Hoosier Comfort Consultants
Smart solutions for better comfort

**FIELD SITE SHEET**
Return the completed sheet with photos of the data plate, failed part and problem area. Subject: "Site Sheet"

# DUAL FUEL

Heat pump + gas furnace

## JOB INFORMATION

*Complete every box. Use N/A if it doesn't apply.*

| Brand | | | Reason for visit | | | | Date of visit |
|---|---|---|---|---|---|---|---|
| ICP | Allied | Other | Start-up | Service | Warranty | Maint. | |

| Homeowner / customer | Jobsite address | City, State, ZIP | Phone |
|---|---|---|---|
| | | | |

| Technician | Dealer company | Dealer phone | Installed | Failure date | Claim / RA # |
|---|---|---|---|---|---|
| | | | | | |

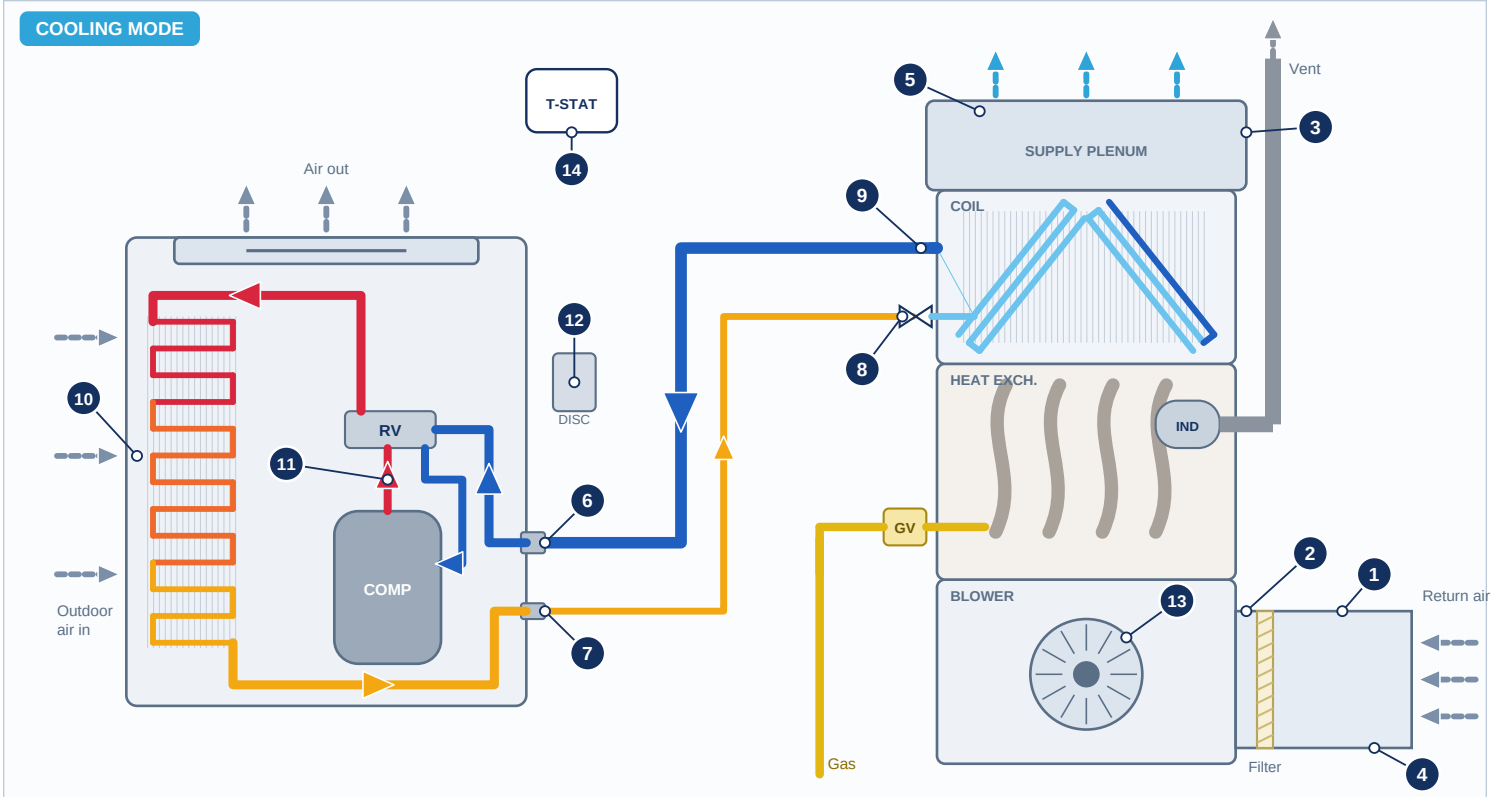
**Complaint / reason for visit**

## EQUIPMENT

| COMPONENT | Manufacturer | Model number | Serial number | Size / tons / BTU |
|---|---|---|---|---|
| Outdoor unit (heat pump) | | | | |
| Furnace | | | | |
| Indoor coil | | | | |
| Thermostat / DF control | | | | |

