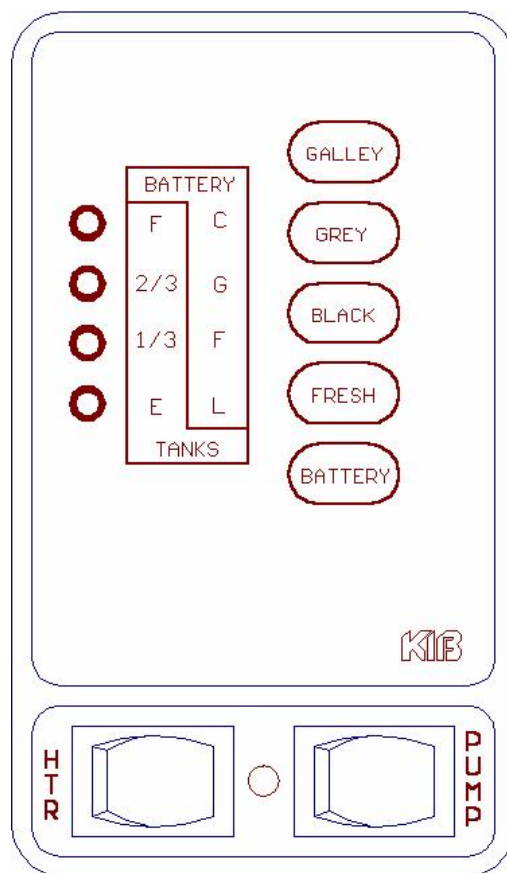


DIAGNOSIS GUIDE FOR THE KIB MICROMONITOR SYSTEM



ISOLATE THE MALFUNCTION

1) MONITORING PANEL

I) PRINTED CIRCUIT BOARD

(A) DAMAGE

1. SHORT CIRCUIT
2. BROKEN COMPONENT

(B) DEFECTIVE

1. COMPONENT FAILURE

II) SWITCH

(A) DAMAGE

1. BROKEN

(B) DEFECTIVE

1. MECHANICAL FAILURE

2) WIRING

I) COACH WIRING

(A) OPEN WIRE

(B) SHORTED WIRE

II) CONNECTORS

(A) LOOSE OR OPEN

3) TANK

I) INSERTS (PROBES)

(A) PLACEMENT

II) PIGTAIL (K101)

(A) DAMAGED/DEFECTIVE

1. OPEN CIRCUIT
- I. CRACKED RESISTOR

TROUBLESHOOTING FULL SYSTEM

PROBLEM:

NO LIGHTS ON PANEL WHEN SWITCH IS PUSHED.

TEST:

(A) MAKE SURE B+ WIRE (RED) HAS 12 VDC CONNECTED.

(B) MAKE SURE GROUND (WHITE) IS CONNECTED TO PANEL.

DIAGNOSIS:

(A) CORRECT WIRING OR VOLTAGE SUPPLY PROBLEM.

1. POLARITY
2. FUSE
3. OPEN WIRE

(B) IF 12 VOLTS DC AND GROUND IS PRESENT AT PANEL BUT DISPLAY IS STILL DEAD REPLACE PRINTED CIRCUIT BOARD.

TROUBLESHOOTING TANKS

PROBLEM:

DISPLAYS "E" ON ONE OR MORE TANKS BUT NOT ALL.

TEST:

- (A) VERIFY THAT LEVELS IN TANKS DO NOT MATCH DISPLAY.
- (B) SWAP TANK CONNECTIONS OPN PANEL (I.E., IF PROBLEM IS IN "FRESH" BUT GREY IS GOOD, SWAP THE FRESH WIRE "BLUE" WITH THE GREY TANK WIRE "GREY". RESET TANK FUNCTIONS TO SEE IF PROBLEM HAS ALSO CHANGED TO ANOTHER TANK OR IS STILL IN SAME TANK.

DIAGNOSIS:

- (A) IF STEP (2) STILL DISPLAYS "E" ON THE SAME TANKS, REPLACE PRINTED CIRCUIT BOARD.
- (B) IF STEP (2) ABOVE DISPLAYS "E" ON DIFFERENT TANK THEN THE PROBLEM IS AN OPEN CONNECTION IN THAT TANK WIRING OR PIGTAIL, REPAIR OR REPLACE WIRING OR PIGTAIL.

