

Chapter 2: Scanner™ Operations

Each test adapter connects to one of the following vehicle diagnostic connectors.



Figure 2-14. 38-pin connector—fits MB-1 adapter

Table 2-2. 38-pin connector pinout (sheet 1 of 2)

PIN	FUNCTION	PIN	FUNCTION
1	Ground, circuit 31 (W12, W15, electronics ground)	14	On-off ratio, engine 119 LH-SFI, engine 120 LH-SFI (right)
2	Voltage, circuit 87 or 15z	15	On-off ratio, engine 120 LH-SFI (left)
3	Voltage, circuit 30		Instrument cluster
4	Electronic diesel system	16	Air conditioning (models 124, 202, 208, 210)
	Electronic distributor-type fuel injection (diesel)		Tempmatic air conditioning (model 170)
	Electronic inline fuel injection (diesel)	17	Distributor ignition, engines 104, 119, engine 120 (right)
	HFM sequential multiport fuel injection/ignition		TD-speed signal (time division) (diesel) (model 140)
	LH sequential multiport fuel injection, engines 104, 119, 120 (right)		TN-speed signal, LH-SFI engines, HFM (model 202)
ME sequential multiport fuel injection/ignition, engines 119, 120 (right)	18	Distributor ignition, engine 120 (left)	

Table 2-2. 38-pin connector pinout (sheet 2 of 2)

PIN	FUNCTION	PIN	FUNCTION
5	LH sequential multiport fuel injection, engine 120 (left)	19	Diagnostic module
	ME sequential multiport fuel injection/ignition, engine 120 (left)	20	Pneumatic system equipment (model 140)
6	Antilock brake system		Combination control module (model 210)
	Electronic traction system	21	Convenience feature (model 140)
	Acceleration slip regulation		Roadster soft top (model 129)
	Electronic stability program	22	Roll bar (model 129)
7	Electronic accelerator	23	Anti-theft alarm
	Cruise control/idle speed control	24–25	Not used
8	Base module	26	Automatic locking differential (model 202)
	Brake assist	27	Not used
9	Automatic locking differential (models 124, 129, 140)	28	Parktronic system (model 140)
10	Electronic transmission control (A/T 5-speed)	29	Not used
	Electronic transmission control	30	Airbag/ETR (SRS)
11	Adaptive damping system	31	Remote central locking
12	Speed-sensitive power steering	32–33	Not used
13	TNA-signal (gasoline) LH-SFI engines	34	Communication and navigation system
	TD-signal (diesel) (model 210)	35–38	Not used
	TN-signal (gasoline), HFM (ME)-SFI engines		

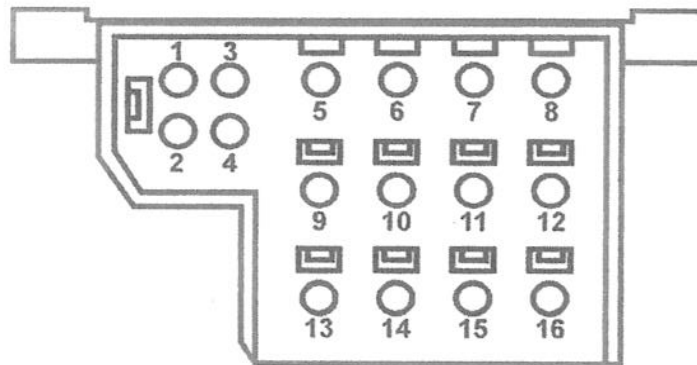


Figure 2-15. 16-pin OBD-I connector—fits MB-2 adapter

Table 2-3. 16-pin OBD-I connector pinout (sheet 1 of 2)

