



LS175

Mini Sweeper



LS175 product video: <https://www.youtube.com/watch?v=lxY6ZHAZLkk&t=3s>

Madvac website: www.madvac.com

Part No.	Description
LS175	LS175 Sub-Compact Sweeper 56HP Tier4 Hatz Engine Includes the following standard features: * Heating & air conditioning * Rear-view camera - color monitor * Gutter broom speed and down pressure in-cab control * Audible engine warning system * Emergency stop button * Fully street legal lighting package including SMV emblem
K202618	Cartridge filtration system - overall machine height 88"
K200638	Stowed retractable wander hose 4" X 15' slinky
K200640	Pressure washer gun 1800 psi with 20' hose
K200636	Electric windshield defrost
K200637	Heated mirrors
K202597	Radio + CD + MP3 player system
K202506	Fire extinguisher 2.2 lb (1 kg. dry powder)
K200641	Tire flatproofing - liquid sealant (all wheels)



www.madvac.com

MINI SWEEPER

LS175

**Product
Overview**



February 2021

Table of Contents

Applications & Customers.....3-4

Why the LS175.....5-8

Specs, Characteristics & Performance.....9-20

Instrumentation & Control.....21-27

Vacuum System.....28-33

Litter Collection System.....34-39

Safety, Comfort & Convenience.....40-44

Easy Access Critical Components.....45-52

Contact Us.....53

LS175 options

Electric windshield defrost..... 12

Heated mirrors..... 12

Radio + CD + MP3 player..... 13

Wander hose..... 31-32

Pressure washer gun..... 33

Cartridge filtration system..... 38

Bag filtration system..... 39

Fire extinguisher..... 40

Tire flatproofing 40

Application

Specifically designed to handle all the areas your large street sweeper can't access or manage

- Sidewalks
- Bike and pedestrian lanes
- Parking lots
- Curb side
- Alleys
- Pathways
- Alongside buildings



Customers

- Cities & municipalities
- Outdoor cleaning contractors
- Airports & seaports
- Transit authorities
- Healthcare services
- Distribution centers
- Shopping malls
- Educational & sports facilities
- Manufacturing facilities
- Amusement parks
- Casinos
- Military
- Correctional facilities



Why the LS175

- LS175 is the **ONLY** 48" wide closed cabin high-dump sweeper manufactured in North America. Everything is built according to North American standards;
- In the category 1.5 to 2 cu.yd. hopper capacity, LS175 is the lowest priced compact sweeper on the market;



Why the LS175



- OEM spare parts shipped within 48 hours;
- 10 to 12 year lifespan will outlast most competitive models;
- Madvac has a 30+ years track record of success – when your machine is due for replacement we'll still be around;

Why the LS175

- Fully street legal lighting - safe and easy to use;
- A CDL permit is not required to operate this machine;



Why the LS175



- For maintenance, LS175 offers unprecedented easy access to all critical components of the machine; (electrical box, manifolds, spool valves)
- LS175 can be purchased using Sourcewell (formerly NJPA) or other cooperative purchasing contracts – save money, get your machine quicker.

Dimensions

with cartridge filtration system



Length: 136 in. (3454 mm)

Height:
88 in.
(2235 mm)



Width: 48 in.
(1219 mm)

- Wheelbase: 65 in. (1651 mm)
- Ground clearance: 8.5 in. (216 mm)

Dimensions

with bag filtration system



Height:
86 in.
(2184mm)



Width: 48 in.
(1219 mm)

Length: 136 in. (3454 mm)

- Wheelbase: 65 in. (1651 mm)
- Ground clearance: 8.5 in. (216 mm)

Body

- Triangular frame tubing for engine 0.25" (6.35 mm) 13 gauge fully welded / reinforced steel
- Hinged side doors for oil cooler and radiator access on both sides
- Double-layer baked powder coating electro statically applied



Cabin

- 200-degree cab vision
- Full windshield laminated glass
- Full view glass tempered doors
- Side windows open each side
- Defrost: windshield heated micro filament / heated mirrors (optional)



Cabin

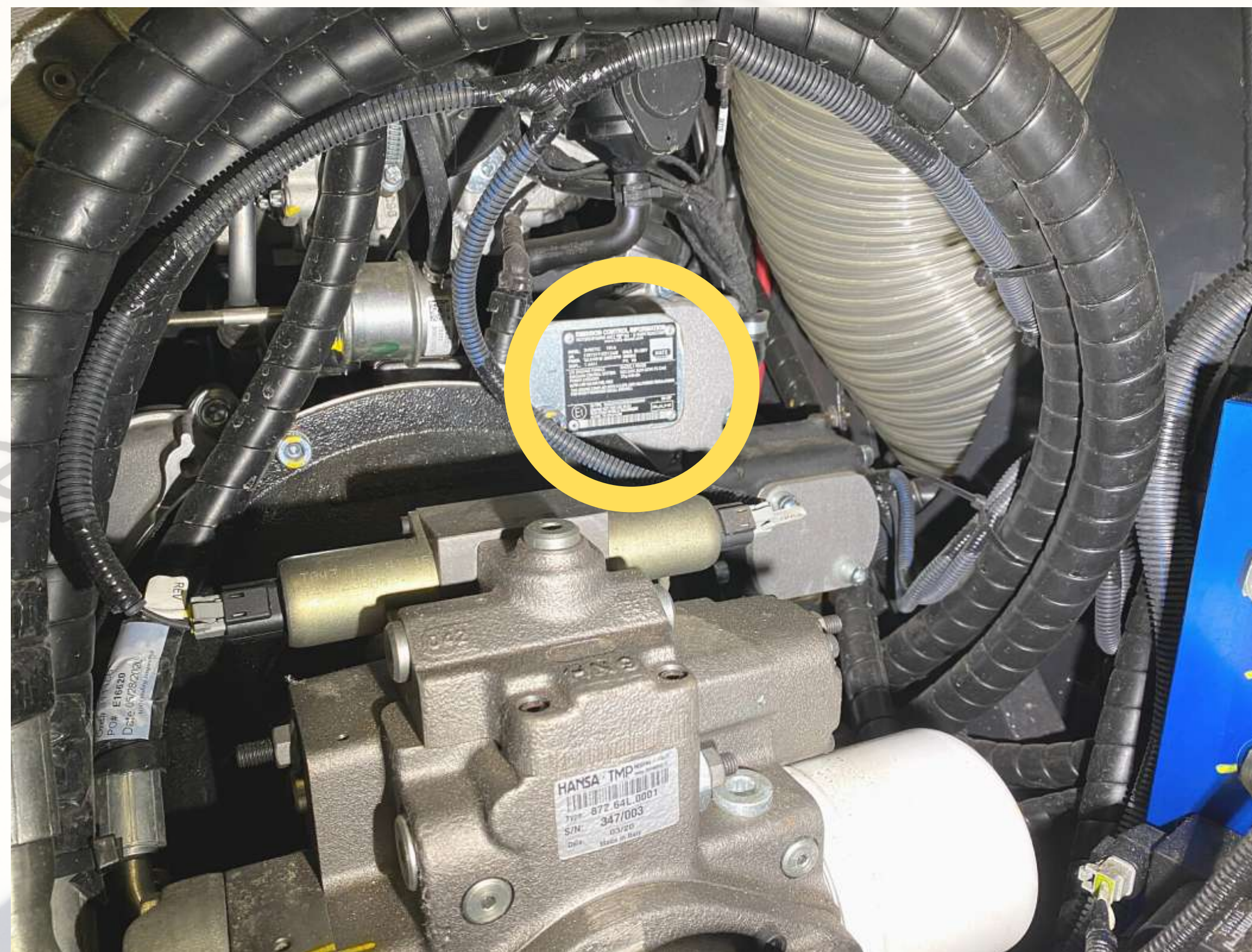


13

- Adjustable suspended air seat with 3-point seat belt
- Retractable armrest with illuminated switches
- Heating / AC: HVAC unit
- Radio / CD / MP3 player (optional)
- Dome light
- Floor glass window

