



Independent Construction Caterpillar 633D Scraper Tier 2 Engine Repower Fact Sheet

This repower project is funded by the Sacramento Metropolitan AQMD using local Construction Mitigation Fees in a Carl Moyer Program matching project.

Project Facts

Owner:	Independent Construction
Equipment Type:	1986 Caterpillar 633D Scraper
Vocation:	Construction
Area of Operation:	Placer and Sacramento Counties
Old Engine Description:	1986 Caterpillar 3408 @ 450 HP
New Engine Description:	Tier 2 Caterpillar 3408E @ 450 HP (2001 Cert)
District Contribution:	\$120,000
Annual NO _x Reduction:	2.4 tons per year
Annual ROG Reduction:	510 pounds per year
Annual PM 10 Reduction:	230 pounds per year
Annual CO ₂ Reduction:	About 20-40% Reduction (more efficient engine)
Overall Cost Effectiveness:	~ \$5,000/ton (NO _x +ROG+10*PM10)
Estimated Health Savings:	~ \$1.5 million over project life



Kiewit Pacific Construction Caterpillar 16G Grader Diesel Catalyst Retrofit Fact Sheet

This retrofit project was funded by Kiewit Pacific to reduce emissions in compliance with SMAQMD construction mitigation requirements.

Project Facts

Owner:	Kiewit Pacific Construction
Equipment Type:	1998 Caterpillar 16G Grader
Vocation:	Construction
Area of Operation:	Sacramento County (Sunridge Mass Grade)
Engine Description:	250 HP
Retrofit Description:	Claire "Alliance" Lean NO _x Catalyst + Diesel Oxidation Catalyst
Retrofit Cost:	\$16,000 (approx.)
NO _x Reduction:	30 percent (baseline NO _x : 6.25 g/bhp-hr)
ROG Reduction:	n/a
PM 10 Reduction:	30 percent (baseline PM ₁₀ : 0.15 g/bhp-hr)



Commercial Low-Emission Propane Generator Fact Sheet

This alternative fuel project was funded by the Sacramento Metropolitan AQMD using Construction Mitigation Fees as a technology demonstration project.

Project Facts

Owner:	Cummins West
Equipment Type:	Low Emission 60 kW GenSet
Vocation:	Commercial Power Generation (Construction)
Area of Operation:	Sacramento Region
Engine Description:	Ford ESG-642 4-cycle V6 spark-ignited industrial engine
Emission Control:	L102 closed loop fuel control system and 3-way catalytic converter
Project Cost:	\$40,000
NOx Emission Rate:	0.063 g/bhp-hr (certified to 1.5 g/bhp-hr)
ROG Emission Rate:	0.152 g/bhr-hr
CO Emission Rate:	0.053 g/bhp-hr
PM10 Emission Rate:	negligible

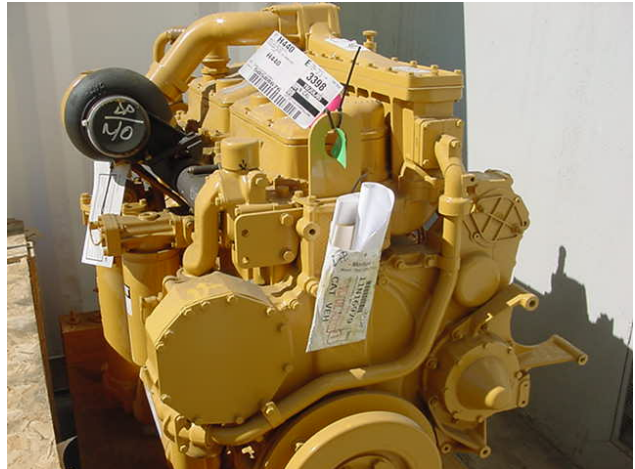


American Engineering & Asphalt Caterpillar 825C Compactor Tier 2 Engine Repower Fact Sheet

This repower project is funded by the Sacramento Metropolitan AQMD using local Construction Mitigation Fees in a Carl Moyer Program matching project.

