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Operator & Parts Manual

Ride-on Auto Sweeper



iS1100

7000702
REV.01(07-2015)

INTERNATIONAL CLEANING EQUIPMENT



READ OPERATOR MANUAL MANUAL CAREFULLY

IMPORTANT: To ensure full warranty protection, Please fill out & return your warranty card.

Please fill out at time of installation for future reference.

Model No. _____

Serial No. _____

Machine Options _____

Sales Rep. _____

Sales Rep. phone no. _____

Customer ID Number _____

Installation Date _____

HOW TO ORDER PARTS

Only use ICE Company supplied or equivalent parts. Parts and supplies may be ordered online, by phone, by fax or by mail.

1. Identify the machine model.
2. Identify the machine serial number from the data label.
3. Ensure the proper serial number is used from the parts list.
4. Identify the part number and quantity.
Do not order by page or reference numbers.
5. Provide your name, company name, customer ID number, billing and shipping address, phone number and purchase order number.



PROTECT THE ENVIRONMENT

Please dispose of packaging materials, old machine components such as batteries, hazardous fluids, including antifreeze and oil, in an environmentally safe way according to local waste disposal regulations.

Always remember to recycle.



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Specifications and parts are subject to change without notice.

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SAFETY PRECAUTIONS

The following symbols indicate potentially dangerous situations. Always read this information carefully and take all necessary precautions to safeguard people and property.

The operator's cooperation is essential in order to prevent injury. No accident prevention program is effective without the total cooperation of the person responsible for the machine operation. Most of the accidents that may occur in a factory, while working or moving around, are caused by failure to comply with the simplest rules for exercising prudence. A careful and prudent operator is the best guarantee against accidents and is essential for successful completion of any prevention program.

SYMBOLS



DANGER!

It indicates a dangerous situation with risk of death for the operator.



WARNING!

It indicates a potential risk of injury for people or damage to objects.



CAUTION!

It indicates a caution or a remark related to important or useful functions. Pay careful attention to the paragraphs marked by this symbol.

NOTE :

It indicates a remark related to important or useful functions.

GENERAL INSTRUCTIONS

Specific warnings and cautions to inform about potential damages to people and machine are shown below.



DANGER!

- Before performing any maintenance, repair, cleaning or replacement procedure disconnect the battery connector, remove the ignition key and engage the parking brake.
- This machine must be used by properly trained operators only. Children or disabled people cannot use this machine.
- Sharp turns must be made at slowest possible speed. Avoid abrupt turns on incline.
- Keep the batteries away from sparks, flames and incandescent material. During the normal operation explosive gases are released.
- Do not wear jewels when working near electrical components.
- Do not work under the lifted machine without supporting it with safety stands.
- When working under the open hood, ensure that it cannot be closed by accident.
- Do not operate the machine near toxic, dangerous, flammable and/or explosive powders, liquids or vapors. This machine is not suitable for collecting dangerous powders.
- If the machine is equipped with lead (WET) batteries, battery charging produces highly explosive hydrogen gas. Keep the hood open when charging the batteries and perform this procedure in well-ventilated areas and away from naked flames.
- When lead batteries (WET) are installed on this machine, do not tilt the machine more than 30° from its horizontal position to not allow the highly corrosive acid to leak out of the batteries. When the machine is to be tilted to perform maintenance procedures, remove the batteries.



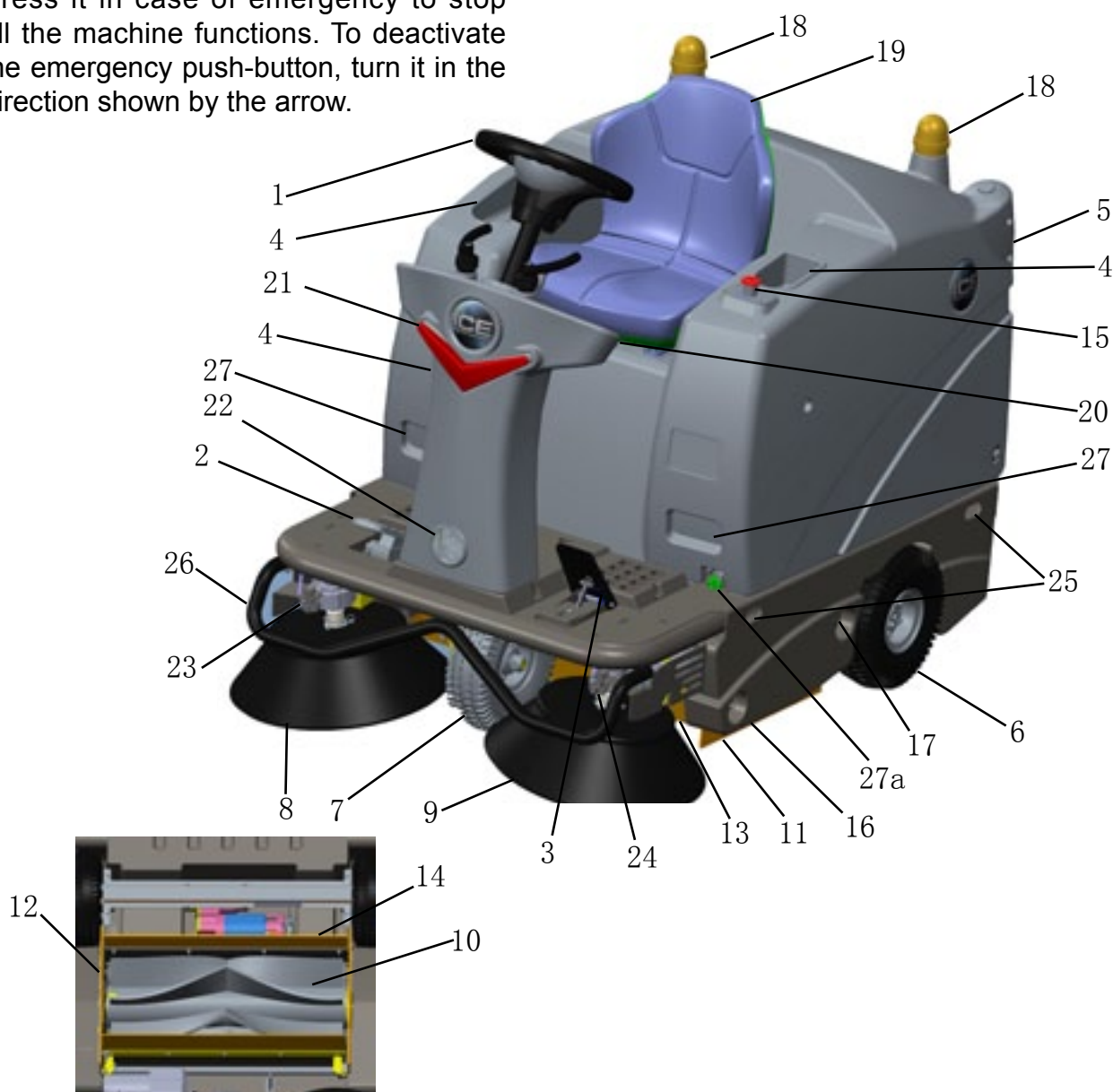
WARNING!

- Carefully read all the instructions before performing any maintenance/repair procedure.
- Take all necessary precautions to prevent hair, jewels and loose clothes from being caught by the machine moving parts.
- When the machine is equipped with lead batteries (WET), don't smoke while charging the batteries.
- Before using the battery charger, ensure that frequency and voltage values, shown on the machine serial number plate, match the electrical mains voltage.
- Do not pull or carry the machine by the battery charger cable and never use the battery charger cable as a handle. Do not close a door on the battery charger cable, or pull the battery charger cable around sharp edges or corners. Do not run the machine on the battery charger cable. Keep the battery charger cable away from heated surfaces.
- Do not charge the batteries if the battery charger cable or the plug are damaged. If the battery charger cable is damaged, contact ICE Service Center.
- To reduce the risk of fire, electric shock, or injury, do not leave the machine unattended when it is plugged in. Before performing any maintenance procedure, disconnect the battery charger cable from the electrical mains.
- To avoid any unauthorized use of the machine, remove the Ignition key.
- Do not leave the machine unattended without being sure that it cannot move independently.
- Do not use the machine on slopes with a gradient exceeding the specifications.
- Use only brushes supplied with the machine and those specified in the Operation Manual. Using other brushes could reduce safety.
- Before using the machine, close all doors and/or covers.
- Do not use the machine in excessively dusty areas.
- Do not wash the machine with direct or pressurised water jets, or with corrosive substances.
- Do not use compressed air to clean this type of machine, except for the filters (see the relevant paragraph).
- While using this machine, take care not to cause damage to other people, and children especially.
- Do not put any can containing fluids on the machine.
- The machine storage temperature must be 32°F to 104°F (0°C to +40°C).
- The machine working temperature must be 32°F to 104°F (0°C to +40°C).
- The humidity must be between 30% and 95%.
- Always protect the machine against the sun, rain and bad weather, both under operation and inactivity condition. Store the machine indoors, in a dry place. This machine must be used in dry conditions, it must not be used or kept outdoors in wet conditions.
- Do not use the machine as a means of transport, or for pushing/towing.
- Do not allow the brushes to operate while the machine is stationary to avoid damaging the floor.
- In case of fire, possibly use a powder fire extinguisher, not a water one.
- Do not bump into shelves or scaffoldings, especially where there is a risk of falling objects.
- Adjust the operation speed to suit the floor conditions.
- This machine cannot be used on roads or public streets.
- Do not tamper with the machine safety guards.
- Follow the routine maintenance procedures scrupulously.
- Do not remove or modify the plates affixed to the machine.
- In case of machine malfunctions, ensure that these are not due to lack of maintenance. Otherwise, request assistance from the authorised personnel or from an authorised Service Center.
- If parts must be replaced, require ORIGINAL spare parts from an Authorised Dealer or Retailer.
- To ensure machine proper and safe operation, the scheduled maintenance shown in the relevant chapter of this Manual must be performed by the authorised personnel or by an authorised Service Center.
- The machine must be disposed of properly, because of the presence of toxic-harmful materials (batteries, oils, etc.), which are subject to standards that require disposal in special centres (see the Scrapping chapter).

MACHINE COMPONENTS

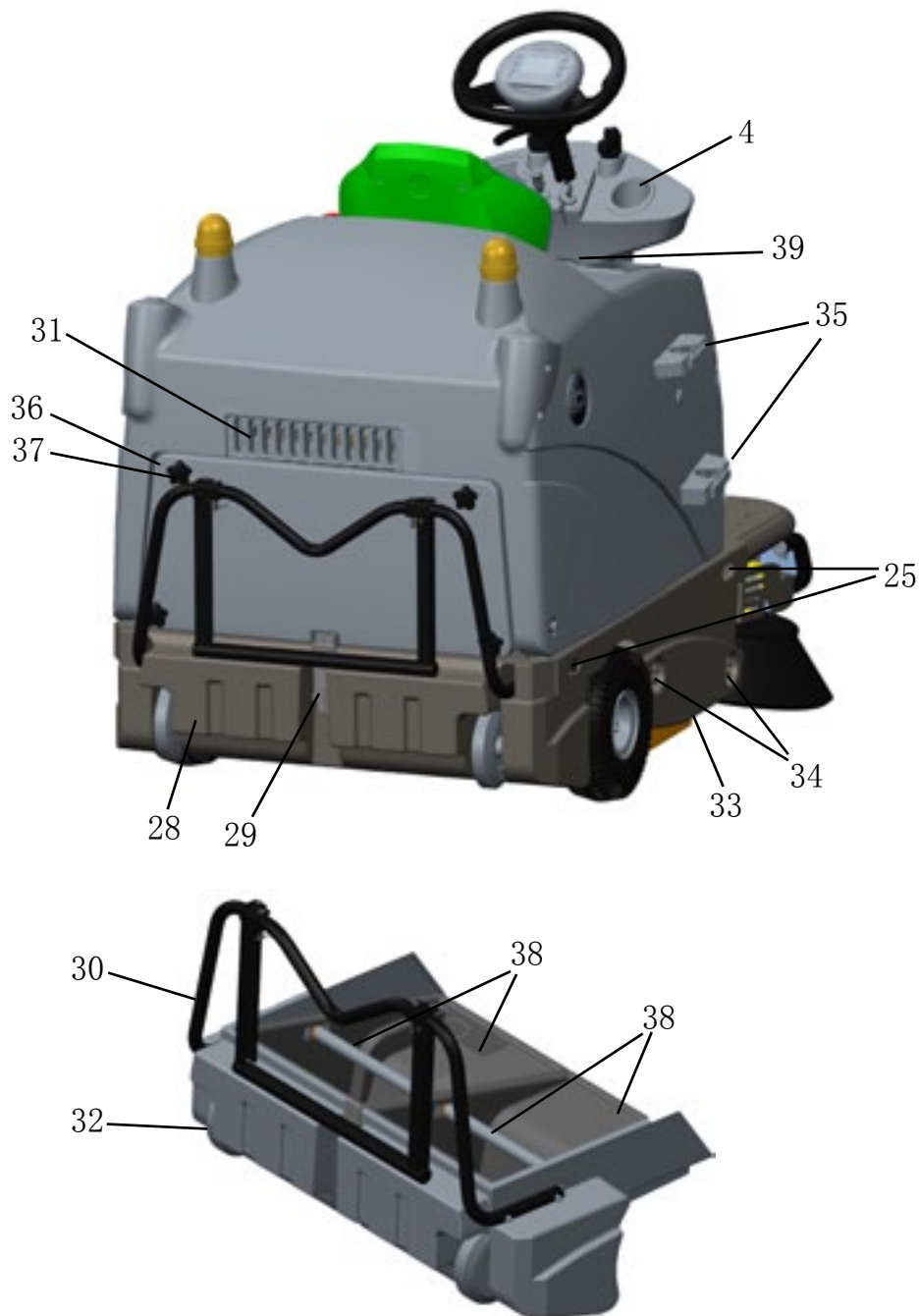
1. Steering wheel
2. Speed control pedal
3. Front skirt lifting pedal
4. Can holder
5. Body
6. Rear driving wheels on fixed axle
7. Front steering wheel
8. Right side brush
9. Left side brush
10. Main brush
11. Left side skirt
12. Right side skirt
13. Front skirt
14. Rear skirt
15. Emergency push-button
16. Left cover (to be opened for performing maintenance procedures only)
17. Cover nuts
18. Flashing light (always on when the ignition key is turned to "I")
19. Driver's seat with safety microswitch
20. Seat longitudinal position adjusting lever
21. Led light
22. Working light (optional)
23. Right side brush height adjusting knob
24. Left side brush height adjusting knob
25. Machine lifting anchors
26. Front bumper
27. Body opening handles
- 27a. Off-board battery charger port

Press it in case of emergency to stop all the machine functions. To deactivate the emergency push-button, turn it in the direction shown by the arrow.



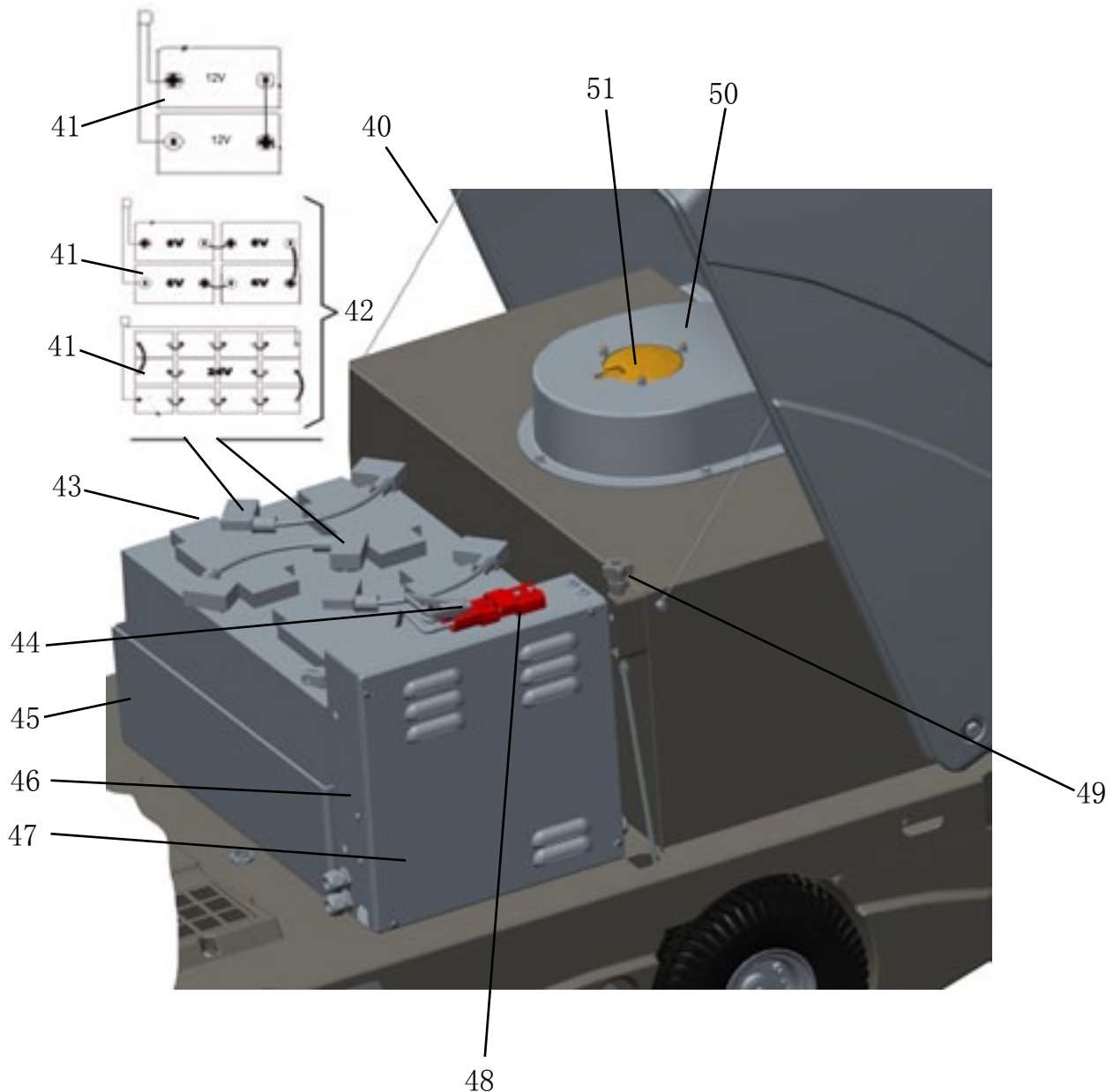
MACHINE COMPONENTS (Continues)

- | | |
|--|---|
| 28. Hopper (empty it when it is full) | 34. Door knobs |
| 29. Hopper fastening hook | 35. Tool Holder |
| 30. Hopper handle | 36. Vacuum filter compartment cover |
| 31. Exhaust hole | 37. Cover knobs |
| 32. Hopper wheel | 38. Internal containers with handle for dumping |
| 33. Right cover (for main broom removal) | 39. Serial decal |



MACHINE COMPONENTS (Continues)

