

HEAVY-DUTY DIESEL INSPECTION AND MAINTENANCE PILOT PROGRAM-PHASE 2

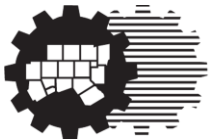
OVERSIZE/OVERWEIGHT TRUCKS

DATA COLLECTION

Commercial Vehicle Enforcement Working Group

March 27, 2018

Chris Klaus



North Central Texas
Council of Governments

OVERVIEW

Motivation

HDDV Emissions Inspection Study

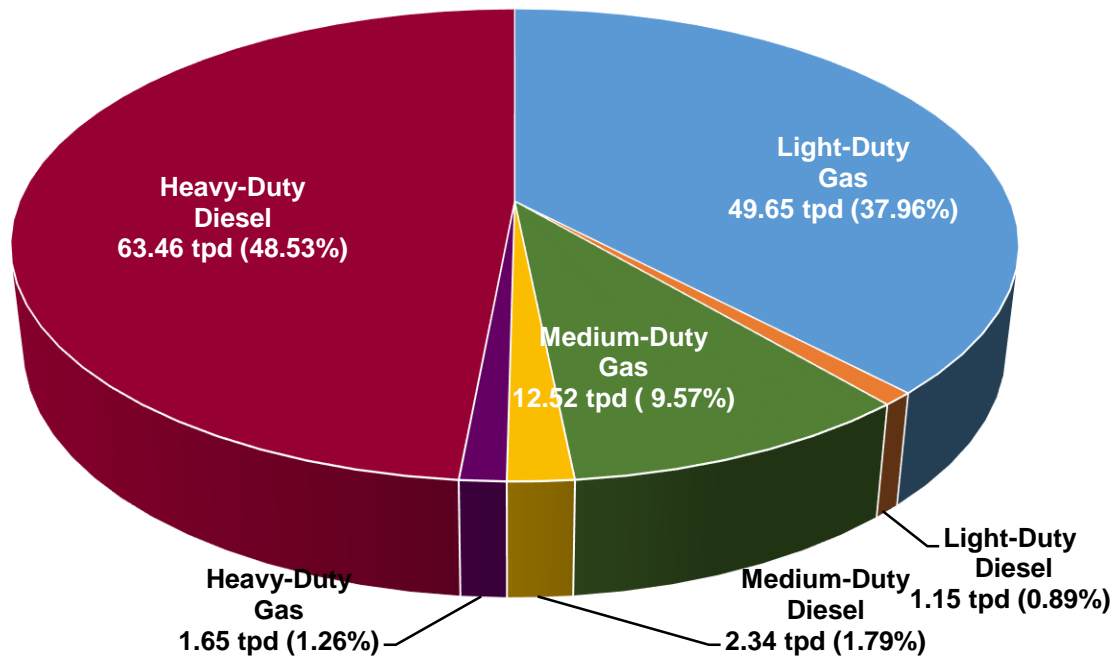
OS/OW Study

Integrating Into Current CVE Efforts

DIESEL EMISSIONS TESTING

No Emissions Inspections for Diesel Vehicles in Texas

Heavy Duty Diesel Vehicles Account for **3.84%** of Total Miles Driven, but Create **48.53%** of On-Road Emissions



Source: Texas Commission on Environmental Quality, 2017 Dallas-Fort Worth 8-hour Ozone Attainment Demonstration State Implementation Plan

