

#97121 Rework

YRSPH W/65" AH

KRUCKE Berg Farms

Ho Sie Radisl

Department: Hydraulic  
 Date: 1/6/2020

Serial # 97121 (REWORK)  
 Model # 4RSPHH

Customer: KRUCKEBERG  
 Dealer: \_\_\_\_\_

Date  
 Completed Initials

A. Check List:		Date Completed	Initials
1. Check Quality Control Worksheet For Unfinished Item Or Items			
2. Finish All Pertinent Items Before Startup			

B. Electrical Items To Check:		Date Completed	Initials
1. All Valves - Lights - Manifolds - Cab Connections - Panel Connections		✓	
2. Power Wires On Batteries		✓	
3. Power Wires To Distribution Panel		✓	
4. Engine Connections			
a. ECU Connections		✓	
b. ECU Power Wires		✓	
c. Reversing Fan On Radiator		N/A	
5. Turn Power On To Main Panel			
a. Turn Key On			
b. Test Work Light Circuits		✓	
c. Turn On Master And Individual Conveyor Circuit Switches And Check Valve Connections For Proper Power On - Off Where Lighted Connections Are Used		✓	
d. Test All Actuators For Direction Of Travel		✓	
e. Test Proper Function Of Hydro Handle Neutral Switch - Seat Switch - Foot Pedal		✓	

*Hinges on Boom  
 Heat shrink  
 Extra wires  
 \* Not felt off ladder*

C. Hydraulic Items To Check:		Date Completed	Initials
1. Turn On All Hydraulic Oil Tank Valves To Fill Hydraulic Circuits		✓	
2. For Leaks On Complete Machine During And After Filling Hydraulic Oil Tank		✓	
3. All Valves And Motors Have Proper Hoses And Plumbing		✓	

D. Startup Items To Check:		Date Completed	Initials
1. Charge Pressure Responds In A Timely Manner On Startup		✓	
2. Test Brakes - Clutch - Hi/Lo - 4X4 Valves		✓	
3. 4X4 Functionality And Direction Of Motors		✓	
4. Run Individual Cylinder Functions And Set Direction Of Travel With Switch		✓	
5. Run Individual Circuits And Check For Proper Direction		✓	
6. Test Reversing Valves		✓	
7. Test Rear Steering		✓	
8. Reverse Engine Fan If Equipped		N/A	
9. Test Run Machine Outside Up To Engine RPM		✓	

E. Bin Level Items To Check:		Date Completed	Initials
1. Test Manual Up/Down For Direction		N/A	
2. Test Auto Mode For Proper Sensor Response		N/A	
3. Make Adjustments As Needed In MD3 Module		N/A	

Test Pressures To Look For:									
Engine	2100 rpm	40 psi oil	Left Prim.	580 psi	800	A.H. Feed	1260 psi		
Grd. Drive Chg. Press.	430 psi	400	Right Prim.	590 psi	1000	Bin Fill	1030 psi	N/A	
Airhead Chg. Press. <i>choppers</i>	270 psi	360	Sec. / Dev.	980 psi	N/A	Bin / Boom	680 psi	N/A	
Primary Chg. Press.	250 psi		Star 1 <sup>st</sup>	370 psi	500	Steer	1790 psi	2000	
Sec. Chg. Press.	250 psi		Star 2 <sup>nd</sup>	300 psi	500	Fan	psi / rpm	5500	1120
Air Knife Chg. Press.	250 psi	N/A	Star Dist.	480 psi	N/A			4500	1030
Brake Chg. Press.	350 psi	400	Cross	600 psi	500			3800	920



# AFE New Equipment Chain Verification Sheet

## Chain For Kruckeberg #97121 Horsesradish Harvester Conversion

AFE Part #	Description	Brand	Location
2003-02039	1/2x33x72mm 2x60 STPL 22' 3 Pitch Lap Joint	Noffsinger	Primary (5)
	WEB_50_3300_260_72_95LPR_SG_STPL_3PLP	(Noffsinger Description)	
2003-02040	1/2x36x40mm 2x60 12STPC-1"A"Flite6" NoEars 70' 3 Pitch Lap Joint	Noffsinger	Rear Cross / Boom
	WEB_50_3600_260_40_534LPR_SG_12STPC-1AEXT6S_3PLP	(Noffsinger Description)	

4 Links  
(19,5")

Dealer Rep \_\_\_\_\_ Date \_\_\_\_\_

Customer Tim Kruckeberg \_\_\_\_\_ Date \_\_\_\_\_

10-22-19

97121 HRSPH A.H.

Talk w/ Mike about machine history  
Hydraulic Pumps - Gearbox, etc.

