



**500x<sup>®</sup>**  
AIR SWEEPER

**GENERAL SPECIFICATIONS**



**MODEL 500x<sup>®</sup> HIGH DUMP REGENERATIVE<sup>®</sup> AIR STREET SWEEPER**  
**DIESEL AUXILIARY ENGINE / DIESEL CABOVER CHASSIS**

**SWEEPER AUXILIARY ENGINE**

Engine ..... John Deere 4045 turbo FT4, 4 cyl.  
Displacement..... 275 in<sup>3</sup> (4.5 L)  
Power ..... 115 hp (86 kW) @ 2200 RPM  
Net torque..... 373 lb-ft @ 1500 RPM (506 Nm)  
Air cleaner ..... Heavy duty, w/pre-cleaner, and  
in-cab air restriction indicator w/gauge.  
Oil filter ..... Spin on, full flow  
Auxiliary engine fuel tank shared with chassis  
Diesel fuel tank capacity..... 50 gal (189 L)  
DEF tank..... Dedicated  
Capacity (volumetric)..... 5.4 gal (20.6 L)  
Capacity (useable)..... 3.8 gal (14.4 L)  
Auxiliary engine protection system  
Fuel/water separator with WIF sensor  
Fuel filters..... 10 µm primary, 2 µm secondary  
Open crankcase ventilation (OCV) filter

**BLOWER, RUBBER COATED**

Aluminum alloy, high volume, open face  
turbine  
Bearings ....(2) sealed lifetime lube, anti-friction  
Housing ..... Patented, isolation mounted, steel  
with abrasion resistant, replaceable liner  
Housing seal ..... Heavy rubber section,  
non-wiping, spring actuated Tilt-N-Seal<sup>®</sup> design  
Drive ..... Fixed displacement,  
heavy duty, bent axis hydraulic motor

**DUST SEPARATOR, RUBBER LINED**

Type .....Cyclonic, multipass,  
centrifugal separation  
Size.....28 x 48 in (71 x 122 cm)  
Location.....Inside hopper  
Particulate removal achieved through dual 48 in  
(122 cm) skimmer slots into hopper  
Abrasion resistant housing w/replaceable liner  
Self-opening, self-emptying when hopper tilts

**HOPPER, STAINLESS STEEL**

Volumetric capacity.....5.7 yd<sup>3</sup> (4.3 m<sup>3</sup>)  
Useable capacity .....4.0 yd<sup>3</sup> (3.06 m<sup>3</sup>)  
Construction .....Welded non-magnetic  
stainless steel plate w/integral stiffeners  
Dump door opening.....68 x 57 in  
(173 x 145 cm)  
Dump door.....Hydraulically self-locking  
Chute .....72 x 48 in (183 x 122 cm)  
stainless steel lined  
Chute reach.....22 in (56 cm) w/o side shift  
Dump direction ..... Right side  
Lifting method ..... Two stage scissor lift, dual  
hydraulic cylinders w/integral holding valves  
Lift capacity.....10,000 lbs (4536 kg)  
Floor dump angle.....50  
Dump height ..... Variable  
Minimum .....24 in (61 cm)  
from bottom of chute to ground  
Maximum .....132 in (11 ft) (335 cm)  
from bottom of chute to ground  
Overall.....262 in (21 ft 8 in) (665.5 cm)  
Hopper screen .....2 piece stainless steel  
screen w/access for cleaning top side  
Hopper drain system

**BROOM ASSIST PICK-UP HEAD (BAH<sup>®</sup>)**

Type.....Dual chamber with broom assist  
Width .....87 in (221 cm)  
Pick-up head area .....3567 in<sup>2</sup> (2.3 m<sup>2</sup>)  
Broom.....12 x 79 in (30.5 x 200.5 cm)  
enclosed in rear of pick-up head  
Suspension.....4 springs 2 drag links

Suction hose.....12 in diameter (30.5 cm)  
Pressure hose .....14 in diameter (35.5 cm)  
Skids.....DUO SKID<sup>®</sup>, long-life carbide  
Linear actuator - pressure bleeder w/gauge  
Integral for leaf/light material pickup  
Reverse pick-up head system

**GUTTER BROOMS, TWIN, Patented**

Drive .....Variable speed  
non-reversible hydraulic motor  
Adjustment.....Adjustable for down  
pressure, pattern and wear  
Down pressure ..... Automatic  
Flexibility..... Integral  
anti-damage "swing away" relief valve  
Brooms .....43 in dia. (109 cm) steel wire,  
vertical diggers  
Hydraulic tilt..... Adjust for curb depth  
Floodlights ..... (2) LED  
Parabolic mirrors .....(2) 10.5 in (26.67 cm) dia.

