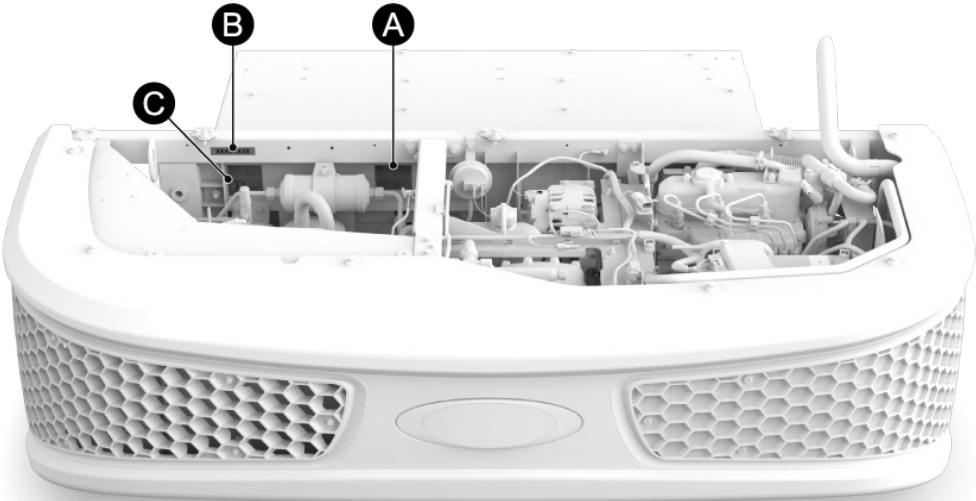




SUPRA[®] HE SERIES SINGLE TEMPERATURE



OPERATOR'S MANUAL



		CARRIER TRANSICOLD INDUSTRIES SCS 810 route de Paris BP16 76120 BOOS FRANCE R.C. ROUEN B 410 041 677		
Model	:			
Code	:			
Country of origin	:			
Year	:			
Serial number	:			
Unit weight (kg)	:	Volts	:	
Sound Power LWA	:	Amps	:	
Refrigerant	:	Cycles	:	
Charge Ref.	:	Phase	:	
Max. Serv. LP/HP	:			

A

XXXXXXXXXX

B

LWA

XX.XdB

C

SUPRA HE SINGLE TEMPERATURE

OPERATOR'S MANUAL

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1. INTRODUCTION

This guide has been prepared for the operator of Carrier Transicold refrigeration units. It contains basic instructions for the daily operation of the refrigeration unit as well as safety information, troubleshooting tips, and other information that will help you to deliver the load in the best possible condition.

Please take the time to read the information contained in this booklet and refer to it whenever you have a question about the operation of your Carrier Transicold unit. This manual refers to the standard model. Some options may not appear in it, and in such cases, you are requested to consult our Technical Services.

Your refrigeration unit has been engineered to provide long, trouble-free performance when it is properly operated and maintained. The checks outlined in this guide will help to minimize on the road problems. In addition, a comprehensive maintenance program will help to ensure that the unit continues to operate reliably. Such a maintenance program will also help to control operating costs, increase the unit's working life, and improve performance.


When having your unit serviced, be sure to specify genuine Carrier Transicold replacement parts for the highest quality and best reliability.

At Carrier Transicold, we are continually working to improve the products that we build for our customers. As a result, specifications may change without notice.

2. IDENTIFICATION & NOISE LEVEL


2.1. NAMEPLATE

Each unit is identified by a nameplate (A) attached to the frame of the unit. The nameplate identifies the complete model number of the unit, the Serial Number (B) and some other information.

 If a problem occurs, please refer to the information on this plate, and make a note of the model and Serial Number (B) before calling for assistance.

This information will be needed when you contact a technician so that he may properly assist you.

2.2. NOISE LEVEL

 The "Noise level" sticker (C) indicates the noise level in L_{WA} (sound power level).


Unit	Maximum Sound Power level
	$L_{WA}(dB)$
SUPRA HE 6	95
SUPRA HE 6 SILENT	93
SUPRA HE 8	96
SUPRA HE 8 SILENT	93
SUPRA HE 9	96
SUPRA HE 9 SILENT	94
SUPRA HE 11	97
SUPRA HE 11 SILENT	95
SUPRA HE 13	97
SUPRA HE 13 SILENT	96

3. SAFETY


3.1. WARNING AND PRECAUTION




This manual contains safety and service instructions to follow in order to prevent any accident. Some of following stickers have been placed on the product for your SAFETY.

-  **NEVER manipulate cab command when driving.**
- NEVER intervene on the unit** for any service or maintenance operation, contact your Carrier Service Center.
- NEVER remove safety elements (grill, skin, metal sheet). If damaged, contact your Service Center for replacement.**

3.2. RISKS

 Contact your medical assistance in case of accident.

