

December 9, 2014

ATB 00317 (1412)

Excessive Vibration Between 30 and 65 MPH

AFFECTED VEHICLES

Year	Model	Trim	VIN Range
2012	Pilot	2WD	5FNYP3H..CB029004 and later
2012	Pilot	4WD	5FNYP4H..CB058214 and later
2013–15	Pilot	ALL	ALL

NOTE: For 2012 models, two different PCMs, Keihin and Continental, were used. A software update is available for the vehicles equipped with Keihin PCMs, and the software update for the Continental PCMs will be available in mid to late January 2015. Once the software is available, this bulletin will be revised to include those vehicles.

SYMPTOM

Under certain driving conditions, there is excessive vibration between 30 and 65 mph.

POSSIBLE CAUSES

For 2WD and 4WD vehicles, the calibration VCM operation combined with the action of the lock up torque converter creates excessive vibration.

Additionally for 4WD vehicles, the propeller shaft's center support bearing bushing material may not effectively dampen vibrations in cold (below 32°F) temperatures.

CORRECTIVE ACTION

Do the inspection procedure, and based on your results, you may need to update the PCM. For 4WD vehicles, you may also need to replace the propeller shaft.

SOFTWARE INFORMATION

NOTE: Unnecessary or incorrect repairs resulting from a failure to update the HDS or MVCI are not covered under warranty.

MVCI Control Module (CM) Update:

Application Version 3.001.040 or later

Database update 12-NOV-2014 or later

HDS Software Version:

3.015.023 or later

Before beginning the repair, make sure that both the HDS and MVCI are updated as listed above.

Do only the update listed in this service bulletin.

Check that the MVCI indicates the applicable program ID listed below (or a later program ID) as the **Available Update** when the update begins.

If the MVCI displays **This vehicle does not need an update at this time** during the update, the software for this service bulletin is already installed.

For more information about updating the HDS, the MVCI, and vehicle systems, refer to Service Bulletin 01-023, *Updating Control Units/Modules*.

CUSTOMER INFORMATION: The information in this bulletin is intended for use only by skilled technicians who have the proper tools, equipment, and training to correctly and safely maintain your vehicle. These procedures should not be attempted by "do-it-yourselfers," and you should not assume this bulletin applies to your vehicle, or that your vehicle has the condition described. To determine whether this information applies, contact an authorized Honda automobile dealer.

Year/Model	PGM-FI Program ID (or later)	PGM-FI Program P/N (or later)	A/T Program ID (or later)	A/T Program P/N (or later)	System to Update
2012 Pilot 2WD	N0A070	37805-RN0-A07	N0A030	37806-RNO-A03	PGM-FI and A/T
2012 Pilot 4WD	N0A970	37805-RN0-A97	N0A930	37806-RNO-A93	PGM-FI and A/T
2013 Pilot 2WD	N0M030	37805-RN0-M03	N0A030	37806-RNO-A03	PGM-FI and A/T
2013 Pilot 4WD	N0M930	37805-RN0-M93	N0A930	37806-RNO-A93	PGM-FI and A/T
2014 Pilot 2WD	N0M030	37805-RN0-M03	N0A030	37806-RNO-A03	PGM-FI and A/T
2014 Pilot 4WD	N0M930	37805-RN0-M93	N0A930	37806-RNO-A93	PGM-FI and A/T
2015 Pilot 2WD	N0M120	37805-RN0-M12	N0A030	37806-RNO-A03	PGM-FI and A/T
2015 Pilot 4WD	N0M820	37805-RN0-M82	N0A930	37806-RNO-A93	PGM-FI and A/T

*Keihin PCMs contain two chips that require you to update both the PGM-FI and A/T system software. A software update for Continental PCMs will be available in mid to late January 2015.

For more information about Keihin and Continental PCMs and how they're different, refer to the *ServiceNews* article *New PCM Supplier for Odysseys and Pilots*.

PARTS INFORMATION

Part Name	Part Number	Quantity
Bolt Washer	90382-SZA-003	2
Flange Bolt (10 mm x 25 mm)	90113-S3V-A00	8
Propeller Shaft (for 4WD)	40100-SZA-S01	1

WARRANTY CLAIM INFORMATION

The normal warranty applies.

