

# 90XT Skid Steer



## ENGINE

Model ..... Case 4T-390 diesel  
Type ..... 4-stroke, turbocharged  
Cylinders ..... 4  
Bore/Stroke ..... 4.02" x 4.72"  
(102 x 120 mm)  
Displacement ..... 239 in<sup>3</sup> (3.9 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 ..... 2650±50  
Rated - full load ..... 2500  
Low idle ..... 950  
Horsepower per SAE J1349  
Gross ..... 85 (63.4 kW) @ 2500 rpm  
Net ..... 74 (55.2 kW) @ 2500 rpm  
Peak torque  
@ 1500 rpm ..... 239 lb-ft (324 N·m)

## ENGINE COOLING

Radiator  
Core type ..... Square wave  
serpentine  
Core size area ..... 165.9 in<sup>2</sup> (.107 m<sup>2</sup>)  
Rows of tubes ..... 5  
Cap pressure ..... 14.9 psi (103 kPa)  
Fan  
Diameter ..... 20.4" (518 mm)  
Ratio ..... 1.1:1  
Water pump  
Style ..... Integral  
Flow ..... 50.7 gpm (192 L/min)  
Engine lubrication  
Pump ..... Deep sump plate cooler  
with pressurized  
under-piston nozzles  
Pump operating angle ratings  
Side-to-side ..... Rated 45°  
Fore and aft ..... Rated 35°  
Oil filtration ..... Replaceable,  
full-flow cartridge

## POWERTRAIN

Drive pump .... Tandem, axial piston  
hydrostatic transmission  
driven directly off  
engine flywheel  
Pump to engine ratio ..... 1:1  
Displacement... 0 to 3.11 in<sup>3</sup> (51 cc)  
Pump flow @ rated rpm... 33.7 gpm  
(128 L/min)  
Flow ..... Bi-directional  
Charge pressure... 350 psi (24 bar)  
System relief..... 5004 psi (345 bar)  
Controls ..... Servo  
Drive motors ..... Variable piston  
hydrostatic motors  
with shuttle valve  
Maximum displacement.... 2.68 in<sup>3</sup>  
(44 cc)  
Speed @ rated engine rpm  
@ max displacement..... 2898 rpm  
Torque @ max displacement  
and relief pressure..... 178 lb-ft  
(241 N·m)  
Travel ..... High/low  
push-button control  
Low speed ..... 0 - 7.1 mph  
(11.4 km/h)  
High speed ..... 0 - 11.1 mph  
(17.86 km/h)  
Final drive..... Double-reduction  
planetary to chain drive  
Drive chain  
Size ..... ASA #120HS  
Tensile strength ..... 41,000 lb  
(182,384 N)  
Axles..... One-piece, forged  
induction-hardened  
high carbon steel  
Torque @ rated rpm ..... 5,994 lb-ft  
(8126 N·m)  
Diameter ..... 2.5" (63.5 mm)  
Length ..... 14.76" (375 mm)  
Parking brakes ..... Spring-applied,  
hydraulic release  
Capacity ..... 4,560 lb-ft (6182 N·m)  
(per side at the axle)  
Engagement ..... Depress on/off  
brake button at left-hand control  
lever, raise seat bar, get off seat,  
stop engine

## HYDRAULIC SYSTEM

Standard equipment pump  
Gear pump with integrated  
constant pressure valve  
Displacement .. 2.44 in<sup>3</sup>/rev (40 cc)  
Pump flow @ rated engine rpm  
Total ..... 25.1 gpm (95 L/min)  
To charge... 4.8 gpm (18.2 L/min)  
Flow ..... 20.3 gpm (77 L/min)  
Loader control valve ..... 2-spool  
open-center series with  
power beyond port  
Relief pressure .. 3002 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)  
Auxiliary valve.... 1-spool open-center  
Hydraulic lines  
Tubing ..... 2nd plated steel  
Loop hoses ..... SAE 100 R12  
Swing-out hydraulic oil cooler  
Core type ..... Four row in-line  
Hydraulic filters .... 2-micron charge,  
6-micron return  
spin-on replaceable elements  
on the return and charge  
lines with warning indicator  
Filter capacity  
Return line filter ..... 0.95 oz (27 g)  
Charge line filter .... 0.35 oz (10 g)

