

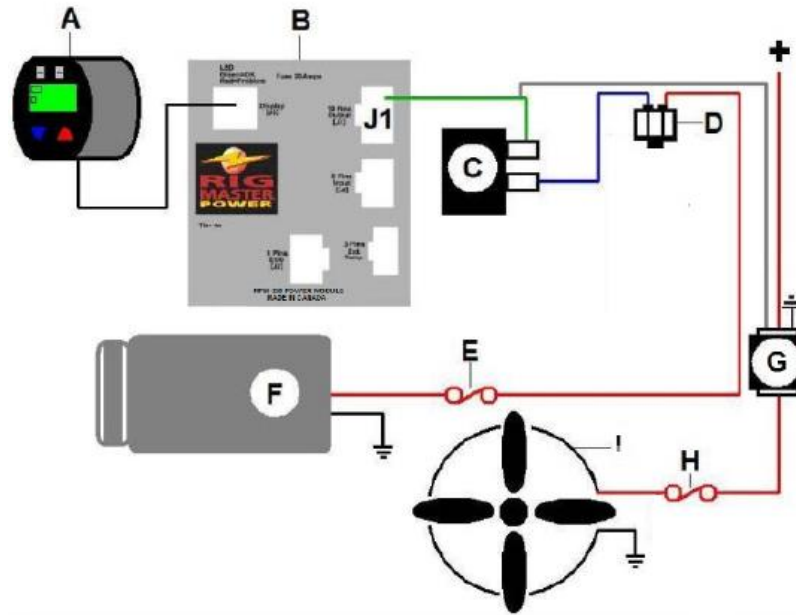
# RigMaster Power International Technical Customer Support

All RigMaster Air Conditioning Circuits and Fan Operation Diagrams

## Air Conditioning Circuit Diagram T4-6K, LG200K(with Kohler Engine, Since Dec 2015)

MTS-T4-6K & MTS-T4-LG200K models have 3 relays on the back wall of the engine cabinet. They trigger the **side electric fan relay 'G'** using the #2 wire on J1 connector. (Green wire)

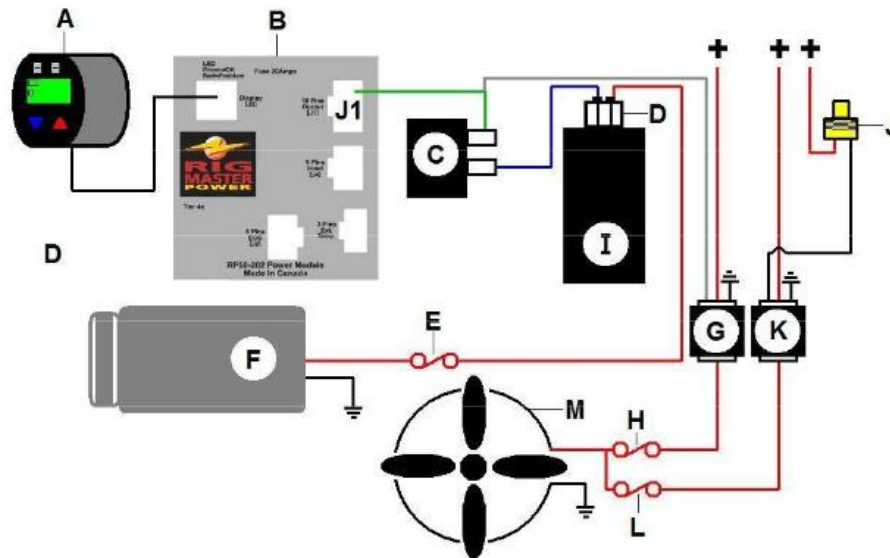
**Compressor clutch 'F'** is triggered by #2 wire on J1 connector, conditions on the **thermostatic switch 'C'** and **binary pressure switch 'D'** must be met for the clutch to be triggered.



