

03610

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TRAIN SET 228

REF: GR000001072, JO PRASA WEIGHT BALANCE EN  
P310 WEIGHTS REPORT

TC2	Balance across front and rear bogies		Longitudinal imbalance [%]		Criteria longitudinal imbalance ≤ 10%	
	Weight Measured [Tons]	Weight Predicted [Tons]	Weight Difference [%]	Tolerance [%]	Criteria Min:Diff:Max	PASS
	18.46	15.49	8.75%	1.62%	PASS	
M3	Balance across front and rear bogies		Longitudinal imbalance [%]		Criteria longitudinal imbalance ≤ 3%	
	Weight Measured vs Predicted	Weight Predicted [Tons]	Weight Difference [%]	Tolerance [%]	Criteria Min:Diff:Max	PASS
	33.95	34.42	1.38%	1.62%	PASS	
M2	Balance across front and rear bogies		Longitudinal imbalance [%]		Criteria longitudinal imbalance ≤ 3%	
	Weight Measured vs Predicted	Weight Predicted [Tons]	Weight Difference [%]	Tolerance [%]	Criteria Min:Diff:Max	PASS
	17.79	17.76	0.03%	1.36%	PASS	
M1	Balance across front and rear bogies		Longitudinal imbalance [%]		Criteria longitudinal imbalance ≤ 3%	
	Weight Measured vs Predicted	Weight Predicted [Tons]	Weight Difference [%]	Tolerance [%]	Criteria Min:Diff:Max	PASS
	35.55	35.50	0.97%	1.37%	PASS	
M4	Balance across front and rear bogies		Longitudinal imbalance [%]		Criteria longitudinal imbalance ≤ 3%	
	Weight Measured vs Predicted	Weight Predicted [Tons]	Weight Difference [%]	Tolerance [%]	Criteria Min:Diff:Max	PASS
	18.60	17.83	2.11%	1.37%	PASS	
TC1	Balance across front and rear bogies		Longitudinal imbalance [%]		Criteria longitudinal imbalance ≤ 10%	
	Weight Measured vs Predicted	Weight Predicted [Tons]	Weight Difference [%]	Tolerance [%]	Criteria Min:Diff:Max	PASS
	36.43	37.05	1.71%	1.62%	PASS	
M3	Balance across front and rear bogies		Longitudinal imbalance [%]		Criteria longitudinal imbalance ≤ 3%	
	Weight Measured vs Predicted	Weight Predicted [Tons]	Weight Difference [%]	Tolerance [%]	Criteria Min:Diff:Max	PASS
	18.59	18.10	1.34%	1.37%	PASS	
M2	Balance across front and rear bogies		Longitudinal imbalance [%]		Criteria longitudinal imbalance ≤ 3%	
	Weight Measured vs Predicted	Weight Predicted [Tons]	Weight Difference [%]	Tolerance [%]	Criteria Min:Diff:Max	PASS
	36.69	36.87	0.47%	1.37%	PASS	
M4	Balance across front and rear bogies		Longitudinal imbalance [%]		Criteria longitudinal imbalance ≤ 3%	
	Weight Measured vs Predicted	Weight Predicted [Tons]	Weight Difference [%]	Tolerance [%]	Criteria Min:Diff:Max	PASS
	17.78	17.83	0.14%	1.36%	PASS	
TC1	Balance across front and rear bogies		Longitudinal imbalance [%]		Criteria longitudinal imbalance ≤ 10%	
	Weight Measured vs Predicted	Weight Predicted [Tons]	Weight Difference [%]	Tolerance [%]	Criteria Min:Diff:Max	PASS
	34.07	34.42	1.03%	1.62%	PASS	
TOTAL TRAIN		Measured Weight	Predicted Weight	Criteria Measured Weight - Predicted Weight		18
		212.20	215.9726	Pass		



