

420 SERIES 3 SKID STEER TIER IV COMPLIANT

ENGINE

Model				
Case 432T/M3 diesel*, Tier IV compliant				
Туре	4-stroke, turbocharged			
Cylinders	4			
Bore/Stroke	3.9 in x 4.1 in (99 mm x 104 mm)			
Displacement	195 in³ (3.2 L)			
Fuel injection	Direct			
Fuel	#2 Diesel			
Fuel filter	In-line strainer			
Air intake	Cross-flow			
Cooling	Liquid			
Engine speeds (rpm)				
High idle - no load	2675 <u>+</u> 75			
Rated - full load	2500			
Low idle	1075 <u>+</u> 75			
Horsepower per SAE J1349				
Gross Net	74 (55 kW) @ 2500 rpm 69 (52 kW) @ 2500 rpm			
Peak torque				
@ 1400 rpm	203 lb·ft (275 N·m)			

ENGINE COOLING

ENGINE COOLING					
Radiator					
Core type	Square wave serpentine				
Core size area	377 in ² (.243 m ²)				
Rows of tubes	4				
Cap pressure	14 psi (97 kPa)				
Fan					
Diameter	18.9 in (480 mm)				
Ratio	1.1:1				
Water pump					
Style	Centrifugal				
Flow	29 gpm (110 L/min)				
Engine lubrication					
Pump	Deep sump with plate cooler and pressurized under-piston nozzles				
Pump operating angle ratings					
Side-to-side	Rated 35°				
Fore and aft	Rated 35°				
Oil filtration	Replaceable,				

full-flow cartridge

POWERTRAIN

POWERIRAIN						
Drive pump						
Tandem, axial piston h with integral charge pu engine flywheel	ydrostatic transmission imp driven directly off					
Pump to engine ratio 1:						
Displacement	0 to 2.62 in ³ (43 cc)					
Pump flow @ high idle						
engine rpm	30.3 gpm (115 L/min)					
Flow	Bi-directional					
Charge pressure	360 psi (24.8 bar)					
System relief	4350 psi (300 bar)					
Controls	Servo					
Drive motors	Fixed displacement radial piston					
Maximum displacemer	•					
	(470 cc)					
Speed @ high idle engine rpm						
@ max displacement	244 rpm					
Optional high speed	407 rpm					
Torque @ max displace	ement					
and relief pressure	1,655 lb·ft					
	(2245 N·m)					
Travel speed mph (km/h))					
Low range	7.2 (11.6)					
High range (optional)	11.6 (18.7)					
Final drive	Single-reduction chain drive					
Drive chain						
Size	ASA #100HV					
Tensile strength	32,180 lb					
	(143 144 N)					
Axles						
One-piece, forged inducarbon steel	uction-hardened high					
Torque @ max displace						
and relief pressure	4,633 lb·ft					
Diameter	(6282 N·m)					
Diameter	2.0 in (51 mm)					
Length	14.6 in (371 mm)					
Parking brakes Spring applied, hydrau	ılic release disc					
Engagement						

HYDRAULIC SYSTEM

Standard equipment pump					
Type	Gear pump				
Displacement	2.2 in ³ /rev (36 cc)				
Pump flow @ rated	np flow @ rated engine rpm				
Total	Total 23.8 gpm (90 L/min)				
Optional high flow @	onal high flow @ rated engine rpm				
Total	33.2 gpm (126 L/min)				
Loader control valve					
3-spool open-center series with power					
beyond port					
Relief pressure	3050 psi (210 bar)				
Port relief pressures					
Loader Raise	3120 psi (215 bar)				
Bucket Dump	3800 psi (260 bar)				
Bucket Curl	3350 psi (230 bar)				
Hydraulic lines					
Tubing	37° JIC Flare				
Loop hoses	SAE 100 R12				
Hydraulic oil cooler					
Core type	Four row in-line				
Hydraulic filter					

6 micron spin on replaceable element on the

return line with warning indicator

Depress on/off brake button on handle or instrument panel, raise seat bar, get off seat, or stop engine

^{*}Manufactured for Case by Iveco.

