

"AUTOMOTIVE INDUSTRY
IN-USE DATA" as presented by Roger Orteca at
the MSTRS meeting on 10/11/00

**AUTOMOTIVE INDUSTRY
IN-USE DATA**

Presented at the MSTRS Meeting

Roger Orteca
Manager of Emissions Certification and Compliance

DaimlerChrysler Corporation
October 11, 2000



AUTOMOTIVE INDUSTRY IN-USE DATA

OVERVIEW:

- Past Customer Vehicle Programs
- Current Reality Check Programs
- Ongoing EPA and CARB In-Use Compliance Test Programs
- Snapshot of future CAP2000 In-Use Verification Program (IUVP)
- Conclusions

Page 2



AUTOMOTIVE INDUSTRY IN-USE DATA

Past Customer Vehicle Programs:

- Undertaken to determine how vehicles perform in customer's hands. Also, feedback to design.
- A cross section of models and engine families tested by most major manufacturers.
- General Motors testing began in the early 1980's.
- Minimal screening, and vehicles tested in the as-received condition.
- Further evaluation was performed when necessary.

Page 3



AUTOMOTIVE INDUSTRY IN-USE DATA

Past Customer Vehicle Programs (continued):

- The industry tested 2629 passenger cars and 1251 light duty trucks for 1990 to 1993 model years.
- The 1990 to 1993 data was given to EPA for modeling purposes.
- The data was reported to the appropriate powertrain group.

Page 4



AUTOMOTIVE INDUSTRY IN-USE DATA

Reality Check Programs:

- Selected engine families voluntarily certified under Alternative Durability Procedures (ADP).
- Fifteen total vehicles per engine family, tested in the 2nd, 3rd and 4th year of service.
- Testing in both S.E. Michigan and S. California.
- Minimal screening, and vehicles tested in the as-received condition.

