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SMART-O® Oil Drain Plug Torque Specifications

A simplified and unified torque system for faster installation of oil drain plugs.

SmarTorq™ offers the world's first unified torque system to simplify and speed up the installation process for oil drain plugs. *

The SmarTorq system establishes uniform torque specifications of 18 ft lbs (24.4 Nm) for gasoline powered cars & light trucks and 27 ft lbs (36.6 Nm) for diesels. These values, combined with SMART-O® plug's properties as a “non-metallic, friction locking-type” of torque prevailing mechanical seal, are recommended to reduce risks for drain plug leakage and oil out events (sudden loss of engine oil due to loss of plug). The below values were established during advanced testing and are only to be applied for use with SMART-O® oil drain plugs.

SmarTorq™ recommended torque setting for SMART-O® oil drain plugs*

For all passenger cars, vans, light trucks using either aluminum or steel oil pans:

Gasoline (petrol) Engines		
Ft lbs.	In lbs.	Nm
18	216	24.4

Diesel Engines		
Ft lbs.	In lbs.	Nm
27	324	36.6



*SmarTorq is only to be used in conjunction with SMART-O® oil drain plugs. Do not torque SMART-O plugs below 6 ft lbs or above 45 ft lbs.

*It is not recommended that a SMART-O® be used when a Helicoil is present, as the Helicoil may have a sharp edge which can tear the O-ring.

*Due to the SMART-O plugs unique sealing mechanism and aluminum crush washer it is important that the SmarTorq™ system be used in all instances regardless of the OEM advertised torque specification.

SMART-O® plugs were vibration and leak tested to verify that one uniform torque specification could be applied to a wider range of vehicles. Previous testing has shown the plug's expanding o-ring design provides increased sealing and higher prevailing torques when compared to corresponding OEM or other aftermarket oil drain plugs.

It is not recommended to use OEM torque values when installing a SMART-O Plug

Torque specs for OEM and regular aftermarket plugs are usually reached using engineering principles that take into account material, length, seal/washer, flange etc. As we conducted testing this unified torque system, we took into account that a small number of engines call for very low torque to be applied on the OEM plug. This was found to be intended for the washer/seal rather than the actual materials of the oil pan and drain plug. There are examples whereby the OEM plug has a flange with a small o-ring located in a groove. OEM torque specs can be as low as 6 Lb. Ft. for such plugs, however SMART-O plugs do not use this sealing system and require a different and higher torque in order to best seat the aluminum crush washer.



Example of oil drain plug requiring low torque to be applied.

Attention:

SMART-O does not offer a replacement plug for the 2011 – 2015 6.7L Ford Power Stroke Diesel. This plug is made of a yellow plastic material.

SMART-O does not offer a direct replacement plug for the Smart For-Two engine which incorporates a small oil screen.

Installation instructions:

1. Remove the OEM oil drain plug and discard in accordance with your shops environmental policies & procedures.
2. Drain all the used motor oil from the engine until the vehicles oil pan threads can be examined.
3. Examine the oil pans threaded oil drain port for damaged or slivered threads, or a damaged sealing surface and make sure they are in good condition. Do not install SMART-O if threads are damaged or have a Helicoil thread insert.
4. Use the online or printed SMART-O[®] vehicle-plug matchup reference guides to help you choose the correct SMART-O[®] Plug for the vehicle being serviced by matching year, make, model and engine size with the correct part number in the guide.
5. Once the correct plug is selected use a thread gauge to match the diameter and thread pitch of the new SMART-O[®] -Plug with the dimensions of the OEM plug.
Make sure and measure the length, of the plug, and the flange to ensure the correct plug is being used. Note the length and flange may differ slightly due to SMART-O[®] plugs being consolidated to make one size fit many vehicles. It is up to the technician to ensure a proper fit, and seal.
6. Make sure and inspect the condition of the O-ring, and washer on the SMART-O[®] plug to ensure they are in new condition and can be used.
7. Use your finger apply a small amount of motor oil to the threads and O-ring, to ensure friction is reduced for installation of the SMART-O[®] Plug. Then screw the new SMART-O[®] plug and washer into the drain plug port, making sure it fits. When the O-ring engages the threads it is normal to feel resistance which makes it harder to turn the plug by hand.
8. Use a torque wrench and tighten the SMART-O[®] plug to the specified SmarTorq for engine type being serviced.
9. Complete the oil change by adding the correct amount of oil, and changing the oil filter if applicable.
10. Start the engine and allow to idle until the oil pressure reaches its operating range. Raise the vehicle if necessary and inspect for leaks. If a leak is found, shut the engine off immediately and identify the source of the oil leak and repair before proceeding.