

Tools Needed for Installation

Separately Purchased Parts

Parts List

Assembly Diagram

Specifications and Regulatory

See Product Label

IntelliCheck 3

IntelliCheck 3r OVERFILL 8

**Temperature Range**

**Operating:** -40 to +140 Degrees F (-40 to +60 Degrees C)

**Storage:** -50 to +185 Degrees F (-45 to +85 Degrees C)

**Power Requirement:**

**Nominal Voltage:** 12 to 24 VDC (-0.5, +8 VDC)

**Consumption:** 9.6 Watts maximum at 24 VDC  
4.8 Watts maximum at 12 VDC

**Outside Dimensions:** 9.26" Wide X 6.81" High X 2.54" Deep

**Weight:** 6.5 lb (2.9 kg)

**Interfaces**

**Inputs:**

- TB4 Sensor Inputs: EN 13922 compliant
- TB3 Auxiliary: I.S. input switch closure less than 100 ohms

**Outputs:**

- TB7: 2.0A at 32 VDC maximum Non-intrinsically safe relay
- TB6 Rack interface: EN 13922 compliant I.S. interface for 2/5- wire sensors
- TB6: Intrinsially safe relay output. 200mA at 32 VDC maximum or 1.6A at 16 VDC maximum

**Scully Signal Company**  
Wilmington, MA 01887, USA  
www.scully.com

For more information and 24 hour technical assistance, call Scully Signal Company at 1-800-272-8559 or email sales@scully.com

Quick Start Guide for Overfill 8

Featuring Dynamic Self-Checking®

www.scully.com

**Mechanical Installation**

**⚠ No drilling or welding to tank's frame should take place without first consulting tank manufacturer. Before beginning installation, tank compartments must be completely drained of liquid and be vapor-free.**

**1. Remove Electronics Module from Housing, and Mount Housing to Truck**

**2. Install Cable Glands**  
(Use Anti Sieze on all threaded fittings including plugs)

**3. Install Power, Sensor and Socket Wire**

**4. Install Electronics Module**  
(Seal conduit against water, a major source of failures)

**Control Drawing**

REQUIRED INSTALLATION NON-HAZARDOUS AREA

REQUIRED INSTALLATION NON-HAZARDOUS AREA

CLASS I, DIVISION 2 OR CLASS I, ZONE 2 HAZARDOUS AREA

CLASS I, DIVISION 2 OR CLASS I, ZONE 2 HAZARDOUS AREA

CLASS I, DIVISION 1, GROUP CD OR CLASS I, ZONE 0 AEX [ia] IIA AREA

ANY 2 OR 5 WIRE SENSOR MEETING INTELLICHECK3 ENTITY PARAMETERS OF

TB4, TB5:

Uo=12.86 Vdc≤ Ui  
Io=344mA≤ Ii  
Po=1.11W≤ Pi  
Co=1.99 F≥ Ci + Cable CAPACITANCE  
Lo=1.2mH≥ Li + Cable INDUCTANCE

