HydraBed

Dealer Service Handbook

INDEX

Cable Controls

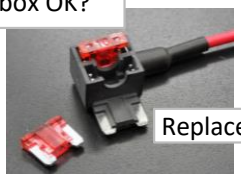
START HERE

Does pump clutch engage?

NO

Is the 10 Amp add-a-fuse obtaining keyed power in fuse box OK?

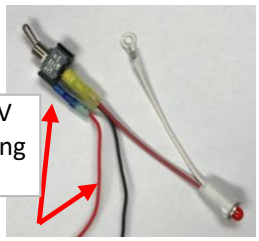
NO



Replace 10 Amp fuse

YES

With the ignition on, is 12V present on the wire providing power to dash bracket?



YES

NO

With the ignition and the dash bracket pump switch on, is 12V present at the pump clutch?

YES

NO

Find where the wire providing power to the dash bracket from the 10 amp add-a-fuse has been compromised.

Find where the wire providing power to pump clutch from the switch on the dash bracket has been compromised.

Replace clutch on pump

YES, but the grip is not performing properly

"Grip/Release" *is weak/slow*

- Check that belts are tight
- Use "burnish clutch" instructions to coach customer to burnish clutch
- Use "clevis adjustment" instructions to coach customer for proper clevis adjustment

Arms are not synchronized

Use "Arm Synchronization" instructions to coach customer for syncronizing arm cylinders

YES, but the load is not performing properly

"Load/Unload" *is weak/slow*

"Load/Unload" *is jerky/eratic*

"Load/Unload" *is not functioning at all*

- Check that belts are tight
- Use "burnish clutch" instructions to coach customer to burnish clutch
- Use "clevis adjustment" instructions to coach customer for proper clevis adjustment

Confirm that reservoir is adequately filled with oil and oil is at pump inlet
Check that cable is shifting valve
Check that no mechanical binding is occuring in lifting mechanism

YES, but no functions are performing properly

Functions are weak/slow

Functions are jerky/eratic

- Check that belts are tight
- Use "burnish clutch" instructions to coach customer to burnish clutch
- Use "clevis adjustment" instructions to coach customer for proper clevis adjustment

Confirm that reservoir is adequately filled with oil and oil is at

Electric Controls Power Supply

START HERE

WITH KEY ON - Is the red LED indicator located in the power harness illuminated?

YES → Go to Wireless Controls

NO

WITH KEY ON - is power present at the blue wire on the relay?

NO

YES

Check grounding connections
- At battery for receiver power
- On black wire for relay ground
Check wiring from blue wire on relay

Check 30 amp in line fuse at the positive terminal of battery and check wiring from the fuse to the relay

NO

WITH KEY ON - is power present at the red wire on the relay?

YES

WITH KEY ON - is power present at the yellow wire on the relay?

NO

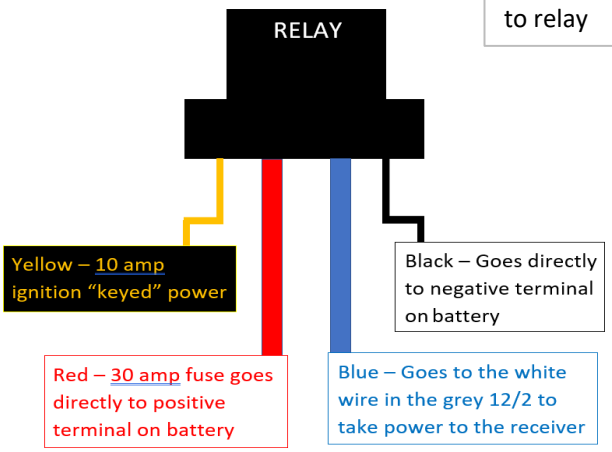
WITH KEY ON - Check 10 amp fuse in add-a-fuse assembly located in fuse box to pick up keyed power and check wiring from fuse to relay

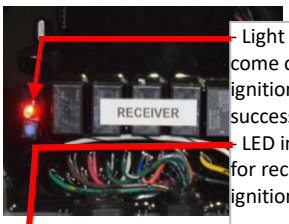
YES

Check grounding connections (at negative battery terminal or other known ground)
- For receiver power
- For relay ground

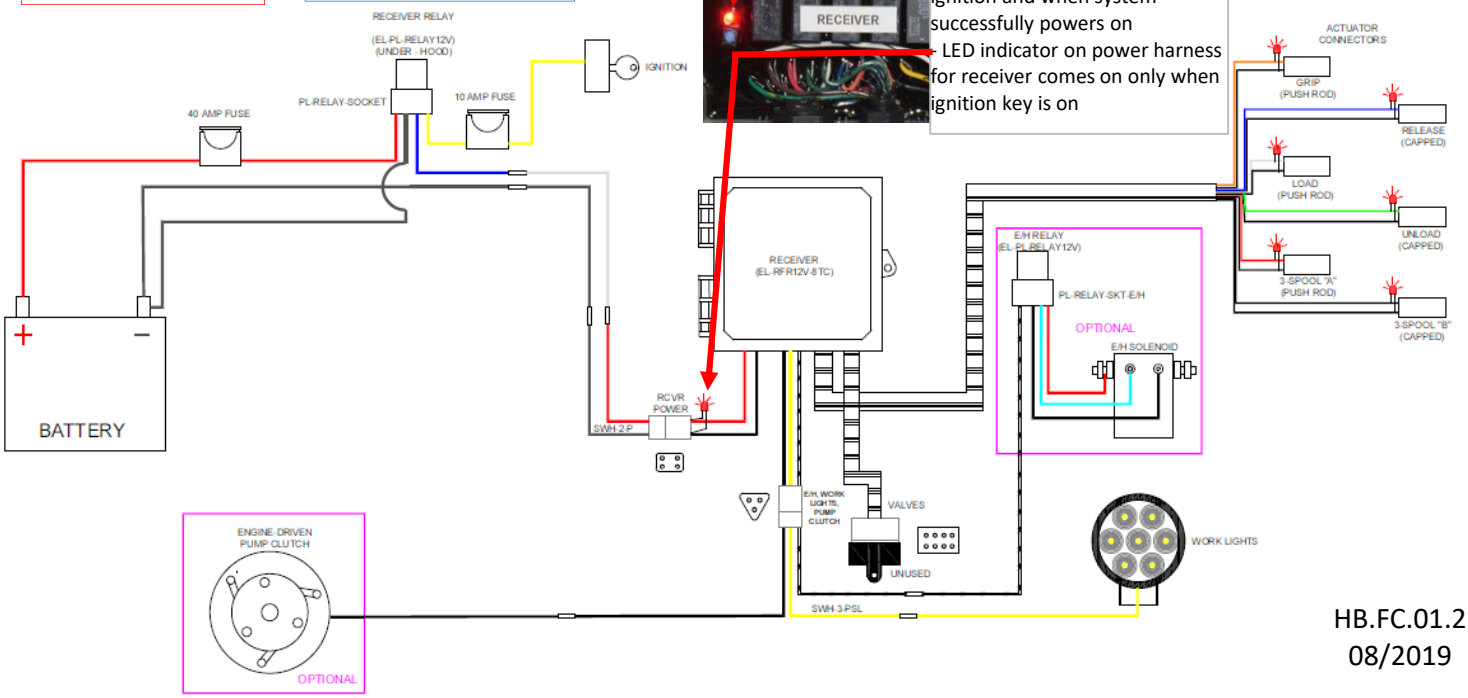
NO

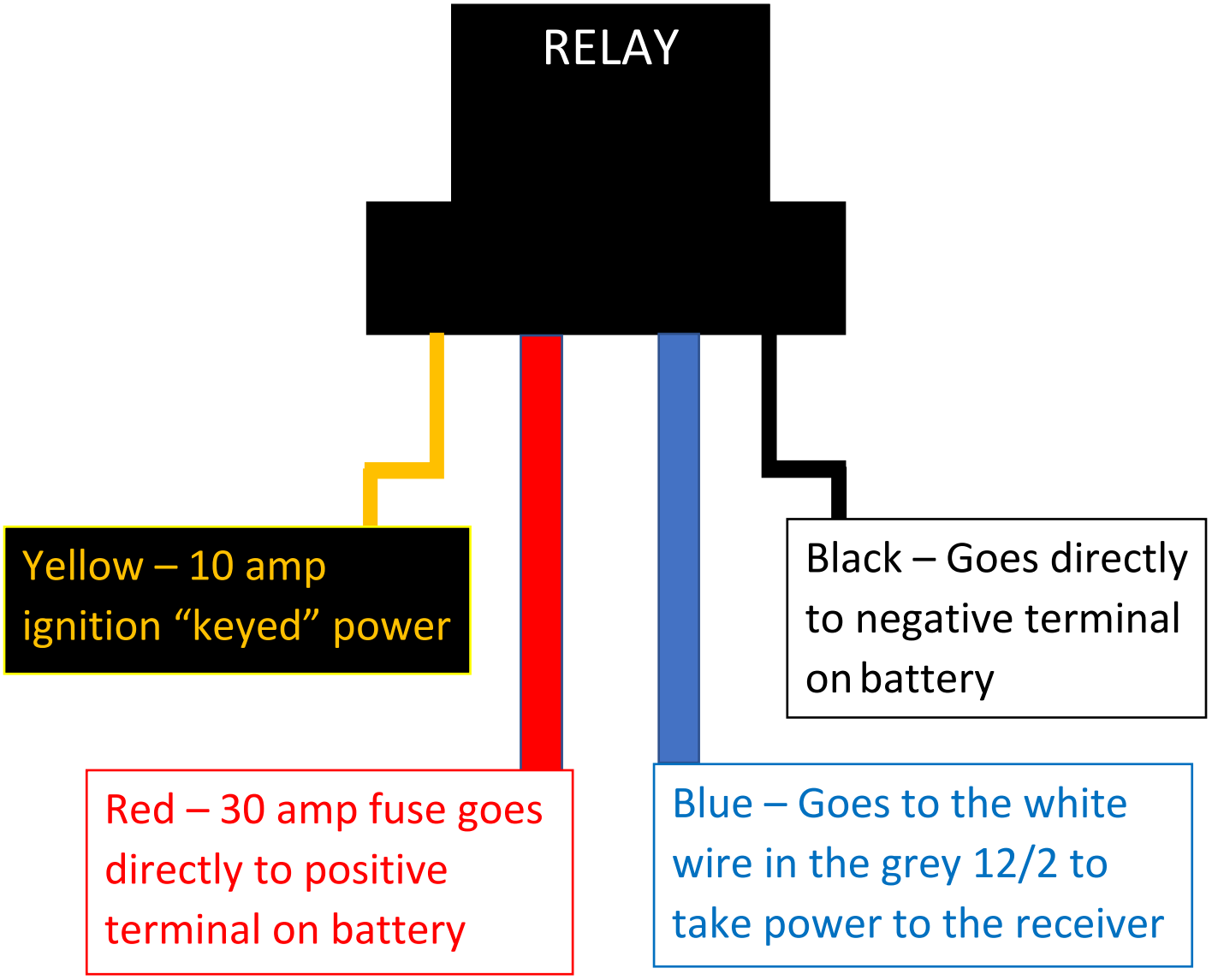
Replace the relay only (may not be necessary to replace the relay socket)





- Light in receiver is designed to come on momentarily with ignition and when system successfully powers on
- LED indicator on power harness for receiver comes on only when ignition key is on




RELAY
Yellow – 10 amp ignition “keyed” power
Red – 30 amp fuse goes directly to positive terminal on battery
Blue – Goes to the white wire in the grey 12/2 to take power to the receiver
Black – Goes directly to negative terminal on battery

Wireless Controls (General)

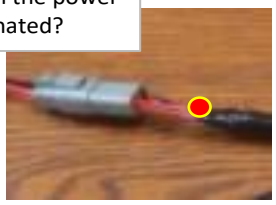
START HERE

WITH KEY ON - Is the red LED indicator loacated in the power harness illuminated?

