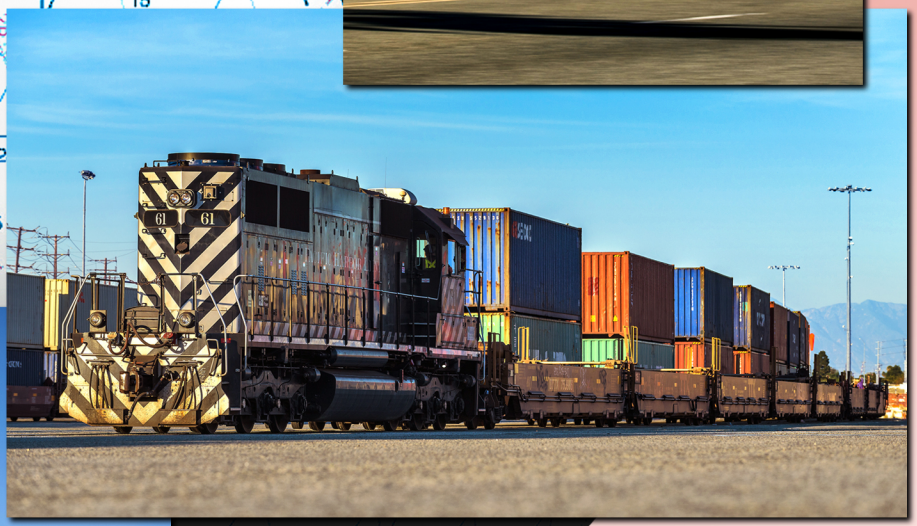
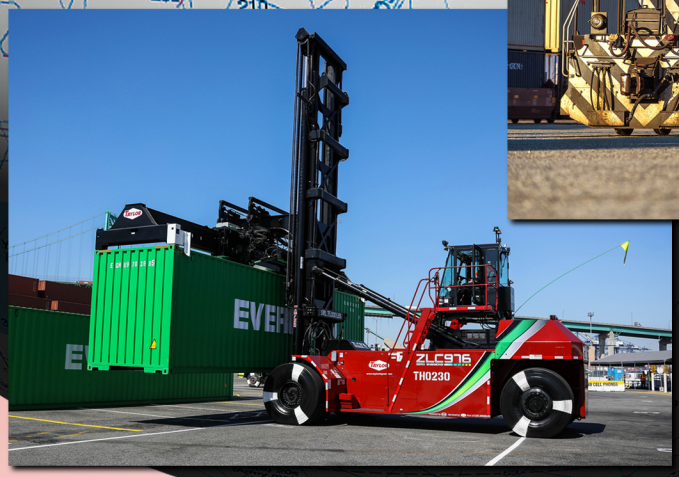
PORT OF LOS ANGELES
INVENTORY OF AIR EMISSIONS - 2019

THE PORT OF LOS ANGELES





Technical Report
APP# 191122-551 A
September 2020

Prepared by:
STARCREST CONSULTING GROUP, LLC

INVENTORY OF AIR EMISSIONS FOR CALENDAR YEAR 2019

Prepared for:

THE PORT OF LOS ANGELES

September 2020

Prepared by:

STARCREST CONSULTING GROUP, LLC
ENVIRONMENTAL MANAGEMENT
AIR QUALITY • CLIMATE • SUSTAINABILITY

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Please note that there may be minor numerical inconsistencies between the various sections, tables, and figures of this report, due to rounding associated with emission estimates, percent contribution, and other calculated numbers. Estimates are calculated using more significant figures than presented in the various tables. A detailed Methodology Report is available on the Port's website.[1] This 2019 Air Emission Inventory correlates with Version 1 of the Methodology Report. There were no updates to methodology.

EXECUTIVE SUMMARY

The Port of Los Angeles (Port or POLA) annual activity-based emissions inventories serve as the primary tool to track the Port's efforts to reduce air emissions from maritime industry-related sources through implementation of measures identified in the San Pedro Bay Ports Clean Air Action Plan (CAAP) and regulations promulgated at the state and federal levels. Development of the annual air emissions estimates is coordinated with a technical working group (TWG) comprised of representatives from the Port, the Port of Long Beach, and the air regulatory agencies: U.S. Environmental Protection Agency, Region 9 (EPA), California Air Resources Board (CARB), and the South Coast Air Quality Management District (South Coast AQMD).

Summary of 2019 Activity and Emission Estimates

Table ES.1 presents the number of vessel calls and the container cargo throughput for calendar years 2005, 2018 and 2019. The TEU throughput decreased by 1% in 2019 as compared to the previous year. Even though containership arrivals decreased 10%, the average TEU per call increased 10% as compared to the previous year, indicative of the larger containerships calling and improved efficiency from vessel alliances.

Comparing 2019 to 2005, the TEU throughput increased 25%, containership arrivals decreased 33%, and the average TEU per call increased 87%. The decrease in containership calls with the significant increase in TEU per call handled shows the impact that larger containerships have made since 2005.

Table ES.1: Container Throughput and Vessel Arrival Call Comparison

Year	TEUs	All Arrivals	Containership Arrivals	Average TEUs/Call
2019	9,337,632	1,687	987	9,461
2018	9,458,749	1,737	1,096	8,630
2005	7,484,625	2,516	1,479	5,061
Previous Year (2018-2019)	**-1%**	**-3%**	**-10%**	**10%**
CAAP Progress (2005-2019)	**25%**	**-33%**	**-33%**	**87%**

[1] *www.portoflosangeles.org/environment/air-quality/air-emissions-inventory*

Table ES.2 summarizes the 2019 total maritime industry-related mobile source emissions of air pollutants in the South Coast Air Basin (SoCAB) by the following categories: ocean-going vessels (OGVs), harbor craft, cargo handling equipment (CHE), locomotives, and heavy-duty vehicles (HDV).

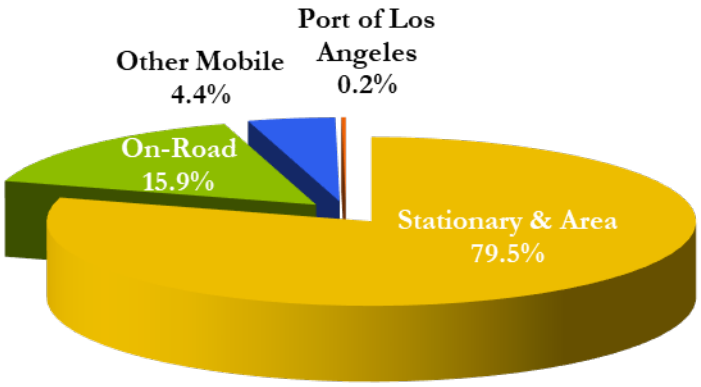
Table ES.2: 2019 Maritime Industry-related Emissions by Category

Category	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
Ocean-going vessels	54	50	41	2,743	102	243	115	192,247
Harbor craft	26	24	26	755	1	543	83	60,884
Cargo handling equipment	7	6	5	410	2	805	83	177,264
Locomotives	32	29	32	882	1	205	49	71,364
Heavy-duty vehicles	9	9	9	1,382	4	207	33	378,015
Total	**127**	**118**	**112**	**6,172**	**109**	**2,003**	**363**	**879,774**

DB ID457

In order to put the maritime industry-related emissions into context, the following figures and tables compare the Port's contributions to the total emissions in the SoCAB by major emission source category. The 2019 SoCAB emissions are based on the 2016 Air Quality Management Plan (AQMP) Appendix III,[2] except for the SoCAB on-road emission estimates, which were updated to take into consideration EMFAC2017.[3] Thus, the SoCAB total emissions do not exactly match 2016 AQMP Appendix III values. It should be noted that neither the SoCAB nor the Port's on-road heavy-duty diesel PM_{10} and $PM_{2.5}$ emissions include brake and tire wear emissions. Due to rounding, the percentages may not total 100%.

Figure ES.1: 2019 PM_{10} Emissions in the South Coast Air Basin



[2] SCAQMD, *Final 2016 AQMP Appendix III, Base & Future Year Emissions Inventories*, March 2017.
[3] *www.arb.ca.gov/emfac/*

Figure ES.2: 2019 $PM_{2.5}$ Emissions in the South Coast Air Basin

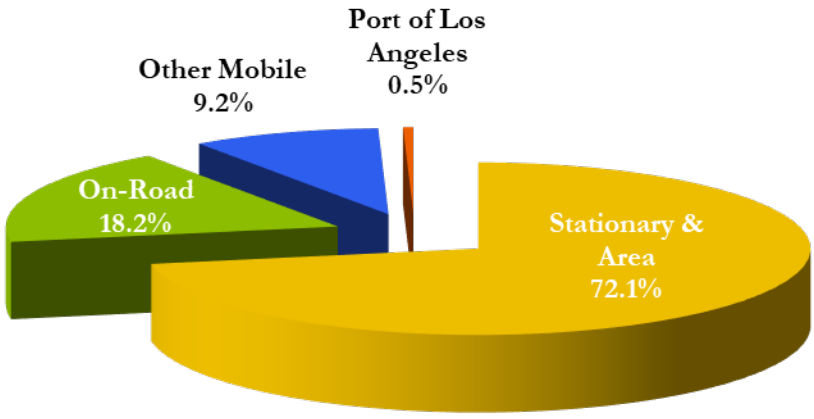


Figure ES.3: 2019 DPM Emissions in the South Coast Air Basin

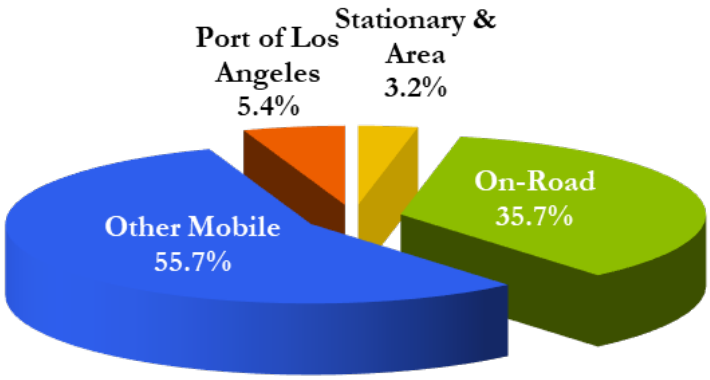


Figure ES.4: 2019 NO_x Emissions in the South Coast Air Basin

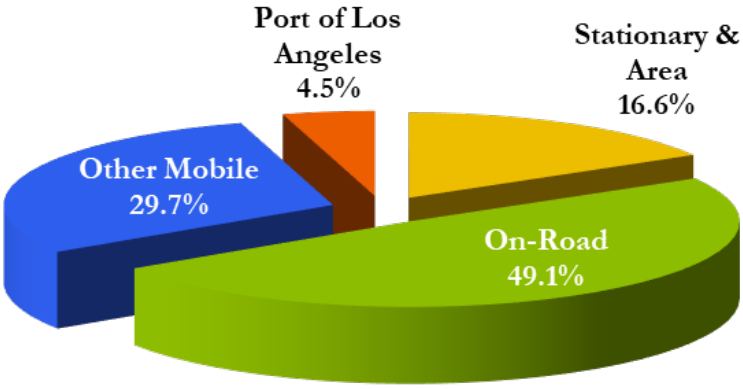
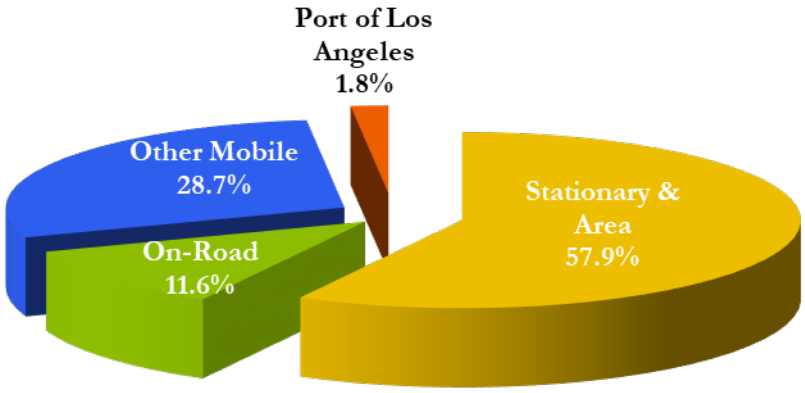


Figure ES.5: 2019 SO_x Emissions in the South Coast Air Basin



Comparison of Emissions from 2005 through 2019

Figure ES.6 presents the graph of the maritime industry-related mobile source emissions in percentage of the total SoCAB emissions from 2005 through 2019. The Port's overall contribution to the SoCAB emissions has decreased significantly for SO_x and DPM emissions since 2005, primarily because of the implementation of various emission reduction programs by the Ports and regulatory agencies, and efficiency improvements from the maritime industry. In recent years, the Port's emission contribution in the South Coast Air Basin has remained the same with slight increase for DPM.

Figure ES.6: Port's Emission Contribution in the South Coast Air Basin

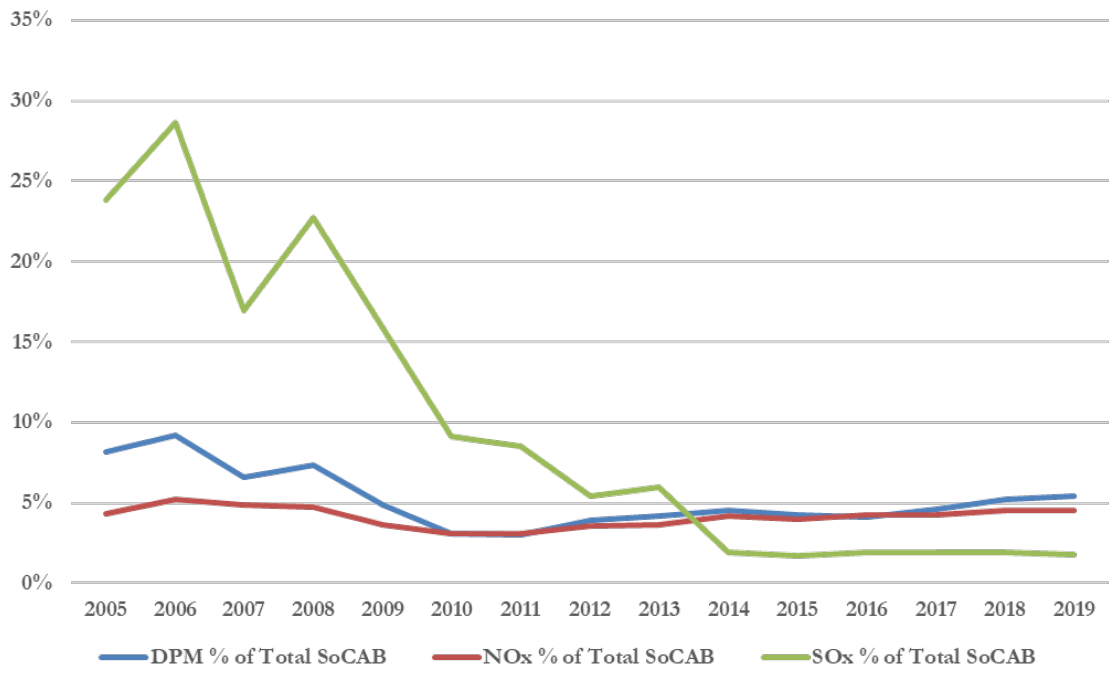


Table ES.3 presents the total net change in emissions from all source categories in 2019 as compared to the previous year and to 2005, all using 2019 methodology. In order to maintain the consistency between the years compared, the previous years' emissions are recalculated whenever new estimation methodologies or data are introduced.

Table ES.3: Maritime Industry-related Emissions Comparison

EI Year	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
2019	127	118	112	6,172	109	2,003	363	879,774
2018	134	124	118	6,554	118	2,132	380	933,572
2005	948	820	879	16,206	4,983	3,757	850	1,036,876
Previous Year (2018-2019)	**-5%**	**-5%**	**-5%**	**-6%**	**-7%**	**-6%**	**-5%**	**-6%**
CAAP Progress (2005-2019)	**-87%**	**-86%**	**-87%**	**-62%**	**-98%**	**-47%**	**-57%**	**-15%**

Table ES.4 presents the 2019 and 2005 emissions comparison by source category. Despite a 25% increase in TEU throughput in 2019 as compared to 2005, emission reductions occurred in all pollutants for each source category, except for CO and CO_2e emissions for harbor craft and CO_2e emissions for CHE.

Table ES.4: Maritime Industry-related 2019-2005 Emissions Comparison by Source Category

	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
2019								
Ocean-going vessels	54	50	41	2,743	102	243	115	192,247
Harbor craft	26	24	26	755	1	543	83	60,884
Cargo handling equipment	7	6	5	410	2	805	83	177,264
Locomotives	32	29	32	882	1	205	49	71,364
Heavy-duty vehicles	9	9	9	1,382	4	207	33	378,015
Total	**127**	**118**	**112**	**6,172**	**109**	**2,003**	**363**	**879,774**
2005								
Ocean-going vessels	534	429	466	5,295	4,825	470	213	288,251
Harbor craft	55	51	55	1,318	6	364	87	56,925
Cargo handling equipment	54	50	53	1,573	9	822	92	134,621
Locomotives	57	53	57	1,712	98	237	89	82,201
Heavy-duty vehicles	248	238	248	6,307	45	1,865	368	474,877
Total	**948**	**820**	**879**	**16,206**	**4,983**	**3,757**	**850**	**1,036,876**
Change between 2005 and 2019 (percent)								
Ocean-going vessels	-90%	-88%	-91%	-48%	-98%	-48%	-46%	-33%
Harbor craft	-54%	-54%	-54%	-43%	-89%	49%	-4%	7%
Cargo handling equipment	-88%	-87%	-91%	-74%	-80%	-2%	-10%	32%
Locomotives	-44%	-45%	-44%	-48%	-99%	-14%	-46%	-13%
Heavy-duty vehicles	-96%	-96%	-97%	-78%	-92%	-89%	-91%	-20%
Total	**-87%**	**-86%**	**-87%**	**-62%**	**-98%**	**-47%**	**-57%**	**-15%**

Several factors contributed to lower emissions in 2019 compared to 2005. Major highlights by source category include:

- For OGV, the primary reasons for emission reductions are fuel switching, shore power, Port's Environmental Ship Index (ESI) Incentive Program, and Vessel Speed Reduction (VSR) compliance. In 2019, all engines for OGV continued to use fuel with 0.1% sulfur or lower and the At-Berth Regulation (i.e., shore power) was also in effect.
- For harbor craft, the emissions in 2019 are lower than 2005 emissions due to the repowers that have occurred in the last few years as required by the CARB In-Use Harbor Craft Regulation or funding incentives, removal of older vessels due to attrition, and more efficient operations.
- For harbor craft, the increase in CO is related to an increase in Tier 2 and 3 engines that have higher CO emission rates compared to pre-Tier 2 and increase in activity. There are no CO_2 standards for engines or control measures for harbor craft, therefore, the CO_2e emissions increased along with increased activity.
- For CHE, implementation of CAAP measures and CARB's Cargo Handling Equipment Regulation, along with funding incentives, resulted in replacement of older equipment with cleaner units, retrofits, and repowers, combined with efficiency in operations, led to lower emissions. The increase in CO_2e reflects lack of lower emission standards or emission control measures and increased activity.
- For locomotives, the decreases in fleet-wide emissions from line haul locomotives are due to meeting the terms of the memorandum of understanding (MOU) with CARB, and the replacement of older switching locomotives with new low-emission and ultra-low emission switchers.
- For HDV, the 2012 implementation of the final phase of the Port's Clean Truck Program (CTP) resulted in significant turnover of older trucks to newer and cleaner trucks as compared to 2005.

Comparison of Emissions by Source Category from 2018 to 2019

Table ES.5 presents the 2019 and 2018 emissions comparison by source category. Overall, 2019 emissions are lower as compared to the previous year, mainly due to a decrease in activity and fleet turnover. Section 9 of this study provides more information about the energy consumption and newer technology comparison by source category that contributed to the decrease in emissions.

Table ES.5: Maritime Industry-related 2019-2018 Emissions Comparison by Source Category

	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
2019								
Ocean-going vessels	54	50	41	2,743	102	243	115	192,247
Harbor craft	26	24	26	755	1	543	83	60,884
Cargo handling equipment	7	6	5	410	2	805	83	177,264
Locomotives	32	29	32	882	1	205	49	71,364
Heavy-duty vehicles	9	9	9	1,382	4	207	33	378,015
Total	**127**	**118**	**112**	**6,172**	**109**	**2,003**	**363**	**879,774**
2018								
Ocean-going vessels	57	53	43	2,909	110	250	119	205,486
Harbor craft	27	25	27	813	1	581	89	66,092
Cargo handling equipment	8	7	6	464	2	877	86	188,894
Locomotives	33	30	33	886	1	216	51	76,073
Heavy-duty vehicles	9	9	9	1,482	4	209	34	397,027
Total	**134**	**124**	**118**	**6,554**	**118**	**2,132**	**380**	**933,572**
Change between 2018 and 2019 (percent)								
Ocean-going vessels	-6%	-6%	-4%	-6%	-7%	-3%	-4%	-6%
Harbor craft	-6%	-6%	-6%	-7%	-8%	-7%	-6%	-8%
Cargo handling equipment	-11%	-11%	-13%	-12%	-6%	-8%	-4%	-6%
Locomotives	-3%	-2%	-3%	0%	-5%	-5%	-5%	-6%
Heavy-duty vehicles	-6%	-6%	-6%	-7%	-5%	-1%	-3%	-5%
Total	**-5%**	**-5%**	**-5%**	**-6%**	**-7%**	**-6%**	**-5%**	**-6%**

Comparison of Emissions Efficiency 2005 through 2019

Table ES.6 summarizes the annualized emissions efficiencies for all five source categories. The overall emission efficiency in 2019 improved for all pollutants as compared to 2005 and previous year. In Table ES.6, a positive percentage means an increase in emissions efficiency.

Table ES.6: Emissions Efficiency Metric Comparison, tons/10,000 TEUs

EI Year	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2e
2019	0.136	0.126	0.120	6.61	0.12	2.14	0.39	942
2018	0.142	0.131	0.124	6.93	0.12	2.25	0.40	987
2005	1.267	1.096	1.175	21.65	6.66	5.02	1.14	1,385
Previous Year (2018-2019)	**4%**	**4%**	**3%**	**5%**	**0%**	**5%**	**3%**	**5%**
CAAP Progress (2005-2019)	**89%**	**88%**	**89%**	**69%**	**98%**	**57%**	**66%**	**32%**

CAAP Standards and Emission Reduction Progress

One of the main purposes of the annual inventories is to provide a progress update on achieving the San Pedro Bay CAAP Standards. These standards consist of the following emission reduction goals, using the 2005 published inventories as a baseline.

- Emission Reduction Standard:
  - By 2014, reduce emissions by 72% for DPM, 22% for NO_x, and 93% for SO_x
  - By 2023, reduce emissions by 77% for DPM, 59% for NO_x, and 93% for SO_x
- Health Risk Reduction Standard: 85% reduction by 2020

Due to the many emission reduction measures undertaken by the Port, as well as statewide and federal regulations and standards, the 2014 and 2023 emission reduction standards are not only met, but exceeded in 2019 for DPM, NO_x and SO_x. Table ES.7 summarizes DPM, NO_x and SO_x percent reductions as compared to the 2014 and 2023 emission reduction standards.

Table ES.7: Reductions as Compared to 2014 and 2023 Emission Reduction Standard

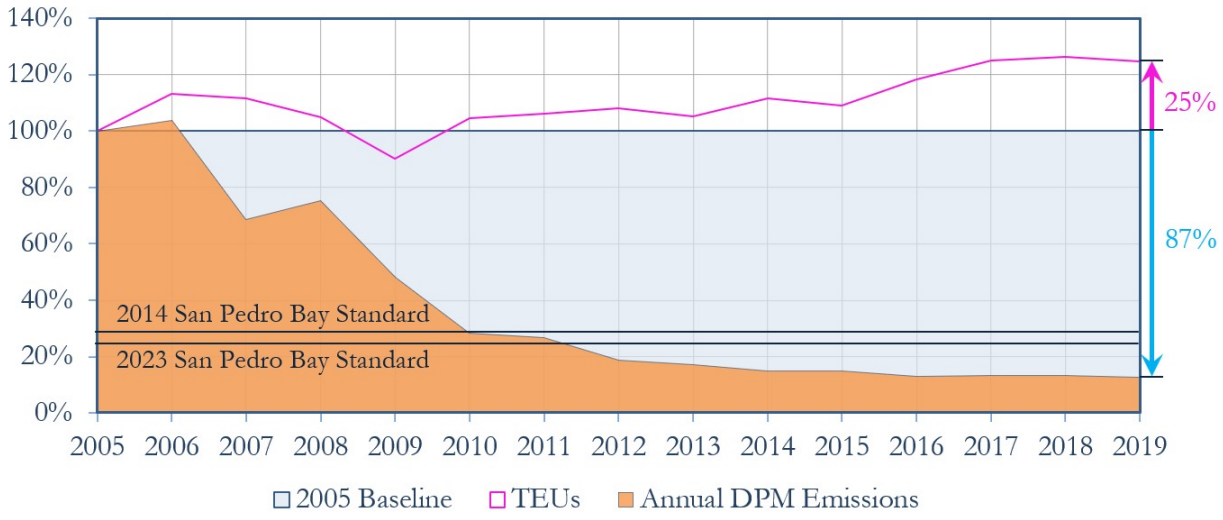
Pollutant	2019 Actual Reductions	2014 Emission Reduction Standard	2023 Emission Reduction Standard
DPM	-87%	72%	77%
NO_x	-62%	22%	59%
SO_x	-98%	93%	93%

The emission reduction standards are represented as a percentage reduction of emissions from 2005 levels and are tied to the regional SoCAB attainment dates for the federal $PM_{2.5}$ and ozone ambient air quality standards in the 2007 AQMP. This EI is used as a tool to track progress in meeting the emission reduction standards.

Figures ES.7 through ES.9 present the 2005 baseline emissions and the year to year percent change in emissions with respect to the 2005 baseline emissions. The 2014 and 2023 standards are also provided as a snapshot of progress to-date towards meeting those standards. The pink line in the figures represents the percentage of TEU throughput as compared to 2005 TEU throughput. These figures provide context to the relative correlation between cargo throughput and emissions.

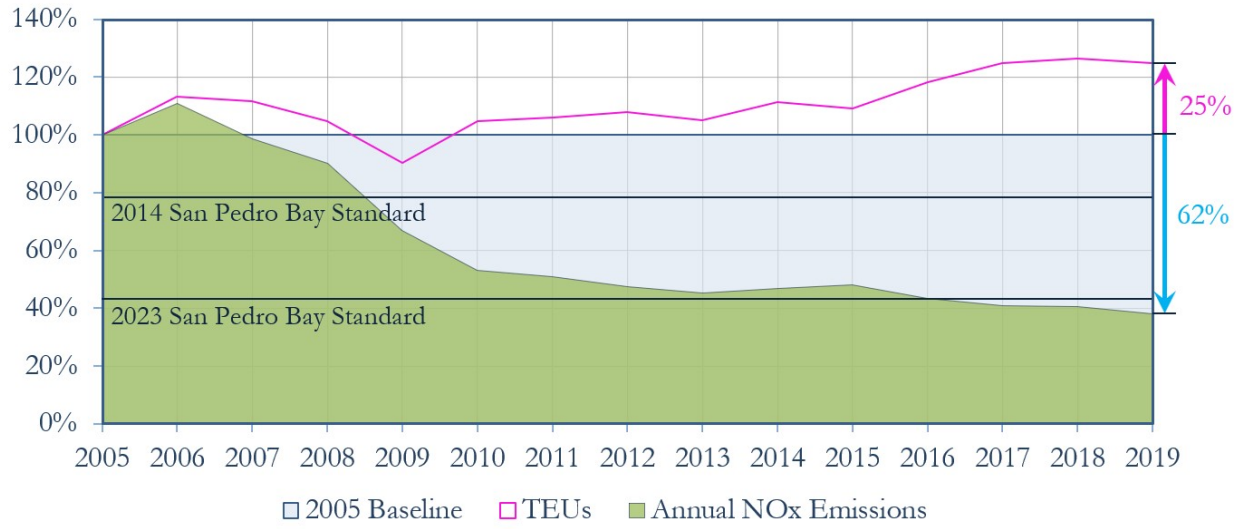
Figure ES.7 shows that the Port has surpassed the 2014 and 2023 DPM emission reduction standards with an 87% emission reduction. In 2019, 0.1% sulfur fuel for OGVs from the IMO North American ECA, which augmented CARB's fuel rule, was in effect. There was an increase in the number of ships using shore-power due to the CARB shore power rule and the majority of the vessels coming to the Port are complying with the Port's vessel speed reduction program.

Figure ES.7: DPM Reductions to Date



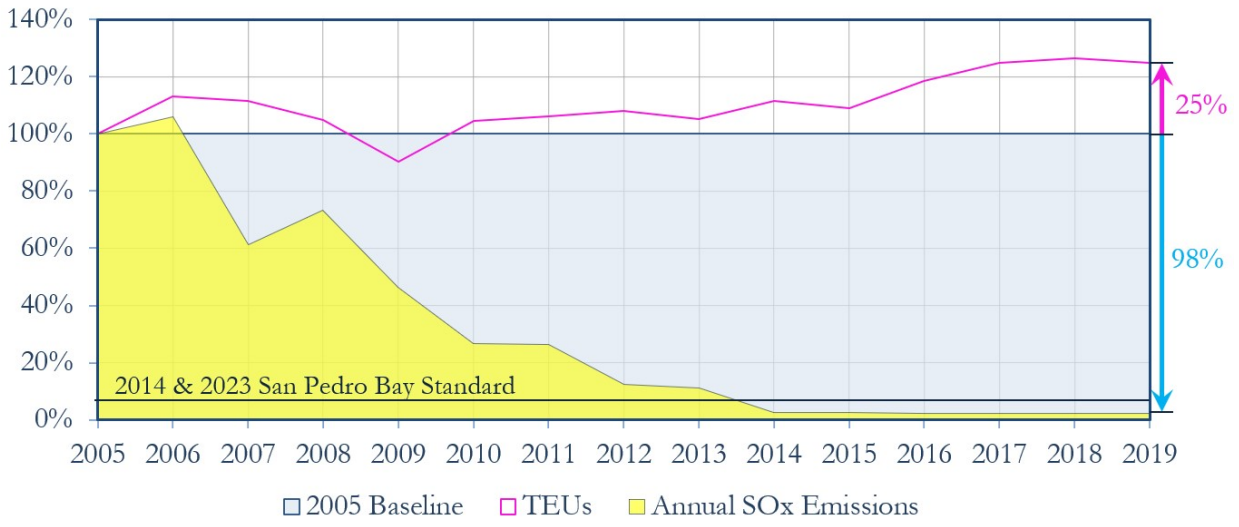
As demonstrated in Figure ES.8, the Port surpassed the 2014 and 2023 NO_x mass emission reduction standard in 2019 with a 62% reduction. This is the second year in a row for the 2023 NO_x mass emission reduction standard (59%) to be surpassed.

Figure ES.8: NO_x Reductions to Date



By 2019, the Port surpassed the 2014 and 2023 SO_x mass emission reduction standards with a 98% reduction. In 2019, 0.1% sulfur fuel for OGVs from the IMO North American ECA was in effect and there was an increase in the number of ships using shore-power, due to the CARB shore power rule, which contributed to the reduction in SO_x.

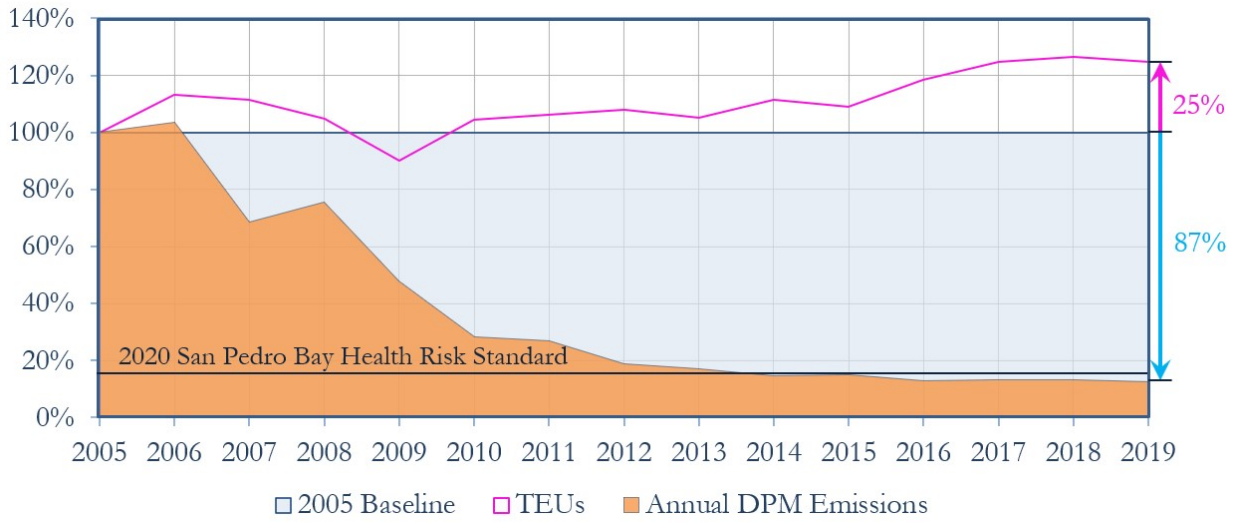
Figure ES.9: SO_x Reductions to Date



Health Risk Reduction Progress

Progress to-date on health risk reduction is determined by comparing the change in DPM mass emissions to the 2005 baseline. Figure ES.10 presents the progress of achieving the standard to date. In 2019, with an 87% reduction, the Port exceeded the 2020 Health Risk Reduction Standard (85%).

Figure ES.10: Health Risk Reduction Benefits to Date



SECTION 1 INTRODUCTION

The Port of Los Angeles (Port or POLA) 2019 Inventory of Air Emissions study presents maritime industry-related emission estimates based on 2019 activity levels. The report also includes a comparison of the estimated 2019 emissions with the 2005 baseline year and previous year emission estimates to track the Port's emission reduction progress under the San Pedro Bay Ports (SPBP) Clean Air Action Plan (CAAP). As in previous inventories, the following five source categories are included:

- Ocean-going vessels (OGV)
- Harbor craft
- Cargo handling equipment (CHE)
- Locomotives
- Heavy-duty vehicles (HDV)

Exhaust emissions of the following pollutants that can cause regional and local air quality impacts have been estimated:

- Particulate matter (PM) (10-micron, 2.5-micron)
- Diesel particulate matter (DPM)
- Oxides of nitrogen (NO_x)
- Oxides of sulfur (SO_x)
- Hydrocarbons (HC)
- Carbon monoxide (CO)

This study also includes estimates of greenhouse gases (GHGs) carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O) emitted from maritime industry-related tenant operational mobile sources. To normalize the three GHG values into a single number representing CO_2 equivalents (CO_2e) the GHG emission estimates are multiplied by the following values and summed.[4]

- CO_2 – 1
- CH_4 – 25
- N_2O - 298

For presentation purposes in the report, only CO_2e values are reported because they include all three GHGs in an equivalent measure to CO_2, which makes up by far the greatest mass of GHG emissions from the source categories included in this inventory. The greenhouse gas emissions are presented in metric tons (tonnes), while the criteria pollutant emissions are shown in tons.

[4] EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018*, July 2019.

Geographical Domain

The geographical extent of the inventory includes emissions from the aforementioned maritime industry-related emission sources operating within the harbor district. For commercial marine vessels, the domain lies within the harbor and up to the study area boundary comprised of an over-water area bounded in the north by the southern Ventura County line at the coast, and in the south with the southern Orange county line at the coast.

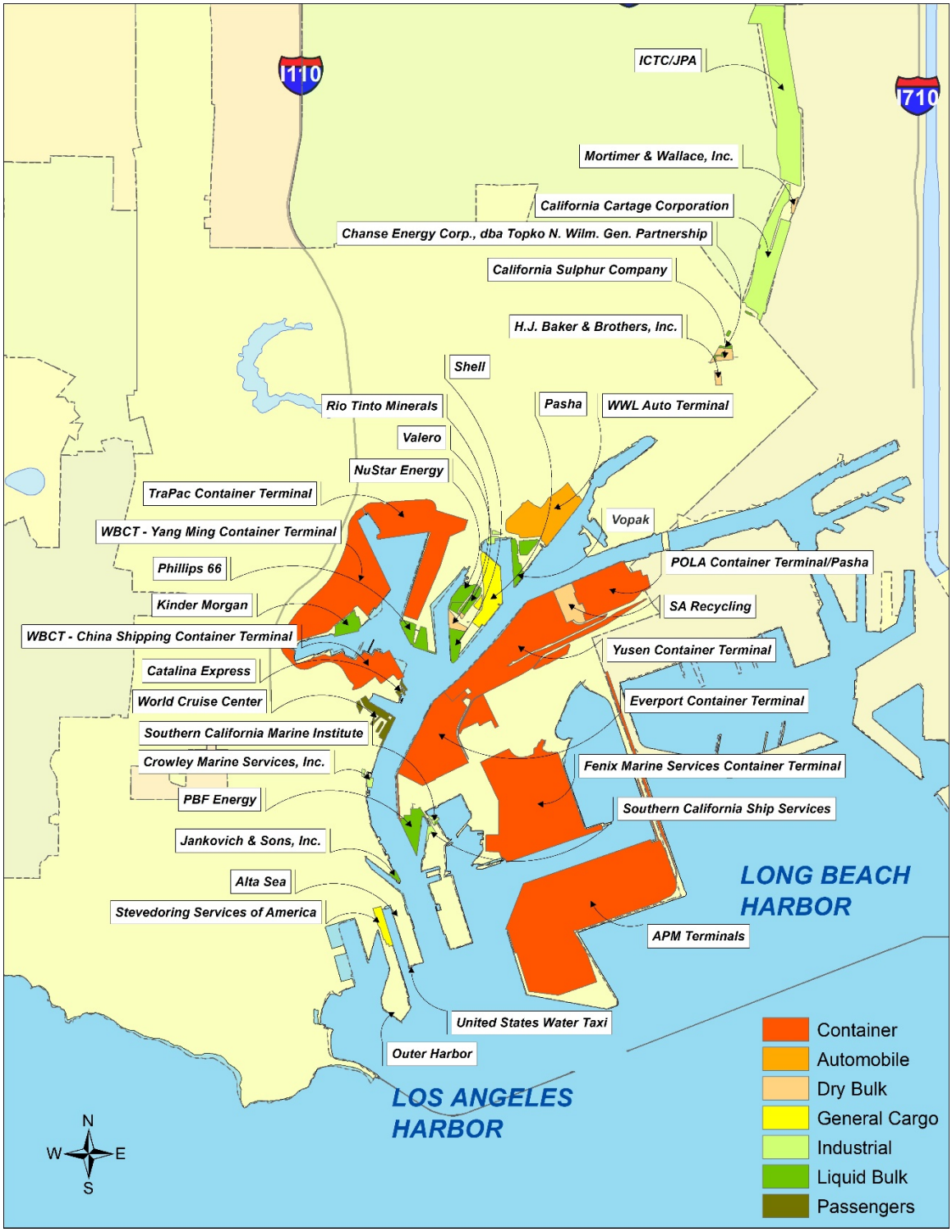
For rail locomotives and on-road trucks, the domain extends from the Port to the cargo's first point of rest within the South Coast Air Basin (SoCAB) or up to the SoCAB boundary, whichever comes first.

Figure 1.1 shows the geographical extent of this inventory, and other overlapping regulatory boundaries.

Figure 1.1: Emissions Inventory Geographical Extent

Figure 1.2 shows the land area of active Port terminals in 2019. The geographical scope for cargo handling equipment is the terminals and facilities on which they operate.

Figure 1.2: Port Boundary Area of Study



SECTION 2 REGULATORY AND CAAP MEASURES

This section summarizes the regulatory initiatives and Port measures related to port activity. Almost all maritime industry-related emissions come from five emission source categories: OGVs, harbor craft, CHE, locomotives, and HDVs. The responsibility for the control of emissions from the majority of these sources falls under the jurisdiction of local (South Coast AQMD), state (California Air Resources Board [CARB]), or federal (U.S. Environmental Protection Agency [EPA]) agencies.

Clean Air Action Plan (CAAP) Strategies

At the end of 2017, the Ports of Los Angeles and Long Beach released the final CAAP 2017 Update.[5] The CAAP 2017 Update contains new strategies from all sources that move cargo through the ports, including the deployment of zero and near-zero emission trucks and cargo handling equipment, and the expansion of programs that reduce ship emissions. The focus of the Update is to work in collaboration with industry stakeholders, regulatory agencies, local communities, and environmental groups for the next 20 years to reduce emissions and combat climate change. The CAAP 2017 strategies that will affect future emission reductions for both Ports include:

- Advancing the Clean Trucks Program to phase out older trucks and transition to near-zero emissions in the early years and zero-emissions by 2035. Under this program, on March 2020, the Boards of Harbor Commissioners of the City of Los Angeles and the City of Long Beach adopted the Clean Truck Fund Rate of $10 per loaded TEU moved by truck in and out of port terminals. Zero-emission trucks will be exempt from the rate throughout the duration of the program. Other exemptions are under consideration. Currently, Port staff are working on strategies to implement the Clean Truck Fund rates and develop priorities and guidance for distributing funds to incentivize transition to near-zero and zero-emission trucks.
- Requiring terminal operators to purchase zero-emissions equipment if feasible, or near-zero or cleanest technology available when procuring new equipment.
- Further reducing emissions from ships at-berth, and transitioning the oldest, most polluting ships out of the San Pedro Bay fleet.
- Accelerating the deployment of cleaner engines and operational strategies to reduce harbor craft emissions.
- Expanding use of on-dock rail to shift more cargo leaving the port to go by rail.

[5] *www.cleanairactionplan.org/documents/final-2017-clean-air-action-plan-update.pdf/*

San Pedro Bay Emissions Reduction Standards

The 2017 CAAP Update did not alter the existing 2010 CAAP Update goals that set health risk and emission reduction standards but did incorporate two new emission targets to reduce GHGs from port-related sources as described below.

Health Risk Reduction Standard

To complement the CARB's Air Pollution Reduction Programs including the Diesel Risk Reduction Plan, the Ports developed the following standard for reducing overall maritime industry-related health risk impacts, relative to 2005 emissions level:

- By 2020, reduce the population-weighted cancer risk of maritime industry-related DPM emissions by 85% in highly impacted communities located proximate to Port sources and throughout the residential areas in the Port region.

Emission Reduction Standard

The Ports developed the following standards for reducing air pollutant emissions from maritime industry-related activities, relative to 2005 emission levels:

- By 2014, reduce emissions of NO_x by 22%, SO_x by 93%, and DPM by 72% to support attainment of the National Ambient Air Quality Standards (NAAQS) for fine particulate matter ($PM_{2.5}$) standards.
- By 2023, reduce emissions of NO_x by 59%, SO_x by 93%, and DPM by 77% to support attainment of the federal 8-hour ozone standards and NAAQS fine particulate matter ($PM_{2.5}$) standards.

2017 CAAP Update New Emission Reduction Targets

- Reduce GHGs from port-related sources to 40% below 1990 levels by 2030
- Reduce GHGs from port-related sources to 80% below 1990 levels by 2050

Regulatory Programs by Source Category

The following section presents a list of currently adopted regulatory programs and CAAP measures by each major source category that influenced the progress towards the SPBP emission reduction targets from the maritime industry in and around the Port.

Table 2.1: OGV Emission Regulations, Standards and Policies

Agency	Regulation/Standard/Policy	Targeted Pollutants	Years Effective	Impact
International Maritime Organization (IMO)	NO_x Emission Standard for Marine Engines *www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Nitrogen-oxides-%28NOx%29-%E2%80%93-Regulation-13.aspx*	NO_x	2011 – Tier II 2016 – Tier III for ECA only	Auxiliary and propulsion engines over 130 kW output power on newly built vessels
IMO	Emissions Control Area, Low Sulfur Fuel Requirements for Marine Engines *www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Sulphur-oxides-%28SOx%29-%E2%80%93-Regulation-14.aspx*	DPM, PM, and SO_x	2012 ECA – 1% Sulfur 2015 ECA – 0.1% Sulfur	Significantly reduce emissions due to low sulfur content in fuel by creating Emissions Control Area (ECA)
IMO	Initial IMO Strategy on reduction of GHG emissions from ships – Resolution MEPC.304(72) *www.unfccc.int/sites/default/files/resource/250_IMO%20submission_Talanoa%20Dialogue_April%202018.pdf*	GHG	2050 – 50%	Initial IMO Strategy on reduction of GHG emissions from ships by 50% in 2050 from 2008 level. Goal is to phase out GHG
IMO	Energy Efficiency Design Index (EEDI) for International Shipping *www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Technical-and-Operational-Measures.aspx*	CO_2 and other pollutants	2013	Increases the design efficiencies of ships relating to energy and emissions

Table 2.1: OGV Emission Regulations, Standards and Policies (cont'd)

Agency	Regulation/Standard/Policy	Targeted Pollutants	Years Effective	Impact
EPA	Emission Standards for Marine Diesel Engines above 30 Liters per Cylinder (Category 3 Engines); Aligns with IMO Annex VI marine engine NO_x standards and low sulfur requirement *www.epa.gov/otaq/oceanvessels.htm#engine-fuel*	DPM, PM, NO_x, and SO_x	2011 – Tier 2 2016 – Tier 3	Auxiliary and propulsion category 3 engines on US flagged new built vessels and requires use of low sulfur fuel
CARB	Regulation to Reduce Emissions from Diesel Auxiliary Engines on Ocean-Going Vessels While At-Berth at a California Port *www.arb.ca.gov/regact/2007/shorepwr07/shorepwr07.htm* and *www.arb.ca.gov/ports/shorepower/forms/regulatoryadvisory/regulatoryadvisory12232013.pdf*	DPM, PM, NO_x, SO_x, CO_2	2014 – 50% 2017 – 70% 2020 – 80%	Shore power (or equivalent) requirements. Vessel operators based on fleet percentage visiting the ports.
CARB	Ocean-going Ship Onboard Incineration *www.arb.ca.gov/ports/shipincin/shipincin.htm*	DPM, PM, and HC	2007	All vessels cannot incinerate within 3 nm of the California coast
CAAP	CAAP Measure – OGV 1 Vessel Speed Reduction (VSR) Program *www.cleanairactionplan.org/strategies/ships/*	All	2008	Vessel operators within 20 nm and 40 nm of Point Fermin
CAAP	CAAP Measure – OGV 2 Reduction of At-Berth OGV Emissions *www.portoflosangeles.org/environment/ogv.asp*	All	2014	Vessel operators and terminals
CAAP	CAAP Measure – OGV 5 and 6 Cleaner OGV Engines and OGV Engine Emissions Reduction Technology Improvements and Environmental Ship Index (ESI) Program *www.cleanairactionplan.org/strategies/ships/*	DPM, PM, and NO_x	2012	Vessel operators who choose to participate in ESI and/or technology demonstrations.

