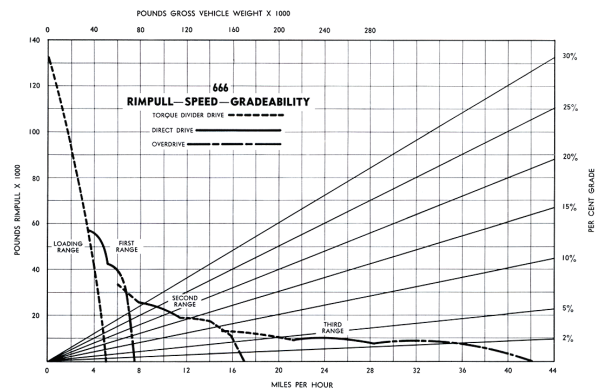


666

WHEEL TRACTOR-SCRAPER



Usable rimpull will depend upon traction available and total weight on tractor drive wheels.

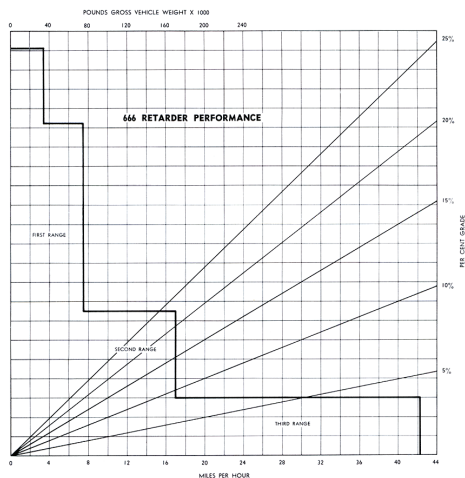


CHART INSTRUCTIONS

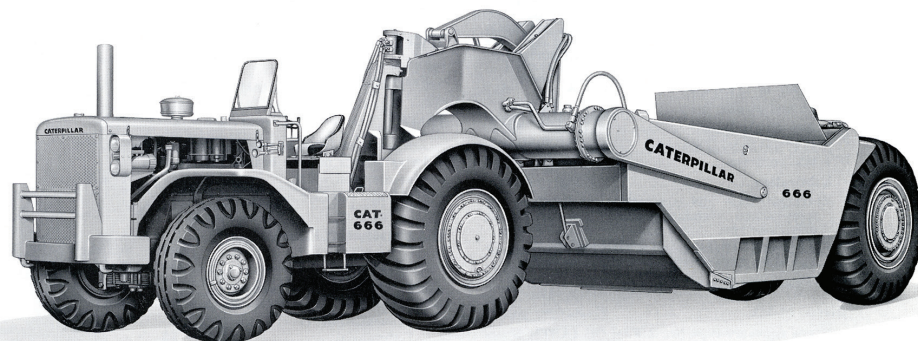
To determine gradeability performance (top): Read down from gross weight to existing grade. (Add rolling resistance to actual grade, 20 lb./ton = 1% grade). From weight-grade point, read horizontally to maximum speed.

To determine retarded performance (bottom): Read down from gross weight to existing grade. (Subtract rolling resistance from existing grade, 20 lb./ton = 1% grade). From weight-grade point, read horizontally to maximum constant descent speed under retarder control.

WHEEL TRACTOR-SCRAPER
54 CU. YD. HEAPED CAPACITY

CATERPILLAR

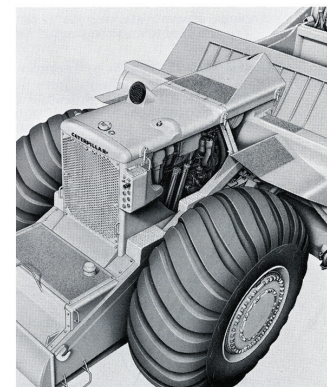
666



The CAT 666 —

Four wheel tractor with scraper,
tandem powered

- 980 HP (max.) total—560 HP tractor engine and 420 HP scraper engine for efficient, hard lugging power.
- Cat power shift transmissions with exclusive, automatic shifting in each of three ranges — plus loading range. Top speed is 42 MPH.
- Operating ease and safety that increase productivity. Hydraulic retarders are standard.
- New 54 cu. yd. (heaped), 40 cu. yd. (struck) Positive Action Scraper for fast, easy loading.
- Service accessibility means more working time — less maintenance time.