 It is essential to shut down the compartment when the doors are open if you are not equipped of plastic curtains, in order to maintain the temperature of this compartment.

GENERAL RISKS



Burning with hot and cold



Cuttings



Noise level



Exhaust gas: DO NOT use the unit in a closed space



Asphyxiation: leave the doors open when working inside the body



Risk of slipping going up in the body: - ice on the floor




Risk of slipping going out of the body: - gasoil on the floor - leak of refrigerant



Electrical risks – when connecting and disconnecting standby plug



GENERAL RISKS	
	Risk of Automatic Restart
	<ul style="list-style-type: none">• If the refrigeration unit is set in Start/Stop mode• Risk of auto start-up in diesel mode when loss of electrical power (configuration in Carrier Service Center)

3.3. WARNING STICKERS MAINTENANCE

1. Keep the warning pictograms clean and without any obstruction material.
2. Clean the pictograms with water and soap and wipe them with soft fabric.
3. Replace damaged or missing pictograms with new pictograms available in Carrier network.
4. If a component having a pictogram is replaced by a new one, be sure that the new component has the right pictogram.
5. Place a warning pictogram by applying it on a dry surface. Press to external sides to eliminate air bubbles.

3.4. RECOMMENDATIONS

3.4.1. WASHING

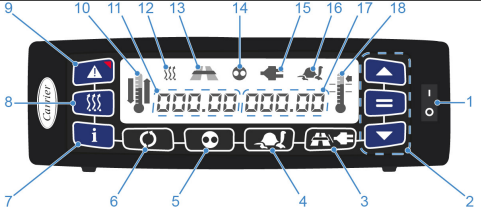
- When washing the vehicle, DO NOT point the high-pressure water under the skin.
- DO NOT spray water on electric components.
- When washing inside the box, DO NOT spray the fan with detergent.

3.4.2. PARKING

Do not park your car in a slope above 10% in order to avoid bad water drain.

4. OPERATION

4.1. CAB COMMAND DESCRIPTION



i Keep the fold out sheet while reading the instructions.

- | | |
|---|------------------------------------|
| 1. RUN/STOP switch. | 10. Running mode: |
| 2. UP ARROW / ENTER / DOWN ARROW keys. | Up arrow: Heating mode. |
| 3. ROAD/STANDBY MODE key. | Down arrow: Cooling mode. |
| 4. CITY SPEED MODE key. | 11. SETPOINT display. |
| 5. AUTO START/STOP & CONTINUOUS key. | 12. DEFROST icon. |
| 6. FUNCTION key. | 13. ROAD MODE icon. |
| 7. UNIT DATA key (SINGLE T°). | 14. AUTO START/STOP icon. |
| UNIT DATA + COMPARTMENT key (MULTI T°). | 15. STANDBY MODE icon. |
| 8. MANUAL DEFROST key. | 16. CITY SPEED icon. |
| 9. ALARM key & led. | 17. BOX TEMPERATURE display. |
| | 18. OUT OF RANGE TEMPERATURE icon. |



4.2. LOCK/UNLOCK CAB COMMAND

i The lock function allows to block any manipulations from the Cab Command.

The user can only start and stop the unit.



1. To lock or unlock the cab command, hold together the **ENTER** & **UNIT DATA** keys for 5 seconds.

"DSP LOCK" is displayed for 10 seconds, when locking.

"DSP UNLCK" is displayed for 10 seconds, when unlocking.

4.3. START A PRETRIP

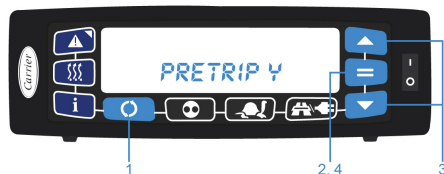
⚙️ The PRETRIP is a test sequence to check unit operation. When PRETRIP is enabled, the unit will enter a test sequence to operate the unit in various operating modes

If a failure occurs during PRETRIP, the microprocessor will generate an alarm.

This function can operate in Road or Standby mode

! This is not a self-diagnosing PRETRIP test. No specific PRETRIP alarms will be generated. PRETRIP must be monitored by the user to verify that the unit operates through all cycles.

⚠️ The PRETRIP can only be initiated if the following condition is reached: **DTS < 4°C**.



1. Press the **FUNCTION** key until "PRETRIP" is displayed.
2. Press the **ENTER** key.

The "PRETRIP N" should be flashing, indicating that it can be set.

3. Press either of the **ARROW** key until "PRETRIP Y" is displayed.
4. Press the **ENTER** key to start the PRETRIP.

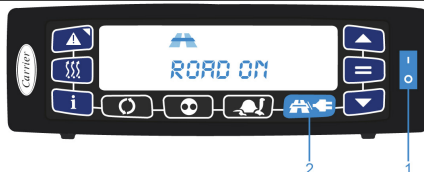
The PRETRIP starts and its status ("TEST X/Y") is displayed.

i X = current test number.