REBUILD GEARBOX  
ENGINE CHANGED IN ~~2016~~ 2011 REMAN  
WHEEL MOTORS  
RADIATOR 2013

BOOM COVER TO HOLD PRODUCT ON BOOM  
PLASTIC UNDER BLADES  
USE ORIGINAL BLADES

ORDER "D-RINGS" (4)

~~REAR STEERING DOESN'T NEED AUTO CENTER, JUST  
NEEDS CABLE w/ VISUAL INDICATOR FOR CENTER~~

HAVE A 6 BANK MVS & A 1 BANK MVS

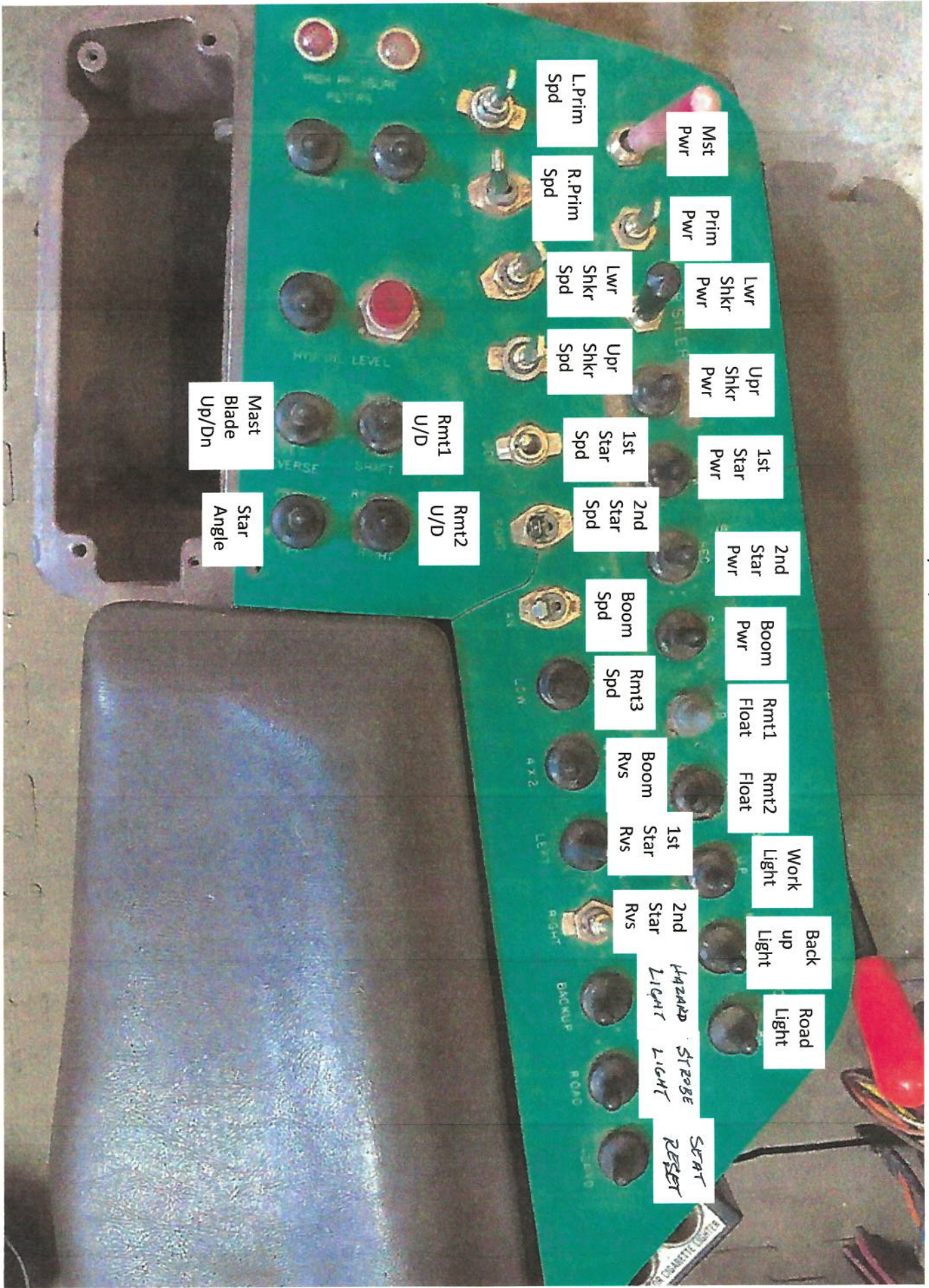
GUAGE PANEL PLACEMENT

TAND 6.4	2018	REMAN
MS18	2016	
MS 50	2016	
V20	2017	
TAN 2.48	2011	

~~ASK ABOUT ABOUT  
MAY 13 10 48 AM 4/22/19~~

400° APPROX  
800° APPROX

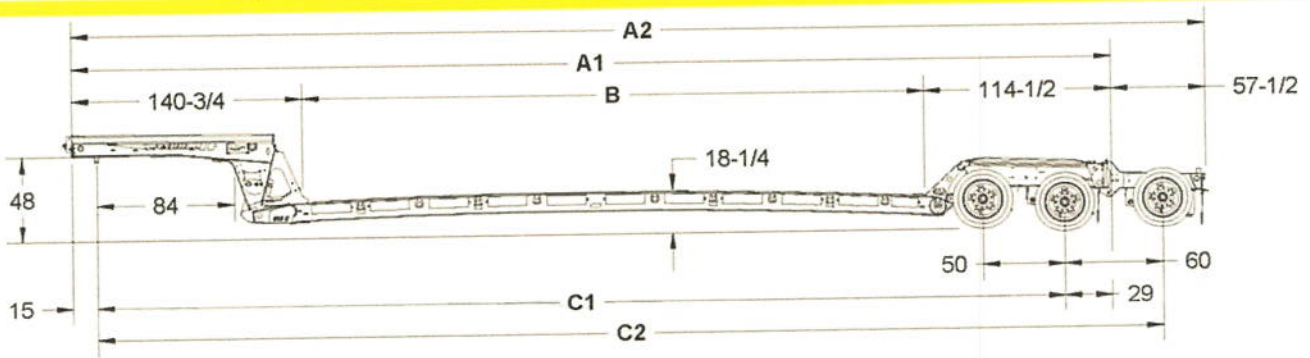
2 - YES FLOAT  
1 - NO FLOAT



