<SUPPLEMENT-IV>

HEATER & AIR CONDITIONER

SECTION HA

MODIFICATION NOTICE:

- Wiring diagram has been changed.
- Automatic A/C controller has been changed.
- Front thermo amp. for auto A/C has been eliminated.

CONTENTS

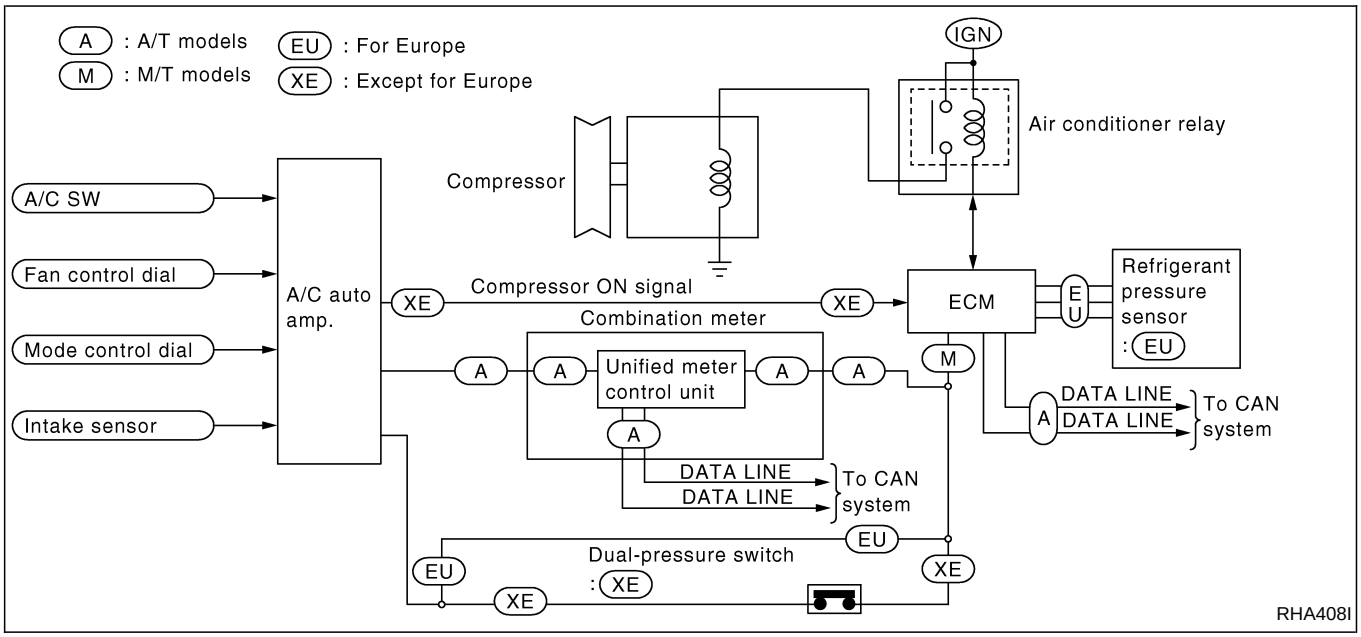
Features (TB48 Engine Models)

CAN COMMUNICATION SYSTEM DESCRIPTION

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

SYSTEM CONSTRUCTION

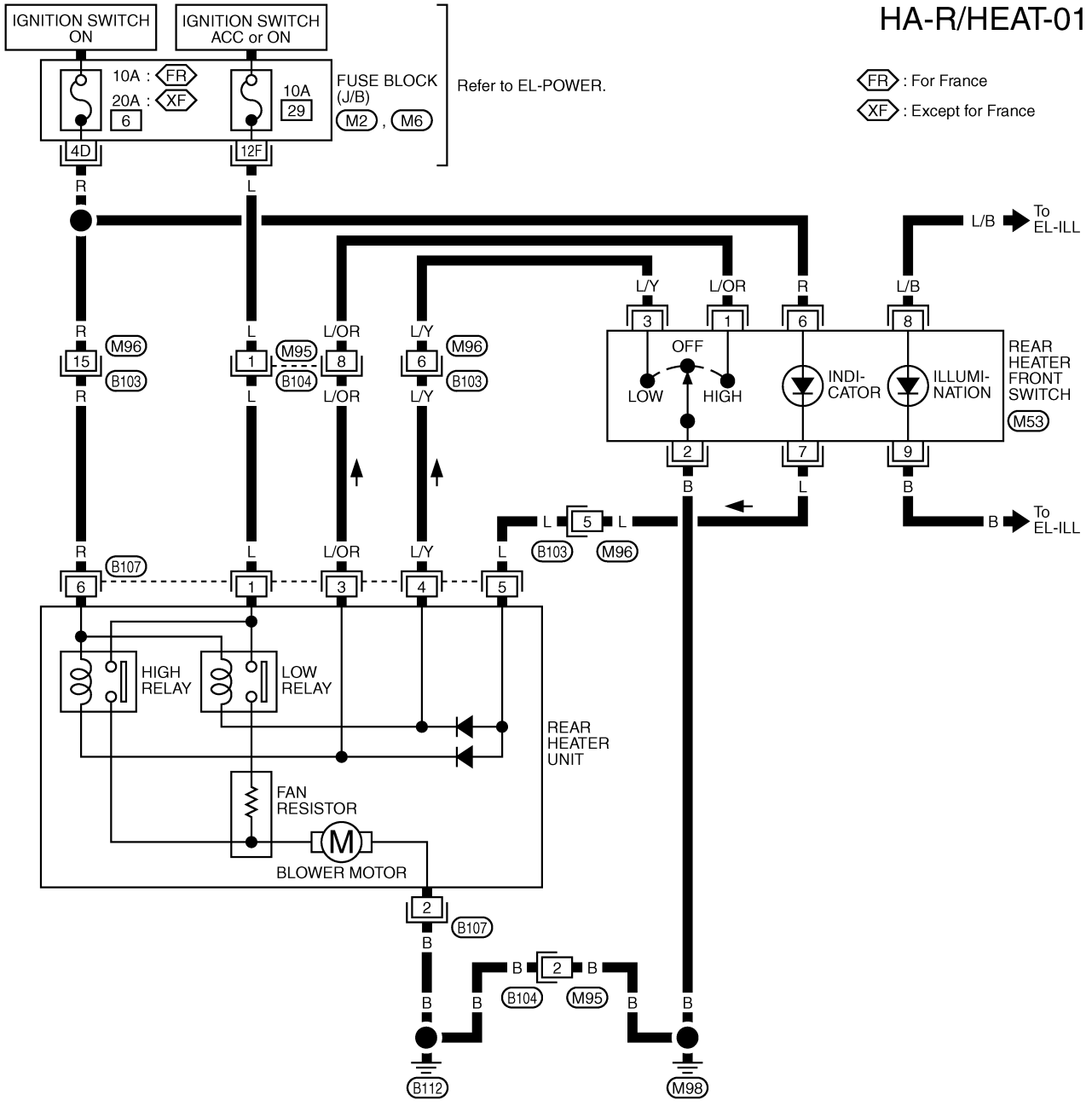
Magnet clutch control



When A/C switch is pressed, turn fan control dial to ON or set mode control dial to DEF position, A/C auto amp. inputs compressor ON signal to ECM.
ECM judges whether compressor can be turned ON, based on each sensor status (refrigerant pressure sensor signal, throttle angle, etc.).
When sending compressor ON signal to ECM from A/C auto amp., ECM simultaneously sends compressor feedback signal to unified meter C/U via CAN communication line.
Unified meter control unit sends compressor feedback signal to A/C auto amp. Then, A/C auto amp. uses input compressor feedback signal to control air inlet.

Wiring Diagram — R/HEAT —/LHD Models

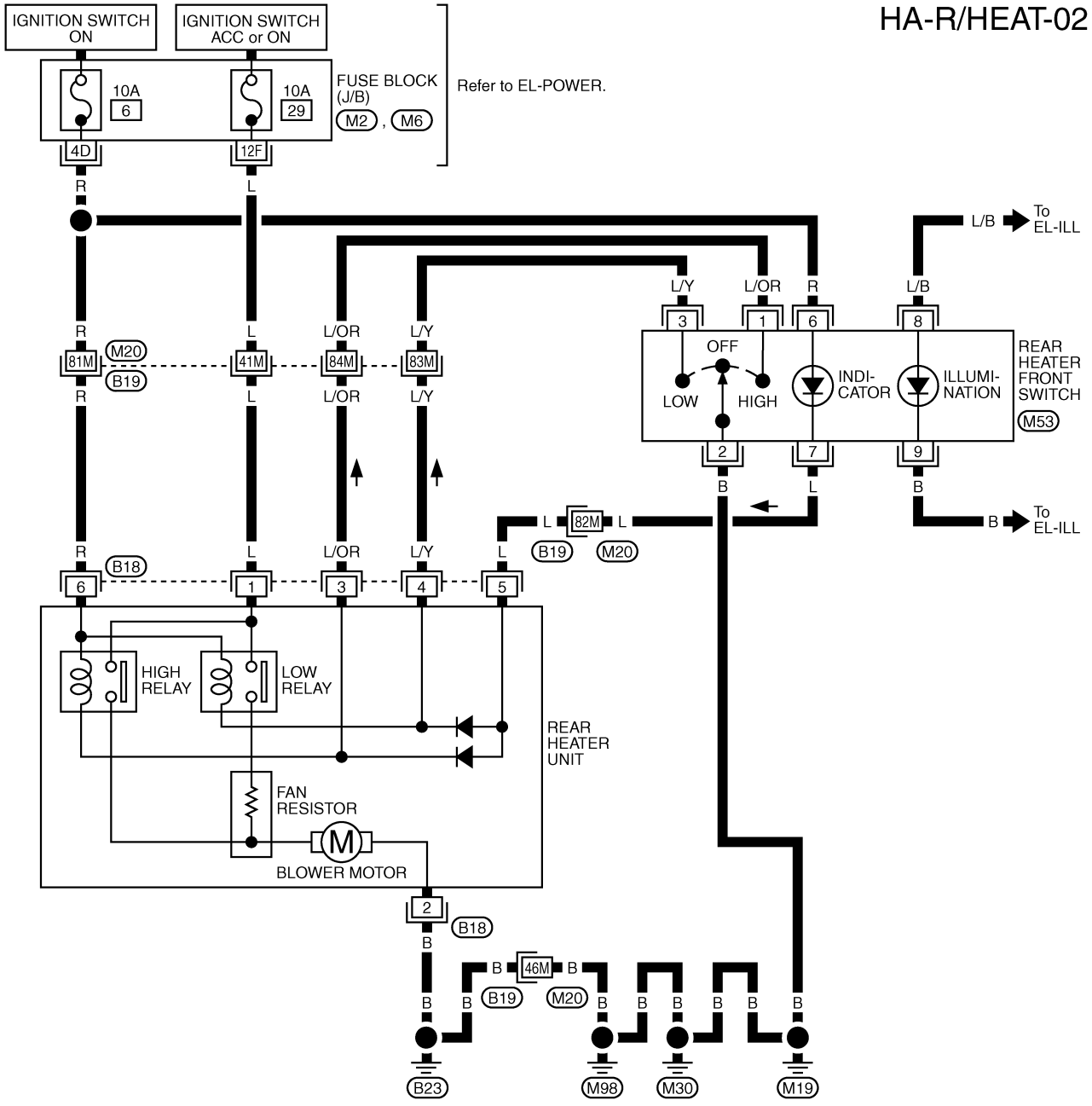
HA-R/HEAT-01



THA185M

Wiring Diagram — R/HEAT —/RHD Models

HA-R/HEAT-02



Refer to last page (Foldout page).

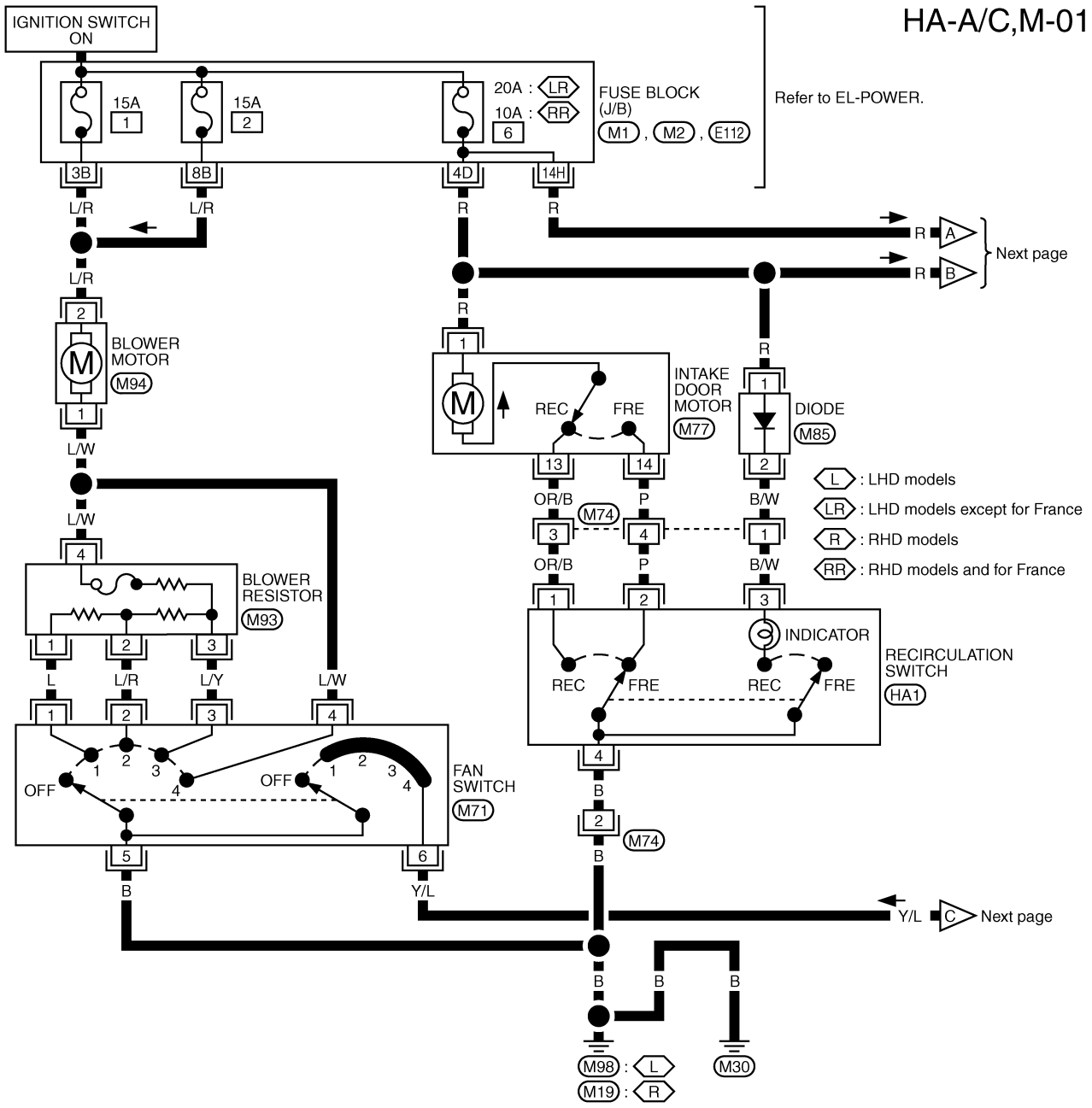
M20, B19

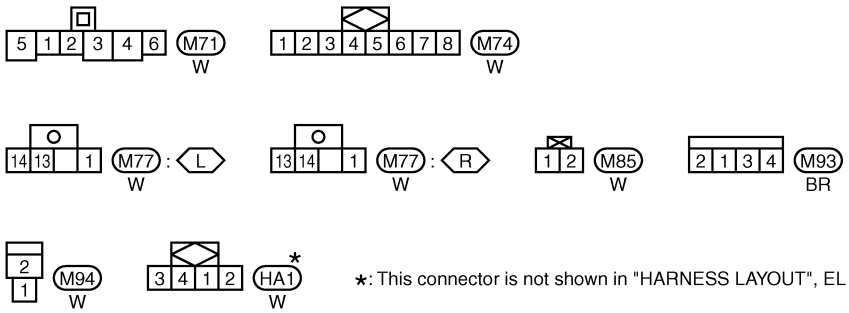
M2

M6

THA186M

Wiring Diagram — A/C, M —/Wagon and Hardtop Models with ZD Engine



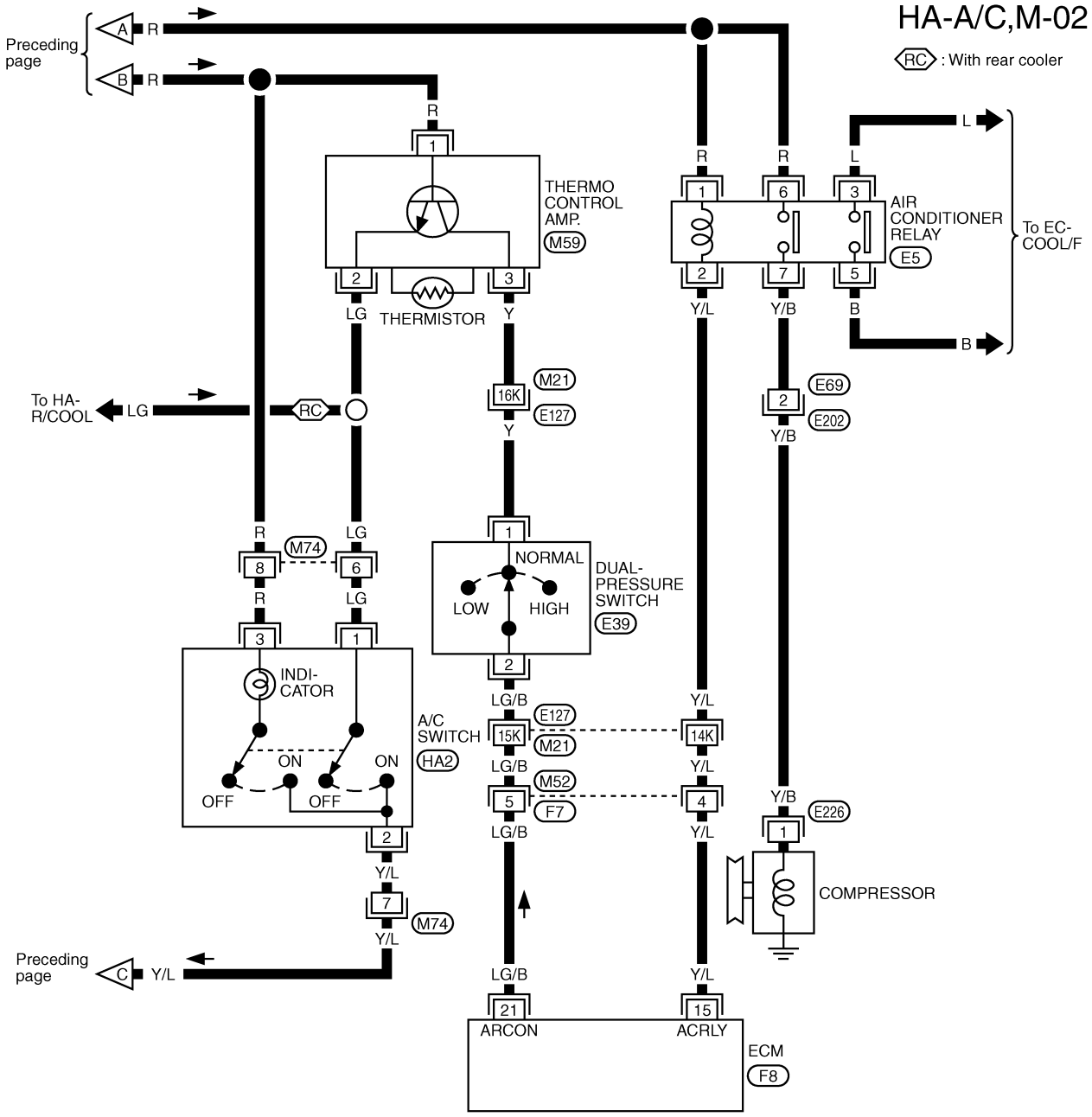


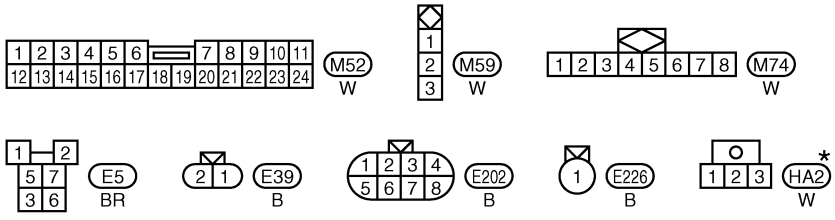
*: This connector is not shown in "HARNESS LAYOUT", EL section.

Refer to last page (Foldout page).
M1
M2
E112

THA187M

Wiring Diagram — A/C, M —/Wagon and Hardtop Models with ZD Engine (Cont'd)



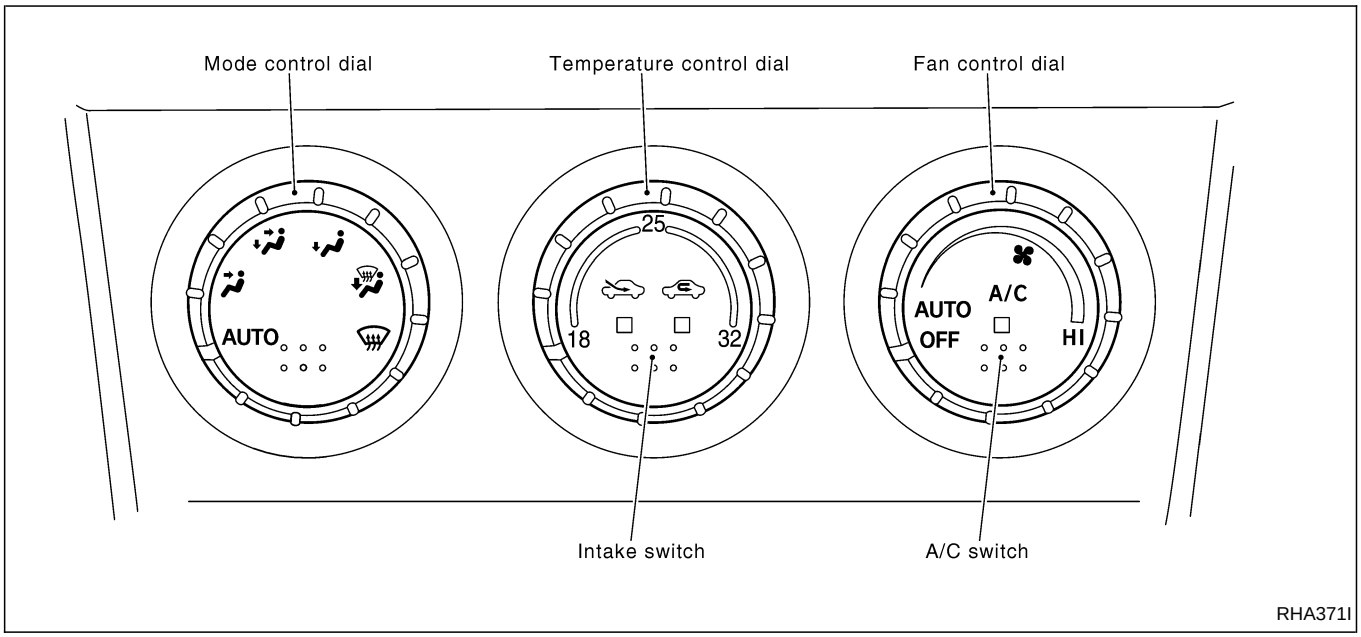


Refer to last page (Foldout page).
M21 , E127
F8

*: This connector is not shown in "HARNESS LAYOUT", EL section.

THA188M

Control Operation



MODE CONTROL DIAL

Controls the air discharge outlets.
Positions the air outlet doors to the defrost position. Also positions the intake doors to the outside air position. When shifting mode control dial to DEF under the following conditions compressor is turned ON. (A/C LED ON)

- FAN: ON
- A/C: OFF

TEMPERATURE CONTROL DIAL (POTENTIO TEMPERATURE CONTROL)

Increase or decrease the set temperature.

FAN CONTROL DIAL

Automatically or Manually control the blower speed. Twenty-five speeds are available for manual control. Shifting fan control dial to AUTO, compressor is turned ON automatically.

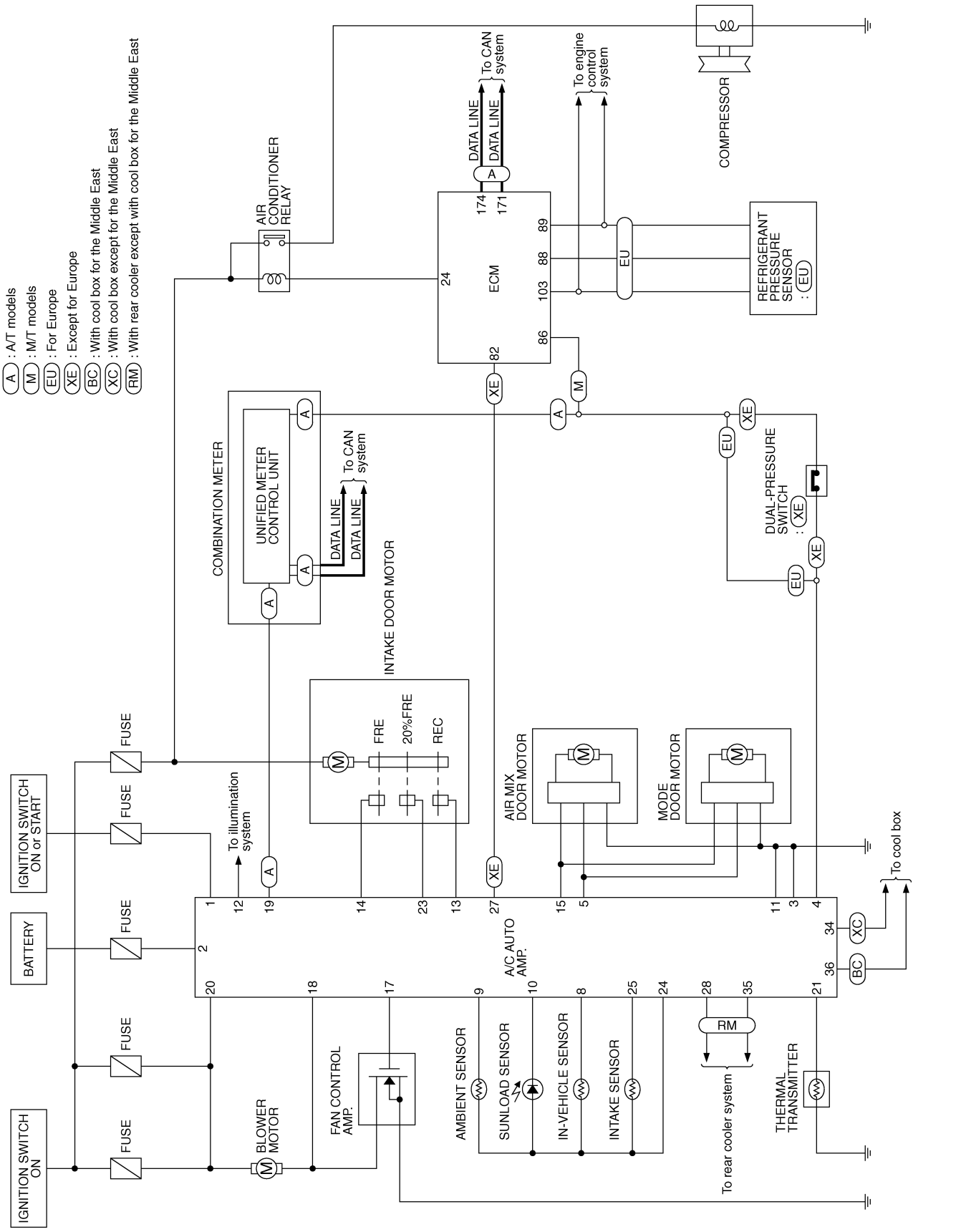
INTAKE SWITCH

- When intake switch is ON, REC LED turns ON, and air inlet is fixed to REC.
- When press intake switch again, FRE LED turns ON, and air inlet is fixed to FRE.
- When intake switch is pressed for approximately 1.5 seconds or longer, REC and FRE LEDs blink twice. Then, automatic control mode is entered. Inlet status is displayed even during automatic control.
- Automatic control mode is entered when REC and FRE LEDs are turned OFF.
- When shifting mode control dial to DEF position, FRE LED is turned ON, or when compressor is turned from ON to OFF, FRE indicator is automatically turned OFF (fixed to FRE mode).
  REC mode can be re-entered by pressing intake switch again. (Except DEF position)

A/C SWITCH

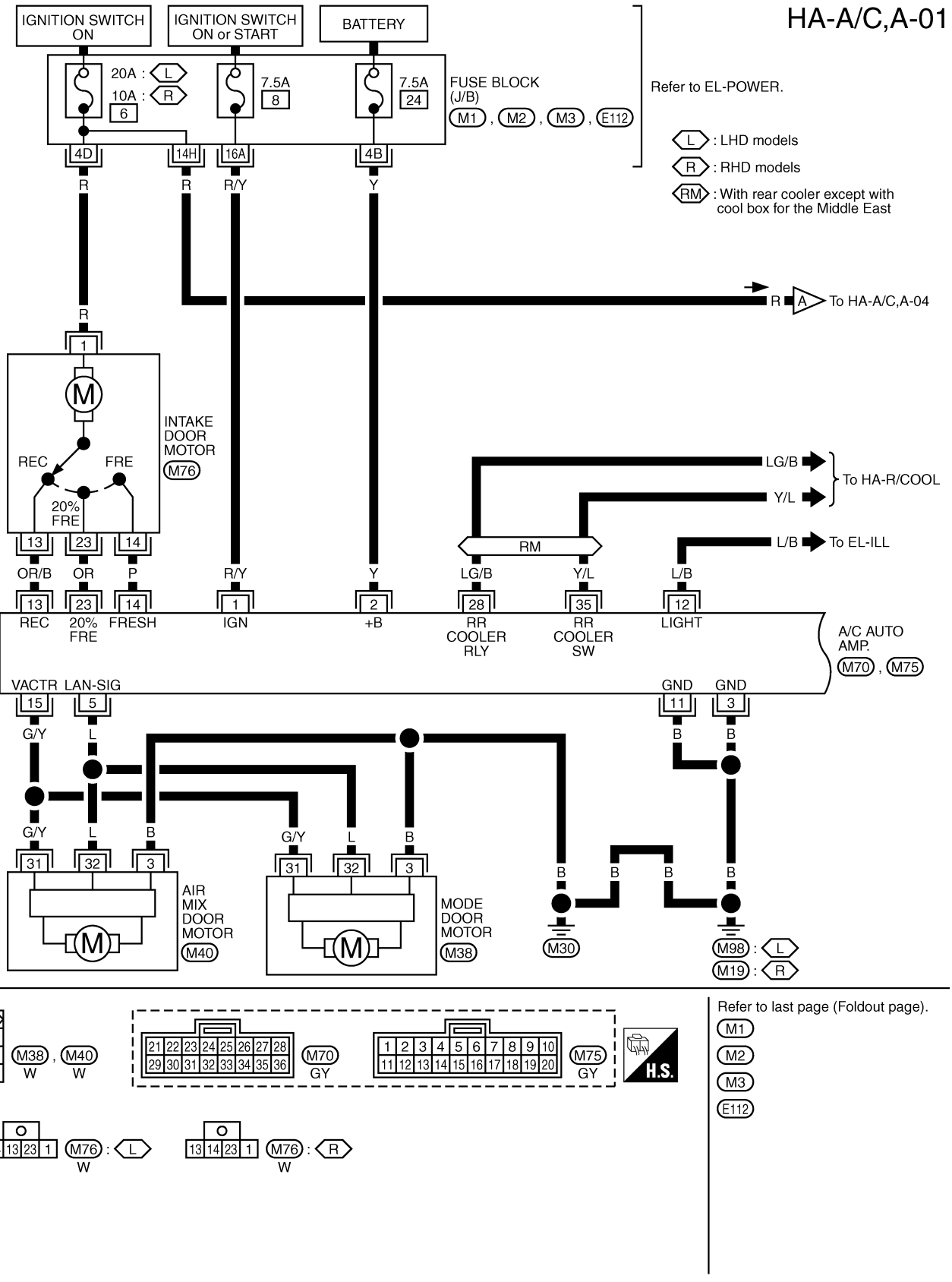
The compressor is ON or OFF.
(Pressing the A/C switch when the fan control dial is ON will turn off the A/C switch and compressor.)

