

September 1995

INVENTORY MANAGEMENT

Purchasing Parts From Contractor-Operated Parts Stores and Commercial Sources



**National Security and
International Affairs Division**

B-260360

September 11, 1995

Congressional Committees

This report responds to the conference report accompanying the Fiscal Year 1995 Department of Defense Appropriations Act, which required us to conduct a cost comparison study of vehicle repair parts purchased from Air Force Contractor Operated Parts Stores (COPARS) with those purchased directly from commercial suppliers. Also, we are reporting on whether the provisions of Office of Management and Budget (OMB) Circular A-76 are to be applied before terminating a COPARS contract.

Background

Air Force bases have a variety of vehicles to support base operations and meet mission needs. The mix of vehicles differs at each base but typically includes common commercial vehicles such as Plymouth and Dodge sedans and Ford and Chevrolet pickup trucks. Other vehicles can include commercial lawn mowers, forklifts, ambulances, fire trucks, buses, and fuel trucks.

The policies and procedures for acquiring vehicle repair parts are prescribed in the Federal Acquisition Regulation for small purchases. The regulation directs the bases to use the small purchase procedure that is most suitable, efficient, and economical for each acquisition. Small purchase procedures include blanket purchase agreements, purchase orders, and the International Merchant Purchase Authorization Card.¹

Bases may also meet their vehicle repair parts needs by establishing COPARS. These stores were authorized in the early 1960s because the Air Force believed they would usually be more responsive and less costly than the traditional Air Force base supply system. The stores are operated under a requirements-type supply contract that is competitively awarded for 1 year with annual renewable options. The contract calls for pricing parts on the basis of discounts from suggested list prices. Each bidder offers a separate discount for each market category, and the contract is awarded to the bidder with the greatest overall discount. Space and utilities for the stores are furnished by the bases.

¹A blanket purchase agreement is a simplified method of filling anticipated recurring needs for supplies or services by establishing charge accounts with qualified supply sources. Purchase orders are used for on-the-spot, over-the-counter purchases of supplies or services. The International Merchant Purchase Authorization Card is a commercial credit card that permits customers to buy directly from a supplier without going through the contracting office, unlike the previous two methods. It reduces the administrative burden associated with other procurement methods.

Currently, the Air Force contracts with COPARS at 46 of its bases, and the value of these contracts totals \$79.6 million. Numerous purchases are made daily from each store, and each purchase is expected to be priced according to the contract. Most items cost less than \$25, and only a few cost more than \$500. The stores also carry, at the contractor's expense, an inventory of frequently required parts.

Results in Brief

Our review showed that the most cost-effective method for purchasing vehicle repair parts can vary from base to base. Every base is unique in terms of the mission that it must support and the nature of its local economy. Factors such as the types of vehicles in the fleet, volume of business conducted, vendor availability in the community, vendor delivery preferences, and vendor payment preferences differ among bases and affect the price of parts. Also, various mission-related factors, such as deployments, may affect the availability of personnel needed to manage a commercial-source parts procurement operation. Given these differences, installation commanders are in the best position to determine which approach for acquiring parts will best meet their needs. In making this decision, the commanders would need to thoroughly analyze all relevant factors to arrive at a reasonable judgment of the preferred purchase option.

Our cost analyses at two bases showed that controlling personnel costs is key to determining whether savings could be achieved in a commercial-source procurement system. To achieve savings, maintenance units would need to (1) perform the purchasing function with approximately the same number of personnel as the COPARS contractor and (2) assign personnel in mid-level enlisted pay grades. Because neither base has initiated a commercial-source procurement system, it is unknown whether bases can operate within these parameters.

OMB Circular A-76 does not apply to the Air Force's vehicle repair parts support decision. The establishment of a commercial-source procurement system is simply an alternative way of doing business. The Air Force is not replacing a COPARS with an identical in-house service. As a result, no study is required.

The Best Approach for Purchasing Parts Varies by Installation

Our study showed that the most cost-effective method for purchasing vehicle parts can vary from base to base. Each one is unique in terms of the mission that it must support and the nature of its local economy. Factors such as the types of vehicles in the fleet, volume of business

conducted, vendor availability in the community, vendor delivery preferences, and vendor payment preferences differ among bases. At the two bases we visited—Dyess Air Force Base in Abilene, Texas, and Little Rock Air Force Base in Jacksonville, Arkansas—we identified numerous local factors affecting the price of parts that would need to be analyzed to determine the most cost-effective approach. For example, at Dyess two large parts distributors do not make deliveries. If parts were bought from these distributors, it would raise the base's vehicle usage costs. Also, two parts distributors at Little Rock do not accept credit cards. To buy parts from these distributors, the base would have to use other procurement methods, such as purchase orders, that would raise transaction costs.

