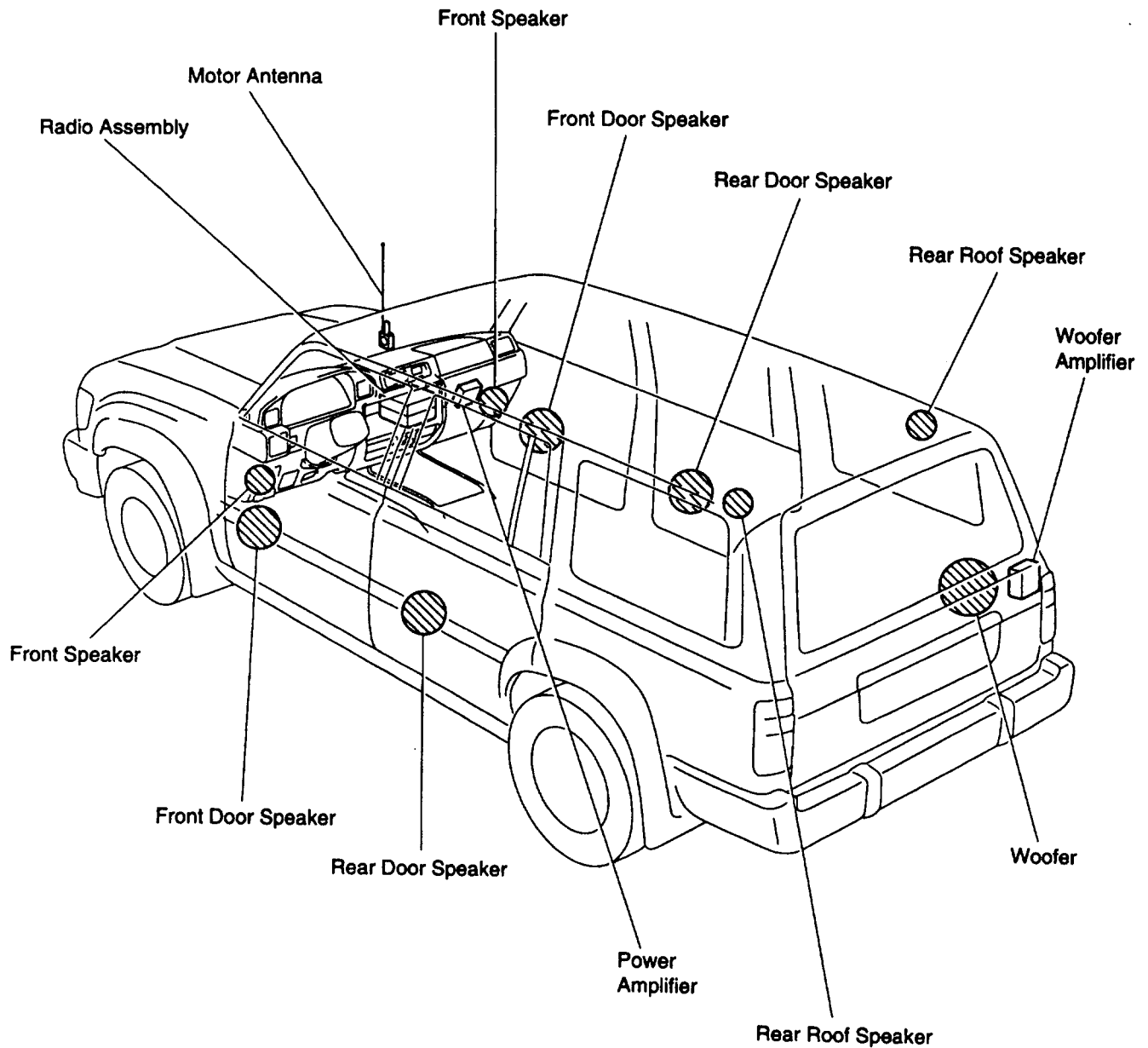


AUDIO SYSTEM PARTS LOCATION



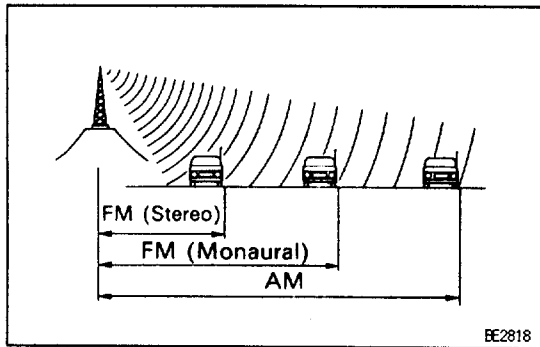
SYSTEM DESCRIPTION

1. RADIO WAVE BAND

The radio wave bands used in radio broadcasting are as follows:

Frequency	30 kHz	300kHz	3 MHz	30 MHz	300 MHz
Designation		LF	MF	HF	VHF
Radio wave		← AM →		← FM →	
Modulation method		Amplitude modulation			Frequency modulation

LF: low Frequency MF: Medium Frequency HF: High Frequency VHF: Very High Frequency



2. SERVICE AREA

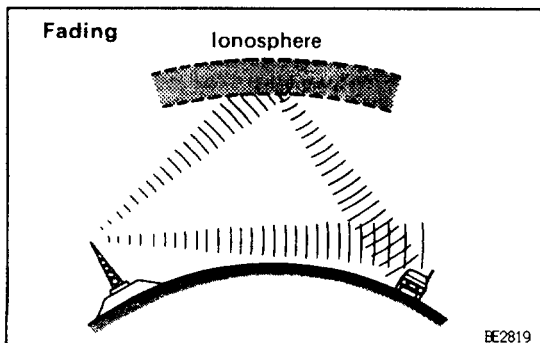
There is great difference in the size of the service area for AM, FM monaural, and FM stereo broadcasting.

Thus it may happen that FM broadcast cannot be received even though AM comes in very clearly.

Not only does FM stereo have the smallest service area, but it also picks up static and other types of interference ("noise") the most easily.

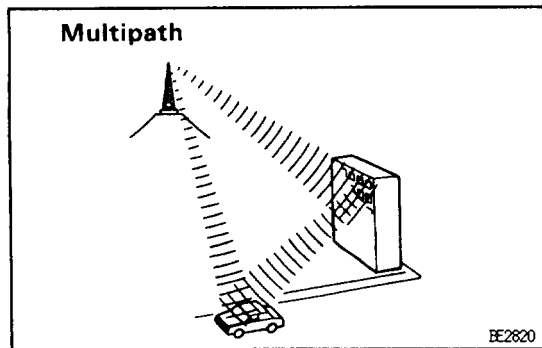
3. RECEPTION PROBLEMS

Besides the problem of static, there are also the problems called "fading", "multipath" and "fade out". These problems are caused not by electrical noise but by the nature of the radio waves themselves.



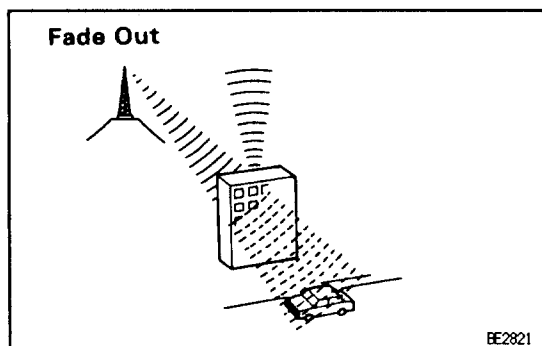
Fading

Besides electrical interference, AM broadcasts are also susceptible to other types of interference, especially at night. This is because AM radio waves bounce off the ionosphere at night. These radio waves then interfere with the signals from the same transmitter that reach the vehicle's antenna directly. This type of interference is called "fading".



Multipath

One type of interference caused by the bouncing of radio waves off of obstructions is called "multipath". Multipath occurs when a signal from the broadcast transmitter antenna bounces off buildings and mountains and interferes with the signal that is received directly



Fade Out

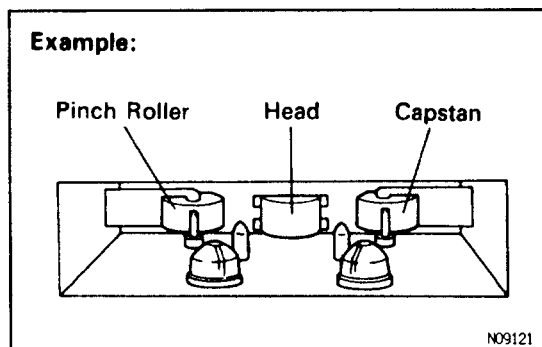
Because FM radio waves are of higher frequencies than AM radio waves, they bounce off buildings, mountains, and other obstructions. For this reason, FM signals often seem to gradually disappear or fade away as the vehicle goes behind a building or other obstruction. This is called "fade out".

4. COMPACT DISC PLAYER

Compact Disc (hereafter called "CD") Players use a laser beam pick-up to read the digital signals recorded on the CD and reproduce analog signals of the music, etc. There are 4.7 in. (12 cm) and 3.2 in (8 cm) discs in the CD player.

HINT: Never attempt to disassemble or oil any part of the player unit. Do not insert any object other than a disc into the magazine.

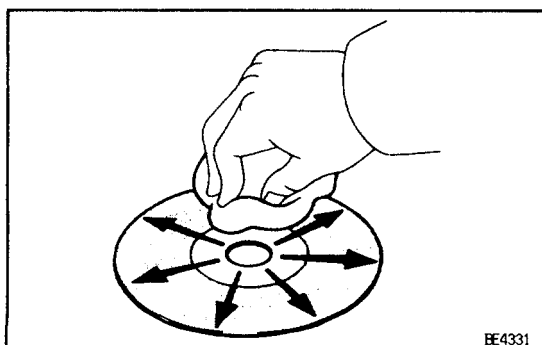
NOTICE: CD players use an invisible laser beam which could cause hazardous radiation exposure. Be sure to operate the player correctly as instructed.



MAINTENANCE

Tape Player/Head Cleaning

- Raise the cassette door with your finger. Next using a pencil or like object, push in the guide.
- Using a cleaning pen or cotton applicator soaked in cleaner, clean the head surface, pinch rollers and capstans.



CD Player/Disc Cleaning

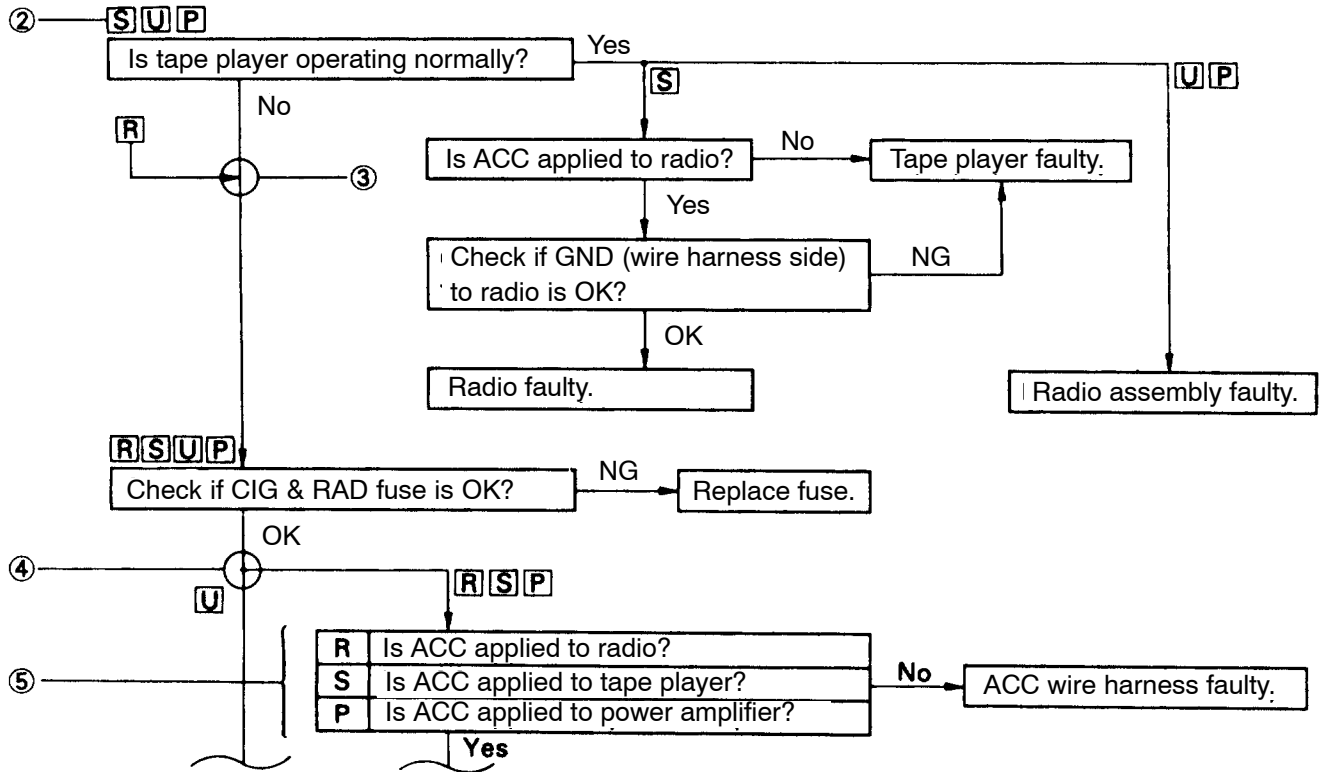
If the disc gets dirty, clean the disc by wiping the surfaces from the center to outside in the radial directions with a soft cloth.

