Port of
LONG BEACH
The Green Port

AIR EMISSIONS INVENTORY - 2018

September 2019

Prepared by:
STARCREST CONSULTING GROUP, LLC

Port of Long Beach
2018 Air Emissions Inventory

Prepared for:

Port of LONG BEACH
The Green Port

September 2019

Prepared by:

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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.

A detailed Methodology Report is available on the Port's website and will be updated as deemed necessary for significant changes to the annual Air Emission Inventories. Note that the 2018 Air Emission Inventory correlates with Version 1 of the Methodology Report.

EXECUTIVE SUMMARY

2018 Port of Long Beach Air Emissions Inventory Results

The Port of Long Beach 2018 Air Emissions Inventory results and a comparison to the Port's 2005 air emissions inventory are presented in Table ES.1. The baseline year used to compare every annual inventory is 2005. To provide a valid comparison between the 2018 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. Greenhouse gas emissions in CO_2e are reported in units of metric tons (MT) per year; all other pollutants are shown in tons per year.

Table ES.1: 2005-2018 Air Emissions Comparison by Source Category

	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e 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**
2018								
Ocean-going vessels	85	80	63	4,169	213	341	151	297,800
Harbor craft	23	21	23	682	1	483	73	55,364
Cargo handling equipment	4	4	3	327	1	632	34	121,766
Locomotives	23	22	23	619	1	149	36	52,382
Heavy-duty vehicles	7	7	7	1,151	3	156	27	308,378
Total	**143**	**134**	**120**	**6,948**	**219**	**1,760**	**321**	**835,689**
Change between 2005 and 2018 (percent)								
Ocean-going vessels	-88%	-86%	-90%	-38%	-97%	-37%	-36%	-24%
Harbor craft	-48%	-48%	-48%	-38%	-86%	64%	5%	24%
Cargo handling equipment	-91%	-91%	-93%	-75%	-88%	59%	-47%	17%
Locomotives	-46%	-45%	-46%	-51%	-99%	-17%	-46%	-14%
Heavy-duty vehicles	-96%	-96%	-97%	-78%	-92%	-90%	-92%	-21%
Total	**-87%**	**-85%**	**-87%**	**-56%**	**-97%**	**-40%**	**-57%**	**-16%**

Table ES.2 summarizes and compares vessel arrivals and containerized cargo throughput in twenty-foot equivalent units (TEU) at POLB in 2005 and 2018. Relative to 2005 levels, containerized cargo throughput is up 21%, while overall containership arrivals to POLB are down 25%. Indicative of the larger vessels calling at POLB, the average number of TEU per vessel call is up 60%.

Table ES.2: 2005-2018 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
2018	84,055,094	8,091,025	2,179	1,005	8,051
Change	**7%**	**21%**	**-19%**	**-25%**	**60%**

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 2018, while Table ES.4 compares the tons of emissions per 100,000 metric tons in 2005 and 2018.

Table ES.3: 2005-2018 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
2018	0.18	0.17	0.15	8.59	0.27	2.18	0.40	1,033
Change (%)	**-89%**	**-88%**	**-89%**	**-63%**	**-97%**	**-50%**	**-65%**	**-30%**

Table ES.4: 2005-2018 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
2018	0.17	0.16	0.14	8.27	0.26	2.09	0.38	994
Change (%)	**-87%**	**-86%**	**-88%**	**-59%**	**-97%**	**-44%**	**-60%**	**-21%**

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 from the baseline year 2005.

As a result of the implementation of CAAP measures and regulations, 2018 emission reduction levels of DPM, NO_x, and SO_x surpassed the respective 2014 SPB Emission Reduction Standards. Despite a 7% increase in metric tons cargo throughput and 21% increase in TEU throughput, the emission reductions achieved in 2018 also surpassed the 2023 DPM and SO_x SPB Emission Reduction Standards.

Table ES.5: 2018 Emissions Reductions Compared to San Pedro Bay CAAP

Pollutant	2018 Actual Reductions	2014 Emission Reduction Standard	2023 Emission Reduction Standard
DPM	87%	72%	77%
NO_x	56%	22%	59%
SO_x	97%	93%	93%

Table ES.6: 2005-2018 Emissions Reductions Compared to San Pedro Bay CAAP by Source Category

Category	2005		2018
DPM (tons)			
Ocean-going vessels	605		63
Harbor craft	45		23
Cargo handling equipment	47		3
Locomotives	43		23
Heavy-duty vehicles	205		7
Total	**945**		**120**
Cumulative DPM Emissions Reduction Achieved in 2018			**87%**
CAAP San Pedro Bay DPM Emissions Reduction Standards		**2014**	**72%**
		2023	**77%**
NO_x (tons)			
Ocean-going vessels	6,726		4,169
Harbor craft	1,107		682
Cargo handling equipment	1,289		327
Locomotives	1,273		619
Heavy-duty vehicles	5,273		1,151
Total	**15,667**		**6,948**
Cumulative NO_x Emissions Reduction Achieved in 2018			**56%**
CAAP San Pedro Bay NO_x Emissions Reduction Standards		**2014**	**22%**
		2023	**59%**
SO_x (tons)			
Ocean-going vessels	6,952		213
Harbor craft	5		1
Cargo handling equipment	11		1
Locomotives	76		1
Heavy-duty vehicles	37		3
Total	**7,081**		**219**
Cumulative SO_x Emissions Reduction Achieved in 2018			**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 (South Coast AQMD). 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 (CO_2e)

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 CO_2. To normalize these values into a single greenhouse gas value, CO_2e, the GHG emission estimates are multiplied by the following values and summed.[1]

- CO_2 – 1
- CH_4 – 25
- N_2O - 298

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

Geographical Domain

Figure 1.1 shows the Port of Long Beach emissions inventory domain. For OGV and harbor craft, the geographical domain lies within the harbor and up to the South Coast Air Basin (SoCAB) over-water 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 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 shows the various terminals color coded by terminal type. As an example, container terminals are orange in Figure 1.2.

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 (ATB/ITB)
- 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 2018 emissions from OGVs is described in Section 2 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019)[2]. The following improvements were made in estimating 2018 OGV emissions:

- Added Vessel Boarding Program (VBP) data related to vessel operations collected over the past year since the last published inventory.

Geographical Domain

The geographical domain or overwater boundary for OGVs includes the berths and waterways in the Port proper as shown in 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.

[2]San Perdo Bay Ports Emissions Inventory Methodology Report, Version 1 – 2019 (April 2019), *www.polb.com/environment/air/emissions.asp*

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 2018 OGV emissions estimates are presented in Tables 2.1 through 2.3. Due to rounding, values may not add up to totals provided.

Table 2.1: 2018 Ocean-going Vessel Emissions by Vessel Type, tons and metric 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	2.9	2.8	2.8	163.7	5.5	15.0	6.6	7,710
Bulk	5.3	5.0	4.6	276.0	12.0	23.9	7.9	16,680
Containership	28.4	26.8	22.3	1,770.4	70.0	125.2	69.2	97,876
Cruise	10.0	9.4	9.4	494.1	19.3	41.4	16.6	26,849
General Cargo	1.2	1.1	1.1	55.2	2.3	5.1	2.0	3,262
Ocean Tugboat (ATB/ITB)	0.1	0.1	0.1	4.4	0.2	0.4	0.2	232
Miscellaneous	4.1	3.9	3.8	212.1	8.2	17.0	6.2	11,450
RoRo	0.7	0.6	0.0	10.0	3.1	1.0	0.5	4,294
Tanker	32.2	30.3	19.4	1,183.4	92.6	111.7	42.2	129,446
Total	**85.0**	**80.0**	**63.4**	**4,169.1**	**213.2**	**340.8**	**151.4**	**297,800**

Table 2.2: 2018 Ocean-going Vessel Emissions by Emissions Source, tons and metric 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	40.3	37.9	40.3	1,885.9	72.1	174.7	63.4	99,959
Auxiliary Boiler	21.6	20.3	0.0	313.1	96.8	31.7	15.9	135,837
Main Engine	23.2	21.8	23.1	1,970.1	44.3	134.4	72.1	62,003
Total	**85.0**	**80.0**	**63.4**	**4,169.1**	**213.2**	**340.8**	**151.4**	**297,800**

Table 2.3: 2018 Ocean-going Vessel Emissions by Mode, tons and metric 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	9.3	8.7	9.3	448.7	16.6	40.1	14.6	22,954
Transit	Auxiliary Boiler	0.6	0.6	0.0	9.2	2.8	0.9	0.5	3,991
Transit	Main Engine	20.4	19.2	20.3	1,773.1	40.5	115.7	56.6	56,741
Total Transit		**30.3**	**28.5**	**29.6**	**2,231.0**	**59.9**	**156.7**	**71.6**	**83,685**
Maneuvering	Auxiliary Engine	3.0	2.9	3.0	143.5	5.4	13.1	4.8	7,504
Maneuvering	Auxiliary Boiler	0.3	0.2	0.0	3.8	1.2	0.4	0.2	1,651
Maneuvering	Main Engine	2.8	2.6	2.8	196.9	3.8	18.6	15.5	5,262
Total Maneuvering		**6.1**	**5.7**	**5.8**	**344.2**	**10.3**	**32.1**	**20.5**	**14,417**
Hotelling at-berth	Auxiliary Engine	18.6	17.5	18.6	877.5	33.4	81.1	29.4	46,348
Hotelling at-berth	Auxiliary Boiler	17.2	16.2	0.0	250.4	77.4	25.4	12.7	108,614
Hotelling at-berth	Main Engine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Total Hotelling at-berth		**35.9**	**33.8**	**18.6**	**1,127.9**	**110.8**	**106.5**	**42.1**	**154,962**
Hotelling at-anchorage	Auxiliary Engine	9.4	8.8	9.4	416.2	16.7	40.4	14.7	23,154
Hotelling at-anchorage	Auxiliary Boiler	3.4	3.2	0.0	49.7	15.4	5.0	2.5	21,581
Hotelling at-anchorage	Main Engine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Total Hotelling at-anchorage		**12.8**	**12.0**	**9.4**	**466.0**	**32.1**	**45.4**	**17.2**	**44,735**
Total		**85.0**	**80.0**	**63.4**	**4,169.1**	**213.2**	**340.8**	**151.4**	**297,800**

Operational Profiles

Table 2.4 presents the numbers of arrivals, departures, and shifts associated with vessels at the Port in 2018.

Table 2.4: 2018 Total OGV Activities

Vessel Type	Arrival	Departure	Shift	Total
Auto Carrier	179	180	19	378
Bulk	202	210	232	644
Bulk - Heavy Load	5	4	3	12
Bulk - Self Discharging	27	27	5	59
Container - 1000	101	101	7	209
Container - 2000	57	58	20	135
Container - 3000	50	51	7	108
Container - 4000	202	200	17	419
Container - 5000	20	18	3	41
Container - 6000	96	93	5	194
Container - 7000	2	2	2	6
Container - 8000	174	172	8	354
Container - 9000	67	66	7	140
Container - 10000	95	95	4	194
Container - 11000	70	70	8	148
Container - 12000	14	14	1	29
Container - 13000	55	55	9	119
Container - 14000	2	2	0	4
Cruise	256	256	0	512
General Cargo	48	55	29	132
Ocean Tugboat (ATB/ITB)	11	4	17	32
Miscellaneous	0	0	2	2
RoRo	1	1	2	4
Tanker - Chemical	103	110	129	342
Tanker - Handysize	3	3	4	10
Tanker - Panamax	92	67	159	318
Tanker - Aframax	87	87	130	304
Tanker - Suezmax	82	83	133	298
Tanker - VLCC	34	33	74	141
Tanker - ULCC	44	46	113	203
Total	**2,179**	**2,163**	**1,149**	**5,491**

Actual VBP data, if available, is used to estimate emissions. If actual VBP data is not available, defaults are used. Table 2.5 presents the auxiliary engine load defaults by vessel type and by mode used to estimate emissions in 2018. Auxiliary engine loads are typically higher during maneuvering than at berth or during transit. 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 2.5: 2018 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	787	2,522	652	682
Container - 4000	1,348	2,327	1,048	1,091
Container - 5000	1,333	4,487	1,107	967
Container - 6000	1,518	2,771	930	1,565
Container - 7000	1,220	2,721	845	1,000
Container - 8000	1,849	3,262	1,289	1,210
Container - 9000	1,476	2,236	1,001	1,044
Container - 10000	1,360	1,925	998	1,096
Container - 11000	1,615	2,973	1,371	1,786
Container - 12000	2,100	3,425	1,650	1,650
Container - 13000	2,018	3,604	1,317	1,015
Container - 14000	2,334	3,863	2,175	1,183
General Cargo	421	1,060	572	180
Ocean Tugboat (ATB/ITB)	76	202	99	76
Miscellaneous	793	2,100	467	200
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	1,035	1,404	1,204	1,020

For all cruise ships (diesel electric and non-diesel electric) that visited the Port in 2018, the auxiliary engine load defaults are listed in Table 2.6.

Table 2.6: Cruise Ship Average Auxiliary Engine Load Defaults, kW

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

Table 2.7 presents the load defaults for the auxiliary boilers for diesel electric cruise ships and tankers.

Table 2.7: 2018 Auxiliary Boiler Load Defaults by Mode for Diesel Electric Vessels, kW

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

Table 2.8 presents the 2018 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. Since loading and discharging data was available for the tankers that visited the Port, a lower boiler load of 875 kW was used for tankers known to be loading cargo while at berth, while the higher boiler load listed in the table was used as a default for the tanker calls that were discharging cargo.

Table 2.8: 2018 Auxiliary Boiler Load Defaults by Mode, kW

Vessel Type	Transit	Maneuvering	Berth Hotelling	Anchorage Hotelling
Auto Carrier	87	184	314	305
Bulk	35	94	125	125
Bulk - Heavy Load	35	94	125	125
Bulk - Self Discharging	44	103	132	132
Container - 1000	106	213	273	270
Container - 2000	141	282	361	358
Container - 3000	164	309	403	400
Container - 4000	170	333	461	457
Container - 5000	247	473	579	572
Container - 6000	194	543	643	640
Container - 7000	259	470	623	619
Container - 8000	261	456	629	628
Container - 9000	314	512	574	573
Container - 10000	341	432	588	588
Container - 11000	335	554	728	728
Container - 12000	330	647	754	754
Container - 13000	203	346	573	547
Container - 14000	265	426	665	665
General Cargo	56	124	160	160
Ocean Tugboat (ATB/ITB)	0	0	0	0
Miscellaneous	33	65	96	96
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	239	675	6,380	788

Vessel hotelling times at-berth, regardless of shore power usage, and at-anchorage during 2018 are shown in Tables 2.9 and 2.10. The miscellaneous vessels and RoRos have high hotelling time due to vessels that are home based in the Port, including ready reserve vessels.

Table 2.9: 2018 At-Berth Hotelling Times, hours

Vessel Type	Min Hours	Max Hours	Avg Hours
Auto Carrier	4.4	44.3	14.5
Bulk - General	2.4	240.3	72.2
Bulk - Heavy Load	27.4	407.0	137.9
Bulk - Self Discharging	9.3	56.4	34.4
Container - 1000	9.6	63.3	25.7
Container - 2000	6.3	86.9	40.5
Container - 3000	12.1	84.2	32.4
Container - 4000	9.1	143.1	35.0
Container - 5000	11.0	95.2	49.2
Container - 6000	45.9	154.7	77.2
Container - 7000	32.1	132.6	77.4
Container - 8000	9.4	164.7	76.8
Container - 9000	11.1	119.5	39.6
Container - 10000	10.8	161.3	91.3
Container - 11000	9.3	179.4	102.3
Container - 12000	97.7	152.8	123.1
Container - 13000	29.3	191.3	114.8
Container - 14000	71.3	159.8	115.5
Cruise	8.2	16.9	11.7
General Cargo	8.0	181.6	47.7
Ocean Tugboat (ATB/ITB)	13.5	110.4	29.5
Miscellaneous	8,759.8	8,759.8	8,759.8
RoRo	2,169.7	8,759.8	5,814.3
Tanker - Chemical	7.3	201.6	45.2
Tanker - Handysize	16.8	69.0	36.2
Tanker - Panamax	12.2	130.5	39.0
Tanker - Aframax	15.7	175.9	39.1
Tanker - Suezmax	11.1	50.1	25.3
Tanker - VLCC	17.6	46.4	28.1
Tanker - ULCC	16.9	52.4	32.3

Table 2.10: 2018 At-Anchorage Hotelling Times, hours

Vessel Type	Min Hours	Max Hours	Avg Hours	Anchorage Activity Count
Auto Carrier	2.8	38.4	17.6	12
Bulk - General	2.3	784.3	108.6	195
Bulk - Heavy Load	19.9	64.6	44.3	3
Bulk - Self Discharging	7.7	44.8	18.4	4
Container - 1000	15.5	20.6	18.0	2
Container - 2000	1.6	23.1	10.3	6
Container - 3000	2.6	89.3	32.4	6
Container - 4000	3.0	78.4	24.7	17
Container - 5000	2.9	126.2	50.4	3
Container - 6000	16.2	165.2	53.7	5
Container - 7000	32.3	32.3	32.3	1
Container - 8000	3.1	47.8	22.3	8
Container - 9000	1.5	47.3	29.2	6
Container - 10000	23.8	86.9	55.3	2
Container - 11000	3.5	30.7	12.6	5
Container - 12000	22.8	22.8	22.8	1
Container - 13000	2.0	63.0	21.5	6
Container - 14000	0	0	0	0
Cruise	0	0	0	0
General Cargo	2.7	350.3	54.0	20
Ocean Tugboat (ATB/ITB)	3.3	436.2	82.2	15
Miscellaneous	0	0	0	0
RoRo	0	0	0	0
Tanker - Chemical	0.7	171.8	23.9	93
Tanker - Handysize	10.7	119.6	60.1	3
Tanker - Panamax	1.6	478.5	60.0	147
Tanker - Aframax	0.1	330.8	62.6	118
Tanker - Suezmax	2.7	477.0	57.0	121
Tanker - VLCC	6.1	276.6	68.2	65
Tanker - ULCC	2.9	551.4	85.1	92
Total				**956**

For this EI, a frequent caller is 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 2018 are frequent callers (i.e. six or more calls/year).

Table 2.11: 2018 Percentage of Frequent Callers

Vessel Type	Frequent Vessels	Total Vessels	Percent Frequent Vessels
Auto Carrier	3	110	3%
Bulk - General	0	179	0%
Bulk - Heavy Load	0	3	0%
Bulk - Self Discharging	2	6	33%
Container - 1000	7	9	78%
Container - 2000	5	9	56%
Container - 3000	4	8	50%
Container - 4000	18	35	51%
Container - 5000	0	12	0%
Container - 6000	5	22	23%
Container - 7000	0	2	0%
Container - 8000	15	36	42%
Container - 9000	6	15	40%
Container - 10000	5	23	22%
Container - 11000	5	17	29%
Container - 12000	0	5	0%
Container - 13000	1	21	5%
Container - 14000	0	2	0%
Cruise	3	5	60%
General Cargo	1	37	3%
Ocean Tugboat (ATB/ITB)	0	5	0%
Miscellaneous	0	1	0%
RoRo	4	49	8%
Tanker - Chemical	0	3	0%
Tanker - Handysize	0	50	0%
Tanker - Panamax	3	21	14%
Tanker - Aframax	4	39	10%
Tanker - Suezmax	0	20	0%
Tanker - VLCC	0	28	0%
Tanker - ULCC	0	22	0%
Total	**91**	**794**	
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.[3] The methodology to estimate 2018 emissions from harbor craft is described in Section 3 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019)[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 2018

[3] *www.polb.com/environment/air/emissions.asp*
[4] San Perdo Bay Ports Emissions Inventory Methodology Report, Version 1 – 2019 (April 2019), *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: 2018 Harbor Craft Emissions by Vessel and Engine Type, tons and metric 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	16.7	0.0	14.6	2.4	1,658
	Propulsion	6.2	5.7	6.2	176.5	0.2	127.0	18.6	14,332
Assist tugboat Total		**6.7**	**6.2**	**6.7**	**193.1**	**0.2**	**141.6**	**21.0**	**15,989**
Crew Boat	Auxiliary	0.1	0.1	0.1	1.6	0.0	1.3	0.4	133
	Propulsion	1.3	1.2	1.3	41.3	0.0	30.1	4.5	3,680
Crew boat Total		**1.4**	**1.2**	**1.4**	**42.9**	**0.0**	**31.4**	**4.9**	**3,813**
Excursion	Auxiliary	0.1	0.1	0.1	2.9	0.0	2.0	0.6	205
	Propulsion	0.6	0.6	0.6	19.7	0.0	13.1	2.0	1,419
Excursion Total		**0.8**	**0.7**	**0.8**	**22.6**	**0.0**	**15.1**	**2.5**	**1,624**
Ferry	Auxiliary	0.2	0.2	0.2	3.8	0.0	2.9	0.8	320
	Propulsion	5.0	4.7	5.0	150.8	0.1	115.5	16.2	12,591
Ferry Total		**5.2**	**4.8**	**5.2**	**154.6**	**0.1**	**118.4**	**17.0**	**12,911**
Government	Auxiliary	0.1	0.1	0.1	5.2	0.0	4.4	0.7	501
	Propulsion	1.0	0.9	1.0	39.1	0.0	33.8	4.7	3,751
Government Total		**1.2**	**1.1**	**1.2**	**44.3**	**0.0**	**38.2**	**5.4**	**4,252**
Ocean tugboat Total	Auxiliary	0.1	0.1	0.1	3.1	0.0	2.5	0.5	284
	Propulsion	5.9	5.5	5.9	170.8	0.1	98.7	15.8	12,455
Ocean tugboat Total		**6.1**	**5.6**	**6.1**	**174.0**	**0.1**	**101.2**	**16.3**	**12,739**
Harbor tugboat	Auxiliary	0.2	0.2	0.2	5.8	0.0	4.5	0.9	490
	Propulsion	1.5	1.4	1.5	42.4	0.0	30.8	4.4	3,316
Harbor tugboat Total		**1.8**	**1.6**	**1.8**	**48.2**	**0.0**	**35.3**	**5.3**	**3,806**
Work boat	Auxiliary	0.0	0.0	0.0	0.2	0.0	0.1	0.0	14
	Propulsion	0.1	0.1	0.1	2.2	0.0	1.9	0.3	216
Work boat Total		**0.1**	**0.1**	**0.1**	**2.4**	**0.0**	**2.0**	**0.3**	**230**
Harbor Craft Total		**23.1**	**21.3**	**23.1**	**682.0**	**0.6**	**483.2**	**72.8**	**55,364**

Operational Profiles

Table 3.2 lists the marine engine count by USEPA marine engine emissions standards tier level and engine type in 2018.

Table 3.2: 2018 Harbor Craft Engine Tier Count

Engine Tier	Auxiliary Engine Count	Propulsion Engine Count	Total Engine Count
Unknown	4	6	10
Tier 0	3	2	5
Tier 1	2	14	16
Tier 2	42	116	158
Tier 3	86	34	120
Total	**137**	**172**	**309**

Table 3.3 summarizes the energy consumption (kW-hr) per engine tier for 2018 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	2018 kW-hr	2018 % of Total
Tier 0	184,601	0.2%
Tier 1	7,778,763	9.3%
Tier 2	53,734,242	64.2%
Tier 3	22,047,008	26.3%
Total	**83,744,613**	**100%**

Tables 3.4 and 3.5 summarize the characteristics of main and auxiliary engines, respectively, by vessel type operating at the Port in 2018. Averages of the model year, horsepower, or operating hours are used as default values when specific data is not available. Defaults were used for less than 1% of model year values, 3% of horsepower values, and 0.3% of operating hours.

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 2018 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: 2018 Main Engine Characteristics by Harbor Craft Type

			Propulsion Engines								
Harbor	Vessel	Engine	Model year			Horsepower			Annual Operating Hours		
Craft Type	Count	Count	Minimum	Maximum	Average	Minimum	Maximum	Average	Minimum	Maximum	Average
Assist tugboat	14	29	1980	2014	2007	600	2,575	2,046	0	2,385	1,429
Crew boat	17	43	2003	2016	2009	290	1,450	588	107	1,636	597
Excursion	8	13	1980	2012	2005	190	450	353	500	2,810	1,572
Ferry	12	26	2008	2015	2010	180	2,680	1,851	660	4,104	1,203
Government	5	9	2009	2016	2012	671	2,012	1,436	302	1,480	1,105
Ocean tugboat	6	12	2004	2012	2008	1,800	3,385	2,168	250	2,384	1,293
Harbor tugboat	16	31	2004	2018	2009	300	1,500	904	79	3,000	648
Work boat	5	9	2008	2015	2011	210	675	478	34	424	239
Total	**83**	**172**									

Table 3.5: 2018 Auxiliary Engine Characteristics by Harbor Craft Type

			Auxiliary Engines								
Harbor	Vessel	Engine	Model year			Horsepower			Annual Operating Hours		
Craft Type	Count	Count	Minimum	Maximum	Average	Minimum	Maximum	Average	Minimum	Maximum	Average
Assist tugboat	14	32	1980	2016	2010	107	400	184	0	3,144	1,310
Crew boat	17	22	2002	2018	2010	13	107	58	5	1,462	644
Excursion	8	8	1980	2012	2005	40	90	62	800	2,810	1,785
Ferry	12	18	2008	2017	2011	18	120	67	384	2,486	1,138
Government	5	12	2009	2017	2013	15	2012	864	74	2,266	766
Ocean tugboat	6	13	2004	2016	2009	60	339	139	189	1,500	882
Harbor tugboat	16	24	2004	2018	2010	15	300	83	100	3,553	831
Work boat	5	8	1979	2015	2004	40	101	70	0	408	203
Total	**83**	**137**									

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 within a certain horsepower range, the NO_x emission rates were updated based on discussions with CARB. The methodology to estimate 2018 emissions from CHE is described in Section 4 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019)[6].

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 2018 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
[6]San Perdo Bay Ports Emissions Inventory Methodology Report, Version 1 – 2019 (April 2019), *www.polb.com/environment/air/emissions.asp*

Emission Estimates

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

Table 4.1: 2018 CHE Emissions by Terminal Type, tons and metric tons

Terminal Type	PM_{10} 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	10
Break-Bulk	0.3	0.2	0.2	8.5	0.0	10.6	1.0	3,124
Container	3.7	3.3	2.9	311.2	1.4	571.7	31.2	116,336
Cruise	0.1	0.1	0.0	1.3	0.0	31.4	0.4	560
Dry Bulk	0.1	0.1	0.1	4.9	0.0	7.5	1.4	519
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	9.4	0.2	1,175
Total	**4.2**	**3.8**	**3.3**	**327.1**	**1.4**	**631.8**	**34.3**	**121,766**

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: 2018 CHE Emissions by Equipment Type, tons and metric tons

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	0.2	0.1	95
Cone vehicle	Diesel	0.0	0.0	0.0	0.6	0.0	0.9	0.1	105
Crane	Diesel	0.0	0.0	0.0	0.1	0.0	0.1	0.0	18
Excavator	Diesel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Forklift	Diesel	0.1	0.1	0.1	8.0	0.0	11.5	0.8	1,946
Forklift	Gasoline	0.0	0.0	0.0	0.5	0.0	6.4	0.2	181
Forklift	Propane	0.1	0.1	0.0	5.9	0.0	35.2	1.8	858
Loader	Diesel	0.1	0.1	0.1	1.8	0.0	4.2	0.5	1,839
Man lift	Diesel	0.0	0.0	0.0	0.2	0.0	0.3	0.0	46
Man lift	Gasoline	0.0	0.0	0.0	0.0	0.0	0.1	0.0	52
Material handler	Diesel	0.0	0.0	0.0	1.2	0.0	0.3	0.1	139
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	85
RTG crane	Diesel	0.5	0.5	0.5	66.5	0.1	16.6	3.9	7,676
Side handler	Diesel	0.0	0.0	0.0	2.0	0.0	0.5	0.1	225
Skid steer loader	Diesel	0.0	0.0	0.0	0.1	0.0	0.2	0.0	24
Sweeper	Diesel	0.0	0.0	0.0	0.9	0.0	0.7	0.1	294
Sweeper	Propane	0.0	0.0	0.0	0.1	0.0	0.3	0.0	19
Top handler	Diesel	1.3	1.2	1.3	170.5	0.5	100.2	17.2	46,766
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	16.6	0.3	180
Truck	Diesel	0.2	0.2	0.2	3.7	0.0	2.0	0.4	930
Yard tractor	Diesel	1.0	0.9	1.0	59.3	0.7	135.9	8.6	52,386
Yard tractor	Gasoline	0.7	0.6	0.0	4.1	0.1	299.3	0.4	7,934
Yard tractor	Propane	0.0	0.0	0.0	0.0	0.0	0.1	0.0	17
Total		**4.2**	**3.8**	**3.3**	**327.1**	**1.4**	**631.8**	**34.3**	**121,766**

Operational Profiles

Table 4.3 is a summary of all the CHE engines by fuel type, including electric equipment. In 2018, there were a total of 1,391 CHE of which 14% are electric, 69% are diesel-powered, 9% are powered by propane engines and 8% are powered by gasoline engines. The 197 pieces of electric equipment are listed in Table 4.4.

Table 4.3: 2018 CHE Engines by Fuel Type

Equipment	Electric	Propane	Gasoline	Diesel	Total
Forklift	9	104	24	106	243
RTG crane	0	0	0	59	59
Side handler	0	0	0	8	8
Top handler	0	0	0	182	182
Yard tractor	0	2	92	547	641
Sweeper	1	7	0	8	16
Other	187	6	2	47	242
Total	**197**	**119**	**118**	**957**	**1,391**
Percent of Total	**14%**	**9%**	**8%**	**69%**	

Table 4.4: 2018 Electric Equipment Count

Equipment	2018 Electric Count
AGV	56
ASC	47
Crane	6
Electric pallet jack	2
Forklift	9
Material handler	1
Miscellaneous	3
Ship to shore crane	66
Sweeper	1
Truck	6
Total	**197**

Table 4.5 summarizes the fossil fueled (i.e. diesel, gasoline, and propane) CHE data collected for the 2018 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. Defaults were used for 0.3% of model year values, 5% of horsepower values, and 2% of operating hour values.

Table 4.5: 2018 Engine Characteristics for Fossil Fueled 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	1	200	200	200	2004	2004	2004	1,500	1,500	1,500
Cone vehicle	Diesel	5	35	35	35	2016	2016	2016	1,802	2,423	2,063
Crane	Diesel	2	173	334	254	1985	2016	2000	30	358	194
Excavator	Diesel	2	322	371	347	2002	2005	2003	na	na	na
Forklift	Diesel	106	50	220	134	1990	2018	2010	8	4,765	743
Hybrid RTG crane	Diesel	15	250	250	250	2016	2016	2016	0	2,561	1,564
Loader	Diesel	11	50	420	335	1985	2017	2011	250	2,262	1,517
Man Lift	Diesel	8	55	100	71	2008	2017	2012	15	684	265
Material handler	Diesel	2	371	717	544	2005	2008	2006	20	1,065	543
Miscellaneous	Diesel	2	13	13	13	2010	2010	2010	229	743	486
Rail pusher	Diesel	3	150	260	202	2013	2013	2013	58	940	394
RTG crane	Diesel	44	515	1,043	711	1998	2013	2006	187	3,653	2,073
Side handler	Diesel	8	205	205	205	2000	2011	2004	76	969	404
Skid steer loader	Diesel	2	67	67	67	2011	2015	2013	557	557	557
Sweeper	Diesel	8	75	210	172	2002	2018	2011	0	2,189	501
Top handler	Diesel	182	174	388	333	1979	2018	2010	0	4,796	2,252
Tractor	Diesel	1	59	59	59	2009	2009	2009	80	80	80
Truck	Diesel	8	177	525	317	1998	2018	2009	0	2,567	1,044
Yard tractor	Diesel	547	135	250	220	2007	2018	2012	0	5,918	1,918
Forklift	Gasoline	24	59	72	64	2002	2016	2012	185	1,337	503
Man Lift	Gasoline	2	82	82	82	2000	2004	2002	19	38	29
Yard tractor	Gasoline	92	335	335	335	2011	2018	2012	0	1,492	892
Forklift	Propane	104	45	141	88	1985	2018	2005	0	2,181	516
Miscellaneous	Propane	1	na	na	na	1998	1998	1998	na	na	na
Sweeper	Propane	7	47	135	88	1982	2016	2005	4	200	75
Tractor	Propane	5	101	101	101	1996	1997	1996	15	1,248	963
Yard tractor	Propane	2	173	173	173	2009	2009	2009	151	214	183
Total		**1,194**									

Table 4.6 is a summary of the emission reduction technologies[7] utilized in cargo handling equipment as retrofits to existing equipment, including diesel oxidation catalysts (DOC), diesel particulate filters (DPF), and BlueCAT retrofit for large-spark ignition (LSI) engines. In 2018, there were no longer any pieces of equipment with DOCs because the older pieces of equipment equipped with DOCs were completely phased out of the terminal fleets and replaced by cleaner equipment.

Table 4.6: 2018 CHE Emission Reduction Technologies by Equipment Type

Equipment	DOC Retrofit	On-Road Engines	ULSD Fuel	DPF Retrofit	BlueCAT Retrofit
Forklift	0	0	106	43	11
RTG crane	0	0	59	23	0
Side handler	0	0	8	7	0
Top handler	0	0	182	57	0
Yard tractor	0	359	547	0	0
Sweeper	0	0	8	0	0
Other	0	5	47	5	5
Total	**0**	**364**	**957**	**135**	**16**

Table 4.7 summarizes the distribution of diesel-powered CHE equipped with off-road diesel engines by USEPA non-road engine emission standards tier level. The table also includes on-road diesel engines. On-road engines are generally lower in emissions than the off-road engines of the same model year.

Table 4.7: 2018 Count of Diesel-Powered CHE by Type and Engine Emission 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	187	359	547
Forklift	16	4	6	18	18	14	30	0	106
Top handler	17	1	10	30	13	61	50	0	182
Other	4	2	1	4	6	7	18	5	47
RTG crane	1	0	25	2	0	16	15	0	59
Side handler	0	0	3	2	2	1	0	0	8
Sweeper	0	0	1	2	1	0	4	0	8
Total	**38**	**7**	**46**	**58**	**40**	**100**	**304**	**364**	**957**
Percent of Total	**4%**	**1%**	**5%**	**6%**	**4%**	**10%**	**32%**	**38%**	

[7] *www.arb.ca.gov/diesel/verdev/vt/cvt.htm*

Table 4.8 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. In 2018, 80% of the energy consumed was by equipment with Tier 4i, Tier 4f, and on-road engines.

Table 4.8: Equipment Energy Consumption by Engine Type and Diesel Engine Standard, kW-hr and %

Engine Type	Engine Tier	kW-hr	% of Total
Diesel	Tier 0	46,188	0.03%
Diesel	Tier 1	8,497,903	5%
Diesel	Tier 2	9,873,864	6%
Diesel	Tier 3	3,895,704	2%
Diesel	Tier 4i	27,332,921	18%
Diesel	Tier 4f	51,681,991	33%
Diesel	Onroad	45,328,717	29%
Gasoline		8,177,134	5%
Propane		1,185,673	1%
Total		**156,020,093**	**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 (boxcar) 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 2018 emissions from rail locomotives closely follows the methodology as described in Section 5 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019) [8].

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 nor end at a Port property, such as east-bound line hauls that initiate in central Los Angeles intermodal yards. Figure 1.1 in Section 1 of this report illustrates the geographical domain.

[8]San Perdo Bay Ports Emissions Inventory Methodology Report, Version 1 – 2019 (April 2019), *www.polb.com/environment/air/emissions.asp*

Data and Information Acquisition

Information from the following general sources was used to estimate emissions associated with Port-related activities of locomotives:

- 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

The Port continues to use the most recent, locally specific data available, including MOU compliance data reflective of actual recent line haul fleet mix characteristics in the SoCAB. In addition, PHL has been providing fuel consumption information for each locomotive in service in each calendar year, along with the engine tier levels of the locomotives. Table 6.1 lists the number of locomotives of each tier level that were operated in 2018, and the percentage of fuel used by locomotives in each tier. Discussion of the tiers and a list of tier-specific emission factors are included in Section 5 of the San Pedro Bay Ports Emissions Inventory Methodology Report Version 1 (2019).

Table 5.1: PHL Switching Fleet Mix, 2018

Locomotive Tier Level /Power Type	Count	% of Fuel Consumed
Genset	6	11%
Tier 3	1	2%
Tier 3+	18	86%
Tier 4	1	1%
Totals	**26**	**100%**

Emission Estimates

A summary of estimated emissions from locomotive operations related to the Port is presented in Tables 5.2.

Table 5.2: 2018 Locomotive Emissions, tons and metric tons

Activity Component	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
On-Port Emissions								
Switching	0.5	0.4	0.5	29.2	0.0	10.0	1.7	3,413
Line Haul	6.5	6.1	6.5	168.5	0.2	39.4	9.8	13,916
On-Port Subtotal	6.9	6.6	6.9	197.7	0.2	49.4	11.5	17,329
Off-Port (Regional) Emissions								
Switching	0.1	0.1	0.1	3.9	0.0	1.8	0.0	619
Line Haul	16.0	15.2	16.0	416.9	0.4	97.4	24.3	34,434
Off-Port Subtotal	16.0	15.3	16.0	420.9	0.4	99.2	24.4	35,053
Total	**23.0**	**21.9**	**23.0**	**619**	**0.6**	**148.5**	**35.9**	**52,382**

Operational Profiles

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

Table 5.3 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 5.48 g/bhp-hr.[9] The 2017 reports were used instead of the 2018 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 but are not used in developing the line haul emission factors because the ULELs are believed to all be in switching service.

[9]Notes from railroads' MOU compliance submissions:
1. For more information on the U.S. EPA locomotive emission standards please visit. *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 5.3: CARB MOU Compliance Data, Megawatt-hours (MW-hr) and g NO_x/bhp-hr

Engine Tier	Number of Locomotives	Megawatt-hours (MW-hr)	%MW-hr by Tier Level	Wt'd Avg NOx (g/bhp-hr)	Tier Contribution to Fleet Average (g/bhp-hr)
BNSF					
Pre-Tier 0	196	1,826	0.6%	13.0	0.08
Tier 0	152	6,880	2.4%	7.7	0.19
Tier 1	1,403	109,907	39%	6.1	2.36
Tier 2	1,392	89,654	32%	4.9	1.55
Tier 3	1,168	63,666	22%	4.7	1.05
Tier 4	255	12,391	4.4%	1	0.04
ULEL	0	0	0%	-	-
Total BNSF	**4,566**	**284,324**	**100%**		**5.3**
UP					
Pre-Tier 0	55	323	0.2%	11.0	0.02
Tier 0	1,726	40,951	22.6%	7.8	1.76
Tier 1	1,891	40,549	22%	6.5	1.46
Tier 2	1,479	53,247	29%	4.9	1.44
Tier 3	817	38,386	21%	4.9	1.04
Tier 4	100	5,430	3.0%	1.1	0.03
ULEL	39	2,207	1%	2.6	0.03
Total UP	**6,107**	**181,093**	**100%**		**5.8**
		ULEL Credit Used			0.3
		UP Fleet Average			**5.5**
Both RRs, excluding ULELs and ULEL credits					
Pre-Tier 0	251	2,149	0%	12.7	0.06
Tier 0	1,878	47,831	10%	7.8	0.80
Tier 1	3,294	150,456	32%	6.2	2.02
Tier 2	2,871	142,901	31%	4.9	1.51
Tier 3	1,985	102,052	22%	4.8	1.05
Tier 4	355	17,821	3.85%	1.0	0.040
Total both	**10,634**	**463,210**	**96%**		**5.48**

Emission factors for particulate matter (PM_{10}, $PM_{2.5}$, and DPM), HC, and CO were calculated using the tier-specific emission rates for those pollutants published by USEPA[10] to develop weighted average emission factors using the MW-hr figures provided in the railroads' submissions. These results are presented in Table 5.4.

Table 5.4: Fleet MW-hr and PM, HC, CO Emission Factors, g/hp-hr

Engine Tier	MW-hr	% of MW-hr	EPA Tier-specific			Fleet Composite		
			PM_{10}	HC	CO	PM_{10}	HC	CO
			g/hp-hr			g/hp-hr		
Pre-Tier 0	2,149	0%	0.32	0.48	1.28	0.00	0.00	0.01
Tier 0	47,831	10%	0.32	0.48	1.28	0.03	0.05	0.13
Tier 1	150,456	32%	0.32	0.47	1.28	0.10	0.15	0.42
Tier 2	142,901	31%	0.18	0.26	1.28	0.06	0.08	0.40
Tier 3	102,052	22%	0.08	0.13	1.28	0.02	0.03	0.28
Tier 4	17,821	3.85%	0.015	0.04	1.28	0.00	0.00	0.05
Total	**463,210**	**100%**				**0.21**	**0.32**	**1.28**

Emission factors for $PM_{2.5}$ and DPM were calculated as fractions of PM_{10}, with $PM_{2.5}$ calculated as 94% of PM_{10} consistent with CARB methodology and DPM equal to PM_{10} 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 5.5 summarizes the emission factors for line haul locomotives, presented in units of g/bhp-hr.

Table 5.5: Emission Factors for Line Haul Locomotives, g/bhp-hr

	PM_{10}	$PM_{2.5}$	DPM	NO_x	SO_x	CO	HC	CO_2	N_2O	CH_4
EF, g/bhp-hr	0.21	0.20	0.21	5.48	0.005	1.28	0.32	494	0.013	0.04

[10]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 San Pedro Bay Ports Emissions Inventory Methodology Report[11], 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 2018 is summarized in Table 5.6.

Table 5.6: 2018 Estimated On-Port Line Haul Locomotive Activity

Activity Measure	Inbound	Outbound	Total
Trains per Year	2,167	2,454	4,621
Locomotives per Train	3	3	N/A
Hours on Port per Trip	1	2.5	N/A
Locomotive Hours per Year	6,501	18,405	24,906

Out-of-Port Line Haul Activity

Table 5.7 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 5.7: 2018 Gross Ton-Mile, Fuel Use, and Horsepower-hour Estimate

	Distance miles	Trains per year	MMGT per year	MMGT-miles per year
Alameda Corridor	21	4,532	33	693
Central LA to Air Basin Boundary	84	4,532	33	2,772
Million gross ton-miles				**3,465**
Estimated gallons of fuel (millions)				**3.48**
Estimated million horsepower-hours				**72.4**

[11]San Perdo Bay Ports Emissions Inventory Methodology Report, Version 1 – 2019 (April 2019), *www.polb.com/environment/air/emissions.asp*

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 2018, 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 2018 emissions from HDVs is described in Section 6 of the San Pedro Bay Ports Emissions Inventory Methodology Report[12].

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 (POLA). 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.

[12]San Perdo Bay Ports Emissions Inventory Methodology Report, Version 1 – 2019 (April 2019), *www.polb.com/environment/air/emissions.asp*

Data and Information Acquisition

Information regarding the activity of trucks while they are on terminal, such as average times and distances traveled through the terminal, 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: 2018 HDV Emissions, tons and metric tons

Activity Location	Vehicle Miles Traveled	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
On-Terminal	2,722,644	0.2	0.2	0.2	119	0.3	76.6	6.1	25,608
On-Road	172,456,050	7.2	6.9	6.9	1,032	2.8	79.1	20.7	282,769
Total	**175,178,694**	**7.4**	**7.1**	**7.1**	**1,151**	**3.1**	**155.7**	**26.8**	**308,378**

Table 6.2: 2018 HDV Emissions Associated with Container Terminals, tons and metric tons

Activity Location	Vehicle Miles Traveled	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
On-Terminal	2,680,253	0.2	0.2	0.2	118	0.3	75.7	6.0	25,278
On-Road	164,087,583	6.8	6.5	6.6	981	2.7	75.3	19.7	269,048
Total	**166,767,836**	**7.0**	**6.7**	**6.8**	**1,099**	**2.9**	**151.0**	**25.7**	**294,326**

Table 6.3: 2018 HDV Emissions Associated with Non-Container Port Terminals, tons and metric tons

Activity Location	Vehicle Miles Traveled	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
On-Terminal	42,392	0.0	0.0	0.0	2	0.0	0.9	0.1	330
On-Road	8,368,467	0.3	0.3	0.3	50	0.1	3.8	1.0	13,721
Total	**8,410,858**	**0.4**	**0.3**	**0.3**	**52**	**0.1**	**4.7**	**1.1**	**14,051**

Operational Profiles

To estimate the 2018 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 2018 is presented in Figure 6.1. The call weighted average age of the trucks in 2018 was approximately 7 years.

Figure 6.1: 2018 Model Year Distribution of HDV Fleet

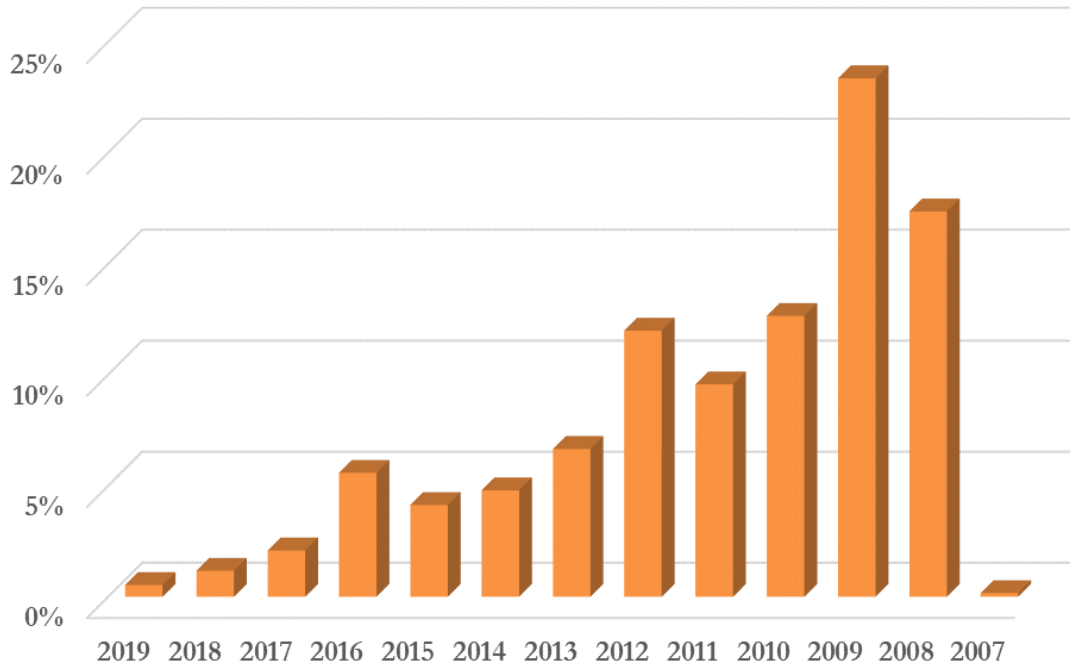


Table 6.4 shows the range and average of reported operating characteristics of on-terminal truck activities at Port container terminals, while Table 6.5 shows the same summary data for non-container terminals and facilities.

