

Applicant Information

Organization/ Applicant Name	FirstName	LastName	JobTitle	Address	City	State	Email Address	ZipCode	OfficePhone	OfficePhone Ext

Project 1 Inform											
	Organization Performing		Number of						Additional	Additional	
Project Name	Project	TargetFleet	Vehicles	City	County	State	Region	Funding Amount	Funding Source	Funding Amount	Public Benefit

Fleet 1 Information:

		Class' Serial and/or VIN # of engine and/or vehicle Serial and/or VIN # of engine Make Engine Family Name (if engine Model Engine Model NA) Displacement per Current Tier Level Horsepower Current Standard Level for PM and VIN # of NAN Year Displacement per Current Tier Level VIN # of VIN # of Level for PM and NAN Year Displacement per Current Tier Level VIN # of VIN # of Level for PM and VIN # of NAHC+NOX Annual Fault of VIN # of VIN																				Ne	ew Vehicle/Tech	nology Informa	tion				
Vehicle Type	VIN # of Name (If										Level for PM and		Amount of Fuel Used (gal/year)	Annual Miles per vehicle (Highway)	Annual Usage Rate (Hours per engine) (Nonroad)	Idling	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Model	New Engine Family Name (Replacements/ Repowers)	New Engine Model Year (Replacements/ Repowers/ Upgrades)	New Engine Horsepower (Replacements/ Repowers)	Displacement pe	replacements/	New Standard Level fo PM and NOx or NMHC+NOx	New Fuel	Annual Idling Hours Reduced (per engine)	
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Project 2 Inform											
	Organization										
	Performing		Number of						Additional	Additional	
Project Name	Project	TargetFleet	Vehicles	City	County	State	Region	Funding Amount	Funding Source	Funding Amount	Public Benefit

Fleet 2 Information:

						Currer	t Vehicle Inform	ation												Ne	w Vehicle/Tech	nology Informat	tion				
Vehicle Type	TargetFleet	Class/	Serial and/or VIN # of engine and/or vehicle		Engine Family Name (If unregulated, ther NA)	n Engine Model Year	Horsepower	Displacement pe Cylinder (Liters)	Current Tier Leve	Current Standard Level for PM and NOx or NMHC+NOx	Fuel Used	Annual Miles per vehicle	Annual Usage Rate (Hours per engine) (Nonroad)	Idling Hours (per	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Mode	(Replacements)			New Engine Displacement per Cylinder (Liters) (Replacements/ Repowers)	(Nonroad replacements/		Annual Idling Hours Reduced (per engine)		Technology Unit Installation Cost
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Project 3 Inform											
	Organization										
	Performing	1	Number of	1					Additional	Additional	l i
Project Name	Project	TargetFleet	Vehicles	City	County	State	Region	Funding Amount	Funding Source	Funding Amount	Public Benefit

Fleet 3 Information:

					Currei	nt Vehicle Inform	ation													Ne	ew Vehicle/Tech	nology Informa	tion					
Vehicle Type	TargetFleet	Class/	Serial and/or VIN # of engine and/or vehicle	Engine Family Name (If unregulated, ther NA)	n Engine Model Year	Horsepower	Displacement per Cylinder (Liters)	Current Tier Level	Current Standard Level for PM and NOx or NMHC+NOx		Amount of Fuel Used (gal/year)	Annual Miles	Annual Usage Rate (Hours per engine) (Nonroad)	Idling	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Mode	New Engine Family Name (Replacements/ Repowers)			Displacement pe Cylinder (Liters) (Replacements/	replacements/	New Standard Level fo	New Fuel	Annual Idling Hours Reduced (per engine)	Technology	Technology Unit Installation Cost
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Copy and paste additional lines as necessary to capture project fleet information. Project 4 Information

Project 4 Inform	hation										
	Organization										
	Performing		Number of						Additional	Additional	
Project Name	Project	TargetFleet	Vehicles	City	County	State	Region	Funding Amount	Funding Source	Funding Amount	Public Benefit

