



XCITE ***Owner's Manual***

1502C HYDRAULIC POWER SUPPLY

Copyright 1997
Xcite Systems Corporation

This document contains proprietary information of Xcite Systems Corporation and is tendered subject to the conditions that the information (a) be retained in confidence (b) not be reproduced or copied in whole or in part and (c) not be used or incorporated into any product except under an express written agreement with Xcite Systems Corporation.

1502C Hydraulic Power Supply



1. Introduction

The XCITE Hydraulic Power Supplies are designed to fulfill the power requirements of exciter heads using the most energy-efficient and maintenance free components available. All units use a highly reliable, variable volume, pressure compensated, axial-piston pump to deliver only the energy demanded by the load, thus reducing power consumption.

2. Theory of Operation

The purpose of the XCITE Hydraulic Power Supply is to supply clean hydraulic oil at a constant pressure under the varying flow demands of the force exciter head. The system was designed to do this in the most efficient manner, considering power requirements, reliability, safety, ease of maintenance, and operator convenience.

2.1. Circuit Description (Hydraulic) See Drawing B-30078

An oil reservoir provides storage for all necessary supply oil and provides some oil cooling. Mounted on the reservoir are oil level and oil temperature gauges, a temperature sensitive switch, and a reservoir fluid level detector switch for motor shut down. A 3000 PSI pressure is achieved by a variable volume, pressure-compensated pump that has a factory set delivery rate.

Fluid from the pump first passes through a five-micron (absolute) filter. Should this filter become clogged, a pressure drop builds up across the sensor, causing a switch to trip. This causes the FILTER light to illuminate. The system should not be operated until the filter element is changed. After passing through the filter, oil flows to the pressure output disconnect.

Oil cooling for the Hydraulic Power Supply is accomplished with a separate oil cooling circulating pump mounted on the same shaft as the main variable volume pump. Oil is continuously circulated from the reservoir through the water/ oil heat exchanger and back to the reservoir. The water/ oil heat exchanger is also connected to a water supply with 50 PSI pressure; 8 GPM flow capacity and a maximum of 70°F water temperature.

The 1502C Hydraulic Power Supply obtains its 3000 PSI operating pressure by means of a pressure compensator which allows the pressure to be adjusted from zero PSI to 3000 PSI. This setting is pre set at the factory for 3000 PSI and should not be changed in the field. Connected to the pressure compensator is a time delay controlled solenoid which cycles the pressure from zero PSI at start up to 3000 PSI approximately 15 seconds after the pump start sequence is initiated.

2.2. Circuit Description (Electric) See Drawing B-30079

The electrical input is specified at the time of purchase as either 200-230 or 380-480 volt, 50/60 Hz, three phase. The fourth wire (green) is a ground wire and must be tied to earth ground to prevent floating grounds due to an unbalanced load.

The pump motor uses the high voltage three-phase power, while the remaining loads derive 120 volt, single-phase from the step-down Transformer T-1 (designated 14), appropriately connected to the incoming power to provide 120 VAC on the secondary of the transformer.

Two-way protection of the three-phase power is provided. A magnetic circuit protector provides over current protection. It is also connected to the electrical box operating handle to disconnect power in the electrical box.

Pump motor overload protection is provided by thermal overload heaters in the motor starter, which were specifically designed for the pump motor. A *RESET* button is conveniently located inside the electrical box, should be thermal overload trip. The pump start relay (1CR), (designated 10), is a latch-up design so that momentary switches may be used for pump start and pump stop operations.

PHASE CORRECT CIRCUIT

A phase sequence relay 1PM (designated 1) is connected to and monitors the 3-phase incoming line to determine if the phasing is connected correctly to provide proper motor rotation. If the START light is off, any two legs of the incoming lines should be reversed.

If the phase is incorrect, 1PM (1) remains de-energized, thus preventing the system from being energized. If the phasing is correct, 1PM (1) energizes, allowing 120 VAC from T-1 (14) to be applied to the pump unit.

The T-1(14) Transformer is fused by 4FU and 5FU (designated 17). The system POWER switch connects power to the control circuits. If oil temperature is normal, relay 2CR (designated 10) is not energized. Momentarily, pressing the START button will energize 1CR (designated 10) if oil level, temperature, filter, and pressure selection are correct.

PUMP START/STOP CIRCUIT

Relay 1CR (10) energizes the motor starter 3. Auxiliary contact 1M closes, latching 1CR. A normally closed CR1(10) contact opens, turning off the *STOP* light.

Momentarily pressing the STOP button breaks the latch-up circuit and de-energize 1CR (10) and the pressure relief solenoid. After a short delay, an *OFF DELAY* contact on 1CR opens, de-energizing the motor-starter coil and causing the pump to stop.

LOW/ HIGH PRESSURE CIRCUIT

The pressure compensator solenoid controlling the system pressure of zero to 3000 PSI is energized by time delay relay 1TR. This relay is preset at the factory such that the pressure compensator solenoid will be energized approximately 15 seconds after the pump motor is started. This setting should not be changed in the field.

LOW OIL CIRCUIT

Relay 3CR (designated 10) is normally not energized unless the oil level drops. If the *RED OIL LEVEL LOW* light illuminates, the system must be reset by pushing the pump *STOP BUTTON* on the Master Controller and oil must be added to the reservoir. When a low oil level is detected, the pump is turned off.

OVER TEMP CIRCUIT

Relay 2CR (10) is normally not energized unless the oil temperature exceeds 150°F +/-10°F. If the *RED OIL OVERTEMP* light is illuminated, the system must be reset by pushing the pump *STOP BUTTON* on the Master Controller after the system cools down.

DIRTY FILTER CIRCUIT

If the differential pressure drop across the filter exceeds approximately 50 PSI, the *RED FILTER* restriction light will illuminate, the Power Supply will **NOT** shut off, however the filter should be changed when the filter light is illuminated.

3. Description

Included on the hydraulic power supply are an oil supply line pressure gauge and a timer which records actual pump running time. Mounted on the side of the reservoir is an oil level sight gauge with an integral oil temperature thermometer. A reservoir drain is also located on the reservoir. All motor controls and associated electrical equipment are located in the electrical control box. Connections for pressure and return hoses are attached with quick disconnect style connectors.

3.1. Major Components

- Oil Reservoir
- Motor
- Variable volume pressure-compensated Pump
- Five-micron Filter Assembly
- Water Heat Exchanger
- Motor Control Box
- Hydraulic Hoses

3.2. Control Components

3.2.1. Emergency Stop Switch

This switch de-energizes the motor-starter relay, bypassing all shutdown logic; thus causing the motor to stop. Use it only in an emergency situation.

WARNING

Some operating conditions cause the system to shutdown.

