FOREWORD [SKYACTIV-D 2.2]

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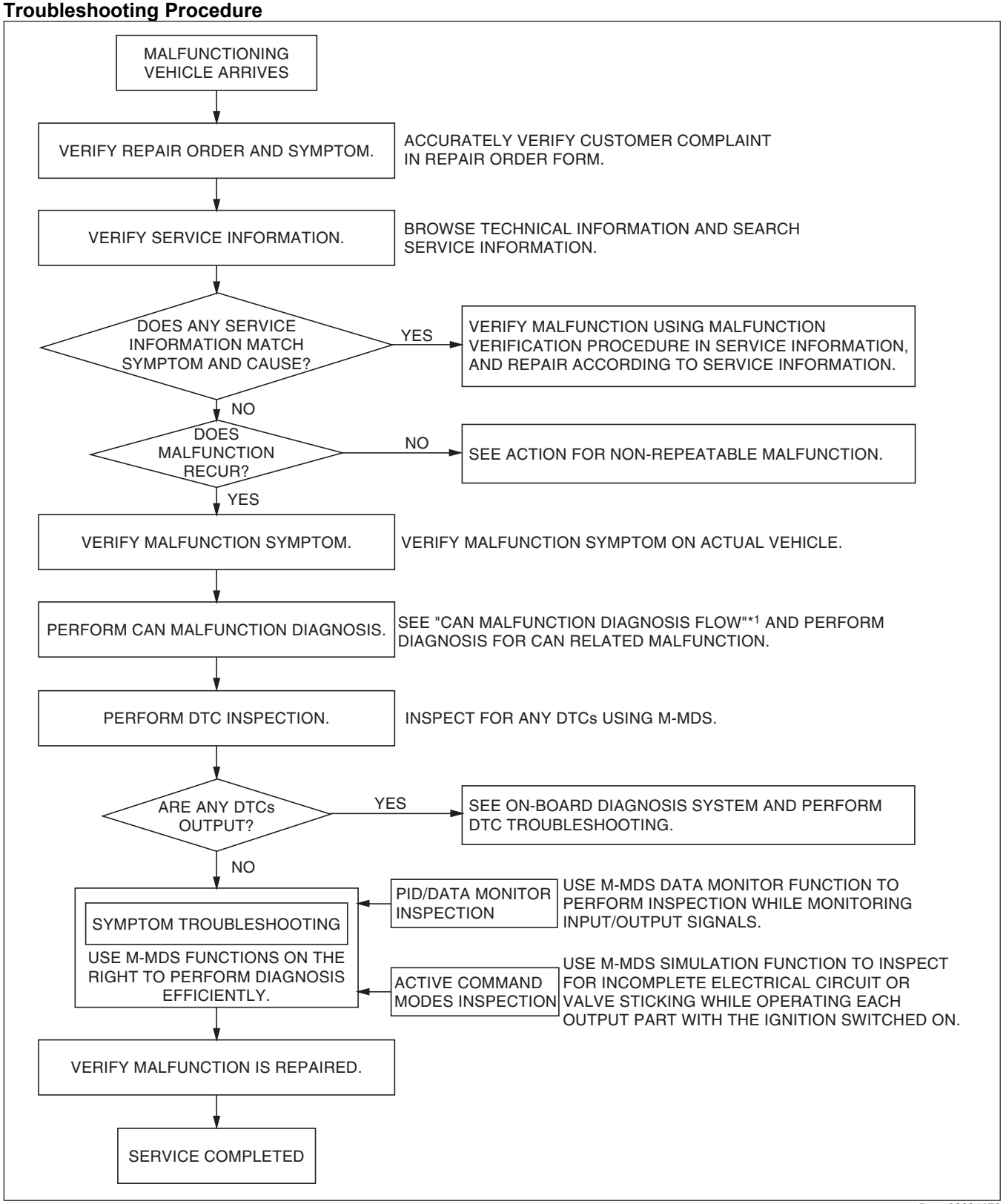
- If there is any vehicle malfunction complaint lodged by a customer, perform malfunction diagnosis according to the troubleshooting procedure.

Troubleshooting Procedure



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*1 : CONTROLLER AREA NETWORK (CAN) MALFUNCTION DIAGNOSIS FLOW [SKYACTIV-D 2.2 (L.H.D.)]/ CONTROLLER AREA NETWORK (CAN) MALFUNCTION DIAGNOSIS FLOW [SKYACTIV-D 2.2 (R.H.D.)]

Repair Order Form

Repair order form and malfunction symptom check sheet

	Repair order	Check with customer	Diagnosis	Repair	Explanation to customer
Date/time					
In-charge					

Customer statement (When? What? What time(s)? Where it occurs. Warning light illumination? Can anyone replicate problem?)