Table 2.2: Harbor Craft Emission Regulations, Standards and Policies

Agency	Regulation/Standard/Policy	Targeted Pollutants	Years Effective	Impact
EPA	Emission Standards for Harbor Craft Engines *www.epa.gov/regulations-emissions-vehicles-and-engines/domestic-regulations-emissions-marine-compression*	All	2009 – Tier 3 2014 – Tier 4 for 800 hp or greater	Commercial marine diesel engines with displacement less than 30 liters per cylinder
CARB	Low Sulfur Fuel Requirement for Harbor Craft *www.arb.ca.gov/regact/carblohc/carblohc.htm*	DPM, PM, NO_x, and SO_x	2006 – 15 ppm in SCAQMD area	Use of low sulfur diesel fuel in commercial harbor craft operating in SCAQMD
CARB	Regulation to Reduce Emissions from Diesel Engines on Commercial Harbor Craft *www.arb.ca.gov/regact/2010/chc10/chc10.htm*	DPM, PM, and NO_x	2009 to 2020 - schedule varies depending on engine model year	Most harbor craft with home port in SCAQMD must meet more stringent emissions limits according to a compliance schedule
CAAP	CAAP Measure – HC 1 Performance Standards for Harbor Craft *www.portoflosangeles.org/environment/air-quality/san-pedro-bay-ports-clean-air-action-plan*	All	Varies	Modernization of harbor craft operating at POLA upon lease renewal

Table 2.3: Cargo Handling Equipment Emission Regulations, Standards and Policies

Agency	Regulation/Standard/Policy	Targeted Pollutants	Years Effective	Impact
EPA	Emission Standards for Non-Road Diesel Powered Equipment *www.epa.gov/otaq/standards/nonroad/nonroadci.htm*	All	2008 through 2015	All non-road equipment
CARB	Cargo Handling Equipment Regulation *www.arb.ca.gov/regact/2011/cargo11/cargo11.htm*	All	2007 through 2017; Opacity test compliance starting in 2016	All Cargo handling equipment
CARB	New Emission Standards, Test Procedures, for Large Spark Ignition (LSI) Engine Forklifts and Other Industrial Equipment *www.arb.ca.gov/regact/2008/lsi2008/lsi2008.htm*	All	2007 – first phase 2010 – second phase	Emission standards for large spark-ignition engines with 25 hp or greater
CARB	Fleet Requirements for Large Spark Ignition Engines *www.arb.ca.gov/regact/2010/offroadlsi10/lsifinalreg.pdf*	All	2009 through 2013	More stringent emissions requirements for fleets of large spark-ignition engines equipment
CAAP	CAAP Measure – CHE1 Performance Standards for CHE *www.portoflosangeles.org/environment/air-quality/san-pedro-bay-ports-clean-air-action-plan*	All	2007 through 2014	Turnover to Tier 4 cargo handling equipment per lease renewal agreement

Table 2.4: Locomotives Emission Regulations, Standards and Policies

Agency	Regulation/Standard/Policy	Targeted Pollutants	Years Effective	Impact
EPA	Emission Standards for New and Remanufactured Locomotives and Locomotive Engines- Latest Regulation *www.epa.gov/otaq/standards/nonroad/locomotives.htm*	DPM and NO_x	2011 through 2013 – Tier 3 2015 – Tier 4	All new and remanufactured locomotive engines
EPA	Control of Emissions of Air Pollution from Nonroad Diesel Engines and Fuel *www.epa.gov/otaq/fuels/dieselfuels/regulations.htm*	SO_x and PM	2010	All locomotive engines
CARB	Low Sulfur Fuel Requirement for Intrastate Locomotives *www.arb.ca.gov/msprog/offroad/loco/loco.htm#intrastate*	SO_x, NO_x, and PM	2007	Intrastate locomotives, mainly switchers
CARB	Statewide 1998 and 2005 Memorandum of Understanding (MOUs) *www.arb.ca.gov/msprog/offroad/loco/loco.htm#intrastate*	NO_x	2010	Union Pacific and BNSF locomotives
CAAP	CAAP Measure – RL1 Pacific Harbor Line (PHL) Rail Switch Engine Modernization *www.portoflosangeles.org/environment/air-quality/san-pedro-bay-ports-clean-air-action-plan*	PM	2010	Pacific Harbor Line switcher engines
CAAP	CAAP Measure – RL2 Class 1 Line-haul and Switcher Fleet Modernization *www.portoflosangeles.org/environment/air-quality/san-pedro-bay-ports-clean-air-action-plan*	All	2023 – Tier 3	Class 1 locomotives at ports
CAAP	CAAP Measure – RL3 New and Redeveloped Near-Dock Rail Yards *www.portoflosangeles.org/environment/air-quality/san-pedro-bay-ports-clean-air-action-plan*	All	2020 – Tier 4	New near-dock rail yards

Table 2.5: Heavy-Duty Vehicles Emission Regulations, Standards and Policies

Agency	Regulation/Standard/Policy	Targeted Pollutants	Years Effective	Impact
CARB/ EPA	Emission Standards for New 2007+ On-Road Heavy-Duty Vehicles *www.arb.ca.gov/msprog/onroadhd/reducstd.htm*	NO_x and PM	2007 2010	All new on-road diesel heavy-duty vehicles
CARB	Heavy-Duty Vehicle On-Board Diagnostics (OBD and OBDII) Requirement *ww2.arb.ca.gov/our-work/programs/obd*	NO_x and PM	2010 +	All new on-road heavy-duty vehicles
CARB	ULSD Fuel Requirement *www.arb.ca.gov/regact/ulsd2003/ulsd2003.htm*	All	2006 - ULSD	All on-road heavy-duty vehicles
CARB	Drayage Truck and Bus Regulation (amended in 2011 and 2014) *www.arb.ca.gov/msprog/onroad/porttruck/drayagevtruckbus.pdf*	All	Phase-in started in 2009	All drayage trucks operating at California ports
CARB	Low NO_x Software Upgrade Program 2007 *www.arb.ca.gov/msprog/hdsoftware/hdsoftware.htm*	NO_x	Starting 2005	1993 to 1998 on-road heavy-duty vehicles that operate in California
CARB	Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Regulation *ww2.arb.ca.gov/our-work/programs/ghg-std-md-hd-eng-veh*	CO_2	Phase 1 started in 2012	Heavy-duty tractors that pull 53-foot+ trailers in California
CARB	Assembly Bill 32 requiring GHG reductions targets and Governor's Executive Order B – 30-15 *www.arb.ca.gov/cc/ab32/ab32.htm*	CO_2	GHG emissions reduction goals in 2020	All operations in California
CAAP	CAAP Measure – HDV1 Performance Standards for On-Road Heavy-Duty Vehicles; Clean Truck Program *www.portoflosangeles.org/environment/air-quality/san-pedro-bay-ports-clean-air-action-plan*	All	Phase-in started in 2008	Requires on-road heavy-duty vehicles that operate at POLA to have 2007 or newer Model Year (MY) engines by 2012

SECTION 3 OCEAN-GOING VESSELS

Source Description

Based on activity data obtained from the Marine Exchange of Southern California (MarEx), there were a total of 1,687 ocean-going vessels (OGVs, ships, or vessels) activities (arrivals not including shifts) to the Port in 2019. These vessels are grouped by the type of cargo they are designed to carry and fall into one of the following vessel categories or types:

- Auto carrier
- Bulk carrier
- Containership
- Cruise vessel
- General cargo
- Miscellaneous vessel
- Ocean-going tugboat
- Refrigerated vessel (Reefer)
- RoRo
- Tanker

From an emissions contribution perspective, the three predominant vessel types are: containerships, tankers, and cruise ships, with containerships being the most significant vessel category. Emission sources on all vessel categories include main engines (propulsion), auxiliary engines (generators), and auxiliary boilers (boilers).

Table 3.1 presents the numbers of arrivals, departures, and shifts associated with vessels at the Port in 2019.

Table 3.1: 2019 Total OGV Activities

Vessel Type	Arrival	Departure	Shift	Total
Auto Carrier	79	77	9	165
Bulk	72	63	61	196
Bulk - Heavy Load	3	3	2	8
Container - 1000	0	1	1	2
Container - 2000	184	185	16	385
Container - 3000	18	18	28	64
Container - 4000	89	91	7	187
Container - 5000	44	46	15	105
Container - 6000	132	135	12	279
Container - 7000	40	39	1	80
Container - 8000	207	211	29	447
Container - 9000	87	88	12	187
Container - 10000	45	45	4	94
Container - 11000	19	24	10	53
Container - 12000	1	1	1	3
Container - 13000	88	90	9	187
Container - 14000	31	31	7	69
Container - 17000	1	1	0	2
Container - 19000	1	0	0	1
Cruise	137	136	3	276
General Cargo	22	17	33	72
Ocean Tugboat (ATB/ITB)	87	93	121	301
Miscellaneous	7	8	1	16
Reefer	16	16	30	62
RoRo	26	26	2	54
Tanker - Chemical	157	159	275	591
Tanker - Handysize	36	35	56	127
Tanker - Panamax	57	73	143	273
Tanker - Aframax	1	1	3	5
Total	**1,687**	**1,713**	**891**	**4,291**

DB ID693

Geographical Domain

The geographical domain or overwater boundary for OGVs includes the berths and waterways in the Port proper and all vessel movements within the 40-nautical mile (nm) arc from Point Fermin as shown previously in Figure 1.1. The northern boundary is the Ventura County line and the southern boundary is the Orange County line. It should be noted that the overwater boundary extends further off the coast to incorporate the South Coast air quality modeling domain, although most of the vessel movements occur within the 40-nm arc.

Data and Information Acquisition

Similar to previous inventories, various sources of data and operational knowledge about the Port's marine activities are used to compile the data necessary to estimate emissions from OGV:

- Marine Exchange of Southern California
- Vessel Speed Reduction Program speed data
- Los Angeles Pilot Service
- IHS Maritime World Register of Ships[6]
- Vessel Boarding Program (VBP) data
- Environmental Ship Index (ESI) fuel and engine data[7]
- Port Wharfinger data, including tanker load and discharge activity data
- Port and terminal shore power activity data, including usage of alternative at-berth emission control technologies (AMECS and METS-1)

During the 2019 EI process, uncertainty regarding the vessel maximum speed values that are provided by IHS Markit Maritime Data were identified. The Ports and environmental agencies that are part of the Emissions Inventory Technical Working Group are aware of the issue and are working to understand it and decide on a path forward. The goal is consistency in the methodology used to estimate OGV emissions. Because the evaluation is on-going, as of this report date, no change has been made to the use of the IHS speed data for the 2019 OGV emissions estimation.

[6] IHS, *www.ihsmarkit.com/products/maritime-world-ship-register.html*
[7] *www.sustainableworldports.org/environmental-ship-index-esi/*

Operational Profiles

Table 3.2 presents the auxiliary engine load defaults by vessel type, by mode, used to estimate emissions. Auxiliary engines are used to provide electricity to equipment on board the vessel. Actual VBP data or actual kWh data from at berth shore power usage data, if available, is used to estimate emissions. If actual VBP or shore power kWh data is not available, defaults are used. For the cruise ship auxiliary engine load defaults, please refer to Table 3.3.

Table 3.2: Average Auxiliary Engine Load Defaults, kW

Vessel Type	Transit	Maneuvering	Berth Hotelling	Anchorage Hotelling
Auto Carrier	520	1,238	859	622
Bulk	255	675	150	253
Bulk - Heavy Load	255	675	150	253
Container - 1000	545	1,058	429	1,000
Container - 2000	968	2,099	966	942
Container - 3000	602	2,063	516	559
Container - 4000	1,454	2,314	1,148	1,124
Container - 5000	1,811	3,293	945	967
Container - 6000	1,509	2,237	1,039	1,464
Container - 7000	1,498	2,445	1,225	884
Container - 8000	1,544	2,666	980	1,055
Container - 9000	1,514	2,864	1,061	996
Container - 10000	1,757	2,210	1,163	1,051
Container - 11000	2,213	2,944	1,341	1,684
Container - 12000	2,460	3,300	1,780	2,000
Container - 13000	1,664	2,450	1,231	1,224
Container - 14000	1,507	2,076	1,148	1,156
Container - 17000	1,483	1,994	1,000	1,000
Container - 19000	1,933	2,100	1,400	1,600
Cruise	na	na	na	na
General Cargo	516	1,439	722	180
Ocean Tug (ATB/ITB)	79	208	102	79
Miscellaneous	643	597	228	200
Reefer	828	1,534	1,087	828
RoRo	434	1,301	751	434
Tanker - Chemical	658	890	816	402
Tanker - Handysize	537	601	820	560
Tanker - Panamax	561	763	623	379
Tanker - Aframax	576	719	724	474

For all cruise ships (diesel electric and non-diesel electric) that visited the Port, the house load defaults are listed in Table 3.3.

Table 3.3: Cruise Ship Average Auxiliary Engine Load Defaults, kW

Passenger Range	Transit	Maneuvering	Berth Hotelling
<1,500	3,994	5,268	3,069
1,500 < 2,000	7,000	9,000	5,613
2,000 < 2,500	11,000	11,350	6,900
2,500 < 3,000	9,781	8,309	6,089
3,000 < 3,500	8,292	10,369	8,292
3,500 < 4,000	9,945	11,411	10,445

Table 3.4 presents the load defaults for the auxiliary boilers for diesel electric cruise ships and tankers.

Table 3.4: Auxiliary Boiler Load Defaults by Mode for Diesel Electric Vessels, kW

Vessel Type	Transit	Maneuvering	Berth Hotelling	Anchorage Hotelling
Cruise - Diesel-Electric	0	0	1,414	0
Tanker - Diesel-Electric	0	145	220	220

Table 3.5 presents the load defaults for the auxiliary boilers by vessel type and by mode. Tankers' boilers produce steam for steam-powered liquid cargo pumps when discharging, steam powered inert gas fans, and to heat fuel for pumping. Less steam is needed when liquid cargo is being loaded. Since loading and discharging data was available for the tankers that visited the Port, a lower boiler load of 875 kW was used for tankers known to be loading cargo while at berth, while the higher boiler load listed in the table was used as a default for the tanker calls that were discharging cargo. In the table below, auxiliary boiler load for the cruise vessel type is for non-diesel electric cruise vessels. Ocean-going tugboats do not have boilers; therefore, their boiler energy default is zero.

Table 3.5: Auxiliary Boiler Load Defaults by Mode, kW

Vessel Type	Transit	Maneuvering	Berth Hotelling	Anchorage Hotelling
Auto Carrier	87	184	314	305
Bulk	35	94	125	125
Bulk - Heavy Load	35	94	125	125
Container - 1000	106	213	273	270
Container - 2000	149	284	352	350
Container - 3000	164	328	420	416
Container - 4000	179	333	449	446
Container - 5000	247	473	579	572
Container - 6000	206	520	597	595
Container - 7000	412	639	678	677
Container - 8000	253	521	653	703
Container - 9000	341	526	619	618
Container - 10000	314	383	511	511
Container - 11000	315	517	694	694
Container - 12000	330	575	790	790
Container - 13000	227	317	565	560
Container - 14000	251	481	354	495
Container - 17000	216	485	585	585
Container - 19000	460	726	761	761
Cruise	282	361	612	306
General Cargo	56	124	160	160
Ocean Tug (ATB/ITB)	0	0	0	0
Miscellaneous	33	65	96	96
Reefer	95	191	285	285
RoRo	67	148	259	251
Tanker - Chemical	59	136	568	255
Tanker - Handysize	144	144	2,586	144
Tanker - Panamax	167	351	3,421	451
Tanker - Aframax	179	438	5,030	375

Hotelling

Table 3.6 summarizes the hotelling times in hours at berth. Hotelling time is the entire duration of time that a ship spends at berth or anchorage for each visit.

Table 3.6: 2019 Hotelling Times at Berth, hours

Vessel Type	Berth Hotelling Time, hours		
	Min	Max	Avg
Auto Carrier	7.9	116.8	18.8
Bulk	6.5	145.3	77.4
Bulk - Heavy Load	133.8	359.3	222.6
Container - 1000	33.4	33.4	33.4
Container - 2000	11.6	66.6	31.4
Container - 3000	6.0	51.6	24.0
Container - 4000	18.9	122.8	33.1
Container - 5000	9.5	117.7	42.6
Container - 6000	10.2	168.3	69.0
Container - 7000	24.0	158.7	70.3
Container - 8000	6.9	169.5	83.4
Container - 9000	37.8	205.3	96.1
Container - 10000	60.2	123.1	90.7
Container - 11000	19.8	161.5	87.2
Container - 12000	14.0	119.5	66.8
Container - 13000	13.6	215.3	108.2
Container - 14000	12.3	180.3	115.1
Container - 17000	166.9	166.9	166.9
Container - 19000	98.5	98.5	98.5
Cruise	2.9	965.1	26.4
General Cargo	13.5	144.6	59.3
Ocean Tugboat (ATB/ITB)	4.5	104.8	30.8
Miscellaneous	39.6	245.8	112.8
Reefer	5.3	73.5	29.9
RoRo	21.3	50.2	31.9
Tanker - Chemical	3.1	90.8	35.0
Tanker - Handysize	15.4	75.1	40.0
Tanker - Panamax	8.4	164.2	56.5
Tanker - Aframax	22.6	22.6	22.6

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Table 3.7 summarizes the hotelling times in hours at anchorage. In general, tankers spend the most time at anchorage.

Table 3.7: 2019 Hotelling Times at Anchorage, hours

Vessel Type	Min	Max	Avg	Vessel Count
Auto Carrier	1.7	97.0	42.6	6
Bulk	1.8	181.1	43.2	45
Bulk - Heavy Load	8.3	8.3	8.3	1
Container - 1000	0.0	0.0	0.0	0
Container - 2000	1.3	89.8	27.6	9
Container - 3000	9.3	29.5	15.0	5
Container - 4000	2.6	48.5	19.7	5
Container - 5000	1.7	111.3	40.6	5
Container - 6000	1.8	39.3	13.4	6
Container - 7000	0.0	0.0	0.0	0
Container - 8000	1.9	64.8	28.5	8
Container - 9000	13.2	108.1	42.7	7
Container - 10000	1.2	19.2	12.0	3
Container - 11000	3.1	53.4	26.7	6
Container - 12000	0.0	0.0	0.0	0
Container - 13000	3.1	153.2	46.0	6
Container - 14000	12.5	104.4	39.4	3
Container - 17000	0.0	0.0	0.0	0
Container - 19000	0.0	0.0	0.0	0
Cruise	1.6	1.6	1.6	1
General Cargo	6.3	275.3	51.3	16
Ocean Tugboat (ATB/ITB)	1.6	682.7	69.0	9
Miscellaneous	11.5	11.5	11.5	1
Reefer	3.8	49.7	23.6	4
RoRo	0.0	0.0	0.0	0
Tanker - Chemical	1.2	682.8	48.7	102
Tanker - Handysize	1.1	174.1	36.6	15
Tanker - Panamax	2.1	278.8	54.9	48
Tanker - Aframax	12.8	79.2	41.6	1

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Frequent Callers

Table 3.8 provides the percentage of frequent callers. For this EI, a frequent caller is defined as a vessel that made six or more calls in one calendar year. Table 3.8 shows that 13% of vessels that called the Port in 2019 are frequent callers with six or more calls.

Table 3.8: 2019 Percentage of Frequent Callers

Vessel Type	Frequent Vessels	Total Vessels	Percent Frequent Vessels
Auto Carrier	2	43	5%
Bulk	0	69	0%
Bulk - Heavy Load	0	3	0%
Container - 1000	0	1	0%
Container - 2000	13	13	100%
Container - 3000	1	5	20%
Container - 4000	11	20	55%
Container - 5000	3	11	27%
Container - 6000	11	43	26%
Container - 7000	4	8	50%
Container - 8000	18	46	39%
Container - 9000	2	34	6%
Container - 10000	1	15	7%
Container - 11000	0	14	0%
Container - 12000	0	1	0%
Container - 13000	2	32	6%
Container - 14000	3	7	43%
Container - 17000	0	1	0%
Container - 19000	0	1	0%
Cruise	9	36	25%
General Cargo	0	21	0%
Ocean Tugboat (ATB/ITB)	3	12	25%
Miscellaneous	0	3	0%
Reefer	0	9	0%
RoRo	1	1	100%
Tanker - Chemical	1	134	1%
Tanker - Handysize	1	15	7%
Tanker - Panamax	0	53	0%
Tanker - Aframax	0	1	0%
Total	**86**	**652**	
Average			**13%**

Vessel Characteristics

Averages by vessel type characteristics for the fleet calling the port are based on the IHS Maritime World Register of Ships and summarized in Table 3.9. Vessel type characteristics include averages of year built, deadweight, maximum rated speed, and main and auxiliary installed engine power ratings, based on the specific vessels that called the Port in 2019.

Table 3.9: 2019 Vessel Type Characteristics

Vessel Type	Average Year Built	Age (Years)	DWT (tonnes)	Max Speed (knots)	Main Eng (kW)
Auto Carrier	2007	12	21,405	20.0	13,668
Bulk	2012	7	45,191	14.4	7,610
Bulk - Heavy Load	2006	14	na	13.1	11,878
Container - 1000	2007	12	28,219	21.3	19,619
Container - 2000	2002	17	35,858	21.6	21,671
Container - 3000	2008	11	42,048	22.0	30,739
Container - 4000	2008	11	63,500	23.8	47,105
Container - 5000	1999	20	66,720	24.6	48,691
Container - 6000	2008	11	78,779	24.9	56,542
Container - 7000	2006	13	82,470	25.0	58,318
Container - 8000	2010	9	101,813	25.1	65,074
Container - 9000	2011	8	109,979	24.0	58,820
Container - 10000	2014	5	121,790	23.6	58,027
Container - 11000	2010	9	123,603	24.3	59,664
Container - 12000	2011	8	146,113	25.3	72,239
Container - 13000	2012	7	147,232	24.2	67,885
Container - 14000	2015	4	153,674	23.8	60,409
Container - 17000	2008	11	156,257	24.5	80,903
Container - 19000	2016	3	201,792	19.0	60,849
Cruise	2004	15	6,642	20.2	46,415
General Cargo	2007	12	45,504	14.9	8,607
Ocean Tugboat (ATB/ITB)	2006	13	2,510	15.0	6,429
Miscellaneous	1985	34	3,697	14.9	9,118
Reefer	1993	26	14,172	20.6	12,351
RoRo	2014	5	24,750	20.0	19,040
Tanker - Chemical	2012	7	45,682	14.6	8,285
Tanker - Handysize	2006	13	46,120	15.1	9,080
Tanker - Panamax	2006	13	71,568	14.9	11,396
Tanker - Aframax	2019	0	na	14.4	13,500

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Table 3.10 presents the percent of engine tier by vessel type for arrivals/shift at the Port. In 2019, one small cruise vessel and two tankers had certified Tier III main engines. In addition, four steamship container vessels (no tier) called in 2019.

Table 3.10: 2019 Percent of OGV Activity by Main Engine Tier and Vessel Type

Vessel Type	IMO Tier 0	IMO Tier I	IMO Tier II	IMO Tier III	No Tier	Calls Count
Auto Carrier	12%	87%	1%	0%	0%	82
Bulk	1%	44%	55%	0%	0%	73
Bulk - Heavy Load	0%	67%	33%	0%	0%	3
Container - 1000	0%	100%	0%	0%	0%	1
Container - 2000	0%	57%	0%	0%	43%	184
Container - 3000	0%	100%	0%	0%	0%	18
Container - 4000	0%	100%	0%	0%	0%	90
Container - 5000	67%	33%	0%	0%	0%	45
Container - 6000	0%	88%	12%	0%	0%	132
Container - 7000	0%	100%	0%	0%	0%	41
Container - 8000	0%	62%	39%	0%	0%	208
Container - 9000	0%	61%	39%	0%	0%	87
Container - 10000	0%	24%	76%	0%	0%	46
Container - 11000	0%	61%	39%	0%	0%	23
Container - 12000	0%	100%	0%	0%	0%	1
Container - 13000	0%	21%	79%	0%	0%	90
Container - 14000	0%	0%	100%	0%	0%	32
Container - 17000	0%	100%	0%	0%	0%	1
Container - 19000	0%	0%	100%	0%	0%	1
Cruise	23%	42%	31%	4%	0%	137
General Cargo	30%	61%	9%	0%	0%	23
Ocean Tugboat (ATB/ITB)	0%	87%	13%	0%	0%	98
Miscellaneous	100%	0%	0%	0%	0%	8
Reefer	100%	0%	0%	0%	0%	16
RoRo	0%	0%	100%	0%	0%	26
Tanker - Chemical	1%	46%	52%	1%	0%	187
Tanker - Handysize	61%	39%	0%	0%	0%	36
Tanker - Panamax	0%	87%	13%	0%	0%	71
Tanker - Aframax	0%	0%	100%	0%	0%	1
Total	**7%**	**59%**	**29%**	**1%**	**5%**	**1,761**

Emissions Estimation Methodology

The methodology to estimate 2019 emissions from OGVs activity is described in Section 2 of the San Pedro Bay Ports Emissions Inventory Methodology Report[8] Version 1 (2019). The following improvements were made in estimating 2019 OGV emissions. Added VBP data related to vessel operations collected since the last inventory and added vessel specific loads calculated from shore power data.

Emission Estimates

The following tables present the estimated OGV emissions categorized in different ways, such as by engine type, by operating mode, and by vessel type. The criteria pollutant emissions are in tons per year (tpy), while the greenhouse gas emissions are in tonnes per year. Table 3.11 presents summaries of emission estimates by engine type in tons per year. The emissions for the CARB-certified capture and control system to treat emissions from auxiliary engines are rolled up into the auxiliary engine emissions in this table.

Table 3.11: Ocean-Going Vessel Emissions by Engine Type

Engine Type	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
Main Engine	18	17	17	1,477	26	106	65	50,476
Auxiliary Engine	24	22	24	1,089	35	118	41	64,829
Auxiliary Boiler	12	11	0	177	41	18	9	76,942
Total	**54**	**50**	**41**	**2,743**	**102**	**243**	**115**	**192,247**

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[8] *San Pedro Bay Ports Emissions Inventory Methodology Report Version 1-2019. www.portoflosangeles.org/environment/air-quality/air-emissions-inventory*

A summary of the OGV emission estimates by vessel type for all pollutants for the year 2019 is presented in Table 3.12. The emissions for bulk heavy load vessels are rolled up with the bulk vessel type.

Table 3.12: Ocean-Going Vessel Emissions by Vessel Type

Vessel Type	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2e
	tons	tons	tons	tons	tons	tons	tons	tonnes
Auto Carrier	1.0	0.9	0.9	55.7	1.4	4.7	2.1	2,926
Bulk	1.1	1.0	0.9	56.9	2.4	4.9	1.6	3,586
Container - 1000	0.0	0.0	0.0	0.7	0.0	0.0	0.0	43.9
Container - 2000	3.8	3.6	2.6	169.2	9.8	14.5	6.4	14,245.6
Container - 3000	0.3	0.3	0.2	25.5	0.7	2.2	0.6	1,463.5
Container - 4000	1.6	1.5	1.4	148.9	2.9	5.9	3.0	6,477.8
Container - 5000	1.7	1.6	1.5	91.6	2.7	10.2	5.6	5,043.4
Container - 6000	4.1	3.7	3.3	233.3	5.2	23.4	12.9	13,513.8
Container - 7000	1.3	1.3	1.0	79.4	1.8	7.2	4.1	4,684.4
Container - 8000	6.7	6.2	4.8	410.4	10.9	33.5	18.4	27,191.9
Container - 9000	3.4	3.2	2.5	176.5	6.9	17.7	9.4	12,889.1
Container - 10000	1.5	1.4	1.1	93.7	2.1	8.3	4.1	6,388.4
Container - 11000	0.8	0.7	0.6	45.6	1.6	4.3	2.2	2,933.7
Container - 12000	0.1	0.0	0.0	3.3	0.1	0.5	0.2	354.1
Container - 13000	3.2	2.9	2.3	180.5	6.1	14.6	8.2	12,218.4
Container - 14000	1.4	1.3	1.2	61.2	1.7	7.8	4.2	4,367.3
Container - 17000	0.1	0.1	0.1	4.2	0.1	0.5	0.3	237.3
Container - 19000	0.1	0.0	0.0	2.3	0.1	0.2	0.1	190.1
Cruise	6.8	6.4	6.3	307.9	11.5	28.6	11.4	18,929
General Cargo	0.8	0.7	0.7	36.9	1.0	3.4	1.4	2,219
Ocean Tugboat (ATB/ITB)	0.8	0.7	0.8	36.5	1.3	3.4	1.4	1,865
Miscellaneous	0.1	0.1	0.1	5.4	0.2	0.4	0.2	338
Reefer	0.7	0.7	0.6	36.4	1.3	3.0	1.3	1,859
RoRo	0.6	0.6	0.6	31.6	1.1	2.0	0.8	1,555
Tanker - Chemical	5.2	4.9	4.2	228.7	9.7	21.8	7.3	17,619
Tanker - Handysize	1.6	1.5	0.9	60.0	4.2	5.3	2.1	6,377
Tanker - Panamax	4.8	4.5	2.2	158.8	14.7	14.3	5.5	22,490
Tanker - Aframax	0.1	0.1	0.0	2.2	0.2	0.2	0.1	242
Total	**53.7**	**49.9**	**41.0**	**2,743.3**	**101.9**	**242.7**	**114.5**	**192,247**

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Table 3.13 presents summaries of emission estimates by the various modes in tons per year. For each mode, the engine type emissions are also listed. At-berth hotelling and at-anchorage hotelling are listed separately. Transit and harbor maneuvering emissions include both berth and anchorage calls.

Table 3.13: Ocean-Going Vessel Emissions by Mode

Mode	Engine Type	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
Transit	Main	15.7	14.6	14.9	1,332.4	24.2	91.9	52.1	46,593
Transit	Auxiliary Engine	6.6	6.1	6.6	296.3	8.9	29.3	10.6	16,761
Transit	Auxiliary Boiler	0.4	0.3	0.0	5.5	1.1	0.6	0.3	2,370
Total Transit		**22.7**	**21.0**	**21.5**	**1,634.2**	**34.2**	**121.7**	**63.0**	**65,724**
Maneuvering	Main	2.1	1.9	2.0	144.5	1.9	14.3	12.6	3,883
Maneuvering	Auxiliary Engine	2.2	2.0	2.2	99.2	2.9	9.7	3.5	5,557
Maneuvering	Auxiliary Boiler	0.2	0.2	0.0	2.6	0.6	0.3	0.1	1,118
Total Maneuvering		**4.4**	**4.1**	**4.2**	**246.3**	**5.4**	**24.3**	**16.3**	**10,559**
Hotelling at-berth	Main	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Hotelling at-berth	Auxiliary Engine	12.0	11.2	12.0	552.0	18.3	65.2	21.4	34,311
Hotelling at-berth	Auxiliary Boiler	10.2	9.5	0.0	152.6	34.9	15.5	7.7	66,209
Total Hotelling at-berth		**22.2**	**20.7**	**12.0**	**704.7**	**53.2**	**80.7**	**29.2**	**100,520**
Hotelling at-anchorage	Main	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Hotelling at-anchorage	Auxiliary Engine	3.2	3.0	3.2	141.5	4.9	14.3	5.2	8,199
Hotelling at-anchorage	Auxiliary Boiler	1.1	1.1	0.0	16.7	4.2	1.7	0.8	7,246
Total Hotelling at-anchorage		**4.4**	**4.1**	**3.2**	**158.2**	**9.1**	**16.0**	**6.0**	**15,444**
Total		**53.7**	**49.9**	**41.0**	**2,743.3**	**101.9**	**242.7**	**114.5**	**192,247**

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SECTION 4 HARBOR CRAFT

This section presents emission estimates for the commercial harbor craft source category, including source descriptions, geographical domain, data acquisition, operational profiles, emissions estimation methodology, and emission estimates.

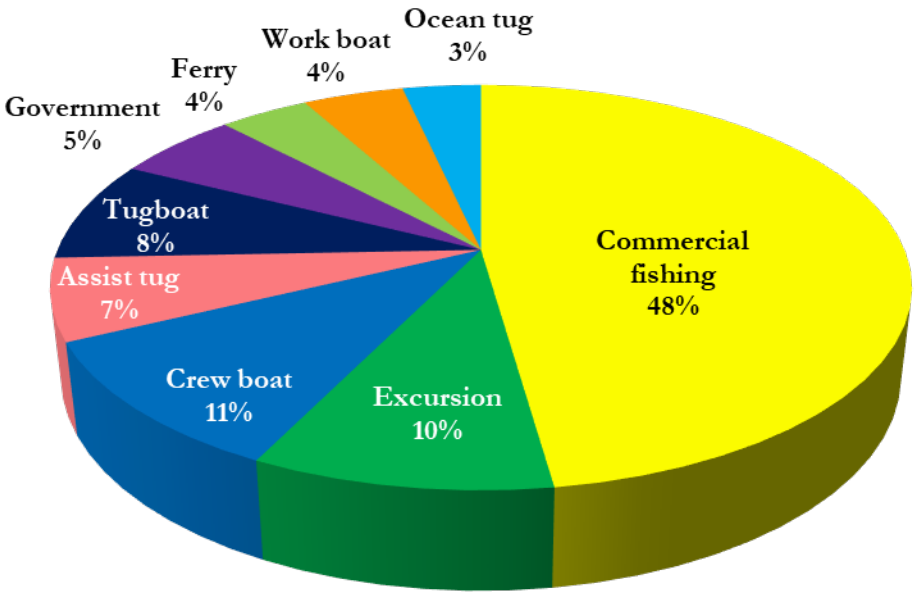
Source Description

Harbor craft are commercial vessels that spend the majority of their time within or near the port and harbor. The harbor craft emissions inventory consists of the following vessel types:

- Assist tugboats
- Commercial fishing vessels
- Crew boats
- Ferry vessels
- Excursion vessels
- Government vessels
- Tugboats
- Ocean tugs
- Work boats

Recreational vessels are not considered to be commercial harbor craft; therefore, their emissions are not included in this inventory. Figure 4.1 presents the distribution of the commercial harbor craft inventoried for the Port in 2019.

Figure 4.1: Distribution of Commercial Harbor Craft Population by Vessel Type



Ocean tugs included in this section are different from the articulated tug barge (ATB) discussed in the ocean-going section of this report. ATBs are seen as specialized single vessels and are included in the marine exchange data for ocean-going vessels. The ocean tugs in this section are not rigidly connected to the barge and are typically not home-ported at the Port but may make frequent calls with barges. They are different from tugboats because their average engine loads are higher than tugboats, which tend to idle more between jobs. Tugboats are typically home-ported in San Pedro Bay harbor and primarily operate within the harbor area but can also operate outside the harbor depending on their work assignments. For this inventory, assist tugs are separated from tugboats due to the load factor used for assist tugs, which is different than the load factor for tugboats.

Geographical Domain

The geographical domain for harbor craft is the same as that for ocean-going vessels.

Data and Information Acquisition

Commercial harbor craft companies were contacted to obtain key operational parameters for their vessels. These include:

- Vessel type
- Engine count
- Engine horsepower (or kilowatts) for main and auxiliary engines
- Engine model year
- Operating hours in calendar year 2019
- Vessel repower information

Operational Profiles

Tables 4.1 and 4.2 summarize the main and auxiliary engine data, respectively, for each vessel type. The averages by vessel type have been used as defaults for vessels for which the model year, horsepower, or operating hour information is missing. Defaults were used mainly for commercial fishing vessels and resulted in the use of defaults for 10% of engine model year values, 9% of horsepower values, and 10% of operating hours.

There are a number of companies that operate harbor craft in both the Ports of Los Angeles and Long Beach harbors. The activity hours for the vessels that are common to both ports reflect work performed during 2019 for the Port of Los Angeles harbor only.

Table 4.1: Summary of Propulsion Engine Data by Vessel Category

Harbor Craft Type	Vessel Count	Engine Count	Model year			Horsepower			Annual Operating Hours		
			Minimum	Maximum	Average	Minimum	Maximum	Average	Minimum	Maximum	Average
Assist tug	13	27	1980	2014	2007	600	2,572	2,004	0	2,173	1,241
Commercial fishing	95	105	1957	2016	2008	150	1,000	377	0	5,000	1,524
Crew boat	21	51	2003	2016	2010	180	1,450	564	119	1,902	786
Excursion	19	38	1981	2019	2009	250	630	385	0	2,800	1,420
Ferry	8	20	2008	2015	2011	2,250	2,680	2,298	588	1,310	1,023
Government	11	21	1993	2012	2005	240	1,770	586	19	712	310
Ocean tug	7	14	2004	2012	2008	1,800	3,385	2,126	200	2,151	1,185
Tugboat	16	31	2001	2018	2010	235	1,500	788	61	850	426
Work boat	9	17	2008	2015	2012	135	1,000	498	0	3,462	916
Total	**199**	**324**									

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Table 4.2: Summary of Auxiliary Engine Data by Vessel Category

Harbor Craft Type	Vessel Count	Engine Count	Model year			Horsepower			Annual Operating Hours		
			Minimum	Maximum	Average	Minimum	Maximum	Average	Minimum	Maximum	Average
Assist tug	13	28	1980	2017	2011	107	296	184	0	2,664	1,372
Commercial fishing	95	45	1957	2016	2009	12	185	78	0	5,000	2,025
Crew boat	21	22	2002	2018	2010	11	107	56	0	2,084	801
Excursion	19	21	1981	2016	2009	11	54	39	0	4,000	2,121
Ferry	8	16	2008	2017	2012	18	120	69	801	2,013	992
Government	11	15	2002	2012	2004	50	1555	522	7	869	153
Ocean tug	7	15	2004	2016	2009	60	339	131	200	2,256	833
Tugboat	16	25	2004	2018	2010	15	121	62	10	1,150	455
Work boat	9	11	1979	2015	2006	40	101	69	0	6,804	1,610
Total	**199**	**198**									

DB ID422

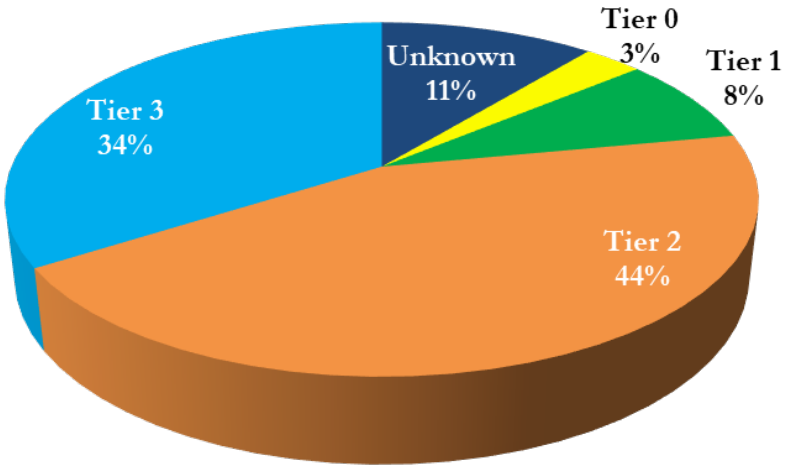
Harbor craft engines with known model year and horsepower are categorized according to their respective EPA marine engine standards (known as "tier level"). In the case where engine information gathered from harbor craft operators fails to identify the specific EPA tier level, the tier level is assigned for that engine based on engine model year and horsepower.[9] These assumptions are consistent with CARB's harbor craft emission factors, which follow the same model year grouping as EPA emissions standards for marine engines.

Table 4.3: Harbor Craft Marine Engine EPA Tier Levels

EPA Tier Level	Marine Engine Model Year Range	Horsepower Range
Tier 0	1999 and older	All
Tier 1	2000 to 2003	< 500 hp
Tier 1	2000 to 2006	> 500 hp
Tier 2	2004 up to Tier 3	< 500 hp
Tier 2	2007 up to Tier 3	> 500 hp
Tier 3	2009 and newer	0 to 120 hp
Tier 3	2013 and newer	> 120 to 175 hp
Tier 3	2014 and newer	> 175 to 500 hp
Tier 3	2013 and newer	> 500 to 750 hp
Tier 3	2012 to 2017	> 750 to 1,900 hp
Tier 3	2013 to 2016	> 1,900 to 3,300 hp
Tier 3	2014 to 2016	> 3,300 hp

Figure 4.2 provides the distribution by Tier of all harbor craft propulsion and auxiliary engines operating at the Port in 2019. If model year and/or horsepower information are not available, the engines are classified as "unknown."

Figure 4.2: Distribution of Harbor Craft Engines by Engine Standards



[9] CFR (Code of Federal Regulation), 40 CFR, subpart 94.8 for Tier 1 and 2 and subpart 1042.101 for Tier 3.

Table 4.4 summarizes the energy consumption (kWh) per engine tier used to estimate 2019 harbor craft emissions. The newer Tier 2 and Tier 3 engines make up 92% of the harbor craft energy consumption, indicating higher use of cleaner engines. Energy consumption of harbor craft engines with unknown tier is distributed among other tiers based on defaults used for missing model year or horsepower for emissions calculations.

Table 4.4: Harbor Craft Energy Consumption by Engine Tier, kWh and %

Engine Tier	2019 kWh	2019 % of Total
Tier 0	542,487	1%
Tier 1	6,391,537	7%
Tier 2	65,648,615	71%
Tier 3	19,511,590	21%
Total	**92,094,228**	**100%**

Emissions Estimation Methodology

The emissions calculation methodology and the emission rates are described in Section 3 of the San Pedro Bay Ports Emissions Inventory Methodology Report[10] Version 1 (2019). Harbor craft emissions are estimated for each engine individually, based on the engine's model year, power rating, and annual hours of operation. The Port's harbor craft emission calculation methodology is similar to the methodology used by the CARB emissions inventory for commercial harbor craft operating in California.[11]

Emission Estimates

Table 4.5 summarizes the estimated 2019 harbor craft emissions by vessel type and engine type. In order for the total emissions to be consistently displayed for each pollutant, the individual values in each table column do not, in some cases, add up to the listed total in the table. This is because there are fewer decimal places displayed (for readability) than are included in the calculated total. The criteria pollutants are listed as tons per year while the CO_2e values are listed as tonnes (metric tons) per year.

[10] *San Pedro Bay Ports Emissions Inventory Methodology Report Version 1-2019. www.portoflosangeles.org/environment/air-quality/air-emissions-inventory*

[11] CARB, *Commercial Harbor Craft Regulatory Activities*, Appendix B: Emissions Estimation Methodology for Commercial Harbor Craft Operating in California. *www.arb.ca.gov/msei/chc-appendix-b-emission-estimates-ver02-27-2012.pdf.*

Table 4.5: Harbor Craft Emissions by Vessel and Engine Type

Harbor Craft Type	Engine Type	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
Assist Tug	Auxiliary	0.5	0.4	0.5	15.2	0.0	13.3	2.2	1,495
	Propulsion	5.0	4.6	5.0	138.3	0.1	102.3	14.5	10,892
Assist Tug Total		**5.5**	**5.1**	**5.5**	**153.5**	**0.1**	**115.5**	**16.8**	**12,387**
Commercial Fishing	Auxiliary	0.7	0.7	0.7	17.4	0.0	14.1	3.4	1,507
	Propulsion	3.2	2.9	3.2	103.1	0.1	77.6	11.4	8,424
Commercial Fishing Total		**3.9**	**3.6**	**3.9**	**120.5**	**0.1**	**91.7**	**14.7**	**9,931**
Crew boat	Auxiliary	0.1	0.1	0.1	2.1	0.0	1.7	0.5	167
	Propulsion	1.9	1.7	1.9	59.5	0.1	43.5	6.5	5,206
Crew boat Total		**2.0**	**1.8**	**2.0**	**61.6**	**0.1**	**45.1**	**7.0**	**5,372**
Excursion	Auxiliary	0.2	0.2	0.2	4.8	0.0	4.1	1.6	398
	Propulsion	1.5	1.4	1.5	49.4	0.0	37.4	5.4	4,154
Excursion Total		**1.7**	**1.6**	**1.7**	**54.2**	**0.1**	**41.6**	**7.1**	**4,552**
Ferry	Auxiliary	0.1	0.1	0.1	2.9	0.0	2.2	0.6	246
	Propulsion	3.8	3.5	3.8	115.6	0.1	90.2	12.7	9,786
Ferry Total		**3.9**	**3.7**	**3.9**	**118.5**	**0.1**	**92.5**	**13.3**	**10,032**
Government	Auxiliary	0.1	0.1	0.1	1.5	0.0	0.7	0.2	92
	Propulsion	0.7	0.7	0.7	15.2	0.0	6.6	1.4	952
Government Total		**0.8**	**0.7**	**0.8**	**16.7**	**0.0**	**7.3**	**1.6**	**1,044**
Ocean Tug	Auxiliary	0.1	0.1	0.1	4.6	0.0	4.1	0.7	467
	Propulsion	6.1	5.6	6.1	174.5	0.1	106.8	16.5	12,920
Ocean Tug Total		**6.2**	**5.7**	**6.2**	**179.1**	**0.2**	**110.9**	**17.3**	**13,387**
Tugboat	Auxiliary	0.1	0.1	0.1	2.0	0.0	1.6	0.4	173
	Propulsion	0.7	0.7	0.7	21.1	0.0	15.7	2.2	1,684
Tugboat Total		**0.8**	**0.8**	**0.8**	**23.2**	**0.0**	**17.2**	**2.6**	**1,856**
Work boat	Auxiliary	0.1	0.1	0.1	2.2	0.0	1.7	0.5	190
	Propulsion	0.8	0.7	0.8	25.1	0.0	19.2	2.7	2,131
Work boat Total		**0.9**	**0.8**	**0.9**	**27.3**	**0.0**	**20.9**	**3.1**	**2,321**
Harbor Craft Total		**25.8**	**23.7**	**25.8**	**754.6**	**0.7**	**542.7**	**83.4**	**60,884**

DB ID427

SECTION 5 CARGO HANDLING EQUIPMENT

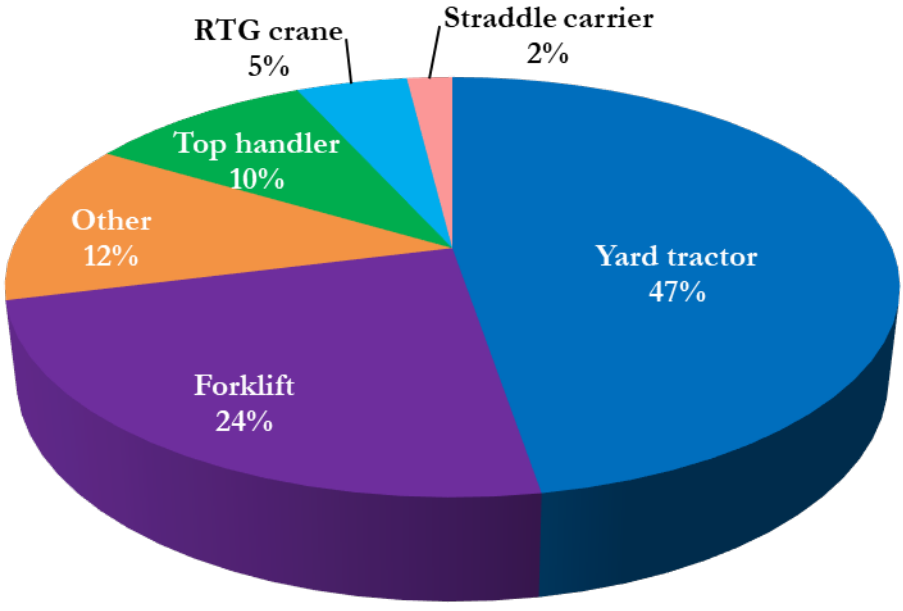
This section presents emissions estimates for the CHE source category, including source descriptions, geographical domain, data acquisition, operational profiles, emissions estimation methodology, and emission estimates.

