



Heavy-Duty Roadside Vehicle Enforcement

November 19, 2020

Presentation Outline

- Roadside Enforcement
- Fleet Investigations
- Next Generation of Roadside Enforcement

Roadside Inspections

- Conducted by CARB staff
- Important part of enforcement program
- 15,000 individual truck inspections per year
- More than 50% conducted in environmental justice communities



Components of an Inspection

- Check MIL status
- Check various components
 - Disconnected, Removed, or Tampered
 - Focus on DPF, SCR, DOC, DEF tank, and sensors
- Emissions Control Label
- OBD download (if available)
- Opacity Test

Inspection Statistics

Program Category	Inspections Completed	Citations Issued	Ratio of Citations to Inspections	Pending Citations on 01 Jan. 2019	Rescinded, Compliant, NFA	Closed	Total Resolved	Pending Citations on 31 Dec. 2019	Penalties Collected
Heavy-Duty Vehicle Inspection Program	6,782	238	4%	199	130	46	176	261	\$85,495.00
Emission Control Label Program	3,813	375	10%	784	159	81	240	919	\$117,005.00
Commercial Vehicle Idling Program	5,111	167	3%	1,409	192	19	211	1,365	\$67,600.00
Solid Waste Collection Vehicle Program	6	1	17%	19	–	–	–	20	\$2,800.00
Truck and Bus Program	5,935	527	9%	4,783	81	669	750	4,560	\$77,200.00
Tractor-Trailer (GHG) (SmartWay®) Program	1,559	320	21%	183	120	35	155	348	\$204,350.00
Drayage Truck Regulation Program	527	17	3%	315	13	10	23	309	\$12,000.00
Transport Refrigeration Unit Program	2,064	933	45%	4,015	280	134	414	4,534	\$332,475.00
Off-road Diesel Vehicle Program	4,291	454	11%	783	66	23	89	1,148	\$23,700.00
Diesel Exhaust Fluid/ Selective Catalytic Reduction	259	–	0%	–	–	–	–	–	–
School Bus Idling Program	8	2	25%	1	–	1	1	2	–
Other Programs	2	–	0%	–	–	–	–	–	–
Total: Heavy-Duty Diesel Field Program Inspections	30,357	3,034	10%	12,491	1,041	1,018	2,059	13,466	\$922,625

Inspection Statistics

Inspections in EJ Areas	18,100
Citations in EJ Areas	1,563
Total California Vehicles Inspected	8,169
Total Out-of-State Vehicles Inspected	3,809
Total Off-Road Vehicles Inspected	4,309
Vehicles Inspected in EJ Areas	9,435
Total Number of Vehicles Inspected	16,287

Fleet Investigations

- Combine data sources to identify non-compliant fleets and trucks
- Bring fleets into compliance
- 200 cases and 3,000 trucks per year

2019 Cases

Program Category	Subprograms	Company Name	Total Assessed Judgment	Total Assessed Settlement	Amount Assessed CARB to	Amount to AB 1071 SEP
Diesel	Diesel Fleet	Durham School Services, LP	–	\$129,000	\$64,500	\$64,500
Diesel	Diesel Fleet	Liberty Transport, LLC	–	\$60,000	\$60,000	–
Diesel	Diesel Fleet	Kerr Trucking, Inc.	–	\$15,500	\$15,500	–
Diesel	Diesel Fleet	Gardner Trucking, Inc.	–	\$27,200	\$27,200	–
Diesel	Diesel Fleet	Casas International Brokerage Inc.	–	\$5,000	\$5,000	–
Diesel	Diesel Fleet	Hitchcock Farms, Inc.	–	\$8,000	\$8,000	–
Diesel	Diesel Fleet	Cargo Northwest Forwarders, Inc.	–	\$20,000	\$20,000	–
Diesel	Diesel Fleet	Nunez Trucking	–	\$12,250	\$12,250	–
Diesel	Diesel Fleet	Anaheim Union School District	–	\$171,000	\$171,000	–
Diesel	Diesel Fleet	JFS Enterprises	–	\$6,000	\$6,000	–
Diesel	Diesel Fleet	Baja Freight Forwarders, Inc.	–	\$5,250	\$5,250	–
Diesel	Diesel Fleet	Richard L Jones Calexico Inc.	–	\$7,000	\$7,000	–
Diesel	Diesel Fleet	San Luis International Freight Services, LLC	–	\$30,000	\$30,000	–
Diesel	Diesel Fleet	Vilore Foods Company, Inc.	–	\$16,250	\$16,250	–
Diesel	Diesel Fleet	Imperial Valley Foods, Inc.	–	\$6,500	\$6,500	–

