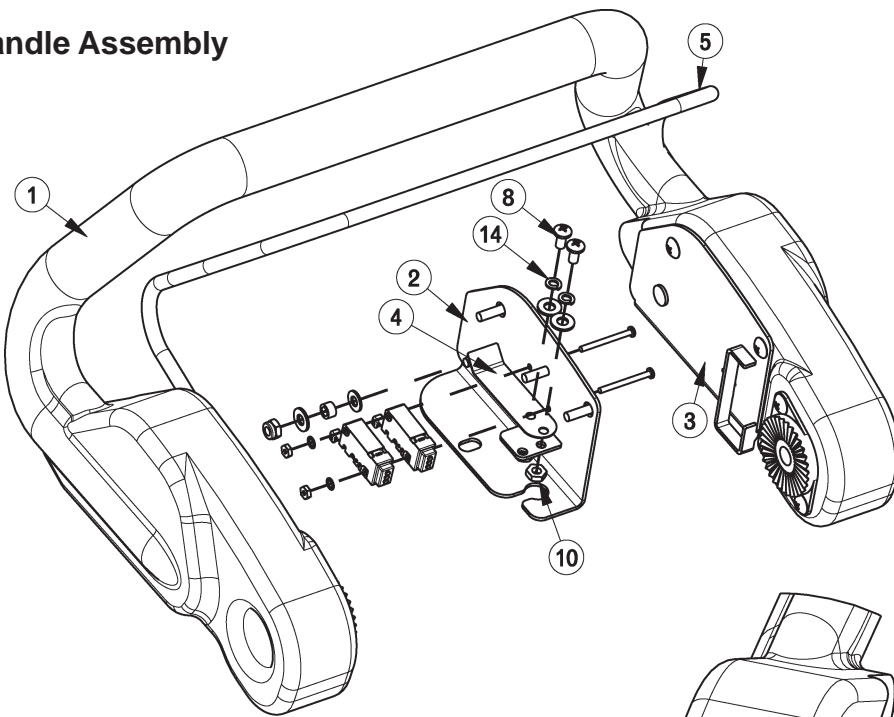
| BILL OF MATERIAL - 172013 | | | |
|---------------------------|----------|-------|-------------------------------|
| ITEM | PART NO. | REQ'D | DESCRIPTION |
| 1 | 172003 | 1 | SOLUTION TANK |
| 2 | 172080 | 1 | HANDLE MOUNT ASSY, LEFT |
| 3 | 172082 | 1 | HANDLE MOUNT ASSY, RIGHT |
| 4 | 260579 | 2 | TOOL CLIP, 1.5" HOSE |
| 5 | 342438 | 1 | FITTING, 1/2 MPT 1/2 HB BRASS |
| 6 | 711507 | 4 | WSR-FLAT .37 X 1.12 X .06 |
| 7 | 711546 | 4 | WSR-HELICAL 3/8 |
| 8 | 711550 | 4 | WSR NYLON .25 ID X .75 OD |
| 9 | 712146 | 4 | SCR-SC BHCS 1/4-20 X .37 SS |
| 10 | 712822 | 4 | SCR-MC TR HD 10-24 X .50 SS |
| 11 | 713041 | 4 | BLT-HH 3/8-16 X 3/4 #5 |





| BILL OF MATERIAL - 172014HR | | | |
|-----------------------------|----------|-------|--------------------------------|
| ITEM | PART NO. | REQ'D | DESCRIPTION |
| 1 | 172004HR | 1 | RECOVERY TANK |
| 2 | 172005HR | 1 | VACUUM MANIFOLD |
| 3 | 172007 | 1 | LID |
| 4 | 172011 | 1 | HOSE, PINCH-OFF W/ CAP, 36" |
| 5 | 172017 | 1 | GASKET, LID |
| 6 | 172049 | 1 | HINGE, RECOVERY TANK |
| 7 | 172067 | 1 | REC TANK CABLE ASSY 11.625 |
| 8 | 172132 | 1 | SCREENED FLOAT |
| 9 | 172329 | 1 | CLAMP-HOSE 1.56" 102122 MURRAY |
| 10 | 711210 | 2 | BLT-HH 1/4-20 X 1.25 STPL |
| 11 | 711212 | 1 | BLT-HH 1/4-20 X 1.50 STPL |
| 12 | 711379 | 1 | NUT, FLANGED WIZZ 5/16-18 |
| 13 | 711519 | 6 | WSR- FLAT .25 X 1.01 X .06 |
| 14 | 711544 | 3 | WSR-HELICAL 1/4 |
| 15 | 712565 | 3 | SCR-MC 1/4-20X.63 SS TR HD |
| 16 | 712758 | 3 | WSR-HELICAL 1/4 SS |

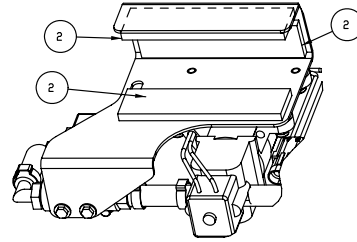
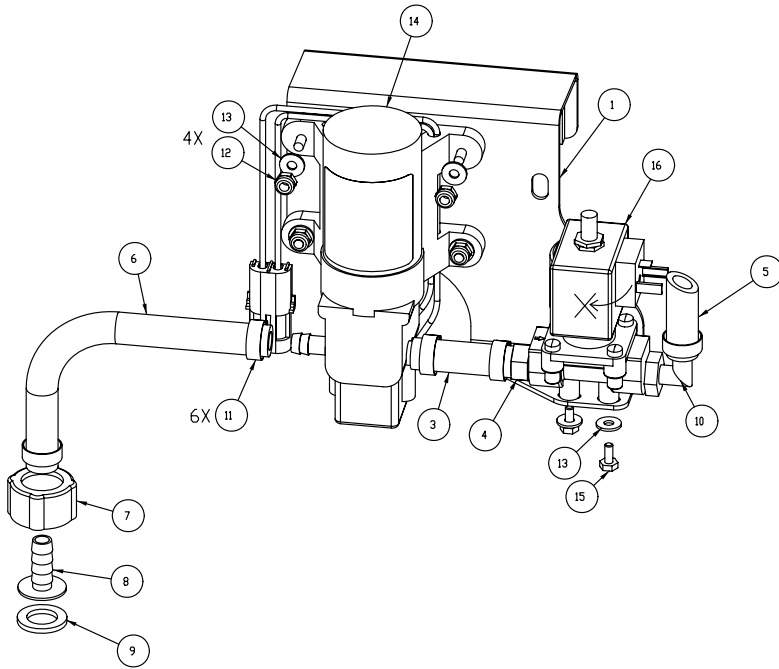
Handle Assembly



BILL OF MATERIAL - 172015

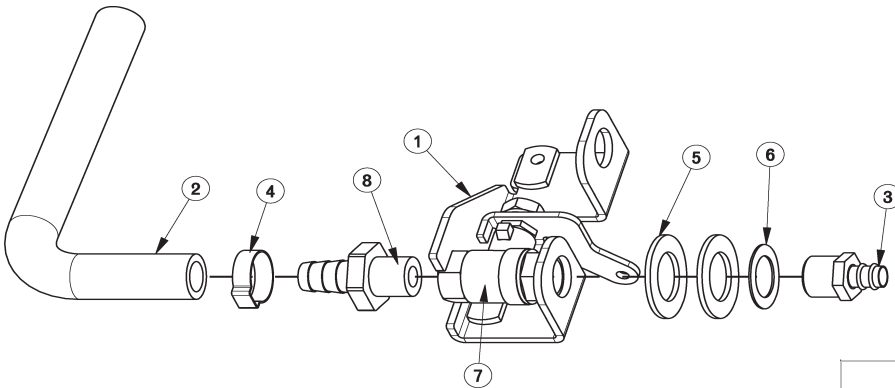
| ITEM | PART NO. | REQ'D | DESCRIPTION | ITEM | PART NO. | REQ'D | DESCRIPTION |
|------|----------|-------|------------------------------|------|----------|-------|---|
| 1 | 172006 | 1 | HANDLE | 11 | 711350 | 2 | NUT-NYLOC 10-32 |
| 2 | 172053 | 1 | BAIL PLATE WMT RH | 12 | 711428 | 2 | NUT-HEX 4-40 |
| 3 | 172054 | 1 | BAIL PLATE WMT LH | 13 | 711503 | 6 | WSR, FLAT#10 |
| 4 | 172057 | 2 | LEAF SPRING | 14 | 711543 | 4 | WSR-HELICAL #10 |
| 5 | 172059 | 1 | BAIL, HANDLE | 15 | 712320 | 2 | WSR-NYLON .22 X .45 X .04 |
| 6 | 172074 | 2 | SPACER, 5/16OD X 17GA, ALUM | 16 | 712326 | 2 | WSR-INT LOCK #4 |
| 7 | 270143 | 2 | HANDLE PIVOT JAW | 17 | 712830 | 10 | SCR-MC 10-24 X .62 STLZ TR HD |
| 8 | 710353 | 4 | SCR-MC RD HD 10-32 X .37 STL | 18 | 747603-1 | 2 | SWITCH ASY, MICRO ROLLER W/PACK/CONDUIT |
| 9 | 710495 | 2 | SCR-MC 4-40 X 1.25 STL Z | 19 | 747632-1 | 1 | CABLE ASY, 5 COND 18G CONSOLE |
| 10 | 711310 | 4 | NUT, HEX 10-32 ST PL | | | | |

