

- INDEX OF SYMPTOMS

Symptom	Page
General Overview of Hydraulic Driven Unit	2
Oil carry over	3
System will not build to correct pressure	4
Oil burping from the air filter	5
Safety relief valve lifts	6
Unit will not turn on	7
Display shows "Diagnostic" when unit is first powered up	8
Display shows "Battery Low"	8
Display shows "Connection Err"	9
Display shows "Over Temp Comp"	10
Display shows"Over Temp Hyd"	11
Display shows "Comp Probe Open	12
Display shows "Hyd Prob Open"	13
Display shows "Hyd Probe Short"	14
Display shows "Comp Probe Short"	15
Display shows "No Pressure Sensor"	16
Pressure sensor value not matching downstream air pressure gauge	17
24 V to 12 V Converter Power/Ground Supply Issue	18

Note 1

Working with Low Side switching:

The VMAC Hydraulic Compressor employs low side switching to its three solenoids and to the fan relay. This means that it supplies +12V to the solenoid at all times, and switches in and out the ground to enable or disable the function. To test the operation of these circuits with a multimeter voltage should be measured directly across the solenoid; from pin B to pin A. The Compressor solenoid should be measured from pin 1 to pin 2.

- Measuring from pin B to pin A will show +12V when function is enabled, and 0V when function is disabled.
- Measuring from pin B to system ground will always show +12V.
- Measuring from pin A to system ground will show +12V when the function is disabled, and OV when the function is enabled.

Note 2

Each install/owner's manual includes electrical schematics and a harness reference chart.

These faultfinding charts and diagrams are intended as a guide only and are to be used in conjunction with VMAC's Installation and Owner's Manuals, they are not intended to be replacements. All safety warnings and notices supplied within the Installation and Owner's Manuals are to be strictly adhered to. Do not use or rely on these charts and diagrams unless the Installation and Owner's Manuals have been read and understood. If any doubt exists with any part of the charts and diagrams, contact VMAC Technical Support for assistance -1-888-241-2289 or tech@vmacair.com

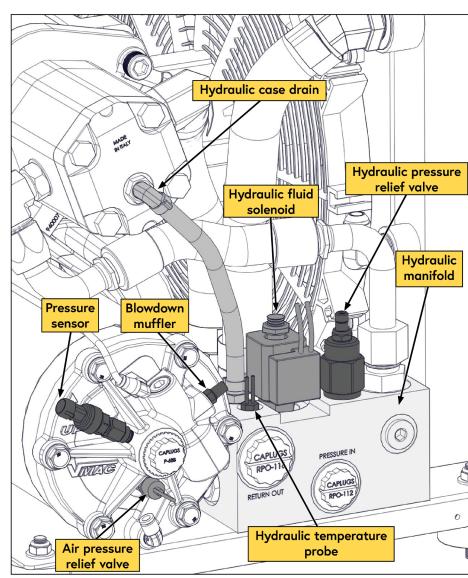
Daily Maintenance

- · Check compressor for oil leaks · Check system for oil leaks
 - Check pressure relief valve condition

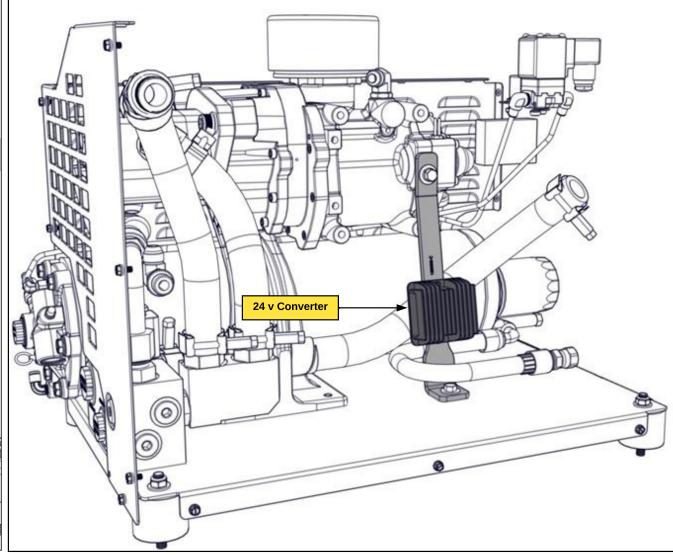
- · Change compressor air filter
- Change pressure relief valve
- Change compressor oil
- · Change compressor oil filter
- Change coalescing filter element
- · Change blowdown muffler

- HYDRAULIC DRIVE SYSTEM OVERVIEW

Air solenoid Fan relay Compressor temperature probe Control Box



24 V Only



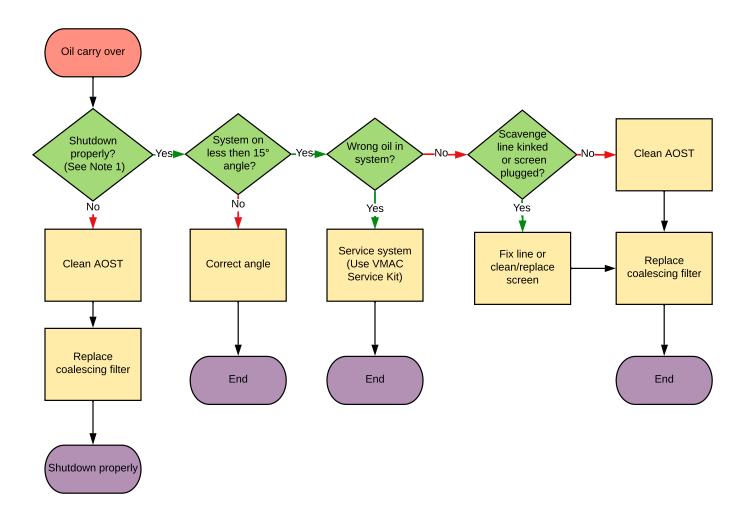
These faultfinding charts and diagrams are intended as a guide only and are to be used in conjunction with VMAC's Installation and Owner's Manuals, they are not intended to be replacements. All safety warnings and notices supplied within the Installation and Owner's Manuals are to be strictly adhered to. Do not use or rely on these charts and diagrams unless the Installation and Owner's Manuals have been read and understood. If any doubt exists with any part of the charts and diagrams, contact VMAC Technical Support for assistance - 1-888-241-2289 or tech@vmacair.com

Daily Maintenance		
Check compressor for oil leaks Check system for oil leaks	Check pressure relief valve condition	

- Change compressor air filter
- Change compressor all like
 Change compressor oil
- · Change compressor oil filter
- Change pressure relief valveChange coalescing filter element
- Change blowdown muffler



Hydraulic Drive Faultfinding Chart - OIL CARRY OVER



Note 1

When air is no longer required, allow the system to build to full system pressure (150 psi) and unload. Stop the Hydraulic Driven Air Compressor using the "OFF" button.

Any residual pressure in the compressor or AOST will blow-down automatically. Disengage the hydraulic system. If equipped, close the hydraulic shut-off valve.

Turn off the power supply to the Hydraulic Driven Air Compressor. Drain any stored air.

