<SUPPLEMENT-III>

HEATER & AIR CONDITIONER

SECTION HA

MODIFICATION NOTICE:

- Wiring diagram has been changed.
- Relief valve to compressor has been added.
- Rear thermo amp. and rear solenoid valve relay have been eliminated.

CONTENTS

Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER” used along with a seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. The SRS system composition which is available to NISSAN MODEL Y61 is as follows (The composition varies according to the destination and optional equipment.):

- For a frontal collision
  The Supplemental Restraint System consists of driver air bag module (located in the center of the steering wheel), front passenger air bag module (located on the instrument panel on passenger side), seat belt pre-tensioners, a diagnosis sensor unit, warning lamp, wiring harness and spiral cable.
- For a side collision
  The Supplemental Restraint System consists of front side air bag module (located in the outer side of front seat), satellite sensor, diagnosis sensor unit (one of components of air bags for a frontal collision), wiring harness, warning lamp (one of components of air bags for a frontal collision).

Information necessary to service the system safely is included in the **RS section** of this Service Manual.

WARNING:

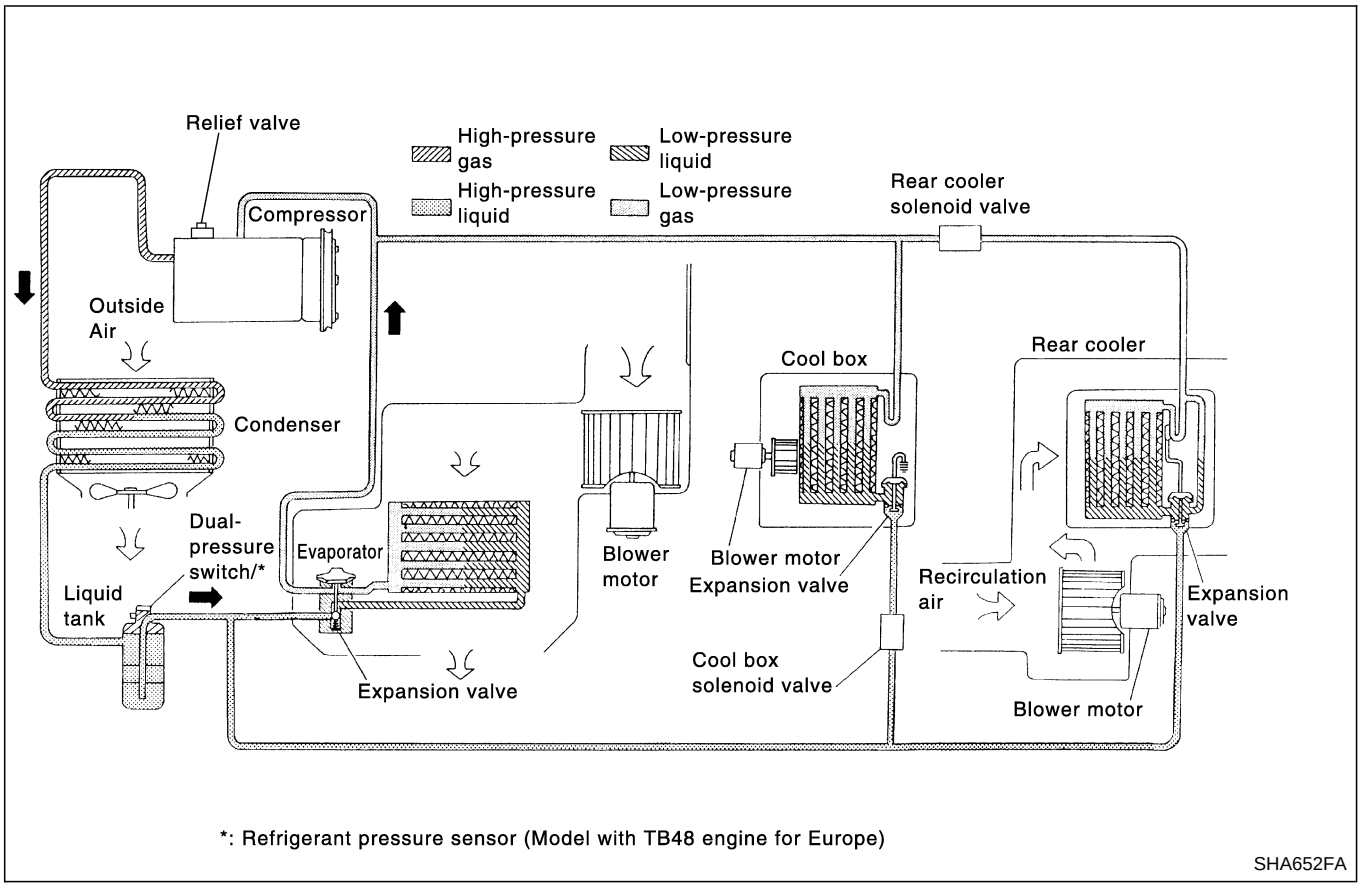
- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance should be performed by an authorized NISSAN dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the RS section.**
- **Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. Spiral cable and wiring harnesses covered with yellow insulation tape either just before the harness connectors or for the complete harness are related to the SRS.**

Refrigeration Cycle

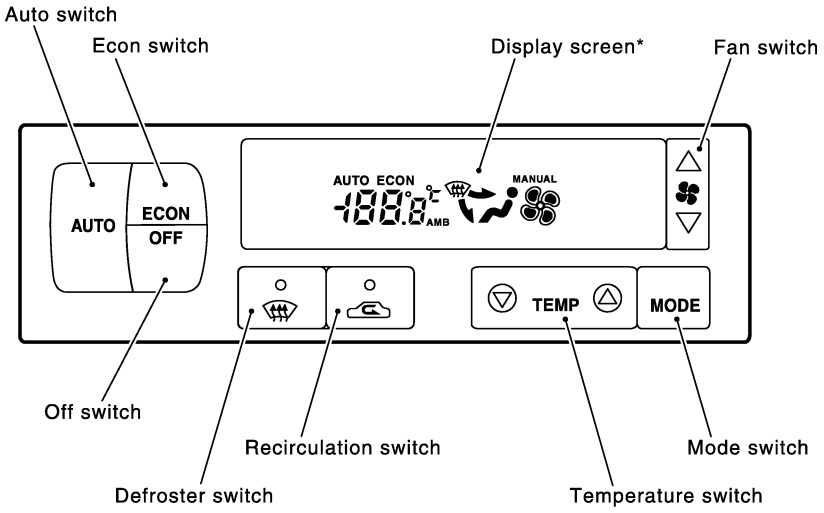
REFRIGERANT SYSTEM PROTECTION

Pressure Relief Valve

The refrigerant system is also protected by a pressure relief valve, located in the rear head of the compressor. When the pressure of refrigerant in the system increases to an unusual level [more than 3,727 kPa (38 kg/cm^2, 540 psi)], the release port on the pressure relief valve automatically opens and releases refrigerant into the atmosphere.



Control Operation



*Display the operation of the system.

RHA210I

AUTO SWITCH

The compressor, air intake doors, air mix door, mode doors, and blower speed are automatically controlled so that the in-vehicle temperature will reach, and be maintained at the set temperature selected by the operator.

The air conditioning cooling function operates only when the engine is running.

ECON SWITCH

Fully automatic control with the compressor off. With the compressor off, the system will not remove heat (cool) or de-humidify. The system will maintain the in-vehicle temperature at the set temperature when the set temperature is above the ambient (outside) temperature.

TEMPERATURE SWITCH (Potentio Temperature Control)

Increases or decreases the set temperature.

OFF SWITCH

The compressor and blower are off, the air intake doors are set to the outside air position. Then, the mode doors are set to the foot (80% foot and 20% defrost) position. In the off position, the A/C system uses the vehicle's "flow through" ventilation. It tries to maintain the interior temperature based on the last set temperature of the system.

FAN SWITCH

Manual control of the blower speed. Four speeds are available for manual control (as shown on the display screen):
low , medium low , medium high , high

MODE SWITCH

Manual control of the air discharge outlets. Four selections are available (as shown on the display screen):
face , bi-level , foot , defrost/foot

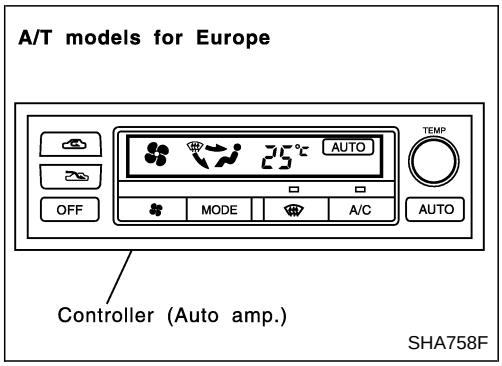
Control Operation (Cont'd)

RECIRCULATION (REC) SWITCH

ON position: Interior air is recirculated inside the vehicle.
OFF position: Automatic control resumes.
Recirculation is canceled when AUTO, DEF or ECON is selected. Recirculation resumes when another mode is chosen.

