



ENGINE - VHP

Model	F4HFE6133*B003
	NEF 6 cyl. CR TAA 4V, Tier 4 Final
	The engine complies w/ 97/68/EC standards. Electronic control
Type	4-stroke, turbocharged and air-to-air cooled
Cylinders	6-cylinder in-line
Bore/Stroke	4.09 x 5.17 in (104 x 132 mm)
Displacement	409 in ³ (6.7 L)
Fuel	Diesel
Fuel injection	Common Rail
Cooling	Liquid
Horsepower @ 2100 RPM – ISO 14396/ECE R120:	
Gross	193/205/220 hp (144/153/164 kW)
Net	137/154 hp (102/115 kW)
Maximum torque @ 1400 RPM:	
	535 ft-lb (725 N-m)

DRIVETRAIN

Rear axle	Graziano, planetary
Differential	Hydraulic lock, operator controlled
Inboard brakes	Wet disc
Number of discs/brake	5
Brake surface area	2,225 in ² (14 336 cm ²)
Tandems:	
Type	Welded plate
Oscillation	15° each way
Front axle	High strength, welded steel
Oscillation	15° each direction
Wheel lean	21.45° left/right
Tires – standard	405/70 R20 SPT9 Dunlop
Rims	1-piece 13 in x 20 in (330.2 mm x 508 mm)
Transmission type:	
	Direct drive countershaft Powershift w/ electronic shift control and inching pedal
Pump flow @ 2000 RPM	22.4 gpm (85 L/min)
Sump	Integral
Speeds	6 forward/3 reverse

Shifting	Single lever, bump style automatic electronic control
Diagnostics	On-board
Speeds:	
Forward:	mph (km/h)
1st	3.3 (5.4)
2nd	5.2 (8.3)
3rd	7.8 (12.6)
4th	11.9 (19.2)
5th	17.3 (27.9)
6th	24.8 (39.9)
Reverse:	mph (km/h)
1st	3.5 (5.7)
2nd	8.3 (13.3)
3rd	18.1 (29.2)

ELECTRICAL

Voltage	24 Volts, negative ground
Alternator	90 amp
Batteries	2 – Low-maintenance 1010 CCA – 100 Ah (20 hr rate)
Work lights:	
	Headlights – 2; Turn signals, front/rear; Stop/tail – 2; Rear mounted floods – 2; Front mounted floods – 2.
Backup alarm	Optional

OPERATOR ENVIRONMENT

ROPS/FOPS cab – SAE J231, ISO 3449; Cab equipped w/ two fully swinging doors for both side access, tinted safety glasses, front and rear sunshield, openable front windows; Adjustable operator's console – includes hydraulic control levers, steering wheel, indicator lights; Air suspension seat w/ 3 in (76 mm) retractable seat belt and movable armrests; Dome light; Inside rearview mirror; Outside rearview mirrors; Cup holder; Storage tray; 12-volt outlet; Radio ready – 12 Volt; Electrical master switch – automatic; Heater/ defroster/pressurizer; Sound suppression; Delphi AM/FM Radio w/ CD; Steps – left/right; Windshield wiper – front; Windshield washer – front; Coat hook; Storage box left and right; Throttle hand lever.

OPERATING WEIGHT

W/ 11 ft (3.35 m) moldboard, 405/70R20 tires, front counterweight, rear ripper – 5 teeth, 175 lb (79 kg) operator and full fuel:	
836C	26,466 lb (12 005 kg)
836C AWD	27,128 lb (12 305 kg)
Weight, front axle:	
836C	6,226 lb (2 824 kg)
836C AWD	6,446 lb (2 924 kg)
Weight, rear axle:	
836C	20,241 lb (9 181 kg)
836C AWD	20,681 lb (9 381 kg)
Blade pressure:	
836C	10,736 lb (4 870 kg)
836C AWD	11,003 lb (4 991 kg)