NOTICE: Do not use a conventional record cleaner or anti-static preservative.

HOW TO USE DIAGNOSTIC CHART

1	Radio	NO POWER COMING IN
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- ① { **R**: w/o Tape Player **S**: Radio-Tape Player (Separate)
U: Radio-Tape Player Unit w/o Power Amplifier **P**: w/ Power Amplifier



- ① Audio system tape and symbol used.
 HINT: Confirm the applicable type of audio system.
- ② Symbol for type of audio system the question applies to.
 HINT: If the audio system type is not applicable, proceed to next question below.
- ③ Junction without black circle.
 HINT: Proceed to next question below.
- ④ Junction without black circle.
 HINT: Proceed to question for applicable audio system type.
- ⑤ HINT: Select question for applicable audio system type.

TROUBLESHOOTING

NOTICE: When replacing the internal mechanism (computer part) of the audio system, be careful that no part of your body or clothes 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 is based on the assumption that the cause of trouble lies with the system components (except for the wires and connectors, etc.).

Always inspect the trouble taking the following items into consideration.

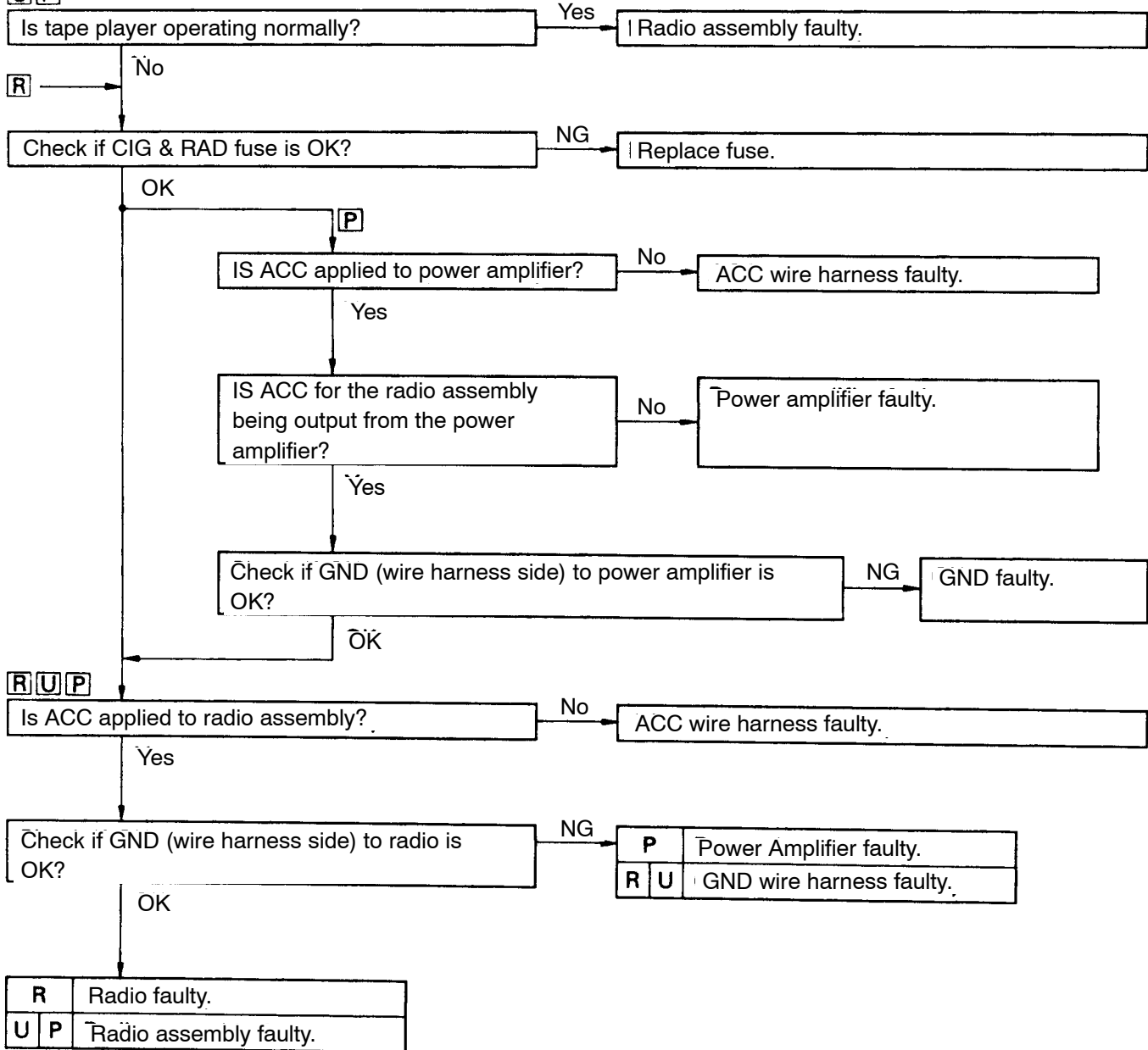
- Open or short circuit of the wire harness
- Connector or terminal connection fault

	Problem	No.
Radio	No power coming in.	1
	Power coming in, but radio not operation.	2
	Noise present, but AM-FM not operating.	3
	Either speaker does not work.	4
	Either AM or FM does not work.	5
	Reception poor (Volume faint).	5
	Few preset turning bands.	5
	Sound quality poor.	6
	Cannot set station select button.	7
	Preset memory disappears.	7
Tape player	Cassette tape cannot be inserted.	8
	Cassette tape inserts, but no power.	9
	Power coming in, but tape player not operating.	10
	Either speaker does not work.	11
	Sound quality poor (Volume faint).	12
	Tape jammed, malfunction with tape speed or auto-reverse.	13
	APS, SKIP, RPT buttons not operating.	14
	Cassette tape will not eject.	15
CD Player	CD cannot be inserted.	16
	CD inserts, but no power.	17
	Power coming in, but CD player not operating.	18
	Sound jumps.	19
	Sound quality poor (Volume faint).	20
	Either speaker does not work.	21
Antenna	CD will not eject.	22
	Antenna does not fully extend or fully retract	23
	Antenna-related.	24
Noise	Noise produced by vibration or shock while driving.	25
	Noise produced when engine starts.	26

1	Radio	NO POWER COMING IN
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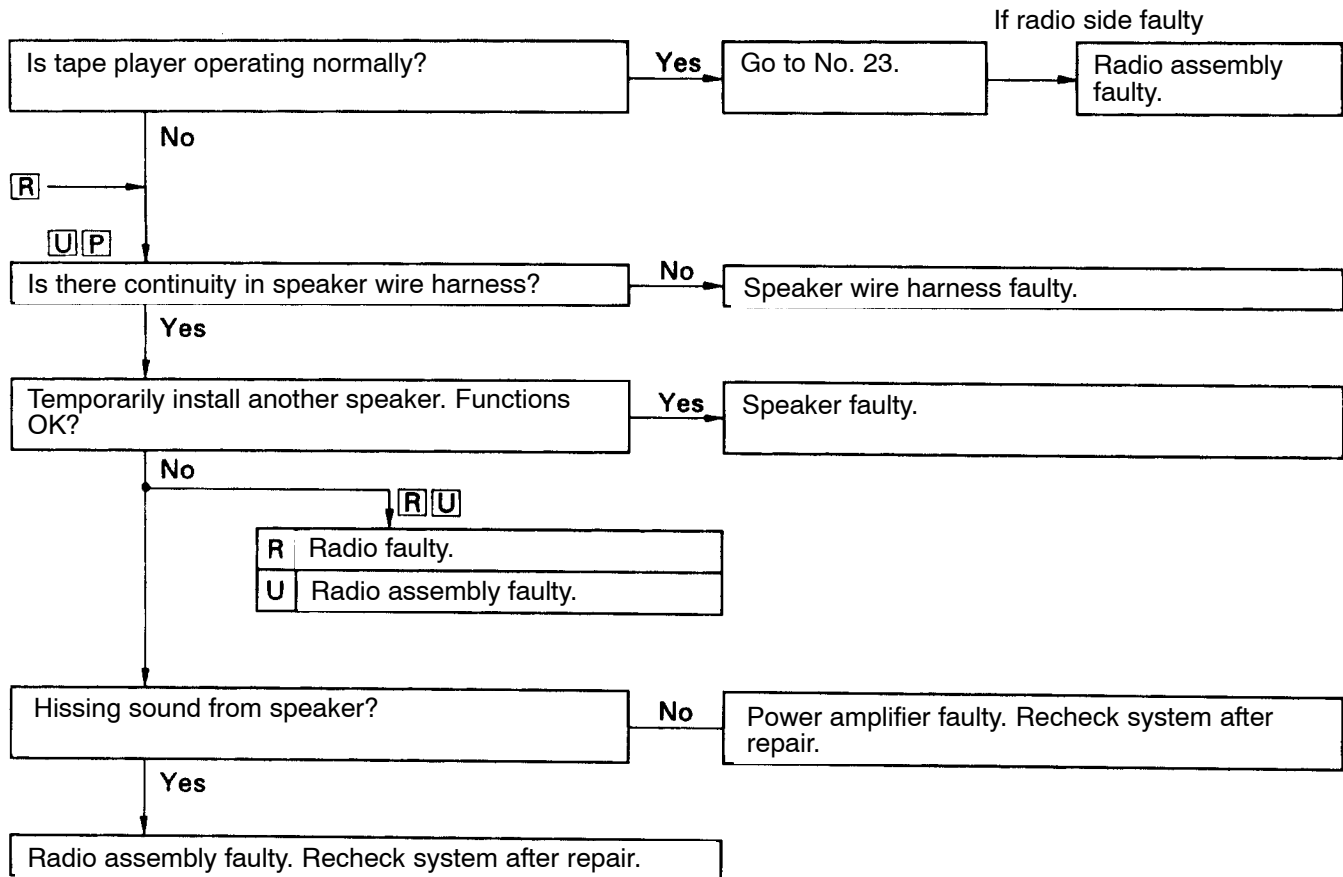
[R] : Radio, 5 Speaker **[U]** : Radio – Tape Player, 5 Speaker
[P] : Radio – Tape Player, 9 Speaker

[U][P]



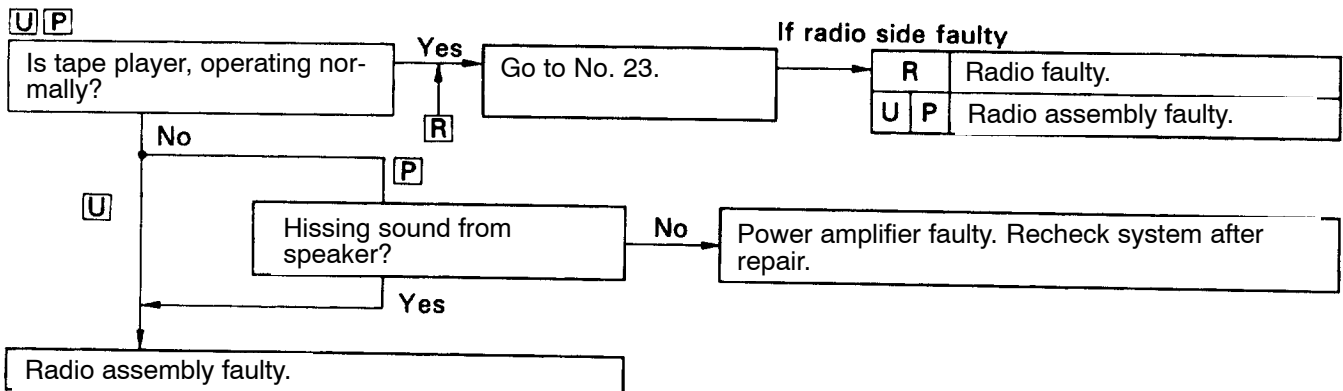
2 Radio POWER COMING IN, BUT RADIO NOT OPERATING

