# SERVICE REPORT PREVENTIVE MAINTENANCE
# PRECISION AIR CONDITIONING (PAC)
## PT. HM SAMPOERNA SUKOREJO PLANT

FORM NO.

**Tipe Form PM04**

| | | | |
|---|---|---|---|
| Lokasi : | Model Unit : | Team Engineer List : | Date : |
| Code unit : | No. Seri : | | Start PM : |
| Nomor Unit : | Periode : | | Close PM : |

**CHECKLIST TEAM BRIEFING**

**INTENSIVE SAFETY BRIEFING TEAM** ? OK ? NOT OK

**A Filter Section**

| Item Checked | Spec. Range / Cond. Std. | Actual Checked | Item Checked | Spec. Range | Actual Checked |
|---|---|---|---|---|---|
| **1. Check/Replace filters** | Clean or Dirty | Clean | **5. Clean condensate pan** | Clean or Dirty | Clean |
| **2. Grille area unrestricted** | OK / Not OK | Ok | **6. Clean trap in condensate drain** | Clean or Dirty | Clean |
| **3. Wipe section clean** | Clean or Dirty | Clean | **7. Check/Test filter-clog switch operation** | Ok or No | Ok |
| **4. Coil clean** | Clean or Dirty | Clean | | | |

**B Blower Section**

| Item Checked | Spec. Range / Cond. Std. | Blower 1 | | Blower 2 | | Blower 3 | | Keterangan |
|---|---|---|---|---|---|---|---|---|
| | | Before | After | Before | After | Before | After | |
| **1. Mounting bolts tight** | Ok or No | OK | OK | OK | OK | OK | OK | OK |
| **2. Fan-guard bolts tight** | Ok or No | OK | OK | OK | OK | OK | OK | OK |
| **3. Impeller spins freely** | Ok or No | OK | OK | OK | OK | OK | OK | OK |
| **4. Check/Test air sail switch** | Ok or No | OK | OK | OK | OK | OK | OK | OK |
| **5. Motor amp draw • Compare to nameplate amps** | FLA L1 =···· A | **L1** | **L1** | **L1** | **L1** | **L1** | **L1** | 1 |
| | FLA L2 =···· A | **L2** | **L2** | **L2** | **L2** | **L2** | **L2** | 1 |
| | FLA L3 =···· A | **L3** | **L3** | **L3** | **L3** | **L3** | **L3** | 1 |
| **6. Check belt tension and condition** | Ok or No | Ok | Ok | Ok | Ok | Ok | Ok | Ok |
| **7. Check sheave/pulley** | Ok or No | Ok | Ok | Ok | Ok | Ok | Ok | Ok |

**C Reheat**

| Item Checked | Spec. Range / Cond. Std. | Heater 1 | | Heater 2 | | Heater 3 | | Keterangan |
|---|---|---|---|---|---|---|---|---|
| | | Before | After | Before | After | Before | After | |
| **1. Reheat amp draw** | FLA =····· A | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **2. Check Heater Resistance** | 18-22 ohm | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **3. Inspect elements** | Ok or No | Ok | Ok | Ok | Ok | Ok | Ok | Ok |
| **4. Check wire connections** | Ok or No | Ok | Ok | Ok | Ok | Ok | Ok | Ok |

**D Steam Generating Humidifier**

| Item Checked | Spec. Range | Actual Checked | Item Checked | Spec. Range | Actual Checked |
|---|---|---|---|---|---|
| **1. Humidifier amp draw** | …….. A | 1 | **4. Check condition of steam hose** | Ok or No | Clean |
| **2. Check drain valve/drain lines/trap fordamage/clogs/leaks** | Ok or No | Ok | **5. Clean strainer** | Ok or No | Clean |
| **3. Check water fill valve and all supply lines/connection for leaks** | Ok or No | Clean | **6. Check humidifier bottle (Boiler tank)** | Ok or No | Clean |
| | | | **7. Check operation of humidifier** | Ok or No | Ok |

**E Electrical Panel**

| Item Checked | Spec. Range / Cond. Std. | Actual Checked | | Keterangan |
|---|---|---|---|---|
| | | Before | After | |
| **1. Check fuses** | Ok or No | Ok | Ok | Ok |
| **2. Check contactors for pitting (Replace if pitted)** | Ok or No | Ok | Ok | Ok |
| **3. Check/Re-torque wire connections** | Ok or No | Ok | Ok | Ok |

## E Electrical Panel

| Item Checked | Spec. Range / Cond. Std. | Actual Checked | | Keterangan |
|---|---|---|---|---|
| | | Before | After | |
| 4. Voltage Line to Neutral Ground | 220 + 10% | L1/L2/L3 =1 V | L1/L2/L3 =1 V | 1 |
| 5. Voltage Line to Line | 380 + 10% | L1L2/L2L3/L1L3 =1 V | L1L2/L2L3/L1L3 =1 V | 1 |
| 6. Frequency | 50 + 10% | F =1 Hz | F =1 Hz | 1 |

## F Controls

| Item Checked | Spec. Range / Cond. Std. | Actual Checked | Item Checked | Spec. Range | Actual Checked |
|---|---|---|---|---|---|
| 1. Check/Verify control operation | Ok or No | Ok | 3. Check/Test water-detectiondevice | Ok or No | Ok |
| 2. Check/Test changeover device | Ok or No | Ok | 4. Check/Test CAN connection between indoor and outdoor units | Ok or No | Ok |

