Training Program on

Trouble Shooting Of Compressors

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Index

1. No Cooling
2. High Ampere
3. No Start
4. OLP Tripping
5. Noise

No Cooling

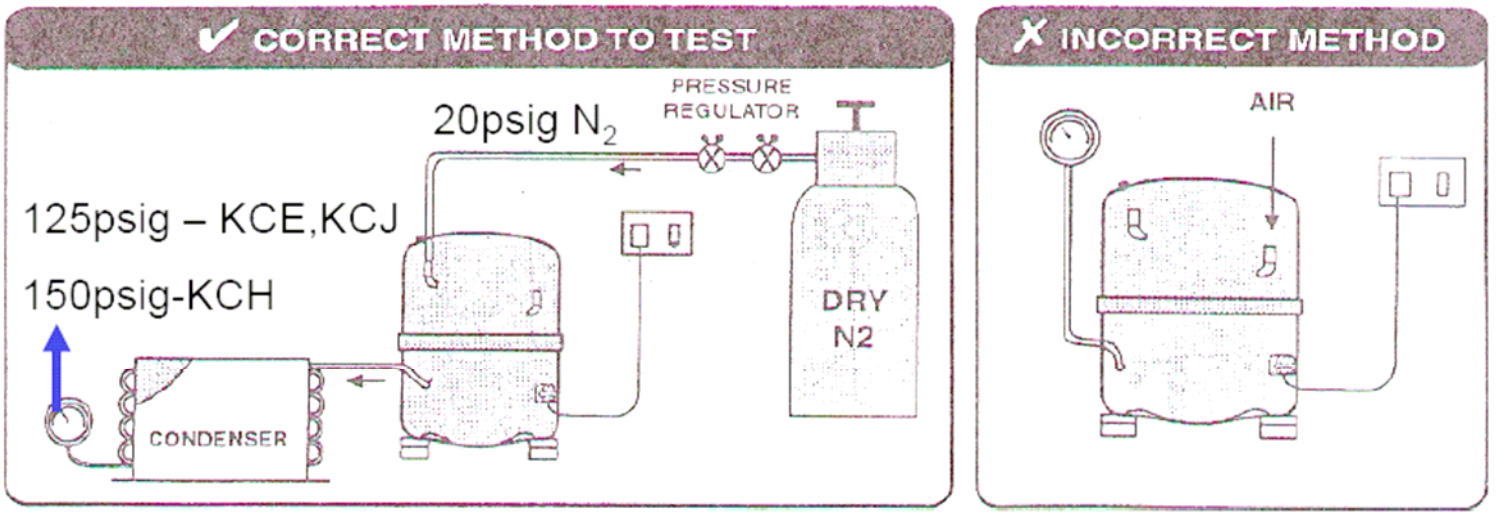
Possible Reasons

- Low Gas charge
- Capillary & or strainer choke
- Evaporator coil frosting (Visi cooler)
- Evaporator fan motor failure
- Wrong selection of compressor
- Thermostat mal functioning or wrong setting
- Leakage through door gaskets
- High product load
- Appliance front glass exposed to daylight (Visi Cooler)
- Refrigerant leak

How to Check Compressor Pumping

- Supply Nitrogen pressure of 20 psig
- Develop Discharge pressure as indicated in diagram
- Allowed leak rate is as mentioned in the table .

Compressor Series	Leak Rate / Minute	Discharge Pressure (psig)
KCE / KCJ / KCN	30 psig	125 psig
KCH / CR / CK	40 psig	150 psig



Compressor Taking High Current

Possible Reasons

- Appliance working on High Suction & High Discharge pressure
- System Overcharged
-Mis wiring
-Loose connections in wiring
-Improper system design
-Voltage fluctuations
-Wrong electrical accessories

Compressor Not Taking Start

Possible Reasons

- Poor Voltage across Compressor C & R terminal
- Wrong or defective Accessories
- Mis wiring
- Loose connection
- Thermostat off
- Unequalised pressure condition
- Compressor OLP Tripped sensing temperature
- For PSC circuits check the PSC Start Specifications

Compressor Getting Overheated and Tripping on OLP

Possible Reasons

- Wrong selection of Compressor (Retrofit jobs)
- Inadequate airflow over compressor
- Appliance located in hot ambient (Kitchen)
- Condensor choked
- Condensor fan motor failed
- Noncondensables in the system
- System Over charged

