## SERVICE REPORT PREVENTIVE **MAINTENANCE**

FORM NO.

## PRECISION AIR CONDITIONING (PAC)

|                          |   |                | M SAMPO<br>T |                           |  | `                                 | C)                |                       | Tipe Form<br>PM04 |
|--------------------------|---|----------------|--------------|---------------------------|--|-----------------------------------|-------------------|-----------------------|-------------------|
| Lok                      | asi : LT3   | Model Unit :   |              |                           | Team Engineer List: tes                        |                                   | es                | Date : 2024-<br>08-03 |                   |
| Coc                      | le unit : 12  | No. Seri }: 12 |              |                           |  |                                   |                   | Start PM : 06:10      |                   |
| Nomor Unit: 83 Periode : |   |                | Close        |                           | Close PM : 0                                   | 08:10                             |                   |                       |                   |
| CE                       | ECKLIST TEAM BRIE   | FING           |              |                           | -  |                                   |                   | -                     | 1                 |
|                          | TENSIVE SAFETY BRIEF  |                |              |                           |  | ?                                 | OK                | ?                     | NOT OK            |
| _                        | AM  |                |              |                           |  |                                   |                   |                       |                   |
| A                        | Filter Section  |                |              |                           |  |                                   |                   |                       |                   |
|                          | Item Checked Spec. Range / Cond. Std.                                     |                |              | Checked                   |  | Range                             |                   | tual Checked          |                   |
|                          | 1. Check/Replace filters  | Clean or Dirty | Clean        |                           | 5. Clean condensa<br>pan                       |                                   | Clean or<br>Dirty | Clean                 |                   |
|                          | 2. Grille area<br>unrestricted  | 011, 1101 011  |              |                           |  | 6. Clean trap in condensate drain |                   | Clean                 |                   |
|                          | 3. Wipe section clean   | Clean or Dirty | Clean        |                           | 7. Check/I                                     | Test filter-                      |                   | Ok                    |                   |
|                          | 4. Coil clean   | Clean or Dirty | Clean        |                           | clog switcl                                    | h operation                       | Ok or No          |                       |                   |
| В                        | Blower Section  | -              |              |                           |  |                                   |                   |                       |                   |
|                          | Item Checked  | Spec. Range /  | Blo          | wer 1                     | Blo  | wer 2                             | Blo               | wer 3                 | Keterangan        |
|                          |   | Cond. Std.     | 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                |
| ł                        | 3. Impeller spins freely  | Ok or No       | OK<br>OK     | OK<br>OK                  | OK<br>OK                                       | OK<br>OK                          | OK<br>OK          | OK<br>OK              | OK<br>OK          |
|                          | 4. Check/Test air sail switch   | Ok or No       |              |                           |  |                                   |                   |                       | OK .              |
|                          | 5. Motor amp draw   | FLA L1 =···· A | L1           | L1                        | L1   | L1                                | L1                | L1                    | 1                 |
|                          | Compare to nameplate  | FLA L2 =···· A | L2           | L2                        | L2   | L2                                | L2                | L2                    | 1                 |
|                          | amps  | FLA L3 =···· A | L3           | L3                        | L3   | L3                                | L3                | L3                    | l<br>or           |
|                          | 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  | Spec. Range /  | Heater 1     |                           | Heater 2                                       |                                   | Heater 3          |                       |                   |
|                          | Item Checked  | Cond. Std.     | Before       | After                     | Before   | After                             | Before            | After                 | Keterangan        |
| ı                        | 1. Reheat amp draw  | FLA =····· A   | 1            | 1                         | 1  | 1                                 | 1                 | 1                     | 1                 |
|                          | 2. Check Heater   |                | 1            | 1                         | 1  | 1                                 | 1                 | 1                     | 1                 |
|                          | Resistance  | 18-22 ohm      |              |                           |  |                                   |                   |                       |                   |
|                          | 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 Hum  | idifier        |              |                           |  |                                   |                   |                       |                   |
|                          | Item Checked  | Spec. Range    | Actual       | Checked                   |  | Item Check                        | ed                | Spec.<br>Range        | Actual Checked    |
|                          | 1. Humidifier amp draw  | A              | 1            |                           | 4. Check of hose                               | condition of                      | steam             | Ok or No              | Clean             |
|                          | 2. Check drain  |                | Ok           |                           |  |                                   |                   |                       | Clean             |
|                          | valve/drain lines/trap<br>fordamage/clogs/leaks                           |                |              |                           | 5. Clean st                                    |                                   |                   | Ok or No              |                   |
|                          | 3. Check water fill valve<br>and all supply<br>lines/connection for leaks | Ok or No       | Clean        |                           | 6. Check humidifier bottle<br>(Boiler<br>tank) |                                   |                   | Ok or No              | Clean             |
| מו                       |   |                |              | 7. Check operation of hum |  |                                   | humidifier        | Ok or No              | Ok                |
| V                        | E Electrical Panel  Spec. Range /   |                |              | Actu                      |  |                                   | Actual Checked    |                       |                   |
| l                        | Item Checked  | Cond. Std.     |              | Before                    |  |                                   | After             |                       | Keterangan        |
| İ                        | 1. Check fuses  | Ok or No       | Ok           |                           |  | Ok                                |                   |                       | Ok                |
|                          | 2. Check contactors for   | Ok or No       | Ok           |                           |  | Ok                                |                   |                       | Ok                |
|                          | pitting (Replace if pitted)   | OK 01 1NO      | 1            |                           |  |                                   |                   |                       |                   |
|                          | 3 Check/Re-torque wire  |                | Ok           |                           |  | Ok                                |                   |                       | Ok                |

