

FILED FOR RECORD: 3-27-1978 at 1:17 o'clock P M
DULY RECORDED: 3-28-1978 at 4:03 o'clock A M
INSTRUMENT NO. _____

GRACE BOSTICK, TYLER CO. CLK.

BY: Grace Bostick DEPUTY

TYLER COUNTY COMMISSIONER'S COURT
SPECIAL MEETING
MARCH 6, 1978

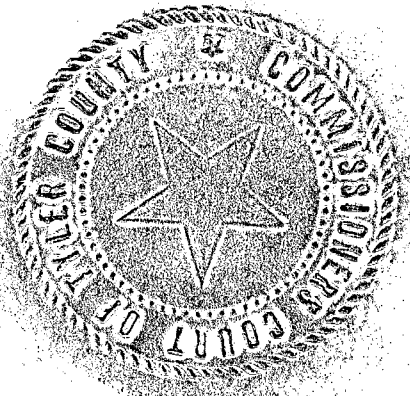
A Special Meeting of the Commissioner's Court met on Monday March 6, 1978, at 10:00 A.M. All members being present. The meeting was opened with prayer by Commissioner James R. Jordan.

A motion was made by Commissioner Fowler and seconded by Comm. Jordan to accept the Bid of Mustang Tractor & Equipment Co., of Houston, Texas 77001. The Bids were for the Motor Grader, Maintainer for Pct. #III. \$10,000.00 will be the down payment, and the balance to be paid by Time-warrants. All voted yes and none no. See attached.

A motion was made by Commissioner Riley and seconded by Comm. Lowe to turn down all Bids on Equipment for Commissioners and go into negotiation for further study. Commissioners Riley and Lowe will study this with the Dealers. All voted yes and none no.

There being no further business, the meeting adjourned.

SIGNED: Allen Sturrock Allen Sturrock, County Judge
Maxie L Riley Maxie Riley, Comm. Pct. #1
H.K. Lowe H.K. Lowe, Comm. Pct. #2
Leon Fowler Leon Fowler, Comm. Pct. #3
James R. Jordan James R. Jordan, Comm. Pct. #4
ATTEST: Grace Bostick Grace Bostick, County Clerk



Mustang

Vol. 4 PG. 372

TRACTOR & EQUIPMENT COMPANY
7777 WASHINGTON • PHONE UN 4-4471 • P.O. BOX 1373
HOUSTON, TEXAS 77001

7990 EAST TEX FREEWAY
BEAUMONT, TEXAS

U.S. HIGHWAY 69 S.E.
LUFKIN, TEXAS

HIGHWAY 71 NORTH
EL CAMPO, TEXAS

QUOTATION

QUOTATION NO. S78-126

DATE February 28, 1978

CUSTOMER INQ. NO.

Honorable Judge & Commissioner's Court
Tyler County Pct. 3
Woodville, Texas 75979

QUOTATIONS ARE SUBJECT TO ACCEPTANCE WITHIN 30 DAYS
FROM DATE OF QUOTATION.

IMPORTANT: WHEN ORDERING PLEASE MENTION ABOVE
QUOTATION NUMBER AND DATE.

Gentlemen:

QUAN.	DESCRIPTION OF MATERIAL	UNIT PRICE	EXTENSION
	We are pleased to submit the following for your consideration:		
1	New Caterpillar 130G motor grader with 135 horsepower diesel engine, 24 volt direct electric starting, dry type air cleaner, blower fan, accelerator-decelerator, articulated frame, articulation indicator, power shift transmission, hydraulic controls, steering and leaned front wheels, 12 foot hydraulic side shift blade, adjustable operator control, console, four wheel oil disc brakes, parking brake, stop and tail lights, 13:00 x 24 12 ply rated tires, rear draw bar, and tool box. Net price F.O.B. Tyler County, Texas Approximate shipping weight: 26,300 lbs. <u>Alternate</u>		\$48,827.00
1	New Caterpillar 120G motor grader with 125 horsepower diesel engine, 24 volt direct electric starting, dry type air cleaner, blower fan, accelerator-decelerator, articulated frame, articulation indicator, power shift transmission, hydraulic controls, steering and leaned front wheels, 12 foot hydraulic side shift blade, adjustable operator control, console, four wheel oil disc brakes, parking brake, stop and tail lights, 13:00 x 24 12 ply rated tires, rear draw bar, and tool box. Net price F.O.B. Tyler County, Texas		\$45,020.00

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QUAN.

DESCRIPTION OF MATERIAL

UNIT PRICE

EXTENSION

Approximate shipping weight: 24,000 lbs.

We appreciate the opportunity of quoting you on
your equipment requirements and hope that we may
be favored with your order.

Yours truly,

MUSTANG TRACTOR & EQUIPMENT CO.



Jim Lindsay
Area Manager

JL:lg

MUSTANG TRACTOR & EQUIPMENT COMPANY
OF HOUSTON

PHONE 864-4471

P. O. BOX 1373

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Net price F.O.B. Tyler County, Texas

\$48,827.00

Approximate shipping weight: 26,300 lbs.

Alternate

1 New Caterpillar 120G motor grader with 125 horsepower diesel engine, 24 volt direct electric starting, dry type air cleaner, blower fan, accelerator-decelerator, articulated frame, articulation indicator, power shift transmission, hydraulic controls, steering and leaned front wheels, 12 foot hydraulic side shift blade, adjustable operator control, console, four wheel oil disc brakes, parking brake, stop and tail lights, 13:00 x 24 12 ply rated tires, rear draw bar, and tool box.

Net price F.O.B. Tyler County, Texas

\$45,020.00

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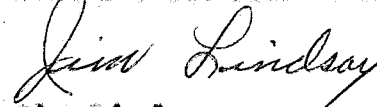
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Approximate shipping weight: 24,000 lbs.

We appreciate the opportunity of quoting you on your equipment requirements and hope that we may be favored with your order.

Yours truly,

MUSTANG TRACTOR & EQUIPMENT CO.



Jim Lindsay
Area Manager

UL:lg



CATERPILLAR

120G Motor Grader

Summary of features

- **Articulated frame, sharp turning front wheels, and optional tandem drive train differential** provide excellent maneuverability and short turning radius.
- **Hydraulic controls** provide fast, constant-speed blade positioning, regardless of engine RPM, for greater blading accuracy.
- **Single lever, direct-drive power shift transmission** with 6 speeds forward and 6 reverse.
- **125 flywheel horsepower** Cat Diesel Engine . . . 30% torque rise results in excellent luggability.
- **Quiet operation** . . . large-diameter, low-speed engine fan . . . rear-mounted transmission . . . rubber-mounted hydraulic pump and tank . . . ROPS cab (standard in U.S. and Canada), low sound level muffler and engine compartment doors optional.
- **Four-wheel oil disc brakes** provide positive stopping performance . . . adjustment-free . . . completely sealed . . . dual circuit air system provides for additional protection.



Caterpillar Engine

Flywheel horsepower @ 2200 RPM 125

The net power at the flywheel of the vehicle engine operating under SAE standard ambient temperature and barometric conditions, 85° F. (29° C) and 29.38" Hg (995 mbar), using 35 API gravity fuel oil at 60° F. (15.6° C). Vehicle engine equipment includes air compressor, blower fan, air cleaner, muffler, water pump, lubricating oil pump, fuel pump and alternator. Engine will maintain specified flywheel power up to 10,000 ft. (3000 m) altitude.

Caterpillar 4-stroke cycle, turbocharged Diesel Model 3304 with four cylinders, 4.75" bore (121 mm), 6.0" stroke (152 mm) and 425 cu. in. (7 litres) piston displacement.

Precombustion chamber fuel system with individual adjustment-free injection pumps and valves.

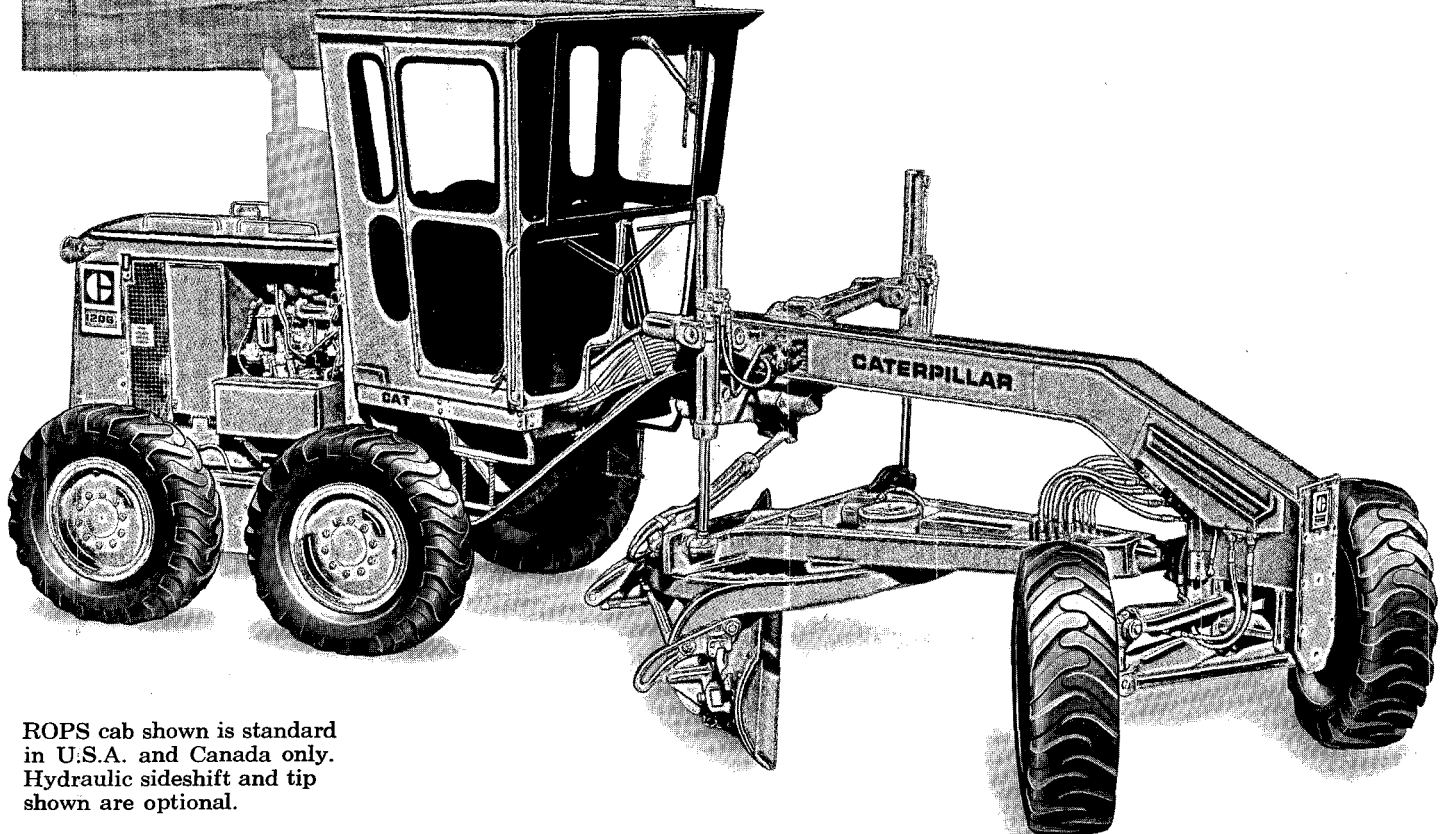
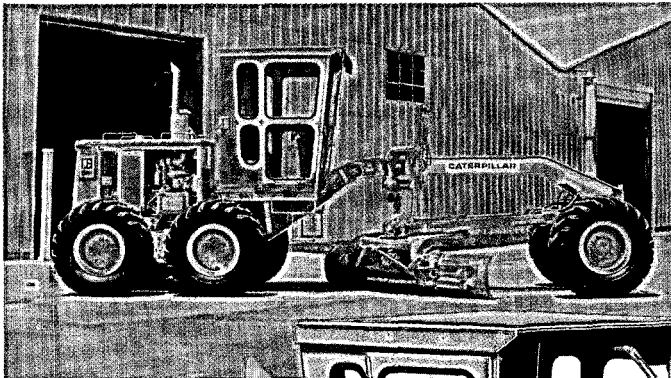
Cam-ground and tapered aluminum alloy pistons with three-ring design; both compression rings ride in iron band cast into piston. Piston undersides are cooled by oil spray. Stellite-faced valves, valve rotators and valve seat inserts.

Steel-backed aluminum alloy precision bearings. High carbon steel alloy crankshaft with Hi-Electro hardened journals.

Pressure lubrication with full-flow filtered oil and oil cooler. Dry-type air cleaner with primary and safety elements, automatic dust ejector and service indicator.

Uses economical No. 2 fuel oil (ASTM Specification D396), often called No. 2 furnace or burner oil, with a minimum cetane rating of 35. Premium quality fuel can be used but is not required.

24-volt direct electric starting system with 19-amp alternator and glow plugs for preheating precombustion chambers.



ROPS cab shown is standard in U.S.A. and Canada only. Hydraulic sideshift and tip shown are optional.

120G

Motor Grader

transmission

Cat-built direct drive power shift. Single lever at operator's right controls six forward and six reverse speeds. Foot pedal provides inching capability for close quarter maneuvering. Transmission safety lock prevents accidental gear engagement. The machine won't move even if the engine is started with shift lever in gear.

Speeds (at rated RPM):

Forward & Reverse	1st	2nd	3rd	4th	5th	6th
MPH	2.4	3.8	6.1	10.0	16.1	25.4
(km/h)	(3.8)	(6.2)	(9.8)	(16.1)	(25.9)	(40.9)

blade controls

Full hydraulic controls provide fast, constant control speed regardless of engine speed. Lock valves in each implement circuit eliminate drift. Operator controls all blading operations with four levers - left blade lift, circle drive, centershift and right blade lift. Hydraulic system lets operator use more than one control without decrease in control response speed.

circle

Fabricated box-section, 60.25" (1530 mm) diameter. Uniform, flame-cut teeth. Hydraulically driven worm and gear provides full 360° circle rotation.

Blade beam - width x thickness 5.50" x 1.25"
(140 x 32 mm)

blade range

Circle centershift, right 19.6" (500 mm)
Left 22.5" (570 mm)

Moldboard sideshift

Manual, Right 15" (380 mm)
Left None
Optional hydraulic, Right 26.5" (670 mm)
Left 20.5" (520 mm)

Maximum shoulder reach outside of tires*:

Manual sideshift, Right 5' (1520 mm)
Left 4' (1220 mm)
Hydraulic, Right 6' (1830 mm)
Left 5' 8.5" (1730 mm)

Maximum blade position, angle, both sides 90°**

Maximum lift above ground 16.25" (410 mm)

Maximum depth of cut 17.75" (450 mm)

Hydraulic blade tip 40° forward; 5° rear

* For 14' (4270 mm) blade, add 1' (305 mm) right or left.