Y = total number of tests to be performed.

⚠️ To abort a PRETRIP in progress, hold the **ENTER** key during 5 seconds.

4.4. STARTING THE UNIT - ROAD OPERATION



1. Place the **RUN/STOP** switch on the RUN position (I).
2. If the unit was running in the Standby Mode, press the **ROAD/STANDBY** key to switch to diesel mode.

The "ROAD MODE" icon lights up and "ROAD ON" is displayed for 10 seconds when activated.

i The microprocessor performs an automatic preheat test for the required time (depending on the engine temperature) and then starts automatically.

4.5. STARTING THE UNIT - STANDBY OPERATION

4.5.1. INTRODUCTION

⚠️ For safe & reliable operation in Standby mode, it is important to consider the following guidelines:

- ALWAYS check that the unit is **OFF** from the cab command before connecting or disconnecting it from the power source.
- The unit connection cable must be fitted with a ground connection. The cable must be connected to earth.
- On the 400 V supply, the unit **MUST BE CONNECTED** to a high sensibility (30 mA) differential protection.
- Operations on the 400 V supply for the unit must only be carried out by authorized personnel.
- The user is liable for ensuring that the above measures are taken.

⚠️ Changing the operation of a unit from 400 V to 230 V implies a change in the electrical coupling, and for certain unit models, the replacement of some components.

Please consult our technical service.

4.5.2. STANDBY GUIDELINE CHART

Operating voltage	Max. current		Standardized extension cable	
	200/240/3/50 Hz	350/415/3/50 Hz	230 volts	400 volts
	220/256/3/60 Hz	380/460/3/60 Hz		
SUPRA HE 6	32 A	25 A	4 x 6 mm ²	4 x 6 mm ²
SUPRA HE 8	32 A	25 A	4 x 6 mm ²	4 x 6 mm ²
SUPRA HE 9	32 A	25 A	4 x 6 mm ²	4 x 6 mm ²
SUPRA HE 11	32 A	25 A	4 x 6 mm ²	4 x 6 mm ²
SUPRA HE 13	32 A	25 A	4 x 6 mm ²	4 x 6 mm ²



4.5.3. PROCEDURE



1. Place the **RUN/STOP** switch on the RUN position (I).
2. If the unit was running in the Road Mode, press the **ROAD/STANDBY** key to switch to electrical mode.

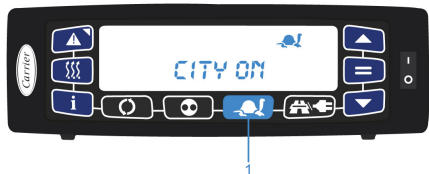
The "STANDBY MODE" icon lights up and "ELEC ON" is displayed for 10 seconds when activated.

i The microprocessor performs an automatic self-test and then starts the unit automatically.

i If Standby Mode is initiated but no power is available, the "A00073" alarm is activated but not displayed. The ALARM led is illuminated and the buzzer sounds.

4.6. CITY SPEED MODE

i By using the City Speed Mode, the unit operates in low speed / low noise.



1. Press the **CITY SPEED** key to toggle between low speed only and normal operating mode.

The **CITY SPEED MODE** icon lights up and "CITY ON" is displayed for 10 seconds when activated.

The **CITY SPEED MODE** icon lights off and "CITY OFF" is displayed for 10 seconds when deactivated.

⚙️ If the City Speed Functional Parameter is locked or all functional parameters are locked, "FN LOCKED" is displayed for 10 seconds and display the appropriate value that is locked in. The display will then return to default.

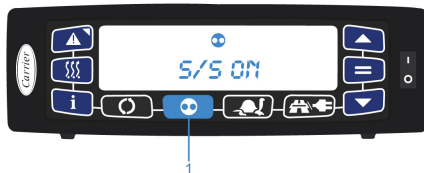
4.7. AUTO START/STOP & CONTINUOUS MODES

i The **AUTO START/STOP** mode enable the unit to automatically start/restart.

- Starts when compartments T° ≠ set point
- Stops when compartments T° = set point.

AUTO START/STOP mode and **CONTINUOUS** mode can be combined with the three operating modes: **ROAD MODE / CITY SPEED MODE / STANDBY MODE**. Refer to the section before.

⚠️ To be able to engage this mode, function "FN2" must be selected with the most suitable time & the function "FN5" must be OFF or "TEMP STRT".