connections

Ok or No

| E   | E Electrical Panel   |                             |                |         |   |                         |        |                |                   |
|-----|--|-----------------------------|----------------|---------|---|-------------------------|--------|----------------|-------------------|
|     | Item Checked   | Spec. Range /<br>Cond. Std. |                |         | Actual<br>Checked   |                         |        |                | Keterangan        |
|     |  |                             |                | Before  |   |                         | After  |                |                   |
|     | 4. Voltage Line to<br>Neutral<br>Ground                              | 220 + 10%                   | 6 L1/L2/L3 =1  |         | V   | V L1/L2/L3 =1           |        | V              | 1                 |
|     | 5. Voltage Line to Line  | 380 + 10%                   | L1L2/L2L3/L    | 1L3 = 1 |   | L1L2/L2L3/L1L3 = 1<br>V |        |                | 1                 |
|     | 6. Frequency   | 50 + 10%                    | F = 1          |         | Hz  | F=1                     |        | Hz             | 1                 |
| F   | Controls   |                             |                |         |   |                         |        |                |                   |
|     | Item Checked   | Spec. Range /<br>Cond. Std. | Actual Checked |         | Item Checked  |                         |        | Spec.<br>Range | Actual<br>Checked |
|     | 1. Check/Verify control operation                                    | Ok or No                    |                |         | 3. Check/Test water-<br>detectiondevice                             |                         |        | Ok or No       | Ok                |
|     | 2. Check/Test<br>changeover device                                   | Ok or No                    | Ok             |         | 4. Check/Test CAN connection<br>between indoor and outdoor<br>units |                         |        | Ok or No       | Ok                |
| G   | Refrigeration Piping   |                             |                |         | 1   |                         |        | ~              |                   |
|     | Item Checked   | Spec. Range                 | Actual         | Checked | ]   | Item Check              | ed     | Spec.<br>Range | Actual<br>Checked |
|     | 1. Check refrigerant lines<br>(clamps secure/no<br>rubbing/no leaks) | Ok or No                    | Ok             |         | 3. Check for restriction temperature drop across                    |                         |        | Ok or No       | Clean             |
|     | 2. Check for moisture  | Ok or No                    | Ok             |         | filterdrier   |                         |        |                |                   |
| 101 | (sight glass) Compressor Section                                     |                             |                |         |   |                         |        |                |                   |
|     | ·  | Spec. Range /               | Cor            | np. 1   | Cor   | omp. 2 Con              |        | np. 3          |                   |
| ı   | Item Checked   | Cond. Std.                  | Before         | After   | Before  | After                   | Before | After          | Keterangan        |
|     | 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<br>wireconnections (inside<br>compressor box)     | Ok or No                    | Ok             | Ok      | Ok  | Ok                      | Ok     | Ok             | Ok                |
|     | 7. Compressor operation (vibration/noise)                            | Hz<br>dB                    | 1              | 1       | 1   | 1                       | 1      | 1              | 1                 |
|     | 8. Check crank-case<br>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 pressure Circuit   | 55 - 90 PsiG                | 1              | 1       | 1   | 1                       | 1      | 1              | 1                 |
|     | 11. Discharge<br>PressureCircuit                                     | 200 - 300 PsiG              | 1              | 1       | 1   | 11                      | 1      | 1              | 1                 |
|     | 12. Superheat Circuit  | ?C                          |                | 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 in Circuit                                      | Ok or No                    | Ok             | Ok      | Ok  | Ok                      | Ok     | Ok             | Ok                |
|     | 15. High pressure cut out<br>Circuit                                 | Ok or No                    | Ok             | Ok      | Ok  | Ok                      | Ok     | Ok             | Ok                |
| L   | 16. Sight Glass  | Ok or No                    | Ok             | Ok      | Ok  | Ok                      | Ok     | Ok             | Ok                |
|     |  |                             |                | -       |   | -                       | •      |                |                   |

