



500x[®]
AIR SWEEPER

GENERAL SPECIFICATIONS



MODEL 500x[®] HIGH DUMP REGENERATIVE[®] AIR STREET SWEEPER
DIESEL AUXILIARY ENGINE / DIESEL CONVENTIONAL CAB CHASSIS

SWEEPER AUXILIARY ENGINE

Engine John Deere 4045 turbo FT4, 4 cyl.
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 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[®] 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 yd³ (4.3 m³)
Useable capacity 4.0 yd³ (3.06 m³)
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[®])

Type Dual chamber with broom assist
Width 87 in (221 cm)
Pick-up head area 3567 in² (2.3 m²)
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[®], long-life carbide
Pressure bleeder Cable operated
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, 250 gallons (946 L)
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[®] 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

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 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
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 (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

International MV607
Freightliner M2-106