R : Radio, 5 Speaker **U** : Radio – Tape Player, 5 Speaker
P : Radio – Tape Player, 9 Speaker



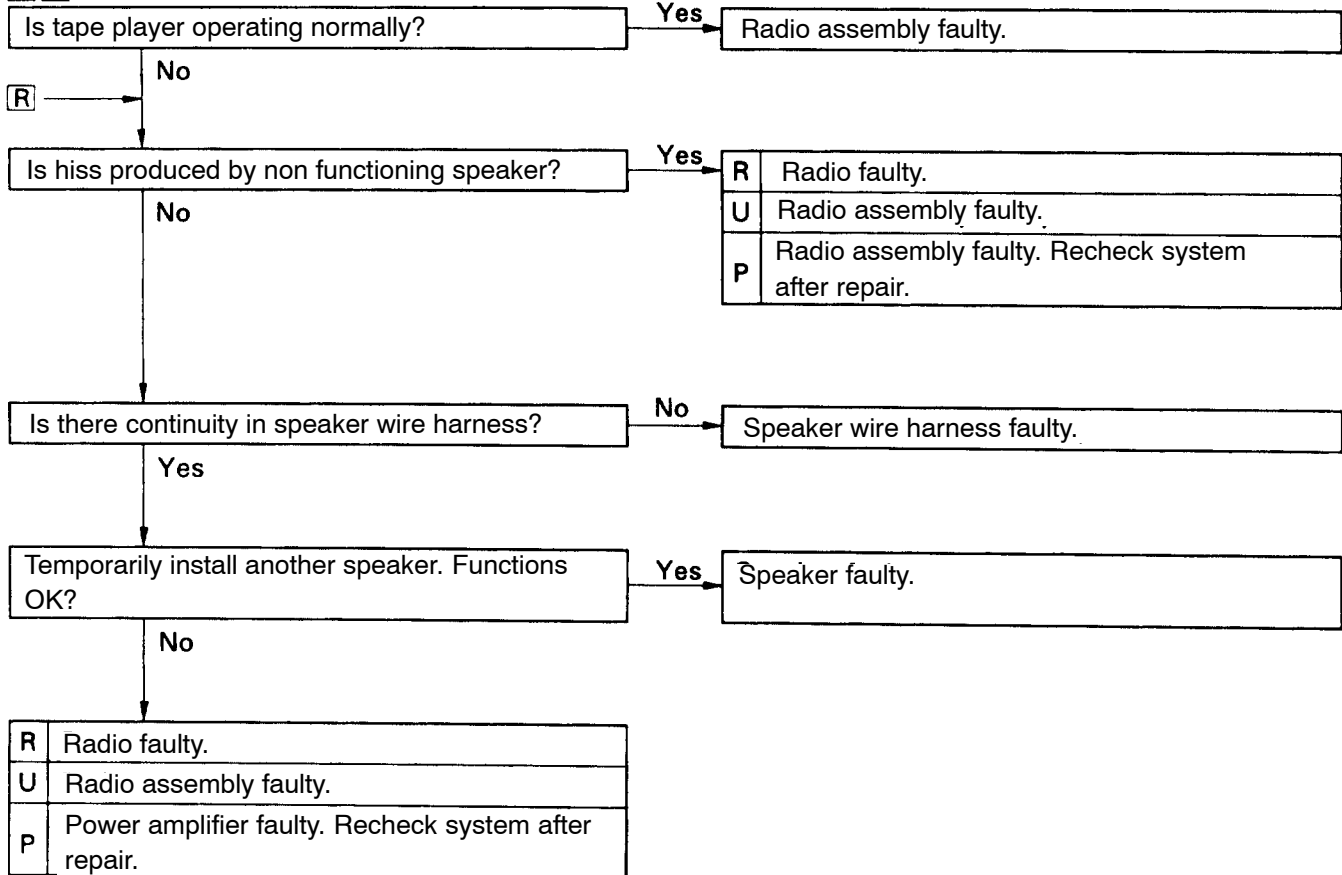
3 Radio NOISE PRESENT, BUT AM-FM NOT OPERATING

R : Radio, 5 Speaker **U** : Radio – Tape Player, 5 Speaker
P : Radio – Tape Player, 9 Speaker



4**Radio****EITHER SPEAKER DOES NOT WORK**

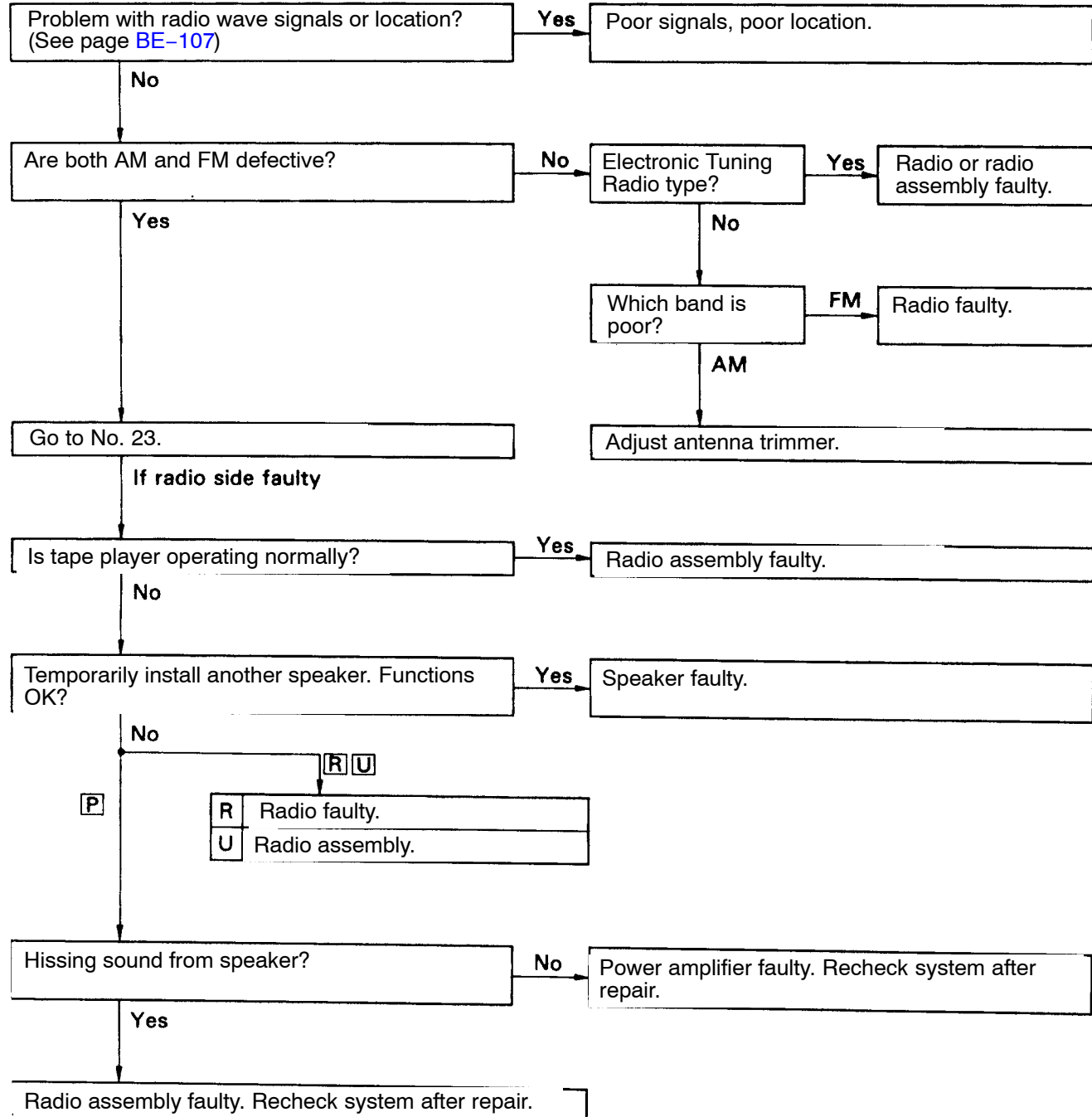
R : Radio, 5 Speaker **U** : Radio – Tape Player, 5 Speaker
P : Radio – Tape Player, 9 Speaker

