

IG-97-036

**AUDIT
REPORT**

RAPID ACTION

**MSFC VEHICLE FLEET CONVERSION:
ADDITIONAL SAVINGS POSSIBLE**

SEPTEMBER 9, 1997



National Aeronautics and
Space Administration

OFFICE OF INSPECTOR GENERAL

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National Aeronautics and
Space Administration



Headquarters
Washington, DC 20546-0001

Reply to Attn of:

W

September 9, 1997

TO: George C. Marshall Space Flight Center
Attn: DA01/Center Director

FROM: W/Acting Assistant Inspector General for Auditing

SUBJECT: Final Rapid Action Report
MSFC Vehicle Fleet Conversion: Additional Savings Possible
Assignment Number A-HA-97-030
Report Number IG-97-36

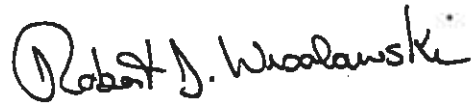
We are currently reviewing government vehicle use at four NASA Centers, including the George C. Marshall Space Flight Center (MSFC). During the audit, a condition came to our attention which warrants management's immediate attention. Therefore, we are issuing the subject report. We determined that contractor vehicle maintenance staff could be further reduced due to the Center's conversion to using GSA leased vehicles. We estimated that the Center could achieve annual savings of up to \$241,000 by eliminating unnecessary contractor staff positions.

During the course of the audit, MSFC management eliminated four of the six contractor vehicle maintenance positions that we believed were unnecessary. This action has resulted in estimated annual savings of about \$163,000.

The OIG issued a draft rapid action report to MSFC management on July 21, 1997, and an exit conference was conducted on August 13, 1997. Your written response, dated August 29, 1997, is summarized in this report and is included in its entirety as Appendix 2.

The corrective actions taken are responsive to the report recommendations. We consider all three recommendations closed with the issuance of this report. If you have any questions or

need additional information, please call Lorne A. Dear, Program Director, Infrastructure and Support at (818) 354-3360; or Daniel J. Samoviski, Acting Director, Audit Division-A, or me at 202-358-1232.

A handwritten signature in black ink that reads "Robert J. Wesolowski". The signature is written in a cursive style with a large, looped initial "R".

Robert J. Wesolowski

Enclosure

cc:

J/B. Cooper

JL/M. Borsi

JLG/J. Hawkins

JM/D. Green

INTRODUCTION

BACKGROUND

On December 1, 1996, George C. Marshall Space Flight Center (MSFC) entered into an agreement with the General Services Administration (GSA) to transfer its fleet of NASA-owned general purpose vehicles into the GSA Interagency Fleet Management System (IFMS). The Center projected significant savings from the transfer.

The agreement stated that the GSA IFMS would:

- accept ownership, on a non-reimbursable basis, of MSFC's motor vehicles and related equipment;
- provide general-purpose vehicles, in the same or better condition, to meet MSFC requirements; and
- provide basic IFMS fleet services, to include motor vehicles and replacement, maintenance, repair, fueling, and tire repair and replacement.

For each IFMS vehicle assigned to MSFC, the Center pays a monthly fee and mileage rate to cover the expenses of providing these services. The only additional charges to the Center would be for accident damage and other vehicle damage that are the responsibility of MSFC employees or the Center's contractors.

Prior to this conversion, the MSFC Vehicle and Equipment Operations and Maintenance Organization provided all vehicle services and maintenance. This organization was broken down into a General Purpose Shop, a Special Purpose Shop, and a Motor Pool. The General Purpose Shop maintained general-purpose vehicles such as cars, pickup trucks, and vans. The Special Purpose Shop maintained special-purpose vehicles and equipment such as wreckers, fuel trucks, high pressure trailers, forklifts, and cranes. The Motor Pool provided drivers for taxis, buses, and trucks. Staff in all shops are contractor personnel.

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OBJECTIVE, SCOPE, AND METHODOLOGY

OBJECTIVE

The objective of the overall audit is to evaluate the effectiveness of NASA's Government vehicle program. However, for this rapid action report we only answered the following questions:

- Did MSFC eliminate its general purpose vehicle maintenance staff following its conversion to using GSA leased vehicles?
- Does MSFC have adequate need-based justification for any general purpose vehicle maintenance staff retained?

