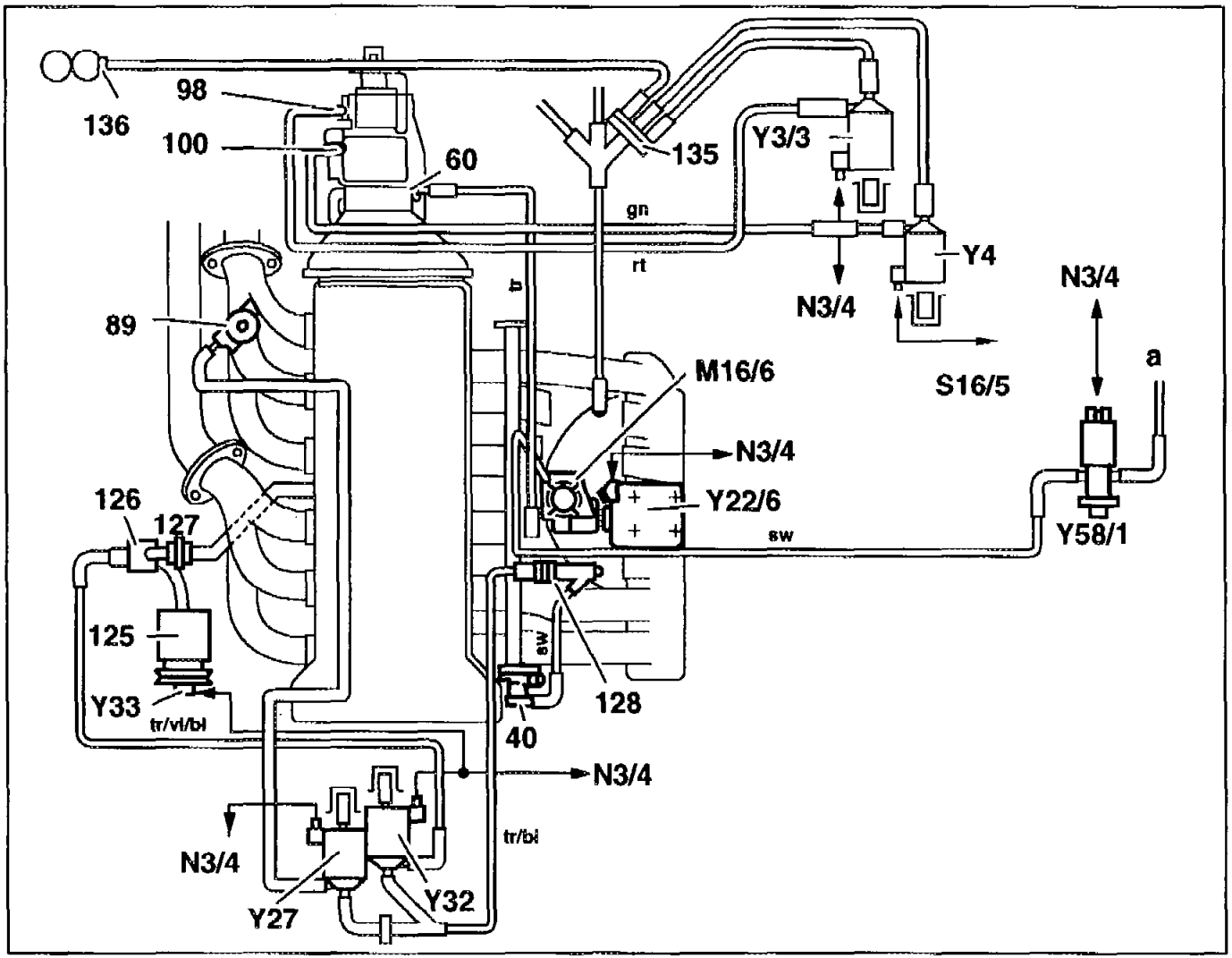
K15 AR09.20-P-1310-01DA	Connecting diagram of intake manifold		

Connecting diagram of vacuum supply
HFM-SFI model 124, 129

40 Diaphragm pressure regulator
60 Modulating pressure vacuum unit
89 Exhaust gas recirculation valve (AUS J USA only)
98 Vacuum element for upshift delay
100 Vacuum element S and E mode
125 Air pump
126 Air shut-off valve
127 Check valve (injected air)
128 Check valve (vacuum)
135 Check valve (vacuum supply)
136 Vacuum reservoir
M16/6 Idle speed control (ISC) actuator
N3/4 Hot film engine management (HFM-SFI) control module
S16/5 Transmission mode switch (2nd mode)
Y3/3 Upshift delay switchover valve
Y4 Switchover valve (2nd transmission mode)



P09.20-0227-06

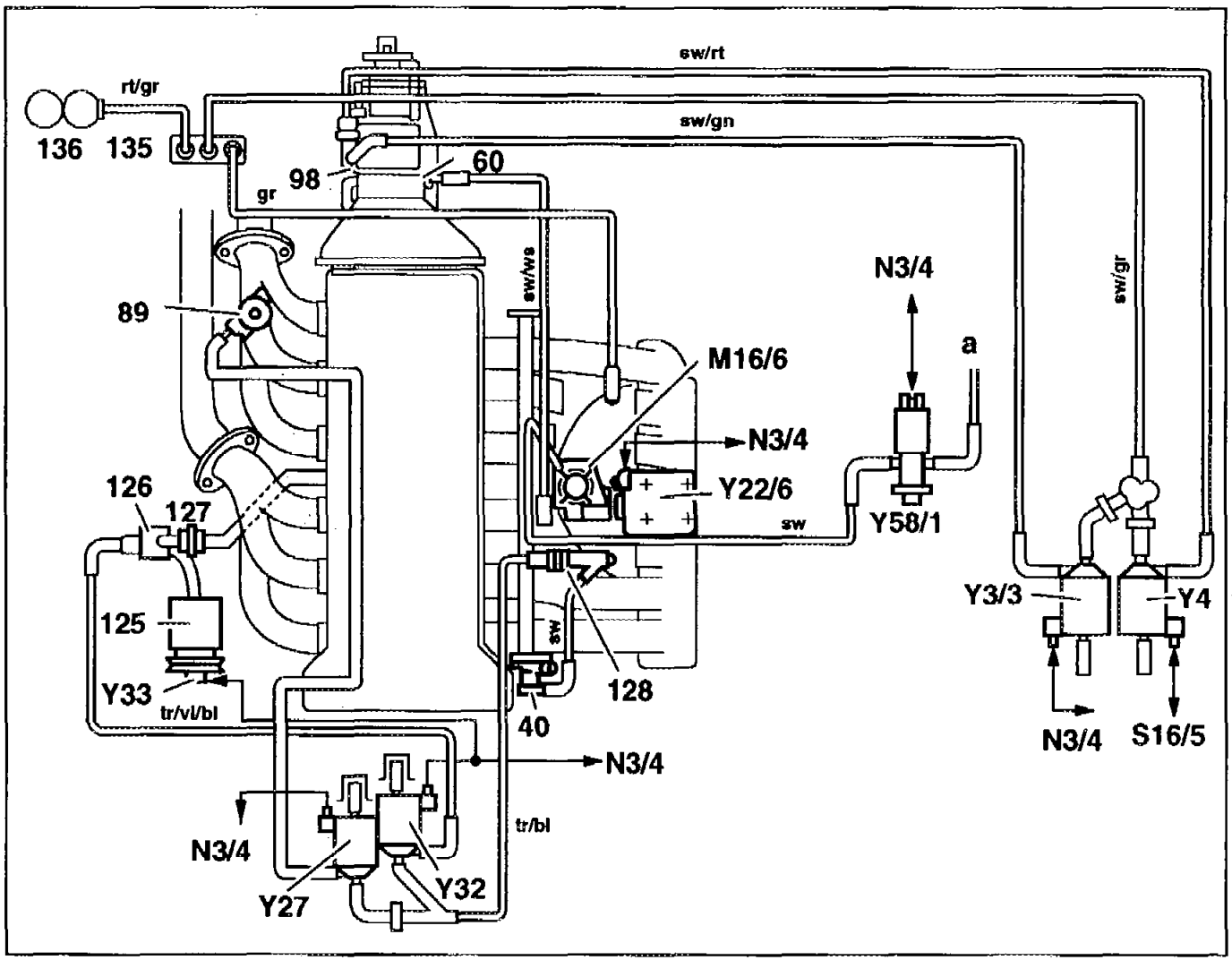
Y22/6 Resonance intake manifold switchover valve
Y27 Exhaust gas recirculation (EGR) switchover valve (AUS J USA only)
Y32 Air injection pump switchover valve
Y33 Electromagnetic air injection pump clutch
Y58/1 Purge control valve