Table 6.4: 2018 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: 2018 Summary of Reported Non-Container Facility Operating Characteristics

	Speed (mph)	Distance (miles)	Gate In (hours)	Unload/Load (hours)	Gate Out (hours)
Maximum	10	0.5	0.08	0.50	0.08
Minimum	0	0.0	0.00	0.00	0.00
Average	6	0.2	0.01	0.08	0.01

In 2018, a total 3,541,352 truck calls were associated with container terminals and 287,714 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 2018, totaling approximately 109,000 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: 2018 Estimated On-Terminal VMT and Idling Hours by Terminal

Terminal Type	Total Miles Traveled	Total Hours Idling (all trips)
Container	1,089,714	915,360
Container	484,060	376,491
Container	329,838	105,548
Container	296,031	343,396
Container	269,843	555,876
Container	210,767	210,767
Auto	5,656	9,721
Break Bulk	3,566	2,995
Break Bulk	3,000	960
Break Bulk	1,500	0
Break Bulk	400	80
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	3,060	8,670
Other	2,250	0
Total	**2,722,644**	**2,535,685**

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

Table 6.7: 2018 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_2O	CH_4	Units
0 (Idle)	0.0038	0.0037	0.0037	26.4429	0.0538	22.6205	1.0346	5,728	0.8892	0.0609	g/hr
5	0.0636	0.0608	0.0610	15.7788	0.0358	4.7498	1.1386	3,788	0.5954	0.0670	g/mi
10	0.0571	0.0546	0.0548	13.2144	0.0308	3.5933	0.8952	3,260	0.5124	0.0527	g/mi
15	0.0486	0.0465	0.0467	10.3284	0.0252	2.3952	0.6130	2,670	0.4197	0.0361	g/mi
20	0.0432	0.0413	0.0414	8.5930	0.0219	1.7049	0.4384	2,320	0.3646	0.0258	g/mi
25	0.0395	0.0378	0.0379	7.4850	0.0196	1.2608	0.3233	2,071	0.3255	0.0190	g/mi
30	0.0372	0.0356	0.0358	6.6607	0.0177	0.9392	0.2407	1,878	0.2952	0.0142	g/mi
35	0.0361	0.0345	0.0347	6.0227	0.0163	0.6986	0.1797	1,729	0.2718	0.0106	g/mi
40	0.0360	0.0344	0.0345	5.5501	0.0153	0.5202	0.1350	1,618	0.2543	0.0079	g/mi
45	0.0367	0.0351	0.0353	5.2288	0.0146	0.3902	0.1026	1,540	0.2421	0.0060	g/mi
50	0.0384	0.0367	0.0368	5.0526	0.0141	0.2986	0.0797	1,495	0.2350	0.0047	g/mi
55	0.0408	0.0391	0.0392	5.0183	0.0140	0.2378	0.0640	1,480	0.2326	0.0038	g/mi
60	0.0446	0.0427	0.0428	5.1744	0.0142	0.2218	0.0598	1,507	0.2369	0.0035	g/mi
65	0.0495	0.0474	0.0475	5.5264	0.0149	0.2383	0.0637	1,574	0.2475	0.0037	g/mi
70	0.0495	0.0474	0.0475	5.5433	0.0149	0.2446	0.0642	1,574	0.2475	0.0038	g/mi

SECTION 7 SUMMARY OF 2018 EMISSION RESULTS

The Port of Long Beach 2018 Air Emissions Inventory results are presented in this section. Table 7.1 summarizes the 2018 air emissions associated with the goods movement-related sources at the Port, by category.

Table 7.1: 2018 Emissions by Source Category, tons and metric tons

Category	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e MT
Ocean-going vessels	85	80	63	4,169	213	341	151	297,800
Harbor craft	23	21	23	682	1	483	73	55,364
Cargo handling equipment	4	4	3	327	1	632	34	121,766
Locomotives	23	22	23	619	1	149	36	52,382
Heavy-duty vehicles	7	7	7	1,151	3	156	27	308,378
Total	**143**	**134**	**120**	**6,948**	**219**	**1,760**	**321**	**835,689**

Table 7.2: 2018 Emissions Percent Contributions by Source Category

Source Category	DPM		NO_x		SO_x		CO_2e	
	tons	%	tons	%	tons	%	MT	%
Ocean-going vessels	63	53%	4,169	60%	213.2	97.4%	297,800	36%
Harbor craft	23	19%	682	10%	0.6	0.3%	55,364	7%
Cargo handling equipment	3	3%	327	5%	1.4	0.7%	121,766	15%
Rail locomotives	23	19%	619	9%	0.6	0.3%	52,382	6%
Heavy-duty vehicles	7	6%	1,151	17%	3.1	1.4%	308,378	37%
Total	**120**	**100%**	**6,948**	**100%**	**218.9**	**100.0%**	**835,689**	**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: 2018 PM_{10} Emissions in the South Coast Air Basin, %

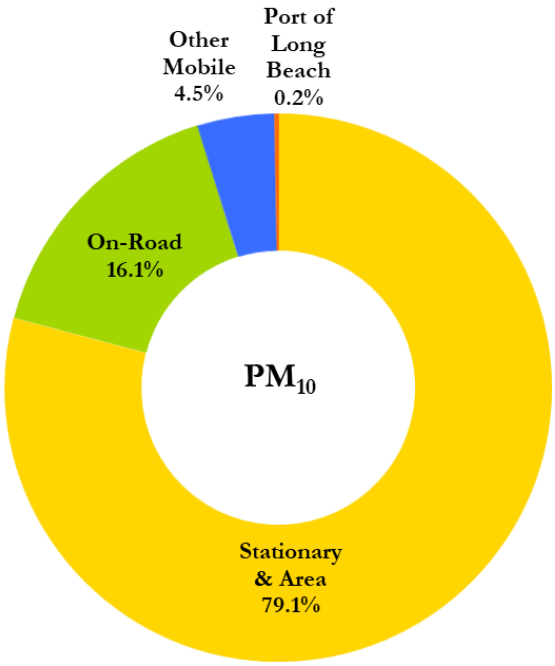


Figure 7.2: 2018 $PM_{2.5}$ Emissions in the South Coast Air Basin, %

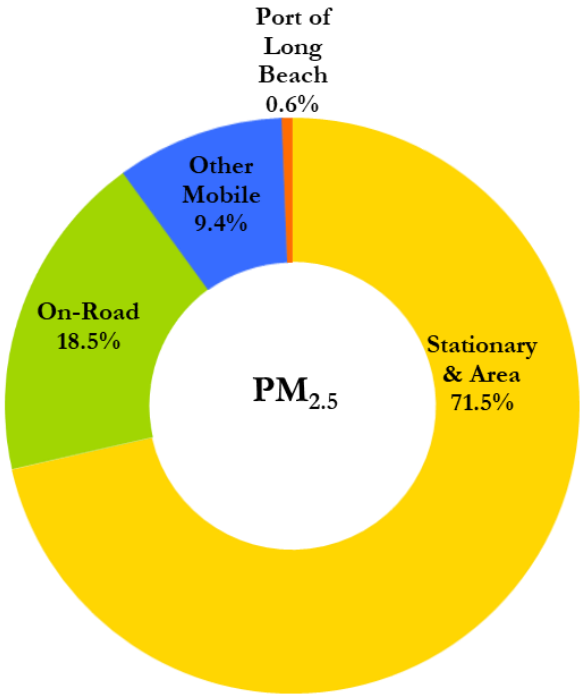


Figure 7.3: 2018 DPM Emissions in the South Coast Air Basin, %

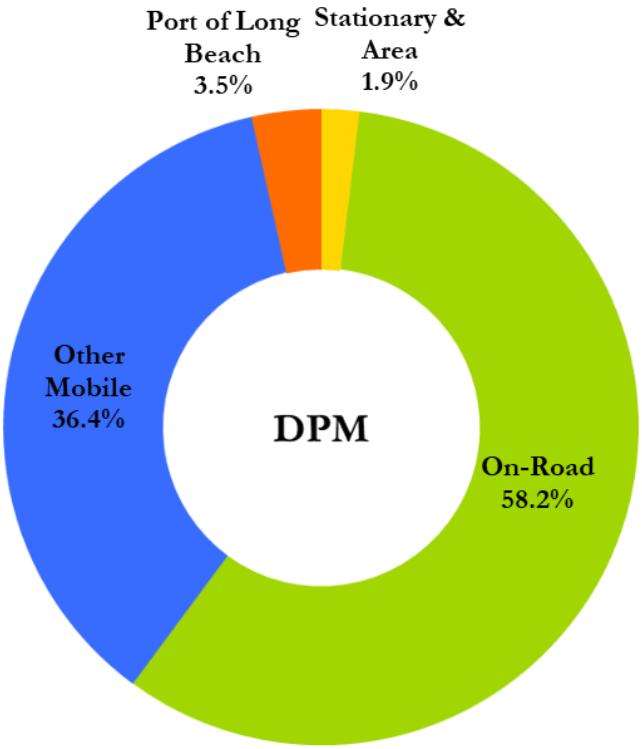


Figure 7.4: 2018 NO_x Emissions in the South Coast Air Basin, %

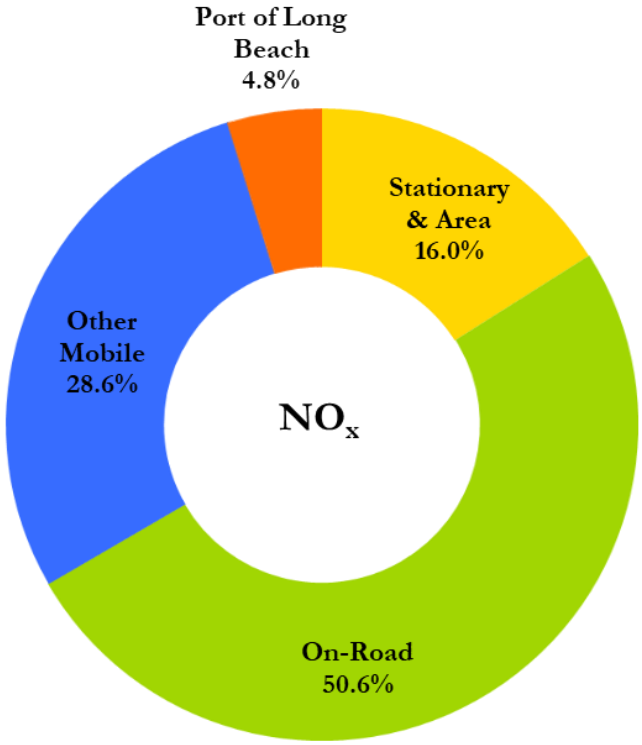
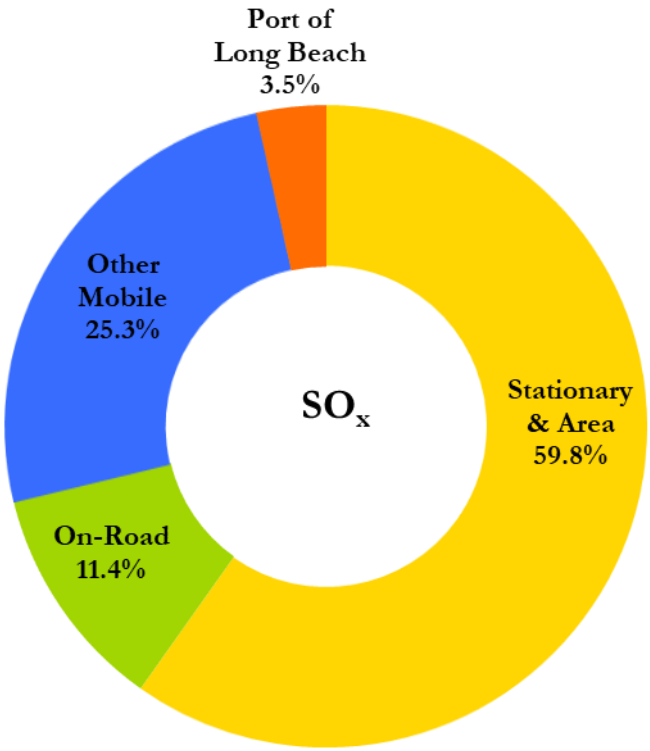


Figure 7.5: 2018 SO_x Emissions in the South Coast Air Basin, %



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 2018 SoCAB emissions are based on the 2016 AQMP Appendix III[13], except for the SoCAB on-road emission estimates which were updated to take into consideration EMFAC2017[14]. Thus, the 2018 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 PM_{10} and $PM_{2.5}$ emissions do not include brake and tire wear emissions similar to the Port's HDV emissions.

[13]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.
[14]ARB, *www.arb.ca.gov/emfac/*

Table 7.3: 2018 PM_{10} Emissions Contribution, tons and %

Category	Subcategory	PM_{10}	Percent PM_{10} Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	3	3%	2%	0.01%
OGV	Bulk vessel	5	6%	4%	0.01%
OGV	Containership	28	33%	20%	0.05%
OGV	Cruise	10	12%	7%	0.02%
OGV	General cargo	1	1%	1%	0.00%
OGV	Ocean tugboat	0	0%	0%	0.00%
OGV	Miscellaneous	4	5%	3%	0.01%
OGV	RoRo	1	1%	0%	0.00%
OGV	Tanker	32	38%	23%	0.06%
OGV	**Subtotal**	**85**	**100%**	**60%**	**0.15%**
Harbor Craft	Assist tug	7	29%	5%	0.01%
Harbor Craft	Harbor tug	2	7%	1%	0.00%
Harbor Craft	Ferry	5	23%	4%	0.01%
Harbor Craft	Ocean tugboat	6	26%	4%	0.01%
Harbor Craft	Government	1	5%	1%	0.00%
Harbor Craft	Excursion	1	3%	1%	0.00%
Harbor Craft	Crewboat	1	6%	1%	0.00%
Harbor Craft	Work boat	0	0%	0%	0.00%
Harbor Craft	**Subtotal**	**23**	**100%**	**16%**	**0.04%**
CHE	RTG crane	1	13%	0%	0.00%
CHE	Forklift	0	6%	0%	0.00%
CHE	Top handler, side pick	1	32%	1%	0.00%
CHE	Other	0	9%	0%	0.00%
CHE	Yard tractor	2	41%	1%	0.00%
CHE	**Subtotal**	**4**	**100%**	**3%**	**0.01%**
Locomotives	Switching	1	2%	0%	0.00%
Locomotives	Line haul	22	98%	16%	0.04%
Locomotives	**Subtotal**	**23**	**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**	**143**		**100%**	**0.2%**
SoCAB AQMP	**Total**	**57,887**			

Table 7.4: 2018 $PM_{2.5}$ Emissions Contribution, tons and %

Category	Subcategory	$PM_{2.5}$	Percent $PM_{2.5}$ Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	3	3%	2%	0.01%
OGV	Bulk vessel	5	6%	4%	0.02%
OGV	Containership	27	33%	20%	0.11%
OGV	Cruise	9	12%	7%	0.04%
OGV	General cargo	1	1%	1%	0.00%
OGV	Ocean tugboat	0	0%	0%	0.00%
OGV	Miscellaneous	4	5%	3%	0.02%
OGV	RoRo	1	1%	0%	0.00%
OGV	Tanker	30	38%	23%	0.13%
OGV	**Subtotal**	**80**	**100%**	**60%**	**0.34%**
Harbor Craft	Assist tug	6	29%	5%	0.03%
Harbor Craft	Harbor tug	2	8%	1%	0.01%
Harbor Craft	Ferry	5	23%	4%	0.02%
Harbor Craft	Ocean tugboat	6	26%	4%	0.02%
Harbor Craft	Government	1	5%	1%	0.00%
Harbor Craft	Excursion	1	3%	1%	0.00%
Harbor Craft	Crewboat	1	6%	1%	0.01%
Harbor Craft	Work boat	0	0%	0%	0.00%
Harbor Craft	**Subtotal**	**21**	**100%**	**16%**	**0.09%**
CHE	RTG crane	0	13%	0%	0.00%
CHE	Forklift	0	6%	0%	0.00%
CHE	Top handler, side pick	1	32%	1%	0.01%
CHE	Other	0	9%	0%	0.00%
CHE	Yard tractor	2	40%	1%	0.01%
CHE	**Subtotal**	**4**	**100%**	**3%**	**0.02%**
Locomotives	Switching	1	2%	0%	0.00%
Locomotives	Line haul	21	98%	16%	0.09%
Locomotives	**Subtotal**	**22**	**100%**	**16%**	**0.09%**
HDV	On-Terminal	0.2	3%	0%	0.00%
HDV	On-road	6.9	97%	5%	0.03%
HDV	**Subtotal**	**7**	**100%**	**5%**	**0.03%**
Port	**Total**	**134**		**100%**	**0.6%**
SoCAB AQMP	**Total**	**23,672**			

Table 7.5: 2018 DPM Emissions Contribution, tons and %

Category	Subcategory	DPM	Percent DPM Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	3	4%	2%	0.1%
OGV	Bulk vessel	5	7%	4%	0.1%
OGV	Containership	22	35%	19%	0.7%
OGV	Cruise	9	15%	8%	0.3%
OGV	General cargo	1	2%	1%	0.0%
OGV	Ocean tugboat	0	0%	0%	0.0%
OGV	Miscellaneous	4	6%	3%	0.1%
OGV	RoRo	0	0%	0%	0.0%
OGV	Tanker	19	31%	16%	0.6%
OGV	**Subtotal**	**63**	**100%**	**53%**	**1.9%**
Harbor Craft	Assist tug	7	29%	6%	0.2%
Harbor Craft	Harbor tug	2	8%	1%	0.1%
Harbor Craft	Ferry	5	23%	4%	0.2%
Harbor Craft	Ocean tugboat	6	26%	5%	0.2%
Harbor Craft	Government	1	5%	1%	0.0%
Harbor Craft	Excursion	1	3%	1%	0.0%
Harbor Craft	Crewboat	1	6%	1%	0.0%
Harbor Craft	Work boat	0	0%	0%	0.0%
Harbor Craft	**Subtotal**	**23**	**100%**	**19%**	**0.7%**
CHE	RTG crane	1	16%	0%	0.0%
CHE	Forklift	0	4%	0%	0.0%
CHE	Top handler, side pick	1	39%	1%	0.0%
CHE	Other	0	10%	0%	0.0%
CHE	Yard tractor	1	30%	1%	0.0%
CHE	**Subtotal**	**3**	**100%**	**3%**	**0.1%**
Locomotives	Switching	1	2%	0%	0.0%
Locomotives	Line haul	22	98%	19%	0.7%
Locomotives	**Subtotal**	**23**	**100%**	**19%**	**0.7%**
HDV	On-Terminal	0.2	3%	0%	0.0%
HDV	On-road	6.9	97%	6%	0.2%
HDV	**Subtotal**	**7**	**100%**	**6%**	**0.2%**
Port	**Total**	**120**		**100%**	**3.5%**
SoCAB AQMP	**Total**	**3,415**			

Table 7.6: 2018 NO_x Emissions Contribution, tons and %

Category	Subcategory	NO_x	Percent NO_x Emissions of Total		
			Category	Port	SoCAB AQMP
OGV	Auto carrier	164	4%	2%	0.1%
OGV	Bulk vessel	276	7%	4%	0.2%
OGV	Containership	1,770	42%	25%	1.2%
OGV	Cruise	494	12%	7%	0.3%
OGV	General cargo	55	1%	1%	0.0%
OGV	Ocean tugboat	4	0%	0%	0.0%
OGV	Miscellaneous	212	5%	3%	0.1%
OGV	RoRo	10	0%	0%	0.0%
OGV	Tanker	1,183	28%	17%	0.8%
OGV	**Subtotal**	**4,169**	**100%**	**60%**	**2.9%**
Harbor Craft	Assist tug	193	28%	3%	0.1%
Harbor Craft	Harbor tug	48	7%	1%	0.0%
Harbor Craft	Ferry	155	23%	2%	0.1%
Harbor Craft	Ocean tugboat	174	26%	3%	0.1%
Harbor Craft	Government	44	6%	1%	0.0%
Harbor Craft	Excursion	23	3%	0%	0.0%
Harbor Craft	Crewboat	43	6%	1%	0.0%
Harbor Craft	Work boat	2	0%	0%	0.0%
Harbor Craft	**Subtotal**	**682**	**100%**	**10%**	**0.5%**
CHE	RTG crane	67	20%	1%	0.0%
CHE	Forklift	14	4%	0%	0.0%
CHE	Top handler, side pick	172	53%	2%	0.1%
CHE	Other	10	3%	0%	0.0%
CHE	Yard tractor	63	19%	1%	0.0%
CHE	**Subtotal**	**327**	**100%**	**5%**	**0.2%**
Locomotives	Switching	33	5%	0%	0.0%
Locomotives	Line haul	585	95%	8%	0.4%
Locomotives	**Subtotal**	**619**	**100%**	**9%**	**0.4%**
HDV	On-Terminal	119	10%	2%	0.1%
HDV	On-road	1,032	90%	15%	0.7%
HDV	**Subtotal**	**1,151**	**100%**	**17%**	**0.8%**
Port	**Total**	**6,948**		**100%**	**4.8%**
SoCAB AQMP	**Total**	**144,883**			

Table 7.7: 2018 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	12	6%	5%	0%
OGV	Containership	70	33%	32%	1%
OGV	Cruise	19	9%	9%	0%
OGV	General cargo	2	1%	1%	0%
OGV	Ocean tugboat	0	0%	0%	0%
OGV	Miscellaneous	8	4%	4%	0%
OGV	RoRo	3	1%	1%	0%
OGV	Tanker	93	43%	42%	1%
OGV	**Subtotal**	**213**	**100%**	**97.4%**	**3%**
Harbor Craft	Assist tug	0.18	29%	0%	0%
Harbor Craft	Harbor tug	0.04	7%	0%	0%
Harbor Craft	Ferry	0.15	23%	0%	0%
Harbor Craft	Ocean tugboat	0.14	23%	0%	0%
Harbor Craft	Government	0.05	8%	0%	0%
Harbor Craft	Excursion	0.02	3%	0%	0%
Harbor Craft	Crewboat	0.04	7%	0%	0%
Harbor Craft	Work boat	0.00	0%	0%	0%
Harbor Craft	**Subtotal**	**1**	**100%**	**0%**	**0%**
CHE	RTG crane	0.1	6%	0%	0%
CHE	Forklift	0.0	2%	0%	0%
CHE	Top handler, side pick	0.5	37%	0%	0%
CHE	Other	0.0	3%	0%	0%
CHE	Yard tractor	0.8	53%	0%	0%
CHE	**Subtotal**	**1**	**100%**	**1%**	**0%**
Locomotives	Switching	0.0	7%	0%	0%
Locomotives	Line haul	0.5	93%	0%	0%
Locomotives	**Subtotal**	**1**	**100%**	**0%**	**0%**
HDV	On-Terminal	0.3	8%	0%	0%
HDV	On-road	2.8	92%	1%	0%
HDV	**Subtotal**	**3**	**100%**	**1%**	**0%**
Port	**Total**	**219**		**100%**	**3.5%**
SoCAB AQMP	**Total**	**6,322**			

Table 7.8: 2018 CO_2e Emissions Contribution, metric tons and %

Category	Subcategory	CO_2e	Percent Emissions of Total	
			Category	Port
OGV	Auto carrier	7,710	3%	1%
OGV	Bulk vessel	16,680	6%	2%
OGV	Containership	97,876	33%	12%
OGV	Cruise	26,849	9%	3%
OGV	General cargo	3,262	1%	0%
OGV	Ocean tugboat	232	0%	0%
OGV	Miscellaneous	11,450	4%	1%
OGV	RoRo	4,294	1%	1%
OGV	Tanker	129,446	43%	15%
OGV	**Subtotal**	**297,800**	**100%**	**36%**
Harbor Craft	Assist tug	15,989	29%	2%
Harbor Craft	Harbor tug	3,806	7%	0%
Harbor Craft	Ferry	12,911	23%	2%
Harbor Craft	Ocean tugboat	12,739	23%	2%
Harbor Craft	Government	4,252	8%	1%
Harbor Craft	Excursion	1,624	3%	0%
Harbor Craft	Crewboat	3,813	7%	0%
Harbor Craft	Work boat	230	0%	0%
Harbor Craft	**Subtotal**	**55,364**	**100%**	**7%**
CHE	RTG crane	7,676	6%	1%
CHE	Forklift	2,985	2%	0%
CHE	Top handler, side pick	46,990	39%	6%
CHE	Other	3,779	3%	0%
CHE	Yard tractor	60,336	50%	7%
CHE	**Subtotal**	**121,766**	**100%**	**15%**
Locomotives	Switching	4,032	8%	0%
Locomotives	Line haul	48,350	92%	6%
Locomotives	**Subtotal**	**52,382**	**100%**	**6%**
HDV	On-Terminal	25,608	8%	3%
HDV	On-road	282,769	92%	34%
HDV	**Subtotal**	**308,378**	**100%**	**37%**
Port	**Total**	**835,689**		**100%**

SECTION 8 COMPARISON OF 2018 AND 2005 FINDINGS AND EMISSION ESTIMATES

This section provides a comparison of the emission estimates for 2018 and 2005 by source category. The baseline year used to compare every annual inventory is 2005. When there was a change in an emissions estimation methodology in 2018, 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: 2005-2018 Port Emissions Comparison by Source Category, tons, metric tons and %

	PM_{10} tons	$PM_{2.5}$ tons	DPM tons	NO_x tons	SO_x tons	CO tons	HC tons	CO_2e 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**
2018								
Ocean-going vessels	85	80	63	4,169	213	341	151	297,800
Harbor craft	23	21	23	682	1	483	73	55,364
Cargo handling equipment	4	4	3	327	1	632	34	121,766
Locomotives	23	22	23	619	1	149	36	52,382
Heavy-duty vehicles	7	7	7	1,151	3	156	27	308,378
Total	**143**	**134**	**120**	**6,948**	**219**	**1,760**	**321**	**835,689**
Change between 2005 and 2018 (percent)								
Ocean-going vessels	-88%	-86%	-90%	-38%	-97%	-37%	-36%	-24%
Harbor craft	-48%	-48%	-48%	-38%	-86%	64%	5%	24%
Cargo handling equipment	-91%	-91%	-93%	-75%	-88%	59%	-47%	17%
Locomotives	-46%	-45%	-46%	-51%	-99%	-17%	-46%	-14%
Heavy-duty vehicles	-96%	-96%	-97%	-78%	-92%	-90%	-92%	-21%
Total	**-87%**	**-85%**	**-87%**	**-56%**	**-97%**	**-40%**	**-57%**	**-16%**

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 2018. Compared to 2005, container throughput is up 21%, while overall containership arrivals to POLB are down 25%. The average number of containers per containership is up 60% which is indicative of larger vessels calling at POLB.