SCOPE

We limited the scope of work for this report to a review of operations and staffing at the MSFC motor pool. Specifically, we assessed the rationale used in transferring staff from the General Purpose Shop to the Special Purpose Shop and the impact of those transfers on MSFC's savings from the conversion to leased vehicles.

METHODOLOGY

We reviewed (1) contractual requirements relating to contractors' roles and responsibilities; (2) available records, documents, and reports pertaining to vehicle operation; and (3) rules and regulations regarding safety inspections. We also discussed staffing plans and requirements with pertinent MSFC and contractor personnel.

AUDIT FIELD WORK

We conducted audit field work related to the observations in this report from April 1997 to May 1997 at Marshall Space Flight Center, Alabama. The audit was performed in accordance with generally accepted auditing standards.

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OBSERVATION AND RECOMMENDATIONS

ADDITIONAL ANNUAL SAVINGS OF \$241,000 ARE POSSIBLE

MSFC's Vehicle and Equipment Operations and Maintenance Organization retained several unnecessary contractor maintenance staff following the conversion to using GSA leased vehicles. This occurred because the Center's Transportation Manager overestimated the continuing need for these staff when the responsibility for maintaining the vehicles switched to GSA. MSFC could achieve annual savings of about \$241,000 by eliminating the unnecessary positions.

After the conversion, MSFC achieved some savings by eliminating the General Purpose Shop and 5 of the 12 contractor employees assigned to that shop. However, the remaining seven contractor employees were retained and transferred to the Special Purpose Shop. The following table shows the positions of the employees eliminated and retained.

GENERAL PURPOSE SHOP	
Employee Positions Eliminated	Employee Positions Retained
Shop Supervisor Mechanics Helper General Purpose Mechanics (3)	General Purpose Mechanics (3) Paint and Body Workers (2) Fuel Truck Driver Gasoline Service Attendant
Total = 5 Positions	Total = 7 Positions

NEED FOR MAINTENANCE PERSONNEL OVERESTIMATED

While the fuel truck driver position still appears to be needed, we believe that, under the new leasing arrangement, MSFC does not need the three general purpose mechanics, two paint and body workers, and one gasoline service attendant who were transferred to the Special Purpose Shop. In addition, we question the need for the tire repairman who was already located in the Special Purpose Shop.

We discussed our position with the MSFC Transportation Manager on April 23, 1997. He informed us that existing and new Center maintenance needs required the retention of the questioned contractor employees, and provided the following rationale for retaining the questioned positions.

1. The three general purpose mechanics were needed to:
 - maintain 16 contractor-provided general purpose vehicles used in MSFC's motor pool;

- assist during program critical hardware moves; and
 - perform monthly crane safety inspections.
2. The two paint and body workers were now working on the Center's special purpose equipment such as forklifts and cranes.
 3. The gasoline service attendant was needed to fuel the leased vehicles until the automated fueling system the Center ordered is received and installed.
 4. The tire repairman was needed to provide supplemental tire repair service for the leased vehicles after the GSA Motor Pool closed at 3:30 p.m. each day.

**Justification Shows Need
for Only One General
Purpose Mechanic**

As shown below, the OIG estimates that MSFC's remaining vehicle and related general maintenance needs represent about .39 FTE's of work for a general purpose mechanic. Based on this estimate, two of the three retained general purpose mechanic positions could be eliminated without affecting MSFC's ability to meet its maintenance needs.

Maintenance on Contractor
Provided General Purpose Vehicles

Prior to MSFC's conversion to GSA leased vehicles, the Center had six mechanics maintaining 349 general purpose vehicles which is a ratio of one mechanic for every 58 vehicles. Now, MSFC is only responsible for maintaining the 16 general purpose vehicles that one contractor provides at no cost for the Center's motor pool. This represents a work equivalent of only .28 FTE's of work for one general purpose mechanic (16 vehicles that currently need to be maintained ÷ 58 vehicles each mechanic formerly maintained).