## INSTRUMENTATION

Digital hourmeter  
 Fuel level LED bar graph  
 Warning lights  
   Fuel level  
   Voltage  
 Engine coolant temperature  
 Transmission charge pressure  
 Engine oil pressure  
 Air cleaner restriction  
 Hydraulic filter restriction  
 Engine oil pressure  
 Parking brake  
 Systems normal  
 Seat belt reminder  
 Warning alarms  
   Engine coolant temperature  
   Transmission charge pressure  
   Engine oil pressure  
   Hydraulic oil temperature  
   Seat belt reminder

## ELECTRICAL SYSTEM

Alternator ..... 65 amp  
 Starter ..... 2.5 kW  
 Battery ..... 12-volt low-maintenance  
   610 cold-cranking amps  
   @ 0° F (-18 C)

## OPERATOR ENVIRONMENT

No-tool tilt ROPS/FOPS canopy  
   w/side screens  
 Vinyl seat  
 Seat presence switch  
 2" (51 mm) retractable seat belt  
 Restraint bar w/integral arm rests  
 Two servo-assist, 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" (57 mm)  
   Rod diameter ..... 1.75" (44.4 mm)  
   Stroke ..... 38.19" (970 mm)  
   Closed length..... 51.97" (1.32 m)  
 Bucket cylinder  
   Bore diameter..... 2.5" (63.5 mm)  
   Rod diameter ..... 1.5" (38.1 mm)  
   Stroke ..... 20.87" (530 mm)  
   Closed length..... 47.4" (1.2 m)

## OPERATING WEIGHTS

Unit equipped with 15.5 x 16.5  
 Galaxy Hippo tires, 82" (2.08 m) dirt  
 bucket, mechanical attachment  
 coupler, full fuel ... 8,950 lb (4060 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)  
 Auxiliary high-flow  
   3000 psi (207 bar) .... +256 lb (116 kg)  
   Hydrostatic..... +269 lb (122 kg)  
 Heater ..... +10 lb (4.5 kg)  
 Suspension seat..... +10 lb (4.5 kg)  
 Hydraulic attachment  
   coupler ..... +38 lb (17 kg)  
 Counterweight ..... +925 lb (420 kg)

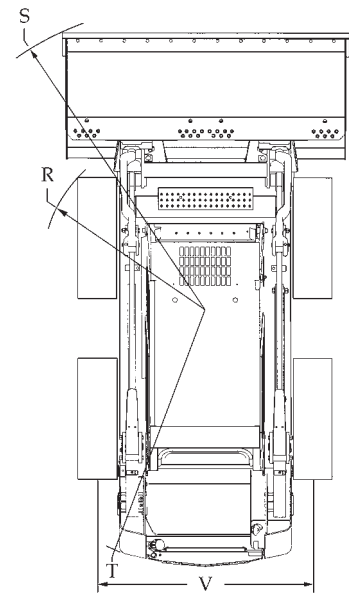
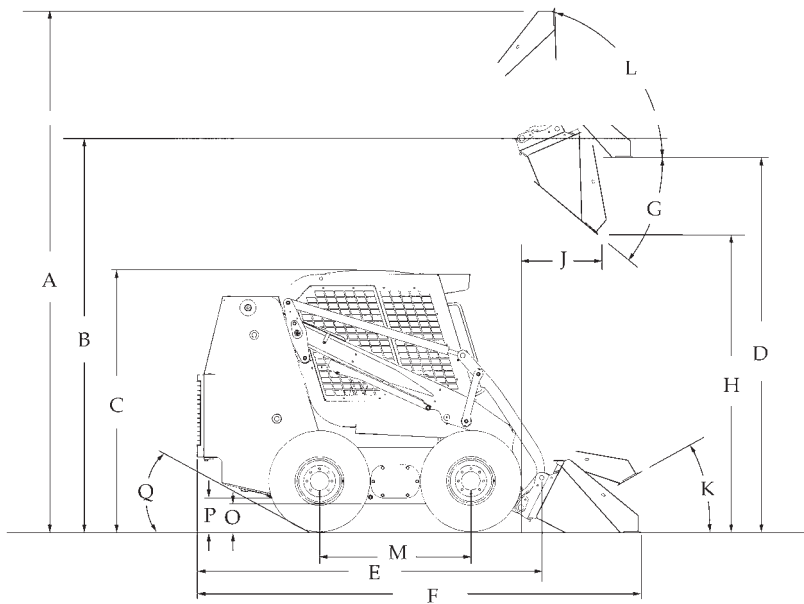
## SERVICE CAPACITIES

