



22-7101

20 July 2022

GENERAL SERVICE BULLETIN

Various Vehicles - Engine Oil Maintenance Inspection

This bulletin supersedes G0000149.

Summary

This article supersedes GSB G0000149 to update the vehicle model years affected and Service Information.

This bulletin provides information and sample images of engine condition relating to proper and improper engine oil maintenance to determine if maintenance records should be reviewed.

Topics covered include:

- Proper Maintenance Examples
- Marginal Maintenance Examples
- Improper Maintenance Examples
- Oil Filter Maintenance Examples
- Other Resources

Service Information

Always refer to the current Warranty and Policy Manual whenever a question of warranty coverage is encountered and when initiating warranty cancellation on a vehicle or component.

Vehicle owners should be referred to their vehicle's Owner's Manual for scheduled maintenance information on their vehicle.

Proper Oil Change Maintenance

Proper maintenance performed at the recommended maintenance intervals

High engine idle hours may require oil change intervals more frequent.

- Oil is clean and not thick.
- No sludge accumulation on the valvetrain. (Figure 1-2)

Figure 1

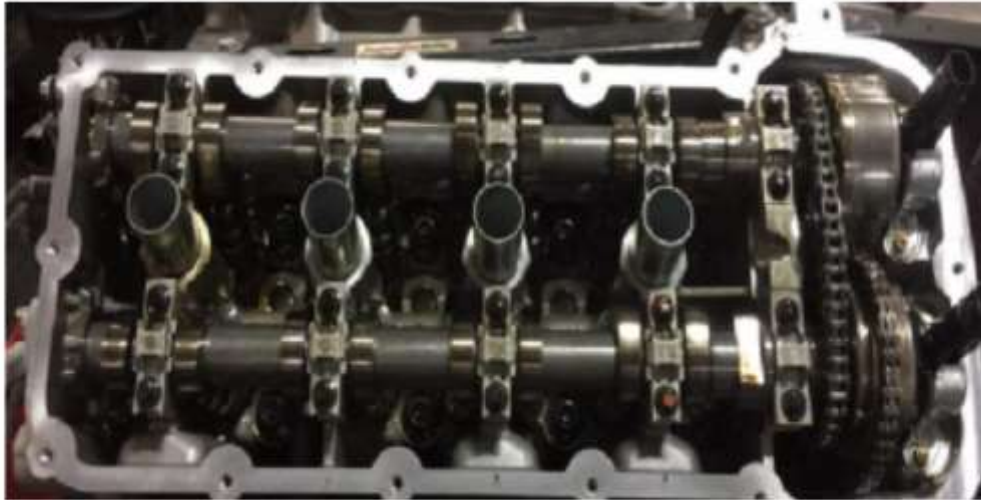
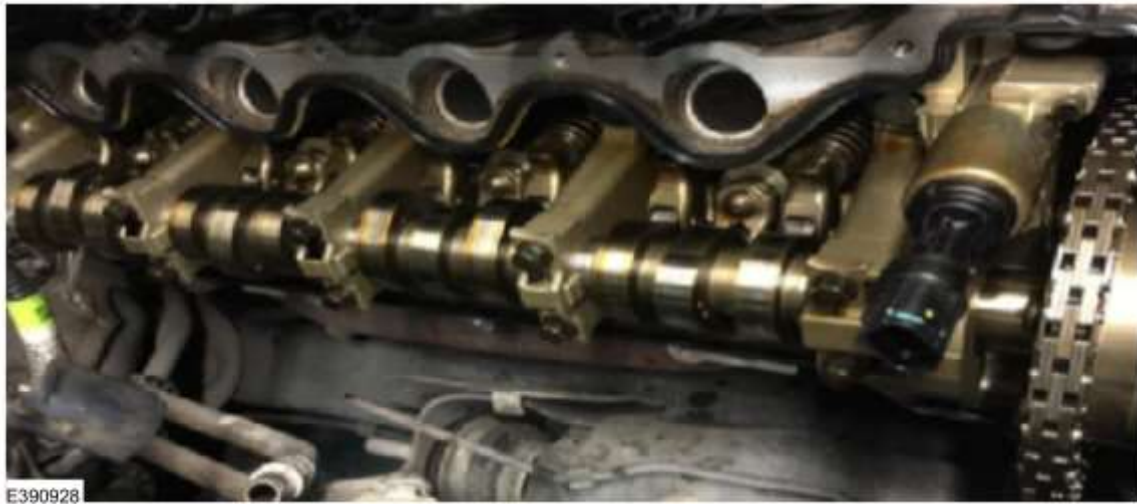


