



Port of
LONG BEACH
The Green Port

AIR EMISSIONS INVENTORY - 2017



July 2018



Prepared by:
STARCREST CONSULTING GROUP, LLC

Port of Long Beach 2017 Air Emissions Inventory

Prepared for:



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LONG BEACH
The Green Port

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Long Beach, CA



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ENVIRONMENTAL MANAGEMENT
AIR QUALITY • CLIMATE • SUSTAINABILITY

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Please note that there may be minor inconsistencies, due to rounding, associated with emission estimates, percent contribution, and other calculated numbers between the various sections, tables, and figures of this report. All estimates are calculated using more significant figures than presented in the various sections.

EXECUTIVE SUMMARY

2017 Port of Long Beach Air Emissions Inventory Results

The Port of Long Beach 2017 Air Emissions Inventory results are presented in Table ES.1. They include a comparison to the Port’s 2005 air emissions inventory. To provide a valid comparison between the 2017 and 2005 emissions estimates, the 2005 base year emissions presented in this table were recalculated using the most up-to-date methodologies and data, as needed. Due to a change in the emission estimating model released by California Air Resources Board (CARB), the 2005 heavy-duty vehicle emissions were recalculated for this inventory; only the carbon dioxide equivalent (CO₂e) emissions are different from the previous published inventory. Greenhouse gas emissions in CO₂e are reported in units of metric tons (MT) per year; all other pollutants are shown in tons per year.

Table ES.1: 2005-2017 Air Emissions Comparison by Source Category

	PM ₁₀	PM _{2.5}	DPM	NO _x	SO _x	CO	HC	CO ₂ e
	tons	tons	tons	tons	tons	tons	tons	MT
2005								
Ocean-going vessels	720	577	605	6,726	6,952	537	236	394,186
Harbor craft	45	41	45	1,107	5	294	70	44,746
Cargo handling equipment	47	44	47	1,289	11	398	65	103,710
Locomotives	43	40	43	1,273	76	179	66	60,579
Heavy-duty vehicles	205	196	205	5,273	37	1,523	318	391,610
Total	1,060	898	945	15,667	7,081	2,931	755	994,832
2017								
Ocean-going vessels	86	81	64	4,253	218	343	148	304,557
Harbor craft	21	20	21	608	1	411	64	48,722
Cargo handling equipment	4	4	4	345	1	540	35	115,792
Locomotives	22	20	22	617	1	151	33	53,284
Heavy-duty vehicles	7	7	7	1,129	3	139	26	296,831
Total	140	131	118	6,952	224	1,583	306	819,186
Change between 2005 and 2017 (percent)								
Ocean-going vessels	-88%	-86%	-89%	-37%	-97%	-36%	-37%	-23%
Harbor craft	-52%	-53%	-52%	-45%	-88%	40%	-9%	9%
Cargo handling equipment	-91%	-91%	-93%	-73%	-88%	36%	-46%	12%
Locomotives	-48%	-50%	-48%	-52%	-99%	-15%	-51%	-12%
Heavy-duty vehicles	-97%	-97%	-97%	-79%	-91%	-91%	-92%	-24%
Total	-87%	-85%	-88%	-56%	-97%	-46%	-59%	-18%

Table ES.2 summarizes and compares vessel arrivals and containerized cargo throughput in twenty-foot equivalent units (TEU) at POLB in 2005 and 2017. Relative to 2005 levels, containerized cargo throughput is up 12%, while overall containership arrivals to POLB are down 28%. Indicative of the larger vessels calling at POLB, the average number of TEU per vessel call is up 56%.

Table ES.2: 2005-2017 Container Throughput and Vessel Call Comparison

Year	Cargo Throughput (metric tons)	Container Throughput (TEU)	All Arrivals	Containership Arrivals	Average TEU per Call
2005	78,560,726	6,709,818	2,690	1,332	5,037
2017	83,507,340	7,544,508	2,157	959	7,867
Change (%)	6%	12%	-20%	-28%	56%

Emissions Metrics

To track operational efficiency improvements and the effectiveness of the emissions reduction strategies and measures, emissions are also estimated in total emissions per unit of cargo handled through the Port. Since Port operations are varied with a mix of containerized and non-containerized cargo, the metrics are based on TEU throughput and metric tons of cargo moved through the Port. Table ES.3 compares the tons of emissions per 10,000 TEU in 2005 and 2017, while Table ES.4 compares the tons of emissions per 100,000 metric tons in 2005 and 2017.

Table ES.3: 2005-2017 Emissions Efficiency Metric Comparison, tons per 10,000 TEU

Year	PM ₁₀	PM _{2.5}	DPM	NO _x	SO _x	CO	HC	CO _{2e}
2005	1.58	1.34	1.41	23.35	10.55	4.37	1.13	1,483
2017	0.19	0.17	0.16	9.22	0.30	2.10	0.41	1,086
Change (%)	-88%	-87%	-89%	-61%	-97%	-52%	-64%	-27%

Table ES.4: 2005-2017 Emission Efficiency Metric Comparison, tons per 100,000 metric tons

Year	PM ₁₀	PM _{2.5}	DPM	NO _x	SO _x	CO	HC	CO _{2e}
2005	1.35	1.14	1.20	19.94	9.01	3.73	0.96	1,266
2017	0.17	0.16	0.14	8.33	0.27	1.90	0.37	981
Change (%)	-87%	-86%	-88%	-58%	-97%	-49%	-61%	-23%

Progress Towards CAAP Goals

Table ES.5 and ES.6 summarize the cumulative air emissions reductions of DPM, NO_x, and SO_x associated with good movement sources and compared to the established CAAP San Pedro Bay (SPB) Emissions Reduction Standards for 2014 and 2023. As a result of the implementation of CAAP measures and regulations, 2017 emission reduction levels of DPM, NO_x, and SO_x surpassed the respective 2014 SBP Emission Reduction Standards. Despite a 6% increase in cargo throughput, the emission reductions achieved in 2017 also surpassed the 2023 DPM and SO_x SBP Emission Reduction Standards.

Table ES.5: 2017 Emissions Reductions Compared to San Pedro Bay CAAP

Pollutant	2017 Actual Reductions	2014 Emission Reduction Standard	2023 Emission Reduction Standard
DPM	88%	72%	77%
NO _x	56%	22%	59%
SO _x	97%	93%	93%

Table ES.6: 2005-2017 Emissions Reductions Compared to San Pedro Bay CAAP by Source Category

Category	2005	2017
DPM (tons)		
Ocean-going vessels	605	64
Harbor craft	45	21
Cargo handling equipment	47	4
Locomotives	43	22
Heavy-duty vehicles	205	7
Total	945	118
Cumulative DPM Emissions Reduction Achieved in 2017		88%
CAAP San Pedro Bay DPM Emissions Reduction Standards	2014	72%
	2023	77%
NO_x (tons)		
Ocean-going vessels	6,726	4,253
Harbor craft	1,107	608
Cargo handling equipment	1,289	345
Locomotives	1,273	617
Heavy-duty vehicles	5,273	1,129
Total	15,667	6,952
Cumulative NO_x Emissions Reduction Achieved in 2017		56%
CAAP San Pedro Bay NO_x Emissions Reduction Standards	2014	22%
	2023	59%
SO_x (tons)		
Ocean-going vessels	6,952	218
Harbor craft	5	1
Cargo handling equipment	11	1
Locomotives	76	1
Heavy-duty vehicles	37	3
Total	7,081	224
Cumulative SO_x Emissions Reduction Achieved in 2017		97%
CAAP San Pedro Bay SO_x Emissions Reduction Standards	2014	93%
	2023	93%

SECTION 1 INTRODUCTION

The Port of Long Beach (Port or POLB) annual activity-based emissions inventories serve as the primary tool to track the Port's efforts to reduce air emissions from goods movement-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. To quantify the annual air emissions, the Port relies on operational information provided by Port tenants and operators. Development of the annual air emissions estimates is coordinated with a technical working group (TWG) comprised of representatives from the Port, the Port of Los Angeles, 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 (SCAQMD). Through collaboration with the TWG, the ports seek the consensus of the air regulatory agencies regarding the methodologies and information used to develop the emissions estimates.

Emissions from the following goods movement-related emission source categories are evaluated:

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

Exhaust emissions of the following pollutants, including greenhouse gases, are quantified in the inventory:

- 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)
- Carbon dioxide equivalent (CO₂e)

Greenhouse gas emissions are presented in units of metric tons (MT or tonnes) of carbon dioxide equivalents, which weight each gas by its global warming potential (GWP) value relative to CO₂. To normalize these values into a single greenhouse gas value, CO₂e, the GHG emission estimates are multiplied by the following values and summed.¹

- CO₂ – 1
- CH₄ – 25
- N₂O - 298

¹U.S. EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2015*, April 2017.

Geographical Domain

For OGV and harbor craft, the geographical 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, emissions are estimated from the Port to the cargo’s first point of rest within the South Coast Air Basin (SoCAB) or up to the basin boundary, whichever comes first.

Figure 1.1: Port of Long Beach Emissions Inventory Domain



Emissions are estimated for activities within Port terminals and facilities.

Figure 1.2: Port of Long Beach Terminals



SECTION 2 OCEAN-GOING VESSELS

Source Description

Vessels are grouped by the type of cargo they transport:

- Auto carrier
- Containership
- General cargo
- Ocean-going tugboat (ATBs)
- Miscellaneous vessel
- Bulk carrier
- Cruise vessel
- Reefer vessel
- Roll-on roll-off vessel (RoRo)
- Tanker

Emissions are estimated from vessel main engines (propulsion), auxiliary engines, and auxiliary boilers (boilers). Based on their emissions contribution, the three predominant vessel types calling at the Port in order are: containerships, tankers, and cruise ships.

Emissions Estimation Methodology

The methodology to estimate 2017 emissions from OGVs is the same as described in Section 2 of the Port of Long Beach 2013 Emissions Inventory² and the subsequent updates made for the Port of Long Beach 2016 Emission Inventory³. The following improvements were made in estimating 2017 OGV emissions:

- Added Vessel Boarding Program (VBP) data related to vessel operations collected since the 2016 EI.
- Over the last two years, collecting VBP data for cruise vessels was a priority to increase understanding of cruise operations and reduce data assumptions. Based on the data collected from ten additional cruise vessels since the previous emissions inventory, the following was updated: 1) The cruise vessel auxiliary engine load defaults were updated by vessel passenger capacity using average loads from VBP data; 2) The diesel electric cruise vessel boiler assumptions were updated. VBP data collected for boilers on diesel electric cruise vessels indicates that the boilers are in use while at berth, regardless if the vessel is using shore power. It was previously assumed that diesel electric cruise vessels did not use their boilers while at berth, unless the vessel was shore powering.

² www.polb.com/civica/filebank/blobdload.asp?BlobID=12238

³ www.polb.com/civica/filebank/blobdload.asp?BlobID=14109

Table 2.1 presents the auxiliary engine load defaults by vessel type and by mode used to estimate emissions in 2017. Auxiliary engines are used to provide electricity to the vessel. Auxiliary engines are typically higher during maneuvering than at berth or during transit. As in past inventory reports, containerships are classified by TEU size. For example, a Container-2000 is a containership with a container capacity of 2,000 to 2,999 TEU.

Table 2.1: 2017 Average Auxiliary Load Defaults by Mode, kW

Vessel Type	Transit	Maneuvering	Berth Hotelling	Anchorage Hotelling
Auto Carrier	1,079	2,391	1,284	622
Bulk	313	822	210	253
Bulk - Heavy Load	462	1,223	272	253
Bulk - Self Discharging	305	807	179	305
Container - 1000	957	2,245	720	1,000
Container - 2000	985	2,188	1,039	1,012
Container - 3000	747	2,562	641	694
Container - 4000	1,403	2,472	1,136	1,200
Container - 5000	1,333	4,487	1,107	967
Container - 6000	1,248	2,567	832	1,645
Container - 7000	1,220	2,721	845	1,000
Container - 8000	1,457	3,249	1,008	986
Container - 9000	1,458	2,323	924	968
Container - 10000	1,318	1,791	981	1,129
Container - 11000	1,618	3,210	1,500	2,000
Container - 12000	2,100	3,425	1,650	1,650
Container - 13000	2,246	4,254	1,317	1,015
Container - 14000	3,000	5,500	3,000	1,015
General Cargo	421	1,060	572	180
Miscellaneous	793	2,100	467	200
Reefer	630	1,889	1,091	630
RoRo	132	396	229	132
Tanker - Chemical	611	833	967	402
Tanker - Handysize	559	768	605	560
Tanker - Panamax	596	801	679	379
Tanker - Aframax	576	719	724	474
Tanker - Suezmax	860	1,288	2,509	773
Tanker - VLCC	1,080	1,486	1,171	1,080
Tanker - ULCC	1,080	1,486	1,171	1,080

For all cruise ships (diesel electric and non-diesel electric) that visited the Port in 2017, house load defaults are listed in Table 2.2. Increased VBP data collected from cruise vessels supported the development of revised defaults. Defaults were revised using mode specific load averages from VBP data.

Table 2.2: Diesel Electric Cruise Ship Average Auxiliary Engine Load Defaults, kW

Passenger Range	Berth		
	Transit	Maneuvering	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 2.3 presents the load defaults for the auxiliary boilers for diesel electric cruise ships and tankers.

Table 2.3: 2017 Auxiliary Boiler Load Defaults by Mode for Diesel Electric Vessels, kW

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

Table 2.4 presents the 2017 load defaults for auxiliary boilers by vessel type and by mode. OGVs have one or more fuel-fired boilers used for fuel heating, producing hot water, and in the case of tankers, discharging cargo at berth. Auxiliary boiler load used for all tankers while being loaded at-berth is 875 kW, unless a vessel-specific boiler load for tanker loading is provided.

Table 2.4: 2017 Auxiliary Boiler Load Defaults by Mode, kW

Vessel Type			Berth	Anchorage
	Transit	Maneuvering	Hotelling	Hotelling
Auto Carrier	87	184	314	305
Bulk	35	94	125	125
Bulk - Heavy Load	35	94	125	125
Bulk - Self Discharging	44	103	132	132
Container - 1000	106	213	273	270
Container - 2000	141	282	361	358
Container - 3000	164	328	420	416
Container - 4000	195	371	477	472
Container - 5000	247	473	579	572
Container - 6000	182	567	615	611
Container - 7000	259	470	623	619
Container - 8000	228	506	668	673
Container - 9000	381	613	677	675
Container - 10000	384	458	581	581
Container - 11000	330	575	790	790
Container - 12000	330	647	754	754
Container - 13000	203	420	612	612
Container - 14000	203	420	612	612
General Cargo	56	124	160	160
Miscellaneous	33	65	96	96
Reefer	104	237	304	304
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
Tanker - Suezmax	144	191	5,843	503
Tanker - VLCC	240	720	6,000	840
Tanker - ULCC	240	720	6,000	840

Geographical Domain

The geographical domain or overwater boundary for OGVs includes the berths and waterways in the Port proper (see Figure 1.2) and all vessel movements within the forty nautical mile (nm) arc from Point Fermin and the SoCAB as shown 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 although the overwater boundary extends further off the coast to incorporate the South Coast air quality modeling domain, most of the vessel movements occur within the 40 nm arc.

Data and Information Acquisition

The primary sources of data and operational information for OGV were obtained from:

- Marine Exchange of Southern California
- Vessel Speed Reduction Program
- Jacobsen Pilot Service
- IHS Maritime Data
- Port Vessel Boarding Program (VBP)
- Port tanker loading information
- Terminal shore power activity data, including usage of alternative at-berth emission control technologies (AMECS)

Emission Estimates

Summaries of the 2017 OGV emissions estimates are presented in Tables 2.5 through 2.7. Due to rounding, values may not add up to totals provided.

Table 2.5: 2017 Ocean-going Vessel Emissions by Vessel Type, tons

Vessel Type	PM ₁₀ tons	PM _{2.5} tons	DPM tons	NO _x tons	SO _x tons	CO tons	HC tons	CO _{2e} MT
Auto Carrier	3.1	2.9	2.9	175.4	5.8	16.0	7.3	8,134
Bulk	4.7	4.4	4.0	250.8	10.4	21.3	6.8	14,551
Containership	28.3	26.7	22.7	1,801.0	70.4	127.4	66.3	98,854
Cruise	8.7	8.2	8.2	430.9	16.3	36.1	14.6	22,754
General Cargo	1.0	0.9	0.9	47.7	2.0	4.5	1.7	2,783
Miscellaneous	4.4	4.2	4.1	227.2	8.7	18.2	6.7	12,139
Reefer	0.1	0.1	0.1	5.4	0.2	0.3	0.1	223
RoRo	0.7	0.6	0.0	10.0	3.1	1.0	0.5	4,281
Tanker	34.7	32.7	20.7	1,304.1	100.8	117.9	44.4	140,839
Total	85.7	80.6	63.7	4,252.6	217.8	342.7	148.3	304,557

Table 2.6: 2017 Ocean-going Vessel Emissions by Emissions Source, tons

Engine Type	PM ₁₀ tons	PM _{2.5} tons	DPM tons	NO _x tons	SO _x tons	CO tons	HC tons	CO _{2e} MT
Auxiliary Engine	42.1	39.6	42.1	1,992.5	76.4	187.1	67.2	106,273
Auxiliary Boiler	21.8	20.5	0.0	316.4	97.8	32.1	16.0	137,253
Main Engine	21.8	20.6	21.7	1,943.8	43.6	123.6	65.1	61,031
Total	85.7	80.6	63.7	4,252.6	217.8	342.7	148.3	304,557

Table 2.7: 2017 Ocean-going Vessel Emissions by Mode, tons

Mode	Engine Type	PM ₁₀ tons	PM _{2.5} tons	DPM tons	NO _x tons	SO _x tons	CO tons	HC tons	CO _{2e} MT
Transit	Auxiliary Engine	8.2	7.7	8.2	398.0	14.6	35.3	12.8	20,231
Transit	Auxiliary Boiler	0.4	0.4	0.0	6.5	2.0	0.7	0.3	2,825
Transit	Main Engine	19.4	18.3	19.3	1,756.6	40.0	107.9	51.9	56,075
Total Transit		28.0	26.4	27.4	2,161.1	56.7	143.9	65.1	79,131
Maneuvering	Auxiliary Engine	3.0	2.8	3.0	143.6	5.4	13.0	4.7	7,475
Maneuvering	Auxiliary Boiler	0.3	0.2	0.0	3.7	1.1	0.4	0.2	1,607
Maneuvering	Main Engine	2.4	2.3	2.4	187.2	3.5	15.7	13.2	4,956
Total Maneuvering		5.7	5.4	5.5	334.5	10.1	29.1	18.1	14,038
Hotelling at-berth	Auxiliary Engine	21.2	20.0	21.2	1,011.5	39.2	97.2	34.5	54,746
Hotelling at-berth	Auxiliary Boiler	17.6	16.5	0.0	255.0	78.9	25.8	12.9	110,606
Hotelling at-berth	Main Engine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Total Hotelling at-berth		38.8	36.5	21.2	1,266.5	118.0	123.0	47.4	165,352
Hotelling at-anchorage	Auxiliary Engine	9.6	9.1	9.6	439.3	17.2	41.6	15.1	23,820
Hotelling at-anchorage	Auxiliary Boiler	3.5	3.3	0.0	51.2	15.8	5.2	2.6	22,215
Hotelling at-anchorage	Main Engine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Total Hotelling at-anchorage		13.2	12.4	9.6	490.5	33.0	46.8	17.7	46,036
Total		85.7	80.6	63.7	4,252.6	217.8	342.7	148.3	304,557

Table 2.8 presents the numbers of arrivals, departures, and shifts associated with vessels at the Port in 2017.

Table 2.8: 2017 Total OGV Activities

Vessel Type	Arrival	Departure	Shift	Total
Auto Carrier	198	198	18	414
Bulk	189	200	236	625
Bulk - Heavy Load	3	3	5	11
Bulk - Self Discharging	22	22	5	49
Container - 1000	114	114	14	242
Container - 2000	81	80	17	178
Container - 3000	59	59	8	126
Container - 4000	128	129	13	270
Container - 5000	25	26	4	55
Container - 6000	70	70	4	144
Container - 7000	2	2	0	4
Container - 8000	239	239	54	532
Container - 9000	62	63	5	130
Container - 10000	70	70	6	146
Container - 11000	45	44	3	92
Container - 12000	4	2	1	7
Container - 13000	59	55	5	119
Container - 14000	1	1	0	2
Cruise	261	261	0	522
General Cargo	54	57	39	150
Miscellaneous	0	0	2	2
Reefer	6	6	6	18
RoRo	2	2	2	6
Tanker - Chemical	111	114	161	386
Tanker - Handysize	8	9	9	26
Tanker - Panamax	99	84	183	366
Tanker - Aframax	96	97	165	358
Tanker - Suezmax	100	98	188	386
Tanker - VLCC	17	17	45	79
Tanker - ULCC	32	30	102	164
Total	2,157	2,152	1,300	5,609

Operational Profiles

Hotelling times at-berth and at-anchorage during 2017 are shown in Tables 2.9 and 2.10. The miscellaneous vessels and RoRos have high hoteling time due to vessels that are home based in the Port, including ready reserve vessels.

Table 2.9: 2017 At-Berth Hotelling Times

Vessel Type	Min Hours	Max Hours	Avg Hours
Auto Carrier	3.9	44.5	13.4
Bulk - General	4.8	207.9	62.3
Bulk - Heavy Load	25.8	652.9	239.6
Bulk - Self Discharging	10.4	101.4	36.1
Container - 1000	6.9	114.2	27.8
Container - 2000	4.6	102.4	47.7
Container - 3000	2.2	88.0	35.5
Container - 4000	8.8	120.2	39.0
Container - 5000	14.2	99.4	68.9
Container - 6000	47.9	109.7	70.1
Container - 7000	99.0	132.4	115.7
Container - 8000	8.9	146.9	65.7
Container - 9000	9.5	123.6	32.8
Container - 10000	13.2	119.1	73.5
Container - 11000	69.7	170.2	98.4
Container - 12000	69.2	142.0	110.9
Container - 13000	20.7	162.3	100.2
Container - 14000	118.7	118.7	118.7
Cruise	8.4	15.3	11.6
General Cargo	9.0	123.2	37.9
Miscellaneous	8,759.8	8,759.8	8,759.8
Reefer	4.9	11.0	7.8
RoRo	3,160.2	5,266.0	4,277.6
Tanker - Chemical	6.7	170.8	39.2
Tanker - Handysize	19.9	72.4	45.1
Tanker - Panamax	4.2	263.3	44.9
Tanker - Aframax	13.4	159.2	44.8
Tanker - Suezmax	12.7	73.3	26.4
Tanker - VLCC	19.0	42.3	27.7
Tanker - ULCC	13.7	51.4	28.7

Table 2.10: 2017 At-Anchorage Hotelling Times

Vessel Type	Min Hours	Max Hours	Avg Hours	Anchorage Activity Count
Auto Carrier	1.2	64.7	23.2	11
Bulk - General	1.1	344.1	85.1	191
Bulk - Heavy Load	19	264.3	141.6	2
Bulk - Self Discharging	37.0	141.0	67.8	4
Container - 1000	1.4	197.8	48.9	12
Container - 2000	4.6	12.3	8.7	4
Container - 3000	9.3	39.8	21.1	4
Container - 4000	1.6	48.6	16.8	12
Container - 5000	3.7	15.2	8.4	4
Container - 6000	2.7	5.1	3.8	3
Container - 7000	0	0	0	0
Container - 8000	2.8	29.1	14.5	8
Container - 9000	1.8	20.1	8.5	4
Container - 10000	2.3	2.3	2.3	1
Container - 11000	2.0	5.9	4.0	2
Container - 12000	24.9	24.9	24.9	1
Container - 13000	2.7	7.8	5.3	2
Container - 14000	0	0	0	0
Cruise	0	0	0	0
General Cargo	0.3	223.2	41.9	30
Miscellaneous	0	0	0	0
Reefer	4.6	7.5	6.3	6
RoRo	0	0	0	0
Tanker - Chemical	1.8	157.3	23.4	115
Tanker - Handysize	3.8	237.6	53.0	8
Tanker - Panamax	1.4	528.3	49.6	165
Tanker - Aframax	0.4	284.8	60.1	146
Tanker - Suezmax	3.0	531.5	73.3	161
Tanker - VLCC	6.0	390.5	77.5	37
Tanker - ULCC	5.8	502.3	85.0	80
Total				1,013

For this EI, a frequent caller is defined as a vessel that made six or more calls in one calendar year. Table 2.11 shows that 11% of vessels that called the Port in 2017 are frequent callers.

Table 2.11: 2017 Percentage of Frequent Callers

Vessel Type	Frequent Vessels	Total Vessels	Percent Frequent Vessels
Auto Carrier	1	124	1%
Bulk - General	0	180	0%
Bulk - Heavy Load	0	3	0%
Bulk - Self Discharging	1	4	25%
Container - 1000	7	11	64%
Container - 2000	7	11	64%
Container - 3000	5	12	42%
Container - 4000	5	36	14%
Container - 5000	0	16	0%
Container - 6000	8	12	67%
Container - 7000	0	1	0%
Container - 8000	23	52	44%
Container - 9000	5	10	50%
Container - 10000	6	15	40%
Container - 11000	4	13	31%
Container - 12000	0	3	0%
Container - 13000	1	31	3%
Container - 14000	0	1	0%
Cruise	3	4	75%
General Cargo	1	43	2%
Miscellaneous	0	0	0%
Reefer	0	3	0%
RoRo	0	2	0%
Tanker - Chemical	4	61	7%
Tanker - Handysize	0	5	0%
Tanker - Panamax	0	55	0%
Tanker - Aframax	4	25	16%
Tanker - Suezmax	3	49	6%
Tanker - VLCC	0	11	0%
Tanker - ULCC	0	22	0%
Total	88	815	
Average			11%

SECTION 3 HARBOR CRAFT

Source Description

Emissions from the following types of diesel-fueled harbor craft were quantified:

- Assist tugboats
- Crew, supply and work boats
- Ferry vessels
- Excursion vessels
- Government vessels
- Harbor tugboats
- Ocean tugboats

Emissions Estimation Methodology

The methodology to estimate emissions from harbor craft is similar to that used in CARB's emissions inventory for commercial harbor craft emissions operating in California.⁴

Geographical Domain

Emissions are estimated for harbor craft operating within the South Coast Air Basin over-water boundary.

Data and Information Acquisition

Harbor craft owners and operators were contacted to obtain key physical and operational parameters, including:

- Type of harbor craft
- Engine count
- Engine horsepower (or kilowatts) for main and auxiliary engines
- Engine model year
- Operating hours in calendar year 2017

⁴ www.polb.com/environment/air/emissions.asp

Emission Estimates

Table 3.1 summarizes the estimated harbor craft vessel emissions by vessel type and engine type.

Table 3.1: 2017 Harbor Craft Emissions by Vessel and Engine Type, tons

Harbor Craft	Engine Type	PM ₁₀ tons	PM _{2.5} tons	DPM tons	NO _x tons	SO _x tons	CO tons	HC tons	CO _{2e} MT
Assist tugboat	Auxiliary	0.5	0.5	0.5	15.8	0.0	13.4	2.2	1,515
	Propulsion	6.2	5.7	6.2	172.4	0.2	119.1	17.6	13,745
Assist tugboat Total		6.7	6.2	6.7	188.3	0.2	132.4	19.9	15,260
Crew Boat	Auxiliary	0.1	0.1	0.1	2.6	0.0	2.0	0.6	201
	Propulsion	1.8	1.7	1.8	54.7	0.1	35.8	5.6	4,594
Crew boat Total		2.0	1.8	2.0	57.3	0.1	37.8	6.2	4,795
Excursion	Auxiliary	0.1	0.1	0.1	2.0	0.0	1.5	0.4	166
	Propulsion	0.4	0.4	0.4	14.2	0.0	11.1	1.5	1,225
Excursion Total		0.5	0.4	0.5	16.1	0.0	12.5	1.9	1,391
Ferry	Auxiliary	0.1	0.1	0.1	3.3	0.0	2.6	0.7	283
	Propulsion	3.6	3.3	3.6	110.6	0.1	84.0	11.8	9,341
Ferry Total		3.7	3.5	3.7	113.9	0.1	86.6	12.5	9,624
Government	Auxiliary	0.1	0.1	0.1	3.3	0.0	2.8	0.5	318
	Propulsion	1.3	1.2	1.3	32.0	0.0	18.3	3.2	2,452
Government Total		1.4	1.3	1.4	35.3	0.0	21.1	3.7	2,770
Ocean tugboat Total	Auxiliary	0.1	0.1	0.1	3.3	0.0	2.6	0.5	300
	Propulsion	5.0	4.6	5.0	139.5	0.1	76.3	12.6	10,010
Ocean tugboat Total		5.2	4.8	5.2	142.8	0.1	78.9	13.1	10,310
Harbor tugboat	Auxiliary	0.2	0.2	0.2	4.9	0.0	3.8	0.8	416
	Propulsion	1.4	1.3	1.4	40.2	0.0	29.7	4.2	3,197
Harbor tugboat Total		1.6	1.5	1.6	45.1	0.0	33.4	5.0	3,614
Work boat	Auxiliary	0.0	0.0	0.0	0.8	0.0	0.6	0.2	65
	Propulsion	0.2	0.2	0.2	8.9	0.0	7.8	1.1	893
Work boat Total		0.2	0.2	0.2	9.7	0.0	8.4	1.3	958
Harbor Craft Total		21.3	19.6	21.3	608.5	0.6	411.2	63.5	48,722

Operational Profiles

Table 3.2 lists the marine engine count by tier and engine type in 2017.

Table 3.2: 2017 Harbor Craft Engine Tier Count

Engine Tier	Auxiliary Engine Count	Propulsion Engine Count	Total Engine Count
Unknown	3	4	7
Tier 0	6	6	12
Tier 1	5	17	22
Tier 2	46	118	164
Tier 3	79	31	110
Total	139	176	315

Table 3.3 summarizes the energy consumption (kW-hr) per engine tier for 2017 harbor craft. The kW-hrs for the unknown engines are distributed in the various tiers based on the default model year and/or kilowatts used to estimate emissions of unknowns.

