We Claim:

1. A transport refrigeration unit for conditioning the atmosphere within a transport cargo space, comprising:

an auxiliary electrical power circuit tapping off an electrical power circuit operatively associated with the transport refrigeration unit as a source of electrical power to which an auxiliary system may be connected when installed in operative association with the transport refrigeration unit; and

a safety power interlock in operative association with a main power supply circuit of the transport refrigeration unit, the safety power interlock breaking the main power supply circuit when the auxiliary system is removed.

2. The transport refrigeration unit as recited in claim 1 further comprising a seal cap disposed in operative association with the auxiliary electrical power circuit and with the safety power interlock when the auxiliary system is removed, the seal cap closing the safety power interlock so as to supply electrical power through the main power supply circuit to the transport refrigeration unit.

3. A transport refrigeration unit for conditioning the atmosphere within a transport cargo space and including an evaporator module operatively associated with the cargo space and at least one evaporator fan motor, and further comprising an auxiliary electrical power circuit to which an auxiliary system may be connected when installed in operative association with the transport refrigeration unit, the auxiliary electrical power circuit tapping off an electrical power circuit for supplying power to the at least one evaporator fan motor, the auxiliary electrical power circuit being energized only when the evaporator fan motor is energized.

4. The transport refrigeration unit as recited in claim 3 wherein the auxiliary electrical power circuit comprises:

a first auxiliary contactor in operative association with a high speed contactor for supplying electrical power to the at least one evaporator fan motor; and

a second auxiliary contactor in operative association with a low speed contactor for supplying electrical power to the at least one evaporator fan motor.

5. The transport refrigeration unit as recited in claim 4 further comprising:

a first in-line fuse operatively connected between the first auxiliary contactor and the source of electrical power; and

a second in-line fuse operatively connected between the second auxiliary contactor and the source of electrical supply.

6. The transport refrigeration unit as recited in claim 1 further comprising an auxiliary electrical power outlet comprising:

a first contact in electrical communication with the source of electrical power;

a second contact in electrical communication with the source of electrical power;

a third contact in electrical communication with an electrical ground;

a fourth contact forming a first terminal in the main power supply circuit; and

a fifth contact forming a second terminal in the main power supply circuit; the main power supply circuit being open between the first and second terminals.

7. The transport refrigeration unit as recited in claim 6 further comprising a seal cap adapted to mate with the auxiliary electrical power outlet, the seal cap when mated with the auxiliary electrical power outlet establishing an electrical connection between the fourth and fifth contacts and blocking electrical connection with the first, second and third contacts.

8. A method for powering an auxiliary system associated with a transport refrigeration unit comprising the steps of:

providing an auxiliary electrical power circuit tapping off an electrical power circuit operatively associated with the transport refrigeration unit as a source of electrical power to which the auxiliary system connects when installed; and

providing a safety power interlock in operative association with a main power supply circuit of the transport refrigeration unit the safety power interlock opening the main power supply circuit when the auxiliary system is removed.

9. The method as set forth in clam 8 further comprising the step of providing a seal cap in operative association with the auxiliary electrical power circuit and with the interlock when the auxiliary system is removed, the seal cap closing the interlock to supply electrical power through the main power supply circuit to the transport refrigeration unit.

We Claim:

1. A transport refrigeration unit for conditioning the atmosphere within a transport cargo space, comprising:

an auxiliary electrical power circuit tapping off an electrical power circuit operatively associated with the transport refrigeration unit as a source of electrical power to which an auxiliary system may be connected when installed in operative association with the transport refrigeration unit; and

a safety power interlock in operative association with a main power supply circuit of the transport refrigeration unit, the safety power interlock breaking the main power supply circuit when the auxiliary system is removed.

2. The transport refrigeration unit as recited in claim 1 further comprising a seal cap disposed in operative association with the auxiliary electrical power circuit and with the safety power interlock when the auxiliary system is removed, the seal cap closing the safety power interlock so as to supply electrical power through the main power supply circuit to the transport refrigeration unit.

3. The transport refrigeration unit as recited in claim 1 and including an evaporator module operatively associated with the cargo space and at least one evaporator fan motor, the auxiliary electrical power circuit tapping off the electrical power circuit for supplying power to the at least one evaporator fan motor, the auxiliary electrical power circuit being energized only when the evaporator fan motor is energized.

4. The transport refrigeration unit as recited in claim 3 wherein the auxiliary electrical power circuit comprises:

a first auxiliary contactor in operative association with a high speed contactor for supplying electrical power to the at least one evaporator fan motor; and

a second auxiliary contactor in operative association with a low speed contactor for supplying electrical power to the at least one evaporator fan motor.

5. The transport refrigeration unit as recited in claim 4 further comprising:

a first in-line fuse operatively connected between the first auxiliary contactor and the source of electrical power; and

a second in-line fuse operatively connected between the second auxiliary contactor and the source of electrical supply.

6. The transport refrigeration unit as recited in claim 1 further comprising an auxiliary electrical power outlet comprising:

a first contact in electrical communication with the source of electrical power;

a second contact in electrical communication with the source of electrical power;

a third contact in electrical communication with an electrical ground;

a fourth contact forming a first terminal in the main power supply circuit; and

a fifth contact forming a second terminal in the main power supply circuit; the main power supply circuit being open between the first and second terminals.

7. The transport refrigeration unit as recited in claim 6 further comprising a seal cap adapted to mate with the auxiliary electrical power outlet, the seal cap when mated with the auxiliary electrical power outlet establishing an electrical connection between the fourth and fifth contacts and blocking electrical connection with the first, second and third contacts.

8. A method for powering an auxiliary system associated with a transport refrigeration unit comprising the steps of:

providing an auxiliary electrical power circuit tapping off an electrical power circuit operatively associated with the transport refrigeration unit as a source of electrical power to which the auxiliary system connects when installed; and

providing a safety power interlock in operative association with a main power supply circuit of the transport refrigeration unit the safety power interlock opening the main power supply circuit when the auxiliary system is removed.

9. The method as set forth in clam 8 further comprising the step of providing a seal cap in operative association with the auxiliary electrical power circuit and with the interlock when the auxiliary system is removed, the seal cap closing the interlock to supply electrical power through the main power supply circuit to the transport refrigeration unit.