Similarly, mission factors differ by base, and installation commanders need to determine whether the additional personnel resources needed to start up a commercial-source procurement operation are available. For example, at Dyess approximately 10 percent of the vehicle maintenance unit's personnel are deployed at any given time, and the vehicle maintenance supervisor values the assistance provided by the COPARS employee. However, bases supporting units that deploy infrequently may not derive as great a benefit from their COPARS. An analysis at each base would determine which procurement method or combination of methods constitutes the best approach for a particular installation. In our opinion, installation commanders are in the best position to make this analysis.

Results of Cost Analyses at Two Bases

For Dyess and Little Rock Air Force Bases, we obtained price quotes from local commercial suppliers and compared them with parts prices charged by COPARS. At Little Rock, we did not obtain statistically projectable parts cost data. However, the data we did obtain allowed us to analyze cost trends. At the two bases, we found that commercial suppliers could generally provide parts at lower cost. However, other costs incurred in making the purchases, particularly personnel costs, could offset or perhaps exceed any parts savings. To be cost-effective, bases must (1) perform the purchasing function with approximately the same number of personnel as the COPARS contractor and (2) assign personnel in mid-level enlisted pay grades. Maintenance supervisors believe that more people would be needed for the first 6 to 12 months of operation until personnel gain experience in operating a commercial-source procurement system. Table 1 shows the results of our cost comparisons and estimates of the costs of operating a commercial-source procurement system for the first 6 to 12 months while units gain experience. Table 2 shows estimated costs after the units gain experience.

Table 1: Projected Annual Costs of Purchasing Parts From Commercial Sources During the First 6 to 12 Months of Operation

Fiscal year 1995 dollars

Cost	Dyess Air Force Base			Little Rock Air Force Base		
	COPARS	Commercial sources	Difference	COPARS	Commercial sources	Difference
Parts	\$217,000	\$199,000	\$18,000 ^a	\$405,000	Unknown	Unknown ^b
Service charge	4,000 ^c	0	4,000	8,000 ^c	0	\$8,000
Personnel						
COPARS contract monitor	19,000 ^d	0	19,000	12,000 ^d	0	12,000
Pay grade E-4	0	63,000	-63,000	0	\$94,000	-94,000
Pay grade E-6	0	88,000	-88,000	0	132,000	-132,000
Vehicle usage	0	2,000	-2,000	0	5,000	-5,000
Assets, supplies, and equipment	0	0	0	0	0	0
Total						
Pay grade E-4	\$240,000	\$264,000^e	-\$24,000	\$425,000	Unknown	Unknown
Pay grade E-6	\$240,000	\$289,000^f	-\$49,000	\$425,000	Unknown	Unknown

Note: See table 2 for an explanation of table notes.

Table 2: Projected Annual Costs of Purchasing Parts From COPARS and Commercial Sources Using the Same Number of Personnel

Fiscal year 1995 dollars

Cost	Dyess Air Force Base			Little Rock Air Force Base		
	COPARS	Commercial sources	Difference	COPARS	Commercial sources	Difference
Parts	\$217,000	\$199,000	\$18,000 ^a	\$405,000	Unknown	Unknown ^b
Service charge	4,000 ^c	0	4,000	8,000 ^c	0	\$8,000
Personnel						
COPARS contract monitor	19,000 ^d	0	19,000	12,000 ^d	0	12,000
Pay grade E-4	0	23,000	-23,000	0	\$47,000	-47,000
Pay grade E-6	0	33,000	-33,000	0	66,000	-66,000
Vehicle usage	0	2,000	-2,000	0	5,000	-5,000
Assets, supplies, and equipment	0	0	0	0	0	0
Total						
Pay grade E-4	\$240,000	\$224,000^e	\$16,000	\$425,000	Unknown	Unknown
Pay grade E-6	\$240,000	\$234,000^f	\$6,000	\$425,000	Unknown	Unknown

^aWe estimated, at the 95-percent confidence level, that the COPARS price for parts would be \$216,656 ± \$2,012 and the local vendor price would be \$198,680 ± \$3,526. The difference between the midpoint of these two ranges, rounded to the nearest \$1,000, is \$18,000.