YES

NO

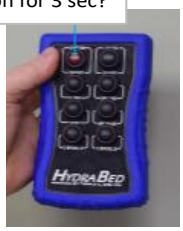
Go to Electric Controls Power Supply Flowchart



WITH KEY ON - Does "System On" indicator on remote illuminate when holding the power button for 3 sec?

YES

NO



Replace battery in remote

Clean battery connections in remote

Replace remote

Does the red LED inside the receiver come on when system is turned on with remote?

NO

View re-pairing instructions on page HB.SD.05
If re-pairing is unsuccessful - confirm external antenna is current with white label on front - replace if necessary

YES

Does clutch pump engage?

NO

YES

Is power present @ pump clutch?

NO

YES

Replace clutch

Do the Hydrabed functions operate properly?
If NO go to next page

YES

Do the work lights perform properly?

NO

NO

GO TO NEXT PAGE

Is power present out of the receiver at black wire from 3 pin connector?

YES

NO

Trace black "clutch wire" from the receiver to the pump clutch and find the wiring issue

Replace receiver

Is power present out of the receiver at yellow wire from 3 pin connector?

YES

NO

Trace yellow "work lights" wire from the receiver to the splice at Hydrabed frame
Cehck wiring connections in headache rack - refer to page HB.SD.07 for headache rack wiring

Contact Factory.

COMMON ISSUE

- Eratic functions - "Jerky, won't work briefly, works better when I hold remote outside cab"
SOLUTION - receivers with date code older than 2/2/18 check that external antenna has white label - replace if necessary

SPECAIL CIRCUMSTANCE ISSUE

- Dropout - ONLY on E/H Hydrabed - the system randomly quits working and will not function at all until powering off and powering back on SOLUTION - check that date code on receiver is newer than 09/25/2017, if date code is older the customer needs

Wireless Controls (General)

Do the HydraBed functions operate properly?

NO, "Load/Unload" is not performing properly

NO, "no functions" are performing properly

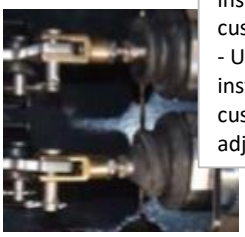
Functions are jerky/eratic

- Check that oil is properly filled in reservoir

- For receivers with date code older than 2/2/18 confirm external antenna is current with white label on front - replace if necessary

Functions are weak/slow

- Check that belts are tight
- Use "burnish clutch" instructions to coach customer to burnish clutch
- Use "clevis adjustment" instructions to coach customer for proper clevis adjustment



NO, "Grip/Release" is not performing properly

"Load/Unload" *does not function at all*

Check red LED indicators on actuator harness at the valve to see if 12V is present when function is requested
If yes replace actuator
If no replacing transmitter or receiver may be necessary

"Load/Unload" *is weak/slow*

- Check that belts are tight
- Use "burnish clutch" instructions to coach customer to burnish clutch
- Use "clevis adjustment" instructions to coach customer for proper clevis adjustment

"Load/Unload" *is jerky/eratic*

- Check that oil is properly filled in reservoir necessary

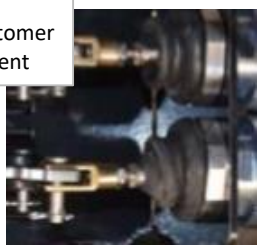
- For receivers with date code older than 2/2/18 confirm external antenna is current with white label on front - replace if necessary

Arms are not synchronized

Use "Arm Synchronization" instructions to coach customer for synchronizing arm cylinders

"Grip/Release" *is weak/slow*

- Check that belts are tight
- Use "burnish clutch" instructions to coach customer to burnish clutch
- Use "clevis adjustment" instructions to coach customer for proper clevis adjustment



"Grip/Release" *does not function at all*

Check red LED indicators on actuator harness at the valve to see if 12V is present when function is requested
If yes replace actuator
If no replacing transmitter or receiver may be

HB.FC.01.3
08/2019

Electric Over Hydraulic Power

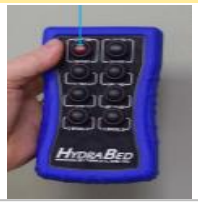
START HERE

WITH KEY ON - Is the red LED indicator loacated in the power harness illuminated?
-On/Off indicator for pendant only

NO

Go to Electric Controls Power Supply Flowchart

YE



WITH KEY ON - Does "System On" indicator on remote illuminate when holding the power button for 3 sec?

NO

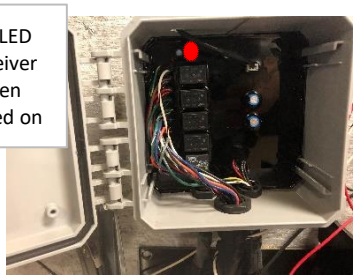
Replace battery in remote

Check battery connections in remote

Replace remote

YES

Does the red LED inside the receiver come on when system is turned on



NO

View re-pairing instructions on page HB.SD.05
If re-pairing is unsuccessful - confirm external antenna is current with white label on front - replace if necessary

YES

Do the HydraBed functions operate properly?
If NO go to next page

NO

GO TO NEXT PAGE

YES

Do the work lights perform properly?

NO

Is power present out of the receiver at yellow wire from 3 pin connector?

YES

Trace yellow "work lights" wire from the receiver to the splice at Hydrabed frame
Cehck wiring connections in headache rack - refer to page HB.SD.06 for work light wiring

NO

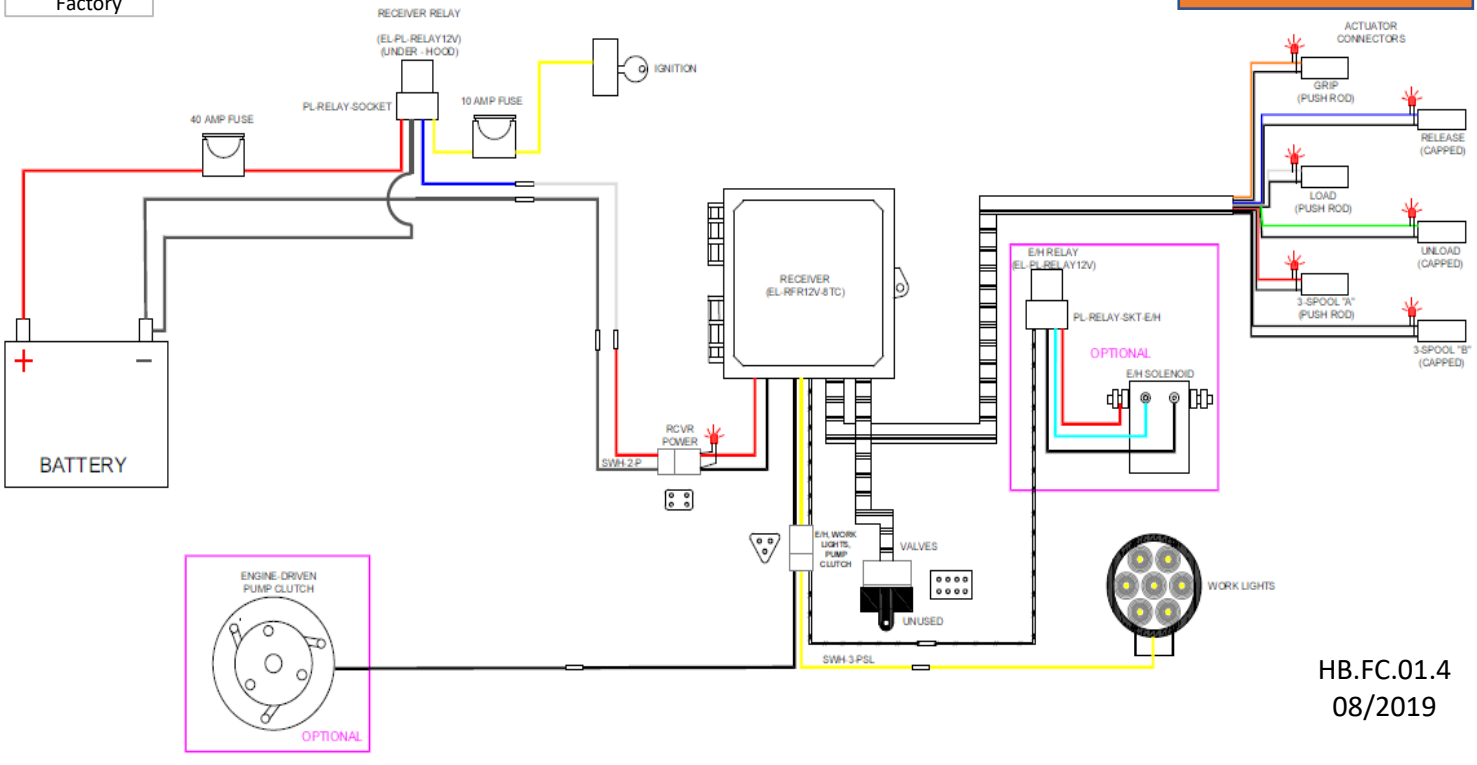
Contact Factory

COMMON ISSUE

- Eratic functions - "Jerky, won't work briefly, works better when I hold remote outside cab" SOLUTION - receivers with date code older than 2/2/18 check that external antenna has white

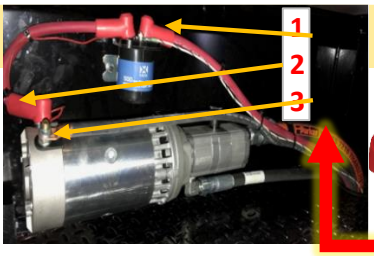
SPECAIL CIRCUMSTANCE ISSUE

- Dropout - ONLY on E/H Hydrabed - the system randomly quits working and will not function at all until powering off and powering back on
SOLUTION - check that date code on receiver is newer than 09/25/2017, if date code is older



HB.FC.01.4
08/2019

Electric Over Hydraulic



E/H
Do the HydraBed functions operate properly?

NO, "Load/Unload" is not performing properly

NO, "Grip/Release" is not performing properly

NO, no functions are performing properly

Nothing works at all

NUMBERS CORRESPOND TO PICTURE ABOVE

1.) Check 12V to power solenoid for E/H motor from positive battery cable

2.) Check 12V at E/H motor when asking for function

3.) Check grounding points for E/H motor

"Load/Unload" *does not function at all*

Check red LED indicators on actuator harness at the valve to see if 12V is present when function is requested
If yes replace actuator
If no replacing transmitter or receiver may be necessary

"Load/Unload" *is weak/slow*

- Use "clevis adjustment" instructions to coach customer for proper clevis adjustment
- Confirm a full 12V is present at E/H motor when using a function
- Check grounding points for E/H motor

"Load/Unload" *is jerky/eratic*

- Check that oil is properly filled in reservoir

- For receivers with date code older than 2/2/18 confirm external antenna is current with white label on front - replace if necessary

Functions are ALL *weak/slow*

Functions are ALL *jerky/eratic*

- Use "clevis adjustment" instructions to coach customer for proper clevis adjustment
- Confirm a full 12V is present at E/H motor when using a function
- Check grounding points for E/H motor

- Check that oil level is to check

- For receivers with date code older than 2/2/18 confirm external antenna is current with white label on front - replace if necessary

Arms are not

Use "Arm Synchronization" instructions to coach customer for synchronizing arm cylinders

"Grip/Release" *is weak/slow*

- Use "clevis adjustment" instructions to coach customer for proper clevis adjustment
- Confirm a full 12V is present at E/H motor when using a function
- Check grounding points for E/H motor

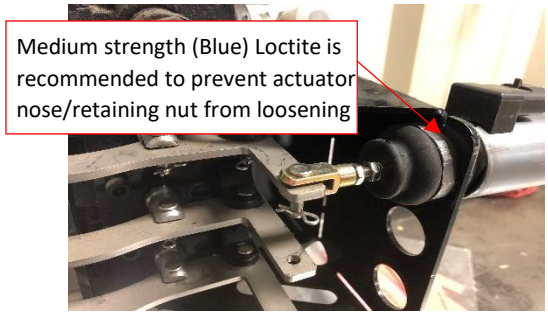
"Grip/Release" *does not function at all*

