

#14074

Hca 5th land farms

QRSPH W/65th AH

ADVANCED FARM EQUIPMENT

14074

HEARTLAND FARMS

4RSPH65LAH

2/19/14

30A 15	20A 14	30A 13	30A 12	30A 11	20A 10	30A 9	30A 8	30A 7	30A 6	30A 5	20A 4	30A 3	30A 2	30A 1
Left Rear	Foot Pedal	A/C	Actuators	Back Up	Fuel	Cab Field	Cab O. H.	Cylinder's	Wiper	Main	Brake	Main	AH Cleaner	Hazard Stat
Light	[Red		[White	Lts. Switch	[Red	Lights	[Red	[Orange	[RED	Power	[Black	Power	Bin Fill	[Yellow
Relay	[52 (1)		[85 (1)	[Brown	[081 (1)	Relay	[22 (3)	[143 (2)	[18 (3)	Relay	[017 (1)	Relay	[Green	Turn Stat
[Black	TC115		[88 (1)	Left Row	[Brown	Auxillary	2-Speed	Power View	[YELLOW	DTS-0160	[Orange	[91 (1)	[Brown	
	[Red		Backup	Light Relay		Outlet	[Black	[0012 (7)	[Purple	Delay	[Red		Cyber Tech	
	[020		Relay	[Brown		[Black	[156 (3)	Cab O.H.	[Yellow	Relay	Warning	[Grd. Drive	[Green	
			{ Brown			[156 (3)	RTC	[Red		[Yellow	[Yellow 10	[Grd. Drive	[091 (4)	
			Backup			[280	[Red	[21 (4)			[Yellow 10	* [Blue 8	Boom Lift	
			Warning				[Red	[21 (4)			[Yellow 10	[A.H. Fan	Panel	
			[Brown				[280				[Yellow 10	[Yellow 10	[Green	
			[088 (1)								[Hyd. Oil Level	[Hyd. Oil Level	[0091	
											[Yellow 10	[Cross XP		
HAZ. STAT		TURN STAT					DTS-0160							
[CB1-Yellow		[CB1-Brown			[Green 607 (2)		SIGNAL		Black]			[Cross XP		
[Yellow 92 (1)		[Brown 502 (5)			[CB4 - Red		12V DC		Brown]			[Black 60		
					[Black		GROUND		Blue]					

R	E	L	A	Y	S	30A 20	30A 19	30A 18	30A 17	30A 16
		4X4 LOCK				Free Whl.	Lt Frt Lts	Rt Frt Lts	Cab Rd Lts	Rt Rear
		RELAY				Switch	Relay	Relay	Relay	Light Relay
85 GRD.		85 Ground				[Orange	[Black	[Blue	[Brown	[Blue
86		86 Black 1				[0924 (1)				
87		87 Black 1								
30		30 Black 01 (2)								
		BACK UP LTS.								
		RELAY								
85 Ground		85 Ground								
86 Brown 06 (2)		86 Orange 144 (2)								
87 CB11 - Brown		87 Black 1								
30 Brown 6		30 Black 01 (2)								
		LEFT ROW LIGHT								
		RELAY								
85 Ground		85 Ground								
86 Brown 057 (1)		86 Orange 144 (2)								
87 CB10-Brown		87 Green 422 (3)								
30 Brown 57		30 White 104 (5)								
		CAB FIELD								
		LIGHT REALY								
85 Ground		85 Ground								
86 Brown 504 (3)		86 Brown 505 (2)								
87 CB9-Brown		87 CB16-Blue								
30 Black (H) 507 (3)		30 Blue (H) 38								
		CAB ROAD								
		LIGHTS RELAY								
85 Ground		85 Ground								
86 Brown 503 (3)		86 Brown 572 (3)								
87 CB17-Brown		87 CB15-Black								
30 Black (H) 526 (3)		30 Black (H) 34								
		RIGHT REAR								
		LIGHT RELAY								
85 Ground		85 Ground								
86 Brown 504 (3)		86 Brown 505 (2)								
87 CB9-Brown		87 CB16-Blue								
30 Black (H) 507 (3)		30 Blue (H) 38								
		LEFT REAR								
		LIGHT RELAY								
85 Ground		85 Ground								
86 Brown 503 (3)		86 Brown 572 (3)								
87 CB17-Brown		87 CB15-Black								
30 Black (H) 526 (3)		30 Black (H) 34								
		RIGHT FRONT								
		LIGHT RELAY								
85 Ground		85 Ground								
86 Brown 505 (2)		86 Brown 505 (2)								
87 CB18-Blue		87 CB18-Blue								
30 Blue (H) 380		30 Blue (H) 380								
		LEFT FRONT								
		LIGHT RELAY								
85 Ground		85 Ground								
86 Brown 572 (3)		86 Brown 572 (3)								
87 CB19-Black		87 CB19-Black								
30 Black (H) 340		30 Black (H) 340								
		AUX POW OUTLET								
		1 (20A)	Red 28	MD3/XA2 Modules						
		2 (20A)	Red 028 (1)	Airhead Switch						
		3 (10A)	Red 1 (8)	RiteHeight Monitor						
		4 (30A)	Red 02	Eng. Fan Rev. Swt.						
		5 (10A)	Red 01 (8)	Scale Monitor						
		6 (10A)	Red	RiteHeight Controller						
		GROUND WIRES								
		Black	001 (8)	RiteHeight Monitor						
		Black		RiteHeight Controller						
		Black	0001 (8)	Scale Monitor						
		A.H. CLEAN. TIMER								
		8 - Blue 26		15 (1)						
		9 - White 27		14 (1)						
		10/11 - Purple 28		13 (1)						
		6/2 - Ground								

