

# 450 SKID STEER TIER II CERTIFIED

## ENGINE

Model	
Case Family III 445T/M2 diesel, Tier II certified	
Type	4-stroke, turbocharged
Cylinders	4
Bore/Stroke	4.1 x 5.2 in (104 x 132 mm)
Displacement	274 in <sup>3</sup> (4.5 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	2480±50
Rated - full load	2300
Low idle	1050±50
Horsepower per SAE J1349	
Gross	88 (65.7 kW) @ 2300 rpm
Net	82 (61.2 kW) @ 2300 rpm
Peak torque	
@ 1400 rpm	263 lb-ft (356 N-m)

## ENGINE COOLING

Radiator	
Core type	Square wave serpentine
Core size area	449 in <sup>2</sup> (.29 m <sup>2</sup> )
Rows of tubes	5
Cap pressure	13 psi (89.6 kPa)
Fan	
Diameter	18.9 in (480 mm)
Ratio	1.1:1
Water pump	
Style	Integral
Flow	48 gpm (182 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

Drive pump	
Tandem, axial piston hydrostatic transmission with integral charge pump driven directly off engine flywheel	
Pump to engine ratio	1.2:1
Displacement	0 to 2.81 in <sup>3</sup> (46 cc)
Pump flow @ rated rpm	33.6 gpm (127 L/min)
Flow	Bi-directional
Charge pressure	360 psi (24 bar)
System relief	5000 psi (345 bar)
Controls	Servo
Drive motors	
Fixed displacement radial piston	
Maximum displacement	45.8 in <sup>3</sup> (750 cc)
Speed @ rated engine rpm	
@ max displacement	180 rpm
Torque @ max displacement and relief pressure	2,733 lb-ft (3,705 N-m)
Travel	
High/low trigger-button control	
Low speed	0 - 6.7 mph (10.7 km/h)
High speed (optional)	0 - 12.3 mph (19.8 km/h)
Final drive	
Single-reduction chain drive	
Drive chain	
Size	ASA #120HS
Tensile strength	41,000 lb (182,384 N)
Axles	
One-piece, forged induction-hardened high carbon steel	
Max torque @ rated rpm	6,681 lb-ft (9,058 N-m)
Diameter	2.5 in (63.5 mm)
Length	14.76 in (375 mm)
Parking brakes	
Spring-applied, hydraulic release	
Capacity	3,969 lb-ft (5,378 N-m) (at the axle shaft)
Engagement	
Depress on/off brake button, raise seat bar, get off seat, or stop engine	

## HYDRAULIC SYSTEM

Standard equipment	
pump	Gear pump
Displacement	1.94 in <sup>3</sup> /rev (32 cc)
Pump flow @ rated engine rpm	
Total	22.1 gpm (83.9 L/min)
Optional high flow @ rated engine rpm	
Total	37.2 gpm (140.6 L/min)
Loader control valve	
3-spool open-center series with power beyond port	
Relief pressure	3000 psi (207 bar)
Port relief pressures	
#1A Lower	3800 psi (262 bar)
#1B Raise	3800 psi (262 bar)
#2A Rollback	3800 psi (262 bar)
#2B Dump	3100 psi (214 bar)
Hydraulic lines	
Tubing	37° JIC Flare
Loop hoses	SAE 100 R12
Hydraulic oil cooler	
Core type	Two row in-line
Hydraulic filter	
6-micron spin-on replaceable element on the return line with warning indicator	

## INSTRUMENTATION

Battery Voltage
LCD hourmeter
Fuel level LED bar graph
Warning lights
Fuel level
Engine preheat
Engine coolant temperature
Engine oil pressure
Air cleaner restriction
Hydraulic charge pressure
Hydraulic filter restriction
Hydraulic oil temperature
Parking brake
Seat belt reminder
Warning alarms
Engine coolant temperature
Engine oil pressure
Hydraulic oil temperature
Hydraulic charge pressure
Seat belt reminder

## ELECTRICAL SYSTEM

Alternator	95 amp
Starter	2.7 kW
Battery	
12-volt low-maintenance 850 cold-cranking amps @ 0° F (-18 C)	