## SYSTEM DIAGRAM: COOLING

*Furnace blower moves air; burners off*




High-pressure vapor (hot gas) | Condensing | High-pressure liquid | Low-pressure liquid + vapor | Low-pressure vapor (suction)

1. Return static, before filter
2. Return static, after filter
3. Supply static, after coil
4. Return air DB / WB
5. Supply air DB / WB
6. Vapor line pressure & temp
7. Liquid pressure & line temp
8. Liquid temp at indoor metering
9. Coil outlet temp (cooling)
10. Outdoor air entering coil
11. Discharge line temp
12. Outdoor volts & amps
13. Blower volts & amps
14. Thermostat call (Y, O/B, W)
15. Gas inlet pressure
16. Manifold pressure
17. Flame sensor (µA)
18. Inducer / pressure switch
19. Flue gas analysis
20. Defrost sensor / coil temp

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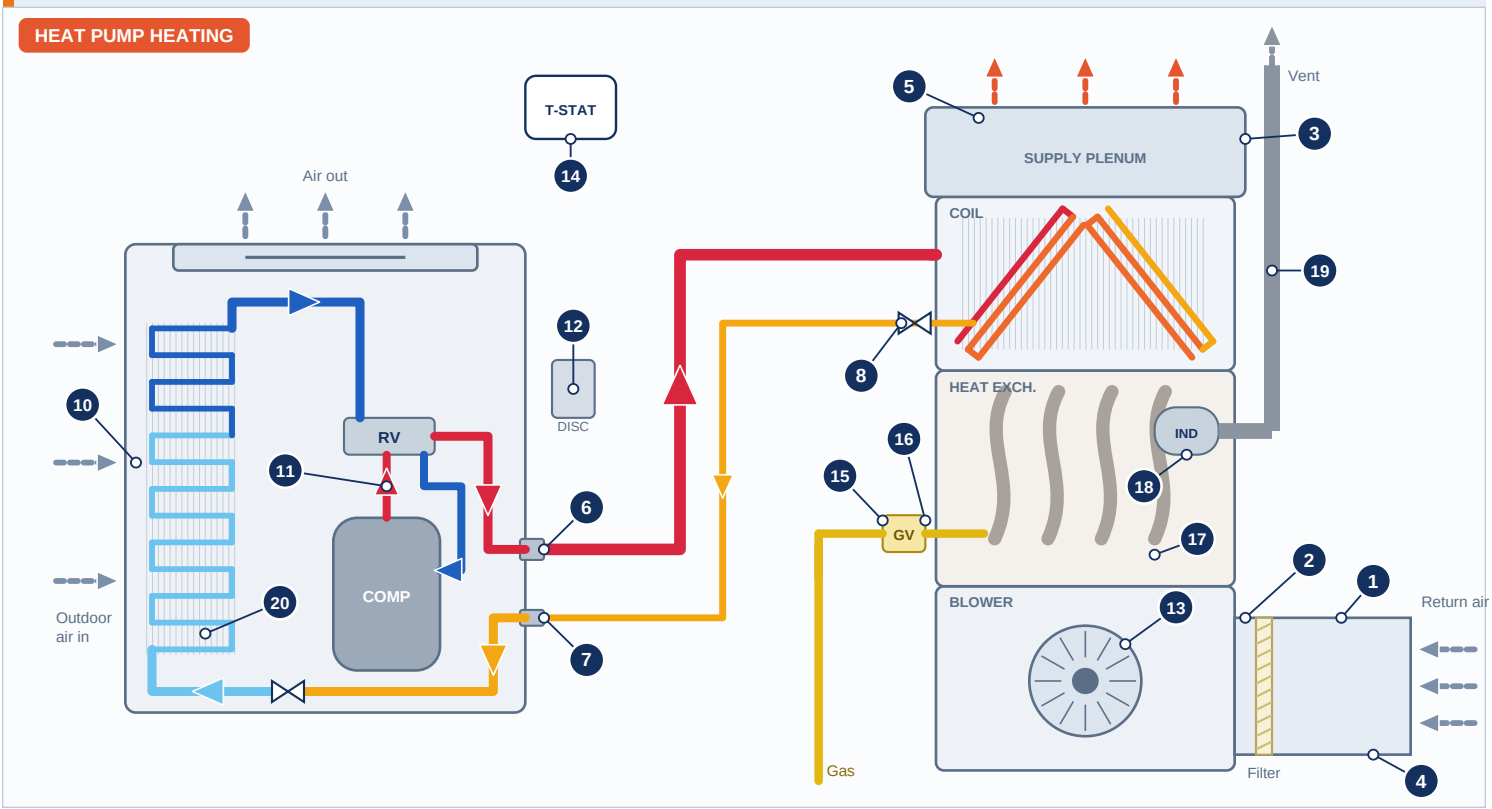
## SYSTEM DIAGRAM: HEAT PUMP HEATING