Engine

- Model: Hatz Tier 4 Final engine 3H50TIC 3 cyl. turbo with CAC/DOC only Bosch controller with in-cab troubleshooting switch and light
- Displacement: 91.54 cu. in. (1500 cc)
- Gross rated power: 58.5 HP (44.0 kW) @ 2800 RPM
- Air cleaner: Donaldson 2-stage filtration system



Performance

- Forward speed:
15 mph (24 km/h)
- Reverse speed:
7.5 mph (12 km/h)
- Gradeability: 20%
- Minimum turning radius:
9 ft. (2.74 m)
- Curb weight:
dry 5500 lbs (2495 kg)

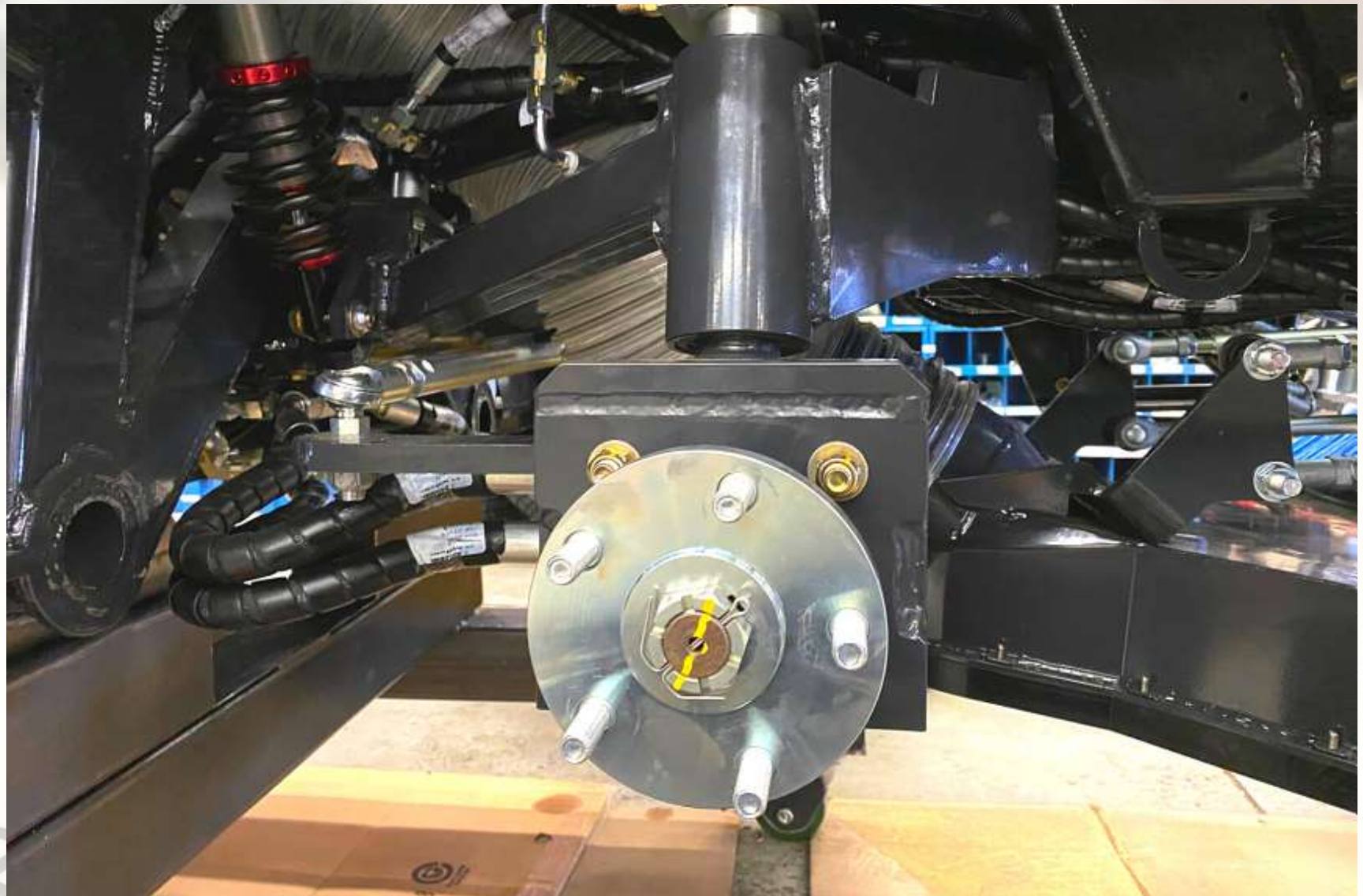


Traction

- Front wheel drive fully controlled by electric pedal
- Radial tires 225 R 12 on all 4 wheels
- Heavy duty hydrostatic drive with infinite movement engine following RPM with anti-stall
- Brakes: front hydrostatic brakes / rear mechanical parking disc brakes / rear hydraulic standard brakes



Suspension



• Front: two coil springs / heavy duty shock absorbers



• Rear: two coil springs / heavy duty shock absorbers on axle

Lighting

Front:

- 2 headlights
- 2 hazard lights
- 2 work lights
- 2 strobe lights

Side panel light

Back:

- 2 work lights
- 2 strobe lights
- Brakes, turn, reverse signals
- SMV sign



Liquid Capacities

- Fuel tank: 21.1 Gal. (80 L)
- Water tank: 58 Gal. (220 L)
- Hydraulic tank: 23.7 Gal. (90 L)