Circuit Diagram — A/C, A —/TB48 Engine



THA189M

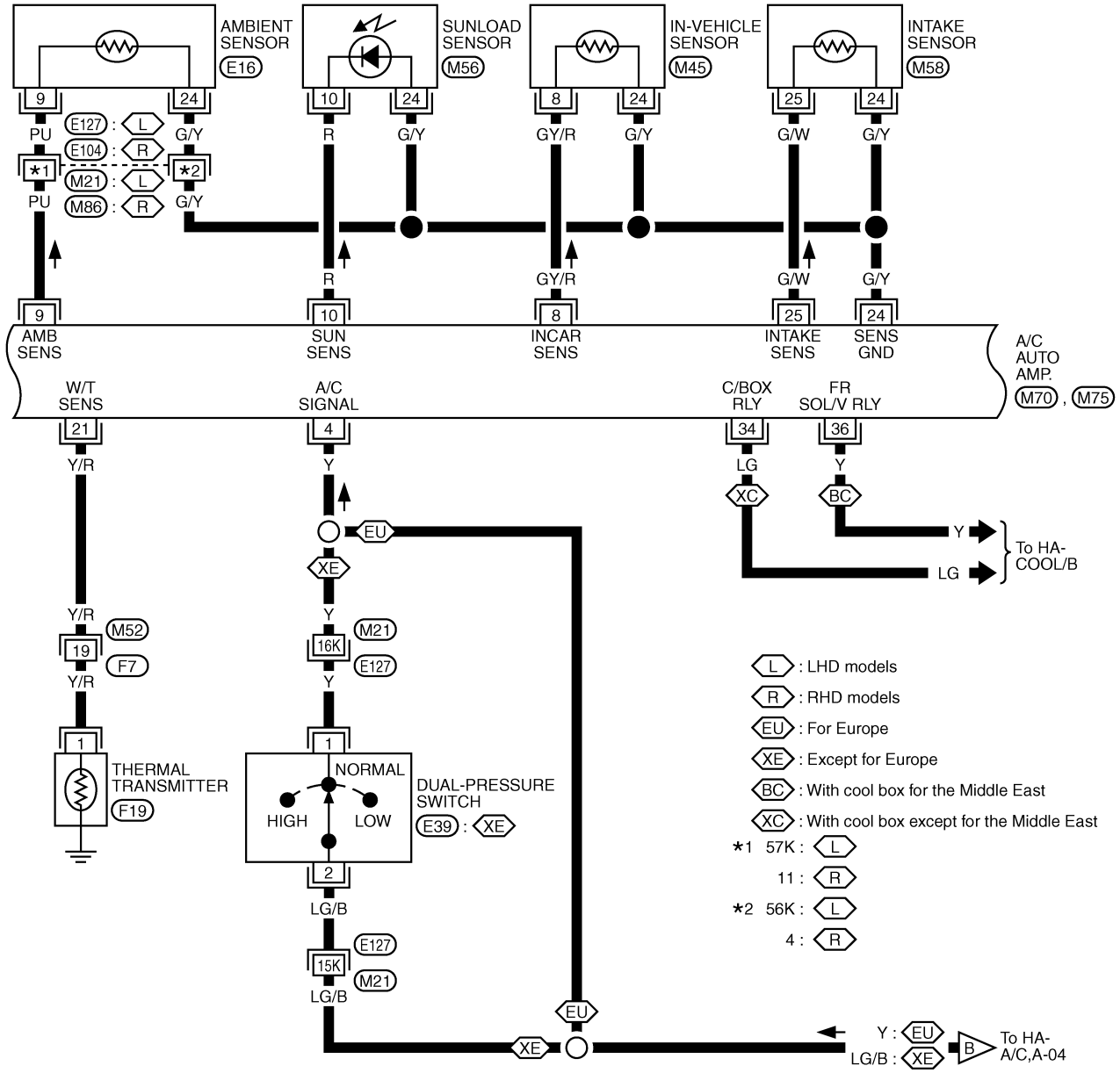
Wiring Diagram — A/C, A —/TB48 Engine

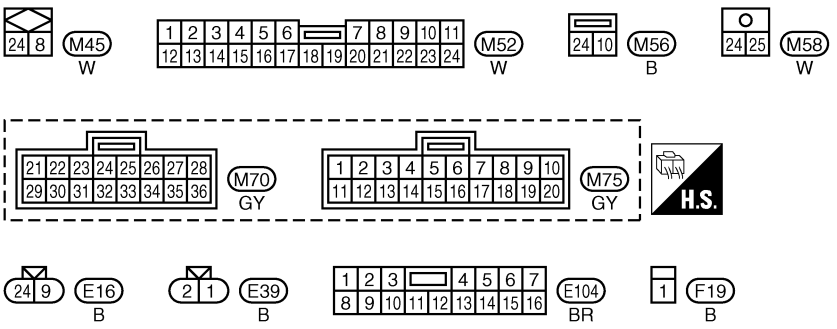


THA190M

Wiring Diagram — A/C, A —/TB48 Engine (Cont'd)

HA-A/C,A-02

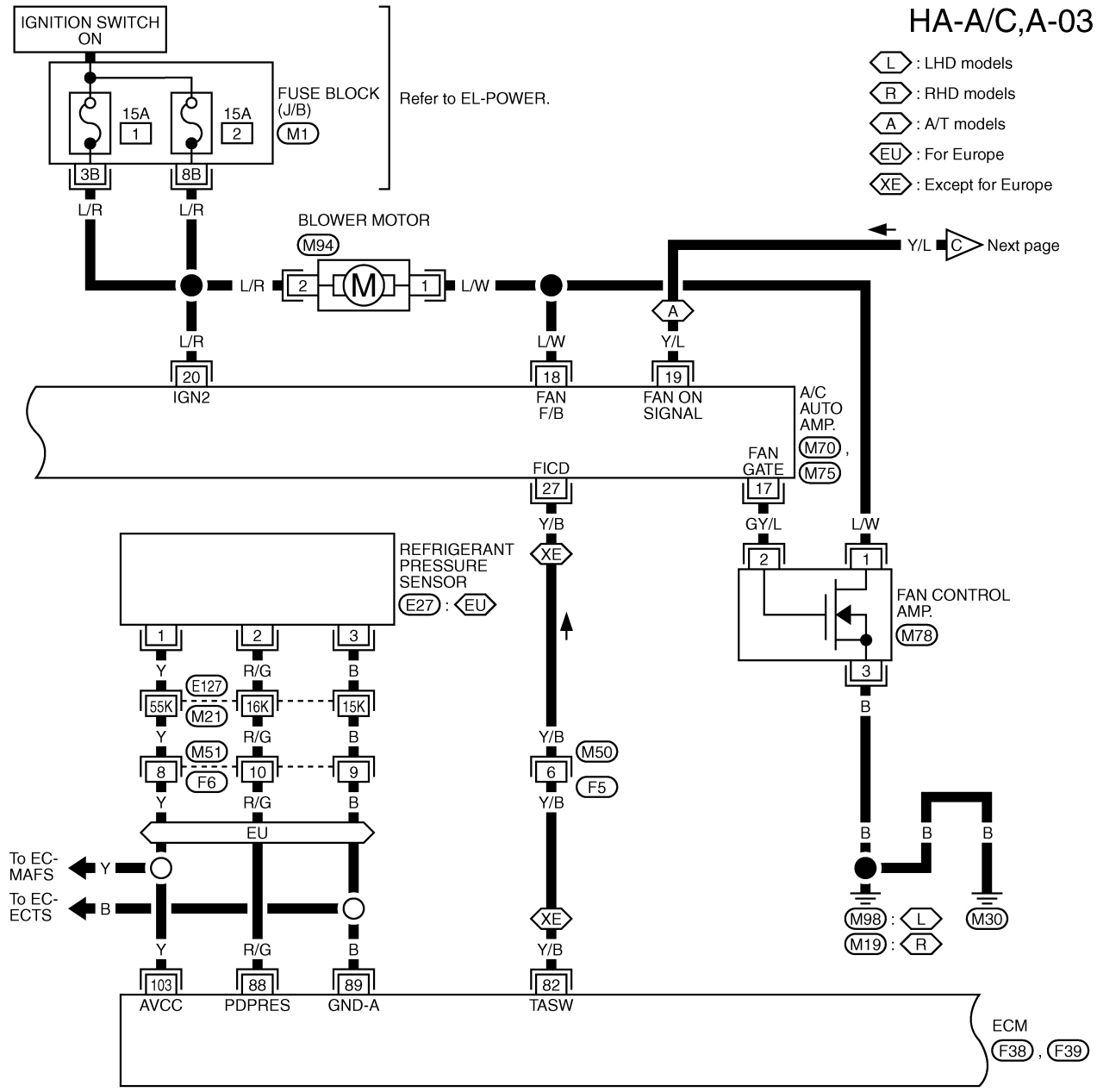


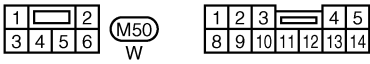


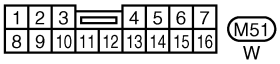
Refer to last page (Foldout page).
M21 , E127

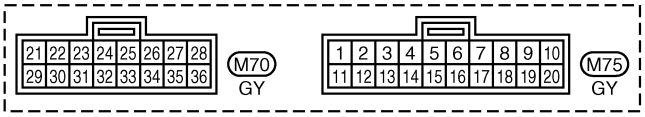
THA191M

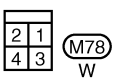
Wiring Diagram — A/C, A —/TB48 Engine (Cont'd)

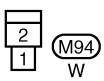


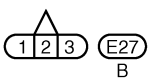










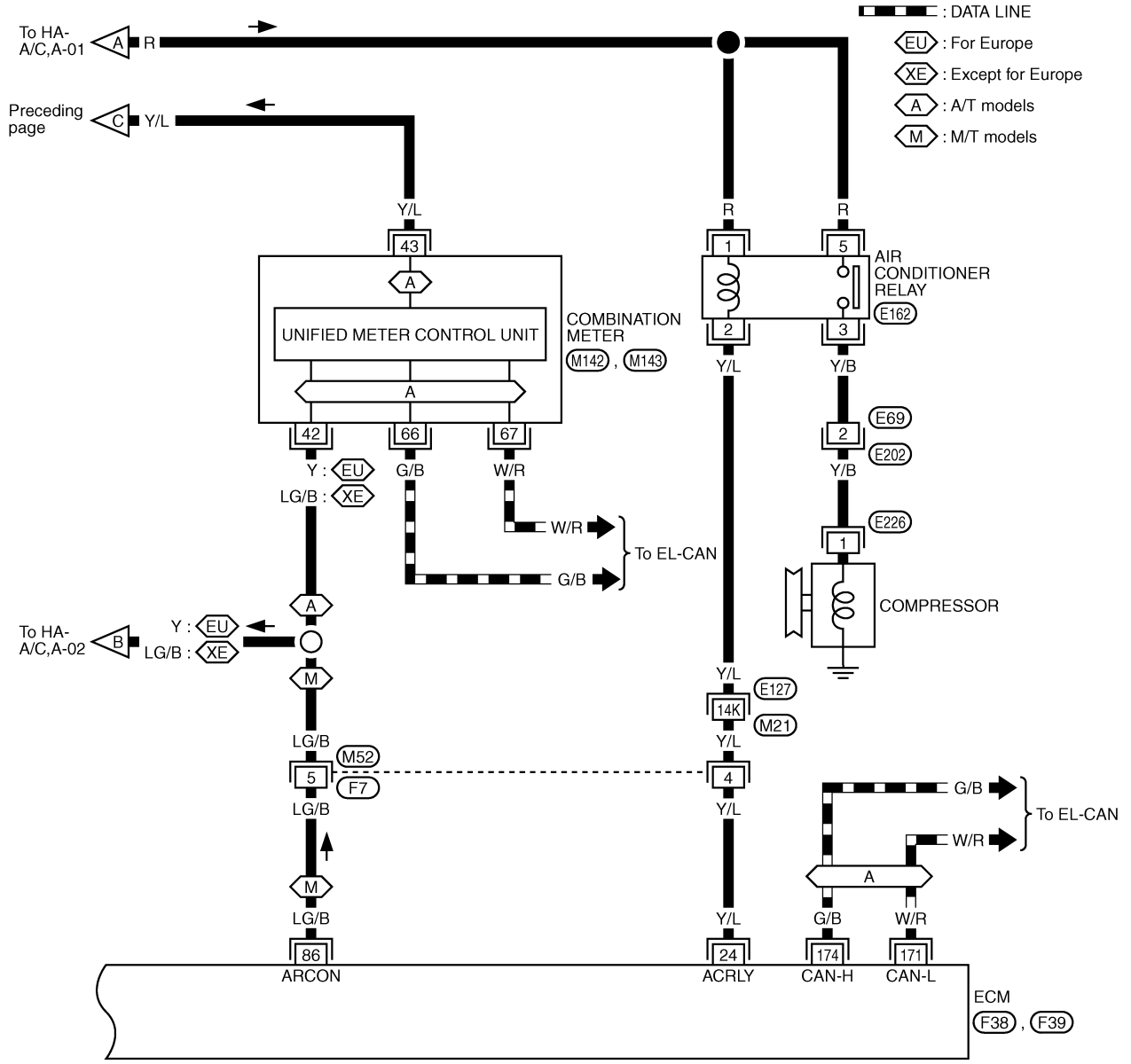


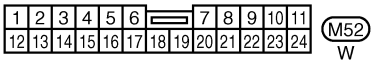
Refer to last page (Foldout page).
M21, E127
M1
F38
F39

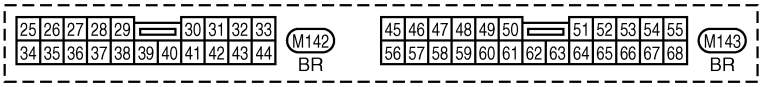
THA192M

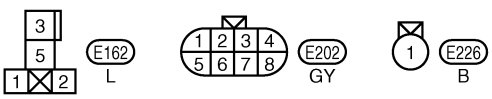
Wiring Diagram — A/C, A —/TB48 Engine (Cont'd)

HA-A/C,A-04





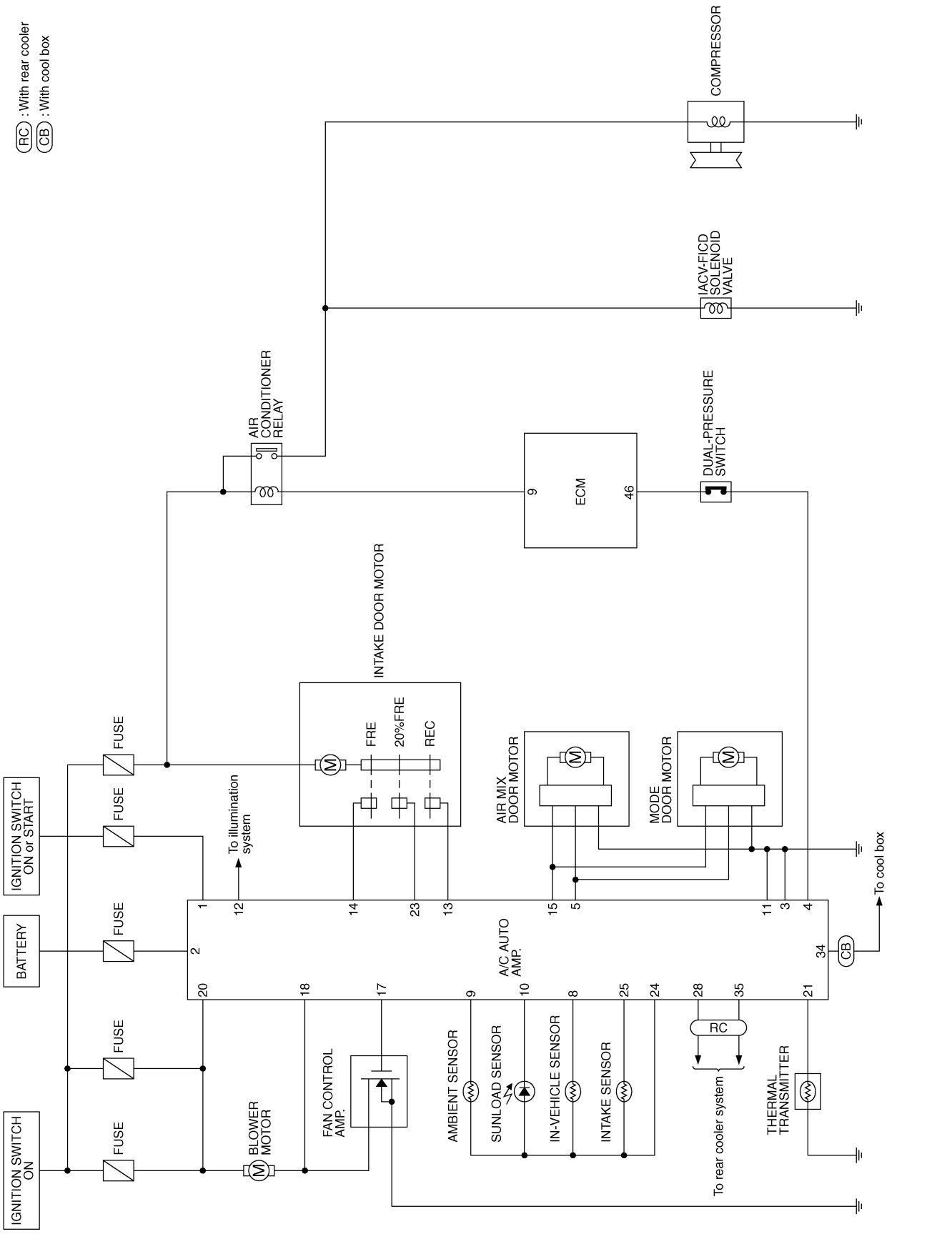




Refer to last page (Foldout page).
M21 , E127
F38
F39

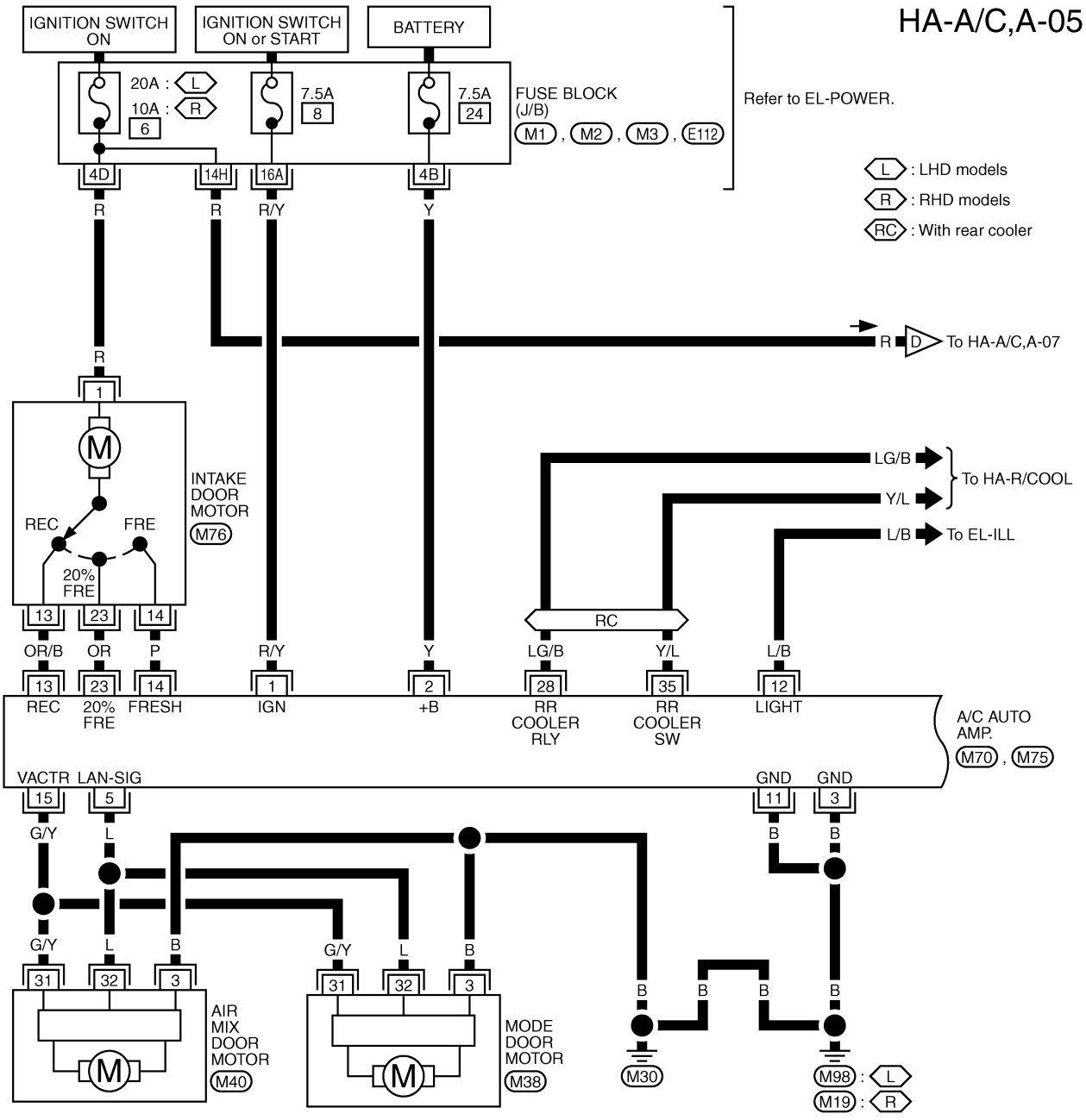
THA193M

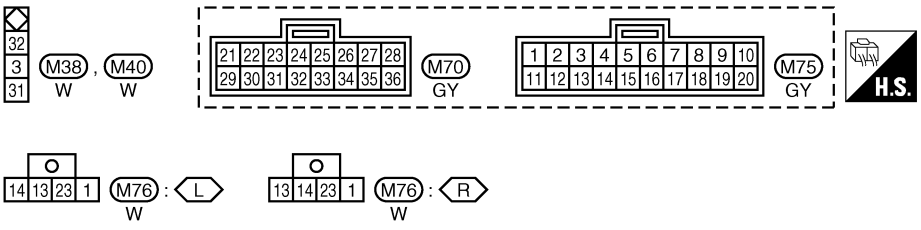
Circuit Diagram — A/C, A —/TB45 Engine



THA194M

Wiring Diagram — A/C, A —/TB45 Engine





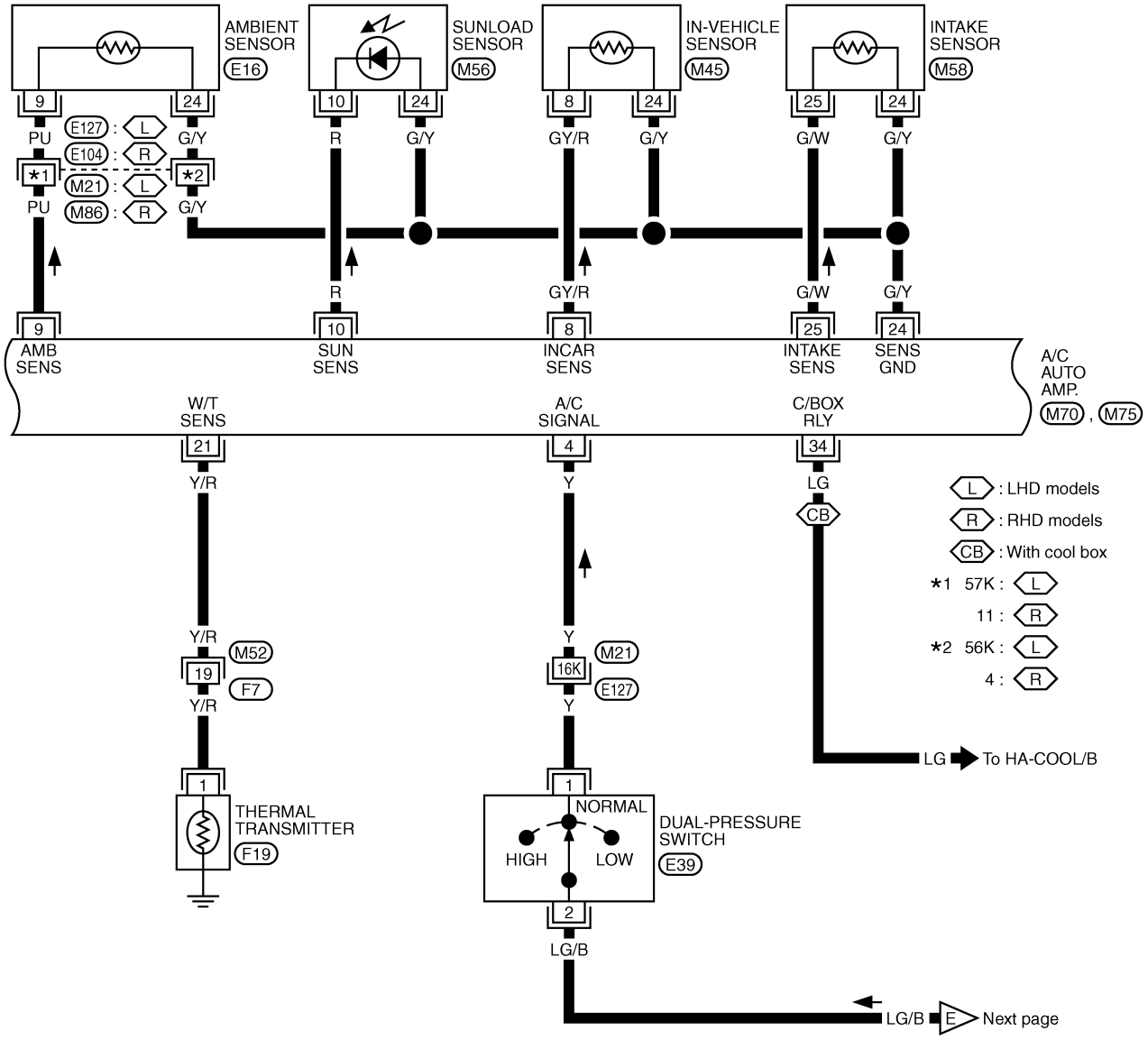
Refer to last page (Foldout page).

