

# **MASICOS AUTOTANQUE ROGER DECOUD OSCAR MARTINEZ**

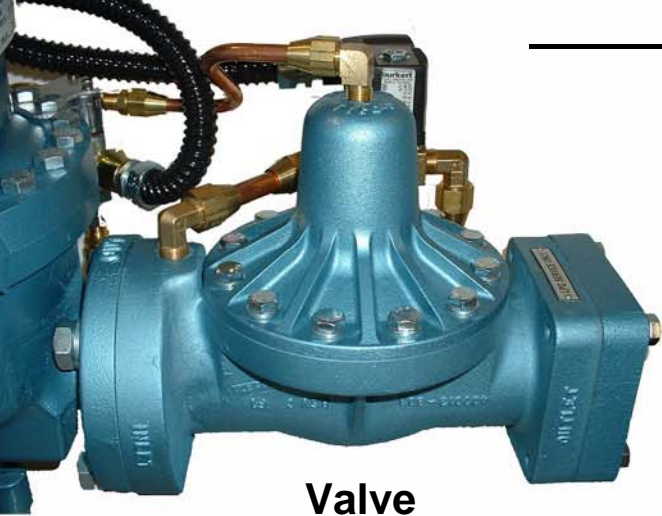


**E4000 Printer and Junction Box in Cab**



**E4000 Register and Valve on Rear Deck**

# System Components



**Valve**



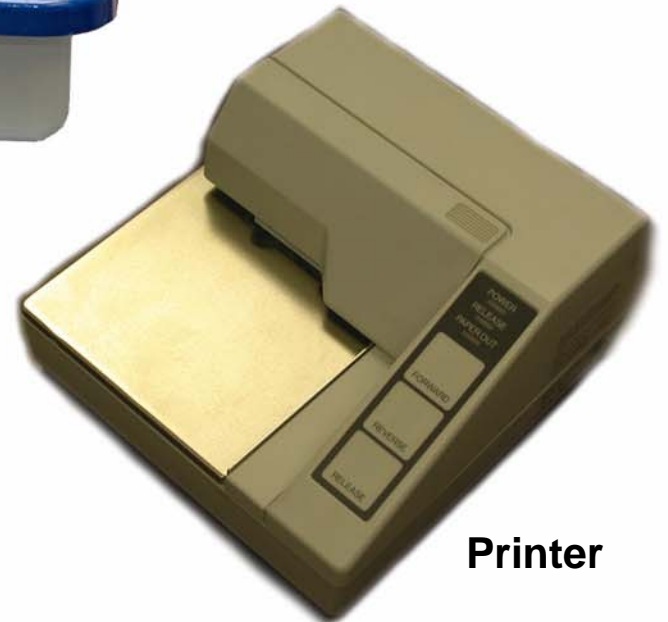
**Power/Data Cable**



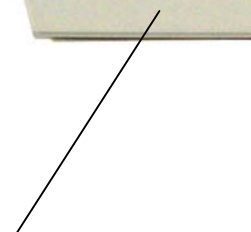
**Register**



**Junction Box**



**Printer**



Epson Roll Printer



Blaster Printer



Epson Slip Printer



Prepped Power/Data Cable

# Installation



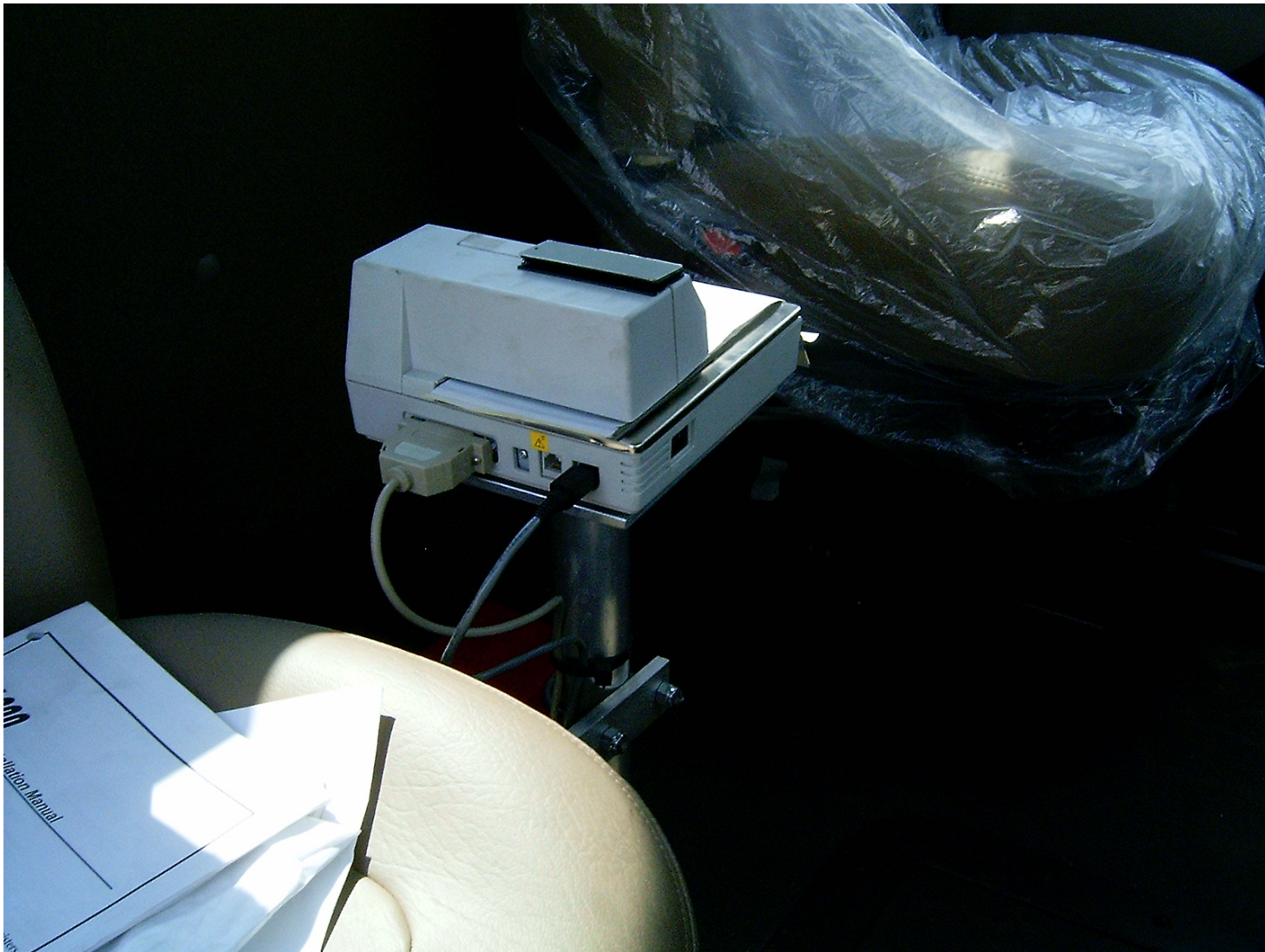
Junction Box  
Installed in Cab



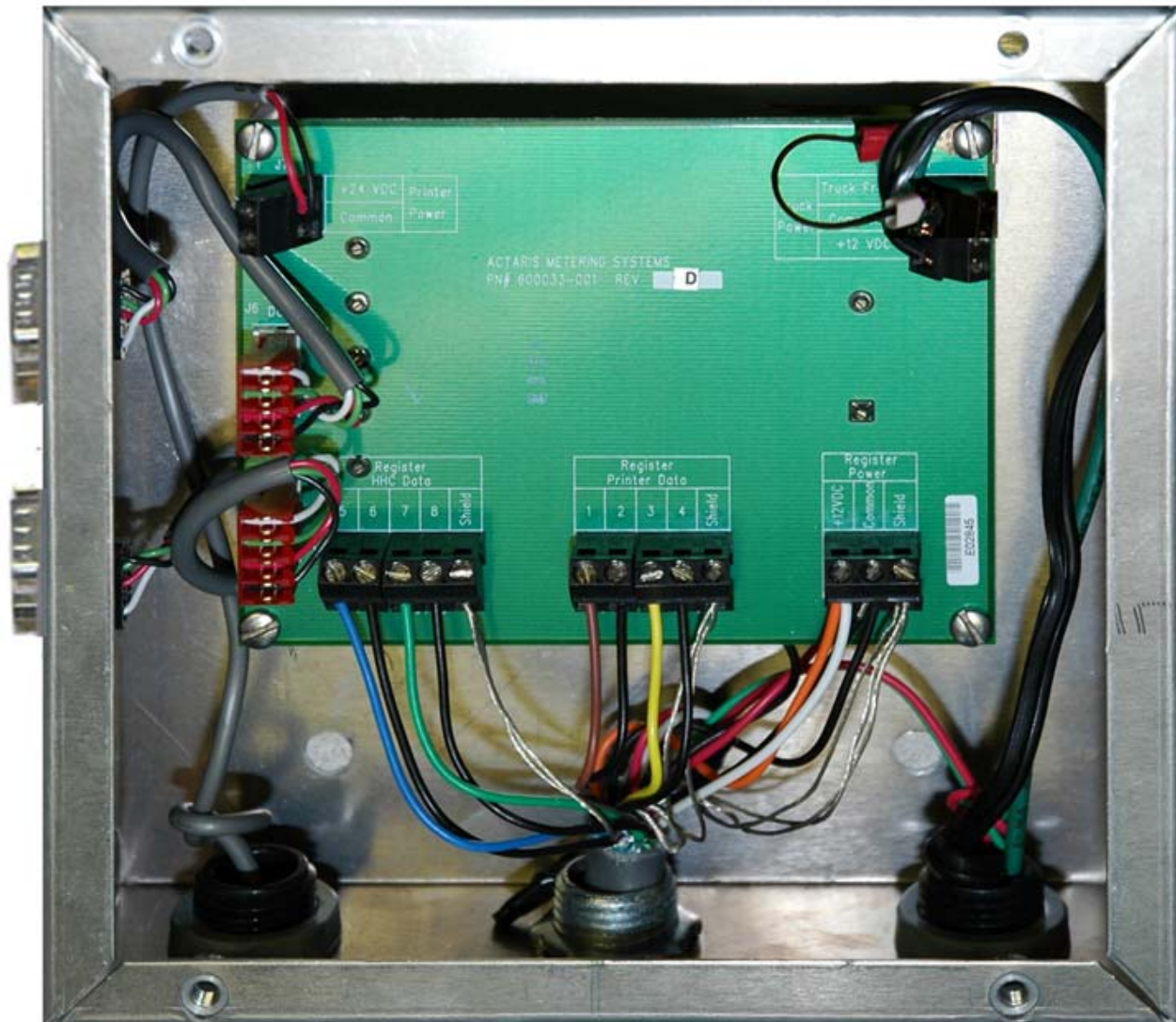
