TECHNICAL SPECIFICATION

AIR CONDITIONING KIT 19

PHELOPHEPA TRAIN-SET 1 & 2

ACCOMMODATION COACH 09

Revision 4

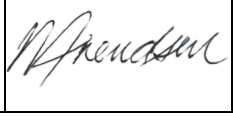
DATE RELEASED

09 October 2026

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DEVELOPMENT, DESIGN, DRAUGHTING

DOCUMENT CONTROL

Control	Date	Signature	Date
Compiled	Jacques Posthumus Electrical Engineer Product Development Coaches		02/02/2010
Updated	Krish Govender National Engineering Manager Coaches		09/10/2026
Approved	Wade Arendsen Engineering Technician Product Development Coaches		09/10/2026

LIST OF REVISIONS

Rev.	Date	Responsible Person	Description of modifications
2	28 July 2026	Krish Govender	1. Added or similar (Brand name) 2. Kit 19: Std Aircons (x 8Midwall) 3. VZE250CB or the latest model conforming to the existing Fresh air fan spec. 4. Or a factory remote supplied with the air-con units.
3	23 September 2026	Krish Govender	5. Various Changes
4	09 October 2026	Krish Govender	6. Various Changes

TABLE OF CONTENTS

1. SCOPE 4
2. SPECIFICATION 4
3. STANDARDS REQUIREMENTS 5
4. AIR CONDITIONER UNITS REQUIRED 5
5. WARRANTY 6
6. MANUALS 6
7. AIR CONDITIONING LAYOUT: 6
8. ANNEXURE A: PHELOPHEPA TRAIN SCHEDULE (TYPICAL) 8

AIR CONDITIONING KIT 19 FOR PHELOPHEPA 2 ACCOMMODATION COACH 09

1. SCOPE

THIS SPECIFICATION DESCRIBES THE AIR CONDITIONING KIT TO BE SUPPLIED FOR PHELOPHEPA 2 ACCOMMODATION COACH 09. THE MATERIAL NUMBER FOR THIS KIT IS 085808781.

SCOPE INCLUDES:

- SUPPLY
- INSTALLATION AND INTEGRATION INTO THE COACH
- TESTING AND COMMISSIONING EQUIPMENT
- COMPLETE SET (3X) OF DOCUMENTATION (OPERATING & MAINTENANCE MANUALS, FAULT FINDING & DIAGNOSTICS, INSTALLATION INSTRUCTIONS)
- 12 MONTHS OEM FACTORY WARRANTY
- EXTENDED 12-MONTH OEM FACTORY WARRANTY (OPTIONAL)

2. SPECIFICATION

ALL AIR CONDITIONING EQUIPMENT MUST BE SUPPLIED IN ACCORDANCE WITH TECHNICAL SPECIFICATION PD-PDC-NAT-SPEC-0044: REQUIREMENTS FOR AIR CONDITIONING UNITS ON MAIN LINE POWER CAR TRAIN SETS.

NOISE PERFORMANCE WITH REGARDS TO THE INDOOR UNITS SHALL NOT EXCEED 40 DB(A) IN NORMAL OPERATING CONDITIONS. SUPPLIERS SHALL SUBMIT OEM TEST CERTIFICATES AS VALIDATION.

ALL AIR-CONDITIONING UNITS OFFERED SHALL HAVE AN ENERGY EFFICIENCY RATIO (EER) NOT LESS THAN 3.2 W/W AT RATED OPERATING CONDITIONS. DOCUMENTARY PROOF OF COMPLIANCE FROM THE MANUFACTURER SHALL BE SUBMITTED WITH THE TENDER.

TECHNICIANS THAT WILL BE CONDUCTING THE INSTALLATION MUST BE SAQCC REGISTERED. PROOF OF TECHNICIAN CERTIFICATION SHALL BE SUBMITTED WITH THE TENDER.

ANNEXURE A INDICATES THE TYPICAL TRAIN ROUTE DURING THE YEAR.

3. STANDARDS REQUIREMENTS

THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SOUTH AFRICAN LEGISLATION, REGULATIONS, BY-LAWS, STANDARDS AND CODES OF PRACTICE WHETHER SPECIFICALLY LISTED IN THIS SPECIFICATION OR NOT.

