

Schwarze A7SE Tornado

A7SE TORNADO STANDARD EQUIPMENT	
SWEEPER ENGINE	PICKUP HEAD
Fuel water separator	90" x 36" Sweeping Head with Rubber Blast Orifice
Safety engine shutdown device	3/8" thick, 14" dia Pressure hose, 14" Suction Hose
Battery and 50 gallon fuel tank shared with chassis	Sweeps-in-Reverse
160 amp alternator	Doublewide full length carbide drag shoes Warranted against wear-out, two years/2000 hours, prorated.
High capacity air cleaner	
HYDRAULIC SYSTEM	DUST CONTROL SYSTEM
25 gallon vented hydraulic reservoir, w/shut-off valves	Twin Electric diaphragm water pumps with inlet restriction indicator
Tank mounted level and temperature indicator	Water tank capacity 480 gallons, polyethylene
Hydraulic pressure, 2500 psi	25-foot long fire hydrant fill hose
In-tank 10 micron return filter with in-cab indicator	50 mesh cleanable filter, with shut off valve
9000 BTU oil to air radiator type oil cooler	Water spray nozzles shall be provided as follows:
12-volt DC hydraulic backup system	Five at pickup head, two nozzles inside hopper
DUST SEPERATOR	Two at gutter broom, per option selected
Centrifugal dust separator, 29000 cu in. with 1680 sq in. door	Two nozzles in suction tube, two at front axle
	An air purge system for flushing water lines
HOPPER	OPERATING CONTROLS
Mild Steel, 8.4 CuYd, 7 CuYd usable Capacity	Sweeper power control, with auto throttle standby
Screens - 5615 square inches, saw tooth design	Broom deploy, tilt and speed
Twin dumping cylinders, 51 degrees	Head up/down or leaf bump, sweep in reverse
Rear door hydraulically opened, closed and locked	Dust control water by zone
Dual 20" X 32" watertight inspection doors, 1 left, 1 right	Hopper dump - in cab and at side broom
External weatherproof dump switches	Sweeper lighting and beacons
Shroud enclosing the auxiliary engine	INSTRUMENTS
BLOWER	Full color hi-res display with the following:
Closed face turbine 10 curved blades, 32.75" dia. by 5" wide	Water level, broom speed, hopper load, vacuum enhancer position
500 Brinell hardness abrasion resistant steel	Sweeper and drive system diagnostics
Fully balanced within 1.5 grams on both sides	Hopper tilted and door open indicator
Vacuum enhancer, w/indicator in cab	Swiveling console for left or right sweeping
Remote grease lines for fan bearing	Hyd. temp. & filter restriction
SWEEPER WARRANTY	SAFETY EQUIPMENT
Sweeper 12 Months, 1200 Hours	Two body props to lock hopper in raised position
VPD Device 36 months, unlimited hours	Rear Amber LED Strobe With Guard
Chassis sweeper engine 36 Months	2 rear yellow alternating LED flashing lights

Sweeper hydraulic pumps and fittings 5 years	Slow moving vehicle emblem, backup alarm, 5-lb fire extinguisher, and a warning triangle kit
Sweeper hydraulic motors and valves 2 years	
	Rear view camera



AVAILABLE IN
ENG1NE
SINGLE ENGINE CONFIGURATION



A7 Tornado SE™

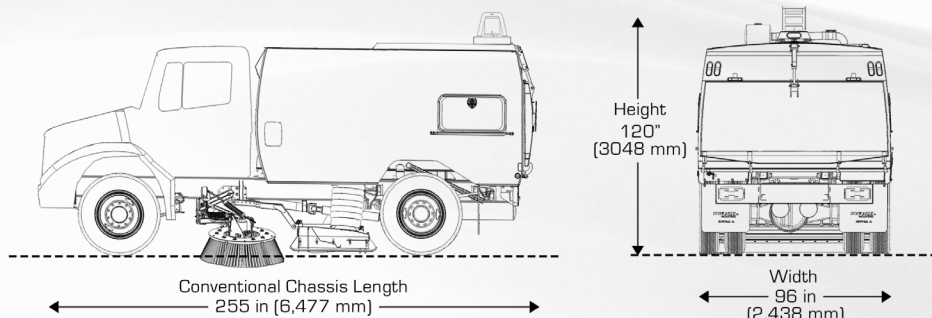
The Schwarze A7 Tornado Single Engine is a heavy-duty, chassis mounted, single engine regenerative air street sweeper with an 8.4 cubic yard hopper. It follows over 20 years of successful operation throughout the United States and around the world of the A7 Tornado twin engine sweeper. The A7 Tornado is the most popular street sweeper in the Schwarze lineup, with its standard high flow saw tooth screens, high efficiency whisper wheel blower and proven blast orifice pickup head, the Schwarze A7 tornado is the standard of the sweeping industry.