Note 2

Short and infrequent use of the air compressor system can lead to a compromised coalescing filter and may cause oil carry over

These faultfinding charts and diagrams are intended as a guide only and are to be used in conjunction with VMAC's Installation and Owner's Manuals, they are not intended to be replacements. All safety warnings and notices supplied within the Installation and Owner's Manuals are to be strictly adhered to. Do not use or rely on these charts and diagrams unless the Installation and Owner's Manuals have been read and understood. If any doubt exists with any part of the charts and diagrams, contact VMAC Technical Support for assistance -1-888-241-2289 or tech@vmacair.com

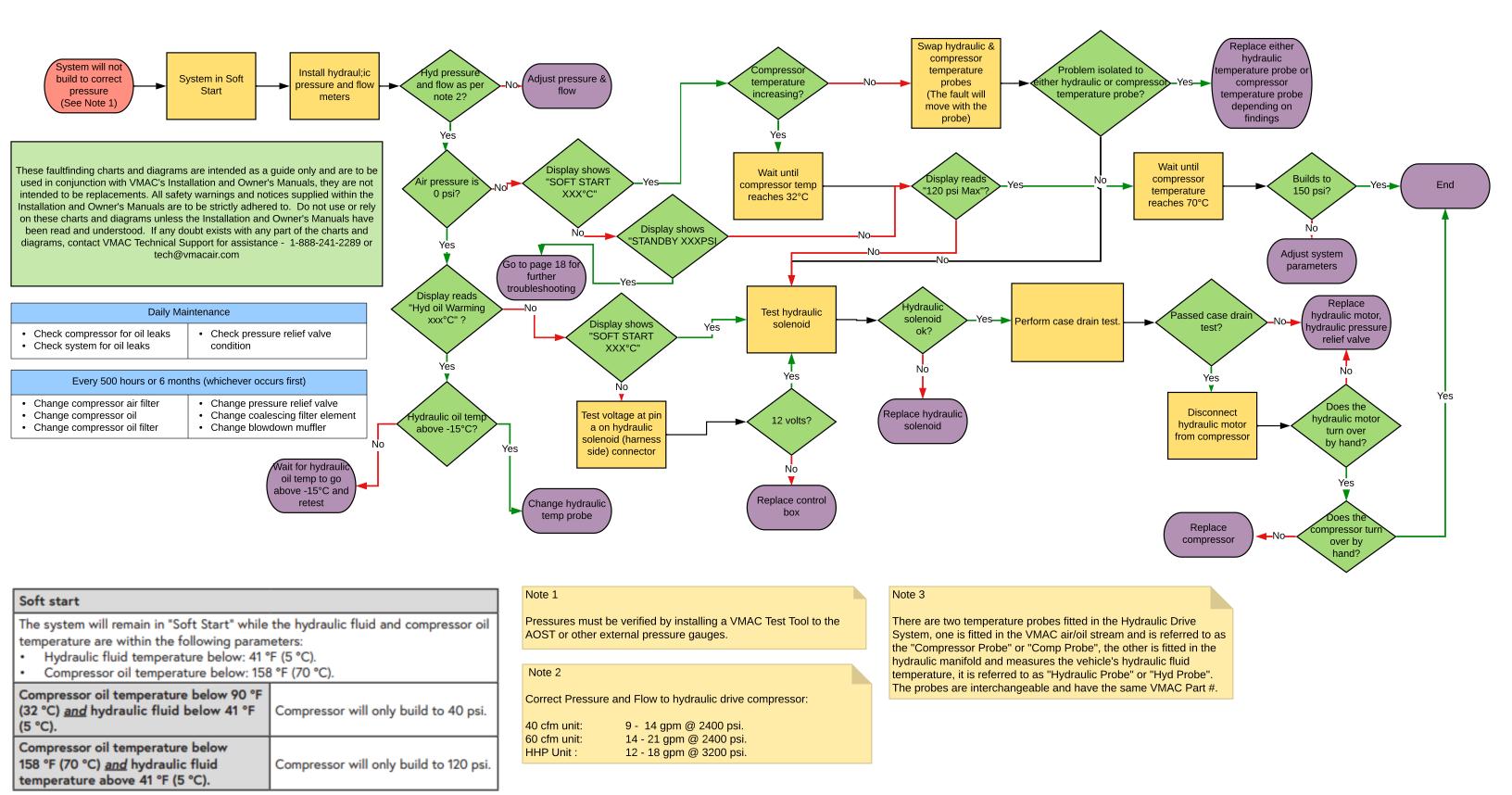
Daily Maintenance

- Check compressor for oil leaks
- Check system for oil leaks
- · Check pressure relief valve condition

- Change compressor air filter
- Change compressor oil
- · Change compressor oil filter
- Change pressure relief valve
- Change coalescing filter element
- Change blowdown muffler

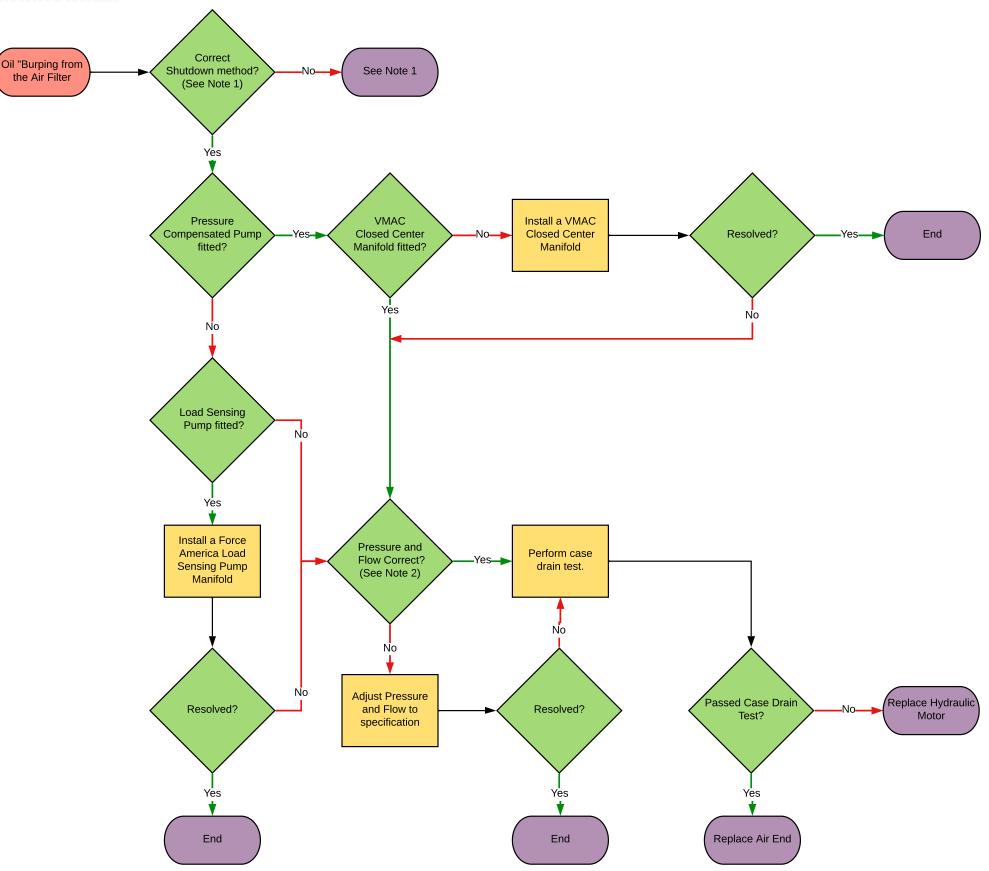


- SYSTEM WILL NOT BUILD TO CORRECT PRESSURE





Hydraulic Drive Faultfinding Chart - OIL BURPING FROM THE AIR FILTER



Note 1

Correct Shutdown Method

- 1. When air is no longer required, allow the system to build to full system pressure (150 psi) and unload.
- 2. Stop the Hydraulic Driven Air Compressor using the "OFF" button. Any residual pressure in the compressor or AOST will blow-down automatically.
- 3. Disengage the hydraulic system.
- 4. If equipped, close the hydraulic shut-off valve.
- 5. Turn off the power supply to the Hydraulic Driven Air Compressor.
- 6. Drain any stored air.

Note 2

Correct Pressure and Flow to hydraulic drive compressor:

40 cfm unit: 9 - 14 gpm @ 2400 psi. 60 cfm unit: 14 - 21 gpm @ 2400 psi. HHP Unit: 12 - 18 gpm @ 3200 psi.