Check red LED indicators on actuator harness at the valve to see if 12V is present when function is requested
If yes replace actuator
If no replacing transmitter or receiver may be necessary

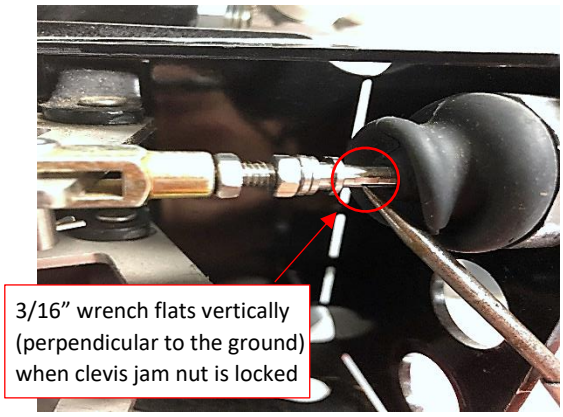
Actuator Clevis Adjustment Instructions

**It is essential that actuator clevis adjustment provides equal valve handle travel both directions from center.

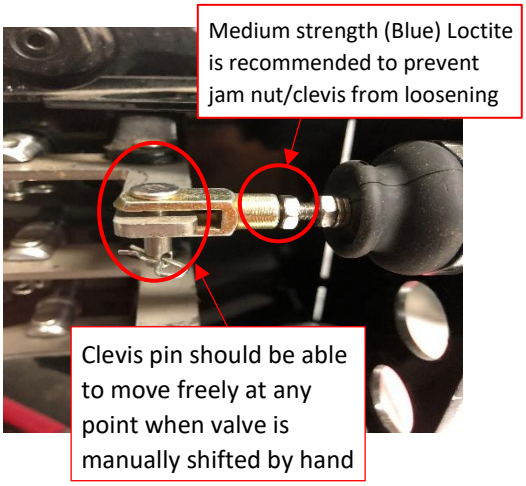
1.) Mount actuator nose to mounting plate with retaining nut
    a. Medium strength (Blue) Loctite is recommended to prevent actuator retaining nut from loosening from actuator nose



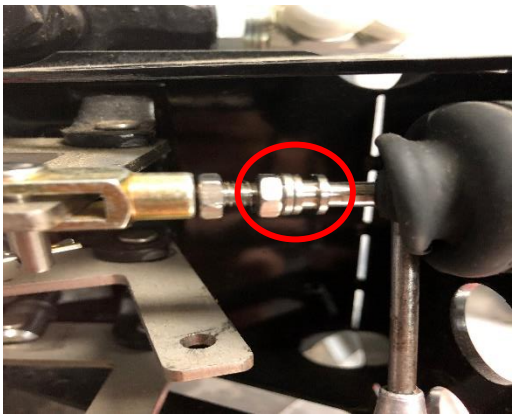
2.) Screw clevis in or out on actuator push rod to accomplish equal stroke both directions
    a. **NOTE: Clevis pin should be able to move freely at any point when valve is manually shifted by hand. If clevis pin becomes tight at any point while shifting valve the pin is preventing the valve from fully shifting and the clevis needs threaded on or off the actuator rod for proper adjustment.
3.) Rotate the push rod to orient the push rod's 3/16" wrench flats vertically



4.) Using a 5/16" open end wrench, lock the properly adjusted clevis in place using one of the jam nuts supplied
    a. Medium strength (Blue) Loctite is recommended to prevent actuator clevis/jam nut from loosening
5.) Recheck the push rod clevis for equal stroke adjustment by confirming the clevis pin moves freely when fully shifting valve handles in both directions manually by hand.



6.) Carefully stretch small end of rubber boot over and into retention groove pre-installed on actuator push rod and lock in place using the remaining jam nut supplied.



Burnishing Clutch / Rephasing Cylinders Process

For efficiency, rephasing the grip cylinders and burnishing the pump clutch can be completed in an individual process. The following steps will guide you through this process.

PREPARATION:

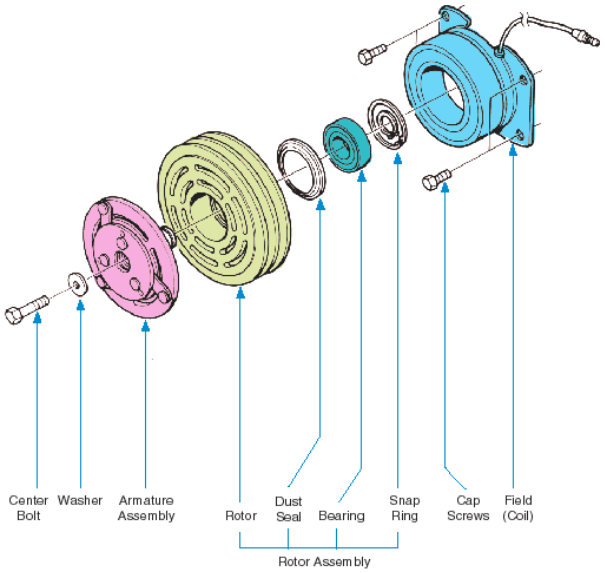
- *For 7' wide "100 Series" Hydra Bed models HB3100, HB3200, HB3300, HB-100, HB-200, HB-300, HB-305 & HB-500, activate the LOAD/UNLOAD control to position the arms in a vertical (upward) position*

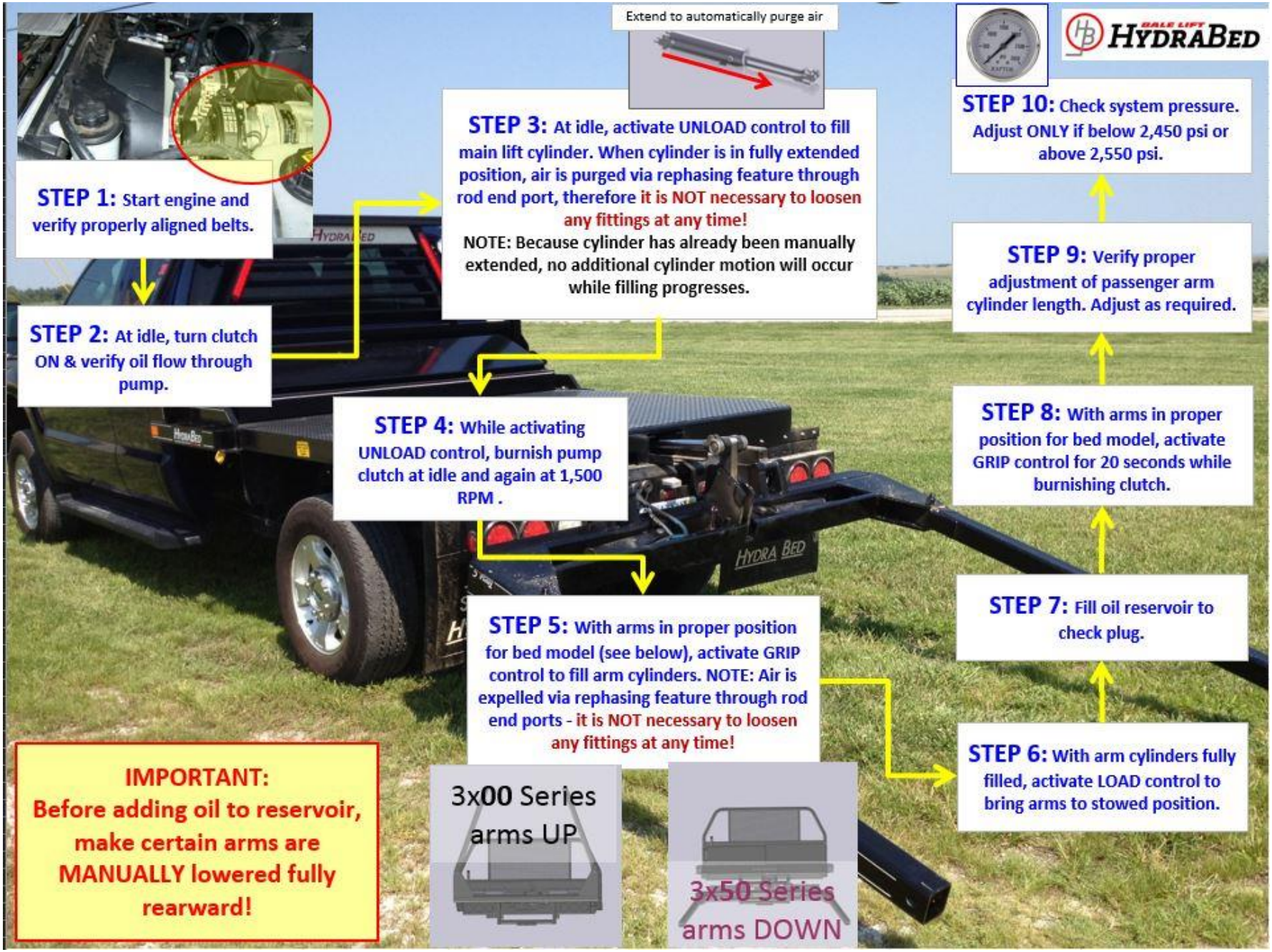
- *For 7'8" wide "50 Series" Hydra Bed models HB3250, HB3350, HB3550, HB250, HB350, HB355, HB550 & HB-555, activate the LOAD/UNLOAD control to position the arms in their fully rearward (down) position*

1.) With the truck engine idling, fully load the pump clutch by activating the GRIP function until the arms bottom out (grip cylinders fully extended) - continue to hold
   a. For an electrically controlled Hydrabed – manually shifting the valve handle by hand is required
   b. By orientating the arms correctly according to the preparation above and GRIPPING the arms - you are fully extending the cylinders which in turn activates the internal rephasing ports.
   c. This process achieves the synchronization of the HydraBed arms.

2.) While continuing to hold the GRIP function, cycle the system ON and OFF approximately 25 times
   a. Repeat this step @ 1000 engine RPM
   b. Repeat this step @ 1250 engine RPM
   c. By activating the pump clutch with the pump fully loaded you are burnishing the clutch. Burnishing the clutch is a healthy procedure that helps prevent clutch slippage.

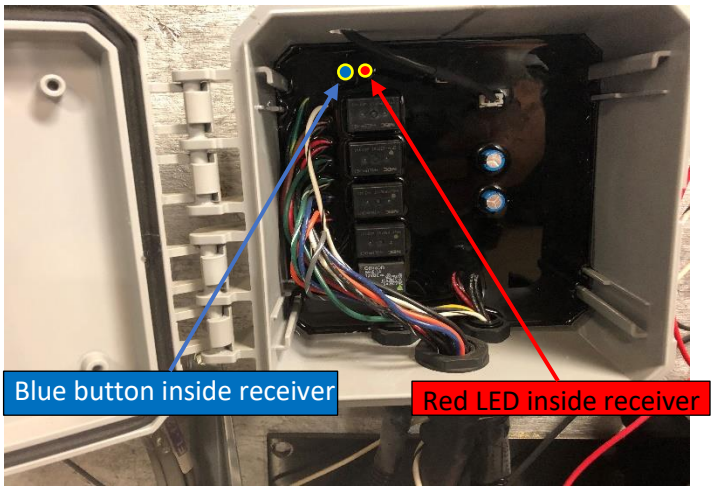
3.) Process complete. The grip cylinders have been rephased and clutch has been burnished.




