



# Reduction of Risks from Pre-1989 Tank Cars



**National Transportation Safety Board**

# Pressure Tank Car Fleet

- **59,344 currently in service**
- **35,425 built before 1989**



# Service Life

- **Last pressure tank cars with non-normalized steel**
  - **Built in 1988**
  - **Service life through 2038**
- **5 tank cars in Minot**
  - **Built 1976**
  - **Service life through 2026**



# Remaining Service Life Pre-1989 Fleet

- **Built – dates:**

1960s	9,251 (26 %)
1970s	17,647 (50 %)
1980 – 1988	8,527 (24 %)

- **End of service life**

1960s	2010 - 2019
1970s	2020 - 2029
1980 – 1988	2030 - 2038



# **5 of the top 10 hazardous materials transported in tank cars were liquefied compressed gases**

**liquefied petroleum gas**

**propane**

**anhydrous ammonia**

**vinyl chloride**

**chlorine**



# Pressure Tank Car Shipments in 2000

- **240,000 shipments**
- **Nearly 55,000 shipments of anhydrous ammonia**





# **Pre-1989 Pressure Tank Cars**

**Unquantified risk to the public**





# **Actions to Reduce Risks to Pre-1989 Fleet**

- **Ranking to identify tank cars posing highest risk**
- **Comprehensive analysis**
  - **Determination of fracture toughness of tank shells**
  - **Use of test data**
  - **Testing of statistically representative sampling**
- **Implementation of measures to eliminate/mitigate risk**