Daily Maintenance

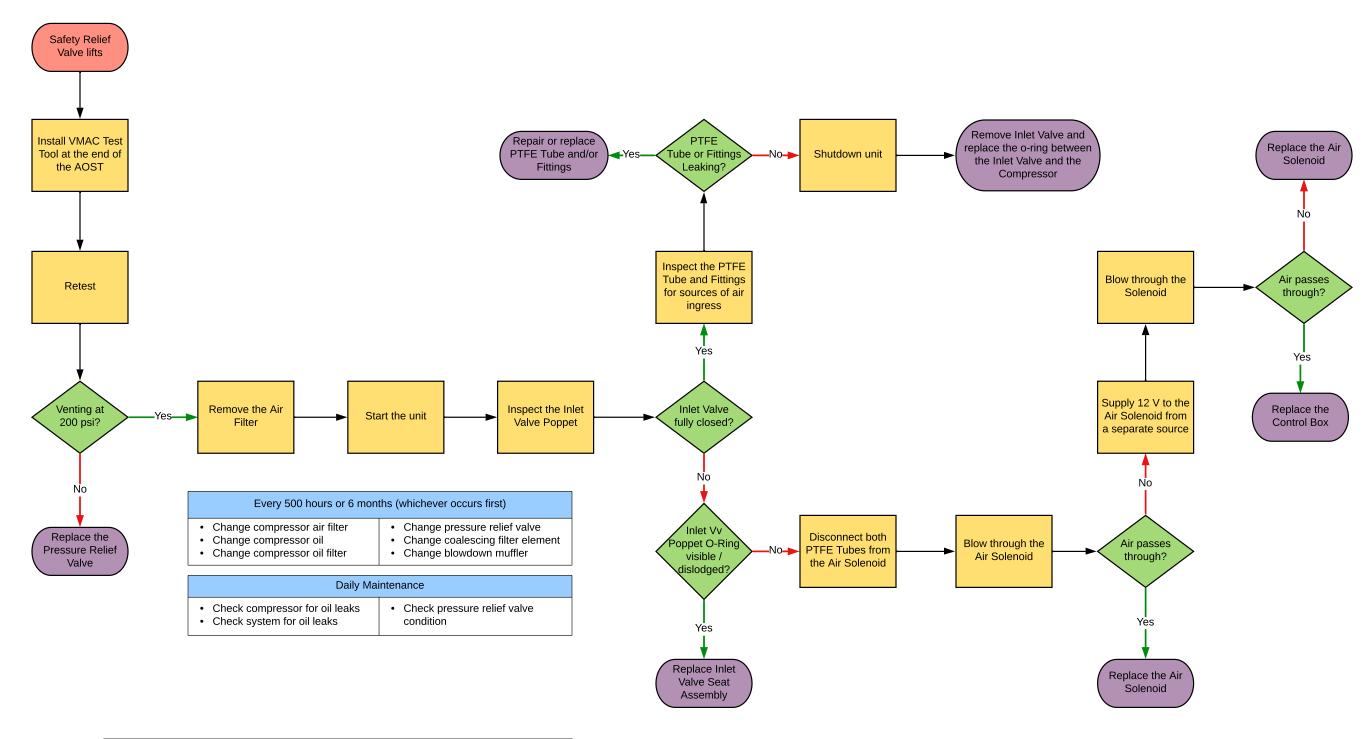
- Check compressor for oil leaks
- · Check system for oil leaks
- · Check pressure relief valve condition

Every 500 hours or 6 months (whichever occurs first)

- · Change compressor air filter
- Change pressure relief valve Change coalescing filter element
- Change compressor oil
- · Change blowdown muffler
- · Change compressor oil filter

These faultfinding charts and diagrams are intended as a guide only and are to be used in conjunction with VMAC's Installation and Owner's Manuals, they are not intended to be replacements. All safety warnings and notices supplied within the Installation and Owner's Manuals are to be strictly adhered to. Do not use or rely on these charts and diagrams unless the Installation and Owner's Manuals have been read and understood. If any doubt exists with any part of the charts and diagrams, contact VMAC Technical Support for assistance -1-888-241-2289 or tech@vmacair.com

- SAFETY RELIEF VALVE LIFTS



These faultfinding charts and diagrams are intended as a guide only and are to be used in conjunction with VMAC's Installation and Owner's Manuals, they are not intended to be replacements. All safety warnings and notices supplied within the Installation and Owner's Manuals are to be strictly adhered to. Do not use or rely on these charts and diagrams unless the Installation and Owner's Manuals have been read and understood. If any doubt exists with any part of the charts and diagrams, contact VMAC Technical Support for assistance - 1-888-241-2289 or tech@vmacair.com



- UNIT WILL NOT TURN ON

Check 10 Amp

mini fuse, before

e Control Box or

Red wire

(See Note 1)

Ensure the system

is properly

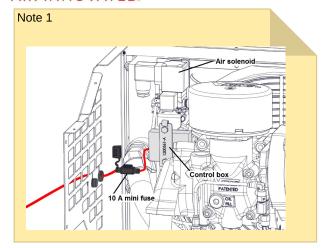
grounded

(all ground

connections are

tight and free of

corrosion)



Note 2

Attach a ground wire to the remote start yellow wire to start the unit, remove the ground wire to stop the unit.

Soft start time may be extended up to 45 minutes in cold temperatures.

Note 4

Correct Pressure and Flow to hydraulic drive compressor:

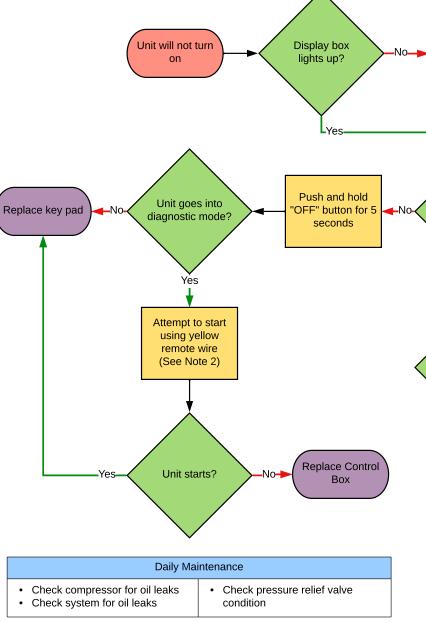
40 cfm unit: 9 - 14 gpm @ 2400 psi. 60 cfm unit: 14 - 21 gpm @ 2400 psi. 12 - 18 gpm @ 3200 psi. HHP Unit:

Note 5

VMAC Part #.

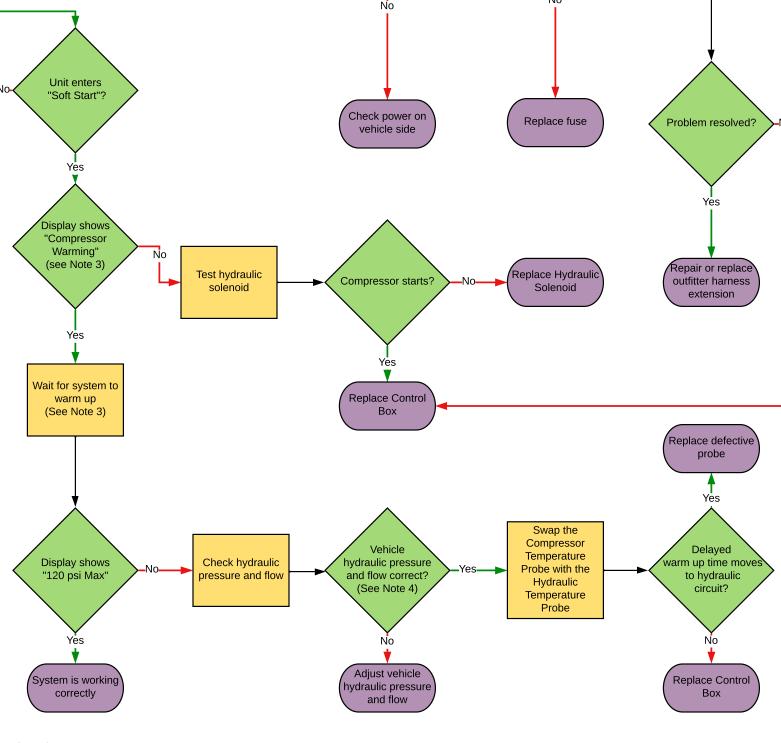
There are two temperature probes fitted in the Hydraulic Drive System, one is fitted in the VMAC air/oil stream and is referred to as the "Compressor Probe" or "Comp Probe", the other is fitted in the hydraulic manifold and measures the vehicle's hydraulic fluid temperature, it is referred to as "Hydraulic Probe" or "Hyd Probe". The probes are interchangeable and have the same

These faultfinding charts and diagrams are intended as a guide only and are to be used in conjunction with VMAC's Installation and Owner's Manuals, they are not intended to be replacements. All safety warnings and notices supplied within the Installation and Owner's Manuals are to be strictly adhered to. Do not use or rely on these charts and diagrams unless the Installation and Owner's Manuals have been read and understood. If any doubt exists with any part of the charts and diagrams, contact VMAC Technical Support for assistance - 1-888-241-2289 or tech@vmacair.com



Every 500 hours or 6 months (whichever occurs first)

- Change compressor air filter
- · Change compressor oil
- · Change compressor oil filter
- Change pressure relief valve
- Change coalescing filter element
- · Change blowdown muffler



12 Volts

before fuse?

