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## MEMORANDUM

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**To:** Mayor Westover and Assembly Members  
Jim Dinley, Administrator *JD*

**Through:** Michael Harmon, Public Works Director *MH*  
Gary Baugher Jr., Maint. & Operations Superintendent *GB*

**From:** Mike Webb, Public Works Maintenance Supervisor

**cc:** Jay Sweeney, Finance Director *JS*

**Date:** July 28, 2011

**Subject:** Replace Vehicle #248, Streets Department Motor Grader

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### Background

The Streets Department vehicle #248, a 1991 Caterpillar 140G Motor Grader, was included in the FY 12 budget for replacement. This budget item was requested and approved in order to meet the current and future equipment needs of the Streets Department.

### Analysis

The Streets Department vehicle #248 is scheduled for replacement in FY12 based on its projected service life, our inspection of the vehicle, and evaluation of its mechanical condition. Due to its mechanical condition we are projecting high maintenance and repair costs if this unit is kept past its projected service life, and it would also decrease the trade in value / sales price of the unit. We have received a trade in allowance of \$42,000 from NC Machinery for our current grader. We recommend accepting this offer.

Replacing this motor grader allows us to continue implementing our plan to incrementally replace our aging heavy equipment fleet as well as restructure the fleet and trying to reduce our operating costs. This also continues to move us towards meeting our vehicle emission reduction goals outlined in the Climate Action Plan. The new motor grader will reduce our exhaust emissions by over 80% as compared to the old grader. Exact reductions are difficult to determine as our old grader was built prior to 1996 when tier 1 emissions were first instituted.

**Fiscal / Procurement:**

Included in the FY 2012 budget is \$290,000.00 for the replacement of the Streets Department vehicle #248 (Caterpillar 140G Motor Grader)

City and Borough of Sitka Procurement Policies require competitive bidding unless otherwise authorized by the Assembly. We have evaluated an alternate method of equipment procurement: purchasing through the State of Alaska's statewide equipment fleet procurement contracts which allows the City and Borough of Sitka to purchase equipment at a better value. Due to the volume of vehicles and equipment the State purchases it is able to position itself for better pricing through the same type of procurement procedures.

**Recommendation:**

**Award the purchase of one 2012 Caterpillar 140M2 All Wheel Drive Motor Grader with Snow Wing to NC Machinery of Juneau, Alaska under the State of Alaska's Bid # CA1500-10 Motor Graders in the amount of \$279,360.00. This includes a trade allowance of \$42,000.00 for our existing 1991 Caterpillar 140G Motor Grader.**

**CITY & BOROUGH OF SITKA**

**MECHANICAL INSPECTION**

**Vehicle #248 Cat 140G Motor Grader**

**DEPARTMENT INFORMATION**

1. Date of Inspection: March 11, 2011 Date of last Inspection: November 23, 2010
2. Department: Streets Department
3. Address: 113 Jarvis St.
4. City/State/Zip Code Sitka, Ak. 99835
5. On-site Contact Person Mike Webb Phone 747-4041
6. Cell phone Number n/a Email Address: mwebb@cityofsitka.com Fax: 747-7668

**VEHICLE INFORMATION**

7. Year/Make/Model 1991 Cat 140G Motor Grader
8. Average hours annually 200
9. Service Interval: 200 hours 10. Equipment Intended Use: Streets Maintenance / Snow Removal
11. Odometer Reading : 3,660 hours 12. Service Life Agreement: 20 years / 2011
13. VIN No. 72V15162

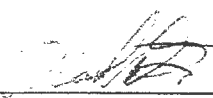
**VEHICLE CONDITION**


14. Exterior: ☐ Excellent ☐ Good ☒ Average ☐ Poor Comments: \_\_\_\_\_
15. Mechanical: ☐ Excellent ☐ Good ☐ Average ☒ Poor Comments: \_\_\_\_\_

**PROJECTED MAINTENANCE /ADDITIONAL COMMENTS**

This unit has average hours and exterior condition for a 20 year old machine. Mechanically many components of the machine are simply beyond repair without substantial parts, labor and downtime. Very high maintenance costs are projected to keep this unit operating past its projected service life.

