

## CheckList List

- TECH - 01: INSPECTION: TRANE RTU'S
- TECH - 02: INSPECTION: EXHAUST FANS
- TECH - 03: INSPECTION: CONTROLS
- TECH - 04: INSPECTION: HOOD/GREASE DUCT
- TECH - 05: INSPECTION: HVAC DUCTWORK
- TECH - 06: INSPECTION: OTHER



# 10-23-023 CHICK-FIL-A #05161 - CREVE COEUR, MO (CREVE COEUR FSU) NEW STORE

## CheckList Information

**Name :** TECH - 01: INSPECTION: TRANE RTU'S      **Status :** Not Completed  
**Assigned Organization :** National TAB      **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 10/16/2023 - Laura Robinson - National TAB

## CheckList Item Details

### OVERALL INSPECTIONS

-Units are level? (Use a bubble level)

**Comment:**

-OA filters are installed?

**Comment:**

-Are the heat exchanger baffles located at the very end of the discharge (against screen)

**Comment:**

-All doors and panels are free from damage?

**Comment:**

-Any other physical damage to note?

**Comment:**

-Clean filters installed inside the units?

**Comment:**

Additional comments:

Comment:

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**MECHANICAL CHECKS**

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-Is the high static drive kit installed on units where it is specified? (Typically kitchen RTU)

Comment:

**not specified on this store**

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-Is the belt a sufficient size that is included with the high static drive kit?

Comment:

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-GFI outlet (if installed) is wired and operational?

Comment:

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-Is the smoke detector installed/relocated to the correct compartment per remark in the RTU schedule?

Comment:

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-Grommets installed for GFI outlet wiring? (If applicable)

Comment:

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-Gas piping installed and valves turned on?

Comment:

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-Gas piping grommets are installed?

Comment:

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-Gas piping is painted with coat Aluminum base paint (should also have a coat of zinc rust primer but likely won't be visible).  
As per Plumbing specs

Comment:

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-Piping (condensate and gas) does not obstruct doors or access panels?

Comment:

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**-Hail Guards are installed on the condenser coils**

Comment:

-Condenser coil is clean and fins are straight?

**Comment:**

-Economizers are functional?

**Comment:**

-Evaporator coil is clean and fins are straight?

**Comment:**

-Turn off unit and spot check high voltage wiring lugs are tight, no loose wires, etc.

**Comment:**

-Belts are properly tensioned?

**Comment:**

-Belts and pulleys are all aligned?

**Comment:**

-Are the power exhaust fan installed on units where specified?

**ac1, 2, 3 only**

**Comment:**

-Take cover off of the power exhaust fan. Does the blower spin freely and do all wires appear to be landed?

**Comment:**

-Inside the mixed air compartment is the power exhaust shroud assembled correctly including the backdraft damper?

**Comment:**

Additional comments:

**Comment:**

**spot check 1 unit. remove discharge panel**

**PLENUM CURB CHECKS (OPEN SUPPLY AIR SIDE PANEL)**

-Do the joints of the curb appear to be sealed well? Is there any gaps or leakage noticeable where the RTU meets the curb?

**Comment:**

-RTU/curb crossmembers are not conflicting? I.e., is the hat channel placement correct on the cross member?

**Comment:**

-Is the insulation secured in place with stick-pins and adhesive? Make sure insulation doesn't peel back.

**Comment:**

-Is there sheet metal angle "nozing" covering insulation at ductwork drops/connections?

**Comment:**

-No high or low voltage wiring is visible inside the discharge air plenum? (Should be MC cable or routed through conduit only)

**Comment:**

Additional comments:

**Comment:**

**CONDENSATE DRAINS - CHECK THAT THEY MATCH DETAIL IN THE PLUMBING DRAWINGS**

-Condensate drains are installed and have union on both sides of P-trap? (per plumbing drawings)

**Comment:**

-Cleanout plug is installed for the lower T fitting

**Comment:**

-Higher T fitting is open to the atmosphere and the top of the opening is below the pipe connection to the RTU?

**Comment:**

-Do condensate lines for each RTU match the sizing shown on the plumbing rooftop drawing? (There should be no reduction in size at any point including the P-trap.)

**Comment:**

-Condensate drains are properly pitched to drain away from the units?

**Comment:**

-Condensate drains have at least 2" rise between connection to unit and the pipe after the P-trap?