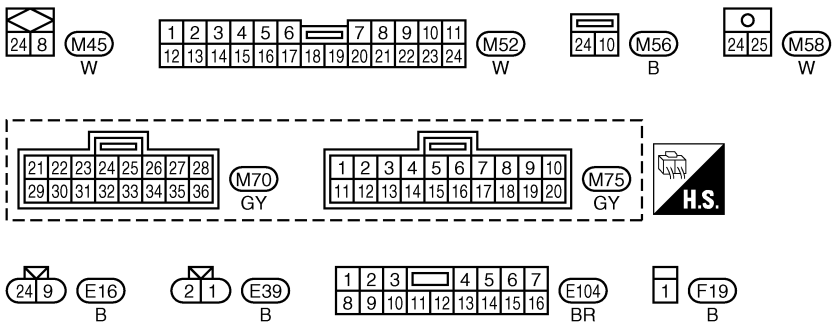
M1
M2
M3
E112

THA195M

Wiring Diagram — A/C, A —/TB45 Engine (Cont'd)

HA-A/C,A-06

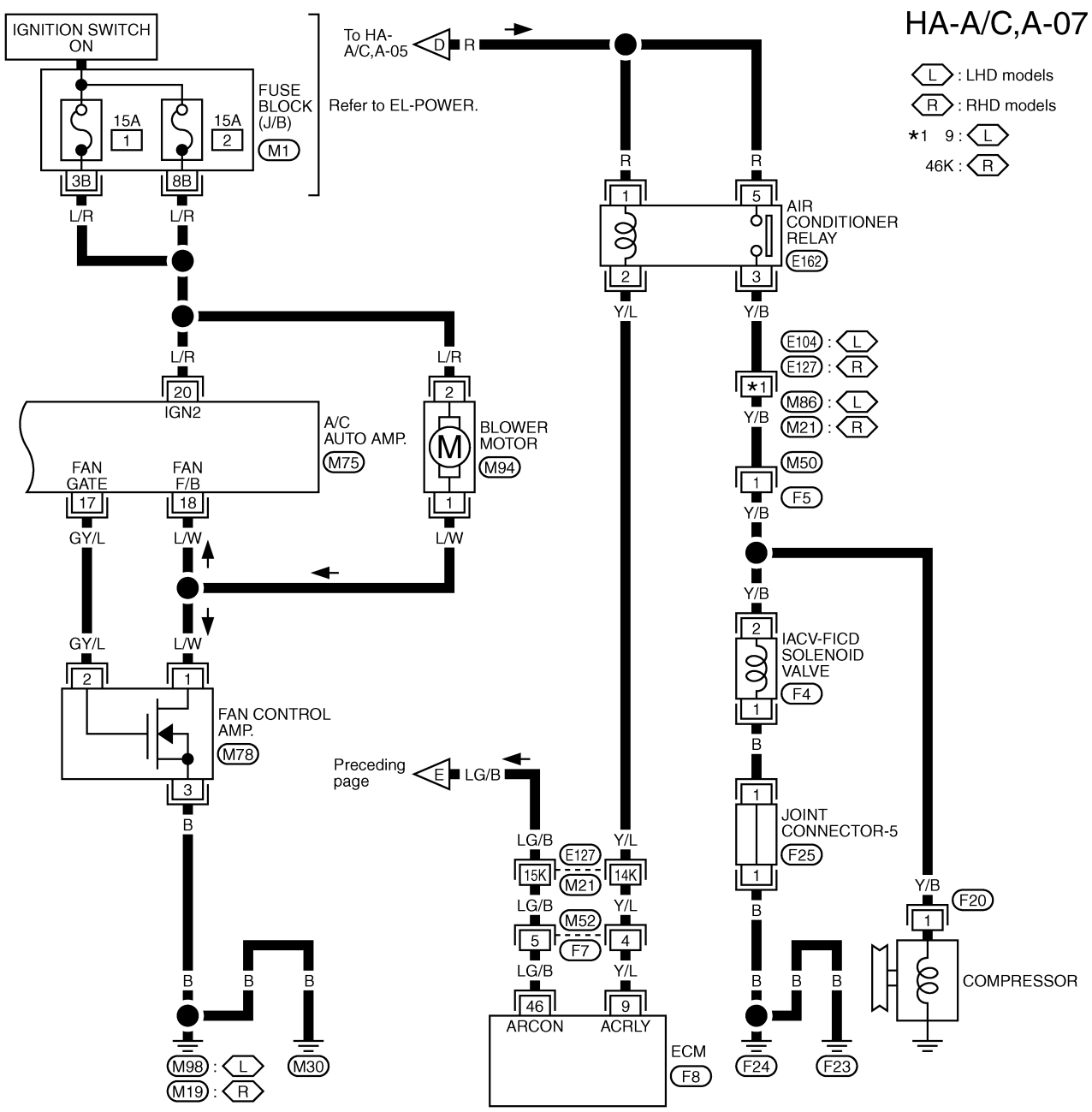


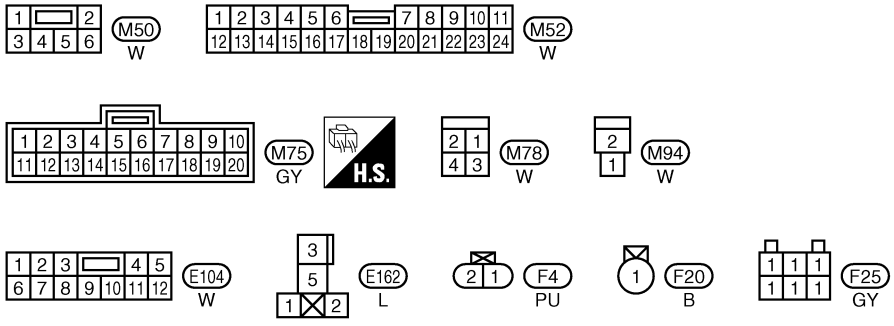


Refer to last page (Foldout page).
M21 , E127

THA196M

Wiring Diagram — A/C, A —/TB45 Engine (Cont'd)

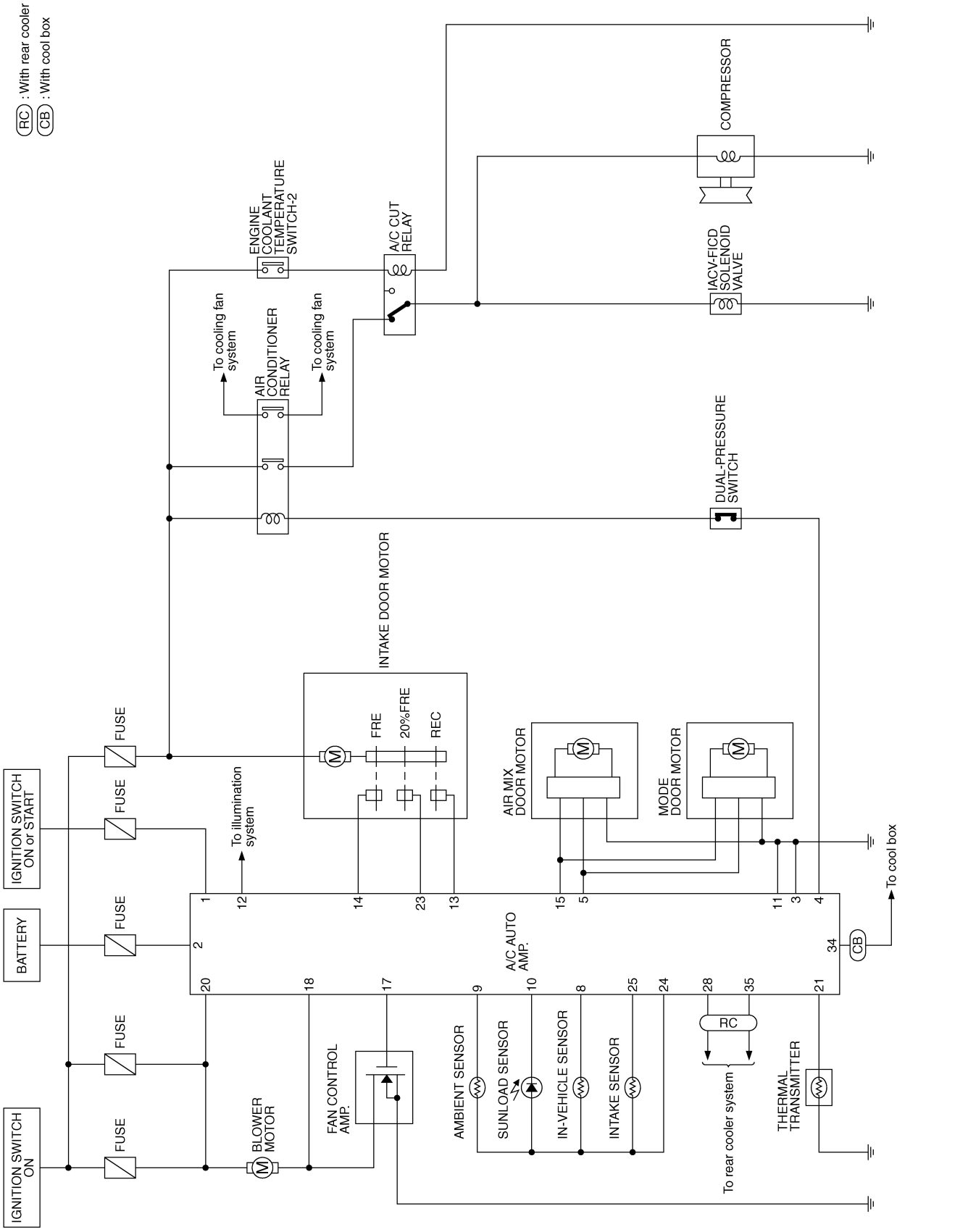




Refer to last page (Foldout page).
M21 , E127
M1
F8

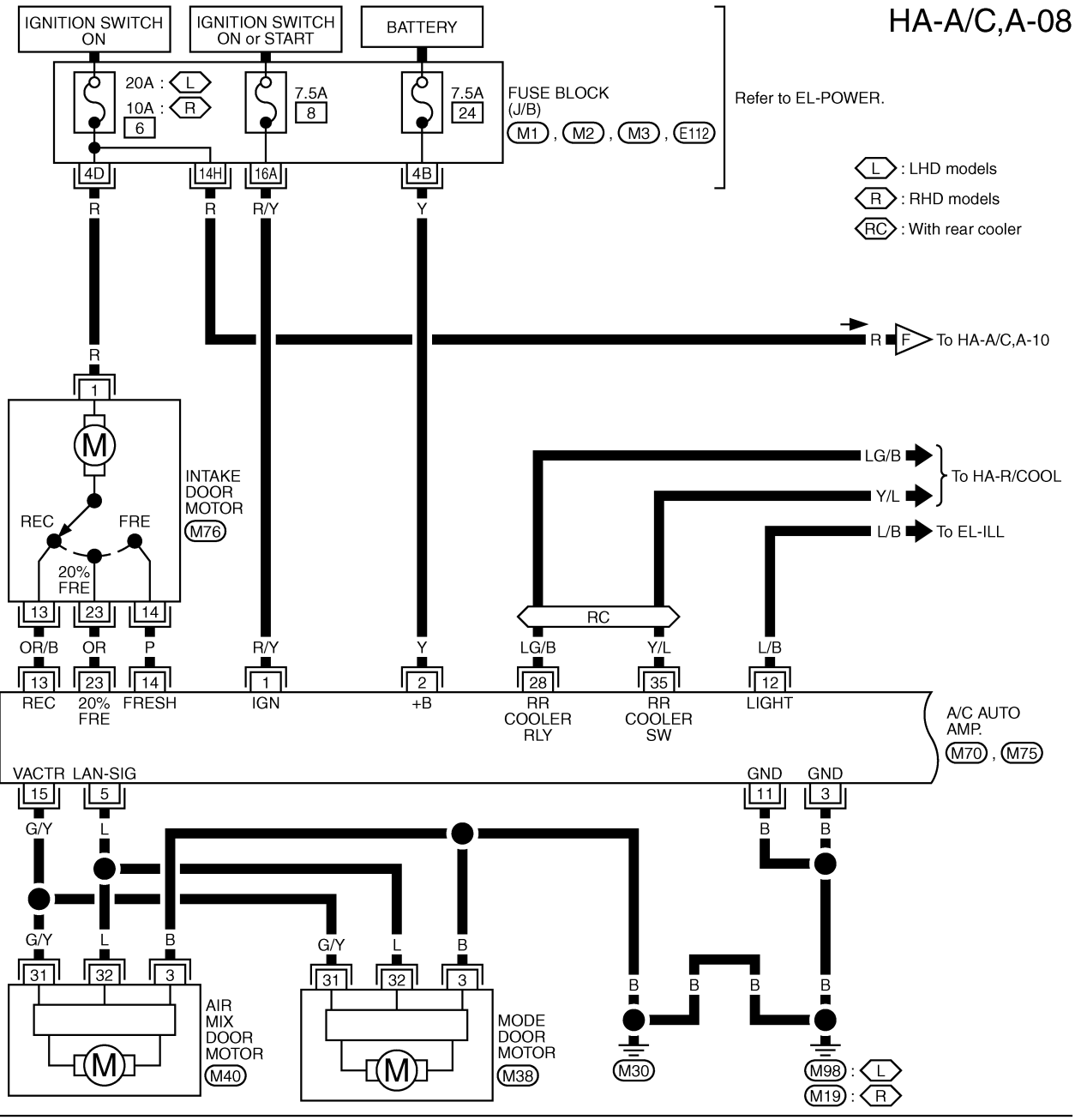
THA197M

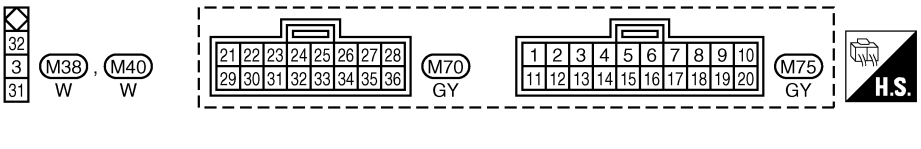
Circuit Diagram — A/C, A —/TD Engine

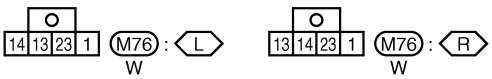


THA198M

Wiring Diagram — A/C, A —/TD Engine







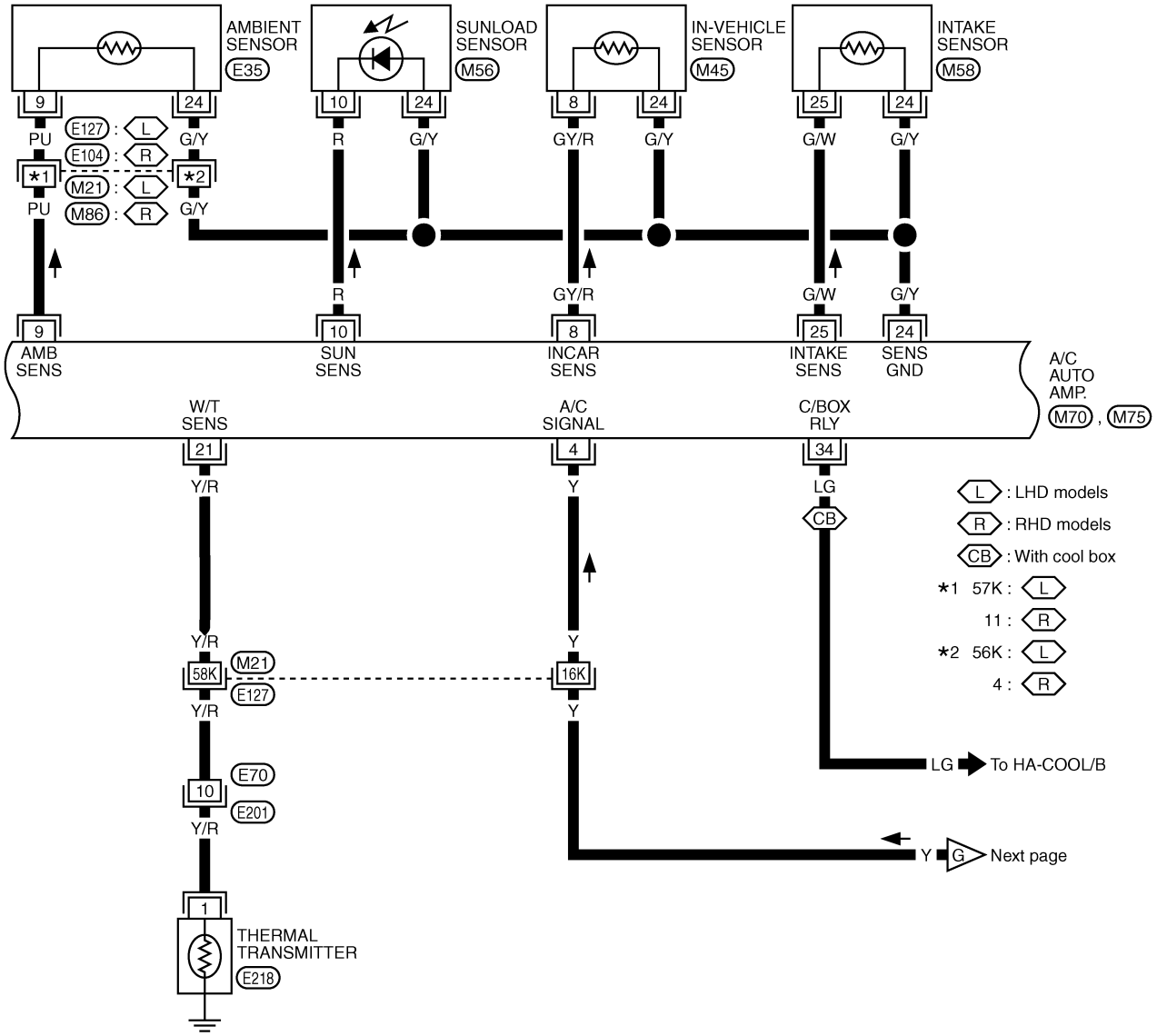
Refer to last page (Foldout page).

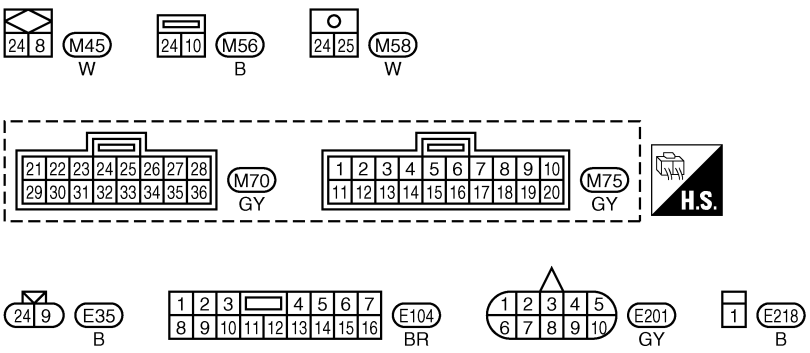
M1
M2
M3
E112

THA199M

Wiring Diagram — A/C, A —/TD Engine (Cont'd)

HA-A/C,A-09

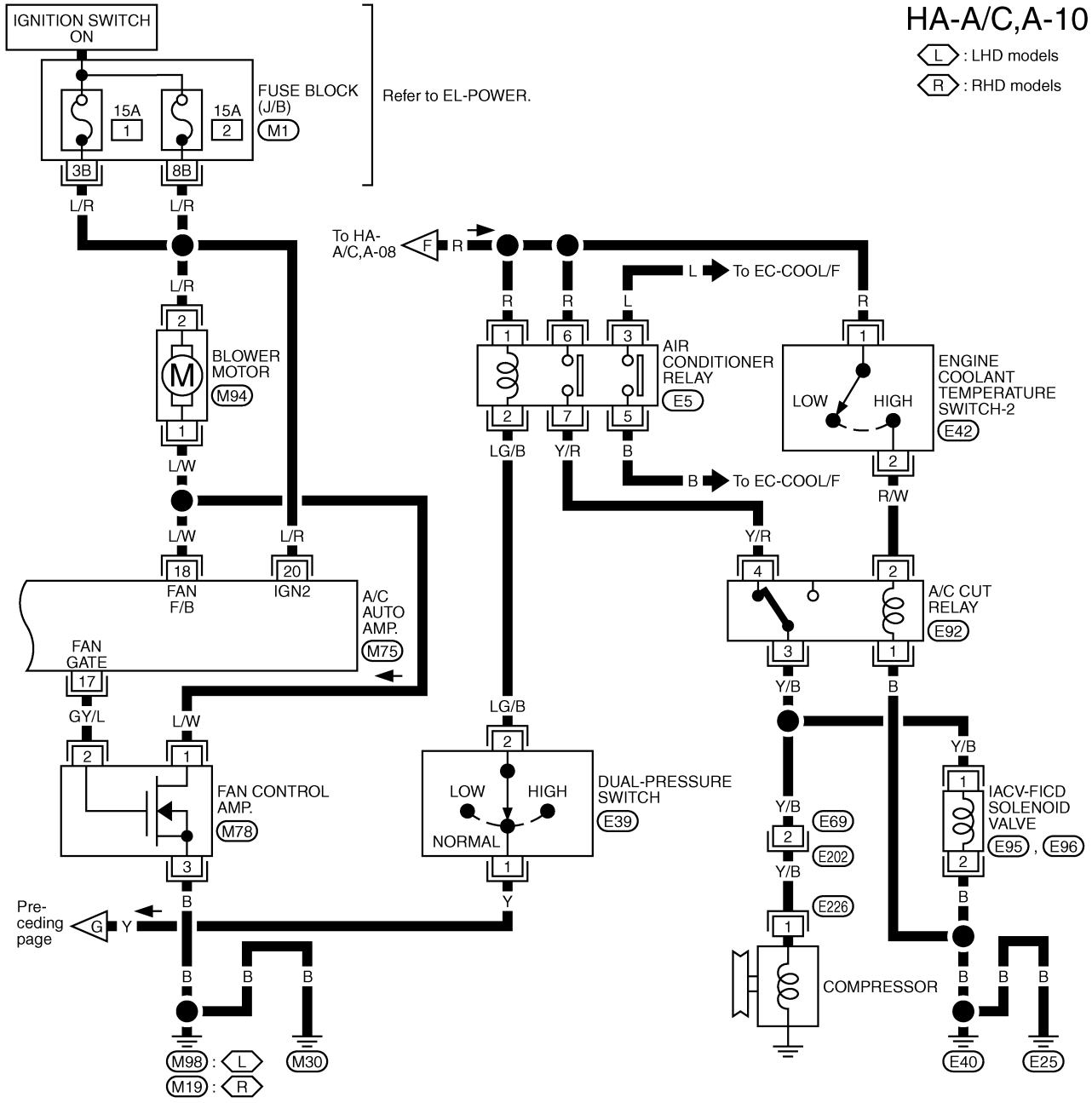


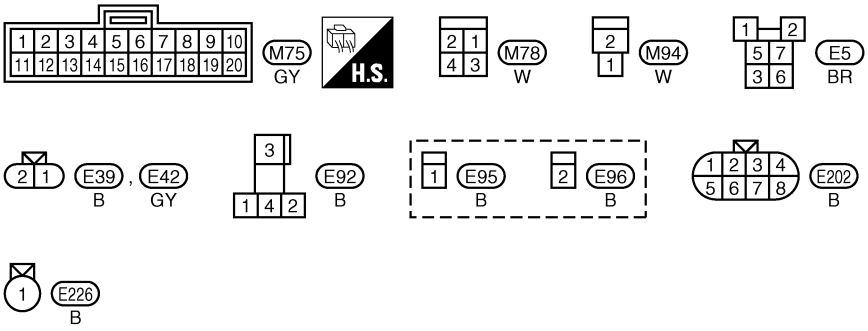


Refer to last page (Foldout page).
M21 , E127

THA200M

Wiring Diagram — A/C, A —/TD Engine (Cont'd)

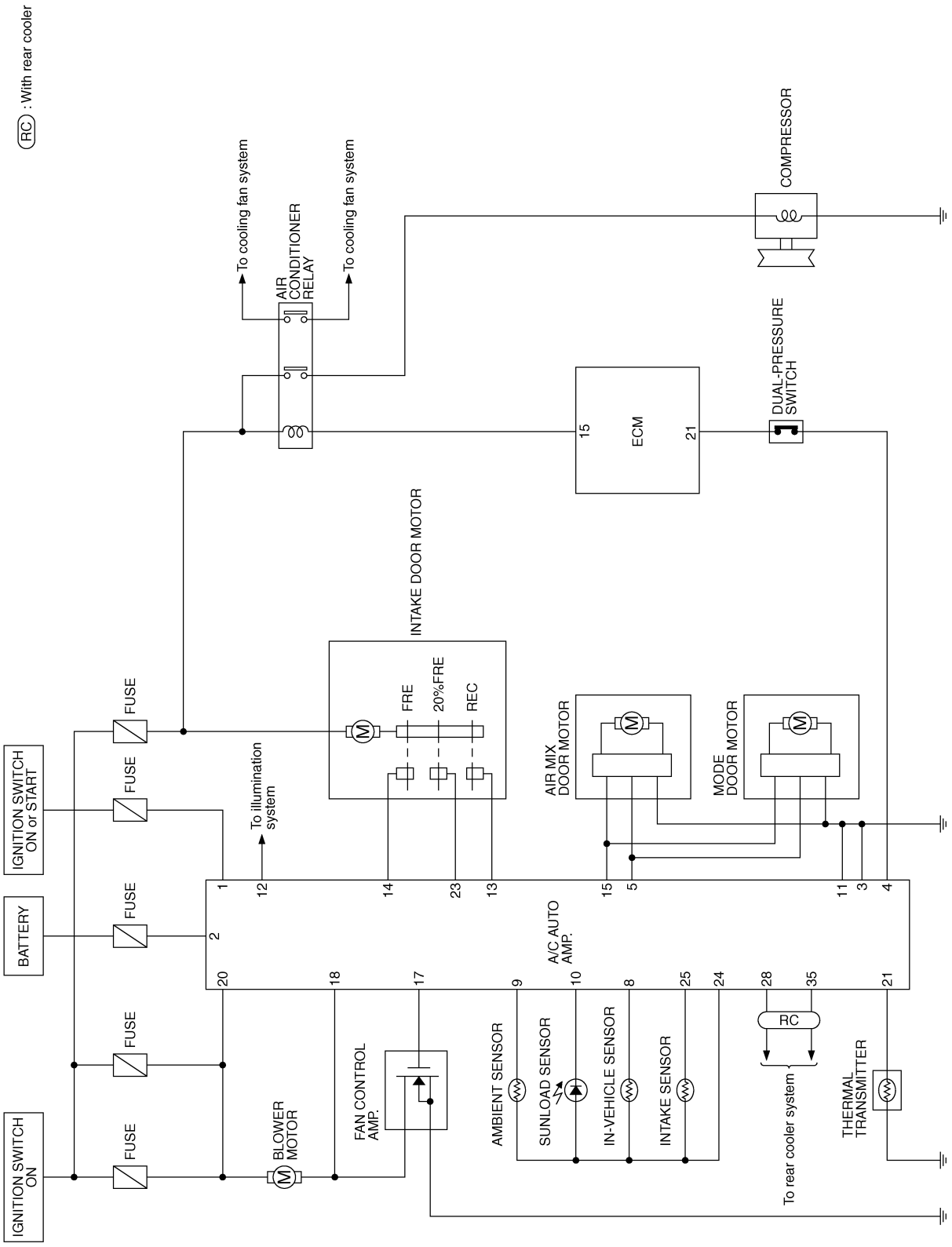




Refer to last page (Foldout page).
M1

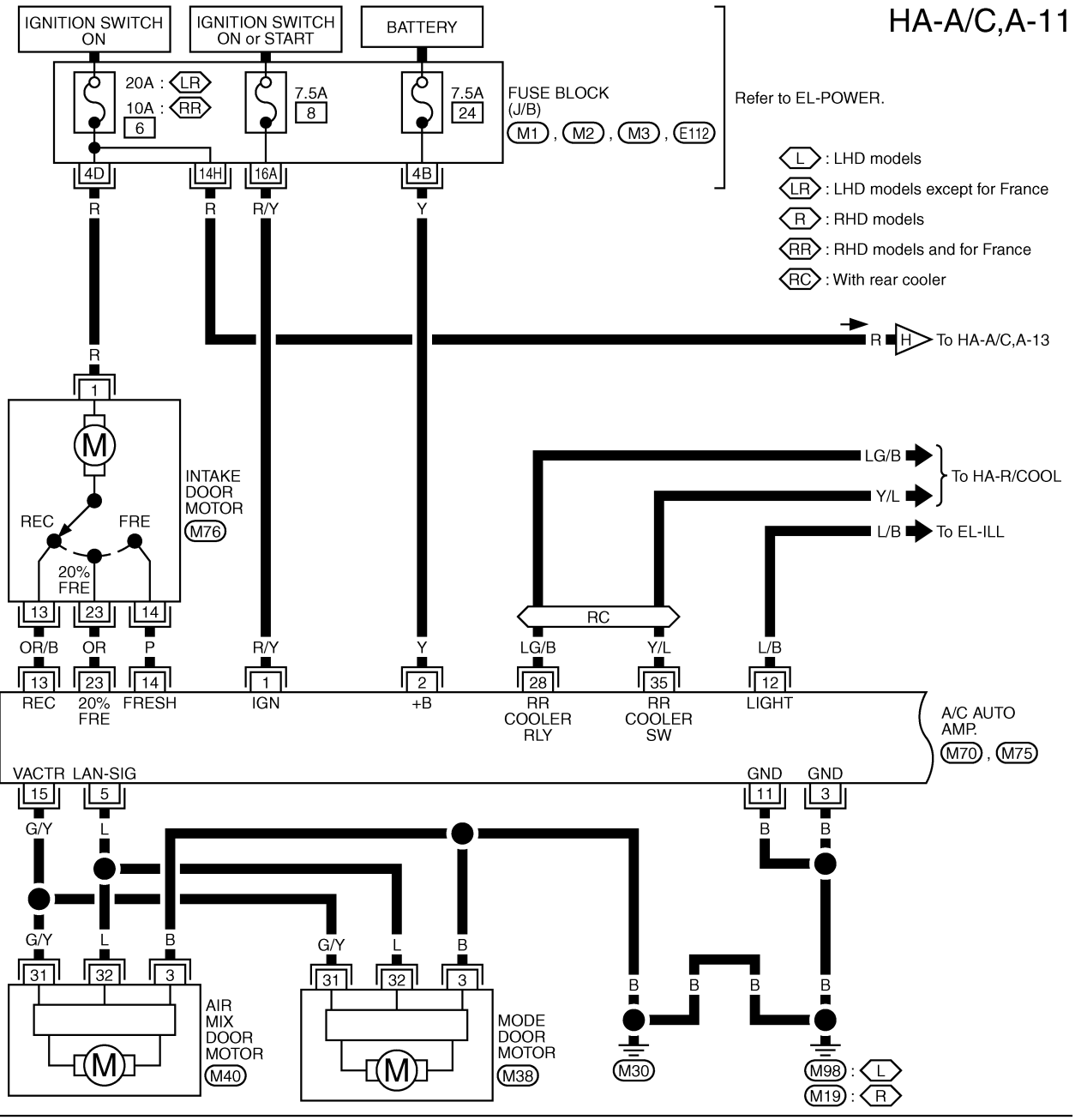
THA201M

Circuit Diagram — A/C, A —/ZD Engine

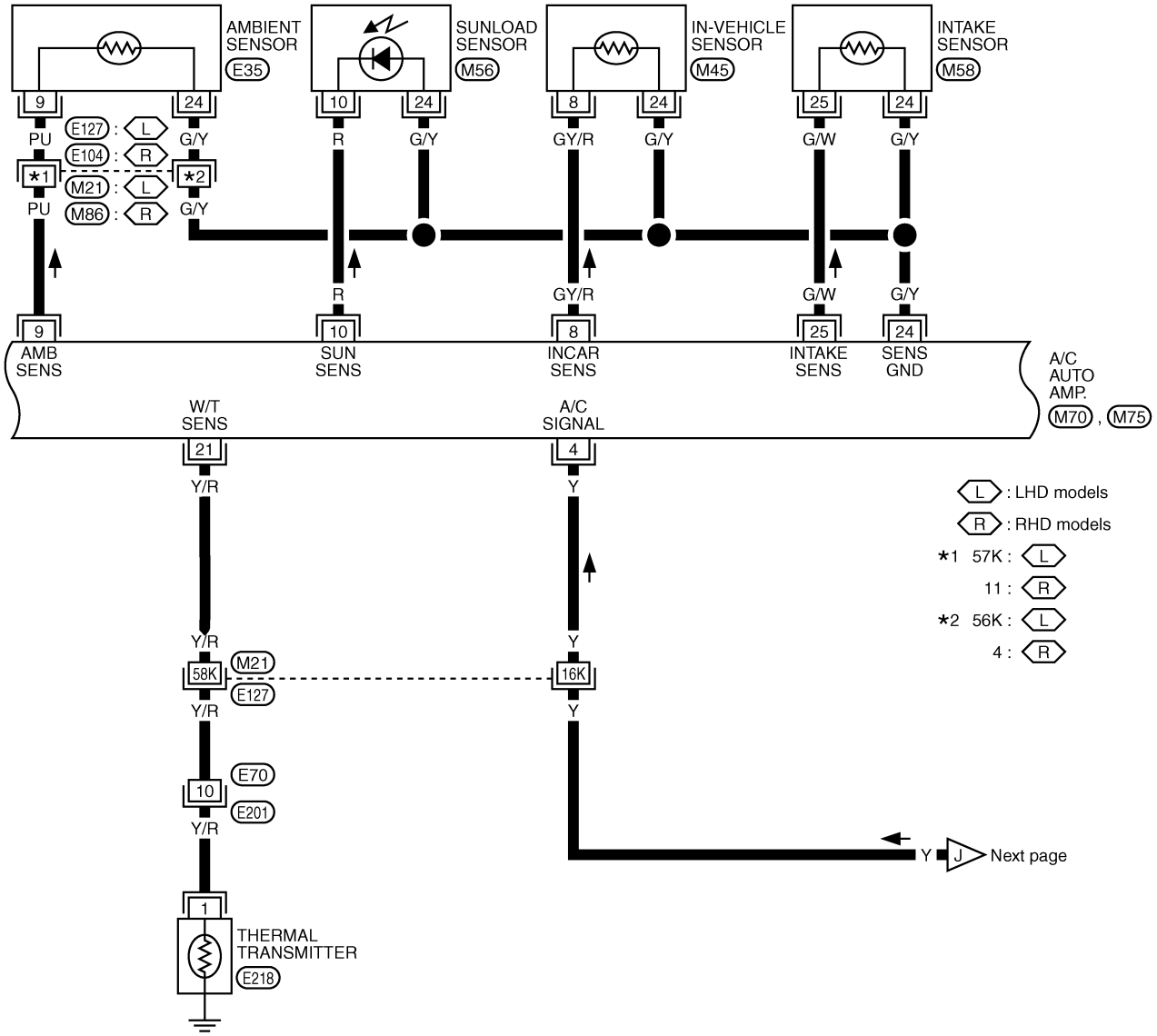


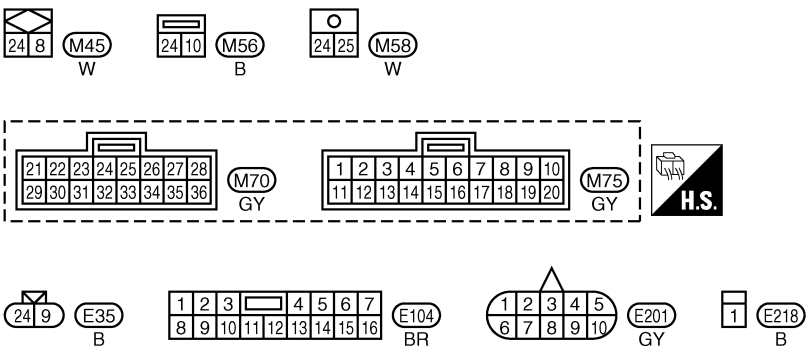
THA202M

Wiring Diagram — A/C, A —/ZD Engine



THA203M

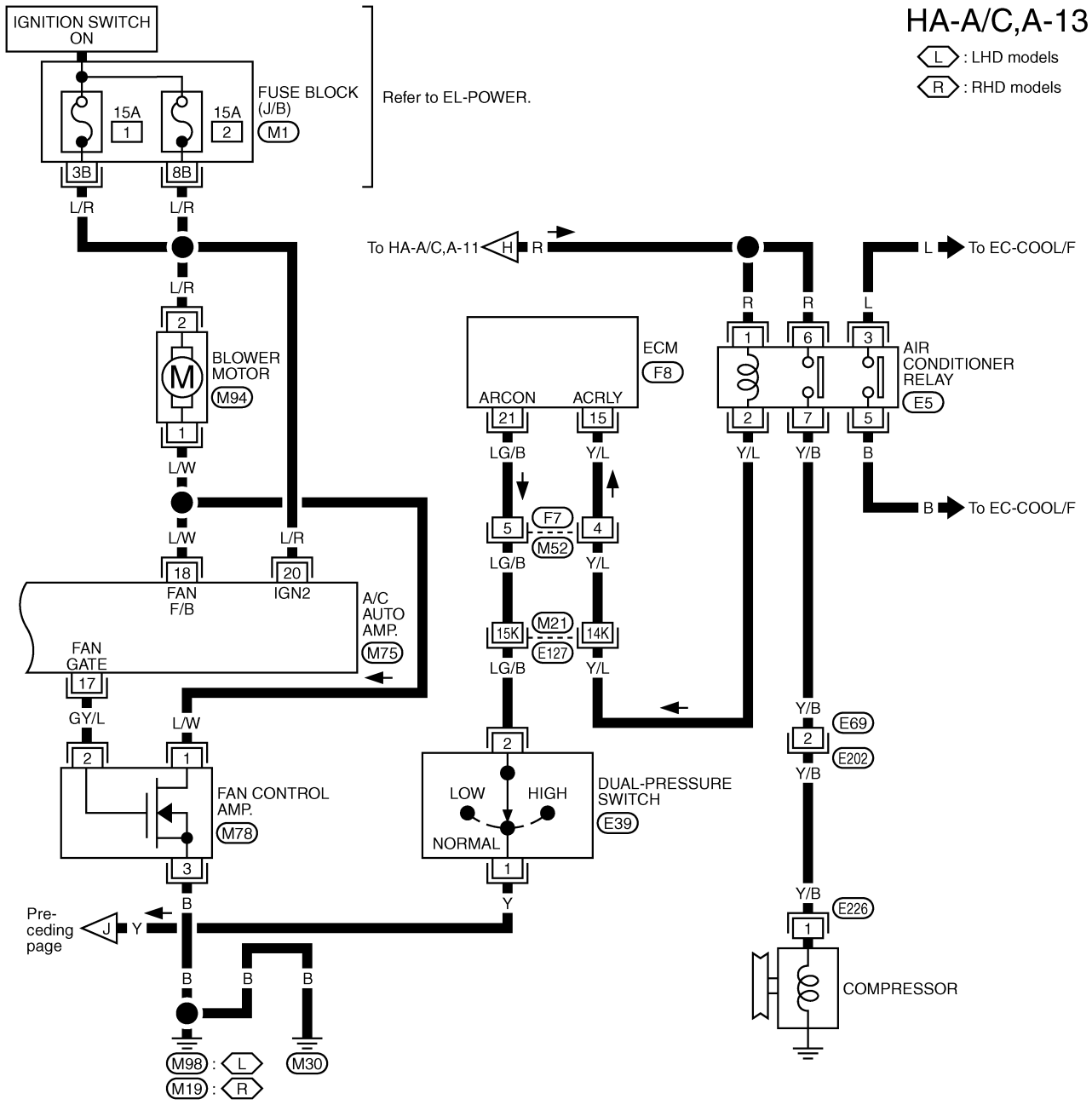


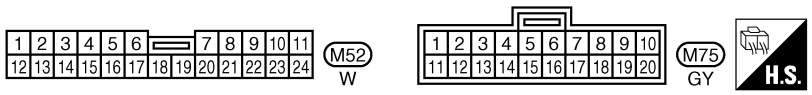


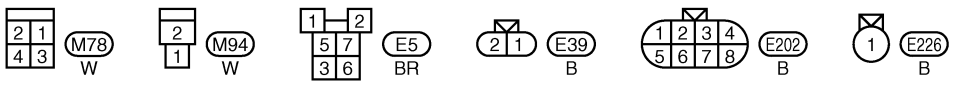
Refer to last page (Foldout page).
M21 , E127

THA204M

Wiring Diagram — A/C, A —/ZD Engine (Cont'd)







Refer to last page (Foldout page).

M21 , E127

M1

F8

THA205M

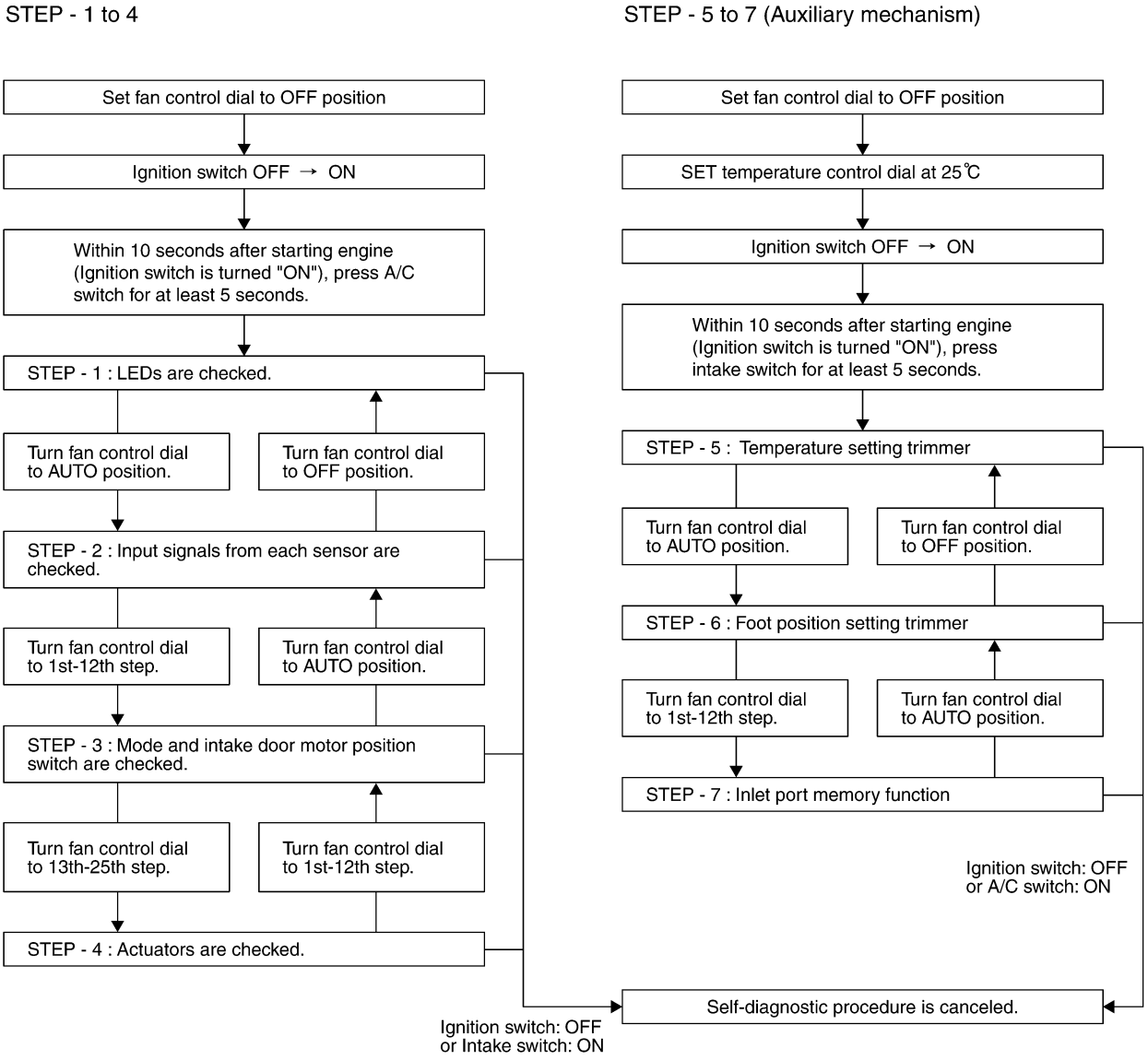
Self-diagnosis

INTRODUCTION AND GENERAL DESCRIPTION

The self-diagnostic system diagnoses sensors, door motors, blower motor, etc. by system line.
Self-diagnosis is step-1 to 7. There are two ways of changing method during self-diagnosis.

- Switching to self-diagnosis step-1 to 4.
  Shifting from usual control to the self-diagnostic system is accomplished by starting the engine (turning the ignition switch from OFF to ON) and pressing A/C switch for at least 5 seconds. The A/C switch must be pressed within 10 seconds after starting the engine (ignition switch is turned ON). This system will be canceled by either pressing intake switch or turning the ignition switch OFF. Shifting from one step to another is accomplished be means of turning fan control dial, as required.
- Switching to self-diagnosis step-5 to 7 (Auxiliary mechanism).
  Shifting from usual control to the self-diagnostic system is accomplished by starting the engine (turning the ignition switch from OFF to ON) and pressing intake switch for at least 5 seconds. The intake switch must be pressed within 10 seconds after starting the engine (ignition switch is turned ON). This system will be canceled by either pressing A/C switch or turning the ignition switch OFF. Shifting from one step to another is accomplished by means of turning fan control dial, as required.

Self-diagnosis (Cont'd)

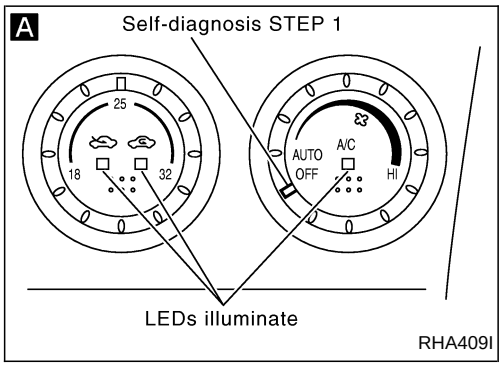


RJIA2106E

CAUTION:
This A/C system cannot perform the setup of the FOOT position (Self-diagnosis: STEP-6).
LED of A/C switch illuminates. It means that it is fixed to the initial setting.

Self-diagnosis (Cont'd)

STEP-BY-STEP PROCEDURE



Set mode control dial to AUTO.

↓

Set temperature control dial to 25°C.

↓

Set fan control dial to OFF.

↓

Turn ignition switch ON.

↓

Set in self-diagnostic mode. Within 10 seconds after starting engine (ignition switch is turned "ON".), press A/C switch for at least 5 seconds.

↓

A

STEP 1 - LEDs ARE CHECKED.
Do all LEDs illuminate?

No → Malfunctioning A/C switch or LED.
Replace A/C auto amp.

Yes ↓

Set fan control dial to AUTO.

↓

Advance to self-diagnosis STEP 2?

No → Malfunctioning fan control dial.
Replace A/C auto amp.

Yes ↓

Set fan control dial to OFF.

↓

Return to self-diagnosis STEP 1?

No → Malfunctioning fan control dial.
Replace A/C auto amp.

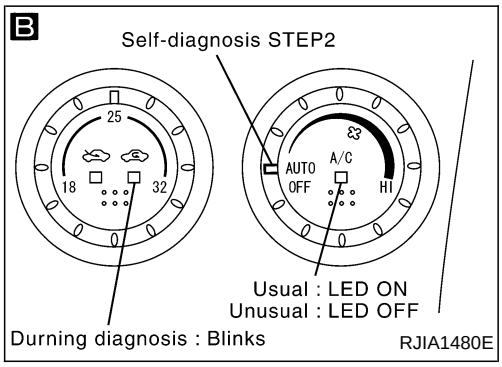
Yes ↓

Set fan control dial to AUTO.

↓

Ⓐ
(Go to next page.)

Self-diagnosis (Cont'd)



Ⓐ

B

STEP 2 - SENSOR CIRCUITS ARE CHECKED FOR OPEN OR SHORT CIRCUIT.
Does LED of A/C switch illuminate?

No

Yes

Set fan control dial to 1 - 12th step.

Ⓑ
(Go to next page.)

Refer to the following chart.

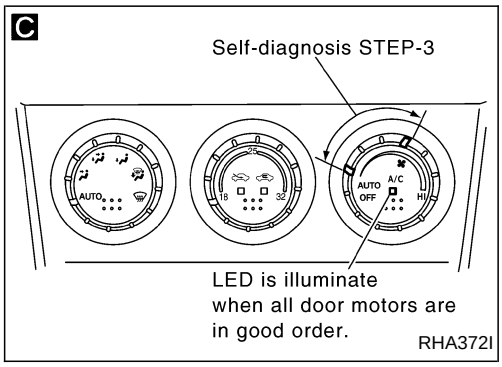
MODE position	Malfunctioning sensor (including circuits)	Reference page
VENT	Ambient sensor	HA-125*
B/L	In-vehicle sensor	HA-127*
FOOT	Sunload sensor*1	HA-129*
D/F	Intake sensor	HA-132*
DEF	Air mix door motor (LCU) PBR	HA-101*

*: Refer to Y61 SERVICE MANUAL, Publication No. SM7E-2Y61G1.

***1: Conduct self-diagnosis STEP 2 under sunshine.**
When conducting indoors, aim a light (more than 60W) at sunload sensor, otherwise LED of A/C switch will indicate despite that sunload sensor is functioning properly.

Self-diagnosis (Cont'd)

C



Ⓑ

C

STEP 3 - MODE DOOR POSITIONS ARE CHECKED.
Does LED of A/C switch illuminate?

No

Yes

Set fan control dial to 13 - 25th step.

Ⓒ
(Go to next page.)

Mode door motor is malfunctioning.

Result	LED status
Mode door motor operates in good order	A/C: ON
Mode door motor is malfunctioning	REC: ON

Self-diagnosis (Cont'd)

D

Discharge air flow

Mode door position	Air outlet/distribution		
	Face	Foot	Defroster
	100%	–	–
	60%	40%	–
	–	80%	20%
	–	60%	40%
	–	–	100%

RHA654FF

Ⓒ

STEP 4 - OPERATION OF EACH ACTUATOR IS CHECKED.
Engine running.

D

Refer to the following chart and confirm discharge air flow, air temperature, blower motor voltage and compressor operation.
Checks must be made visually, by listening to any noise, or by touching air outlets with your hand, etc. for improper operation.

Mode control dial position	Actuator test pattern				
	Mode door	Intake door	Air mix door	Blower motor	Compressor
AUTO	VENT 	REC	Full Cold	4 - 5V	ON
VENT	VENT 	REC	Full Cold	9 - 11V	ON
B/L	B/L 	REC	Full Cold	7 - 9V	OFF
FOOT	FOOT 	FRE	Full Hot	7 - 9V	OFF
D/F	D/F 	FRE	Full Hot	7 - 9V	ON
DEF	DEF 	FRE	Full Hot	10 - 12V	ON

NG →
- Air outlet does not change.
  Go to HA-4035.
- Intake door does not change.
  Go to HA-4037.
- Discharge air temperature does not change.
  Go to HA-4036.
- Magnet clutch does not engage.
  Go to HA-4039.
- Blower motor operation is malfunctioning.
  Go to HA-4038.

OK ↓

Turn ignition switch OFF or press intake switch.

↓

END

AUXILIARY MECHANISM: TEMPERATURE SETTING TRIMMER

The trimmer compensates for differences in range of ±3°C between temperature setting (Temperature control dial position) and temperature felt by driver.
Operating procedures for this trimmer are as follows:

1. Set temperature at 25°C.
2. Set fan control dial to OFF.
3. Turn ignition switch ON.
4. Set in self-diagnostic mode as follows. Within 10 seconds after starting engine (ignition switch is turned ON.), press intake switch for at least 5 seconds.
5. Turn temperature control dial as desired. Temperature will change at a rate of 1°C each time a dial is turned.

Setting temperature	LED status of each switch		
	FRE	REC	A/C
−3°C	ON	ON	ON
−2°C	ON	ON	OFF
−1°C	ON	OFF	ON
0°C (Initial setting)	OFF	OFF	OFF
1°C	OFF	OFF	ON
2°C	OFF	ON	OFF
3°C	OFF	ON	ON

When battery cable is disconnected, trimmer operation is canceled. Temperature set becomes that of initial condition, i.e. 0°C.

AUXILIARY MECHANISM: FOOT POSITION SETTING TRIMMER

CAUTION:

This A/C system cannot perform the setup of the FOOT position.
LED of A/C switch illuminates. It means that it is fixed to the initial setting.

AUXILIARY MECHANISM: INLET PORT MEMORY FUNCTION

When ignition switch is turned from OFF to ON, inlet port can be set to AUTO or manual.
Operating procedures for this trimmer are as follows:

1. Set fan control dial to 1st - 25th step.
2. Turn ignition switch ON.
3. Set in self-diagnostic mode as follows. Within 10 seconds after starting engine (ignition switch is turned ON.), press intake switch for at least 5 seconds.
4. Press intake switch as desired.

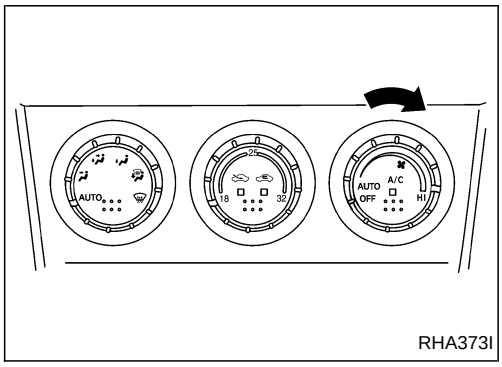
LED status of intake switch		Setting status		Setting changeover method
FRE	REC	FRE	REC	
OFF	ON	AUTO control (Initial setting)	Manual REC status is memorized. (Initial setting)	Intake switch: ON
ON	OFF	Manual FRE status is memorized.	AUTO control	
ON	ON	Manual FRE status is memorized.	Manual REC status is memorized.	
OFF	OFF	AUTO control	AUTO control	

Operational Check

The purpose of the operational check is to confirm that the system is as it should be. The systems which will be checked are the blower, mode (discharge air), intake air, temperature decrease, temperature increase and A/C switch.

CONDITIONS:

- **Engine running and at normal operating temperature.**

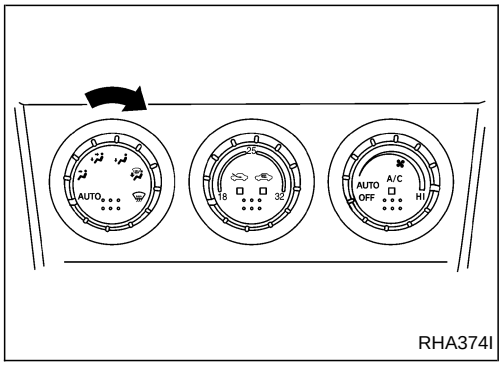


RHA373I

PROCEDURE:

1. Check blower

1) Turn fan control dial to 1st speed. Blower should operate at low speed.
2) Turn fan control dial to 2nd speed, and continue checking blower speed until all speeds are checked.
3) Leave blower on MAX speed.



RHA374I

2. Check discharge air

1) Turn mode control dial to each position.

Discharge air flow

Mode door position	Air outlet/distribution		
	Face	Foot	Defroster
	100%	–	–
	60%	40%	–
	–	80%	20%
	–	60%	40%
	–	–	100%

RHA654FF

2) Confirm that discharge air comes out according to the air distribution table at left.

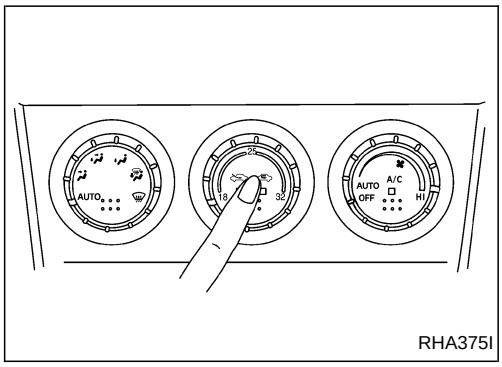
Refer to “Discharge Air Flow”, “DESCRIPTION” (HA-14) in Y61 SERVICE MANUAL, Publication No. SM7E-2Y61G1.

NOTE:

Confirm that the compressor clutch is engaged (sound or visual inspection) and intake door position is at FRESH when the DEF position is selected.

Intake door position is checked in the next step.

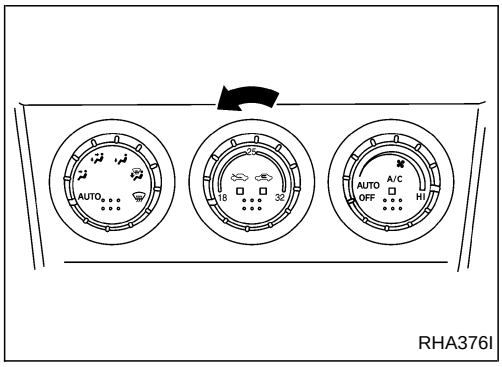
Operational Check (Cont'd)



RHA375I

3. Check intake door

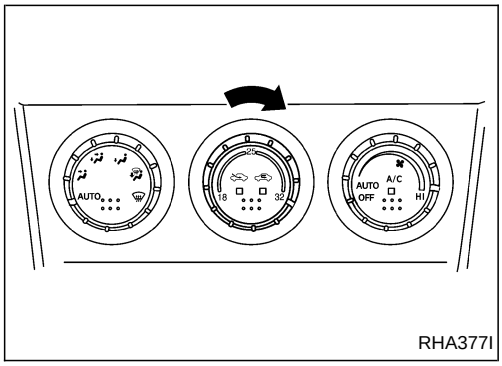
1) Press intake switch. Recirculation indicator should illuminate.
2) Press intake switch again. Fresh indicator should illuminate.
3) Listen for intake door position change (you should hear blower sound change slightly).



RHA376I

4. Check temperature decrease

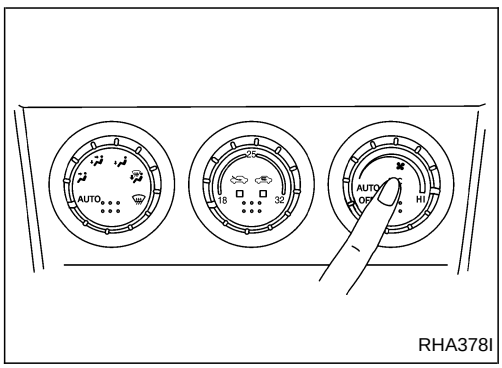
1) Turn temperature control dial until 18°C.
2) Check for cold air at discharge air outlets.



RHA377I

5. Check temperature increase

1) Turn temperature control dial until 32°C.
2) Check for hot air at discharge air outlets.



RHA378I

6. Check A/C switch

1) Turn fan control dial to AUTO position.
2) Press A/C switch. (LED will turn ON.)
   Confirm that the compressor clutch engages (sound or visual inspection).
   (Discharge air and suction air will depend on ambient, in-vehicle and set temperatures.)

A/C System

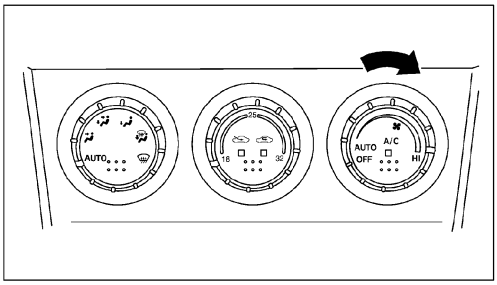
TROUBLE DIAGNOSIS PROCEDURE FOR A/C SYSTEM

SYMPTOM:

- **A/C system does not come on.**

Inspection flow

1. Confirm symptom by performing the following operational check.



OPERATIONAL CHECK
a. Set fan control dial to AUTO position.
(Compressor is turned ON automatically.)
Confirm that the compressor clutch engages
(Sound or visual inspection).
(blower speed will depend
on ambient, in-vehicle and set temperatures.)

If OK (symptom cannot be duplicated), perform complete operational check (*2).
If NG (symptom is confirmed), continue with STEP-2 following.

2. Check for any service bulletins.
3. Check Main Power Supply and Ground Circuit. (*1)
4. Replace auto amp.

RHA379I

*1: HA-96 in Y61 SERVICE MANUAL, Publication No. SM7E-2Y61G1

*2: HA-4032

Mode Door Motor

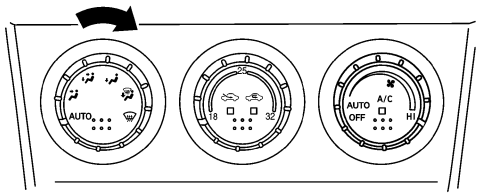
TROUBLE DIAGNOSIS PROCEDURE FOR MODE DOOR MOTOR (LAN)

SYMPTOM:

- **Air outlet does not change.**
- **Mode door motor does not operate normally.**

Inspection flow

1. Confirm symptom by performing the following operational check.



OPERATIONAL CHECK – Discharge air

a. Turn mode control dial to each position.

Discharge air flow

Mode door position	Air outlet/distribution		
	Vent	Foot	Defroster
	100%	–	–
	60%	40%	–
	–	80%	20%
	–	60%	40%
	–	–	100%

b. Confirm that discharge air comes out according to the air distribution table at left.
Refer to “Discharge Air Flow” (*1).

