

# RAPID RESPONSE TORQUE CONTROL

**HYDRAULICS**  
*Inc.*

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FORT WORTH, TEXAS 76110-4104



# RAPID RESPONSE TORQUE CONTROL

## GENERAL

The Hydraulics, Inc. Rapid Response Torque Control (pressure compensator) provides control of the swashplate angle within the pump of a hydrostatic closed-loop system, thereby giving precise control of the output pressure of the pump. The speed at which the pressure control system reacts, provides protection for the prime mover and the driven load. The rapid response torque control will work even in the systems that may require the pump to be driven over-center in order to maintain constant pressure in the high pressure loop.

Torque control kits are available to provide pressure control for one or both ports of the hydrostatic pump, and for systems involving two transmissions driving a common load.

## APPLICATION

The torque control system has been applied to Dynapower, Eaton, and Sundstrand hydrostatic drives. The schematics shown herein are as applied to Sundstrand Series 20 thru 27 and are for reference to other manufacturers systems.

Hydraulics, Inc. is not responsible for the effects of applications of the rapid response control to Dynapower, Eatonk, Sundstrand, or other company products and their warranties.

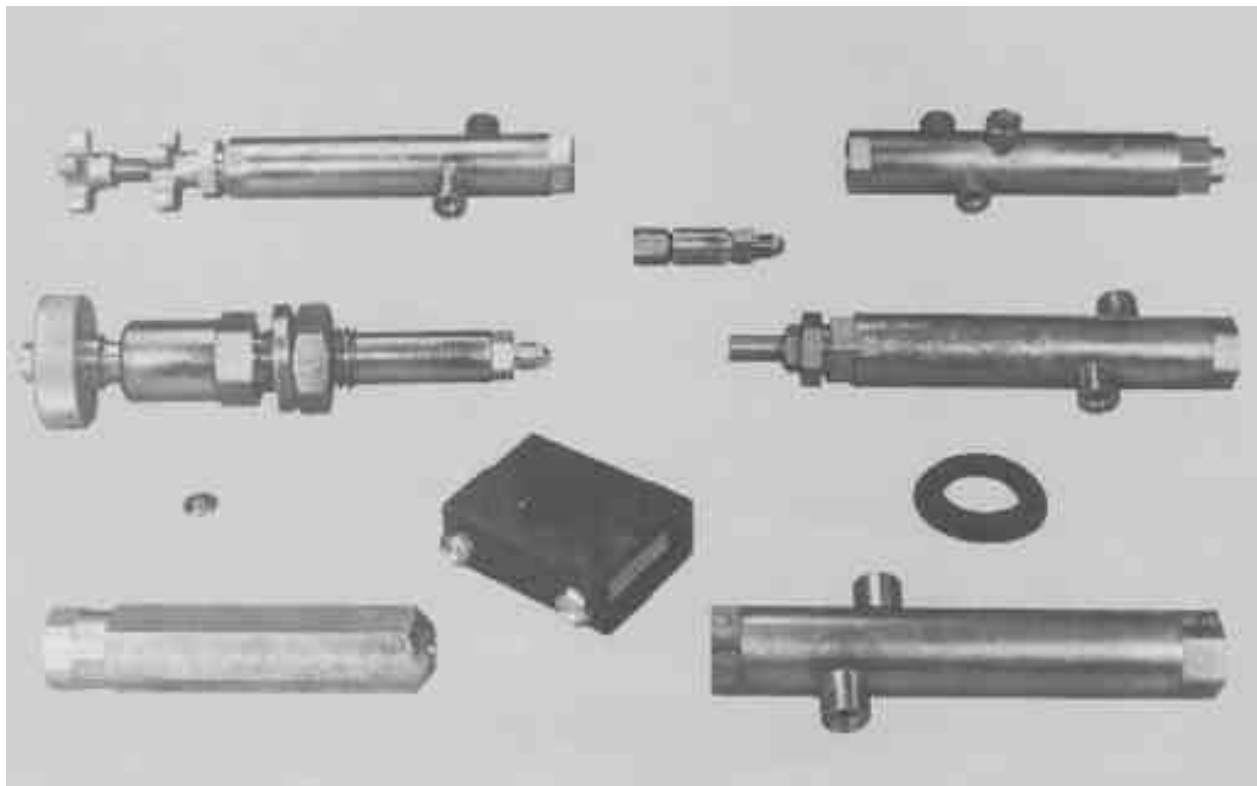
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### NOTE:

Special packaging and adaptations are available for OEM applications. See back cover.



**"Because of technological progress and product improvement, all design and dimensional data shown is subject to change without notice. Technical information has been prepared from actual test results under controlled environmental conditions and data is considered to be reliable, but no responsibility can be assumed for its accuracy under varied field conditions."**