**Comment:**

Additional comments:

**Comment:**

**LOW VOLTAGE WIRING**

-Grommets are installed around penetrations for wiring that is not in conduit?

**Comment:**

-Wires landed at P and P1 on the Reliatel Economizer Module

**Comment:**

-Are there any flash codes present on the economizer?

**Comment:**

-Wires landed to R, G, Y1, Y2, W1, W2, C on thermostat terminal strip?

**Comment:**

-Wire from " - " terminal at the humidity sensor landed to terminal 19 "RH-" on the NLTB board.

**Comment:**

-Wire from " + " terminal at the humidity sensor landed to terminal 18 "RH-" on the NLTB board.

**Comment:**

-Wire for humidstats is landed at 24VAC R terminal on the "Sensor" strip?

**Comment:**

-Wire landed to terminal 6 "ESTOP" on the LTB1 terminal strip.

**Comment:**

-Is the factory 24V jumper between terminal 5 and 6 removed on the LTB board for ESTOP? (Note: the jumper looks like a small metal bar)

**Comment:**

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-Are there any loose wires inside the unit that have not been connected to sensors?

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**Comment:**

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Additional comments:

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**Comment:**

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**OTHER**

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-Laminated copy of the control wiring is included in each RTU electrical cabinet as per the Controls M Sheet

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**Comment:**

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-Has mechanical contractor provided a second set of filters for owner (should be stored in space somewhere)

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**Comment:**

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-Annunciators are the specified Suncoast Keyless type?

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**Comment:**

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-All annunciators are labeled?

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**Comment:**

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Additional comments:

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**Comment:**

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**SEISMIC DETAILS**

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Seismic clips attached to both sides of the unit and secured with screws if specified in the RTU schedule remarks?

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**Comment:**

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Additional comments:

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**Comment:**



**10-23-023 CHICK-FIL-A #05161 - CREVE COEUR, MO (CREVE COEUR FSU)  
NEW STORE**

**CheckList Information**

**Name :** TECH - 02: INSPECTION: EXHAUST FANS      **Status :** Not Completed  
**Assigned Organization :** National TAB      **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 10/16/2023 - Laura Robinson - National TAB

**CheckList Item Details**

**RESTROOM EXHAUST FAN**

-Rectangular duct is lined?

**Comment:**

-Round duct is externally insulated?

**Comment:**

-Backdraft damper is installed in duct and operates correctly?

**Comment:**

-Flexible conduit is run up through duct to raceway in fan?

**Comment:**

-Fan is secured to the curb with screws?

**Comment:**

-Speed controller installed and wired?

**Comment:**

Additional comments:

**Comment:**

**UTILITY SET GREASE FANS**

-1' high nozzle is installed? If the fan is within 10' of parapet walls, RTU's, or condensing units, ensure that it extends at least 2" above them.

**Comment:**

-Joint between the nozzle and the exhaust fan collar has welded bead (not tack weld) so that grease will not accumulate? Caulking not preferred as it falls off.

**Comment:**

-G2 drip guard is installed and drain is piped to center of the guard?

**Comment:**

-Transitions from duct to fan, and from fan to nozzle, are bolted and either have fire caulking or gasket?

**Comment:**

-Service disconnect is installed on the outside of the fan and functional?

**Comment:**

-Belts are properly tensioned? (rotated to 2 tick marks)

**Comment:**

-PVC grease drains pieces are glued together?

**Comment:**

-Pulleys are aligned?

**Comment:**

-Spare belt provided for each fan? (Relocate spare belt to the inside of the door.)

**Comment:**

-What other defects or quality control issues observed with the fans? For instance - access door missing, name plate wrong/missing, bolts or nuts missing from motor mount, etc

**Comment:**

-Walk around unit and ensure fan is free of damage?

**Comment:**

-Verify that the nameplate matches design and that the store # matches

**Comment:**

-Blower wheel spins freely?

**Comment:**

-Fan is free of noise and vibration?

**Comment:**

Additional comments:

**Comment:**

UPBLAST GREASE FANS

**not applicable**

-Curb extensions installed?

**Comment:**

-Grease duct is terminated flush with top of curb?

**Comment:**

-Fire caulking around the grease duct flange on top of curb?

**Comment:**

-Drip guard is installed and drain is piped to center of the guard?

