

TROUBLESHOOTING

NOTICE:

When replacing the internal mechanism (computer part) of the audio system, be careful that no part of your body or clothing comes in contact with the terminals of the leads from the IC, etc. of the replacement part (spare part).

HINT:

This inspection procedure is a simple troubleshooting which should be carried out on the vehicle during system operation and was prepared on the assumption of system component troubles (except for the wires and connectors, etc.).

Always inspect the trouble taking the following items into consideration.

- Open or short circuit of the wire harness
- Connector or terminal connection fault

| | Problem | No. |
|-----------------|---|-----|
| Radio | Radio not operating when power switch turned to 'ON'. | 1 |
| | Display indicates when power switch turned to 'ON', but no sound (including 'noise') is produced. | 2 |
| | Noise present, but AM - FM not operating. | 3 |
| | Any speaker does not work. | 4 |
| | Any AM or FM does not work. | 5 |
| | Few preset turning bands. | 5 |
| | Reception poor. | 6 |
| | Sound quality poor. | 7 |
| Tape Player | Preset memory disappears. | 8 |
| | Cassette tape cannot be inserted. | 9 |
| | Cassette tape inserted, but no power. | 10 |
| | Power coming in, but tape player not operating. | 11 |
| | Any speaker does not work. | 12 |
| | Sound quality poor. | 13 |
| | Tape jammed, malfunction with tape speed or auto-reverse. | 14 |
| CD Auto Changer | Cassette tape will not eject. | 15 |
| | CD magazine cannot be inserted. | 16 |
| | CD magazine inserted, but no power. | 17 |
| | Power coming in, but CD player not operating. | 18 |
| | Sound jumps. | 19 |
| | Sound quality poor (Volume faint). | 20 |
| | Any speaker does not work. | 21 |
| Power Amplifier | CD magazine will not be ejected. | 22 |
| | No power coming in. | 23 |
| | Power coming in, but power amplifier not operating. | 24 |
| | Any speaker does not work. | 25 |
| Noise | Noise occurs | 26 |
| | Noise produced by vibration or shock while driving. | 27 |
| | Noise produced when engine starts. | 28 |

The term "AM" includes LW, MW and SW, and the term "FM" includes UKW.

1. DIAGNOSIS FUNCTION

Error codes over tuner and connected equipment are displayed on the screen of tuner.

HINT:

For LEXUS RX300, press the function switch instead of TRACK TUNE APS switch.

(a) Diagnosis start-up

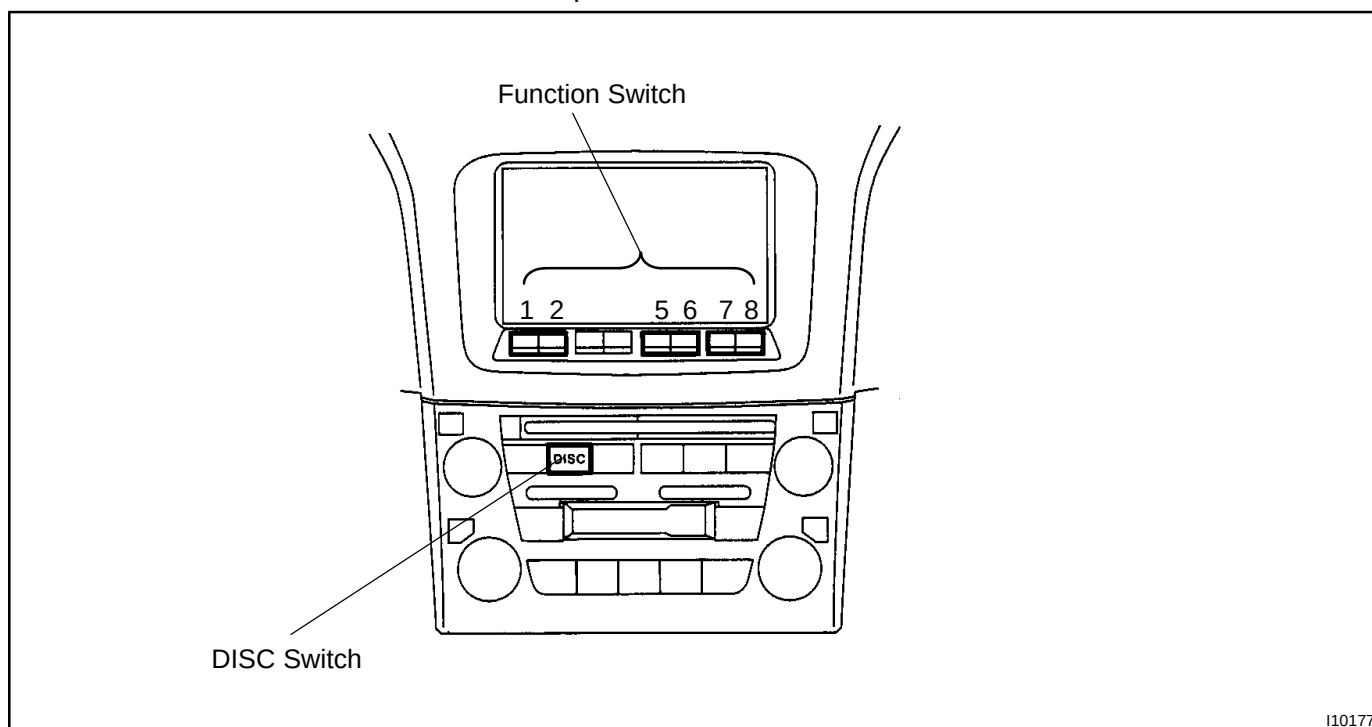
For shifting to diagnosis mode, push "DISC" switch 3 times with pressing "1", "6", "7" or "8" of function switch at the same time while the audio power is OFF and ACC is ON.

To exit from diagnosis mode, press "DISC" switch for 2 seconds or turn the ignition key OFF.

(When "1-190" is displayed, the mode is transferred to LAN check mode.)

(b) LAN check

When starting up the diagnosis mode, the mode turns to LAN check mode, the screen displays the code numbers (physical address) of tuner and connected equipment. Smaller codes are displayed in order, displayed code numbers are switched by operating TUNE "UP" or "DOWN" switch. In LAN check mode, by pressing "5" of function switch for more than 2 secs., diagnosis memory of each equipment can be deleted, when deletion is completed, the mode returns to LAN check mode.



Code No. (physical address) List

| Code No. (physical address) | Equipment name |
|-----------------------------|---|
| 190 | Radio receiver assembly (Audio head unit) |
| 1c4 (RX300) | Center Cluster Integration Switch |
| 1d4 (RX300) | Multi Display |
| 240 | CD changer (in Luggage room) |
| 360 | CD changer(in center console and glove compartment box) |
| 440 | Power amplifier |

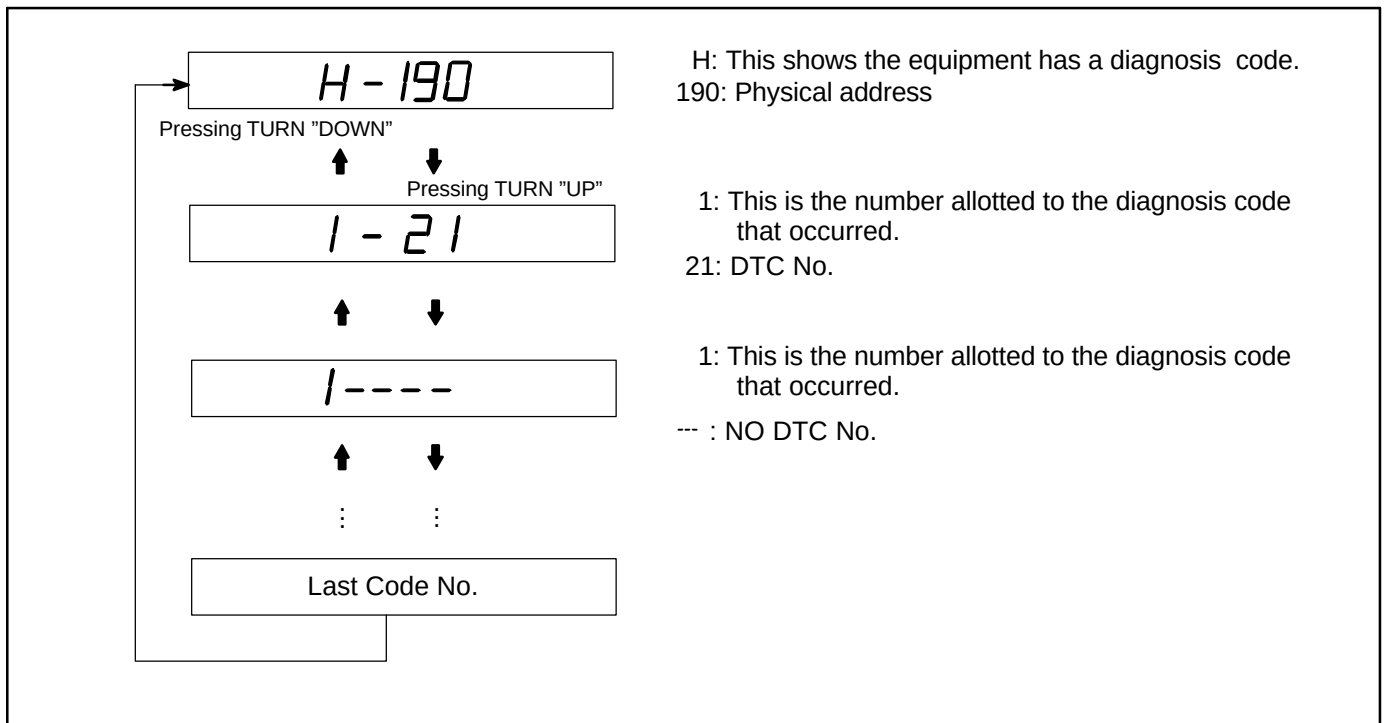
(c) System check

When pressing "1" of function switch in LAN check mode, the mode turns to the system check mode, the system performs self diagnosis of connected equipment and displays the results. ("SYS" (showing the system is under detection) is displayed.)

(d) Perform the operation shown in the following illustration, then read the result of the inspection.

HINT:

- It sometimes takes approx. 40 secs. till the system inspection is completed.
- The chart below is an example of when diagnosis code "21" appears on the physical address (190) equipment. (ROM error occurs on the radio receiver.)
- The smaller code numbers (physical address) are displayed in order (code No., diagnosis code, support code of diagnosis code (object equipment)).
- When no error is detected in the system, "00" is displayed.
- When an error code is detected, up to 6 codes per one system are displayed. Pressing TUNE "UP" or "DOWN" switches the display.
- In the system check mode, when pressing "8" of function switch the mode returns to LAN check mode.



(e) Diagnosis memory

(1) In LAN check mode, when pressing "2" of TRACK TUNE APS switch the mode turns to the diagnosis memory mode. ("CODE" is displayed.)

