commercialvehicle

BRAKE SAFETY SYMPOSIUM

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Indianapolis, Indiana
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Agenda Topics

Brakes:

1. What issues and concerns do you see from a fleet maintenance perspective.

2. What needs do you see for dealing with this?
   - (education, training, equipment/technology, regulations, etc.)

3. Roles of private sector and government sector to help, and in what areas.

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Issues / Concerns: Maintenance / Preventative

Component Reliability:

Brake component quality has continued to improve over the years.

1. Shoes / Linings
   - No rust jacking on OEM shoes, higher quality.
     - Issues come with aftermarket shoes
       - Must purchase quality. Particularly on trailers.
   - Linings have improved life and reduced cracking
   - Preventative Maintenance:
     - Know your wear rate, set up proactive maintenance.

2. Brake Chambers
   - Rusting not a major issue.
     - Spec long life components for trailers.
   - Preventative Maintenance:
     - Stroke indicators installed on all SNI chambers to aid inspection.
     - Continuously inspect for proper functionality.
       - @ PM and daily by the driver.

3. ASA
   - Used to be a high OOS issue, newer slacks are very reliable.
   - This issue has dropped off of the radar screen.

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Issues / Concerns:
Improvement Opportunities:

1. Lights
   - We are seeing improved reliability with LED lights.

2. Air Line, Routing: Factory (OEM) Focus
   - Rubbing, Areas of concern.
   - PM Focus Item.

3. ABS
   - Good reliability, but the 1939 bus reliability is critical.

4. Container Chassis
   - Running older technology
     - Spoke wheels, inboard mount drums, 7” brakes.
     - Increased maintenance costs.
     - Bias ply tires.
   - Aftermarket Linings??

5. Hand Brakes
   - Old technology
   - Could be disabled going down the road.

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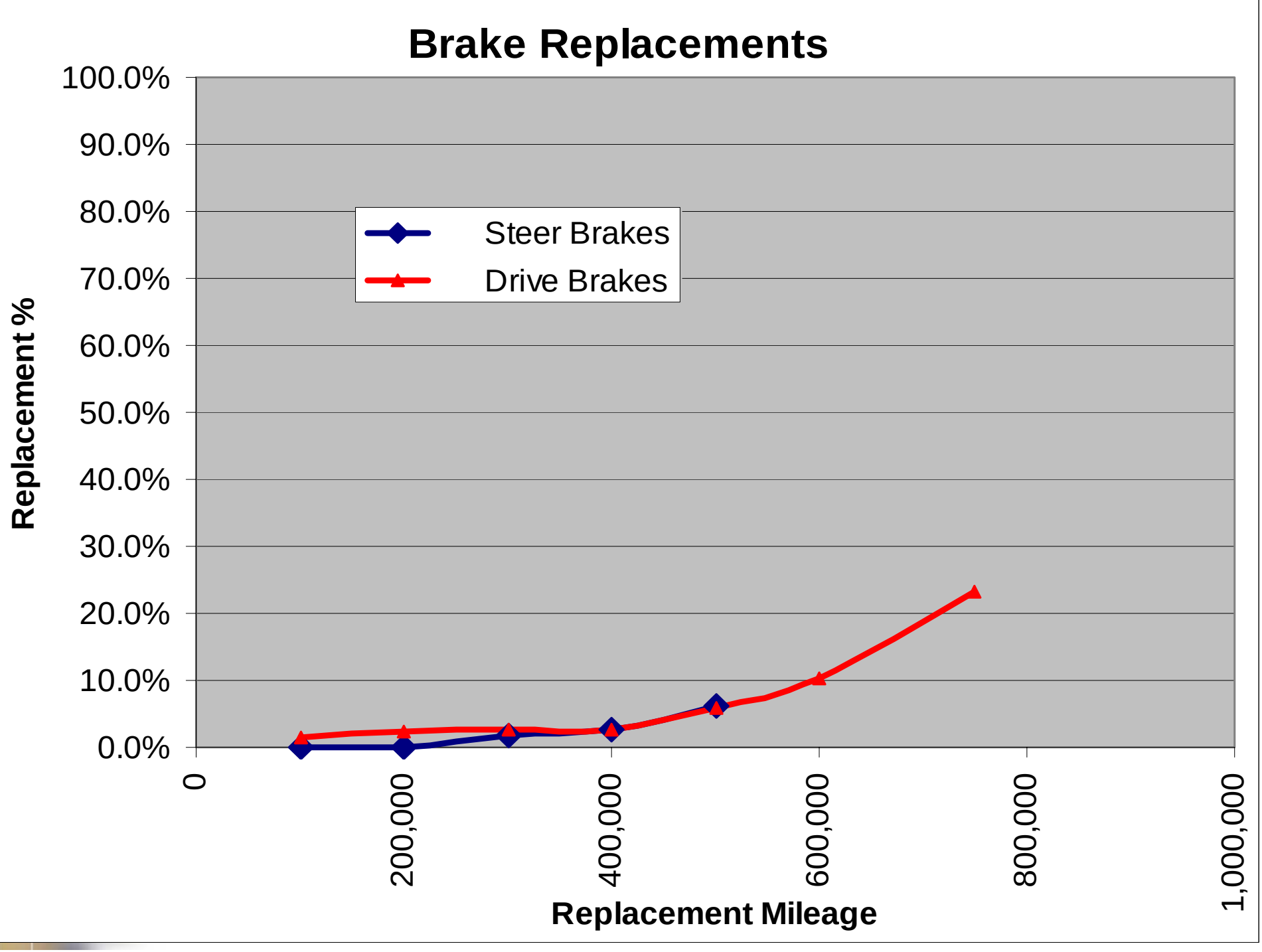
Brake Replacements
100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
Replacement %
Steer Brakes
Drive Brakes
0
200,000
400,000
600,000
800,000
1,000,000
Replacement Mileage

Solutions:






1. **Training / Education:**
   - Number one safety device on the truck is the driver.
     - High expectations.
       - Pre-Trip
       - Governor Check, air leaks, service and parking brake checks
   - PM – Only qualified mechanics.
     - Information must keep up with new technologies as they are released.
       - Roll stability control.
     - High use of intranet for information dissemination.
       - Weekly communications, lessons learned, trends, etc.
   - What does ‘Qualified’ Mean?
     - Provide more up front clarity around current regulations.
       - Training program approved by state, provincial,or federal agency.
     - Take the subjectivity out.
     - Improve consistency of knowledge and certification.

2. **Equipment / Technology:** Cooperative venture between the Government and the end user.
   - **Cost Effective** high performance brakes.
   - **Cost Effective** stability systems.
   - **Cost Effective** system diagnostics.
   - **Cost Effective** RF Technology???.

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Role of Government & Private Sector:






1. Government should enable the end user to use safety systems.
   - Grants for testing, Cost/Tax incentives, Regulatory changes.
   - Industry is looking for cost effective safety technology.
     - Roll Stability Control
       - Standard Since 4th Qtr 2003
       - Very positive results
     - New Brake Technology Interests
       - EBS
       - Collision Mitigation, adaptive cruise control.
     - Work with TMC
       - Broad industry perspective.
       - Develop cost effective technology.

2. Regulations
   - Define the goal.
     - Ie. Reduction in fatalities by 50% by 2010.
   - Determine best approach to achieve goal based on solid **unbiased statistical data**.
     - Ie. Reduce stopping distances by 30%
   - Work with end users to determine the best way to achieve the goal with as much freedom as possible.

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Questions?