Assist Work on Program
Critical Hardware (PCH) Moves

At MSFC, moving space hardware (i.e., space station hardware) from one location to another is a PCH move. According to the Transportation Manager, the MSFC Space Station Program requires the Vehicle and Equipment Operations and Maintenance Organization to have a mechanic on hand whenever space station hardware is moved just in case a piece of equipment needs repair.

While the Center does not have a record of the number of hours devoted to PCH moves, the Transportation Manager was able to provide the following information. During fiscal year 1997 MSFC has already conducted 10 PCH moves and an additional 6 moves are projected. The number of hours involved in a move varies from move to move, but historically, the maximum time involved has been 16 hours.

Based on the number of completed and projected moves, and the maximum duration of a move, a general purpose mechanic would only be needed for about 232 hours [136 hours already used plus 96 hours projected (6 moves x 16 hours)] to support PCH moves at the Center during this fiscal year. This represents a work equivalent of only .11 FTE's of work for one general purpose mechanic (232 hours ÷ 2080 hours in a standard work year).

Monthly Crane Safety Inspections

While MSFC is conducting monthly crane safety inspections, the general purpose mechanics are not required to perform this function. MSFC's institutional contractor, Management Services Incorporated (MSI), is responsible for providing the personnel to meet the Center's vehicle and equipment maintenance needs including crane safety inspections. However, MSI subcontracted the monthly crane inspections to Consolidated Crane Inspections Incorporated.

According to the Manager of MSI, Consolidated Crane Inspections Incorporated, based in Orlando, Florida, sends an inspector and an operator to MSFC each month to perform the monthly crane safety inspections. A special purpose mechanic assists the inspector. The mechanic assisting the inspector has always been a special purpose mechanic, not a general purpose mechanic, because the contract requires personnel involved in the operation/rigging of mobile cranes to be certified. The special purpose mechanic is certified to assist with the monthly inspections.

Conversion to Leased Vehicles Eliminated Requirement for Paint and Body Workers

When MSFC converted to GSA leased general purpose vehicles, the requirement for performing any needed paint and body work switched to GSA. Eliminating the requirement for repairing and painting these vehicles also eliminated the need to retain the two paint and body workers.

Since the conversion to leased vehicles, MSFC has been using these workers to do paint and body work on the Center's special purpose equipment, such as forklifts. The Transportation Manager acknowledged that the Center usually has not done paint and body work on special purpose equipment in the past.

**Gasoline Service
Attendant Needed Until
Automated Fueling System
Installed**

Despite the conversion to leased vehicles, MSFC is still refueling its general purpose vehicles on Center. Under the terms of the agreement with GSA, MSFC refuels the vehicles and is reimbursed by GSA for the cost of the fuel and an administrative fee. Therefore, the Center still needs a gasoline service attendant to refuel the vehicles and keep the records needed to bill GSA.

However, the Transportation Manager informed us that the Center has ordered an automated fueling system that will both allow vehicle users to refuel their own vehicles and document the fuel use of each vehicle. He stated that when this system is received and installed the Center may no longer need a gasoline service attendant. The OIG agrees with the Transportation Manager and believes that installing an automated fueling system would eliminate the requirement for a gasoline service attendant.

**Justification for Tire
Repairman Questionable**

While the tire repairman position had been located in the Special Purpose Shop, we still question the need for a tire repairman following the conversion to leased general purpose vehicles. We believe that ending the requirement to perform tire repair and replacement on 349 vehicles eliminates the need for the tire repairman position.

According to the Transportation Manager, the tire repairman was needed because the GSA Motor Pool closed at 3:30 p.m. each day and the Center needed to provide tire repair service until the Center closed. However, the GSA Interagency Fleet Management System provides for after hours emergency repairs and service through the credit card issued with each leased vehicle. Vehicle users are authorized to charge up to \$250 in emergency repairs, including tire repair, on an IFMS credit card.

CONCLUSION

When the responsibility for maintaining MSFC's general purpose vehicles switched to GSA, MSFC's Transportation Manager overestimated the continuing need for General Purpose Shop maintenance personnel. Consequently, the Center retained more maintenance staff than needed for the reduced workload.

