

Certificate of Calibration

Al Takamul Yard, North Rumailah South Iraq

• Phone : +964 7810009138 • www.qualitycontrol-iraq.com • E-mail: op@qualitycontrol-iraq.com

Date of Issue: April 24, 2024

Page 1 of 1

| | | | |
|--------------------|------------------|------------------|--|
| WORK ORDER NUMBER | : By Email | CUSTOMER DETAILS | |
| JOB NUMBER | : QC/JN/24/00194 | Name | : Halliburton Worldwide IRAQ (TSS) |
| CERTIFICATE NUMBER | : QC240424-01 | Address | : Western Burjesia, Oil Street, District Zubair-South Iraq |

EQUIPMENT IDENTIFICATION AND SPECIFICATIONS

Description : Pressure Relief Valve
Manufacturer : Anderson Greenwood
Model : NA
Serial Number : 450612
Location : SURGE TANK # 11433984
Set/Pressure : 225 psi
Tolerance : $\pm 3\%$
As Found : In Tolerance
Calibration Date : April 24, 2024
Calibration Due : **23 April 2025**
Last Calibration : NA



ENVIRONMENTAL CONDITIONS DURING TEST

Ambient Temperature : $22.0 \pm 2^{\circ}\text{C}$ Humidity : $30.0 \pm 5\% \text{ RH}$ Atm. Pressure : $1011.0 \pm 10 \text{ hPa}$

CALIBRATION METHOD

Standard Method API 527 was used to test the unit under test. Test pressure was applied on inlet of unit under test and test was repeated 3 times. Identical repeatings were carried out as recommended in used standard.

REFERENCE EQUIPMENT USED

| DESCRIPTION | SERIAL NO. | MAKE / MODEL | CALIBRATION DATE | CALIBRATION DUE DATE |
|------------------------|------------|--------------------------|------------------|----------------------|
| Digital Pressure Gauge | 1505119397 | Sino Instruments / HS108 | 20 Nov, 2023 | 19 Nov, 2024 |

CALIBRATION TEST RESULTS

| Set Pressure on Unit Under Calibration (M) | Ref. Standard Values (A) | Deviation (D=M-A) | Tolerance Limit |
|--|--------------------------|-------------------|-----------------|
| psi | psi | psi | \pm psi |
| 225 | 229 | -4 | 6.8 |

Calibration results were found to conform as per specified accuracy requirements. Above Instrument has **PASSED** its Calibration.

DEVIATION FROM STANDARD METHOD : None

REMARK (S) :

- ☒ The results are as found (no adjustment done).
☐ The results are post adjustment.

| CALIBRATED BY | REVIEWED & APPROVED BY | CLIENT |
|--|---|--------|
|  Mahdi Halim |  LAB INCHARGE Asjad Rafiq | |

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Page 1 of 1

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| WORK ORDER NUMBER | : By Email | CUSTOMER DETAILS | |
| JOB NUMBER | : QC/JN/24/00194 | Name | : Halliburton Worldwide IRAQ (TSS) |
| CERTIFICATE NUMBER | : QC240424-02 | Address | : Western Burjesia, Oil Street, District Zubair-South Iraq |

EQUIPMENT IDENTIFICATION AND SPECIFICATIONS

Description : Pressure Relief Valve
Manufacturer : Anderson Greenwood
Model : NA
Serial Number : 396326
Location : SURGE TANK # 11433984
Set/Pressure : 225 psi
Tolerance : $\pm 3\%$
As Found : In Tolerance
Calibration Date : April 24, 2024
Calibration Due : **23 April 2025**
Last Calibration : NA



ENVIRONMENTAL CONDITIONS DURING TEST

Ambient Temperature : $22.0 \pm 2^{\circ}\text{C}$ Humidity : $30.0 \pm 5\% \text{ RH}$ Atm. Pressure : $1011.0 \pm 10 \text{ hPa}$

CALIBRATION METHOD

Standard Method API 527 was used to test the unit under test. Test pressure was applied on inlet of unit under test and test was repeated 3 times. Identical repeatings were carried out as recommended in used standard.