a to activated charcoal canister

M15 AR09.20-P-1310-01DB	Connecting diagram of intake manifold		

Connecting diagram of vacuum supply HFM-SFI model 140

40	*Diaphragm pressure regulator*
60	*Modulating pressure vacuum unit*
89	*Exhaust gas recirculation valve (AUS J USA only)*
98	*Vacuum element for upshift delay*
125	*Air pump*
126	*Air shut-off valve*
127	*Check valve (injected air)*
128	*Check valve (vacuum)*
135	*Check valve (vacuum supply)*
136	*Vacuum reservoir*
M16/6	*Idle speed control (ISC) actuator*
N3/4	*Hot film engine management (HFM-SFI) control module*
S16/5	*Transmission mode switch (2nd mode) (except J USA)*
Y3/3	*Upshift delay switchover valve*
Y4	*Switchover valve (2nd transmission mode) (except J USA)*



P09.20-0233-06

Y22/6 Resonance intake manifold switchover valve

Y27 Exhaust gas recirculation (EGR) switchover valve (AUS) (J) (USA) only)

Y32 Air injection pump switchover valve

Y33 Electromagnetic air injection pump clutch

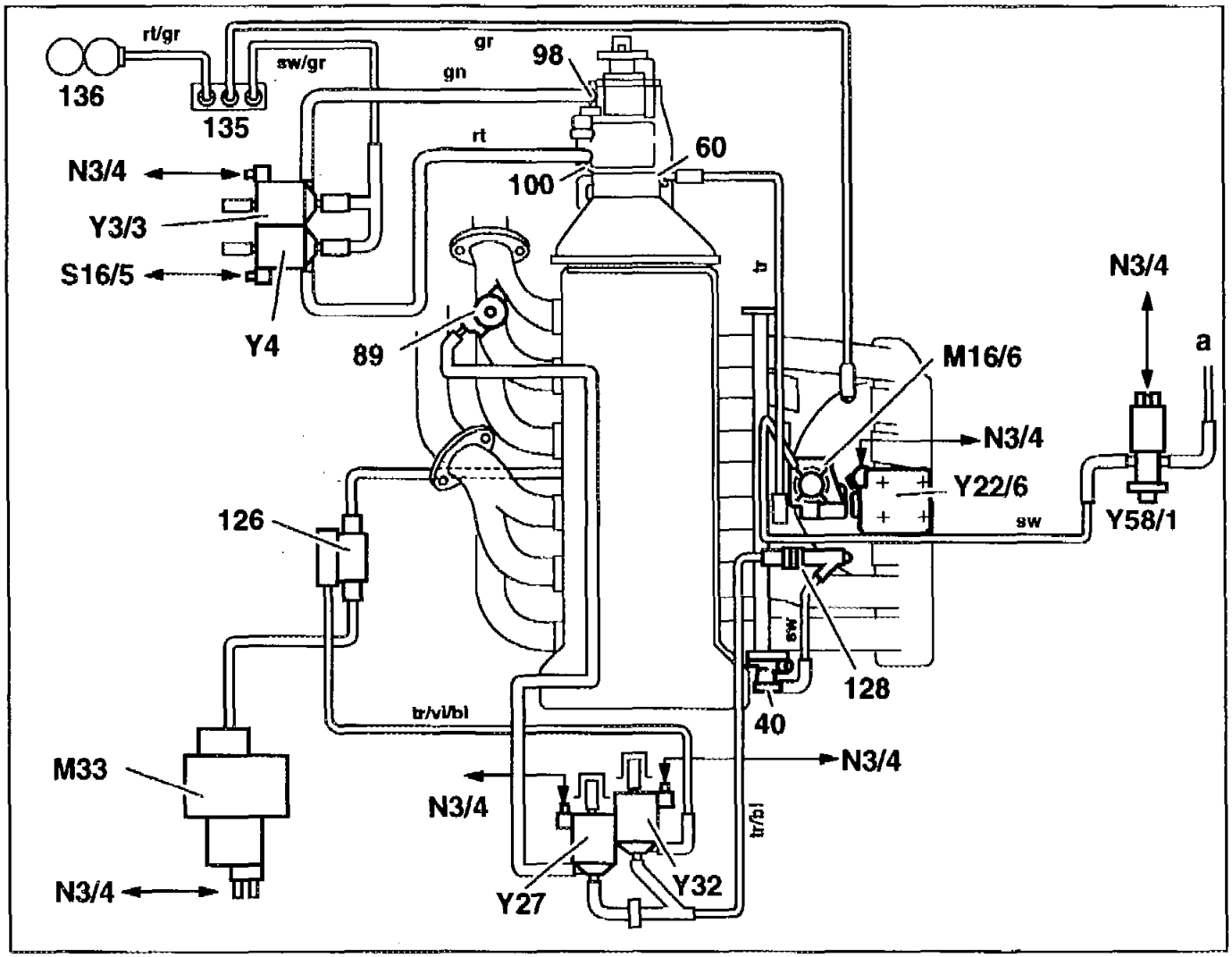
Y58/1 Purge control valve

a to activated charcoal canister

O15 AR09.20-P-1310-01DC	Connecting diagram of intake manifold		

Connecting diagram of vacuum supply HFM-SFI model 202

40 Diaphragm pressure regulator
60 Modulating pressure vacuum unit
89 Exhaust gas recirculation valve (J) (USA) only)
98 Vacuum element for upshift delay
100 Vacuum element S and E mode (except (J) (USA))
126 Air shut-off valve (except (AUS))
128 Check valve (vacuum)
135 Check valve (vacuum supply)
136 Vacuum reservoir
M16/6 Idle speed control (ISC) actuator
M33 Electric air pump (except (AUS))
N3/4 Hot film engine management (HFM-SFI) control module
S16/5 Transmission mode switch (2nd mode) (except (J) (USA))
Y3/3 Upshift delay switchover valve