Table 3.3: Harbor Craft Energy Consumption by Engine Tier, kW-hr and %

Engine Tier	2017 kW-hr	2017 % of Total
Tier 0	217,440	0.3%
Tier 1	10,549,482	14.3%
Tier 2	45,246,823	61.4%
Tier 3	17,683,669	24.0%
Total	73,697,414	100%

Tables 3.4 and 3.5 summarize the characteristics of main and auxiliary engines respectively, by vessel type operating at the Port in 2017. Averages of the model year, horsepower, or operating hours are used as default values when specific data is not available.

A number of companies operate harbor craft in the harbors of both the Ports of Long Beach and Los Angeles. The activity hours for the vessels that are common to both ports reflect work performed during 2017 within the Port of Long Beach harbor only. For harbor vessels that share the work at both Ports in San Pedro Bay, the total hours are divided equally between the two ports.

Table 3.4: 2017 Main Engine Characteristics by Harbor Craft Type

Harbor Craft Type	Vessel Count	Engine Count	Propulsion Engines								
			Model year			Horsepower			Annual Operating Hours		
			Minimum	Maximum	Average	Minimum	Maximum	Average	Minimum	Maximum	Average
Assist tugboat	14	29	1980	2014	2007	600	2,575	2,046	23	2,238	1,368
Crew boat	18	45	2003	2014	2009	290	1,450	580	52	2,012	781
Excursion	7	11	2010	2012	2010	190	450	353	300	2,810	1,617
Ferry	12	26	1998	2015	2008	180	2,680	1,851	298	1,452	882
Government	4	7	2003	2013	2008	645	2,012	1,518	457	1,819	1,017
Ocean tugboat	6	12	2004	2012	2008	1,800	3,385	2,168	250	1,711	1,075
Harbor tugboat	17	33	2004	2012	2009	300	2,005	943	25	3,000	597
Work boat	7	13	2005	2015	2011	210	675	473	135	1,553	679
Total	85	176									

Table 3.5: 2017 Auxiliary Engine Characteristics by Harbor Craft Type

Harbor Craft Type	Vessel Count	Engine Count	Auxiliary Engines								
			Model year			Horsepower			Annual Operating Hours		
			Minimum	Maximum	Average	Minimum	Maximum	Average	Minimum	Maximum	Average
Assist tugboat	14	28	1980	2014	2010	107	400	183	13	2,432	1,417
Crew boat	18	23	1980	2015	2008	13	107	57	1	2,243	884
Excursion	7	7	2009	2012	2010	40	90	62	100	2,810	1,565
Ferry	12	18	2003	2017	2010	18	120	67	230	1,706	950
Government	4	11	2003	2013	2012	13	2012	941	43	2,969	556
Ocean tugboat	6	13	2004	2016	2009	60	339	139	189	1,500	903
Harbor tugboat	17	26	2004	2012	2009	15	300	78	18	3,553	593
Work boat	7	13	1968	2015	2001	27	101	62	1	1,939	635
Total	85	139									

SECTION 4 CARGO HANDLING EQUIPMENT

Source Description

Cargo handling equipment (CHE) typically operate at Port terminals or railyards to move cargo such as containers, general cargo, and bulk cargo to and from marine vessels, railcars, and on-road trucks. The majority of CHE are composed of off-road equipment not designed to operate on public roadways. This inventory includes CHE powered by engines fueled by diesel, gasoline, propane or electricity.

Emissions Estimation Methodology

The emissions calculation methodology used to estimate CHE emissions is consistent with CARB's latest methodology for estimating emissions from CHE.⁵ For the newer diesel on-road engines with a certain horsepower range, the NO_x emission rates were updated based on discussions with CARB.

Geographical Domain

Emissions are estimated for CHE operating within Port terminals and facilities.

Data and Information Acquisition

The maintenance and/or CHE operating staff of each terminal were contacted to obtain equipment count and activity information on the CHE specific to their terminal or facility operations for the 2017 calendar year.

⁵ CARB, Appendix B: Emission Estimation Methodology for Cargo Handling Equipment Operating at Ports and Intermodal Rail Yards in California at www.arb.ca.gov/regact/2011/cargo11/cargoappb.pdf, viewed 22 July 2017

Emission Estimates

A summary of CHE emissions by terminal type is presented in Table 4.1.

Table 4.1: 2017 CHE Emissions by Terminal Type, tons and metric tons per year

Terminal Type	PM₁₀ tons	PM_{2.5} tons	DPM Tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_{2e} MT
Auto	0.0	0.0	0.0	0.0	0.0	0.2	0.0	12
Break-Bulk	0.2	0.1	0.1	6.0	0.0	9.7	0.7	2,611
Container	3.8	3.5	3.2	331.8	1.3	492.9	32.3	111,143
Cruise	0.1	0.1	0.0	1.1	0.0	20.3	0.4	411
Dry Bulk	0.1	0.1	0.1	5.0	0.0	7.2	1.3	443
Liquid	0.0	0.0	0.0	0.5	0.0	1.1	0.1	42
Other	0.0	0.0	0.0	0.7	0.0	8.4	0.2	1,131
Total	4.2	3.8	3.5	345.2	1.4	539.7	35.0	115,792

Table 4.2 presents the CHE emissions by equipment and engine type. Emissions from boom lifts are included in the miscellaneous propane category. Emissions from rail car movers are included under the miscellaneous diesel category.

Table 4.2: 2017 CHE Emissions by Equipment Type, tons and metric tons per year

Port Equipment	Engine Type	PM ₁₀ tons	PM _{2.5} tons	DPM tons	NO _x tons	SO _x tons	CO tons	HC tons	CO _{2e} MT
Bulldozer	Diesel	0.0	0.0	0.0	0.9	0.0	0.3	0.1	106
Cone vehicle	Diesel	0.0	0.0	0.0	0.2	0.0	0.3	0.0	45
Crane	Diesel	0.0	0.0	0.0	0.1	0.0	0.1	0.0	19
Excavator	Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Forklift	Diesel	0.2	0.1	0.2	6.5	0.0	9.3	0.6	1,602
Forklift	Gasoline	0.0	0.0	0.0	0.3	0.0	4.2	0.1	151
Forklift	Propane	0.1	0.1	0.0	6.8	0.0	28.2	2.4	739
Loader	Diesel	0.1	0.1	0.1	2.0	0.0	3.6	0.4	1,594
Man lift	Diesel	0.0	0.0	0.0	0.2	0.0	0.2	0.0	39
Man lift	Gasoline	0.0	0.0	0.0	2.3	0.0	34.3	1.7	52
Material handler	Diesel	0.0	0.0	0.0	0.5	0.0	0.1	0.0	68
Miscellaneous	Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4
Miscellaneous	Propane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Rail pusher	Diesel	0.0	0.0	0.0	0.2	0.0	0.2	0.0	50
RTG crane	Diesel	1.0	0.9	1.0	86.6	0.1	22.6	5.3	10,391
Side handler	Diesel	0.0	0.0	0.0	5.1	0.0	1.1	0.3	520
Skid steer loader	Diesel	0.0	0.0	0.0	0.2	0.0	0.2	0.0	33
Sweeper	Diesel	0.0	0.0	0.0	1.0	0.0	0.6	0.1	284
Sweeper	Propane	0.0	0.0	0.0	0.3	0.0	1.5	0.1	47
Top handler	Diesel	1.2	1.0	1.2	165.4	0.5	86.7	15.5	40,766
Tractor	Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1
Tractor	Propane	0.0	0.0	0.0	0.5	0.0	16.3	0.3	179
Truck	Diesel	0.1	0.1	0.1	2.1	0.0	1.6	0.2	757
Yard tractor	Diesel	0.9	0.8	0.9	60.6	0.7	126.8	7.7	51,736
Yard tractor	Gasoline	0.6	0.5	0.0	3.3	0.1	201.3	0.3	6,511
Yard tractor	Propane	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6
Total		4.2	3.8	3.5	345.2	1.4	539.7	35.0	115,792

Operational Profiles

Table 4.3 summarizes CHE data collected for the 2017 calendar year. The average values shown in the following tables are population-weighted and are used as default. For equipment without specific operational information available, default values associated with the specific equipment and engine type are used. The miscellaneous equipment includes electric lifts and light towers.

Table 4.3: 2017 Engine Characteristics for All CHE Operating at the Port

Equipment	Engine Type	Count	Power (hp)			Model Year			Annual Operating Hours		
			Min	Max	Average	Min	Max	Average	Min	Max	Average
Bulldozer	Diesel	2	92	200	146	2004	2012	2008	400	1,500	950
Cone vehicle	Diesel	5	35	35	35	2016	2016	2016	601	1301	889.2
Crane	Diesel	2	173	334	254	1985	2016	2000	40	359	200
Excavator	Diesel	2	322	371	347	2002	2005	2003	0	0	0
Forklift	Diesel	104	50	220	135	1990	2017	2009	10	4,765	617
Hybrid RTG crane	Diesel	7	250	250	250	2016	2016	2016	1,274	2,774	2,161
Loader	Diesel	11	50	418	327	1985	2015	2009	250	2,351	1,320
Man Lift	Diesel	8	55	100	71	2008	2017	2012	13	395	233
Material handler	Diesel	2	371	717	544	2005	2008	2006	540	540	540
Miscellaneous	Diesel	2	13	13	13	2010	2010	2010	49	1,007	528
Rail pusher	Diesel	3	150	260	202	2013	2013	2013	50	395	277
RTG crane	Diesel	60	515	1,043	701	1998	2016	2006	183	4,314	2,125
Side handler	Diesel	13	205	240	216	2000	2011	2003	59	1,714	533
Skid steer loader	Diesel	2	67	67	67	2011	2015	2013	779	779	779
Sweeper	Diesel	6	114	230	187	2002	2014	2007	120	2,043	610
Top handler	Diesel	195	174	388	329	1979	2017	2010	1	3,949	1,927
Tractor	Diesel	1	59	59	59	2009	2009	2009	80	80	80
Truck	Diesel	7	210	525	337	1998	2016	2007	200	2,716	1,142
Yard tractor	Diesel	564	135	250	223	2007	2017	2011	13	5,394	1,878
Automated guided vehicle	Electric	56	na	na	na	na	na	na	na	na	na
Automatic stacking crane	Electric	32	na	na	na	na	na	na	na	na	na
Crane	Electric	4	na	na	na	1980	2006	1993	na	na	na
Electric pallet jack	Electric	2	na	na	na	2013	2013	2013	na	na	na
Forklift	Electric	9	na	na	na	1995	2013	2001	na	na	na
Material handler	Electric	1	na	na	na	1995	1995	1995	na	na	na
Miscellaneous	Electric	3	na	na	na	2000	2003	2001	na	na	na
Ship to shore crane	Electric	64	na	na	na	2015	2015	2015	na	na	na
Sweeper	Electric	1	na	na	na	na	na	na	na	na	na
Truck	Electric	6	na	na	na	2008	2016	2009	na	na	na
Forklift	Gasoline	24	59	72	64	2002	2016	2012	104	1,018	423
Man Lift	Gasoline	2	82	82	82	2000	2004	2002	2,190	2,190	2,190
Yard tractor, gasoline	Gasoline	80	335	335	335	2011	2011	2011	182	3,334	842
Forklift	Propane	109	45	141	86	1985	2017	2004	15	2,838	486
Miscellaneous	Propane	1	na	na	na	1998	1998	1998	na	na	na
Sweeper	Propane	6	47	135	82	1982	2016	2004	30	600	178
Tractor	Propane	5	101	101	101	1996	1997	1996	960	1,440	1,200
Yard tractor, propane	Propane	7	173	173	173	2009	2009	2009	10	75	47
Total		1,408									

Table 4.4 is a summary of the CHE engines by fuel type. In 2017, 13% of the equipment were electric, 71% of CHE engines inventoried were diesel-powered, followed by 9% powered by propane and 8% by gasoline-fueled engines.

Table 4.4: 2017 CHE Engines by Fuel Type

Equipment	Electric	Propane	Gasoline	Diesel	Total
Forklift	9	109	24	104	246
RTG crane	0	0	0	67	67
Side handler	0	0	0	13	13
Top handler	0	0	0	195	195
Yard tractor	0	7	80	564	651
Sweeper	1	6	0	6	13
Other	168	6	2	47	223
Total	178	128	106	996	1,408
Percent of Total	13%	9%	8%	71%	

Table 4.5 is a summary of the emission reduction technologies⁶ utilized in cargo handling equipment as retrofits existing equipment, including diesel oxidation catalysts (DOC), diesel particulate filters (DPF), and BlueCAT retrofit for large-spark ignition (LSI) engines. In 2017, there are no longer any equipment with DOCs because the older equipment equipped with DOCs were completely phased out of the terminal fleets and replaced by cleaner equipment.

Table 4.5: 2017 CHE Emission Reduction Technologies by Equipment Type

Equipment	DOC Retrofit	On-Road Engines	ULSD Fuel	DPF Retrofit	Vycon Retrofit	BlueCAT Retrofit
Forklift	0	0	104	50	0	11
RTG crane	0	0	67	30	4	0
Side handler	0	0	13	12	0	0
Top handler	0	0	195	70	0	0
Yard tractor	0	400	564	0	0	0
Sweeper	0	0	6	0	0	0
Other	0	4	47	5	0	5
Total	0	404	996	167	4	16

⁶ www.arb.ca.gov/diesel/verdev/vt/cvt.htm

Table 4.6 summarizes the distribution of diesel-powered CHE equipped with off-road diesel engines by EPA non-road engine emission tier level and on-road diesel engines. On-road engines are generally lower in emissions than the off-road engines of the same model year.

Table 4.6: 2017 Count of Diesel-Powered CHE by Type and Engine Standard

Equipment Type	Unknown Tier	Tier 0	Tier 1	Tier 2	Tier 3	Tier 4i	Tier 4f	On-road	Total Diesel
Yard tractor	0	0	0	0	0	1	163	400	564
Forklift	13	5	8	24	18	14	22	0	104
Top handler	12	1	10	41	15	66	50	0	195
Other	4	2	1	4	7	9	16	4	47
RTG crane	1	0	25	8	0	25	8	0	67
Side handler	0	0	4	6	2	1	0	0	13
Sweeper	0	0	1	2	2	0	1	0	6
Total	30	8	49	85	44	116	260	404	996
Percent of Total	3%	1%	5%	9%	4%	12%	26%	41%	

Table 4.7 summarizes the energy consumption (kW-hr) for all of the equipment by engine tier. For diesel equipment, the equipment with higher tier levels (newer equipment) and those with on-road engines are generally used more than older equipment, which contributes to reduced emissions due to cleaner engine standards in newer equipment.

Table 4.7: Equipment Energy Consumption by Engine Type and Diesel Engine Standard, kW-hr and %

Engine Type	Engine Tier	kW-hr	% of Total
Diesel	Tier 0	47,258	0.03%
Diesel	Tier 1	8,356,523	6%
Diesel	Tier 2	11,386,327	8%
Diesel	Tier 3	4,534,560	3%
Diesel	Tier 4i	37,573,605	25%
Diesel	Tier 4f	30,733,101	21%
Diesel	Onroad	48,135,345	32%
Gasoline		6,847,873	5%
Propane		1,073,503	1%
Total		148,688,094	100%

SECTION 5 RAILROAD LOCOMOTIVES

Source Description

Railroad locomotives are used to move trains transporting intermodal (containerized) freight and lesser amounts of dry bulk, liquid bulk, and car-load (box car freight) to, from, and within the Port. Railroad locomotive activities at the Port consist of two different types of operations: the initiation or termination of long-distance cargo movements, known as line haul, and the short-distance movement of rail cars, such as the assembling and disassembling of trains in and around the Port, known as switching.

Rail operators Burlington Northern Santa Fe (BNSF) and Union Pacific (UP) provide line haul service to and from the Port and also operate switching services at their off-port locations. Pacific Harbor Line (PHL) performs most of the switching operations within the Port.

Emissions Estimation Methodology

The methodology used to estimate 2017 emissions from rail locomotives is generally the same as described in Section 5 of the Port of Long Beach 2013 Air Emissions Inventory, which is available on the Port's website at www.polb.com/emissions.

Geographical Domain

Emissions from railroad locomotives are estimated for movements of cargo by rail locomotives within Port boundaries, directly to or from port-owned properties such as terminals and on-port rail yards, or to and from the SoCAB boundary. 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 or end at a Port property, such as east-bound line hauls that initiate in central Los Angeles intermodal yards. For rail locomotives, emissions are estimated from the Port to the cargo's first point of rest within the South Coast Air Basin (SoCAB) or up to the basin boundary, whichever comes first. Figure 1.1 in Section 1 of this report illustrates the geographical domain.

Data and Information Acquisition

To estimate emissions associated with Port-related activities of locomotives, information was obtained from:

- Previous emissions studies
- Port cargo statistics
- Input from railroad operators
- Published information sources
- California Air Resources Board Memorandum of Understanding (CARB MOU) line-haul fleet compliance data

Emission Estimates

A summary of estimated emissions from locomotive operations related to the Port is presented in Tables 5.1.

Table 5.1: 2017 Locomotive Estimated Emissions, tons and tonnes

Activity Component	PM ₁₀ tons	PM _{2.5} tons	DPM tons	NO _x tons	SO _x tons	CO tons	HC tons	CO _{2e} tonnes
On-Port Emissions								
Switching	0.2	0.2	0.2	21.2	0.0	8.9	1.1	3,020
Line Haul	6.1	5.5	6.1	163.7	0.2	38.8	8.8	13,722
On-Port Subtotal	6.3	5.6	6.3	184.9	0.2	47.7	9.9	16,741
Off-Port (Regional) Emissions								
Switching	0.1	0.1	0.1	4.4	0.0	2.0	0.1	689
Line Haul	15.8	14.3	15.8	427.8	0.4	101.4	23.0	35,854
Off-Port Subtotal	15.9	14.3	15.9	432.2	0.4	103.4	23.0	36,543
Total	22.2	20.0	22.2	617	0.6	151.0	32.9	53,284

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 Port's 2013 EI report available on the Port's website at www.polb.com/emissions.

Table 5.2 presents the CARB MOU compliance information submitted annually by BNSF and UP on pre-Tier 0 through Tier 4 locomotive fleet composition, showing a weighted average NO_x emission factor of 5.40 g/bhp-hr.⁷ The 2016 reports were used instead of the 2017 because of the timing of the inventory data collection phase and of the posting of the compliance reports by CARB. The ultra-low emission locomotives (ULEL) are also included in the table.

⁷ Notes from railroads' MOU compliance submissions:

1. For more information on the U.S. EPA locomotive emission standards, www.epa.gov/oms/locomotives.htm.
2. Number of locomotives is the sum of all individual locomotives that visited or operated within the SCAB at any time during 2014.

Table 5.2: CARB MOU Compliance Data, Megawatt-hours (MWhr) and g NO_x/bhp-hr

Engine Tier	Number of Locomotives	Megawatt-hours (MWhr)	%MWhrs by Tier Level	Wt'd Avg NO _x (g/bhp-hr)	Tier Contribution to Fleet Average (g/bhp-hr)
BNSF					
Pre-Tier C	41	948	0.4%	12.8	0.05
Tier 0	141	4,409	1.8%	7.6	0.14
Tier 1	1,250	80,060	32%	6.2	2.01
Tier 2	1,320	85,126	34%	5.0	1.72
Tier 3	1,112	67,842	27%	4.6	1.26
Tier 4	236	9,093	3.7%	1.2	0.04
ULEL	0	0	0%	-	-
Total BN	4,100	247,478	100%		5.2
UP					
Tier not r	5	91	0.1%	10.6	0.01
Pre-Tier C	14	78	0.0%	14.2	0.01
Tier 0	1,719	32,040	18.8%	7.8	1.47
Tier 1	1,804	29,168	17%	6.5	1.11
Tier 2	1,412	54,955	32%	5.0	1.61
Tier 3	801	46,862	28%	4.8	1.32
Tier 4	101	3,488	2.0%	1.1	0.02
ULEL	44	3,482	2%	2.6	0.05
Total UP	5,900	170,163	100%		5.6
				ULEL Credit Used	0.1
				UP Fleet Average	5.5
Both RRs, excluding ULELs and ULEL credits					
Pre-Tier C	55	1,026	0%	12.9	0.03
Tier 0	1,860	36,448	9%	7.8	0.68
Tier 1	3,054	109,228	26%	6.3	1.66
Tier 2	2,732	140,081	34%	5.0	1.69
Tier 3	1,913	114,703	28%	4.7	1.30
Tier 4	337	12,581	3.04%	1.2	0.036
Total bot	9,951	414,068	97%		5.40

Emission factors for particulate matter (PM₁₀, PM_{2.5}, and DPM), HC, and CO were calculated using the tier-specific emission rates for those pollutants published by EPA⁸ to develop weighted average emission factors using the MWhr figures provided in the railroads' submissions. These results are presented in Table 5.3.

Table 5.3: Fleet MWhr and PM, HC, CO Emission Factors, g/hp-hr

Engine Tier	MWhr	% of MWhr	EPA Tier-specific			Fleet Composite		
			PM ₁₀	HC	CO	PM ₁₀	HC	CO
			g/hp-hr			g/hp-hr		
Pre-Tier 0	1,026	0%	0.32	0.48	1.28	0.00	0.00	0.00
Tier 0	36,448	9%	0.32	0.48	1.28	0.03	0.04	0.11
Tier 1	109,228	26%	0.32	0.47	1.28	0.08	0.12	0.34
Tier 2	140,081	34%	0.18	0.26	1.28	0.06	0.09	0.43
Tier 3	114,703	28%	0.08	0.13	1.28	0.02	0.04	0.36
Tier 4	12,581	3.04%	0.015	0.04	1.28	0.00	0.00	0.04
Totals	414,068	100%				0.20	0.29	1.28

Emission factors for PM_{2.5} and DPM were calculated as fractions of PM₁₀, with PM_{2.5} calculated as 94% of PM₁₀ consistent with CARB methodology and DPM equal to PM₁₀ because 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 5.4 summarizes the emission factors for line haul locomotives, presented in units of g/bhp-hr.

Table 5.4: Emission Factors for Line Haul Locomotives, g/bhp-hr

	PM ₁₀	PM _{2.5}	DPM	NO _x	SO _x	CO	HC	CO ₂	N ₂ O	CH ₄
EF, g/bhp-hr	0.20	0.18	0.20	5.40	0.005	1.28	0.29	494	0.013	0.04

⁸ EPA Office of Transportation and Air Quality, "Emission Factors for Locomotives" EPA-420-F-09-025 April 2009.

On-Port Line Haul Activity

As described in the 2013 emissions inventory report, estimates of the 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 for 2017 is summarized in Table 5.5.

Table 5.5: 2017 Estimated On-Port Line Haul Locomotive Activity

Activity Measure	Inbound	Outbound	Total
Trains per Year	2,131	2,422	4,553
Locomotives per Train	3	3	N/A
Hours on Port per Trip	1	2.5	N/A
Locomotive Hours per Year	6,393	18,165	24,558

Out-of-Port Line Haul Activity

Table 5.6 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. Fuel consumption is calculated by multiplying gross ton-miles by the average fuel consumption factor of 0.990 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 5.6: 2017 Gross Ton-Mile, Fuel Use, and Horsepower-hour Estimate

	Distance miles	Trains per year	MMGT per year	MMGT- miles per year
Alameda Corridor	21	4,503	33	693
Central LA to Air Basin Boundary	84	4,503	33	2,772
Million gross ton-miles				3,465
Estimated gallons of fuel (millions)				3.44
Estimated million horsepower-hours				71.6

SECTION 6 HEAVY-DUTY VEHICLES

Source Description

Heavy-duty vehicles (HDVs), or trucks, are used to move cargo, particularly containerized cargo, to and from the marine terminals. Trucks also transfer containers between terminals and off-port railcar loading facilities. The local activity is often referred to as drayage. In the course of their daily operations, 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.

The majority of trucks that service the Port's terminals are diesel-fueled vehicles. Alternative fuel trucks, primarily those fueled by liquefied natural gas (LNG), made approximately 4% of the terminal calls in 2017, according to an evaluation of the Port's Clean Trucks 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.

Emissions Estimation Methodology

The methodology used to estimate 2017 emissions from HDVs is generally the same as described in Section 6.0 of the Port of Long Beach 2013 Air Emissions Inventory, which is available on the Port's website at www.polb.com/emissions.

The major change underlying the emission calculations in this inventory compared to the previous EI was a change in emission factor model as released by CARB. EMFAC2017, which replaced the previously used EMFAC2014, is the latest iteration of CARB's series of emission estimating models incorporating their latest data. Because the new model version contains changes based on CARB's latest information, previous years' emissions have been re-estimated using the EMFAC2017 emission factors for each previous calendar year included in the report. The only change to the 2005 emissions is to the CO₂, which affects the CO_{2e} values.

Along with the release of EMFAC2017, CARB published updated information on short-term emissions from model-year 2010 and newer trucks equipped with selective catalytic converters (SCR) when they start up, either from cold or after being shut off for various periods of time. When starting, HDVs equipped with SCR emit higher-than-normal amounts of NO_x until the catalyst in the converter reaches optimum operating temperature. Not all 2010+ trucks are equipped with SCR; many have an exhaust gas recirculation (EGR) system which does not cause start emissions. Because the prevalence of EGR-equipped trucks increases with each new model year, CARB has developed average emission factors for each model year of truck starting with 2010 which have been used to estimate start emissions for the HDVs in this EI and in previous years in which 2010 or newer trucks called at Port terminals (i.e., calendar years 2009 and later). The start emissions contribute a very small amount of NO_x, approximately 1% of overall HDV NO_x emissions in the 2017 EI.

HDV emission estimates are based on estimates of vehicle miles traveled (VMT), average speeds, CARB's on-road vehicle emissions model "EMFAC" 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.

Geographical Domain

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

- **On-terminal operations**, which include waiting for terminal entry, transiting the terminal to drop off and/or pick up cargo, and departing the terminals.
- **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 Los Angeles. The activity of on-road trucks included within the geographical domain is from the Port to the cargo's first point of rest within SoCAB or up to the basin boundary, whichever comes first.

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.

The model year distribution of HDVs operating at the Port is developed using radio frequency identification (RFID) call information gathered at the Port and POLA container terminals and truck/engine model year data from the Port Drayage Truck Registry (PTDR). The RFID call information is only collected at container terminals, so it is assumed for the inventory that trucks calling at other Port terminals have the same general distribution of model years.

Emission Estimates

Tables 6.1 through 6.3 summarize the vehicle miles traveled and emissions associated with overall HDV activity, emissions associated with container terminal activity, and emissions associated with other Port terminals, respectively.

Table 6.1: 2017 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 ₂ e MT
On-Terminal	2,601,850	0.2	0.2	0.2	116	0.2	69.5	7.7	24,233
On-Road	166,952,922	7.0	6.7	6.7	1,013	3.1	69.2	18.6	272,599
Total	169,554,772	7.2	6.8	6.9	1,129	3.3	138.7	26.3	296,831

Table 6.2: 2017 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 ₂ e MT
On-Terminal	2,559,514	0.2	0.2	0.2	115	0.2	68.6	7.6	23,904
On-Road	158,700,496	6.6	6.3	6.3	962	2.9	65.8	17.6	259,124
Total	161,260,009	6.8	6.5	6.5	1,077	3.1	134.4	25.3	283,028

Table 6.3: 2017 HDV Emissions Associated with Non-Container 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 ₂ e MT
On-Terminal	42,337	0.0	0.0	0.0	2	0.0	0.9	0.1	329
On-Road	8,252,426	0.3	0.3	0.3	50	0.2	3.4	0.9	13,474
Total	8,294,762	0.3	0.3	0.3	52	0.2	4.3	1.0	13,803

Operational Profiles

To estimate the 2017 emissions from HDVs, operational profiles were developed for on-terminal truck activity using data and information collected from terminal operators. The on-road truck activity profiles were developed using trip generation and travel demand models to estimate the number of on-road VMT.

The model year distribution of HDVs was determined using RFID information collected at Port terminals to track the number of truck calls, and truck model year information from the PDTR. The distribution of the model years of the trucks that called at the Port and at the Port of Los Angeles terminals during 2017 is presented in Figure 6.1. The call weighted average age of the trucks in 2017 was approximately 5 years.

Figure 6.1: 2017 Model Year Distribution of the Heavy-Duty Truck Fleet

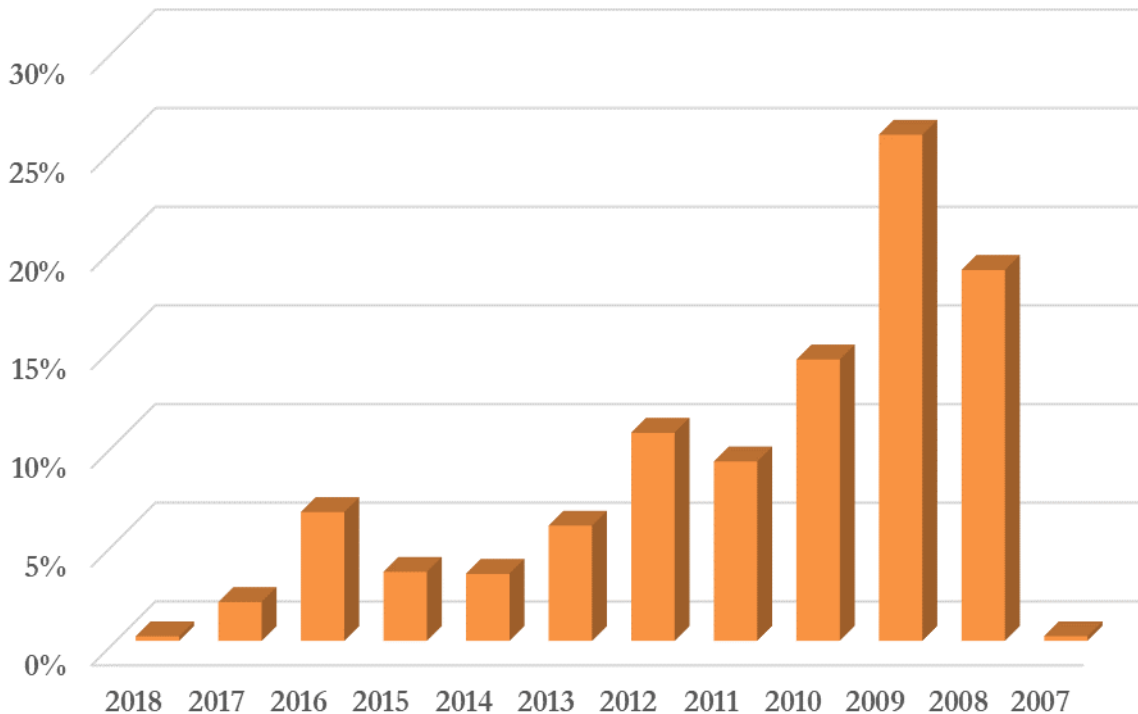


Table 6.4 shows the range and average of reported operating characteristics of on-terminal truck activities at Port container terminals, while Table 6.5 shows the same summary data for non-container terminals and facilities.