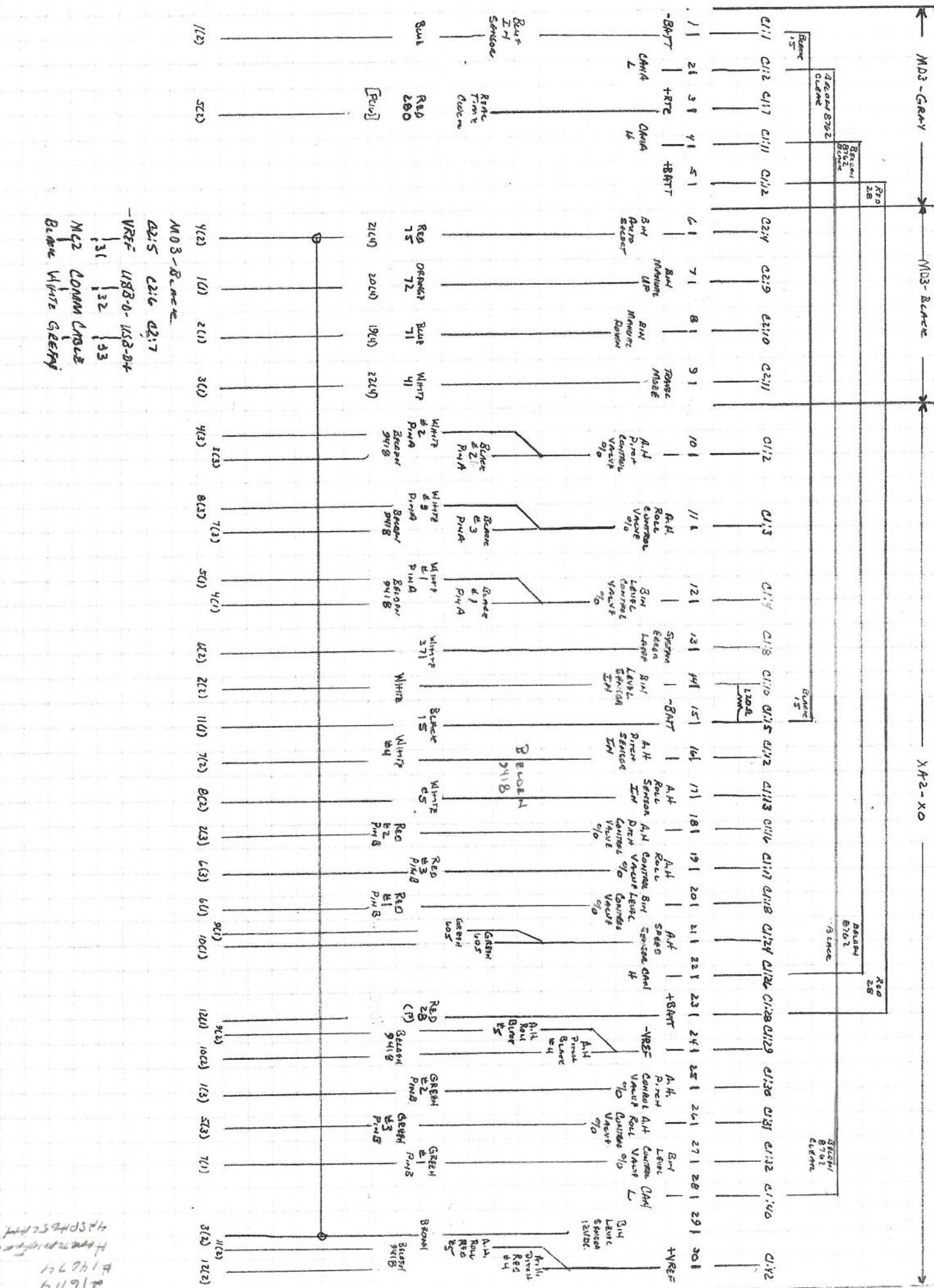
ADVANCED FARM EQUIPMENT

ELECTRONIC LEVEL SETTINGS

#14074

	FACTORY	3/21/14		FACTORY	3/21/14		FACTORY	3/21/14
BIN LEVEL	SETTINGS	2014	AIR HEAD	SETTINGS	2014	AIR HEAD	SETTINGS	2014
BIN LEVEL SENSOR:			PITCH SENSOR			ROLL SENSOR		
MIN	850 850	850	MIN	1200	1200	MIN	1100	1100
MAX	4450	4400	MAX	3700	3700	MAX	4100	4100
BINLEVEL PID:			PITCH PID:			ROLL PID		
P-TERM	4.0	2.06	P-TERM	3.0	2.0	P-TERM	2.5	1.60
I-TERM	0.30	0.20	I-TERM	0.30 0.2	0.20	I-TERM	0.30 0.20	0.20
BIN TRAVEL:			AIR HEAD TRAVEL:					
CYLINDER SPEED	30	60	CYL. SPEED	75	75			
BIN LEVEL:			AIR HEAD LEVEL:					
CYLINDER SPEED	85 85	85	CYL. SPEED	75	75			
BIN LEVEL CONTROL:			PITCH CONTROL			ROLL CONTROL		
MIN	40	40	MIN	37 33	33	MIN	37	37
MAX	85	85	MAX	77	77	MAX	85	85
START	0	0	START	0	0	START	0	0
STOP	0	0	STOP	0	0	STOP	0	0
ACCEPTABLE ERROR:	1	1.00	A/H PITCH ACC. DIFFERENCE			A/H ROLL ACC. DIFFERENCE		
			VALUE	1	3.00	VALUE	1	3.50
LEVEL CONTROL DELAY:	100							
START RAMP:	20							
STOP RAMP:	20							
BIN ADJUST (IN.)	10							
			AIRHEAD SPEED TO ENABLE LEVELING:					
			VALUE	200				

8m / Air Hens Leuze 1119



M03-Red
M03-Blue
M03-Gray
M03-X0

2/6/14
HSPBSCMT
14674

14074

HEARTLAND FARMS

2/6/2014

#14074
HEARTLAND FARMS
4RSPH 65" LAH

4RSPH 65" LAH
BIN / AIR HEAD ELECTRONIC LEVELING

MD3 MODULE (GRAY PLUG)

C1:1	- BATT	Ground - Black 15 To XA2-A0 C1:15	Black 15	(C1:15)
C1:2	CAN A-L	Belden 8762 - Clear To XA2-AO C1:40		(C1:2)
C1:7	+RTC	12VDC Continuous From 10A Fuse In Panel	Red 280	(C1:7)
C1:11	CAN A-H	Belden 8762 - Black To XA2-AO C1:26		(C1:11)
C1:12	+ BATT	+12VDC TO XA2-A0 C1:28		(C1:28)

MD3 MODULE (BLACK PLUG)

C2:4	DIN-D	Bin Auto Node Select	Ground	Red [(Red 75 (4))]
C2:5	-VREF	MC2 Comm Cable	Data -	Black
C2:6	USB-D-	MC2 Comm Cable	Data +	White
C2:7	USB-D+	MC2 Comm Cable		Green
C2:9	DIN-E	Bin Manual Up		Orange 72 (4)
C2:10	DIN-F	Bin Manual Down		Blue 71 (4)
C2:11	DIN-G	Travel mode		White 41 (4)

[Handwritten mark]

4RSPH 65" LAH
BIN / AIR HEAD ELECTRONIC LEVELING

PLUG 1						Junction Block	
1	Orange	72	20(4)	Bin Manual Up		7	C2:9
2	Blue	71	19(4)	Bin Manual Down		8	C2:10
3	White	41	22(4)	Travel Mode		9	C2:11
4	Black #1	Pin "A"		Bin Level Valve Control %	Belden 9418	12	C1:4
5	White #1	Pin "A"		Bin Level Valve Control %		12	C1:4
6	Red #1	Pin "B"		Bin Level Valve Control %		20	C1:18
7	Green #1	Pin "B"		Bin Level Valve Control %		27	C1:32
8							
9	Green	605		Airhead Speed Sensor "IN" Fron Fan		21	C1:24
10	Green	605		Airhead Speed Sensor "OUT" To Cab		21	C1:24
11	Black	15	P(4)	Panel Ground		15	C1:15
12	Red	28	P(3)	Panel 12VDC		23	C1:28

PLUG 2

1	Blue			bin Level Sensor Ground		1	C1:1
2	White			Bin Level Sensor Signal "IN"		14	C1:10
3	Brown			Bin Level Sensor 12VDC		29	C1:4
4	Red	75	21(4)	Bin Level Select		6	C2:4
5	Red	280	P(16)	Real Time Clock 12VDC		3	C1:7
6	White	371	23(4)	System Error Lamp		13	C1:8
7	White	#4		Airhead Pitch Sensor "IN"	Belden 8770 #4	16	C1:12
8	White	#5		Airhead Roll Sensor "IN"	Belden 8770 #5	17	C1:13
9	Black	#5		Airhead Roll " -VREF "	#5	24	C1:29
10	Balck	#4		Airhead Pitch " - VREF "	#4	24	C1:29
11	Red	#5		Airhead Roll " VREF "	#5	30	C1:42
12	Red	#4		Airhead Pitch " +VREF "	#4	30	C1:42

PLUG 3

1	Green	#2		Airhead Pitch Control Valve Pin "B"	Belden 9418 #2	25	C1:30
2	Red	#2		Airhead Pitch Control Valve Pin "B"		18	C1:16
3	Black	#2		Airhead Pitch Control Valve Pin "A"		10	C1:2
4	White	#2		Airhead Pitch Control Valve Pin "A"		10	C1:2
5	Green	#3		Airhead Roll Control Valve Pin "B"	Belden 9418 #3	26	C1:31
6	Red	#3		Airhead Roll Control Valve Pin "B"		19	C1:17
7	Black	#3		Airhead Roll Control Valve Pin "A"		11	C1:3
8	White	#3		Airhead Roll Control Valve Pin "A"		11	C1:3

9

10

11

12

14074

HEARTLAND FARMS

2/6/2014

4RSPH 65" LAH
BIN / AIR HEAD ELECTRONIC LEVELING

BIN SENSOR

Blue	Ground	Junction Block	1
White	Signal	Junction Block	14
Brown	12VDC	Junction Block	29

AIR HEAD PITCH SENSOR #4

Black	- VREF	Junction Block	24
White	Signal	Junctionm Block	16
Red	+ VREF	Junction Block	30

AIR HEAD ROLL SENSOR #5

Black	- VREF	Junction Block	24
White	Signal	Junction Block	16
Red	+ VREF	Junction Block	30