**Comment:**

-Conduit is long enough so that fan can fully hinge back?

**Comment:**

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-Fan hinges in correct direction as specified in mechanical plans? If not shown on plans, are they all hinged in the same direction?

**Comment:**

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-Belts are properly tensioned? (rotated to 3 tick marks)

**Comment:**

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-Service disconnect is installed and functional?

**Comment:**

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-PVC grease drains pieces are glued together?

**Comment:**

---

-Pulleys are aligned?

**Comment:**

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-Spare belt provided for each fan?

**Comment:**

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-Walk around unit and ensure fan is free of damage?

**Comment:**

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-Verify that the nameplate matches design and that the store # matches

**Comment:**

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-Blower wheel spins freely?

**Comment:**

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-No major leakage around the base of the fan?

**Comment:**

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-Fan is free of noise and vibration?

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**Comment:**

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Additional comments:

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**Comment:**

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**10-23-023 CHICK-FIL-A #05161 - CREVE COEUR, MO (CREVE COEUR FSU)  
NEW STORE**

**CheckList Information**

**Name :** TECH - 03: INSPECTION: CONTROLS      **Status :** Not Completed  
**Assigned Organization :** National TAB      **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 10/16/2023 - Laura Robinson - National TAB

**CheckList Item Details**

**SENSORS (OVERALL CHECKS)**

-Sensors labeled on wall adjacent to sensors (unless plans specifically state otherwise) and have the correct unit number and indicate whether they are temp or humidity?

**Comment:**

-Temperature and humidity sensors are installed where shown on the drawing?

**Comment:**

Additional comments:

**Comment:**

**TEMPERATURE SENSORS**

-Temperature sensors are wired to the correct thermostat? (Check by having someone hold a handwarming pad or lighter under the sensor from a safe distance and verifying temperature rise on the thermostat)

**Comment:**

-Verify that manufacturer/model stamped on the outer jacket of the temperature sensor wiring cables is Connect Air model W221P-2003OR. The wire should be a shielded twisted pair (i.e., only two wires), with one drain wire. If other manufacturers are used, note the manufacturer/model and take picture for report.

**Comment:**

-Is RS1 on each temperature sensor wired to RS-1 in the Suncoast panel?

**Comment:**

-Is RS+V on each temperature sensor wired to RS+V in the Suncoast panel?

**Comment:**

-Is RS2 on each temperature sensor wired with DRAIN wire to RS2 in the Suncoast panel?

**Comment:**

Additional comments:

**Comment:**

#### **HUMIDITY SENSORS**

-Verify that manufacturer/model stamped on the outer jacket of the humidity sensor wiring cables matches the specification (Connect Air model W221P-2003 is preferred)

**Comment:**

-Covers of humidstats are secured?

**Comment:**

-LENNOX: For all humidity sensors: 2 conductor shielded cable has one wire landed to Vin, one to GND, and the shield wire is not connected.

**Comment:**

-LENNOX: For all humidity sensors: For second shielded cable, one wire is landed to Vout and the shield wire is not connected.

**Comment:**

-TRANE: For all humidity sensors, one wire landed to + and one wire landed to - and the shield wire is not connected.

**Comment:**

Additional comments:

**Comment:**

#### **PANEL**

-High voltage wiring is run through the cable routing compartment and cover is installed?

**Comment:**

-Low voltage wiring installed at all terminals shown on specification for each RTU—E1, DI-1, G, Y2, Y1, W2, W1, R, C, RS2, RS1, RS+V

**Comment:**

-Thermostats are powered?

**Comment:**

-Overall, is panel is completely wired with no jumpers, installation complete, and is fully operational?

**Comment:**

-LENNOX units - Is OCP wired to P terminal in SEC panel, and P1 jumpered to R in the SEC panel

**Comment:**

-TRANE units - Are P & P1 terminals landed between the SEC panel and economizer module

**Comment:**

-Are R-1, R-2, and R-3 (R-4 and R-5 if applicable) ice cube relays factory wired properly from SEC inside the panel. Take photo and include in TAB report

**Comment:**

-Is R-6 (fire interlock) relay factory wired properly from SEC inside the panel. Take photo and include in TAB report.

**Comment:**

Additional comments:

**Comment:**



10-23-023 CHICK-FIL-A #05161 - CREVE COEUR, MO (CREVE COEUR FSU)
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CheckList Information

Name : TECH - 04: INSPECTION: HOOD/GREASE DUCT Status : Not Completed
Assigned Organization : National TAB Asset :
Requesting Organization : National TAB
Created Date : 10/16/2023 - Laura Robinson - National TAB

CheckList Item Details

Picture document all issues with full description. Needs to include the location of the specification (ex:Page, specification #, detail #) in the drawings. If you see something, say something. If there are any other issues you identify outside of these checklists note those in the report as well. All issues should be communicated with the MC onsite

HOODS

-Are hoods hung at the correct height? (check Halton spec for exact dimension - typically 64". Halton spec supercedes mechanical drawings)

Comment:

-Make sure pin and sleeve electrical box is assembled correctly on all hoods

Comment:

-Take filters out of bank. Are there any parts laying in the grease trough and if so do they need to be installed?

Comment:

-Adjust the slider on filter bank so that the filters have tight fit? Ensure no pieces are missing from the slider

Comment:

-Side brackets installed in between hoods and counters?

Comment:

-Any threaded holes underneath hood canopy are filled?

**Comment:**

-All hoods supported at factory support points with threaded rod (3/8" typ.)?

**Comment:**

-If threaded rod is exposed below ceiling, is it inside stainless steel tubing and is the escutcheon installed?

**Comment:**

-ANSUL pull stations are labeled with red bakelite label with 1/4" high white letters indicating the hoods served?

**Comment:**

Is the ANSUL system installation complete?

**Comment:**

-Curb caps secured to the curb where roof top grease duct penetrates into space? (if no roof top grease duct put N/A)

**Comment:**

-Capture jet fans are hard piped?

**Comment:**

-Capture jet speed controllers are wired and functional.

**Comment:**

-Capture jet fans are installed the correct direction (so they supply air to hood canopy and do NOT exhaust)

**Comment:**

-Side Capture jet (if applicable) is installed with fan guard and stand?

**Comment:**

-Hoods are secured to the wall at all pre-punch hole locations?

**Comment:**

-Is the fry chute installed?

**Comment:**

-Are the grease cups installed?

**Comment:**

-Are gusset bracket bolts installed (typically on Hood 2)?

**Comment:**

-Ensure there is no damage to the hoods?

**Comment:**

Additional comments:

**Comment:**

**GREASE DUCTWORK**

-EF-1 main drop is equal distance between both risers unless specified otherwise on drawings

**Comment:**

-Unifrax Firewrap brand is used on all grease ductwork

**Comment:**

-All turns in grease duct are long radius type elbows and follow equation  $\text{Radius} = (3 * W) / 2$ . (Measured to the duct centerline). No mitered fitting allowed. (Both in space and on roof)

**Comment:**

-Each grease cleanout doors meets specifications, is assembled correctly, and is the correct size? (Outer plate is not required for rooftop ductwork - indoors only)

**Comment:**

-Each grease cleanout doors are installed in the location shown on drawing?

**Comment:**

-Balancing dampers are installed if specified?

**Comment:**

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-Roof top grease duct is painted white in a professional manner? If grease duct is not painted, recommend that all rust be removed prior to painting.

**Comment:**

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-Rooftop grease duct is supported at 6' intervals maximum with supports shown in specification?

**Comment:**

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-Rooftop grease duct is supported at each duct drop into the space?

**Comment:**

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Additional comments:

**Comment:**

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**10-23-023 CHICK-FIL-A #05161 - CREVE COEUR, MO (CREVE COEUR FSU)  
NEW STORE**

**CheckList Information**

**Name :** TECH - 05: INSPECTION: HVAC DUCTWORK      **Status :** Not Completed  
**Assigned Organization :** National TAB      **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 10/16/2023 - Laura Robinson - National TAB

**CheckList Item Details**

Picture document all issues with full description. Needs to include the location of the specification (ex:Page, specification #, detail #) in the drawings. If you see something, say something. If there are any other issues you identify outside of these checklists note those in the report as well. All issues should be communicated with the MC onsite

**MAIN TRUNKS (SPOT CHECK)**

-All ductwork (w/ exception of RR fan) is externally insulated. No liners are allowed and must be removed.

**Comment:**

-Ductwork insulation has minimum 6 R-Value installed?