The Center could achieve annual savings of about \$241,000 by eliminating two general purpose mechanics, two paint and body workers, a gasoline service attendant, and a tire repairman. The following table shows the savings that could be achieved for each of these positions.

Position	Annual Labor Cost Per Position	Number of Positions	Estimated Annual Savings
General Purpose Mechanic	\$ 42,723.20	2	\$ 85,446.40
Paint and Body Worker	42,723.20	2	85,446.40
Gasoline Service Attendant	34,819.20	1	34,819.20
Tire Repairman	35,526.40	1	35,526.40
Total	\$ 155,792.00	6	\$ 241,238.40

RECOMMENDATION 1

The Director of MSFC's Management Operations Office should eliminate two general purpose mechanic positions and the two paint and body worker positions that were transferred from the General Purpose Shop to the Special Purpose Shop when the Center began leasing its vehicles from GSA.

Management's Response

Partially concur. As of June 1997, MSFC had already eliminated one of the two mechanic positions the IG recommended eliminating. As explained at the exit conference on August 13, 1997, the other mechanic is needed to support work on the special purpose equipment that is still maintained by the Center.

Evaluation Of Management's Response

The information MSFC management presented at the exit conference supports the continuing need for one of the two questioned mechanic positions. Based on this additional information, the actions taken satisfy the intent of the recommendation.

RECOMMENDATION 2

The Director of MSFC's Management Operations Office should eliminate the gasoline service attendant position as soon as the automated refueling system the Center ordered is received and installed.

Management's Response Concur. MSFC has eliminated the paint and body positions questioned by the IG. MSFC retained the paint and body workers for a period of time to reduce the backlog of paint and body work on the Center's special purpose equipment.

Evaluation Of Management's Response The actions taken by Center management satisfy the intent of the recommendation.

RECOMMENDATION 3 The Director of MSFC's Management Operations Office should reevaluate the need for the tire repair position that was retained, since tire repair on the leased vehicles is the responsibility of GSA.

Management's Response Concur. MSFC reevaluated the need for the tire repairman and believes that several conditions necessitate the retention of this position including:

- the continuing need to repair and replace tires on the Center's special purpose equipment.
- the requirement for a generalist who can assist with the shop work and substitute as a mechanics helper and fuel truck driver.

Evaluation Of Management's Response MSFC management's evaluation justifies the need for the tire repairman position and satisfies the intent of the recommendation.

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The Honorable Pete Sessions, U.S. House of Representatives

National Aeronautics and
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George C. Marshall Space Flight Center
Marshall Space Flight Center, AL 35812



Reply to Attn of. DE01

AUG 29 1997

TO: Office of Inspector General
Attn: W/Robert J. Weslowski

FROM: DE01/Susan McGuire Smith

SUBJECT: OIG Draft Rapid Action Report, Marshall Vehicle
Fleet Conversion: Additional Savings Possible,
Assignment Number HA-97-030

We have reviewed the subject report and agree with the Inspector General's (IG) overall assessment that converting to GSA leased vehicles offered the Center an opportunity to eliminate some contractor maintenance positions. In fact, the Center has already made reductions in a manner that will avoid negatively impacting MSFC's ability to conduct its work, yet optimizing savings to be recovered from the vehicle conversion to GSA. Furthermore, every effort will be made under the Center's new Institutional Services Contract, which will be awarded by October 1, 1997, to optimize the uses of resources while assuring the sufficiency of the functions. Our detailed response is enclosed.

If you have any questions or need additional information concerning our comments, please contact BE01/Danny Walker at (205) 544-0100.


Susan McGuire Smith
Associate Director

Enclosure

cc:
MS28-1/Mr. Iler

**MSFC RESPONSE TO OIG DRAFT RAPID ACTION REPORT:
MARSHALL VEHICLE FLEET CONVERSION:
ADDITIONAL SAVINGS POSSIBLE
A-HA-97-030**

Our comments and responses to the report recommendations are presented below.

IG Recommendation: Eliminate two of the three general purpose mechanic positions that were transferred from the General Purpose Shop to the Special Purpose Shop when the Center began leasing its vehicles from GSA.