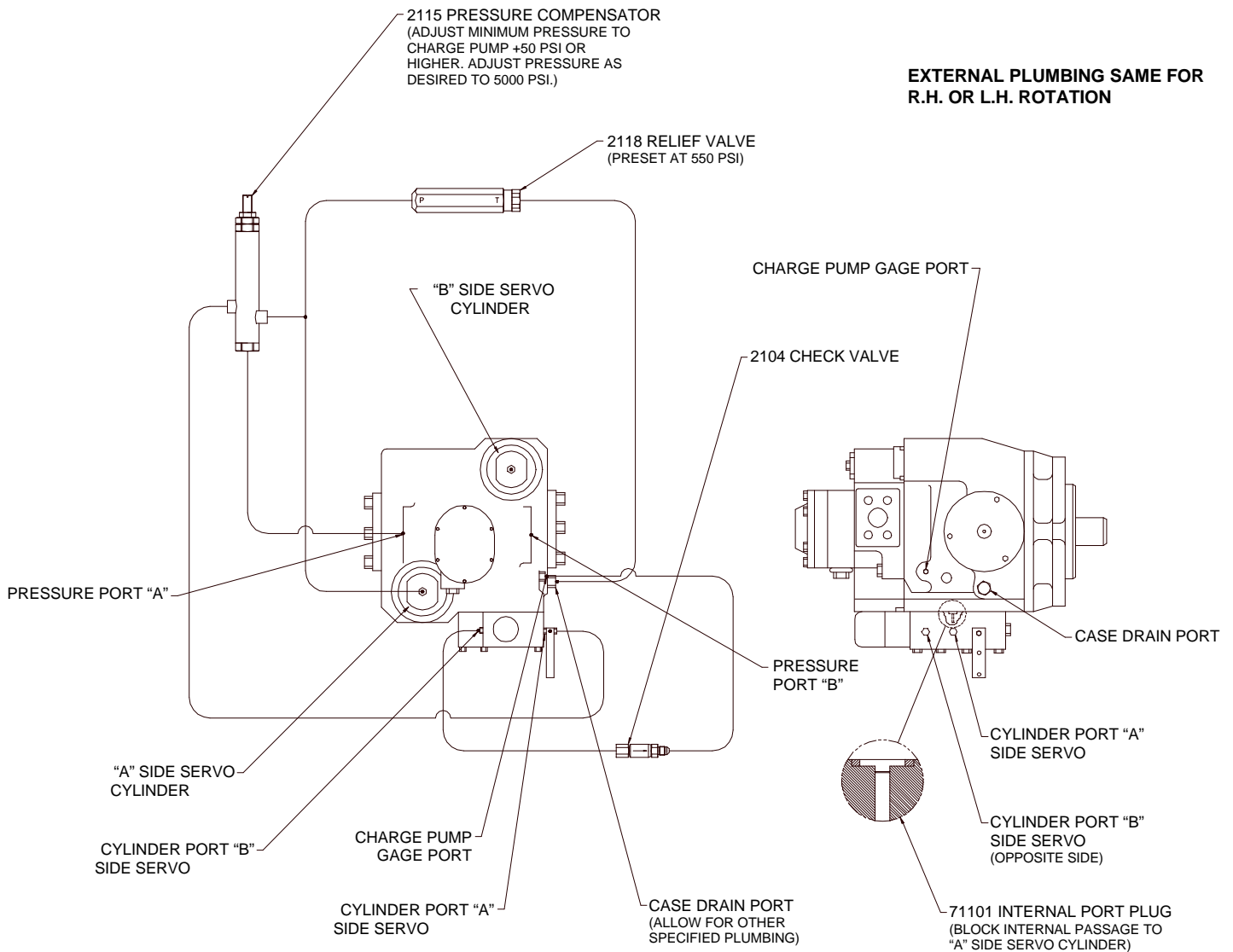
# TORQUE CONTROL FOR PORT "A" OR "B"

## KITS FOR PORT "A" OR "B"

The following chart lists components for controlling port "A" or "B" in a manual, remote, or panel mount kit.

Part No.	Description	PORT "A" OR "B"		
		KIT A2115	KIT A2115R	KIT A2115P
		Manual	Remote	Panel Mount
2104	Check Valve	1	1	1
2106	Remote Pressure Control		1	
2115	Compensator (Manual)	1		
2115A	Compensator (Remote)		1	
2115C	Compensator (Panel Mount)			1
2118	Relief Valve	1	1	1
71101	Internal Port Plug	1	1	1

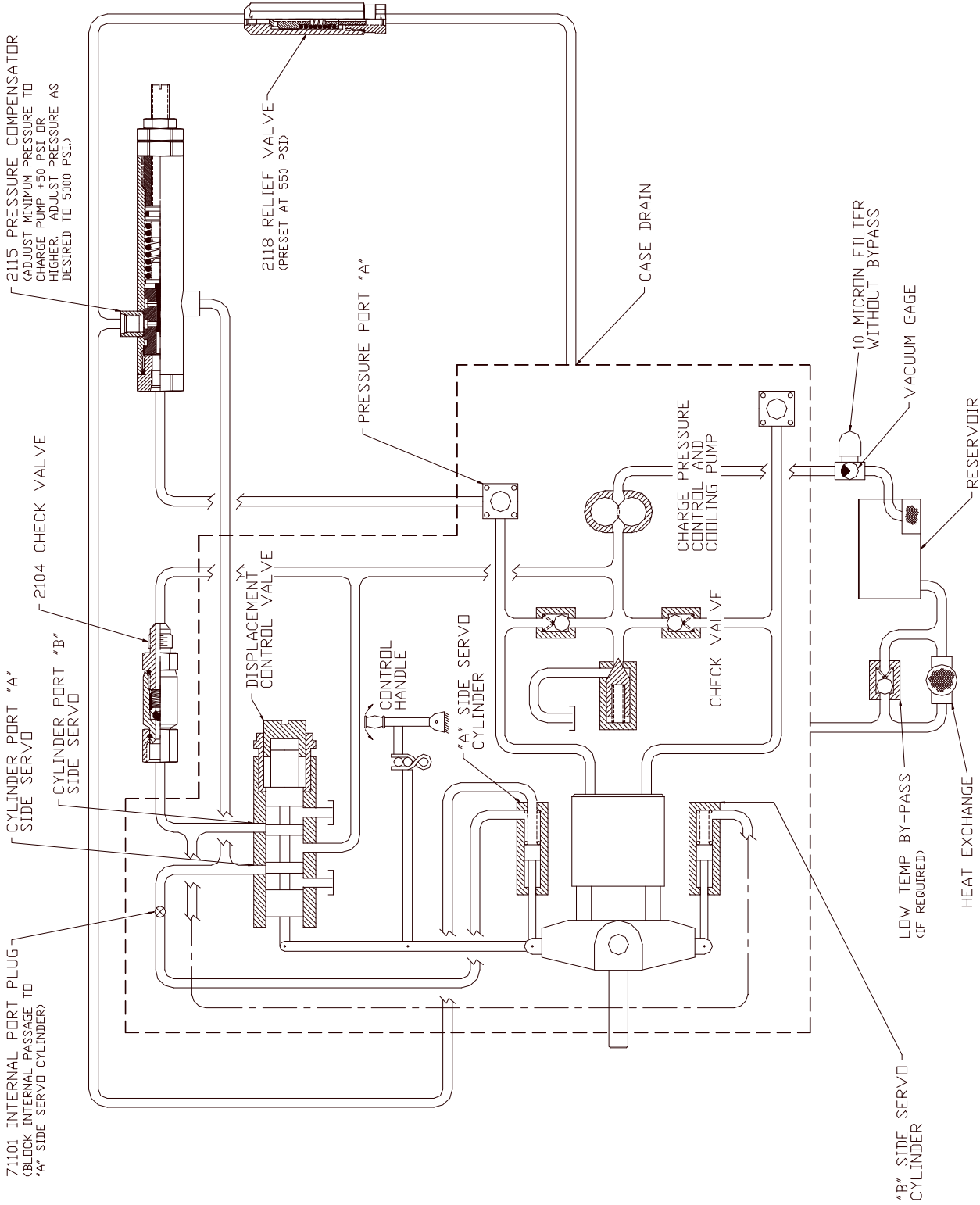
## TORQUE CONTROL FOR PORT "A" OR "B" (SCHEMATIC)





