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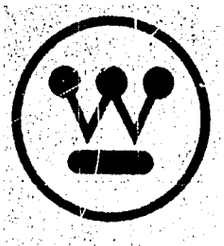

Westinghouse Health Systems

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PROJECT FOR STRENGTHENING HEALTH CARE IN HAITI

Transportation Component Report For The Development Of The Administrative Systems Improvement Plan

PREFACE

For the convenience of the user, those materials that are associated with similar technical topics have been bound together. The two items that are association with Transportation are bound in this volume. Within this volume, each item is treated individually with its own identifying preface, etc.

Found herein will be:

"Health Transportation System"

"Report on Integrated Transportation System, Transportation Component for the Development of an Administrative Systems Improvement Plan"

These materials all pertain to deliverable item 1.g.v Component Report for the Development of the Administrative Improvement Plan: Transportation Systems.

MATRIX OF CONTRACT ARTICLE AND PROJECT REPORTS

CONTRACT REF.	CONTRACT DESCRIPTION	1. ORGANIZATION & DEV. PLAN, BHPE	DEVELOPMENT OF AN ADMIN. SYSTEMS IMPROVEMENT PLAN: 2. HEALTH MANPOWER COMPONENT	3. HEALTH FACILITIES COMPONENT	4. MEDICAL LOGISTICS & SUPPLY COMPONENT	5. ANALYSIS OF THE BUDGET STRUCTURE & ITS RELATIONSHIP TO PLANNING	6. HEALTH TRANSPORTATION SYSTEM	7. ASSESSMENT OF THE HEALTH STATISTICS AND INFORMATION SYSTEM	8. RPT. ON ADMIN. NORMS FOR DSPP	9. A MANUAL OF STATISTICAL NORMS, PROCEDURES AND FORMS FOR DSPP	10. HEALTH CARE FINANCIAL SYSTEM FINANCE SYSTEM COMPONENT FOR THE DEV. OF AN ADMIN. SYSTEMS IMPROVEMENT PLAN.	11. RPT. ON INTEGRATED TRANSPORTATION SYSTEM, TRANSPORTATION COMPONENT FOR THE DEV. OF AN ADMIN. SYSTEMS IMPROVEMENT PLAN	12. DRUGS, LOGISTICS AND SUPPLIES COMPONENT FOR THE DEV. OF AN ADMIN. SYSTEMS IMPROVEMENT PLAN	13. INSTITUTIONAL ANALYSIS, FINANCIAL SYSTEM COMPONENT FOR THE DEV. OF AN ADMIN. SYSTEMS IMPROVEMENT PLAN	14. PROGRAM BUDGETING COURSE DOCUMENTS, FINANCIAL SYSTEM COMPONENT FOR THE DEV. OF AN ADMIN. SYSTEMS IMPROVEMENT PLAN	15. RPT. ON PROGRESS OF THE BUR. OF HEALTH PLANNING & EVALUATION	16. OUTLINE OF A REVISED NATIONAL HEALTH PLAN	17. FINAL CONSULTANT ACTIVITIES RPT
1.a.	A PLAN FOR THE REORGANIZATION OF THE BUREAU OF HEALTH PLNG.	●																●	
1.b.	TRAINING REQUIREMENTS FOR PERSONNEL OF BHP	●																●	
1.c(1)	AN EVALUATION OF THE EXISTING DATA SYSTEM							●											
1.c(2)	A DETAILING OF THE REORGANIZATION OF THE HEALTH DATA COLLECTION AND ANALYSIS SYSTEM									●									
1.d.	A NATIONAL HEALTH PLAN FOR HAITI																	●**	
1.e.	A SPECIFIC PLAN FOR THE IMPROVEMENT OF THE ADMINISTRATIVE SYSTEM OF THE MINISTRY								●										
1.f.	A GRADUAL INTEGRATION PLAN OF THE NATIONAL SERVICE OF MALARIA ERADICATION INTO MOH													●*					
1.g.i.	COMPONENT RPT. FOR THE DEV. OF THE ADMIN. IMPROVEMENT PLAN: FINANCING					●					●					●			
1.g.ii	COMPONENT RPT. FOR THE DEV. OF THE ADMIN. IMPROVEMENT PLAN: MANPOWER AND TASK ANALYSIS			●															
1.g.iii	COMPONENT RPT. FOR THE DEV. OF THE ADMIN. IMPROVEMENT PLAN: DRUG INVENTORY & SUPPLY SYSTEMS.				●										●				
1.g.iv	COMPONENT RPT. FOR THE DEV. OF THE ADMIN. IMPROVEMENT PLAN: ANAL. OF PHYSICAL FACILITIES		●																
1.g.v.	COMPONENT RPT. FOR THE DEV. OF THE ADMIN. IMPROVEMENT PLAN: TRANSPORTATION SYSTEMS			●			●							●					
2.a.	A RPT. OF ACTIVITY BY EACH CONSULTANT/SPECIALIST																		●

* A CONTRACT MODIFICATION IS IN PROCESS AT THIS TIME TO CHANGE [illegible] TO READ:

AN INTEGRATION PLAN FOR THE TRANSPORTATION SYSTEM OF THE NATIONAL SERVICE OF MALARIA ERADICATION INTO THE MOH.

** A CONTRACT MODIFICATION IS IN PROCESS AT THIS TIME TO CHANGE [illegible] TO READ:

PREPARATION OF AN OUTLINE AND PROCEDURE FOR A NATIONAL HEALTH PLAN FOR HAITI.

Project: 521-11-510-070

Contract: AID/la-C-1179

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PROJECT FOR STRENGTHENING HEALTH CARE IN HAITI

Health Transportation System for the Development of the Administration Systems Improvement Plan

PREFACE

This report, in the form of a memorandum, is the first of two reports which comprise The Transportation Component of the Administrative Systems Improvement Plan (item 1,g.(v) of Article I.c. as per modification no.2). This memorandum was translated into French and first presented to the Chief of the Bureau of Health Planning on April 22, 1977. Drafts were also given to USAID/Haiti at that time.

This report contains the initial observations of Westinghouse Health Systems concerning transportation for Haiti's health system and represents the crucial direction setting analysis for this component area. Subsequently, the second report in the area of transportation specifies the detailed plan for integration of the DSPP and SNEM transport systems.

From Nick Fusco
WIN
Date 22 April 1977
Subject: Transportation System

USAID, Port-au-Prince

The existing transportation system within the health sector is composed of three parts:

- The Division of Public Health and Population (DSPP) system;
- The National Society for Endemic Diseases (SNEM) system; and
- The independently used International Organization (OI) vehicles.

While each of the three systems function adequately when observed independently their overall impact on the health system is detrimental. The separate systems cause inefficiency and redundance in the deployment of vehicles, inefficiency in maintenance and repair of vehicles, and poor control of budget expenditures. The common source of these problems is the independent operation of the three systems. Vehicles are deployed and dispatched from the three authorities often creating duplicate trips and dual vehicle assignments. The maintenance and repair systems face similar redundance problems and suffer from limited resources, partially as a result of the separate systems.

Overall, the Director General has knowledge only of the budget directly within the DSPP,* The largest budget problem is posed by the independently donated and controlled OI vehicles. These vehicles come and go from government service creating an enormous impact, yet are totally outside the purview of DSPP directorate. Each such donated vehicle will cost the DSPP about $2,400 (U.S.) annually to operate. Since the total number of OI vehicles in the service of DSPP divisions is unknown, the magnitude of the budget impact is also unknown. It requires only 40 OI vehicles to create a budget demand equal to the current DSPP vehicle maintenance and repair expenditures.

*See Appendix A for a description of the DSPP.

The underlying implication of these observations is the need to develop a single transportation system for the public health sector. However, the specific nature of the problem demands a dual approach to the solution. Because of external constraints by the multilateral agencies involved in the donation of OI vehicles, separate solutions must be attempted.

In terms of the DSPP and SNEM transportation systems, the most natural solution is to merge the two. The one system could then serve the whole public health sector. Such a merger would allow the system to develop uniform approaches to many technical and administrative problems. This would allow more efficient utilization of all of the physical resources (cars, drivers, and mechanics). It would permit the efficient dispatching and utilization of vehicles within the public health sector. Finally, the merger would give the office of the Director General and the Bureau of Health Planning and Evaluation (BHP/E) more comprehensive knowledge of the budget and expenditures within the transportation system. This information will allow the planners to better utilize the resources of the existing transportation system and to allow them to make changes in response to the public health sector.

The approach to the problem of the OI vehicles has two facets. Ideally, blanket or individual agreements should be made with the donor agencies to allow these vehicles to be initially incorporated into the transportation system, rather than given to specific projects or divisions. However, assignments of donated vehicles to projects or divisions as part of the gift mechanism would be workable in a total transportation system. In any case, the overall objective is for a single transportation system. The following administrative mechanisms could be instituted by the DSPP:

- All offerings of OI vehicles should be reported to the planning office.

- The receipt of OI vehicles should be reported to the director of transportation and to the planning office.
- The director of transportation should develop and maintain an inventory of all non-Service Governmental vehicles in the public health sector.
- Preceding receipt of an OI vehicle by a project or division, the funding source for annual maintenance, fuel, and driver should be clarified with the office of the Director General.
- If an OI vehicle is to be serviced and maintained by the transportation garage, annual funds covering that activity should be transferred from the project or division to the transportation budget.

In a summary, the problems facing the DSPP transportation unit are as follows:

- Insufficient number of vehicles to serve the needs of the DSPP;
- Inappropriate vehicles in the current fleet;
- Current fleet composed of outdated vehicles;
- Current fleet is not standardized so that the different makes and models of vehicles severely hamper maintenance and repair activity;
- An organized dispatching and deployment system for vehicles is lacking;
- Garage facility is underequipped and inadequate;
- Most qualified mechanics will not work for the DSPP because of low salaries, and lack of facilities and tools;
- Maintenance and repair parts are non-existent;
- Purchasing process is awkward causing extensive delays;
- Adequate administration of the transportation unit is lacking.

THE INTEGRATION

While there may well be reasons for separating SNEM and the DSPP in administrative and technical areas, there are no strong arguments for keeping separate support services such as transportation. In fact, every logical attempt at problem solving, especially of the problems faced by th DSPP transportation unit, point imperatively toward a merger of the two transportation units. To begin with, some of the redundancy of activity and overlap can be eliminated. The single unit can be made to function more efficiently, in both the transport and the maintenance areas, than either unit currently does, without the loss of any employment.

The purpose of the proposed merger is to develop a single efficient transportation service for the public health sector. Simultaneously, the problems that exist under the current system would be solved. All of this can be accomplished without adding people to the system. The primary inputs to facilitate the merger are financial and community support coupled with technical assistance for the organization and administration of the merger itself.

The critical premise to the implementation of the proposed merger is for both parties to agree to the concept. Such feelings are evident in this situation at both the DSPP and SNEM levels. The organization and administrative implementation of the merger must be worked out jointly. Because the great majority of the details of merger must be developed during the joint working period, expert technical assistance in organization development and administration would aid the merger process. The following majo points should be incorporated into the merger, regardless of the organizational details.

- Increase the DSPP fleet of 29 vehicles over the next 3 years to 122 vehicles, based on the reasonable assumption that existing vehicles in the DSPP fleet older than 7 years (before 1970) be discounted. This approach recognizes the current vehicle deficiencies and the new demands for additional vehicles.
- Replace all vehicles older than five years (1975) in years 4 and 5 to maintain the fleet at 122 vehicles with all vehicles being less than 6 years old. (This implies 12 new vehicles.)

- Develop a surplus reserve for peak or emergency period using the discounted vehicles. The bulk of the surplus fleet, along with all of the "junkers" and parts-vehicles should be disposed of as soon as possible. This should be done by either selling as scrap metal or at public auction. Since the two transportation units are to become one, it is in the major interest of both units to dispose of these "junkers" to unencumber the system and to free valuable space at the SNEM facility.

- Minimize the number of different manufacturers and model types to be purchased by the combined system. This matter should be brought up for immediate discussion since SNEM will be engaged in the vehicle purchase plan. The DSPP future purchases will consist of the following four types of vehicles (all four wheel drive):
  - -Ambulance
  - -Van, 9 passenger
  - -Pick-up truck
  - -Jeep type

  Specifications for these are furnished in the appendices. In addition, replace existing old vehicles in the DSPP fleet with a small number of the following vehicle types:
  - -Flatbed Truck
  - -Dump Truck
  - -Bus (School bus type)

- Appoint a dispatcher (currently with SNEM) to coordinate total vehicle fleet. Since this person may not be familiar with the roles of vehicles under the DSPP a short retraining period will be needed. This will permit the dispatcher to better respond to the needs of the new enlarged system.

- Increase the maintenance and repair capability for the merged transportation system. The DSPP garage should be abandoned as a mechanical garage. The existing SNEM facility should be expanded to absorb the new repair workload and personnel. Taking into account the deployment of vehicles into the health regions and using observed and estimated rates of vehicle use, an additional 12 vehicle repair stalls will be needed at the SNEM garage. With the support functions included, a total of 903 square meters (9720 sq. ft.) of additional space will be required. A more detailed break-down of this space is presented in the appendix.

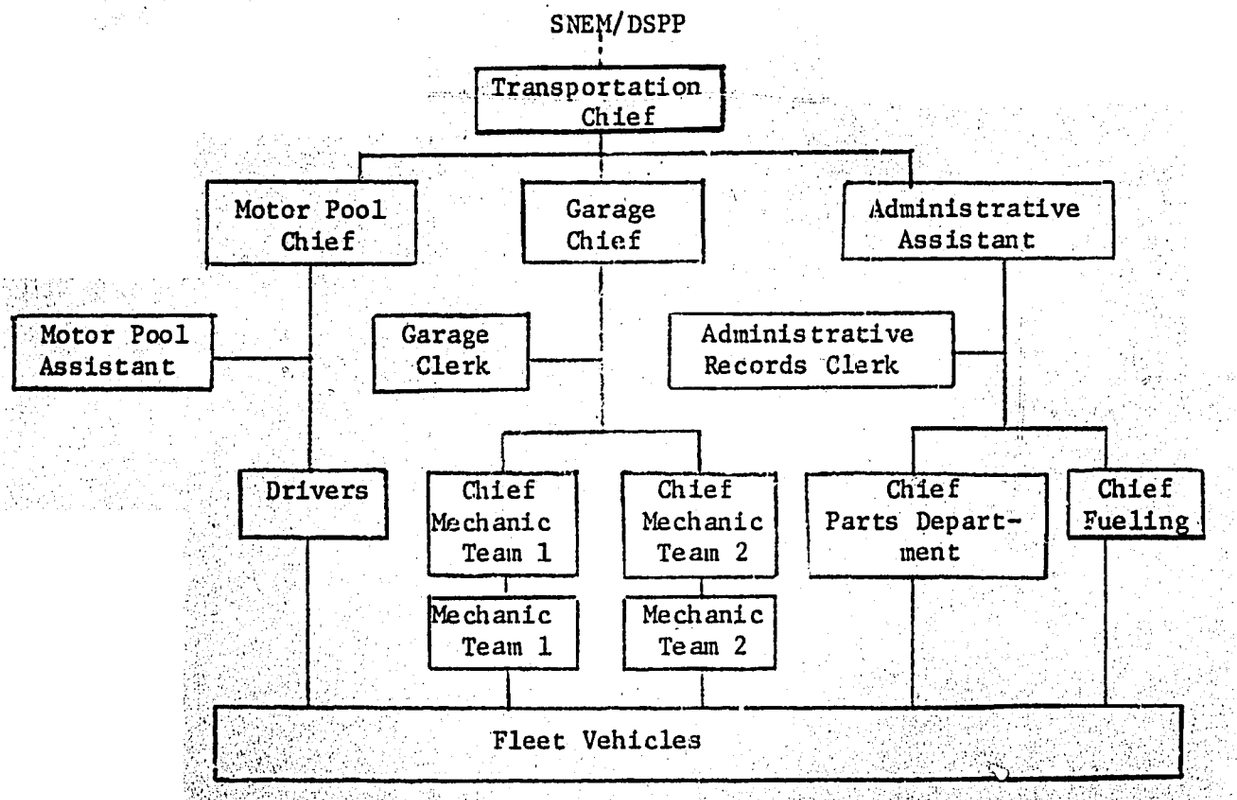
- Obtain additional mechanical tools and repair equipment to handle the increased vehicle fleet and the resultant increased workload. Since the DSPP garage has almost nothing to bring to the merger, this will entail purchase of many new tools and equipment.

- SNEM employees have been on a program involving salary supplements so that the inequities created in the pay scale must be rectified.

- Extend the salary supplements paid under the SNEM program to the DSPP employees involved in the merger.

- Expand the SNEM system for maintaining an inventory of maintenance and repair parts for the total fleet. This approach would alleviate the funding problems experienced by DSPP and form a singular, uniform purchasing and inventory system modelled after the existing SNEM system. Donor funds could then be used to address the primary DSPP problem of funding shortage for maintenance.

- Develop an administrative structure amenable to both units as a major part of the merger. This must be done without loss of employment, yet without sacrificing efficiency in the new transportation unit. It must be developed together by the existing administrations. This would probably best occur during the period of technical assistance related to the merger. The organization chart presented below is proposed for consideration.



Proposed Organization of the Transportation System

- Extend the concept of the mobile maintenance team (MMT) to cover all field vehicles. The two SNEM teams for Zone I & III should follow the boundaries of the south and north west health regions. New MMT's would be added for northern and central health regions This could be accomplished with current personnel and only the addition of vehicles and tools. The guidelines suggested in consultant Puett's report should be followed.