ENTITY TB4, TB5:  
Uo=12.86 V  
Io=7 mA  
Po=12.2 mW  
Co=297.5 μF  
Lo=2.9 H

ENTITY TB6:  
Ui=15 V  
Ii=250 mA  
Pi=0.23 W  
Ci=3.1 μF  
Li=0

200mA AT 32VDC MAX OR  
500mA AT 16VDC MAX

2.0A AT 32VDC MAX  
FUSE 2.5A

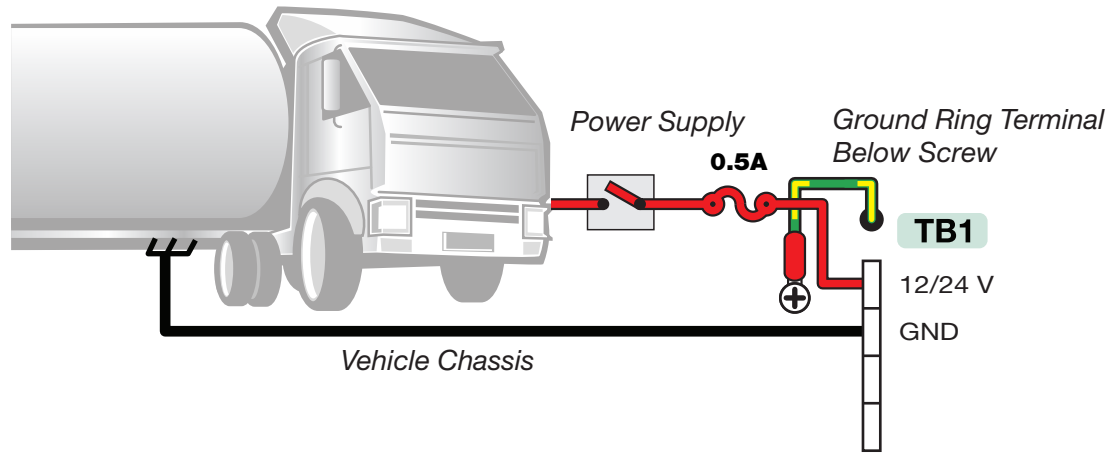
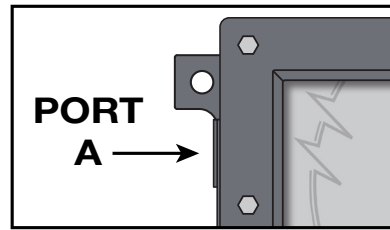
NOTES:

- THE MANUFACTURER'S INSTALLATION DRAWING MUST BE FOLLOWED WHEN INSTALLING THIS EQUIPMENT. THIS DRAWING IS NOT A WIRING DIAGRAM. IT IS TO SHOW WHAT AREA CLASSIFICATIONS IT CAN BE INSTALLED IN.
- INSTALLATIONS IN THE U.S. SHOULD BE IN ACCORDANCE WITH ANSI/ISA RP12.06.01 "INSTALLATION OF INTRINSICALLY SAFE SYSTEMS FOR HAZARDOUS (CLASSIFIED) LOCATIONS" AND THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (ANSI/NFPA 70). WHEN CONNECTED TO ASSOCIATED APPARATUS, THE RESISTANCE BETWEEN INTRINSICALLY SAFE GROUND AND EARTH GROUND MUST BE LESS THAN 1.0 OHM.
- INSTALLATION IN CANADA SHOULD BE IN ACCORDANCE WITH THE LATEST EDITION OF THE C22.1 CANADIAN ELECTRICAL CODE, PART I.
- THE ENTITY CONCEPT ALLOWS INTERCONNECTION OF ASSOCIATED APPARATUS AND INTRINSICALLY SAFE APPARATUS WITH WHEN THE FOLLOWING IS TRUE; Uo ≤ Ui, Io ≤ Ii, Po ≤ Pi, Co ≤ Ci + Ccable; Lo ≥ Li + Lcable.
- WARNING: IMPROPER CONNECTIONS, COMPONENT SUBSTITUTION OR TAMPERING MAY IMPAIR INTRINSIC SAFETY AND CREATE HAZARDOUS CONDITIONS.
- WIRE SEPARATE INTRINSICALLY SAFE CIRCUITS IN INDIVIDUALLY SHIELDED CABLES.



# Electronic Installation

## 1. Wire in Power

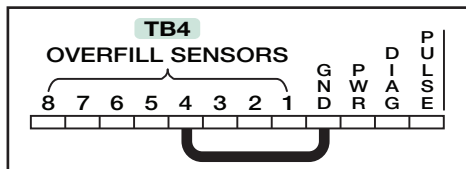


## 2. Program Module

(Example of 4 Compartment OVP programming)

- a. Attach jumpers as shown according to sensor type & parallel vs. series connection (for 5-Wire only).
- b. Apply power to the IntelliCheck®3. The indicator lights representing configured sensors (1,2 and 3) will be flashing synchronously, alternating between red and green, with the indicator light representing the highest configured sensor (4) flashing at twice the rate of the other configured sensors. All remaining sensor indicator lights (5 thru 8) will be off. The Dynacheck, Permit, Aux In, Load Rack, and Power indicator lights will be steady green.
- c. Leave the unit powered up for approximately 10 seconds. Then remove power from the IntelliCheck®3 and remove the programming jumper.