Table 8.2: 2005-2018 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
2018	84,055,094	8,091,025	2,179	1,005	8,051
Change (%)	**7%**	**21%**	**-19%**	**-25%**	**60%**

Table 8.3 presents the total net change in emissions for all source categories in 2018 compared to 2005.

Table 8.3: 2005-2018 Emissions Comparison, tons, metric 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
2018	143	134	120	6,948	219	1,760	321	835,689
Change	**-917**	**-764**	**-825**	**-8,719**	**-6,862**	**-1,171**	**-434**	**-159,143**
Change (%)	**-87%**	**-85%**	**-87%**	**-56%**	**-97%**	**-40%**	**-57%**	**-16%**

The following summarizes the comparison of 2005 and 2018 emissions by source category.

Ocean-Going Vessels

Emissions from OGV were lower in 2018 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. Some of the vessel emission reductions are also due to increased vessel efficiency and utilization due to the deployment of larger container vessels that has resulted in fewer vessel calls. Additionally, industry consolidation and an increase in vessel alliances and sharing agreements has also resulted in better vessel utilization.

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 2018 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 2018 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 2018 as compared to 2005.

Locomotives
Emissions from rail locomotives were lower in 2018 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 2018 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 sources in 2005 and 2018 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. The main engine activity has decreased through the years mainly due to the VSR program while the auxiliary engine activity has decreased due to shore power regulation. The boiler activity increase is due to larger vessels staying longer at berth and no program or regulation to decrease the boiler activity.

Table 8.4: 2005-2018 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
2018	379,061,502	91,364,858	143,797,687	143,898,957
Change (%)	**-25%**	**-40%**	**-37%**	**16%**

The various emission reduction strategies for ocean-going vessels that were in effect in 2018 are listed in Table 8.5. A 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 CARB Vessel At-Berth shore power regulation.

Table 8.5: 2005-2018 OGV Emission Reduction Strategies

	Percent (%) of All Calls					
Year	Fuel Switch Aux Eng	Fuel Switch Main Eng	VSR 20 nm	VSR 40 nm	Shore Power	AMECS
2005	14%	0%	68%	0%	0%	0.0%
2018	100%	100%	96%	91%	48%	0.3%

Table 8.6 summarizes the main engine tier levels for 2005 and 2018. In 2018, for the first time two tanker vessels meeting IMO's Tier III NO_x standards visited the Port. NO_x emissions for Tier III vessels are 75% cleaner than Tier II vessels. The No Tier column represents vessels that do not have diesel engines, such as steamships.

Table 8.6: 2005-2018 OGV Main Engine Tiers

Year	IMO Tier 0	IMO Tier I	IMO Tier II	IMO Tier III	No Tier
2005	54%	42%	0%	0.0%	4%
2018	16%	54%	29%	0.2%	0.2%

Harbor Craft

As shown in Table 8.7, the harbor craft population count operating at the Port decreased by 10%. However, there was a 3% increase in total engine count (most harbor craft are equipped with more than one engine), and a 24% increase in the overall energy consumption (as measured by kilowatt hours) from 2005 to 2018.

Table 8.7: 2005-2018 Harbor Craft Count and Energy Consumption Comparison

Year	Vessel Count	Engine Count	Total kW-hr
2005	92	301	67,684,712
2018	83	309	83,744,613
Change (%)	**-10%**	**3%**	**24%**

Table 8.8 summarizes the distribution of engines based on EPA's engine standards for 2005 and 2018. 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 8.8: 2005-2018 Harbor Craft Engine Tier Change, %

	2005 Engine Count	2018 Engine Count	% Change
Unknown	102	10	-90%
Tier 0	86	5	-94%
Tier 1	102	16	-84%
Tier 2	11	158	1336%
Tier 3	0	120	100%
Total	**301**	**309**	**3%**

Table 8.9 compares the harbor craft energy consumption (kW-hr) by engine tier. In 2018, 90% of energy consumed by harbor craft is from Tier 2 and 3 engines.

Table 8.9: 2005-2018 Engine Energy and Activity Change, %

Engine Tier	2005 kW-hr	2005 % of Total	2018 kW-hr	2018 % of Total
Tier 0	44,096,837	65.2%	184,601	0.2%
Tier 1	23,254,327	34.4%	7,778,763	9.3%
Tier 2	333,548	0.5%	53,734,242	64.2%
Tier 3	0	0.0%	22,047,008	26.3%
Total	**67,684,712**	**100%**	**83,744,613**	**100%**

Cargo Handling Equipment

Between 2005 and 2018, there was a 10% increase in the equipment count due to electric equipment and new equipment types added at the recently built automated container terminal. There was also a 16% 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 8.10: 2005-2018 CHE Count and Energy Consumption Comparison

Year	Population	Activity (kW-hr)
2005	1,259	134,618,521
2018	1,391	156,020,093
Change (%)	**10%**	**16%**

Table 8.11 shows the equipment energy consumption (kW-hr) comparison by diesel engine tier and by equipment using non-diesel fuel for calendar years 2018 and 2005. Among diesel equipment, 80% of the energy consumed in 2018, is from equipment with on-road engines and Tier 4 engines.

Table 8.11: CHE Energy Consumption Comparison by Engine Tier, kW-hr

Engine Type	Engine Tier	2005 kW-hr	2005 % of Total	2018 kW-hr	2018 % of Total
Diesel	Tier 0	12,023,155	9%	46,188	0.03%
Diesel	Tier 1	65,059,472	48%	8,497,903	5%
Diesel	Tier 2	49,337,838	37%	9,873,864	6%
Diesel	Tier 3	41,636	0.03%	3,895,704	2%
Diesel	Tier 4i	0	0%	27,332,921	18%
Diesel	Tier 4f	0	0%	51,681,991	33%
Diesel	Onroad	6,610,773	5%	45,328,717	29%
Gasoline		3,866	0.003%	8,177,134	5%
Propane		1,541,782	1%	1,185,673	1%
Total		**134,618,521**	**100%**	**156,020,093**	**100%**

Tables 8.12 and 8.13 compare the CHE emission reduction technologies and fuels used in 2018 with those used in 2005. There was a significant increase in the number of CHE equipped with cleaner on-road engines in 2018. CHE equipped with DOCs continued to be replaced with newer equipment, resulting in no equipment with DOC in 2018. All of the DPFs installed are on equipment at Tier 3 or lower level.

Table 8.12: 2005-2018 CHE Emission Reduction Technology Equipment Count Comparison

Equipment	2005 DOC	2018 DOC	2005 On-road Engine	2018 On-road Engine	2005 DPF	2018 DPF	2005 BlueCAT	2018 BlueCAT
Forklift	40	0	0	0	0	43	0	11
RTG crane	11	0	0	0	0	23	0	0
Side handler	42	0	0	0	0	7	0	0
Top handler	92	0	0	0	0	57	0	0
Yard tractor	514	0	53	359	0	0	0	0
Other	2	0	0	5	0	5	0	5
Total	**701**	**0**	**53**	**364**	**0**	**135**	**0**	**16**

Table 8.13: 2005-2018 CHE Equipment Count by Fuel Type Comparison

Equipment	2005 Emulsified Fuel	2018 Emulsified Fuel	2005 O2 Diesel	2018 O2 Diesel	2005 ULSD	2018 ULSD	2005 Propane Engine	2018 Propane Engine	2005 Gasoline Engine	2018 Gasoline Engine
Forklift	3	0	4	0	0	106	122	104	1	24
RTG crane	16	0	12	0	0	59	0	0	0	0
Side handler	4	0	8	0	0	8	0	0	0	0
Top handler	10	0	10	0	0	182	0	0	0	0
Yard tractor	151	0	81	0	0	547	0	2	0	92
Other	2	0	0	0	0	55	11	13	1	2
Total	**186**	**0**	**115**	**0**	**0**	**957**	**133**	**119**	**2**	**118**

The following tables and figures for CHE activities are included as additional comparisons between 2005 and 2018. Table 8.14 shows a comparison of CHE counts by equipment type. In total, there was a 10% increase in equipment count from 2005 to 2018, with the largest increase in the "other equipment" category due to new equipment at the recently completed automated container terminal, some of which are electric. Top handlers saw an increase, but the remaining equipment counts went down from 2005 due to equipment retirement, and terminal efficiency improvements.

Table 8.14: 2005-2018 CHE Equipment Count and Change, %

Equipment	2005	2018	Change
Forklift	295	243	-18%
RTG crane	85	59	-31%
Side handler	43	8	-81%
Top handler	113	182	61%
Yard tractor	641	641	0%
Sweeper	15	16	7%
Other	67	242	261%
Total	**1,259**	**1,391**	**10%**

Table 8.15 shows the electric equipment count for 2018 and compares to 2005. The majority of the electric equipment is new due to the recently completed automated container terminal. In 2005, the 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 8.15: 2005-2018 CHE Count of Electric Equipment

Equipment	2005 Electric	2018 Electric
AGV	0	56
ASC	0	47
Crane	0	6
Electric pallet jack	2	2
Forklift	3	9
Material handler	0	1
Miscellaneous	0	3
Ship to shore crane	na	66
Sweeper	0	1
Truck	0	6
Total	**5**	**197**

Locomotives

Table 8.16 shows the various throughput comparisons for rail transportation in 2005 and 2018. The total port throughput between calendar years 2005 and 2018 was higher by 21% in 2018. The on-dock rail throughput was higher in 2018 than in 2005. The on-dock rail percent of total throughput increased from 16% to 23% between 2005 and 2018.

Table 8.16: 2005-2018 Container Throughput Comparison, TEU and %

	2005	2018	Change
Total Port Throughput	6,709,818	8,091,025	21%
Total On-Dock Rail*	1,094,765	1,834,675	68%
% On-Dock	16%	23%	

*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 2018, 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 2018. Table 8.17 compares the vehicle miles traveled by heavy-duty trucks in 2005 and 2018.

Table 8.17: 2005-2018 HDV Total Idling Time Comparison, hours and %

EI Year	Total Idling Time (hours)
2005	3,854,273
2018	2,535,685
Change (%)	**-34%**

Table 8.18: 2005-2018 HDV Vehicle Miles Traveled Comparison, miles and %

Activity Location	2005 VMT	2018 VMT	Change %
On-Terminal	2,866,476	2,722,644	-5%
On-Road	213,716,895	172,456,050	-19%
	216,583,371	**175,178,694**	**-19%**

Compared to 2005, the average age of trucks visiting the Port has decreased from 11 to 7 years due to the Port's Clean Trucks Program launched in October 2008 requiring the progressive ban of pre-2007 trucks between 2008 and up to present.

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 2018 and 2005 in TEU and metric tons.

Table 9.1: 2005-2018 Container and Cargo Throughput and Change, %

Year	Throughput	
	Container (TEU)	Cargo (metric tons)
2005	6,709,818	78,560,726
2018	8,091,025	84,055,094
Change (%)	**21%**	**7%**

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 2018, respectively. The tons of emissions per 10,000 TEU of cargo decreased in 2018; an improvement from 2005.

Table 9.2: 2005-2018 Emission Efficiency Metric Comparison, annual 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
2018	0.18	0.17	0.15	8.59	0.27	2.18	0.40	1,033
Change (%)	**-89%**	**-88%**	**-89%**	**-63%**	**-97%**	**-50%**	**-65%**	**-30%**

Table 9.3: 2005-2018 Emission Efficiency Metric Comparison, annual tons per 100,000 metric tons of cargo

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
2018	0.17	0.16	0.14	8.27	0.26	2.09	0.38	994
Change (%)	**-87%**	**-86%**	**-88%**	**-59%**	**-97%**	**-44%**	**-60%**	**-21%**

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 2018 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 2018 using the 2018 methodology.

Table 10.1: 2005-2018 Emissions in tons and Reductions in % Compared to CAAP San Pedro Bay Emissions Reduction Standards

Category	2005		2018
DPM (tons)			
Ocean-going vessels	605		63
Harbor craft	45		23
Cargo handling equipment	47		3
Locomotives	43		23
Heavy-duty vehicles	205		7
Total	**945**		**120**
Cumulative DPM Emissions Reduction Achieved in 2018			**87%**
CAAP San Pedro Bay DPM Emissions Reduction Standards		**2014**	**72%**
		2023	**77%**
NO_x (tons)			
Ocean-going vessels	6,726		4,169
Harbor craft	1,107		682
Cargo handling equipment	1,289		327
Locomotives	1,273		619
Heavy-duty vehicles	5,273		1,151
Total	**15,667**		**6,948**
Cumulative NO_x Emissions Reduction Achieved in 2018			**56%**
CAAP San Pedro Bay NO_x Emissions Reduction Standards		**2014**	**22%**
		2023	**59%**
SO_x (tons)			
Ocean-going vessels	6,952		213
Harbor craft	5		1
Cargo handling equipment	11		1
Locomotives	76		1
Heavy-duty vehicles	37		3
Total	**7,081**		**219**
Cumulative SO_x Emissions Reduction Achieved in 2018			**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

This appendix summarizes the current regulatory initiatives and Port measures related to port activity that influenced 2018 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 Update[1]. 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.

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

San Pedro Bay Emissions Reduction Standards

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

Health Risk Reduction Standard

To complement the CARB's Air Pollution Reduction Programs including the Diesel Risk Reduction Plan, the Ports 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:

- 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 the progress towards the SPBP emission reduction targets 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** *www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Nitrogen-oxides-%28NOx%29-%E2%80%93-Regulation-13.aspx*	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** *www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Sulphur-oxides-%28SOx%29-%E2%80%93-Regulation-14.aspx*	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** *www.imo.org/en/OurWork/Environment/PollutionPrevention/AirPollution/Pages/Technical-and-Operational-Measures.aspx*	CO_2 and other pollutants	2013	Increases the design efficiencies of ships relating to energy and emissions
IMO	**Initial IMO Strategy on reduction of GHG emissions from ships – Resolution MEPC 304 (72)** *www.unfccc.int/sites/default/files/resource/250_IMO%20submission_Talanoa%20Dialogue_April%202018.pdf*	GHG	2050 – 50%	Initial IMO Strategy on reduction of GHG emissions from ships by 50% in 2050 from 2008 level. 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** *www.epa.gov/otaq/oceanvessels.htm#engine-fuel*	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** *www.arb.ca.gov/regact/2007/shorepwr07/shorepwr07.htm* and *www.arb.ca.gov/ports/shorepower/forms/regulatoryadvisory/regulatoryadvisory12232013.pdf*	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** *www.arb.ca.gov/ports/shipincin/shipincin.htm*	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** *www.cleanairactionplan.org/strategies/ships/*	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** *www.cleanairactionplan.org/strategies/ships/*	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** *www.cleanairactionplan.org/strategies/ships/*	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** *www.epa.gov/ regulations-emissions-vehicles-and-engines/domestic-regulations-emissions-marine-compression*	All	2009 – Tier 3 2014 – Tier 4 for 800 hp or greater	Commercial marine diesel engines with displacement less than 30 liters per cylinder
CARB	**Low Sulfur Fuel Requirement for Harbor Craft** *www.arb.ca.gov/regact/carblohc/carblohc.htm*	DPM PM NO_x 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** *www.arb.ca.gov/regact/2010/chc10/chc10.htm*	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** *www.cleanairactionplan.org/strategies/harbor-craft/*	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** *www.epa.gov/otaq/standards/nonroad/nonroadci.htm*	All	2008-2015	All non-road (also known as off-road) equipment.
CARB	**Regulation for Cargo Handling Equipment Operating at Ports and Intermodal Railyards** *www.arb.ca.gov/regact/2011/cargo11/cargo11.htm*	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** *www.arb.ca.gov/regact/2008/lsi2008/lsi2008.htm*	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** *www.arb.ca.gov/regact/2010/offroadlsi10/lsifinalreg.pdf*	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** *www.cleanairactionplan.org/strategies/cargo-handling-equipment/*	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** *www.epa.gov/otaq/standards/nonroad/locomotives.htm*	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** *www.epa.gov/otaq/fuels/dieselfuels/regulations.htm*	SOx PM	2010	All locomotive engines
CARB	Low Sulfur Fuel Requirement for Intrastate Locomotives *www.arb.ca.gov/msprog/offroad/loco/loco.htm#intrastate*	SO_x NO_x PM	2007	Intrastate locomotives, mainly switchers
CARB	**Statewide 1998 and 2005 Memorandum of Understanding (MOUs)** *www.arb.ca.gov/msprog/offroad/loco/loco.htm#intrastate*	NO_x	2010	UP and BNSF locomotives
SPBP CAAP	**CAAP Measure – RL1 Pacific Harbor Line (PHL) Rail Switch Engine Modernization** *www.cleanairactionplan.org/strategies/trains/*	PM	2010	PHL switcher engines
SPBP CAAP	**CAAP Measure – RL2 Class 1 Line-haul and Switcher Fleet Modernization** *www.cleanairactionplan.org/strategies/trains/*	All	2023 – Tier 3	Class 1 locomotives at ports
SPBP CAAP	**CAAP Measure – RL3 New and Redeveloped Near-Dock Rail Yards** *www.cleanairactionplan.org/strategies/trains/*	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** *www.arb.ca.gov/msprog/onroadhd/reducstd.htm*	NO_x PM	2007 2010	All new on-road diesel heavy-duty vehicles
CARB	**Heavy-Duty Vehicle On-Board Diagnostics (OBD and OBDII) Requirement** *www.arb.ca.gov/msprog/obdprog/section1971_1_clean2013.pdf*	NOx PM	2010+	All new on-road heavy-duty vehicles
CARB	**Ultra-Low Sulfur Diesel Fuel Requirement** *www.arb.ca.gov/regact/ulsd2003/ulsd2003.htm*	All	2006 - ULSD	All on-road heavy-duty vehicles
CARB	**Drayage and Truck and Bus Regulation** (amended in 2011 and 2014) *www.arb.ca.gov/msprog/onroad/porttruck/finalregdrayage.pdf*	All	Phase in started in 2009	All drayage trucks operating at California ports
CARB	**Low NOx Software Upgrade Program** *www.arb.ca.gov/msprog/hdsoftware/hdsoftware.htm*	NO_x	Starting 2005	1993 to 1998 on-road heavy-duty vehicles that operate in California
CARB	**Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Regulation** *www.arb.ca.gov/cc/hdghg/hdghg.htm*	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** *www.arb.ca.gov/cc/ab32/ab32.htm and www.gov.ca.gov/news.php?id=18938*	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** *www.cleanairactionplan.org/strategies/trucks/*	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	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
AGV	AGV001	Gottwald		Electric						CHE Electric				
AGV	AGV002	Gottwald		Electric						CHE Electric				
AGV	AGV003	Gottwald		Electric						CHE Electric				
AGV	AGV004	Gottwald		Electric						CHE Electric				
AGV	AGV005	Gottwald		Electric						CHE Electric				
AGV	AGV007	Gottwald		Electric						CHE Electric				
AGV	AGV008	Gottwald		Electric						CHE Electric				
AGV	AGV009	Gottwald		Electric						CHE Electric				
AGV	AGV010	Gottwald		Electric						CHE Electric				
AGV	AGV011	Gottwald		Electric						CHE Electric				
AGV	AGV012	Gottwald		Electric						CHE Electric				
AGV	AGV013	Gottwald		Electric						CHE Electric				
AGV	AGV014	Gottwald		Electric						CHE Electric				
AGV	AGV015	Gottwald		Electric						CHE Electric				
AGV	AGV016	Gottwald		Electric						CHE Electric				
AGV	AGV017	Gottwald		Electric						CHE Electric				
AGV	AGV018	Gottwald		Electric						CHE Electric				
AGV	AGV019	Gottwald		Electric						CHE Electric				
AGV	AGV020	Gottwald		Electric						CHE Electric				
AGV	AGV021	Gottwald		Electric						CHE Electric				
AGV	AGV022	Gottwald		Electric						CHE Electric				
AGV	AGV023	Gottwald		Electric						CHE Electric				
AGV	AGV024	Gottwald		Electric						CHE Electric				
AGV	AGV025	Gottwald		Electric						CHE Electric				
AGV	AGV026	Gottwald		Electric						CHE Electric				
AGV	AGV027	Gottwald		Electric						CHE Electric				
AGV	AGV028	Gottwald		Electric						CHE Electric				
AGV	AGV029	Gottwald		Electric						CHE Electric				
AGV	AGV030	Gottwald		Electric						CHE Electric				
AGV	AGV031	Gottwald		Electric						CHE Electric				
AGV	AGV032	Gottwald		Electric						CHE Electric				
AGV	AGV033	Gottwald		Electric						CHE Electric				
AGV	AGV034	Gottwald		Electric						CHE Electric				
AGV	AGV035	Gottwald		Electric						CHE Electric				
AGV	AGV036	Gottwald		Electric						CHE Electric				
AGV	AGV037	Gottwald		Electric						CHE Electric				
AGV	AGV038	Gottwald		Electric						CHE Electric				
AGV	AGV039	Gottwald		Electric						CHE Electric				
AGV	AGV040	Gottwald		Electric						CHE Electric				
AGV	AGV041	Gottwald		Electric						CHE Electric				
AGV	AGV042	Gottwald		Electric						CHE Electric				
AGV	AGV043	Gottwald		Electric						CHE Electric				
AGV	AGV044	Gottwald		Electric						CHE Electric				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
AGV	AGV045	Gottwald		Electric						CHE Electric				
AGV	AGV046	Gottwald		Electric						CHE Electric				
AGV	AGV047	Gottwald		Electric						CHE Electric				
AGV	AGV048	Gottwald		Electric						CHE Electric				
AGV	AGV049	Gottwald		Electric						CHE Electric				
AGV	AGV050	Gottwald		Electric						CHE Electric				
AGV	AGV051	Gottwald		Electric						CHE Electric				
AGV	AGV052	Gottwald		Electric						CHE Electric				
AGV	AGV053	Gottwald		Electric						CHE Electric				
AGV	AGV054	Gottwald		Electric						CHE Electric				
AGV	AGV055	Gottwald		Electric						CHE Electric				
AGV	AGV056	Gottwald		Electric						CHE Electric				
AGV	AGV057	Gottwald		Electric						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				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Automatic Stacking Crane	ASC16L	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC16W	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC17L	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC17W	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC18L	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC18W	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC19L	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC19W	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC20L	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC21L	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC22L	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC23L	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC23W	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC24L	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC24W	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC25L	ZPMC		Electric						CHE Electric				
Automatic Stacking Crane	ASC25W	ZPMC		Electric						CHE Electric				
Bulldozer	AEP00545	Caterpillar		Diesel			2004	200	1500	CHE Diesel				
Cone Vehicle	IBC 001	Motrec		Diesel	Kubota	V1505-ET0	2016	35	1847	CHE Diesel				
Cone Vehicle	IBC 002	Motrec		Diesel	Kubota	V1505-ET0	2016	35	2423	CHE Diesel				
Cone Vehicle	IBC 003	Motrec		Diesel	Kubota	V1505-ET0	2016	35	1802	CHE Diesel				
Cone Vehicle	IBC 004	Motrec		Diesel	Kubota	V1505-ET0	2016	35	2039	CHE Diesel				
Cone Vehicle	IBC 005	Motrec		Diesel	Kubota	V1505-ET0	2016	35	2206	CHE Diesel				
Crane	203002	American	325	Electric			1980	0	0	CHE Electric				
Crane	217002	Gottwald	330EG	Electric			2006	0	0	CHE Electric				
Crane	218001	Linkbelt	HSP-8015	Diesel	GMC	50435001	1985	334	30	CHE Diesel				
Crane	#2T	Terex	RT555	Diesel	Cummins	QSB 6.7	2016	173	358	CHE Diesel				
Crane	IY001	ZPMC		Electric						CHE Electric				
Crane	IY002	ZPMC		Electric						CHE Electric				
Crane	IY003	ZPMC		Electric						CHE Electric				
Crane	IY004	ZPMC		Electric						CHE Electric				
Electric Pallet Jack	#31	Toyota	8HBE30	Electric	Toyota	AC drive m	2013	0	105	CHE Electric				
Electric Pallet Jack	#32	Toyota	8HBE30	Electric	Toyota	AC drive m	2013	0	105	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	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	57	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				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Forklift	812	Clark	C25L	LPG		5000 lbs	2015	75	400	CHE Propane				
Forklift	1008	Hyster	H100XM	LPG	Vortec	5 T	2002	117	1232	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	445	CHE Propane				
Forklift	1802	Yale	GLP100	LPG	Vortec	5 T	2005	117	474	CHE Propane				
Forklift	2009	Taylor		Diesel	Cummins	11.5 T	2002	173	1975	CHE Diesel		8/25/2014		
Forklift	2010	Taylor	THD360L	Diesel	Cummins	11.5 T	2002	173	577	CHE Diesel		8/25/2014		
Forklift	2069	Taylor	TX360M	Diesel	Cummins	11.5 T	2007		390	CHE Diesel		12/1/2011		
Forklift	2793	Taylor	TH350L	Diesel	Cummins	11.5 T	2005	150	976	CHE Diesel		8/25/2014		
Forklift	2794	Taylor	TH350L	Diesel	Cummins	11.5 T	2005	150	1232	CHE Diesel		8/25/2014		
Forklift	3001	Caterpillar	P33000D	Diesel	Caterpillar	6M60-TLA3	2008	148	1680	CHE Diesel				
Forklift	3002	Caterpillar	P33000D	Diesel	Caterpillar	6M60-TLA3	2008	148	1752	CHE Diesel				
Forklift	3010	Yale	GLP100	Diesel	Vortec	5 T	2012	117	1741	CHE Diesel				
Forklift	3016	Taylor	T520M	Diesel	Cummins	25 ton	2008		278	CHE Diesel		12/1/2011		
Forklift	5050	Clark	C25L	LPG	GM	DPSIB2.7GI	2013	96	2181	CHE Propane				
Forklift	5051	Clark	C25L	LPG	GM	DPSIB2.7GI	2013	96	1954	CHE Propane				
Forklift	5052	Clark	C25L	LPG	GM	DPSIB2.7GI	2013	96	2020	CHE Propane				
Forklift	5053	Clark	C25L	LPG	GM	DPSIB2.7GI	2014	96	2087	CHE Propane				
Forklift	5054	Clark	C25L	LPG	GM	DPSIB2.7GI	2014	96	1620	CHE Propane				
Forklift	5055	Clark	C25L	LPG	GM	DPSIB2.7GI	2014	96	1380	CHE Propane				
Forklift	5056	Clark	C25L	LPG	GM	DPSIB2.7GI	2014	96	1920	CHE Propane				
Forklift	6000	Mitshubish	K25	Gasoline	Nissan	6,000 lb	2013	59	656	CHE Gasoline				
Forklift	6001	Mitshubish	K25	Gasoline	Nissan	6,000 lb	2013	59	481	CHE Gasoline				
Forklift	6002	Mitsubishi	K25	Gasoline		6,000 lb	2013		299	CHE Gasoline				
Forklift	6003	Mitsubishi	K25	Gasoline		6,000 lb	2013		528	CHE Gasoline				
Forklift	6004	Mitsubishi	K25	Gasoline		6,000 lb	2013			CHE Gasoline				
Forklift	6005	Mitsubishi	K25	Gasoline		6,000 lb	2013			CHE Gasoline				
Forklift	6016	Caterpillar	GP30K	LPG		6,000 lb	2000	62	322	CHE Propane				
Forklift	6017	Caterpillar	GP30K	LPG		6,000 lb	2000	62	268	CHE Propane				
Forklift	6036	Caterpillar	P6000	LPG	Nissan	K21	2004	62	245	CHE Propane				
Forklift	7001	Mitshubish	K25	Gasoline	Nissan	6,000 lb	2013	59	675	CHE Gasoline				
Forklift	7002	Mitshubish	K25	Gasoline	Nissan	6,000 lb	2013	59	653	CHE Gasoline				
Forklift	7003	Mitshubish	K25	Gasoline	Nissan	7000 lb	2013	59	680	CHE Gasoline				
Forklift	7004	Mitshubish	K25	Gasoline	Nissan	7000 lb	2013	59	229	CHE Gasoline				
Forklift	7005	Mitsubishi	K25	Gasoline		6,000 lb	2013			CHE Gasoline				
Forklift	7006	Mitsubishi	K25	Gasoline		7,000 lb	2013		185	CHE Gasoline				
Forklift	7008	Mitsubishi	K25	Gasoline		7,000 lb	2013		688	CHE Gasoline				
Forklift	7009	Mitsubishi	K25	Gasoline		7,000 lb			599	CHE Gasoline				
Forklift	7010	Mitsubishi	K25	Gasoline		7,000 lb	2013		583	CHE Gasoline				
Forklift	8000	Mitsubishi	FG40N	Gasoline			2016		472	CHE Gasoline				
Forklift	8020	Mitsubishi	FG40N	Gasoline		8,000 lb	2012		402	CHE Gasoline				
Forklift	8033	Mitsubishi	H80XM	Gasoline			2002		1337	CHE Gasoline				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Forklift	8210	Mitsubishi	FG40N	Gasoline	Nissan	8,000 lb	2012	59	233	CHE Gasoline				
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	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	1823	CHE Diesel				
Forklift	30206	Taylor	X-300M	Diesel	Cummins	QSB6.7	2017	220	2059	CHE Diesel				
Forklift	30207	Taylor	X-300M	Diesel	Cummins	QSB6.7	2017	220	1304	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	1076	CHE Diesel		9/10/2014		
Forklift	30295	Taylor	T300M	Diesel	Cummins	QSB5.9	2004	165	1757	CHE Diesel				
Forklift	30296	Taylor	T300M	Diesel	Cummins	QSB5.9	2004	165	1543	CHE Diesel		6/6/2014		
Forklift	30297	Taylor	T-300M	Diesel			2005	160		CHE Diesel		6/1/2014		
Forklift	30298	Taylor	TX-300M	Diesel			2007	117	187	CHE Diesel		12/15/2014		
Forklift	30300	Taylor	TX300M	Diesel	Cummins		2014		2384	CHE Diesel				
Forklift	30301	Taylor	TX300M	Diesel	Cummins		2014		3998	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		
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		2481	CHE Diesel				
Forklift	35201			Diesel			2010			CHE Diesel		12/11/2014		
Forklift	35202	Taylor	TX300M	Diesel	Cummins		2014		2808	CHE Diesel				
Forklift	35203	Taylor	XL360L	Diesel	Cummins	QSB6.7	2018		127	CHE Diesel				
Forklift	35204	Taylor	XL360L	Diesel	Cummins	QSB6.7	2018		120	CHE Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Forklift	36000	Taylor	HX360L	Diesel	Cummins	QSB6.7	2018		969	CHE Diesel				
Forklift	40210	Magna Lift	40OB412FS	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	Toyota	5FBE15	Electric	Toyota	AC drive m	1997	0	387	CHE Electric				
Forklift	#11	Toyota	7FBEU15	Electric	Toyota	AC drive m	1995	0	800	CHE Electric				
Forklift	#12	Toyota		Electric	Taylor-Dun	DC Drive M	1995	0	377	CHE Electric				
Forklift	#13	Toyota	7FBEU20	Electric	Toyota	AC drive m	1995	0	426	CHE Electric				
Forklift	#27	Toyota	42-6FGCU18	LPG	Toyota	Toyota 4Y	1995	57	47	CHE Propane				
Forklift	#30	Toyota	7FBEU15	Electric	Toyota	AC drive m	2013	0	229	CHE Electric				
Forklift	#33	Raymond		Electric	Raymond	AC drive m	2012	0	86	CHE Electric				
Forklift	#34	Toyota	8FGU30	LPG	Toyota	4Y ECS	2013	57	212	CHE Propane				
Forklift	#35	Toyota	8FGU30	LPG	Toyota	4Y ECS	2013	57	235	CHE Propane				
Forklift	#36	Toyota	8FGU30	LPG	Toyota	4Y ECS	2014	57	114	CHE Propane				
Forklift	#37	Toyota	8FGU30	LPG	Toyota	4Y ECS	2014	57	106	CHE Propane				
Forklift	#8	Toyota	42-6FGCU18	LPG	Toyota	Toyota 4Y	1995	57	14	CHE Propane				
Forklift	#9	Toyota	42-6FGCU18	LPG	Toyota	Toyota 4Y	1995	57	24	CHE Propane				
Forklift	03-088	JLG Skytrak	8042 T4F	Diesel	Cummins	QSF3.8	2015	110	77	CHE Diesel				
Forklift	03-089	JLG Skytrak	8042 T4F	Diesel	Cummins	QSF3.8	2015	110	216	CHE Diesel				
Forklift	10 W	Hyster	H210D	Diesel			2017	120	1282	CHE Diesel				
Forklift	11 W	Hyster	H210D	Diesel	Cummins		2015	110	1270	CHE Diesel				
Forklift	12 W	Hyster	H210D	Diesel	Cummins		2014	110	1113	CHE Diesel				
Forklift	13 W	Hyster	H155FT	Diesel			2017		744	CHE Diesel				
Forklift	14 W	Hyster	H155XL2	Diesel	Cummins		2015	75	1032	CHE Diesel				
Forklift	15 W	Hyster	H210HD	Diesel	Cummins		2015	75	877	CHE Diesel				
Forklift	16 W	Hyster	H155XL2	Diesel	Cummins		2015	75	1166	CHE Diesel				
Forklift	2005f	Caterpillar	PG55N1	LPG	GCT	12000 lbs	2017	141	279	CHE Propane				
Forklift	28609R	Taylor	XH350L	Diesel	Cummins	35000 lbs	2015	160	4765	CHE Diesel				
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	29381R	Taylor		Diesel	Cummins	32000 lbs	2015	173	3910	CHE Diesel				
Forklift	29382R	Taylor	X360M	Diesel		32000 lbs	2015	173	387	CHE Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Forklift	29783R	Clark	C25L	LPG		5000 lbs	2015	70	1212	CHE Propane				
Forklift	29795R	Taylor	X360M	Diesel	Cummins	32000 lbs	2015	173	2883	CHE Diesel				
Forklift	4 W	Hyster	H210D	Diesel	Cummins		2013	110	1185	CHE Diesel				
Forklift	5 W	Hyster	H210D	Diesel	Cummins		2013	110	1268	CHE Diesel				
Forklift	5049F	Clark	C25L	LPG	GM	DPSIB2.7GI	2013	96	1695	CHE Propane				
Forklift	6 W	Hyster	H190D	Diesel	Cummins		2008	120	1064	CHE Diesel		1/1/2014		
Forklift	7 W	Hyster	H210D	Diesel	Cummins		2015	120	1305	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	1687	CHE Diesel				
Forklift	9 W	Hyster	H 210HD	Diesel	Perkins		2017	125	1323	CHE Diesel				
Forklift	F006V0225	Hyster	H155XL	LPG	Perkins	1004-4	2012	103	150	CHE Propane				
Forklift	F007E0197	Hyster	H210HD	Diesel	Cummins	QSB6.7-15	2002	155	200	CHE Diesel		1/1/2014		
Forklift	F007E0246	Hyster	H210HD	Diesel	Perkins	1106C-E60	2003	155	225	CHE Diesel		1/1/2014		
Forklift	F007E0246	Hyster	H210HD	Diesel	Perkins	1106C-E60	2003	155	225	CHE Diesel		1/1/2014		
Forklift	F007E0246	Hyster	H210HD	Diesel	Perkins	1106C-E60	2003	155	225	CHE Diesel		1/1/2014		
Forklift	F007E0247	Hyster	H210HD	Diesel	Perkins	1106C-E60	2003	155	225	CHE Diesel		1/1/2013		
Forklift	F007E0247	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	114	CHE Diesel		1/1/2013		
Forklift	F111.4			LPG				84	240	CHE Propane				
Forklift	F-117.36	Taylor		Diesel	Cummins	QSB 6.7	2007	160	227	CHE Diesel		1/1/2014		
Forklift	F118.11	Catepillar		Diesel	Mitsubishi	DP50K-2	2008	64	276	CHE Diesel		1/1/2013		
Forklift	F128.35			Diesel		QSB 6.7	2013	173	246	CHE Diesel				
Forklift	F129.5			LPG		QSB 6.7	2013	74	118	CHE Propane				
Forklift	F130.5			LPG		QSB 6.7	2013	74	249	CHE Propane				
Forklift	F131.5			LPG		QSB 6.7	2013	74	171	CHE Propane				
Forklift	F132.5			LPG		QSB 6.7	2013	74	268	CHE Propane				
Forklift	F133.5			LPG		QSB 6.7	2013	74	235	CHE Propane				
Forklift	F134.36	Taylor		Diesel	Cummins	QSB6.7	2014	173	1655	CHE Diesel				
Forklift	F135.5			LPG		QSB 6.7		74	1596	CHE Propane				
Forklift	F158-10	Hyster		Diesel	Kubota		2018	73	233	CHE Diesel				
Forklift	F159-10	Hyster		Diesel	Kubota		2018	73	181	CHE Diesel				
Forklift	F160-10	Hyster		Diesel	Kubota		2018	73	177	CHE Diesel				
Forklift	F161-10	Hyster		Diesel	Kubota		2018	73	69	CHE Diesel				
Forklift	F162.36	Taylor		Diesel	Cummins	QSB6.7	2018	173	85	CHE Diesel				
Forklift	F163.36	Taylor		Diesel	Cummins	QSB6.7	2018	173	292	CHE Diesel				
Forklift	F164-11	Clark		Diesel	Duetz	TD3.6L4	2018	74	9	CHE Diesel				
Forklift	F165-11	Clark		Diesel	Duetz	TD3.6L4	2018	74	8	CHE Diesel				
Forklift	F-88.30	Taylor	QSB-155C	Diesel	Cummins	QSB-155C	2003	155	316	CHE Diesel		1/1/2013		
Forklift	F-89.30	Taylor	QSB-155C	Diesel	Cummins	QSB-155C	2003	155	194	CHE Diesel		1/1/2013		
Forklift	FL 03-310	Hyster	H360-48HD2	Diesel	Cummins	QSB6.7	2015	164	229	CHE Diesel				
Forklift	FL 03-311	Hyster	H360-48HD2	Diesel	Cummins	QSB6.7	2015	164	178	CHE Diesel				
Forklift	FL 03-312	Hyster	H360-48HD2	Diesel	Cummins	QSB6.7	2015	164	443	CHE Diesel				
Forklift	FL 03-313	Hyster	H360-48HD2	Diesel	Cummins	QSB6.7	2015	164	300	CHE Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
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-090	Hyster	N40ZRS2	Electric					51	CHE Electric				
Forklift	FL-091	Hyster	N40ZRS2	Electric					89	CHE Electric				
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	FL100			Electric			2006	0	0	CHE Electric				
Forklift	FL4500		4,500 lbs	Diesel			1996	50	10	CHE Diesel				
Forklift	FL550	Taylor	X550M	Diesel	Isuzu	55000 lbs	2015	100	243	CHE Diesel				
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				
Forklift	FLBL	Hyster		Diesel			1995	60	520	CHE Diesel				
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	L-1	Linde	H80D	Diesel			2008	125	1706	CHE Diesel		1/1/2017		
Forklift	L-2	Linde	H80D	Diesel			2008	125	1168	CHE Diesel		1/1/2017		
Forklift	L-3	Linde	H80D	Diesel			2008	125	1352	CHE Diesel		12/1/2015		
Forklift	L5	Mitsubishi	FG40N	Gasoline	Mitsubishi	TB45	2011	72	553	CHE Gasoline				
Forklift	L6	Mitsubishi	FG40N	Gasoline	Mitsubishi	TB45	2011	72	467	CHE Gasoline				
Forklift	L7	Mitsubishi	FG35N	Gasoline	Mitsubishi	TB45	2016	72	241	CHE Gasoline				
Forklift	L8	Mitsubishi	FG35N	Gasoline	Mitsubishi	TB45	2016	72	240	CHE Gasoline				
Forklift	L9	Mitsubishi	FG35N	Gasoline	Mitsubishi	TB45	2016	72	359	CHE Gasoline				
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				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Forklift	LGB28	Hyster	S120XM	LPG		5 T	2002	50	1500	CHE Propane				
Forklift	own455a	Toyota	8FGU30	LPG	Toyota	4Y	2018	57	700	CHE Propane				
Forklift	own455b	Toyota	8FGU30	LPG	Toyota	4Y	2010	57	300	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	TT28	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	1472	CHE Diesel				
Hybrid RTG	TT29	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	269	CHE Diesel				
Hybrid RTG	TT30	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	0	CHE Diesel				
Hybrid RTG	TT31	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	1410	CHE Diesel				
Hybrid RTG	TT32	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	1129	CHE Diesel				
Hybrid RTG	TT33	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	1383	CHE Diesel				
Hybrid RTG	TT34	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	2291	CHE Diesel				
Hybrid RTG	TT35	MIT-Paceco	KTA 19	Diesel	Caterpillar	C7.1	2016	250	1665	CHE Diesel				
Hybrid RTG	TT41	Paceco-Mit		Diesel	Caterpillar	C7.1	2016	250	2032	CHE Diesel				
Hybrid RTG	TT42	Paceco-Mit		Diesel	Caterpillar	C7.1	2016	250	1891	CHE Diesel				
Hybrid RTG	TT43	Paceco-Mit		Diesel	Caterpillar	C7.1	2016	250	2141	CHE Diesel				
Hybrid RTG	TT44	Paceco-Mit		Diesel	Caterpillar	C7.1	2016	250	2111	CHE Diesel				
Hybrid RTG	TT45	Paceco-Mit		Diesel	Caterpillar	C7.1	2016	250	1636	CHE Diesel				
Hybrid RTG	TT46	Paceco-Mit		Diesel	Caterpillar	C7.1	2016	250	2561	CHE Diesel				
Hybrid RTG	TT47	Paceco-Mit		Diesel	Caterpillar	C7.1	2016	250	1470	CHE Diesel				
Loader	10059	Kubota	R520S	Diesel			2003	50	1500	CHE Diesel				
Loader	#10LD	Caterpillar	980M	Diesel	Caterpillar	C13	2015	418	1922	CHE Diesel				
Loader	#11LD	Caterpillar	980M	Diesel	Caterpillar	C13	2015	418	2262	CHE Diesel				
Loader	#12LD	Caterpillar	980M	Diesel	Caterpillar	C13	2015	418	2082	CHE Diesel				
Loader	#14LD	Caterpillar	980M	Diesel	Caterpillar	C13	2017	420	1652	CHE Diesel				
Loader	#8LD	Caterpillar	980K	Diesel	Caterpillar	C13	2012	402	665	CHE Diesel				
Loader	#9LD	Caterpillar	980M	Diesel	Caterpillar	C13	2015	418	1410	CHE Diesel				
Loader	70L1	Catepillar	950B	Diesel	Caterpillar		1985	200	250	CHE Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Loader	K1Y00340	CAT	982-M	Diesel		C-13	2014			CHE Diesel				
Loader	KRS00297	CAT	980-M	Diesel		C-13	2014			CHE Diesel				
Loader	ownload	Caterpillar	972M	Diesel	Caterpillar		2017	272	1912	CHE Diesel				
Man Lift	1004004	JLG	600S	Diesel	Perkins	404-22T	2009	62	75	CHE Diesel				
Man Lift	1004011	JLG	1200SJP	Diesel	Deutz	TD2011L04	2008	75	684	CHE Diesel				
Man Lift	62660003	JLG	600S	Diesel	Deutz	TD2.9L4	2014	67	273	CHE Diesel				
Man Lift	ML	Genie	S-85	Diesel			2009			CHE Diesel				
Man Lift	ML08	Genie	S60	Gasoline	Ford	LRG425-EF	2000	82	19	CHE Gasoline				
Man Lift	ML09	JLG	600S	Gasoline	Ford	LRG425-EF	2004	82	38	CHE Gasoline				
Man Lift	ML10	JLG	1350SJP	Diesel	Deutz	TCD2.9L4	2017	55	15	CHE Diesel				
Man Lift	SC-139			Diesel			2013	62	227	CHE Diesel				
Man Lift	SC-156	JLG		Diesel	Deutz	TCD 3.6L4	2015	100	196	CHE Diesel				
Man Lift	SC-99			Diesel			2013	74	388	CHE Diesel				
Material Handler	108031	Caterpillar	345CMH	Diesel	Caterpillar	C13	2005	371	1065	CHE Diesel		9/15/2011		
Material Handler	110003	Caterpillar	375-L	Diesel	Caterpillar	C15	2008	717	20	CHE Diesel		6/22/2011		
Material Handler	110008	Caterpillar	375L	Electric	Reliance		1995	0	0	CHE Electric				
Miscellaneous	#19	JLG	600S	LPG	JLG	GM Vortec	1998		0	CHE Propane				
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	SC-123	Peco		Diesel	Kubota		2010	13	743	CHE Diesel				
Miscellaneous	SC-124	Peco		Diesel	Kubota		2010	13	229	CHE Diesel				
Rail pusher	3501011	RailKing	RK 330	Diesel	Cummins	QSB6.7 19	2013	195	183	CHE Diesel				
Rail pusher	SC-138			Diesel			2013	150	58	CHE Diesel				
Rail pusher	SC-140			Diesel			2013	260	940	CHE Diesel				
Rub-trd Gantry Crane	10RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	1201	CHE Diesel		12/27/2013		
Rub-trd Gantry Crane	11RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	2272	CHE Diesel		11/22/2013		
Rub-trd Gantry Crane	14RTG	ZPMC	RC40.6/64	Diesel	CAT	C15	2013	515	3604	CHE Diesel				
Rub-trd Gantry Crane	15RTG	ZPMC	RC40.6/64	Diesel	CAT	C15	2013	515	3313	CHE Diesel				
Rub-trd Gantry Crane	16RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	2963	CHE Diesel				
Rub-trd Gantry Crane	17RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3554	CHE Diesel				
Rub-trd Gantry Crane	18RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3264	CHE Diesel				
Rub-trd Gantry Crane	1RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	2239	CHE Diesel		2/26/2014		
Rub-trd Gantry Crane	20RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	2604	CHE Diesel				
Rub-trd Gantry Crane	21RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	2855	CHE Diesel				
Rub-trd Gantry Crane	22RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3254	CHE Diesel				
Rub-trd Gantry Crane	23RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3230	CHE Diesel				
Rub-trd Gantry Crane	24RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3653	CHE Diesel				
Rub-trd Gantry Crane	25RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3533	CHE Diesel				
Rub-trd Gantry Crane	26RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3205	CHE Diesel				
Rub-trd Gantry Crane	27RTG	Paceco	RT 4023-81-	Diesel	CAT	C15	2013	515	3178	CHE Diesel				
Rub-trd Gantry Crane	2RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1999	615	2816	CHE Diesel		1/31/2014		
Rub-trd Gantry Crane	3RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1999	615	2282	CHE Diesel		6/24/2013		