Table 6.4: 2017 Summary of Reported Container Terminal Operating Characteristics

	Speed (mph)	Distance (miles)	Gate In (hours)	Unload/Load (hours)	Gate Out (hours)
Maximum	15	1.50	0.10	0.92	0.08
Minimum	5	0.50	0.03	0.29	0.00
Average	7	0.80	0.09	0.56	0.03

Table 6.5: 2017 Summary of Reported Non-Container Facility Operating Characteristics

	Speed (mph)	Distance (miles)	Gate In (hours)	Unload/Load (hours)	Gate Out (hours)
Maximum	10	0.50	0.08	0.50	0.08
Minimum	0	0.01	0.00	0.00	0.00
Average	5	0.21	0.01	0.06	0.01

In 2017, a total 3,457,027 truck calls were associated with container terminals and 287,946 truck calls were associated with non-container facilities. The total number of truck calls associated with container terminals is estimated by the trip generation model on which truck travel VMT estimates are based, while non-container terminal truck calls were obtained from the terminal operators. The non-container terminal number includes activity at the Port’s temporary empty container depot and chassis support facility that operated in 2017, totaling 109,611 calls. The chassis yard is used for pickup, delivery and maintenance of chassis.

Table 6.6 provides the on-terminal operating parameters, listing total estimated VMT and hours of idling on-terminal and waiting at entry gates. The idling times are likely to be over-estimated because 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. To date, there are no other known available data sources identified to provide a reliable estimate of the average percentage of time the trucks' engines are turned off while on terminal.

Table 6.6: 2017 Estimated On-Terminal VMT and Idling Hours by Terminal

Terminal Type	Total Miles Traveled	Total Hours Idling (all trips)
Container	950,298	798,250
Container	426,715	331,889
Container	357,569	414,780
Container	343,820	110,022
Container	257,950	257,950
Container	223,163	459,715
Auto	5,656	9,721
Break Bulk	3,566	2,995
Break Bulk	3,000	960
Break Bulk	1,500	0
Break Bulk	386	77
Break Bulk	20	0
Dry Bulk	13,025	686
Dry Bulk	40	440
Liquid Bulk	5,400	4,320
Liquid Bulk	3,125	375
Liquid Bulk	1,350	0
Other	3,071	8,701
Other	2,199	0
Total	2,601,850	2,400,882

Table 6.7 summarizes the speed-specific emission factors used to estimate emissions.

Table 6.7: 2017 Speed-Specific Composite Exhaust Emission Factor, g/hr and g/mi

Speed (mph)	PM ₁₀	PM _{2.5}	DPM	NO _x	SO _x	CO	HC	CO ₂	N ₂ O	CH ₄	Units
0 (Idle)	0.0042	0.0040	0.0042	27.7441	0.0534	21.4084	1.7196	5,702	0.8851	0.1011	g/hr
5	0.0654	0.0626	0.0628	15.6632	0.0168	4.7823	1.1875	3,782	0.5945	0.0698	g/mi
10	0.0588	0.0563	0.0565	13.1875	0.0168	3.6499	0.9358	3,267	0.5135	0.0550	g/mi
15	0.0502	0.0480	0.0482	10.3518	0.0168	2.4499	0.6417	2,686	0.4222	0.0377	g/mi
20	0.0446	0.0427	0.0428	8.6212	0.0168	1.7469	0.4588	2,337	0.3673	0.0270	g/mi
25	0.0408	0.0390	0.0392	7.5613	0.0168	1.2907	0.3382	2,090	0.3285	0.0199	g/mi
30	0.0383	0.0367	0.0368	6.7942	0.0168	0.9609	0.2517	1,901	0.2987	0.0148	g/mi
35	0.0369	0.0353	0.0355	6.1998	0.0168	0.7147	0.1878	1,754	0.2757	0.0110	g/mi
40	0.0365	0.0349	0.0350	5.7556	0.0168	0.5323	0.1409	1,644	0.2584	0.0083	g/mi
45	0.0369	0.0353	0.0354	5.4465	0.0168	0.3994	0.1069	1,566	0.2461	0.0063	g/mi
50	0.0381	0.0365	0.0366	5.2657	0.0168	0.3051	0.0827	1,517	0.2385	0.0049	g/mi
55	0.0401	0.0384	0.0385	5.2097	0.0168	0.2417	0.0660	1,497	0.2353	0.0039	g/mi
60	0.0433	0.0414	0.0416	5.3308	0.0168	0.2237	0.0613	1,519	0.2387	0.0036	g/mi
65	0.0476	0.0455	0.0457	5.6335	0.0168	0.2381	0.0649	1,579	0.2482	0.0038	g/mi
70	0.0476	0.0455	0.0457	5.6507	0.0168	0.2433	0.0654	1,579	0.2482	0.0038	g/mi

SECTION 7 SUMMARY OF 2017 EMISSION RESULTS

The emission results for the Port of Long Beach 2017 Air Emissions Inventory are presented in this section. Table 7.1 summarizes the 2017 air emissions associated with the goods movement-related sources at the Port, by category.

Table 7.1: 2017 Emissions by Source Category

Category	PM₁₀	PM_{2.5}	DPM	NO_x	SO_x	CO	HC	CO_{2e}
	tons	tons	tons	tons	tons	tons	tons	MT
Ocean-going vessels	86	81	64	4,255	218	343	148	304,651
Harbor craft	21	20	21	608	1	411	64	48,722
Cargo handling equipment	4	4	4	345	1	540	35	115,792
Locomotives	22	20	22	617	1	151	33	53,284
Heavy-duty vehicles	7	7	7	1,129	3	139	26	296,831
Total	141	131	118	6,955	224	1,584	306	819,280

Table 7.2: 2017 Emissions Percent Contributions by Source Category

Source Category	DPM		NO_x		SO_x		CO_{2e}	
	tons	%	tons	%	tons	%	MT	%
Ocean-going vessels	64	54%	4,255	61%	218	97%	304,651	37%
Harbor craft	21	18%	608	9%	1	0%	48,722	6%
Cargo handling equipment	4	3%	345	5%	1	1%	115,792	14%
Rail locomotives	22	19%	617	9%	1	0%	53,284	7%
Heavy-duty vehicles	7	6%	1,129	16%	3	1%	296,831	36%
Total	118	100%	6,955	100%	224	100%	819,280	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. Due to rounding, the percentages may not total 100%.

Figure 7.1: 2017 PM₁₀ Emissions in the South Coast Air Basin, %

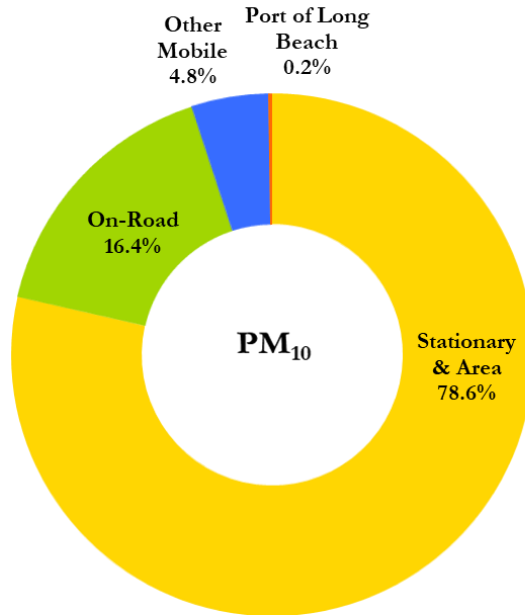


Figure 7.2: 2017 PM_{2.5} Emissions in the South Coast Air Basin, %

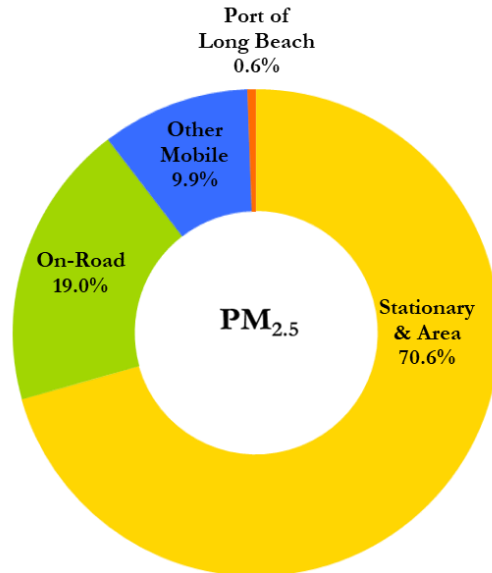


Figure 7.3: 2017 DPM Emissions in the South Coast Air Basin, %

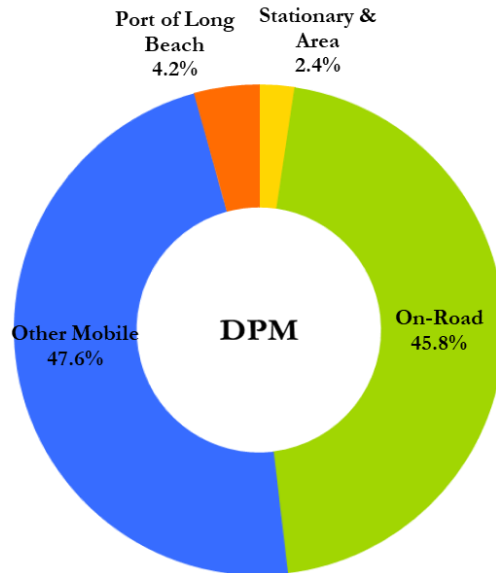


Figure 7.4: 2017 NO_x Emissions in the South Coast Air Basin, %

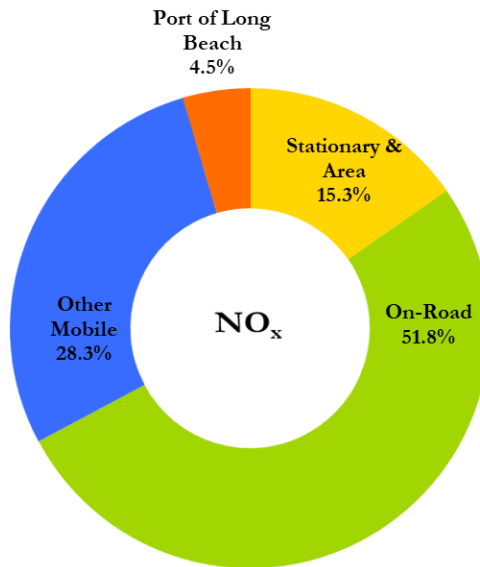
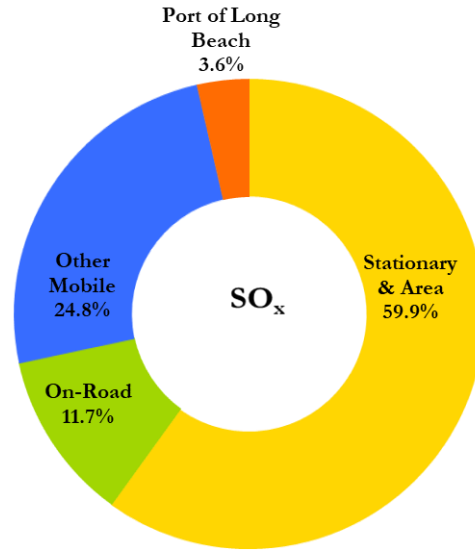


Figure 7.5: 2017 SO_x Emissions in the South Coast Air Basin, %



Tables 7.3 through 7.8 list the percent emissions contribution. Emission factors and NO_x start emissions calculation methodology were used to estimate the Port’s HDV emissions. The 2017 SoCAB emissions are based on the 2016 AQMP Appendix III⁹, except for the SoCAB on-road emission estimates which were updated to take into consideration EMFAC2017¹⁰. Thus, the 2017 SoCAB total emissions shown on the bottom row of the tables do not exactly match 2016 AQMP Appendix III values. It should be noted that SoCAB on-road heavy-duty diesel PM₁₀ and PM_{2.5} emissions do not include brake and tire wear emissions similar to the Port’s HDV emissions.

⁹ 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.

¹⁰ ARB, www.arb.ca.gov/emfac/

Table 7.3: 2017 PM₁₀ Emissions Contribution, tons and %

Category	Subcategory	PM ₁₀	Percent PM ₁₀ Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	3	4%	2%	0.01%
OGV	Bulk vessel	5	5%	3%	0.01%
OGV	Containership	28	33%	20%	0.05%
OGV	Cruise	9	10%	6%	0.02%
OGV	General cargo	1	1%	1%	0.00%
OGV	Miscellaneous	4	5%	3%	0.01%
OGV	Reefer	0	0%	0%	0.00%
OGV	RoRo	1	1%	0%	0.00%
OGV	Tanker	35	40%	25%	0.06%
OGV	Subtotal	86	100%	61%	0.15%
Harbor Craft	Assist tug	7	31%	5%	0.01%
Harbor Craft	Harbor tug	2	9%	1%	0.00%
Harbor Craft	Ferry	0	2%	0%	0.00%
Harbor Craft	Ocean tugboat	4	18%	3%	0.01%
Harbor Craft	Government	1	6%	1%	0.00%
Harbor Craft	Excursion	5	24%	4%	0.01%
Harbor Craft	Crewboat	2	8%	1%	0.00%
Harbor Craft	Work boat	0	1%	0%	0.00%
Harbor Craft	Subtotal	21	100%	15%	0.04%
CHE	RTG crane	1	24%	1%	0.00%
CHE	Forklift	0	6%	0%	0.00%
CHE	Top handler, side pick	1	28%	1%	0.00%
CHE	Other	0	7%	0%	0.00%
CHE	Yard tractor	2	36%	1%	0.00%
CHE	Subtotal	4	100%	3%	0.01%
Locomotives	Switching	0	1%	0%	0.00%
Locomotives	Line haul	22	99%	16%	0.04%
Locomotives	Subtotal	22	100%	16%	0.04%
HDV	On-Terminal	0	3%	0%	0.00%
HDV	On-road	7	97%	5%	0.01%
HDV	Subtotal	7	100%	5%	0.01%
Port	Total	140		100%	0.2%
SoCAB AQMP	Total	57,455			

Table 7.4: 2017 PM_{2.5} Emissions Contribution, tons and %

Category	Subcategory	PM _{2.5}	Percent PM _{2.5} Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	3	4%	2%	0.01%
OGV	Bulk vessel	4	5%	3%	0.02%
OGV	Containership	27	33%	20%	0.11%
OGV	Cruise	8	10%	6%	0.03%
OGV	General cargo	1	1%	1%	0.00%
OGV	Miscellaneous	4	5%	3%	0.02%
OGV	Reefer	0	0%	0%	0.00%
OGV	RoRo	1	1%	0%	0.00%
OGV	Tanker	33	40%	25%	0.14%
OGV	Subtotal	81	100%	62%	0.34%
Harbor Craft	Assist tug	6	32%	5%	0.03%
Harbor Craft	Harbor tug	2	9%	1%	0.01%
Harbor Craft	Ferry	0	2%	0%	0.00%
Harbor Craft	Ocean tugboat	3	18%	3%	0.01%
Harbor Craft	Government	1	6%	1%	0.01%
Harbor Craft	Excursion	5	24%	4%	0.02%
Harbor Craft	Crewboat	1	8%	1%	0.01%
Harbor Craft	Work boat	0	1%	0%	0.00%
Harbor Craft	Subtotal	20	100%	15%	0.08%
CHE	RTG crane	1	24%	1%	0.00%
CHE	Forklift	0	6%	0%	0.00%
CHE	Top handler, side pick	1	28%	1%	0.00%
CHE	Other	0	7%	0%	0.00%
CHE	Yard tractor	1	35%	1%	0.01%
CHE	Subtotal	4	100%	3%	0.02%
Locomotives	Switching	0	1%	0%	0.00%
Locomotives	Line haul	20	99%	15%	0.08%
Locomotives	Subtotal	20	100%	15%	0.08%
HDV	On-Terminal	0.2	3%	0%	0.00%
HDV	On-road	6.7	97%	5%	0.03%
HDV	Subtotal	7	100%	5%	0.03%
Port	Total	131		100%	0.6%
SoCAB AQMP	Total	23,700			

Table 7.5: 2017 DPM Emissions Contribution, tons and %

Category	Subcategory	DPM	Percent DPM Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	3	5%	2%	0.1%
OGV	Bulk vessel	4	6%	3%	0.1%
OGV	Containership	23	36%	19%	0.8%
OGV	Cruise	8	13%	7%	0.3%
OGV	General cargo	1	1%	1%	0.0%
OGV	Miscellaneous	4	6%	3%	0.1%
OGV	Reefer	0	0%	0%	0.0%
OGV	RoRo	0	0%	0%	0.0%
OGV	Tanker	21	33%	18%	0.7%
OGV	Subtotal	64	100%	54%	2.3%
Harbor Craft	Assist tug	7	31%	6%	0.2%
Harbor Craft	Harbor tug	2	9%	2%	0.1%
Harbor Craft	Ferry	0	2%	0%	0.0%
Harbor Craft	Ocean tugboat	4	18%	3%	0.1%
Harbor Craft	Government	1	6%	1%	0.0%
Harbor Craft	Excursion	5	24%	4%	0.2%
Harbor Craft	Crewboat	2	8%	1%	0.1%
Harbor Craft	Work boat	0	1%	0%	0.0%
Harbor Craft	Subtotal	21	100%	18%	0.8%
CHE	RTG crane	1	28%	1%	0.0%
CHE	Forklift	0	5%	0%	0.0%
CHE	Top handler, side pick	1	33%	1%	0.0%
CHE	Other	0	7%	0%	0.0%
CHE	Yard tractor	1	27%	1%	0.0%
CHE	Subtotal	4	100%	3%	0.1%
Locomotives	Switching	0	1%	0%	0.0%
Locomotives	Line haul	22	99%	19%	0.8%
Locomotives	Subtotal	22	100%	19%	0.8%
HDV	On-Terminal	0.2	3%	0%	0.0%
HDV	On-road	6.7	97%	6%	0.2%
HDV	Subtotal	7	100%	6%	0.2%
Port	Total	118		100%	4.2%
SoCAB AQMP	Total	2,794			

Table 7.6: 2017 NO_x Emissions Contribution, tons and %

Category	Subcategory	NO _x	Percent NO _x Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	175	4%	3%	0.1%
OGV	Bulk vessel	251	6%	4%	0.2%
OGV	Containership	1,801	42%	26%	1.2%
OGV	Cruise	431	10%	6%	0.3%
OGV	General cargo	48	1%	1%	0.0%
OGV	Miscellaneous	227	5%	3%	0.1%
OGV	Reefer	5	0%	0%	0.0%
OGV	RoRo	10	0%	0%	0.0%
OGV	Tanker	1,304	31%	19%	0.8%
OGV	Subtotal	4,253	100%	61%	2.8%
Harbor Craft	Assist tug	188	31%	3%	0.1%
Harbor Craft	Harbor tug	57	9%	1%	0.0%
Harbor Craft	Ferry	16	3%	0%	0.0%
Harbor Craft	Ocean tugboat	114	19%	2%	0.1%
Harbor Craft	Government	35	6%	1%	0.0%
Harbor Craft	Excursion	143	23%	2%	0.1%
Harbor Craft	Crewboat	45	7%	1%	0.0%
Harbor Craft	Work boat	10	2%	0%	0.0%
Harbor Craft	Subtotal	608	100%	9%	0.4%
CHE	RTG crane	87	25%	1%	0.1%
CHE	Forklift	14	4%	0%	0.0%
CHE	Top handler, side pick	171	49%	2%	0.1%
CHE	Other	10	3%	0%	0.0%
CHE	Yard tractor	64	19%	1%	0.0%
CHE	Subtotal	345	100%	5%	0.2%
Locomotives	Switching	26	4%	0%	0.0%
Locomotives	Line haul	592	96%	9%	0.4%
Locomotives	Subtotal	617	100%	9%	0.4%
HDV	On-Terminal	116	10%	2%	0.1%
HDV	On-road	1,013	90%	15%	0.7%
HDV	Subtotal	1,129	100%	16%	0.7%
Port	Total	6,952		100%	4.5%
SoCAB AQMP	Total	154,291			

Table 7.7: 2017 SO_x Emissions Contribution, tons and %

Category	Subcategory	SO _x	Percent SO _x Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	6	3%	3%	0%
OGV	Bulk vessel	10	5%	5%	0%
OGV	Containership	70	32%	31%	1%
OGV	Cruise	16	7%	7%	0%
OGV	General cargo	2	1%	1%	0%
OGV	Miscellaneous	9	4%	4%	0%
OGV	Reefer	0	0%	0%	0%
OGV	RoRo	3	1%	1%	0%
OGV	Tanker	101	46%	45%	2%
OGV	Subtotal	218	100%	97.4%	3%
Harbor Craft	Assist tug	0.17	31%	0%	0%
Harbor Craft	Harbor tug	0.05	10%	0%	0%
Harbor Craft	Ferry	0.02	3%	0%	0%
Harbor Craft	Ocean tugboat	0.11	20%	0%	0%
Harbor Craft	Government	0.03	6%	0%	0%
Harbor Craft	Excursion	0.12	21%	0%	0%
Harbor Craft	Crewboat	0.04	7%	0%	0%
Harbor Craft	Work boat	0.01	2%	0%	0%
Harbor Craft	Subtotal	1	100%	0%	0%
CHE	RTG crane	0.1	9%	0%	0%
CHE	Forklift	0.0	2%	0%	0%
CHE	Top handler, side pick	0.5	34%	0%	0%
CHE	Other	0.0	3%	0%	0%
CHE	Yard tractor	0.7	53%	0%	0%
CHE	Subtotal	1	100%	1%	0%
Locomotives	Switching	0.0	6%	0%	0%
Locomotives	Line haul	0.5	94%	0%	0%
Locomotives	Subtotal	1	100%	0%	0%
HDV	On-Terminal	0.2	6%	0%	0%
HDV	On-road	3.1	94%	1%	0%
HDV	Subtotal	3	100%	1%	0%
Port	Total	224		100%	3.6%
SoCAB AQMP Total		6,254			

Table 7.8: 2017 CO₂e Emissions Contribution, metric tons and %

Category	Subcategory	CO ₂ e	Percent Emissions of Total	
			Category	Port
OGV	Auto carrier	8,134	3%	1%
OGV	Bulk vessel	14,551	5%	2%
OGV	Containership	98,854	32%	12%
OGV	Cruise	22,754	7%	3%
OGV	General cargo	2,783	1%	0%
OGV	Miscellaneous	12,139	4%	1%
OGV	Reefer	223	0%	0%
OGV	RoRo	4,281	1%	1%
OGV	Tanker	140,839	46%	17%
OGV	Subtotal	304,557	100%	37%
Harbor Craft	Assist tug	16,829	35%	2%
Harbor Craft	Harbor tug	5,288	11%	1%
Harbor Craft	Ferry	1,534	3%	0%
Harbor Craft	Ocean tugboat	10,613	22%	1%
Harbor Craft	Government	3,055	6%	0%
Harbor Craft	Excursion	11,370	23%	1%
Harbor Craft	Crewboat	3,985	8%	0%
Harbor Craft	Work boat	1,056	2%	0%
Harbor Craft	Subtotal	48,722	100%	6%
CHE	RTG crane	10,391	9%	1%
CHE	Forklift	2,493	2%	0%
CHE	Top handler, side pick	41,286	36%	5%
CHE	Other	3,370	3%	0%
CHE	Yard tractor	58,253	50%	7%
CHE	Subtotal	115,792	100%	14%
Locomotives	Switching	3,709	7%	0%
Locomotives	Line haul	49,575	93%	6%
Locomotives	Subtotal	53,284	100%	7%
HDV	On-Terminal	24,233	8%	3%
HDV	On-road	272,599	92%	33%
HDV	Subtotal	296,831	100%	36%
Port	Total	819,186		100%

SECTION 8 COMPARISON OF 2017 AND 2005 FINDINGS AND EMISSION ESTIMATES

This section provides a comparison of the emission estimates for 2017 and 2005 by source category. When there was a change in an emissions estimation methodology in 2017, the 2005 emissions were recalculated using 2005 activity data with the new methodology to provide a valid basis for comparison. Due to rounding, the values may not add up to the whole number values for the percentage change or total emissions at the bottom of each table.

Table 8.1: 2005-2017 Port Emissions Comparison by Source Category, tons and %

	PM₁₀	PM_{2.5}	DPM	NO_x	SO_x	CO	HC	CO₂e
	tons	tons	tons	tons	tons	tons	tons	MT
2005								
Ocean-going vessels	720	577	605	6,726	6,952	537	236	394,186
Harbor craft	45	41	45	1,107	5	294	70	44,746
Cargo handling equipment	47	44	47	1,289	11	398	65	103,710
Locomotives	43	40	43	1,273	76	179	66	60,579
Heavy-duty vehicles	205	196	205	5,273	37	1,523	318	391,610
Total	1,060	898	945	15,667	7,081	2,931	755	994,832
2017								
Ocean-going vessels	86	81	64	4,253	218	343	148	304,557
Harbor craft	21	20	21	608	1	411	64	48,722
Cargo handling equipment	4	4	4	345	1	540	35	115,792
Locomotives	22	20	22	617	1	151	33	53,284
Heavy-duty vehicles	7	7	7	1,129	3	139	26	296,831
Total	140	131	118	6,952	224	1,583	306	819,186
Change between 2005 and 2017 (percent)								
Ocean-going vessels	-88%	-86%	-89%	-37%	-97%	-36%	-37%	-23%
Harbor craft	-52%	-53%	-52%	-45%	-88%	40%	-9%	9%
Cargo handling equipment	-91%	-91%	-93%	-73%	-88%	36%	-46%	12%
Locomotives	-48%	-50%	-48%	-52%	-99%	-15%	-51%	-12%
Heavy-duty vehicles	-97%	-97%	-97%	-79%	-91%	-91%	-92%	-24%
Total	-87%	-85%	-88%	-56%	-97%	-46%	-59%	-18%

Table 8.2 provides a comparison of the number of vessel calls and container cargo throughput as well as the average TEUs per containership call between 2005 and 2017. Compared to 2005, container throughput is up 12%, while overall containership arrivals to POLB are down 20%. The average number of containers per containership is up 56% which is indicative of larger vessels calling at POLB.

Table 8.2: 2005-2017 Container Throughput and Vessel Call Comparison

Year	Cargo Throughput (metric tons)	Container Throughput (TEU)	All Arrivals	Containership Arrivals	Average TEU per Call
2005	78,560,726	6,709,818	2,690	1,332	5,037
2017	83,507,340	7,544,508	2,157	959	7,867
Change (%)	6%	12%	-20%	-28%	56%

Table 8.3 presents the total net change in emissions for all source categories in 2017 compared to 2005.

Table 8.3: 2005-2017 Emissions Comparison, tons and %

EI Year	PM ₁₀ tons	PM _{2.5} tons	DPM tons	NO _x tons	SO _x tons	CO tons	HC tons	CO _{2e} MT
2005	1,060	898	945	15,667	7,081	2,931	755	994,832
2017	140	131	118	6,952	224	1,583	306	819,186
Change	-920	-767	-827	-8,715	-6,857	-1,348	-449	-175,646
Change (%)	-87%	-85%	-88%	-56%	-97%	-46%	-59%	-18%

The following summarizes the comparison of 2005 and 2017 emissions by source category.

Ocean-Going Vessels

Emissions from OGV were lower in 2017 compared to 2005 levels as a result of significant increased participation in the Port's Vessel Speed Reduction program, implementation of the Green Flag incentive program, CARB OGV low sulfur marine fuel regulation requiring distillate fuels with a maximum sulfur content of 0.1%, North American Emission Control Area (ECA), and implementation of the CARB Vessel At-Berth shore power regulation.

Harbor Craft

Harbor craft emissions decreased for all pollutants, except for CO and CO_{2e}. The decrease is due to the use of newer engines in 2017 and lower sulfur content of the fuel used. The increase in CO emissions is related to the impact from the introduction of cleaner engines that do not have lower CO standards. The increase in CO_{2e} is mainly due to the increase in energy consumption in 2017 as compared to 2005.

Cargo Handling Equipment

Cargo handling equipment emissions decreased for all pollutants, except for CO and CO_{2e}. The continued replacement and retrofit of existing equipment with cleaner engines and implementation of CAAP measures and the CARB CHE regulation resulted in a decrease in emissions. The increase in CO emissions from cargo handling equipment is attributed to the addition of several gasoline-fuel yard tractors with higher CO emission rates compared to diesel yard tractors. The increase in CO_{2e} is mainly due to the increase in energy consumption in 2017 as compared to 2005.

Locomotives

Emissions from rail locomotives were lower in 2017 compared to 2005 due in part to the turnover of locomotives to cleaner ultra-low emissions switching locomotives in the PHL and UP fleets. In addition, use of cleaner fuels and cleaner line haul locomotives by both UP and BNSF contributed to the reduced emissions.

Heavy-Duty Vehicles

Truck emissions were significantly lower in 2017 compared to 2005 due to the implementation the Port's Clean Trucks Program requiring the use of trucks that meet cleaner on-road engine emission standards. Other factors include lower overall reported idling time due to gate automation and improvements since 2005 and decreased total vehicle miles travelled due to the increase in utilization of on-dock rail and changes in regional travel patterns.