Software Update Only

Operation Number	Description	Flat Rate Time	Template ID	Failed Part Number
2200A0	REPAIR PROCEDURE A: For 2WD vehicles: Update the PCM (includes test-drive and diagnosis).	0.8 hour	14-078A	37820-RN0-A95
	REPAIR PROCEDURE B: For 4WD vehicles: Update the PCM (includes test-drive and diagnosis).	0.8 hour	14-078B	37820-RN0-A95

Defect Code: 08001

Symptom Code: 04201

Skill Level: Repair Technician

Software Update and Propeller Shaft Replacement

Operation Number	Description	Flat Rate Time	Template ID	Failed Part Number
2200A0	REPAIR PROCEDURE B: For 4WD vehicles: Update the PCM (includes test-drive and diagnosis).	0.8 hour	14-078B	37820-RN0-A95
2191A8	REPAIR PROCEDURE C: For 4WD vehicles: Replace the propeller shaft.	0.4 hour	14-078C	40100-SZA-A02

Defect Code: 08001

Symptom Code: 04201

Skill Level: Repair Technician

Propeller Shaft Replacement Only

Operation Number	Description	Flat Rate Time	Template ID	Failed Part Number
2191A8	REPAIR PROCEDURE C: For 4WD vehicles: Replace the propeller shaft.	0.4 hour	14-078C	40100-SZA-A02

Defect Code: 08001

Symptom Code: 04201

Skill Level: Repair Technician

INSPECTION PROCEDURE

Customer Questions

Have the service advisor ask the customer the following questions:

1. What is the outside temperature when the vibration occurs?

Above 32 °F

Below 32 °F

Temperature has no effect on vibration

2. At what speed does the vibration occur?

Low speed (up to 30 MPH)

Medium speed (30-65 MPH)

High speed (above 65 MPH)

3. What driving condition is the vibration occurring?

Light or steady throttle

Hard Acceleration

Light braking

Moderate or hard braking

Test-Drive the vehicle

1. Test-drive the vehicle and confirm the customer information using the HDS; set the cruise control Cancel button in the perimeter setting to trigger the snapshot. Then, set up the HDS to take a PGM-FI snapshot 15 seconds before and after the trigger.
2. Drive the vehicle in the speed range where the customer feels the vibration. Once you feel the vibration, keep the throttle and speed steady and press the cruise control Cancel button once to trigger the snapshot.
3. Save the snapshot.
4. Repeat steps 1 through 3 a second time before going to step 5.
5. Continue driving to create the vibration again. Once you feel the vibration, press the cruise control Cancel button again to trigger the snapshot, then lift off the throttle for 2 seconds, and then resume the throttle.
 - If the vibration does not go away, **this bulletin does not apply**. Continue with normal troubleshooting.
 - If the vibration goes away, continue to **Results**.

Results

To review the snap shots, select the following signals:

- Valve Pause
- Engine RPM
- Main Shaft
- Vehicle Speed

Set the cylinder (scale to 10).

NOTE: Setting the scaling parameters to the lowest levels will make interpreting the data easier.

This bulletin does not apply if any of the following occurred; continue with normal troubleshooting:

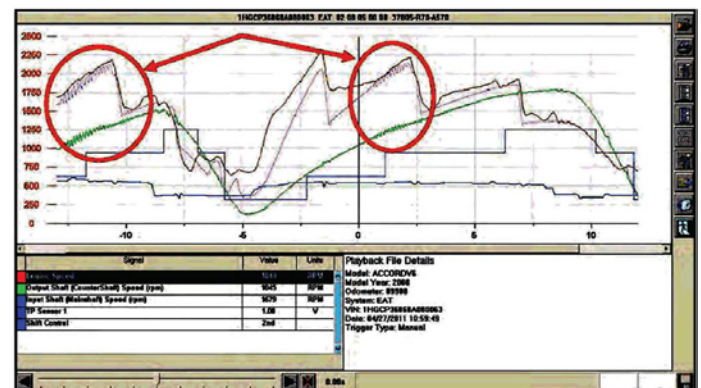
- The customer indicated the vibration occurred under braking or hard acceleration.
- The engine is not in valve pause when the vibration occurs.
- The snapshots 1 and 2 indicate fluctuations in the main shaft but the engine speed is steady – review the job aid *Torque Converter Clutch Shudder and Vibration*.

NORMAL TORQUE CONVERTER



POSSIBLE TORQUE CONVERTER ISSUES

Refer to the Job Aid.



Do REPAIR PROCEDURE A (2WD) if:

- The vibration occurred between 30 and 65 mph; review the snapshots 1 and 2 to see if the snapshot shows the engine in valve pause and the main shaft and rpms are steady at the time of the vibration. Also check snapshot 3 to confirm that the engine was in valve pause once the vibration occurred and went away when you released the throttle.
- The vibration occurred between 30 and 65 mph; the vibration occurred during light or constant throttle.