INSTRUMENTATION

Indicators

Digital Hourmeter

Fuel level LCD bar graph with alarm

Warning lights with alarms

Engine coolant temperature

Engine oil pressure

Engine Malfunction

Hydraulic charge pressure

Hydraulic filter restriction

Hydraulic oil temperature

Warning alarms

Battery voltage (plus display)

Indicator light

Engine preheat

Parking brake

Seat bar reminder

ELECTRICAL SYSTEM

Alternator	95 amp
Starter	2.7 kW
Ratten	

12-volt low-maintenance 1125 cold-cranking amps @ 0° F (-18° C)

OPERATOR ENVIRONMENT

ROPS/FOPS level 1 canopy w/side screens
Tilt ROPS/FOPS
Rear window w/ emergency escape
Instrument panels
Suspension vinyl seat
2 in (51 mm) retractable seat belt
Hand throttle
Foot throttle
Alarm package
Headliner
Top window
Cup holder
Power plug socket
Foot rest
Storage tray
Low effort ergonomic hand controls
Padded seat bar w/integral armrests
Loader control lockout system
Electric parking brake control
Floor cleanout panel

CYLINDERS

Lift cylinder					
Bore diameter	2.5 in (63.5 mm)				
Rod diameter	1.5 in (38.1 mm)				
Stroke	35.8 in (910 mm)				
Closed length	46.8 in (1190 mm)				
Bucket cylinder					
Bore diameter	2.75 in (69.9 mm)				
Rod diameter	1.37 in (34.9 mm)				
Stroke	14.6 in (370 mm)				
Closed length	26.9 in (683 mm)				

OPERATING WEIGHTS

Unit equipped with 10.00 x 16.5 Galaxy Beefy Baby II tires, 60 in (1.5 m) foundry/excavating bucket, mechanical attachment coupler, full fuel tank and 165 lb (75 kg) operator

	6605 lb (2996 kg)
Shipping weight	6055 lb (2747 kg)
Add-on weights	
Side cab glass	+70 lb (32 kg)
Lexan® door	+50 lb (22.6 kg)
Glass door wwiper	+77 lb (35 kg)
Suspension seat	+10 lb (4.5 kg)

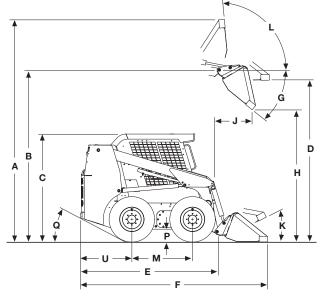
SERVICE CAPACITIES

Fuel tank	22.0 gal (83.3 L)		
Engine oil w/filter	9 qt (8.5 L)		
Engine cooling system	12 qt (11.4 L)		
Hydraulic system			
Reservoir	7.1 gal (26.8 L)		
Total	13.2 gal (50 L)		
Chain tanks (per side)	8 qt (7.6 L)		

TIRE SELECTION

	Size	Ply Rating	Tread Depth	Tire Width	Width Over Tires	Tire Weight*
Galaxy XD2002	10.00 x 16.5	8	0.59 in (15 mm)	10.7 in (284 mm)	59 in (1.50 m)	52 lb (23.6 kg)
Galaxy XD2002	12.00 x 16.5	10	0.69 in (17 mm)	13.1 in (333 mm)	64 in (1.63 m)	72 lb (32.7 kg)
Galaxy Beefy Baby II	10.00 x 16.5	8	0.75 in (19 mm)	10.2 in (259 mm)	59 in (1.50 m)	61 lb (27.6 kg)
Galaxy Beefy Baby II	12.00 x 16.5	10	0.81 in (21 mm)	12.4 in (315 mm)	64 in (1.63 m)	82 lb (37.2 kg)
Galaxy Hulk	10.00 x 16.5	10	1.37 in (35 mm)	10.2 in (259 mm)	59 in (1.50 m)	79 lb (35.8 kg)
Galaxy Hippo	31.5 x 16.5	8	0.75 in (19 mm)	12.8 in (325 mm)	64 in (1.63 m)	70 lb (31.7 kg)
Galaxy Solid Flex	10 x 16.5	n/a	.7 in (18 mm)	9.6 in (244 mm)	61 in (1.50 m)	230 lb (104 kg)
Galaxy Solid Flex (offset wheel)	10 x 16.5	n/a	.7 in (18 mm)	9.6 in (244 mm)	67 in (1.70 m)	230 lb (104 kg)