^bOur sample was not large enough to statistically project an annual savings.

^cContractors may impose a service charge when they are required to obtain parts that are not already priced in the contract.

^dThis number is the cost of Air Force personnel (at pay grade E-5) that monitor the COPARS contract.

^eThis number is the sum of parts; service charge; personnel (pay grade E-4); vehicle usage; and assets, supplies, and equipment.

^fThis number is the sum of parts; service charge; personnel (pay grade E-6); vehicle usage; and assets, supplies and equipment.

Parts Cost

Our analysis of vehicle parts prices was based on a sample of repair activity over 20 random days. We obtained price quotes for items in our sample from vendors or specialized parts suppliers and obtained the current COPARS price for these same items and determined the difference.

At Dyess Air Force Base, our sample included 466 parts purchased by the vehicle maintenance unit. Over the 20 days, parts quotes from commercial sources were \$3,115 less than equivalent parts purchased from COPARS. We

estimated that Dyess could save about \$22,000 annually by buying parts from commercial sources. The savings includes \$4,000 in service charges now paid to COPARS that would not be incurred in a commercial-source procurement operation.

At Little Rock Air Force Base, our sample included 772 items purchased from COPARS by the vehicle maintenance unit. However, at the conclusion of our fieldwork, we had collected price quotes on only 133 parts purchased by the vehicle maintenance unit over 4 random days. For these parts, commercial suppliers were \$1,142 less than the same parts purchased from COPARS. This sample is not large enough to statistically project a total annual savings, and the sample would have to be completed to determine the amount of savings. However, this information provides sufficient data to do a cost-trend analysis. If this savings trend were to continue, the base would achieve an annual savings of \$64,000. This includes \$8,000 in service charges paid to COPARS that would not be incurred in a commercial-source procurement operation.

Generally, COPARS parts prices are higher than parts purchased directly from commercial sources because COPARS prices include service costs (e.g., employee and home and field office operating expenses) and profit that are applied against the parts it sells to the Air Force. Contractors must add sufficient surcharge to the parts sold to the base to cover these expenses. Therefore, we believe our savings estimates are reasonable.

Personnel Cost

To operate a commercial-source procurement system, vehicle maintenance units would have to assign personnel to do work now performed by COPARS employees. This work includes assisting mechanics in identifying parts, identifying sources of supply, placing orders, arranging the pickup or delivery of parts, returning wrong parts, and performing administrative functions related to parts distribution and tracking. At Dyess these services are provided by one full-time COPARS employee. At Little Rock these services are provided by two full-time COPARS employees.² Personnel costs for COPARS employees were not included in our analysis as a COPARS program cost because the employees' salaries are paid by their employers and are included in the price of parts sold to the unit. COPARS personnel costs are for Air Force personnel that monitor the COPARS contract. This job would not be required in a commercial-source procurement system.

²Each employee spends about 6 hours per day on tasks that would be directly transferable to Air Force personnel in a commercial-source procurement system.

Two factors determine the Air Force's personnel costs in a commercial-source procurement system: the number of people assigned to provide the services now provided by COPARS employees and their pay grade. Because neither Dyess nor Little Rock has instituted a commercial-source procurement system, the number of personnel that would be required and their grades are not known.

To achieve savings at both bases, our analysis showed that the maintenance units would need to (1) control the number of personnel assigned to perform the purchasing function and (2) assign personnel in mid-level enlisted pay grades. For example, if the one COPARS employee at Dyess and the two COPARS employees at Little Rock were replaced with Air Force personnel at pay grade E-4, the bases would incur personnel costs of \$23,000 and \$47,000, respectively, and would generate savings of \$16,000 and \$24,000, respectively. At pay grade E-6, personnel costs at Dyess and Little Rock would be \$33,000 and \$66,000, respectively, and savings would decrease to \$6,000 and \$5,000, respectively.³

Maintenance supervisors at both bases believe that it would take 6 to 12 months to identify suppliers and gain experience in parts research and procurement. Until Air Force personnel gained that experience, more people would be required. The Dyess maintenance supervisor told us he would initially need to assign two people to operate a commercial-source procurement system. Currently, one person spends 4 hours a day monitoring the COPARS contract. This person would be reassigned for a net addition of 1.5 personnel. At Little Rock, the vehicle maintenance unit commander told us that she would need three people to operate a commercial-source procurement system. Currently, one person spends approximately 2-1/2 hours a day monitoring the COPARS contract. This person would similarly be reassigned for a net addition of 2.7 personnel.

