Automatic Tire Inflation – Benefits for Tanker Industry Fleets
PSI Team

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ATIS Utilization Today

- PSI Invented Automatic Tire Inflation 21 years ago
- ATIS systems now on >70% of the top 200 For-Hire & Private Fleets at some level
- ATIS’s now being specified on > 40% of new N.A. OEM vans & reefers
- ATIS utilization in tanker industry @ 10%
- >1,000,000 trailers running with ATIS by end of 2015
Why consider automatic tire inflation for your tankers?

- Significant reduction in tire related roadside service calls
- Improved vehicle Fuel Economy - +3.8% per FMCSA Study in 2010
- Longer Tread Life - > 10%
- Short ROI (7-10 months)
- Very Low maintenance
- Majority of top fleets are using ATIS
Al Cohn
Truck Tires & Your Fleet
Tires continue to be the #1 maintenance cost for commercial fleets.
Tire Prices for 18 wheeler over $8,400 (April 2015)
Inflation Pressure & Tires

- # 1 Maintenance Issue Fleets Face Today is Tire Inflation Pressure
  - It takes too long to check
  - Get Dirty
  - Inside Dual Difficult to Reach
  - Inflation Gauges are Inaccurate
  - Lose Valve Cap after Pressure Check
  - Valve Cores Stick in the Cold and Lose Air
  - Trailer Tires typically have the worst air pressure
Why Do Tires Lose Air?

- Osmosis through the casing
  - 1 to 4 PSI/Month
  - Depends on tire materials & construction

- Tread Punctures

- Sidewall Damage

- Leaking Valve Stems

Slow leaking punctures in the tread is the #1 reason why tires lose air
Air Pressure Statistics

100 psi +/- 1

100 psi +/- 2

100 psi +/- 3

100 psi +/- 4

100 psi +/- 5
Tire Underinflation is the Major Issue

- Only Leads to Problems & Increased Fleet Costs
  - Irregular wear leads to premature removal
  - Tire punctures increase
    - Longer footprint
    - Rubber becomes hot & “softer”
  - Tire casings become hot from overflexing, which reduces retreadability
  - Fuel economy drops significantly
Underinflated Commercial Low Rolling Resistance Truck Tires & It’s Impact on Fuel Economy
Tire Footprints 100, 90, 80, & 70 psi @ 4250 pounds
18% more rubber at 70 psi
3.0% negative impact on fuel economy

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CSA & Tires
“An Update”
Tire Violations – Severity Rating = 8

- Flat tire or fabric exposed
- Ply or belt material exposed
- Tread &/or sidewall separation
- Flat tire &/or audible air leak
- Cut exposing ply &/or belt material
- Steer tire tread depth less than 4/32”
- Drive, trailer, dollie tire tread depth less than 2/32”
Flat Tire – 8 points

Various definitions of what is a “flat tire”

- CVSA states a flat tire is when the tire pressure drops to 50% or less of what is the maximum tire inflation molded into the tire sidewall
  - Example: Tire sidewall says “120 psi max”
    - 50% of 120 psi equals 60 psi

- A vehicle found with even 1 flat tire is considered out of service
Underinflated Tire – 3 points

What is definition of an underinflated tire?

- Nobody knows
- Currently, there are only published definitions of a flat tire

Fleets concerned that a zealous inspector can start assigning 3 points to tires that are 5, 10, or 20 psi underinflated

- Points can add up very quickly
- Is the pressure gauge calibrated?
CVSA – Out of Service Criteria

April 1, 2015
CVSA – Regulatory Guidance (underinflation)

- In order to have a violation for low tire inflation pressure, inspector must have a load/inflation chart for the given tire size and load range.

- An underinflated tire is not a violation until it meet FMCSA 393.75(a)(3) – No motor vehicle shall be operated on any tire that is flat or has an audible air leak.
Oil Well Service Fleets Opportunities for ATIS

Steve Robinson
North America Oil & Gas Production Metrics

- 90 Million brls of oil & gas per day worldwide; 21% of that in the US
- >50% of US consumption was imported
- 2013 1st time US produced more than we imported
- US has 800 billion brls of recoverable oil, Saudi Arabia has 267 billion
- US unconventional oil (shale or tight oil) has risen 25% since 2008
US Production Metrics

- In 2002 shale gas production was only 2% of total US natural gas output, today 37%.
- US Employment attributable to fracking will account for > 3.9 million jobs and $500 billion to US GDP by 2025.
- US Oil import requirements down from 60% in 2005 to 42% today.
- Crude prices @ $ 56 will slow exploration somewhat in 2015 but production goes on.
- Active Rig count down from 2,000 to 844.
Unconventional Oil is Unlocking New Domestic Sources of Supply

From 1970 to 2008, crude oil production fell from 9.6 mbd to 5 mbd. Unconventional oil has played a significant role in reversing oil production decline.

Oil production has risen 25% since 2008, due to production of tight oil.

*Projections, Source: IHS CERA
IMPACT of CSA on Vocational Fleets

- Citations impact Driver’s CDL & Fleet Safety Rating
- Flat tires are 8 points
- Fleet’s Safety Rating also hit
- Federal Gov’t does not fund – States Fund
- Vocational & oil well service fleets are popular target for Highway Patrol & Weigh Stations
Why Midstream Service Fleets Should Consider ATIS

- Elimination or reduction of Roadside Service Calls due to flats
- Fuel Economy Improves by as much as 3.8%
- Casings last longer
- Tread Life is > 10% longer
- ThermALERT™ Warning could save wheel-end, avoid tire or even trailer fires
Why Specify ATIS (con’t)

- $5,000 per hour cost at well head for equipment on ground during drilling and/or fracking - can’t have down time
- 1,500 to 2,000 ‘trailer/tanker trips’ required per horizontal well head
- Compliance, Safety, Accountability (CSA) Impact is profound on midstream oil well service fleets
THANKS!