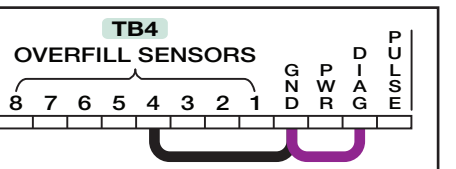
### 2-Wire Optic Sensors in Parallel



Jumper 1: GND to TB4 Highest Compartment Number

Jumper 2: None

### 5-Wire Optic Sensors in Series

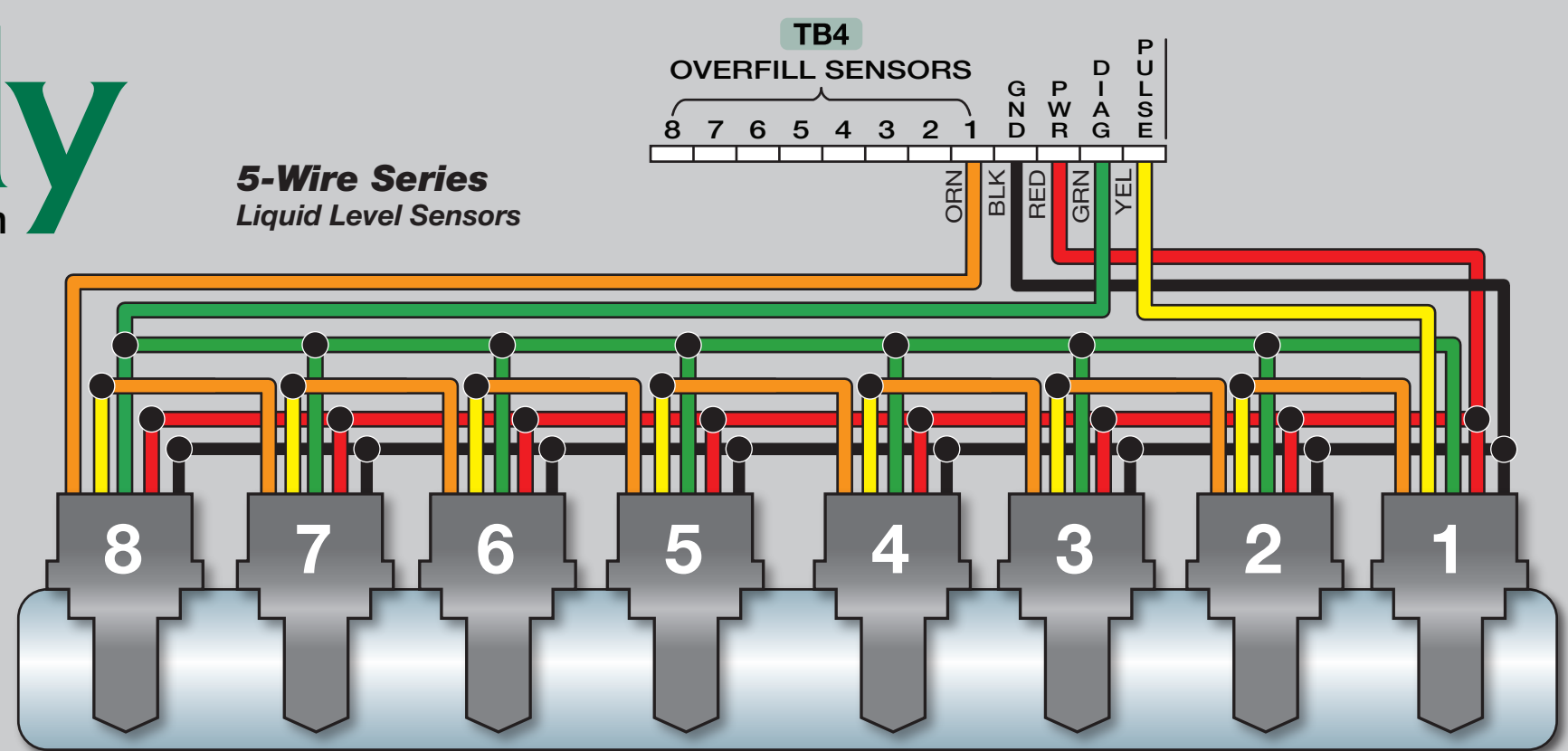
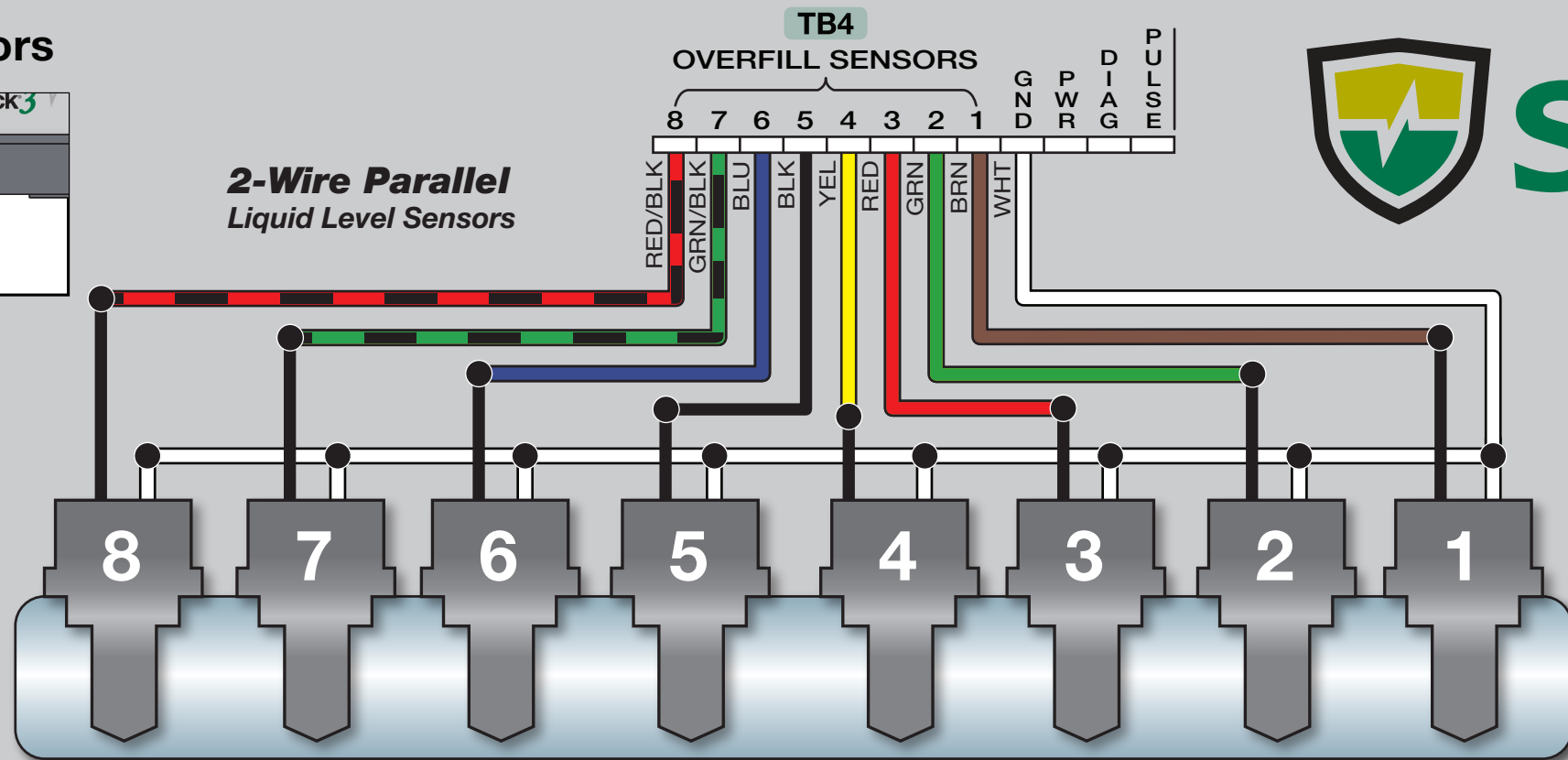
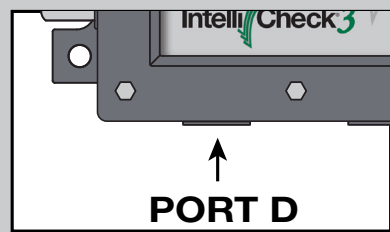