Page 5



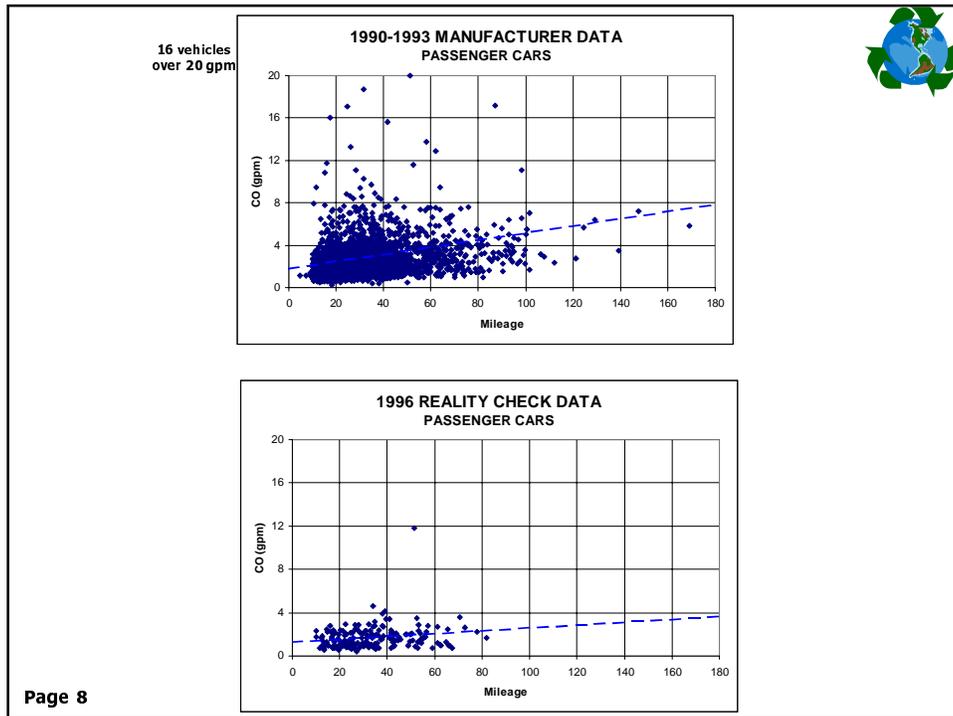
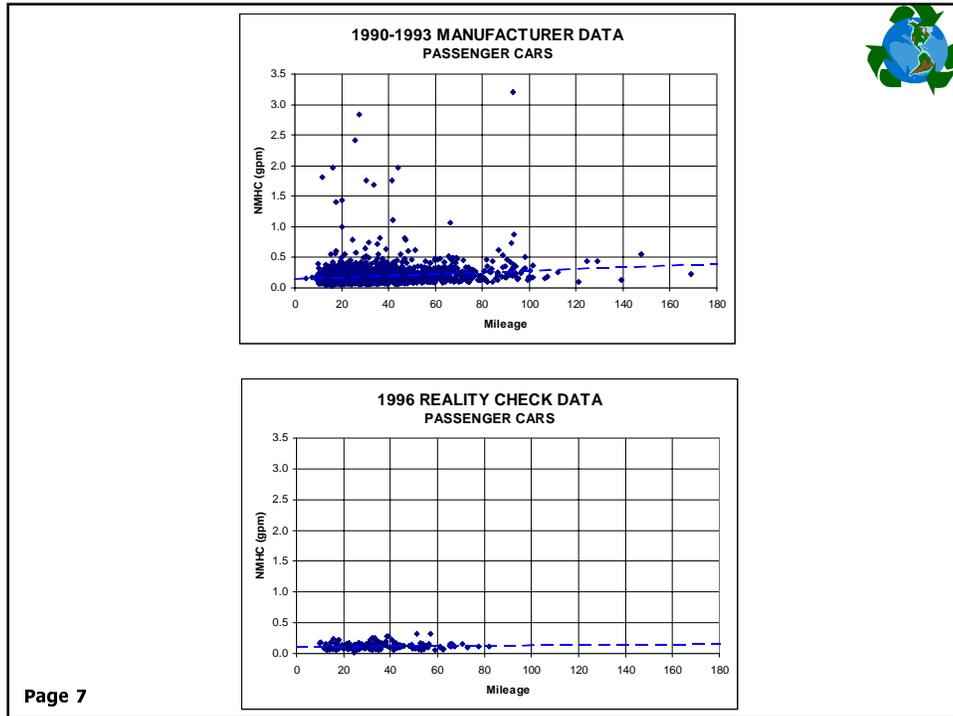
AUTOMOTIVE INDUSTRY IN-USE DATA

Reality Check Programs (continued):

