



# AS-690

BATTERY WALK-BEHIND SWEEPER

OPERATION & PARTS MANUAL



Rhino Cleaning Machines | Rev. 06-2026



## OVERVIEW

The Rhino AS-690 is a battery-powered, walk-behind floor sweeper built for commercial and industrial use. It pairs a 400 mm main brush with dual side brushes for a full 1,000 mm sweeping path, collecting dust and light debris into a 22 L hopper. A maintenance-free 12V battery delivers roughly five hours of run time per charge, and an integrated filter with a manual dust-shaker keeps suction strong throughout the shift.

## SPECIFICATIONS

|                             |                                   |
|-----------------------------|-----------------------------------|
| <b>Product Model</b>        | AS-690                            |
| <b>Battery</b>              | 12V 100Ah / approx. 5 hr run time |
| <b>Main brush length</b>    | 400 mm                            |
| <b>Side brush diameter</b>  | 400 mm                            |
| <b>Total sweeping width</b> | 1,000 mm                          |
| <b>Cleaning rate</b>        | 4,000 m <sup>2</sup> /hr          |
| <b>Total power</b>          | 270 W / 340 W                     |
| <b>Dust filter area</b>     | 1.5 m <sup>2</sup>                |
| <b>Hopper capacity</b>      | 22 L                              |
| <b>Optional water tank</b>  | 12 L                              |

### WHAT'S IN THE BOX

Sweeper unit, 12V 100Ah battery, charger, and ignition key (the key ships inside the manual's plastic bag to prevent loss in transit). Inspect the carton on arrival; if there is visible shipping damage, keep the packaging and file a claim with the freight carrier right away.



## OPERATION

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### CONTROLS

- Key switch (ignition)
- Main brush button
- Side brush button
- Battery charge display
- Charging port
- Main brush height adjuster
- Handle height adjuster
- Side brush height adjuster
- Hopper handle & dust-shaker handle
- Water spray pump button (if equipped)

### STARTING

- Insert the key and turn it to ON.
- Confirm the hopper and covers are closed.
- Switch the main brush and side brushes to the ON ("I") position.
- Guide the machine over the floor at a steady walking pace.

### STOPPING

- Switch the brushes to OFF ("0").
- Turn the key to OFF and remove it.
- Empty the hopper after every use.

### OPERATING TIPS

- Empty the hopper as soon as it fills — a full hopper or blocked filter stops debris pickup.
- Work the dust-shaker handle (about ten pulls) periodically to clear the filter and maintain suction.
- For larger debris, briefly tip the front wheels up as you advance over it.
- Don't park the machine with the brushes spinning in one spot; it can mark the floor.
- In freezing conditions, dry the hopper after use to prevent ice damage.

## SAFETY

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- Only trained, authorized operators should run this machine. Keep children away.
- Turn the key OFF and remove it before any cleaning, adjustment, or repair.
- Do not use on slopes that exceed the machine's rated incline, or as a means of transport.
- Do not sweep burning, smoking, flammable, toxic, or sharp/stringy material (rope, belts, standing water).
- Operate and store between -10°C and 40°C.

**Battery safety:** Charge in a well-ventilated area away from open flame — charging produces hydrogen gas. Disconnect the negative (–) lead first, then the positive (+). Never rest tools or metal across the terminals. Do not touch the battery terminals or DC plug pins during charging.



## MAINTENANCE

Routine maintenance protects the service life and safe operation of the sweeper. Always stop the machine and remove the key before servicing; remove the battery if required.

### MAIN BRUSH HEIGHT

Bristles should contact the floor by 3–5 mm — more is not better. As the brush wears, turn the right-side rotary handle counter-clockwise one notch (about 2 mm) to lower it. When the handle reaches its last position, reset it and adjust via the nut behind the front cover.

### REPLACING THE MAIN BRUSH

- Remove the housing screws and detach the left/right linkage rods.
- Support the machine and slide the main brush out.
- Move the left/right fixing sleeves to the new brush in the same positions.
- Reinstall, fasten, and reset the height to 3–5 mm. Wear gloves — bristles can cut.