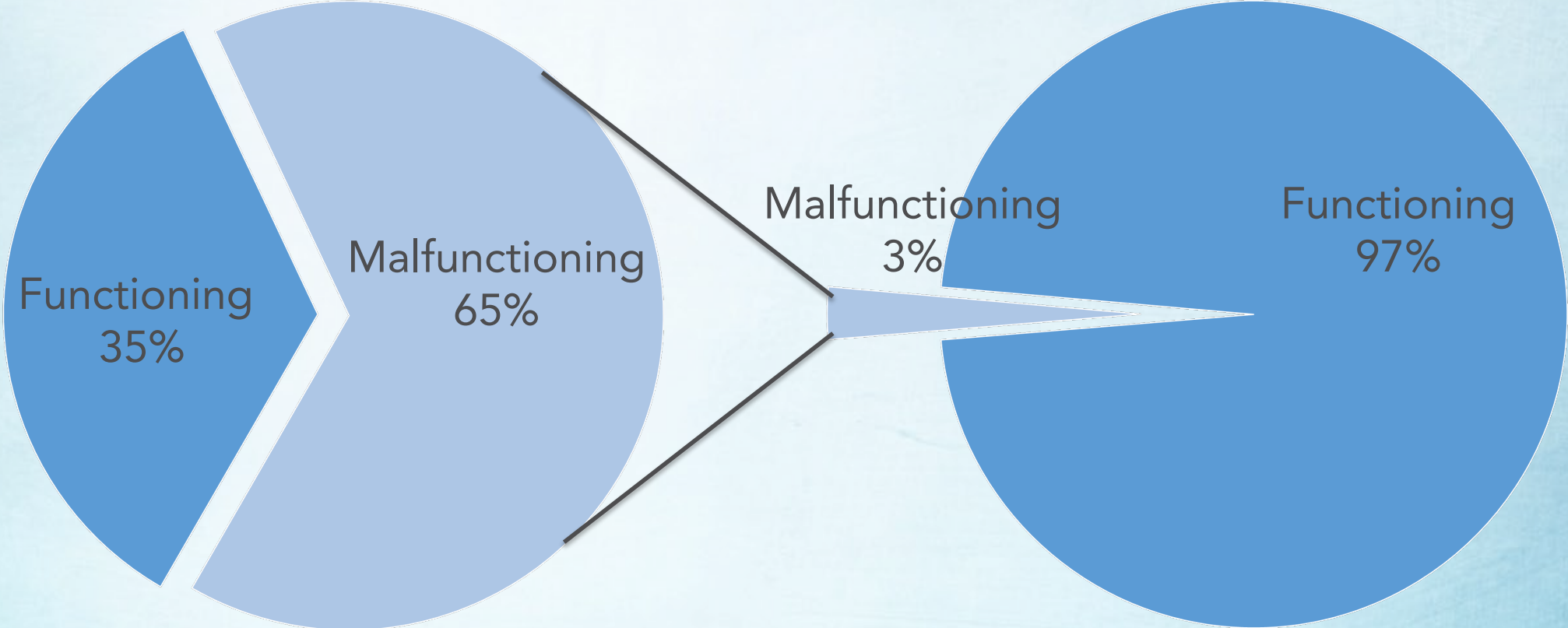
Background

- CARB regulations are modernizing truck fleets
 - Diesel particulate filters, NOx catalysts, and OBD
 - Eventually all heavy-duty trucks will be zero emission
- Compliance with Truck and Bus Regulation has improved dramatically
 - From 72% in 2015 to 86% in 2019
- Remaining emissions are caused by a small fraction of malfunctioning/poorly maintained vehicles