**Comment:**

-Canvas connector installed between the main supply & return drops and RTU's.

**Comment:**

-Check that base-pan connections are seated and aligned correctly (i.e., duct connections at the RTU)?

**Comment:**

-Turning vanes on main supply drop should be single thickness and not double thickness? (not necessary in returns)

**Comment:**

-Ducts 24" or wider have stick pins and stick pins are covered with duct tape or mastic?

**Comment:**

-All seams in insulation are taped?

**Comment:**

-Is the insulation wet?

**Comment:**

-Does the return air drop span-out with a transition per specification where applicable (i.e., is it a tapered transition from opening at unit to full size on plans and NOT hard mitred transition)

**Comment:**

-Check that sealant used on ductwork connections (spot check 1)

**Comment:**

Additional comments:

**Comment:**

**GRILLE TAKEOFFS (SPOT CHECK)**

-Damper handles are located on the left or right of the duct?

-Do all start collars and Rusking In-Line dampers match specification and appear to be purchased thru Tom Barrow Co

**Comment:**

-Fluorescent ribbon is attached to each damper handle?

**Comment:**

-Minimum 1' rigid duct after start collar?

**Comment:**

-Flex duct is installed on each duct run after rigid duct and is less than 48" in length?

**Comment:**

-Rigid hard pipe with 90 degree fitting and riser connecting to the grille?

**Comment:**

-Drawband and tape are used to secure inner core of the flex duct? (Spot check)

**Comment:**

-Drawband or tape is used on outer jacket?

**Comment:**

-Tops of diffusers are insulated?

**Comment:**

-Mastic at rigid connections to diffuser?

**Comment:**

Additional comments:

**Comment:**

**OVERALL**

-Any leaky ductwork observed?

**Comment:**

-Ductwork supported properly?

**Comment:**

Additional comments:

**Comment:**

**GRD'S**

-Do all diffusers match specified models and appear to be purchased thru Tom Barrow Co.?

**Comment:**

-Do all diffusers appear to be clean of dust and debris?

**Comment:**

-Any damage to diffusers?

**Comment:**

-All diffusers installed at the correct locations?

**Comment:**

-Ensure that deflectors for diffusers in entires, Drive thru cockpit, office, adjacent to soffits, restrooms, RR vesibule are closed as shown on the mechanical plan.

**Comment:**

-Look at plans and adjust pattern deflectors to throw straight down for diffusers near hood where noted.

**Comment:**

-Adjust pattern deflectors for any other diffusers where noted on plans (Either included as a note in plans or as blacked out triangle sections of diffuser.)

**Comment:**

-Air diffuser air pattern blades adjusted uniformly?

**Comment:**

-Is space free of drafting?

**Comment:**

-Notice any squeaking damper noise? If so, tighten wing-nut on opposite side of stand-off.

**Comment:**

Additional comments:

**Comment:**



**10-23-023 CHICK-FIL-A #05161 - CREVE COEUR, MO (CREVE COEUR FSU)  
NEW STORE**

**CheckList Information**

**Name :** TECH - 06: INSPECTION: OTHER      **Status :** Not Completed

**Assigned Organization :** National TAB      **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 10/16/2023 - Laura Robinson - National TAB

**CheckList Item Details**

Picture document all issues with full description. Needs to include the location of the specification (ex:Page, specification #, detail #) in the drawings. If you see something, say something. If there are any other issues you identify outside of these checklists note those in the report as well. All issues should be communicated with the MC onsite

**AIR DOORS**

Does the hanging height of the air doors match design?

**Comment:**

-Installed in proper location?

**Comment:**

-Correct model/manufacturer?

**Comment:**

-Is the Drive-thru air curtain diverter box installed and allows enough room for servicing the air filter?

**Comment:**

-Timer is set to minimum position (0)?

**Comment:**

-They are operating correctly?

**Comment:**

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-Are switches installed?

**Comment:**

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-For drive thru air door, if MP-1-30 type or similar, door is adjusted so it is not noisy and directed at the center of the drive thru window?

**Comment:**

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-For drive thru air door, if Chameleon type, fan speed is set as high as possible without creating disruptive noise, and air is directed to center of walkway?

**Comment:**

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Additional comments:

**Comment:**

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**CANOPY**

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Are canopy fans and heaters installed and controls complete?

**Comment:**

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Additional comments:

**Comment:**

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