### SIDE BRUSHES

Adjust with the left-side rotary handle when the side brushes no longer reach the floor cleanly. To replace, power off, lift the machine, remove the three bolts under the brush plate, fit the new brush, and reset height.

### FILTER & HOPPER

- Pull the dust-shaker about ten times whenever suction drops.
- To deep-clean, remove the hopper and gently scrape the filter base with a smooth (burr-free) edge.
- Never wash the filter with water or detergent. Replace it if cracked.

### BATTERY

Recharge when the warning light/alarm activates and at least once every two months. Power off the AC side before disconnecting the DC plug.

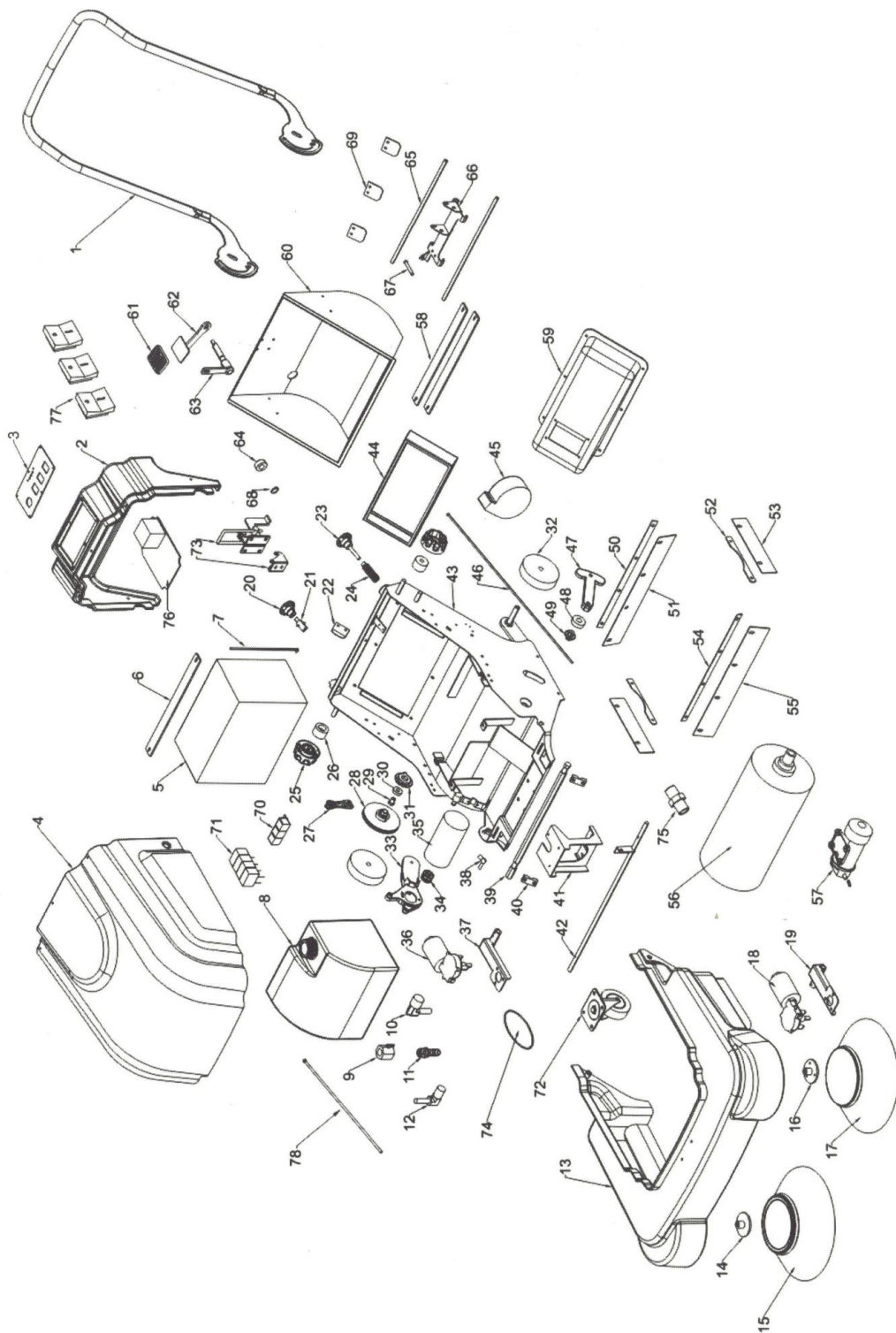
### MAINTENANCE SCHEDULE (TYPICAL)