Pump Assembly

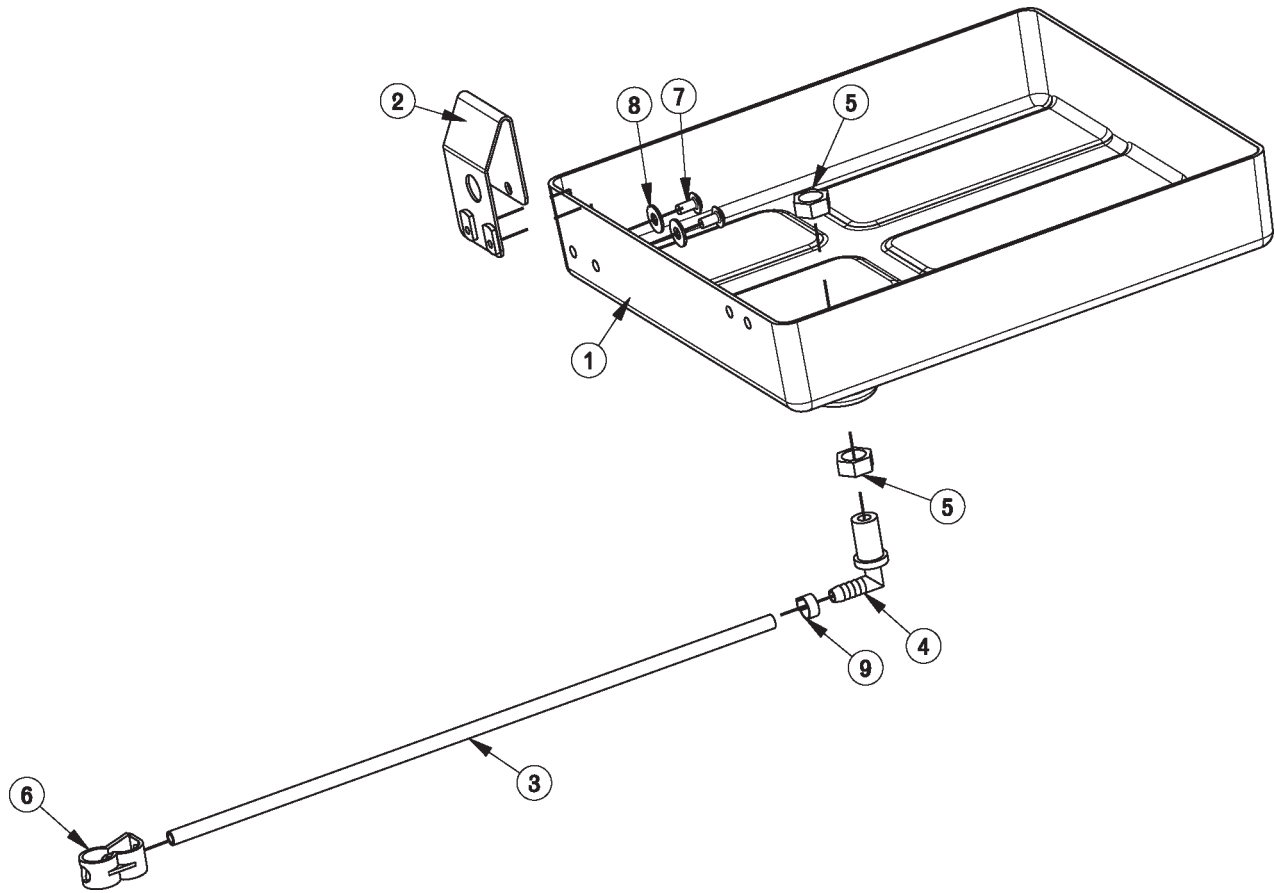


| BILL OF MATERIAL - 172305 | | | |
|---------------------------|----------|-------|---------------------------------------|
| ITEM | PART NO. | REQ'D | DESCRIPTION |
| 1 | 172302 | 1 | BKT, PUMP MOUNT |
| 2 | 172304 | 3 | FOAM .25 X 1.25 X 5 W/ ADH |
| 3 | 172322 | 1 | HOSE-WIRE REINF 3/8 X 2" |
| 4 | 173156 | 1 | FITTING, 3/8 MNPT X 3/8 BARB |
| 5 | 241097 | 1 | HOSE-WIRE REINF 3/8 X 31" |
| 6 | 320254 | 1 | HOSE-WIRE REINF 3/8 x 9" |
| 7 | 342442 | 1 | FITTING, FGHT NUT PP |
| 8 | 342443 | 1 | FITTING 3/8HB INSERT PP |
| 9 | 342444 | 1 | WSR-FILTER, GARDEN HOSE SIZE |
| 10 | 450040 | 1 | FITTING-90 3/8MPT X 3/8BARB NYLON |
| 11 | 450076 | 5 | CLAMP-CRIMP 185R SS |
| 12 | 712638 | 4 | NUT, HEX 10-24 SS NYLOC |
| 13 | 712764 | 6 | WSR #10 SS |
| 14 | 747691 | 1 | PUMP, 24VDC 35PSI 3/8HOSE w/CONNECTOR |
| 15 | 11038965 | 2 | BOLT-HH M4X0.7 X 10 Z DICH |
| 16 | 90435595 | 1 | WATER SOLENOID, 24VDC 2.5BAR |

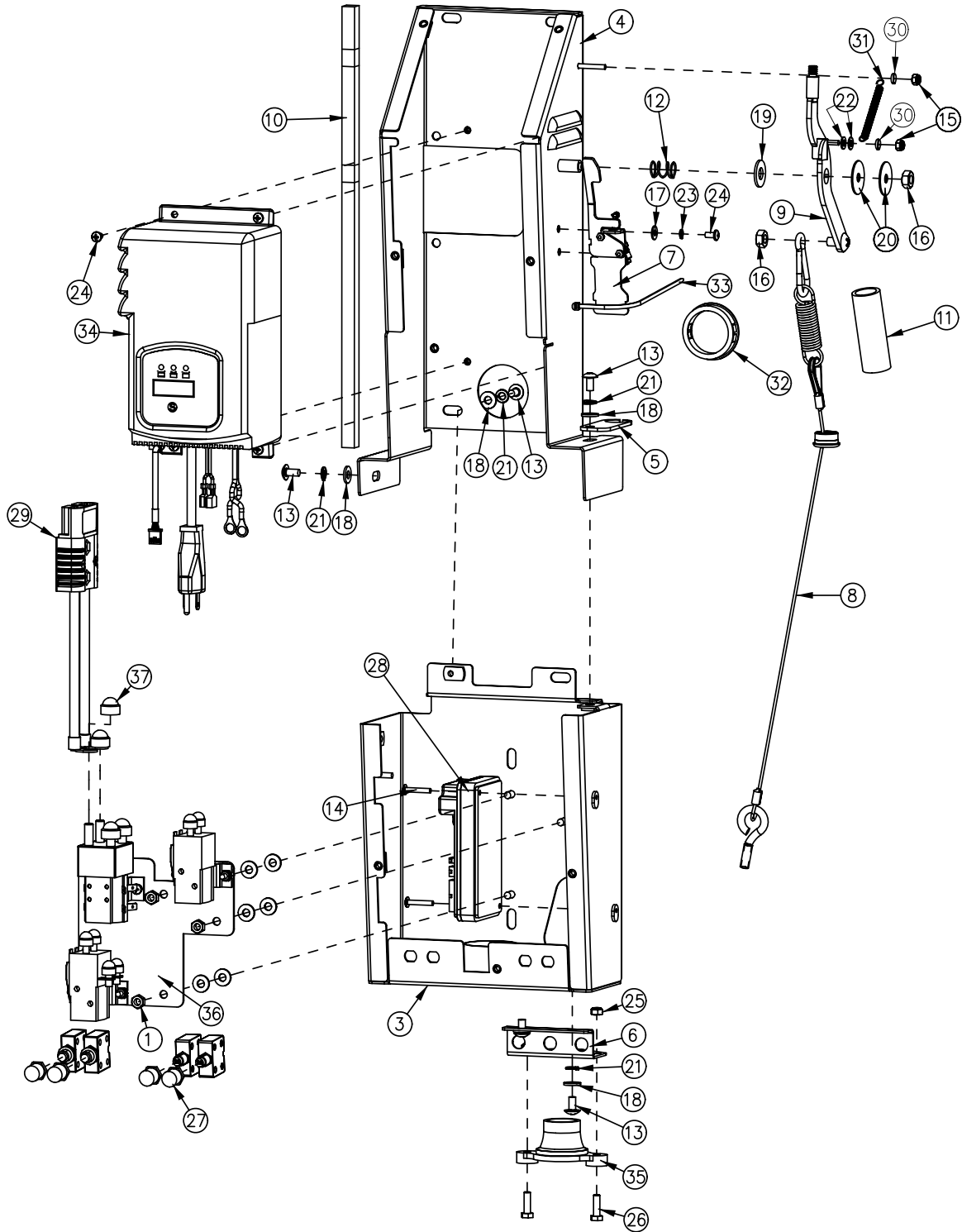
Solution Valve Assembly



| BILL OF MATERIAL - 172064 | | | |
|---------------------------|----------|-------|-------------------------------|
| ITEM | PART NO. | REQ'D | DESCRIPTION |
| 1 | 172063 | 1 | BKT, SOL VALVE MOUNT |
| 2 | 172158 | 1 | HOSE, 1/2"ID X 7.5" NYLOBRAID |
| 3 | 320265 | 1 | FITTING DUBL 3/8HBx3/8MPT |
| 4 | 383347 | 1 | CRIMP CLAMP 1/2 HOSE SS 185R |
| 5 | 711512 | 2 | WSR-FLAT .75X1.37X.08 |
| 6 | 711513 | 1 | WSR-FLAT .69 X 1.06 X .03 SS |
| 7 | 809415 | 1 | VALVE, 3/8 FPT, 45 OPEN/CLOSE |
| 8 | 827008 | 1 | FITTING, 3/8 MPT 1/2 HOSE |

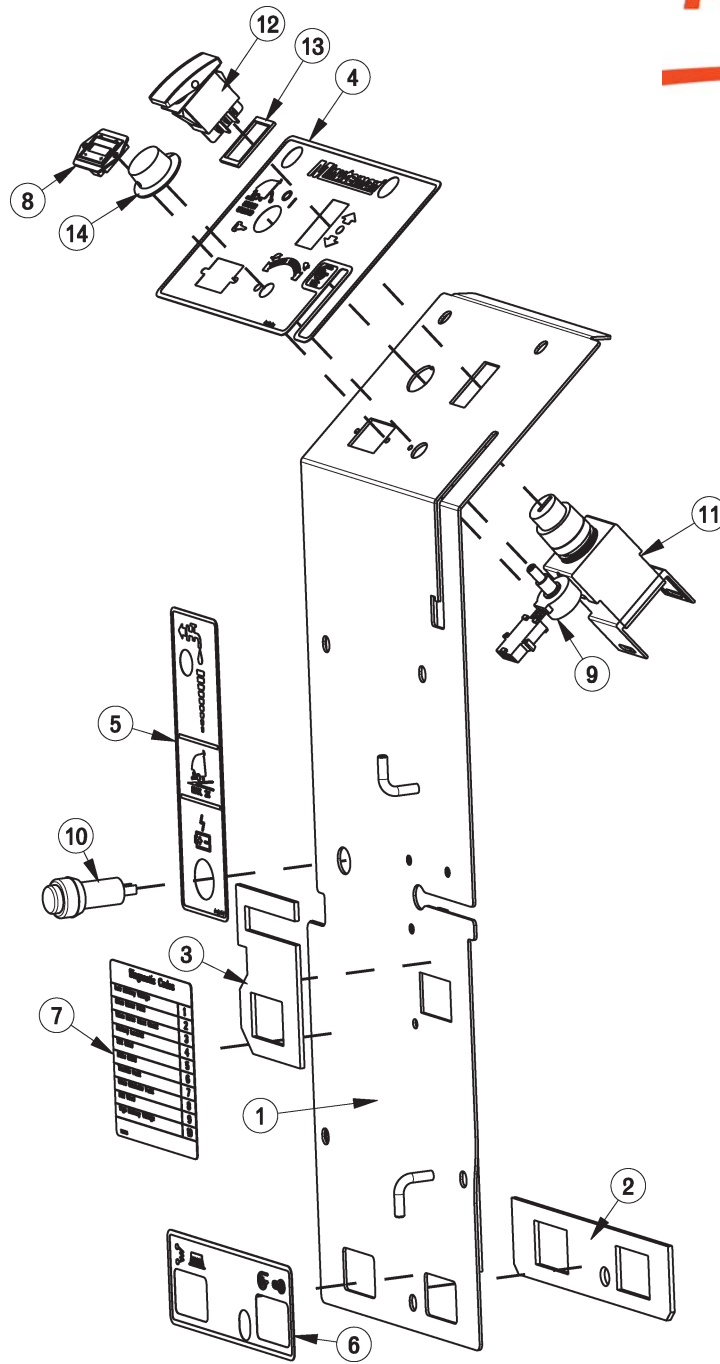


| BILL OF MATERIAL - 172012 | | | |
|---------------------------|----------|-------|--------------------------------|
| ITEM | PART NO. | REQ'D | DESCRIPTION |
| 1 | 172116 | 1 | BATTERY BOX |
| 2 | 172213 | 1 | BKT, SPACER FOR BATTERIES |
| 3 | 260224 | 1 | 18" HOSE |
| 4 | 320271 | 1 | NOZZLE BODY-ELBOW |
| 5 | 320272 | 2 | NOZZLE BODY LOCKNUT |
| 6 | 320273 | 1 | HOSE SHUT-OFF CLAMP |
| 7 | 710178 | 2 | SCR-MC 1/4-20 X .50 TRUSS STPL |
| 8 | 711575 | 2 | WSR-FLT .31x.75x.06ST |
| 9 | 828490 | 1 | CRIMP CLAMP 140R |