3.3. Monitoring Devices

3.3.1. Phase Sequence Relay (PHASE Indicator)

A phase sequence relay monitors the three-phase power applied to the unit. If the phasing of the wires is incorrect, the relay will prevent the pump from being energized, and the *PHASE CORRECT* lamp will illuminate.

3.3.2. Filter Pressure Drop Sensor (FILTER Indicator)

This sensor sends a signal if the differential pressure across the filter element is excessive. This occurs when the differential pressure drop across the replaceable filter element exceeds 50 PSI. Excessive differential pressure occurs when the filter element is clogging, fluid viscosity is too high, fluid temperature is too low, or any combination. At that time, the *FILTER* light illuminates and the filter should be replaced.

Note: There may be times when the system is first started and the oil is cold that the filter light will illuminate. Allow 10 to 20 minutes of operation and if the filter light goes off, then the filter is not dirty and does not need replaced.

3.3.3. OIL OVERTEMP Indicator

The temperature sensor monitors the oil temperature of the reservoir and prevents the pump from running if the oil temperature exceeds 150°F +/-10°F. The *OIL OVERTEMP* light illuminates, indicating that the maximum allowable oil temperature has been exceeded.

3.3.4. LOW OIL Indicator

The level sensor monitors the oil level in the oil reservoir and prevents the pump from running if the oil level is low. The pump will shut down or fail to start until additional oil is added. The red *LOW OIL* indicator lamp illuminates during this condition.

4. Care and Maintenance**WARNING**

Electrocution or severe electrical shock may occur.

When the MAIN power is plugged in, the line side of the motor starter is at line voltage.

The XCITE Hydraulic Power Supply was designed so that no periodic lubrication on mechanical parts is required. Cleanliness is very important when using sophisticated hydraulic systems, and although a clean room environment is far from necessary, general cleanliness is recommended. Routine maintenance on the overall system should include the following.

4.1. Operating Care

4.1.1. Wipe off all cables after each use.

4.1.2. Never drag cables across the floor.

4.1.3. Immediately after the hydraulic hoses are disconnected, cover all hydraulic connectors with the covers provided.

4.1.4. During operation, the oil temperature should never rise above 140°F. (The oil temperature thermal relay shuts down the system at 150°F +/-10°F.)

4.1.5. Before each test, check the oil pressure to make sure it is at 3000 PSI. A pressure set knob with lock nut adjustment is located on the top of the supply tank. This control is preset at the factory and should not be adjusted.

4.1.6. Before each test, check to make sure that the water supply is turned on and the supply water temperature is below 70°F, that the pump maintenance warning lights are not illuminated, and that the phase sequence indicator shows proper motor phasing.

If for some reason the system has overloaded, the pump motor started thermal overload will trip. Reset it by opening the access door, and pushing the reset button located on the motor starter.

4.2. Maintenance

4.2.1. To keep the system operating within the specified limits, it is necessary to periodically check the oil level by observing the oil level gauge. Fluid should fill the gauge.

4.2.2. Oil should be changed after every 1000 hours of pump operation.

4.2.3. The condition of the filter is displayed by the light on the electrical control box inside the cabinet. The filter requires replacement only when the *FILTER* light is illuminated.

4.2.4. Oil should be drained from the reservoir during transportation.

5. Troubleshooting

Listed below are some of the common problems which may be experienced with a Power Supply.

5.1. Unit Overheats causing Pump To Turn Off and Oil Overtemp to Illuminate
Overheating may be caused by an interruption in water flow to the water/oil heat exchanger or supply water temperatures above 70°F. Check to see that water is flowing through the water/oil heat exchanger at 8GPM when the oil temperature is above 135°F. If pump has shut down due to overheating, it will require several hours of natural cooling before the pump will restart.

5.2. Pump De-Energizes

A pump that de-energizes for no apparent reason can be caused by a noisy 3-phase power line at which the 3-phase voltage drops below 380 VAC (50 Hz) for more than 10 milliseconds. This results in the phase monitor relay 1PM momentarily de-energizing, shutting off the system.

6. Specifications

<u>Item</u>	<u>Specifications</u>
Dimensions	
Height	70.00"
Width	54.00"
Depth	72.00"
Weight	2200 lb (without oil)
Hydraulic Oil	Mobil DTE-24/25
Filter	5 Micron
Pump	30 GPM
Pressure-compensated variable flow axial piston	
Motor, 380V, 3-Phase, 50 Hz at 90 Amps or 460V, 3-Phase, 60 Hz at 75 Amps	60 HP
Reservoir	120 gallon
Cooling	Water (50 PSI, 70°F, 8GPM Flow Max)
Noise Level (at 3 feet with full pump flow at 3000PSI)	78 to 86 dBA depending on location

7. Drawings***Model 1502C***

Pump/ Reservoir Outline Dimensions	B-30077
Hydraulic Schematic	B-30078
Electrical Schematic 440-480 VAC, 60 Hz	B-30079
Electrical Box Layout	B-30080

8

7

6

5

4

3

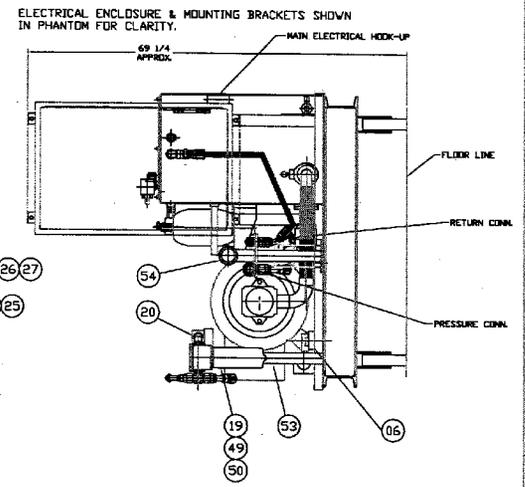
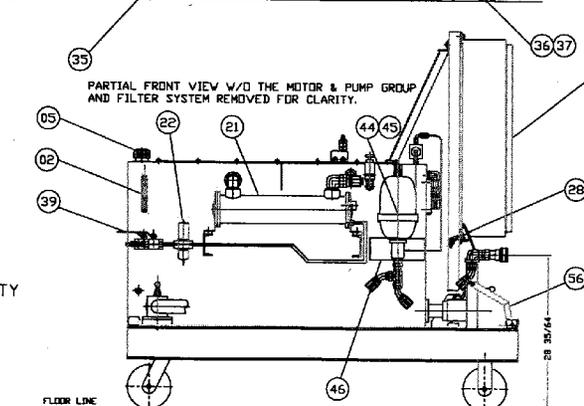
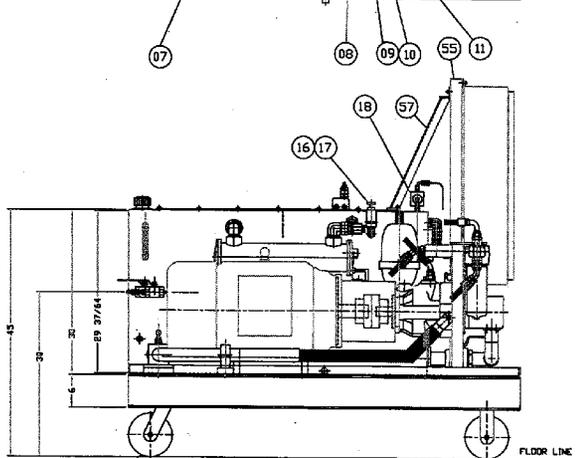
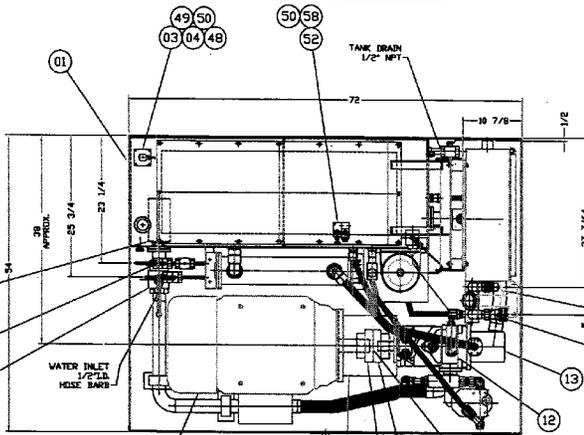
2