Extend to automatically purge air
HYDRABED
STEP 1: Start engine and verify properly aligned belts.
STEP 2: At idle, turn clutch ON & verify oil flow through pump.
STEP 3: At idle, activate UNLOAD control to fill main lift cylinder. When cylinder is in fully extended position, air is purged via rephasing feature through rod end port, therefore it is NOT necessary to loosen any fittings at any time!
NOTE: Because cylinder has already been manually extended, no additional cylinder motion will occur while filling progresses.
STEP 4: While activating UNLOAD control, burnish pump clutch at idle and again at 1,500 RPM .
STEP 5: With arms in proper position for bed model (see below), activate GRIP control to fill arm cylinders. NOTE: Air is expelled via rephasing feature through rod end ports - it is NOT necessary to loosen any fittings at any time!
STEP 6: With arm cylinders fully filled, activate LOAD control to bring arms to stowed position.
STEP 7: Fill oil reservoir to check plug.
STEP 8: With arms in proper position for bed model, activate GRIP control for 20 seconds while burnishing clutch.
STEP 9: Verify proper adjustment of passenger arm cylinder length. Adjust as required.
STEP 10: Check system pressure. Adjust ONLY if below 2,450 psi or above 2,550 psi.
IMPORTANT:
Before adding oil to reservoir, make certain arms are MANUALLY lowered fully rearward!
3x00 Series arms UP
3x50 Series arms DOWN

HydraBed Husco Valve Wireless Controls System Pairing

Receiver/transmitter systems are shipped as a paired unit. Should it become necessary to re-pair a transmitter to a receiver, follow these steps:

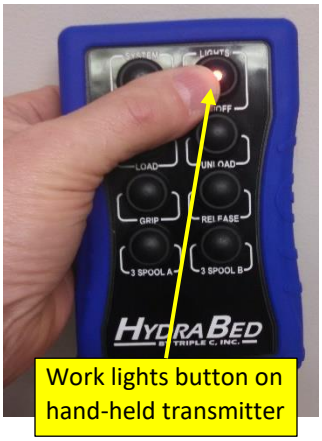


Preparation:

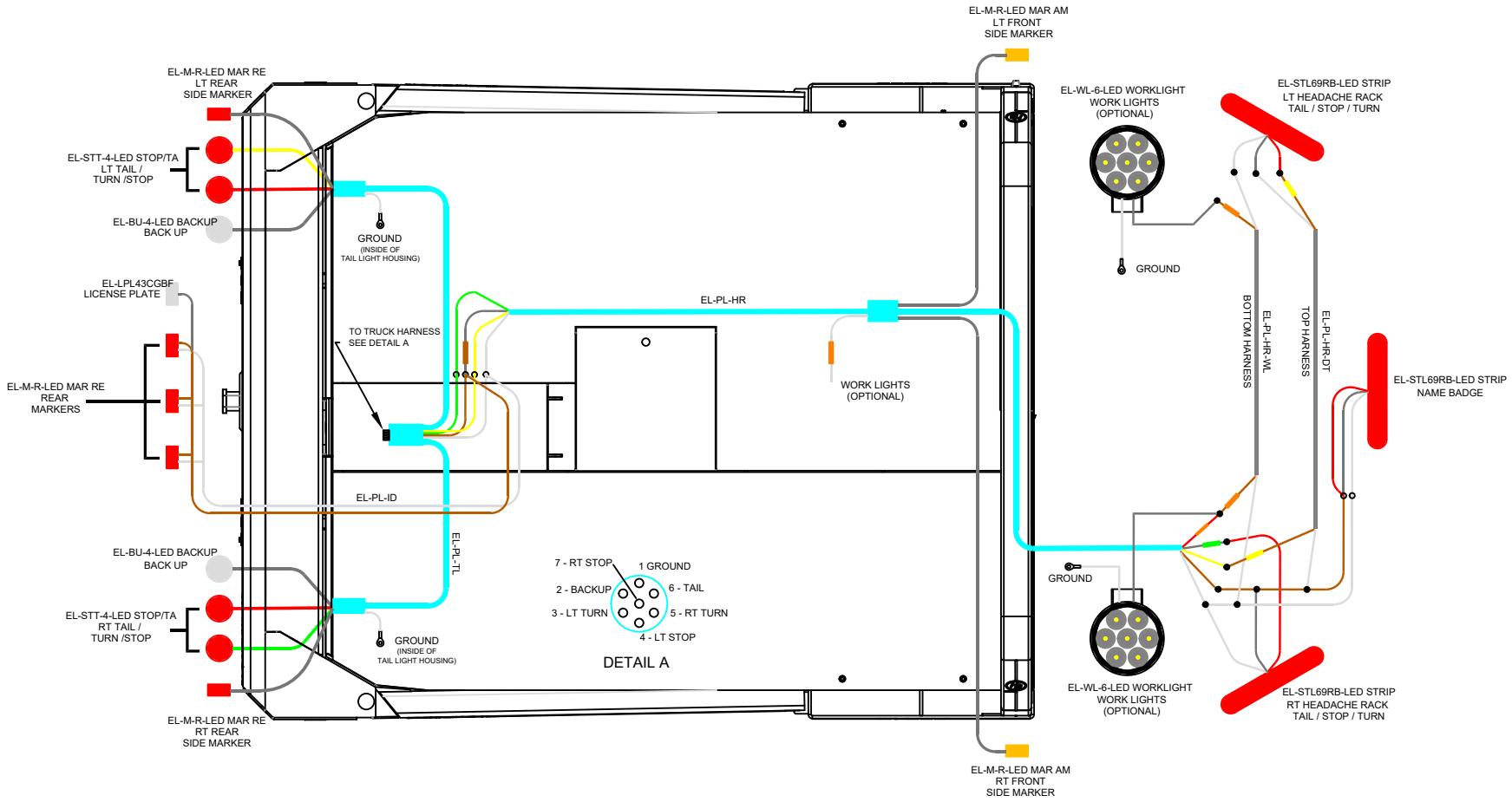
- Turn the hand-held transmitter off
- Open the hinged lid to the receiver by unclasping the latch located on the side of the enclosure

1. Turn truck ignition key ON.
   NOTE: The Red LED located inside of the receiver will light momentarily as power is first introduced to the receiver. If this does not happen it is likely you have a power supply issue.

2. Press and hold the Blue button located in the receiver until the Red LED next to it lights, then release.
3. **Immediately** press and hold "Work Lights" button on the hand-held transmitter until the Red LED inside the receiver blinks **ONE** single time, then release "Work Lights" button.
4. Wait momentarily (3-5 seconds) until Red LED inside of the receiver blinks rapidly and then shuts off.
   NOTE: If the Red LED did not blink ONE single-blink before blinking rapidly, pairing may not have been successful.



5. Turn hand-held transmitter's "Work Lights" button off.
6. Turn hand-held transmitter's "System" button on.
   NOTE: When "System" button is turned on, the Red LED in the receiver should be on - if the light is not on, the system did not successfully power on.
7. Confirm all hand-held transmitter functions perform correctly.



PART NO.	DESCRIPTION	QTY.
EL-426-18	GROMMET - TAIL LIGHTS	6
EL-B150-18	GROMMET - MARKER LIGHTS	7

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ± 1/16
ANGULAR: MACH ± 1 BEND ± 1
TWO PLACE DECIMAL ± .010
THREE PLACE DECIMAL ± .005

MATERIAL

DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	ETHAN	9/12/2018
PART #	Part #	
ASM #	Asm #	

COMMENTS:

WIRING DIAGRAM, HYDRABED

P.O. BOX 248, SABETHA, KS 66534
(785) 284-3674 FAX (785) 284-3931

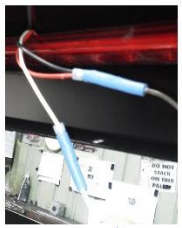
HYDRABED

SIZE	DWG. NO.	REV
B	11-0005-03	A

SCALE: 1:32 | WEIGHT: | SHEET 1 OF 1

	REVISIONS		
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	6/21/2013	
B	REVISED TO MATCH NEW HARNESSES	2/3/2014	

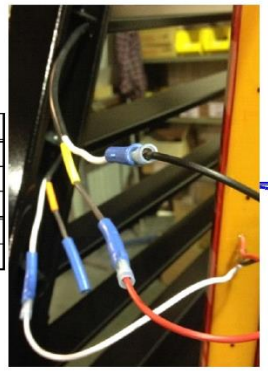
WIRE COLOR/FUCTION	
female bullet	YELLOW (LEFTH TURN, STOP)
female bullet	BROWN (TAIL)
female bullet	ORANGE(FUTURE WORK LIGHT)
female bullet	WHITE (GROUND)

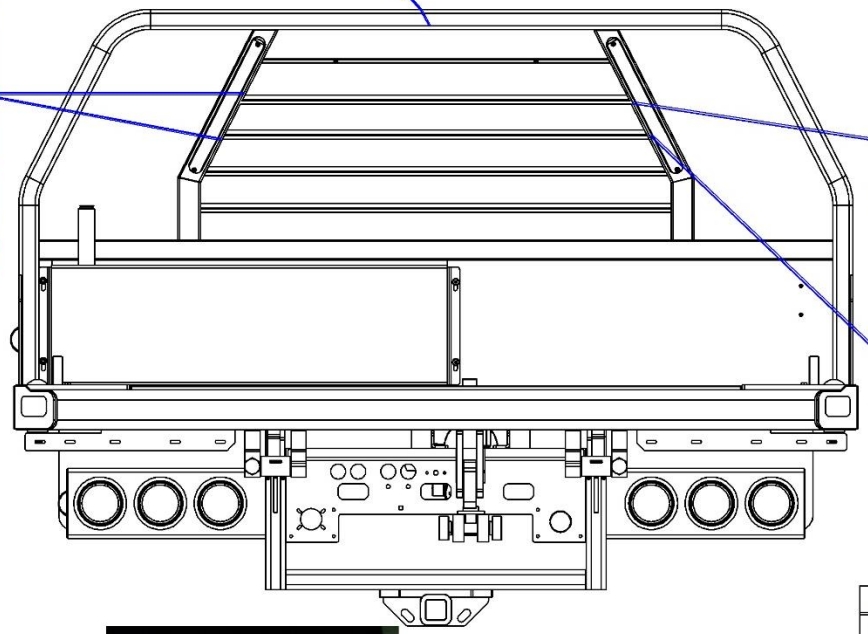


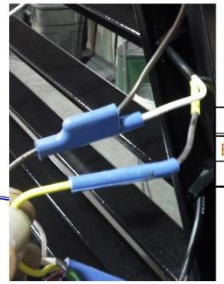
HARNESS	LIGHT
BLACK	RED/ BLACK
WHITE	WHITE

WIRE COLOR/FUCTION	
Female bullet	GREEN (RIGHT TURN, STOP)
Double female bullet	BROWN (TAIL)
Double female bullet	ORANGE(FUTURE WORK LIGHT)
Double female bullet	WHITE (GROUND)

TOP HARNESS	LIGHT
BROWN w/ YELLOW	RED
WHITE	BLACK
BOTTOM HARNESS	
WHITE	WHITE
BROWN w/ ORANGE	PLUG

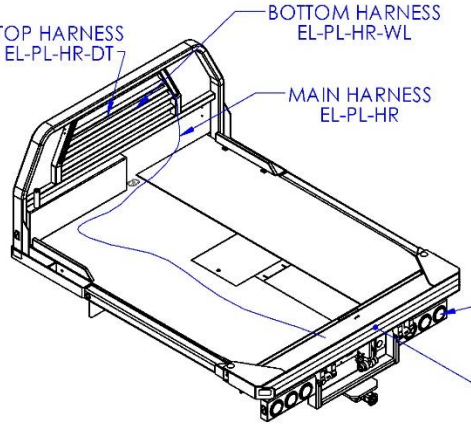






TOP HARNESS	MAIN HARNESS
BROWN w/ YELLOW	YELLOW
WHITE	BROWN

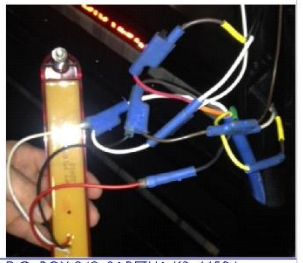
BOTTOM HARNESS	MAIN HARNESS
BROWN w/ ORANGE	RED w/ ORANGE
WHITE	WHITE



PLUGS TOWARDS TOP

	WIRE COLOR/FUCTION
male bullet	YELLOW (LEFTH TURN, STOP)
male bullet	BROWN (TAIL)
male bullet	GREEN (RIGHT TURN, STOP)
male bullet	WHITE (GROUND)