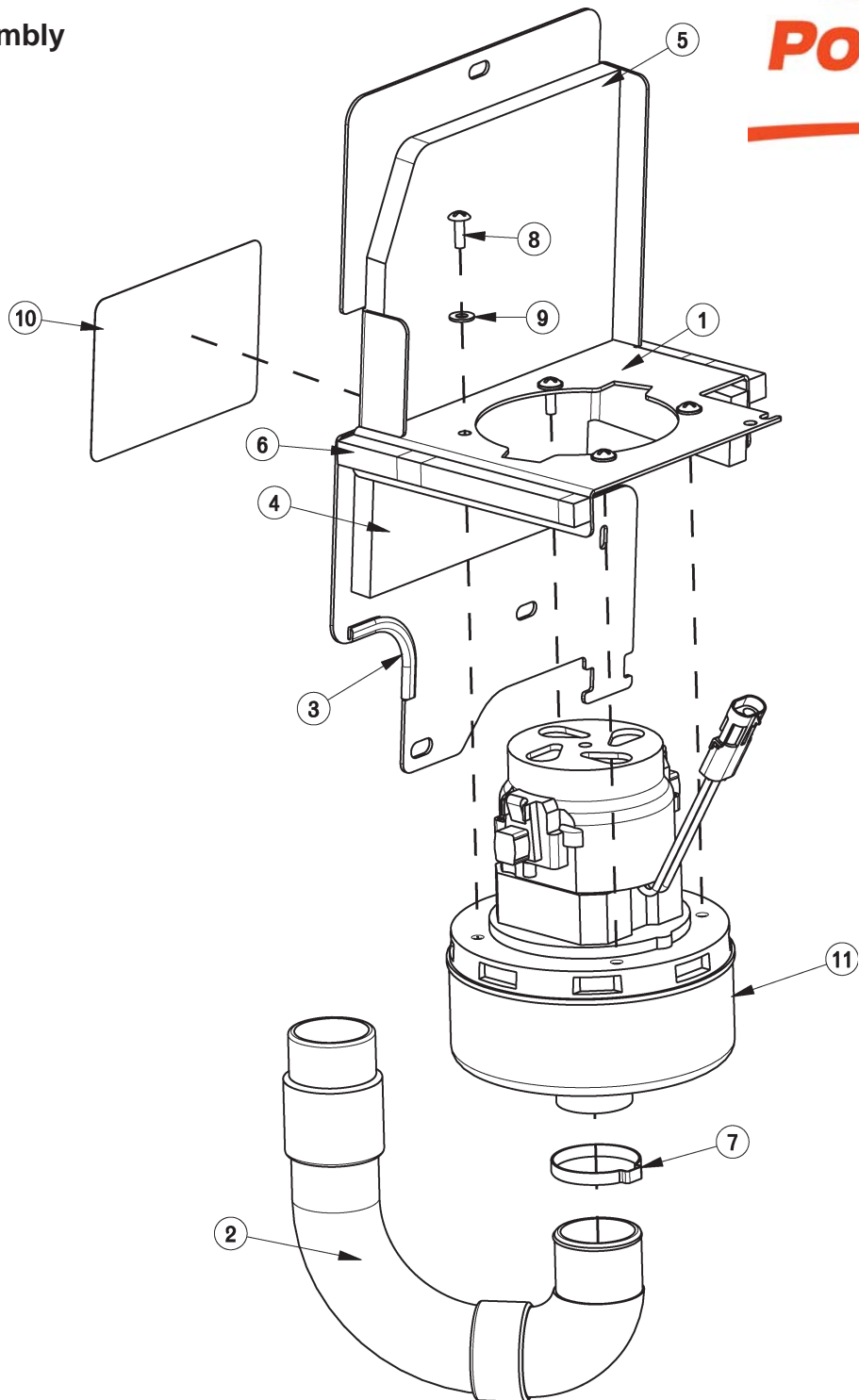


| BILL OF MATERIAL - 172075C | | | |
|----------------------------|----------|-------|------------------------------------|
| ITEM | PART NO. | REQ'D | DESCRIPTION |
| 1 | 369-416 | 3 | NUT-HEX 1/4-20 NYLOC SERATED |
| 2 | 000719 | 1 | PACER-ISL 90 (NOT SHOWN) |
| 3 | 172077 | 1 | ELEC BOX-BOT HALF WMT |
| 4 | 172088 | 1 | ELEC BOX-TOP HALF WMT |
| 5 | 172107 | 1 | BKT, UPPER BUSHING MOUNT |
| 6 | 172128 | 1 | BKT, LOWER BUSHING MOUNT |
| 7 | 172141 | 1 | VAC SWITCH ASSY |
| 8 | 172149 | 1 | CABLE ASSY, SQUEEGEE LIFT |
| 9 | 172152 | 1 | VAC LEVER WMT |
| 10 | 172188_ | 1 | FOAM TAPE, 1/2" SQ X 16.5" |
| 11 | 172331 | 1 | PIPE, 3/4 X 3.0 SCHD 40 PVC |
| 12 | 670093 | 1 | SPRING, COMPRESSION |
| 13 | 710178 | 5 | SCR-MC 1/4-20 X .50 TRUSS STPL |
| 14 | 710534 | 2 | SCR-MC TR HD 8-32 X 1.00 SS |
| 15 | 711372 | 2 | NUT-NYLOC 8-32 STL ZINC |
| 16 | 711383 | 2 | NUT-HEX CLR LOC 5/16-18 |
| 17 | 711503 | 2 | WSR, FLAT#10 |
| 18 | 711505 | 11 | 1/4 FLAT WASHER, STEEL |
| 19 | 711508 | 1 | WSR-FLAT .44X 1.0X.08 |
| 20 | 711516 | 2 | WSR- FLAT .31 X 1.25 X .05 |
| 21 | 711544 | 5 | WSR-HELICAL 1/4 |
| 22 | 712320 | 2 | WSR-NYLON .22 X .45 X .04 |
| 23 | 712757 | 2 | WSR - HELICAL #10 SS |
| 24 | 712810 | 6 | SCR-MC 10-24 X .37 ST PL |
| 25 | 717018 | 2 | NUT-NYLOC M6 X 1.0 |
| 26 | 717022 | 2 | BOLT-HH M6X1.0 X 20 |
| 27 | 742748 | 4 | CIRCUIT BREAKER BOOT |
| 28 | 747608 | 1 | I-DRIVE, 24V 70A PM MOTOR CONTROL |
| 29 | 747637 | 1 | WIRE ASY, MACHINE-BATTERY |
| 30 | 760134 | 2 | MOUNT RING |
| 31 | 762084 | 1 | SPRING-EXT .25OD X 2" F.L. MUSIC |
| 32 | 762400 | 1 | HEYCO BUSHING 2.00" |
| 33 | 828062 | 1 | CABLE TIE LARGE |
| 34 | 957745 | 1 | CHARGER, 24VDC 12A ON-BOARD 120VAC |
| 35 | 90508391 | 1 | BUSHING, CABLE GUIDE, HAKO |
| 36 | 747670C | 1 | ELEC PANEL ASSY |
| 37 | 15592033 | 2 | CAP, SAFETY NUT COVER M8 |



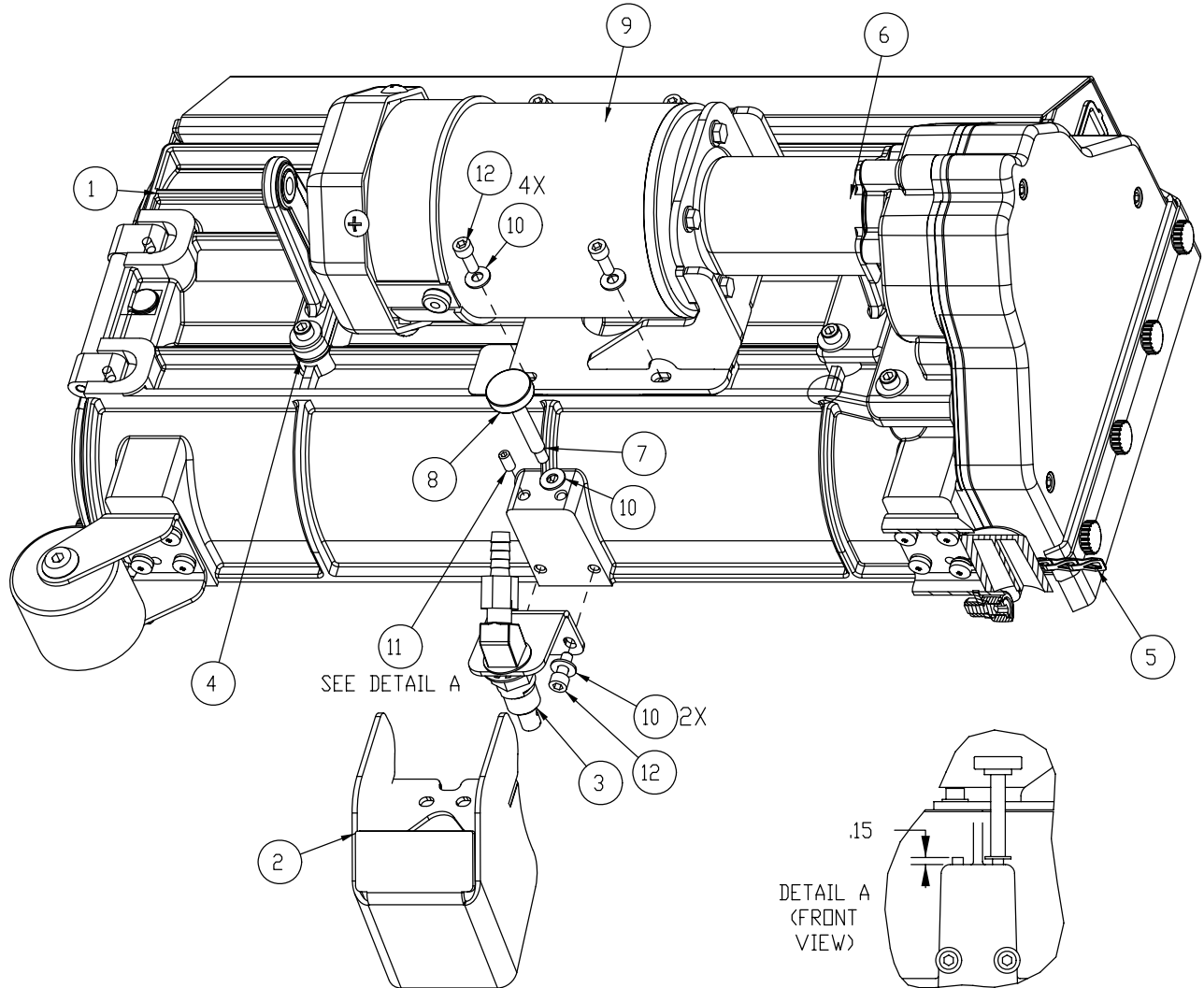
BILL OF MATERIAL - 172330PB

| ITEM | PART NO. | REQ'D | DESCRIPTION | | | |
|------|----------|-------|----------------------------|----|----------|-------------------------------------|
| | | | | 8 | 747011 | 1 BATTERY GAUGE, TRUCHARGE |
| 1 | 172182 | 1 | TD COVER WMT | 9 | 747026 | 1 POTENTIOMETER ASSY SPEED CONTROL |
| 2 | 172193 | 1 | GASKET, CB OUTLINE | 10 | 747614 | 1 CHARGE STATUS INDICATOR |
| 3 | 172194 | 1 | GASKET, CHARGER CORD PLATE | 11 | 747617-3 | 1 KEYSWITCH ASY, KEYSWTICH + HAR |
| 4 | 715683 | 1 | DECAL, DASHBOARD CYL | 12 | 748201 | 1 SWITCH, DPDT ON/OFF/ON |
| 5 | 715672 | 1 | DECAL, CHARGE STATUS | 13 | 748209 | 1 GASKET-FOR 2 POLE ROCKER SWITCHES |
| 6 | 715674 | 1 | DECAL, TD CIRCUIT BREAKER | 14 | 809874 | 1 KNOB, SPEED CONTROL |
| 7 | 715678 | 1 | DECAL. DIAGNOSTIC CODES | | | |