Calson Fuller

INCREASE  
H. HENDRICKSON  
UP  
DOWN





Printer Cable Connections



Junction Box Wiring



Junction Box Connection to Battery



Installed on Mechanical Meter



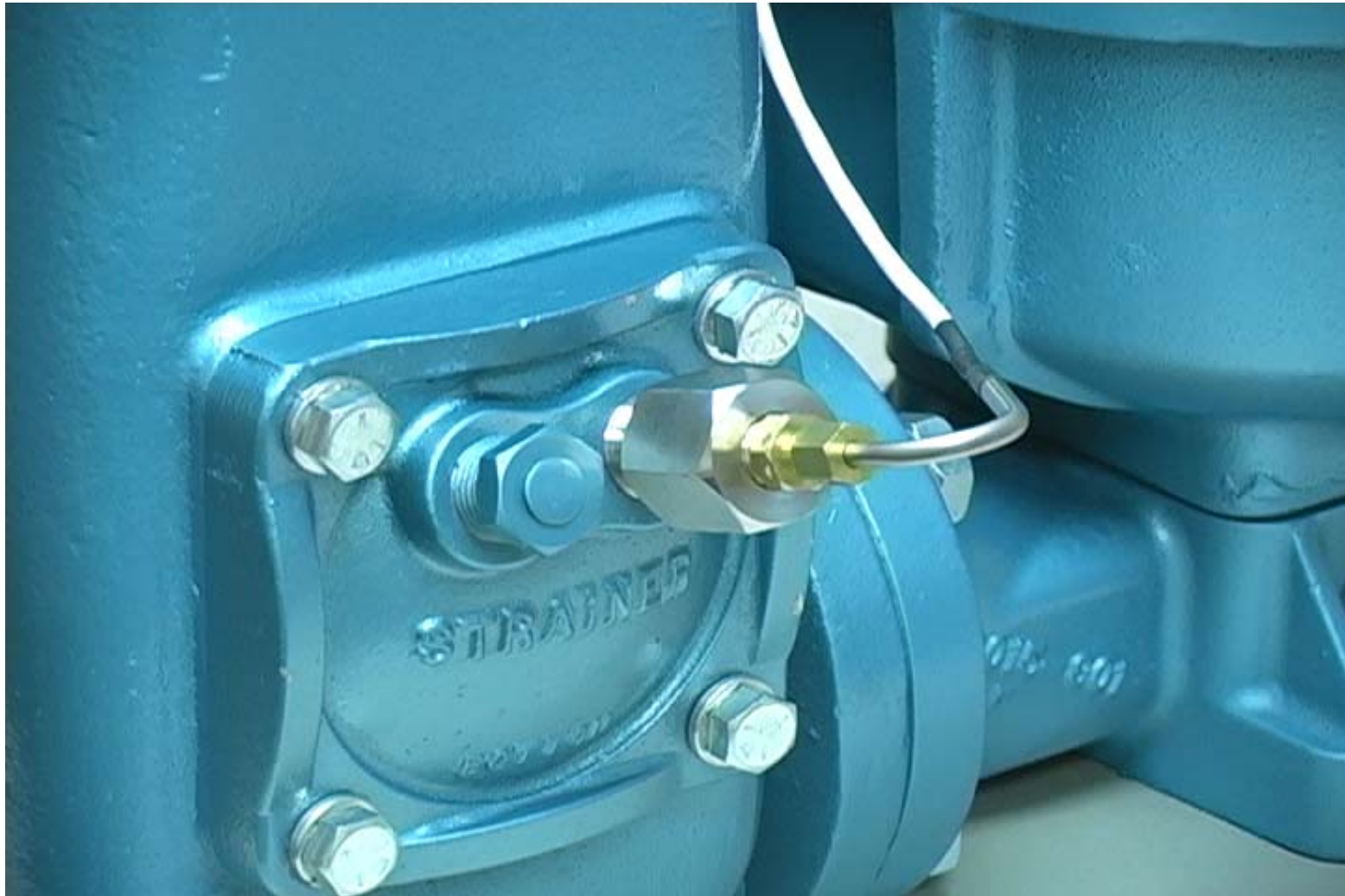
Installed on Electronic Mass Flowmeter



Meter with Adapter Ring



RTD Installed in Register

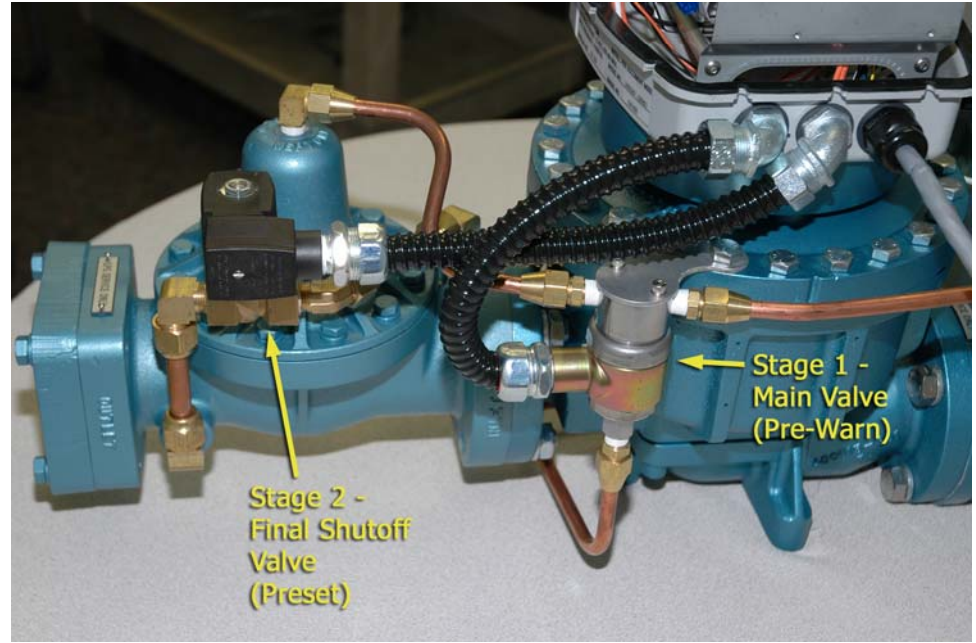


RTD Installed in Meter Strainer Cover





LPG Security Valve Installed on Meter

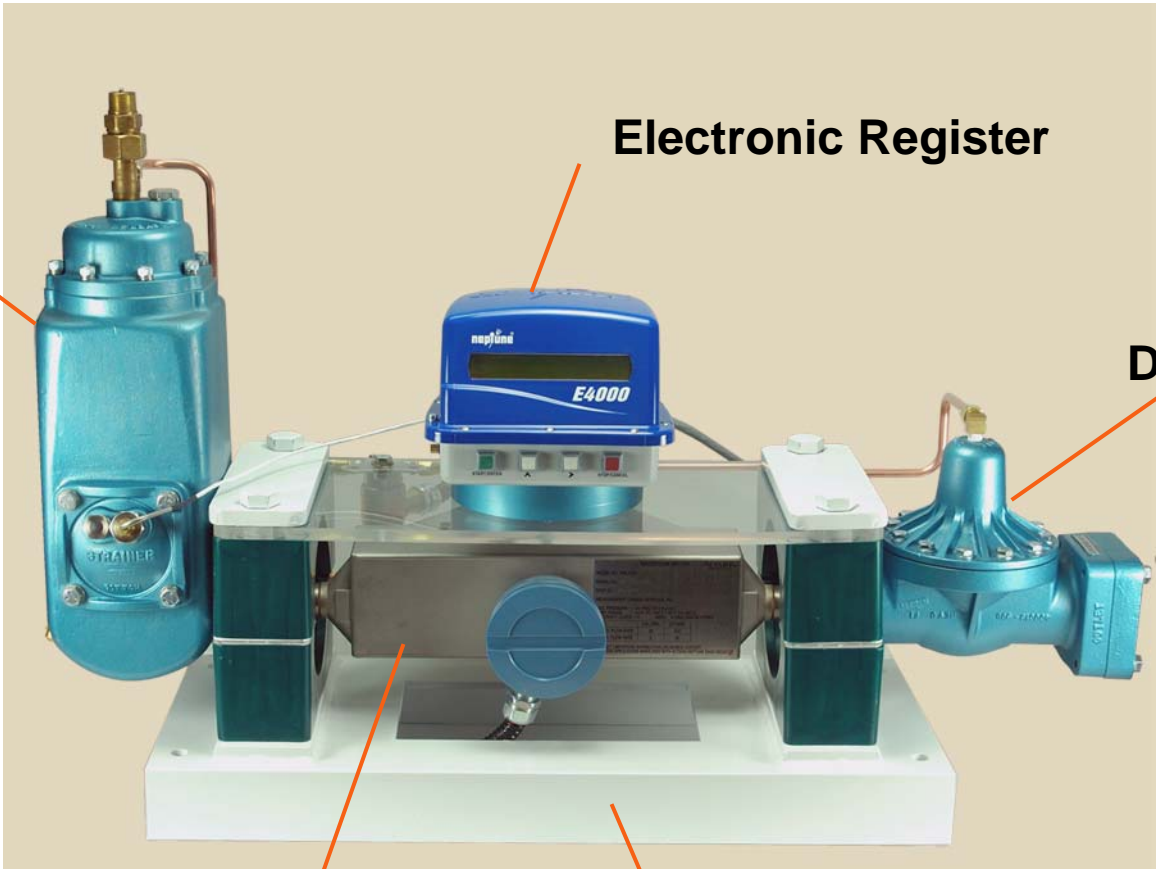


Dual Stage LPG Valve

# Metering System

- System Components
- Coriolis vs. Mechanical Truck Meters