Connect Display

box directly to 4

pin control box

harness

(Bypasses upfitte

harness

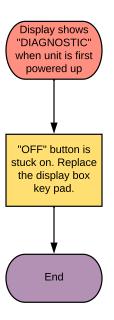
extension)

12 Volts

after fuse?



DISPLAY SHOWS "DIAGNOSTIC" WHEN UNIT IS FIRST POWERED UP /



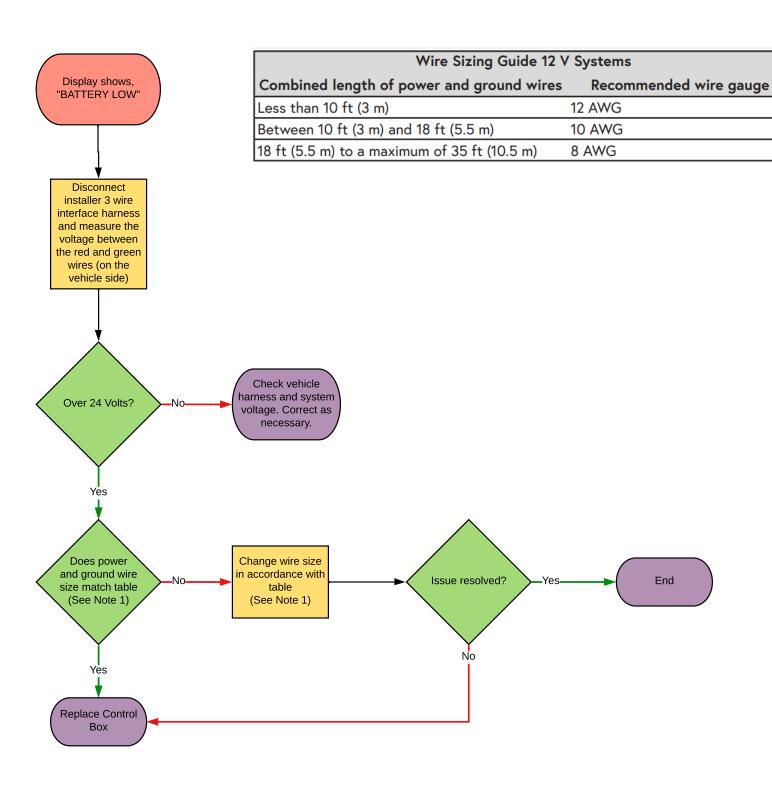
These faultfinding charts and diagrams are intended as a guide only and are to be used in conjunction with VMAC's Installation and Owner's Manuals, they are not intended to be replacements. All safety warnings and notices supplied within the Installation and Owner's Manuals are to be strictly adhered to. Do not use or rely on these charts and diagrams unless the Installation and Owner's Manuals have been read and understood. If any doubt exists with any part of the charts and diagrams, contact VMAC Technical Support for assistance - 1-888-241-2289 or tech@vmacair.com

Daily Maintenance			
Check compressor for oil leaks Check system for oil leaks	Check pressure relief valve condition		

· Change compressor oil filter

Every 500 hours or 6 months (whichever occurs first) Change compressor air filter Change compressor oil Change coalescing filter element

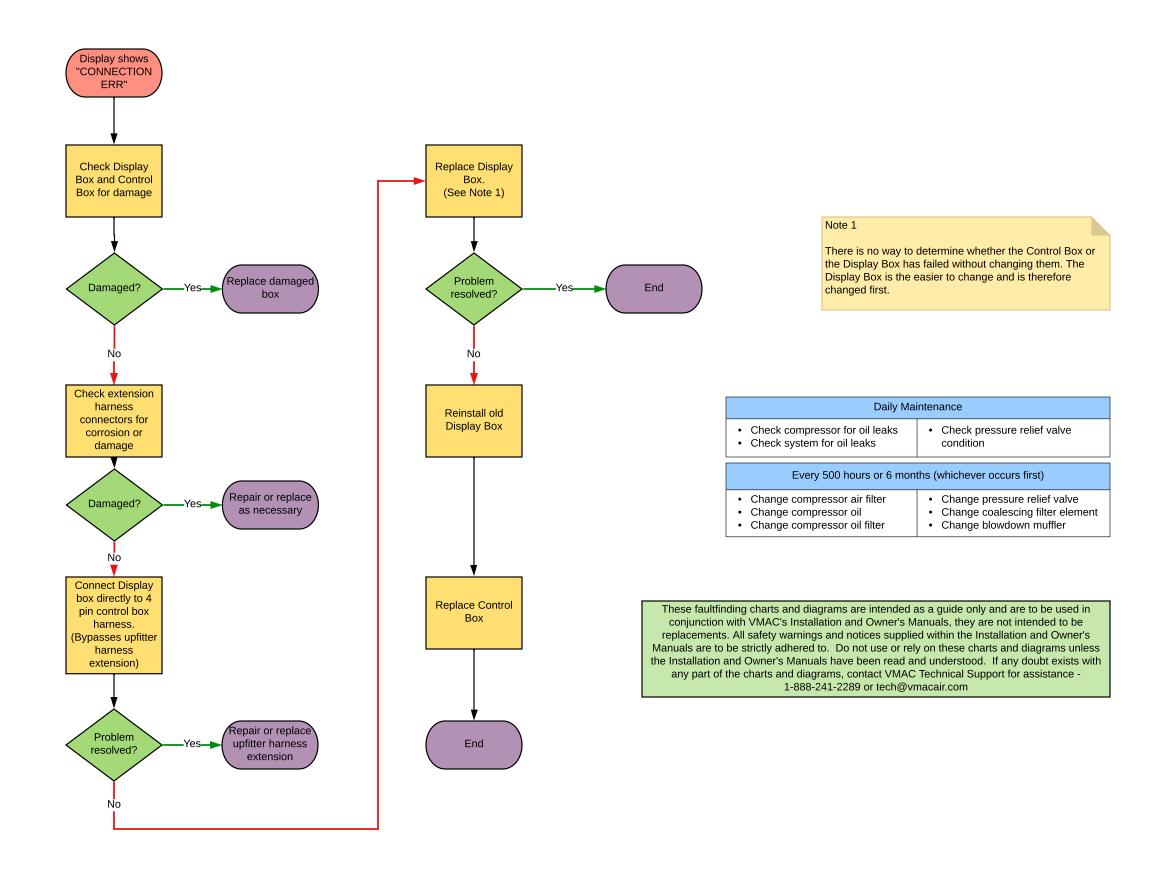
DISPLAY SHOWS "BATTERY LOW"



Rev H - Correct as of: 01/11/2024

· Change blowdown muffler

Hydraulic Drive Faultfinding Chart - DISPLAY SHOWS "CONNECTION ERR"





- DISPLAY SHOWS "OVER TEMP COMP"

Note 1

There are two temperature probes fitted in the Hydraulic Drive System, one is fitted in the VMAC air/oil stream and is referred to as the "Compressor Probe" or "Comp Probe", the other is fitted in the hydraulic manifold and measures the vehicle's hydraulic fluid temperature, it is referred to as "Hydraulic Probe" or "Hyd Probe".