HYDRAULICS

System design	Closed center, load sensing
Hydraulic pump	Load sensing piston pump, variable displacement, pressure and flow compensated
Rated flow @ 2100 RPM	25 gpm (94.5 L/min)
Control valve	10 section
Side shift and pitch	Hydraulic
Saddle	5 positions
Diagnostic quick couplers	8

SERVICE CAPACITIES

Engine	3.3 gal (12.5 L)
w/ filter change	4.7 gal (18.5 L)
Fuel	73.4 gal (278 L)
Transmission	7.1 gal (27 L)
w/ filter change	6.6 gal (25 L)
Radiator	8.45 gal (32 L)
Hydraulic reservoir	18.5 gal (70 L)
Hydraulic system:	
836C	44.9 gal (170 L)
836C AWD	48.9 gal (185 L)
Circle gearbox	0.66 gal (2.5 L)
Rear axle center	8.2 gal (31 L)
Total axle	8.2 gal (31 L)
Tandem case, each	15.9 gal (60 L)

OTHER SPECIFICATIONS

Steering:	
Type	Open center/Reaction, w/o LS
Turns – lock-to-lock	7
Pump capacity @ 2100 engine RPM:	
	5.8 gpm (22 L/min)
Relief pressure	2,176 psi (150 bar)
	Integral w/ priority valve
Cylinder – 2:	
	1.75 in bore x 9.84 in stroke x 0.87 in rod dia. (44.5 mm x 250.0 mm x 22.2 mm)
Supplemental steering	Integral
Articulation:	
Type	Hydraulic actuated, no external stop
Range	28° left/right
Controls	Hydraulic

MAINFRAME

Type	All welded box
Front section:	
Size	10.7 in x 10.7 in (270 mm x 270 mm)
Weight – each side	61.9 lb-ft (92.1 kg/m)
Rear section:	
Size	8.7 in x 2.4 in (220 mm x 60 mm)
Weight – each side	69.6 lb-ft (103.6 kg/m)

DRAWBAR

Type:	
"A" frame welded construction with center mounted circle turn motor	
Ball and circle	Shim adjustable

MOLDBOARD

Type	High-carbon steel
Shape	Single radius curve
Length	11 ft 0 in (3 355 mm)
Height	23.6 in (526 mm)
Thickness	0.59 in (15 mm)
End bits	2, interchangeable
Blade pitch positions:	
Normal pitch	47°
Minimum pitch	36°
Maximum pitch	86°
Blade shift:	
Right	19.33 in (491 mm)
Left	27.87 in (708 mm)
Max. bank cutting angle:	
Right	117°
Left	76°
Max. ground penetration	17.95 in (456 mm)
Max. lift above ground	15.51 in (394 mm)

CIRCLE

Type	Welded construction
Diameter:	
Max. outside	41.3 in (1 050 mm)
Vertical member	63.0 in (1 600 mm)
Rotation	360°
Speed	1.86 RPM (11.2°/second)
Drive	Hydraulic motor
Type	Roller geroter
Displacement	4.9 in³/Rev. (0.25 L/Rev.)
Rated hydraulic flow	19.8 gpm (75 L/min)

ATTACHMENTS**SCARIFIER**

Type	Moldboard mounted
Width of cut	35.4 in (900 mm)
Teeth	4
Optional	11
Tooth spacing	11.8 in (300 mm)
Optional	4.5 in (114 mm)
Lift above ground	8.78 in (223 mm)
Max. penetration	6.73 in (171 mm)
Weight	445 lb (202 kg)
Includes front attachment group	

PUSH BLOCK

Type	Front mounted
Weight	1,084 lb (492 kg)

