AUDIO SYSTEM

DESCRIPTION

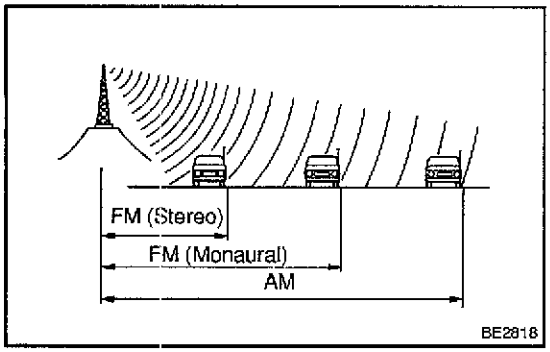
BE03P-01

1. RADIO WAVE BAND

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

Frequency	30 kHz	300 kHz	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



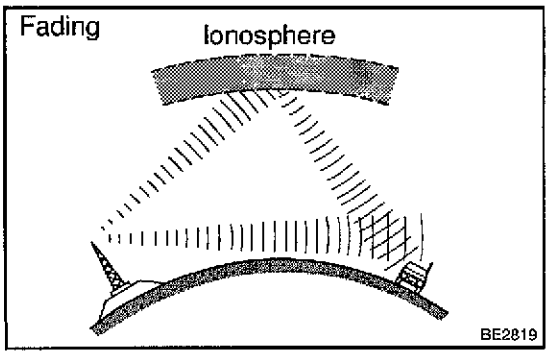
2. SERVICE AREA

There are great differences in the size of the service area for AM and FM monaural. Sometimes FM stereo broadcasts cannot be received even though AM comes in very clearly at the same location.

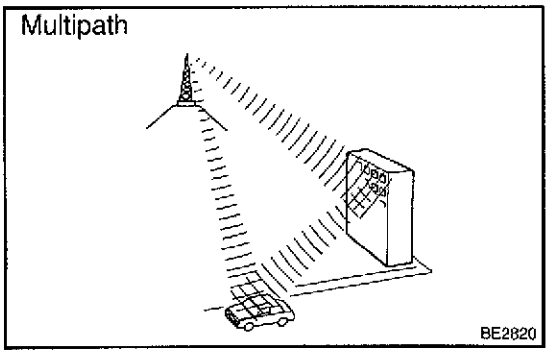
Not only does FM stereo have the smallest service area, but it also picks up static and other types of interference ("noise") easily if the vehicle is moving in a fringe area.

3. RECEPTION PROBLEMS

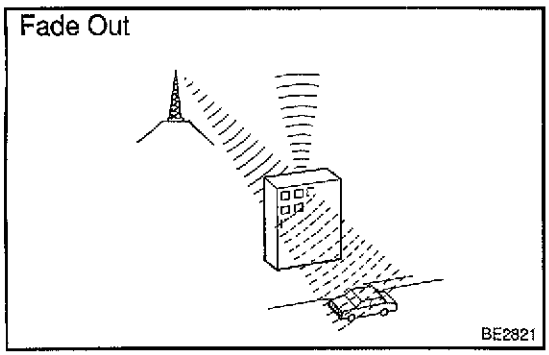
Besides the problem by static, there are also the problems called "fading", "multipath" and "fade out". These problems are caused not by electrical noise but by the nature of the radio waves propagations.



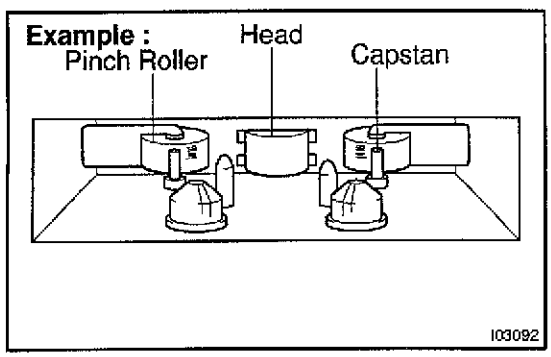
- Fading
  Besides electrical interference, AM broadcasts are also susceptible to other types of interference, especially at night. This is because AM radio waves bounce off the ionosphere at night.
  These radio waves then interfere with the signals from the same transmitter that reach the vehicle's antenna directly. This type of interference is called "fading", because the reflected indirect signal (which is off–phase in relation to the direct wave) sporadically strenghten or weaken the resultant signal at reception point.



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



- Fade Out
  Because FM radio waves are of higher frequencies than those of AM, 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. MAINTENANCE OF TAPE PLAYER

Tape player / Tape head cleaning
Using a moist–type cleaning tape, clean the head surface, pinch rollers and capstans.
(Never use "abrasive" type cassette–shaped cleaner.)

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TROUBLESHOOTING

NOTICE:

When replacing internal mechanism (including LSI) of the audio system, never let your finger or clothes touch the leads of replacement electronic parts such as IC.