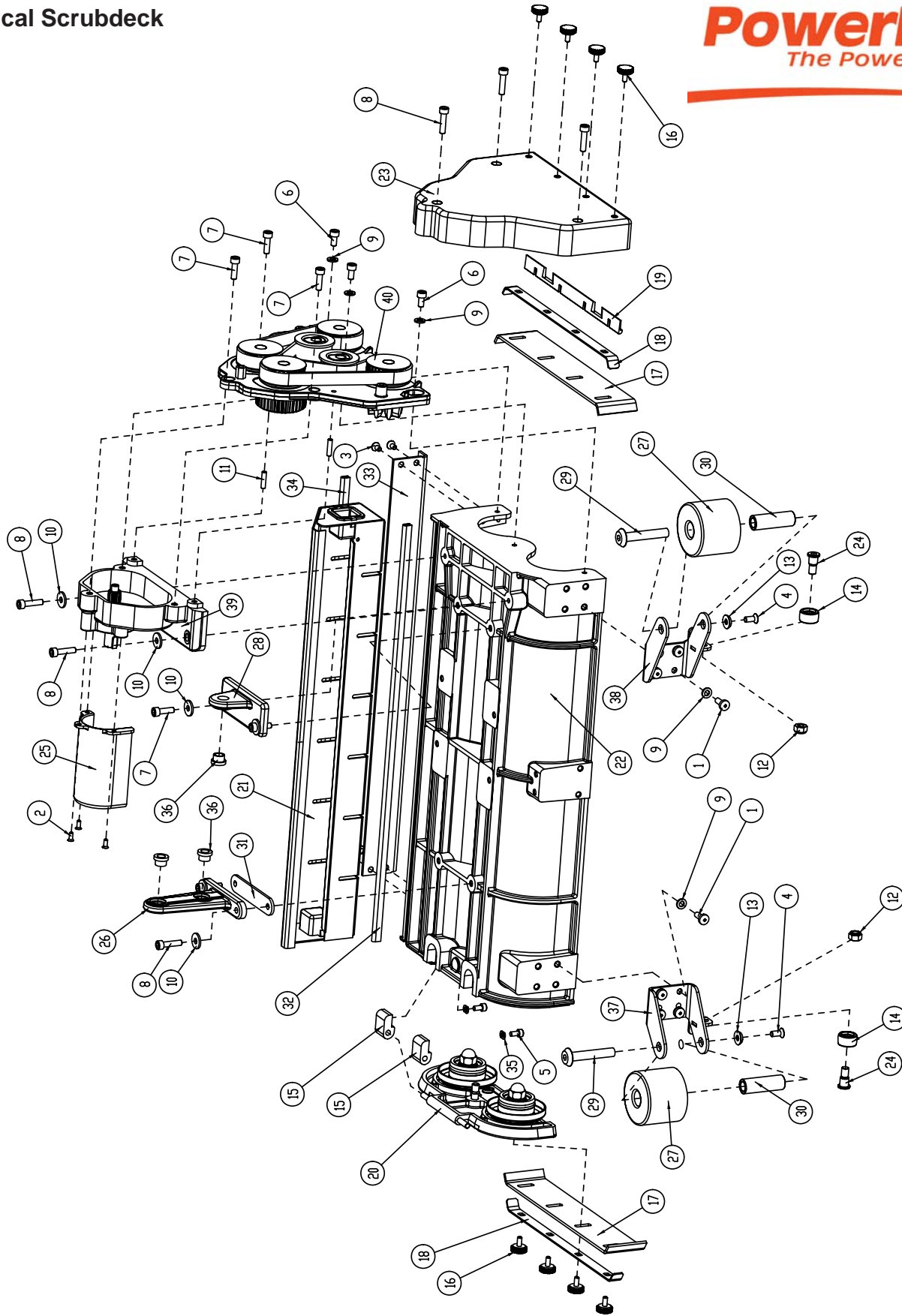
BILL OF MATERIAL - 172050

| ITEM | PART NO. | REQ'D | DESCRIPTION | ITEM | PART NO. | REQ'D | DESCRIPTION |
|------|----------|-------|------------------------------|------|----------|-------|-------------------------|
| 1 | 172045 | 1 | VAC MOUNT WMT | 7 | 450095 | 1 | CRIMP CLAMP, 1.75" |
| 2 | 172048 | 1 | HOSE, STRETCH 13" | 8 | 711160 | 4 | #10 X 5/8 HI-LO |
| 3 | 172124 | 1 | EDGE TRIM, .063 X 3.0, BLACK | 9 | 711503 | 4 | WSR, FLAT#10 |
| 4 | 172186 | 1 | FOAM COVER, FRONT 1 | 10 | 715676 | 1 | DECAL, BATT CABLE ROUTE |
| 5 | 172187 | 1 | FOAM COVER, FRONT 2 | 11 | 747607-1 | 1 | VAC MOTOR ASY |
| 6 | 172188 | 2 | FOAM TAPE, 1/2" SQ X 16.5" | | | | |



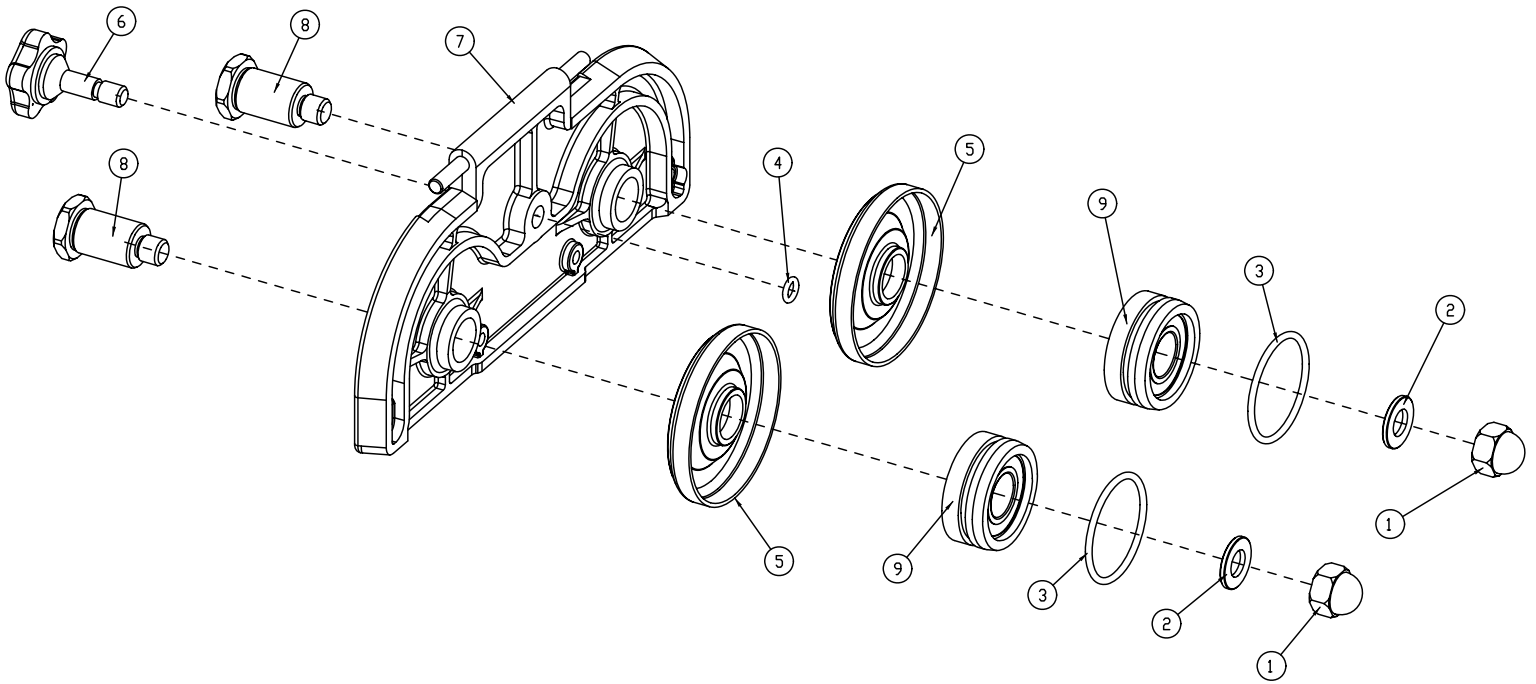
BILL OF MATERIAL - 172325

| ITEM | PART NO. | REQ'D | DESCRIPTION |
|------|----------|-------|--------------------------------|
| 1 | 172300 | 1 | CYLINDRICAL SCRUBDECK |
| 2 | 172307 | 1 | SPRAYJET COVER WELDMENT |
| 3 | 172312 | 1 | SPRAY NOZZLE ASSY |
| 4 | 172333 | 1 | SPACER, CYL DECK MOUNT |
| 5 | 172334 | 1 | DRAG CHAIN, CYL. SCRUBDECK |
| 6 | 172345 | 1 | L-070 LOVEJOY COUPLER |
| 7 | 172349 | 1 | BLT- SHLDR .31 X .375 X 1/4-20 |
| 8 | 172353 | 1 | KNOB, KNURLED |
| 9 | 172355 | 1 | CYL MOTOR ASM |
| 10 | 711504 | 7 | WSR-FLAT 1/4 ID SS |
| 11 | 712160 | 1 | SCR-SK, M6 X 12 SS CUP PT |
| 12 | 11132065 | 6 | SCR-SC, M6X1.0 X 16 Z DICH |