Do REPAIR PROCEDURE B (4WD) if:

- The vibration occurred between 30 and 65 mph; review the snapshots 1 and 2 to see if the snapshot shows the engine in valve pause and the main shaft and rpms are steady at the time of the vibration. Also check snapshot 3 to confirm that the engine was in valve pause once the vibration occurred and went away when you released the throttle.
- The vibration occurred between 30 and 65 mph; the vibration occurred during light or constant throttle.

Do REPAIR PROCEDURE C (4WD) if:

- The customer indicated that the vibration occurs when the temperature was 32 °F or colder, you will need to replace the propeller shaft.

REPAIR PROCEDURE A (2WD)

Update the PGM-FI and the A/T software. Refer to Service Bulletin 01-023, *Updating Control Units/Modules*.

REPAIR PROCEDURE B (4WD)

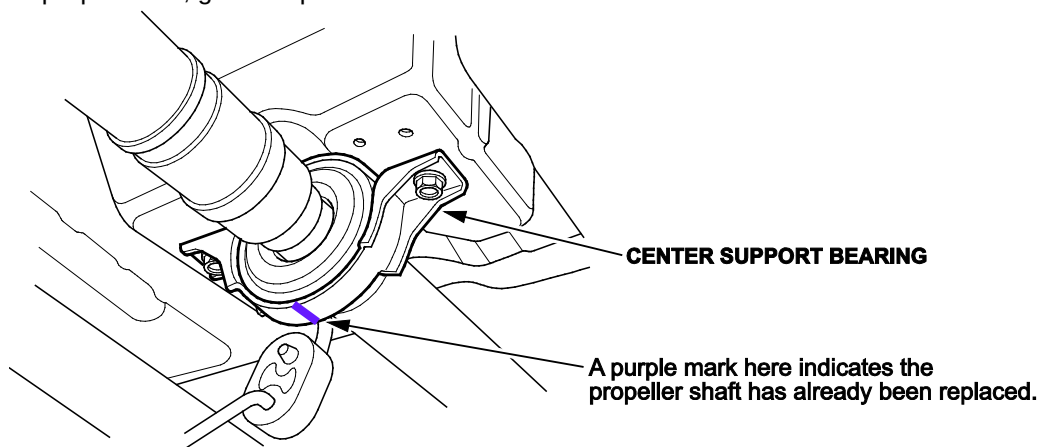
Update the PGM-FI or the A/T software. Refer to Service Bulletin 01-023, *Updating Control Units/Modules*.

- If your inspection results indicated to replace the propeller shaft, go to REPAIR PROCEDURE C.
- If your inspection results **did not indicate replacing the propeller shaft**, the vehicle is repaired.

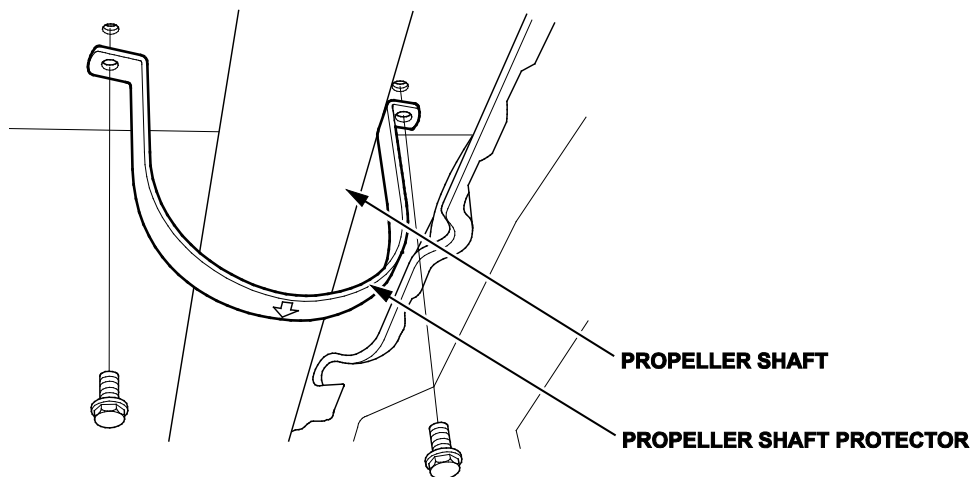
REPAIR PROCEDURE C (4WD)

NOTE: Make sure you update the A/T and PGM-FI software or check that the software has been updated before replacing the propeller shaft.