# TORQUE CONTROL FOR PORT "A" OR "B"

(SCHEMATIC)



HYDRAULICS, INC. NOT RESPONSIBLE FOR PUMP WARRANTY

NOTES:

1. All connecting plumbing to be 1/4" tube size.
2. Control cylinder end caps must be ported with -4 S.A.E. O-Ring port for external plumbing. Consult pump mfg.
3. Plumbing layout is for control of pump port "A".

RAPID RESPONSE TORQUE CONTROL FOR SUNSTRAND HYDRO-TRANSMISSION - SERIES 20 THRU 27



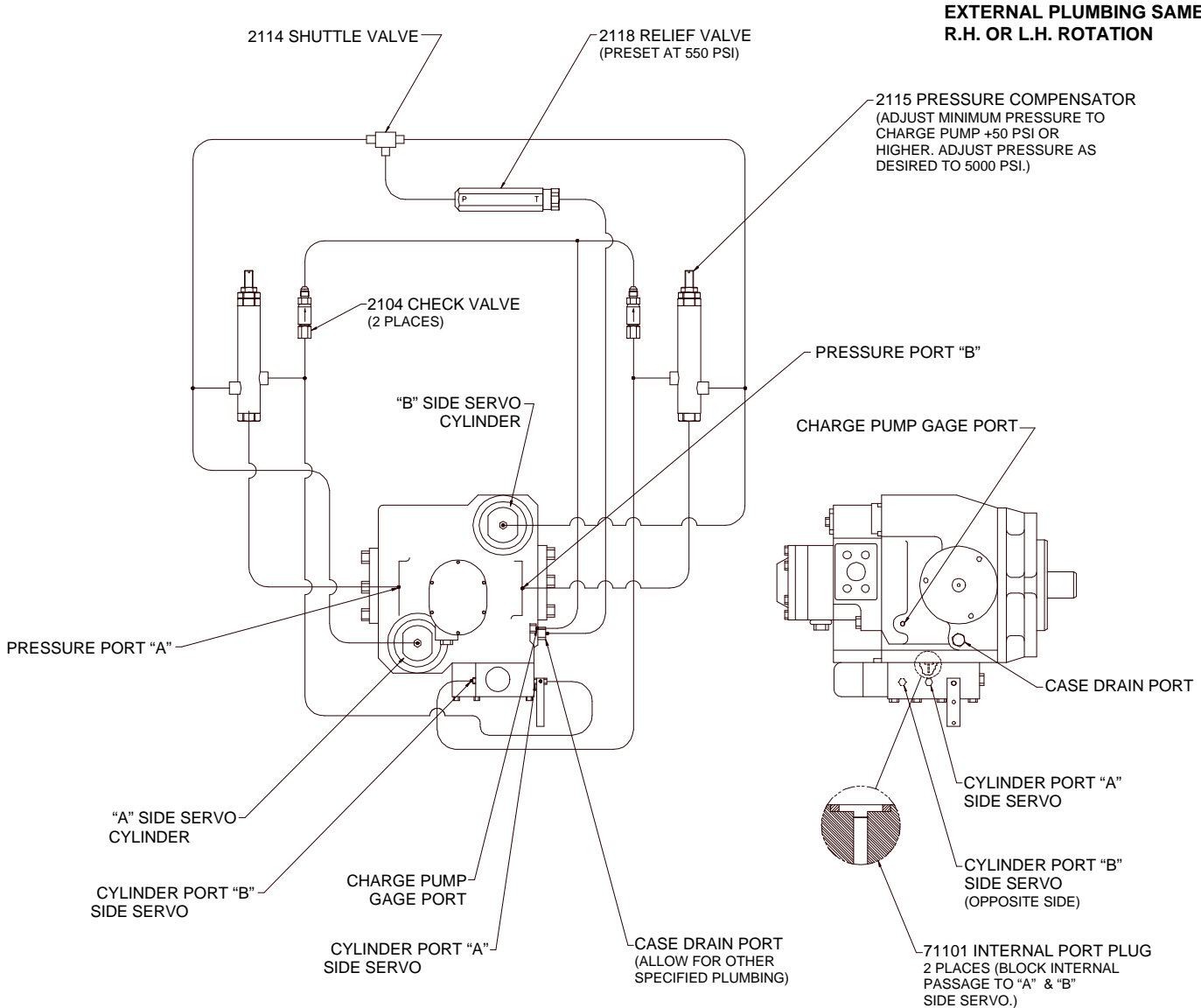
# TORQUE CONTROL FOR PORT "A" & "B"

## KITS FOR PORT "A" & "B"

The following chart lists components for controlling port "A" & "B" in a manual, remote, or panel mount kit.