With main frame in crab position, add 37" (940 mm) right or left.

**Mid-range bank sloping (2:1) capability requires addition of optional centershift cylinder extension.

moldboard

Wear-resistant, high-carbon steel.
Length x height x thickness 12' x 24" x .75"
(3650 x 610 x 19 mm)

Cutting edge - Caterpillar through-hardened curved DH-2 steel and .62" (16 mm) diameter bolts.

Width x thickness 6" x .62" (152 x 16 mm)

drawbar

Solid section, 5.5" x 3.5" (140 x 89 mm) A-frame with four widely spaced shoes to support the circle. All have vertical adjustment, two have horizontal adjustment.

frame

Front frame - Flanged, single-box-section structure runs from front bolster to the articulation joint.

Top and bottom plates -

Width x thickness 11" x .75" (280 x 19 mm)

Side plates - Minimum

height x thickness 8.25" x 0.375" (209 x 10 mm)

Minimum weight 78.41 lb./ft. (117 kg/m)

Minimum vertical

section modulus 81 inches cubed (1330 cm³)

Rear frame - Two solid channels integral with final drive case.

axles

Front - Solid steel arched bar.

Maximum ground clearance 23" (580 mm)

Oscillation 32° total

Wheel lean 18° left or right

Rear - Full-floating, forged heat-treated steel.

tandems

Height x width 16.00" x 6.75" (405 x 170 mm)

Sidewall thickness 0.50" (13 mm)

Drive chain pitch 1.75" (44 mm)

Wheel axle spacing 5' (1520 mm)

steering

Front wheels - Full hydraulic power.

Steering range 50° left or right

Frame - Hydraulically actuated steering 20° left or right

Minimum turning radius (outside front tires) 22' (6.7 m)*

* Using front wheel steering, frame articulation and optional differential unlock.

wheels

Interchangeable rim and wheel assemblies. Tubeless tires, six 13.00 x 24 (8 PR) traction-type.

brakes

(System meets OSHA regulations.)

Service - Four-wheel, air-actuated, oil disc brakes are completely sealed and adjustment-free. Low air pressure, below 60 psi (4.1 bar), in either circuit of the brake system is indicated to the operator by visual (red light) and audible (horn) warnings.

Parking - Multiple oil disc located in transmission case, manually actuated, spring-engaged, air disengaged. Push the red lever on the transmission control console forward to actuate. This neutralizes the transmission, engages the parking brake and activates the transmission neutral safety lock to prevent machine movement if engine is started with transmission engaged.

Emergency - Dual circuit air system includes an individual circuit to each tandem for added braking protection. A malfunction in one circuit still leaves the machine with at least half its original braking capacity for emergency stops.

In the event of loss of service brakes, the spring-actuated, non-modulated parking brake can be applied to bring the machine to a stop, even if the air supply is interrupted. (Method not recommended for repeated applications.)

ROPS

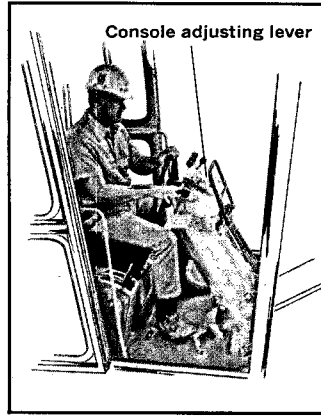
(ROPS Cab is standard in U.S.A. and Canada only.)

ROPS (Rollover Protective Structures) offered by Caterpillar for this machine meet ROPS criteria: SAE J396, SAE J1040a and ISO 3471. They also meet FOPS (Falling Object Protective Structure) criteria SAE J231 and ISO 3449.

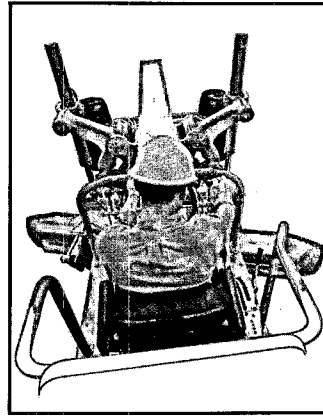
The operator's machine — true sit-down operation . . . visibility and convenience unmatched in conventional designs.



Environment for efficiency — that's the Series G Compartment. An adjustable control console moves out of the way for easy entry and exit. It pulls back to the operator for any of three working positions and true sit-down operation without tiresome hand and arm movement. Steering wheel is tilt adjustable, too, so the operator can pick the most comfortable overall position. The seat is con-

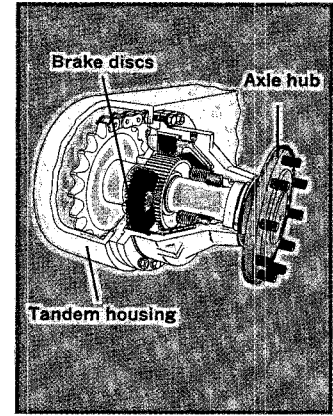


toured, deeply padded and adjustable. Blade levers are arranged in the familiar Caterpillar pattern for easy operator orientation. Transmission control is a single lever to the operator's right. It's full power shift — no manual clutching — so he can shift up or down without stopping the machine or losing time or momentum. An "inching" pedal lets him ease up to curbs or obstructions.



Work area visibility is excellent because of control location and frame design. An operator can work with increased confidence. While seated, he can see both ends of the blade and the ground ahead much better than on conventional machines. The Series G main frame is a single member all the way to the front axle. The top of the frame has none of the usual blade linkage obstructing the forward view.

Protection . . . for man and machine.

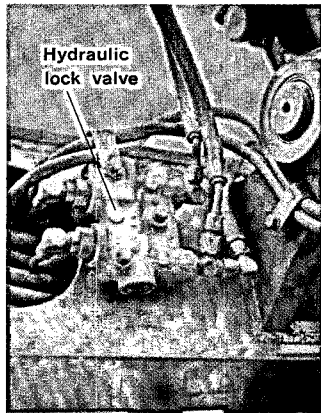


Four-wheel oil disc brakes are bathed in oil and sealed to the environment. They need none of the periodic adjustment and lining replacement typical of shoe-type brakes. Each tandem set is activated by its own air circuit, so failure in one circuit still leaves half the original braking capacity. **ROPS cab or canopy, work lights, directional signals,** other safety items are all available for specific user needs.

Full hydraulic blade controls — effortless, fast precise action.

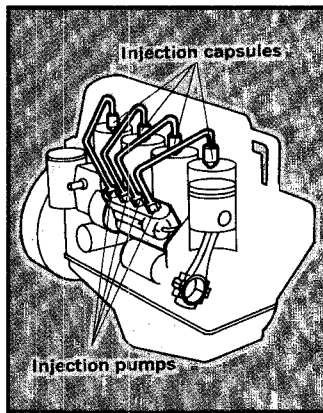


Hydraulic blade control levers engage smoothly and crisply. Response is immediate and always predictable regardless of engine RPM, or with two or more levers engaged at once. Variable displacement piston pump senses hydraulic system needs and automatically adjusts hydraulic flow. Closely spaced levers and short travel engagement reduce operator effort.

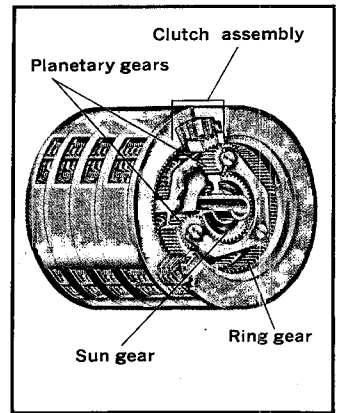


Lock valves in every dual control hydraulic circuit eliminate a major problem found in traditional grader hydraulic systems: blade creep and drift. These valves provide the Series G grader with positive hold at each blade setting, essential for precise finish grading.

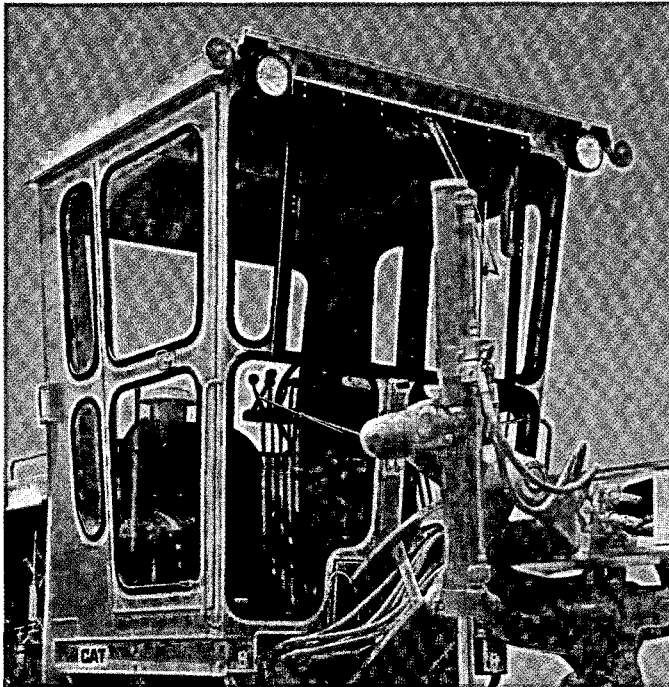
Reliable Cat Power Train — simple, efficient.



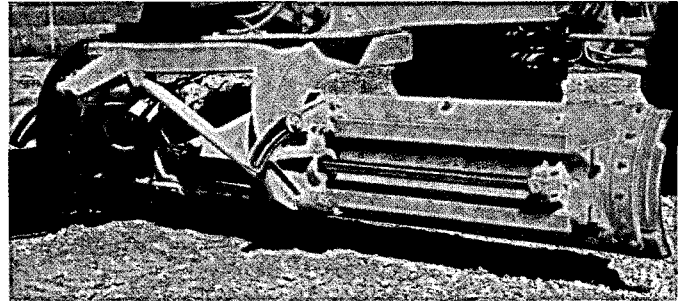
Durable Cat 3304 Diesel Engine powers the 120G. It features the proven adjustment-free Cat fuel system, with replaceable individual injector pumps and valves. Separate fuel injection valves resist clogging, even over long periods of idling, and can be replaced without system re-balancing. A 24-volt starting system with glow plugs is standard for faster cold-weather starting.



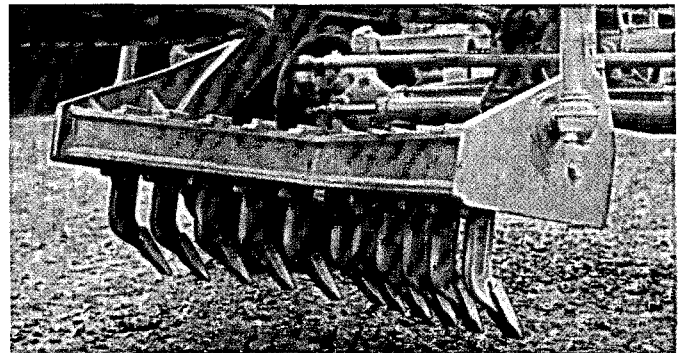
Direct drive power shift transmission was designed specifically for motor graders. It has no torque converter to cause lags or surges, just smooth no-clutch one-lever shifting with direct drive feel. Compact planetary gear sets provide high reduction in minimum space. Large diameter clutch assemblies have high holding capacity. Plates are continuously lubricated and cooled by oil.

attachments


ROPS cab (standard in U.S.A. and Canada only) maintains operator efficiency in unfavorable working conditions. Tinted safety glass all around gives excellent visibility. Full doors permit entry from either side. Includes sound suppression, inside-mounted rear view mirror, dome light, front defroster fan, front windshield washer and three wipers. Available as accessories are air conditioner/heater, heater only, rear window wiper and rear defroster fan. ROPS is also available as open version (canopy) without front windshield or doors.



Hydraulic sideshift and tip are optional. Sideshifting blade lets operator get closer to obstructions or reach well outside the wheel for shoulder or bank work. Hydraulic tip adjusts the blade angle fore and aft for best rolling action, depending on material and travel speed.



V-type scarifier — mounted forward of the moldboard, used for mixing, breaking up base course, asphalt, slabby and frozen materials. Standard arrangement includes 11 scarifier shanks.

Working width	46.62" (1180 mm)
Scarifying depth, maximum	11.5" (292 mm)
Scarifier shank holders, number and spacing	11 @ 4.56" (116 mm)


standard equipment

19-amp alternator. Dry-type air cleaner with pre-cleaner, automatic dust ejector and air cleaner service indicator. Blower fan. Muffler. Accelerator/decelerator. Power shift transmission. Articulated frame. Hydraulic power steering. Hydraulic blade controls. 12' (3650 mm)

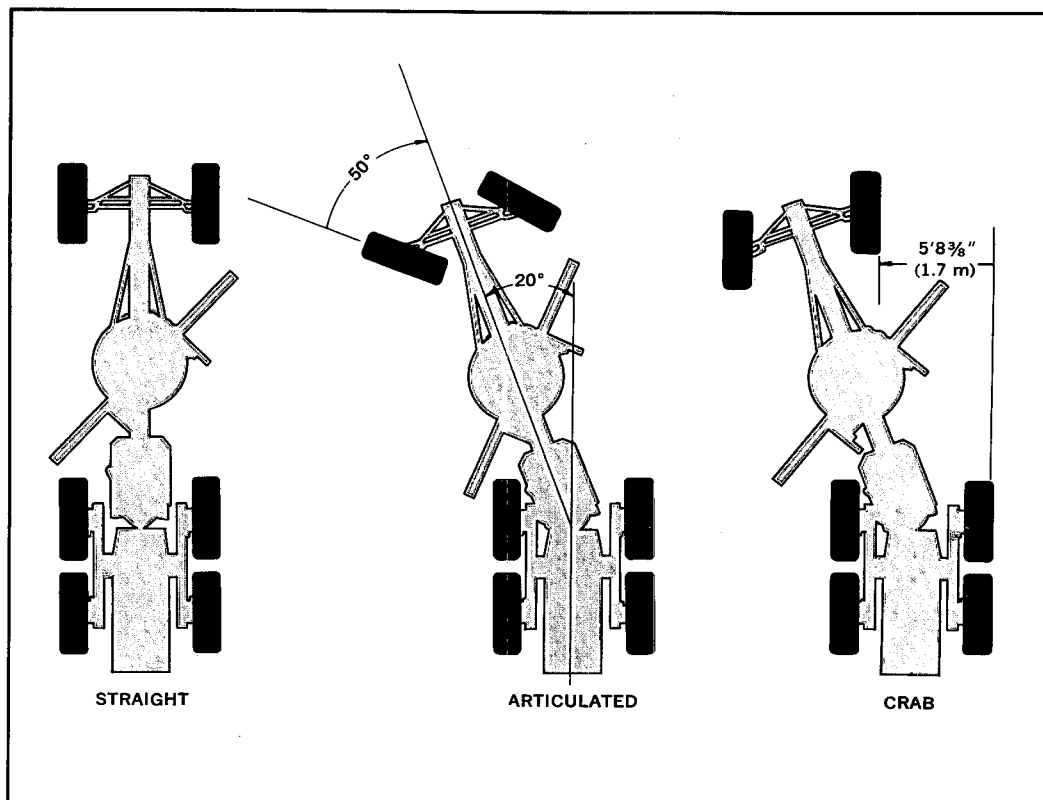
manual sideshift moldboard with manual tip control. 6" x .62" (152 x 16 mm) DH-2 steel cutting edges with .62" (16 mm) diameter bolts. Horn. Backup alarm (U.S. only). Four-wheel oil disc brakes. Parking brake. ROPS cab (U.S. and Canada). Stop and tail lights. Contour seat. Seat belt. Tool box. Adjustable control console and steering wheel tilt. Rear drawbar. 13.00 x 24, 8 PR (G-2) traction-type tires.