## OPERATOR ENVIRONMENT

No-tool tilt ROPS/FOPS canopy w/side screens
Water-shedding vinyl seat
Seat presence switch
2 in (51 mm) retractable seat belt
Restraint bar w/integral armrests
Two adjustable, hands-only control levers
Hand and foot throttles
Loader control lockout system
Rear window w/escape provision
Front and rear halogen floodlights
Floor cleanout panel

## CYLINDERS

Lift cylinder	
Bore diameter	2.25 in (57 mm)
Rod diameter	1.75 in (44.4 mm)
Stroke	38.2 in (970 mm)
Closed length	52.0 in (1.32 m)
Bucket cylinder	
Bore diameter	2.5 in (63.5 mm)
Rod diameter	1.5 in (38.1 mm)
Stroke	20.9 in (530 mm)
Closed length	47.4 in (1.2 m)

## OPERATING WEIGHTS

Unit equipped with 12 x 16.5 tires, 73 in (1.85 m) dirt bucket, mechanical attachment coupler, full fuel		8,830 lb (4005 kg)
Add-on weights		
Side cab glass		+70 lb (32 kg)
Lexan® door		+70 lb (32 kg)
Glass door w/wiper		+77 lb (935 kg)
Heater		+60 lb (27 kg)
Suspension seat		+10 lb (4.5 kg)
High flow auxiliary hydraulics		269 lb (122 kg)
Hydraulic attachment coupler		+38 lb (17 kg)
Counterweight		+875 lb (387 kg)

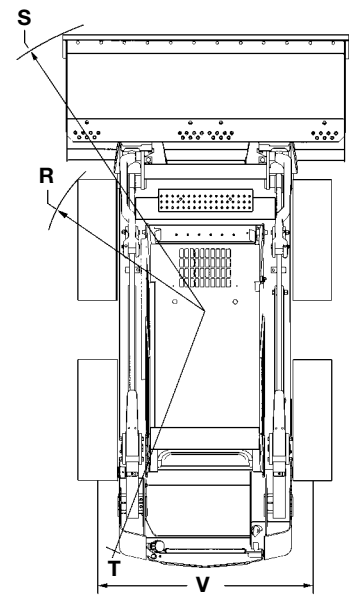
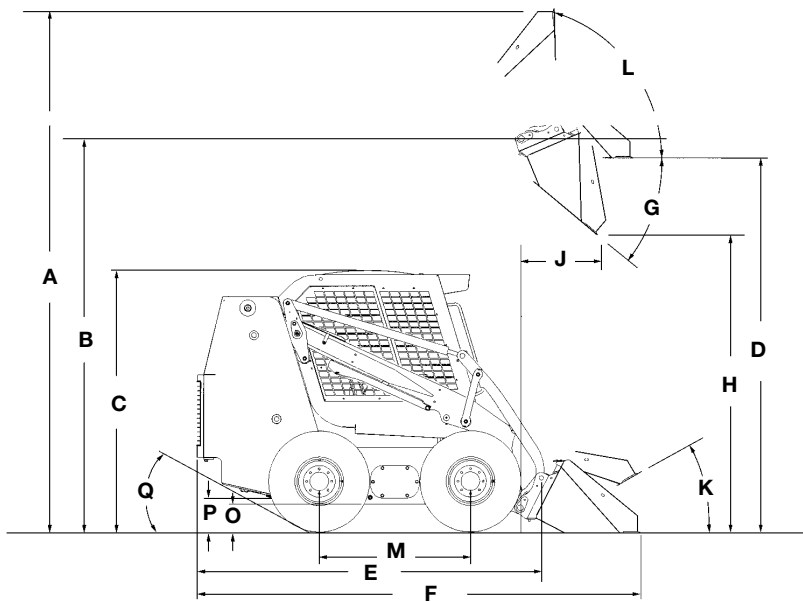
## SERVICE CAPACITIES

Fuel tank	20.7 gal (78.3 L)
Engine oil w/filter	3.2 gal (12 L)
Engine cooling system	18 qt (17 L)
Flywheel/splitter gearbox	2.1 qt (2 L)
Hydraulic system	
Reservoir	6.5 gal (24.5 L)
Total	17.0 gal (64.3 L)
Chain tanks (per side)	8 qt (7.6 L)