- SAQCC (SOUTH AFRICAN QUALIFICATION AND CERTIFICATION COMMITTEE)
- SARACCA (SOUTH AFRICAN REFRIGERATION AND AIR CONDITIONING CONTRACTORS' ASSOCIATION)
- SANS 941 (ENERGY EFFICIENCY OF ELECTRICAL AND ELECTRONIC APPARATUS)
- SANS 10103 (MEASUREMENT AND RATING OF ENVIRONMENTAL NOISE WITH RESPECT TO ANNOYANCE AND TO SPEECH COMMUNICATION)
- SANS 54511-3 (2016): AIR CONDITIONERS, LIQUID CHILLING PACKAGES AND HEAT PUMPS. ELECTRICAL DRIVEN COMPRESSORS FOR SPACE HEATING AND COOLING

4. AIR CONDITIONER UNITS REQUIRED

THE VARIOUS COMPONENTS AND QUANTITIES REQUIRED FOR PHELOPHEPA 1 & 2 ACCOMMODATION COACH 09 ARE TABULATED BELOW:

Phelophepa 2 Accommodation 09			
Component	**Type**	**Qty**	**Description/Notes**
Standard evaporator mid-wall mounted	Daikin: FTXF25E5V1B Capacity: 9000 BTU Inverter-driven or similar	8	Kit 19: Std Aircons (x8 Midwall)
Standard condenser unit	Daikin: RXF25E5V1B Capacity: 9000 BTU Inverter-driven or similar	8	
Remote control	Daikin: BRC1D528 or Factory remote supplied with the air-con units:	8	
Evaporator covers	To be custom manufactured	8	Colour to be determined – must match compartment colour.
Flexible A/C hoses	Fittings on each side	8 sets	
Custom door louvres	Custom-made for 32mm door thickness	8	Colour to be determined – must match compartment colour.
Fresh air fan	VZE 250CB or the latest model conforming to the existing Fresh air fan specs	2	
Fresh air ducting	With inlet and outlet louvers	2 sets	Inlet ducting colour to match coach exterior. Outlet grills to match the compartment interior colour.

Four-core silicone cable	Cable between the indoor and outdoor units	±80m	
Connecting wire	Between the indoor unit and the remote control	8 sets	
Extraction fan	VZE250CB or the latest model conforming to the existing Fresh air fan specs.	4	Grills to match toilet/shower ceiling colour.

5. WARRANTY

- THE AIRCONDITIONING UNITS SHALL INCLUDE 12 MONTHS OEM FACTORY WARRANTY
- SUPPLIER TO QUOTE ON EXTENDED 12-MONTH OEM FACTORY WARRANTY (ADDITIONAL AFTER INITIAL 12 MONTHS WARRANTY HAS EXPIRED) (OPTIONAL)
    - THE OPTIONAL WARRANTY SHALL INCLUDE THE REPLACEMENT OF DEFECTIVE PARTS INCLUDING: COMPRESSORS, CIRCUIT BOARDS, FAN MOTORS, SENSORS, HEAT EXCHANGERS AND CONTROL PANELS; IF THESE ARE NOT COVERED UNDER THE OEM WARRANTY.