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Rub-trd Gantry Crane	4RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1999	615	1324	CHE Diesel		1/31/2014		
Rub-trd Gantry Crane	5RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1999	615	2203	CHE Diesel		1/31/2014		
Rub-trd Gantry Crane	6RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	1909	CHE Diesel		11/4/2013		
Rub-trd Gantry Crane	7RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	1788	CHE Diesel		11/1/2013		
Rub-trd Gantry Crane	8RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	1563	CHE Diesel		10/21/2013		
Rub-trd Gantry Crane	9RTG	ZPMC	RC40.6/64	Diesel	Cummins	KTA19	1998	615	1894	CHE Diesel		1/27/2014		
Rub-trd Gantry Crane	TT29 old	MIT-Pacec	KTA 19	Diesel	Caterpillar	C7.1	2005	553	187	CHE Diesel		1/1/2014		
Rub-trd Gantry Crane	TT30 old	MIT-Pacec	KTA 19	Diesel	Caterpillar	C7.1	2005	553	580	CHE Diesel		1/1/2014		
Rub-trd Gantry Crane	TT-38	Mitsui		Diesel	Caterpillar	C15	2011	528	992	CHE Diesel				
Rub-trd Gantry Crane	TT-39	Mitsui		Diesel	Caterpillar	C15	2011	528	1048	CHE Diesel				
Rub-trd Gantry Crane	TT-40	Mitsui		Diesel	Caterpillar	C15	2011	528	1024	CHE Diesel				
Rub-trd Gantry Crane	ZT06	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2003	946	1045	CHE Diesel				
Rub-trd Gantry Crane	ZT07	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2003	946	1168	CHE Diesel				
Rub-trd Gantry Crane	ZT08	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	1285	CHE Diesel				
Rub-trd Gantry Crane	ZT09	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	1226	CHE Diesel				
Rub-trd Gantry Crane	ZT10	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	1377	CHE Diesel				
Rub-trd Gantry Crane	ZT11	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	1800	CHE Diesel		4/26/2013		
Rub-trd Gantry Crane	ZT12	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	2604	CHE Diesel		12/15/2014		
Rub-trd Gantry Crane	ZT13	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	985	CHE Diesel		3/29/2013		
Rub-trd Gantry Crane	ZT14	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	748	CHE Diesel		3/20/2013		
Rub-trd Gantry Crane	ZT15	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2004	1043	2961	CHE Diesel		3/26/2013		
Rub-trd Gantry Crane	ZT19			Diesel			2002		1211	CHE Diesel		4/26/2013		
Rub-trd Gantry Crane	ZT34	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2005	1043		CHE Diesel		3/15/2013		
Rub-trd Gantry Crane	ZT35	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2005	1043	2615	CHE Diesel		2/15/2013		
Rub-trd Gantry Crane	ZT36	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2005	1043	1354	CHE Diesel		4/24/2013		
Rub-trd Gantry Crane	ZT37	ZPMC	RC50.8/66	Diesel	Caterpillar	3412	2005	1043	1227	CHE Diesel		4/22/2013		
Side pick	15252	Taylor	TECSP157-8	Diesel	Cummins	B5.9C	2000	205	76	CHE Diesel		6/21/2013		
Side pick	15253	Taylor	TECSP157-8	Diesel	Cummins	B5.9C	2000	205	79	CHE Diesel		6/21/2013		
Side pick	15255	Taylor	TECSP157-8	Diesel	Cummins	QSB5.9	2003	205	332	CHE Diesel		6/6/2013		
Side pick	15256	Taylor	TECSP157-8	Diesel	Cummins	QSB5.9	2005	205	86	CHE Diesel		6/6/2013		
Side pick	15257	Taylor	TECSP157-8	Diesel			2011	205	521	CHE Diesel				
Side pick	15264	Taylor	TECSP157/8	Diesel	Cummins	B5.9C	2002	205	407	CHE Diesel		3/2/2013		
Side pick	15265	Taylor	TECSP157/8	Diesel	Cummins	QSBB5.9C	2006	205	763	CHE Diesel		5/2/2013		
Side pick	15266	Taylor	TECSP157/8	Diesel	Cummins	QSBB5.9C	2006	205	969	CHE Diesel		5/2/2013		
Skid Steer Loader	MWD0234	CAT	226-B	Diesel			2011			CHE Diesel				
Skid Steer Loader	SSL1	Caterpillar	226D	Diesel		C2.2	2015	67	557	CHE Diesel				
STS Crane	STS 001	ZPMC		Electric						CHE Electric				
STS Crane	STS 002	ZPMC		Electric						CHE Electric				
STS Crane	STS 003	ZPMC		Electric						CHE Electric				
STS Crane	STS 004	ZPMC		Electric						CHE Electric				
STS Crane	STS 005	ZPMC		Electric						CHE Electric				
STS Crane	STS 006	ZPMC		Electric						CHE Electric				
STS Crane	STS 007	ZPMC		Electric						CHE Electric				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
STS Crane	STS 008	ZPMC		Electric						CHE Electric				
STS Crane	STS 009	ZPMC		Electric						CHE Electric				
STS Crane	STS 010	ZPMC		Electric						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				
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				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
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	23007	Tennant	Centurion	Diesel			2005	180	203	CHE Diesel				
Sweeper	#25	Tennant	800	LPG	Tennant	Gas/LP Ford 2.3 liter			39	CHE Propane				
Sweeper	#26	Tennant	5700XP	Electric	Tennant	AC drive motor		0	0	CHE Electric				
Sweeper	03-103	Elgin	Pelican	Diesel	John Deere	4045TE270	2006	114	112	CHE Diesel				
Sweeper	03-105	Advance		LPG			2015	114	114	CHE Propane				
Sweeper	owned6	Tennant	S30	LPG	GM	1.6L	2013	55	100	CHE Propane				
Sweeper	SC-155			LPG	Kubota		2016	47	4	CHE Propane				
Sweeper	SC-158	TYMCO		Diesel	Cummins		2015	200	287	CHE Diesel				
Sweeper	SC-158	TYMCO		Diesel	John Deere		2015	75	287	CHE Diesel				
Sweeper	SW#2		6650XP	LPG			2004	125	36	CHE Propane				
Sweeper	SW100	Tennant		LPG			2005	50	200	CHE Propane				
Sweeper	SW18	Edgen		LPG			1982	135	30	CHE Propane				
Sweeper	SW20DN	Elgin	Internationa	Diesel	Internation	Max Force	2009	210	540	CHE Diesel				
Sweeper	SW20new	Tymco	600	Diesel			2018	210	0	CHE Diesel				
Sweeper	SW-21	Schwarze	S3481	Diesel	Isuzu	4HEZXS	2002	190	387	CHE Diesel				
Sweeper	V007	Elgin	Whirlwind	Diesel	Cummins	ISB10	2014	200	2189	CHE Diesel				
Top handler	6158	Taylor	THDC-9555	Diesel	Cummins	QSM-11	2002	300	1809	CHE Diesel		4/11/2012		
Top handler	6159	Taylor	THDC-9555	Diesel	Cummins	QSM-11	2004	300	2408	CHE Diesel		3/29/2012		
Top handler	6160	Taylor	THDC-9555	Diesel	Cummins	QSM-11	2004	300	1898	CHE Diesel		4/13/2012		
Top handler	6162	Taylor	THDC-9555	Diesel	Cummins	QSM-11	2004	300	841	CHE Diesel		5/7/2012		
Top handler	6163	Taylor	THDC-9555	Diesel	Cummins	QSM-11	2005	300	987	CHE Diesel		4/26/2012		
Top handler	6164	Taylor	THDC-9555	Diesel	Cummins	QSM-11	2005	300	557	CHE Diesel		5/3/2012		
Top handler	6179	Taylor	THDC-9555	Diesel	Cummins	LT 10-C	2006	250	1101	CHE Diesel		4/9/2012		
Top handler	6182	Taylor	THDC-9555	Diesel	Cummins	LT 10-C	2006	250	862	CHE Diesel		4/5/2012		
Top handler	6196	Taylor	TXC976	Diesel			2008		2053	CHE Diesel		2/1/2011		
Top handler	6197	Taylor	TXC976	Diesel			2008		1778	CHE Diesel		2/1/2011		
Top handler	6198	Taylor	TXC976	Diesel			2008		797	CHE Diesel		2/1/2011		

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Top handler	36001	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3375	CHE Diesel				
Top handler	36002	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3218	CHE Diesel				
Top handler	36003	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3001	CHE Diesel				
Top handler	36004	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3443	CHE Diesel				
Top handler	36005	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3084	CHE Diesel				
Top handler	36006	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3052	CHE Diesel				
Top handler	36007	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	2996	CHE Diesel				
Top handler	36008	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	2776	CHE Diesel				
Top handler	36009	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	2754	CHE Diesel				
Top handler	36010	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3351	CHE Diesel				
Top handler	36011	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	2884	CHE Diesel				
Top handler	36012	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	2963	CHE Diesel				
Top handler	36013	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	2650	CHE Diesel				
Top handler	36014	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	2764	CHE Diesel				
Top handler	36015	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3836	CHE Diesel				
Top handler	36016	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3545	CHE Diesel				
Top handler	36017	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	4635	CHE Diesel				
Top handler	36018	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3502	CHE Diesel				
Top handler	36019	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3336	CHE Diesel				
Top handler	36020	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	2812	CHE Diesel				
Top handler	36021	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3121	CHE Diesel				
Top handler	36022	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3366	CHE Diesel				
Top handler	36023	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3508	CHE Diesel				
Top handler	36024	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3166	CHE Diesel				
Top handler	36025	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3212	CHE Diesel				
Top handler	36026	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3024	CHE Diesel				
Top handler	36027	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3273	CHE Diesel				
Top handler	36028	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3157	CHE Diesel				
Top handler	36029	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	2904	CHE Diesel				
Top handler	36030	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3465	CHE Diesel				
Top handler	36031	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3632	CHE Diesel				
Top handler	36032	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	2650	CHE Diesel				
Top handler	36033	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3727	CHE Diesel				
Top handler	36034	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3128	CHE Diesel				
Top handler	36035	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	3297	CHE Diesel				
Top handler	36036	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	2523	CHE Diesel				
Top handler	36037	Taylor	TXLC976	Diesel	Volvo	TAD-1360V	2012	343	4204	CHE Diesel				
Top handler	80202	Taylor		Diesel			2011	330	2208	CHE Diesel				
Top handler	80206	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2006	335	1912	CHE Diesel		4/27/2013		
Top handler	80207	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2006	335	2187	CHE Diesel		1/28/2013		
Top handler	80210	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2005	330	1790	CHE Diesel		4/27/2013		
Top handler	80211	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2006	335	2080	CHE Diesel		2/13/2013		
Top handler	80215	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2005	335	720	CHE Diesel		12/1/2012		

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Top handler	80216	Taylor	THDC 955	Diesel	Cummins	QSMII-C	2005	335	1676	CHE Diesel		4/27/2013		
Top handler	80219	Taylor	THDC 955	Diesel	Cummins	M11-C	1998	275	2303	CHE Diesel		7/31/2013		
Top handler	80222	Taylor	THDC 955	Diesel	Cummins	M11-C	1999	275		CHE Diesel		7/30/2013		
Top handler	80223	Taylor	THDC 955	Diesel	Cummins	M11-C	1999	275	2352	CHE Diesel		7/26/2013		
Top handler	80224	Taylor	THDC 955	Diesel	Cummins	M11-C	1999	275	2433	CHE Diesel		7/29/2013		
Top handler	80225	Taylor	THDC 955	Diesel	Cummins	M11-C	2000	275	2776	CHE Diesel		7/29/2013		
Top handler	80226	Taylor	THDC 955	Diesel	Cummins	M11-C	2000	275	2266	CHE Diesel		7/30/2013		
Top handler	80227	Taylor	THDC 955	Diesel	Cummins	M11-C	2000	275		CHE Diesel		7/30/2013		
Top handler	80228	Taylor	THDC 955	Diesel	Cummins	M11-C	2000	275	2551	CHE Diesel		7/30/2013		
Top handler	80229	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2001	275	1982	CHE Diesel		4/24/2013		
Top handler	80230	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2001	275	2485	CHE Diesel		4/29/2013		
Top handler	80231	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2001	275	1602	CHE Diesel		4/25/2013		
Top handler	80234	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2001	275	2157	CHE Diesel		4/25/2013		
Top handler	80235	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	2890	CHE Diesel		4/30/2013		
Top handler	80236	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2003	300	3623	CHE Diesel		4/29/2013		
Top handler	80237	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2003	300	3116	CHE Diesel		4/29/2013		
Top handler	80238	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2003	300	2807	CHE Diesel		4/19/2013		
Top handler	80239	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	300	2596	CHE Diesel		4/27/2013		
Top handler	80240	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	300	3090	CHE Diesel		4/22/2013		
Top handler	80241	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	335	2347	CHE Diesel		4/22/2013		
Top handler	80242	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	335	2431	CHE Diesel		4/27/2013		
Top handler	80243	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	335	3709	CHE Diesel		4/27/2013		
Top handler	80249	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2007	275	2569	CHE Diesel		12/1/2012		
Top handler	80250	Taylor	THDC 955	Diesel	Cummins		2000	275	2214	CHE Diesel		12/1/2012		
Top handler	80252	Taylor	THDC 955	Diesel	Cummins	M11-C	2000	275	1943	CHE Diesel		7/31/2013		
Top handler	80257	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	2884	CHE Diesel		4/27/2013		
Top handler	80258	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	2983	CHE Diesel		12/1/2012		
Top handler	80259	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	2359	CHE Diesel		12/1/2012		
Top handler	80260	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	3515	CHE Diesel		4/27/2013		
Top handler	80261	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	2362	CHE Diesel		4/27/2013		
Top handler	80262	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2002	300	1829	CHE Diesel		4/27/2013		
Top handler	80265	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	300	1771	CHE Diesel		4/27/2013		
Top handler	80266	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2004	300	2038	CHE Diesel		4/27/2013		
Top handler	80281	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	709	CHE Diesel				
Top handler	80282	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	883	CHE Diesel				
Top handler	80283	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	829	CHE Diesel				
Top handler	80284	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	778	CHE Diesel				
Top handler	80285	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	2006	CHE Diesel				
Top handler	80286	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	2435	CHE Diesel				
Top handler	80287	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	675	CHE Diesel				
Top handler	80288	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	1028	CHE Diesel				
Top handler	80289	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	1160	CHE Diesel				
Top handler	80290	Taylor	THDC 955	Diesel	Cummins	QSM11-C	2007	275	2970	CHE Diesel		12/1/2012		

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Top handler	80291	Taylor		Diesel			2011	330	563	CHE Diesel				
Top handler	80292	Taylor		Diesel			2011	330	2246	CHE Diesel				
Top handler	80293	Taylor		Diesel			2011	330	1943	CHE Diesel				
Top handler	80294	Taylor		Diesel			2011	330	2101	CHE Diesel				
Top handler	80295	Taylor		Diesel			2011	330	2358	CHE Diesel				
Top handler	80296	Taylor		Diesel			2011	330	2309	CHE Diesel				
Top handler	80297	Taylor		Diesel			2011	330	2261	CHE Diesel				
Top handler	80298	Taylor		Diesel			2011	330	2381	CHE Diesel				
Top handler	80299	Taylor		Diesel			2011	330	1994	CHE Diesel				
Top handler	80300	Taylor		Diesel			2011	330	1971	CHE Diesel				
Top handler	80301	Taylor		Diesel			2014		3108	CHE Diesel				
Top handler	80302	Taylor		Diesel			2014		2881	CHE Diesel				
Top handler	80303	Taylor		Diesel			2014		3202	CHE Diesel				
Top handler	80304	Taylor	XLC-976	Diesel	Cummins		2015		3016	CHE Diesel				
Top handler	80305			Diesel			2015		3404	CHE Diesel				
Top handler	80306			Diesel			2015		3683	CHE Diesel				
Top handler	80307			Diesel			2015		3642	CHE Diesel				
Top handler	80308	Taylor		Diesel			2011	330	2182	CHE Diesel				
Top handler	80309	Taylor		Diesel			2011	330	2642	CHE Diesel				
Top handler	80310			Diesel			2015		3100	CHE Diesel				
Top handler	80311			Diesel			2015		3422	CHE Diesel				
Top handler	80312	Taylor		Diesel			2011	330	2542	CHE Diesel				
Top handler	80314	Taylor		Diesel			2012	330	2449	CHE Diesel				
Top handler	80315	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	709	CHE Diesel				
Top handler	80316	Taylor	XLC976	Diesel	Volvo	TAD1371VI	2017	285	807	CHE Diesel				
Top handler	80317	Taylor	TXLC 976	Diesel	Cummins		2018		1313	CHE Diesel				
Top handler	80318	Taylor		Diesel			2018		513	CHE Diesel				
Top handler	80319	Taylor		Diesel			2018		619	CHE Diesel				
Top handler	80361	Taylor	TXLC 976	Diesel	Cummins		2018		869	CHE Diesel				
Top handler	80362	Taylor	TXLC 976	Diesel	Cummins		2018		940	CHE Diesel				
Top handler	03-963	Hyster	HY	Diesel	Cummins	QSL9 350	2013	335	0	CHE Diesel				
Top handler	03-964	Hyster	HY	Diesel	Cummins	QSL9 350	2013	335	0	CHE Diesel				
Top handler	03-965	Hyster	HY	Diesel	Cummins	QSL9 350	2013	335	1215	CHE Diesel				
Top handler	03-966	Hyster	HY	Diesel	Cummins	QSL9-350	2013	350	0	CHE Diesel				
Top handler	360L3	Hyster		Diesel	Cummins	QSL9	2015	350	2117	CHE Diesel				
Top handler	360L4	Hyster		Diesel	Cummins	QSL9	2015	350	1958	CHE Diesel				
Top handler	360L5	Hyster		Diesel	Cummins	QSL9	2015	350	635	CHE Diesel				
Top handler	6TPK17000	Taylor	XLC 976	Diesel	Volvo	TAD-1371V	2017	388	3498	CHE Diesel				
Top handler	6TPK17001	Taylor	XLC 976	Diesel	Volvo	TAD-1371V	2017	388	3119	CHE Diesel				
Top handler	6TPK17002	Taylor	XLC 976	Diesel	Volvo	TAD-1371V	2017	388	4523	CHE Diesel				
Top handler	6TPK17003	Taylor	XLC 976	Diesel	Volvo	TAD-1371V	2017	388	4796	CHE Diesel				
Top handler	6TPK17004	Taylor	XLC 976	Diesel	Volvo	TAD-1371V	2017	388	3951	CHE Diesel				
Top handler	6TPK17005	Taylor	XLC 976	Diesel	Volvo	TAD-1371V	2017	388	3740	CHE Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Top handler	6TPK17006	Taylor	XLC 976	Diesel	Volvo	TAD-1371V	2017	388	3978	CHE Diesel				
Top handler	6TPK17007	Taylor	XLC 976	Diesel	Volvo	TAD-1371V	2017	388	3900	CHE Diesel				
Top handler	6TPK17008	Taylor	XLC 976	Diesel	Volvo	TAD-1371V	2017	388	3028	CHE Diesel				
Top handler	6TPK17009	Taylor	XLC 976	Diesel	Volvo	TAD-1371V	2017	388	3798	CHE Diesel				
Top handler	F 112.95	Taylor		Diesel	Cummins	QSM11	2007	350	0	CHE Diesel		1/1/2013		
Top handler	F 113.95	Taylor		Diesel	Cummins	QSM11	2007	350	1	CHE Diesel		1/1/2013		
Top handler	F 114.95	Taylor		Diesel	Cummins	QSM11	2007	350	74	CHE Diesel		1/1/2013		
Top handler	F 115.95	Taylor		Diesel	Cummins	QSM11	2007	350	76	CHE Diesel		1/1/2013		
Top handler	F 116.95	Taylor		Diesel	Cummins	QSM11	2007	350	25	CHE Diesel		1/1/2013		
Top handler	F 117.36	Taylor		Diesel	Cummins	QSM11	2010	350	227	CHE Diesel		1/1/2013		
Top handler	F 122.95	Taylor		Diesel	Volvo	TAD 1360V	2011	343	170	CHE Diesel				
Top handler	F 123.95	Taylor		Diesel	Volvo	TAD 1360V	2011	343	296	CHE Diesel				
Top handler	F 124.95	Taylor		Diesel	Volvo	TAD 1360V	2011	343	136	CHE Diesel				
Top handler	F 125.95			Diesel		TAD 1360V	2013	343	142	CHE Diesel				
Top handler	F 127.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	410	CHE Diesel				
Top handler	F 128.35	Taylor		Diesel	Volvo	TAD1371-7	2015	382	246	CHE Diesel				
Top handler	F 134.36	Taylor		Diesel	Volvo	TAD1371-7	2015	382	1655	CHE Diesel				
Top handler	F 135.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	1596	CHE Diesel				
Top handler	F 136.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2162	CHE Diesel				
Top handler	F 137.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2255	CHE Diesel				
Top handler	F 138.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2344	CHE Diesel				
Top handler	F 139.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	1831	CHE Diesel				
Top handler	F 140.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2238	CHE Diesel				
Top handler	F 141.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2368	CHE Diesel				
Top handler	F 142.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2335	CHE Diesel				
Top handler	F 143.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2033	CHE Diesel				
Top handler	F 144.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2591	CHE Diesel				
Top handler	F 145.95	Taylor		Diesel	Volvo	TAD1371-7	2015	382	2407	CHE Diesel				
Top handler	F 146.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	1983	CHE Diesel				
Top handler	F 147.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	2430	CHE Diesel				
Top handler	F 148.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	2659	CHE Diesel				
Top handler	F 149.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	2616	CHE Diesel				
Top handler	F 150.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	2272	CHE Diesel				
Top handler	F 151.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	2887	CHE Diesel				
Top handler	F 152.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	3299	CHE Diesel				
Top handler	F 153.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	2906	CHE Diesel				
Top handler	F 154.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	2130	CHE Diesel				
Top handler	F 155.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	2855	CHE Diesel				
Top handler	F 156.95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	2985	CHE Diesel				
Top handler	F 157-95	Taylor		Diesel	Volvo	TAD1371-7	2016	382	2681	CHE Diesel				
Top handler	RS-001	Hyster	RS 45-31CH	Diesel	Cummins	QSL9-350	2013	350	104	CHE Diesel				
Top handler	TH1000	TAYLOR	75000#	Diesel		40 T	1979	174	60	CHE Diesel		1/1/2014		
Tractor	1370	United Tra	SM-50F	LPG	Ford	CSG6491	1996	101	1220	CHE Propane				3/20/2012