- Bobtail Installation
- Meter Zeroing
- Meter Calibration
- Meter Operation
- Optional Accessories

# Metering System



Electronic Register

Vapor Release

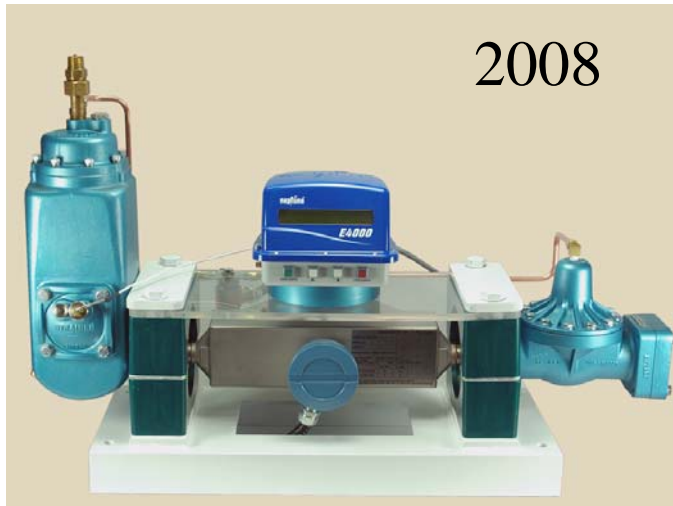
Differential Valve

Meter

Truck Mounting Bracket

# Advantages of Coriolis vs Mechanical Truck Meters

- Cost Effective - Reduced unmetered product
- Greater Accuracy: 0.1 - 0.2% vs 0.5 - 1%
- Accurate Measurement not affected by:
  - Temperature
  - Pressure
  - Fluid Density
  - Viscosity
- No moving parts - Reduced downtime/longer service life
  - Greater calibration stability