Response: Partially Concur.

As of June 1997, MSFC had already eliminated one of the two mechanic positions the IG recommended eliminating. As explained at the exit conference on August 13, 1997, the other mechanic is needed for work on the special purpose equipment that is still maintained by the Center. Historically, mechanics in the General Purpose Shop have performed certain types of maintenance on general and special purpose equipment, as well as general purpose vehicles, and have always spent a significant portion of their time on these tasks. The present Shop requirements support the need for two mechanic FTEs, therefore, in our opinion the remaining mechanic position should not be eliminated. Documentation of General Purpose Shop mechanics working on special purpose vehicles and equipment were provided to the auditors at the exit conference.

Since the appropriate corrective action has been taken we consider this recommendation closed upon issuance of the final report.

IG Recommendation: Eliminate the two paint and body worker positions.

Response: Concur.

The paint and body worker positions have already been eliminated from the contract. Nonetheless, it is important to understand why they were retained for a period of time. Paint and body work is, and always has been, a part of maintenance under this contract for general purpose vehicles and for general and special purpose equipment. The large number of general purpose vehicles, however, required continuous work and virtually consumed the two FTEs available for paint and body work. While sufficient paint and body work was done to prevent rusting and operational impairment of the special purpose equipment, staffing was not available to do all the necessary repairs.

Because the paint and body work on special purpose equipment, of necessity, has been neglected for years, there was a huge backlog of paint and body work requirements for this equipment. In short, the paint and body experts were reducing their backlog. As soon as the backlog was reduced, the staff was reduced. It was a decision to utilize the people already here who have worked on the equipment to try to deal with the backlog to the extent practicable, given the reduced level of general purpose vehicles. We believe this to be a good management decision.

Since the necessary corrective action has been taken, we consider this recommendation closed upon issuance of the final report.

IG Recommendation: Eliminate the gasoline service attendant position as soon as automated fueling system is received and installed.

Response: The automated fueling system was installed in July and the gasoline service attendant position is scheduled for elimination as soon as the station is fully functional as a self-service facility. It is projected to be fully functional by the end of this month.

Since the necessary corrective action has been taken we consider this recommendation closed upon issuance of the final report.

IG Recommendation: Reevaluate the need for the tire repair position that was retained, since tire repair on the leased vehicles is the responsibility of GSA.

Response: Concur.

We have evaluated the need for the tire repairman and believe that several conditions necessitate the retention of this position. Currently, repairs and replacement of tires are averaging 40 per month, down from the 100 per month prior to November. They are performed on general purpose equipment comprising trailers, tractors, fork lifts, cranes, scooters, etc. Two special purpose vehicles have 88 tires each, which have to be inspected, repaired and replaced as necessary. Much of this equipment has special requirements or present special difficulties in changing a tire. These tasks are extremely labor intensive, and vary in time from one hour to a day or more for one vehicles. Special purpose equipment is also used in places, such as construction areas, where tire damage occurs more frequently. Thus, what appears to be an average of two tire repairs per day, which is in itself significant, is really more of an effort than it seems.

Even when the numbers were up on tire repair/replacement for general purpose vehicles, the relative FTE effort is smaller than the numbers of repairs reflect. This is because tire removal, repair, etc., requires relatively much less time and effort, especially for a skilled repairer, than do those general and special purpose equipment tires. It is estimated that the tire repairer spent approximately .25 to .3 FTEs on general purpose vehicles tire repair/ replacement.

Further, the tire repairman performs numerous functions in addition to tire repair duties. For instance, he gets paid at the same rate and substitutes as a mechanics helper, and as a fuel truck driver. He also picks up spare parts required for repairs. Thus, the tire repairman performs multiple jobs. This is very important as he is needed for flexibility and backup in addition to his primary function. Neither is it reasonable to assume that people will not require sick leave or annual leave, or that functions should stand idle pending their return. It is efficient workforce management to maintain, at least for the present time, a generalist who can fill in several places, especially given the need for the tire repairer.

Since the necessary corrective action has been taken, we consider this recommendation closed upon issuance of the final report.

MAJOR CONTRIBUTORS TO THIS REPORT

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