RECOMMENDATION: REPLACEMENT / SALE OF UNIT

  
\_\_\_\_\_  
Chief Mechanic

 8-2-2011  
\_\_\_\_\_  
Public Works Maintenance Supervisor

**NC MACHINERY**



City and Borough of Sitka  
100 Lincoln St.  
Sitka, AK 99835

July 27, 2011

Attention: Mike Webb

**2011 MODEL CATERPILLAR Model: 140M2 ALL WHEEL DRIVE Motor Grader  
Per State of Alaska Bid # CA1500-10**

**STANDARD EQUIPMENT**

**POWERTRAIN** - Air cleaner, dual stage dry type radial - seal with service indicator - and automatic dust ejector - Air-to-air after cooler (ATAAC) - Belt, serpentine, automatic tensioner - Brakes, oil disc, four-wheel, hydraulic - Demand fan, hydraulic - Differential, lock/unlock, Automatic - Drain, engine oil, ecology - Electronic over-speed protection - Engine, C9 with ACERT technology, - diesel, - with automatic engine de-rate and idle - control. **Meets U.S. EPA Tier 4 and EU - Stage IIb emission standards.** - Parking brake, multi-disc, sealed and - oil cooled - Sediment drain, fuel tank - Tandem drive - Transmission, 8 speed forward and - 6 speed reverse, power shift, direct - drive - VHP Plus (Variable Horsepower Plus) - Alarm, back-up

**ELECTRICAL** - Alarm, back-up - Alternator, 150 ampere, sealed - Batteries, maintenance free, heavy - duty, 1125 CCA - Breaker panel, ground accessible - Electrical hydraulic valves - Electrical system, 24 volt - Grade Control Ready (Cab harness, - software, valves, bosses and brackets) - Lights, reversing - Lights, roading, roof-mounted - stop and tail, LED - Starter, electric - Air Conditioning with heater

**OPERATOR ENVIRONMENT** - Air Conditioning with heater - Articulation, automatic return to center - Center shift pin indicator - Display, digital speed and gear - Doors, left and right side with wiper - Gauge, machine level - Gauges (analog) inside the cab - (includes fuel, articulation, engine - coolant temp, engine - RPM, and hydraulic oil temp, regen) - SOS ports, engine, hydraulic - transmission, coolant, fuel - Joystick gear selection, hydraulic - power steering hydraulic controls - hydraulic controls, (right/left - blade lift with float position, blade - side shift and tip, circle drive, - center shift, front wheel lean and - articulation and steering) - Lights, night time cab - Messenger operator information - Meter, hour, digital - Mirror, inside rearview, wide angle - Power Port, 12V - Radio Ready, Entertainment - ROPS cab, sound suppressed - 70dB(A) ISO 6394 - Seat, cloth -covered, comfort - suspension - Storage area for cooler/lunchbox - Throttle control, electronic - Windows: laminated glass - - fixed front with intermittent wiper - - side and rear (3)

**SAFETY AND SECURITY** - Clutch, circle drive slip - Doors, 4, engine compartment, (two left - hand, two right hand,) locking - Ground level engine shutdown - Hammer (emergency exit) - Horn, electric - Lockout, hydraulic implement (for - roading and servicing) - Seat belt, retractable 3" - Secondary steering - Tandem walkway/guards - A partial allowance for tires on

**TIRES, RIMS, AND WHEELS** - A partial allowance for tires on - 10" x 24" multi-piece rims is included - in the base machine price and weight. - Antifreeze (-35C/-30F)