- Establish a separate fueling facility so as to not create the same problems that now exist at the DSPP garage. Because this facility will serve more than just the Public Health fleet, a central location among government facilities would be desirable. The site of the existing DSPP garage meets this criterion to a degree, and should be renovated as a central fueling depot for all government vehicles including the public health transportation unit. The fueling facility will fall under the administration of the Public Health Unit (see proposed organization chart). The separate location is critical to avoid the traffic interference at the SNEM facility created by fuel demands. If it is felt that this must be located at the SNEM facility, then a separate entrance and traffic flow should be established for the fueling function which will not interrupt other functions.

Although there is apparent agreement on the concept of the merger by both parties, at least two obstacles to the merger still exist. The primary obstacle is created by funding questions. The merger will be impossible without funding support from other sources (USAID) to overcome the resource inequities of the two units. This includes both physical and salary inequities which currently exist. Resolution of this obstacle is most likely to be assured with a guarantee from USAID for equalizing funds.

The other potential obstacle to the merger lies in the detailed discussions which must take place between SNEM and and the DSPP. Obviously if the details of the merger can not be resolved, the merger becomes awkward. This potential obstacle is best addressed in two ways. First, the proper representatives from each unit must plan a series of discussions to open all issues to both sides. These would best be held over a period of time to reduce any sense of pressure. This will enable both sides to think about the issues and specific organizational problems. Secondly, technical assistance should be used as a catalyst for merger discussions. The technical assistant can bring to the discussions the objective view of the

third person, as well as, specific technical advice on administrative and organizational problems encountered in the merger.

The following list represents the total costs (capital costs and operating costs) associated with the continued operation of a transportation unit for the DSPP and necessary to make possible the merger of the DSPP and SNEM transportation units. Detailed breakdowns of these costs are presented in Appendix B.

ESTIMATED PROJECT COSTS FOR TRANSPORTATION, PHASE II
RELATED TO THE MERGER OF THE DSPP AND SNEM TRANSPORTATION UNITS
(THOUSANDS $ U.S.)

	YEARS					
	1	2	3	4	5	Total
ANNUAL TOTALS	854.8	518	507.6	309.5	336.3	3,095.2
Vehicles						
Replacement	147.0	147.0	147.0	70.0	59.0	570.0
Additional	269.0	123.0	120.0	8.1	-	1090.1
Gasoline						
Vehicles	61.0	65.9	70.8	75.6	83.0	356.3
Motorcycles & Bikes	3.5	3.8	4.1	4.3	4.8	20.5
Maintenance, Repair						
Vehicles	122.0	122.0	122.0	122.0	122.0	610.0
Motocycles & Bikes	-	5.8	10.7	17.5	17.5	51.5
Garage Equipment	25.0	-	5.0	-	5.0	35.0
Garage Facility Addition	185.3	-	-	-	-	185.3
Fuel Depot Conversion	-	23.5	-	-	-	23.5
Technical Assistance (ST)	42.0	27.0	28.0	12.0	44.0	153.0
*Training (OJT & Institutional)						

*not includedin totals here, shown with the training cost table, page 22.

**Current dollar values.

APPENDIX A

DESCRIPTION OF THE DSPP UNIT

The existing transportation unit of the DSPP is a dichotomou system. It is severly constrained by: lack of physical resources (tools and equipment); lack of adequate work space; an obsolete fleet of vehicles; and a grossly inadequate maintenance and repair budget. Overall, however, the DSPP garage functions in an organized manner and manages to keep a fleet of vehicles on the road, many of which date from the mid-fifties.

The current (F.Y. 1976-77) budget for the DSPP transportation unit is (U.S.) $195,712.80 of which 48% is for salaries. Of the remaining amount ((U.S.) $101,140.00), (U.S.) $84,288 is for fuel for an unknown quantity of cars for several government agencies, and (U.S.) $ 11,872.80 is for the University Hospital. This leaves only (U.S.) $4,980.00 for parts and equipment. It has been estimated that it takes from (U.S.) $1,500 and $2,400 per year to fuel, maintain, and repair <u>each</u> vehicle. This does not compare favorably with the (U.S.) $66, spent per vehicle on maintenance and repairs by the DSPP.

The DSPP transport unit currently has 75 operating vehicles. They range in model year from 1953 to 1976 and come from 13 different manufacturers. The types of vehicles range from ambulances to dump trucks to jeeps to sedans just to name a few. Twenty three of the cars are assigned to health components in the regions; the remainder are used in Port-au-Prince.

There is no dispatcher or coordinated scheduling of trips for vehicle utilization. The mechanism for assigning vehicles to specific units and divisions is not clear, but definitely is not from within the transportation unit. The purchasing of vehicles is also done outside of the transportation unit. This function appears to be carried out by the chief of the division of finance in the office of the Director General.

The maintenance and repair of the DSPP vehicles (those with the Service Governmental (SG) license) is done at the transportation unit garage on Rue Americaine. The garage consists of a wooden shed facility with a dirt floor and 15 repair stalls. A number of partially scrapped vehicles, also occupy this area. These wrecks serve as an inventory of parts for repair work, since the DSPP garage does not have an inventory supply. Purchasing of maintenance and repair parts is carried out on a vehicle by vehicle basis. The purchasing process is very involved, and requires up to seven approval signatures. Parts often must be ordered from the states, which makes the process even more lengthy. It is not uncommon for the price of a part to increase between the initial pricing and the release of a purchase order. This means the whole process often must be done over.

The rate of breakdown or repair is very difficult to assertain within the DSPP. Garage personnel indicated the number of vehicles in for repair range from 8 to 12 at any given time. However the length of time for repairs, due to parts purchasing delays, probably distorts this pattern. Further, there is indication that preventive maintenance is not well scheduled in the DSPP--often being left to the discretion of the drivers. This is usually inadequate in multiple driver vehicles. SNEM seems to have developed some guidelines at least in the area of preventive maintenance. However, even these guidelines have limitations since they are tied to mileage, and the vehicles are driven at vastly differing rates--from about 5,000 miles/year to over 20,000 miles/year.

Major equipment at The DSPP garage is almost nonexistant. There is only one hydralic lift (uncovered) and no electronic equipment. Tire mounting is done totally by hand, and there is a very limited supply of hand tools.

The DSPP Garage is also a fueling depot for a large number of vehicles from several other government agencies, as well as the DSPP. This creates a constant flow of traffic through the work area.

The staffing at the DSPP garage consists of the following job titles and numbers of persons.

DSPP GARAGE (From the Le Moniteur)

Mechanic, Chief	1
Inspector	1
Mechanic	11
Chauffeur	70
Electrician	2
Upholsterer	1
Technician	5
Painter	2
Wharehouse person	3
Auto repair person	8
Carpenter	3
Helper	10
Apprentice	14
Supervisor	2
	133 persons

APPENDIX B

COST DERIVATIONS

VEHICLES

Assumptions

- o 30 Vehicles usable from current DSPP, 1970 or newer model year
- o 3 Vehicles at DSPP Hospitals: (1) ambulance type,
  (1) 9 passenger van,
  (1) pick-up truck.
- o 1 Vehicle at each health center, with or without beds (jeep type.)
- o 1 Motorbike at each dispensary, primarily for use in visiting outlying villages & front line health workers

Vehicles for the North or South regions are not included, they are supplied under the BID/OPS project.

North-West (Port-de-Paix, Gonaives)

Required: 2 Ambulances
4 9-passenger vans (2 axles)
4 Pick-Up Truck (2 Axles)
4 Jeep
17 Motorbikes (see special vehicles)
Currently Have: None

Central (St-Marc, Hinche, Belladere)

Required: 3 Ambulances
3 9 Pass. Van
3 Pick-up Trucks
4 Jeep
15 Motorbikes (see special vehicles)

Currently have: None

West (Jacmel, Petit Goave (part), Port-au-Prince (part))

Required: 2 Ambulances
2 9 Pass. Wagon
2 Pick-up Trucks
7 Jeep
35 Motorbike

Currently have: 1 Jeep
1 Ambulance

New Vehicles, All Regions

Ambulances	- 6
9 Pass. Van	- 9
Pick-up Truck	- 9
Jeep	- 14
Motorbike	- 67

Vehicles Needed To Replace Old Vehicles At The Central Motorpool

Ambulance	- 2
9 Pass. Van	- 17*
Pick-up Truck	- 4
Jeep	- 8
Flatbed Truck	- 10
Dump Truck	- 1
Bus	- 1

*For the sake of uniformity, current minibus & station wagon vehicles have been assumed to be replaced by 9 Passenger Vans.

Total New Vehicles (Purchased yr. 1-3)

			Unit (U.S.)	Total $ (U.S.)
4 WD	Ambulances	12	11,000	132,000
4 WD	9 Pass. Van	30	10,000	300,000
4 WD	Pick-up	17	9,000	153,000
4 WD	Jeep	22	5,000	110,000
	Flatbed Truck	10	14,000	140,000
	Dump Truck	1	15,000	15,000
	Bus	1	18,000	18,000
				$ 868,000

Special Vehicles Required By BEW Programs

- Expansion of mobile maintenance team concept (SNEM) to cover

Total Fleet	Unit $	Total $ (U.S.)
5-9 Pass. Vans (without spats)	10,000	50,000

- Facility maintenance person for 3 regions

3 - 1250 motorcycle	1,000	3,000

- Motorbikes for each dispensary in 3 regions

67 - Motorized bike (velomoteur)	300	20,100
1 - Ton Truck (Central Garage)	20,000	20,000
		$ 92,100

Vehicles To Be Replaced in Years 4 & 5 Due To Age

	Unit $	Total $ (U. S.)
5 Ambulance	11,000	55,000
2 Pass. Van	10,000	20,000
1 Pick-up	9,000	9,000
1 Bus	18,000	18,000
3 Sedan	9,000	27,000
		129,00

Stable Fleet Size 1981

From existing fleet (1974 or newer)	17
Purchased yr 1-3	93
Purchased yr 4-5	12
	122 Vehicles
	+ 3
	67 Motorbikes
	192 Total Vehicles

Purchasing Schedule (Proposed)

	Initial Repl' Central Garage		Year 1		Year 2		Year 3		Year 4-5	
	no.	$(U.S.)	no.	$ (U.S.)	no.	$ (U.S.)	no.	$ (U.S.)	no.	$ (U.S.)
Ambulance	2	22,000	6	66,000	2	22,000	2	22,000	5	55,000
Pass. Van	17	170,000	7	70,000	3	30,000	3	30,000	2	20,000
Pick-up	4	36,000	7	63,000	3	27,000	3	27,000	1	9,000
Jeep	8	40,000			7	35,000	7	35,000		
Flatbed Trk	10	140,000								
Dump Trk	1	15,000								
Bus	1	18,000								
Sedan									1	18,000
Motorcycle									3	27,000
Motorbike					3	3,000				
Ton Trk					20	6,000	20	6,000	27	8,100
Pass. Van			1	20,000						
			5	50,000						
Total		441,000 *		269,000 **		123,000 **		120,000 **		137,100***

* On Chart, Page 10, Distributed over 1st. 3 years, as $147,000/year as replacement vehicles.

** Additional vehicles.

*** 129,000 replacement, 8.1 additional vehicles

Fuel

Assumptions

- The DSPP/GOH will continue to purchase gasoline at 1/2 market price, in Port-au-Prince.
- An inflation rate of 8 percent per year for gasoline.
- An average of 15 M.P.G. for DSPP vehicles and an average mileage of 15,000 miles per year.
- An average of 80 M.P.G. for motorcycles and motorbikes and a mileage of 8,000 miles per year.
- Oil and Lubricants are part of maintenance costs.
- SNEM maintains its own budget for fuel.

The total gasoline needed to fuel the DSPP portion of the motorpool is:

	Gallons/Year/ Vehicle	Total Gallon
122 Vehicles	1000	122,000
70 Motorcycle (Motor bike)	100	7,000
		129,000

Price/Gal.	Yr.	$(US)
.50	1 Vehicle	61,000
	Motorcycle	3,500
.54	2 Vehicle	65,880
	Motorcycle	3,780
.58	3 Vehicle	70,800
	Motorcycle	4,060
.62	4 Vehicle	75,640
	Motorcycle	4,340
.68	5 Vehicle	82,960
	Motorcycle	4,760
	Total (US)	376,720

* This does not include the vehicles in the North and South regions, which are funded with UNICEF operating money

MAINTENANCE, REPAIR, EQUIPMENT

Assumptions

The cost for repair and maintenance per vehicles was based on an average of: the cost to repair each type of vehicle:

$1,800 per vehicle per year, HACHO;
1,100 per vehicle per year, SNEM;
66 per vehicle per year, DSPP.

Therefore the average cost was $1,000 per vehicle per year for preventive maintenance and repair. This cost can be broken down as follows:

Preventive Maintenance (1,000 miles) 15 per year @ $1	$15
Preventive Maintenance (6,000 miles) 2.5 per year @ $100	250
Annual tire change	150
Annual shock change	75
Annual spring change ($750 per 2 years)	375
Absorption cost of major repairs, overhauls and accidents	135
	$1,000

Total Maintenance and Repair

122 Vehicles X $1,000 per vehicle = $122,000 X 5 years = $610,000

EQUIPMENT

Major equipment will be needed to supplement the present SNEM equipment. An initial lump sum of $25,000 plus two supplemental amounts of $5,000 in years 3 & 5 will be needed.

Examples of equipment		Total Cost	
Air compressor & tank	Welding Equip.	year 1	$25,000
Tire mounter	Lubrication Equip.	year 3	5,000
Wheel balancing equipment	Tow Bars	year 5	5,000
Jacks, stands	Hoists, Portable		
Battery chargers	M.M.T. Tools	TOTAL	$35,000
Hand Tools			
Body Repair Tools			

TECHNICAL ASSISTANCE

1. Technical Assistance for the organizational and administrative details of the merger.

2 per X 45 work days X $152 per day = 13,680 X 1.74 overhead rate	$23,803
2 per X 60 days X $42 per day =	5,040
Transportation	700
Misc.	400
	$29,943

2. A transportation consultant to assist the mergered units to work out detailed logistic and technical problems, plan procurement of vehicles & equipment, conduct retraining programs, etc.

1 person X 45 work days X $152 per day = 6840 X 1.74 overhead rate	$11,901
1 person X 60 day X $42 per day	2,520
Transportation	375
Misc.	200
	$14,996

3. Transportation consultant to return in third year to evaluate the conditions & effectiveness of the merger.

1 person X 60 work days X $152 per day = 9120 X 1.74 overhead rate	$15,869

4. Transportation person and budget analyst or economist to assist in future planning, especially the shift from USAID support to DSPP sources

2 persons X 60 work days X $152 per day = 18240 X 1.74 overhead	$31,738

5. Miscellaneous other short-term technical assistance related to new equipment, short term training, and specific transportation problem solving--estimated to total 7.5 person months.

7.5 person months X $8,000 $60,000

The breakdown of expenditure for technical assistance over a five year period is as follows:

Year 1	$ 42,000
Year 2	27,000
Year 3	28,000
Year 4	12,000
Year 5	44,000
	$ 153,000

GARAGE FACILITY

Using the new combined fleet for workload calculations and assuming preventive maintenance in the regions will be done by the mobile maintenance teams--only cars in SNEM zone II, the SNEM central depot, DSPP West Region and DSPP central will get preventive service at the garage facility.

145 vehicles X 15 preventive maintenance services (PMS) per year = 2175 PMS per year

2175 PMSs per year ÷ 220 work days = 9.9 PMS per day

9.9 PMS ÷ 2 PMS per stall per day = 5 stalls

Assuming that 2 preventive maintenance visits in 15 are for 6,000 mile tune-up etc. and would require a whole staff the following increase in stall requirements would be necessary:

2175 PMS per year X 13 percent(2 ÷ 15) = 283 visits per year

283 visits per year ÷ 220 work days = 1.3 tune-ups per day or 2 stalls

Assuming that at any one time 10 to 15 percent of the total fleet (237 vehicles) would be in for major repairs (several days in a staff), between 24 and 36 stalls would be needed.

If the new addition has the oversize stalls (workbays) as does the existing SNEM facility, the peak loads could be absorbed by doubling up. In summary, the required stalls would be:

Preventive Maintenance	- 5
6,000 mile tune-up	- 2
Repair	-24
	31 stalls
Stalls currently at SNEM	19
Needed:	12 stalls

BUILDING REQUIREMENTS

12 stalls @ 360 sq. ft. (12 ft. X 30 ft.)	4320	
Additional inventory storage	500	
Toilets, showers	400	
Locker room	600	
	5820 sq. ft.	(541 sq. mtrs.)
Yard space (within building)	4500 sq. ft.	(419 sq. mtrs.)

COSTS

o Building - 541 square meters @ $60 (U.S.) per square meter	$32,460
o Interior yard space - 419 square meters @ $40 per square meter	16,760
o Plumbing drainage	3,000
o Electric/service/power	5,000
o New roof, existing Garage - 1200 m^2 @ $20 per m^2	24,000
o Paving, parking lot (2500 m^2 @ $10 per m^2)	25,000
o Additional wall or fencing	2,000
o Built-in equipment, Hydralic Hoists	50,000
25% overhead, fees, contingency etc.	27,055
TOTAL:	$185,275

Land acquisition costs will be absorbed by the Government of Haiti.

GASOLINE FACILITY

Assume that a separate facility is needed for fueling since this service is also provided to Government of Haiti cars outside DSPP/SNEM. This, in turn, creates a traffic burden on the repair compound, unless it is separate. This facility could be provided at a remodeled facility at the current site of the DSPP garage on Rue Americaine. An alternate would be at a remodeled portion of the SNEM facility with a new separate entrance.

