

Component Procedures: Engine Oil

Table of Contents

1. Parts and Labor (itype_189)
2. Specifications Quick Reference (itype_439)
3. Engine Oil and Oil Filter Replacement (Article 12177)
4. Engine Mechanical Specifications (LFX) (Article 12224_clone68225991_1)
5. Fluid and Lubricant Recommendations (Article 12585_clone68226309_3)
6. All New Technical Service Bulletins (itype_432)
7. All Technical Service Bulletins (itype_100)
8. Repair Tips (itype_110)
9. Leaks (itype_149)
10. Out of specification (itype_158)
11. Fluids, Chemicals and Additives (itype_112)
12. OEM Policies and Procedures (itype_120)

Component Procedures: Engine Oil

Parts and Labor (itype_189)

Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Remove & Replace	Filters > Oil Filter, R&R	C	0.3	0.3
Remove & Replace	Filters > Oil Filter, R&R > NOTE > To Change ?		0.1	

Specifications Quick Reference (itype_439)

Quick Specifications

- item

Engine Oil and Oil Filter Replacement (Article 12177)

Removal Procedure

- Remove the intake manifold cover (2). Refer to Intake Manifold Cover Replacement - Front . Click for full-size image
- Place a suitable drain pan below the oil filter adapter (4). Click for full-size image
- Remove the oil filter cap (1).
- Remove and discard the oil filter cartridge (3).
- Inspect the oil filter cap O-ring (2), replace if necessary.
- Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .
- Position the drain pan below the oil drain plug (1). Click for full-size image
- Remove the oil pan drain plug (1).
- Clean and inspect the oil pan drain plug seal (2), replace parts as necessary.
- Allow the oil to drain completely.

Installation Procedure

- Install the oil pan drain plug and NEW drain plug seal and tighten to 25 Nm (18 lb ft) . Click for full-size image
- Lower the vehicle.
- Lubricate the oil filter cap threads and NEW O-ring with clean engine oil. Click for full-size image
- Install a NEW oil filter cartridge (3). Click for full-size image
- Install the oil filter cap (1) and tighten to 30 Nm (22 lb ft) .
- Fill the engine with the appropriate oil type and quantity. Refer to Fluid and Lubricant Recommendations and Approximate Fluid Capacities .
- Install the intake manifold cover (2). Refer to Intake Manifold Cover Replacement - Front . Click for full-size image

Engine Mechanical Specifications (LFX) (Article 12224_clone68225991_1)

Application Specification

Metric English

General

Engine Type V-6

- Engine Type

Displacement 3.6 Liter 220 CID

- Displacement

RPO LFX

- RPO

VIN 3

- VIN

Lubrication System

Oil Capacity – with Filter 5.7 Liters 6.0 Quarts

- Oil Capacity – with Filter

Oil Capacity – without Filter 5.2 Liters 5.5 Quarts

- Oil Capacity – without Filter

Fluid and Lubricant Recommendations (Article 12585_clone68226309_3)

Usage Fluid/Lubricant

Engine Oil Use only engine oil licensed to the dexos1 specification, or equivalent, of the proper SAE viscosity grade. ACDelco dexos1 Synthetic Blend is recommended. Use SAE 5W-30 viscosity grade engine oil. Cold Temperature Operation: In an area of extreme cold, where the temperature falls below -29°C (-20°F), an SAE 0W-30 oil may be used. An oil of this viscosity grade will provide easier cold starting for the engine at extremely low temperatures. When selecting an oil of the appropriate viscosity grade, always select an oil of the correct specification. Refer to Owner's Manual for more information. On Z/28, for track events or competitive driving, use Mobil 1® 15W-50 engine oil. A warning message will display at high oil temperatures.

All New Technical Service Bulletins (itype_432)

Tsbs

- Fuel and Oil Additives - Facts and Myths - Maximizing Gasoline Fuel Economy (05-00-89-072H, 2026/05/05)
- Information on Engine Oil Consumption Guidelines (01-06-01-011S, 2025/07/28)

All Technical Service Bulletins (itype_100)

Tsbs

- Engine - dexos 1(R) and dexos 2(R) Oil Specs/Information (11-00-90-001B, 2013/05/21)
- PIP5257D: Cooling System Contaminated With Engine Oil (PIP5257D, 2020/04/17)
- Fuel and Oil Additives - Facts and Myths - Maximizing Gasoline Fuel Economy (05-00-89-072H, 2026/05/05)
- Engine Oil Dye May be Mistaken for Contamination on Low Mileage Engines (PI0275B, 2012/02/17)
- Engine - Oil Leak Prevention After Oil/Filter Change (15-00-90-001, 2015/03/06)
- Information on Engine Oil Consumption Guidelines (01-06-01-011S, 2025/07/28)
- Information for Repairing Engine Front Cover Oil Leak, Sealing Surface Preparation and Applying RTV Sealant (12-06-01-003D, 2022/05/02)

Repair Tips (itype_110)

Tsbs

- Engine - dexos 1(R) and dexos 2(R) Oil Specs/Information (11-00-90-001B, 2013/05/21)
- Engine - Oil Leak Prevention After Oil/Filter Change (15-00-90-001, 2015/03/06)

Leaks (itype_149)

Tsbs

- Information for Repairing Engine Front Cover Oil Leak, Sealing Surface Preparation and Applying RTV Sealant (12-06-01-003D, 2022/05/02)

Out of specification (itype_158)

Tsbs

- PIP5257D: Cooling System Contaminated With Engine Oil (PIP5257D, 2020/04/17)

Fluids, Chemicals and Additives (itype_112)

Tsbs

- Fuel and Oil Additives - Facts and Myths - Maximizing Gasoline Fuel Economy (05-00-89-072H, 2026/05/05)

OEM Policies and Procedures (itype_120)

Tsbs

- Engine Oil Dye May be Mistaken for Contamination on Low Mileage Engines (PI0275B, 2012/02/17)
- Information on Engine Oil Consumption Guidelines (01-06-01-011S, 2025/07/28)