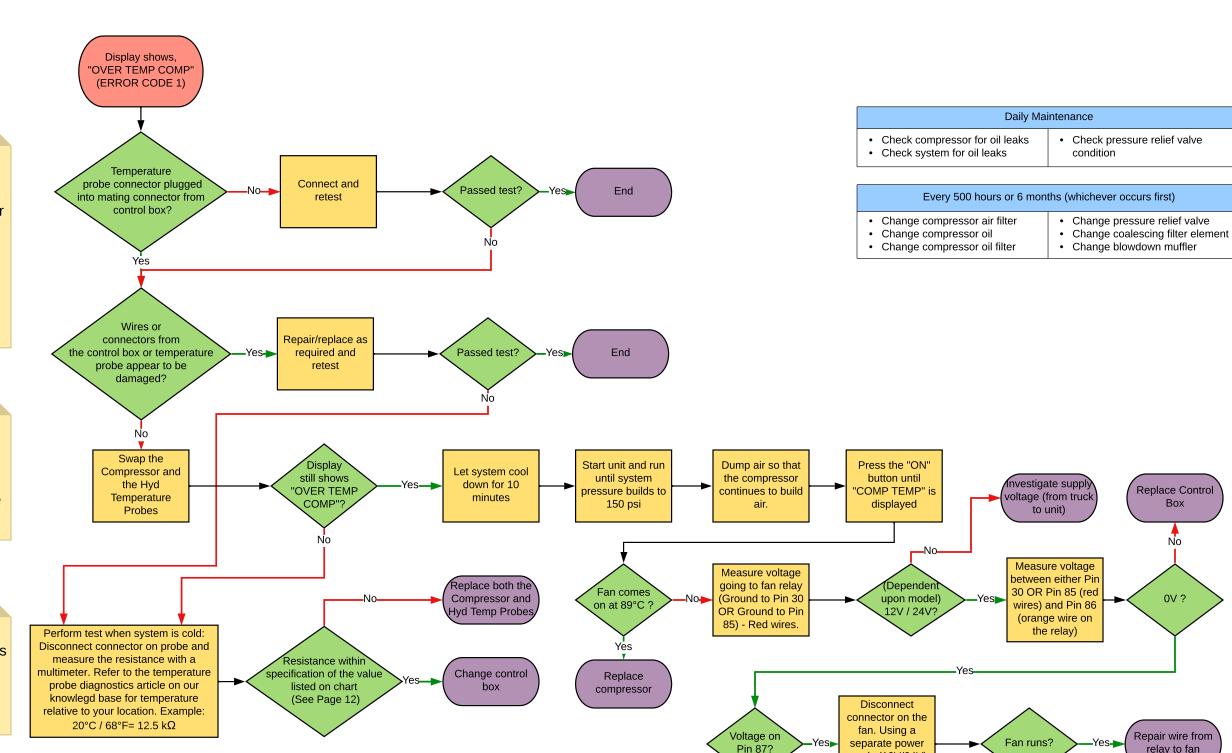
The probes are interchangeable and have the same VMAC Part #.

Note 2

Duty cycle, the physical location of the Hydraulic Drive System (e.g. in an enclosed cabinet) and the load on the vehicle's hydraulic system, all impact the VMAC system temperature.

Note 3

It is possible that a faulty probe may pass tests at ambient temperature, but will fail at normal operating temperatures; in these situations the probe must be replaced.



These faultfinding charts and diagrams are intended as a guide only and are to be used in conjunction with VMAC's Installation and Owner's Manuals, they are not intended to be replacements. All safety warnings and notices supplied within the Installation and Owner's Manuals are to be strictly adhered to. Do not use or rely on these charts and diagrams unless the Installation and Owner's Manuals have been read and understood. If any doubt exists with any part of the charts and diagrams, contact VMAC Technical Support for assistance -1-888-241-2289 or tech@vmacair.com

Copyright 2024 VMAC Global Technology Inc. All Rights Reserved. These materials are provided by VMAC for informational purposes only, without representation or warranty of any kind, and VMAC shall not be liable for errors or omissions with respect to the materials.

Rev H - Correct as of: 01/11/2024

Replace relay

supply (12V/24V) apply power to the fan

Replace fan

Replace Contro

Box

Ν'n

0V ?

relay to fan



- DISPLAY SHOWS "OVER TEMP HYD"

Note 1

There are two temperature probes fitted in the Hydraulic Drive System, one is fitted in the VMAC air/oil stream and is referred to as the "Compressor Probe" or "Comp Probe", the other is fitted in the hydraulic manifold and measures the vehicle's hydraulic fluid temperature, it is referred to as "Hydraulic Probe" or "Hyd Probe".

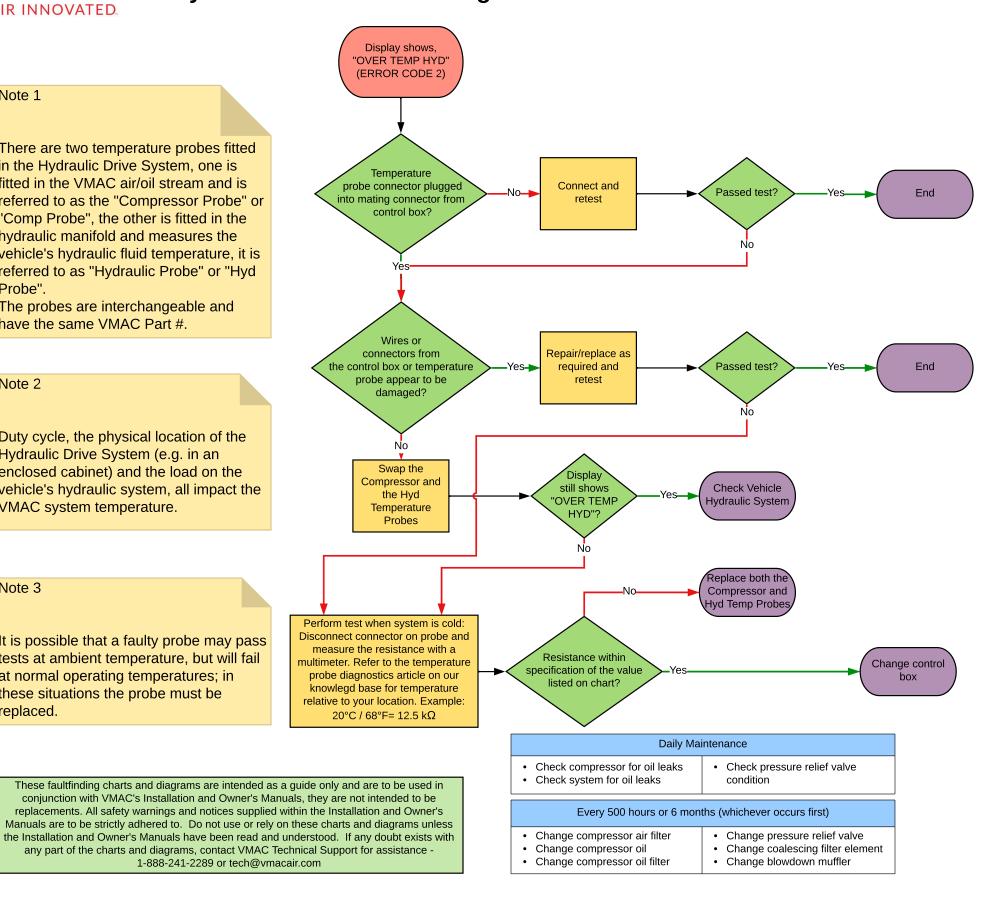
The probes are interchangeable and have the same VMAC Part #.

Note 2

Duty cycle, the physical location of the Hydraulic Drive System (e.g. in an enclosed cabinet) and the load on the vehicle's hydraulic system, all impact the VMAC system temperature.

Note 3

It is possible that a faulty probe may pass tests at ambient temperature, but will fail at normal operating temperatures; in these situations the probe must be replaced.



- DISPLAY SHOWS "HYD PROBE OPEN"

Note 1

There are two temperature probes fitted in the Hydraulic Drive System, one is fitted in the VMAC air/oil stream and is referred to as the "Compressor Probe" or "Comp Probe", the other is fitted in the hydraulic manifold and measures the vehicle's hydraulic fluid temperature, it is referred to as "Hydraulic Probe" or "Hyd Probe".