Ocean-Going Vessels

Overall energy consumption (in terms of kW-hrs) by OGV emission source in 2005 and 2017 are shown in Table 8.4. The kW-hrs associated with the Advanced Maritime Emission Control System (AMECS) technology generators are included in the total kW-hrs shown in the table.

Table 8.4: 2005-2017 OGV Energy Consumption Comparison by Emission Source, kW-hrs

Year	All Emission Sources	Main Engine	Auxiliary Engine	Boiler
2005	507,488,985	153,369,455	229,580,036	124,539,494
2017	388,212,519	90,335,249	152,478,087	145,399,183
Change (%)	-24%	-41%	-34%	17%

The various emission reduction strategies for ocean-going vessels that were in effect in 2017 are listed in Table 8.5. A new column has been added for vessels that used the Advanced Maritime Emission Control System (AMECS) technology as an alternative technology to shore power to comply with the At-Berth Regulation.

Table 8.5: 2005-2017 OGV Emission Reduction Strategies

Year	Percent (%) of All Calls					
	Fuel Switch Aux Eng	Fuel Switch Main Eng	VSR 20 nm	VSR 40 nm	Shore Power	AMECS
2005	14%	0%	68%	0%	0%	0%
2017	100%	100%	97%	91%	39%	1%

Harbor Craft

As shown in Table 8.6, the harbor craft population count operating at the Port decreased by 8%. In addition, there was a 5% decrease in total engine count (most harbor craft are equipped with more than one engine), and a 9% increase in the overall energy consumption (as measured by kilowatt hours) from 2005 to 2017.

Table 8.6: 2005-2017 Harbor Craft Count and Energy Consumption Comparison

Year	Vessel Count	Engine Count	Total kW-hr
2005	92	301	67,684,712
2017	85	315	73,697,414
Change (%)	-8%	5%	9%

Table 8.7 summarizes the distribution of engines based on EPA’s engine standards for 2005 and 2017. Since 2005, the percentage of Tier 2 and Tier 3 engines increased significantly due to the introduction of newer vessels with newer engines into the fleet and replacements of existing higher-emitting engines with cleaner engines. Over the years, with better data collection techniques and better record keeping required with grant funded repowers, the number of engines of unknown tier level has decreased significantly.

Table 8.7: 2005-2017 Harbor Craft Engine Tier Change, %

	2005 Engine Count	2017 Engine Count	% Change
Unknown	102	7	-93%
Tier 0	86	12	-86%
Tier 1	102	22	-78%
Tier 2	11	164	1391%
Tier 3	0	110	100%
Total	301	315	5%

Table 8.8 compares the harbor craft energy consumption (kW-hr) by engine tier. In 2017, 85% of energy consumed by harbor craft is from Tier 2 and 3 engines.

Table 8.8: 2005-2017 Engine Power and Activity Change, %

Engine Tier	2005	2005	2017	2017
	kW-hr	% of Total	kW-hr	% of Total
Tier 0	44,096,837	65%	217,440	0.3%
Tier 1	23,254,327	34%	10,549,482	14.3%
Tier 2	333,548	0%	45,246,823	61.4%
Tier 3	0	0%	17,683,669	24.0%
Total	67,684,712	100%	73,697,414	100%

Cargo Handling Equipment

Between 2005 and 2017, there was a 12% increase in the equipment count due to electric equipment and new equipment types added at the automated terminal. There was also a 10% increase in energy consumption, measured as total kilowatt-hours. The total kW-hr does not include electric equipment consumption, only energy consumption from fossil-fueled equipment.

Table 8.9: 2005-2017 CHE Count and Energy Consumption Comparison

Year	Population	Activity (kW-hr)
2005	1,259	134,618,521
2017	1,408	148,688,094
Change (%)	12%	10%

Table 8.10 shows the equipment energy consumption (kW-hr) comparison by engine tier and by other fuel-typed equipment for calendar years 2017 and 2005. Among diesel equipment, the majority of the energy consumed in 2017, is for equipment with on-road engines and Tier 4 engines.

Table 8.10: CHE Energy Consumption Comparison by Engine Tier, kW-hr

Engine Type	Engine Tier	2005 kW-hr	2005 % of Total	2017 kW-hr	2017 % of Total
Diesel	Tier 0	12,023,155	9%	47,258	0.03%
Diesel	Tier 1	65,059,472	48%	8,356,523	6%
Diesel	Tier 2	49,337,838	37%	11,386,327	8%
Diesel	Tier 3	41,636	0.03%	4,534,560	3%
Diesel	Tier 4i	0	0%	37,573,605	25%
Diesel	Tier 4f	0	0%	30,733,101	21%
Diesel	Onroad	6,610,773	5%	48,135,345	32%
Gasoline		3,866	0.003%	6,847,873	5%
Propane		1,541,782	1%	1,073,503	1%
Total		134,618,521	100%	148,688,094	100%

Tables 8.11 and 8.12 compare the CHE emission reduction technologies and fuels used in 2017 with those used in 2005. There was a significant increase in the number of CHE equipped with cleaner on-road engines in 2017. CHE equipped with DOCs continued to be replaced with newer equipment, resulting into no equipment with DOC in 2017. All of the DPFs installed are Tier 3 level. Although not shown in Table 8.12, there are 85 gasoline yard tractors in 2017. The gasoline yard tractors replaced diesel yard tractors.

Table 8.11: 2005-2017 CHE Emission Reduction Technology Equipment Count Comparison

Equipment	2005 DOC	2017 DOC	2005 On-road Engine	2017 On-road Engine	2005 DPF	2017 DPF	2005 Vycon	2017 Vycon	2005 BlueCAT	2017 BlueCAT
Forklift	40	0	0	0	0	50	0	0	0	11
RTG crane	11	0	0	0	0	30	0	4	0	0
Side handler	42	0	0	0	0	12	0	0	0	0
Top handler	92	0	0	0	0	70	0	0	0	0
Yard tractor	514	0	53	400	0	0	0	0	0	0
Other	2	0	0	4	0	5	0	0	0	5
Total	701	0	53	404	0	167	0	4	0	16

Table 8.12: 2005-2017 CHE Equipment Count by Fuel Type Comparison

Equipment	2005 Emulsified Fuel	2017 Emulsified Fuel	2005 O2 Diesel	2017 O2 Diesel	2005 ULSD	2017 ULSD	2005 Propane Engine	2017 Propane Engine	2005 Gasoline Engine	2017 Gasoline Engine
Forklift	3	0	4	0	0	104	122	109	1	24
RTG crane	16	0	12	0	0	67	0	0	0	0
Side handler	4	0	8	0	0	13	0	0	0	0
Top handler	10	0	10	0	0	195	0	0	0	0
Yard tractor	151	0	81	0	0	564	0	7	0	80
Other	2	0	0	0	0	53	11	12	1	2
Total	186	0	115	0	0	996	133	128	2	106

The following tables and figures for CHE activities are included as additional comparisons between 2005 and 2017. Table 8.13 shows a comparison of CHE counts by equipment type. In total, there was a 12% increase in equipment count from 2005 to 2017, with the largest increase in the “other equipment” category due to new equipment at automated terminal, some of which are electric. Top handlers saw increase, but the remaining equipment counts went down from 2005 due to equipment retirement, and terminal efficiency improvements.

Table 8.13: 2005-2017 CHE Equipment Count and Change, %

Equipment	2005	2017	Change
Forklift	295	246	-17%
RTG crane	85	67	-21%
Side handler	43	13	-70%
Top handler	113	195	73%
Yard tractor	641	651	2%
Sweeper	15	13	-13%
Other	67	223	233%
Total	1,259	1,408	12%

Table 8.14 shows the electric equipment count for 2017 and compares to 2005. The majority of the electric equipment is new due to the automated terminal. It should be noted that in 2005, a count of the electric ship to shore cranes was not included in the 2005 EI; therefore “na” was added to the table as not available.

Table 8.14: 2005-2017 CHE Count of Electric Equipment

Equipment	2005 Electric	2017 Electric
AGV	0	56
ASC	0	32
Crane	0	4
Electric pallet	2	2
Forklift	3	9
Material handle	0	1
Miscellaneous	0	3
Ship to shore c	na	64
Sweeper	0	1
Truck	0	6
Total	5	178

Table 8.15 shows a comparison of the average model year and average age for CHE by equipment type. The average age of forklifts is lower than in 2005. The average age of all other equipment is higher in 2017 than 2005 even though the average model year of the equipment is newer.

Table 8.15: 2005-2017 CHE Average Model Year and Age Comparison, year

Equipment	MY 2005	MY 2017	Age 2005	Age 2017
Forklift	1993	2009	12	8
RTG crane	1995	2006	10	11
Side handler	1999	2003	6	14
Top handler	2001	2010	4	7
Yard tractor	2001	2011	4	6
Sweeper	1996	2007	9	10

Locomotives

Table 8.16 shows the various throughput comparisons for rail transportation in 2005 and 2017. The total port throughput between calendar years 2005 and 2017 was higher by 12% in 2017. The on-dock rail throughput was higher in 2017 than in 2005. The percent of on-dock rail increased from 16% of all container throughput to 24%.

Table 8.16: 2005-2017 Container Throughput Comparison, TEU and %

	2005	2017	Change
Total Port Throughput	6,709,818	7,544,507	12%
Total On-Dock Rail*	1,094,765	1,795,585	64%
% On-Dock	16%	24%	

*Based on average of 1.8 TEUs per container

Heavy-Duty Vehicles

While the basic methodology used to estimate HDV emissions did not change for 2017, the latest version of CARB's emission model, EMFAC2017, was used instead of the previous version, EMFAC2014. Emission factors from this model were used along with regional travel demand modeling based on the number of containers moved through each terminal and terminal-specific characteristics. Concurrent with the release of EMFAC2017, CARB revised their guidance on start emissions of NO_x, which have been estimated for model year 2010 and newer trucks using the methodology described in the HDV section above.

Emissions from the HDV source category continue to be far lower than in 2005 due largely to the following factors affecting the overall age of the truck fleet and average idling times compared with 2005.

- Newer fleet of trucks due to the Port's Clean Trucks Program (CTP).
- The terminals optimized their gate systems and use radio frequency identification (RFID) readers to identify trucks complying with the CTP provisions, which helped reduce idling time.

Table 8.17 shows total port-wide idling times reported in 2005 and 2017. Table 8.18 compares the vehicle miles traveled by heavy-duty trucks in 2005 and 2017.

Table 8.17: 2005-2017 HDV Total Idling Time Comparison, hours and %

EI Year	Total Idling Time (hours)
2005	3,854,273
2017	2,400,882
Change (%)	-38%

Table 8.18: 2005-2017 HDV Vehicle Miles Traveled Comparison, miles and %

Activity Location	2005 VMT	2017 VMT	Change %
On-Terminal	2,866,476	2,601,850	-9%
On-Road	213,716,895	166,952,922	-22%
	216,583,371	169,554,772	-22%

Compared to 2005, the average age of trucks visiting the Port has decreased from 11 to 5 years due to the Port's Clean Trucks Program launched in October 2008 requiring the progressive ban of pre-2007 trucks between 2008 and 2017.

SECTION 9 METRICS

To measure the effectiveness of emissions reduction strategies and progress towards the San Pedro Bay Emission Reduction Standards, the Port has established metrics to track emissions per unit of work by source category. Since port operations are varied with a mix of container and non-container cargo, the metrics listed in this section are based on TEU throughput and metric tons of cargo moved through the Port. Table 9.1 compares the amount of throughput in 2017 and 2005 in TEU and metric tons.

Table 9.1: 2005-2017 Container and Cargo Throughput and Change, %

Year	Throughput	
	Container (TEU)	Cargo (metric tons)
2005	6,709,818	78,560,726
2017	7,544,508	83,507,340
Change (%)	12%	6%

Tables 9.2 and 9.3 show the port-wide tons of emissions per 10,000 TEU and per 100,000 metric tons of cargo in 2005 and 2017, respectively. The tons of emissions per 10,000 TEU of cargo decreased in 2017; an improvement from 2005.

Table 9.2: 2005-2017 Emission Efficiency Metric Comparison, annual tons per 10,000 TEU and %

Year	PM ₁₀	PM _{2.5}	DPM	NO _x	SO _x	CO	HC	CO _{2e}
2005	1.58	1.34	1.41	23.35	10.55	4.37	1.13	1,483
2017	0.19	0.17	0.16	9.22	0.30	2.10	0.41	1,086
Change (%)	-88%	-87%	-89%	-61%	-97%	-52%	-64%	-27%

Table 9.3: 2005-2017 Emission Efficiency Metric Comparison, annual tons per 100,000 metric tons of cargo and %

Year	PM ₁₀	PM _{2.5}	DPM	NO _x	SO _x	CO	HC	CO _{2e}
2005	1.35	1.14	1.20	19.94	9.01	3.73	0.96	1,266
2017	0.17	0.16	0.14	8.33	0.27	1.90	0.37	981
Change (%)	-87%	-86%	-88%	-58%	-97%	-49%	-61%	-23%

SECTION 10 CAAP PROGRESS

The Port's annual emissions inventories serve as the primary tool to track progress towards achieving the Clean Air Action Plan's San Pedro Bay Standards. These standards consist of the following emission reduction goals:

- Mass Emissions Reduction Standards:
 - By 2014, reduce emissions by 72% for DPM, 22% for NO_x, and 93% for SO_x from 2005 levels
 - By 2023, reduce emissions by 77% for DPM, 59% for NO_x, and 93% for SO_x from 2005 levels

The reduction of goods movement-related emissions in 2017 compared to 2005 can be attributed to a number of initiatives, including emissions reduction programs identified in the CAAP and implemented by the Port, such as the Clean Trucks Program, Green Flag Vessel Speed Reduction Program, as well as CARB regulations requiring the use of shore power for vessels at berth and the use of cleaner vessel fuels.

Economic forecasts indicate cargo volumes through the Port of Long Beach will increase in upcoming years. While emission reductions are expected to continue in the future toward meeting the CAAP goals, the rapid rate of emission reductions in recent years may not continue as cargo volumes increase. However, continued implementation of the CAAP and regulatory programs will continue to provide emissions benefits from goods movement-related sources and may offset impacts from the projected growth in trade.

The mass emissions reduction standards are represented as a percentage reduction of emissions from 2005 levels. Table 10.1 summarizes the standardized estimates of emissions by source category for calendar years 2005 and 2017 using the 2017 methodology.

Table 10.1: 2005-2017 Emissions Reductions Compared to CAAP San Pedro Bay Emissions Reduction Standards

Category	2005	2017
DPM (tons)		
Ocean-going vessels	605	64
Harbor craft	45	21
Cargo handling equipment	47	4
Locomotives	43	22
Heavy-duty vehicles	205	7
Total	945	118
Cumulative DPM Emissions Reduction Achieved in 2017		88%
CAAP San Pedro Bay DPM Emissions Reduction Standards	2014	72%
	2023	77%
NO_x (tons)		
Ocean-going vessels	6,726	4,253
Harbor craft	1,107	608
Cargo handling equipment	1,289	345
Locomotives	1,273	617
Heavy-duty vehicles	5,273	1,129
Total	15,667	6,952
Cumulative NO_x Emissions Reduction Achieved in 2017		56%
CAAP San Pedro Bay NO_x Emissions Reduction Standards	2014	22%
	2023	59%
SO_x (tons)		
Ocean-going vessels	6,952	218
Harbor craft	5	1
Cargo handling equipment	11	1
Locomotives	76	1
Heavy-duty vehicles	37	3
Total	7,081	224
Cumulative SO_x Emissions Reduction Achieved in 2017		97%
CAAP San Pedro Bay SO_x Emissions Reduction Standards	2014	93%
	2023	93%

**APPENDIX A:
REGULATORY AND SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN (CAAP) MEASURES**

APPENDIX A: REGULATORY AND SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN (CAAP) MEASURES

This appendix summarizes the current regulatory initiatives and Port measures related to port activity that influenced 2017 emissions. Almost all goods movement-related emissions in and around the port come from five emission source categories: OGVs, HDVs, CHE, harbor craft, and locomotives. The responsibility for the emissions control of the majority of these sources falls under the jurisdiction of local (South Coast Air Quality Management District [SCAQMD]), state (CARB), or federal (U.S. Environmental Protection Agency [EPA]) agencies.

Clean Air Action Plan (CAAP) Strategies

At the end of 2017, the Ports of Long Beach and Los Angeles released the final CAAP 2017 Update¹. 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 with a truck rate to take effect in 2020.
- Requiring terminal operators to purchase zero-emissions equipment if feasible, or near-zero or cleanest 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.

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 of Long Beach and Los Angeles have developed the following standard for reducing overall goods movement-related health risk impacts, relative to 2005 emissions level:

¹ www.cleanairactionplan.org/documents/final-2017-clean-air-action-plan-update.pdf/

- By 2020, reduce the population-weighted cancer risk attributed to port-related DPM pollution by 85% in highly-impacted communities located proximate to port sources and throughout the residential areas in the port region.

Emission Reduction Standard

Consistent with the ports' commitment to meet their fair-share of mass emission reductions of air pollutants, the Ports of Long Beach and Los Angeles developed the following standards for reducing air pollutant emissions from goods movement-related activities, relative to 2005 emission levels:

- By 2014, reduce emissions of NO_x by 22%, of SO_x by 93%, and of DPM by 72% to support attainment of the national fine particulate matter (PM_{2.5}) standards.
- By 2023, reduce emissions of NO_x by 59%, of SO_x by 93%, and of DPM by 77% to support attainment of the national and federal 8-hour ozone standards and national 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 tables summarize current regulatory programs and CAAP measures by major source category that influenced 2017 emissions from goods movement-related operations at the Port.

Table A.1: OGV Emission Regulations, Standards and Policies

Agency	Regulation/Standard/Policy	Targeted Pollutants	Implementation Year	Impact
IMO	NO_x Emission Standard for Marine Engines <i>www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Nitrogen-oxides-%28NOx%29---Regulation-13.aspx</i>	NO _x	2011 – Tier 2 2016 – Tier 3 for ECA only	Sets NO _x emission standard for auxiliary and propulsion engines over 130 kW output power on newly built vessels
IMO	Low Sulfur Fuel Requirements for Marine Engines <i>www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Sulphur-oxides-%28SOx%29---Regulation-14.aspx</i>	DPM PM SO _x	2012 ECA – 1% Sulfur 2015 ECA – 0.1% Sulfur	Significantly reduces emissions due to low sulfur content in fuel by creating Emissions Control Area (ECA)
IMO	Energy Efficiency Design Index (EEDI) for International Shipping <i>www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Technical-and-Operational-Measures.aspx</i>	CO ₂ and other pollutants	2013	Increases the design efficiencies of ships relating to energy and emissions
IMO	Initial IMO Strategy on reduction of GHG emissions from ships – Resolution MEPC 304 (72) <i>https://unfccc.int/sites/default/files/resource/250_IMO%20submission_Talanoa%20Dialogue_April%202018.pdf</i>	GHG	2050 – 50%	Initial IMO Strategy on reduction of GHG emissions from ships by 50% in 2050 from 2008 level. The ultimate goal is to phase out GHG
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 <i>www.epa.gov/otaq/oceanvessels.htm#engine-fuel</i>	DPM PM NO _x SO _x	2011 – Tier 2 2016 – Tier 3	Auxiliary and propulsion on US-Flagged new built vessels; Use of low sulfur fuel

Table A.1 (continued): OGV Emission Regulations, Standards and Policies

Agency	Regulation, Standard, or Policy	Targeted Pollutants	Implementation Year	Impact
CARB	Regulation to Reduce Emissions from Diesel Auxiliary Engines on Ocean-Going Vessels While At-Berth at a California Port <i>www.arb.ca.gov/regact/2007/shorepwr07/shorepwr07.htm</i> and <i>www.arb.ca.gov/ports/shorepower/forms/regulatoryadvisory/regulatoryadvisory12232013.pdf</i>	All	2014 – 50% 2017 – 70% 2020 – 80%	Vessels must use Shore power (or equivalent) requirement to reduce at-berth emissions. Compliance levels based on fleet percentage visiting the port.
CARB	Ocean-going Ship Onboard Incineration <i>www.arb.ca.gov/ports/shipincin/shipincin.htm</i>	DPM PM HC	2007	Vessels operators cannot incinerate within 3 nm of the California coast
SPBP CAAP	CAAP Measure – OGV 1 Vessel Speed Reduction (VSR) Program <i>www.portoflosangeles.org/CAAP/_2010_CAAP_UPDATE_FINAL.pdf</i>	All	2008	Vessel operators within 20 nm and 40 nm of Point Fermin
SPBP CAAP	CAAP Measure – OGV 2 Reduction of At-Berth OGV Emissions <i>www.portoflosangeles.org/CAAP/_2010_CAAP_UPDATE_FINAL.pdf</i>	All	2014	Shore power requirements. Vessel operators and terminals
SPBP CAAP	CAAP Measure – OGV 5 and 6 Cleaner OGV Engines and OGV Engine Emissions Reduction Technology Improvements <i>www.portoflosangeles.org/CAAP/_2010_CAAP_UPDATE_FINAL.pdf</i>	DPM PM NO _x	2012	Vessel operators who choose to participate in technology demonstrations and/or Green Ship Incentive Program

Table A.2: Harbor Craft Emission Regulations, Standards and Policies

Agency	Regulation, Standard, or Policy	Targeted Pollutants	Implementation Year	Impact
EPA	Emission Standards for Harbor Craft Engines <i>www.epa.gov/%20regulations-emissions-vehicles-and-engines/domestic-regulations-emissions-marine-compression</i>	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 <i>www.arb.ca.gov/regact/carblobc/carblobc.htm</i>	DPM PM NO _x SO _x	2006 – 15 ppm	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 <i>www.arb.ca.gov/regact/2010/cbc10/cbc10.htm</i>	DPM PM NO _x	2009 to 2020 - Depending on engine model year	Most harbor craft homeported in SCAQMD must meet more stringent emissions limits according to a compliance schedule
SPBP CAAP	CAAP Measure – HC 1 Performance Standards for Harbor Craft <i>www.portoflosangeles.org/CAAP/_2010_CAAP_UPDATE_FINAL.pdf</i>	All	2009 to 2020 - Depending on engine model year	Modernization of harbor craft operating in San Pedro Bay Ports.

Table A.3: Cargo Handling Equipment Emission Regulations, Standards and Policies

Agency	Regulation, Standard, or Policy	Targeted Pollutants	Implementation Year	Impact
EPA	Emission Standards for Non-Road Diesel Powered Equipment <i>www.epa.gov/emission-standards-reference-guide</i>	All	2008-2015	All non-road (also known as off-road) equipment.
CARB	Regulation for Cargo Handling Equipment Operating at Ports and Intermodal Railyards <i>www.arb.ca.gov/regact/2011/cargo11/cargo11.htm</i>	All	2007-2017; Opacity test compliance starting in 2016	All cargo handling equipment operating at ports and intermodal railyards.
CARB	New Emission Standards, Test Procedures, for Large Spark Ignition (LSI) Engine Forklifts and Other Industrial Equipment <i>www.arb.ca.gov/regact/2008/lsi2008/lsi2008.htm</i>	All	2007 – Phase 1 2010 – Phase 2	Emission standards for large spark-ignition engines 25 hp or greater.
CARB	Fleet Requirements for Large Spark Ignition Engines <i>www.arb.ca.gov/regact/2010/offroadlsi10/lsifinalreg.pdf</i>	All	2009-2013	More stringent emissions requirements for fleets of large spark ignition engine equipment fleets.
SPBP CAAP	CAAP Measure – CHE1 Performance Standards for CHE <i>www.portoflosangeles.org/CAAP/_2010_CAAP_UPDATE_FINAL.pdf</i>	All	2007-2014	Turnover to Tier 4 cargo handling equipment per lease renewal agreement

Table A.4: Railroad Locomotives Emission Regulations, Standards and Policies

Agency	Regulation, Standard, or Policy	Targeted Pollutants	Implementation Year	Impact
EPA	Emission Standards for New and Remanufactured Locomotives and Locomotive Engines- Latest Regulation <i>www.epa.gov/emission-standards-reference-guide</i>	DPM 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 <i>www.epa.gov/diesel-fuel-standards</i>	SO _x PM	2010	All locomotive engines
CARB	Low Sulfur Fuel Requirement for Intrastate Locomotives <i>www.arb.ca.gov/msprog/offroad/loco/loco.htm#intrastate</i>	SO _x NO _x PM	2007	Intrastate locomotives, mainly switchers
CARB	Statewide 1998 and 2005 Memorandum of Understanding (MOUs) <i>www.arb.ca.gov/msprog/offroad/loco/loco.htm#intrastate</i>	NO _x	2010	UP and BNSF locomotives
SPBP CAAP	CAAP Measure – RL1 Pacific Harbor Line (PHL) Rail Switch Engine Modernization <i>www.portoflosangeles.org/CAAP/_2010_CAAP_UPDATE_FINAL.pdf</i>	PM	2010	PHL switcher engines
SPBP CAAP	CAAP Measure – RL2 Class 1 Line-haul and Switcher Fleet Modernization <i>www.portoflosangeles.org/CAAP/_2010_CAAP_UPDATE_FINAL.pdf</i>	All	2023 – Tier 3	Class 1 locomotives at ports
SPBP CAAP	CAAP Measure – RL3 New and Redeveloped Near-Dock Rail Yards <i>www.portoflosangeles.org/CAAP/_2010_CAAP_UPDATE_FINAL.pdf</i>	All	2020 – Tier 4	New near-dock rail yards

Table A.5: Heavy-Duty Vehicles Emission Regulations, Standards and Policies

Agency	Regulation, Standard, or Policy	Targeted Pollutants	Implementation Year	Impact
CARB/EPA	Emission Standards for New 2007+ On-Road Heavy-Duty Vehicles <i>www.arb.ca.gov/msprog/onroadhd/reducstd.htm</i>	NO _x PM	2007 2010	All new on-road diesel heavy-duty vehicles
CARB	Heavy-Duty Vehicle On-Board Diagnostics (OBD and OBDII) Requirement <i>www.arb.ca.gov/msprog/obdprog/section1971_1_clean2013.pdf</i>	NO _x PM	2010+	All new on-road heavy-duty vehicles
CARB	Ultra-Low Sulfur Diesel Fuel Requirement <i>www.arb.ca.gov/regact/ulsd2003/ulsd2003.htm</i>	All	2006 - ULSD	All on-road heavy-duty vehicles
CARB	Drayage and Truck and Bus Regulation (amended in 2011 and 2014) <i>www.arb.ca.gov/msprog/onroad/porttruck/finalregdrayage.pdf</i>	All	Phase in started in 2009	All drayage trucks operating at California ports
CARB	Low NO_x Software Upgrade Program <i>www.arb.ca.gov/msprog/hdsoftware/hdsoftware.htm</i>	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 <i>www.arb.ca.gov/cc/hdghg/hdghg.htm</i>	CO ₂	Phase 1 starting in 2012	Heavy-duty tractors that pull 53-foot+ trailers in CA
CARB	Assembly Bill 32 requiring GHG reductions targets and Governor's Executive Order B – 30-15 <i>www.arb.ca.gov/cc/ab32/ab32.htm</i> and <i>www.gov.ca.gov/2015/04/29/news18938/</i>	CO ₂	GHG emissions reduction goals in 2020	All sectors identified in Climate Change Scoping Plan, including Goods Movement Sector.
SPBP CAAP	CAAP Measure – HDV1 Performance Standards for On-Road Heavy-Duty Vehicles; Clean Truck Program <i>www.portoflosangeles.org/CAAP/_2010_CAAP_UPDATE_FINAL.pdf</i>	All	Phase-in starting in 2008	On-road heavy-duty vehicles that operate at POLB must have 2007 or newer engines by 2012.

