

LOWDOLLER MOTORSPORTS

**SHOCK TRAVEL SENSOR
PART NUMBER
STS-12800 (1/2" X 8" STROKE)
STS-23800 (1" X 8" STROKE)
STS-12600 (1/2" X 6" STROKE)
STS-23600 (1" X 6" STROKE)**

Overview:

Our linear position transducers are designed to measure suspension travel during the entire data acquisition recording period. For drag race purposes we are primarily interested in the suspension movement within the first 60'.

Installation:

Installation of the shock travel sensor will vary significantly for each application.

Mounting kit- <http://www.hfrfabrication.com/store-2/HFR-Bolt-On-Shock-Sensor-Mounts-p119070016>



HFR Bolt On Shock Sensor Mounts

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\$20.00

In stock

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Product Details

With the demanding world of shock technology in racing today we have created a bolt on shock sensor bracket. Bottom mounting hole is 1/2" diameter with a 3/16" top hole for shock sensor. There is no better way to easily add the ability of measuring shock travel than these brackets. No additional fabrication required. Price is per pair.

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- Start by jacking the car up and making sure the suspension is at full droop.
- Mount the top eyelet to the chassis or a fixed location.
- Mount the piston rod end to the rear end housing or lower control arm.
- Make sure the sensor has plenty of travel left in the event your vehicle separates the suspension beyond “full droop”
- Ensure the suspension hits a hard stop before is completely collapses the sensor.
- Carefully cycle the suspension and check for binding



Wiring-

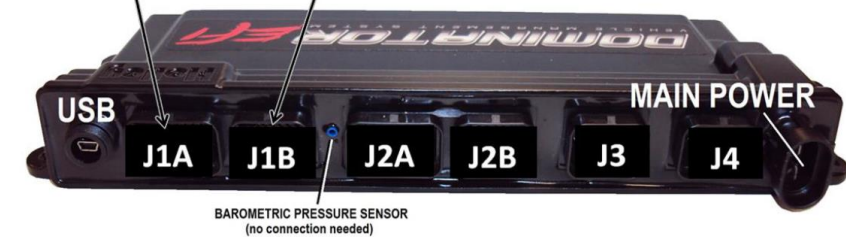
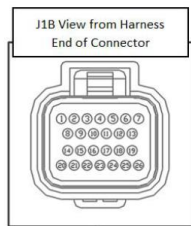
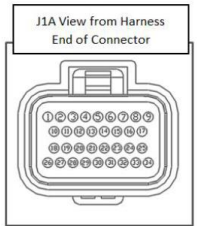
- Never run high voltage or “noisy/dirty” wires in parallel (bundle/loom together) with any EFI sensor wiring. If wires need to cross, try to do so at an angle.
- I recommend adding some type of pluggable connector for quick removal while washing or servicing the suspension. I prefer the “Deutsch” 4 pin connectors.



- Brown wire = clean +5VDC supply. (Also known as +5v reference.)
- Blue wire = clean sensor ground.
- Yellow wire = 0-5VDC input. (This is your signal wire.)
- Black wire = chassis or battery ground.

For Holley EFI users-

<u>Connector</u>	<u>Sensor +5v Reference Voltage Pin</u>	<u>Sensor Ground Pin</u>
J1A	A26	A18
J2A	A26	A18
J3	B8 and B22	B1 and B16
J4	B20	B14



Calibration:

After installing your shock travel sensor, you will need to set up your data acquisition device up. Every system is different, but the basic configuration is common. Below is the setup for Holley EFI.

#	NAME	TYPE	ECU PIN	ENABLE	Configure	Where Used
#1	Dome Pressure	5 VOLT	J1-A4	<input checked="" type="checkbox"/> Enable	Configure	Where Used
#2	Hotside Pressure	5 VOLT	J1-A13	<input checked="" type="checkbox"/> Enable	Configure	Where Used
#3	Trans Temp	THERMISTOR	J1-A12	<input checked="" type="checkbox"/> Enable	Configure	Where Used
#4	Coolant Pressure	5 VOLT	NOT DEFINED	<input type="checkbox"/> Enable	Configure	Where Used
#5	Trans Pressure	5 VOLT	NOT DEFINED	<input type="checkbox"/> Enable	Configure	Where Used
#6	Drivershaft Speed	DIGITAL SPEED/FREQ	J4-B18	<input checked="" type="checkbox"/> Enable	Configure	Where Used
#7	Rear Wheel Speed	DIGITAL SPEED/FREQ	J1-A3	<input checked="" type="checkbox"/> Enable	Configure	Where Used
#8	Front Wheel Speed	DIGITAL SPEED/FREQ	J4-B24	<input checked="" type="checkbox"/> Enable	Configure	Where Used
#9	Accel -X	5 VOLT	J4-B16	<input checked="" type="checkbox"/> Enable	Configure	Where Used
#10	Accel -Y	5 VOLT	NOT DEFINED	<input type="checkbox"/> Enable	Configure	Where Used
#11	Accel -Z	5 VOLT	J4-B15	<input checked="" type="checkbox"/> Enable	Configure	Where Used
#12	DR Shock Travel	5 VOLT	NOT DEFINED	<input type="checkbox"/> Enable	Configure	Where Used
#13	PR Shock Travel	5 VOLT	J4-B23	<input checked="" type="checkbox"/> Enable	Configure	Where Used
#14	PF Shock Travel	5 VOLT	J4-B25	<input checked="" type="checkbox"/> Enable	Configure	Where Used

- The screen shot below shows 0-100% travel.
- I prefer to set it up as +/- inches of travel relative to ride height.
- To do this, set 0 Volts as 0".
- For 8" travel sensors Set 5V as 8". For 6" travel sensors set 5V as 6"
- Note what static ride height is. I.e, 3"

Voltage (volts)	PR Shock Travel (%*10)
0.00	0.00
6.67	6.67
13.33	13.33
20.00	20.00
26.67	26.67
33.33	33.33
40.00	40.00
46.67	46.67
53.33	53.33
60.00	60.00
66.67	66.67
73.33	73.33
80.00	80.00
86.67	86.67
93.33	93.33
100.00	100.00

Conclusion:

The goal is simple. Collect as much data as possible and use that information to propel you into the winner's circle! Good luck and happy racing!

Giving back to the racers:

If you don't mind sharing, please send me feedback, photos, and datalog screenshots!

Support:

For technical support or questions please email me at lowdollermotorsports@gmail.com I will typically respond within the hour, but please allow up to 24hrs response time.

If you need immediate support, send me an email and mark it urgent. I will respond as quickly as possible.

Thanks for choosing Lowdoller Motorsports!

Sincerely,

Brandon Doller