ON-BOARD DIAGNOSTIC SYSTEM FOREWORD [GW6A-EL, GW6AX-EL]

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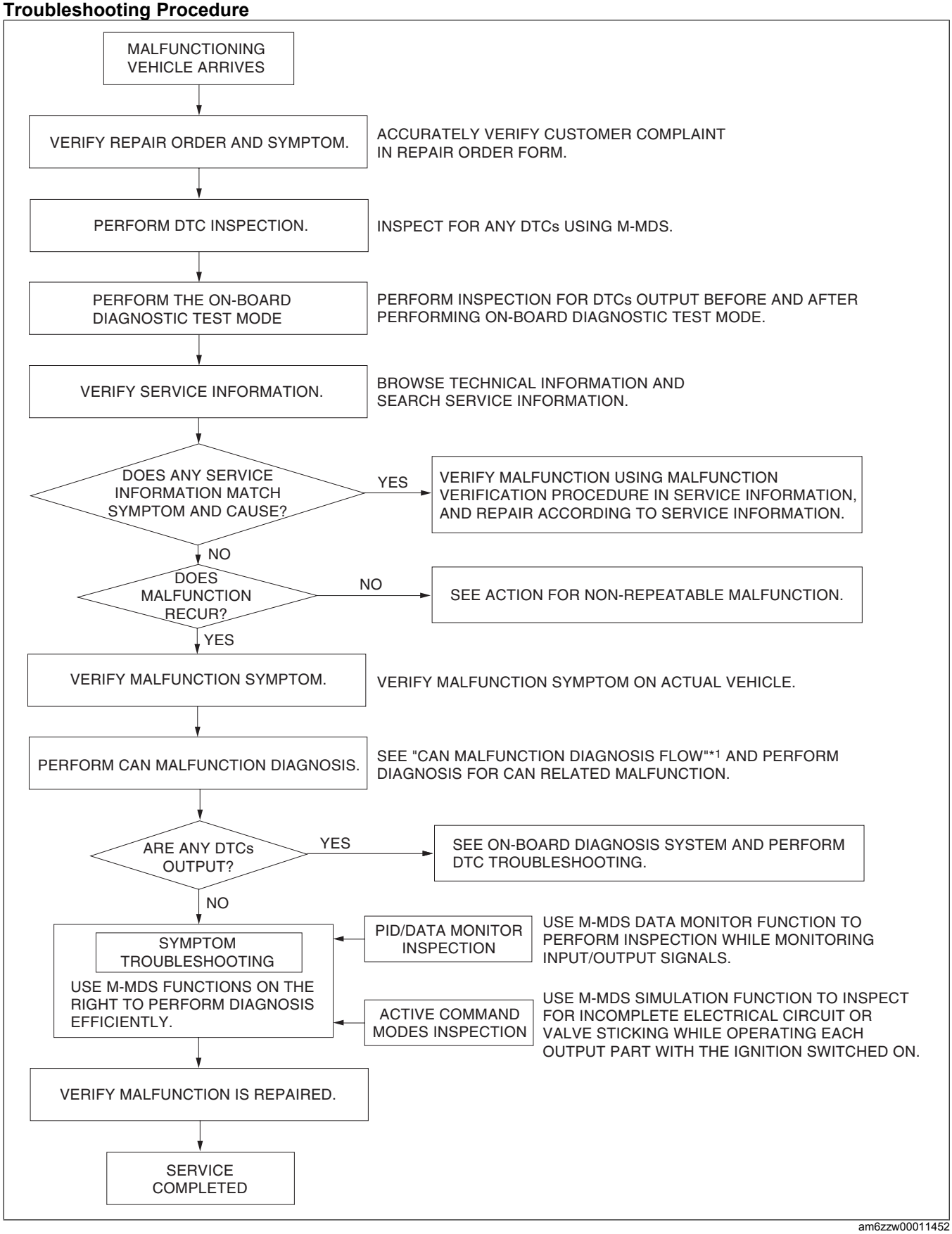
- If there is any vehicle malfunction complaint lodged by a customer, perform malfunction diagnosis according to the troubleshooting procedure.