LIGHT	MAIN HARNESS
RED	GREEN
WHITE	WHITE
BLACK	BROWN



UNLESS OTHERWISE SPECIFIED:	NAME	DATE
DRAWN	HEATH	8/7/2019
PART #		
ASM #	SUB-HB-3199 L-TD	

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ±1/16
ANGULAR: MACH ± 1 BEND ±
TWO PLACE DECIMAL ±0.0
THREE PLACE DECIMAL ±0.0
MATERIAL

DO NOT SCALE DRAWING

COMMENTS:

HB-3200 WIRING INSTALLATION

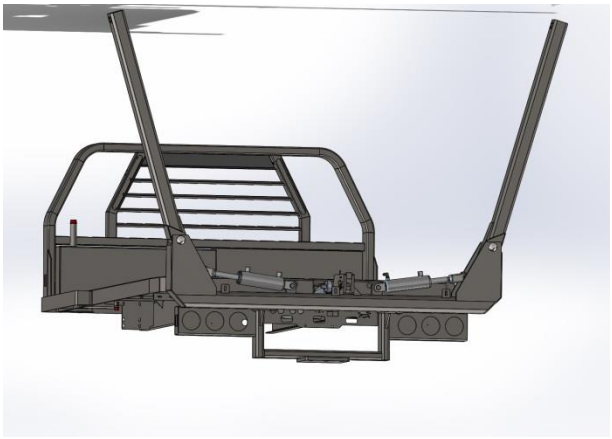
P.O. BOX 248, SABETHA KS. 66534
(785) 284-3674 FAX (785) 284-3931

TRIPLE C INC.

SIZE	DWG. NO.	REV
B	11-0205 B	B

SCALE: 1:12 WEIGHT: 1727.06 SHEET 1 OF 1

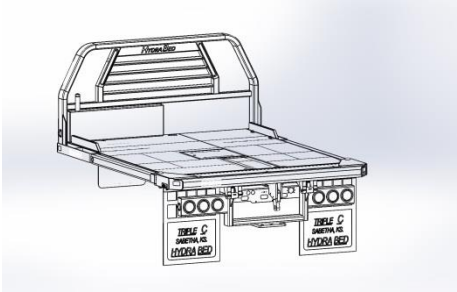
Hydra Bed Arm **Cylinder Length** Adjustment



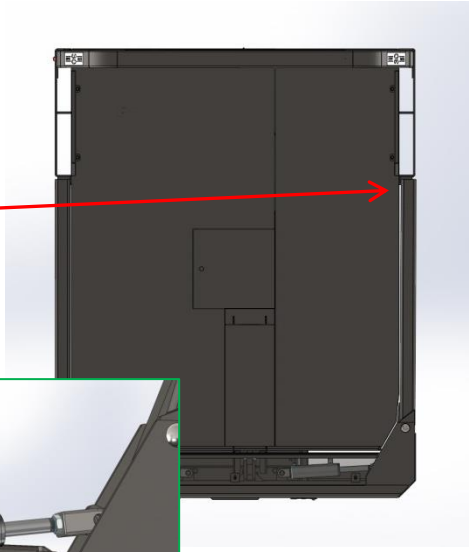
The Hydra Bed arms are powered AND synchronized by a rephasing pair of hydraulic cylinders. The passenger arm cylinder of that pair is equipped with a threaded rod/clevis arrangement. This feature provides a means of adjusting the passenger arm position in relation to the driver's arm position. During the initial installation of the bed, adjustment of the passenger arm cylinder length may be necessary for accurate synchronization which is defined as both arms contacting the sides of the bed at the same time.

Proper cylinder length adjustment steps are:

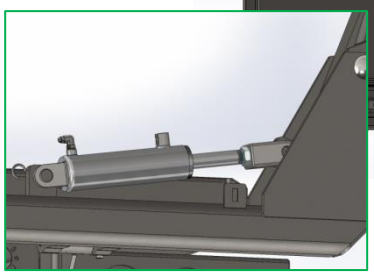
1. Make certain ALL air is purged from both arm cylinders.
    a. DO NOT disconnect or loosen any hydraulic fittings! The Hydra Bed cylinders are self-purging.
    b. With the pump engaged and the arms in their fully rearward position (fully upward on all 7' wide models ending in "00" and "05"), activate and hold the GRIP function for 30 seconds. This allows both arm cylinders to fully extend.
    c. At this fully extended (arms fully gripped) position, the cylinder rephasing function is enabled and any trapped air is purged by the hydraulic flow moving through the circuit.



2. Activate the LOAD control to bring the arms within 1 inch of the stowed (home) position.
3. Activate the GRIP control until an arm just touches the bed side.



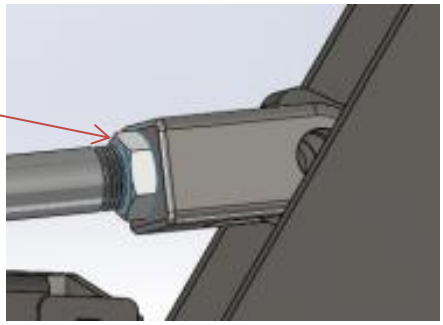
4. If both arms are touching the bed side evenly, no adjustment is necessary.
5. If only the Driver's arm is touching, measure and record the gap between the Passenger arm and bed side, proceed to **Step 7**.
6. If only the Passenger arm is touching, measure and record the gap between the Driver's arm and bed side, proceed to **Step 10**.



7. **START HERE IF DRIVER'S ARM IS TOUCHING BEFORE PASSENGER ARM:** After moving the arms to a rearward position, activate the RELEASE control until the passenger cylinder clevis locknut is Accessible. Turn system OFF.

8. Using a 1-5/8” open end wrench, loosen the locknut.

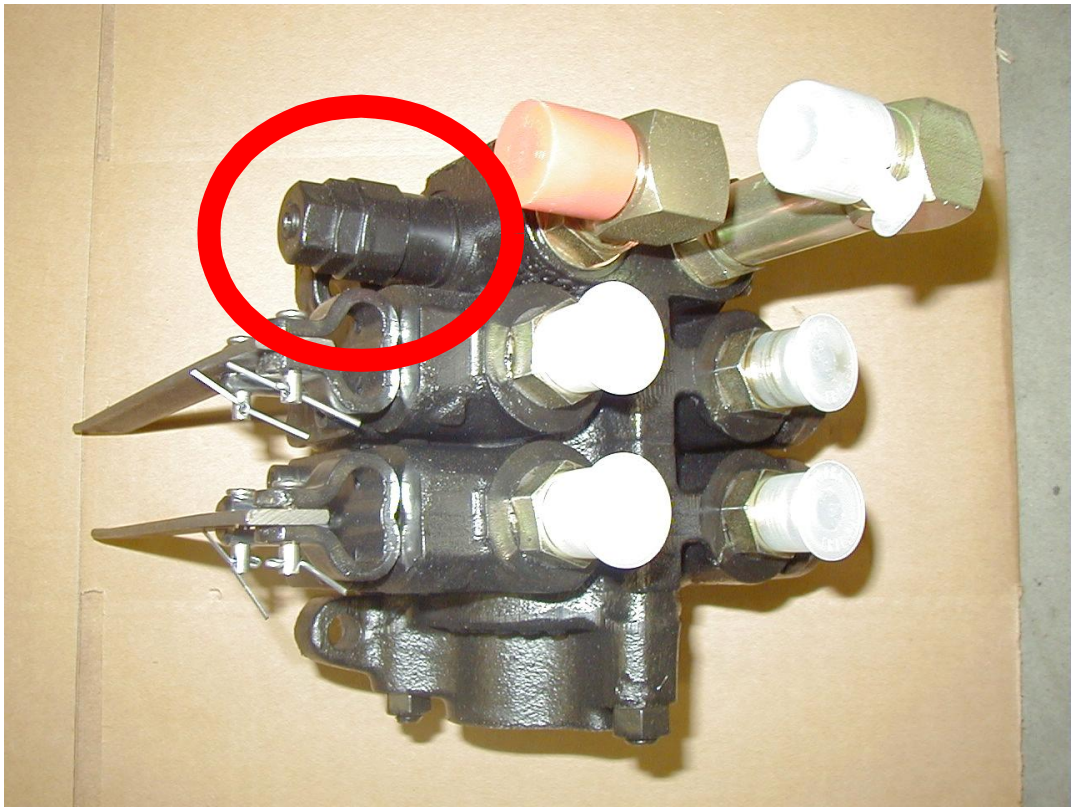
9. Using a 1” open end wrench, turn the passenger cylinder shaft OUT of the clevis (top of shaft will rotate TOWARD the bed). One full revolution of the shaft will move the passenger arm tip toward the bed side approximately ½”.



10. **START HERE IF PASSENGER ARM IS TOUCHING BEFORE DRIVER’S ARM:** After moving the arms to a rearward position, activate the RELEASE control until the passenger cylinder clevis locknut is accessible. Turn system OFF.
11. Using a 1-5/8” open end wrench, loosen the locknut.
12. Using a 1” open end wrench, turn the passenger cylinder shaft IN to the clevis (top of shaft will rotate AWAY from the bed). One full revolution of the shaft will move the passenger arm tip away from the bed side approximately ½”.

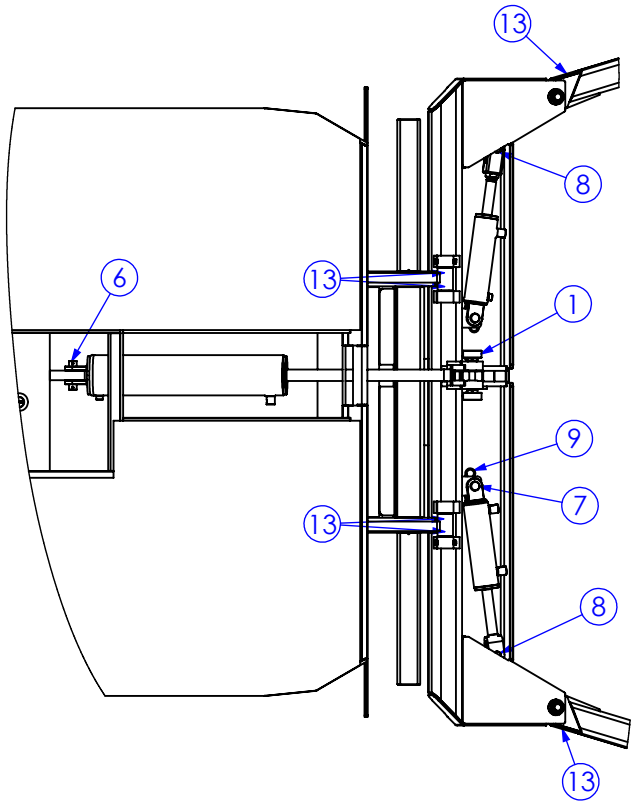
13. Re-tighten the clevis lock nut.
14. Re-check for accurate synchronization and repeat above steps as necessary.

Hydra Bed **MANUAL** control valve
Pressure Relief Setting Procedure



To adjust the pressure relief setting on a Husco 5000 Series manual control valve:

1. Temporarily connect a hydraulic pressure gauge with minimum 3,000psi capability to a system quick coupler.
2. With pump turned on, activate appropriate control to pressurize the gauge; note the indicated pressure.
3. Loosen the ¾” locking nut on the pressure relief adjusting screw.
4. Using a 5/32" Allen wrench, turn the screw clockwise to increase pressure to the correct 2,450 psi setting.
5. Tighten the locking nut and verify that the pressure gauge indicates the desired 2,450 psi.