NOTE:

- **If OK (symptom cannot be duplicated), perform complete operational check (*2).**
  If NG (symptom is confirmed), continue with STEP-2 following.
- **Confirm that the compressor clutch is engaged (sound or visual inspection) and intake door position is at FRESH when DEF is selected.**
  Intake door position is checked in the next step.

2. Check for any service bulletins.
3. Perform self-diagnosis STEP-1. (*3)
4. Perform self-diagnosis STEP-2. (*4)
   - OK → 3
   - NG → Go to appropriate malfunctioning sensor circuit. (*12)
5. Perform self-diagnosis STEP-3. (*5)
   - NG → Go to DIAGNOSTIC PROCEDURE FOR LAN SYSTEM CIRCUIT. (*11)
6. Perform self-diagnosis STEP-4. (*6)
   - NG → Check mode door control linkage. (*13)
     - NG → Repair or adjust control linkage.
   - OK **[Cause cannot be confirmed by self-diagnosis.]**
7. Check ambient sensor circuit. (*7)
8. Check in-vehicle sensor circuit. (*8)
9. Check sunload sensor circuit. (*9)
10. Check intake sensor circuit. (*10)
11. Check air mix door motor circuit. (*11)
    - OK → If the symptom still exists, perform a complete operational check (*2) and check for other symptoms.
      [Refer to symptom table, (*14).]
      Does another symptom exist?
      - Yes → Go to Trouble Diagnosis for related symptoms. **[Another symptom exists.]**
      - No → Replace auto amp. → INSPECTION END

RHA380I

1: HA-14
*2: HA-4032
*3: HA-4027
*4: HA-4028
*5: HA-4029
*6: HA-4030
7: HA-125
8: HA-127
9: HA-129
10: HA-132
11: HA-101
12: HA-87
13: HA-99
14: HA-91

*: Refer to Y61 SERVICE MANUAL, Publication No. SM7E-2Y61G1.

Air Mix Door Motor

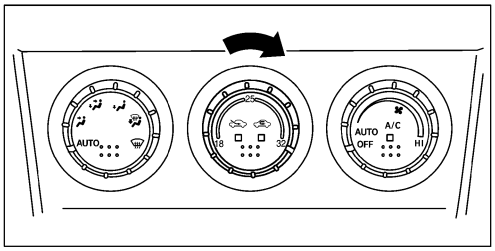
TROUBLE DIAGNOSIS PROCEDURE FOR AIR MIX DOOR (LAN)

SYMPTOM:

- **Discharge air temperature does not change.**
- **Air mix door motor does not operate.**

Inspection flow

1. Confirm symptom by performing the following operational check.



OPERATIONAL CHECK

Temperature increase

a. Turn temperature control dial clockwise until 32˚C.
b. Check for hot air at discharge air outlets.

Temperature decrease

a. Turn temperature control dial counterclockwise until 18˚C.
b. Check for cold air at discharge air outlets.

If OK (symptom cannot be duplicated), perform complete operational check (*12).
If NG (symptom is confirmed), continue with STEP-2 following.

2. Check for any service bulletins.
3. Perform self-diagnosis STEP-1.(*1)
OK
4. Perform self-diagnosis STEP-2. (*2)
NG → Go to appropriate malfunctioning sensor circuit. (*2)
OK
5. Perform self-diagnosis STEP-4. (*3)
OK → 6. Check ambient sensor circuit. (*4)
[Cause cannot be confirmed by self-diagnosis.]
OK → 7. Check in-vehicle sensor circuit. (*5)
OK → 8. Check sunload sensor circuit. (*6)
OK → 9. Check intake sensor circuit. (*7)
OK → 10. Check air mix door motor circuit. (*8)
OK → If the symptom still exists, perform a complete operational check (*12) and check for other symptoms. [Refer to symptom table, (*9).] Does another symptom exist?
Yes → Go to Trouble Diagnosis for related symptom.
Another symptom exists.
No → Replace auto amp. → INSPECTION END

NG → Check air mix door control linkage. (*11)
OK → Go to LAN system circuit. (*10)
NG → Repair or adjust control linkage.

RHA381I

*1: HA-4027
*2: HA-4028
*3: HA-4027 see STEP 4
4: HA-125
5: HA-127
6: HA-129
7: HA-132
8: HA-101
9: HA-91
10: HA-100
11: HA-103
*12: HA-4032

*: Refer to Y61 SERVICE MANUAL, Publication No. SM7E-2Y61G1.

Intake Door Motor

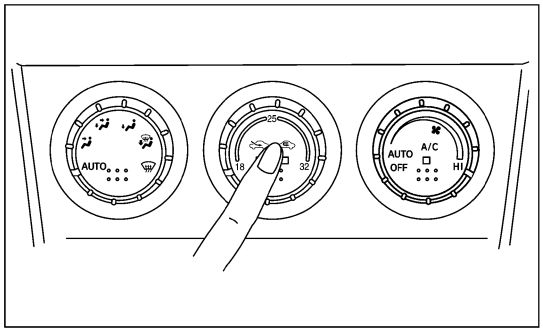
TROUBLE DIAGNOSIS PROCEDURE FOR INTAKE DOOR

SYMPTOM:

- **Intake door does not change.**
- **Intake door motor does not operate normally.**

Inspection flow

1. Confirm symptom by performing the following operational check.



a. Press intake switch.
Recirculation indicator should illuminate.
b. Press intake switch again.
Fresh indicator should illuminate.
c. Listen for intake door position change (you should hear blower sound change slightly).

If OK (symptom cannot be duplicated), perform complete operational check (*11).
If NG (symptom is confirmed), continue with STEP-2 following.

2. Check for any service bulletins.
3. Perform self-diagnosis STEP-1. (*1)
OK
4. Perform self-diagnosis STEP-2. (*2)
NG → Go to appropriate malfunctioning sensor circuit. (*2)
OK
5. Perform self-diagnosis STEP-4. (*3)
OK
[Cause cannot be confirmed by self-diagnosis.]
NG → Check intake door control linkage. (*10)
NG → Repair or adjust control linkage.
OK → Go to LAN system circuit. (*9)
OK
6. Check ambient sensor circuit. (*4)
OK
7. Check in-vehicle sensor circuit. (*5)
OK
8. Check sunload sensor circuit. (*6)
OK
9. Check intake sensor circuit. (*7)
OK
10. Check air mix door motor circuit. (*8)
OK
If the symptom still exists, perform a complete operational check (*11) and check for other symptoms. [Refer to symptom table, (*12).] Does another symptom exist?
No → Replace auto amp. → INSPECTION END
Yes → Go to Trouble Diagnosis for related symptom.
Another symptom exists.

RHA382I

*1: HA-4027
*2: HA-4028
*3: HA-4027 see STEP 4
4: HA-125
5: HA-127
6: HA-129
7: HA-132
8: HA-101
9: HA-107
10: HA-106
*11: HA-4032
12: HA-91

*: Refer to Y61 SERVICE MANUAL, Publication No. SM7E-2Y61G1.

Blower Motor

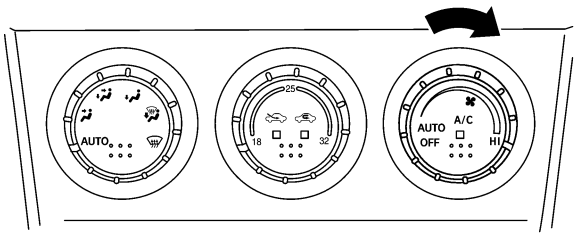
TROUBLE DIAGNOSIS PROCEDURE FOR BLOWER MOTOR

SYMPTOM:

- **Blower motor operation is malfunctioning.**
- **Blower motor operation is malfunctioning under out of starting fan speed control.**

Inspection flow

1. Confirm symptom by performing the following operational check.



OPERATIONAL CHECK - Blower
Turn fan control dial clockwise, and continue checking blower speed until all speeds are checked.
If OK (symptom cannot be duplicated), perform complete operational check (*10).
If NG (symptom is confirmed), continue with STEP-2 following.

2. Check for any service bulletins.
3. Perform self-diagnosis STEP-1. (*1)
OK
4. Perform self-diagnosis STEP-2. (*2)
NG → Go to appropriate malfunctioning sensor circuit. (*2)
OK
5. Perform self-diagnosis STEP-4. (*3)
Does blower motor speed change according to each code No.?
No → Go to Blower Motor Circuit. (*4)

Code No.	41	42	43	44	45	46
Blower motor voltage	4.5V	10.5V	8.5V			12V

Yes
6. Is engine coolant temperature below 56˚C?
No → Blower motor operation is normal.
Yes
7. Is blower motor operating under starting blower speed control?
No → Go to Blower Motor Circuit. (*4)
OK → Check thermal transmitter control circuit. Refer to EL section (“Thermal Transmitter Check”, “METERS AND GAUGES”).
Yes **[Cause cannot be confirmed by self-diagnosis.]**
8. Check ambient sensor circuit. (*5)
OK
9. Check in-vehicle sensor circuit. (*6)
OK
10. Check sunload sensor circuit. (*7)
OK
11. Check intake sensor circuit. (*8)
OK
If the symptom still exists, perform a complete operational check (*9) and check for other symptoms. [Refer to symptom table, (*10).] Does another symptom exist?
Yes → Go to Trouble Diagnosis for related symptom.
Another symptom exists.
No
Replace auto amp. → INSPECTION END

RHA383I

*1: HA-4027
*2: HA-4028
*3: HA-4030
4: HA-111
5: HA-125
6: HA-127
7: HA-129
8: HA-132
9: HA-91
*10: HA-4032

*: Refer to Y61 SERVICE MANUAL, Publication No. SM7E-2Y61G1.

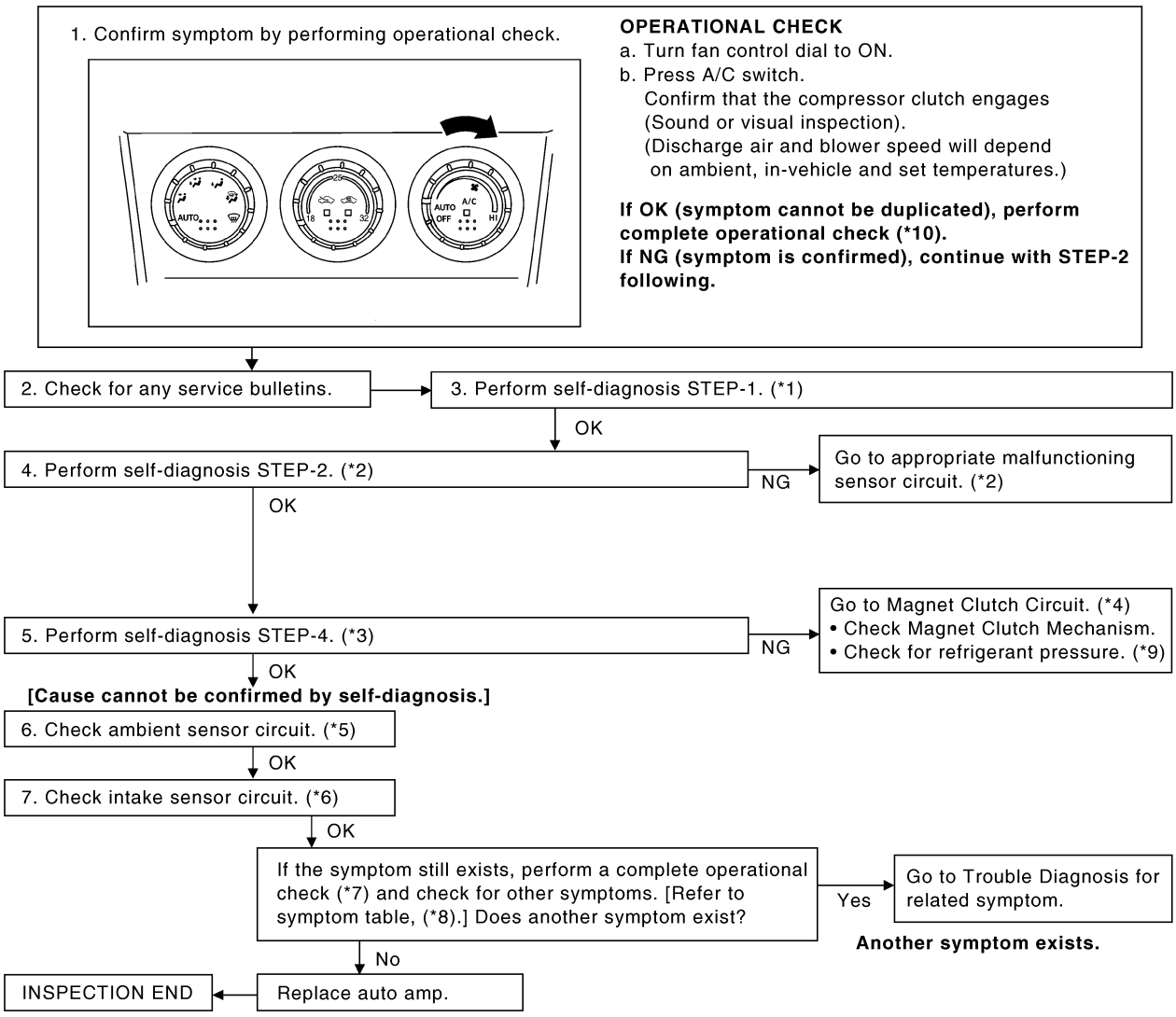
Magnet Clutch

TROUBLE DIAGNOSIS PROCEDURE FOR MAGNET CLUTCH

SYMPTOM:

- **Magnet clutch does not engage.**

Inspection flow



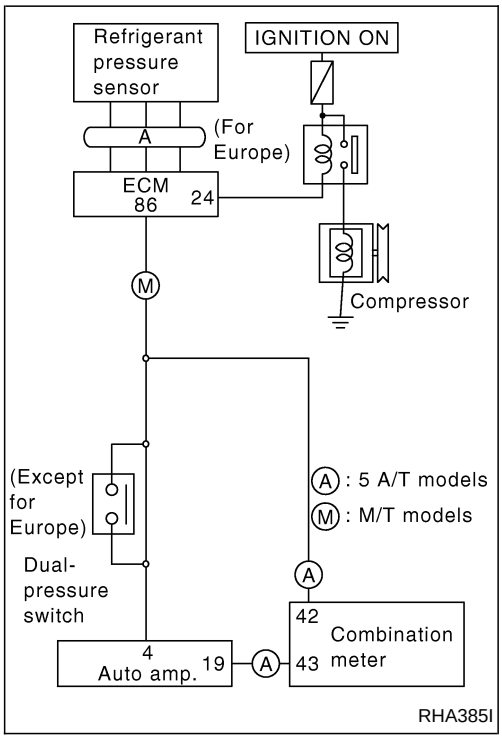
RHA384I

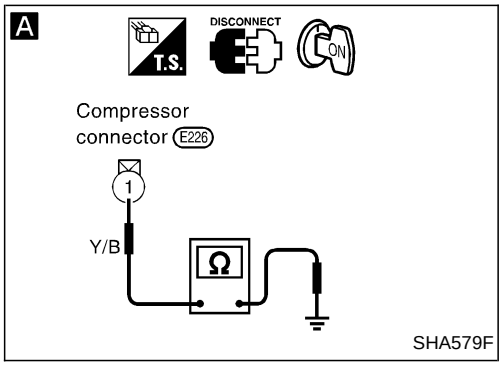
*1: HA-4027
*2: HA-4027 see STEP 2
*3: HA-4027 see STEP 4
*4: HA-4040: TB48 engine
HA-4043: TB45 engine
HA-4046: TD engine
HA-4049: ZD engine
*5: HA-125 in Y61 SERVICE MANUAL, publication No. SM7E-2Y61G1
*6: HA-132 in Y61 SERVICE MANUAL, publication No. SM7E-2Y61G1
*7: HA-4032
*8: HA-91 in Y61 SERVICE MANUAL, publication No. SM7E-2Y61G1
*9: HA-43 in Y61 SERVICE MANUAL, publication No. SM7E-2Y61G1

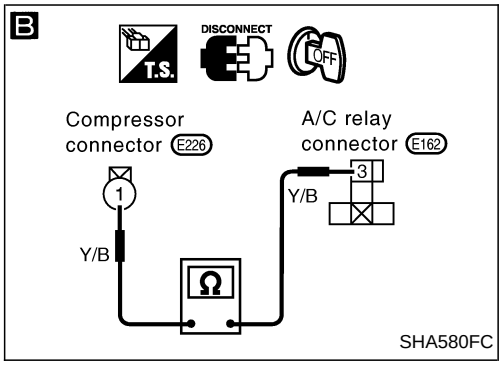
Magnet Clutch (Cont'd)

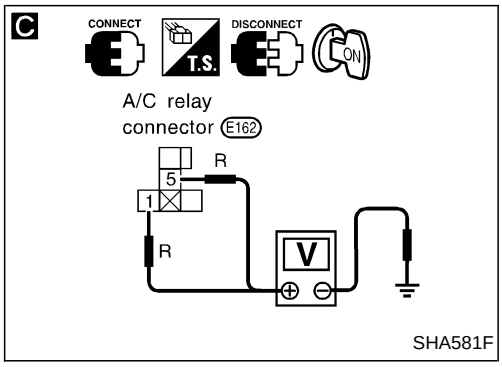
DIAGNOSTIC PROCEDURE (TB48 ENGINE EXCEPT FOR THE MIDDLE EAST)

SYMPTOM: Magnet clutch does not engage when A/C switch and fan control dial are ON.









CHECK INTAKE SENSOR CIRCUIT.
Refer to self-diagnosis (HA-4027) and intake sensor circuit (HA-132 in Y61 SERVICE MANUAL, publication No. SM7E-2Y61G1.)

↓

A

CHECK POWER SUPPLY FOR COMPRESSOR.
Disconnect compressor harness connector.
Do approx. 12 volts exist between compressor harness connector terminal No. ① and ground?

Yes → Check magnet clutch coil.
NG → Replace magnet clutch. Refer to HA-178 in Y61 SERVICE MANUAL (publication No. SM7E-2Y61G1).

No ↓

Disconnect A/C relay.

↓

B

Note

CHECK CIRCUIT CONTINUITY BETWEEN A/C RELAY HARNESS CONNECTOR TERMINAL NO. ③ AND COMPRESSOR HARNESS CONNECTOR TERMINAL NO. ① .
Continuity should exist.
If OK, check harness for short.

OK ↓

C

CHECK POWER SUPPLY FOR A/C RELAY.
Disconnect A/C relay.
Do approx. 12 volts exist between A/C relay harness connector terminal Nos. ① , ⑤ and ground?

No → Check power supply circuit and 10A or 20A (No. 6) located in the fuse block (J/B). Refer to EL section ("Wiring Diagram", "POWER SUPPLY ROUTING").

Yes ↓

CHECK A/C RELAY AFTER DISCONNECTING IT.
Refer to HA-41 in Y61 SERVICE MANUAL, publication No. SM1E-Y61EG1.

NG → Replace A/C relay.

OK ↓

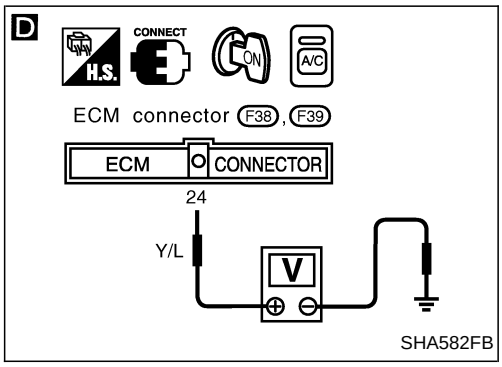
Ⓐ

(Go to next page.)

Note:
If the result is NG or No after checking circuit continuity, repair harness or connector.

Magnet Clutch (Cont'd)

D



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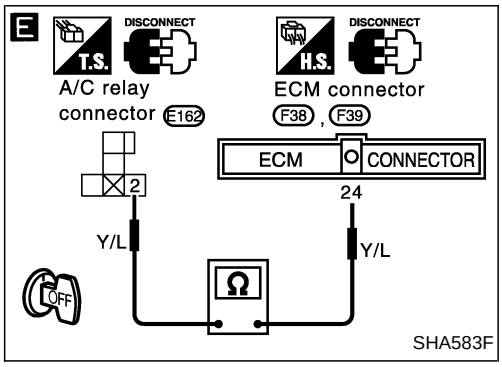

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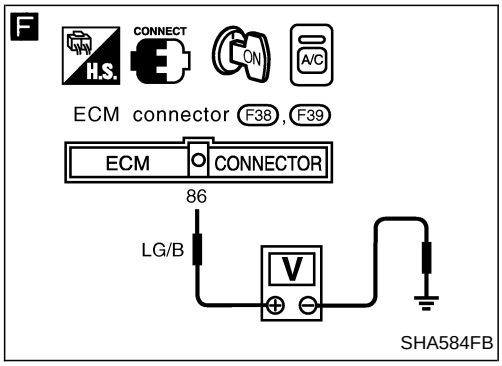

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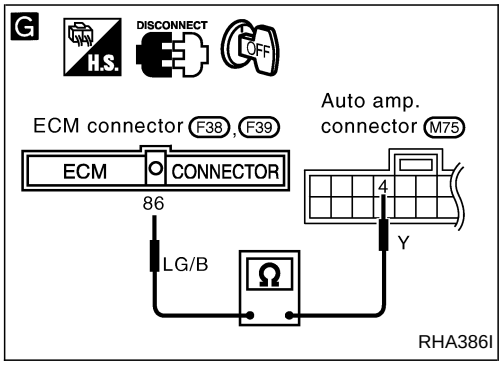


Ⓐ

Reconnect A/C relay.

D

CHECK COIL SIDE CIRCUIT OF A/C RELAY.
Do approx. 12 volts exist between ECM harness connector terminal No. ㉔ and ground?

No → Disconnect A/C relay. Disconnect ECM harness connector.

Yes

Yes

M/T models

A/T models

Ⓑ

(Go to next page.)

E

Note

CHECK CIRCUIT CONTINUITY BETWEEN A/C RELAY HARNESS CONNECTOR TERMINAL NO. ② AND ECM HARNESS CONNECTOR TERMINAL NO. ㉔.
Continuity should exist.
If OK, check harness for short.

F

CHECK VOLTAGE FOR ECM.
Do approx. 12 volts exist between ECM harness connector terminal No. ㊱ and ground?

No → CHECK ECM. Refer to EC section.

Yes

Disconnect ECM harness connector.
Disconnect auto amp. harness connector.

G

Note

CHECK CIRCUIT CONTINUITY BETWEEN ECM HARNESS CONNECTOR TERMINAL NO. ㊱ AND AUTO AMP. HARNESS CONNECTOR TERMINAL NO. ④.
Continuity should exist.
If OK, check harness for short.

OK

CHECK REFRIGERANT PRESSURE SENSOR.
Refer to EC-498 (publication No. SM2E-Y61FG1).

NG → Replace refrigerant pressure sensor.

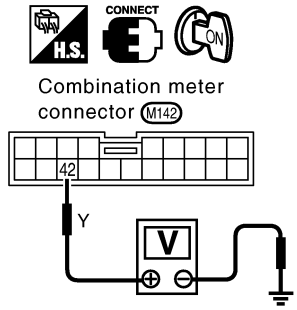
OK

Replace auto amp.

Note:
If the result is NG or No after checking circuit continuity, repair harness or connector.

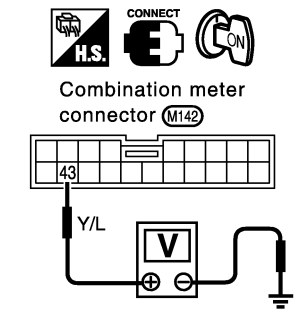
Magnet Clutch (Cont'd)

H



SHA693FA

I



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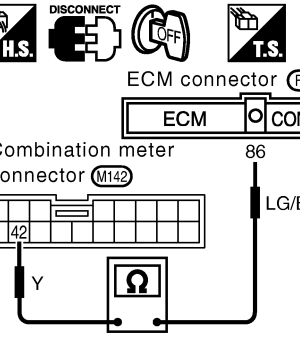
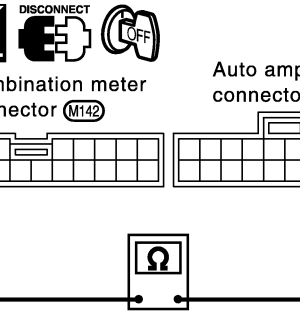


RHA387I

K



SHA697F

Ⓑ

H

CHECK VOLTAGE FOR COMBINATION METER. (COMPRESSOR ON SIGNAL)
Do approx. 12V exist between combination meter harness connector terminal No. ㊷ and ground?

No → **J** Note: CHECK CIRCUIT CONTINUITY BETWEEN COMBINATION METER HARNESS CONNECTOR TERMINAL NO. ㊷ AND ECM HARNESS CONNECTOR TERMINAL NO. ㊽.
Continuity should exist.
If OK, check harness for short.

OK → Replace ECM.

Yes

I

CHECK VOLTAGE FOR COMBINATION METER. (FAN ON SIGNAL)
Do approx. 12V exist between combination meter harness connector terminal No. ㊸ and ground?

No → Replace combination meter.

Yes → Disconnect combination meter and auto amp. harness connector.

K Note: CHECK CIRCUIT CONTINUITY BETWEEN COMBINATION METER HARNESS CONNECTOR TERMINAL NO. ㊸ AND AUTO AMP. HARNESS CONNECTOR TERMINAL NO. ⑲.
Continuity should exist.
If OK, check harness for short.

OK → CHECK REFRIGERANT PRESSURE SENSOR.
Refer to EC-498 (publication No. SM2E-Y61FG1).

NG → Replace refrigerant pressure sensor.

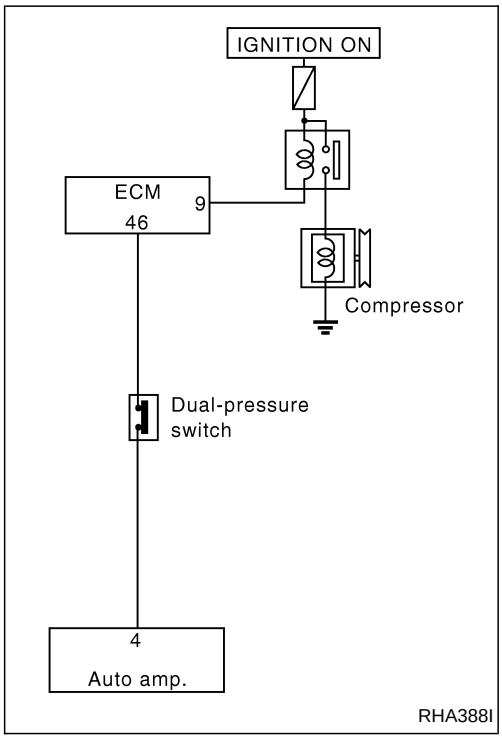
OK → Replace auto amp.

Note:
If the result is NG or No after checking circuit continuity, repair harness or connector.

Magnet Clutch (Cont'd)

DIAGNOSTIC PROCEDURE (MODELS WITH TB45 ENGINE)

SYMPTOM: Magnet clutch does not engage when A/C switch and fan control dial are ON.



A

CHECK POWER SUPPLY FOR COMPRESSOR.
Disconnect compressor harness connector.
Do approx. 12 volts exist between compressor harness connector terminal No. ① and ground?

Yes → Check magnet clutch coil.
NG → Replace magnet clutch. Refer to HA-178 in Y61 SERVICE MANUAL, publication No. SM7E-2Y61G1.

No

Disconnect A/C relay.

B

Note

CHECK CIRCUIT CONTINUITY BETWEEN A/C RELAY HARNESS CONNECTOR TERMINAL NO. ③ AND COMPRESSOR HARNESS CONNECTOR TERMINAL NO. ① .
Continuity should exist.
If OK, check harness for short.

OK

C

CHECK POWER SUPPLY FOR A/C RELAY.
Disconnect A/C relay.
Do approx. 12 volts exist between A/C relay harness connector terminal Nos. ① , ⑤ and ground?

No → Check power supply circuit and 10A or 20A (No. 6) located in the fuse block (J/B).
Refer to EL section ("Wiring Diagram", "POWER SUPPLY ROUTING").

Yes

CHECK A/C RELAY AFTER DISCONNECTING IT.
Refer to HA-22 in Y61 SERVICE MANUAL, publication No. SM1E-Y61EG1.

NG → Replace A/C relay.