Materials and specifications are subject to change without notice.

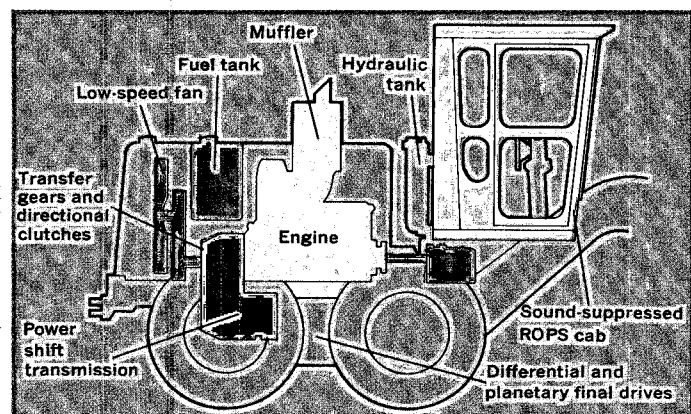
Maneuverability — easier, faster, shorter turns. You can do more work.

Three steering techniques . . . for best match to job, an important advantage in productivity over conventional motor grader design.

- **Straight frame**, with main frame centered and only front wheels used for steering, is best for long-pass blading.
- **Articulated turn** uses the full 20° frame articulation, 50° front wheel steering angle and unlocked tandem drive train differential (optional) for shortest turning radius. Result is easier maneuvering in close quarters, quicker turn-around at the end of a pass, plus ability to carry a full blade load around a curve.
- **Crab steering** helps compensate for side drift when turning a windrow, keeps tandems on firm footing when cleaning a wet ditch, increases stability for side slope work, and side thrust when using a snow wing. Frame is fully articulated, with front wheels turned parallel to tandems.



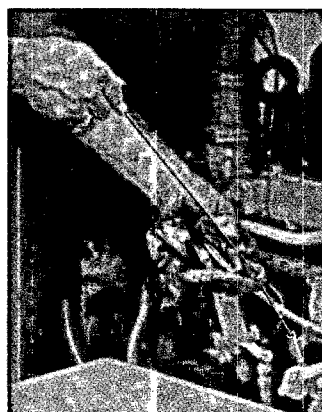
Quieter operation — a noticeable difference, by design.



Quiet power train has engine flywheel facing rearward to get transmission sound and vibration away from the operator's compartment. Helical design transfer gearing cuts sound. The fan is large diameter, slower turning. Fuel tank placed between the fan and cab area helps keep fan sound away from the operator. The optional muffler has extra capacity. ROPS cab (standard in U.S.

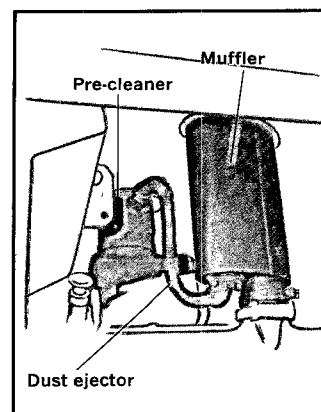
and Canada) is sound-suppressed, with absorption material in roof and rear, and sound reducing floor mat. Cab front and sides are flared to further reduce effects of sound waves. The optional ROPS canopy has a rear wall and window to cut down operator sound exposure.

Serviceability — less time on maintenance, easier repair.



Less maintenance time compared to conventional design graders means more work time. Series G Graders have:

- **Significantly fewer grease fittings.**
- **More accessible checkpoints** — most can be checked from the ground.
- **Automatic dust ejector** — diverts dust from intake air, blows it out exhaust.
- **Spin-on oil and fuel filters** — disposable, easy to



change, non-contaminating.

- **Outside-mounted hydraulic valves** — easier to check and service than those mounted inside a tank.
- **Transmission or other major components** can be removed as units without disturbing rest of power train.



hydraulics

Closed center, constant pressure system with Cat variable displacement piston pump powers blade controls, wheel lean, steering, articulation and attachments. Constant pressure parallel control valve circuit design provides immediate implement response. Hydraulic lock valves in all circuits prevent undesirable cylinder drift.

Output @ 2200 engine RPM and 2500 psi (172 bar) 3 to 51 gpm (11.4 to 193 litres/min) depending on system requirements.



service refill capacities

	U.S. Gallons	(litres)
Fuel tank	60	(227)
Radiator	10	(38)
Crankcase	5.5	(21)
Transmission and final drive	18	(68)
Tandem housing (each)	13	(49)
Hydraulic system	18	(68)



operating weight (approximate)

Basic operating weight includes lubricants, coolant, full fuel tank, operator, 12' (3650 mm) manual sideshift blade and 13.00 x 24 (8 PR) traction-type tires and ROPS cab (standard in U.S. and Canada).

Weight on front wheels	6,545 lb. (2970 kg)
Weight on rear wheels	18,750 lb. (8500 kg)
Total weight	25,295 lb. (11 475 kg)

Equipped as above and including optional hydraulic sideshift and tip moldboard, and V-type scarifier:

Weight on front wheels	8,710 lb. (3950 kg)
Weight on rear wheels	19,615 lb. (8890 kg)
Total weight	28,325 lb. (12 850 kg)

Add weights of additional equipment from Attachment Selection list to obtain **total equipped operating weight**.



attachment selection

(with approximate installed weights)

Air conditioner, provides cooling and heating	300 lb. (136 kg)
Alternator, 50-amp	15 lb. (7 kg)
Articulation position indicator	10 lb. (4 kg)
Backup alarm (standard in U.S.)	20 lb. (9 kg)
Blade, 12' (3650 mm), mechanical sideshift	100 lb. (45 kg)
Blade extension, 2' (610 mm), right or left	200 lb. (91 kg)
Blade sideshift, hydraulic, 12' (3650 mm)	650 lb. (295 kg)
14' (4270 mm)	870 lb. (395 kg)
w/hydraulic tip, 12' (3650 mm)	850 lb. (385 kg)
14' (4270 mm)	1070 lb. (485 kg)

Cab, ROPS (standard in U.S.A.

and Canada only),

meets OSHA regulations 1,515 lb. (690 kg)

Canopy, ROPS (meets OSHA

regulations), includes rear wall

with window 1,015 lb. (460 kg)

Cutting edges, through-hardened DH-2 steel, curved 8" x .75" (203 x 19 mm):

12' (3650 mm) 90 lb. (41 kg)

14' (4270 mm) 112 lb. (51 kg)

12' (3650 mm) with overlay end bits 143 lb. (65 kg)

14' (4270 mm) with overlay end bits 161 lb. (73 kg)

Cylinder extension, centershift 21 lb. (10 kg)

Defroster fan, rear 5 lb. (2 kg)

Drive train differential, w/lock-unlock 60 lb. (27 kg)

End bits, reversible overlay 38 lb. (17 kg)

Engine compartment doors 125 lb. (57 kg)

Heater, cab, hot water 22 lb. (10 kg)

Heater, engine coolant, 120-volt 3 lb. (1 kg)

Hydraulic arrangements with one or more additional hydraulic valves are available for hydraulic blade sideshift and tip; V-type scarifier; and for attachments from other suppliers, such as snow plows and snow wings and bulldozer.

Jack, hydraulic 21 lb. (10 kg)

Lighting system, 24-volt:

Front-mounted headlights (2) 36 lb. (15 kg)

Cab-mounted headlights (2) 5 lb. (2 kg)

Center-mounted floodlights (2) 8 lb. (4 kg)

Rear-mounted floodlight (1) 5 lb. (2 kg)

Directional signals with flasher switch 15 lb. (7 kg)

Warning beacon (amber or blue) 10 lb. (5 kg)

Mirrors for cab, outside, right and/or left 5 lb. (2 kg)

Muffler, low sound 32 lb. (18 kg)

Prescreener 5 lb. (2 kg)

Rims, 10" (254 mm), for use with

14.00 x 24 tires 253 lb. (115 kg)

Scarifier, front V-type w/11 teeth 2,047 lb. (928 kg)

Spare tire and wheel 300 lb. (136 kg)

Starting system, low temperature 50 lb. (23 kg)

Suspension seat 50 lb. (23 kg)

Tachograph drive receptacle 25 lb. (11 kg)

Tire inflation kit 5 lb. (2 kg)

Tires, set of six,

13.00 x 24, 10 PR 90 lb. (41 kg)

13.00 x 24, 12 PR 180 lb. (81 kg)

14.00 x 24, 10 PR 200 lb. (91 kg)

14.00 x 24, 12 PR 215 lb. (97 kg)

15.5 x 25, 8 PR 800 lb. (363 kg)

Tool kit 18 lb. (8 kg)

Vandalism protection: locking caps for

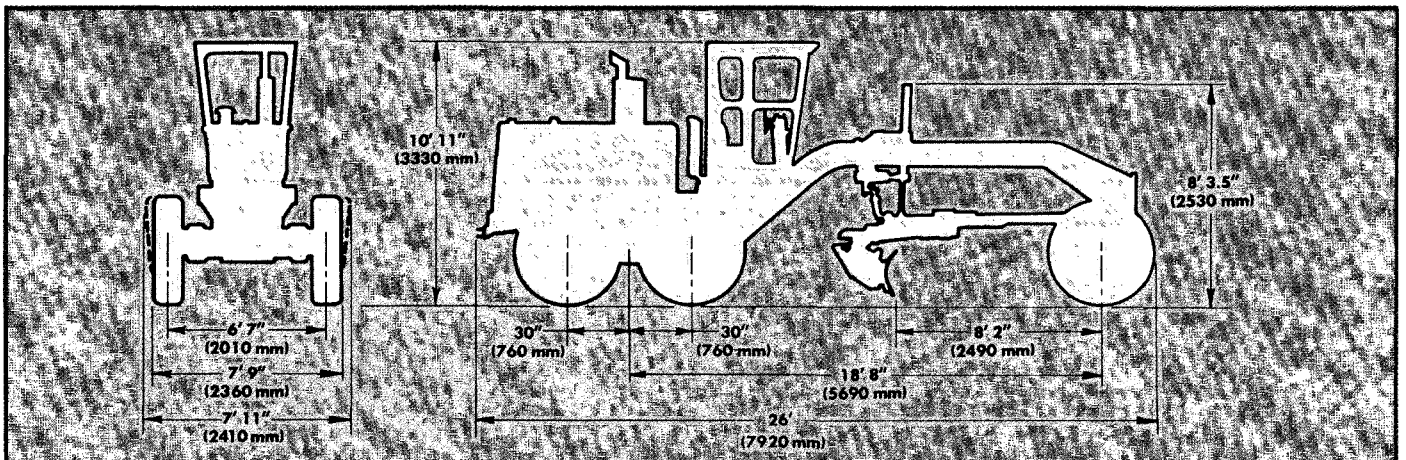
hydraulic tank, radiator, fuel tank,

crankcase, transmission filler spout and

transmission dipstick and engine

gauge panel guard 27 lb. (12 kg)

Windshield wiper, rear 8 lb. (4 kg)



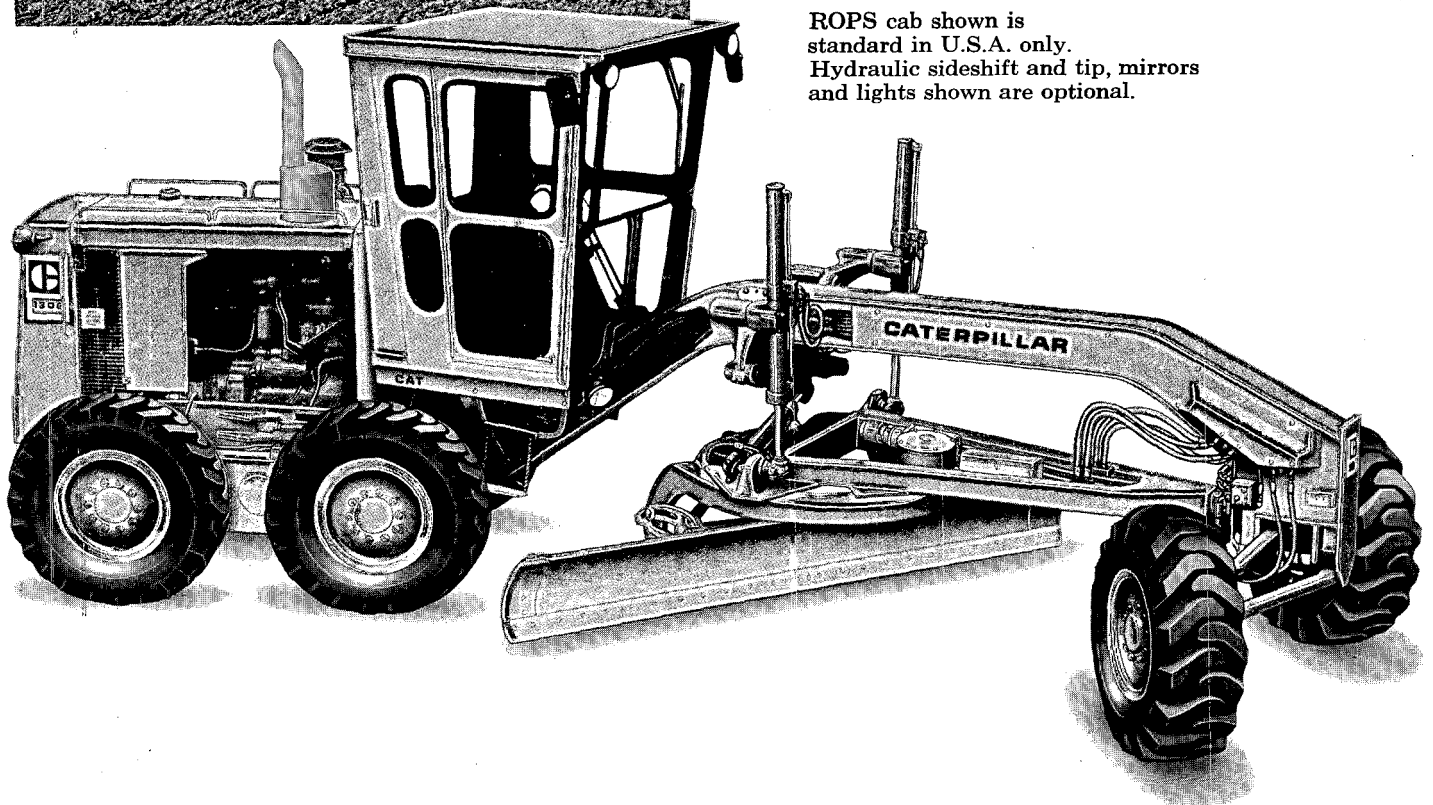


CATERPILLAR

130G Motor Grader

Summary of features

- **Articulated frame, sharp turning front wheels, and optional tandem drive train differential** provide excellent maneuverability and short turning radius.
- **Hydraulic controls** provide fast, constant speed blade positioning regardless of engine RPM for greater blading accuracy.
- **Single lever, direct drive power shift transmission** with 6 speeds forward and 6 reverse.
- **135 flywheel horsepower** Cat Diesel Engine . . . 25% torque rise results in excellent luggability.
- **Quiet operation** . . . large-diameter, low-speed engine fan . . . rear-mounted transmission . . . rubber-mounted hydraulic pump and tank . . . ROPS cab (standard in U.S.) low sound level muffler and engine compartment doors optional.
- **Four-wheel oil disc brakes** provide positive stopping performance . . . adjustment-free . . . completely sealed . . . dual circuit air system provides extra protection.