**AIR HEAD ENCLOSURE
BELDEN 8770 - #5**

6 PIN PLUG ROLL

PIN 1	White	Signal
2	Black	- VREF
3	Red	+ VREF

PITCH BELDEN 8770 - #4

4	White	Signal
5	Black	- VREF
6	Red	+ VREF

BIN VALVE BELDEN 9418 #1

PIN

White	A
Green	B
Black	A
Red	B

A.H. PITCH VALVE BELDEN 9418 #2

White	A
Green	B
Black	A
Red	B

A.H. ROLL VALVE BELDEN 9418 #3

White	A
Green	B
Black	A
Red	B

#14074
HEARTLAND FARMS
4RSPH65LAH

14074

HEARTLAND FARMS

2/6/2014

4RSPH 65"LAH
BIN / AIR HEAD ELECTRONIC LEVELING

XA2-XA MODULE

C1:2	PWM-A	Airhead Pitch Control % To Both Valve Coils Pin "A"	Belden 9418 Black #2 White #2
C1:3	PWM-B	Airhead Roll Control % To Both Valve Coils Pin "A"	Belden 89418 Black #3 White #3
C1:4	PWM-C	Bin Level Control % To Both Valve Coils Pin "A"	Belden 8762 Black #1 White #1
C1:8	DOUT-A	System Error Lamp	White 371 (4)
C1:10	VIN-A	Bin Level Sensor Signal "IN"	White
C1:12	VIN-C	Airhead Pitch Sensor Signal "IN"	Belden 9418 White #4
C1:13	VIN-D	Airhead Pitch Sensor Signal "IN"	Belsen 9418 White #5
C1:16	PWM-A RET+	Airhead Pitch8 Control To One Valve Coil Pin "B"	Belden 9418 Red #2
C1:17	PWM-B RET+	Airhead Roll Control To One Valve Coil Pin "B"	Belden 9418 Red #2
C1:15	-BATT	Ground To MD3 C1:1	Black P
C1:18	PWM-C RET+	Bin Level Control To One Valve Coil Pin "B"	Belden 8762 Red #1
C1:24	FIN-A	Airhead Speed Sensor	Green 605
C1:26	CAN-H	To MD3 (Black Plug) C1:11	Red 28 (P)
C1:28	+BATT	+12VDC To MD3 (Gray Plug) C1:12	Belden 9418
C1:29	-VREF	Airhead Pitch Sensor "- VREF "	Black #4
		Airhead Roll Sensor "-VREF "	Belden 9418 Black #5
C1:30	PWM-A RET-	Airhead Pitch Control % To One Valve Coil Pin "B"	Belden 9418 Green #2
C1:31	PWM-B RET-	Airhead Roll Control % To One Valve Coil Pin "B"	Belden 9418 Green #3
C1:32	PWM-C RET-	Bin Level Control % To One Valve Coil Pin "B"	Belden 8762 Green #1
C1:40	CAN-L	To MD3 (Clear) C1:2	Belden 9418
C1:42	+VREF	Airhead Pitch Sensor "+VREF "	Red #4
		Airhead Roll Sensor "+VREF "	Belden 9418 Red #5
C1:1	ADDR-H	Termination Resistor	
C1:14	ADD-L	Termination Resistor	

11
101

Application

The ATS50 sensor belongs to the Parker family of accessories provided to complement electronic control systems. The ATS50 is a non-contact, Hall effect angle/tilt sensor for mobile hydraulic applications. The ATS50 will sense angular movement in one axis and output a ratiometric 0-5 VDC signal. The sensor has twelve inch leads with an attached Deutsch connector. To make the sensor suitable for mobile equipment, we have focused upon properties such as reliability, electromagnetic immunity and ease of installation.

Properties

Reliability

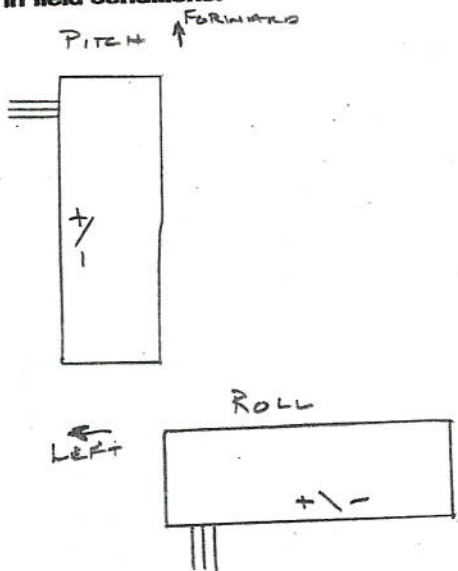
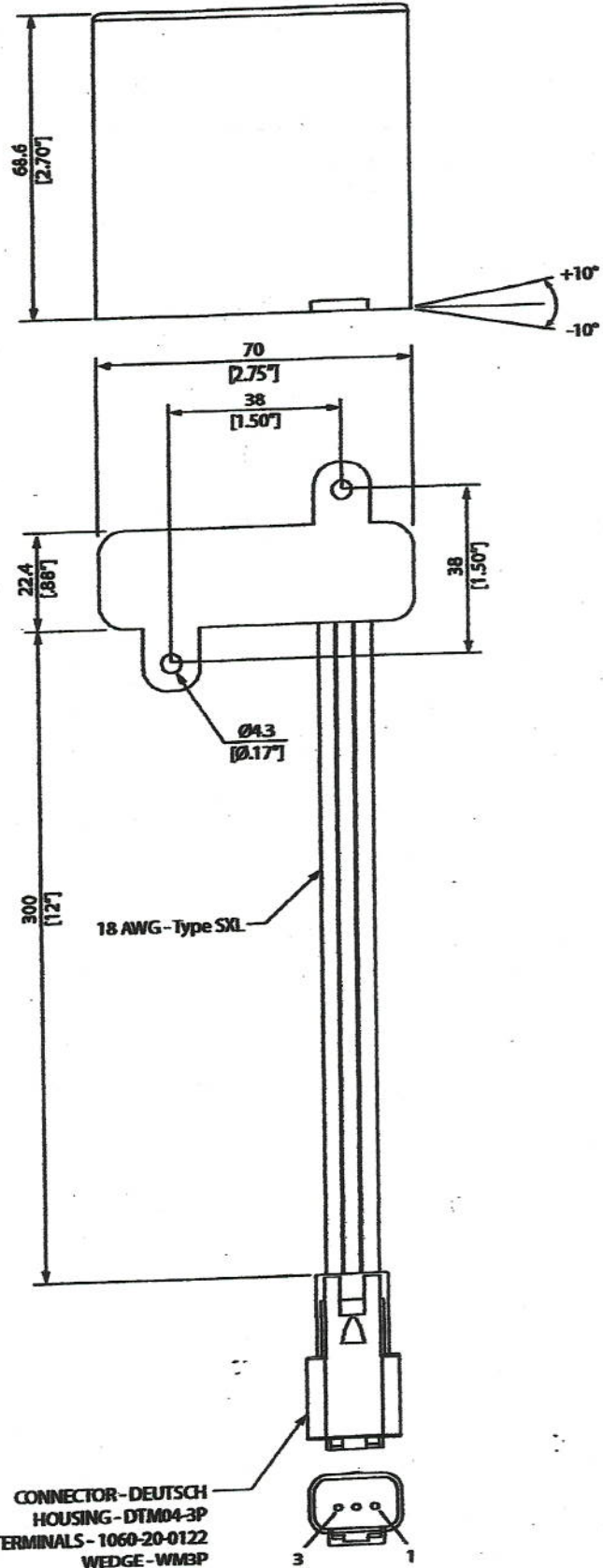
The ATS50 has a tough ABS plastic construction for strength and corrosion resistance. The sensor uses non-contact, Hall effect technology for trouble free operation. The sensor is very robust and able to withstand rugged applications.