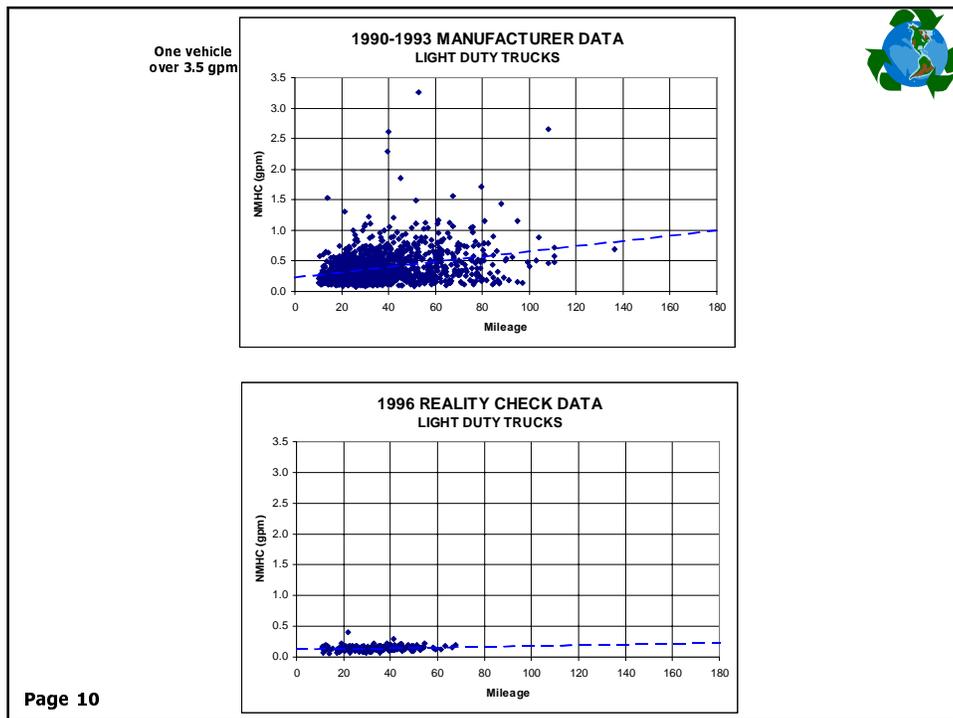
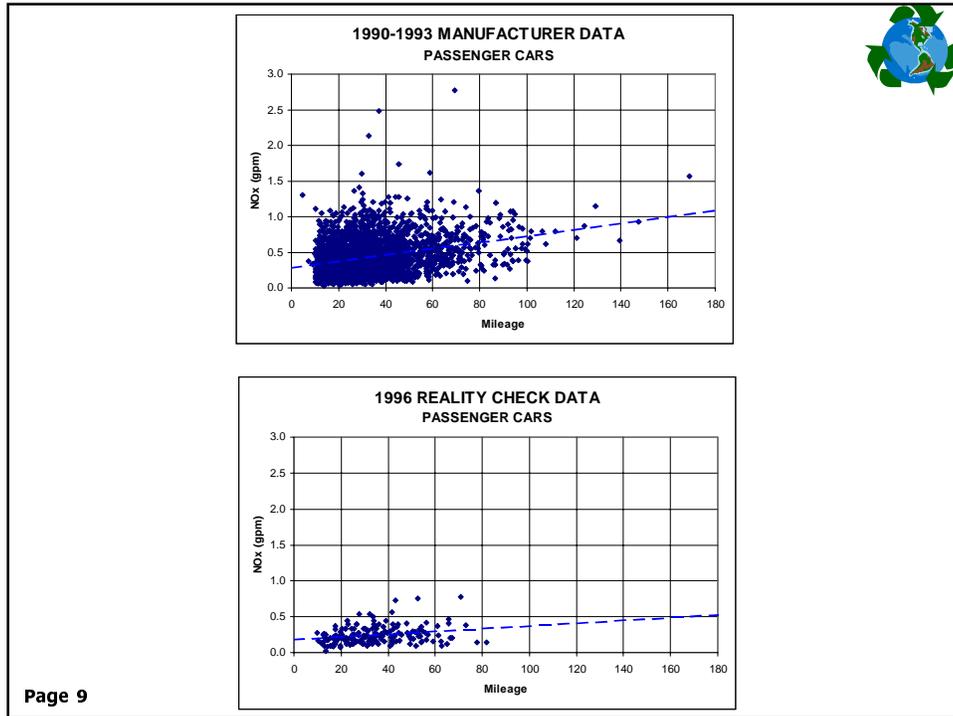
- Ford, General Motors and DaimlerChrysler tested a total of 353 1996 model year vehicles. Of the total, there are 183 passenger cars and 170 light duty trucks.
- All data is reported to CARB and EPA.
- The data is also reported to the appropriate powertrain group.

