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respectively, extending from their first ports **224** to the bleeder valves **226** of the slave cylinders **194** and **196** of the hydraulic system **10a**. Second ports **228** of the valves **214** and **216** are connected to the manifold **62** which is in fluid communication with the first fluid port **64** of the flow reversing valve **66**. The third port **230** of each three-way poppet valve is connected to a collection manifold **232** which is in fluid communication with a first port **234** of a shutoff valve **236**, and the second port **238** of the shutoff valve **236** is connected by a fluid return line to the fluid return manifold **80**. The shutoff valve **236** is preferably a solenoid operated two-way poppet valve and its function will herein after be described.

A Cross-flushing operation on the two slave cylinders **194**, and **196** is accomplished with the flow reversing valve **66** in its second position (shown in solid lines in FIG. **10**) so that fluid supplied by the pump **108** is directed through the flow reversing valve **66** and the manifold **62** to the second ports **228** of the three-way poppet valves **214**, **216**, and **218** and the fourth poppet valve(not shown). The poppet valve **214** is shown in a first position wherein the first and second ports **224** and **228** are in fluid communication with each other and the third port **230** is blocked. The other three way poppet valves **216** and **218** are in the second position wherein the first and third ports **224** and **230** are in fluid communication with each other and the second ports **228** are blocked. Since the second ports **228** of all except the poppet valve **214** are blocked, the fluid supplied through the manifold **62** will flow only into the second port **228** of the valve **214** and out through its first port **224**. Fluid emerging from the port **224** of the valve **214** is directed by the bleeder valve line **220** into and through the slave cylinder **194** and through the cross-line **192** into the slave cylinder **196**. Since the master cylinder **180** has a relatively high resistance to fluid flow, fluid in the cross-line **192** will take the path of least resistance and will flow and directly and sequentially through the slave cylinders **194** and **196**. The fluid will exit the slave cylinder **196** through the bleeder valve line **222** and flow into the first port **224** of the three-way poppet valve **216**. With the poppet valve **216** in the second position, fluid will flow out through its third port **230** into the manifold **232** and through the shutoff valve **236** into the fluid return manifold **80** into the holding vessel **84**.

The shutoff valve **236** is open position during cross-flushing operations to provide a flow path for fluid returning from the hydraulic system being serviced. When the shutoff valve **236** is actuated to its closed position, the third port **230** of the three-way poppet valves **214**, **216**, **218** and the fourth valve (not shown), will be blocked and those valves will then function as two way poppet valves. Therefore, when the shutoff valve **236** is closed, the apparatus **14a** will function in the manner hereinbefore described with reference to the apparatus **14**.

While the principles of the invention have now been made clear in illustrated embodiments, many modifications will be obvious to those skilled in the art which do not depart from those principles. The appended claims are therefore intended to cover such modifications within the limits only of the true spirit and scope of the invention.

What I claim is:

1. An apparatus for flushing contaminants from a hydraulic system which includes a master cylinder and at least one component having a bleeder valve, said apparatus comprising:

- a) a holding vessel for old fluid;
- b) a pump coupled to draw the old fluid from said holding vessel; and

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c) a valve having a master cylinder line and at least one bleed valve line both for connection to the hydraulic system to be serviced, said valve coupled to said pump and to said holding vessel for receiving the old fluid from said pump and directing it through the hydraulic system to be serviced and returning it to said holding vessel.

2. An apparatus as claimed in claim **1** wherein said valve has a first position wherein the fluid from said pump is directed through the hydraulic system to be serviced in a first direction and returned to said holding vessel and a second position wherein the fluid is routed through the hydraulic system in an opposite direction and returned to said holding vessel.

3. An apparatus as claimed in claim **1** wherein the hydraulic systems to be serviced have a plurality of components each of which has a bleeder valve, said apparatus further comprising:

- a) said valve having a plurality of bleeder valve lines each for connection to a different one of the bleeder valves of the components of the hydraulic system to be serviced; and
- b) a plurality of shutoff valves each located in a different one of said plurality of bleeder valve lines, said shutoff valves are individually operable to control the flow of fluid through their respective ones of said bleeder valve lines.

4. An apparatus for flushing, replacing a fluid and bleeding a hydraulic system including a master cylinder and at least one component having a bleeder valve, said apparatus comprising:

- a) a holding vessel for old fluid;
- b) a supply vessel of new fluid;
- c) a fluid selector valve coupled to said holding vessel and to said supply vessel for receiving the old fluid from said holding vessel during system flushing and the new fluid from said supply vessel during system fluid replacement and bleeding;
- d) a pump coupled to move the old fluid from said holding vessel through said flow selector valve during system flushing and to move the new fluid from said supply vessel through said fluid selector valve during fluid replacement and bleeding; and
- e) a flow reversing valve coupled to said pump and to said holding vessel and having a master cylinder line and at least one bleed valve line both for connection to the hydraulic system to be serviced, said flow reversing valve having a first position wherein the fluid from said pump is directed through the system in a first direction and returned to said holding vessel and a second position wherein the fluid is routed through the hydraulic system in an opposite direction and returned to said holding vessel.

5. An apparatus as claimed in claim **4** wherein the hydraulic systems to be serviced have a plurality of components each of which has a bleeder valve, said apparatus further comprising:

- a) said flow reversing valve having a plurality of bleeder valve lines each for connection to a different one of the bleeder valves of the components of the hydraulic systems to be serviced; and
- b) a plurality of shutoff valves each located in a different one of said plurality of bleeder valve lines, said shutoff valves are individually operable to control the flow of fluid through their respective ones of said bleeder valve lines.