FINAL 12-2-19



# Model 835 Line Drawings



MODEL	A1		A2		B		C1		C2	
	FEET IN.	METERS	FEET IN.	METERS	FEET IN.	METERS	FEET IN.	METERS	FEET IN.	METERS
835-27-48	47' 11-1/2"	14.62	52' - 9"	16.08	26' 8-1/4"	8.13	44' 3-1/2"	13.50	49' 3-1/2"	15.02
835-30-51	50' 11-1/2"	15.53	55' - 9"	16.99	29' 8-1/4"	9.05	47' 3-1/2"	14.41	52' 3-1/2"	15.94
835-32-53	52' 11-1/2"	16.14	57' - 9"	17.60	31' 8-1/4"	9.66	49' 3-1/2"	15.02	54' 3-1/2"	16.55

2013 / 01 / 02  
LC835C/S/835D-32-53

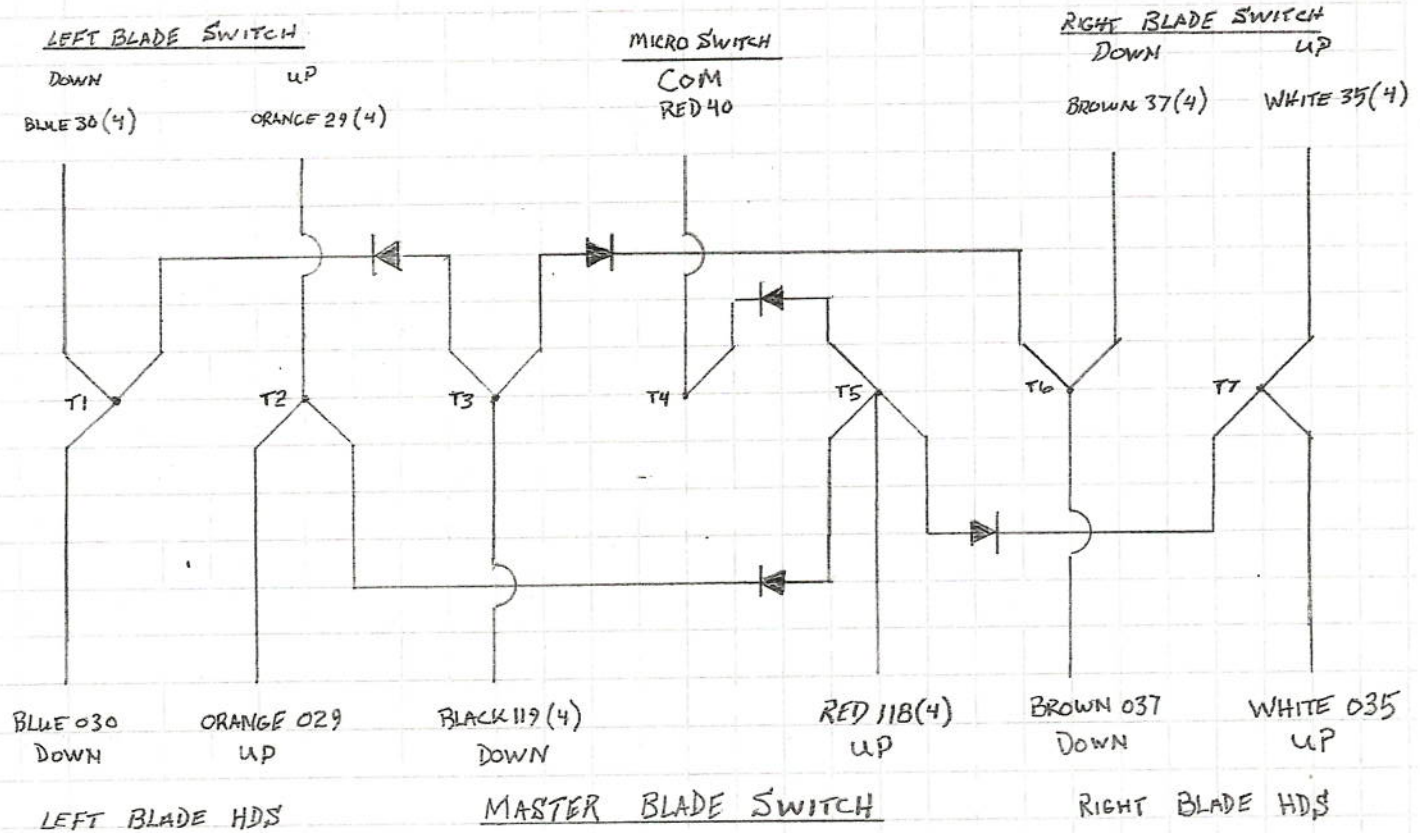
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# BLADE / COULTER CONTROL (TOP TERMINAL STRIP)



