



— Innovative, Elegant & Robust Solutions —

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ENVIROSPRAY Component Manual

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ENVIROSPRAY®

Water Module HYDEN422 and Sequence Valve HYDEN408



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1 Water Module HYDEN422-BAAAA

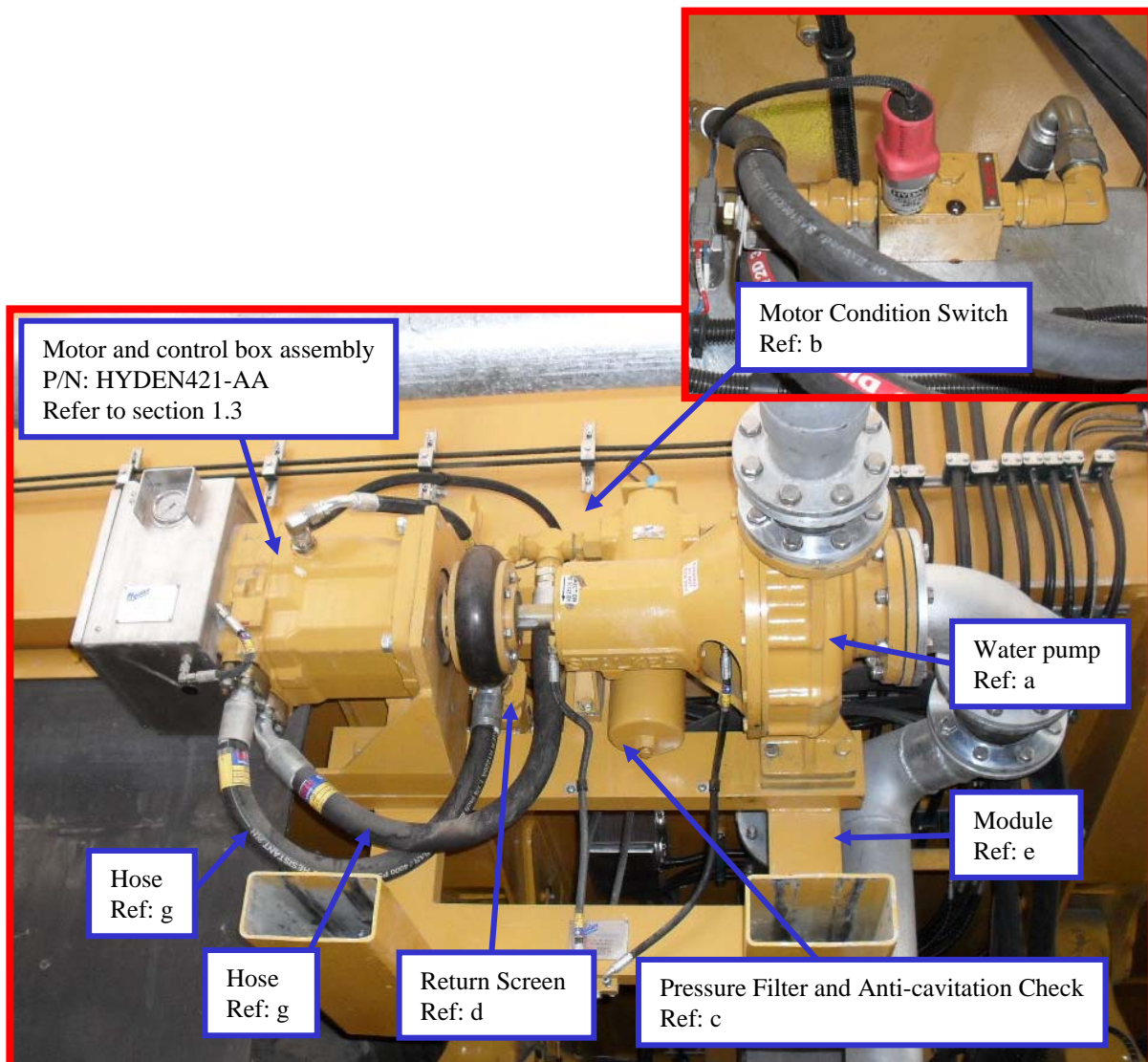
1.1 Description

The hub of the hydraulic system is the main water pump module that consists of a large variable motor, control box, pressure filter, return filter, motor condition indicator and mounting frame assembly all in one package. This modular concept ensures that if the Enviro-spray™ diagnostics are used correctly and the system is still not functioning correctly that the simple change of the complete module will rectify the problem with minimal down time while ensuring any resultant contamination is removed with the module for inspection by trained Enviro-spray™ agents.