REFERENCE EQUIPMENT USED

| DESCRIPTION | SERIAL NO. | MAKE / MODEL | CALIBRATION DATE | CALIBRATION DUE DATE |
|------------------------|------------|--------------------------|------------------|----------------------|
| Digital Pressure Gauge | 1505119397 | Sino Instruments / HS108 | 20 Nov, 2023 | 19 Nov, 2024 |

CALIBRATION TEST RESULTS

| Set Pressure on Unit Under Calibration (M) | Ref. Standard Values (A) | Deviation (D=M-A) | Tolerance Limit |
|--|--------------------------|-------------------|-----------------|
| psi | psi | psi | \pm psi |
| 225 | 227 | -2 | 6.8 |

Calibration results were found to conform as per specified accuracy requirements. Above Instrument has **PASSED** its Calibration.

DEVIATION FROM STANDARD METHOD : None

REMARK (S) :

- ☒ The results are as found (no adjustment done).
☐ The results are post adjustment.

| CALIBRATED BY | REVIEWED & APPROVED BY | CLIENT |
|--|---|--------|
|  Mahdi Halim |  LAB INCHARGE Asjad Rafiq | |

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Date of Issue: April 24, 2024**Page 1 of 1**

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| REQUEST NUMBER | : By Contract | CUSTOMER DETAILS | |
| JOB NUMBER | : QC/JN/24/00194 | Name | Halliburton Worldwide IRAQ (TSS) |
| CERTIFICATE NUMBER | : QC240424-03 | Address | Western Burjesia, Oil Street, District Zubair-South Iraq |

Description : **Pressure Gauge**
Manufacturer : FISHER
Model : NA
Serial Number : **210207-01**
Type : Analog
Location : SURGE TANK # 11433984
Range : 0 to 60 psi
Calibrated Range : 0 to 60 psi
Resolution : 1 psi
Tolerance : ± 1.0 % of Full Scale
As found : In Tolerance
Calibration Date : April 24, 2024
Calibration Due : 23 April 2025
Last Calibration Date : NA

**DEVIATION FROM STANDARD METHOD : None****REMARK (S) :**

1. No adjustments were made prior to calibration.
2. No accessories were fitted.
3. Values were rounded in computation.

ENVIRONMENTAL CONDITIONS DURING TESTAmbient Temperature : $22.0 \pm 2^{\circ}\text{C}$ Humidity : $44.0 \pm 5\% \text{ RH}$ Atm. Pressure : $1011.0 \pm 10 \text{ hPa}$ **CALIBRATION METHOD**

The above equipment has been calibrated in accordance with Calibration Procedure QC/CP/R/03 Rev. 01

The above instrument has been calibrated in increasing and decreasing pressure mode using a Digital Pressure Calibrator as the reference standard having traceability to Internationally recognised standards.

REFERENCE EQUIPMENT USED

| DESCRIPTION | SERIAL NO. | MAKE / MODEL | CALIBRATION DATE | CALIBRATION DUE DATE |
|------------------------|------------|---------------|------------------|----------------------|
| Digital Pressure Gauge | 468802 | AMETEK / XP2i | 20 Nov, 2023 | 19 Nov, 2024 |

CALIBRATION TEST RESULTS

| Measured Values on Unit Under Calibration (M) | Ref. Standard Values (A) | Deviation (D=M-A) | Full Scale Error % |
|---|--------------------------|-------------------|--------------------|
| 0 | 0 | 0 | % |
| 0 | 0.00 | 0.00 | 0.0 |
| 15 | 15.20 | -0.20 | -0.3 |
| 30 | 30.30 | -0.30 | -0.5 |
| 45 | 45.30 | -0.30 | -0.5 |
| 60 | 60.40 | -0.40 | -0.7 |

Calibration results were found to conform as per specified accuracy requirements. Above Instrument has **PASSED** its Calibration.

- ☒ The results are as found (no adjustment done).
☐ The results are post adjustment.

| | | | |
|--|---|--------------|--------|
| CALIBRATED BY | REVIEWED & APPROVED BY | LAB INCHARGE | CLIENT |
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Page 1 of 1

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| REQUEST NUMBER | : By Contract | CUSTOMER DETAILS | |
| JOB NUMBER | : QC/JN/24/00194 | Name | Halliburton Worldwide IRAQ (TSS) |
| CERTIFICATE NUMBER | : QC240424-04 | Address | Western Burjesia, Oil Street, District Zubair-South Iraq |