**FLUIDS** - Antifreeze (-35C/-30F) - Extended Life Coolant to -35C/-30F

**OTHER STANDARD EQUIPMENT** - Accumulators, brake, dual certified - Bumper, rear, integrated with hitch - Drawbar, 6 shoe with replaceable - wear strips - Fluid check, ground level - Fuel tank, 110 gallon (416 L) - Ground level fueling - Hydraulic lines for base functions - Pump, hydraulic, high capacity (98cc/ - 6cu in) - Radiator, cleanout access (both sides) - Tool box

## Description

## Reference No

Base machine price FOB AML Sitka: \$305,071.00  
140G Trade unit FOB Sitka: (\$42,000)  
Optional 12' Henke snow wing: \$16,289.00

**Total Price: \$279,360.00**

**TRADE-IN FOB Sitka:**

Model	Make	Serial Number	Year	Trade Allowance
140G	CATERPILLAR (AA)	72V15162	1991	\$42,000.00

**WARRANTY:**

Standard Warranty: 12 months/unlimited hours  
Extended Warranty: 60 months/5,000 hours Premier

We wish to thank you for the opportunity of quoting on your equipment needs. This quotation is valid for 30 days, after which time we reserve the right to re-quote. If there are any questions, please do not hesitate to contact me.

Sincerely,

Erik Clark  
Machine Sales Representative

NC Machinery  
8550 Airport Blvd.  
Juneau, AK 99801  
1-800-478-0478

**NC Machinery Co., 6450 Arctic Blvd., Anchorage, AK 99518-1532; TEL. (800) 478-7000**

S O L D  T O	PURCHASER CITY & BOROUGH OF SITKA					
	STREET ADDRESS 100 LINCOLN ST				<SAME>	
	CITY/STATE SITKA, AK	COUNTY SITKA BOROUGH (A26)				
	POSTAL CODE 99835-7540	PHONE NO. 907 747 4000				
	EQUIPMENT Mike Webb					
T O	CUSTOMER CONTACT: PRODUCT SUPPORT Mike Webb				F.O.B. AT: AML Sitka	
	INDUSTRY CODE: LOCAL GOVERNMENT (GV93)		PRINCIPAL WORK CODE CONSTRUCTION & MAINTENANCE (220)			
			AIRPORT			
CUSTOMER NUMBER 9995610			Sales Tax Exemption # (if applicable) LOCAL GOVERNMENT			CUSTOMER PO NUMBER
PAYMENT TERMS: (All terms and payments are subject to Finance Company - OAC approval)						
NET PAYMENT ON RECEIPT OF INVOICE <input checked="" type="checkbox"/>		NET ON DELIVERY <input type="checkbox"/>		FINANCIAL SERVICES <input type="checkbox"/> CSC <input type="checkbox"/> LEASE		
CASH WITH ORDER \$0.00		BALANCE TO FINANCE \$0.00		INTEREST RATE 0%		
PAYMENT PERIOD		PAYMENT AMOUNT \$0.00		NUMBER OF PAYMENTS 0		OPTIONAL BUY-OUT
DESCRIPTION OF EQUIPMENT ORDERED / PURCHASED						
MAKE: CATERPILLAR		MODEL: 140M2AWDB		YEAR: TBA		
STOCK NUMBER: B13932		SERIAL NUMBER: TBA		SMU: TBA		
140M2 AWD MOTOR GRADER		PRECLEANER				
