

How to Build a CCS Lightning System

The CCS Lightning system has been split into individual component part numbers to allow the dealer flexibility when ordering units or components for stock, and to allow the customer to build a system best suited for their needs.

There are some parts that are a **must** when building a system and there are also some choices that need to be made depending upon the vehicle and the customer's operating environment.

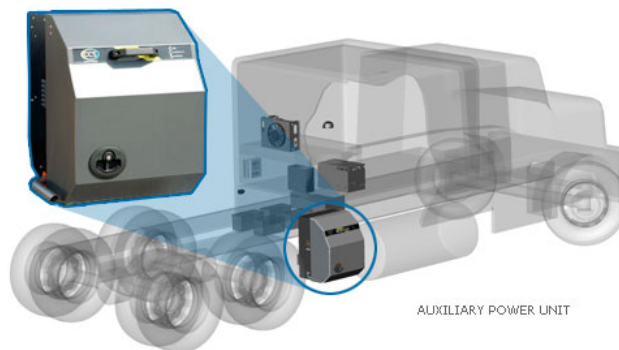
When quoting or building a system for a customer, please keep in mind that this is a direct ship program, so the dealer is responsible for the freight and custom/brokerage costs. There is also a labour content involved in the installation of the system as well as a small quantity of shop supplies required to complete the installation.

Basic labour required to install the standard system will take an experienced dealer 13-15 hours. When optional equipment is purchased, there will be additional labour required to install the extra components. This optional labour is estimated in each section when relevant.

Every CCS Lightning system must contain 9 parts:

1

P/N 1058854 ASSEMBLY, AUXILIARY POWER UNIT



2

P/N 1061563 INSTALLATION KIT, STANDARD

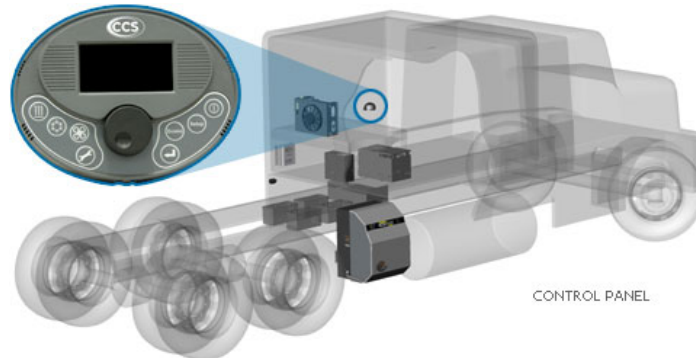
Notes:

This kit **does not** include basic shop supplies required to install the complete system such as:

- | | |
|-----------------------|-----------------------------------|
| 3/4" silicon hose 50' | 1/2" loom 50' |
| 5/16" fuel hose 15' | 2 gage battery cables red & black |
| 3/16" fuel hose 15' | 3/4" plastic coolant tee's 3/4" |
| 1" loom 50' | |
| 3/4" loom 10' | |

3

P/N 1060919 ASSEMBLY, CAB CONTROLLER



4 & 5

P/N 1058689 CHEB UNIT, 10000 BTU

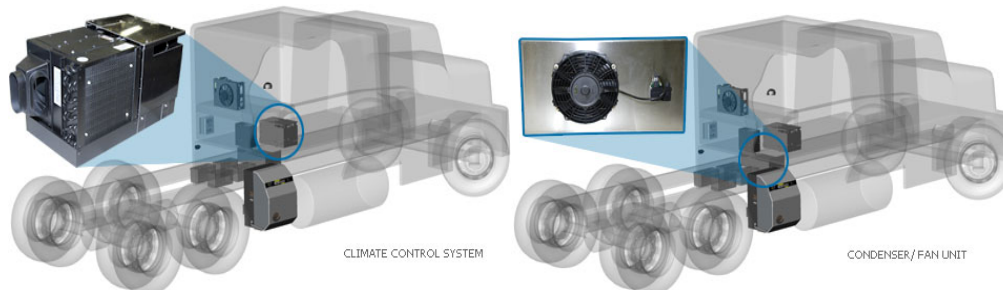
P/N 1058695 CONDENSER/FAN UNIT, 10000 BTU

OR

P/N 1058691 CCS, CHEB UNIT, 14000 BTU

P/N 1058696 CCS, CONDENSER, 14000 BTU

(Both options must be purchased as a pair.)