U P

5 Radio EITHER AM OR FM DOES NOT WORK, RECEPTION POOR (VOLUME FAINT), FEW PRESET TUNING BANDS

R : Radio, 5 Speaker **U** : Radio – Tape Player, 5 Speaker

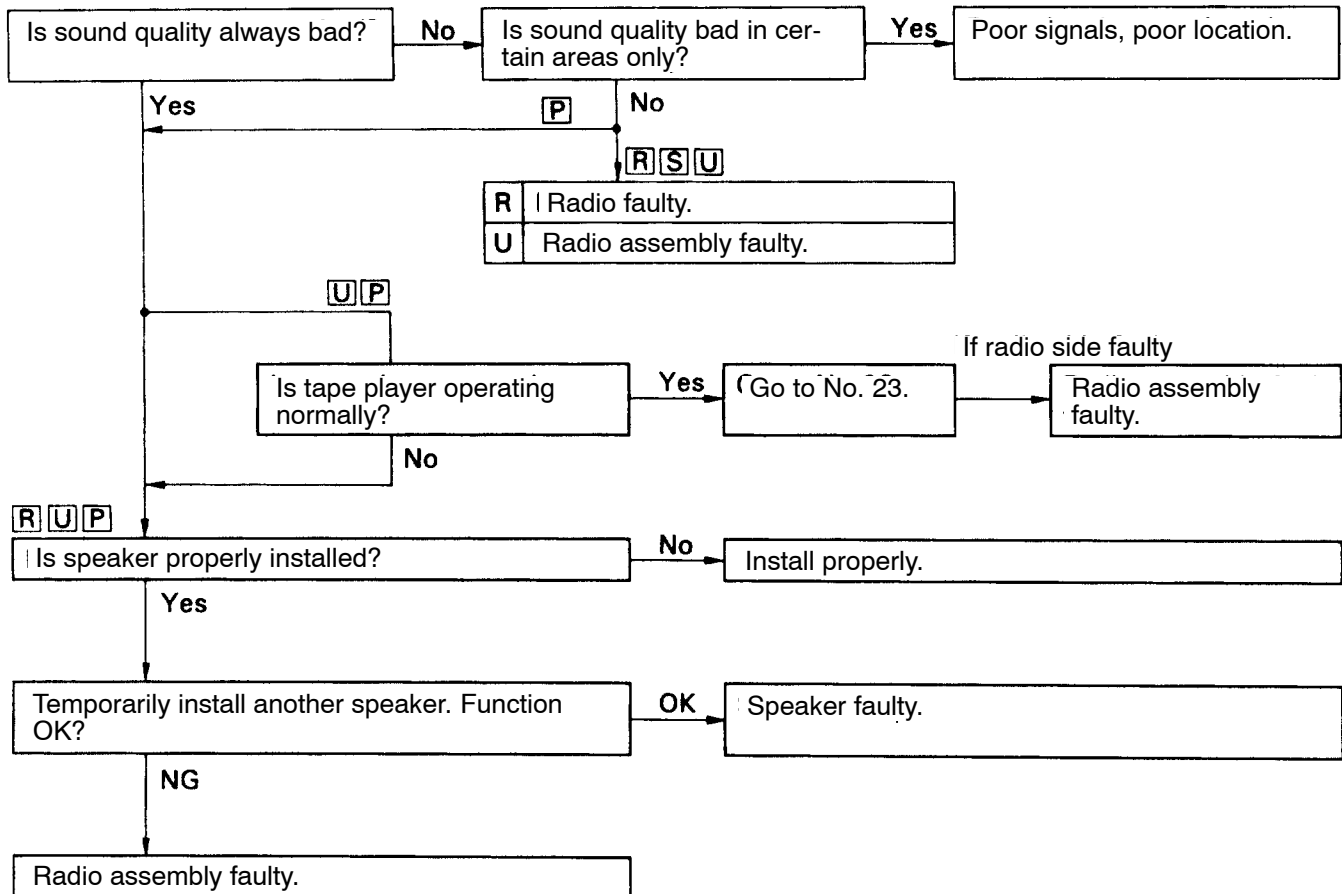
P : Radio – Tape Player, 9 Speaker



6 Radio SOUND QUALITY POOR

R : 1 Radio, 5 Speaker **U** : Radio - Tape Player, 5 Speaker

P : Radio - Tape Player, 9 Speaker

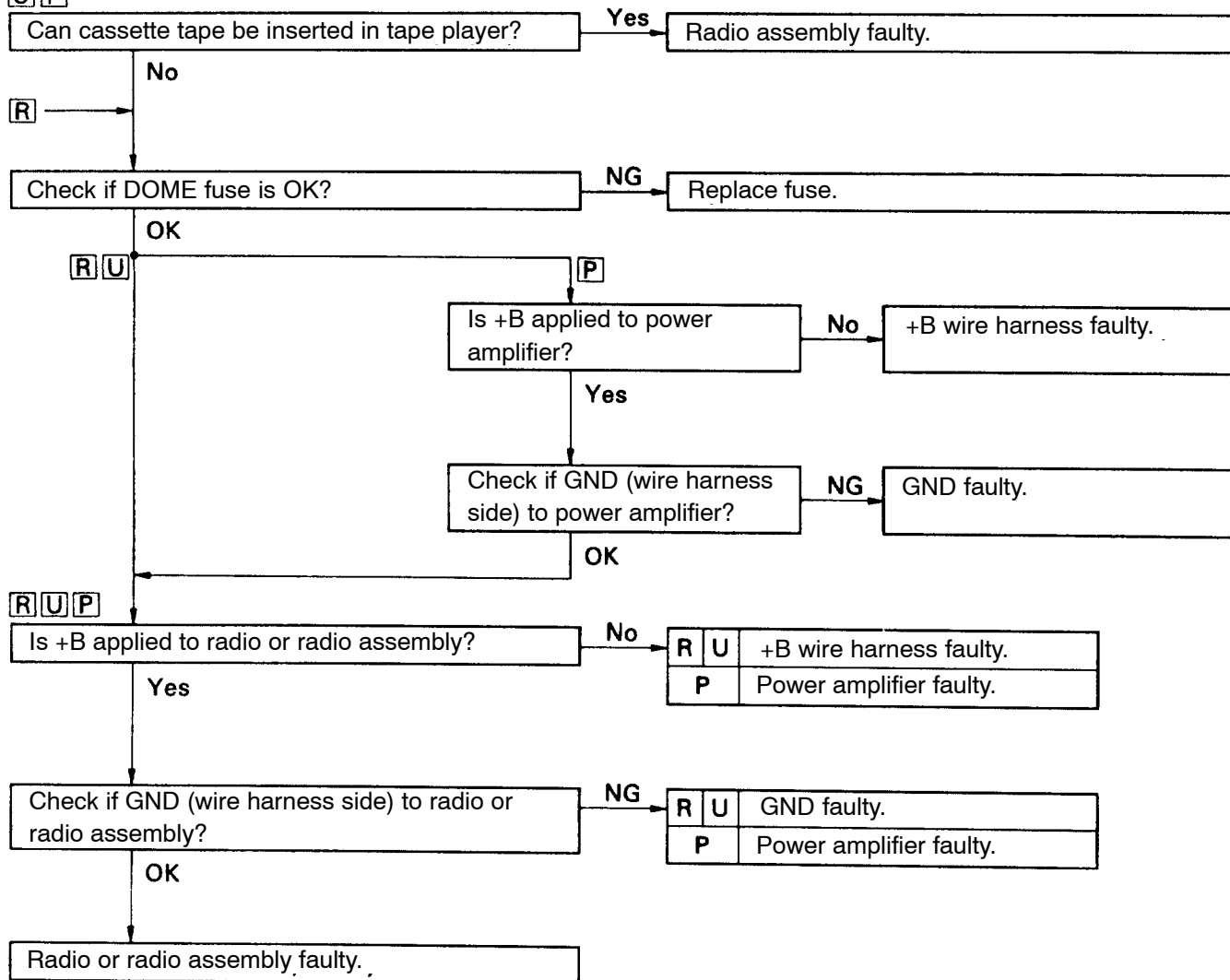


7 Radio CANNOT SET STATION SELECT BUTTON, PRESENT MEMORY DISAPPEARS

R : Radio, 5 Speaker **U** : Radio – Tape Player, 5 Speaker

P : Radio – Tape Player, 9 Speaker

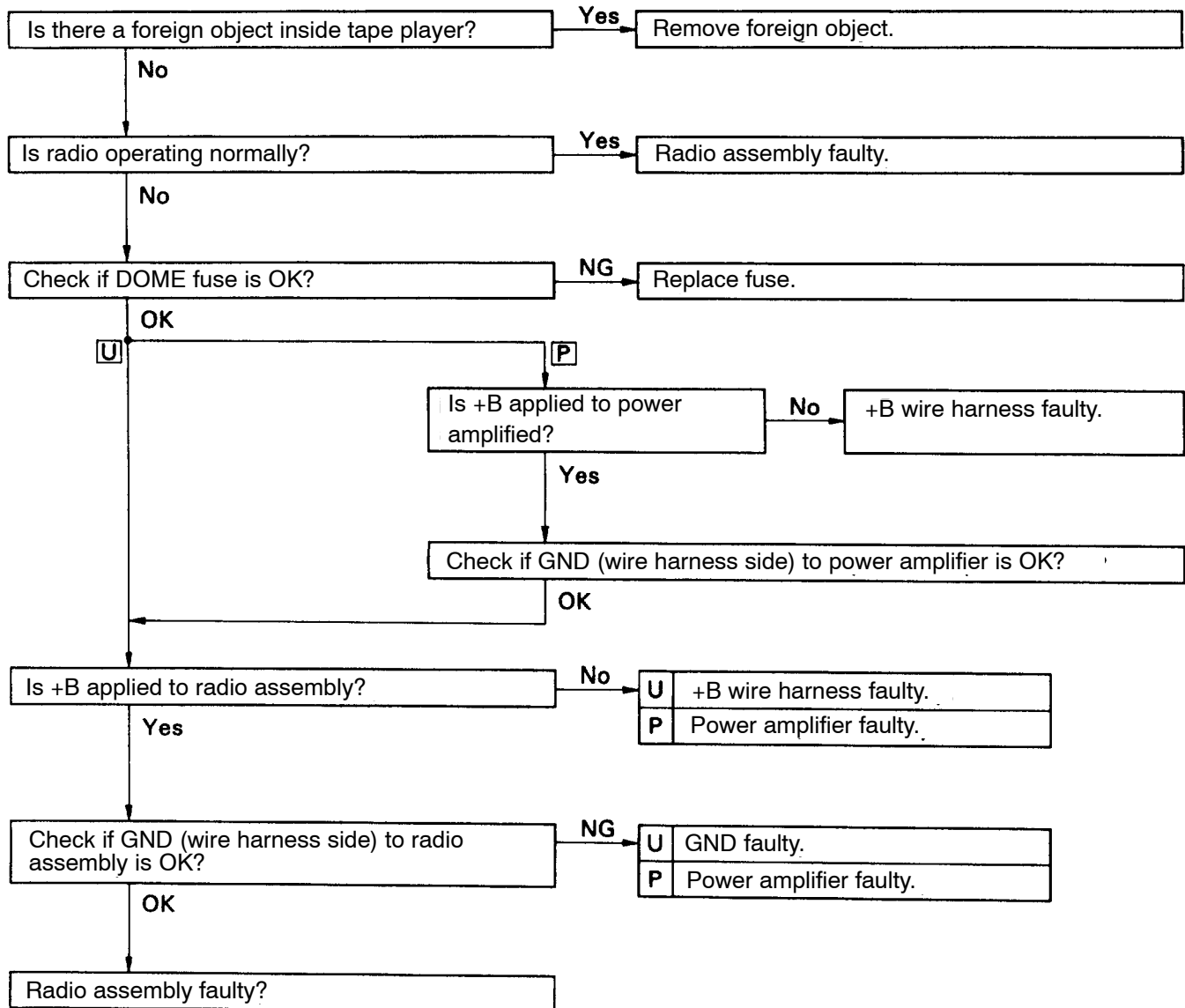
U P



8 Tape Player CASSETTE TAPE CANNOT BE INSERT

U : Radio - Tape Player, 5 Speaker