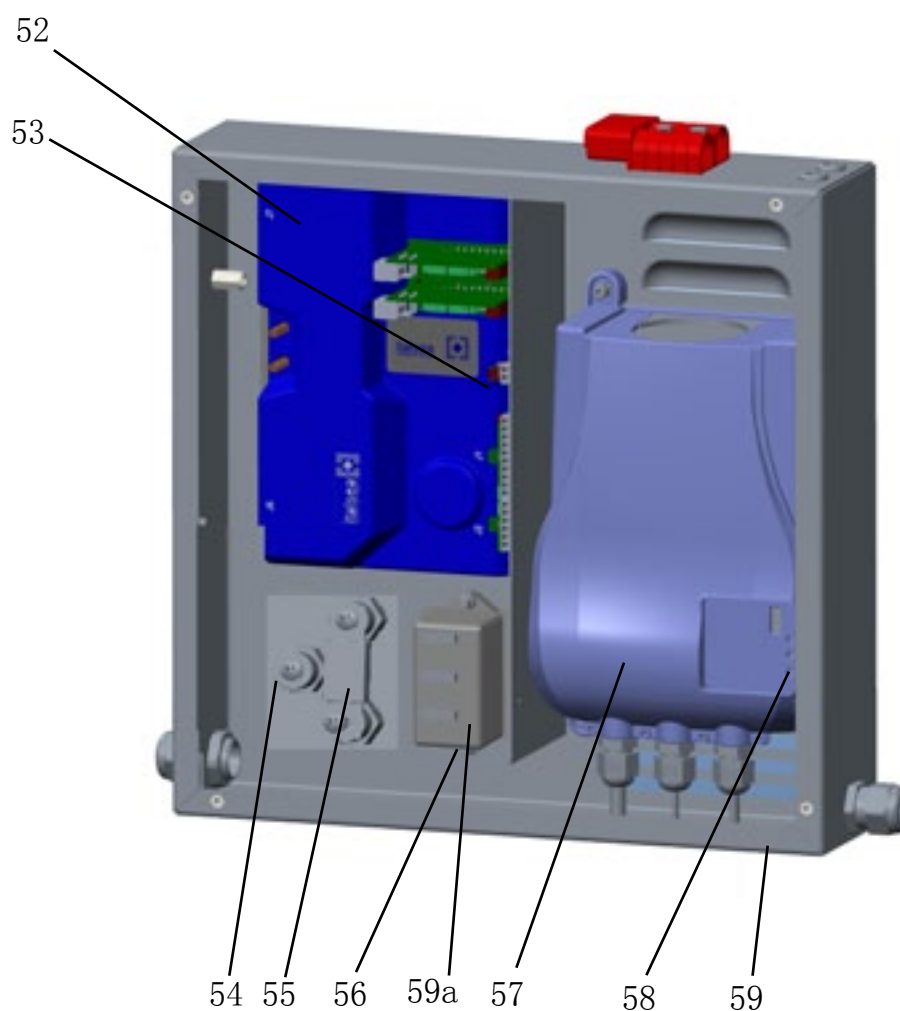
- 40. Body rope
- 41. Lead batteries (WET) or optional gel batteries (GEL)
- 42. Battery connection diagram
- 43. Battery caps (for WET batteries only)
- 44. Battery connector
- 45. Battery container
- 46. Electrical component box
- 47. Electrical component cover
- 48. Machine connector
- 49. Main broom height adjusting knob
- 50. Vacuum Fan cover
- 51. Vacuum fan



MACHINE COMPONENTS (Continues)

Electrical component box

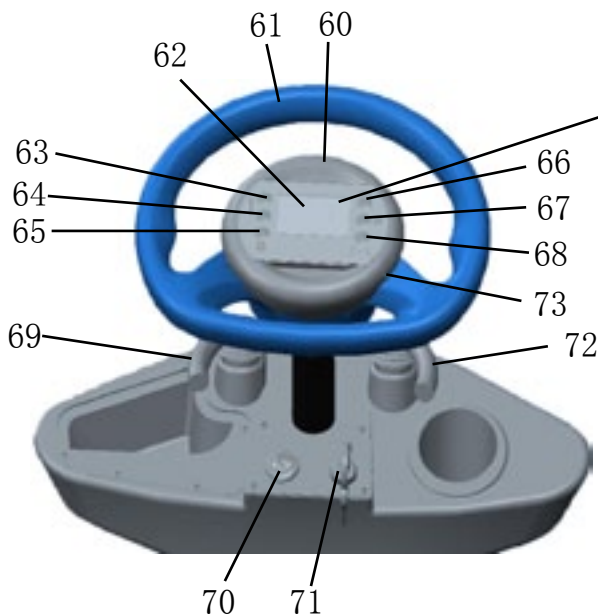
- 52. Drive system electronic board
- 53. Drive system malfunction led. If the led is on, the drive system is operating, if the led ashes, the drive system is malfunctioning
- 54. Pillar
- 55. Main fuse
- 56. Lamellar fuse box
- 57. Electronic battery charger
- 58. Charged battery warning light
- 59. Electrical component box
- 59a. Lamellar fuse box cover



MACHINE COMPONENTS (Continues)

CONTROL PANEL

- 60. Board housing cover
- 61. Steering wheel
- 62. LCD display screen.
- 63. Speed increasing switch
- 64. Speed deincreasing switch
- 65. Backward direction switch, Buzzer indicates if backward direction is active (buzzer on) or not (buzzer off)
- 66. Buzzer enable switch
- 67. Vacuum enable switch
- 68. Filter shaker switch
- 69. Left and right side brush lifting/lowering lever
- 70. Switch (working light)
- 71. Ignition key (when turned to "0" it turns the machine off and disables all functions; when turned to "I" it enables all machine functions; it also turns on the flashing light)
- 72. Main broom lifting/lowering lever
- 73. Panel fastening screws

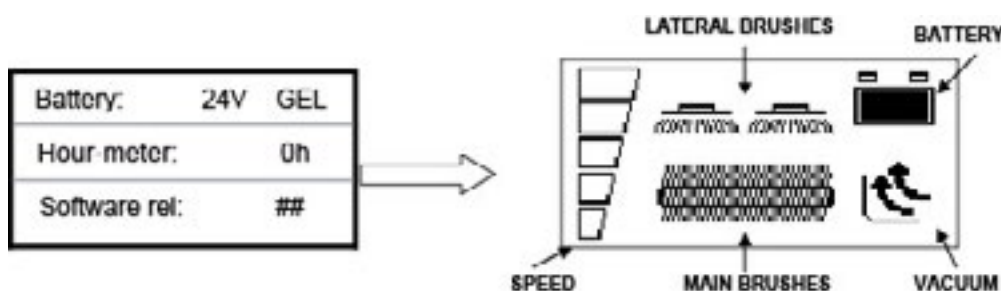


BATTERY LEVEL INDICATOR

The battery level indicator shows the charge level of the batteries with a segmented display. When the batteries are fully charged, all the segments are lit. As the batteries discharge, the segments shut off.

The batteries should be recharged when only one segment displays. At this point, the battery icon will begin flashing, and sweeping and vacuum will automatically shut off to alert the operator of the battery condition. When all the segments have shut off, everything set off.

At power on, the display shows: battery voltage, hourmeter and software release (for about 1 second). Then system instantaneous conditions are shown: active functions, battery charge, active alarms...



ACCESSORIES/OPTIONS

In addition to the standard components, the machine can be equipped with the following accessories/options, according to the machine specific use:

- Main and side brooms with harder or softer bristles
- Working light
- Skirts of various materials
- Protective roof

For further information concerning the optional accessories, contact an authorised Retailer.

SPECIFICATIONS

| General | Values |
|---|--|
| Machine length | 59 in (1,500 mm) |
| Machine width (without side brushes) | 36.8 in (937 mm) |
| Machine maximum height (at the steering wheel) | 50.3 in (1,250 mm) |
| Cleaning width (without side brushes) | 27.6 in (700 mm) |
| Cleaning width (with side brushes) | 50.8 in (1,290 mm) |
| Minimum distance from the floor (skirts not included) | 2.6 in (67 mm) |
| Main brush size (diameter x length) | 11.8 x 27.6 in (300 mm x 700 mm) |
| Side brush diameter | 17.7 in (450 mm) |
| Main brush speed | 550 rpm |
| Side brush speed | 80 rpm |
| Front steering wheel diameter | 11.8 in (300 mm) |
| Rear driving wheel diameter | 11.8 in (300 mm) |
| Front wheel specific pressure on the floor | 159.5 psi (1.1 N/mm ²) |
| Rear wheel specific pressure on the floor | 101.5 psi (0.7 N/mm ²) |
| Total machine weight (without batteries) | 573.2 lb (255 kg) |
| Hopper capacity | 21.2 gal (80 liters) |
| Main brush motor | 0.67 HP (500 W) |
| Side brush motors | 0.1 HP (80 W) |
| Drive system motor | 0.8 HP (600 W), 110 rpm |
| Vacuum system motor | 0.41 HP (310 W) |
| Filter shaker motor | 0.13 HP (100 W), 6,500 rpm |
| Sound pressure level at workstation (A Lpa) | 63.8 dB(A) |
| Vibration level at the operator's arms (*) | <8.2ft/s ² (2.5m/s ²) |
| Vibration level at the operator's body (*) | <1.9ft/s ² (0.6m/s ²) |

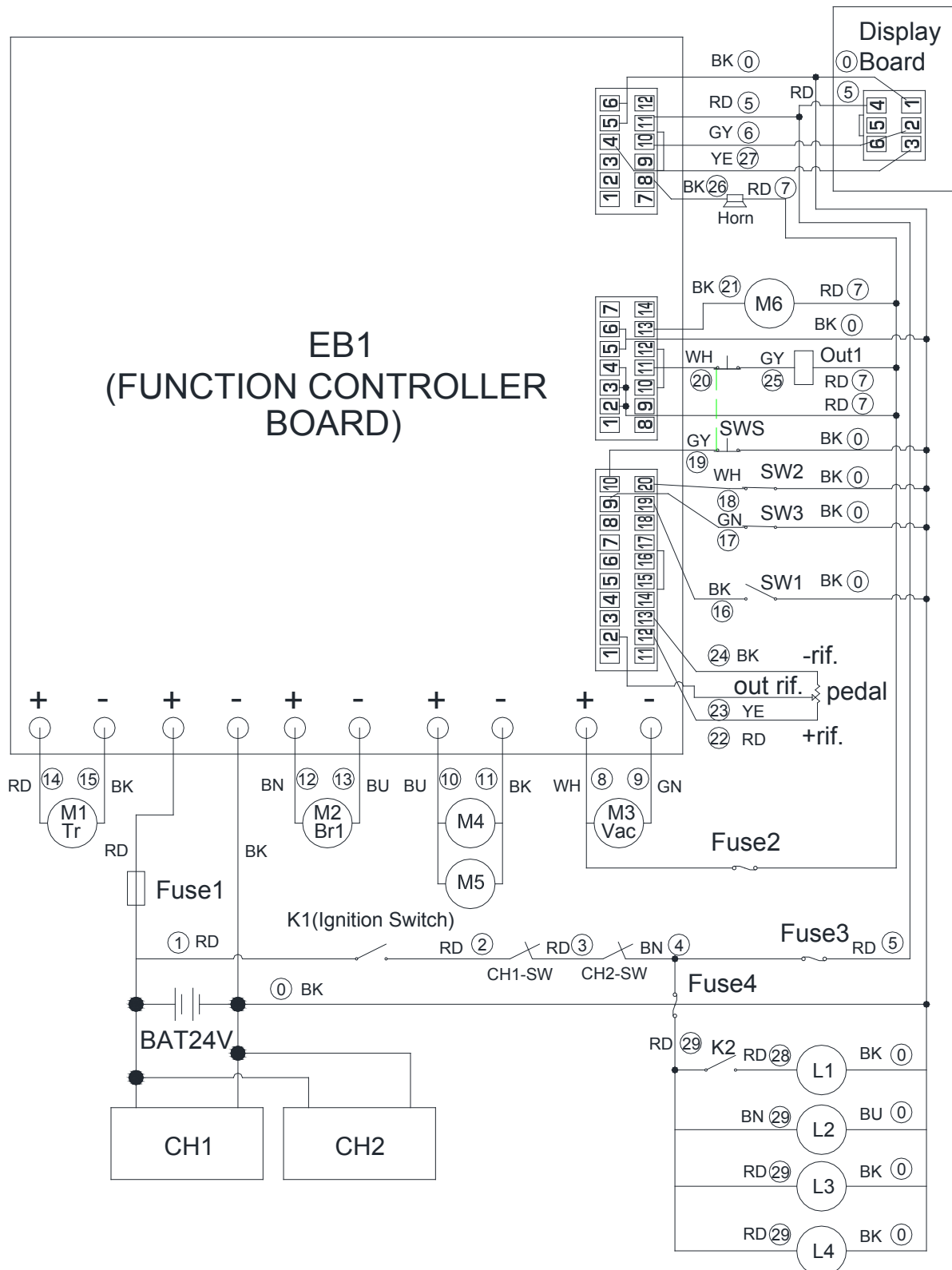
(*) Under normal working conditions, on a level asphalt surface.

| Performance | Values |
|-------------------------------|------------------|
| Maximum forward/reverse speed | 3.7 mph (6 km/h) |
| Maximum reverse speed | 1.8 mph (3 km/h) |
| Gradeability | 11.3° (20 %) |
| Minimum turning radius | 51.6 in(1,310mm) |

| Batteries | Values |
|---|------------------------------|
| Battery voltage | 24 V |
| Battery minimum capacity (optional) | 130 Ah C20 |
| Battery maximum capacity(optional) | 256 Ah C20 |
| Battery container inner size (length x width xheight) | 21x14.7x6.1in(534x374x155mm) |

| Dust vacuuming and filtering | Values |
|-------------------------------|--|
| Paper dust filter 5-10 µm | 38.8ft ² (3.6m ²) |
| Main brush compartment vacuum | 0.43 in (11mm H ₂ O) |
| Filter shaker activation | Electric |

WIRING DIAGRAM



WIRING DIAGRAM

Key

| | |
|--------|--|
| BAT | Batteries, 24V |
| CH1 | Battery charger |
| CH1-SW | On-board charger interlock switch |
| CH2 | Off-board charger port |
| CH2-SW | On-board charger interlock switch |
| EB1 | Function controller board |
| Fuse1 | Main fuse (150A) |
| Fuse2 | Vacuum fan&Horn&Electrobrake (15A) |
| Fuse3 | Display card fuse (5A) |
| Fuse4 | Working light & flashing light fuse (3A) |
| K1 | Ignition key |
| K2 | Working light switch |
| L1 | Working light |
| L2 | Led light |
| L3 | Flashing light (left) |
| L4 | Flashing light (right) |
| M1 | Drive system motor |
| M2 | Main brush motor |
| M3 | Vacuum fan |
| M4 | Right side brush motor |
| M5 | Left side brush motor |
| M6 | Filter shaker motor |
| Pedal | Drive speed potentiometer (pedal) |
| Out1 | Electrobrake output |
| SWS | Emergency push-button |
| SW1 | Driver's seat safety microswitch |
| SW2 | Main brush microswitch |
| SW3 | Side brush microswitch |

Color code

| | |
|----|--------|
| BK | Black |
| BU | Blue |
| BN | Brown |
| GN | Green |
| GY | Grey |
| RD | Red |
| VT | Violet |
| WH | White |
| YE | Yellow |

OPERATION



On some points of the machine there are some adhesive plates indicating:

- DANGER
- WARNING
- CAUTION

While reading this Manual, the operator must pay careful attention to the symbols shown on the plates. Do not cover these plates for any reason and immediately replace them if they are damaged.

BATTERY CHECK ON A NEW MACHINE

NOTE:if the machine is equipped with electronic battery charger (optional), this must be connected to the batteries to allow the machine to operate.

The machine needs four 6V or two 12V batteries, connected according to the diagram (42), or one 24 V battery box. The machine can be supplied in one of the following configurations:

- 一、 WET or GEL or Li batteries already installed on the machine
- 二、 WET batteries installed on the machine but without electrolyte
- 三、 Without batteries

According to machine configuration, proceed as follows.

一、 WET or GEL Li batteries already installed on the machine

- 1) Open the machine body(5) and check that the batteries are connected to the machine with the connector (44).
- 2) Close the body (5).
- 3) Insert the ignition key (71) and turn it to "I" [without pressing the pedal (2)].
If the battery level indicator shows all the segment , the batteries are charged.
If the battery level indicator begins flashing, the batteries must be charged (see the procedure in Maintenance chapter).

二、 WET batteries installed on the machine but without electrolyte

- 1) Open the machine body (5).
- 2) Remove all battery caps(43).



WARNING! Pay attention when using sulfuric acid, as it is corrosive. If it comes in contact with skin or eyes, rinse thoroughly with water and consult a physician. Batteries have to be filled in a well-ventilated area.

Wear protective gloves.

- 3) Fill the battery cells with sulfuric acid for batteries (density 2.79 to 2.84 lb at 77°F (1.27 to 1.29 kg at 25°C)) according to the instructions shown in the Battery Manual.

The correct quantity of sulfuric acid is shown in the Battery Manual.

- 4) Let the batteries rest and fill in with sulfuric acid according to the instructions shown in the Battery Manual.
- 5) Charge the batteries (see the procedure in Maintenance chapter).

三、 Without batteries

- 1) Buy appropriate batteries (see the Technical Data paragraph and the diagram (42)).
For the battery choice and installation, apply to qualified battery Retailers.
- 2) Install the batteries.
- 3) Set the battery charger (if equipped) according to the type of batteries installed.

SWEEPING AND BRUSH INFORMATION

Pick up oversized debris before sweeping. Flatten or remove bulky cartons from aisles before sweeping. Pick up pieces of wire, twine, string, etc., which could become entangled in the brush or brush plugs.

Plan the sweeping in advance. Try to arrange long runs with minimum stopping and starting. Do an entire floor or section at one time. Drive the straightest path possible. Avoid bumping into posts or scraping the sides of the machine. Overlap the brush paths.

Avoid turning the steering wheel too sharply when the machine is in motion. The machine is very responsive to the movement of the steering wheel. Avoid sudden turns, except in emergencies. For best results, use the correct brush type for your sweeping application. The following are recommendations for main sweeping and side brush applications.

Polypropylene main brush&side brush

Superior pick-up of sand, gravel, and paper litter. Polypropylene retains its stiffness when wet and can be used indoors or outdoors with equal performance. Not recommended for high-temperature debris.

Mix Fiber main brush&side brush

The natural choice for cleaning fine debris on carpet and sweeping very heavy dust and other fine particles on hard surfaces. When cleaning carpet, check brush and perma filter panel regularly for carpet debris.

Polypropylene&wire main brush&side brush

Polypropylene gives this brush good general-purpose sweeping ability. While the wire provides a light cutting action for impacted dirt or mud.

Nylon main brush&side brush

Excellent wear life, but less aggressive and performs less well in conditions with moisture or high humidity. Often used on rough surfaces or high-temperature environments because of its toughness and long wear characteristics.

STARTING AND STOPPING THE MACHINE

Starting the machine

- 1) Sit on the driver's seat (19).
- 2) If necessary, adjust the seat to a comfortable position by using the lever (20).
- 3) Turn the ignition key (71) to "I" and do not press the pedal (2). Check that battery level indicator on the LCD display screen shows all the segment(charged battery). If battery level indicator begins flashing, turn the ignition key to "0" and charge the batteries (see the procedure in Maintenance chapter).
- 4) Drive the machine to the working area, by keeping the hands on the steering wheel and pressing the pedal (2) to move forward and press the switch (65) to move backward(buzzer on). The drive speed can be adjusted from zero to maximum speed by increasing the pressure on the pedal (2).

Note:The seat (19) is equipped with a safety sensor, which allows the machine to be driven by pressing the pedal (2) only when the operator is on the driver's seat.

- 5) Lower the main brush(10) with the lever (72); it will start turning.
- 6) Turn on the vacuum fan(51) by pressing the switch (67).

Note:The vacuum system turns on only when the main brush is lowered.

- 7) Lower the side brushes (8 and 9) with the lever (69).

Note:The side brushes (8 and 9) can be lowered and lifted even when the machine is moving.

The side brushes do not turn when they are lifted or when the main brush is lifted.

- 8) Start sweeping by turning the steering wheel (1) and moving the machine forward by pressing the pedal (2).

Stopping the machine

- 9) To stop the machine, release the pedal (2).
In case of emergency, press the emergency push-button (15) to immediately stop the machine. To deactivate the emergency push-button (15), turn it in the direction shown by the arrow.
- 10) Lift the side brushes (8 and 9) with the lever (69).
- 11) Turn off the vacuum fan(51) by pressing the switch (67) .
- 12) Lift the main brush (10) with the lever (72).
- 13) To stop the machine, turn the ignition key (71) to "0".



WARNING! Before leaving machine or performing any maintenance,repair,cleaning or replacement procedure,stop on level surface,turn off machine,and remove Ignition key.

MACHINE OPERATION



WARNING! Pay careful attention when operating the machine at high speed: sudden steering could cause this three-wheel machine to become unstable due to weight distribution.

Always reduce the speed before steering.

- 1) Avoid stopping for a long time with the machine in the same position and the brushes turning: this could create unwanted marks on the floor.
- 2) To collect light and bulky waste materials, lift the front skirt by pressing the pedal (3); take into consideration that the machine vacuum capability is reduced when the front skirt is lifted.



CAUTION! When operating on wet grounds, it is essential to turn off the vacuum fan with the switch (67) to prevent the dust filter from being damaged.