Noise

Possible Reasons

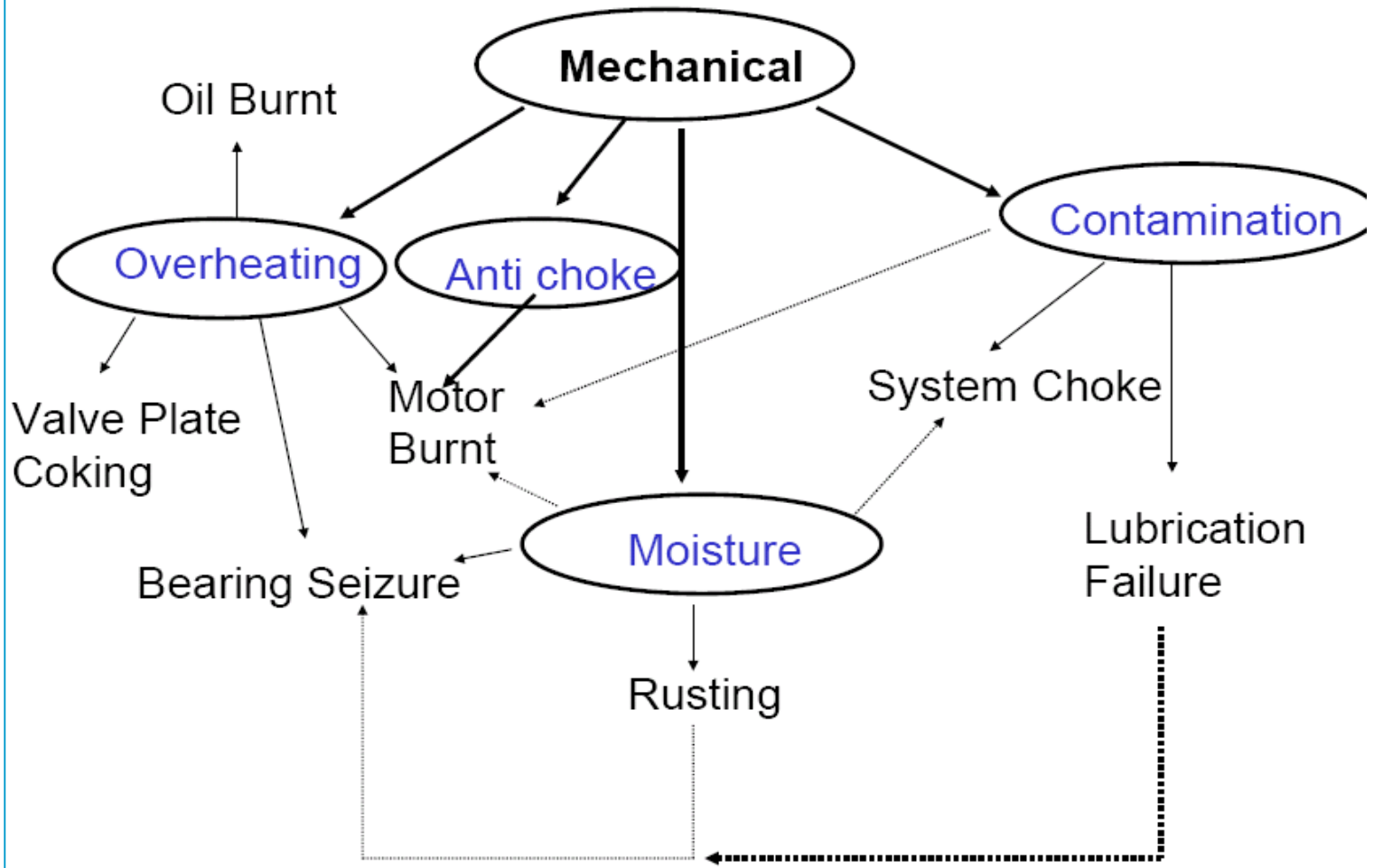
-Improper compressor Installation on appliance base plate