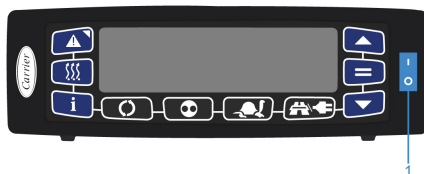
1. Press the **AUTO START/STOP - CONTINUOUS** key to toggle between the **AUTO START/STOP** & **CONTINUOUS** mode.

The "**AUTO START/STOP**" icon lights up and "S/S ON" is displayed for 10 seconds when activated.

The "**AUTO START/STOP**" icon lights off and "S/S OFF" is displayed for 10 seconds when deactivated.

4.8. UNIT SHUT DOWN

! To shut down the unit, **ALWAYS** use the cab command.



1. Place the **RUN/STOP** switch on the **STOP** position (O).

The screen turns off instantly but the unit continues to operate for a few seconds before shutting down.



4.9. ADJUST THE TEMPERATURE SET POINT



1. Press or hold the ▲ key to increase / ▼ key to decrease the temperature set point.
2. Once the desired set point is displayed, press the **ENTER** key to record the change.

i If the **ENTER** key is not pressed within 5 seconds, LED will flash and the set point return to its previous value.

4.10. LAUNCH A MANUAL DEFROST CYCLE

⚠ The compartment / box temperature must be lower than 6.8°C to initiate a defrost cycle.

With the system powered up and the default screen displayed, press the DEFROST key (1). "dF" is displayed and remains so for the entire defrost cycle duration. At the defrost cycle's completion, the display returns to default



1. Press the **MANUAL DEFROST** key to initiate a defrost cycle.

The "DEFROST" icon lights up and "dF" is displayed for the entire defrost cycle duration.

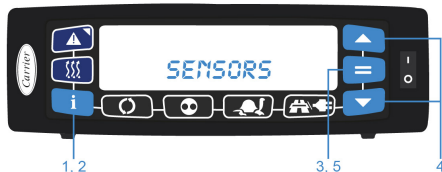
⚙ If defrost does not initiate, the DEFROST icon turns off and "NO dF" is displayed.

4.11. UNIT DATA

i The Unit Data menu allows the user to display the unit's operating data values (hour meters, battery voltage, etc.).

⚙ Once inside the Unit Data submenus, if no keys are pressed for 5 seconds the display will return to the default display.

- Temperature are in °C or °F depending on the configuration.
- Pressures are displayed in a B or P to signify bars or psig.



2. Press the **UNIT DATA** key to access the unit data menu.
3. Press again the **UNIT DATA** key to scroll through the menus.
4. Press the **ENTER** key to access a menu (for example, the SENSORS menu).
5. Press the ▲ or ▼ key to scroll through the data list.
6. You can either press the **ENTER** key at any time to exit the menu, or hold it down for 3 seconds to lock the display (the data displayed will remain until the **ENTER** key is held down again for 3 seconds).

4.11.1. UNIT DATA LIST

SENSORS	
AAT	Ambient Air Temperature (entering condenser).
RAT	Return Air Temperature (entering evaporator).
SAT	Supply Air Temperature (leaving evaporator).
DLT	Delta-T. Supply Air Temperature minus Return Air Temperature (negative value indicates cooling and a positive value indicates heating).
DTS	Defrost Termination Temperature.
RS1	Remote Sensor 1.
RS2	Remote Sensor 2.
RS3	Remote Sensor 3.

METERS	
SBY	Standby Hour Meter (Electrical mode).
SON	Switch On Hour Meter.
HS	High Speed running Hour Meter.
STRT	Start Cycle Counter.
MENG	Maintenance Engine Hour Meter.
MSBY	Maintenance Standby Hour Meter.
MSON	Maintenance Switch On Hour Meter.
ENG	Engine Hour Meter (Road mode).



SYSTEM	
CDT	Compressor Discharge Temperature (leaving the compressor).
CDP	Compressor Discharge Pressure (leaving the compressor).
CSP	Compressor Suction Pressure (entering the compressor).
CST**	Compressor Suction Temperature (entering the compressor).
SMV	Compressor Suction Modulation Valve % opening.

ENGINE	
ENCT	Engine Coolant Temperature.
RPM	Diesel Engine Speed.
BATT	Battery Volts.
DCS	DC Current Sensor (displayed in amps).
FLS	Fuel Level %. Displayed only if the fuel level sensor is installed.

INFO	
MM/DD//YY	Current date and time that the system is using.
HH:MM	Hours and minutes using the 24 hour clock format.
SER1	Characters 1-4 of Serial Number.
SER2	Characters 5-8 of Serial Number.
SER3	Characters 9-11 of Serial Number.
MOD1	Characters 1-4 of Model Number.
MOD2	Characters 5-8 of Model Number.
MOD3	Characters 9-12 of Model Number.
SW	Software revision.

OPTIONS	
DTRAK	Optional communication allowing a telematics company to retrieve information.
	Download.
ADVTRAK	Changing software.
	Changing file configuration remote.