With the use of Air Force personnel cost data for pay grade E-4, we estimated the cost of the additional personnel during the start-up period would be \$44,000 annually at Dyess and \$82,000 annually at Little Rock.⁴ At pay grade E-6, the cost of the additional personnel would be \$69,000 annually at Dyess and \$120,000 at Little Rock. Additionally, the supervisors

³The savings for Little Rock are the net differences between the savings identified in our parts cost-trend analysis (including service charge) and costs for personnel (pay grades E-4 and E-6); vehicle usage; and assets, supplies, and equipment.

⁴The estimates for Dyess and Little Rock are derived by subtracting the cost of the individual who monitors the COPARS contract from the cost of personnel assigned to operate the commercial-source procurement system.

noted that deployments and reassignments of personnel could occasionally disrupt operations.

Both Air Force and contractor officials commented on our personnel cost analysis. Air Force officials agreed that personnel would need to be assigned to perform those functions now performed by the COPARS contractor. However, they stated that the functions would be performed by personnel already in the units and that no additional personnel would be assigned. Thus, even though parts procurement transaction costs, including personnel costs, would increase, the units would incur no additional personnel costs overall.

Contractor officials questioned whether the units could train personnel to the same degree of proficiency at parts identification and research as COPARS employees within 6 months. One contractor believed it would take 3 years or more for Air Force personnel to become adequately trained in this field.

Vehicle Usage Cost

In a commercial-source procurement system, Air Force personnel would have to use government vehicles to pick up parts from commercial suppliers that do not make deliveries. Because the bases would essentially be dealing with the same commercial suppliers as their existing COPARS, we based our vehicle usage estimates on the average number of miles, at 30 cents per mile, the COPARS contractor drives in 1 week picking up parts. At Dyess and Little Rock Air Force Bases, we estimated that annual vehicle usage costs would be \$2,000 and \$5,000, respectively.

Assets, Supplies, and Equipment Cost

Our analysis did not identify any significant cost differences in assets, supplies, or equipment needed to operate either a COPARS or commercial-source procurement system.

OMB Circular A-76 Study Is Not Required

OMB Circular A-76 establishes the federal policy that governs whether commercial services should be performed under contract with commercial sources or with in-house government facilities and personnel. According to the policy, the government generally relies on commercial sources to supply the products and services it needs. However, government performance of a commercial activity is authorized if a cost comparison shows that the government can operate the activity at an estimated lower cost.

According to an OMB official, an A-76 study is required when identical functions are transferred from the contractor to the government or vice versa. For example, if the Air Force planned to replace a COPARS with an identical in-house system, such as a Government Operated Parts Store, an A-76 study would be required.

Purchasing parts from commercial sources rather than from COPARS is not a transfer of identical functions; it is an established alternative method for meeting repair parts needs. Authority for purchases would be delegated to base personnel, and the base would no longer use COPARS' services. As a result, we believe the Air Force is not required to perform an OMB A-76 cost study before terminating a COPARS contract and purchasing automotive repair parts in the local market.

Agency and Contractor Comments and Our Evaluation

The Department of Defense fully concurred with our findings, conclusions, and methodology (see app. II). We also discussed our findings with officials from the Office of the Secretary of the Air Force and incorporated their comments where appropriate.

We received comments from three COPARS contractors. The contractors' overall concern was that our report would be interpreted as saying that the local purchase option is less costly than COPARS. That is not our overall conclusion, and we revised our report to more prominently state that the cost-effectiveness decision depends on local circumstances and therefore should be decided on a case-by-case basis after careful analysis.

The contractors specifically raised concerns in two areas. First, they commented that our comparison presents an optimistic picture of prices that government personnel can obtain. According to one contractor, vendors are under no obligation to actually sell at the prices we obtained, whereas COPARS prices are firm and valid for the duration of the contract, regardless of outside market factors and fleet changes.

Although we agree with this contractor's position, we believe that bases that initiate commercial-source procurement systems will likely obtain parts from the same suppliers used by COPARS. Since no additional charges will be added to cover service costs and profit, we also believe that bases should be able to obtain most parts at less cost.

Second, the contractors disagreed with our personnel cost analysis, stating that our conclusion assumed that savings could be achieved if the Air

Force performed the purchasing functions with the same number of personnel as the COPARS contractors. The contractors questioned whether the Air Force could achieve the same degree of proficiency as COPARS personnel in identifying parts and conducting research in 6 to 12 months. Also, they questioned whether our analysis adequately assessed the pay grades of personnel who would perform the parts purchasing function.