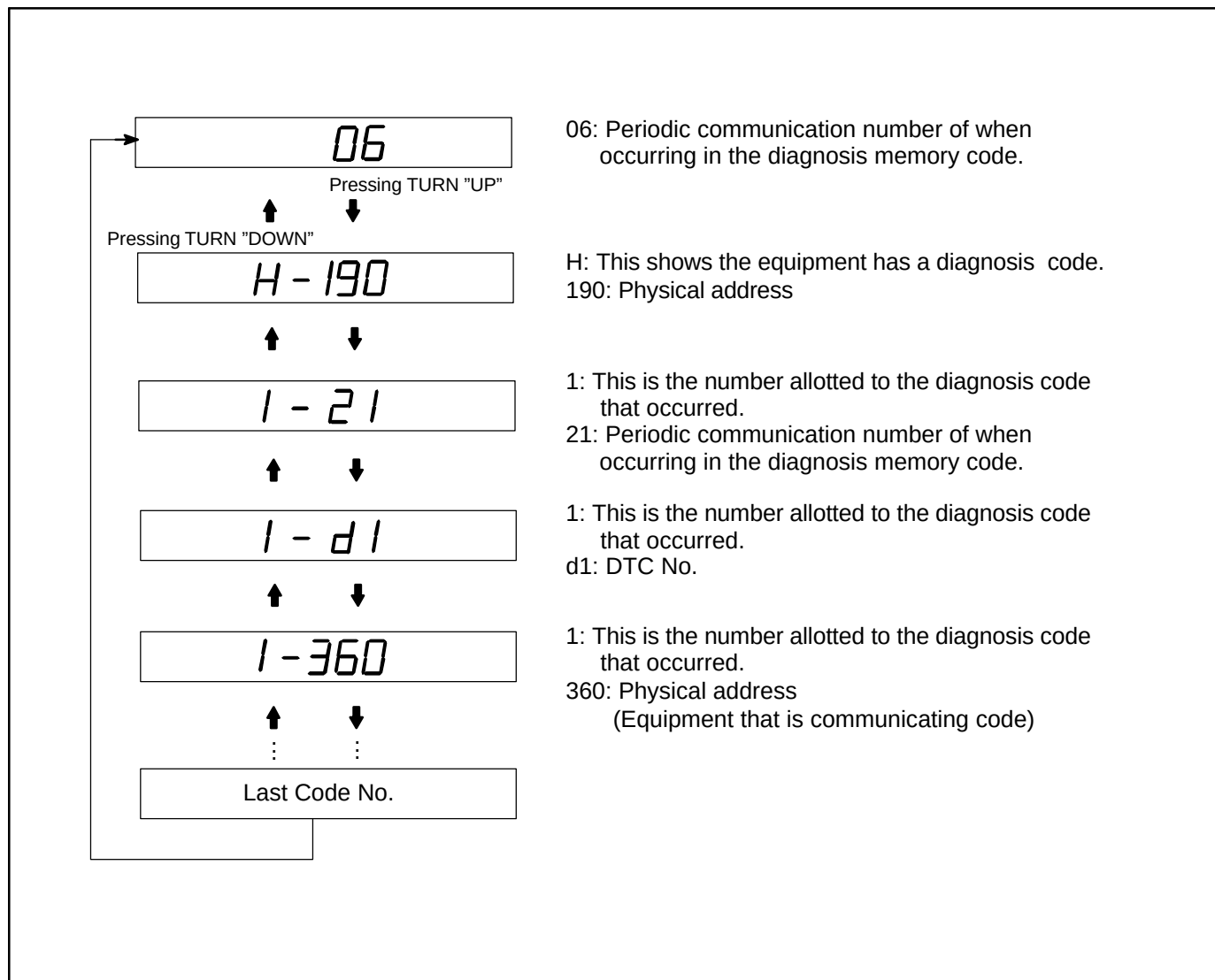
The results of self diagnosis performed over tuner and connected equipment are memorized and displayed.

(2) Perform the operation shown in the following illustration, then read the result of the inspection.

HINT:

- The smaller code numbers (physical address) are displayed in order (code No. , periodic communication number when error occurs, diagnosis code, and support code of diagnosis code (object equipment)).
- When no error is detected in the system, "00" is displayed. When an error code is detected, up to 6 codes per one system are displayed. Pressing TUNE "UP" or "DOWN" switches the display. Each diagnosis code is same as code in the system check mode.
- When pressing "8" of function switch, the mode returns to LAN check mode.

- The following illustration below is an example of when diagnosis code "D1" appears on the code (190) and (240 or 360) equipment. (Communication error occurs between the radio receiver and CD changer.)



(f) Diagnosis memory clear

- (1) After error is fixed, start up the diagnosis mode.
- (2) Continue pressing TRACK TURN APS switch "5" for 2 secs. (CLr is displayed.)
- (3) Press the TRACK TURN APS switch "2" and transfer to the diagnosis memory mode and check that the normal code (00) is output.

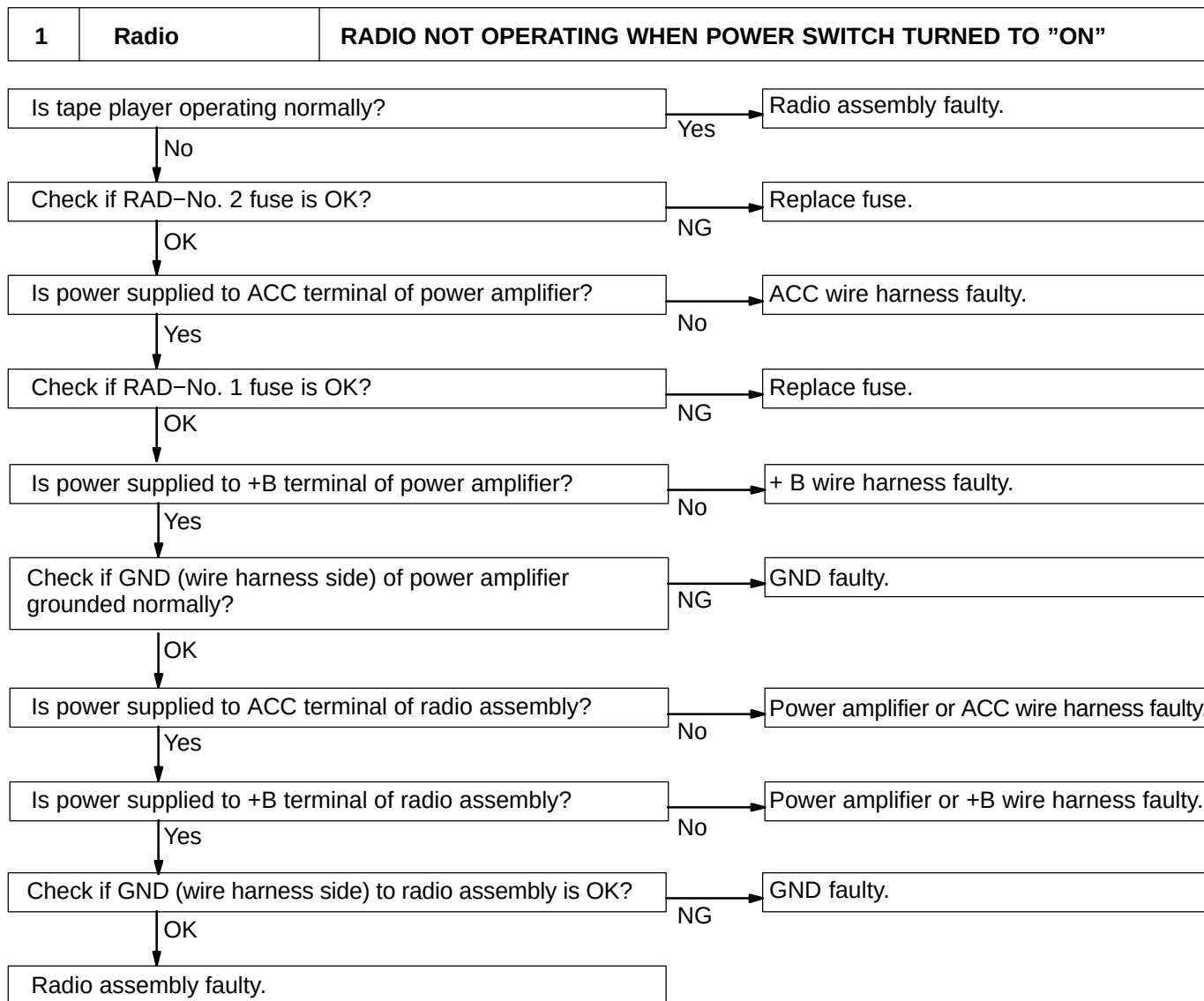
2. DIAGNOSIS CODE LIST

- If there is "O" in the column of system check, an error can be detected when the mode is switched to the system check mode.
- If there is "O" in the column of diagnosis mode, each unit is monitoring whether or not it has failure. In case of detecting failure, it memorizes DTC.

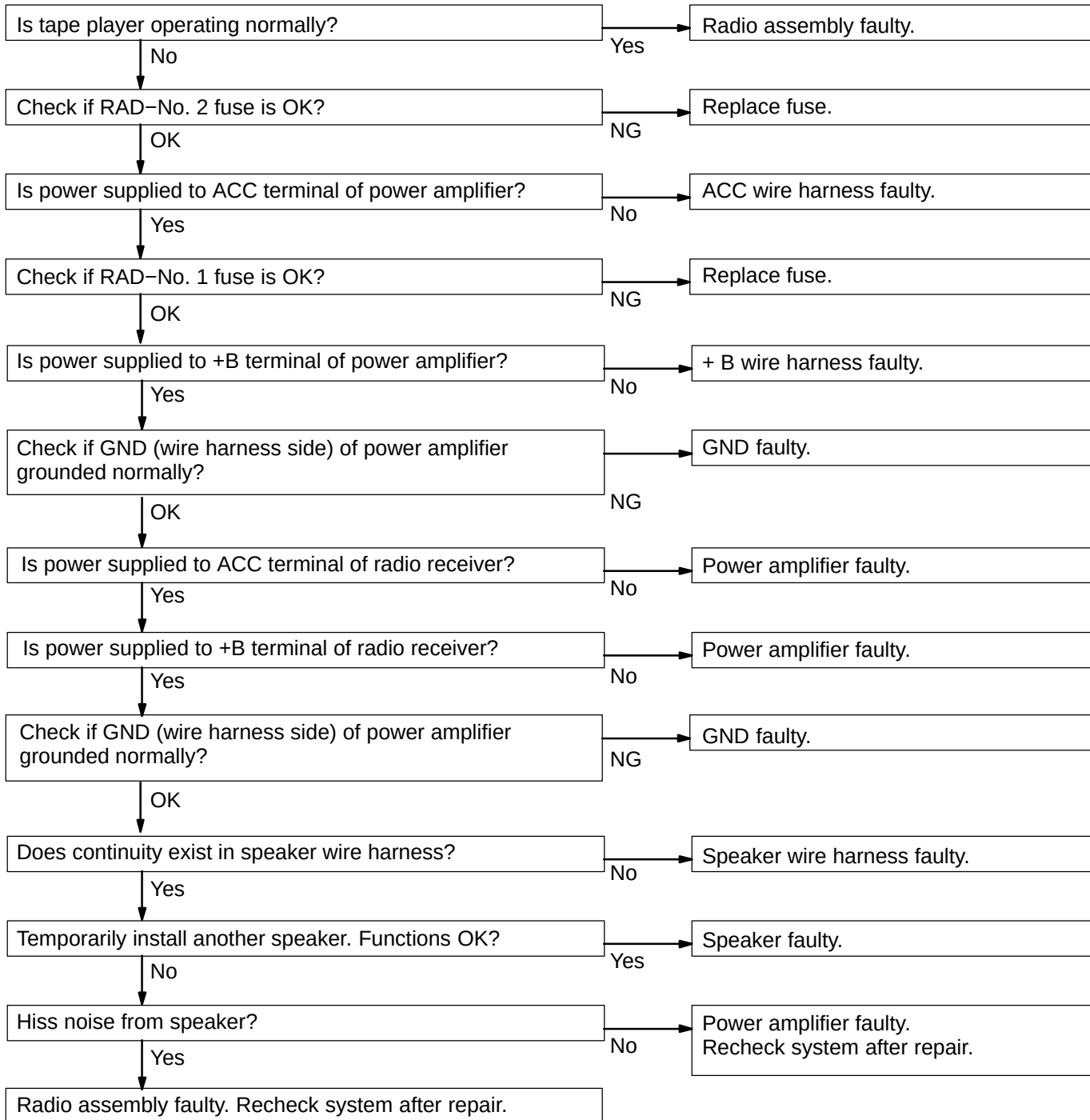
| Parts Name | DTC | Diagnosis item | Diagnosis content | Countermeasure and inspected parts | System Check | Diagnosis memory |
|-----------------|-----|------------------------------------|---|--|--------------|------------------|
| Head Unit (190) | 21 | ROM error | There is an error on internal ROM. | Radio receiver check. | ○ | X |
| | 22 | RAM error | There is an error on internal RAM. | | ○ | X |
| | 41 | AM tuner error | There is an error in AM tuner. | | X | ○ |
| | 42 | FM tuner error | There is an error in FM tuner. | | X | ○ |
| | 50 | Cassette error | There is an error in cassette deck. | | X | ○ |
| | 51 | Cassette eject error | Cassette can not be ejected from Head Unit. | | X | ○ |
| | D1 | Transmitter error | Communication with the equipment that is communicating has failed successively. | Radio receiver check. Wire harness and connector check. | ○ | ○ |
| | D2 | Periodic communication no response | Error in periodic communication. | ● Wire harness and connector | X | ○ |
| | D4 | Periodic communication error | Connection confirmation has not come from the equipment that is communicating | ● Radio receiver check. ● Wire harness check. | X | ○ |
| | FF | Diagnosis no response | Result of diagnosis is not issued from start to finish. | Radio receiver check. | ○ | X |
| CD (240) (360) | 21 | ROM error | There is an error on internal ROM. | CD changer check. | ○ | X |
| | 22 | RAM error | There is an error on internal RAM. | | ○ | X |
| | 60 | CD error | Error codes other than 61-69 are detected. | | X | ○ |
| | 61 | EJECT error | CD is not ejected. | CD changer check. Magazine check. | X | ○ |
| | 62 | DISC inside out/flaw | CD is inserted inside out or it has a flaw. | CD check. | X | ○ |
| | 63 | Pickup temperature detection | High temperature of CD changer is detected. | CD changer check. | X | ○ |
| | 64 | Excessive current detection | Excessive current to CD changer is detected. | | X | ○ |
| | 67 | Tray insertion/ discharging error | An error occurs in insertion and discharging operation of CD changer tray. | CD changer check. Magazine check. | X | ○ |

