Operator's Manual

ComfortPro™ 250ION and 240EPS

Electric Auxiliary Power Unit

COMFORT PRO ELECTRIC

62-12077 Rev B

Carrier TRANSICOLD

Operator's Manual

for

ComfortPro™

Electric A/C System
250ION and 240EPS

Table of Contents

1. Introduction

NOTICE

This manual covers the 250ION and 240EPS ComfortPro system. The truck must be equipped with a minimum 240 Amp alternator.

This guide has been prepared for the operator of Carrier Transicold ComfortPro Electric Auxiliary Power Units (APU). It contains basic instructions for the operation of the APU, safety information, and, troubleshooting tips. 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 the Carrier Transicold Comfort Pro Electric APU.

Your Comfort Pro Electric APU 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 over-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 APU's working life, and improve performance.

This guide is intended to be an introduction to your APU and to provide general assistance when needed. More comprehensive information can be found in the Comfort Pro Electric APU Operation and Service manual (62-12063), which is available from your local Carrier Transicold dealer. 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, unit specifications may change without notice.

2. ComfortPro Electric Models

250ION	Provides air conditioning and optional heating to the truck cab. Powered by lithium ion batteries and an advanced power management system the 250ION provides extended runtime and reduced charge time.
240EPS	Features the same air conditioning and optional heating features of the 250ION. Utilizes AGM batteries and standard power management system.

3. Unit Identification

Figure 1 240EPS - Battery Powered A/C System

Each unit is identified by a decal attached to the power unit frame inside the upper access cover. This decal is on the horizontal part of the frame between the lower access cover and compressor base. An additional decal is located on the top cover of the Climate Control Unit (CCU). The decal identifies the model and serial number of the unit, type of refrigerant, and refrigerant charge.

If a concern arises, refer to the information on this decal, and make a note of the model and serial numbers before calling for assistance. This is required when you contact an authorized Carrier Transicold dealer so that they may properly assist you.

4. Safety

These safety alerts alone cannot eliminate hazards that can occur. Strict compliance with these special instructions when performing the installation and maintenance, plus common sense, are major accident prevention measures.

WARNING - warns against hazards or unsafe conditions which COULD result in severe personal injury or death.

CAUTION - warns against potential hazard or unsafe practices which could result in minor personal injury.

NOTICE - warns against potential product or property damage.

4.1 Fuel / Batteries

Exercise extreme caution when working near fuel or fuel-filled equipment. Do not operate equipment during fueling operations. Use eye protection when working near batteries, which contain acid and can explode. Do not smoke or use open flames near batteries.

California Proposition 65 Warning: The APU and CCU components of this product contain lead, a chemical known to the State of California to cause cancer and birth defects and other reproductive harm.

4.2 Electrical

Electric shock can cause severe personal injury, burns, and death. Before working on any unit, disconnect the truck batteries and the auxiliary batteries. Use only approved materials and methods when working on the electrical system, and follow local electrical codes. Never work on the APU system or the electrical circuitry when the APU system is running. Never work with electricity in wet conditions.

4.3 Toxic Substances

Fuel, oil, coolant, and refrigerant are toxic and in some cases, carcinogenic. Wear eye and hand protection at all times. Remove contaminated clothing immediately and wash contaminated skin. Do not breathe in vapors.

4.4 Moving, High Energy, and Hot Parts

Moving, high energy (e.g. batteries) and hot parts can cause severe injury and/or death. Before servicing on any unit, shut it off and disconnect it from the truck and auxiliary batteries. Do not start until protective covers have been replaced. Also, loose parts and tools falling into machinery can cause severe accidents. Always ensure bolts and clamps are correctly torqued and secured. Inspect mechanical components periodically for damage, corrosion, and proper torque.

4.5 Misuse

The ComfortPro Electric is designed to provide cooling and heating (if equipped) for vehicles in normal on-road conditions.

⚠ WARNING

- **DO NOT open the APU enclosure when the APU is running. Moving parts inside the APU can cause severe injury and/ or death. DO NOT restart the APU until the covers have been replaced.**
- **Danger from moving, high energy and high temperature parts. In order to perform some troubleshooting or maintenance tips, you will have to open access covers to the APU or remove enclosures. Before doing so, shut off the ComfortPro Electric. Do not place fingers or tools within the condenser fan area and ensure no tools or other metal objects bridge the positive cables/ lugs to the negative cables/lugs or the frame. Also, be aware that some components may still be too hot to touch if the system was recently running.**

⚠ WARNING

- **DO NOT start the APU when the enclosure cover is removed. Operating with the cover off may result in injury and/or death.**
- **Once automatic functions are set the system could start at anytime. Before servicing the unit be sure to disconnect the unit from both the truck batteries and the auxiliary batteries to prevent injury should the unit attempt to start while servicing. All presets will remain once battery cable is reconnected.**

⚠ CAUTION

- **If you are not qualified to perform the specified check or the required maintenance task, consult your dealer about servicing.**
- **DO NOT open the CCU enclosure. There are no operator-serviceable parts inside.**

5. Components

The main components of the ComfortPro Electric are the Auxiliary Power Unit (APU), the Climate Control Unit (CCU) and the Driver Control Panel (DCP).