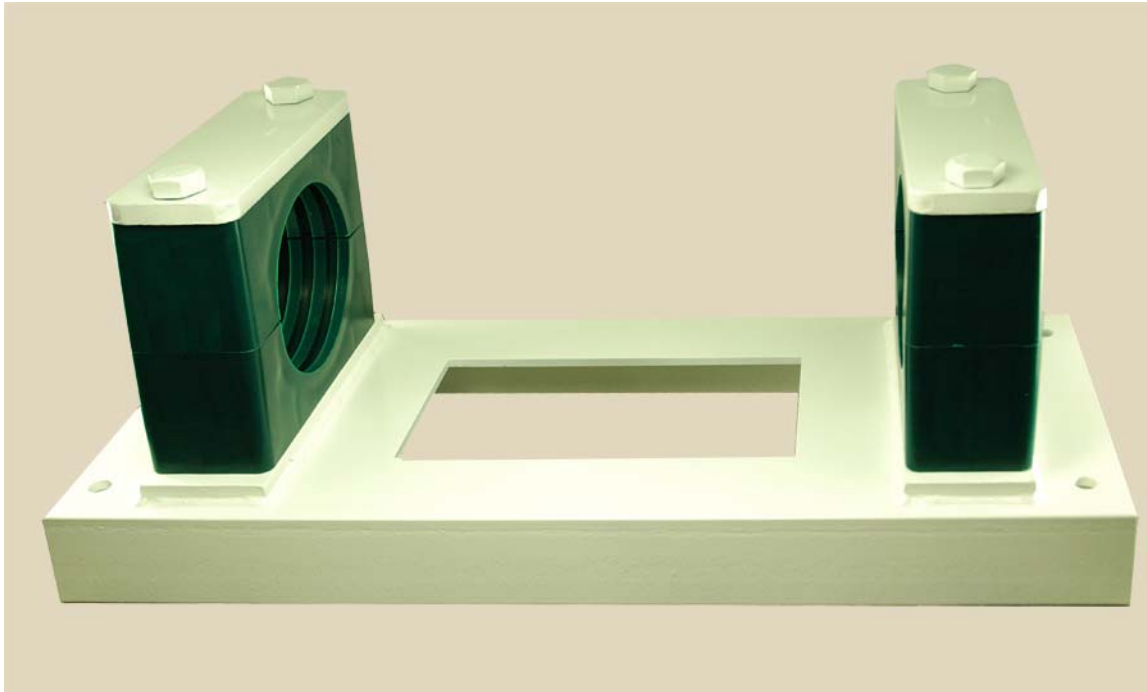
VS



# Typical Bobtail Installation



# Truck Mounting Bracket

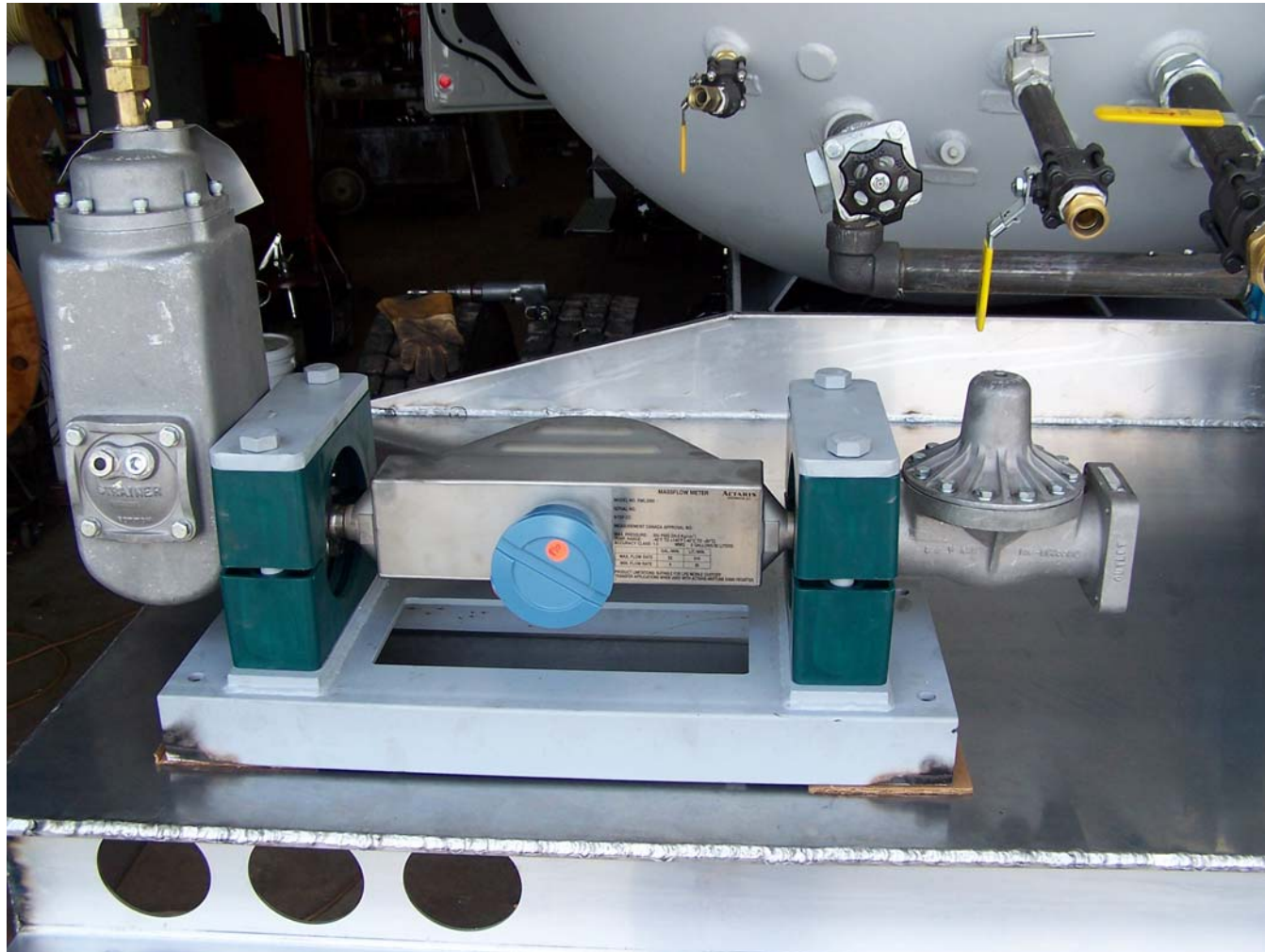


# Truck Mounting Bracket Installation





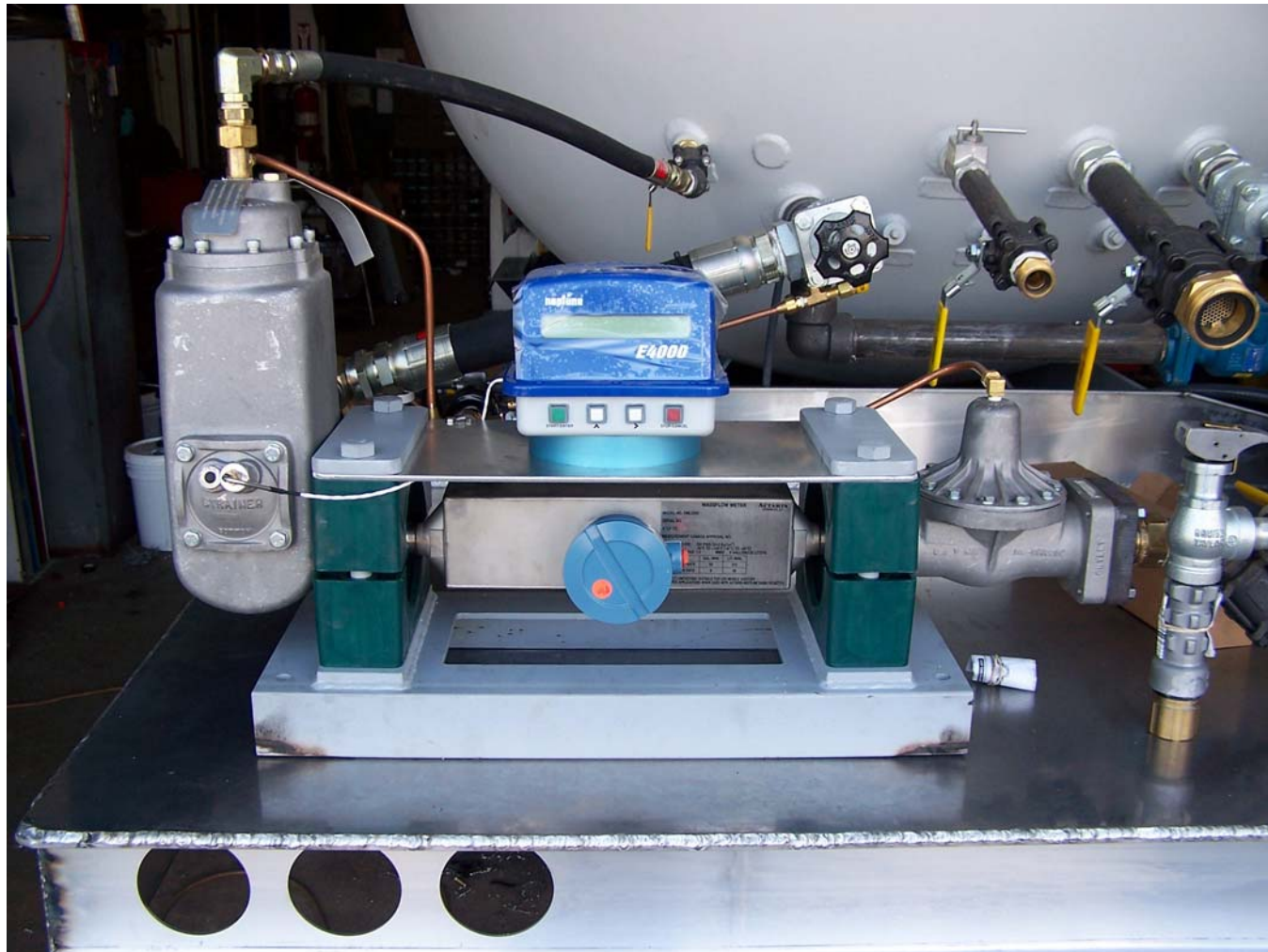
# Meter Assembled in Truck Bracket



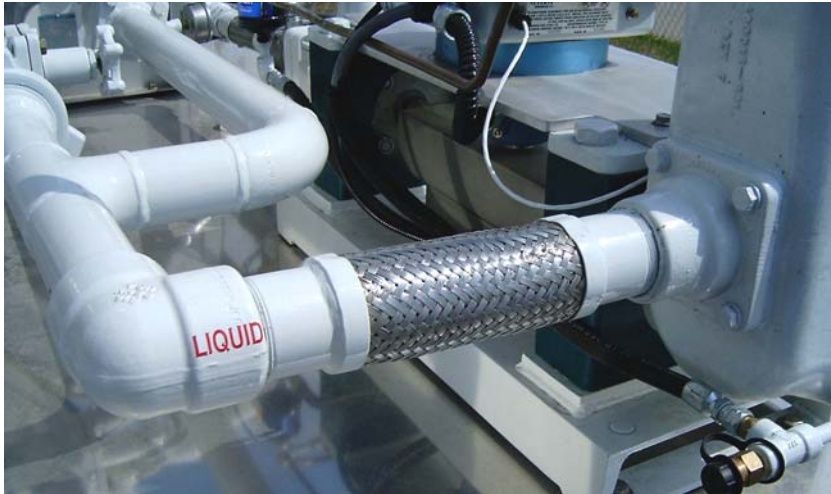
# Complete with Electronic Register



# Piping, Complete with Valves



# Flexible Hoses at Inlet and Outlet



Vapor Release Inlet