ISO46



Diesel fuel tank filler

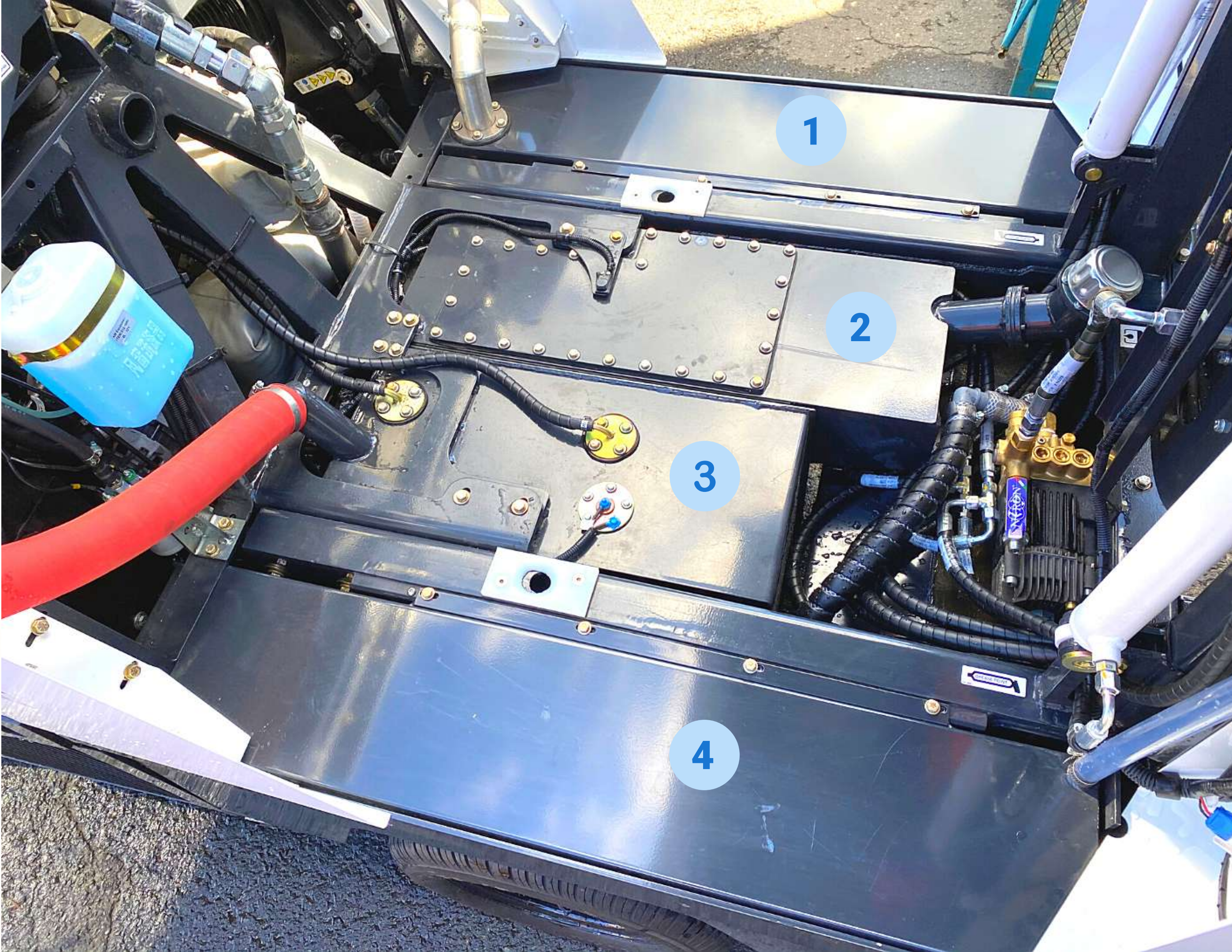


Water tank filler



Hydraulic tank filler

Liquid Tanks



- 1 Water tank
- 2 Hydraulic tank
- 3 Fuel tank
- 4 Water tank

Instrument Panel

(bottom)

- Hour meter

(middle)

- Fuel gauge

(left to right)

- No water indicator
- Brake indicator
- Left turn signal
- Engine oil indicator
- Battery indicator
- Engine temperature indicator
- Right turn signal
- Glow plug indicator
- Engine maintenance required

Check engine light
/ diagnostic switch



Switch & Lever



- Turn signal lights
- Strobe and tail lights
- Headlights
- Horn

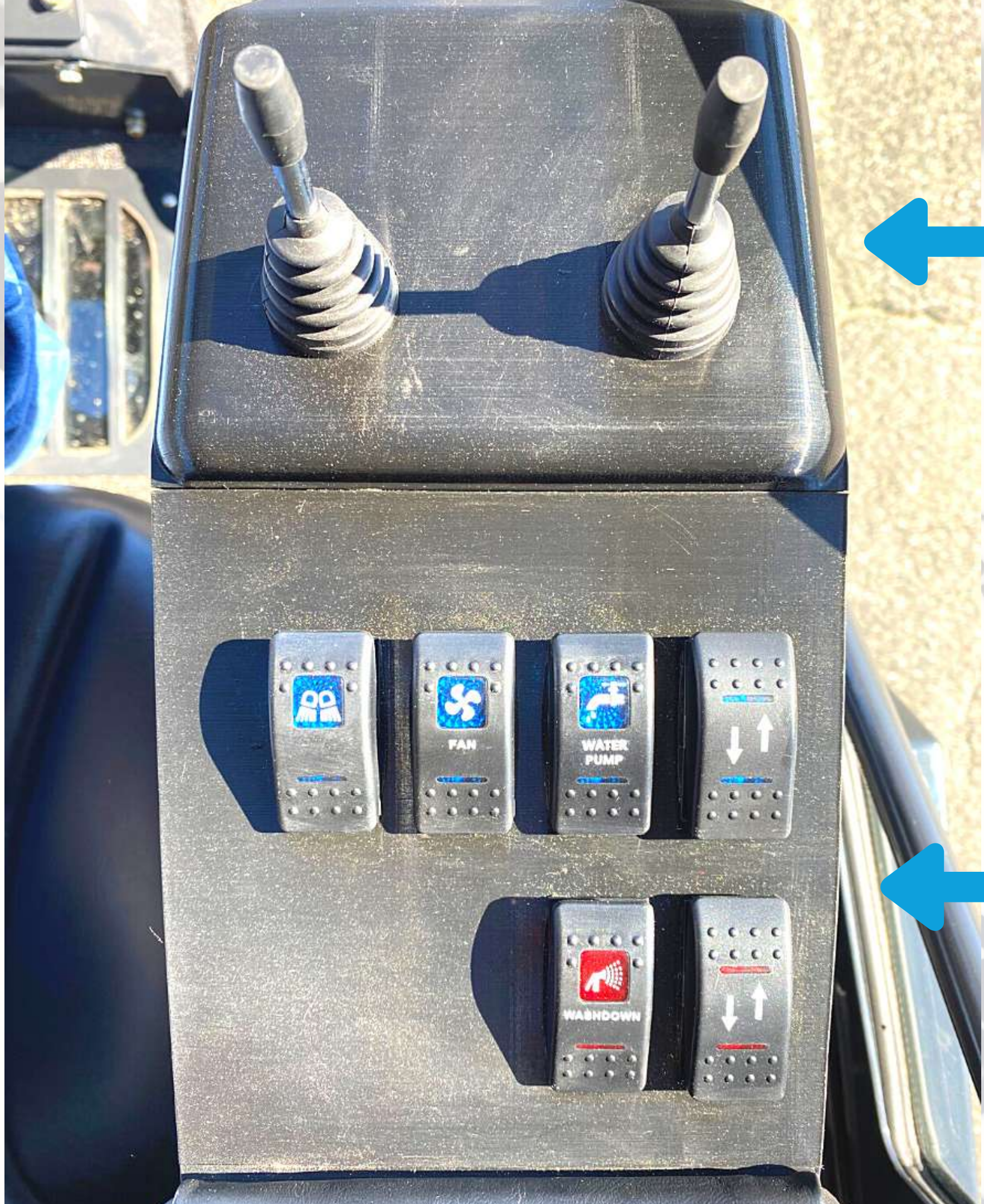


Controls

(left to right)

- Hazard lights
- Windshield washer
- Windshield wiper
- Work light switch (front and back)
- Windshield defrost





Fully independent left / right gutter broom joysticks

Armrest Controls

- (Clockwise)
- Gutter broom/brush switch
 - Vacuum fan switch
 - Water spray switch
 - Vacuum nozzle switch
 - Container raise/lower switch
 - Power wash

Broom Controls





Heat & AC Controls

(left to right)