GLOBAL ARRANGEMENT, LOW AMBIENT		BASE& 6 (WM,WT,DA1,DA2,FL,RIP)				
MOLDBOARD, 14 FT, PLUS		LIGHTS, FRONT HEADLIGHTS, HIGH				
STARTER, ELECTRIC, HEAVY DUTY		CAB, PLUS (STANDARD GLASS)				
PRODUCT LINK, PL321		NO ACCUGRADE				
LANGUAGE, ENGLISH		TIRES, 14.0R24 MX XSNO+ 1* MP				
COMFORT PACKAGE		SNOW WING READY PACKAGE				
LIGHT, LED WARNING STROBE		LIGHTS, WORKING, PLUS				
MIRRORS, OUTSIDE HEATED		MOUNTING, FOR WARNING LIGHT				
HEATER, ENGINE COOLANT, 120V		LANE 3 ORDER				
ACCUMULATORS, BLADE LIFT		ROLL ON-ROLL OFF				
INSTALLATION AR- BOX FRAME		12' Henke Snow Wing				
ARTICULATION GUARD						
HITCH, TOWING						
WEATHER, COLD PLUS						
TRADE-IN EQUIPMENT						
MODEL: 140G - CATERPILLAR(AA)		YEAR: 1991		SN: 72V15162		Sell Price \$321,360.00
PAYOUT TO:		AMOUNT:		PAID BY:		Less Gross Trade Allowance (\$42,000.00)
MODEL:		YEAR:		SN:		Balance \$279,360.00
PAYOUT TO:		AMOUNT:		PAID BY:		
MODEL:		YEAR:		SN:		
PAYOUT TO:		AMOUNT:		PAID BY:		
MODEL:		YEAR:		SN:		
PAYOUT TO:		AMOUNT:		PAID BY:		
ALL TRADES-INS ARE SUBJECT TO EQUIPMENT BEING IN "AS INSPECTED CONDITION" BY VENDOR AT TIME OF DELIVERY OF REPLACEMENT MACHINE PURCHASE ABOVE.						
PURCHASER HEREBY SELLS THE TRADE-IN EQUIPMENT DESCRIBED ABOVE TO THE VENDOR AND WARRANTS IT TO BE FREE AND CLEAR OF ALL CLAIMS, LIENS, MORTGAGES AND SECURITY INTEREST EXCEPT AS SHOWN ABOVE.						
<input checked="" type="checkbox"/> CATERPILLAR EQUIPMENT WARRANTY			INITIAL <div style="border: 1px solid black; width: 100px; height: 30px; display: inline-block;"></div>		<input type="checkbox"/> USED EQUIPMENT WARRANTY	
			INITIAL <div style="border: 1px solid black; width: 100px; height: 30px; display: inline-block;"></div>			
The customer acknowledges that he has received a copy of the NC Machinery Co. Caterpillar Warranty and has read and understood said warranty. Scheduled oil sampling (S.O.S.) is mandatory with this warranty. The customer is responsible for taking oil samples at designated intervals from all power train components and failure to do so may result in voiding the warranty.					All used equipment is sold as is where is and no warranty is offered or implied except as specified here:	
Warranty applicable including expiration date where necessary: 12 months/unlimited hours					Warranty applicable:	
60 Month/5,000 hours Premier						
CSA:						
NOTES:						

**THIS AGREEMENT IS SUBJECT TO THE TERMS AND CONDITIONS ON THE REVERSE**

NC Machinery Co.