## TIRE SELECTION

	Size	Ply Rating	Tread Depth	Tire Width	Width Over Tires	Tire Weight*
Solideal Hauler SKS	12.00 x 16.5	10	0.75 in (19 mm)	13.1 in (333 mm)	72 in (1.83 m)	74 lb (33.6 kg)
Galaxy Beefy Baby II	12.00 x 16.5	10	0.75 in (19 mm)	12.3 in (312 mm)	72 in (1.83 m)	81 lb (36.7 kg)
Galaxy Hulk	12.00 x 16.5	12	0.81 in (21 mm)	12.3 in (312 mm)	72 in (1.83 m)	100 lb (45.3 kg)
Galaxy King Kong	12.00 x 16.5	10	1.25 in (32 mm)	10.2 in (259 mm)	72 in (1.83 m)	96 lb (43.5 kg)
Galaxy Bulky Hulk	33/15.50 x 16.5	14	0.81 in (21 mm)	16.7 in (424 mm)	80 in (2.03 m)	124 lb (56.2 kg)
Case Steel Tracks	12.00 x 16.5	NA	1.4 in † (36 mm)	14.7 in ∅ (373 mm)	78 in (1.98 m)	959 lb (435.0 kg)

NOTE: \*Tire weight does not include wheel weight. †Equals grouser depth. ∅Equals track width.



## DIMENSIONS

<b>A.</b>	Overall operating height	
	Dirt bucket	150.3 in (3.82 m)
	Light material bucket	158.9 in (4.04 m)
	Height to*	
<b>B.</b>	Bucket hinge pin	124.5 in (3.16 m)
<b>C.</b>	Top of rollover protective structure	80 in (2.03 m)
<b>D.</b>	Bottom of level bucket, loader arm fully raised	116.5 in (2.96 m)
	Overall length	
<b>E.</b>	w/o attachment w/coupler	108.7 in (2.77 m)
<b>F.</b>	w/dirt bucket on ground	140.8 in (3.59 m)
<b>F.</b>	w/light material bucket on ground	148.5 in (3.79 m)
<b>G.</b>	Dump angle at maximum height	
	Dirt bucket	40°
	Light material bucket	35°
<b>H.</b>	Dump height – loader arm fully raised	
	Dirt bucket	94.5 in (2.40 m)
	Light material bucket	93.0 in (2.36 m)
<b>J.</b>	Reach – loader arm fully raised	
	Dirt bucket	26.7 in (678 mm)
	Light material bucket	35.3 in (896 mm)
	Maximum attachment rollback	
<b>K.</b>	Bucket on ground	30°
<b>L.</b>	Bucket at full height	55°
<b>M.</b>	Wheelbase	46.06 in (1.17 m)
	Ground clearance	
<b>O.</b>	Bottom of chain case	9.1 in (231 mm)
<b>P.</b>	Bottom of belly pan	11 in (279 mm)
<b>P.</b>	Bottom of optional counterweight	9.1 in (231 mm)
<b>Q.</b>	Angle of departure	28°
	Clearance circle front	
<b>R.</b>	less bucket	54.5 in (1.38 m)
<b>S.</b>	w/73 in (1.85 m) dirt bucket on ground	84.3 in (2.14 m)
<b>S.</b>	w/84 in (2.08 m) dirt bucket on ground	86.3 in (2.19 m)
<b>S.</b>	w/84 in (2.08 m) light material bucket on ground	93.3 in (2.37 m)
<b>T.</b>	Clearance circle rear	62.2 in (1.58 m)
<b>V.</b>	Tread width, centerline to centerline	64.5 in (1.64 m)

NOTE: \*Equipped with 12 x 16.5 tires.

## PERFORMANCE SPECS

Operating load	2,450 lb (1111 kg)
w/counterweight	2,910 lb (1320 kg)
Tipping load	4,900 lb (2223 kg)
w/counterweight	5,820 lb (2640 kg)
Breakout force	
Lift	5,290 lbf (23 531 N)
Bucket	6,200 lbf (27 578 N)
Dig depth	
w/bucket flat	0.24 in (6 mm)
Cycle time	
Raise	3.14 seconds
Lower	2.44 seconds
Dump	1.14 seconds
Rollback	.99 seconds

NOTE: SAE rated lift capacities. Cycle time measured with rated load in bucket.