We recognized the contractors' concerns about our personnel cost analysis by presenting these costs as a range to reflect the uncertainty of these costs and by incorporating their comments where appropriate. The contractors also provided other detailed comments, and we considered these in finalizing our report.

Scope and Methodology

We conducted our study at two Air Force Air Combat Command bases: Dyess Air Force Base, Abilene, Texas, and Little Rock Air Force Base, Jacksonville, Arkansas. These bases were selected based on recommendations from the COPARS contractors and Air Force officials. Additional information on our scope and methodology appears in appendix I. We performed our review from January to May 1995 in accordance with generally accepted government auditing standards.

We will send copies of this report to the Director, OMB; the Secretaries of Defense and the Air Force; and other interested parties. We will also provide copies to others upon request.

Please contact me at (202) 512-8412 if you or your staff have any questions concerning this report. Major contributors to this report are listed in appendix III.



David R. Warren
Director, Defense Management
and NASA Issues

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House of Representatives

Scope and Methodology

Our sampling methodology considered the cost of parts, frequency that the parts are needed, and maintenance workload associated with the parts requirement. We discussed the methodology with Contractor Operated Parts Store (COPARS) contractors and Air Force personnel.

To compare parts prices, we obtained a listing of actual repair parts purchases between February 1994 and February 1995 from the Air Force's On-Line Vehicle Information Management System. Other data for nonvehicle parts necessary for repair activity but not recorded in the system were contained on individual requisitions. These parts represent shop supplies and parts that a repair facility would need but are not attributed to a specific vehicle or engine. We automated the requisition data used by the maintenance personnel to order nonvehicle parts and combined this information with the system's data.

We used these data to sample repair activities over 20 randomly selected days at the two locations (more costly days had a higher chance of selection) and obtained prices from vendors or specialized parts suppliers. We obtained the current COPARS price for these same items and determined the difference between the commercial suppliers' and the COPARS' prices for each day's activity and estimated our results to reflect 1 year of daily maintenance activities. We were able to obtain prices for all 20 days of activity at Dyess. At Little Rock, we did not complete the parts cost comparison because our analysis was showing that decisions would still have to be made on a case-by-case basis and the 4 days of activity we did obtain was sufficient to show cost trends.

Because some of the data lacked detail, we could not obtain local supplier prices for all items. For these items, we assumed that the difference between the suppliers' and the COPARS' prices would be zero.

We did not verify the accuracy of the Air Force's data or the completeness of the nonvehicle parts requisitions. If the Air Force's data contained maintenance activity errors, our results would be directly affected by these errors.

Our personnel estimates were based on interviews with managers within each bases' contracting squadron, finance office, and vehicle maintenance unit. These individuals identified the time required to administer the COPARS contract and estimated the amount of time that would be required to administer a commercial-source procurement system for vehicle repair parts. We used estimates of the number of personnel needed to procure

parts from commercial sources because we could not find any bases with a comparable size and mix of vehicles that currently manage a commercial-source procurement operation. We discussed our conclusions regarding personnel with maintenance supervisors at both bases, and they agreed with our numbers.

Our analysis of vehicle usage costs was based on an analysis of vehicle usage reimbursement records maintained by the COPARS contractor. Assets, supplies, and equipment costs were based on interviews with Air Force vehicle maintenance supervisors and COPARS employees.

Comments From the Department of Defense



ACQUISITION AND
TECHNOLOGY

(L/MDM)

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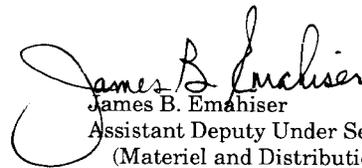
Dear Mr. Hinton,

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report titled "INVENTORY MANAGEMENT: Purchasing Vehicle Repair Parts From Contractor Operated Parts Stores and Commercial Sources," dated June 28, 1995 (GAO Code 709115, OSD Case 9968). The Department concurs with the draft report.

The Department agrees that the most effective method for purchasing vehicle repair parts will vary by site. The DoD also agrees that, based on both costs and various mission related factors, the installation commanders are in the best position to assess their needs. There are no recommendations in the draft report.

The DoD appreciates the opportunity to comment on the draft report.

Sincerely,


James B. Emahiser
Assistant Deputy Under Secretary
(Materiel and Distribution Management)



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