P09.20-0234-06

Y4 *Switchover valve (2nd transmission mode) (except (J) (USA))*

Y22/6 *Resonance intake manifold switchover valve*

Y27 *Exhaust gas recirculation (EGR) switchover valve ((J) (USA) only)*

Y32 *Air injection pump switchover valve (except (AUS))*

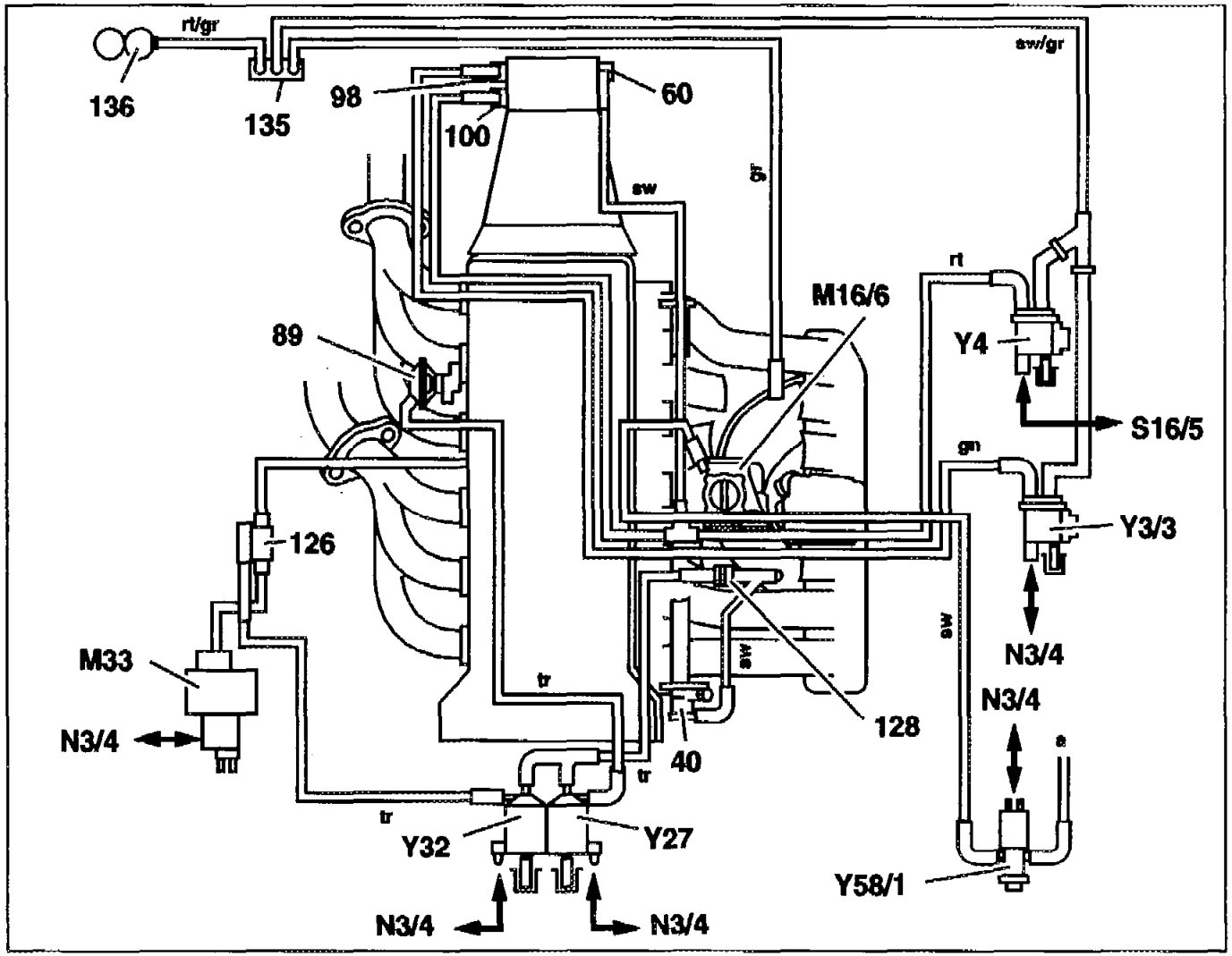
Y58/1 *Purge control valve*

a *to activated charcoal canister*

A16 AR09.20-P-1310-01DE	Connecting diagram of intake manifold		

Connecting diagram of vacuum supply HFM-SFI model 210

40	*Diaphragm pressure regulator*
60	*Modulating pressure vacuum unit*
89	*Exhaust gas recirculation valve (AUS J USA only)*
98	*Vacuum element for upshift delay*
126	*Air shut-off valve*
128	*Check valve (vacuum)*
135	*Check valve (vacuum supply)*
136	*Vacuum reservoir*
M16/6	*Idle speed control (ISC) actuator*
M33	*Electric air pump (AUS CH J S SK TAW USA N only)*
N3/4	*Hot film engine management (HFM-SFI) control module*
S16/5	*Transmission mode switch (2nd mode) (except J USA)*
Y3/3	*Upshift delay switchover valve*



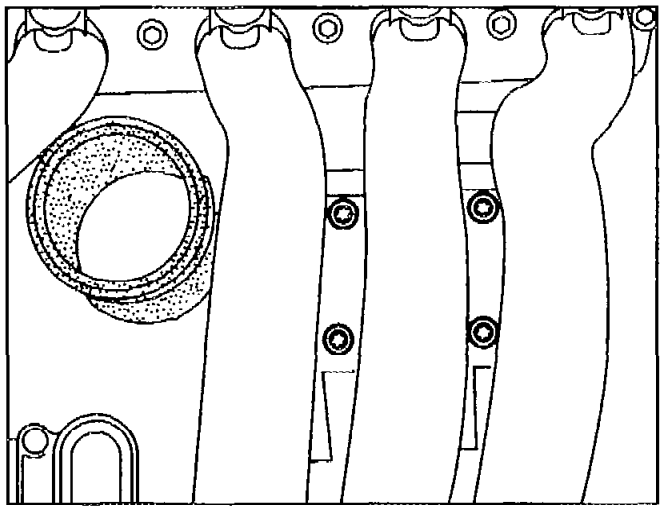
P09.20-0252-06

Y4 *Switchover valve (2nd transmission mode) (except (J) (USA))*
Y22/6 *Resonance intake manifold switchover valve*
Y27 *Exhaust gas recirculation (EGR) switchover valve ((AUS) (J) (USA) only)*
Y32 *Air injection pump switchover valve*
Y33 *Electromagnetic air injection pump clutch*
Y58/1 *Purge control valve*

