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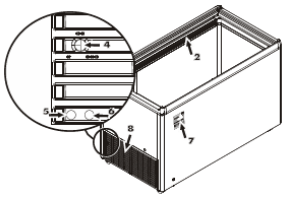
Far East Refrigeration Malaysia

STANDARD OPERATION PROSUDER: TECHNICAL INSIDE SCOOP

LIEBHERR embraco

LIEBHERR EFI2153 : EVENT CHEST FREEZER

	Ensure to re-stock **Refrigerator Spare Part Kit.** Each technical transport require 1 complete set standby for immediate action if requested from any Inside Scoop Outlet. **Refrigerator Storage Box** : Capacitor, Motor Fan, Blade, Filter Dryer & etc. **Refrigerator Compartment Box** : Overload, Relay, Potential Relay, OMRON & etc. **Mandatory Storage Box** : Meter Gauge, Vacuum, Clamp/Multi Meter, Digital Scale & etc.
	**Check all power supply** 240V starting from Wall Socket, Plug Top, Fuse, Button Switch, LED Light, Thermostat & Compressor/Motor **Trip Issues**: Identify and ensure every **electrical component in good condition**, if identify faulty component replace it immediately. However if beyond your experience refer to expert/superior. Otherwise follow next step below.
 **REPORT PRACTICE METHODS** Step 1: Take Reading Clamp Meter & Manifold Gauge in 1 Picture Step 2: Report condition unit status • Amp Reading/Actual 1.2A/1.0A • Gas Type & Presure R404 : 5Psi • Evap/Room Temp -23C • Condesor Temp 50C • Compressor Temp 80C	**Temp Abnormal Issues**: Check temperature set point should be **-18C till -23C**. Otherwise consider abnormal. **Check Compressor**: Connect compressor with Clamp Meter & Manifold Gauge the reading should be **1.0A: 5-20PSI**. Also take compressor temperature reading should be range **70-90C** otherwise consider overheat. **Compressor Not Running**: Check **Run/Start Capacitor** using Clamp/Multi Meter Probe. Then check **Overload/Relay/Potential Relay** by ensuring circuit flow using test pen/continuity test. If identify faulty unit replace with new immediately then test run and take reading again, otherwise compressor out of order. **Compressor Running**: Clear existing gas and vacuum the refrigerant system for 15minutes. Then re-new gas refrigerant by applying **scale method following nameplate 50g**, test run unit within 30 minutes if temperature achievable to set point then okay, otherwise follow next step below.
	**Check Filter Dryer & Capillary Tube**: Identify deferential temp between in/out pipe, it's should be warm on both side, otherwise means clogging. Others method, cut piping and check gas/refrigerant flow. **Replace Filter Dryer Copper**: Prepared welding/torch set and copper equipment. Be sure your safety first, then begin the replacement work. **Repair Capillary Tube**: Cut few inches cap tube and check if clogging/dirt until presentable clean. Then welding/torch its back as before.
	**All step has been apply as practice**, outcome are still abnormal. Change compressor by following nameplate ( ) due to performance drop/high amp/overheat/out of order.

* If your are an experince technician & all above has been implemented but still abnormal you may skip some step or apply alternative method.

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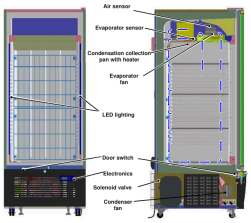
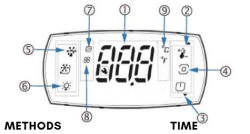
LIEBHERR FV3613: CAKE DISPLAY FREEZER