Source Description

The CHE category includes equipment that moves cargo (including cargo in containers, general cargo, and bulk cargo) to and from marine vessels, railcars, and on-road trucks. The equipment is typically operated at marine terminals or at rail yards and not on public roadways. This inventory includes cargo handling equipment fueled by diesel, gasoline, propane, liquefied natural gas (LNG), and electricity. Due to the diversity of cargo handled by the Port's terminals, there is a wide range of equipment types.

Figure 5.1 presents the population distribution of the 2,038 pieces of equipment inventoried at the Port for calendar year 2019. The 12% for other equipment captures a variety of terminal equipment, such as bulldozer, cone vehicle, excavator, loader, man lift, material handler, rail pusher, reach stacker, skid steer loader, side pick, sweeper, and truck. The hybrid and conventional rubber-tired gantry (RTG) crane counts are included under RTG crane. The hybrid and conventional straddle carrier counts are included under straddle carrier.

Figure 5.1: CHE Count Distribution by Equipment Type



Geographical Domain

The geographical domain for CHE is the terminals within the Port.

Data and Information Acquisition

The maintenance and/or CHE operating staff of each terminal were contacted in person, by e-mail, or by telephone, to obtain equipment count and activity information on the CHE specific to their terminal's operation for the 2019 calendar year.

Operational Profiles

Table 5.1 summarizes the cargo handling equipment data collected from the terminals and facilities for the calendar year 2019. The table includes the count of all equipment as well as the range and the average of horsepower, model year, and annual operating hours by equipment type for equipment with known operating parameters. For the electric-powered equipment shown in the table, "na" denotes "not applicable" for engine size, model year and operating hours.

The averages by CHE engine and fuel type were used as defaults for the missing information. Defaults were used for 1% of engine model year values, 2% of horsepower values, and 0.1% of operating hours.

Table 5.1: CHE Engine Characteristics for All Terminals

Equipment	Engine Type	Count	Power (hp)			Model Year			Annual Activity Hours		
			Min	Max	Average	Min	Max	Average	Min	Max	Average
Stacking crane	Electric	29	na	na	na	na	na	na	961	2,869	2,151
Bulldozer	Diesel	3	200	310	237	2006	2007	2007	91	915	395
Cone Vehicle	Diesel	21	25	35	32	2010	2015	2013	11	2,657	1,083
Crane	Diesel	8	130	751	265	1969	2014	1997	0	934	338
Crane	Electric	3	na	na	na	na	na	na	929	1,045	975
Wharf crane	Electric	86	na	na	na	na	na	na	0	4791	1053
Excavator	Diesel	1	371	371	371	2010	2010	2010	0	0	0
Forklift	Diesel	110	56	388	177	1985	2018	2010	0	3,328	538
Forklift	Electric	11	na	na	na	na	na	na	na	na	na
Forklift	Gasoline	7	45	45	45	2010	2012	2011	114	1,620	608
Forklift	Propane	355	32	200	73	1988	2017	2000	0	2,718	396
Loader	Diesel	11	55	460	259	1999	2015	2009	0	3,786	1,144
Loader	Electric	2	na	na	na	na	na	na	na	na	na
Man lift	Diesel	19	49	152	85	2000	2018	2008	0	576	158
Man lift	Electric	5	na	na	na	na	na	na	na	na	na
Man lift	Gasoline	1	60	60	60	2007	2007	2007	88	88	88
Material handler	Diesel	9	371	475	396	2005	2011	2008	560	3,952	1,882
Miscellaneous	Diesel	1	268	268	268	2007	2007	2007	944	944	944
Miscellaneous	Electric	2	na	na	na	na	na	na	na	na	na
Rail pusher	Diesel	1	194	194	194	2012	2012	2012	143	143	143
Reach stacker	Diesel	1	250	250	250	2013	2013	2013	0	0	0
Hybrid RTG	Diesel	13	137	302	257	2009	2018	2016	1,463	5,611	3,904
RTG crane	Diesel	85	320	779	623	2002	2015	2009	0	5,585	2,455
Side pick	Diesel	15	152	275	242	2000	2017	2013	12	2,416	1,044
Skid steer loader	Diesel	4	56	75	68	1994	2012	2005	112	756	527
Hybrid straddle carrier	Diesel	12	102	102	102	2016	2016	2016	0	3,075	2,266
Straddle carrier	Diesel	28	425	425	425	2013	2015	2014	1,316	5,760	4,532
Sweeper	Diesel	8	96	260	162	2000	2016	2009	54	2,416	919
Sweeper	Gasoline	2	205	205	205	2002	2005	2004	2,416	2,416	2,416
Top handler	Diesel	198	250	400	338	1999	2018	2012	0	4,060	2,177
Truck	Diesel	21	185	540	349	2005	2014	2008	119	2,638	860
Truck	Propane	1	na	na	na	1973	1973	1973	177	177	177
Yard tractor	Diesel	790	158	250	228	1995	2019	2011	0	5,647	1,910
Yard tractor	LNG	17	230	230	230	2009	2010	2010	142	1,235	494
Yard tractor	Propane	158	174	231	200	2000	2011	2007	0	2,859	1,822
Total count		**2,038**									

DB ID228

Table 5.2 is a summary of the emission reduction technologies utilized in cargo handling equipment, including diesel oxidation catalysts (DOC), diesel particulate filters (DPF), and BlueCAT retrofit for large-spark ignition (LSI) engines. There is significantly less equipment with DOCs than in earlier years because the older equipment equipped with DOCs are being phased out of the terminal fleets. Equipment with DPF retrofits are also being phased out as existing equipment with DPFs are replaced with newer pieces of equipment with Tier 4 engines. Hybrid equipment count is included in the table as the count is expected to increase in the near future. The Vycon retrofit count is not included as there are no longer any Vycon units on the RTG cranes.

Table 5.2: Count of CHE Utilizing Emission Reduction Technologies

Equipment	DOC Retrofit	On-Road Engines	DPF Retrofit	Hybrid	BlueCAT LSI Equip
Forklift	0	0	42	0	208
RTG crane	6	0	8	13	0
Straddle carrier	0	0	3	12	0
Top handler	0	0	62	0	0
Yard tractor	0	675	4	0	0
Sweeper	0	1	2	0	0
Other	0	12	36	0	0
Total	**6**	**688**	**157**	**25**	**208**

DB ID234

Table 5.3 shows the distribution of equipment by fuel type. The "other" electric equipment includes automatic stacking carriers (ASCs), cranes, loaders, manlifts, and miscellaneous.

Table 5.3: Count of CHE Equipment by Fuel Type

Equipment	Electric	LNG	Propane	Gasoline	Diesel	Total
Forklift	11	0	355	7	110	483
Wharf crane	86	0	0	0	0	86
RTG crane	0	0	0	0	98	98
Straddle carrier	0	0	0	0	40	40
Top handler	0	0	0	0	198	198
Yard tractor	0	17	158	0	790	965
Other	41	0	1	3	123	168
Total	**138**	**17**	**514**	**10**	**1,359**	**2,038**

DB ID235

Table 5.4 summarizes the distribution of diesel cargo handling equipment's engines including smaller auxiliary RTG engines by off-road diesel engine standards[12] (Tier 0, 1, 2, 3, 4 interim, and 4 final) based on model year and horsepower range. The table also lists the count of each type of equipment using on-road diesel engines. The table does not reflect the fact that some of the engines may be cleaner than the Tier level they are certified to because of use of emissions control devices added to existing equipment. The "Unknown" Tier column shown in the table represents equipment with missing horsepower or model year information necessary for Tier level classifications. Due to the recent significant number of straddle carriers in the inventory, they were taken out of the "other" category for the count of diesel engines by engine standards.

Table 5.4: Count of Diesel Engines by Engine Standards

Equipment Type	Tier 0	Tier 1	Tier 2	Tier 3	Tier 4i	Tier 4f	Unknown Tier	On-road Engine	Total Diesel Engines
Forklift	7	1	8	26	36	24	8	0	110
RTG crane	0	0	29	11	39	19	0	0	98
Side pick	0	2	0	1	0	9	3	0	15
Top handler	0	2	21	40	31	104	0	0	198
Yard tractor	4	0	0	0	19	92	0	675	790
Other	5	8	11	29	16	25	1	13	108
Straddle carrier	0	0	0	0	17	23	0	0	40
Total	**16**	**13**	**69**	**107**	**158**	**296**	**12**	**688**	**1,359**
Percent	**1%**	**1%**	**5%**	**8%**	**12%**	**22%**	**1%**	**51%**	

DB ID878

Table 5.5 summarizes the energy consumption (kWh) for the diesel equipment by engine tier and the other engine types (i.e. gasoline, propane and LNG), but not electric. Energy consumption of cargo handling equipment engines with unknown tier is distributed among other tiers based on defaults used for missing model year or horsepower for emissions calculations.

[12] EPA, *Nonroad Compression-Ignition Engines- Exhaust Emission Standards,* June 2004

Table 5.5: Equipment Energy Consumption by Engine Tier, kWh and %

Engine Type	Engine Tier	Energy Consumption kWh	Percent Total
Diesel	Tier 0	605,487	0.3%
Diesel	Tier 1	516,058	0.2%
Diesel	Tier 2	9,174,217	4.0%
Diesel	Tier 3	19,041,041	8.4%
Diesel	Tier 4i	29,196,609	12.8%
Diesel	Tier 4f	58,616,737	25.8%
Diesel	Onroad engines	90,674,119	39.8%
Gasoline		548,183	0.2%
Propane		18,652,133	8.2%
LNG		562,868	0.2%
Total		**227,587,451**	

Emissions Estimation Methodology

The emissions calculation methodology and the emission rates are described in Section 4 of the San Pedro Bay Ports Emissions Inventory Methodology Report[13] Version 1 (2019). The Port's emissions calculation methodology used to estimate CHE emissions is consistent with CARB's latest methodology for estimating emissions from CHE.[14]

Emission Estimates

Table 5.6 summarizes the CHE emissions by terminal type and Table 5.7 provides a more detailed summary of cargo handling equipment emissions by equipment and engine type. The "Other" category is for intermodal yard and other facilities located on port property.

Table 5.6: CHE Emissions by Terminal Type

Terminal Type	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
Auto	0.0	0.0	0.0	0.1	0.0	3.1	0.3	34
Break-Bulk	0.5	0.5	0.5	26.6	0.1	16.0	2.5	5,687
Container	5.8	5.4	4.3	363.3	1.8	727.4	74.9	165,248
Cruise	0.0	0.0	0.0	0.8	0.0	1.9	0.1	75
Dry Bulk	0.1	0.1	0.1	7.0	0.0	5.5	0.6	454
Liquid	0.0	0.0	0.0	0.2	0.0	0.4	0.1	53
Other	0.3	0.3	0.1	12.4	0.1	51.0	4.4	5,711
Total	**6.7**	**6.2**	**5.0**	**410.4**	**1.9**	**805.2**	**82.8**	**177,264**

[13] *San Pedro Bay Ports Emissions Inventory Methodology Report Version 1-2019. www.portoflosangeles.org/environment/air-quality/air-emissions-inventory*

[14] CARB, Appendix B: Emission Estimation Methodology for Cargo Handling Equipment Operating at Ports and Intermodal Rail Yards in California. *www.arb.ca.gov/regact/2011/cargo11/cargoappb.pdf*

Table 5.7 presents the emissions by cargo handling equipment type and engine type.

Table 5.7: CHE Emissions by Equipment and Engine Type

Equipment	Engine	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
Bulldozer	Diesel	0.0	0.0	0.0	0.5	0.0	0.2	0.1	106
Cone vehicle	Diesel	0.0	0.0	0.0	1.6	0.0	2.2	0.1	204
Crane	Diesel	0.1	0.1	0.1	2.3	0.0	1.0	0.2	258
Excavator	Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Forklift	Diesel	0.1	0.1	0.1	7.4	0.0	8.1	0.6	1,802
Forklift	Gasoline	0.0	0.0	0.0	0.1	0.0	3.5	0.3	46
Forklift	Propane	0.2	0.2	0.0	8.6	0.0	50.5	2.1	1,789
Loader	Diesel	0.0	0.0	0.0	3.5	0.0	2.2	0.4	859
Man lift	Diesel	0.0	0.0	0.0	0.6	0.0	0.5	0.0	67
Man lift	Gasoline	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2
Material handler	Diesel	0.1	0.1	0.1	12.4	0.0	4.7	1.1	2,183
Miscellaneous	Diesel	0.0	0.0	0.0	0.4	0.0	0.2	0.0	74
Rail pusher	Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8
Reach stacker	Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
RTG crane	Diesel	1.3	1.2	1.3	72.5	0.2	34.1	6.7	16,401
Side pick	Diesel	0.0	0.0	0.0	2.3	0.0	2.9	0.4	1,286
Skid steer loader	Diesel	0.0	0.0	0.0	0.4	0.0	0.3	0.0	44
Straddle carrier	Diesel	0.2	0.1	0.2	12.4	0.1	15.6	2.2	6,500
Sweeper	Diesel	0.1	0.1	0.1	2.1	0.0	2.0	0.2	533
Sweeper	Gasoline	0.0	0.0	0.0	8.6	0.0	39.8	2.7	498
Top handler	Diesel	1.3	1.2	1.3	113.0	0.6	106.0	16.2	49,227
Truck	Diesel	0.3	0.3	0.3	6.6	0.0	4.2	0.6	1,936
Truck	Propane	0.0	0.0	0.0	0.4	0.0	0.8	0.1	21
Yard tractor	Diesel	1.4	1.3	1.4	93.9	1.0	183.0	12.4	77,975
Yard tractor	LNG	0.0	0.0	0.0	0.5	0.0	0.1	1.8	373
Yard tractor	Propane	1.5	1.5	0.0	60.2	0.0	343.5	34.4	15,070
Total		**6.7**	**6.2**	**5.0**	**410.4**	**1.91**	**805.2**	**82.8**	**177,264**

DB ID237

SECTION 6 LOCOMOTIVES

This section presents emission estimates for the railroad locomotives source category, including source description, geographical domain, data and information acquisition, operational profiles, emissions estimation methodology, and emission estimates.

Source Description

Railroad operations are typically described in terms of two different types of operations, line haul and switching. Line haul refers to the movement of cargo by train over long distances. Line haul operations occur at or near the Port as the initiation or termination of a line haul trip, as cargo is either picked up for transport to destinations across the country or is dropped off for shipment overseas. Switching refers to short movements of rail cars, such as in the assembling and disassembling of trains at various locations in and around the Port, sorting of the cars of inbound cargo trains into contiguous "fragments" for subsequent delivery to terminals, and the short distance hauling of rail cargo within the Port.

The Port is served by three railway companies:

- Burlington Northern Santa Fe Railway Company (BNSF)
- Union Pacific Railroad (UP)
- Pacific Harbor Line (PHL)

BNSF and UP provide line haul service to and from the Port and operate switching services at their off-port locations, while PHL performs most of the switching operations within the Port. Locomotives used for line haul operations are typically equipped with large, powerful engines of over 4,000 hp, while switch engines are smaller, typically having one or more engines totaling 2,000 to 3,000 hp. The locomotives used in switching service at the Port are primarily new, low-emitting locomotives specifically designed for switching duty. Switching locomotives are operated by PHL within the Port and by UP at the near-port railyard.

Geographical Domain

The specific activities included in this emissions inventory are movements of cargo within Port boundaries, and directly to or from Port-owned properties such as terminals and on-Port rail yards, within and to the boundary of the SoCAB. The inventory does not include rail movements of cargo that occur solely outside the Port, such as off-port rail yard switching, and movements that neither begin nor end at a Port property, such as east-bound line hauls that initiate in central Los Angeles intermodal yards. For rail locomotives, the domain extends from the Port to the cargo's first point of rest within the South Coast Air Basin (SoCAB) or up to the SoCAB boundary, whichever comes first. Figure 1.1 in Section 1 illustrates the boundaries.

Data and Information Acquisition

Information from the following general sources was used to estimate emissions associated with maritime industry-related activities of locomotives operating both within the Port and outside the Port to the boundary of the SoCAB:

- Previous emissions studies
- Port cargo statistics
- Input from railroad operators
- Published information sources
- CARB MOU line-haul fleet compliance data

The Port continues to use the most recent, locally specific data available, including MOU compliance data reflective of actual recent line haul fleet mix characteristics in the SoCAB. In addition, PHL has provided fuel consumption information for each locomotive in service in each calendar year, along with the engine tier levels of the locomotives. Table 6.1 lists the number of locomotives for each tier level that were operated in 2019, and the percentage of fuel used by locomotives in each tier. Discussion of the tiers and a list of tier-specific emission factors are included in Section 5 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019).[15]

Table 6.1: PHL Switching Fleet Mix, 2019

Locomotive Tier Level /Power Type	Count	% of Fuel Consumed
Genset	6	7%
Tier 3	0	0%
Tier 3+	18	89%
Tier 4	1	4%
Totals	**25**	**100%**

[15] *www.portoflosangeles.org/environment/air-quality/air-emissions-inventory*

Operational Profiles

The goods movement rail system in terms of the activities that are carried out by locomotive operators is the same as described in detail in Section 5 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019).[16]

Emissions Estimation Methodology

The emission calculation methodology used to estimate locomotive emissions is consistent with the methodology described in detail in Section 5 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019).[17] Tables that contain information specific to this EI are presented below.

Table 6.2 presents the MOU compliance information submitted by both railroads and the composite of both railroads' pre-Tier 0 through Tier 4 locomotive NO_x emissions for calendar year 2018, showing a weighted average NO_x emission factor of 5.78 g/hphr.[18] The 2018 reports were used instead of the 2019 due to the timing of the inventory data collection phase and of the posting of the compliance reports by CARB. The emission factors based on the 2019 compliance report will be used for the future 2020 EI.

[16] *www.portoflosangeles.org/environment/air-quality/air-emissions-inventory*
[17] *www.portoflosangeles.org/environment/air-quality/air-emissions-inventory*
[18] Notes from railroads' MOU compliance submissions:
1. For more information on the U.S. EPA locomotive emission standards please visit. *www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-emission-standards-locomotives-and-locomotive*
2. Number of locomotives is the sum of all individual locomotives that visited or operated within the SoCAB at any time during 2018.

Table 6.2: MOU Compliance Data, MWh and g NO_x/hp-hr

Engine Tier	Number of Locomotives	Megawatt-hours (MWh)	% MWh by Tier Level	Wt'd Avg NOx (g/bhp-hr)	Tier Contribution to Fleet Average (g/bhp-hr)
BNSF					
Pre-Tier 0	297	1,797	0.7%	13.0	0.08
Tier 0	268	11,118	4.0%	7.8	0.31
Tier 1	1,455	99,606	36%	6.1	2.20
Tier 2	1,507	97,720	35%	4.9	1.74
Tier 3	1,187	53,473	19%	4.5	0.87
Tier 4	251	11,962	4.3%	1.1	0.05
ULEL	0	0	0%	-	-
Total BNSF	**4,965**	**275,676**	**100%**		**5.3**
UP					
Tier not reported	37	343	0.2%	6.3	0.01
Pre-Tier 0	57	639	0.3%	12.7	0.04
Tier 0	1,814	48,707	21.3%	8.5	1.81
Tier 1	2,433	63,855	28%	7.3	2.04
Tier 2	1,582	57,948	25%	5.3	1.34
Tier 3	953	47,062	21%	5.2	1.07
Tier 4	245	8,603	3.8%	1.1	0.04
ULEL	32	1,476	1%	2.8	0.02
Total UP	**7,153**	**228,633**	**100%**		**6.37**
		ULEL Credit Used			0.80
		UP Fleet Average			**5.57**
Both RRs, excluding ULELs and ULEL credits					
Pre-Tier 0	354	2,436	0%	12.9	0.06
Tier 0	2,082	59,825	12%	8.4	1.00
Tier 1	3,925	163,805	33%	6.6	2.14
Tier 2	3,089	155,668	31%	5.0	1.56
Tier 3	2,140	100,535	20%	4.8	0.97
Tier 4	496	20,565	4%	1.1	0.05
Total both	**12,086**	**502,833**	**100%**		**5.78**

Emission factors for particulate matter (PM_{10}), HC, and CO were calculated using the tier-specific emission rates for those pollutants published by EPA[19] and used to develop weighted average emission factors using the megawatt hour (MWh) figures provided in the railroads' submissions. These results are presented in Table 6.3.

Table 6.3: Fleet MW-hr and PM, HC, CO Emission Factors, g/bhp-hr

Engine Tier	MWh	% of MWh	EPA Tier-specific			Fleet Composite		
			PM_{10}	HC	CO	PM_{10}	HC	CO
			g/bhp-hr			g/bhp-hr		
Pre-Tier 0	2,436	0%	0.32	0.48	1.28	0.00	0.00	0.01
Tier 0	59,825	12%	0.32	0.48	1.28	0.04	0.06	0.15
Tier 1	163,805	33%	0.32	0.47	1.28	0.10	0.15	0.42
Tier 2	155,668	31%	0.18	0.26	1.28	0.06	0.08	0.40
Tier 3	100,535	20%	0.08	0.13	1.28	0.02	0.03	0.26
Tier 4	20,565	4.09%	0.015	0.04	1.28	0.00	0.00	0.05
Totals	**502,833**	**100%**				**0.22**	**0.32**	**1.28**

Emission factors for $PM_{2.5}$ and DPM were calculated as fractions of PM_{10}, with $PM_{2.5}$ calculated as 94% of PM_{10} consistent with CARB methodology and DPM equal to PM_{10}, since all PM emissions from diesel engines are defined as DPM. Rounding of emission factors before and after the conversion resulted in the emission factor values shown. Table 6.4 summarizes the latest emission factors for line haul locomotives, presented in units of g/hp-hr. The greenhouse gas emission factors are unchanged from the previous EI.

Table 6.4: Emission Factors for Line Haul Locomotives, g/bhp-hr

	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2	N_2O	CH_4
EF, g/bhp-hr	0.22	0.20	0.22	5.78	0.005	1.28	0.32	489	0.013	0.04

[19] EPA Office of Transportation and Air Quality, "Emission Factors for Locomotives" EPA-420-F-09-025 April 2009.

On-Port Line Haul Emissions

The estimated number of trains per year, locomotives per train, and on-port hours per train are multiplied together to calculate total locomotive hours per year. This activity information is summarized in Table 6.5.

Table 6.5: Estimated On-Port Line Haul Locomotive Activity

Activity Measure	Inbound	Outbound	Total
Trains per Year	4,049	3,551	7,600
Locomotives per Train	3	3	N/A
Hours on Port per Trip	1	2.5	N/A
Locomotive Hours per Year	12,147	26,633	38,780

Out-of-Port Line Haul Emissions

Table 6.6 lists the estimated totals of travel distance, out-of-port trains per year, out-of-port million gross tons (MMGT), out-of-port MMGT-miles, gallons of fuel used, and horsepower-hours. The gross ton-miles are calculated by multiplying distance in miles by number of trains by the average weight of a train, which is estimated to be 7,402 tons. Fuel consumption is calculated by multiplying gross ton-miles by the average fuel consumption factor of 0.996 gallons per thousand gross ton-miles. Overall horsepower hours are calculated by multiplying the fuel used by the fuel consumption conversion factor of 20.8 hp-hr/gal.

Table 6.6: Gross Ton-Mile, Fuel Use, and Horsepower-hour Estimate

	Distance miles	Trains per year	MMGT per year	MMGT-miles per year
Alameda Corridor	21	5,445	40	840
Central LA to Air Basin Boundary	84	5,445	40	3,360
Million gross ton-miles				**4,200**
Estimated gallons of fuel (millions)				**4.18**
Estimated million horsepower-hours				**86.9**

Emission Estimates

A summary of estimated emissions from locomotive operations related to the Port is presented below in Table 6.7. These emissions include operations within the Port and maritime industry-related emissions outside the Port out to the boundary of the SoCAB. The "maritime industry-related" off-port activity is associated with cargo movements having either their origin or termination at the Port. Emissions resulting from the movement of cargo originating or terminating at one of the off-port rail yards are not included. The criteria pollutants are listed as tons per year, while the CO_2e values are listed as tonnes (metric tons) per year.

In order for the total emissions to be consistently displayed for each pollutant, the individual values in the table entries do not, in some cases, add up to the totals listed in the table. This is because there are fewer decimal places displayed (for readability) than are included in the calculated totals.

Table 6.7: Locomotive Operations Estimated Emissions

Activity Component	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
Switching	0.4	0.4	0.4	45.5	0.06	19.4	2.3	6,537
Line Haul	31.3	28.8	31.3	836.3	0.72	185.2	46.3	64,828
Total	**31.7**	**29.2**	**31.7**	**881.8**	**0.79**	**204.6**	**48.6**	**71,364**

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SECTION 7 HEAVY-DUTY VEHICLES

This section presents emission estimates for the HDV emission source category, including source description, geographical domain, data and information acquisition, operational profiles, emissions estimation methodology, and the emission estimates.

Source Description

Heavy-duty vehicles (specifically heavy-duty trucks) are used extensively to move cargo, particularly containerized cargo, to and from the marine terminals. Trucks deliver cargo to both local and national destinations. The local activity is often referred to as drayage and includes the transfer of containers between terminals and off-port railcar loading facilities. In the course of their daily operations, both local and national destined trucks are driven onto and through the terminals, where they deliver and/or pick up cargo. They are also driven on the public roads within the Port boundaries and on the public roads outside the Port.

While most of the trucks that service the Port's terminals are diesel-fueled vehicles, alternatively-fueled trucks, primarily those fueled by LNG, made approximately 4% of the terminal calls in 2019, according to an evaluation of the Port's Clean Truck Program (CTP) activity records and the Port Drayage Truck Registry (PDTR). Vehicles using fuel other than diesel fuel do not emit diesel particulate matter, so the diesel particulate emission estimates presented in this inventory have been adjusted to take the alternative-fueled trucks into account.

The most common configuration of HDV is the articulated tractor-trailer (truck and semi-trailer) having five axles, including the trailer axles. The most common type of trailer in the study area is the container chassis, built to accommodate standard-sized cargo containers. Additional trailer types include tankers, boxes, and flatbeds. A tractor traveling without an attached trailer is called a "bobtail" while a tractor pulling an unloaded container trailer chassis is known simply as a "chassis." These vehicles are all classified as heavy HDVs regardless of their actual weight because the classification is based on gross vehicle weight rating (GVWR), which is a rating of the vehicle's total carrying capacity. Therefore, the emission estimates do not distinguish among the different configurations.

Geographical Domain

The two major geographical components of truck activities have been evaluated for this inventory:

- On-terminal operations, which include waiting for terminal entry, transiting the terminal to drop off and/or pick up cargo, and departing the terminal.
- On-road operations, consisting of travel on public roads within the SoCAB. This also includes travel on public roads within the Port boundaries and those of the adjacent Port of Long Beach.

Data and Information Acquisition

Information regarding on-terminal truck activity, such as average times and distances while on the terminals, is collected during in-person and/or telephone interviews with terminal personnel. For on-road operations, the volumes (number of trucks), distances, and average speeds on roadway segments between defined intersections are estimated using trip generation and travel demand models that have been developed for these purposes. The trip generation model is used to develop truck trip numbers for container terminals, while the terminal interviews are used to obtain trip counts associated with non-container terminals.

Operational Profiles

Table 7.1 illustrates the range and average of reported operating characteristics of on-terminal truck activities at port container terminals, while Table 7.2 shows similar summary data for the non-container terminals and facilities. The total numbers of terminal calls in 2019 were 3,938,580 associated with the Port's container terminals and 833,675 associated with the non-container facilities. The total number of container terminal calls is estimated by the trip generation model on which truck travel estimates are based, while non-container terminal calls were obtained from the terminal operators. The non-container terminal number includes activity at the Port's peel-off yard that operated in 2019, totaling approximately 30,000 calls. The peel-off yard was established to improve terminal efficiency by allowing containers off-loaded from ships to be quickly removed from the container terminal and placed in the yard, to be picked up for further transport at a later time.

Table 7.1: Summary of Reported Container Terminal Operating Characteristics

	Speed (mph)	Distance (miles)	Gate In (hours)	Unload/ Load (hours)	Gate Out (hours)
Maximum	15	1.90	0.2	0.9	0.07
Minimum	10	0.90	0.08	0.45	0.00
Average	12.5	1.48	0.14	0.64	0.02

Table 7.2: Summary of Reported Non-Container Facility Operating Characteristics

	Speed (mph)	Distance (miles)	Gate In (hours)	Unload/ Load (hours)	Gate Out (hours)
Maximum	20	1.30	0.08	0.47	0.05
Minimum	5	0.02	0.00	0.00	0.00
Average	8.6	0.48	0.03	0.13	0.01

Table 7.3 presents further detail on the on-terminal operating parameters provided by terminal operators, listing total estimated miles traveled and hours of idling on-terminal and waiting at entry gates. Terminals are listed by type.

Table 7.3: Estimated On-Terminal VMT and Idling Hours by Terminal

Terminal Type	Total Miles Traveled	Total Hours Idling (all trips)
Container	1,511,973	1,078,541
Container	1,124,660	449,864
Container	1,031,136	528,457
Container	889,983	510,257
Container	682,773	276,703
Container	525,320	402,745
Auto	1,463	995
Break Bulk	28,000	6,300
Break Bulk	11,000	7,040
Dry Bulk	2,600	832
Dry Bulk	1,250	375
Liquid Bulk	3125	375
Liquid Bulk	18	0
Other	468,038	210,617
Other	94,900	13,870
Other	67,600	8,320
Other	65,243	9,536
Other	3,000	14,100
Other	520	910
Other	40	320
Total	**6,512,641**	**3,520,156**

Emissions Estimation Methodology

The emission estimating methodology for the Port's on-road truck fleet is described in Section 6 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019).[20] HDV emission estimates are based on estimates of vehicle miles traveled (VMT), average speeds, CARB's on-road vehicle emissions model EMFAC2017, and HDV model year information specific to the San Pedro Bay ports. The most recent version of the model, EMFAC2017, reflects CARB's current understanding of motor vehicle travel activities and their associated emission levels.

Table 7.4 summarizes the 2019 speed-specific composite emission factors developed from the EMFAC2017 model and the model year distribution discussed below. These composite emission factors are developed using model year specific emission factors for the T7 POLA vehicle category of EMFAC2017.

Table 7.4: Speed-Specific Composite Exhaust Emission Factors

Speed (mph)	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2	N_2O	CH_4	Units
0 (Idle)	0.0039	0.0037	0.0037	26.1794	0.0540	23.7915	1.0407	5,754	0.8932	0.0612	g/hr
5	0.0611	0.0584	0.0586	15.7870	0.0355	4.6439	1.0781	3,756	0.5903	0.0634	g/mi
10	0.0548	0.0525	0.0526	13.1278	0.0304	3.4880	0.8465	3,221	0.5063	0.0498	g/mi
15	0.0467	0.0446	0.0448	10.1944	0.0248	2.3113	0.5790	2,630	0.4134	0.0341	g/mi
20	0.0414	0.0396	0.0397	8.4594	0.0216	1.6426	0.4139	2,282	0.3587	0.0244	g/mi
25	0.0379	0.0363	0.0364	7.3206	0.0192	1.2157	0.3053	2,034	0.3196	0.0180	g/mi
30	0.0358	0.0343	0.0344	6.4551	0.0174	0.9064	0.2274	1,840	0.2892	0.0134	g/mi
35	0.0349	0.0334	0.0335	5.7836	0.0160	0.6744	0.1699	1,690	0.2657	0.0100	g/mi
40	0.0349	0.0334	0.0335	5.2869	0.0149	0.5023	0.1277	1,579	0.2482	0.0075	g/mi
45	0.0359	0.0344	0.0345	4.9516	0.0142	0.3771	0.0972	1,503	0.2363	0.0057	g/mi
50	0.0378	0.0362	0.0363	4.7714	0.0138	0.2893	0.0756	1,461	0.2296	0.0044	g/mi
55	0.0406	0.0389	0.0390	4.7457	0.0137	0.2318	0.0610	1,450	0.2279	0.0036	g/mi
60	0.0447	0.0427	0.0429	4.9166	0.0140	0.2177	0.0572	1,482	0.2330	0.0034	g/mi
65	0.0499	0.0478	0.0479	5.2914	0.0147	0.2354	0.0609	1,555	0.2444	0.0036	g/mi
70	0.0499	0.0478	0.0479	5.3069	0.0147	0.2445	0.0617	1,555	0.2444	0.0036	g/mi

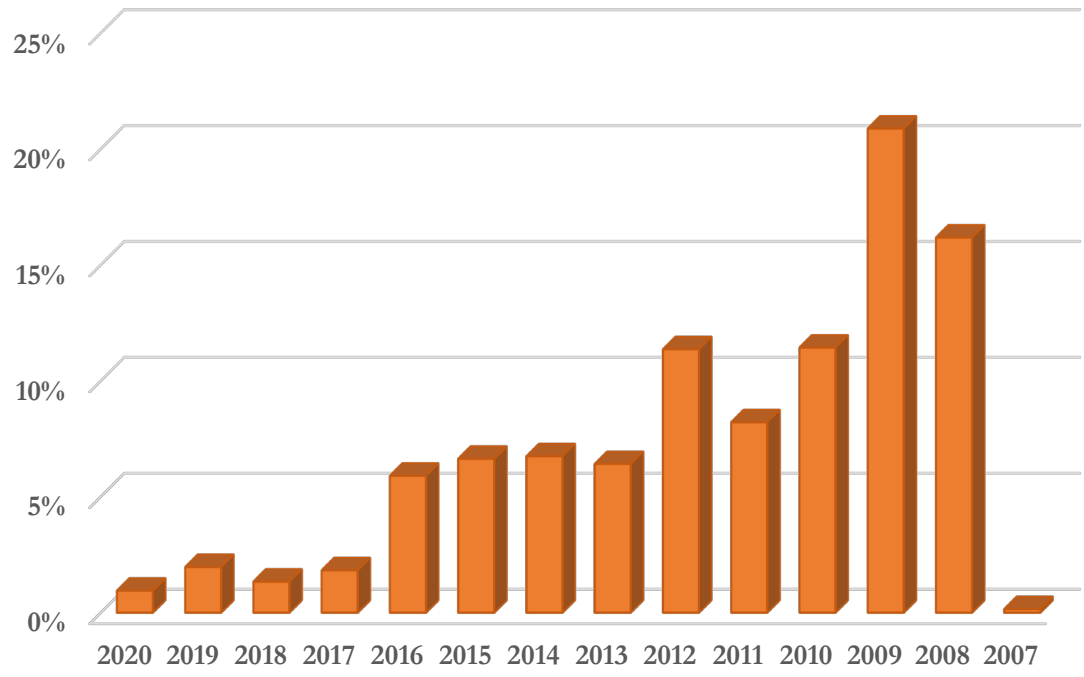
[20] *San Pedro Bay Ports Emissions Inventory Methodology Report Version 1-2019. www.portoflosangeles.org/environment/air-quality/air-emissions-inventory*

Model Year Distribution

Since vehicle emissions vary according to the vehicle's model year and age, the activity level of trucks within each model year is an important part of developing emission estimates. The 2019 model year distribution for the current emissions inventory is based on call data originating from radio frequency identification (RFID) data, which tracked almost 7 million truck calls made to the Port of Los Angeles and the Port of Long Beach in 2019, as well as model year data drawn from the PDTR. The PDTR contains model year information on all registered drayage trucks serving the Port and the fuel type used by each truck, from which an adjustment factor for the DPM emission estimates was developed for non-diesel fueled vehicles. The RFID data provided the number of calls made by each model year of truck.

The distribution of the model years of the trucks that called at both the Port and POLB terminals during 2019, which was used to develop the composite emission factors listed above, is presented in Figure 7.1. The call weighted average age of the trucks calling at San Pedro Bay Port terminals in 2019 was approximately 7.6 years.

Figure 7.1: 2019 Model Year Distribution of the Heavy-Duty Truck Fleet



Emission Estimates

The estimates of 2019 HDV emissions are presented in this section. As discussed above, on-terminal emissions are based on terminal-specific information such as the number of trucks passing through the terminal and the distance they travel on-terminal, and the Port-wide totals are the sum of the terminal-specific estimates. The on-road emissions have been estimated using travel demand model results to estimate how many miles in total the trucks travel along defined roadways in the SoCAB on the way to their first cargo drop-off point. The on-terminal estimates include the sum of driving and idling emissions calculated separately. The idling emissions are likely to be somewhat over-estimated since the idling estimates are based on the entire time that trucks are on terminal (except for driving time), which does not account for times that trucks are turned off while on terminal. No data source has been identified that would provide a reliable estimate of the average percentage of time the trucks' engines are turned off while on terminal. The on-road estimates include idling emissions as a normal part of the driving cycle because the average speeds include estimates of normal traffic idling times, and the emission factors are designed to take this into account.

In order for the total emissions to be consistently displayed for each pollutant, the individual values in each table column do not, in some cases, add up to the listed total in the tables. This is due to fewer decimal places displayed for readability than are included in the calculated total.

Emission estimates for HDV activity associated with Port terminals and other facilities are presented in the following tables. Table 7.5 summarizes emissions from HDVs associated with all Port terminals.

Table 7.5: HDV Emissions

Activity Location	Vehicle Miles Traveled	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
On-Terminal	6,512,641	0.4	0.4	0.4	183	0.4	112.4	9.0	40,798
On-Road	209,945,962	8.5	8.2	8.2	1,198	3.4	94.9	24.3	337,217
Total	**216,458,602**	**8.9**	**8.5**	**8.6**	**1,382**	**3.8**	**207.3**	**33.3**	**378,015**

Table 7.6 presents HDV emissions associated with container terminal activity separately from emissions associated with other port terminals and facilities.

Table 7.6: HDV Emissions Associated with Container Terminals

Activity Location	Vehicle Miles Traveled	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
On-Terminal	5,765,844	0.3	0.3	0.3	166	0.4	103.0	8.1	36,945
On-Road	199,625,979	8.1	7.8	7.8	1,139	3.2	90.3	23.1	320,662
Total	**205,391,823**	**8.4**	**8.1**	**8.1**	**1,305**	**3.6**	**193.3**	**31.3**	**357,607**

Table 7.7 presents emissions associated with other port terminals and facilities separately.

Table 7.7: HDV Emissions Associated with Other Port Terminals

Activity Location	Vehicle Miles Traveled	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
On-Terminal	746,797	0.0	0.0	0.0	17	0.0	9.4	0.9	3,853
On-Road	10,319,983	0.4	0.4	0.4	59	0.2	4.6	1.2	16,555
Total	**11,066,779**	**0.5**	**0.4**	**0.4**	**76**	**0.2**	**14.1**	**2.0**	**20,408**

SECTION 8 SUMMARY OF 2019 EMISSION RESULTS

Table 8.1 summarizes the 2019 total maritime industry-related emissions associated with the Port of Los Angeles by category. Tables 8.2 through 8.4 present DPM, NO_x and SO_x emissions in the context of Port-wide and air basin-wide emissions by source category and subcategory.

Table 8.1: Emissions by Source Category

Category	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
Ocean-going vessels	54	50	41	2,743	102	243	115	192,247
Harbor craft	26	24	26	755	1	543	83	60,884
Cargo handling equipment	7	6	5	410	2	805	83	177,264
Locomotives	32	29	32	882	1	205	49	71,364
Heavy-duty vehicles	9	9	9	1,382	4	207	33	378,015
Total	**127**	**118**	**112**	**6,172**	**109**	**2,003**	**363**	**879,774**

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Table 8.2: DPM Emissions by Category and Percent Contribution

Category	Subcategory	DPM Emissions	Percent DPM Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	0.9	2%	1%	0.0%
OGV	Bulk vessel	0.9	2%	1%	0.0%
OGV	Containership	22.8	56%	20%	1.1%
OGV	Cruise	6.3	15%	6%	0.3%
OGV	General cargo	0.7	2%	1%	0.0%
OGV	Other	1.4	4%	1%	0.1%
OGV	Reefer	0.6	2%	1%	0.0%
OGV	Tanker	7.3	18%	7%	0.4%
OGV	**Subtotal**	**41**	**100%**	**37%**	**2.0%**
Harbor Craft	Assist tug	5.5	21%	5%	0.3%
Harbor Craft	Harbor tug	0.8	3%	1%	0.0%
Harbor Craft	Commercial fishing	3.9	15%	3%	0.2%
Harbor Craft	Ferry	3.9	15%	4%	0.2%
Harbor Craft	Ocean tugboat	6.2	24%	6%	0.3%
Harbor Craft	Government	0.8	3%	1%	0.0%
Harbor Craft	Excursion	1.7	7%	2%	0.1%
Harbor Craft	Crewboat	2.0	8%	2%	0.1%
Harbor Craft	Work boat	0.9	3%	1%	0.0%
Harbor Craft	**Subtotal**	**26**	**100%**	**23%**	**1.2%**
CHE	RTG crane	1.3	26%	1%	0.1%
CHE	Forklift	0.1	2%	0%	0.0%
CHE	Top handler, side pick	1.4	27%	1%	0.1%
CHE	Other	0.8	17%	1%	0.0%
CHE	Yard tractor	1.4	29%	1%	0.1%
CHE	**Subtotal**	**5**	**100%**	**4%**	**0.2%**
Locomotives	Switching	0.4	1%	0%	0.0%
Locomotives	Line haul	31.3	99%	28%	1.5%
Locomotives	**Subtotal**	**32**	**100%**	**28%**	**1.5%**
HDV	On-Terminal	0.4	4%	0%	0.0%
HDV	On-Road	8.2	96%	7%	0.4%
HDV	**Subtotal**	**9**	**100%**	**8%**	**0.4%**
Port	**Total**	**112**		**100%**	**5.4%**
SoCAB AQMP	**Total**	**2,085**			

Table 8.3: NO_x Emissions by Category and Percent Contribution

Category	Subcategory	NO_x Emissions	Percent NO_x Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	56	2%	1%	0.0%
OGV	Bulk vessel	57	2%	1%	0.0%
OGV	Containership	1,726	63%	28%	1.3%
OGV	Cruise	308	11%	5%	0.2%
OGV	General cargo	37	1%	1%	0.0%
OGV	Other	73	3%	1%	0.1%
OGV	Reefer	36	1%	1%	0.0%
OGV	Tanker	450	16%	7%	0.3%
OGV	**Subtotal**	**2,743**	**100%**	**44%**	**2.0%**
Harbor Craft	Assist tug	153	20%	2.5%	0.1%
Harbor Craft	Harbor tug	23	3%	0.4%	0.0%
Harbor Craft	Commercial fishing	121	16%	2.0%	0.1%
Harbor Craft	Ferry	119	16%	1.9%	0.1%
Harbor Craft	Ocean tugboat	179	24%	2.9%	0.1%
Harbor Craft	Government	17	2%	0.3%	0.0%
Harbor Craft	Excursion	54	7%	0.9%	0.0%
Harbor Craft	Crewboat	62	8%	1.0%	0.0%
Harbor Craft	Work boat	27	4%	0.4%	0.0%
Harbor Craft	**Subtotal**	**755**	**100%**	**12%**	**0.6%**
CHE	RTG crane	72	18%	1.2%	0.1%
CHE	Forklift	16	4%	0.3%	0.0%
CHE	Top handler, side pick	115	28%	1.9%	0.1%
CHE	Other	52	13%	0.8%	0.0%
CHE	Yard tractor	155	38%	2.5%	0.1%
CHE	**Subtotal**	**410**	**100%**	**7%**	**0.3%**
Locomotives	Switching	45	5%	0.7%	0.0%
Locomotives	Line haul	836	95%	13.6%	0.6%
Locomotives	**Subtotal**	**882**	**100%**	**14%**	**0.6%**
HDV	On-Terminal	183	13%	3%	0.1%
HDV	On-Road	1,198	87%	19%	0.9%
HDV	**Subtotal**	**1,382**	**100%**	**22%**	**1.0%**
Port	**Total**	**6,172**		**100%**	**4.5%**
SoCAB AQMP	**Total**	**136,564**			

Table 8.4: SO_x Emissions by Category and Percent Contribution

Category	Subcategory	SO_x Emissions	Percent SO_x Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	1.4	1%	1%	0%
OGV	Bulk vessel	2.4	2%	2%	0%
OGV	Containership	52.8	52%	48%	1%
OGV	Cruise	11.5	11%	11%	0%
OGV	General cargo	1.0	1%	1%	0%
OGV	Other	2.7	3%	2%	0%
OGV	Reefer	1.3	1%	1%	0%
OGV	Tanker	28.7	28%	26%	0%
OGV	**Subtotal**	**102**	**100%**	**93%**	**2%**
Harbor Craft	Assist tug	0.1	20%	0%	0%
Harbor Craft	Harbor tug	0.0	3%	0%	0%
Harbor Craft	Commercial fishing	0.1	16%	0%	0%
Harbor Craft	Ferry	0.1	16%	0%	0%
Harbor Craft	Ocean tugboat	0.2	22%	0%	0%
Harbor Craft	Government	0.0	2%	0%	0%
Harbor Craft	Excursion	0.1	7%	0%	0%
Harbor Craft	Crewboat	0.1	9%	0%	0%
Harbor Craft	Work boat	0.0	4%	0%	0%
Harbor Craft	**Subtotal**	**0.7**	**100%**	**1%**	**0%**
CHE	RTG crane	0.2	10%	0%	0%
CHE	Forklift	0.0	1%	0%	0%
CHE	Top handler, side pick	0.6	30%	1%	0%
CHE	Other	0.2	8%	0%	0%
CHE	Yard tractor	1.0	52%	1%	0%
CHE	**Subtotal**	**1.9**	**100%**	**2%**	**0%**
Locomotives	Switching	0.1	8%	0%	0%
Locomotives	Line haul	0.7	92%	1%	0%
Locomotives	**Subtotal**	**0.8**	**100%**	**1%**	**0%**
HDV	On-Terminal	0.4	11%	0%	0%
HDV	On-Road	3.4	89%	3%	0%
HDV	**Subtotal**	**3.8**	**100%**	**3%**	**0%**
Port	**Total**	**109**		**100%**	**1.8%**
SoCAB AQMP	**Total**	**6,100**			

To place the maritime industry-related emissions into context, the following figures compare the Port's contributions to the total emissions in the South Coast Air Basin by major emission source category. The 2019 SoCAB emissions are based on the 2016 AQMP Appendix III,[21] except for the SoCAB on-road emission estimates which were updated to take into consideration EMFAC2017.[22] Thus, the 2019 SoCAB total emissions do not exactly match 2016 AQPM Appendix III values. It should be noted that neither the SoCAB nor the Port's on-road heavy-duty diesel PM_{10} and $PM_{2.5}$ emissions include brake and tire wear emissions. Due to rounding, the percentages may not total 100%.