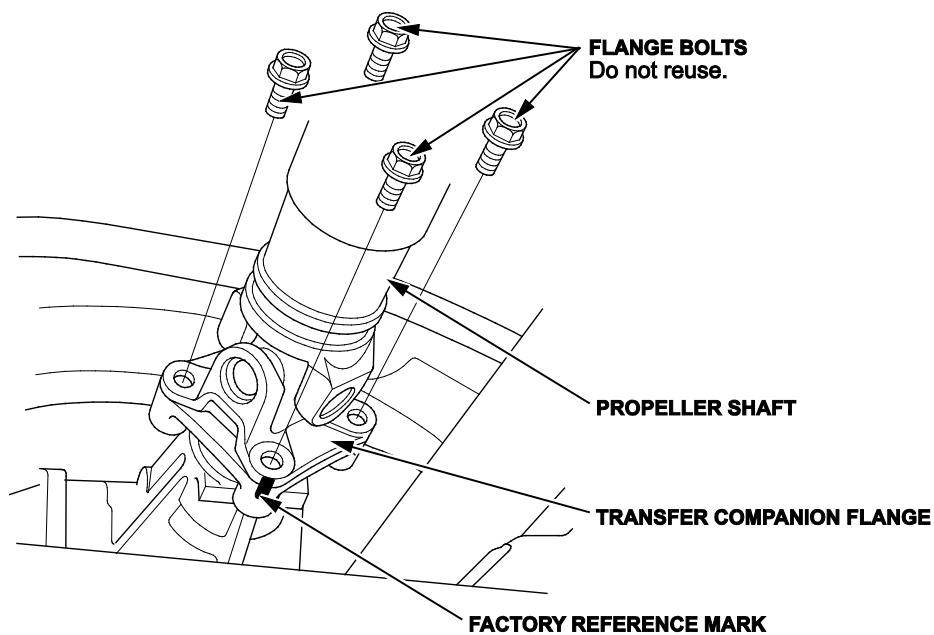
1. Raise and support the vehicle.
2. Check that the propeller shaft has not already been replaced. Check if there is a purple mark on the center support bearing as shown below.
 - If there is a purple mark on the center support bearing, the propeller shaft has already been replaced with a new part. Do not replace the propeller shaft again. If there is still a vibration, this bulletin does not apply. Continue with normal troubleshooting.
 - If there is no purple mark, go to step 3.



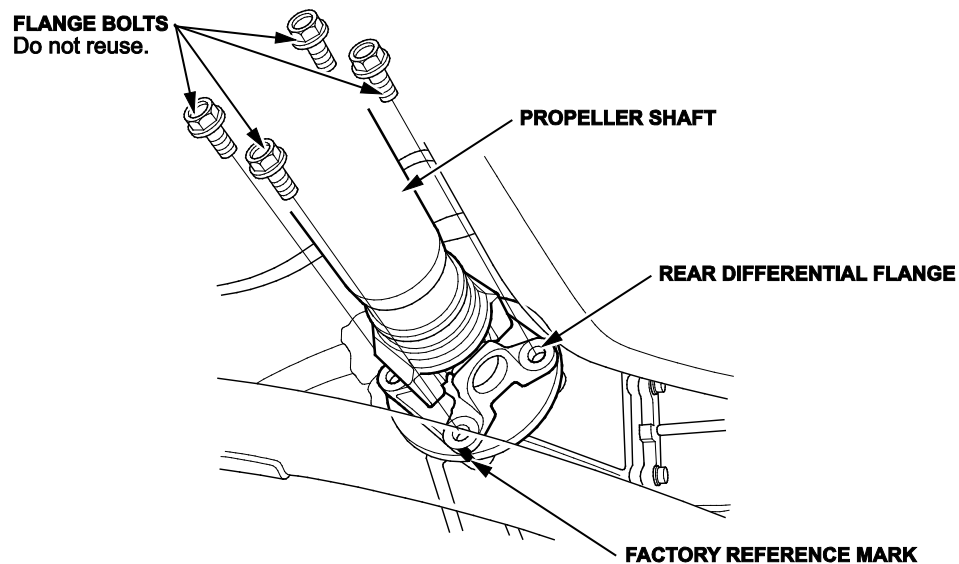
3. Remove the propeller shaft protector.