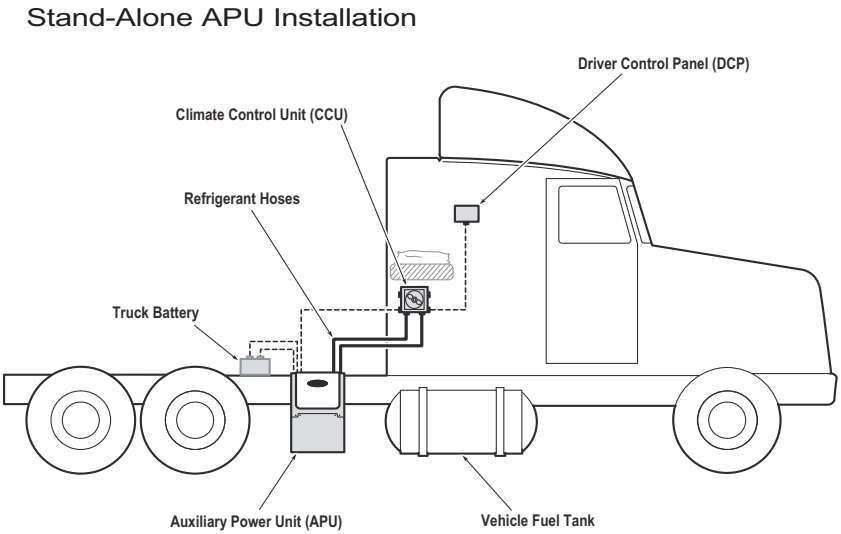


Figure 2 System Components

5.1 Auxiliary Power Unit (APU)

The APU is mounted on the truck's frame rail. It consists of a compressor, compressor controller, condenser fan, heat exchanger, and four batteries. The APU's batteries provide power to the system and are re-charged via the truck's alternator or the optional Shore Power kit.

⚠ WARNING

Do not open the APU enclosure when the APU is running as moving parts inside the APU can cause severe injury and/or death. Do not restart the APU until the covers have been replaced.

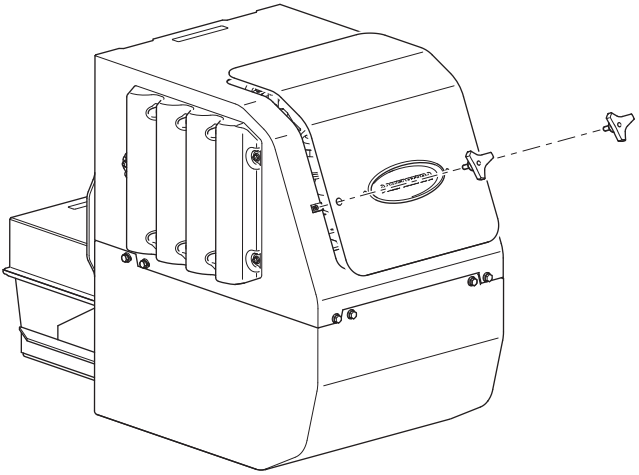


Figure 3 Climate Control Unit (CCU)

5.2 Climate Control Unit (CCU):

The CCU assembly consists of the following components:

- The CCU, which provides air conditioning to the sleeper cabin. This unit is typically installed underneath the bunk.
- Three air ducts in the sleeper cabin, connected to the CCU.