HEAVY-DUTY DIESEL INSPECTION AND MAINTENANCE PILOT PROGRAM

Project Overview

Phase 2 Study Follow-Up to 2012 Phase 1 Study

Main Objectives for Phase 2 Study

Identify and Test Refinements of System Design

Investigate Other Technologies to Integrate

Deploy Refined System for Real World Application

**System Design Refinements and Other Technology Testing
Performed at Texas A&M Campus**

Field Study Deployment Performed at Texas Weigh Station

Partnered with Multiple Agencies

HEAVY-DUTY DIESEL INSPECTION AND MAINTENANCE PILOT PROGRAM

OHMS Overview

Three Major Components:
Exhaust Collection
Vehicle Monitoring
Emissions Analysis

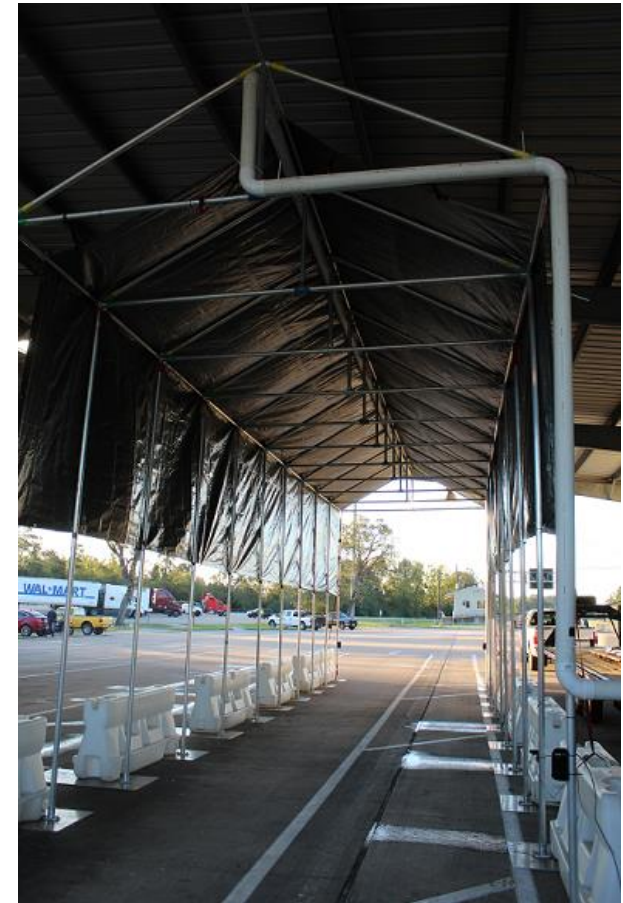


Photo Source: TTI

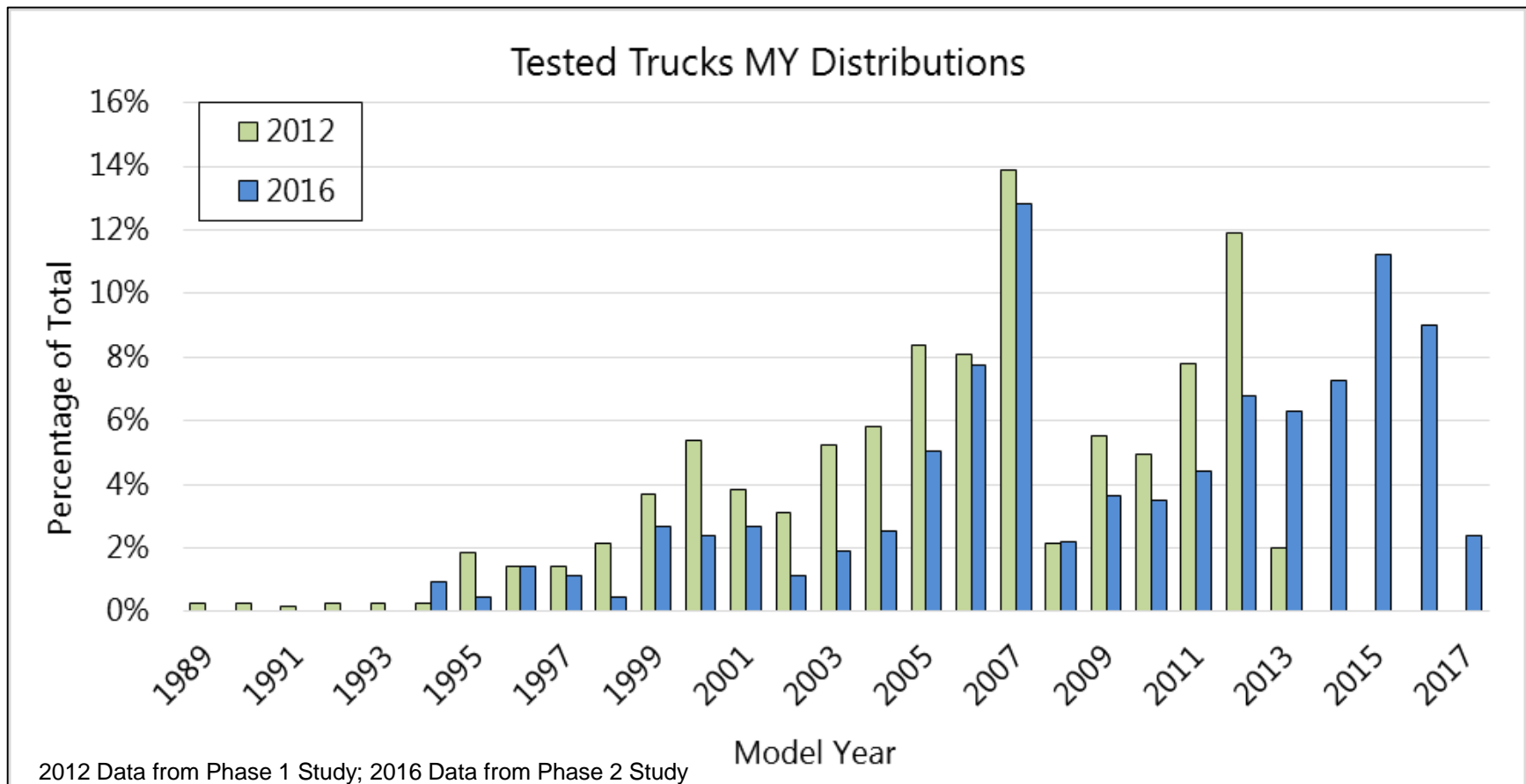
OHMS = On-Road Heavy-Duty Emissions Measurement System