Gas tanks (under ground) with concrete pad and a small building with enclosed office ($80\ m^2$ @ \$60 per m^2)	\$ 4,800
Wide gate (in/out)	1,000
Area paving 1,000 m^2 @ \$10/m^2	10,000
Plumbing	1,000
Electrical	2,000
Sub Total:	18,880
25% over head, fee, contingencys:	4,700
	\$ 23,500

TRAINING

A certain amount of on the job training and continuing education is always necessary for mechanics. This can be done at the garage with visiting instructors from local mechanic training schools.

The following cost estimates for on-the-job and institutional training would be required:

O.J.T. - 3 person months @ \$1,000 per month	3,000	
Equipment and texts	1,000	
	4,000	per year
Institutional - 6 persons per year @ \$2,000 per (2 - 6 month cycles)	12,000	
TOTAL	16,000	per year

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Agency for International Development
Regional Operations Division, Latin America
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PROJECT FOR STRENGTHENING HEALTH CARE IN HAITI

Report on Integrated Transportation System

Transportation Component for the Development of the Administrative Systems Improvement Plan

PREFACE

This report on The Integrated Transportation System constitutes the Plan for DSPP/SNEM Transportation System Integration required under this contract (item f. of Article I.c., as per modification no. 2). From a technical perspective, because this report expands upon Westinghouse Health Systems' initial (1977) assessment of DSPP transportation needs and because it addresses administrative improvements required in the area of transportation, the report also represents the second of two reports comprising the Transportation Component of the Administrative Systems Improvement Plan (item 1.g.(v) of Article I.c.).

The report specifies how Ministry of Health, SNEM, Division of Family Hygiene and Bureau of Nutrition resources may be combined with additional resource inputs to develop an integrated transport system to serve Haiti's health system.

The draft of this report was prepared in June 1978 by Westinghouse Health Systems consultants Mr. David Crichton and Mr. Ricot Jean, working together with DSPP staff. The draft materials were made available to the Bureau of Health Planning and Evaluation and to USAID/Haiti at that time.

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TRANSPORTATION SYSTEM

FOREWARD

The transportation system consists of many different organizational components which must be molded together in order for the system to become operational. These components are diversified as to organizational concept and purpose. Without each one, the total system will not work.

The purpose of this procedural report is to explain how each organization within the transport system works, as well as how the entire system functions. Further, it provides details as to what is required of each and how they dovetail together into one cohesive transportation system - one that is capable of supporting health care services for the people of Haiti.

In preparing this report, it was realized that it would be to the advantage of the many management personnel involved to be able to separate the transportation system into its component functional parts. Each part will then be a unit by itself capable of being utilized independently and as required. This report is divided into the required parts, therefore, so that each functional operation within the transportation system may be developed independently.

INTRODUCTION

One of the primary objectives of the Ministry of Health, Haiti is to provide an effective and responsive medical transportation system that will assist the government in upgrading health delivery services. In order to meet the transportation system objective it must be possible to move medical personnel, patients, medical commodities and other related services quickly from one point to another.

Many factors enter into the process of enabling the MOH transportation system to be responsive to the stated needs. This report deals with all factors involved in the development of such a system. It includes acquisition and replacement, maintenance, repair, spare parts, garages and gasoline, as well as administration and dispatching.

At the present time, four individual fleets are operating as well as two separate maintenance systems. Consequently, it is impossible to maintain all of these vehicles efficiently. These operations must be combined for effectiveness and economy.

Additional maintenance facilities will be required in Port-au-Prince and at selected sites within the rural areas to assure adequate maintenance support at the more distant points. Also, a spare parts warehouse must be provided. New maintenance support equipment is essential to maintain the fleet in operational condition. A gasoline dispensing point must be built to handle the expanded fleet effectively. Maintenance personnel now available in DSPP and SNEM will require extensive retraining.

In summation, the application of the principles and methods described herein should lead clearly to the goal of a single modern and efficient transportation network serving Haiti's health system needs.

PLAN FOR THE IMPLEMENTATION OF THE UNIFIED SYSTEM

Unification concerns the separate fleets of vehicles of four operating units in health: Ministry of Health, SNEM, Division of Family Hygiene and Bureau of Nutrition. The proposed plan foresees two phases in the development of a single system which will eventually operate more efficiently and economically to the advantage of the Ministry of Health and Government of Haiti.

Phase I

During this phase, unification of certain functions will take place in accordance with the Transportation System document under preparation by the Ministry of Health with the assistance of Westinghouse Health Systems. This unification includes the fusing or combining of the following:

a. Housing of vehicles in a single central garage and two field garages.

b. A single maintenance shop for repairs and preventive maintenance program, including the mechanical, electrical and body work, painting and motor overhaul.

c. A central depot for distribution and control of gasoline and diesel oil.

d. A central depot for spare parts including distribution to field garages and mobile units.

e. Training programs for staff improvement.

f. Unified system of recording work performance, cost analysis, budgeting and evaluation.

Phase II

During the second phase, the plan for finalizing the process of integration will be developed and implemented. This encompasses the fullest possible development and strengthening of Phase I activities as well as the integration of all vehicle utilization into a single system of dispatching and control.

Since the Phase I plan unifies vehicle services but not vehicle usage, the necessary steps in Phase II incorporate those that will achieve the goal of unity in MOH transportation. Such steps consist of the following types:

a. Administration
b. Organization
c. Dispatching
d. Operational norms
e. Cost analysis and evaluation

Five Year Plan 1979-1983

In the course of the five year period, 1979-1983, Phases I and II will be developed, implemented and finalized. These processes or series of events are predicated generally upon a year by year basis. While the steps are not to be followed according to a calendar, grouping of steps, by year, is presented herewith.

Year One

a. Garage - Plans for funding, site selection, and construction of new garage at SNEM will be completed, including new field garages located at Gonaives and Cayes.

b. Planning for renovation of certain existing structures, for spare parts storage facility and placement of underground gasoline storage tanks at SNEM will be completed and funded.

c. Start of construction and renovations will be undertaken.

d. Chief of garage will be in place and functioning.

e. Preparation and submission of orders for vehicles, spare parts, garage equipment, storage tanks, etc. will be accomplished.

f. Long-term technical consultant, to assist MOH in training and assisting mechanics and other technicians will be on the job.

g. In-service, on-the-job, training plans will be prepared in detail. Initial group of mechanics will commence recycling training for updating technical knowledge and skills.

Year Two

a. Components of the improved system of Transportation will be implemented. It is expected that the garage complex will be ready for use. This includes space for vehicle storage, spare parts, servicing and repairs, dispatching and control, gasoline storage and distribution, and for administration.

b. The field garages will be completed and ready for use.

c. Equipment for a and b above will be received and installed.

d. Vehicles will be stationed in the central and regional garages.

e. Dispatching systems for each of the 4 independent fleets will be developed and initiated.

f. Spare parts will be received and organized in the warehouse according to plan.

g. Spare parts will be deployed to field garages and to mobile servicing units.

h. Administrative organization will be fully implemented and operational. This activity includes selection of additional personnel, implementation of norms, orientation of administrative staff and activation of training programs.

i. Forms for requisitioning spare parts, for vehicle use, for repair, etc. will be in place. Instructions for proper use will be provided and interpreted to all concerned.

j. Centralized vehicle servicing, and repair will commence.

k. New vehicles will be incorporated into fleets and pre-1971 models removed according to plan.

l. Orientation of selected staff (MOH, SNEM, Bureau of Nutrition, Division of Family Hygiene) on goals, details, norms and methods to be utilized in development of the expanded transportation system.

m. Planning for MOH-SNEM overall integration.

n. Analysis of the implications of each step planned toward the goal of integration and unification of the entire transportation system, including fiscal, administrative, personnel and other factors.

Year Three

a. Final steps will be undertaken in full implementation of Phase I, of the Transportation System.

b. Analysis and correction of problems encountered in early stages of coordination of the four fleets will be underway with the help of Technical Assistance.

c. Disposition schedule will be finalized for mal-functioning, old vehicles.

d. Budget revisions will be developed relative to significant changes.

Year Four

a. Upon ministerial approval, the finalized, total integration plan of MOH-SNEM is initiated. Details of the plan include directives enabling coordination and integration procedures to advance as determined to be necessary by the commission on MOH-SNEM integration. These include detailed steps related to administration, budget, purchases, personnel, accounting and consolidation of vehicles into a fully unified system.

b. Phase I of the expanded and strengthened transportation system operation will have been in operation for three years. Using the technical assistance already proposed and budgeted, the Ministry of Health will evaluate the status of Phase I from the point of view of several aspects, such as: progress toward achieving stated goals; efficiency of operation of the component parts; i.e., vehicle housing and protection, gasoline control and distribution, cost-effectiveness of repairs and vehicle maintenance and efficiency of field garage operations. Utilizing the results of this evaluation plus the knowledge and experience gained, Phase II of the plan for final integration of all vehicles will be developed in detail.

c. The above requires at first an administrative analysis of the procedures, forms, controls, costs and staffing involved in each of the four distinct groups of vehicles. Subsequently, the degree to which these four systems have succeeded in achieving their goals, of service and of efficiency, must be studied.

d. Finally, benefitting from the accumulated information, along with data on vehicle utilization, preventive maintenance and repair effectiveness, as well as training programs, the plan will be prepared for implementation. It will include steps necessary for incorporating four distinct usage patterns into a single one, for centralized control and information on all vehicles, of all types, throughout the country and finally, for dispatching and usage. This will be based upon the most efficient use of each vehicle consistent with the goals of servicing the national health system. Norms and standards of operation will be components of the system.

e. An organization chart will be developed to show changes in the administrative structure. Changes will be reflected in personnel, supervision and in transministerial relationships. In turn, it is expected that a favorable impact upon the transportation budget will result.

Year Five

a. During this period, MOH-SNEM integration is expected to progress satisfactorily as norms are applied and questions are resolved.

b. The plan of implementation of Phase II of the Transportation System unification, having been approved by the Ministry of Health should be effectively functioning, even during the early stage. The necessary changes will be incorporated through administrative and organizational methods.

c. Technical assistance, as anticipated, will help the Ministry of Health to analyze progress as well as problems involved in Phase I operations. Analyses will be directed in part to savings effected by means of unifying all services as well as operations, and by the effect of positive training programs developed on a continuing basis.

d. It should be possible at this stage to determine such factors of economy as are reflected in such measurements as numbers of trips, number of vehicles required in the system, numbers of gallons of gasoline used per transport unit, replacement needs, etc.

SECTION I.

GARAGE AND TRANSPORTATION

GARAGE AND TRANSPORTATION SECTION

INTRODUCTION

The primary objective of the Garage and Transportation Section is to provide an effective and responsive medical transportation system that is capable of assisting the government in upgrading the health delivery system of the Ministry of Health. In order to meet this objective, the transportati system must be able to move medical personnel, patients, medical supplies and other services quickly and at the least possible cost. This movement does not happen by chance. It takes good management skills, planning, proper organization and dedicated personnel to be responsive to the medical needs of the people.

The above components will provide excellent, sound concepts, the basic essentials, to make a transportation system work. They will explain the actions that the Chief, Garage and Transportation Section and his personnel must be involved in, as well as organizational concepts that must be adhered to for efficiency of operation. Further, an explanation will be provided on the norms (requirements) as advocated by the DSPP Commission on Administrative Norms and their effect upon a sound system of transportation support. Finally, there is provided the organization chart, description and procedures of operation, job responsibilities, forms and their instructions for preparation. By following the information contained in these procedures, it will be possible to develop a sound system of transportation geared to supporting the delivery of health services to the nation.

REQUIREMENTS

OBJECTIVE

The objective of the "Garage and Transportation" Section is to ensure, in an inexpensive and effective way, the operation of the fleet of vehicles which are essential to the different activities of the department.

RESPONSIBILITIES

1. Contributes through the Organization and Method Bureau (O and M) to the study of the Department's need for vehicles of different types.

2. Participates in the selection of vehicles that are intended for the different services, central and regional, taking into consideration what they will be used for and the climatic conditions, etc. to which they will be exposed.

3. Helps the Administrator in the assignment of vehicles to the appropriate workers and services, considering the needs to be filled and the instructions of the Secretary of State and the Direction Generale.

4. Ensures a garage for the vehicles, with maximum security.

5. Establishes and promotes, with the approval of the Direction Generale, a system for defining and controlling distances and itineraries of the vehicles as well as the trips they make.

6. Studies and suggests to the Administrator the number of drivers needed, a system for recruitment of personnel for the section, the assignment to the different positions, the work schedule and the training that the drivers must receive.

7. Prepares and brings up to date, periodically, with the collaboration of the O and M Bureau, a code of operation of the vehicles of the Department which should stipulate precisely the rules of driving, the driver's ethics, the maintenance of the vehicle, its periodic check up by the Section, speed limit, trip ticket, mileage control, the precautions before and after the trips, and the steps to take in case of breakdown or accident.

8. Maintains and does periodic check-ups of the vehicles in service and repair of the non-functioning ones.

9. Supervises the work and comportment of the drivers with evaluation of their files (absences, poor discipline, number of accidents, results of periodic medical check-ups, vision control, use of alcohol, narcotics, license control).

10. Registers vehicles, tires and batteries, with a card file for identification.

11. Legal procedures relative to registration, insurance and inspection of the vehicles.

12. Distributes motor fuel and lubricants as in the catalog given by the Administration.

13. Quarterly presentation, to the Administration, of reports relative to the functioning of the Section, the need for equipment, spare parts for the maintenance of vehicles and emergency repair, state and use of the vehicles, the systems of control in force, the work and comportment of the drivers and other employees, change in job assignment, and repairs made during the current period.

ORGANIZATION

The Section consists of three services: transport, garage service, and administrative service.

1. The role of the Service of Transport is to:

   a. Check and locate the vehicles and control their circulation.

   b. Organize, supervise and evaluate the drivers's work.

   c. Proceed with the control of vehicles, tires, batteries and tools on board, and register them in series, make periodic inventories and establish card files.

   d. Comply with the legal formalities relative to traffic: registration, inspection, insurance.

   e. Take necessary steps in case of accidents or penalties.

   f. Keep the file of each vehicle up to date. (date of purchase, type, brand, cost, repair, date of check-up, date of replacement of batteries, tires, etc.).

   g. Keep each driver's file up to date.

   h. Organize distances and control the itineraries of the vehicles (mileage, trip tickets).

   i. Draw up a list of teams and emergency shifts for work hours and days outside of regular work period.

   j. Control and maintain an inventory of the material and equipment according to the laws and regulations of the Public Accounts.

   k. Provide the Chief of the Section with necessary information for the preparation of his reports and requisitions, point out any irregularity in the service and make suggestions for improving work conditions.

1. Organize the distribution of fuel and lubricants in agreement with the quota established by the Administration and approved by the Direction Generale and the Secretary of State.

2. The role of the Garage Service is to:

a. Garage vehicles within the area with maximum security.

b. Perform periodic check-ups and maintenance.

c. Repair vehicles in cases of breakdown and accident.

This service is composed of different workshops that have to be maintained at a level of maximum operational efficiency, as follows:

(1) Workshop for general mechanics
(2) Workshop for electrical systems
(3) Motor Diesel workshop
(4) Workshop for tightening and lubrication
(5) Workshop for painting and duco
(6) Workshop for tires

These workshops will be open every work-day from 7 A.M. to 2 P.M. The Chief of Service will be authorized, when necessary, to have some workshops run beyond regular hours of work, at overtime pay rates.

Teams and emergency shifts will be established for repair of vehicles outside of the garage and outside of the regular hours of work.

3. The Administrative Service

This service will be annexed to the Bureau of the Section Chief and used for Garage and Transportation. It is responsible for:

a. Secretarial work (typing, compilation of records, reception and information).

b. Book-keeping, preparation of requisitions, inventory and petty cash.

c. Functioning of the storage rooms (spare parts, tires, various tools).

d. Supervision and domestic services.

The Chief of the Section, assisted by the other technicians and staff workers, will be responsible for the operation of the Section. The O and M Bureau will establish, with the approval of the Administration and the Chief of the Section, administrative norms of operation and will suggest methods and procedures for simplifying the work, speeding up and augmenting productivity.

FUNCTIONING

The Service of Transports will organize and supervise the circulation of vehicles in agreement with the instructions given by the Administration to the Chief of Section. This service will also take care of the housing of vehicles providing the maximum security, supervision, inventory of tools, tires and batteries, etc.

The Service will assure that the vehicles are periodically checked and will give to the repair workshops "request for repair" approved by the Chief of Section.

The Service will function only according to the "request for repair" emanating from the dispatcher, signed by the Chief of Garage and Transportation and approved by the Chief of Section.

This Section will serve as a technical reference for regional garages for the training of personnel for the country on the whole, and as a garage and repair workshop for Port-au-Prince.

The details of these assignments will be established by the Bureau of Planification and Evaluation, the O and M, the Administration and the Chief of Section.

The Section will follow the general regulations governing the administrative activities of the department (accounting, personnel, purchases, inventory, etc.). It will submit a monthly report on the operation to the Chief of the Administration.

The Section will see to the organization and functioning of a permanent repair service that can operate all over the country. Only Department vehicles will be garaged and repaired.

PERSONNEL

The personnel will be composed of technicians, workers, and administrative employees having the necessary qualifications and experience.

The Chief of Section must have graduated from a recognized industrial school and have five years of experience in a well-organized garage and three years of experience at DSPP.

He will be assisted by: a graduate Chief Mechanic with five years of experience; and an Assistant Chief of Garage and Transportation who must have had three years of experience in a well-organized source of transportation.