Fuel tank..... 20.7 gal (78.3 L)  
 Engine oil w/filter ..... 11 qt (10.4 L)  
 Engine oil w/o filter..... 10 qt (9.5 L)  
 Engine cooling system... 17.5 qt (16.6 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*	Max Travel Speed
Solideal Hauler SKS.....	12.00 x 16.5	10	0.75" (19 mm)	13.1" (333 mm)	72" (1.83 m)	51 lb (23.1 kg)	11.1 mph (17.9 km/h)
Galaxy Beefy Baby II.....	12.00 x 16.5	10	0.75" (19 mm)	12.3" (312 mm)	72" (1.83 m)	81 lb (36.7 kg)	11.1 mph (17.9 km/h)
Galaxy Hippo .....	33/15.50 x 16.5	12	0.81" (21 mm)	12.8" (325 mm)	80" (2.03 m)	96 lb (43.5 kg)	11.1 mph (17.9 km/h)
Galaxy King Kong.....	12.00 x 16.5	10	1.25" (32 mm)	10.2" (259 mm)	72" (1.83 m)	96 lb (43.5 kg)	11.2 mph (18.0 km/h)
Galaxy Hulk.....	12.00 x 16.5	12	0.81" (21 mm)	12.3" (312 mm)	72" (1.83 m)	100 lb (45.3 kg)	11.1 mph (17.9 km/h)
Galaxy Bulky Hulk.....	33/15.50 x 16.5	14	0.81" (21 mm)	16.7" (424 mm)	80" (2.03 m)	124 lb (56.2 kg)	11.1 mph (17.9 km/h)
Case Steel Tracks .....	12.00 x 16.5...	NA	1.4"∞ (36 mm)	14.7"∅ (373 mm)	78" (1.98 m)	959 lb (435.0 kg)	11.8 mph (18.9 km/h)

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



## DIMENSIONS

- A. Overall operating height
  - Dirt bucket ..... 150.3" (3.82 m)
  - Light material bucket ..... 158.9" (4.04 m)
- Height to\*
- B. Bucket hinge pin ..... 124.5" (3.16 m)
- C. Top of rollover protective structure ..... 80" (2.03 m)
- D. Bottom of level bucket, loader arm fully raised ..... 116.5" (2.96 m)
- Overall length
- E. w/o attachment w/coupler ..... 105.5" (2.68 m)
- F. w/dirt bucket on ground ..... 137.6" (3.49 m)
- F. w/light material bucket on ground ..... 145.3" (3.69 m)
- G. Dump angle at maximum height
  - Dirt bucket ..... 40°
  - Light material bucket ..... 35°
- H. Dump height – loader arm fully raised
  - Dirt bucket ..... 94.5" (2.40 m)
  - Light material bucket ..... 93.0" (2.36 m)
- J. Reach – loader arm fully raised
  - Dirt bucket ..... 26.7" (678 mm)
  - Light material bucket ..... 35.3" (896 mm)
- Maximum attachment rollback
- K. Bucket on ground ..... 30°
- L. Bucket at full height ..... 55°
- M. Wheelbase ..... 46.06" (1.17 m)
- Ground clearance
- O. Bottom of chain case ..... 9.1" (231 mm)
- P. Bottom of belly pan ..... 11" (279 mm)
- P. Bottom of optional counterweight ..... 9.1" (231 mm)
- Q. Angle of departure ..... 28°
- Clearance circle front
- R. less bucket ..... 54.5" (1.38 m)
- S. w/73" (1.85 m) dirt bucket on ground ..... 84.3" (2.14 m)
- S. w/82" (2.08 m) dirt bucket on ground ..... 86.3" (2.19 m)
- S. w/82" (2.08 m) light material bucket on ground ..... 93.3" (2.37 m)
- T. Clearance circle rear ..... 62.2" (1.58 m)
- V. Tread width, centerline to centerline ..... 64.5" (1.64 m)

NOTE: \*Equipped with 15.5 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 cylinder ..... 5,290 lbf (23 531 N)
  - Bucket cylinder ..... 6,200 lbf (27 578 N)
- Dig depth
  - w/bucket flat ..... 0.24" (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 ft³ (m³)
Dirt	73 (1.9)	553 (251)	16.8 (.48)
	82 (2.1)	593 (269)	19 (.54)
	HD Dirt	73 (1.9)	621 (282)
Utility	82 (2.1)	676 (307)	19 (.54)
	73 (1.9)	628 (285)	22.4 (.63)
	82 (2.1)	674 (306)	25.3 (.72)
HD Utility	73 (1.9)	696 (316)	22.4 (.63)
	82 (2.1)	758 (344)	25.3 (.72)
	Light Material	82 (2.1)	584 (265)

