

**AI TAKAMUL COMPANY FOR ENGINEERING TEST AND PROFESSIONAL SAFETY LIMITED**

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**INSPECTION CERTIFICATE FOR X-OVER**

<b>Client Name:</b>	<b>HALLIBURTON (TSS)</b>	Report No.:	HAL-24-09-NDT-TSS-039
Acceptance criteria.	DS-1 Volume 4 Fifth Edition & API 5CT	Date of Inspection:	03.SEP.2024
Refrance Standard TSS	ST-GL-HAL-TT-510 REV NO 5.1	Next Inspection Date:	<b>02-MAR-2025</b>

**TEST EQUIPMENT & CONSUMABLE DETAILS**

Item	Batch #/Manufacture/Exp Date	Technical Details	Calibration
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.16.APR.2024 Cal Due 15.OCT.2024
FLUORESCENT 14HF	Batch #: 220306 Manufacture: Magnaflux Exp Date: March.2025	A.C HAND YOKE	SR#201504052 Cal.15.APR.2024 Cal Due 14.OCT.2024
INTENSITY METER	SR#R.043943 Cal.17.APR.2024 Cal Due 16.OCT.2024	UV BLACK LIGHT	SR#1898977 Cal.15.APR.2024 Cal Due 14.OCT.2024
LEAD GAGE	SR#AH07KF0027 GAEMAKER LG-5003 Cal.17.APR.2024 Cal Due 16.OCT.2024	THREAD PROFILE GAGE	SR#21336 CAL.Date.17.APR.2024 Cal Due 16.OCT.2024 SR#21335 CAL.Date.17.APR.2024 Cal Due 16.OCT.2024
Magnetic Partical Concentration 7 HF	1.2 TO 2.4 ML/100 ML	UV LIGHT INTENSITY:	3038 μw/cm <sup>2</sup>
Magnetic particle concentration flourcent 14 HF	0.1 TO 0.4 ML/100 ML	WMPT Light Intensity:	3640 Lux

**MAGNITISUM DIRECTION (LONGITUDENAL)**

<b>METHODOLOGY:</b>	<ul style="list-style-type: none"> <li>Through Visual inspection</li> <li>Dimensional Inspection</li> </ul>	<ul style="list-style-type: none"> <li>MPI inspection with Ultraviolet light</li> </ul>
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Serial No.	Description	Connection		Result Inspection			Dimensional Inspection												
		Pin		Pin			Pin					Pin			Body				
		Pin	Pin	Pin	Pin	Body	OD(In)	ID(In)	Neck ϕ(In)	Pin λ(In)	Bevel ϕ(In)	OD(In)	ID(In)	Neck ϕ(In)	Pin λ(In)	Bevel ϕ(In)	Pin T λ(In)	Box T λ(In)	Overall λ (In)
TSS-118	X-OVER	5 1/2 ACME	3 1/2 PH6	Acc.	Acc.	Acc.	7 1/2"	2 11/16"	-	-	7 7/16"	7 1/2"	2 11/16"	-	-	4 1/4"	-	-	27 1/4"



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

**Abbreviations :**

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

<b>Inspector Name:</b>	M.Shahzad Ahmed	<b>Review By</b>				
<b>Qualification:</b>	ASNT Level II (MT, PT, VT)	<b>Senior Inspector:</b>	NAVEED HUSSAIN	<b>Supervisor:</b>	Hani Ali	<b>Customer Name:</b>
<b>Signature:</b>						<b>Customer Signature:</b>
Original - Client Files		Copy - Area Office		QC/FN/FLS/03 Rev.00	Dated: 07 Nov 2021	