Figure 8.1: 2019 PM_{10} Emissions in the South Coast Air Basin

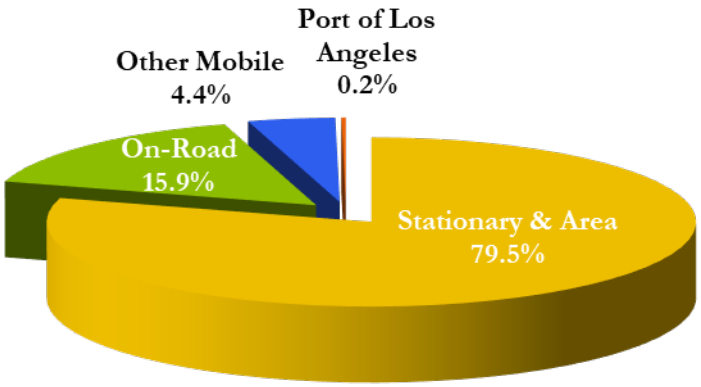
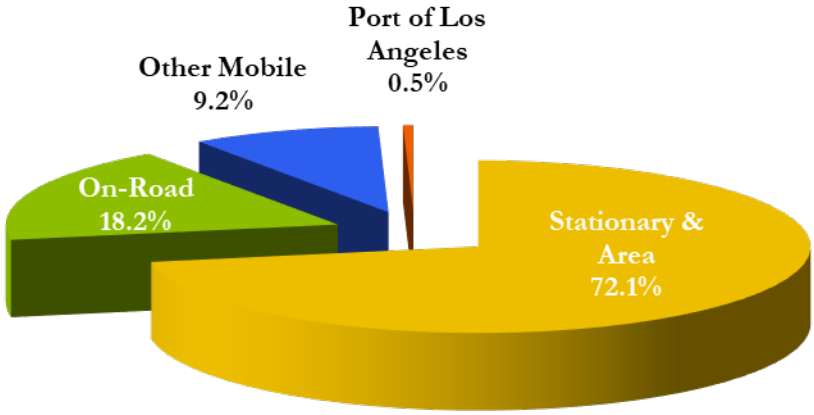


Figure 8.2: 2019 $PM_{2.5}$ Emissions in the South Coast Air Basin



[21] SCAQMD, *Final 2016 AQMP Appendix III, Base & Future Year Emissions Inventories*, March 2017. Except on-road emissions based on EMFAC2014 are replaced with EMFAC2017 estimates.
[22] *www.arb.ca.gov/emfac/*

Figure 8.3: 2019 DPM Emissions in the South Coast Air Basin

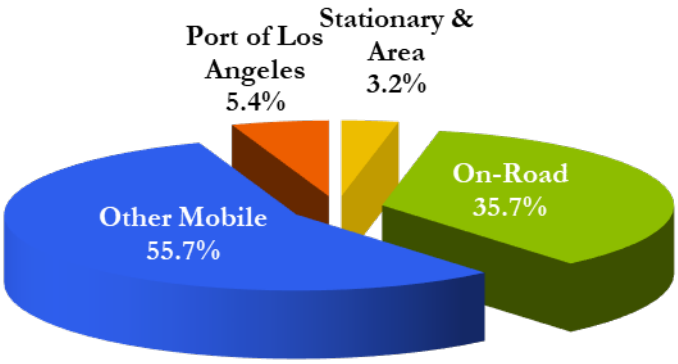


Figure 8.4: 2019 NO_x Emissions in the South Coast Air Basin

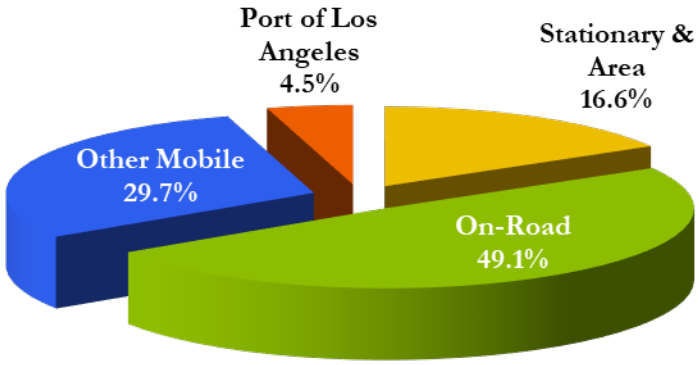
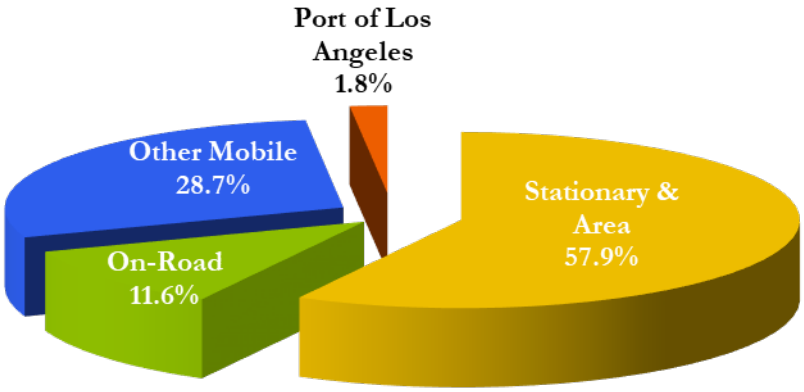


Figure 8.5: 2019 SO_x Emissions in the South Coast Air Basin



SECTION 9 COMPARISON OF 2019 AND PREVIOUS YEARS' FINDINGS AND EMISSION ESTIMATES

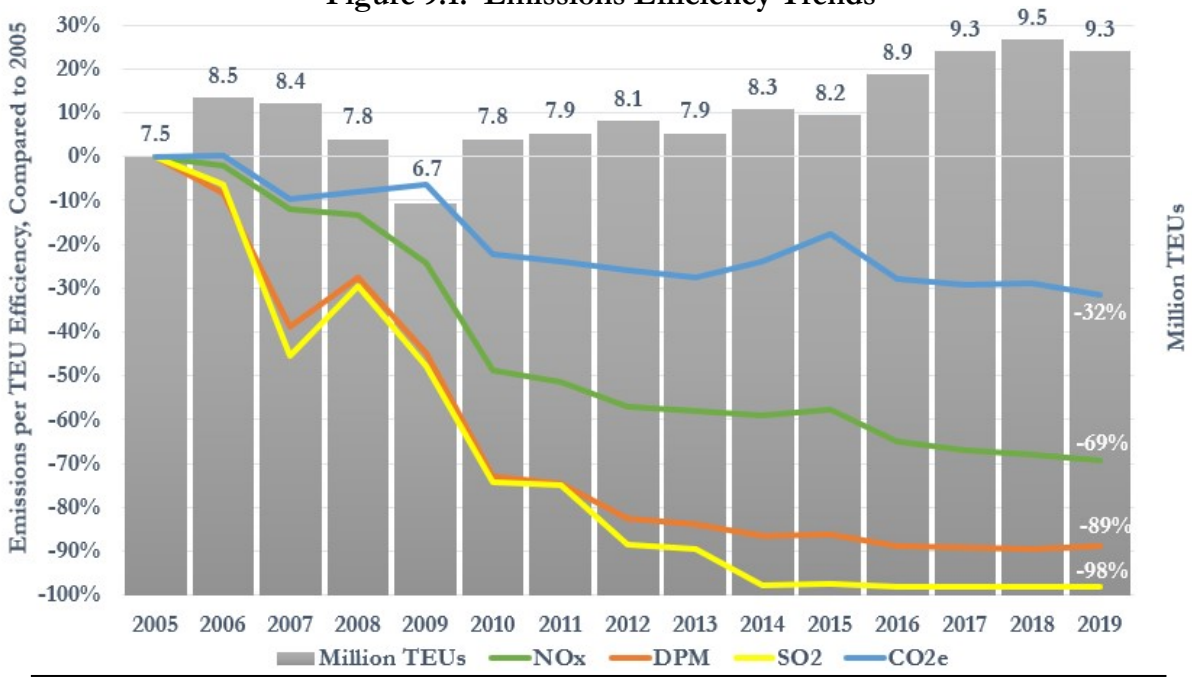
This section compares 2019 emissions to emissions in both the previous year and 2005, in terms of overall emissions, and for each source category. Comparisons by emission source categories are addressed in separate subsections in table and chart formats, with the explanation of the findings and differences in emissions between years.

The tables and charts in this section summarize the percent change from the previous year (2019 vs 2018) and for the CAAP Progress (2019 vs 2005) using 2019 methodology for the emissions comparison. CAAP progress is tracked by comparing emissions each year to 2005 emissions, since 2005 is considered the baseline year for CAAP. Table 9.1 and Figure 9.1 shows emissions efficiency as tons of emissions per 10,000 TEUs. In Table 9.1, a positive percent change for the emissions efficiency comparison means an improvement in efficiency. In Figure 9.1, for illustrative purposes, a negative percent change shows the improvement from the baseline year.

Table 9.1: Emissions Efficiency Metric, tons/10,000 TEUs

EI Year	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2e
2019	0.136	0.126	0.120	6.61	0.12	2.14	0.39	942
2018	0.142	0.131	0.124	6.93	0.12	2.25	0.40	987
2005	1.267	1.096	1.175	21.65	6.66	5.02	1.14	1,385
Previous Year (2018-2019)	**4%**	**4%**	**3%**	**5%**	**0%**	**5%**	**3%**	**5%**
CAAP Progress (2005-2019)	**89%**	**88%**	**89%**	**69%**	**98%**	**57%**	**66%**	**32%**

Figure 9.1: Emissions Efficiency Trends



Ocean-Going Vessels

The methodology used to estimate ocean going vessel emissions for this 2019 inventory did not change from the methodology used in the previous year inventory. The emissions calculation methodology and the emission rates are described in Section 2 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019).

The various emission reduction strategies implemented for ocean-going vessels are listed in Table 9.2. The table lists the percentage of all vessel calls that participated in the specific control strategy for 2019, the previous year, and 2005. The following OGV emission reductions strategies are listed:

- Shore Power[23] refers to vessel calls using shore power at berth, instead of running their diesel-powered auxiliary engines.
- VSR[24] refers to the vessels reducing their transit speed to 12 knots or lower within 20 and 40 nm of the Port.
- ESI[25] refers to the number of vessel calls that participated in ports' ESI program and using ship-specific low sulfur (S) fuel, which in several cases contained S levels below the regulated S level of 0.1% resulting in additional SO_x, PM, $PM_{2.5}$, and DPM benefit. Fuel correction factors specific to the S content of the fuel were developed and used based on fuel quality data provided as part of the ESI program.
- Engine International Air Pollution Prevention (EIAPP) certificates refer to the number of vessel calls using ship-specific NO_x emission factors for main and auxiliary engines, where vessel specific EIAPP certificates with actual NO_x rating was available through the ESI program or the VBP.

In 2019, in addition to the shore power calls listed in the table, an additional 6% of vessel calls used alternative technology to comply with the At-Berth Regulation. The alternative technology includes the Maritime Emissions Treatment System (METS) and Advanced Maritime Emission Control System (AMECS).

Table 9.2: OGV Emission Reduction Strategies

Year	Shore Power	VSR 20 nm	VSR 40 nm	ESI	EIAPP Main Eng	EIAPP Aux Eng
2019	42%	91%	87%	55%	61%	60%
2018	44%	91%	85%	56%	61%	61%
2005	2%	65%	na	0%	5%	5%

DB ID1790

[23] *www.portoflosangeles.org/environment/air-quality/alternative-maritime-power-(amp)*
[24] *www.portoflosangeles.org/environment/air-quality/vessel-speed-reduction-program*
[25] *www.portoflosangeles.org/environment/air-quality/environmental-ship-index*

Since 2005, fuel switching from heavy fuel oil (HFO) to low sulfur content fuel such as marine gas oil (MGO) or marine distillate oil (MDO) is a major emission reduction strategy for OGV. In 2005, fuel switching was voluntary and only 7% of main engines and 27% of auxiliary engines switched fuel. In 2019, all vessels switched fuel (100%) to 0.1% sulfur content MGO to comply with Phase II of CARB's marine fuel regulation and the North American Emissions Control Area (ECA) requirements or less than 0.1% S fuel reported by vessels participating in the ESI program.

Table 9.3 summarizes the main engine IMO NO_x standards tier calls (Tier) for 2019, the previous year and 2005. The "No Tier" level is for vessels that do not have diesel engines, such as steamships. Tier I refers to calls by vessels meeting or exceeding Tier I NO_x standards (vessels constructed from 2000-2010), Tier II refers to calls by vessels meeting or exceeding Tier II NO_x standards (vessels constructed from 2011-2015), and Tier III NO_x refers to calls by vessels meeting or exceeding the IMO's Tier III standards, which are in effect in the North American ECA for vessels constructed on or after January 1, 2016.

In 2019, one small cruise vessel and two tankers had certified Tier III main engines. NO_x emissions for Tier III vessels are 75% cleaner than Tier II vessels. Compared to previous year, the trend continues for less Tier 0 and Tier I engines.

Table 9.3: OGV Main Engine Tiers

Year	IMO Tier 0	IMO Tier I	IMO Tier II	IMO Tier III	No Tier
2019	7%	59%	29%	0.5%	5%
2018	9%	62%	25%	0.1%	4%
2005	59%	37%	0%	0.0%	4%

DB ID1789

Table 9.4 presents the ship emissions source activity in terms of total energy consumption (expressed as kWh). In 2019, the total energy consumption decreased 6% compared to the previous year and decreased by 35% compared to 2005. The kWh associated with the METS and AMECS technology generators are included in the total auxiliary engine kWh shown in the table. The main engine activity has decreased through the years mainly due to the VSR program and fewer vessel calls, while the auxiliary engine activity has decreased, due to shore power regulation.

Table 9.4: OGV Energy Consumption Comparison, kWh

Year	All Engines Total kWh	Main Eng Total kWh	Aux Eng Total kWh	Boiler Total kWh
2019	243,321,998	69,230,554	91,816,320	81,509,856
2018	258,929,191	73,154,123	92,801,884	92,432,475
2005	375,883,856	116,098,665	187,017,287	72,767,905
Previous Year (2018-2019)	**-6%**	**-5%**	**-1%**	**-12%**
CAAP Progress (2005-2019)	**-35%**	**-40%**	**-51%**	**12%**

Table 9.5 compares the OGV emissions for calendar years 2019, the previous year and 2005. Reductions in OGV emissions are mainly attributed to increased participation in the Port's VSR program, the CARB shore power regulation, CARB marine fuel regulation, and the Port's ESI-based incentive program. Between 2018 and 2019, OGV emissions decreased due to fewer vessels calling the Port in 2019.

Table 9.5: OGV Emissions Comparison

EI Year	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2e
2019	54	50	41	2,743	102	243	115	192,247
2018	57	53	43	2,909	110	250	119	205,486
2005	534	429	466	5,295	4,825	470	213	288,251
Previous Year (2018-2019)	**-6%**	**-6%**	**-4%**	**-6%**	**-7%**	**-3%**	**-4%**	**-6%**
CAAP Progress (2005-2019)	**-90%**	**-88%**	**-91%**	**-48%**	**-98%**	**-48%**	**-46%**	**-33%**

DB ID692

Table 9.6 shows the emissions efficiency changes between 2019, the previous year, and 2005. A positive percent change for the emissions efficiency comparison means an improvement in efficiency.

Table 9.6: OGV Emissions Efficiency Metric Comparison, tons/10,000 TEUs

EI Year	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC
2019	0.06	0.05	0.04	2.94	0.11	0.26	0.12
2018	0.06	0.06	0.05	3.08	0.12	0.26	0.13
2005	0.71	0.57	0.62	7.08	6.45	0.63	0.29
Previous Year (2018-2019)	**5%**	**5%**	**2%**	**5%**	**6%**	**2%**	**2%**
CAAP Progress (2005-2019)	**92%**	**91%**	**93%**	**59%**	**98%**	**59%**	**57%**

Harbor Craft

The methodology used to estimate harbor craft emissions for this 2019 inventory did not change from the methodology used in the previous year inventory. The emissions calculation methodology and the emission rates are described in Section 3 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019).

In 2018 and 2019, the Port received engine model year, horsepower and hours of activity for vessels that received Carl Moyer grants. This information was used for commercial fishing vessels that previously lacked this specific information.

Table 9.7 summarizes the number of harbor craft inventoried for 2019, the previous year and 2005. Overall, the total vessel count decreased by 8% between 2019 and previous year, and decreased by 30% between 2005 and 2019. The decrease in vessels is mainly due to fewer commercial fishing vessels and excursion vessels (due to waterfront project) in 2019.

Table 9.7: Harbor Craft Count Comparison

Harbor Vessel Type	2019	2018	2005
Assist tug	13	14	16
Commercial fishing	95	102	156
Crew boat	21	23	14
Excursion	19	25	24
Ferry	8	8	7
Government	11	11	26
Ocean tug	7	7	7
Tugboat	16	17	21
Work boat	9	9	14
Total	**199**	**216**	**285**

DB ID196

Table 9.8 summarizes the percent distribution of engines based on EPA's engine standards. The decrease in unknowns for the 2019 and previous year is due to new data received from the South Coast AQMD's Carl Moyer Program which provided engine model year and horsepower for commercial fishing vessels that were previously missing. Specifically, in previous years the horsepower was unknown for many of the repowered commercial fishing vessels, therefore they were classified as unknown prior to receiving this data. This data also included estimated annual hours which were also used. These hours may be conservative as they may include time spent outside of the inventory geographical domain.

Tier 1, 2 and 3 engine categories for the Port's harbor craft inventory is based on the EPA's emission standards for marine engines.[26] Tier 0 engines are unregulated engines built prior to the promulgation of the EPA emission standards. The percentages in the "unknown" column represent engines missing model year, or horsepower, or both.

Table 9.8: Harbor Craft Engine Standards Comparison by Tier

Year	Tier 0	Tier 1	Tier 2	Tier 3	Unknown
2019	3%	8%	44%	34%	11%
2018	4%	8%	41%	34%	14%
2005	15%	27%	3%	0%	55%

DB ID1631

Table 9.9 summarizes the overall energy consumption of harbor craft (kWh), which decreased by 8% in 2019 compared to the previous year. The energy consumption increased by 7% in 2019 as compared to 2005.

Table 9.9: Harbor Craft Comparison

Year	Vessel Count	Engine Count	Total kWh
2019	199	522	92,094,228
2018	216	561	99,971,106
2005	285	578	86,105,024
Previous Year (2018-2019)	**-8%**	**-7%**	**-8%**
CAAP Progress (2005-2019)	**-30%**	**-10%**	**7%**

[26] Code of Federal Regulation, *40 CFR, subpart 94.8 for Tier 1 and 2 and subpart 1042.101 for Tier 3*

Table 9.10 shows the harbor craft energy consumption (kWh) comparison by engine tier for calendar years 2019, previous year and 2005.

Table 9.10: Harbor Craft Energy Consumption Comparison by Engine Tier, kWh

Engine Tier	2019 % of Total	2018 % of Total	2005 % of Total
Tier 0	1%	1%	55%
Tier 1	7%	8%	30%
Tier 2	71%	67%	15%
Tier 3	21%	24%	0%
Total	**100%**	**100%**	**100%**

Table 9.11 shows the emissions comparisons for calendar 2019, the previous year, and 2005 for harbor craft. In 2019, emissions for all pollutants decreased as compared to the previous year. The decrease is mainly due to lower energy consumption (see Table 9.9).

Table 9.11: Harbor Craft Emission Comparison

Year	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
2019	26	24	26	755	0.7	543	83	60,884
2018	27	25	27	813	0.7	581	89	66,092
2005	55	51	55	1,318	6.3	364	87	56,925
Previous Year (2018-2019)	**-6%**	**-6%**	**-6%**	**-7%**	**-8%**	**-7%**	**-6%**	**-8%**
CAAP Progress (2005-2019)	**-54%**	**-54%**	**-54%**	**-43%**	**-89%**	**49%**	**-4%**	**7%**

DB ID427

Compared to 2005, emissions decreased for PM, NO_x, and SO_x. The emissions increased for CO and CO_2e.

The increase in CO is more directly related to an increase in Tier 2 and Tier 3 engines that have higher CO emission rates compared to pre-Tier 2. Due to the stringency of PM and (NO_x + HC) standards of Tier 2 engines, less stringent Tier 2 CO standards were adopted which resulted in higher CO emission rates.

Since 2005, there has been an increase in Tier 2 and Tier 3 engines due to vessel repowers, CARB's in-use harbor craft regulation, and new vessels bought by companies over the last few years. The focus of Tier 2 and Tier 3 engine standards is on PM and NO_x reduction; there are no CO_2 standards, therefore the CO_2e emissions have increased over time.

Table 9.12 shows the emissions efficiency changes in 2019 as compared to the previous year and 2005. It should be noted that total harbor craft emissions were used for this efficiency comparison although emissions from several harbor craft types (e.g., commercial fishing vessels) are not dependent on container throughput. A positive percent for the emissions efficiency comparison means an improvement in efficiency.

Table 9.12: Harbor Craft Emissions Efficiency Metric Comparison, tons/10,000 TEUs

Year	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2e
2019	0.03	0.03	0.03	0.81	0.001	0.58	0.09	65
2018	0.03	0.03	0.03	0.86	0.001	0.61	0.09	70
2005	0.07	0.07	0.07	1.76	0.008	0.49	0.12	76
Previous Year (2018-2019)	**3%**	**7%**	**3%**	**6%**	**0%**	**5%**	**5%**	**7%**
CAAP Progress (2005-2019)	**62%**	**63%**	**62%**	**54%**	**88%**	**-20%**	**24%**	**14%**

Cargo Handling Equipment

The methodology used to estimate CHE emissions for the 2019 inventory did not change from the methodology used in the previous year inventory. The emissions calculation methodology and the emission rates are described in Section 4 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019).

Table 9.13 shows that the number of units of cargo handling equipment decreased by 2%, while the overall energy consumption (measured as total kWh, the product of the rated engine size in kW, annual operating hours and load factors) decreased by 6% in 2019 as compared to 2018. Less equipment is operating at the terminals and there is lower usage level to handle TEU throughput which was 1% lower than previous year.

From 2005 to 2019, there was a 14% increase in population and 31% increase in activity level to handle the 25% increased TEU throughput.

Table 9.13: CHE Count and Activity Comparison

Year	Count	Energy Consumption kWh	TEU	Activity per TEU
2019	2,038	227,587,451	9,337,632	24
2018	2,085	242,727,087	9,458,749	26
2005	1,782	173,108,402	7,484,624	23
Previous Year (2018-2019)	**-2%**	**-6%**	**-1%**	**-5%**
CAAP Progress (2005-2019)	**14%**	**31%**	**25%**	**5%**

Table 9.14 summarizes the numbers of pieces of cargo handling equipment using various engine and power types, including electric, LNG, diesel, propane, and gasoline. Compared to the previous year, there was no significant change of engine type distribution by equipment. Hybrid RTG cranes and straddle carriers are included in the diesel count.

Table 9.14: Count of CHE Equipment Type

Equipment	Electric	LNG	Propane	Gasoline	Diesel	Total
2019						
Forklift	11	0	355	7	110	483
Wharf crane	86	0	0	0	0	86
RTG crane	0	0	0	0	98	98
Straddle carrier	0	0	0	0	40	40
Top handler	0	0	0	0	198	198
Yard tractor	0	17	158	0	790	965
Other	41	0	1	3	123	168
Total	**138**	**17**	**514**	**10**	**1,359**	**2,038**
	6.8%	**0.8%**	**25.2%**	**0.5%**	**66.7%**	
2018						
Forklift	8	0	356	7	115	486
Wharf crane	81	0	0	0	0	81
RTG crane	0	0	0	0	101	101
Straddle carrier	0	0	0	0	40	40
Top handler	0	0	0	0	213	213
Yard tractor	0	17	178	0	789	984
Other	51	0	1	5	123	180
Total	**140**	**17**	**535**	**12**	**1,381**	**2,085**
	6.7%	**0.8%**	**25.7%**	**0.6%**	**66.2%**	
2005						
Forklift	0	0	263	8	151	422
Wharf crane	67	0	0	0	0	67
RTG crane	0	0	0	0	98	98
Straddle carrier	0	0	0	0	0	0
Top handler	0	0	0	0	127	127
Yard tractor	0	0	53	0	848	901
Other	12	0	0	3	152	167
Total	**79**	**0**	**316**	**11**	**1,376**	**1,782**
	4.4%	**0.0%**	**17.7%**	**0.6%**	**77.2%**	

DB ID235

Table 9.15 summarizes the number and percentage of diesel-powered CHE with various emission controls by equipment type in 2019, the previous year and 2005. The emission controls for CHE include: DOC retrofits, DPF retrofits, on-road engines (CHE equipped with on-road certified engines instead of off-road engines), and the use of ULSD with a maximum sulfur content of 15 ppm. Several items to note include:

- Since some emission controls can be used in combination with others, the number of units of equipment with controls cannot be added across to come up with the total equipment count (counts of equipment with controls would be greater than the total equipment counts).
- With implementation of the Port's CAAP measure for CHE and CARB's CHE regulation, the relative percentage of cargo handling equipment equipped with new on-road engines increased significantly when compared to 2005.
- Mainly due to equipment turnover, the DOC count has decreased significantly since 2005 as older equipment with DOCs were replaced with newer equipment that does not require the use of DOCs.
- ULSD is used by all diesel equipment since 2006. For 2005, ULSD was used by some diesel equipment, but not all. Compared to previous year, in 2019 there were less diesel-powered equipment.
- Comparing to previous year, in 2019 there were less DPF retrofits due to older equipment with DPF retrofits replaced with newer equipment that meet Tier 4f engine standards.
- Compared to previous year, in 2019 there are less yard tractors with on-road engines as terminal operators opted to purchase yard tractors with offroad Tier 4f engines instead of yard tractors with on-road engines.

Table 9.15: Count of CHE Diesel Equipment Emissions Control Matrix

Equipment	DOC Retrofit	On-Road Engines	DPF Retrofit	ULSD Fuel	Total Diesel-Powered Equipment	% of Diesel Powered Equipment DOC Retrofit	On-Road Engines	DPF Retrofit	ULSD Fuel
2019									
Forklift	0	0	42	110	110	0.0%	0%	38%	100%
RTG crane	6	0	8	98	98	6.1%	0%	8%	100%
Side pick	0	0	3	15	15	0.0%	0%	20%	100%
Top handler	0	0	62	198	198	0.0%	0%	31%	100%
Yard tractor	0	675	4	790	790	0.0%	85%	1%	100%
Sweeper	0	1	2	8	8	0.0%	13%	25%	100%
Other	0	12	36	140	140	0.0%	9%	26%	100%
Total	**6**	**688**	**157**	**1,359**	**1,359**	**0.4%**	**51%**	**12%**	**100%**
2018									
Forklift	0	0	49	115	115	0.0%	0%	43%	100%
RTG crane	6	0	9	101	101	5.9%	0%	9%	100%
Side pick	0	0	3	15	15	0.0%	0%	20%	100%
Top handler	0	0	81	213	213	0.0%	0%	38%	100%
Yard tractor	0	740	4	789	789	0.0%	94%	1%	100%
Sweeper	0	1	2	5	5	0.0%	20%	40%	100%
Other	0	12	37	143	143	0.0%	8%	26%	100%
Total	**6**	**753**	**185**	**1,381**	**1,381**	**0.4%**	**55%**	**13%**	**100%**
2005									
Forklift	3	0	0	27	151	2%	0%	0%	18%
RTG crane	0	0	0	36	98	0%	0%	0%	37%
Side pick	14	0	0	16	41	34%	0%	0%	39%
Top handler	48	0	0	79	127	38%	0%	0%	62%
Yard tractor	520	164	0	483	848	61%	19%	0%	57%
Sweeper	0	0	0	0	8	0%	0%	0%	0%
Other	0	1	0	65	103	0%	1%	0%	63%
Total	**585**	**165**	**0**	**706**	**1,376**	**43%**	**12%**	**0%**	**51%**

Table 9.16 compares the total number of cargo handling equipment with off-road diesel engines (meeting Tier 0, 1, 2, 3, 4i, and 4 off-road diesel engine standards) and those equipped with on-road diesel engines for 2019, the previous year and 2005. Since classification of engine standards is based on the engine's model year and horsepower, equipment with missing horsepower or model year information are listed separately under the Unknown Tier column in this table.

Implementation of the CAAP's CHE measure and CARB's CHE regulation have resulted in a steady increase in the prevalence of newer and cleaner equipment (i.e., primarily Tier 3 and Tier 4) replacing the older and higher-emitting equipment (Tier 0, Tier 1, and Tier 2).

Table 9.16: Count of CHE Diesel Engine Tier and On-road Engine

Year	Tier 0	Tier 1	Tier 2	Tier 3	Tier 4i	Tier 4f	On-road Engine	Unknown Tier	Total Diesel Engines
2019	16	13	69	107	158	296	688	12	1,359
2018	16	22	97	123	140	241	753	13	1,405
2005	256	582	360	0	0	0	165	13	1,376
Previous Year	**0%**	**-41%**	**-29%**	**-13%**	**13%**	**23%**	**-9%**	**-8%**	**-3%**
CAAP Progress	**-94%**	**-98%**	**-81%**	**NA**	**NA**	**NA**	**317%**	**-8%**	**-1%**

DB ID878

Table 9.17 shows the distribution of equipment energy consumption (kWh) comparison by engine type. The Tier 4f energy consumption increased from previous year.

Table 9.17: Distribution of CHE Energy Consumption by Engine Type, %

Engine Type	Engine Tier	2019 % of Total	2018 % of Total	2005 % of Total
Diesel	Tier 0	0.3%	0.3%	11.0%
Diesel	Tier 1	0.2%	0.8%	39.3%
Diesel	Tier 2	4.0%	4.3%	31.2%
Diesel	Tier 3	8.4%	8.5%	0.0%
Diesel	Tier 4i	12.8%	12.9%	0.0%
Diesel	Tier 4	25.8%	23.6%	0.0%
Diesel	Onroad engines	39.8%	40.9%	12.0%
Gasoline		0.2%	0.1%	0.3%
Propane		8.2%	8.1%	6.2%
LNG		0.2%	0.5%	0.0%

Table 9.18 shows the cargo handling equipment emissions comparisons for 2019, the previous year and 2005. Compared to the previous year, all emissions decreased, due to decrease in activity.

The reductions in 2019 emissions compared to 2005 emissions are largely due to the implementation of the Port's CHE measures and CARB's CHE regulation. The efforts resulted in the introduction of newer equipment with cleaner engines and the installation of emission controls. The increase in CO_2e is mainly due to the 31% increase in energy consumption (see Table 9.13) in 2019 as compared to 2005.

Table 9.18: CHE Emissions Comparison

Year	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
2019	7	6	5	410	2	805	83	177,264
2018	8	7	6	464	2	877	86	188,894
2005	54	50	53	1,573	9	822	92	134,621
Previous Year (2018-2019)	**-11%**	**-11%**	**-13%**	**-12%**	**-6%**	**-8%**	**-4%**	**-6%**
CAAP Progress (2005-2019)	**-88%**	**-87%**	**-91%**	**-74%**	**-80%**	**-2%**	**-10%**	**32%**

DB ID237

Table 9.19 shows the emissions efficiency changes in 2019 from 2005 and previous year. A positive percentage change for the emissions efficiency comparison means an improvement in efficiency with respect to a particular pollutant.

Table 9.19: CHE Emissions Efficiency Metric Comparison, tons/10,000 TEUs

Year	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2e
2019	0.007	0.007	0.005	0.439	0.002	0.862	0.089	190
2018	0.008	0.007	0.006	0.490	0.002	0.927	0.091	200
2005	0.072	0.066	0.071	2.102	0.013	1.099	0.123	180
Previous Year (2018-2019)	**10%**	**10%**	**12%**	**10%**	**0%**	**7%**	**2%**	**5%**
CAAP Progress (2005-2019)	**90%**	**90%**	**92%**	**79%**	**85%**	**22%**	**28%**	**-6%**

Locomotives

The methodology used to estimate locomotive emissions in this 2019 inventory is the same as that used in the previous year inventory. The emissions calculation methodology and the emission rates are described in Section 5 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019).

Table 9.20 shows the throughput comparisons for locomotives for 2019, the previous year, and 2005.

Table 9.20: Throughput Comparison, million TEUs

Throughput	2005	2018	2019
Total	7.48	9.46	9.34
On-dock lifts	1.02	1.35	1.29
On-dock TEUs	1.84	2.42	2.32
% On-dock	25%	26%	25%

Table 9.21 shows the locomotive emission estimates for calendar years 2019, the previous year, and 2005. The 2018 PM_{10}, $PM_{2.5}$, and DPM emissions were adjusted to be consistent with a change made to the rounding of emission factor for these pollutants for the 2019 inventory. As a result, the 2018 emissions listed in Table 9.21 do not exactly match the values reported in the 2018 emissions inventory report.

Table 9.21: Locomotive Emission Comparison

Year	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
2019	32	29	32	882	0.8	205	49	71,364
2018	33	30	33	886	0.8	216	51	76,073
2005	57	53	57	1,712	98.0	237	89	82,201
Previous Year (2018-2019)	**-3%**	**-2%**	**-3%**	**0%**	**-5%**	**-5%**	**-5%**	**-6%**
CAAP Progress (2005-2019)	**-44%**	**-45%**	**-44%**	**-48%**	**-99%**	**-14%**	**-45%**	**-13%**

DB ID428

Compared to 2005, the decrease in emissions are due to PHL's and UP's fleet turnover to ultra-low emissions switching locomotives, the use of ULSD, and the Class 1 railroads' compliance with the MOU and introduction of newer locomotives. CO_2e emissions have been reduced since 2005 despite the increase in rail throughput through the freight movement efficiency improvements implemented by the railroads and terminals. The decrease in emissions from 2018 to 2019 were due to the lower rail throughput experienced by the Port.

Table 9.22 shows the emissions efficiency changes in 2019 from the previous year and from 2005. A positive percentage for the emissions efficiency comparison means an improvement in efficiency. For locomotive emissions efficiency, the on-dock lifts were used as opposed to TEU throughput, since this is a more direct way to measure efficiency for the locomotives. For the CAAP progress (2019 vs. 2005), emissions efficiencies have improved for all pollutants. The efficiency in 2019 compared to the previous year improved slightly for CO_2e.

Table 9.22: Locomotive Emissions Efficiency Comparison, tons/10,000 on-dock lifts

Year	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2e
2019	0.25	0.23	0.25	6.84	0.01	1.59	0.38	553
2018	0.24	0.22	0.24	6.59	0.01	1.60	0.38	565
2005	0.56	0.52	0.56	16.75	0.96	2.32	0.87	804
Previous Year (2018-2019)	**-2%**	**-2%**	**-2%**	**-4%**	**0%**	**1%**	**1%**	**2%**
CAAP Progress (2005-2019)	**56%**	**56%**	**56%**	**59%**	**99%**	**32%**	**57%**	**31%**

Heavy-Duty Vehicles

The methodology used to estimate HDV emissions in this 2019 inventory is the same as that used in the previous year inventory. The emissions calculation methodology and the emission rates are described in Section 6 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019). The latest version of CARB's emission model, EMFAC2017, was used in 2019, as it was also used in 2018.

Table 9.23 shows the total port-wide idling time based on information provided by the terminal operators which, as noted previously, relates to time spent on terminal that may not solely be time spent idling. Total idling decreased 6% as compared to the previous year and increased by 17% since 2005. The increase in idling since 2005 may be due to the increase in TEU throughput, which resulted in more truck trips.

Table 9.23: HDV Idling Time Comparison, hours

EI Year	Total Idling Time (hours)
2019	3,520,156
2018	3,762,793
2005	3,017,252
Previous Year (2018-2019)	**-6%**
CAAP Progress (2005-2019)	**17%**

Table 9.24 summarizes the average age of the truck fleet in 2019, the previous year and 2005. The average age of the trucks visiting the Port was 7.6 years, rounded to 8 years, in 2019.

Table 9.24: Fleet Weighted Average Age, years

Year	Call-Weighted Average Age (years)
2019	8
2018	7
2005	11

Table 9.25 summarizes the HDV emissions for 2019, the previous year and 2005. The HDV emissions of all pollutants have decreased significantly from 2005 largely due to increasingly stringent on-road engine emission standards and the implementation of the CTP. Compared to the previous year, emissions also decreased for all pollutants.

Table 9.25: HDV Emissions Comparison

Year	VMT	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e tonnes
2019	216,458,602	8.9	8.5	8.6	1,382	3.8	207	33	378,015
2018	225,189,014	9.5	9.1	9.1	1,482	4.0	209	34	397,027
2005	266,434,761	248	238	248	6,307	45	1,865	368	474,877
Previous Year (2018-2019)	**-4%**	**-6%**	**-6%**	**-6%**	**-7%**	**-5%**	**-1%**	**-3%**	**-5%**
CAAP Progress (2005-2019)	**-19%**	**-96%**	**-96%**	**-97%**	**-78%**	**-92%**	**-89%**	**-91%**	**-20%**

As an overall measure of the changes in HDV emissions independent of changes in throughput, Table 9.26 illustrates the changes in emissions in average grams per mile (g/mi) between 2005 and 2019 and between 2018 and 2019. The units of grams per mile are used because they show the changes independent of changes in throughput, which can complicate the comparisons. The figures have been calculated by dividing overall HDV emissions by overall miles traveled and include idling emissions, as well as emissions from driving at various speeds, on-terminal and on-road. Particulate emissions have been reduced most dramatically from 2005 to 2019, followed by the other pollutants. The CTP and engine emission standards are responsible for most reductions, including the particulate and NO_x decreases, while fuel sulfur standards, specifically the introduction of ultra-low sulfur diesel fuel (ULSD), are responsible for the SO_x reduction.

Table 9.26: Fleet Average Emissions, g/mile

Year	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2e
2019	0.0373	0.0357	0.0359	5.7909	0.0158	0.8690	0.1396	1,746
2018	0.0381	0.0365	0.0366	5.9694	0.0159	0.8417	0.1380	1,763
2005	0.8457	0.8091	0.8457	21.4756	0.1529	6.3487	1.2536	1,782
Previous Year (2018-2019)	**-2%**	**-2%**	**-2%**	**-3%**	**-1%**	**3%**	**1%**	**-1%**
CAAP Progress (2005-2019)	**-96%**	**-96%**	**-96%**	**-73%**	**-90%**	**-86%**	**-89%**	**-2%**

Figure 9.2 illustrates the HDV model year distribution for calendar years 2017 to 2019. It shows the peak of 2009 model year trucks that persists in each calendar year, but the percentage is less for 2019 CY. It also shows the elevated percentages of newer, 2010+ trucks.

Figure 9.2: Model Year Distribution

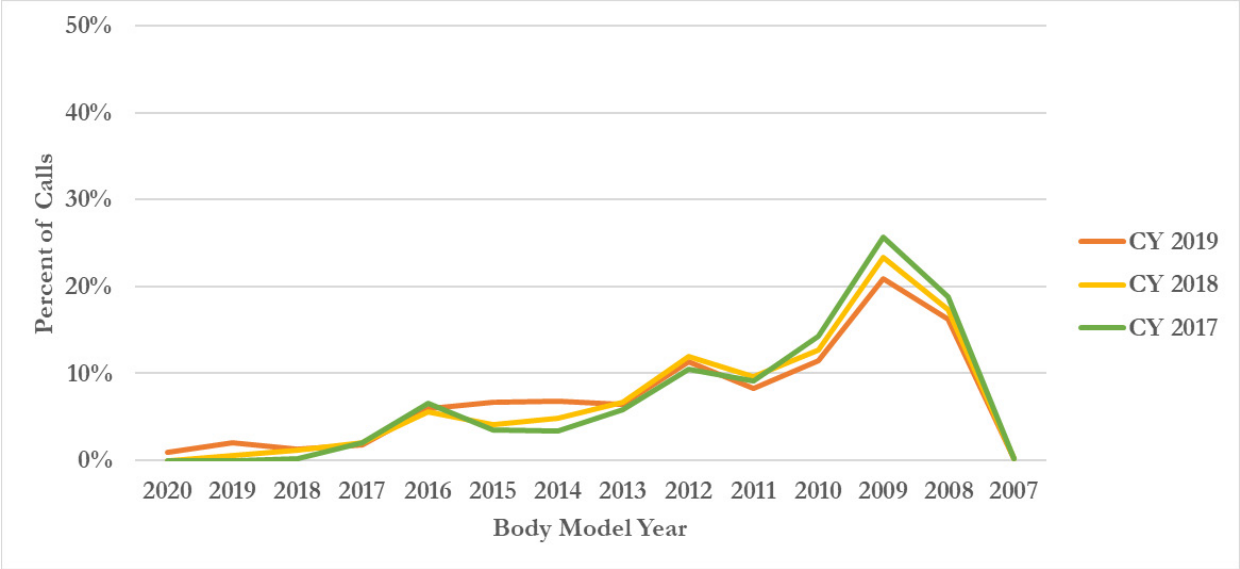


Table 9.27 shows the emissions efficiency changes for HDVs. A positive percentage for the emissions efficiency comparison means an improvement in efficiency. Comparing 2019 to 2005 for CAAP progress, HDV emissions efficiency has improved for all pollutants. Comparing 2019 to the previous year, emissions efficiency improved for PM, NO_x, and CO_2e, while it remained the same for SO_x, CO, and hydrocarbon.

Table 9.27: HDV Emissions Efficiency Metrics Comparison, tons/10,000 TEUs

Year	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2e
2019	0.0095	0.0091	0.0092	1.480	0.004	0.22	0.04	405
2018	0.0100	0.0096	0.0096	1.567	0.004	0.22	0.04	420
2005	0.3318	0.3175	0.3318	8.427	0.060	2.49	0.49	634
Previous Year (2018-2019)	**5%**	**5%**	**4%**	**6%**	**0%**	**0%**	**0%**	**4%**
CAAP Progress (2005-2019)	**97%**	**97%**	**97%**	**82%**	**93%**	**91%**	**92%**	**36%**

CAAP Standards and Progress

One of the main purposes of the annual inventories is to provide a progress update on achieving the CAAP's San Pedro Bay Standards. These standards consist of the following emission reduction goals, compared to the 2005 inventories:

- Emission Reduction Standard:
  - By 2014, achieve emission reductions of 72% for DPM, 22% for NO_x, and 93% for SO_x
  - By 2023, achieve emission reductions of 77% for DPM, 59% for NO_x, and 93% for SO_x
- Health Risk Reduction Standard: 85% reduction by 2020

Due to the many emission reduction measures undertaken by the Port, as well as statewide and federal regulations and standards, the 2014 and 2023 emission reduction standards have been met and exceeded in 2019 for DPM, NO_x, and SO_x. Below is a summary of DPM, NO_x, and SO_x percent reductions as compared to the 2014/2023 emission reduction standards.

Table 9.28: Reductions as Compared to 2014 and 2023 Emission Reduction Standard

Pollutant	2019 Actual Reductions	2014 Emission Reduction Standard	2023 Emission Reduction Standard
DPM	87%	72%	77%
NO_x	62%	22%	59%
SO_x	98%	93%	93%

The following tables show the standardized estimates of emissions by source category for calendar years 2019, previous years, and 2005 using current year methodology and the percent reduction of emissions from 2005 levels.