1

PARTS LIST - BILL OF MATERIAL				
ITEM	DESCRIPTION	PART#	MANUFACTURER	QTY
01	L-SHAPED RESERVOIR FRAME	11352-R00-S01	TRIAD	1
02	GAUGE, SIGHT LEVEL/TEMP	ALG-01	VESSCOR	1
03	COVER LEVEL/TEMP SWITCH	LSCP-300	TRIAD TECH	1
04	SWITCH LEVEL/TEMPERATURE	57144	GENSIS	1
05	ASSEMBLY, FILLER BREATHER	HC-120	HYDRO-CRAFT	1
06	BAR, MOTOR DAMPENING	V5M-364-W	VESSCOR	2
07	MOTOR, 60 HP @ 1500 RPM, TEFC, °C FACE WITH BASE, 3ØV/3Ø/3PH, 3Ø/4TC FRAME, 3ØV/3Ø/3PH-42-4603/60HZ, DUAL RATED	113004RH-1	BALDOR	1
08	ADAPTOR, MOTOR/PUMP	261390	VESSCOR	1
09	HUB, MOTOR COUPLING	M60021220	MAGNALOY	1
10	HUB, PUMP COUPLING	M60012214	MAGNALOY	1
11	INSERT, COUPLING	M67097	MAGNALOY	1
12	PUMP, V.V. PRESSURE COMPENSATED PISTON (30 GPM MAX.)	PV060R1D3C7NPVS	PARKER	1
13	PUMP, FIXED DISPLACEMENT VANE (37 GPM)	FPV35S30R2FN1	PARKER	1
14	STRAINER, SUCTION	HA-FS-50	HYDRO-CRAFT	1
15	IFLANGE, 1 1/4" CODE 82 4-BOLT SAE STR. THD.	W48-20-20U	ANCHOR	1
16	IVALVE, CARTRIDGE RELIEF	RAH1616S60	PARKER	1
17	BODY, CARTRIDGE VALVE	D16-2A16T	PARKER	1
18	VALVE, ACCUMULATOR DUMP	B82378	BOSCH	1
19	FILTER, PRESSURE	28P 2 05Q E2 50 N4M4 1	PARKER	1
	REPLACEMENT ELEMENT # G04271			
20	VALVE, CHECK	C16205	PARKER	1
21	HEAT EXCHANGER, 4:1 OIL/WATER	EKS 1024-F-R	THERMAL TRANS.	1
22	VALVE, WATER MODULATING	65511	THERMAL TRANS.	1
23	BULBWELL	65280	THERMAL TRANS.	1
24	COUPLER, 1" 60 SERIES QUICK	H8-63-T16	PARKER	2
25	PLUG, COUPLER DUST	H8-65	PARKER	3
26	NIPPLE, 1" 60 SERIES QUICK	H8-63-T16	PARKER	2
27	CAP, NIPPLE DUST	H8-66	PARKER	3
28	GAUGE, PRESSURE	25 310-SST-5000 PSIBAR	NOSHOK	1
29	IFLANGE, GAUGE	25 3 CHROME FLANGE	NOSHOK	1
30	SMUBBER, GAUGE	NSAB-KXV-HS	SUN	1
31	ENCLOSURE, ELECTRICAL	A-302408LP	HOFFMAN	1
32	PANEL, ENCLOSURE	A-30924	HOFFMAN	1
33	SET, 1502C TAG	11375-R00-S01	TRIAD	1
34				
35	CASTER, 8" X 2" CAST IRON SWIVEL, 1400# CAP.	2422T14	MMMASTER-CARR	2
36	CASTER, 8" X 2" CAST IRON RIGID, 1400# CAP.	2422T22	MMMASTER-CARR	2
37	KIT, CASTER BRAKE	2422T77	MMMASTER-CARR	2
38				
39	IVALVE, 1/2" BALL	V500P8	PARKER	1
40	HOSE ASSEMBLY	451TC0505-16-18-16-480	PARKER	2
41	HOSE ASSEMBLY	451TC0505-16-18-16-36	PARKER	2
42	ADAPTER	16 HPSON-S	PARKER	2
43	ADAPTER	16 C50X-S	PARKER	2
44	ACCUMULATOR, 1 GALLON, 2500 PRECHARGE	BAD183T001	PARKER	1
45	BASE, ACCUMULATOR	1449100000	PARKER	1
46	CLAMP, ACCUMULATOR	1449080000	PARKER	1
47	VALVE, 2" BALL	BVAL-200S-4321/LH	DMC	2
48	CONNECTOR, 3 PIN + GRD, 1/2" NPT TO DIN	931 297-004	HIRSCHMANN	1
49	CONNECTOR, 0.250 VAC/DC (5 M LONG)	633 095-112	HIRSCHMANN	2
50	GASKET, CONNECTOR	731 831-002	HIRSCHMANN	3
51	COMPENSATOR, REMOTE PRESSURE	IPVCRAR0311	PARKER	1
52	MODULE, PASSETE COMP. WITH UNLOADING	RCM1LHD-1003895	PARKER	1
53	BRACKET, PRESSURE FILTER	11410-R00-S01	TRIAD	1
54	BRACKET, HYDRAULIC CONNECTION	11411-R00-S01	TRIAD	1
55	BRACKET, ELECTRICAL BOX (NOT SHOWN)	11412-R00-S01	TRIAD	1
56	BRACKET, HYD. CONNECTION SUPPORT	11413-R00-S01	TRIAD	1
57	BRACKET, ELECT. BOX SUPPORT (NOT SHOWN)	11414-R00-S01	TRIAD	1
58	CONN., 120 VAC/DC, 2-PIN W/BUERGE SUPP. (6 M LONG)	633 108-112	HIRSCHMANN	1

*NOTE: ITEMS 40 THRU 43 SHIPPED LOOSE.