Fleet 4 Information:

			VIN # of Name (If unregulated, then Engine Model Displacement per Current Tier Level NOx or Fuel Used per vehicle per engine)																			Ne	ew Vehicle/Tech	nology Informa	tion					
Vehicle Type	VIN # of Name (If Level for PM and Amount of A													Annual Miles		Idling	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Model	(Replacements)	New Engine Model Year (Replacements/ Repowers/ Upgrades)		Displacement per Cylinder (Liters)	replacements/	New Standard Level fo	New Fuel	Annual Idling Hours Reduced (per engine)	Technology Unit Cost	Technolog Unit y Installatio Cost
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Project 5 Information

 	lation										
	Organization										
	Performing		Number of						Additional	Additional	
Project Name	Project	TargetFleet	Vehicles	City	County	State	Region	Funding Amount	Funding Source	Funding Amount	Public Benefit

Fleet 5 Information:

						Currer	nt Vehicle Inform	ation											Ne	w Vehicle/Tech	nology Informa	tion					
Vehicle Typ	TargetFlee		Serial and/or VIN # of engine and/or vehicle	Engine Model	Engine Family Name (If unregulated, then NA)	n Engine Model Year			Current Tier Level	Current Standard Level for PM and NOx or NMHC+NOx	Amount of Fuel Used (gal/year)	per vehicle	per engine)	Idling Hours (per	Retrofit	Technology Type	Technology Make	(Replacements/	New Engine Model Year (Replacements/ Repowers/ Upgrades)	Horsepower	(Replacements/	r (Nonroad replacements/	New Standard Level fo PM and NOx or NMHC+NOx	New Fuel	Annual Idling Hours Reduced (per engine)	Technology	
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Copy and paste additional lines as necessary to capture project fleet information.

Please replicate the Project and Fleet Information Tables as necessary for additional Projects/Fleets.



Applicant Information

Organization/ Applicant Name	FirstName	LastName	JobTitle	Address	City	State	EmailAddress	ZipCode	OfficePhone	OfficePhoneE xt
Drainat 4 Inform	ation									

Froject i morm											
	Organization									Additional	
	Performing		Number of					Funding	Additional	Funding	
ProjectName	Project	TargetFleet	Vehicles	City	County	State	Region	Amount	Funding Source	Amount	Public Benefit
		Marine									

Fleet 1 Information for MARINE VESSELS ONLY

							Current Vess	el Information	า													New	Vessel/Technol	ogy Information						
Sector	Application	Boat Name o Other Identifie	Total Number of Engines per er Vessel	Engine Type	Serial # of e Engine	Engine Make Engine Mode		Engine Model Year		Displacement per Cylinder (Liters)	1	Current Standard evel for PM and NOx or NMHC+NOx	Fuel Type	Amount of Fue Used (gal/year	Annual Usage Rate (Hours per engine)	Annual Idling Hours (per engine)	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Model	New Engine Family Name (Replacements/ Repowers)	New Engine Model Year (Replacements/ Repowers/ Upgrades)	New Engine Horsepower (Replacements/ Repowers)	New Engine Displacement per Cylinder (Liters) (Replacements/ Repowers)	r New Tier Leve (Replacement Repowers/ Upgrades)	el New Standar s/ Level for PM and NOx or NMHC+NOx	d New Fuel Type	Annual Idling Hours Reduced (per engine)	Technology Unit Cost	Technology Unit Installation Cost
Marine			-																											
Marine																														
Marine																														
Marine																														
																				-										
Marine																														

Copy and paste additional lines as necessary to capture project fleet information.