Electromagnetic immunity

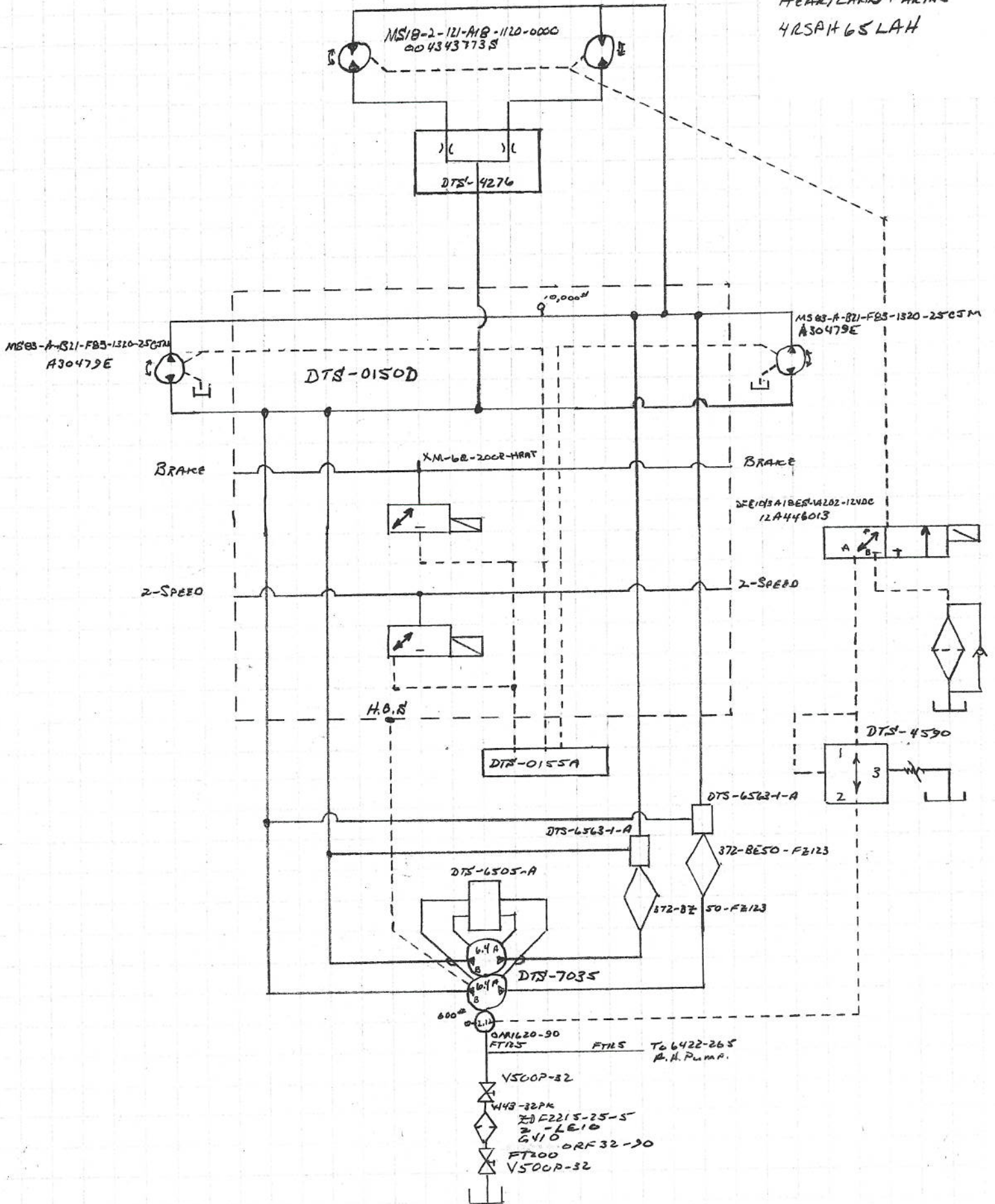
The design of the ATS50 has a high level of EMI protection.

Installation

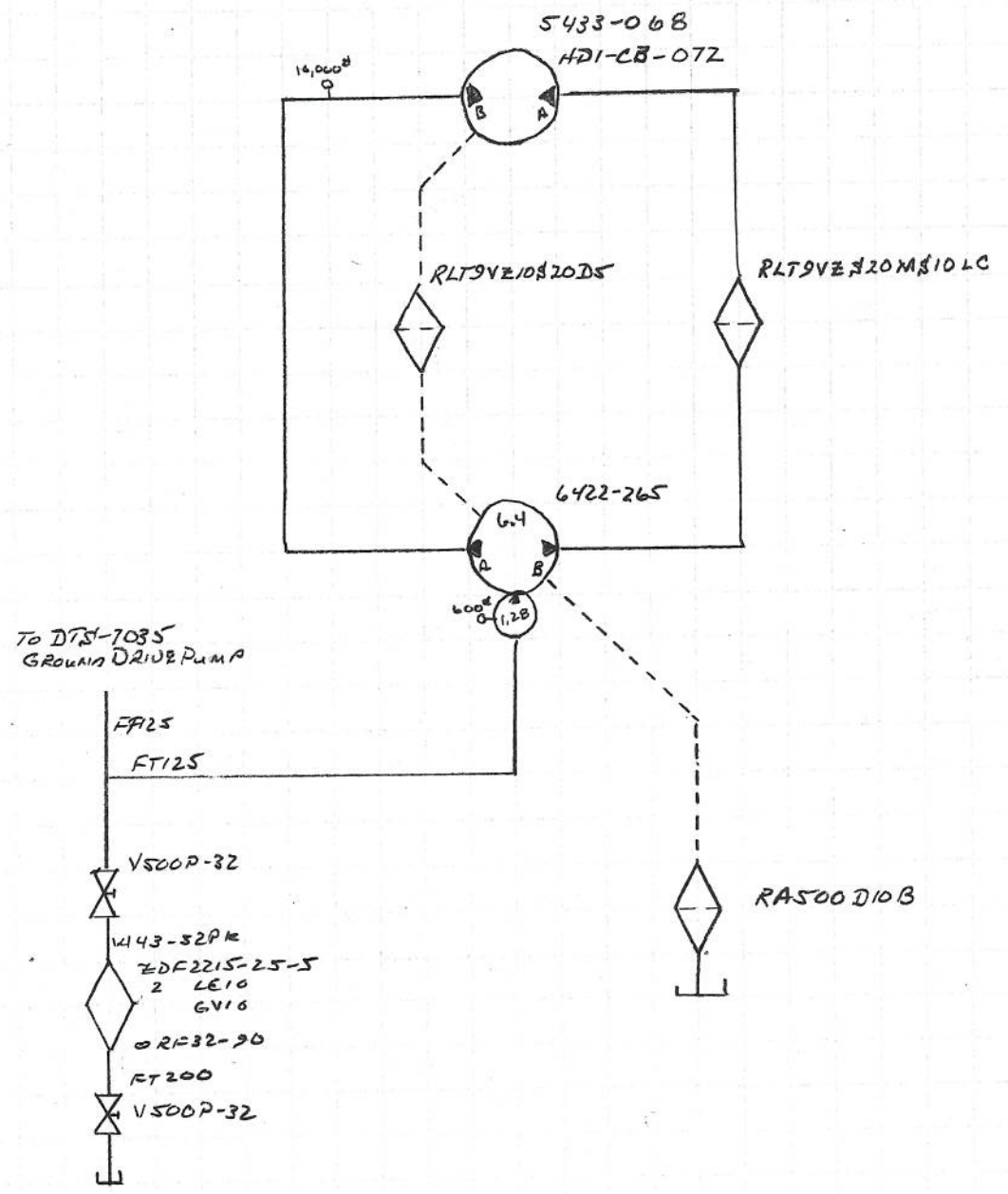
The ATS50 is well designed for the mobile hydraulics industry. The 3 pin connector is a sealed Deutsch DTM type designed for automotive use. This connector combined with potted electronics gives the sensor IP67 protection for exposed outdoor applications. The mounting holes are extra large for easy alignment. These features provide for easy installation and removal, even in field conditions.