Caterpillar Engine

Flywheel horsepower @ 2200 RPM 135

The net power at the flywheel of the vehicle engine operating under SAE standard ambient temperature and barometric conditions, 85° F. (29° C) and 29.38" Hg (995 mbar), using 35 API gravity fuel oil at 60° F. (15.6° C). Vehicle engine equipment includes air compressor, blower fan, air cleaner, muffler, water pump, lubricating oil pump, fuel pump and alternator. Engine will maintain specified flywheel power up to 7,500 ft. (2300 m) altitude.

Caterpillar 4-stroke-cycle turbocharged Diesel Model 3304 with four cylinders, 4.75" bore (121 mm), 6.0" stroke (152 mm) and 425 cu. in. (7 litres) piston displacement. Precombustion chamber fuel system with individual adjustment-free injection pumps and valves.

Cam-ground and tapered aluminum alloy pistons with three-ring design; both compression rings ride in iron band cast into piston. Piston undersides are cooled by oil spray. Stellite-faced valves, valve rotators and valve seat inserts.

Steel-backed aluminum alloy precision bearings. High carbon steel alloy crankshaft with Hi-Electro hardened journals.

Pressure lubrication with full-flow filtered oil and oil cooler. Dry-type air cleaner with primary and safety elements, automatic dust ejector and service indicator.

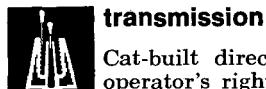
Uses economical No. 2 fuel oil (ASTM Specification D396), often called No. 2 furnace or burner oil, with a minimum cetane rating of 35. Premium quality fuel can be used but is not required.

24-volt direct electric starting system with 19-amp alternator and glow plugs for preheating precombustion chambers.

ROPS cab shown is standard in U.S.A. only. Hydraulic sideshift and tip, mirrors and lights shown are optional.

130G

Motor Grader

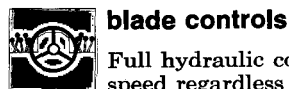


transmission

Cat-built direct drive power shift. Single lever at operator's right controls six forward and six reverse speeds. Foot pedal provides inching capability for close quarter maneuvering. Transmission safety lock prevents accidental gear engagement. The machine won't move even if the engine is started with shift lever in gear.

Speeds (at rated RPM):

Forward & Reverse	1st	2nd	3rd	4th	5th	6th
MPH	2.3	3.7	5.8	9.6	15.5	24.5
(km/h)	(3.7)	(6.0)	(9.5)	(15.6)	(24.9)	(39.4)



blade controls

Full hydraulic controls provide fast, constant control speed regardless of engine speed. Lock valves in each implement circuit eliminate drift. Operator controls all blade operations with four levers - left blade lift, circle drive, centershift and right blade lift. Constant pressure system lets operator use more than one control without decrease in control response speed.



circle

Seamless steel forging, 60.25" (1530 mm) diameter. Uniform, flame-cut teeth. Raised wear surfaces top and bottom prevent circle teeth from contacting support shoes. Hydraulically driven worm gear provides full 360° circle rotation.

Blade beam - width x thickness 5.50" x 1.25"
(140 x 32 mm)



blade range

Circle centershift, right 20.5" (520 mm)
Left 25.5" (650 mm)

Moldboard sideshift,

Manual, Right 15" (380 mm)
Left None
Optional hydraulic, Right 26.5" (670 mm)
Left 20.5" (520 mm)

Maximum shoulder reach outside of tires*:

Manual sideshift, Right 5' 1" (1550 mm)
Left 4' 3" (1300 mm)
Hydraulic, Right 6' 1.5" (1870 mm)
Left 5' 11" (1800 mm)

Maximum blade position, angle, both sides 90°**

Maximum lift above ground 17.25" (440 mm)

Maximum depth of cut 17.75" (450 mm)

Hydraulic blade tip 40° forward; 5° rear

* For 14' (4270 mm) blade, add 1' (305 mm) right or left.

With main frame in crab position, add 37" (940 mm), right or left.

**Mid-range bank sloping (2:1) capability requires addition of optional centershift cylinder extension.



moldboard

Wear-resistant, high-carbon steel.

Length x height x thickness 12' x 24" x .75"
(3650 x 610 x 19 mm)

Cutting edge - Caterpillar through-hardened curved DH-2 steel and .62" (16 mm) diameter bolts.

Width x thickness 6" x .62" (152 x 16 mm)



drawbar

Box-section, 5.5" x 3.5" x 0.5" (140 x 89 x 13 mm) A-frame with four widely spaced shoes to support the circle. All have vertical adjustment, two have horizontal adjustment.



frame

Front frame - Flanged, box-section structure runs from front bolster to the articulation joint.

Top and bottom plates -

Width x thickness 12" x .88" (305 x 22 mm)

Side plates -

Height x thickness 9.75" x 0.5" (248 x 13 mm)

Minimum weight 104 lb./ft. (47 kg/m)

Minimum vertical section modulus 116.7 inches cubed

Rear frame - Two box-sectioned channels integral with final drive case.



axles

Front - Solid steel arched bar provides 24" (610 mm) ground clearance. Oscillates total of 32°.

Front wheel lean angle 18° left or right

Rear - Full-floating, forged, heat-treated steel.



tandems

Height x width 18.25" x 7.88" (464 x 200 mm)

Sidewall thickness62" (16 mm)

Drive chain pitch 2.0" (51 mm)

Wheel axle spacing 5' (1520 mm)



steering

Front wheels - Full hydraulic power.

Steering range 50° left or right

Frame - Hydraulically-actuated steering 20° left or right

Minimum turning radius

(outside front tires) 24' (7.3 m)*

* Using front wheel steering, frame articulation and optional differential unlock.



wheels

Interchangeable rim and wheel assemblies. Tubeless tires, six 13.00 x 24 (8 PR) traction-type.



brakes

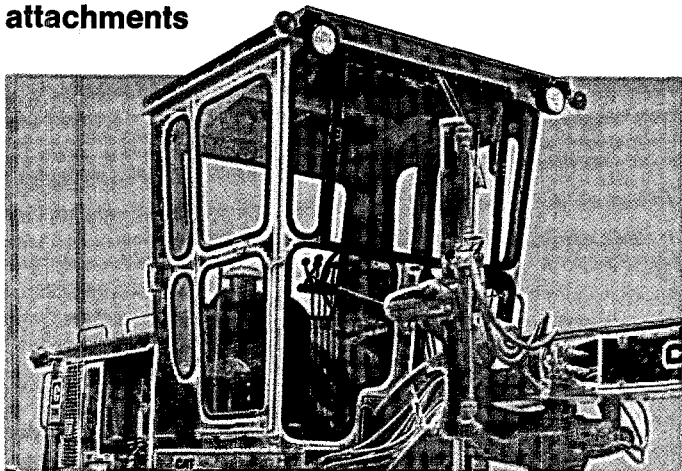
(System meets OSHA regulations.)

Service - Four-wheel, air-actuated, oil disc brakes are completely sealed and adjustment-free. Low air pressure, below 60 psi (4.1 bar), in either circuit of the brake system is indicated to the operator by visual (red light) and audible (horn) warnings.

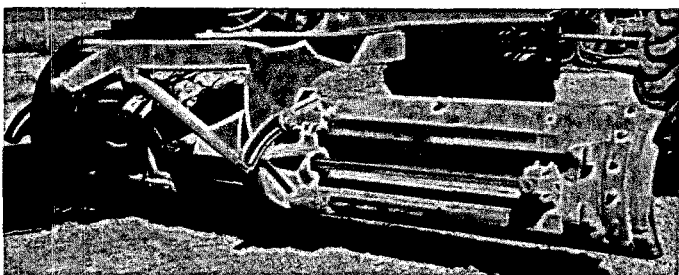
Parking - Multiple oil disc located in transmission case, manually actuated, spring-engaged, air disengaged. Push the red lever on the transmission control console forward to actuate. This neutralizes the transmission, engages the parking brake and activates the transmission neutral safety lock to prevent machine movement if engine is started with transmission engaged.

Emergency - Dual circuit air system includes an individual circuit to each tandem for added braking protection. A malfunction in one circuit still leaves the machine with at least half its original braking capacity for emergency stops.

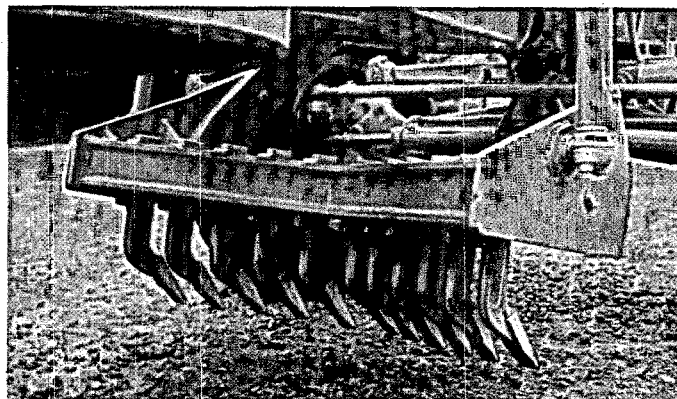
In the event of loss of service brakes, the spring-actuated, non-modulated parking brake can be applied to bring the machine to a stop, even if the air supply is interrupted. (Method not recommended for repeated applications.)

attachments


Optional ROPS cab (standard in U.S.A.) maintains operator efficiency in unfavorable working conditions. Tinted safety glass all around gives excellent visibility. Full doors permit entry from either side. Includes sound suppression, inside-mounted rear view mirror, front defroster fan, dome light, front window washer, three wipers, and double floor mat. Available accessories include air conditioner/heater, heater only, outside-mounted side view mirrors, rear window wiper and rear defroster fan. ROPS also available in an open version (canopy) without front windshield or doors.



Hydraulic sideshift and tip are optional. Sideshifting blade lets operator get closer to obstructions or reach well outside the wheel for shoulder or bank work. Hydraulic tip adjusts the blade angle fore and aft for best rolling action, depending on material and travel speed.



V-type scarifier — mounted forward of the moldboard, used for mixing, breaking up base course, asphalt, slabby and frozen materials. Standard arrangement includes 11 scarifier shanks.

Specifications:

	Front-Mounted V-type Scarifier	Rear-Mounted Ripper-Scarifier
Working width	46.62" (1180 mm)	86.5" (2200 mm)
Scarifying depth, maximum	11.5" (292 mm)	11.1" (280 mm)
Ripping depth, maximum	—	17.1" (430 mm)
Scarifier shank holders, number and spacing	11 @ 4.56" (116 mm)	9 @ 10.5" (270 mm)
Ripper shank holders, number and spacing	—	5 @ 21" (530 mm)
Increase in machine length, beam raised	—	37.5" (950 mm)


standard equipment

19-amp alternator. Dry-type air cleaner with pre-cleaner, automatic dust ejector and air cleaner service indicator. Blower fan. Muffler. Hand throttle. Accelerator/decelerator. Power shift transmission. Articulated frame. Hydraulic power steering. Hydraulic blade controls. 12' (3650 mm) manual sideshift moldboard with

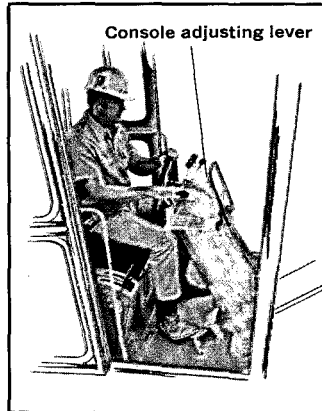
manual tip control. 6" x .62" (152 x 16 mm) DH-2 steel cutting edges with .62" (16 mm) diameter bolts. Horn. Backup alarm (U.S. only). Four-wheel oil disc brakes. Parking brake. ROPS cab (U.S. only). Stop and tail lights. Contour seat. Seat belt. Adjustable control console with tilt steering wheel. Toolbox. Rear drawbar. 13.00 x 24, 8 PR (G2) traction-type tires.

Materials and specifications are subject to change without notice.

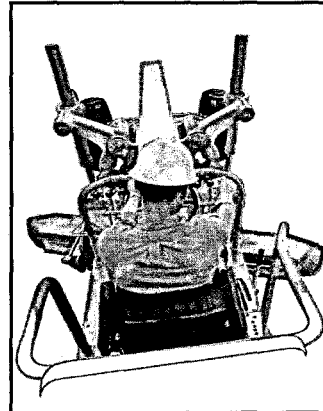
The operator's machine — true sit-down operation . . . visibility and convenience unmatched in conventional designs.



Environment for efficiency — that's the Series G Compartment. An adjustable control console moves out of the way for easy entry and exit. It pulls back to the operator for any of three working positions and true sit-down operation without tiresome hand and arm movement. Steering wheel is tilt adjustable, too, so the operator can pick the most comfortable overall position. The seat is contoured, deeply padded and

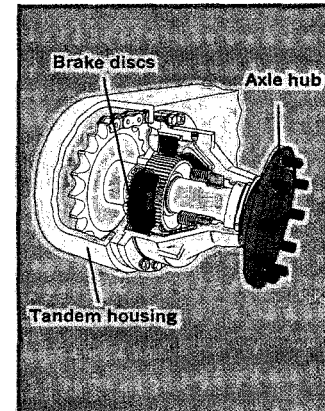


adjustable. Blade levers are arranged in the familiar Caterpillar pattern for easy operator orientation. Transmission control is a single lever to the operator's right. It's full power shift — no manual clutching — so he can shift up or down without stopping the machine or losing time or momentum. An "inching" pedal lets him ease up to curbs or obstructions.