| Parts Name | DTC | Diagnosis item | Diagnosis content | Countermeasure and inspected parts | System Check | Diagnosis memory |
|-------------------------|-----|------------------------------|---|--|--------------|------------------|
| CD (240) (360) | 68 | Elevator error | An error occurs in elevator of CD changer elevator. | CD changer check. | X | ○ |
| | 69 | Clamp error | An error occurs in CD changer clamp. | | X | ○ |
| | D1 | Transmitter error | Communication with the equipment that is communicating has failed successively. | | ○ | ○ |
| | D4 | Periodic communication error | Connection confirmation has not come from the equipment that is communicating | <ul style="list-style-type: none"> ● Radio receiver check. ● Wire harness check. | X | ○ |
| | FF | Diagnosis no response | Result of diagnosis is not issued from start to finish. | CD changer check. | ○ | X |
| AMP (440) | D1 | Transmitter error | Communication with the equipment that is communicating has failed successively. | Stereo component amplifier check. | ○ | ○ |
| | D4 | Periodic communication error | Connection confirmation has not come from the equipment that is communicating | <ul style="list-style-type: none"> ● Radio receiver check. ● Wire harness check. | X | ○ |
| | FF | Diagnosis no response | Result of diagnosis is not issued from start to finish. | Stereo component amplifier check. | ○ | X |
| Center Cluster (1c4) | D1 | Transmitter error | Communication with the equipment that is communicating has failed successively. | Center Cluster Check | ○ | ○ |
| | D4 | Periodic communication error | Connection confirmation has not come from the equipment that is communicating | <ul style="list-style-type: none"> ● Radio receiver check. ● Wire harness check. | X | ○ |
| Multi Display (1d4) | D1 | Transmitter error | Communication with the equipment that is communicating has failed successively. | Multi-Display Check | ○ | ○ |
| | D4 | Periodic communication error | Connection confirmation has not come from the equipment that is communicating | <ul style="list-style-type: none"> ● Radio receiver check. ● Wire harness check. | X | ○ |
| | 21 | ROM error | There is an error on internal ROM. | Multi-Display Check | ○ | X |
| | 22 | RAM error | There is an error on internal RAM. | | ○ | X |