HINT:

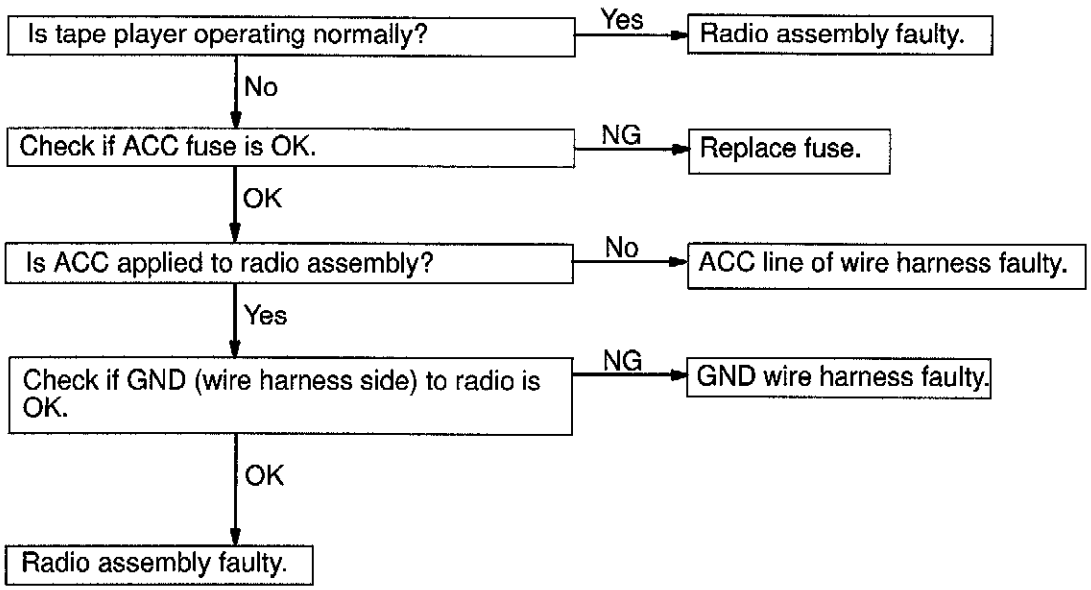
This inspection procedure is a simple troubleshooting which should be used on the vehicle during system operation, and applicable only when a system component is assumed to be faulty (Neither wire harness, connectors, nor anything else.)

Always inspect the trouble taking the following items into consideration.

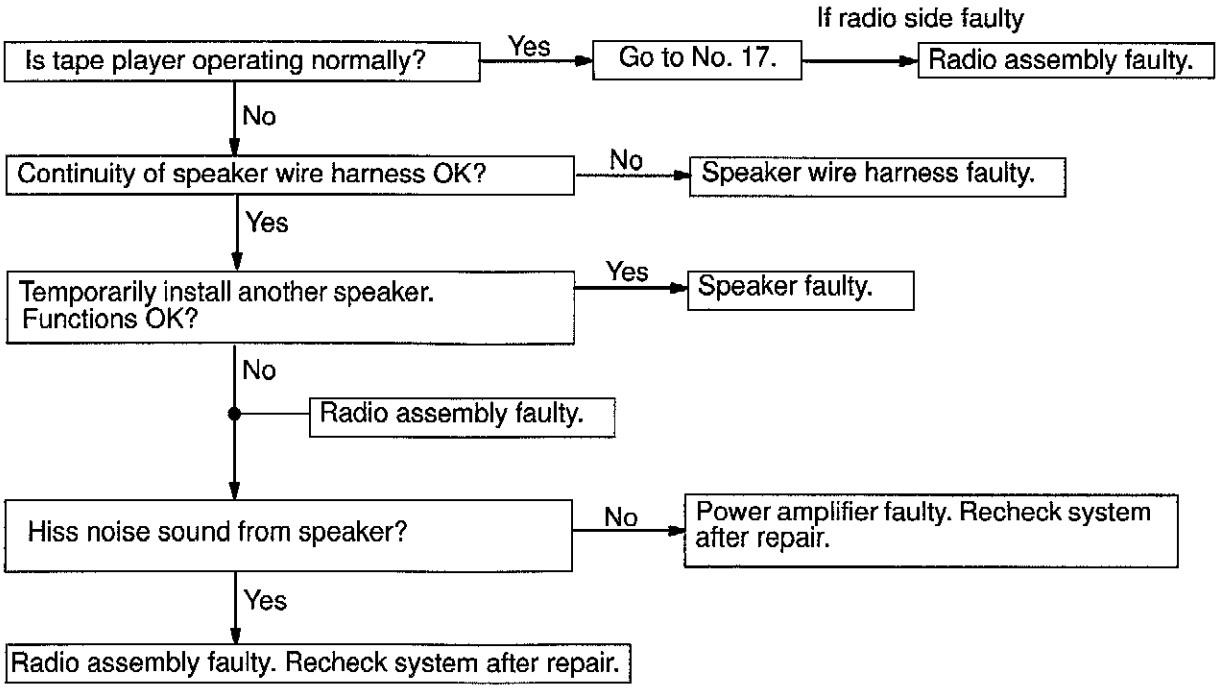
- Open or short circuit of the wire harness
- Connector or terminal connection faull

	Problem	No.
Radio	No power coming in.	1
	Power coming in, but radio not operating.	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
	Fewer station presets.	5
	Sound quality poor.	6
	Cannot set station select button.	6
	Preset memory disappears.	7
Tape Player	Cassette tape cannot be inserted.	8
	cassette tape inserted.	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
	Will not eject cassette tape.	15
Antenna	Antenna – related.	16
Noise	Noise produced by vibration or shock while driving.	17
	Noise produced when engine starts.	18

