



**500x<sup>®</sup>**  
AIR SWEEPER

**GENERAL SPECIFICATIONS**



**MODEL 500x<sup>®</sup> REGENERATIVE AIR SWEEPER<sup>®</sup>**  
**FINAL TIER 4 AUXILIARY ENGINE/CONVENTIONAL CAB CHASSIS**

**SWEEPER AUXILIARY ENGINE**

Engine ..... John Deere, 4045 turbo, 4 cyl.  
(Final Tier 4)  
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  
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 and separate fuel filter  
Open crankcase ventilation (OCV) filter

**BLOWER, RUBBER LINED**

Aluminum alloy, high volume, open face turbine  
Purpose ..... Creates blast and suction  
Bearings .... (2) sealed lifetime lube, anti-friction  
Housing ..... Isolation mounted  
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**

Type ..... Cyclonic, multipass,  
centrifugal separation  
Size ..... 28 x 48 in (711 x 1219 mm)  
Location ..... Inside hopper  
Particulate removal achieved through dual  
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  
Floor dump angle ..... 50°  
Dump door opening ..... 68 x 57 in  
(1727 x 1448 mm)  
Dump door ..... Self-locking  
Chute ..... 72 x 48 in (183 x 122 cm)  
stainless steel lined  
Chute reach ..... 22 in (56 cm) w/o side shift  
Dumping direction ..... Right side  
Lifting method ..... Two stage scissor lift, dual  
hydraulic cylinders w/integral holding valves  
Lift capacity ..... 10,000 lbs (4536 kg)  
Dump height ..... Variable  
Minimum ..... 24 in (610 mm)  
from bottom of chute to ground  
Maximum ..... 132 in (11 ft) (3353 mm)  
from bottom of chute to ground  
Overall ..... 262 in (21 ft 8 in) (6655 mm)  
Dump tilt slope ..... 50°  
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  
Function ..... Delivers air blast and suction  
Width ..... 87 in (2210 mm)  
Pick-up head area ..... 3567 in<sup>2</sup> (2.3 m<sup>2</sup>)  
Broom ..... 12 x 79 in (305 x 2007 mm)  
enclosed in rear of pick-up head  
Suspension ..... 4 springs 2 drag links

Suction hose ..... 12 in diameter (305 mm)  
Pressure hose ..... 14 in diameter (356 mm)  
Skids ..... DUO SKID<sup>®</sup>, long-life carbide  
Pressure bleeder ..... Integral for  
leaf/light material pick-up.  
Reverse pick-up head system

**GUTTER BROOMS, TWIN, Patented**

Standard equipment, includes floodlights and  
parabolic mirrors  
Drive ..... Variable speed  
non-reversible hydraulic motor  
Adjustment ..... Adjustable for down  
pressure, pattern and wear  
Down pressure ..... Automatically  
adjusts to requirement  
Flexibility ..... All directions, integral  
anti-damage "swing away" relief valve  
Brooms ..... 43 in dia. (1.1 m) steel wire,  
vertical diggers  
Hydraulic tilt ..... Twin gutter brooms  
adjust for curb depth

**HYDRAULIC SYSTEM**

Drive ..... Direct drive  
Blower pump ..... Heavy duty variable  
displacement piston pump, hydrostatically  
drives blower  
Sweeper pump ..... Variable displacement  
piston pump, operates gutter brooms, pick-up  
head, stabilizers, hopper lift, hopper dump, and  
hopper door.  
Blower pump flow ..... 26 GPM (100 LPM)  
Sweeper pump flow ..... 11 GPM (42 LPM)  
BAH pump ..... Gear pump,  
operates Broom Assist Head broom motor  
BAH pump flow ..... 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  
Cooler ..... Air to oil  
integral with auxiliary engine heat exchanger  
Hydraulic level/temperature shutdown system  
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, 250 gallons (946 L)  
Filter ..... 80 mesh stainless steel, in-line  
Low water shut-off ..... Safety shut-off  
with low water warning light 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  
to the operator and includes hour meters  
(trip and total) for the auxiliary engine, gutter  
brooms, pick-up head, blower, water pump,  
and BAH broom if applicable; dump cycle  
counter, sweeper odometer (records curb  
miles swept and sweeping hours), service  
reminders, custom reminders, overspeed  
warning, low water audible alarm, and OBD.

**Interior Components**

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

**Exterior Components**

BlueLogic multiplex modules

**STORAGE COMPARTMENT**

Location ..... Rear left, beneath auxiliary engine  
Dimensions ..... 18 x 18 x 30 in  
(457 x 457 x 762 mm)

**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 alternating LED rear flashers, front  
mounted SAE Class 1/California Title 13 amber  
beacon light (LED) w/ limb guard, back-up  
alarm, scissor lift safety props, and shop prop.

**OPTIONAL EQUIPMENT**

AOD water pump w/washdown hose/spray gun  
Abrasion protection package  
Air purge, water system  
Auto Sweep Interrupt (ASI)  
Auxiliary hand hose, 8 in (203 mm) diameter  
Camera/monitor system  
Engine block heater  
Gutter broom, drop down  
High output water system  
Hi/Low pressure washdown system  
Hopper load indicator alarms  
Hopper vibrator - electric  
Linear actuator - pressure bleeder w/gauge  
Low emissions package (required for South  
Coast AQMD Rule 1186)  
Magnet, light, standard, or heavy duty  
Pick-up head front curtain lifter  
Sweeper deluge system, includes hopper and  
pick-up head deluge w/6 in (152 mm) cleanout  
port  
Screen vibrator - pneumatic  
Paint color (other than TYMCO standard white)

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

**CHASSIS AVAILABLE**

International 4300  
Freightliner M2-106