*NOTE: NOT ALL COMPONENTS SHOWN IN ALL VIEWS FOR CLARITY



⚠ DANGER ⚠
 ACCUMULATOR CIRCUIT
 DISCHARGE PRESSURE PRIOR
 TO ANY DISASSEMBLY OF PLUMBING
 OR VALVING COMPONENTS.

SYSTEM REQUIREMENTS	
RESERVOIR CAPACITY:	120 GALLONS
FLUID TYPE:	3TE24
SYSTEM OPERATING TEMPERATURE:	130°F
PUMP FLOW RATE:	30 GPM
SYSTEM OPERATING PRESSURE:	3000 PSI
PUMP COMPENSATING PRESSURE:	2000 PSI
RELIEF VALVE PRESSURE:	3500 PSI
PRESSURE SWITCH SETTING:	NA PSI
ELECTRIC MOTOR:	60 HP @ 1500 RPM
PAINT SPECIFICATION:	SEE BELOW
MIN. WATER PRESS.	50 PSI
MIN. WATER FLOW:	8 GPM
MAX. WATER TEMPERATURE:	78°F

PAINT SPECIFICATION:
 (ORDER ALL 3 PARTS)
 COMPONENT A - PPG AUE-350 140-39019 LOW GLOSS POLYURETHANE ENAMEL
 COMPONENT B - PPG AUE-351 CATALYST
 MIX RATIO A TO B = 3 : 1
 REDUCER - MEK ONLY

T.T. DWG. 11377-R01-S01

THIS DRAWING IS TO BE INTERPRETED USING THE LATEST REVISIONS UNLESS OTHERWISE INDICATED BY DIMENSIONS TO DIMENSIONS.

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE:

FRANCHISES & LINES	±.005
FINISHES	±.005
BREAK SHARP CORNERS	

THIS AREA PROTECTS

DATE: 01/28/05
 DESIGNED BY: JAS
 CHECKED BY: JAS
 DATE: 02-23-05

SCITE SYSTEMS CORPORATION

ASSEMBLY, POWER UNIT OUTLINE
 1503 C HYD. POWER SUPPLY

REV: 01
 J0559A
 B 30077

CONFIDENTIAL DOCUMENT. PROPRIETARY INFORMATION NOT TO BE RELEASED TO OTHERS WITHOUT CONSENT OF TRANE TECHNOLOGIES LLC. THIS DOCUMENT AND OTHER INFORMATION FROM TRANE TECHNOLOGIES LLC PROVIDE PRESENT AND FUTURE SYSTEMS FOR PUBLIC INFORMATION BY BOTH TRANE TECHNOLOGIES CORPORATION AND TRANE TECHNOLOGIES LLC. ANY REPRODUCTION OF THIS DOCUMENT OR ANY PARTS THEREOF WITHOUT THE WRITTEN PERMISSION OF TRANE TECHNOLOGIES LLC IS STRICTLY PROHIBITED. THE USER SHALL BE RESPONSIBLE FOR THE PROPER SELECTION OF THE PRODUCT AND SYSTEMS AND FOR THE SAFETY AND SOUNDNESS OF THE APPLICATION AND USE.

8

7

6

5

4

3

2

1

8

7

6

5

4

3

2

1

PARTS LIST - BILL OF MATERIAL

ITEM	DESCRIPTION	PART #	MANUFACTURER	QTY
01	L-SHAPED RESERVOIR/FRAME	11357-R00-S01	TRIAD	1
02	GAUGE, SIG-FT LEVEL/TEMP	ALG-5T	VEVSCOR	1
03	COVER, LEVEL/TEMP, SWITCH	LSCP-300	TRIAD TECH.	1
04	SWITCH, LEVEL/TEMPERATURE	57144	GEMS	1
05	ASSEMBLY, FILTER/BREATHER	HC-130	HYDRO-CRAFT	1
06	BAR, MOTOR DAMPENING	VSM-364-W	VEVSCOR	2
07	MOTOR, 60 HP @ 1500 RPM, TEFC "C" FACE WITH BASE, 380V/3/50HZ, 364TC FRAME	113004RH-1	BALDOR	1
08	ADAPTOR, MOTOR/PUMP	261399	VEVSCOR	1
09	HLB, MOTOR COUPLING	M60021220	MAGNALOY	1
10	HLB, PUMP COUPLING	M60012414	MAGNALOY	1
11	INSERT, COUPLING	M67017	MAGNALOY	1
12	PUMP, V.V. PRESSURE COMPENSATED PISTON (30 GPM MAX.)	PV080R1D3C7NFWS	PARKER	1
13	PUMP, FIXED DISPLACEMENT VANE (37 GPM)	PFV130S30R2FN1	PARKER	1
14	STRAINER, SUCTION	HA-FS-50	HYDRO-CRAFT	1
15	FLANGE, 1 1/4" ODD 62 4-BOLT SAE STR. THD.	W48-20-20J	ANCHOR	1
16	VALVE, CARTIRIDGE RELIEF	RVH161550	PARKER	1
17	BODY, CARTIRIDGE VALVE	1816-1-16T	PARKER	1
18	VALVE, ACCUMULATOR DUMP	982376	BOSCH	1
19	FILTER, PRESSURE	28P 2 05Q E2 50 MN4 1	PARKER	1
	REPLACEMENT ELEMENT # G04271			
20	VALVE, CHECK	C1600S	PARKER	1
21	HEAT EXCHANGER, 4:1 OIL/WATER	EKS-1024-FR	THERMAL TRANS.	1
22	VALVE, WATER MODULATING	65511	THERMAL TRANS.	1
23	BULBWELL	65280	THERMAL TRANS.	1
24	COUPLER, 1" 90 SERIES QUICK	HB-62-T16	PARKER	2
25	FLIC, COUPLER DUST	HB-65	PARKER	2
26	NIPPLE, 1" 90 SERIES QUICK	HB-63-T16	PARKER	2
27	CAP, NIPPLE DUST	HB-66	PARKER	3
28	GAUGE, PRESSURE	25.310-S6T-5000 PSI/BAR	NOSHOK	1
29	FLANGE, GAUGE	25.3 CHROME FLANGE	NOSHOK	1
30	BRIBBER, GAUGE	NS48-KXV-415	SUN	1
31	ENCLOSURE, ELECTRICAL	A-30248L-P	HOFFMAN	1
32	PANEL, ENCLOSURE	A-30P24	HOFFMAN	1
33	SET, 1502C TAG	11376-R00-S01	TRIAD	1
34				
35	CASTER, 8" X 2" CAST IRON SWIVEL, 1400# CAP.	2422T14	MGMMASTER-CARR	2
36	CASTER, 8" X 2" CAST IRON RIGID, 1400# CAP.	2422T22	MGMMASTER-CARR	2
37	KIT, CASTER BRAKE	2422T77	MGMMASTER-CARR	2
38				
39	VALVE, 1/2" BALL	V5009B	PARKER	1
40	HOSE ASSEMBLY	451TC0505-16-16-16-480	PARKER	2
41	HOSE ASSEMBLY	451TC0505-16-16-16-36	PARKER	2
42	ADAPTER	16 HPSON-S	PARKER	2
43	ADAPTER	16 CSOX-S	PARKER	2
44	ACCUMULATOR, 1 GALLON, 2500 PRECHARGE	1B40183T01A1	PARKER	1
45	BASE, ACCUMULATOR	1449100000	PARKER	1
46	CLAMP, ACCUMULATOR	1449080000	PARKER	1
47	VALVE, 2" BALL	BVAL-200S-4321LH	DMIC	1
48	CONNECTOR, 3 PIN + GRD, 1/2" NPT TO DIN	931 297-004	HIRSCHMANN	1
49	CONNECTOR, 0-50 VAC/VDC (6 M LONG)	933 095-112	HIRSCHMANN	2
50	GASKET, CONNECTOR	731 531-002	HIRSCHMANN	3
51	COMPENSATOR, REMOTE PRESSURE	PVCRARCN311	PARKER	1
52	MODULE, REMOTE COMP. WITH UNLOADING	RCM1LN1D-10X3695	PARKER	1
53	BRACKET, PRESSURE FILTER	11410-R00-S01	TRIAD	1
54	BRACKET, HYDRAULIC CONNECTION	11411-R00-S01	TRIAD	1
55	BRACKET, ELECTRICAL BOX (NOT SHOWN)	11412-R00-S01	TRIAD	1
56	BRACKET, HYD. CONNECTION SUPPORT	11413-R00-S01	TRIAD	1
57	BRACKET, ELECT. BOX SUPPORT (NOT SHOWN)	11414-R00-S01	TRIAD	1
58	CONN., 120 VAC/VDC, 2-PIN W/SURGE SUPP. (6 M LONG)	933 108-112	HIRSCHMANN	1