Work area visibility is excellent because of control location and frame design. An operator can work with increased confidence. While seated, he can see both ends of the blade and the ground ahead much better than on conventional machines. The Series G main frame is a single member all the way to the front axle. The top of the frame has none of the usual blade linkage obstructing the forward view.

Protection . . . for man and machine.

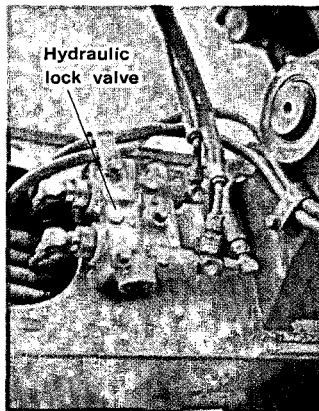


Four-wheel oil disc brakes are bathed in oil and sealed to the environment. They need none of the periodic adjustment and lining replacement typical of shoe-type brakes. Each tandem set is activated by its own air circuit, so failure in one circuit still leaves half the original braking capacity. **ROPS cab or canopy, work lights, directional signals,** other safety items are all available for specific user needs.

Full hydraulic blade controls — effortless, fast precise action.

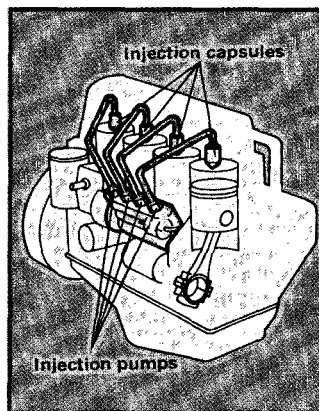


Hydraulic blade control levers engage smoothly and crisply. Response is immediate and always predictable regardless of engine RPM, or with two or more levers engaged at once. Variable displacement piston pump senses hydraulic system needs and automatically adjusts hydraulic flow and pressure to match. Closely spaced levers and short travel engagement reduce operator effort.

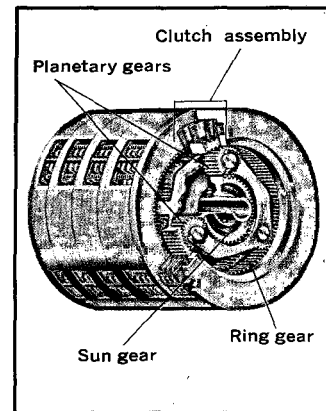


Lock valves in every hydraulic circuit eliminate a major problem found in traditional grader hydraulic systems: blade creep and drift. These valves provide the Series G grader with positive hold at each blade setting, essential for precise finish grading.

Reliable Cat Power Train — simple, efficient.



Durable Cat 3304 Diesel Engine powers the 130G. It features the proven adjustment-free Cat fuel system, with replaceable individual injector pumps and valves. Separate fuel injection valves resist clogging, even over long periods of idling, and can be replaced without system rebalancing. A 24-volt starting system with glow plugs is standard for faster cold-weather starting.

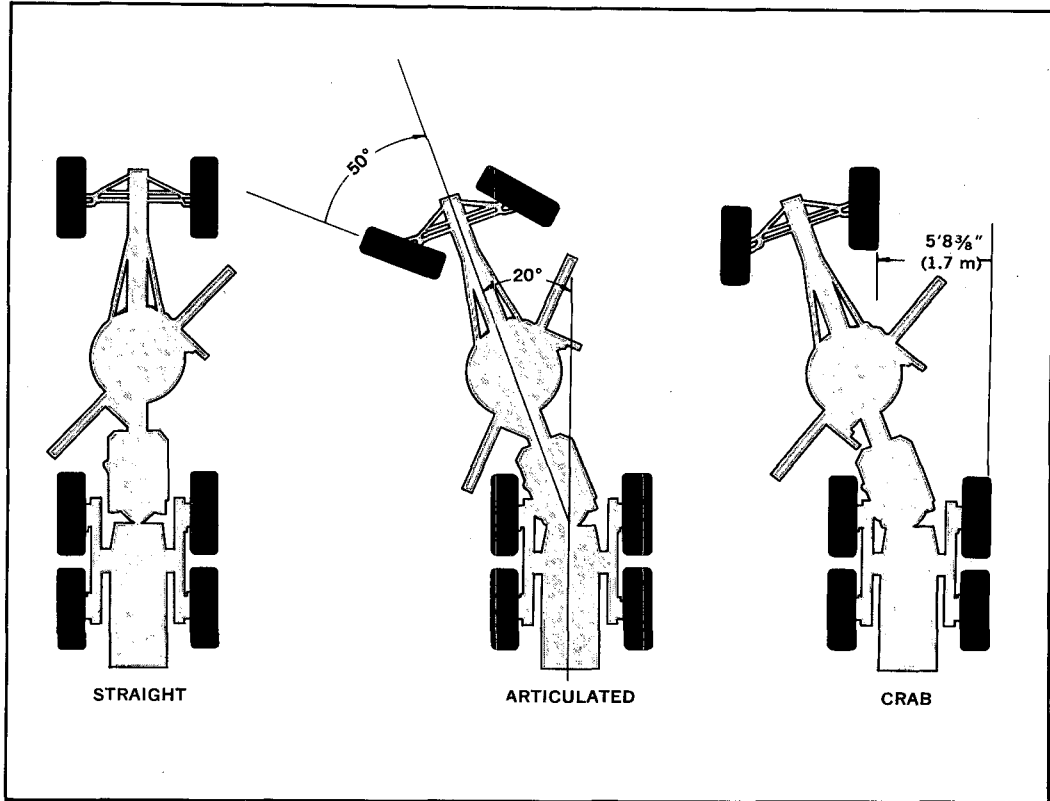


Direct drive power shift transmission was designed specifically for motor graders. It has no torque converter to cause lags or surges, just smooth no-clutch one-lever shifting with direct drive feel. Compact planetary gear sets provide high reduction in minimum space. Large diameter clutch assemblies have high holding capacity. Plates are continuously lubricated and cooled by oil.

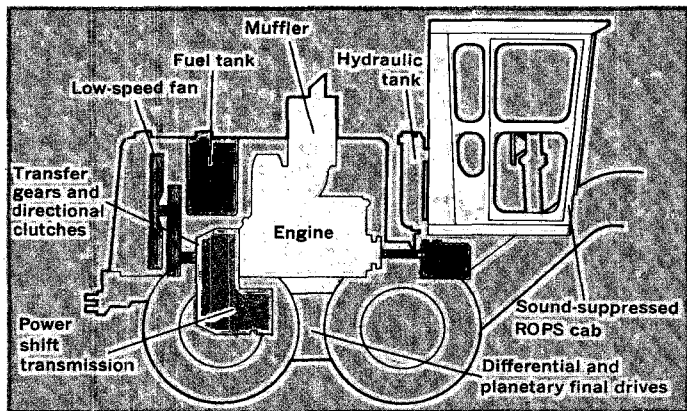
Maneuverability — easier, faster, shorter turns. You can do more work.

Three steering techniques . . . for best match to job, an important advantage in productivity over conventional motor grader design.

- **Straight frame**, with main frame centered and only front wheels used for steering, is best for long-pass blading.
- **Articulated turn** uses the full 20° frame articulation, 50° front wheel steering angle and unlocked tandem drive train differential (optional) for shortest turning radius. Result is easier maneuvering in close quarters, quicker turn-around at the end of a pass, plus ability to carry a full blade load around a curve.
- **Crab steering** helps compensate for side drift when turning a windrow, keeps tandems on firm footing when cleaning a wet ditch, increases stability for side slope work, and side thrust when using a snow wing. Frame is fully articulated, with front wheels turned parallel to tandems.



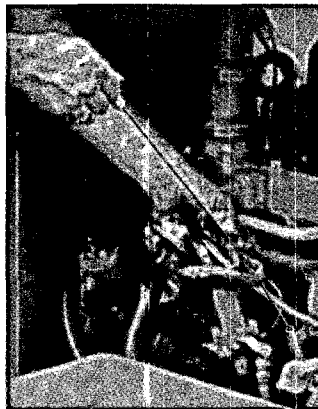
Quieter operation — a noticeable difference, by design.



Quiet power train has engine flywheel facing rearward to get transmission sound and vibration away from the operator's compartment. Helical design transfer gearing cuts sound. The fan is large diameter, slower turning. Fuel tank placed between the fan and cab area helps keep fan sound away from the operator. The optional muffler has extra capacity. ROPS cab (standard in U.S.)

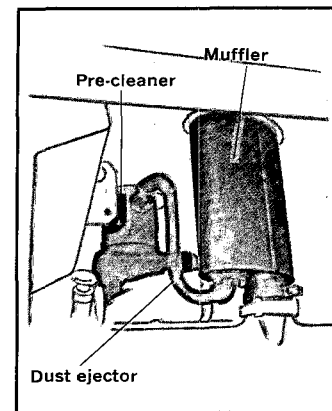
is sound-suppressed, with sound absorbing material in roof and rear, and sound reducing floor mats. Cab front and sides are flared to further reduce effects of sound waves. The optional ROPS canopy has a rear wall and window to cut down operator sound exposure.

Serviceability — less time on maintenance, easier repair.



Less maintenance time compared to conventional design graders means more work time. Series G Graders have:

- **Significantly fewer grease fittings.**
- **More accessible checkpoints** — most can be checked from the ground.
- **Automatic dust ejector** — diverts dust from intake air, blows it out exhaust.
- **Spin-on oil and fuel filters** — disposable, easy to



change, non-contaminating.

- **Outside-mounted hydraulic valves** — easier to check and service than those mounted inside a tank.
- **Transmission or other major components** can be removed as units without disturbing rest of power train.



ROPS

(ROPS Cab is standard in U.S.A. only.)

ROPS (Rollover Protective Structures) offered by Caterpillar for this machine meet ROPS criteria: SAE J396, SAE J1040a and ISO 3471. They also meet FOPS (Falling Object Protective Structure) criteria SAE J231 and ISO 3449.



hydraulics

Closed center, constant pressure system with Caterpillar variable displacement piston pump powers blade controls, wheel lean, steering, articulation and attachments. Constant-pressure, parallel-control-valve circuit design provides immediate implement response. Dual-level pump capacity (2150 and 3500 psi - 148 and 241 bar) matches horsepower use to system needs. Hydraulic lock valves in all circuits prevent undesirable cylinder drift.

Output @ 2200 engine RPM and
2150 psi (148 bar) 3 to 51 gpm (11.4 to 193 litres/min)
depending upon system requirements.



service refill capacities

	U.S. Gallons	(litres)
Fuel tank	75	(284)
Radiator	10	(38)
Crankcase	5.5	(21)
Transmission and final drive	21	(79)
Tandem housings (each)	17	(64)
Hydraulic system	18	(68)



operating weight (approximate)

Basic operating weight includes lubricants, coolant, full fuel tank, operator, 12' (3650 mm) manual side shift blade, 13.00 x 24 (8 PR) traction-type tires and ROPS cab (standard in U.S.):

Weight on front wheels	7,310 lb. (3320 kg)
Weight on rear wheels	19,910 lb. (9030 kg)
Total weight	27,220 lb. (12 350 kg)

Equipped as above and including V-type scarifier, and 12' (3650 mm) blade with hydraulic sideshift and tip:

Weight on front wheels	9,550 lb. (4330 kg)
Weight on rear wheels	20,820 lb. (9445 kg)
Total weight	30,370 lb. (13 780 kg)

Add weights of additional equipment from Attachment Selection list to obtain **total equipped operating weight**.

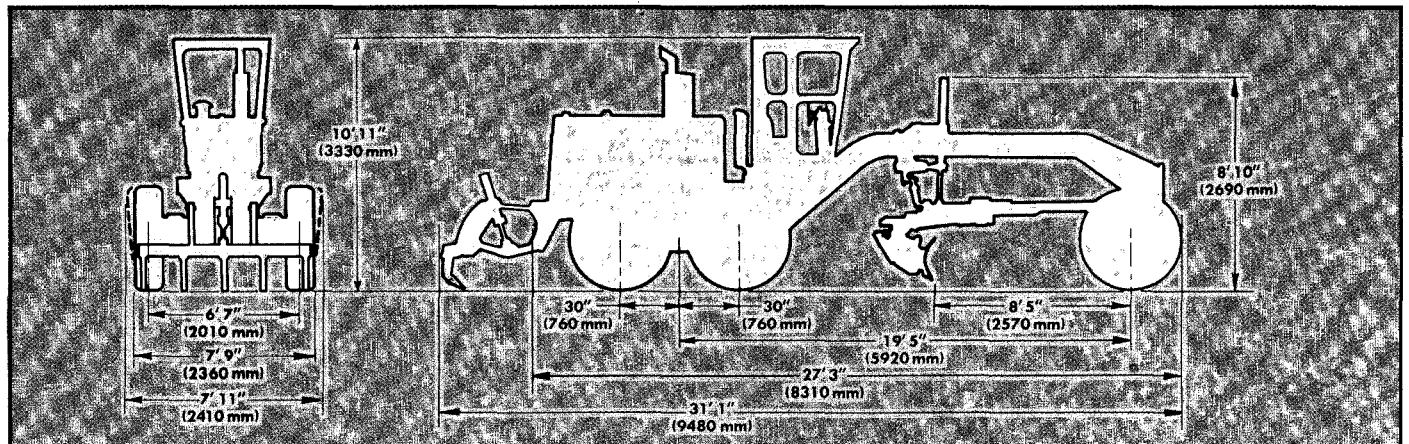


attachment selection

(with approximate installed weights)

Air conditioner, provides cooling and heating	300 lb. (136 kg)
Alternator, 50-amp	15 lb. (6 kg)
Articulation position indicator	10 lb. (2 kg)
Blade, 12' (3650 mm) mechanical	100 lb. (45 kg)
Blade extension, 2' (610 mm) right or left	200 lb. (91 kg)