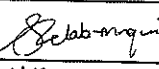


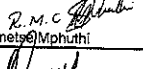

Name	Department	Designation	Signature	Date

End of cycle

End of cycle EVU number

09/06/2024

Company Gibela	Name of the requester Joshua Nemanashe	Function PME	Date 7 May 2024	Visa 	Request N° PRASA-DERSU-1096
			Plant Country	Gibela South Africa	
Project	PRASA PROJECT		Customer	PRASA	
Product name Reference	TS161 to TS210 TC1,M4,M1,M2,M3,TC2		Drawing number and Revision	DT00000207673	
Temporary <input checked="" type="checkbox"/> Until : TS161 to TS210	Quantity : 80 Train sets	Serial Numbers / Batch: TS211 to TS290		Permanent <input type="checkbox"/>	
<b>Requirement:</b> According to GIB0000001672 prasa weight balance EN . TC1/TC2:The weighing report specification requires the weight difference (weight measured vs predicted weight) tolerance to be 1.62%. M1/M2:The weighing report specification requires the weight difference (weight measured vs predicted weight) tolerance to be 1.37%. M3/M4:The weighing report specification requires the weight difference (weight measured vs predicted weight) tolerance to be 1.36%.				<b>Anteriority:</b>  <b>Impact on:</b> Environment..... <input type="checkbox"/> Safety (people)..... <input type="checkbox"/> Contract clauses..... <input type="checkbox"/> Economic..... <input type="checkbox"/> Development.. <input type="checkbox"/> Product Safety..... <input type="checkbox"/> Reliability..... <input type="checkbox"/> Performances..... <input checked="" type="checkbox"/> Delivery..... <input type="checkbox"/> Cost..... <input type="checkbox"/> Documentation..... <input type="checkbox"/> Resources..... <input type="checkbox"/> Others..... <input type="checkbox"/>	
<b>Non-conformity description:</b> The average weights measured from TS120 up to 162 has shown a deviation from the acceptance criteria. However, after discussions with BARRABES-PRADAL Daniel an additional 0.5% deviation from the acceptance criteria will not have an impact. Should we had this to the acceptance tolerance then all the cars will pass. <b>"these trains are equivalent in terms of mass (we have seen a gap around 0,5)"</b>  See below min and max weight measured for TS120-162 and the average tolerances (We expect the same deviation for the next 80 train sets):					
	Min	Max			
TC2	33.9	34.6			
M3	35.4	35.9			
M2	36	37.1			
M1	36.6	37			
M4	35.3	36.6			
TC1	33.9	34.4			
TC2	Weight Measured vs Predicted	Weight Measured (Tons)	Weight Predicted (Tons)	Weight Difference (%)	Tolerance (%)
		34.32	34.48	0.38%	1.62%
M3	Weight Measured vs Predicted	Weight Measured (Tons)	Weight Predicted (Tons)	Weight Difference (%)	Tolerance (%)
		35.67	35.50	0.88%	1.36%
M2	Weight Measured vs Predicted	Weight Measured (Tons)	Weight Predicted (Tons)	Weight Difference (%)	Tolerance (%)
		36.53	37.05	1.42%	1.37%
M1	Weight Measured vs Predicted	Weight Measured (Tons)	Weight Predicted (Tons)	Weight Difference (%)	Tolerance (%)
		36.69	36.87	0.50%	1.36%
M4	Weight Measured vs Predicted	Weight Measured (Tons)	Weight Predicted (Tons)	Weight Difference (%)	Tolerance (%)
		35.69	35.95	0.75%	1.36%
TC1	Weight Measured vs Predicted	Weight Measured (Tons)	Weight Predicted (Tons)	Weight Difference (%)	Tolerance (%)
		34.09	34.42	0.96%	1.62%

<b>Cause of the non-conformity / reasons for request:</b> Weight balance document was revised from J to K by engineering and the following was removed from the weight calculations: -Main Reservoir Tank Removal -Brake Reservoir Resizing -CPU bloc is combined with the screen - Closure of Air Extractor Opening						
<b>Attached documents:</b> REF: GIB0000001672_K0 PRASA WEIGHT BALANCE EN report  RE TS Weight is failing .msg						
<b>Containment action:</b> Each train is evaluated by engineering and based on risk it will be approved or declined. A new version of GIB000001672 will be created to align the sub system actual weight with the theoretical weight which will reduce the error percentage.		<b>Use or assignment limitations of the non-conforming product:</b>				
<b>Corrective &amp; Preventive action:</b> Engineering to revise car weights per baseline.						
Function	Entity	Name	Date	Visa	Observations / Conditions	Decision
Process Manufacturing Engineering	GIB	Junior MAGADA	14/05/2024			<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
Train System Engineering	GIB	Mpho LELALA-MNGUNI				<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
Industrial Quality	GIB	Lucy MAKOFANE	14/05/2024			<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
Project Engineering Manager	GIB	Tshepo NKODI	15/05/2024			<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
Project Quality Safety Manager	GIB	Solani MALIBONGWE	16/05/2024	 pp. Reitumetseng Mphuthi		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK
Project Manager	GIB	Devendran GOVENDER	17/05/2024		Engineering to update the test procedure with new targets	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOK