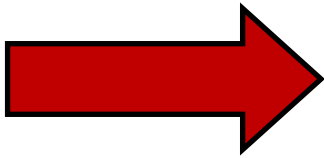




CONTROLLER INSTRUCTION USE AND WARRANTY INFORMATION

**PLEASE READ AND UNDERSTAND THIS INSTRUCTION
GUIDE AND WARRANTY INFORMATION PRIOR TO
THE OPERATION OF ANY CONTROLLER.**



IMPORTANT

PLEASE READ AND UNDERSTAND THE CONTROLLER INSTRUCTIONS BEFORE USE.

THE DUAL MOTOR CONTROL UNIT IS DESIGNED FOR THE “SMITH SPREADER” SERIES DUAL ELECTRIC SPREADERS.

IT IS RECOMMENDED THAT THE CONTROLLER IS INSTALLED BY AN AUTHORIZED SMITH SPREADER DEALER TO AVOID ANY DELAY WITH REGARDS TO WARRANTY CLAIMS OR QUESTIONS. RETAIN ALL RECIEPTS AS THEY WILL BE REQUIRED FOR ANY AND ALL WARRANTY CLAIMS.

ALL CONNECTIONS MUST HAVE ANTI-CORRISON COMPOUND.

THE CONTROLLER UNIT IS SET UP WITH TWO SAFETY FEATURES.

FIRST—THE DUAL CONTROLLER OPERATES TO A CONTINUOUS RANGE OF 60 AMPS MAXIMUM FOR THE CONVEYOR MOTOR AND 35 AMPS FOR THE SPINNER MOTOR. AMPERAGE OVER 60 AMPS FOR THE CONVEYOR AND 35 AMPS FOR THE SPINNER, FOR MORE THAN 4 SECONDS, WILL SHUT THE CONTROLLER OFF AND WOULD HAVE TO BE RESET BY PUSHING THE RESET BUTTON ON THE BOX.

SECOND—THE CONTROLLER OPERATES AT 12 VOLTS BUT WILL OPERATE WITH VOLTAGE AS LOW AS 11 VOLTS. VOLTAGE LESS THAN 11 VOLTS WILL CAUSE THE CONTROLLER TO SHUT OFF AND HAVE TO BE RESET BY PUSHING THE MASTER SWITCH “OFF”, THAN “ON” AGAIN.

IN EITHER CASE, AN INSPECTION OF THE SPREADER AND/OR VEHICLE SHOULD BE DONE IF THE CONTROLLER SHOULD CONTINUE TO SHUT DOWN.



POSSIBLE CAUSES FOR EXCESSIVE SPREADER AMPERAGE



FROZEN OR HARDENED MATERIAL IN THE HOPPER.



POOR CABLE CONNECTIONS OR BROKEN/FRAYED CABLES



CONVEYOR/SPINNER MOTOR WEAK, WHICH CAN CAUSE EXCESSIVE AMPERAGE.



IMPROPER OFF-SEASON STORAGE. FOR EXAMPLE: LEAVING MATERIAL IN THE HOPPER DURING THE OFF-SEASON, LEAVING THE UNIT AND ELECTRICAL COMPONENTS EXPOSED TO THE WEATHER UNPROTECTED, IMPROPER MAINTENANCE AND /OR CLEANING OF THE UNIT AND THE ELECTRICAL COMPONENTS BEFORE OFF-SEASON STORAGE.

POSSIBLE CAUSES FOR LOW VEHICLE VOLTAGE



VEHICLE ALTERNATOR MAY BE UNDER-SIZE FOR THE APPLICATION, WEAK OR WORN OUT.



BATTERY MAY BE UNDER-SIZE, WEAK OR WORN OUT.



OPERATING TOO MANY VEHICLE ELECTRONICS AT THE SAME TIME.
(LIGHTS, HEATER, RADIO, SPREADER, PLOW, ETC..)



POOR CABLE CONNECTIONS FROM VEHICLE TO THE CONTROLLER.

