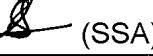
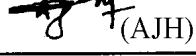


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COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in any way detrimental to the interest of the company.		<u>MANIFOLD ASSY, HYDRAULIC</u>																																				
		1.0 DESCRIPTION : This specification describes the requirements for Manifold Assy-Hydraulic to be used in Hydraulic supply system for Fr6B & Fr9E Gas Turbines. 2.0 SPECIFICATION : The manifold Assy-Hydraulic consists three valves and manifold to mount them and to interconnect them. 2.1 For scheme and outline dimensions, refer drg. no.13552291001-01. 2.2 OPERATION : Oil from the hydraulic pump enters the manifold and is ported directly to check valve inlet with branches to air bleed valve and to the relief valve. If the oil pressure is above the relief valve setting, the relief valve will open and relieve the oil directly to drain at a rate sufficient to just maintain the set pressure at the valve inlet. The air bleed valve allows any air that may be trapped in this portion of the supply system to escape during the pump startup cycle. The check valve prevents back flow from the system and also isolates the two relief valves in a dual pump installation. 3.0 SYSTEM COMPONENTS : All the valves coming in Hydraulic manifold assembly should be of M/s Vickers make only. Others makes are not acceptable. M/s Vickers Model No's are given below. 3.1 RELIEF VALVE : <table border="0" style="width: 100%;"> <tr> <td style="width: 40%;">Type</td> <td>:</td> <td>Adjustable pilot – Operated valves.</td> </tr> <tr> <td>Flow</td> <td>:</td> <td>80 LPM</td> </tr> <tr> <td>Pr. Relief Range</td> <td>:</td> <td>35 to 140 Kg/cm²</td> </tr> <tr> <td>Model No.</td> <td>:</td> <td>CG-06-C-50</td> </tr> <tr> <td>Set pressure</td> <td>:</td> <td>94.89 ± 1.75 Kg/cm² (g)</td> </tr> </table> 3.2 CHECK VALVE : <table border="0" style="width: 100%;"> <tr> <td style="width: 40%;">Max Flow</td> <td>:</td> <td>80 LPM</td> </tr> <tr> <td>Max Pressure</td> <td>:</td> <td>210 Kg/cm²</td> </tr> <tr> <td>Free low Pr. drop</td> <td>:</td> <td>0.5 to 2 Kg/cm²</td> </tr> <tr> <td>Model No.</td> <td>:</td> <td>C4G-815-S19</td> </tr> </table> 3.3 AIR BLEED VALVE : <table border="0" style="width: 100%;"> <tr> <td style="width: 40%;">Valve closing pressure</td> <td>:</td> <td>9.5 Kg/cm²</td> </tr> <tr> <td>Model No.</td> <td>:</td> <td>ABS-03-10-IN80</td> </tr> </table> All these components are to be assembled on a manifold with internal drilling for passages and with required inlet, outlet, vent & drain connections.				Type	:	Adjustable pilot – Operated valves.	Flow	:	80 LPM	Pr. Relief Range	:	35 to 140 Kg/cm ²	Model No.	:	CG-06-C-50	Set pressure	:	94.89 ± 1.75 Kg/cm ² (g)	Max Flow	:	80 LPM	Max Pressure	:	210 Kg/cm ²	Free low Pr. drop	:	0.5 to 2 Kg/cm ²	Model No.	:	C4G-815-S19	Valve closing pressure	:	9.5 Kg/cm ²	Model No.	:	ABS-03-10-IN80
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Ref.Doc.	142D4923G001	Revisions : Refer to record of revisions :	Prepared :  (Y.V.RAO)	Approved :  (B.I.BABU)	Date : 10-05-93																																	

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	TABLE – I																																																																																	
	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:10%;">BHEL VAR NO.</th> <th style="width:10%;">POSN NO.</th> <th style="width:30%;">DESCRIPTION</th> <th style="width:15%;">BHEL Mat_Code</th> <th style="width:10%;">WT in (kg)</th> <th style="width:25%;">REMARKS</th> </tr> </thead> <tbody> <tr> <td>01</td> <td>-</td> <td>HYD MANIFOLD ASSLY. AS PER DRG.NO. 13552291001-01.</td> <td>GT9751413010</td> <td>36.0</td> <td></td> </tr> <tr> <td>-</td> <td>03</td> <td>RELIEF VALVE VICKERS MODEL No. : CG-06-C-50</td> <td>GT9751140021</td> <td>1.5</td> <td>FOR POSN. NO'S. REFER DRG. NO. 13552291001-01</td> </tr> <tr> <td>-</td> <td>04</td> <td>AIR BLEED VALVE VICKERS MODEL No. : ABS-03-10-IN80</td> <td>GT9751140030</td> <td>1.0</td> <td>FOR POSN. NO'S. REFER DRG. NO. 13552291001-01</td> </tr> <tr> <td>-</td> <td>02</td> <td>CHECK VALVE VICKERS MODEL No. : C4G-815-S19</td> <td>GT9751140048</td> <td>1.0</td> <td>FOR POSN. NO'S. REFER DRG. NO. 13552291001-01</td> </tr> <tr> <td>03</td> <td>-</td> <td>CHECK VALVE</td> <td>GT975143036</td> <td>3.0</td> <td>-</td> </tr> <tr> <td colspan="5" style="text-align: center;"># DO NOT USE #</td> <td></td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>				BHEL VAR NO.	POSN NO.	DESCRIPTION	BHEL Mat_Code	WT in (kg)	REMARKS	01	-	HYD MANIFOLD ASSLY. AS PER DRG.NO. 13552291001-01.	GT9751413010	36.0		-	03	RELIEF VALVE VICKERS MODEL No. : CG-06-C-50	GT9751140021	1.5	FOR POSN. NO'S. REFER DRG. NO. 13552291001-01	-	04	AIR BLEED VALVE VICKERS MODEL No. : ABS-03-10-IN80	GT9751140030	1.0	FOR POSN. NO'S. REFER DRG. NO. 13552291001-01	-	02	CHECK VALVE VICKERS MODEL No. : C4G-815-S19	GT9751140048	1.0	FOR POSN. NO'S. REFER DRG. NO. 13552291001-01	03	-	CHECK VALVE	GT975143036	3.0	-	# DO NOT USE #																																									
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RECORD OF REVISIONS						
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	00	10-05-93	First made.	-	-	
	01	31-05-97	- Revised in line with EMI 011. - Sheet 2 & 3 added.	(GIRIDHAR)	(KRMH)	
	02	12-12-03	Spec. Completely revised.	 (YVRAO)	 (BIBABU)	
	03	28-01-05	RELIEF VALVE MODELE NO CHANGED FROM CG-06-C-10 TO CG-06-C-50 IN TABLE -1.	 (YVRAO)	 (BIBABU)	
	04	14.02.2012	Modified Clause 3.1	 (SSA)	 (AJH)	
	Ref. Doc					