- 3) For machine proper operation, the dust filter must be as clean as possible. To clean it while sweeping, turn on the filter shaker by pressing the switch (68), it will last a few seconds.
During this operation the vacuum fan is automatically shut off.
After cleaning the filter, then start sweeping again.
While working, repeat the procedure every 15 minutes on average (depending on the dustiness of the area to be cleaned).

NOTE: When the dust filter is clogged and/or the hopper is full, the machine cannot collect dust and debris anymore.

- 4) The hopper (28) should be dumped after each working period and whenever it is full (see the procedure in the next paragraph).

HOPPER EMPTYING

- 1) Stop the machine on a level surface by releasing the drive pedal.
- 2) Turn the ignition key (71) to "0".
- 3) Disengage the hook (29) by pulling its lower end.
- 5) Remove the hopper (28) by using the handle (30) and by disengaging it from the inner guides.
To move the hopper (28) by using the handle (30).
Discharge all the debris into special containers. To make discharging procedure easier, inside the hopper there are two different containers (optional) with handle (38).
- 6) Install the containers with handle (38), if equipped.
- 7) Install the hopper (28) and engage it to the inner guides, then fasten it with the hook (29).
- 8) The machine is ready to start sweeping again.

AFTER USING THE MACHINE

After working, before leaving the machine, perform the following procedures.

- 1) Lift the side brushes with the lever (69).
- 2) Lift the main brush with the lever (72).
- 3) Turn on the filter shaker with the switch (68).
- 4) Empty the hopper (28) (see the procedure in the previous paragraph).
- 5) Remove the ignition key (71).

PUSHING/TOWING THE MACHINE

To push/tow the machine when it is turned off, no special prearrangement is necessary.

MACHINE STORAGE

If the machine is not going to be used for more than 30 days, proceed as follows:

- 1) Check that the machine storage area is dry and clean.
- 2) Disconnect the battery connector (44).

FIRST PERIOD OF USE

After the first 8 hours perform the following procedures:

- Check the fastening and connecting parts for proper tightening.
- Check the visible parts for integrity and leakages.

MAINTENANCE

The lifespan of the machine and its maximum operating safety are ensured by proper and regular maintenance.

The following table provides the scheduled maintenance. The intervals shown may vary according to particular working conditions, which are to be defined by the person in charge of the maintenance.

All scheduled or extraordinary maintenance procedures must be performed by qualified personnel, or by an authorised Service Center.

This Manual describes only the easiest and most common maintenance procedures.

For other maintenance procedures shown in the Scheduled Maintenance Table, refer to the Service Manual that can be consulted at any Service Center.



Warning! To perform maintenance procedures, the machine must be off on a level surface, the ignition key removed, and, if necessary, the batteries must be disconnected.

Read carefully the instructions shown in Safety chapter before performing any maintenance procedure,

SCHEDULED MAINTENANCE TABLE

| Procedure | Upon delivery | Every 10 hours | Every 50 hours | Every 100 hours | Every 200 hours | Every 400 hours |
|---|---------------|----------------|----------------|-----------------|-----------------|-----------------|
| WET battery fluid level check | | | | | | |
| Side and main brush height check and adjustment | | | | | | |
| Dust filter cleaning and integrity check | | | | | | |
| Skirt height and operation check | | | | | | |
| Filter shaker operation check | | | | | | |
| Main brush driving belt visual inspection | | | | | | |
| Nut and screw tightening check | | | | (1) | | |
| Steering chain check and cleaning | | | | | | |
| Main brush driving belt replacement | | | | | | |
| Main motor and drive system motor carbon brush check or replacement | | | | | | |

(1) And after the first 8 running-in hours.

MAIN BRUSH HEIGHT CHECK AND ADJUSTMENT

NOTE:Brushes with harder or softer bristles are available. This procedure is applicable to all types of brushes.

- 1) Check the main brush distance from the floor as shown below:
 - Drive the machine on a level floor.
 - Keep the machine stationary, lower the main brush and turn it on for a few seconds.
 - Stop and lift the main brush, then move the machine and switch it off.
 - Check that the main brush print (A, Fig. 1), along its length is 0.8 to 1.6 in (2 to 4 cm) wide.
 If the print (A) is not within specifications, adjust the brush height as shown in step 2.
- 2) Turn the ignition key (71) to "0".
- 3) Open the body(5)
- 4) Loosen the knob (A, Fig. 2) on the left side of the machine.
- 5) Turn the knob (B, Fig. 2) and remind that:
 - It must be screwed to lift the brush;
 - It must be unscrewed to lower the brush.
 After the adjustment, hold the knob (B) and tighten the knob (A).
- 6) Perform step 1 again to check the proper adjustment of the main broom height.
- 8) When the brush is too worn to be adjusted, replace it as shown in the next paragraph.

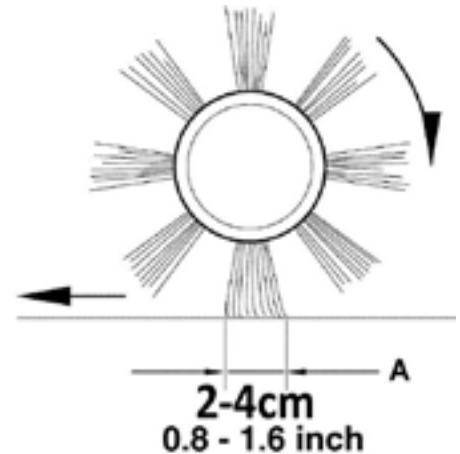


Figure1

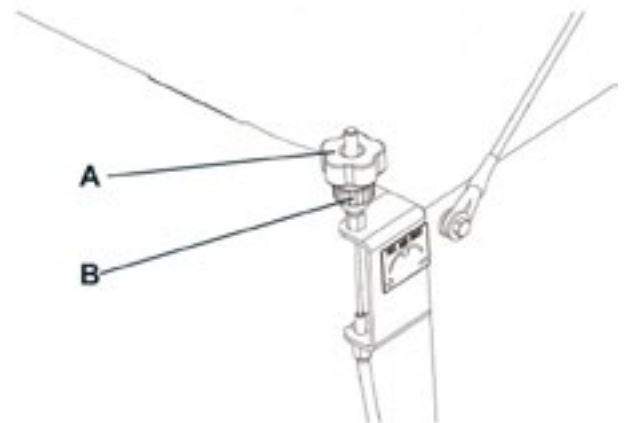


Figure2

⚠ CAUTION! If the main broom print is excessive(larger than 1.6 in (4 cm)), the machine regular operation is affected and the moving or electrical parts can overheat, thus reducing machine life. Pay careful attention when performing the above-mentioned checks, and always use the machine according to the indicated conditions.

MAIN BRUSH REPLACEMENT

NOTE:Brushes with harder or softer bristles are available. This procedure is applicable to all types of brooms.



CAUTION! It is advisable to wear protective gloves when replacing the main brush because there can be sharp debris between the bristles.

- 1) Drive the machine on a level floor and release the pedal (2) and stop the machine.
- 2) Turn the ignition key (71) to "0"
- 3) Unscrew the knobs (34) and remove the right cover (33).
- 4) Loosen the knob (A, Fig. 3).
- 5) Unscrew the knobs (B, Fig. 3) and remove the brush compartment cover (C).
- 6) Remove the brush (A, Fig.4)
- 7) Check that the drive hub (A, Fig. 5) is free from dirt or foreign materials (ropes, rags, etc.) accidentally rolled up.
- 8) The new main brush must be installed with the bristles rows (B, Fig. 5) bent as shown in the figure.
- 9) Install the new main brush (C, Fig. 5) and ensure that the mesh (D) correctly fits into the relevant drive hub (A).
- 10) Install the broom compartment cover (C, Fig. 3) and tighten the knobs (B) and (A).
- 11) Install the right cover (33), then tighten the knobs (34).
- 12) Check and adjust the main broom height as shown in the previous paragraph.

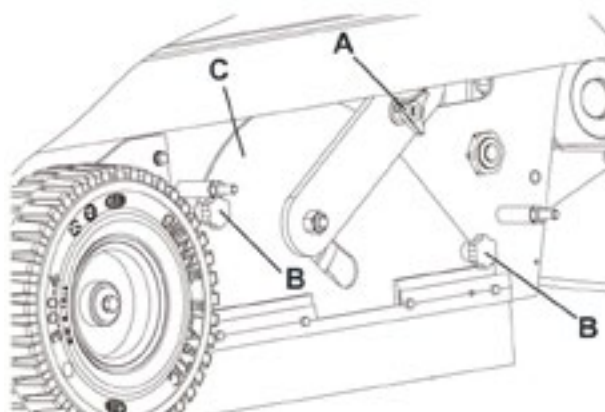


Figure3



Figure4

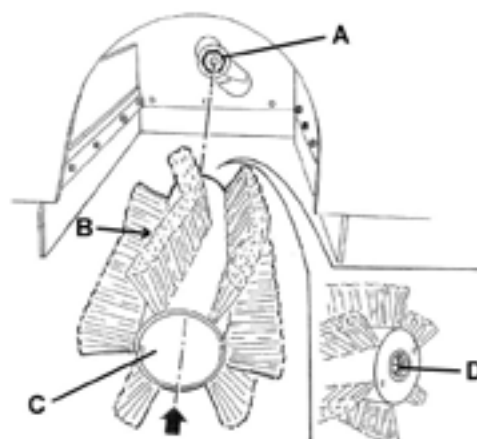


Figure5

SIDE BRUSH HEIGHT CHECK AND ADJUSTMENT

NOTE:Brushes with harder or softer bristles are available. This procedure is applicable to all types of brushes.

1) Check the side brush distance from the floor, according to the following procedure:

- Drive the machine on a level ground and lower the side brushes.
- Keep the machine stationary and turn on the side brushes for a few seconds.
- Lift the side brushes, then move the machine and turn it off.
- Check that the side brush prints are as shown in the figure (A and B, Fig. 6).

If the print is not within specifications, adjust the brush height, according to the procedure shown in step 2.

2) Turn the ignition key (71) to "0".

3) Loosen the knob (A, Fig. 7) positioned above the brush.

4) Turn the knob (B, Fig. 7) and remind that:

- It must be screwed to lift the brush;
- It must be unscrewed to lower the brush.

After the adjustment, hold the knob (B) and tighten the knob (A).

5) Perform step 1 again to check the proper adjustment of the side brush height.

6) When the brushes are too worn and can no longer be adjusted, replace them according to the procedure shown in the relevant paragraph.

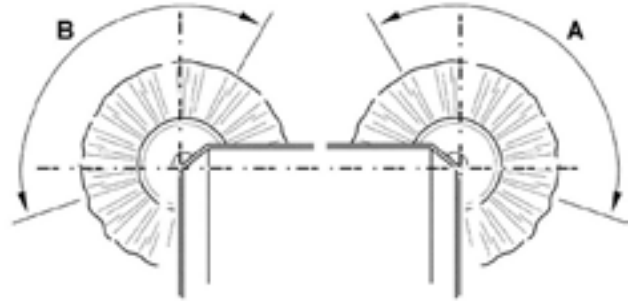


Figure6

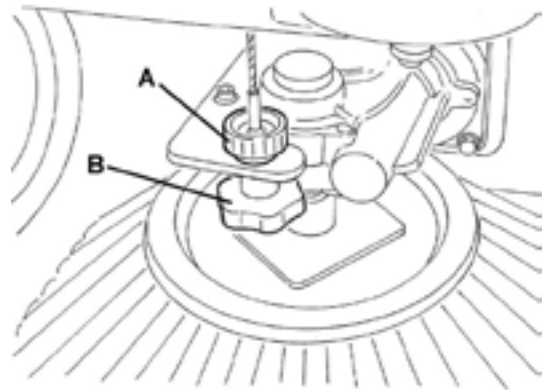


Figure7

SIDE BRUSH REPLACEMENT

NOTE:Brushes with harder or softer bristles are available. This procedure is applicable to all types of brushes.



CAUTION! It is advisable to wear protective gloves when replacing the side brushes because there can be sharp debris between the bristles.

1) Drive the machine on a level ground and release the pedal (2) and stop the machine.

2) Turn the ignition key (71) to "0".

3) Release the spring (A, Fig. 8), remove the pin (B) and the brush (C) from the gearmotor shaft.

4) Install the new side brush on the gearmotor shaft, insert the pin (B, Fig. 8) in the holes (D, Fig. 8), and engage the spring (A, Fig. 8)

5) Check and adjust the side brush height as shown in the previous paragraph.

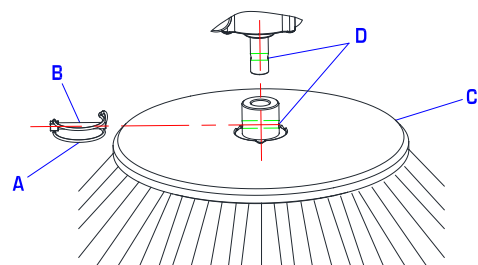


Figure8

DUST FILTER CLEANING AND INTEGRITY CHECK

NOTE: Besides the standard paper filter, polyester filters are also available. The following procedure is applicable to each type of filter.

- 1) Drive the machine on a level floor and release the pedal (2) and stop the machine.
 - 2) Turn the ignition key (71) to "0".
 - 3) Disengage the hook (29) by pulling its lower end.
 - 4) Remove the hopper (28) by using the handle (30) and by using hand and by disengaging it from the inner guides.
 - 5) Unscrew the knobs (37) and remove the filter compartment cover (36).
 - 6) Loosen the knobs (A, Fig.9).
 - 7) Disconnect the connector (B, Fig.9) from the filter shaker motor (C).
 - 8) Remove the dust filter fastening frame (D, Fig.9).
 - 9) Remove the dust filter (E, Fig. 9).
 - 10) In an outdoor area, clean the filter by shaking it on a level and clean surface, tapping the side (A, Fig. 10) opposite to the wire gauze (B).
- Complete the cleaning procedure by using compressed air (C, Fig. 10) at maximum 6 Bar, blowing only from the side of the wire gauze (B), at a minimum distance of 11.8 in (30 cm).

According to the filter type, observe the following cautions:

- Paper filter : Do not use water or detergents to clean it, otherwise it can be damaged.
- Polyester filter : For a better cleaning, it is allowed to wash the filter with water and non-lathering detergents. This provides better quality cleaning but reduces the life of the filter, which will have to be replaced more frequently. The use of inadequate detergents can damage the filter.

- 11) Check the filter body for tears. If necessary, replace the filter.

- 13) Clean the rubber gasket (A, Fig.10) of the cover (36) and check it for integrity and efficiency; if necessary replace it.

- 14) Assemble the components in the reverse order of disassembly, and note the following:

- Install the filter (E, Fig. 9) with the wire gauze (B, Fig. 10) facing upwards.

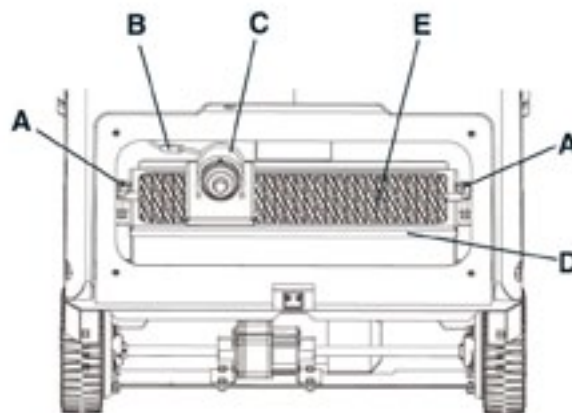


Figure9

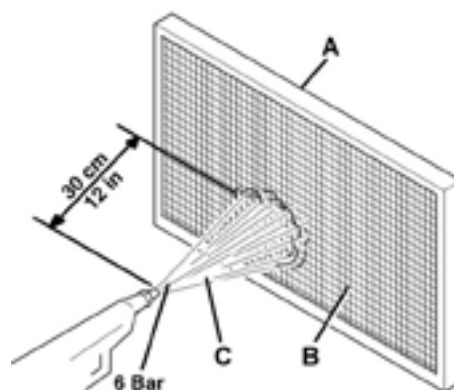


Figure10



Figure11

SKIRT HEIGHT AND OPERATION CHECK

- 1) Drive the machine on a level floor that is suitable for checking the skirt height.
- 2) Turn the ignition key (71) to "0".

Side skirt check

- 1) Unscrew the knobs (17 and 34) and remove both left (16) and right covers (33).
- 2) Check the side skirts (11 and 12) for integrity. Replace the skirts when they have cuts (A, Fig. 12) larger than 0.79 in (20 mm) or cracks (B) larger than 0.39 in (10 mm) (for skirt replacement).
- 3) Check that distance from the ground of the side skirts (11 and 12) is within 0 – 0.12 in (0 – 3 mm) (A, Fig. 13). If necessary, adjust the skirt height by using the slots on the screws (A, Fig. 16).
- 4) Assemble the components in the reverse order of disassembly.

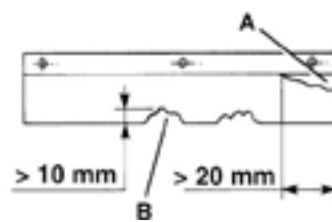


Figure12

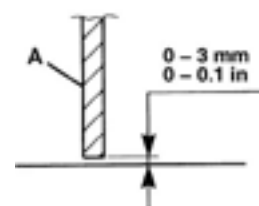


Figure13

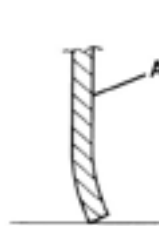


Figure14

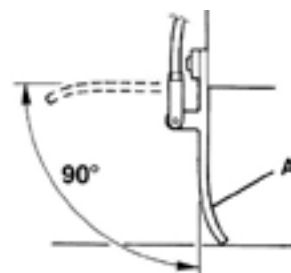


Figure15

Front and rear skirt check

- 1) Remove the main brush as shown in the relevant paragraph.
- 2) Check the front (13) and rear skirts (14) for integrity. Replace the skirts when they have cuts (A, Fig. 12) larger than 0.79 in (20 mm) or cracks (B) larger than 0.39 in (10 mm) (for skirt replacement).
- 3) Check that:
 - The front skirt (A, Fig. 17) slightly touches the floor (A, Fig. 14).
 - The distance from the ground of the rear skirt (B, Fig. 17) is within 0-0.12 in 0-3 mm (A, Fig. 12).
- 4) If necessary, adjust the skirt height by using the slots on the screws (C and D, Fig. 17).
- 5) Press the front skirt lifting pedal (3) and check that the front skirt (A, Fig. 15) turns upward for about 90° (as shown in the figure); then release the pedal and check that the skirt does not remain in an intermediate position but returns to its initial position. If necessary, for the front skirt control cable adjustment or replacement.
- 6) Assemble the components in the reverse order of disassembly.

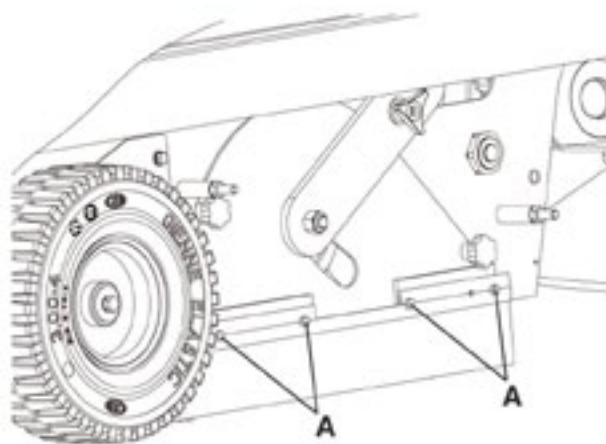


Figure16

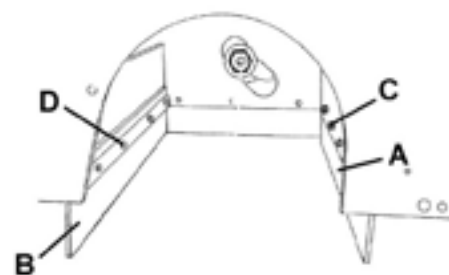


Figure17

BATTERY CHARGING



CAUTION! Charge the batteries when battery level indicator begins flashing and at the end of each cleaning cycle. Keeping the batteries charged make their life last longer.



WARNING! When the batteries are discharged, charge them as soon as possible, as that condition makes their life shorter.