OK

Ⓐ

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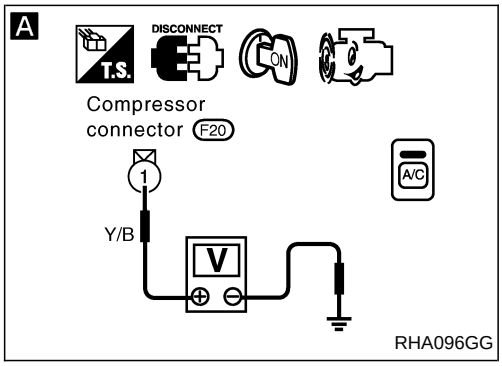
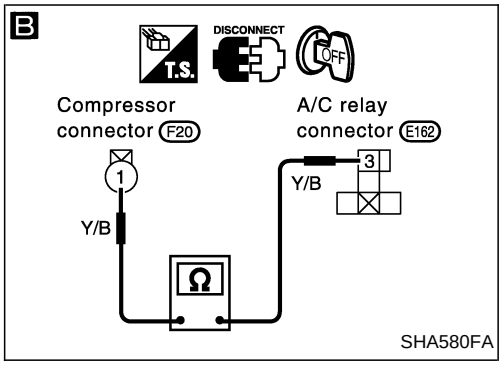
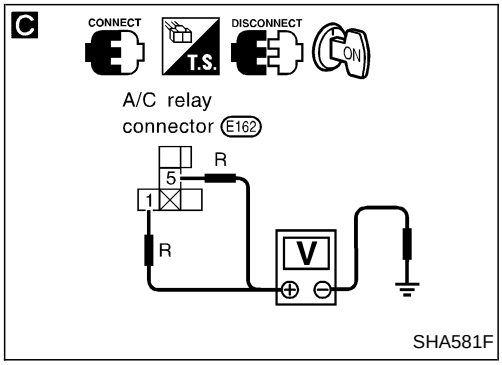
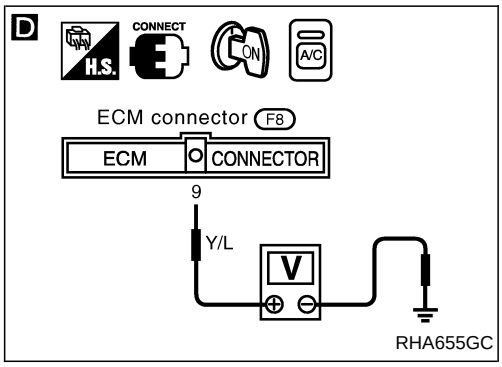


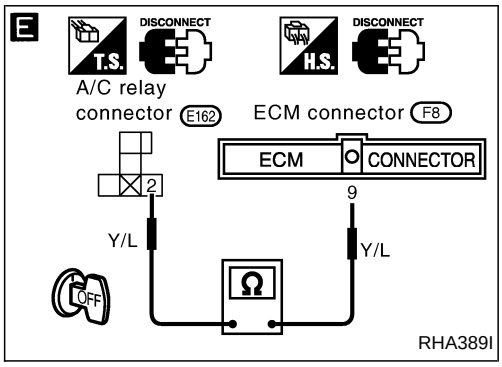


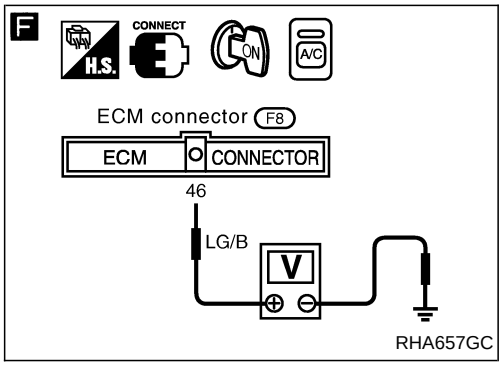


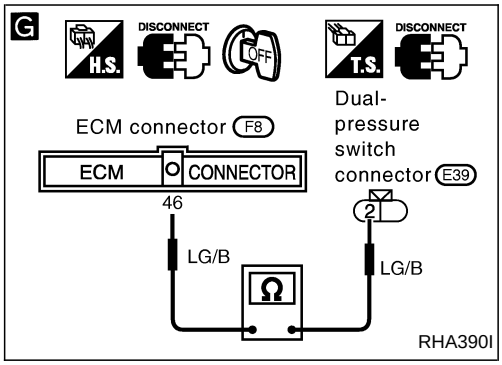
Note:
If the result is NG or No after checking circuit continuity, repair harness or connector.

Magnet Clutch (Cont'd)









Ⓐ

Reconnect A/C relay.

D

CHECK COIL SIDE CIRCUIT OF A/C RELAY.
Do approx. 12 volts exist between ECM harness connector terminal No. ⑨ and ground?

No → Disconnect A/C relay. Disconnect ECM harness connector.

E

Note

CHECK CIRCUIT CONTINUITY BETWEEN A/C RELAY HARNESS CONNECTOR TERMINAL NO. ② AND ECM HARNESS CONNECTOR TERMINAL NO. ⑨ .
Continuity should exist.
If OK, check harness for short.

Yes

F

CHECK VOLTAGE FOR ECM.
Do approx. 12 volts exist between ECM harness connector terminal No. ㊻ and ground?

No → CHECK ECM. Refer to EC section.

Yes

Disconnect ECM harness connector.
Disconnect dual-pressure switch harness connector.

G

Note

CHECK CIRCUIT CONTINUITY BETWEEN ECM HARNESS CONNECTOR TERMINAL NO. ㊻ AND DUAL-PRESSURE SWITCH HARNESS CONNECTOR TERMINAL NO. ② .
Continuity should exist.
If OK, check harness for short.

OK

CHECK DUAL-PRESSURE SWITCH.
Refer to HA-119 in Y61 SERVICE MANUAL, publication No. SM7E-2Y61G1.

NG → Replace dual-pressure switch.

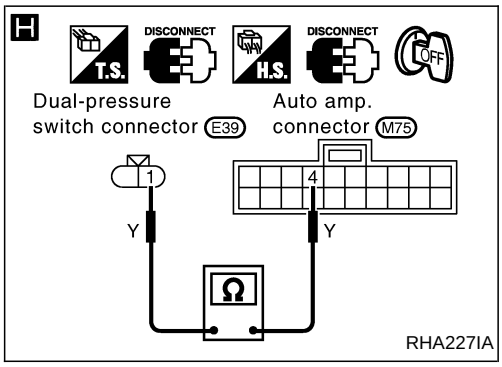
OK

Ⓑ

(Go to next page.)

Note:
If the result is NG or No after checking circuit continuity, repair harness or connector.

Magnet Clutch (Cont'd)



Ⓑ

H Note

Check circuit continuity between dual-pressure switch harness connector terminal No. ① and auto amp. harness connector terminal No. ④ .
Continuity should exist.
If OK, check harness for short.

OK

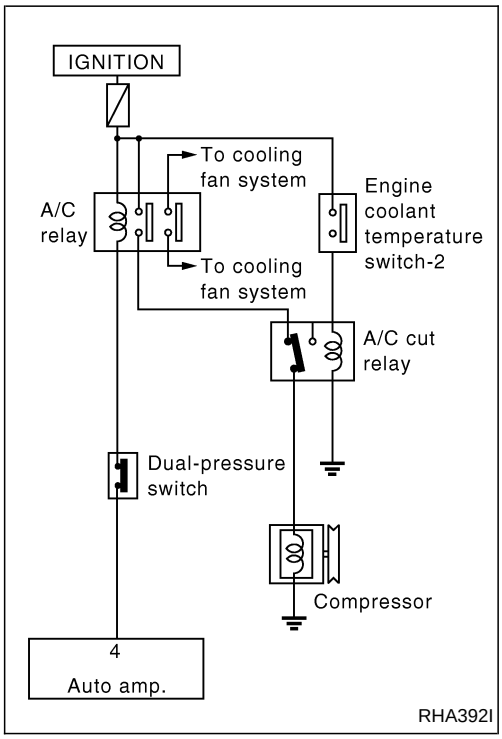
Replace auto amp.

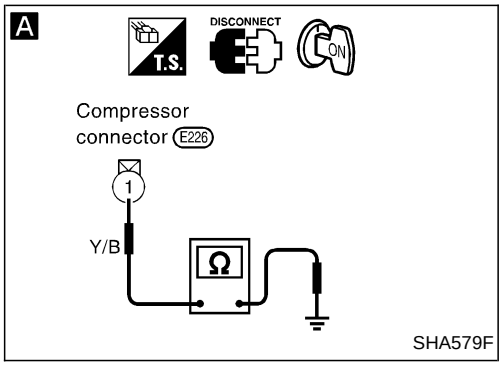
Note:
If the result is NG or No after checking circuit continuity, repair harness or connector.

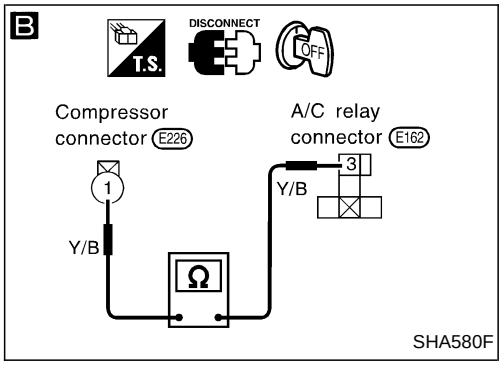
Magnet Clutch (Cont'd)

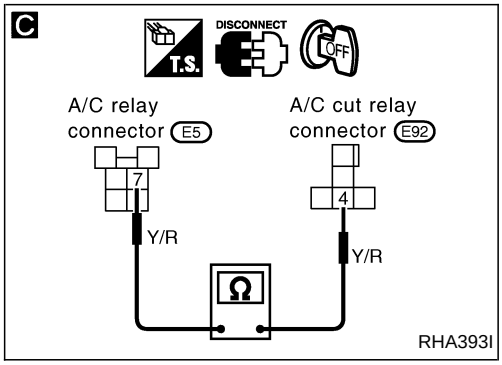
DIAGNOSTIC PROCEDURE (MODELS WITH TD ENGINE)

SYMPTOM: Magnet clutch does not engage when A/C switch and fan control dial are ON.









A

CHECK POWER SUPPLY FOR COMPRESSOR.
Disconnect compressor harness connector.
Do approx. 12 volts exist between compressor harness terminal No. ① and ground?

Yes → Check magnet clutch coil.
NG → Replace magnet clutch. Refer to HA-178 in Y61 SERVICE MANUAL, publication No. SM7E-2Y61G1.

No → Disconnect A/C cut relay.

B

Note

CHECK CIRCUIT CONTINUITY BETWEEN A/C CUT RELAY HARNESS CONNECTOR TERMINAL NO. ③ AND COMPRESSOR HARNESS CONNECTOR TERMINAL NO. ① .
Continuity should exist.
If OK, check harness for short.

OK → CHECK A/C CUT RELAY.
Refer to HA-4051.

NG → Replace A/C cut relay.

OK → C

Note

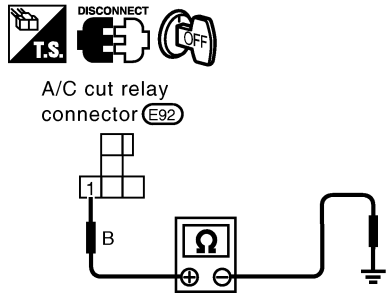
CHECK CIRCUIT CONTINUITY BETWEEN A/C RELAY HARNESS CONNECTOR TERMINAL NO. ⑦ AND A/C CUT RELAY HARNESS CONNECTOR TERMINAL NO. ④ .
Continuity should exist.
If OK, check harness for short.

OK → Ⓐ
(Go to next page.)

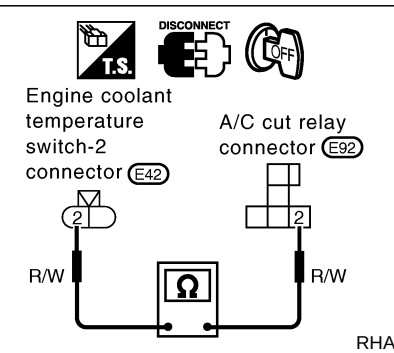
Note:
If the result is NG or No after checking circuit continuity, repair harness or connector.

Magnet Clutch (Cont'd)

D



E



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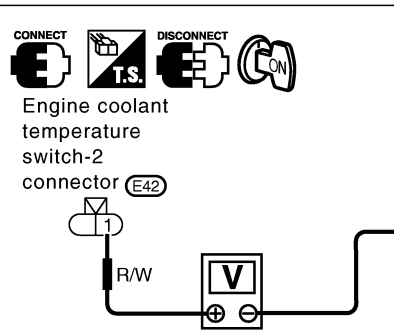

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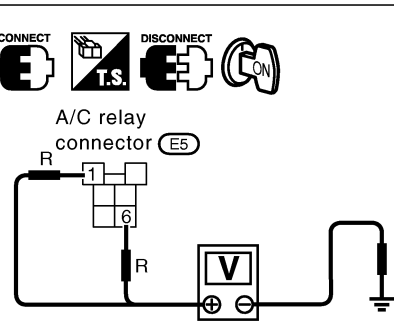

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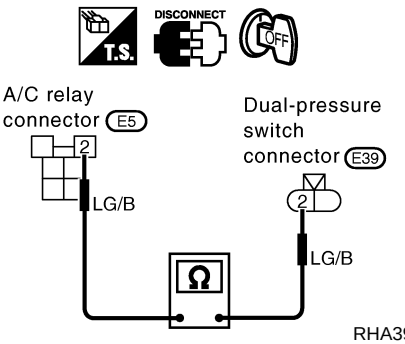


Ⓐ

D Note

CHECK CIRCUIT CONTINUITY BETWEEN A/C CUT RELAY HARNESS CONNECTOR TERMINAL NO. ① AND GROUND.

OK

E Note

CHECK CIRCUIT CONTINUITY BETWEEN A/C CUT RELAY HARNESS CONNECTOR TERMINAL NO. ② AND ENGINE COOLANT TEMPERATURE SWITCH-2 HARNESS CONNECTOR TERMINAL NO. ② .

OK

CHECK ENGINE COOLANT TEMPERATURE SWITCH-2.
Refer to HA-4051.

NG → Replace engine coolant temperature switch-2.

OK

F

CHECK POWER SUPPLY FOR ENGINE COOLANT TEMPERATURE SWITCH-2.
Do approx. 12 volts exist between engine coolant temperature switch-2 harness connector terminal No. ① and ground?

No → Check power supply circuit and 10A or 20A (No. 6) located in the fuse block (J/B).
Refer to EL section ("Wiring Diagram", "POWER SUPPLY ROUTING").

Yes

G

CHECK POWER SUPPLY FOR A/C RELAY.
Do approx. 12 volts exist between A/C relay harness connector terminal Nos. ① , ⑥ and ground?

No → Check power supply circuit and 10A or 20A (No. 6) located in the fuse block (J/B).
Refer to EL section ("Wiring Diagram", "POWER SUPPLY ROUTING").

Yes

H Note

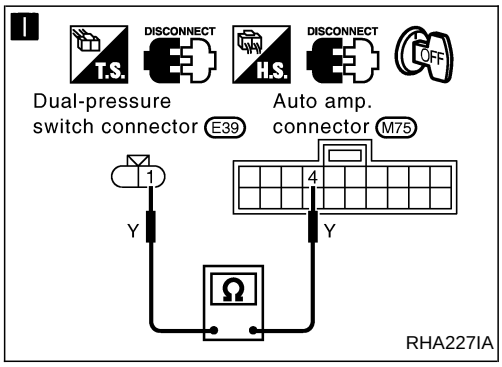
CHECK CIRCUIT CONTINUITY BETWEEN A/C RELAY HARNESS CONNECTOR TERMINAL NO. ② AND DUAL-PRESSURE SWITCH HARNESS CONNECTOR TERMINAL NO. ② .
Continuity should exist.
If OK, check harness for short.

OK

Ⓑ
(Go to next page.)

Note:
If the result is NG or No after checking circuit continuity, repair harness or connector.

Magnet Clutch (Cont'd)



Ⓑ

CHECK DUAL-PRESSURE SWITCH.
Refer to HA-119 in Y61 SERVICE MANUAL, publication No. SM7E-2Y61G1.

NG → Replace dual-pressure switch.

OK

I Note

CHECK CIRCUIT CONTINUITY BETWEEN DUAL-PRESSURE SWITCH HARNESS CONNECTOR TERMINAL NO. ① AND AUTO AMP. HARNESS CONNECTOR TERMINAL NO. ④ .
Continuity should exist.
If OK, check harness for short.

OK

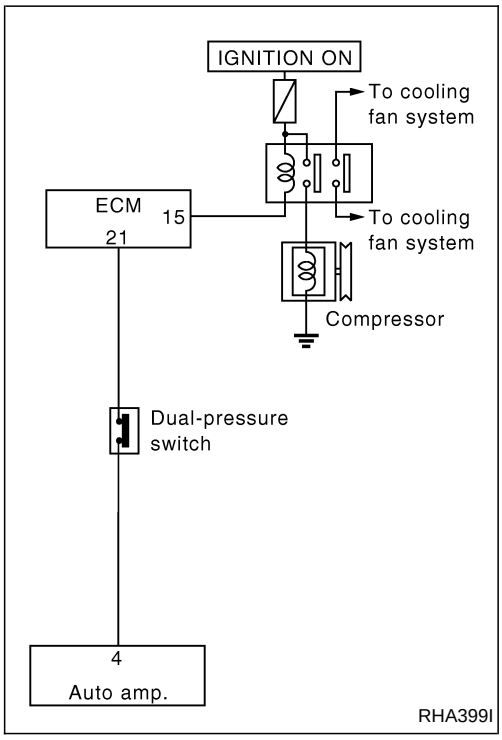
Replace auto amp.

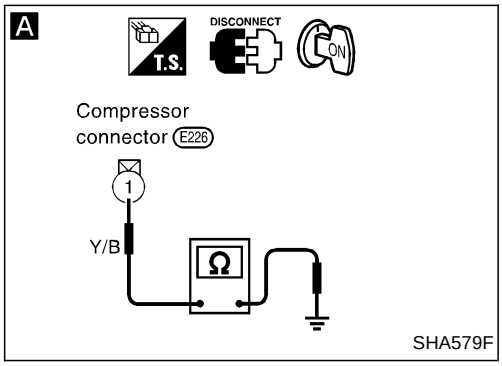
Note:
If the result is NG or No after checking circuit continuity, repair harness or connector.

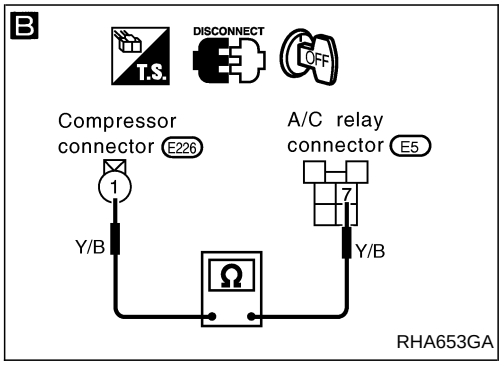
Magnet Clutch (Cont'd)

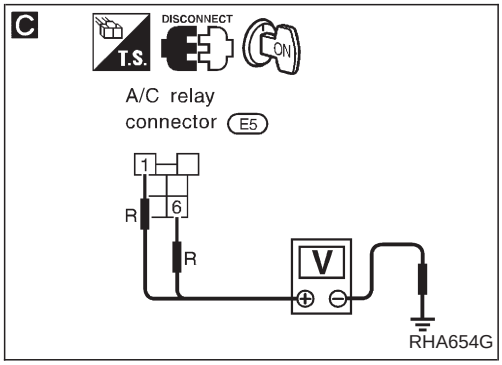
DIAGNOSTIC PROCEDURE (MODELS WITH ZD ENGINE)

SYMPTOM: Magnet clutch does not engage when A/C switch and fan control dial are ON.









A

CHECK POWER SUPPLY FOR COMPRESSOR.
Disconnect compressor harness connector.
Do approx. 12 volts exist between compressor harness connector terminal No. ① and ground?

Yes → Check magnet clutch coil.
NG → Replace magnet clutch. Refer to HA-178 in Y61 SERVICE MANUAL, publication No. SM7E-2Y61G1.

No → Disconnect A/C relay.

B

Note

CHECK CIRCUIT CONTINUITY BETWEEN A/C RELAY HARNESS CONNECTOR TERMINAL NO. ⑦ AND COMPRESSOR HARNESS CONNECTOR TERMINAL NO. ① .
Continuity should exist.
If OK, check harness for short.

OK

C

CHECK POWER SUPPLY FOR A/C RELAY.
Disconnect A/C relay.
Do approx. 12 volts exist between A/C relay harness connector terminal Nos. ① , ⑥ and ground?

No → Check power supply circuit and 10A or 20A (No. 6) located in the fuse block (J/B).
Refer to EL section ("Wiring Diagram", "POWER SUPPLY ROUTING").

Yes

CHECK A/C RELAY AFTER DISCONNECTING IT.
Refer to HA-119 in Y61 SERVICE MANUAL, publication No. SM7E-2Y61G1.

NG → Replace A/C relay.

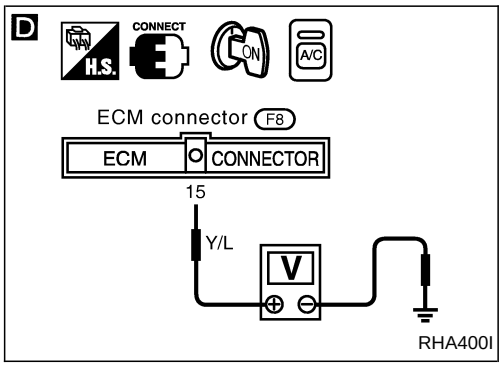
OK

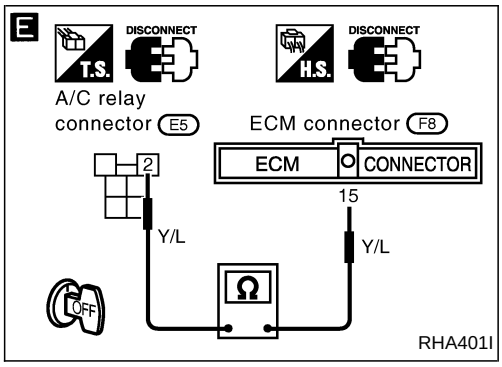
Ⓐ

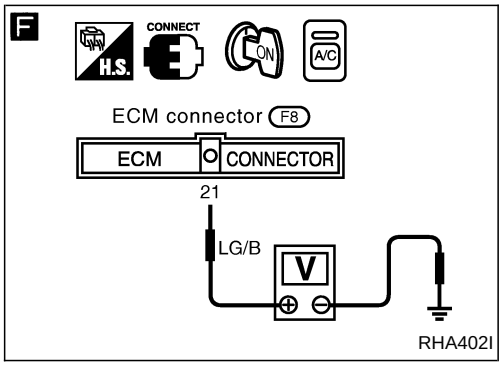
(Go to next page.)

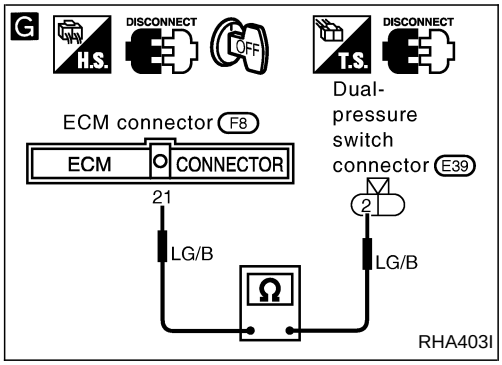
Note:
If the result is NG or No after checking circuit continuity, repair harness or connector.

Magnet Clutch (Cont'd)









Ⓐ

Reconnect A/C relay.

D

CHECK COIL SIDE CIRCUIT OF A/C RELAY.
Do approx. 12 volts exist between ECM harness connector terminal No. ⑮ and ground?

No → Disconnect A/C relay. Disconnect ECM harness connector.

E Note

CHECK CIRCUIT CONTINUITY BETWEEN A/C RELAY HARNESS CONNECTOR TERMINAL NO. ② AND ECM HARNESS CONNECTOR TERMINAL NO. ⑮.
Continuity should exist.
If OK, check harness for short.

Yes

F

CHECK VOLTAGE FOR ECM.
Do approx. 12 volts exist between ECM harness connector terminal No. ㉑ and ground?

No → CHECK ECM. Refer to EC section.

Yes

Disconnect ECM harness connector.
Disconnect dual-pressure switch harness connector.

G Note

CHECK CIRCUIT CONTINUITY BETWEEN ECM HARNESS CONNECTOR TERMINAL NO. ㉑ AND DUAL-PRESSURE SWITCH HARNESS CONNECTOR TERMINAL NO. ② .
Continuity should exist.
If OK, check harness for short.

OK

CHECK DUAL-PRESSURE SWITCH.
Refer to HA-119 in Y61 SERVICE MANUAL, publication No. SM7E-2Y61G1.

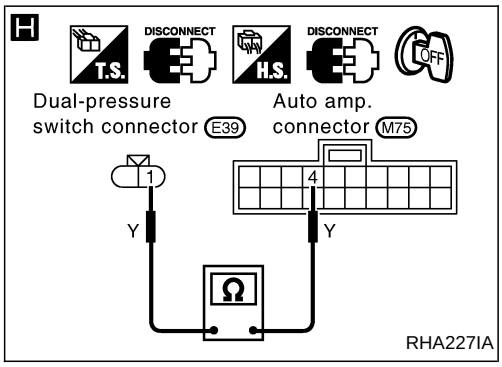
NG → Replace dual-pressure switch.

OK

Ⓑ

Note:
If the result is NG or No after checking circuit continuity, repair harness or connector.

Magnet Clutch (Cont'd)



Ⓑ

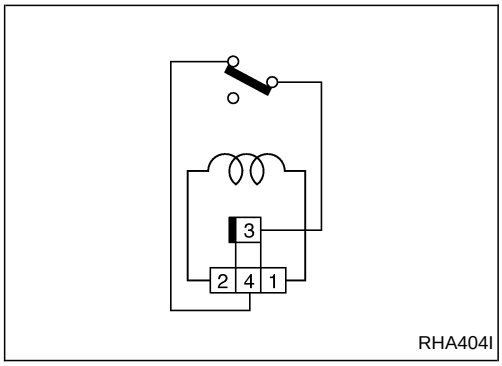
H Note

Check circuit continuity between dual-pressure switch harness connector terminal No. ① and auto amp. harness connector terminal No. ④ .
Continuity should exist.
If OK, check harness for short.

Yes

Replace auto amp.

Note:
If the result is NG or No after checking circuit continuity, repair harness or connector.



COMPONENT INSPECTION

A/C cut relay (TD engine models)

Check continuity between terminal Nos. ④ and ③ .

Conditions	Continuity
12V direct current supply between terminal Nos. ② and ①	No
No current supply	Yes

If NG, replace relay.

Engine coolant temperature switch-2 (TD engine models)

Check engine coolant temperature switch-2 for proper operation.

Operating temperature °C (°F)	Operation
Increasing to 87 - 93 (189 - 199)	OFF → ON
Decreasing to 82 - 84 (180 - 183)	ON → OFF

OFF: Continuity does not exist.
ON: Continuity exists.

Insufficient Cooling

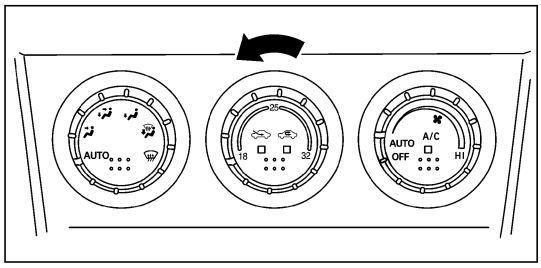
TROUBLE DIAGNOSIS PROCEDURE FOR INSUFFICIENT COOLING

SYMPTOM:

- **Insufficient cooling.**

Inspection flow

1. Confirm symptom by performing the following operational check.



OPERATIONAL CHECK – Temperature decrease

a. Turn temperature control dial counterclockwise until 18°C.

b. Check for cold air at discharge air outlets.

If OK (symptom cannot be duplicated), perform complete operational check (*11).
If NG (symptom is confirmed), continue with STEP-2 following.

2. Check for any service bulletins.

3. Perform self-diagnosis STEP-1. (*1)

OK

4. Perform self-diagnosis STEP-2. (*2)
NG → Go to appropriate malfunctioning sensor circuit. (*2)

OK

5. Perform self-diagnosis STEP-4. (*3)
NG → **Go to appropriate malfunctioning items.**
- Check LAN system circuit. (*4)
- Check blower motor circuit. (*6)
- Check magnet clutch circuit. (*7)

OK

6. Check compressor belt tension. Refer to MA section.
NG → Adjust or replace compressor belt.

OK

7. Check air mix door operation. (*8)
NG → Adjust or replace air mix door control linkage.

OK

8. Check cooling fan motor operation.
NG → Refer to EC section.

OK

9. Before connecting ACR4 to vehicle, check ACR4 gauges. No refrigerant pressure should be displayed. If NG, recover refrigerant from equipment lines.

OK

10. Check for evaporator coil freeze up.
NG (Freeze up.) → Perform performance test diagnoses. Refer to (*9).
(Does not freeze up.)

OK

11. Check refrigeration cycle pressure with manifold gauge connected.
NG → Perform performance test diagnoses. Refer to (*9).

OK

12. Check ducts for air leaks.
NG → Repair air leaks.

OK

13. Perform temperature setting trimmer. (*10)
(1) Set up AUXILIARY MECHANISM mode in self-diagnosis.
(2) Turn temperature dial counterclockwise as desired.

OK

INSPECTION END

RHA405I

*1: HA-4032
*2: HA-4027
*3: HA-4028
*4: HA-4030
5: HA-101
6: HA-41
*7: HA-4031
8: HA-100
9: HA-111
*10: HA-4039
11: HA-41

*: Refer to Y61 SERVICE MANUAL, Publication No. SM7E-2Y61G1.

