

MAX200

Check Valve Retrofit

***Field Installation Bulletin
801570 - Rev. 0***



MAX200
Check Valve Retrofit

Field Installation Bulletin
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MAX200 CHECK VALVE RETROFIT

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MAX200 CHECK VALVE RETROFIT

Objective

The objective of this field installation bulletin is to provide instruction for upgrading the MAX200 power supplies that currently have the coolant solenoid valve (V8).

This retrofit involves removing the current solenoid valve and replacing it with a 1 to 3 psi check valve.

Customer Required Tools

- Phillips-head screwdriver
- Vice-grips
- Adjustable wrench or
 - 1/2" open-end wrench
 - 5/8" open-end wrench
 - 7/16" open-end wrench
 - 9/16" open-end wrench
 - 11/16" open-end wrench

Hypertherm Parts

The format to list and call out Hypertherm parts is as follows:

Part No.	Description
XXXXXX	Bold heading indicates parent item or kit containing one or more items.
XXXXXX	Indented item in normal type indicates a part contained under the parent item or kit.

MAX200 Valve Replacement Kit

Part No.	Description	Qty.
028535	Valve Replacement for 006045	1
006053	Valve, Check 1/3 psi, 1/4 NPTM	1
015551	Coupling 1/4 Brass	1
015131	Fitting, 3/8 Tube X 1/4 NPT	1
015133	Ferrule, 3/8 OD Tube Delrin	1
046047	Tubing, 3/8 OD Blk Air Brake	7.5"
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MAX200 CHECK VALVE RETROFIT



WARNING!



Extremely dangerous voltages are present in the MAX200 power supply. Be certain that all power to the power supply is disconnected before attempting any retrofit work as described below.