Technicians and workers will be appointed by the Secretary of State on supported recommendation of the Chief of Section, via the Chief of Administration. Their number and allotment will be established in agreement with O and M, taking into account the volume of the activities.

Administrative employees will be submitted to the control relating to this category of personnel.

The Garage and Transportation Section personnel will consist of:

- Chief, Garage and Transportation Section
- Assistant Chief, Garage and Transportation Section
- Administrative Assistant
- Clerk Typist
- Chief Storekeeper
- Stock Control Clerk
- Warehouseman
- Purchasing Coordinator
- Dispatcher Central Garage, also in Charge of Service Station
- Chief of Service and Dispatcher (Gonaives)
- Chief of Service and Dispatcher (Cayes)
- Store and Toolkeeper
- Drivers
- Mechanics
- Gasoline Station Attendant
- Messenger
- Domestic
- Night Watchman

Hierarchy and Relation with other Services

The Section is under the Division of General Administration to whicl it presents its reports, requisitions, suggestions and complaints.

Outside of the routine activities (check-up of vehicles, breakdown service, minor repairs) its relationship to the different services is through the central administration.

Site

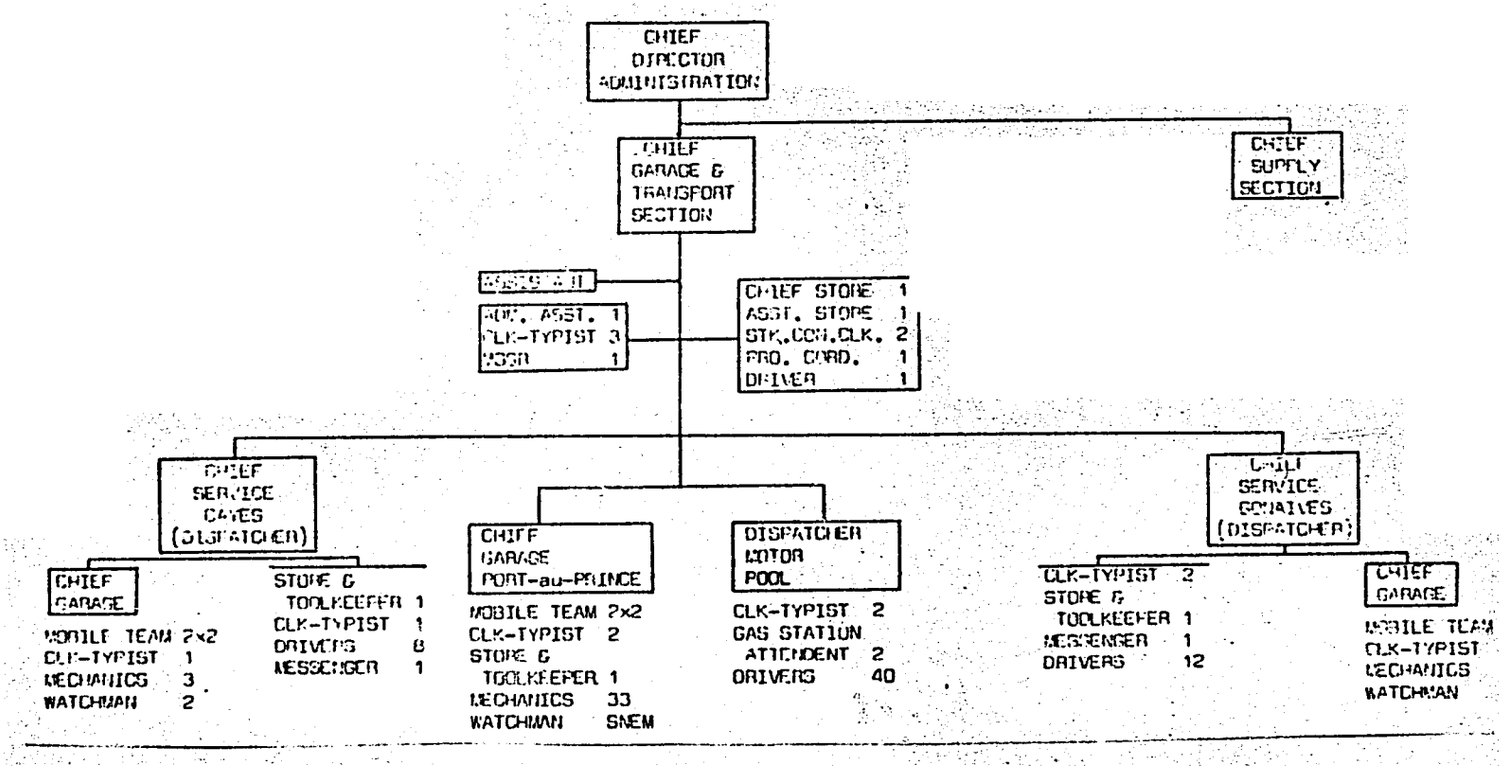
When DSPP has completed its garage complex for its different services, the Garage and Transportation Section will be installed in such a way as to give free access to the vehicles from the street without interfering with the normal functioning of the administrative offices.

Security measures will be taken, in agreement with the Section, "Constructions, Repairs and Maintenance" against theft, fire and other hazards.

The pumps for the distribution of gasoline and lubricants as well as the warehouse for combustible materials will be placed far from the workshop and offices. This plan offers safety and minimizes in the circulation of vehicles.

Only the Department's vehicles and those of its employees, will be permitted in the area of the Section.

ORGANIZATION CHART



DESCRIPTION OF OPERATIONS

DOSSIER DU VEHICLE PROCEDURE

The Administrative Assistant will prepare and maintain a Dossier du Vehicle (D.D.V.) for each DSPP vehicle. In this responsibility he will function as follows:

1. He will require that the Dispatchers in Gonaives and Cayes maintain a Dossier du Vehicle for each vehicle in each fleet.

2. He will have the Dispatchers in Gonaives and Cayes forward a copy of the Dossier du Vehicle for each of their vehicles.

3. He will maintain all operable vehicles in a serviceable D.D.V. file.

4. He will maintain an unservicable file for all non-operable vehicles.

5. When a vehicle comes out of the garage repaired, the D.D.V. will be removed from the unserviceable file. All repairs done will be entered on it, and then the D.D.V. will be placed in the serviceable file.

6. He will file as a matter of record copy 3 of the Shop Work Order.

STORE AND TOOLKEEPER PROCEDURE

The Store and Toolkeeper is responsible for materials under the supervision of the Chief Mechanic in the Central Garage, and the Dispatchers in Gonaives and Cayes. His functions are to receive, store and issue spare parts, as well as maintenance of tools.

As a Storekeeper he will:

1. Request and receive supplies.

   a. Requires the Chief Mechanic to provide a listing of the type and quantity of spare parts and other items to be carried as shop stock for a 30-day period.

   b. Checks the stock record cards for additional requirements based upon usage factors.

2. Prepares requisitions in seven copies.

3. Obtain the approvals and signatures of the approving authority.

4. Retain copy seven of requisitions in suspense file.

5. Forward copies one through six to Spare Parts Supply (See Section VI)

6. Receive supplies with requisition copies two and three if transportation is involved, if no transportation involved, copy two only.

7. Post copy two to stock record card.

8. Forward copy three to Transportation. If local pick-up is involved, this will not be required.

9. Place supply item in proper location in Shop Stock Storage.

10. Issue (See Flow Chart "Issue Procedure from Shop Stock", following)

As a Toolkeeper he will:

1. Request and Receive tools.

   a. Request the Chief Mechanic to prepare a listing of all tool requirements for mechanics.

   b. Check records of tools available for issue and then prepare requisition of needed tools in seven copies.

c. Retain copy seven in suspense file.

d. Forward copies one through six to supply source.

e. Receive tools with requisition copies two and three, if transportation involved; if no transportation involved, copy 2 only.

f. Post copy two to stock record card.

g. Forward copy three to Transportation, or if local pick-up, this will not be required.

2. Storage

a. Place tools in proper location.

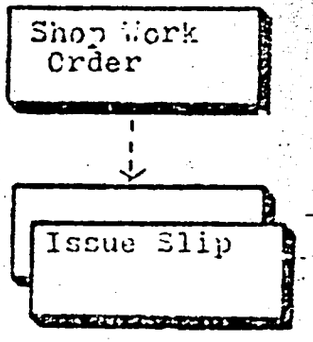
b. Assigned tools will be kept separately in tool boxes until issued.

c. General use tools will be placed on a tool board or other location depending on the type of tool.

3. Issue (See Flow Chart "Tool Issue Procedure").

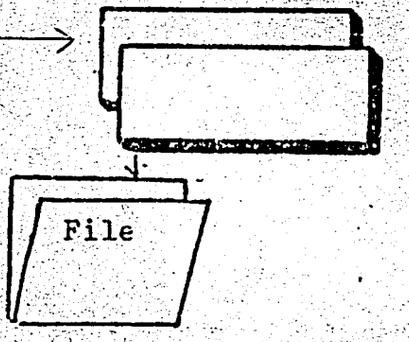
ISSUE PROCEDURE - SHOP STOCK

MECHANIC



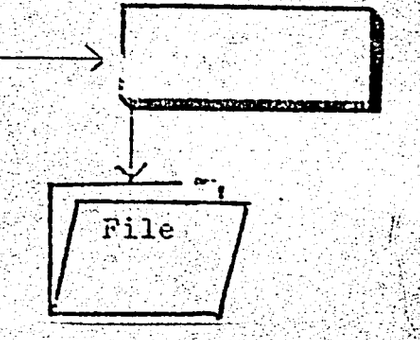
1. Mechanic using Shop Work Order prepares two copies of Issue Slip and assigns Work Order number.
2. Obtains signature of Chief Mechanic on the Issue Slip.
3. Takes Issue Slip to Storekeeper.

STOREKEEPER



4. Checks Issue Slip to make sure that all information is correct.
5. Assigns Issue Slip number, using next unassigned number, keeping in numerical sequence.
6. Fills in the quantity of supplies issued.
7. Obtains signature of mechanic receiving supplies.
8. Gives mechanic copy two for work order file.
9. Records issue on stock card, then files.
10. Maintains folder for record and for

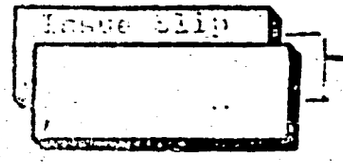
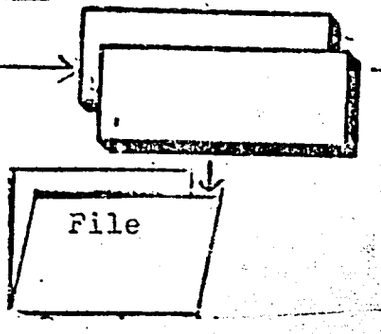
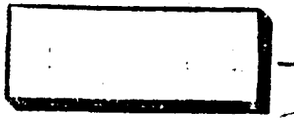
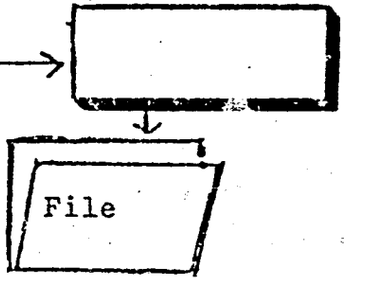
MECHANIC

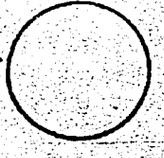
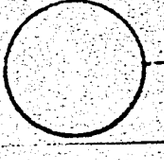


11. Retains copy two of Issue Slip in Shop Work Order File for a record of cost and parts required.

TOOL ISSUE PROCEDURE

Tools Assigned ▭ Tools General ◯

CHIEF MECHANIC	TOOLKEEPER	MECHANIC	CHIEF MECHANIC
			
1. Prepares Issue Slip in two copies when tools are assigned to mechanic. 2. Signs request block of Issue Slip, and forwards to toolkeeper.	3. Receives two copies of Issue Slip. 4. Has responsible mechanic sign for tools 5. Issues tools and signs Issue Slip indicating issue was made. 6. Records on stock card. 7. Copy two to mechanic. 8. File copy one.	9. Return copy two of Issue Slip to Chief Mechanic.	10. Maintains copy two of Issue Slip in a file folder as a record of tools assigned, and to whom they are assigned.

MECHANIC	TOOLKEEPER	MECHANIC
		
1. Each mechanic is assigned a numbered disk by the Chief Mechanic. 2. Presents disk to toolkeeper when general use tool is required.	3. Toolkeeper accepts disk. 4. Issues tool from tool board. 5. Places disk in place of tool on board.	6. Mechanic returns tool and gets his disk back.

JOB RESPONSIBILITIES

CHIEF, GARAGE AND TRANSPORTATION SECTION

Responsible to the Chief, Division of Administration, for the development of a transportation system that will support the goal of upgrading health delivery services to the Haitian people. Specific responsibilities are as follows:

1. Develops guidelines, policies and plans for the Garage and Transportation Section.

2. Compiles and analyzes requirements for the development of the transportation system.

3. Studies transportation movement activities to ascertain the effectiveness of the support system and to improve the efficiency of the operations.

4. Makes necessary adjustments to the transportation traffic pattern when required due to unusual circumstances.

5. Maintains current data on status of supply movement program so that additional vehicles can be added if required.

6. Maintains close contact with the maintenance program in orde to assure that the maximum number of fleet vehicles are in operation.

7. Assures that a well-supplied spare parts system is designed to provide backup support for the maintenance program.

ASSISTANT CHIEF

Responsible to the Chief, Garage and Transportation Section. Specific responsibilities to include:

1. Developing training programs to upgrade personnel qualifications of all subordinate personnel.

2. Supervising all training programs to assure their value in strengthening employee technical skills.

3. Acting in the capacity of the Chief, during his absence, or at other times when so required.

4. Understanding the duties of the Chief, thus assuring continuity in supervisory responsibilities and ongoing activities.

ADMINISTRATIVE ASSISTANT

Responsible to the Chief, Garage and Transportation Section, for all internal administrative functions to include:

1. Personnel matters

2. Receipt and dispatch of all correspondence

3. Maintenance of office files and records pertaining to the entire transportation system.

4. Written guidelines so that all subordinate personnel will be enabled to have a complete understanding of their responsibilities.

5. Procuring publications that are needed by all subordinate personnel within the Section in order to keep current with technical developments.

6. Providing operational statistics and information to subordinate units within the Section.

7. Preparation of all correspondence for the Chief, and Assistant Chief.

8. Prepares and maintains a "Dossier du Vehicle" for each DSPP vehicle in the transportation system.

9. Requires reports from those with responsibility for vehicles outside of Port-au-Prince when changes have to be made in location, so that an accurate record can be maintained for each vehicle.

10. Reviews all incoming orders, directives, and procedures that come from the Chief, Division of Administration, and assures that each is rerouted to correct subordinate units within the Section for necessary action.

11. Reviews all outgoing correspondence so that he may be knowledgeable of all actions going on in the Section.

CLERK-TYPIST

The Clerk-Typist will:

1. Receive and transmit all correspondence.
2. Type all correspondence and reports.
3. Prepare files and assure proper filing.
4. Type manifests, requisitions, or maintenance forms when so required.

5. Take messages, and pass on information.

6. Be responsible for the requisition, storage, issue, and accounting of office supplies.

7. Undertake all other secretarial work required by the responsible Chief, Assistant Chief, or other responsible person.

8. Operate the duplicating machine if available.

CHIEF STOREKEEPER

The scope of responsibilities incumbent upon the Chief Storekeeper encompasses the following:

1. Stock accounting
2. Document processing, authentication and filing
3. Requirements computation
4. Warehouse storage planning and control
5. Receipt, store and issue
6. Assist in inventory management
7. Advise in the disposal of excess items
8. Inspection
9. In-storage maintenance and fire safety
10. Liaison with Chief, Garage and Transportation
11. Training of subordinate personnel
12. Supervision of personnel of the spare parts supply organization.

STOCK CONTROL CLERK

Responsible for administering effective stock controls to assure proper stock accounting, verification of inventories, proper documentation, computation of requirements, establishment of a means to control standards and specifications of spare parts and other commodities required in the transportation system. Specific functions are as follows:

1. Maintaining records of current balances of commodities stored within the storage warehousing operations.
2. Maintaining a stock record card of information pertaining to any commodity in storage.
3. Preparation of inventory cards from the stock record cards.
4. Maintaining stock records on prescribed forms.
5. Administrative editing of all documents for completeness and accuracy of required entries and authorized signatures. Editing will include verification of requisitions, stock, maintenance activity control number, justification of quantity ordered.
6. Insuring that each incoming requisition is assigned a Voucher Number and is posted to the Voucher Register.
7. Responsible to assure that all entries posted to the Voucher Register are in ink or typewritten.
8. Responsible to assure that voucher numbers are assigned in numerical sequence beginning with number one (1), at the beginning of each fiscal year.
9. Processing of requisitions and forwarding them to storage for necessary supply action.
10. Processing of requisitions and maintaining a suspense file until requisition documents are returned from storage with supply action

WAREHOUSEMAN

Responsible for ensuring that warehousing space is properly used to maximize utilization of warehouse facilities. Assures that available and necessary material and manpower will be provided for economical and efficient operations in receiving, storing, maintaining, protecting, packing and shipping of all stored commodities. Is further responsible for maintaining accurate data for all commodities stored. Specific functions are as follows:

1. Maintains a locator system of locations for items stored.
2. Prepares stock cards as required.
3. Conducts location surveys on a scheduled basis and when special surveys are required due to incorrect locations.
4. Assists in accomplishment of prescribed inventories.
5. Responsible for the systematic numbering of all storage location
6. Responsible for proper storage of all commodities received.
7. Responsible for maintaining supplies in useable condition.
8. Plans the layout of all storage areas. Forecasts space requirements, plans and accomplishes rewarehousing as required for effective and efficient utilization of space.
9. Selects items from stock based on requisitions and delivers to shipping area for issue.
10. Responsible for checking, loading of commodities to be shipped out by transportation vehicles, or held for pick-up by mechanic.
11. Responsible for assuring that adequate documentation has been provided prior to shipment or pick-up of commodities.
12. Off-loads and checks all incoming commodities to assure correctness, quantities and condition. Also responsible to assist stock control clerk in preparing necessary documents for shortages, damages or unserviceable commodities.