WARNING! If the machine is equipped with lead (WET) batteries, battery charging produces highly explosive hydrogen gas. Charge the batteries in well-ventilated areas and away from naked flames.

Do not smoke while charging the batteries.

While charging the batteries always keep the body open.



WARNING! Pay careful attention when charging WET batteries as there may be battery fluid leakages. The battery fluid is corrosive. If it comes in contact with skin or eyes, rinse thoroughly with water and consult a physician.

- 1) Drive the machine on a level floor and release the pedal (2) and stop the machine.
- 2) Turn the ignition key (71) to "0".
- 3) Open the body (5).
- 4) (For WET batteries only) check the level of electrolyte inside the batteries. If necessary, top up through the caps (43). Leave all the caps (43) open for battery charging. If necessary, clean the upper surface of the batteries.
- 5) Charge the batteries according to one of the following methods, depending on the presence of the electronic battery charger (57) (optional).

Charging the batteries with an external battery charger

- 1) Check that the battery charger is suitable by referring to the Battery Charger Manual. The battery charger voltage rating is 24 V.



CAUTION! Use a battery charger suitable for the type of batteries installed.

- 2) Disconnect the battery connector (44) and connect it to the external battery charger.
- 3) Connect the battery charger to the electrical mains.
- 4) After charging, disconnect the battery charger from the electrical mains and from the battery connector (44).
- 5) (For WET batteries only) check the level of electrolyte inside the batteries; then close all the caps (43).
- 6) Reconnect the battery connector (44) to the machine connector.
- 7) Close the body (5). The machine is ready to be used.

Charging the batteries with the battery charger

- 1) (For WET batteries only) check the level of electrolyte inside the batteries. If necessary, top up through the caps (43). Leave all the caps (43) open for battery charging. When the correct level is reached, clean, if necessary, the upper surface of the batteries.
- 2) Connect the battery charger cable to the electrical mains.



WARNING! Check that the voltage and frequency shown on the machine serial number plate (39) match the electrical mains values.

NOTE: When the battery charger is connected to the electrical mains, all machine functions are automatically disabled.

- 3) When the green warning light (58) turns on, the batteries are charged.
- 4) For further information about the battery charger operation (57), see the Battery Charger Manual.
- 5) Disconnect the battery charger cable from the electrical mains and place it in its housing on the machine.
- 6) (For WET batteries only) Close all the caps (43).
- 7) Close the body (5). The machine is ready to be used.

FUSE CHECK/REPLACEMENT/RESET

- 1) Drive the machine on a level floor and release the pedal (2) and stop the machine.
- 2) Turn the ignition key (71) to "0".
- 3) Open the body(5).
- 4) Disconnect the battery connector (44).

Lamellar fuse check/replacement

- 1) Remove the electrical component box cover (47).
- 2) Check/replace the following fuse (Fig. 18):
FM: (A): Main fuse (150A)
- 3) Remove the fuse box cover (59a).
- 4) Check/replace the relevant fuse among the following (Fig. 18):
F1: Main fuse (key circuit) (15A)
F2: Display board fuse (5A)
F3: Working light fuse (3A)

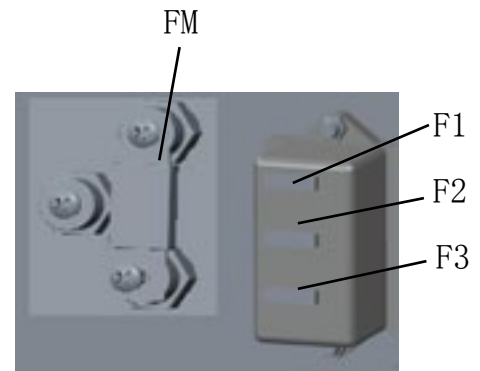


Figure18

SAFETY FUNCTIONS

The machine is equipped with the following safety functions.

EMERGENCY PUSH-BUTTON

It is located in an easily accessible position(15).It has to be pressed in case of emergency, to stop all the machine functions.

DRIVER'S SEAT MICROSWITCH

It is located inside the driver's seat and it does not allow the machine drive system to operate if the operator is not seated on the driver's seat.

ALARMS

Active alarms are shown on the display.

| Alarm #id | Meaning | Action |
|---------------------------|--|---|
| F01:Sit in Seat | No sit in the seat or Seat circuit open | Sit in the operator seat or Check circuit |
| F04:Vac. OverLoad | Vacuum ammeter protection | Verify vacuum motor working current value |
| F05:Main Bru. OverLoad | Main bru. ammeter protection | Verify Main bru. motor working current value |
| F06:Side Bru. OverLoad | Side bru. ammeter protection | Verify Side bru. motor working current value |
| F07:Propel Error | Propel Motor ammeter protection | Verify Propel Motor current value |
| F10:Bat. Low | Battery is low | Charging the battery |
| F11:Bat. Very Low | Battery is very low | Charging the battery |
| F12:Brake Open | Brake circuit open | Check brake wirings and circuit |
| F13:Accel. SRO | Stepping the propel pedal when starting machine | Release the propel pedal when turn on the machine |
| F14:Brake Short | Brake circuit short | Check brake wirings and circuit |
| F16:Over Temp | Over Temp or Controller Fault | Verify motor working current value or Change Controller |
| F17:Temp. Sensor | Temp. Sensor failure | Change Controller |
| F18:Accel. Sensor | Accel. Sensor failure | Verify Pedal wirings and Accel. Sensor |
| F20:Main Brush Open | Main Motor error or circuit open | Verify wirings and main brush motor |
| F24:Traction Motor Open | Traction Motor error or circuit open | Verify wirings and traction motor |
| F25:Side Brush Motor Open | Side Brush Motor error or circuit open | Verify wirings and side brush motors |
| F42:Contact Blocking | Contact error | Change Controller |
| F43:Ems Active | Emergency stop button be activated or circuit open | Reset emergency stop button, restart the machine or check circuit |
| F44:Controller Fault | Controller Fault | Change Controller |
| F45:Ex-Circuit Fault | External Circuit Fault | Check external wirings |
| F46:Temp. Tab Error | Controller Fault | Change Controller |
| F47:Self-check Error | Controller Fault | Change Controller |
| F48:Para. Error | Controller Fault | Change Controller |

TROUBLESHOOTING

| Trouble | Possible cause | Remedy |
|--|---|--|
| The machine does not start when turning the ignition key to "I". | The battery connector (44) is disconnected. | Connect the battery connector. |
| | The FM fuse in the holder (54) is open. | Replace the FM fuse. |
| | The battery charger cable is connected to the electrical mains. | Disconnect the battery charger cable from the electrical mains. |
| The main brush does not work. | The main brush microswitch faulty. | Replace the main brush microswitch. |
| The side brushes do not operate. | The main brush is not lowered. | Lower the main brush. |
| | The side brush microswitch faulty. | Replace the side brush microswitch. |
| The machine operates only when stationary, otherwise battery level indicator begins flashing,. | The batteries are discharged. | Charge the batteries. If the problem persists, replace the battery. |
| The battery autonomy is low. | The batteries are dead. | Replace the batteries. |
| | The battery capacity is low. | Buy batteries with higher capacity (see the Technical Data paragraph). |

SCRAPPING

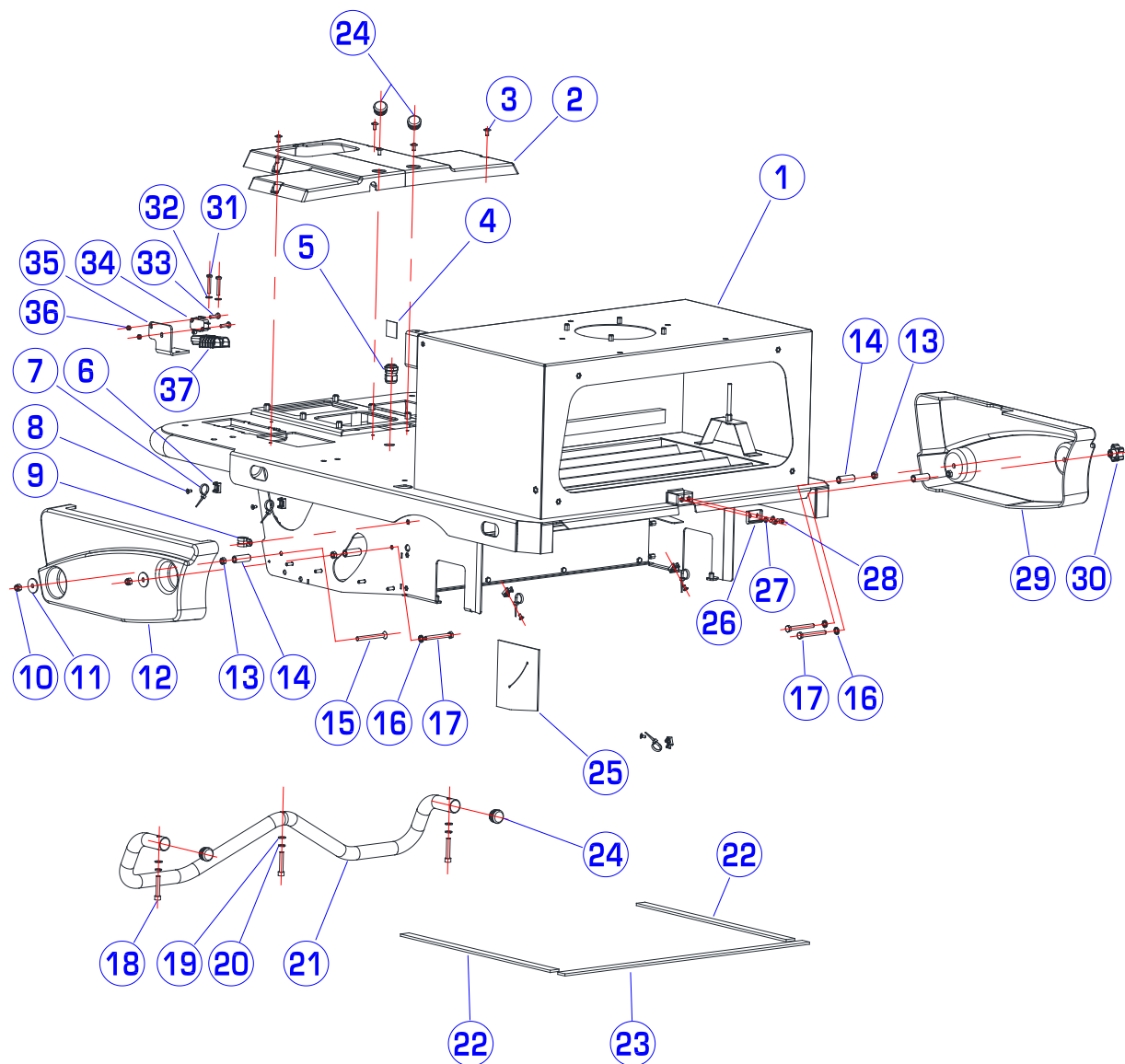
Have the machine scrapped by a qualified scrapper.

Before scrapping the machine, remove and separate the following materials, which must be disposed of properly according to the Law in force:

- Batteries
- Polyester dust filter
- Plastic hoses and components
- Engine oil
- Main and side brushes
- Electrical and electronic components (*)

(*) Refer to the nearest ICE Center especially when scrapping electrical and electronic components.

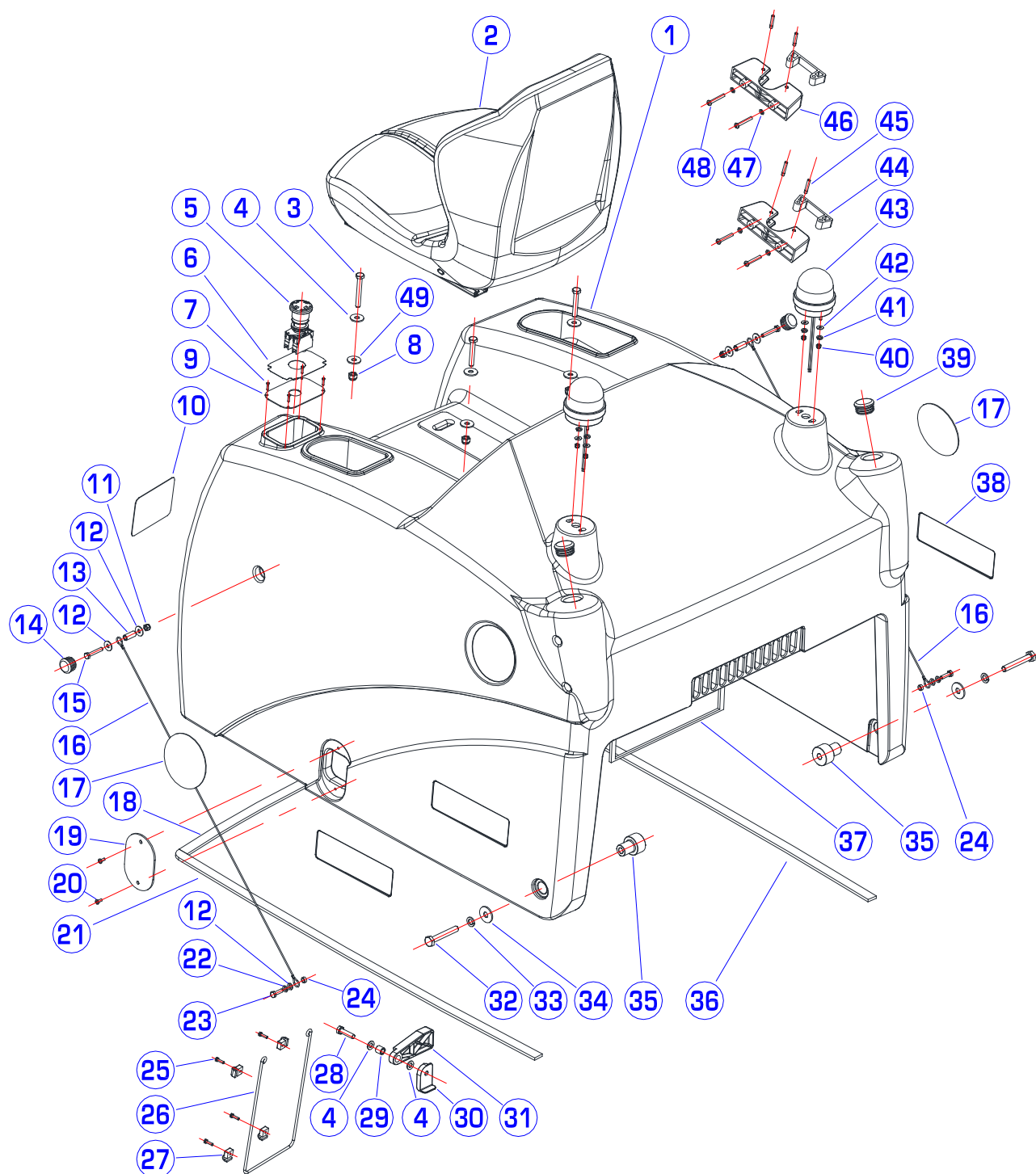
CHASS ASSEMBLY



PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|-------------------|------------------------|---|---------------------|
| 1 | 7000000 | Chassis Assembly | 1 |
| 2 | 7000028 | Foot Borad | 1 |
| 3 | 1221614 | Screw,Ph,M6X14 | 6 |
| 4 | 7000712 | Decal,Main Brush Adjustment | 1 |
| 5 | 7000272 | Strain Relief | 1 |
| 6 | 7000275 | Clamp Support | 4 |
| 7 | 1914080 | Plastic Clamp | 4 |
| 8 | 1513510 | Countersunk Hex Screw,M5X10 | 5 |
| 9 | 6150712 | Clamp | 1 |
| 10 | 1123810 | Nut,Lock,SS,M8 | 2 |
| 11 | 1421828 | Washer,Plain, ϕ 8X ϕ 28X3 | 2 |
| 12 | 7000414 | Left Cover | 1 |
| 13 | 1121807 | Nut,SS,M8 | 4 |
| 14 | 7000033 | Spacer | 4 |
| 15 | 1513880 | Countersunk Hex Screw,M8X80 | 1 |
| 16 | 1434800 | Spring Lock Washer, ϕ 8 | 1 |
| 17 | 1021870 | Screw, RHM, M8X70, SST | 3 |
| 18 | 1022845 | Screw, RHM, M8X45, SST | 3 |
| 19 | 1411816 | Washer,Plain, ϕ 8X ϕ 16X1.6 | 3 |
| 20 | 1422821 | Washer, Lock, ϕ 8 | 3 |
| 21 | 7000269 | Front Bumper | 1 |
| 22 | 7000271 | Gasket | 2 |
| 23 | 7000272 | Gasket | 1 |
| 24 | 7000283 | Cap | 4 |
| 25 | 7000286 | Gasket | 1 |
| 26 | 7000181-4 | Hook | 1 |
| 27 | 1021616 | Washer, Lock, ϕ 6 | 2 |
| 28 | 1521612 | Socket Head, M6X12, SST | 2 |
| 29 | 7000415 | Right Cover | 1 |
| 30 | 7000180 | Knob | 2 |
| 31 | 1221425 | Screw,Ph,M4X25 | 2 |
| 32 | 1421412 | Washer,Plain, ϕ 4X ϕ 11X1 | 2 |
| 33 | 1211320 | Screw,Ph,M3X20 | 2 |
| 34 | 8310423 | Micro Switch | 1 |
| 35 | 7000319 | Bracket (for Gel battery charger) | 1 |
| 36 | 1123305 | Nut,Lock,SS,M3 | 2 |
| 37 | 8113020 | Anderson Connector(for Gel battery charger) | 1 |

