

## ON-BOARD DIAGNOSTIC SYSTEM EXTERNAL TESTER COMMUNICATION FUNCTION

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- The external tester communication function enables communication of diagnostic data (DTC read-outs, input/output signal read-outs, and operation of input/output parts) between the 4-wheel drive (4WD) control module (CM) and an external tester.

### Connections and Communication Contents

	External tester	
	Mazda Modular Diagnostic System (M-MDS)	
	Connection	Communication method
On-board diagnostic (malfunction detection) function	Input/output: HS_CAN_H, HS_CAN_L	Serial communication
PID/DATA monitor function	Input/output: HS_CAN_H, HS_CAN_L	Serial communication
Active command modes function	Input/output: HS_CAN_H, HS_CAN_L	Serial communication

### Serial communication

- Serial communication (two-way communication) allows for multiple data to be sent and received instantly along the same line.
- By connecting the Mazda Modular Diagnostic System (M-MDS) to the DLC-2, diagnostic data can be sent and received between the M-MDS and the 4WD CM using the HS\_CAN\_H and HS\_CAN\_L terminals (within the DLC-2).
- The 4WD CM receives the command signals of the malfunction detection function, parameter identification (PID)/data monitor function, and the active command modes function from the M-MDS, and sends DTCs and data regarding the operating condition and status of each input/output part to the M-MDS.

Diagnostic function name	Signal received	Signal sent
Malfunction detection function	DTC verification signal	DTC
PID/data monitor function	Command signal to read selected monitor item	Monitored data for requested monitor item
Active command modes function	Operation command signal for selected active command modes item	Input/output part name