Part No.	Description	PORT "A" & "B"		
		KIT B2115	KIT B2115R	KIT B2115P
		Manual	Remote	Panel Mount
2104	Check Valve	2	2	2
2106	Remote Pressure Control		2	
2114	Shuttle Valve	1	1	1
2115	Compensator (Manual)	2		
2115A	Compensator (Remote)		2	
2115C	Compensator ( Panel Mount)			2
2118	Relief Valve	1	1	1
71101	Internal Port Plug	2	2	2

## TORQUE CONTROL FOR PORT "A" & "B" (SCHEMATIC)



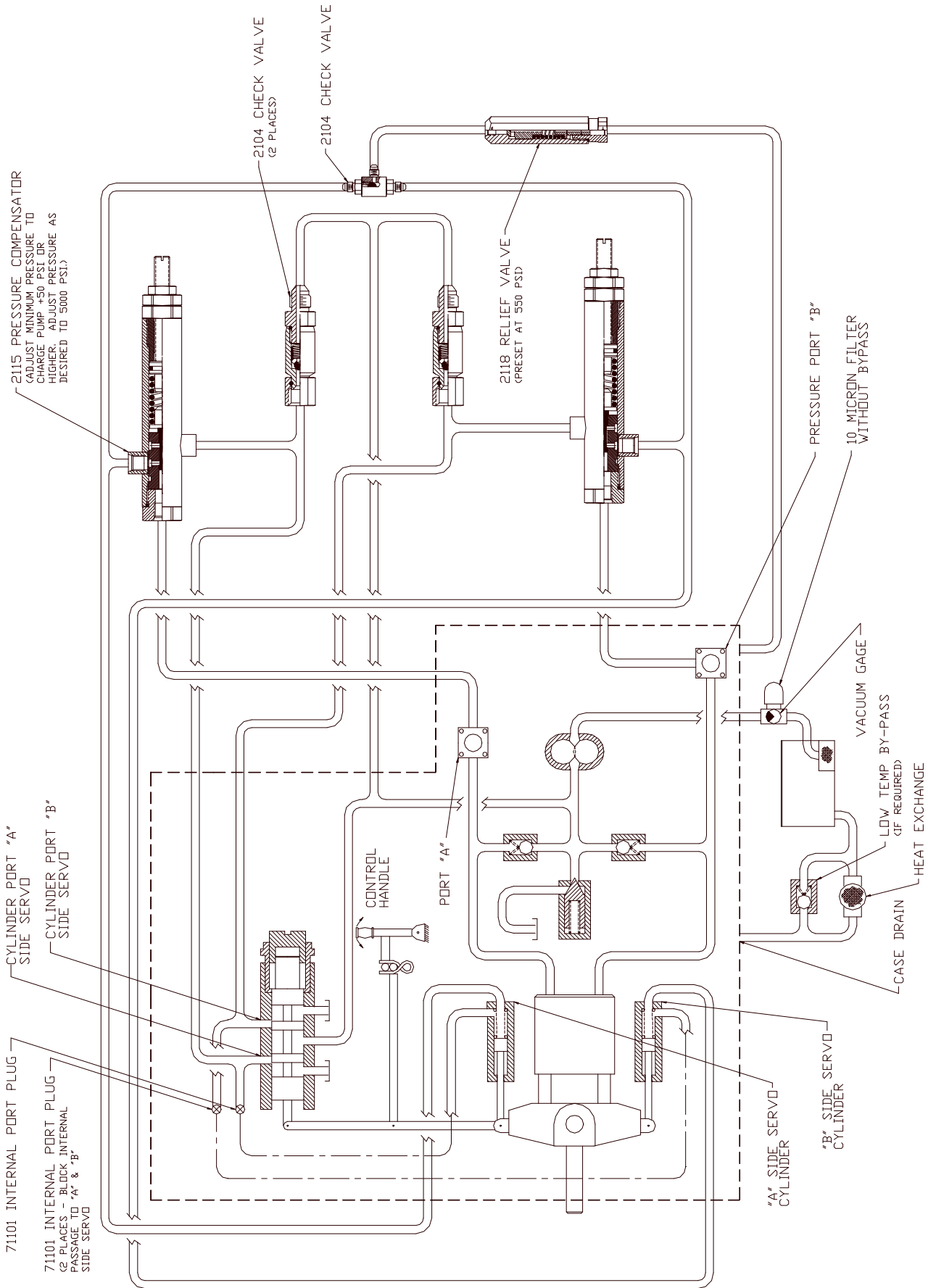
HYDRAULICS, INC. NOT RESPONSIBLE FOR PUMP WARRANTY

NOTE: PLUMBING LAYOUT IS FOR CONTROL OF PUMP PORT "A" & "B"



# TORQUE CONTROL FOR PORT "A" & "B"

(SCHEMATIC)



HYDRAULICS, INC. NOT RESPONSIBLE  
FOR PUMP WARRANTY

NOTES:

1. All connecting plumbing to be 1/4" tube size.
2. Control cylinder end caps must be ported with -4 S.A.E. D-Ring port for external plumbing. Consult pump mfg.
3. Plumbing layout is for control of pump port "A" & "B".