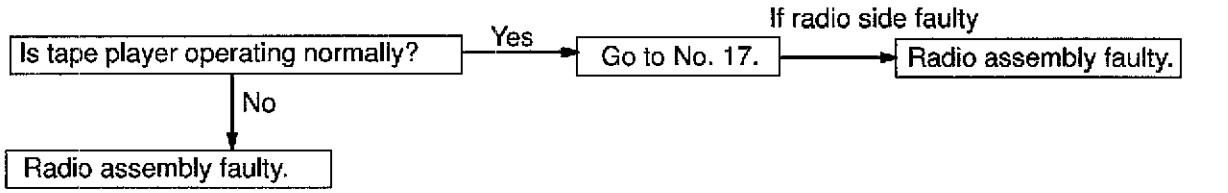
1	Radio	NO POWER COMING IN



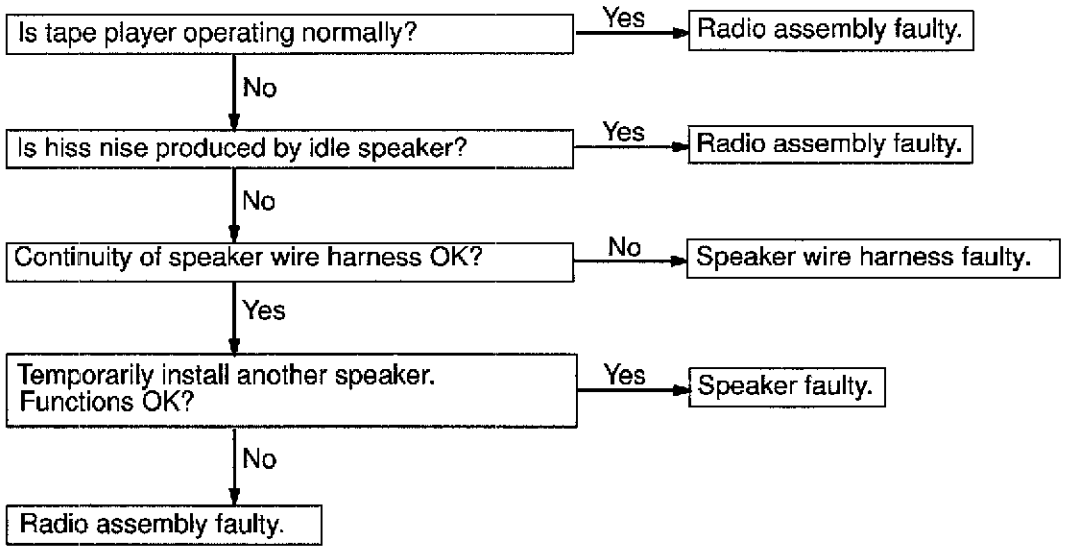
2	Radio	POWER COMING IN, BUT RADIO NOT OPERATING



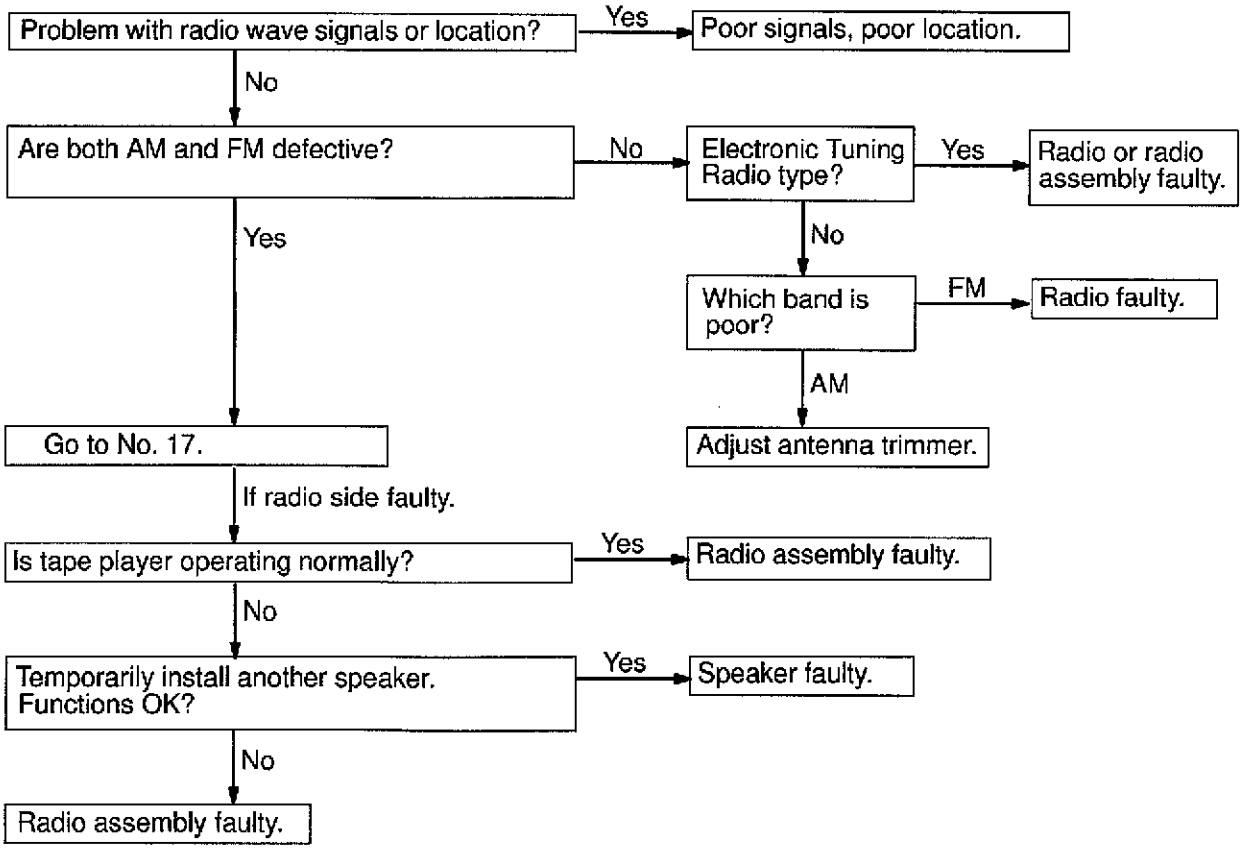
3	Radio	NOISE PRESENT, BUT AM–FM NOT OPERATING