DEFROSTER (DEF) SWITCH

Positions the mode doors to the defrost position. Also positions the air intake doors to the outside air position.

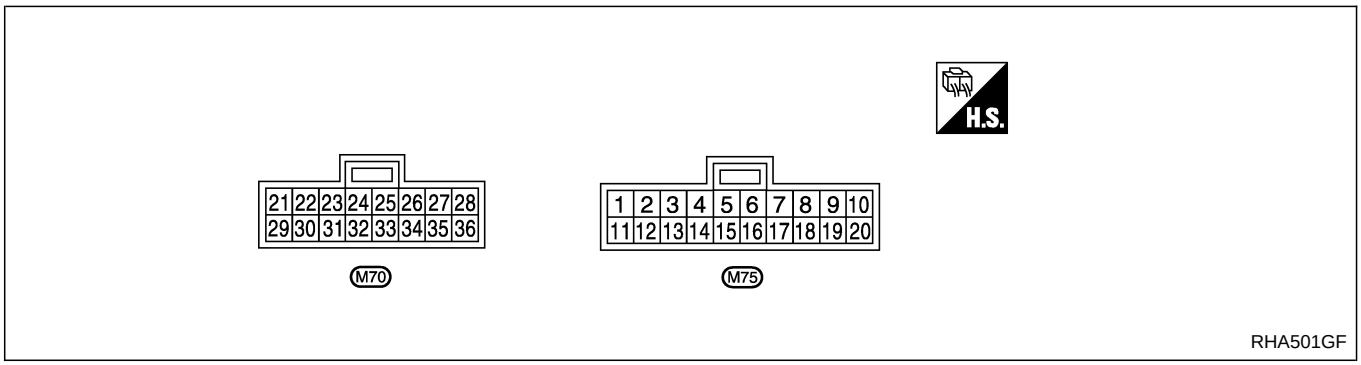


Auto Amp. Terminals and Reference Value

INSPECTION OF AUTO AMP.

- Measure voltage between each terminal and body ground by following “AUTO AMP. INSPECTION TABLE”.

- Pin connector terminal layout



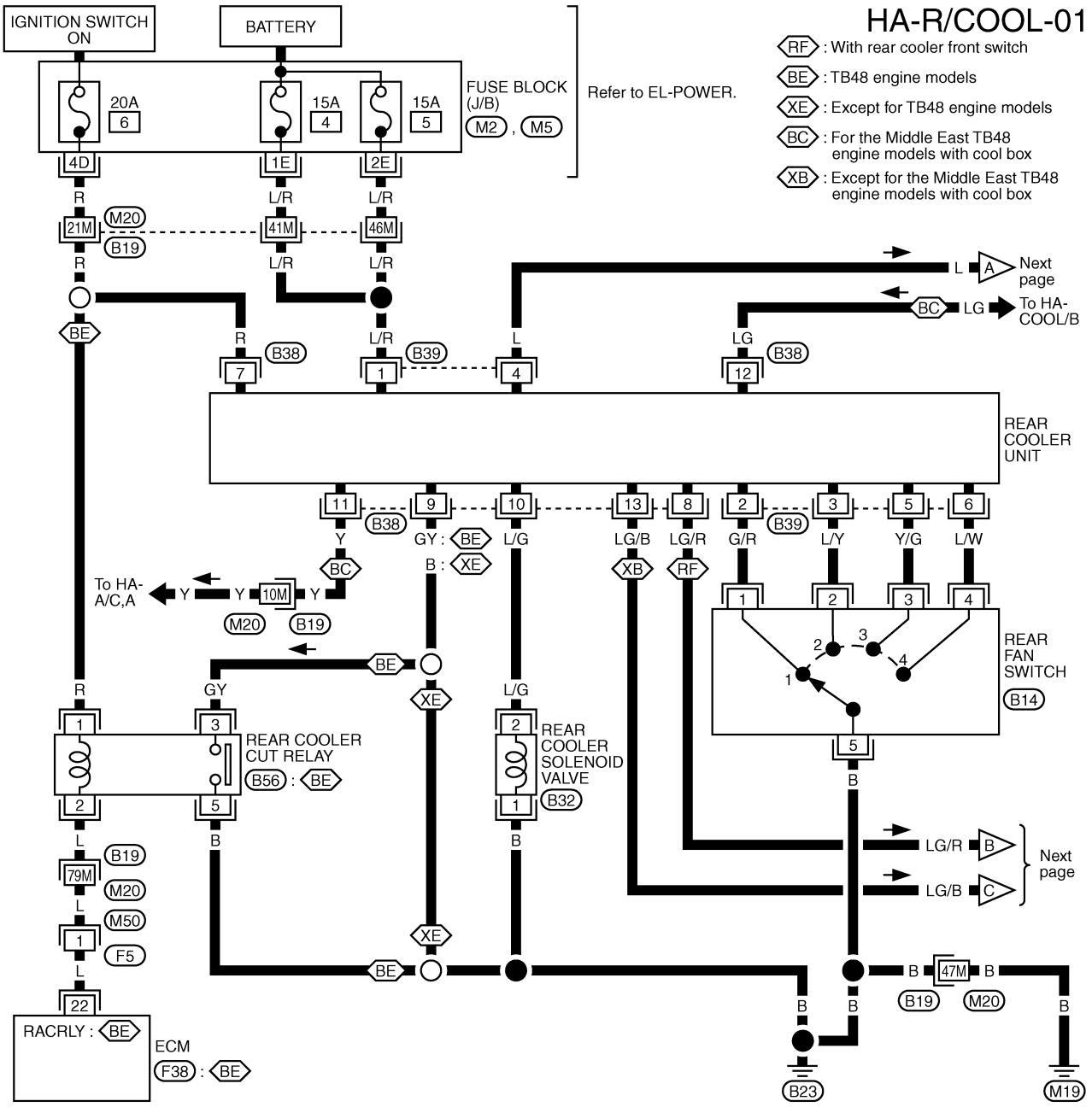
Auto Amp. Terminals and Reference Value (Cont'd)