a *to activated charcoal canister*

C16 AR09.20-P-1310-09DA	Removing bolts for intake silencer		

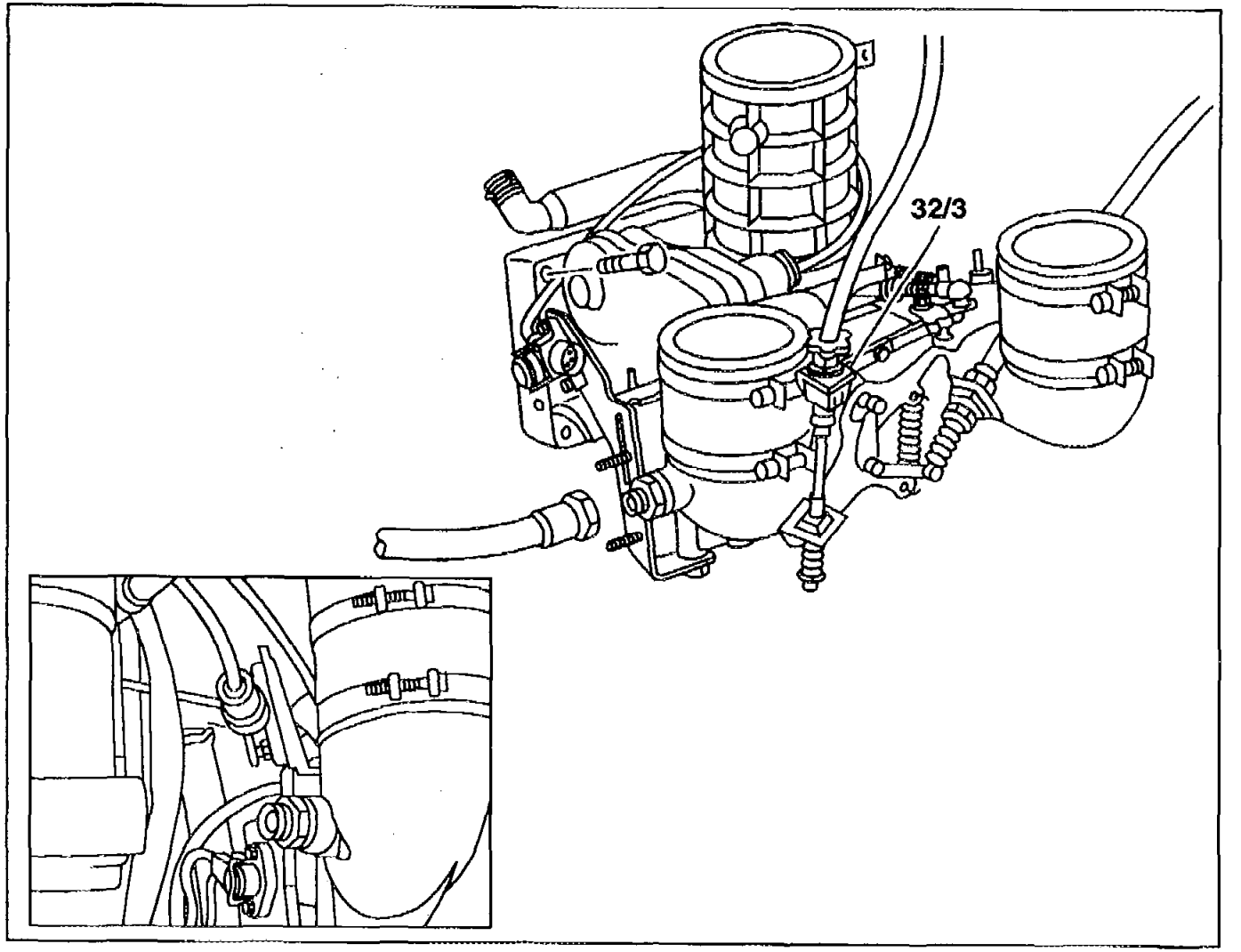
Unscrew T20 Torx socket screws



P09.20-0267-01

D16 AR09.20-P-1310-02DA **BT**	Removing and installing ram manifold Intake manifold with mount for intake noise muffler		BT09.20-P-0003-01A

32/3 Bracket of control lever



P09.20-0226-06

Prerequisite: resonance intake manifold removed

1 Remove control cable from bracket of throttle control lever (32/3).

2 Take off ram manifold.
a) **Models with oil-to-water heat exchanger:** unscrew bolt at the resonance intake manifold from the pipe fixture with spacer sleeve.
b) **Models with oil cooler:** unscrew bolt from the oil pipe fixture.
c) **Note**
Replace ram manifold, if necessary. To do this, remove all the parts attached to the ram manifold and fit onto new ram manifold. Replace gaskets.

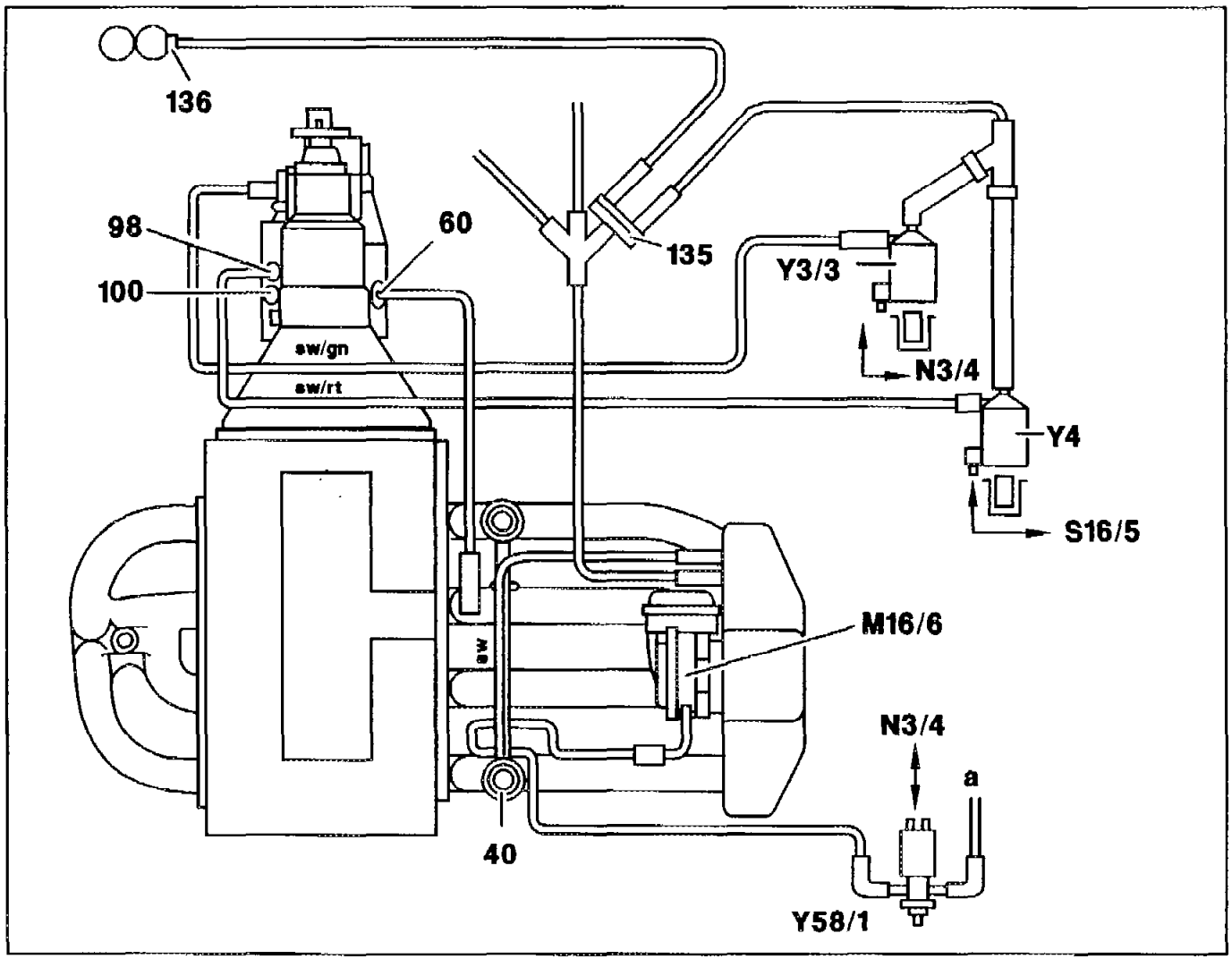
3 Install in reverse sequence.

ⓘ When installing, ensure that no vacuum pipes or electrical wiring is trapped.

F16	AR09.20-P-1310-01G	Connecting diagram of intake manifold		

Connecting diagram of vacuum supply
HFM-SFI injection with TWC bis 07/96

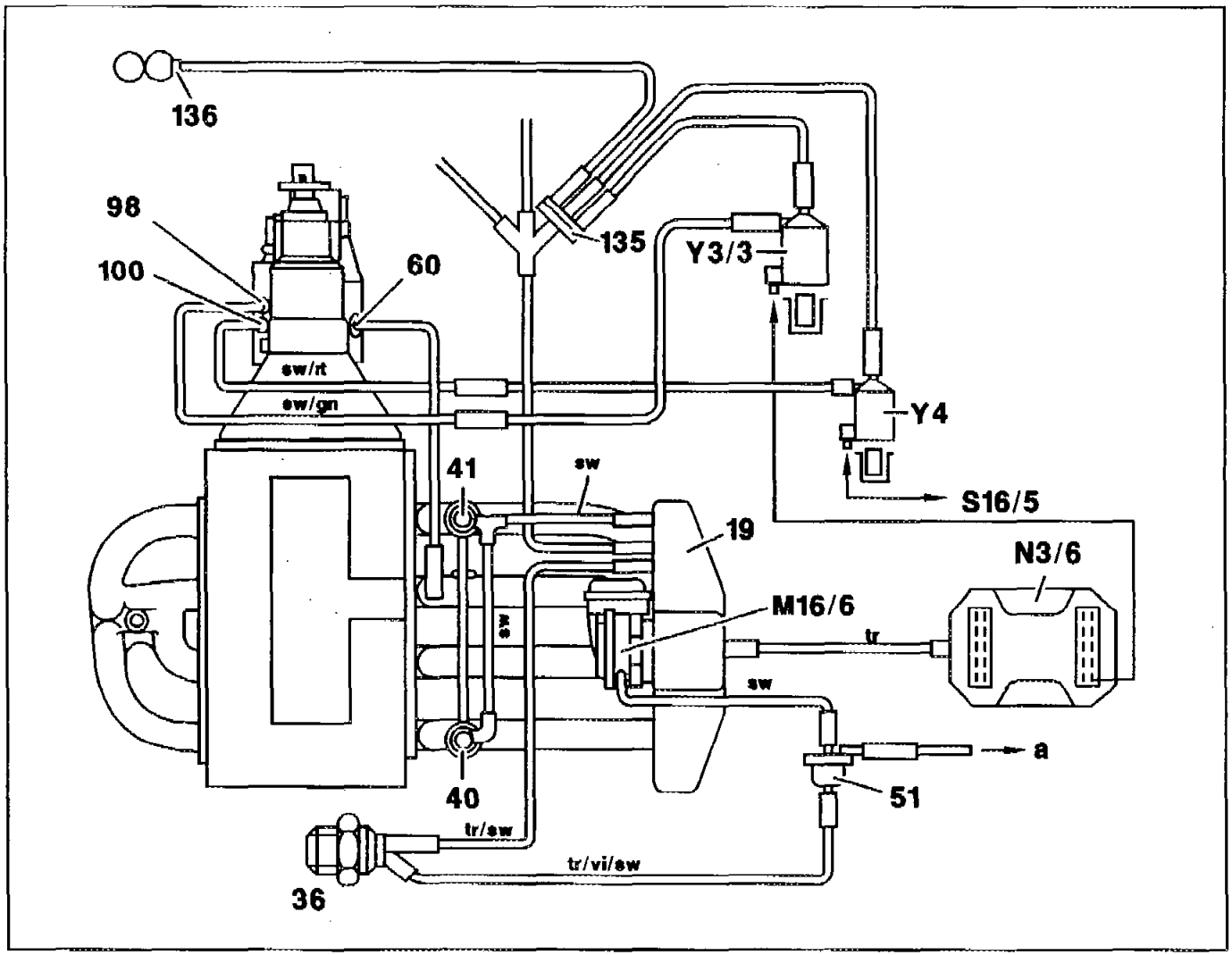
40	*Diaphragm pressure regulator*
60	*Modulating pressure vacuum unit*
98	*Vacuum element for upshift delay*
100	*Vacuum element S and E mode*
135	*Check valve (vacuum supply)*
136	*Vacuum reservoir*
M16/6	*Idle speed control (ISC) actuator*
N3/4	*Hot film engine management (HFM-SFI) control module*
S16/5	*Transmission mode switch (2nd mode) (except AUS J)*
Y3/3	*Upshift delay switchover valve*
Y4	*Switchover valve (2nd transmission mode) (except AUS J)*
Y58/1	*Purge control valve*
a	*to activated charcoal canister*



P09.20-0228-06

Connecting diagram of vacuum supply PMS injection with TWC (1st version)

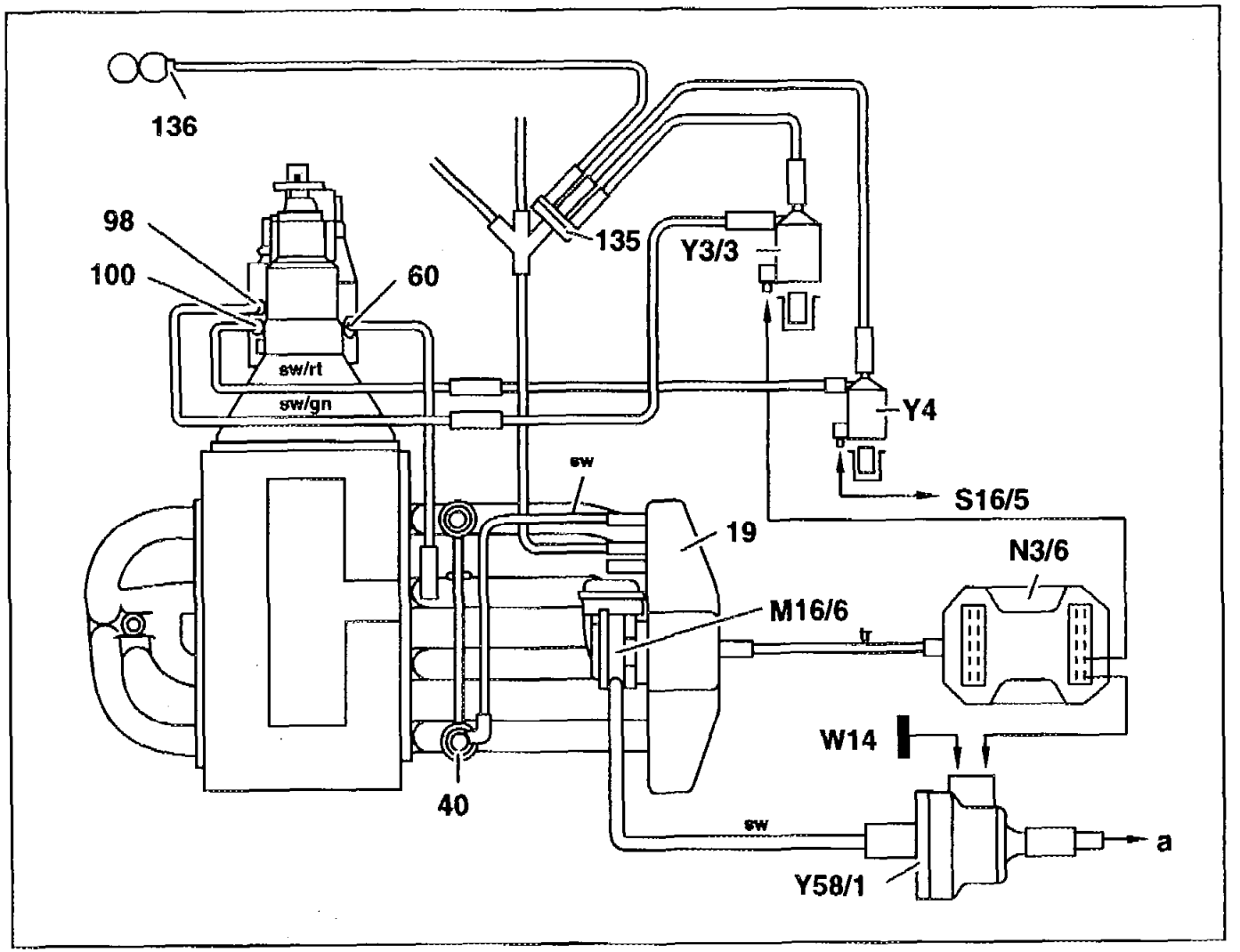
19	*Intake manifold*
36	*Thermovalve (opens at 70°C/ closes at 35°C)*
40	*Diaphragm pressure regulator*
41	*Diaphragm pressure damper*
51	*Purge valve*
60	*Modulating pressure vacuum unit (AT only)*
98	*Vacuum element for upshift delay*
100	*2nd transmission mode vacuum element (AT only)*
135	*Check valve (vacuum supply)*
136	*Vacuum reservoir*
M16/6	*Idle speed control (ISC) actuator*
N3/6	*Pressure engine management (PMS) control module*
S16/5	*Transmission mode switch (2nd mode) (AT only)*
Y3/3	*Upshift delay switchover valve (AT only)*
a	*to activated charcoal canister*