*NOTE: ITEMS 40 THRU 43 SHIPPED LOOSE.

SYSTEM REQUIREMENTS

RESERVOIR CAPACITY:	120 GALLONS
FLUID TYPE:	DTE24
SYSTEM OPERATING TEMPERATURE:	130 °F
PUMP FLOW RATE:	30 GPM
SYSTEM OPERATING PRESSURE:	3000 PSI
PUMP COMPENSATING PRESSURE:	3100 PSI
RELIEF VALVE PRESSURE:	3500 PSI
PRESSURE SWITCH SETTING:	NA PSI
ELECTRIC MOTOR:	60 HP @ 1500 RPM
PAINT SPECIFICATION:	SEE ABOVE
MIN. WATER PRESS.	50 PSI
MIN. WATER FLOW:	8 GPM
MAX. WATER TEMPERATURE:	70 °F

CONFIDENTIAL DOCUMENT; PROPRIETARY INFORMATION NOT TO BE DISCLOSED TO OTHERS WITHOUT CONSENT OF TRIAD TECHNOLOGIES LLC. THIS DOCUMENT AND OTHER INFORMATION FROM TRIAD TECHNOLOGIES LLC PROVIDE PRODUCT AND/OR SYSTEM OPTIONS FOR FUTURE INVESTIGATION BY USERS HAVING TECHNICAL EXPERTISE. BEFORE YOU SELECT OR USE ANY PRODUCT OR SYSTEM, IT IS IMPORTANT THAT YOU ANALYZE ALL ASPECTS OF YOUR APPLICATION AND REVIEW THE INFORMATION CONCERNING THE PRODUCT OR SYSTEM IN THE CURRENT PRODUCT CATALOG. DUE TO THE VARIETY OF OPERATING CONDITIONS AND APPLICATIONS FOR THESE PRODUCTS OR SYSTEMS, THE USER, THROUGH ITS OWN ANALYSIS AND TESTING IS SOLELY RESPONSIBLE FOR MAKING THE FINAL SELECTION OF THE PRODUCTS AND SYSTEMS AND ASSURING THAT ALL PERFORMANCE, SAFETY AND WARNING REQUIREMENTS OF THE APPLICATION ARE MET.