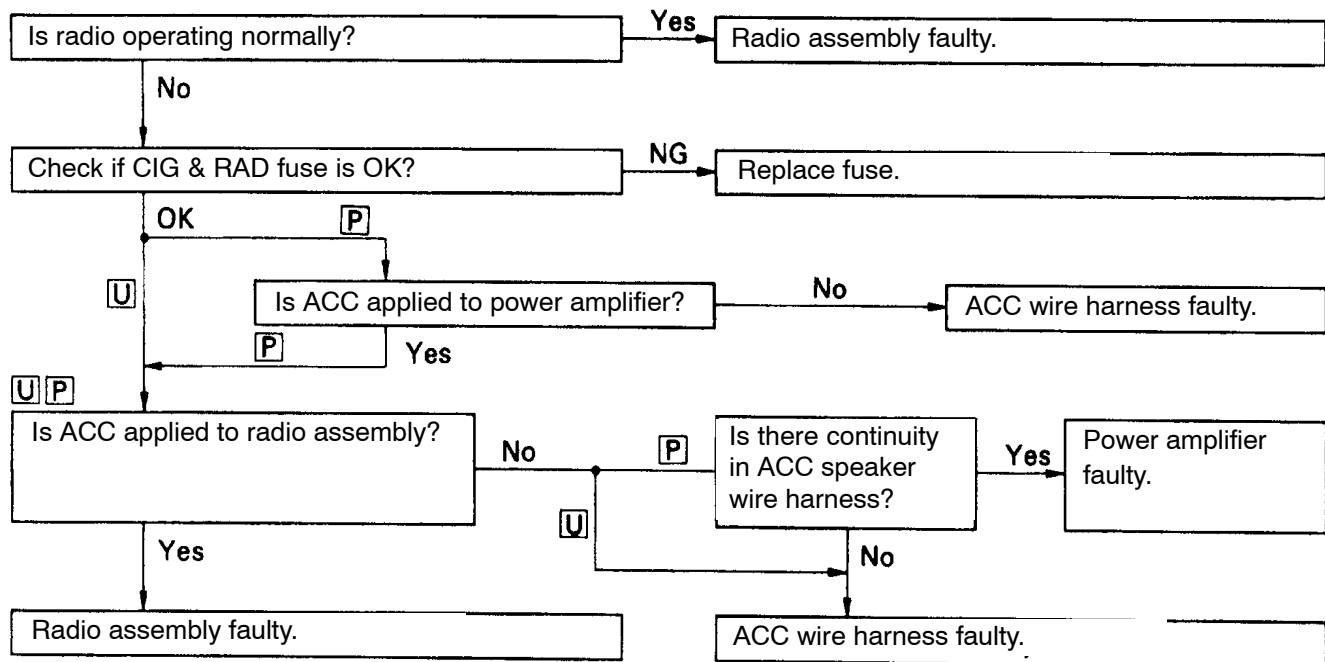
P : Radio - Tape Player, 9 Speaker



9 Tape Player CASSETTE TAPE INSERTS, BUT NO POWER

U : Radio - Tape Player, 5 Speaker

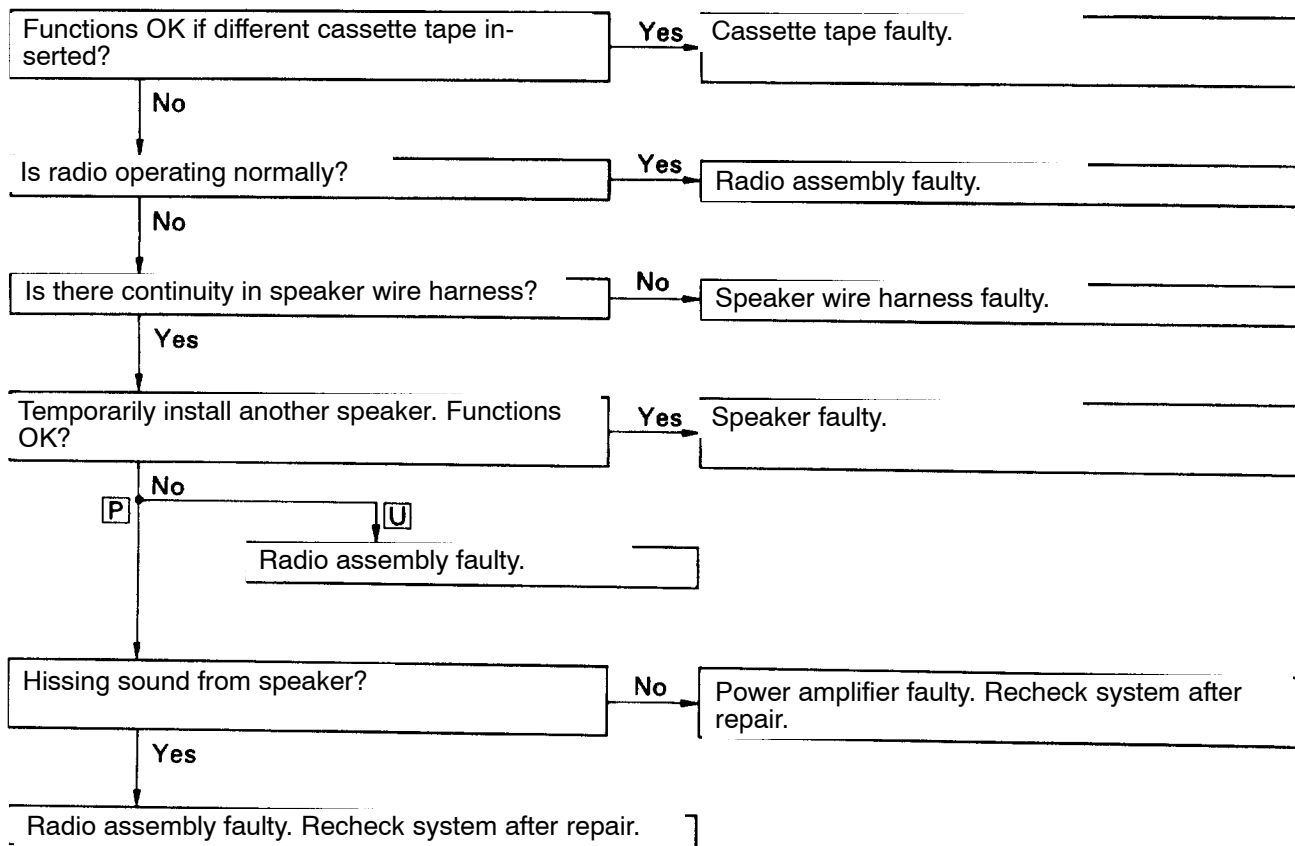
P : Radio - Tape Player, 9 Speaker



10 Tape Player POWER COMING IN, BUT TAPE PLAYER NOT OPERATING

U : Radio - Tape Player, 5 Speaker

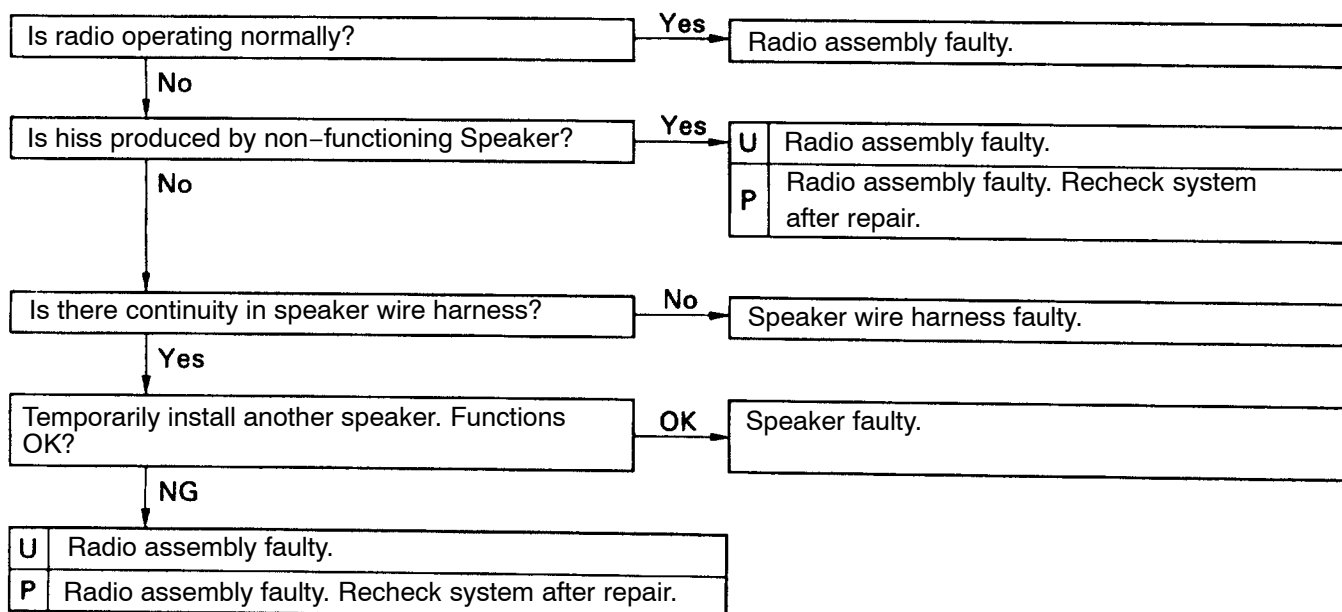
P : Radio - Tape Player, 9 Speaker



11 Tape Player EITHER SPEAKER DOES NOT WORK

U : Radio - Tape Player, 5 Speaker

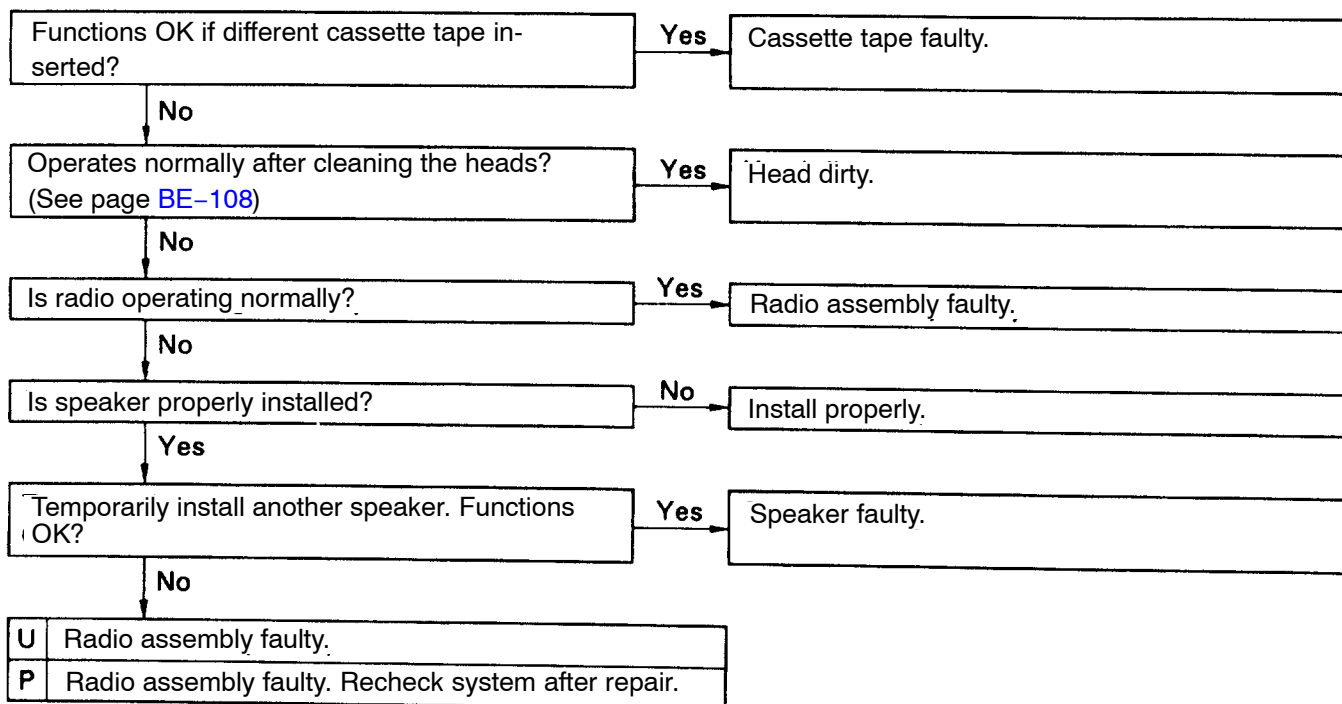
P : Radio - Tape Player, 9 Speaker



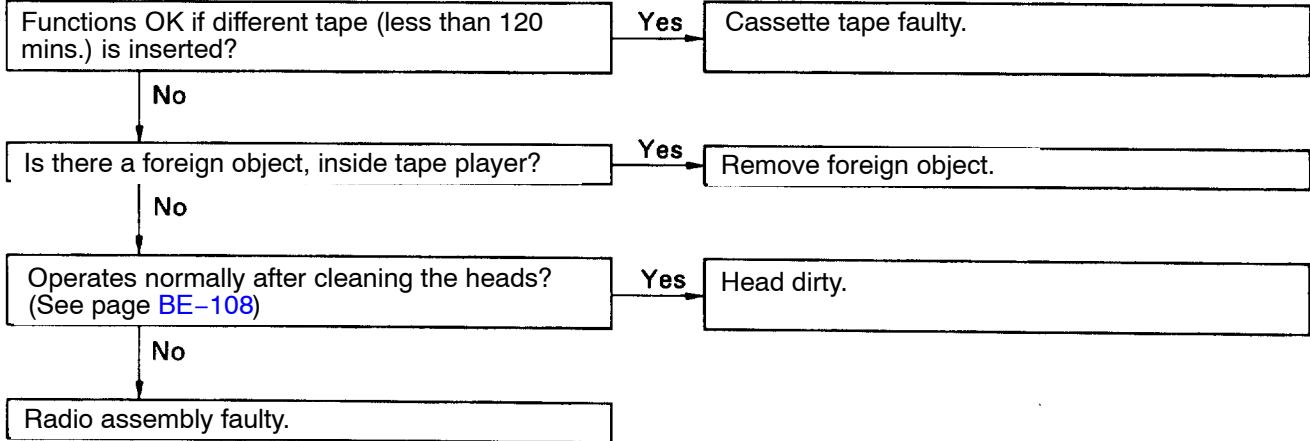
12 Tape Player SOUND QUALITY POOR (VOLUME FAINT)