**HYDRAULIC SYSTEM**

Drive ..... Direct drive  
Blower pump..... Heavy duty variable  
displacement piston pump, hydrostatically  
drives blower  
Blower pump flow rate ..... 26 GPM (100 LPM)  
Sweeper pump ..... Variable displacement  
piston pump, operates gutter brooms, pick-up  
head, stabilizers, hopper lift, hopper dump, and  
hopper door.  
Sweeper pump flow rate.....11 GPM (42 LPM)  
BAH pump ..... Gear pump,  
BAH pump flow rate..... 8 GPM (30 LPM)  
Reservoir ..... 34 gal (129 L)  
Return filter .....3 micron,  
spin-on, in-line return  
Charge loop filter .....10 micron  
Vent filter.....10 micron spin-on  
Hydraulic oil..... Extended life 10W ISO 46  
Cooler..... Air to oil  
integral with auxiliary engine heat exchanger  
Hydraulic level/temperature shutdown system  
w/ temperature gauge in cab  
Hydraulic oil filter restriction indicator in cab  
Hydraulic oil sight/temperature gauge  
Auxiliary hydraulic system

**DUST CONTROL SYSTEM**

Water spray nozzles for dust suppression  
Pump .....Electric diaphragm  
Reservoirs ...Polyethylene, 360 gal (1362 L) total  
Filter.....80 mesh stainless steel, in-line  
Low water shut-off ..... Safety shut-off  
with audible and visual indicator in cab  
Spray nozzles:  
Pick-up head.....4  
Gutter brooms (each).....2  
Hopper .....1  
Hydrant fill hose w/storage area.....20 ft (6 m)

**CONTROL SYSTEM**

**BlueLogic<sup>®</sup> Control System**  
Multiplexed electrical system includes hardware  
and TYMCO designed software that integrates  
the in-cab controls to the auxiliary engine and  
all sweeper functions; as well as provides  
intelligent safety features and on-board  
diagnostics (OBD) for the auxiliary engine and  
sweeper through the BlueLogic display.

**BlueLogic Display**

Pedestal mounted touchscreen display provides  
sweeper and auxiliary engine data and includes  
hour meters (trip and total) for the auxiliary  
engine, gutter brooms, pick-up head, blower,  
water pump, and BAH broom; dump cycle  
counter, sweeper odometer (records curb miles  
swept and sweeping hours), service reminders,  
custom reminders, overspeed warning, low  
water audible alarm, dust control system  
winterization guide, and OBD.

**Interior Components**

BlueLogic display, auxiliary fuse panel,  
illuminated control switches: pick-up head,  
gutter brooms, blower RPM, pressure bleeder,  
dump cycle, variable speed gutter brooms, dust  
control water system nozzles, safety lights.

**Exterior Components**

BlueLogic Control Modules (BCMs)

**STORAGE COMPARTMENT**

Location.....Rear left, beneath auxiliary engine  
Dimensions.....18 x 18 x 30 in  
(46 x 46 x 76 cm)

**SAFETY/WARNING DEVICES**

BlueLogic Control System utilizes solid-state  
proximity switches to help provide several  
safety systems: Right and left stabilizers  
automatically deploy before raising the hopper  
and retract after lowering the hopper, stabilizers  
down warning system, transmission interlock  
when stabilizers are down, blower actuation  
interlock, and minimum dump interlock. Other  
devices include inclinometer, alternating LED  
rear flashers, front mounted SAE Class 1/  
California Title 13 amber beacon light (LED) w/  
limb guard, rear view camera system, back-up  
alarm, scissor lift safety props, dump door/tilt  
cylinder safety props, and shop prop.

**OPTIONAL EQUIPMENT**

AOD water pump w/washdown hose/spray gun  
Abrasion protection package  
Additional camera views - pick-up head, left  
gutter broom, right gutter broom  
Auto Sweep Interrupt (ASI)  
Auxiliary hand hose, 8 in (20 cm) diameter  
Gutter broom, drop down  
High output water system  
Hi/Low washdown system  
Hopper load indicator alarms w/gauge  
Hopper vibrator - electric  
Low emissions package (required for South  
Coast AQMD Rule 1186)  
Magnet: Light, standard, or heavy duty  
Pick-up head front curtain lifter  
Shop air purge, dust control system  
Sweeper deluge system, includes hopper and  
pick-up head deluge w/6 in (15 cm) cleanout  
port  
Screen vibrator - pneumatic  
Paint color (other than TYMCO standard white)

*Special options are available. Contact your local  
dealer or TYMCO.*

**CHASSIS AVAILABLE**

Peterbilt 220