Description : **Pressure Gauge**
Manufacturer : FISHER
Model : NA
Serial Number : **210207-02**
Type : Analog
Location : SURGE TANK # 11433984
Range : 0 to 60 psi
Calibrated Range : 0 to 60 psi
Resolution : 1 psi
Tolerance : ± 1.0 % of Full Scale
As found : In Tolerance
Calibration Date : April 24, 2024
Calibration Due : 23 April 2025
Last Calibration Date : NA

**DEVIATION FROM STANDARD METHOD : None****REMARK (S) :**

1. No adjustments were made prior to calibration.
2. No accessories were fitted.
3. Values were rounded in computation.

ENVIRONMENTAL CONDITIONS DURING TESTAmbient Temperature : $22.0 \pm 2^{\circ}\text{C}$ Humidity : $44.0 \pm 5\% \text{ RH}$ Atm. Pressure : $1011.0 \pm 10 \text{ hPa}$ **CALIBRATION METHOD**

The above equipment has been calibrated in accordance with Calibration Procedure QC/CP/R/03 Rev. 01

The above instrument has been calibrated in increasing and decreasing pressure mode using a Digital Pressure Calibrator as the reference standard having traceability to Internationally recognised standards.

REFERENCE EQUIPMENT USED

| DESCRIPTION | SERIAL NO. | MAKE / MODEL | CALIBRATION DATE | CALIBRATION DUE DATE |
|------------------------|------------|---------------|------------------|----------------------|
| Digital Pressure Gauge | 468802 | AMETEK / XP2i | 20 Nov, 2023 | 19 Nov, 2024 |

CALIBRATION TEST RESULTS

| Measured Values on Unit Under Calibration (M) | Ref. Standard Values (A) | Deviation (D=M-A) | Full Scale Error % |
|---|--------------------------|-------------------|--------------------|
| 0 | 0 | 0 | % |
| 0 | 0.00 | 0.00 | 0.0 |
| 15 | 14.50 | 0.50 | 0.8 |
| 30 | 29.50 | 0.50 | 0.8 |
| 45 | 44.70 | 0.30 | 0.5 |
| 60 | 59.80 | 0.20 | 0.3 |

Calibration results were found to conform as per specified accuracy requirements. Above Instrument has **PASSED** its Calibration.

- ☒ The results are as found (no adjustment done).
☐ The results are post adjustment.

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Page 1 of 1

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| JOB NUMBER | : QC/JN/24/00194 | Name | Halliburton Worldwide IRAQ (TSS) |
| CERTIFICATE NUMBER | : QC240424-05 | Address | Western Burjesia, Oil Street, District Zubair-South Iraq |

Description : Pressure Gauge
Manufacturer : FISHER
Model : NA
Serial Number : 209205-01
Type : Analog
Location : SURGE TANK # 11433984
Range : 0 to 60 psi
Calibrated Range : 0 to 60 psi
Resolution : 1 psi
Tolerance : ± 1.0 % of Full Scale
As found : In Tolerance
Calibration Date : April 24, 2024
Calibration Due : 23 April 2025
Last Calibration Date : NA



DEVIATION FROM STANDARD METHOD : None

REMARK (S) :

1. No adjustments were made prior to calibration.
2. No accessories were fitted.
3. Values were rounded in computation.

ENVIRONMENTAL CONDITIONS DURING TEST

Ambient Temperature : $22.0 \pm 2^{\circ}\text{C}$ Humidity : $44.0 \pm 5\% \text{ RH}$ Atm. Pressure : $1011.0 \pm 10 \text{ hPa}$

CALIBRATION METHOD

The above equipment has been calibrated in accordance with Calibration Procedure QC/CP/R/03 Rev. 01

The above instrument has been calibrated in increasing and decreasing pressure mode using a Digital Pressure Calibrator as the reference standard having traceability to Internationally recognised standards.

REFERENCE EQUIPMENT USED

| DESCRIPTION | SERIAL NO. | MAKE / MODEL | CALIBRATION DATE | CALIBRATION DUE DATE |
|------------------------|------------|---------------|------------------|----------------------|
| Digital Pressure Gauge | 468802 | AMETEK / XP2i | 20 Nov, 2023 | 19 Nov, 2024 |

CALIBRATION TEST RESULTS

| Measured Values on Unit Under Calibration (M) | Ref. Standard Values (A) | Deviation (D=M-A) | Full Scale Error % |
|---|--------------------------|-------------------|--------------------|
| 0 | 0 | 0 | % |
| 0 | 0.00 | 0.00 | 0.0 |
| 15 | 15.20 | -0.20 | -0.3 |
| 30 | 30.20 | -0.20 | -0.3 |
| 45 | 45.20 | -0.20 | -0.3 |
| 60 | 60.30 | -0.30 | -0.5 |

Calibration results were found to conform as per specified accuracy requirements. Above Instrument has **PASSED** its Calibration.