13. Maintains supply of materials required to pack, brace or block materials while in shipment.

14. Maintains required shipping and receiving logs or registers that are required to assure control of commodities.

15. Responsible for the receiving, stock accounting, storage, maintenance of all commodities.

16. Responsible for fire and safety protection in all facilities under the control of Chief Storekeeper - Spare Parts Supply.

PURCHASING COORDINATOR

The Spare Parts purchasing coordinator is based in Port-au-Prince, and is responsible for:

1. The securing of pricing data of supply and other data required for requisitioning purposes.

2. Obtaining supplies from local dealers when so required by the Chief Storekeeper, or other responsible person.

3. Assisting in the shipment of supplies when so required.

This position requires an individual with sound judgment who can effectively handle significant responsibility. The coordinator must be able to work alone and without close supervision. When required to buy supplies, he/she will make sure that the purchased items will conform to the highest standards of quality and be economical. The individual is expected to be a licensed driver and can fill in as a supply driver when so required.

The spare parts purchasing coordinator and the medical supply purchasing coordinator must be cross-trained so that each can fill the position of the other when circumstances so require.

DISPATCHER

The Dispatcher, Motor Pool Central Garage, is responsible to the Chief, Garage and Transportation Section. He must properly supervise the control and dispatching of the DSPP fleet of vehicles, and provide petroleum products for the fleet. Responsibilities are as follows:

Motor Pool

1. Maintain control over all drivers to assure their efficiency, productivity and availability.
2. Dispatch all vehicles by the use of prescribed forms and records.
3. Maintain all records relative to the operation of the Motor Pool.
4. Maintain all records relative to driver qualifications.
5. Assure that drivers have all prescribed records prior to dispatching, e.g., trip ticket, accident report, etc.
6. Route dispatched vehicles to take advantage of maximum passenger and freight usage.
7. In the event that changes have to be made in vehicle usage and if directions have not been received from higher authority, the dispatcher will make the decision. He will then report to the Chief, Garage and Transportation Section, his action and its basis.

Gasoline Station

1. Maintain personnel control over the gasoline station attendants.
2. Maintain document control over receiving, storage, and issuing of all petroleum products required for DSPP fleet vehicle operation.
3. Maintain petroleum products dispensing equipment in operational condition.
4. Maintain adequate fire fighting equipment in operating condition.

CHIEF OF SERVICE AND DISPATCHER, GONAIVES/CAYES

Is responsible to the Chief, Garage and Transportation Section, for all actions necessary for a responsive transportation system within the Gonaives/Cayes areas. Responsibilities are as follows:

1. Garage
   a. To see that the Chief of Garage performs in such a manner that the garage will be run effectively and responsively and provide economical service.
   b. To advise the Chief of Garage relative to administrative decisions that effect the maintenance program.
   c. To make decisions relative to the maintenance program that are beyond the responsibility of the Chief of Garage.
2. Dispatching
   a. Maintains control over all drivers to assure that they are efficient and work productive.
   b. Dispatches all vehicles by the use of prescribed forms and records.
   c. Maintains all vehicles by the use of prescribed forms and records.
   d. Maintains all records relative to driver qualifications.
   e. Assures that drivers have all prescribed records prior to dispatching, e.g., trip ticket, accident report, etc.
   f. Routes dispatched vehicles to take advantage of maximum passenger and freight usage.
   g. In the event that changes have to be made in vehicle usage and directions have not been received from higher authority, the dispatcher will make the decision. He will then report to the Chief, Garage and Transportation Section, his action and its basis.
   h. Maintains a "Dossier Du Vehicle" for each vehicle assigned to the Gonaives garage, or the Cayes garage, and forwards a copy of each to the Administrative Assistant.

3. Stores and Toolkeeper

   a. Assures that a well-organized system of shop stock supply (spare parts and other maintenance items), is in operation and effective.

   b. Assures that the system for the control of tools is effective and secure.

4. Miscellaneous Duties

   a. Controls and is responsible for the work and actions of the clerk-typist.

   b. Controls and gives directions to the messenger.

TRUCK DRIVER

The truck driver's job is the safe operation of the vehicle placed in his charge, its protection and maintenance, and the safe transport of its passengers and cargo. Among the qualifications and responsibilities involved are:

1. The truck driver must be properly licensed. He is expected to obtain, at his charge, and keep in his possession, a valid driver's licence for the type of vehicle (s) he operates.

2. The truck driver must be in good health. He is expected to submit to physical and eye examinations upon request of the Dispatcher. Failure to submit to examination, or failure to meet the physical and visual standards necessary for the professional operation of vehicle will result in dismissal.

3. The truck driver is expected to know and obey the traffic regulations of Haiti, and exercise judgment and common sense in situations where no rules apply or are violated by others.

4. The truck driver is to transport only authorized passengers and cargo, and do so in a safe, timely, and conscientious manner.

5. The truck driver must report to the Dispatcher any damage to persons or property resulting during his operation of any DSPP vehicle. The truck driver is expected to know and understand the legal procedures involved in accidents. In the event of an accident the truck driver must follow these procedures exactly, reporting to the proper authorities, as required.

6. The truck driver is responsible for the mechanical condition of the vehicle assigned him, including its inventory of tools and spares. This includes:

   a. At least a daily check of oil, water, brake fluid, etc.; cleaning the vehicle; and checking important vehicle functions.

   b. Keeping up to date all records and logs required by DSPP and submitting them as required.

   c. Assuring routine maintenance as prescribed by DSPP regulations, and assuring repair of defective conditions. Where at all possible, the truck driver should be present during maintenance and repair operations. Unsatisfactory repairs or maintenance should be reported to the Chief Mechanic.

7. The truck driver's responsibilities naturally entail unusual work hours since it is he who must drive persons and cargo with a variety of different schedules. The truck driver is on call whenever needed, and should also expect to be asked to do such other work within his capabilities as the Regional Officer or the Central Office directs.

8. The truck drivers are in frequent contact with members of the communities in which DSPP works. The truck driver must conduct himself in a manner which reflects credit to DSPP.

9. It is the truck driver's responsibility to insure the safety of his vehicle, its passengers, and cargo. He is the person ultimately responsible and if he is asked to operate the vehicle in a manner which in his judgment endangers the safety of vehicl or passengers (e.g. overloading, excess speed), it is his duty to refuse.

10. The truck driver's job differs from that of an ordinary driver primarily in the added responsibility for valuable cargo, and the higher degree of driving skill needed to maneuver heavily laden trucks in traffic and over bad roads. Special judgment is called for in determining proper loads, operating speed, and in refusing the frequent demands to carry unauthorized passengers and/or cargo.

DRIVER

The driver's job is the safe operation of the vehicle in his charge, its protection and maintenance, and the safe transport of its passengers and cargo. Among the qualifications and responsibilities involved are:

1. The driver must be properly licensed. He is expected to obtain, at his expense, and keep in his possession, a valid driver's license for the type of vehicle (s) he operates.

2. The driver must be in good health. He is expected to submit to physical and eye examinations upon request of the Dispatcher. Failure to submit to examination or failure to meet the physical and visual standards necessary for the professional operation of a vehicle will result in dismissal.

3. The driver is expected to know and obey the traffic regulations of Haiti, and exercise judgment and common sense in situations where no rules apply, or are violated by others.

4. The driver is to transport only authorized passengers and cargo, and do so in a safe, timely, and conscientious manner.

5. The driver must report to the Dispatcher any damage to persons or property resulting during his operation of any DSPP vehicle. The driver is expected to know and understand the legal procedures involved in accidents. In the event of an accident the driver must follow these procedures exactly, reporting to the proper authorities, as required.

6. The driver is responsible for the mechanical condition of the vehicle assigned him, including its inventory of tools and spares. This includes:

   a. At least a daily check of oil, water, brake fluid, etc.; cleaning the vehicle; and checking important vehicle functions.

   b. Keeping up to date all records and logs required by DSPP, and submitting them as required.

7. The drivers' responsibilities naturally entail unusual work hours, since it is he who must drive persons and cargo with a variety of different schedules. The driver is on call whenever needed, and should also expect to be asked to do such other work within his capabilities as the Regional Office or the Central Office directs.

8. Drivers are in frequent contact with members of the communities in which DSPP works. The driver must conduct himself in a manner which reflects credit to DSPP.

9. It is the driver's responsibility to insure the safety of his vehicle, its passengers, and cargo. He is the person ultimately responsible and if he is asked to operate the vehicle in a manner which, in his judgment, endangers the safety of vehicle or passengers (e.g., overloading, excess speed), it is his duty to refuse.

ASSISTANT TRUCK DRIVER

The Assistant Truck Driver will:

1. Load and unload the truck.
2. Work in the Motor Pool as required when the truck is being repaired.
3. Keep the truck clean at all times.
4. Guard the truck and its cargo.
5. Undertake such other duties as may be specified by the Dispatcher.

ASSISTANT CHIEF MECHANIC

The Assistant Chief Mechanic:

1. Is a fully qualified mechanic capable of mechanical and electrical work of high quality on all types of vehicles and machinery.
2. Assists and works with the Chief Mechanic on such work as the Chief Mechanic shall assign him.
3. In the absence of the Chief Mechanic, the Assistant Chief Mechanic shall fulfill his responsibilities.
4. Supervises the work of the aides, or other mechanics assigned to work with him, paying special attention to improving their skills.
5. Requisitions tools and spare parts in the absence of the Chief.

MECHANIC

The Mechanic:

1. Has a level of mechanical skill and training allowing him to work independently under the direction and supervision of the Chief Mechanic.
2. Is responsible for supervising the apprentices and mechanic's aides assigned to him by the Chief Mechanic.
3. Is authorized to draw spare parts and tools with the approval of the Chief Mechanic. He is expected to maintain all supplies in good condition and be accountable for their use.

THE JUNIOR MECHANIC

The Junior Mechani

1. Has a level of mechanical training and skill allowing him to work independently though under the direction and supervision or the Chief Mechanic.
2. Is also responsible for supervising the Apprentice Mechanics assigned to him by the Chief Mechanic.
3. Accounts for all tools, equipment and material required to complete his task.

APPRENTICE MECHANIC

The Apprentice Mechanic:

1. Works under the supervision of experienced mechanics.
2. Receives training on the job to improve his mechanical skills. He must have enough experience to undertake routine mechanical tasks such as preventive maintenance.
3. Is responsible for keeping tools and the work area clean and in good condition. He is not authorized to draw spare parts or tools.
4. Studies his trade under the supervision of the mechanic and follows his recommendations.
5. Observes carefully the technical recommendations made by the Chief Mechanic.
6. Assists in cleaning the garage.

BODY REPAIRMAN AND PAINTER

The Body Repairman and Painter:

1. Is expected to be experienced in automotive painting and body repair work.
2. Will work independently although he is under the direction and supervision of the Chief Mechanic.
3. Demonstrates a high level of skill and responsibility concerning complete paint and body repair work of all vehicles.
4. Must be a good welder.
5. Is responsible for supervising the apprentice mechanics assigned by the Chief Mechanic.

The Body Repairman and Painter is authorized to draw spare parts tools and materials as needed with the approval of the Chief Mechanic. He is expected to maintain all tools and materials in good condition and be accountable for their use.

GASOLINE STATION ATTENDANT

The Gasoline Station Attendant is responsible to the dispatcher. His duties include the complete operation of the gasoline station. He must have the capacity to work independently.

He is responsible for receiving, storing, and issuing petroleum products. He must maintain the daily control report, and the monthly bulk petroleum accounting summary. He is responsible for accounting for all equipment and material required to operate the gasoline station.

MESSENGER

The Messenger is responsible for:

1. Carrying messages, performing errands and making purchases.
2. Opening the office or other place of business in the morning, and closing at the termination of working, as requested.
3. Assisting in security and fire inspection prior to closing of the office after working hours.
4. Other related duties as assigned.

DOMESTIC

The Domestic is responsible for general cleanup, including sweeping, mopping, washing and keeping the office or other place of business in good order. The Domestic works each day of the normal work week, and will be available for extra duty in case of an emergency

NIGHT WATCHMAN

The Night Watchman is responsible for:

1. The security of the garage area, equipment, vehicles, spare parts supply area, gasoline station, offices or other buildings or areas that pertain to the DSPP Garage and Transportation Section.

2. A continuous check to make sure that there are no fire hazards.

3. Maintaining the area that he is responsible for in neat condition.

4. The reporting of any unusual happenings during his tour of duty to his Chief or other responsible person.

FORM PREPARATION

DOSSIER DU VEHICLE

The Administrative Assistant will be responsible for the preparation of a "Dossier Du Vehicle" for each vehicle in the DSPP fleet as follows:

Basic Vehicle Data

1. Unit. Enter the number assigned to the vehicle.
2. Make. Enter make of the vehicle.
3. Type. Enter the type of vehicle, e.g., pick-up truck, sedan, etc.
4. Year. Enter the year vehicle was manufactured.
5. Chassis number. Enter chassis control number.
6. Motor. Enter the motor number assigned.
7. Key number. Enter the key number assigned each key for a given vehicle.
8. Origin. Enter where vehicle obtained.
9. Date. Enter date that vehicle entered the system.
10. Assigned. Enter location where vehicle is assigned.
11. Insurance. Enter the Insurance Policy Number for the vehicle.

Maintenance and Repairs

After the vehicle has been repaired and returned from the garage, it will then be necessary to use the Shop Work Order and fill in all the information required in this section of the D.D.V.

Expenses by Year and Mileage

A record must be maintained in this section of all expenses for a given year and the total mileage for the year. This section must be very accurate and complete because it provides budgeting information.

DOSSIER DU VEHICULE

Unité.................... Marque.................... TYPE.................... Année....................

Chassis No.................... Moteur.................... Key No....................

Source d'Origine.................... Date....................

Insurance No....................

ENTRETIEN & REPARATION				VALEUR DEPENSEE				
DATE	LECTURE SPEEDOM.	[illegible] Grd.	NOMBRE D'HEURES	PIECES	BATTERIES	PNEUS ET TUBES	Oil	Fuel

ENTRETIEN & REPARATION

DATE	LECTURE SPEEDOM.	[illegible] NO.	NOMBRE D'HEURES	PIECES	[illegible]	[illegible]	[illegible]	[illegible]

DEPENSES EFFECTUEES POUR LE VEHICULE PAR AN ET PAR KILOMETRE

	[illegible]	[illegible]	[illegible]
Nombre de kilomètres parcourus			
Nombre d'heures de répar. et d'entretien			
Coût de la main-d'oeuvre			
Coût des pièces			
Coût de la gazoline			
Coût [illegible]			
Achat de batteries			
Achat de pneus			
Coût total des opérations			
Coût des opérations par kilomètre			
[illegible]			

Nombre d'accidents par an
No. de série des batteries
No. de série des pneus
[illegible]

VEHICLE CONTROL REGISTER

When a request for a vehicle comes into the Motor Pool, the Dispatcher will immediately enter all information relative to the dispatching in the "Vehicle Control Register" as follows:

1. Date. Enter date for which vehicle is requested.
2. Vehicle requested by. Enter name, title, and organization of requester.
3. Destination. Enter where the vehicle is to go.
4. Time of request. Enter time request was received.
5. Assigned no. of vehicle. Enter the number assigned to vehicle. for control purposes.
6. Driver. Enter name of driver.
7. Time Out. Enter the time the driver starts his run.
8. Time In. Enter time that the driver is released by his passenger.

TRIP TICKET

The trip ticket will be prepared by the dispatcher for each vehicle that leaves the motor pool. All required blocks on the form will be filled in by the dispatcher and driver as follows:

Dispatcher

1. Vehicle Number. Enter the number assigned to each vehicle.
2. Make. Enter the make of the vehicle.
3. Type. Enter the type of vehicle, e.g., pick-up truck, sedan.
4. Driver. Enter the name of the user of the vehicle.
5. Utilizer. Enter the name of the user of the vehicle.
6. Period From. Enter the time the vehicle was dispatched from the motor pool.
7. To. Enter the time the driver returned to the motor pool.

VEHICLE DISPATCH.

CONTROL REGISTER

DATE	VEHICLE REQUESTED BY	DESTINATION	TIME OF REQUEST	ASSIGNED VEHICLE NUMBER	DRIVER	TIME OUT	TIME IN

Driver

1. Date. Enter date that the vehicle is to be driven.
2. From. Enter location from where dispatched.
3. Hour. Enter time of dispatching.
4. Mileage. Enter the mileage when dispatched.
5. Hour. Enter hour of arrival at destination.
6. Mileage. Enter the mileage on the vehicle at destination.
7. To. Enter destination.
8. Authorizing Trip. Name the person that authorized the trip.
9. Passenger. Enter the number of passengers carried.
10. Motor Fuel. Enter quantity of fuel added and number of ticket.
11. Motor Oil. Enter quantity of oil required.
12. Remarks. Enter any remarks considered necessary regarding the vehicle or other problems that might reflect information about the trip or passengers.