4.12. FUNCTION

i The Function menu allows the user to set functions such as PRETRIP, the temperature unit (°C / °F).

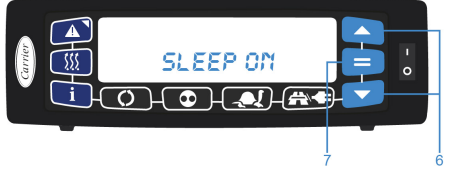


1. Press the **FUNCTION** key to access the function menu.
2. Press again the **FUNCTION** key to scroll through the menus.
3. Press the **ENTER** key to access a menu (for example, the **TIMER** menu).



4. Press the **▲** or **▼** key to scroll through the function list.
5. Press the **ENTER** key once on the desired function.

The function should be flashing, indicating that it can be set.



6. Press the **▲** or **▼** key to change the value.
7. Press the **ENTER** key to validate.

⚠ If the new setting is not validated within 3 seconds, the screen goes back to the menu display and the setting has not been changed.



4.12.1. FUNCTION / PARAMETER LIST

i Selection in bold are factory settings.

TEST	
PRETRIP	Enable or disable PRETRIP: No / Yes.

TIMER	
SLEEP	Enable or disable Sleep Mode. Off / On.

TEMP	
RSTR	Restart temperature for perishable set points in Start/Stop: Default Δt° : 4°C (7,2°F).
PROBE RAT or SAT	This indicates the primary sensor that is used for performing temperature control in the system: Return Air / Supply Air.

SETTING	
TEMP	Determines temperature units on display: Fahrenheit °F / Celsius °C
PRESS	Determines pressure units on display: Psig / Bars .
DATE	Determines date format on display: MM/DD/YYYY / DD/MM/YYYY.
BRIGHTNESS	Determines display brightness. Setting is 0 to 100.

SS PARAMETER	
MINRT	Minimum run time for set points in Start/Stop mode: 4 to 60 minutes, with 1 minute intervals. Default: 4 minutes
MINOF	Minimum off time for perishable set points in Start/Stop mode: 10 to 90 minutes, with 1 minute intervals. Special Note EMEAR Region: This parameter's default is based on the Operating Mode.
OVER	Defines how far away the active temperature must be away from the set point before the minimum off time can be overridden in Start/Stop mode for perishable setpoints: Default Δt°: 4°C (7,2°F). Special Note EMEAR Region: This parameter default is based on the Operating Mode.
MAXOF	Maximum off time for perishable set points during Start/Stop mode: Off / 10 to 255 minutes, with 1 minute intervals.

MODE	
LSCON	Determines the low speed delay adjustment for Continuous: Off / 0 to 255 minutes, with 1 minute intervals. Default: 1 minute.

MODE	
LSSS	Determines the low speed delay adjustment for Start/Stop: Off / 0 to 255 minutes, with 1 minute intervals. Default: 1 minute.
CITY	Disable high speed in the speed control overrides: No / Yes. Only applies to EMEAR Region.

OTHER	
DEFR	The time interval between defrost cycles: 1.5 hours / 3 hours / 6 hours / 12 hours.
FRESHP	Fresh Protect, used for supply air control. NO / A / B / C (Default) / D / E.
TRANG1	This is the out-of-range temperature tolerance selection. NO / A: 2°C (3,6°F) / B: 3°C (5,4°F) / C: 4°C (7,2°F)



5. ALARM

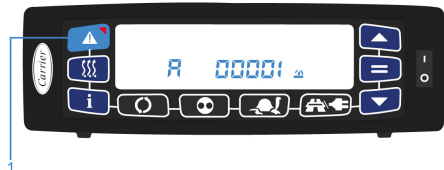
5.1. OVERVIEW

Everything possible has been done to ensure that your unit is the most reliable, trouble-free equipment available on the market today. If, however, you run into problems, the following section may be of assistance.

If you do not find the trouble that you have experienced listed below, please call your Carrier Transicold dealer for assistance.

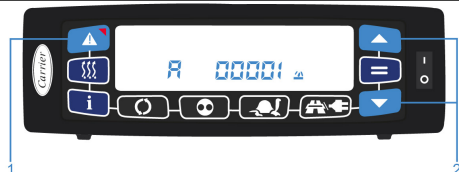
Unit does not start.	<ul style="list-style-type: none"> • Check fuel level. • Check if the electrical plug and power supply are connected. • Check alarms. • Check if the box and unit door are closed.
Unit does not reach the desired temperature.	<ul style="list-style-type: none"> • Check if doors are closed. • Check if products are loaded at the right temperatures. • Evaporator frosted: launch a manual defrost. • Evaporator airflow blocked: check if correct loading. • Check airflow indicator: if blown away from the unit, consult your service point to reverse the phases in the standby plug. • Dirty condenser: consult your Service point for cleaning. • Check alarms.
No cab command display.	<ul style="list-style-type: none"> • Battery fuses. • Check if doors are closed.