1.2 Components

1.2.1 Component Identification

The following picture illustrate a typical installation of a Water Module. Identified are the major components within the assembly. Part numbers for these components can be found in section 1.2.2 using the references listed below.



1.2.2 Component Breakdown

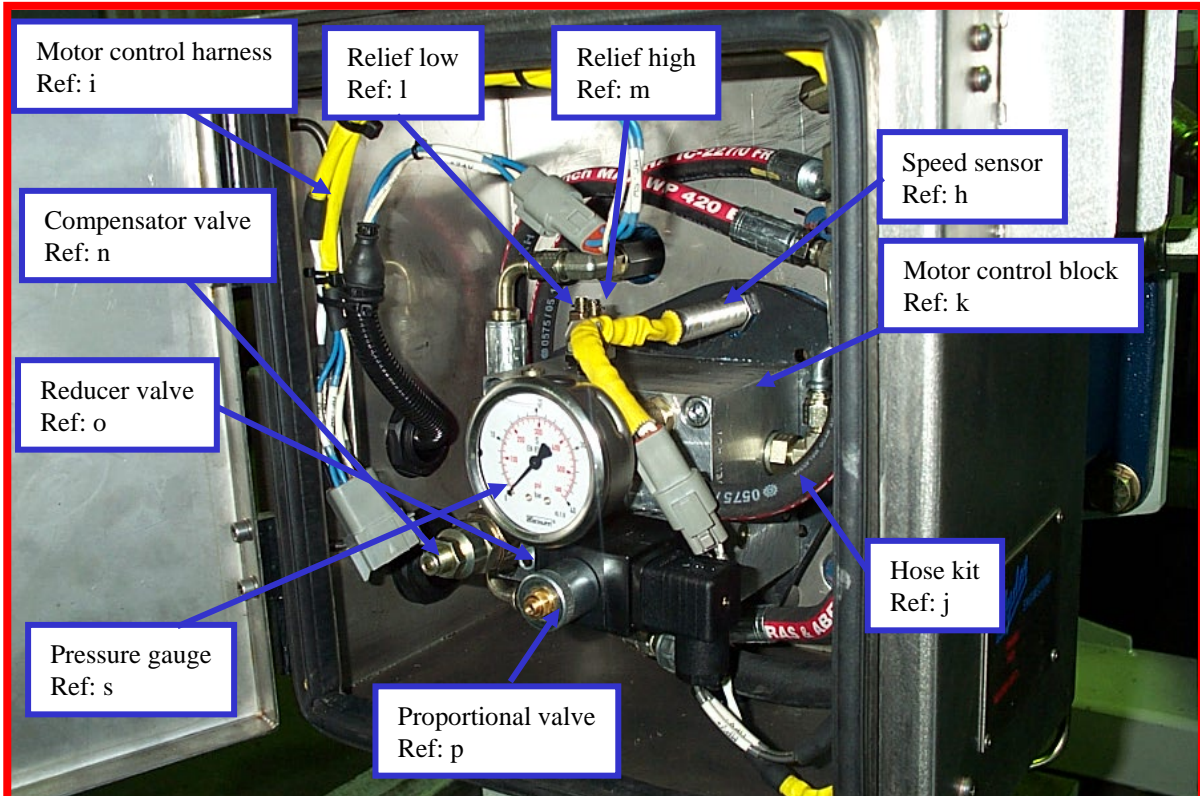
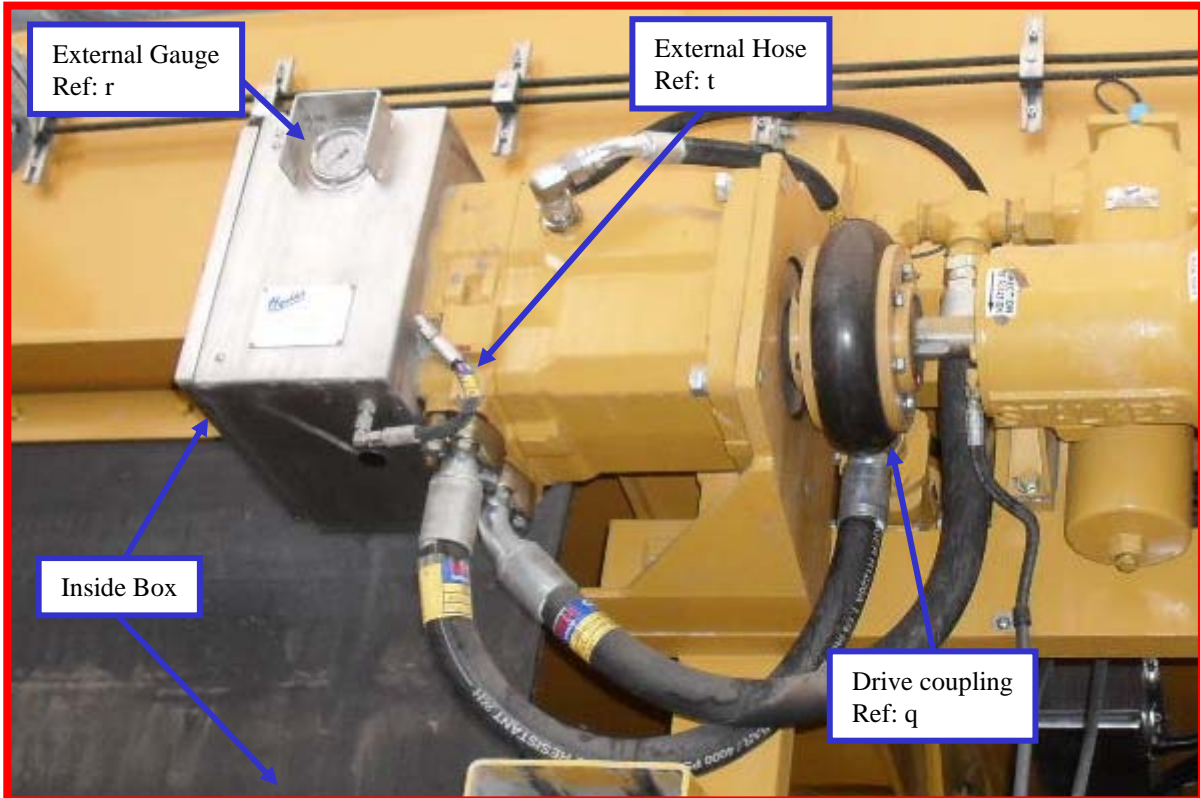
The following table lists the major components with their part numbers. The list only includes major components and components typically required for maintenance. If required, further component details can be provided by contacting Hyden Engineering.