**APPENDIX B:
CARGO HANDLING EQUIPMENT DATA**

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
AGV	AGV001	Gottwald		Electric					1422	CHE Electric					
AGV	AGV002	Gottwald		Electric					1249	CHE Electric					
AGV	AGV003	Gottwald		Electric					1574	CHE Electric					
AGV	AGV004	Gottwald		Electric					1755	CHE Electric					
AGV	AGV005	Gottwald		Electric					1670	CHE Electric					
AGV	AGV007	Gottwald		Electric					1931	CHE Electric					
AGV	AGV008	Gottwald		Electric					1654	CHE Electric					
AGV	AGV009	Gottwald		Electric					1693	CHE Electric					
AGV	AGV010	Gottwald		Electric					1572	CHE Electric					
AGV	AGV011	Gottwald		Electric					1697	CHE Electric					
AGV	AGV012	Gottwald		Electric					1757	CHE Electric					
AGV	AGV013	Gottwald		Electric					1721	CHE Electric					
AGV	AGV014	Gottwald		Electric					1724	CHE Electric					
AGV	AGV015	Gottwald		Electric					1185	CHE Electric					
AGV	AGV016	Gottwald		Electric					761	CHE Electric					
AGV	AGV017	Gottwald		Electric					1693	CHE Electric					
AGV	AGV018	Gottwald		Electric					834	CHE Electric					
AGV	AGV019	Gottwald		Electric					1572	CHE Electric					
AGV	AGV020	Gottwald		Electric					1712	CHE Electric					
AGV	AGV021	Gottwald		Electric					1626	CHE Electric					
AGV	AGV022	Gottwald		Electric					1145	CHE Electric					
AGV	AGV023	Gottwald		Electric					1649	CHE Electric					
AGV	AGV024	Gottwald		Electric					1490	CHE Electric					
AGV	AGV025	Gottwald		Electric					1601	CHE Electric					
AGV	AGV026	Gottwald		Electric					1643	CHE Electric					
AGV	AGV027	Gottwald		Electric					1634	CHE Electric					
AGV	AGV028	Gottwald		Electric					1569	CHE Electric					
AGV	AGV029	Gottwald		Electric					1896	CHE Electric					
AGV	AGV030	Gottwald		Electric					1713	CHE Electric					
AGV	AGV031	Gottwald		Electric					1600	CHE Electric					
AGV	AGV032	Gottwald		Electric					1143	CHE Electric					
AGV	AGV033	Gottwald		Electric					1643	CHE Electric					
AGV	AGV034	Gottwald		Electric					1721	CHE Electric					
AGV	AGV035	Gottwald		Electric					1502	CHE Electric					
AGV	AGV036	Gottwald		Electric					1635	CHE Electric					
AGV	AGV037	Gottwald		Electric					1673	CHE Electric					
AGV	AGV038	Gottwald		Electric					1550	CHE Electric					
AGV	AGV039	Gottwald		Electric					1016	CHE Electric					
AGV	AGV040	Gottwald		Electric					839	CHE Electric					
AGV	AGV041	Gottwald		Electric					1060	CHE Electric					
AGV	AGV042	Gottwald		Electric					1013	CHE Electric					
AGV	AGV043	Gottwald		Electric					969	CHE Electric					
AGV	AGV044	Gottwald		Electric					1021	CHE Electric					
AGV	AGV045	Gottwald		Electric					1073	CHE Electric					
AGV	AGV046	Gottwald		Electric					990	CHE Electric					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
AGV	AGV047	Gottwald		Electric					918	CHE Electric					
AGV	AGV048	Gottwald		Electric					981	CHE Electric					
AGV	AGV049	Gottwald		Electric					971	CHE Electric					
AGV	AGV050	Gottwald		Electric					588	CHE Electric					
AGV	AGV051	Gottwald		Electric					164	CHE Electric					
AGV	AGV052	Gottwald		Electric					218	CHE Electric					
AGV	AGV053	Gottwald		Electric					236	CHE Electric					
AGV	AGV054	Gottwald		Electric					203	CHE Electric					
AGV	AGV055	Gottwald		Electric					228	CHE Electric					
AGV	AGV056	Gottwald		Electric					234	CHE Electric					
AGV	AGV057	Gottwald		Electric					199	CHE Electric					
Automatic Stacking Crane	ASC01L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC01W	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC02L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC02W	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC03L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC03W	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC04L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC04W	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC05L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC05W	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC06L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC06W	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC07L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC07W	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC08L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC08W	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC09L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC09W	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC10L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC10W	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC11L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC11W	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC12L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC12W	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC13L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC13W	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC14L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC14W	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC15L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC15W	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC16L	ZPMC		Electric						CHE Electric					
Automatic Stacking Crane	ASC16W	ZPMC		Electric						CHE Electric					
Bulldozer	AEP00545	Caterpillar		Diesel			2004	200	1500	CHE Diesel					
Bulldozer	owned1	Caterpillar	D4	Diesel	Caterpillar	D4K2	2012	92	400	CHE Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Cone Vehicle	IBC 001	Motrec		Diesel	Kubota	V1505-ETO	2016	35	887	CHE Diesel					
Cone Vehicle	IBC 002	Motrec		Diesel	Kubota	V1505-ETO	2016	35	1301	CHE Diesel					
Cone Vehicle	IBC 003	Motrec		Diesel	Kubota	V1505-ETO	2016	35	601	CHE Diesel					
Cone Vehicle	IBC 004	Motrec		Diesel	Kubota	V1505-ETO	2016	35	785	CHE Diesel					
Cone Vehicle	IBC 005	Motrec		Diesel	Kubota	V1505-ETO	2016	35	872	CHE Diesel					
Crane	218001	Linkbelt	HSP-8015	Diesel	GMC	50435001	1985	334	40	CHE Diesel					
Crane	#2T	Terex	RT555	Diesel	Cummins	QSB 6.7	2016	173	359	CHE Diesel					
Crane	203002	American	325	Electric			1980	0	0	CHE Electric					
Crane	217002	Gottwald	330EG	Electric			2006	0	0	CHE Electric					
Crane	IY001	ZPMC		Electric						CHE Electric					
Crane	IY002	ZPMC		Electric						CHE Electric					
Electric Pallet Jack	#31	Toyota	8HBE30	Electric	Toyota	AC drive m	2013	0	124	CHE Electric					
Electric Pallet Jack	#32	Toyota	8HBE30	Electric	Toyota	AC drive m	2013	0	128	CHE Electric					
Excavator	108019	Caterpillar	345B	Diesel	Caterpillar	3176C	2002	322	0	CHE Diesel					
Excavator	108021	Caterpillar	345CL	Diesel	Caterpillar	C13	2005	371	0	CHE Diesel					
Forklift	306	Taylor	THD300	Diesel	Cummins	C 5.9-C (6 E	2000	160	434	CHE Diesel					
Forklift	307	Taylor	THDH350	Diesel	Cummins	C 5.9-C (6 E	2001	160	614	CHE Diesel					
Forklift	308	Taylor	TH350L	Diesel	Cummins	C 5.9-C (6 E	2005	160	778	CHE Diesel					
Forklift	309	Taylor	TH350L	Diesel	Cummins	C 5.9-C (6 E	2006	160	1015	CHE Diesel					
Forklift	2009	Taylor		Diesel	Cummins	11.5 T	2002	173	236	CHE Diesel			8/25/2014		
Forklift	2010	Taylor	THD360L	Diesel	Cummins	11.5 T	2002	173	181	CHE Diesel			8/25/2014		
Forklift	2069	Taylor	TX360M	Diesel	Cummins	11.5 T	2007		263	CHE Diesel			12/1/2011		
Forklift	2793	Taylor	TH350L	Diesel	Cummins	11.5 T	2005	150	258	CHE Diesel			8/25/2014		
Forklift	2794	Taylor	TH350L	Diesel	Cummins	11.5 T	2005	150	561	CHE Diesel			8/25/2014		
Forklift	3001	Caterpillar	P33000D	Diesel	Caterpillar	6M60-TLA3	2008	148	1920	CHE Diesel					
Forklift	3002	Caterpillar	P33000D	Diesel	Caterpillar	6M60-TLA3	2008	148	1536	CHE Diesel					
Forklift	3010	Yale	GLP100	Diesel	Vortec	5 T	2012	117	156	CHE Diesel					
Forklift	3016	Taylor	T520M	Diesel	Cummins	25 ton	2008		654	CHE Diesel			12/1/2011		
Forklift	17501	Mitsubishi	FD80	Diesel	Mitsubishi	8 T	2006	117	100	CHE Diesel			1/1/2012		
Forklift	17502	Mitsubishi	FD80	Diesel	Mitsubishi	8 T	2006	117	100	CHE Diesel			1/1/2012		
Forklift	30205	Taylor	X-300M	Diesel	Cummins	QSB6.7	2017	220	1466	CHE Diesel					
Forklift	30206	Taylor	X-300M	Diesel	Cummins	QSB6.7	2017	220	1553	CHE Diesel					
Forklift	30207	Taylor	X-300M	Diesel	Cummins	QSB6.7	2017	220	1132	CHE Diesel					
Forklift	30290	Taylor	THD 300	Diesel	Cummins	15 T	1990	183	100	CHE Diesel			1/1/2014		
Forklift	30294	Taylor	T-300M	Diesel			2003	165	857	CHE Diesel			9/10/2014		
Forklift	30295	Taylor	T300M	Diesel	Cummins	QSB5.9	2004	165	974	CHE Diesel					
Forklift	30296	Taylor	T300M	Diesel	Cummins	QSB5.9	2004	165	499	CHE Diesel			6/6/2014		
Forklift	30297	Taylor	T-300M	Diesel			2005	160	695	CHE Diesel			6/1/2014		
Forklift	30298	Taylor	TX-300M	Diesel			2007	117	408	CHE Diesel			12/15/2014		
Forklift	30300	Taylor	TX300M	Diesel	Cummins		2014		2204	CHE Diesel					
Forklift	30301	Taylor	TX300M	Diesel	Cummins		2014		2026	CHE Diesel					
Forklift	33000	Taylor	tx-330m	Diesel	Cummins	16 T	2011	117	200	CHE Diesel			4/20/2015		
Forklift	33001	Taylor	tx-330m	Diesel	Cummins	16 T	2011	117	200	CHE Diesel			4/20/2015		
Forklift	33002	Taylor	tx-330m	Diesel	Cummins	16 T	2011	117	200	CHE Diesel			4/30/2015		
Forklift	33003	Taylor	tx-330m	Diesel	Cummins	16 T	2011	117	200	CHE Diesel			5/6/2015		

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Forklift	33004	Taylor	tx-330m	Diesel	Cummins	16 T	2011	117	200	CHE Diesel			5/8/2015		
Forklift	33005	Taylor	tx-330m	Diesel	Cummins	16 T	2011	117	200	CHE Diesel			5/19/2015		
Forklift	33006	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel					
Forklift	33007	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel					
Forklift	33008	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel					
Forklift	33009	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel					
Forklift	33010	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel					
Forklift	33011	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel					
Forklift	33012	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel					
Forklift	33013	Taylor	tx-330m	Diesel	Cummins	16 T	2012	117	200	CHE Diesel					
Forklift	35200	Taylor	TXH350L	Diesel	Cummins	QSB6.7	2015		900	CHE Diesel					
Forklift	35201			Diesel			2010		396	CHE Diesel			12/11/2014		
Forklift	35302	Taylor	TX300M	Diesel	Cummins		2014		2240	CHE Diesel					
Forklift	40210	Magna Lift	400B412FS	Diesel	Caterpillar	20 T	2007	176	150	CHE Diesel			1/1/2012		
Forklift	40212	Magna Lift	40PBL12FS	Diesel	Cummins	20 T	2007	117	150	CHE Diesel			1/1/2012		
Forklift	40213	Taylor	TXH400L	Diesel	Cummins	20 T	2008	117	150	CHE Diesel			5/11/2015		
Forklift	40214	Taylor	TXH400L	Diesel	Cummins	20 T	2008	117	150	CHE Diesel			5/15/2015		
Forklift	55200	Taylor	27 T	Diesel		27 T	2017		100	CHE Diesel					
Forklift	55201	Taylor	27 T	Diesel		27 T	2017		100	CHE Diesel					
Forklift	55202	Otek	55SC	Diesel	Caterpillar	28 T	2000	176	150	CHE Diesel			1/1/2014		
Forklift	55203	Otek	55SC	Diesel	Caterpillar	28 T	2001	176	100	CHE Diesel			1/1/2014		
Forklift	55204	Otek	55SC	Diesel	Caterpillar	28 T	2001	176	100	CHE Diesel			1/1/2014		
Forklift	55206	Hoist	P550	Diesel	Cummins	28 T	2007	215	150	CHE Diesel			5/20/2015		
Forklift	55208	Taylor	27 T	Diesel		27 T	2017		100	CHE Diesel					
Forklift	55209	Taylor	27 T	Diesel		27 T	2017		100	CHE Diesel					
Forklift	72000	Taylor	36 T	Diesel		36 T	2017		100	CHE Diesel					
Forklift	10 W	Hyster	H210D	Diesel			2017	120	929	CHE Diesel					
Forklift	11 W	Hyster	H210D	Diesel	Cummins		2015	110	500	CHE Diesel					
Forklift	12 W	Hyster	H210D	Diesel	Cummins		2014	110	400	CHE Diesel					
Forklift	13 W			Diesel			2017		610	CHE Diesel					
Forklift	14 W	Hyster	H155XL2	Diesel	Cummins		2015	75	400	CHE Diesel					
Forklift	15 W	Hyster	H210HD	Diesel	Cummins		2015	75	400	CHE Diesel					
Forklift	16 W	Hyster	H155XL2	Diesel	Cummins		2015	75	1000	CHE Diesel					
Forklift	28609R	Taylor	XH350L	Diesel	Cummins	35000 lbs	2015	160	4765	CHE Diesel					
Forklift	29381R	Taylor		Diesel	Cummins	32000 lbs	2015	173	3910	CHE Diesel					
Forklift	29382R	Taylor	X360M	Diesel		32000 lbs	2015	173	387	CHE Diesel					
Forklift	29795R	Taylor	X360M	Diesel	Cummins	32000 lbs	2015	173	2883	CHE Diesel					
Forklift	4 W	Hyster	H210D	Diesel	Cummins		2013	110	1385	CHE Diesel					
Forklift	5 W	Hyster	H210D	Diesel	Cummins		2013	110	1224	CHE Diesel					
Forklift	6 W	Hyster	H190D	Diesel	Cummins		2008	120	1080	CHE Diesel			1/1/2014		
Forklift	7 W	Hyster	H210D	Diesel	Cummins		2015	120	500	CHE Diesel					
Forklift	70FP1	Hyster	XL2	Diesel	Hyster	7.5 T	1995	120	250	CHE Diesel					
Forklift	8 W	Hyster	H210D	Diesel	Cummins		2017	120	979	CHE Diesel			1/1/2014		
Forklift	9 W	Hyster	H 210HD	Diesel	Perkins		2017	125	1243	CHE Diesel			11/1/2012		
Forklift	007E01972	Hyster	H210HD	Diesel	Cummins	QSB6.7-15!	2002	155	200	CHE Diesel			1/1/2014		

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Forklift	007E02462	Hyster	H210HD	Diesel	Perkins	1106C-E60	2003	155	225	CHE Diesel			1/1/2014		
Forklift	007E02463	Hyster	H210HD	Diesel	Perkins	1106C-E60	2003	155	225	CHE Diesel			1/1/2014		
Forklift	007E02464	Hyster	H210HD	Diesel	Perkins	1106C-E60	2003	155	225	CHE Diesel			1/1/2014		
Forklift	007E02470	Hyster	H210HD	Diesel	Perkins	1106C-E60	2003	155	225	CHE Diesel			1/1/2013		
Forklift	007E02476	Hyster	H210HD	Diesel	Perkins	1106C-E60	2003	155	225	CHE Diesel			1/1/2014		
Forklift	F100.11	Caterpillar	DP50K-D	Diesel	Mitsubishi	S6S	2004	84	531	CHE Diesel			1/1/2013		
Forklift	F111.4			Diesel				84	193	CHE Diesel			1/1/2013		
Forklift	F-117.36	Taylor		Diesel	Cummins	QSB 6.7	2007	160	203	CHE Diesel			1/1/2014		
Forklift	F118.11	Catepillar		Diesel	Mitsubishi	DP50K-2	2008	64	417	CHE Diesel			1/1/2013		
Forklift	F128.35			Diesel		QSB 6.7	2013	173	322	CHE Diesel					
Forklift	F134.36	Taylor		Diesel	Cummins	QSB6.7	2014	173	2605	CHE Diesel					
Forklift	F-88.30	Taylor	QSB-155C	Diesel	Cummins	QSB-155C	2003	155	238	CHE Diesel			1/1/2013		
Forklift	F-89.30	Taylor	QSB-155C	Diesel	Cummins	QSB-155C	2003	155	309	CHE Diesel			1/1/2013		
Forklift	F-94.11	Caterpillar	DP50K-D	Diesel	Mitsubishi	S6S	2004	84	506	CHE Diesel			1/1/2010		
Forklift	F95.11	Caterpillar	DP50K-D	Diesel	Mitsubishi	S6S	2004	84	318	CHE Diesel			1/1/2010		
Forklift	F96.11	Caterpillar	DP50K-D	Diesel	Mitsubishi	S6S	2004	84	359	CHE Diesel			1/1/2010		
Forklift	F99.11	Caterpillar	DP50K-D	Diesel	Mitsubishi	S6S	2004	84	415	CHE Diesel			1/1/2010		
Forklift	FL 03-310	Hyster	H360-48HD2	Diesel	Cummins	QSB6.7	2015	164	387	CHE Diesel					
Forklift	FL 03-311	Hyster	H360-48HD2	Diesel	Cummins	QSB6.7	2015	164	355	CHE Diesel					
Forklift	FL 03-312	Hyster	H360-48HD2	Diesel	Cummins	QSB6.7	2015	164	493	CHE Diesel					
Forklift	FL 03-313	Hyster	H360-48HD2	Diesel	Cummins	QSB6.7	2015	164	351	CHE Diesel					
Forklift	FL-088	JLG Skytrak	8042 T4F	Diesel	Cummins	QSF3.8	2015	110	93	CHE Diesel					
Forklift	FL-089	JLG Skytrak	8042 T4F	Diesel	Cummins	QSF3.8	2015	110	106	CHE Diesel					
Forklift	FL4500		4,500 lbs	Diesel			1996	50	10	CHE Diesel					
Forklift	FL550	Taylor	X550M	Diesel	Isuzu	55000 lbs	2015	100	287	CHE Diesel					
Forklift	FLBL	Hyster		Diesel			1995	60	520	CHE Diesel					
Forklift	L-1	Linde	H80D	Diesel			2008	125	1059	CHE Diesel			1/1/2017		
Forklift	L-2	Linde	H80D	Diesel			2008	125	590	CHE Diesel			1/1/2017		
Forklift	L-3	Linde	H80D	Diesel			2008	125	660	CHE Diesel			12/1/2015		
Forklift	#10	Toyota	5FBE15	Electric	Toyota	AC drive m	1997	0	428	CHE Electric					
Forklift	#11	Toyota	7FBEU15	Electric	Toyota	AC drive m	1995	0	832	CHE Electric					
Forklift	#12	Toyota		Electric	Taylor-Dun	DC Drive M	1995	0	376	CHE Electric					
Forklift	#13	Toyota	7FBEU20	Electric	Toyota	AC drive m	1995	0	402	CHE Electric					
Forklift	#30	Toyota	7FBEU15	Electric	Toyota	AC drive m	2013	0	305	CHE Electric					
Forklift	#33	Raymond		Electric	Raymond	AC drive m	2012	0	108	CHE Electric					
Forklift	FL-090	Hyster	N40ZRS2	Electric					51	CHE Electric					
Forklift	FL-091	Hyster	N40ZRS2	Electric					89	CHE Electric					
Forklift	FL100			Electric			2006	0	0	CHE Electric					
Forklift	6000	Mitshubish	K25	Gasoline	Nissan	6,000 lb	2013	59	617	CHE Gasoline					
Forklift	6001	Mitshubish	K25	Gasoline	Nissan	6,000 lb	2013	59	506	CHE Gasoline					
Forklift	6002	Mitsubishi	K25	Gasoline		6,000 lb	2013		113	CHE Gasoline					
Forklift	6003	Mitsubishi	K25	Gasoline		6,000 lb	2013		472	CHE Gasoline					
Forklift	6004	Mitsubishi	K25	Gasoline		6,000 lb	2013		104	CHE Gasoline					
Forklift	6005	Mitsubishi	K25	Gasoline		6,000 lb	2013		107	CHE Gasoline					
Forklift	7001	Mitshubish	K25	Gasoline	Nissan	6,000 lb	2013	59	634	CHE Gasoline					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Forklift	7002	Mitsubish	K25	Gasoline	Nissan	6,000 lb	2013	59	399	CHE Gasoline					
Forklift	7003	Mitsubish	K25	Gasoline	Nissan	7000 lb	2013	59	409	CHE Gasoline					
Forklift	7004	Mitsubish	K25	Gasoline	Nissan	7000 lb	2013	59	206	CHE Gasoline					
Forklift	7005	Mitsubishi	K25	Gasoline		6,000 lb	2013		259	CHE Gasoline					
Forklift	7006	Mitsubishi	K25	Gasoline		7,000 lb	2013		349	CHE Gasoline					
Forklift	7008	Mitsubishi	K25	Gasoline		7,000 lb	2013		812	CHE Gasoline					
Forklift	7009	Mitsubishi	K25	Gasoline		7,000 lb			725	CHE Gasoline					
Forklift	7010	Mitsubishi	K25	Gasoline		7,000 lb	2013		489	CHE Gasoline					
Forklift	8000	Mitsubishi	FG40N	Gasoline			2016		361	CHE Gasoline					
Forklift	8020	Mitsubishi	FG40N	Gasoline		8,000 lb	2012		370	CHE Gasoline					
Forklift	8033	Mitsubishi	H80XM	Gasoline			2002		1018	CHE Gasoline					
Forklift	8210	Mitsubishi	FG40N	Gasoline	Nissan	8,000 lb	2012	59	612	CHE Gasoline					
Forklift	L5	Mitsubishi	FG40N	Gasoline	Mitsubishi	TB45	2011	72	442	CHE Gasoline					
Forklift	L6	Mitsubishi	FG40N	Gasoline	Mitsubishi	TB45	2011	72	454	CHE Gasoline					
Forklift	L7	Mitsubishi	FG35N	Gasoline	Mitsubishi	TB45	2016	72	194	CHE Gasoline					
Forklift	L8	Mitsubishi	FG35N	Gasoline	Mitsubishi	TB45	2016	72	163	CHE Gasoline					
Forklift	L9	Mitsubishi	FG35N	Gasoline	Mitsubishi	TB45	2016	72	327	CHE Gasoline					
Forklift	68	Mitsubishi	FG30B	LPG	Mitsubishi	FG 30	2000	54	254	CHE Propane					
Forklift	69	Mitsubishi	FG30B	LPG	Mitsubishi	FG 30	2000	54	287	CHE Propane					
Forklift	70	Mitsubishi	FG30B	LPG	Mitsubishi	FG 30	2000	54	203	CHE Propane					
Forklift	71	Mitsubishi	FG30B	LPG	Mitsubishi	FG 30	2000	54	264	CHE Propane					
Forklift	72	Mitsubishi	FG30B	LPG	Mitsubishi	FG 30	2000	54	166	CHE Propane					
Forklift	75	Hyster	H60FT	LPG	Mazda	2.2	2014	46	166	CHE Propane					
Forklift	76	Hyster	H60FT	LPG	Mazda	2.2	2014	46	140	CHE Propane					
Forklift	78	Hyster	H60FT	LPG	Mazda	2.2	2014	46	83	CHE Propane					
Forklift	79	Hyster	H60FT	LPG	Mazda	2.2	2014	46	319	CHE Propane					
Forklift	80	Hyster	H60FT	LPG	Mazda	2.2	2014	46	311	CHE Propane					
Forklift	521	Toyota	42-4FCC15	LPG		3000 lbs	1985	60	89	CHE Propane					
Forklift	593	Clark	C25L	LPG	Cummins	5000 lbs	2010	70	2053	CHE Propane					
Forklift	811	Clark	C25L	LPG		5000 lbs	2015	75	1720	CHE Propane					
Forklift	812	Clark	C25L	LPG		5000 lbs	2015	75	400	CHE Propane					
Forklift	1008	Hyster	H100XM	LPG	Vortec	5 T	2002	117	2838	CHE Propane					
Forklift	1012	Yale		LPG			2003	117		CHE Propane					
Forklift	1215	Hyster		LPG			2014			CHE Propane					
Forklift	1801	Yale	GLP100	LPG	Vortec	5 T	2005	117	596	CHE Propane					
Forklift	1802	Yale	GLP100	LPG	Vortec	5 T	2005	117	114	CHE Propane					
Forklift	5050	Clark	C25L	LPG	GM	DPSIB2.7Gi	2013	96	732	CHE Propane					
Forklift	5051	Clark	C25L	LPG	GM	DPSIB2.7Gi	2013	96	621	CHE Propane					
Forklift	5052	Clark	C25L	LPG	GM	DPSIB2.7Gi	2013	96	1010	CHE Propane					
Forklift	5053	Clark	C25L	LPG	GM	DPSIB2.7Gi	2014	96	1200	CHE Propane					
Forklift	5054	Clark	C25L	LPG	GM	DPSIB2.7Gi	2014	96	1200	CHE Propane					
Forklift	5055	Clark	C25L	LPG	GM	DPSIB2.7Gi	2014	96	910	CHE Propane					
Forklift	5056	Clark	C25L	LPG	GM	DPSIB2.7Gi	2014	96	960	CHE Propane					
Forklift	6016	Caterpillar	GP30K	LPG		6,000 lb	2000	62	244	CHE Propane					
Forklift	6017	Caterpillar	GP30K	LPG		6,000 lb	2000	62	153	CHE Propane					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Forklift	6036	Caterpillar	P6000	LPG	Nissan	K21	2004	62	655	CHE Propane					
Forklift	10117	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane					
Forklift	10118	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane					
Forklift	10119	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane					
Forklift	10120	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane					
Forklift	10121	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane					
Forklift	10122	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane					
Forklift	10123	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane					
Forklift	10124	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane					
Forklift	10125	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane					
Forklift	10126	Mitsubishi	FG45K1	LPG	Nissan	5 T	2006	117	50	CHE Propane					
Forklift	#27	Toyota	42-6FGCU18	LPG	Toyota	Toyota 4Y	1995	57	55	CHE Propane					
Forklift	#34	Toyota	8FGU30	LPG	Toyota	4Y ECS	2013	57	298	CHE Propane					
Forklift	#35	Toyota	8FGU30	LPG	Toyota	4Y ECS	2013	57	230	CHE Propane					
Forklift	#36	Toyota	8FGU30	LPG	Toyota	4Y ECS	2014	57	59	CHE Propane					
Forklift	#37	Toyota	8FGU30	LPG	Toyota	4Y ECS	2014	57	162	CHE Propane					
Forklift	#8	Toyota	42-6FGCU18	LPG	Toyota	Toyota 4Y	1995	57	40	CHE Propane					
Forklift	#9	Toyota	42-6FGCU18	LPG	Toyota	Toyota 4Y	1995	57	39	CHE Propane					
Forklift	2005f	Caterpillar	PG55N1	LPG	GCT	12000 lbs	2017	141	222	CHE Propane					
Forklift	28782R	Clark	C25L	LPG		5000 lbs	2015	70	1336	CHE Propane					
Forklift	28784R	Clark	C25L	LPG		5000 lbs	2015	70	1158	CHE Propane					
Forklift	29252R	Clark	C25L	LPG		5000 lbs	2013	70	1212	CHE Propane					
Forklift	29783R	Clark	C25L	LPG		5000 lbs	2015	70	1212	CHE Propane					
Forklift	5049F	Clark	C25L	LPG	GM	DPSIB2.7Gi	2013	96	310	CHE Propane					
Forklift	006V02252	Hyster	H155XL	LPG	Perkins	1004-4	2012	103	150	CHE Propane					
Forklift	F129.5			LPG		QSB 6.7	2013	74	461	CHE Propane					
Forklift	F130.5			LPG		QSB 6.7	2013	74	407	CHE Propane					
Forklift	F131.5			LPG		QSB 6.7	2013	74	351	CHE Propane					
Forklift	F132.5			LPG		QSB 6.7	2013	74	585	CHE Propane					
Forklift	F133.5			LPG		QSB 6.7	2013	74	259	CHE Propane					
Forklift	F135.5			LPG		QSB 6.7	2013	74	283	CHE Propane					
Forklift	FL-071	Mitsubishi	FG30K	LPG	Mitsubishi	4G64	2000		45	CHE Propane					
Forklift	FL-077	Hyster	Fortis 80	LPG	Kubota	WG3800	2014	98	468	CHE Propane					
Forklift	FL-082	Hyster	H60FT	LPG	Kubota	WG3800	2015	98	89	CHE Propane					
Forklift	FL-083	Hyster	H60FT	LPG	Kubota	WG3800	2015	98	233	CHE Propane					
Forklift	FL-084	Hyster	H60FT	LPG	Kubota	WG3800	2015	98	79	CHE Propane					
Forklift	FL-085	Hyster	H60FT	LPG	Kubota	WG3800	2015	98	157	CHE Propane					
Forklift	FL-086	Hyster	H60FT	LPG	Kubota	WG3800	2015	98	188	CHE Propane					
Forklift	FL-087	Hyster	H60FT	LPG	Kubota	WG3800	2015	98	74	CHE Propane					
Forklift	FL-092	Hyster	H80FT	LPG	Kubota	WG3800	2015	98	207	CHE Propane					
Forklift	FL-093	Hyster	H80FT	LPG	Kubota	WG3800	2015	98	317	CHE Propane					
Forklift	FL-094	Hyster	H80FT	LPG	Kubota	WG3800	2015	98	76	CHE Propane					
Forklift	FLBD100A	Hyster	S155XL	LPG		11.5 T	2000	100	200	CHE Propane					
Forklift	FLBD100B	Hyster	S155XL	LPG		11.5 T	2000	100	200	CHE Propane					
Forklift	FLBD100C	Komatsu		LPG			2004	50	1500	CHE Propane					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Forklift	FLBL20			LPG			1995	120	624	CHE Propane					
Forklift	FLBL50A	Hyster	H35xm	LPG	Case	5 T	1995	45	52	CHE Propane					
Forklift	FLBL50B	Toyota	7Fgu25	LPG	Toyota	5 T	2004	50	52	CHE Propane					
Forklift	H80XM	Hyster	H80XM	LPG	GM	6 cyl	2004	94	120	CHE Propane					
Forklift	leased3	Toyota	8FGU30	LPG	Toyota	4Y	2010	47	600	CHE Propane					
Forklift	LGB17	Hyster	S80XM	LPG		7.5T	2002	80	500	CHE Propane					
Forklift	LGB18	Hyster	S80XM	LPG		7.5T	2002	80	500	CHE Propane					
Forklift	LGB19	Hyster	S80XM	LPG		7.5T	2002	80	500	CHE Propane					
Forklift	LGB20	Hyster	S80XM	LPG		7.5T	2002	80	500	CHE Propane					
Forklift	LGB21	Hyster	S80XM	LPG		7.5T	2002	80	500	CHE Propane					
Forklift	LGB22	Hyster	S120XM	LPG		5 T	2002	50	1500	CHE Propane					
Forklift	LGB23	Hyster	S120XM	LPG		5 T	2002	50	1500	CHE Propane					
Forklift	LGB24	Hyster	S120XM	LPG		5 T	2002	50	1500	CHE Propane					
Forklift	LGB25	Hyster	S120XM	LPG		5 T	2002	50	1500	CHE Propane					
Forklift	LGB26	Hyster	S120XM	LPG		5 T	2002	50	1500	CHE Propane					
Forklift	LGB27	Hyster	S120XM	LPG		5 T	2002	50	1500	CHE Propane					
Forklift	LGB28	Hyster	S120XM	LPG		5 T	2002	50	1500	CHE Propane					
Forklift	owned3	Toyota	7FGU25	LPG	Toyota	F2	2006	46	0	CHE Propane					
Forklift	owned5	Toyota	8FGU30	LPG	Toyota	4Y-ECS	2008	62	400	CHE Propane					
Forklift	SSAD1	Toyota		LPG		3 T	1987	122	0	CHE Propane					2008
Forklift	SSAD10	Toyota		LPG		3 T	1987	122	15	CHE Propane					2008
Forklift	SSAD11	Toyota		LPG		3 T	1987	122	0	CHE Propane					2008
Forklift	SSAD12	Clark	CGP25	LPG		3 T	1993	122	290	CHE Propane					2008
Forklift	SSAD13	Clark	CGP25	LPG		3 T	1995	122	240	CHE Propane					
Forklift	SSAD15	Clark	CGP25	LPG		3 T	1995	122	100	CHE Propane					
Forklift	SSAD17	Clark	CGP25	LPG		3 T	1995	122	100	CHE Propane					
Forklift	SSAD18	Toyota		LPG		3 T	1987	122	0	CHE Propane					2008
Forklift	SSAD19	Toyota		LPG		3 T	1987	122	0	CHE Propane					2008
Forklift	SSAD20	Toyota		LPG		3 T	1987	122	0	CHE Propane					
Forklift	SSAD23	Toyota	15.000#	LPG		3 T	2008		150	CHE Propane					
Forklift	SSAD24	Toyota	15,000#	LPG		3 T	2008		390	CHE Propane					
Forklift	SSAD26	Toyota		LPG		5 T	1987	122	0	CHE Propane					2008
Forklift	SSAD4	Toyota		LPG		5 T	1987	122	0	CHE Propane					2008
Forklift	SSAD6	Toyota		LPG		5 T	1987	122	0	CHE Propane					2008
Forklift	SSAD8	Toyota		LPG		5 T	1987	122	0	CHE Propane					2008
Forklift	SSAD9	Toyota		LPG		5 T	1987	122	140	CHE Propane					2008
Hybrid RTG	TT41	Paceco-Mit		Diesel	Caterpillar	C7.1	2016	250	1876	CHE Diesel					
Hybrid RTG	TT42	Paceco-Mit		Diesel	Caterpillar	C7.1	2016	250	2413	CHE Diesel					
Hybrid RTG	TT43	Paceco-Mit		Diesel	Caterpillar	C7.1	2016	250	2382	CHE Diesel					
Hybrid RTG	TT44	Paceco-Mit		Diesel	Caterpillar	C7.1	2016	250	2202	CHE Diesel					
Hybrid RTG	TT45	Paceco-Mit		Diesel	Caterpillar	C7.1	2016	250	2774	CHE Diesel					
Hybrid RTG	TT46	Paceco-Mit		Diesel	Caterpillar	C7.1	2016	250	1274	CHE Diesel					
Hybrid RTG	TT47	Paceco-Mit		Diesel	Caterpillar	C7.1	2016	250	2209	CHE Diesel					
Loader	10059	Kubota	R520S	Diesel			2003	50	1500	CHE Diesel					
Loader	#10LD	Caterpillar	980M	Diesel	Caterpillar	C13	2015	418	2074	CHE Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Loader	#11LD	Caterpillar	980M	Diesel	Caterpillar	C13	2015	418	2351	CHE Diesel					
Loader	#12LD	Caterpillar	980M	Diesel	Caterpillar	C13	2015	418	2215	CHE Diesel					
Loader	#7LD	Caterpillar	980H	Diesel	Caterpillar	C15	2008	349	462	CHE Diesel			1/27/2011		
Loader	#8LD	Caterpillar	980K	Diesel	Caterpillar	C13	2012	402	381	CHE Diesel					
Loader	#9LD	Caterpillar	980M	Diesel	Caterpillar	C13	2015	418	1745	CHE Diesel					
Loader	70L1	Caterpillar	950B	Diesel	Caterpillar		1985	200	250	CHE Diesel					
Loader	K1Y00340	CAT	982-M	Diesel		C-13	2014			CHE Diesel					
Loader	KRS00297	CAT	980-M	Diesel		C-13	2014			CHE Diesel					
Loader	leased6	Komatsu	WA470-7	Diesel	Komatsu	SAA6D125I	2013	272	900	CHE Diesel					
Man Lift	1004004	JLG	600S	Diesel	Perkins	404-22T	2009	62	107	CHE Diesel					
Man Lift	1004011	JLG	1200SJP	Diesel	Deutz	TD2011L04	2008	75	220	CHE Diesel					
Man Lift	62660003	JL:G	600S	Diesel	Deutz	TD2.9L4	2014	67	344	CHE Diesel					
Man Lift	ML	Genie	S-85	Diesel			2009			CHE Diesel					
Man Lift	ML10	JLG	1350SJP	Diesel	Deutz	TCD2.9L4	2017	55	13	CHE Diesel					
Man Lift	SC-139			Diesel			2013	62	395	CHE Diesel					
Man Lift	SC-156	JLG		Diesel	Deutz	TCD 3.6L4	2015	100	196	CHE Diesel					
Man Lift	SC-99			Diesel			2013	74	359	CHE Diesel					
Man Lift	ML08	Genie	S60	Gasoline	Ford	LRG425-EF	2000	82		CHE Gasoline					
Man Lift	ML09	JLG	600S	Gasoline	Ford	LRG425-EF	2004	82	2190	CHE Gasoline					
Material Handler	108031	Caterpillar	345CMH	Diesel	Caterpillar	C13	2005	371	540	CHE Diesel			9/15/2011		
Material Handler	110003	Caterpillar	375-L	Diesel	Caterpillar	C15	2008	717	0	CHE Diesel			6/22/2011		
Material Handler	110008	Caterpillar	375L	Electric	Reliance		1995	0	0	CHE Electric					
Miscellaneous	SC-123	Peco		Diesel	Kubota		2010	13	1007	CHE Diesel					
Miscellaneous	SC-124	Peco		Diesel	Kubota		2010	13	49	CHE Diesel					
Miscellaneous	#20	JLG	1.93E+05	Electric	JLG	AC drive m	2000	0	0	CHE Electric					
Miscellaneous	#21	JLG	1.93E+05	Electric	JLG	AC drive m	2001	0	0	CHE Electric					
Miscellaneous	#22	JLG	1930ES	Electric	JLG	AC drive m	2003	0	0	CHE Electric					
Miscellaneous	#19	JLG	600S	LPG	JLG	GM Vortec	1998		0	CHE Propane					
Rail pusher	3501011	RailKing	RK 330	Diesel	Cummins	QSB6.7 195	2013	195	50	CHE Diesel					
Rail pusher	SC-138			Diesel			2013	150	385	CHE Diesel					
Rail pusher	SC-140			Diesel			2013	260	395	CHE Diesel					
Rub-trd Gantry Crane	02-015	ZPMC	RC40	Diesel	Cummins	KTA 19 G4	2012	680	1936	CHE Diesel					
Rub-trd Gantry Crane	02-017	ZPMC	RC40	Diesel	Cummins	KTA 19 G4	2011	680	204	CHE Diesel					
Rub-trd Gantry Crane	02-018	ZPMC	RC40	Diesel	Cummins	KTA 19 G4	2012	680	1800	CHE Diesel					
Rub-trd Gantry Crane	02-024	ZPMC	RC6156	Diesel	Cummins	QSK23-G1	2012	815	1368	CHE Diesel					
Rub-trd Gantry Crane	02-025	ZPMC	RC6156	Diesel	Cummins	QSK23-G1	2012	815	1228	CHE Diesel					
Rub-trd Gantry Crane	02-026	ZPMC	RC6156	Diesel	Cummins	QSK23-G1	2012	815	1664	CHE Diesel					
Rub-trd Gantry Crane	02-027	ZPMC	RC6156	Diesel	Cummins	QSK23-G1	2012	815	2528	CHE Diesel					
Rub-trd Gantry Crane	02-028	ZPMC	RC6156	Diesel	Cummins	QSK23-G1	2012	815	1406	CHE Diesel					
Rub-trd Gantry Crane	02-029	ZPMC	RC6156	Diesel	Cummins	QSK23-G1	2012	815	1968	CHE Diesel					
Rub-trd Gantry Crane	10RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	2100	CHE Diesel			12/27/2013		
Rub-trd Gantry Crane	11RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	1383	CHE Diesel			11/22/2013		
Rub-trd Gantry Crane	14RTG	ZPMC	RC40.6/64	Diesel	CAT	C15	2013	515	3392	CHE Diesel					
Rub-trd Gantry Crane	15RTG	ZPMC	RC40.6/64	Diesel	CAT	C15	2013	515	3880	CHE Diesel					
Rub-trd Gantry Crane	16RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3848	CHE Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Rub-trd Gantry Crane	17RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3808	CHE Diesel					
Rub-trd Gantry Crane	18RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	2152	CHE Diesel					
Rub-trd Gantry Crane	1RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	2186	CHE Diesel			2/26/2014		
Rub-trd Gantry Crane	20RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	4166	CHE Diesel					
Rub-trd Gantry Crane	21RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3866	CHE Diesel					
Rub-trd Gantry Crane	22RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	4174	CHE Diesel					
Rub-trd Gantry Crane	23RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3669	CHE Diesel					
Rub-trd Gantry Crane	24RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	4253	CHE Diesel					
Rub-trd Gantry Crane	25RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	2976	CHE Diesel					
Rub-trd Gantry Crane	26RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3535	CHE Diesel					
Rub-trd Gantry Crane	27RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	4314	CHE Diesel					
Rub-trd Gantry Crane	2RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1999	615	2261	CHE Diesel			1/31/2014		
Rub-trd Gantry Crane	3RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1999	615	1895	CHE Diesel			6/24/2013		
Rub-trd Gantry Crane	4RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1999	615	183	CHE Diesel			1/31/2014		
Rub-trd Gantry Crane	5RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1999	615	777	CHE Diesel			1/31/2014		
Rub-trd Gantry Crane	6RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	1950	CHE Diesel			11/4/2013		
Rub-trd Gantry Crane	7RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	1950	CHE Diesel			11/1/2013		
Rub-trd Gantry Crane	8RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	2828	CHE Diesel			10/21/2013		
Rub-trd Gantry Crane	9RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	1802	CHE Diesel			1/27/2014		
Rub-trd Gantry Crane	TT-28	MIT-Pacecc	KTA 19	Diesel	Deutz	BF8M 105	2005	553	789	CHE Diesel			1/1/2014		
Rub-trd Gantry Crane	TT-29	MIT-Pacecc	KTA 19	Diesel	Deutz	KTA 19	2005	553	1119	CHE Diesel			1/1/2014		
Rub-trd Gantry Crane	TT-30	MIT-Pacecc	KTA 19	Diesel	Deutz	KTA 19	2005	553	1315	CHE Diesel			1/1/2014		
Rub-trd Gantry Crane	TT-31	MIT-Pacecc	KTA 19	Diesel	Deutz	KTA 19	2016	553	656	CHE Diesel			1/1/2014		
Rub-trd Gantry Crane	TT-31 old	MIT-Pacecc	KTA 19	Diesel	Deutz	KTA 19	2005	553	656	CHE Diesel			1/1/2014		
Rub-trd Gantry Crane	TT-32	MIT-Pacecc	KTA 19	Diesel	Deutz	KTA 19	2005	553	1988	CHE Diesel			1/1/2014	1/1/2010	
Rub-trd Gantry Crane	TT-33	MIT-Pacecc	KTA 19	Diesel	Deutz	KTA 19	2005	553	1817	CHE Diesel			1/1/2014	1/1/2010	
Rub-trd Gantry Crane	TT-34	MIT-Pacecc	KTA 19	Diesel	Deutz	KTA 19	2005	553	987	CHE Diesel			1/1/2014	1/1/2010	
Rub-trd Gantry Crane	TT-35	MIT-Pacecc	KTA 19	Diesel	Deutz	KTA 19	2005	553	451	CHE Diesel			1/1/2014	9/1/2006	
Rub-trd Gantry Crane	TT-38	Mitsui		Diesel	Caterpillar	C15	2011	528	1893	CHE Diesel					
Rub-trd Gantry Crane	TT-39	Mitsui		Diesel	Caterpillar	C15	2011	528	1344	CHE Diesel					
Rub-trd Gantry Crane	TT-40	Mitsui		Diesel	Caterpillar	C15	2011	528	1495	CHE Diesel					
Rub-trd Gantry Crane	ZT06	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2003	946	2037	CHE Diesel					
Rub-trd Gantry Crane	ZT07	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2003	946	1983	CHE Diesel					
Rub-trd Gantry Crane	ZT08	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	2979	CHE Diesel					
Rub-trd Gantry Crane	ZT09	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	3043	CHE Diesel					
Rub-trd Gantry Crane	ZT10	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	2411	CHE Diesel					
Rub-trd Gantry Crane	ZT11	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	2613	CHE Diesel			4/26/2013		
Rub-trd Gantry Crane	ZT12	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	1454	CHE Diesel			12/15/2014		
Rub-trd Gantry Crane	ZT13	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	3772	CHE Diesel			3/29/2013		
Rub-trd Gantry Crane	ZT14	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	788	CHE Diesel			3/20/2013		
Rub-trd Gantry Crane	ZT15	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	2026	CHE Diesel			3/26/2013		
Rub-trd Gantry Crane	ZT19			Diesel			2002		2131	CHE Diesel			4/26/2013		
Rub-trd Gantry Crane	ZT34	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2005	1043	1502	CHE Diesel			3/15/2013		
Rub-trd Gantry Crane	ZT35	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2005	1043	1037	CHE Diesel			2/15/2013		
Rub-trd Gantry Crane	ZT36	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2005	1043	2927	CHE Diesel			4/24/2013		