Table 9.29: DPM Emissions Comparison by Source Category, tons

Category	2005	2018	2019
Ocean-going vessels	466	43	41
Harbor Craft	55	27	26
Cargo handling equipment	53	6	5
Locomotives	57	33	32
Heavy-duty vehicles	248	9	9
Total	**879**	**118**	**112**
% Cumulative Change		**87%**	**87%**

Table 9.30: NO_x Emissions Comparison by Source Category, tons

Category	2005	2018	2019
Ocean-going vessels	5,295	2,909	2,743
Harbor Craft	1,318	813	755
Cargo handling equipment	1,573	464	410
Locomotives	1,712	886	882
Heavy-duty vehicles	6,307	1,482	1,382
Total	**16,206**	**6,554**	**6,172**
% Cumulative Change		**60%**	**62%**

Table 9.31: SO_x Emissions Comparison by Source Category, tons

Category	2005	2018	2019
Ocean-going vessels	4,825	110	102
Harbor Craft	6	1	1
Cargo handling equipment	9	2	2
Locomotives	98	1	1
Heavy-duty vehicles	45	4	4
Total	**4,983**	**118**	**109**
% Cumulative Change		**98%**	**98%**

APPENDIX A: CHE Inventory

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Automatic Stacking Crane	ASC 01L	Kalmar	ASC 4+	Electric					2418	CHE Electric			
Automatic Stacking Crane	ASC 01W	Kalmar	ASC 4+	Electric					2301	CHE Electric			
Automatic Stacking Crane	ASC 02L	Kalmar	ASC 4+	Electric					2381	CHE Electric			
Automatic Stacking Crane	ASC 02W	Kalmar	ASC 4+	Electric					2221	CHE Electric			
Automatic Stacking Crane	ASC 03L	Kalmar	ASC 4+	Electric					2307	CHE Electric			
Automatic Stacking Crane	ASC 03W	Kalmar	ASC 4+	Electric					1961	CHE Electric			
Automatic Stacking Crane	ASC 04L	Kalmar	ASC 4+	Electric					2347	CHE Electric			
Automatic Stacking Crane	ASC 04W	Kalmar	ASC 4+	Electric					2150	CHE Electric			
Automatic Stacking Crane	ASC 07L	Kalmar	ASC 4+	Electric					2027	CHE Electric			
Automatic Stacking Crane	ASC 07W	Kalmar	ASC 4+	Electric					1631	CHE Electric			
Automatic Stacking Crane	ASC 08L	Kalmar	ASC 4+	Electric					1338	CHE Electric			
Automatic Stacking Crane	ASC 08W	Kalmar	ASC 4+	Electric					1998	CHE Electric			
Automatic Stacking Crane	ASC 09L	Kalmar	ASC 4+	Electric					2196	CHE Electric			
Automatic Stacking Crane	ASC 09W	Kalmar	ASC 4+	Electric					2062	CHE Electric			
Automatic Stacking Crane	ASC 10L	Kalmar	ASC 4+	Electric					2216	CHE Electric			
Automatic Stacking Crane	ASC 10W	Kalmar	ASC 4+	Electric					1928	CHE Electric			
Automatic Stacking Crane	ASC 11L	Kalmar	ASC 4+	Electric					961	CHE Electric			
Automatic Stacking Crane	LAXASC7022	Kalmar	ASC 4+	Electric					2361	CHE Electric			
Automatic Stacking Crane	LAXASC7023	Kalmar	ASC 4+	Electric					2467	CHE Electric			
Automatic Stacking Crane	LAXASC7024	Kalmar	ASC 4+	Electric					2491	CHE Electric			
Automatic Stacking Crane	LAXASC7025	Kalmar	ASC 4+	Electric					2402	CHE Electric			
Automatic Stacking Crane	LAXASC7026	Kalmar	ASC 4+	Electric					2527	CHE Electric			
Automatic Stacking Crane	LAXASC7027	Kalmar	ASC 4+	Electric					2366	CHE Electric			
Automatic Stacking Crane	LAXASC7028	Kalmar	ASC 4+	Electric					2421	CHE Electric			
Automatic Stacking Crane	LAXASC7029	Kalmar	ASC 4+	Electric					2315	CHE Electric			
Automatic Stacking Crane	LAXASC7030	Kalmar	ASC 4+	Electric					2869	CHE Electric			
Automatic Stacking Crane	LAXASC7031	Kalmar	ASC 4+	Electric					2150	CHE Electric			
Automatic Stacking Crane	LAXASC7032	Kalmar	ASC 5.0	Electric					1992	CHE Electric			
Automatic Stacking Crane	LAXASC7033	Kalmar	ASC 5.0	Electric					1586	CHE Electric			
Bulldozer	403005	Caterpillar	D8T	Diesel	Caterpillar	C15	2006	310	915	CHE Diesel			
Bulldozer	404001	Caterpillar	D6R	Diesel	Caterpillar	C9	2007	200	91	CHE Diesel		15-05-11	
Bulldozer	404002	Caterpillar	D6R	Diesel	Caterpillar	C9	2007	200	179	CHE Diesel		07-05-15	
Cone Vehicle	41301	MEC	IBZ	Diesel	Kubota	D1105E	2013	25	1766	CHE Diesel			
Cone Vehicle	41302	MEC	IBZ	Diesel	Kubota	D1105E	2013	25	1595	CHE Diesel			
Cone Vehicle	41303	MEC	IBZ	Diesel	Kubota	D1105E	2013	25	1607	CHE Diesel			
Cone Vehicle	41304	MEC	IBZ	Diesel	Kubota	D1105E	2013	25	1660	CHE Diesel			
Cone Vehicle	41305	MEC	IBZ	Diesel	Kubota	D1105E	2013	25	1351	CHE Diesel			
Cone Vehicle	41306	MEC	IBZ	Diesel	Kubota	D1105E	2013	25	2140	CHE Diesel			
Cone Vehicle	EMSU711	Motrec	RR662SD	Diesel			2010	35	2165	CHE Diesel		01-01-14	
Cone Vehicle	EMSU712	Motrec	RR662SD	Diesel			2010	35	2342	CHE Diesel		01-01-14	
Cone Vehicle	EMSU713	Motrec	RR662SD	Diesel			2010	35	180	CHE Diesel		01-01-14	
Cone Vehicle	EMSU714	Motrec	RR662SD	Diesel			2010	35	2657	CHE Diesel		01-01-14	
Cone Vehicle	EMSU745	Motrec	RR662SD	Diesel			2014	35	1233	CHE Diesel			
Cone Vehicle	EMSU746	Motrec	RR662SD	Diesel			2014	35	330	CHE Diesel			
Cone Vehicle	EMSU747	Motrec	RR662SD	Diesel			2014	35	2571	CHE Diesel			
Cone Vehicle	LAXCCT301	Motrec	RR-662	Diesel	Kubota Corp	V1505-ET04	2015	35	165	CHE Diesel			
Cone Vehicle	LAXCCT302	Motrec	RR-662	Diesel	Kubota Corp	V1505-ET04	2015	35	11	CHE Diesel			
Cone Vehicle	LAXCCT303	Motrec	RR-662	Diesel	Kubota Corp	V1505-ET04	2015	35	231	CHE Diesel			
Cone Vehicle	LAXCCT304	Motrec	RR-662	Diesel	Kubota Corp	V1505-ET04	2015	35	132	CHE Diesel			
Cone Vehicle	LAXCCT305	Motrec	RR-662	Diesel	Kubota Corp	V1505-ET04	2015	35	312	CHE Diesel			
Cone Vehicle	LAXCCT306	Motrec	RR-662	Diesel	Kubota Corp	V1505-ET04	2015	35	248	CHE Diesel			
Cone Vehicle	LAXCCT307	Motrec	RR-662	Diesel	Kubota Corp	V1505-ET04	2015	35	26	CHE Diesel			
Cone Vehicle	LAXCCT308	Motrec	RR-662	Diesel	Kubota Corp	V1505-ET04	2015	35	12	CHE Diesel			
Crane	203001	Manitowoc	400W	Diesel	Detroit Diesel	NS-743-B320	1969	245	0	CHE Diesel			
Crane	209001	Grove	RT855B	Diesel	Caterpillar	3116	1995	205	565	CHE Diesel			
Crane	220001	Liebherr	LHM550	Diesel	Liebherr	D9512A7-04	2014	751	934	CHE Diesel			
Crane	Cran301	P&H	Omega 35T	Diesel	Detroit Diesel	6V53	1987	244	18	CHE Diesel			
Crane	Cran302	P&H 75T	75T	Diesel	Detroit Diesel	75T	1987	244	504	CHE Diesel			
Crane	LAC1641	Terex	RT550	Diesel	Cummins	6bta5.9	2003	174	265	CHE Diesel			
Crane	LAC1642	Terex	RT230	Diesel	Cummins	6BT5.9	2004	130	199	CHE Diesel			
Crane	LAC1643	Terex	RT230-2	Diesel	Cummins	6BT5.9	2014	130	217	CHE Diesel			
Crane	LAXIYC001	Paceco		Electric					951	CHE Electric			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Crane	LAXIYC002	Paceco		Electric					1045	CHE Electric			
Crane	LAXIYC003	Paceco		Electric					929	CHE Electric			
Electric wharf crane	APSZ175	Noell		Electric					1904	CHE Electric			
Electric wharf crane	APSZ176	Noell		Electric					2294	CHE Electric			
Electric wharf crane	APSZ177	Noell		Electric					2658	CHE Electric			
Electric wharf crane	APSZ178	Noell		Electric					2754	CHE Electric			
Electric wharf crane	APSZ179	Noell		Electric					2658	CHE Electric			
Electric wharf crane	APSZ180	Noell		Electric					2080	CHE Electric			
Electric wharf crane	APSZ181n	Noell		Electric					632	CHE Electric			
Electric wharf crane	APSZ182n	Noell		Electric					1232	CHE Electric			
Electric wharf crane	C 15	ZPMC		Electric					0	CHE Electric			
Electric wharf crane	C 16	ZPMC		Electric					0	CHE Electric			
Electric wharf crane	C 17	ZPMC		Electric					0	CHE Electric			
Electric wharf crane	C 18	ZPMC		Electric					0	CHE Electric			
Electric wharf crane	C 19	ZPMC		Electric					0	CHE Electric			
Electric wharf crane	crane 5	Mitsui/Paceco		Electric					1964	CHE Electric			
Electric wharf crane	crane 6	Mitsui/Paceco		Electric					2072	CHE Electric			
Electric wharf crane	ELWC36			Electric					0	CHE Electric			
Electric wharf crane	ELWC37			Electric					0	CHE Electric			
Electric wharf crane	ELWC38			Electric					0	CHE Electric			
Electric wharf crane	ELWC39			Electric					0	CHE Electric			
Electric wharf crane	ELWC40			Electric					0	CHE Electric			
Electric wharf crane	ELWC41			Electric					0	CHE Electric			
Electric wharf crane	ELWC42			Electric					0	CHE Electric			
Electric wharf crane	ELWC43			Electric					0	CHE Electric			
Electric wharf crane	ELWC44			Electric					0	CHE Electric			
Electric wharf crane	ELWC45	Noell		Electric					0	CHE Electric			
Electric wharf crane	ELWC46	Noell		Electric					0	CHE Electric			
Electric wharf crane	ELWC47	Noell		Electric					0	CHE Electric			
Electric wharf crane	ELWC48	Noell		Electric					0	CHE Electric			
Electric wharf crane	ELWC49	Noell		Electric					0	CHE Electric			
Electric wharf crane	ELWC50	Noell		Electric					0	CHE Electric			
Electric wharf crane	ELWC51	Noell		Electric					0	CHE Electric			
Electric wharf crane	ELWC52	Noell		Electric					0	CHE Electric			
Electric wharf crane	ELWC53	Noell		Electric					0	CHE Electric			
Electric wharf crane	ELWC54	Noell		Electric					0	CHE Electric			
Electric wharf crane	ELWC55	ZPMC		Electric					0	CHE Electric			
Electric wharf crane	ELWC56	ZPMC		Electric					0	CHE Electric			
Electric wharf crane	ELWC57	ZPMC		Electric					0	CHE Electric			
Electric wharf crane	ELWC58	ZPMC		Electric					0	CHE Electric			
Electric wharf crane	ELWC61	MITSUBISHI	7820-7	Electric					0	CHE Electric			
Electric wharf crane	ELWC62	ZPMC	J111A00-8	Electric					0	CHE Electric			
Electric wharf crane	ELWC63	ZPMC	J111A00-9	Electric					0	CHE Electric			
Electric wharf crane	ELWC64	ZPMC	ZP-2073-10	Electric					0	CHE Electric			
Electric wharf crane	ELWC65	ZPMC	ZP-2073-11	Electric					0	CHE Electric			
Electric wharf crane	ELWC66	ZPMC	ZP-2073-12	Electric					0	CHE Electric			
Electric wharf crane	ELWC67			Electric					0	CHE Electric			
Electric wharf crane	ELWC68			Electric					0	CHE Electric			
Electric wharf crane	ELWC69			Electric					0	CHE Electric			
Electric wharf crane	ELWC70			Electric					0	CHE Electric			
Electric wharf crane	ELWC71			Electric					0	CHE Electric			
Electric wharf crane	ELWC72			Electric					0	CHE Electric			
Electric wharf crane	ELWC74			Electric					0	CHE Electric			
Electric wharf crane	ELWC75			Electric					0	CHE Electric			
Electric wharf crane	ELWC76			Electric					0	CHE Electric			
Electric wharf crane	ELWC77			Electric					0	CHE Electric			
Electric wharf crane	ELWC78			Electric					0	CHE Electric			
Electric wharf crane	ELWC79			Electric					456	CHE Electric			
Electric wharf crane	ELWC80			Electric					868	CHE Electric			
Electric wharf crane	ELWC81			Electric					457	CHE Electric			
Electric wharf crane	ELWC82			Electric					0	CHE Electric			
Electric wharf crane	EMSZ713	ZPMC	J481A	Electric					3604	CHE Electric			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Electric wharf crane	EMSZ714	ZPMC	J481A	Electric					4358	CHE Electric			
Electric wharf crane	EMSZ715	ZPMC	J481A	Electric					4602	CHE Electric			
Electric wharf crane	EMSZ716	ZPMC	J481A	Electric					4791	CHE Electric			
Electric wharf crane	FMSZ007	ZPMC	ZP-1002000014	Electric					3858	CHE Electric			
Electric wharf crane	FMSZ008	ZPMC	ZP-1002000014	Electric					3778	CHE Electric			
Electric wharf crane	FMSZ009	ZPMC	ZP-1002000015	Electric					3468	CHE Electric			
Electric wharf crane	FMSZ010	ZPMC	ZP-1002000015	Electric					2392	CHE Electric			
Electric wharf crane	LAXSTS101	Paceco		Electric					341	CHE Electric			
Electric wharf crane	LAXSTS102	Paceco		Electric					558	CHE Electric			
Electric wharf crane	LAXSTS103	Paceco		Electric					2110	CHE Electric			
Electric wharf crane	LAXSTS104	Paceco		Electric					398	CHE Electric			
Electric wharf crane	LAXSTS105	Paceco		Electric					2577	CHE Electric			
Electric wharf crane	LAXSTS106	Paceco		Electric					2718	CHE Electric			
Electric wharf crane	LAXSTS107	Paceco		Electric					1431	CHE Electric			
Electric wharf crane	LAXSTS108	Paceco		Electric					2717	CHE Electric			
Electric wharf crane	LAXSTS109	Paceco		Electric					3479	CHE Electric			
Electric wharf crane	LAXSTS110	Paceco		Electric					1941	CHE Electric			
Electric wharf crane	STSY1	Mitsubishi	60T	Electric					1029	CHE Electric			
Electric wharf crane	STSY2	Mitsubishi	60T	Electric					1253	CHE Electric			
Electric wharf crane	STSY3	Mitsubishi	50T	Electric					2473	CHE Electric			
Electric wharf crane	STSY4	Mitsubishi	50T	Electric					2901	CHE Electric			
Electric wharf crane	STSY5	Mitsui/Paceco	70T	Electric					2622	CHE Electric			
Electric wharf crane	STSY6	Mitsui/Paceco	70T	Electric					3190	CHE Electric			
Electric wharf crane	STSY7	Mitsui/Paceco	70T	Electric					3360	CHE Electric			
Electric wharf crane	STSY8	Mitsui/Paceco	70T	Electric					2608	CHE Electric			
Electric wharf crane	STSY9	Mitsubishi	60T	Electric					0	CHE Electric			
Excavator	108018	Caterpillar	345B	Diesel	Caterpillar	C13	2010	371	0	CHE Diesel		15-11-11	
Forklift	23	Caterpillar	V-300B	Diesel	Caterpillar	3208	1990	117	295	CHE Diesel		01-01-10	
Forklift	219	Caterpillar	V-330B	Diesel	Caterpillar	3208	1985	125	280	CHE Diesel		01-01-10	
Forklift	220	Caterpillar	V-330B	Diesel	Caterpillar	3208	1985	125	376	CHE Diesel		01-01-10	
Forklift	223	Caterpillar	V-330B	Diesel	Caterpillar	3208	1985	125	460	CHE Diesel		01-01-10	
Forklift	339	Kalmar	DCD160-12	Diesel	Cummins	QSB6.7	2016	173	263	CHE Diesel			
Forklift	1210	Hyster	H50FT	Diesel	YANMAR	3.3L	2014	165	2083	CHE Diesel			
Forklift	2054	Taylor	TX360L	Diesel	Cummins	5.9	2007	137	254	CHE Diesel		13-05-13	
Forklift	2071	Taylor	TX360L	Diesel	Cummins	5.9	2007	137	81	CHE Diesel		12-03-14	
Forklift	2077	Yale	GDP360EBECCV	Diesel			2009		114	CHE Diesel		13-08-13	
Forklift	2791	Taylor	TH350L	Diesel	Cummins	5.9	2004	190	1069	CHE Diesel		15-01-14	
Forklift	2792	Taylor	TH350L	Diesel	Cummins	5.9	2004	152	1094	CHE Diesel		18-08-14	
Forklift	2796	Taylor	TH350L	Diesel	Cummins	5.9	2005	152	1531	CHE Diesel		21-02-13	
Forklift	2797	Taylor	TH350L	Diesel	Cummins	5.9	2005	152	1555	CHE Diesel		14-08-14	
Forklift	3090	Kalmar	DCD160-12	Diesel	Cummins	QSB 6.7	2016	173	87	CHE Diesel			
Forklift	3091	Kalmar	DCD160-12	Diesel	Cummins	QSB 6.7	2016	173	459	CHE Diesel			
Forklift	7023	Taylor	TE-300-M	Diesel	Cummins	6BTA	1996	115	0	CHE Diesel		01-01-12	
Forklift	7026	Taylor	TE-250-M	Diesel	Cummins	6BTA	1993	210	164	CHE Diesel		01-01-12	
Forklift	7087	Taylor	T-360L	Diesel			2007	260	3328	CHE Diesel		01-01-12	
Forklift	7088	Hoist	P36	Diesel			2007	160	709	CHE Diesel		01-01-12	
Forklift	7089		SMV16-600B	Diesel			2011	248	1598	CHE Diesel			
Forklift	7091		SMV16-600B	Diesel			2011	248	1667	CHE Diesel			
Forklift	7092			Diesel			2016		1776	CHE Diesel			
Forklift	7093			Diesel			2016		1945	CHE Diesel			
Forklift	61302	Hyster	H300HD	Diesel	Cummins	QSB6.7	2013	129	918	CHE Diesel			
Forklift	601021	Caterpillar	DP150	Diesel	Deutz	TCD2012L042V	2010	131	393	CHE Diesel			
Forklift	601035	Caterpillar	P33000-D	Diesel	Mitsubishi	6M60	2007	148	629	CHE Diesel			
Forklift	601051	Caterpillar	PD10000	Diesel	Mitsubishi	SS-DP	2011	75	871	CHE Diesel			
Forklift	601052	Caterpillar	PD10000	Diesel	Mitsubishi	SS-DP	2011	75	0	CHE Diesel			
Forklift	601060	Caterpillar	DP50CN1-D	Diesel	Caterpillar	3914/2200	2013	75	1936	CHE Diesel			
Forklift	606044	Hyster	H300XL	Diesel	Perkins		1993	175	78	CHE Diesel		05-04-11	
Forklift	609014	Linde	H35D	Diesel	Volkswagon	BAEU	2007	59	640	CHE Diesel			
Forklift	609031	Linde	H50D	Diesel	Volkswagon	CBJ.B.	2009	74	0	CHE Diesel			
Forklift	EMSF684	Taylor	TE800L	Diesel	Cummins		2018	330	350	CHE Diesel			
Forklift	EMSF719	Hoist	P360	Diesel	Cummins	QSB6.7	2013	173	0	CHE Diesel			
Forklift	EMSF730	Hyster	P360	Diesel	Cummins	QSB6.7	2016	164	590	CHE Diesel		30-12-13	

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Forklift	EMSF731	Hyster	P360	Diesel	Cummins	QSB6.7	2016	164	1184	CHE Diesel		30-12-13	
Forklift	F16	Kalmar	15T	Diesel	Cummins	QSB 6.7	2007	220	98	CHE Diesel		04-05-12	
Forklift	F18	Kalmar	15T	Diesel	Cummins	QSB 6.7	2007	220	59	CHE Diesel			
Forklift	F19	Kalmar	15T	Diesel	Cummins	QSB 6.7	2007	220	49	CHE Diesel			
Forklift	F20	Capacity	TJ7000	Diesel	Cummins	QSC8.3L	2007	230	84	CHE Diesel		01-01-09	
Forklift	F25	Capacity	TJ7000	Diesel	Cummins	QSB6.7	2008	220	68	CHE Diesel		01-03-10	
Forklift	F26	Capacity	TJ7000	Diesel	Cummins	QSB6.7	2008	220	86	CHE Diesel		01-03-10	
Forklift	F34			Diesel			2012		253	CHE Diesel			
Forklift	F35			Diesel	Cummins		2015		858	CHE Diesel			
Forklift	F36			Diesel	Cummins		2015		122	CHE Diesel			
Forklift	F37			Diesel	Cummins		2015		1668	CHE Diesel			
Forklift	F38	Hyundai		Diesel	Cummins		2017		80	CHE Diesel			
Forklift	FL18-0101	Taylor	TX360L	Diesel	Cummins	QSB 6.7	2012	173	2629	CHE Diesel			
Forklift	FL18-0102	Fantuzzi	FDC180/1600	Diesel	Caterpillar	Tier 4i C4.4	2014	174	920	CHE Diesel			
Forklift	FL18-0103	Fantuzzi	FDC180/1600	Diesel	Caterpillar	Tier 4i C4.4	2014	174	3181	CHE Diesel			
Forklift	FL18-0104	Taylor	TX360L	Diesel	Cummins	QSB 6.7	2015	173	283	CHE Diesel			
Forklift	FL5-0101	Clark	C50sD	Diesel	Deutz	TD 3.6 L4	2015	56	300	CHE Diesel			
Forklift	FL5-0102	Clark	C50sD	Diesel	Deutz	TD 3.6 L4	2015	56	194	CHE Diesel			
Forklift	FL5-0103	Clark	C50sD	Diesel	Deutz	TD 3.6 L4	2015	56	70	CHE Diesel			
Forklift	FL5-0104	Clark	C50sD	Diesel	Deutz	TD 3.6 L4	2015	56	118	CHE Diesel			
Forklift	FL5-0105	Clark	C50sD	Diesel	Deutz	TD 3.6 L4	2015	56	303	CHE Diesel			
Forklift	FL5-0106	Clark	C50sD	Diesel	Deutz	TD 3.6 L4	2015	56	227	CHE Diesel			
Forklift	FL5-0107	Clark	C50sD	Diesel	Deutz	TD 3.6 L4	2015	56	284	CHE Diesel			
Forklift	FL5-0108	Clark	C50sD	Diesel	Deutz	TD 3.6 L4	2015	56	303	CHE Diesel			
Forklift	FMSHL 01	Hyster	P360	Diesel	Cummins	QSB6.7	2018	164	847	CHE Diesel			
Forklift	FMSHL 02	Hyster	P360	Diesel	Cummins	QSB6.7	2018	164	1758	CHE Diesel			
Forklift	FMSHL 03	Hyster	P360	Diesel	Cummins	QSB6.7	2018	164	461	CHE Diesel			
Forklift	FMSHL 04	Hyster	P360	Diesel	Cummins	QSB6.7	2018	164	481	CHE Diesel			
Forklift	L15/620	Kalmar	DCE-150-6	Diesel	Cummins	QSB6.7	2008	173	168	CHE Diesel		12-03-15	
Forklift	L15/621	Kalmar	DCE-150-6	Diesel	Cummins	QSB6.7	2008	173	127	CHE Diesel		21-01-15	
Forklift	L15/622	Kalmar	DCE-150-6	Diesel	Cummins	QSB6.7	2008	173	15	CHE Diesel		23-01-15	
Forklift	L15/623	Kalmar	DCE-150-6	Diesel	Cummins	QSB6.7	2008	173	0	CHE Diesel		12-03-15	
Forklift	L15/624	Taylor	TX330SL	Diesel	Cummins	QSB6.7	2012	174	167	CHE Diesel		09-04-15	
Forklift	L15/625	Taylor	TX330SL	Diesel	Cummins	QSB6.7	2012	174	65	CHE Diesel		30-03-15	
Forklift	L21/016	Kalmar	DCE160-12	Diesel	Cummins	QSB 5.9L B	2007	185	35	CHE Diesel		31-08-15	
Forklift	L21/017	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2011	160	133	CHE Diesel		17-07-15	
Forklift	L21/018	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2011	160	343	CHE Diesel		21-07-15	
Forklift	L21/019	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2011	160	604	CHE Diesel		23-07-15	
Forklift	L21/020	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2011	160	228	CHE Diesel		24-07-15	
Forklift	L21/021	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2013	173	226	CHE Diesel			
Forklift	L21/022	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2013	173	490	CHE Diesel			
Forklift	L21/023	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2013	173	512	CHE Diesel			
Forklift	L21/024	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2013	173	354	CHE Diesel			
Forklift	L21/025	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2013	173	467	CHE Diesel			
Forklift	L21/026	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2013	173	444	CHE Diesel			
Forklift	L21/027	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2013	173	0	CHE Diesel			
Forklift	L21/028	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2014	173	599	CHE Diesel			
Forklift	L21/029	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2014	173	642	CHE Diesel			
Forklift	L21/030	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2014	173	500	CHE Diesel			
Forklift	L21/031	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2014	173	569	CHE Diesel			
Forklift	L21/032	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2014	173	828	CHE Diesel			
Forklift	L21/033	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2014	173	645	CHE Diesel			
Forklift	L21/034	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2014	173	716	CHE Diesel			
Forklift	L21/035	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2014	173	604	CHE Diesel			
Forklift	L21/036	Taylor	XH350L	Diesel	Cummins	QSB6.7	2017	173	248	CHE Diesel			
Forklift	L21/037	Taylor	XH350L	Diesel	Cummins	QSB6.7	2017	173	267	CHE Diesel			
Forklift	L26/006	Taylor	TX550RC	Diesel	Cummins	QSB6.7	2012	220	197	CHE Diesel		01-07-16	
Forklift	L26/007	Taylor	TX550RC	Diesel	Cummins	QSB6.7	2012	220	295	CHE Diesel		01-07-16	
Forklift	L26/008	Taylor	TX550RC	Diesel	Cummins	QSB6.7	2012	220	217	CHE Diesel		01-07-16	
Forklift	L26/009	Taylor	TX550RC	Diesel	Cummins	QSB6.7	2012	220	231	CHE Diesel		01-07-16	
Forklift	L26/010	Taylor	TX550RC	Diesel	Cummins	QSB6.7	2012	220	175	CHE Diesel		27-06-17	
Forklift	L26/011	Taylor	TX550RC	Diesel	Cummins	QSB6.7	2012	220	177	CHE Diesel		17-06-16	

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Forklift	L32/701	Kalmar	DCD250	Diesel	Cummins	QSB6.7	2008	260	81	CHE Diesel		05-02-16	
Forklift	L34/705	Taylor	TX1700L	Diesel	Cummins	QSL-9	2013	230	387	CHE Diesel			
Forklift	L34/706	Taylor	TX1700L	Diesel	Cummins	QSL-9	2013	230	418	CHE Diesel			
Forklift	L34/707	Taylor	TX1700L	Diesel	Cummins	QSL-9	2013	230	230	CHE Diesel			
Forklift	L44/604	Kalmar	DCD370-12	Diesel	Volvo	TAD1170VE	2014	319	237	CHE Diesel			
Forklift	L44/605	Kalmar	DCD370-12	Diesel	Cummins	QSM11	2004	330	8	CHE Diesel			
Forklift	L44/606	Kalmar	DCD370-12	Diesel	Cummins	QSM11	2004	330	0	CHE Diesel			
Forklift	L50/701	Kalmar	DCF500-12	Diesel	Cummins	QSM11	2008	350	504	CHE Diesel		08-04-16	
Forklift	L50/702	Kalmar	DCF500-12	Diesel	Volvo	TAD1360VE	2013	348	560	CHE Diesel			
Forklift	L50/801	Taylor	X1000RC	Diesel	Volvo	TAD1371VE	2014	388	301	CHE Diesel			
Forklift	L50/802	Taylor	X1000RC	Diesel	Volvo	TAD1371VE	2014	388	248	CHE Diesel			
Forklift	L9/601	Kalmar	DCE90-6L	Diesel	Perkins	S6S	2004	114	94	CHE Diesel		31-07-14	
Forklift	LAFL1208	Hyster	H330XL	Diesel	Perkins	YH70393*U660399(	1997	150	248	CHE Diesel			
Forklift	3064	Caterpillar	18 F4	Electric					0	CHE Electric			
Forklift	3067	Caterpillar	18 F4	Electric					0	CHE Electric			
Forklift	3069	Caterpillar	18 F4	Electric					0	CHE Electric			
Forklift	62002	Raymond Pacer	R30-C30TT	Electric					0	CHE Electric			
Forklift	APSF454	Hyster	N40FR	Electric					0	CHE Electric			
Forklift	L21/013E	Kalmar	DCE160-12	Electric					0	CHE Electric			
Forklift	L21/014E	Kalmar	DCE160-12	Electric					0	CHE Electric			
Forklift	L21/015E	Kalmar	DCE160-12	Electric					0	CHE Electric			
Forklift	WWL5	Nissan	CSP01L15S	Electric					0	CHE Electric			
Forklift	WWL6	Hyster	N40XMR2	Electric					0	CHE Electric			
Forklift	WWL7	Nissan	CK1B1L15S	Electric					0	CHE Electric			
Forklift	F27	Toyota		Gasoline			2010		445	CHE Gasoline			
Forklift	F28	Toyota		Gasoline			2011		114	CHE Gasoline			
Forklift	F29	Toyota		Gasoline			2011		142	CHE Gasoline			
Forklift	F30	Mitsubishi		Gasoline	Nissan		2012		373	CHE Gasoline			
Forklift	WWL1	Nissan	CF01A15V	Gasoline				45	550	CHE Gasoline			
Forklift	WWL2	Nissan	CF01A15V	Gasoline				45	1620	CHE Gasoline			
Forklift	WWL4	Nissan	CPH01A15V	Gasoline				45	1015	CHE Gasoline			
Forklift	1009	Hyster	H100XM	LPG	GMC	3.6	2002	165	4	CHE Propane			
Forklift	1205	Hyster	H80XL	LPG	GMC	3.6	1995	165	29	CHE Propane			
Forklift	1215	Hyster	H50FT	LPG	PSI	2.2	2014	59	392	CHE Propane			
Forklift	1216	Hyster	H50FT	LPG	PSI	2.2	2015	59	260	CHE Propane			
Forklift	1293	Mitsubishi	FG30	LPG	Mitsubishi	4G64	1996	55	385	CHE Propane			06-08-13
Forklift	1294	Mitsubishi	FG30	LPG	Mitsubishi	4G64	1995	55	289	CHE Propane			06-08-13
Forklift	1300	Mitsubishi	FG30	LPG	Mitsubishi	4G64	1995	55	372	CHE Propane			06-08-13
Forklift	1356	Mitsubishi	P6000	LPG	Mitsubishi	FG30	1995	62	385	CHE Propane			11-02-13
Forklift	1357			LPG					289	CHE Propane			11-02-13
Forklift	1803	Yale	GLP100MJNB	LPG	GMC	3.6	2005	160	28	CHE Propane			
Forklift	1804	Yale	GLP100MJNB	LPG	GMC	3.6	2005	160	423	CHE Propane			
Forklift	1805	Yale	GLP100MJNB	LPG	GMC	3.6	2005	160	74	CHE Propane			
Forklift	1812	Yale	GLP100	LPG			2008	160	206	CHE Propane			
Forklift	1813	Yale	GLP100	LPG			2008	160	33	CHE Propane			
Forklift	1980	Hyster	H100FT	LPG			2011		823	CHE Propane			
Forklift	2306	Nissan	FO4G40V-LP	LPG			2002	122	248	CHE Propane			
Forklift	2307	Nissan	FO4G40V-LP	LPG			2002	122	170	CHE Propane			
Forklift	2308	Nissan	FO4G40V-LP	LPG			2002	122	153	CHE Propane			
Forklift	2364	Nissan	PL50LP	LPG			2007	122	170	CHE Propane			
Forklift	2365	Nissan	PL50LP	LPG			2007	122	194	CHE Propane			
Forklift	2366	Nissan	JP80BYLP	LPG			2007	122	256	CHE Propane			
Forklift	2367	Nissan	JP80BYLP	LPG			2007	122	473	CHE Propane			
Forklift	2368	Nissan	JP80BYLP	LPG			2007	122	581	CHE Propane			
Forklift	2369	Nissan	JP80BYLP	LPG			2007	122	493	CHE Propane			
Forklift	2370	Nissan	JP80BYLP	LPG			2007	122	468	CHE Propane			
Forklift	2371	Nissan	JP80BYLP	LPG			2007	122	279	CHE Propane			
Forklift	2372	Nissan	JP80BYLP	LPG			2007	122	296	CHE Propane			
Forklift	2373	Nissan	JP80BYLP	LPG			2007	122	302	CHE Propane			
Forklift	5061	Clark	C25L	LPG	GM	DPSIB2.7G	2016	96	225	CHE Propane			
Forklift	5062	Clark	C25L	LPG	GM	DPSIB2.7G	2016	96	244	CHE Propane			
Forklift	6004	Toyota	8FGU32	LPG	Toyota	4Y	2017	42	129	CHE Propane			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Forklift	6005	Toyota	8FGU32	LPG	Toyota	4Y	2017	42	161	CHE Propane			
Forklift	6006	Toyota	8FGU32	LPG	Toyota	4Y	2017	42	246	CHE Propane			
Forklift	6007	Toyota	8FGU32	LPG	Toyota	4Y	2017	42	99	CHE Propane			
Forklift	6008	Toyota	8FGU32	LPG	Toyota	4Y	2017	42	97	CHE Propane			
Forklift	6009	Toyota	8FGU32	LPG	Toyota	4Y	2017	42	144	CHE Propane			
Forklift	6010	Toyota	8FGU32	LPG	Toyota	4Y	2017	42	360	CHE Propane			
Forklift	6019	Caterpillar	GP30	LPG	Mitsubishi		2000	55	178	CHE Propane			22-01-14
Forklift	6023	Caterpillar	GP30	LPG	Mitsubishi		2003	57	227	CHE Propane			23-08-13
Forklift	6025	Caterpillar	GP30	LPG	Mitsubishi		2003	62	169	CHE Propane			06-08-13
Forklift	6031	Caterpillar	P6000	LPG	Nissan		2004	43	210	CHE Propane			
Forklift	6034	Caterpillar	P6000	LPG	Nissan		2004	62	140	CHE Propane			
Forklift	6037	Caterpillar	P6000	LPG	Nissan		2004	43	77	CHE Propane			
Forklift	6039	Caterpillar	P6000	LPG	Mitsubishi		2004	62	69	CHE Propane			
Forklift	6040	Caterpillar	P6000	LPG	Nissan		2004	62	0	CHE Propane			
Forklift	6041	Caterpillar	P6000	LPG	Nissan		2004	62	105	CHE Propane			
Forklift	6044	Caterpillar	P6000	LPG	Nissan		2004	43	190	CHE Propane			
Forklift	6045	Caterpillar	P6000	LPG	Nissan		2004	43	58	CHE Propane			
Forklift	70123	Toyota	7FU45	LPG	GM	4.3 Vortec	2008	200	1200	CHE Propane			
Forklift	601009	Caterpillar	V80F	LPG	Perkins		1989	65	299	CHE Propane			
Forklift	606035	Hyster	H80XL	LPG	GM		2007	100	179	CHE Propane			
Forklift	6001F	Hyster	H50FT	LPG	Mazda	2.2L	2010	46	24	CHE Propane			
Forklift	6002F	Hyster	H50FT	LPG	Mazda	2.2L	2010	46	61	CHE Propane			
Forklift	6003F	Hyster	H50FT	LPG	Mazda	2.2L	2010	46	198	CHE Propane			
Forklift	APSF416	Hyster	H135XL	LPG	Mitsubishi	4G52	1992	49	0	CHE Propane			
Forklift	APSF502	Daewoo	G355-2	LPG	GM	Vortec	2000	85	6	CHE Propane			
Forklift	CC1	Toyota		LPG			2002	43	113	CHE Propane			01-01-08
Forklift	CC100	Hyster		LPG			1990	98	63	CHE Propane			01-01-12
Forklift	CC108	Toyota		LPG			1997	43	170	CHE Propane			01-01-08
Forklift	CC109	Toyota		LPG			1997	43	53	CHE Propane			01-01-08
Forklift	CC11	Toyota		LPG			1991	43	51	CHE Propane			01-01-08
Forklift	CC110	Toyota		LPG			1997	43	411	CHE Propane			01-01-08
Forklift	CC111	Toyota		LPG			1997	43	97	CHE Propane			01-01-08
Forklift	CC112	Toyota		LPG			1997	90	115	CHE Propane			01-01-08
Forklift	CC113	Toyota		LPG			1997	90	138	CHE Propane			01-01-08
Forklift	CC114	Toyota		LPG			1997	43	432	CHE Propane			01-01-08
Forklift	CC116	Hyster		LPG			1992	98	0	CHE Propane			01-01-08
Forklift	CC119	Hyster		LPG				110	0	CHE Propane			01-01-08
Forklift	CC12	Toyota		LPG			1991	43	484	CHE Propane			01-01-08
Forklift	CC120	Hyster		LPG			1991	98	7	CHE Propane			01-01-12
Forklift	CC123	Hyster		LPG			1991	98	0	CHE Propane			01-01-08
Forklift	CC124	Hyster		LPG			1994	98	0	CHE Propane			01-01-12
Forklift	CC125	Clark		LPG			1999	64	330	CHE Propane			01-01-08
Forklift	CC126	Clark		LPG			1999	64	0	CHE Propane			01-01-08
Forklift	CC128	Clark		LPG			1999	64	295	CHE Propane			01-01-08
Forklift	CC129	Clark		LPG			1999	64	171	CHE Propane			01-01-08
Forklift	CC131	Clark		LPG			1999	64	253	CHE Propane			01-01-08
Forklift	CC132	Clark		LPG			2000	64	256	CHE Propane			01-01-08
Forklift	CC133	Clark		LPG			1999	64	335	CHE Propane			01-01-08
Forklift	CC134	Clark		LPG			1999	64	248	CHE Propane			01-01-08
Forklift	CC135	Clark		LPG			1999	64	0	CHE Propane			01-01-08
Forklift	CC136	Clark		LPG			1999	64	327	CHE Propane			01-01-08
Forklift	CC138	Clark		LPG			1999	64	8	CHE Propane			01-01-08
Forklift	CC139	Clark		LPG			1999	64	343	CHE Propane			01-01-08
Forklift	CC14	Toyota		LPG			1991	43	434	CHE Propane			01-01-08
Forklift	CC140	Clark		LPG			2000	64	252	CHE Propane			01-01-12
Forklift	CC141	Clark		LPG			2000	64	279	CHE Propane			01-01-12
Forklift	CC144	Clark		LPG			2000	64	379	CHE Propane			01-01-12
Forklift	CC146	Clark		LPG			2000	64	405	CHE Propane			01-01-12
Forklift	CC147	Clark		LPG			2000	64	334	CHE Propane			01-01-12
Forklift	CC148	Clark		LPG			2000	64	326	CHE Propane			01-01-12
Forklift	CC149	Clark		LPG			2000	64	172	CHE Propane			01-01-12
Forklift	CC15	Toyota		LPG			1997	43	934	CHE Propane			01-01-08

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Forklift	CC151	Clark		LPG			2000	64	313	CHE Propane			01-01-12
Forklift	CC152	Clark		LPG			2000	64	403	CHE Propane			01-01-12
Forklift	CC153	Clark		LPG			2000	64	200	CHE Propane			01-01-12
Forklift	CC155	Clark		LPG			2000	64	0	CHE Propane			01-01-12
Forklift	CC156	Clark		LPG			2000	64	0	CHE Propane			01-01-12
Forklift	CC157	Clark		LPG			2000	64	186	CHE Propane			01-01-12
Forklift	CC158	Clark		LPG			2000	64	404	CHE Propane			01-01-12
Forklift	CC16	Clark		LPG			1999	64	523	CHE Propane			01-01-08
Forklift	CC16F	Toyota		LPG			1994	32	120	CHE Propane			
Forklift	CC17	Toyota		LPG			1997	43	829	CHE Propane			01-01-08
Forklift	CC175	Hyster		LPG			1994	43	9	CHE Propane			01-01-08
Forklift	CC177	Hyster		LPG			1994	98	0	CHE Propane			01-01-08
Forklift	CC18	Toyota		LPG			1991	43	420	CHE Propane			01-01-08
Forklift	CC2	Toyota		LPG			2002	43	565	CHE Propane			01-01-08
Forklift	CC20	Toyota		LPG			1991	43	356	CHE Propane			01-01-08
Forklift	CC200	Toyota		LPG			1991	72	20	CHE Propane			01-01-12
Forklift	CC201	Toyota		LPG			1991	43	1245	CHE Propane			01-01-12
Forklift	CC202	Toyota		LPG			1991	43	932	CHE Propane			01-01-08
Forklift	CC203	Toyota		LPG			1991	43	786	CHE Propane			01-01-08
Forklift	CC204	Toyota		LPG			1991	43	547	CHE Propane			01-01-08
Forklift	CC205	Toyota		LPG			1991	43	141	CHE Propane			01-01-08
Forklift	CC206	Toyota		LPG			1990	43	1123	CHE Propane			01-01-08
Forklift	CC207	Toyota		LPG			1991	43	600	CHE Propane			01-01-08
Forklift	CC208	Toyota		LPG			1991	43	1420	CHE Propane			01-01-08
Forklift	CC209	Toyota		LPG			1991	43	272	CHE Propane			01-01-08
Forklift	CC21	Toyota		LPG			1990	72	0	CHE Propane			01-01-08
Forklift	CC210	Toyota		LPG			1991	43	982	CHE Propane			01-01-08
Forklift	CC211	Toyota		LPG			1996	43	176	CHE Propane			01-01-08
Forklift	CC212	Toyota		LPG			1996	43	1250	CHE Propane			01-01-08
Forklift	CC213	Toyota		LPG			1996	43	1159	CHE Propane			01-01-08
Forklift	CC214	Toyota		LPG			1996	43	1282	CHE Propane			01-01-08
Forklift	CC218	Toyota		LPG			1996	43	549	CHE Propane			01-01-08
Forklift	CC219	Toyota		LPG			1996	43	797	CHE Propane			01-01-08
Forklift	CC21D	Dae		LPG				64	397	CHE Propane			01-01-08
Forklift	CC22	Toyota		LPG			1996	43	55	CHE Propane			01-01-08
Forklift	CC220	Toyota		LPG			1997	43	1242	CHE Propane			01-01-08
Forklift	CC221	Toyota		LPG			2008	43	282	CHE Propane			
Forklift	CC222	Toyota		LPG			2008	43	194	CHE Propane			
Forklift	CC223	Toyota		LPG			2008	43	137	CHE Propane			
Forklift	CC224	Toyota		LPG			2008	43	442	CHE Propane			
Forklift	CC225	Toyota		LPG			2008	43	290	CHE Propane			
Forklift	CC226	Toyota		LPG			2008	43	393	CHE Propane			
Forklift	CC227	Toyota		LPG			2008	43	1007	CHE Propane			
Forklift	CC228	Toyota		LPG			2008	43	430	CHE Propane			
Forklift	CC229	Toyota		LPG			2008	43	267	CHE Propane			
Forklift	CC22D	Dae		LPG				64	2	CHE Propane			01-01-08
Forklift	CC23	Toyota		LPG			1991	43	1	CHE Propane			01-01-08
Forklift	CC230	Toyota		LPG			2008	43	491	CHE Propane			
Forklift	CC231	Toyota		LPG			2008	43	708	CHE Propane			
Forklift	CC232	Toyota		LPG			2008	43	371	CHE Propane			
Forklift	CC233	Toyota		LPG			2008	43	638	CHE Propane			
Forklift	CC234	Toyota		LPG			2008	43	641	CHE Propane			
Forklift	CC235	Toyota		LPG			2008	43	568	CHE Propane			
Forklift	CC236	Toyota		LPG			2008	43	792	CHE Propane			
Forklift	CC237	Toyota		LPG			2008	43	445	CHE Propane			
Forklift	CC238	Toyota		LPG			2008	43	951	CHE Propane			
Forklift	CC239	Toyota		LPG			2008	43	1424	CHE Propane			
Forklift	CC23D	Dae		LPG				64	440	CHE Propane			01-01-08
Forklift	CC24	Dae		LPG					592	CHE Propane			
Forklift	CC240	Toyota		LPG			2008	43	723	CHE Propane			
Forklift	CC241	Toyota		LPG			2008	43	1216	CHE Propane			
Forklift	CC242	Toyota		LPG			2008	43	1317	CHE Propane			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Forklift	CC243	Toyota		LPG			2008	43	345	CHE Propane			
Forklift	CC244	Toyota		LPG			2008	43	1170	CHE Propane			
Forklift	CC245	Toyota		LPG			2008	43	406	CHE Propane			
Forklift	CC25	Toyota		LPG				43	341	CHE Propane			01-01-08
Forklift	CC26	Toyota		LPG				43	594	CHE Propane			01-01-08
Forklift	CC26D	Dae		LPG				64	182	CHE Propane			01-01-08
Forklift	CC27	Toyota		LPG			1991	43	356	CHE Propane			01-01-08
Forklift	CC27D	Dae		LPG				64	484	CHE Propane			01-01-08
Forklift	CC28	Toyota		LPG			1991	43	688	CHE Propane			01-01-08
Forklift	CC30	Toyota		LPG			1991	43	432	CHE Propane			01-01-08
Forklift	CC31	Toyota		LPG			1990	72	0	CHE Propane			01-01-08
Forklift	CC32	Toyota		LPG			1997	43	659	CHE Propane			01-01-08
Forklift	CC33	Toyota		LPG			1996	43	749	CHE Propane			01-01-08
Forklift	CC34	Toyota		LPG			1997	43	1237	CHE Propane			01-01-08
Forklift	CC35	Toyota		LPG			1997	43	1015	CHE Propane			01-01-08
Forklift	CC36	Toyota		LPG			1997	43	1172	CHE Propane			01-01-08
Forklift	CC37	Toyota		LPG			1997	43	9	CHE Propane			01-01-08
Forklift	CC38	Toyota		LPG			1991	43	417	CHE Propane			01-01-08
Forklift	CC39	Toyota		LPG			1997	43	428	CHE Propane			01-01-08
Forklift	CC4	Toyota		LPG			1996	43	1152	CHE Propane			01-01-08
Forklift	CC40	Toyota		LPG			1991	43	591	CHE Propane			01-01-08
Forklift	CC41	Toyota		LPG			1990	72	0	CHE Propane			01-01-08
Forklift	CC43	Toyota		LPG			1991	43	469	CHE Propane			01-01-08
Forklift	CC44	Toyota		LPG			1991	43	358	CHE Propane			01-01-08
Forklift	CC46	Toyota		LPG			1991	43	9	CHE Propane			01-01-08
Forklift	CC47	Toyota		LPG			1991	43	430	CHE Propane			01-01-08
Forklift	CC48	Toyota		LPG			1991	43	519	CHE Propane			01-01-08
Forklift	CC49	Toyota		LPG			1991	43	669	CHE Propane			01-01-08
Forklift	CC5	Toyota		LPG			1991	43	759	CHE Propane			01-01-08
Forklift	CC50	Toyota		LPG			1991	72	48	CHE Propane			01-01-12
Forklift	CC51	Toyota		LPG			1991	43	995	CHE Propane			01-01-08
Forklift	CC52	Toyota		LPG			1991	43	788	CHE Propane			01-01-08
Forklift	CC55	Toyota		LPG			1991	43	370	CHE Propane			01-01-08
Forklift	CC56	Toyota		LPG			1991	43	456	CHE Propane			01-01-08
Forklift	CC57	Toyota		LPG			1991	43	988	CHE Propane			01-01-08
Forklift	CC58	Toyota		LPG			1991	43	420	CHE Propane			01-01-08
Forklift	CC59	Toyota		LPG			1991	43	377	CHE Propane			01-01-08
Forklift	CC6	Toyota		LPG			1997	43	619	CHE Propane			01-01-08
Forklift	CC60	Toyota		LPG			1991	43	1372	CHE Propane			01-01-08
Forklift	CC61	Toyota		LPG			1997	43	3	CHE Propane			01-01-08
Forklift	CC62	Toyota		LPG			1997	43	2718	CHE Propane			01-01-08
Forklift	CC63	Toyota		LPG			1997	43	415	CHE Propane			01-01-08
Forklift	CC64	Toyota		LPG			1997	43	333	CHE Propane			01-01-08
Forklift	CC65	Toyota		LPG			1991	43	488	CHE Propane			01-01-08
Forklift	CC67	Toyota		LPG			1997	43	394	CHE Propane			01-01-08
Forklift	CC68	Toyota		LPG			1997	43	371	CHE Propane			01-01-08
Forklift	CC69	Toyota		LPG			1997	43	304	CHE Propane			01-01-08
Forklift	CC7	Toyota		LPG			1991	43	596	CHE Propane			01-01-08
Forklift	CC70	Toyota		LPG			1991	43	824	CHE Propane			01-01-08
Forklift	CC71	Toyota		LPG			1991	43	596	CHE Propane			01-01-08
Forklift	CC73	Toyota		LPG			1997	43	435	CHE Propane			01-01-08
Forklift	CC74	Toyota		LPG			1991	43	312	CHE Propane			01-01-08
Forklift	CC75	Toyota		LPG			1991	43	643	CHE Propane			01-01-08
Forklift	CC8	Toyota		LPG				72	460	CHE Propane			01-01-08
Forklift	CC81	Toyota		LPG			1997	43	2	CHE Propane			01-01-08
Forklift	CC82	Toyota		LPG			1991	43	466	CHE Propane			01-01-08
Forklift	CC83	Toyota		LPG			1991	43	377	CHE Propane			01-01-08
Forklift	CC86	Toyota		LPG			1991	43	414	CHE Propane			01-01-08
Forklift	CC87	Toyota		LPG			1991	43	396	CHE Propane			01-01-08
Forklift	CC88	Toyota		LPG			1990	43	0	CHE Propane			01-01-08
Forklift	CC89	Toyota		LPG			2002	43	292	CHE Propane			01-01-08
Forklift	CC9	Toyota		LPG			1991	43	1	CHE Propane			01-01-08

