

ENGINE

Make	Case/FPT
Model	F2CFE614B Tier 4 interim certified
Type	4-stroke, turbocharged
Cylinders	6-cylinder in-line
Bore/Stroke	4.61 in x 5.31 in (177 X 135 mm)
Displacement	531 in ³ (8.7 L)
Fuel	#2 Diesel (#1 & 2 mixture permitted for cold temperature) Does not require ultra-low sulfur fuel B5 biodiesel tolerant
Fuel injection	Direct injection – electronic
Fuel filter	Replaceable, full flow spin-on cartridge
Fuel pump	Bosch CP 3.3
Gradeability	35° fore/aft & side to side
Air filter	2-element dry-type w/ warning restriction indicator
Rear-mount cooling module – non-stacked:	External independent mounted coolers
Fan – hydraulic driven:	
Style	9 blade puller
Diameter	34.5 in (876 mm)
Water pump	Integral
Engine oil:	
Pump:	Deep sump plate cooler with pressurized under-piston nozzles
Pump operating angles:	
Side-to-side	35°
Fore and aft	35°
Oil filtration	Replaceable, full flow, spin-on cartridge
Engine speeds – RPM:	
Rated speed, full load	2100
Horsepower – maximum power range:	
Peak @ 1800 RPM:	
Gross	347 hp (259 kW)
Net	320 hp (239 kW)
Rated @ 2100 RPM:	
Gross	315 hp (235 kW)
Net	284 hp (212 kW)
Torque – maximum power range @ 1100 RPM:	
Gross	1183 lb·ft (1604 N·m)
Net	1154 lb·ft (1564 N·m)
Torque rise:	
Maximum power range	50%

NOTE: Gross horsepower and torque per SAE J1995
Net horsepower and torque per SAE J1349

POWERTRAIN

Transmission:	4F/3R Proportional w/ Electronic Control Module torque sensing autoshift/manual shift and modulation	
Gears	Helical cut	
Torque converter:		
Stall ratio	2.51:1	
Differential:	Open on front and rear axles	
Rear axle oscillation	24° total	
Front and rear axles:		
Differential ratio	4.25	
Planetary ratio	6.35	
Final axle ratio	27.00	
Special application axles – optional:		
Front axle equipped with locking differential		
Rear axle equipped with open differential		
Planetaries	Outboard	
Service brakes:	Hydraulically actuated, maintenance-free, multiple wet disc w/ accumulator to all four wheels	
Brake surface area:		
Front hub – each	1144 in ² (.738 m ²)	
Rear hub – each	1144 in ² (.738 m ²)	
Parking brakes:	Spring-applied hydraulic release disc on transmission output shaft	
4 speed transmission travel speeds:		
	Forward	Reverse
	mph (km/h)	mph (km/h)
1st	4.3 (6.9)	4.3 (6.9)
2nd	7.2 (11.6)	7.2 (11.6)
3rd	11.0 (17.7)	15.8 (25.8)
4th	23.3 (37.4)	—

NOTE: Travel speeds at full engine throttle
w/ 26.5 x 25 XHAT tires.

ELECTRICAL

Voltage	24 Volts, negative ground
Alternator	95 amp
Batteries (2)	900 CCA 12-volt

OPERATOR ENVIRONMENT

ROPS cab w/ heat and air conditioning;
Key start; Articulated power steering w/ tilt
column; Fully adjustable, suspension seat;
2 in (51 mm) retractable seat belt; Foot
throttle; Single lever 2-function loader control;
w/ wrist rest; Cup holder; Coat hook; (1) Interior
rearview mirror; Storage tray behind seat;
Lunch box compartment; Single brake pedal;
F/N/R shuttle switch; Glove box; Pressurized
air filtering; Anti-glare window strip; Defroster;
Side window, partial/fully open; Dome light;
Wipers, rear and intermittent front;
Windshield washers, front and rear;
Rubber floor mat; Horn.

Gauges:

Analog:

Engine coolant temperature; Fuel level;
Transmission oil temperature; Hydraulic
oil temperature.