The Schwarze A7 Tornado SE has no performance compromise from its twin engine version and can perform most typical sweeping at a low single engine speeds allowing for low noise and operational costs. When full power is needed for heavy jobs like construction and spring cleanup the A7 Tornado SE comes through with the same amount of sweep power available on the twin engine A7 Tornado.

Designed to operate exactly like the twin engine model, little if any additional operator and technician training is required. The Schwarze exclusive selectable "sweeps in reverse" feature allows unparalleled ability to clean all surfaces.



SINGLE ENGINE TECHNOLOGY WITHOUT THE LOSS OF PERFORMANCE



*TYPICAL MEASUREMENTS SHOWN , EXACT DIMENSIONS DEPENDING ON OPTIONS AND TRUCK MANUFACTURER

SWEEPING PATH

Pickup head only	90 in (2286 mm)
Head and 1 broom	117 in (2972 mm)
Head and 2 brooms	144 in (3658 mm)

CHASSIS

Freightliner M2 106

SWEEPER BODY

Construction	Welded 10-gauge stainless steel plate
Safety props	Lift spacers

CHASSIS AND SWEEPER POWER

Model/type	ISB 6.7 in-line 6 cylinder
Emissions	GHG21 turbo-charged diesel
Manufacturer	Cummins Corp
Displacement	6.7 liter (409 c.i.)
Brake horsepower	240 hp (180 kw) @ 2500 rpm
Torque	560 ft lb (759 Nm) @1100 rpm
Air cleaner	High capacity dry type with safety element and restriction indicator
Oil filter	Full-flow/spin-on
Stroke	5 in (127 mm)
Bore	4.20 in (106 mm)
Compression ratio	19 to 1
Safety shutdown	Cummins automatic
Throttle control	Electronic

SWEEPER/CHASSIS ELECTRICAL

Voltage	12 V
Engine alternator	160 amp

DUST CONTROL SYSTEM

Type	High pressure/low volume
Capacity	470 gallon (1786 L); options to 570 gallons (2166 liters)
Tank construction	Polyethylene
Pump Inlet filter	50 mesh; cleanable
Fill diameter	2.5 in (63.5 mm)
Fill hose	25 ft (7620 mm)
Controls	Electric; in-cab
Nozzles	2 on each broom; 5 around suction head; 2 inside suction nozzle; 2 on front axle; 2 inside hopper
Water level gauge	In-cab

INSTRUMENTATION

Sweeper	Flat panel display; spray water level; hydraulic oil temperature; sweep mode; sweep in reverse; vacuum enhancer position; hopper position, sweeper diagnostics; sweep power; broom speed
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FAN SYSTEM

Type	Closed-face radial
Drive	Hot shift PTO via 5 groove; banded power belt
Construction	AR steel
Balance	1.5 grams on 2 sides
Diameter	32.75 in (832 mm)
Housing lining	Bolt-in corded rubber
Mounting	2 regreasable sealed bearings
Vacuum enhancer	For heavy/light material; in-cab indicator

PICKUP HEAD

Type	Dual chambered full-width blast orifice
Operating direction	Forward and reverse
Suspension	Adjustable spring balanced
Length	90 in (2286 mm)
Pressure hose diam	14 in (355.6 mm)
Suction hose diam	14 in (355.6 mm)
Hose construction	3/8 in (9.5 mm) wire-reinforced molded rubber
Head area	3240 sq in (20903 sq cm)
Controls	Hydraulic raise and lower
Skids	Double wide tungsten carbide
Construction	Abrasion-resistant steel inlet and outlet transitions.

SIDE BROOMS

Type	Vertical steel digger
Location	Right; left; forward of pickup head
Diameter	44 in (1118 mm)
Drive	Hydraulic
Suspension	Torque-sensing spring
Wear adjustment	Automatic
Pressure	Manual
Speed	Variable; non-reversing
Segments	5 each side; disposable
Tilt angle adjustment	In-cab controls

DEBRIS HOPPER

Volumetric capacity	8.4 cu yd (6.4 cu m)
Usable Capacity	7.0 cu yd (5.4 cu m)
Dump angle	51 degrees
Floor angle	3 degrees
Lifting	Two hydraulic cylinders
Hopper dump door	Hydraulic open, close, lock
Inspection doors	1 on each side, pressure vessel lock
Hopper dump height	40 in (1016 mm)
Debris screens	Sawtooth drop down

HYDRAULIC SYSTEM

Type	Variable displacement
Max Pump capacity	27 gpm @ 1800 rpm (103 lpm)
Drive	Belt
Maximum pressure	2750 psi (190 bar)
Reservoir	25 gal (94 L)
Filter	10 micron; in-tank with DP gauge
Protection	Pressure relief valve
Controls	Electro-hydraulic

AUXILIARY HYDRAULIC SYSTEM

Type	Gear type; driven by electric motor
Function	Lower hopper; open/close hopper door; raise brooms and pickup head

PAINT

One coat of sealer/primer and two coats of Sherwin Williams Duraspar in standard white color

Note: Design and specifications subject to change without notice.



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