5.2. STOP THE ALARM BUZZER



1. Hold the **ALARM** key for 3 seconds.

5.3. DISPLAY ALARMS



1. Press the **ALARM** key.
2. Press the **ARROW** keys to scroll through the list.

i A XXXXX= Active malfunction.
P XXXXX= Past malfunction.

5.4. CLEAR ALARMS



1. From the alarm display, hold either of the **ARROW** key until "ALARN RST" is displayed.
2. Press the **ENTER** key.

If conditions are met, the ALARM led lights off and "ALARM CLR" is displayed.

5.5. ALARM LIST

This is a non-exhaustive alarm list.





































If you encounter any other alarm, call or go to a CARRIER TRANSICOLD Service Center as soon as possible.





















SEVERITY OF THE ALARM	
	The unit can run without risk. Go to service center for maintenance.
	The vehicle can still drive but the unit is automatically switched OFF. Go to service center to check functioning.
	Immediately stop the vehicle. The unit cannot run. Call service center.

ALARM STATUS ABBREVIATION	
AB-BREV.	STATUS
ALO	ALarm Only.
SAL	Shutdown ALarm.
SALCY	Shutdown ALarm if Configured Yes.

Severity	Alarm	Description	Status
	1	LOW FUEL LEVEL WARNING	ALO
	11	CHECK ENGINE OIL PRESSURE	SALCY
	12	HIGH COOLANT TEMPERATURE	SALCY
	13	HIGH DISCHARGE PRESSURE	SAL
	15	BATTERY VOLTAGE TOO HIGH	SAL
	16	BATTERY VOLTAGE TOO LOW	SAL
	17	HIGH COMP DISCHARGE TEMP	SAL
	18	LOW SUCTION PRESSURE	SALCY
	19	LOW FUEL SHUTDOWN	SALCY
	20	MAXIMUM COMPRESSOR ALARMS	SAL
	21	TECHNICIAN RESET REQUIRED	SAL
	27	HIGH SUCTION PRESSURE	SALCY
	28	CHECK REFRIGERATION SYSTEM	SALCY
	30	FAILED TO RUN MINIMUM TIME	SAL



	31	FAILED TO START - AUTO MODE	SAL
	34	ENGINE FAILED TO STOP	ALO
	35	ENGINE FAILED TO CRANK	ALO
	36	CHECK COOLANT TEMPERATURE	ALO
	37	CHECK LOW SPEED RPM	ALO
	38	CHECK HIGH SPEED RPM	ALO
	39	CHECK ENGINE RPM	SALCY
	41	ENGINE STALLED	SAL
	53	BOX TEMP OUT-OF-RANGE	SALCY
	54	DEFROST NOT COMPLETE	ALO
	55	DEFROST OVERRIDE	ALO
	59	DATA RECORDER MEMORY FAIL	ALO
	60	REAL TIME CLOCK FAIL	ALO
	61	DOOR OPEN	ALO
	73	STANDBY / NO AC POWER	SAL
	76	CONDENSER MOTOR OVERHEATED	SAL
	109	CHECK EVAPORATOR FAN	SAL
	121	CHECK AMBIENT AIR SENSOR	ALO
	122	CHECK RETURN AIR SENSOR	ALO
	123	CHECK SUPPLY AIR SENSOR	ALO
	141	PRETRIP ABORT	ALO
	223	ENGINE MAINTENANCE DUE	ALO
	224	STANDBY MAINTENANCE DUE	ALO
	225	GENERAL MAINTENANCE DUE	ALO
	2000	UPDATE SOFTWARE	SAL
	3000	STANDBY MOTOR OVERLOAD	SAL
	3002	CHECK MEDIUM SPEED	ALO
	5003	DIESEL / ELECTRIC RELAY	ALO
	5014	CHECK STARTER SOLENOID CIRCUIT	ALO
	5015	CHECK THREE WAY VALVE	ALO
	5017	CHECK ENGINE PREHEAT ENABLE CIRCUIT	ALO
	5028	TPC FUSE 2 ALARM	SAL
	5029	TPC FUSE 3 / 5 / 7 ALARM	ALO
	5030	TPC FUSE 4 ALARM	ALO
	5031	TPC FUSE 10 ALARM	ALO
	5032	TPC FUSE 11 ALARM	ALO