BODY ASSEMBLY



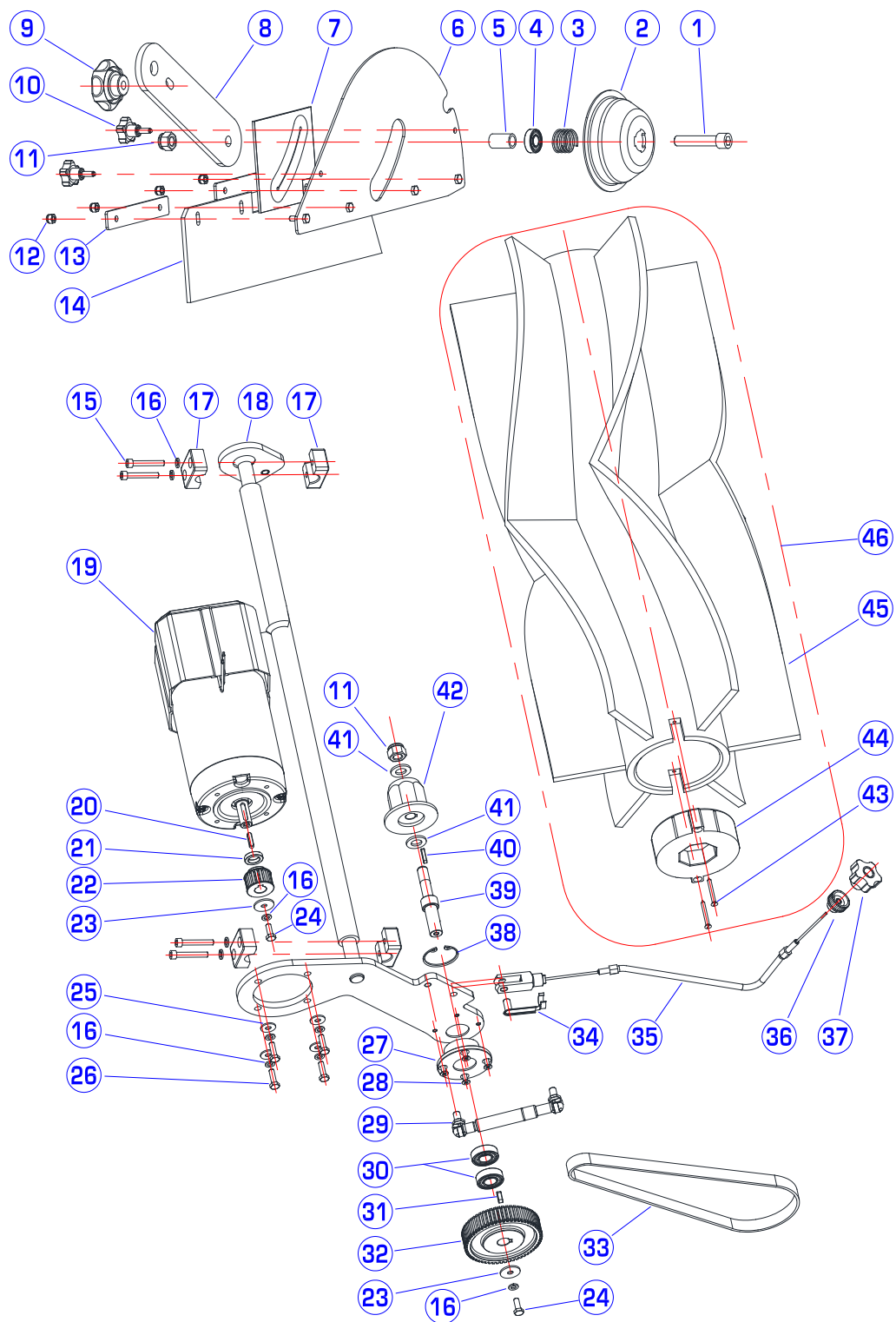
PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|--------|-------------|--|----------|
| 1 | 7000311 | Body | 1 |
| 2 | 8310402 | Seat | 1 |
| 3 | 1021855 | Screw, RHM, M8X55, SST | 4 |
| 4 | 1411816 | Washer, Plain, ϕ 8X ϕ 16X1.6 | 6 |
| 5 | 8310707 | Emergency Switch | 1 |
| 6 | 7000299 | Decal, Emergency Switch | 1 |
| 7 | 1310016 | Screw, ST2.9X16, SST | 4 |
| 8 | 1123810 | Nut, Lock, SS, M8 | 4 |
| 9 | 7000298 | Panel, Emergency Switch | 1 |
| 10 | 7000709 | Warning Decal | 1 |
| 11 | 1123608 | Nut, Lock, SS, M6 | 2 |
| 12 | 1421618 | Washer, Plain, ϕ 6.4X ϕ 18X1.6 | 6 |
| 13 | 7000308 | Tube | 2 |
| 14 | 7000318 | Cap | 2 |
| 15 | 1021635 | Screw, RHM, M6X35, SST | 2 |
| 16 | 7000416 | Rope | 2 |
| 17 | 4010316 | ICE Logo | 2 |
| 18 | 7000305 | Middle Gasket | 1 |
| 19 | 8210114 | Clear Window | 1 |
| 20 | 1221410 | Screw, Ph, M4X10 | 2 |
| 21 | 7000306 | Left Gasket | 1 |
| 22 | 1422616 | Washer, Lock, ϕ 6 | 2 |
| 23 | 1021616 | Screw, RHM, M6X16, SST | 2 |
| 24 | 7000295 | Tube | 2 |
| 25 | 1022416 | Screw, M4X16, SST | 4 |
| 26 | 8133501 | Mesh | 1 |
| 27 | 8133502 | Clip, Mesh | 4 |
| 28 | 1021830 | Screw, RHM, M8X30, SST | 1 |
| 29 | 8115404 | Bushing | 1 |
| 30 | 8111008 | Stopper | 1 |
| 31 | 8111007 | Bracket | 1 |
| 32 | 1021065 | Screw, RHM, M10X65, SST | 2 |
| 33 | 1422026 | Washer, Lock, ϕ 10 | 2 |
| 34 | 1421030 | Washer, Plain, ϕ 10X ϕ 30X2.5 | 2 |
| 35 | 7000025 | Pin | 2 |
| 36 | 7000307 | Right Gasket | 1 |
| 37 | 7000165 | Gasket | 1 |
| 38 | 8130099 | Decal (only for i-Synergy) | 2 |
| 39 | 7000287 | Cap | 2 |

PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|-----------|----------------|---------------------------|-------------|
| 40 | 1121403 | Nut,SS,M4 | 4 |
| 41 | 1422411 | Washer, Lock, Ø4 | 4 |
| 42 | 1421412 | Washer,Plain, φ 4X φ 12X1 | 4 |
| 43 | 7000313 | Flash Light | 2 |
| 44 | 7000316 | Clamp | 2 |
| 45 | 7000317 | Pin | 4 |
| 46 | 7000315 | Bracket | 2 |
| 47 | 1421511 | Washer,Plain, φ 5X φ 12X1 | 4 |
| 48 | 1221535 | Screw,Ph,M5X35 | 4 |
| 49 | 1411828 | Washer,Plain, φ 8X φ 28X3 | 4 |

MAIN BRUSH ASSEMBLY



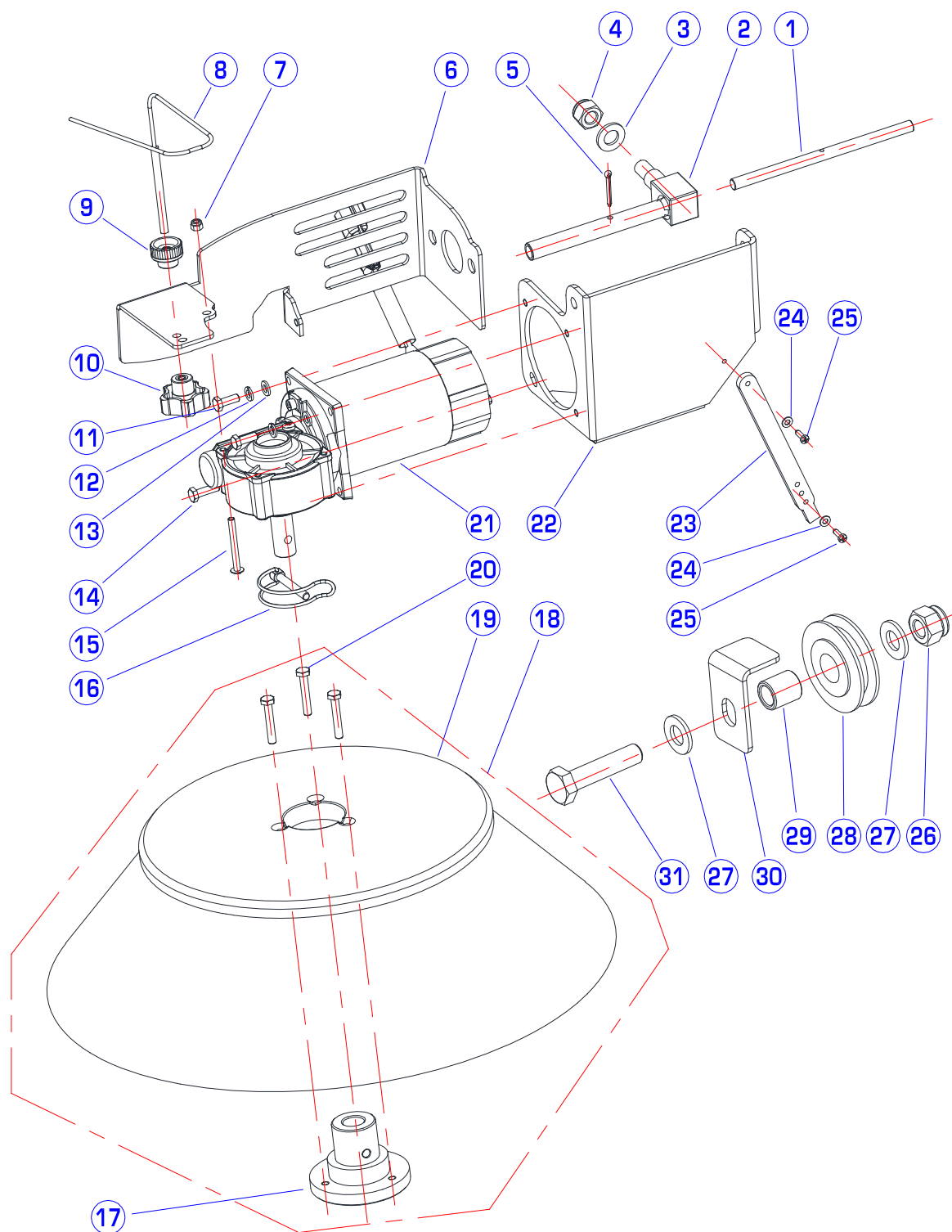
PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|--------|-------------|-------------------------------|----------|
| 1 | 1521260 | Socket Head, M12X60, SST | 1 |
| 2 | 7000069 | Free Hub | 1 |
| 3 | 7000070 | Spring | 1 |
| 4 | 7000185 | Ball Bearing | 1 |
| 5 | 7000068 | Spacer | 1 |
| 6 | 7000133 | Support,Right Skirt | 1 |
| 7 | 7000285 | Gasket Adhesive | 1 |
| 8 | 7000067 | Plate | 1 |
| 9 | 7000174 | Knob,M10 | 1 |
| 10 | 7000179 | Knob,M6 | 2 |
| 11 | 1123115 | Nut,Lock,SS,M12 | 2 |
| 12 | 1123608 | Nut,Lock,SS,M6 | 4 |
| 13 | 7000135 | Plate,Side Skirt | 2 |
| 14 | 7000134 | Side Skirt | 1 |
| 15 | 1521640 | Screw, RHM, M6X40, SST | 4 |
| 16 | 1422616 | Washer, Lock, Ø6 | 10 |
| 17 | 7000053 | Support,Main Brush Shaft | 4 |
| 18 | 7000055 | Shaft,Main Brush | 1 |
| 19 | 7000196 | Main Brush Motor | 1 |
| 20 | 1655020 | Key,5X5X20 | 1 |
| 21 | 7000064 | Spacer | 1 |
| 22 | 7000065 | Pulley,HTD20 5M 15 6F | 1 |
| 23 | 1621624 | Washer,Plain, φ 6.6X φ 22X2 | 2 |
| 24 | 1021616 | Screw, RHM, M6X16, SST | 2 |
| 25 | 1421618 | Washer,Plain, φ 6.4X φ 18X1.6 | 4 |
| 26 | 1021620 | Screw, RHM, M6X20, SST | 4 |
| 27 | 7000060 | Flange | 1 |
| 28 | 1222512 | Screw, HH, M5X12, SST | 4 |
| 29 | 7000190 | Gas, Spring | 1 |
| 30 | 7000186 | Ball Bearing,6002 2RS | 2 |
| 31 | 1655015 | Key,5X5X15 | 1 |
| 32 | 7000062 | Pulley,HTD60 5M 15 6W | 1 |
| 33 | 7000192 | Belt | 1 |
| 34 | 7000512 | Clips | 1 |
| 35 | 7000513 | Cable,Main Brush | 1 |
| 36 | 7000177 | Knob | 1 |
| 37 | 7000178 | Knob | 1 |
| 38 | 1437032 | Ring Retaining | 1 |
| 39 | 7000061 | Pin | 1 |

PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|--------|-------------|--|----------|
| 40 | 1644020 | Key,4X4X20 | 1 |
| 41 | 1421124 | Washer,Plain, ϕ 13X ϕ 25X2.5 | 2 |
| 42 | 7000063 | Traction Hub | 1 |
| 43 | 1321240 | Screw,ST4.2X40, SST | 1 |
| 44 | 7000073 | Hub | 1 |
| 45 | 7000072 | Main Brush (Poly) | 1 |
| | 7000626 | Main Brush (Poly/Wire) | 1 |
| | 7000627 | Main Brush (Mix Fibres) | 1 |
| 46 | 7000071 | Main Brush Assembly (Poly) | 1 |
| | 7000620 | Main Brush Assembly (Poly/Wire) | 1 |
| | 7000621 | Main Brush Assembly (Mix Fibres) | 1 |

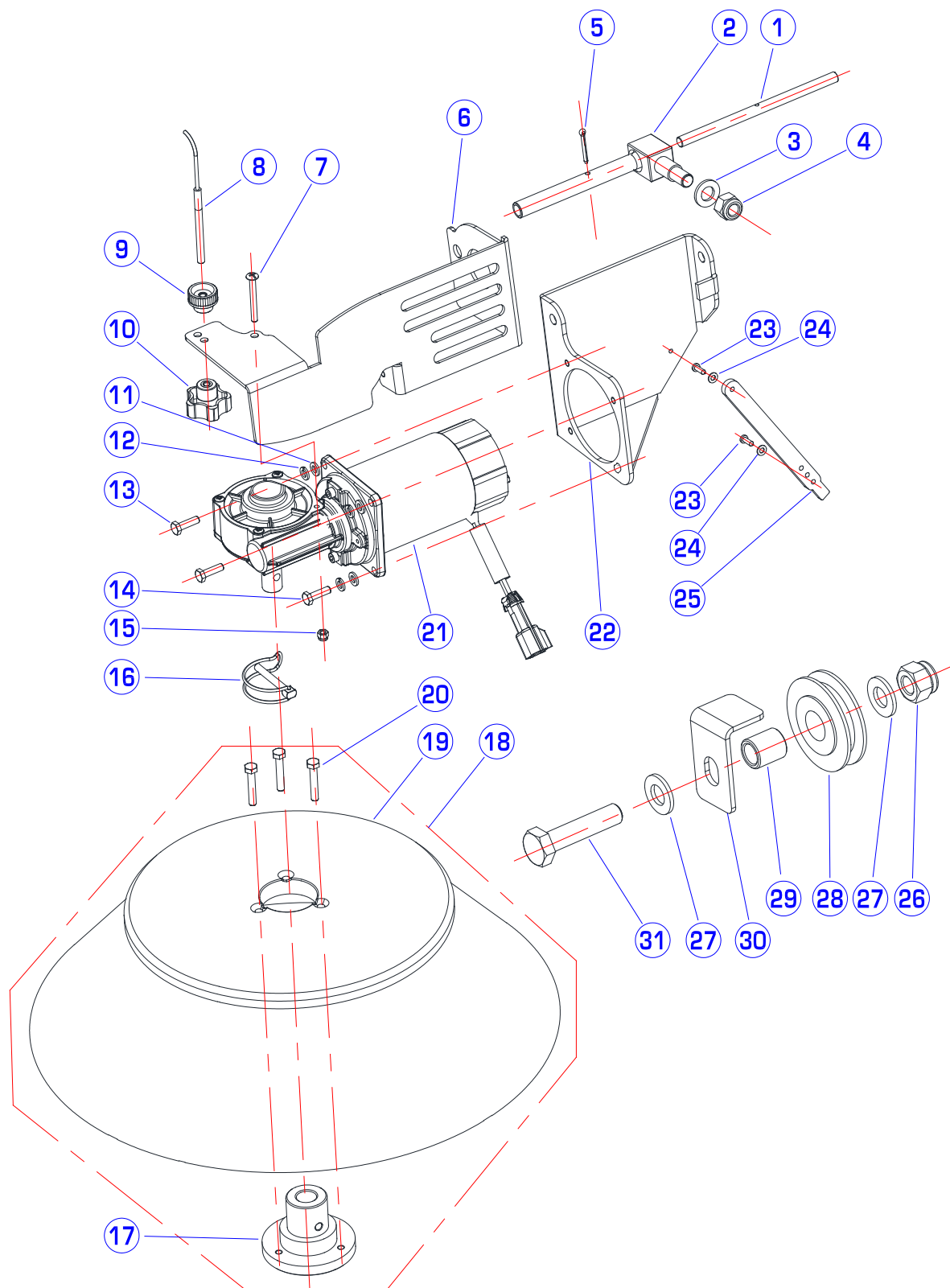
RIGHT SIDE BRUSH ASSEMBLY



PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|--------|-------------|---|----------|
| 1 | 7000080 | Shaft, Side Brush | 1 |
| 2 | 7000077 | Linkage Assembly, Side Brush | 1 |
| 3 | 1421124 | Washer, Plain, ϕ 24X ϕ 13X2.5 | 1 |
| 4 | 1123115 | Nut, Lock, SS, M6 | 1 |
| 5 | 1645324 | Split Pin, ϕ 3.2X24 | 1 |
| 6 | 7000267 | Plate | 1 |
| 7 | 1123507 | Nut, Lock, SS, M5 | 1 |
| 8 | 7000503 | Cable, Right Side Brush | 1 |
| 9 | 7000177 | Knob | 1 |
| 10 | 7000178 | Knob | 1 |
| 11 | 1021616 | Screw, RHM, M6X16, SST | 3 |
| 12 | 1422616 | Washer, Lock, ϕ 6 | 4 |
| 13 | 1421612 | Washer, Plain, ϕ 6X ϕ 12X1.6 | 4 |
| 14 | 1021625 | Screw, RHM, M6X25, SST | 1 |
| 15 | 1221550 | Screw, Ph, M5X50 | 1 |
| 16 | 7000274 | Split Pin | 1 |
| 17 | 7000085 | Hub, Side Brush | 1 |
| 18 | 7000083 | Side Brush Assembly(Poly) | 1 |
| | 7000622 | Side Brush Assembly(Poly/Wire) | 1 |
| | 7000623 | Side Brush Assembly(Mix Fibres) | 1 |
| 19 | 7000084 | Side Brush (Poly) | 1 |
| | 7000624 | Side Brush (Poly/Wire) | 1 |
| | 7000625 | Side Brush (Mix Fibres) | 1 |
| 20 | 1513626 | Countersunk Hex Screw, M6X25 | 3 |
| 21 | 7000194 | Right Side Brush Motor | 1 |
| 22 | 7000075 | Support, Right Side Brush | 1 |
| 23 | 7000076 | Rubber | 1 |
| 24 | 1421412 | Washer, Plain, ϕ 4X ϕ 12X1 | 2 |
| 25 | 1311417 | Screw, ST4X14 | 2 |
| 26 | 1123810 | Nut, Lock, SS, M8 | 1 |
| 27 | 1411816 | Washer, Plain, ϕ 8X ϕ 16X1.6 | 2 |
| 28 | 7000032 | Pulley | 1 |
| 29 | 7000031 | Spacer | 1 |
| 30 | 7000030 | Bracker, Cable Fixing | 1 |
| 31 | 1021835 | Screw, RHM, M8X35, SST | 1 |

