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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [03/2023 -]
Title: M20A-FXS (ENGINE MECHANICAL): REAR CRANKSHAFT OIL SEAL: REMOVAL; 2023 - 2024 MY Prius Prius Prime [03/2023 -]		

REMOVAL

CAUTION / NOTICE / HINT

The necessary procedures (adjustment, calibration, initialization or registration) that must be performed after parts are removed and installed, or replaced during rear crankshaft oil seal removal/installation are shown below.

Necessary Procedures After Parts Removed/Installed/Replaced

REPLACED PART OR PERFORMED PROCEDURE	NECESSARY PROCEDURE	EFFECT/INOPERATIVE FUNCTION WHEN NECESSARY PROCEDURE NOT PERFORMED	LINK
Replacement of ECM	Perform Vehicle Identification Number (VIN) registration	DTC is output	INFO
	ECU configuration	-	INFO
	Update ECU security key	Vehicle Control History (RoB) are stored	INFO
<ul style="list-style-type: none"> Replacement of engine assembly Gas leak from exhaust system is repaired 	Inspection after repair	<ul style="list-style-type: none"> Poor idle, etc. Engine start function, etc. 	INFO
Replacement of inverter with converter assembly	ECU configuration	-	INFO
	Resolver learning	<ul style="list-style-type: none"> DTCs are stored Slight vibration at a vehicle speed of 5 km/h (3 mph) or less Shock or vibration during acceleration 	for M20A-FXS HEV Model: INFO for M20A-FXS PHEV Model: INFO

*: Even when not replacing the part, it is necessary to perform the specified necessary procedures after installation.

*1: Also necessary after performing a tire rotation.

*2: It is not necessary to perform this procedure if the tire pressure warning valve and transmitters are installed to the same location.

*3: The vehicle height changes because of tire replacement.

*4: If matchmarks were not placed when removing parts related to steering operation, perform end position initial setting.

REPLACED PART OR PERFORMED PROCEDURE	NECESSARY PROCEDURE	EFFECT/INOPERATIVE FUNCTION WHEN NECESSARY PROCEDURE NOT PERFORMED	LINK
for PHEV Model: Replacement of service plug grip	High voltage fuse accumulated load history reset	DTCs are stored	INFO
Replacement of hybrid vehicle transaxle assembly	<ul style="list-style-type: none"> • Resolver learning • Initialize resolver 	<ul style="list-style-type: none"> • DTCs are stored • Slight vibration at a vehicle speed of 5 km/h (3 mph) or less • Shock or vibration during acceleration 	for M20A-FXS HEV Model: INFO for M20A-FXS PHEV Model: INFO
Suspension parts	Rear television camera assembly optical axis (Back camera position setting)	Parking Assist Monitor System	INFO
	Parking assist ECU initialization	Panoramic View Monitor System	INFO
		Advanced Park	INFO
Tires	<ul style="list-style-type: none"> • Initialization*1*2 • Tire Position Identification*1*2 	Tire Pressure Warning System	Refer to Procedures Necessary When Replacing Parts (for Tire Pressure Warning System) table below INFO
	Rear television camera assembly optical axis (Back camera position setting)	Parking Assist Monitor System	INFO
	Parking assist ECU initialization*3	Panoramic View Monitor System	INFO
		Advanced Park	INFO
	No. 2 steering intermediate shaft assembly*4	End position initial setting	-

*: Even when not replacing the part, it is necessary to perform the specified necessary procedures after installation.

*1: Also necessary after performing a tire rotation.

*2: It is not necessary to perform this procedure if the tire pressure warning valve and transmitters are installed to the same location.

*3: The vehicle height changes because of tire replacement.

*4: If matchmarks were not placed when removing parts related to steering operation, perform end position initial setting.

REPLACED PART OR PERFORMED PROCEDURE	NECESSARY PROCEDURE	EFFECT/INOPERATIVE FUNCTION WHEN NECESSARY PROCEDURE NOT PERFORMED	LINK
Replacement of front bumper assembly*	Front television camera view adjustment	Panoramic View Monitor System	INFO
		Advanced Park	INFO
Front wheel alignment adjustment	Perform "Calibration"	<ul style="list-style-type: none"> • DTCs are stored • ABS warning light illuminates • Brake system warning light (yellow indicator) illuminates • Slip indicator light illuminates • Electronically controlled brake system disabled or malfunctions 	INFO

*: Even when not replacing the part, it is necessary to perform the specified necessary procedures after installation.

*1: Also necessary after performing a tire rotation.

*2: It is not necessary to perform this procedure if the tire pressure warning valve and transmitters are installed to the same location.

*3: The vehicle height changes because of tire replacement.

*4: If matchmarks were not placed when removing parts related to steering operation, perform end position initial setting.

HINT:

When the cable is disconnected / reconnected to the auxiliary battery terminal, systems temporarily stop operating. However, each system has a function that completes learning the first time the system is used.