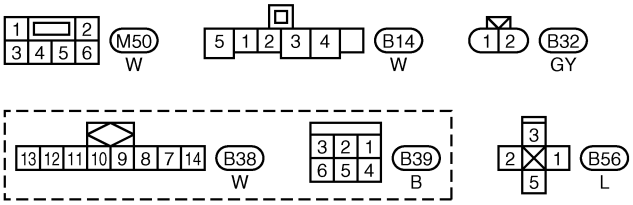
AUTO AMP. INSPECTION TABLE

TERMINAL No. (Wire color)	ITEM	CONDITION			VOLTAGE V
1 (RY)	Power supply for IGN		—		Approximately 12
2 (Y)	Power supply for BAT		—		Approximately 12
3 (B)	Ground		—		—
4 (Y)*2 (LG)*4	Compressor ON signal		Compressor	ON	Approximately 0
				OFF	Approximately 12
5 (L)	LAN signal		—		Approximately 5.5
8 (GY/R)	In-vehicle sensor	—			—
9 (PU)	Ambient sensor	—			—
10 (R)	Sunload sensor	—			—
11 (B)	Ground		—		—
12 (L/B)	Power supply for illumination		Illumination switch ON		Approximately 12
13 (OR/B)	Intake door position switch		RECIRCULATION		Approximately 0
			FRESH or 20% FRESH		Approximately 12
14 (P)	Intake door position switch		FRESH		Approximately 0
			RECIRCULATION or 20% FRESH		Approximately 12
15 (G/Y)	Power supply for mode and air mix door motor		—		Approximately 12
17 (GY/L)	Fan control amp. control signal		Fan speed	Low, middle low or middle high	Approximately 2.5 - 3.0
				High	Approximately 9 - 10
18 (L/W)	Blower motor feed back			Low	Approximately 7 - 10
19*1 (Y/L)	Fan ON signal		Blower fan	ON	Approximately 0
				OFF	Approximately 5
20 (L/R)	Power supply for blower motor		—		Approximately 12
21 (Y/R)	Thermal transmitter	—			—
23 (OR)	Intake door position switch		20% FRESH		Approximately 0
			RECIRCULATION or FRESH		Approximately 12
24 (G/Y)	Sensor ground	—			—
25 (G/W)	Intake sensor	—			—
27*2 (Y/B)	FICD ON signal		Compressor ON	Ambient temperature 20.5°C or less	Approximately 0
				Ambient temperature 23.5°C or more	Approximately 12
28 (LG/B)	Rear cooler relay		Rear cooler ON		Approximately 0
			Rear cooler OFF		Approximately 12
35 (Y/L)*5 (OR/L)*6	Rear cooler switch		Rear cooler switch ON		Approximately 0
			Rear cooler switch OFF		Approximately 12
36*3 (Y)	Front solenoid valve relay		Cool box switch ON		Approximately 0
			Cool box switch OFF		Approximately 12