Project 2 Inform	ation										
	Organization Performing		Number of					Funding	Additional	Additional Funding	
ProjectName	Project	TargetFleet	Vehicles	City	County	State	Region	Amount	Funding Source	Amount	Public Benefit
		Marine									

Fleet 2 Information for MARINE VESSELS ONLY

					Current Ves	sel Informatio	n										New	Vessel/Technol	ogy Information						
Sector	Total Number of Boat Name or Engines pe Application Other Identifier Vessel	r Engine Type	Serial # of Engine E	Engine Make	Engine Family Name (If unregulated engine, then NA)	Engine Model Year		Displacement per Cylinder (Liters)	Current Tier		Annual Usage Amount of Fuel Rate (Hours Used (gal/year) per engine)	Year of Retrofit Action	Technology Type	Technology Make	Verified Technology Model	New Engine Family Name (Replacements/ Repowers)	New Engine Model Year (Replacements/ Repowers/ Upgrades)	New Engine Horsepower (Replacements/ Repowers)	Cylinder (Liters)	(Replacements/ Repowers/	Level for PM	New Fuel	Annual Idling Hours Reduced (per engine)	Technology Unit Cost	Technology Unit Installation Cost
Marine																									
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Marine																									

Copy and paste additional lines as necessary to capture project fleet information.

Please replicate the Project and Fleet Information Tables as necessary for additional Projects/Fleets.



The following instructions explain how to fill out the Fleet Description tab and the Marine Vessels tab.

Each tab is divided into three sections: Recipient Information, Project Information, and Fleet Information.

Below is an explanation of each field.

For an example of how the Applicant Fleet Description spreadsheet should be filled out, please refer to the tab labeled 'Example'.

Applicant Information should only be filled out only once.

Project Information and Fleet Information should be filled out for each separate "project" within the proposal.

Separate projects are generally defined as separate subgrants to various entities, or separate, distinct target fleets within the grant or subgrants.

Fleet Information should be cumulative, and include all affected engines, vehicles, and retrofits proposed as part of the project.

Applicant Information

Organization/ Applicant Name- Enter the name of the organization applying for the grant from EPA (regardless of who actually uses the funds). First Name- Enter the FIRST name of the contact person for the application. Last Name- Enter the LAST name of the contact person for the application. Job Title- Enter the Job Title of the contact person for the application. Email Address- Enter the email address of the contact person for the application. Address- Enter the address of the contact person for the application. City- Enter the city of the contact person for the application. State- Enter the two letter postal code of the contact person for the application. Zip Code- Enter the zip code of the contact person for the application. Office Phone- Enter the phone number of the contact person for the application. OfficePhoneExt- Enter the extension of the contact person for the application.

Project Information

Project Name- Enter the name of the project (try to include both the Organization Name and Fleet(s)).

Organization Performing Project- Enter the name of the organization performing the project (this could be the Prime Organization/Applicant or a Subgrantee).

Target Fleet- Select from the dropdown menu provided the target fleet to be addressed.

Number of Vehicles- Enter the number of vehicles to be addressed.

City- Enter the city in which the project will take place.

County- Enter the county in which the project will take place.

State- Enter the two letter postal code for the state in which the project will take place.

Funding Amount - Enter the total amount of Federal funds to be committed to the project

Additional Funding Source- If there are to be matching funds, enter the source.

Additional Funding Amount- Enter the amount of funds provided.

Public Benefit - If the vehicles are part of a public fleet or benefit the public (i.e. a private school bus company contracted by a public school; drayage vehicles that serve a port; private construction equipment contracted to a public works project, etc) enter "yes", otherwise enter "no".

Fleet Information

Vehicles can be combined on one line if all the information is the same. Please see the Example tab.

- Vehicle Type- Enter the vehicle type, either "On Highway" "NonRoad".
 - Target Fleet- Select the target fleet from the dropdown menu.
- Class/Equipment- Select from the dropdown menu the Vehicle Class or type of nonroad equipment.
 - Serial/VIN # Enter the Serial number or VIN number of the engine or vehicle
 - Engine Make- Enter the manufacturer of the exisiting Engine.
 - Engine Model- Enter the model of the exisiting Engine.

Engine Family Name- Enter the Engine Family name of the existing Engine. NOTE: unregulated engines will not have an Engine Family Name.

Engine Family Name information is optional for Idle Reduction, Aerodynamic Technology, Low Rolling Resistance Tires, and Fuels projects.