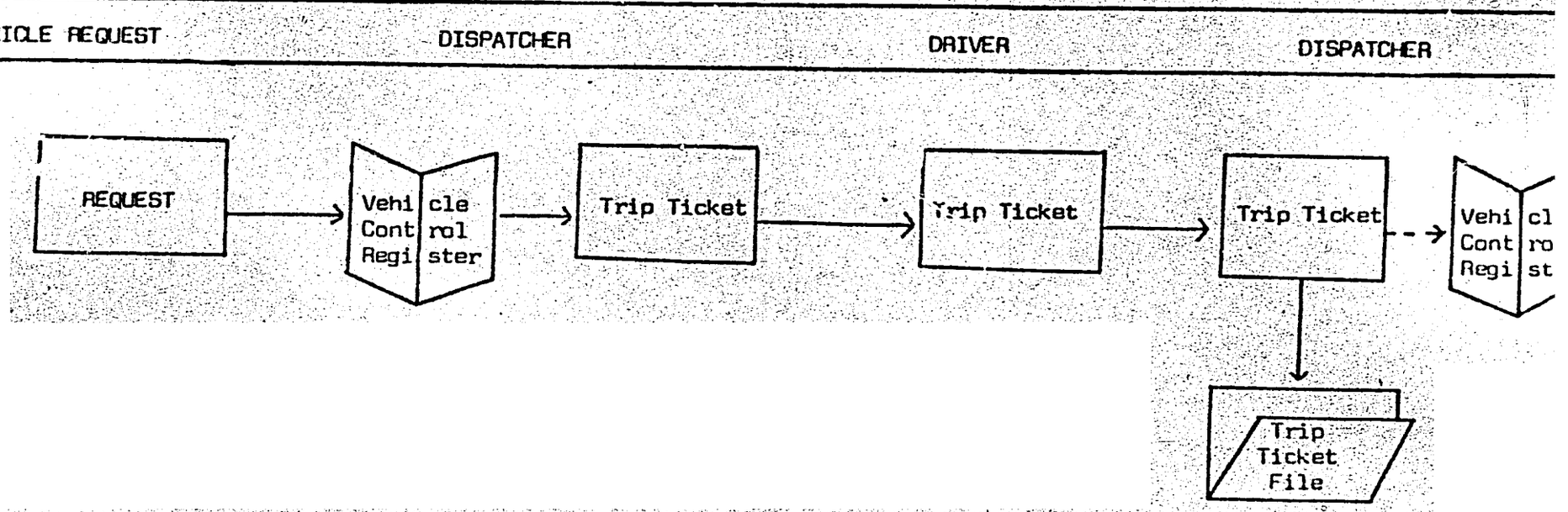
TRIP TICKET

Véhicule No. _____ Marque _____ Type _____ : Driver _____

Utilisateur _____ Période du _____ au _____

Date	De	Hre	Mileage	A	Hre	Mileage	Autorisé par	No. Pass.	Carburant Ajouté Quantité	No.	Ticket	Huile Moteur ou Gt.	Remarks

VEHICLE DISPATCHING PROCEDURE



requests transport indicating time required and type of vehicle needed.

1. logs request in Vehicle Control Register
2. assigns vehicle
3. assigns driver
4. prepares trip ticket

1. inspects vehicle (if problem discovered, reports to dispatcher)
2. carries out assignment
3. completes trip ticket
4. returns vehicle to Motor Pool

1. records trip ticket information in Vehicl Control Register
2. files Trip Ticket

SECTION II.

WAREHOUSING FOR SPARE PARTS

II. WAREHOUSING FOR SPARE PARTS

BACKGROUND

Maintenance can have a profound effect on the ability of a transportation system to carry out its assigned tasks. If the vehicles are well taken care of, then part of the battle is won. On the other hand, if vehicles are broken down and in need of repair, then the chances are that the maintenance program of the organization is not functioning properly. If improvement is not forthcoming, the ability to keep the vehicles operational will falter and die. When that happens there is no longer a transportation system, but only a fleet of inoperative vehicles.

To prevent this possibility from happening and to assure that the vehicles will remain operational, the maintenance program must be well organized. One of the most important factors in such a program is the adequacy of spare parts support. In fact, not only are spare parts required, but the flow of parts must be continuous and never ending. If the spare parts are available in the warehouse but cannot be located due to poor storage practices, then regardless of the quantity "somewhere in the warehouse", they are useless. The purpose of the descriptive material below is two fold: first, to provide better understanding of warehousing methods; and second, to illustrate how these methods can assist in providing a better system for storage and control of spare parts and related maintenance supply items.

GENERAL

Warehousing does not happen by itself with spare parts falling into their proper location. It requires advance planning of space layout. Size, shape, weight and type of item must be considered when planning how and where to store. If the item is seldom issued but must be kept for emergency, place it toward the back of the warehouse. If it is a fast moving item, place it where it is easy to get at. Never place a very small item of supply in a very large bin, or on a pallet or pallet rack, unless the quantity is great enough to allow full utilization of space. The warehouse supervisor must be able to plan his storage space and proper utilization of this space for efficiency of operation.

Available Storage Facilities

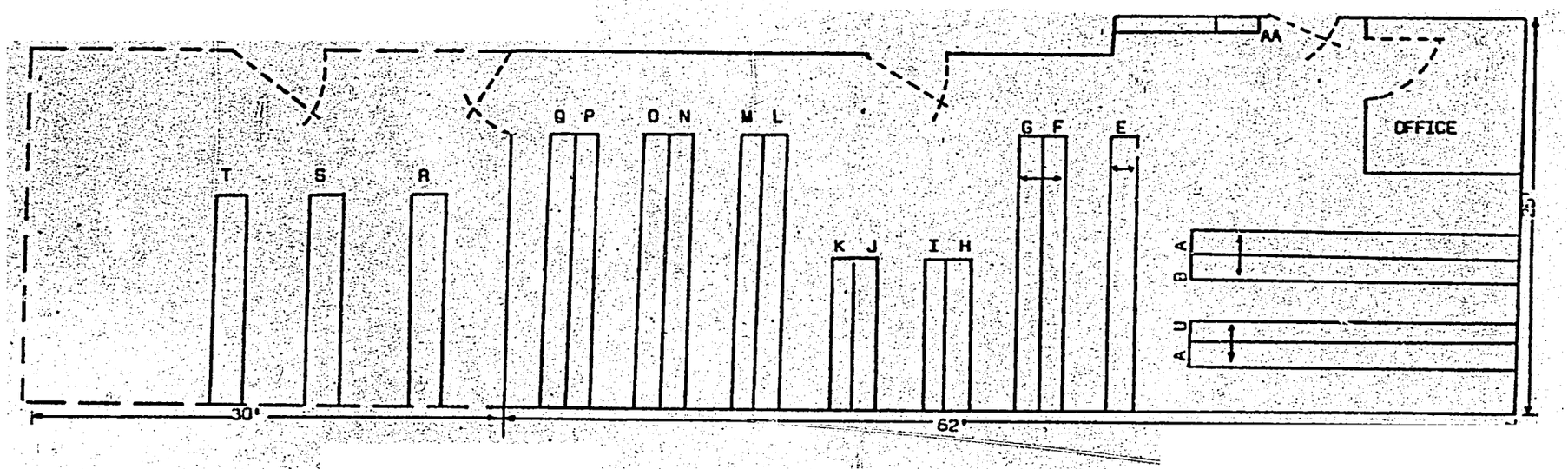
The central DSPP garage will become the complex for maintenance and parts supply for the transportation fleet. It will be located at the SNEM facility. In the event that the maintenance shops remain in their present location, it is contemplated that the spare parts warehouse will also remain in its present location, but be enlarged by about 800 sq.ft. (see Example No. 1). A large existing building will be used to store large rebuilt assemblies, e.g., repaired engines, transmissions, rear ends, springs and tires (see Example No. 2). If it is decided to move the maintenance repair shops to a different location nearby in the DSPP (SNEM) complex, then the warehousing will be reversed. This means that the present warehouse will be used to store rebuilt assemblies, tires, etc., and the new building to store spare parts.

Planning the Storage Layout

The fast processing of supplies through the cycle of receipt, storage and issue requires that the storage layout be planned carefully. It is necessary to know approximately how many spare parts and other maintenance items will be carried in the warehouse. Allow a minimum amount of space for work areas where receiving and issuing of supplies takes place. Except in an emergency, work areas should not be used for storage of supplies

SPARE PARTS
WAREHOUSE

PLANOGRAPH
(PRESENT)



Scale : 1/8" = 1"

Warehouse Planograph.

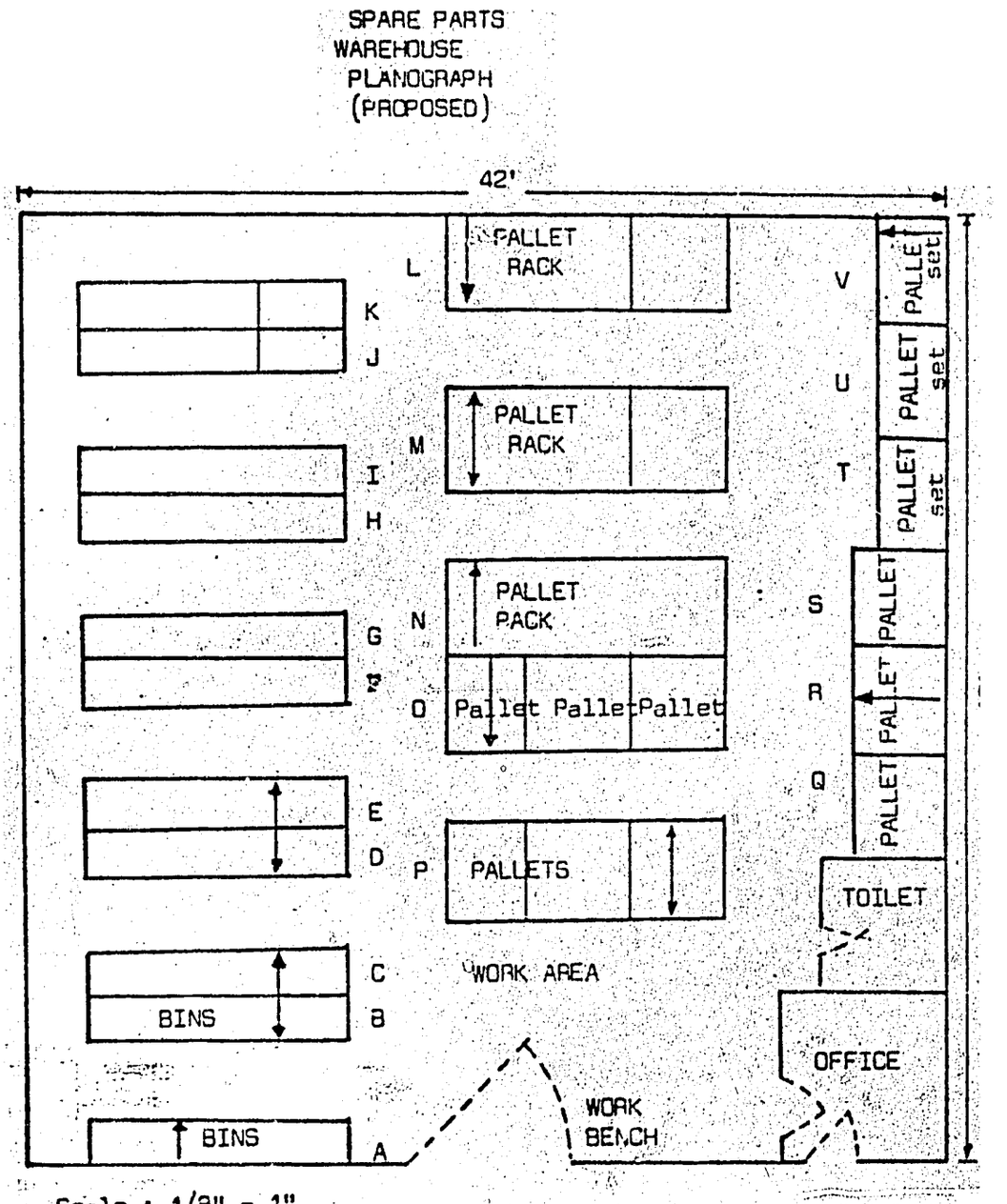
If the garage area remains in the present location and is renovated, this spare parts warehouse building will be renovated and expanded. Warehousing of spare parts will continue to be stored here and assemblies, tires and other large bulk supplies in proposed building.

The bin sections on the planograph are the suggested locations not where they are now located.

The office is planned. The - - - - - indicate the area of expansion.

Each bin section in the present warehouse is 15" deep x 36" wide x 8' high.

WAREHOUSE EXAMPLE NO. 1



Warehouse Planograph.

If the garage area is moved rather then renovated, this will be the spare parts warehouse. The present spare parts warehouse will then be used for warehousing of assemblies, tires and other large bulk supplies.

The planograph indicates proposed storage aids for storing spare parts, not what is presently there. With modification the present bin section could be utilized.

WAREHOUSE EXAMPLE NO. 2

Determine the aisle space by the type and size of 2-wheel hand trucks, or other types of material-handling equipment, that will be used in the storage area (see Figure no. 3). In planning, consider the characteristics of the items of supply and the capacity of the storage space.

Characteristics of items

The majority of maintenance supply items and spare parts require no special handling, although a few are combustible, crushable or easily rusted. It is necessary to assure that the few with these characteristics be considered by themselves. They require the right type storage aid and location. Each should be considered separately, then stored accordingly.

1. Combustible items - Store with petroleum products in separate structure.

2. Crushable items - Gaskets and hoses must be suspended. Light bulbs - store in drawers or protected surfaces.

3. Rustable items - Keep off floor on a storage aid. Watch closely. Keep dry or oiled.

Capacity of Storage Area

It is necessary to determine the capacity of storage according to the following factors: the physical dimensions of the area; location and size of doors and entrances; distances between structural columns; ceiling heights; capacity of the floor; position of the office or other interior structure that may hinder storage locations.

Preparation of the Storage Layout

In preparing the storage layout for maximum efficiency of space usage, it is necessary to develop a floor planograph scaled to 1/8 inch per foot on grid paper of the same scale. First, lay out the size and shape of the warehouse on the grid paper. The second step will be to plot in all interior structures, columns, doors and other entrances. What remains will be the usable floor space for supply storage, aisles, and work area. The third step

SPARE PARTS

WAREHOUSE

HANDLING EQUIPMENT

c. Wrecker truck. The wrecker (fig 11-8) has a hydraulically operated crane, which is mounted on the rear of the chassis. The hydraulic system is powered by the truck engine. The 2 1/2 ton wrecker has a lift capacity of 4,000 to 8,000 pounds, while the 5-ton models have lift capacities of 10,000 to 20,000 pounds.

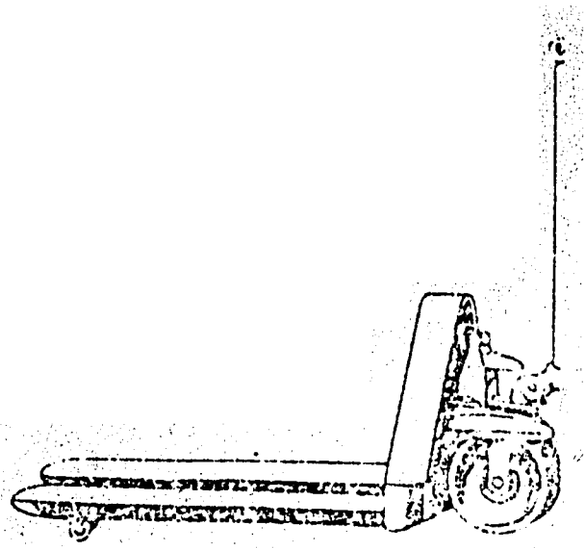


Figure — Handlift truck.

Nonpowered Materials-Handling Equipment

You may use nonpowered MHE for operations for which powered equipment is not needed or would not be economical. Some of the items of nonpowered MHE are given below.

a. Handlift truck. The handlift truck (fig) is sometimes known as the hydraulic jack or pallet jack. It is operated and guided by hand. It has two load-carrying forks that can be raised about 4 inches to carry palletized loads. This equipment is used mainly for short, level movements.

b. Two-wheel hand truck. The two-wheel hand truck (fig) is used in all types of situations where there are space limitations. The truck has two handles, a platform on which the load rests, and a pair of solid rubber wheels which are attached to the body of the framework. It has two metal legs on the top corners of the platform to help bear the load when the truck is resting flat on the ground.

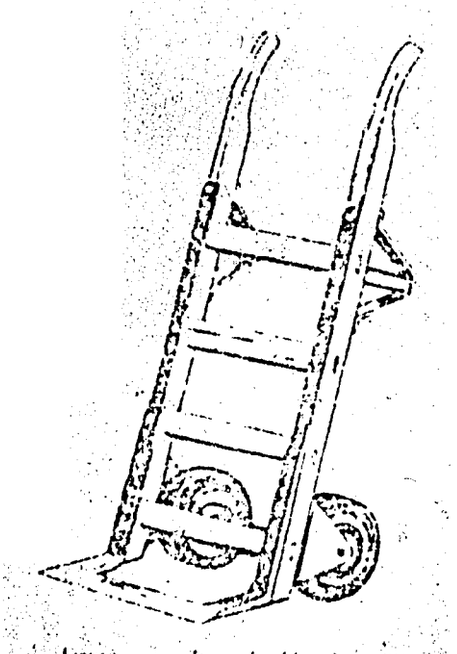


Figure — Two-wheel hand truck.

is to measure the size of the different types of storage aids to be used (see Example No. 4). The actual planning for these storage aids is as follows:

1. The size in feet of the different types of storage aids to be used should then be measured so that they can be plotted on the planograph layout.