Emissions Due to Malfunction - PM

Statewide PM2.5 Emissions from HD Truck in 2031

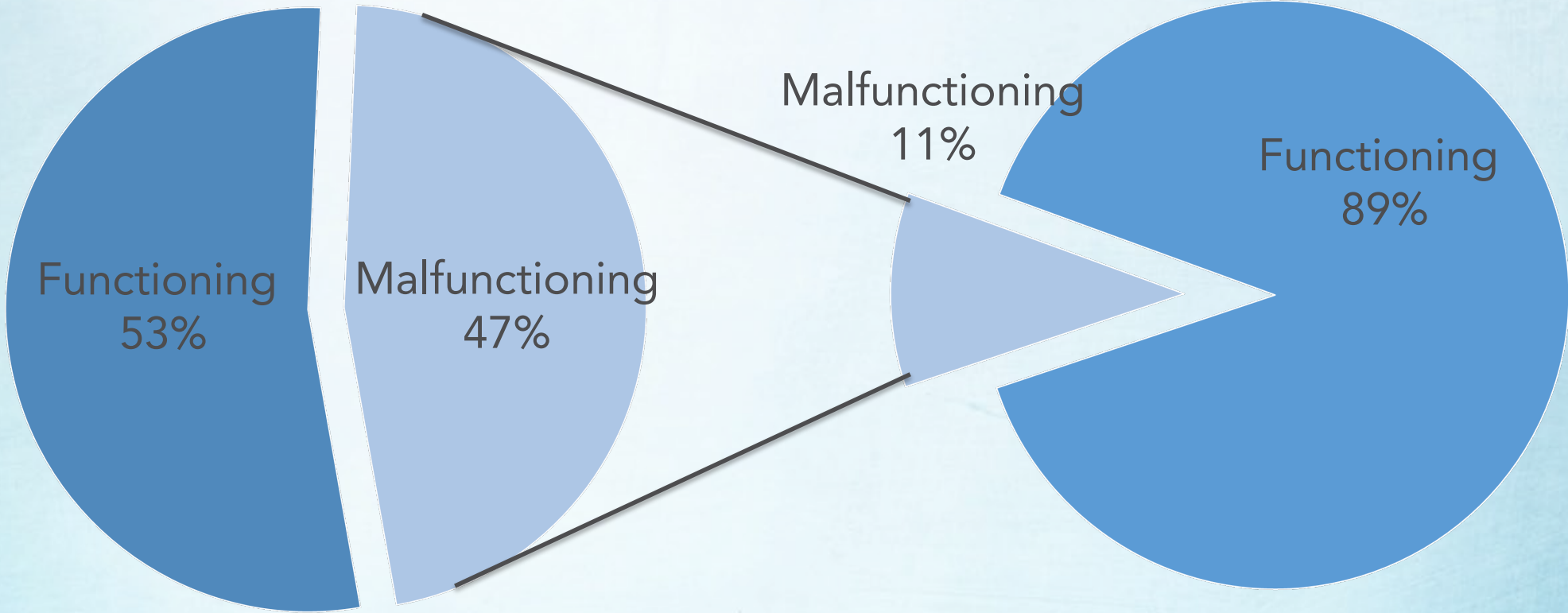
Statewide HD Truck Population in 2031



Emissions Due to Malfunction - NOx

Statewide NOx Emissions from HD Truck in 2031

Statewide HD Truck Population in 2031

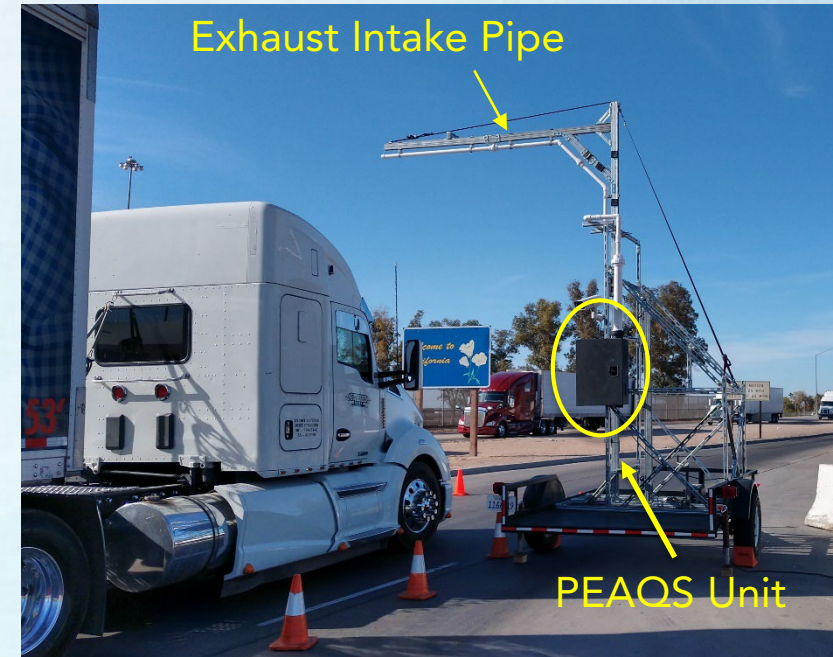


Roadside Emissions Monitoring

- Technology to measure individual trucks emissions is well established
- CARB developed Portable Emissions Acquisition System (PEAQS), but other products available
- Captures license plate with Automated License Plate Reader (ALPR) cameras