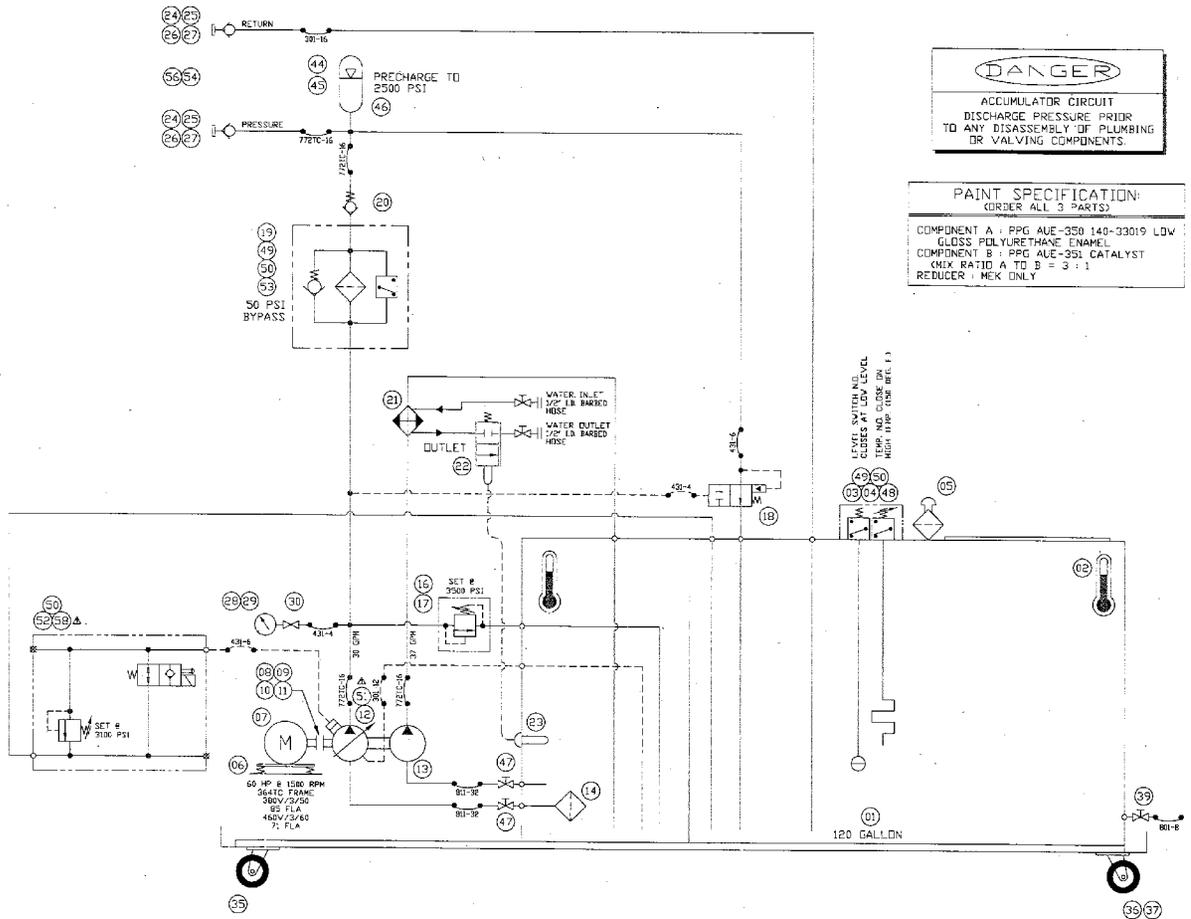
DATE	REV	DESCRIPTION	DATE	APPROVED
03-04-05	JAS	ADD THIS CHANGE. USED TO BE 400 TO 5000 PSI. NEWEST AT 1500 PSI. (SEE DRAWING) USED FROM 1500 TO 5000 PSI. TO ADD SUPPORT TO EXISTING BRACKETS. (SEE DRAWING) (SEE DRAWING)		JAS

DANGER

ACCUMULATOR CIRCUIT
DISCHARGE PRESSURE PRIOR
TO ANY DISASSEMBLY OF PLUMBING
OR VALVING COMPONENTS.

PAINT SPECIFICATION:
(ORDER ALL 3 PARTS)

COMPONENT A : PPG AUE-350 140-33019 LW
GLOSS POLYURETHANE ENAMEL
COMPONENT B : PPG AUE-351 CATALYST
(MIX RATIO A TO B = 3 : 1)
REDUCER : MEK ONLY



T.T. DWG. 11339-R01-S01

THIS DRAWING IS TO BE INTERPRETED USING THE LATEST REVISION OF ANSI/ASME Y14 DRAFTING STANDARDS

UNLESS OTHERWISE SPECIFIED ALL DIMS ARE IN INCHES TOLERANCES ARE:

DECIMAL: .015 ± .01
.030 ± .005
.060 ± .005

FRACTIONS: 1/32 ± .005
ANGULAR: ± 1'



AutoCAD LT 2000

DRAWN	JAS	DATE	12/29/04
REVISION <td></td> <td>DATE</td> <td></td>		DATE	
ISSUED <td>JAS <td>DATE <td>02-23-05 </td></td></td>	JAS <td>DATE <td>02-23-05 </td></td>	DATE <td>02-23-05 </td>	02-23-05

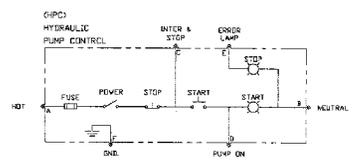
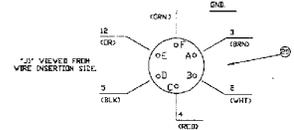
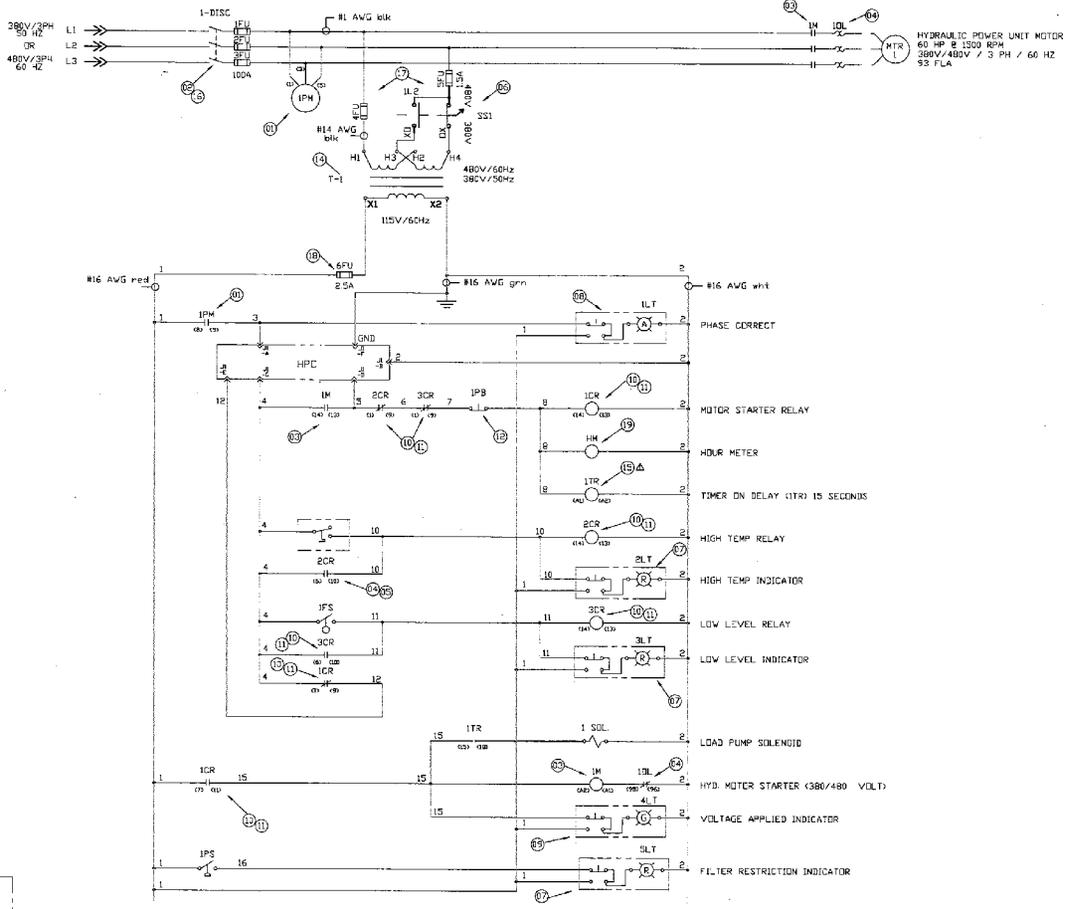