## PLUG #1

PIN 1	BLUE	30(4)
2	ORANGE	29(4)
3	RED	40
4	BROWN	37(4)
5	WHITE	35(4)
6		
7	BLUE	030
8	ORANGE	029
9	BLACK	119(4)
10	RED	118(4)
11	BROWN	037
12	WHITE	035

A806CH ENCLOSURE (2001-0160)
10- 2001-0179 DIODE
8"- 2001-0619 #3 DIN RAIL (35mm)
14- 2001-1003 TERMINAL BLOCK
4- 2001-1079 END CLAMP
2- 2001-0941 END BARRIER
2- 2001-0125 12 PIN MOUNTED RECEPTACLE
2- 2001-0276 12 PIN PLUG
2- 2001-0136 W12S
2- 2001-0134 W12P
2- 2001-0055 CAVITY PLUG
22- 2001-0078 CONTACT PINS
22- 2001-0080 CONTACT SOCKETS
160 FT- 2001-0305 WG16

# Solid-State Cube Timers

## Repeat Cycle Q6F Series

**Operating Logic:** Upon application of input voltage, the "off" delay is initiated. At the end of the "off" preset time, the load is activated and the "on" delay starts. At the end of the "on" preset time, the load is deactivated and a new cycle begins. The "on" and "off" cycles will continue to alternate until input voltage is removed.

This timer is available with "on" time occurring first logic.

*Note:* 1) Remote potentiometer leads should be shielded when running close to other wires; 2) The minimum time setting on external resistor-adjustable time delay relays is obtained by shorting together the external resistor terminals of the relay; 3) The maximum time setting within tolerance limits is obtained by using a 1 megohm resistor; 4) Timing values between the minimum and maximum limits are linear with resistance within 10%; 5) Recommend 1/4 watt minimum resistor be used.

### Specifications

#### Time Delay

**Adjustment:** External resistor, factory fixed on special order (Minimum order requirement)

**Range:** 50 mS to 10 hours in 9 ranges

**Repeatability:**  $\pm .5\% + 8$  mS maximum (.25% typ) at constant temperature

#### Accuracy:

Maximum time  $\pm 2\%$  at  $R_t = 1$  megohms

Minimum time  $+0\%$ ,  $-30\%$  at  $R_t = 0$  ohm

#### Input

**Operating Voltage:** 120, 240 VAC; 12 VDC; 24 VAC/DC  $\pm 10\%$ ; (D.C. models have reverse polarity protection. Unfiltered input voltage to them must be full-wave rectified)

**Frequency:** 50/60 Hz

#### Mechanical

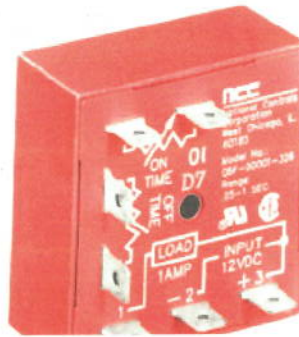
**Termination:** .25"x.032" male fast-on terminals

**Mounting:** Surface mount with one #8 screw

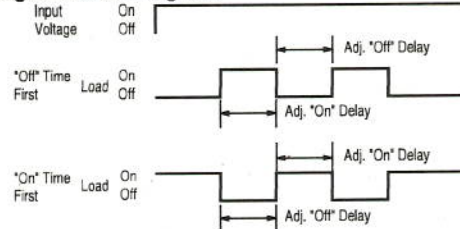
### Ordering Information

Time Range	Input Voltage and Appropriate Part Numbers			
	12 VDC $\pm 10\%$	24 VAC/DC $\pm 10\%$	120 VAC $\pm 10\%$	240 VAC $\pm 10\%$
.05-1 Second	Q6F-00001-326	Q6F-00001-327	Q6F-00001-321	Q6F-00001-325
.25-5 Seconds	Q6F-00005-326	Q6F-00005-327	Q6F-00005-321	Q6F-00005-325
.5-10 Seconds	Q6F-00010-326	Q6F-00010-327	Q6F-00010-321	Q6F-00010-325
3-60 Seconds	Q6F-00060-326	Q6F-00060-327	Q6F-00060-321	Q6F-00060-325
15-300 Seconds	Q6F-00300-326	Q6F-00300-327	Q6F-00300-321	Q6F-00300-325
30-600 Seconds	Q6F-00600-326	Q6F-00600-327	Q6F-00600-321	Q6F-00600-325
180-3600 Seconds	Q6F-03600-326	Q6F-03600-327	Q6F-03600-321	Q6F-03600-325
2.5-5 Hours	Q6F-18000-326	Q6F-18000-327	Q6F-18000-321	Q6F-18000-325
.5-10 Hours	Q6F-36000-326	Q6F-36000-327	Q6F-36000-321	Q6F-36000-325
"On" Time First Logic		Input Voltage and Appropriate Part Numbers		
3-60 Seconds	Q6F-00060-336	⓪	Q6F-00060-331	⓪
15-300 Seconds	⓪	⓪	⓪	⓪
30-600 Seconds	⓪	⓪	Q6F-00600-331	⓪
180-3600 Seconds	⓪	⓪	⓪	⓪
.25-5 Hours	⓪	⓪	⓪	⓪
Trigger Time (Start Sec. Closure)	500 mS	500 mS	500 mS	500 mS
Reset Time	500 mS	500 mS	500 mS	500 mS
Min. Load	5 mA	5 mA	2 mA	2 mA
Max. Leakage Current	100 $\mu$ A	100 $\mu$ A	100 $\mu$ A	100 $\mu$ A
Voltage Drop @ 1A	2.1 Volts max.	3.2 Volts max.	3.3 Volts max.	3.3 Volts max.
Power Consumption	2.6 Watts Max.	3.7 VA Max	4.3 VA Max	5.8 VA Max.
Peak 1 Cycle Surge	4 Amp	4 Amp	20 Amp	20 Amp
Protection	rev. voltage	8.8j. MOV	30j. MOV	30j. MOV