Blade lift accumulator	145 lb. (66 kg)
Blade side shift, hydraulic,	
12' (3650 mm)	650 lb. (295 kg)
14' (4270 mm)	870 lb. (395 kg)
w/hydraulic tip, 12' (3650 mm)	850 lb. (385 kg)
w/hydraulic tip, 14' (4270 mm)	1,070 lb. (485 kg)
Cabs, ROPS, (standard in U.S.A.) meets OSHA regulations	1,515 lb. (690 kg)
Canopy, ROPS (meets OSHA regulations), includes rear wall with window	1,015 lb. (460 kg)
Cutting edges, through-hardened DH-2 steel, curved 8" x .75" (203 x 19 mm):	
12' (3650 mm)	98 lb. (44 kg)
14' (4270 mm)	114 lb. (52 kg)
Cylinder extension, centershift	29 lb. (13 kg)
Defroster fan, rear	5 lb. (2 kg)
Drive train differential w/lock - unlock	60 lb. (27 kg)
End bits, reversible overlay	38 lb. (17 kg)
Engine compartment doors	170 lb. (77 kg)
Heater, cab, hot water	22 lb. (10 kg)
Heater, engine coolant, 120-volt	3 lb. (1 kg)
Hydraulic arrangements with one or more additional hydraulic valves are available for hydraulic blade side shift and tip; V-type scarifier and rear-mounted ripper-scarifier; and for attachments from other suppliers, such as snow plows and snow wings and bulldozer.	
Jack, hydraulic	21 lb. (10 kg)
Lighting system, 24-volt:	
Front-mounted headlights (2)	36 lb. (16 kg)
Cab-mounted headlights (2)	5 lb. (2 kg)
Center-mounted floodlights (2)	8 lb. (4 kg)
Rear-mounted floodlight (1)	5 lb. (2 kg)
Directional signals with flasher switch	15 lb. (7 kg)
Warning beacon (amber or blue)	8 lb. (4 kg)
Low temperature starting system	35 lb. (16 kg)
Mirror, outside, right or left, for cab or canopy	5 lb. (2 kg)
Muffler, sound suppression	40 lb. (18 kg)
Prescreener	5 lb. (2 kg)
Push plate	1,010 lb. (458 kg)
Rims, 10" (254 mm), for use with 14.00 x 24 tires	253 lb. (115 kg)
Ripper-scarifier, includes 3 shanks	2,130 lb. (966 kg)
Scarifier, front, V-type, w/11 teeth	2,080 lb. (943 kg)
Seat, suspension	50 lb. (23 kg)
Spare tire and wheel	300 lb. (136 kg)
Tachograph drive receptacle	18 lb. (8 kg)
Tires, set of six,	
13.00 x 24, 10 PR	90 lb. (41 kg)
13.00 x 24, 12 PR	180 lb. (82 kg)
14.00 x 24, 10 PR	200 lb. (91 kg)
14.00 x 24, 12 PR	215 lb. (97 kg)
Tire inflation kit	3 lb. (1 kg)
Tool kit	18 lb. (8 kg)
Vandalism protection: locking caps for hydraulic tank, radiator, fuel tank, crankcase, transmission filler spout and transmission dipstick, and engine gauge panel guard	23 lb. (8 kg)
Windshield wiper, rear	8 lb. (4 kg)





Mustang

TRACTOR & EQUIPMENT CO.

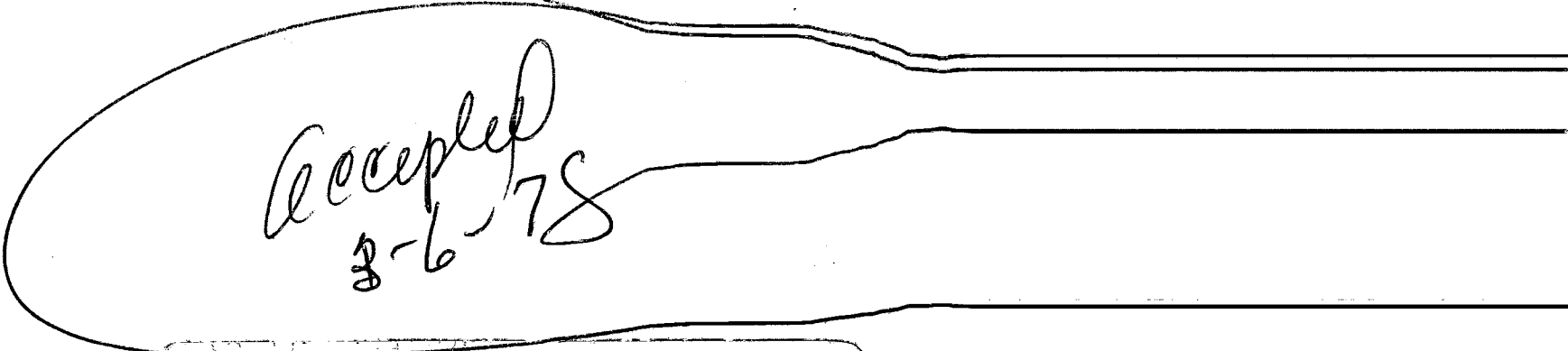
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YOUR
CATERPILLAR
DEALER

Vol. 4 PG. 378



Accepted
8-6-78

Honorable Judge &
Commissioner's Court
Tyler County Pct. 3
Woodville, Texas 75979

Tyler Cty. Pct. 3
Bid on Motor Grader



Vol. 4 PG. 379

Allen Machinery Co., Inc.

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Lufkin, Texas 75901

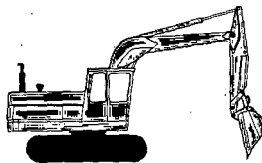
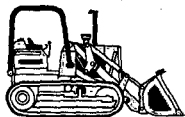
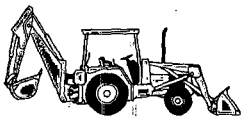
2 March 1978

Tyler County
Woodville, Texas 75979

We are pleased to quote on the following John Deere Motor Grader. We meet and or exceed all required specifications.

1 - New JD770 Motor Grader Equipped As Follows:

- 142 H.P. Diesel Engine
- 13.00x24 In. 12 Ply
- 24 Volt Electrical System
- Electric Starter
- 42 Amp Alternator
- Power Shift Transmission
- Lock-Unlock Differential
- Power Steering Front Wheels
- Hydraulic Front Wheel Lean
- Hydraulic Articulated Frame Steer
- Suspension Seat
- Power Brakes
- Parking Brakes
- Hydraulic Circle (360° Rotation)
- Hydraulic Circle Sideshift
- Hydraulic Blade Sideshift
- Hydraulic Blade Pitch
- 12 Ft. Moldboard
- Driving Lights (2 White Front-2 Red Stop & Tail)
- Work Lights (2 White Front-2 Rear)
- Turn Lights
- Engine Side Shields
- Hour Meter
- Cigarette Lighter
- Horn
- Precleaner
- Dry Air Cleaner
- Air Restriction Indicator
- Complete Instrumentation
- Starting Aid
- Accelerator-Decelerator
- Rear Draw Bar
- Tool Box
- Articulation Indicator





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PAGE 2

SAE Operating Weight 28,150 LBS.

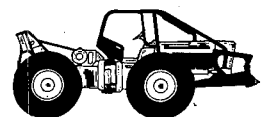
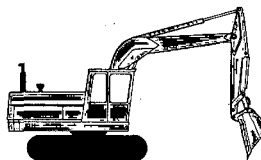
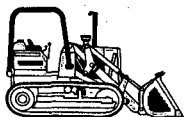
This Unit Carries A One Year Factory Warranty, Plus A 90 Day Free Field Service Warranty.

Unit Price	\$68,823.00
Less Full Municiple Discount	\$15,676.00
	<hr/>
Net Bid FOB Woodville, Texas	\$53,147.00

Delivery 45 to 60 Days

Bo Do La Fosse

Larry Jones
Sales Mgr





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Allen Machinery Co., Inc.

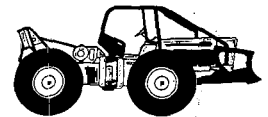
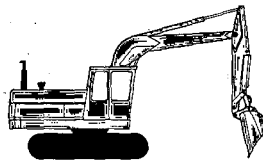
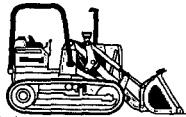
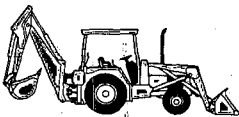
P.O. Box 3327 - Loop 287 West
Lufkin, Texas 75901

2 March 1978

ALTERNATE

1 - New JD670 Motor Grader Equipped As Follows:

125 H.P. Engine Diesel
13.00x24 In. 12 Ply Tires
24 Volt Electrical System
42 Amp Alternator
Electric Starter
Power Shift Transmission
Lock-Unlock Differential
Power Steering Front Wheels
Hydraulic Front Wheel Lean
Hydraulic Articulated Frame Steer
Suspension Seat
Power Brakes
Parking Brakes
12 Ft. Moldboard
Hydraulic Circle (360° Rotation)
Hydraulic Circle Sideshift
Hydraulic Blade Sideshift
Hydraulic Blade Pitch
Driving Lights (2 White Front-2 Red Stop & Tail)
360 Minute Reserve Capacity Batteries
Work Lights (2 White Front-2 White Rear)
Turn Lights
Engine Side Shields
Hour Meter
Cigarette Lighter
Horn
Precleaner
Dry Air Cleaner
Air Restriction Indicator
Complete Instrumentation
Ether Starting Aid
Accelerator-Decelerator
Articulation Indicator
Rear Drawbar
Tool Box
SAE Operating Weight 24,000





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Allen Machinery Co., Inc.

P.O. Box 3327 - Loop 287 West
Lufkin, Texas 75901

PAGE 2

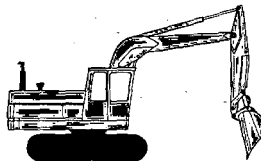
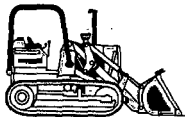
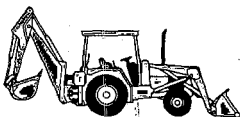
This Unit Carries A One Year Factory Warranty, Plus A 90 Day Free Field Service Warranty.

Unit Price	\$60,109.00
Less Full Municipal Discount	\$13,690.00
Net FOB Woodville, Texas	<u>\$46,419.00</u>

Delivery 45 TO 60 Days

Bo Do La Fosse

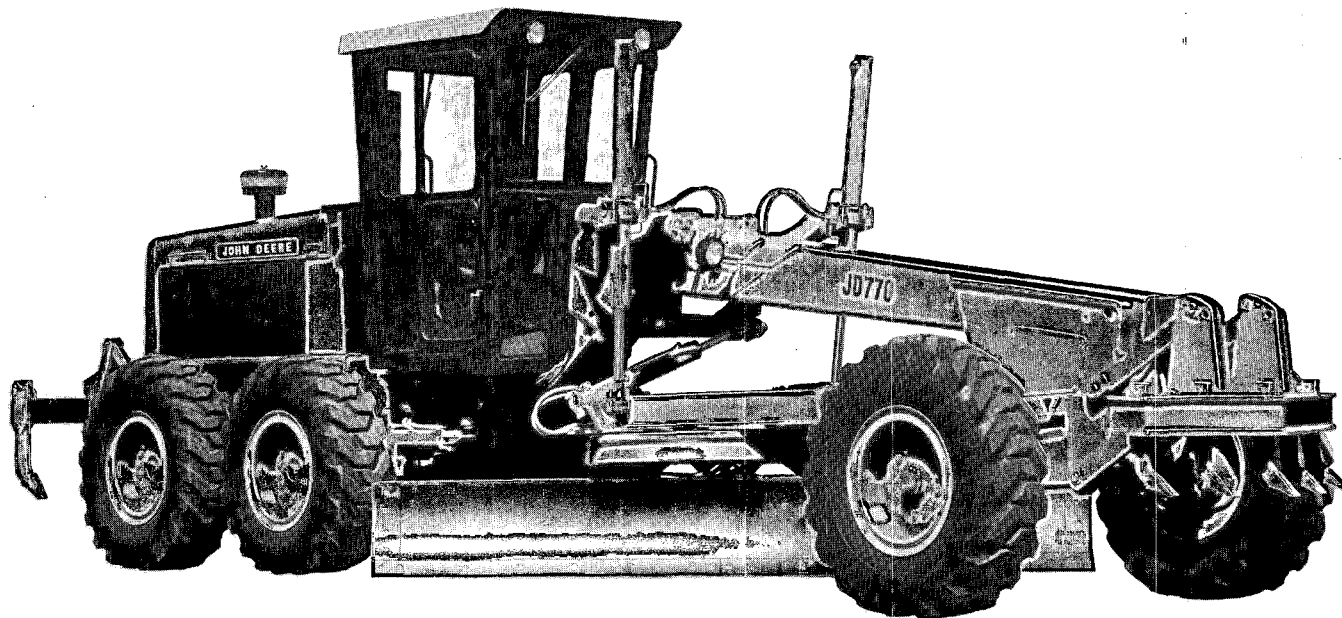
Randy Jones
Sales Mgr.



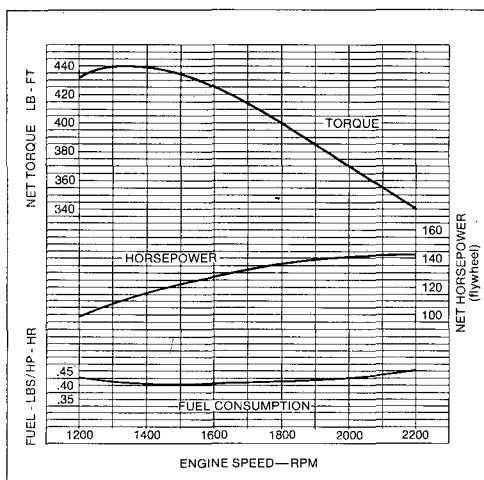


JD770 MOTOR GRADER

Vol. 4 PG. 383



ENGINE PERFORMANCE



FEATURES

142 SAE net hp (144 PS)

12-ft. (3.66 m) blade standard; 13-ft. (3.96 m) and 14-ft. (4.27 m) blades and 2-ft. (610 mm) extensions available

Power Shift transmission;
8 speeds forward, 4 reverse

Articulated frame steering

Differential lock-unlock

22-ft. (6.71 m) turning radius

All-hydraulic control of blade and machine functions

Closed-center hydraulic system with no-leak, drift-free poppet valves

Push-button control

Hydraulically controlled, 7-position lift arms let you position blade for 90-degree bank cuts, left or right, in approximately one minute, without leaving the seat

Oscillating front axle and rear tandem

Hydraulic front-wheel lean

Roll-over protective structure (ROPS) w/cab

ADD VERSATILITY WITH:

Scarifier

Rear-mounted ripper

Snow plow and wings

Bulldozer

▲Automatic blade control

ALLEN MACHINERY COMPANY, INC.
LOOP 287 W. — P. O. BOX 3327
LUFKIN, TEXAS 75901

JD770 MOTOR GRADER SPECIFICATIONS

(Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE Standards. Except where otherwise noted, these specifications are based on a unit equipped with 13.00-24, 10-ply-rating, tubeless tires, 13-ft. (3.96 m) moldboard, and standard equipment.)

Power (at 2200 engine rpm): SAE
 Gross 152 hp (113.5kW*)
 Net 142 hp (106 kW) 144 PS

Net engine flywheel power is for an engine equipped with fan, air cleaner, water pump, lubricating oil pump, fuel pump, alternator, and muffler. The gross engine power is without fan. Flywheel power ratings are under SAE standard conditions of 500-ft. altitude and 85°F. temperature, and DIN 70 020 conditions (non-corrected). No derating is required up to 10,000 ft. (3000 m) altitude.