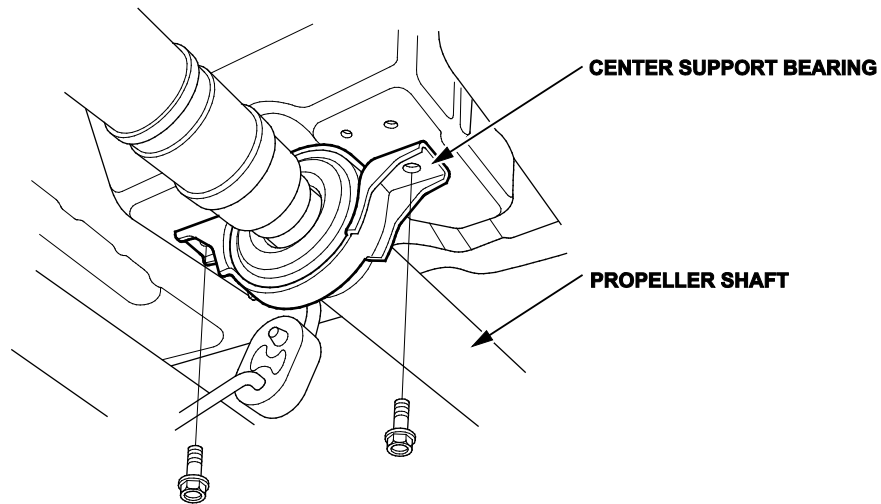
4. Remove the flange bolts from the transfer companion flange.



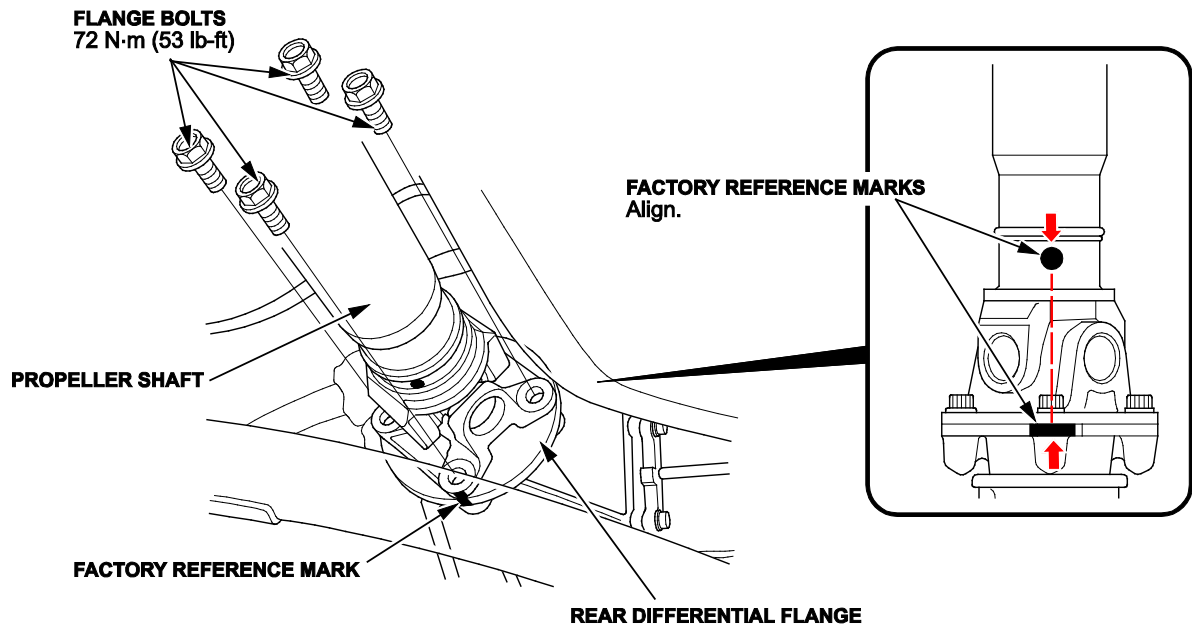
5. Remove the flange bolts from the rear differential flange.



