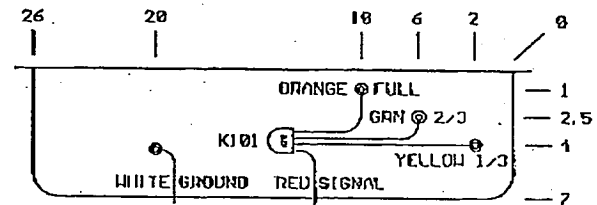
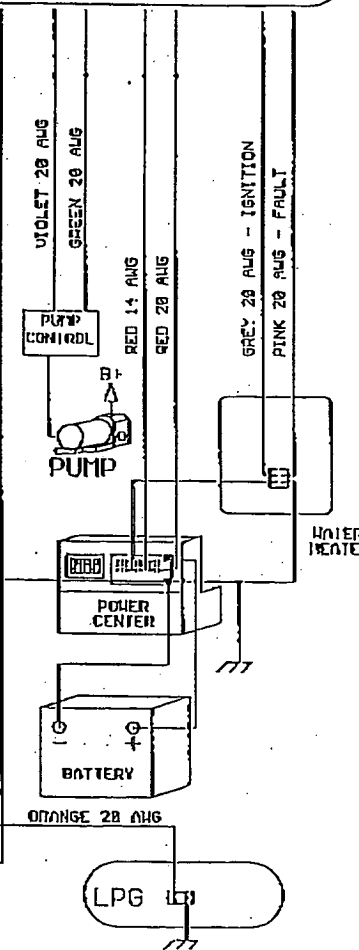
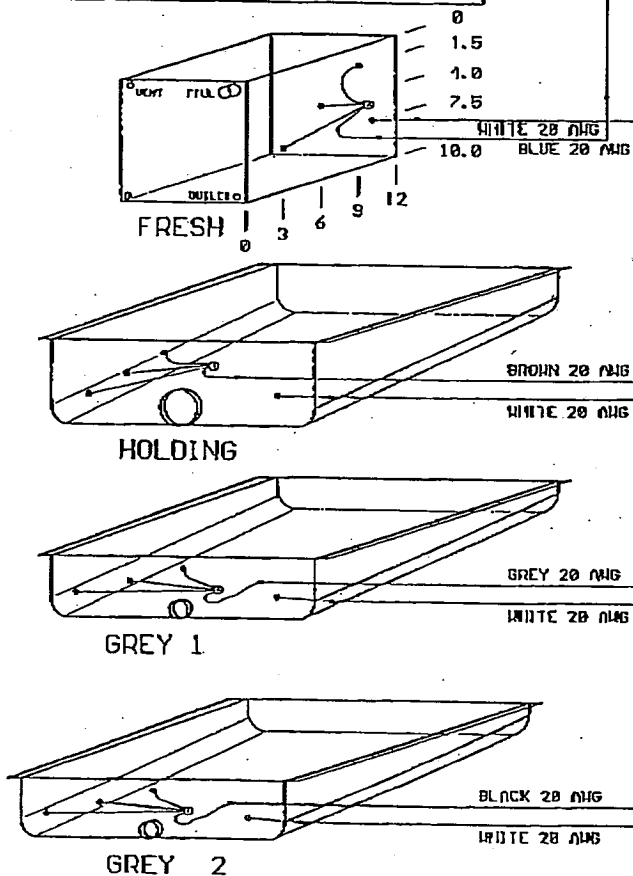
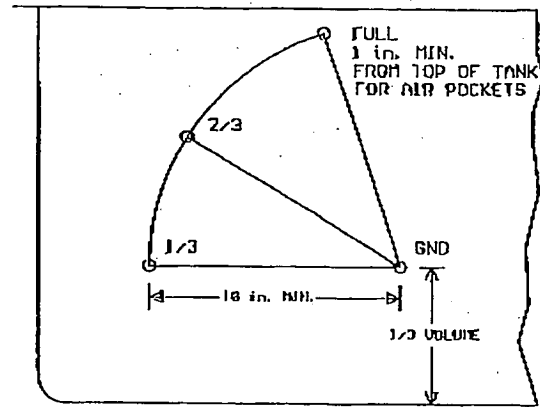
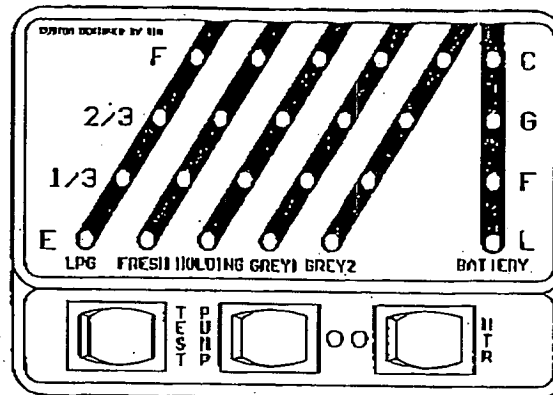