- ☒ The results are as found (no adjustment done).
☐ The results are post adjustment.

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Page 1 of 1

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| JOB NUMBER | : QC/JN/24/00194 | Name | Halliburton Worldwide IRAQ (TSS) |
| CERTIFICATE NUMBER | : QC240424-06 | Address | Western Burjesia, Oil Street, District Zubair-South Iraq |

Description : Pressure Gauge
Manufacturer : FISHER
Model : NA
Serial Number : 209205-02
Type : Analog
Location : SURGE TANK # 11433984
Range : 0 to 60 psi
Calibrated Range : 0 to 60 psi
Resolution : 1 psi
Tolerance : ± 1.0 % of Full Scale
As found : In Tolerance
Calibration Date : April 24, 2024
Calibration Due : 23 April 2025
Last Calibration Date : NA



DEVIATION FROM STANDARD METHOD : None

REMARK (S) :

1. No adjustments were made prior to calibration.
2. No accessories were fitted.
3. Values were rounded in computation.

ENVIRONMENTAL CONDITIONS DURING TEST

Ambient Temperature : $22.0 \pm 2^{\circ}\text{C}$ Humidity : $44.0 \pm 5\% \text{ RH}$ Atm. Pressure : $1011.0 \pm 10 \text{ hPa}$

CALIBRATION METHOD

The above equipment has been calibrated in accordance with Calibration Procedure QC/CP/R/03 Rev. 01

The above instrument has been calibrated in increasing and decreasing pressure mode using a Digital Pressure Calibrator as the reference standard having traceability to Internationally recognised standards.

REFERENCE EQUIPMENT USED

| DESCRIPTION | SERIAL NO. | MAKE / MODEL | CALIBRATION DATE | CALIBRATION DUE DATE |
|------------------------|------------|---------------|------------------|----------------------|
| Digital Pressure Gauge | 468802 | AMETEK / XP2i | 20 Nov, 2023 | 19 Nov, 2024 |

CALIBRATION TEST RESULTS

| Measured Values on Unit Under Calibration (M) | Ref. Standard Values (A) | Deviation (D=M-A) | Full Scale Error % |
|---|--------------------------|-------------------|--------------------|
| 0 | 0 | 0 | % |
| 0 | 0.00 | 0.00 | 0.0 |
| 15 | 15.10 | -0.10 | -0.2 |
| 30 | 30.20 | -0.20 | -0.3 |
| 45 | 45.20 | -0.20 | -0.3 |
| 60 | 60.30 | -0.30 | -0.5 |

Calibration results were found to conform as per specified accuracy requirements. Above Instrument has **PASSED** its Calibration.

- ☒ The results are as found (no adjustment done).
☐ The results are post adjustment.

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Page 1 of 1

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| JOB NUMBER | : QC/JN/24/00194 | Name | Halliburton Worldwide IRAQ (TSS) |
| CERTIFICATE NUMBER | : QC240424-07 | Address | Western Burjesia, Oil Street, District Zubair-South Iraq |

Description : Pressure Gauge
Manufacturer : FISHER
Model : NA
Serial Number : 212203-01
Type : Analog
Location : SURGE TANK # 11433984
Range : 0 to 60 psi
Calibrated Range : 0 to 60 psi
Resolution : 1 psi
Tolerance : ± 1.0 % of Full Scale
As found : In Tolerance
Calibration Date : April 24, 2024
Calibration Due : 23 April 2025
Last Calibration Date : NA



DEVIATION FROM STANDARD METHOD : None

REMARK (S) :

1. No adjustments were made prior to calibration.
2. No accessories were fitted.
3. Values were rounded in computation.

ENVIRONMENTAL CONDITIONS DURING TEST

Ambient Temperature : $22.0 \pm 2^{\circ}\text{C}$ Humidity : $44.0 \pm 5\% \text{ RH}$ Atm. Pressure : $1011.0 \pm 10 \text{ hPa}$

CALIBRATION METHOD

The above equipment has been calibrated in accordance with Calibration Procedure QC/CP/R/03 Rev. 01

The above instrument has been calibrated in increasing and decreasing pressure mode using a Digital Pressure Calibrator as the reference standard having traceability to Internationally recognised standards.