ATTENTION

ALL DEALERS AND END USERS

SMITH SPREADERS HAS PROVIDED A CHECK LIST TO ENSURE PROPER CONTROLLER INSTALLATION AND OPERATION.

- ◆ **SECURE CONTROLLER CABLE CONNECTORS TO SOLENOID, CIRCUIT BREAKER AND BATTERY.**
- ◆ **DIRECT NEGATIVE CONNECTION TO THE BATTERY. NO BODY GROUNDS.**
- ◆ **AFTER INSTALLING SOLENOID, CIRCUIT BREAKER, AND CABLES TO THE VEHICLE, CHECK FOR A MINIMUM OF 12 VOLTS AT THE CABLE CONNECTOR FOR THE CONTROLLER. PLEASE CHECK THE VOLTAGE WHILE THE VEHICLE IS RUNNING AND ACCESSORIES ON SUCH AS; HEATER, RADIO, LIGHTS, ETC. VOLTAGE LESS THEN 11 VOLTS WILL CAUSE THE CONTROLLER TO SHUT DOWN AND NEED TO BE RESET.**
- ◆ **CHUCK THE LUBRICANT LEVEL OF THE GEARBOX.**
- ◆ **CHECK THE CONVEYOR CHAIN TENSION. A CONVEYOR CHAIN THAT IS ADJUSTED TOO TIGHT WILL CREATE EXCESSIVE AMPERAGE.**
- ◆ **ELECTRIC MOTOR(S) USED THREE OR MORE SEASONS SHOULD BE BENCH TESTED FOR AMPERAGE DRAW WHEN A NEW CONTROLLER IS BEING INSTALLED FOR THE FIRST TIME.**

(A CONVEYOR MOTOR AVERAGES 6 AMPS. A SPINNER MOTOR AVERAGES 3 AMPS.)

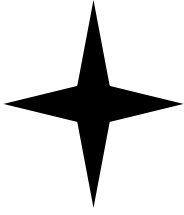
-ATTENTION SECTION CONTINUED-

- ◆ **WHEN INSTALLING THE ELECTRIC SPREADER, WHETHER A NEW INSTALL OR A RE-INSTALL, MAKE SURE THERE IS NO DEBRIS OR LEFT-OVER MATERIAL IN THE HOPPER.**
- ◆ **DURING THE OFF-SEASON, THE SPREADER SHOULD BE STORED IN A DRY LOCATION OUT OF THE WEATHER IF POSSIBLE. OTHERWISE, IT IS RECOMMENDED TO REMOVE THE SPEED CONTROLLER FROM THE SPREADER AND STORE IN A DRY LOCATION FOR PROPER OPERATION IN THE FUTURE. ALL CABLE CONNECTIONS SHOULD BE CLEANED AND SECURED DURING THE OFF-SEASON. DI-ELECTRIC GREASE IS RECOMMENDED.**
- ◆ **EVEN THOUGH THE SPEED CONTROLLER CASE IS WATER TIGHT, IT IS NOT RECOMMENDED TO SPRAY WATER DIRECTLY ON THE UNIT. WIPE OFF WITH DAMP CLOTH.**

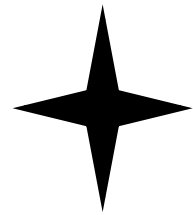
FOLLOWING THE INSTALLATION PROCEDURES AND MAINTENANCE RECOMMENDATIONS IN THIS BOOKLET ARE VERY IMPORTANT TO THE OPERATION OF THE CONTROLLER AND SPREADER.

IMPROPER INSTALLATION, USE OR LACK OF MAINTENANCE IN REGARDS TO THE CONTROLLER AND/OR SPREADER MAY RESULT IN VOIDING ANY AND ALL WARRANTIES.

KEEP ALL ORIGINAL RECEIPTS AS THEY WILL BE REQUIRED FOR ANY WARRANTY ISSUES



ADDITIONAL CONTROLLER INFORMATION



IN THE EVENT THE SPEED CONTROL MALFUNCTIONS, IT WILL NOT PREVENT YOU FROM OPERATING YOUR SPREADER.