- Fan speed
- Temperature setting
- AC on/off switch



Other Controls



Hand parking brake - disc brakes on rear wheels



Hydrostatic pedal - forward / neutral / reverse



Standard hydraulic disc brake pedal

Vacuum System

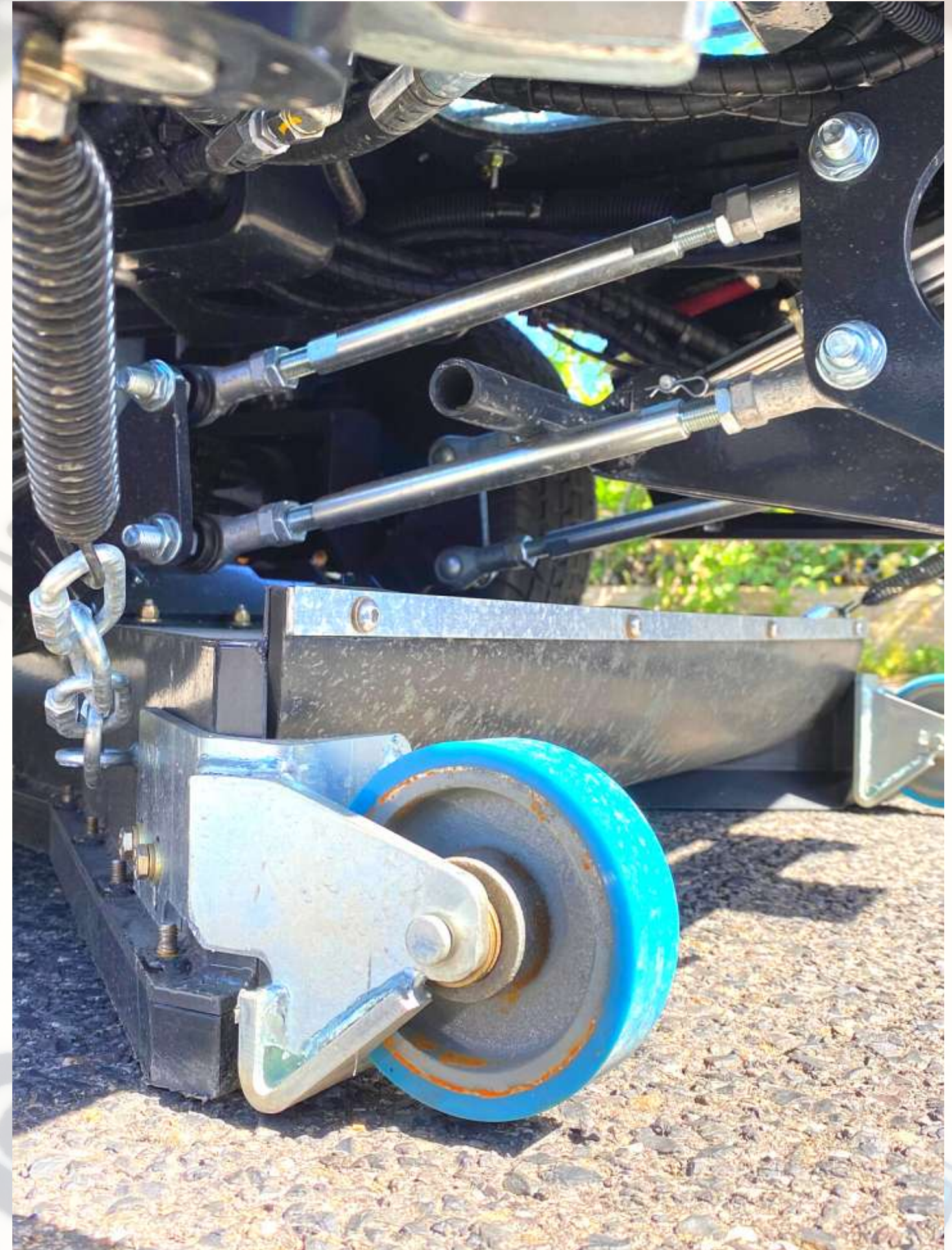
- Vacuum rating: 2500 CFM
- Aluminum fan construction
- High performance speed 5000 RPM
- Side-mounted fan: no litter goes through the fan





Vacuum Head

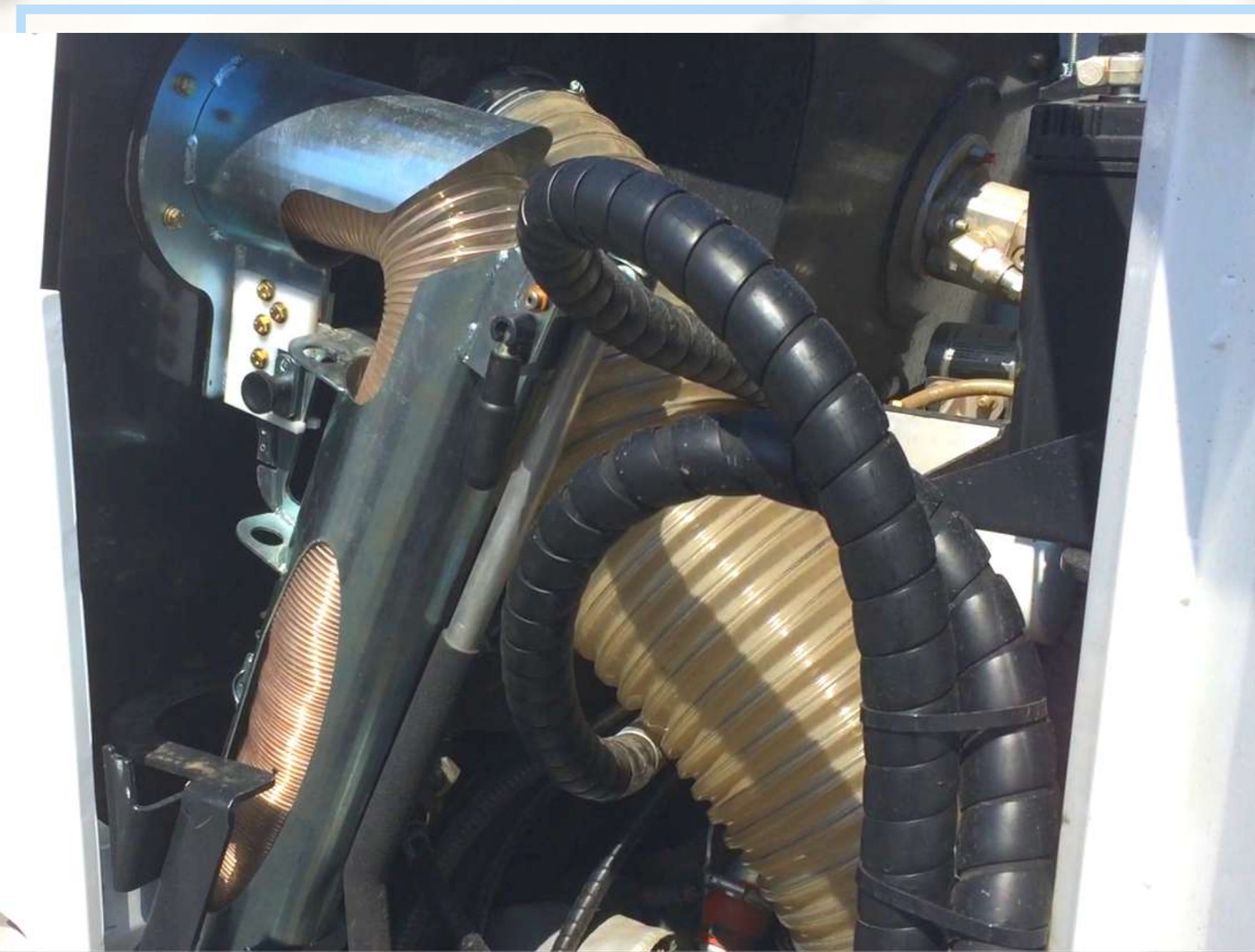
- 30" (762 mm) wide
- Self-adjusts to uneven surfaces
- Automatic raise / lower from cab
- Straight-through suction allows the operator to pick up virtually any litter that fits inside the suction nozzle