	5033	POWER ENABLE COIL OPEN CIRCUIT	SAL
	5034	POWER ENABLE CONTACT FAIL ALARM	SAL
	22801	MCA-IN - LOW SENSOR VOLTAGE	ALO
	22802	MCA-IN - HIGH SENSOR VOLTAGE	ALO
	22803	MCA-IN - LOST CONFIGURATION	SAL
	23800	TPC - CAN FAIL	SAL
	23803	TPC LOST CONFIGURATION	SAL
	25800	SIO - CAN FAIL	SAL
	25801	SIO OVER CURRENT	ALO
	25802	SIO INPUT VOLTAGE	ALO
	25803	SIO LOST CONFIGURATION VOLTAGE	SAL
	26100	NO COMM FROM MICRO TO ENCU	SAL
	26101	ENGINE OVERHEAT ENCU	ALO
	26102	WATER TEMPERATURE LOW ENCU	ALO
	26103	WATER TEMPERATURE HIGH ENCU	ALO
	26104	BATTERY VOLTAGE HIGH ENCU	SAL
	26105	ENGINE OVERRUN ENCU	SAL
	26106	SENSOR SUPPLY VOLTAGE 1 LOW	SAL
	26109	ACTUATOR ABNORMAL ENCU	SAL
	26110	ENGINE SPEED SENSOR ABNORMAL	SAL



6. MAINTENANCE

6.1. INTRODUCTION

A comprehensive maintenance program will help to ensure that the unit continues to operate reliably. Such a maintenance program will also help to control operating costs, increase the unit's working life, and improve performance.

IMPORTANT TO READ AND FOLLOW

Regular maintenance includes a quick overview of the unit from a Safety perspective. Service Technician must pay particular attention, but not exclusively to: nuts and bolts tightening (replacing if missing), electrical wires, harnesses, fuel lines routing (repairing or replacing if needed), doors, skins grills, panels conditions (repairing or replacing if needed).


Confirmation of such operations can be detailed on request.

All maintenance services must be done by a technician trained on Carrier products respecting all safety and quality standards of Carrier.

6.2. MAINTENANCE SCHEDULE

Service type	Service frequency (Hours)	
	2000	4000
A	X	
B		X

7. RECOMMENDATION

 This unit is not designed to carry special loads which emit corrosive gas.

These kinds of products can impact unit performance, and seriously reduce component lifetime.

Please contact us if such products need to be carried.

- Proper air circulation in the insulated box, air that can move around and through the load, is a critical element in maintaining product quality during transport. If air cannot circulate completely around the load: hot spots or top freeze can occur.
- The use of pallets is highly recommended. Their usage allow air to flow more freely through them, giving air the possibility to return to the evaporator, helping products protection from heat passing through the floor of the truck. When using pallets, it is important to refrain from stacking extra boxes on the floor at the rear of the truck, because this will cut off the airflow.
- Product stacking is another important factor in protecting the product. Products that generate heat, fruits and vegetables for example, should be stacked so the air can flow through the product to remove the heat; this is called "air stacking" the product. Products that do not create heat, meats and frozen products, should be stacked tightly in the center of the box.
- All products should be kept away from the sidewalls of the body, allowing air to flow between the body and the load; this prevents heat filtering through the walls from affecting the product.
- It is important to check the temperature of the product being loaded to ensure that it is at the correct temperature for transport. The refrigeration unit is designed to maintain the temperature of the product at the temperature at which it was loaded; it is not designed to cool a warm product.

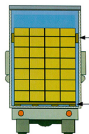
7.1. BEFORE LOADING

- Pre-cool the inside of the insulated body by lowering the temperature for about 15 minutes.
- Evacuate the humidity existing inside the box by carrying out a manual defrost. This can only take place when enabled by the defrost thermostat (box temperature lower than 3°C during pull down and 8°C during heating).
- Evaporator fans are protected by safety grills. In the event of heavy duty use of the unit, ice can accumulate on the grills. It is therefore recommended to clean them regularly by means of a small brush. The operation **MUST** be done when the unit has been SHUTDOWN.



7.2. WHEN LOADING

- Performed with the unit stopped.
- Open doors as little as possible to avoid the intake of hot air and humidity.
- Select the temperature using the thermostat, according on the goods being transported.
- Check the internal temperature of the goods being loaded (using a probe thermometer).
- Be careful not to block the air intakes on the evaporator section and the ventilation ducts.



- Leave a free space of about 6 to 8 cm between load and front wall and 20 cm for the roof.
- Load the product on pallets (gratings) to ensure the return of free air into the unit and improve product protection.

- Do not forget to close the doors.
- Before closing the doors, check your load again and make sure no one is locked in the box.

i For stationary use, we recommend placing the box in the shade.

⊘ Never leave your unit more than a month without running.

! Open the cooling box doors in case of extended stop.

8. RECOMMENDED TRANSPORT TEMPERATURES

Below are some general recommendations on product transport temperatures and operating modes for the unit. These are included for reference only and should not be considered pre-emptive of the set-point required by the shipper or receiver. More detailed information can be obtained from your Carrier Transicold dealer.