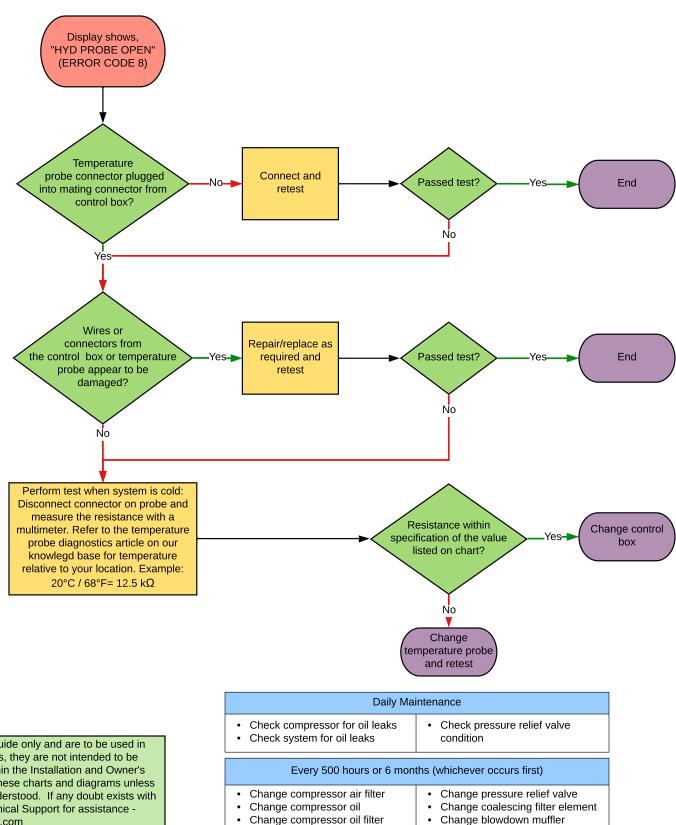
The probes are interchangeable and have the same VMAC Part #.

Note 2

Duty cycle, the physical location of the Hydraulic Drive System (e.g. in an enclosed cabinet) and the load on the vehicle's hydraulic system, all impact the VMAC system temperature.

Note 3

It is possible that a faulty probe may pass tests at ambient temperature, but will fail at normal operating temperatures; in these situations the probe must be replaced.



· Change blowdown muffler

These faultfinding charts and diagrams are intended as a guide only and are to be used in conjunction with VMAC's Installation and Owner's Manuals, they are not intended to be replacements. All safety warnings and notices supplied within the Installation and Owner's Manuals are to be strictly adhered to. Do not use or rely on these charts and diagrams unless the Installation and Owner's Manuals have been read and understood. If any doubt exists with any part of the charts and diagrams, contact VMAC Technical Support for assistance -1-888-241-2289 or tech@vmacair.com

- DISPLAY SHOWS "COMP PROBE OPEN"

Note 1

There are two temperature probes fitted in the Hydraulic Drive System, one is fitted in the VMAC air/oil stream and is referred to as the "Compressor Probe" or "Comp Probe", the other is fitted in the hydraulic manifold and measures the vehicle's hydraulic fluid temperature, it is referred to as "Hydraulic Probe" or "Hyd Probe".

The probes are interchangeable and have the same VMAC Part #.

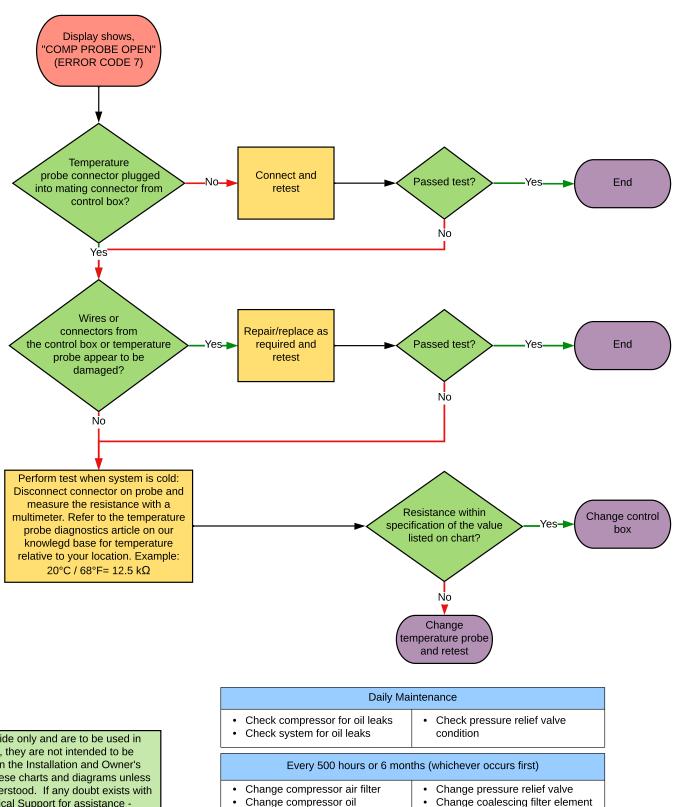
Note 2

Duty cycle, the physical location of the Hydraulic Drive System (e.g. in an enclosed cabinet) and the load on the vehicle's hydraulic system, all impact the VMAC system temperature.

Note 3

It is possible that a faulty probe may pass tests at ambient temperature, but will fail at normal operating temperatures; in these situations the probe must be replaced.

These faultfinding charts and diagrams are intended as a guide only and are to be used in conjunction with VMAC's Installation and Owner's Manuals, they are not intended to be replacements. All safety warnings and notices supplied within the Installation and Owner's Manuals are to be strictly adhered to. Do not use or rely on these charts and diagrams unless the Installation and Owner's Manuals have been read and understood. If any doubt exists with any part of the charts and diagrams, contact VMAC Technical Support for assistance - 1-888-241-2289 or tech@vmacair.com



· Change compressor oil filter

· Change blowdown muffler

- DISPLAY SHOWS "HYD PROBE SHORT"

Note 1

There are two temperature probes fitted in the Hydraulic Drive System, one is fitted in the VMAC air/oil stream and is referred to as the "Compressor Probe" or "Comp Probe", the other is fitted in the hydraulic manifold and measures the vehicle's hydraulic fluid temperature, it is referred to as "Hydraulic Probe" or "Hyd Probe".

The probes are interchangeable and have the same VMAC Part #.

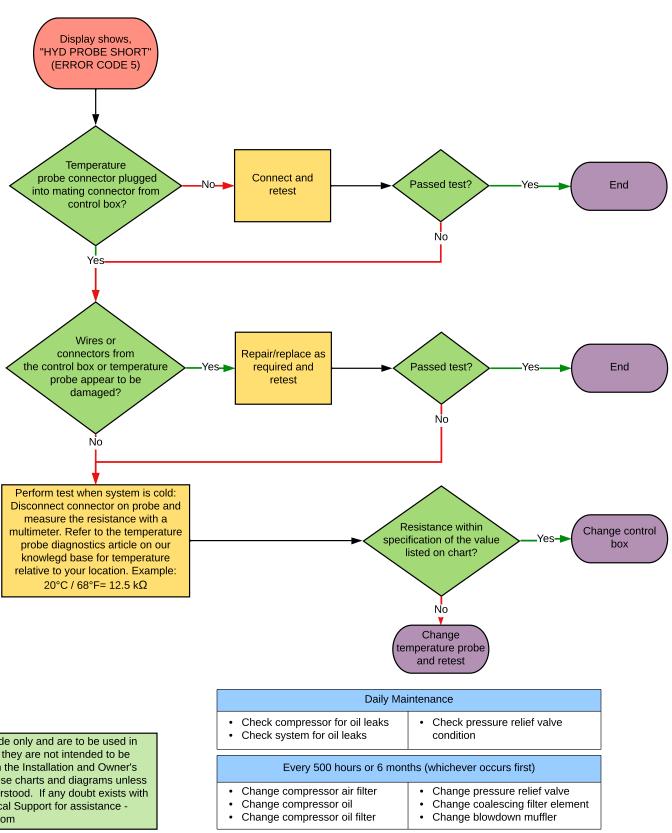
Note 2

Duty cycle, the physical location of the Hydraulic Drive System (e.g. in an enclosed cabinet) and the load on the vehicle's hydraulic system, all impact the VMAC system temperature.

Note 3

It is possible that a faulty probe may pass tests at ambient temperature, but will fail at normal operating temperatures; in these situations the probe must be replaced.

These faultfinding charts and diagrams are intended as a guide only and are to be used in conjunction with VMAC's Installation and Owner's Manuals, they are not intended to be replacements. All safety warnings and notices supplied within the Installation and Owner's Manuals are to be strictly adhered to. Do not use or rely on these charts and diagrams unless the Installation and Owner's Manuals have been read and understood. If any doubt exists with any part of the charts and diagrams, contact VMAC Technical Support for assistance - 1-888-241-2289 or tech@vmacair.com



- DISPLAY SHOWS "COMP PROBE SHORT"

Note 1

There are two temperature probes fitted in the Hydraulic Drive System, one is fitted in the VMAC air/oil stream and is referred to as the "Compressor Probe" or "Comp Probe", the other is fitted in the hydraulic manifold and measures the vehicle's hydraulic fluid temperature, it is referred to as "Hydraulic Probe" or "Hyd Probe".