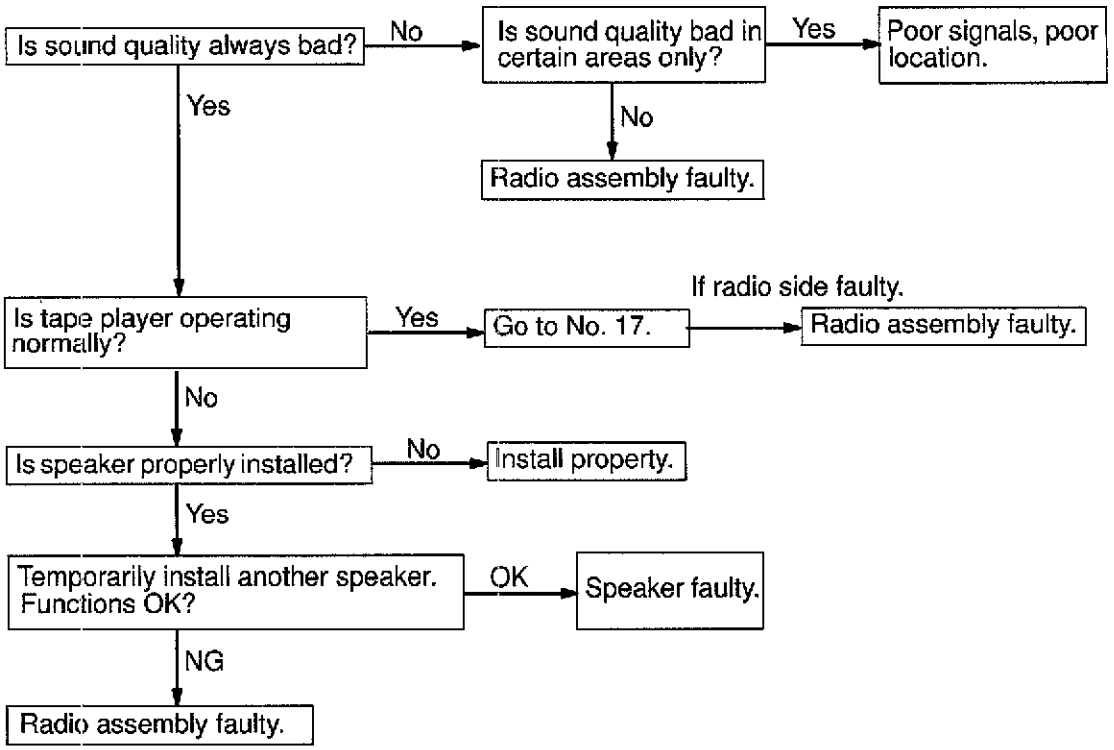
4	Radio	EITHER SPEAKER DOES NOT WORK



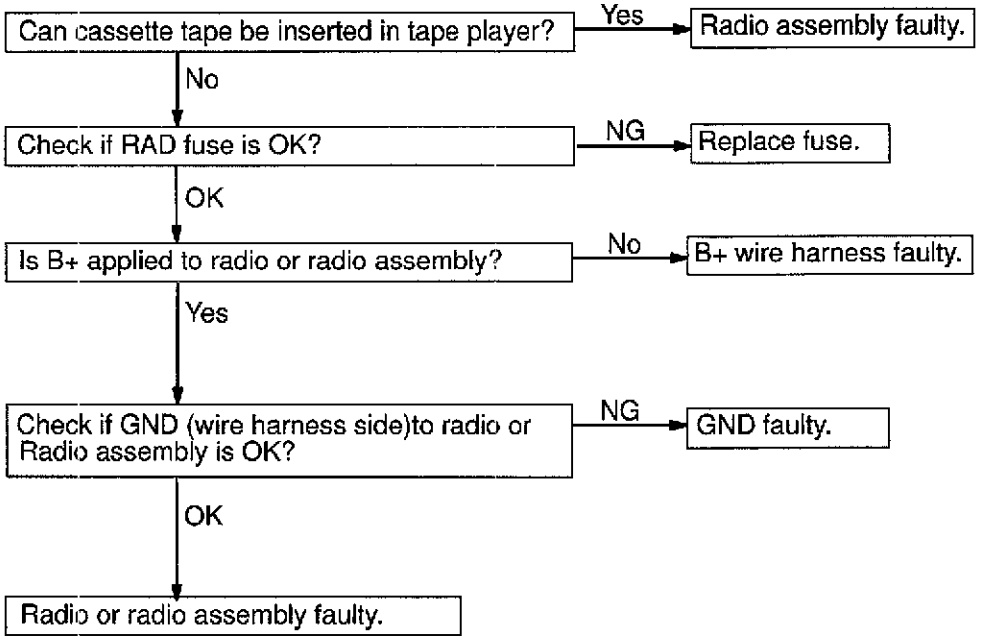
5	Radio	EITHER AM OR FM DOES NOT WORK, RECEPTION POOR (VOLUME FAINT), FEWER STATION PRESETS