Optional Potentiometer: Part Number ASY-0001M-450



#### Logic Function Diagram:



#### Output

**Type:** Solid-state, normally open

**Rating:** 1 amp steady state

**Life:** 100,000,000 operations

#### Protection

**Transient Voltage:** Metal oxide varistor see rating below

**Dielectric Breakdown:** 3000 VAC, RMS, terminals to mounting

**Insulation Resistance:** 100 megohms minimum between terminals and case

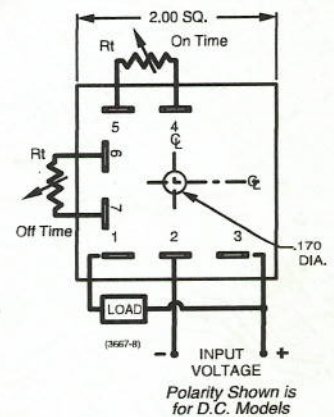
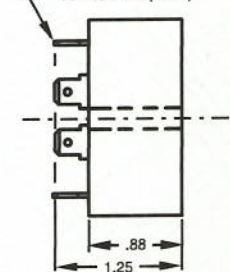
#### Environmental

**Storage Temperature:**  $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$

**Operating Temperature:**  $-40^{\circ}\text{C}$  to  $65^{\circ}\text{C}$

**Humidity:** 95% relative

.25 X .032 MALE FAST-ON TERMINALS (7 PL.)



#### External Resistance/Time Delay Relationship

1 megohm external resistance is required to obtain the maximum time for all ranges. To determine the actual resistance needed to obtain the required time delay, use the following formula:

$$R_t = \frac{T_{\text{required}} - T_{\text{minimum}}}{T_{\text{maximum}} - T_{\text{minimum}}} \times 1,000,000 \text{ ohms}$$

*Note:* Due to component tolerances, the actual time obtained will normally be within 5% of desired time.

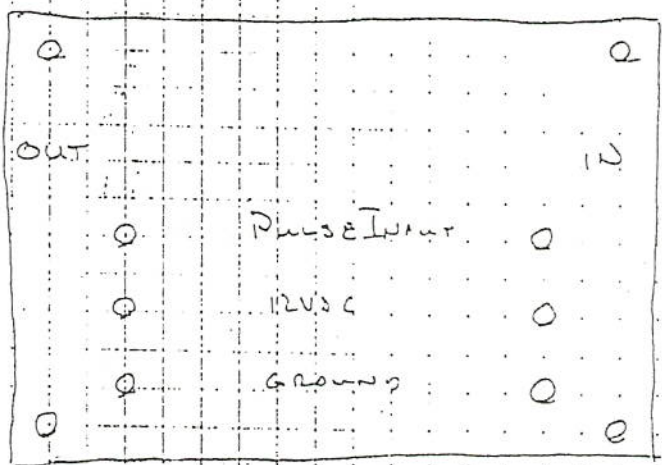


# SPEEDOMETER 4X MULTIPLIER 1995

04.00	# 1	12V.DC+	BROWN	Fuse #15		
03.70	# 2	GROUND	BLUE			
02.60	# 3	IMPULSE	DRIVE GREEN (LOT 2-3C2)			
01.50	# 4					
	# 5	12VDC+	BROWN	} POCAM HARNESS	} THERMISTOR WIRE	
	# 6	GROUND	BLUE			RED
	# 7	IMPULSE	BLACK			GREEN
	# 8				WHITE	