- **Every 10 hrs:** Check brush height; inspect brushes for wear or tangled debris; check filter cleanliness; check apron height.
- **Every 50–100 hrs:** Inspect drive belt; tighten screws and nuts.
- **Every 200–500 hrs:** Inspect brush and belt wear; replace the main brush drive belt as needed.

**Warranty note:** Consumable wear parts (main brush, side brushes, belts, pulleys, filter) and damage from improper use, neglect, or unauthorized modification are not covered. Source replacement parts only through Rhino or an authorized distributor.

## EXPLODED VIEW

Numbered callouts (1–78) correspond to the Ref. column in the Parts List on the following page.





## PARTS LIST

Reference numbers (Ref.) correspond to the callouts on the exploded-view schematic. When ordering, please provide the Rhino part number.

| REF. | PART NUMBER     | DESCRIPTION                                            | QTY | REF. | PART NUMBER      | DESCRIPTION                            | QTY |
|------|-----------------|--------------------------------------------------------|-----|------|------------------|----------------------------------------|-----|
| 1    | RHAS-PSHAND     | Push-handle                                            | 1   | 40   | RHAS-THREADLCK   | Thread-locker                          | 2   |
| 2    | RHAS-RRCVR      | Rear cover                                             | 1   | 41   | RHAS-APBRACK     | Apron bracket                          | 1   |
| 3    | RHAS-SWPNL      | Switch panel                                           | 1   | 42   | RHAS-SDBRSHROD   | Adjusting tie rod of side brush        | 1   |
| 4    | RHAS-TPCVR      | Top cover                                              | 1   | 43   | RHAS-MAINFRAME   | Main frame                             | 1   |
| 5    | RHAS-100BATT    | 12V 100Ah battery                                      | 1   | 44   | RHAS-DUSTSCREEN  | Dust filter screen                     | 1   |
| 6    | RHAS-BATTPRES   | Battery press (piece)                                  | 1   | 45   | RHAS-12VFAN      | 12V fan                                | 1   |
| 7    | RHAS-BATSCREW   | Battery hold-down screw                                | 2   | 46   | RHAS-SDBRSHWIRE  | Wire drawing for lifting of side brush | 1   |
| 8    | RHAS-WATANK     | Water tank                                             | 1   | 47   | RHAS-MAINROD     | Connecting rod of main brush           | 1   |
| 9    | RHAS-BALLVLV    | 4-point internal/external thread ball valve (optional) | 1   | 48   | RHAS-6203BEAR    | 6203 bearing                           | 1   |
| 10   | RHAS-10BREL     | 4-point $\phi 10$ barb elbow (optional)                | 1   | 49   | RHAS-FIXSLEEVE   | Fixing sleeve of main brush (right)    | 1   |
| 11   | RHAS-10BRSTR    | 4-point $\phi 10$ barb straight fitting (optional)     | 1   | 50   | RHAS-RRBRSTRIPR  | Rear rubber strip retainer             | 1   |
| 12   | RHAS-6BREL      | 1-point $\phi 6$ barb elbow (optional)                 | 1   | 51   | RHAS-RRBRSTRIP   | Rear rubber strip                      | 1   |
| 13   | RHAS-FRAME      | Frame                                                  | 1   | 52   | RHAS-LFTRTRETAIN | Left/right rubber strip retainer       | 2   |
| 14   | RHAS-SDBRHUB    | Side brush hub                                         | 1   | 53   | RHAS-LFTRTRBBR   | Left/right rubber strips               | 2   |
| 15   | RHAS-SDBRUSH    | Side brush                                             | 1   | 54   | RHAS-RBBRCLIP    | Front rubber strip retainer            | 1   |
| 16   | RHAS-SDBRHUB    | Side brush hub                                         | 1   | 55   | RHAS-RBBRSTRIP   | Front rubber strip                     | 1   |
