

Circulate to:     Sales Manager     Accounting     Service Manager     Technician     Parts Manager

## Mercury Diesel 2.8L/4.2L D-Tronic Revised Torque Procedures

### Models Affected

Model	Serial Number Range
Mercury Diesel 2.8L D-Tronic	88005001–88005518 88010000–88012420 0K144109–0M999999
Mercury Diesel 4.2L D-Tronic	88040001–88080000 0K144114–0M999999 0L667439–0M999999

### Scope

Worldwide

### Situation

Mercury MerCruiser engine service manual 22, part number 860074, Mercury MerCruiser engine service manual 22 (revision 1), part number 860074-1, and Mercury MerCruiser engine service manual 22 supplement, part number 860074020, contain outdated installation and tightening procedures for the front pulley nut and for the connecting rod end cap.

### Correction

The following procedures contain revised torque specifications and tightening procedures for the front pulley nut and for the connecting rod end cap. Refer to the appropriate service manual for the full assembly procedure, but use the specifications and tightening procedures listed here.

### 2.8L/4.2L D-Tronic Front Pulley Torque

The steps in the following procedures replace:

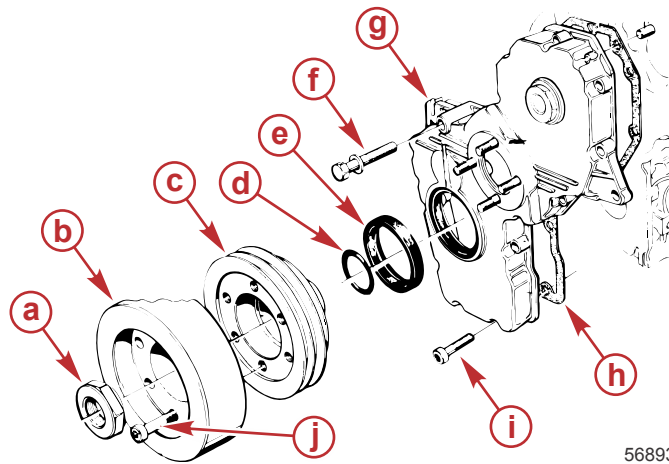
- The pulley nut torque specification listed in step 4 on page 3A-46 of Service Manual 22, part number 860074
- Steps 6 and 7 on page 3A-79 of Service Manual 22 (revision 1), part number 860074-1
- Step 9 and the pulley nut torque specification listed in step 10 on page 3A-40 of Service Manual 22 Supplement, part number 860074020

Follow the applicable procedure for your model.

THE INFORMATION IN THIS DOCUMENT IS CONFIDENTIAL AND PROTECTED BY COPYRIGHT AND IS THE PROPERTY OF MERCURY MARINE.

This document is provided for the sole and exclusive use of the original recipient as prescribed by Mercury Marine and may not be distributed or copied, digitally or otherwise, without the prior written consent of Mercury Marine.

Refer to item "a" in the following illustration.



- a - Pulley nut
- NOTE:** The pulley nut has left-hand threads.
- b - Vibration damper
- c - Crankshaft pulley
- d - Crankshaft O-ring seal
- e - Timing cover seal
- f - M8 screw with serrated, cupped washer
- g - Timing cover
- h - Gasket
- i - M6 screw
- j - M10 screw

56893

### 2.8L 165 HP Models

1. Apply Loctite® 270™ to the threads of the pulley nut.
2. Tighten the left-hand thread pulley nut to the specified torque.

Description	Nm	lb-in.	lb-ft
Pulley nut (left-hand thread)	245	–	181

### 2.8L 170/200 HP Models

1. Apply Molykote® G-Rapid Plus Paste to the threads of the pulley nut and to the face of the pulley nut that contacts the crankshaft pulley.
2. Tighten the left-hand thread pulley nut to the first specified torque.

Description		Nm	lb-in.	lb-ft
Pulley nut (left-hand thread)	<b>First</b>	400	–	295

3. Loosen the pulley nut.
4. Tighten the pulley nut to the final specified torque.

Description		Nm	lb-in.	lb-ft
Pulley nut (left-hand thread)	<b>Final</b>	600	–	443

### 4.2L 250/270/300/320 HP Models

1. Apply Molykote® G-Rapid Plus Paste to the threads of the pulley nut and to the face of the pulley nut that contacts the crankshaft pulley.
2. Tighten the left-hand thread pulley nut to the first specified torque.

Description		Nm	lb-in.	lb-ft
Pulley nut (left-hand thread)	<b>First</b>	274	–	202

3. Loosen the pulley nut by turning it 90°.
4. Tighten the pulley nut to the final specified torque.

Description		Nm	lb-in.	lb-ft
Pulley nut (left-hand thread)	<b>Final</b>	274	–	202

THE INFORMATION IN THIS DOCUMENT IS CONFIDENTIAL AND PROTECTED BY COPYRIGHT AND IS THE PROPERTY OF MERCURY MARINE.

This document is provided for the sole and exclusive use of the original recipient as prescribed by Mercury Marine and may not be distributed or copied, digitally or otherwise, without the prior written consent of Mercury Marine.


## 2.8L/4.2L D-Tronic Connecting Rod End Cap Torque

The following steps replace:


- Step 9 on page 3A-70 of Service Manual 22, part number 860074
- Step 9 on page 3A-115 of Service Manual 22 (revision 1), part number 860074-1
- Steps 9 and 10 on page 3A-59 of Service Manual 22 Supplement, part number 860074020

**IMPORTANT: New connecting rod screw threads and the screw head do not generally require lubrication. An antifriction product should have been applied by the factory. If the screw threads are not stretched, and the top or bottom of the bolt head does not show damage, the connecting rod screws may be reused. When reusing a connecting rod screw, lubricate the threads and bottom of the screw head with the specified lubricant.**

1. Lubricate the connecting rod screw threads and the underside of the screw head, unless the screws are being replaced with new screws.

Tube Ref No.	Description	Where Used	Part No.
 4	Needle Bearing Assembly Lubricant	Connecting rod screw threads and the underside of the screw head	8M0071836

2. Apply lubricant to the crankshaft journal and connecting rod bearing surfaces.

Tube Ref No.	Description	Where Used	Part No.
 80	SAE Engine Oil 30W	Connecting rod crankshaft journal and rod bearing surfaces	Obtain Locally

3. Install the connecting rod cap.
4. Install and tighten the connecting rod screws to the specified torque.

Description		Nm	lb-in.	lb-ft
Connecting rod screw	<b>First</b>	10	89	–
	<b>Second</b>	30	–	22
	<b>Final (Angle Torque)</b>	+ 40°		

5. Verify that proper torque was achieved by testing the torque setting of each connecting rod screw to be at least as specified in the following table. Do not apply more than this specified amount during the verification.

Description	Nm	lb-in.	lb-ft
Connecting rod screw verification torque	88	–	65

THE INFORMATION IN THIS DOCUMENT IS CONFIDENTIAL AND PROTECTED BY COPYRIGHT AND IS THE PROPERTY OF MERCURY MARINE.

This document is provided for the sole and exclusive use of the original recipient as prescribed by Mercury Marine and may not be distributed or copied, digitally or otherwise, without the prior written consent of Mercury Marine.