To: All Customers
From: Chris Osetek – Technology Manager
Date: March 4, 2020

Subject: Upgrade Announcement- Implementation of High Density Pressure System

We continue to evaluate our customers' suggestions for improvements and implement those which provide more useful data and increased productivity.

Effective 1st shift, Wednesday March 4th 2020, we are pleased to announce the implementation of an additional data collection system called High Density Pressure System (aka Yellow Pressure Box)

The HDPS is a standalone data collection system that interfaces with our tunnel data acquisition system. This system will function very similarly to ICADS which has been effectively in service for the last 6 years.

System Features:

1. Box Dimensions (11" x 12" x 10")
2. A total of 124 discrete pressure channels are available via connection to the HDPS box.
    a. These pressures are connected in banks of 31 using our standard 31-pin pressure connector.
    b. Maximum pressure of the embedded transducers is .8psi
3. HDPS is outfitted with 4 31 pin male pressure connectors (31M900) and a reference pressure connector with a 1/8" barbed fitting.
    a. Customers should supply their pressures in a 31 pin female connector (31F900). This is the same connector used to mate to our existing pressure infrastructure.
    b. For small numbers of pressures we can attach our adapter and connect the pressures individually.
4. A single power cable and a single Cat 5 communications cable will be routed up from the basement along the right front ram, into the engine compartment, through the firewall and connected to the HDPS box located inside the vehicle.

Recording of Data:

Customer Sheet

Due to the customer requests for streaming data, the ability to record information on the customer sheet is not included in the current implementation.

TDMS Data file

Aerodyn will provide the data to the customer after each run. This data is stored in a tdms binary spreadsheet format in the Customer Folder. The .tdms – Microsoft Excel converter is installed on the Customer-PC. We also will provide the installer for customers wanting to have the tdms file converter installed on their own PC.

Streaming of Data

A brand new feature of this system is the ability to view the pressures in real time. This is designed for troubleshooting at the beginning of the test (in particular during shakedown) to diagnose any leaks throughout the system.

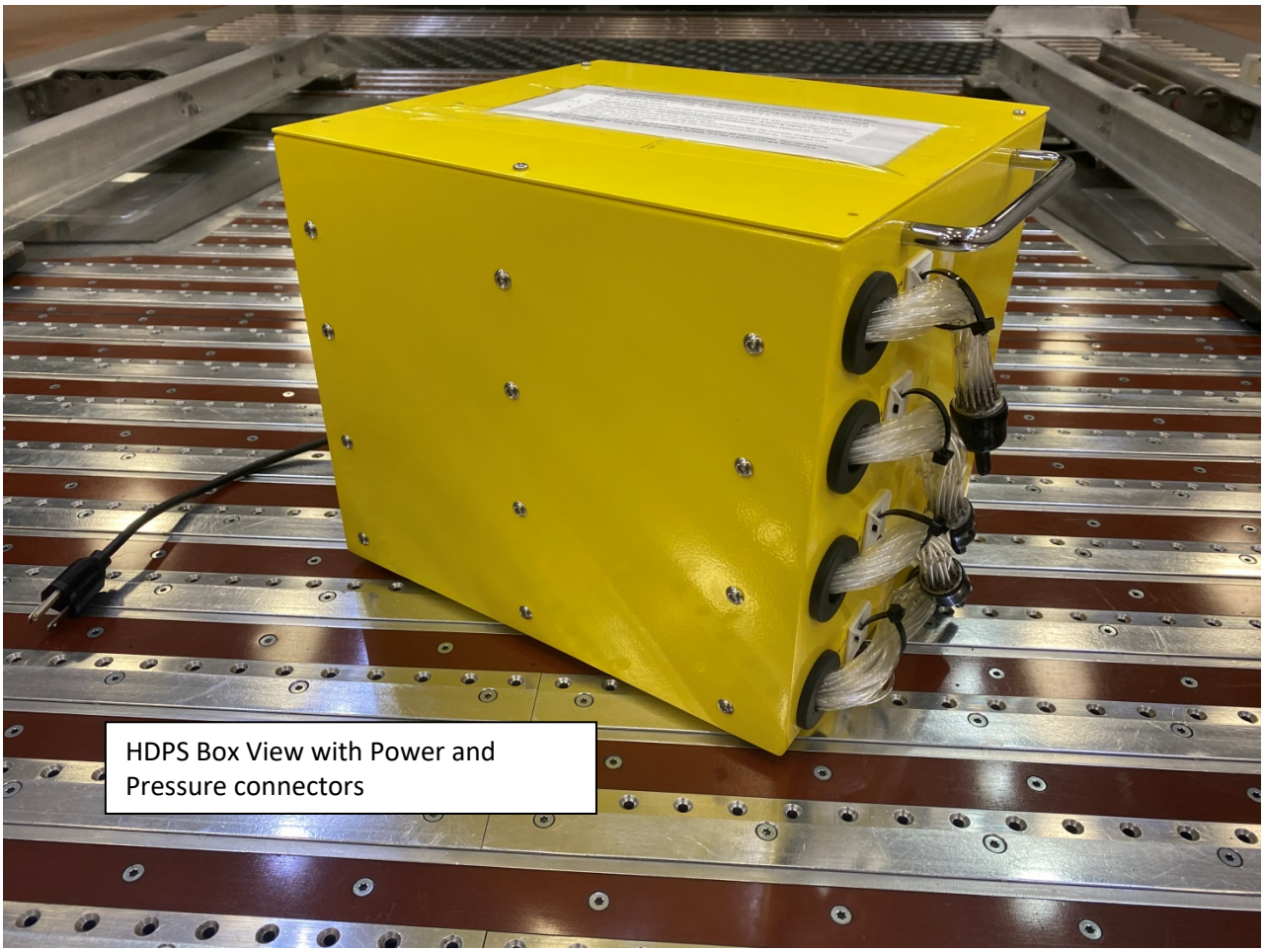
NOTE: the absolute levels of these streaming pressures may differ slightly from what you see in an actual data point due to the dynamic nature of pressure measurements. This is a point measurement using standard calibration vs an integrated measurement using individual calibrations.

Aerodyn Responsibilities:

1. Install the main control box inside the vehicle
2. Install and connect power and network connection cable to control box inside vehicle
3. Connect Customer Pressure connectors to the box.
4. Connect reference pressure to tunnel pitot reference or to customer supplied reference pressure.
5. Disconnect, remove and store all Aerodyn equipment

Customer to provide the following:

1. Request the control box be installed by noting on the Vehicle Specification Sheet for the wind tunnel test
2. Provide a minimum 1” diameter hole thru the firewall, on the passenger side
3. Labeled pressure connectors.
4. Pressure leads long enough to reach a central location inside the car
5. Ends of all pressure leads to be terminated with 31F900 – OR – an adapter provided



HDPS Box View with Power and Pressure connectors


94–124
63–93
32–62
1–31
Pressure Bank Labeling


31M900 Scanivalve connector installed on all 4 banks on the box.
Customer needs the 31F900 to mate to this connector

Reference tube can be connected to Tunnel Reference or to Customer supplied reference.