ITEM	COMPONENT	OPERATION
A	Cabin Controller	Cabin temperature thermostat and controller that commands power module gives voltage to A/C Compressor circuit
B	Power Module	Processes cabin controller commands, provides voltage to A/C circuit.
C	Evaporator Thermostatic Switch	Monitors evaporator temperature, "opens" if icing is detected
D	Binary Pressure Switch	Provides voltage to the compressor ("closes") if high side pressure is between 28 to 450 psi
E	7.5 Amp Fuse	A/C Compressor clutch Fuse
F	Compressor Clutch	Voltage from power module must pass through switches 'C' and 'D' to engage compressor clutch
G	A/C Controlled Side Fan Relay	Triggered by the power module Green wire when A/C is selected
H	35 Amp Fuse	Electric fan Fuse
I	Electric Side Fan (Exhaust)	Side fan activated by Relay G

## Air Conditioning Circuit Diagram T4-6 (CAT, Perkins Units 2009 – 2014)

MTS-T4-6 models have 4 relays on the back wall of the engine cabinet. They trigger the **condenser electric fan relay 'G'** using the #2 wire on J1 connector (Green wire). **Condenser electric fan 'M'** will be also activated if **Coolant temperature Switch 'J'** triggers its relay **'K' Engine Temperature Controlled Fan Relay**. **Compressor clutch 'F'** is triggered by #2 wire on J1 connector, required conditions on the **thermostatic switch 'C'** and **binary pressure switch 'D'** must be met for the clutch to be triggered.



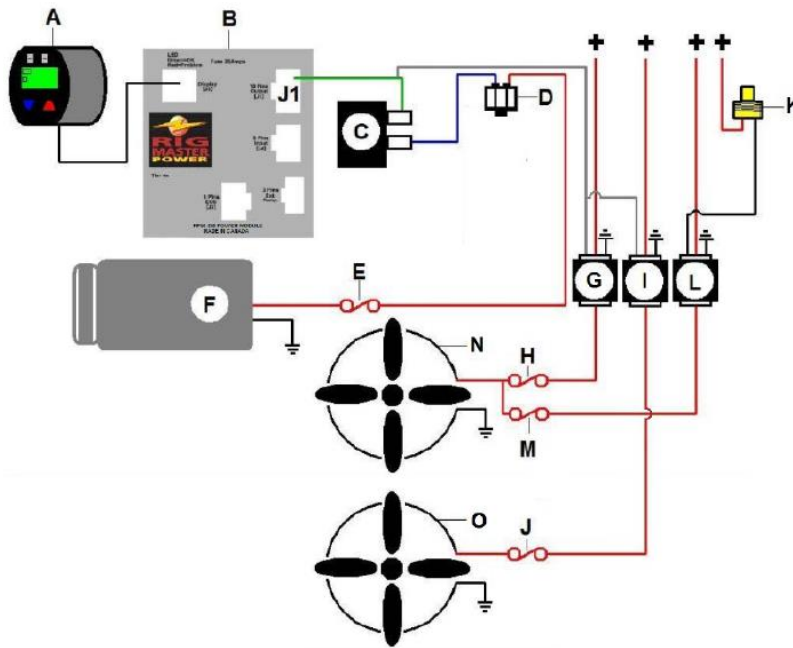
ITEM	COMPONENT	OPERATION
A	Cabin Controller	Cabin temperature thermostat and controller that commands power module gives voltage to A/C Compressor circuit
B	Power Module	Processes cabin controller commands, provides voltage to A/C circuit.
C	Evaporator Thermostatic Switch	Monitors evaporator temperature, "opens" if icing is detected
D	Binary Pressure Switch	Provides voltage to the compressor ("closes") if high side pressure is between 28 to 450 psi
E	7.5 Amp Fuse	A/C Compressor Fuse
F	Compressor Clutch	Voltage from power module must pass through switches 'C' and 'D' to engage compressor clutch
G	A/C Controlled Side Fan Relay	Triggered by the power module Green wire when A/C is selected
H	35 Amp Fuse	Electric Fan Fuse
I	Receiver / Dryer	Removes moisture from refrigerant
J	Engine Coolant Temperature Sensor	Gives power to relay 'K' when engine coolant temp reaches 195°F
K	Engine Coolant Temperature Controlled Fan Relay	Receives signal from switch 'J'
L	35 Amp Fuse	Electric Condenser fan Fuse
M	Electric Condenser Fan	Cools engine radiator and A/C Condenser

## Air Conditioning Circuit Diagram LG200 (CAT, Perkins, 2011-2014)

MTS-T4-LG200 models have 5 relays on the back wall of the engine cabinet. They trigger **condenser electric fan relay 'G'** and **Bottom fan relay 'I'** using the #2 wire on J1 connector (Green wire). **Condenser electric fan 'N'** will be also activated if **Coolant temperature Switch 'K'** triggers its relay **'L' Engine Temperature Controlled Fan Relay**.