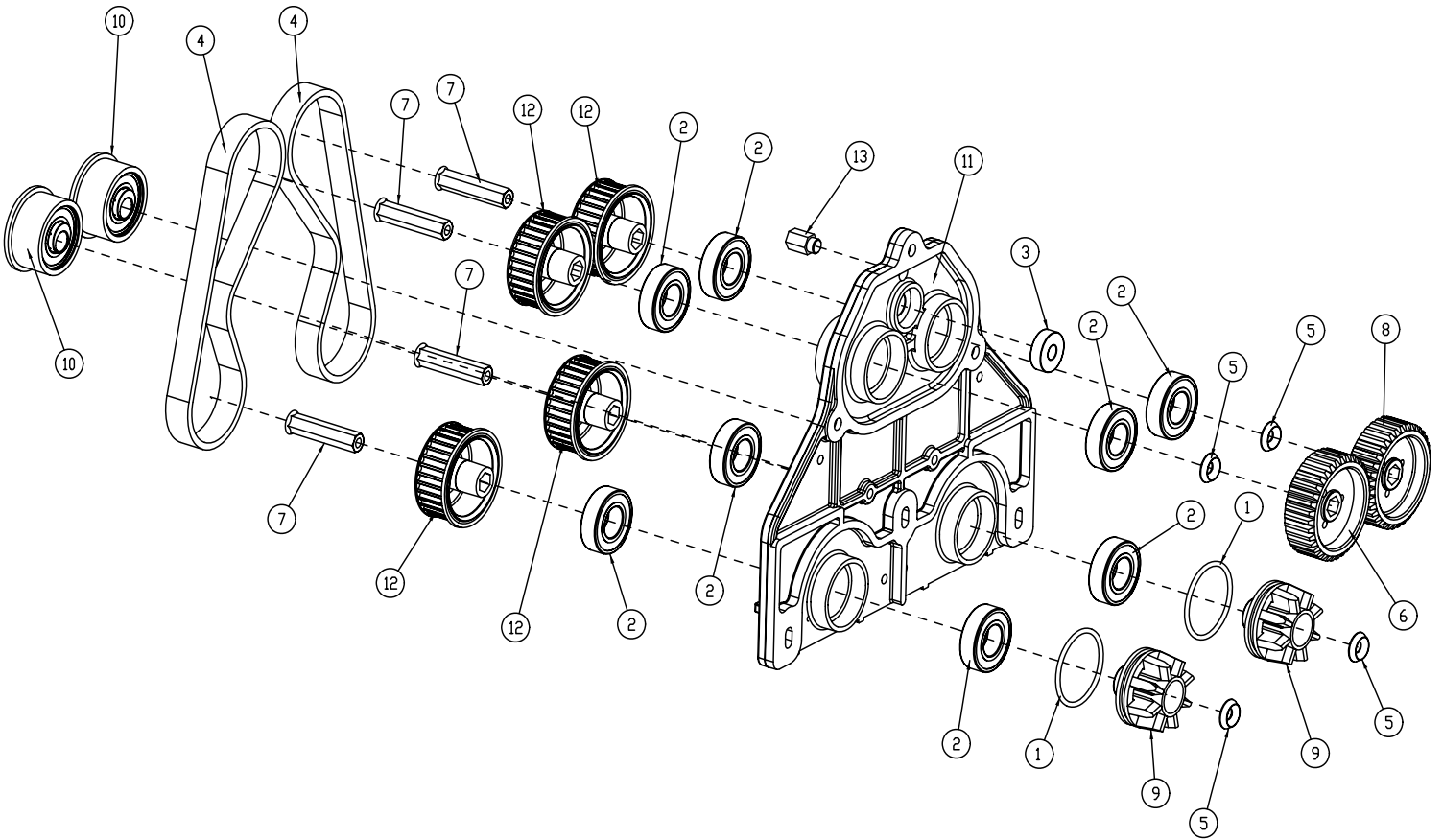


| BILL OF MATERIAL - 172300 | | | |
|---------------------------|----------|-------|-----------------------------------|
| ITEM | PART NO. | REQ'D | DESCRIPTION |
| 1 | 817306 | 8 | SCR-PAN HD M6x16 |
| 2 | 829103 | 3 | SCR-MC FL HD M4 X 10 SS |
| 3 | 829203 | 4 | CR-CSK-SCREW-M5X10-SS |
| 4 | 829321 | 2 | SC-FHCS M6 X 14 SS |
| 5 | 831203 | 2 | SCR-SHCS, M5X10 ZP |
| 6 | 831304 | 3 | SCR-SHCS, M6X12 ZP |
| 7 | 831307 | 5 | SCR-SHCS, M6X20 ZP |
| 8 | 831308 | 7 | SCR-SHCS, M6X25 ZP |
| 9 | 844061 | 11 | WASHER-6_4X12X1_6 |
| 10 | 844063 | 6 | WASHER-6_4X18X2 |
| 11 | 853508 | 2 | DOWEL PIN |
| 12 | 859086 | 2 | NUT-NYLOC M8 |
| 13 | 925012 | 2 | WASHER-BRIDGE |
| 14 | 931163 | 2 | WHEEL - BRUSH |
| 15 | 931171 | 2 | HINGE-IDLER END |
| 16 | 931172 | 8 | KNOB-SQG |
| 17 | 931235 | 2 | LIP-FLASH GUARD |
| 18 | 3130024 | 2 | STRIP-FLASH GUARD |
| 19 | 3130110 | 1 | SEAL-BELT COVER |
| 20 | 3180062 | 1 | IDLER SUPPORT ASSLY BRUSH |
| 21 | 3180217 | 1 | DEBRIS TRAY |
| 22 | 3530278 | 1 | BRUSH DECK HOUSING |
| 23 | 3530280 | 1 | BELT COVER |
| 24 | 3530283 | 2 | PIN-BRUSH WHEEL |
| 25 | 3530287 | 1 | COUPLER COVER |
| 26 | 3530288 | 1 | BRACKET - DOUBLE ARM |
| 27 | 3530290 | 2 | DEFLECTOR ROLLER |
| 28 | 3530291 | 1 | BRACKET - SINGLE ARM |
| 29 | 3530292 | 2 | DEFLECTOR ROLLER STUD |
| 30 | 3530296 | 2 | SLEEVE DEFLECTOR ROLLER |
| 31 | 3530346 | 1 | SPACER, DOUBLE ARM |
| 32 | 3530358 | 1 | STRIP HOUSING U BEEDING |
| 33 | 3530359 | 1 | SUPPORT PLATE HOUSING |
| 34 | 3530361 | 1 | STRIP HOUSING U BEEDING |
| 35 | 3530362 | 2 | SPECIAL WASHER M5 |
| 36 | 3530408 | 3 | BUSHING-FLG, .375X.50X.31 GFS-055 |
| 37 | 3580215 | 1 | DEFLECTOR ROLLER ARM RH WELDMENT |
| 38 | 3580216 | 1 | DEFLECTOR ROLLER ARM LH WELDMENT |
| 39 | 3580219 | 1 | HOUSING - GEAR ASSY |
| 40 | 3580257 | 1 | HOUSING ASSY-GEAR SUPPORT |

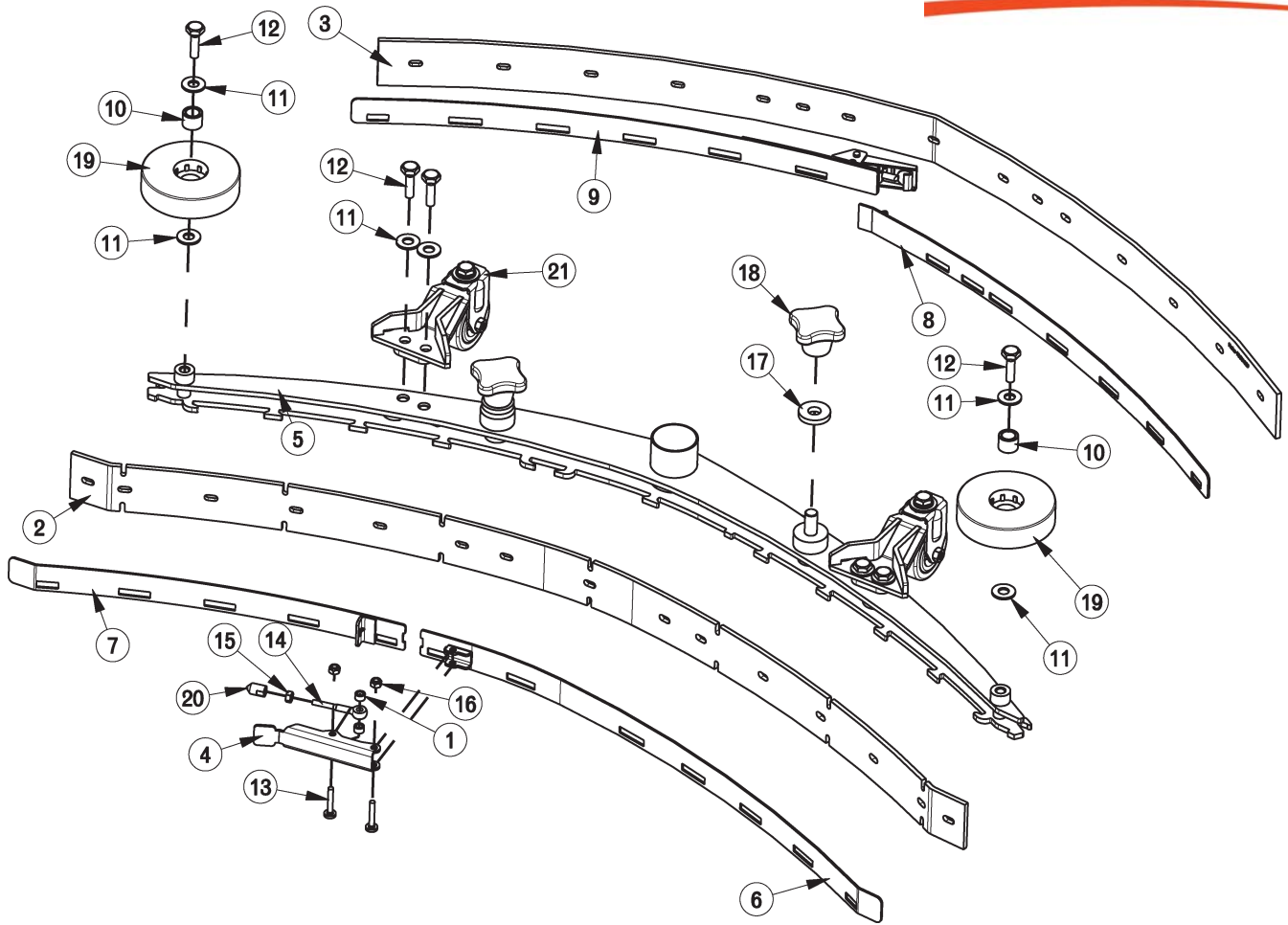
**Cylindrical Scrubdeck
SubAssy I - Idler Support**



| BILL OF MATERIAL - 3180062 | | | |
|----------------------------|----------|-------|----------------------------|
| ITEM | PART NO. | REQ'D | DESCRIPTION |
| 1 | 838100 | 2 | DOMED CAP NUT-M10-SS |
| 2 | 845101 | 2 | WASHER-SS-304-10.5X20X2 |
| 3 | 854007 | 2 | O' RING - 36X2.5 |
| 4 | 854008 | 1 | ORING 6X2.0 |
| 5 | 931157 | 2 | SPACER, IDLER HUB COVER |
| 6 | 931758 | 1 | KNOB-IDLER COVER LOCK |
| 7 | 3130005 | 1 | COVER IDLER END -MACHINING |
| 8 | 3130042 | 2 | PIN-IDLER END |
| 9 | 3180091 | 2 | IDLER PULLEY - BRUSH |

