

AI TAKAMUL COMPANY FOR ENGINEERING TESTS AND PROFESSIONAL SAFETY LIMITED

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INSPECTION CERTIFICATE FOR X-OVER

| | | | |
|--|---|---|--|
| Client Name: | HALLIBURTON (TSS) | Report No.: | HAL-24-02-MS-TSS-123 |
| Acceptance criteria. | DS-1, Volume 4 Fifth Edition | Date of Inspection: | 10.February.2024 |
| Work Location: | Burjesia Halliburton Camp Basra - Iraq | Next Date of Inspection: | 09.August.2024 |
| Halliburton Doc. (Visual Procedure D00305796 Revision U) | | Halliburton Doc. (MPI Procedure D00976850 Revision D) | |
| TEST EQUIPMENT & CONSUMABLE DETAILS | | | |
| WHITE CONTRAST WCP-2 | Batch #: 220602 Manufacture: Magnaflux Exp Date: JUN.2025 | TECHNICAL DETAILS | Wet Visible Continuous |
| BLACK INK 7HF | Batch#.220605 Manufacture: Magnaflux Exp Date: JULY.2025 | COIL(1200 AMP-TURNS/IN | SR#22650 Cal. 15.AUG.2023 Cal Due 14.FEB.2024 |
| FLUORESCENT 14HF | Batch #: 220306 Manufacture: Magnaflux Exp Date: March.2025 | A.C HAND YOKE | SR#201504048 Cal 15.AUG.2023 Cal Due 14.FEB.2024 |
| INTENSITY METER | SR#R.043943 Cal.15.AUG.2023 Cal Due 14.FEB.2024 | UV BLACK LIGHT | SR#1932401 Cal. 15.AUG.2023 Cal Due 14.FEB.2024 |
| LEAD GAGE | SR#AH07KF0027 GAEMAKER LG-5003 CAL.Date. 15.AUG.2023 CAL Due Date 14.FEB.2024 | THREAD PROFILE GAGE | SR#21336 CAL.Date.15. AUG. 2023 CAL Due Date.14. FEB. 2024 SR#21335 CAL.Date.17. AUG.2023 CAL Due Date. 16.FEB.2024 |
| Magnetic Partical Concentration 7 HF | 1.2 TO 2.4 ML/100 ML | UV LIGHT INTENSITY: | 3038 µw/cm ² |
| Magnetic particle concentration fluorescent 14 HF | 0.1 TO 0.4 ML/100 ML | WMPT Light Intensity: | 3520 Lux |
| MAGNITISUM DIRECTION (LONGITUDENAL) | | | |
| METHODOLOGY: | <ul style="list-style-type: none"> Through Visual inspection Dimensional MPI inspection with Ultraviolet light | | |

| Serial No. | Description | Connection | | Result Inspection | | | Dimensional Inspection | | | | | | | | | | | | | |
|------------|-------------|------------|-----------|-------------------|------|------|------------------------|--------|------------|-----------|-------------|--------|----------|----------|----------|----------|-------------|-----------|-------------|---------------|
| | | Pin | Box | Pin | Box | Body | Pin | | | | | Box | | | | Body | | | | |
| | | | | | | | OD(In) | ID(In) | Neck ϕ(In) | Pin λ(In) | Bevel ϕ(In) | OD(In) | CB ϕ(In) | CB δ(In) | BB ϕ(In) | BB δ(In) | Bevel ϕ(In) | Pin λ(In) | Box T λ(In) | Overall λ(In) |
| IB-13 | X-OVER | 3 1/2 IF | 3 7/8 CAS | Acc. | Acc. | Acc. | 4 3/4" | 2 1/2" | 1/2" | 4" | 4 5/8" | 4 3/4" | - | - | - | - | 4 11/16" | - | - | 20" |



Conclusion: 01 X-OVER was found "Acceptable". At time of Inspection Ready For Use.

| | | | | | | |
|-----------------------------------|-------------------------------|---------------------------------|-------------------------------------|-------------------------|---------------------------|--------------------|
| OD Outside Diameter | ID Inside Diameter | SRG Stress Relief Groove | CB Counter Bore | BB Bore Back | FB Float Bore | |
| ∅ Diameter | ∅ Length | ∏ Width | ∏ Depth | NP. Not Present | NA. Not Applicable | |
| EGR Elevator Groove Recess | SGR Slip Groove Recess | CR Crack | B Bent | PC Premium Class | RF Reface | |
| GT Galled Thread | TP Thread Pitting | SP Seal Pitting | TD Thread Damage | SD Seal Damage | M Mashed | |
| 1 100 % Coating | 2 99-71 % Coating | 3 70-40 % Coating | 4 Up to 40 % | 5 Nil | WT Wall Thickness | |
| Colors Code: | | White No Defects | Red Crack or Extreme Damage. | Blue Damage | Green Seal Damage | Yellow ACFM |

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|-------------------------|--------------------------|--------------------------|----------------|---|----------|-----------------------|----------------------------|
| Inspector Name: | M.Shabzad Ahmed | Review By | | | | | |
| Qualification: | ASNT Level III MPI/VT | Senior Inspector: | Naveed Hussain | Supervisor: | Hani Ali | Customer Name: | |
| Signature: | | | | | | | Customer Signature: |
| Original - Client Files | | Copy - Area Office | | QC/FN/DJ-PB/029 Rev.00 dated 07.Nov2021 | | | |