Dixell

	Ensure to re-stock **Refrigerator Spare Part Kit.** Each technical transport require 1 complete set standby for immediate action if requested from any Inside Scoop Outlet. **Refrigerator Storage Box** : Capacitor, Motor Fan, Blade, Filter Dryer **Refrigerator Compartment Box** : Overload, Relay, Potential Relay, OMRON **Mandatory Storage Box** : Meter Gauge, Vacuum, Clamp/Multi Meter, Digital Scale
	**Check all power supply** 240V starting from Wall Socket, Plug Top, Fuse, Digital Thermostat, LED Light, LED Power Supply 12V (Mini), Thermostat & Compressor/Motor. **Trip Issues**: Identify and ensure every **electrical component in good condition**, if identify faulty component replace it immediately. However if beyond your experience refer to expert/superior. Otherwise follow next step below.
	**Digital Thermostat**: Check parameter stability by ensuring probe reading meet actual temperature. Then test de-frost for 20-40 minutes if drain water dry continue next step, if water dripping means ice build at evaporator test run for 20 minutes after defrost to confirming circulation system conditions. If Error Code showed please refer manual book. However if beyond your experience refer to expert/superior. Otherwise follow next step below.
	**Temp Abnormal Issues**: Check temperature set point should be **-18C till -23C**. Otherwise consider abnormal. **Check Compressor**: Connect compressor with Clamp Meter & Manifold Gauge the reading should be **2.0A: 5-20PSI**. Also take compressor temperature reading should be range **70-90C** otherwise consider overheat. **Compressor Not Running**: Check **Run/Start Capacitor (10µF/75µF)** using Clamp/Multi Meter Probe. Then check **Overload/Potential Relay** by ensuring circuit flow using test pen/continuity test. If identify faulty unit replace with new immediately then test run and take reading again, otherwise compressor out of order. **Compressor Running**: Clear existing gas and vacuum the refrigerant system for 15minutes. Then re-new gas refrigerant by applying **scale method following nameplate 380g**, test run unit within 30 minutes if temperature achievable to set point then okay, otherwise follow next step below.
	**Check Filter Dryer & Capillary Tube**: Identify deferential temp between in/out pipe, it's should be warm on both side, otherwise means clogging. Others method, cut piping and check gas/refrigerant flow. **Replace Filter Dryer Copper**: Prepared welding/torch set and copper equipment. Be sure your safety first, then begin the replacement work. **Repair Capillary Tube**: Cut few inches cap tube and check if clogging/dirt until presentable clean. Then welding/torch its back as before. **Check/Replace Solenoid Valve**: Check rotation of solenoid valve via Danfoss Application/Special Tools. If no movement means system faulty either no power supply or out of order. Otherwise, valve mechanical malfunction.

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STANDARD OPERATION PROSUDER: TECHNICAL INSIDE SCOOP

INSIDE SCOOP

	**All step has been apply as practice**, outcome are still abnormal. Change compressor by following nameplate **AMBRACO: NEU2168U:** $\frac{3}{4}HP$ due to performance drop/high amp/overheat/out of order.

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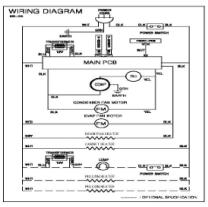
REFRIGERATOR MANUFACTURER Turbo air
Tecumseh
F & B EQUIPMENT SDN. BHD. Commercial kitchen equipment supplier
KULTHORN COMPRESSOR

TURBO AIR KUF12-2/KUF15-2/KUF18-3: COUNTER FREEZER

	Ensure to re-stock **Refrigerator Spare Part Kit**. Each technical transport require 1 complete set standby for immediate action if requested from any Inside Scoop Outlet. **Refrigerator Storage Box** : Capacitor, Motor Fan, Blade, Filter Dryer **Refrigerator Compartment Box** : Overload, Relay, Potential Relay, OMRON **Mandatory Storage Box** : Meter Gauge, Vacuum, Clamp/Multi Meter, Digital Scale
	**Check all power supply** 240V starting from Wall Socket, Plug Top, Fuse, Digital Thermostat, LED Light, LED Power Supply 12V (Mini), Thermostat & Compressor/Motor. **Trip Issues**: Identify and ensure every **electrical component in good condition**, if identify faulty component replace it immediately. However if beyond your experience refer to expert/superior. Otherwise follow next step below
 **METHODS** / **TIMES** Step 1: De-Frost Setting — 20-40 Minutes Step 2: Run & Temp Logger — 20-30 Minutes Step 3: Next Step — 2 Attempt	**Digital Thermostat/Screen**: Check parameter stability by ensuring probe reading meet actual temperature. Then test de-frost for 20-40 minutes if drain water dry continue next step, if water dripping means ice build at evaporator test run for 20 minutes after defrost to confirming circulation system conditions. If Error Code showed please refer manual book. However if beyond your experience refer to expert/superior. Otherwise follow next step below.
 **REPORT PRACTICE METHODS** Step 1: Take Reading Clamp Meter & Manifold Gauge in 1 Picture Step 2: Report condition unit status • Amp Reading/Actual — 2.4A/3A • Gas Type & Presure — R404 : 20Psi • Evap/Room Temp — -23C • Condesor Temp — 45C • Compressor Temp — 70C	**Temp Abnormal Issues**: Check temperature set point should be **-18C till -23C**. Otherwise consider abnormal **Check Compressor**: Connect compressor with Clamp Meter & Manifold Gauge the reading should be **2.0A: 5-20PSI**. Also take compressor temperature reading should be range **70-90C** otherwise consider overheat. **Compressor Not Running**: Check **Run/Start Capacitor (15µF/97µF)** using Clamp/Multi Meter Probe. Then check **Overload/Relay** by ensuring circuit flow using test pen/continuity test. If identify faulty unit replace with new immediately then test run and take reading again, otherwise compressor out of order. **Compressor Running**: Clear existing gas and vacuum the refrigerant system for 15minutes. Then re-new gas refrigerant by applying **scale method following nameplate 360g-380g**, test run unit within 30 minutes if temperature achievable to set point then okay, otherwise follow next step below.
	**Check Filter Dryer & Capillary Tube**: Identify deferential temp between in/out pipe, it's should be warm on both side, otherwise means clogging. Others method, cut piping and check gas/refrigerant flow. **Replace Filter Dryer** $\frac{1}{2}$: Prepared welding/torch set and copper equipment. Be sure your safety first, then begin the replacement work. **Repair Capillary Tube**: Cut few inches cap tube and check if clogging/dirt until presentable clean. Then welding/torch its back as before