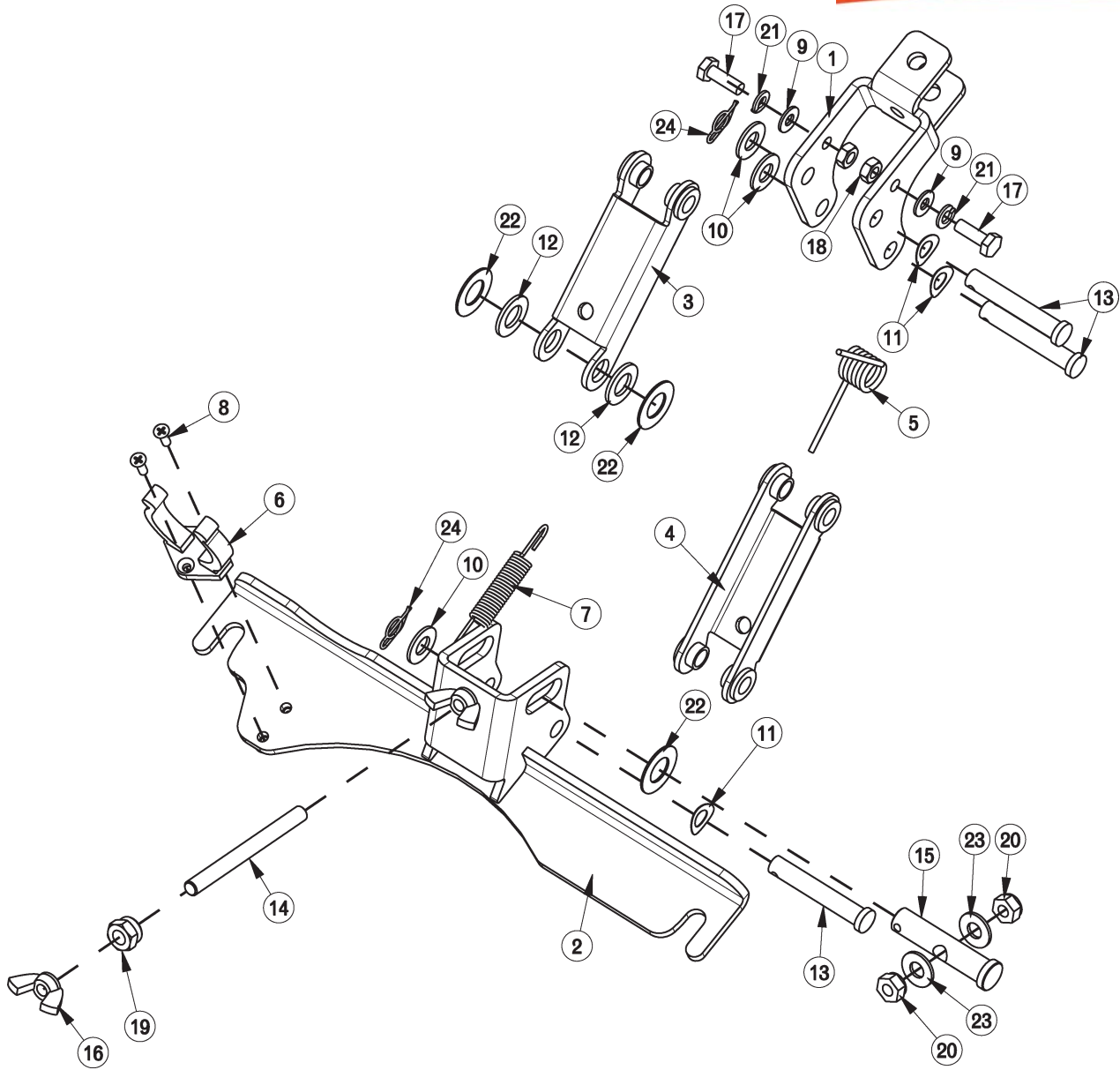


| BILL OF MATERIAL - 3580257 | | | |
|----------------------------|----------|-------|--------------------------|
| ITEM | PART NO. | REQ'D | DESCRIPTION |
| 1 | 854007 | 2 | O' RING - 36X2.5 |
| 2 | 875010 | 8 | BEARING-6003 NSE NACHI |
| 3 | 875011 | 1 | BEARING-608 2Z |
| 4 | 925002 | 2 | DRIVE BELT 425-5M-15-HTD |
| 5 | 925012 | 4 | WASHER-BRIDGE |
| 6 | 925193 | 1 | GEAR-LH |
| 7 | 931027 | 4 | DRIVE KEY |
| 8 | 931035 | 1 | GEAR-RH |
| 9 | 931129 | 2 | PULLEY-DRIVE |
| 10 | 931815 | 2 | IDLER-PLAIN ASSY |
| 11 | 3130006 | 1 | HOUSING-GEAR SUPPORT |
| 12 | 3180008 | 4 | SPROCKET ASSEMBLY-GEAR |
| 13 | 3530372 | 1 | STUD-M/F, M8/M6 ZP |



BILL OF MATERIAL - 172230

| ITEM | PART NO. | REQ'D | DESCRIPTION | ITEM | PART NO. | REQ'D | DESCRIPTION |
|------|----------|-------|------------------------------|------|----------|-------|----------------------------|
| 1 | 172074 | 2 | SPACER, 5/16OD X 17GA, ALUM | 12 | 11039567 | 6 | BLT-HH M8 X 25 SS DIN933 |
| 2 | 172162 | 1 | BLADE, FRONT 34" SQUEEGEE | 13 | 11175494 | 2 | SCR-MC M5 X 25 SS DIN7985 |
| 3 | 172163 | 1 | BLADE, REAR 34" SQUEEGEE | 14 | 11518313 | 1 | BLT-EYE M5 X 40 SS |
| 4 | 172234 | 1 | LEVER, 90535758 | 15 | 12022430 | 1 | NUT-HEX M5 SS DIN934 |
| 5 | 172235 | 1 | SQUEEGEE WMT, 860MM | 16 | 12040283 | 2 | NUT-HEX M5 NYLOC SS DIN985 |
| 6 | 172240 | 1 | STRAP WMT, FRONT | 17 | 12515094 | 2 | WSR, SQUEEGEE KNOB |
| 7 | 172241 | 1 | STRAP WMT, FRONT | 18 | 17133026 | 2 | KNOB, M10 STAR HANDLE |
| 8 | 172245 | 1 | STRAP WMT, REAR | 19 | 90336637 | 2 | WHEEL, 3.15OD |
| 9 | 172246 | 1 | STRAP WMT, REAR | 20 | 90513631 | 1 | PIN, THD 90513631 |
| 10 | 430322 | 2 | BUSHING .435 X .625 X .50 | 21 | 97098842 | 2 | CASTER ASSY |
| 11 | 712772 | 8 | WSR-FLAT .344 x .75 x .06 SS | | | | |



BILL OF MATERIAL - 172150

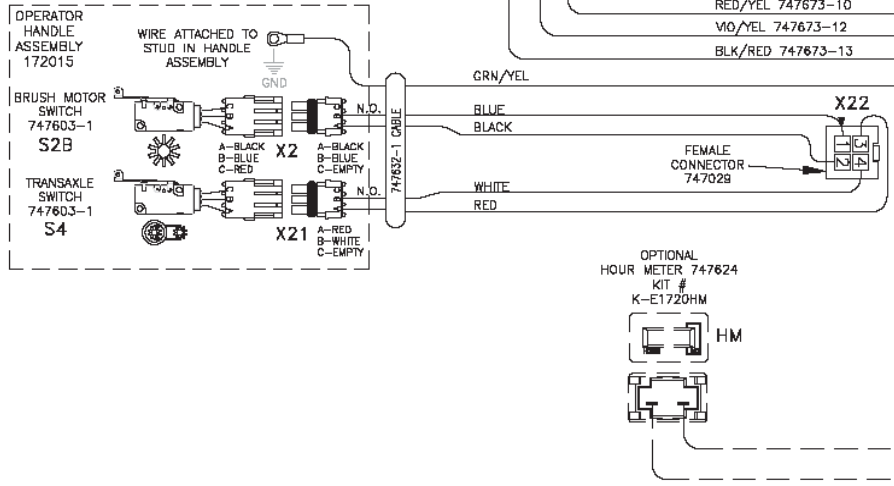
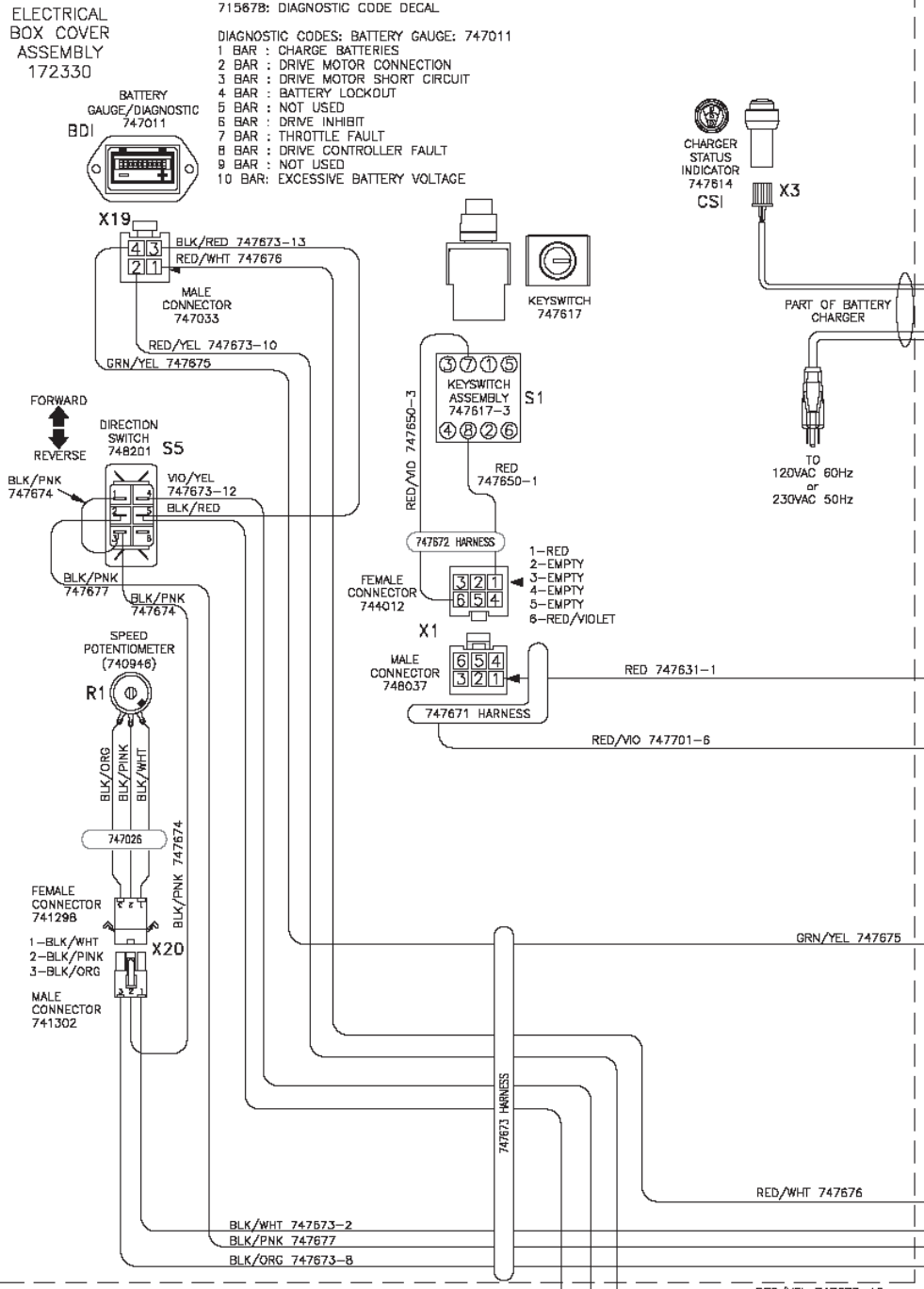
| ITEM | PART NO. | REQ'D | DESCRIPTION | ITEM | PART NO. | REQ'D | DESCRIPTION |
|------|----------|-------|------------------------------|------|----------|-------|--------------------------------|
| 1 | 172134 | 1 | BKT, MAIN SQUEEGEE HINGE | 13 | 711678 | 3 | CLEVIS PIN 3/8 X 2-1/4 |
| 2 | 172155 | 1 | SQUEEGEE MOUNT WMT | 14 | 712147 | 1 | ROD-THD 5/16-18 X 3.5 SS |
| 3 | 172196 | 1 | SQ TOP LINK W/ BUSHING | 15 | 712148 | 1 | CLEVIS PIN, 1/2 x 2.25 W/ HOLE |
| 4 | 172197 | 1 | SQ BOT LINK W/ BUSH | 16 | 712157 | 2 | NUT- WING 5/16-18 SS |
| 5 | 172261 | 1 | TORSION SPRING | 17 | 712562 | 2 | BOLT-HH 1/4-20X3/4 SS |
| 6 | 260579 | 1 | TOOL CLIP, 1.5" HOSE | 18 | 712665 | 2 | NUT-HEX 1/4-20 SS |
| 7 | 430051 | 1 | RETURN SPRING-3.00" | 19 | 712680 | 1 | NUT-HEX 5/16-18 SS |
| 8 | 710530 | 2 | SCR-MC FL HD 8-32 X .50 BRS | 20 | 712683 | 2 | NUT, HEX 5/16-18 NYLOC SS |
| 9 | 711504 | 2 | WSR-FLAT 1/4 ID SS | 21 | 712758 | 2 | WSR-HELICAL 1/4 SS |
| 10 | 711515 | 3 | WSR-FLAT .406 X .812 X .0625 | 22 | 712760 | 3 | WSR-FLAT .56X1.06X.04 SS |
| 11 | 711523 | 3 | WSR-WAVE .37X .68 X .08 | 23 | 712772 | 2 | WSR-FLAT .344 x .75 x .06 SS |
| 12 | 711592 | 2 | WSR-FLAT .50 X .9 X .075 NYL | 24 | 3400125 | 2 | PIN-COTTER 3/8 RUE RING |