| 17   | RHAS-SDBRUSH    | Side brush                                             | 1   | 56   | RHAS-MAINBRSH    | Main brush                             | 1   |
| 18   | RHAS-BRSHMTRA   | Side brush motor (right) A                             | 1   | 57   | RHAS-WATERPUMP   | 12V water pump (optional)              | 1   |
| 19   | RHAS-BRSHMTRB   | Side brush motor (right) B                             | 1   | 58   | RHAS-FIXEDPLATE  | Fixed plate of dust filter screen      | 2   |
| 20   | RHAS-M10KNOB    | M10 knob nut                                           | 1   | 59   | RHAS-FANCVR      | Fan cover                              | 1   |
| 21   | RHAS-MBRSHSCW   | Adjusting screw for main brush                         | 1   | 60   | RHAS-DUSTBIN     | Dustbin                                | 1   |
| 22   | RHAS-CHRGSKT    | 50A Charging socket                                    | 1   | 61   | RHAS-PEDALPLT    | Pedal rubber plate                     | 1   |
| 23   | RHAS-1030KNBNT  | M10 x 30 knob nut                                      | 1   | 62   | RHAS-PEDALROD    | Dust-shaker pedal rod                  | 1   |
| 24   | RHAS-SBRSHSCW   | Adjusting screw for side brush                         | 1   | 63   | RHAS-PEDALJNT    | Dust-shaker movable joint              | 1   |
| 25   | RHAS-M12KNOB    | M12 knob nut                                           | 1   | 64   | RHAS-INTERSPACE  | Intermediate spacer                    | 1   |
| 26   | RHAS-RBPDPSHHD  | Rubber pad for push handle                             | 2   | 65   | RHAS-DUSTROD     | Connecting rod of dust-shaker rack     | 2   |
| 27   | RHAS-BRAKEARM   | Brake arm                                              | 1   | 66   | RHAS-DUSTSHAKER  | Dust-shaker rack                       | 1   |
| 28   | RHAS-LGDRVPU    | Driven pulley (large)                                  | 1   | 67   | RHAS-757PIN      | 7*57 pin                               | 1   |
| 29   | RHAS-BEARSLEEVE | Driven pulley bearing sleeve                           | 1   | 68   | RHAS-16AXCLIP    | Circlip for $\phi 16$ axle             | 1   |
| 30   | RHAS-6001BEAR   | 6001 bearing                                           | 2   | 69   | RHAS-DUSTSHAKEF  | Dust-shaker film                       | 1   |
| 31   | RHAS-FXSLVMNBRH | Fixing sleeve of main brush (left)                     | 1   | 70   | RHAS-12VRELAY    | 12V relay                              | 3   |
| 32   | RHAS-AXLEWHEEL  | 6-inch dual-axle wheel                                 | 2   | 71   | RHAS-FUSEHOLD    | Fuse holder                            | 4   |
| 33   | RHAS-MTRFRAME   | Mounting frame of main brush motor                     | 1   | 72   | RHAS-BTMCASTER   | 4-inch flat-bottom caster              | 1   |
| 34   | RHAS-SMDRVPULL  | Drive pulley (small)                                   | 1   | 73   | RHAS-DUSTBUCK    | Dustbin buckle                         | 1   |
| 35   | RHAS-MNBRUSHMTR | Main brush motor                                       | 1   | 74   | RHAS-BELT        | Belt                                   | 1   |
| 36   | RHAS-SDBRSHMTR  | Side brush motor (left)                                | 1   | 75   | RHAS-NOZZLE      | Nozzle (optional)                      | 2   |
| 37   | RHAS-SDBRSHSPT  | Side brush motor support (left)                        | 1   | 76   | RHAS-CIRCUITBRD  | Battery level circuit board            | 1   |
| 38   | RHAS-RODEND     | Rod-end bearing                                        | 2   | 77   | RHAS-SWITCH      | Switch                                 | 3   |
| 39   | RHAS-HEXROD     | Hex rod                                                | 1   | 78   | RHAS-WIREROPE    | Wire rope                              | 1   |

Items marked "(optional)" are available depending on configuration (e.g., the water-spray system). Specifications and parts are subject to change without notice.