RAPID RESPONSE TORQUE CONTROL FOR SUNDSTRAND HYDRO-  
TRANSMISSION - SERIES 20 THRU 27



# TORQUE CONTROL FOR PORT "A" SLAVED

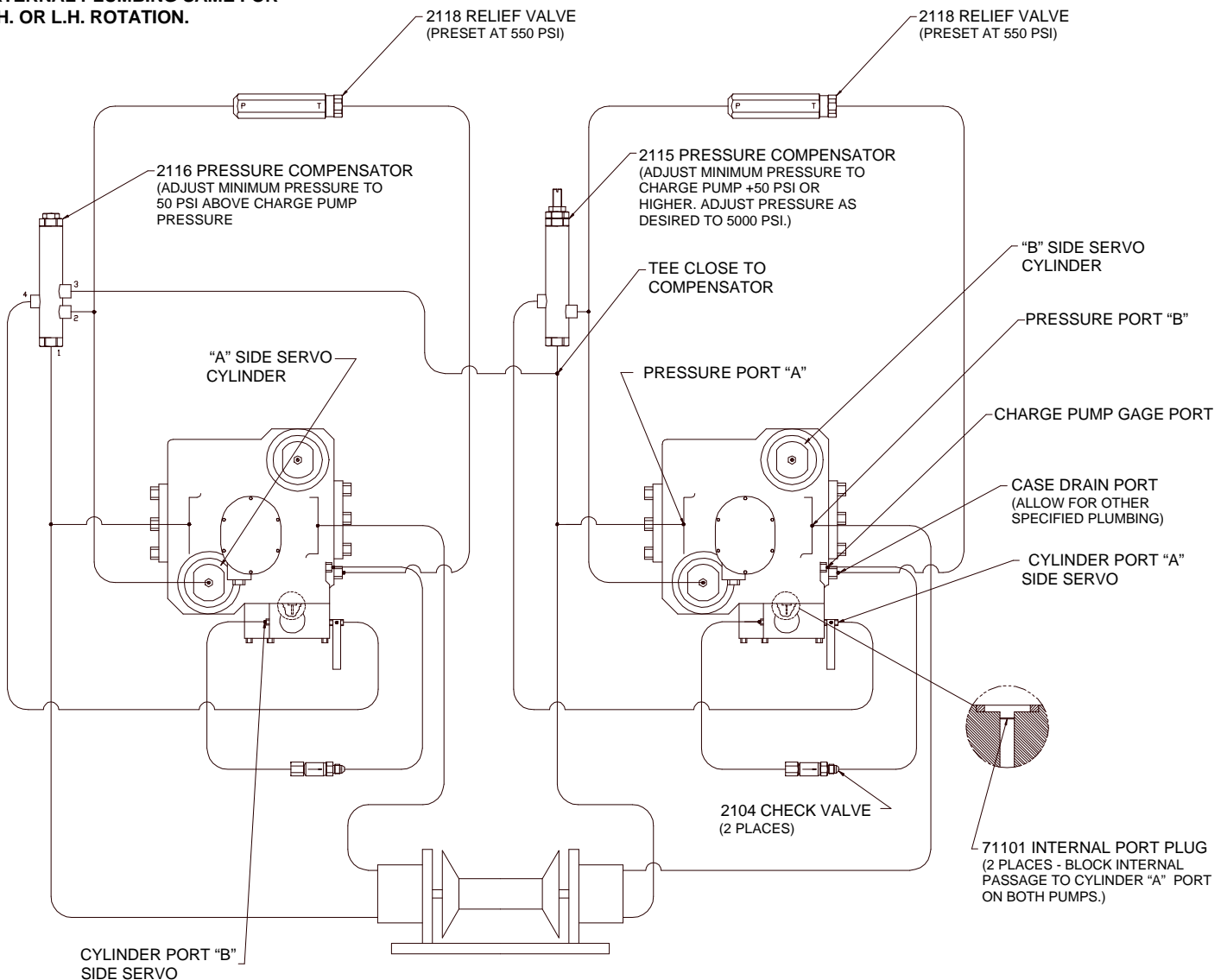
## KITS FOR PORT "A" SLAVED

The following chart lists components for controlling port "A" slaved in a manual, remote, or panel mount kit.

Part No.	Description	PORT "A" SLAVED		
		KIT C2115	KIT C2115R	KIT C2115P
		Manual	Remote	Panel Mount
2104	Check Valve	2	2	2
2106	Remote Pressure Control	1	1	1
2115	Compensator (Manual)	1		
2115A	Compensator (Remote)		1	
2115C	Compensator (Panel Mount)			1
2116D	Compensator Slave (Preset)	1	1	1
2118	Relief Valve	2	2	2
71101	Internal Port Plug	2	2	2

## TORQUE CONTROL FOR PORT "A" SLAVED (SCHEMATIC)

EXTERNAL PLUMBING SAME FOR R.H. OR L.H. ROTATION.



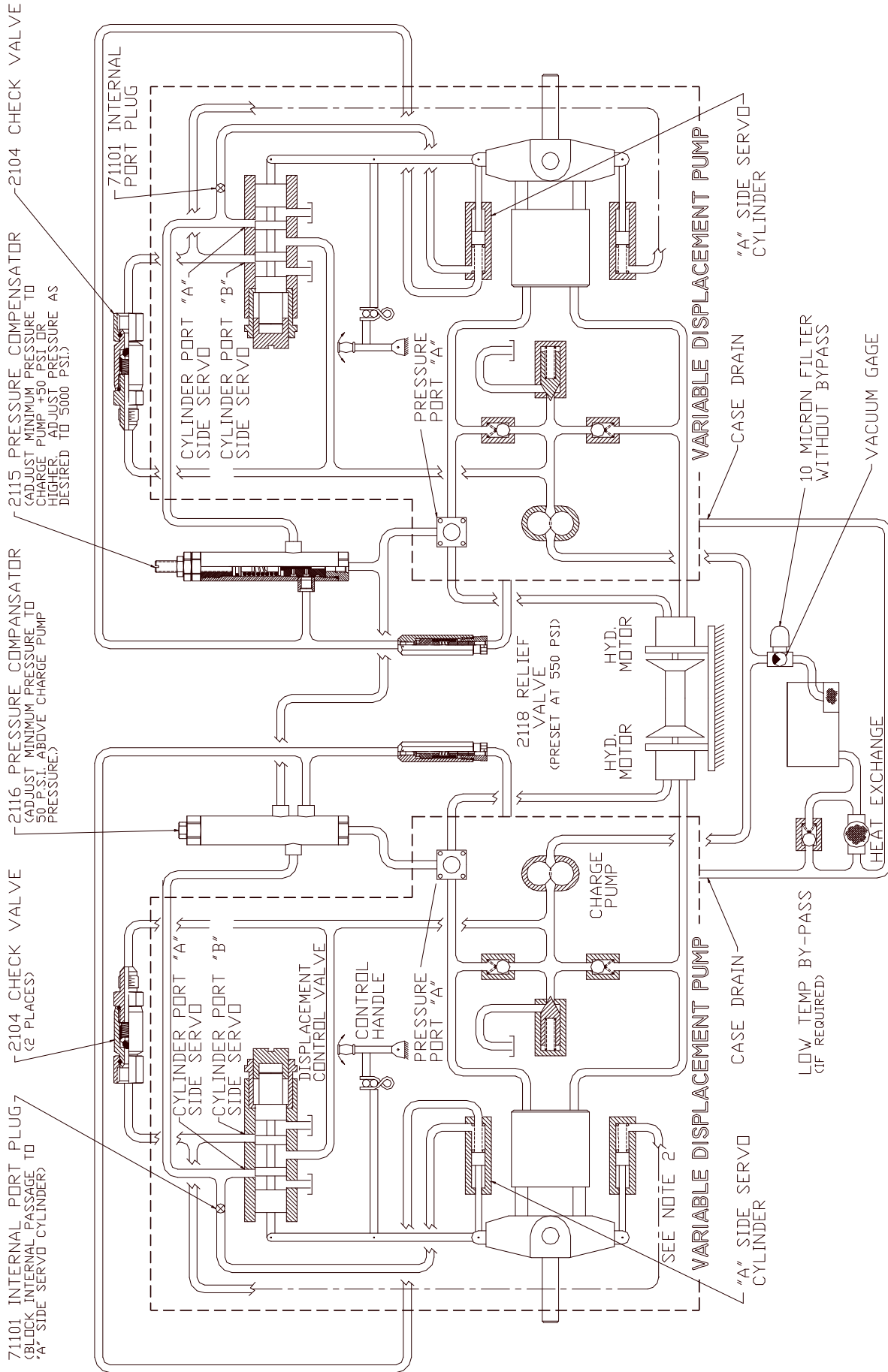
HYDRAULICS, INC. NOT RESPONSIBLE FOR PUMP WARRANTY