Ref.	Description	Qty	Part / Assembly	Sub Assembly
a	Water Pump	1	HYDEN423-C	
b	Motor Indicator Kit	1	HYDEN258-C	
-	Motor Condition Indicator	1		HYDEN258-0
-	Electric Indicator	1		HYDEN418-A
c	Filter Assembly	1	HYDEN379-A	
-	Warning Sticker	1		HY-2270AAA
-	Filter Element	1		HY-2045AAA
-	Filter Bowl	1		HYDEN594-0
-	Electric Indicator	1		HYDEN418-0
d	Return Screen	1	HYDEN420-B	
-	Screen Element	1		HY-2047AAA
e	Pump Module Assembly Kit	1	HYDEN505-AAA	
-	Module Frame	1	HY-1531ACA	
f	Motor Hose Pressure	1	H1220A-1060-T704-2026-T735-2020	
g	Motor Hose Return	1	H1220A-920-T704-2026-T733-2020	
-	Motor Hose Case Vent	1	T112A-540-T204-1217-T225-1217	
-	Control Box Return Hose	1	T16A-745-T204-0609-T224-0609	
-	Grease Line	1	T14A-600CL-T204-0407-T224-0407	
-	Grease Line	1	T14A-630CL-T204-0407-T224-0407	

1.3 Sub-assembly Water Pump Motor HYDEN421-AA

1.3.1 Component Identification

The following picture illustrates the mounting of a HYDEN421-AA Motor on a Water Module. Identified are the major components within the assembly. Part numbers for these components can be found in section 1.3.2 using the references listed below.



1.3.2 Component Breakdown

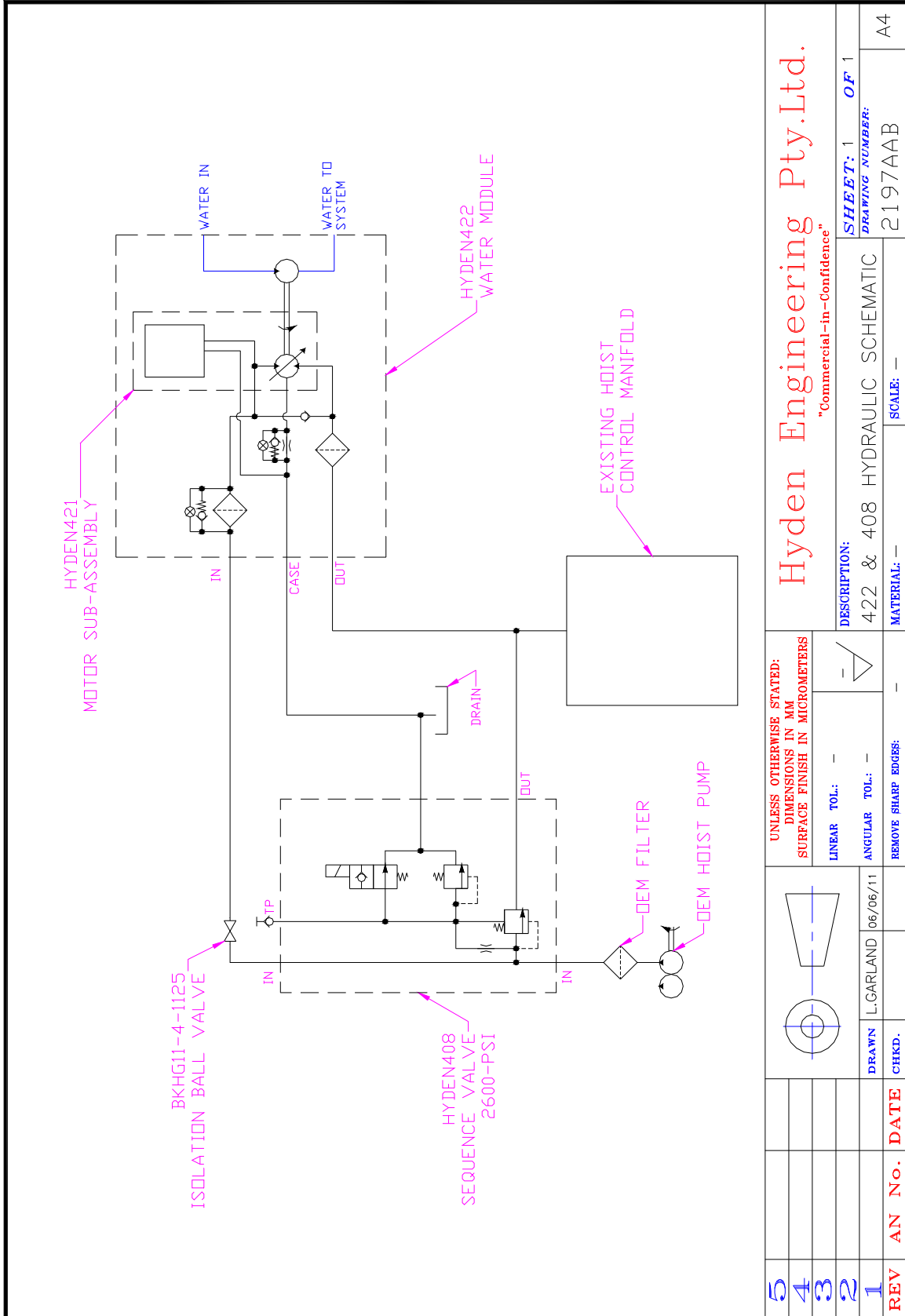
The following table lists the major components with their part numbers. The list only includes major components and components typically required for maintenance. If required, further component details can be provided by contacting Hyden Engineering.