DIRECT CONNECT HOOK UPS—ALLOWS OPERATION WITH MAX SPEEDS

SERIES IV & MEDIUM DUTY UNITS

- ⇒ 2 POWER CABLES WERE INCLUDED AND INSTALLED (SEE INSTALLATION DIAGRAM IN MANUAL).
- ⇒ BYPASS THE CONTROLLER BY HOOKING THESE DIRECTLY TO THE CONVEYOR MOTOR & SPINNER MOTOR CABLES.

MINI MAX SPREADER

- ⇒ THE ONE POWER CABLE GIVEN AND THE “Y” SPLITTER CABLE WITH THE SPREADER PURCHASE.
- ⇒ DISCONNECT THE POWER CABLE FROM THE CONTROLLER.
- ⇒ ATTACH THE SINGLE END OF THE “Y” CABLE AND ATTACH THE SPLIT ENDS TO THE CONVEYOR AND SPINNER MOTOR CABLE.
- ⇒ ALLOWS SPREADER TO OPERATE AT MAX SPEED AND PREVENT DOWN TIME.

WARRANTY

SMITH METAL WORKS/SMITH SPREADERS

- ◆ **THIS SPEED CONTROLLER IS WARRANTIED FOR A PERIOD OF 1 (ONE) YEAR FROM THE ORIGINAL DATE OF PURCHASE.**
- ◆ **ANY WARRANTY ISSUES OR QUESTIONS NEED TO BE HANDLED BY AN AUTHORIZED SMITH SPREADER DEALER.**
- ◆ **THE END USER MUST CALL SMITH METAL WORKS BEFORE ANY WARRANTY MAY BE CONSIDERED OR APPLIED IN THE EVENT A DEALER IS NOT AVAILABLE. PLEASE RETAIN ALL RECEIPTS & HAVE DEALER INFORMATION HANDY PRIOR TO CALL.**
- ◆ **IMPROPER INSTALLATION, USE OR LACK OF MAINTENANCE TO THE CONTROLLER AND/OR SPREADER MAY VOID THE WARRANTY.**
- ◆ **PLEASE CONTACT YOUR SMITH SPREADER DEALER WITH ANY QUESTIONS OR CONCERNS OR YOU MAY CALL SMITH METAL WORKS OF NEWARK, INC (SMITH SPREADERS) AT (315)331-1651 FOR FURTHER ASSISTANCE.**

Optional Controller Purchase Warranty

- ◆ CONTROLLERS ARE WARRANTIED WITH THE FOLLOWING CONDITIONS;
- ◆ PLEASE READ CAREFULLY CONTROLLERS ARE COVERED UNDER THE FOLLOWING TERMS AND CONDITIONS ONLY.
- ◆ CONTROLLERS CONSIST OF THREE PARTS—IN CAB CONTROL, 6 PIN HARNESS AND OUTSIDE CONTROL BOX.
- ◆ AFTER INSPECTION TO VERIFY A MANUFACTURED DEFECT CONTROLLERS—ONLY THE DEFECTIVE COMPONENT WOULD BE CONSIDERED FOR WARRANTY REPLACEMENT. IF CONTROLLER CONNECTIONS ARE CORRODED OR CIRCUIT BOARDS BURNED, THESE WOULD NOT BE COVERED. CURRENTLY, THIS WARRANTY TIME FRAME IS ONE YEAR FROM POINT OF PURCHASE FROM DEALER. THIS WARRANTY COVERS PARTS ONLY, NO LABOR IS COVERED, AGAINST MANUFACTURER DEFECT. PROOF OF PURCHASE DATE WILL BE REQUIRED. FOR TRACING PURPOSES, WE WILL BE ASKING FOR A PO# FOR EACH RETURNED CONTROLLER FOR POTENTIAL WARRANTY. IF THE MANUFACTURER DEEMS THAT THE CONTROLLER IS NOT COVERED DUE TO NON-MANUFACTURERS DEFECT, THE CUSTOMER WILL THEN BE REQUIRED TO COVER CHARGES STEMMING FROM TESTING PROCESS. THE PROCESS COULD BE APPROXIMATELY \$150.00 EACH UNIT SENT IN.
- ◆ IF THE CONTROL ASSEMBLY (THE THREE COMPONENTS; IN CAB CONTROL, 6 PIN HARNESS AND OUTSIDE CONTROL BOX) ONE OF THE THREE IS DEEMED FAULTY THIS WOULD BE THE ONLY COMPONENT REPLACED. THE WHOLE THREE PART SERIES WOULD NOT BE REPLACED.
- ◆ END USER IS RESPONSIBLE FOR THE IDENTIFICATION OF WHICH OF THE COMPONENTS IS FAULTY, AND FAULT CODES.