**SCHEMATIC, HYDRAULIC
1502C HYD. POWER SUPPLY**

DRAWING TITLE	J0559A	SIZE (INCH)	B 30078	REV	1
CUSTOMER	XCITE	SCALE	FULL	SHEET	1 OF 1

ITEM	QTY.	MFG.	MODEL NUMBER	DESCRIPTION
01	1	NEWARK	31C1088	PHASE MONITOR
02	1	CUTLER HAMMER	C363UV100JT	DISCONNECT, 100A FUSIBLE
03	1	ALLEN BRADLEY	100-D110D11	CONTACTOR, 33HP @ 380V
04	1	ALLEN BRADLEY	193-EEHF	RELAY, OVERLOAD
05				
06	1	ALLEN BRADLEY	800T-H33A	S.S. V/ KEY
07	3	ALLEN BRADLEY	800T-P716R	LIGHT, PILOT, RED
08	1	ALLEN BRADLEY	800T-P716A	LIGHT, PILOT, AMBER
09	1	ALLEN BRADLEY	800T-P716G	LIGHT, PILOT, GREEN
10	3	CUTLER-HAMMER	32PR4A-A2	RELAY, 3A CONTACTS
11	3	CUTLER-HAMMER	B2P44	SOCKETS, RELAY
12	1	ALLEN BRADLEY	800T-FX6D4	PUSH-BUTTON, E STOP
13	1	ALLEN BRADLEY	800T-X648J	LEGEND PLATE (E STOP)
14	1	ACME	TA-232406	TRANSFORMER
15	1	ALLEN BRADLEY	700-FEM3TU23	TIMER, MULTIFUNCTION
16	3	BUSSMANN	J601003CR	FUSE BLOCK, 100A
17	2	BUSSMANN	RC6032B	FUSE BLOCK, 1.5A
18	1	BUSSMANN	R25030-1	FUSE BLOCK, 4A
19	1	MCMASTER CARR	1672T84-115V	METER, HOUR, 115V/50-60HZ
20	1	AMPHENOL	97-3102A18-12S	CONNECTOR, 6 PIN FEMALE
21	1	TRIAD	10222-R00-S0	LEGEND PLATES, CUSTOM
22	2	HARTING	0914022751	CONNECTOR, FEMALE INSERT
23	2	HARTING	0914022651	CONNECTOR, MALE INSERT
24	10	ALPHA	1898/12C	12 COND. CORD
25	1	GOULD	66413	POWER DISTRIBUTION BLOCK
26	1	HOFFMAN	A352408LP	ENCLOSURE, 36X24X8
27	1	HOFFMAN	A36P24	ENCLOSURE PANEL
28	1	HOFFMAN	F-66T36HC	WIRING TROUGH
29	1	ANY MANUF.	SD-8-4	CABLE, 8 AWG, 4 COND
30	23	ALLEN-BRADLEY	1492-W3	TERMINAL BLOCK
31	8	ALLEN-BRADLEY	1492-EA35	END ANCHOR
32	4	ALLEN-BRADLEY	1492-E93	END BARRIER
33	2	HARTING	09140060303	HAN MOD. FRAME
34	2	HARTING	09140009960	STOPPER
35	1	HARTING	09300360318	PANEL BASE 1 LEVER
36	1	HARTING	15300050547	SIDE ENTRY HOOD
37	1	DDK	DMS3102A18-12S	FEMALE PANEL MOUNT CONNECTOR

REV	REF	DESCRIPTION	DATE	APPROVED
AC	A	REWORK CIRCUIT AS SHOWN HERE'S CORRECT FOR PUMP UNDER TEST CASE	02-22-05	JAS



T.T. DWG 11373-R01-S01

THIS DRAWING IS TO BE INTERPRETED USING THE LATEST REVISION OF ANSI/ASME Y14 DRAFTING STANDARDS.

UNLESS OTHERWISE SPECIFIED:

- ALL DIMS ARE IN INCHES
- TOLERANCES ARE:
 - DECIMAL .XXX ± .01
 - .0XXX ± .005
 - .0XXXX ± .0005
- FRACTIONS ± 1/32
- ANGULAR ± 1'
- BREAK SHARP CORNERS

AutoCAD LT 2000

THIRD ANGLE PROJECTION

DATE	02-22-05
DATE	02-23-05

SCHEMATIC, ELECTRICAL
1502 C HYD. POWER SUPPLY

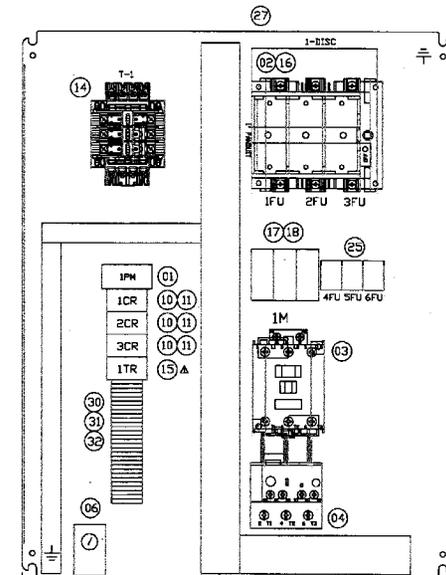
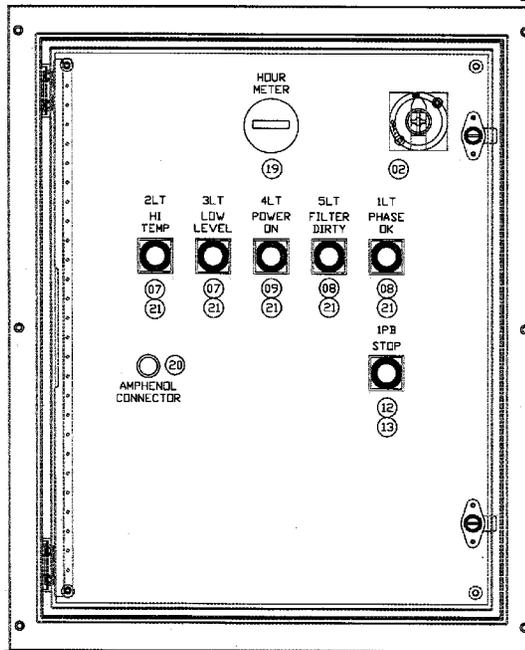
JO559A B 30079