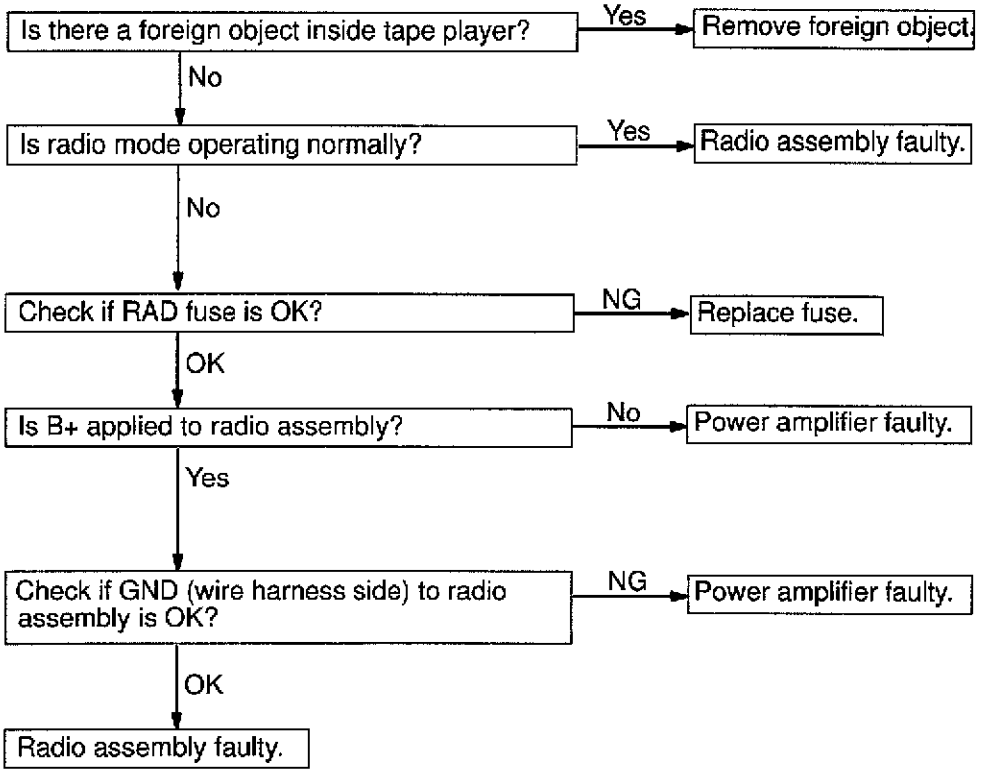
6 Radio — SOUND QUALITY POOR



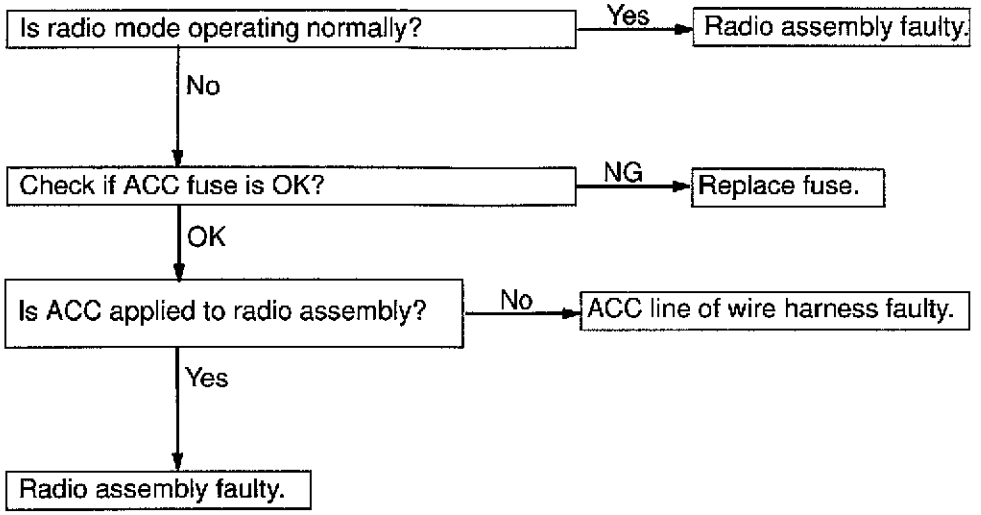
7 Radio — CANNOT SET STATION SELECT BUTTON, PRESET MEMORY DISAPPEARS



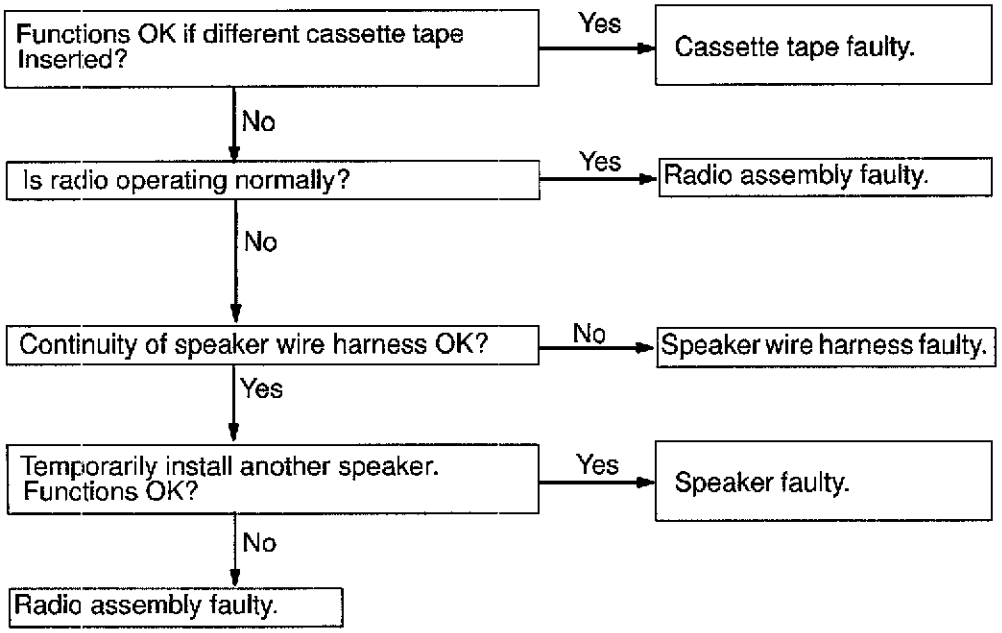
8	Tape Player	CASSETTE TAPE CANNOT BE INSERTED