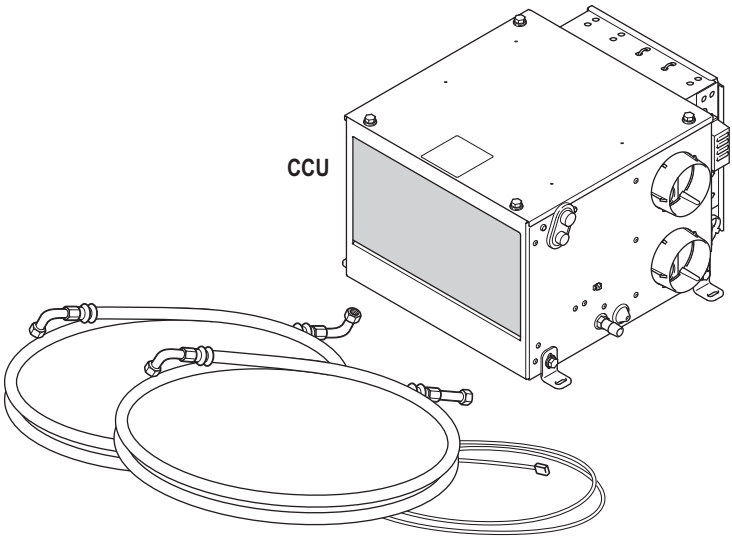


Figure 4 CCU Components

⚠ CAUTION

- Do not open the CCU enclosure. There are no operator-serviceable parts inside.
- Ensure nothing is blocking airflow into the inlet filter face of the CCU and that none of the ducts are damaged or kinked, otherwise HVAC performance will be impacted.

5.3 Driver Control Panel (DCP)

The DCP, which is mounted inside the sleeper cabin, controls the APU and the CCU. The central panel on the DCP provides status information using words and icons:

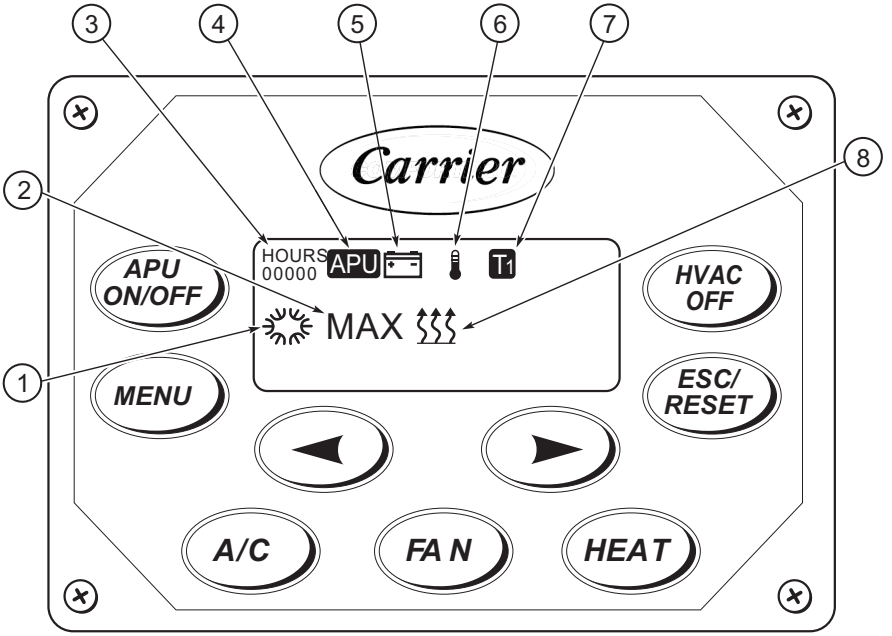


Figure 5 Driver Control Panel (DCP)

1. When visible, the A/C is cooling.
2. When visible, the A/C is running in maximum output mode.
3. Indicates the number of operating hours on the system.
4. Indicates the state of the APU.
   - The APU is running in A/C, Heat or Fan Only mode
   - The APU is off
5. Indicates that the battery voltage has reached its shutdown threshold. A message that reads “LOW VOLTAGE” will appear with this symbol.
6. Indicates that Temp Start mode is enabled.
7. Indicates that Timer mode is enabled.
8. When visible, the heater system is heating (if equipped).

6. Operation

The HVAC system can be started manually from within the sleeper cabin using the appropriate buttons on the DCP. If the A/C button is pressed, the system will turn on and the compressor will cycle (automatically turn on and off) to keep the sleeper cabin at the specified temperature. The A/C will continue to operate until it is turned off or until the lower battery threshold associated with A/C is reached. While in this A/C mode, the FAN button can be pressed to cycle between FAN LOW, FAN MED and FAN HIGH speeds.

If a heater is installed and the “HEAT” button is pressed, the heater will turn on and keep the sleeper cabin at the specified temperature. The heater will continue to operate until you turn it off or until the lower battery threshold associated with the heater is reached.

If both A/C and HEAT modes are off and the FAN button is pressed, the system will run the fan at whatever speed is desired. By pressing the FAN button again, it toggles between FAN OFF, FAN LOW, FAN MED and FAN HIGH speeds. In all cases, the HVAC OFF or APU ON/OFF button can be used to disable the mode.

6.1 A/C Operation

NOTE

The air conditioning function will not operate if the temperature is lower than 65°F.