Page 6

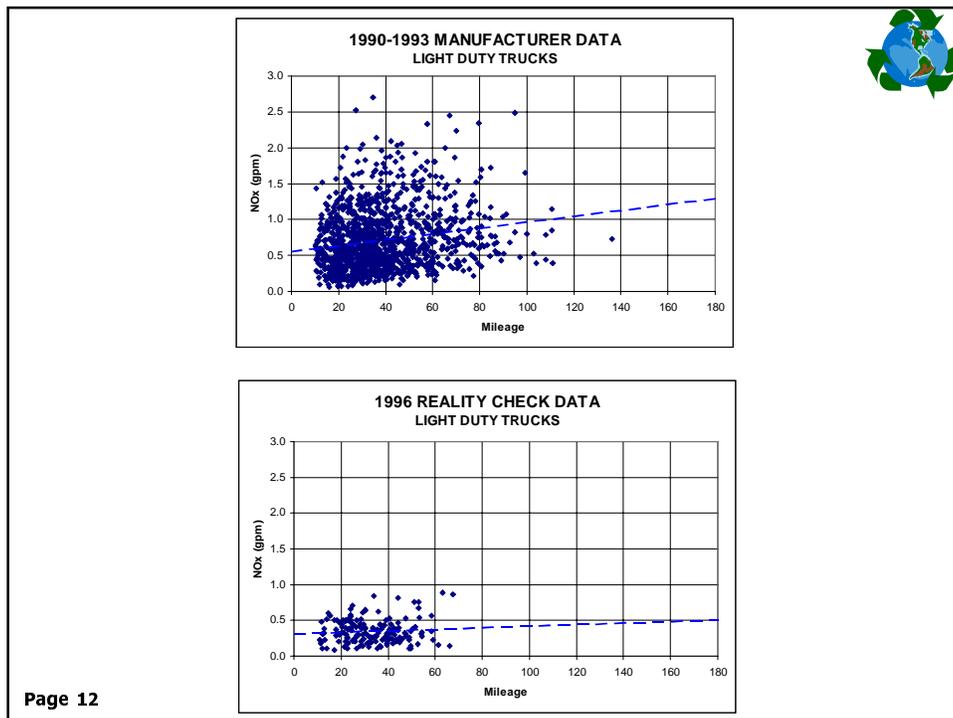
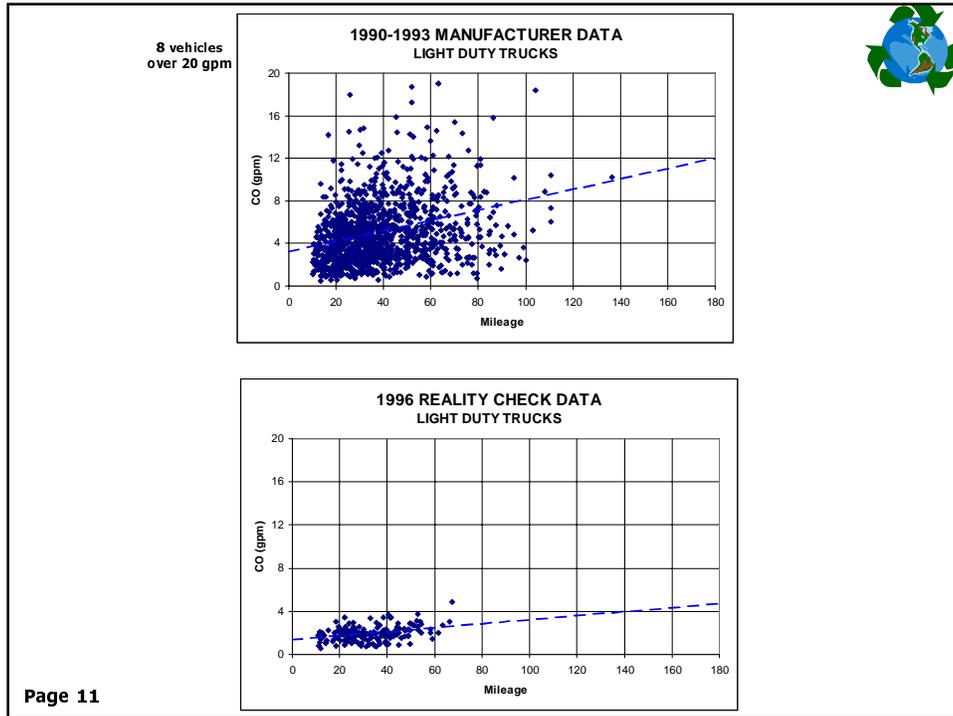
"AUTOMOTIVE INDUSTRY
IN-USE DATA" as presented by Roger Orteca at
the MSTRS meeting on 10/11/00



"AUTOMOTIVE INDUSTRY
IN-USE DATA" as presented by Roger Orteca at
the MSTRS meeting on 10/11/00



"AUTOMOTIVE INDUSTRY
IN-USE DATA" as presented by Roger Orteca at
the MSTRS meeting on 10/11/00





AUTOMOTIVE INDUSTRY IN-USE DATA

Ongoing EPA and CARB In-Use Compliance Test Programs:

- Selected engine families are tested for compliance to standards.
- Most of EPA programs use minimal vehicle screening for an initial evaluation. Follow-up "confirmatory" testing is possible.
- CARB programs, to date, screen for proper use and maintenance.
- Testing has been conducted in N. Virginia, S.E. Michigan and the Bay Area or South Coast of California.

