

# CARB EXECUTIVE ORDERS

## TRANSTEX® VS. UTILITY TRAILER MANUFACTURING (UTM)

| DEVICE         | $\Delta C_d A (m^2)^*$ | TEST TYPE   | TRAILER TYPE                        | CARB EXECUTIVE ORDER        |
|----------------|------------------------|-------------|-------------------------------------|-----------------------------|
| E-1930T        | 0.49                   | Wind Tunnel | Long Dry and Long Refrigerated Vans | <a href="#">AD-05-002</a>   |
| E-1932T        | 0.50                   | Wind Tunnel | Long Dry and Long Refrigerated Vans | <a href="#">AD-05-001-1</a> |
| E-2330T        | 0.51                   | Wind Tunnel | Long Dry and Long Refrigerated Vans | <a href="#">AD-05-003</a>   |
| UTM USS-120A-4 | 0.44                   | Wind Tunnel | Long Dry and Long Refrigerated Vans | <a href="#">AD-06-001-1</a> |

\*The  $\Delta C_d A (m^2)$  value is the difference in the coefficient of aerodynamic drag by the area between a trailer without an aerodynamic device and a trailer with an aerodynamic device. The  $\Delta C_d A (m^2)$  value correlates to fuel savings; as the  $\Delta C_d A (m^2)$  increases, fuel savings increase proportionally.

### TESTING

When testing Long Dry Vans and Long Refrigerated Vans, the lowest  $\Delta C_d A (m^2)$  value is recorded. This value always results from Long Refrigerated Vans. When comparing CARB's Executive Order for the UTM USS-120A-4 skirt with a  $\Delta C_d A (m^2)$  of 0.44 to CARB's Executive Orders for TRANSTEX® EDGE™ Skirts with  $\Delta C_d A (m^2)$  values of 0.49, 0.50, and 0.51 yields the most accurate results.

TRANSTEX® and UTM completed testing on Long Dry Vans and Long Refrigerated Vans.

### CASE STUDY | E-1930T VS UTM USS-120A-4

$$\begin{aligned}
 \% \text{ Increase in Fuel Savings} &= \frac{\Delta C_d A (\text{TRANSTEX}^\circ) - \Delta C_d A (\text{UTM})}{\Delta C_d A (\text{UTM})} \times 100 \\
 &= \frac{0.49 - 0.44}{0.44} \times 100 \\
 &= 11.36\%
 \end{aligned}$$

| FUEL SAVINGS COMPARISON<br>TRANSTEX® VS. UTM USS-120A-4 |                             |
|---|-----------------------------|
| E-1930T   | 11.36% greater fuel savings |
| E-1932T   | 13.64% greater fuel savings |
| E-2330T   | 15.91% greater fuel savings |

### CONCLUSION

By equipping trailers with TRANSTEX® EDGE™ Skirts, fleets benefit from **between 11% and 16% more fuel savings** than with UTM's USS-120A-4 skirt.