*In the international system of units (SI), power is expressed in kilowatts (kW).

Engine: John Deere Turbocharged diesel, vertical 6-cylinder, valve-in-head, 4-stroke cycle
 Bore and stroke 4.75x5 in. (120.6x127 mm)
 Piston displacement 531 cu. in. (8702 cm³)
 Compression ratio 15.8 to 1
 Maximum torque @ 1,400 rpm . . . 440 lb-ft (597 Nm) (60.9 kg-m)
 NACC or AMA (U.S. Tax) horsepower 54.15
 Main bearings 7
 Lubrication Pressure system w/full-flow filter
 Cooling Pressurized w/thermostat and fixed bypass
 Fan Suction
 Air cleaner w/restriction indicator Dry
 Electrical system 24-volt w/alternator
 Batteries (2) Reserve capacity: 360 minutes

Transmission . . . Power Shift, 8 forward and 4 reverse selections

Differential Lock Foot-operated, hydraulically actuated

Travel Speeds (2200 engine rpm, no tire slip, 14.00-24 tires):

Shift Lever Position	mph	km/h
Forward 1	2.3	3.7
2	3.3	5.3
3	5.2	8.9
4	6.7	10.8
5	8.8	14.2
6	11.5	18.5
7	14.6	23.6
8	25.1	40.4
Reverse 1	3.0	4.8
2	4.2	6.8
3	6.6	10.6
4	8.6	13.9

Final Drives Inboard planetary

Brakes:

Service Foot-operated, hydraulically actuated, wet-disk, effective on 4 tandem wheels
 Parking Foot-operated, mechanical, dry-disk, effective on 4 tandem wheels

Steering:

Front Full hydraulic power system
 Range 47.5 deg. left or right
 Rear Hydraulically articulated frame steering (25 deg. left or right)
 Turning radius 22 ft. (6.71 m)

Hydraulic System: Closed-center

Standby pressure 2250 psi (155.1 bar) (158.2 kg/cm²)
 ▲Pump Variable-displacement, 50.2 gpm (3.2 l/s) @ 2200 engine rpm

Circle: 5 ft. (1.5 m) dia., welded angle
 Rotation 360 deg.
 Drive Hydraulic motor and worm gear

Drawbar Welded box, 3.5x7x0.5 in. (89x178x13 mm) wall, w/ball and socket pivot

Blade:

Length 12 ft. (3.66 m)
 Height 24 in. (610 mm)
 Thickness 0.88 in. (22 mm)

Blade Lifting Mechanism:

Control Dual-lever, hydraulic
 Cylinders (2) . . . 3.5 in. (89 mm) dia. bore; 49 in. (1.25 m) stroke

Blade Range:

Lift above ground 1 ft. 5 in. (432 mm)
 Blade side shift:
 Right or left 2 ft. 2.9 in. (683 mm)
 Shoulder reach outside wheels:
 Right 7 ft. 8.5 in. (2.35 m)
 Left 7 ft. 8 in. (2.34 m)
 Pitch 35 deg. total

Lift Arms:

Positions 7
 Control Hydraulic, foot operated

Frame:

Rear mainframe . . . Flanged box section from articulation joint to mainframe arch
 Top and bottom plate, width 14 in. (356 mm)
 thickness 0.875 in. (22 mm)
 Side plates, minimum height 10.25 in. (260 mm)
 thickness 0.50 in. (13 mm)
 Weight per ft., min. 112 lb. (166.7 kg/m)
 Minimum vertical-section modulus 127 inches cubed (323 cm cubed)
 Front mainframe Formed box section from mainframe arch to front hood
 Width 10 in. (254 mm)
 Height, min. 13 in. (330 mm)
 Thickness 0.625 in. (16 mm)
 Weight per ft. (m), min. 92.3 lb. (137.3 kg/m)
 Minimum vertical section modulus 100 inches cubed (254 cm cubed)

Tandems: Welded steel box section, 27x7.56 in. (686x192 mm)

Drive 2 in. (50.8 mm) pitch roller chain
 Axle dia. at bearings 3.63 in. (92 mm)
 3.35 in. (85 mm)

Front Axle: Fabricated steel box-frame with steel spindles, tapered roller bearings

Diameter at bearing seats 3.54 in. (90 mm)
 1.87 in. (48 mm)
 Total oscillation 30 deg.
 Wheel lean (either direction) 20 deg.

Rear Drive Axle: Full floating with tapered roller bearings
 Diameter at bearings 3.63 in. (92.2 mm)

Tires

13.00-24, 10- or 12-ply rating; 8-in. rim
 14.00-24, 10- or 12-ply rating; 8- or 10-in. rim
 17.5-25, 12-ply rating; 14-in. rim

Dimensions:

Tire Size	Wheel Tread		Width		Ground Clearance (Front Axle)
	Front	Rear	Front	Rear	
13.00-24	76.60 in. (1.94 m)	79.61 in. (2.02 m)	7 ft. 10 in. (2.34 m)	7 ft. 10 in. (2.34 m)	1 ft. 10 in. (559 mm)
14.00-24	76.60 in. (1.94 m)	79.61 in. (2.02 m)	8 ft. (2.44 m)	8 ft. (2.44 m)	1 ft. 10.5 in. (571 mm)
17.5-25	79.36 in. (2.01 m)	82.37 in. (2.09 m)	8 ft. 6 in. (2.59 m)	8 ft. 6 in. (2.59 m)	1 ft. 11.2 in. (589 mm)

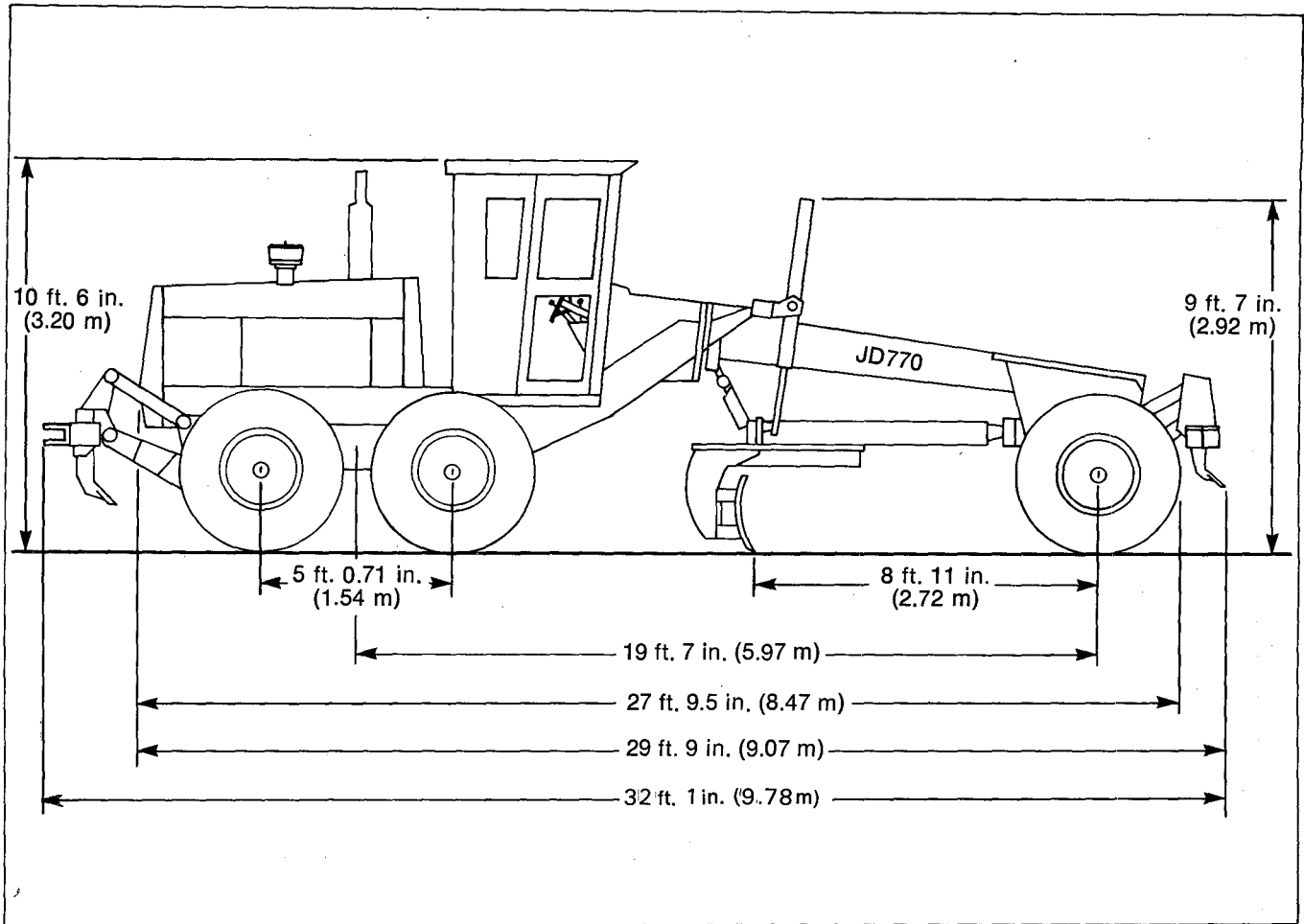
Height to top of steering wheel 7 ft. 6 in. (2.29 m)

Capacities

	U.S.	Liters
Fuel tank	70 gal.	265.0
Cooling system	10 gal.	37.9
Engine lubrication, including filter	22 qt.	20.8
Transmission and hydraulic system	31 gal.	117.3
Tandem housings (each)	4 gal.	15.1
Worm gearbox	3 qt.	2.8

▲Indicates change from last printing.

JD770 MOTOR GRADER DIMENSIONS



Scarifier (Special Equipment):
 V-type for 4 ft. (1.22 m) cut with 3 manual pitch positions and hydraulic float
 Number of teeth (9 possible) 5
 Lift above ground 1 ft. 10 in. (559 mm)
 Penetration 12 in. (305 mm)
 Shank size 1.25x4 in. (31.7x102 mm)

Ripper (Special Equipment): 8 ft. (2.44 m) cut width, parallelogram linkage, 2 manual shank vertical positions
 Number of shank pockets 5
 Number of shanks 3
 Lift above ground 1 ft. 2.5 in. (368 mm)
 Penetration 1 ft. 2 in. (356 mm)
 Shank size 2x5 in. (51x127 mm)
 Lift above ground (shank in upper position) 1 ft. 11.5 in. (397 mm)

SAE Operating Weight	On Front Wheels	On Rear Wheels	Total
Standard equipment ...	8220 lb. (3729 kg)	21,625 lb. (9809 kg)	29,845 lb. (13 538 kg)
Standard equipment, and scarifier	9434 lb. (4279 kg)	21,625 lb. (9809 kg)	31,059 lb. (14 088 kg)
Standard equipment, scarifier and ripper ..	8637 lb. (3918 kg)	24,922 lb. (11 305 kg)	33,559 lb. (15 222 kg)

Additional Standard Equipment:
 Transistorized voltage regulator
 Lights (2 white front w/stop and tallight)
 Work lights (2 front and 2 rear floods)
 Turn signals
 Cigaret lighter
 Horn
 Deluxe seat
 Air filter indicator
 Mechanical hourmeter
 Ether starting aid

Gauges:
 Water temperature
 Transmission temperature
 Transmission lube
 Transmission pressure
 Engine oil pressure
 Fuel gauge
 Precleaner
 ROPS cab w/seat belt
 Front windshield wiper
 Rear windshield wiper
 Floor mat
 Engine side-shields

Special Equipment:
 Scarifier
 Below-cab blade lights
 Bench seat
 Cab heater
 Cab defroster fan
 ROPS canopy w/seat belt
 Coolant heater
 2-ft. (610 mm) moldboard extensions, right or left
 13-ft. (3.96 m) and 14-ft. (4.27 m) moldboards
 Overlay end bits
 Transmission bottom guard

Moldboard float position
 Rear-mounted ripper w/drawbar hitch
 Heavy-duty batteries (620 min. reserve capacity)
 Drawbar hitch
 Toolbox
 Articulation indicator
 Engine disconnect
 Reverse warning system
 Sound baffled engine side shields
 3-in seat belt
 Heavy-duty cutting edge
 ▲Automatic blade control



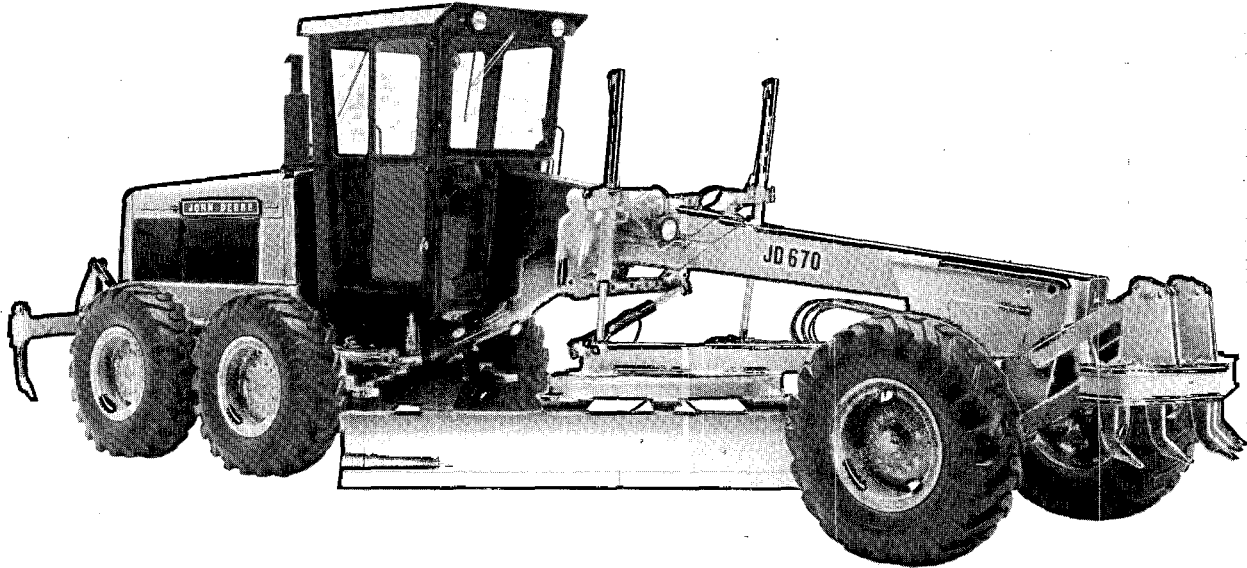
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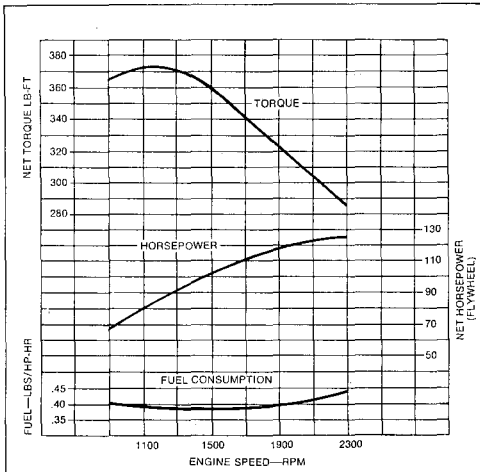


JD670 MOTOR GRADER

Vol. 4 PG. 384



ENGINE PERFORMANCE



ALLEN MACHINERY COMPANY, INC.
LOOP 287 W. — P. O. BOX 3327
LUFKIN, TEXAS 75901

FEATURES

125 SAE net hp (126.7 PS)

12-ft. (3.66 m) blade standard; 13-ft. (3.96 m) and 14-ft. (4.27 m) blades and 2-ft. (610 mm) extensions available

Power Shift transmission;
8 speeds forward, 4 reverse

Articulated frame steering

Differential lock-unlock

22-ft. (6.71 m) turning radius

All-hydraulic control of blade and machine functions

Closed-center hydraulic system with built-in, positive hydraulic locks provides instant response without blade drift or creep

Hydraulically controlled, 7-position lift arms let you position blade for 90-degree bank cuts, left or right, in approximately one minute, without leaving the seat

Oscillating front axle and rear tandem

Hydraulic front-wheel lean

Roll-over protective structure (ROPS) w/cab

ADD VERSATILITY WITH:

Scarifier

Rear-mounted ripper

Snow plow and wing

Bulldozer

Automatic blade control

JD670 MOTOR GRADER SPECIFICATIONS

(Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE Standards. Except where otherwise noted, these specifications are based on a unit equipped with 13.00-24, 8-ply rating, tubeless tires, 12 ft. (3.66 m) moldboard, and standard equipment.