NOTE: PLUMBING LAYOUT IS FOR CONTROL OF PUMP PORT "A" & "B"



# TORQUE CONTROL FOR PORT "A" SLAVED

(SCHEMATIC)



RAPID RESPONSE TORQUE CONTROL FOR SUNDSTRAND HYDRO-TRANSMISSION - SERIES 20 THRU 27

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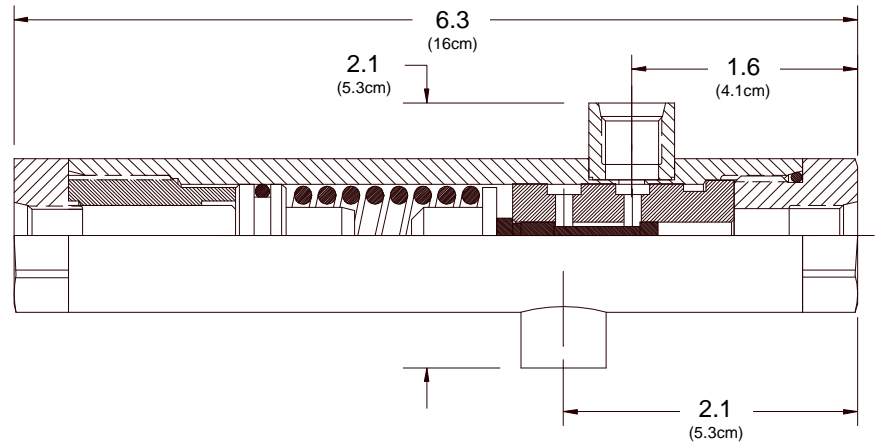
NOTES:

1. All connecting plumbing to be 1/4" tube size
  2. Control cylinder end caps must be ported with -4 S.A.E.
  3. O-Ring port for external plumbing. Consult pump mfg.
  4. Tee close to master compensator.
- Plumbing layout is for slaved control of "A" port on dual pumps.

