



TAYLOR MACHINE WORKS, INC.

# Joystick Diagnostic Checklist

Dealer Name: \_\_\_\_\_ Customer Name: \_\_\_\_\_

Dealer Location: \_\_\_\_\_ Customer Location: \_\_\_\_\_

Machine Model Number: \_\_\_\_\_ Machine Serial Number: \_\_\_\_\_

In Service Date: \_\_\_\_\_ Machine Hours: \_\_\_\_\_

Joystick Hours: \_\_\_\_\_  
(if replacement part)

**JOYSTICK PART NUMBER** *(Please Check One)*

Joystick Serial Number: \_\_\_\_\_

- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| <input type="checkbox"/> 2326-024    | <input type="checkbox"/> I-1-29-1267 |
| <input type="checkbox"/> 2326-069    | <input type="checkbox"/> I-1-29-1441 |
| <input type="checkbox"/> 2326-111    | <input type="checkbox"/> I-1-29-1446 |
| <input type="checkbox"/> 2326-247    | <input type="checkbox"/> I-1-29-1475 |
| <input type="checkbox"/> I-1-29-0879 | <input type="checkbox"/> Other       |
| <input type="checkbox"/> I-1-29-1215 |                                      |
| <input type="checkbox"/> I-1-29-1242 |                                      |

Date Joystick Problem Occurred: \_\_\_\_\_

Describe The Problem That Occurred: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Record Any Error Codes From The TICS Display: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Were all connections at joystick inspected for loose pins, damage, etc. and reconnected?  YES  NO

Did replacing the joystick solve the problem?.....  YES  NO

If yes, does the problem reoccur when the original joystick is reinstalled?.....  YES  NO

Is this a recurring problem on the machine?.....  YES  NO

If yes, is the failure mode the same prior to failures?.....  YES  NO

Comments: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

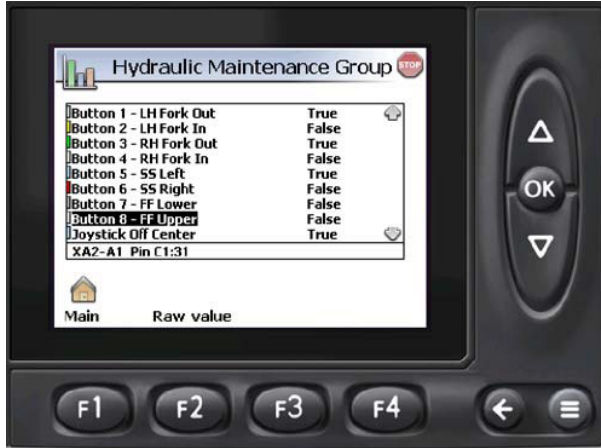
**All components submitted for warranty must be accompanied by this form for warranty claim to be valid and a copy must accompany the work order and claim.**

## Checking Joystick Inputs on trucks equipped with MD3 TICS Display

The joystick inputs can be checked accessing either the Hydraulic Maintenance Group (below) or the Hydraulics screen (refer to **Accessing through the Hydraulics Screen** of this form).

### Accessing through the Hydraulic Maintenance Group.

Check all joystick inputs (buttons 1-10, joystick off center, tilt X axis input and lift Y axis input) via the hydraulic maintenance pressure group on the TICS display (see screen shot below). The value for buttons 1-10 should show true when the corresponding button is depressed. The joystick off center value should show true when the joystick is moved from its center position along the X or Y axis.



### Record the values as shown on the display:

- Depress Button 1 Value is:  TRUE  FALSE
- Depress Button 2 Value is:  TRUE  FALSE
- Depress Button 3 Value is:  TRUE  FALSE
- Depress Button 4 Value is:  TRUE  FALSE
- Depress Button 5 Value is:  TRUE  FALSE
- Depress Button 6 Value is:  TRUE  FALSE
- Depress Button 7 Value is:  TRUE  FALSE
- Depress Button 8 Value is:  TRUE  FALSE
- Depress Button 9 Value is:  TRUE  FALSE

### If Equipped:

- Depress Button 10 Value is:  TRUE  FALSE

Fully move the joystick to tilt out position (X Axis).

JoystickOff Center Value is:  TRUE  FALSE

Fully move the joystick to tilt back position (X Axis).

JoystickOff Center Value is:  TRUE  FALSE

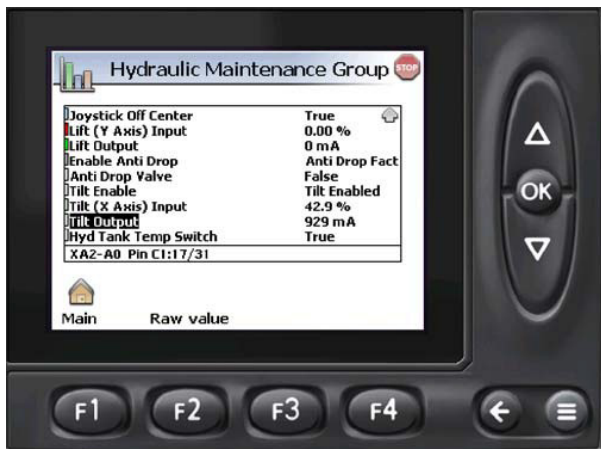
Fully move the joystick to lift position (Y Axis).