**Electric Bottom Fan 'O'** only works when A/C is selected.

**Compressor clutch 'F'** is triggered by #2 wire on J1 connector, required conditions on the **thermostatic switch 'C'** and **binary pressure switch 'D'** must be met for the clutch to be triggered.



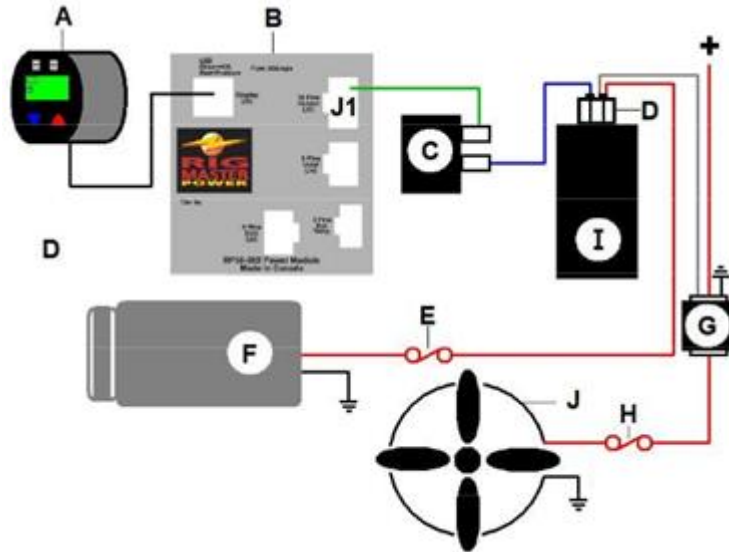
ITEM	COMPONENT	OPERATION
A	Cabin Controller	Cabin Controller (and temperature thermostat) commands power module to give voltage to A/C Compressor circuit
B	Power Module	Processes cabin controller commands, provides voltage to A/C circuit.
C	Evaporator Thermostatic Switch	Monitors evaporator temperature, "opens" if icing is detected
D	Binary Pressure Switch	Provides voltage to the compressor if high side pressure is between 28 to 450 psi Provides voltage to the compressor ("closes") if high side pressure is between 28 to 450 psi
E	7.5 Amp Fuse	A/C Compressor clutch Fuse
F	Compressor Clutch	Voltage from power module must pass through switches 'C' and 'D' to engage compressor clutch
G	A/C Controlled Side Fan Relay	Triggered by the power module Green wire when A/C is selected

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ITEM	COMPONENT	OPERATION
H	35 Amp Fuse	Condenser Electric Fan Fuse
I	A/C Controlled Bottom Fan Relay	Activates bottom fan
J	35 Amp Fuse	Bottom Electric Fan Fuse
K	Electric Fan Engine Coolant Temp Sensor	Gives power to relay 'K' when engine coolant temp reaches 195°F
L	Fan Relay controlled by Engine Coolant Temp Sensor	Receives signal from Engine Coolant Temp Sensor 'K'
M	35 Amp Fuse	Fuse for the condenser electric fan
N	Electric Condenser Fan	Cools engine radiator and A/C Condenser
O	Electric Bottom Fan	Exhausts hot air from engine cabinet when A/C is ON

## Air Conditioning Circuit Diagram RMP 10-40, 104, 14-6 Models (Before 2008)

RMP/RMC models. **Condenser electric fan relay 'G'** is triggered by the Binary **Pressure Switch 'D'** on the **receiver dryer 'I'** that also activates the compressor clutch at the same time.