LCD screen:

Hour meter; Time; FNR indication; Trip
computer; Metric/english; Differential
lock*; Joystick steering indicator*;
Engine speed; Automatic trans indication;
DeClutch indication; Fuel consumption;
Engine diagnostics; Error reporting;
Travel speed; Current gear selection;
Engine mode indication; Multiple
languages; Transmission diagnostics;
DEF (diesel exhaust fluid) gauge;
Engine oil temperature; Oil pressure;
Coolant temperature; Transmission oil
temperature; Transmission sump oil
temperature; Hydraulic oil temperature;
System voltage; Turbocharger air
temperature; Fuel level percentage;
Warning prompts.

Warning lights:

Main warning; Low fuel; Turn signals;
Four-way flashers; High beam lights;
Grid heater*; Low brake pressure;
Low steering pressure; Parking brake.

Audible/Visual alarms:

Caution alarm:

Parking brake; Coolant temperature;
Hydraulic oil temperature; Transmission
oil temperature; Air filter; Transmission
filter; Hydraulic filter; Alternator; Low fuel.

Critical alarm:

Engine oil pressure; Brake pressure;
Steering pressure – w/ aux. steering*;
Coolant temperature; Hydraulic oil
temperature; Transmission oil temperature.

Backup alarm

NOTE: *If equipped with option.

OPERATING WEIGHT

Z-Bar

Unit equipped with ROPS cab with heater and A/C, standard counterweight, 26.5R25 XHA2 tires, 6.25 yd³ (4.8 m³) pin on w/ bolt on edge, full fuel, 175 lb (79 kg) operator:
59,578 lb (27 024z kg)

XR

Unit equipped with ROPS cab with heater and A/C, full counterweight, 26.5R25 XHA2 tires, 6.25 yd³ (4.8 m³) pin on w/ bolt on edge, full fuel, 175 lb (79 kg) operator:
61,263 lb (27 788 kg)

HYDRAULICS

Pump – steering/implement:

Closed center pressure / flow compensated

Variable displacement – load-sensing:

12.2 in³/rev 100.4 gpm @ 2000 rpm
(380 L/min @ 2000 rpm)

Loader control valve:

Closed-center, sectional 2, 3 or 4-function with pilot control for lift, tilt and auxiliary hydraulics, electromagnetic detents in float, raise and rollback

Loader auxiliary steering:

Hydraulic orbital center-pivot articulating w/ on-demand oil flow

High pressure standby:

Implement 3650 psi (25 165 kPa)
Steering 3495 psi (24 097 kPa)

Filtration:

10-micron, full flow replaceable cartridges on return line, condition indicator light for filter

SERVICE CAPACITY

Fuel tank	125 gal (473 L)
DEF (diesel exhaust fluid) tank	24 gal (90.8 L)
Usable capacity	17.1 gal (64.7 L)
Hydraulic system:	
Reservoir	34 gal (130 L)
Total	66 gal (300 L)
Transmission:	
Service w/ filter	48 qt (45.4 L)
Front and rear axle:	
Front axle	68 qt (64.0 L)
Rear axle	68 qt (64.0 L)
Engine oil w/ filter	28 qt (26.5 L)
Cooling system	15 gal (56.8 L)

OTHER SPECIFICATIONS

Lift cylinder:

Bore diameter	7.00 in (177.8 mm)
Rod diameter	4.50 in (114.3 mm)
Stroke	34.48 in (875.8 mm)

Dump cylinder:

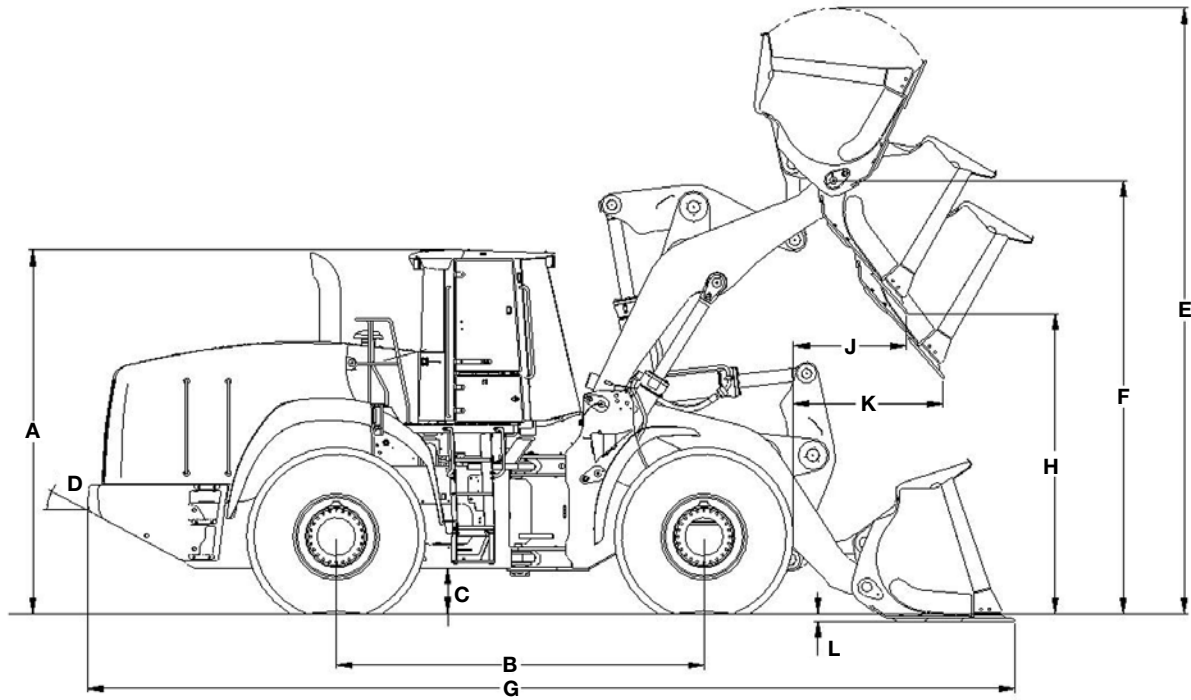
Bore diameter	8.00 in (203.2 mm)
Rod diameter	5.00 in (127.0 mm)
Stroke	27.35 in (694.7 mm)

Loader:

Z-Bar loader linkage; Single control for lift and tilt; Positive hold float; Automatic return-to-dig; Automatic height control; Automatic return-to-travel; Brake pedal transmission disconnect; Bucket position indicator on bucket.

Cycle time:

Raise w/ rated bucket load	6.5 sec
Dump w/ rated bucket load	1.4 sec
Lower – empty:	
Power down	2.8 sec
Float down	2.6 sec



Line drawings are for illustrative purpose only and may not be exact representation of unit.

DIMENSIONS

A. Height to top of ROPS cab	140.6 in (3573 mm)
B. Wheelbase	139.8 in (3550 mm)
C. Ground clearance	16.9 in (429.5 mm)
D. Angle of departure, rear	26°
Width:	
Overall* without bucket	117.7 in (2.99 m)
Centerline tread	88.6 in (2.25 m)
Turning radius* – outside	250.9 in (6.37 m)
Turning angle:	
From center	40°
Total angle	80°
Rear axle oscillation, total	26°

NOTE: *Dimensions taken with 26.5R25 Michelin XHA2 tires. Additional dimensions on pages 3 & 4.

WEIGHT ADJUSTMENTS

Select Options	Weight Adjustment	Tipping Load Adjustment Straight	Tipping Load Adjustment 40° Turn
26.5 x 25 L3 Goodyear	-284 lb (-129 kg)	-129 lb (-58 kg)	-327 lb (-148 kg)
26.5 x 25 L4 Goodyear	+880 lb (+399 kg)	+1305 lb (+592 kg)	+1180 lb (+535 kg)
26.5 x 25 L5 Goodyear	+1308 lb (+593 kg)	+2048 lb (+929 kg)	+2027 lb (+920 kg)

NOTE: Unit equipped with Z-Bar loader arms, 6.25 yd³ (4.8 m³) pin on bucket w/ bolt-on edge, 26.5R25 Michelin XHA2 tires, ROPS cab with heater and A/C, full counterweight, front and rear fenders, full fuel and 175 lb (75 kg) operator. Adjust select options from rated weight.