1/9/14
 # 14074
 HEATLAND FARMS
 425A H 65 LAH

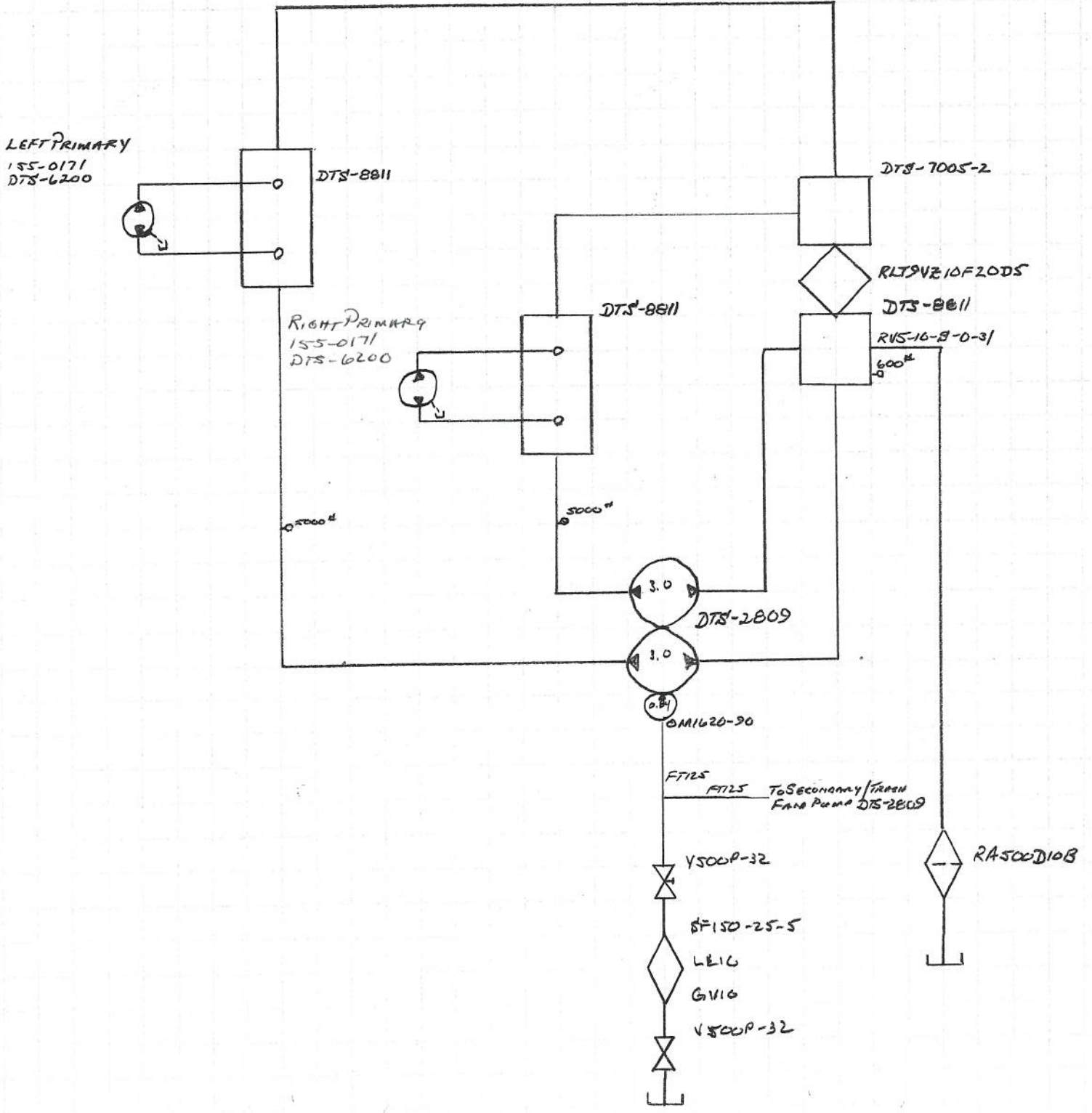


1/9/14
#14074
HEARTLAND FARMS
42SP#65LAH

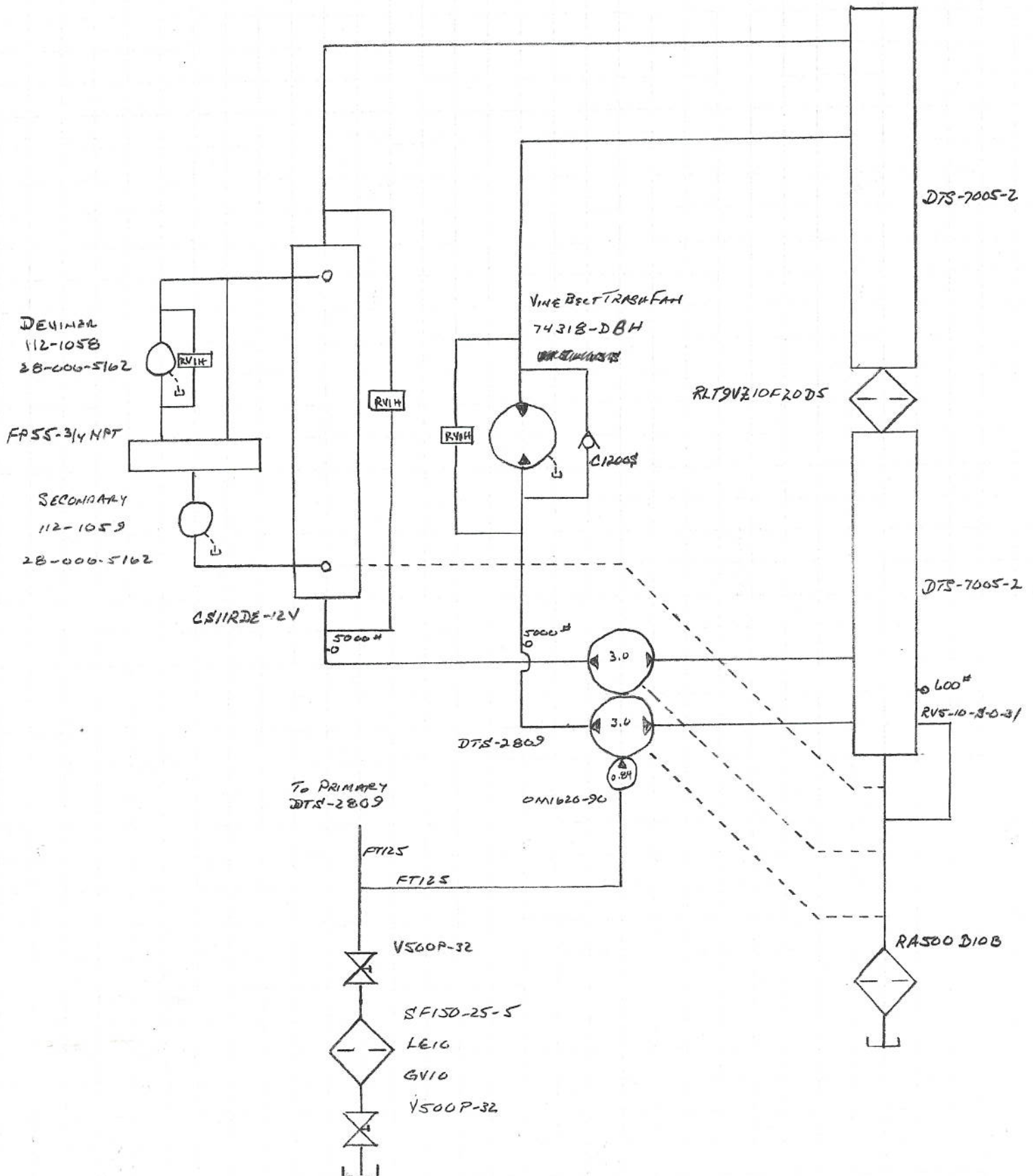