HEAVY-DUTY VEHICLE INSPECTION AND MAINTENANCE PROGRAM

Field Study Results

Fleet Analysis:

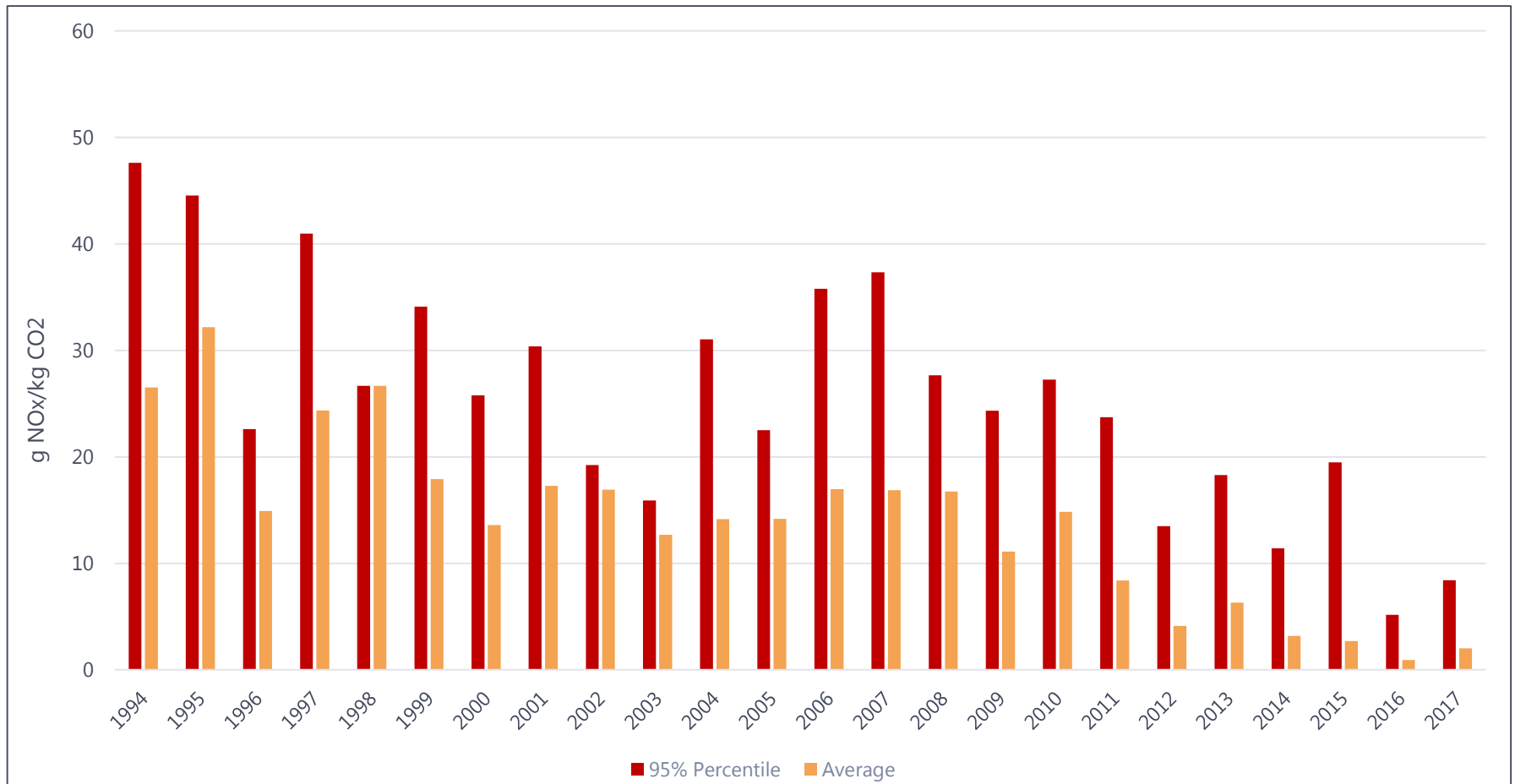
Model Year 2007 Trucks Peaked in 2012 and 2016