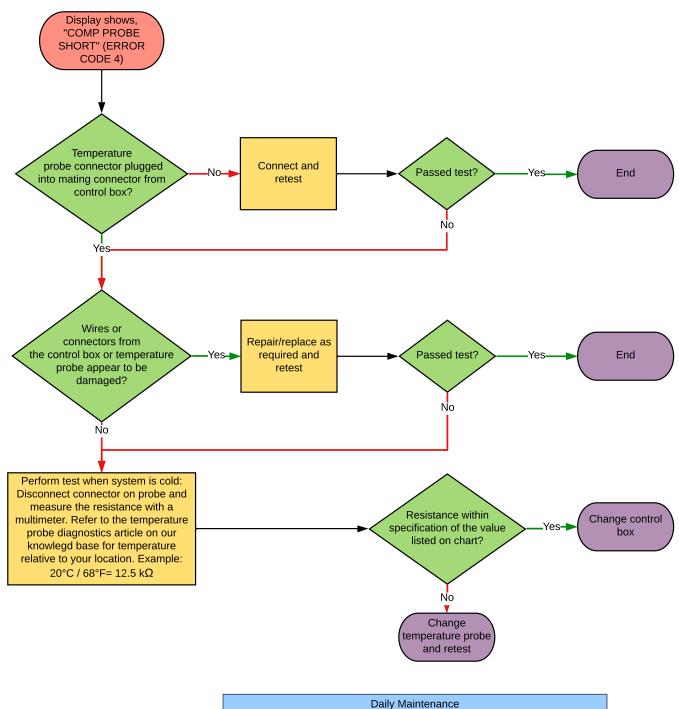
The probes are interchangeable and have the same VMAC Part #.

Note 2

Duty cycle, the physical location of the Hydraulic Drive System (e.g. in an enclosed cabinet) and the load on the vehicle's hydraulic system, all impact the VMAC system temperature.

Note 3

It is possible that a faulty probe may pass tests at ambient temperature, but will fail at normal operating temperatures; in these situations the probe must be replaced.



These faultfinding charts and diagrams are intended as a guide only and are to be used in conjunction with VMAC's Installation and Owner's Manuals, they are not intended to be replacements. All safety warnings and notices supplied within the Installation and Owner's Manuals are to be strictly adhered to. Do not use or rely on these charts and diagrams unless the Installation and Owner's Manuals have been read and understood. If any doubt exists with any part of the charts and diagrams, contact VMAC Technical Support for assistance - 1-888-241-2289 or tech@vmacair.com

Daily Maintena

- Check compressor for oil leaksCheck system for oil leaks
- Check pressure relief valve condition

- Change compressor air filter
- Change pressure relief valveChange coalescing filter element
- Change compressor oilChange compressor oil filter
- Change blowdown muffler



Display shows

Pressure Sensor

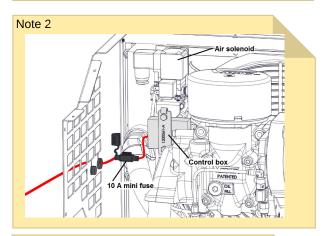
(ERROR CODE

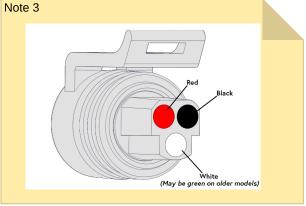
11)

- DISPLAY SHOWS "PRESSURE SENSOR?



i.e. Very low resistance (almost zero) to ground when back probed with unit running. A resistance reading above 2 Ohms indicates a "bad" ground.



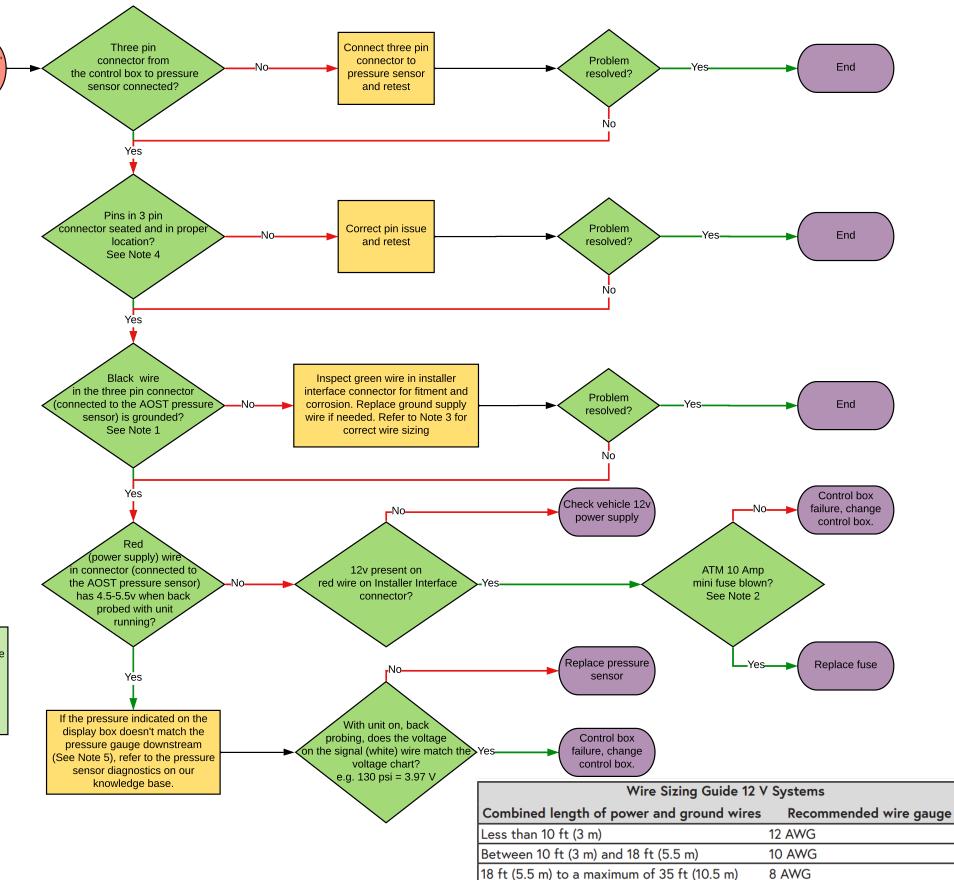


Note 4 Measured before any installed regulator.

These faultfinding charts and diagrams are intended as a guide only and are to be used in conjunction with VMAC's Installation and Owner's Manuals, they are not intended to be replacements. All safety warnings and notices supplied within the Installation and Owner's Manuals are to be strictly adhered to. Do not use or rely on these charts and diagrams unless the Installation and Owner's Manuals have been read and understood If any doubt exists with any part of the charts and diagrams, contact VMAC Technical Support for assistance - 1-888-241-2289 or tech@vmacair.com

Daily Maintenance

- · Check compressor for oil leaks · Check system for oil leaks
- Check pressure relief valve condition
- Every 500 hours or 6 months (whichever occurs first)
- · Change compressor air filter
- Change compressor oil · Change compressor oil filter
- Change pressure relief valve
 - · Change coalescing filter element
 - · Change blowdown muffler



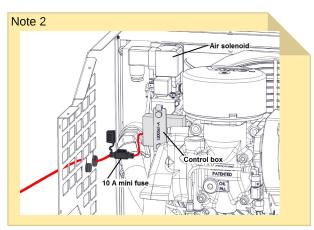


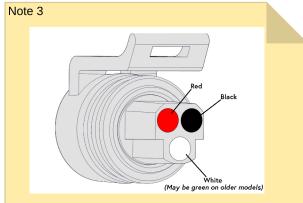
downstream air

pressure gauge

- PRESSURE SENSOR VALUE NOT MATCHING **DOWNSTREAM AIR PRESSURE GAUGE**

i.e. Very low resistance (almost zero) to ground when back probed with unit running. A resistance reading above 2 Ohms indicates a "bad" ground.