Note: hoses to or from HYDEN421 unit are listed in component table in section 1.2.2.

Ref.	Description	Qty	Part / Assembly	Sub Component
h	Speed sensor	1	3E-7126	
i	Electrical harness	1	HY-2154AAA	
j	Hose kit (box hoses)	1	HY-2223AAA	
k	Motor control valve	1	HYDEN426-00	
l	Relief valve	1		HYDEN297-EJ
m	Relief valve	1		HYDEN599-AA
n	Sequence valve	1		HYDEN602-AA
o	Pressure reducer	1		HYDEN461-AA
p	Proportional Pressure Reducer	1		HYDEN498-F
q	Coupling kit	1	HYDEN472-A	
	Tyre	1		F90
	Bolts	12		BOLT-M10-1.5x35-ZP-8.8
	Washers	12		WASHER-SPRING-M10-ZP-8.8
r	External gauge	1	SPG063-250-1-RBU	
s	Test gauge	1	SPG063-40-1-RBU	
t	External hose	1	T14A-170CL-T204-0407SS-T204-0407SS	

1.4 Hydraulic Schematic

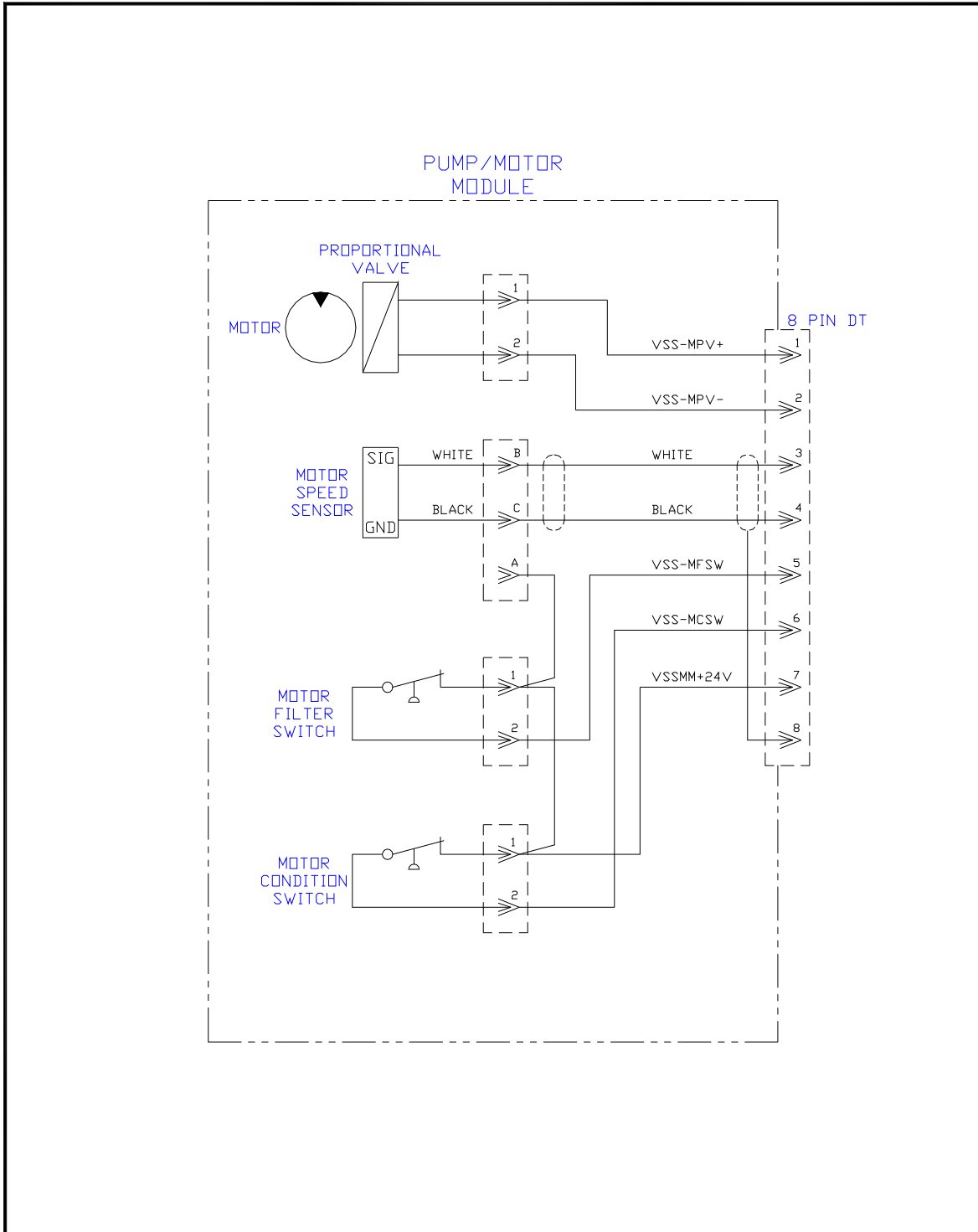
The following schematic shows the hydraulics used for the HYDEN422 Water Module incorporating the Sequence Valve HYDEN408 (refer to section 2).