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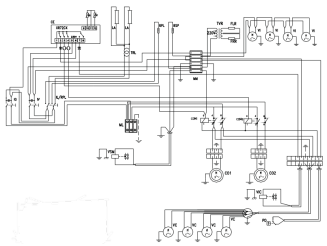
	All step has been apply as practice, outcome are still abnormal. Change compressor by following nameplate **KULHON: AE2425ZK:** $\frac{1}{3}HP$ due to performance drop/high amp/overheat/out of order. Other alternative compressor will be **TECUMSEH: AE2425 / EMBRACO: NT2182GK**

*If your are an experince technician & all above has been implemented but still abnormal you may skip some step or apply alternative method.

embraco Pastry Pro Since 1984 **ITEL PROGET: ICE CREAM DISPLAY FREEZER** Dixell Ital proget

	Ensure to re-stock **Refrigerator Spare Part Kit**. Each technical transport require 1 complete set standby for immediate action if requested from any Inside Scoop Outlet. **Refrigerator Storage Box** : Capacitor, Motor Fan, Blade, Filter Dryer, Solenoid **Refrigerator Compartment Box** : Overload, Relay, Potential Relay, OMRON **Mandatory Storage Box** : Meter Gauge, Vacuum, Clamp/Multi Meter, Digital Scale
	**Check all power supply** 240V starting from Wall Socket, Plug Top, Fuse, Digital Thermostat, LED Light, LED Power Supply 12V, Thermostat, Solenoid, Relay & Compressor/Motor. **Trip Issues**: Identify and ensure every **electrical component in good condition**, if identify faulty component replace it immediately. Via experience, double check **OMRON Relay & Solenoid**. However if beyond your experience refer to expert/superior. Otherwise follow next step below
 METHODS / TIME Step 1: De-Frost Setting — 20-40 Minutes Step 2: Run & Temp Logger — 20-30 Minutes Step 3: Next Step — 2 Attemps	**Digital Thermostat**: Check parameter stability by ensuring probe reading meet actual temperature. Then test de-frost for 20-40 minutes if drain water dry continue next step, if water dripping means ice build at evaporator test run for 20 minutes after defrost to confirming circulation system conditions. If Error Code showed please refer manual book. However if beyond your experience refer to expert/superior. Otherwise follow next step below.
 **REPORT PRACTICE METHODS** Step 1: Take Reading Clamp Meter & Manifold Gauge in 1 Picture Step 2: Report condition unit status • Amp Reading/Actual — 2.4A/3A • Gas Type & Presure — R404 : 20Psi • Evap/Room Temp — -23C • Condesor Temp — 45C • Compressor Temp — 70C	**Temp Abnormal Issues**: Check temperature set point should be **-18C till -23C**. Otherwise consider abnormal **Check Compressor**: Connect compressor with Clamp Meter & Manifold Gauge the reading should be **7.0-9.0A: 5-20PSI**. Also take compressor temperature reading should be range **70-90C** otherwise consider overheat. **Compressor Not Running**: Check **Run/Start Capacitor (15µF/170µF)** using Clamp/Multi Meter Probe. Then check **Overload/Potential Relay** by ensuring circuit flow using test pen/continuity test. If identify faulty unit replace with new immediately then test run and take reading again, otherwise compressor out of order. **Compressor Running**: Clear existing gas and vacuum the refrigerant system for 15minutes. Then re-new gas refrigerant by applying **scale method following nameplate 6kg for 2 Compressor**, test run unit within 30 minutes if temperature achievable to set point then okay, otherwise follow next step below.