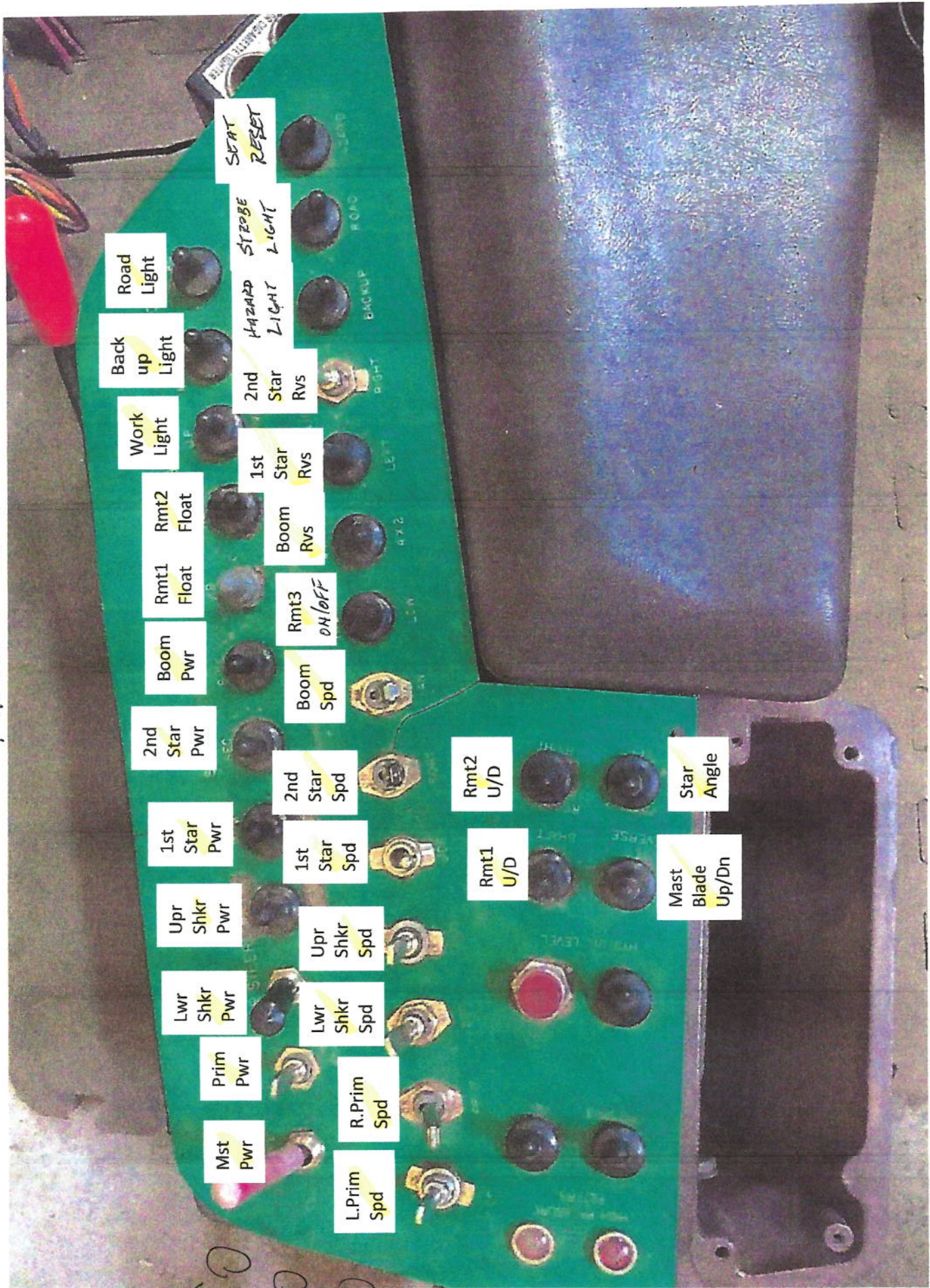
# 1996

Ans  
GREEN 607  
RED  
GREEN



POCAM  
- BLACK (CABLE) WHITE (THERM. WIRE)  
BROWN (CABLE) RED (THERM. WIRE)  
BLUE (CABLE) GREEN (THERM. WIRE)