Hyden Engineering Pty.Ltd.		SHEET: 1 OF 1
"Commercial-in-Confidence"		DRAWING NUMBER: 2197AAB
UNLESS OTHERWISE STATED: DIMENSIONS IN MM SURFACE FINISH IN MICROMETERS	DESCRIPTION: 422 & 408 HYDRAULIC SCHEMATIC	SCALE: -
LINEAR TOL: -	ANGULAR TOL: -	REMOVE SHARP EDGES: -

1.5 Electrical Schematic

The following schematic shows the wiring used for the HYDEN422 Water Module. It includes wire labelling and plug groupings for easy identification.



REFER TO 'CONTROL SYSTEMS' MANUAL FOR CONTROL SYSTEMS ELECTRICAL CIRCUITS

5																					
4																					
3																					
2																					
1																					
REV	AN No.	DATE	CHKD.	L.GARLAND	17/06/11																
<p>UNLESS OTHERWISE STATED: DIMENSIONS IN MM SURFACE FINISH IN MICROMETERS</p>										<p>Hyden Engineering Pty.Ltd. "Commercial-in-confidence"</p>											
<p>LINEAR TOL: -</p>										<p>DESCRIPTION: HYDEN422 MODULE ELEC CCT</p>											
<p>ANGULAR TOL: -</p>										<p>SHEET: 1 OF 1</p>											
<p>REMOVE SHARP EDGES: -</p>										<p>DRAWING NUMBER: 2733AAA</p>											
<p>MATERIAL: -</p>										<p>SCALE: -</p>											
										<p>A3</p>											

