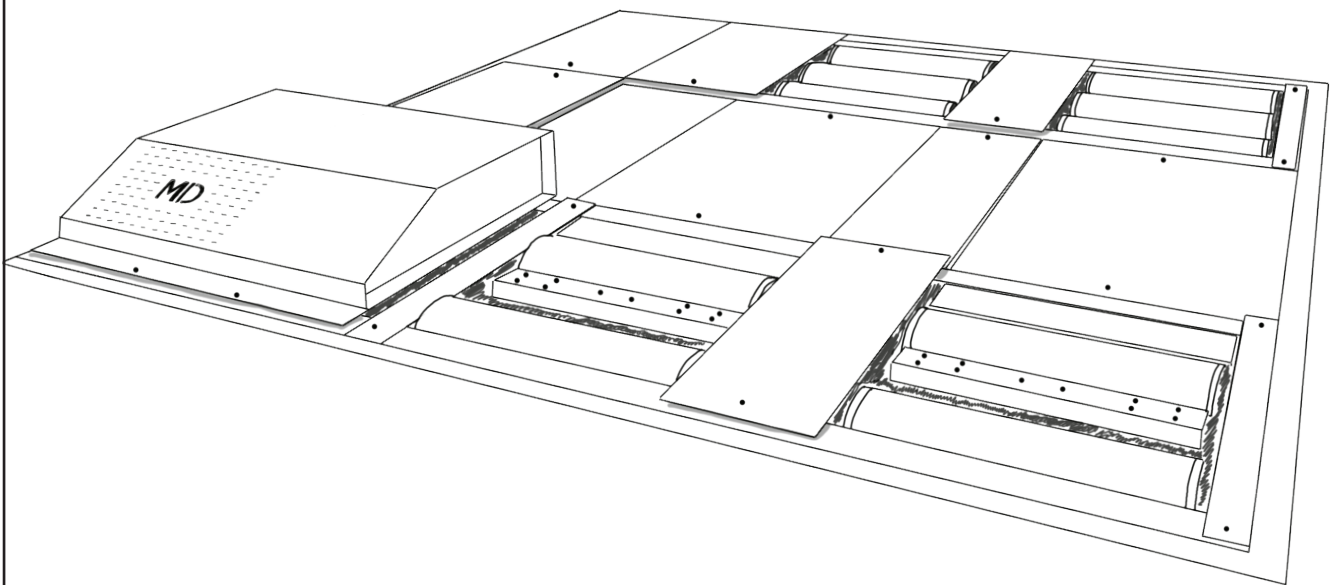


## Mustang Dynamometer

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**Mustang Dynamometer**




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## Key

<b><u>Bold/Underline</u></b>	PowerDyne Menu Selection
	PowerDyne Function
<b>Bold</b>	PowerDyne Button/Popup Selection
	Helpful tip
	Extremely Important!

## To Bring Car Onto Lift

---

Turn on shop vent fan

 **Lift**

 **Up** (this locks roller brake)

- Bring wheel just behind roller
- **TIP** You want the wheel to be “climbing” the roller during operation
- Chock both sides of one wheel
- Use 4 tiedowns
- Tighten straps (somewhat loose)

 **Lift**

 **Down** (this unlocks roller brake)

- Roll to 10 MPH to center the car  **Keep hands on the steering wheel!**
- Tighten straps fully
- Lock handles

**TIP** crisscross straps on front wheel drive cars

- Place engine cooling fan in front of car
- Open shop doors
- Mount AFR Sensor
- Mount exhaust vent hoses
- Open Window
- Turn on vehicle exhaust vent fan

 **DO NOT USE BRAKES!**

## Enter a New Vehicle

---

 **File**

 **Load Configuration**

 select **2WD** or **AWD**

 **Database**

 **Customer Vehicles**

 select **New Search**

- Enter the First and Last name

 select **Save**

 select **Vehicles**

- Enter the:
- Plate
  - Year
  - Make
  - Model
  - Weight
  - HP @ 50
  - Cylinders
  - Displacement

 select **Save**

 select **Select**

 select **Exit**

 select **Exit**

## To Find a Vehicle

---

 **Database**

 **Pick Vehicle For Testing**

- Enter the name

 select **Search**

 select the desired vehicle

 select **OK**

## OBD-II Functions

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**TIP** You must reload OBD-II whenever you restart the program or turn the car ON/OFF

 Calibration

 Scan Tool Setup

 OBD-II

- Select the channel to edit
- Pick parameter by scrolling down

To view parameters on PowerDyne:

 Double click the window you want changed

- Scroll down
- Select parameter

 select **OK**

## RPM Configuration

 Calibration


 SmartTach Setup

 Download Inductive Configuration (verify "Remote" on SmartTach)

To change the RPM Source from **Spark Plug** to **OBD-II** or **VS/VS**:

 Calibration

 Dyno Parameters

- Locate the **Engine RPM Input Source** area (top right corner)
-  select **OBD-II** or **Analog** (Spark Plug for Inductive) (TS1) (OPT)

**TIP** *make sure the switch box is at the correct position, A or B*



- Rev the engine to 3,000 RPM for inductive

**TIP** *If the RPM drops off, change the threshold voltage with the following instructions:*

 Calibration

 SmartTach Setup

 Set Threshold Voltage

- The **Default** is **1.760** (The range is **0-5 V**)
-  Change the **Default** to **.95**
- Rev the engine to 3,000 RPM
- If it still drops off,  change the **Default** to **2.15**

**TIP** *If RPM is different between the Car Tach and the Computer, calibrate with the following instructions:*

 Calibration

 SmartTach Setup

 Set Pulse/Rev

- Set so that SmartTach and the computer/screen RPMs match.

## Tests

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**TIP** For a cleaner view, use “Graph by Time” on the View Trace Function.

### Basic Horsepower Test

 **Tests**

 **Performance**

 **Power Curve**

- Set the **Start Speed** to **50 MPH**
- Set the **Stop Speed** to **80-130 MPH** (depending on HP)

 click **Start Test**

- Be in 4th gear @ 40 MPH (or closest 1:1 ratio), then launch.

 **Check tie-down straps after run!**

### Basic 1/4 Mile Test

 **Tests**

 **Timing**

 **1/4 Mile**

 click **Start Test**

 **Check tie-down straps after run!**

**TIP** PowerDyne auto-saves results when “Save Trace” and “Save Result” is highlighted (not grayed-out)

 **DO NOT USE BRAKES!**



## Calibration Verification / Maintenance

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### Calibration

 Calibration

 Load Cell Calibration

 Load Cell 1

- Verify that the **Current (in)** and **Current (zero)** are within 0.04 of each other

*To Recalibrate:*

 click **Zero** with no weight

- Place a 50 lb. cal weight on the load cell

 click **Span**

 click **OK**

### Maintenance (Lubrication)

Every 6 months:

- Grease pillow blocks with Mobile Synthetic Grease (High Temp)
- PAU (1 place) Remove Allen screw opposite zerk fitting