1. Press the AC button to activate the A/C. The A/C will turn on only if the temperature is too high (to adjust the temperature, see below). When the A/C is on, the A/C icon (snowflake) appears.
2. To set the temperature, press or the ◄ or ► button when the A/C is on. The notch on the temperature bar moves. The A/C compressor will automatically turn on and off to maintain this temperature.
3. Press FAN to switch between low, medium and high fan speeds.
4. Press HVAC OFF to deactivate the A/C.

6.2 Setting Maximum A/C Output

To set Maximum Output, press and hold the A/C button for five seconds and the word “MAX” will appear beside the snowflake. This will run the system at maximum output for 30 minutes or until the setpoint temperature is reached.

6.3 FAN Only Operation

A FAN only mode exists and can be run when the A/C and HEAT modes are both off. With the A/C and HEAT modes off, the FAN only mode can be enabled by pressing the FAN button. Once in this mode, press the FAN button to toggle between off, low, medium and high fan speeds.

Press HVAC OFF to disable this FAN only mode.

6.4 Heater Operation (if equipped)

Heating mode is available when an optional heater is installed and connected to the ComfortPro Electric system.

NOTICE

When heater is present, there is a Preventive Maintenance (PM) requirement for the heater to be run for at least 30 minutes every 30 days. A reminder message on the DCP screen that states "PM 30 DAY EXP 30 MIN HEAT ON" will appear 30 days after the heater was last run. Pressing ESC closes the message temporarily, however it will keep appearing until this PM is complete.

Turing the heater on and off:

1. Press HEAT to activate the heater. The heater will turn on only if the cabin temperature is too low. When the heater is on, the HEAT will appear.
2. To set the temperature, press or the ◄ or ► button when the heater is on. The notch on the temperature bar moves. The heater will automatically turn on and off to maintain this temperature.
3. The air heater option contains its own circulation fan and therefore the FAN button on the DCP is not required to circulate air, however, if additional air circulation is desired, the FAN button can be utilized to adjust the fan between off, low, medium and high states.
4. The engine coolant heater option requires the FAN be used to adjust the fan speed between off, low, medium and high speeds (default is off).
5. Press HVAC OFF to deactivate the heater.

7. Password Protection

- Adding a password to the DCP will protect one or more functions so that only a person who knows the password can set the function.
- On a newly installed DCP, the password will be 000 or 0000, meaning that no password protection is in place.
- To password-protect functions, first change the factory password (see **Set Up Password Protection**). All functions will now be password protected. Password protection can then be removed from selected functions, as desired (see **Protect Functions with a Password**).
- The password can be changed at any time, if necessary. Note that if you change the password to 000 or 0000, you will remove password protection from all functions.
- If the password is ever lost, contact your dealer to have the password reset.

7.1 Set Up Password Protection

1. Press the **MENU** button.
2. Press the ◄ or ► button until "**SET/CHANGE PASSWORD**" is displayed, then press the **MENU** button. "**ENTER PASSWORD**" is displayed with three blank squares, one for each digit in the password. The first digit flashes.
3. Press the ◄ or ► button until the first number in the password is displayed. For example, if your password is "432" press ► until "4" shows, then press the **MENU** button.
4. Repeat for each digit in the password.
5. Press the **MENU** button again after entering the last digit. "**NEW PASSWORD**" is displayed.
6. Repeat the above steps to enter the new password. "**CONFIRM**" is displayed.
7. Enter the new password again, then press the **MENU** button to exit this function.

⚠ WARNING

Once automatic functions are set the system could start at anytime. Before servicing the unit be sure to disconnect the unit from the batteries to prevent injury should the unit attempt to start while servicing. All presets will remain once battery cable is reconnected.

7.2 Protect Functions with a Password

1. Press the **MENU** button.
2. Press the ◄ or ► button until "**PASSWORD PROTECT**" is displayed, then press the **MENU** button. If this menu does not appear, then you have not changed from the factory password. Change the password and then try again. "**ENTER PASSWORD**" is displayed with three blank squares, one for each digit in the password. The first square flashes.
3. Press the ◄ or ► button until the first number in the password is displayed, then press the **MENU** button.
4. Repeat for each digit in the password.
5. Press the **MENU** button again after entering the last digit. The first feature that can be password protected is displayed with "**YES**" or "**NO**" (indicating whether it is currently password protected).
6. Press the ◄ or ► button to change the "**YES**" or "**NO**".
7. Press the **MENU** button to move to the next feature. Or press the ◄ or ► button to skip to the next feature.

7.3 Entering the Password

When setting up a function, you may be prompted to enter the password.

1. Press the ◄ or ► button until the first number in the password is displayed, then press the **MENU** button.
2. Repeat for each digit in the password.
3. Press the **MENU** button again after entering the last digit.

