Manitowoc

MANITOWOC REFRIGERANT FIELD CONVERSION PROCEDURE
R-502 to DuPont SUVA®HP81 (R-402B)
Field Kit 76-2646-3

FOR REACH-IN FREEZER MODELS

FS1 FS2 FS3
with Copeland Compressors

WARNING!
Use only DuPont HP81® as retrofit refrigerant. Other replacement refrigerants may cause poor performance and/or component failure.

EQUIPMENT MODIFICATION REQUIREMENTS

Component	Change Required
Compressor	None (no oil change required)
Expansion valve (TXV)	None
h pressure cut-out	None
Fan cycling control (air-cooled)	None
All solenoid valves	None
Heat exchanger	Refer to FS1, FS2, special instructions
Electrical wiring	None
Branch circuit fuse size	None
Air-cooled condenser	None
Evaporator	None
Refrigerant charge	Same amount as old R502 charge

SYSTEM PERFORMANCE AFTER CONVERSION

- **Operating discharge (high) pressure** - Air-cooled models will run 10-30 PSIG (64-207 kPa gauge) higher than R-502 pressures published in service manuals.
- **Operating suction (low) pressure** - Will run 1-3 psig (7-21 kPa gauge) higher than R-502 pressure published in service manuals.
- **Interior Cabinet Temperature** - will remain the same as published in service manuals.

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CONVERSION INSTRUCTIONS

1. Recover R-502 refrigerant from the reach-in in accordance with local and national governing laws.

2. Refer to "equipment modification requirements" checklist on previous page.

   Remove heat exchange on FS1 and FS2 models **prior** to recharging.

3. Remove and replace liquid line filter drier. Use only Manitowoc approved O.E.M. filter drier. See chart.

   NOTE: *Compressor oil does not require changing.*

REACH-IN	FILTER DRIER
FS1	12-3005-1
FS2	12-3005-1
FS3	89-3015-3

4. Evacuate the reach-in.

5. Charge ice machine with DuPont SUVA®HP81 refrigerant. System charge is identical to R-502 charge listed on model/serial number tag.

   NOTE: Charge with **liquid** only into the high side of reach-in using weigh-in method or "Dial-A-Charge". Refer to Service Manual for proper charging procedure.

6. Remove R-502 labels from compressor and near front of control box. Do not remove model and serial number tags!

7. Attach a SUVA®HP81 conversion label (p/n) to each of three locations (find labels attached on page 4);

   A. Next to both serial number plates.
   B. Next to the service valves or front of control box.

   IMPORTANT: *Write service company name and conversion date on each label.*

8. Restart reach-in and verify it operates properly. (Refer to service manual if necessary.)

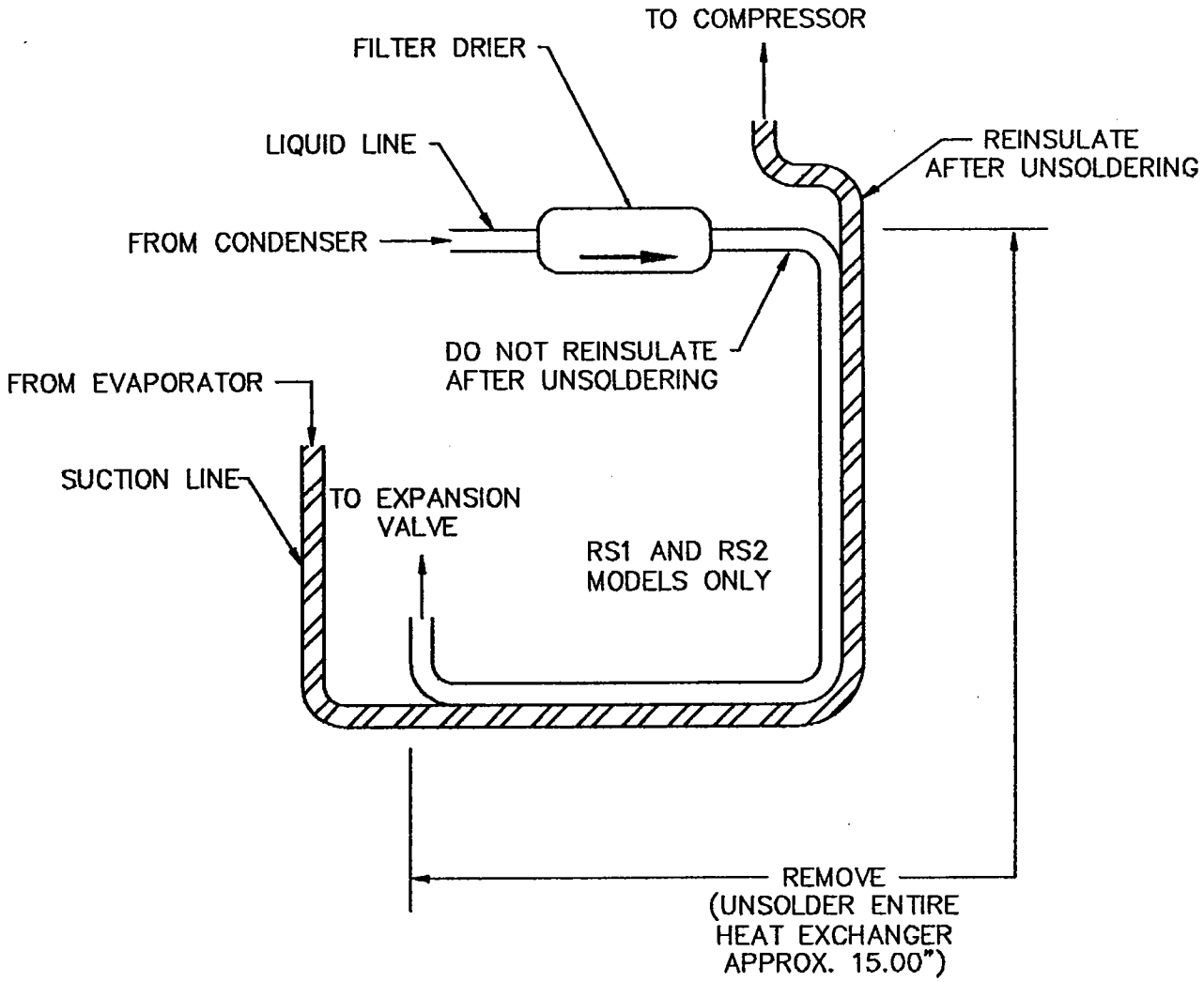
FS1 AND FS2 MODELS ONLY
HEAT EXCHANGER REMOVAL

The FS1 and FS2 require removing the heat exchanger when converting to SUVA®HP81. The procedure is as follows:

CAUTION: Remove entire system charge before proceeding.

1. Remove the insulation from the suction line liquid heat exchanger assembly. You will see the liquid line soldered to the suction line for approximately 15 inches. You must remove this soldered length.
2. Remove the liquid line from the suction line.

   Starting at evaporator end, use a pliers and a low flame torch to **carefully** separate the liquid line from the suction line.
3. Reinsulate the suction line. Run the removed liquid line outside the suction line insulation.



IMPORTANT

This reach-in is converted to

DuPont Suva®HP81 (R402B) Refrigerant

in accordance with Manitowoc guidelines.

REFRIGERANT CHARGE

The Suva®HP81 charge remains the same as R-502 charge specified on the serial plate.

ELECTRICAL/PRESSURE RATINGS

All electrical and pressure ratings listed on serial plate remain the same.

Service Co. _____

Month _____ Year _____

Manitowoc Equipment Works

8134983

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