REAR RIPPER

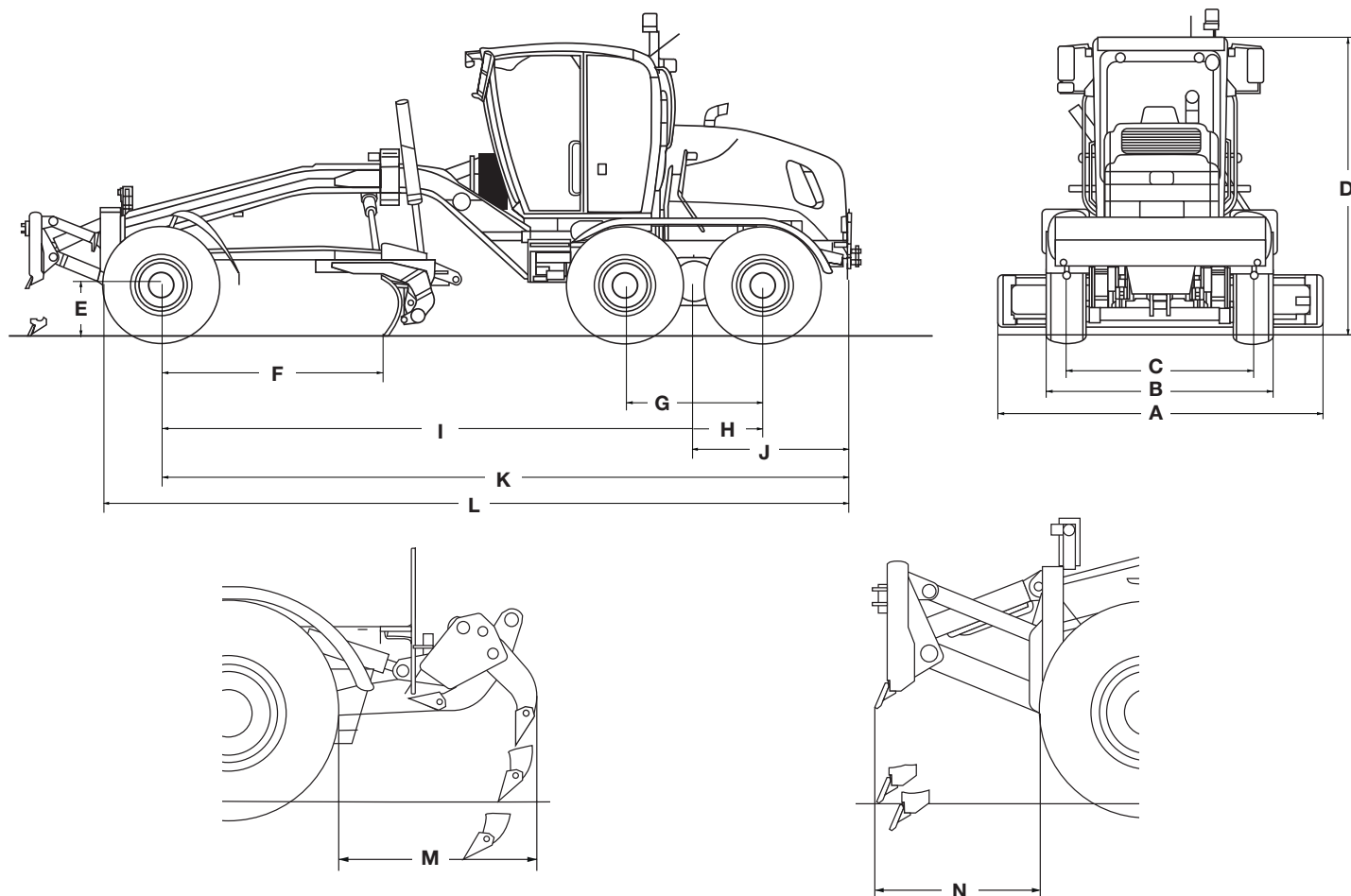
Type	Parallel
Ripper teeth	3
Optional	5
Scarifier teeth	5
Optional	9
Width of cut	80.7 in (2 049 mm)
Lift above ground:	
Ripper teeth	12.3 in (313 mm)
Scarifier teeth	27.67 in (703 mm)
Max. penetration:	
Ripper teeth	12.2 in (310 mm)
Scarifier teeth	9.43 in (252 mm)
Weight:	
3 Teeth	1,168 lb (530 kg)
5 Teeth	1,314 lb (596 kg)