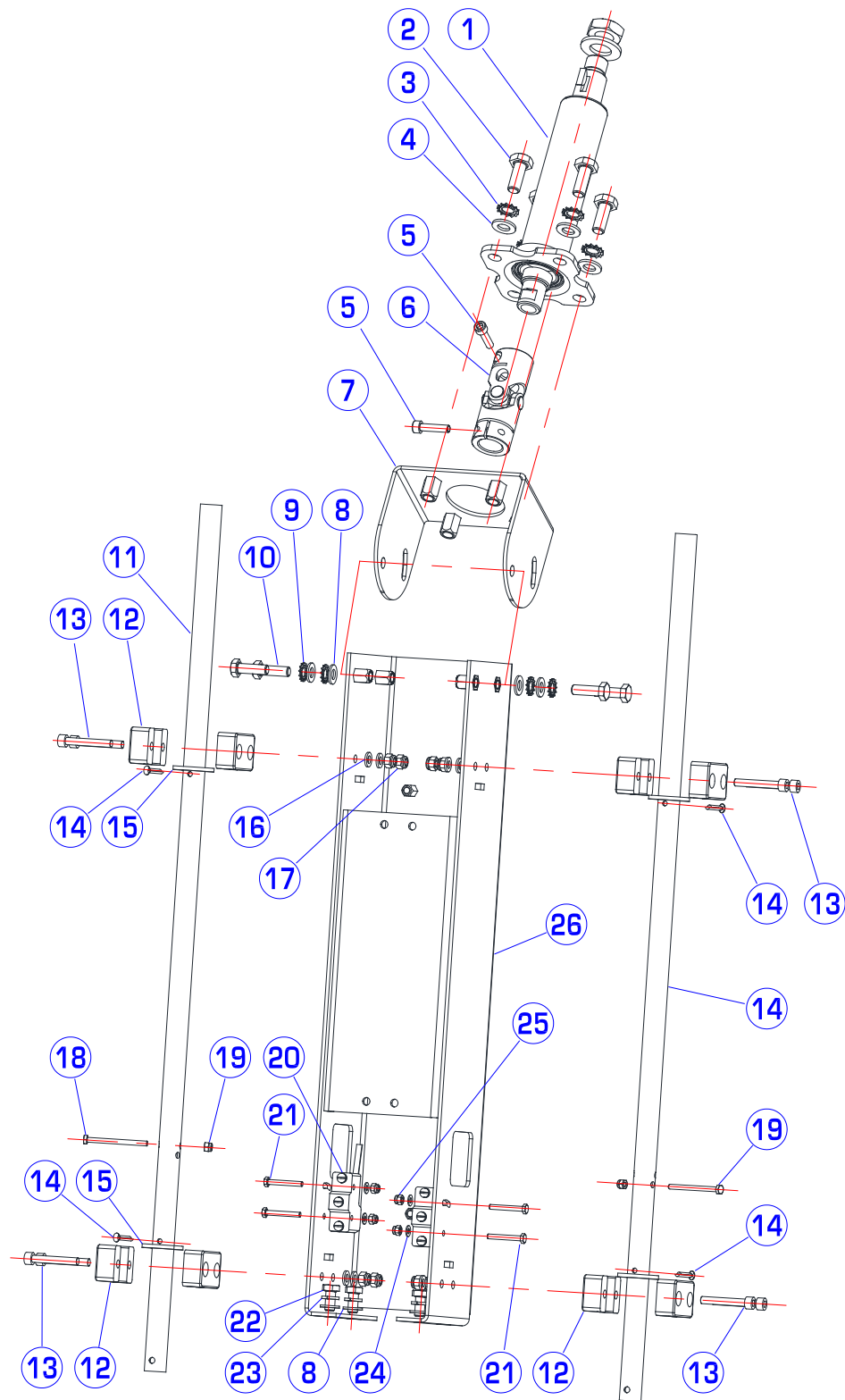
LEFT SIDE BRUSH ASSEMBLY



PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|--------|-------------|---|----------|
| 1 | 7000080 | Shaft, Side Brush | 1 |
| 2 | 7000077 | Linkage Assembly, Side Brush | 1 |
| 3 | 1421124 | Washer, Plain, ϕ 24X ϕ 13X2.5 | 1 |
| 4 | 1123115 | Nut, Lock, SS, M6 | 1 |
| 5 | 1645324 | Split Pin, ϕ 3.2X24 | 1 |
| 6 | 7000266 | Plate | 1 |
| 7 | 1221550 | Screw, Ph, M5X50 | 1 |
| 8 | 7000504 | Cable, Left Side Brush | 1 |
| 9 | 7000177 | Knob | 1 |
| 10 | 7000178 | Knob | 1 |
| 11 | 1421612 | Washer, Plain, ϕ 6X ϕ 12X1.6 | 4 |
| 12 | 1422616 | Washer, Lock, ϕ 6 | 4 |
| 13 | 1021616 | Screw, RHM, M6X16, SST | 3 |
| 14 | 1021625 | Screw, RHM, M6X25, SST | 1 |
| 15 | 1123507 | Nut, Lock, SS, M5 | 1 |
| 16 | 7000274 | Split Pin | 1 |
| 17 | 7000085 | Hub, Side Brush | 1 |
| 18 | 7000083 | Side Brush Assembly(Poly) | 1 |
| | 7000622 | Side Brush Assembly(Poly/Wire) | 1 |
| | 7000623 | Side Brush Assembly(Mix Fibres) | 1 |
| 19 | 7000084 | Side Brush (Poly) | 1 |
| | 7000624 | Side Brush (Poly/Wire) | 1 |
| | 7000625 | Side Brush (Mix Fibres) | 1 |
| 20 | 1513626 | Countersunk Hex Screw, M6X25 | 3 |
| 21 | 7000193 | Left Side Brush Motor | 1 |
| 22 | 7000082 | Support, Left Side Brush | 1 |
| 23 | 1311417 | Screw, ST4X14 | 2 |
| 24 | 1421412 | Washer, Plain, ϕ 4X ϕ 12X1 | 2 |
| 25 | 7000076 | Rubber | 1 |
| 26 | 1123810 | Nut, Lock, SS, M8 | 1 |
| 27 | 1411816 | Washer, Plain, ϕ 8X ϕ 16X1.6 | 2 |
| 28 | 7000032 | Pulley | 1 |
| 29 | 7000031 | Spacer | 1 |
| 30 | 7000030 | Bracker, Cable Fixing | 1 |
| 31 | 1021835 | Screw, RHM, M8X35, SST | 1 |

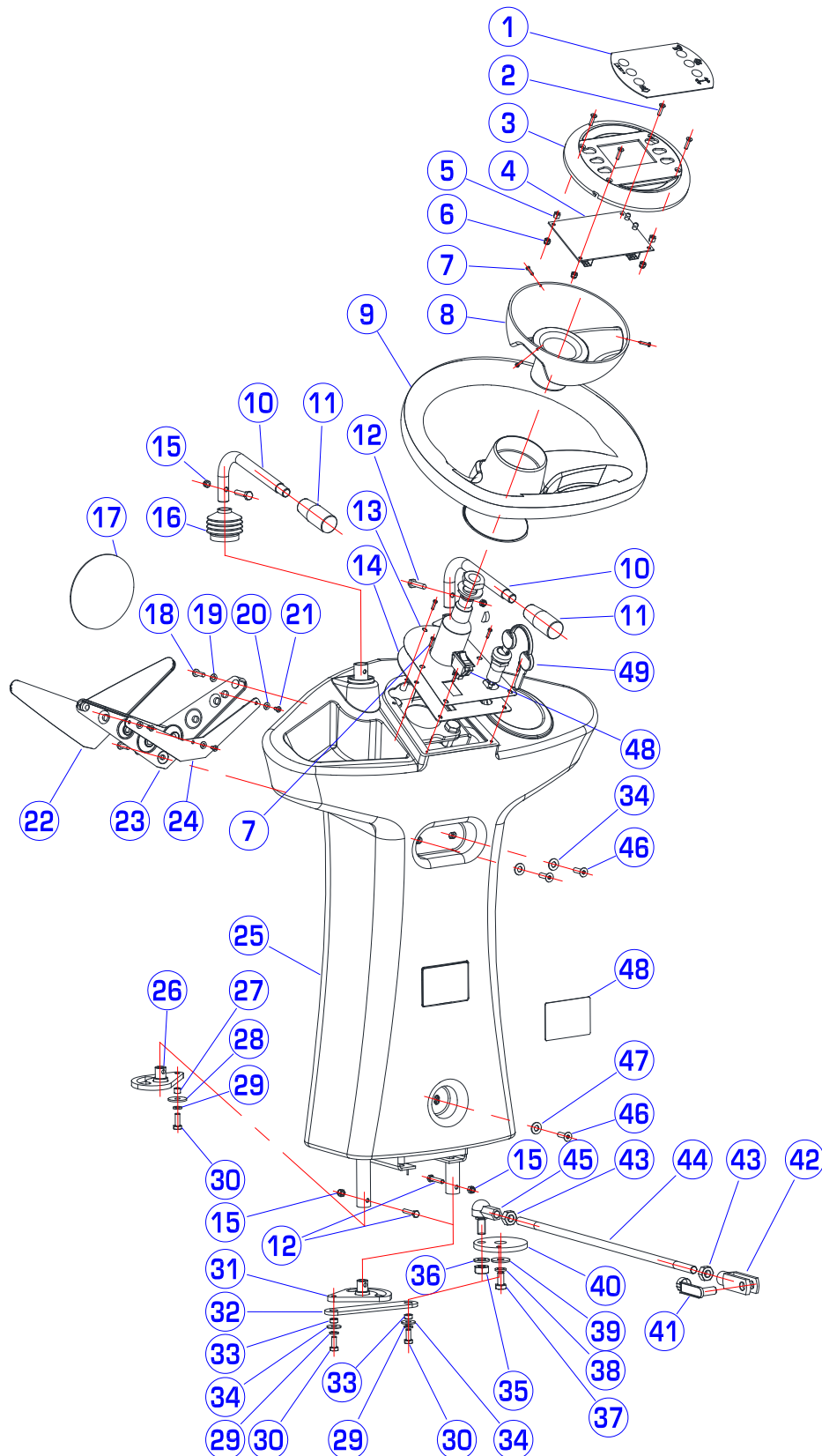
STEERING ASSEMBLY



PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|--------|-------------|---|----------|
| 1 | 7000410 | Steering Column | 1 |
| 2 | 1021025 | Screw, RHM, M10X25, SST | 4 |
| 3 | 1434100 | Spring Lock Washer, ϕ 10 | 4 |
| 4 | 1421020 | Washer, Plain, ϕ 10X ϕ 20X2 | 4 |
| 5 | 1521625 | Socket Head, M6X25, SST | 2 |
| 6 | 7000411 | Joint | 1 |
| 7 | 7000113 | Support | 1 |
| 8 | 1411816 | Washer, Plain, ϕ 8X ϕ 16X1.6 | 4 |
| 9 | 1434800 | Spring Lock Washer, ϕ 8 | 4 |
| 10 | 1021816 | Screw, RHM, M8X16, SST | 4 |
| 11 | 7000050 | Lever Shaft | 2 |
| 12 | 7000053 | Support, Main Brush Shaft | 4 |
| 13 | 1521640 | Socket Head, M6X40, SST | 8 |
| 14 | 1645425 | Elastic Pin, ϕ 4X25 | 4 |
| 15 | 1421334 | Washer, Plain, ϕ 19X ϕ 34X3 | 4 |
| 16 | 1421612 | Washer, Plain, ϕ 6X ϕ 12X1.6 | 8 |
| 17 | 1123608 | Nut, Lock, SS, M6 | 8 |
| 18 | 1021545 | Screw, RHM, M5X45, SST | 2 |
| 19 | 1123507 | Nut, Lock, SS, M5 | 2 |
| 20 | 7000412 | Micro Switch | 2 |
| 21 | 1021430 | Screw, RHM, M4X30, SST | 4 |
| 22 | 1021816 | Screw, RHM, M8X16, SST | 4 |
| 23 | 1422821 | Washer, Lock, ϕ 8 | 4 |
| 24 | 1421409 | Washer, Plain, ϕ 4.3X ϕ 9X0.8 | 4 |
| 25 | 1123406 | Nut, Lock, SS, M4 | 4 |
| 26 | 7000112 | Column | 1 |

STEERING ASSEMBLY



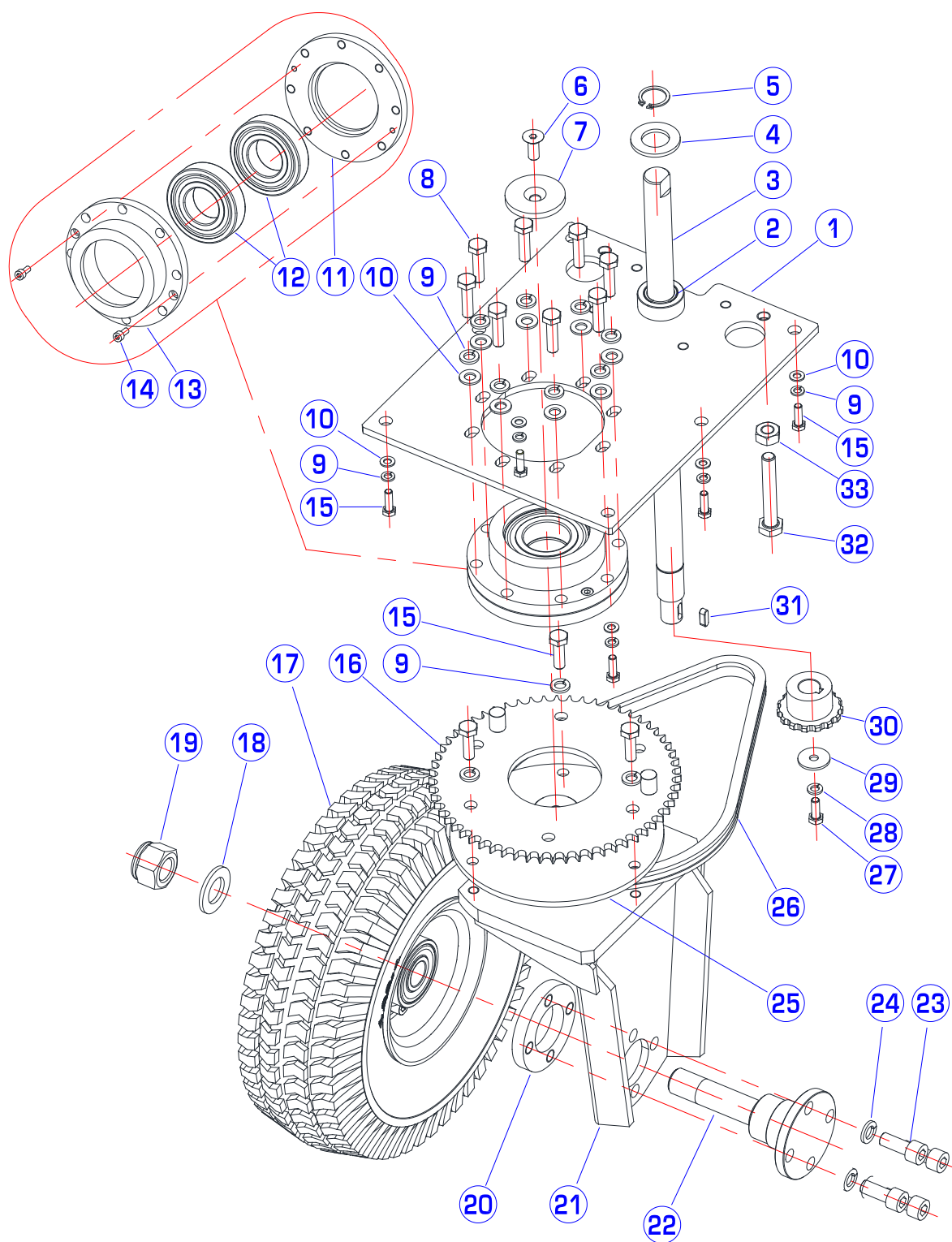
PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|--------|-------------|---|----------|
| 1 | 7000309 | Decal,Dash Board | 1 |
| 2 | 1222416 | Screw, FH, M4X16, SST | 4 |
| 3 | 7000403 | Cover,Board Housing | 1 |
| 4 | 7000404 | Electronic Board | 1 |
| 5 | 7000310 | Spacer | 4 |
| 6 | 1123406 | Nut,Lock,SS,M4 | 4 |
| 7 | 1321012 | Screw,ST2.9X12 | 5 |
| 8 | 7000402 | Board Housing | 1 |
| 9 | 7000401 | Steering Wheel | 1 |
| 10 | 7000293 | Lever | 2 |
| 11 | 7000293-1 | Cover, Lever | 2 |
| 12 | 1021525 | Screw, RHM, M5X25, SST | 4 |
| 13 | 7000409 | Decal,Ignition Key | 1 |
| 14 | 7000408 | Support,Ignition Key | 1 |
| 15 | 1123507 | Nut,Lock,SS,M5 | 2 |
| 16 | 7000314 | Rubber Cover | 2 |
| 17 | 4010316 | ICE Logo | 1 |
| 18 | 1221516 | Screw, PH, M5X16, SST | 3 |
| 19 | 1421510 | Washer,Plain, ϕ 5.3X ϕ 10X1 | 3 |
| 20 | 1421409 | Washer,Plain, ϕ 4.3X ϕ 9X0.8 | 3 |
| 21 | 1321110 | Screw,ST3.5X10 | 3 |
| 22 | 8133602 | Cover,Led Lighter | 1 |
| 23 | 8133601 | Support,Led Lighter | 1 |
| 24 | 8133603 | Led Lighter | 1 |
| 25 | 7000405 | Cover,Steering Column | 1 |
| 26 | 7000116 | Return Lever,Side Brush | 1 |
| 27 | 7000115 | Spacer | 1 |
| 28 | 1621624 | Washer,Plain, ϕ 6.6X ϕ 22X2 | 1 |
| 29 | 1422616 | Washer, Lock, ϕ 6 | 3 |
| 30 | 1021616 | Screw, RHM, M6X16, SST | 1 |
| 31 | 7000119 | Return Lever,Main Brush | 1 |
| 32 | 7000171 | Lever | 1 |
| 33 | 7000172 | Spacer | 2 |
| 34 | 1421618 | Washer,Plain, ϕ 6.4X ϕ 18X1.6 | 5 |
| 35 | 1123012 | Nut,Lock,SS,M10 | 1 |
| 36 | 1421020 | Washer,Plain, ϕ 10.5X ϕ 20X2 | 1 |
| 37 | 1021816 | Screw, RHM, M8X16, SST | 1 |
| 38 | 1422821 | Washer, Lock, ϕ 8 | 1 |
| 39 | 1421824 | Washer,Plain, ϕ 8X ϕ 24X2 | 1 |

PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|-------------------|------------------------|-------------------------|---------------------|
| 40 | 7000170 | Disk Plate | 1 |
| 41 | 7000502 | Clips | 1 |
| 42 | 7000501 | Fork(long) | 1 |
| 43 | 1121008 | Nut,SS,M10 | 2 |
| 44 | 7000173 | Bar | 1 |
| 45 | 7000294 | Joint-head | 1 |
| 46 | 1521625 | Socket Head, M6X25, SST | 3 |
| 47 | 7000705 | Serial Decal | 1 |
| 48 | 6210503 | Switch | 1 |
| 49 | 8310706 | Ignition Key | 1 |

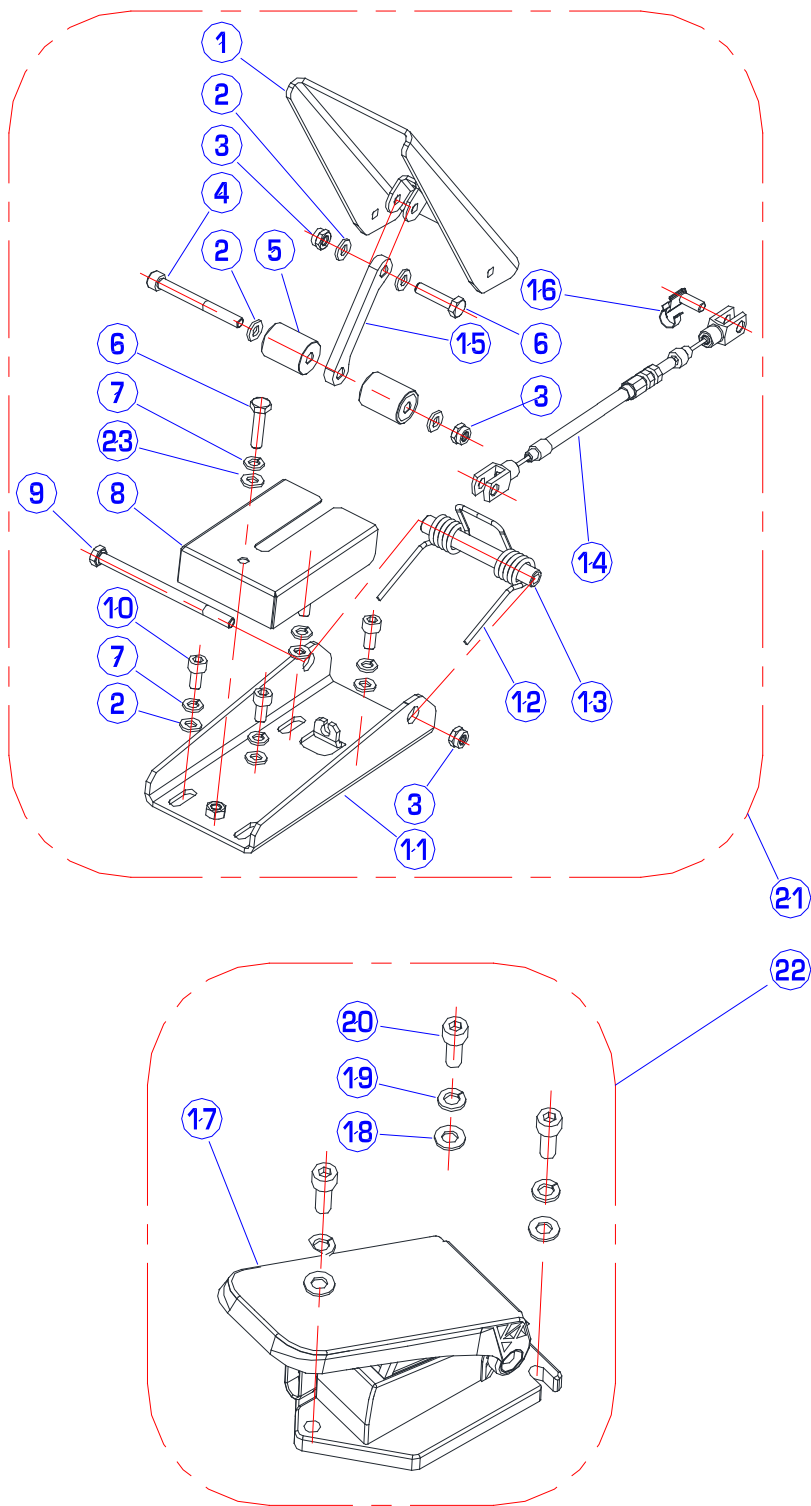
ICE iS1100



PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|--------|-------------|---------------------------------------|----------|
| 1 | 7000099 | Plate Supporting | 1 |
| 2 | 7000103 | Bushing | 1 |
| 3 | 700010 | Steering Shaft | 1 |
| 4 | 1421330 | Washer,Plain, ϕ 21X ϕ 37X3 | 1 |
| 5 | 1436020 | Ring Retaining | 1 |
| 6 | 7000106 | Bearing Retainer | 1 |
| 7 | 1513825 | Countersunk Hex Screw,M8X25 | 1 |
| 8 | 1021830 | Screw, RHM, M8X30, SST | 8 |
| 9 | 1422821 | Washer, Lock, ϕ 8 | 17 |
| 10 | 1411816 | Washer,Plain, ϕ 8X ϕ 16X1.6 | 14 |
| 11 | 7000098 | Flange | 1 |
| 12 | 7000187 | Ball Bearing,6207 2RS | 2 |
| 13 | 7000097 | Flange | 1 |
| 14 | 1521512 | Socket Head, M5X12, SST | 2 |
| 15 | 1021825 | Screw, RHM, M8X25, SST | 9 |
| 16 | 7000093 | Crown | 1 |
| 17 | 7000198 | Front Wheel | 1 |
| 18 | 1421330 | Washer,Plain, ϕ 21X ϕ 37X3 | 1 |
| 19 | 1123020 | Nut,Lock,SS,M20 | 1 |
| 20 | 7000104 | Flange | 1 |
| 21 | 7000087 | Support,Front Wheel | 1 |
| 22 | 7000105 | Shaft,Front Wheel | 1 |
| 23 | 1521025 | Socket Head, M10X25, SST | 4 |
| 24 | 1422026 | Washer, Lock, ϕ 10 | 4 |
| 25 | 7000092 | Plate | 1 |
| 26 | 7000110 | Chain | 1 |
| 27 | 1021616 | Screw, RHM, M6X16, SST | 1 |
| 28 | 1422616 | Washer, Lock, ϕ 6 | 1 |
| 29 | 1621624 | Washer,Plain, ϕ 6.6X ϕ 22X2 | 1 |
| 30 | 7000109 | Sprocket | 1 |
| 31 | 1655015 | Key,5X5X15 | 1 |
| 32 | 1022065 | Screw, RHM, M10X65, SST | 2 |
| 33 | 1121008 | Nut,SS,M10 | 2 |