CONTROL OR CONTROLS COMPONENTS.

- ◆ THE ABOVE PROCESS WOULD BE USED IN THE SAME MANNER FOR EACH OF THE THREE PARTS. THE THREE COMPONENTS COVERED BY THIS WOULD BE THE IN CAB CONTROL, 6 PIN HARNESS, OUTSIDE CONTROL BOX. AGAIN—PLEASE READ THE ABOVE.
- ◆ EACH SPREADER THAT IS SOLD COMES WITH THE OPTION OF THIS CONTROLLER, WITH EVERY SPREADER AN INSTALL KIT CONTAINS THE ORIGINAL ON/OFF SWITCH AND SECOND POWER CABLE THAT SHOULD BE RETAINED BY THE CUSTOMER IN THE EVENT THAT THE CONTROLLER BECOMES INOPERABLE. THIS ENSURES THAT NO SPREADER WOULD EVER BECOME COMPLETELY INOPERABLE BY THE END USER.

CONTROLLER TROUBLE SHOOTING

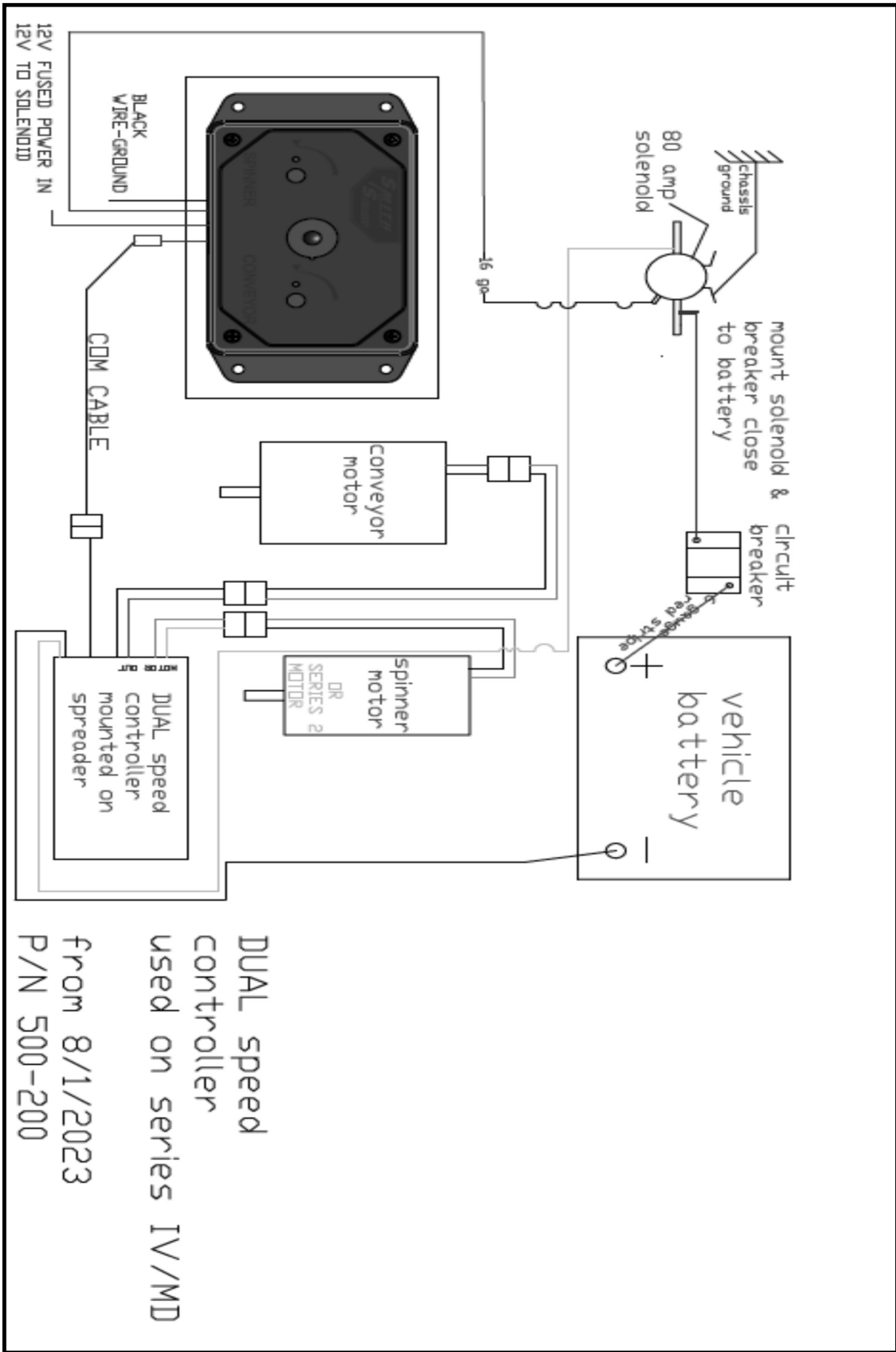
- ◆ **ENSURE EVERYTHING IS CONNECTED PER OUR INSTALLATION DRAWING. DISCONNECT THE LONG 12V RED/BLACK CABLE FROM THE BRAIN BOX. TURN THE IN CAB BOX SWITCH ON AND TEST VOLTAGE AT THE CONNECTOR END OF THE LONG RED/BLACK CABLE. SHOULD BE 12.6V + NOT RUNNING. 14V TRUCK RUNNING. TURN THE IN CAB SWITCH OFF. IF NOT, CHECK THE SOLENOID CONNECTIONS AND THE 2 RED WIRE IN CAB BOX CONNECTIONS.**