8. Setting the Time and Date

You can set the time and date on the DCP. The time and date does not automatically adjust for time zone changes; you must adjust it. The time and date settings remain even when the APU is turned off.

1. Press the **MENU** button.
2. Press the ◄ or ► button until "**TIME & DATE**" is displayed, then press the **MENU** button.

   If "**ENTER PASSWORD**" is displayed, enter your password. This function cannot be set up if you do not know the password (see **Password Protection**).

   The time and date function takes you through several settings: 12/24-hour-clock, hour set, minutes set, am/pm-set (for 12-hour clock only), and day of week.
3. Press the ◄ or ► button to change the setting.
4. Press the **MENU** button to move to the next setting, or press ***ESC/RESET*** to cancel any changes you have not yet accepted.
5. Press the **MENU** button when done.

9. Temperature Units (°F or °C)

The temperature units can be switched to be either Celsius or Fahrenheit.

1. Press the **MENU** button.
2. Press the ◄ or ► button until "**UNITS**" is displayed, then press the **MENU** button.

   If "**ENTER PASSWORD**" is displayed, enter your password. This function cannot be set up if you do not know the password (see **Password Protection**).
3. Press the ◄ or ► button to toggle between "FAHRENHEIT" and "CELSIUS".
4. Press the **MENU** button when done.

10. Timer

NOTE

The timer feature is only available if an optional heater is installed and connected to the ComfortPro Electric system.

The ComfortPro can be set up so that the heater runs automatically for a specified time on specified days of the week.

The timer must be set up as follows: Specify the day and time you want the heater to run, specify the duration (the length of time you want the heater to run for) and specify the duration (the length of time you want the heater to run for), specify the temperature you want maintained in the sleeper cabin and specify if you want the fan OFF or on LOW speed.

1. Press the **MENU** button.
2. Press the ◄ or ► button until "**TIMER**" is displayed, then press the **MENU** button.

   If "**ENTER PASSWORD**" is displayed, enter your password. This function cannot be set up if you do not know the password (see **Password Protection**).

3. Press the ◄ or ► button to display "**ON**" or "**OFF**".
4. Press the **MENU** button to confirm this setting. The current setting remains until you change it; turning off the APU or manually starting the APU does not cancel the timer function.

10.1 Setting Start Time/Day

1. Press the **MENU** button.
2. Press the ◄ or ► button until "**TIMER**" is displayed, then press the **MENU** button.

   If "**ENTER PASSWORD**" is displayed, enter your password. This function cannot be set up if you do not know the password (see **Password Protection**).

3. Press the ◄ or ► button to display "**SET START.**"
4. Press the **MENU** button to confirm this setting. The current start time is displayed.
5. Press the ◄ or ► button to set the hours, minutes and day.
6. Press the **MENU** button to confirm this setting.

10.2 Setting Duration

NOTE

Factory Default Duration Setting is 1 hour. Range is 0.5 hrs - 10 hrs (in 0.5 hr increments).

1. Press the **MENU** button.
2. Press the ◄ or ► button until "**TIMER**" is displayed, then press the **MENU** button.

   If "**ENTER PASSWORD**" is displayed, enter your password. This function cannot be set up if you do not know the password (see **Password Protection**).

3. Press the ◄ or ► button to display "**SET DURATION**".
4. Press the **MENU** button to confirm this setting. The current duration time is displayed.
5. Press the ◄ or ► button to scroll to the length of time to run the APU.
6. Press the **MENU** button to confirm this setting or press the **ESC/RESET** button to cancel and retain the current duration.
7. Press the **MENU** button to exit.

10.3 Setting Timer Temperature

NOTE

Factory Default Temperature Setting is 21°C / 70°F. Range is 18°C / 64°F to 30°C / 86°F.

1. Press the **MENU** button.
2. Press the ◄ or ► button until "**TIMER**" is displayed, then press the **MENU** button.

   If "**ENTER PASSWORD**" is displayed, enter your password.This function cannot be set up if you do not know the password (see **Password Protection**).

   .

3. Press the ◄ or ► button to display "**SET TEMP**".
4. Press the **MENU** button to confirm the setting. Current temperature is displayed.
5. Press the ◄ or ► button to scroll to scroll to the desired temperature.
6. Press the **MENU** button to confirm this setting or press the **ESC/RESET** button to cancel and retain the current temperature.
7. Press the **MENU** button to exit.

10.4 Setting Timer Fan Speed

NOTE

Factory Default Fan Setting is OFF. Allowable fan speed settings are OFF or LOW.