PERFORMANCE DATA

1121F Z-Bar*	5.25 yd³ General Purpose Pin On (4.0 m³) Bucket with Bolt-on Edge	5.25 yd³ General Purpose Pin On (4.0 m³) Bucket with Teeth Only	6.25 yd³ General Purpose Pin On (4.8 m³) Bucket with Bolt-on Edge
SAE bucket capacity – struck	4.53 yd ³ (3.46 m ³)	4.33 yd ³ (3.31 m ³)	5.45 yd ³ (4.17 m ³)
Heaped	5.25 yd ³ (4.01 m ³)	5.06 yd ³ (3.87 m ³)	6.25 yd ³ (4.78 m ³)
Bucket width – outside	125.8 in (3195 mm)	125.8 in (3195 mm)	125.8 in (3195 mm)
Bucket weight	4,936 lb (2239 kg)	4,896 lb (2221 kg)	5,322 lb (2414 kg)
E. Operating height – fully raised with spillguard	234.6 in (5960 mm)	234.6 in (5960 mm)	240.9 in (6120 mm)
F. Hinge pin height – fully raised	174.9 in (4443 mm)	174.9 in (4443 mm)	174.9 in (4443 mm)
G. Overall length – bucket level on ground	353.0 in (8967 mm)	360.2 in (9148 mm)	359.0 in (9113 mm)
Dump angle – fully raised	50°	50°	50°
H. Dump height – fully raised, 45° dump	129.9 in (3299 mm)	125.3 in (3183 mm)	126.0 in (3201 mm)
J. Bucket reach – fully raised, 45° dump	45.5 in (1157 mm)	51.0 in (1296 mm)	50.1 in (1273 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	77.4 in (1965 mm)	80.9 in (2054 mm)	80.3 in (2040 mm)
Operating load – SAE	19,756 lb (8961 kg)	19,910 lb (9031 kg)	19,525 lb (8856 kg)
Maximum material density – SAE	3,767 lb/yd ³ (2235 kg/m ³)	3,935 lb/yd ³ (2335 kg/m ³)	3,123 lb/yd ³ (1853 kg/m ³)
Tipping load – SAE:			
Straight	46,627 lb (21 150 kg)	46,980 lb (21 310 kg)	46,184 lb (20 949 kg)
40° turn	39,512 lb (17 923 kg)	39,820 lb (18 062 kg)	39,050 lb (17 713 kg)
Lift capacity:			
Full height	33,106 lb (15 017 kg)	33,086 lb (15 007 kg)	32,745 lb (14 853 kg)
Maximum reach	48,483 lb (21 991 kg)	48,559 lb (22 026 kg)	48,090 lb (21 813 kg)
Ground	58,121 lb (26 363 kg)	58,687 lb (26 620 kg)	56,730 lb (25 732 kg)
Breakout force with tilt cylinder	56,309 lb (25 542 kg)	60,475 lb (27 431 kg)	49,960 lb (22 661 kg)
Maximum rollback:			
Ground	45°	45°	45°
Carry position	51°	51°	51°
@ Maximum reach	68°	68°	68°
@ Full height	65°	65°	65°
L. Dig depth	4.6 in (118 mm)	4.6 in (118 mm)	4.7 in (118 mm)
Maximum grading angle with bucket – back dragging	60°	60°	60°
Loader clearance circle	561.8 in (14 271 mm)	565.6 in (14 367 mm)	565.0 in (14 352 mm)