Materials and specifications are subject to change without notice.



www.cat.com / www.caterpillar.com

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CLASSIC CONSTRUCTION MODELS
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SERIAL #

Attested By _____

It is hereby certified the Cat 666 80-Ton Wheel Tractor-Scraper with the serial number at left is an authentic registered Classic Construction Model produced in a strictly limited single edition.

FOUR-WHEEL TRACTOR

ENGINES:

Four-cycle, turbocharged, valve-in-head, diesel.
Tractor Scraper
Horsepower (Maximum) 560 420
The maximum rating of the diesel engines used in the 666 are shown for comparative purposes.
Horsepower (Flywheel) 450 335
@ 1900 RPM.....
Flywheel horsepower is the net horsepower at the flywheel of the standard engine operating under normal temperature and barometric conditions (up to 85° F. and 2500 ft. altitude). Standard engine equipment includes fan, air cleaners, water pump, lubricating oil pump, fuel pump and generator.
Number of cylinders..... 8 6
Bore and stroke, in. 5.4 x 6.5
Piston displacement, cu. in. 1190 893
NACC horsepower for USA tax purposes 93 70
Lubrication.....Full pressure
Bearings: Main and connecting rod bearings are steel-backed aluminum alloy, lead-tin plated, precision-type.
Crankshafts: High carbon steel with “Hi-Electro” hardened journals.
Air cleaners: Dry type

FUEL:

Burns economy-type No. 2 Fuel Oil (ASTM Specification D396-48T, often called No. 2 furnace or burner oil, with a minimum cetane rating of 35. Expensive, premium-quality diesel fuel can be used, but is not required.

STARTING METHODS:

Tractor (Optional),
24-volt starting system for direct electric starting of diesel.
Gasoline starting engine with 24-volt starting motor.
Scraper, separate starting motor for scraper engine.
Tractor engine must be started first.

TRANSMISSIONS (tractor and scraper synchronized):

Caterpillar-built power shift with exclusive TORQUE DIVIDER, providing three automatically shifted speeds in each of three manually selected ranges plus loading range. 9 forward speeds, 3 reverse speeds. Scraper transmission may be shifted to neutral independently.

STANDARD ELECTRIC ACCESSORIES:

Four sealed beams (two headlights — two floodlights) dash lights and batteries. Charging alternator and full transistor voltage regulator on direct electric starting system. Optional on gasoline starting system.

SEAT:

Torsionflex, bucket type, upholstered, mounted on torsion spring and shock absorber suspension assembly.

STEERING:

Full time hydraulic boost.

FRONT AXLE:

Oscillating type, wishbone construction with transverse leaf spring.

FINAL DRIVES (tractor and scraper):

TypePlanetary
AxleFull-floating
BearingsSplit-roller
Scraper differentialNo-Spin

TIRES (Tubeless):

Drive 37.5-39 (28 PR)
Front 18.0-25 (20 PR)

BRAKES:

Air actuated (synchronized to brake scraper first).
Drive wheels may be braked individually.
Diameter and width..... 30" x 8"
Hydraulic retarder is standard

CAPACITIES, U.S. Gallons:

	Tractor	Scraper
Fuel tank	180	125
Lubricating System:		
Crankcase	15	9.75
Transmission	33	31
Differential	25	29
Final drive (each side).....	7	6
Cooling system	38	31
Total hydraulic system (steering and scraper).....	92	
Retarder system	7	7

WEIGHTS, total unit

On wheels of 666, approx., lb.