1. Press the **MENU** button.
2. Press the ◄ or ► button until "**TIMER**" is displayed, then press the **MENU** button.

   If "**ENTER PASSWORD**" is displayed, enter your password. This function cannot be set up if you do not know the password (see **Password Protection**).

3. Press the ◄ or ► button to display "**SET FAN**".
4. Press the **MENU** button to confirm the setting. Current fan speed is displayed.
5. Press the ◄ or ► button to scroll to scroll to the desired fan speed; OFF or LOW.
6. Press the **MENU** button to confirm this setting or press the **ESC/RESET** button to cancel and retain the current fan speed.
7. Press the **MENU** button to exit.

11. Temp Start

NOTE

The temperature start feature is only available if the coolant heater option is installed and connected to the ComfortPro Electric system.

The heater can be set to run automatically for a specified time whenever the ambient temperature goes below a specified value. This feature ensures that the truck engine does not get so cold that it will not start.

This feature is not intended to maintain a comfortable sleeper cabin temperature. It is only intended to keep the truck engine from getting too cold. However, if some of the heat is desired to be used to heat the cabin as well, the fan speed can be configured to be on LOW speed.

11.1 Turning Temp Start On / Off

1. Press the **MENU** button.
2. Press the ◄ or ► button until "**TEMP START**" is displayed, then press the **MENU** button.

   If "**ENTER PASSWORD**" is displayed, enter your password. This function cannot be set up if you do not know the password (see **Password Protection**).

3. Press the ◄ or ► button to display "**ON**" or "**OFF**".
4. Press the **MENU** button to confirm this setting. The current setting remains until you change it; turning off the APU or manually starting the APU does not permanently cancel this setting.

11.2 Setting Start Temperature

NOTE

Factory Default Temperature Setting 14°F / -10°C. Range is -4°F / -20°C to 41°F / 5°C.

1. Press the **MENU** button.
2. Press the ◄ or ► button until "**TEMP START**" is displayed, then press the **MENU** button.

   If "**ENTER PASSWORD**" is displayed, enter your password. This function cannot be set up if you do not know the password (see **Password Protection**).

3. Press the ◄ or ► button to display “**SET TEMP**”.
4. Press the **MENU** button to confirm this setting. The current start temperature is displayed.
5. Press the ◄ or ► button to scroll to the desired temperature.
6. Press the **MENU** button to confirm this setting or press the **ESC/RESET** button to cancel and retain the current start temperature.
7. Press the **MENU** button to exit.

11.3 Setting Duration

NOTE

Factory Default Duration Setting is two hours. Range is one hour to four hours.

1. Press the **MENU** button.
2. Press the ◄ or ► button until “**TEMP START**” is displayed, then press the **MENU** button.

   If “**ENTER PASSWORD**” is displayed, enter your password. This function cannot be set up if you do not know the password (see **Password Protection**).

3. Press the ◄ or ► button to display “**SET DURATION**”.
4. Press the **MENU** button to confirm this setting. The current duration is displayed in hours.
5. Press the ◄ or ► button to scroll to the amount of time you want the APU to run before automatically shutting off.
6. Press the **MENU** button to confirm this setting or press the **ESC/RESET** button to cancel and retain the current start temperature.
7. Press the **MENU** button to exit.

11.4 Setting Temp Start Fan Speed

NOTE

Factory Default Fan Setting is OFF. Allowable fan speed settings are OFF or LOW.

1. Press the **MENU** button.
2. Press the ◄ or ► button until "**TEMP START**" is displayed, then press the **MENU** button.

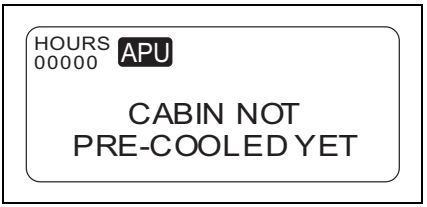
   If "**ENTER PASSWORD**" is displayed, enter your password. This function cannot be set up if you do not know the password (see **Password Protection**).
   Press the ◄ or ► button to display "**SET FAN**".
3. Press the **MENU** button to confirm the setting. Current fan speed is displayed.
4. Press the ◄ or ► button to scroll to scroll to the desired fan speed; OFF or LOW.
5. Press the **MENU** button to confirm this setting or press the **ESC/RESET** button to cancel and retain the current fan speed.
6. Press the **MENU** button to exit.

12. Configurable Items

The configurable items can be set up by your dealer or fleet manager as desired.