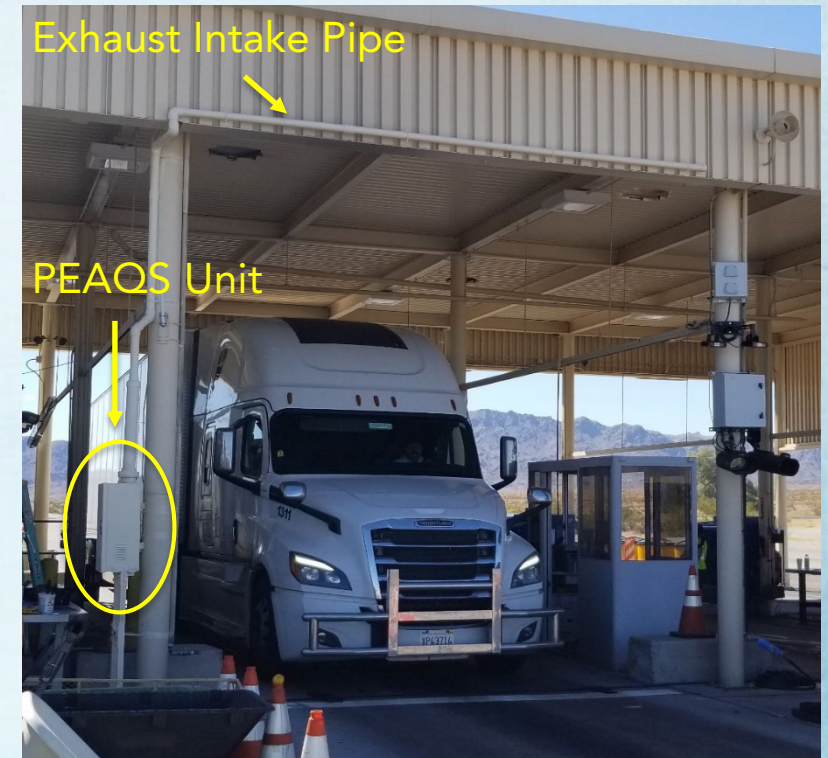
Mobile PEAQS System

- Installed on mobile trailer
- Set up on local roadways in communities



Unattended PEAQS System

- Installed on existing fixtures
- Continuously collects data
- Captures truck traffic along California highways



Evaluating Data to Identify High Emitting Vehicles

- Emissions data paired with license plate data
- High emitting vehicles flagged for investigation, especially repeat offenders
- Non-compliant vehicles subject to enforcement
- Engine families with patterns of high emissions referred for in-use compliance testing



Thank you for your time!

Any Questions?