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)	

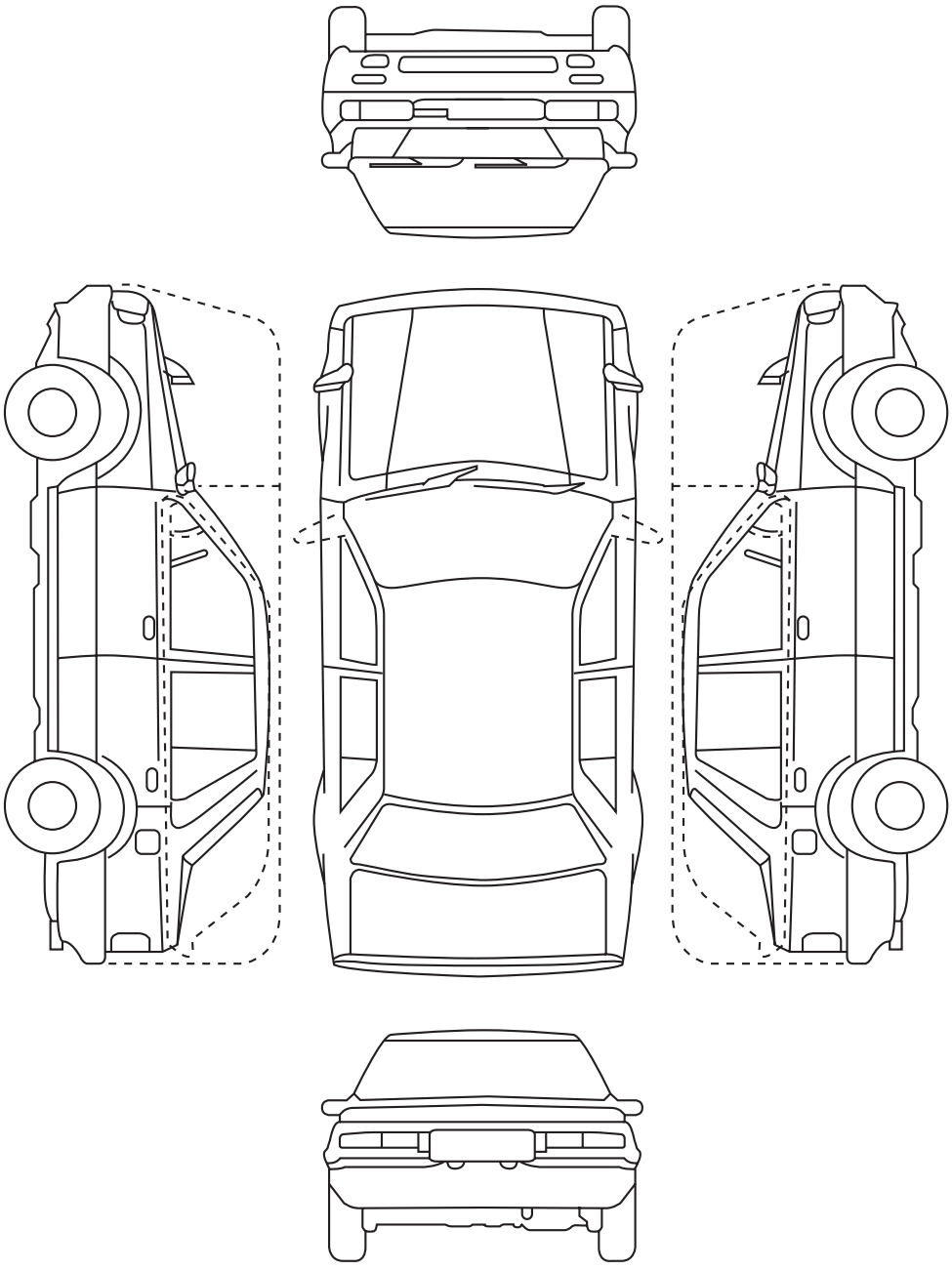
Environmental conditions				Occurrence frequency	Driving conditions									
Weather	Ambient temp.	Drive scenario	Grade		Fuel	Warm-up condition	Driving operation	Driving posture	Load	Accelerator opening angle	Shift position		Eng RPM	Vehicle speed	Pattern of use
Sunny	-10˚C {14˚F} or less	Depart/arrive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

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:
  - Verify that no DTCs are stored. (See ON-BOARD DIAGNOSTIC SYSTEM DTC INSPECTION [GW6A-EL, GW6AX-EL].)
  - Based on the repair order form, attempt to drive the vehicle or perform tests to replicate the malfunction, record the data at that time, and detect the malfunction cause.
- If the malfunction does not recur after the above servicing, explain to the customer that the vehicle is normal.