Project Facts

Owner:	American Engineering & Asphalt
Equipment Type:	1986 Caterpillar 825C Compactor
Vocation:	Construction
Area of Operation:	Sacramento, Placer
Old Engine Description:	1986 Caterpillar 3406 @ 345 HP
New Engine Description:	Tier 2 Caterpillar 3406E @ 345 HP
District Contribution:	\$82,000
Annual NO _x Reduction:	1.4 tons per year
Annual ROG Reduction:	320 pounds per year
Annual PM 10 Reduction:	140 pounds per year
Annual CO ₂ Reduction:	About 20% Reduction (more efficient engine)
Overall Cost Effectiveness:	\$6,200/ton (NO _x +ROG+20*PM10)
Estimated Health Savings:	~ \$600,000 over project life



B&D Geerts Construction Caterpillar 826C Compactor Tier 1 Engine Repower Fact Sheet

This repower project is funded by the Sacramento Metropolitan AQMD using local Construction Mitigation Fees in a Carl Moyer Program matching project.

Project Facts

Owner:	B&D Geerts Construction
Equipment Type:	1986 Caterpillar 826C Compactor
Vocation:	Construction
Area of Operation:	Yolo
Old Engine Description:	1986 Caterpillar 3406 @ 345 HP
New Engine Description:	Tier 1 Caterpillar 3406 @ 345 HP
District Contribution:	\$30,000
Annual NO _x Reduction:	0.9 tons per year
Annual ROG Reduction:	220 pounds per year
Annual PM 10 Reduction:	110 pounds per year
Annual CO ₂ Reduction:	About 20% Reduction (more efficient engine)
Overall Cost Effectiveness:	\$3,200/ton (NO _x +ROG+20*PM10)
Estimated Health Savings:	~ \$400,000 over project life



Collet Construction Caterpillar 825C Compactor Tier 2 Engine Repower Fact Sheet

This repower project is funded by the Sacramento Metropolitan AQMD using local Construction Mitigation Fees in a Carl Moyer Program matching project.

Project Facts

Owner:	Collet Construction
Equipment Type:	1984 Caterpillar 825C Compactor
Vocation:	Construction
Area of Operation:	Sacramento, El Dorado, Placer, Yolo, Solano
Old Engine Description:	1984 Caterpillar 3406 @ 341 HP
New Engine Description:	Tier 2 Caterpillar 3406 @ 345 HP
District Contribution:	\$80,000
Annual NOx Reduction:	1.2 tons per year
Annual ROG Reduction:	310 pounds per year
Annual PM 10 Reduction:	120 pounds per year
Annual CO2 Reduction:	About 20% Reduction (more efficient engine)
Overall Cost Effectiveness:	\$6,900/ton (NOx+ROG+20*PM10)
Estimated Health Savings:	~ \$500,000 over project life



Kiewit Pacific Caterpillar 651E Scraper Tier 1 Engine Repower Fact Sheet

This repower project is funded by the Sacramento Metropolitan AQMD using local Construction Mitigation Fees in a Carl Moyer Program matching project.

Project Facts

Owner:	Kiewit Pacific
Equipment Type:	1993 Caterpillar 651E Scraper
Vocation:	Construction
Area of Operation:	Sacramento, El Dorado, Placer, Yolo, Solano
Old Engine Description:	1993 Caterpillar 3412 @ 586 HP
New Engine Description:	Tier 1 Caterpillar 3412E @ 632 HP
District Contribution:	\$56,011
Annual NO _x Reduction:	0.8 tons per year
Annual ROG Reduction:	330 pounds per year
Annual PM 10 Reduction:	140 pounds per year
Annual CO ₂ Reduction:	About 20% Reduction (more efficient engine)
Overall Cost Effectiveness:	\$5,300/ton (NO _x +ROG+20*PM10)
Estimated Health Savings:	~ \$400,000 over project life