Notes:

The 10,000Btu system is typically sufficient to keep most trucks cool, however, it is recommended that larger sleeper bunks that predominantly operate in southern, warm climates, purchase the larger output system.

The optional 14000Btu system will require approximately one (1) extra hour of installation.

6

P/N 1059436 REFRIGERANT LINE KIT 6FT, 90° AT EVAPORATOR

OR

P/N 1061823 REFRIGERANT LINE KIT, 6FT, STRAIGHT AT EVAPORATOR

P/N 1068690 REFRIGERANT LINE KIT, 4FT, 90° AT EVAPORATOR

P/N 1061824 REFRIGERANT LINE KIT, 8FT, STRAIGHT AT EVAPAPORATOR

P/N 1061825 REFRIGERANT LINE KIT, 15FT, STRAIGHT AT EVAPORATOR

Notes:

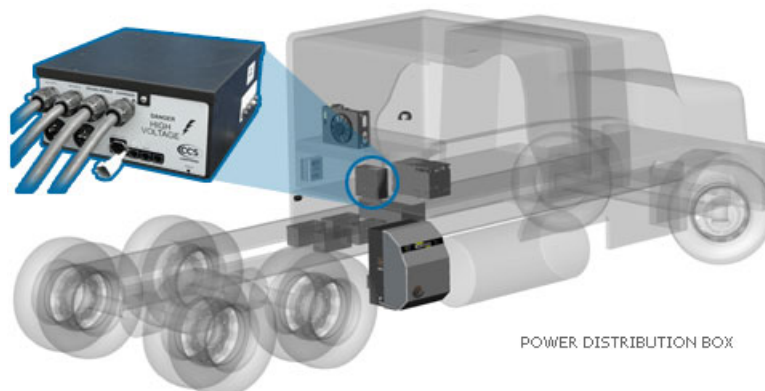
Part # 1059436 will be sufficient in almost all cases. Installation technicians should ensure hose length vs. component location before permanently installing equipment.

7

P/N 1060813 ASSEMBLY, DISTRIBUTION BOX, NO SHORE POWER

OR

P/N 1060859 ASSEMBLY, DISTRIBUTION BOX, W/SHORE POWER

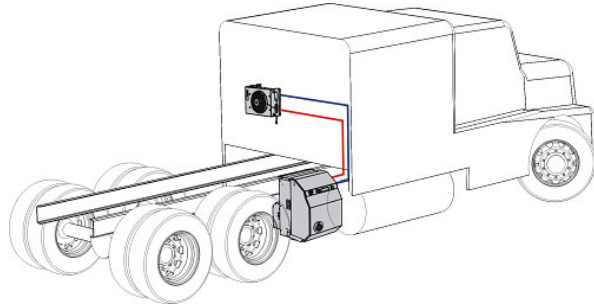


Notes:

The shore power option allows the user to operate the heating, cooling and battery charging systems without running the generator by connecting to a commercial electricity supply.

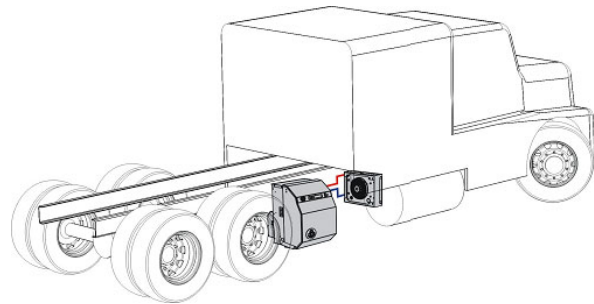
The optional shore power system will require approximately 1.5 (one and a half) extra hours of installation.