U : Radio - Tape Player, 5 Speaker

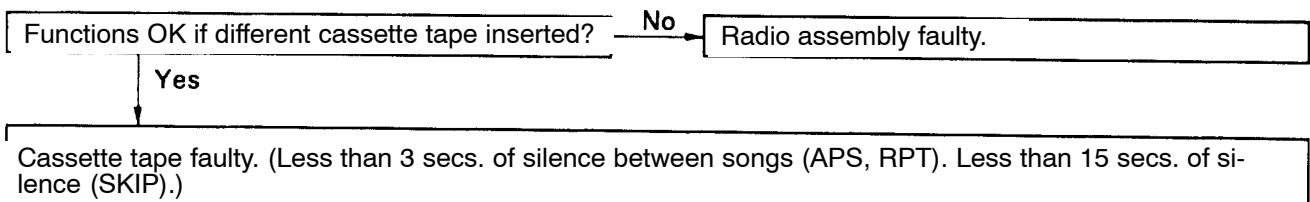
P : Radio - Tape Player, 9 Speaker



13 Tape Player TAPE JAMMED, MALFUNCTION WITH TAPE SPEED OR AUTO REVERSE

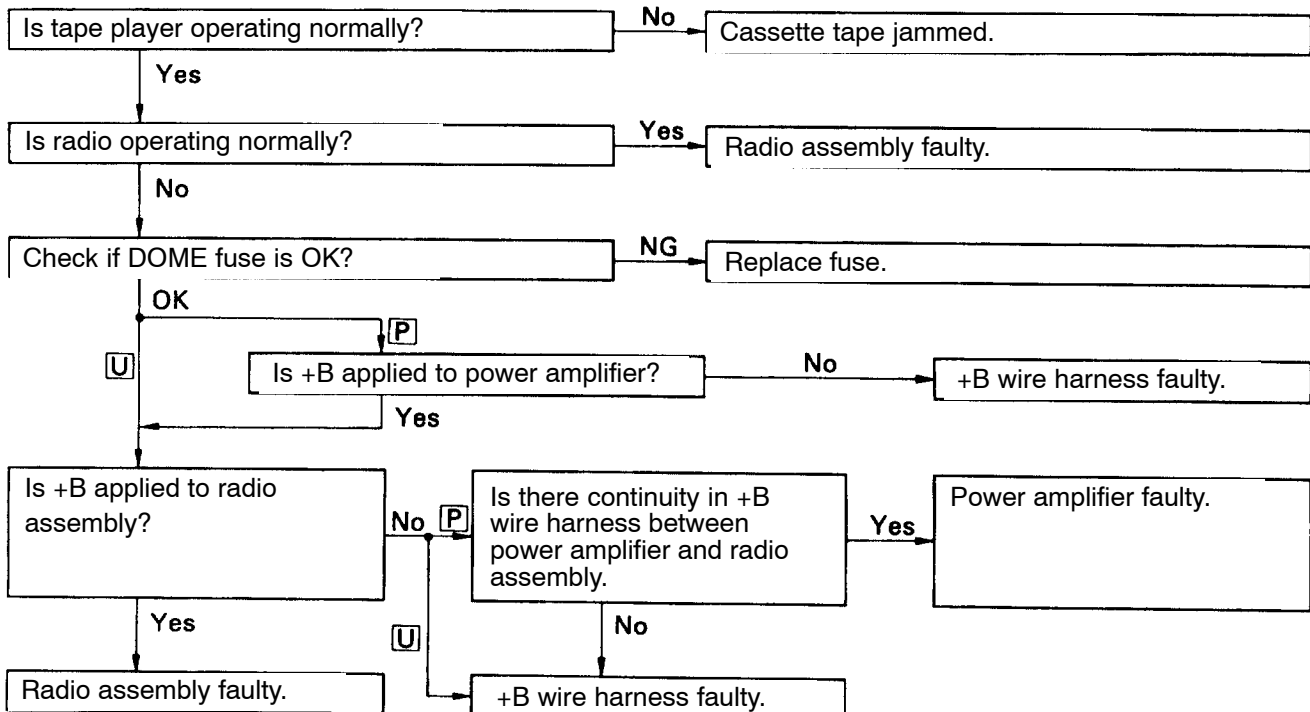


14 Tape Player APS, SKIP, RPT BUTTON NOT OPERATING

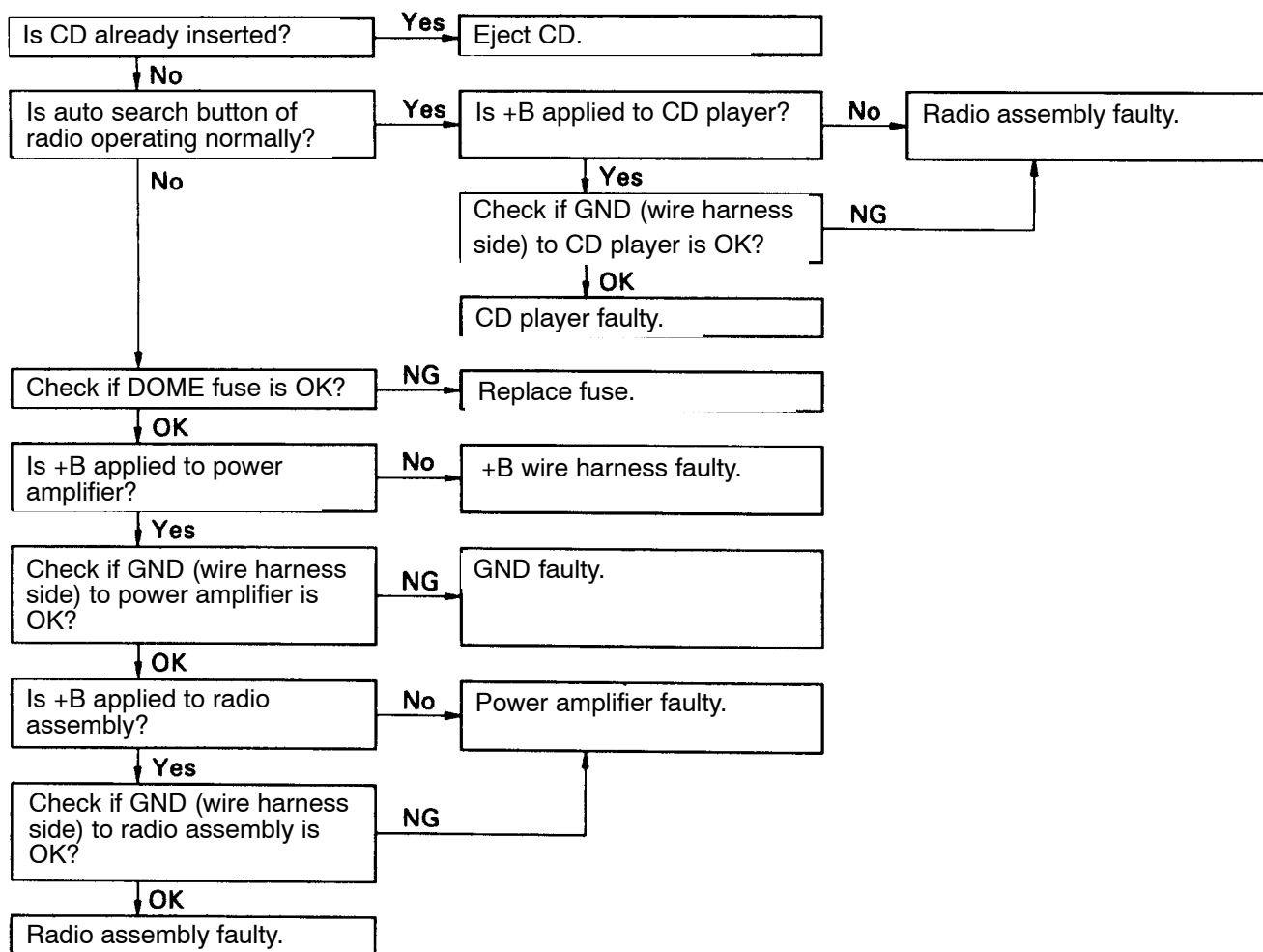


15 Tape Player CASSETTE TAPE WILL NOT EJECT

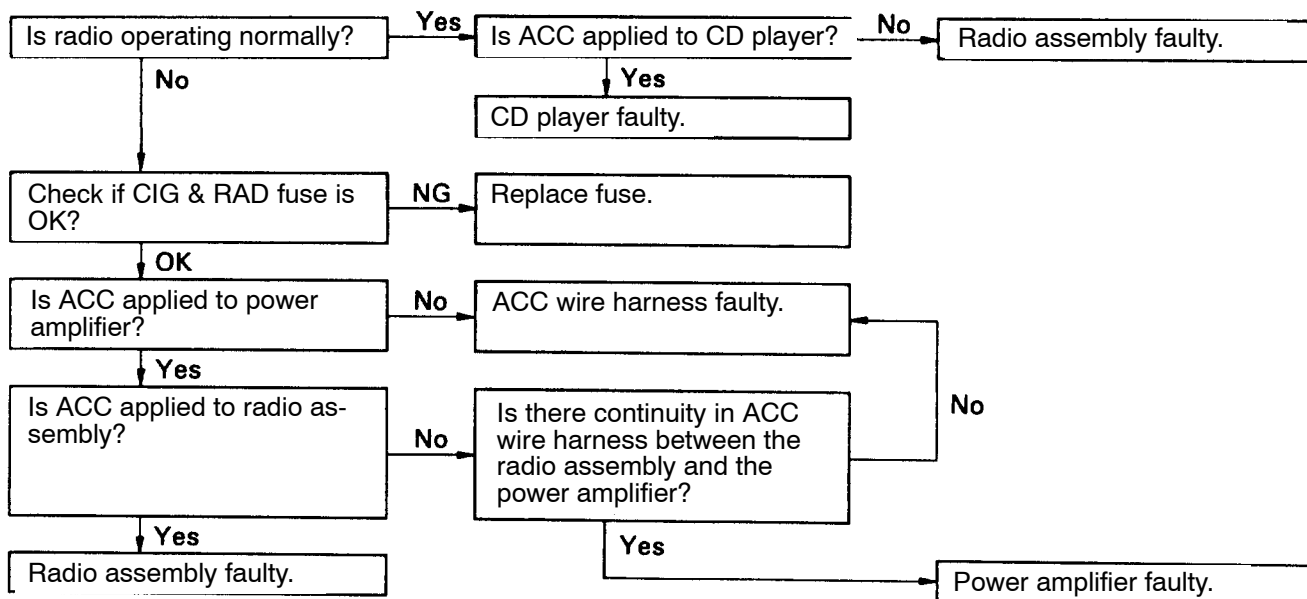
R : Radio, 5 Speaker **U** : Radio – Tape Player, 5 Speaker
P : Radio – Tape Player, 9 Speaker