Engine Model Year- Enter the model year of this engine set.

Horsepower- For NONROAD ONLY, Enter the average horsepower of the equipment.



Displacement per cylinder Enter the engine displacement per cylinder in liters. Current Tier Level- For NONROAD REPLACEMENTS, REPOWERS AND UPGRADES ONLY, Select from the dropdown menu the Current Tier Level. Current Standard Level - For NONROAD AND ON-HIGHWAY REPLACEMENTS, REPOWERS AND UPGRADES ONLY, enter the current emission standard levels of the engine for PM and NOx or NMHC+NOx. **Current Fuel Type-** Select the type of fuel that is currently being used (prior to any clean diesel activity change). Amount of Fuel Used- Enter the amount of fuel used in gallons/year. Annual Miles- For ON-HIGHWAY ONLY, Enter the average number of vehicle miles traveled per year per vehicle. Annual Usage Rate Hours- For NONROAD ONLY, Enter the average number of hours the equipment is used per year. Annual Idling Hours- For ON-HIGHWAY ONLY, Enter the average number of hours the vehicle idles per year. Year of Retrofit Action- Enter the year in which the retrofit will take place (i.e., if in 2010, you're replacing a 1995 bus with a 2007 bus, the retrofit year is 2010.) Technology Type- Enter the type of technology to be used. Example: Diesel Particulate Filter, Replacement, Biodiesel 100 **Technology Make-** Enter the make of the technology. Example: Donaldson, Caterpillar. Verified Technology Model- Enter the model of the technology as identified on the EPA/CARB verification lists (i.e. Johnson Matthey ACCRT, Carrier Transicold - Comfortpro, etc.) to confirm a verified technology was used. This is applicable for exhaust retrofits, upgrades, idle reduction technologies, aerodynamics and low rolling resistant tires. Verified Technology Model may not be known for the initial application, pending the bid process, and would be noted as TBD. New Engine Family Name- For REPLACEMENTS AND REPOWERS ONLY, Enter the Engine Family Name of the new engine. New Engine Model Year- For REPLACEMENTS AND REPOWERS ONLY, Enter the model year of the new vehicle/engine. New Horsepower- For NONROAD ONLY, Enter the average horsepower of the equipment. New Displacement per cylinder Enter the engine displacement per cylinder in liters. New Tier Level- For NONROAD REPLACEMENTS, REPOWERS AND UPGRADES ONLY, Select from the dropdown menu the new Tier Level. New Standard Level- For NONROAD AND ON-HIGHWAY REPLACEMENTS, REPOWERS AND UPGRADES ONLY, enter the new emission standard levels of the engine for PM and NOx or NMHC+NOx. New Fuel Type- Select the new type of fuel that is being used. Annual Idling Hours reduced- For IDLE REDUCTION STRATEGIES ONLY, Enter the average number of idling hours reduced for the engine. Technology Unit Cost- Enter the dollar amount of the technology per unit. **Technology Unit Installation-** Enter the cost of installing the technology per unit.

Marine Vessels

Application- Select the	will always read marine. • target vessel. boat name or other identifier of the vessel
Engine Type- Identify w VIN/Serial # - For Repo Engine Make- Enter the	total number of engines on the vessel including auxiliary and propulsion. The max number of engines allowed per vessel is 5. hich engines are propulsion and which are auxiliary. wer and Vehicle Replacement Projects, Enter the VIN or engine Serial # for each scrapped/replaced vehicle or engine. manufacturer of the exisiting Engine. model of the exisiting Engine.
Engine Family Name- Enter the Engine Model Year- Enter the Horsepower- Enter the	Engine Family Name for each engine. Unregulated engines will not have an Engine Family Name. model year of the existing engine. horsepower of the existing engine.
Current Tier Level- For REPL	m the dropdown menu the displacement per cylinder in liters. ACEMENTS, REPOWERS AND UPGRADES ONLY, Select from the dropdown menu the Current Tier Level. ACEMENTS, REPOWERS AND UPGRADES ONLY, enter the current emission standard levels of the engine for PM and NOx +NOx.
Amount of Fuel Used- Enter the Annual Usage Rate Hours- Enter the Annual Idling Hours per Engine- Enter the Year of Retrofit Action Enter the	type of fuel that is currently being used (prior to any clean diesel activity change). amount of fuel used in gallons/year for the engine. average number of hours the engine is used per year. idling hours for the engine in a given year. year in which the retrofit will take place (i.e. If in 2010, you're upgrading a Tier 0 engine to Tier 1, then the retrofit year is 2010) type of technology to be used. Example: Diesel Oxidation Catalyst, Shore Power, Engine Repower, etc.