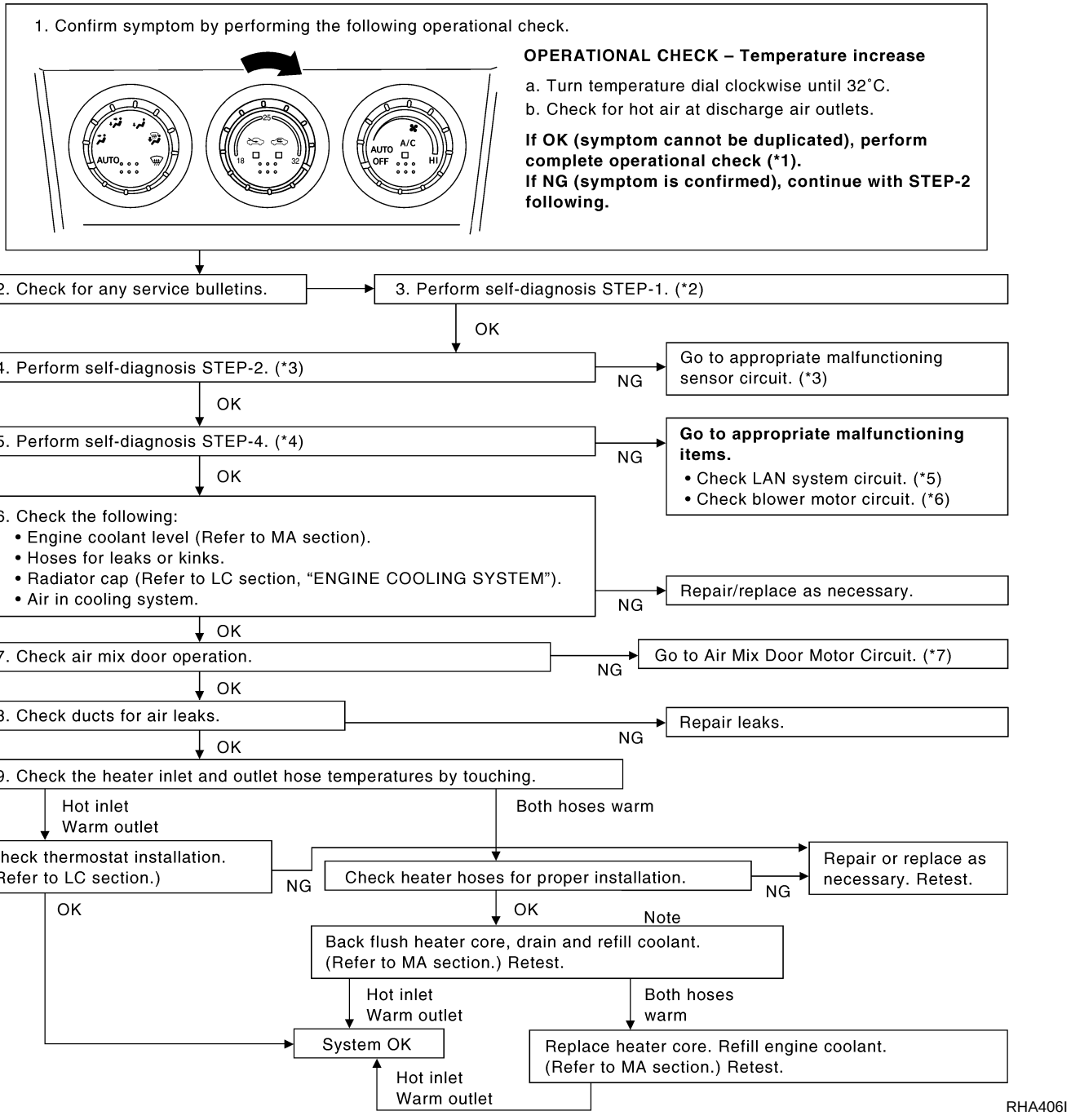
Insufficient Heating

TROUBLE DIAGNOSIS PROCEDURE FOR INSUFFICIENT HEATING

SYMPTOM:

- **Insufficient heating.**

Inspection flow



*1: HA-4032
*2: HA-4027
*3: HA-4028
*4: HA-4030
5: HA-100
6: HA-111
*7: HA-4036

*: Refer to Y61 SERVICE MANUAL, Publication No. SM7E-2Y61G1.

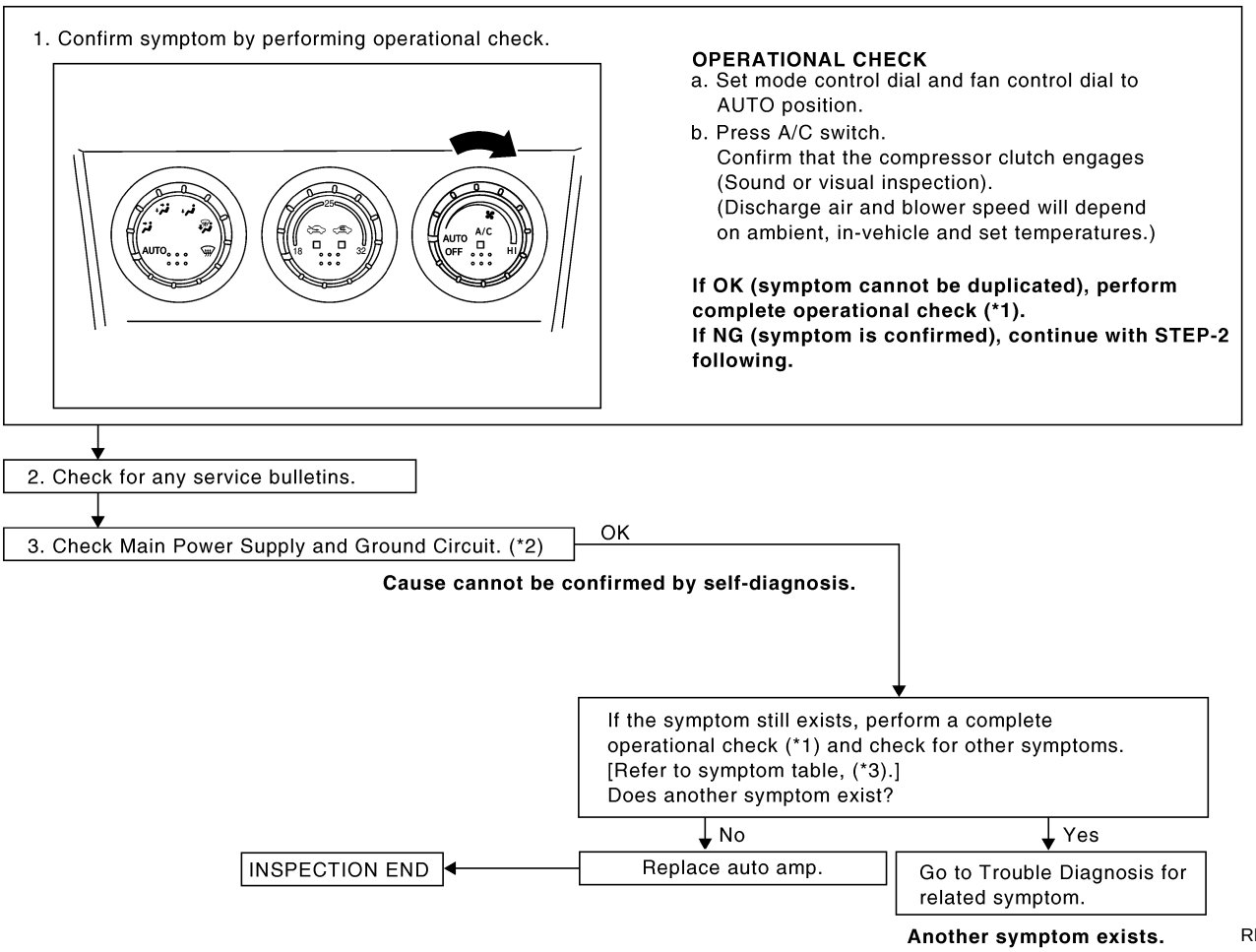
Self-diagnosis

TROUBLE DIAGNOSIS PROCEDURE FOR SELF-DIAGNOSIS

SYMPTOM:

- **Self-diagnosis cannot be performed.**

Inspection flow

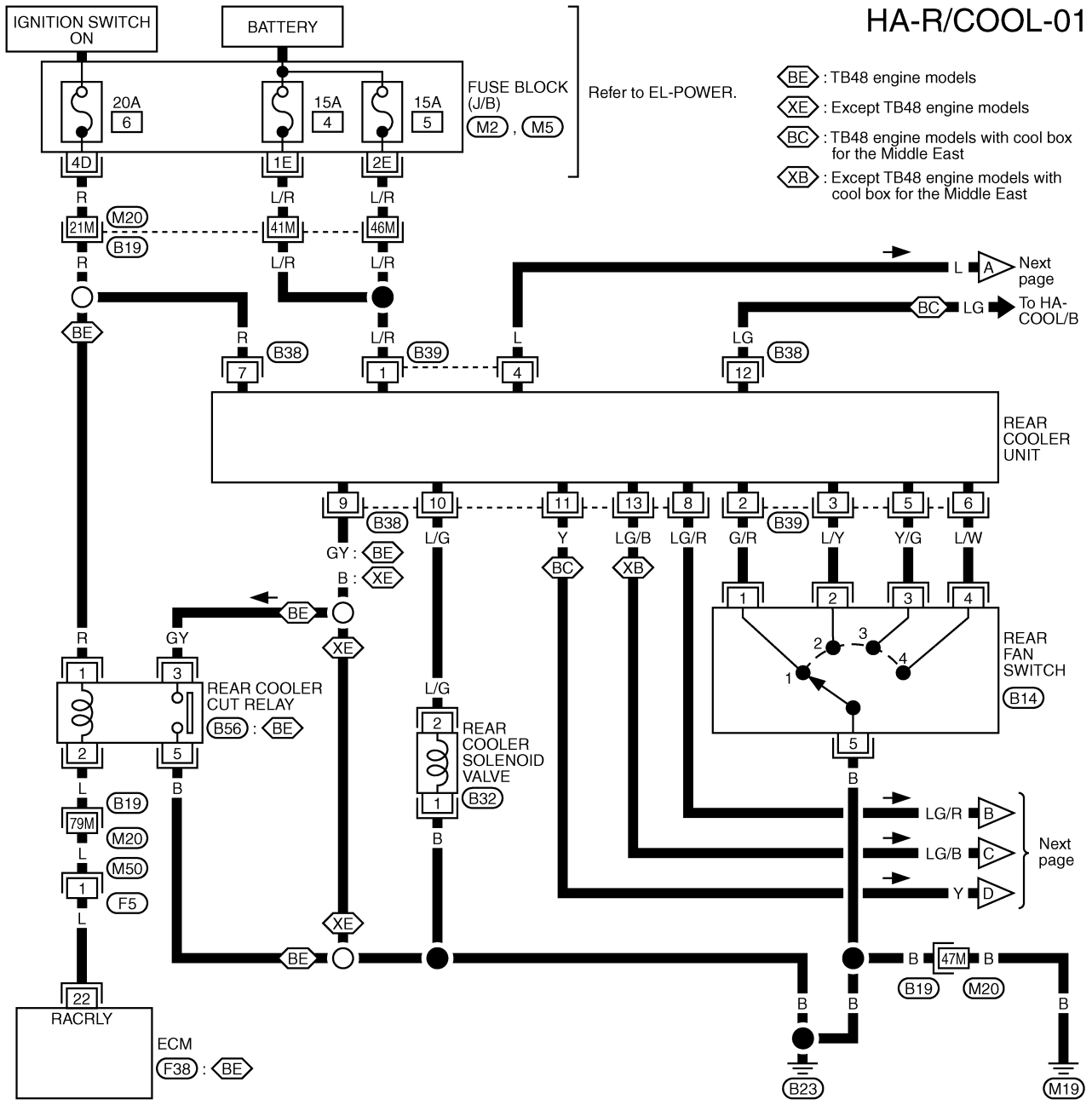


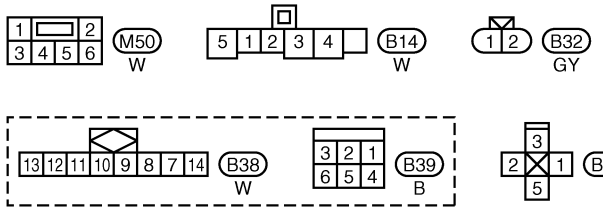
*1: HA-4032

*2: HA-96 in Y61 SERVICE MANUAL, Publication No. SM7E-2Y61G1

*3: HA-91 in Y61 SERVICE MANUAL, Publication No. SM7E-2Y61G1

Wiring Diagram — R/COOL —/LHD Models with Front Auto A/C

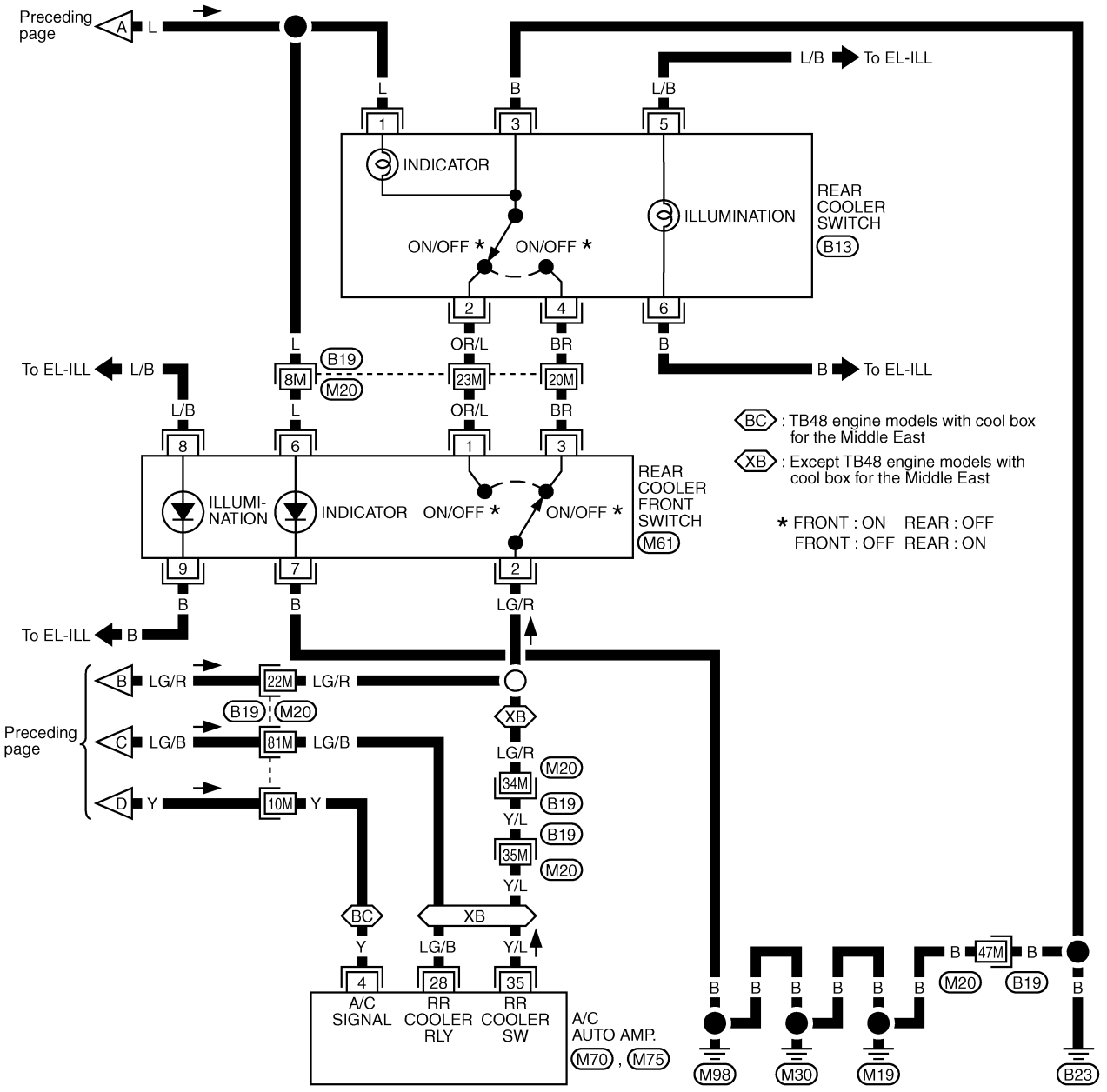


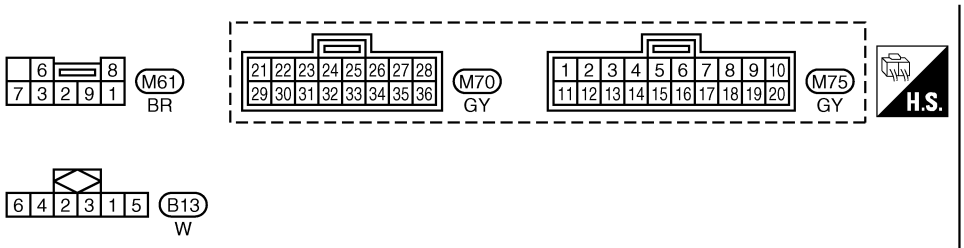


Refer to last page (Foldout page).
M20 , B19
M2
M5
F38

Wiring Diagram — R/COOL —/LHD Models with Front Auto A/C (Cont'd)

HA-R/COOL-02

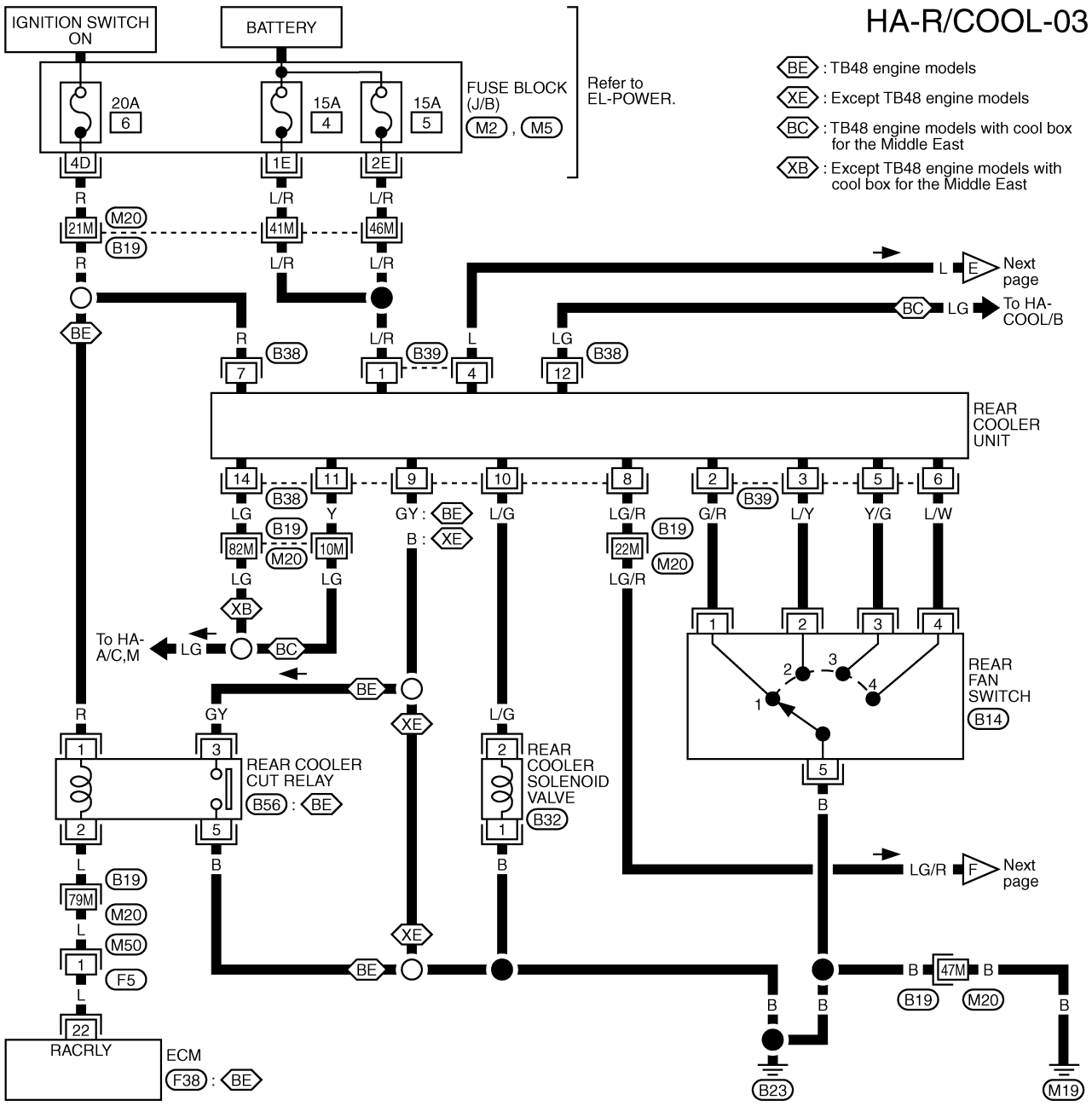


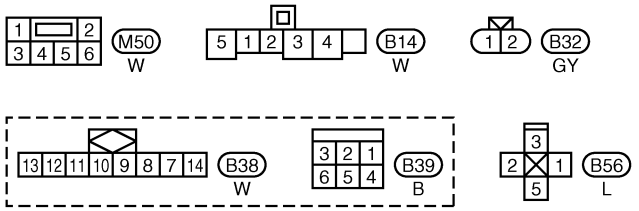


Refer to last page (Foldout page).
M20 , B19

THA207M

Wiring Diagram — R/COOL —/LHD Models with Front Manual A/C Except for TB45E Engine





Refer to last page (Foldout page).

M20 , B19

M2

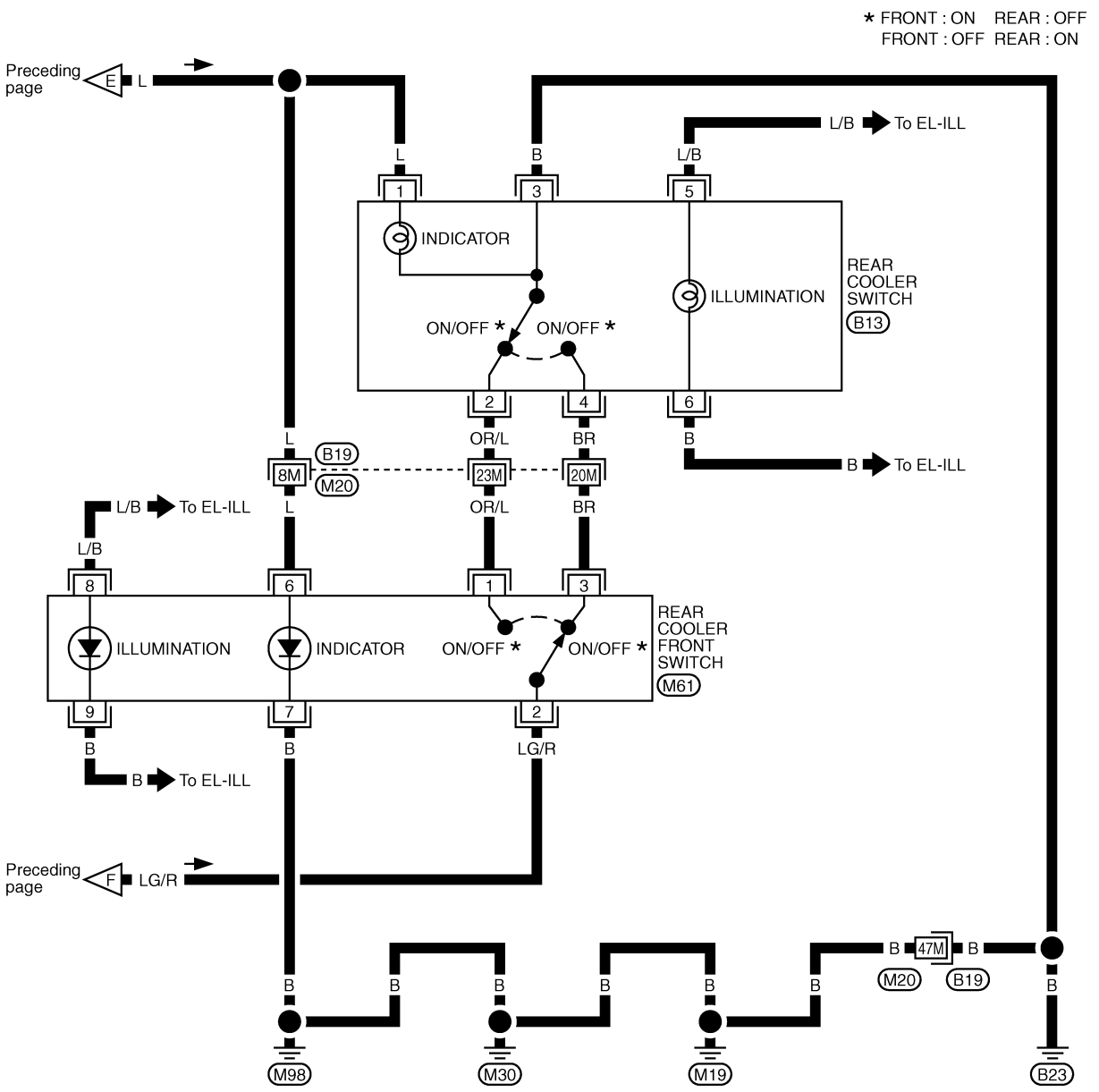
M5

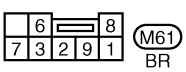
F38

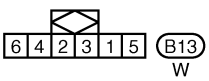
THA208M

Wiring Diagram — R/COOL —/LHD Models with Front Manual A/C Except for TB45E Engine (Cont'd)

HA-R/COOL-04



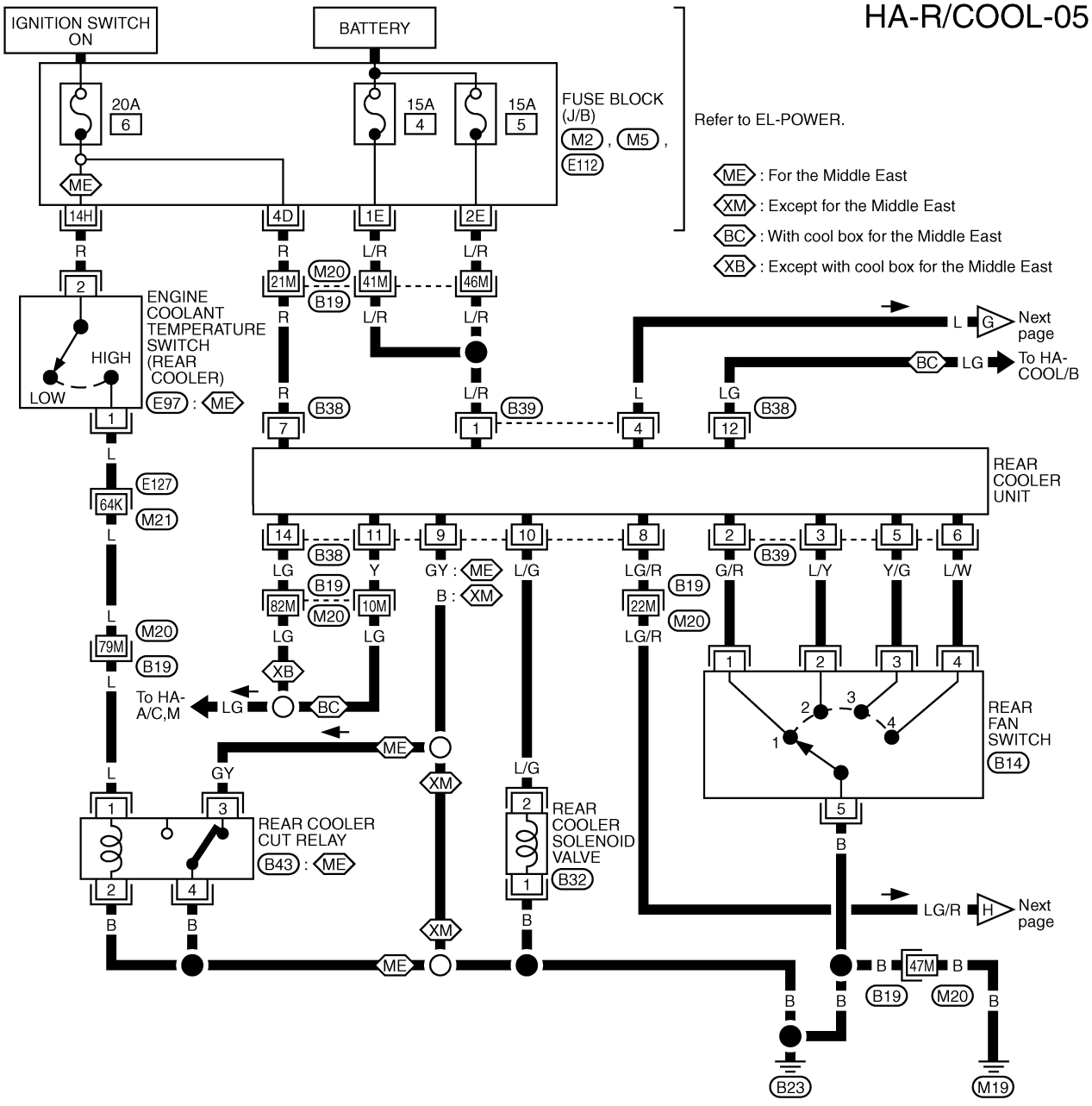


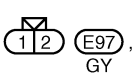


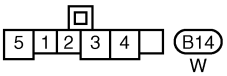
Refer to last page (Foldout page).
M20 , B19

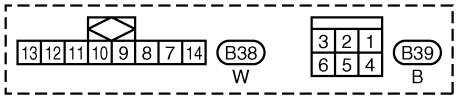
THA209M

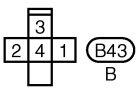
Wiring Diagram — R/COOL —/LHD Models with Front Manual A/C for TB45E Engine











Refer to last page (Foldout page).