P09.20-0229-06

Connecting diagram of vacuum supply PMS with TWC (2nd version)

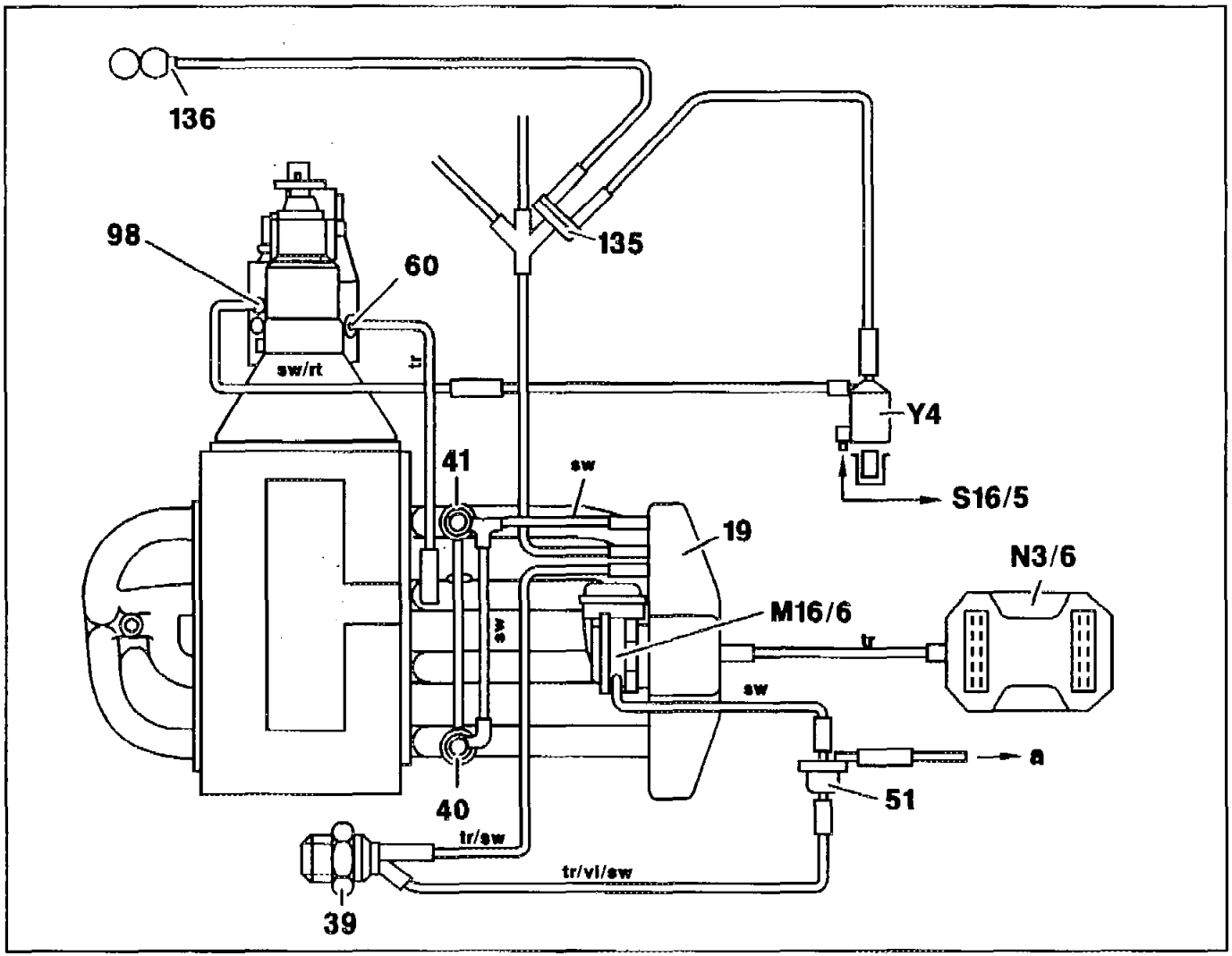
19	*Intake manifold*
40	*Diaphragm pressure regulator (AT only)*
60	*Modulating pressure vacuum unit (AT only)*
98	*Vacuum element for upshift delay (AT only)*
100	*2nd transmission mode vacuum element (AT only)*
135	*Check valve (vacuum supply)*
136	*Vacuum reservoir*
M16/6	*Idle speed control (ISC) actuator*
N3/6	*Pressure engine management (PMS) control module*
S16/5	*Transmission mode switch (2nd mode) (AT only)*
W14	*Ground, ABS hydraulic unit bracket*
Y3/3	*Upshift delay switchover valve (AT only)*
Y4	*Switchover valve (2nd transmission mode) (AT only)*
Y58/1	*Purge control valve*
a	*to activated charcoal canister*



P09.20-0230-06

Connecting diagram of vacuum supply PMS injection without TWC (1st version)