## OPTIONAL BUCKETS

Type	Width inch (m)	Weight lb (kg)	Heaped Capacity ft <sup>3</sup> (m <sup>3</sup> )
Dirt	73 (1.9)	553 (251)	16.8 (.48)
	84 (2.1)	593 (269)	19 (.54)
HD Dirt	73 (1.9)	621 (282)	16.8 (.48)
	84 (2.1)	676 (307)	19 (.54)
Utility	73 (1.9)	628 (285)	22.4 (.63)
	84 (2.1)	674 (306)	25.3 (.72)
HD Utility	73 (1.9)	696 (316)	22.4 (.63)
	84 (2.1)	758 (344)	25.3 (.72)
Light Material	82 (2.1)	584 (265)	32.5 (.92)

## STANDARD EQUIPMENT

### OPERATOR'S COMPARTMENT

ROPS/FOPS canopy w/side screens  
No-tools tilt ROPS/FOPS  
Instrument panels  
Water-shedding vinyl seat  
2 in (51 mm) retractable seat belt  
Hand & foot throttles  
Ergonomic hand controls  
Seat bar w/integral arm rests  
Loader control lockout system  
Electric brake control  
Rear window w/emergency escape feature  
Floor cleanout panel

### LOADER

Radial lift linkage  
Mechanical two-way self-leveling linkage  
Power Cycle bucket linkage  
Mechanical attachment coupler

## OPTIONAL EQUIPMENT

### OPERATOR'S COMPARTMENT

Vinyl suspension seat w/ 2 in (51 mm) retractable seat belt  
Vinyl suspension seat w/ 3 in (76 mm) retractable seat belt  
Electric auxiliary hydraulic control  
Glass front door w/wiper & washer  
Sliding side windows  
Air conditioning  
Heater (deluxe)  
Accessory power outlet  
Floor mat w/footrests  
Headliner

### ENGINE

Case Family III 445T/M2 diesel  
Tier II Certified  
Integral engine oil cooling  
Fuel filter w/water trap  
Dual element air cleaner  
95 amp alternator  
850 CCA 12-volt battery  
Heavy-duty radiator

### POWERTRAIN

Hydrostatic four wheel drive  
Servo controls  
ASA #120HS drive chain  
SAHR disc parking brakes

### HYDRAULICS

Auxiliary hydraulics 3000 psi  
(207 bar) - 22.1 gpm (83.9 L/min),  
Auxiliary interlock system  
Loader arm mounted ISO flat face hydraulic quick connectors  
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, 1-rear  
Rear tail lights  
Options harness

### LOADER

Auxiliary front electric control  
Ride Control  
Hydraulic attachment coupler

### HYDRAULICS

Auxiliary high-flow 3000 psi  
(207 bar) - 37.2 gpm (140.6 L/min)  
Attachment case drain plumbing  
Electronically controlled auxiliary hydraulics  
Second auxiliary hydraulics

### ENGINE

Coolant block heater  
Grid heater

### OTHER

2-speed ground drive  
Backup alarm and horn package  
Rotating beacon  
875 lb (397 kg) counterweight  
Lift hooks  
Drawbar  
Heavy-duty rear door  
Special paint  
Language decals  
Factory-installed tires - see page 2  
Buckets - see page 3  
Bolt-on spill guards  
Bolt-on cutting edges  
42 in (1.07 m)/48 in (1.22 m) pallet forks  
Jump start terminals/battery disconnect switch  
Steel tracks

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

NOTE: All engines meet current EPA emissions requirements.

IMPORTANT: CNH America LLC reserves the right to change these specifications without notice and without incurring any obligation relating to such change. CNH America LLC does not warrant the safety or reliability of attachments from other manufacturers.

Case is a registered trademark of CNH America LLC. Any trademarks referred to herein, in association with goods and/or services of companies other than CNH America LLC, are the property of those respective companies.



[www.casece.com](http://www.casece.com)

 CASE IS A BRAND OF CNH,  
A GLOBAL LEADER IN CONSTRUCTION EQUIPMENT, AGRICULTURAL EQUIPMENT AND FINANCIAL SERVICES.

Form No. CCE1200517  
Replaces form no. CCE5210403

Printed in U.S.A.

© 2005 CNH America LLC  
All Rights Reserved