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Forklift	CC90	Toyota		LPG			1997	43	902	CHE Propane			01-01-08
Forklift	CC91	Toyota		LPG			1997	43	1088	CHE Propane			01-01-08
Forklift	CC92	Toyota		LPG			1997	43	1154	CHE Propane			01-01-08
Forklift	CC93	Toyota		LPG			1997	43	506	CHE Propane			01-01-08
Forklift	CC94	Toyota		LPG			1997	43	1114	CHE Propane			01-01-08
Forklift	CC95	Toyota		LPG			1997	43	0	CHE Propane			01-01-08
Forklift	CC96	Toyota		LPG			1997	43	1616	CHE Propane			01-01-08
Forklift	CC97	Toyota		LPG			1997	43	1349	CHE Propane			01-01-08
Forklift	CC98	Toyota		LPG			1997	43	315	CHE Propane			01-01-08
Forklift	CC99	Toyota		LPG			1997	43	1005	CHE Propane			01-01-08
Forklift	CC9F	Toyota		LPG			1990	72	119	CHE Propane			01-01-08
Forklift	CCD1	Toyota		LPG			1993	43	29	CHE Propane			01-01-08
Forklift	CCD3	Toyota		LPG			1993	43	980	CHE Propane			01-01-08
Forklift	CCD4	Toyota		LPG			1993	43	1177	CHE Propane			01-01-08
Forklift	CCD5	Toyota		LPG			1993	43	173	CHE Propane			01-01-08
Forklift	CCT1	Toyota		LPG			1996	43	503	CHE Propane			01-01-08
Forklift	CCT2	Toyota		LPG			1991	43	43	CHE Propane			01-01-08
Forklift	CCT3	Toyota		LPG			1991	43	629	CHE Propane			01-01-08
Forklift	EMSF631	Clark	GCS20MB	LPG	Mitsubishi	4G52	1988	49	130	CHE Propane			
Forklift	EMSF632	Clark	GCS 20	LPG	Mitsubishi	4G52	1988	49	8	CHE Propane			
Forklift	EMSF686	Komatsu	FG40ZT-8	LPG	Nissan	TB45L	2007	86	75	CHE Propane			
Forklift	EMSF687	Komatsu	FG40ZT-8	LPG	Nissan	TB45L	2007	86	84	CHE Propane			
Forklift	EMSF696	Nissan	PF80YLP	LPG	Nissan	TB45	2010	95	190	CHE Propane			
Forklift	EMSF697	Nissan	PF80YLP	LPG	Nissan	TB45	2010	95	317	CHE Propane			
Forklift	EMSF698	Nissan	PF80YLP	LPG	Nissan	TB45	2010	95	100	CHE Propane			
Forklift	EMSF699	Nissan	PF80YLP	LPG	Nissan	TB45	2010	95	291	CHE Propane			
Forklift	EMSF700	Nissan	PF80YLP	LPG	Nissan	TB45	2010	95	189	CHE Propane			
Forklift	EMSF704	Clark	C40L	LPG	GM	4.3L	2012	120	379	CHE Propane			
Forklift	EMSF705	Clark	C40L	LPG	GM	4.3L	2012	120	34	CHE Propane			
Forklift	EMSF706	Clark	C40L	LPG	GM	4.3L	2012	120	227	CHE Propane			
Forklift	EMSF707	Clark	C40L	LPG	GM	4.3L	2012	120	86	CHE Propane			
Forklift	EMSF708	Clark	C40L	LPG	GM	4.3L	2012	120	387	CHE Propane			
Forklift	EMSF709	Toyota	8FGUS25-147V	LPG	Toyota	:2403050	2012	51	18	CHE Propane			
Forklift	EMSF710	Toyota	8FGUS25-147V	LPG	Toyota	:2403050	2012	51	81	CHE Propane			
Forklift	EMSF716	Mitsubishi	FG45N-LE	LPG	Nissan	TB45	2013	95	121	CHE Propane			
Forklift	EMSF717	Mitsubishi	FG45N-LE	LPG	Nissan	TB45	2013	95	330	CHE Propane			
Forklift	EMSF718	Mitsubishi	FG45N-LE	LPG	Nissan	TB45	2013	95	421	CHE Propane			
Forklift	EMSF721	Hyster	H90FT	LPG	GM	4.3L	2014	100	240	CHE Propane			
Forklift	EMSF722	Hyster	H90FT	LPG	GM	4.3L	2014	100	152	CHE Propane			
Forklift	EMSF723	Hyster	H90FT	LPG	GM	4.3L	2014	100	191	CHE Propane			
Forklift	EMSF724	Hyster	H90FT	LPG	GM	4.3L	2014	100	228	CHE Propane			
Forklift	EMSF725	Toyota	8FGU25	LPG	Toyota	204Y	2014	51	428	CHE Propane			
Forklift	EMSF726	Toyota	8FGU25	LPG	Toyota	204Y	2014	51	635	CHE Propane			
Forklift	F21	Nissan	60	LPG	Nissan	K25L	2007		294	CHE Propane			
Forklift	F22	Nissan	60	LPG	Nissan	K25L	2007		143	CHE Propane			
Forklift	F23	Nissan		LPG	Nissan		2007		448	CHE Propane			
Forklift	F31	CAT		LPG	Nissan	K25L	2008		239	CHE Propane			
Forklift	F32	CAT		LPG	Nissan	K25L	2008		293	CHE Propane			
Forklift	F33	CAT		LPG	Nissan	K25L	2008		120	CHE Propane			
Forklift	L5/524P	Clark	C55S	LPG	GM	V6 4.3	2013	93	353	CHE Propane			
Forklift	L5/525P	Clark	C55S	LPG	GM	V6 4.3	2013	93	439	CHE Propane			
Forklift	L5/526P	Clark	C55S	LPG	GM	V6 4.3	2013	93	132	CHE Propane			
Forklift	L5/527P	Clark	C55S	LPG	GM	V6 4.3	2013	93	476	CHE Propane			
Forklift	L5/528P	Clark	C55S	LPG	GM	V6 4.3	2013	93	413	CHE Propane			
Forklift	L5/529P	Clark	C55S	LPG	GM	V6 4.3	2013	93	589	CHE Propane			
Forklift	L5/530P	Clark	C55S	LPG	GM	V6 4.3	2013	93	443	CHE Propane			
Forklift	L5/531P	Clark	C55S	LPG	GM	V6 4.3	2013	93	433	CHE Propane			
Forklift	L5/532P	Clark	C55S	LPG	GM	V6 4.3	2013	93	436	CHE Propane			
Forklift	L5/533P	Clark	C55S	LPG	GM	V6 4.3	2013	93	448	CHE Propane			
Forklift	L5/534P	Clark	C55S	LPG	GM	V6 4.3	2013	93	183	CHE Propane			
Forklift	L5/535P	Clark	C55S	LPG	GM	V6 4.3	2013	93	452	CHE Propane			
Forklift	L5/536P	Clark	C55S	LPG	GM	V6 4.3	2013	93	214	CHE Propane			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Forklift	L5/537P	Clark	C55S	LPG	GM	V6 4.3	2013	93	366	CHE Propane			
Forklift	L5/538P	Clark	C55S	LPG	GM	V6 4.3	2013	93	130	CHE Propane			
Forklift	L8/801P	Clark	C75L	LPG	GM	V6 4.3	2013	93	107	CHE Propane			
Forklift	L8/802P	Clark	C75L	LPG	GM	V6 4.3	2013	93	68	CHE Propane			
Forklift	LAFL1203	Caterpillar	5,000 lb.	LPG	Caterpillar		1994	122	124	CHE Propane			
Forklift	LAFL1204	Mitsubishi	5,000 lb	LPG	Mitsubishi		1994	122	254	CHE Propane			
Forklift	LAFL1331			LPG			1995	122	200	CHE Propane			
Forklift	LAFL1343			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1344			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1345			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1346			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1347			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1348			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1349			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1350			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1351			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1352			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1353			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1354			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1355			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1356			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1357			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1358			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1359			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1360			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1361			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1362			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1363			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1364			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1365			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1366			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1367			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1368			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1369			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1370			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1371			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1372			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1373			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1374			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1375			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1376			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1377			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1378			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1379			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1380			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1381			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1382			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1383			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1384			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1385			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1386			LPG			1993	122	200	CHE Propane			01-01-12
Forklift	LAFL1387	Mitsubishi		LPG			1994	122	200	CHE Propane			01-01-12
Forklift	LAFL1388	Komatsu		LPG	Komatsu		1995	122	200	CHE Propane			01-01-12
Forklift	LAFL1389		5000 lb	LPG			1995	122	200	CHE Propane			01-01-12
Forklift	LAFL1390	Hyster		LPG	Hyster		1997	122	200	CHE Propane			01-01-12
Forklift	LAFL1391	Hyster		LPG			2000	122	200	CHE Propane			
Forklift	LAFL1392	Nissan		LPG			2002	122	200	CHE Propane			
Forklift	LAFL1393	Nissan		LPG			2002	122	200	CHE Propane			
Forklift	LAFL1394	Nissan		LPG			2002	122	200	CHE Propane			
Forklift	LAFL1414	Komatsu	5000 lb	LPG			2002	58	1000	CHE Propane			
Forklift	LAFL1415	Komatsu	5000 lb	LPG			2002	58	1000	CHE Propane			
Forklift	LAFL1416	Komatsu	6000 lb	LPG			2002	60	1000	CHE Propane			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Forklift	LAFL1417	Komatsu	6000 lb	LPG			2002	60	1000	CHE Propane			
Forklift	LAFL1418	Komatsu	6000 lb	LPG			2002	60	1000	CHE Propane			
Forklift	LAFL1419	Komatsu	6000 lb	LPG			2002	60	1000	CHE Propane			
Forklift	LAFL1420	Komatsu	6000 lb	LPG			2002	60	1000	CHE Propane			
Forklift	LAFL1421	Komatsu	6000 lb	LPG			2002	60	1000	CHE Propane			
Forklift	LAFL1653	Yale	GLP050VXESV	LPG	Mazda	F2-Z25D	2006	51	568	CHE Propane			
Forklift	LAFL1654	Yale	GLP050VXESV	LPG	Mazda	F2-Z25D	2006	51	460	CHE Propane			
Forklift	LAFL1655	Heyster	H50FT	LPG	IMPCO		2010	46	98	CHE Propane			
Forklift	LAFL3020	Komatsu	6000 lb	LPG			2008	60	1000	CHE Propane			
Forklift	LAFL3021	Komatsu	6000 lb	LPG			2008	60	1000	CHE Propane			
Forklift	LAFL3022	Komatsu	6000 lb	LPG			2008	60	1000	CHE Propane			
Forklift	LAFL3023	Komatsu	6000 lb	LPG			2008	60	1000	CHE Propane			
Forklift	LAFLSCS	Hyster	H50XM	LPG	Hyster				502	CHE Propane			
Forklift	LAGPF1567			LPG			2015	125	2179	CHE Propane			
Hybrid RTG	9073	ZPMC	RTG	Diesel			2011	197	2015	CHE Diesel			
Hybrid RTG	9081	Paceco	RTG	Diesel	Caterpillar	C7.1 ACERT	2015	302	3608	CHE Diesel			
Hybrid RTG	9082	Paceco	RTG	Diesel	Caterpillar	C7.1 ACERT	2015	302	3786	CHE Diesel			
Hybrid RTG	9083	Paceco	RTG	Diesel	Caterpillar	C7.1 ACERT	2015	302	3021	CHE Diesel			
Hybrid RTG	9084	Paceco	RTG	Diesel	Caterpillar	C7.1 ACERT	2015	302	3331	CHE Diesel			
Hybrid RTG	9085	Paceco	RTG	Diesel	Caterpillar	C7.1 ACERT	2015	302	2198	CHE Diesel			
Hybrid RTG	90906	Mi Jack	1200 REH	Diesel	John Deere	4045HF485	2009	137	1463	CHE Diesel			
Hybrid RTG	FMSZ001	Paceco-Mitsui		Diesel	Caterpillar	C7	2018	249	5491	CHE Diesel			
Hybrid RTG	FMSZ002	Paceco-Mitsui		Diesel	Caterpillar	C7	2018	249	5482	CHE Diesel			
Hybrid RTG	FMSZ003	Paceco-Mitsui		Diesel	Caterpillar	C7	2018	249	5611	CHE Diesel			
Hybrid RTG	FMSZ004	Paceco-Mitsui		Diesel	Caterpillar	C7	2018	249	5031	CHE Diesel			
Hybrid RTG	FMSZ005	Paceco-Mitsui		Diesel	Caterpillar	C7	2018	249	5101	CHE Diesel			
Hybrid RTG	FMSZ006	Paceco-Mitsui		Diesel	Caterpillar	C7	2018	249	4609	CHE Diesel			
Hybrid Straddle Carrier	SC0029	Kalmar	HSC350A	Diesel	AGCO	44AWF	2016	102	2341	CHE Diesel			
Hybrid Straddle Carrier	SC0030	Kalmar	HSC350A	Diesel	AGCO	44AWF	2016	102	2260	CHE Diesel			
Hybrid Straddle Carrier	SC0031	Kalmar	HSC350A	Diesel	AGCO	44AWF	2016	102	2679	CHE Diesel			
Hybrid Straddle Carrier	SC0032	Kalmar	HSC350A	Diesel	AGCO	44AWF	2016	102	2414	CHE Diesel			
Hybrid Straddle Carrier	SC0033	Kalmar	HSC350A	Diesel	AGCO	44AWF	2016	102	2602	CHE Diesel			
Hybrid Straddle Carrier	SC0034	Kalmar	HSC350A	Diesel	AGCO	44AWF	2016	102	0	CHE Diesel			
Hybrid Straddle Carrier	SC0035	Kalmar	HSC350A	Diesel	AGCO	44AWF	2016	102	2211	CHE Diesel			
Hybrid Straddle Carrier	SC0036	Kalmar	HSC350A	Diesel	AGCO	44AWF	2016	102	2190	CHE Diesel			
Hybrid Straddle Carrier	SC0037	Kalmar	HSC350A	Diesel	AGCO	44AWF	2016	102	3026	CHE Diesel			
Hybrid Straddle Carrier	SC0038	Kalmar	HSC350A	Diesel	AGCO	44AWF	2016	102	2545	CHE Diesel			
Hybrid Straddle Carrier	SC0039	Kalmar	HSC350A	Diesel	AGCO	44AWF	2016	102	3075	CHE Diesel			
Hybrid Straddle Carrier	SC0040	Kalmar	HSC350A	Diesel	AGCO	44AWF	2016	102	1850	CHE Diesel			
Loader	306002	Caterpillar	966-D	Diesel	Caterpillar	C-7	2010	300	0	CHE Diesel			
Loader	306003	Caterpillar	966-D	Diesel	Caterpillar	C-7	2010	232	755	CHE Diesel		22-07-10	
Loader	306019	Caterpillar	966G	Diesel	Caterpillar	3176C	2005	259	778	CHE Diesel		08-09-10	
Loader	308005	Caterpillar	980H	Diesel	Caterpillar	C15	2007	318	2115	CHE Diesel		08-05-15	
Loader	309002	Caterpillar	988-F	Diesel	Caterpillar	3408E	1999	430	0	CHE Diesel		07-01-14	
Loader	309015	Caterpillar	988H	Diesel	Caterpillar		2011	210	3786	CHE Diesel		27-02-15	
Loader	309016	Caterpillar	988K	Diesel	Caterpillar		2013	210	2639	CHE Diesel			
Loader	712002	Caterpillar	904H	Diesel	Mitsubishi	S4Q2-T	2008	55	952	CHE Diesel			
Loader	LAL1563V2	Case	480	Diesel			2009	110	964	CHE Diesel			
Loader	M115	Mijack	M115	Diesel	Cummins	QSX11.9	2010	460	36	CHE Diesel			
Loader	MJ150	Mijack	MJ150	Diesel	Cummins	QSB 6.7	2015	260	559	CHE Diesel			
Loader	3702001	Hustler		Electric					0	CHE Electric			
Loader	3702002	Hustler		Electric					0	CHE Electric			
Man Lift	1005	JLG	86055	Diesel	Deutz	FRM2011	2002	87	223	CHE Diesel		01-01-12	
Man Lift	1072	Terex	TB60	Diesel	Cummins	B3.9	2000	80	374	CHE Diesel		01-01-12	
Man Lift	1113	JLG	86JS	Diesel			2006	87	386	CHE Diesel		01-01-12	
Man Lift	1211	Skyjack		Diesel			2018	107	0	CHE Diesel			
Man Lift	1212	Skyjack		Diesel			2018	107	0	CHE Diesel			
Man Lift	60702	Genie lift	S60	Diesel	Deutz	D2011L031	2007	49	325	CHE Diesel			
Man Lift	1004003	JLG Lift	600AJ	Diesel			2012	80	0	CHE Diesel			
Man Lift	1004005	JLG Lift	800AJ	Diesel	Deutz	D2011L040	2010	49	2	CHE Diesel			
Man Lift	1004006	JLG Lift	800 AJ	Diesel	Perkins	GP65-4N	2009	65	576	CHE Diesel			
Man Lift	1004007	JLG Lift	800 AJ	Diesel	Perkins	GP65-4N	2009	65	231	CHE Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model		Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Man Lift	1204ML	Terex	TB85	Diesel	Cummins	B3.9		2000	152	54	CHE Diesel		05-09-13	
Man Lift	1210TH	Skyjack	SJ1256	Diesel	Deutz AG	TCD 3.6 l4		2017	107	39	CHE Diesel			
Man Lift	EMSU462	Genie	S-125	Diesel				2003	75	75	CHE Diesel		01-01-14	
Man Lift	EMSU679	Genie	S-65	Diesel				2007	75	118	CHE Diesel		01-01-14	
Man Lift	ML002	Terex	TB60	Diesel	Cummins	B3.9-C		2002	73	82	CHE Diesel		20-08-14	
Man Lift	ML003	JLG	1350SJP	Diesel	Deutz	TD2011L04		2012	73	232	CHE Diesel			
Man Lift	ML120	JLG		Diesel	Deutz	BF4M2011		2004	87	27	CHE Diesel		01-09-10	
Man Lift	ML42	JLG	G6-42A	Diesel	Cummins	QSF3.8		2015	110	63	CHE Diesel			
Man Lift	ML86	JLG		Diesel	Deutz	BF4M2011		2006	87	199	CHE Diesel		01-09-10	
Man Lift	1209	Skyjack	SJIH 4740	Electric						0	CHE Electric			
Man Lift	1213	Skyjack		Electric						0	CHE Electric			
Man Lift	1002005	JLG Lift	GS2646	Electric						0	CHE Electric			
Man Lift	1008001	Skyjack	3291	Electric						0	CHE Electric			
Man Lift	1008002	Skyjack	3226	Electric						0	CHE Electric			
Man Lift	EMSU656	JLG	660SJ	Gasoline				2007	60	88	CHE Gasoline			
Material Handler	108011	Caterpillar	345C MH	Diesel	Caterpillar	C13		2008	371	2010	CHE Diesel		27-02-15	
Material Handler	108012	Caterpillar	345C MH	Diesel	Caterpillar	C13		2007	371	3078	CHE Diesel		24-03-15	
Material Handler	108013	Caterpillar	345C MH	Diesel	Caterpillar	C13		2007	371	1659	CHE Diesel		23-09-13	
Material Handler	108014	Caterpillar	345C MH	Diesel	Caterpillar	C13		2008	371	2017	CHE Diesel		27-02-15	
Material Handler	108015	Caterpillar	345	Diesel	Caterpillar	C13		2005	371	3952	CHE Diesel		09-05-16	
Material Handler	110001	Caterpillar	375-L	Diesel	Caterpillar	C15		2009	475	614	CHE Diesel		01-06-12	
Material Handler	110007	Caterpillar	375-L	Diesel	Caterpillar	C15		2009	450	560	CHE Diesel		01-08-11	
Material Handler	127001	Caterpillar	385C	Diesel	Caterpillar	C18		2008	390	1511	CHE Diesel		23-03-15	
Material Handler	127002	Caterpillar	385C	Diesel	Caterpillar	C18		2011	390	1534	CHE Diesel		20-03-15	
Miscellaneous	107026	Caterpillar	330DL	Diesel	Caterpillar	C9		2007	268	944	CHE Diesel		01-04-11	
Miscellaneous	3701005	Lindeman	PA75	Electric				1994		0	CHE Electric			
Miscellaneous	3701006	Al John		Electric				2008		0	CHE Electric			
Rail Pusher	3501010	Rail King	RK320	Diesel	Cummins			2012	194	143	CHE Diesel			
Reach Stacker	302	Kalmar	TD100G	Diesel	Cummins	QSL9 250		2013	250	0	CHE Diesel			
Rub-trd Gantry Crane	9051	ZPMC	RTG	Diesel	Caterpillar		3456	2003	612	1777	CHE Diesel	01-12-12		
Rub-trd Gantry Crane	9052	ZPMC	RTG	Diesel	Caterpillar		3456	2003	612	1759	CHE Diesel	01-12-12		
Rub-trd Gantry Crane	9053	ZPMC	RTG	Diesel	Caterpillar		3456	2003	612	1272	CHE Diesel	01-12-12		
Rub-trd Gantry Crane	9054	ZPMC	RTG	Diesel	Caterpillar		3456	2003	612	1685	CHE Diesel	01-12-12		
Rub-trd Gantry Crane	9055	ZPMC	RTG	Diesel	Caterpillar		3456	2003	612	1790	CHE Diesel	01-12-12		
Rub-trd Gantry Crane	9056	ZPMC	RTG	Diesel	Caterpillar		3456	2003	612	1464	CHE Diesel	01-12-12		
Rub-trd Gantry Crane	9057	ZPMC	RTG	Diesel	Caterpillar		3456	2003	612	1333	CHE Diesel	01-12-12		
Rub-trd Gantry Crane	9058	ZPMC	RTG	Diesel	Caterpillar		3456	2003	612	1111	CHE Diesel	01-12-12		
Rub-trd Gantry Crane	9061	Paceco	RTG	Diesel	Deutz	8M1015C		2004	454	2360	CHE Diesel	01-12-12		
Rub-trd Gantry Crane	9062	Paceco	RTG	Diesel	Deutz	8M1015C		2004	454	2132	CHE Diesel	01-12-12		
Rub-trd Gantry Crane	9071	ZPMC	RTG	Diesel	Cummins	QSX15-G7		2005	685	2529	CHE Diesel	01-12-12		
Rub-trd Gantry Crane	9072	ZPMC	RTG	Diesel	Cummins	QSX15-G7		2005	685	1301	CHE Diesel	01-12-12		
Rub-trd Gantry Crane	9074	ZPMC	RTG	Diesel	Cummins	QSX15-G7		2005	685	2429	CHE Diesel	01-12-12		
Rub-trd Gantry Crane	9075	ZPMC	RTG	Diesel	Cummins	QSX15-G7		2005	685	1757	CHE Diesel	01-12-12		
Rub-trd Gantry Crane	9076	ZPMC	RTG	Diesel	Cummins	QSX15-G7		2005	685	1236	CHE Diesel	01-12-12		
Rub-trd Gantry Crane	90285	Mi Jack	1000RC	Diesel	Detroit	DDEC		2011	320	860	CHE Diesel			
Rub-trd Gantry Crane	90504	Mi Jack	1200R	Diesel	Cummins	QSL9		2011	320	883	CHE Diesel			
Rub-trd Gantry Crane	90602	Mi Jack	1200R	Diesel	Detroit	DDEC		2011	320	2345	CHE Diesel			
Rub-trd Gantry Crane	90805	Mi Jack	1200R	Diesel	Cummins	QSL9		2011	320	1046	CHE Diesel			
Rub-trd Gantry Crane	91304	Mi Jack	1200R	Diesel	Cummins	QSL9		2011	320	2130	CHE Diesel			
Rub-trd Gantry Crane	91501	Mi Jack	1200R	Diesel	Cummins	QSL9 333		2015	320	4854	CHE Diesel			
Rub-trd Gantry Crane	EMSZ055	Sumitomo	RTG62 / 22.555	Diesel	Cummins	QSX15G		2014	750	4595	CHE Diesel			
Rub-trd Gantry Crane	EMSZ056	Sumitomo	RTG62 / 22.555	Diesel	Cummins	QSX15G		2014	750	4977	CHE Diesel		01-01-16	
Rub-trd Gantry Crane	EMSZ057	Noell	RTG62 / 22.555	Diesel	Cummins	KTA 19-G2		2013	600	5011	CHE Diesel			
Rub-trd Gantry Crane	EMSZ058	Noell	RTG62 / 22.555	Diesel	Cummins	KTA 19-G2		2013	600	4810	CHE Diesel			
Rub-trd Gantry Crane	EMSZ059	Noell	RTG62 / 22.555	Diesel	Cummins	KTA 19-G2		2013	600	4803	CHE Diesel			
Rub-trd Gantry Crane	EMSZ060	Noell	RTG62 / 22.555	Diesel	Cummins	KTA 19-G2		2013	600	5222	CHE Diesel			
Rub-trd Gantry Crane	EMSZ061	Noell	RTG62 / 22.555	Diesel	Cummins	KTA 19-G2		2013	600	5585	CHE Diesel			
Rub-trd Gantry Crane	EMSZ062	Noell	RTG62 / 22.555	Diesel	Cummins	KTA 19-G2		2013	600	2944	CHE Diesel			
Rub-trd Gantry Crane	EMSZ063	Noell	RTG62 / 22.555	Diesel	Cummins	KTA 19-G2		2013	600	4328	CHE Diesel			
Rub-trd Gantry Crane	EMSZ064	Noell	RTG62 / 22.555	Diesel	Cummins	KTA 19-G2		2013	600	4470	CHE Diesel			
Rub-trd Gantry Crane	EMSZ304	Paceco-Mitsui		Diesel	Cummins	QSX15G		2014	750	3798	CHE Diesel			
Rub-trd Gantry Crane	EMSZ305	Noell		Diesel	Caterpillar	C15		2015	624	4100	CHE Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Rub-trd Gantry Crane	EMSZ306	Noell		Diesel	Caterpillar	C15	2015	624	3153	CHE Diesel			
Rub-trd Gantry Crane	EMSZ307	Noell		Diesel	Caterpillar	C15	2015	624	2603	CHE Diesel			
Rub-trd Gantry Crane	EMSZ308	Noell		Diesel	Caterpillar	C15	2015	624	3136	CHE Diesel			
Rub-trd Gantry Crane	K1	Kone	D1703	Diesel	Cummins	QSX 15-G7	2005	680	364	CHE Diesel	01-01-12		
Rub-trd Gantry Crane	K10	Kone	D1703	Diesel	Cummins	QSX 15-G7	2005	680	2425	CHE Diesel	13-12-12		
Rub-trd Gantry Crane	K12	Kone	D1703	Diesel	Cummins	QSX 15-G7	2005	680	2050	CHE Diesel			
Rub-trd Gantry Crane	K13	Kone	D1703	Diesel	Cummins	QSX 15-G7	2005	680	2579	CHE Diesel		23-01-13	
Rub-trd Gantry Crane	K14	Kone	D1703	Diesel	Cummins	QSX 15-G7	2005	680	2692	CHE Diesel		31-01-13	
Rub-trd Gantry Crane	K15	Kone	D1703	Diesel	Cummins	QSX 15-G7	2002	680	1225	CHE Diesel	21-05-12		
Rub-trd Gantry Crane	K18	Kone	D1703	Diesel	Cummins	QSX 15-G7	2006	680	2790	CHE Diesel			
Rub-trd Gantry Crane	K19	Kone	D1703	Diesel	Cummins	QSX 15-G7	2006	680	2551	CHE Diesel			
Rub-trd Gantry Crane	K21	Kone	D1703	Diesel	Cummins	QSX 15-G7	2006	680	2927	CHE Diesel		01-10-14	
Rub-trd Gantry Crane	K22	Kone	D1703	Diesel	Cummins	QSX 15-G7	2006	680	3054	CHE Diesel			
Rub-trd Gantry Crane	K23	Kone	D1703	Diesel	Cummins	QSX 15-G7	2006	680	534	CHE Diesel			
Rub-trd Gantry Crane	K24	Kone	D1703	Diesel	Cummins	QSX 15-G7	2006	680	2833	CHE Diesel			
Rub-trd Gantry Crane	K25	Kone	D1703	Diesel	Cummins	QSX 15-G7	2006	680	3172	CHE Diesel			
Rub-trd Gantry Crane	K28	Kone	D1703	Diesel	Cummins	QSX 15-G7	2006	680	2828	CHE Diesel		26-02-13	
Rub-trd Gantry Crane	K3	Kone	D1703	Diesel	Cummins	QSX 15-G7	2005	680	2612	CHE Diesel	24-10-12		
Rub-trd Gantry Crane	K31	Kone	D1703	Diesel	Cummins	QSX 15-G7	2006	680	3184	CHE Diesel		13-02-13	
Rub-trd Gantry Crane	K32	Kone	D1703	Diesel	Cummins	QSX 15-G7	2007	680	2513	CHE Diesel		01-10-14	
Rub-trd Gantry Crane	K4	Kone	D1703	Diesel	Cummins	QSX 15-G7	2005	680	3237	CHE Diesel	31-07-12		
Rub-trd Gantry Crane	K5	Kone	D1703	Diesel	Cummins	QSX 15-G7	2005	680	2661	CHE Diesel	11-10-12		
Rub-trd Gantry Crane	K6	Kone	D1703	Diesel	Cummins	QSX 15-G7	2005	680	2160	CHE Diesel	06-11-12		
Rub-trd Gantry Crane	K7	Kone	D1703	Diesel	Cummins	QSX 15-G7	2005	680	3567	CHE Diesel			
Rub-trd Gantry Crane	K8	Kone	D1703	Diesel	Cummins	QSX 15-G7	2005	680	2954	CHE Diesel	27-12-12		
Rub-trd Gantry Crane	K9	Kone	D1703	Diesel	Cummins	QSX 15-G7	2005	680	0	CHE Diesel	16-11-12		
Rub-trd Gantry Crane	T-1	Mitsui-Paceco	RT4023-8-1	Diesel	Caterpillar	C-15	2013	779	2277	CHE Diesel			
Rub-trd Gantry Crane	T-10	Mitsui-Paceco	RT4023-8-1	Diesel	Caterpillar	C-15	2013	779	1250	CHE Diesel			
Rub-trd Gantry Crane	T-11	Mitsui-Paceco	RT4023-8-1	Diesel	Caterpillar	C-15	2013	779	2413	CHE Diesel			
Rub-trd Gantry Crane	T-12	ZMPC	RC40.6/56	Diesel	Caterpillar	3456ATAAC	2005	612	404	CHE Diesel		01-01-15	
Rub-trd Gantry Crane	T-2	Mitsui-Paceco	RT4023-8-1	Diesel	Caterpillar	C-15	2013	779	1474	CHE Diesel			
Rub-trd Gantry Crane	T-3	Mitsui-Paceco	RT4023-8-1	Diesel	Caterpillar	C-15	2013	779	1307	CHE Diesel			
Rub-trd Gantry Crane	T-4	Mitsui-Paceco	RT4023-8-1	Diesel	Caterpillar	C-15	2013	779	842	CHE Diesel			
Rub-trd Gantry Crane	T-5	Mitsui-Paceco	RT4023-8-1	Diesel	Caterpillar	C-15	2013	779	1641	CHE Diesel			
Rub-trd Gantry Crane	T-6	Mitsui-Paceco	RT4023-8-1	Diesel	Caterpillar	C-15	2013	779	1110	CHE Diesel			
Rub-trd Gantry Crane	T-7	Mitsui-Paceco	RT4023-8-1	Diesel	Caterpillar	C-15	2013	779	2639	CHE Diesel			
Rub-trd Gantry Crane	T-8	Mitsui-Paceco	RT4023-8-1	Diesel	Caterpillar	C-15	2013	779	1854	CHE Diesel			
Rub-trd Gantry Crane	T-9	Mitsui-Paceco	RT4023-8-1	Diesel	Caterpillar	C-15	2013	779	1843	CHE Diesel			
Rub-trd Gantry Crane	TR15	Mitsui/Paceco	RT-4020-8-I-5	Diesel	Cummins	NTA855	2012	550	2747	CHE Diesel			
Rub-trd Gantry Crane	TR16	Mitsui/Paceco	RT-4020-8-I-5	Diesel	Cummins	QSX-G14	2013	627	1729	CHE Diesel			
Rub-trd Gantry Crane	TR18	Mitsui/Paceco	RT-4020-8-I-5	Diesel	Cummins	QSX-G14	2013	627	2295	CHE Diesel			
Rub-trd Gantry Crane	TR19new	Mitsui/Paceco	RT-4020-8-I-5	Diesel	Cummins	QSZ15	2011	410	2094	CHE Diesel			
Rub-trd Gantry Crane	TR20	Mitsui/Paceco	RT-4020-8-I-5	Diesel	Cummins	NTA855	2012	550	2146	CHE Diesel			
Rub-trd Gantry Crane	TR21new	Mitsui/Paceco	RT-4020-8-I-5	Diesel	Cummins	QSZ15	2011	410	2167	CHE Diesel			
Rub-trd Gantry Crane	TR22	Mitsui/Paceco	RT-4020-8-I-5	Diesel	Cummins	NTA855	2012	550	1946	CHE Diesel			
Rub-trd Gantry Crane	TR23	Mitsui/Paceco	RT-4020-8-I-5	Diesel	Cummins	NTA855	2012	550	2173	CHE Diesel			
Rub-trd Gantry Crane	TR24	Mitsui/Paceco	RT-4020-8-I-5	Diesel	Cummins	NTA855	2012	550	2767	CHE Diesel			
Rub-trd Gantry Crane	TR25	Mitsui/Paceco	RT-4020-8-I-5	Diesel	Cummins	NTA855	2012	550	2443	CHE Diesel			
Rub-trd Gantry Crane	TR26	Mitsui/Paceco	RT-4020-8-I-5	Diesel	Cummins	QSZ15	2011	410	2508	CHE Diesel			
Rub-trd Gantry Crane	TR27	Mitsui/Paceco	RT-4020-8-I-5	Diesel	Cummins	NTA855	2012	550	2709	CHE Diesel			
Rub-trd Gantry Crane	TR28	Mitsui/Paceco	RT-4020-8-I-5	Diesel	Cummins	NTA855	2012	550	2915	CHE Diesel			
Rub-trd Gantry Crane	TR29	Mitsui/Paceco	RT-4020-8-I-5	Diesel	Cummins	NTA855	2012	550	2509	CHE Diesel			
Side pick	335	Kalmar		Diesel	Cummins	QSL9 275	2017	275	17	CHE Diesel			
Side pick	336	Fantuzzi	FDC25K7	Diesel	Cummins	QSL9 275	2017	275	110	CHE Diesel			
Side pick	341	Fantuzzi	FDC25K7	Diesel	Cummins	QSL	2016	275	88	CHE Diesel			
Side pick	342	Terex	FDC25K7	Diesel	Cummins	QSL	2016	275	223	CHE Diesel			
Side pick	343	Terex	FDC25K7	Diesel	Cummins	QSL	2016	275	951	CHE Diesel			
Side pick	6330	Taylor	TECSP-156	Diesel	Cummins	QSB5.9	2006	215	2416	CHE Diesel		13-02-13	
Side pick	6380			Diesel			2015		2416	CHE Diesel			
Side pick	6381			Diesel			2015		2416	CHE Diesel			
Side pick	6382			Diesel			2015		2416	CHE Diesel			
Side pick	340SP	Terex	FDC25K7	Diesel	Cummins	QSL	2016	275	512	CHE Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Side pick	SH 0301	Fantuzzi	FDC25K5	Diesel	Caterpillar	C 7.1 Tier 4F	2014	250	1565	CHE Diesel			
Side pick	SH 0305	Fantuzzi	FDC25K5	Diesel	Cummins	C 7.1 Tier 4F	2014	240	2205	CHE Diesel			
Side pick	SH 306	Fantuzzi	FDC25K5	Diesel	Caterpillar	C 7.1 Tier 4F	2014	250	286	CHE Diesel			
Side pick	SH1	Taylor	TEC 155H	Diesel	Cummins	5.9L B series	2000	152	32	CHE Diesel		11-07-14	
Side pick	SH2	Taylor	TEC 155H	Diesel	Cummins	5.9L B series	2000	152	12	CHE Diesel		11-07-14	
Skid Steer Loader	705001	Caterpillar	252B	Diesel	Mitsubishi	3044C	2007	70	756	CHE Diesel			
Skid Steer Loader	705035	Caterpillar	252B	Diesel	Mitsubishi	3044C	2007	70	520	CHE Diesel			
Skid Steer Loader	705043	Caterpillar	252B	Diesel	Caterpillar	S4S-DTDPB	2012	56	719	CHE Diesel			
Skid Steer Loader	LASSL1650	Bobcat	853	Diesel	bobcat	KUBTA	1994	75	112	CHE Diesel			
Straddle Carriers	SC001	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	3732	CHE Diesel			
Straddle Carriers	SC0010	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	4621	CHE Diesel			
Straddle Carriers	SC0011	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	4889	CHE Diesel			
Straddle Carriers	SC0012	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	4843	CHE Diesel			
Straddle Carriers	SC0013	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	4503	CHE Diesel			
Straddle Carriers	SC0014	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	5317	CHE Diesel			
Straddle Carriers	SC0015	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	5197	CHE Diesel			
Straddle Carriers	SC0016	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	2567	CHE Diesel			
Straddle Carriers	SC0017	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	5025	CHE Diesel			
Straddle Carriers	SC0018	Kalmar	ESC350WA	Diesel	Volvo	TAD1172VE	2015	425	3803	CHE Diesel			
Straddle Carriers	SC0019	Kalmar	ESC350WA	Diesel	Volvo	TAD1172VE	2015	425	4248	CHE Diesel			
Straddle Carriers	SC002	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	5490	CHE Diesel			
Straddle Carriers	SC0020	Kalmar	ESC350WA	Diesel	Volvo	TAD1172VE	2015	425	5760	CHE Diesel			
Straddle Carriers	SC0021	Kalmar	ESC350WA	Diesel	Volvo	TAD1172VE	2015	425	4920	CHE Diesel			
Straddle Carriers	SC0022	Kalmar	ESC350WA	Diesel	Volvo	TAD1172VE	2015	425	4297	CHE Diesel			
Straddle Carriers	SC0023	Kalmar	ESC350WA	Diesel	Volvo	TAD1172VE	2015	425	4888	CHE Diesel			
Straddle Carriers	SC0024	Kalmar	ESC350WA	Diesel	Volvo	TAD1172VE	2015	425	4528	CHE Diesel			
Straddle Carriers	SC0025	Kalmar	ESC350WA	Diesel	Volvo	TAD1172VE	2015	425	5635	CHE Diesel			
Straddle Carriers	SC0026	Kalmar	ESC350WA	Diesel	Volvo	TAD1172VE	2015	425	2800	CHE Diesel			
Straddle Carriers	SC0027	Kalmar	ESC350WA	Diesel	Volvo	TAD1172VE	2015	425	3936	CHE Diesel			
Straddle Carriers	SC0028	Kalmar	ESC350WA	Diesel	Volvo	TAD1172VE	2015	425	4661	CHE Diesel			
Straddle Carriers	SC003	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	5629	CHE Diesel			
Straddle Carriers	SC004	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	4801	CHE Diesel			
Straddle Carriers	SC005	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	4658	CHE Diesel			
Straddle Carriers	SC006	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	5128	CHE Diesel			
Straddle Carriers	SC007	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	1316	CHE Diesel			
Straddle Carriers	SC008	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	5295	CHE Diesel			
Straddle Carriers	SC009	Kalmar	ESC350WA	Diesel	AGCO	SISU POWER 98ATI	2013	425	4398	CHE Diesel			
Sweeper	1208004	Tymco	DST-6	Diesel	Isuzu	6HKIX	2008	260	1703	CHE Diesel			
Sweeper	LAXSWE1206			Diesel			2013		497	CHE Diesel			
Sweeper	S-3	Freightliner		Diesel	Cummins	ISB240	2009	240	2123	CHE On Road Diesel			
Sweeper	S-3a			Diesel	John Deere		2008	99	2416	CHE Diesel			
Sweeper	ST003	Caterpillar	IT14G	Diesel	Caterpillar	3054 DIT	2000	96	80	CHE Diesel		19-09-13	
Sweeper	ST004	Caterpillar	IT14G	Diesel	Caterpillar	3054 DIT	2000	96	54	CHE Diesel		16-09-13	
Sweeper	ST005	Caterpillar	DL200TC-5	Diesel	Doosan	1204F-E44TAN	2016	173	266	CHE Diesel			
Sweeper	ST006	Caterpillar	DL200TC-5	Diesel	Doosan	1204F-E44TAN	2016	173	213	CHE Diesel			
Sweeper	1073	Elgin	Crosswind	Gasoline	Cummins	ISB205	2002	205	2416	CHE Gasoline			
Sweeper	1098	Elgin	Crosswind	Gasoline			2005	205	2416	CHE Gasoline			
Top handler	318	Taylor	THDC-975	Diesel	Cummins	QSL	2016	350	1573	CHE Diesel			
Top handler	319	Taylor	FDC550G5	Diesel	Cummins	QSG12	2016	400	42	CHE Diesel			
Top handler	337	Fantuzzi	FDC500G5	Diesel	Cummins		2016	350	4060	CHE Diesel			
Top handler	6012	Taylor	TEC-950L	Diesel	Cummins	M11	1999	250	2416	CHE Diesel		01-01-12	
Top handler	6156	Taylor	THDC-955	Diesel	Cummins	QSM11	2002	250	1884	CHE Diesel		01-12-12	
Top handler	6183	Taylor	THDC-955	Diesel	Cummins	QSM11	2006	260	1508	CHE Diesel		01-12-12	
Top handler	6184	Taylor	THDC-955	Diesel	Cummins	QSM11	2006	260	1938	CHE Diesel		01-12-12	
Top handler	6186	Taylor	THDC-955	Diesel	Cummins	QSM11	2006	260	1692	CHE Diesel		01-12-12	
Top handler	6187	Taylor	THDC-975	Diesel	Cummins	QSM11	2006	260	1977	CHE Diesel		01-12-12	
Top handler	6188	Taylor	THDC-975	Diesel	Cummins	QSM11	2006	260	2360	CHE Diesel		01-12-12	
Top handler	6189	Taylor	THDC-975	Diesel	Cummins	QSM11	2007	260	1894	CHE Diesel		01-01-09	
Top handler	6190	Taylor	THDC-975	Diesel	Cummins	QSM11	2007	260	2634	CHE Diesel		01-01-09	
Top handler	6191	Taylor	THDC-975	Diesel	Cummins	QSM11	2007	260	1788	CHE Diesel		01-01-09	
Top handler	6192	Taylor	THDC-975	Diesel	Cummins	QSM11	2007	260	2108	CHE Diesel		01-01-09	
Top handler	6193	Taylor	THDC-975	Diesel	Cummins	QSM11	2007	260	1578	CHE Diesel		01-01-09	