Items for which learning is completed by driving the vehicle

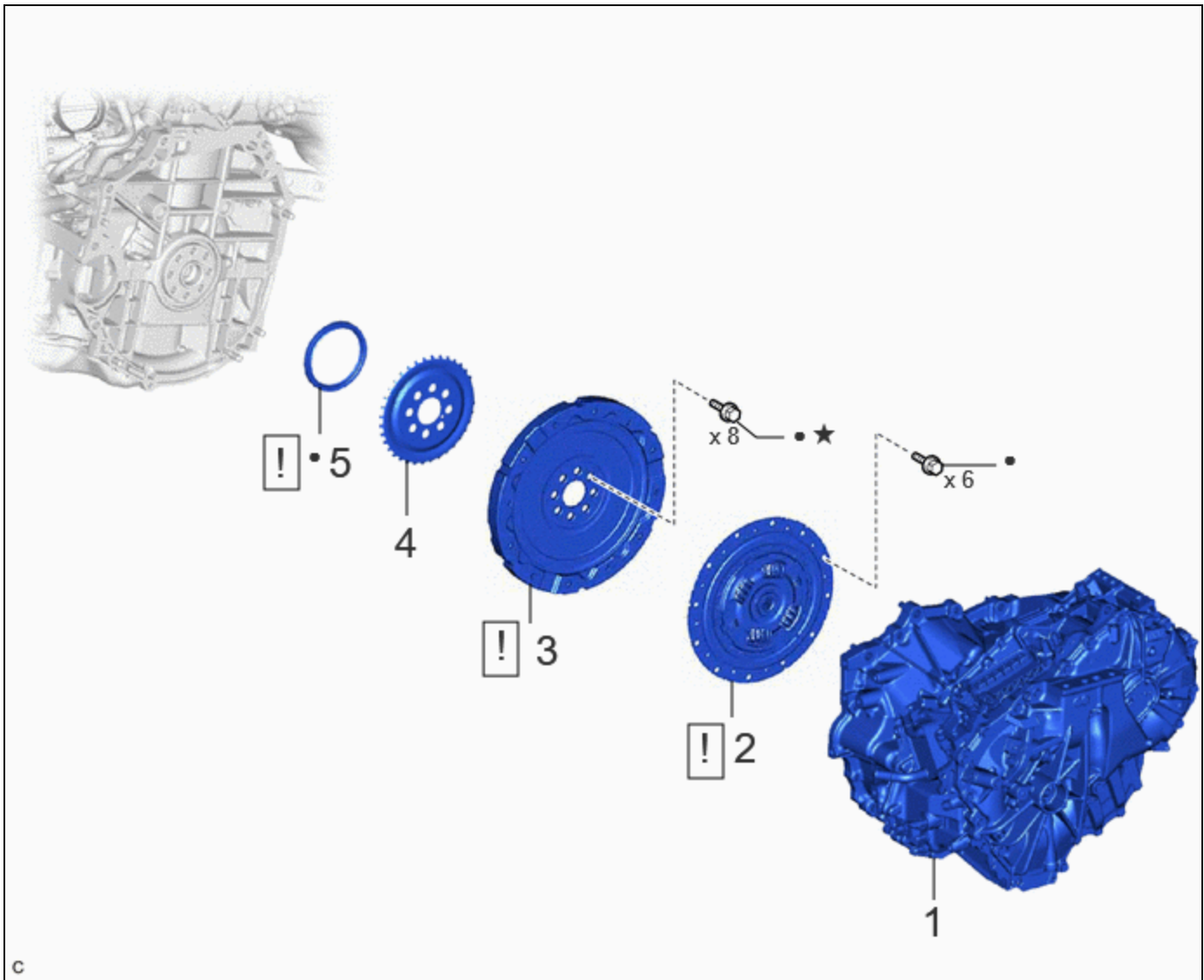
EFFECT/INOPERATIVE FUNCTION WHEN NECESSARY PROCEDURE NOT PERFORMED	NECESSARY PROCEDURES	LINK
Front Camera System	Drive the vehicle straight ahead at 35 km/h (22 mph) or more for 5 seconds or more.	INFO

Items for which learning is completed by operating the vehicle normally

EFFECT/INOPERATIVE FUNCTION WHEN NECESSARY PROCEDURE NOT PERFORMED	NECESSARY PROCEDURES	LINK
Power Door Lock Control System*1 <ul style="list-style-type: none"> Back door opener 	Perform door unlock operation with door control switch or electrical key transmitter sub-assembly switch.	INFO
Power Back Door System*2	Reset back door close position	INFO
Air Conditioning System	<p>for HEV Model:</p> <p>After the ignition switch is turned to ON, the servo motor standard position is recognized.</p> <p>for PHEV Model:</p> <p>After the ignition switch is turned to ON, the servo motor and cooler expansion valve standard position is recognized.</p>	-
<p>*1: w/o Power Back Door System</p> <p>*2: w/ Power Back Door System</p>		

CAUTION / NOTICE / HINT

COMPONENTS (REMOVAL)