- Rigid connecting tubes Improper installation of M/c on ground

-Blower / Fan imbalance

-System Overcharged

Cause and Effect



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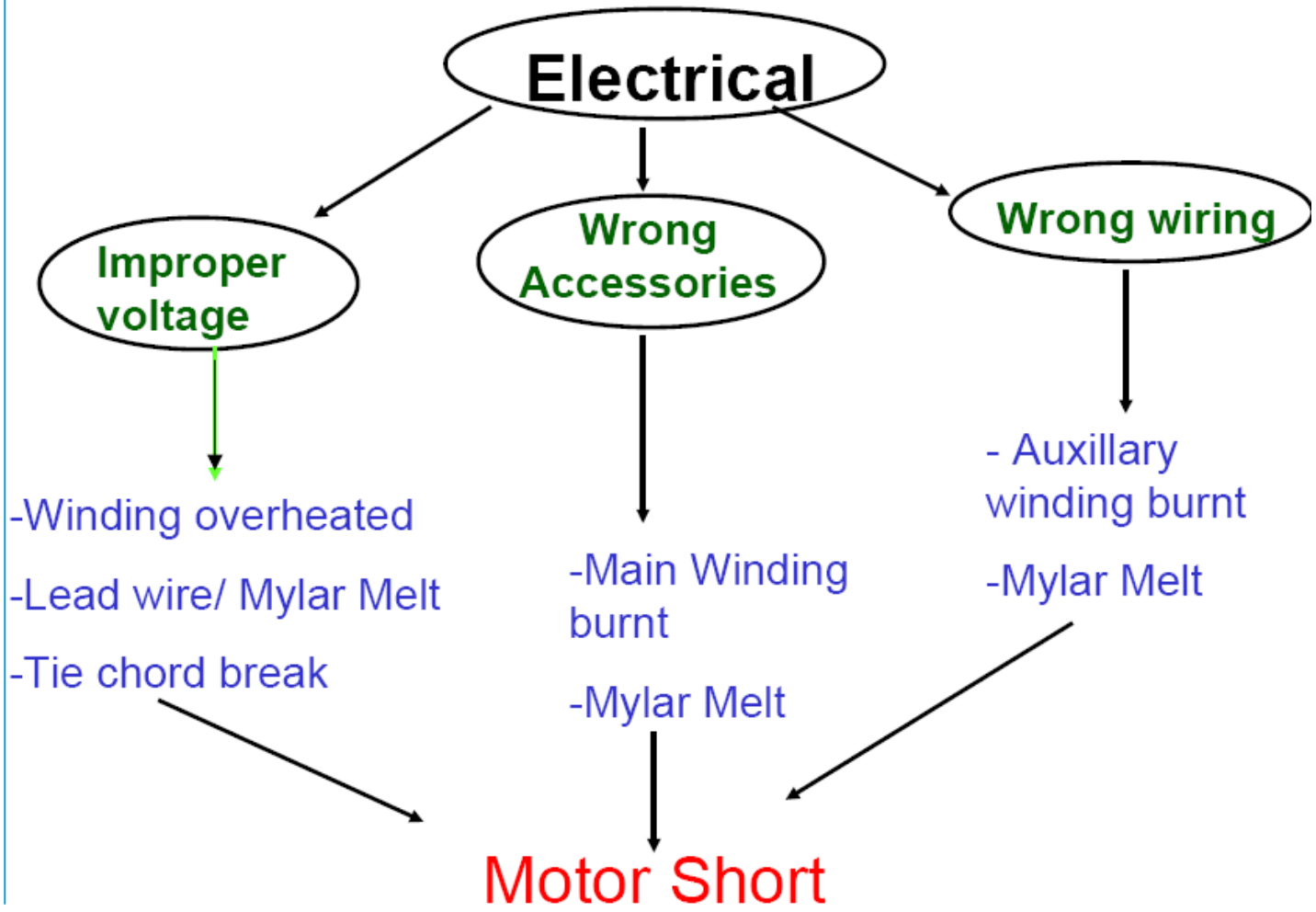
Electrical
Improper voltage
Wrong Accessories
Wrong wiring
-Winding overheated
-Lead wire/ Mylar Melt
-Tie chord break
-Main Winding burnt
-Mylar Melt
- Auxillary winding burnt
-Mylar Melt
Motor Short

Electrical Accessories Testing

Compressor With Internal OLP

1. No continuity in CSR : if compressor trip on OLP , allow OLP to reset
2. Resistance (C&R) + Resistance (C&S) = Resistance (S&R)
3. Check continuity between compressor body and each terminal (C, S, & R)

Compressor With External OLP

1. No continuity between any of CSR terminal indicates compressor failure
2. Check continuity between compressor body and each terminal (C, S, & R)

Thank You !

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