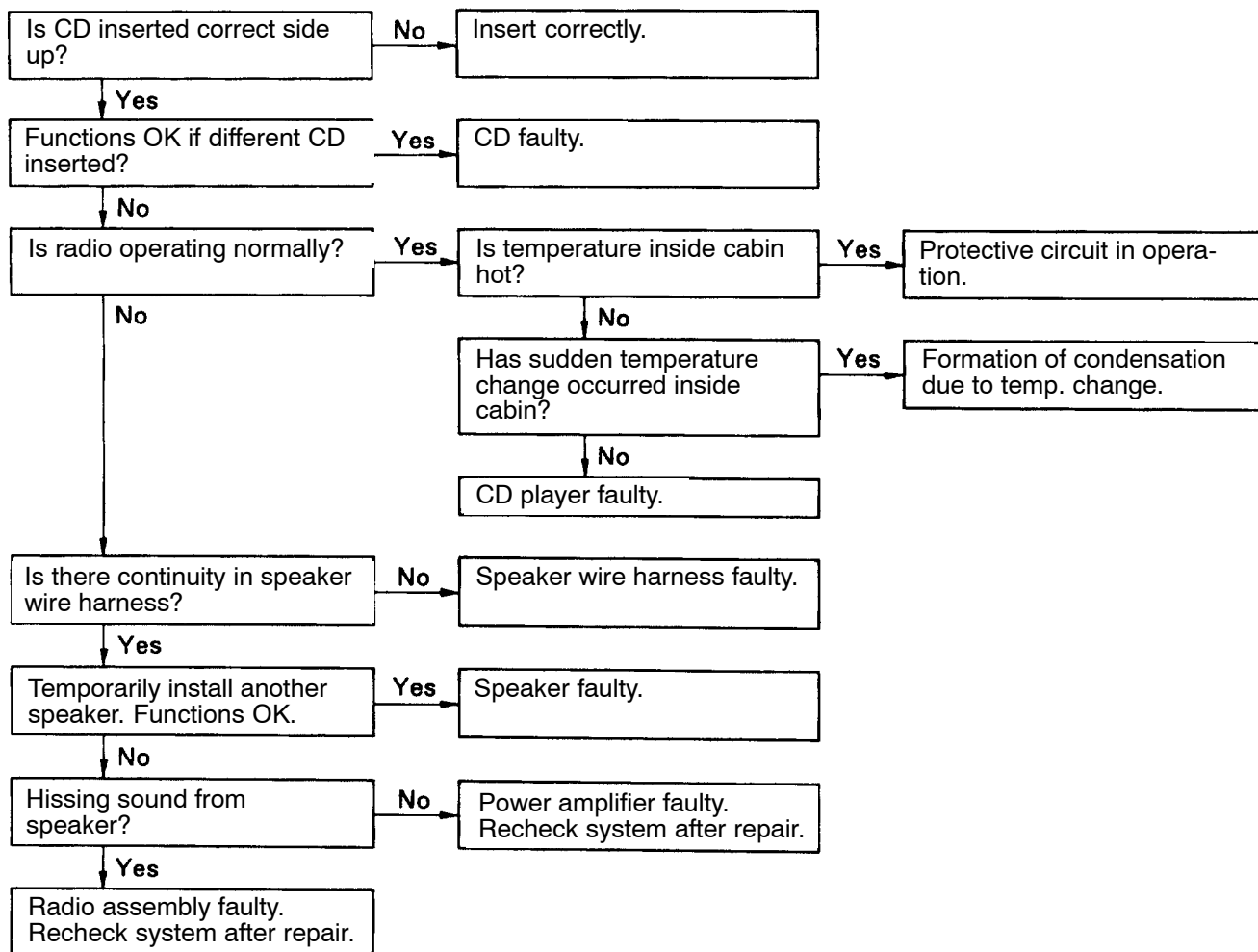
16 CD Player CD CANNOT BE INSERTED



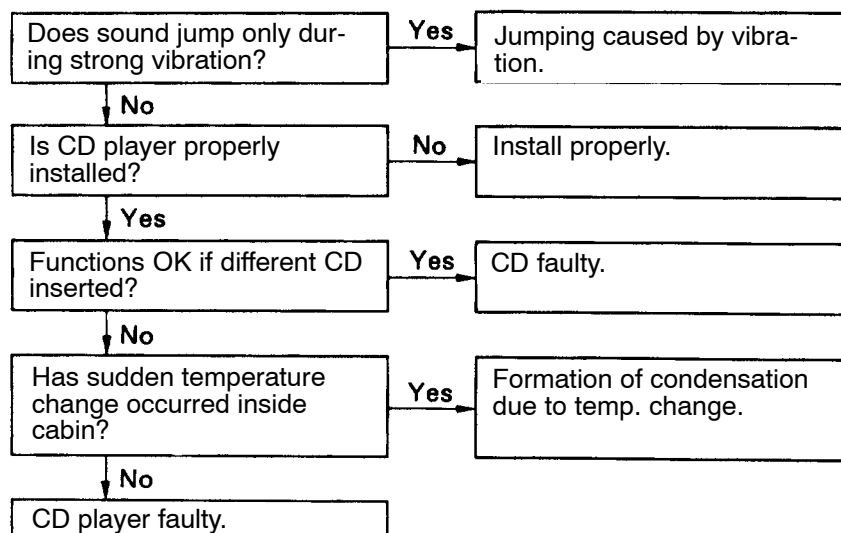
17 CD Player CD INSERTS, BUT NO POWER



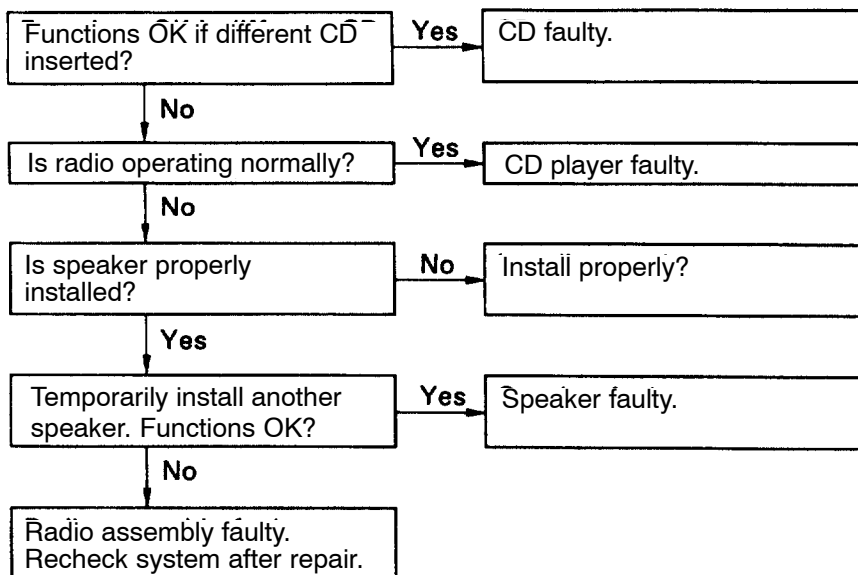
18 CD Player POWER COMING IN, BUT CD PLAYER NOT OPERATING