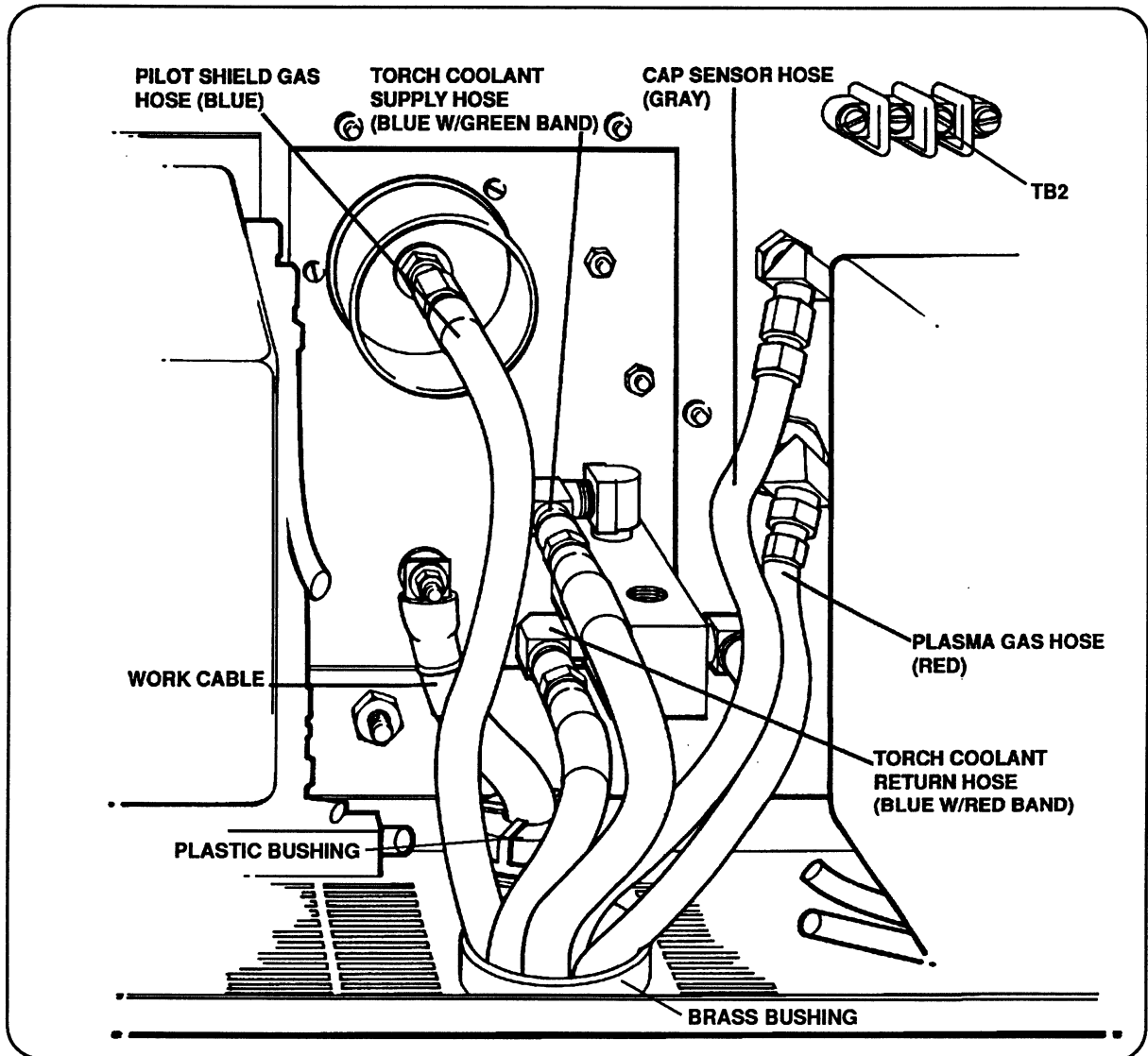


Figure 1 MAX200 Torch Lead and Work Cable Connections

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Retrofit Procedure - Removal

Before removing the old flow switch assembly and solenoid, the torch hoses and the work cable must be removed. See Figure 1 to locate hosing.

Note: Figure 1 is for machine-torch systems. Hand-torch systems have an additional cable connected to the terminal block TB2.

1. Using the Phillips-head screwdriver, remove the seven screws securing the rear panel, and remove the panel.
2. Using an adjustable or 5/8" open-end wrench, remove the Pilot Shield Gas hose (Blue).
3. Using an adjustable or 1/2" open-end wrench, remove the Torch Coolant Supply hose (Blue w/ Green band) and the Torch Coolant Return hose (Blue w/Red band).
4. Using an adjustable or 7/16" open-end wrench, remove the Cap Sensor Hose (Gray). Loosening in a clockwise direction, remove the Plasma Gas Hose (Red).
5. Slide all the hoses down through the brass bushing and out of the way.
6. Using an adjustable or 9/16" open-end wrench, disconnect the work cable from the rear of the MAX200 and slide it through the plastic bushing and out of the way.

Now that the torch hosing and work cable are out of the way, the flow switch assembly and solenoid must be disconnected. See Figure 2 and proceed as follows:

7. Using an adjustable or 5/8" wrench, remove and disconnect hosing to reservoir and filter.
8. Remove the hosing to the heat exchanger at the heat exchanger. Remove the brass insert (P/N 015134) located in the end of this hosing.
9. Unplug connector labeled 25, and terminals marked 106 and 107.
10. Finally, using an adjustable or 7/16" open-end wrench, remove one nut securing the flow switch assembly from the MAX200 rear panel shelf. See Figure 2 for location of 7/16" nut.

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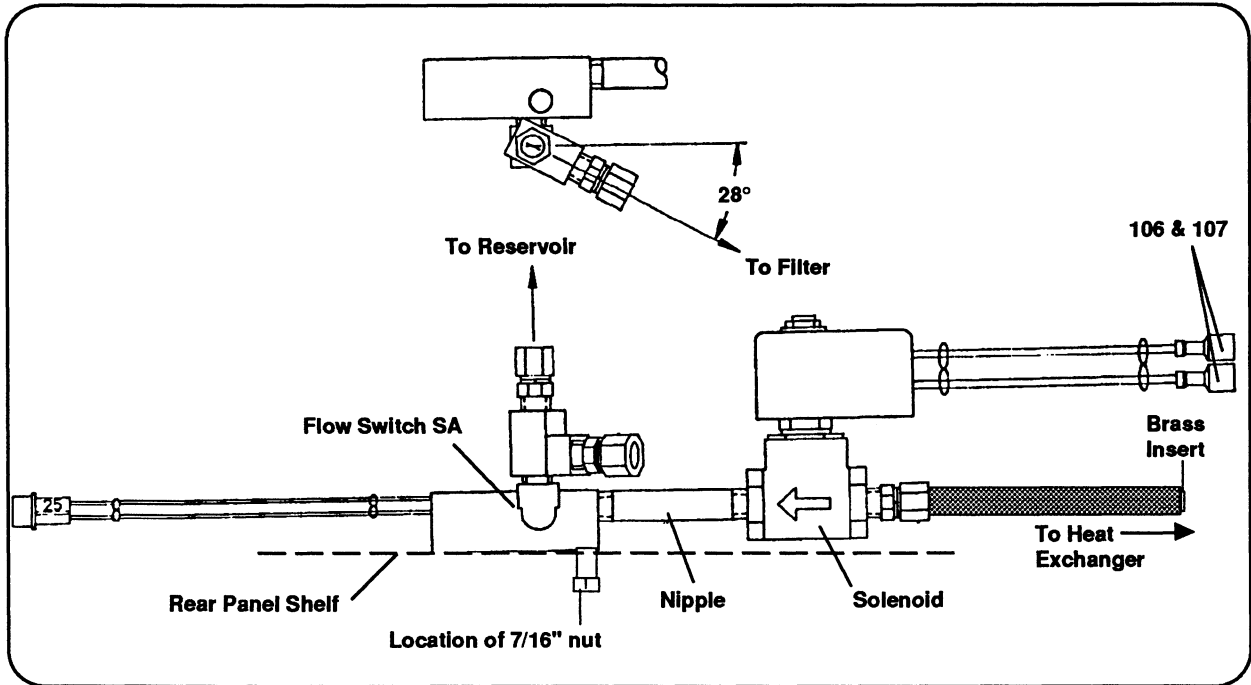