FINAL 12-2-19



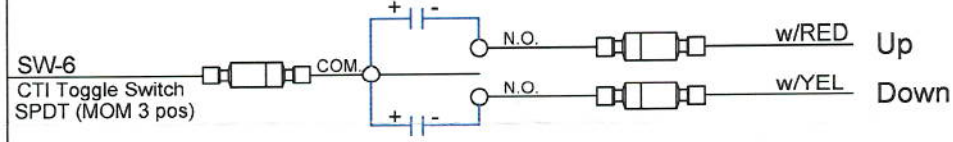
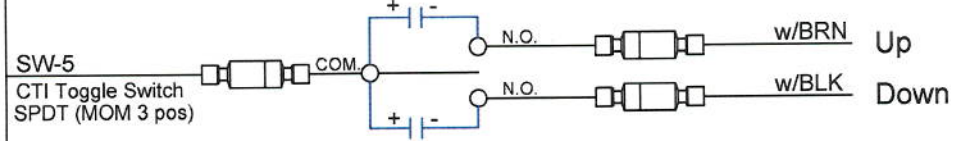
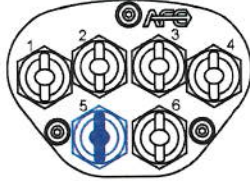
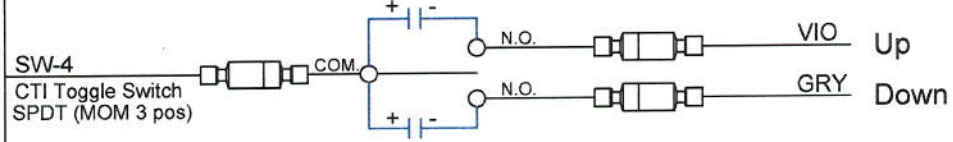
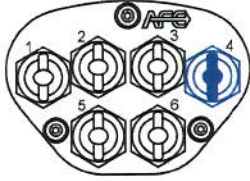
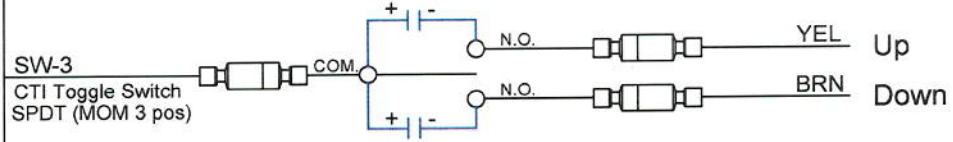
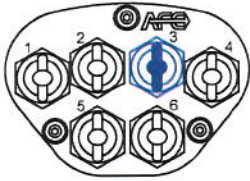
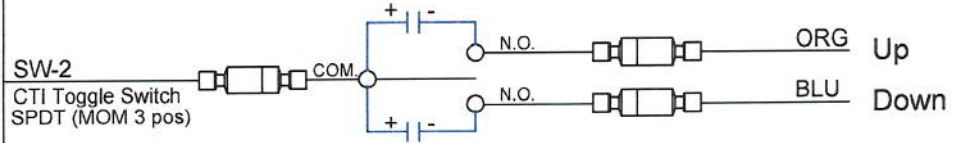
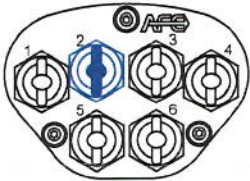
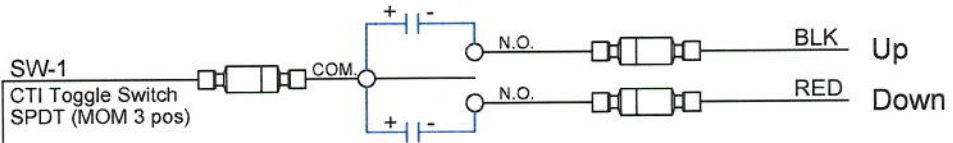
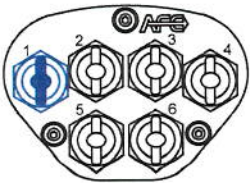
LPR  
 Brake  
 2 SPD  
 M14

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
------	-----	-------------	------	----------

**Note:**

1-Cyber-Tech, Inc. Proposed Handy-Grip® wiring to be APPROVED by the customer prior to manufacture and installation for operator use.



WHT Common  
(30 vDC 5 amp Max)

GRN Ground

**CAUTION:**  
Metal Handle MUST Be Grounded For Safe Operation!

**Cyber-Tech, Inc.**  
P.O Box 23801  
Portland, Or 97281-3801

**1.800.621.8754**

**www.cyber-tech.net**

**8901 Handy-Grip  
(6 Togg w/Boots)**

**SCHEMATIC DIAGRAM**

SIZE	FSCM NO.	DWG NO.	REV
	503-620-8580	CTI-2021541	
SCALE	1:1	D DOWERS	SHEET 1 OF 1

DATE 12/6/2019

New item for Stock (Kruckeberg Harv)