WIRING LEGEND

RED 22 AWG - FILTERED POSITIVE
 RED 14 AWG - POSITIVE VDC PUMP HEATER
 VIOLET 14 AWG - PUMP
 GREEN 22 AWG - PUMP INDICATOR
 WHITE - GROUND
 GREY - GREY1 TANK
 BLACK - GREY2 TANK
 BROWN - HOLDING
 BLUE - FRESH TANK
 ORANGE - LPG
 GREY 20 AWG - HEATER IGNITION
 PINK 20 AWG - HEATER FAULT

REPLACEMENT PARTS

PRINTED CIRCUIT BOARD - # SUBPCBK29
 TEST SWITCH - # S300MK1
 PUMP/HEATER SWITCH - # S300KLD1
 RESISTOR PIGTAIL - # K101



PLACE 1/3 AND GROUND INSERT AT 1/3 VOLUME.
 PLACE GROUND INSERT NO LESS THAN 10 in. FROM OTHER INSERTS IN HOLDING AND GREY TANKS. USE ALL AVAILABLE SPACE.
 ALL HOLDING & LPG TANK GROUNDS MUST BE ATTACHED TO MONITOR GROUND.

MPI PROBE INSTALLATION

MARK TANK PER PLACEMENT GUIDE.
 DRILL HOLES USING 3/8 in. BIT. DRILL AT LOW SPEED.
 INSERT MPI INTO HOLE.
 REMOVE TOP 3/8 in NUT
 TIGHTEN BOTTOM NUT UNTIL SNUG, DO NOT OVER TIGHTEN
 * USE NUT DRIVER, DO NOT USE SCREW GUN
 ATTACH WIRE WITH NUT REMOVED EARLIER
 SEAL EXPOSED CONNECTIONS WITH RED BATTERY SPRAY OR SILICON SEALER

DIAGNOSIS GUIDE FOR THE KIB MONITOR SYSTEM

ISOLATE THE MALFUNCTION

A. MONITOR PANEL

1. PRINTED CIRCUIT BOARD
 - a. DAMAGE
 1. SHORT CIRCUIT
 2. BROKEN COMPONENT
 - b. DEFECTIVE
 1. COMPONENT FAILURE
2. SWITCH
 - a. DAMAGE
 1. BROKEN
 - b. DEFECTIVE
 1. MECHANICAL FAILURE

1. COACH WIRING
 - a. OPEN WIRE
 - b. SHORTED WIRE
2. CONNECTORS
 - a. LOOSE OR OPEN

C. TANK

1. INSERTS (PROBES)
 - a. PLACEMENT
2. PIGTAIL (K101)
 - a. DAMAGE/DEFECTIVE
 1. OPEN CIRCUIT
 - a. CRACKED RESISTOR
 2. SEE TEST PROCEDURE