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Tractor	1371	United Tra	SM-50F	LPG	Ford	CSG6491	1996	101	1220	CHE Propane				8/23/2012
Tractor	1372	United Tra	SM-50-F	LPG			1997	101	15	CHE Propane				7/13/2010
Tractor	1375	United Tra	SM-50F	LPG	Ford	CSG6491	1996	101	1248	CHE Propane				8/21/2012
Tractor	1376	United Tra	SM-50F	LPG	Ford	CSG6491	1996	101	1110	CHE Propane				4/27/2010
Tractor	TRC20	Kubota	M59	Diesel	Kubota	2403M	2009	59	80	CHE Diesel				
Truck	22680	Ford	F-750	Diesel	Caterpillar	3126	2006	210	250	CHE On Road Diesel				
Truck	1304008	Freightling	ISB6.7	Diesel	Cummins	M2106	2011	300	200	CHE On Road Diesel				
Truck	1315002	Terex	TR45	Diesel	Cummins	QSK19	2009	525	2224	CHE Diesel				
Truck	1315003	Terex	TR45	Diesel	Cummins	QSK19	2009	525	1420	CHE Diesel				
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				
Truck	NWT	Ford	F750	Diesel	Ford	6.7	2016	270	2567	CHE Diesel				
Truck	SC-162	McClellan		Diesel	Cummins	L9	2018	177	0	CHE On Road Diesel		1/21/2014		
Truck	SC-60	Ford		Diesel			1998	230	583	CHE On Road Diesel		9/7/2013		
Truck	SC-85	Sterline		Diesel			2006	300	1111	CHE On Road Diesel		1/21/2014		
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	2687	CHE On Road Diesel				
Yard tractor	5047	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2857	CHE On Road Diesel				
Yard tractor	5048	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1991	CHE On Road Diesel				
Yard tractor	5049	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2436	CHE On Road Diesel				
Yard tractor	5301	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2740	CHE On Road Diesel				
Yard tractor	5302	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2996	CHE On Road Diesel				
Yard tractor	5304	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2871	CHE On Road Diesel				
Yard tractor	5305	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2874	CHE On Road Diesel				
Yard tractor	5306	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2523	CHE On Road Diesel				
Yard tractor	5307	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2564	CHE On Road Diesel				
Yard tractor	5308	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2597	CHE On Road Diesel				
Yard tractor	5309	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2719	CHE On Road Diesel				
Yard tractor	5545	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	1241	CHE On Road Diesel				
Yard tractor	5546	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2256	CHE On Road Diesel				
Yard tractor	5547	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2631	CHE On Road Diesel				
Yard tractor	5548	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2554	CHE On Road Diesel				
Yard tractor	5549	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2631	CHE On Road Diesel				
Yard tractor	5550	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	3244	CHE On Road Diesel				
Yard tractor	5551	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2557	CHE On Road Diesel				
Yard tractor	5553	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2090	CHE On Road Diesel				
Yard tractor	5554	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2582	CHE On Road Diesel				
Yard tractor	5555	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	127	CHE On Road Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	5556	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2618	CHE On Road Diesel				
Yard tractor	5557	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2315	CHE On Road Diesel				
Yard tractor	5559	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2379	CHE On Road Diesel				
Yard tractor	5560	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2198	CHE On Road Diesel				
Yard tractor	5601	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	3039	CHE On Road Diesel				
Yard tractor	5602	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2606	CHE On Road Diesel				
Yard tractor	5603	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2598	CHE On Road Diesel				
Yard tractor	5604	Capacity	TJ7000	Diesel	Cummins	ISB 6.7	2007	240	2349	CHE On Road Diesel				
Yard tractor	5605	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2383	CHE On Road Diesel				
Yard tractor	5606	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2310	CHE On Road Diesel				
Yard tractor	5607	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2136	CHE On Road Diesel				
Yard tractor	5608	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2102	CHE On Road Diesel				
Yard tractor	5609	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	1190	CHE On Road Diesel				
Yard tractor	5610	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2042	CHE On Road Diesel				
Yard tractor	5626	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	1916	CHE On Road Diesel				
Yard tractor	5627	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2256	CHE On Road Diesel				
Yard tractor	5628	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2449	CHE On Road Diesel				
Yard tractor	5629	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2007	240	2924	CHE On Road Diesel				
Yard tractor	5799	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	239	CHE On Road Diesel				
Yard tractor	5800	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2924	CHE On Road Diesel				
Yard tractor	5801	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2480	CHE On Road Diesel				
Yard tractor	5802	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2515	CHE On Road Diesel				
Yard tractor	5803	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2589	CHE On Road Diesel				
Yard tractor	5805	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1691	CHE On Road Diesel				
Yard tractor	5806	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2743	CHE On Road Diesel				
Yard tractor	5807	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2596	CHE On Road Diesel				
Yard tractor	5808	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2517	CHE On Road Diesel				
Yard tractor	5809	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2820	CHE On Road Diesel				
Yard tractor	5810	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2976	CHE On Road Diesel				
Yard tractor	5811	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2843	CHE On Road Diesel				
Yard tractor	5812	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2668	CHE On Road Diesel				
Yard tractor	5813	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2746	CHE On Road Diesel				
Yard tractor	5814	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2682	CHE On Road Diesel				
Yard tractor	5849	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2539	CHE On Road Diesel				
Yard tractor	5850	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2698	CHE On Road Diesel				
Yard tractor	5851	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	3039	CHE On Road Diesel				
Yard tractor	5852	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2437	CHE On Road Diesel				
Yard tractor	5853	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2733	CHE On Road Diesel				
Yard tractor	5854	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2515	CHE On Road Diesel				
Yard tractor	5855	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2764	CHE On Road Diesel				
Yard tractor	5856	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2740	CHE On Road Diesel				
Yard tractor	5857	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2642	CHE On Road Diesel				
Yard tractor	5858	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2431	CHE On Road Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	5859	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2227	CHE On Road Diesel				
Yard tractor	5860	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2341	CHE On Road Diesel				
Yard tractor	5861	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	4830	CHE On Road Diesel				
Yard tractor	5862	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2842	CHE On Road Diesel				
Yard tractor	5863	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2921	CHE On Road Diesel				
Yard tractor	5864	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2412	CHE On Road Diesel				
Yard tractor	5866	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2554	CHE On Road Diesel				
Yard tractor	5867	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2579	CHE On Road Diesel				
Yard tractor	5868	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2746	CHE On Road Diesel				
Yard tractor	5869	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2895	CHE On Road Diesel				
Yard tractor	5870	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	3128	CHE On Road Diesel				
Yard tractor	5871	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2396	CHE On Road Diesel				
Yard tractor	5872	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2568	CHE On Road Diesel				
Yard tractor	5873	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2078	CHE On Road Diesel				
Yard tractor	5874	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	1506	CHE On Road Diesel				
Yard tractor	5875	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2720	CHE On Road Diesel				
Yard tractor	5876	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2707	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	2579	CHE On Road Diesel				
Yard tractor	5879	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2036	CHE On Road Diesel				
Yard tractor	5880	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2856	CHE On Road Diesel				
Yard tractor	5881	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2839	CHE On Road Diesel				
Yard tractor	5882	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2482	CHE On Road Diesel				
Yard tractor	5883	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2522	CHE On Road Diesel				
Yard tractor	5884	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2732	CHE On Road Diesel				
Yard tractor	5885	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	3036	CHE On Road Diesel				
Yard tractor	5886	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2568	CHE On Road Diesel				
Yard tractor	5887	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2605	CHE On Road Diesel				
Yard tractor	5888	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2870	CHE On Road Diesel				
Yard tractor	5889	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2085	CHE On Road Diesel				
Yard tractor	5890	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2824	CHE On Road Diesel				
Yard tractor	5891	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2268	CHE On Road Diesel				
Yard tractor	5892	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2272	CHE On Road Diesel				
Yard tractor	5893	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2008	240	2991	CHE On Road Diesel				
Yard tractor	35001	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	3271	CHE On Road Diesel				
Yard tractor	35002	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2236	CHE On Road Diesel				
Yard tractor	35003	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2592	CHE On Road Diesel				
Yard tractor	35004	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2885	CHE On Road Diesel				
Yard tractor	35005	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	1911	CHE On Road Diesel				
Yard tractor	35006	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2829	CHE On Road Diesel				
Yard tractor	35007	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2285	CHE On Road Diesel				
Yard tractor	35008	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	1468	CHE On Road Diesel				
Yard tractor	35009	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2330	CHE On Road Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	35010	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	3734	CHE On Road Diesel				
Yard tractor	35011	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2792	CHE On Road Diesel				
Yard tractor	35012	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2966	CHE On Road Diesel				
Yard tractor	35013	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2219	CHE On Road Diesel				
Yard tractor	35014	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2654	CHE On Road Diesel				
Yard tractor	35015	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	1733	CHE On Road Diesel				
Yard tractor	35016	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2878	CHE On Road Diesel				
Yard tractor	35017	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2088	CHE On Road Diesel				
Yard tractor	35018	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2748	CHE On Road Diesel				
Yard tractor	35019	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	3550	CHE On Road Diesel				
Yard tractor	35020	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2265	CHE On Road Diesel				
Yard tractor	35021	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	1546	CHE On Road Diesel				
Yard tractor	35022	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2617	CHE On Road Diesel				
Yard tractor	35023	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2553	CHE On Road Diesel				
Yard tractor	35024	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2777	CHE On Road Diesel				
Yard tractor	35025	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2449	CHE On Road Diesel				
Yard tractor	35026	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2011	240	2858	CHE On Road Diesel				
Yard tractor	35027	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2453	CHE On Road Diesel				
Yard tractor	35028	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2798	CHE On Road Diesel				
Yard tractor	35029	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2711	CHE On Road Diesel				
Yard tractor	35030	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2943	CHE On Road Diesel				
Yard tractor	35031	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2154	CHE On Road Diesel				
Yard tractor	35032	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	3593	CHE On Road Diesel				
Yard tractor	35033	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2337	CHE On Road Diesel				
Yard tractor	35034	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2545	CHE On Road Diesel				
Yard tractor	35035	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	3145	CHE On Road Diesel				
Yard tractor	35036	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2452	CHE On Road Diesel				
Yard tractor	35037	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2810	CHE On Road Diesel				
Yard tractor	35038	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	3041	CHE On Road Diesel				
Yard tractor	35039	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2677	CHE On Road Diesel				
Yard tractor	35041	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2567	CHE On Road Diesel				
Yard tractor	35042	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2626	CHE On Road Diesel				
Yard tractor	35043	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2440	CHE On Road Diesel				
Yard tractor	35044	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	3044	CHE On Road Diesel				
Yard tractor	35045	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	476	CHE On Road Diesel				
Yard tractor	35046	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	3408	CHE On Road Diesel				
Yard tractor	35047	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2421	CHE On Road Diesel				
Yard tractor	35048	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2497	CHE On Road Diesel				
Yard tractor	35049	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2894	CHE On Road Diesel				
Yard tractor	35050	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2785	CHE On Road Diesel				
Yard tractor	35051	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2426	CHE On Road Diesel				
Yard tractor	35052	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2497	CHE On Road Diesel				
Yard tractor	35053	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2852	CHE On Road Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	35054	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2340	CHE On Road Diesel				
Yard tractor	35055	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	3075	CHE On Road Diesel				
Yard tractor	35056	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2868	CHE On Road Diesel				
Yard tractor	35057	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	1624	CHE On Road Diesel				
Yard tractor	35058	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2868	CHE On Road Diesel				
Yard tractor	35060	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	3051	CHE On Road Diesel				
Yard tractor	35061	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	5029	CHE On Road Diesel				
Yard tractor	35062	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	3398	CHE On Road Diesel				
Yard tractor	35063	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	3230	CHE On Road Diesel				
Yard tractor	35064	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2616	CHE On Road Diesel				
Yard tractor	35065	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2759	CHE On Road Diesel				
Yard tractor	35066	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2920	CHE On Road Diesel				
Yard tractor	35067	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2103	CHE On Road Diesel				
Yard tractor	35068	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	3099	CHE On Road Diesel				
Yard tractor	35069	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	2511	CHE On Road Diesel				
Yard tractor	35070	Capacity	TJ9000	Diesel	Cummins	ISB 6.7	2012	240	3913	CHE On Road Diesel				
Yard tractor	04-194	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	785	CHE On Road Diesel				
Yard tractor	04-195	Ottawa	YT-50	Diesel	Cummins	ISB6	2012	250	921	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	5UTR1600(	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	5918	CHE Diesel				
Yard tractor	5UTR1600:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	3407	CHE Diesel				
Yard tractor	5UTR1600:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	3315	CHE Diesel				
Yard tractor	5UTR1600:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	4215	CHE Diesel				
Yard tractor	5UTR1600-	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2963	CHE Diesel				
Yard tractor	5UTR1600:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	3300	CHE Diesel				
Yard tractor	5UTR1600(	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	3076	CHE Diesel				
Yard tractor	5UTR1600;	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	3188	CHE Diesel				
Yard tractor	5UTR1600:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2838	CHE Diesel				
Yard tractor	5UTR1600:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	3401	CHE Diesel				
Yard tractor	5UTR1601(	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2710	CHE Diesel				
Yard tractor	5UTR1601:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2157	CHE Diesel				
Yard tractor	5UTR1601-	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	2864	CHE Diesel				
Yard tractor	5UTR1601:	Capacity	TJ9000	Diesel	Cummins	QSB 6.7	2016	225	3338	CHE Diesel				
Yard tractor	H072	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	115	CHE Diesel				
Yard tractor	H073	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	140	CHE Diesel				
Yard tractor	H074	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2329	CHE Diesel				
Yard tractor	H075	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2212	CHE Diesel				
Yard tractor	H076	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2284	CHE Diesel				
Yard tractor	H077	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2641	CHE Diesel				
Yard tractor	H078	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	1791	CHE Diesel				
Yard tractor	H079	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2052	CHE Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	H080	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2270	CHE Diesel				
Yard tractor	H081	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2264	CHE Diesel				
Yard tractor	H082	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2193	CHE Diesel				
Yard tractor	H083	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2163	CHE Diesel				
Yard tractor	H084	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	1812	CHE Diesel				
Yard tractor	H085	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2199	CHE Diesel				
Yard tractor	H086	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2671	CHE Diesel				
Yard tractor	H087	Kalmar/Ott	T2	Diesel	Cummins	QSB6.7225	2016	225	2556	CHE Diesel				
Yard tractor	H-088	Dina		Gasoline	Chevy	454-FI	2011	335	1327	CHE Gasoline				
Yard tractor	H-089	Dina		Gasoline	Chevy	454-FI	2011	335	1174	CHE Gasoline				
Yard tractor	H-090	Dina		Gasoline	Chevy	454-FI	2011	335	1223	CHE Gasoline				
Yard tractor	H-091	Dina		Gasoline	Chevy	454-FI	2011	335	1226	CHE Gasoline				
Yard tractor	H-092	Dina		Gasoline	Chevy	454-FI	2011	335	1220	CHE Gasoline				
Yard tractor	H-093	Dina		Gasoline	Chevy	454-FI	2011	335	1097	CHE Gasoline				
Yard tractor	H-094	Dina		Gasoline	Chevy	454-FI	2011	335	1244	CHE Gasoline				
Yard tractor	H-095	Dina		Gasoline	Chevy	454-FI	2011	335	1285	CHE Gasoline				
Yard tractor	H-096	Dina		Gasoline	Chevy	454-FI	2011	335	1099	CHE Gasoline				
Yard tractor	H-097	Dina		Gasoline	Chevy	454-FI	2011	335	1195	CHE Gasoline				
Yard tractor	H-098	Dina		Gasoline	Chevy	454-FI	2011	335	1138	CHE Gasoline				
Yard tractor	H-099	Dina		Gasoline	Chevy	454-FI	2011	335	1251	CHE Gasoline				
Yard tractor	H-100	Dina		Gasoline	Chevy	454-FI	2011	335	1255	CHE Gasoline				
Yard tractor	H-101	Dina		Gasoline	Chevy	454-FI	2011	335	1298	CHE Gasoline				
Yard tractor	H-102	Dina		Gasoline	Chevy	454-FI	2011	335	1171	CHE Gasoline				
Yard tractor	H-103	Dina		Gasoline	Chevy	454-FI	2011	335	0	CHE Gasoline				
Yard tractor	H-104	Dina		Gasoline	Chevy	454-FI	2011	335	1219	CHE Gasoline				
Yard tractor	H-105	Dina		Gasoline	Chevy	454-FI	2011	335	1200	CHE Gasoline				
Yard tractor	H-106	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	1422	CHE On Road Diesel				
Yard tractor	H-107	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	1802	CHE On Road Diesel				
Yard tractor	H-108	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	1767	CHE On Road Diesel				
Yard tractor	H-109	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	305	CHE On Road Diesel				
Yard tractor	H-110	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173		CHE On Road Diesel				
Yard tractor	H-111	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	2174	CHE On Road Diesel				
Yard tractor	H-112	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	2040	CHE On Road Diesel				
Yard tractor	H-113	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2008	173	2410	CHE On Road Diesel				
Yard tractor	H-119	Capacity	TJ7000	Diesel	Edelbrock	454 Engine	2017	204	855	CHE Diesel				
Yard tractor	H-121	Capacity	TJ7000	Diesel	Edelbrock	454 Engine	2017	204	634	CHE Diesel				
Yard tractor	H-280	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2024	CHE On Road Diesel				
Yard tractor	H-281	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1484	CHE On Road Diesel				
Yard tractor	H-282	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1942	CHE On Road Diesel				
Yard tractor	H-283	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2134	CHE On Road Diesel				
Yard tractor	H-417	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2197	CHE On Road Diesel				
Yard tractor	H-418	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1892	CHE On Road Diesel				
Yard tractor	H-419	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1971	CHE On Road Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	H-420	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1616	CHE On Road Diesel				
Yard tractor	H-421	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1780	CHE On Road Diesel				
Yard tractor	H-422	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1623	CHE On Road Diesel				
Yard tractor	H-423	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1752	CHE On Road Diesel				
Yard tractor	H-424	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1930	CHE On Road Diesel				
Yard tractor	H-425	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1938	CHE On Road Diesel				
Yard tractor	H-426	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1508	CHE On Road Diesel				
Yard tractor	H-427	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2176	CHE On Road Diesel				
Yard tractor	H-428	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1808	CHE On Road Diesel				
Yard tractor	H-429	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1922	CHE On Road Diesel				
Yard tractor	H-430	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2043	CHE On Road Diesel				
Yard tractor	H-431	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1532	CHE On Road Diesel				
Yard tractor	H-432	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1962	CHE On Road Diesel				
Yard tractor	H-433	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1849	CHE On Road Diesel				
Yard tractor	H-434	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1723	CHE On Road Diesel				
Yard tractor	H-435	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1547	CHE On Road Diesel				
Yard tractor	H-436	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2223	CHE On Road Diesel				
Yard tractor	H-437	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1786	CHE On Road Diesel				
Yard tractor	H-438	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	2677	CHE On Road Diesel				
Yard tractor	H-439	Capacity	TJ7000	Diesel	Cummins	ISB Tier 3	2007	200	1573	CHE On Road Diesel				
Yard tractor	H-507	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2344	CHE On Road Diesel				
Yard tractor	H-508	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2311	CHE On Road Diesel				
Yard tractor	H-509	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	722	CHE On Road Diesel				
Yard tractor	H-510	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2302	CHE On Road Diesel				
Yard tractor	H-511	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1805	CHE On Road Diesel				
Yard tractor	H-512	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2384	CHE On Road Diesel				
Yard tractor	H-513	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2530	CHE On Road Diesel				
Yard tractor	H-514	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173		CHE On Road Diesel				
Yard tractor	H-515	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2363	CHE On Road Diesel				
Yard tractor	H-516	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	1865	CHE On Road Diesel				
Yard tractor	H-517	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173		CHE On Road Diesel				
Yard tractor	H-518	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2103	CHE On Road Diesel				
Yard tractor	H-519	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2476	CHE On Road Diesel				
Yard tractor	H-520	Capacity	TJ7000	Diesel	Cummins	ISB6.7	2007	173	2380	CHE On Road Diesel				
Yard tractor	H-521	Dina		Gasoline	Chevy	454-FI	2011	335	182	CHE Gasoline				
Yard tractor	H-522	Dina		Gasoline	Chevy	454-FI	2011	335	395	CHE Gasoline				
Yard tractor	H-603	Dina		Gasoline	Chevy	454-FI	2011	335	1492	CHE Gasoline				
Yard tractor	H-604	Dina		Gasoline	Chevy	454-FI	2011	335	346	CHE Gasoline				
Yard tractor	H-605	Dina		Gasoline	Chevy	454-FI	2011	335	1038	CHE Gasoline				
Yard tractor	H-606	Dina		Gasoline	Chevy	454-FI	2011	335	815	CHE Gasoline				
Yard tractor	H-608	Dina		Gasoline	Chevy	454-FI	2011	335	945	CHE Gasoline				
Yard tractor	H-609	Dina		Gasoline	Chevy	454-FI	2011	335	1061	CHE Gasoline				
Yard tractor	H-610	Dina		Gasoline	Chevy	454-FI	2011	335	1233	CHE Gasoline				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	H-6101	Dina		Gasoline	Chevy	454-FI	2011	335	1200	CHE Gasoline				
Yard tractor	H-6103	Dina		Gasoline	Chevy	454-FI	2011	335	1206	CHE Gasoline				
Yard tractor	H-6104	Dina		Gasoline	Chevy	454-FI	2011	335	939	CHE Gasoline				
Yard tractor	H-6106	Dina		Gasoline	Chevy	454-FI	2011	335	1168	CHE Gasoline				
Yard tractor	H-6107	Dina		Gasoline	Chevy	454-FI	2011	335	1230	CHE Gasoline				
Yard tractor	H-6108	Dina		Gasoline	Chevy	454-FI	2011	335	1082	CHE Gasoline				
Yard tractor	H-611	Dina		Gasoline	Chevy	454-FI	2011	335		CHE Gasoline				
Yard tractor	H-6111	Dina		Gasoline	Chevy	454-FI	2011	335	1250	CHE Gasoline				
Yard tractor	H-612	Dina		Gasoline	Chevy	454-FI	2011	335	1090	CHE Gasoline				
Yard tractor	H-614	Dina		Gasoline	Chevy	454-FI	2011	335	1186	CHE Gasoline				
Yard tractor	H-619	Dina		Gasoline	Chevy	454-FI	2011	335	1072	CHE Gasoline				
Yard tractor	H-620	Dina		Gasoline	Chevy	454-FI	2011	335	1026	CHE Gasoline				
Yard tractor	H-627	Dina		Gasoline	Chevy	454-FI	2011	335	1202	CHE Gasoline				
Yard tractor	H-628	Dina		Gasoline	Chevy	454-FI	2011	335	1294	CHE Gasoline				
Yard tractor	H-629	Dina		Gasoline	Chevy	454-FI	2011	335	889	CHE Gasoline				
Yard tractor	H-630	Dina		Gasoline	Chevy	454-FI	2011	335	1302	CHE Gasoline				
Yard tractor	H-631	Dina		Gasoline	Chevy	454-FI	2011	335	1120	CHE Gasoline				
Yard tractor	H-632	Dina		Gasoline	Chevy	454-FI	2011	335	251	CHE Gasoline				
Yard tractor	H-633	Dina		Gasoline	Chevy	454-FI	2011	335	1193	CHE Gasoline				
Yard tractor	H-634	Dina		Gasoline	Chevy	454-FI	2011	335	1083	CHE Gasoline				
Yard tractor	H-635	Dina		Gasoline	Chevy	454-FI	2011	335	1081	CHE Gasoline				
Yard tractor	H-636	Dina		Gasoline	Chevy	454-FI	2011	335	1166	CHE Gasoline				
Yard tractor	H-639	Dina		Gasoline	Chevy	454-FI	2011	335	1158	CHE Gasoline				
Yard tractor	H-640	Dina		Gasoline	Chevy	454-FI	2011	335	1122	CHE Gasoline				
Yard tractor	H-643	Dina		Gasoline	Chevy	454-FI	2011	335	943	CHE Gasoline				
Yard tractor	H-644	Dina		Gasoline	Chevy	454-FI	2011	335	1173	CHE Gasoline				
Yard tractor	H-645	Dina		Gasoline	Chevy	454-FI	2011	335	929	CHE Gasoline				