*Above the balance point. Below it the furnace runs and the heat pump stops*




High-pressure vapor (hot gas) | Condensing | High-pressure liquid | Low-pressure liquid + vapor | Low-pressure vapor (suction)

## DUAL FUEL CONTROL SETUP

| Control type | Balance point (°F) | HP lockout below (°F) | Aux / furnace lockout above (°F) | Outdoor sensor installed? |
|---|---|---|---|---|
| | | | | Yes No |

| HP + furnace never run together? | Furnace runs in defrost? | Coil downstream of furnace? | O/B setting matches brand? |
|---|---|---|---|
| Yes No | Yes No | Yes No | Yes No |

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## READINGS

*Run 15+ minutes in each mode*

| Refrigerant | Indoor metering | Piston # | Line set length (ft) | Vertical lift (ft) | Charge added / removed (oz) |
|---|---|---|---|---|---|
| | | | | | |

| # | MEASUREMENT (where) | COOLING | HP HEAT | GAS HEAT | TYPICAL / TARGET |
|---|---|---|---|---|---|
| 1 | **Return static, before filter**<br>Upstream of filter | in. w.c. | in. w.c. | in. w.c. | Filter drop (2-1) usually < 0.15-0.20 |
| 2 | **Return static, after filter**<br>Between filter and blower | in. w.c. | in. w.c. | in. w.c. | Use for total ESP |
| 3 | **Supply static**<br>Supply plenum, after coil | in. w.c. | in. w.c. | in. w.c. | Total ESP typically <= 0.50 in. w.c. |
| 4 | **Return air**<br>Return duct | DB WB | °F | °F | |
| 5 | **Supply air**<br>Supply plenum | DB WB | °F | °F | Gas: rise within rating plate range |
| 6 | **Vapor line pressure / temp**<br>Large service valve | psig °F | psig °F | | Cooling suction; HP heat discharge pressure |
| 7 | **Liquid pressure / temp**<br>Small service valve | psig °F | psig °F | | Subcooling per nameplate (cooling) |
| 8 | **Liquid temp at indoor metering**<br>Liquid line at coil | °F | °F | | Cooling: within ~3 °F of #7 |
| 9 | **Coil outlet temp**<br>Vapor line at TXV bulb | °F | | | Cooling only |
| 10 | **Outdoor air**<br>Entering outdoor coil | °F | °F | °F | Record for balance point check |
| 11 | **Discharge line temp**<br>About 6 in. from compressor | °F | °F | | Investigate above ~225 °F |
| 12 | **Outdoor volts / comp. / fan amps**<br>Disconnect and contactor | V A A | V A A | | Volts within 10%; amps vs. RLA / FLA |
| 13 | **Blower volts / amps**<br>Furnace blower motor | V A | V A | V A | Compare to motor FLA |
| 14 | **Thermostat call**<br>Y, O/B, W at board | V | V | V | Only one heat source called at a time |
| 15 | **Gas inlet pressure**<br>Gas valve inlet tap | | | in. w.c. | Within rating plate min / max |
| 16 | **Manifold pressure**<br>Gas valve outlet tap | | | lo hi | Per rating plate |
| 17 | **Flame sensor**<br>In series with sensor lead | | | µA | Usually 2-6 µA DC |
| 18 | **Inducer pressure / switch**<br>Pressure switch tubing | | | in. w.c. | Above switch make point |
| 19 | **Flue gas**<br>Vent sample port | | | O2 CO | Air-free CO and O2 per manufacturer |
| 20 | **Defrost sensor / coil temp**<br>Defrost board sensor | | °F kOhm | | Sensor resistance per mfr. chart |

## CALCULATED VALUES

*Fills in automatically as readings are entered (Adobe Reader, Chrome, Edge, Firefox)*

| Superheat (auto) | Target superheat | Subcooling (auto) | Target subcooling | Liquid line drop 7-8 (auto) |
|---|---|---|---|---|
| | | | | |

| Filter drop (auto) | Total ESP (auto) | Rated max ESP | Cooling delta-T (auto) | Est. airflow (CFM) | CFM per ton (auto) |
|---|---|---|---|---|---|
| | | | | | |

| Charge check (auto) | Airflow / static check (auto) |
|---|---|
| | |

| HP heat rise (auto) | Gas temp rise (auto) | Balance point check notes |
|---|---|---|
| | | |

## FINDINGS & SIGN-OFF

**Findings / parts replaced / corrective action**

| Technician signature | Date | Reviewed by | Date |
|---|---|---|---|
| | | | |