PRODUCT	SET POINT RANGE	OPERATING MODE
Bananas	15°C (60°F)	Continuous
Fresh fruits and vegetables	+4°C to +6°C (+39°F to +43°F)	Continuous
Fresh meats and seafood	+2°C (+36°F)	Auto-Start/Stop or Continuous
Dairy products	+2°C to +6°C (+36°F to +43°F)	Auto-Start/Stop or Continuous
Ice	-20°C (-4°F)	Auto-Start/Stop
Frozen fruits and vegetables	-18°C (0°F)	Auto-Start/Stop
Frozen meats and seafood	-20°C (-4°F)	Auto-Start/Stop
Ice cream	-25°C (-13°F)	Auto-Start/Stop

! During delivery cycles that includes frequent stops and door openings, it is recommended that the unit always be operated in the continuous run mode to help insure product quality.

It is essential to shut down the compartment during the periods when the doors are open, in order to maintain the temperature of the cargo in the other compartments and keep the unit operating correctly.



9. A.T.P. EUROPE REGULATION EXTRACT

Approval of vehicles intended for the carriage of perishable goods.

Before putting a refrigerated vehicle into service, it is necessary to have it approved by the Regional Health Department.

Characteristics of vehicles used for carrying perishable goods, refrigeration unit.


The refrigeration unit is an insulated unit with a cooling system which makes it possible, with a mean outside temperature of +30°C, to lower the temperature inside the empty body and to maintain this low temperature in the following way:

Class A: Refrigeration unit furnished with a cooling system whereby a temperature between +12°C and 0°C inclusive can be chosen.

Class B: Refrigeration unit furnished with a cooling system whereby a temperature between +12°C and -10°C inclusive can be chosen.

Class C: Refrigeration unit furnished with a cooling system whereby a temperature between +12°C and -20°C inclusive can be chosen.

The cooling capacity of a unit is determined by a test carried out in one of the approved testing stations and ratified by an official report.

 The "K" factor of bodies intended to be classified as C must be equal to or lower than 0.4 W/m² °C.

Signs, identification marks and plates to be attached to refrigeration units.

Distinguishing plate:


- Standard refrigeration unit Class A → FNA
- Reinforced refrigeration unit Class A → FRA
- Reinforced refrigeration unit Class B → FRB
- Reinforced refrigeration unit Class C → FRC

In addition to the above identification marks, the date (month and year) of expiry of the approval certificate must be indicated.

Refrigeration plate example:

FRC
11-2023

(11 = month - 2023 = year)

 Regularly check the expiry date of the approval certificate. During transport, the approval certificate or provisional certificate should be shown on request of qualified agents. To have an insulated unit approved as a refrigeration unit, an application to modify the approval certificate should be sent to the regional health office.

10. 24H ASSISTANCE

At Carrier Transicold we're working hard to give you complete service when and where you need it. That implies a worldwide network of dealers and available an emergency service. These Service Centers are manned by factory-trained service personnel and backed by extensive parts inventories that will assure you of prompt repair.

Should you encounter a unit problem with your refrigeration unit during transit, follow your company's emergency procedure or contact the nearest Carrier Transicold Service Center. Consult the directory to locate the Service Center nearest you. This directory may be obtained from your Carrier Transicold dealer.

If you are unable to reach a Service Center, call Carrier Transicold's 24Hour Assistance: **ONE CALL**.

In Europe, please use the following free phone numbers from:

AT	AUSTRIA	0800 291039
BE	BELGIUM	0800 99310
CH	SWITZERLAND	0800 838839
DE	GERMANY	0800 1808180
DK	DENMARK	808 81832
ES	SPAIN	900 993213
FR	FRANCE	0800 913148
FI	FINLAND	0800 113221
GB	GREAT BRITAIN	0800 9179067
GR	GREECE	00800 3222523
HU	HUNGARY	06800 13526
IT	ITALY	800 791033
IE	IRELAND	1800 553286
LU	LUXEMBURG	800 23581
RU	RUSSIA	810 80020031032
NO	NORWAY	800 11435
NL	THE NETHERLANDS	0800 0224894
PT	PORTUGAL	8008 32283
PL	POLAND	00800 3211238
SE	SWEDEN	020 790470

From other countries / Direct: +32 11 8791 00

In Canada or United States, call: 1 - 800 - 448 1661

When calling, **please have the following information ready for fastest service:**

- Your name, the name of your company, and your location.
- A telephone number where you can be called back.
- Refrigeration unit model and serial number.
- Box temperature, set point and product.
- Brief description of the problem you are experiencing and what you have already done to try to correct it.

We will do everything we can to get your problem taken care of and get you back on the road.





Over 600 Carrier Service Centers
in Europe, Russia,
Middle East and Africa

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