| Ι | Condensor Section |             |        |       |            |
|---|-------------------|-------------|--------|-------|------------|
|   | Item              | Spec. Range | Before | After | Keterangan |
| Ш | Checked           |             |        |       |            |

|     | 1. Coil clean of debris (Cle<br>ifrequired)                               | ean coil        | Clean or Dirty  | Clean                                    | Clean   |                |                   |  |  |
|-----|---|-----------------|---|--|---------|----------------|-------------------|--|--|
| Н   | 2. Fans free of debris  |                 | Clean or Dirty  | Clean                                    | Clean   |                |                   |  |  |
|     | 3. Fans securely mounted  |                 | 1   | 1  | 1       |                |                   |  |  |
| Н   | 4. Motor bearings in good   |                 | 1   | 1  | 1       |                |                   |  |  |
| Н   | 5. Check all refrigerant lin  |                 | 1   | Ok                                       | Ok      |                |                   |  |  |
|     | vibration   |                 | Ok or No  | OK                                       |         |                |                   |  |  |
|     | isolation. Support as neces   | ssary           |   |  |         |                |                   |  |  |
|     | 6. Check for refrigerant le   |                 | Ok or No  | Ok                                       | Ok      |                |                   |  |  |
|     | 7. Check surge-protection (ifinstalled) status-indicat                    |                 | Ok or No  | Ok                                       | Ok      |                |                   |  |  |
|     | 8. Check/Re-torque wire c   |                 | Ok or No  | Ok                                       | Ok      |                |                   |  |  |
|     | 9. Check contactors for pirifpitted)                                      |                 | Ok or No  | Ok                                       | Ok      |                |                   |  |  |
|     | 10. Verify operation seque  | ence/set points | 1   | 1  | 1       |                |                   |  |  |
|     | 11. Charge verification:  |                 | 1   | 1  | 1       |                |                   |  |  |
|     | a. Outdoor Ambient Temp   | perature        | 1   | 1  | 1       |                |                   |  |  |
|     | b. Subcooling   |                 | 1   | 1  | 1       |                |                   |  |  |
|     | c. Indoor-unit Return-air   |                 | 1   | 1  | 1       |                |                   |  |  |
|     | d. Sight-glass level (if Lee-<br>orpumped refrigerant)                    | Тетр            | 1   | 1  | 1       |                |                   |  |  |
|     | 12 Motor omn draw   |                 | FLA = 1 A   | L1/L2/L3 =                               | L1/L2   |                |                   |  |  |
|     | 12. Motor amp draw  |                 | FLA - 1 A   | 1 Amp                                    | 1 A     | mp             |                   |  |  |
| J   | General Function  |                 |   |  |         |                |                   |  |  |
|     | Item Checked  | Spec. Range     | Actual<br>Checked   | Item Check                               | æd      | Spec.<br>Range | Actual<br>Checked |  |  |
|     | 1. Cooling Test   | Ok or No        | Ok  | 4. Dehumidification T                    | est     | Ok or No       | Ok                |  |  |