1 Wiring Diagrams

PAGE LAYOUT

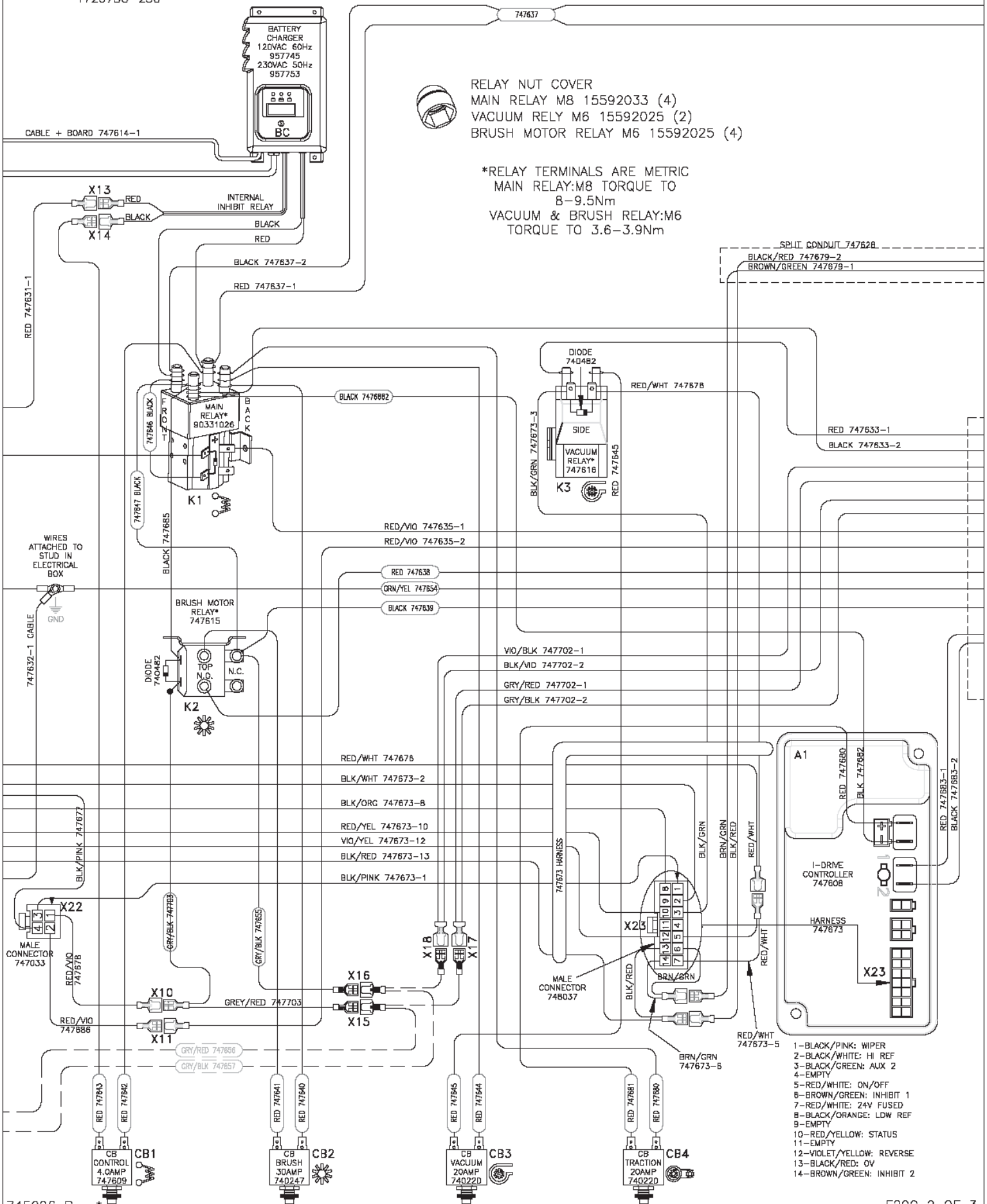


PAGES GO TOGETHER AS SHOWN TO SEE THE ENTIRE SCHEMATIC AS ONE.



| CONNECTOR # | DESCRIPTION |
|-------------|--------------------------------------|
| X1 | KEYSWITCH (S1) |
| X2 | BRUSH MOTOR SWITCH (S2B) |
| X3 | CHARGER STATUS INDICATOR (CSI) |
| X4 | VACUUM SWITCH (S3) |
| X5 | BATTERY CONNECTOR |
| X6 | VACUUM MOTOR |
| X7 | BRUSH MOTOR SWITCH (S2A) |
| X8 | WATER PUMP (M1) |
| X9 | WATER SOLENOID VALVE (Y1) |
| X10 | OPERATOR HANDLE CABLE |
| X11 | OPERATOR HANDLE CABLE |
| X12 | NOT USED |
| X13 | BATTERY CHARGER (BC)- INTERNAL RELAY |
| X14 | BATTERY CHARGER (BC)- INTERNAL RELAY |
| X15 | SOLENOID/HOUR METER CONNECTION |
| X16 | SOLENOID/HOUR METER CONNECTION |
| X17 | OPTIONAL (USED WITH HOUR METER) |
| X18 | OPTIONAL (USED WITH HOUR METER) |
| X19 | BATTERY DISCHARGE INDICATOR (BDI) |
| X20 | SPEED POTENTIOMETER (R1) |
| X21 | TRANSAXLE SWITCH (S4) |
| X22 | OPERATOR HANDLE CABLE |
| X23 | I-DRIVE HARNESS |
| X24 | TRANSAXLE MOTOR (M4) |
| X25 | OPERATOR HANDLE CABLE |
| X26 | I-DRIVE (A1) to VACUUM SWITCH (S3) |
| X27 | I-DRIVE (A1) to VACUUM SWITCH (S3) |

ELECTRICAL
BOX ASSEMBLY
172075C-120
172075C-230



RELAY NUT COVER
MAIN RELAY M8 15592033 (4)
VACUUM RELAY M6 15592025 (2)
BRUSH MOTOR RELAY M6 15592025 (4)

*RELAY TERMINALS ARE METRIC
MAIN RELAY:M8 TORQUE TO
8-9.5Nm
VACUUM & BRUSH RELAY:M6
TORQUE TO 3.6-3.9Nm

SPLIT CONDUIT 747628

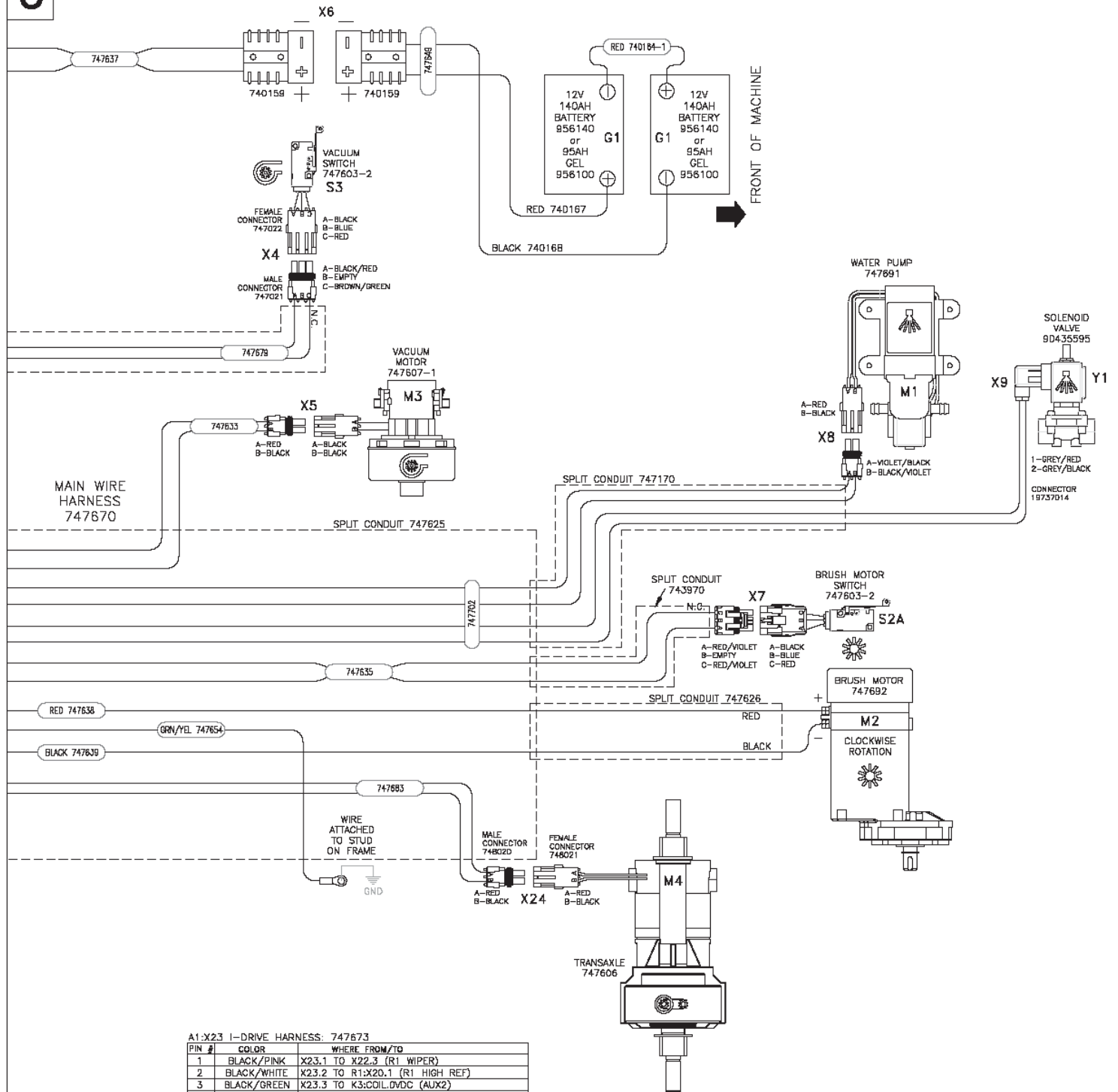
BLACK/RED 747679-2
BROWN/GREEN 747679-1

RED 747633-1
BLACK 747633-2

VIO/BLK 747702-1
BLK/VIO 747702-2
GRY/RED 747702-1
GRY/BLK 747702-2

RED/WHT 747676
BLK/WHT 747673-2
BLK/GRN 747673-8
RED/YEL 747673-10
VIO/YEL 747673-12
BLK/RED 747673-13
BLK/PINK 747673-1

- 1-BLACK/PINK: WIPER
- 2-BLACK/WHITE: HI REF
- 3-BLACK/GREEN: AUX 2
- 4-EMPTY
- 5-RED/WHITE: ON/OFF
- 6-BROWN/GREEN: INHIBIT 1
- 7-RED/WHITE: 24V FUSED
- 8-BLACK/ORANGE: LDW REF
- 9-EMPTY
- 10-RED/YELLOW: STATUS
- 11-EMPTY
- 12-VIOLET/YELLOW: REVERSE
- 13-BLACK/RED: OV
- 14-BROWN/GREEN: INHIBIT 2



A1:X23 I-DRIVE HARNESS: 747673

| PIN # | COLOR | WHERE FROM/TO |
|-------|---------------|--|
| 1 | BLACK/PINK | X23.1 TO X22.3 (R1 WIPER) |
| 2 | BLACK/WHITE | X23.2 TO R1:X20.1 (R1 HIGH REF) |
| 3 | BLACK/GREEN | X23.3 TO K3:COIL.0VDC (AUX2) |
| 4 | EMPTY | - |
| 5 | RED/WHITE | X23.5 JUMPER TO X23.7 (ON/OFF) |
| 6 | BROWN/GREEN | X23.6 JUMPER TO X23.14 (INHIBIT 1) |
| 7 | RED/WHITE | X23.7 JUMPER TO X23.5 (24VDC FUSED) |
| 8 | BLACK/ORANGE | X23.8 TO R1:X20.3 (R1 LOW-REF) |
| 9 | EMPTY | - |
| 10 | RED/YELLOW | X23.10 TO BDI:X19.2 (STATUS) |
| 11 | EMPTY | - |
| 12 | VIOLET/YELLOW | X23.12 TO S5.4 (REVERSE) |
| 13 | BLACK/RED | X23.13 JUMPER S5.6 JUMPER BDI:X19.3 (OV) |
| 14 | BROWN/GREEN | X23.14 JUMPER TO X23.6 (INHIBIT 2) |