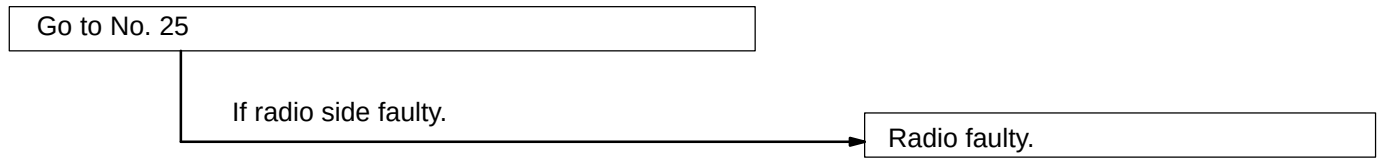
(): w/ Navigation system



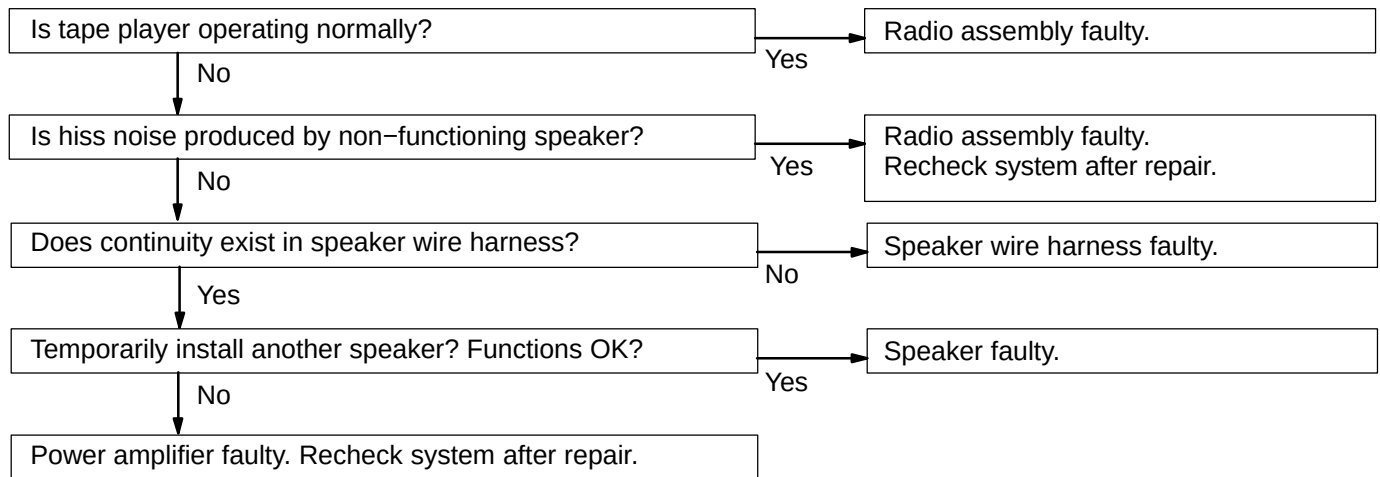
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| 2 | Radio | DISPLAY INDICATES WHEN POWER SWITCH TURNED TO "ON", BUT NO SOUND (INCLUDING "NOISE") IS PRODUCED |
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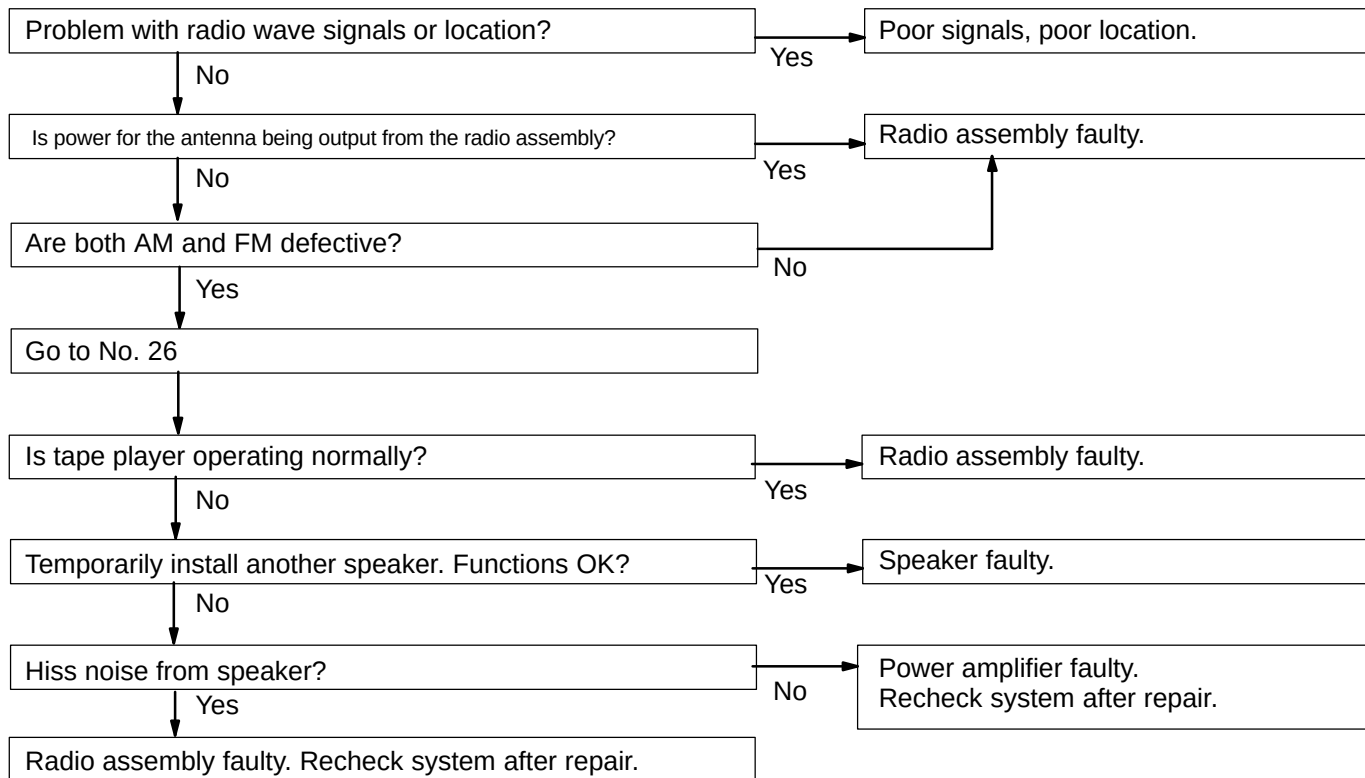
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| 3 | Radio | NOISE PRESENT, BUT AM-FM NOT OPERATING |
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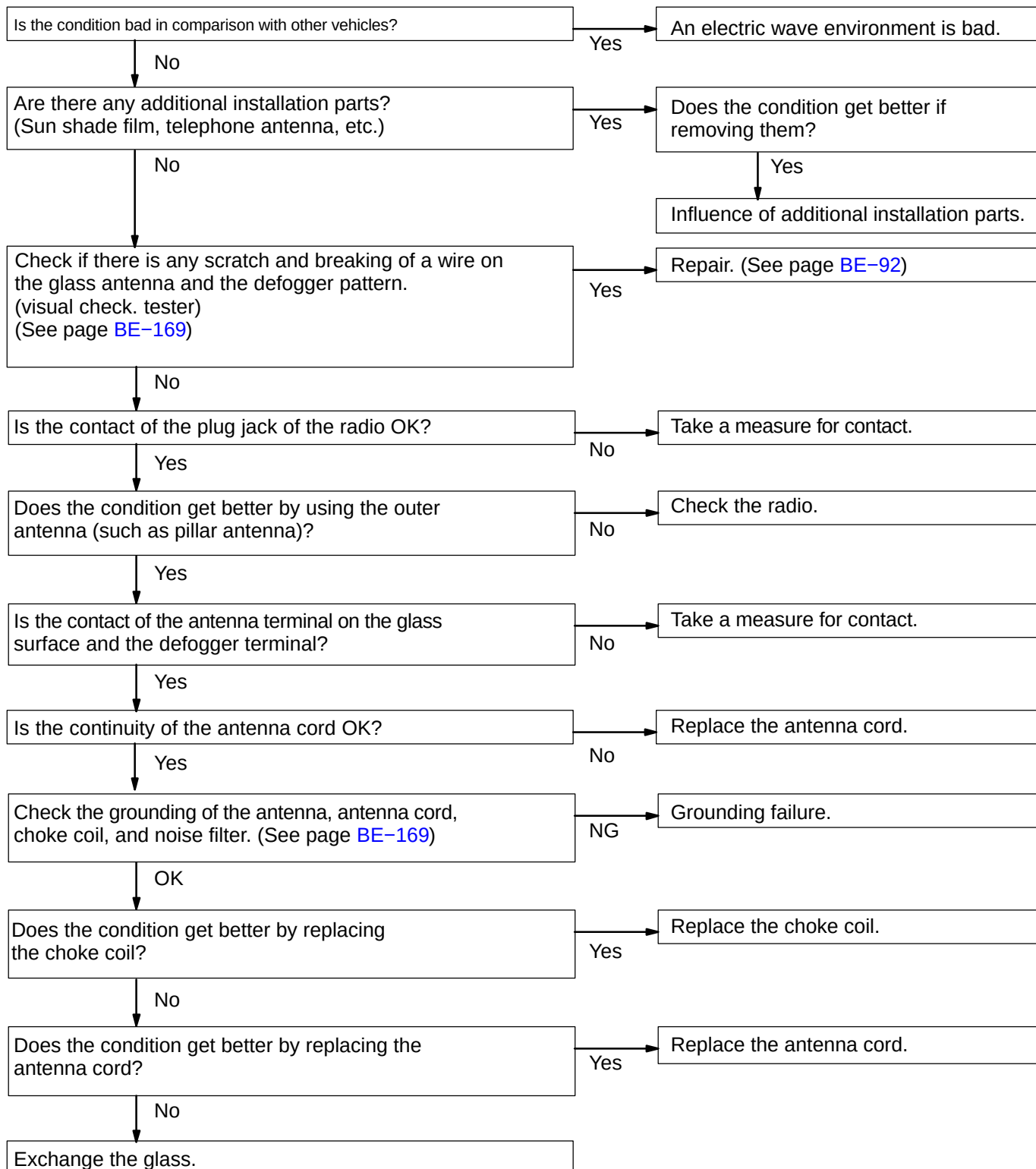
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| 4 | Radio | ANY SPEAKER DOES NOT WORK |
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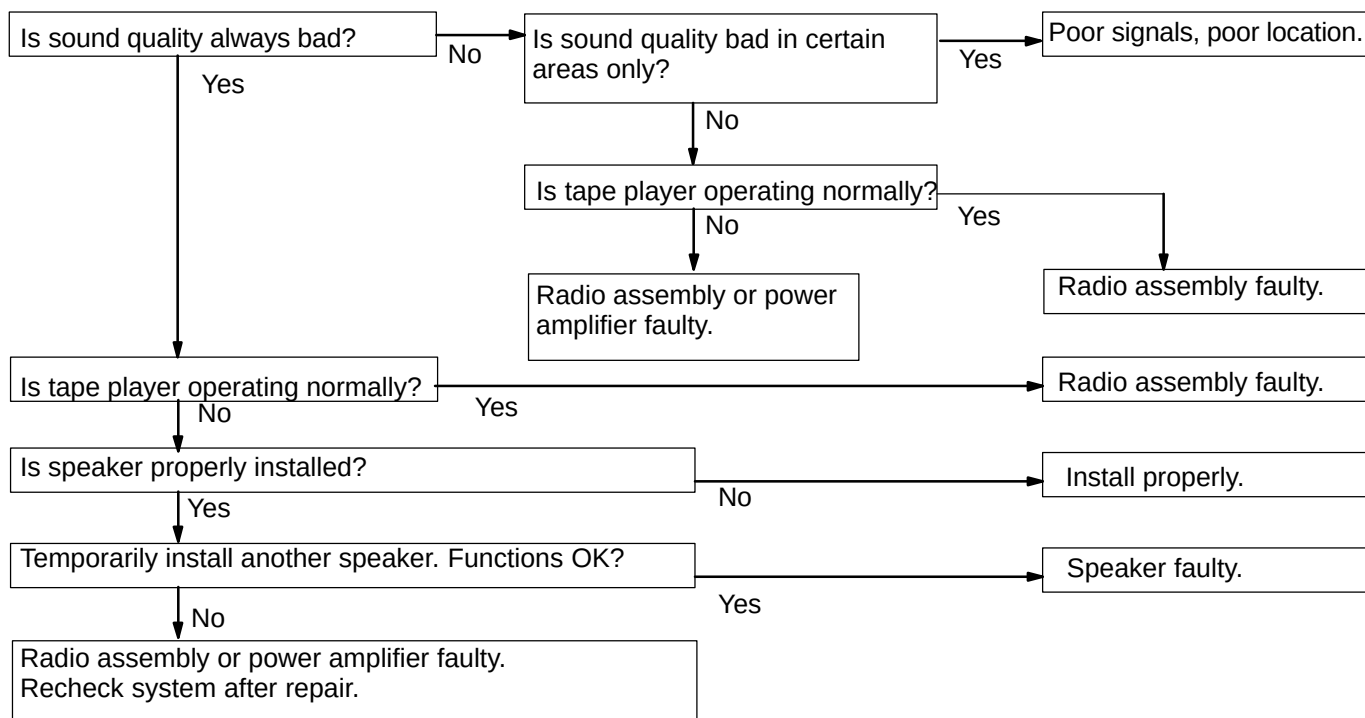
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| 5 | Radio | ANY AM OR FM DOES NOT WORK FEW PRESET TUNING BANDS |
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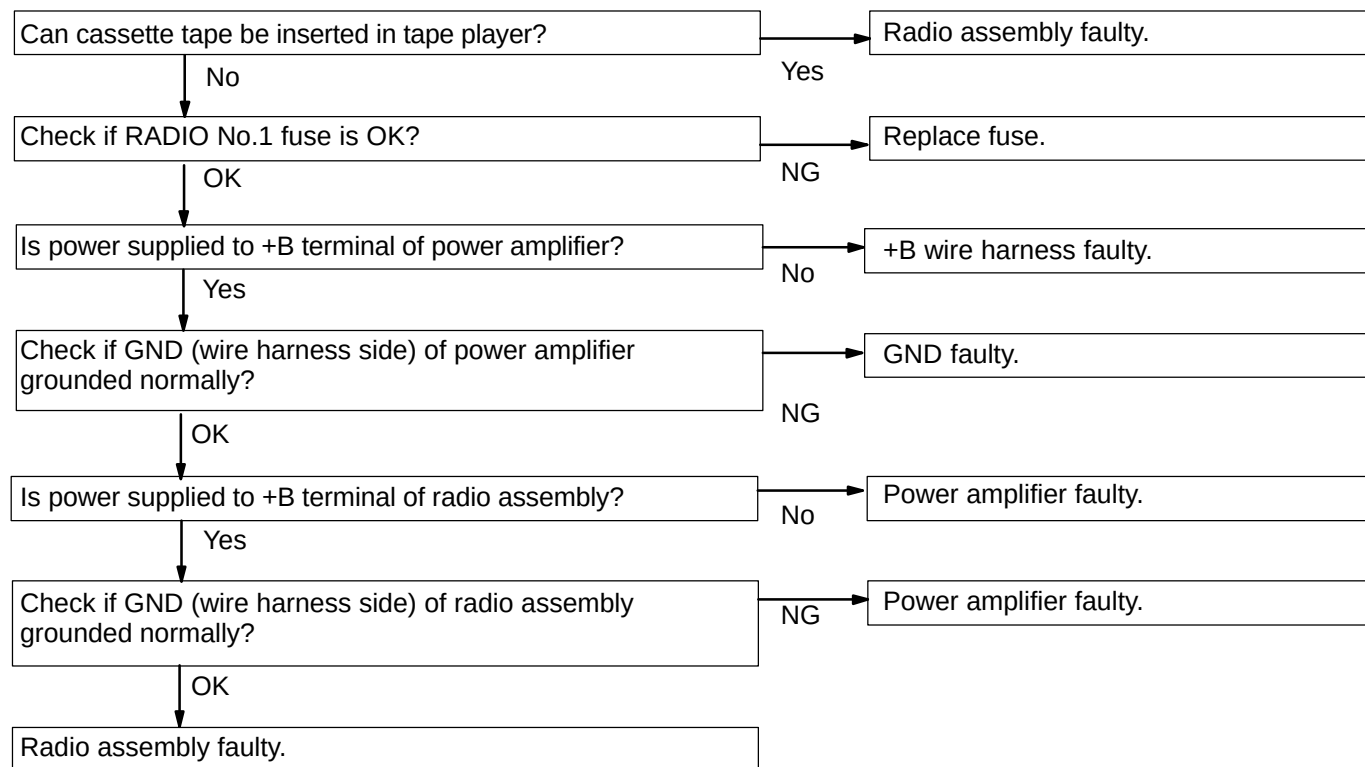
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| 6 | Radio | POOR RECEPTION |
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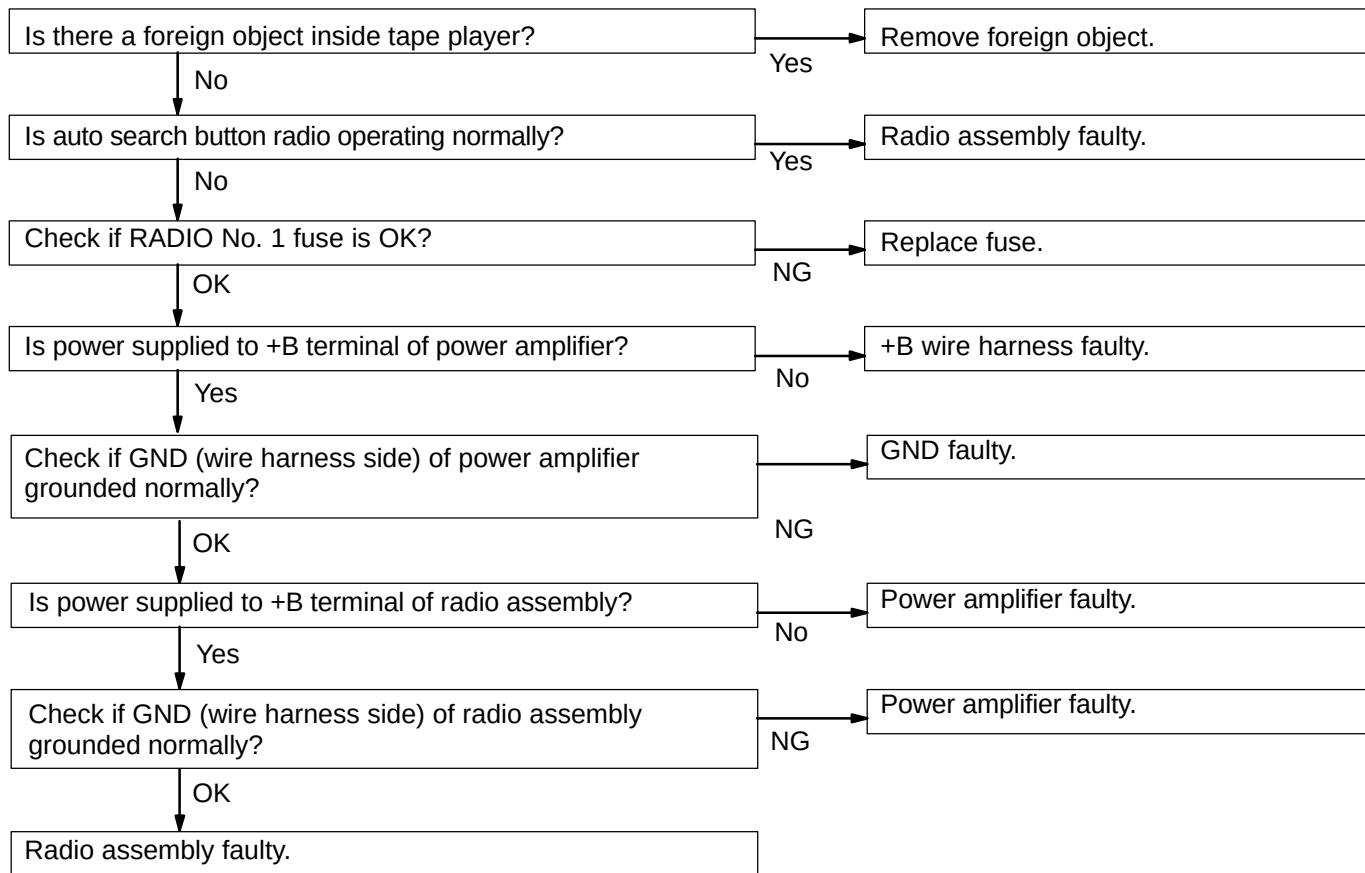
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| 7 | Radio | SOUND QUALITY POOR |
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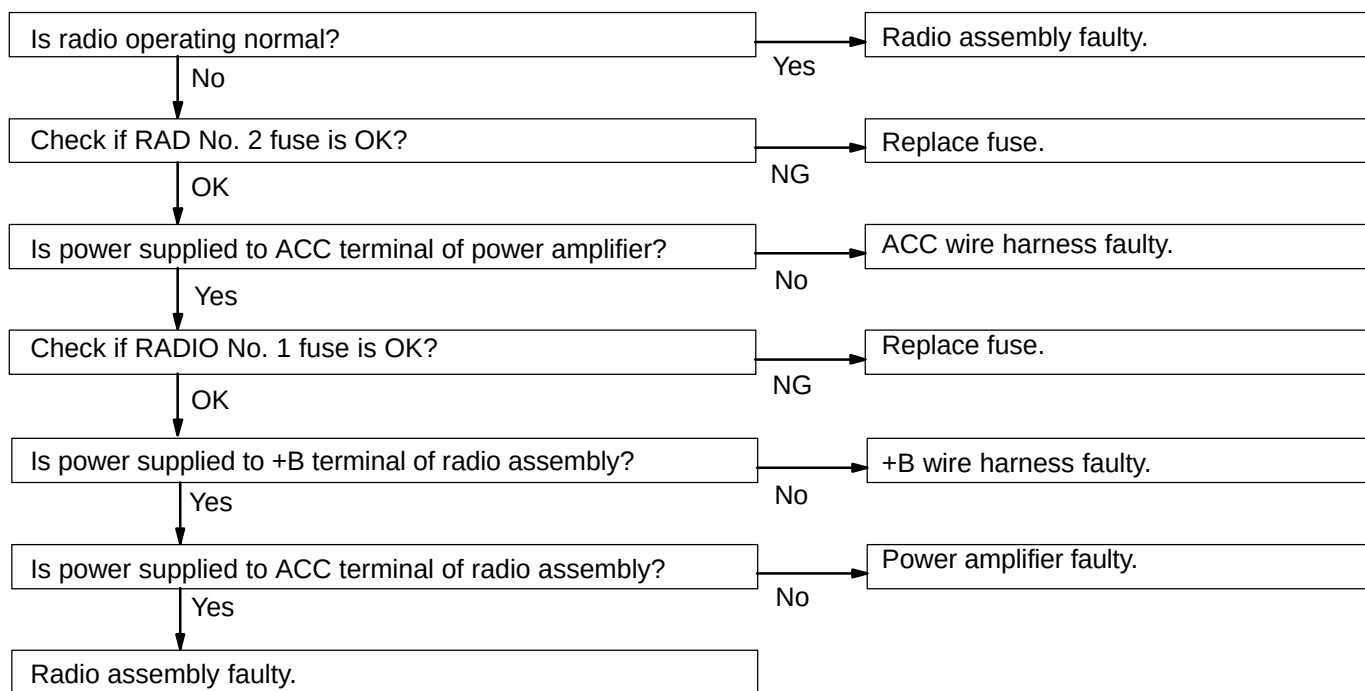
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| 8 | Radio | PRESET MEMORY DISAPPEARS |
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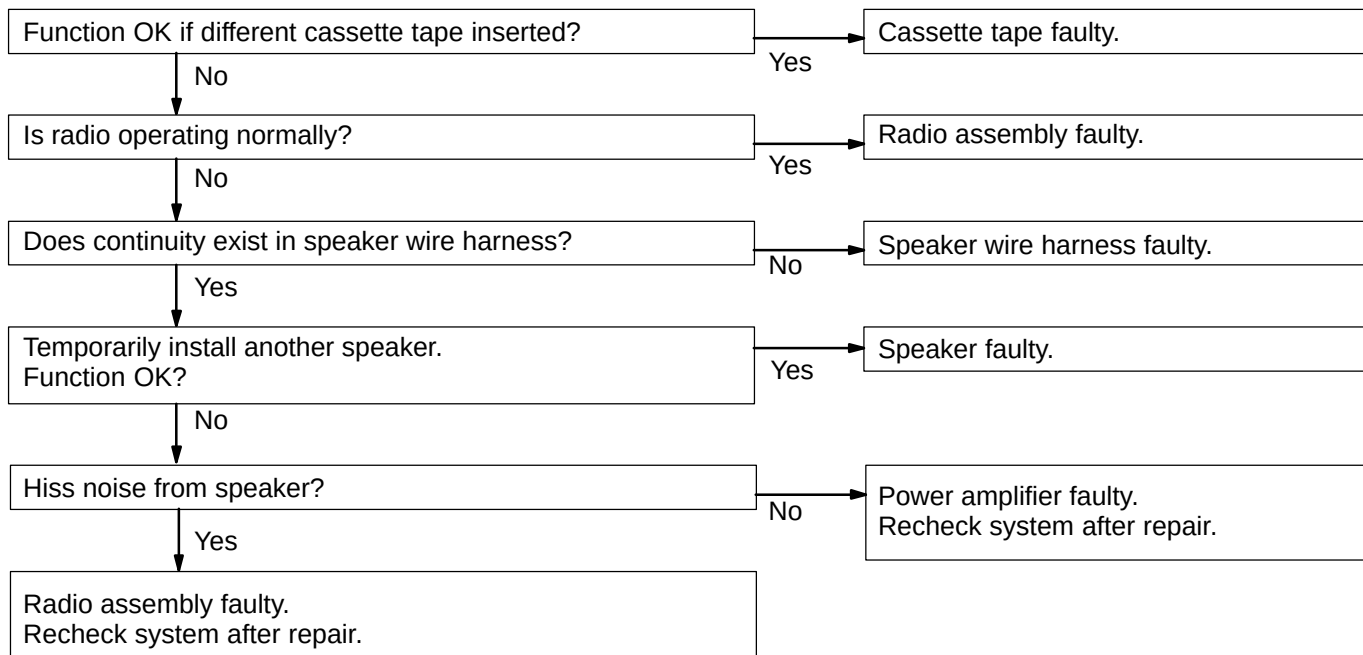
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|----------|--------------------|---|