Technology Make- Enter the make of the technology. Example: Donaldson, Caterpillar.

Verified Technology Model- Enter the model of the technology if available (i.e. Johnson Matthey PCRT).

New Engine Family Name- For REPLACEMENTS AND REPOWERS ONLY, Enter the Engine Family name of the new engine.

New Engine Model Year- For REPLACEMENTS AND REPOWERS ONLY, Enter the model year of the new engine.

Horsepower- Enter the horsepower of the new engine.

Displacement per cylinder Select from the dropdown menu the displacement per cylinder in liters.

New Engine Tier Level- For REPLACEMENTS, REPOWERS AND UPGRADES ONLY, Select from the dropdown menu the new Tier Level. New Standard Levels- For REPLACEMENTS, REPOWERS AND UPGRADES ONLY, enter the new emission standard levels of the engine for PM and NOx or NMHC+NOx.

New Fuel Type- Select the new type of fuel that is being used.

Annual Idling Hours reduced- For IDLE REDUCTION STRATEGIES ONLY, Enter the number of idling hours reduced as a result of this technology.

Technology Unit Cost- Enter the cost of the technology per unit.

Technology Unit Installation- Enter the cost of installing the technology per unit.



Applicant Information

Organization/ Applicant Name	FirstName	LastName	JobTitle	Address	City	State	Email Address	ZipCode	OfficePhone	OfficePhone Ext
Missouri			General Services				Jeannie.Wilso			
Department of Transportation	Jeannie	Wilson	Fleet Manager	P.O. Box 270	Jefferson City		n@modot.mo. gov		573-526-1199	ĺ

Project 1 Information

Project Name	Organization Performing Project	TargetFleet	Number of Vehicles	City	County	State	Region	Funding Amount	Additional Funding Source	Additional Funding Amount	Public Benefit
MO Dept of	Missouri								In-kind		
Transport	Department of	City/County							contribution from		
Retrofits	Transportation	vehicle	2	St. Louis		MO	7	\$63,271	MODOT	\$2,000	yes

Fleet 1 Information:

							Curre	nt Vehicle Inform	ation												New	Vehicle/Techno	ology Informa	ation					
Vehicle Type	TargetFleet	Class/ Equipment	Serial and/or VIN # of engine and/or vehicle	Engine Make	Engine Model	Engine Family Name (If unregulated, the NA)	n Engine Mode Year	Horsepower	Displacement per (Cylinder (Liters)	Current Tier Level (Nonroad)	Current Standard Level for PM and NOx or NMHC+NOx	Fuel Type		Annual Miles per vehicle (Highway)	Idling Hours (per	Year of Retrofit Action		Technology Make	Verified Technology Model	New Engine Family Name (Replacements/ Repowers)	New Engine Model Year (Replacements/ Repowers/ Upgrades)	New Engine Horsepower (Replacements/ Repowers)	New Engine Displacemen t per Cylinder (Liters) (Replacemen ts/ Repowers)	New Tier Level (Nonroad	New Standard Level for PM and NOx or NMHC+NOx	New Fuel Type	Annual Idling Hours Reduced (per engine)	Technology Unit Cost	Technology Unit Installation Cost
	City/County	Dumpers/Ten									PM: 0.10. NOx: 4.0	Diesel					Diesel Oxidation												
On Highway	vehicle	ders	#7M001145	International	DT466	2NVXH0466AN	A 2002	300	7.6		g/bhp-hr	ppm	8000		800	2009	Catalyst	Donaldson	Series 6100 DOC										
												Diesel					Diesel												
	City/County	Dumpers/Ten									PM: 0.10, NOx: 4.0	(ULSD), 15					Oxidation	Johnson											
On Highway	vehicle	ders	#MVA26679	International	DT466	2NVXH0466AN	A 2002	300	7.6		g/bhp-hr	ppm	8000		800	2009	Catalyst	Matthey	CRT3		1					1			