Power (at 2300 engine rpm): SAE
 Gross 135 hp (100.7 kW*)
 Net 125 hp (93.2 kW) 126.7 PS

Net engine flywheel power is for an engine equipped with fan, air cleaner, water pump, lubricating oil pump, fuel pump, alternator, and muffler. The gross engine power is without fan. Flywheel power ratings are under SAE standard conditions of 500-ft. altitude and 85°F. temperature, and DIN 70 020 conditions (non-corrected). No derating is required up to 10,000 ft. (3000 m) altitude.

*In the international system of units (SI), power is expressed in kilowatts (kW).

Engine: John Deere turbocharged diesel, vertical 6-cylinder, valve-in-head, 4-stroke cycle.

Bore and stroke 4.19x5 in. (106.5x127 mm)
 Piston displacement 414 cu. in. (6784 cm³)
 Compression ratio 16.2 to 1
 Maximum torque @ 1300 rpm .. 372 lb.-ft. (504 Nm)(51.4 kg/m)
 NACC or AMA (U.S. Tax) horsepower 42.1
 Main bearings 7
 Lubrication Pressure system w/full-flow filter
 Cooling Pressurized, w/thermostat and fixed bypass
 Fan Suction
 Air cleaner w/restriction indicator Dry
 Electrical system 24-volt w/alternator
 Batteries (2) 12-volt Reserve capacity: 180 minutes

Transmission: Power Shift, 8 forward and 4 reverse selections

Differential Lock: Foot-operated, hydraulically actuated

Travel Speeds (2300 engine rpm, no tire slip):

Shift Lever Position	mph	km/h
Forward 1	2.3	3.6
2	3.2	5.1
3	4.8	7.8
4	6.3	10.1
5	8.2	13.2
6	10.5	17.0
7	14.1	22.8
8	23.9	38.4
Reverse 1	2.8	4.5
2	3.9	6.3
3	5.9	9.5
4	7.6	12.3

Final Drives: Inboard planetary

Brakes:
 Service Foot-operated, hydraulically actuated, wet-disk, effective on 4 tandem wheels
 Parking Foot-operated, mechanical, dry-disk, effective on 4 tandem wheels

Steering:
 Front Full hydraulic power system
 Range 47.5 deg. left or right
 Rear Hydraulically articulated frame steering (25 deg. left or right)
 Turning radius 22 ft. (6.71 m)

Hydraulic System: Closed-center
 Standby pressure 2250 psi (155.1 bar) (158.2 kg/cm²)
 Pump Variable-displacement, 35 gpm (132 l/min) @ 2300 engine rpm

Circle: 4 ft. 10 in. (1.47 m) dia., welded angle
 Rotation 360 deg.
 Drive Hydraulic motor and worm gear
 Sideshift, right and left 31.2 in. (792 mm)
Drawbar: Welded box, 3.5x7x0.38 in. (89x178x10 mm) wall, w/ball and socket pivot

Blade:
 Length 12 ft. (3.66 m)
 Height 24 in. (610 mm)
 Thickness 0.88 in. (22 mm)

Blade Lifting Mechanism:
 Control Dual-lever, hydraulic w/float position
 Cylinders .. (2) 3.25 in. (82.6 mm) dia. bore; 44.87 in. (1.14 m) stroke

Blade Range:
 Lift above ground 1 ft. 4.10 in. (409 mm)
 Blade side shift:
 Right or left 2 ft. 2.9 in. (683 mm)
 Shoulder reach outside wheels:
 Right or left 7 ft. (2.13 m)
 Pitch 35 deg. total

Lift Arms:
 Positions 7
 Control Hydraulic, foot operated

Frame:
 Rear mainframe Welded box section from articulation joint to mainframe arch
 Top and bottom plate, width 8.25 in. (210 mm)
 thickness 0.625 in. (16 mm)
 Side plates, minimum height 13.15 in. (334 mm)
 thickness 0.625 in. (16 mm)
 Weight per ft., min. 93 lb. (138.4 kg/m)
 Minimum vertical-section modulus 104.52 in. cubed (265 cm cubed)
 Front mainframe Formed box section from mainframe arch to front hood
 Width 8.25 in. (210 mm)
 Height, min. 12.3 in. (312 mm)
 Thickness 0.625 in. (16 mm)
 Weight per ft. (m), min. 75.6 lb. (112.5 kg/m)
 Minimum vertical section modulus 69.44 in. cubed (176 cm cubed)

Tandems: Welded steel box section, 27x7.56 in. (686x192 mm)
 Drive 2 in. (50.8 mm) pitch roller chain
 Axle dia. at bearings 3.63 in. (92 mm)
 3.35 in. (85 mm)

Front Axle: Fabricated steel box-frame with steel spindles, tapered roller bearings
 Diameter at bearing seats 3.54 in. (90 mm)
 1.87 in. (48 mm)
 Total oscillation 30 deg.
 Wheel lean (either direction) 20 deg.

Rear Drive Axle: Full floating with tapered roller bearings
 Diameter at bearings 3.348 in. (85 mm)

Tires
 13.00-24, 8-, 10- or 12-ply rating; 8-in. rim
 14.00-24, 10- or 12-ply rating; 8- or 10-in. rim
 17.5-25, 12-ply rating; 14-in. rim

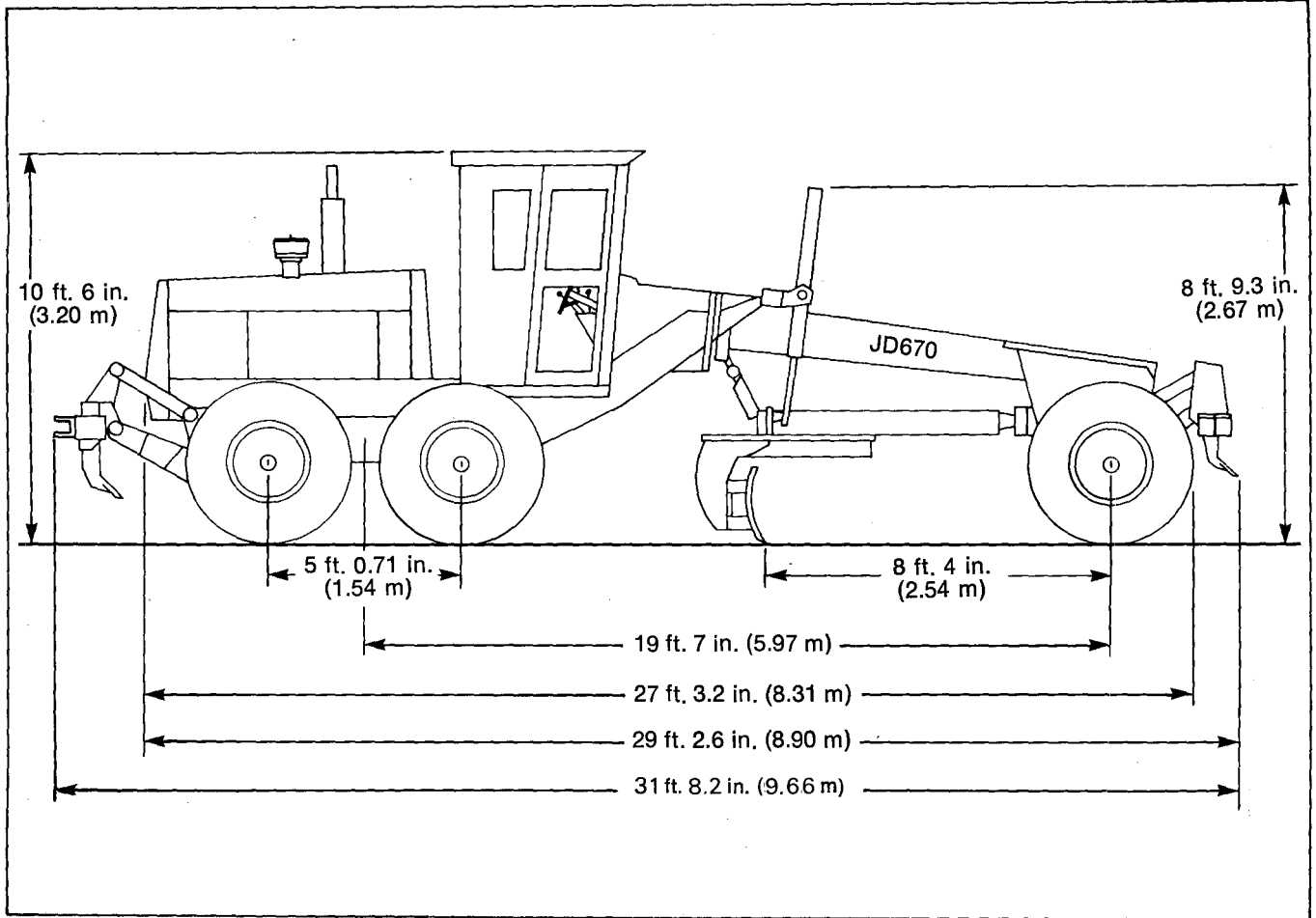
Dimensions:

Tire Size	Wheel Tread		Width		Ground Clearance (Front Axle)
	Front	Rear	Front	Rear	
13.00-24	76.60 in. (1.94 m)	79.61 in. (2.02 m)	7 ft. 10 in. (2.34 m)	7 ft. 10 in. (2.34 m)	1 ft. 10 in. (559 mm)
14.00-24	76.60 in. (1.94 m)	79.61 in. (2.02 m)	8 ft. (2.44 m)	8 ft. (2.44 m)	1 ft. 10.5 in. (571 mm)
17.5-25	79.36 in. (2.01 m)	82.37 in. (2.09 m)	8 ft. 6 in. (2.59 m)	8 ft. 6 in. (2.59 m)	1 ft. 11.2 in. (589 mm)

Height to top of steering wheel 7 ft. 4.4 in. (2.25 m)

Capacities	U.S.	Liters
Fuel tank	60 gal.	227
Cooling system	7 gal.	26.5
Engine lubrication, including filter	20 qt.	18.9
▲Transmission and hydraulic system	28 gal.	106
Tandem housings (each)	4 gal.	15.1
Worm gearbox	3 qt.	2.8

JD670 MOTOR GRADER DIMENSIONS



Scarifier (Special Equipment):

V-type for 4 ft. (1.22 m) cut with 3 manual pitch positions and hydraulic float
 Number of teeth (9 possible) 5
 Lift above ground 1 ft. 10 in. (559 mm)
 Penetration 12 in. (305 mm)
 Shank size 1.25x4 in. (31.7x102 mm)

Ripper (Special Equipment): 8 ft. (2.44 m) cut width, parallelogram linkage, 2 manual shank vertical positions
 Number of shank pockets 5
 Number of shanks 3
 Lift above ground 1 ft. 2.5 in. (368 mm)
 Penetration 1 ft. 2 in. (356 mm)
 Shank size 2x5 in. (51x127 mm)
 Lift above ground (shanks in upper position) 1 ft. 11.5 in. (597 mm)

Additional Standard Equipment:

Transistorized voltage regulator
 Lights (2 white front w/ stop and taillight)
 Work lights (2 front and 2 rear floods)
 Turn signals
 Cigarette lighter
 Horn
 Deluxe seat
 Air filter indicator
 Mechanical hourmeter
 Ether starting aid
 Vandal protection

Gauges:

Water temperature
 Transmission temperature
 Transmission lube
 Transmission pressure
 Engine oil pressure
 Fuel gauge
 Precleaner
 ROPS cab w/ seat belt
 Front windshield wiper
 Rear windshield wiper
 Floor mat
 Engine side-shields

Special Equipment:

Scarifier
 Below-cab blade lights
 Bench seat
 Cab heater
 Cab defroster fan
 ROPS canopy w/ seat belt
 Coolant heater
 2-ft. (610 mm) moldboard extensions, right or left
 13-ft. (3.96 m) and 14-ft. (4.27 m) moldboards
 Overlay end bits

Transmission bottom guard
 Rear-mounted ripper w/ drawbar hitch
 Drawbar hitch
 Toolbox
 Articulation indicator
 Engine disconnect
 Reverse warning alarm
 Sound baffled engine side shields
 Heavy-duty cutting edges
 3-in. seat belt
 ▲Automatic blade control

▲ SAE Operating Weight	On Front Wheels	On Rear Wheels	Total
Standard equipment . . .	7653 lb. (3471 kg)	18,177 lb. (8245 kg)	25,830 lb. (11 716 kg)
Standard equipment and scarifier	8767 lb. (3977 kg)	18,177 lb. (8245 kg)	26,944 lb. (12 222 kg)
Standard equipment, scarifier and ripper . .	7970 lb. (3615 kg)	21,474 lb. (9741 kg)	29,444 lb. (13 356 kg)

▲Indicates change from previous printing.



5-670-4

ALLEN MACHINERY COMPANY, INC.
P.O. BOX 3327
LUFKIN, TEXAS 75901

Vol. 4 PG. 385

NO. _____ TIME: *9:45* AM

MAR 2 1978

GRACE BOSTICK, COUNTY CLERK
TYLER COUNTY, TEXAS

BY: *Grace Bostick*

TYLER COUNTY
WOODVILLE, TEXAS 75979

BID ON MOTOR GRADER