JoystickOff Center Value is:  TRUE  FALSE

Fully move the joystick to lower position (Y Axis).

JoystickOff Center Value is:  TRUE  FALSE

Check the X and Y axis inputs by moving the joystick along the corresponding axis. The input value should range from -100% to 100% for each axis when “raw value” is displayed above the F2 button (see screen shot below). The values should range from 450mV-4550mV when “scaled value” is displayed above F2.



**Record the values with “raw value” displayed above F2:**

Fully move the joystick to tilt out position and record Tilt (X Axis) Input percentage (%): \_\_\_\_\_

Fully move the joystick to tilt back position and record Tilt (X Axis) Input percentage (%): \_\_\_\_\_

Fully move the joystick to lift position and record Lift (Y Axis) Input percentage (%): \_\_\_\_\_

Fully move the joystick to lower position and record Lift (Y Axis) Input percentage (%): \_\_\_\_\_

**Record the values with “scaled value” displayed above F2:**

Fully move the joystick to tilt out position and record Tilt (X Axis) Input (mV): \_\_\_\_\_

Fully move the joystick to tilt back position and record Tilt (X Axis) Input (mV): \_\_\_\_\_

Fully move the joystick to lift position and record Lift (Y Axis) Input (mV): \_\_\_\_\_

Fully move the joystick to lower position and record Lift (Y Axis) Input (mV): \_\_\_\_\_

Comments: \_\_\_\_\_

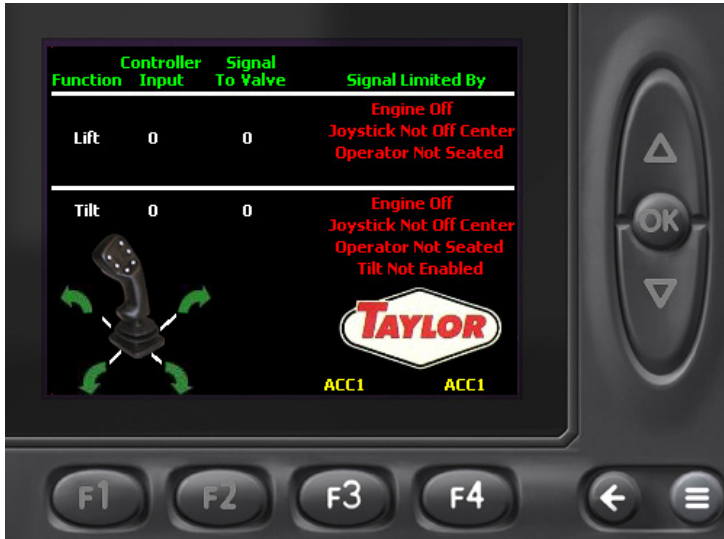
\_\_\_\_\_  
\_\_\_\_\_

**All joystick components submitted for warranty must be accompanied by this form for warranty claim to be valid and a copy must accompany the work order and claim.**

### Accessing through the Hydraulics Screen.

Check all joystick inputs (buttons 1-10, joystick off center, tilt X axis input and lift Y axis input) via the hydraulic diagnostic screens on the TICS display (see screen shot below).

Check the Lift and Tilt inputs by moving the joystick along the corresponding directions. The input value should range from -100% to 100% for each axis (see screen shot below). The Joystick Not Off Center indicator should turn off when the joystick is moved from its center position along the X or Y axis.



Record the values as shown on the display:

Function	Controller Input	Signal To Valve
Lift (Raise):	_____	_____
Lift (Lower):	_____	_____
Tilt (Fwd):	_____	_____
Tilt (Back):	_____	_____

- Fully move the joystick to tilt out position (X Axis).
- Fully move the joystick to tilt back position (X Axis).
- Fully move the joystick to lift position (Y Axis).
- Fully move the joystick to lower position (Y Axis).

- Joystick Not Off Center Value is:  ON  OFF
- Joystick Not Off Center Value is:  ON  OFF
- Joystick Not Off Center Value is:  ON  OFF
- Joystick Not Off Center Value is:  ON  OFF

Check the joystick button inputs by pressing each button. The indicators for buttons 1-10 should change to green when the corresponding button is depressed.