|     | 2. Heating Test   | Ok or No        | Ok  | 5. Alarm Test                            |         | Ok or No       | Ok                |  |  |
|     | 3. Humidification Test  | Ok or No        | Ok  |  |         |                |                   |  |  |
| K   | Room Condition  |                 |   |  |         |                |                   |  |  |
|     |   |                 |   | Item Checked                             |         | Spec.<br>Range | Actual            |  |  |
|     | Item Checked  | Spec. Range     | Actual<br>Checked   |  |         | Kange          | Checked           |  |  |
|     | Item Checked  1. Temperature  | Spec. Range     | Checked   | 2. Humidity                              |         | 1 %            | Checked 1         |  |  |
|     | 1. Temperature  |                 | Checked   | 2. Humidity                              |         | Ü              | Checked<br>1      |  |  |
| Ten | 1. Temperature<br>muan : tes  |                 | Checked   | 2. Humidity                              |         | Ü              | Checked           |  |  |
| Ten | 1. Temperature  |                 | Checked<br>1 NOT  | 2. Humidity                              |         | Ü              | Checked 1         |  |  |
| Ten | 1. Temperature<br>muan : tes  |                 | Checked   | 2. Humidity                              |         | Ü              | Checked 1         |  |  |
| Ten | 1. Temperature muan : tes komendasi : tes JOB COMPLETED                   |                 | Checked<br>1 NOT  | 2. Humidity TES UME                      | RUNNING | 1 %            | Checked 1         |  |  |
| Ten | 1. Temperature<br>muan : tes<br>komendasi : tes                           |                 | Checked  NOT  RESU  NO, please check on N                           | 2. Humidity TES  UME NOTES               |         | 1 %            | Checked 1         |  |  |
| Ten | 1. Temperature muan : tes komendasi : tes JOB COMPLETED                   |                 | Checked  I  NOT  RESU  NO, please check on N  APPRO                 | 2. Humidity TES  UME NOTES               |         | 1 %            | Checked 1         |  |  |
| Ten | 1. Temperature muan : tes komendasi : tes  JOB COMPLETED ?                |                 | Checked  NOT  RESU  NO, please check on N  APPRO SIGN               | 2. Humidity TES  UME NOTES  OVAL HING    |         | 1 % GHOURS:    |                   |  |  |
| Ten | 1. Temperature  muan : tes  komendasi : tes  JOB COMPLETED ?  Approved by |                 | Checked  I  NOT  RESU  NO, please check on M  APPRO SIGN Verified B | 2. Humidity TES  UME NOTES  OVAL UING By |         | 1 % GHOURS:    | Service By        |  |  |
| Ten | 1. Temperature muan : tes komendasi : tes  JOB COMPLETED ?                |                 | Checked  NOT  RESU  NO, please check on N  APPRO SIGN               | 2. Humidity TES  UME NOTES  OVAL UING By |         | 1 % GHOURS:    |                   |  |  |
| Ten | 1. Temperature  muan : tes  komendasi : tes  JOB COMPLETED ?  Approved by |                 | Checked  I  NOT  RESU  NO, please check on M  APPRO SIGN Verified B | 2. Humidity TES  UME NOTES  OVAL UING By |         | 1 % GHOURS:    | Service By        |  |  |
| Ten | 1. Temperature  muan : tes  komendasi : tes  JOB COMPLETED ?  Approved by |                 | Checked  I  NOT  RESU  NO, please check on M  APPRO SIGN Verified B | 2. Humidity TES  UME NOTES  OVAL UING By |         | 1 % GHOURS:    | Service By        |  |  |
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Keterangan: Lembar 1 untuk Teknisi; Lembar 2 untuk User; Lembar 3 Arsip Kantor