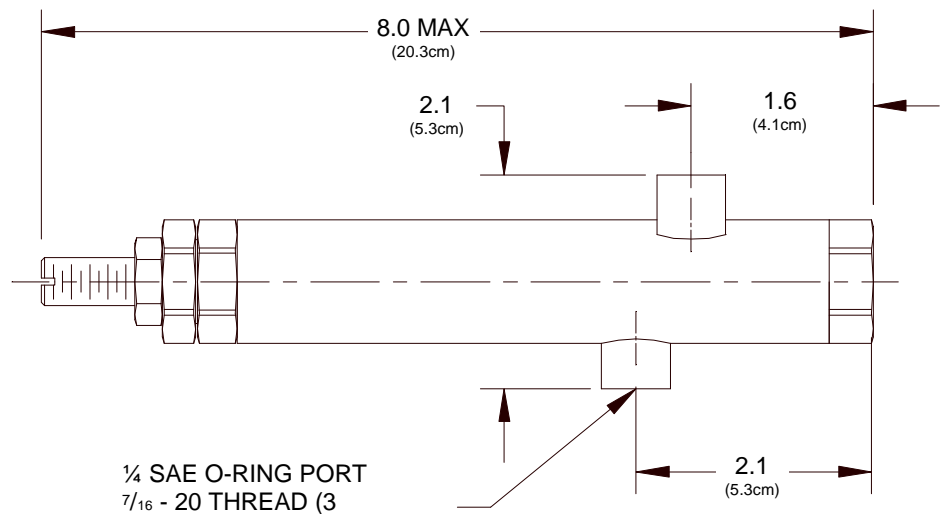


# TORQUE CONTROL COMPONENTS

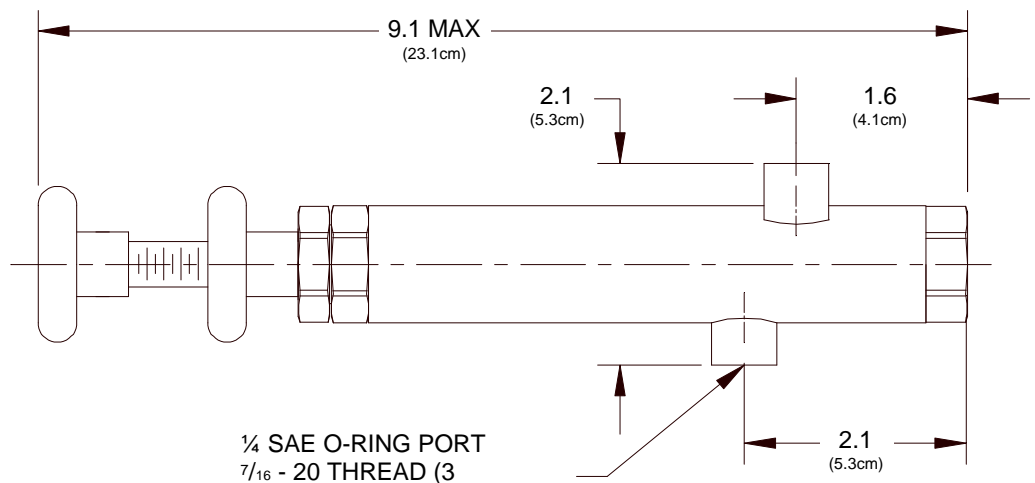
**PART NO. 2115-A**  
2 PORT COMPENSATOR  
REMOTE CONTROL  
SEAL KIT SK-2115



**PART NO. 2115**  
2 PORT COMPENSATOR  
MANUAL CONTROL  
SEAL KIT SK-2115



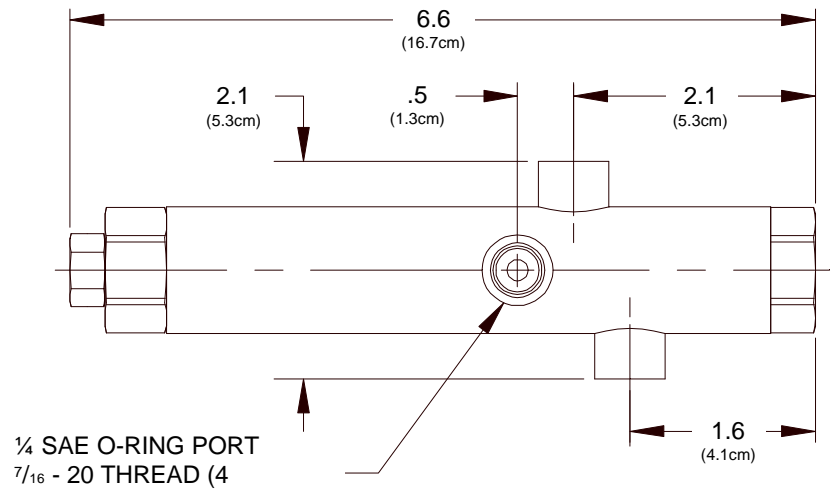
**PART NO. 2115-C**  
2 PORT COMPENSATOR  
PANEL MOUNT CONTROL  
SEAL KIT SK-2115