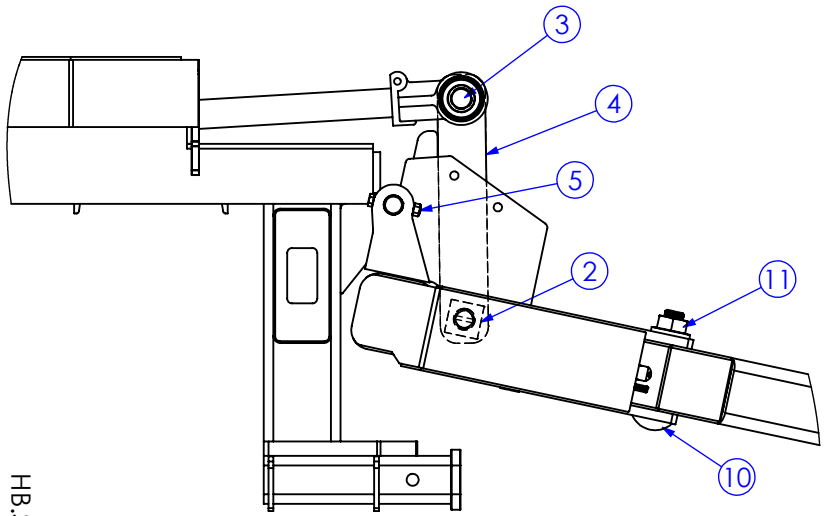
RE-KLR-1250 Kit includes:

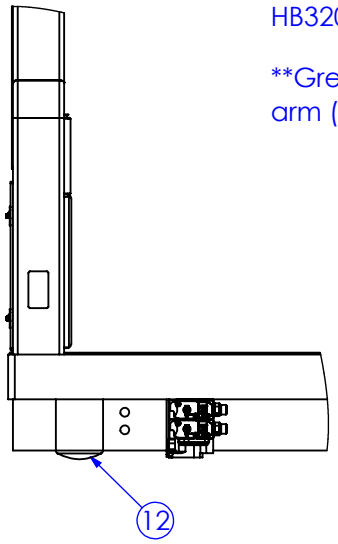
Item No.	Part No.	Desc.	Qty.
1	RE-BA100RR	Roller Bearing	2
2	RE-PN1x300	Sq. HD. Main Linkage Rear Pin	1
3	RE-PN-1x600	Bearing Pin, Rod End Main Lift Pin	1
4	RE-LB-125	Linkage bar	1

RE-KPBR Kit includes:

Item No.	Part No.	Desc.	Qty.
1	RE-BA100RR	Roller Bearing	2
3	RE-PN-1x600	Bearing Pin, Rod End Main Lift Pin	1

Item No.	Part No.	Desc.	Qty.
5	RE-PN-1x601	Main Hinge Pin w/ Bolt & Lock Nut	2
6	RE-PN1x375	Main Lift Cylinder Base Pin	1
7	HD-PC-1x2-3/4	Clevis Pin 1x2-3/4	2
8	RE-PN-1x338	Arm Rod End Pin 3-1/2" Arm	2
9	HD-HPC .178	R-Pin .178 Dia.	2
10	*BO-1-1/4x6 CCS	Arm Bolt	2
11	BO-1-1/4 HNS	Arm Bolt Lock Nut	2
12	GN-K22001	10 Micron Filter	1
13	HD-ZG 1/4-28 STR	Grease Zerks	**8



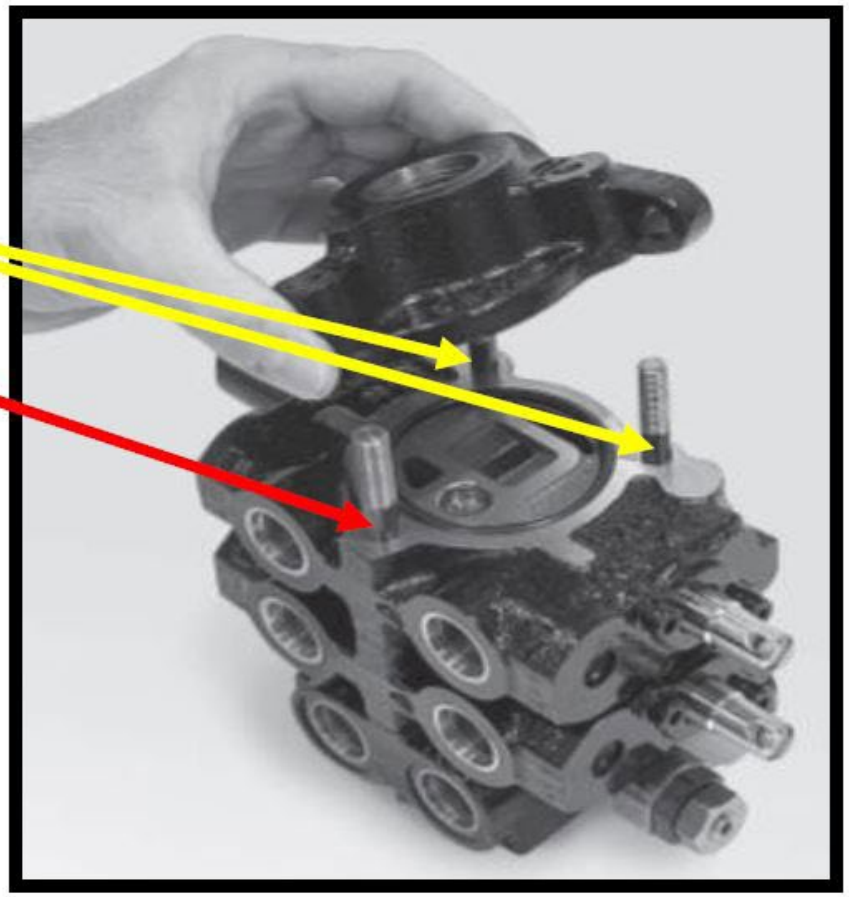


*HB250, HB350, HB355, HB550, HB555, HB3100
HB3200, HB3250, HB3300, HB3350, HB3550 only

**Grease zerks are located in spinner bushing of each arm (not shown).

Tie Rod Torque

- Lower small Tie Rods
  - 14 FT/LBS
- Upper Large Tie rod
  - 33 FT/LBs
- Under-torqued
  - Results in limited pressure to work ports
- Over-torqued
  - Results in failure to shift valve spool or failure to return valve spool to center



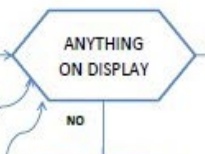
ELECTRIC FEEDER DISPLAY/SENSOR TROUBLESHOOTING FLOWCHART

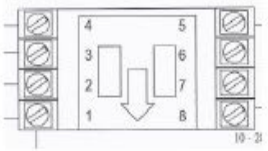
HydraFeeder by HydraBed

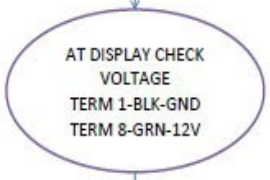
Drawing : 30-0924 September 19, 2018

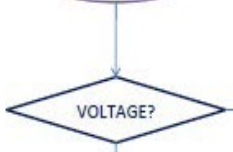
DO THE FOLLOWING FIRST

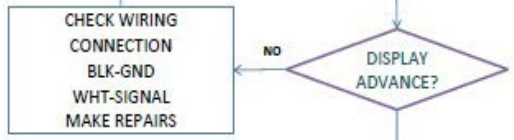
1. CHECK AND CORRECT ALL 4 MENU SETTINGS AS NEEDED. THIS WILL VERIFY THAT THE DISPLAY BATTERY IS GOOD AND THE BUTTONS WORK PROPERLY. REFER TO OWNERS MANUAL. THIS COULD SOLVE THE PROBLEM
2. MOVE TO THE NUMBER ONE (1) MENU AND RECORD CURRENT SETTING (CUSTOM SETTING).
3. TO AID IN TROUBLESHOOTING, TEMPORARILY REPROGRAM THE NUMBER ONE (1) MENU TO 01.0000

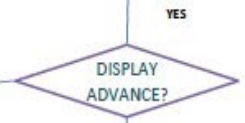


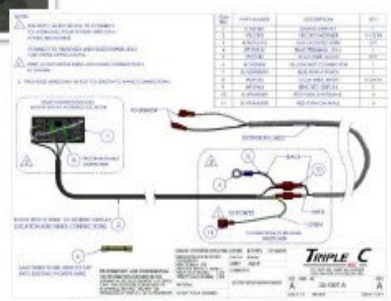




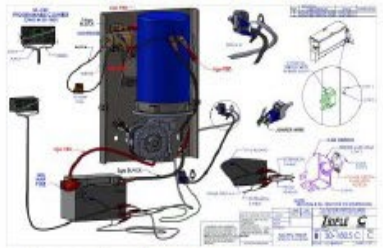


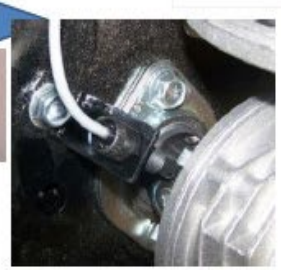






Click on drawings for additional information





GENERAL NOTES

1. REFER TO HYDRA FEEDER OWNERS MANUAL FOR DISPLAY FUNCTIONS AND PROGRAMMING INSTRUCTIONS
2. REFER TO OWNERS MANUAL FOR WIRING DIAGRAM 30-1801 & 30-1805.
3. CHECK FOR VOLTAGE USING COMMON 12V TEST LIGHT.

ELECTRIC COUNTER CONFIGURATION

Entering the factor into the digital display:

Refer to the Technical Manual shipped with the digital display.

There are four (4) parameters that make up the programmable display. The leftmost digit designates each parameter. Once in the programming mode, you must scroll through each parameter to return to normal operation.

The display is configured from the factory to enter the programming mode simply by pressing the Down (left) Key.

Programming parameters can be accessed by pressing the Down Key. To edit a parameter use the Down key to scroll until the desired parameter appears on the screen. Pressing the Next key will cause the leftmost digit of that value to begin to flash. Use the Next and Down keys in combination to choose individual digits and change their value.

1 The first menu is the count-input calibrator. Using the next/reset key, input your factor number that you calculated in step 6 on page 8. Press the next/reset once more after you have entered the last digit of your factor, then press the down key to advance to next parameter. Factory preset is 01.0000.

2 The second menu is the “Display Decimal Point”. This should be set to “off’. Press the down key to advance to next parameter.

3 The third menu is the “Count Offset”. This should be set to “000000”. All zeros. Press the down key to advance to next parameter.

4 The fourth menu is the “Front Panel Reset Enable”. This should be set to “on”. Press the down key once more.

5 Your digital display is now configured to display the number of pounds for that particular feed.

PROGRAMMABLE DISPLAY - ELECTRIC ONLY

The digital counter is factory configured to count one digit per auger revolution. The factory preset for menu 1 is 01.0000. If you desire your counter to display "pounds of feed", follow these instructions to calculate your programming factor.

To determine the programming factor:

1 Obtain a container to run feed into. Weigh that container empty.
Example: Empty container weighs 4 pounds.

2 With the readout displaying zeros, run some feed into the container. The larger the sample size, the greater your accuracy.