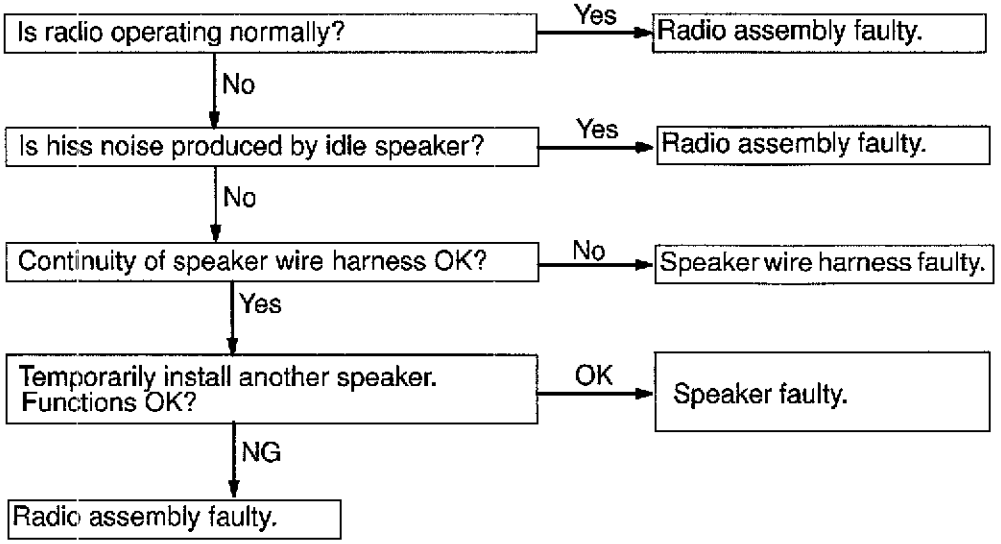
9	Tape Player	CASSETTE TAPE INSERTED, BUT NO POWER



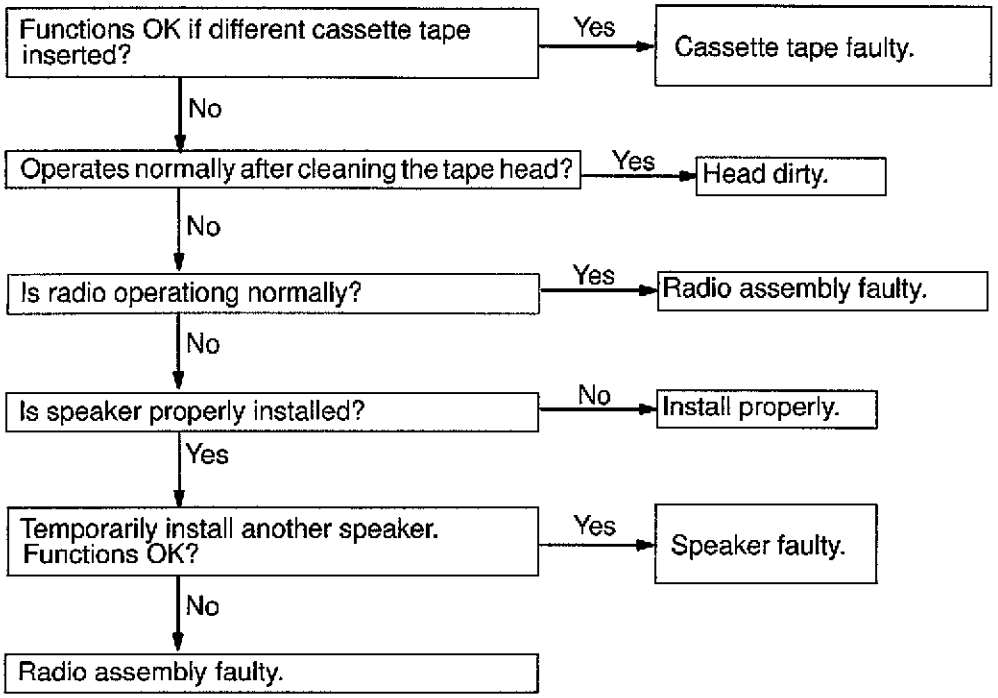
10	Tape Player	POWER COMING IN, BUT TAPE PLAYER NOT OPERATING



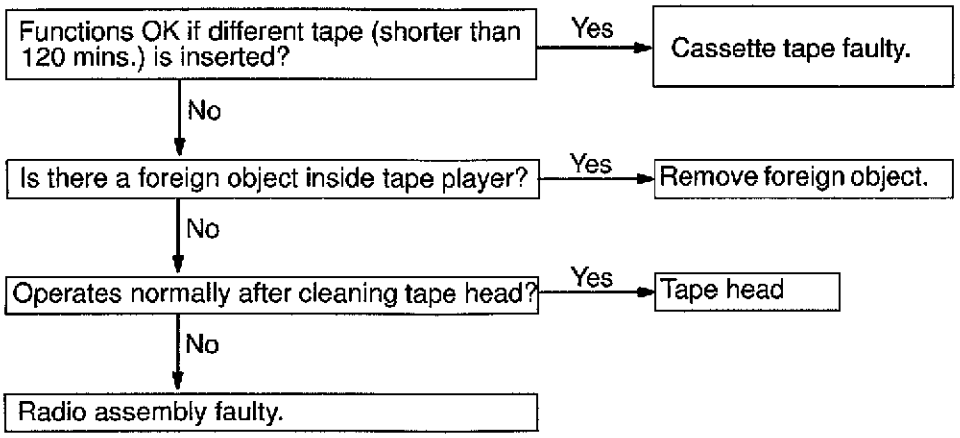
11	Tape Player	EITHER SPEAKER DOES NOT WORK