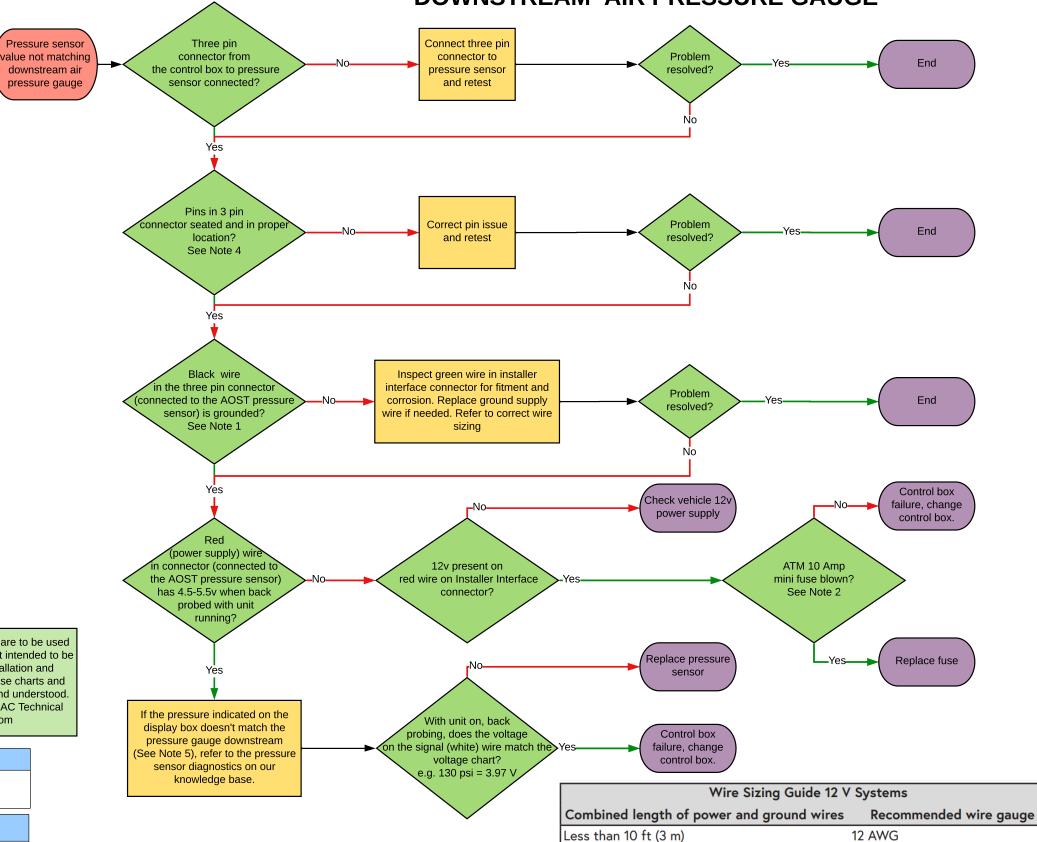
Note 4

Measured before any installed regulator.

These faultfinding charts and diagrams are intended as a guide only and are to be used in conjunction with VMAC's Installation and Owner's Manuals, they are not intended to be replacements. All safety warnings and notices supplied within the Installation and Owner's Manuals are to be strictly adhered to. Do not use or rely on these charts and diagrams unless the Installation and Owner's Manuals have been read and understood. If any doubt exists with any part of the charts and diagrams, contact VMAC Technical Support for assistance - 1-888-241-2289 or tech@vmacair.com

Daily Maintenance

- Check compressor for oil leaks Check system for oil leaks
- · Check pressure relief valve condition
- Every 500 hours or 6 months (whichever occurs first)
- · Change compressor air filter
- Change compressor oil
- Change pressure relief valve
 - Change coalescing filter element
- Change compressor oil filter Change blowdown muffler



Copyright 2024 VMAC Global Technology Inc. All Rights Reserved. These materials are provided by VMAC for informational purposes only, without representation or warranty of any kind, and VMAC shall not be liable for errors or omissions with respect to the materials.

10 AWG

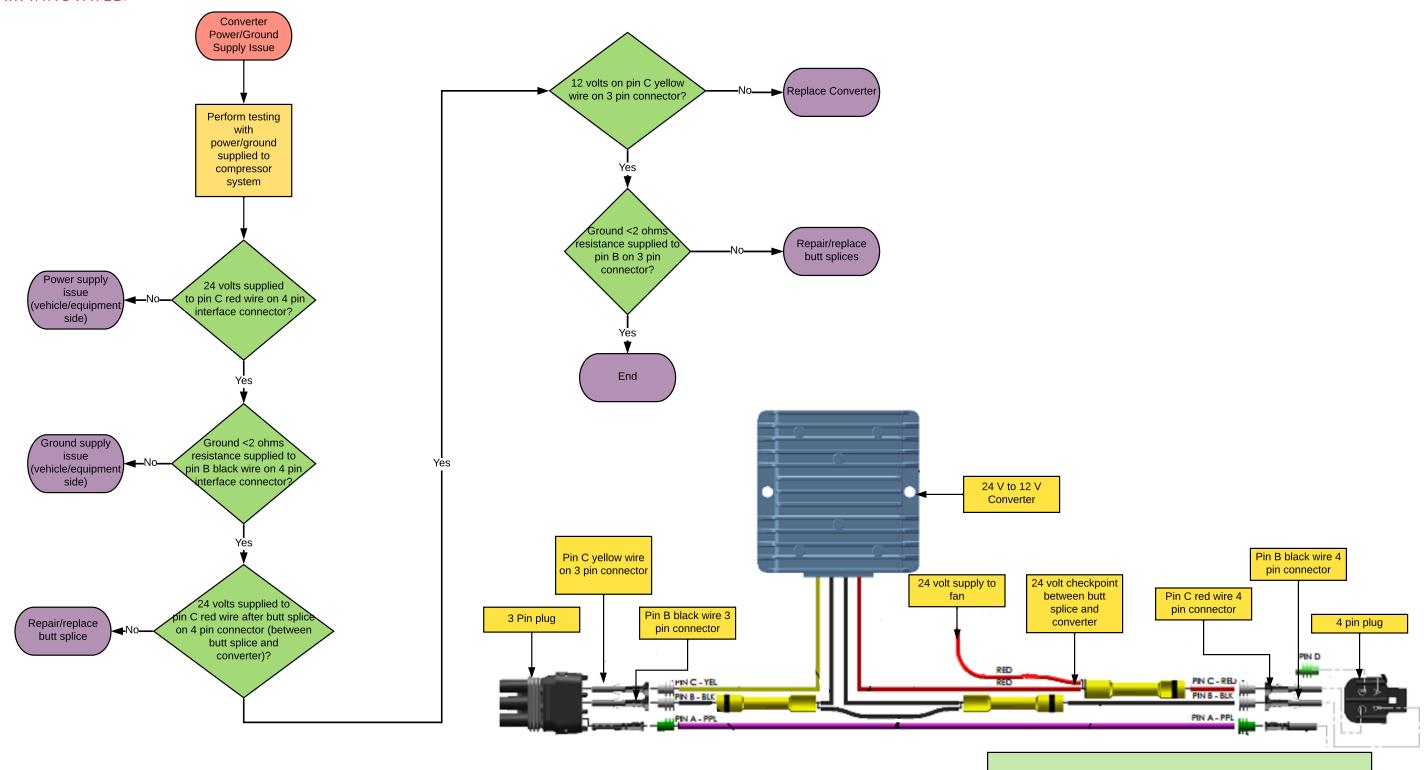
8 AWG

Between 10 ft (3 m) and 18 ft (5.5 m)

18 ft (5.5 m) to a maximum of 35 ft (10.5 m)



- 24 V to 12 V Converter Power/Ground Supply Issue



These faultfinding charts and diagrams are intended as a guide only and are to be used in conjunction with VMAC's Installation and Owner's Manuals, they are not intended to be replacements. All safety warnings and notices supplied within the Installation and Owner's Manuals are to be strictly adhered to. Do not use or rely on these charts and diagrams unless the Installation and Owner's Manuals have been read and understood. If any doubt exists with any part of the charts and diagrams, contact VMAC Technical Support for assistance - 1-888-241-2289 or tech@vmacair.com