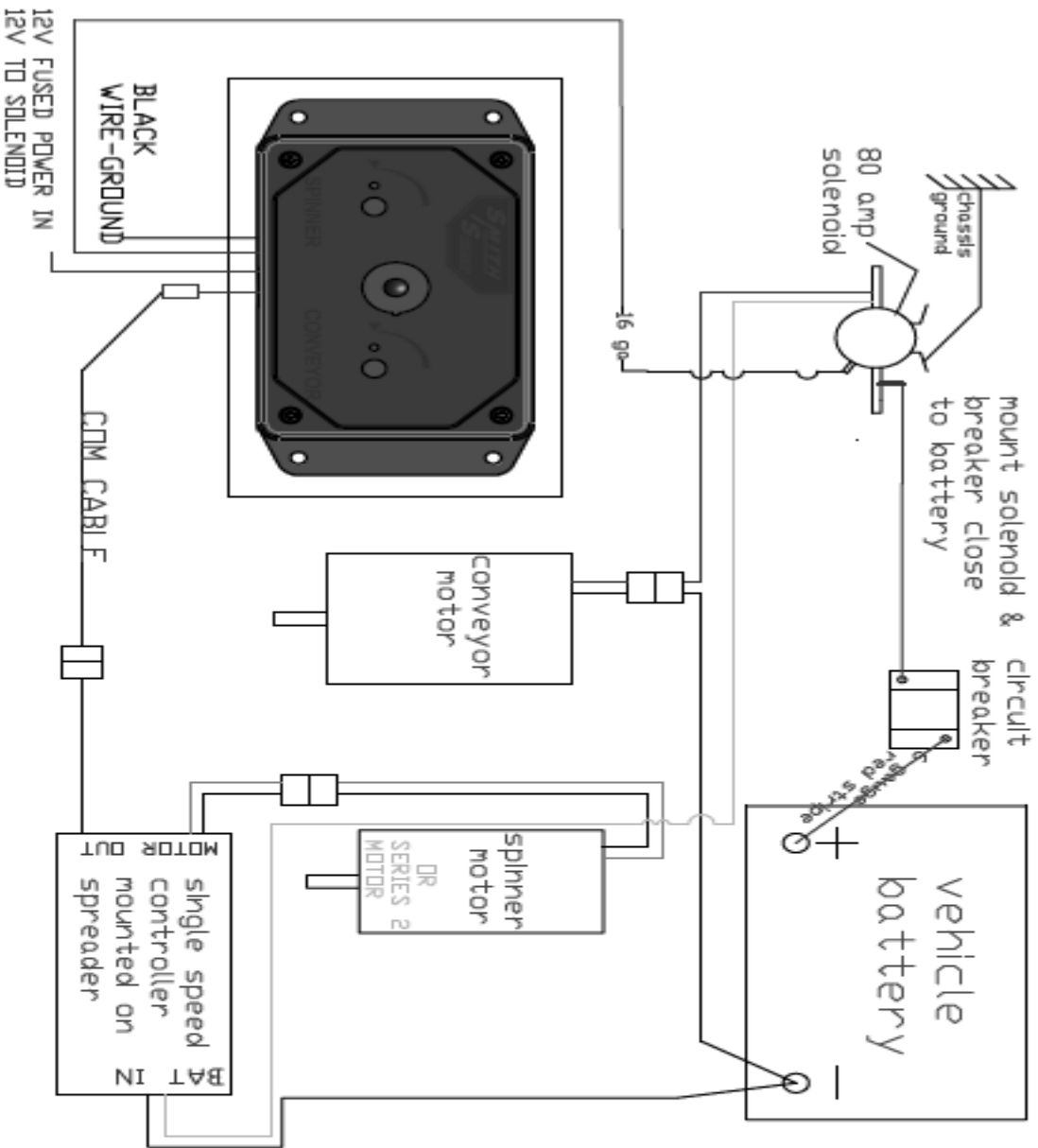
- ◆ **IF YES, RECONNECT THE POWER CABLE TO THE BATTERY.**

- ◆ **DISCONNECT THE 2 SHORT MOTOR CABLES FROM THE BRAIN BOX. TURN THE IN CAB SWITCH ON AND TURN BOTH RHEOSTATS TO MAX. NOW, TEST VOLTAGE AT BOTH BRAIN BOX SHORT ENDS. BOTH SHOULD BE 12.6V +. TURN THE IN CAB SWITCH AND RHEOSTATS OFF.**

- ◆ **IF YES, DISCONNECT THE LONG POWER CABLE FROM THE BRAIN BOX AND CONNECT IT DIRECT TO EITHER MOTOR. TURN THE IN CAB SWITCH ON AND TURN BOTH RHEOSTATS ALL THE WAY UP. IF IT RUNS, TURN THE IN CAB SWITCH AND RHEOSTATS OFF AND SWITCH IT TO THE OTHER MOTOR. IF IT DOES NOT RUN, REPLACE THE MOTOR. TURN THE IN CAB SWITCH AND RHEOSTATS OFF. RECONNECT ALL CABLES. IF IT DOES NOT, REPLACE THE MOTOR.**

- ◆ **CALL IF ADDITIONAL HELP IS NEEDED (PARTS DEPARTMENT 315-331-1651 EXT 206).**





single speed
controller
used on series IV
AND SERIES 2
from 8/1/2023
P/N 140-100