# United States Commercial Limited Warranty



| <u>Model</u>       | <u>Rotationally-Molded Components</u> | <u>Parts</u> | <u>Battery</u>   | <u>Labor</u> | <u>Travel</u> | <u>Hour Meter Limit</u> |
|--------------------|---------------------------------------|--------------|------------------|--------------|---------------|-------------------------|
| Backpack Vac 4 qt  | 5 Years                               | 1 Year       | N/A              | 6 Months     | N/A           | N/A                     |
| 19" Pad Drive      | 5 Years                               | 1 Year       | 1 Year Pro-Rated | 6 Months     | 30 Days       | 1000 Hours              |
| 28" Traction Drive | 5 Years                               | 1 Year       | 1 Year Pro-Rated | 6 Months     | 30 Days       | 1000 Hours              |
| AS-690 Sweeper     | 5 Years                               | 1 Year       | 1 Year Pro-Rated | 6 Months     | 30 Days       | 1000 Hours              |

## New Machine Warranty

Rhino Cleaning Machines (Rhino) warrants to the original purchaser, for the above-stated periods (whichever occurs first), that machines will be free from defects in workmanship and material, provided that machines are installed, operated, and maintained in accordance with Rhino written manuals and other instructions. This warranty does not apply to damage or failure caused by accident, freight damage, misuse negligence, abuse, improper repair, or maintenance of the machines. Please refer to the Operator Manual for proper machine operation and maintenance instructions. The warranty period begins on the date the unit is delivered to the end-user site. A Warranty Registration Checklist must be filled out electronically via the Shipping notification email. Rhino will require credit card information for all warranty service dispatch requests unless there is an open account in good standing on file with Rhino or an authorized distributor. In the event that a warranty claim is denied due to the aforementioned reason, Rhino reserves the right to charge your credit card or account for the full amount of any labor, travel and parts costs incurred due to the equipment repair. Rhino will not reimburse or compensate any customer expense for parts or service. While under warranty, all parts supplied and services rendered must be transacted through Rhino or an authorized distributor; any parts or service determined to be covered under warranty will be provided on behalf of the customer. Warranty does not cover items considered wear parts unless determined to be defective in parts or workmanship.

## Labor and Travel Warranty

Rhino will, at its option, provide labor and travel or pay for outside repair for the above stated periods.

## Parts Warranty

Parts replaced or repaired under this warranty are guaranteed for the remainder of the warranty period. Consumable parts, expected to wear from normal use, are not covered under the parts warranty.

## Service Labor Warranty

Labor performed by Rhino or an authorized service representative is warranted for thirty (30) days from the date the repairs are completed. This policy does not cover work performed by any service company other than Rhino or an authorized Rhino distributor or service center and is restricted to the specific repair operation, component, or concern for which the claim is made.

## Disclaimer

Rhino will not be liable for any indirect, special, consequential, or punitive damages (including lost profits) arising out of or relating to this agreement or the transactions it contemplates (whether for breach of contract, tort, negligence, or other form of action) and irrespective of whether it has been advised of the possibility of any such damage. In no event will Rhino's liability exceed the price the Buyer paid for the specific Goods giving rise to the claim or cause of action. All Sales Are Final. However, if we decide to waive any part of our policy, by our sole determination, there will be a 25% restocking fee plus all freight costs incurred. If we have shipped the wrong item or there was shipping damage, please contact us. Rhino hereby disclaims any and all other warranties express or implied, including, but not limited to, any implied warranty of merchantability and/or fitness for a particular purpose

Rhino Cleaning Machines reserves the right to change its warranty policy without notice.