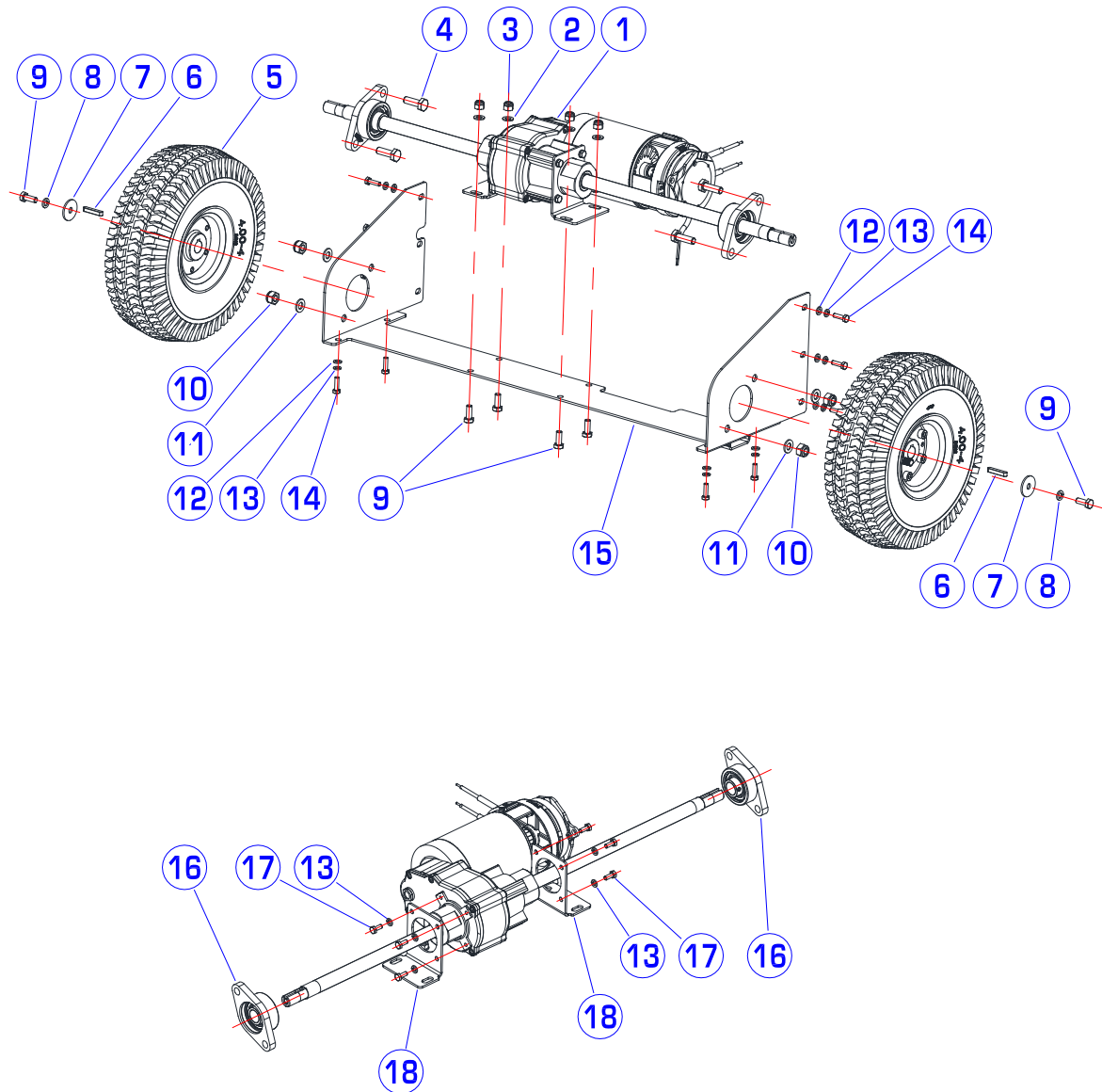
PEDAL ASSEMBLY



PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|--------|-------------|--|----------|
| 1 | 7000214 | Pedal | 1 |
| 2 | 1421612 | Washer, Plain, ϕ 6X ϕ 12X1.6 | 8 |
| 3 | 1123608 | Nut, Lock, SS, M6 | 3 |
| 4 | 1521655 | Socket Head, M6X55, SST | 1 |
| 5 | 7000220 | Roller | 1 |
| 6 | 1021625 | Screw, RHM, M6X25, SST | 2 |
| 7 | 1021616 | Washer, Lock, ϕ 6 | 5 |
| 8 | 7000221 | Cover | 1 |
| 9 | 1222690 | Screw, RHM, M6X90, SST | 1 |
| 10 | 1521612 | Socket Head, M6X12, SST | 4 |
| 11 | 7000211 | Pedal Support | 1 |
| 12 | 7000217 | Spring | 1 |
| 13 | 7000213 | Spacer | 1 |
| 14 | 7000508 | Cable, Front Skirt Lift-up | 1 |
| 15 | 7000219 | Lever | 1 |
| 16 | 7000507 | Clips | 1 |
| 17 | 7000162 | Speed Control Pedal | 1 |
| 18 | 1411816 | Washer, Plain, ϕ 8X ϕ 16X1.6 | 3 |
| 19 | 1422821 | Washer, Lock, ϕ 8 | 3 |
| 20 | 1521820 | Socket Head, M8X20, SST | 3 |
| 21 | 7000210 | Front Skirt Raising Pedal Kit | 1 |
| 22 | 7000161 | Speed Control Pedal Kit | 1 |
| 23 | 1621624 | Washer, Plain, ϕ 6X ϕ 22X2 | 1 |

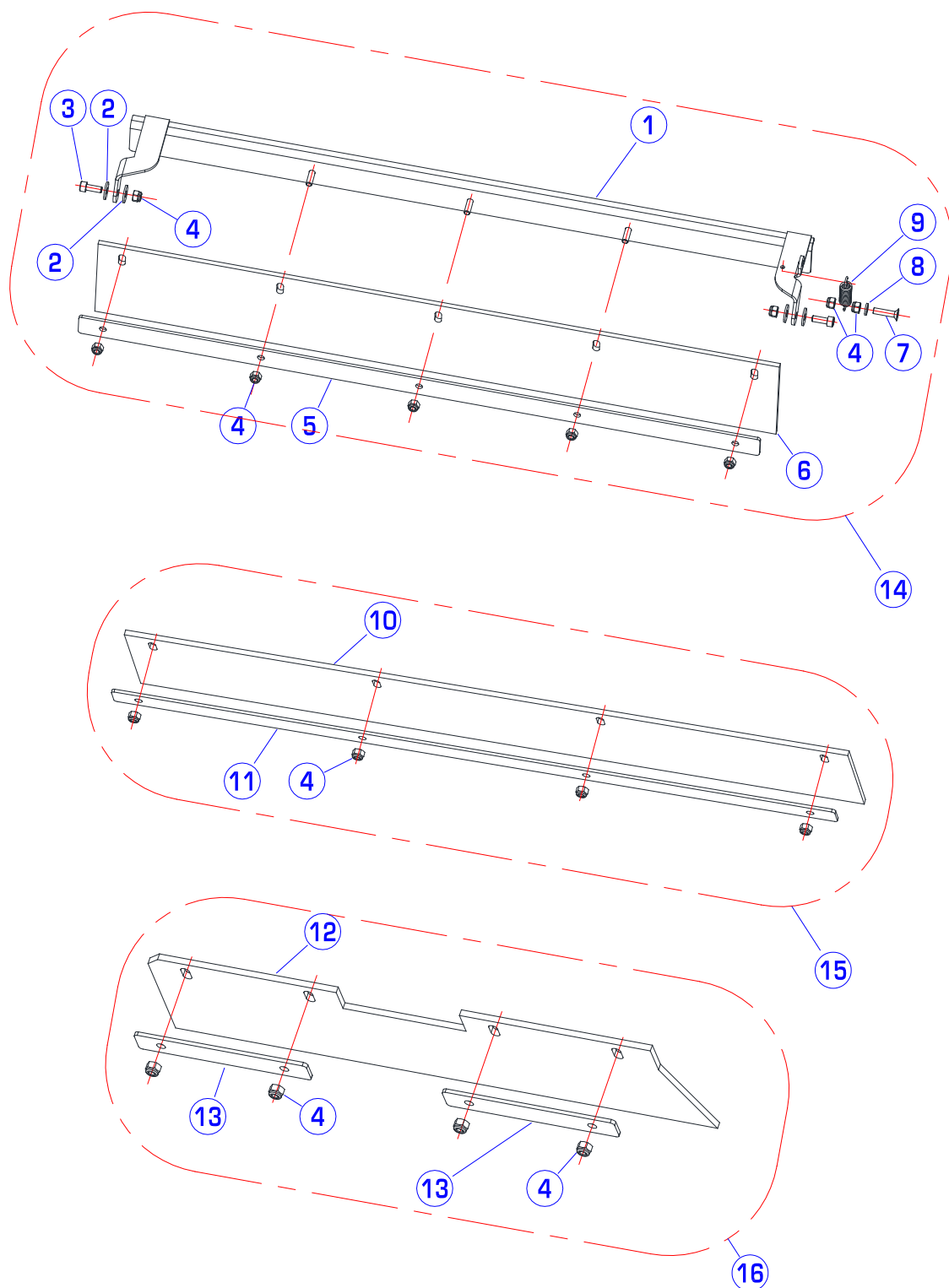
DRIVE ASSEMBLY



PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|--------|-------------|--|----------|
| 1 | 7000197 | Transaxle | 1 |
| 2 | 1421824 | Washer, Plain, ϕ 8X ϕ 24X2 | 4 |
| 3 | 1123810 | Nut, Lock, SS, M8 | 4 |
| 4 | 1021030 | Screw, RHM, M10X30, SST | 4 |
| 5 | 7000199 | Traction Wheel | 2 |
| 6 | 1666035 | Key, 6X6X35 | 2 |
| 7 | 1421828 | Washer, Plain, ϕ 8X ϕ 28X3 | 2 |
| 8 | 1422821 | Washer, Lock, ϕ 8 | 2 |
| 9 | 1021820 | Screw, RHM, M8X20, SST | 6 |
| 10 | 1123012 | Nut, Lock, SS, M10 | 4 |
| 11 | 1411020 | Washer, Plain, ϕ 10X ϕ 20X2 | 4 |
| 12 | 1421612 | Washer, Plain, ϕ 6X ϕ 12X1.6 | 10 |
| 13 | 1422616 | Washer, Lock, ϕ 6 | 18 |
| 14 | 1021620 | Screw, RHM, M6X20, SST | 10 |
| 15 | 7000037 | Support, Transaxle | 1 |
| 16 | 7000188 | Ball Bearing with Flange | 1 |
| 17 | 1021616 | Screw, RHM, M6X16, SST | 8 |
| 18 | 7000040 | Bracket, Transaxle | 2 |

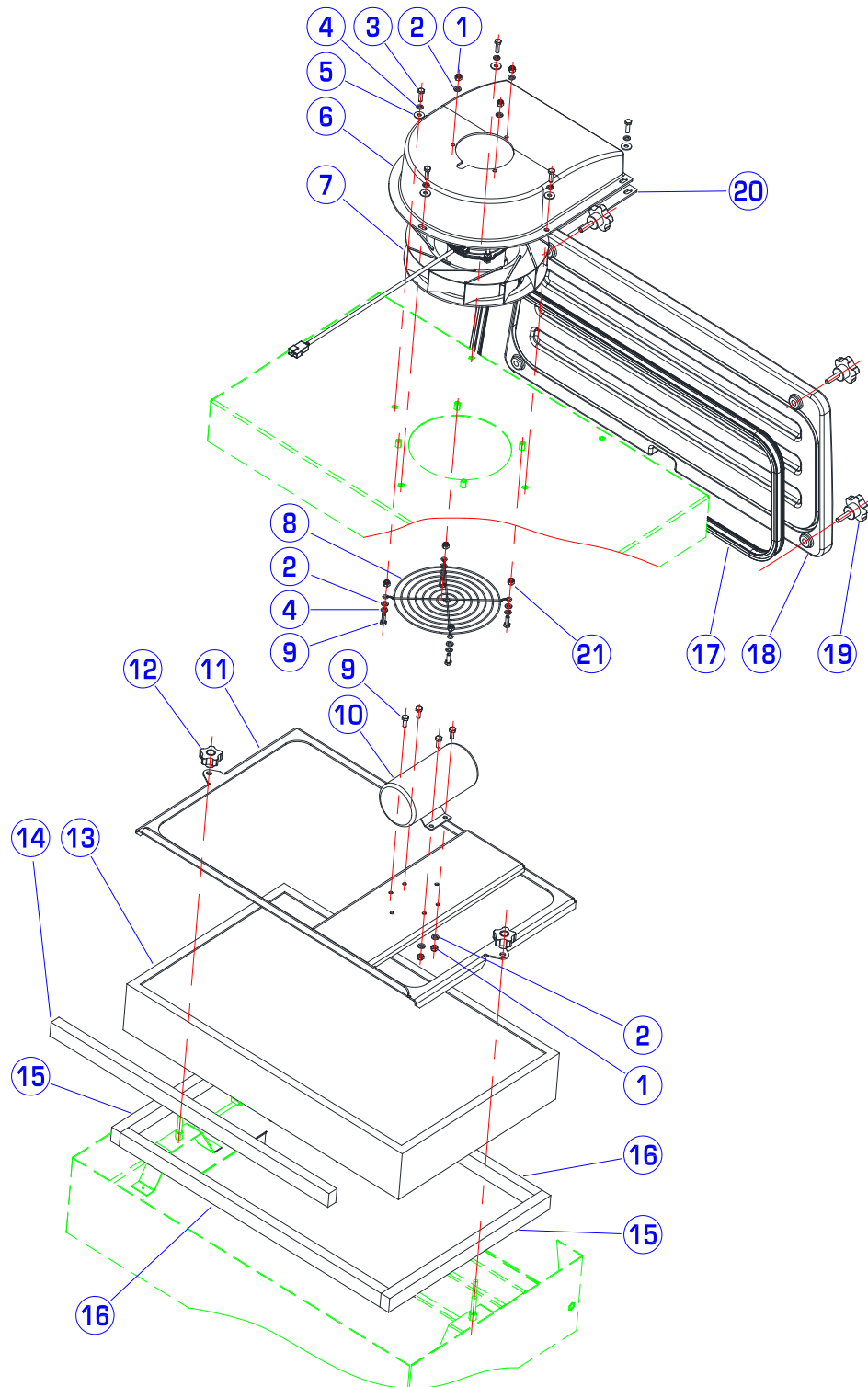
SKIRTS ASSEMBLY



PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|-----------|----------------|---|-------------|
| 1 | 7000123 | Frame,Front Skirt | 1 |
| 2 | 1421618 | Washer,Plain, ϕ 6.4X ϕ 18X1.6 | 4 |
| 3 | 1521616 | Socket Head, M6X16, SST | 2 |
| 4 | 1123608 | Nut,Lock,SS,M6 | 16 |
| 5 | 7000128 | Plate,Front Skirt | 1 |
| 6 | 7000127 | Front Skirt | 1 |
| 7 | 1513626 | Countersunk Hex Screw,M6X25 | 1 |
| 8 | 1421612 | Washer,Plain, ϕ 6X ϕ 12X1.6 | 1 |
| 9 | 7000147 | Spring | 1 |
| 10 | 7000130 | Rear Skirt | 1 |
| 11 | 7000131 | Plate,Rear Skirt | 1 |
| 12 | 7000134 | Side Skirt | 1 |
| 13 | 7000135 | Plate,Side Skirt | 2 |
| 14 | 7000122 | Front Skirt Assembly | 1 |
| 15 | 7000129 | Rear Skirt Assembly | 1 |
| 16 | 7000136 | Left Skirt Assembly | 1 |