2. It will then be necessary to calculate how many of these storage aids, by type, will be used. Initially this factor will be based on the Garage Procedure portion of this report.

3. After the estimate of the amount of spare parts and other maintenance supply items is known, the following procedures should be used:

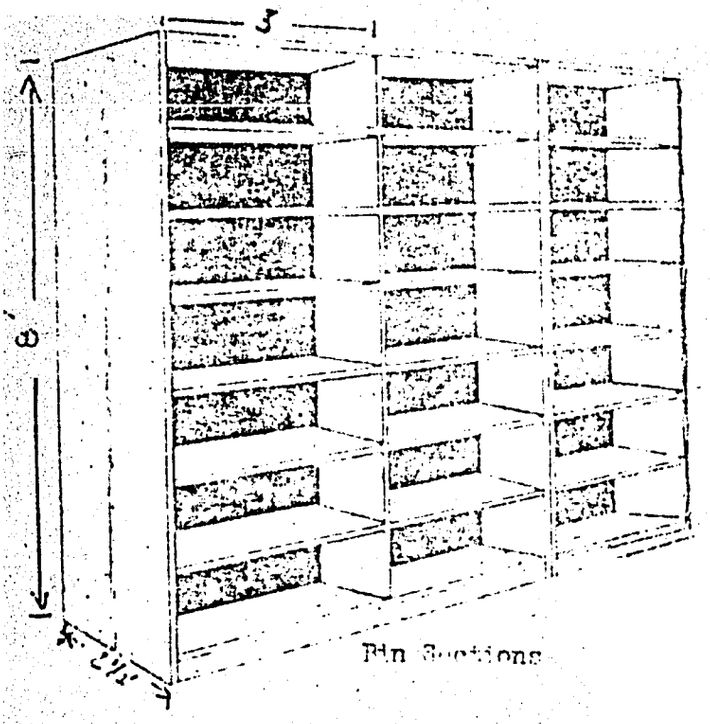
   a. Use one of the bin sections to determine approximately what quantity it holds, in terms of the different items of supply,

   b. Then the total quantity of the different items of supply required should be divided by the amount to be stored in the one bin section,

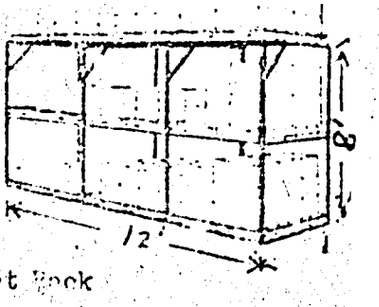
   c. This procedure indicates the number of bin section storage aids required for the warehouse,

   d. The estimated number of days of supply required for each item will also influence how much storage aid space is required,

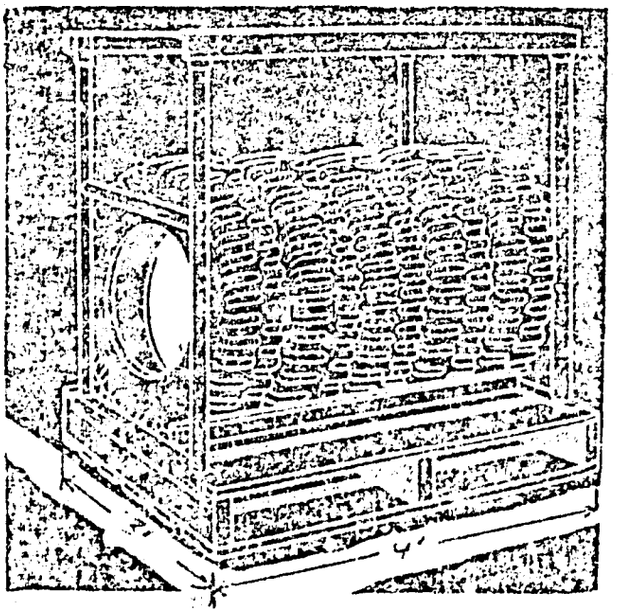
   e. Larger items, e.g., assemblies, springs, tires require other types of pallet racks, pallet support sets, pallets, etc. (each section, pallet rack is 48" x 48", each support set is 36" deep x 48" wide; each pallet is 48" x 48"),



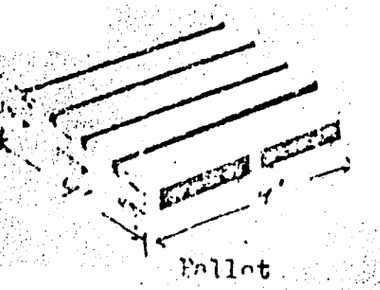
Bin Sections



Pallet Rack



Pallet Support Set



Pallet

Suggested Storage Aids

WAREHOUSE EXAMPLE NO. 4

4. It is now possible to plot the actual storage aids on the planograph according to the numbers and type required,

5. The next step is to actually plot in the storage aids on the scaled planograph (an example is given in Example No. 5). This has been scaled 1/2" = 1" (oversized) to show method of plotting. If, as in Figure No. 5, the warehouse area is 13' wide with a 3' door opening and the bin row is 2' x 9', for a total of three bins each, these may be plotted as indicated on the grid paper. The first bin row would be from East to West with the bin openings facing North. Leave a 3' aisle and place the second bin row facing the first bin row. Place the third bin row back to back with the second bin row. The warehouse area now has 3 bin rows consisting of 9 bin sections. If each bin section holds 50 different spare parts, then the total to be stored in this sample warehouse area would be 450 different spare parts.

Storage Criteria

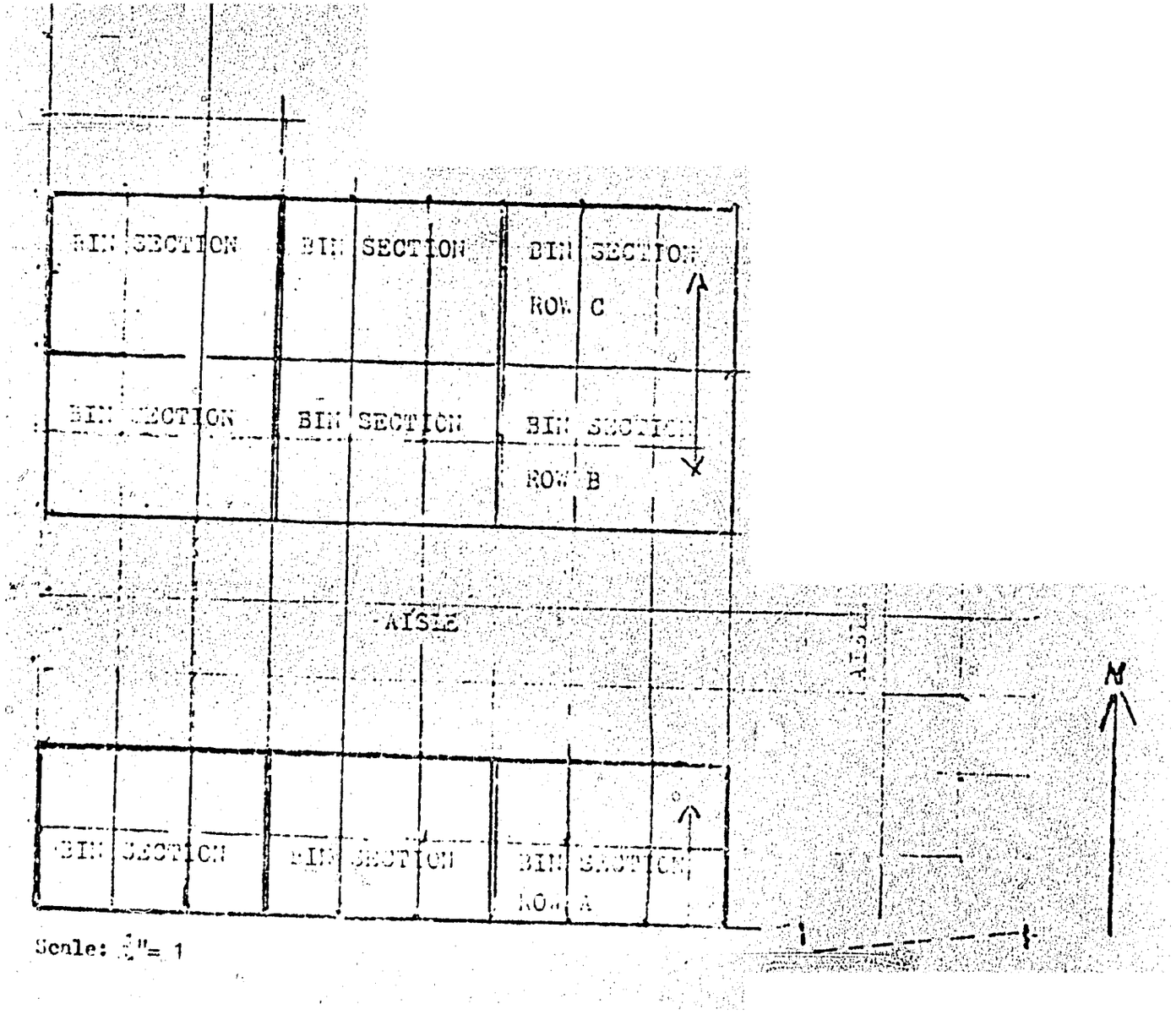
After it has been determined the next stage to consider will be the method of storing the items of supply. This may be done as follows:

1. Store spare parts and other maintenance supply items by the nature or general purpose of the item, e.g., transmissions will be located, grouped together in the storage area, in alphabetical sequence by manufacturer, Chevrolet, Datsun, Ford, etc.

2. Spare parts and other maintenance supply items that are unique for a given manufacturer will be grouped by the assembly that they are intended for, e.g., all spare parts for a transmission will be in one bin shelving area or more if needed, e.g., under transmission, the spare parts will be by manufacturer, in alphabetical sequence, e.g., Chevrolet, Datsun, Ford.

3. All general use items such as tires, light bulbs, bolts, nuts, hose, gasket material, etc. will be stored in an area that is reserved for items of this type.

DSPP
SPARE PARTS
WAREHOUSE
PLANOGRAPH



EXAMPLE NO. 5 Suggested Warehouse Planograph

4. Consideration must be given to the size, shape, weight, etc., of the item to be stored. If it is a large item,then the "pallet rack" or a "pallet" should be used. If it is a tire, then the "pallet support set" should be used to keep from deforming the tires. The "pallet support set" can be stacked 3' high, (see Example No. 4). Small items should be placed in bin storage. Several different spare parts can be stored in one bin opening but each different item must be tagged, or have a bin card, for easy identification. Otherwise there is a possibility of a lost item of supply.

5. Light weight items should be at shoulder height or higher for ease of handling. Large heavy items should be stored lower so that they can easily be placed on two-wheel hand trucks or moved manually without too much lifting.

6. Small, easily lost spare parts and general use items (points, light bulbs, condenser, etc.) should be placed in cabinets (see Example No. 6).

Storage Location

Since several hundred items will be stored in the DSPP spare parts warehouse, a system of stock location must be maintained to assure that issue of the items can be made without undue delay. The system must be simple so that it will be easy to understand by all personnel.

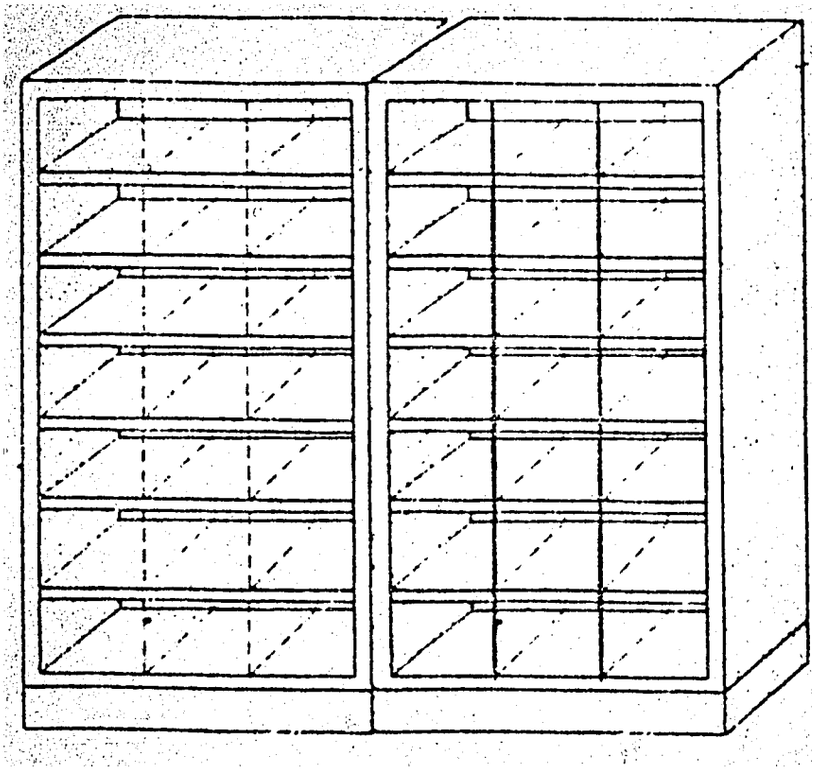
Setting up a Locator System

The first thing to do is to look at the planograph, then assign the locator system to rows, section, level and segment (see Examples Nos. 7 and 8).

1. Rows - All rows of bins, pallet racks, pallet sets or pallets will be alpha in sequence.

2. Sections - All sections, bin sections, pallet rack sections, pallet sections, or each pallet in the row will be given a number in sequence.

DSPP
SPARE PARTS
WAREHOUSE
STORAGE AIDS



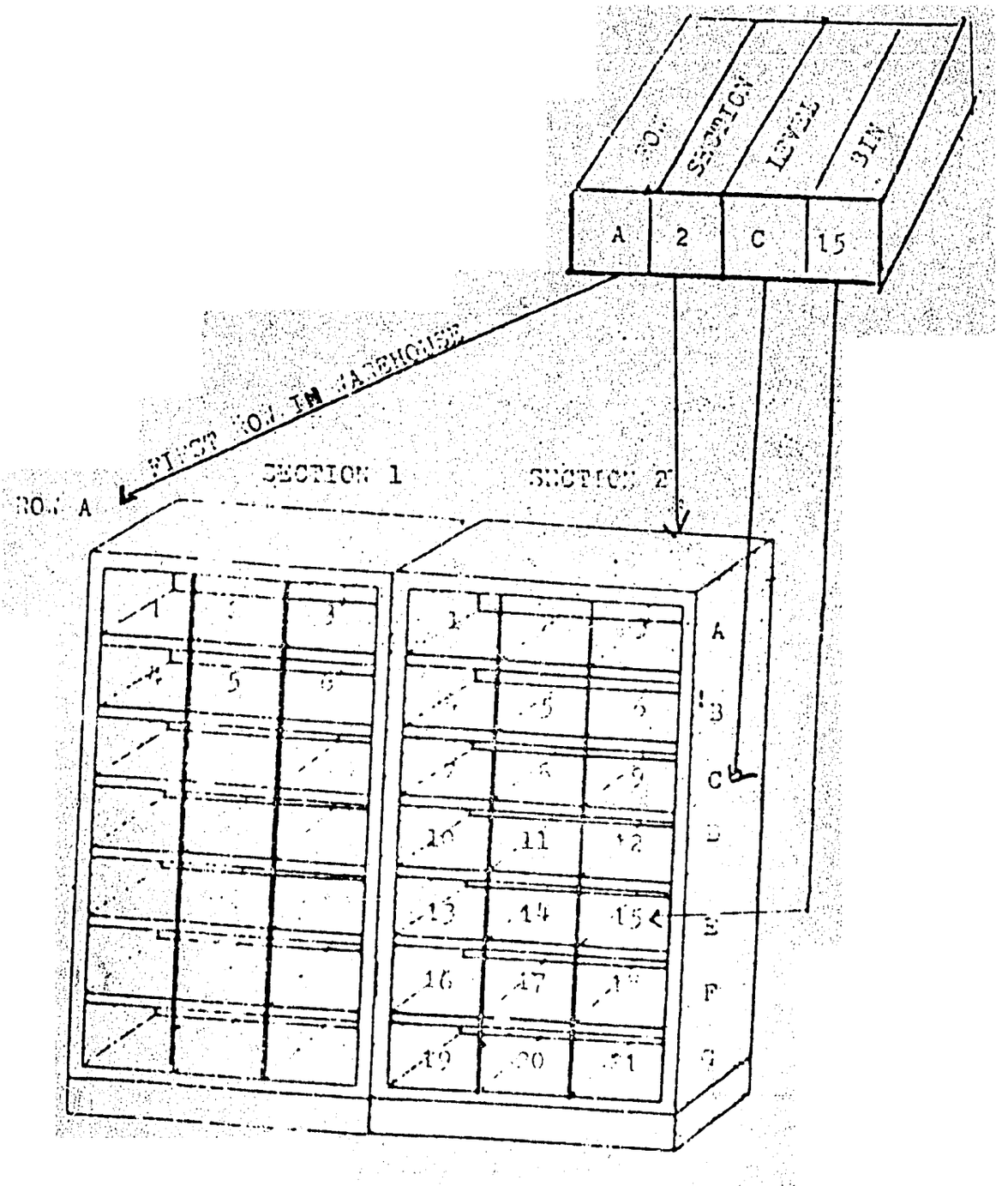
Suggested Storage Aids

WAREHOUSE EXAMPLE NO. 6

SPARE PARTS

WAREHOUSE

STOCK LOCATOR NUMBERING SYSTEM



Proposed Stock Locator Numbering System
WAREHOUSE EXAMPLE No. 7

STOCK LOCATOR CARD

STOCK/PART NUMBER	PREVIOUS STOCK/PART NUMBER

ITEM DESCRIPTION

STOCK LOCATION RECORD

LOCATION				
ROW	SEC.	LEVEL	LIN	

UNIT OF ISSUE	UNITS PER PACK

DATE RECEIVED	SERVICEABLE	UNSERVICEABLE

BULK LOCATION

ROW OR GENERAL AREA

REMARKS

STOCK LOCATOR CARD

Stock Locator Card (Suggested)

WAREHOUSE EXAMPLE NO. 8

3. Level - Each level in the bin section will be alpha from top to bottom.

4. Bin - Each bin opening in the section will be numbered from left top bin and ending with the right bottom bin (see Example No. 7).