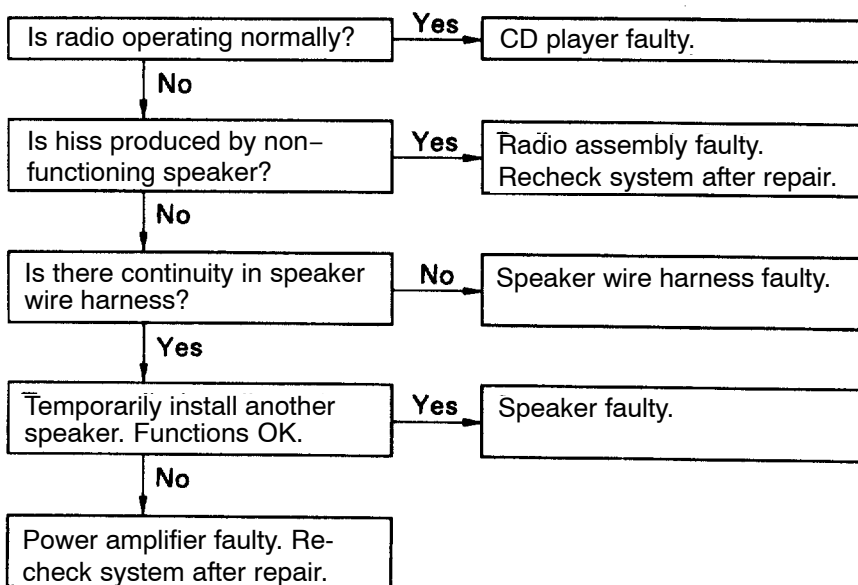
19 CD Player SOUND JUMPS

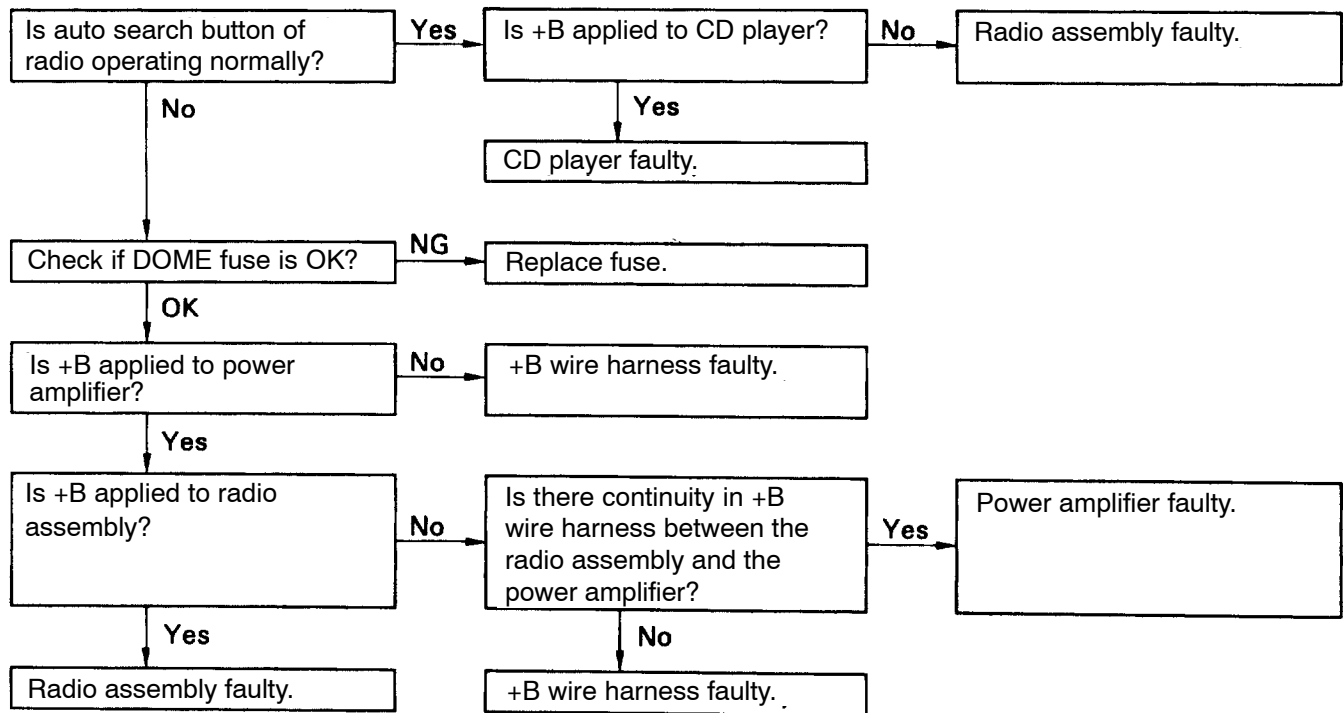


20 CD Player SOUND QUALITY POOR (VOLUME FAINT)

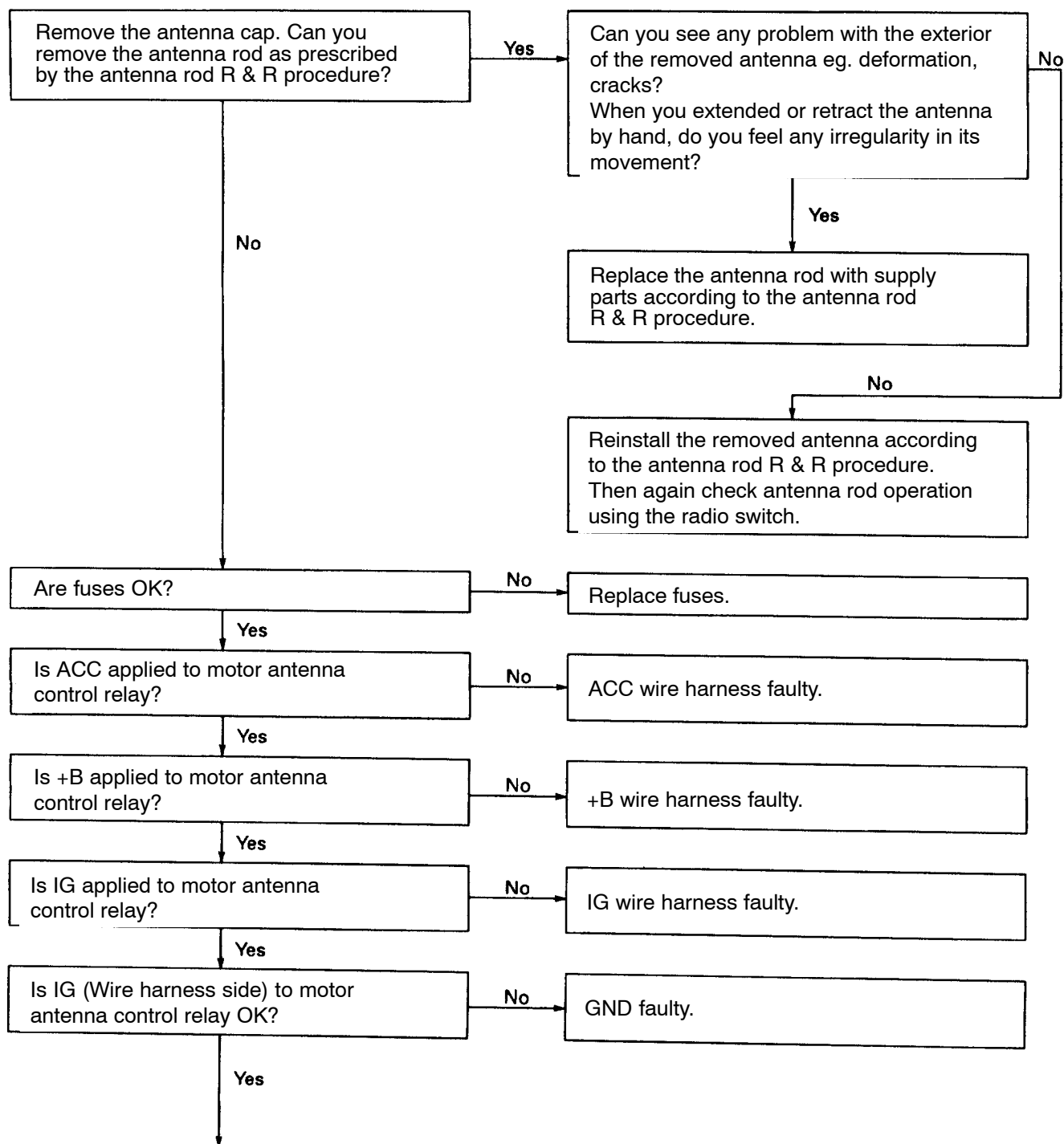


21 CD Player EITHER SPEAKER DOES NOT WORK

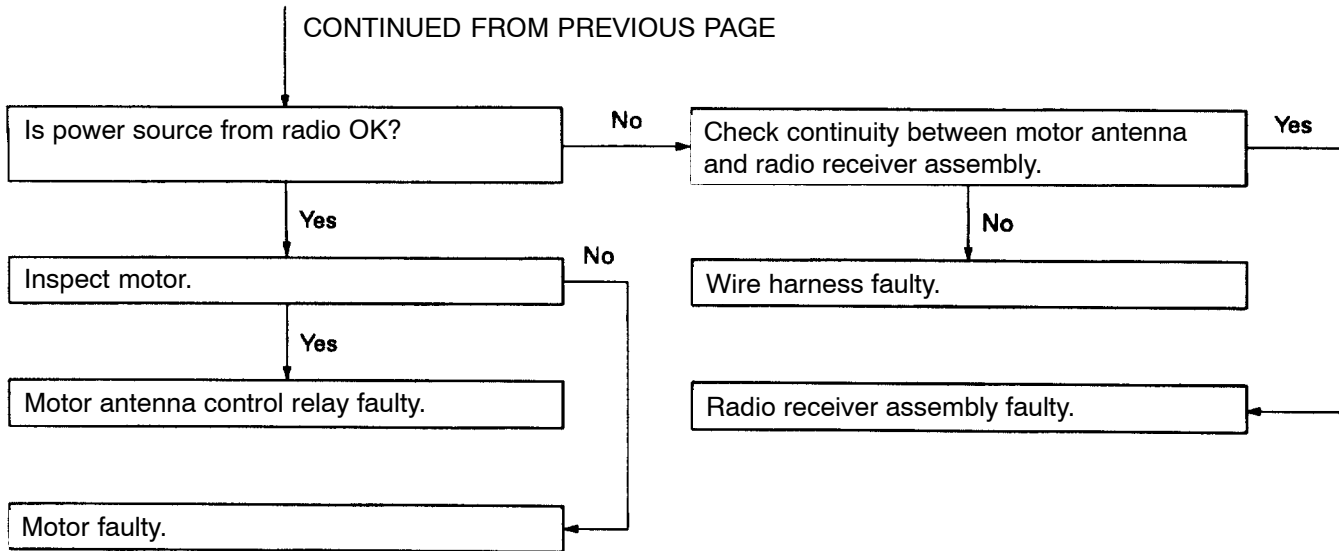


22 CD Player CD WILL NOT EJECT

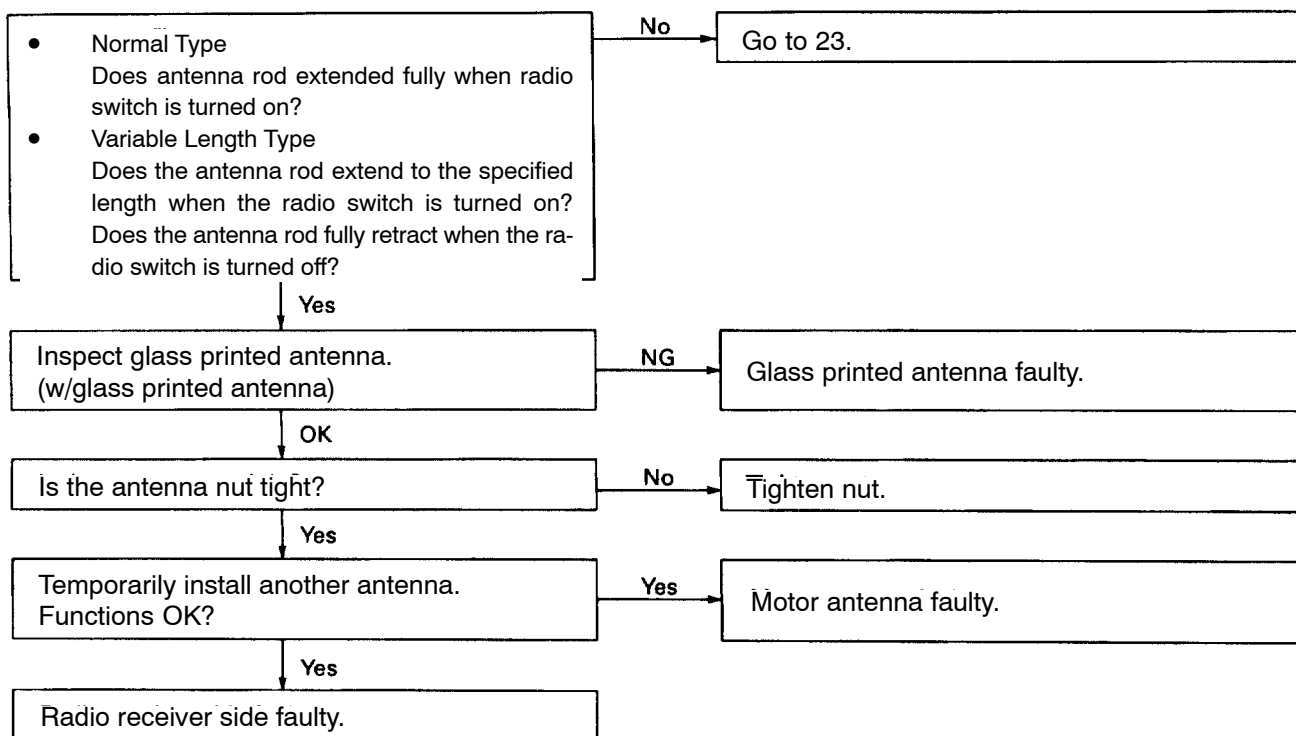
23 Antenna ANTENNA DOES NOT FULLY EXTEND OR FULLY RETRACT



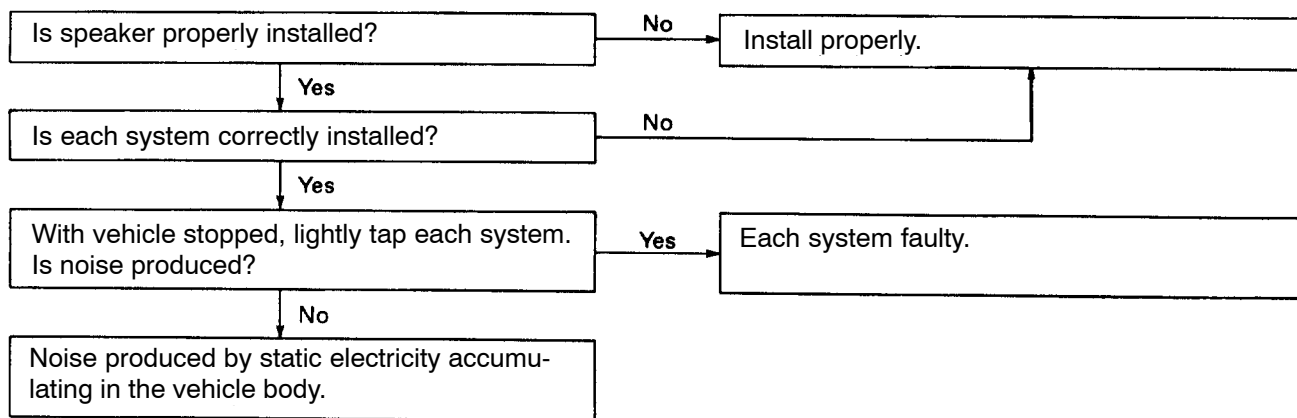
CONTINUED FROM PREVIOUS PAGE



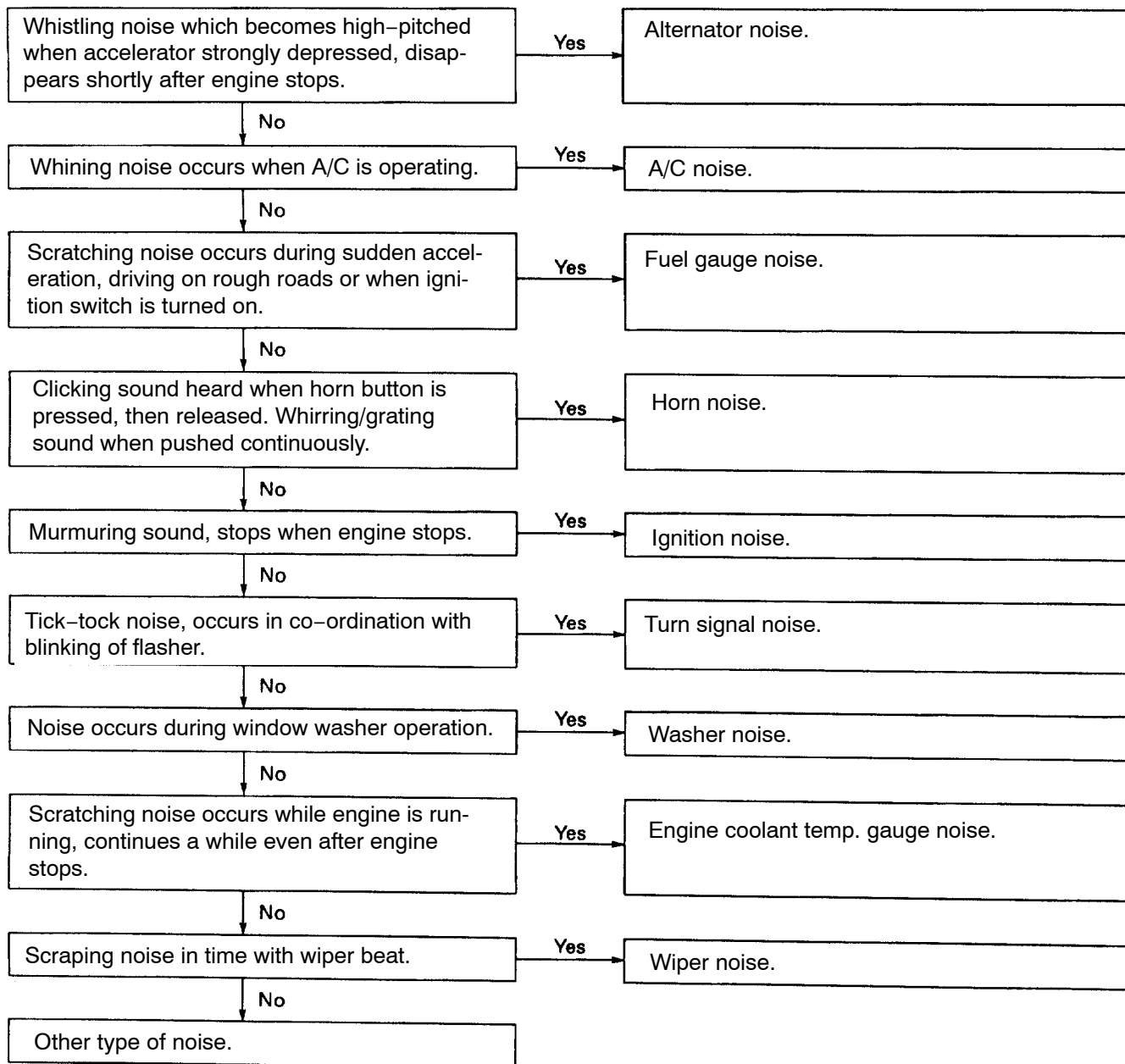
24 Antenna ANTENNA-RELATED

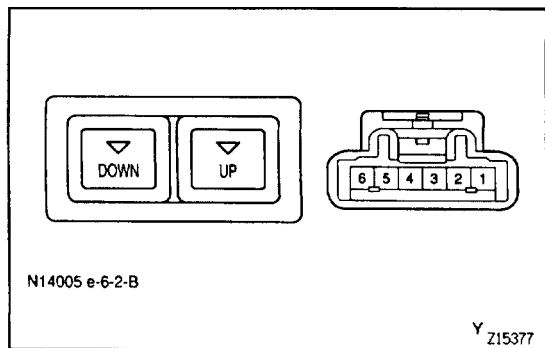


25 Noise NOISE PRODUCED BY VIBRATION OR SHOCK WHILE DRIVING



26 Noise NOISE PRODUCED WHEN ENGINE STARTS





ANTENNA SWITCH INSPECTION

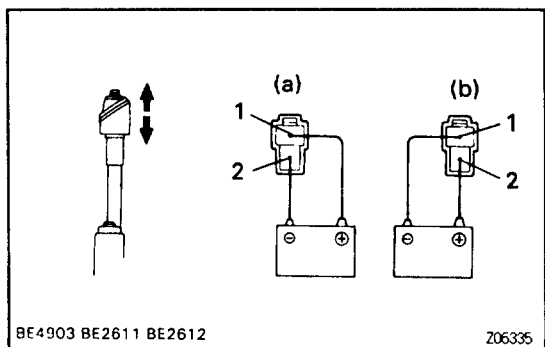
INSPECT SWITCH CONTINUITY

w/ MOTOR ANTENNA:

Except RADIO-LINKED TYPE

Condition	Tester connection to terminal number	Specified condition
UP Button Position Free	2 – 5	Continuity
UP Button Position Pushed in	4 – 5	Continuity
DOWN Button Position Free	2 – 3	Continuity
DOWN Button Position Pushed in	3 – 4	Continuity
Illumination circuit	1 – 6	Continuity

If continuity is not as specified, replace the switch.



ANTENNA MOTOR INSPECTION

INSPECT MOTOR OPERATION

- Connect the positive (+) lead from the battery to terminal 1 and the negative (–) lead to terminal 2, and check that the motor turns (moves upward.)
- Then, reverse the polarity, check that the motor turns the opposite way (moves downward.)

If operation is not as specified, replace the motor.