Jumper 1: GND to TB4 Highest Compartment Number

Jumper 2: GND to DIAG

**Before applying DC battery power to unit, ensure that polarity of the voltage supplied to TB1 is correct.**

## 3. Wire Sensors



### Operations for Parallel Sensor Lights

LED Status	Indication	Permission
	No Sensor Present	-
	Dry Sensor	Permit
	Wet Sensor	No Permit
	DYNACHECK® (Constant Blink Rate)	-
	Sensor Circuit Faulty (Equal to DYNACHECK Blink Rate)	No Permit
	Sensor Return Line Open (Slower than DYNACHECK Blink Rate)	No Permit
	Sensor Return Line Shorted to Ground (Faster than DYNACHECK Blink Rate)	No Permit

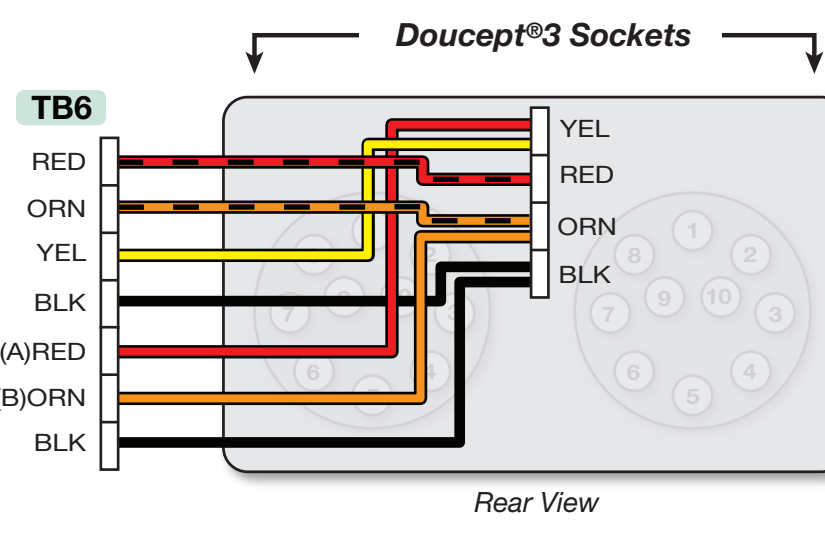
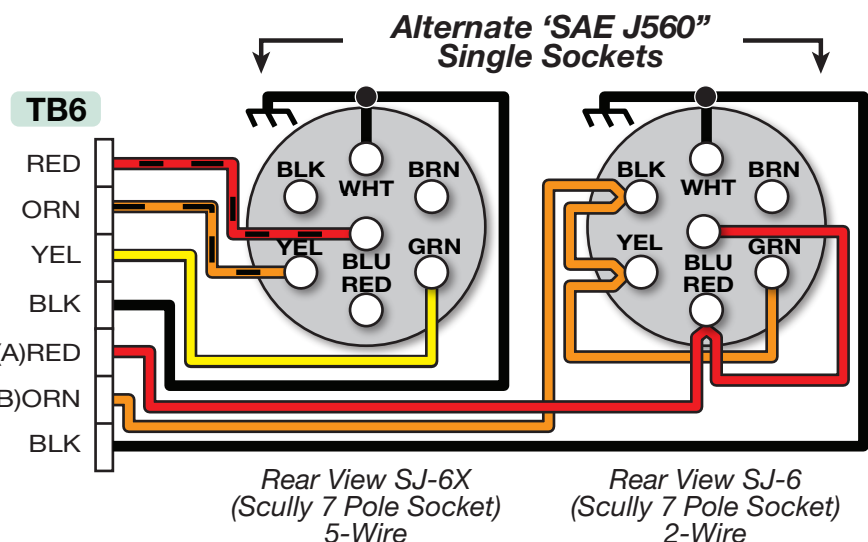
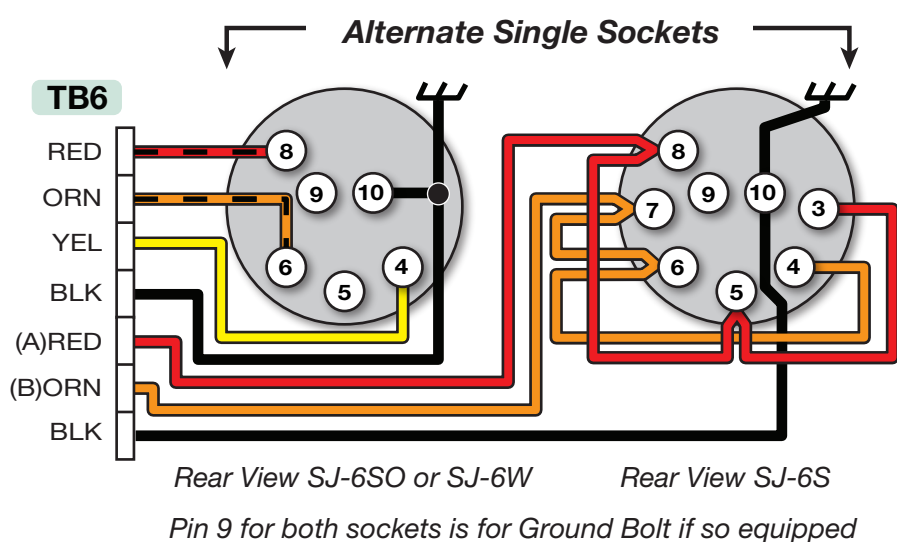
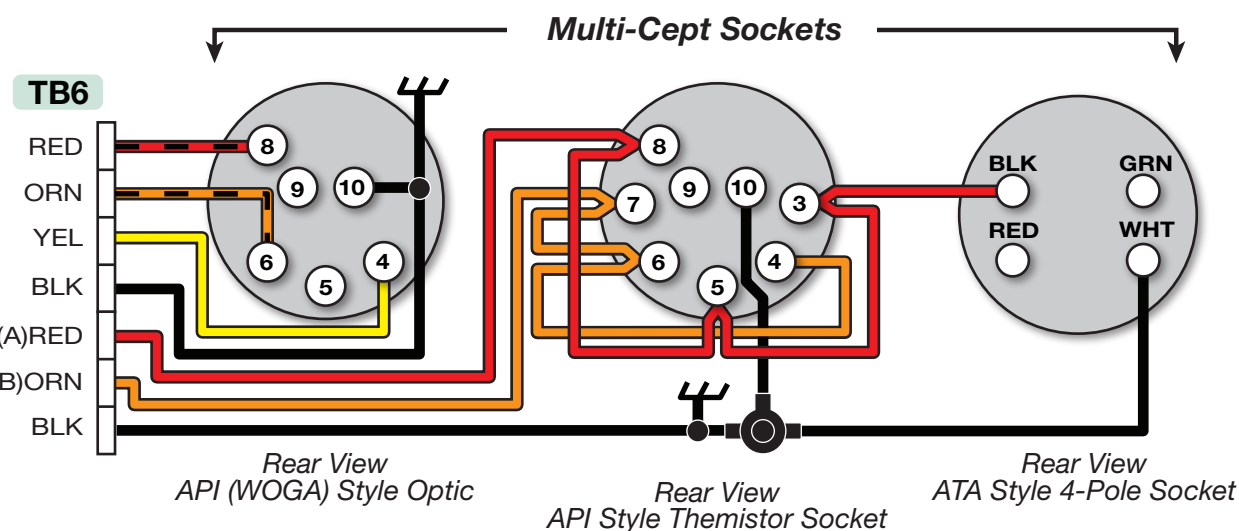
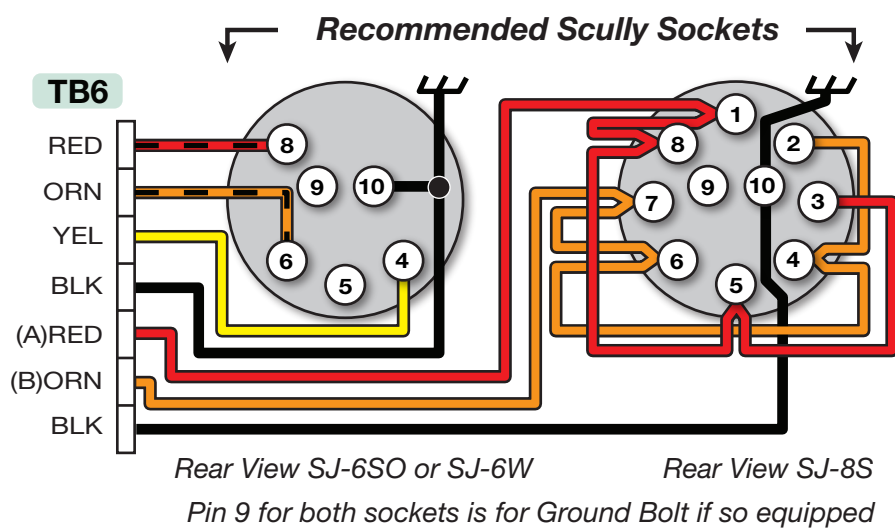
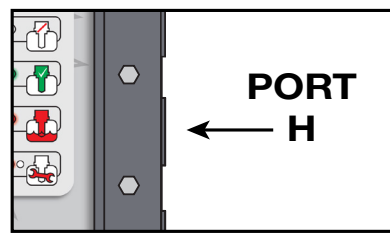
(time →)