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INSIDE SCOOP

	**Check Filter Dryer & Capillary Tube**: Identify deferential temp between in/out pipe, it's should be warm on both side, otherwise means clogging. Others method, cut piping and check gas/refrigerant flow. **Replace Filter Dryer** $\frac{1}{2}$: Prepared welding/torch set and copper equipment. Be sure your safety first, then begin the replacement work. **Repair Capillary Tube**: Cut few inches cap tube and check if clogging/dirt until presentable clean. Then welding/torch its back as before **Check/Replace Solenoid Valve**: Check rotation of solenoid valve via Danfoss Application/Special Tools. If no movement means system faulty either no power supply or out of order. Otherwise, valve mechanical malfunction.
	All step has been apply as practice, outcome are still abnormal. Change compressor by following nameplate **EMBRACO: NJ2192GK:** $1\frac{1}{4} HP$ due to performance drop/high amp/overheat/out of order. Other alternative compressor will be **TECUMSEH: AK2448Z-AA3C**

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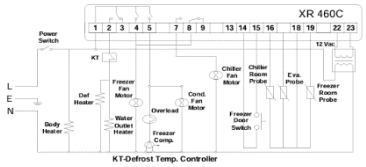
BERJAYA embraco BERJAYA BS2DC5/BS2DC4/BS2DC3: COUNTER FREEZER Dixell

	Ensure to re-stock **Refrigerator Spare Part Kit**. Each technical transport require 1 complete set standby for immediate action if requested from any Inside Scoop Outlet. **Refrigerator Storage Box** : Capacitor, Motor Fan, Blade, Filter Dryer **Refrigerator Compartment Box** : Overload, Relay, Potential Relay, OMRON **Mandatory Storage Box** : Meter Gauge, Vacuum, Clamp/Multi Meter, Digital Scale
	**Check all power supply** 240V starting from Wall Socket, Plug Top, Fuse, Digital Thermostat, LED Light, LED Power Supply 12V (Mini), Thermostat & Compressor/Motor. **Trip Issues**: Identify and ensure every **electrical component in good condition**, if identify faulty component replace it immediately. However if beyond your experience refer to expert/superior. Otherwise follow next step below
 **METHODS** / **TIME** Step 1: De-Frost Setting — 20-40 Minutes Step 2: Run & Temp Logger — 20-30 Minutes Step 3: Next Step — 2 Attemps	**Digital Thermostat**: Check parameter stability by ensuring probe reading meet actual temperature. Then test de-frost for 20-40 minutes if drain water dry continue next step, if water dripping means ice build at evaporator test run for 20 minutes after defrost to confirming circulation system conditions. If Error Code showed please refer manual book. However if beyond your experience refer to expert/superior. Otherwise follow next step below.
 **REPORT PRACTICE METHODS** Step 1: Take Reading Clamp Meter & Manifold Gauge in 1 Picture Step 2: Report condition unit status • Amp Reading/Actual — 1.2A/1.0A • Gas Type & Presure — R134 : 15Psi • Evap/Room Temp — 4C • Condesor Temp — 45C • Compressor Temp — 70C	**Temp Abnormal Issues**: Check temperature set point should be **1C till 4C**. Otherwise consider abnormal **Check Compressor**: Connect compressor with Clamp Meter & Manifold Gauge the reading should be **2.0A: 10-15PSI**. Also take compressor temperature reading should be range **70-90C** otherwise consider overheat. **Compressor Not Running**: Check **Run/Start Capacitor (15µF/97µF)** using Clamp/Multi Meter Probe. Then check **Overload/Relay** by ensuring circuit flow using test pen/continuity test. If identify faulty unit replace with new immediately then test run and take reading again, otherwise compressor out of order. **Compressor Running**: Clear existing gas and vacuum the refrigerant system for 15minutes. Then re-new gas refrigerant by applying **scale method following nameplate 360g-380g**, test run unit within 30 minutes if temperature achievable to set point then okay, otherwise follow next step below.