Yard tractor	H-646	Dina		Gasoline	Chevy	454-FI	2011	335	1132	CHE Gasoline				
Yard tractor	H-649	Dina		Gasoline	Chevy	454-FI	2011	335	946	CHE Gasoline				
Yard tractor	H-650	Dina		Gasoline	Chevy	454-FI	2011	335	1093	CHE Gasoline				
Yard tractor	H-653	Dina		Gasoline	Chevy	454-FI	2011	335	688	CHE Gasoline				
Yard tractor	H-654	Dina		Gasoline	Chevy	454-FI	2011	335	580	CHE Gasoline				
Yard tractor	H-655	Dina		Gasoline	Chevy	454-FI	2011	335	1192	CHE Gasoline				
Yard tractor	H-656	Dina		Gasoline	Chevy	454-FI	2011	335	1218	CHE Gasoline				
Yard tractor	H-657	Dina		Gasoline	Chevy	454-FI	2011	335	1060	CHE Gasoline				
Yard tractor	H-658	Dina		Gasoline	Chevy	454-FI	2011	335	1118	CHE Gasoline				
Yard tractor	H-659	Dina		Gasoline	Chevy	454-FI	2011	335	987	CHE Gasoline				
Yard tractor	H-660	Dina		Gasoline	Chevy	454-FI	2011	335	192	CHE Gasoline				
Yard tractor	H-661	Dina		Gasoline	Chevy	454-FI	2011	335	1098	CHE Gasoline				
Yard tractor	H-662	Dina		Gasoline	Chevy	454-FI	2011	335	1320	CHE Gasoline				
Yard tractor	H-663	Dina		Gasoline	Chevy	454-FI	2011	335	917	CHE Gasoline				
Yard tractor	H-664	Dina		Gasoline	Chevy	454-FI	2011	335	1174	CHE Gasoline				
Yard tractor	H-665	Dina		Gasoline	Chevy	454-FI	2011	335	1107	CHE Gasoline				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
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	1069	CHE Gasoline				
Yard tractor	H-668	Dina		Gasoline	Chevy	454-FI	2011	335	1057	CHE Gasoline				
Yard tractor	H-669	Dina		Gasoline	Chevy	454-FI	2011	335	995	CHE Gasoline				
Yard tractor	H-671	Dina		Gasoline	Chevy	454-FI	2011	335	1028	CHE Gasoline				
Yard tractor	H-694	Dina		Gasoline	Chevy	454-FI	2011	335	1066	CHE Gasoline				
Yard tractor	H-695	Dina		Gasoline	Chevy	454-FI	2011	335	230	CHE Gasoline				
Yard tractor	H-696	Dina		Gasoline	Chevy	454-FI	2011	335	1221	CHE Gasoline				
Yard tractor	H-697	Dina		Gasoline	Chevy	454-FI	2011	335	17	CHE Gasoline				
Yard tractor	H-698	Dina		Gasoline	Chevy	454-FI	2011	335	33	CHE Gasoline				
Yard tractor	H7000	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2344	CHE Diesel				
Yard tractor	H7001	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2222	CHE Diesel				
Yard tractor	H7002	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2357	CHE Diesel				
Yard tractor	H7003	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2506	CHE Diesel				
Yard tractor	H7004	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2553	CHE Diesel				
Yard tractor	H7005	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2208	CHE Diesel				
Yard tractor	H7006	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1364	CHE Diesel				
Yard tractor	H7007	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2296	CHE Diesel				
Yard tractor	H7008	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2454	CHE Diesel				
Yard tractor	H7009	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1466	CHE Diesel				
Yard tractor	H7010	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2237	CHE Diesel				
Yard tractor	H7011	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1867	CHE Diesel				
Yard tractor	H7012	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2489	CHE Diesel				
Yard tractor	H7013	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2200	CHE Diesel				
Yard tractor	H7014	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225		CHE Diesel				
Yard tractor	H7015	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2027	CHE Diesel				
Yard tractor	H7016	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2369	CHE Diesel				
Yard tractor	H7017	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2354	CHE Diesel				
Yard tractor	H7018	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2427	CHE Diesel				
Yard tractor	H7019	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2202	CHE Diesel				
Yard tractor	H7020	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	975	CHE Diesel				
Yard tractor	H7028	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1916	CHE Diesel				
Yard tractor	H7029	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1644	CHE Diesel				
Yard tractor	H7030	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2358	CHE Diesel				
Yard tractor	H7031	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2416	CHE Diesel				
Yard tractor	H7032	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2320	CHE Diesel				
Yard tractor	H7033	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	178	CHE Diesel				
Yard tractor	H7034	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2072	CHE Diesel				
Yard tractor	H7035	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2010	CHE Diesel				
Yard tractor	H7037	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1729	CHE Diesel				
Yard tractor	H7038	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1641	CHE Diesel				
Yard tractor	H7039	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2536	CHE Diesel				
Yard tractor	H7040	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	215	CHE Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	H7041	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2372	CHE Diesel				
Yard tractor	H7042	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2539	CHE Diesel				
Yard tractor	H7043	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2420	CHE Diesel				
Yard tractor	H7044	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2588	CHE Diesel				
Yard tractor	H7045	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	19	CHE Diesel				
Yard tractor	H7046	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	350	CHE Diesel				
Yard tractor	H7047	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	964	CHE Diesel				
Yard tractor	H7048	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	337	CHE Diesel				
Yard tractor	H7049	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1874	CHE Diesel				
Yard tractor	H7050	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	267	CHE Diesel				
Yard tractor	H7051	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2526	CHE Diesel				
Yard tractor	H7052	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2409	CHE Diesel				
Yard tractor	H7053	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	3074	CHE Diesel				
Yard tractor	H7054	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	3079	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	2020	CHE Diesel				
Yard tractor	H7057	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2450	CHE Diesel				
Yard tractor	H7058	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2894	CHE Diesel				
Yard tractor	H7059	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2532	CHE Diesel				
Yard tractor	H7060	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2382	CHE Diesel				
Yard tractor	H7061	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2172	CHE Diesel				
Yard tractor	H7062	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2418	CHE Diesel				
Yard tractor	H7063	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2209	CHE Diesel				
Yard tractor	H7064	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2288	CHE Diesel				
Yard tractor	H7065	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2323	CHE Diesel				
Yard tractor	H7066	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2308	CHE Diesel				
Yard tractor	H7067	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1356	CHE Diesel				
Yard tractor	H7068	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	3177	CHE Diesel				
Yard tractor	H7069	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1952	CHE Diesel				
Yard tractor	H7070	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2419	CHE Diesel				
Yard tractor	H7071	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2472	CHE Diesel				
Yard tractor	H7072	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2395	CHE Diesel				
Yard tractor	H7073	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2656	CHE Diesel				
Yard tractor	H7074	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2525	CHE Diesel				
Yard tractor	H7075	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2548	CHE Diesel				
Yard tractor	H7076	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	757	CHE Diesel				
Yard tractor	H7077	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	3095	CHE Diesel				
Yard tractor	H7078	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2358	CHE Diesel				
Yard tractor	H7079	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2559	CHE Diesel				
Yard tractor	H7080	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2654	CHE Diesel				
Yard tractor	H7081	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2567	CHE Diesel				
Yard tractor	H7082	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	249	CHE Diesel				
Yard tractor	H7083	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2130	CHE Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	H7084	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2521	CHE Diesel				
Yard tractor	H7085	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1624	CHE Diesel				
Yard tractor	H7086	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2616	CHE Diesel				
Yard tractor	H7087	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2330	CHE Diesel				
Yard tractor	H7088	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2289	CHE Diesel				
Yard tractor	H7089	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2522	CHE Diesel				
Yard tractor	H7090	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2438	CHE Diesel				
Yard tractor	H7091	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2428	CHE Diesel				
Yard tractor	H7092	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	3356	CHE Diesel				
Yard tractor	H7093	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2481	CHE Diesel				
Yard tractor	H7094	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2750	CHE Diesel				
Yard tractor	H7095	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2827	CHE Diesel				
Yard tractor	H7096	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1029	CHE Diesel				
Yard tractor	H7097	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1613	CHE Diesel				
Yard tractor	H7098	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2367	CHE Diesel				
Yard tractor	H7099	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2475	CHE Diesel				
Yard tractor	H7100	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2976	CHE Diesel				
Yard tractor	H7101	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2493	CHE Diesel				
Yard tractor	H7102	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	757	CHE Diesel				
Yard tractor	H7103	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2537	CHE Diesel				
Yard tractor	H7104	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2447	CHE Diesel				
Yard tractor	H7105	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2078	CHE Diesel				
Yard tractor	H7106	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	0	CHE Diesel				
Yard tractor	H7107	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2530	CHE Diesel				
Yard tractor	H7108	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2465	CHE Diesel				
Yard tractor	H7109	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	2481	CHE Diesel				
Yard tractor	H7110	Kalmar/Ott		Diesel	Cummins	6.7 QSB	2016	225	1611	CHE Diesel				
Yard tractor	H7113	Dina		Gasoline	Chevy	454-FI	2018	335	476	CHE Gasoline				
Yard tractor	H7114	Dina		Gasoline	Chevy	454-FI	2018	335	17	CHE Gasoline				
Yard tractor	H7115	Dina		Gasoline	Chevy	454-FI	2018	335	99	CHE Gasoline				
Yard tractor	H7116	Dina		Gasoline	Chevy	454-FI	2018	335	142	CHE Gasoline				
Yard tractor	H7117	Dina		Gasoline	Chevy	454-FI	2018	335	196	CHE Gasoline				
Yard tractor	H7118	Dina		Gasoline	Chevy	454-FI	2018	335	27	CHE Gasoline				
Yard tractor	H7119	Dina		Gasoline	Chevy	454-FI	2018	335	98	CHE Gasoline				
Yard tractor	H7120	Dina		Gasoline	Chevy	454-FI	2018	335	102	CHE Gasoline				
Yard tractor	H7121	Dina		Gasoline	Chevy	454-FI	2018	335	52	CHE Gasoline				
Yard tractor	H7123	Dina		Gasoline	Chevy	454-FI	2018	335	33	CHE Gasoline				
Yard tractor	H7124	Dina		Gasoline	Chevy	454-FI	2018	335	84	CHE Gasoline				
Yard tractor	H7129	Dina		Gasoline	Chevy	454-FI	2018	335	68	CHE Gasoline				
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	T142	Ottawa	Commando	LPG	Ford V10		2009	173	214	CHE Propane				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	T146	Ottawa	Commando	LPG	Ford V10		2009	173	151	CHE Propane				
Yard tractor	T202	Kalmar		Diesel	Cummins	ISB 200	2007	200	700	CHE On Road Diesel				
Yard tractor	T203	Kalmar		Diesel	Cummins	ISB 200	2007	200	1290	CHE On Road Diesel				
Yard tractor	T204	Kalmar		Diesel	Cummins	ISB 200	2007	200	1055	CHE On Road Diesel				
Yard tractor	T206	Kalmar		Diesel	Cummins	ISB 200	2007	200	663	CHE On Road Diesel				
Yard tractor	T207	Kalmar		Diesel	Cummins	ISB 200	2007	200	745	CHE On Road Diesel				
Yard tractor	T208	Kalmar		Diesel	Cummins	ISB 200	2007	200	936	CHE On Road Diesel				
Yard tractor	T209	Kalmar		Diesel	Cummins	ISB 200	2007	200	619	CHE On Road Diesel				
Yard tractor	T210	Kalmar		Diesel	Cummins	ISB 200	2007	200	530	CHE On Road Diesel				
Yard tractor	T211	Kalmar		Diesel	Cummins	ISB 200	2007	200	1,241	CHE On Road Diesel				
Yard tractor	T212	Kalmar		Diesel	Cummins	ISB 200	2007	200	406	CHE On Road Diesel				
Yard tractor	T213	Kalmar		Diesel	Cummins	ISB 200	2007	200	775	CHE On Road Diesel				
Yard tractor	T214	Kalmar		Diesel	Cummins	ISB 200	2007	200	1,139	CHE On Road Diesel				
Yard tractor	T215	Kalmar		Diesel	Cummins	ISB 200	2008	200	396	CHE On Road Diesel				
Yard tractor	T216	Kalmar		Diesel	Cummins	ISB 200	2008	200	830	CHE On Road Diesel				
Yard tractor	T218	Kalmar		Diesel	Cummins	ISB 200	2008	200	1420	CHE On Road Diesel				
Yard tractor	T219	Kalmar		Diesel	Cummins	ISB 200	2008	200	726	CHE On Road Diesel				
Yard tractor	T220	Kalmar		Diesel	Cummins	ISB 200	2008	200	1100	CHE On Road Diesel				
Yard tractor	T221	Kalmar		Diesel	Cummins	ISB 200	2008	200	118	CHE On Road Diesel				
Yard tractor	T222	Kalmar		Diesel	Cummins	ISB 200	2008	200	1103	CHE On Road Diesel				
Yard tractor	T223	Kalmar		Diesel	Cummins	ISB 200	2008	200	208	CHE On Road Diesel				
Yard tractor	T225	Kalmar		Diesel	Cummins	ISB 200	2008	200	782	CHE On Road Diesel				
Yard tractor	T226	Kalmar		Diesel	Cummins	ISB 200	2008	200	1224	CHE On Road Diesel				
Yard tractor	T227	Kalmar		Diesel	Cummins	ISB 200	2008	200	173	CHE On Road Diesel				
Yard tractor	T228	Kalmar		Diesel	Cummins	ISB 200	2008	200	947	CHE On Road Diesel				
Yard tractor	T229	Kalmar		Diesel	Cummins	ISB 200	2008	200	211	CHE On Road Diesel				
Yard tractor	T231	Kalmar		Diesel	Cummins	ISB 200	2008	200	1810	CHE On Road Diesel				
Yard tractor	T232	Kalmar		Diesel	Cummins	ISB 200	2008	200	1476	CHE On Road Diesel				
Yard tractor	T233	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1033	CHE On Road Diesel				
Yard tractor	T234	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1370	CHE On Road Diesel				
Yard tractor	T235	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1024	CHE On Road Diesel				
Yard tractor	T236	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	558	CHE On Road Diesel				
Yard tractor	T238	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1052	CHE On Road Diesel				
Yard tractor	T240	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1454	CHE On Road Diesel				
Yard tractor	T242	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1359	CHE On Road Diesel				
Yard tractor	T243	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1075	CHE On Road Diesel				
Yard tractor	T244	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	65	CHE On Road Diesel				
Yard tractor	T245	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1219	CHE On Road Diesel				
Yard tractor	T246	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1104	CHE On Road Diesel				
Yard tractor	T248	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	658	CHE On Road Diesel				
Yard tractor	T249	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1044	CHE On Road Diesel				
Yard tractor	T250	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1385	CHE On Road Diesel				
Yard tractor	T251	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1647	CHE On Road Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	T253	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1168	CHE On Road Diesel				
Yard tractor	T257	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1188	CHE On Road Diesel				
Yard tractor	T258	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	632	CHE On Road Diesel				
Yard tractor	T259	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1544	CHE On Road Diesel				
Yard tractor	T260	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1875	CHE On Road Diesel				
Yard tractor	T261	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	410	CHE On Road Diesel				
Yard tractor	T262	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1385	CHE On Road Diesel				
Yard tractor	T263	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	895	CHE On Road Diesel				
Yard tractor	T264	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1205	CHE On Road Diesel				
Yard tractor	T265	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1416	CHE On Road Diesel				
Yard tractor	T267	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1325	CHE On Road Diesel				
Yard tractor	T268	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	928	CHE On Road Diesel				
Yard tractor	T270	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	709	CHE On Road Diesel				
Yard tractor	T271	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1510	CHE On Road Diesel				
Yard tractor	T272	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1000	CHE On Road Diesel				
Yard tractor	T273	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	919	CHE On Road Diesel				
Yard tractor	T274	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	859	CHE On Road Diesel				
Yard tractor	T276	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	961	CHE On Road Diesel				
Yard tractor	T277	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	685	CHE On Road Diesel				
Yard tractor	T280	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1412	CHE On Road Diesel				
Yard tractor	T282	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	939	CHE On Road Diesel				
Yard tractor	T283	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1157	CHE On Road Diesel				
Yard tractor	T285	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1043	CHE On Road Diesel				
Yard tractor	T286	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	874	CHE On Road Diesel				
Yard tractor	T287	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	709	CHE On Road Diesel				
Yard tractor	T288	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1070	CHE On Road Diesel				
Yard tractor	T290	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	857	CHE On Road Diesel				
Yard tractor	T291	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	681	CHE On Road Diesel				
Yard tractor	T292	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1456	CHE On Road Diesel				
Yard tractor	T293	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1240	CHE On Road Diesel				
Yard tractor	T294	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1230	CHE On Road Diesel				
Yard tractor	T296	Kalmar	ISB200	Diesel	Cummins	ISB 200	2009	200	1860	CHE On Road Diesel				
Yard tractor	T300	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1578	CHE Diesel				
Yard tractor	T301	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1436	CHE Diesel				
Yard tractor	T303	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1468	CHE Diesel				
Yard tractor	T304	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1453	CHE Diesel				
Yard tractor	T305	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1880	CHE Diesel				
Yard tractor	T306	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1819	CHE Diesel				
Yard tractor	T307	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1578	CHE Diesel				
Yard tractor	T309	Kalmar		Diesel	Cummins	QSB6.7	2015	173	2173	CHE Diesel				
Yard tractor	T310	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1250	CHE Diesel				
Yard tractor	T311	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1715	CHE Diesel				
Yard tractor	T312	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1498	CHE Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	T313	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1722	CHE Diesel				
Yard tractor	T314	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1090	CHE Diesel				
Yard tractor	T315	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1447	CHE Diesel				
Yard tractor	T316	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1620	CHE Diesel				
Yard tractor	T317	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1610	CHE Diesel				
Yard tractor	T318	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1941	CHE Diesel				
Yard tractor	T319	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1819	CHE Diesel				
Yard tractor	T320	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1717	CHE Diesel				
Yard tractor	T321	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1448	CHE Diesel				
Yard tractor	T322	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1810	CHE Diesel				
Yard tractor	T323	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1866	CHE Diesel				
Yard tractor	T324	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1831	CHE Diesel				
Yard tractor	T325	Kalmar		Diesel	Cummins	QSB6.7	2015	173	1627	CHE Diesel				
Yard tractor	T326	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1378	CHE Diesel				
Yard tractor	T327	Kalmar		Diesel	Cummins	QSB6.7	2018	173	803	CHE Diesel				
Yard tractor	T328	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1404	CHE Diesel				
Yard tractor	T329	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1040	CHE Diesel				
Yard tractor	T330	Kalmar		Diesel	Cummins	QSB6.7	2018	173	951	CHE Diesel				
Yard tractor	T331	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1488	CHE Diesel				
Yard tractor	T332	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1373	CHE Diesel				
Yard tractor	T333	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1392	CHE Diesel				
Yard tractor	T334	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1160	CHE Diesel				
Yard tractor	T335	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1236	CHE Diesel				
Yard tractor	T336	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1517	CHE Diesel				
Yard tractor	T337	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1185	CHE Diesel				
Yard tractor	T338	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1328	CHE Diesel				
Yard tractor	T339	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1379	CHE Diesel				
Yard tractor	T340	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1057	CHE Diesel				
Yard tractor	T341	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1581	CHE Diesel				
Yard tractor	T342	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1137	CHE Diesel				
Yard tractor	T343	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1367	CHE Diesel				
Yard tractor	T344	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1359	CHE Diesel				
Yard tractor	T345	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1118	CHE Diesel				
Yard tractor	T346	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1561	CHE Diesel				
Yard tractor	T347	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1400	CHE Diesel				
Yard tractor	T348	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1417	CHE Diesel				
Yard tractor	T349	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1050	CHE Diesel				
Yard tractor	T350	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1118	CHE Diesel				
Yard tractor	T351	Kalmar		Diesel	Cummins	QSB6.7	2018	173	1198	CHE Diesel				
Yard tractor	UTR001	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1754	CHE On Road Diesel				
Yard tractor	UTR002	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1875	CHE On Road Diesel				
Yard tractor	UTR003	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1816	CHE On Road Diesel				
Yard tractor	UTR004	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	624	CHE On Road Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	UTR005	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	862	CHE On Road Diesel				
Yard tractor	UTR006	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	932	CHE On Road Diesel				
Yard tractor	UTR007	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1456	CHE On Road Diesel				
Yard tractor	UTR008	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1774	CHE On Road Diesel				
Yard tractor	UTR009	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2155	CHE On Road Diesel				
Yard tractor	UTR010	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2227	CHE On Road Diesel				
Yard tractor	UTR011	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1626	CHE On Road Diesel				
Yard tractor	UTR012	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2067	CHE On Road Diesel				
Yard tractor	UTR013	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1574	CHE On Road Diesel				
Yard tractor	UTR014	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1582	CHE On Road Diesel				
Yard tractor	UTR015	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1704	CHE On Road Diesel				
Yard tractor	UTR016	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1799	CHE On Road Diesel				
Yard tractor	UTR017	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2380	CHE On Road Diesel				
Yard tractor	UTR018	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1751	CHE On Road Diesel				
Yard tractor	UTR019	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1140	CHE On Road Diesel				
Yard tractor	UTR020	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2169	CHE On Road Diesel				
Yard tractor	UTR021	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1991	CHE On Road Diesel				
Yard tractor	UTR022	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2552	CHE On Road Diesel				
Yard tractor	UTR023	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2667	CHE On Road Diesel				
Yard tractor	UTR024	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2439	CHE On Road Diesel				
Yard tractor	UTR025	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	3062	CHE On Road Diesel				
Yard tractor	UTR026	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2037	CHE On Road Diesel				
Yard tractor	UTR027	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2166	CHE On Road Diesel				
Yard tractor	UTR028	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1851	CHE On Road Diesel				
Yard tractor	UTR029	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2873	CHE On Road Diesel				
Yard tractor	UTR030	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2661	CHE On Road Diesel				
Yard tractor	UTR031	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2560	CHE On Road Diesel				
Yard tractor	UTR032	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1986	CHE On Road Diesel				
Yard tractor	UTR033	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2173	CHE On Road Diesel				
Yard tractor	UTR034	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1655	CHE On Road Diesel				
Yard tractor	UTR035	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	2202	CHE On Road Diesel				
Yard tractor	UTR036	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	387	CHE On Road Diesel				
Yard tractor	UTR037	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	745	CHE On Road Diesel				
Yard tractor	UTR038	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	1084	CHE On Road Diesel				
Yard tractor	UTR039	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	24	CHE On Road Diesel				
Yard tractor	UTR040	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	395	CHE On Road Diesel				
Yard tractor	UTR041	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	135	CHE On Road Diesel				
Yard tractor	UTR042	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	91	CHE On Road Diesel				
Yard tractor	UTR043	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	931	CHE On Road Diesel				
Yard tractor	UTR044	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	29	CHE On Road Diesel				
Yard tractor	UTR045	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	304	CHE On Road Diesel				
Yard tractor	UTR046	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel				
Yard tractor	UTR047	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	196	CHE On Road Diesel				

Port Equip Type	Equip ID	Equip Make	Equip Model	Engine Type	Engine Make	Engine Model	EngineYear	HP	Annual Hours	Category	DPF level 2	DPF level 3	Vycon	Blue Cat
Yard tractor	UTR048	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel				
Yard tractor	UTR049	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	23	CHE On Road Diesel				
Yard tractor	UTR050	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel				
Yard tractor	UTR051	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel				
Yard tractor	UTR052	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel				
Yard tractor	UTR053	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel				
Yard tractor	UTR054	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel				
Yard tractor	UTR055	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel				
Yard tractor	UTR056	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel				
Yard tractor	UTR057	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel				
Yard tractor	UTR058	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel				
Yard tractor	UTR059	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel				
Yard tractor	UTR060	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel				
Yard tractor	UTR061	Ottawa	YT-50	Diesel	Cummins	ISB6-720	2014	250	0	CHE On Road Diesel				
Yard tractor	YTW	Capacity	6BTA	Diesel	Cummins		2013	135	963	CHE Diesel				