Sweep Gear



- Brushes: two polypropylene brushes (independently joystick controlled) 25" (635 mm) diameter each
- Brush arm: floating and adjustable
- Brush speed: 0 to 150 RPM
- Sweeping width: 44"-100" (1118 mm-2540 mm)
- Pickup nozzle: electric raise/lower with polymer skate and wheels



Wander Hose

Retractable 4" x 15' (101 mm x 4572 mm)
for additional cleaning or hard-to-reach areas (optional)



Wander Hose

Before using wander hose, steel plate is manually inserted to seal off main vacuum hose. This allows maximum suction power for the wander hose.



Power Wash (Optional)

- 2 gpm @ 1800 PSI
- 30 ft. (9.14 m) long



33



Tip-to-Dump Container

- Litter capacity: 1.75 cu.yd. / 1.34 m³ / 353 gal.
- Payload: 2000 lbs (907 kg)
- Material: stainless steel
- Dumping height: 67 inches (1702 mm)
- Container tipping angle: 142 degrees



3-Stage Filtration System



STAGE 1 - WATER (part 1)

Nozzles on each broom and at entry point of the container spray water on litter and dust before they enter inside the container.

3-Stage Filtration System



STAGE 1 - WATER (part 2)

2" (50 mm) high of water added inside the container captures dust particles and debris that enter inside the container.

3-Stage Filtration System



STAGE 2 - ROTARY FILTER

Self-cleaning, steel rotary filter inside the container allows air to flow out of the container while blocking larger particles and debris. Scraper prevents litter from clogging the system.

3-Stage Filtration System



STAGE 3 - CARTRIDGE FILTRATION SYSTEM (OPTION 1)

Four MERV 15 filter cartridges on top of the machine secure any dust that water system and rotary filter did not contain.

3-Stage Filtration System



STAGE 3 - BAG FILTRATION SYSTEM (OPTION 2)

Low profile heavy-duty filtration bag secures any dust that water system and rotary filter did not contain.

Operator Safety

- Emergency stop button
- Fire extinguisher (optional)
- Tire flatproofing (optional)
- Audible engine warning system



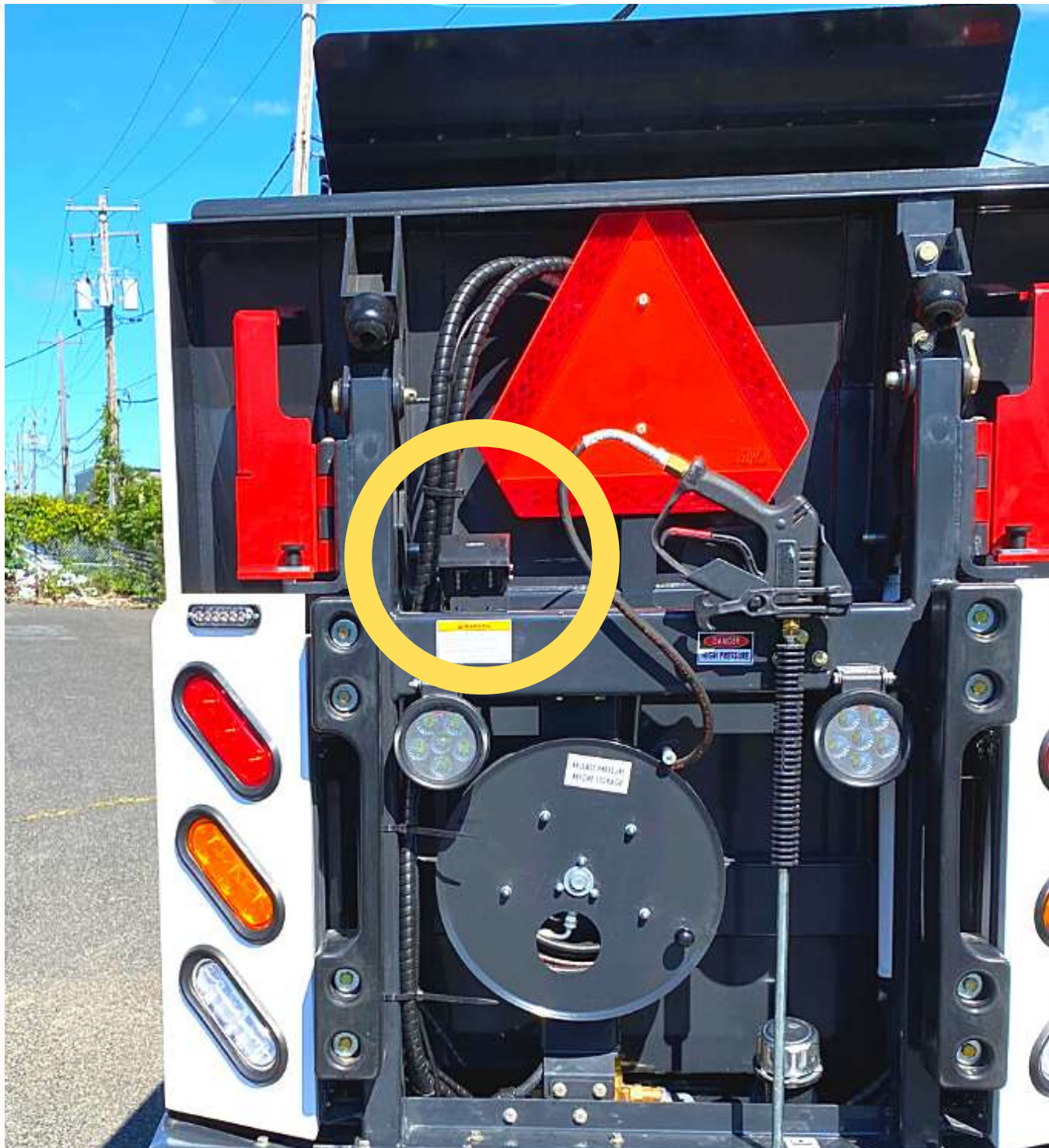
Safety Props

Prevents hopper from accidentally going down during maintenance or cleaning



Easy to engage and release

Rear-view Camera



7" (178 mm) rear-view camera system with TFT color monitor



Electrical Panel

- Easy access from inside the cab
- Single panel for entire machine
- Every groundline connected to a ground bar inside the panel