U.S. MODELS		CALIFORNIA MODELS ONLY (WITH LED)	
PIN	FUNCTION	PIN	FUNCTION
1	Ground	1	Ground
2	Not used	2	Push-button for on-board diagnostics
3	Continuous fuel injection	3	Continuous fuel injection
4	Electronic diesel system		Diagnostic module
5	4MATIC	4	LED
6	Airbag/ETR (SRS)	5	Automatic locking differential
	Air conditioning (model 124)	6	Airbag/ETR (SRS)
Roll bar (model 129)	7		Air conditioning (model 124)
7	Distributor ignition	7	Roll bar (model 129)
	HFM sequential multiport fuel injection/ignition		8
	Pressurized engine control	HFM sequential multiport fuel injection/ignition	
8	Adaptive damping system	8	Adaptive damping system
	Roll bar (model 124)		Roll bar (model 124)
9	TN-signal (gasoline)	9	Roadster soft top (model 129)
10	Anti-theft alarm		TN-signal (gasoline)
11	Remote central locking	10	Anti-theft alarm
12	Electronic transmission control	11	Remote central locking
13		12	

Table 2-3. 16-pin OBD-I connector pinout (sheet 2 of 2)

U.S. MODELS		CALIFORNIA MODELS ONLY (WITH LED)	
PIN	FUNCTION	PIN	FUNCTION
14	Electronic accelerator (model 124)	13	Electronic transmission control
	Cruise control/idle speed control (model 124)	14	Electronic accelerator (model 124)
	Engine systems control module (MAS) (model 129)		Cruise control/idle speed control (model 124)
15	Not used		Engine systems control module (MAS) (model 129)
16	Circuit 15	15	Not used
		16	Circuit 15

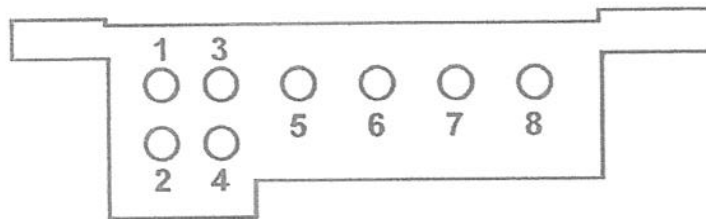


Figure 2-16. 8-pin connector—fits MB-2 adapter

Table 2-4. 8-pin connector pinout

PIN	FUNCTION
1	Ground
2	Not used
3	Continuous fuel injection
4	Diesel injection system
	Electronic idle speed control
	Electronic diesel
5	Automatic locking differential
	Automatic-engaged 4WD (model 124 only)
6	Airbag
7	Air conditioning
8	Not used

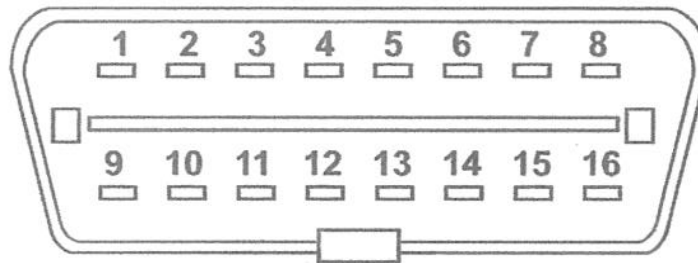


Figure 2-17. 16-pin OBD-II connector—fits DL-16 adapter

Table 2-5. 16-pin OBD-II connector pinout

PIN	FUNCTION	PIN	FUNCTION
1	Not used	9	Electronic Traction System (ETS), model 163
2	Not used	10	Not used
3	TNA-signal (gasoline)	11	Electronic transmission control (ETC)
4	Circuit 31, ground	12	All Activity Module (AAM)
5	Circuit 31, electric ground	13	Airbag/ETR (SRS)
6	CAN interior bus (H)	14	CAN interior bus (L)
7	Motor electronics (ME)	15	Instrument cluster
8	Circuit 87, voltage supply	16	Circuit 30, voltage supply

Note the following when connecting the Scanner™ to the vehicle:

- “LEFT” or “RIGHT,” when included in the connection message, assumes that you are in the driver’s seat.
- When the connection message screen refers to the MB-2 adapter, use the MB-2A adapter.
- The MB-1 and DL-16 adapters require a Personality Key™. See the on-screen connection instructions for the vehicle you are testing for the correct Personality Key™.
- The Scanner™ displays [MORE] if a message exceeds four lines. Scroll to display the additional lines.