Empty:	
Tractor front	22,700
Tractor driver	43,100
Scraper	59,200
Total	125,000
Loaded, based on 122,000 lb. average load: (3000 lb./cu. yd. material x 54 cu. yd. heaped capacity x .75 load factor)	
Tractor front, 12%	30,000
Tractor driver, 34%	84,300
Scraper, 54%	132,700
Total	247,000

Width required for non-stop turn.....45'6"

CONVERSION TABLE			
1 Mile = 1,609 Kilometers	1 Sq. In. = 6.452 Sq. Centimeters		
1 Foot = 30.48 Centimeters	1 Lb. = 453.6 Kilogram		
1 Inch = 2.54 Centimeters	1 Sq. Yd. = 0.836 Sq. Meters		
1 U.S. Gal. = 3.785 Liters	1 Sq. Ft. = 929 Sq. Centimeters		
1 U.S. Gal. = 0.833 Imp. Gals.			
1 U.S. Gal. Diesel Fuel = 7.3 Lb. (approx.)			
1 U.S. Gal. Coolant = 8.3 Lb. (approx.)			

SCRAPER

CAPACITY:

Heaped, SAE rating..... 54 cu. yd.
Struck, SAE rating..... 40 cu. yd.

CONSTRUCTION:

Complete bowl is box section for maximum strength, minimum weight.
High tensile strength steel used in high wear and stress areas.
Draft arms removable for shipping.

BOWL:

Average height of sides..... 6'10"
Inside width 11'8"
Maximum depth of spread..... 24"
Maximum depth of cut..... 19"
Maximum hydraulic penetration force at cutting edge, approx. 147,000 lb.

CUTTING EDGE:

Width of cut (outside router bits)..... 11' 11.5"
Dimensions: Center section . 1.12" x 16" x 68.25"
Each end section... 1" x 13" x 35.5"
Type.....“Hi-Electro” hardened-reversible

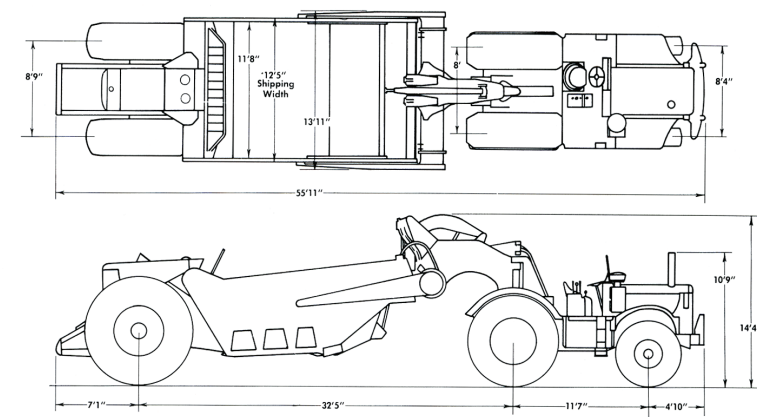
EJECTOR:

Type.....dozer, 2-speed, positive return
Control lever has detent for holding ejector return.

APRON:

Opening (bowl 6" off ground level)..... 9' 2"
Closure force (cutting edge fully raised, apron open 12"), approx..... 36,000 lb.

DIMENSIONS:



METHOD OF OPERATION:

Closed hydraulic system powered by vane type pump. Bowl, apron and ejector are independently controlled.

HYDRAULIC CYLINDERS:

Bowl lift (2), double acting with quick drop valves, cylinders isolated from circuit when carrying load.
Bore and stroke..... 9.25" x 43.7"
Apron (1), double acting with sequence valve for positive closure.
Bore and stroke..... 9.25" x 33.2"
Ejector (2), double acting, 2-speed.
Bore (telescoping) and stroke, 8.25" to 6.5" x 89"

HYDRAULIC PUMP:

Output..... 145 GPM @ 2000 RPM
Relief valve setting.....2000 PSI

WHEELS:

AxlesCantilever mounted
Bearings, preadjusted, lifetime lubricated, tapered roller with face type floating ring seals.
Rims (5° taper) 32.00-51

TIRES (Tubeless) 37.5-51 (36 PR)

BRAKES:

Diameter and width 30" x 8"
Hydraulic retarder is standard