Page 13



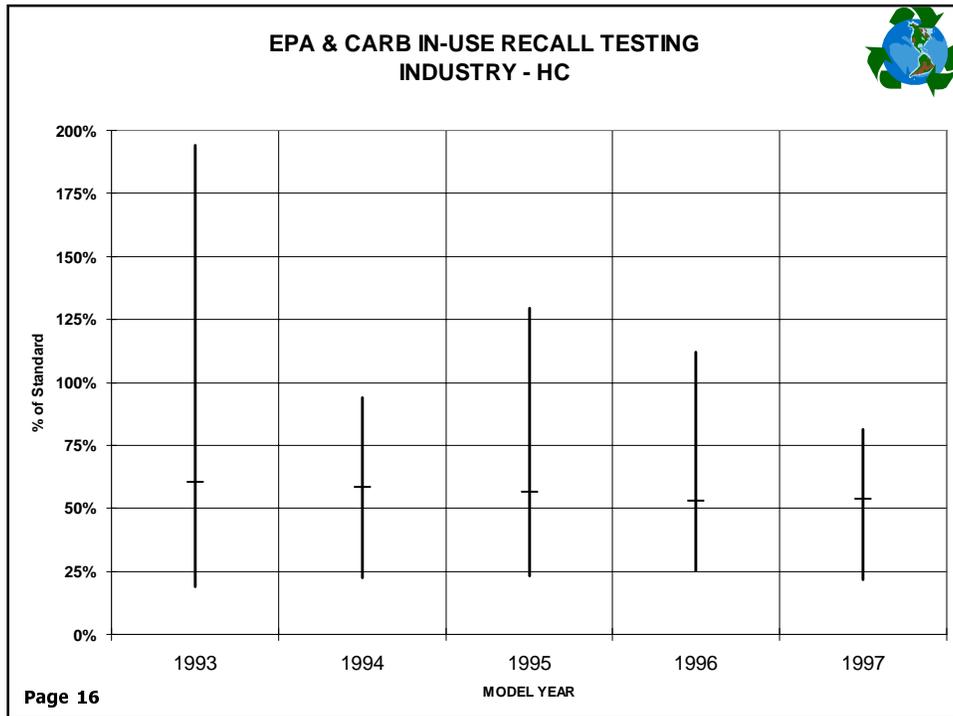
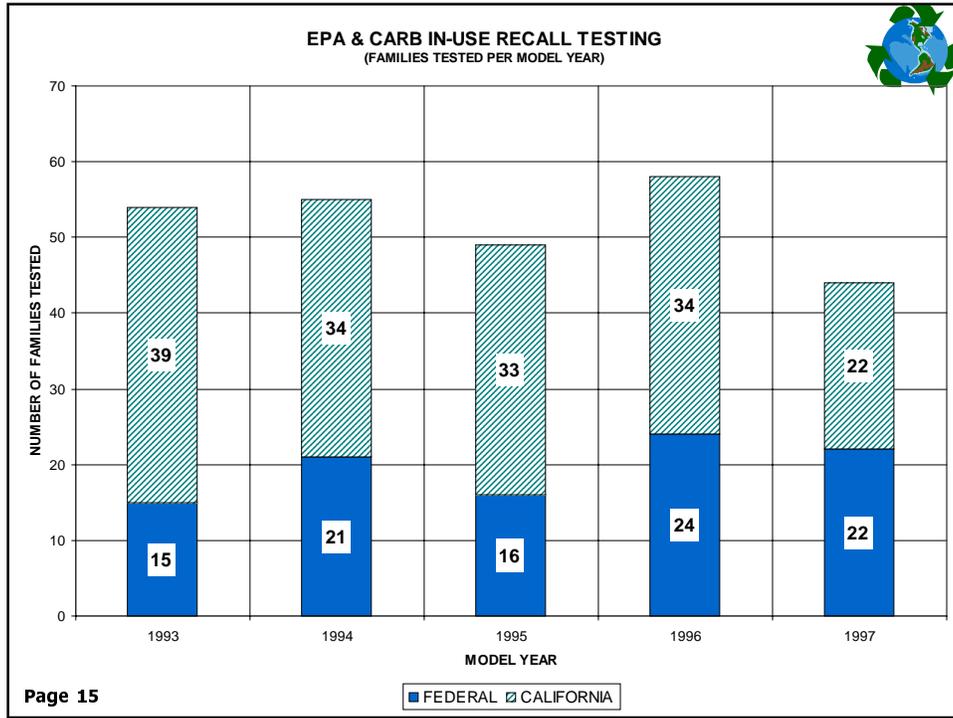
AUTOMOTIVE INDUSTRY IN-USE DATA