M20 , B19

M21 , E127

M2

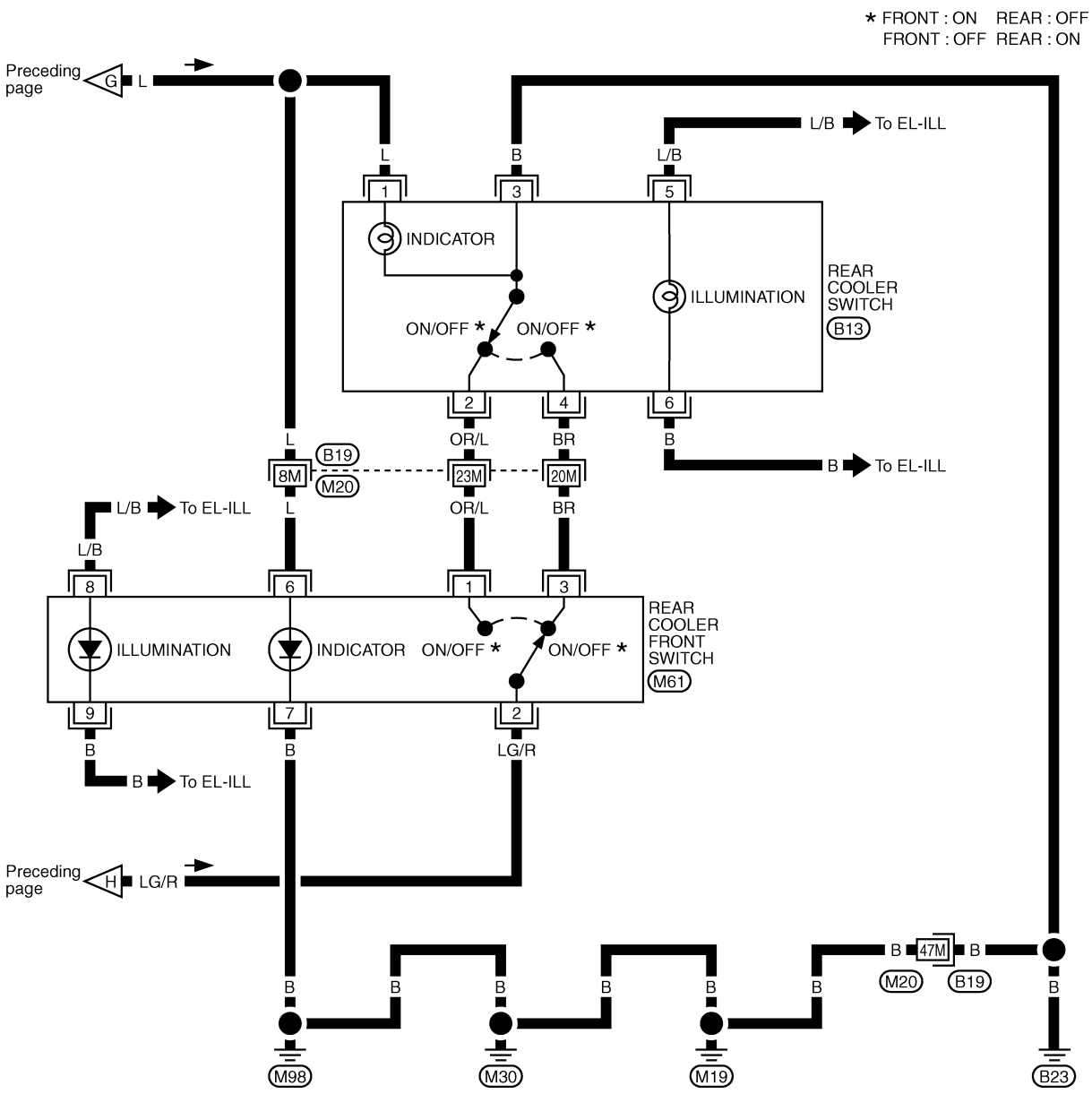
M5

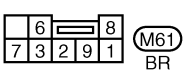
E112

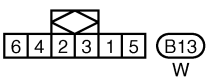
THA210M

Wiring Diagram — R/COOL —/LHD Models with Front Manual A/C for TB45E Engine (Cont'd)

HA-R/COOL-06





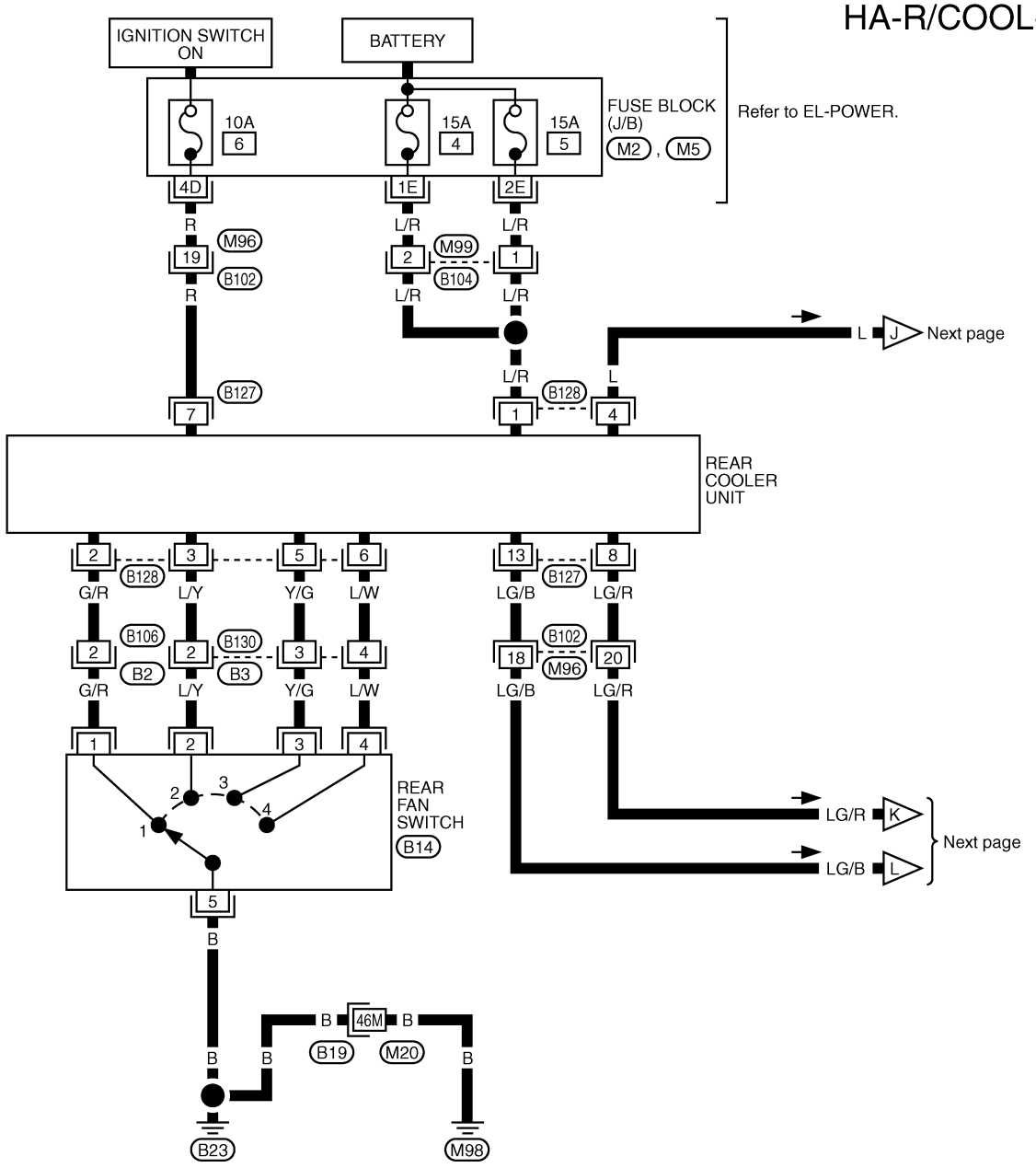


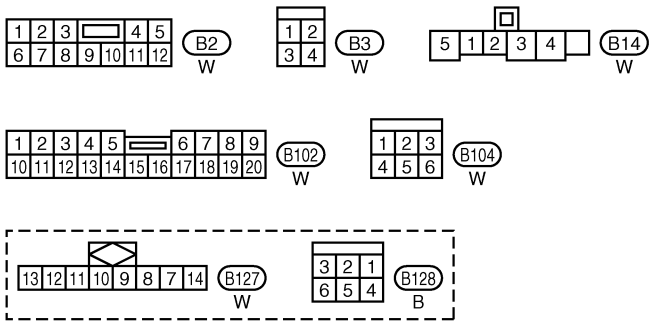
Refer to last page (Foldout page).
M20 , B19

THA211M

Wiring Diagram — R/COOL —/RHD Models with Front Auto A/C

HA-R/COOL-07





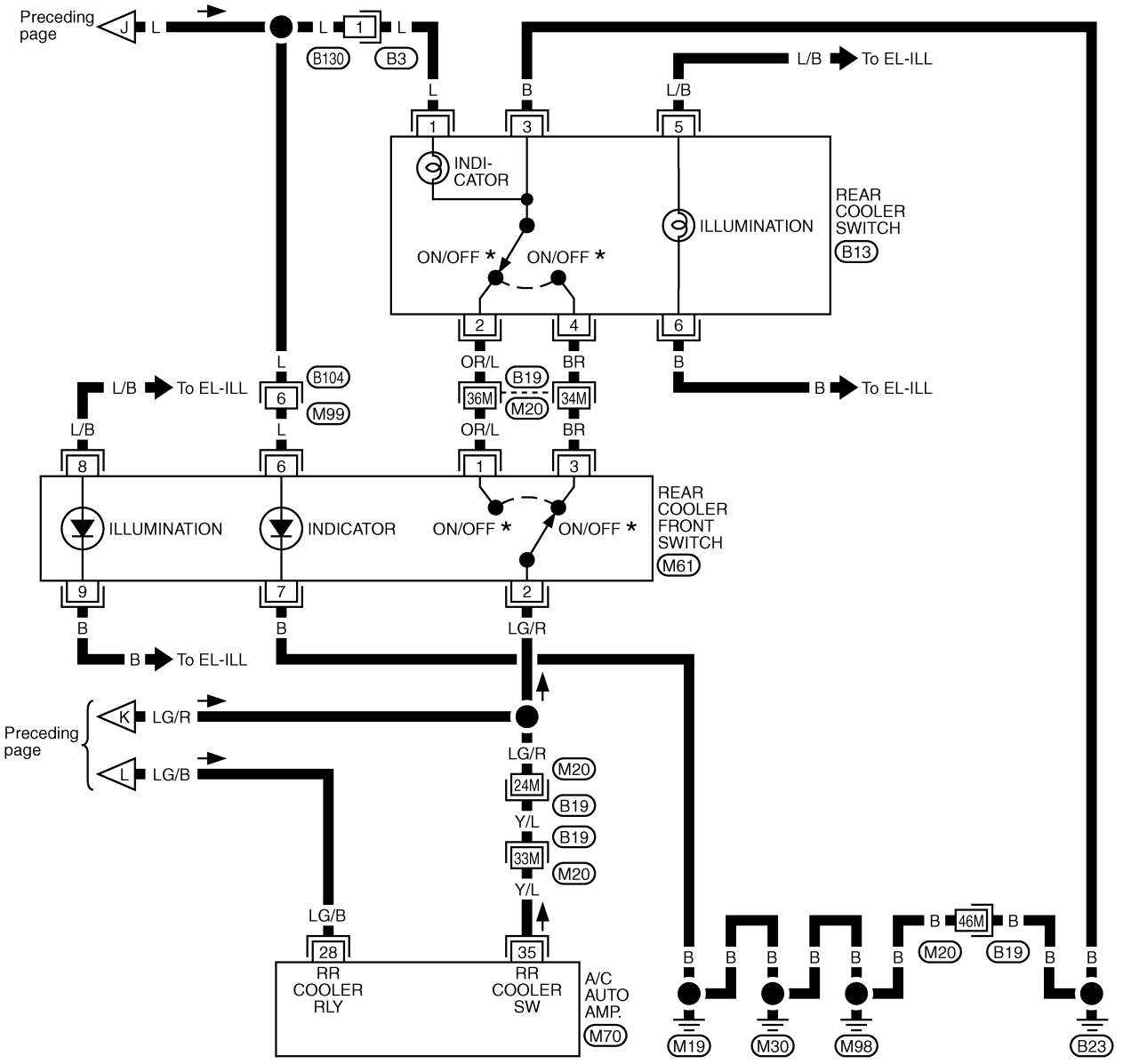
Refer to last page (Foldout page).
M20 , B19
M2
M5

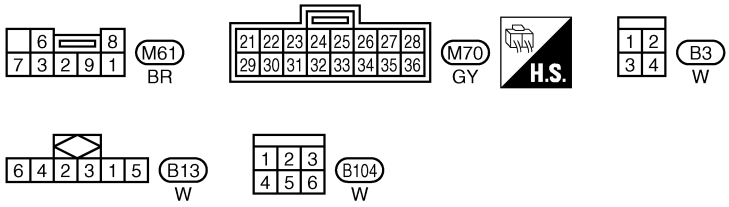
THA212M

Wiring Diagram — R/COOL —/RHD Models with Front Auto A/C (Cont'd)

HA-R/COOL-08

* FRONT : ON REAR : OFF
FRONT : OFF REAR : ON



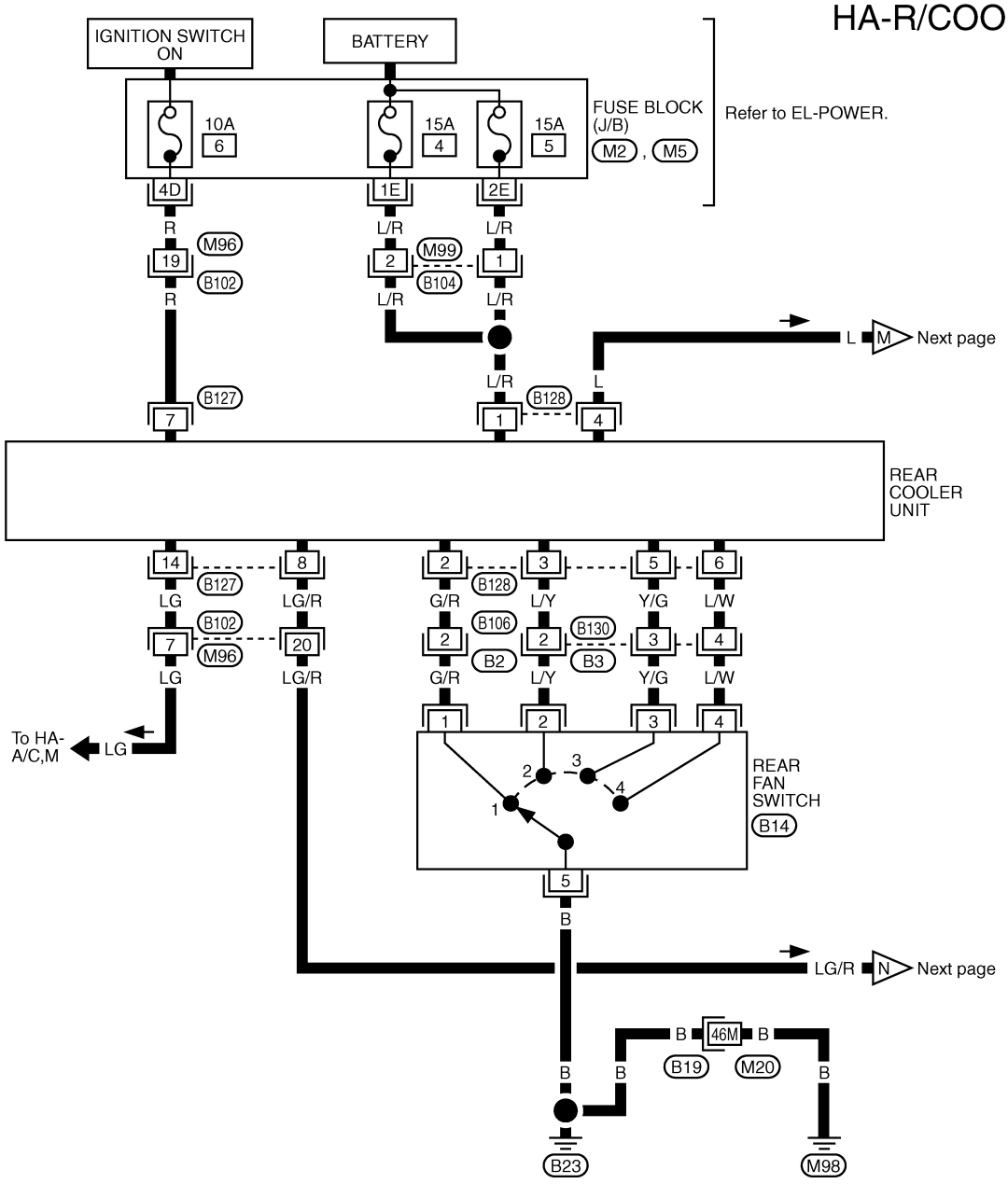


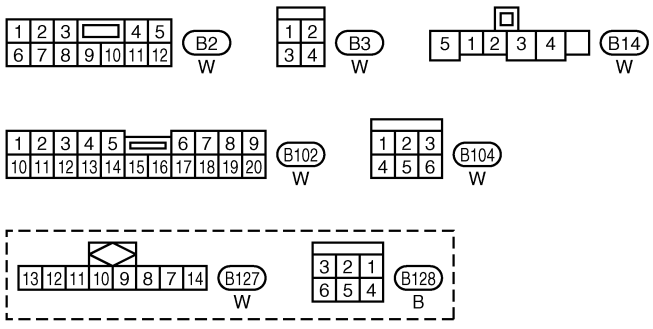
Refer to last page (Foldout page).
M20 , B19

THA213M

Wiring Diagram — R/COOL —/RHD Models with Front Manual A/C

HA-R/COOL-09



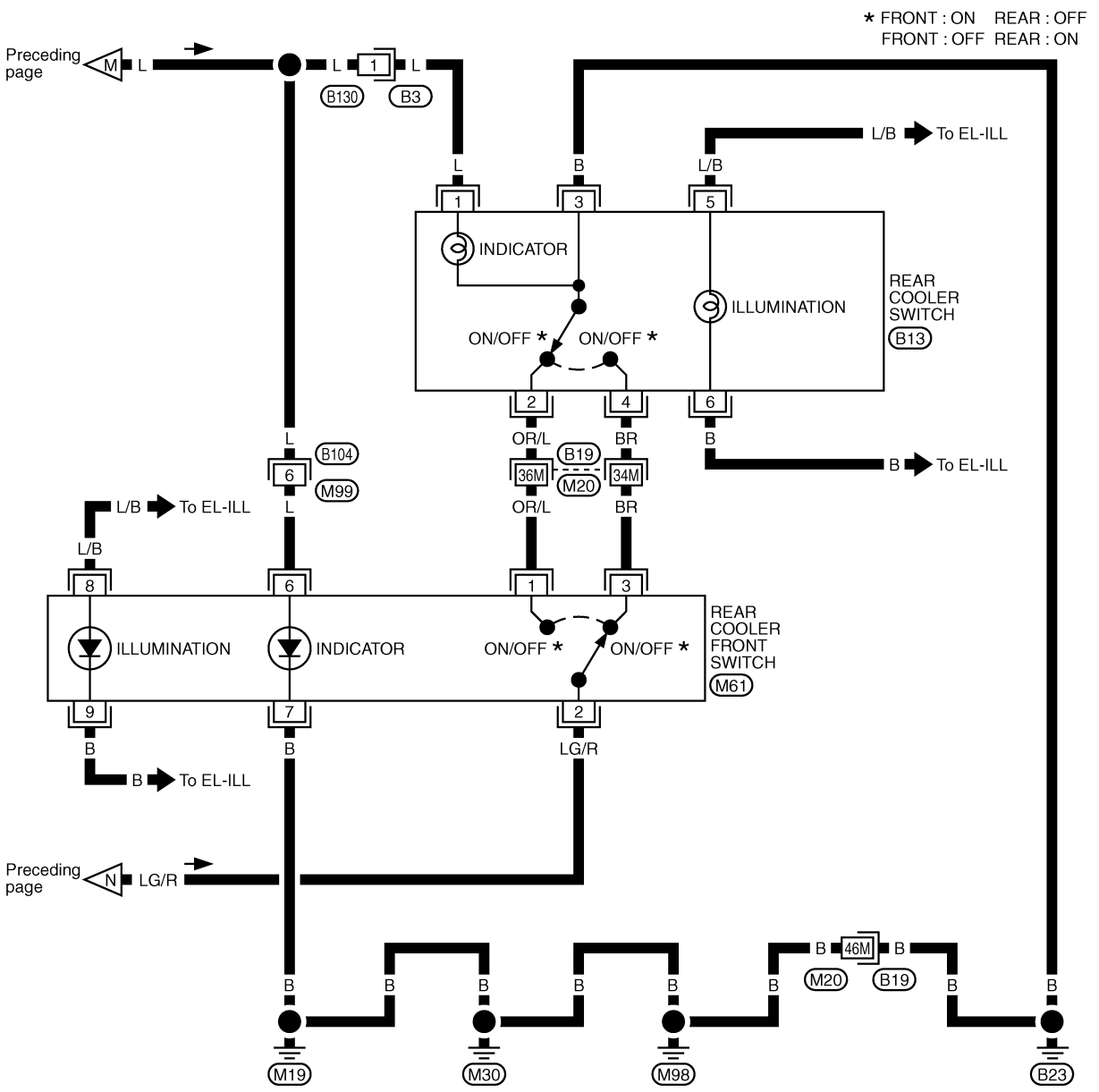


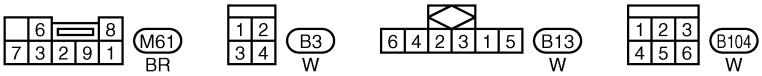
Refer to last page (Foldout page).
M20, B19
M2
M5

THA214M

Wiring Diagram — R/COOL —/RHD Models with Front Manual A/C (Cont'd)

HA-R/COOL-10

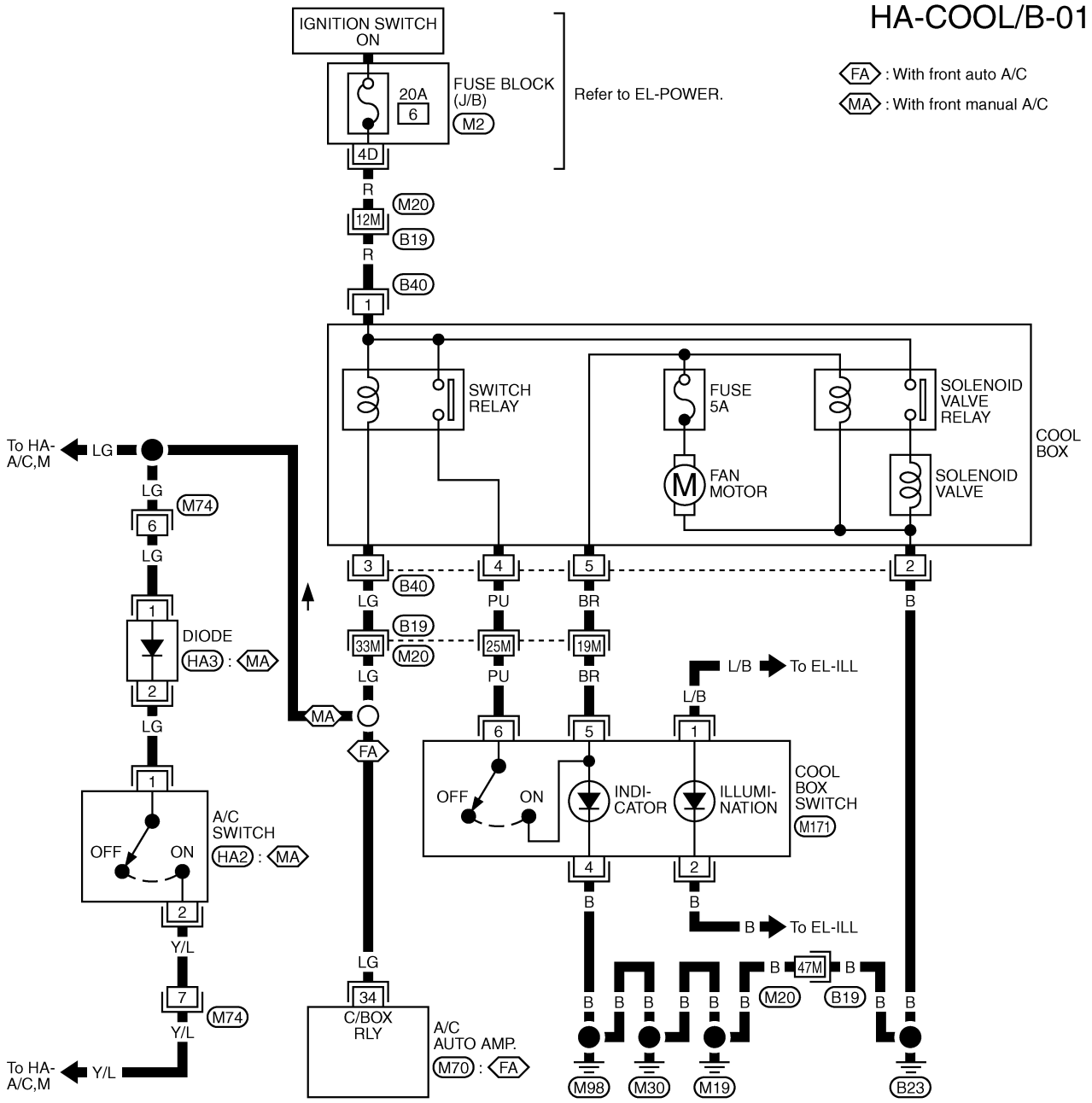


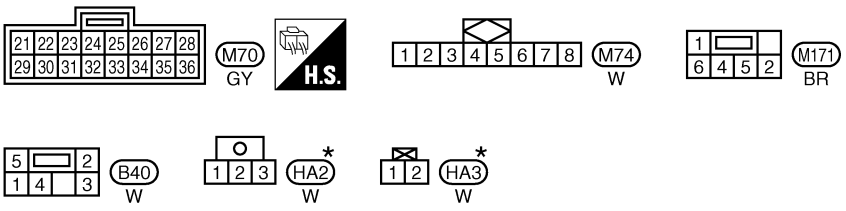


Refer to last page (Foldout page).
M20 , B19

THA215M

Wiring Diagram — COOL/B —/All Engines Except TB48 and TB45E Wagon Models for the Middle East



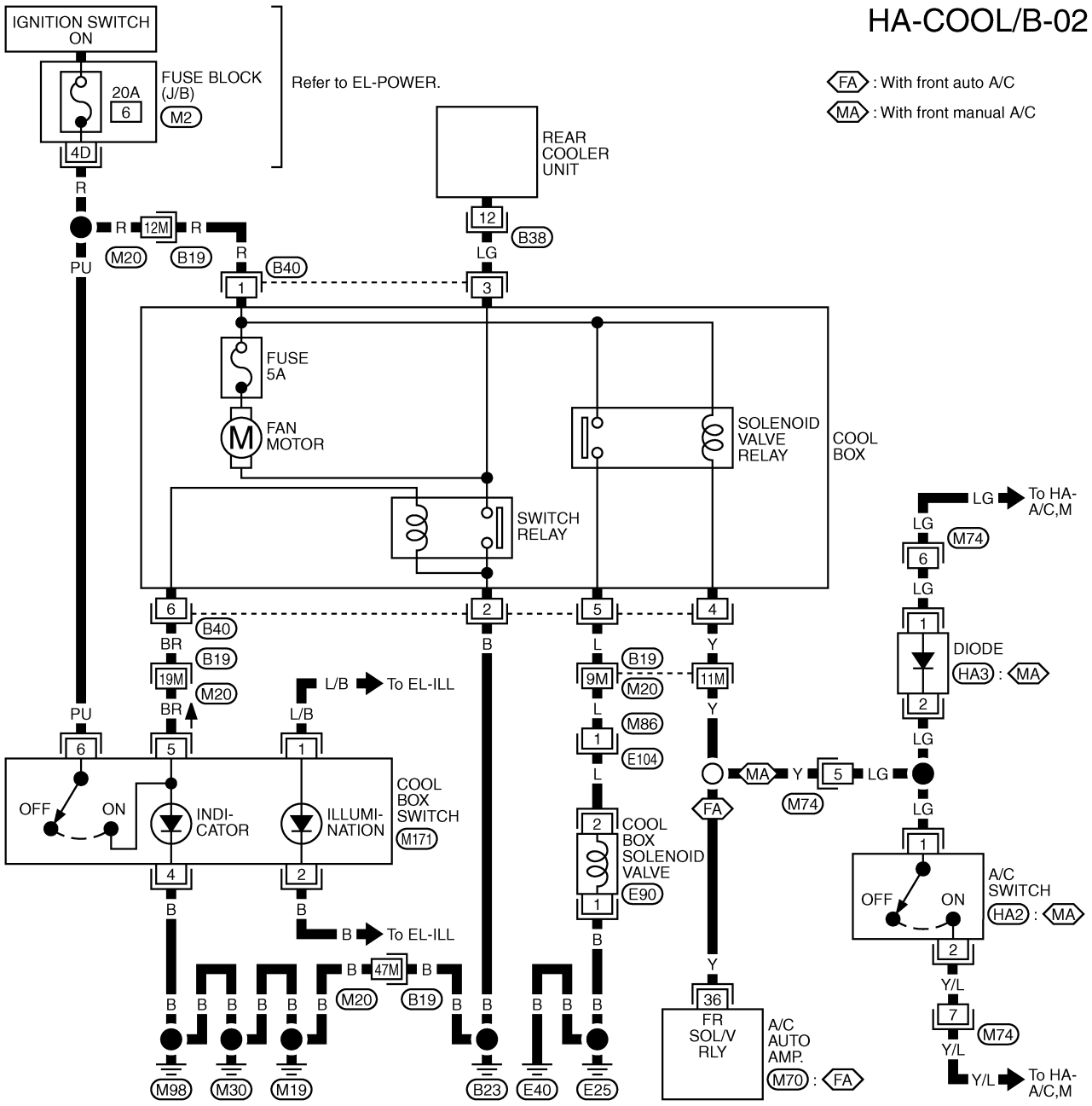


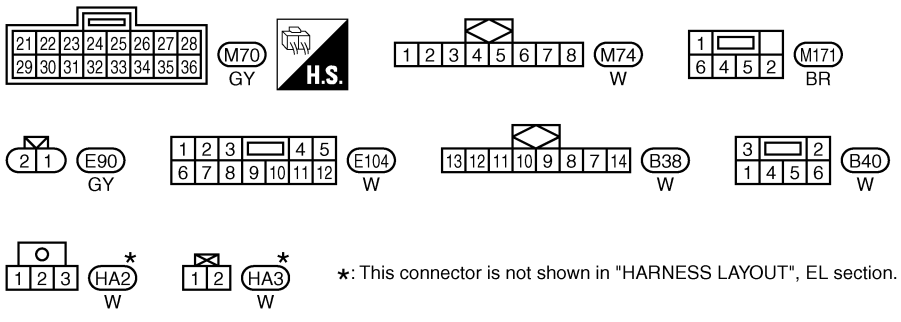
★: This connector is not shown in "HARNESS LAYOUT", EL section.

Refer to last page (Foldout page).
M20 , B19
M2

THA216M

Wiring Diagram — COOL/B —/TB48 and TB45E Engine Wagon Models for the Middle East





∗: This connector is not shown in "HARNESS LAYOUT", EL section.

Refer to last page (Foldout page).
M20 , B19
M2

THA217M