*1: A/T models
*2: Except for Europe
*3: For the Middle East with cool box
*4: Except for the Middle East
*5: With rear cooler front switch and without cool box
*6: Without rear cooler front switch

Wiring Diagram — R/COOL —/With Front Auto A/C





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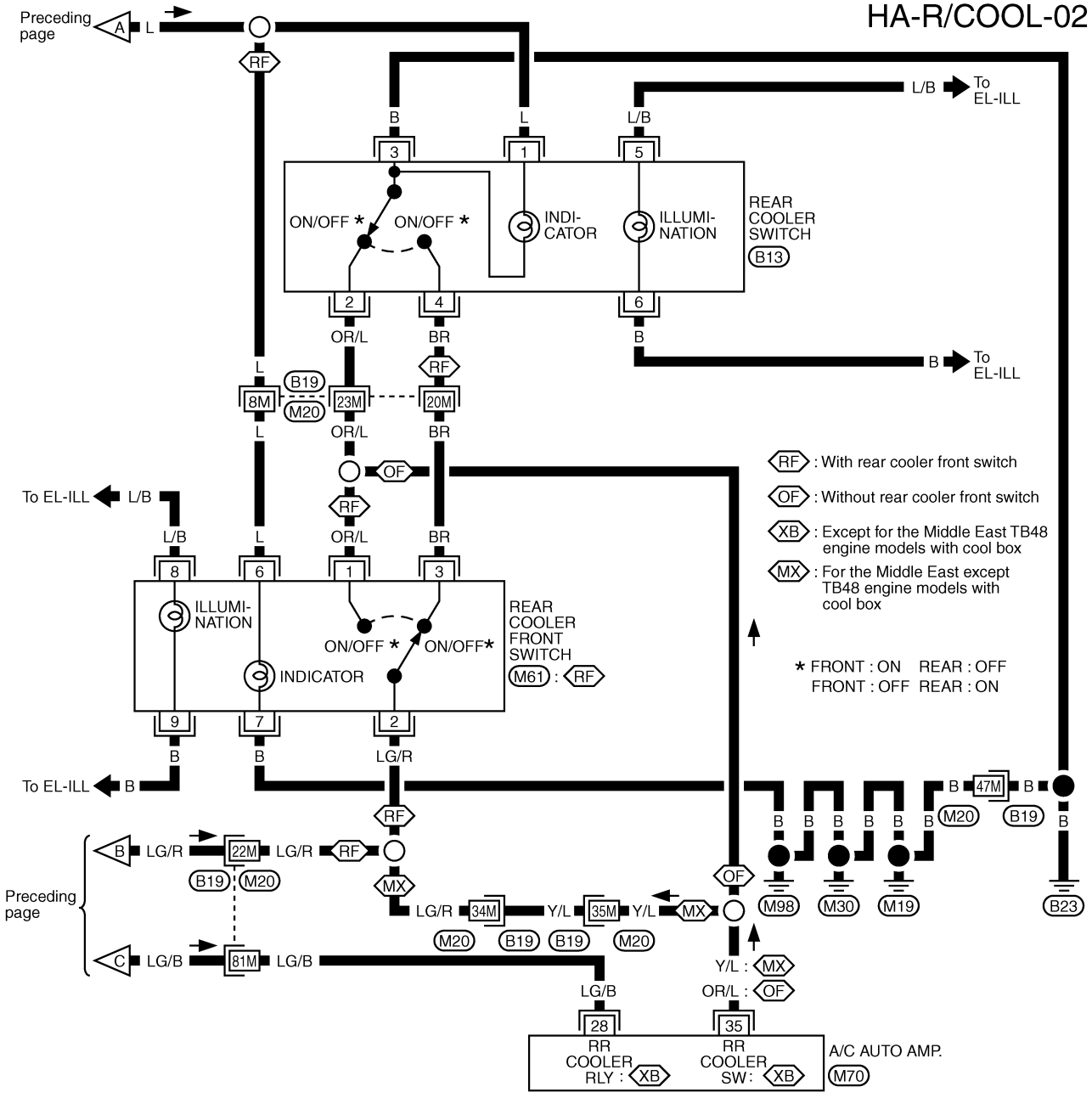
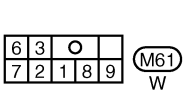
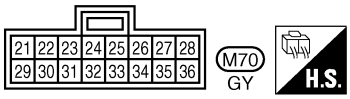
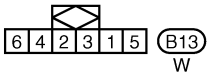
Wiring Diagram — R/COOL —/With Front Auto A/C (Cont'd)

HA-R/COOL-02









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Wiring Diagram — R/COOL —/With Front Auto A/C (Cont'd)