43

FUSES & RELAYS CHART

ORN	10A	15A	WATER PUMPS	PRESSURE WASH
TCH	30A	30A	A/C BLOWER	START SIGNAL
GHT	25A	30A	HEATED WINDSHIELD HEATED MIRRORS	FUSE RAIL #
DIO	25A	40A	HYDRAULIC FUNCTIONS	FUSE RAIL #
AN	40A	20A	MAIN CONTROLLER	OIL COOLING FAN
TERS	10A	20A	ROBOTIC ARM CONTROLLER	WINDSHIELD HEATER
TROBE	10A	30A	IGNITION(DEUTZ) DASH INSTRUMENT LIGHTS (HATZ) PROXIMITY SENSORS	WATER LEVEL
SHTS	25A	20A	A/C FAN	A/C
AMS				
SHER				
WIPER				
SIGNALS				
IGHTS				
AMERA				
RADIO				
R SEAT				

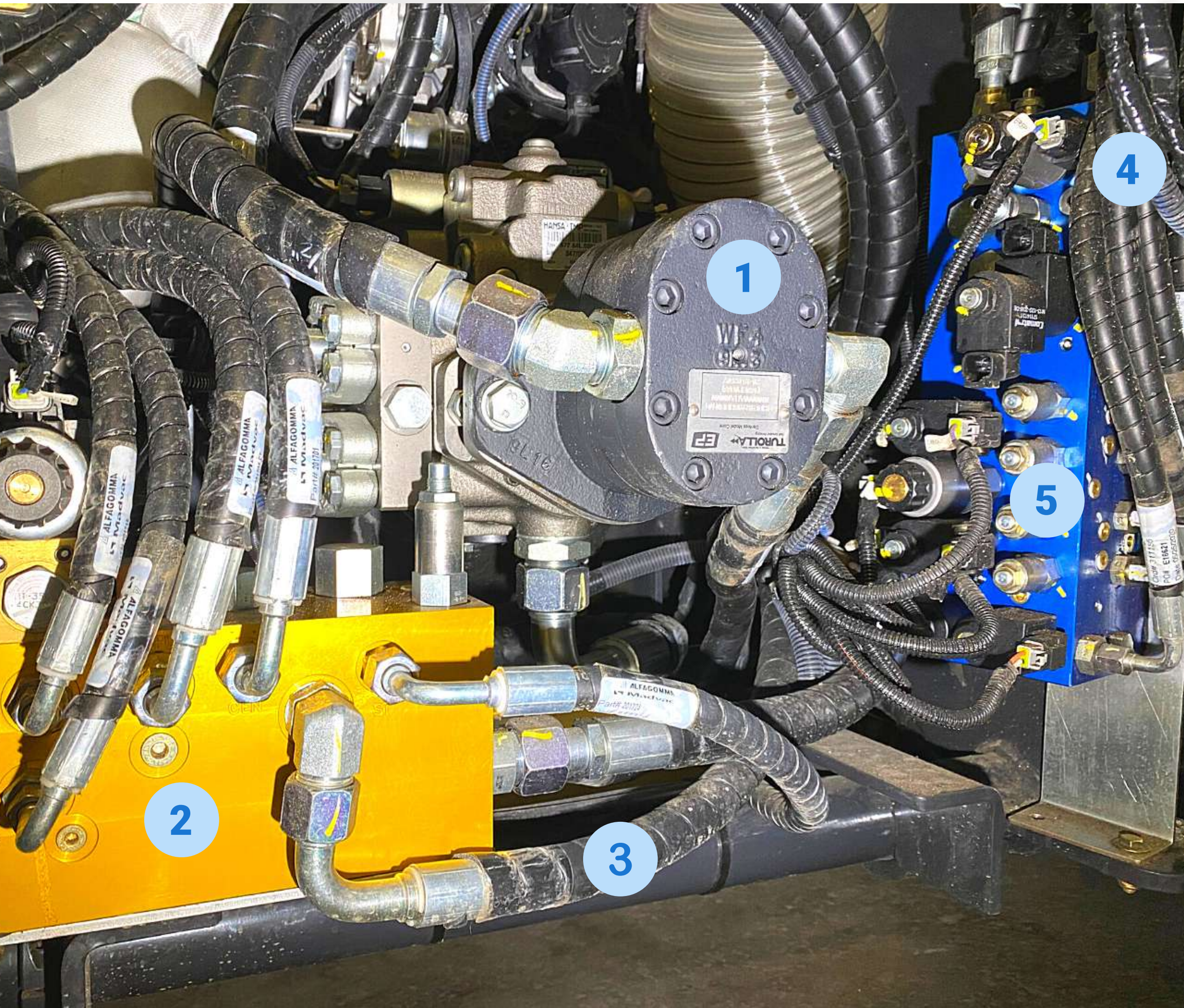


Side Doors

Doors on both sides of the machine allow quick access to all critical components of the unit including the retractable wander hose



Easy Access Critical Components



1 19 cc hydraulic pump

2 Hydraulic manifold

The hydraulic manifold takes the pressure created by the hydraulic pump, and distributes the pressure to the vacuum fan, power steering, hopper lift, pressure washer and shredder

Easy Access Critical Components



- 3 Every hydraulic line is protected with plastic spiral wrap and identified with a part number
- 4 Every electrical connection is a Deutsch IP 67 connector
- 5 Compact hydraulic manifold for displacement of the brooms and broom rotation. Every hose and electrical connection is easily accessible

Easy Access Critical Components

- 1 Mechanical inverter relay for the pick-up head
- 2 Powerful 12 v fan for the oil cooler with temp switch activation
- 3 Heavy duty hydraulic oil cooler
- 4 Large hydraulic oil return hose ensures no back pressure on the system
- 5 Easy access heavy duty water inlet



Easy Access Critical Components

1

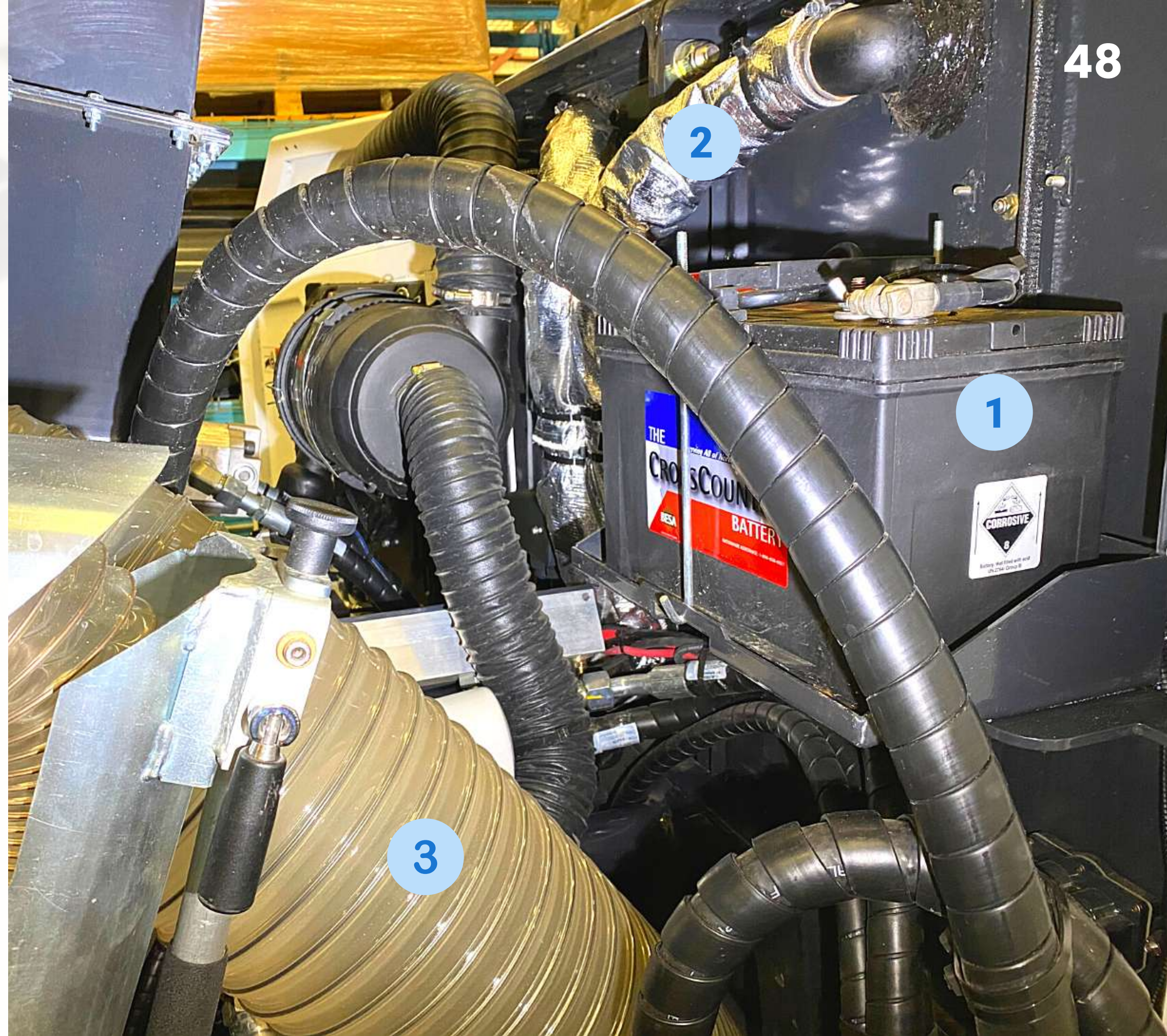
Deep cycle hybrid battery ensures crank power when starting the engine and delivers required voltage when operating the machine