HEAVY-DUTY VEHICLE INSPECTION AND MAINTENANCE PROGRAM

Field Study Results

NOx Results by Truck Model Year



OVERSIZE / OVERWEIGHT TRUCKS

Project Overview

Understand Impact of Oversize/Overweight (OS/OW) Heavy Duty Vehicle Emissions in Dallas-Fort Worth Area

Main Objectives

Develop Inventory of OS/OW Vehicle Operations in Region and their Role in Overall Emissions Inventory

Understand Potential Impacts of Changes in OS/OW Operations, Such as Improved Weigh Station Technologies or Enforcement Methods



Photo Source: Texas Department of Motor Vehicles

OVERSIZE / OVERWEIGHT TRUCKS

What's At Stake?

**Higher Weight =
More Power/Torque =
(?) More Emissions**

**Legal (Permit) & Illegal Activities
VMT, Roadways, Speeds, Volume, Frequency**

Start FY18 Over A 2 Year Period

DATA COLLECTION

Effort to Begin Collecting Data on Truck Emissions-related Items

Work with Commercial Vehicle Enforcement Officers

Provide List of Items to Check and Data to Collect During CVE Events

Trucks Chosen Randomly with NCTCOG Staff on Hand to Assist

DATA COLLECTION

Type of Diesel in Fuel Tank (Presence of Clear On-Road Diesel or Red Off-Road Diesel)

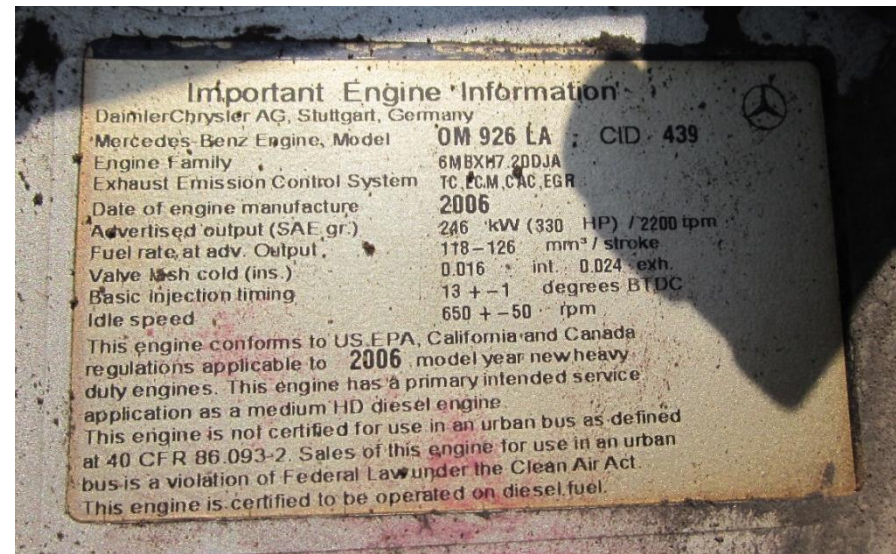
Diesel Exhaust Fluid Level, if Equipped with Selective Catalytic Reduction System



DATA COLLECTION

Emission Control Label on Engine

Check Engine Light Status and if Illuminated, Pull Diagnostic Trouble Codes



FUTURE

Integration Into Current CVE Efforts

Fixed Roadside I/M Check (Manual)

**Telematics: OBD --> Transportation System
(Automatic)**

FOR MORE INFORMATION

Jason Brown
Principal Air Quality Planner
NCTCOG
(817) 704-2514
jbrown@nctcog.org

Shawn Dintino
Air Quality Planner III
NCTCOG
(817) 704-5605
sdintino@nctcog.org

www.nctcog.org/DieselIM