



500x[®]
AIR SWEEPER

GENERAL SPECIFICATIONS



MODEL 500x[®] REGENERATIVE AIR SWEEPER[®]
FINAL TIER 4 AUXILIARY ENGINE/CONVENTIONAL CAB CHASSIS

SWEEPER AUXILIARY ENGINE

Engine John Deere, 4045 turbo, 4 cyl.
(Final Tier 4)
Displacement..... 275 in³ (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 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[®] 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 yd³ (4.3 m³)
Useable capacity 4.0 yd³ (3.06 m³)
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[®])

Type Dual chamber with broom assist
Function Delivers air blast and suction
Width 87 in (2210 mm)
Pick-up head area 3567 in² (2.3 m²)
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[®], 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[®] 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, dust control system
winterization guide, 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, dump
door/tilt cylinder safety props, and shop prop.

OPTIONAL EQUIPMENT

AOD water pump w/washdown hose/spray gun
Abrasion protection package
Auto Sweep Interrupt (ASI)
Auxiliary hand hose, 8 in (203 mm) diameter
Camera/monitor system
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
Shop air purge, dust control 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
Freightliner M2-106