Project 2 Information

Project Name	Performing Project	TargetFleet	Number of Vehicles	City	County	State	Region	Funding Amount	Additional Funding Source	Additional Funding Amount	Public Benefit
MO Dept of Transport Retrofits	Missouri Department of Transportation	Construction	2	St. Louis		мо	7		In-kind contribution from MODOT	\$2,400	yes

Fleet 2 Information:

							Currer	nt Vehicle Inform	ation											New	Vehicle/Techno	ology Information	on				/
Vehicle Type	TargetFleet	Class/ Equipment	Serial and/or VIN # of engine and/or vehicle	Engine Make	Engine Model	Engine Family Name (If unregulated, ther NA)	n Engine Model Year	Horsepower	Displacement per Cylinder (Liters)		Current Standard Level for PM and NOx or NMHC+NOx	Fuel Type	Amount of Fuel Used (gal/year)		Year of Retrofit Action	Technology Type		Verified Technology Model	New Engine Family Name (Replacements/	New Engine Model Year (Replacements/ Repowers/ Upgrades)	New Engine Horsepower (Replacements/ Repowers)	t per Cylinder (Liters) (Replacemen re	New Tier Level (Nonroad eplacement ' Repowers/ Upgrades)	New Standard Level for PM and NOx or NMHC+NOx	New Fuel Type	Annual Idling Hours Reduced (per engine) Unit Cost	Technology Unit gy Installation t Cost
NonRoad	Construction		#8GT1429IA1 0871	John Deere	DB33A	WDWXL03.3AM N	1998	62		Tier 1	PM: N/A, NOx: 9.2 g/kW-hr	Diesel (LSD), 500 ppm	14000	300	2009	Biodiesel (B20)									Biodiesel 20		
NonRoad	Construction	Aerial Lifts	#BWK030919 8722	New Holland			1995	80		Tier 0		Diesel (LSD), 500 ppm	2700	250	2009	Engine Repower	New Holland			2008	300		Tier 3	PM: 0.40, NMHC+NOx: 4.7 g/kW-hr	Diesel (LSD), 500 ppm		
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Project 3 Information

Project Name	Organization Performing Project	TargetFleet	Number of Vehicles	City	County	State	Region	Funding Amount	Additional Funding Source	Additional Funding Amount	Public Benefit
Marine Ferry &	XYZ Towing &								XYZ Towing &		
Tug Repower	Transportation								Transportation		
Project	Company	Marine	2	New York		NY	2	\$1,500,000	Company	\$1,000,000	yes