2 Sequence Valve HYDEN408-BA

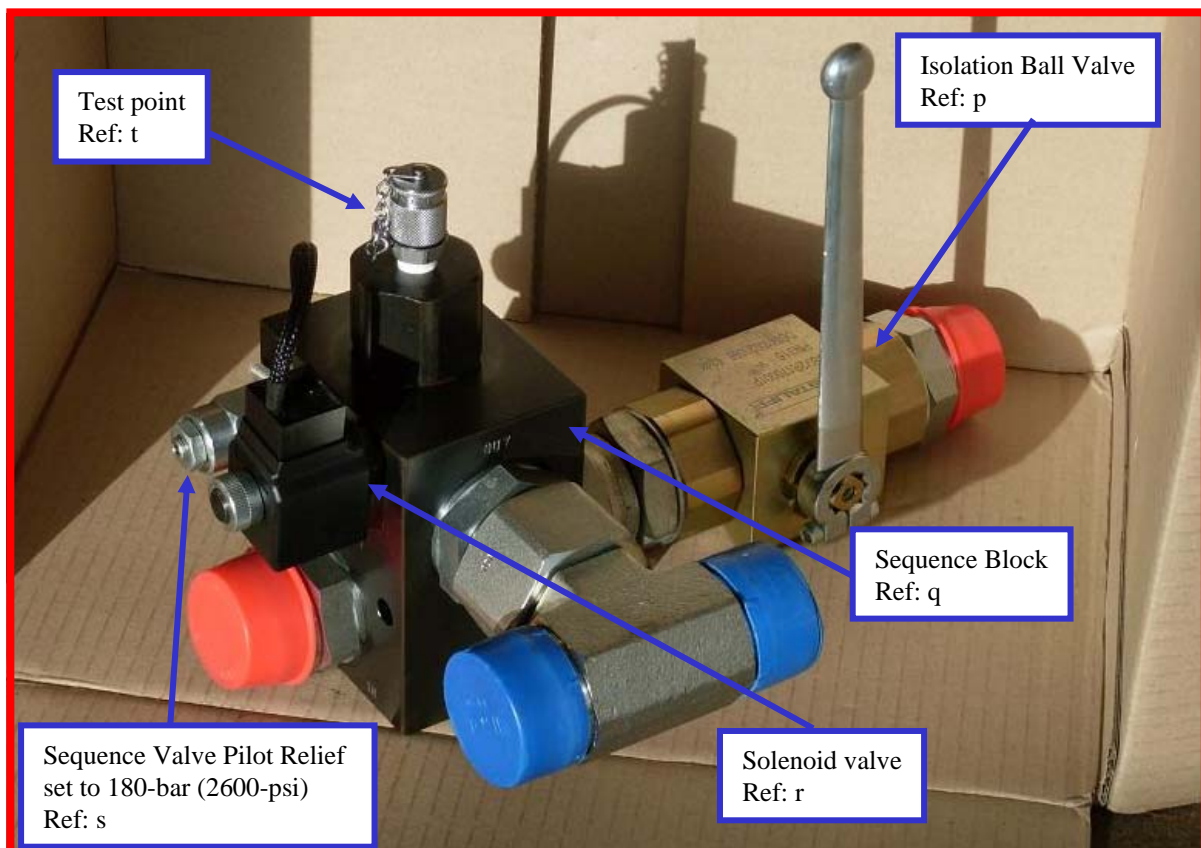
2.1 Description

The Enviro-spray™ sequence valve changed the way water systems interact with existing OEM hydraulic systems by removing the need to control any of the existing valves with the spray system so that the reliability and simplicity of the Enviro-spray™ system was maintained. The sequence valve simply sends the oil to the Enviro-spray™ water pump module and then back into the existing control valve so that all the oil that went through the old system still follows the same path ensuring brake cooling flow stays consistent with OEM specifications.

2.2 Components

2.2.1 Component Identification

The following picture identifies the components within the HYDEN408-BA assembly. Part numbers for these components can be found in section 2.2.2 using the references listed below.



2.2.2 Component Breakdown

The following table lists the major components with their part numbers. The list only includes major components and components typically required for maintenance. If required, further component details can be provided by contacting Hyden Engineering.

Ref.	Description	Qty	Part / Assembly	Sub Assembly
p	Ball valve	1	BKHG11-4-1125	
q	Sequence valve block C/W relief and solenoid excluding coil	1	HYDEN408-00	
r	Solenoid valve	1	HYDEN460-E	
-	Valve	1		HYDEN498-E
-	Coil	1		HYDEN494-A
s	Relief valve	1	HYDEN233-G0	
t	Test point	1	HY-1269AAA	