B. WIRING

TROUBLE SHOOTING □ FULL SYSTEM

- PROBLEM:** NO LIGHTS ON PANEL WHEN SWITCH IS PUSHED
- TEST:**
1. MAKE SURE B+ WIRE (RED) HAS 12 VDC CONNECTED.
 2. MAKE SURE GROUND (WHITE) IS CONNECTED TO PANEL.
- DIAGNOSIS:**
1. CORRECT WIRING OR VOLTAGE SUPPLY PROBLEM.
 - A. POLARITY
 - B. FUSE
 - C. OPEN WIRE
 2. IF 12 VOLTS DC AND GROUND IS PRESENT AT PANEL BUT DISPLAY IS STILL DEAD REPLACE PRINTED CIRCUIT BOARD.

TROUBLE SHOOTING □ TANKS

- PROBLEM:** DISPLAYS 'E' ON ONE OR MORE TANKS BUT NOT ALL.
- TEST:**
1. VERIFY THAT LEVELS IN TANKS DO NOT MATCH DISPLAY.

2. SWAP TANK CONNECTIONS ON PANEL (I.E. , IF PROBLEM IS IN 'FRESH' BUT GREY IS GOOD, SWAP THE FRESH WIRE "BLUE" WITH THE GREY TANK WIRE "GREY" . RETEST TANK FUNCTIONS TO SEE IF PROBLEM HAS ALSO CHANGED TO ANOTHER TANK OR IS STILL IN SAME TANK.

- DIAGNOSIS:
1. IF STEP (2) STILL DISPLAYS 'E' ON THE SAME TANK, REPLACE PRINTED CIRCUIT BOARD.
 2. 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.
 3. OPEN CONNECTION IN EITHER GROUND OR SIGNAL WIRE WILL SHOW 'E' ON TANK DISPLAY.

PROBLEM: DISPLAYS 'F' ON ONE OR MORE TANKS, OTHERS TEST GOOD.

- TEST:
1. VERIFY THAT LEVELS IN TANKS DO NOT MATCH DISPLAY.
 2. SWAP TANK CONNECTIONS ON PANEL AS FOR PREVIOUS PROBLEM. RETEST TANKS TO SEE IF PROBLEM HAS ALSO CHANGED TO ANOTHER TANK OR IS STILL IN THE SAME TANK.

- DIAGNOSIS:
1. IF STEP (2) ABOVE STILL DISPLAYS 'F' ON THE SAME TANK, REPLACE PRINTED CIRCUIT BOARD.
 2. IF STEP (2) ABOVE DISPLAYS 'F' ON DIFFERENT TANK, THEN 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:
1. VERIFY TANK IS EMPTY.
 2. OPEN PIGTAIL GROUND WIRE (WHITE).
 3. CHECK PROBE PLACEMENT IN TANK. THIS VERY CRITICAL IN SINGLE WIRE SYSTEMS. SEE PLACEMENT DIAGRAMS.

- DIAGNOSIS:
1. IF DISPLAY CHANGES TO 'E' AFTER STEP (2) ABOVE AND PROBES ARE NOT PLACED CORRECTLY ABANDON AND INSTALL PROBES IN THE PROPER POSITION.
 2. RETEST TANK.

JUN 23 '00 04:28PM KIB ENTERPRISES INC 219 262 5172

P.5/7

TROUBLE SHOOTING □ LPG

PROBLEM: DISPLAY INDICATES "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