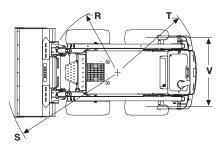
^{*}Tire weight does not include the wheel weight



DIMENSIONS*

Α.	Overall operating height	
	w/foundry/excavating bucket - short lip	151.6 in (3.85 m)
	w/low profile bucket – standard lip	157.5 in (4.00 m)
	w/low profile extended bucket - long lip	162.5 in (4.13 m)
	Height to	
B.	Bucket hinge pin	120.7 in (3.06 m)
C.	Top of rollover protective structure	78.9 in (2.00 m)
D.	Bottom of level bucket, loader arm fully raised	113.5 in (2.88 m)
	Overall length	
E.	w/o attachment w/coupler	102.5 in (2.60 m)
F.	w/foundry/excavating bucket on ground	127.9 in (3.25 m)
F.	w/low profile bucket on ground	132.9 in (3.38 m)
F	w/low profile extended bucket on ground	137.9 in (3.50 m)
G.	Dump angle at maximum height	39°
H.	Dump height – loader arm fully raised	
	w/foundry/excavating bucket	96.1 in (2.44 m)
	w/low profile bucket	92.6 in (2.35 m)
	w/low profile extended bucket	89.4 in (2.27 m)
J.	Dump reach – loader arm fully raised	
	w/foundry/excavating bucket	22.9 in (0.58 m)
	w/low profile bucket	28.8 in (0.73 m)
	w/low profile extended bucket	32.6 in (0.83 m)
	Maximum attachment rollback	
K.	Bucket on ground	29°
<u>L.</u>	Bucket at full height	96°
М.	Wheelbase	42.3 in (1.07 m)
	Ground clearance	
P	Bottom of belly pan	8.2 in (208 mm)
Q.	Angle of departure	26°
	Clearance circle front	
R.	Less bucket	56.7 in (1.44 m)
S.	w/60 in (1.52 m) foundry/excavating bucket on ground	76 in (1.93 m)
S.	w/60 in (1.52 m) low profile bucket on ground	81.2 in (2.06 m)
S.	w/60 in (1.52 m) low profile extended bucket on ground	85.9 in (2.18 m)
Т	Clearance circle rear	59.2 in (1.50 m)
U.	Rear axle to bumper	37.0 in (0.94 m)
V.	Tread width, centerline to centerline	54.3 in (1.38 m)
NOT	TE: *Equipped with 10 v 16 F Colovy Boofy Poby II tires	

NOTE: *Equipped with 10 x 16.5 Galaxy Beefy Baby II tires.



PERFORMANCE SPECS

Operating load	1850 lb (839 kg)
Tipping load	3700 lb (1678 kg)
Breakout force	
Lift cylinder	4,200 lbf (18 682 N)
Bucket cylinder	5500 lbf (24 465 N)
Dig depth	
w/bucket flat	0.2 in (6.00 mm)
Cycle time	
Raise	3.6 seconds
Lower	2.6 seconds
Dump	1.3 seconds
Rollback	1.6 seconds

NOTE: SAE rated lift capacities.

