



ENVIRONMENTAL PROTECTION

Information on the Purchase, Use, and Disposal of Engine Lubricating Oil

Highlights of [GAO-03-340](#), a report to the Chairman and Ranking Minority Member, Committee on Environment and Public Works, U.S. Senate

Why GAO Did This Study

Concerned with the time, money, and resources that the federal government expends servicing its vehicle and engine fleet, the Committee asked GAO to compile information on the government's use of engine lubricating oil.

GAO was asked to determine:

- How much engine lubricating oil the federal government bought in fiscal years 1999, 2000, and 2001;
- What costs are incurred for the disposal and recycling of engine lubricating oil;
- What costs are incurred for changing motor oil in military and civilian fleets;
- What logistical implications exist for the transport of engine lubricating oil during recent military operations; and
- What options exist for reducing purchase, maintenance, and disposal costs for engine lubricating oil.

To conduct its study, GAO focused on three agencies that account for 79 percent of all non-tactical vehicles owned or leased by the U.S. government: the U.S. Postal Service (USPS), the Department of Defense (DOD), and the General Services Administration (GSA). It compiled information only on engine lubricating oil used in ground vehicles and equipment and not in aircraft and ships.

www.gao.gov/cgi-bin/getrpt?GAO-03-340.

To view the full report, including the scope and methodology, click on the link above. For more information, contact William M. Solis at (202) 512-8365 or solisw@gao.gov.

What GAO Found

There is no aggregate data on the purchase, use, and disposal of engine lubricating oil for the federal government as a whole. However, the three agencies included in GAO's review—USPS, DOD, and GSA—collectively bought nearly 41 million quarts of engine lubricating oil, valued at about \$37.3 million, from fiscal years 1999 to 2001.

Only limited data is available on the costs for disposing and recycling engine lubricating oil used in the land-based vehicle fleets of these three agencies. The Army and Navy maintain some disposal data, but the Air Force, GSA, and USPS do not have any aggregate information available. In addition, information is not readily available on the number of labor hours and costs incurred in changing oil in the agencies' vehicles. Finally, it is difficult, if not impossible, to estimate the costs of transporting engine lubricating oil during military operations because the transportation costs depend largely on the specific scenario.

Several methods were identified for reducing the cost and use of engine lubricating oil:

- **Bypass filters**, used in conjunction with traditional oil filters, can substantially reduce the number of oil changes required by increasing the intervals between oil changes by two to ten times.
- **Synthetic lubricating oils** have the potential to increase the length of time between oil changes, reduce engine wear, and enhance the engine's operation over a greater range of temperatures.
- **Oil analysis programs** can also reduce engine oil use. These programs determine when it is time to change the oil by testing its condition in the engine rather than by following a regularly scheduled oil change based on mileage or usage.

Engine Lubricating Oil Purchases for Selected Agencies (FY 1999-2001)

Fiscal year	DOD/Military				Total	USPS	GSA	Total
	Army	Air Force	Navy	Marine Corps				
Dollars in millions								
2001	\$6.2	\$1.5	\$0.9	\$0.7	\$9.3	\$2.1	\$1.5	\$12.9
2000	6.1	1.4	1.0	0.6	9.1	2.0	1.5	12.6
1999	5.3	1.7	0.7	0.5	8.2	2.2	1.4	11.8
Total	\$17.6	\$4.6	\$2.6	\$1.8	\$26.6	\$6.3	\$4.4	\$37.3
Quarts in millions								
2001	6.4	1.7	1.0	0.8	9.9	2.1	1.4	13.4
2000	6.8	1.8	1.3	0.7	10.6	2.1	1.3	14.0
1999	6.0	2.1	1.0	0.6	9.7	2.3	1.3	13.3
Total	19.2	5.6	3.3	2.1	30.2	6.5	4.0	40.7

Source: Data and estimates provided by USPS, GSA, and DOD.