1/9/14

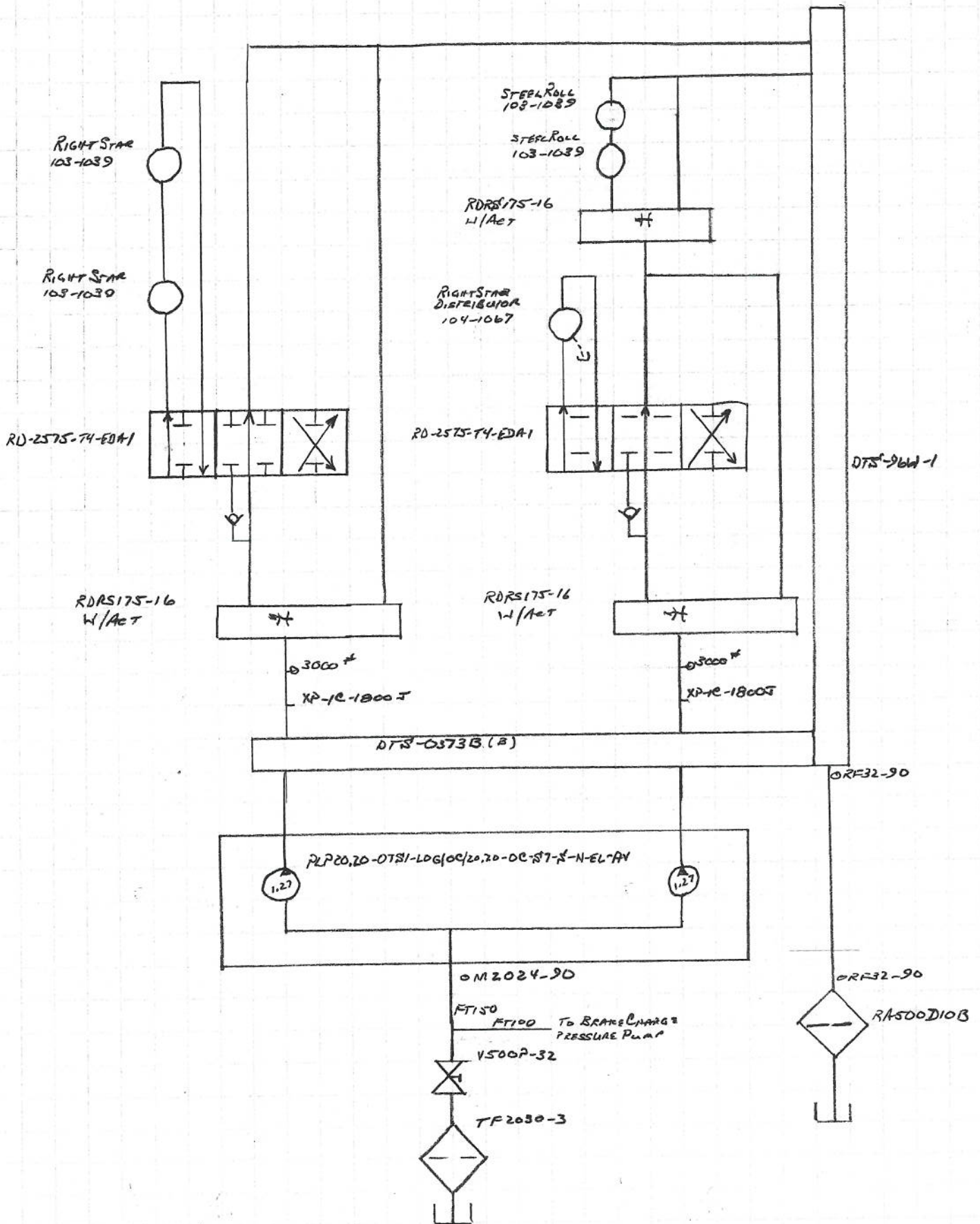
HEATLANTA FANMS
4RSPH 6SLAH



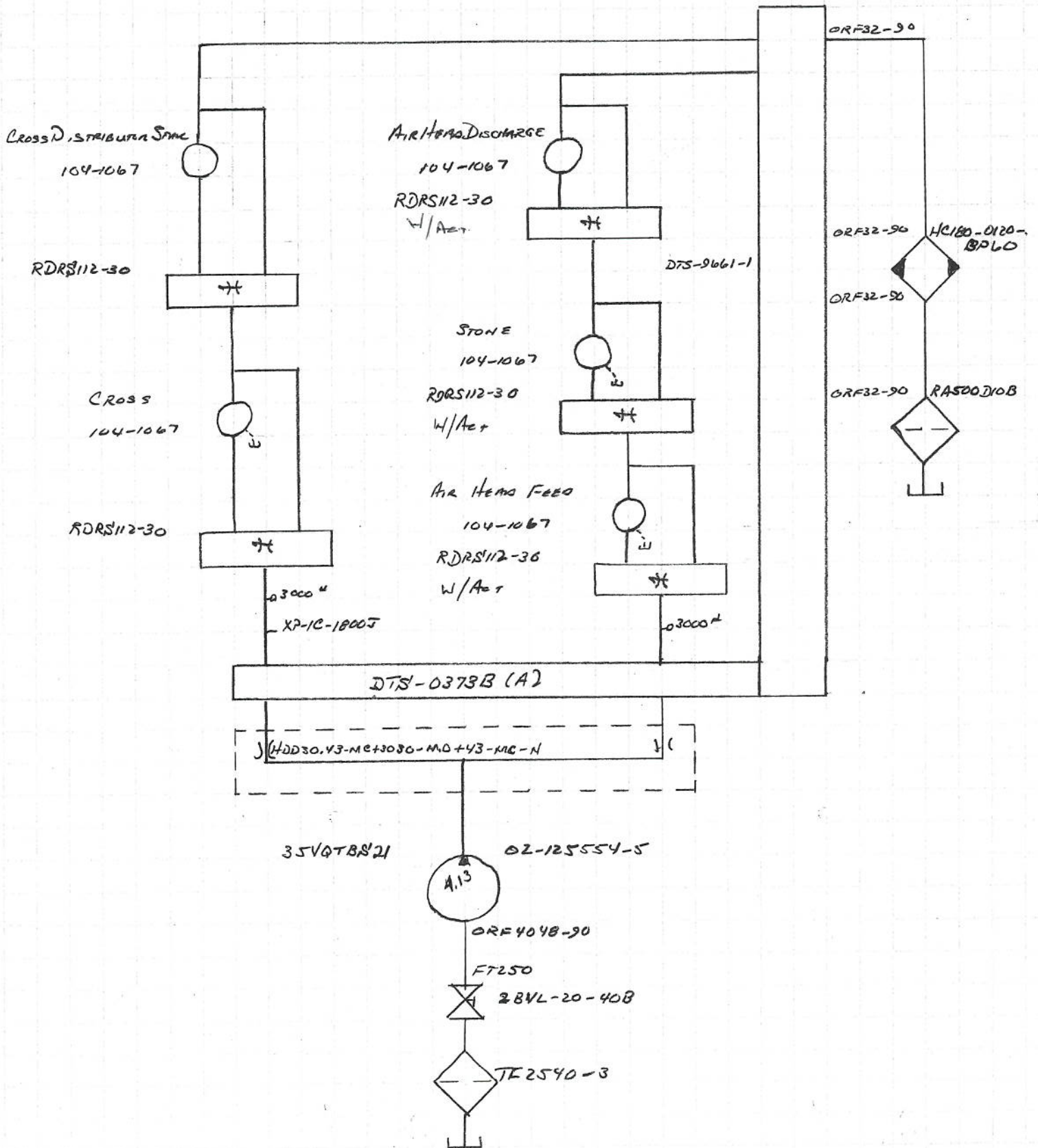
1/9/14
 #14074
 HEARTLAND FARMS
 YRSAMBSLAH