PROBLEM:

DISPLAYS "F" ON ONE OR MORE TANKS, OTHERS TEST GOOD.

TEST:

- (A) VERIFY THAT LEVELS IN TANKS DO NOT MATCH DISPLAY
- (B) SWAP TANK CONNECTINS ON PANEL AS FOR PREVIOUS PROBLEM. RESET TANKS TO SEE IF PROBLEM HAS ALSO CHANGED TO ANOTHER TANK OR IS STILLIN THE SAME TANK.

DIAGNOSIS:

- (A) IF STEP (2) ABOVE STILL DISPLAYS "F" ON THE SAME TANK, REPLACE PRINTED CIRCUIT BOARD.
- (B) IF STEP (2) ABOVE DISPLAYS "F" ON DIFFERENT TANK, THEM THE PROBLEM MAYBE A SHORT IN THE WIRING, A SIGNAL WIRE SHORTED TO GROUND WILL DISPLAY "F" ON THE PANEL. REPAIR OR REPLACE WIRING.



PROBLEM:

FALSE READINGS (I.E., 1/3 OR 2/3 INDICATION IN AN EMPTY TANK)

TEST:

- (A) VERIFY TANKS IS EMPTY.
- (B) OPEN PIGTAIL GROUND WIRE (WHITE).
- (C) CHECK PROBE PLACEMENT IN TANK. THIS IS CRITICAL IN SINGLE WIRE SYSTEMS. SEE PLACEMENT DIAGRAM.

DIAGNOSIS:

- (A) IF DISPLAY CHANGES TO "E" AFTER STEP (2) ABOVE AND PROBES ARE NOT PLACED CORRECTLY ABANDON AND INSTALL PROBES IN PROPER POSITION.
- (B) RETEST TANK.

TROUBLESHOOTING LPG

PROBLEM:

DISPLAY INDICATS "E" ALL THE TIME.

TEST:

- (1) VERIFY TANK IS NOT EMPTY.
- (2) VERIFY WIRE FROM 90 OHM SENDING UNIT TO ORANGE WIRE ON BACK OF PANEL IS NOT SHORTED TO GROUND
- (3) CHECK SENDING UNIT FOR DAMAGE OR STICKING.

DIAGNOSIS:

- (1) ADD GAS TO TANK AND RETEST.
- (2) RUN CONTINUITY TEST ON WIRE, END TO END AND TO SYSTEM GROUND (SHORT TEST).
- (3) REPLACE SENDING UNIT IF FOUND DEFECTIVE.

PROBLEM:

DISPLAY INDICATES "F" ALL THE TIME.

TEST:

- (1) DISCONNECT ORANGE WIRE. IF DISPLAY IS "E", PROBLEM IS IN WIRING OR SENDING UNIT.

DIAGNOSIS:

- (1) IF PROBLEM IS IN WIRING OR SENDING UNIT AS INDICATED ABOVE, CHECK FOR OPEN CONNECTION OR BAD SENDING UNIT.
- (2) IF DISPLAY STILL INDICATES "F" REPLACE PRINTED CIRCUIT BOARD.

K101 PIGTAIL TEST PROCEDURE

THE K101 PIGTAIL CAN BE TESTED WITH AN OHM METER AS FOLLOWS

RED TO ORANGE – 0 OHMS

RED TO GREEN – 68K OHMS

RED TO YELLOW – 188K OHMS

NOTE:

DO NOT SHORT FRESH WATER TANK PROBES WITH JUMPER WIRES. WATER TEST OR USE A 43K OHM RESISTOR FOR TESTING

PEPLACE ONLY DEFECTIVE COMPONENTS I.E. PCB/SWITCH/PIGTAIL

M-PANEL BATTERY READ OUT

CHARGE	12.70	TO	12.85
GOOD	12.10	TO	12.15
FAIR	11.60	TO	11.65
LOW	6.00	TO	-----

ALL VALUES IN D.C. VOLTS $\pm$ 5%

KIB TECHNICAL SUPPORT

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