1121F XR	5.25 yd³ General Purpose Pin On (4.0 m³) Bucket with Bolt-on Edge	5.25 yd³ General Purpose Pin On (4.0 m³) Bucket with Teeth Only	6.25 yd³ General Purpose Pin On (4.8 m³) Bucket with Bolt-on Edge
E. Operating height – fully raised with spillguard	251.1 in (6377 mm)	251.1 in (6377 mm)	257.4 in (6537 mm)
F. Hinge pin height – fully raised	191.3 in (4860 mm)	191.3 in (4860 mm)	191.3 in (4860 mm)
G. Overall length – bucket level on ground	369.1 in (9374 mm)	376.2 in (9555 mm)	375.0 in (9526 mm)
Dump angle – fully raised	50°	50°	50°
H. Dump height – fully raised, 45° dump	146.3 in (3717 mm)	141.7 in (3600 mm)	142.5 in (3619 mm)
J. Bucket reach – fully raised, 45° dump	47.2 in (1200 mm)	52.7 in (1338 mm)	51.8 in (1316 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	91.9 in (2335 mm)	95.7 in (2430 mm)	95.1 in (2415 mm)
Operating load – SAE	17,378 lb (7882 kg)	17,506 lb (7941 kg)	17,092 lb (7753 kg)
Maximum material density – SAE	3,313 lb/yd ³ (1966 kg/m ³)	3,460 lb/yd ³ (2053 kg/m ³)	2,734 lb/yd ³ (1622 kg/m ³)
Tipping load – SAE:			
Straight	40,997 lb (18 596 kg)	41,298 lb (18 732 kg)	40,386 lb (18 319 kg)
40° turn	34,765 lb (15 765 kg)	35,012 lb (15 881 kg)	34,185 lb (15 506 kg)
Lift capacity:			
Full height	31,654 lb (14 358 kg)	31,651 lb (14 357 kg)	31,281 lb (14,189 kg)
Maximum reach	43,573 lb (19 764 kg)	43,668 lb (19 808 kg)	43,163 lb (19,578 kg)
Ground	48,833 lb (22 150 kg)	49,273 lb (22 350 kg)	47,616 lb (21,598 kg)
Breakout force with tilt cylinder	56,856 lb (25 790 kg)	61,063 lb (27 698 kg)	50,449 lb (22 883 kg)
Maximum rollback:			
Ground	42°	42°	42°
Carry position	49°	49°	49°
@ Maximum reach	66°	66°	66°
@ Full height	66°	66°	66°
L. Dig Depth	4.7 in (118 mm)	4.7 in (118 mm)	4.7 in (119 mm)
Maximum grading angle with bucket – back dragging	63°	62°	62°
Loader clearance circle	577.3 in (14 663 mm)	581.8 in (14 777 mm)	581.1 in (14 759 mm)

PERFORMANCE DATA

1121F Z-Bar*	6.25 yd³ General Purpose Pin On (4.8 m³) Bucket with Teeth Only
SAE bucket capacity – struck	5.25 yd ³ (4.01 m ³)
Heaped	6.06 yd ³ (4.63 m ³)
Bucket width – outside	125.8 in (3195 mm)
Bucket weight	5,284 lb (2397 kg)
E. Operating height – fully raised with spillguard	240.9 in (6120 mm)
F. Hinge pin height – fully raised	174.9 in (4443 mm)
G. Overall length – bucket level on ground	366.1 in (9300 mm)
Dump angle – fully raised	50°
H. Dump height – fully raised, 45° dump	121.5 in (3085 mm)
J. Bucket reach – fully raised, 45° dump	55.6 in (1412 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	83.6 in (2124 mm)
Operating load – SAE	19,668 lb (8921 kg)
Maximum material density – SAE	3,246 lb/yd ³ (1926 kg/m ³)
Tipping load – SAE:	
Straight	46,516 lb (21 099 kg)
40° turn	39,336 lb (17 843 kg)
Lift capacity:	
Full height	32,725 lb (14 844 kg)
Maximum reach	48,162 lb (21 846 kg)
Ground	57,254 lb (25 970 kg)
Breakout force with tilt cylinder	53,243 lb (24 151 kg)
Maximum rollback:	
Ground	45°
Carry position	51°
@ Maximum reach	68°
@ Full height	65°
L. Dig depth	4.7 in (118 mm)
Maximum grading angle with bucket – back dragging	60°
Loader clearance circle	568.9 in (14 451 mm)

NOTE:

*Z-Bar performance data shown w/ standard counterweight.
Performance data unit equipped with 26.5R25 Michelin XHA2 tires, ROPS cab w/ heater and A/C, standard counterweight, full fuel and 175 lb (75 kg) operator. Specifications per SAE J732, J1234, J695, J742, and J818.