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Rub-trd Gantry Crane	ZT37	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2005	1043	859	CHE Diesel			4/22/2013		
Side pick	318	Fantuzzi	FDC 25K7	Diesel	Cummins	QSC 8.3	2003	240	349	CHE Diesel			12/10/2010		
Side pick	319	Fantuzzi	FDC 25K7	Diesel	Cummins	QSC 8.3	2003	240	1714	CHE Diesel			12/15/2010		
Side pick	320	Fantuzzi	FDC 25K7	Diesel	Cummins	QSC 8.3	2005	240	464	CHE Diesel			12/17/2010		
Side pick	321	Fantuzzi	FDC 25K7	Diesel	Cummins	QSC 8.3	2005	240	733	CHE Diesel			12/22/2010		
Side pick	15252	Taylor	TECSP157-8	Diesel	Cummins	B5.9C	2000	205	65	CHE Diesel			6/21/2013		
Side pick	15253	Taylor	TECSP157-8	Diesel	Cummins	B5.9C	2000	205	59	CHE Diesel			6/21/2013		
Side pick	15254	Taylor	TECSP157-8	Diesel	Cummins	B5.9C	2000	205	833	CHE Diesel			6/21/2013		
Side pick	15255	Taylor	TECSP157-8	Diesel	Cummins	QSB5.9	2003	205	222	CHE Diesel			6/6/2013		
Side pick	15256	Taylor	TECSP157-8	Diesel	Cummins	QSB5.9	2005	205	65	CHE Diesel			6/6/2013		
Side pick	15257	Taylor	TECSP157-8	Diesel			2011	205	693	CHE Diesel					
Side pick	15264	Taylor	TECSP157/8	Diesel	Cummins	B5.9C	2002	205	380	CHE Diesel			3/2/2013		
Side pick	15265	Taylor	TECSP157/8	Diesel	Cummins	QSBB5.9C	2006	205	613	CHE Diesel			5/2/2013		
Side pick	15266	Taylor	TECSP157/8	Diesel	Cummins	QSBB5.9C	2006	205	743	CHE Diesel			5/2/2013		
Skid Steer Loader	MWD02347	CAT	226-B	Diesel			2011			CHE Diesel					
Skid Steer Loader	SSL1	Caterpillar	226D	Diesel		C2.2	2015	67	779	CHE Diesel					
STS Crane	STS 001	ZPMC		Electric			2015			CHE Electric					
STS Crane	STS 002	ZPMC		Electric			2015			CHE Electric					
STS Crane	STS 003	ZPMC		Electric			2015			CHE Electric					
STS Crane	STS 004	ZPMC		Electric			2015			CHE Electric					
STS Crane	STS 005	ZPMC		Electric			2015			CHE Electric					
STS Crane	STS 006	ZPMC		Electric			2015			CHE Electric					
STS Crane	STS 007	ZPMC		Electric			2015			CHE Electric					
STS Crane	STS 008	ZPMC		Electric			2015			CHE Electric					
STS Crane	STSC10			Electric						CHE Electric					
STS Crane	STSC11			Electric						CHE Electric					
STS Crane	STSC12			Electric						CHE Electric					
STS Crane	STSC14			Electric						CHE Electric					
STS Crane	STSC15			Electric						CHE Electric					
STS Crane	STSC20			Electric						CHE Electric					
STS Crane	STSC21			Electric						CHE Electric					
STS Crane	STSC22			Electric						CHE Electric					
STS Crane	STSC23			Electric						CHE Electric					
STS Crane	STSC24			Electric						CHE Electric					
STS Crane	STSC25			Electric						CHE Electric					
STS Crane	STSC26			Electric						CHE Electric					
STS Crane	STSC27			Electric						CHE Electric					
STS Crane	STSC28			Electric						CHE Electric					
STS Crane	STSC29			Electric						CHE Electric					
STS Crane	STSC3			Electric						CHE Electric					
STS Crane	STSC30			Electric						CHE Electric					
STS Crane	STSC31			Electric						CHE Electric					
STS Crane	STSC33			Electric						CHE Electric					
STS Crane	STSC4			Electric						CHE Electric					
STS Crane	STSC40			Electric						CHE Electric					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
STS Crane	STSC41			Electric						CHE Electric					
STS Crane	STSC42			Electric						CHE Electric					
STS Crane	STSC43			Electric						CHE Electric					
STS Crane	STSC44			Electric						CHE Electric					
STS Crane	STSC45			Electric						CHE Electric					
STS Crane	STSC46			Electric						CHE Electric					
STS Crane	STSC47			Electric						CHE Electric					
STS Crane	STSC48			Electric						CHE Electric					
STS Crane	STSC49			Electric						CHE Electric					
STS Crane	STSC50			Electric						CHE Electric					
STS Crane	STSC51			Electric						CHE Electric					
STS Crane	STSC52			Electric						CHE Electric					
STS Crane	STSC53			Electric						CHE Electric					
STS Crane	STSC54			Electric						CHE Electric					
STS Crane	STSC55			Electric						CHE Electric					
STS Crane	STSC56			Electric						CHE Electric					
STS Crane	STSC57			Electric						CHE Electric					
STS Crane	STSC7			Electric						CHE Electric					
STS Crane	STSC8			Electric						CHE Electric					
STS Crane	STSC80			Electric						CHE Electric					
STS Crane	STSC81			Electric						CHE Electric					
STS Crane	STSC82			Electric						CHE Electric					
STS Crane	STSC83			Electric						CHE Electric					
STS Crane	STSC84			Electric						CHE Electric					
STS Crane	STSC85			Electric						CHE Electric					
STS Crane	STSC86			Electric						CHE Electric					
STS Crane	STSC87			Electric						CHE Electric					
STS Crane	STSC88			Electric						CHE Electric					
STS Crane	STSC89			Electric						CHE Electric					
STS Crane	STSC9			Electric						CHE Electric					
STS Crane	STSC90			Electric						CHE Electric					
STS Crane	STSC91			Electric						CHE Electric					
STS Crane	STSC92			Electric						CHE Electric					
STS Crane	STSC93			Electric						CHE Electric					
STS Crane	STSC94			Electric						CHE Electric					
Sweeper	103	Elgin	Pelican	Diesel	John Deere	4045TE270	2006	114	174	CHE Diesel					
Sweeper	23007	Tennant	Centurion	Diesel			2005	180	120	CHE Diesel					
Sweeper	SC-93	International		Diesel	Maxxforce		2009	230	385	CHE Diesel					
Sweeper	SW20DN	Elgin	Internationa	Diesel	Internation	Max Force	2009	210	540	CHE Diesel					
Sweeper	SW-21	Schwarze	S3481	Diesel	Isuzu	4HEZXS	2002	190	395	CHE Diesel					
Sweeper	V007	Elgin	Whirlwind	Diesel	Cummins	ISB10	2014	200	2043	CHE Diesel					
Sweeper	#26	Tennant	5700XP	Electric	Tennant	AC drive motor		0	0	CHE Electric					
Sweeper	#25	Tennant	800	LPG	Tennant	Gas/LP Ford 2.3 liter			33	CHE Propane					
Sweeper	owned6	Tennant	S30	LPG	GM	1.6L	2013	55	100	CHE Propane					
Sweeper	SC-155			LPG	Kubota		2016	47	105	CHE Propane					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Sweeper	SW#2			LPG			2004	125	600	CHE Propane					
Sweeper	SW100	Tennant		LPG			2005	50	200	CHE Propane					
Sweeper	SW18	Edgen		LPG			1982	135	30	CHE Propane					
Top handler	6158	Taylor	THDC-9555	Diesel	Cummins	QSM-11	2002	300	1938	CHE Diesel			4/11/2012		
Top handler	6159	Taylor	THDC-9555	Diesel	Cummins	QSM-11	2004	300	1981	CHE Diesel			3/29/2012		
Top handler	6160	Taylor	THDC-9555	Diesel	Cummins	QSM-11	2004	300	1460	CHE Diesel			4/13/2012		
Top handler	6162	Taylor	THDC-9555	Diesel	Cummins	QSM-11	2004	300	3024	CHE Diesel			5/7/2012		
Top handler	6163	Taylor	THDC-9555	Diesel	Cummins	QSM-11	2005	300	2090	CHE Diesel			4/26/2012		
Top handler	6164	Taylor	THDC-9555	Diesel	Cummins	QSM-11	2005	300	1585	CHE Diesel			5/3/2012		
Top handler	6179	Taylor	THDC-9555	Diesel	Cummins	LT 10-C	2006	250	2281	CHE Diesel			4/9/2012		
Top handler	6182	Taylor	THDC-9555	Diesel	Cummins	LT 10-C	2006	250	2260	CHE Diesel			4/5/2012		
Top handler	6196	Taylor	TXC976	Diesel			2008		1527	CHE Diesel			2/1/2011		
Top handler	6197	Taylor	TXC976	Diesel			2008		1479	CHE Diesel			2/1/2011		
Top handler	6198	Taylor	TXC976	Diesel			2008		1875	CHE Diesel			2/1/2011		
Top handler	36001	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	2787	CHE Diesel					
Top handler	36002	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3329	CHE Diesel					
Top handler	36003	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3356	CHE Diesel					
Top handler	36004	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3662	CHE Diesel					
Top handler	36005	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3604	CHE Diesel					
Top handler	36006	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	2783	CHE Diesel					
Top handler	36007	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3675	CHE Diesel					
Top handler	36008	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3380	CHE Diesel					
Top handler	36009	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	2966	CHE Diesel					
Top handler	36010	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3145	CHE Diesel					
Top handler	36011	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3287	CHE Diesel					
Top handler	36012	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	2220	CHE Diesel					
Top handler	36013	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3616	CHE Diesel					
Top handler	36014	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3024	CHE Diesel					
Top handler	36015	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3786	CHE Diesel					
Top handler	36016	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3549	CHE Diesel					
Top handler	36017	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3784	CHE Diesel					
Top handler	36018	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3073	CHE Diesel					
Top handler	36019	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3436	CHE Diesel					
Top handler	36020	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3523	CHE Diesel					
Top handler	36021	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3714	CHE Diesel					
Top handler	36022	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	2901	CHE Diesel					
Top handler	36023	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3129	CHE Diesel					
Top handler	36024	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3226	CHE Diesel					
Top handler	36025	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3307	CHE Diesel					
Top handler	36026	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	2320	CHE Diesel					
Top handler	36027	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	2849	CHE Diesel					
Top handler	36028	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	2255	CHE Diesel					
Top handler	36029	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	2620	CHE Diesel					
Top handler	36030	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3603	CHE Diesel					
Top handler	36031	Taylor	TXLC976	Diesel	Volvo	TAD-1360v	2012	343	3454	CHE Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Top handler	36032	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	2822	CHE Diesel					
Top handler	36033	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3935	CHE Diesel					
Top handler	36034	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3454	CHE Diesel					
Top handler	36035	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3375	CHE Diesel					
Top handler	36036	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3511	CHE Diesel					
Top handler	36037	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3949	CHE Diesel					
Top handler	80202	Taylor		Diesel			2011	330	938	CHE Diesel					
Top handler	80206	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2006	335	2076	CHE Diesel			4/27/2013		
Top handler	80207	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2006	335	1476	CHE Diesel			1/28/2013		
Top handler	80210	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2005	330	1674	CHE Diesel			4/27/2013		
Top handler	80211	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2006	335	1430	CHE Diesel			2/13/2013		
Top handler	80215	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2005	335	938	CHE Diesel			12/1/2012		
Top handler	80216	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2005	335	1869	CHE Diesel			4/27/2013		
Top handler	80219	Taylor	THDC 955	Diesel	Cummins	M11-C	1998	275	1411	CHE Diesel			7/31/2013		
Top handler	80222	Taylor	THDC 955	Diesel	Cummins	M11-C	1999	275	446	CHE Diesel			7/30/2013		
Top handler	80223	Taylor	THDC 955	Diesel	Cummins	M11-C	1999	275	1169	CHE Diesel			7/26/2013		
Top handler	80224	Taylor	THDC 955	Diesel	Cummins	M11-C	1999	275	1989	CHE Diesel			7/29/2013		
Top handler	80225	Taylor	THDC 955	Diesel	Cummins	M11-C	2000	275	1299	CHE Diesel			7/29/2013		
Top handler	80226	Taylor	THDC 955	Diesel	Cummins	M11-C	2000	275	1317	CHE Diesel			7/30/2013		
Top handler	80227	Taylor	THDC 955	Diesel	Cummins	M11-C	2000	275	1466	CHE Diesel			7/30/2013		
Top handler	80228	Taylor	THDC 955	Diesel	Cummins	M11-C	2000	275	1648	CHE Diesel			7/30/2013		
Top handler	80229	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2001	275	2290	CHE Diesel			4/24/2013		
Top handler	80230	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2001	275	2088	CHE Diesel			4/29/2013		
Top handler	80231	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2001	275	1841	CHE Diesel			4/25/2013		
Top handler	80234	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2001	275	1931	CHE Diesel			4/25/2013		
Top handler	80235	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	2524	CHE Diesel			4/30/2013		
Top handler	80236	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2003	300	2197	CHE Diesel			4/29/2013		
Top handler	80237	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2003	300	2885	CHE Diesel			4/29/2013		
Top handler	80238	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2003	300	2488	CHE Diesel			4/19/2013		
Top handler	80239	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	300	2162	CHE Diesel			4/27/2013		
Top handler	80240	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	300	2524	CHE Diesel			4/22/2013		
Top handler	80241	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	335	2728	CHE Diesel			4/22/2013		
Top handler	80242	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	335	2709	CHE Diesel			4/27/2013		
Top handler	80243	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	335	2354	CHE Diesel			4/27/2013		
Top handler	80245	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2005	335	2562	CHE Diesel			4/27/2013		
Top handler	80246	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2006	335	2784	CHE Diesel			1/3/2013		
Top handler	80249	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2007	275	2621	CHE Diesel			12/1/2012		
Top handler	80250	Taylor	THDC 955	Diesel	Cummins		2000	275	2187	CHE Diesel			12/1/2012		
Top handler	80252	Taylor	THDC 955	Diesel	Cummins	M11-C	2000	275	1942	CHE Diesel			7/31/2013		
Top handler	80257	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	2402	CHE Diesel			4/27/2013		
Top handler	80258	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	2525	CHE Diesel			12/1/2012		
Top handler	80259	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	2013	CHE Diesel			12/1/2012		
Top handler	80260	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	2442	CHE Diesel			4/27/2013		
Top handler	80261	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	2229	CHE Diesel			4/27/2013		
Top handler	80262	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	1789	CHE Diesel			4/27/2013		

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Top handler	80265	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	300	2181	CHE Diesel			4/27/2013		
Top handler	80266	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	300	2386	CHE Diesel			4/27/2013		
Top handler	80281	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	786	CHE Diesel					
Top handler	80282	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	1131	CHE Diesel					
Top handler	80283	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	524	CHE Diesel					
Top handler	80284	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	573	CHE Diesel					
Top handler	80285	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	1700	CHE Diesel					
Top handler	80286	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	913	CHE Diesel					
Top handler	80287	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	526	CHE Diesel					
Top handler	80288	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	883	CHE Diesel					
Top handler	80289	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	530	CHE Diesel					
Top handler	80290	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2007	275	2942	CHE Diesel			12/1/2012		
Top handler	80291	Taylor		Diesel			2011	330	1915	CHE Diesel					
Top handler	80292	Taylor		Diesel			2011	330	2518	CHE Diesel					
Top handler	80293	Taylor		Diesel			2011	330	1073	CHE Diesel					
Top handler	80294	Taylor		Diesel			2011	330	1759	CHE Diesel					
Top handler	80295	Taylor		Diesel			2011	330	1874	CHE Diesel					
Top handler	80296	Taylor		Diesel			2011	330	1850	CHE Diesel					
Top handler	80297	Taylor		Diesel			2011	330	2011	CHE Diesel					
Top handler	80298	Taylor		Diesel			2011	330	1822	CHE Diesel					
Top handler	80299	Taylor		Diesel			2011	330	1745	CHE Diesel					
Top handler	80300	Taylor		Diesel			2011	330	1975	CHE Diesel					
Top handler	80301	Taylor		Diesel			2014		2714	CHE Diesel					
Top handler	80302	Taylor		Diesel			2014		2368	CHE Diesel					
Top handler	80303	Taylor		Diesel			2014		1900	CHE Diesel					
Top handler	80304	Taylor	XLC-976	Diesel	Cummins		2015		2878	CHE Diesel					
Top handler	80305			Diesel			2015		3058	CHE Diesel					
Top handler	80306			Diesel			2015		2784	CHE Diesel					
Top handler	80307			Diesel			2015		1022	CHE Diesel					
Top handler	80308	Taylor		Diesel			2011	330	2046	CHE Diesel					
Top handler	80309	Taylor		Diesel			2011	330	2568	CHE Diesel					
Top handler	80310			Diesel			2015		899	CHE Diesel					
Top handler	80311			Diesel			2015		947	CHE Diesel					
Top handler	80312	Taylor		Diesel			2011	330	1929	CHE Diesel					
Top handler	80314	Taylor		Diesel			2012	330	2312	CHE Diesel					
Top handler	80315	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	449	CHE Diesel					
Top handler	80316	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	384	CHE Diesel					
Top handler	03-953	Fantuzzi	FDC 500G5	Diesel	Cummins	QSMII-C	2003	260	289	CHE Diesel			8/29/2011		
Top handler	03-955	Fantuzzi	FDC 500G5	Diesel	Cummins	QSMII-C	2004	260	300	CHE Diesel			8/19/2011		
Top handler	03-956	Fantuzzi	FDC 500G5	Diesel	Cummins	QSMII-C	2004	260	343	CHE Diesel			8/22/2011		
Top handler	03-957	Fantuzzi	FDC 500G5	Diesel	Cummins	QSMII-C	2004	260	470	CHE Diesel			8/24/2011		
Top handler	03-958	Fantuzzi	FDC 500G5	Diesel	Cummins	QSMII-C	2004	260	322	CHE Diesel			8/17/2011		
Top handler	03-959	Fantuzzi	FDC 500G5	Diesel	Cummins	QSMII-C	2005	260	244	CHE Diesel			8/30/2011		
Top handler	03-960	Fantuzzi	FDC 500G5	Diesel	Cummins	QSMII-C	2005	260	856	CHE Diesel			1/1/2016		
Top handler	03-961	Linde	C400	Diesel	Cummins	QSM11	2005	260	365	CHE Diesel			1/1/2016		