Figure 2 Flow Switch Subassembly and Solenoid

Retrofit Procedure - Replacement

Refer to Figure 3 to see retrofitted flow switch subassembly and check valve.

1. Using vice-grips on the nipple, unscrew it and the solenoid valve from the flow switch assembly.
2. Using an adjustable wrench or an 11/16" open-end wrench, attach and tighten the check valve assembly to the flow switch subassembly.
3. Locate the entire assembly back on the rear panel shelf, and tighten the 7/16" nut to secure.
4. Place the brass insert that was removed from step 8 into the hosing that is to be attached to the heat exchanger. Connect and tighten the hose from the check valve assembly to the heat exchanger.
5. Reconnect the #25 connector to its mating receptacle.
6. Reconnect the torch leads and work cable. Refer to *Retrofit Procedure - Removal*, and Figure 1.

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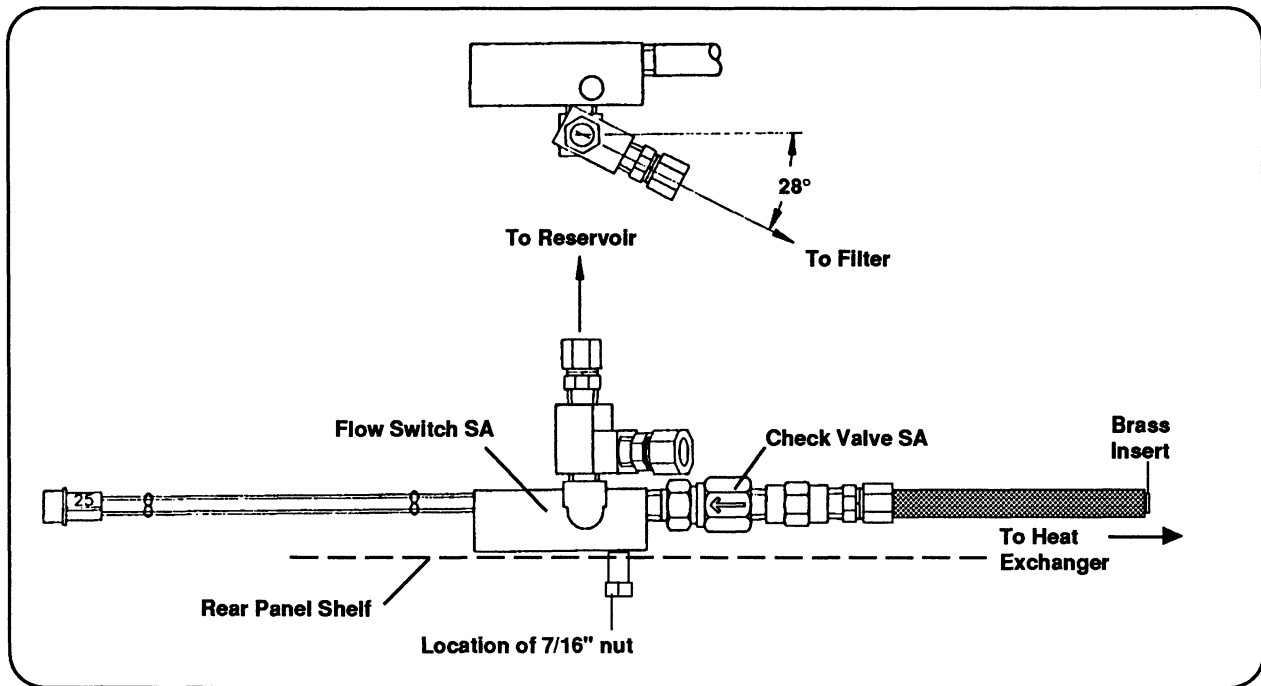


Figure 3 Flow Switch Subassembly and Check valve

Checkout

1. Double-check connections, and then re-apply main power.
2. Start MAX200 power supply (refer to the *Operation* section of the MAX200 Instruction Manual for startup procedure, if necessary) and check for any leaks.
3. Repair leaks, if necessary.

Retrofit is now complete.