Vehicle body number:	Registration date:	Date of malfunction occurrence:	Odometer reading km {mph}
Engine (SOHC/DOHC/RE/DE) (Cab /EGI/ Turbo/ Miller cycle/ LPG/Direct injection)		Transmission (MT/HAT/EC-AT/CVT)	

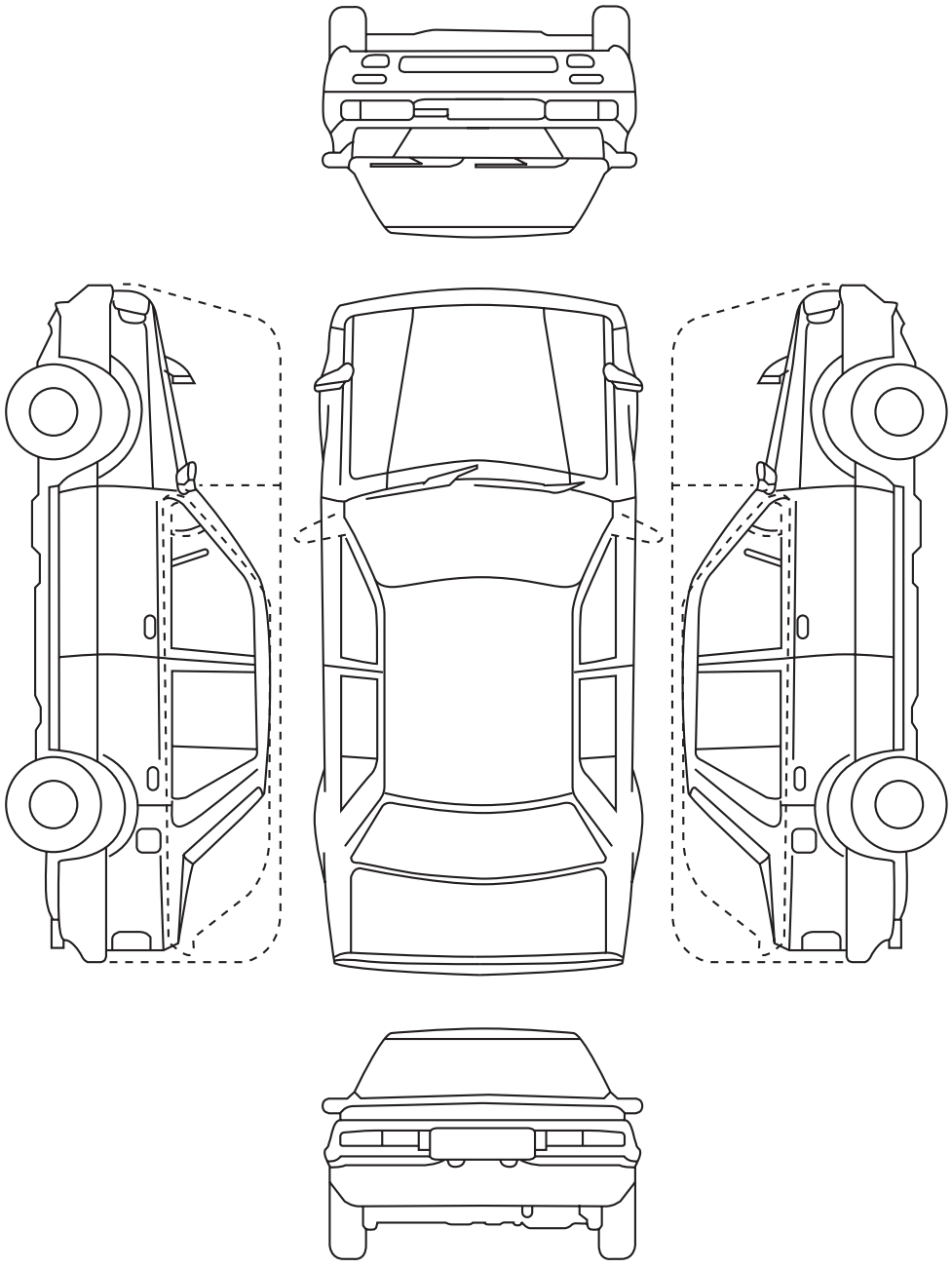
Environmental conditions				Occurrence frequency	Driving conditions									
Weather	Ambient temp.	Drive scenario	Grade		Fuel	Warm-up condition	Driving operation	Driving posture	Load	Accelerator opening angle	Shift position		Eng RPM	Vehicle speed	Pattern of use
Sunny Cloudy Rain Snow High wind Wind gusts N/A Other	-10˚C {14˚F} or less -10— 0˚C {14—32˚F} 0—10˚C {32—50˚F} 10—15˚C {50—59˚F} 15—20˚C {59—58˚F} 20—25˚C {68—77˚F} 25—30˚C {77—86˚F} 30—35˚C {86—95˚F} 35—4{0˚C {95—104˚F} 40—45˚C {104—113˚F} 45˚C {113˚F} or more N/A Other	Depart/arrive Traffic jam (city) Standard city street Suburbs Highway Uneven road Dry road surface Wet road surface Snow bound road Icy road Other	Flat Upgrade Down grade N/A Other	Once/day 2-3 times/day 4-5 times/day Many times/day Once/week 2-3 times/week 4-5 times/week Once/month 2-3 times/month 4-5 times/month Other	Regular High Oct. Diesel LPG Other Fuel gauge F E	Cold Half-warmed Fully warmed N/A Other Water temp. gauge H C	When starting After starting Re-starting (min. after stopped) Idling Racing Accel. from stop Normal driving Deceleration Braking Soft braking Clutch disengage Sudden accel. Light accel. Shifting (km/h {mph} → km/h {mph}) Other	Vehicle stopped Straight-on driving Reversing Right turn Left turn Other	Headlights on Exterior lights on A/C on AUTO ˚C{˚F} Blower: 1 step Blower: 2 steps Blower: 3 steps Blower: 4 steps Power steering lock to lock Rear defrost on Wipers on Audio on Other	0/8 1/8 2/8 3/8 4/8 5/8 6/8 7/8 8/8	MT AT	1 2 3 4 5 6 N R P R N D S L Hold M (km/h {mph})	Idle Less than 1,000 Less than 1,500 Less than 2,000 Less than 2,500 Less than 3,000 Less than 4,000 Less than 4,500 Less than 5,000 Less than 5,500 Less than 6,000 Less than 6,500 7,000 or more	5 km/h {3 mph} 10 km/h {6.2 mph} 20 km/h {12 mph} 30 km/h {19 mph} 40 km/h {25 mph} 50 km/h {31 mph} 60 km/h {37 mph} 70 km/h {43 mph} 80 km/h {50 mph} 90 km/h {56 mph} 100 km/h {62.1 mph} 110 km/h {68.4 mph} 120 km/h {74.6 mph} 130 km/h {80.8 mph} 140 km/h {87 mph} 150 km/h {93.2 mph} 160 km/h {99.4 mph}	Work_____% Minor use_____% Trips_____% Other_____% Between ENG. start→Stop: Distance, time Approx km Approx Hrs. No. of occupants: Load condition kg Other