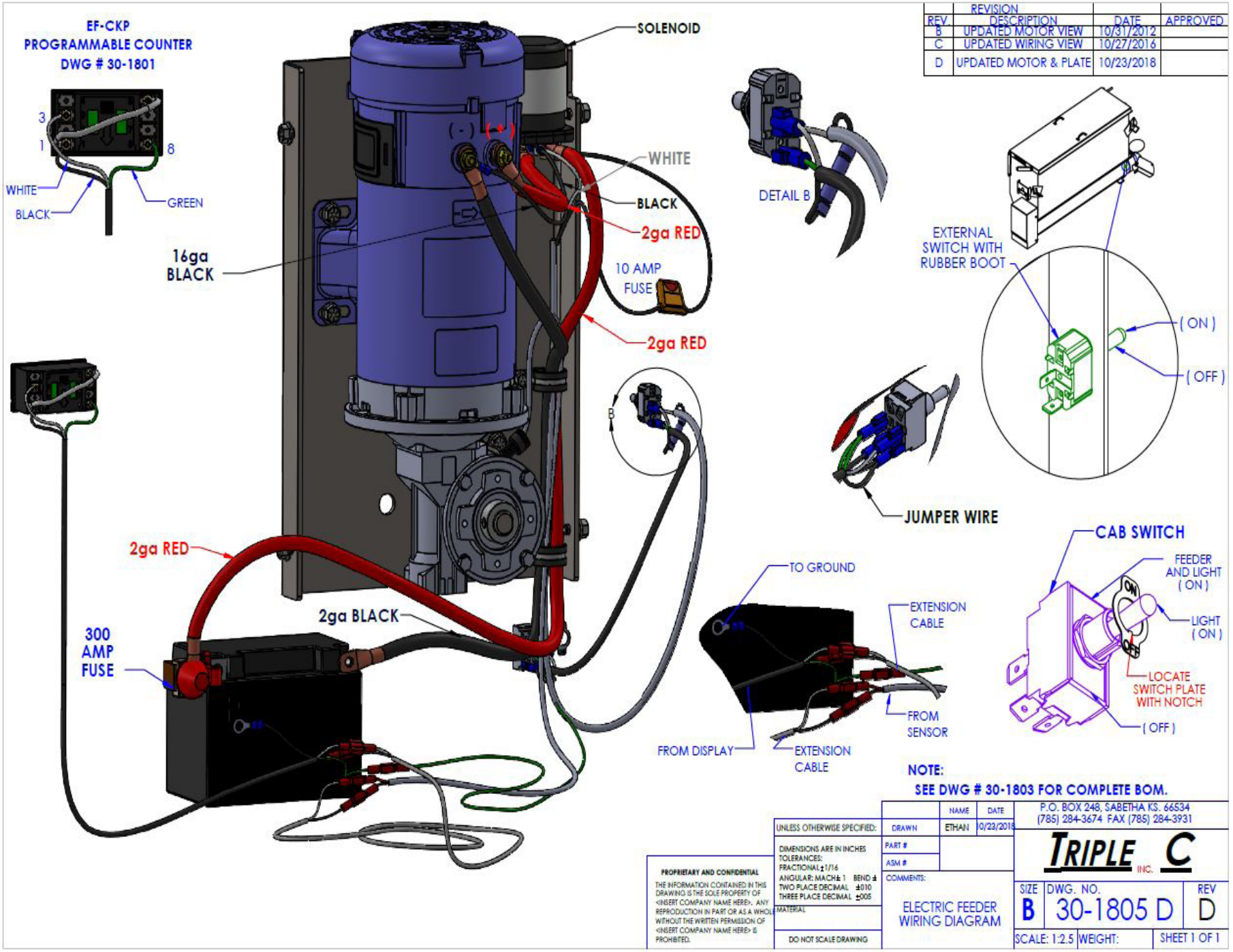
3 Record the number on the digital display.
Example: Number on display is 7

4 Weigh the full container and subtract the weight of the container.
Example: 67 – 4 = 63 pounds of feed

5 Divide the number of pounds by the number on the display. This will be the number of pounds per revolution.
Example: 63 / 7 = 9

6 This is the programming factor for that particular feed. Replace the number calculated in step 5 (Example: 9) in the first counter parameter. See page 10 for instructions to enter the factor into the counter. Record this factor and feed type for future reference.

For accurate feeding, this must be done for each different type of feed.



REV	REVISION DESCRIPTION	DATE	APPROVED
B	UPDATED MOTOR VIEW	10/31/2012	
C	UPDATED WIRING VIEW	10/27/2016	
D	UPDATED MOTOR & PLATE	10/23/2018	

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ±1/16
ANGULAR: MACH ± 1 BEND ±
TWO PLACE DECIMAL ±010
THREE PLACE DECIMAL ±005
MATERIAL
DO NOT SCALE DRAWING

	NAME	DATE
DRAWN	ETHAN	10/23/2018
PART #		
ASM #		
COMMENTS:		

ELECTRIC FEEDER WIRING DIAGRAM

P.O. BOX 248, SABETHA KS. 66534
(785) 284-3674 FAX (785) 284-3931

TRIPLE C INC.

SIZE	DWG. NO.	REV
B	30-1805 D	D

SCALE: 1:2.5 | WEIGHT: | SHEET 1 OF 1

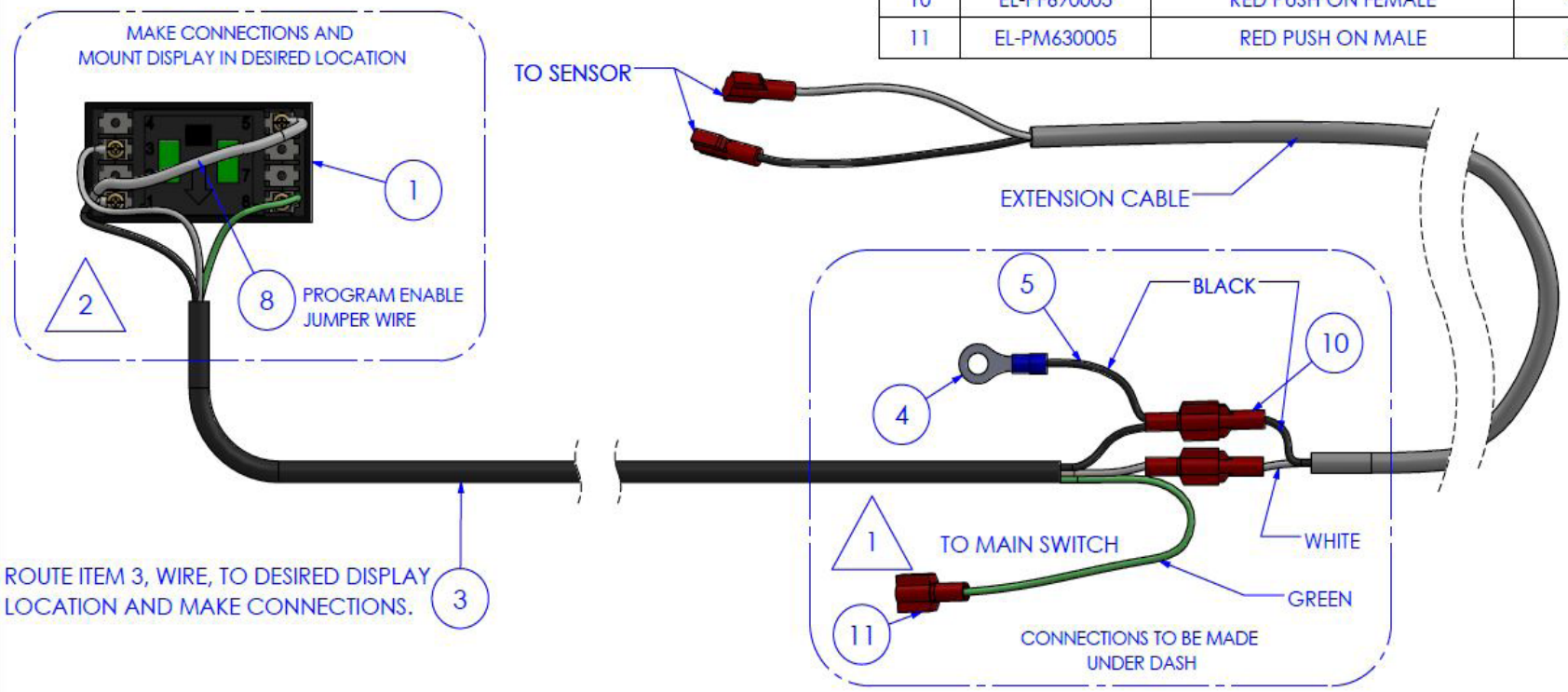
NOTES:

1. CONNECT TO MAIN SWITCH GREEN WIRE

2. STRIP JACKET FROM WIRES AND MAKE CONNECTIONS AS SHOWN.

3. PROVIDED WIRES MAY BE CUT TO LENGTH TO MAKE CONNECTIONS.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	A103-001	DIGITAL DISPLAY	1
2	VELCRO	VELCRO FASTENER	1-1/2 IN
3	W18/3 SVO	18/3 JACKETED WIRE	3 FT
4	RT152565	RING TERMINAL, 5/16	1
5	W37140	14 GA WIRE, BLACK	2 FT
6	BC423005	YELLOW BUTT CONNECTOR	1
7	EL-QS905595	BLUE QUICK SPLICE	1
8	W29165	16 GA WIRE, WHITE	2-3/4 IN
9	HF12-64	BRACKET, DISPLAY	1
10	EL-PF690005	RED PUSH ON FEMALE	4
11	EL-PM630005	RED PUSH ON MALE	3



PROPRIETARY AND CONFIDENTIAL

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UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ± 1/16
ANGULAR: MACH ± 1 BEND ± 1
TWO PLACE DECIMAL ± 010
THREE PLACE DECIMAL ± 005