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Top handler	03-963	Hyster	HY	Diesel	Cummins	QSL9 350	2013	335	1837	CHE Diesel					
Top handler	03-964	Hyster	HY	Diesel	Cummins	QSL9 350	2013	335	1758	CHE Diesel					
Top handler	03-965	Hyster	HY	Diesel	Cummins	QSL9 350	2013	335	1645	CHE Diesel					
Top handler	03-966	Hyster	HY	Diesel	Cummins	QSL9-350	2013	350	1522	CHE Diesel					
Top handler	360L3	Hyster		Diesel	Cummins	QSL9	2015	350	2627	CHE Diesel					
Top handler	360L4	Hyster		Diesel	Cummins	QSL9	2015	350	2259	CHE Diesel					
Top handler	360L5	Hyster		Diesel	Cummins	QSL9	2015	350	2507	CHE Diesel					
Top handler	6TPK17000	Taylor	XLC 976	Diesel	Volvo	TAD-1371v	2017	388	1042	CHE Diesel					
Top handler	6TPK17001	Taylor	XLC 976	Diesel	Volvo	TAD-1371v	2017	388	1248	CHE Diesel					
Top handler	6TPK17002	Taylor	XLC 976	Diesel	Volvo	TAD-1371v	2017	388	30	CHE Diesel					
Top handler	6TPK17003	Taylor	XLC 976	Diesel	Volvo	TAD-1371v	2017	388	0	CHE Diesel					
Top handler	6TPK17004	Taylor	XLC 976	Diesel	Volvo	TAD-1371v	2017	388	60	CHE Diesel					
Top handler	6TPK17005	Taylor	XLC 976	Diesel	Volvo	TAD-1371v	2017	388	0	CHE Diesel					
Top handler	6TPK17006	Taylor	XLC 976	Diesel	Volvo	TAD-1371v	2017	388	0	CHE Diesel					
Top handler	6TPK17007	Taylor	XLC 976	Diesel	Volvo	TAD-1371v	2017	388	0	CHE Diesel					
Top handler	6TPK17008	Taylor	XLC 976	Diesel	Volvo	TAD-1371v	2017	388	0	CHE Diesel					
Top handler	6TPK17009	Taylor	XLC 976	Diesel	Volvo	TAD-1371v	2017	388	0	CHE Diesel					
Top handler	AA	Hyster	HY	Diesel	Cummins	QSL9-350	2013	350	966	CHE Diesel					
Top handler	BB	Hyster	HY	Diesel	Cummins	QSL9-350	2013	350	512	CHE Diesel					
Top handler	F 112.95	Taylor		Diesel	Cummins	QSM11	2007	350	599	CHE Diesel			1/1/2013		
Top handler	F 113.95	Taylor		Diesel	Cummins	QSM11	2007	350	819	CHE Diesel			1/1/2013		
Top handler	F 114.95	Taylor		Diesel	Cummins	QSM11	2007	350	843	CHE Diesel			1/1/2013		
Top handler	F 115.95	Taylor		Diesel	Cummins	QSM11	2007	350	624	CHE Diesel			1/1/2013		
Top handler	F 116.95	Taylor		Diesel	Cummins	QSM11	2007	350	77	CHE Diesel			1/1/2013		
Top handler	F 117.36	Taylor		Diesel	Cummins	QSM11	2010	350	203	CHE Diesel			1/1/2013		
Top handler	F 119.95	Taylor		Diesel	Cummins	QSM11	2010	350	460	CHE Diesel			1/1/2013		
Top handler	F 120.95	Taylor		Diesel	Volvo	TAD 1360V	2011	343	1	CHE Diesel					
Top handler	F 121.95	Taylor		Diesel	Volvo	TAD 1360V	2011	343	850	CHE Diesel					
Top handler	F 122.95	Taylor		Diesel	Volvo	TAD 1360V	2011	343	1158	CHE Diesel					
Top handler	F 123.95	Taylor		Diesel	Volvo	TAD 1360V	2011	343	1631	CHE Diesel					
Top handler	F 124.95	Taylor		Diesel	Volvo	TAD 1360V	2011	343	164	CHE Diesel					
Top handler	F 125.95			Diesel		TAD 1360V	2013	343	0	CHE Diesel					
Top handler	F 126.95			Diesel		TAD 1360V	2013	343	878	CHE Diesel					
Top handler	F 127.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	1287	CHE Diesel					
Top handler	F 128.35	Taylor		Diesel	Volvo	TAD1371-7	2015	382	322	CHE Diesel					
Top handler	F 134.36	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2605	CHE Diesel					
Top handler	F 135.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	1625	CHE Diesel					
Top handler	F 136.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	1715	CHE Diesel					
Top handler	F 137.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	1029	CHE Diesel					
Top handler	F 138.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	1296	CHE Diesel					
Top handler	F 139.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	1476	CHE Diesel					
Top handler	F 140.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2163	CHE Diesel					
Top handler	F 141.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2386	CHE Diesel					
Top handler	F 142.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2481	CHE Diesel					
Top handler	F 143.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2504	CHE Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Top handler	F 144.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2897	CHE Diesel					
Top handler	F 145.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2646	CHE Diesel					
Top handler	F 146.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	2780	CHE Diesel					
Top handler	F 147.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	2781	CHE Diesel					
Top handler	F 148.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	2581	CHE Diesel					
Top handler	F 149.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	2452	CHE Diesel					
Top handler	F 150.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	1638	CHE Diesel					
Top handler	F 151.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	2216	CHE Diesel					
Top handler	F 152.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	1987	CHE Diesel					
Top handler	F 153.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	1544	CHE Diesel					
Top handler	F 154.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	1765	CHE Diesel					
Top handler	F 155.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	1943	CHE Diesel					
Top handler	F 156.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	1679	CHE Diesel					
Top handler	F 157.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	1385	CHE Diesel					
Top handler	F-77.80	Taylor	M-11	Diesel	Cummins	M-11	2004	260	55	CHE Diesel			1/1/2010		
Top handler	F-80.80	Taylor	M 11-C	Diesel	Cummins	M 11-C	2001	260	208	CHE Diesel			1/1/2010		
Top handler	RS-001	Hyster	RS 45-31CH	Diesel	Cummins	QSL9-350	2013	350	176	CHE Diesel					
Top handler	TH1000	TAYLOR	75000#	Diesel		40 T	1979	174	60	CHE Diesel			1/1/2014		
Tractor	TRC20	Kubota	M59	Diesel	Kubota	2403M	2009	59	80	CHE Diesel					
Tractor	1370	United Trac	SM-50F	LPG	Ford	CSG6491	1996	101	1200	CHE Propane					3/20/2012
Tractor	1371	United Trac	SM-50F	LPG	Ford	CSG6491	1996	101	1200	CHE Propane					8/23/2012
Tractor	1372	United Trac	SM-50-F	LPG			1997	101	0	CHE Propane					7/13/2010
Tractor	1375	United Trac	SM-50F	LPG	Ford	CSG6491	1996	101	1440	CHE Propane					8/21/2012
Tractor	1376	United Trac	SM-50F	LPG	Ford	CSG6491	1996	101	960	CHE Propane					4/27/2010
Truck	22680	Ford	F-750	Diesel	Caterpillar	3126	2006	210	250	CHE On Road Diesel					
Truck	1304008	Freightliner	ISB6.7	Diesel	Cummins	M2106	2011	300	1596	CHE On Road Diesel					
Truck	1315002	Terex	TR45	Diesel	Cummins	QSK19	2009	525	1342	CHE Diesel					
Truck	1315003	Terex	TR45	Diesel	Cummins	QSK19	2009	525	200	CHE Diesel					
Truck	NWT	Ford	F750	Diesel	Ford	6.7	2016	270	2716	CHE Diesel					
Truck	SC-60	Ford		Diesel			1998	230	636	CHE On Road Diesel			9/7/2013		
Truck	SC-85	Sterline		Diesel			2006	300	1252	CHE On Road Diesel			1/21/2014		
Truck	#14	Taylor-Dun	B0-210-36	Electric	Taylor-Dun	DC Drive M	2008	0	132	CHE Electric					
Truck	#15	Taylor-Dun	B0-210-36	Electric	Taylor-Dun	DC Drive M	2008	0	249	CHE Electric					
Truck	#16	Taylor-Dun	MX-016-00	Electric	Taylor-Dun	DC Drive M	2008	0	16	CHE Electric					
Truck	#17	Taylor-Dun	MX-016-00	Electric	Taylor-Dun	DC Drive M	2009	0	183	CHE Electric					
Truck	#18	Taylor-Dun	MX-016-00	Electric	Taylor-Dun	DC Drive M	2009	0	92	CHE Electric					
Truck	#20T	Taylor-Dun	B5-440-48	Electric	Taylor-Dun	DC Drive M	2016	0	211	CHE Electric					
Yard tractor	707	Kalmar		Diesel	Cummins	ISB6.7 200	2012	200	4338	CHE On Road Diesel					
Yard tractor	827	Ottawa	T2	Diesel	Cummins	QSB6.7 Tie	2015	164	952	CHE Diesel					
Yard tractor	5046	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1871	CHE On Road Diesel					
Yard tractor	5047	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2122	CHE On Road Diesel					
Yard tractor	5048	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2876	CHE On Road Diesel					
Yard tractor	5049	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2406	CHE On Road Diesel					
Yard tractor	5301	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2050	CHE On Road Diesel					
Yard tractor	5302	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2740	CHE On Road Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	5304	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	3144	CHE On Road Diesel					
Yard tractor	5305	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1901	CHE On Road Diesel					
Yard tractor	5306	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2760	CHE On Road Diesel					
Yard tractor	5307	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2663	CHE On Road Diesel					
Yard tractor	5308	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2031	CHE On Road Diesel					
Yard tractor	5309	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1549	CHE On Road Diesel					
Yard tractor	5545	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2108	CHE On Road Diesel					
Yard tractor	5546	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	4287	CHE On Road Diesel					
Yard tractor	5547	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2218	CHE On Road Diesel					
Yard tractor	5548	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	1819	CHE On Road Diesel					
Yard tractor	5549	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2593	CHE On Road Diesel					
Yard tractor	5550	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2031	CHE On Road Diesel					
Yard tractor	5551	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	1955	CHE On Road Diesel					
Yard tractor	5553	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	1917	CHE On Road Diesel					
Yard tractor	5554	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2160	CHE On Road Diesel					
Yard tractor	5555	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	257	CHE On Road Diesel					
Yard tractor	5556	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2307	CHE On Road Diesel					
Yard tractor	5557	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	3015	CHE On Road Diesel					
Yard tractor	5559	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	1110	CHE On Road Diesel					
Yard tractor	5560	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2985	CHE On Road Diesel					
Yard tractor	5601	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2101	CHE On Road Diesel					
Yard tractor	5602	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2003	CHE On Road Diesel					
Yard tractor	5603	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2103	CHE On Road Diesel					
Yard tractor	5604	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2643	CHE On Road Diesel					
Yard tractor	5605	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	3182	CHE On Road Diesel					
Yard tractor	5606	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	1655	CHE On Road Diesel					
Yard tractor	5607	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	1810	CHE On Road Diesel					
Yard tractor	5608	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	1946	CHE On Road Diesel					
Yard tractor	5609	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2121	CHE On Road Diesel					
Yard tractor	5610	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2453	CHE On Road Diesel					
Yard tractor	5626	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	1933	CHE On Road Diesel					
Yard tractor	5627	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	1843	CHE On Road Diesel					
Yard tractor	5628	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2417	CHE On Road Diesel					
Yard tractor	5629	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2036	CHE On Road Diesel					
Yard tractor	5799	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	459	CHE On Road Diesel					
Yard tractor	5800	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1684	CHE On Road Diesel					
Yard tractor	5801	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1306	CHE On Road Diesel					
Yard tractor	5802	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2169	CHE On Road Diesel					
Yard tractor	5803	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	854	CHE On Road Diesel					
Yard tractor	5805	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2603	CHE On Road Diesel					
Yard tractor	5806	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1985	CHE On Road Diesel					
Yard tractor	5807	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1312	CHE On Road Diesel					
Yard tractor	5808	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2071	CHE On Road Diesel					
Yard tractor	5809	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2396	CHE On Road Diesel					
Yard tractor	5810	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2544	CHE On Road Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	5811	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2744	CHE On Road Diesel					
Yard tractor	5812	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2472	CHE On Road Diesel					
Yard tractor	5813	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2345	CHE On Road Diesel					
Yard tractor	5814	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2474	CHE On Road Diesel					
Yard tractor	5849	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2168	CHE On Road Diesel					
Yard tractor	5850	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2677	CHE On Road Diesel					
Yard tractor	5851	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1807	CHE On Road Diesel					
Yard tractor	5852	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2442	CHE On Road Diesel					
Yard tractor	5853	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	3001	CHE On Road Diesel					
Yard tractor	5854	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2087	CHE On Road Diesel					
Yard tractor	5855	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2563	CHE On Road Diesel					
Yard tractor	5856	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2232	CHE On Road Diesel					
Yard tractor	5857	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2357	CHE On Road Diesel					
Yard tractor	5858	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2515	CHE On Road Diesel					
Yard tractor	5859	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2214	CHE On Road Diesel					
Yard tractor	5860	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2351	CHE On Road Diesel					
Yard tractor	5861	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2283	CHE On Road Diesel					
Yard tractor	5862	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2371	CHE On Road Diesel					
Yard tractor	5863	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2050	CHE On Road Diesel					
Yard tractor	5864	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1736	CHE On Road Diesel					
Yard tractor	5866	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2215	CHE On Road Diesel					
Yard tractor	5867	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2458	CHE On Road Diesel					
Yard tractor	5868	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2627	CHE On Road Diesel					
Yard tractor	5869	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2578	CHE On Road Diesel					
Yard tractor	5870	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2771	CHE On Road Diesel					
Yard tractor	5871	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1236	CHE On Road Diesel					
Yard tractor	5872	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2577	CHE On Road Diesel					
Yard tractor	5873	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2650	CHE On Road Diesel					
Yard tractor	5874	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	3171	CHE On Road Diesel					
Yard tractor	5875	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2520	CHE On Road Diesel					
Yard tractor	5876	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2194	CHE On Road Diesel					
Yard tractor	5877	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	0	CHE On Road Diesel					
Yard tractor	5878	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2399	CHE On Road Diesel					
Yard tractor	5879	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2796	CHE On Road Diesel					
Yard tractor	5880	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2405	CHE On Road Diesel					
Yard tractor	5881	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2660	CHE On Road Diesel					
Yard tractor	5882	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	3717	CHE On Road Diesel					
Yard tractor	5883	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2590	CHE On Road Diesel					
Yard tractor	5884	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1747	CHE On Road Diesel					
Yard tractor	5885	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2136	CHE On Road Diesel					
Yard tractor	5886	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2160	CHE On Road Diesel					
Yard tractor	5887	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2184	CHE On Road Diesel					
Yard tractor	5888	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2069	CHE On Road Diesel					
Yard tractor	5889	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2331	CHE On Road Diesel					
Yard tractor	5890	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2481	CHE On Road Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	5891	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2060	CHE On Road Diesel					
Yard tractor	5892	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1651	CHE On Road Diesel					
Yard tractor	5893	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240		CHE On Road Diesel					
Yard tractor	35001	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2130	CHE On Road Diesel					
Yard tractor	35002	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2567	CHE On Road Diesel					
Yard tractor	35003	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2131	CHE On Road Diesel					
Yard tractor	35004	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2522	CHE On Road Diesel					
Yard tractor	35005	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2225	CHE On Road Diesel					
Yard tractor	35006	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	3044	CHE On Road Diesel					
Yard tractor	35007	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2366	CHE On Road Diesel					
Yard tractor	35008	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2743	CHE On Road Diesel					
Yard tractor	35009	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2367	CHE On Road Diesel					
Yard tractor	35010	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2096	CHE On Road Diesel					
Yard tractor	35011	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2563	CHE On Road Diesel					
Yard tractor	35012	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2498	CHE On Road Diesel					
Yard tractor	35013	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2369	CHE On Road Diesel					
Yard tractor	35014	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2600	CHE On Road Diesel					
Yard tractor	35015	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2453	CHE On Road Diesel					
Yard tractor	35016	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2700	CHE On Road Diesel					
Yard tractor	35017	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2210	CHE On Road Diesel					
Yard tractor	35018	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2590	CHE On Road Diesel					
Yard tractor	35019	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	3342	CHE On Road Diesel					
Yard tractor	35020	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2548	CHE On Road Diesel					
Yard tractor	35021	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2981	CHE On Road Diesel					
Yard tractor	35022	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2500	CHE On Road Diesel					
Yard tractor	35023	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2411	CHE On Road Diesel					
Yard tractor	35024	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2759	CHE On Road Diesel					
Yard tractor	35025	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2853	CHE On Road Diesel					
Yard tractor	35026	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2524	CHE On Road Diesel					
Yard tractor	35027	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2784	CHE On Road Diesel					
Yard tractor	35028	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2545	CHE On Road Diesel					
Yard tractor	35029	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2940	CHE On Road Diesel					
Yard tractor	35030	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1623	CHE On Road Diesel					
Yard tractor	35031	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2613	CHE On Road Diesel					
Yard tractor	35032	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1649	CHE On Road Diesel					
Yard tractor	35033	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2205	CHE On Road Diesel					
Yard tractor	35034	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2665	CHE On Road Diesel					
Yard tractor	35035	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1673	CHE On Road Diesel					
Yard tractor	35036	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2308	CHE On Road Diesel					
Yard tractor	35037	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2548	CHE On Road Diesel					
Yard tractor	35038	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2425	CHE On Road Diesel					
Yard tractor	35039	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2068	CHE On Road Diesel					
Yard tractor	35041	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2849	CHE On Road Diesel					
Yard tractor	35042	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1890	CHE On Road Diesel					
Yard tractor	35043	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2483	CHE On Road Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	35044	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2098	CHE On Road Diesel					
Yard tractor	35045	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2378	CHE On Road Diesel					
Yard tractor	35046	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2215	CHE On Road Diesel					
Yard tractor	35047	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2324	CHE On Road Diesel					
Yard tractor	35048	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2698	CHE On Road Diesel					
Yard tractor	35049	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2423	CHE On Road Diesel					
Yard tractor	35050	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2279	CHE On Road Diesel					
Yard tractor	35051	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2535	CHE On Road Diesel					
Yard tractor	35052	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2641	CHE On Road Diesel					
Yard tractor	35053	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2598	CHE On Road Diesel					
Yard tractor	35054	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	3795	CHE On Road Diesel					
Yard tractor	35055	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2468	CHE On Road Diesel					
Yard tractor	35056	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2884	CHE On Road Diesel					
Yard tractor	35057	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2987	CHE On Road Diesel					
Yard tractor	35058	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2688	CHE On Road Diesel					
Yard tractor	35060	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2019	CHE On Road Diesel					
Yard tractor	35061	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2753	CHE On Road Diesel					
Yard tractor	35062	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2822	CHE On Road Diesel					
Yard tractor	35063	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	3314	CHE On Road Diesel					
Yard tractor	35064	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	3051	CHE On Road Diesel					
Yard tractor	35065	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2658	CHE On Road Diesel					
Yard tractor	35066	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2569	CHE On Road Diesel					
Yard tractor	35067	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2640	CHE On Road Diesel					
Yard tractor	35068	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2231	CHE On Road Diesel					
Yard tractor	35069	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2479	CHE On Road Diesel					
Yard tractor	35070	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2226	CHE On Road Diesel					
Yard tractor	04-036	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	669	CHE On Road Diesel					
Yard tractor	04-037	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1022	CHE On Road Diesel					
Yard tractor	04-038	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1086	CHE On Road Diesel					
Yard tractor	04-039	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1085	CHE On Road Diesel					
Yard tractor	04-040	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1079	CHE On Road Diesel					
Yard tractor	04-041	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1091	CHE On Road Diesel					
Yard tractor	04-042	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1233	CHE On Road Diesel					
Yard tractor	04-043	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1223	CHE On Road Diesel					
Yard tractor	04-044	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1316	CHE On Road Diesel					
Yard tractor	04-045	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	924	CHE On Road Diesel					
Yard tractor	04-046	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1172	CHE On Road Diesel					
Yard tractor	04-047	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1163	CHE On Road Diesel					
Yard tractor	04-048	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1086	CHE On Road Diesel					
Yard tractor	04-049	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1183	CHE On Road Diesel					
Yard tractor	04-050	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1570	CHE On Road Diesel					
Yard tractor	04-051	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1234	CHE On Road Diesel					
Yard tractor	04-052	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1151	CHE On Road Diesel					
Yard tractor	04-053	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2033	CHE On Road Diesel					
Yard tractor	04-054	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1332	CHE On Road Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	04-055	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1190	CHE On Road Diesel					
Yard tractor	04-056	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1356	CHE On Road Diesel					
Yard tractor	04-057	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1102	CHE On Road Diesel					
Yard tractor	04-058	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1473	CHE On Road Diesel					
Yard tractor	04-059	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1309	CHE On Road Diesel					
Yard tractor	04-060	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1188	CHE On Road Diesel					
Yard tractor	04-061	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1223	CHE On Road Diesel					
Yard tractor	04-167	Ottawa	YT-50	Diesel	Cummins	ISB2040	2007	240	1165	CHE On Road Diesel					
Yard tractor	04-168	Ottawa	YT-50	Diesel	Cummins	ISB2040	2007	240	959	CHE On Road Diesel					
Yard tractor	04-169	Ottawa	YT-50	Diesel	Cummins	ISB2040	2007	240	335	CHE On Road Diesel					
Yard tractor	04-170	Ottawa	YT-50	Diesel	Cummins	ISB2040	2007	240	646	CHE On Road Diesel					
Yard tractor	04-171	Ottawa	YT-50	Diesel	Cummins	ISB2040	2007	240	273	CHE On Road Diesel					
Yard tractor	04-172	Ottawa	YT-50	Diesel	Cummins	ISB2040	2007	240	997	CHE On Road Diesel					
Yard tractor	04-173	Ottawa	YT-50	Diesel	Cummins	ISB2040	2007	240	433	CHE On Road Diesel					
Yard tractor	04-174	Ottawa	YT-50	Diesel	Cummins	ISB	2008	240	793	CHE On Road Diesel					
Yard tractor	04-176	Ottawa	YT-50	Diesel	Cummins	ISB	2008	240	1206	CHE On Road Diesel					
Yard tractor	04-177	Ottawa	YT-50	Diesel	Cummins	ISB	2008	240	1204	CHE On Road Diesel					
Yard tractor	04-178	Ottawa	YT-50	Diesel	Cummins	ISB	2008	240	1244	CHE On Road Diesel					
Yard tractor	04-179	Ottawa	YT-50	Diesel	Cummins	ISB	2008	240	337	CHE On Road Diesel					
Yard tractor	04-181	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	1276	CHE On Road Diesel					
Yard tractor	04-182	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	616	CHE On Road Diesel					
Yard tractor	04-183	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	1238	CHE On Road Diesel					
Yard tractor	04-184	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	894	CHE On Road Diesel					
Yard tractor	04-185	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	1230	CHE On Road Diesel					
Yard tractor	04-186	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	1344	CHE On Road Diesel					
Yard tractor	04-187	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	1378	CHE On Road Diesel					
Yard tractor	04-188	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	1442	CHE On Road Diesel					
Yard tractor	04-189	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	1379	CHE On Road Diesel					
Yard tractor	04-190	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	1275	CHE On Road Diesel					
Yard tractor	04-191	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	1317	CHE On Road Diesel					
Yard tractor	04-192	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	1297	CHE On Road Diesel					
Yard tractor	04-193	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	1086	CHE On Road Diesel					
Yard tractor	04-194	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	1219	CHE On Road Diesel					
Yard tractor	04-195	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	1233	CHE On Road Diesel					
Yard tractor	28838R	Ottawa	T2	Diesel	Cummins	QSB6.7 Tie	2015	164	899	CHE Diesel					
Yard tractor	29524R	Kalmar		Diesel	Cummins	ISB6.7 200	2012	200	1918	CHE On Road Diesel					
Yard tractor	30205R	Kalmar		Diesel	Cummins	ISB6.7 200	2015	200	472	CHE On Road Diesel					
Yard tractor	5UTR16000 Capacity		TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2725	CHE Diesel					
Yard tractor	5UTR16001 Capacity		TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2678	CHE Diesel					
Yard tractor	5UTR16002 Capacity		TJ9000	Diesel	Cummins	QSB 6.7	2016	225	3153	CHE Diesel					
Yard tractor	5UTR16003 Capacity		TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2347	CHE Diesel					
Yard tractor	5UTR16004 Capacity		TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2692	CHE Diesel					
Yard tractor	5UTR16005 Capacity		TJ9000	Diesel	Cummins	QSB 6.7	2016	225	3230	CHE Diesel					
Yard tractor	5UTR16006 Capacity		TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2966	CHE Diesel					
Yard tractor	5UTR16007 Capacity		TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2768	CHE Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	5UTR16008	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	3144	CHE Diesel					
Yard tractor	5UTR16009	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	1606	CHE Diesel					
Yard tractor	5UTR16010	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	3318	CHE Diesel					
Yard tractor	5UTR16011	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	3187	CHE Diesel					
Yard tractor	5UTR16012	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2422	CHE Diesel					
Yard tractor	5UTR16013	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2597	CHE Diesel					
Yard tractor	H072	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	13	CHE Diesel					
Yard tractor	H073	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	86	CHE Diesel					
Yard tractor	H074	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2202	CHE Diesel					
Yard tractor	H075	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2017	CHE Diesel					
Yard tractor	H076	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2122	CHE Diesel					
Yard tractor	H077	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2464	CHE Diesel					
Yard tractor	H078	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2244	CHE Diesel					
Yard tractor	H079	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2165	CHE Diesel					
Yard tractor	H080	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2014	CHE Diesel					
Yard tractor	H081	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	1060	CHE Diesel					
Yard tractor	H082	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2242	CHE Diesel					
Yard tractor	H083	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2327	CHE Diesel					
Yard tractor	H084	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2027	CHE Diesel					
Yard tractor	H085	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2020	CHE Diesel					
Yard tractor	H086	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2401	CHE Diesel					
Yard tractor	H087	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	119	CHE Diesel					
Yard tractor	H-106	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	1467	CHE On Road Diesel					
Yard tractor	H-107	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	1466	CHE On Road Diesel					
Yard tractor	H-108	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	1047	CHE On Road Diesel					
Yard tractor	H-109	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	1549	CHE On Road Diesel					
Yard tractor	H-110	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	1483	CHE On Road Diesel					
Yard tractor	H-111	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	1464	CHE On Road Diesel					
Yard tractor	H-112	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	1799	CHE On Road Diesel					
Yard tractor	H-113	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	1604	CHE On Road Diesel					
Yard tractor	H-119	Capacity	TJ7000	Diesel	Edelbrock	454 Engine	2017	204	366	CHE Diesel					
Yard tractor	H-121	Capacity	TJ7000	Diesel	Edelbrock	454 Engine	2017	204	247	CHE Diesel					
Yard tractor	H-280	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	175	CHE On Road Diesel					
Yard tractor	H-281	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1578	CHE On Road Diesel					
Yard tractor	H-282	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1882	CHE On Road Diesel					
Yard tractor	H-283	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1817	CHE On Road Diesel					
Yard tractor	H-417	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	5394	CHE On Road Diesel					
Yard tractor	H-418	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1691	CHE On Road Diesel					
Yard tractor	H-419	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1411	CHE On Road Diesel					
Yard tractor	H-420	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	605	CHE On Road Diesel					
Yard tractor	H-421	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1393	CHE On Road Diesel					
Yard tractor	H-422	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1173	CHE On Road Diesel					
Yard tractor	H-423	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	3091	CHE On Road Diesel					
Yard tractor	H-424	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1871	CHE On Road Diesel					
Yard tractor	H-425	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1449	CHE On Road Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	H-426	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1494	CHE On Road Diesel					
Yard tractor	H-427	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1771	CHE On Road Diesel					
Yard tractor	H-428	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1485	CHE On Road Diesel					
Yard tractor	H-429	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1398	CHE On Road Diesel					
Yard tractor	H-430	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1237	CHE On Road Diesel					
Yard tractor	H-431	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1445	CHE On Road Diesel					
Yard tractor	H-432	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1142	CHE On Road Diesel					
Yard tractor	H-433	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1238	CHE On Road Diesel					
Yard tractor	H-434	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1104	CHE On Road Diesel					
Yard tractor	H-435	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1453	CHE On Road Diesel					
Yard tractor	H-436	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2009	CHE On Road Diesel					
Yard tractor	H-437	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1301	CHE On Road Diesel					
Yard tractor	H-438	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2320	CHE On Road Diesel					
Yard tractor	H-439	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2027	CHE On Road Diesel					
Yard tractor	H-507	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2146	CHE On Road Diesel					
Yard tractor	H-508	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1959	CHE On Road Diesel					
Yard tractor	H-509	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1093	CHE On Road Diesel					
Yard tractor	H-510	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1703	CHE On Road Diesel					
Yard tractor	H-511	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1555	CHE On Road Diesel					
Yard tractor	H-512	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2084	CHE On Road Diesel					
Yard tractor	H-513	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2229	CHE On Road Diesel					
Yard tractor	H-514	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2504	CHE On Road Diesel					
Yard tractor	H-515	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1245	CHE On Road Diesel					
Yard tractor	H-516	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1598	CHE On Road Diesel					
Yard tractor	H-517	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2027	CHE On Road Diesel					
Yard tractor	H-518	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1898	CHE On Road Diesel					
Yard tractor	H-519	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1965	CHE On Road Diesel					
Yard tractor	H-520	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2117	CHE On Road Diesel					
Yard tractor	H7000	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2113	CHE Diesel					
Yard tractor	H7001	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1973	CHE Diesel					
Yard tractor	H7002	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1978	CHE Diesel					
Yard tractor	H7003	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1924	CHE Diesel					
Yard tractor	H7004	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1754	CHE Diesel					
Yard tractor	H7005	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1903	CHE Diesel					
Yard tractor	H7006	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1659	CHE Diesel					
Yard tractor	H7007	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1862	CHE Diesel					
Yard tractor	H7008	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1839	CHE Diesel					
Yard tractor	H7009	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1920	CHE Diesel					
Yard tractor	H7010	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1602	CHE Diesel					
Yard tractor	H7011	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2127	CHE Diesel					
Yard tractor	H7012	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1540	CHE Diesel					
Yard tractor	H7013	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1983	CHE Diesel					
Yard tractor	H7014	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1969	CHE Diesel					
Yard tractor	H7015	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	966	CHE Diesel					
Yard tractor	H7016	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2013	CHE Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	H7017	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1820	CHE Diesel					
Yard tractor	H7018	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1892	CHE Diesel					
Yard tractor	H7019	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2020	CHE Diesel					
Yard tractor	H7020	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1863	CHE Diesel					
Yard tractor	H7028	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	520	CHE Diesel					
Yard tractor	H7029	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2219	CHE Diesel					
Yard tractor	H7030	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1965	CHE Diesel					
Yard tractor	H7031	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1962	CHE Diesel					
Yard tractor	H7032	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1880	CHE Diesel					
Yard tractor	H7033	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1701	CHE Diesel					
Yard tractor	H7034	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1501	CHE Diesel					
Yard tractor	H7035	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1883	CHE Diesel					
Yard tractor	H7037	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1880	CHE Diesel					
Yard tractor	H7038	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2170	CHE Diesel					
Yard tractor	H7039	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1767	CHE Diesel					
Yard tractor	H7040	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2036	CHE Diesel					
Yard tractor	H7041	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2050	CHE Diesel					
Yard tractor	H7042	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2328	CHE Diesel					
Yard tractor	H7043	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2199	CHE Diesel					
Yard tractor	H7044	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2202	CHE Diesel					
Yard tractor	H7045	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1828	CHE Diesel					
Yard tractor	H7046	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2262	CHE Diesel					
Yard tractor	H7047	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2058	CHE Diesel					
Yard tractor	H7048	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1818	CHE Diesel					
Yard tractor	H7049	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2070	CHE Diesel					
Yard tractor	H7050	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2046	CHE Diesel					
Yard tractor	H7051	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2379	CHE Diesel					
Yard tractor	H7052	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2282	CHE Diesel					
Yard tractor	H7053	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2702	CHE Diesel					
Yard tractor	H7054	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2036	CHE Diesel					
Yard tractor	H7055	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2367	CHE Diesel					
Yard tractor	H7056	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2041	CHE Diesel					
Yard tractor	H7057	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1923	CHE Diesel					
Yard tractor	H7058	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1556	CHE Diesel					
Yard tractor	H7059	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1963	CHE Diesel					
Yard tractor	H7060	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	915	CHE Diesel					
Yard tractor	H7061	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1928	CHE Diesel					
Yard tractor	H7062	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1823	CHE Diesel					
Yard tractor	H7063	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1934	CHE Diesel					
Yard tractor	H7064	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1721	CHE Diesel					
Yard tractor	H7065	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2109	CHE Diesel					
Yard tractor	H7066	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1977	CHE Diesel					
Yard tractor	H7067	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1091	CHE Diesel					
Yard tractor	H7068	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	3214	CHE Diesel					
Yard tractor	H7069	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1960	CHE Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	H7070	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1913	CHE Diesel					
Yard tractor	H7071	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1952	CHE Diesel					
Yard tractor	H7072	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2247	CHE Diesel					
Yard tractor	H7073	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1756	CHE Diesel					
Yard tractor	H7074	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2068	CHE Diesel					
Yard tractor	H7075	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2044	CHE Diesel					
Yard tractor	H7076	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2200	CHE Diesel					
Yard tractor	H7077	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2729	CHE Diesel					
Yard tractor	H7078	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1917	CHE Diesel					
Yard tractor	H7079	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1932	CHE Diesel					
Yard tractor	H7080	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2239	CHE Diesel					
Yard tractor	H7081	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1744	CHE Diesel					
Yard tractor	H7082	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2117	CHE Diesel					
Yard tractor	H7083	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2035	CHE Diesel					
Yard tractor	H7084	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2253	CHE Diesel					
Yard tractor	H7085	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2077	CHE Diesel					
Yard tractor	H7086	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1852	CHE Diesel					
Yard tractor	H7087	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2238	CHE Diesel					
Yard tractor	H7088	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1052	CHE Diesel					
Yard tractor	H7089	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2074	CHE Diesel					
Yard tractor	H7090	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	446	CHE Diesel					
Yard tractor	H7091	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1958	CHE Diesel					
Yard tractor	H7092	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2183	CHE Diesel					
Yard tractor	H7093	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2145	CHE Diesel					
Yard tractor	H7094	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2551	CHE Diesel					
Yard tractor	H7095	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2716	CHE Diesel					
Yard tractor	H7096	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1355	CHE Diesel					
Yard tractor	H7097	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2164	CHE Diesel					
Yard tractor	H7098	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1972	CHE Diesel					
Yard tractor	H7099	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2090	CHE Diesel					
Yard tractor	H7100	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2437	CHE Diesel					
Yard tractor	H7101	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2036	CHE Diesel					
Yard tractor	H7102	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2880	CHE Diesel					
Yard tractor	H7103	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2272	CHE Diesel					
Yard tractor	H7104	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2086	CHE Diesel					
Yard tractor	H7105	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1711	CHE Diesel					
Yard tractor	H7106	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	985	CHE Diesel					
Yard tractor	H7107	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2223	CHE Diesel					
Yard tractor	H7108	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1912	CHE Diesel					
Yard tractor	H7109	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2555	CHE Diesel					
Yard tractor	H7110	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2174	CHE Diesel					
Yard tractor	LAYT0021	Ottawa		Diesel			2008		160	CHE On Road Diesel					
Yard tractor	LAYT0022	Ottawa		Diesel			2008		0	CHE On Road Diesel					
Yard tractor	LAYT0023	Ottawa		Diesel			2008		190	CHE On Road Diesel					
Yard tractor	T202	Kalmar		Diesel	Cummins	ISB 200	2007	200	1321	CHE On Road Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	T203	Kalmar		Diesel	Cummins	ISB 200	2007	200	1684	CHE On Road Diesel					
Yard tractor	T204	Kalmar		Diesel	Cummins	ISB 200	2007	200	2343	CHE On Road Diesel					
Yard tractor	T205	Kalmar		Diesel	Cummins	ISB 200	2007	200	0	CHE On Road Diesel					
Yard tractor	T206	Kalmar		Diesel	Cummins	ISB 200	2007	200	1505	CHE On Road Diesel					
Yard tractor	T207	Kalmar		Diesel	Cummins	ISB 200	2007	200	855	CHE On Road Diesel					
Yard tractor	T208	Kalmar		Diesel	Cummins	ISB 200	2007	200	2067	CHE On Road Diesel					
Yard tractor	T209	Kalmar		Diesel	Cummins	ISB 200	2007	200	540	CHE On Road Diesel					
Yard tractor	T210	Kalmar		Diesel	Cummins	ISB 200	2007	200	1975	CHE On Road Diesel					
Yard tractor	T211	Kalmar		Diesel	Cummins	ISB 200	2007	200	109	CHE On Road Diesel					
Yard tractor	T212	Kalmar		Diesel	Cummins	ISB 200	2007	200	1448	CHE On Road Diesel					
Yard tractor	T213	Kalmar		Diesel	Cummins	ISB 200	2007	200	1424	CHE On Road Diesel					
Yard tractor	T214	Kalmar		Diesel	Cummins	ISB 200	2007	200	1979	CHE On Road Diesel					
Yard tractor	T215	Kalmar		Diesel	Cummins	ISB 200	2008	200	513	CHE On Road Diesel					
Yard tractor	T216	Kalmar		Diesel	Cummins	ISB 200	2008	200	1527	CHE On Road Diesel					
Yard tractor	T217	Kalmar		Diesel	Cummins	ISB 200	2008	200	1438	CHE On Road Diesel					
Yard tractor	T218	Kalmar		Diesel	Cummins	ISB 200	2008	200	2054	CHE On Road Diesel					
Yard tractor	T219	Kalmar		Diesel	Cummins	ISB 200	2008	200	1975	CHE On Road Diesel					
Yard tractor	T220	Kalmar		Diesel	Cummins	ISB 200	2008	200	1986	CHE On Road Diesel					
Yard tractor	T221	Kalmar		Diesel	Cummins	ISB 200	2008	200	1798	CHE On Road Diesel					
Yard tractor	T222	Kalmar		Diesel	Cummins	ISB 200	2008	200	1887	CHE On Road Diesel					
Yard tractor	T223	Kalmar		Diesel	Cummins	ISB 200	2008	200	0	CHE On Road Diesel					
Yard tractor	T224	Kalmar		Diesel	Cummins	ISB 200	2008	200	805	CHE On Road Diesel					
Yard tractor	T225	Kalmar		Diesel	Cummins	ISB 200	2008	200	936	CHE On Road Diesel					
Yard tractor	T226	Kalmar		Diesel	Cummins	ISB 200	2008	200	1873	CHE On Road Diesel					
Yard tractor	T227	Kalmar		Diesel	Cummins	ISB 200	2008	200	1852	CHE On Road Diesel					
Yard tractor	T228	Kalmar		Diesel	Cummins	ISB 200	2008	200	1764	CHE On Road Diesel					
Yard tractor	T229	Kalmar		Diesel	Cummins	ISB 200	2008	200	1556	CHE On Road Diesel					
Yard tractor	T230	Kalmar		Diesel	Cummins	ISB 200	2008	200	1335	CHE On Road Diesel					
Yard tractor	T231	Kalmar		Diesel	Cummins	ISB 200	2008	200	1539	CHE On Road Diesel					
Yard tractor	T232	Kalmar		Diesel	Cummins	ISB 200	2008	200	1567	CHE On Road Diesel					
Yard tractor	T233	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1688	CHE On Road Diesel					
Yard tractor	T234	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1887	CHE On Road Diesel					
Yard tractor	T235	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	2347	CHE On Road Diesel					
Yard tractor	T236	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1675	CHE On Road Diesel					
Yard tractor	T237	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	0	CHE On Road Diesel					
Yard tractor	T238	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1644	CHE On Road Diesel					
Yard tractor	T239	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	0	CHE On Road Diesel					
Yard tractor	T240	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1484	CHE On Road Diesel					
Yard tractor	T242	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	2230	CHE On Road Diesel					
Yard tractor	T243	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1852	CHE On Road Diesel					
Yard tractor	T244	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	0	CHE On Road Diesel					
Yard tractor	T245	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1836	CHE On Road Diesel					
Yard tractor	T246	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1923	CHE On Road Diesel					
Yard tractor	T247	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1063	CHE On Road Diesel					
Yard tractor	T248	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1514	CHE On Road Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	T249	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1649	CHE On Road Diesel					
Yard tractor	T250	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1491	CHE On Road Diesel					
Yard tractor	T251	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1570	CHE On Road Diesel					
Yard tractor	T252	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	0	CHE On Road Diesel					
Yard tractor	T253	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1903	CHE On Road Diesel					
Yard tractor	T254	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1133	CHE On Road Diesel					
Yard tractor	T255	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1495	CHE On Road Diesel					
Yard tractor	T257	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	2148	CHE On Road Diesel					
Yard tractor	T258	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1801	CHE On Road Diesel					
Yard tractor	T259	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1165	CHE On Road Diesel					
Yard tractor	T260	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	2797	CHE On Road Diesel					
Yard tractor	T261	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1992	CHE On Road Diesel					
Yard tractor	T262	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1345	CHE On Road Diesel					
Yard tractor	T263	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1380	CHE On Road Diesel					
Yard tractor	T264	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1886	CHE On Road Diesel					
Yard tractor	T265	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1901	CHE On Road Diesel					
Yard tractor	T267	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1877	CHE On Road Diesel					
Yard tractor	T268	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1709	CHE On Road Diesel					
Yard tractor	T269	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1929	CHE On Road Diesel					
Yard tractor	T270	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	2141	CHE On Road Diesel					
Yard tractor	T271	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1066	CHE On Road Diesel					
Yard tractor	T272	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	2038	CHE On Road Diesel					
Yard tractor	T273	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	2088	CHE On Road Diesel					
Yard tractor	T274	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1734	CHE On Road Diesel					
Yard tractor	T275	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	0	CHE On Road Diesel					
Yard tractor	T276	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1287	CHE On Road Diesel					
Yard tractor	T277	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1983	CHE On Road Diesel					
Yard tractor	T278	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1515	CHE On Road Diesel					
Yard tractor	T279	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	0	CHE On Road Diesel					
Yard tractor	T280	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	2028	CHE On Road Diesel					
Yard tractor	T281	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1892	CHE On Road Diesel					
Yard tractor	T282	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1796	CHE On Road Diesel					
Yard tractor	T283	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	402	CHE On Road Diesel					
Yard tractor	T284	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1836	CHE On Road Diesel					
Yard tractor	T285	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	442	CHE On Road Diesel					
Yard tractor	T286	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1939	CHE On Road Diesel					
Yard tractor	T287	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1963	CHE On Road Diesel					
Yard tractor	T288	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	2017	CHE On Road Diesel					
Yard tractor	T290	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	2054	CHE On Road Diesel					
Yard tractor	T291	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1513	CHE On Road Diesel					
Yard tractor	T292	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1768	CHE On Road Diesel					
Yard tractor	T293	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1691	CHE On Road Diesel					
Yard tractor	T294	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1652	CHE On Road Diesel					
Yard tractor	T296	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	662	CHE On Road Diesel					
Yard tractor	T300	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1522	CHE Diesel					
Yard tractor	T301	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1047	CHE Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	T302	Kalmar		Diesel	Cummins	QSB6.7	2015	173	0	CHE Diesel					
Yard tractor	T303	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1354	CHE Diesel					
Yard tractor	T304	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1475	CHE Diesel					
Yard tractor	T305	Kalmar		Diesel	Cummins	QSB6.7	2015	173	0	CHE Diesel					
Yard tractor	T306	Kalmar		Diesel	Cummins	QSB6.7	2015	173	2094	CHE Diesel					
Yard tractor	T307	Kalmar		Diesel	Cummins	QSB6.7	2015	173	2290	CHE Diesel					
Yard tractor	T308	Kalmar		Diesel	Cummins	QSB6.7	2015	173	0	CHE Diesel					
Yard tractor	T309	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1770	CHE Diesel					
Yard tractor	T310	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1619	CHE Diesel					
Yard tractor	T311	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1976	CHE Diesel					
Yard tractor	T312	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1856	CHE Diesel					
Yard tractor	T313	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1255	CHE Diesel					
Yard tractor	T314	Kalmar		Diesel	Cummins	QSB6.7	2015	173	0	CHE Diesel					
Yard tractor	T315	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1943	CHE Diesel					
Yard tractor	T316	Kalmar		Diesel	Cummins	QSB6.7	2015	173	2118	CHE Diesel					
Yard tractor	T317	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1579	CHE Diesel					
Yard tractor	T318	Kalmar		Diesel	Cummins	QSB6.7	2015	173	2353	CHE Diesel					
Yard tractor	T319	Kalmar		Diesel	Cummins	QSB6.7	2015	173	2579	CHE Diesel					
Yard tractor	T320	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1830	CHE Diesel					
Yard tractor	T321	Kalmar		Diesel	Cummins	QSB6.7	2015	173	2456	CHE Diesel					
Yard tractor	T322	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1947	CHE Diesel					
Yard tractor	T323	Kalmar		Diesel	Cummins	QSB6.7	2015	173	233	CHE Diesel					
Yard tractor	T324	Kalmar		Diesel	Cummins	QSB6.7	2015	173	2616	CHE Diesel					
Yard tractor	T325	Kalmar		Diesel	Cummins	QSB6.7	2015	173	2270	CHE Diesel					
Yard tractor	UTR001	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1820	CHE On Road Diesel					
Yard tractor	UTR002	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1601	CHE On Road Diesel					
Yard tractor	UTR003	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1346	CHE On Road Diesel					
Yard tractor	UTR004	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1535	CHE On Road Diesel					
Yard tractor	UTR005	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1555	CHE On Road Diesel					
Yard tractor	UTR006	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1419	CHE On Road Diesel					
Yard tractor	UTR007	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1898	CHE On Road Diesel					
Yard tractor	UTR008	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	146	CHE On Road Diesel					
Yard tractor	UTR009	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	584	CHE On Road Diesel					
Yard tractor	UTR010	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	624	CHE On Road Diesel					
Yard tractor	UTR011	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1715	CHE On Road Diesel					
Yard tractor	UTR012	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1092	CHE On Road Diesel					
Yard tractor	UTR013	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	667	CHE On Road Diesel					
Yard tractor	UTR014	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	805	CHE On Road Diesel					
Yard tractor	UTR015	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1621	CHE On Road Diesel					
Yard tractor	UTR016	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1054	CHE On Road Diesel					
Yard tractor	UTR017	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1494	CHE On Road Diesel					
Yard tractor	UTR018	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2168	CHE On Road Diesel					
Yard tractor	UTR019	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1652	CHE On Road Diesel					
Yard tractor	UTR020	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	945	CHE On Road Diesel					
Yard tractor	UTR021	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1765	CHE On Road Diesel					
Yard tractor	UTR022	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2241	CHE On Road Diesel					
Yard tractor	UTR023	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2103	CHE On Road Diesel					
Yard tractor	UTR024	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1631	CHE On Road Diesel					
Yard tractor	UTR025	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2143	CHE On Road Diesel					
Yard tractor	UTR026	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	533	CHE On Road Diesel					
Yard tractor	UTR027	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1947	CHE On Road Diesel					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	UTR028	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1376	CHE On Road Diesel					
Yard tractor	UTR029	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	942	CHE On Road Diesel					
Yard tractor	UTR030	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	663	CHE On Road Diesel					
Yard tractor	UTR031	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1162	CHE On Road Diesel					
Yard tractor	UTR032	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	889	CHE On Road Diesel					
Yard tractor	UTR033	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1556	CHE On Road Diesel					
Yard tractor	UTR034	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1600	CHE On Road Diesel					
Yard tractor	UTR035	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1772	CHE On Road Diesel					
Yard tractor	YTW	Capacity	6BTA	Diesel	Cummins		2013	135	135	CHE Diesel					
Yard tractor	H-088	Dina		Gasoline	Chevy	454-FI	2011	335	1171	CHE Gasoline					
Yard tractor	H-089	Dina		Gasoline	Chevy	454-FI	2011	335	937	CHE Gasoline					
Yard tractor	H-090	Dina		Gasoline	Chevy	454-FI	2011	335	996	CHE Gasoline					
Yard tractor	H-091	Dina		Gasoline	Chevy	454-FI	2011	335	1149	CHE Gasoline					
Yard tractor	H-092	Dina		Gasoline	Chevy	454-FI	2011	335	1248	CHE Gasoline					
Yard tractor	H-093	Dina		Gasoline	Chevy	454-FI	2011	335	1129	CHE Gasoline					
Yard tractor	H-094	Dina		Gasoline	Chevy	454-FI	2011	335	1188	CHE Gasoline					
Yard tractor	H-095	Dina		Gasoline	Chevy	454-FI	2011	335	1085	CHE Gasoline					
Yard tractor	H-096	Dina		Gasoline	Chevy	454-FI	2011	335	1188	CHE Gasoline					
Yard tractor	H-097	Dina		Gasoline	Chevy	454-FI	2011	335	1019	CHE Gasoline					
Yard tractor	H-098	Dina		Gasoline	Chevy	454-FI	2011	335	1215	CHE Gasoline					
Yard tractor	H-099	Dina		Gasoline	Chevy	454-FI	2011	335	1274	CHE Gasoline					
Yard tractor	H-100	Dina		Gasoline	Chevy	454-FI	2011	335	860	CHE Gasoline					
Yard tractor	H-101	Dina		Gasoline	Chevy	454-FI	2011	335	1220	CHE Gasoline					
Yard tractor	H-102	Dina		Gasoline	Chevy	454-FI	2011	335	903	CHE Gasoline					
Yard tractor	H-103	Dina		Gasoline	Chevy	454-FI	2011	335	1187	CHE Gasoline					
Yard tractor	H-104	Dina		Gasoline	Chevy	454-FI	2011	335	1168	CHE Gasoline					
Yard tractor	H-105	Dina		Gasoline	Chevy	454-FI	2011	335	1127	CHE Gasoline					
Yard tractor	H-521	Dina		Gasoline	Chevy	454-FI	2011	335	1018	CHE Gasoline					
Yard tractor	H-522	Dina		Gasoline	Chevy	454-FI	2011	335	194	CHE Gasoline					
Yard tractor	H-603	Dina		Gasoline	Chevy	454-FI	2011	335	231	CHE Gasoline					
Yard tractor	H-604	Dina		Gasoline	Chevy	454-FI	2011	335	3334	CHE Gasoline					
Yard tractor	H-605	Dina		Gasoline	Chevy	454-FI	2011	335	619	CHE Gasoline					
Yard tractor	H-606	Dina		Gasoline	Chevy	454-FI	2011	335	923	CHE Gasoline					
Yard tractor	H-608	Dina		Gasoline	Chevy	454-FI	2011	335	743	CHE Gasoline					
Yard tractor	H-609	Dina		Gasoline	Chevy	454-FI	2011	335	911	CHE Gasoline					
Yard tractor	H-610	Dina		Gasoline	Chevy	454-FI	2011	335	819	CHE Gasoline					
Yard tractor	H-6101	Dina		Gasoline	Chevy	454-FI	2011	335	934	CHE Gasoline					
Yard tractor	H-6103	Dina		Gasoline	Chevy	454-FI	2011	335	848	CHE Gasoline					
Yard tractor	H-6104	Dina		Gasoline	Chevy	454-FI	2011	335	760	CHE Gasoline					
Yard tractor	H-6106	Dina		Gasoline	Chevy	454-FI	2011	335	876	CHE Gasoline					
Yard tractor	H-6107	Dina		Gasoline	Chevy	454-FI	2011	335	746	CHE Gasoline					
Yard tractor	H-6108	Dina		Gasoline	Chevy	454-FI	2011	335	890	CHE Gasoline					
Yard tractor	H-611	Dina		Gasoline	Chevy	454-FI	2011	335	847	CHE Gasoline					
Yard tractor	H-6111	Dina		Gasoline	Chevy	454-FI	2011	335	900	CHE Gasoline					
Yard tractor	H-612	Dina		Gasoline	Chevy	454-FI	2011	335	971	CHE Gasoline					
Yard tractor	H-614	Dina		Gasoline	Chevy	454-FI	2011	335	852	CHE Gasoline					
Yard tractor	H-619	Dina		Gasoline	Chevy	454-FI	2011	335	346	CHE Gasoline					
Yard tractor	H-620	Dina		Gasoline	Chevy	454-FI	2011	335	740	CHE Gasoline					
Yard tractor	H-627	Dina		Gasoline	Chevy	454-FI	2011	335	576	CHE Gasoline					
Yard tractor	H-628	Dina		Gasoline	Chevy	454-FI	2011	335	692	CHE Gasoline					
Yard tractor	H-629	Dina		Gasoline	Chevy	454-FI	2011	335	583	CHE Gasoline					