1121F XR	6.25 yd³ General Purpose Pin On (4.8 m³) Bucket with Teeth Only
E. Operating height – fully raised with spillguard	257.4 in (6537 mm)
F. Hinge pin height – fully raised	191.3 in (4860 mm)
G. Overall length – bucket level on ground	382.2 in (9707 mm)
Dump angle – fully raised	50°
H. Dump height – fully raised, 45° dump	137.9 in (3503 mm)
J. Bucket reach – fully raised, 45° dump	57.3 in (1454 mm)
K. Bucket reach – 7 ft 0 in (2.13 m) height, 45° dump	98.6 in (2505 mm)
Operating load – SAE	17,214 lb (7808 kg)
Maximum material density – SAE	2,841 lb/yd ³ (1686 kg/m ³)
Tipping load – SAE:	
Straight	40,673 lb (18 449 kg)
40° turn	34,428 lb (15 616 kg)
Lift capacity:	
Full height	31,278 lb (14 188 kg)
Maximum reach	43,254 lb (19 620 kg)
Ground	48,023 lb (21 783 kg)
Breakout force with tilt cylinder	53,765 lb (24 387 kg)
Maximum rollback:	
Ground	42°
Carry position	49°
@ Maximum reach	66°
@ Full height	66°
L. Dig Depth	4.7 in (119 mm)
Maximum grading angle with bucket – back dragging	62°
Loader clearance circle	585.6 in (14 875 mm)

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

ROPS/FOPS cab structure
See page 1

ENGINE

Case/FPT F2CFE614B
Tier 4 interim certified
Selectable work modes
Maximum power
Automatic power
Standard power
Economy power
Automatic shutdown – idle reduction device
Turbocharger
Charge air cooling
Automatic fan belt tensioner
Integral engine oil cooling
Fuel filter with water trap
Dual-element dry-type air cleaner
Hydraulic-driven cooling fan
Liquid-cooled radiator
Rear-mounted cooling module
Common rail electronic fuel injection

POWERTRAIN

4-wheel drive
4F/3R selectable autoshift/manual shift transmission
Electronic control module – programmable, computer controlled proportional shifting with programmable gear selection
Onboard diagnostics
Single lever electronic shift control
F/N/R switch in loader control handle
Downshift button
Torque converter
Outboard planetary axles
Transmission oil cooler
Brake pedal transmission disconnect
Hydraulic wet disc brakes
Spring-applied hydraulic release parking brake
Limp-Home Mode
Greaseable rear axle trunnion

HYDRAULICS

Single lever 2-function loader control valve
Low-effort steering
Hydraulic driven fan
(8) Diagnostic quick couplers
Split flange hydraulic connections – 1 inch or greater
Hydraulic oil cooler

ELECTRICAL

95 amp alternator and voltage regulator
Electrical disconnect switch
(2) 900 CCA 12-volt batteries
Electric starter
Lights:
Front and rear halogen flood lights
2 Front driving headlights – high/low beam
2 Front flood
2 Rear flood
2 LED stop/tail lights
Front and rear turn signal/flash
Key start/stop switch
Centrally located fuse box with all electrical circuits protected

LOADER

See page 2

OTHER

Electric hood lift
Front and rear fenders
Standard counterweight
Drawbar hitch
Articulation locking bar
Lift arm locking bar
Lift and tie-down points – front/rear
Backup alarm
Remote drain points
3-piece rims

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

Heated cloth-covered air-suspension seat
3 in (76 mm) seat belt
Sound Shield noise suppression package
Radio, 12V AM/FM with auxiliary input
Radio-ready (12 or 24-volt) with 2 auxiliary power (12-volt) outlets
Cab convenience package
Rotating beacon
Second brake pedal
Joystick steering, with extra FNR, kickdown buttons
External rear view mirrors
Rear view camera with accessory mount
Extra front-facing work lights

POWERTRAIN

Special application axles with locking front differential
Axle oscillation stops
Cold weather package
Engine block heater
Fuel heater
Hydraulic oil cooler bypass
Low temperature hydraulic oil
Grid heater
Ejector type pre-cleaner
Remote jump start receptacle

HYDRAULICS

Auxiliary hydraulics
Ride Control
Secondary steering
3 or 4-function loader valves with 2 or 3-lever loader control
Variable speed hydraulic reversing fan

LOADER

Extended reach XR
Attachment auxiliary hydraulics
Buckets – see pages 4 & 5

TIRES

26.5 x 25 L3 Bias
26.5 R25 L3 Radial
26.5 x 25 L5 Bias
26.5 R25 L5 Radial

OTHER

Special paint
Full coverage fenders
Tool box
Fire extinguisher
Side guards for rear frame
License plate brackets, front and rear
12 mph (20 kph) maximum speed control
Wheel chocks



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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