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Top handler	6194	Taylor	THDC-975	Diesel	Cummins	QSM11	2007	260	1351	CHE Diesel		01-01-09	
Top handler	6289	Taylor	THDC-955	Diesel	Cummins	QSM11	2005	330	2416	CHE Diesel		01-01-12	
Top handler	6291	Taylor	THDC-955	Diesel	Cummins	QSM11	2005	330	2416	CHE Diesel		01-01-12	
Top handler	6292	Taylor	THDC-955	Diesel	Cummins	QSM11	2005	330	2416	CHE Diesel		01-01-12	
Top handler	6295	Taylor	THDC-955	Diesel	Cummins	QSM11	2005	330	2416	CHE Diesel		01-01-12	
Top handler	6303	Taylor	THDC-955	Diesel	Cummins	QSM11	2006	335	2416	CHE Diesel		01-01-12	
Top handler	6306	Taylor	THDC-955	Diesel	Cummins	QSM11	2006	335	2416	CHE Diesel		01-01-12	
Top handler	6309	Taylor	THDC-955	Diesel	Cummins	QSM11	2006	335	2416	CHE Diesel		01-01-12	
Top handler	6310	Taylor	THDC-955	Diesel	Cummins	QSM11	2006	335	2416	CHE Diesel		01-01-12	
Top handler	6311	Taylor	THDC-955	Diesel	Cummins	QSM11	2006	335	2416	CHE Diesel		01-01-12	
Top handler	6348	Taylor	THDC-975	Diesel	Cummins		2013	348	2416	CHE Diesel			
Top handler	6349	Taylor	THDC-975	Diesel	Cummins		2013	348	2416	CHE Diesel			
Top handler	6350	Taylor	THDC-975	Diesel	Cummins		2013	348	2416	CHE Diesel			
Top handler	6351	Taylor	THDC-975	Diesel	Cummins		2013	348	2416	CHE Diesel			
Top handler	6352	Taylor	THDC-975	Diesel	Cummins		2013	348	2416	CHE Diesel			
Top handler	6353	Taylor		Diesel	Volvo		2014	335	2416	CHE Diesel			
Top handler	6354	Taylor		Diesel	Volvo		2014	335	2416	CHE Diesel			
Top handler	6355	Taylor		Diesel	Volvo		2014	335	2416	CHE Diesel			
Top handler	6356	Taylor		Diesel	Volvo		2014	335	2416	CHE Diesel			
Top handler	6357	Taylor		Diesel	Volvo		2014	335	2416	CHE Diesel			
Top handler	6358	Taylor		Diesel	Volvo		2014	335	2416	CHE Diesel			
Top handler	6359	Taylor		Diesel	Volvo		2014	335	2416	CHE Diesel			
Top handler	6360	Taylor		Diesel	Volvo		2014	335	2416	CHE Diesel			
Top handler	6361	Taylor		Diesel	Volvo		2014	335	2416	CHE Diesel			
Top handler	6364	Hyster		Diesel	Cummins	QSL9	2014	350	2416	CHE Diesel			
Top handler	6365	Hyster		Diesel	Cummins	QSL9	2014	350	2416	CHE Diesel			
Top handler	6366	Hyster		Diesel	Cummins	QSL9	2014	350	2416	CHE Diesel			
Top handler	6367	Hyster		Diesel	Cummins	QSL9	2014	350	2416	CHE Diesel			
Top handler	6368	Hyster		Diesel	Cummins	QSL9	2014	350	2416	CHE Diesel			
Top handler	6369	Hyster		Diesel	Cummins	QSL9	2014	350	2416	CHE Diesel			
Top handler	6370	Hyster		Diesel	Cummins	QSL9	2014	350	2416	CHE Diesel			
Top handler	6371	Hyster		Diesel	Cummins	QSL9	2014	350	2416	CHE Diesel			
Top handler	6372	Hyster		Diesel	Cummins	QSL9	2014	350	2416	CHE Diesel			
Top handler	6373	Hyster	H1150HD	Diesel	Cummins	QSL9	2014	350	2416	CHE Diesel			
Top handler	6374	Hyster	H1150HD	Diesel	Cummins	QSL9	2014	350	2416	CHE Diesel			
Top handler	6375			Diesel			2015	325	2416	CHE Diesel			
Top handler	6376			Diesel			2015	325	2416	CHE Diesel			
Top handler	6377			Diesel			2015	325	2416	CHE Diesel			
Top handler	6378			Diesel			2015	325	2416	CHE Diesel			
Top handler	6401	Taylor	TXC-976	Diesel	Cummins	QSM11	2008	260	3069	CHE Diesel		01-01-09	
Top handler	6402	Taylor	TXC-976	Diesel	Cummins	QSM11	2008	260	2270	CHE Diesel		01-01-09	
Top handler	6403	Taylor	TXC-976	Diesel	Cummins	QSM11	2008	260	2984	CHE Diesel		01-01-09	
Top handler	6404	Taylor	TXC-976	Diesel	Cummins	QSM11	2008	260	3506	CHE Diesel		01-01-09	
Top handler	6405	Taylor	TXC-976	Diesel	Cummins	QSM11	2008	260	3122	CHE Diesel		01-01-09	
Top handler	6406	Taylor	TXC-976	Diesel	Cummins	QSM11	2008	260	2927	CHE Diesel		01-01-09	
Top handler	6407	Taylor	TXC-976	Diesel	Cummins	QSM11	2008	260	3243	CHE Diesel		01-01-09	
Top handler	6408	Taylor	TXC-976	Diesel	Cummins	QSM11	2008	260	2978	CHE Diesel		01-01-09	
Top handler	6409	Taylor	TXC-976	Diesel	Cummins	QSM11	2008	260	2896	CHE Diesel		01-01-09	
Top handler	6410	Taylor	TXC-976	Diesel	Cummins	QSM11	2008	260	2776	CHE Diesel		01-01-09	
Top handler	6411	Taylor	TXC-976	Diesel	Cummins	QSM11	2008	260	2860	CHE Diesel		01-01-09	
Top handler	6412	Taylor	TXC-976	Diesel	Cummins	QSM11	2008	260	2245	CHE Diesel		01-01-09	
Top handler	6413	Taylor	TXC-976	Diesel	Cummins	QSM11	2008	260	2902	CHE Diesel		01-01-09	
Top handler	6414	Taylor	TXC-976	Diesel	Cummins	QSM11	2008	260	3149	CHE Diesel		01-01-09	
Top handler	6415	Taylor	TXC-976	Diesel	Cummins	QSM11	2008	260	3354	CHE Diesel		01-01-09	
Top handler	6416	Taylor	TXLC976	Diesel	Cummins	QSM11	2011	335	2363	CHE Diesel			
Top handler	6417	Taylor	TXLC976	Diesel	Cummins	QSM11	2011	335	2224	CHE Diesel			
Top handler	6418	Taylor	TXLC976	Diesel	Cummins	QSM11	2011	335	1471	CHE Diesel			
Top handler	6419	Hyster	H-1150-HDCH	Diesel	Cummins	QSL 9L	2014	370	1769	CHE Diesel			
Top handler	6420	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2017	363	1155	CHE Diesel			
Top handler	6421	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2017	363	2682	CHE Diesel			
Top handler	6422	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2017	363	2100	CHE Diesel			
Top handler	6423	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2017	363	1672	CHE Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Top handler	6424	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2017	363	2069	CHE Diesel			
Top handler	6425	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2017	363	2009	CHE Diesel			
Top handler	6426	Taylor	XLC 976E	Diesel	Volvo	12.8 L	2017	388	1601	CHE Diesel			
Top handler	6427	Taylor	XLC 976E	Diesel	Volvo	12.8 L	2017	388	2539	CHE Diesel			
Top handler	80801	Linde	C400	Diesel	Cummins	QSM11	2006	325	741	CHE Diesel		01-08-11	
Top handler	6312TH	Taylor	THDC-955	Diesel	Cummins	QSM11	2006	335	2416	CHE Diesel		01-01-12	
Top handler	6313TH	Taylor	THDC-955	Diesel	Cummins	QSM11	2006	335	2416	CHE Diesel		01-01-12	
Top handler	6405a	TXLC976	2016	Diesel	Volvo	TAD13	2015	325	2416	CHE Diesel			
Top handler	6406a	TXLC976	2016	Diesel	Volvo	TAD13	2015	325	2416	CHE Diesel			
Top handler	EMSZ300	Taylor	TXC-976	Diesel			2015	330	1688	CHE Diesel			
Top handler	EMSZ301	Taylor	TXC-976	Diesel			2015	330	1262	CHE Diesel			
Top handler	EMSZ302	Taylor	TXC-976	Diesel	Volvo	TAD1360VE	2014	335	754	CHE Diesel			
Top handler	EMSZ303	Taylor	TXC-976	Diesel			2015	330	1581	CHE Diesel			
Top handler	EMSZ704	Taylor	TXC-976	Diesel	Volvo	TAD1360VE	2012	335		CHE Diesel			
Top handler	EMSZ705	Taylor	TXC-976	Diesel	Volvo	TAD1360VE	2012	335	117	CHE Diesel			
Top handler	EMSZ706	Taylor	TXC-976	Diesel	Volvo	TAD1360VE	2012	335	2248	CHE Diesel			
Top handler	EMSZ707	Taylor	TXLC-976	Diesel	Volvo	TAD1360VE	2012	335	2459	CHE Diesel			
Top handler	EMSZ708	Taylor	TXLC-976	Diesel	Volvo	TAD1360VE	2012	335	2352	CHE Diesel			
Top handler	EMSZ709	Taylor	TXLC-976	Diesel	Volvo	TAD1360VE	2012	335	2497	CHE Diesel			
Top handler	EMSZ710	Taylor	TXLC-976	Diesel	Volvo	TAD1360VE	2012	335	2501	CHE Diesel			
Top handler	EMSZ711	Taylor	TXLC-976	Diesel	Volvo	TAD1360VE	2012	335	1867	CHE Diesel			
Top handler	EMSZ717	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2014	350	1666	CHE Diesel			
Top handler	EMSZ718	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2014	350	1826	CHE Diesel			
Top handler	EMSZ719	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2014	350	2258	CHE Diesel			
Top handler	EMSZ720	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2014	350	1827	CHE Diesel			
Top handler	EMSZ721	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2014	350	1319	CHE Diesel			
Top handler	EMSZ723	Taylor	TXLC-976	Diesel	Volvo	L-TAD1360VE	2014	350	3069	CHE Diesel			
Top handler	EMSZ724	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2014	350	383	CHE Diesel			
Top handler	EMSZ725	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2014	350	2699	CHE Diesel			
Top handler	EMSZ726	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2014	350	2186	CHE Diesel			
Top handler	EMSZ727,	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2014	350	1855	CHE Diesel			
Top handler	EMSZ732	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2015	350	3057	CHE Diesel			
Top handler	EMSZ733	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2015	350	1477	CHE Diesel			
Top handler	EMSZ734	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2015	350	1549	CHE Diesel			
Top handler	EMSZ735	Taylor	TXLC-976	Diesel	Volvo	TAD1360VE	2015	335	2560	CHE Diesel			
Top handler	EMSZ736	Taylor	TXLC-976	Diesel	Volvo	TAD1360VE	2015	335	2925	CHE Diesel			
Top handler	EMSZ737	Taylor	TXLC-976	Diesel	Volvo	TAD1360VE	2015	335	1926	CHE Diesel			
Top handler	EMSZ738	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2017	350	2211	CHE Diesel			
Top handler	EMSZ739 H	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2017	350	2419	CHE Diesel			
Top handler	EMSZ740 hSTER	Hyster	H1150HD-CH	Diesel	Cummins	QSL 9L	2017	350	3057	CHE Diesel			
Top handler	EMSZ741	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	3565	CHE Diesel			
Top handler	EMSZ742	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	3664	CHE Diesel			
Top handler	EMSZ743	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	2981	CHE Diesel			
Top handler	EMSZ744	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	2714	CHE Diesel			
Top handler	EMSZ745	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	2755	CHE Diesel			
Top handler	EMSZ746	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	2826	CHE Diesel			
Top handler	EMSZ747	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	2712	CHE Diesel			
Top handler	EMSZ748	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	3345	CHE Diesel			
Top handler	EMSZ749	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	2758	CHE Diesel			
Top handler	EMSZ750	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	2751	CHE Diesel			
Top handler	EMSZ751	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	2538	CHE Diesel			
Top handler	EMSZ752	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	2692	CHE Diesel			
Top handler	EMSZ753	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	3063	CHE Diesel			
Top handler	EMSZ754	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	2967	CHE Diesel			
Top handler	EMSZ755	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	3152	CHE Diesel			
Top handler	EMSZ756	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	2697	CHE Diesel			
Top handler	EMSZ757	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	2619	CHE Diesel			
Top handler	EMSZ758	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	2564	CHE Diesel			
Top handler	EMSZ759	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	0	CHE Diesel			
Top handler	EMSZ760	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	0	CHE Diesel			
Top handler	EMSZ761	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	0	CHE Diesel			
Top handler	EMSZ762	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	0	CHE Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Top handler	EMSZ763	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	0	CHE Diesel			
Top handler	EMSZ764	Taylor	XLC-976	Diesel	Volvo	TAD1371VE	2018	389	0	CHE Diesel			
Top handler	TH 0201	Taylor	TEC-950L	Diesel	Cummins	QSM-11	2011	330	7	CHE Diesel		01-01-12	
Top handler	TH 0203	Fantuzzi	FDC500G5	Diesel	Cummins	QSM11	2003	330	2030	CHE Diesel		01-01-11	
Top handler	TH 0204	Fantuzzi	FDC500G5	Diesel	Cummins	QSM11	2004	330	1246	CHE Diesel		01-01-11	
Top handler	TH 0206	Fantuzzi	FDC500G5	Diesel	Cummins	QSM11	2004	330	625	CHE Diesel		01-01-11	
Top handler	TH 0207	Fantuzzi	FDC500G5	Diesel	Cummins	QSM11	2003	330	475	CHE Diesel		01-01-11	
Top handler	TH 0209	Fantuzzi	FDC500G5	Diesel	Cummins	QSM11	2004	330	575	CHE Diesel		01-01-11	
Top handler	TH 0212	Fantuzzi	FDC500G5	Diesel	Cummins	QSM11	2004	330	845	CHE Diesel		01-01-13	
Top handler	TH 0213	Fantuzzi	FDC500G5	Diesel	Cummins	QSM11	2004	330	1193	CHE Diesel		01-01-11	
Top handler	TH 0214	Fantuzzi	FDC500G5	Diesel	Cummins	QSM11	2004	330	873	CHE Diesel		01-01-11	
Top handler	TH 0215	Taylor	TXLC976	Diesel	Volvo T4i	TAD1360WE	2012	256	2270	CHE Diesel			
Top handler	TH 0216	Taylor	TXLC976	Diesel	Volvo T4i	TAD1360WE	2012	256	2669	CHE Diesel			
Top handler	TH 0217	Taylor	XLC976	Diesel	Volvo T4F	TAD1375VE	2016	388	3158	CHE Diesel			
Top handler	TH 0218	Taylor	XLC976	Diesel	Volvo T4F	TAD1375VE	2016	388	3440	CHE Diesel			
Top handler	TH 0219	Taylor	XLC976	Diesel	Volvo T4F	TAD1375VE	2016	388	3515	CHE Diesel			
Top handler	TH 0220	Taylor	XLC976	Diesel	Volvo T4F	TAD1375VE	2016	388	2567	CHE Diesel			
Top handler	TH 0221	Taylor	XLC976	Diesel	Volvo T4F	TAD1375VE	2016	388	3667	CHE Diesel			
Top handler	TH 0222	Taylor	XLC976	Diesel	Volvo T4F	TAD1375VE	2016	388	3141	CHE Diesel			
Top handler	TH 0223	Taylor	XLC976	Diesel	Volvo T4F	TAD1375VE	2016	388	3763	CHE Diesel			
Top handler	TH 0224	Taylor	XLC976	Diesel	Volvo T4F	TAD1375VE	2016	388	3695	CHE Diesel			
Top handler	TH 0225	Taylor	XLC976	Diesel	Volvo T4F	TAD1375VE	2016	388	3542	CHE Diesel			
Top handler	TH 0226	Taylor	XLC976	Diesel	Volvo T4F	TAD1375VE	2016	388	3320	CHE Diesel			
Top handler	TH 0227	Taylor	XLC976	Diesel	Volvo T4F	TAD1375VE	2016	388	2533	CHE Diesel			
Top handler	TH 0228	Taylor	XLC976	Diesel	Volvo T4F	TAD1375VE	2016	388	2964	CHE Diesel			
Top handler	TH16	Fantuzzi	FDS500	Diesel	Cummins	QSM11	2005	330	158	CHE Diesel		01-01-12	
Top handler	TH17	Fantuzzi	FDS500	Diesel	Cummins	QSM11	2005	330	262	CHE Diesel		01-01-12	
Top handler	TH18	Fantuzzi	FDS500	Diesel	Cummins	QSM11	2005	330	295	CHE Diesel		01-01-12	
Top handler	TH19	Fantuzzi	FDS500	Diesel	Cummins	QSM11	2005	330	76	CHE Diesel		01-01-12	
Top handler	TH21	Fantuzzi	FDS500	Diesel	Cummins	QSM11	2005	330	248	CHE Diesel		01-01-12	
Top handler	TH22	Fantuzzi	FDS500	Diesel	Cummins	QSM11	2005	330	328	CHE Diesel		01-01-12	
Top handler	TH23	Fantuzzi	FDS500	Diesel	Cummins	QSM11	2005	330	338	CHE Diesel		01-01-12	
Top handler	TH24	Fantuzzi	FDS500	Diesel	Cummins	QSM11	2005	330	260	CHE Diesel			
Top handler	TH25	Fantuzzi	FDS500	Diesel	Cummins	QSM11	2005	330	258	CHE Diesel			
Top handler	TH27	Taylor	TH976	Diesel	Cummins	QSM11	2008	335	1547	CHE Diesel		01-01-10	
Top handler	TH28	Taylor	TH976	Diesel	Cummins	QSM11	2008	335	1793	CHE Diesel		01-02-10	
Top handler	TH29	Taylor	TH976	Diesel	Cummins	QSM11	2008	335	2029	CHE Diesel		01-01-10	
Top handler	TH30	Taylor	TH976	Diesel	Cummins	QSM11	2008	335	1506	CHE Diesel		01-03-10	
Top handler	TH31	Taylor	TH976	Diesel	Cummins	QSM11	2008	335	2068	CHE Diesel		01-01-12	
Top handler	TH32	Taylor	TH976	Diesel	Cummins	QSM11	2008	335	1744	CHE Diesel		01-03-10	
Top handler	TH33	Taylor	TXCL976	Diesel	Volvo	TAD1360V	2011	348	1988	CHE Diesel			
Top handler	TH34	Taylor	TXCL976	Diesel	Volvo	TAD1360V	2011	348	1720	CHE Diesel			
Top handler	TH35	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2012	343	2884	CHE Diesel			
Top handler	TH36	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2012	343	2992	CHE Diesel			
Top handler	TH37	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2013	343	2440	CHE Diesel			
Top handler	TH38	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2013	343	2422	CHE Diesel			
Top handler	TH39	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2013	343	3046	CHE Diesel			
Top handler	TH40	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2013	343	2161	CHE Diesel			
Top handler	TH41	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2013	343	1849	CHE Diesel			
Top handler	TH42	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2013	343	2804	CHE Diesel			
Top handler	TH43	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2013	343	3027	CHE Diesel			
Top handler	TH44	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2013	343	2880	CHE Diesel			
Top handler	TH45	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2015	343	2729	CHE Diesel			
Top handler	TH46	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2015	343	2781	CHE Diesel			
Top handler	TH47	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2015	343	2912	CHE Diesel			
Top handler	TH48	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2015	343	2658	CHE Diesel			
Top handler	TH49	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2015	343	3063	CHE Diesel			
Top handler	TH50	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2015	343	2793	CHE Diesel			
Top handler	TH51	Taylor	TXCL976	Diesel	Volvo	TAD1360VE	2015	343	3692	CHE Diesel			
Truck	19019	Sterling		Diesel	Caterpillar	C7	2005	250	705	CHE On Road Diesel		13-11-13	
Truck	19020	Sterling		Diesel	Caterpillar	C7	2005	250	661	CHE On Road Diesel		07-11-13	
Truck	19025	Sterling		Diesel	Cummins	ISC	2007	330	606	CHE On Road Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model		Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Truck	19026	Sterling	LT8500	Diesel	Cummins	ISC		2008	250	1105	CHE On Road Diesel			
Truck	19027	Peterbilt	335	Diesel	Cummins	ISC		2008	250	778	CHE On Road Diesel			
Truck	19028	Freightliner		Diesel	Cummins	ISL		2013	350	1024	CHE On Road Diesel			
Truck	1312008	Terex	40T33-07	Diesel	Caterpillar	C15		2007	540	866	CHE Diesel			
Truck	1312009	Terex	40T 33-07	Diesel	Caterpillar	C-15		2009	540	187	CHE Diesel			
Truck	1312012	Terex	40T 33-07	Diesel	Cummins	QSK19		2006	525	993	CHE Diesel			
Truck	1312013	Terex	40T 33-07	Diesel	Cummins	QSK19		2007	525	1059	CHE Diesel			
Truck	1312014	Terex	40T 33-07	Diesel	Cummins	QSK19		2007	525	1468	CHE Diesel			
Truck	1312015	Terex	T40K-800	Diesel				2012	390	580	CHE Diesel			
Truck	1315001	Terex	TR45	Diesel	Cummins	QSK19		2009	525	870	CHE Diesel			
Truck	1316001	Caterpillar	TA30	Diesel	Cummins	QSM11		2006	350	216	CHE Diesel			
Truck	1316002	Terex	TA400	Diesel	Scania			2014	444	2230	CHE Diesel			
Truck	MV28	Freightliner		Diesel	Cummins		5.9	2005	185	120	CHE On Road Diesel		01-01-12	
Truck	MV29	Freightliner		Diesel	Cummins		5.9	2005	185	277	CHE On Road Diesel		01-01-12	
Truck	MV30	Freightliner		Diesel	Cummins		5.9	2005	185	119	CHE On Road Diesel		01-01-12	
Truck	T12	Peterbuilt		Diesel	Cummins	ISC		2006	240	817	CHE On Road Diesel			
Truck	T15	Ford	F750	Diesel	Cummins	ISC		2008	240	2638	CHE On Road Diesel			
Truck	T9	Peterbuilt		Diesel	Cummins	ISC		2006	240	747	CHE On Road Diesel			
Truck	19010	Ford	FT001	LPG	Ford	330EFV		1973		177	CHE Propane			
Yard tractor	4001	Capacity		Diesel	Cummins	ISB 07		2008	210	1500	CHE On Road Diesel			
Yard tractor	4003	Capacity		Diesel	Cummins	ISB 07		2008	210	1250	CHE On Road Diesel			
Yard tractor	4004	Capacity		Diesel	Cummins	ISB 07		2008	210	585	CHE On Road Diesel			
Yard tractor	4005	Capacity		Diesel	Cummins	ISB 07		2008	210	502	CHE On Road Diesel			
Yard tractor	4006	Capacity		Diesel	Cummins	ISB 07		2008	210	467	CHE On Road Diesel			
Yard tractor	4007	Capacity		Diesel	Cummins	ISB 07		2008	210	390	CHE On Road Diesel			
Yard tractor	4008	Capacity		Diesel	Cummins	ISB 07		2008	210	610	CHE On Road Diesel			
Yard tractor	4009	Capacity		Diesel	Cummins	ISB 07		2008	210	971	CHE On Road Diesel			
Yard tractor	4010	Capacity		Diesel	Cummins	ISB 07		2008	210	455	CHE On Road Diesel			
Yard tractor	4011	Capacity		Diesel	Cummins	ISB 07		2008	210	361	CHE On Road Diesel			
Yard tractor	4012	Capacity		Diesel	Cummins	ISB 07		2008	210	536	CHE On Road Diesel			
Yard tractor	4013	Capacity		Diesel	Cummins	ISB 07		2008	210	572	CHE On Road Diesel			
Yard tractor	4014	Capacity		Diesel	Cummins	ISB 07		2008	210	366	CHE On Road Diesel			
Yard tractor	4015	Capacity		Diesel	Cummins	ISB 07		2008	210	486	CHE On Road Diesel			
Yard tractor	4016	Capacity		Diesel	Cummins	ISB 07		2008	210	260	CHE On Road Diesel			
Yard tractor	4017	Capacity		Diesel	Cummins	ISB 07		2008	210	823	CHE On Road Diesel			
Yard tractor	4018	Capacity		Diesel	Cummins	ISB 07		2008	210	427	CHE On Road Diesel			
Yard tractor	4021	Capacity		Diesel	Cummins	ISB 07		2008	210	4237	CHE On Road Diesel			
Yard tractor	4022	Capacity		Diesel	Cummins	ISB 07		2008	210	82	CHE On Road Diesel			
Yard tractor	4024	Capacity		Diesel	Cummins	ISB 07		2008	210	1007	CHE On Road Diesel			
Yard tractor	4026	Capacity		Diesel	Cummins	ISB 07		2008	210	463	CHE On Road Diesel			
Yard tractor	4028	Capacity		Diesel	Cummins	ISB 07		2008	210	5647	CHE On Road Diesel			
Yard tractor	4032	Capacity		Diesel	Cummins	ISB 07		2008	210	430	CHE On Road Diesel			
Yard tractor	4033	Capacity		Diesel	Cummins	ISB 07		2008	210	0	CHE On Road Diesel			
Yard tractor	4035	Capacity		Diesel	Cummins	ISB 07		2008	210	390	CHE On Road Diesel			
Yard tractor	4036	Capacity		Diesel	Cummins	ISB 07		2008	210	9	CHE On Road Diesel			
Yard tractor	4037	Capacity		Diesel	Cummins	ISB 07		2008	210	93	CHE On Road Diesel			
Yard tractor	4038	Capacity		Diesel	Cummins	ISB 07		2008	210	412	CHE On Road Diesel			
Yard tractor	4039	Capacity		Diesel	Cummins	ISB 07		2008	210	437	CHE On Road Diesel			
Yard tractor	4041	Capacity		Diesel	Cummins	ISB 07		2008	210	409	CHE On Road Diesel			
Yard tractor	4043	Capacity		Diesel	Cummins	ISB 07		2008	210	454	CHE On Road Diesel			
Yard tractor	4044	Capacity		Diesel	Cummins	ISB 07		2008	210	0	CHE On Road Diesel			
Yard tractor	4045	Capacity		Diesel	Cummins	ISB 07		2008	210	0	CHE On Road Diesel			
Yard tractor	4046	Capacity		Diesel	Cummins	ISB 07		2008	210	0	CHE On Road Diesel			
Yard tractor	4047	Capacity		Diesel	Cummins	ISB 07		2008	210	209	CHE On Road Diesel			
Yard tractor	4048	Capacity		Diesel	Cummins	ISB 07		2008	210	0	CHE On Road Diesel			
Yard tractor	4051	Capacity		Diesel	Cummins	ISB 07		2008	210	443	CHE On Road Diesel			
Yard tractor	4052	Capacity		Diesel	Cummins	ISB 07		2008	210	449	CHE On Road Diesel			
Yard tractor	4053	Capacity		Diesel	Cummins	ISB 07		2008	210	552	CHE On Road Diesel			
Yard tractor	21202	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200		2012	200	1870	CHE On Road Diesel			
Yard tractor	21203	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200		2012	200	1880	CHE On Road Diesel			
Yard tractor	21204	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200		2012	200	2345	CHE On Road Diesel			
Yard tractor	21206	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200		2012	200	2520	CHE On Road Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Yard tractor	21207	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	2268	CHE On Road Diesel			
Yard tractor	21208	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	2320	CHE On Road Diesel			
Yard tractor	21210	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	1657	CHE On Road Diesel			
Yard tractor	21213	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	2047	CHE On Road Diesel			
Yard tractor	21216	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	2641	CHE On Road Diesel			
Yard tractor	21219	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	786	CHE On Road Diesel			
Yard tractor	21220	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	2549	CHE On Road Diesel			
Yard tractor	21223	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	1150	CHE On Road Diesel			
Yard tractor	21224	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	2541	CHE On Road Diesel			
Yard tractor	21227	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	2137	CHE On Road Diesel			
Yard tractor	21228	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	2259	CHE On Road Diesel			
Yard tractor	21229	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	2009	CHE On Road Diesel			
Yard tractor	21230	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	2234	CHE On Road Diesel			
Yard tractor	21231	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	569	CHE On Road Diesel			
Yard tractor	21232	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	2067	CHE On Road Diesel			
Yard tractor	21238	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	2430	CHE On Road Diesel			
Yard tractor	21239	Autocar	ACTT42	Diesel	Cummins	ISB6.7 200	2012	200	2395	CHE On Road Diesel			
Yard tractor	21540	Ottawa	4 x 2	Diesel	Cummins	ISB6.7 200	2015	200	2641	CHE On Road Diesel			
Yard tractor	21541	Ottawa	4 x 2	Diesel	Cummins	ISB6.7 200	2015	200	3710	CHE On Road Diesel			
Yard tractor	21542	Ottawa	4 x 2	Diesel	Cummins	ISB6.7 200	2015	200	3627	CHE On Road Diesel			
Yard tractor	21543	Ottawa	4 x 2	Diesel	Cummins	ISB6.7 200	2015	200	3624	CHE On Road Diesel			
Yard tractor	21544	Ottawa	4 x 2	Diesel	Cummins	ISB6.7 200	2015	200	3641	CHE On Road Diesel			
Yard tractor	21545	Ottawa	4 x 2	Diesel	Cummins	ISB6.7 200	2015	200	3356	CHE On Road Diesel			
Yard tractor	21547	Ottawa	4 x 2	Diesel	Cummins	ISB6.7 200	2015	200	3281	CHE On Road Diesel			
Yard tractor	21548	Ottawa	4 x 2	Diesel	Cummins	ISB6.7 200	2015	200	3114	CHE On Road Diesel			
Yard tractor	21549	Ottawa	4 x 2	Diesel	Cummins	ISB6.7 200	2015	200	3574	CHE On Road Diesel			
Yard tractor	21901	Autocar		Diesel	Cummins	ISB6.7 200	2019	200	694	CHE On Road Diesel			
Yard tractor	21902	Autocar		Diesel	Cummins	ISB6.7 200	2019	200	757	CHE On Road Diesel			
Yard tractor	21903	Autocar		Diesel	Cummins	ISB6.7 200	2019	200	790	CHE On Road Diesel			
Yard tractor	21904	Autocar		Diesel	Cummins	ISB6.7 200	2019	200	573	CHE On Road Diesel			
Yard tractor	25460	Ottawa	4x2	Diesel		QSB 6.7	2011	200	2841	CHE Diesel			
Yard tractor	25461	Ottawa	4x2	Diesel		QSB 6.7	2011	200	2841	CHE Diesel			
Yard tractor	25462	Ottawa	4x2	Diesel		QSB 6.7	2011	200	2841	CHE Diesel			
Yard tractor	25463	Ottawa	4x2	Diesel		QSB 6.7	2011	200	2841	CHE Diesel			
Yard tractor	25464	Ottawa	4x2	Diesel		QSB 6.7	2011	200	2841	CHE Diesel			
Yard tractor	25465	Ottawa	4x2	Diesel		QSB 6.7	2011	200	2841	CHE Diesel			
Yard tractor	25466	Ottawa	4x2	Diesel		QSB 6.7	2011	200	2841	CHE Diesel			
Yard tractor	25467	Ottawa	4x2	Diesel		QSB 6.7	2011	200	2841	CHE Diesel			
Yard tractor	25468	Ottawa	4x2	Diesel		QSB 6.7	2011	200	2841	CHE Diesel			
Yard tractor	25469	Ottawa	4x2	Diesel		QSB 6.7	2011	200	2841	CHE Diesel			
Yard tractor	25470	Ottawa	4x2	Diesel		QSB 6.7	2011	200	2841	CHE Diesel			
Yard tractor	25471	Ottawa	4x2	Diesel		QSB 6.7	2013	200	2841	CHE Diesel			
Yard tractor	25472	Ottawa	4x2	Diesel		QSB 6.7	2013	200	2841	CHE Diesel			
Yard tractor	25473	Ottawa	4x2	Diesel		QSB 6.7	2013	200	2841	CHE Diesel			
Yard tractor	25474	Ottawa	4x2	Diesel		QSB 6.7	2013	200	2841	CHE Diesel			
Yard tractor	25475	Ottawa	4x2	Diesel		QSB 6.7	2013	200	2841	CHE Diesel			
Yard tractor	25476	Ottawa	4x2	Diesel		QSB 6.7	2013	200	2841	CHE Diesel			
Yard tractor	25477	Ottawa	4x2	Diesel		QSB 6.7	2013	200	2841	CHE Diesel			
Yard tractor	25479	Ottawa	4x2	Diesel		QSB 6.7	2013	200	2841	CHE Diesel			
Yard tractor	35100	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	309	CHE Diesel			
Yard tractor	35101	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	31	CHE Diesel			
Yard tractor	35102	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	249	CHE Diesel			
Yard tractor	35103	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	211	CHE Diesel			
Yard tractor	35104	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	280	CHE Diesel			
Yard tractor	35105	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	190	CHE Diesel			
Yard tractor	35106	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	338	CHE Diesel			
Yard tractor	35107	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	74	CHE Diesel			
Yard tractor	35108	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	5	CHE Diesel			
Yard tractor	35109	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	252	CHE Diesel			
Yard tractor	35110	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	39	CHE Diesel			
Yard tractor	35111	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	279	CHE Diesel			
Yard tractor	35112	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	36	CHE Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Yard tractor	35113	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	264	CHE Diesel			
Yard tractor	35114	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	126	CHE Diesel			
Yard tractor	35115	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	330	CHE Diesel			
Yard tractor	35116	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	235	CHE Diesel			
Yard tractor	35117	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	250	CHE Diesel			
Yard tractor	35118	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	162	CHE Diesel			
Yard tractor	35119	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	312	CHE Diesel			
Yard tractor	35120	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	39	CHE Diesel			
Yard tractor	35121	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	31	CHE Diesel			
Yard tractor	35122	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	52	CHE Diesel			
Yard tractor	35123	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	164	CHE Diesel			
Yard tractor	35124	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	45	CHE Diesel			
Yard tractor	35125	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	31	CHE Diesel			
Yard tractor	35126	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	152	CHE Diesel			
Yard tractor	35127	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	124	CHE Diesel			
Yard tractor	35128	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	154	CHE Diesel			
Yard tractor	35129	TICO	Pro-spotter	Diesel	Cummins	QSB Tier 4f	2019	158	33	CHE Diesel			
Yard tractor	40156	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40157	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40158	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40159	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40160	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40161	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40162	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40163	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40164	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40165	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40166	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40167	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40168	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40169	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40170	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40171	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40172	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40173	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40174	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40175	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40176	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40177	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40178	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40179	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40180	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40181	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40182	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40183	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40184	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40185	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40186	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40187	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40188	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40189	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40190	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40191	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40192	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40193	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40194	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40195	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40196	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40210	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40211	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40212	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40213	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Yard tractor	40214	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40215	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40216	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40217	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40218	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40219	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40220	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40221	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40222	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40223	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40224	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40225	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40226	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40227	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40228	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40229	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40230	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40231	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40232	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40233	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40234	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40235	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40236	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40237	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40238	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40239	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40240	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40241	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40242	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40243	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40244	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40245	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40246	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40247	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40248	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40249	Ottowa	C-50	Diesel	Cummins	ISB6.7	2008	240	2841	CHE On Road Diesel			
Yard tractor	40250	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40251	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40252	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40253	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40254	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40255	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40256	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40257	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40258	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40259	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40260	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40261	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40262	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40263	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40264	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40265	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40266	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40267	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40268	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40269	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40270	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40271	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40272	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40273	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40274	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40275	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Yard tractor	40276	Ottawa	4x2	Diesel	Cummins	ISB6.7	2013	250	2841	CHE On Road Diesel			
Yard tractor	40277	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40278	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40279	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40280	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40281	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40282	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40283	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40284	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40285	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40286	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40287	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40288	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40289	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40290	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40291	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40292	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40293	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40294	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40295	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40296	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40297	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40298	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40299	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40300	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40301	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40302	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40303	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40304	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40305	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40306	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40307	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40308	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40309	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40310	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40311	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40312	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40313	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40314	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40315	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40316	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40317	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40318	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40319	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40320	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40321	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40322	Ottawa	4x2	Diesel	Cummins	ISB6.7	2014	250	2841	CHE On Road Diesel			
Yard tractor	40373	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	250	2841	CHE Diesel			
Yard tractor	40374	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	250	2841	CHE Diesel			
Yard tractor	40375	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	250	2841	CHE Diesel			
Yard tractor	40376	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	250	2841	CHE Diesel			
Yard tractor	40377	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	250	2841	CHE Diesel			
Yard tractor	40378	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	250	2841	CHE Diesel			
Yard tractor	40379	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	250	2841	CHE Diesel			
Yard tractor	40380	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	250	2841	CHE Diesel			
Yard tractor	40381	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	250	2841	CHE Diesel			
Yard tractor	40382	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	250	2841	CHE Diesel			
Yard tractor	40383	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	250	2841	CHE Diesel			
Yard tractor	40384	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	250	2841	CHE Diesel			
Yard tractor	40385	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	250	2841	CHE Diesel			
Yard tractor	40386	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	250	2841	CHE Diesel			
Yard tractor	40387	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	250	2841	CHE Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Yard tractor	40508	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40509	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40510	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40511	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40512	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40513	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40514	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40515	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40516	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40517	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40518	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40519	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40520	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40521	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40522	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40523	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	40524	Ottawa	4x2	Diesel	Cummins	QSB 6.7	2016	200	2841	CHE Diesel			
Yard tractor	4055YT	Capacity		Diesel	Cummins	ISB 07	2008	210	0	CHE On Road Diesel			
Yard tractor	4061YT	Capacity		Diesel	Cummins	ISB 07	2008	210	810	CHE On Road Diesel			
Yard tractor	4066YT	Capacity		Diesel	Cummins	ISB 07	2008	210	1328	CHE On Road Diesel			
Yard tractor	EMST001	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	3483	CHE On Road Diesel			
Yard tractor	EMST003	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	2613	CHE On Road Diesel			
Yard tractor	EMST004	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	2949	CHE On Road Diesel			
Yard tractor	EMST005	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	2776	CHE On Road Diesel			
Yard tractor	EMST006	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	2755	CHE On Road Diesel			
Yard tractor	EMST011	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	3480	CHE On Road Diesel			
Yard tractor	EMST012	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	2763	CHE On Road Diesel			
Yard tractor	EMST013	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	3114	CHE On Road Diesel			
Yard tractor	EMST014	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	1841	CHE On Road Diesel			
Yard tractor	EMST015	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	2888	CHE On Road Diesel			
Yard tractor	EMST016	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	2157	CHE On Road Diesel			
Yard tractor	EMST017	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	2382	CHE On Road Diesel			
Yard tractor	EMST018	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	3850	CHE On Road Diesel			
Yard tractor	EMST019	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	3878	CHE On Road Diesel			
Yard tractor	EMST020	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	1905	CHE On Road Diesel			
Yard tractor	EMST021	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	4732	CHE On Road Diesel			
Yard tractor	EMST022	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	3081	CHE On Road Diesel			
Yard tractor	EMST023	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	3560	CHE On Road Diesel			
Yard tractor	EMST024	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	2581	CHE On Road Diesel			
Yard tractor	EMST025	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	2696	CHE On Road Diesel			
Yard tractor	EMST026	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	2725	CHE On Road Diesel			
Yard tractor	EMST027	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	2749	CHE On Road Diesel			
Yard tractor	EMST768	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			
Yard tractor	EMST769	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	217	CHE On Road Diesel			
Yard tractor	EMST770	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	137	CHE On Road Diesel			
Yard tractor	EMST771	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	934	CHE On Road Diesel			
Yard tractor	EMST772	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	3987	CHE On Road Diesel			
Yard tractor	EMST773	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	705	CHE On Road Diesel			
Yard tractor	EMST774	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1943	CHE On Road Diesel			
Yard tractor	EMST775	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	2349	CHE On Road Diesel			
Yard tractor	EMST776	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1772	CHE On Road Diesel			
Yard tractor	EMST777	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	2357	CHE On Road Diesel			
Yard tractor	EMST778	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1767	CHE On Road Diesel			
Yard tractor	EMST779	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1473	CHE On Road Diesel			
Yard tractor	EMST780	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	2712	CHE On Road Diesel			
Yard tractor	EMST781	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	2557	CHE On Road Diesel			
Yard tractor	EMST782	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			
Yard tractor	EMST783	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			
Yard tractor	EMST784	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			
Yard tractor	EMST785	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1518	CHE On Road Diesel			
Yard tractor	EMST786	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1935	CHE On Road Diesel			
Yard tractor	EMST787	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Yard tractor	EMST788	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			
Yard tractor	EMST789	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			
Yard tractor	EMST790	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			
Yard tractor	EMST791	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			
Yard tractor	EMST792	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	60	CHE On Road Diesel			
Yard tractor	EMST793	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			
Yard tractor	EMST794	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	382	CHE On Road Diesel			
Yard tractor	EMST795	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			
Yard tractor	EMST796	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1923	CHE On Road Diesel			
Yard tractor	EMST797	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			
Yard tractor	EMST798	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			
Yard tractor	EMST799	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1310	CHE On Road Diesel			
Yard tractor	EMST800	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	2340	CHE On Road Diesel			
Yard tractor	EMST801	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	2342	CHE On Road Diesel			
Yard tractor	EMST802	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	2372	CHE On Road Diesel			
Yard tractor	EMST803	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	4824	CHE On Road Diesel			
Yard tractor	EMST804	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	2583	CHE On Road Diesel			
Yard tractor	EMST805	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	3739	CHE On Road Diesel			
Yard tractor	EMST806	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1936	CHE On Road Diesel			
Yard tractor	EMST807	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1160	CHE On Road Diesel			
Yard tractor	EMST808	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1160	CHE On Road Diesel			
Yard tractor	EMST809	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			
Yard tractor	EMST810	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	2617	CHE On Road Diesel			
Yard tractor	EMST811	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1933	CHE On Road Diesel			
Yard tractor	EMST812	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	2460	CHE On Road Diesel			
Yard tractor	EMST813	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1648	CHE On Road Diesel			
Yard tractor	EMST814	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	14	CHE On Road Diesel			
Yard tractor	EMST815	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	2601	CHE On Road Diesel			
Yard tractor	EMST816	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	2945	CHE On Road Diesel			
Yard tractor	EMST817	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1918	CHE On Road Diesel			
Yard tractor	EMST818	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	2098	CHE On Road Diesel			
Yard tractor	EMST819	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1493	CHE On Road Diesel			
Yard tractor	EMST820	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1433	CHE On Road Diesel			
Yard tractor	EMST821	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	2580	CHE On Road Diesel			
Yard tractor	EMST822	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1969	CHE On Road Diesel			
Yard tractor	EMST823	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			
Yard tractor	EMST824	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	0	CHE On Road Diesel			
Yard tractor	EMST825	Capacity	TJ7000	Diesel	Cummins	ISB240	2007	240	1159	CHE On Road Diesel			
Yard tractor	EMST831	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	1738	CHE On Road Diesel			
Yard tractor	EMST832	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	0	CHE On Road Diesel			
Yard tractor	EMST833	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	1995	CHE On Road Diesel			
Yard tractor	EMST834	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	2161	CHE On Road Diesel			
Yard tractor	EMST835	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	2955	CHE On Road Diesel			
Yard tractor	EMST836	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	1928	CHE On Road Diesel			
Yard tractor	EMST837	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	2066	CHE On Road Diesel			
Yard tractor	EMST838	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	1783	CHE On Road Diesel			
Yard tractor	EMST839	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	204	CHE On Road Diesel			
Yard tractor	EMST840	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	0	CHE On Road Diesel			
Yard tractor	EMST841	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	1936	CHE On Road Diesel			
Yard tractor	EMST842	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	1473	CHE On Road Diesel			
Yard tractor	EMST843	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	2632	CHE On Road Diesel			
Yard tractor	EMST844	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	2862	CHE On Road Diesel			
Yard tractor	EMST845	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	805	CHE On Road Diesel			
Yard tractor	EMST846	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	0	CHE On Road Diesel			
Yard tractor	EMST847	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	1552	CHE On Road Diesel			
Yard tractor	EMST848	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	0	CHE On Road Diesel			
Yard tractor	EMST849	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	0	CHE On Road Diesel			
Yard tractor	EMST850	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	2290	CHE On Road Diesel			
Yard tractor	EMST851	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	389	CHE On Road Diesel			
Yard tractor	EMST852	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	5097	CHE On Road Diesel			
Yard tractor	EMST853	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	1464	CHE On Road Diesel			
Yard tractor	EMST854	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	2653	CHE On Road Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Yard tractor	EMST855	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	1521	CHE On Road Diesel			
Yard tractor	EMST856	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	1914	CHE On Road Diesel			
Yard tractor	EMST857	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	1867	CHE On Road Diesel			
Yard tractor	EMST858	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	1522	CHE On Road Diesel			
Yard tractor	EMST859	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	1985	CHE On Road Diesel			
Yard tractor	EMST860	Capacity	TJ7000	Diesel	Cummins	ISB	2008	240	1341	CHE On Road Diesel			
Yard tractor	EMST862	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	1735	CHE On Road Diesel			
Yard tractor	EMST863	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	659	CHE On Road Diesel			
Yard tractor	EMST864	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	2490	CHE On Road Diesel			
Yard tractor	EMST865	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	1825	CHE On Road Diesel			
Yard tractor	EMST866	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	2254	CHE On Road Diesel			
Yard tractor	EMST867	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	1682	CHE On Road Diesel			
Yard tractor	EMST868	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	1724	CHE On Road Diesel			
Yard tractor	EMST869	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	0	CHE On Road Diesel			
Yard tractor	EMST870	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	1984	CHE On Road Diesel			
Yard tractor	EMST871	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	1275	CHE On Road Diesel			
Yard tractor	EMST872	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	586	CHE On Road Diesel			
Yard tractor	EMST873	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	3006	CHE On Road Diesel			
Yard tractor	EMST874	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	2110	CHE On Road Diesel			
Yard tractor	EMST875	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	3285	CHE On Road Diesel			
Yard tractor	EMST876	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	2849	CHE On Road Diesel			
Yard tractor	EMST877	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	3491	CHE On Road Diesel			
Yard tractor	EMST878	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	2092	CHE On Road Diesel			
Yard tractor	EMST879	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	501	CHE On Road Diesel			
Yard tractor	EMST880	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	1935	CHE On Road Diesel			
Yard tractor	EMST881	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	2037	CHE On Road Diesel			
Yard tractor	EMST882	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	2074	CHE On Road Diesel			
Yard tractor	EMST883	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	1076	CHE On Road Diesel			
Yard tractor	EMST884	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	173	CHE On Road Diesel			
Yard tractor	EMST885	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	2654	CHE On Road Diesel			
Yard tractor	EMST886	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	1439	CHE On Road Diesel			
Yard tractor	EMST887	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	1377	CHE On Road Diesel			
Yard tractor	EMST888	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	2447	CHE On Road Diesel			
Yard tractor	EMST889	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	818	CHE On Road Diesel			
Yard tractor	EMST890	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	2315	CHE On Road Diesel			
Yard tractor	EMST891	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	1455	CHE On Road Diesel			
Yard tractor	EMST892	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	0	CHE On Road Diesel			
Yard tractor	EMST893	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	267	CHE On Road Diesel			
Yard tractor	EMST894	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	1830	CHE On Road Diesel			
Yard tractor	EMST895	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	0	CHE On Road Diesel			
Yard tractor	EMST896	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	1006	CHE On Road Diesel			
Yard tractor	EMST897	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	1260	CHE On Road Diesel			
Yard tractor	EMST898	Capacity	TJ9000	Diesel	Cummins	ISB	2008	240	3023	CHE On Road Diesel			
Yard tractor	EMST911	Capacity	TJ9000	Diesel	Cummins	ISB	2012	220	2645	CHE On Road Diesel			
Yard tractor	EMST912	Capacity	TJ9000	Diesel	Cummins	ISB	2012	220	1791	CHE On Road Diesel			
Yard tractor	EMST913	Capacity	TJ9000	Diesel	Cummins	ISB	2012	220	1545	CHE On Road Diesel			
Yard tractor	EMST914	Capacity	TJ9000	Diesel	Cummins	ISB	2012	220	1928	CHE On Road Diesel			
Yard tractor	EMST915	Capacity	TJ9000	Diesel	Cummins	ISB	2012	220	689	CHE On Road Diesel			
Yard tractor	EMST916	Capacity	TJ9000	Diesel	Cummins	ISB	2012	220	1429	CHE On Road Diesel			
Yard tractor	EMST917	Capacity	TJ9000	Diesel	Cummins	ISB	2012	220	1837	CHE On Road Diesel			
Yard tractor	EMST918	Capacity	TJ9000	Diesel	Cummins	ISB	2012	220	1201	CHE On Road Diesel			
Yard tractor	EMST919	Capacity	TJ9000	Diesel	Cummins	ISB	2012	220	210	CHE On Road Diesel			
Yard tractor	EMST920	Capacity	TJ9000	Diesel	Cummins	ISB	2012	220	1826	CHE On Road Diesel			
Yard tractor	EMST921	Capacity	TJ9000	Diesel	Cummins	ISB	2011	220	364	CHE On Road Diesel			
Yard tractor	EMST922	Capacity	TJ9000	Diesel	Cummins	ISB	2011	220	500	CHE On Road Diesel			
Yard tractor	EMST923	Capacity	TJ9000	Diesel	Cummins	ISB	2011	220	1769	CHE On Road Diesel			
Yard tractor	EMST924	Capacity	TJ9000	Diesel	Cummins	ISB	2011	220	1818	CHE On Road Diesel			
Yard tractor	EMST925	Capacity	TJ9000	Diesel	Cummins	ISB	2011	220	2159	CHE On Road Diesel			
Yard tractor	EMST926	Capacity	TJ9000	Diesel	Cummins	ISB	2011	220	3985	CHE On Road Diesel			
Yard tractor	EMST927	Capacity	TJ9000	Diesel	Cummins	ISB	2011	220	1770	CHE On Road Diesel			
Yard tractor	EMST928	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	936	CHE On Road Diesel			
Yard tractor	EMST929	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220		CHE On Road Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Yard tractor	EMST930	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	2406	CHE On Road Diesel			
Yard tractor	EMST931	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1777	CHE On Road Diesel			
Yard tractor	EMST932	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	2437	CHE On Road Diesel			
Yard tractor	EMST933	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	184	CHE On Road Diesel			
Yard tractor	EMST934	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	2170	CHE On Road Diesel			
Yard tractor	EMST935	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	2064	CHE On Road Diesel			
Yard tractor	EMST936	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1310	CHE On Road Diesel			
Yard tractor	EMST937	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1858	CHE On Road Diesel			
Yard tractor	EMST938	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1630	CHE On Road Diesel			
Yard tractor	EMST939	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1961	CHE On Road Diesel			
Yard tractor	EMST940	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	2402	CHE On Road Diesel			
Yard tractor	EMST941	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	2174	CHE On Road Diesel			
Yard tractor	EMST942	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1658	CHE On Road Diesel			
Yard tractor	EMST943	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	2418	CHE On Road Diesel			
Yard tractor	EMST944	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1895	CHE On Road Diesel			
Yard tractor	EMST945	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1891	CHE On Road Diesel			
Yard tractor	EMST946	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	3170	CHE On Road Diesel			
Yard tractor	EMST947	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	2281	CHE On Road Diesel			
Yard tractor	EMST948	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1829	CHE On Road Diesel			
Yard tractor	EMST949	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	3162	CHE On Road Diesel			
Yard tractor	EMST950	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1905	CHE On Road Diesel			
Yard tractor	EMST951	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1608	CHE On Road Diesel			
Yard tractor	EMST952	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	2100	CHE On Road Diesel			
Yard tractor	EMST953	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1456	CHE On Road Diesel			
Yard tractor	EMST954	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1319	CHE On Road Diesel			
Yard tractor	EMST955	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1983	CHE On Road Diesel			
Yard tractor	EMST956	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1997	CHE On Road Diesel			
Yard tractor	EMST957	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1912	CHE On Road Diesel			
Yard tractor	EMST958	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	2269	CHE On Road Diesel			
Yard tractor	EMST959	Capacity	TJ9000	Diesel	Cummins	ISB	2013	220	1705	CHE On Road Diesel			
Yard tractor	EMST960	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	1719	CHE On Road Diesel			
Yard tractor	EMST961	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2145	CHE On Road Diesel			
Yard tractor	EMST962	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	3525	CHE On Road Diesel			
Yard tractor	EMST963	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2148	CHE On Road Diesel			
Yard tractor	EMST964	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2504	CHE On Road Diesel			
Yard tractor	EMST965	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	3198	CHE On Road Diesel			
Yard tractor	EMST966	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2238	CHE On Road Diesel			
Yard tractor	EMST967	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2899	CHE On Road Diesel			
Yard tractor	EMST968	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	3674	CHE On Road Diesel			
Yard tractor	EMST969	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	949	CHE On Road Diesel			
Yard tractor	EMST970	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	1967	CHE On Road Diesel			
Yard tractor	EMST971	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	1796	CHE On Road Diesel			
Yard tractor	EMST972	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2301	CHE On Road Diesel			
Yard tractor	EMST973	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2751	CHE On Road Diesel			
Yard tractor	EMST974	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2600	CHE On Road Diesel			
Yard tractor	EMST975	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2186	CHE On Road Diesel			
Yard tractor	EMST976	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2423	CHE On Road Diesel			
Yard tractor	EMST977	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2759	CHE On Road Diesel			
Yard tractor	EMST978	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	999	CHE On Road Diesel			
Yard tractor	EMST979	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	440	CHE On Road Diesel			
Yard tractor	EMST980	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2879	CHE On Road Diesel			
Yard tractor	EMST981	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2982	CHE On Road Diesel			
Yard tractor	EMST982	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2570	CHE On Road Diesel			
Yard tractor	EMST983	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2157	CHE On Road Diesel			
Yard tractor	EMST984	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	1133	CHE On Road Diesel			
Yard tractor	EMST985	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	4079	CHE On Road Diesel			
Yard tractor	EMST986	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	3196	CHE On Road Diesel			
Yard tractor	EMST987	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	1915	CHE On Road Diesel			
Yard tractor	EMST988	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2473	CHE On Road Diesel			
Yard tractor	EMST989	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	4447	CHE On Road Diesel			
Yard tractor	EMST990	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	3509	CHE On Road Diesel			
Yard tractor	EMST991	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2426	CHE On Road Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Yard tractor	EMST992	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2179	CHE On Road Diesel			
Yard tractor	EMST993	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2238	CHE On Road Diesel			
Yard tractor	EMST994	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	4008	CHE On Road Diesel			
Yard tractor	EMST995	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2160	CHE On Road Diesel			
Yard tractor	EMST996	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2650	CHE On Road Diesel			
Yard tractor	EMST997	Capacity	TJ9000	Diesel	Cummins	ISB	2014	220	2277	CHE On Road Diesel			
Yard tractor	EMST998	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	2906	CHE On Road Diesel			
Yard tractor	EMST999	Capacity	TJ9000	Diesel	Cummins	ISB	2015	225	1976	CHE On Road Diesel			
Yard tractor	H182	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	861	CHE On Road Diesel			
Yard tractor	H183	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1238	CHE On Road Diesel			
Yard tractor	H184	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	597	CHE On Road Diesel			
Yard tractor	H185	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	886	CHE On Road Diesel			
Yard tractor	H186	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1987	CHE On Road Diesel			
Yard tractor	H187	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1594	CHE On Road Diesel			
Yard tractor	H188	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	2337	CHE On Road Diesel			
Yard tractor	H189	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1194	CHE On Road Diesel			
Yard tractor	H190	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1623	CHE On Road Diesel			
Yard tractor	H191	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1272	CHE On Road Diesel			
Yard tractor	H192	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	2406	CHE On Road Diesel			
Yard tractor	H193	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1105	CHE On Road Diesel			
Yard tractor	H194	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1107	CHE On Road Diesel			
Yard tractor	H195	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	772	CHE On Road Diesel			
Yard tractor	H196	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1372	CHE On Road Diesel			
Yard tractor	H197	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1101	CHE On Road Diesel			
Yard tractor	H198	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1642	CHE On Road Diesel			
Yard tractor	H199	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	989	CHE On Road Diesel			
Yard tractor	H200	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	987	CHE On Road Diesel			
Yard tractor	H201	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1201	CHE On Road Diesel			
Yard tractor	H202	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1018	CHE On Road Diesel			
Yard tractor	H203	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	897	CHE On Road Diesel			
Yard tractor	H204	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1723	CHE On Road Diesel			
Yard tractor	H205	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	2110	CHE On Road Diesel			
Yard tractor	H206	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1067	CHE On Road Diesel			
Yard tractor	H207	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	843	CHE On Road Diesel			
Yard tractor	H208	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1120	CHE On Road Diesel			
Yard tractor	H209	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1676	CHE On Road Diesel			
Yard tractor	H210	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	927	CHE On Road Diesel			
Yard tractor	H211	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1370	CHE On Road Diesel			
Yard tractor	H212	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1625	CHE On Road Diesel			
Yard tractor	H213	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1260	CHE On Road Diesel			
Yard tractor	H214	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1296	CHE On Road Diesel			
Yard tractor	H215	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1587	CHE On Road Diesel			
Yard tractor	H216	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1972	CHE On Road Diesel			
Yard tractor	H217	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1027	CHE On Road Diesel			
Yard tractor	H218	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1282	CHE On Road Diesel			
Yard tractor	H219	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1143	CHE On Road Diesel			
Yard tractor	H220	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1536	CHE On Road Diesel			
Yard tractor	H221	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1035	CHE On Road Diesel			
Yard tractor	H222	Ottawa	C-50	Diesel	Cummins	ISB07 240	2008	240	1518	CHE On Road Diesel			
Yard tractor	H223	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1715	CHE On Road Diesel			
Yard tractor	H224	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1184	CHE On Road Diesel			
Yard tractor	H225	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1546	CHE On Road Diesel			
Yard tractor	H226	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1634	CHE On Road Diesel			
Yard tractor	H227	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1451	CHE On Road Diesel			
Yard tractor	H228	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1509	CHE On Road Diesel			
Yard tractor	H229	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1542	CHE On Road Diesel			
Yard tractor	H230	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1382	CHE On Road Diesel			
Yard tractor	H231	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1943	CHE On Road Diesel			
Yard tractor	H232	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1674	CHE On Road Diesel			
Yard tractor	H233	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1344	CHE On Road Diesel			
Yard tractor	H234	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1751	CHE On Road Diesel			
Yard tractor	H235	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1865	CHE On Road Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Yard tractor	H236	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1794	CHE On Road Diesel			
Yard tractor	H237	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1781	CHE On Road Diesel			
Yard tractor	H238	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1720	CHE On Road Diesel			
Yard tractor	H239	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1606	CHE On Road Diesel			
Yard tractor	H240	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	2091	CHE On Road Diesel			
Yard tractor	H241	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1527	CHE On Road Diesel			
Yard tractor	H242	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	2303	CHE On Road Diesel			
Yard tractor	H243	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1649	CHE On Road Diesel			
Yard tractor	H244	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	2597	CHE On Road Diesel			
Yard tractor	H245	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1555	CHE On Road Diesel			
Yard tractor	H246	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1702	CHE On Road Diesel			
Yard tractor	H247	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1770	CHE On Road Diesel			
Yard tractor	H248	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1797	CHE On Road Diesel			
Yard tractor	H249	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1499	CHE On Road Diesel			
Yard tractor	H250	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1991	CHE On Road Diesel			
Yard tractor	H251	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1946	CHE On Road Diesel			
Yard tractor	H252	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	2066	CHE On Road Diesel			
Yard tractor	H253	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	2042	CHE On Road Diesel			
Yard tractor	H254	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	2375	CHE On Road Diesel			
Yard tractor	H255	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1731	CHE On Road Diesel			
Yard tractor	H256	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	1626	CHE On Road Diesel			
Yard tractor	H257	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2012	240	2596	CHE On Road Diesel			
Yard tractor	H258	Ottawa		Diesel	Cummins	ISB6.7	2014	240	1871	CHE On Road Diesel			
Yard tractor	H259	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2729	CHE On Road Diesel			
Yard tractor	H260	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2433	CHE On Road Diesel			
Yard tractor	H261	Ottawa		Diesel	Cummins	ISB6.7	2014	240	1620	CHE On Road Diesel			
Yard tractor	H262	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2265	CHE On Road Diesel			
Yard tractor	H263	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2628	CHE On Road Diesel			
Yard tractor	H264	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2121	CHE On Road Diesel			
Yard tractor	H265	Ottawa		Diesel	Cummins	ISB6.7	2014	240		CHE On Road Diesel			
Yard tractor	H266	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2211	CHE On Road Diesel			
Yard tractor	H267	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2357	CHE On Road Diesel			
Yard tractor	H268	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2313	CHE On Road Diesel			
Yard tractor	H269	Ottawa		Diesel	Cummins	ISB6.7	2014	240	1833	CHE On Road Diesel			
Yard tractor	H270	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2534	CHE On Road Diesel			
Yard tractor	H271	Ottawa		Diesel	Cummins	ISB6.7	2014	240	1682	CHE On Road Diesel			
Yard tractor	H272	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2785	CHE On Road Diesel			
Yard tractor	H273	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2271	CHE On Road Diesel			
Yard tractor	H274	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2439	CHE On Road Diesel			
Yard tractor	H275	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2298	CHE On Road Diesel			
Yard tractor	H276	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2290	CHE On Road Diesel			
Yard tractor	H277	Ottawa		Diesel	Cummins	ISB6.7	2014	240	1230	CHE On Road Diesel			
Yard tractor	H278	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2008	CHE On Road Diesel			
Yard tractor	H279	Ottawa		Diesel	Cummins	ISB6.7	2014	240	1943	CHE On Road Diesel			
Yard tractor	H280	Ottawa		Diesel	Cummins	ISB6.7	2014	240	1715	CHE On Road Diesel			
Yard tractor	H281	Ottawa		Diesel	Cummins	ISB6.7	2014	240	1927	CHE On Road Diesel			
Yard tractor	H282	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2361	CHE On Road Diesel			
Yard tractor	H283	Ottawa		Diesel	Cummins	ISB6.7	2014	240	1986	CHE On Road Diesel			
Yard tractor	H284	Ottawa		Diesel	Cummins	ISB6.7	2014	240	3346	CHE On Road Diesel			
Yard tractor	H285	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2250	CHE On Road Diesel			
Yard tractor	H286	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2723	CHE On Road Diesel			
Yard tractor	H287	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2323	CHE On Road Diesel			
Yard tractor	H288	Ottawa		Diesel	Cummins	ISB6.7	2014	240	1926	CHE On Road Diesel			
Yard tractor	H289	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2632	CHE On Road Diesel			
Yard tractor	H290	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2370	CHE On Road Diesel			
Yard tractor	H291	Ottawa		Diesel	Cummins	ISB6.7	2014	240	1987	CHE On Road Diesel			
Yard tractor	H292	Ottawa		Diesel	Cummins	ISB6.7	2014	240	2202	CHE On Road Diesel			
Yard tractor	H293	Ottawa		Diesel	Cummins	ISB6.7	2014	240	1918	CHE On Road Diesel			
Yard tractor	H294	Ottawa		Diesel			2015		1561	CHE On Road Diesel			
Yard tractor	H295	Ottawa		Diesel			2015		1264	CHE On Road Diesel			
Yard tractor	H296	Ottawa		Diesel			2015		1128	CHE On Road Diesel			
Yard tractor	H297	Ottawa		Diesel			2015		1098	CHE On Road Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Yard tractor	H298	Ottawa		Diesel			2015		989	CHE On Road Diesel			
Yard tractor	H299	Ottawa		Diesel			2015		1945	CHE On Road Diesel			
Yard tractor	H300	Ottawa		Diesel			2015		1863	CHE On Road Diesel			
Yard tractor	H301	Ottawa		Diesel			2015		1186	CHE On Road Diesel			
Yard tractor	H303	Ottawa		Diesel			2015		1094	CHE On Road Diesel			
Yard tractor	LAYT1564			Diesel			1995	250	2147	CHE Diesel		01-01-12	
Yard tractor	LAYT1565			Diesel			1995	250	1872	CHE Diesel		01-01-12	
Yard tractor	LAYT1566			Diesel			1995	250	1168	CHE Diesel		01-01-12	
Yard tractor	LAYT1567			Diesel			1995	250	1353	CHE Diesel		01-01-12	
Yard tractor	Y242	Capacity	TJ7000	Diesel	Cummins	ISB-200	2007	200	0	CHE On Road Diesel			
Yard tractor	Y243	Capacity	TJ7000	Diesel	Cummins	ISB-07	2007	200	380	CHE On Road Diesel			
Yard tractor	Y244	Capacity	TJ7000	Diesel	Cummins	ISB-07	2007	200	213	CHE On Road Diesel			
Yard tractor	Y245	Capacity	TJ7000	Diesel	Cummins	ISB-07	2007	200	290	CHE On Road Diesel			
Yard tractor	Y247	Capacity	TJ7000	Diesel	Cummins	ISB-07	2007	200	182	CHE On Road Diesel			
Yard tractor	Y248	Capacity	TJ7000	Diesel	Cummins	ISB-07	2007	200	461	CHE On Road Diesel			
Yard tractor	Y258	Ottowa	4x2	Diesel	Cummins	ISB-6.7	2015	200	265	CHE On Road Diesel			
Yard tractor	Y259	Ottowa	4x2	Diesel	Cummins	ISB-6.7	2015	200	182	CHE On Road Diesel			
Yard tractor	Y260	Ottowa	T2-4x2	Diesel	Cummins	QSB-6.7	2015	173	297	CHE Diesel			
Yard tractor	Y261	Ottowa	T2-4x2	Diesel	Cummins	QSB-6.7	2015	173	246	CHE Diesel			
Yard tractor	YT 0201	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1680	CHE On Road Diesel			
Yard tractor	YT 0202	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1900	CHE On Road Diesel			
Yard tractor	YT 0203	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1724	CHE On Road Diesel			
Yard tractor	YT 0204	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	712	CHE On Road Diesel			
Yard tractor	YT 0205	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	904	CHE On Road Diesel			
Yard tractor	YT 0206	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1244	CHE On Road Diesel			
Yard tractor	YT 0207	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1196	CHE On Road Diesel			
Yard tractor	YT 0208	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1576	CHE On Road Diesel			
Yard tractor	YT 0209	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1772	CHE On Road Diesel			
Yard tractor	YT 0210	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	2420	CHE On Road Diesel			
Yard tractor	YT 0211	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	984	CHE On Road Diesel			
Yard tractor	YT 0213	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1700	CHE On Road Diesel			
Yard tractor	YT 0214	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1408	CHE On Road Diesel			
Yard tractor	YT 0215	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1212	CHE On Road Diesel			
Yard tractor	YT 0216	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	2460	CHE On Road Diesel			
Yard tractor	YT 0217	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1700	CHE On Road Diesel			
Yard tractor	YT 0218	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	2364	CHE On Road Diesel			
Yard tractor	YT 0219	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1160	CHE On Road Diesel			
Yard tractor	YT 0220	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	2036	CHE On Road Diesel			
Yard tractor	YT 0221	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	220	1156	CHE On Road Diesel			
Yard tractor	YT 0222	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	220	204	CHE On Road Diesel			
Yard tractor	YT 0223	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	220	1203	CHE On Road Diesel			
Yard tractor	YT 0224	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	220	1492	CHE On Road Diesel			
Yard tractor	YT 0225	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	220	1420	CHE On Road Diesel			
Yard tractor	YT 0226	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	220	1666	CHE On Road Diesel			
Yard tractor	YT 0227	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	220	288	CHE On Road Diesel			
Yard tractor	YT 0228	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	220	152	CHE On Road Diesel			
Yard tractor	YT 0229	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	220	1080	CHE On Road Diesel			
Yard tractor	YT 0230	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	220	1423	CHE On Road Diesel			
Yard tractor	YT 0231	Capacity	TJ7000	Diesel	Cummins	ISB 220	2008	220	1644	CHE On Road Diesel			
Yard tractor	YT 0232	Capacity	TJ7000	Diesel	Cummins	ISB 220	2008	220	1313	CHE On Road Diesel			
Yard tractor	YT 0233	Capacity	TJ7000	Diesel	Cummins	ISB 220	2008	220	2328	CHE On Road Diesel			
Yard tractor	YT 0234	Capacity	TJ7000	Diesel	Cummins	ISB 220	2008	220	1328	CHE On Road Diesel			
Yard tractor	YT 0235	Capacity	TJ7000	Diesel	Cummins	ISB 220	2008	220	910	CHE On Road Diesel			
Yard tractor	YT 0236	Capacity	TJ7000	Diesel	Cummins	ISB 220	2008	220	972	CHE On Road Diesel			
Yard tractor	YT 0237	Capacity	TJ7000	Diesel	Cummins	ISB 220	2008	220	1444	CHE On Road Diesel			
Yard tractor	YT 0238	Capacity	TJ7000	Diesel	Cummins	ISB 220	2008	220	1616	CHE On Road Diesel			
Yard tractor	YT 0239	Capacity	TJ7000	Diesel	Cummins	ISB 220	2008	220	1168	CHE On Road Diesel			
Yard tractor	YT 0240	Capacity	TJ7000	Diesel	Cummins	ISB 220	2008	220	1992	CHE On Road Diesel			
Yard tractor	YT 0241	Capacity	TJ7000	Diesel	Cummins	ISB 220	2008	220	1520	CHE On Road Diesel			
Yard tractor	YT 0242	Capacity	TJ7000	Diesel	Cummins	ISB 220	2008	220	2092	CHE On Road Diesel			
Yard tractor	YT 0243	Capacity	TJ7000	Diesel	Cummins	ISB 220	2008	220	668	CHE On Road Diesel			
Yard tractor	YT 0244	Capacity	TJ9000	Diesel	Cummins	ISB 10	2011	240	1708	CHE On Road Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Yard tractor	YT 0245	Capacity	TJ9000	Diesel	Cummins	ISB 10	2011	240	1800	CHE On Road Diesel			
Yard tractor	YT 0246	Capacity	TJ9000	Diesel	Cummins	ISB 10	2011	240	1208	CHE On Road Diesel			
Yard tractor	YT 0247	Capacity	TJ9000	Diesel	Cummins	ISB 10	2011	240	708	CHE On Road Diesel			
Yard tractor	YT 0248	Capacity	TJ9000	Diesel	Cummins	ISB 10	2011	240	2088	CHE On Road Diesel			
Yard tractor	YT 0249	Capacity	TJ9000	Diesel	Cummins	ISB 10	2011	240	1236	CHE On Road Diesel			
Yard tractor	YT 0250	Capacity	TJ9000	Diesel	Cummins	ISB 10	2011	240	1524	CHE On Road Diesel			
Yard tractor	YT 0251	Capacity	TJ9000	Diesel	Cummins	ISB 10	2011	240	1776	CHE On Road Diesel			
Yard tractor	YT 0252	Capacity	TJ9000	Diesel	Cummins	ISB 10	2011	240	1716	CHE On Road Diesel			
Yard tractor	YT 0253	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1512	CHE On Road Diesel			
Yard tractor	YT 0254	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1456	CHE On Road Diesel			
Yard tractor	YT 0255	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	2480	CHE On Road Diesel			
Yard tractor	YT 0256	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	2332	CHE On Road Diesel			
Yard tractor	YT 0258	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1712	CHE On Road Diesel			
Yard tractor	YT 0259	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1756	CHE On Road Diesel			
Yard tractor	YT 0260	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	980	CHE On Road Diesel			
Yard tractor	YT 0261	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1228	CHE On Road Diesel			
Yard tractor	YT 0262	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1600	CHE On Road Diesel			
Yard tractor	YT 0263	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1056	CHE On Road Diesel			
Yard tractor	YT 0264	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1332	CHE On Road Diesel			
Yard tractor	YT 0265	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1380	CHE On Road Diesel			
Yard tractor	YT 0266	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1100	CHE On Road Diesel			
Yard tractor	YT 0267	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1408	CHE On Road Diesel			
Yard tractor	YT 0268	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1652	CHE On Road Diesel			
Yard tractor	YT 0269	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1428	CHE On Road Diesel			
Yard tractor	YT 0270	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	2060	CHE On Road Diesel			
Yard tractor	YT 0271	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1160	CHE On Road Diesel			
Yard tractor	YT 0272	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1760	CHE On Road Diesel			
Yard tractor	YT 0273	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1648	CHE On Road Diesel			
Yard tractor	YT 0274	Capacity	TJ9000	Diesel	Cummins	ISB 240	2012	240	1422	CHE On Road Diesel			
Yard tractor	YT 0275	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1036	CHE On Road Diesel			
Yard tractor	YT 0276	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1756	CHE On Road Diesel			
Yard tractor	YT 0277	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	2808	CHE On Road Diesel			
Yard tractor	YT 0278	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	944	CHE On Road Diesel			
Yard tractor	YT 0279	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	2228	CHE On Road Diesel			
Yard tractor	YT 0280	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1032	CHE On Road Diesel			
Yard tractor	YT 0281	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1780	CHE On Road Diesel			
Yard tractor	YT 0283	Capacity	TJ9000	Diesel	Cummins	ISB6.7	2013	240	1904	CHE On Road Diesel			
Yard tractor	YT 0284	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	972	CHE Diesel			
Yard tractor	YT 0285	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	2044	CHE Diesel			
Yard tractor	YT 0286	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	684	CHE Diesel			
Yard tractor	YT 0287	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1340	CHE Diesel			
Yard tractor	YT 0288	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1784	CHE Diesel			
Yard tractor	YT 0290	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1064	CHE Diesel			
Yard tractor	YT 0291	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1116	CHE Diesel			
Yard tractor	YT 0292	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1472	CHE Diesel			
Yard tractor	YT 0293	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1172	CHE Diesel			
Yard tractor	YT 0294	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1272	CHE Diesel			
Yard tractor	YT 0295	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	252	CHE Diesel			
Yard tractor	YT 0296	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	379	CHE Diesel			
Yard tractor	YT 0297	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1936	CHE Diesel			
Yard tractor	YT 0298	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	2064	CHE Diesel			
Yard tractor	YT 0299	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1748	CHE Diesel			
Yard tractor	YT 0300	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1795	CHE Diesel			
Yard tractor	YT 0301	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	2500	CHE Diesel			
Yard tractor	YT 0302	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	2760	CHE Diesel			
Yard tractor	YT 0303	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1544	CHE Diesel			
Yard tractor	YT 0304	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1244	CHE Diesel			
Yard tractor	YT 0305	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1776	CHE Diesel			
Yard tractor	YT 0306	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	2076	CHE Diesel			
Yard tractor	YT 0307	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1068	CHE Diesel			
Yard tractor	YT 0308	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1500	CHE Diesel			
Yard tractor	YT 0309	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1304	CHE Diesel			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Yard tractor	YT 0310	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	624	CHE Diesel			
Yard tractor	YT 0311	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	512	CHE Diesel			
Yard tractor	YT 0312	Capacity	TJ9000	Diesel	Cummins	QSB6.7	2015	225	1404	CHE Diesel			
Yard tractor	LAYT3001	Ottawa		LNG	Cummins	BGAS BG-230	2009	230	142	CHE On Road LNG			
Yard tractor	LAYT3002	Ottawa		LNG	Cummins	BGAS BG-230	2009	230	271	CHE On Road LNG			
Yard tractor	LAYT3003	Ottawa		LNG	Cummins	BGAS BG-230	2009	230	386	CHE On Road LNG			
Yard tractor	LAYT3004	Ottawa		LNG	Cummins	BGAS BG-230	2009	230	357	CHE On Road LNG			
Yard tractor	LAYT3005	Ottawa		LNG	Cummins	BGAS BG-230	2009	230	1235	CHE On Road LNG			
Yard tractor	LAYT3006	Ottawa		LNG	Cummins	ISL-G	2010	230	500	CHE On Road LNG			
Yard tractor	LAYT3007	Ottawa		LNG	Cummins	ISL-G	2010	230	500	CHE On Road LNG			
Yard tractor	LAYT3008	Ottawa		LNG	Cummins	ISL-G	2010	230	500	CHE On Road LNG			
Yard tractor	LAYT3009	Ottawa		LNG	Cummins	ISL-G	2010	230	500	CHE On Road LNG			
Yard tractor	LAYT3010	Ottawa		LNG	Cummins	ISL-G	2010	230	500	CHE On Road LNG			
Yard tractor	LAYT3011	Ottawa		LNG	Cummins	ISL-G	2010	230	500	CHE On Road LNG			
Yard tractor	LAYT3012	Ottawa		LNG	Cummins	ISL-G	2010	230	500	CHE On Road LNG			
Yard tractor	LAYT3013	Ottawa		LNG	Cummins	ISL-G	2010	230	500	CHE On Road LNG			
Yard tractor	LAYT3014	Ottawa		LNG	Cummins	ISL-G	2010	230	500	CHE On Road LNG			
Yard tractor	LAYT3015	Ottawa		LNG	Cummins	ISL-G	2010	230	500	CHE On Road LNG			
Yard tractor	LAYT3016	Ottawa		LNG	Cummins	ISL-G	2010	230	500	CHE On Road LNG			
Yard tractor	LAYT3017	Ottawa		LNG	Cummins	ISL-G	2010	230	500	CHE On Road LNG			
Yard tractor	5260	Magnum	TT120	LPG	Cummins	LPG 195	2000	174	292	CHE Propane			
Yard tractor	5328	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1342	CHE Propane			
Yard tractor	5330	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1873	CHE Propane			
Yard tractor	5331	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1350	CHE Propane			
Yard tractor	5334	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1760	CHE Propane			
Yard tractor	5336	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1644	CHE Propane			
Yard tractor	5337	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1175	CHE Propane			
Yard tractor	5338	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1704	CHE Propane			
Yard tractor	5340	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	79	CHE Propane			
Yard tractor	5341	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1600	CHE Propane			
Yard tractor	5342	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1307	CHE Propane			
Yard tractor	5343	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1808	CHE Propane			
Yard tractor	5344	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	730	CHE Propane			
Yard tractor	5345	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1113	CHE Propane			
Yard tractor	5347	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1244	CHE Propane			
Yard tractor	5352	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1024	CHE Propane			
Yard tractor	5354	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1794	CHE Propane			
Yard tractor	5355	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1701	CHE Propane			
Yard tractor	5356	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1653	CHE Propane			
Yard tractor	5357	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1083	CHE Propane			
Yard tractor	5358	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	855	CHE Propane			
Yard tractor	5359	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	716	CHE Propane			
Yard tractor	5361	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	988	CHE Propane			
Yard tractor	5363	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1582	CHE Propane			
Yard tractor	5364	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1399	CHE Propane			
Yard tractor	5365	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1782	CHE Propane			
Yard tractor	5366	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1480	CHE Propane			
Yard tractor	5367	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1750	CHE Propane			
Yard tractor	5368	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	2086	CHE Propane			
Yard tractor	5375	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	0	CHE Propane			
Yard tractor	5376	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1366	CHE Propane			
Yard tractor	5377	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1954	CHE Propane			
Yard tractor	5378	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1632	CHE Propane			
Yard tractor	5380	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1913	CHE Propane			
Yard tractor	5385	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1489	CHE Propane			
Yard tractor	5386	Kalmar	PT122	LPG	Cummins	LPG 195	2004	195	1229	CHE Propane			
Yard tractor	5470	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1247	CHE Propane			
Yard tractor	5471	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	834	CHE Propane			
Yard tractor	5472	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1325	CHE Propane			
Yard tractor	5473	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1733	CHE Propane			
Yard tractor	5474	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1647	CHE Propane			
Yard tractor	5475	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1461	CHE Propane			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Yard tractor	5476	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1968	CHE Propane			
Yard tractor	5477	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	2093	CHE Propane			
Yard tractor	5478	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1902	CHE Propane			
Yard tractor	5479	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1649	CHE Propane			
Yard tractor	5480	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1790	CHE Propane			
Yard tractor	5481	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1528	CHE Propane			
Yard tractor	5482	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1585	CHE Propane			
Yard tractor	5483	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	403	CHE Propane			
Yard tractor	5484	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1731	CHE Propane			
Yard tractor	5485	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1497	CHE Propane			
Yard tractor	5486	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1720	CHE Propane			
Yard tractor	5487	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1813	CHE Propane			
Yard tractor	5488	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	2033	CHE Propane			
Yard tractor	5489	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1302	CHE Propane			
Yard tractor	5490	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1353	CHE Propane			
Yard tractor	5491	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1537	CHE Propane			
Yard tractor	5492	Capacity	TJ9000	LPG	Ford	6.8L V10	2011	231	1388	CHE Propane			
Yard tractor	5561	Capacity	TJ9000	LPG			2007	195	1879	CHE Propane			
Yard tractor	5562	Capacity	TJ9000	LPG			2007	195	2232	CHE Propane			
Yard tractor	5563	Capacity	TJ9000	LPG			2007	195	1899	CHE Propane			
Yard tractor	5564	Capacity	TJ9000	LPG			2007	195	2103	CHE Propane			
Yard tractor	5565	Capacity	TJ9000	LPG			2007	195	2220	CHE Propane			
Yard tractor	5566	Capacity	TJ9000	LPG			2007	195	1747	CHE Propane			
Yard tractor	5567	Capacity	TJ9000	LPG			2007	195	1993	CHE Propane			
Yard tractor	5568	Capacity	TJ9000	LPG			2007	195	2332	CHE Propane			
Yard tractor	5569	Capacity	TJ9000	LPG			2007	195	1648	CHE Propane			
Yard tractor	5570	Capacity	TJ9000	LPG			2007	195	1971	CHE Propane			
Yard tractor	5571	Capacity	TJ9000	LPG			2007	195	2083	CHE Propane			
Yard tractor	5572	Capacity	TJ9000	LPG			2007	195	2112	CHE Propane			
Yard tractor	5573	Capacity	TJ9000	LPG			2007	195	2292	CHE Propane			
Yard tractor	5574	Capacity	TJ9000	LPG			2007	195	2206	CHE Propane			
Yard tractor	5575	Capacity	TJ9000	LPG			2007	195	2346	CHE Propane			
Yard tractor	5576	Capacity	TJ9000	LPG			2007	195	2308	CHE Propane			
Yard tractor	5577	Capacity	TJ9000	LPG			2007	195	1537	CHE Propane			
Yard tractor	5578	Capacity	TJ9000	LPG			2007	195	1157	CHE Propane			
Yard tractor	5579	Capacity	TJ9000	LPG			2007	195	2218	CHE Propane			
Yard tractor	5580	Capacity	TJ9000	LPG			2007	195	2069	CHE Propane			
Yard tractor	5581	Capacity	TJ9000	LPG			2007	195	2286	CHE Propane			
Yard tractor	5582	Capacity	TJ9000	LPG			2007	195	2094	CHE Propane			
Yard tractor	5583	Capacity	TJ9000	LPG			2007	195	2228	CHE Propane			
Yard tractor	5584	Capacity	TJ9000	LPG			2007	195	1652	CHE Propane			
Yard tractor	5585	Capacity	TJ9000	LPG			2007	195	2420	CHE Propane			
Yard tractor	5586	Capacity	TJ9000	LPG			2007	195	2313	CHE Propane			
Yard tractor	5587	Capacity	TJ9000	LPG			2007	195	2308	CHE Propane			
Yard tractor	5588	Capacity	TJ9000	LPG			2007	195	1969	CHE Propane			
Yard tractor	5589	Capacity	TJ9000	LPG			2007	195	2173	CHE Propane			
Yard tractor	5590	Capacity	TJ9000	LPG			2007	195	2085	CHE Propane			
Yard tractor	5591	Capacity	TJ9000	LPG			2007	195	0	CHE Propane			
Yard tractor	5592	Capacity	TJ9000	LPG			2007	195	1638	CHE Propane			
Yard tractor	5593	Capacity	TJ9000	LPG			2007	195	2037	CHE Propane			
Yard tractor	5594	Capacity	TJ9000	LPG			2007	195	2397	CHE Propane			
Yard tractor	5595	Capacity	TJ9000	LPG			2007	195	2317	CHE Propane			
Yard tractor	5596	Capacity	TJ9000	LPG			2007	195	1451	CHE Propane			
Yard tractor	5597	Capacity	TJ9000	LPG			2007	195	2409	CHE Propane			
Yard tractor	5598	Capacity	TJ9000	LPG			2007	195	2252	CHE Propane			
Yard tractor	5599	Capacity	TJ9000	LPG			2007	195	2348	CHE Propane			
Yard tractor	5600	Capacity	TJ9000	LPG			2007	195	2530	CHE Propane			
Yard tractor	5615	Capacity	TJ9000	LPG			2007	195	2234	CHE Propane			
Yard tractor	5616	Capacity	TJ9000	LPG			2007	195	1624	CHE Propane			
Yard tractor	5652	Capacity	TJ9000	LPG			2007	195	2282	CHE Propane			
Yard tractor	5653	Capacity	TJ9000	LPG			2007	195	1625	CHE Propane			
Yard tractor	5654	Capacity	TJ9000	LPG			2007	195	2255	CHE Propane			