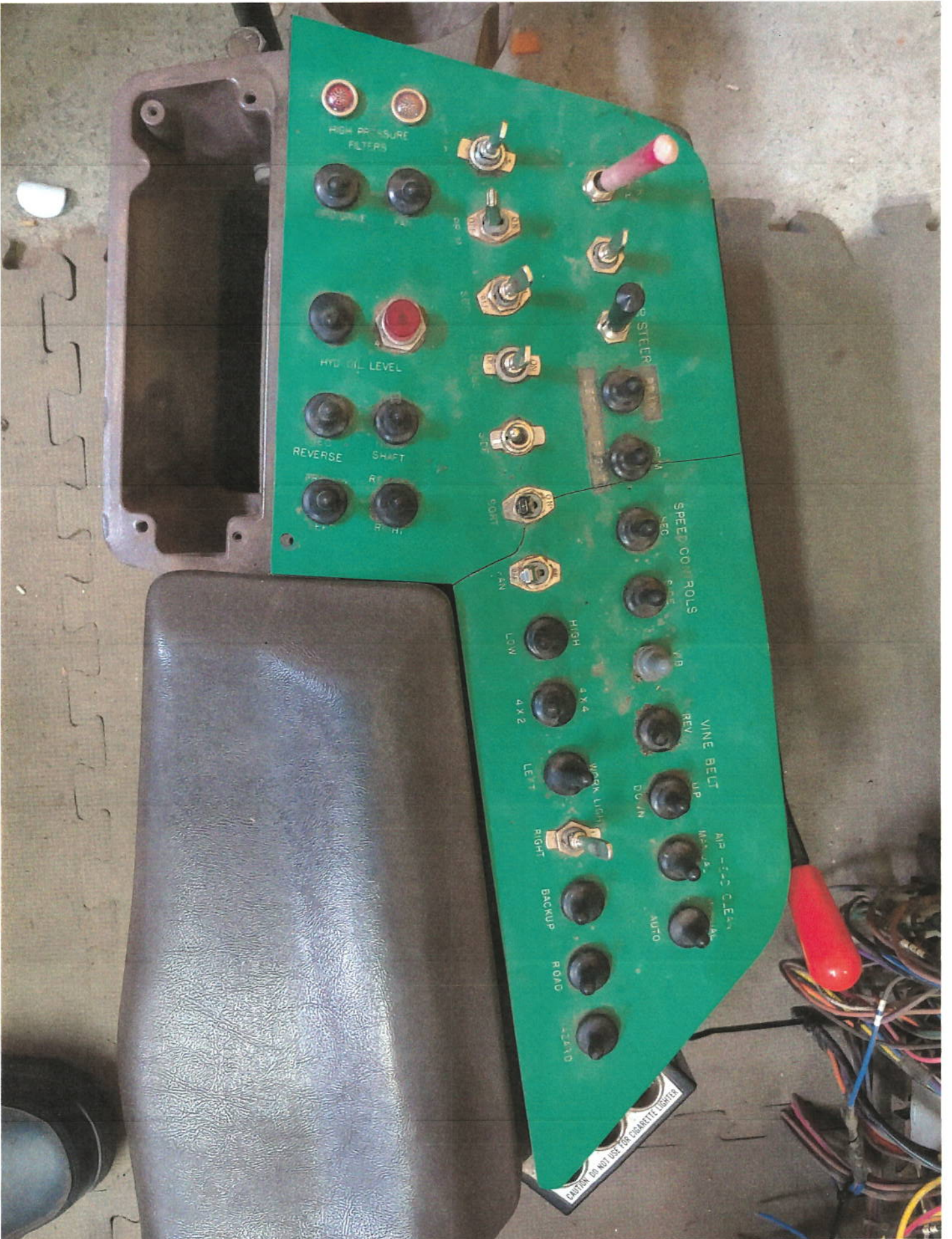
Hydraulics Dept

PARTS ORDER

QTY	PART NO	VENDOR PART NO	DESCRIPTION
1	49332	GRO 49332 (NAPA #)	Lamp/Clearance & Marker w/Grommet

CUSTOMER PRODUCTS = CPL1A (3/4" LED)

CPL1 - BEZEL (MUST BE ORDERED SEPERATELY)



**patrick.t@lenco-harvesters.com**

---

**From:** Tim Kruckeberg <tkruck90@gmail.com>  
**Sent:** Wednesday, October 30, 2019 9:21 AM  
**To:** patrick.t@lenco-harvesters.com  
**Subject:** Re: Hydraulic quick connect

Also, all three valves at front of harvester should have pressure relief.

Tim

On Wed, Oct 30, 2019 at 8:10 AM Tim Kruckeberg <[tkruck90@gmail.com](mailto:tkruck90@gmail.com)> wrote:  
Pat,

Primary: Toggle, on/off, momentary reverse foot switch (L/R)  
Beater 1: Toggle, on/off  
Beater 2: Toggle, on/off  
Star table section 1: Toggle, on/off, reverse hand switch that holds position  
Star table section 2: Toggle, on/off, reverse hand switch that holds position  
Boom: Toggle, on/off, reverse hand switch that holds position

If you can send me a blank schematic of how the switches will be laid out when it works, we would like to start working on that so, we have time to think about it. Call if you have any questions.

Thanks,  
Tim

On Wed, Oct 30, 2019 at 6:47 AM Tim Kruckeberg <[tkruck90@gmail.com](mailto:tkruck90@gmail.com)> wrote:  
I will give you a call here shortly.

Tim

--

Tim Kruckeberg  
Cell: (618)973-8252

--

Tim Kruckeberg  
Kruckeberg Farms  
Cell: [\(618\)973-8252](tel:6189738252)  
Office: (618)377-0890  
Fax: (618)377-0891  
6933 Fields Drive  
Moro, IL 62067

Quality Engraving

PO Box 213  
2820 N. Raucholz Rd.  
MI 48626

# Packing Slip

Date	Invoice #
12/8/2019	108

Ship To
Advanced Farm Equipment, LLC 5773 Crystal Road Vestaburg, MI 48891

P.O. No.	Ship	Via	FOB	Project
063219	12/8/2019			

Quantity	Item Code	Description
	Tags Shipping	
<i>Received 12-11-19</i>		

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2003-02040	1/2x36x40mm 2x60 12STPC-1"A"Flite6"NoEars 70' 3 Pitch Lap Joint	Noffsinger	Rear Cross / Boom
	WEB_50_3600_260_40_534LPR_SG_12STPC-1AEXT6S_3PLP	(Noffsinger Description)	

Dealer Rep \_\_\_\_\_

Date \_\_\_\_\_

Customer Tim Kruckeberg

Date \_\_\_\_\_