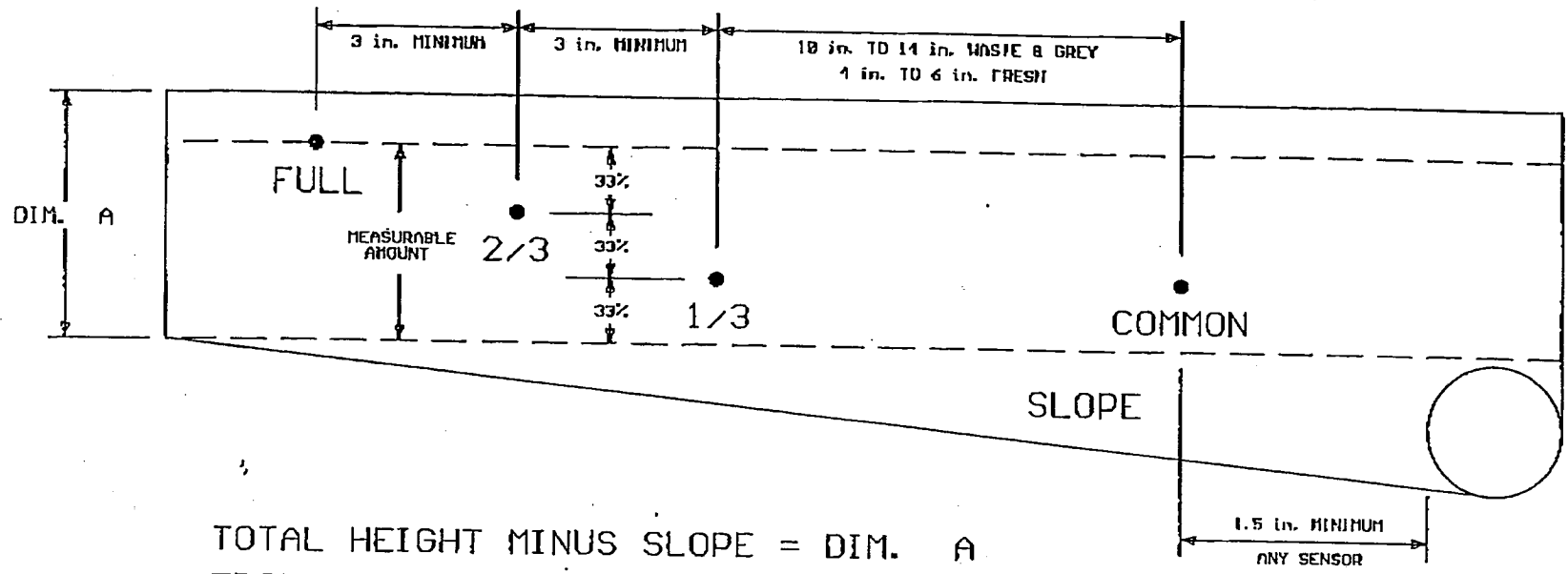
RED TO GREEN - 68K OHMS +/- 5 %

RED TO YELLOW - 188K OHMS +/- 5 %

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

* **REPLACE ONLY DEFECTIVE COMPONENTS I.E., PCB/SWITCH/PIGTAIL**

KIB TECHNICAL PHONE (219)262-0518 FAX (219)2625172



TOTAL HEIGHT MINUS SLOPE = DIM. A
 FROM THIS AMOUNT SUBTRACT 1 in. TO FULL
 THE REMAINDER IS THE MEASURABLE AMOUNT
 DIVIDE THE MEASURABLE AMOUNT INTO THIRDS
 LOCATE THE COMMON LEVEL WITH 1/3 SENSOR
 DO NOT LOCATE SENSORS NEAR INLETS

| | |
|------------------------------|------------|
| KIB enterprises corp. | |
| TITLE: LOCATING SENSORS | |
| DRAWN BY: W.F.Faubion | REV: C |
| DATE: 10/30/98 | SHEET: 1/1 |

K-PANEL BATTERY READ OUT

| | 1988 | 2-91 | 1-92 |
|---------------|-------------|------|------|
| CHARGE | 14.5 | 13.3 | 12.7 |
| | (CONVERTER) | | |
| GOOD | 12.6 | 12.6 | 11.9 |
| FAIR | 12.0 | 12.0 | 11.2 |
| LOW | 6.0 | 6.0 | 6.0 |

ALL VALUES D.C. VOLTS + OR - 5%