2

Insulated duct for ventilation inside the cabin (AC and heater)

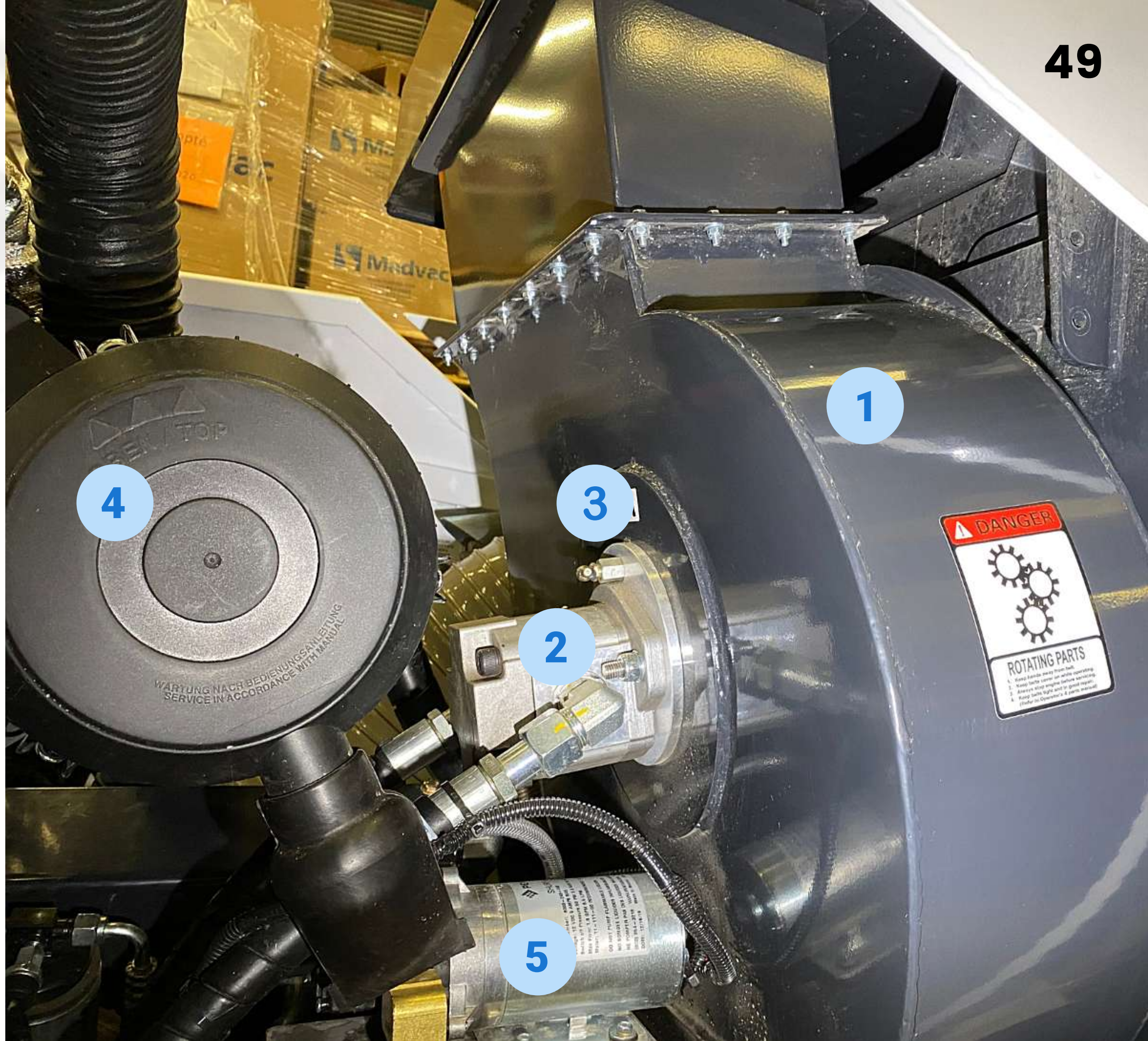
3

Clear 8" diameter suction hose - easy to see if any debris is clogging the hose

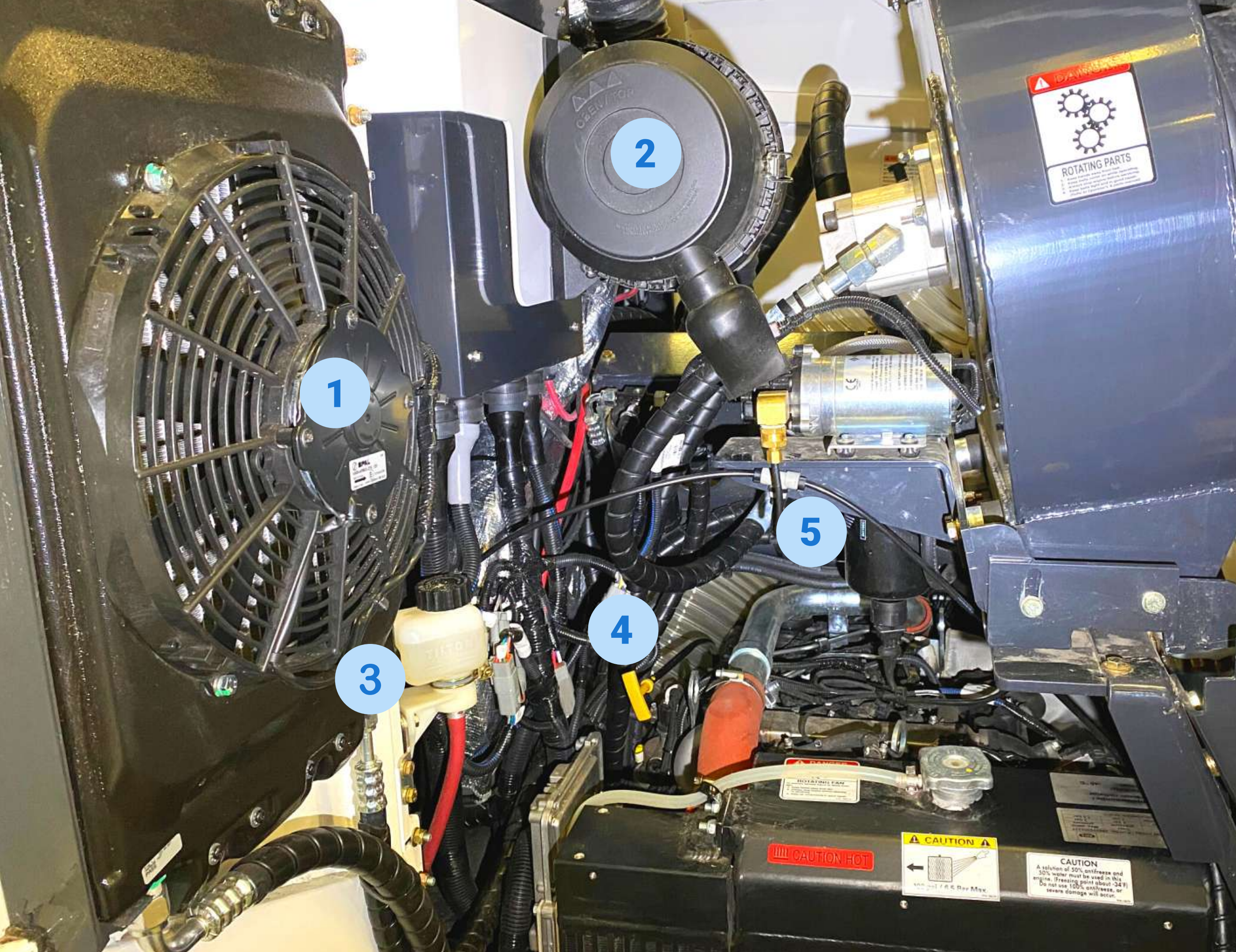


Easy Access Critical Components

- 1 Optimized fan casing to prioritize air velocity
- 2 Hydraulic fan motor, easy access for maintenance
- 3 Lubrication point of the fan shaft preserves longevity of the motor seal
- 4 Original Hatz two staged intake air filter for the engine
- 5 12 v 50 psi electrical water pump with internal shut off switch



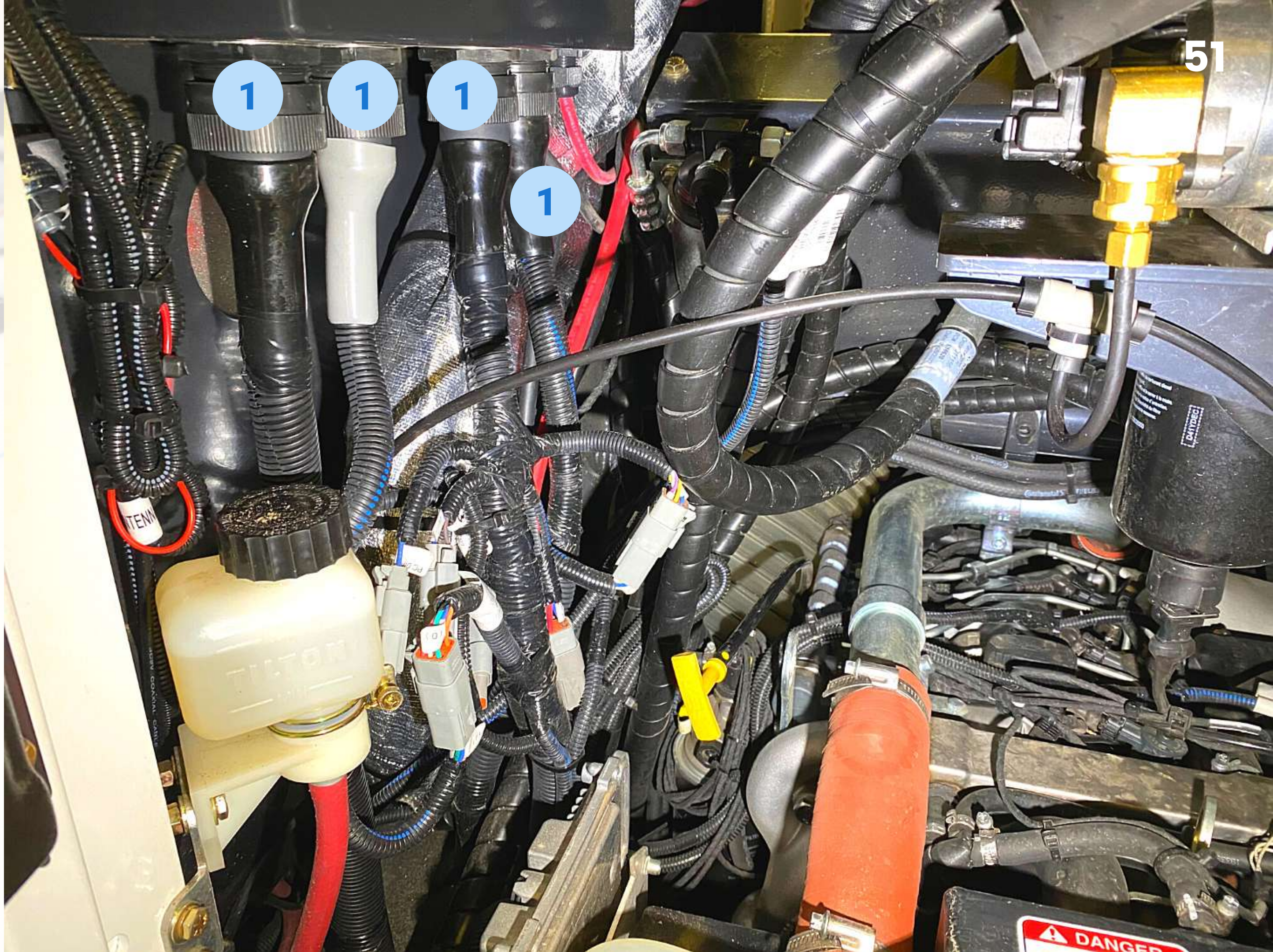
Easy Access Critical Components



- 1 Condenser for AC system
- 2 Two-stage air filter for the engine
- 3 Brake fluid reservoir
- 4 Engine dipstick
- 5 Diesel separator acts like a pre-filter to ensure clean fuel is delivered to the engine

Easy Access Critical Components

1 All electrical harnesses are connected to the main electrical box via IP 67 round Deutsch connectors



Easy Access Critical Components



- 1 Engine coolant radiator
- 2 Air intercooler intake
- 3 BOSCH controller for the engine

CONNECT WITH US!

To schedule a demo, request a quote, or for more information on the LS175 sweeper:



855-651-0444 (USA/Canada)

450-651-0444 (International)



info@exprolink.com





Madvac[®]
COMPACT SWEEPERS & VACUUMS

Sourcewell 
Awarded Contract

<http://www.madvac.com>