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	Year	HP	Annual Hours	Category	DOC	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	H-630	Dina		Gasoline	Chevy	454-FI	2011	335	182	CHE Gasoline					
Yard tractor	H-631	Dina		Gasoline	Chevy	454-FI	2011	335	549	CHE Gasoline					
Yard tractor	H-632	Dina		Gasoline	Chevy	454-FI	2011	335	942	CHE Gasoline					
Yard tractor	H-633	Dina		Gasoline	Chevy	454-FI	2011	335	640	CHE Gasoline					
Yard tractor	H-634	Dina		Gasoline	Chevy	454-FI	2011	335	658	CHE Gasoline					
Yard tractor	H-635	Dina		Gasoline	Chevy	454-FI	2011	335	714	CHE Gasoline					
Yard tractor	H-636	Dina		Gasoline	Chevy	454-FI	2011	335	713	CHE Gasoline					
Yard tractor	H-639	Dina		Gasoline	Chevy	454-FI	2011	335	653	CHE Gasoline					
Yard tractor	H-640	Dina		Gasoline	Chevy	454-FI	2011	335	493	CHE Gasoline					
Yard tractor	H-643	Dina		Gasoline	Chevy	454-FI	2011	335	862	CHE Gasoline					
Yard tractor	H-644	Dina		Gasoline	Chevy	454-FI	2011	335	812	CHE Gasoline					
Yard tractor	H-645	Dina		Gasoline	Chevy	454-FI	2011	335	423	CHE Gasoline					
Yard tractor	H-646	Dina		Gasoline	Chevy	454-FI	2011	335	690	CHE Gasoline					
Yard tractor	H-649	Dina		Gasoline	Chevy	454-FI	2011	335	838	CHE Gasoline					
Yard tractor	H-650	Dina		Gasoline	Chevy	454-FI	2011	335	640	CHE Gasoline					
Yard tractor	H-653	Dina		Gasoline	Chevy	454-FI	2011	335	898	CHE Gasoline					
Yard tractor	H-654	Dina		Gasoline	Chevy	454-FI	2011	335	752	CHE Gasoline					
Yard tractor	H-655	Dina		Gasoline	Chevy	454-FI	2011	335	494	CHE Gasoline					
Yard tractor	H-656	Dina		Gasoline	Chevy	454-FI	2011	335	647	CHE Gasoline					
Yard tractor	H-657	Dina		Gasoline	Chevy	454-FI	2011	335	785	CHE Gasoline					
Yard tractor	H-658	Dina		Gasoline	Chevy	454-FI	2011	335	747	CHE Gasoline					
Yard tractor	H-659	Dina		Gasoline	Chevy	454-FI	2011	335	800	CHE Gasoline					
Yard tractor	H-660	Dina		Gasoline	Chevy	454-FI	2011	335	769	CHE Gasoline					
Yard tractor	H-661	Dina		Gasoline	Chevy	454-FI	2011	335	837	CHE Gasoline					
Yard tractor	H-662	Dina		Gasoline	Chevy	454-FI	2011	335	902	CHE Gasoline					
Yard tractor	H-663	Dina		Gasoline	Chevy	454-FI	2011	335	740	CHE Gasoline					
Yard tractor	H-664	Dina		Gasoline	Chevy	454-FI	2011	335	669	CHE Gasoline					
Yard tractor	H-665	Dina		Gasoline	Chevy	454-FI	2011	335	734	CHE Gasoline					
Yard tractor	H-666	Dina		Gasoline	Chevy	454-FI	2011	335	775	CHE Gasoline					
Yard tractor	H-667	Dina		Gasoline	Chevy	454-FI	2011	335	958	CHE Gasoline					
Yard tractor	H-668	Dina		Gasoline	Chevy	454-FI	2011	335	776	CHE Gasoline					
Yard tractor	H-669	Dina		Gasoline	Chevy	454-FI	2011	335	676	CHE Gasoline					
Yard tractor	H-671	Dina		Gasoline	Chevy	454-FI	2011	335	660	CHE Gasoline					
Yard tractor	H-694	Dina		Gasoline	Chevy	454-FI	2011	335	915	CHE Gasoline					
Yard tractor	H-695	Dina		Gasoline	Chevy	454-FI	2011	335	220	CHE Gasoline					
Yard tractor	H-696	Dina		Gasoline	Chevy	454-FI	2011	335	886	CHE Gasoline					
Yard tractor	H-697	Dina		Gasoline	Chevy	454-FI	2011	335	893	CHE Gasoline					
Yard tractor	H-698	Dina		Gasoline	Chevy	454-FI	2011	335	597	CHE Gasoline					
Yard tractor	T139	Ottawa	Commando 5	LPG	Ford V10		2009	173	0	CHE Propane					
Yard tractor	T141	Ottawa	Commando 5	LPG	Ford V10		2009	173	0	CHE Propane					
Yard tractor	T142	Ottawa	Commando 5	LPG	Ford V10		2009	173	55	CHE Propane					
Yard tractor	T143	Ottawa	Commando 5	LPG	Ford V10		2009	173	10	CHE Propane					
Yard tractor	T144	Ottawa	Commando 5	LPG	Ford V10		2009	173	0	CHE Propane					
Yard tractor	T145	Ottawa	Commando 5	LPG	Ford V10		2009	173	0	CHE Propane					
Yard tractor	T146	Ottawa	Commando 5	LPG	Ford V10		2009	173	75	CHE Propane					