OPTIONAL BUCKETS

The state of the s			
Туре	Width inch (m)	Weight lb (kg)	Heaped Capacity ft³ (m³)
Foundry/ Excavating	60 (1.5)	270 (122)	11.5 (0.33)
	66 (1.6)	370 (168)	15.2 (0.43)
	72 (1.8)	390 (177)	16.7 (0.47)
	78 (2.0)	495 (225)	18.4 (0.52)
Low Profile	60 (1.5)	360 (163)	11.5 (0.33)
	66 (1.6)	400 (181)	13.2 (0.37)
	72 (1.8)	425 (193)	14.5 (0.41)
Low Profile Extended	60 (1.5)	360 (163)	14.3 (0.40)
	66 (1.6)	434 (197)	15.5 (0.44)
	72 (1.8)	477 (216)	17.1 (0.48)
	78 (2.0)	502 (228)	18.6 (0.53)
Utility/Light Material	60 (1.5)	350 (159)	19.7 (0.56)
	72 (1.8)	434 (197)	23.7 (0.67)
	84 (2.1)	497 (225)	27.9 (0.79)
Heavy-Duty/ Dirt	60 (1.5)	400 (181)	12.1 (0.34)
	66 (1.6)	474 (215)	13.3 (0.37)
	72 (1.8)	501 (227)	14.6 (0.41)
	78 (2.0)	527 (239)	15.9 (0.45)

STANDARD EQUIPMENT

OPERATOR'S COMPARTMENT

ROPS/FOPS level 1 canopy w/side screens

Tilt ROPS/FOPS

Rear window w/ emergency escape

Instrument panels

Suspension vinyl seat

2 in (51 mm) retractable seat belt

Hand throttle

Foot throttle

Alarm package

Headliner

Top window

Cup holder

Power plug socket

Foot rest

Storage tray

Low effort ergonomic hand controls

Padded seat bar w/integral armrests

Loader control lockout system

Electric parking brake control

Floor cleanout panel

LOADER

Radial loader arm design

Mechanical attachment coupler

Loader lift arm support strut

ENGINE

Case/Iveco 432T/M3 diesel

Tier IV compliant

No maintenance belt

Side-by-side radiator and oil cooler

Grid heater

Integral engine oil cooling

Fuel filter w/water trap

Dual element air cleaner

95 amp alternator

1125 CCA 12-volt battery

POWERTRAIN

Hydrostatic four wheel drive

Servo controlled pumps

ASA #100HS drive chain

SAHR disc parking brakes

HYDRAULICS

Auxiliary hydraulics 3050 psi (210 bar) – 23.8 gpm (90 L/min)

Hydraulic circuit pedal lock

Loader arm-mounted ISO flat face connectors

Auxiliary function lockout override

Loader function lockout system

Loader lift lockout override

3-spool loader control valve

Heavy-duty oil cooler

Loader arm float position

OTHER

Integral bumper counterweight

Lockable service access hood

Single-point daily servicing

Halogen lights, 2-front, 2 side, 1-rear (halogen)

Rear tail lights

Remote oil drain

OPTIONAL EQUIPMENT

OPERATOR'S COMPARTMENT

Deluxe cloth suspension seat w/ heater and lumbar support

Interior mirror

Electric auxiliary hydraulic control

Glass front door w/wiper & washer

Sliding side windows

3 inch retractable seat belt

Heater and AC

Radio

Demolition door

LOADER

Auxiliary front electric control

Ride control

Pilot controls

Hydraulic attachment coupler

Hydraulic one-way self-leveling

HYDRAULICS

High-flow auxiliary hydraulics

3050 psi (210 bar) - 33.2 gpm (126 L/min)

Second auxiliary hydraulics

Attachment case drain plumbing

ENGINE

Coolant block heater

Battery disconnect switch w/jumpstart terminals

OTHER

2 speed ground drive

Deluxe instrument panel

Road lights

Rotating beacon

Lift hooks

Special paint

Language decals

Factory-installed tires – see page 2

Buckets - see page 3

Bolt-on bucket cutting edges

42 in (1.07 m) and 48 in (1.22 m) pallet forks

Steel tracks

Lift cylinder quards

NOTE: All specifications are stated in accordance with SAE Standards or Recommended Practices, where applicable.

NOTE: All engines meet current EPA emissions requirements.

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