### Operations for Series Sensor Lights

LED Status	Indication	Permission
	No Sensor Present	-
	Dry Sensor	Permit
	Wet Sensor	No Permit
	DYNACHECK® (Constant Blink Rate)	-
	Sensor Circuit Faulty (Equal to DYNACHECK Blink Rate)	No Permit
	Sensor Return Line Open (Slower than DYNACHECK Blink Rate)	No Permit
	Sensor Return Line Shorted to Ground (Faster than DYNACHECK Blink Rate)	No Permit

(time →)

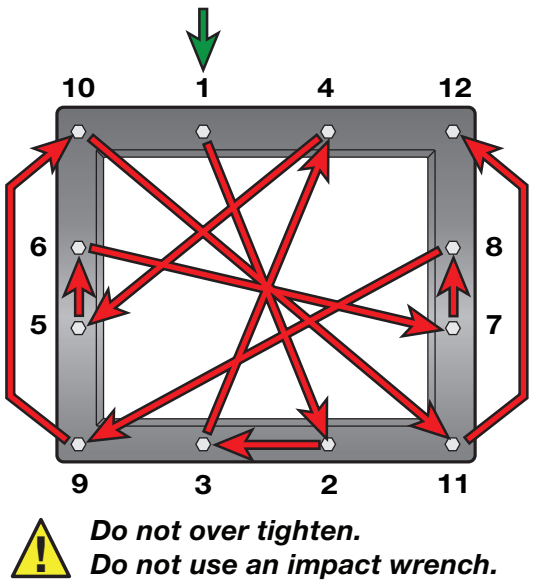
## 4. Wire Sockets



## Close Unit Using Torque Sequence

Place the gasket, window and cover onto the housing and tighten in numeric sequence as shown. After the cover is secure, power can be supplied to the unit for diagnostic evaluation.

Place the gasket, window and cover on to the enclosure housing and lightly tighten all twelve stainless steel hex bolts. Repeat by firmly and evenly tightening to approximately 4.07 N-m (36 inch lbs) per bolt.



**Do not over tighten. Do not use an impact wrench.**

## Operations Status Lights

DYNACHECK®			
PERMIT			
AUX IN			
LOAD RACK			
POWER			