## G Refrigeration Piping

| Item Checked | Spec. Range | Actual Checked | Item Checked | Spec. Range | Actual Checked |
|---|---|---|---|---|---|
| 1. Check refrigerant lines (clamps secure/no rubbing/no leaks) | Ok or No | Ok | 3. Check for restriction temperature drop across filterdrier | Ok or No | Clean |
| 2. Check for moisture (sight glass) | Ok or No | Ok | | | |

## H Compressor Section

| Item Checked | Spec. Range / Cond. Std. | Comp. 1 | | Comp. 2 | | Comp. 3 | | Keterangan |
|---|---|---|---|---|---|---|---|---|
| | | Before | After | Before | After | Before | After | |
| 1. Ampere draw | OA…··· A | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2. Check oil level | 55 - 90 PsiG | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3. Check for oil leaks | 200 - 300 PsiG | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4. Check compressormounts (springs/bushings) | Ok or No | Ok | Ok | Ok | Ok | Ok | Ok | Ok |
| 5. Cap tubes (not rubbing) | Ok or No | Ok | Ok | Ok | Ok | Ok | Ok | Ok |
| 6. Check/Re-torque wireconnections (inside compressor box) | Ok or No | Ok | Ok | Ok | Ok | Ok | Ok | Ok |
| 7. Compressor operation (vibration/noise) | …..... Hz …..... dB | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8. Check crank-case heater fuses/operation | Ok or No | Ok | Ok | Ok | Ok | Ok | Ok | Ok |
| 9. Check for refrigerantleaks | Ok or No | Ok | Ok | Ok | Ok | Ok | Ok | Ok |
| 10. Suction pressureCircuit | 55 - 90 PsiG | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11. Discharge PressureCircuit | 200 - 300 PsiG | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 12. Superheat Circuit | …..... ?C | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 13. Low-pressure switchcut out Circuit | Ok or No | Ok | Ok | Ok | Ok | Ok | Ok | Ok |
| 14. Low pressure cut inCircuit | Ok or No | Ok | Ok | Ok | Ok | Ok | Ok | Ok |
| 15. High pressure cut out Circuit | Ok or No | Ok | Ok | Ok | Ok | Ok | Ok | Ok |
| 16. Sight Glass | Ok or No | Ok | Ok | Ok | Ok | Ok | Ok | Ok |

## I Condensor Section

| Item Checked | Spec. Range | Before | After | Keterangan |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| | **1. Coil clean of debris (Clean coil ifrequired)** | Clean or Dirty | Clean | Clean | |
| | **2. Fans free of debris** | Clean or Dirty | Clean | Clean | |
| | **3. Fans securely mounted** | 1 | 1 | 1 | |
| | **4. Motor bearings in good condition** | 1 | 1 | 1 | |
| | **5. Check all refrigerant lines for vibration isolation. Support as necessary** | Ok or No | Ok | Ok | |
| | **6. Check for refrigerant leaks** | Ok or No | Ok | Ok | |
| | **7. Check surge-protection device (ifinstalled) status-indicator lights** | Ok or No | Ok | Ok | |
| | **8. Check/Re-torque wire connections** | Ok or No | Ok | Ok | |
| | **9. Check contactors for pitting (replace ifpitted)** | Ok or No | Ok | Ok | |
| | **10. Verify operation sequence/set points** | 1 | 1 | 1 | |
| | **11. Charge verification:** | 1 | 1 | 1 | |
| | **a. Outdoor Ambient Temperature** | 1 | 1 | 1 | |
| | **b. Subcooling** | 1 | 1 | 1 | |
| | **c. Indoor-unit Return-air Temperature** | 1 | 1 | 1 | |
| | **d. Sight-glass level (if Lee-Temp orpumped refrigerant)** | 1 | 1 | 1 | |
| | **12. Motor amp draw** | FLA = ……. A | L1/L2/L3 = ……..<br>Amp | L1/L2/L3 = ……..<br>Amp | |

**J General Function**

| | Item Checked | Spec. Range | Actual Checked | Item Checked | Spec. Range | Actual Checked |
|---|---|---|---|---|---|---|
| | **1. Cooling Test** | Ok or No | | **4. Dehumidification Test** | Ok or No | |
| | **2. Heating Test** | Ok or No | | **5. Alarm Test** | Ok or No | |
| | **3. Humidification Test** | Ok or No | | | | |

**K Room Condition**

| | Item Checked | Spec. Range | Actual Checked | Item Checked | Spec. Range | Actual Checked |
|---|---|---|---|---|---|---|
| | **1. Temperature** | ……... ?C | | **2. Humidity** | …….. % | |

**NOTES**

**Temuan :**

**Rekomendasi :**

**RESUME**

| | |
|---|---|
| **JOB COMPLETED ? YES ? NO, please check on NOTES ?** | **RUNNING HOURS :** |

**APPROVAL SIGNING**

| **Approved by** | **Verified By** | **Service By** |
|---|---|---|
| ISS, | Supervisor, | Team Leader/Staf, |
| ( _____ ) | ( _____ ) | ( _____ ) |
| No. HP. | No. HP. | No. HP. |

***Keterangan : Lembar 1 untuk Teknisi; Lembar 2 untuk User; Lembar 3 Arsip Kantor***