DOZER BLADE

Type	Front mounted
Width	92.5 in (2 350 mm)
Height	30.1 in (765 mm)
Lift above ground	20.0 in (509 mm)
Penetration	5.4 in (136 mm)
Weight	1,270 lb (576 kg)
Includes front attachment group	

COUNTERWEIGHT

Type	Front mounted
Weight	1,124 lb (510 kg)



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

DIMENSIONS	836C	836C AWD
A. Blade width	11 ft 0 in (3 355 mm)	11 ft 0 in (3 355 mm)
B. Distance between outside edges of tires	7 ft 8 in (2 326 mm)	7 ft 7 in (2 303 mm)
C. Wheel tread – rim 13 x 20 – one piece rim	6 ft 4 in (1 923 mm)	6 ft 3 in (1 900 mm)
D. Height to top of cab – low profile	10 ft 1 in (3 060 mm)	10 ft 1 in (3 060 mm)
E. Tire radius – when static	1 ft 7 in (487 mm)	1 ft 7 in (487 mm)
F. Blade base	6 ft 6 in (1 981 mm)	6 ft 6 in (1 981 mm)
G. Distance between tandem axles	4 ft 1 in (1 241 mm)	4 ft 1 in (1 241 mm)
H. Distance between tandem center and wheel	2 ft 0 in (621 mm)	2 ft 0 in (621 mm)
I. Wheelbase	17 ft 7 in (5 351 mm)	17 ft 7 in (5 351 mm)
J. Distance between tandem center and rear end of machine	5 ft 2 in (1 585 mm)	5 ft 2 in (1 585 mm)
K. Distance between front axle and rear end of machine	22 ft 9 in (6 936 mm)	22 ft 9 in (6 936 mm)
L. Overall length – without ripper or front attachment	27 ft 4 in (8 372 mm)	27 ft 4 in (8 372 mm)
M. Distance between rear tires and rear ripper	5 ft 4 in (1 625 mm)	5 ft 4 in (1 625 mm)
N. Distance between front tires and front dozer blade	4 ft 8 in (1 424 mm)	4 ft 8 in (1 424 mm)
Outside tire turning radius	21 ft 8 in (6 600 mm)	22 ft 4 in (6 800 mm)
Ground clearance – rear axle	12.2 in (310 mm)	12.2 in (310 mm)
Ground clearance – front axle	19.1 in (485 mm)	19.1 in (485 mm)

NOTE: All units equipped with 405/70R20 tires, ROPS cab with heater and A/C, std. battery, full fuel, 175 lb (79 kg) operator. Specifications per ISO 7134.

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1

ENGINE

F4HFE6133*B003 NEF 6 cyl. CR TAA 4V
turbocharged diesel
Tier 4 Final Certified
Temperature controlled cooling fan
SCR only exhaust gas after-treatment
Charge air cooler
Air intake grid heater
Common rail electronic fuel injection
Hydraulic driven cooling fan
Auto idle
Cold start up to -19°C
Air cleaner/pre-cleaner with scavenge line
and safety element
Variable fan speed

DRIVETRAIN

Hydraulic differential lock
Immobilization disc brake on transmission
Powershift transmission with 6 Forward and
3 Reverse speeds with integrated torque
converter
Hydraulic dual circuit brake system
Hydrostatic front wheel drive D.C.V.
Electronic Drive Control Volume and
hydraulic differential – FWD version only
Internal gearing:
Covered, Backlash-free and maintenance
free slewing ring operation on 360°
Hydrostatic power steering
Circle drive without overload clutch
Rear axle with automatic/manual gear shifting
Transmission with automatic/manual
gear shifting

HYDRAULICS

Closed center, load sensing hydraulic system
Controls for all functions
10 section control valve
Hydraulic moldboard side shift and pitch
5-position saddle
11 ft x 20.7 in (3 355 x 526 mm) moldboard
8 hydraulic diagnostic quick couplers
Front and rear piping for hydraulic attachment
Moldboard support no scarifier
Oscillating front axle with hydraulic
lean adjustment
Oscillating tandem axle with automatic
no-spin differential
Hydraulic circle turn – 360°
Hydraulic system lock valves for blade lift,
blade shift, front wheel lean, blade pitch,
articulation and special equipment, scarifier
– optional, and rear ripper – optional
Lock valve lift cylinder blade