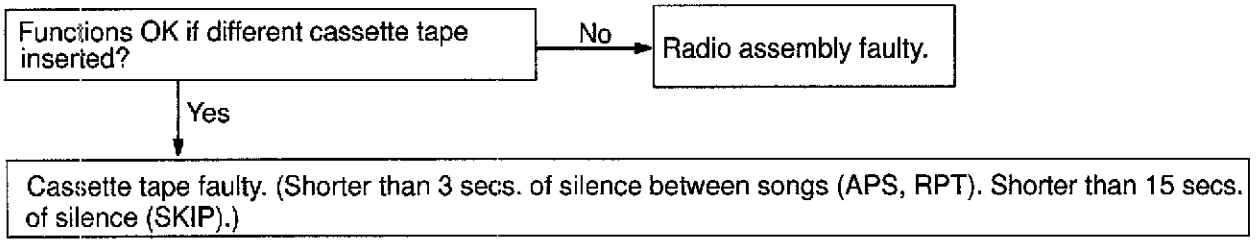
12	Tape Player	SOUND QUALITY POOR (VOLUME FAINT)



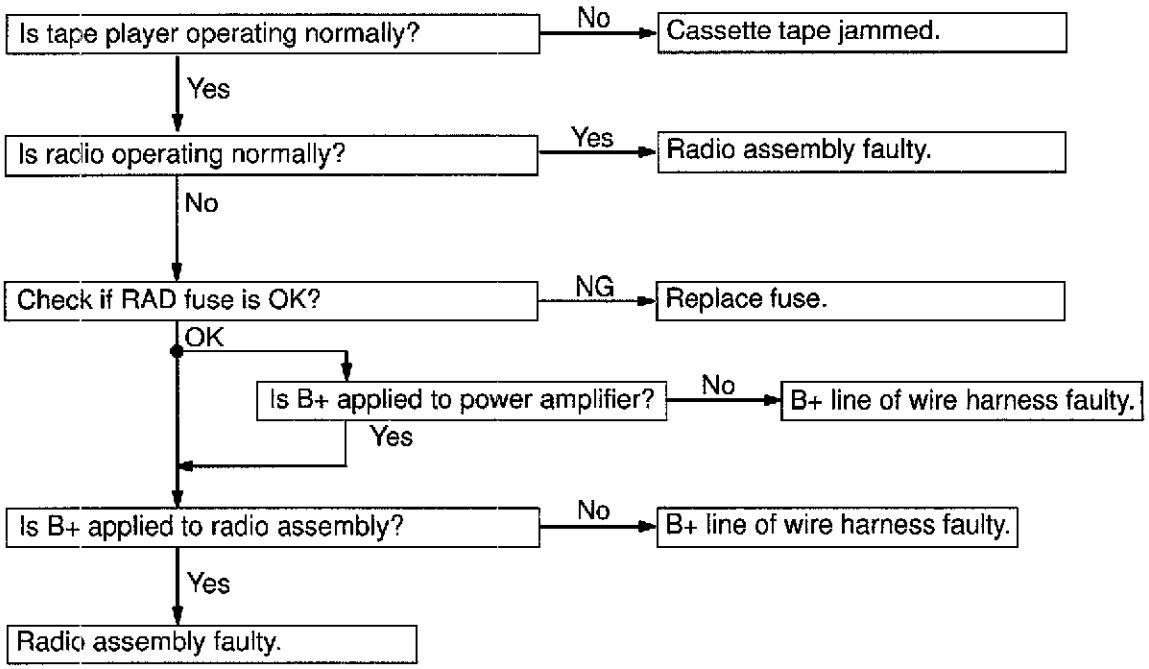
13	Tape Player	TAPE JAMMED, MALFUNCTION WITH TAPE SPEED OR AUTO–REVERSE



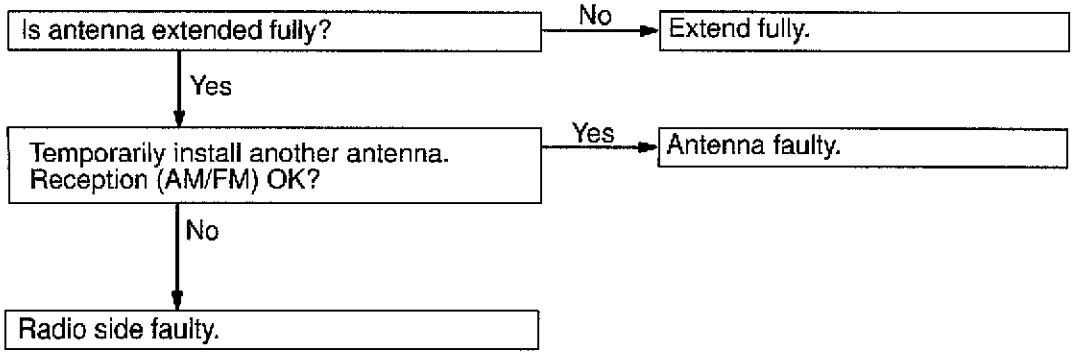
14	Tape Player	APS, SKIP, RPT BUTTONS NOT OPERATING