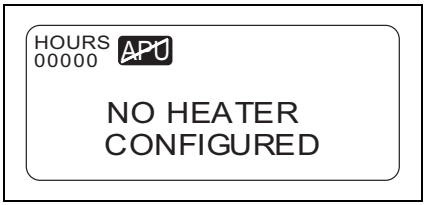
12.1 Cabin Pre-Cool

A/C is disallowed until the cabin is pre-cooled below a programmed temperature. If this feature has been enabled, you may see a “CABIN NOT PRE-COOLED YET” message on the DCP if it is hotter than the programmed temperature. In this case, you’ll need to use the truck’s cabin A/C system to cool the sleeper cabin down first.



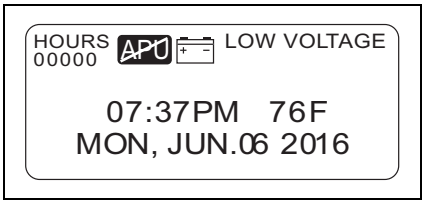
12.2 Heater Configuration

If an optional heater is installed and controlled by the ComfortPro Electric system, it must be configured. Note that if a heater is not configured and you press the HEAT button, you’ll see a “NO HEATER CONFIGURED” message on the DCP.



12.3 Battery Low Voltage Cut-Out

The low voltage cut-out can be programmed as desired in order to optimize runtime without compromising battery life. When the system reaches this low voltage cut-out, the battery light on the DCP will come on and the message “LOW VOLTAGE” will appear.



13. Inside the System and Fuses

NOTICE

200A AMG truck battery fuse not shown. It is located in truck battery box area in positive cable that then connects to the APU's battery isolator.

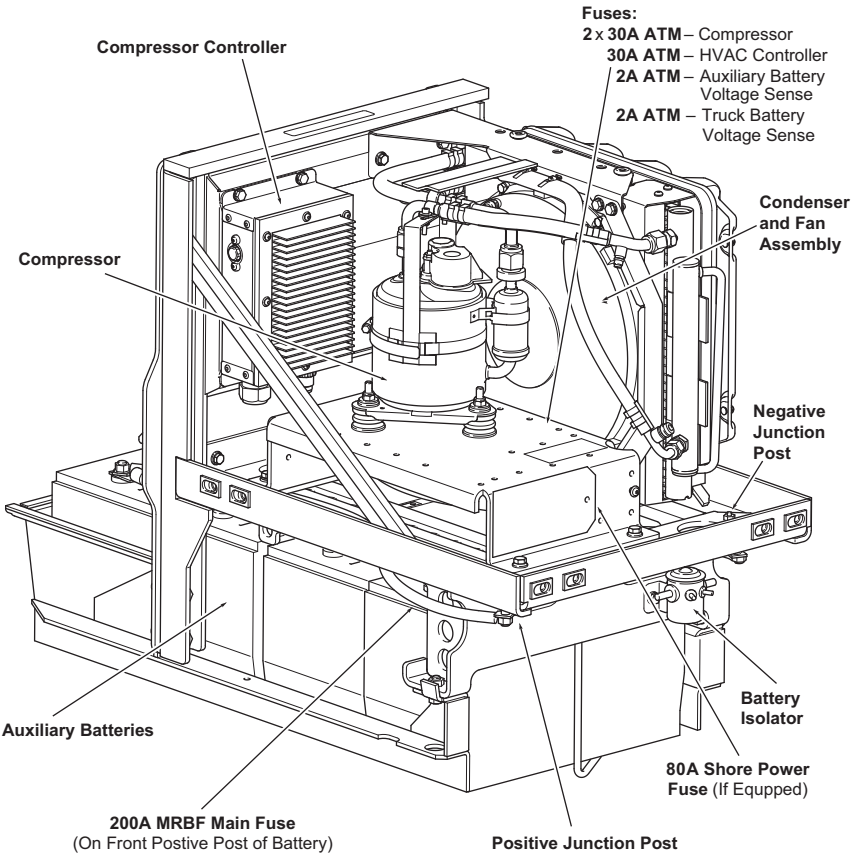


Figure 6 APU with Covers Removed

NOTICE

1A ATO truck interlock fuse not shown. Fuse is located in the P203 connector which is typically located under the dash of the truck (where truck switched ignition power is tapped into).