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	**Check Filter Dryer & Capillary Tube**: Identify deferential temp between in/out pipe, it's should be warm on both side, otherwise means clogging. Others method, cut piping and check gas/refrigerant flow. **Replace Filter Dryer** $\frac{1}{2}$: Prepared welding/torch set and copper equipment. Be sure your safety first, then begin the replacement work. **Repair Capillary Tube**: Cut few inches cap tube and check if clogging/dirt until presentable clean. Then welding/torch its back as before
	All step has been apply as practice, outcome are still abnormal. Change compressor by following nameplate **KULHON: AE2425ZK:** $\frac{1}{3}HP$ due to performance drop/high amp/overheat/out of order. Other alternative compressor will be **TECUMSEH: AE2425 / EMBRACO: NT2182GK**

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hiberembraco SAGI KAGL6B-OP14: SINGLE DOOR BLAST FREEZER

	Ensure to re-stock **Refrigerator Spare Part Kit**. Each technical transport require 1 complete set standby for immediate action if requested from any Inside Scoop Outlet. **Refrigerator Storage Box** : Capacitor, Motor Fan, Blade, Filter Dryer **Refrigerator Compartment Box** : Overload, Relay, Potential Relay, OMRON **Mandatory Storage Box** : Meter Gauge, Vacuum, Clamp/Multi Meter, Digital Scale
	Check all power supply 240V starting from Wall Socket, Plug Top, Fuse, Digital Thermostat, LED Light, LED Power Supply 12V (Mini), Thermostat & Compressor/Motor. **Trip Issues**: Identify and ensure every **electrical component in good condition**, if identify faulty component replace it immediately. However if beyond your experience refer to expert/superior. Otherwise follow next step below
	Digital Thermostat: Check parameter stability by ensuring probe reading meet actual temperature. Then test de-frost for 20-40 minutes by pressing MENU 5 Second then ENTER. If Error Code showed please refer manual book. However if beyond your experience refer to expert/superior. Otherwise follow next step below.
 **REPORT PRACTICE METHODS** Step 1: Take Reading Clamp Meter & Manifold Gauge in 1 Picture Step 2: Report condition unit status • Amp Reading/Actual 1.2A/1.0A • Gas Type & Presure R134 : 15Psi • Evap/Room Temp 4C • Condesor Temp 45C • Compressor Temp 70C	**Temp Abnormal Issues**: Check temperature set point should be **-18C till -23C**. Otherwise consider abnormal **Check Compressor**: Connect compressor with Clamp Meter & Manifold Gauge the reading should be **4.0A: 30-35PSI for low side & 270-290PSI for high side**. Also take compressor temperature reading should be range **70-90C** otherwise consider overheat. **Compressor Not Running**: Check **Run/Start Capacitor (15µF/97µF)** using Clamp/Multi Meter Probe. Then check **Overload/Relay** by ensuring circuit flow using test pen/continuity test. If identify faulty unit replace with new immediately then test run and take reading again, otherwise compressor out of order. **Compressor Running**: Clear existing gas and vacuum the refrigerant system for 15minutes. Then re-new gas refrigerant by applying **scale method following**

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	nameplate **360g-380g**, test run unit within 30 minutes if temperature achievable to set point then okay, otherwise follow next step below.
	**Check Filter Dryer & Capillary Tube**: Identify deferential temp between in/out pipe, it's should be warm on both side, otherwise means clogging. Others method, cut piping and check gas/refrigerant flow. **Replace Filter Dryer**$\frac{1}{2}$: Prepared welding/torch set and copper equipment. Be sure your safety first, then begin the replacement work. **Repair Capillary Tube**: Cut few inches cap tube and check if clogging/dirt until presentable clean. Then welding/torch its back as before
	All step has been apply as practice, outcome are still abnormal. Change compressor by following nameplate **EMBRACO: NT2192GK:** $1\frac{1}{4}HP$ due to performance drop/high amp/overheat/out of order. Other alternative compressor will be

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