| 9 | Tape Player | CASSETTE TAPE CANNOT BE INSERTED |
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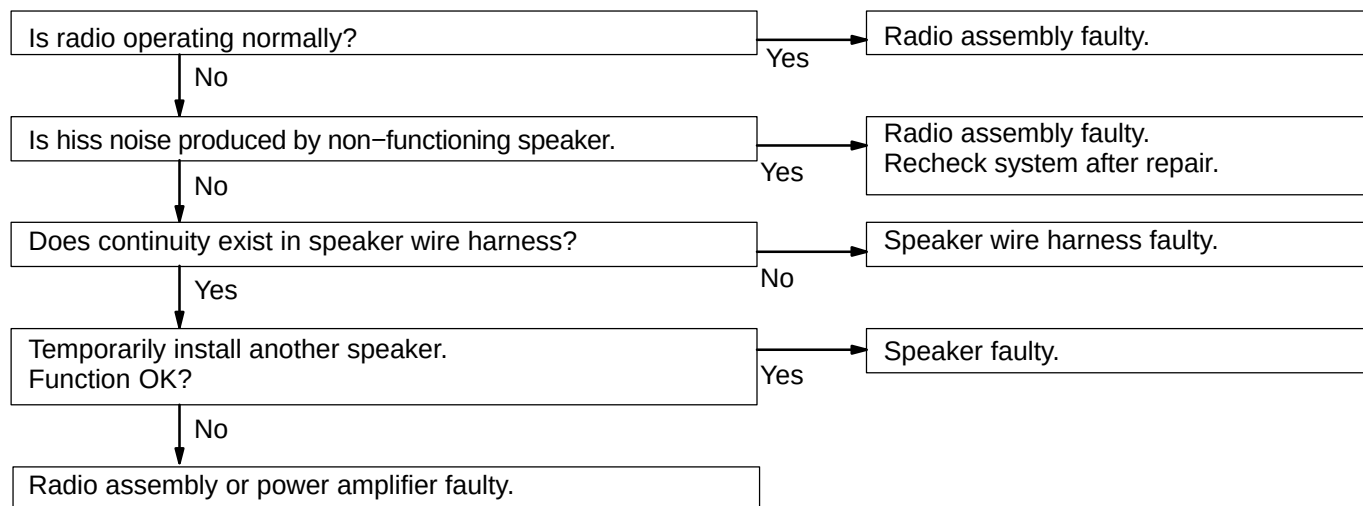
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| 10 | Tape Player | CASSETTE TAPE INSERTED, BUT NO POWER |
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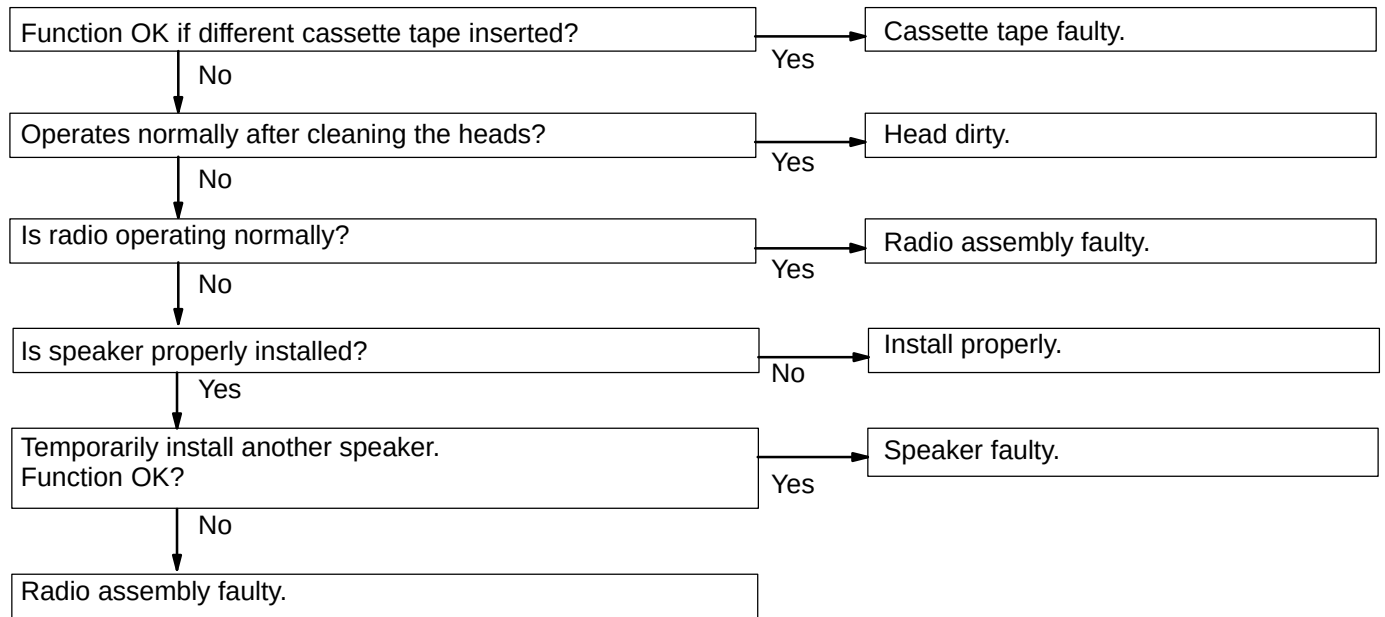
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| 11 | Tape Player | POWER COMING IN, BUT TAPE PLAYER NOT OPERATING |
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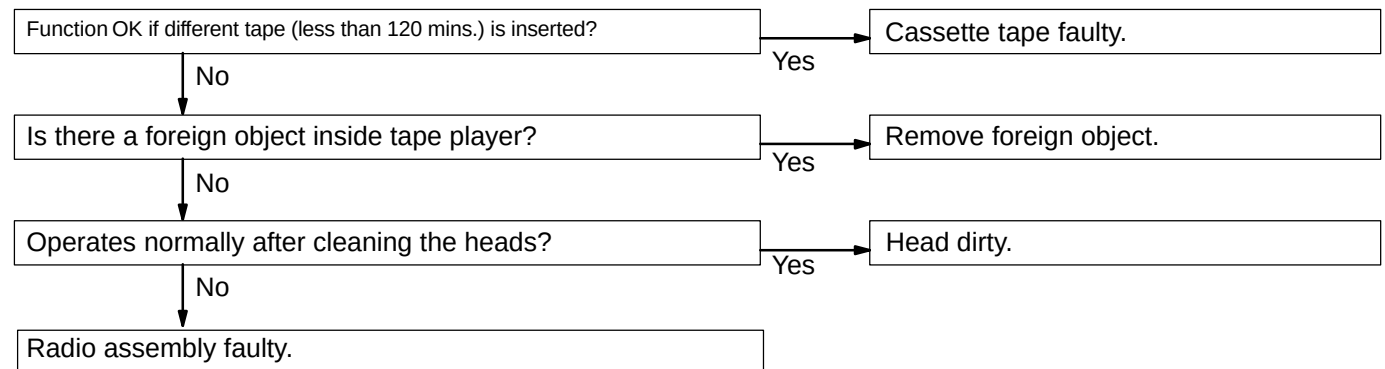
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| 12 | Tape Player | ANY SPEAKER DOES NOT WORK |
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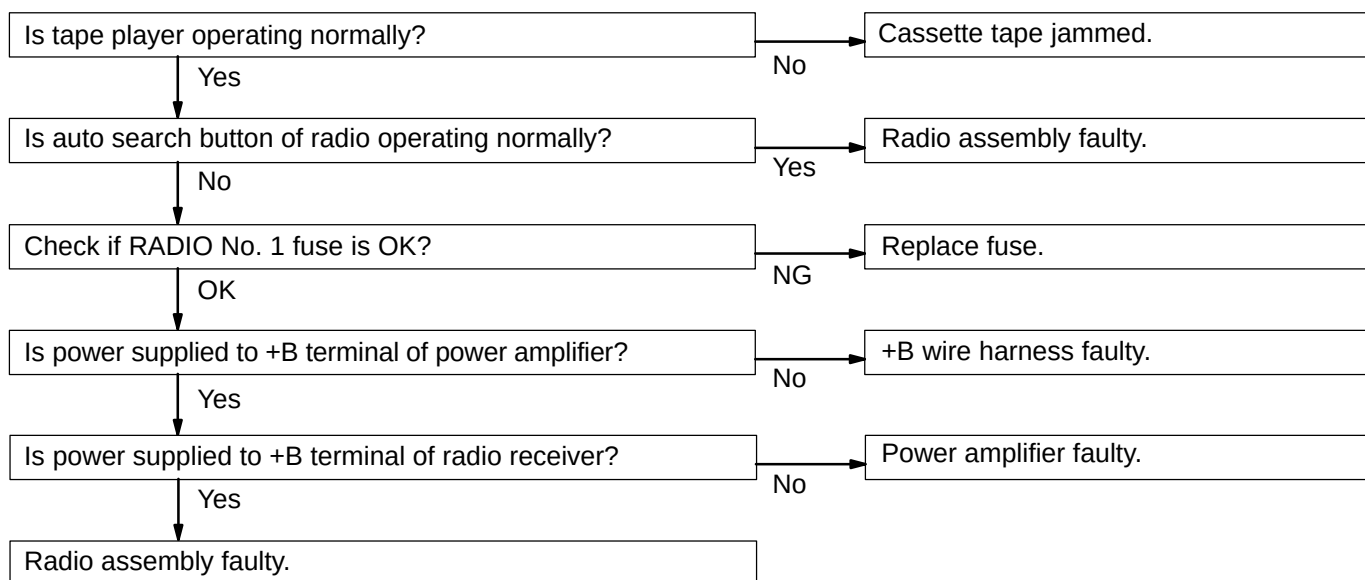
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| 13 | Tape Player | SOUND QUALITY POOR (VOLUME FAINT) |
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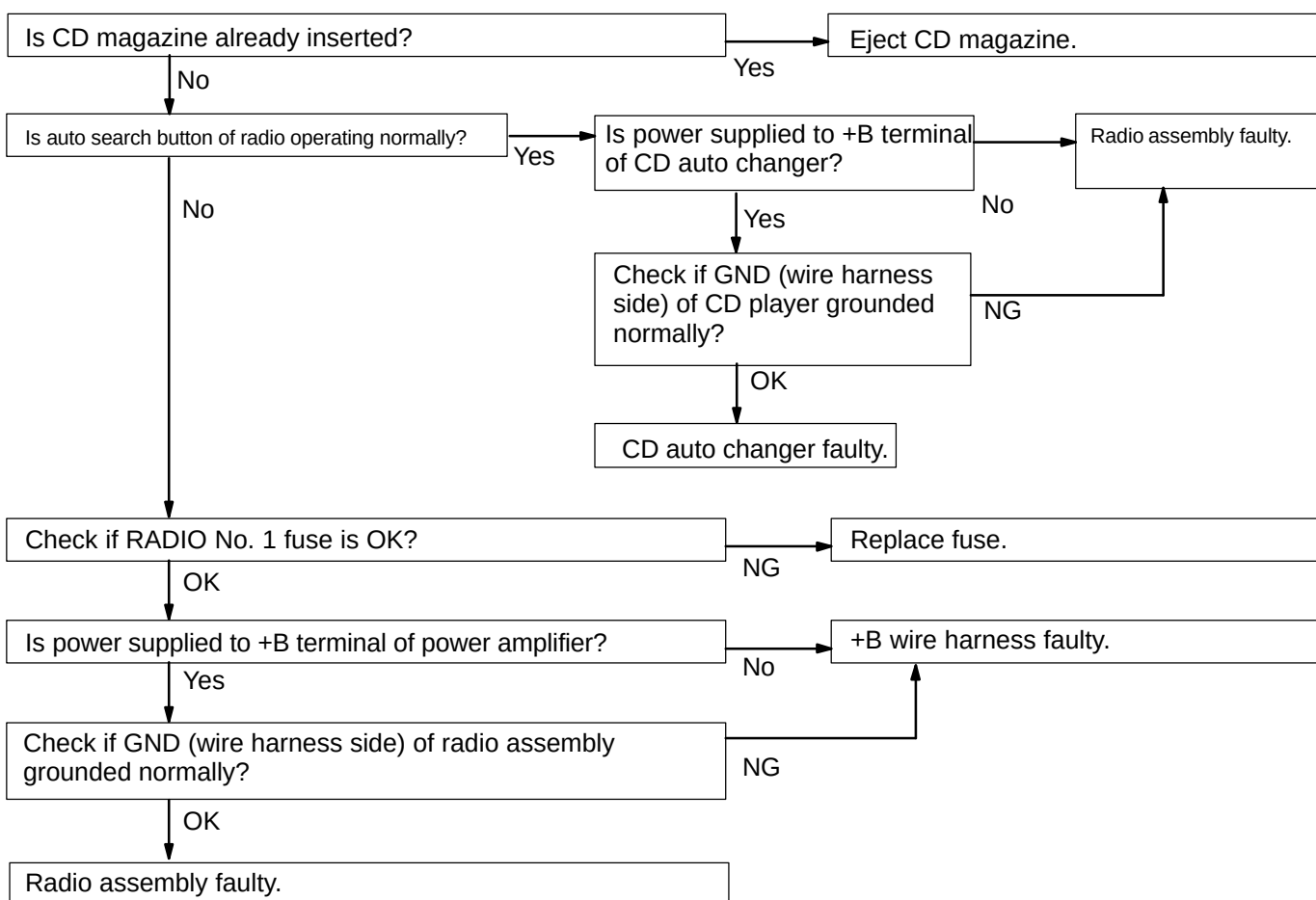
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| 14 | Tape Player | TAPE JAMMED MALFUNCTION WITH TAPE SPEED OR AUTO-REVERSE |
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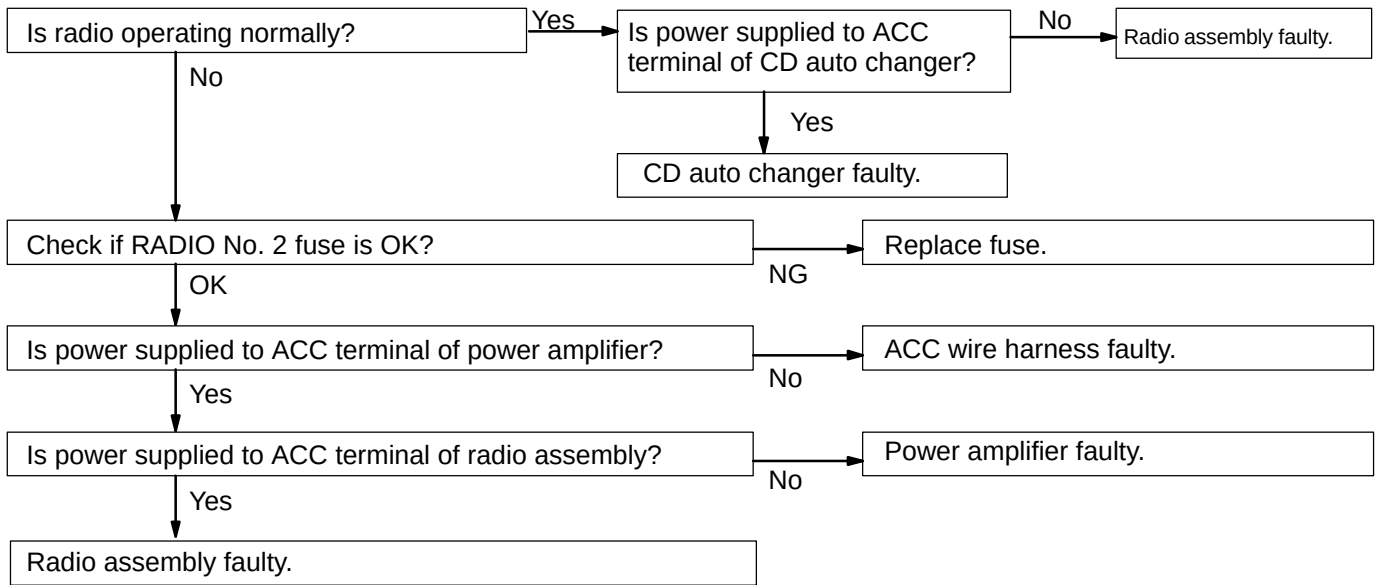
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| 15 | Tape Player | CASSETTE TAPE WILL NOT BE EJECTED |
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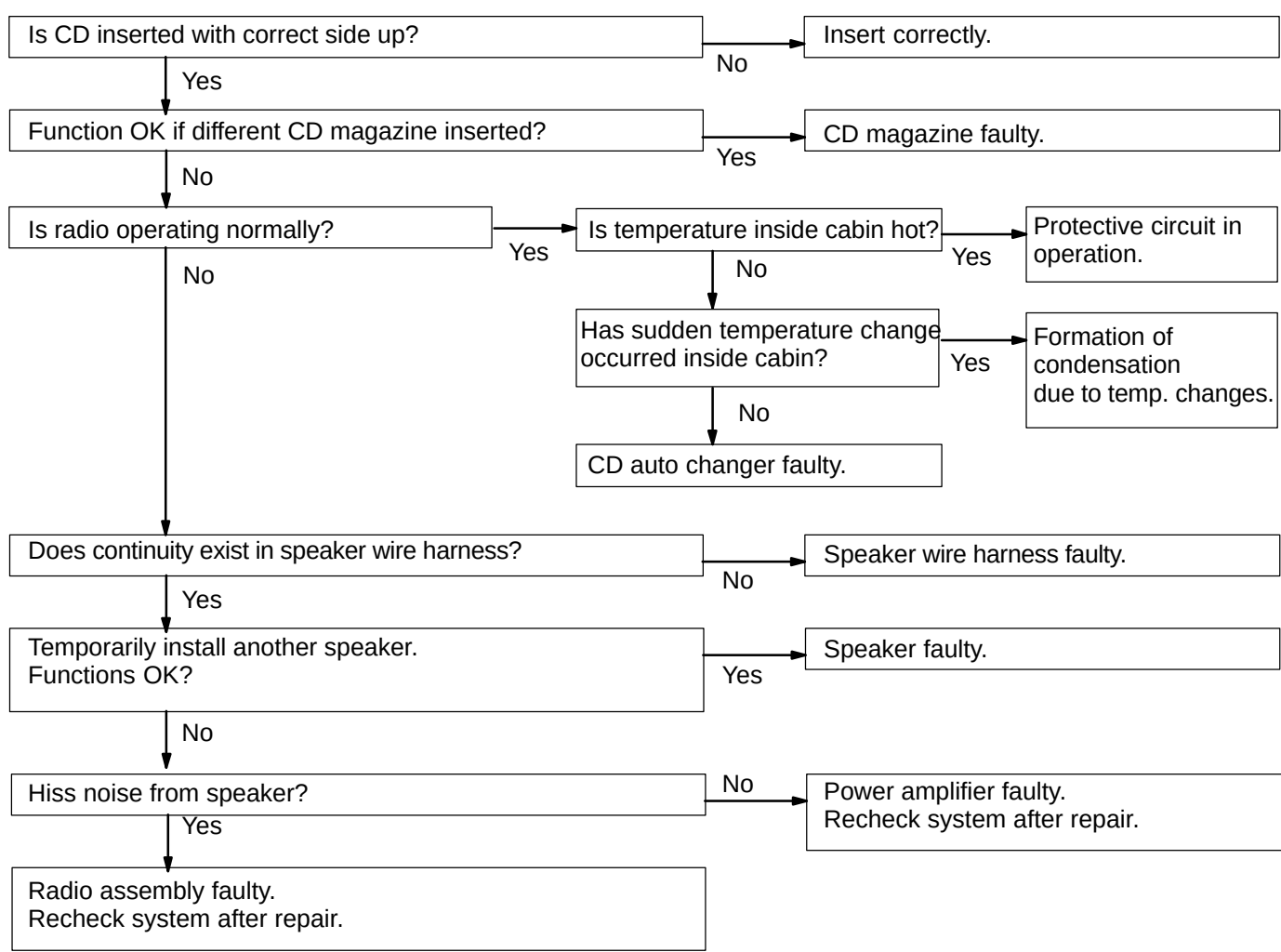
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| 16 | CD Auto Changer | CD MAGAZINE CANNOT BE INSERTED |
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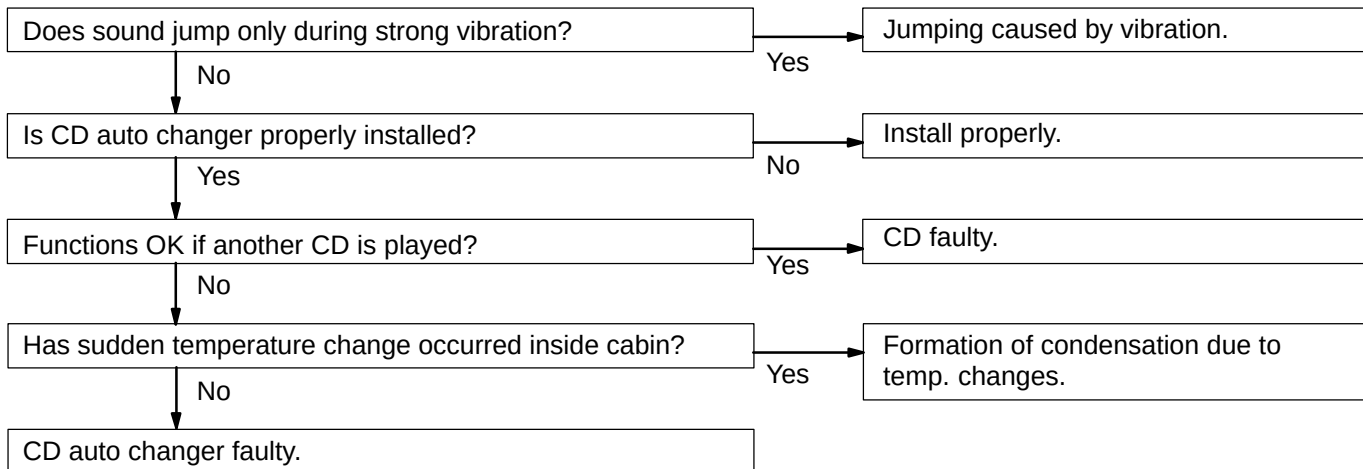
17 CD Auto Changer CD MAGAZINE INSERTED, BUT NO POWER