R1:X20 SPEED POTENTIOMETER: 747D26

| COLOR | WHERE FROM/TO |
|-------|--------------------------------------|
| 1 | BLACK/WHITE X20.1 TO A1:X23.2 |
| 2 | BLACK/PINK X20.2 TO S5.3 JUMPER S5.1 |
| 3 | BLACK/ORANGE X20.3 TO A1:X23.8 |

X22: OPERATOR HANDLE CABLE: 747632-1

| COLOR | WHERE FROM/TO |
|-------|-------------------------|
| 1 | BLUE X22.1 TO S2B:X2.9 |
| 2 | BLACK X22.2 |
| 3 | RED X22.3 TO S4:X21.A |
| 4 | WHITE X22.4 TO S4:X21.B |

X22: CONNECTOR TO OPERATOR HANDLE CABLE: 747632-1

| COLOR | WHERE FROM/TO |
|-------|---|
| 1 | RED/VIOLET X22.1 TO X1D JUMPER K2:COIL.24VDC JUMPER X15 |
| 2 | RED/VIOLET X22.2 TO X11 TO S2A:X7.A |
| 3 | BLACK/PINK X22.3 TO A1:X23.1 |
| 4 | BLACK/PINK X22.4 TO S5.2 |

S1:X1 MAIN KEYSWITCH ASSEMBLY: 747617-1

| PIN # | COLOR | WHERE FROM/TO |
|-------|------------|--------------------------------|
| 1 | RED | X1.1 TO X1.3 BC INTERNAL RELAY |
| 2 | EMPTY | - |
| 3 | EMPTY | - |
| 4 | EMPTY | - |
| 5 | EMPTY | - |
| 6 | RED/VIOLET | X1.1 TO K1:COIL.24VDC |

BATTERY CHARGER: 957745 or 957753

| COLOR | WHERE FROM/TO |
|-------|--------------------------------------|
| X13 | RED X13 TO S1:X1.1 |
| X14 | BLACK X14: CB1 CONTROL 4.0A |
| 14GA | RED K1:CONTACT + (REAR LEFT POST) |
| 14GA | BLACK K1:CONTACT - (FRONT LEFT POST) |

OTHER WIRE COLORS

| | |
|--------------|--|
| RED | BATTERY 24VDC: + |
| BLACK | BATTERY 0VDC: - |
| GREEN/YELLOW | GROUND |
| RED/VIOLET | 24VDC AFTER MAIN KEYSWITCH |
| X15 | GREY/RED OPTIONAL POWER 24VDC: 4A MAX |
| X18 | GREY/BLACK OPTIONAL POWER 0VDC: 4A MAX |
| X8.A | VIOLET/BLACK WATER PUMP: 24VDC |
| X8.B | BLACK/VIOLET WATER PUMP: 0VDC |
| X9.A | VIOLET/BLACK WATER SOLENOID VALVE: 24VDC |
| X9.B | BLACK/VIOLET WATER SOLENOID VALVE: 0VDC |

| REFERENCE # | COMPONENT NAME | PART NUMBER |
|---------------------|-----------------------------------|-------------|
| M1 | PUMP, WATER | 748691 |
| M2 | MOTOR, BRUSH | 748692 |
| M3 | MOTOR, VACUUM ASSEMBLY | 747607-1 |
| M4 | TRANSAXLE | 747606 |
| Y1 | SOLENOID VALVE, WATER | 90435595 |
| K1 | RELAY, MAIN | 90331026 |
| K2 | RELAY, BRUSH MOTOR | 747615 |
| K3 | RELAY, VACUUM | 747616 |
| CB1 | CIRCUIT BREAKER, CONTROL 4.0A | 747609 |
| CB2 | CIRCUIT BREAKER, BRUSH MOTOR 30A | 740247 |
| CB3 | CIRCUIT BREAKER, VACUUM MOTOR 20A | 740220 |
| CB4 | CIRCUIT BREAKER, TRANSAXLE 20A | 740220 |
| S1 | KEYSWITCH | 747617 |
| S2A | SWITCH, BRUSH MOTOR (at motor) | 747603-2 |
| S2B | SWITCH, BRUSH MOTOR (handle) | 748603-1 |
| S3 | SWITCH, VACUUM MOTOR | 748603-2 |
| S4 | SWITCH, TRANSAXLE (handle) | 748603-1 |
| S5 | SWITCH, DIRECTION | 748201 |
| A1 | CONTROLLER, I-DRIVE | 747608 |
| R1 | SPEED POTENTIOMETER ASSEMBLY | 747026 |
| BDI | BATTERY DISCHARGE INDICATOR | 747011 |
| CSI | CHARGER STATUS INDICATOR | 747614 |
| HM (optional) | KIT, HOUR METER OPTION | K-E1720HM |
| BC | BATTERY CHARGER 120VAC | 957745 |
| BC (model specific) | BATTERY CHARGER 230VAC | 957753 |
| G1 | BATTERY, 12V 140AH | 956140 |
| G1 (optional) | BATTERY-GEL 12V 95AH | 956100 |

| REFERENCE # | CONNECTOR FUNCTION | PART # -female | PART # -male |
|-------------|---|----------------|--------------|
| X1 | KEYSWITCH (S1) | 744012 | 748037 |
| X2 | SWITCH, BRUSH MOTOR (S2B) | 747022 | 747021 |
| X3 | CHARGER STATUS INDICATOR (CSI) | Part of CSI | Part of BC |
| X4 | SWITCH, VACUUM (S3) | 747022 | 747021 |
| X5 | MOTOR, VACUUM (M3) | 748021 | 748020 |
| X6 | BATTERY CONNECTOR | 740159 | 740159 |
| X7 | SWITCH, BRUSH MOTOR (S2A) | 747022 | 747021 |
| X8 | PUMP, WATER (M1) | 748021 | 748020 |
| X9 | SOLENOID VALVE, WATER (Y1) | 19737014 | N/A |
| X10 | OPERATOR HANDLE CABLE | 741093 | 740697 |
| X11 | OPERATOR HANDLE CABLE | 740366 | 740697 |
| X12 | NOT USED | | |
| X13 | BATTERY CHARGER (BC)- INTERNAL RELAY | 740366 | 740697 |
| X14 | BATTERY CHARGER (BC)-INTERNAL RELAY | 740366 | 740697 |
| X15 | SOLENOID/HOUR METER CONNECTION | 740366 | 741165 |
| X16 | SOLENOID/HOUR METER CONNECTION | 740366 | 741165 |
| X17 | OPTIONAL HOUR METER (HM) WIRE-747656 | 740366 | 741165 |
| X18 | OPTIONAL HOUR METER (HM) WIRE-747657 | 740366 | 741165 |
| X19 | BATTERY DISCHARGE INDICATOR (BDI) | Part of BDI | 747033 |
| X20 | SPEED POTENTIOMETER ASM (R1) | 741298 | 741302 |
| X21 | SWITCH, TRANSAXLE (S4) | 747022 | 747021 |
| X22 | OPERATOR HANDLE CABLE | 747029 | 747033 |
| X23 | I-DRIVE HARNESS: 747673 | Part of A1 | 748037 |
| X24 | MOTOR, TRANSAXLE (M4) | 748021 | 748020 |
| X25 | I-DRIVE (A1) to VACUUM SWITCH (S3) | 740366 | 741165 |
| X26 | I-DRIVE (A1) to VACUUM SWITCH (S3) | 741093 | 740697 |
| X27 | I-DRIVE (A1) to VACUUM RELAY (K3) CONTACT | 741093 | 741165 |

Revision F
Effective November 1, 2008
PowerBoss Made Simple Industrial Limited Warranty

Minuteman International owner of PowerBoss warrants to the original purchaser/user that the product is free from defects in workmanship and materials under normal use. PowerBoss will, at its option, repair or replace without charge, parts that fail under normal use and service when operated and maintained in accordance with the applicable operation and instruction manuals. All warranty claims must be submitted through and approved by factory authorized repair stations.

This warranty does not apply to normal wear, or to items whose life is dependent on their use and care. Parts not manufactured by PowerBoss are covered by and subject to the warranties and/or guarantees of their manufacturers. Please contact Minuteman International for procedures in warranty claims against these manufacture.

Special warning to purchaser – Use of replacement parts not manufactured by PowerBoss or its designated licensees, will void all warranties expressed or implied. A potential health hazard exists without original equipment replacement.

All warranted items become the sole property of Minuteman International or PowerBoss or its original manufacturer, whichever the case may be.

PowerBoss disclaims any implied warranty, including the warranty of merchantability and the warranty of fitness for a particular purpose. PowerBoss assumes no responsibility for any special, incidental or consequential damages.

This limited warranty is applicable only in the U.S.A. and Canada, and is extended only to the original user/purchaser of this product. Customers outside the U.S.A. and Canada should contact their local distributor for export warranty policies. PowerBoss is not responsible for costs or repairs performed by persons other than those specifically authorized by PowerBoss. This warranty does not apply to damage from transportation, alterations by unauthorized persons, misuse or abuse of the equipment, use of non-compatible chemicals, or damage to property, or loss of income due to malfunctions of the product. If a difficulty develops with this machine, you should contact the dealer from whom it was purchased.

This warranty gives you specific legal rights, and you may have other rights, which vary from state to state. Some states do not allow the exclusion or limitation of special, incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions and limitations may not apply to you.

| | Travel* | Labor | Parts | Engine | Extended Warranty | Costs |
|----------------------|-------------|------------|----------------------|------------------------|---|-------|
| Walk behinds | | | | | | |
| Battery sweepers | Ninety days | One year | One year | N/A | 2 years Parts + Labor (or 2000 Hours) | 2% |
| IC sweepers | Ninety days | One year | One year | Through manufacturer | 2 years Parts + Labor (or 2000 Hours) | 2% |
| Battery scrubbers | Ninety days | Two years | Three years | N/A | 3 Years Parts + Labor (or 3000 Hours) | 2% |
| Riders | | | | | | |
| Battery scrubbers | Ninety days | Two years | Three years/2000 hrs | N/A | 3 Years Parts + Labor (or 3000 Hours) | 2% |
| IC sweeper/scrubbers | Ninety days | Six months | Two years/2000 hrs | Two years/3000 hrs** | 2 years Parts + Labor (or 2000 Hours) | 3% |
| IC sweepers | Ninety days | Six months | Four years/3000 hrs | Five years/3000 hrs** | 4 Years Parts + 2 Years Labor (or 4000 Hours) | 3% |
| Exceptions | | | | | | |
| Apex series sweeper | Ninety days | One year | One year/1000 hrs | One year/1000 hrs** | 2 years Parts + Labor (or 2000 Hours) | 3% |
| 6X sweeper | Ninety days | Six months | Two years/2000 hrs | Two years/2000 hours** | 2 years Parts + Labor (or 2000 Hours) | 3% |

Tank Bladders Eight years/ no additional labor
Polypropylene plastic tanks Ten years/ no additional labor
Batteries 0-3 months full replacement, 4-12 prorated credit
Charges One-year replacement
Replacement parts Ninety days

*Two-hour cap

**Through engine manufacture. See section 3 of warranty manual for engine warranty exceptions

***Base upon dealer's certification status

Extended Warranty MUST be signed up within 30 days of delivery to End User (Dealer has 1 Year from Receiving Machine to Sign up extended Warranty)

Extended Warranty Cost is based on Invoice Price multiplied by the Percentage listed in the Extended Warranty Column

All above labor and travel reimbursed at 65 or 75% of the published shop rate.