1 OF 1

CONFIDENTIAL DOCUMENT. PROPRIETARY INFORMATION NOT TO BE DISCLOSED TO OTHERS WITHOUT CONSENT OF TRIAD TECHNOLOGIES LLC. THIS DOCUMENT AND OTHER INFORMATION FROM TRIAD TECHNOLOGIES LLC PROVIDE PRODUCT AND/OR SYSTEM OPTIONS FOR FUTURE INVESTIGATION BY USERS HAVING TECHNICAL EXPERTISE. BEFORE YOU SELECT OR USE ANY PRODUCT OR SYSTEM, IT IS IMPORTANT THAT YOU ANALYZE ALL ASPECTS OF YOUR APPLICATION AND REVIEW THE INFORMATION CONCERNING THE PRODUCT OR SYSTEM IN THE CURRENT PRODUCT CATALOG. DUE TO THE VARIETY OF OPERATING CONDITIONS AND APPLICATIONS FOR THESE PRODUCTS OR SYSTEMS, THE USER, THROUGH ITS OWN ANALYSIS AND TESTING IS SOLELY RESPONSIBLE FOR MAKING THE FINAL SELECTION OF THE PRODUCTS AND SYSTEMS AND ASSURING THAT ALL PERFORMANCE, SAFETY AND WARNING REQUIREMENTS OF THE APPLICATION ARE MET.

ITEM	QTY.	MFG.	MODEL NUMBER	DESCRIPTION
01	1	NEWARK	31C1088	PHASE MONITOR
02	1	CUTLER HAMMER	C363UV100JT	DISCONNECT, 100A FUSIBLE
03	1	ALLEN BRADLEY	100-M110D11	CONTACTOR, 30HP @ 380V
04	1	ALLEN BRADLEY	193-EEHF	RELAY, OVERLOAD
05				
06	1	ALLEN BRADLEY	800T-H33A	S.S. W/ KEY
07	3	ALLEN BRADLEY	800T-PT16R	LIGHT, PILOT, RED
08	1	ALLEN BRADLEY	800T-PT16A	LIGHT, PILOT, AMBER
09	1	ALLEN BRADLEY	800T-PT16G	LIGHT, PILOT, GREEN
10	3	CUTLER-HAMMER	D2PR4A-A2	RELAY, 3A CONTACTS
11	3	CUTLER-HAMMER	D2PA4	SOCKETS, RELAY
12	1	ALLEN BRADLEY	800T-FX6D4	PUSH-BUTTON, E STOP
13	1	ALLEN BRADLEY	800T-K64BJ	LEGEND PLATE (E STOP)
14	1	ACME	1A-232406	TRANSFORMER
15	1	ALLEN BRADLEY	700-FEM3TU23	TIMER, MULTIFUNCTION
16	3	BUSSMANN	J601003CR	FUSE BLOCK, 100A
17	2	BUSSMANN	BC6032B	FUSE BLOCK, 1.5A
18	1	BUSSMANN	R25030-1	FUSE BLOCK, 4A
19	1	MCMASTER CARR	1672T84-115V	METER, HOUR, 115V/50-60HZ
20	1	AMPHENDL	97-3102A18-12S	CONNECTOR, 6 PIN FEMALE
21	1	TRIAD	10222-R00-S01	LEGEND PLATES, CUSTOM
22	2	HARTING	09140022751	CONNECTOR, FEMALE INSERT
23	2	HARTING	09140022651	CONNECTOR, MALE INSERT
24	10 FT	ALPHA	1898/12C	12 COND. CORD
25	1	GOULD	66413	POWER DISTRIBUTION BLOCK
26	1	HOFFMAN	A352408LP	ENCLOSURE, 36X24X8
27	1	HOFFMAN	A36P24	ENCLOSURE PANEL
28	1	HOFFMAN	F-66T36HC	WIRING TROUGH
29	1	ANY MANUF.	SD-B-4	CABLE, 8 AWG, 4 COND
30	20	ALLEN-BRADLEY	1492-W3	TERMINAL BLOCK
31	8	ALLEN-BRADLEY	1492-EA35	END ANCHOR
32	4	ALLEN-BRADLEY	1492-EB3	END BARRIER
33	2	HARTING	09140060303	HAN MOD. FRAME
34	2	HARTING	0914009960	STOPPER
35	1	HARTING	0930006318	PANEL BASE 1 LEVER
36	1	HARTING	1S300060547	SIDE ENTRY HOOD
37	1	DDK	DMS3102A18-12S	FEMALE PANEL MOUNT CONNECTOR

DATE	REV	DESCRIPTION	DATE	APPROVED
03-14-03	JAS	REVISED DRAWING (SEESE TRIM) FOR PUMP (MAGAZI FEATURE 2000) (PUMP UNIT REMOVED)		JAS



T.T. DWG. 11374-R01-S01

THIS DRAWING IS TO BE INTERPRETED USING THE LATEST REVISION OF ANSI/ASME Y14 DRAFTING STANDARDS



UNLESS OTHERWISE SPECIFIED ALL DIMS ARE IN INCHES TOLERANCES ARE:

DECIMAL: 0.xxx ± .01
0.xxxx ± .005
0.xxxxx ± .0005

FRACTIONS: ± 1/32
ANGULAR: ± 1'

BREAK SHARP CORNERS
AutoCAD LT
2000

DATE	BY	DATE	BY
02-22-05	JAS	02-23-05	JAS

XCITE SYSTEMS CORPORATION

**LAYOUT, ELECTRICAL BOX
1502 C HYD. POWER SUPPLY**

DATE: 02-22-05
JOB NO.: J0559A
DWG NO.: B 30080
SHEET 1 OF 1

CONFIDENTIAL DOCUMENT. PROPRIETARY INFORMATION NOT TO BE DISCLOSED TO OTHERS WITHOUT CONSENT OF TRIAD TECHNOLOGIES LLC. THIS DOCUMENT AND OTHER INFORMATION FROM TRIAD TECHNOLOGIES LLC PROVIDE PRODUCT AND/OR SYSTEM OPTIONS FOR YOUR INVESTIGATION BY USERS HAVING TECHNICAL EXPERTISE. BEFORE YOU SELECT OR USE ANY PRODUCT OR SYSTEM, IT IS IMPORTANT THAT YOU ANALYZE ALL ASPECTS OF YOUR APPLICATION AND REVIEW THE INFORMATION CONCERNING THE PRODUCT OR SYSTEM IN THE CURRENT PRODUCT CATALOG. DUE TO THE VARIETY OF OPERATING CONDITIONS AND APPLICATIONS FOR THESE PRODUCTS OR SYSTEMS, THE USER, THROUGH ITS OWN ANALYSIS AND TESTING IS SOLELY RESPONSIBLE FOR MAKING THE FINAL SELECTION OF THE PRODUCTS AND SYSTEMS AND ASSURING THAT ALL PERFORMANCE, SAFETY AND WARNING REQUIREMENTS OF THE APPLICATION ARE MET.