DTC, measured data (fuel pressure, intake manifold vacuum, throttle sensor electromotive force, air flow electromotive force, other), maintenance, repair, accident history, installation of commercial devices

Dealer name:	Vehicle body number:	Odometer reading:
Vehicle-in date:	Estimated repair completion date:	Person in-charge:
Subject (Content):		

Audio memory

	1	2	3	4	5	6	Fuel level
FM1							E F
FM2							
AM							



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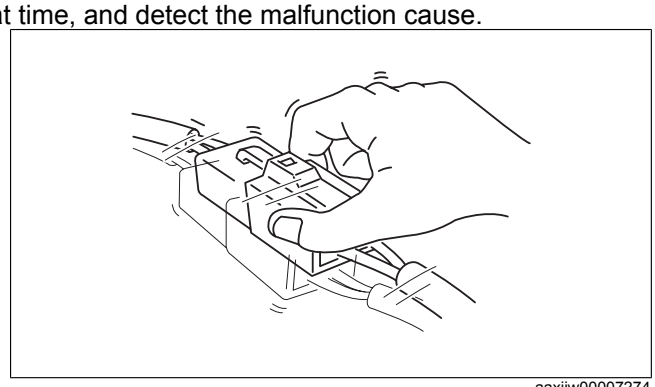
Action for Non-repeatable Malfunction

- If the malfunction does not recur, verify the malfunction cause by performing the following actions:
  - — Based on the repair order form, attempt to drive the vehicle or perform tests to replicate the malfunction, record the data (such as PCM circuit voltage) at that time, and detect the malfunction cause.
  - — Shake the wiring harness or connector of the electrical component which is suspected to be the cause of the malfunction, and inspect for malfunction or occurrence of any DTCs.



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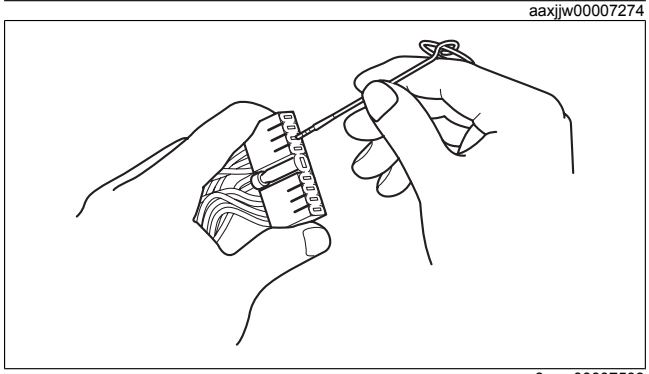
  - — Inspect the female terminals on the connector of the electric component which is suspected to be the cause of the malfunction for poor connection.



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