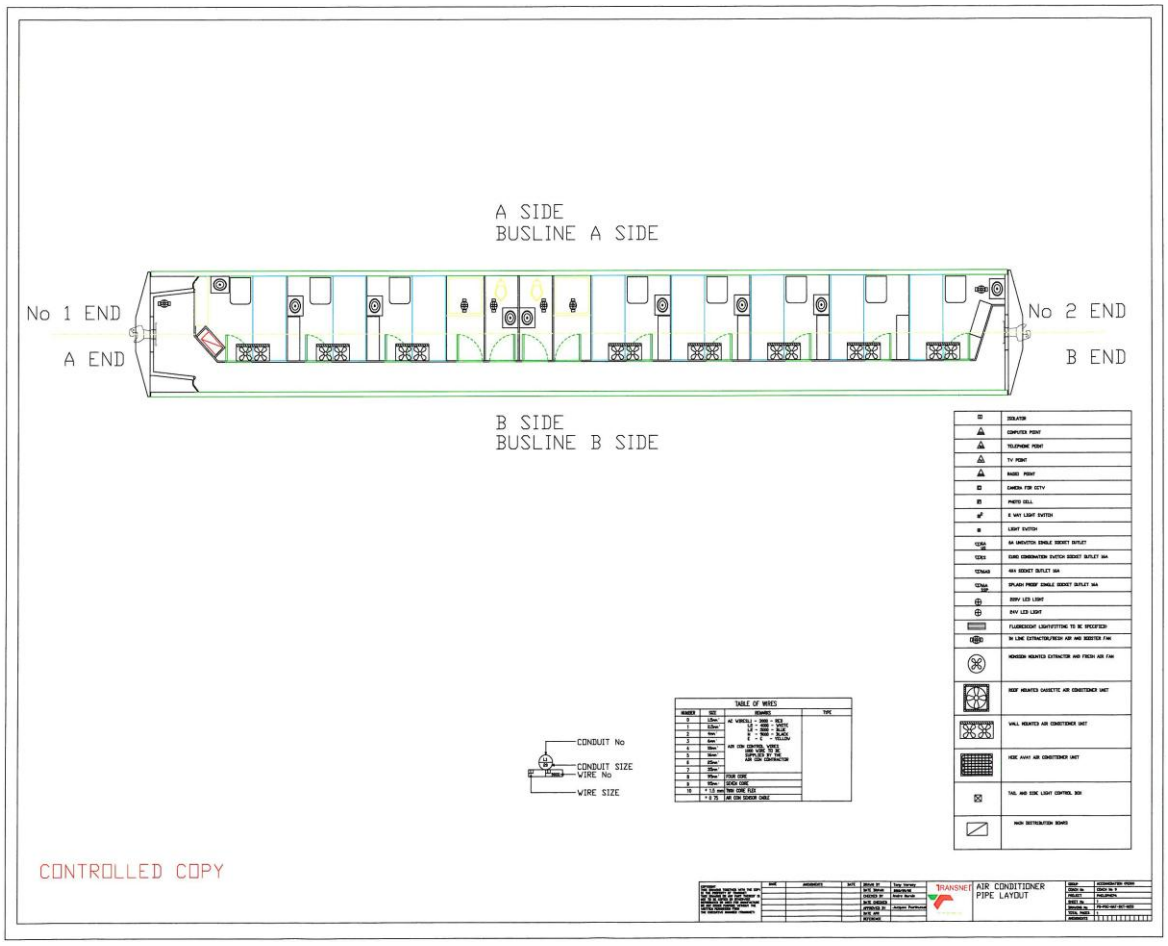
6. MANUALS

THE FOLLOWING MANUALS MUST BE SUPPLIED:

- (3X) OPERATING & MAINTENANCE MANUALS, INCLUDING FAULT FINDING & DIAGNOSTICS, INSTALLATION INSTRUCTIONS

7. AIR CONDITIONING LAYOUT:

PD-PDC-NAT-SKT-0153


A SIDE
BUSLINE A SIDE
No 1 END
A END
No 2 END
B END
B SIDE
BUSLINE B SIDE
CONDUIT No
CONDUIT SIZE
WIRE No
WIRE SIZE
TABLE OF WIRES
CONTROLLED COPY
AIR CONDITIONER
PIPE LAYOUT

8. ANNEXURE A: PHELOPHEPA TRAIN SCHEDULE (TYPICAL)

Phelophepa 1	
Province	**Time Frame**
Eastern Cape	20 January – 28 March
Free State	31 March – 30 May
Gauteng	2 – 27 June
North-West Province	30 June – 22 August
Western Cape	25 August – 17 October

Phelophepa 2	
Province	**Time Frame**
KwaZulu Natal	20 January – 28 March
Mpumalanga	31 March – 13 June
Limpopo	16 June – 8 August
Gauteng	11 August – 5 September
Northern Cape	8 September – 17 October