Ongoing EPA and CARB In-Use Compliance Test Programs (continued):

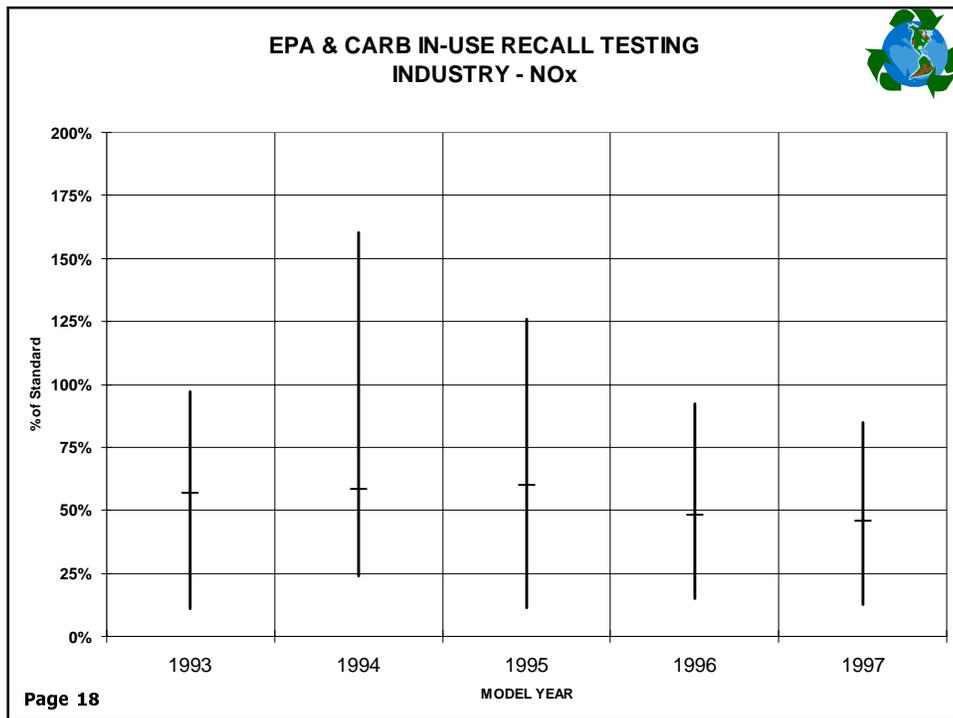
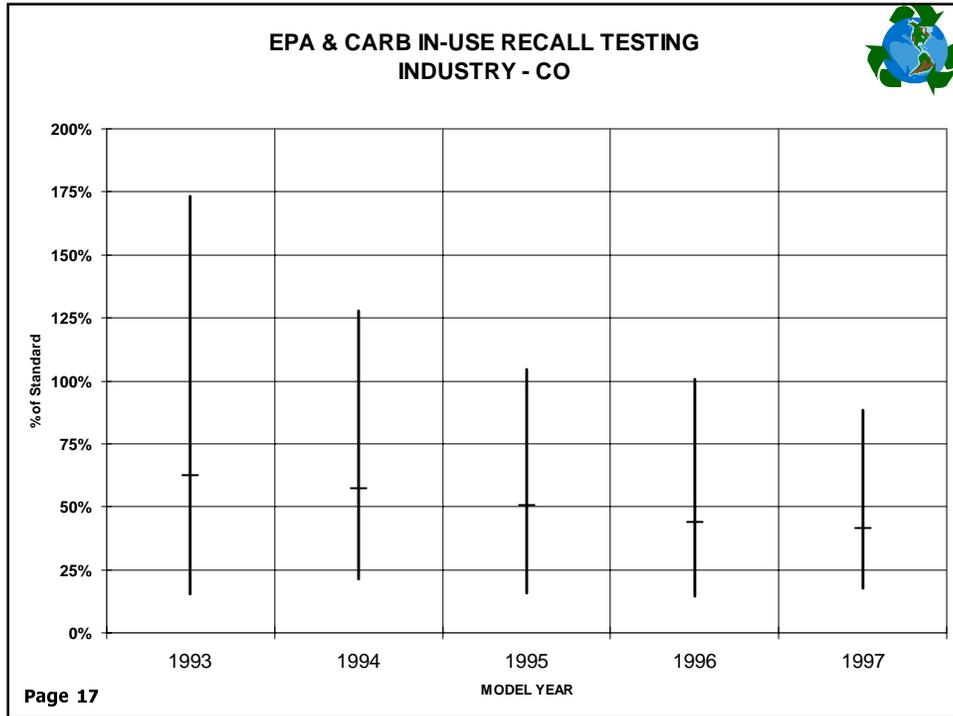
- A total of 256 1993 to 1997 Model Year EPA and CARB programs were tested through the end of 1999.
- Two of 138 Ford, General Motors and DaimlerChrysler programs resulted in a recall.