P/N 1059491 ASSEMBLY, REMOTE RADIATOR KIT, CAB MOUNTED



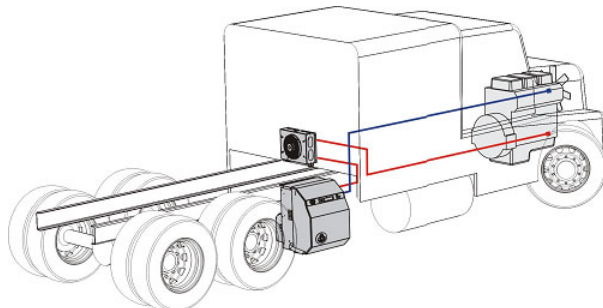
OR

P/N 1063787 ASSEMBLY, REMOTE RADIATOR KIT, FRAME MOUNTED



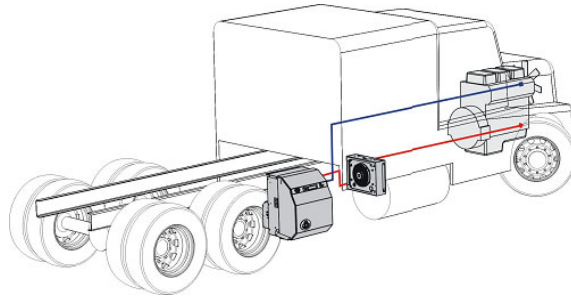
OR

P/N 1061826 ASSEMBLY, SHARED COOLING KIT, CAB MOUNTED



OR

P/N 1063763 ASSEMBLY, SHARED COOLING KIT, FRAME MOUNTED



Notes:

The installation of either the remote or shared system requires the installation of a heat exchanger. This heat exchanger can be mounted to the rear of the cab or the frame of the truck. Proper clearances and mounting areas are required, as are proper height levels with reference to the main truck engine coolant expansion tank. If in doubt, please consult the factory for advice.

The shared cooling option will require approximately two (2) extra hours of installation.

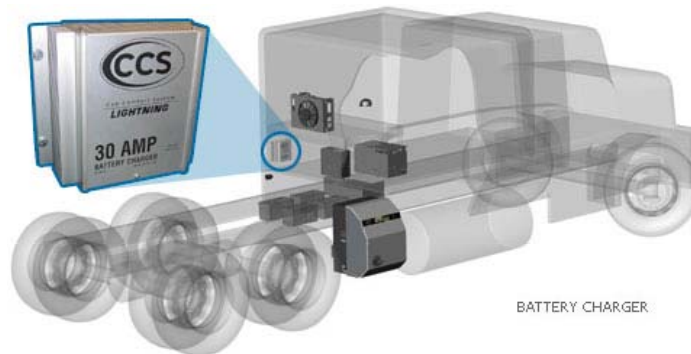
Some Volvo models with the Xbrace located across the rear of the bunk wall will not permit the installation of the shared cooling, cab mount option – proper installation height vs coolant expansion tank height is not available.

9

P/N 1059888 ASSEMBLY, BATTERY CHARGER 30A

OR

P/N 1061827 ASSEMBLY, BATTERY CHARGER 40A



Notes:

It is strongly recommended that the 40A charger be installed with the 14,000 BTU air conditioning system, or on any vehicle with an abnormally high DC power requirement.

Optional Equipment

P/N 1061838 FRAME GRIPPER KIT

P/N 1061828 COVER, APU SHINE KIT

P/N 1061151 ASSEMBLY, KEYLESS REMOTE START KIT

System Part Number Table

1	1058854	Assembly, Auxiliary Power Unit
2	1061563	Installation Kit, Standard
3	1060919	Assembly, Cab Controller
4		CCS, CHEB Unit, 10000BTU OR 14000BTU
5		CCS, Condenser / fan unit, 10000BTU OR 14000BTU
6		Refrigerant Line Kit
7		Assembly, Distribution Box, Shore Power OR Non-Shore Power
8		Assembly, Shared/Remote Cooling, Cab/Frame Mount
9		Assembly, Battery Charger, 30A OR 40A