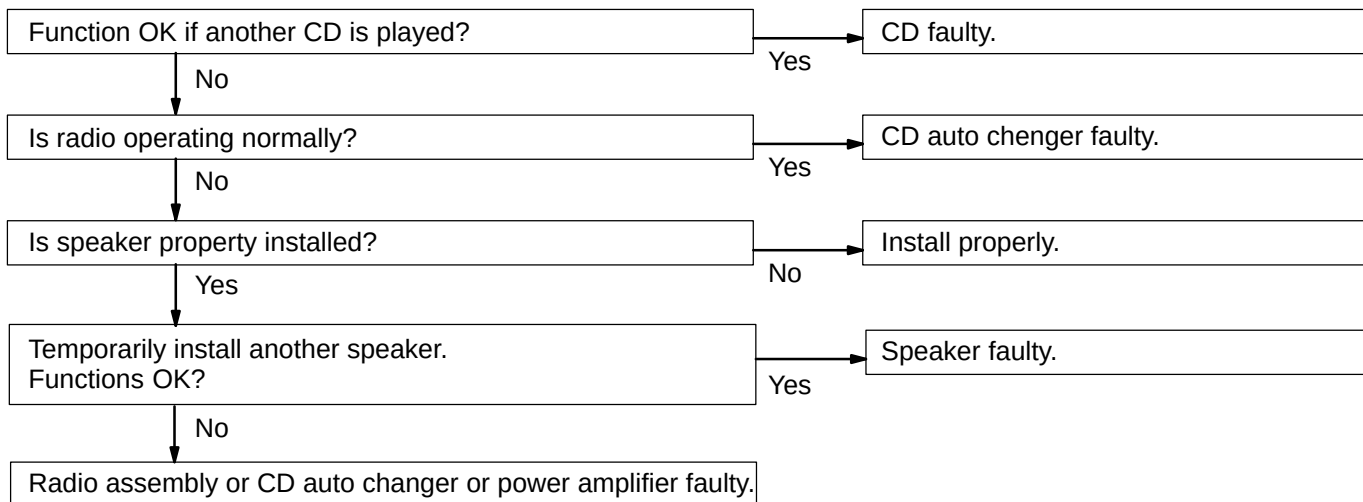
18 CD Auto Changer POWER COMING IN, BUT CD AUTO CHANGER NOT OPERATING