Fleet 3 Information for MARINE VESSELS ONLY

	Current vessel information										New vesse/iecnnology information																			
Sect	or i	Application	Boat Name Other Ident	Total Num e or of Engine ifier per Vess		Serial # of Engine	Engine Make		Engine Family Name (If unregulated ngine, then NA)	Engine Model Year		Displacement per Cylinder (Liters)	Current Tier Level	Current Standard Level for PM and NOx or NMHC+NOx	Fuel Type	Amount of Fuel (Hours per	Hours (per	Year of Retrofit Action	Technology Type	Technology Ma	Verified e Technology Mode	New Engine Family Name (Replacements/ el Repowers)	Model Year (Replacements/ Repowers/	New Engine Horsepower / (Replacemen ts/ Repowers)	(Liters) (Replaceme nts/	New Tier Level (Replacements/	New Standard Level for PM and NOx or NMHC+NO x New Fue	Annua Idling Ho Reduc (per Type engine	ours ed	Technology Unit Installation Cost
					propulsion	76HI-1234				1075	105/	5.0<= size <15.0			Diesel (LSD),	140000			ngine	EMD	8-710G7C-T2		204	0		Tier 2				
					propulsion	7001-1234				1975	1950	5.0<= 8128 < 15.0	THEFU		500 ppm Diesel (LSD),	140000			Repower Engine	EMD	0-710070-12		201	0		Tiel 2				
					propulsion	76HI-5678				1975	1950	5.0<= size <15.0	Tier 0		500 ppm	140000				EMD	8-710G7C-T2		201	0		Tier 2				
					auxilliary					1975	200	0.9 <= size < 1.2	Tier 0		Diesel (LSD), 500 ppm	30000		c.	/ehicle/Equip nent Replacement		CKM100DM3		201	0		Tier 2				
Mari	Tu	ig Boat/ Tow Boat	Tug#1	4	auxilliary					1975	200	0.9 <= size < 1.2	Tier 0		Diesel (LSD), 500 ppm	30000		2011 F	/ehicle/Equip nent Replacement		CKM100DM3		201	0		Tier 2				
					propulsion	16VF012345				1995	1100	1.2 <= size <2.5	Tier 0		Diesel (LSD), 500 ppm Diesel (LSD),	150000		2011 F	(cpone)	MTU	10V2000M72		201	0		Tier 2				
					propulsion	16VF012346				1995	1100	1.2 <= size <2.5	Tier O		Diesel (LSD), 500 ppm	150000			Engine Repower	мти	10V2000M72		201	0		Tier 2				
	τ.	- D+/ T																												
Mari	ne	ig Boat/ Tow Boat	Tug#2	2																										

		DO NOT	MODIFY THIS PA	GE A	TALL!	
Region	Model Year	States	Fleet Type	_		
Region	Woder rear	States	rieet Type	_		
1	1970		School Bus		Vehicle Type	Vehicle Class or Type of Nonroad Equipment
2			Ports and Airports		On Highway	Class 5
3			Construction		NonRoad	Class 6
4	1973	AR	Delivery Truck			Class 7
5	1974	СА	Transit Bus			Class 8A
6	1975	со	Rail		public fleet	Class 8B
7			Refuse Hauler		yes	School Bus
8			Utility Vehicle		no	Transit Bus
g	1978	DC	Long Haul			-
10	1979	FL	Short Haul			2-Wheel Tractors
	1980	GA	Agriculture			ACRefrigeration
	1981		Mining		Fuel	Aerial Lifts
	1982	ID	Marine		Diesel (ULSD), 15 ppm	Agricultural Mowers
	1983	IL	Stationary		Diesel (LSD), 500 ppm	Agricultural Tractors
	1984	IN	City/County vehicle		Diesel, 3,400 ppm	Airport Support Equipment
	1985	IA	Emergency vehicle		Biodiesel 100	Balers
	1986	KS	Other		Biodiesel 20	Bore/Drill Rigs
	1987	KY			Biodiesel 5	Cement & Mortar Mixers
	1988	LA			LPG	Combines
	1989	MA			LNG	Concrete/Industrial Saws
	1990	ME			CNG (lbs)	Cranes
	1991				CNG (ft3)	Crawler Tractors
	1992				E85	Crushing/Proc. Equipment
	1993				Emulsion	Dumpers/Tenders
	1994		Tiers			Excavators
	1995		unregulated			Ferries
	1996		Tier 0			Forklifts
	1997		Tier 1			Graders
	1998		Tier 2			Hydro Power Units
	1999		Tier 3			Irrigation Sets
	2000		Tier 4			Light Commercial Air Compressors
	2001		Tier 0+			Light Commercial Gas Compressors
	2002		Tier 1+			Light Commercial Generator Sets
	2003		Tier 2+			Light Commercial Pressure Washer
	2004	NC				Light Commercial Pumps