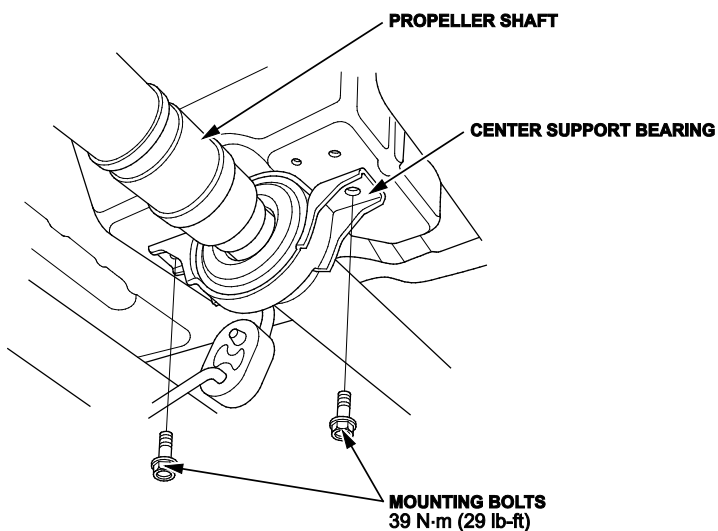
6. Remove the center support bearing mounting bolts.



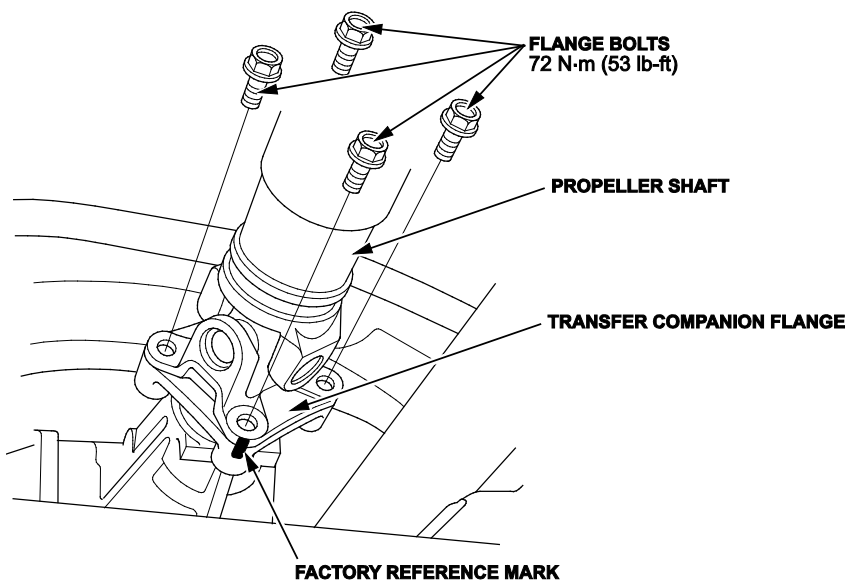
7. Install the new propeller shaft by aligning the factory reference marks on the No. 2 propeller shaft to the rear differential companion flange as shown below. Then install new flange bolts and torque them to **72 N·m (53 lb-ft)**.



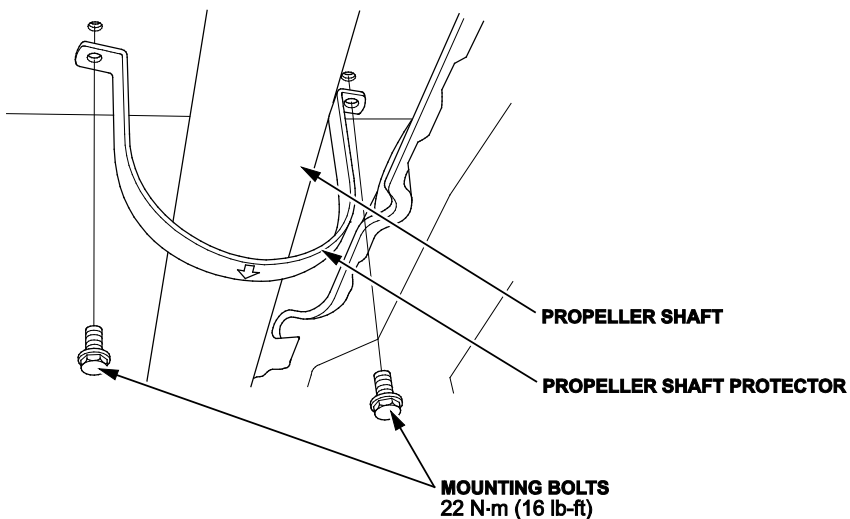
8. Install the new center support bearing mounting bolts and torque them to **39 N·m (29 lb-ft)**.



9. Set the No. 1 propeller shaft to the transfer companion flange. Then install new flange bolts and torque them to **72 N·m (53 lb-ft)**.



10. Reinstall the propeller shaft protector.



END