



**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**

Make ..... 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 engine  
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.

**GUTTER BROOMS, DUAL, 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 ..... Dual 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 absolute, 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  
Reservoir ..... Polyethylene 250 gallon (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)

**CONTROLS**

**Inside cab (lighted)**  
Pick-up head, left and right gutter brooms, left and right gutter broom tilt, ignition, blower on/off (variable), dust control system, all safety lights, hopper dump/tilt, pressure bleeder, auxiliary fuse panel  
**BlueLogic<sup>®</sup> Display**  
High resolution, color LCD multi-function touchscreen display that provides the operator

feedback on the status of the sweeper and auxiliary engine. The display provides information for all safety equipment, as well as lifetime and trip hours for sweeper equipment such as the gutter brooms, pick-up head, pick-up head broom, and blower. The display also provides service hours for the auxiliary engine and hydraulic system fluids and filters. Additionally, the sweeper odometer records lifetime and trip curb miles swept.

**BlueLogic<sup>®</sup> Control System**

Multiplexed electrical control system which provides intelligent safety features and assists in sweeper troubleshooting with on board diagnostics (OBD). Specific to the Model 500x, BlueLogic pauses the dust control system when the blower is turned off, maintains blower at constant speed and monitors the hydraulic level/temperature shutdown system. BlueLogic also provides several safety interlocks on Model 500x, i.e. disabling the transmission if stabilizers are down and disabling blower when hopper is raised/hopper door is open.

**STORAGE COMPARTMENT**

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

**SAFETY/WARNING DEVICES**

Solid state proximity switches, right and left side stabilizers (automatically engage when lifting hopper), blower actuation interlock, minimum dump interlock, stabilizer down warning system, alternating LED rear flashers, front mounted SAE Class 1/California Title 13 amber beacon light with limb guard - LED, back-up alarm, scissor lift safety props, shop prop, and transmission interlock when stabilizers down.

**OPTIONAL EQUIPMENT**

AOD water pump w/washdown hose/spray gun  
Abrasion protection package  
Air purge, water system  
Auto sweep interrupt w/overspeed interrupt  
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  
Reverse pick-up head system  
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 - DT or Cummins ISB  
Freightliner M2-106