2005 ND	Light Commercial Welders
2006 OH	Locomotives Line-Haul
2000 OK	Locomotives Switch
2007 OK 2008 OR	Locomotives Other
2008 OK 2009 PA	
	Logging Equip Fell/Bunch/Skidders
2010 RI	Logging Equipment Chain Saws > 6
2011 SC	Logging Equipment Shredders > 6
2012 SD	Off-Highway Tractors
2013 TN	Off-highway Trucks
2014 TX	Other Agricultural Equipment
UT	Other Construction Equipment
VT	Other General Industrial Equipment
VA	Other Material Handling Equipment
WA	Pavers
WV	Paving Equipment
WI	Plate Compactors
WY	Railway Maintenance
	Rollers
	Rough Terrain Forklifts
	Rubber Tire Dozers
	Rubber Tire Loaders
	Scrapers
	Signal Boards
DO NOT MODIFIY THIS PAGE AT ALL!	Skid Steer Loaders
	Sprayers
	Surfacing Equipment
	Swathers
	Sweepers/Scrubbers
	Tampers/Rammers (unused)
	Terminal Tractors
	Tillers > 6 HP
	Tractors/Loaders/Backhoes
	Trenchers
	DO NOT MODIFIY THIS PAGE AT ALL!

			Displacement per
Technology	Marine Application	Engine Type	cylinder
Diesel Oxidation Catalyst	Container	auxilliary	size < 0.9
Diesel Oxidation Catalyst + B20	Ferry/Excursion	propulsion	0.9 <= size < 1.2
Diesel Oxidation Catalyst + B100	Tug Boat/ Tow Boat		1.2 <= size <2.5
Diesel Oxidation Catalyst + Closed Crankcase Ventilation			
+B20	Commercial Fishing		2.5<= size <3.5
Diesel Oxidation Catalyst + Closed Crankcase Ventilation +	Commercial Charter		
B100	Fishing		2.5<= size <5.0
Diesel Oxidation Catalyst + Emulsion	Crew and Supply		5.0<= size <15.0
Diesel Particulate Filter	Pilot		15.0<= size <20.0
Diesel Oxidation Catalyst + Closed Crankcase Ventilation	Work Boat		20.0<= size <25.0
Diesel Particulate Filter + Closed Crankcase Ventilation	Other		25.0<= size <30.0
Diesel Oxidation Catalyst + Closed Crankcase Ventilation +			
ULSD (for Nonroad only)			
Diesel Oxidation Catalyst + ULSD (for Nonroad only)			
Partial Flow Filter			
Lean NO _x Catalyst/Diesel Particulate Filter			
Selective Catalytic Reduction			
Exhaust Gas Recirculation + Diesel Particulate Filter			
Ultra Low Sulfur Diesel (ULSD)			
Compressed Natural Gas			
Liquid Natural Gas			
Biodiesel (B20)			
Biodiesel (B100)			
Hybrid			
Hybrid Electric Replacement with Diesel Particulate Filter			
Compressed Natural Gas (CNG) Replacement			
Alternative Fuel Conversion			
Verified Engine Upgrade Kit			
Certified Remanufacture System			
Engine Repower			
Vehicle/Equipment Replacement			
Direct Fired Heater			
Auxiliary Power Unit			
Shutdown/Startup for Locomotives			
Low Rolling Resistance Tires			
Aerodynamic Improvements			
Truck Stop Electrification			

Shore Connection System (Marine)		
Shore Connection System (Locomotive)		
Generator Set		
Battery Air Conditioning System		
Thermal Storage Systems		
Engine Shutdown Automatic Tire Inflation		
Other Fuel Efficient Tire		
Single Wide Tires		
Aero Profile Tractor		
Cab Side Fairing		
Cab Front air dam front bumper		
Cab roof fairing		
Trailer side skirts		
Trailer Bubble		
Trailer Tails		
Integrated cab roof fairing		
Cab roof deflector		
Other		