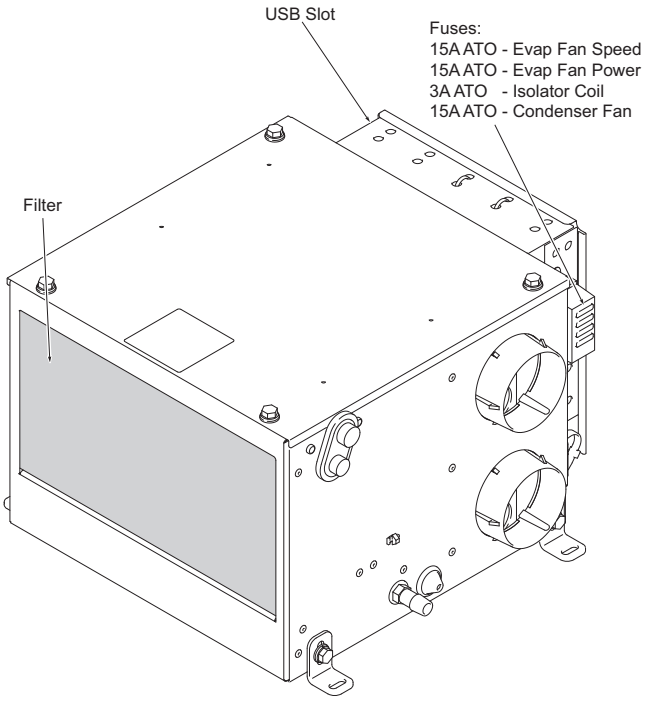


Figure 7 CCU Fuses

14. Maintenance Schedule

This schedule lists the maintenance tasks that must be performed, and the maximum interval between checks.

Environmental conditions may require increased shorter periods between checks.

⚠ CAUTION

If you are not qualified to perform the specified check or the required maintenance task, consult your dealer about servicing.

⚠ WARNING

- **Do not open the CCU enclosure. There are no operator-serviceable parts inside.**
- **Danger from moving parts. In order to perform these maintenance checks, you must open the access covers to the APU. Before doing so, shut off the APU and disconnect it from the truck batteries. Never observe the inside of the APU enclosure or insert your fingers or a tool into the enclosure when the APU is running.**

NOTICE

- **Once a year contact your dealer to arrange for a tune up of the CCU. This tune up prepares the CCU for the air conditioning season and should therefore be performed in the spring.**
- **Do not power-wash the inside of the APU. Use a garden hose with a gentle spray pattern.**
- **It is recommended that the 1000 hour and 2000 hour checks be completed once per year, typically in the spring before the A/C system starts to be used frequently again.**

Table 1 Maintenance Schedule

Interval between checks (in hours of operation)	Every	
	1000 hrs	2000 hrs
Check integrity of APU frame, fastener torque, frame grippers and APU offset brackets (if equipped)	x	
Check battery cable connections for torque, clean as required and re-grease with dielectric grease to protect them.	x	
Check refrigerant hoses and clamps for abrasion, wear points and wet spots that may indicate refrigerant leakage.	x	
Clean inside the APU with a gentle spray using a garden hose, especially each spring to wash off any salt.	x	
Check condenser for damage, leakage and/or contaminated fins; clean debris from fins.	x	
Check air ducting and outlets for damage and/or restrictions.	x	
Check CCU inlet face (where filter is) for obstructions to airflow.	x	
Check CCU air filter, clean or replace as necessary. To clean, remove the mesh filter and vacuum or wash (soap and water). Shake dry and reattach.		x
Check evaporator for damaged and/or contaminated fins and for refrigerant leaks indicated by wet spots or dark stains.		x
Check electrical harnesses for tight connections and harness abrasions.		x
Check the CCU drain hose/duck bill to ensure it works (squeeze the duck bill).		x
Check the refrigerant charge level by installing A/C gauges to the ports within the APU and verifying the pressures as per service manual.		x
Check air conditioning performance (A/C).		x
Check heater performance (HEAT) if heater option is installed.		x
CCU Service - Every year		
If equipped with heater: 1. Refer to heater manual for recommended maintenance. 2. Heater must be run for 30 minutes every 30 days. A message will appear on the DCP to remind the operator of this every 30 days.		

15. Pretrip Inspection

The Pretrip Inspection should be performed before operating the unit. This inspection is essential to ensure reliable operation of this unit. These checks take only a few minutes.

⚠ WARNING

Unit may start automatically at any time even if the switch is in the OFF position. Use proper lockout/tagout procedures before inspection/servicing. All unit inspection/servicing must be done by properly trained personnel only.

Table 2 Pretrip Inspection

Before Starting APU
Drain water from bottom of fuel tank (if equipped with fuel-fired heater)
Check battery cables for rubbing or chafing
Check truck battery terminals for cleanliness
Start unit and place in cool mode
After Starting Engine Running
Check DCP for correct display of all icons and words
Check operation in cool mode (ambient above 65°F)
Check operation in heat mode (if equipped; ambient below 85°F)

16. Specifications

Table 3 APU Specifications

Air Conditioner	7500 BTU/hr
Cabin Air Heater	7000 BTU/hr
Engine Coolant Heater	17,200 BTU/hr
Operating Range	A/C: 65°F (18°C) and higher Heat: 85°F (29°C) and lower

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