Aerodynamic Trailer Fairings
Why Trailer Aerodynamics?

- Manufacturers have increased fuel efficiency by over 10% through tractor aerodynamics...

- Trailers represent an opportunity for vast improvement versus current standard configurations
Air Drag = Wasted Fuel

- At speeds above 35 mph, a majority of fuel is used to overcome the aerodynamic drag of a tractor trailer.
- Without skirts, wind flows underneath the trailer and hits the wheels and axle components to create fuel wasting drag.
- Skirts direct the wind around the axles, and allow them to draft the tractor more effectively.
- Skirting provides the most operationally practical and cost effective means to achieve drag reduction on trailers.
Leading Manufacturers

• **Freight Wing – US**
  - Multi-Panel design – 145 lbs
  - DMP plastic
  - 36,000 units on the road
  - Introduced in 2007

• **Ridge Corp – US**
  - Single panel design – 165 lbs
  - Fiberglass Composite
  - est. 14,000 units on the road
  - Introduced in 2010

• **Laydon – Canada**
  - Multi-Panel design - 260 lbs
  - Fiberglass Composite
  - est. 5,000 units on the road
  - Introduced in 2004

• **Transtex – Canada**
  - Single panel – 240 lbs
  - Fiberglass Composite
  - est. 25,000 units on the road
  - Introduced in 2005

• **Utility – US**
  - Single panel - 340+ lbs
  - Fiberglass Composite
  - est. 45,000 units on the road
  - Introduced in 2010

• **Wabash – US**
  - Multi-Panel design - 360 lbs
  - Steel Composite / PVC
  - est. 34,000 units on the road
  - Introduced in 2009
Laydon

Transtex

Freight Wing - AeroFlex Maxx

Ridge Corp - Green Wing

Wabash - AeroSkirt

Utility - USS 160
Aerodynamics - Proof

The Industry is learning what to look for:

- SAE/TMC J1321 track test results approved by EPA SmartWay
- Independent 3rd party evaluations
- Lower to the ground = better performance (8” to 16”)
- Proven stability and strength
Durability

What to consider:

- Temperature extremes
- UV Protection - to prevent fade or cracking
- Panels able to flex inward, and outward
- Strong rear bracing, yet flexible
- Ease of maintenance
- Side and Edge impact resistant material
Fleets know the Benefits

- Save $$$$!
  - Fuel savings of up to $3,300 per trailer every 100,000 miles of operation*
  - Return on investment in approximately 40,000 miles of trailer operation*

- Meet CARB Compliance
  - EPA SmartWay certified to meet the California trailer rules

- “Green” Fleet Image
  - Greenhouse gas reductions of over 13 tons per trailer per 100,000 miles

*Based on 5% fuel savings, 6 mpg baseline, $4.00/gal fuel cost, product installed cost of $1,450.
What’s Next?

• Continued improvement to side skirt design
  • Continued competitive pressure driving innovation
  • Skirts are getting lighter, more durable, less expensive
  • Diversification of “compliance requirement” versus “fuel savings”

• Improved tail skirts
  • The next biggest area of fuel savings for fleets
  • Significant operational hurdles
  • Innovation will make them lighter, cheaper, and easier to use and maintain

• Other New Products
  • Address Specialty trailers
    • Chassis, tankers, curtain side, drop deck, etc
  • Gap reduction
  • ???
Thank You

For More Information Please Contact:

Eric Salyers
Vice President, Freight Wing Inc
eric@freightwing.com
513-884-4940