Page 14

"AUTOMOTIVE INDUSTRY
IN-USE DATA" as presented by Roger Orteca at
the MSTRS meeting on 10/11/00



"AUTOMOTIVE INDUSTRY
IN-USE DATA" as presented by Roger Orteca at
the MSTRS meeting on 10/11/00





AUTOMOTIVE INDUSTRY IN-USE DATA

Snapshot of Future CAP2000 IUVP Testing:

- The emphasis shifts from Certification to In-Use.
- IUVP data will be used to evaluate the certification process.
- Manufacturer-conducted testing is required for 2001 Model Year. Some manufacturers opted-in early.
- All test groupings tested, except groupings with "small" sales volumes.
- Testing in 1st (minimum 10k miles) and 5th (minimum 50k miles) year of service.

Page 19



AUTOMOTIVE INDUSTRY IN-USE DATA

Snapshot of CAP2000 IUVP Testing (continued):

- Testing in California required for California-only test groups.
- At least 50% testing in cool climates for Federal test groups.
- All vehicles are tested in the as-received condition.
- Between 6-10 total vehicles tested per test group, depending upon sales volume. Exemptions for "small" volume test groups are allowed.
- Manufacturer responsible for "Confirmatory" testing if results exceed specified levels. These results could be used as a basis for recall.

Page 20



AUTOMOTIVE INDUSTRY IN-USE DATA

Conclusions:

- In-Use emissions performance has significantly improved between the early 1990's and 1996.
- Compliance has improved also.
 - 1997 was the first year that all manufacturers passed in-use compliance testing.

Page 21



AUTOMOTIVE INDUSTRY IN-USE DATA

Conclusions (continued):

- CAP 2000 IUVP will provide more significant in-use data because:
 - Manufacturers are required to perform testing.
 - There is broader coverage of the entire fleet.
 - There is recall jeopardy.
 - There is quick feedback, due to low mileage testing.
 - There is more high mileage data collected.

Page 22

"AUTOMOTIVE INDUSTRY
IN-USE DATA" as presented by Roger Orteca at
the MSTRS meeting on 10/11/00



AUTOMOTIVE INDUSTRY IN-USE DATA

Questions?

Page 23