Port Equip Type	Equip ID	Equip Make	Equip Model	EngineType	Engine Make	Engine Model	Engine Year	HP	Annual Hours	Category	DPF level 2	DPF level 3	Blue Cat
Yard tractor	5655	Capacity	TJ9000	LPG			2007	195	2253	CHE Propane			
Yard tractor	5656	Capacity	TJ9000	LPG			2007	195	1909	CHE Propane			
Yard tractor	5657	Capacity	TJ9000	LPG			2007	195	1838	CHE Propane			
Yard tractor	5665	Capacity	TJ9000	LPG			2007	195	4	CHE Propane			
Yard tractor	5667	Capacity	TJ9000	LPG			2007	195	2179	CHE Propane			
Yard tractor	5669	Capacity	TJ9000	LPG			2007	195	2320	CHE Propane			
Yard tractor	5671	Capacity	TJ9000	LPG			2007	195	2620	CHE Propane			
Yard tractor	5674	Capacity	TJ9000	LPG			2007	195	2279	CHE Propane			
Yard tractor	5675	Capacity	TJ9000	LPG			2007	195	2342	CHE Propane			
Yard tractor	5676	Capacity	TJ9000	LPG			2007	195	2250	CHE Propane			
Yard tractor	5677	Capacity	TJ9000	LPG			2007	195	1473	CHE Propane			
Yard tractor	5678	Capacity	TJ9000	LPG			2007	195	1896	CHE Propane			
Yard tractor	5679	Capacity	TJ9000	LPG			2007	195	2485	CHE Propane			
Yard tractor	5682	Capacity	TJ9000	LPG			2007	195	1929	CHE Propane			
Yard tractor	5683	Capacity	TJ9000	LPG			2008	195	2308	CHE Propane			
Yard tractor	5686	Capacity	TJ9000	LPG			2008	195	2236	CHE Propane			
Yard tractor	5702	Capacity	TJ9000	LPG			2008	195	2194	CHE Propane			
Yard tractor	5703	Capacity	TJ9000	LPG			2008	195	2166	CHE Propane			
Yard tractor	5704	Capacity	TJ9000	LPG			2008	195	1464	CHE Propane			
Yard tractor	5706	Capacity	TJ9000	LPG			2008	195	1900	CHE Propane			
Yard tractor	5720	Capacity	TJ9000	LPG			2008	195	1736	CHE Propane			
Yard tractor	5724	Capacity	TJ9000	LPG			2008	195	2451	CHE Propane			
Yard tractor	5744	Capacity	TJ9000	LPG			2008	195	2136	CHE Propane			
Yard tractor	5746	Capacity	TJ9000	LPG			2008	195	2750	CHE Propane			
Yard tractor	5747	Capacity	TJ9000	LPG			2008	195	2510	CHE Propane			
Yard tractor	5748	Capacity	TJ9000	LPG			2008	195	1805	CHE Propane			
Yard tractor	5749	Capacity	TJ9000	LPG			2008	195	560	CHE Propane			
Yard tractor	5750	Capacity	TJ9000	LPG			2008	195	2435	CHE Propane			
Yard tractor	5751	Capacity	TJ9000	LPG			2008	195	2474	CHE Propane			
Yard tractor	5752	Capacity	TJ9000	LPG			2008	195	2071	CHE Propane			
Yard tractor	5754	Capacity	TJ9000	LPG			2008	195	2353	CHE Propane			
Yard tractor	5756	Capacity	TJ9000	LPG			2008	195	2178	CHE Propane			
Yard tractor	5769	Capacity	TJ9000	LPG			2008	195	2859	CHE Propane			
Yard tractor	5770	Capacity	TJ9000	LPG			2008	195	2274	CHE Propane			
Yard tractor	5771	Capacity	TJ9000	LPG			2008	195	1757	CHE Propane			
Yard tractor	5772	Capacity	TJ9000	LPG			2008	195	2478	CHE Propane			
Yard tractor	5773	Capacity	TJ9000	LPG			2008	195	2463	CHE Propane			
Yard tractor	5775	Capacity	TJ9000	LPG			2008	195	296	CHE Propane			
Yard tractor	5778	Capacity	TJ9000	LPG			2008	195	2171	CHE Propane			
Yard tractor	5779	Capacity	TJ9000	LPG			2008	195	2224	CHE Propane			
Yard tractor	5780	Capacity	TJ9000	LPG			2008	195	954	CHE Propane			
Yard tractor	5782	Capacity	TJ9000	LPG			2008	195	2363	CHE Propane			
Yard tractor	5786	Capacity	TJ9000	LPG			2008	195	1535	CHE Propane			
Yard tractor	5787	Capacity	TJ9000	LPG			2008	195	2529	CHE Propane			
Yard tractor	5788	Capacity	TJ9000	LPG			2008	195	2410	CHE Propane			
Yard tractor	5789	Capacity	TJ9000	LPG			2008	195	2269	CHE Propane			
Yard tractor	5790	Capacity	TJ9000	LPG			2008	195	2629	CHE Propane			
Yard tractor	5791	Capacity	TJ9000	LPG			2008	195	2295	CHE Propane			
Yard tractor	5792	Capacity	TJ9000	LPG			2008	195	2496	CHE Propane			
Yard tractor	5793	Capacity	TJ9000	LPG			2008	195	1898	CHE Propane			
Yard tractor	5794	Capacity	TJ9000	LPG			2008	195	2432	CHE Propane			
Yard tractor	5795	Capacity	TJ9000	LPG			2008	195	2339	CHE Propane			
Yard tractor	5796	Capacity	TJ9000	LPG			2008	195	2079	CHE Propane			
Yard tractor	5797	Capacity	TJ9000	LPG			2008	195	2308	CHE Propane			