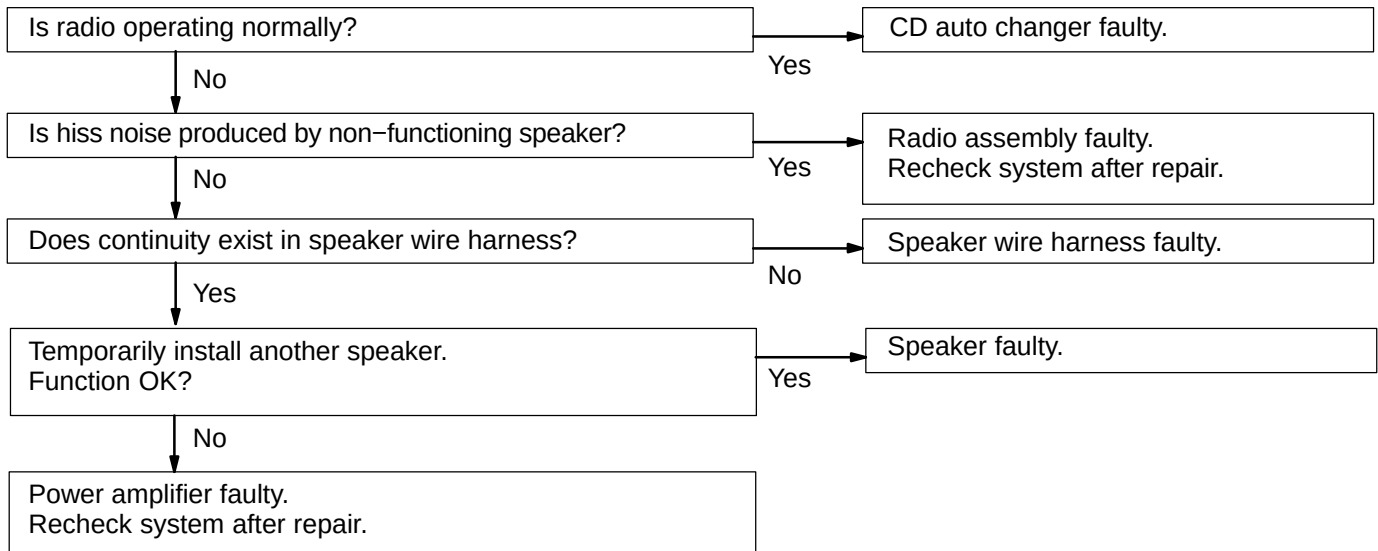
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| 19 | CD Auto Changer | SOUND JUMPS |
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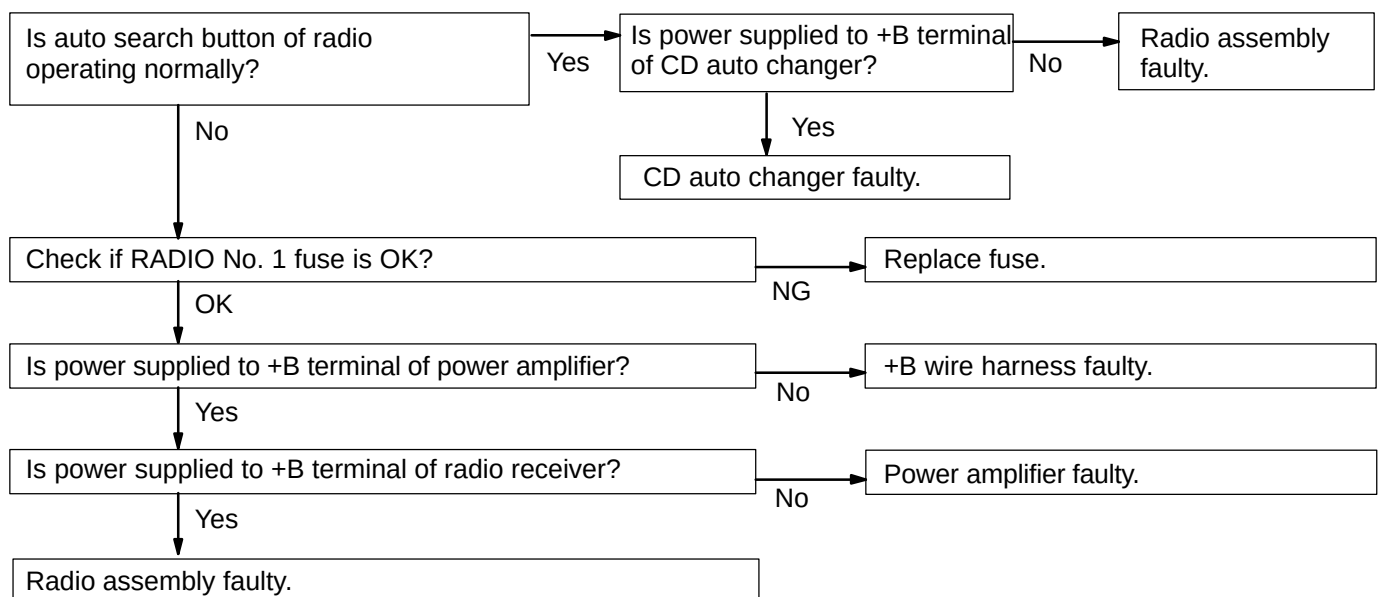
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| 20 | CD Auto Changer | SOUND QUALITY POOR (VOLUME FAINT) |
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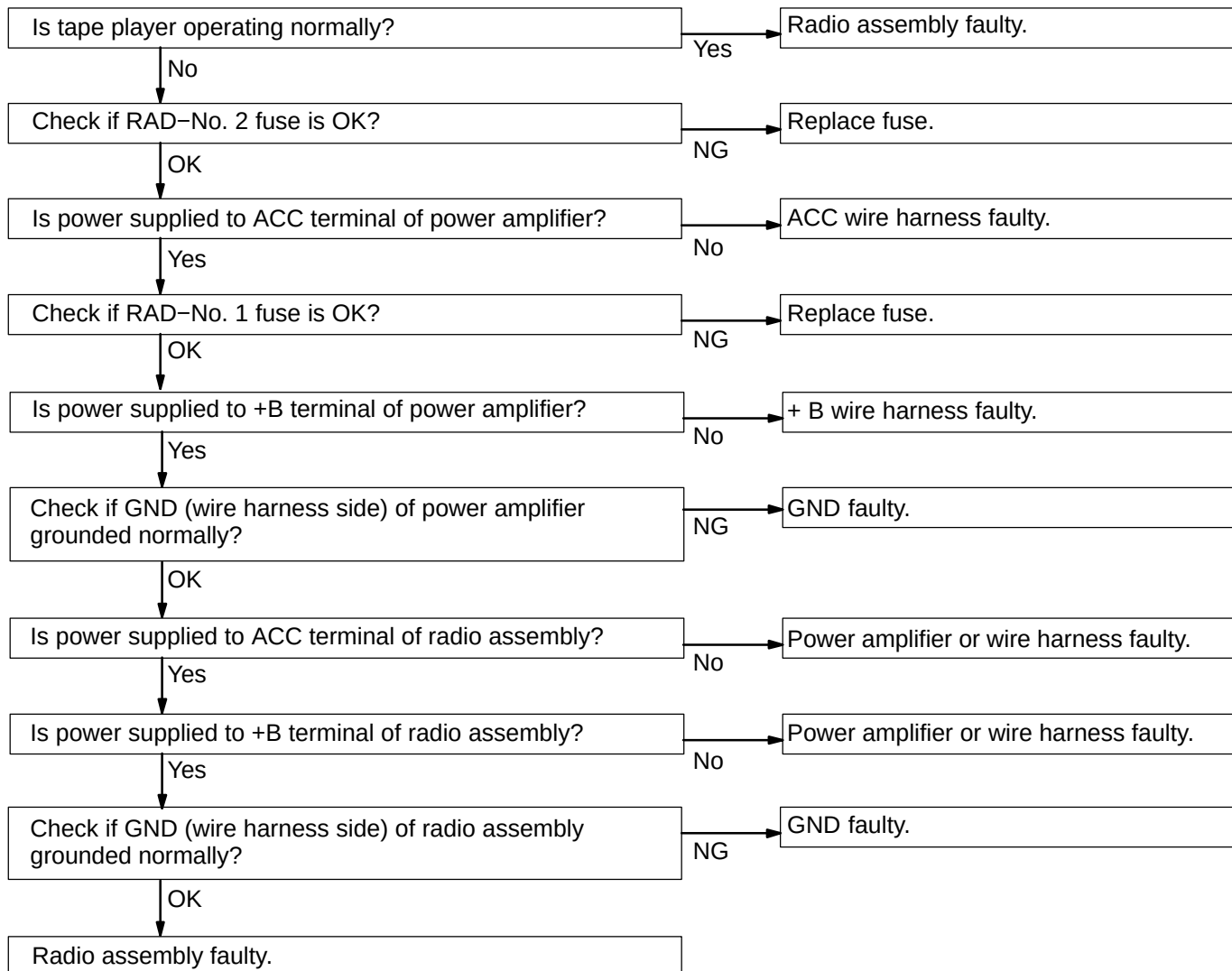
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| 21 | CD Auto Changer | ANY SPEAKER DOES NOT WORK |
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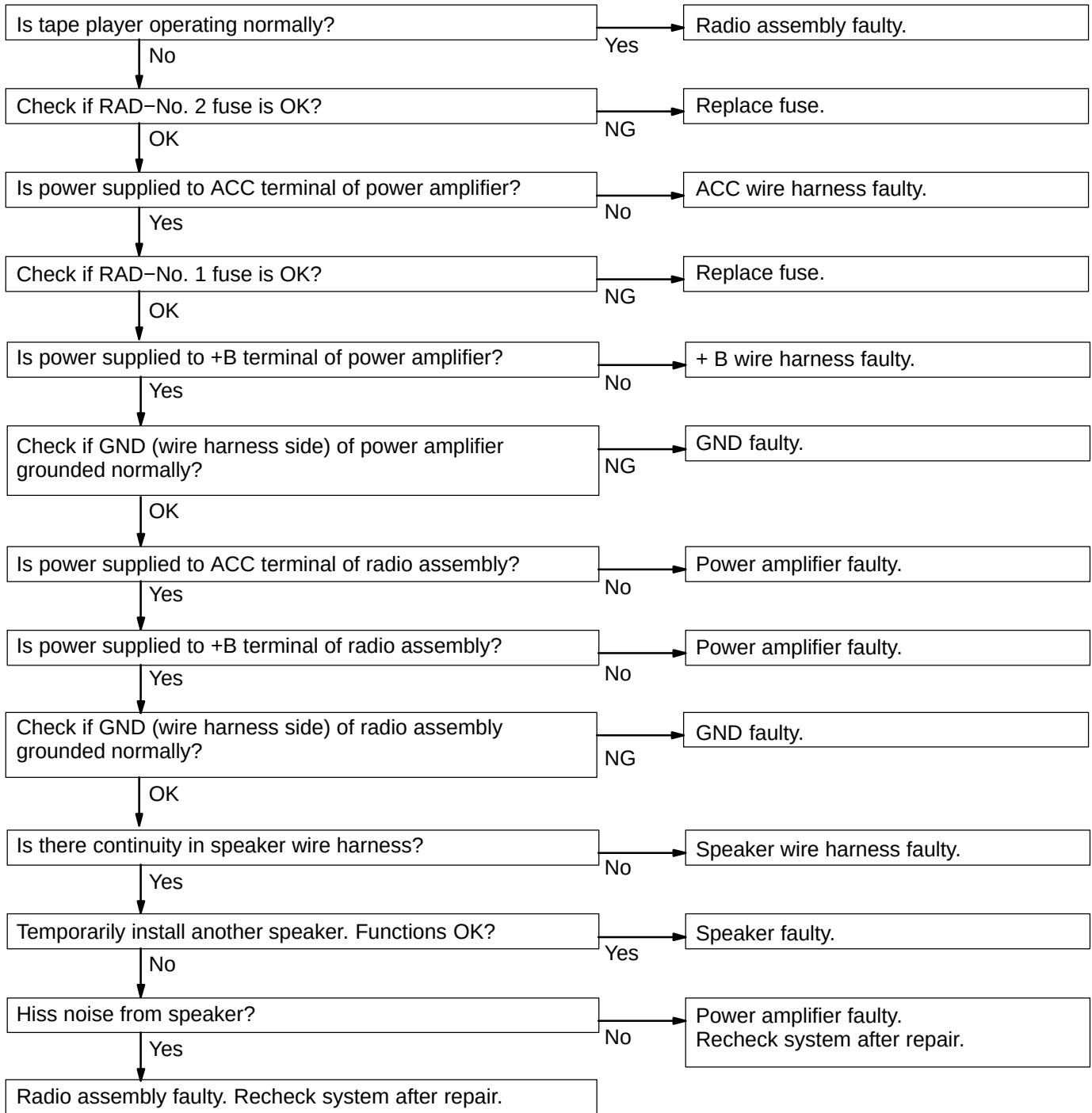
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| 22 | CD Auto Changer | CD MAGAZINE WILL NOT BE EJECTED |
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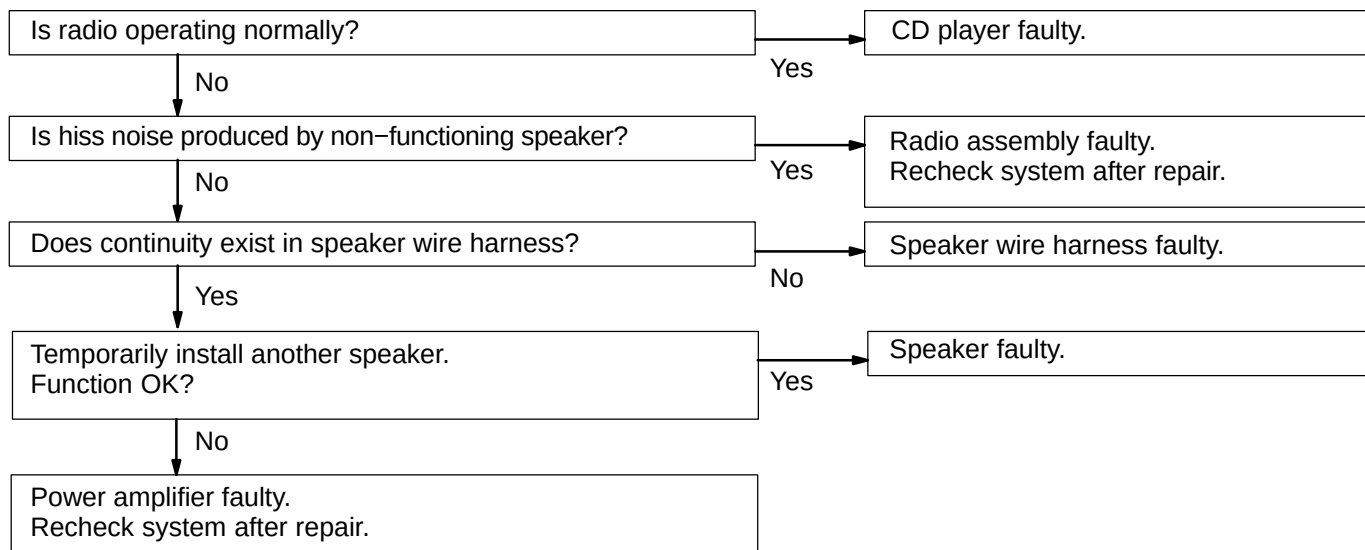
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| 23 | Power Amplifier | NO POWER COMING IN |
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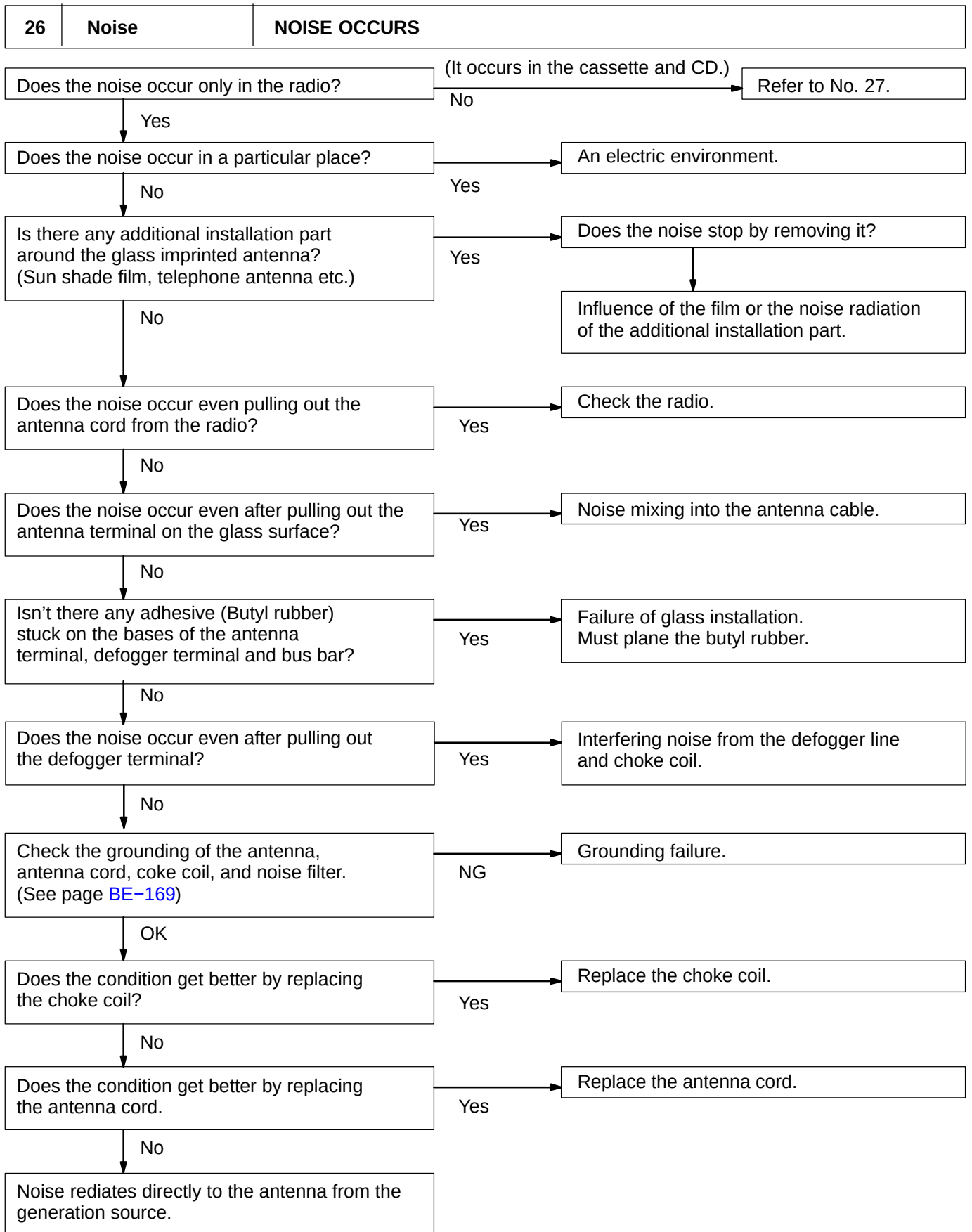