MATERIAL

DO NOT SCALE DRAWING

DRAWN ETHAN 9/26/2018
PART # Part #
ASM # Asm #
COMMENTS:
ELECTRIC-FEEDER SENSOR COUNTER

TRIPLE C INC
P.O. BOX 248, SABETHA, KS 66534
(785) 284-3674 FAX (785) 284-3931

SIZE A | DWG. NO. 30-1807 A | REV A
SCALE: 1:8 | WEIGHT: | SHEET 1 OF 1

HF.SD.04
08/2019

HYDRAULIC FEEDER DISPLAY/SENSOR TROUBLESHOOTING FLOWCHART

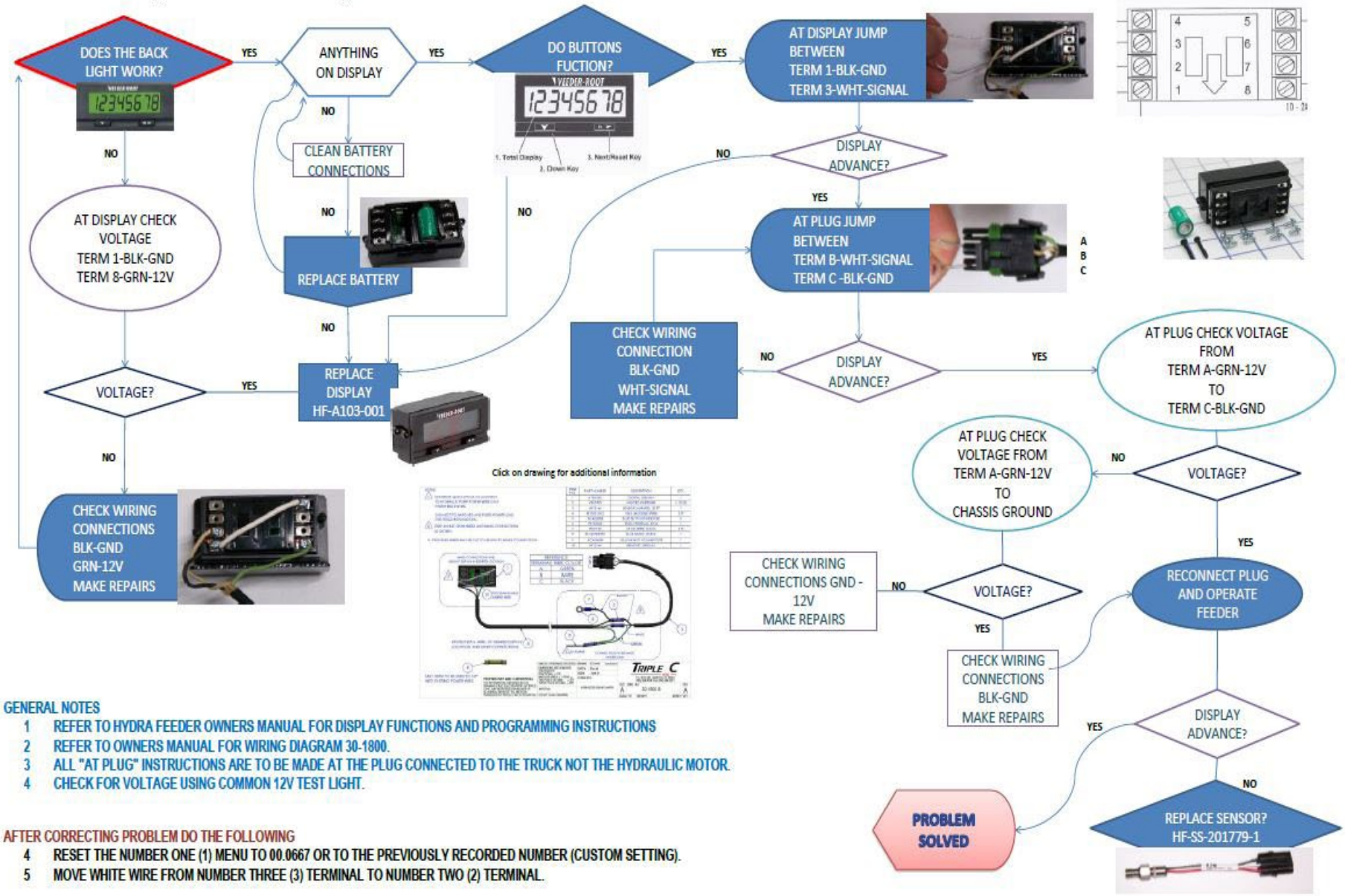
HydraFeeder by HydraBed

Drawing : 30-0921 C

September 19, 2018

DO THE FOLLOWING FIRST

1. CHECK AND CORRECT ALL 4 MENU SETTINGS AS NEEDED. THIS WILL VERIFY THAT THE DISPLAY BATTERY IS GOOD AND THE BUTTONS WORK PROPERLY. REFER TO OWNERS MANUAL. THIS COULD SOLVE THE PROBLEM
2. MOVE TO THE NUMBER ONE (1) MENU AND RECORD CURRENT SETTING (CUSTOM SETTING).
3. TO AID IN TROUBLESHOOTING, TEMPORARILY REPROGRAM THE NUMBER ONE (1) MENU TO 01.0000 AND MOVE THE WHITE WIRE FROM THE NUMBER TWO (2) TERMINAL TO THE NUMBER THREE (3) TERMINAL.



GENERAL NOTES

1. REFER TO HYDRA FEEDER OWNERS MANUAL FOR DISPLAY FUNCTIONS AND PROGRAMMING INSTRUCTIONS
2. REFER TO OWNERS MANUAL FOR WIRING DIAGRAM 30-1800.
3. ALL "AT PLUG" INSTRUCTIONS ARE TO BE MADE AT THE PLUG CONNECTED TO THE TRUCK NOT THE HYDRAULIC MOTOR.
4. CHECK FOR VOLTAGE USING COMMON 12V TEST LIGHT.

AFTER CORRECTING PROBLEM DO THE FOLLOWING

4. RESET THE NUMBER ONE (1) MENU TO 00.0667 OR TO THE PREVIOUSLY RECORDED NUMBER (CUSTOM SETTING).
5. MOVE WHITE WIRE FROM NUMBER THREE (3) TERMINAL TO NUMBER TWO (2) TERMINAL.

NOTES:

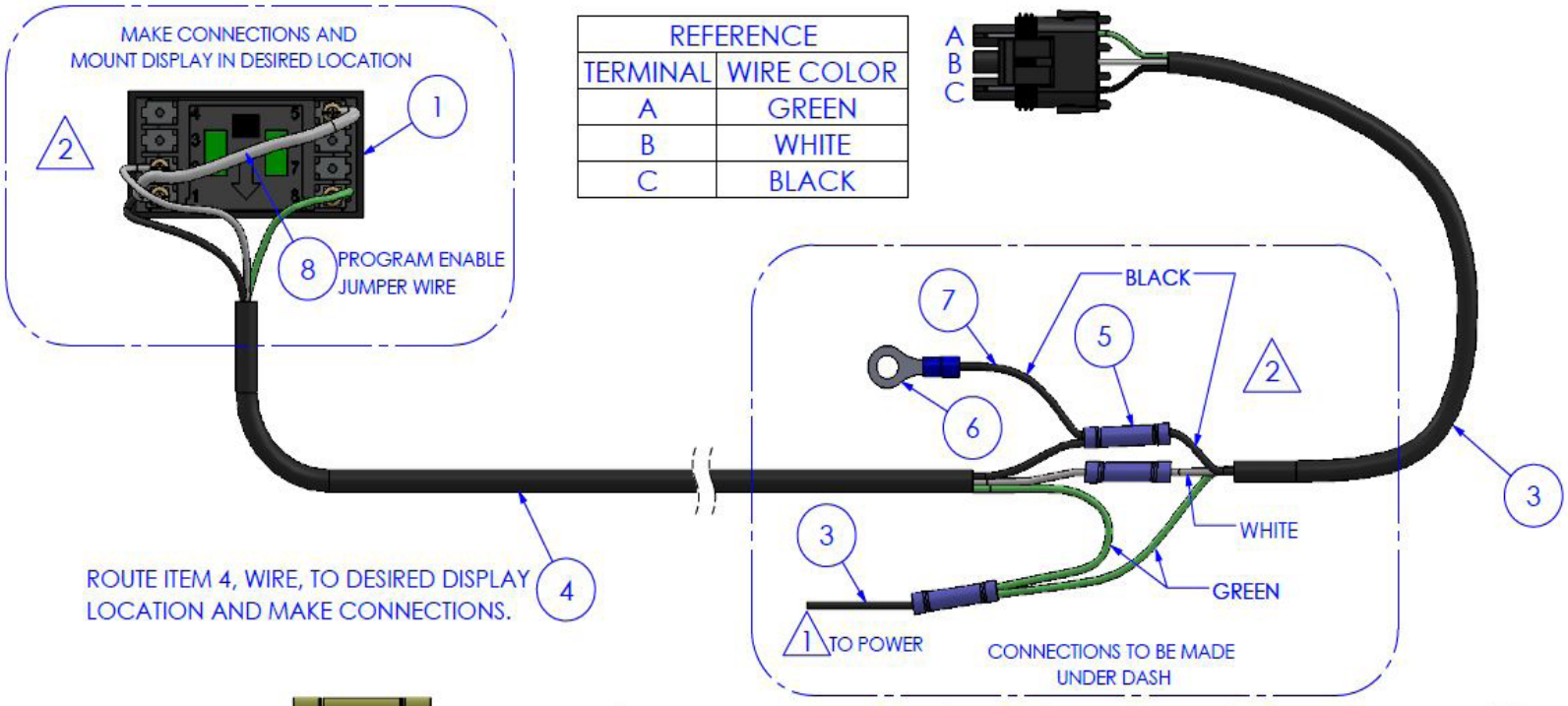
1. USE ITEM 8, QUICK SPLICE, TO CONNECT TO HYDRAULIC PUMP POWER WIRE ON A HYDRA BED SYSTEM.

   CONNECT TO SWITCHED AND FUSED POWER LEAD FOR OTHER APPLICATIONS.

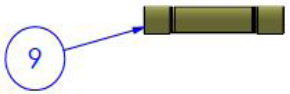
2. STRIP JACKET FROM WIRES AND MAKE CONNECTIONS AS SHOWN.

3. PROVIDED WIRES MAY BE CUT TO LENGTH TO MAKE CONNECTIONS.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	A103-001	DIGITAL DISPLAY	1
2	VELCRO	VELCRO FASTENER	1-1/2 IN
3	HF12-46	SENSOR HARNESS, 20 FT	1
4	W18/3 SVO	18/3 JACKETED WIRE	3 FT
5	BC422005	BLUE BUTT CONNECTOR	3
6	RT152565	RING TERMINAL, 5/16	1
7	W37140	14 GA WIRE, BLACK	2 FT
8	EL-QS905595	BLUE QUICK SPLICE	1
9	BC423005	YELLOW BUTT CONNECTOR	1
10	HF12-64	BRACKET, DISPLAY	1



REFERENCE	
TERMINAL	WIRE COLOR
A	GREEN
B	WHITE
C	BLACK



MAY NEED TO BE USED TO TAP INTO EXISTING POWER WIRE.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL ± 1/16
ANGULAR: MACH ± 1 BEND ±
TWO PLACE DECIMAL ± 010
THREE PLACE DECIMAL ± 005

MATERIAL

DO NOT SCALE DRAWING

DRAWN ETHAN 10/26/2016
PART # Part #
ASM # Asm #
COMMENTS:
HYDRA-FEEDER SENSOR COUNTER

TRIPLE C INC
P.O. BOX 248, SABETHA, KS 66534
(785) 284-3674 FAX (785) 284-3931

SIZE	DWG. NO.	REV
A	30-1800 B	A

SCALE: 1:8 WEIGHT: SHEET 1 OF 1

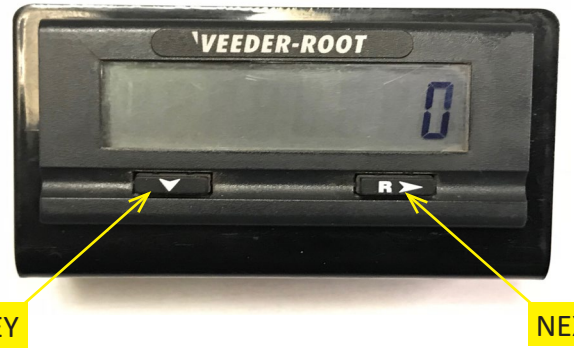
HYDRAULIC COUNTER CONFIGURATION

Entering the factor into the digital display:

Refer to the Technical Manual shipped with the digital display.

There are four (4) parameters that make up the programmable display. The leftmost digit designates each parameter. Once in the programming mode, you must scroll through each parameter to return to normal operation.

The display is configured from the factory to enter the programming mode simply by pressing the Down (left) Key.



Programming parameters can be accessed by pressing the Down Key. To edit a parameter use the Down key to scroll until the desired parameter appears on the screen. Pressing the Next key will cause the leftmost digit of that value to begin to flash. Use the Next and Down keys in combination to choose individual digits and change their value.

1 The first menu is the count-input calibrator. Using the next/reset key, input your factor number that you calculated in step 6 on page 7. Press the next/reset once more after you have entered the last digit of your factor, then press the down key to advance to next parameter. **Factory preset is 00.0667**.

2 The second menu is the “Display Decimal Point”. This should be set to “off’. Press the down key to advance to next parameter.

3 The third menu is the “Count Offset”. This should be set to “000000”. All zeros. Press the down key to advance to next parameter.

4 The fourth menu is the “Front Panel Reset Enable”. This should be set to “on”. Press the down key once more.

5 Your digital display is now configured to display the number of pounds for that particular feed.

PROGRAMMABLE DISPLAY - HYDRAULIC ONLY

The digital counter is factory configured to count one digit per auger revolution. The factory preset for menu 1 is 00.0667. If you desire your counter to display “pounds of feed”, follow these instructions to calculate your programming factor.

To determine the programming factor:

1 Obtain a container to run feed into. Weigh that container empty.
Example: Empty container weighs 4 pounds.

2 With the readout displaying zeros, run some feed into the container. The larger the sample size, the greater your accuracy.

3 Record the number on the digital display.
Example: Number on display is 7

4 Weigh the full container and subtract the weight of the container.
Example: 67 – 4 = 63 pounds of feed

5 Divide the number of pounds by the number on the display. This will be the number of pounds per revolution.
Example: 63 / 7 = 9

6 Divide the number of pounds per revolution by 15. This will be the factor you will program into the digital display.
Example: 9 / 15 = .6000

7 This is the programming factor for that particular feed. Replace the number calculated in step 6 (Example 0.6000) in the first counter parameter. See page 9 for instructions to enter the factor into the counter. Record this factor and feed type for future reference.

For accurate feeding, this must be done for each different type of feed.