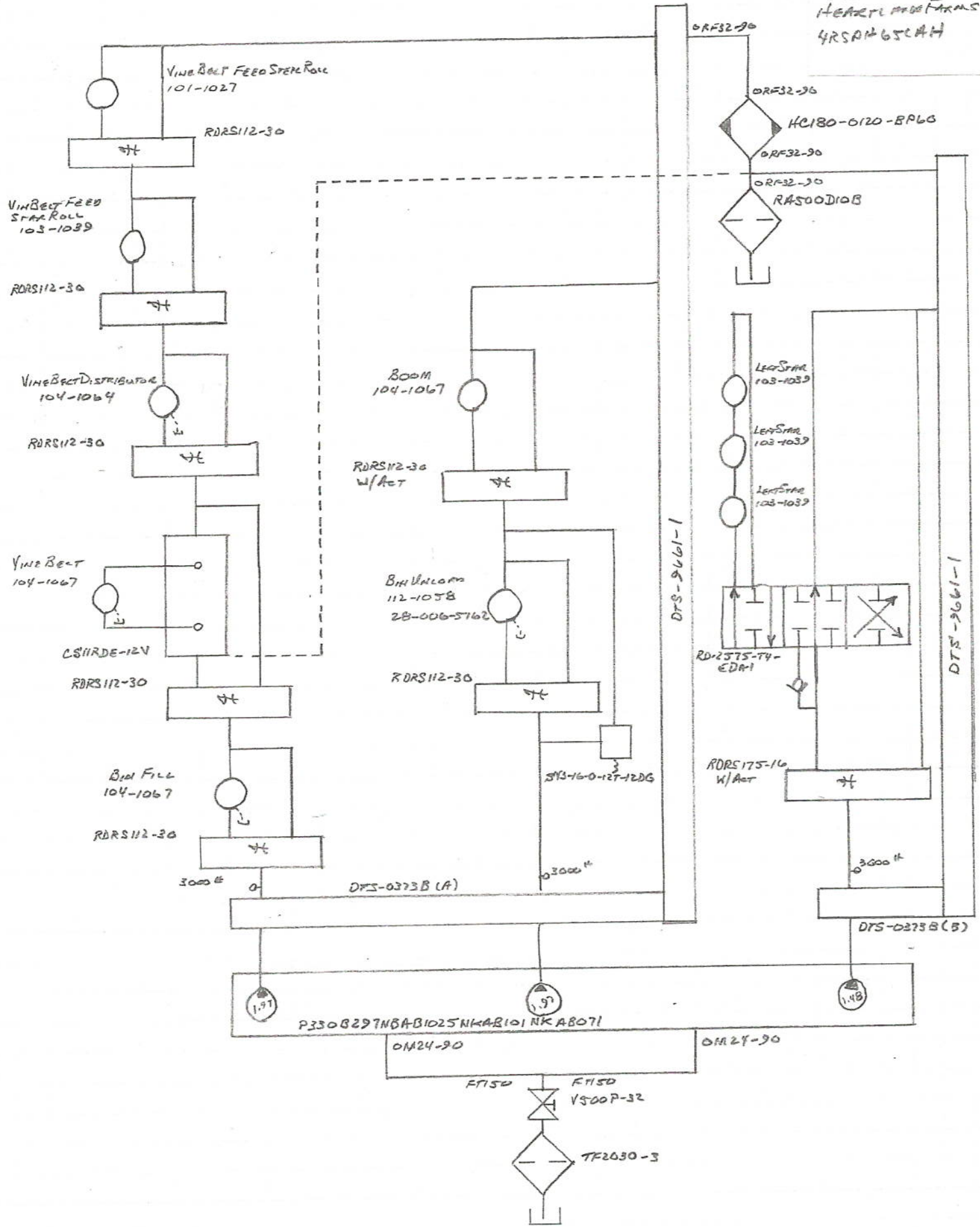
1/2/14 #14074
HEARTLAND FRAME
4RSPH65LH



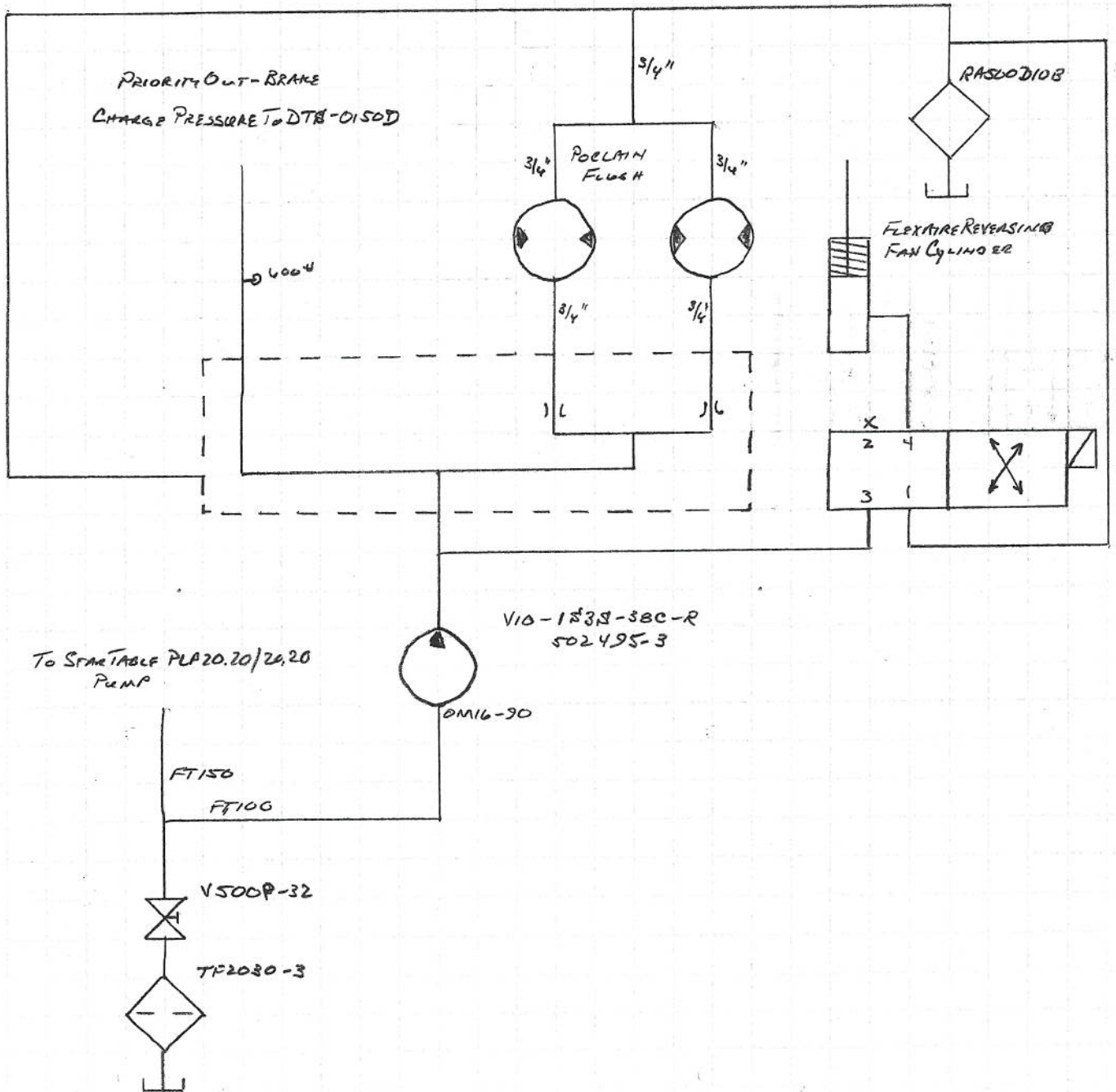
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9RSP465LAH

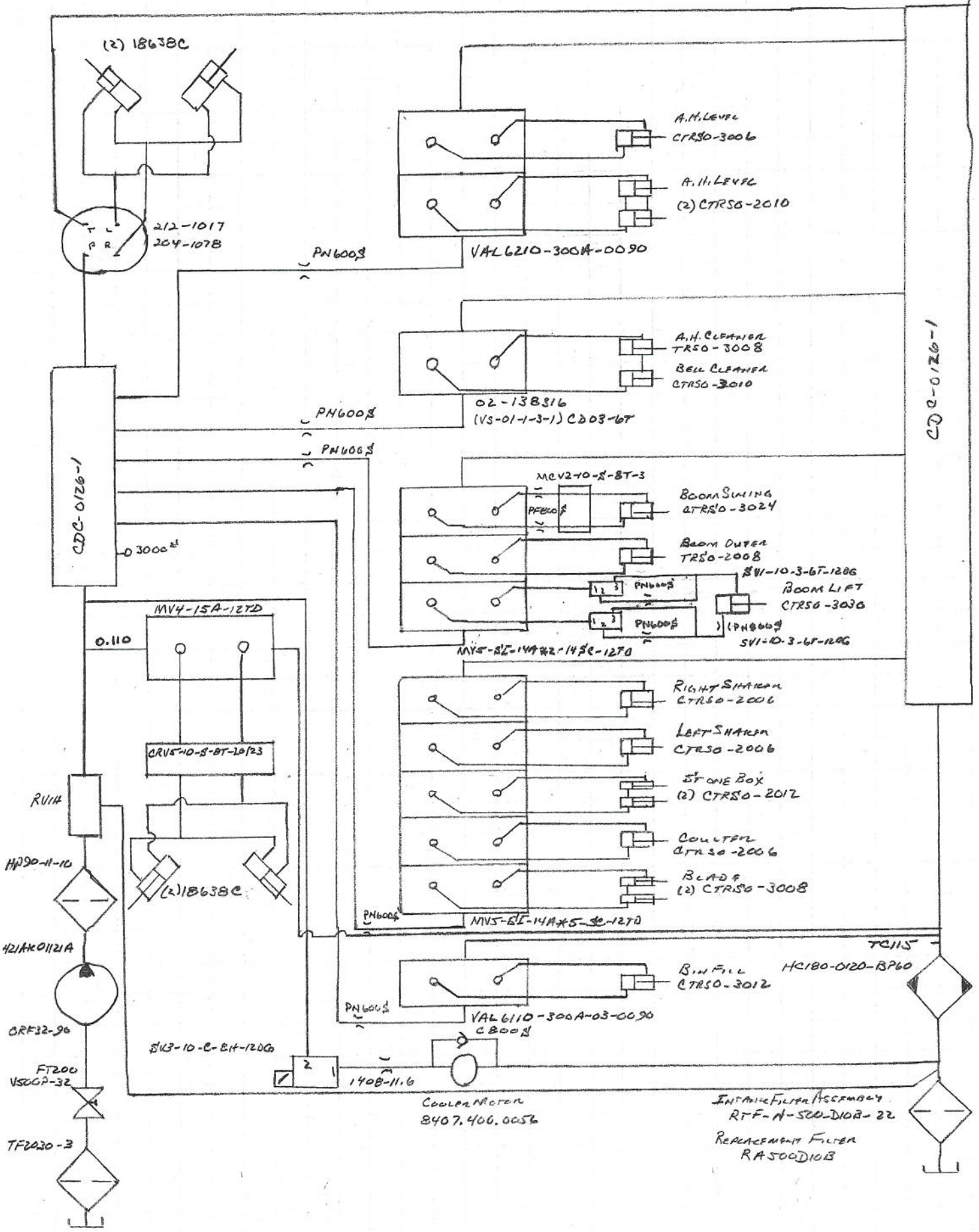


1/9/14
 #14074
 HEARTLAND FARMS
 4RSAM65CAH



11/2/14
#14074
HEARTLAND FARMS
4RSPH65LAH



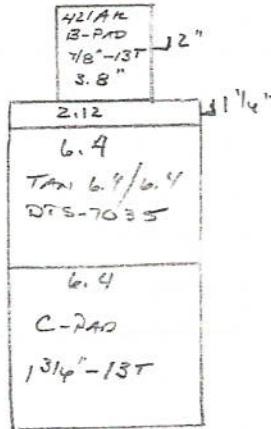


1/9/14 #14074

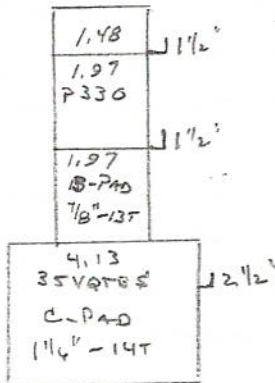
HERRLAND FARMS 485FA65CMT

4"
TF2540-3
2 1/2" 90° STEEL
2 1/2" CLS. NIP.
2 BVL 20-40B
FT250
* 35VQTRP

X 2" X 1 1/4" Bush
FT125
* TAN 6.4/6.4
O 2" 90° STEEL
2" X 1 1/4" Bush
FT125
* 6.4



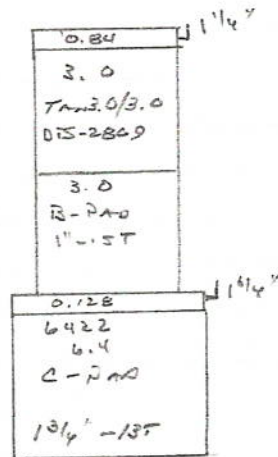
L.R.