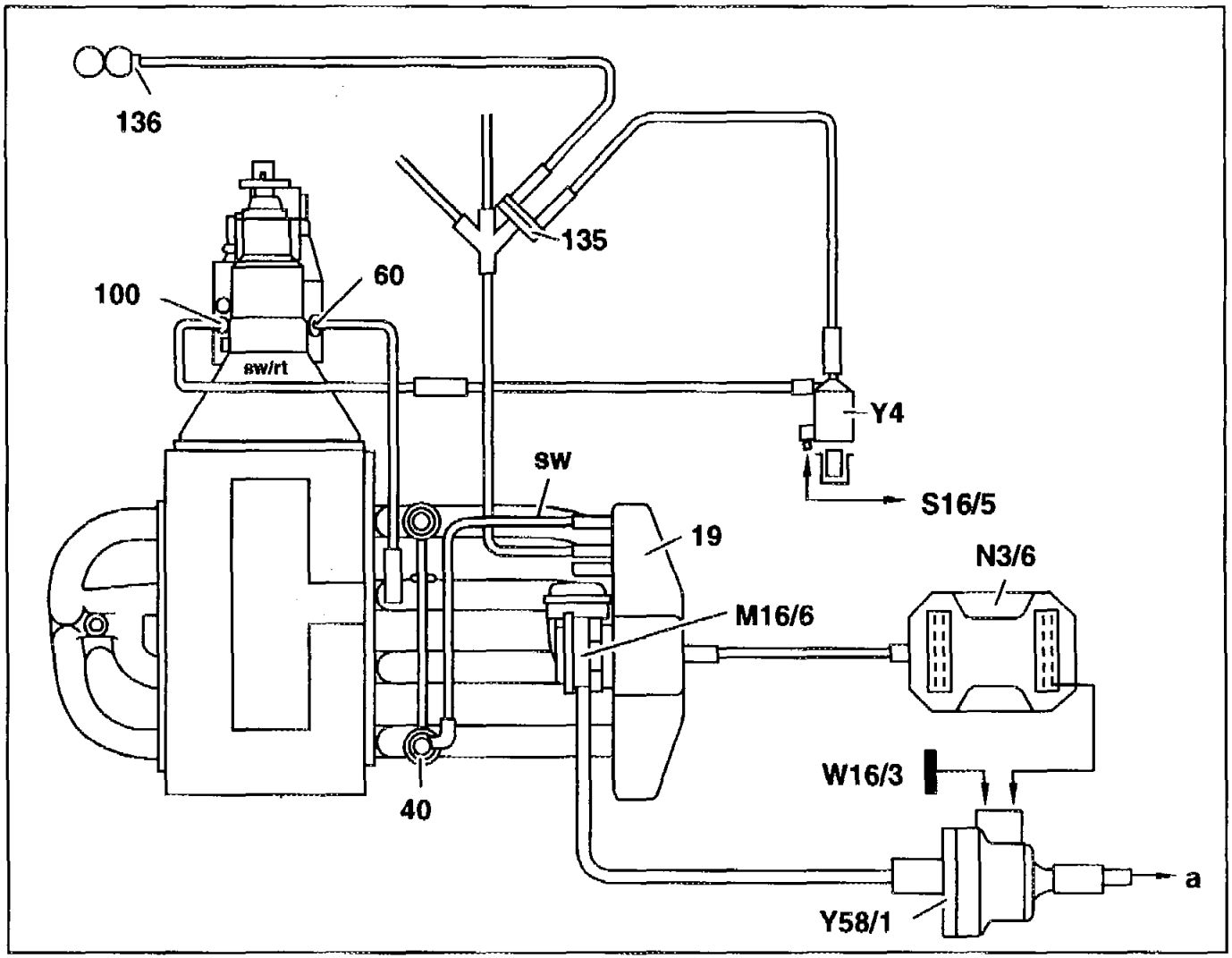
19	*Intake manifold*
39	*Thermovalve (opens at 70°C/ closes at 35°C)*
40	*Diaphragm pressure regulator*
41	*Diaphragm pressure damper*
51	*Purge valve*
60	*Modulating pressure vacuum unit (AT only)*
98	*Vacuum element for upshift delay (AT only)*
135	*Check valve (vacuum supply)*
136	*Vacuum reservoir*
M16/6	*Idle speed control (ISC) actuator*
N3/6	*Pressure engine management (PMS) control module*
S16/5	*Transmission mode switch (2nd mode) (AT only)*
Y4	*Switchover valve (2nd transmission mode) (AT only)*
a	*to activated charcoal canister*



P09.20-0231-06

Connecting diagram of vacuum supply PMS injection without TWC (2nd version)

19	*Intake manifold*
40	*Diaphragm pressure regulator*
60	*Modulating pressure vacuum unit (AT only)*
100	*2nd transmission mode vacuum element (AT only)*
135	*Check valve (vacuum supply)*
136	*Vacuum reservoir*
M16/6	*Idle speed control (ISC) actuator*
N3/6	*Pressure engine management (PMS) control module*
S16/5	*Transmission mode switch (2nd mode) (AT only)*
W16/3	*Ground, component compartment, left, power ground*
Y4	*Switchover valve (2nd transmission mode)*
Y58/1	*Purge control valve (AT only)*
a	*to activated charcoal canister*



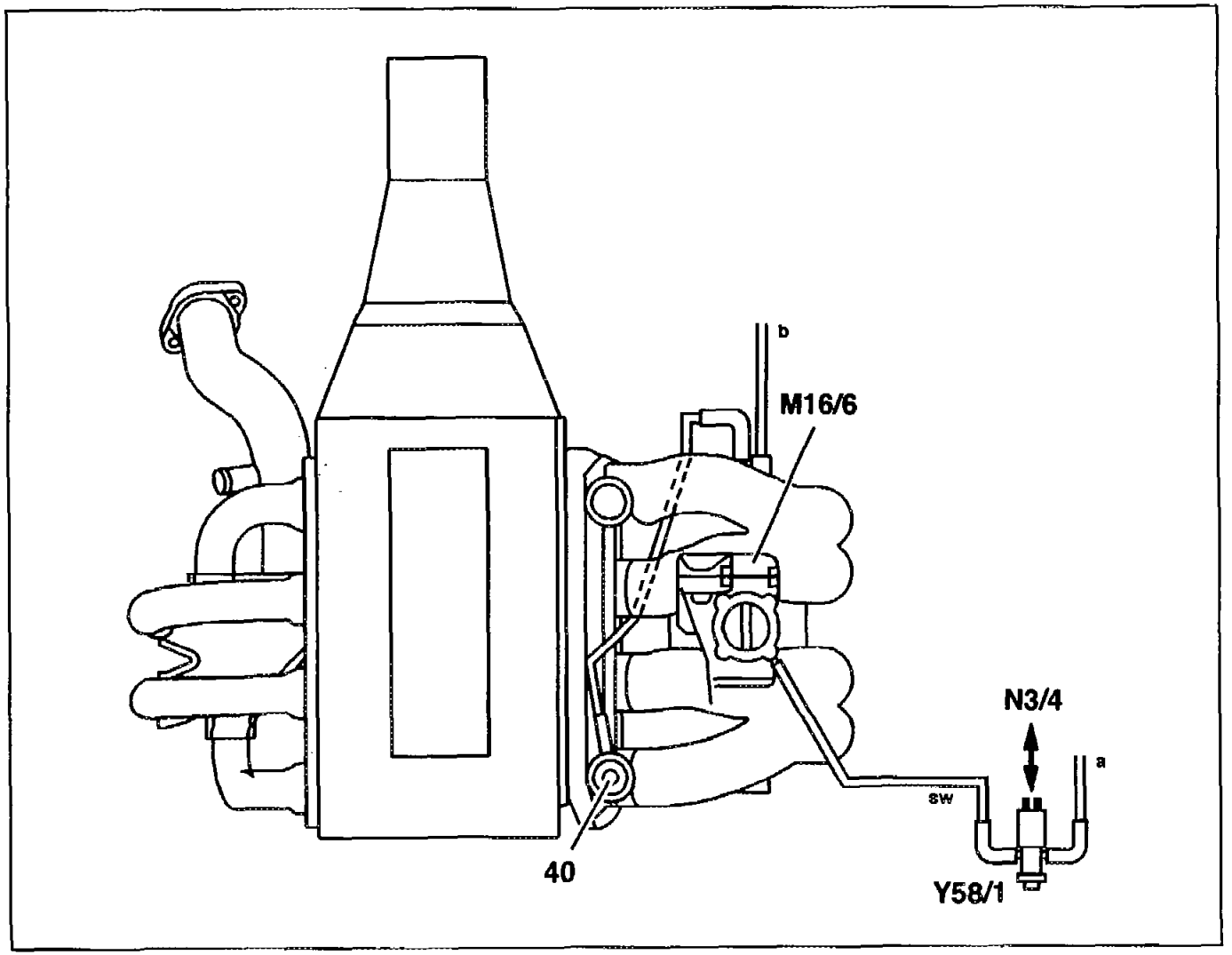
P09.20-0232-06

L16 AR09.20-P-1310-01GB	Connection diagram of intake manifold		

Connection diagram of vacuum supply HFM-SFI fuel injection with TWC

40 *Diaphragm pressure regulator*
M16/6 *Idle speed control (ISC) actuator*
N3/4 *HFM-SFI engine control module*
Y58/1 *Purge control valve*