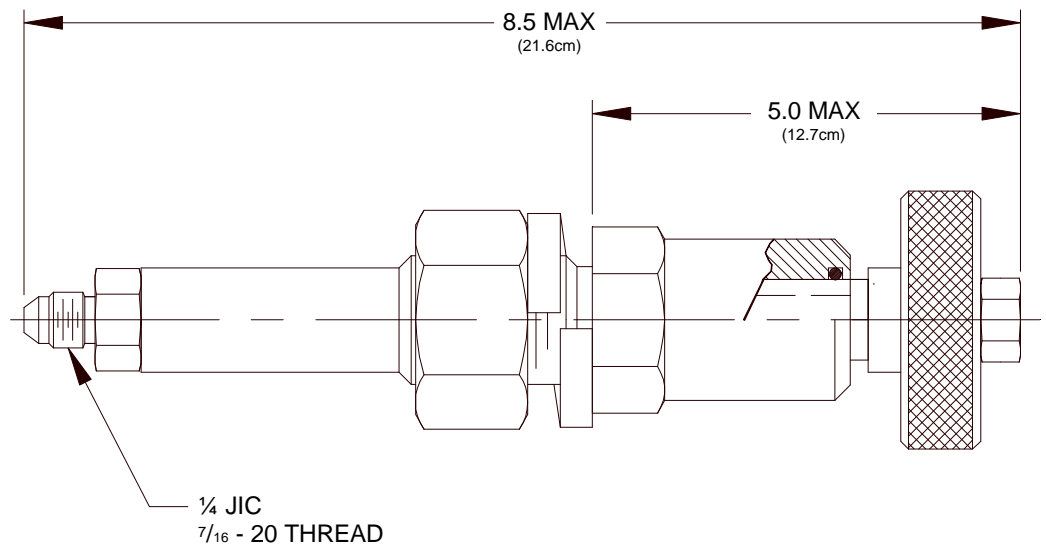


## TORQUE CONTROL COMPONENTS

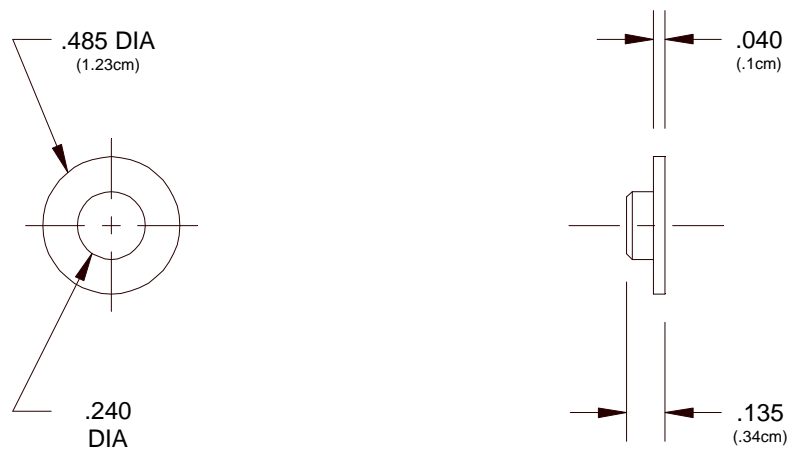
**PART NO. 2116-D**  
3 PORT COMPENSATOR  
SLAVE CONTROL  
SEAL KIT SK-2116



**PART NO. 2106**  
PRESSURE CONTROL  
REMOTE CONTROL  
SEAL KIT SK-2106



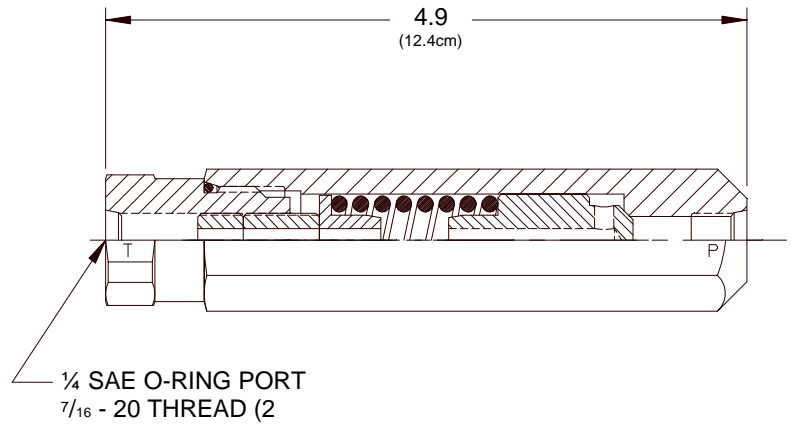
**PART NO. 71101**  
INTERNAL PORT PLUG



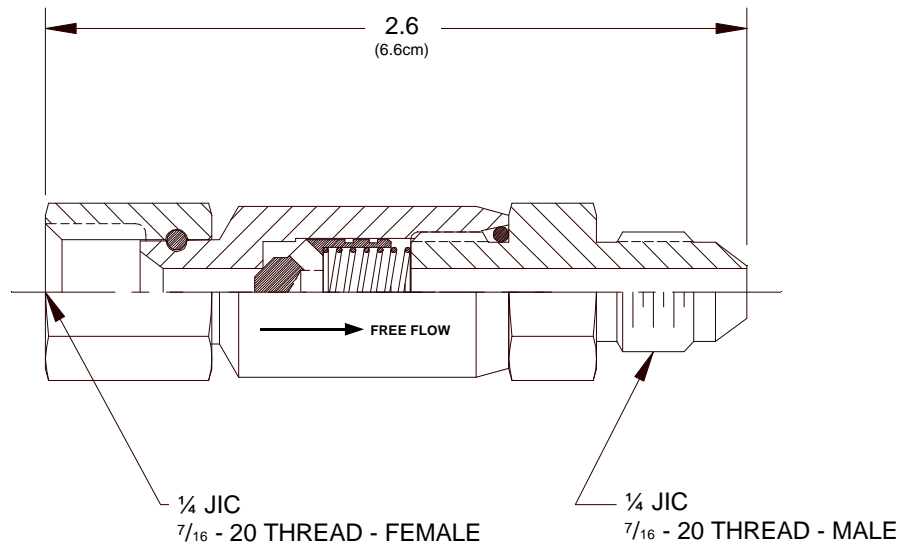


## TORQUE CONTROL COMPONENTS

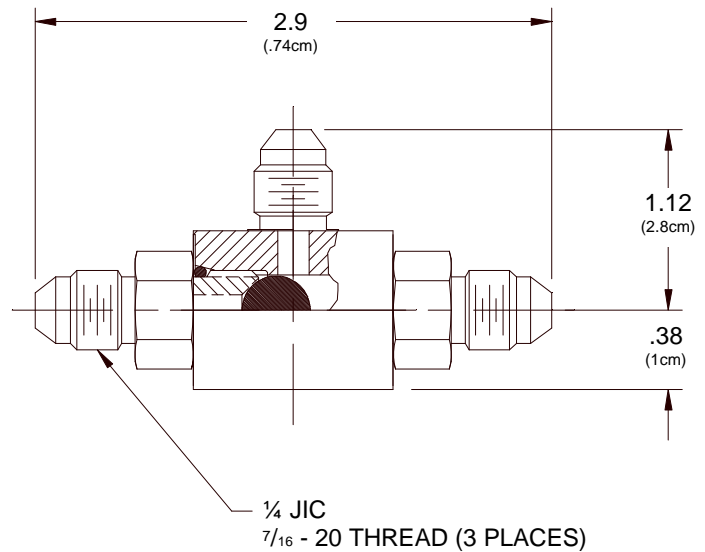
**PART NO. 2118**  
RELIEF VALVE  
SEAL KIT SK-2118

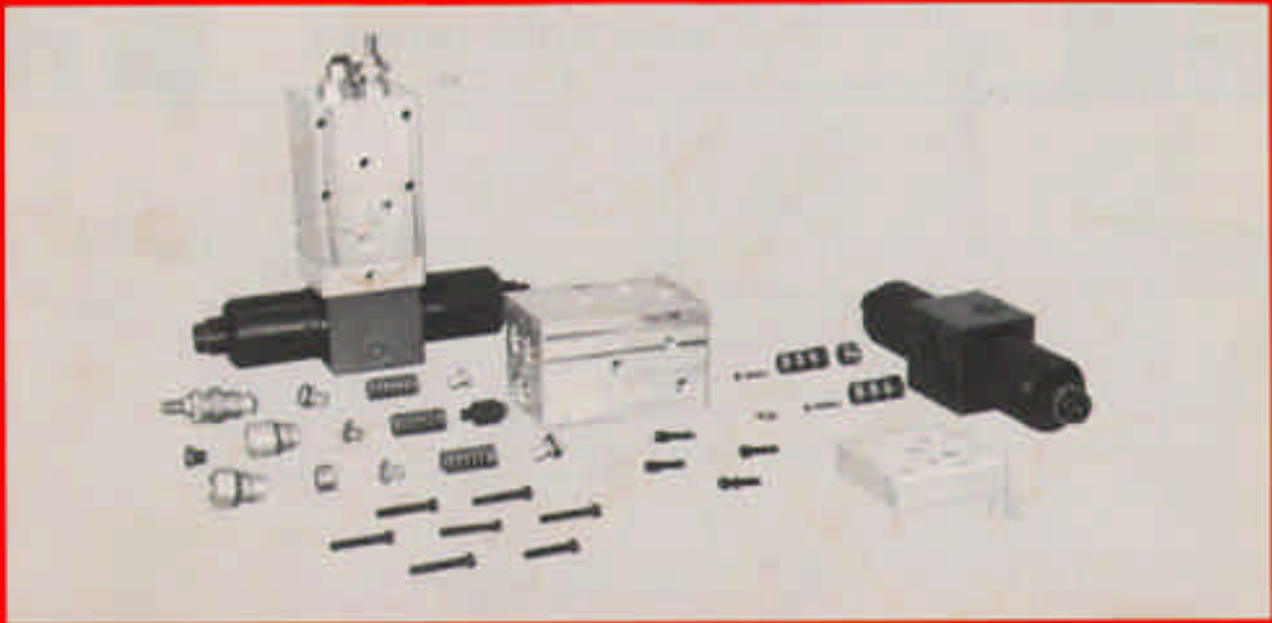


**PART NO. 2104**  
CHECK VALVE  
SEAL KIT SK-2104



**PART NO. 2114**  
SHUTTLE VALVE  
SEAL KIT SK-2114





HC-100



HC-102



HC-103



**Plant and Offices:**  
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 Tel: 817/923-1965  
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**CONTACT OUR FORT WORTH OFFICE FOR ADDITIONAL  
 PRODUCT INFORMATION • SWIVELS, COUPLINGS,  
 AND CONTROLS FOR HYDRAULIC SYSTEMS • ASK  
 FOR THE NEAREST REPRESENTATIVE.**