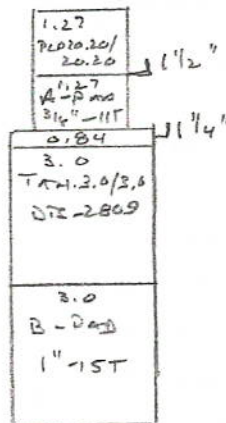
T.R.

3"
TF2030-3
2" CLS. NIP.
V500P-32
2" 90° STEEL
FT200
* 421AK

3"
TF2030-3
2" 90° STEEL
2" CLS. NIP
V500P-32
2" CLS. NIP
2" TEE TO
X 2" X 1 1/2" Bush
FT150
* TRIP. PUMP
O 2" 90° STEEL
2" X 1 1/2" Bush
FT150
* TRIP. PUMP



L.L.



T.L.

3"
TF2030-3
2" 90° STEEL
2" CLS. NIP
V500P-32
2" CLS. NIP
2" TEE TO
X 2" X 1 1/2" Bush
FT150
* TAN. PUMP
O 2" 90° STEEL
2" X 1 1/2" Bush
FT150
* V10

L.R. - TAN 6.4
421AK
L.L. - SINGLE 6.4
DIS-2809

T.R. 35VQTRP

TRIPLE COMM.

T.L. DIS-2809

TAN 3.0/3.0

V10

4"
4" X 2" Bush
2" 90° STEEL
2" CLS. NIP.
V500P-32
2" X 1 1/2" Bush
1 1/2" CLS. NIP.
SF150-25-5
1 1/2" CLS. NIP
2" X 1 1/2" Bush
V500P-32
2" CLS. NIP.
2" TEE TO
X 2" X 1 1/4" Bush
1 1/4"-45° STEEL
FT125
* TAN 3.0/3.0
O ~~2" X 1 1/4" Bush~~
2" X 1 1/4" Bush
FT125
* TAN 3.0/3.0

GROUND DRIVE
STEERING
AIR HEAD
SECONDARY
TRASH FAN

CROSS
SIDE

RIM FILL
BIN VINCOR
LEFT STARTABLE

LEFT PRIMARY
RIGHT PRIMARY

RIGHT STARTABLE
RIGHT STARTABLE DIST.

BRAND CAG. PRESS.
POCLAIN FLIGHT.
ENG. COOL. FAN REV.

DUCST - 13387 4R009-1.20E-N11-BBET-CC4-CE4-CE4-LS
DRIVE PLATE - TORSION COILERS 19310

V10 0.6 1"
ENGINE QS X 15-520 HD

1/3/14
E14074
HEARTLAND FRAMES
4RSP#65LAH

MS18-2

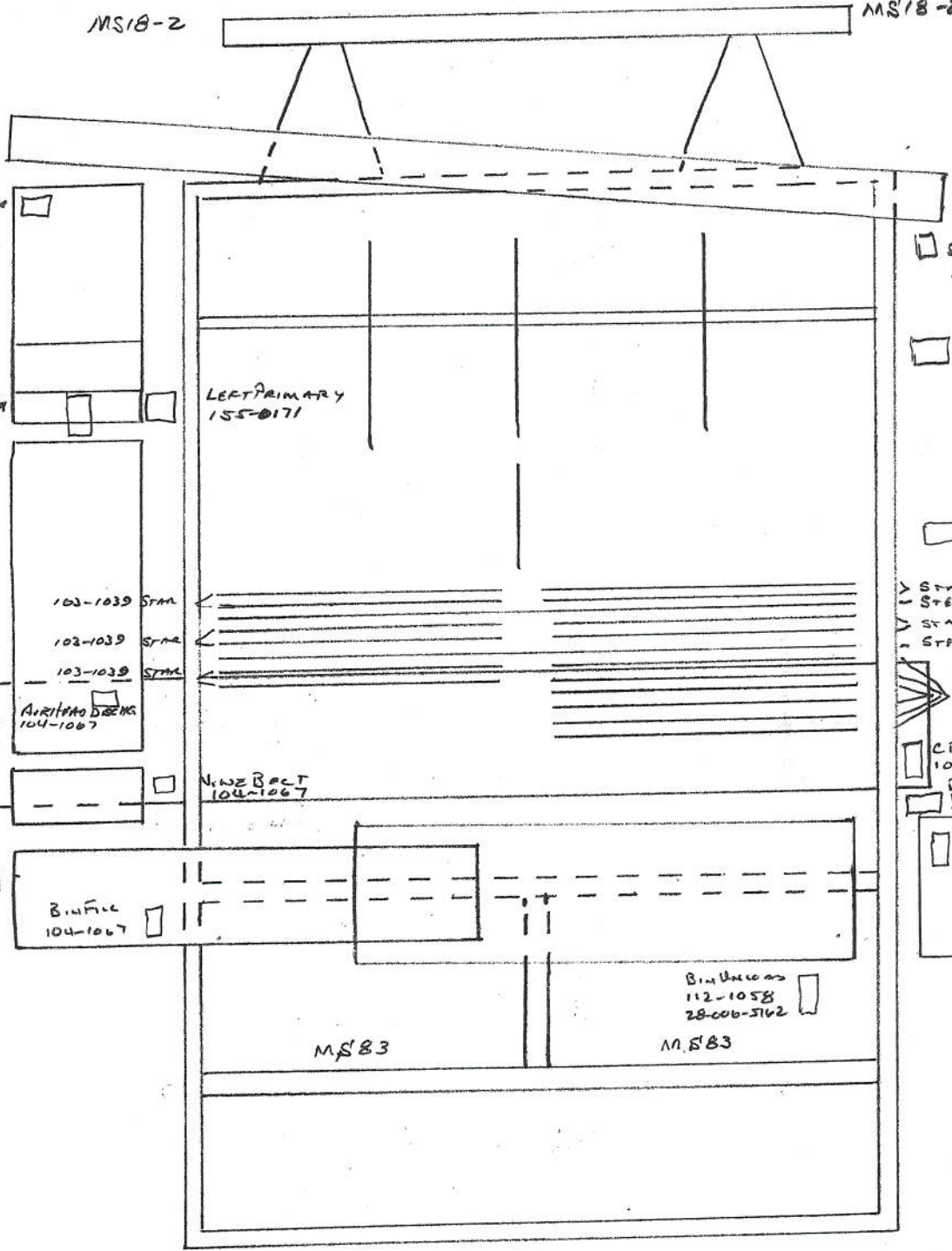
MS18-2

Air Handler
104-1067

Air Handler
5433-068
H21-CA-072

STARROW
103-1039
STEEL ROLL
101-1027

DISTRIBUTION
ROWS
104-1067
TRASH FAN
74318-DAT



103-1039 STAIR
103-1039 STAIR
103-1039 STAIR
AIR HANDLING
104-1067

LEFT PRIMARY
155-0171

NEW BOAT
104-1067

Bin File
104-1067

MS83

Bin Unit
112-1058
28-006-5162

MS83

STORE
104-1067

RIGHT PRIMARY
155-0171

SECONDARY
112-1059
28-006-5162

STAIR 103-1039
STEEL ROLL 103-1039
STAIR 103-1039
STEEL ROLL 103-1039

STAIR DISTRIBUTION
103-1039

CROSS
104-1067

DEVIDER
112-1058
28-006-5162

ROOM
104-1067