Differential Valve Outlet

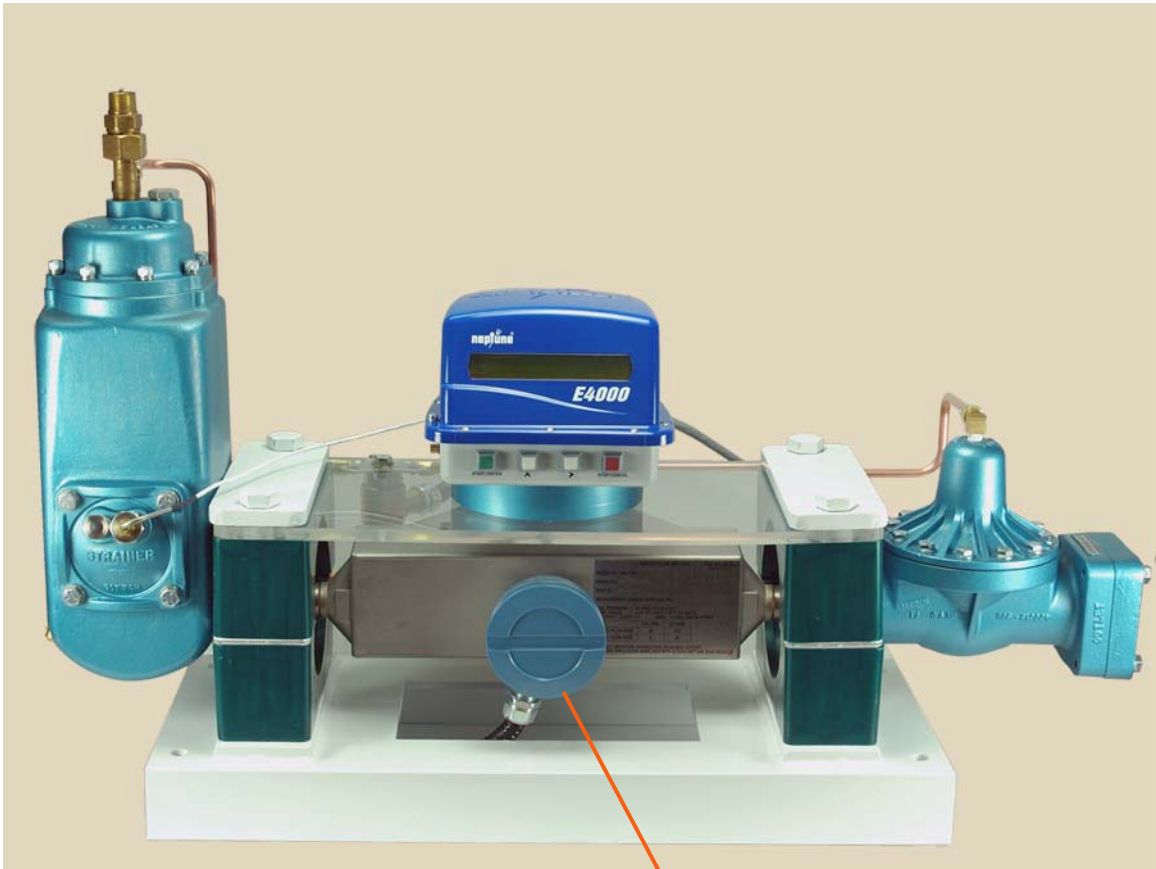
# Printer and Junction Box in Truck Cab

Printer



JBox

# Pulse Transmitter

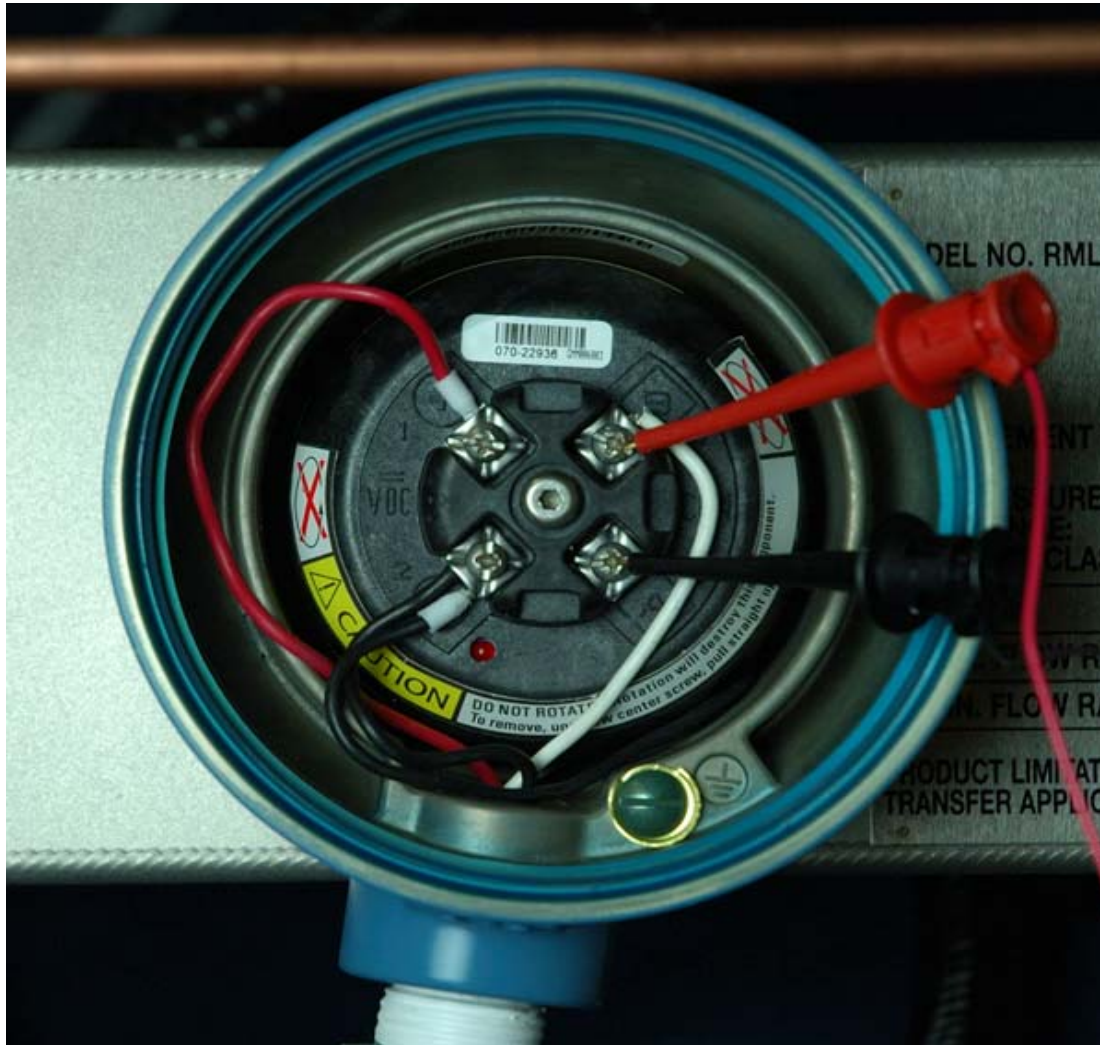


Pulse Transmitter

# Zeroing Kit connected from laptop to meter



# Pulse transmitter with terminal clips attached





# FloLink Software- Transmitter Connection Screen

**FloLink v2.2 - Connect - Transmitter Not Connected**

File View Connection FloLink Tools Plug-ins Help

**Connect - Transmitter Not Connected**

**Protocol**

- Modbus RTU (8-Bit)
- Modbus ASCII (7-Bit)
- Service Port
- HART RS-485
- HART BELL 202
- Converter Toggles RTS

**Serial Port**

- COM1
- COM2
- COM3
- COM4

**Connect via Polling**

Devices Found:

Poll

**Baud Rate**

- 1200
- 2400
- 4800
- 9600
- 19200
- 38400

**Parity**

- None
- Odd
- Even

**Stop Bits**

- 1
- 2

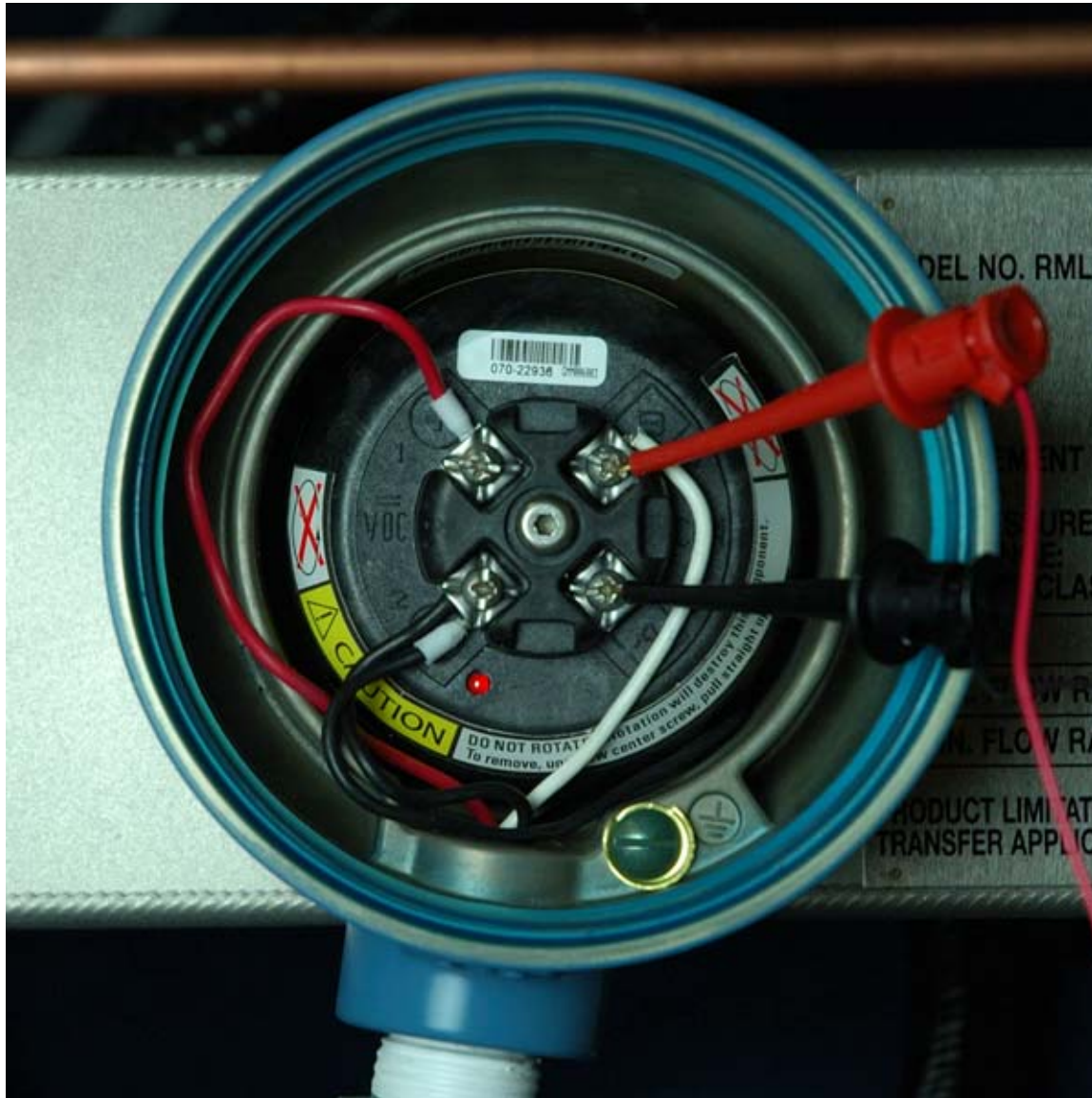
**Connect**

- Address
- Tag

Connect

Cancel

# Pulse Transmitter, with power established



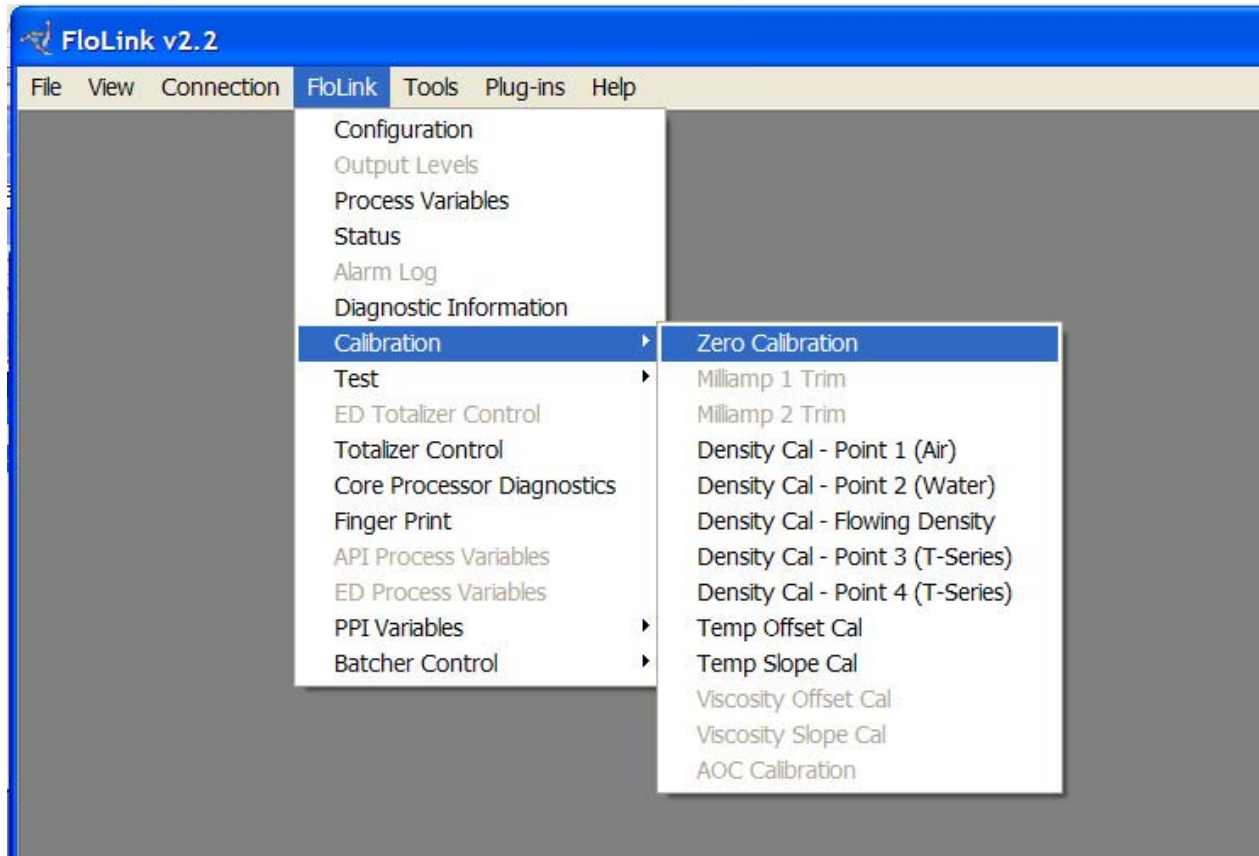
# Flolink Software- Process Variables Screen

The screenshot shows the 'Process Variables - RML 1000, Rev 2.2x' window. It contains three main sections: Mass, Volume, and Other. Each section has three input fields with their respective units.

Section	Variable	Value	Unit
Mass	Flow	0.00000	lb/min
	Total	36.04396	lb
	Inv	41.48753	lb
Volume	Flow	0.00000	gal/min
	Total	40.80593	gal
	Inv	43.67334	gal
Other	Density	0.00000	g/cm3
	Temp.	22.87039	deg C
	External Pressure	0.00000	bar
	External Temperature	0.00000	deg C

At the bottom of the window, there is a status bar with the following information: 'For Help, press F1', 'Connection: RML 1000, Rev 2.2x', 'Tag: M. RESET', and 'Device Fault Status:'. The status bar also includes green indicator lights for the connection and fault status.