TIRES

405/70 R20 SPT9 Dunlop

INSTRUMENTS

Analog displays/Gauges:
Fuel level; Engine coolant temperature;
Transmission oil temperature;
Hydraulic oil temperature.
Monitor Functions:
Hour meter; Automatic trans indication;
DEF/Ad blue level indication; Floating – if
activated; FWD aggressive mode; Error
prompt; Park brake message; Clutch
engagement status; Vehicle moving – yes/
no; Engine speed; Travel speed; Current
gear selection; FNR indication; Clock; Trip
computer; Fuel consumption; Fuel level
percentage; Oil pressure; Coolant
temperature; Engine oil temperature;
Transmission oil temperature; Hydraulic oil
temperature; Turbocharger air temperature;
Differential lock indicator; Gear selection
indicator; Engine diagnostics; Transmission
diagnostics; Keypad diagnostics; UCM
diagnostics; Speed limit module; Support
for different severities – White/Yellow/Red;
System voltage; Error reporting; Warning
prompts; Indicator warning lamps – main
warning, parking brake, low brake
pressure, low steering pressure, Pre-glow,
high beams, turn signals, hazard lights,
low fuel.

ELECTRICAL

2 – Heavy-duty batteries – 1010 CCA
Battery main switch
Electronic Systems Monitor
Horn
Alternator – 90 amp
Headlights
2 – Turn signals front
2 – Tail lights with turn signals, brake lights
Flood lights – cab mounted

OTHER

Front counterweight
Rear counterweight
Front fender with hinged mudflaps
Rear fender
Wheel chocks x 2
Standard tooling
Drive Shaft Maintenance Free
Rear Ripper Maintenance Free
Dozer Maintenance Free

TELEMATICS

CASE SiteWatch™ Telematics – includes
hardware and a 3-yr Advanced
data subscription

OPTIONAL EQUIPMENT

MOLDBOARDS

8 ft x 20.7 in (2 440 x 526 mm), single radius curve
10 ft x 20.7 in (3 050 x 526 mm), single radius curve
Extensions – 2 ft (610 mm)
Front Float Control
Moldboard Float Control – Hydraforce/ HF22484-03
Lift cylinder/side shift accumulators
Lift cylinder accumulators
Moldboard with overload clutch
Moldboard side plates left/right

OPERATOR ENVIRONMENT

Front windows openable with rear window defroster
Lower front wiper/washers
Rear windshield washer
Air conditioning
Low Profile Cab
Radio
Air suspension seat, heated, moveable arm rests

HYDRAULICS

Rear ripper hydraulic predisposition
Environment friendly hydraulic oil panolin

TIRES

420/75 R20 XMCL TL Michelin
455/70 R20 SPT9 Dunlop
405/70 R24 SPT9 Dunlop

ELECTRICAL

2 – Front mounted working lights
2 – Floodlights at moldboard
2 – Floodlights at articulation
2 – Floodlights rear
Snow wing lighting package
Backup alarm
Beacon

OTHER

Bidirectional engine cooling fan
Cold weather package
Fire extinguisher
Strobe light
Tool box – without tools
Deluxe tool box – with tools
Tire inflator kit
Spare wheel
Spare wheel support
Slow moving vehicle sign
Rear pull hook
Equipment on road
On road approval
Speed Limitation 20 km/h
Speed Limitation 25 km/h

ATTACHMENTS

Front pull hook
Front counterweight – 1,124 lb (510 kg)
Rear counterweight – 330.7 lb (150 kg)
Front dozer blade
Moldboard scarifier
Moldboard ripper
Front push plate
Front support and lift cylinder
Rear ripper with 3 or 5 teeth with or without protective device