PURCHASER

ORDER RECEIVED BY

Erik Clark

APPROVED AND ACCEPTED ON

REPRESENTATIVE

CITY &amp; BOROUGH OF SITKA

PURCHASER

RY

**SIGNATURE**

PRINT NAME AND TITLE

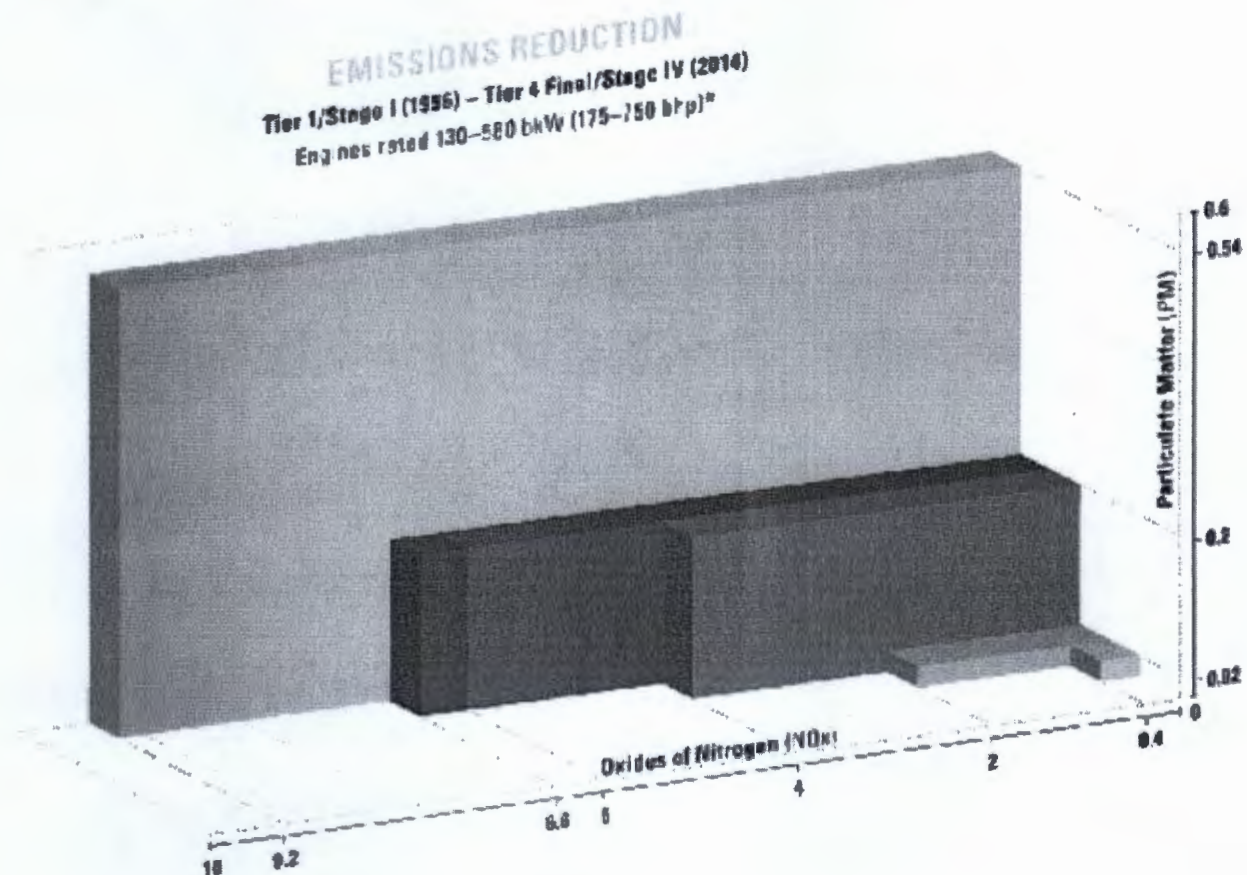
## REDUCE EMISSIONS WITH CAT TIER 4/STAGE IIIB TECHNOLOGY

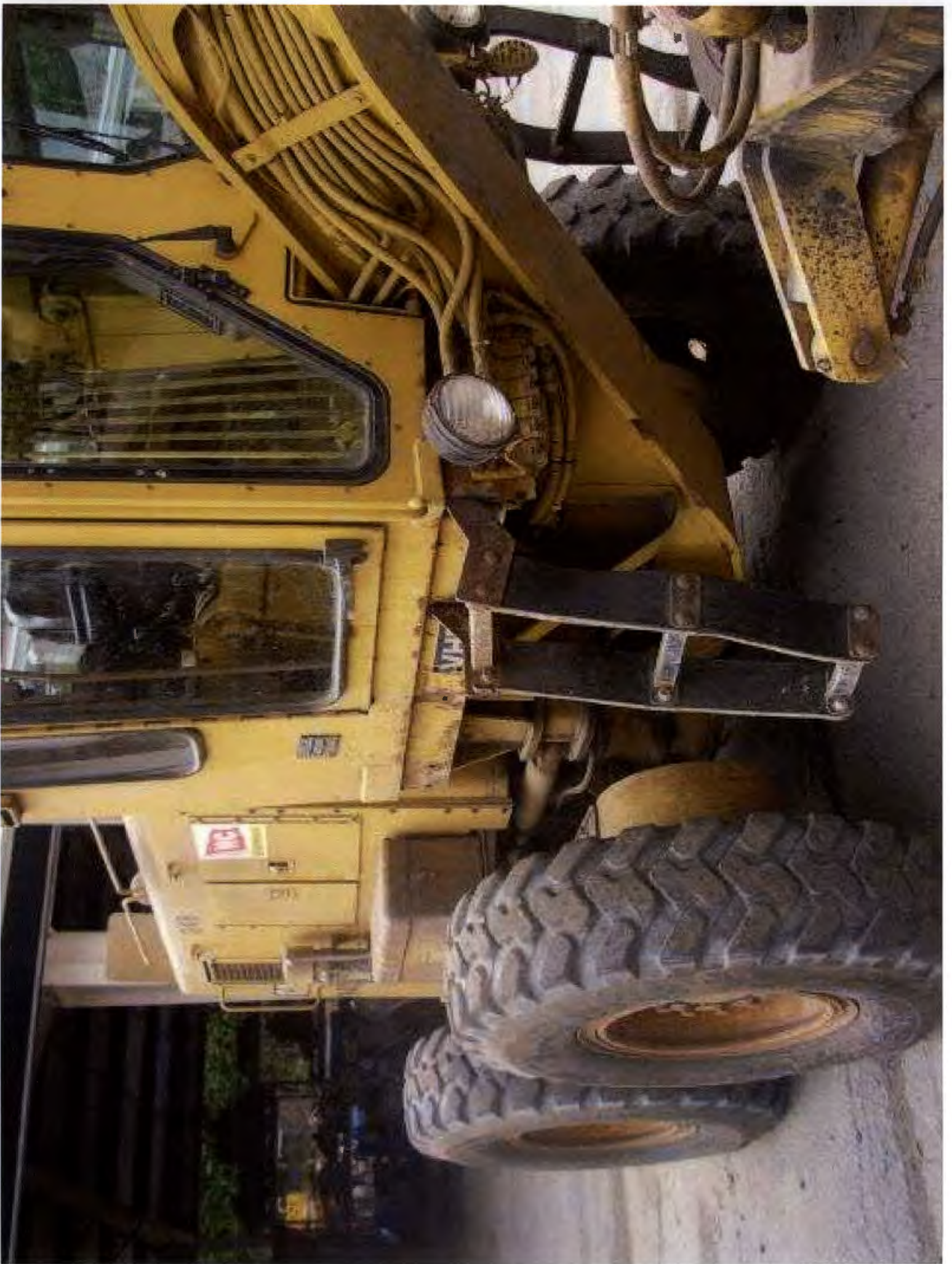
Emissions standards have been systematically reducing levels of Particulate Matter (PM) and Oxides of Nitrogen (NOx) since 1996 when the first standards went into effect.

From Tier 1/Stage I (1996) levels to Tier 3/Stage IIIA (2006), emissions standards required an approximate 65 percent reduction in PM and a 60 percent reduction in NOx.

The next phase of emissions standards, called Tier 4 Interim in the U.S. and Stage IIIB in the European Union, take effect in 2011. Compared to Tier 3/Stage IIIA levels, Tier 4 Interim/Stage IIIB standards require a 90 percent reduction in PM and a 50 percent decrease in NOx. Tier 4 Final/Stage IV standards, which will become effective in 2014, reduce NOx by an additional 80 percent, taking PM and NOx emissions to near-zero levels.

1996 Tier 1/Stage I	2006 Tier 3/Stage IIIA
2004 Stage II	2011 Tier 4 Interim/Stage IIIB
2004 Tier 2	2014 Tier 4 Final/Stage IV









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