REFERENCE EQUIPMENT USED

| DESCRIPTION | SERIAL NO. | MAKE / MODEL | CALIBRATION DATE | CALIBRATION DUE DATE |
|------------------------|------------|---------------|------------------|----------------------|
| Digital Pressure Gauge | 468802 | AMETEK / XP2i | 20 Nov, 2023 | 19 Nov, 2024 |

CALIBRATION TEST RESULTS

| Measured Values on Unit Under Calibration (M) | Ref. Standard Values (A) | Deviation (D=M-A) | Full Scale Error % |
|---|--------------------------|-------------------|--------------------|
| 0 | 0 | 0 | % |
| 0 | 0.00 | 0.00 | 0.0 |
| 15 | 15.20 | -0.20 | -0.3 |
| 30 | 30.30 | -0.30 | -0.5 |
| 45 | 45.30 | -0.30 | -0.5 |
| 60 | 60.30 | -0.30 | -0.5 |

Calibration results were found to conform as per specified accuracy requirements. Above Instrument has **PASSED** its Calibration.

- ☒ The results are as found (no adjustment done).
☐ The results are post adjustment.

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| | | | |
|--------------------|----------------------|------------------|--|
| REQUEST NUMBER | : By Contract | CUSTOMER DETAILS | |
| JOB NUMBER | : QC/JN/24/00194 | Name | Halliburton Worldwide IRAQ (TSS) |
| CERTIFICATE NUMBER | : QC240424-08 | Address | Western Burjesia, Oil Street, District Zubair-South Iraq |

Description : **Pressure Gauge**
Manufacturer : FISHER
Model : NA
Serial Number : **212203-02**
Type : Analog
Location : SURGE TANK # 11433984
Range : 0 to 60 psi
Calibrated Range : 0 to 60 psi
Resolution : 1 psi
Tolerance : ± 1.0 % of Full Scale
As found : In Tolerance
Calibration Date : April 24, 2024
Calibration Due : 23 April 2025
Last Calibration Date : NA

**DEVIATION FROM STANDARD METHOD : None****REMARK (S) :**

1. No adjustments were made prior to calibration.
2. No accessories were fitted.
3. Values were rounded in computation.

ENVIRONMENTAL CONDITIONS DURING TESTAmbient Temperature : $22.0 \pm 2^{\circ}\text{C}$ Humidity : $44.0 \pm 5\% \text{ RH}$ Atm. Pressure : $1011.0 \pm 10 \text{ hPa}$ **CALIBRATION METHOD**

The above equipment has been calibrated in accordance with Calibration Procedure QC/CP/R/03 Rev. 01

The above instrument has been calibrated in increasing and decreasing pressure mode using a Digital Pressure Calibrator as the reference standard having traceability to Internationally recognised standards.

REFERENCE EQUIPMENT USED

| DESCRIPTION | SERIAL NO. | MAKE / MODEL | CALIBRATION DATE | CALIBRATION DUE DATE |
|------------------------|------------|---------------|------------------|----------------------|
| Digital Pressure Gauge | 468802 | AMETEK / XP2i | 20 Nov, 2023 | 19 Nov, 2024 |

CALIBRATION TEST RESULTS

| Measured Values on Unit Under Calibration (M) | Ref. Standard Values (A) | Deviation (D=M-A) | Full Scale Error % |
|---|--------------------------|-------------------|--------------------|
| 0 | 0 | 0 | % |
| 0 | 0.00 | 0.00 | 0.0 |
| 15 | 14.70 | 0.30 | 0.5 |
| 30 | 29.80 | 0.20 | 0.3 |
| 45 | 44.80 | 0.20 | 0.3 |
| 60 | 59.90 | 0.10 | 0.2 |

Calibration results were found to conform as per specified accuracy requirements. Above Instrument has **PASSED** its Calibration.

- ☒ The results are as found (no adjustment done).
☐ The results are post adjustment.

| | | | |
|--|---|--------------|--------|
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|  Mahdi Halim |  | Asjad Rafiq | |