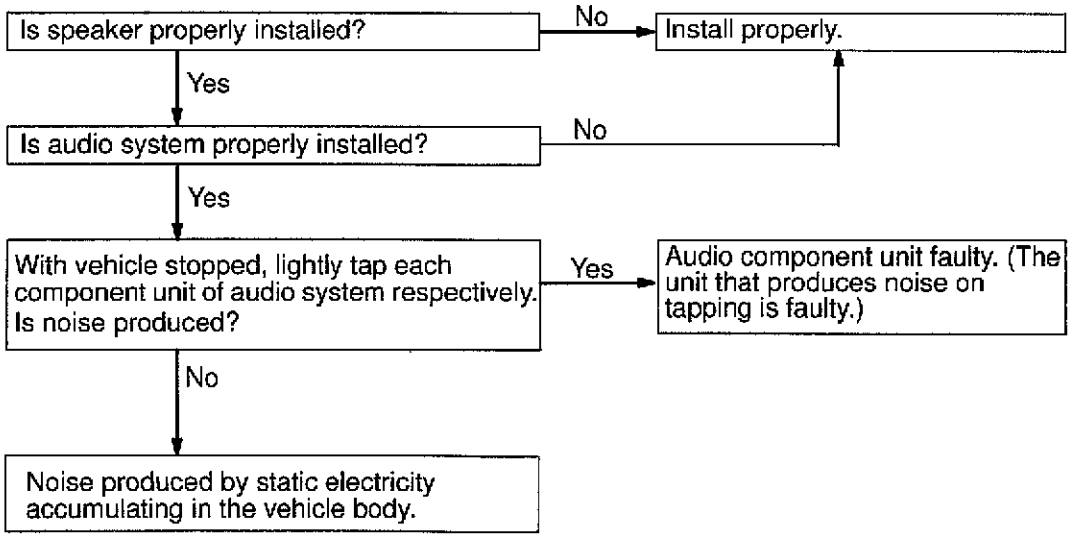
15	Tape Player	CASSETTE TAPE WILL NOT EJECT



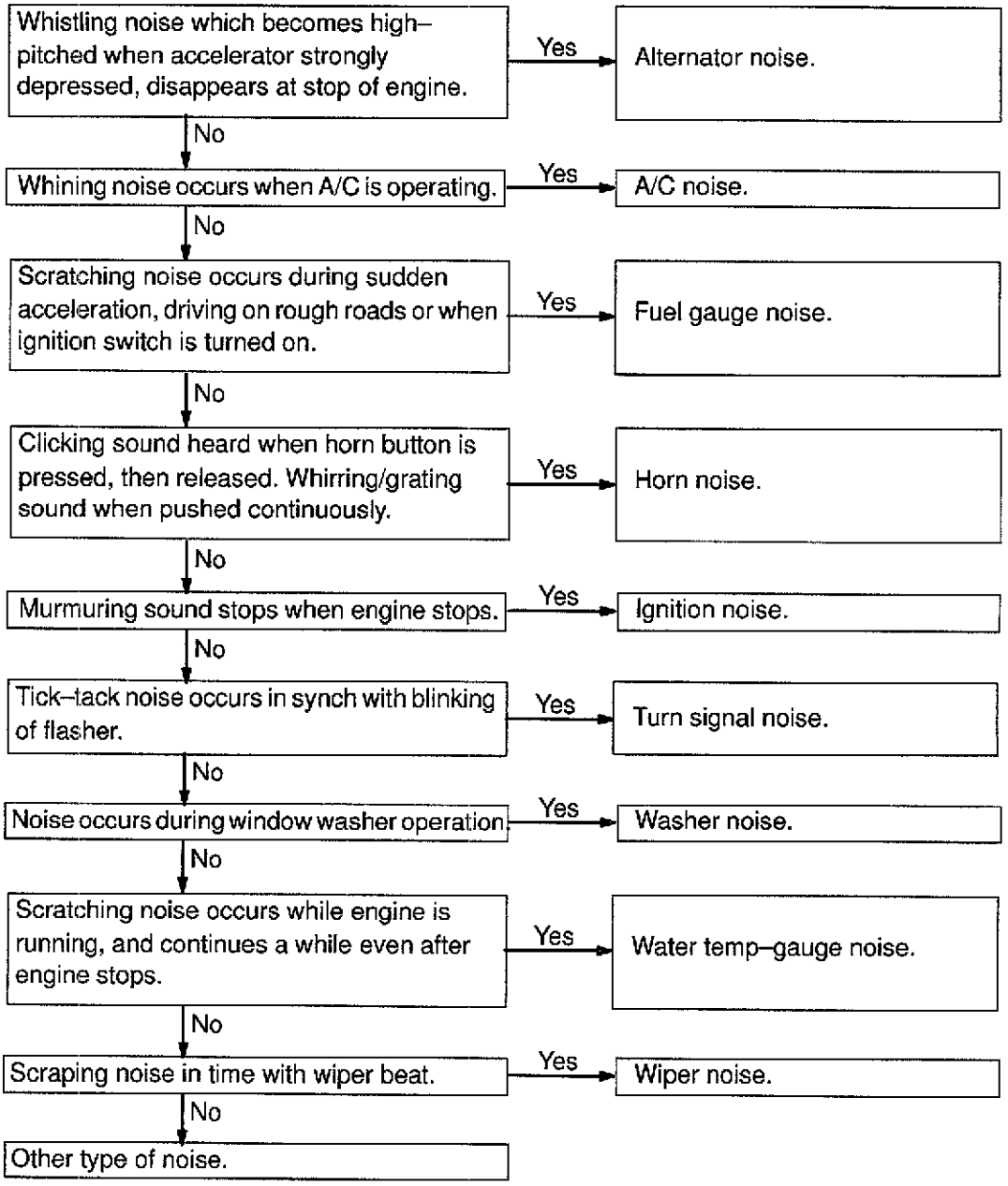
16	Antenna	ANTENNA–RELATED



17	Noise	NOISE PRODUCED BY VIBRATION OR SHOCK WHILE DRIVING



18	Noise	NOISE PRODUCED WHEN ENGINE STARTS



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LOCATION