	PROCEDURE	PART NAME CODE			
1	HYBRID VEHICLE TRANSAXLE ASSEMBLY	30900	-	-	-
2	TRANSMISSION INPUT DAMPER ASSEMBLY	31270	INFO	-	-
3	FLYWHEEL SUB-ASSEMBLY	13405	INFO	-	-
4	NO. 1 CRANKSHAFT POSITION SENSOR PLATE	19315	-	-	-
5	REAR ENGINE OIL SEAL	11401L	INFO	-	-

•	Non-reusable part	★	Precoated part
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PROCEDURE

1. REMOVE HYBRID VEHICLE TRANSAXLE ASSEMBLY

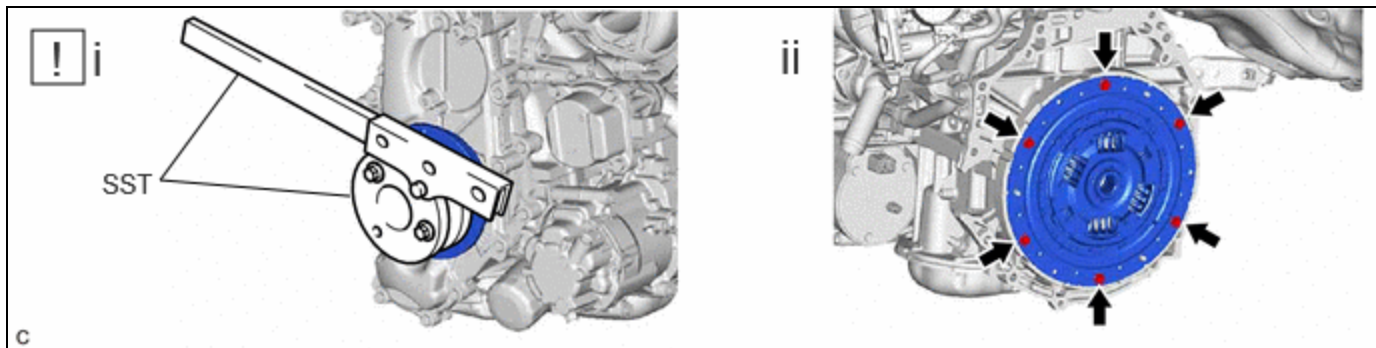
Click here [INFO](#)

2. REMOVE TRANSMISSION INPUT DAMPER ASSEMBLY



NOTICE:

- Using height adjustment attachments and plate lift attachments, keep the engine assembly level.
- To prevent the oil pan sub-assembly from deforming, do not place any attachments under the oil pan sub-assembly of the engine assembly.
- Using an engine sling device and engine lift, secure the engine assembly before servicing.



(1) Using SST, hold the crankshaft pulley assembly.

SST: 09213-54015

SST: 09330-00021

(2) Remove the 6 bolts and transmission input damper assembly from the flywheel sub-assembly.

3. REMOVE FLYWHEEL SUB-ASSEMBLY



(1) Using SST, hold the crankshaft pulley assembly.

SST: 09213-54015

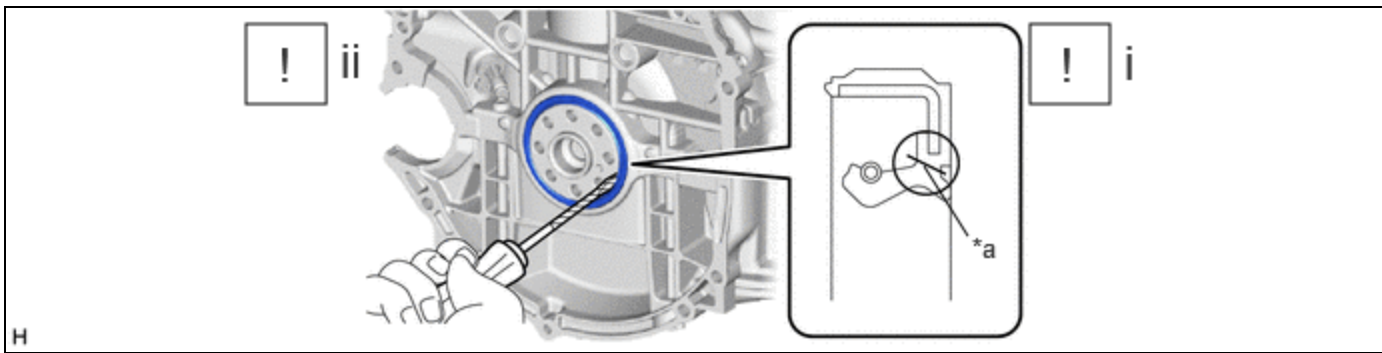
SST: 09330-00021

(2) Remove the 8 bolts and flywheel sub-assembly from the crankshaft.

4. REMOVE NO. 1 CRANKSHAFT POSITION SENSOR PLATE



5. REMOVE REAR ENGINE OIL SEAL



*a	Cut Position	-	-
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(1) Using a knife, cut off the lip of the rear engine oil seal.

(2) Using a screwdriver, pry out the rear engine oil seal.

NOTICE:

Do not damage the surface of the rear engine oil seal press fit hole or the crankshaft.

HINT:

Tape the screwdriver tip before use.