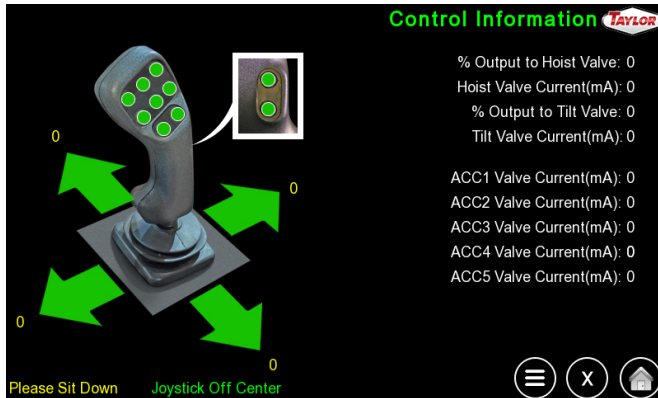
Record indications as shown on the display:

- Button 1 Pressed is:  GREEN  RED
- Button 2 Pressed is:  GREEN  RED
- Button 3 Pressed is:  GREEN  RED
- Button 4 Pressed is:  GREEN  RED
- Button 5 Pressed is:  GREEN  RED
- Button 6 Pressed is:  GREEN  RED
- Button 7 Pressed is:  GREEN  RED
- Button 8 Pressed is:  GREEN  RED
- Button 9 Pressed is:  GREEN  RED

- If Equipped:*
- Button 10 Pressed is:  GREEN  RED

## Checking Joystick Inputs on trucks equipped with MD4 TICS Display

Check all joystick inputs (buttons 1-10, joystick off center, tilt X axis input and lift Y axis input) via the hydraulic diagnostic screens on the TICS display (see screen shot below).



Version 1

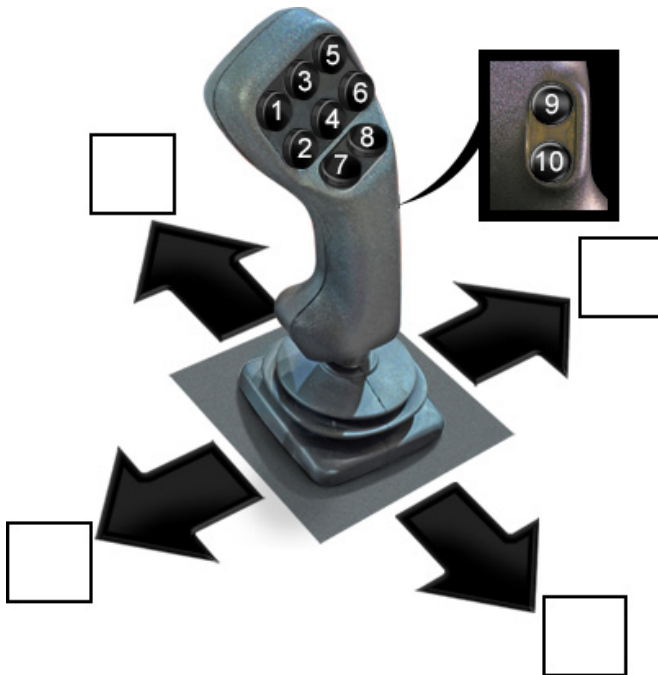


Version 2

Check the Lift and Tilt inputs by moving the joystick along the corresponding directions. The input value should range from -100% to 100% for each axis (see screen shot above). Record the Lift and Tilt values in the directional boxes (below).

Check the joystick button inputs. The button indicators (buttons 1-10) should change to green when the corresponding button is pressed.

The Joystick Off Center indicator should illuminate when the joystick is moved from its center position along the X or Y axis.



Record the values as shown on the display:

- |                     |             |                                |                                |
|---------------------|-------------|--------------------------------|--------------------------------|
| Button 1            | Pressed is: | <input type="checkbox"/> GREEN | <input type="checkbox"/> BLACK |
| Button 2            | Pressed is: | <input type="checkbox"/> GREEN | <input type="checkbox"/> BLACK |
| Button 3            | Pressed is: | <input type="checkbox"/> GREEN | <input type="checkbox"/> BLACK |
| Button 4            | Pressed is: | <input type="checkbox"/> GREEN | <input type="checkbox"/> BLACK |
| Button 5            | Pressed is: | <input type="checkbox"/> GREEN | <input type="checkbox"/> BLACK |
| Button 6            | Pressed is: | <input type="checkbox"/> GREEN | <input type="checkbox"/> BLACK |
| Button 7            | Pressed is: | <input type="checkbox"/> GREEN | <input type="checkbox"/> BLACK |
| Button 8            | Pressed is: | <input type="checkbox"/> GREEN | <input type="checkbox"/> BLACK |
| Button 9            | Pressed is: | <input type="checkbox"/> GREEN | <input type="checkbox"/> BLACK |
| <i>If Equipped:</i> |             |                                |                                |
| Button 10           | Pressed is: | <input type="checkbox"/> GREEN | <input type="checkbox"/> BLACK |

- Fully move the joystick to tilt out position (X Axis).
- Fully move the joystick to tilt back position (X Axis).
- Fully move the joystick to lift position (Y Axis).
- Fully move the joystick to lower position (Y Axis).

- |                               |                             |                              |
|-------------------------------|-----------------------------|------------------------------|
| Joystick Off Center Value is: | <input type="checkbox"/> ON | <input type="checkbox"/> OFF |
| Joystick Off Center Value is: | <input type="checkbox"/> ON | <input type="checkbox"/> OFF |
| Joystick Off Center Value is: | <input type="checkbox"/> ON | <input type="checkbox"/> OFF |
| Joystick Off Center Value is: | <input type="checkbox"/> ON | <input type="checkbox"/> OFF |