Figure 2



- No build up of sludge on the underside of the valve cover. (Figure 3)

Figure 3



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Marginal Maintenance

Marginal maintenance performed just outside the recommended maintenance intervals

If failure occurred, the failure could be warrantable. Maintenance records should be evaluated prior to repairs. Consult the Warranty and Policy Manual prior to warranty cancellation.

No sludge accumulation on the valvetrain. (Figure 4)

Figure 4



Oil is starting to varnish. The oil change intervals should be evaluated for timeliness.

The level of varnish in the engine can be scrapped with a fingernail. (Figure 5)

Figure 5



Example Of A Ford Engine With 140,000 Miles Where Regular Maintenance Was Performed With Motorcraft Oil And Filters (Figure 6)

Figure 6



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Example Of Ford Engine With 27,304 Miles With No Maintenance History Available And Sludge On The Valvetrain (Figure 7)

Any lubrication-related condition should not be covered by warranty or extended service plan (ESP). Consult the Warranty and Policy Manual prior to warranty cancellation.

Figure 7



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Improper Oil Change Maintenance - No Record Of Service

3.5L EcoBoost with 15,899 miles

No maintenance history.

The following failures are not warrantable. Any lubrication-related condition should not be covered by warranty or ESP. Consult the Warranty and Policy Manual prior to warranty cancellation.

Heavy oil sludge build-up on the cam caps, head and variable camshaft timing (VCT) solenoids from lack of oil changes. (Figure 8)

Figure 8



Heavy oil sludge build-up on the underside of the valve cover. (Figure 9)



Sludge accumulation on the valvetrain and oil pick up tube. Oil is thick and broken down, show significant signs of lubrication restriction from sludge accumulation. (Figure 10)

Figure 10



The bearing shown has significant signs of lubrication restriction from sludge accumulation. (Figure 11)

Figure 11



Improper Maintenance - Insufficient Records And Sludge

Any lubrication related condition should not be covered by warranty or ESP.

Positive crankcase ventilation (PCV) system issues may cause oil sludge if left uncorrected.

F-250, 6.8L 3V, 58,251 miles

3 oil changes performed

Heavy oil sludge on the valvetrain. (Figure 12)

Figure 12



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Heavy oil sludge on the underside of the valve cover. (Figure 13)

Figure 13



Oil Starvation/Lack Of Maintenance

The bearing damage and bluing of the bearing cap from heat. This damage may occur when the oil deteriorates and burns (causing low level) and loses its lubrication qualities. The bearings may be damaged because they no longer have oil cooling and lubricating them which generates heat, evidenced by bluing/discoloration.

Figure 14



Figure 15



Original Factory-Installed Oil Filter Identifiers

All-white filter can with FoMoCo in white lettering in a black box. (Figure 16)

Figure 16



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All-black filter can with white FoMoCo lettering (6.7L OEM and authorized remanufactured engines). (Figure 17)

Figure 17



E390943

All-white filter can, line drawn labels with global language and FoMoCo in black. (Figure 18)

Figure 18



E390944

All-white filter can with a black or red square. (Figure 19)

Figure 19



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Service Oil Filter Identification

Although not required for warranty coverage it is highly recommended that Ford and Motorcraft® oil and filters be used. Genuine Ford and Motorcraft® replacement parts, Motorcraft and Ford-authorized branded re-manufactured replacement parts. These parts meet or exceed our specifications. If not using Ford authorized parts, they may not meet Ford specifications.

White Motorcraft lettering inside a red box. (Figure 20)

Figure 20



E390946

Red Motorcraft lettering with other labeling in black. (Figure 21)

Figure 21



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NOTE: This information is not intended to replace or supersede any warranty, parts and service policy, workshop manual (WSM) procedures or technical training or wiring diagram information.