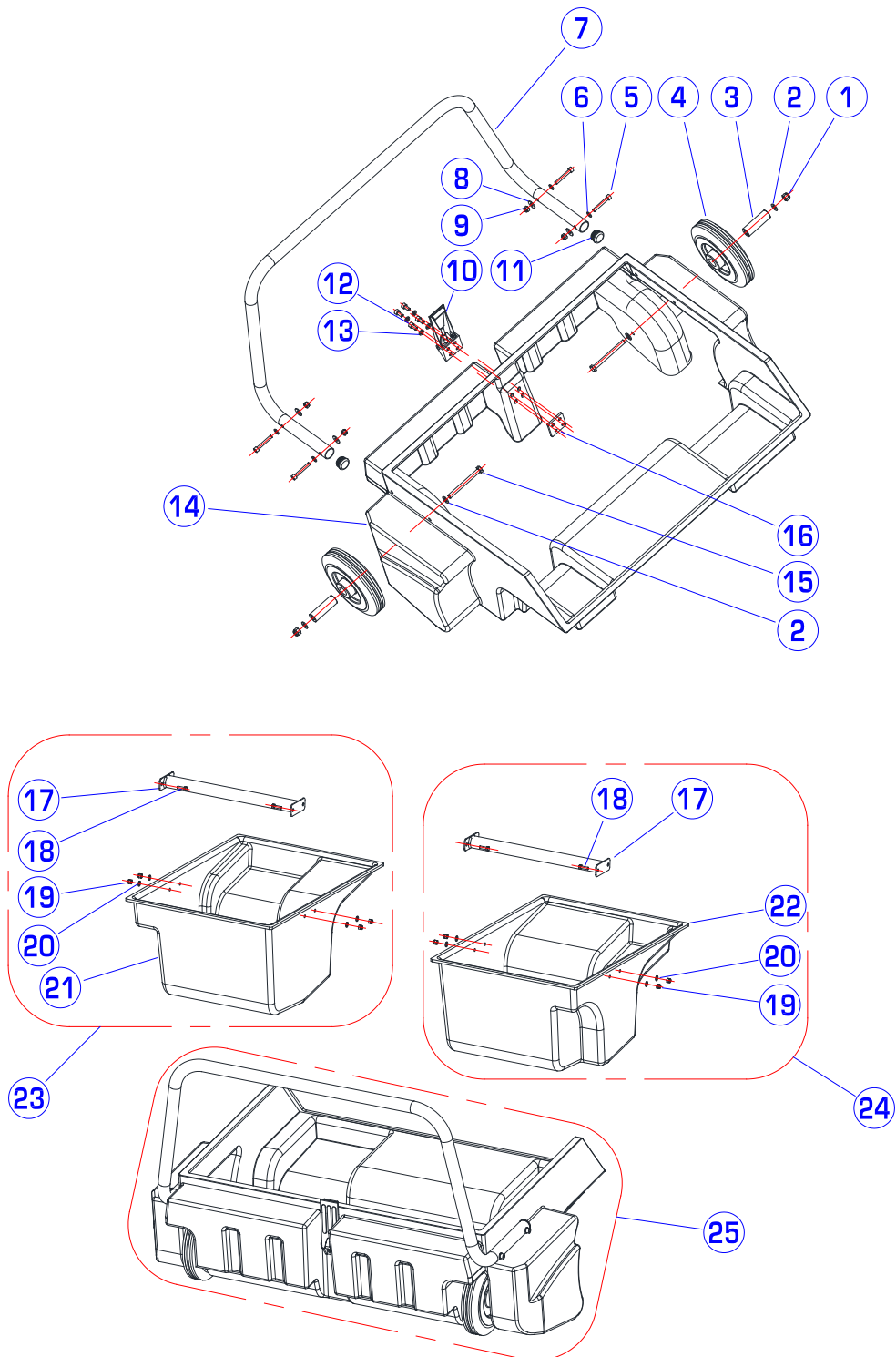
DUST CONTROL SYSTEM



PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|--------|-------------|---|----------|
| 1 | 1123608 | Nut,Lock,SS,M6 | 7 |
| 2 | 1421612 | Washer,Plain, ϕ 6X ϕ 12X1.6 | 11 |
| 3 | 1021620 | Screw, RHM, M6X20, SST | 5 |
| 4 | 1422616 | Washer, Lock, ϕ 6 | 9 |
| 5 | 1421618 | Washer,Plain, ϕ 6.4X ϕ 18X1.6 | 5 |
| 6 | 7000158 | Cover | 1 |
| 7 | 7000159 | Vacuum Fan | 1 |
| 8 | 7000160 | Screen Protection | 1 |
| 9 | 1021616 | Screw, RHM, M6X16, SST | 4 |
| 10 | 7000195 | Filter Shaker Motor | 1 |
| 11 | 7000042 | Filter Frame | 1 |
| 12 | 7000180 | Knob | 2 |
| 13 | 7000048 | Panel Filter | 1 |
| 14 | 7000291 | Gasket | 1 |
| 15 | 7000047 | Gasket(Short) | 2 |
| 16 | 7000046 | Gasket(Long) | 2 |
| 17 | 7000265 | Gasket | 1 |
| 18 | 7000264 | Rear Cover | 1 |
| 19 | 7000175 | Knob | 4 |
| 20 | 7000164 | Gasket | 1 |
| 21 | 1121605 | Nut,SS,M6 | 4 |

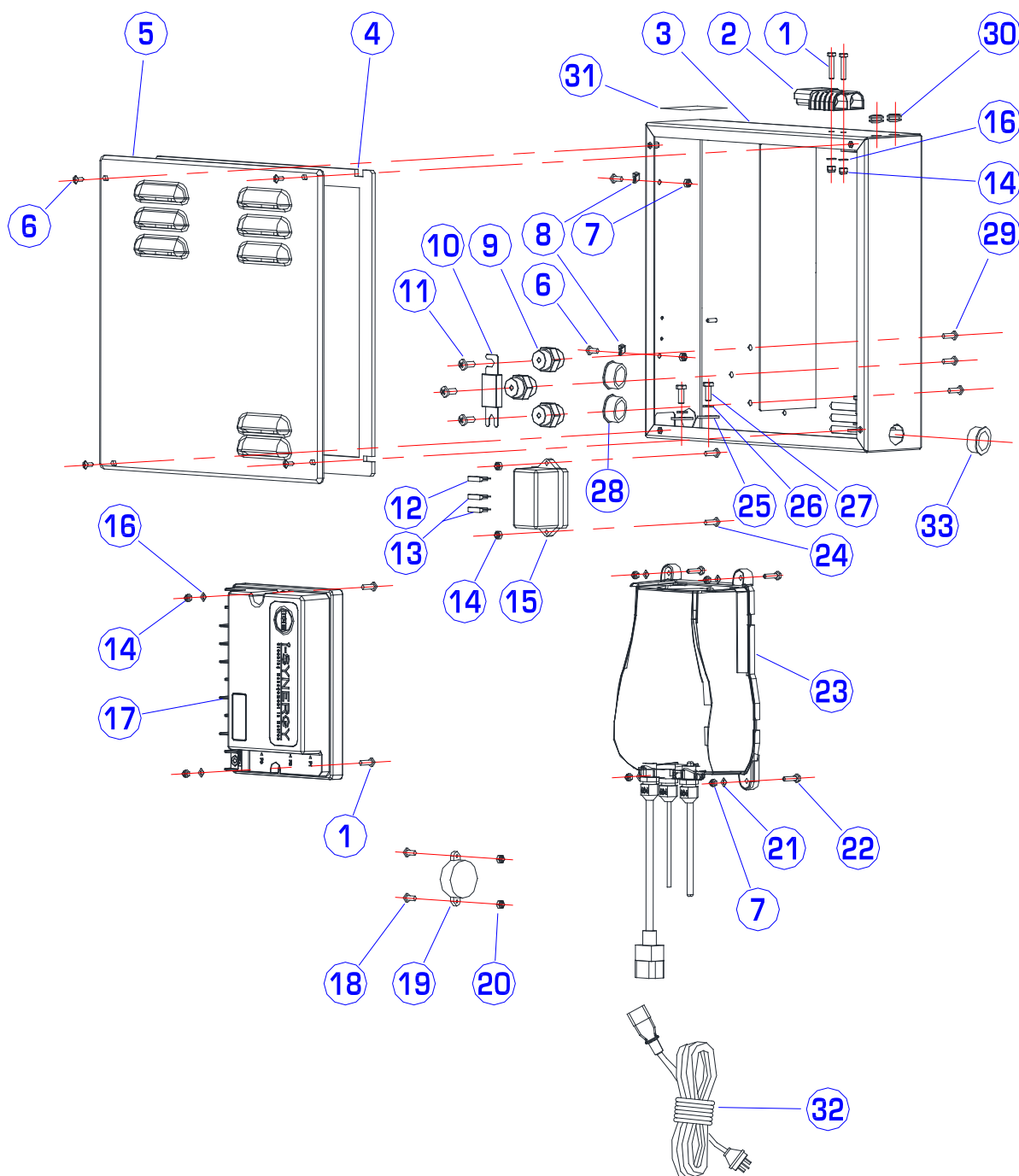
HOPPER ASSEMBLY



PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|--------|-------------|---------------------------------------|----------|
| 1 | 1123810 | Nut,Lock,SS,M8 | 2 |
| 2 | 1411816 | Washer,Plain, ϕ 8X ϕ 16X1.6 | 4 |
| 3 | 7000146 | Spacer | 2 |
| 4 | 7000139 | Hopper Wheel | 2 |
| 5 | 1521640 | Socket Head, M6X40, SST | 4 |
| 6 | 1421612 | Washer,Plain, ϕ 6X ϕ 12X1.6 | 4 |
| 7 | 7000145 | Handle | 1 |
| 8 | 1421618 | Washer,Plain, ϕ 6X ϕ 18X1.6 | 4 |
| 9 | 1123608 | Nut,Lock,SS,M6 | 4 |
| 10 | 7000181 | Latch | 1 |
| 11 | 7000140 | Cap | 2 |
| 12 | 1521612 | Socket Head, M6X12, SST | 2 |
| 13 | 1422616 | Washer, Lock, ϕ 6 | 2 |
| 14 | 7000138 | Hopper | 1 |
| 15 | 1022890 | Screw, RHM, M8X90, SST | 2 |
| 16 | 7000141 | Plate | 1 |
| 17 | 7000232 | Handle Assembly | 2 |
| 18 | 1021516 | Screw, RHM, M5X16, SST | 8 |
| 19 | 1123507 | Nut,Lock,SS,M5 | 8 |
| 20 | 1421510 | Washer,Plain, ϕ 5.3X ϕ 10X1 | 8 |
| 21 | 7000238 | Left Bocket | 1 |
| 22 | 7000236 | Right Bocket | 1 |
| 23 | 7000237 | Kit Left Bocket | 1 |
| 24 | 7000235 | Kit Right Bocket | 1 |
| 25 | 7000137 | Hopper Assembly | 1 |

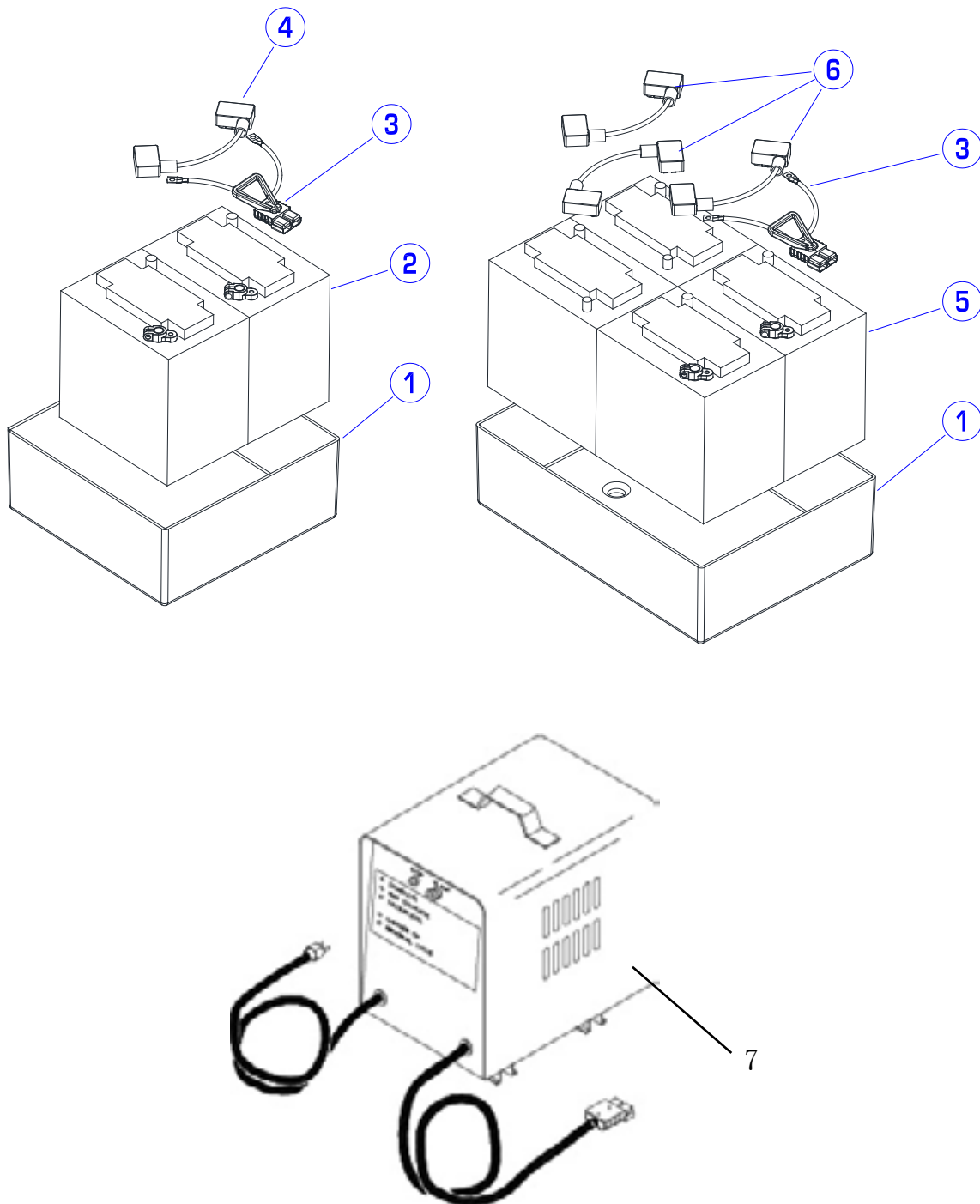
ELECTRONIC BOX ASSEMBLY



PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|--------|-------------|--|----------|
| 1 | 1021535 | Screw, RHM, M5X35, SST | 4 |
| 2 | 7000182 | ANDERSON Connector | 1 |
| 3 | 7000153 | Electronic Box | 1 |
| 4 | 7000155 | Gasket | 1 |
| 5 | 7000154 | Cover,Electronic Box | 1 |
| 6 | 1221412 | Screw, PH, M4X12, SST | 6 |
| 7 | 1123406 | Nut,Lock,SS,M4 | 6 |
| 8 | 2320236 | Clamp | 2 |
| 9 | 8114705 | Pillar | 3 |
| 10 | 8310480 | Fuse,150A | 1 |
| 11 | 1221616 | Screw, PH, M6X16, SST | 3 |
| 12 | 7000248 | Fuse,15A | 1 |
| 13 | 7000247 | Fuse,3A | 2 |
| 14 | 1123507 | Nut,Lock,SS,M5 | 8 |
| 15 | 7000245 | Fuse Holder | 1 |
| 16 | 1421510 | Washer,Plain, ϕ 5.3X ϕ 10X1 | 4 |
| 17 | 7000790 | Electronic Board | 1 |
| 18 | 1221314 | Screw, PH, M3X14, SST | 2 |
| 19 | 8310708 | Buzzer | 1 |
| 20 | 1123305 | Nut,Lock,SS,M3 | 2 |
| 21 | 1421409 | Washer,Plain, ϕ 4.3X ϕ 9X0.8 | 4 |
| 22 | 1021430 | Screw, RHM, M4X30, SST | 4 |
| 23 | 8210106 | Battery Charge,25A(Optional) | 1 |
| 24 | 1021516 | Screw, RHM, M5X16, SST | 2 |
| 25 | 1621624 | Washer,Plain, ϕ 6.6X ϕ 22X2 | 4 |
| 26 | 1422616 | Washer, Lock, ϕ 6 | 4 |
| 27 | 1021616 | Screw, RHM, M6X16, SST | 4 |
| 28 | 7000321 | Snap Bushing | 2 |
| 29 | 1021610 | Screw, RHM, M6X10, SST | 3 |
| 30 | 7000273 | Grommet | 2 |
| 31 | 8111024 | Decal,Battery | 1 |
| 32 | 8112030 | Powr cord,Battery charger ,US (Optional) | 1 |
| | 8112040 | Powr cord,Battery charger, EU (Optional) | 1 |
| | 8112050 | Powr cord,Battery charger, JP (Optional) | 1 |
| | 8112060 | Powr cord,Battery charger, CH (Optional) | 1 |
| | 8112070 | Powr cord,Battery charger, UK (Optional) | 1 |
| 33 | 7000322 | Snap Bushing | 1 |

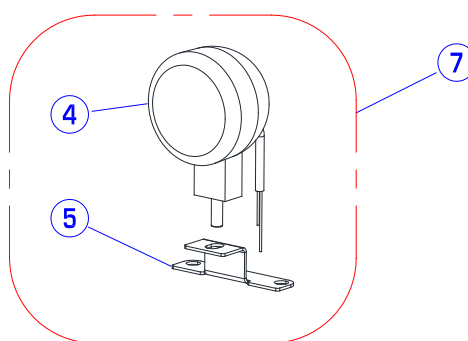
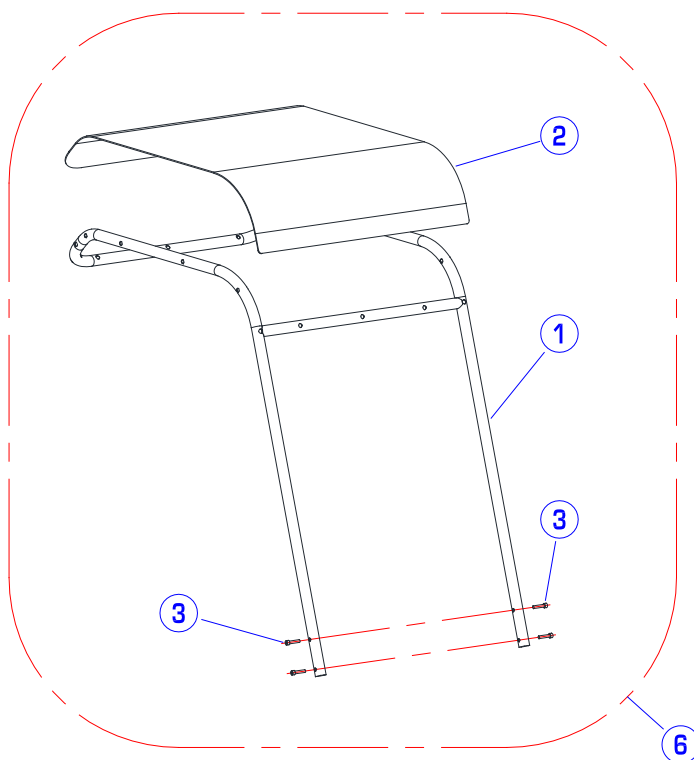
BATTERY GROUP & BATTERY CHARGER



PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|-------------------|------------------------|---------------------------------|---------------------|
| 1 | 7000169 | Battery Container | 1 |
| 2 | 8113011 | Battery,130AH,12V (Optional) | 2 |
| 3 | 7000205 | Harness.Battery | 1 |
| 4 | 8114750 | Cable,Battery | 1 |
| 5 | 8210105 | Battery,6V,260AH (Optional) | 4 |
| 6 | 8210141 | Cable,Battery | 3 |
| 7 | 8114721 | Battery Charger,13A, (Optional) | 1 |

ACCESSORIES



PARTS LIST

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|-----------|----------------|-------------------------|-------------|
| 1 | 7000611 | Roof Assy | 1 |
| 2 | 7000613 | Roof Protection | 1 |
| 3 | 1521840 | Socket Head, M8X40, SST | 4 |
| 4 | 7000413 | Led Worklamp | 1 |
| 5 | 7000114 | Support,Led Worklamp | 1 |
| 6 | 7000610 | Kit Protection Roof | 1 |
| 7 | 7000630 | Kit Working Light | 1 |

WEAR&TEAR PARTS

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|--------|-------------|---------------------------|----------|
| 1 | 7000083 | Side Brush Assembly(Poly) | 1 |
| 2 | 7000071 | Main Brush Assembly(Poly) | 1 |
| 3 | 7000127 | Front Skirt | 1 |
| 4 | 7000130 | Rear Skirt | 1 |
| 5 | 7000134 | Side Skirt | 1 |
| 6 | 7000048 | Panel Filter | 1 |

ORDINARY MAINTENANCE

| DIA NO | PART NUMBER | DESCRIPTION | NO REQ'D |
|--------|-------------|---------------------------|----------|
| 1 | 7000192 | Belt | 1 |
| 2 | 7000508 | Cable,Front Skirt Lift-up | 1 |
| 3 | 7000513 | Cable,Main Brush | 1 |
| 4 | 7000503 | Cable,Right Side Brush | 1 |
| 5 | 7000504 | Cable,Left Side Brush | 1 |
| 6 | 7000291 | Gasket | 1 |
| 7 | 7000047 | Gasket(Short) | 2 |
| 8 | 7000046 | Gasket(Long) | 2 |
| 9 | 7000265 | Gasket | 1 |
| 10 | 7000271 | Gasket | 2 |
| 11 | 7000272 | Gasket | 1 |
| 12 | 8310480 | Fuse,150A | 1 |
| 13 | 7000246 | Fuse,5A | 1 |
| 14 | 7000247 | Fuse,3A | 1 |
| 15 | 7000248 | Fuse,15A | 1 |