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| 24 | Power Amplifier | POWER COMING IN, BUT WOOFER (POWER) AMPLIFIER NOT OPERATING |
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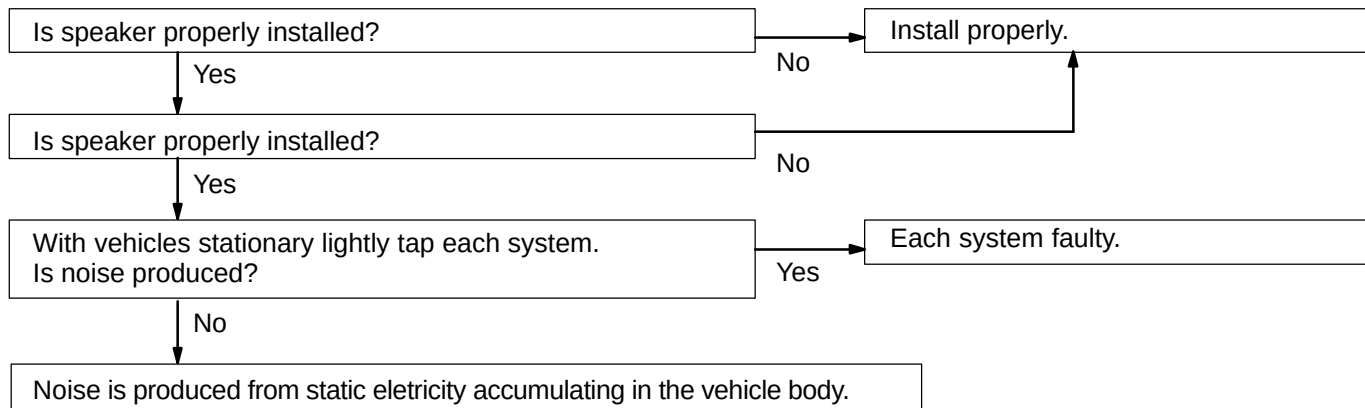


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| 25 | Power Amplifier | ANY SPEAKER DOES NOT WORK |
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|-----------|--------------|---|
| 27 | Noise | NOISE PRODUCED BY VIBRATION OR SHOCK WHILE DRIVING |
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|-----------|--------------|--|
| 28 | Noise | NOISE PRODUCED WHEN ENGINE STARTS |
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