# STANDARD EQUIPMENT

## OPERATOR'S COMPARTMENT

ROPS/FOPS canopy w/side screens  
No-tools tilt ROPS/FOPS  
Instrument panels  
Vinyl seat  
2" (51 mm) retractable seat belt  
Hand & foot throttles  
Ergonomic hand controls  
Restraint bar w/integral arm rests  
Loader control lockout system  
Fingertip brake control  
Rear window w/escape provision  
Horn  
Floor cleanout panel

## LOADER

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

## ENGINE

Case 4T-390 turbocharged diesel  
Automatic fan belt tensioner  
Integral engine oil cooling  
Fuel filter w/water trap  
Dual element air cleaner  
65 amp alternator  
610 CCA 12-volt battery  
Heavy-duty radiator

## POWERTRAIN

Hydrostatic four wheel drive  
High/Low range  
Servo controls  
Double reduction planetary final drive  
ASA #120HS drive chain  
Disc parking brakes

## HYDRAULICS

Auxiliary hydraulics 3000 psi (207 bar) - 20.3 gpm (77 L/min), hydraulic circuit pedal lock, loader arm mounted ISO flat face couplers  
Loader function lockout system  
Loader lift lockout override  
2-spool loader control valve  
1-spool auxiliary valve  
Heavy-duty swing-out oil cooler  
Loader arm float position

## OTHER

Integral bumper counterweight  
Heavy-duty louvered rear grille  
Lockable service access hood  
Single-point daily servicing  
Halogen lights, 2-front, 1-rear  
Rear tail lights and reflectors

# OPTIONAL EQUIPMENT

## OPERATOR'S COMPARTMENT

Vinyl suspension seat w/2" (51 mm) retractable seat belt  
Vinyl suspension seat w/3" (76 mm) retractable seat belt  
Auxiliary front electric controls  
Chassis options harness  
Lexan® front door  
Glass front door w/wiper & washer  
Sliding side windows  
Heater (floor)  
Heater (deluxe)  
Accessory power outlet

## LOADER

Ride Control  
Hydraulic attachment coupler

## ENGINE

Coolant block heater  
Thermostart

## HYDRAULICS

Auxiliary high-flow  
3000 psi (207 bar) - 40.9 gpm (155 L/min)  
Hydrostatic high-flow  
5000 psi (345 bar) - 30.4 gpm (115 L/min)

## OTHER

Backup alarm  
Rotating beacon  
925 lb (420 kg) counterweight  
Front lift hooks

## OTHER (continued)

Drawbar  
Special paint  
Manual brake release  
Buckets - see page 3  
42" (1.07 m) / 48" (1.22 m) pallet forks  
Model 560 trencher  
Model D125 backhoe  
Bolt-on bucket cutting edges  
Catalytic muffler  
Aspirator  
Battery disconnect switch  
Automatic engine shutdown system  
Steel tracks  
ECI proportional fan drive  
Tire options  
Galaxy Poly Soft-Super Fill  
Tyrlyner  
Factory-installed tires - see page 2

Lexan is a trademark of the General Electric Co.

Galaxy, Beefy Baby II, Hippo, Hulk, King Kong, Bulky Hulk, and Poly Soft-Super Fill are trademarks of the Galaxy Tire Co.

Hauler SKS is a trademark of Solideal Industrial Tires, Inc.

Tyrlyner is a registered trademark of Tyrlyner Company.

© 2001 CASE CORPORATION

All Rights Reserved. Case is a registered trademark of Case Corporation.

## CASE CORPORATION

700 STATE STREET  
RACINE, WI 53404 U.S.A.

## CASE CANADA CORPORATION

450 SHERMAN AVENUE NORTH  
HAMILTON, ON L8N 4C4 CANADA

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

Form No. CE 119-10-01

Replaces Form No. - CE 119-7-99



IMPORTANT: Case Corporation reserves the right to change these specifications without notice and without incurring any obligation relating to such change. Units shown may be equipped with non-standard equipment. Attachments from other manufacturers are shown for illustration only. Case Corporation does not warrant the safety or reliability of attachments from other manufacturers.

Visit Case Corporation on the Web at:

<http://www.casecorp.com>

Printed in U.S.A.