a *To activated charcoal filter*
b *To other consumers*

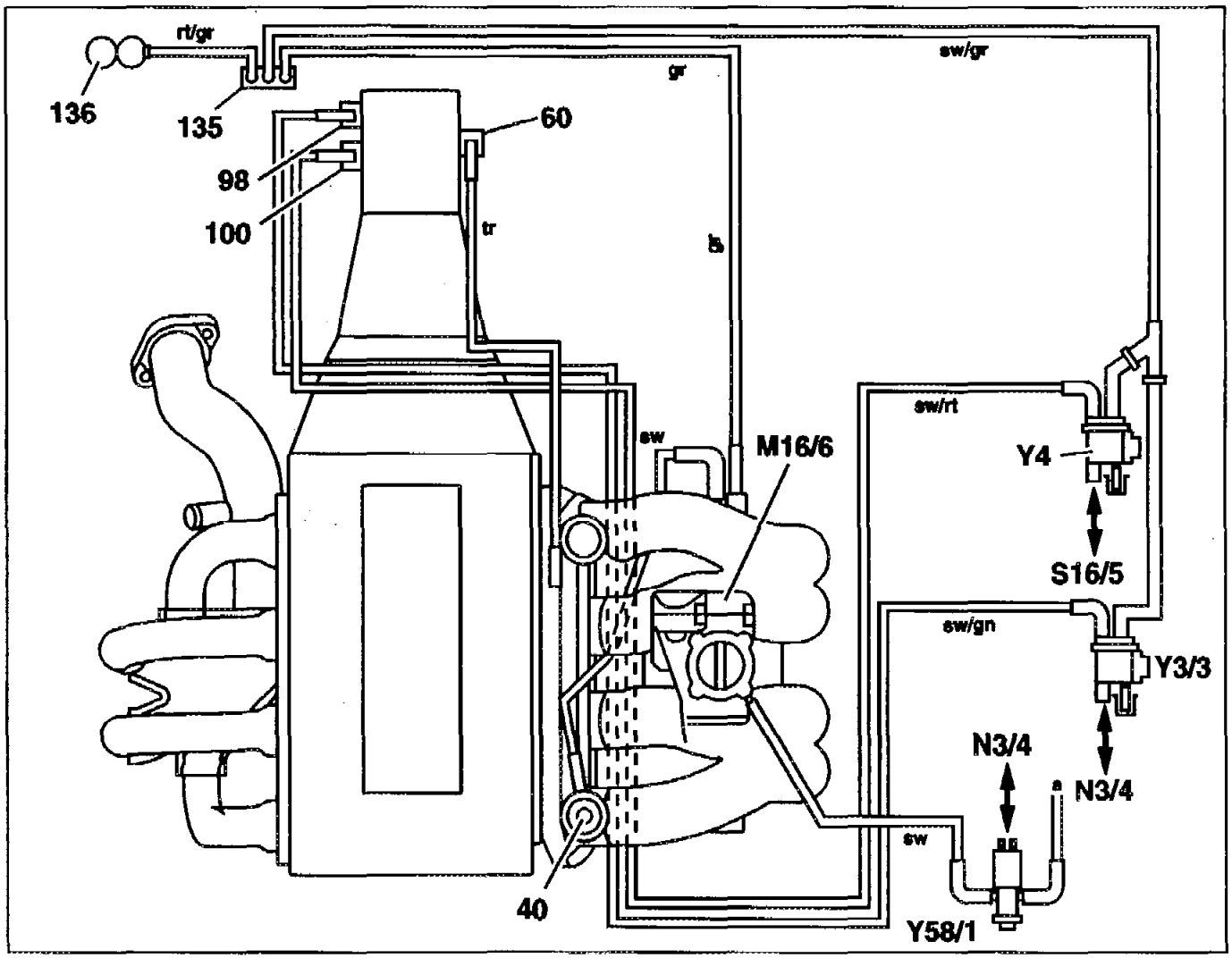


P09.20-0274-06

M16 AR09.20-P-1310-01GA	Connecting diagram of intake manifold		

Connecting diagram of vacuum supply HFM-SFI injection with TWC bis 05/96

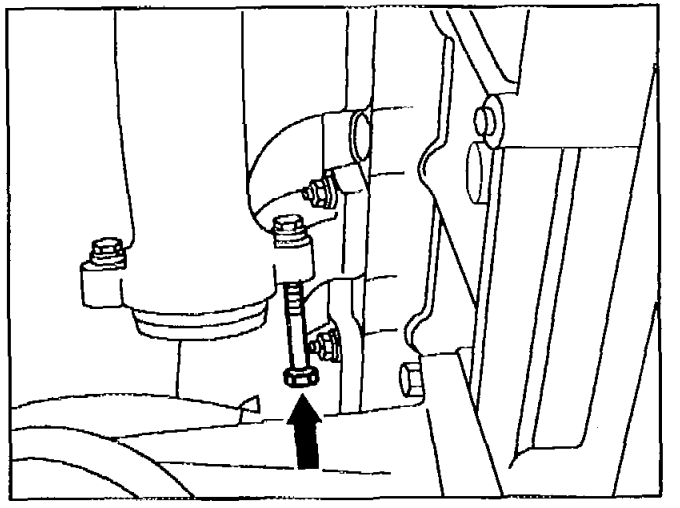
40	*Diaphragm pressure regulator*
60	*Modulating pressure vacuum unit*
98	*Vacuum element for upshift delay*
100	*Vacuum element S & E mode*
135	*Check valve (vacuum supply)*
136	*Vacuum reservoir*
M16/6	*Idle speed control (ISC) actuator*
N3/4	*Hot film engine management (HFM-SFI) control module*
S16/5	*Transmission mode switch (2nd mode) (except AUS J)*
Y3/3	*Upshift delay switchover valve*
Y4	*Switchover valve (2nd transmission mode) (except AUS J)*
Y58/1	*Purge control valve*
a	*to activated charcoal canister*



P09.20-0253-06

N16 AR49.10-P-5531-01DA	Replacing rivet nuts in exhaust manifold	103 589 01 39 00 Caulking screw	

1 Use a suitable bolt (arrow) to knock rivet nuts out of the holes in the exhaust manifold.

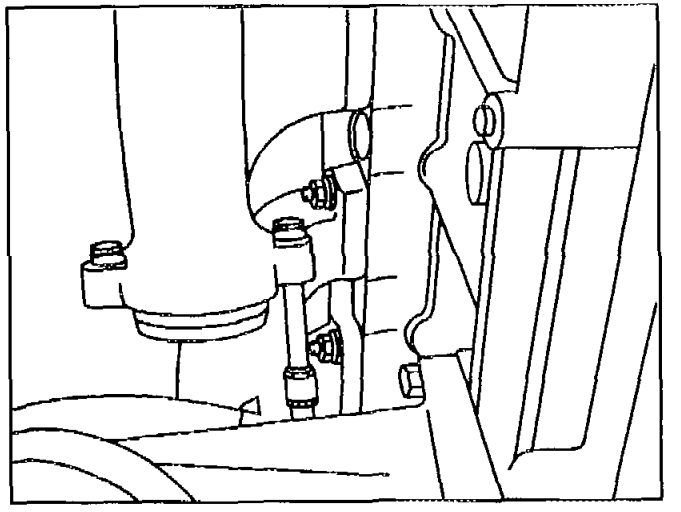


P49.10-0209-01

i Screw in bolt by hand only.

2 Insert new rivet nut into hole of the exhaust manifold.

3 Screw in caulking bolt and tighten to about 30 Nm.



P49.10-0210-01