# FloLink Software- Menu Selection, Zero Calibration



# Flolink- Zero Calibration Screen Before Zeroing

Flow Calibration RML 1000, Rev 2.2x

Flow Calibration

Zero Time  Sec

Zero  uSec

Std. Dev.  uSec

Process Variable

Mass Flow  kg/min

Drive Gain  %

Status

- Calibration in Progress (A104)
- Calibration Failure (A10)

Zero

Apply

Close

# Flolink- Zero Calibration Screen During Zeroing

Flow Calibration RML 1000, Rev 2.2x

Flow Calibration

Zero Time  Sec

Zero  uSec

Std. Dev.  uSec

Process Variable

Mass Flow  kg/min

Drive Gain  %

Status

- Calibration in Progress (A104)
- Calibration Failure (A10)

Zero

Apply

Close

# Flolink- Zero Calibration Screen After Zeroing

Flow Calibration RML 1000, Rev 2.2x

Flow Calibration

Zero Time  Sec

Zero  uSec

Std. Dev.  uSec

Process Variable

Mass Flow  kg/min

Drive Gain  %

Status

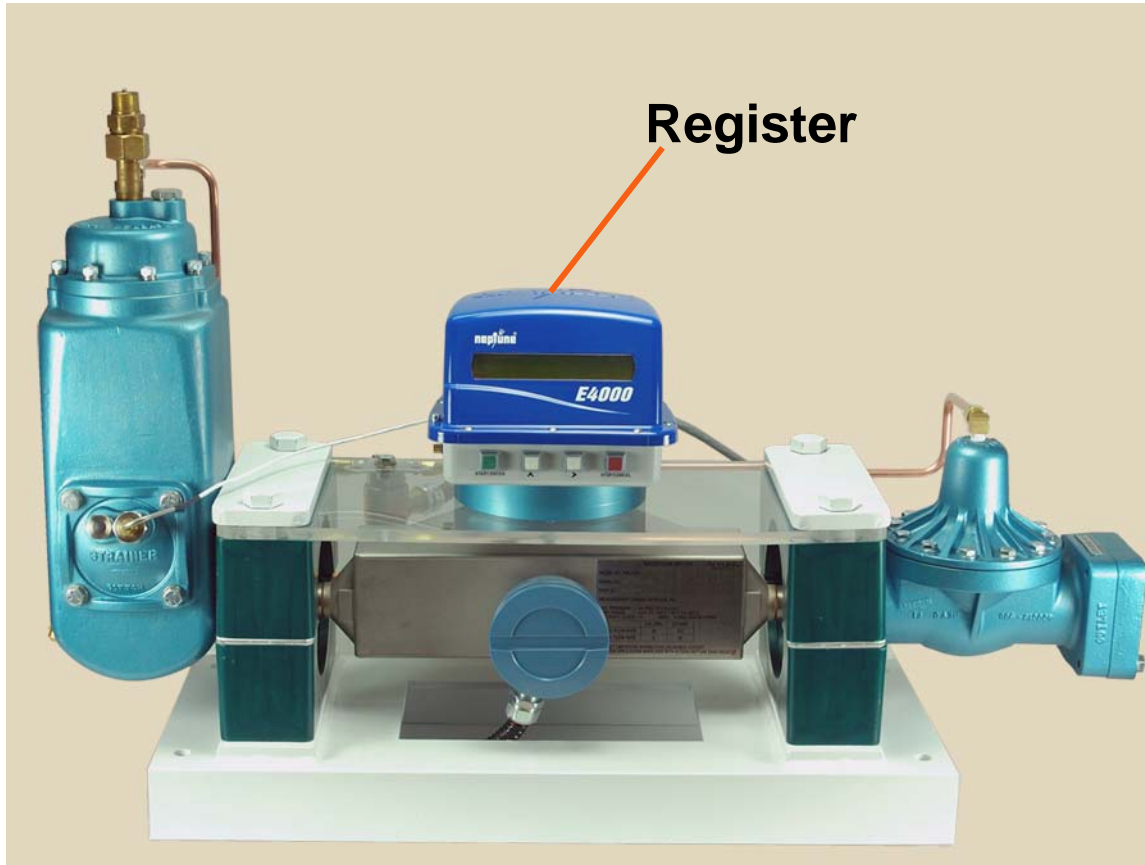
- Calibration in Progress (A104)
- Calibration Failure (A10)

Zero

Apply

Close

# Meter Calibration





## Electronic Register- Root Menu



Press

# Delivery Tickets

## Pump and Print

```
TRUCK#D1052  MTR#DZ1002  REG#E053DD  
DATE 08/17/2005  TIME 03:39:17pm  
DELIVERY #      6  
PRODUCT #0      Propane #0  
VOLUME START    0.0 GAL  
                NET      300.0 GAL  
VOL. CORR. TO 60 F
```

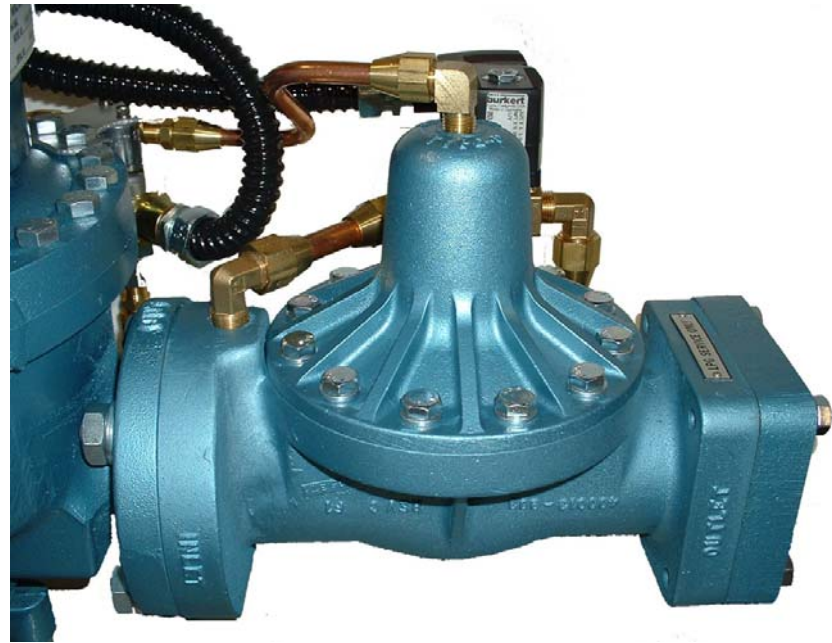
## Priced Delivery

```
TRUCK#D1052  MTR#DZ1002  REG#E053DD  
DATE 08/17/2005  TIME 04:26:16pm  
DELIVERY #      14  
PRODUCT #2      Propane #2  
VOLUME START    0.0 GAL  
                NET      100.0 GAL  
PRICE/GAL      $ 2.259  $ 225.90  
TAX             % 6.000  $ 13.55  
TAX/GAL        $ 0.120  $ 12.00  
TOTAL FUEL     $ 251.45  
MISC FEE       $ 2.50  
TOTAL SALE     $ 253.95  
VOL. CORR. TO 60 F
```

## Optional Accessories



**F-RAMS HHC**



**Dual Stage Preset Valve**



LEASO  
SISTEMI PER LA MISURA  
E IL CONTROLLO DEL FLUSSO  
DEI GAS  
SISTEMI PER LA MISURA  
E IL CONTROLLO DEL FLUSSO  
DEI GAS