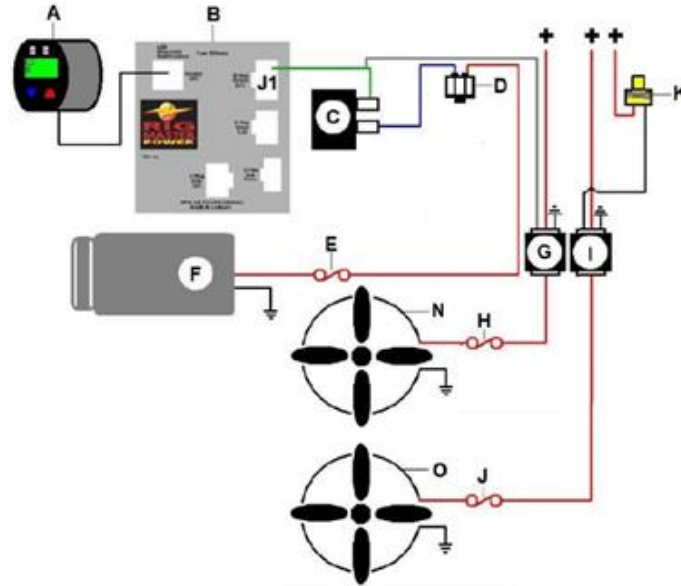
ITEM	COMPONENT	OPERATION
A	Cabin Controller	Cabin Controller (and temperature thermostat) commands power module to give voltage to A/C Compressor circuit
B	Power Module	Processes cabin controller commands, provides voltage to A/C circuit.
C	Evaporator Thermostatic Switch	Monitors evaporator temperature, "opens" if icing is detected
D	Binary Pressure Switch	Provides voltage to the compressor if high side pressure is between 28 to 450 psi
E	7.5 Amp Fuse	A/C Compressor clutch Fuse
F	Compressor Clutch	Voltage from power module must pass through switches 'C' and 'D' to engage compressor clutch
G	A/C Controlled Side Fan Relay	Triggered by the power module Green wire when A/C is selected
H	35 Amp Fuse	Electric fan Fuse
I	Receiver / Dryer	Removes moisture from Freon refrigerant
J	Electric Condenser Fan	Cools engine radiator and A/C Condenser

## Air Conditioning Circuit Diagram for V10 Models (Catwalk Model 2011-2014)

Early MTS-T4-V10 models (only produced in 2011) had 4 relays on the back wall of the engine cabinet. These units trigger **condenser electric fan relay 'G'** and **Bottom fan relay 'I'** using the #2 wire on J1 connector (Green wire). **Bottom electric fan 'O'** will be activated if **Coolant temperature Switch 'K'** triggers its relay **'I' Engine Temperature Controlled Fan Relay**.

**Note:**

Later versions of the MTS-T4-V10 (from 2012 to 2014) APUs had 5 relays on the back wall of the cabinet, these units have an identical air conditioning system to the LG200 (2011-2014 units), please refer to "Air Conditioning Circuit Diagram LG200 (CAT, Perkins, 2011-2014)" section (above) for that information.



ITEM	COMPONENT	OPERATION
A	Cabin Controller	Cabin Controller (and temperature thermostat) commands power module to give voltage to A/C Compressor circuit
B	Power Module	Processes cabin controller commands, provides voltage to A/C circuit.
C	Evaporator Thermostatic Switch	Monitors evaporator temperature, "opens" if icing is detected
D	Binary Pressure Switch	Provides voltage to the compressor if high side pressure is between 28 to 450 psi
E	7.5 Amp Fuse	Fuse for A/C Compressor
F	Compressor Clutch	Voltage from power module must pass through switches 'C' and 'D' to engage compressor clutch
G	A/C Controlled Side Fan Relay	Triggered by the power module Green wire when A/C is selected
H	35 Amp Fuse	Condenser electric fan Fuse
I	Engine Temperature Controlled Fan Relay	Given power by Engine Coolant Temp Sensor 'K'
J	35 Amp Fuse	Bottom electric fan Fuse
K	Engine Coolant Temp Sensor	Gives power to relay 'I' when engine coolant temp reaches 195°F
N	Electric Condenser Fan	Cools engine radiator and A/C Condenser
O	Electric Bottom Fan	Exhausts hot air from engine cabinet when A/C is ON