Stock Control Office and Warehouse Equipment

In order to operate the office and warehouse efficiently, it is necessary that appropriate types of equipment be provided. Some of the equipment will be the type that is normally used in an office, while other types will be used in the warehouse. The different types of aids and equipment for an efficient supply support operation are as follows:

Stock Control

1. Typewriter
2. Adding machine or calculator
3. File cabinet
4. Cardex filing cabinet, tub files
5. Desk
6. Chairs
7. Wastebaskets
8. Telephone
9. In/Out trays
0. Scissors
1. Air Conditioning System
2. Hand Counter (Vouchering)

Storage (Warehouse)

1. Work tables
2. 2-Wheel hand truck
3. Handlift truck
4. Bin Sections
5. Pallet Support Sets
6. Pallet Racks
7. Pallets
8. Hand tools (hammer, crowbars, snippers, screwdrivers, etc.)
9. Desk
10. Chair
11. Counter issue
12. Banding material
13. Miscellaneous (material for packaging)
14. In/Out trays

SUMMARY

A great deal of work is required to achieve a well-organized supply operation. Advanced planning of space requirements and its use is a prime consideration. "What is available or can be made available for storage of supplies is one factor. The layout of all storage aids on a planograph is important since this type of planning permits supplies to be assigned to a specific arrival. A locator system assures that items of supply will not become lost, once stored. Storage handling equipment is essential so that warehouse personnel may work efficiently. Stock control personnel must have sufficient equipment and aids to maintain accurate control." If the supervisor of spare parts warehousing considers all of the above measures in his planning, the basic requirements for a successful operation will be in place.

SECTION 3

GARAGE COMPLEX

III. GARAGE COMPLEX

GARAGE SPACE COMPOUND CENTRAL GARAGE

SNEM is operating a garage suitable for 16 vehicles. A larger fleet of approximately 175 is anticipated. The present garage cannot accommodate the additional vehicles.

To meet the space requirements of an enlarged fleet, two alternatives exist:

1. Improve the present garage and make it larger.
2. Build a new garage at the East side of the existing property on empty land.

Following discussions with DSPP, the decision was reached that, a new garage structure is the better of the two options.

The following description provides the details of the space needed for the central garage.

To repair a vehicle, a surface area of 36 sq. meters is needed. This space, or section, has been utilized in planning total space requirements. The number of sections that will be used in the garage and the overall space required for each section is provided below.

Shop Space Requirement

Section	No.of Vehicles	Space Required (square meters)
Grease and Lubrication	2	72
Wheel Alignment	2	72
Tune up	2	72
Electricity	2	72
Battery	1	36
Regular Repair	3	108
Transmission, Differential, Motor Replacement	4	144
Tires	1	36
Body Repair	3	108
Paint	2	72
Repair of Motors	1	36
	TOTAL	828

Other Garage Space Requirement

Engine Overhaul

For the mechanic working on engine overhaul, a room or space 11m x 14m (154 sq. meters) is required. This room will serve also for engine stockage.

Tool Room

All the tools for the garage and for the mechanics will be in one room. This requires a surface area of 12.50m x 10m (125 sq. meters).

Warehouse

The warehouse will be located in the vicinity of the garage to facilitate securing needed spare parts. The warehouse will have a surface area of 9m x 25m (228 sq. meters).

Bathroom

A bathroom with three water closets and three showers will be included. This area will measure 3.6m x 10m (36 sq.meters) serving about 40 employees.

Gasoline Station

The SNEM garage is operating a gas station with one gasoline pump. This is not adequate to serve the new, merging fleet. Two types of vehicles will be served; those with the regular engine, and those that use the gas-oil as motor fuel. Two pumps for the gasoline and one for the gas-oil will be required.

According to the physical location of the property, three pumps should be located in front of the present parking area, for effective traffic control.

The East part of the property is empty. To prevent traffic problems between the vehicles coming in for gasoline and going out or leaving from the garage, a new gate at the East side must be constructed. The vehicles will come in through one gate and be routed to go out through the next one.

Outdoor Parking Space

The new garage will be able to hold 22 vehicles in process of repair. Outdoor parking for at least 40 vehicles must be anticipated. The parking for one vehicle requires space of 3m x 6m (18 sq. meters). For 40 vehicles, 720 sq. meters of space is required.

Total Space Requirement for Central Garage

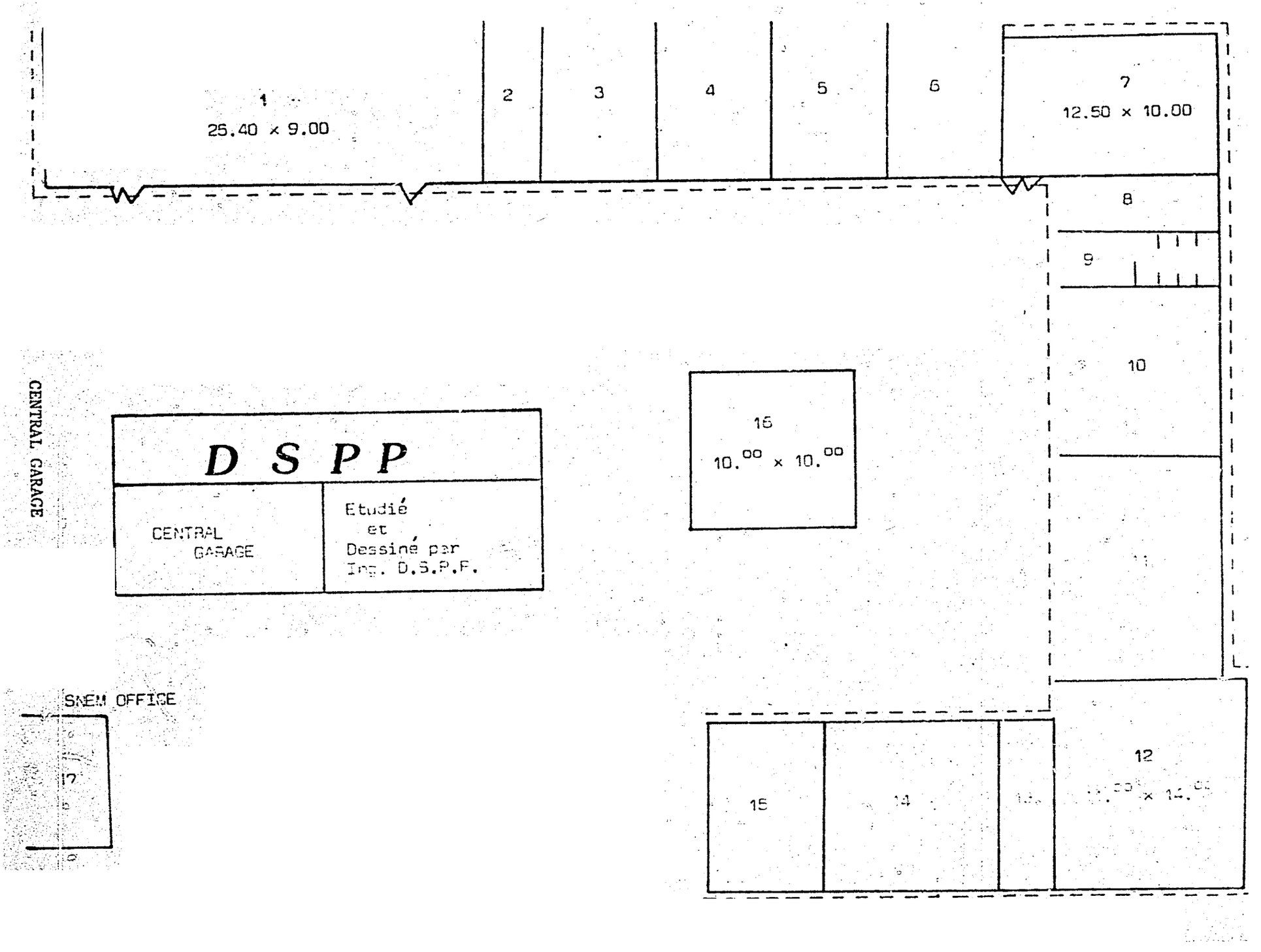
Indoor	Square Meters
Space for Repair	828
Engine Overhaul	154
Warehouse	228
Tool Room	125
Toilets	36
	1,371
Outdoor	720

Cost Estimate

Garage building	1,371m^2	@ $ 80.00 =	$109,680.00
Administration building	100m^2	@ $150.00 =	15,000.00
			$124,680.00
Engineering Fees	10%		12,468.00
			$137,148.00

Central Garage Floor Plan (Code)

1- Warehouse
2- Battery
3- Electricity
4- Tune up
5- Grease and lubrication
6- Wheel Alignment
7- Tool Room
8- Motor Repair
9- Toilets
10- Regular Repair
11- Transmission and Differential
12- Engine Overhaul and stockage
13- Tire Repair
14- Body and Welding
15- Paint Shop
16- Administration Building


1
25.40 x 9.00
2
3
4
5
6
7
12.50 x 10.00
8
9
10
11
15
10.00 x 10.00
CENTRAL GARAGE
D S P P
CENTRAL GARAGE
Etudié et Dessiné par Ing. D.S.P.P.
SNEM OFFICE
12
15
14
12
11.50 x 14.00

Garage Space Compound (Cayes - Gonaives)

The SNEM office and the garage are located in rented space at both Cayes and Gonaives. The SNEM garage is located in the backyard of the office and is available for only a few vehicles. The other vehicles are parked on the sidewalk. The DSPP garage has a simple parking area for two vehicles located in the yards of both Gonaives and Cayes hospitals.

To provide appropriate space, it is recommended that property at the DSPP hospital in Gonaives be utilized for construction of a new garage. This property measures about 140m x 80m. It is bounded by the National Road, at the southern entrance of the town. This situation will not create any inconvenience. For Cayes, about 700m^2 of land can be purchased near the Institut de Developpement Agricole et Industriel (I.D.A.I.), if Governmental property cannot be found.

Other Garage Space Requirements

The warehouse will be built with a surface area of 15m x 7m (105m^2). The toilet will require a space of 3.6m x 7m (25.20m^2), providing for a water closet and two showers.

The tool room will be 6.5m x 7m (45.50m^2).

Total Space Requirements (in square meters)

Shop Space Requirements	396.00	
Tool Room	45.50	
Warehouse	105.00	
Toilet	25.20	
	571.20	square meters
Building Administration	28.00	square meters

Gasoline Status

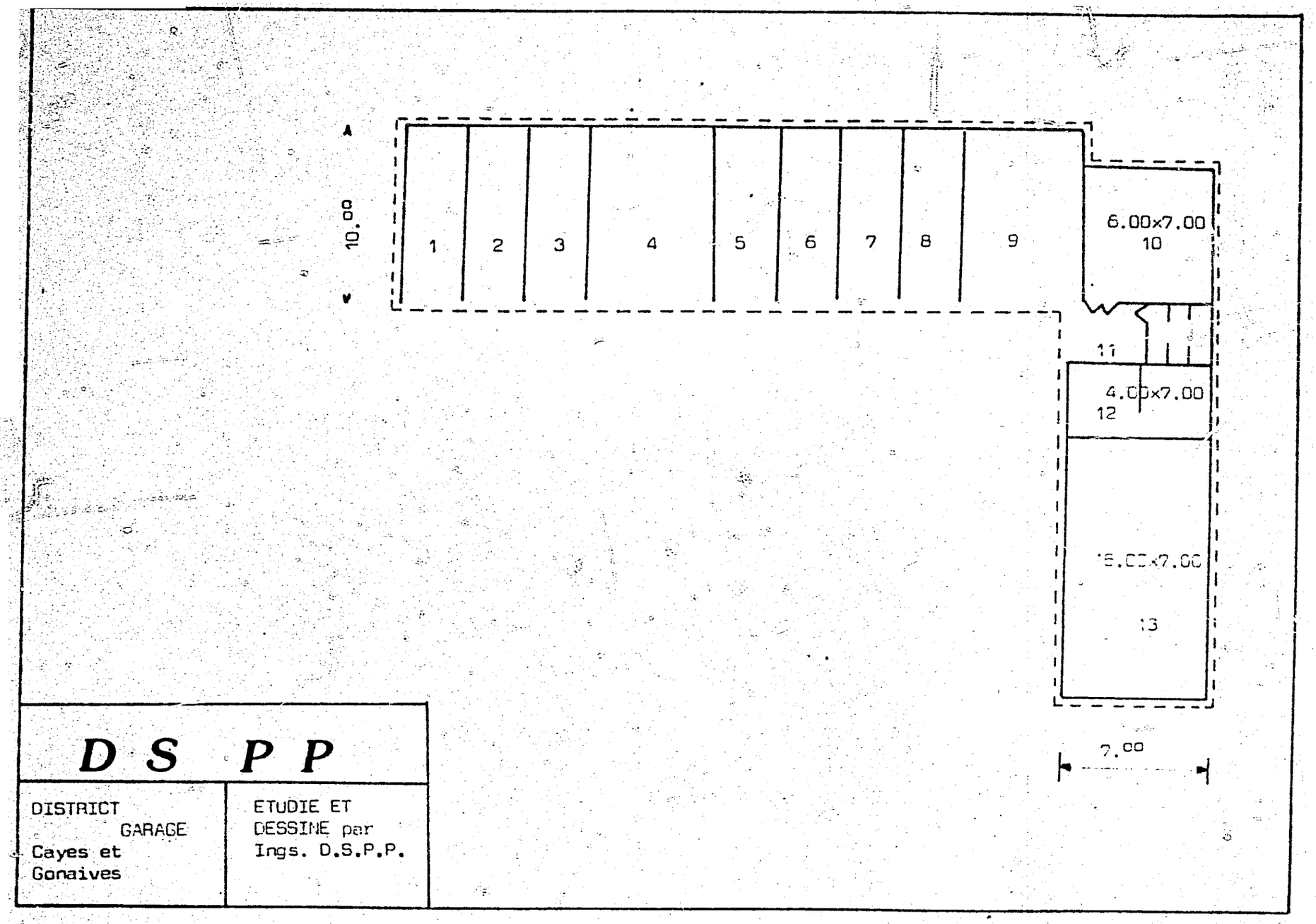
It is estimated that 15 vehicles will be supplied every day with gasoline or gas-oil at each of the two district garages. Gas coupons will be used for these two district garages serving the northern and southern areas of the country.

Cayes/Gonaives - Cost Estimate (2 garages)

Garage Building	571m^2	@ $ 80.00	$ 45,680.00
Administration Bldg.	28m^2	@ $150.00	4,200.00
			$ 49,880.00
Engineering Fees	10%		4,988.00
		Sub-total	$ 54,868.00
		Plus	54,868.00
		GRAND TOTAL (2 garages)	$109,736.00

Cayes/Gonaives - Floor Plan

1- Electrical
2- Battery
3- Tire
4- Body and Welding
5- Transmission and Differential
6- Regular Repair
7- Wheel Alignment
8- Tune up
9- Grease and Lubrication
10- Tool room
11- Toilet
12- Administration
13- Warehouse



D S P P	
DISTRICT GARAGE Cayes et Gonaives	ETUDIE ET DESSINE par Ings. D.S.P.P.

SECTION 4

GARAGE MAINTENANCE

ORGANIZATION

User Level

Maintenance of equipment is performed for only one reason and that is to assure that the vehicles and other equipment assigned to the Transportation System are operational and remain operational.

In order to make this system a reality, it is necessary that maintenance start at the lowest level of day-to-day vehicle or other equipment operation. This is at the level of the operator of the vehicle.

He must learn the importance of making a daily check of his vehicle, such as checking tires, oil, horn, windshield wipers and the overall condition of the vehicles by means of careful observations.

Field Operations Level

Maintenance at the field level consists of inspecting, servicing, lubricating and general minor repairs. It includes also replacement of minor assemblies. Spare parts supply will be maintained at the Gonaives, Cayes, level and will be supplemented by Central Warehouse as necessary.

The field garages at Gonaives and Cayes are also responsible for the mobile maintenance team schedules. The dispatcher is responsible for sending the teams to district hospitals, health centers, dispensaries and so forth, on a routine basis. Also, he will dispatch them for break-downs and other emergencies, so that the vehicle can be brought back to the field garage, and for Central Garage if necessary.

Central Garage Level

Functions consist primarily of repairs and replacement of unserviceable parts beyond the scope of the maintenance support capability of the field garages.

It is responsible also for major overhaul and rebuilding of parts and sub-assemblies. These in turn are returned to the spare parts supply stock for reissue. In addition, preventive maintenance is on-going, basic activity.

All of this field work requires tools and skills not available in the maintenance organization.

General Operational Policies

The higher the maintenance level goes the more important it is that the maintenance work be based on higher skills of the personnel and a more complex facility. It is, therefore, desirable that the Chief of the maintenance garage be trained and qualified to assure the following:

1. That personnel have the proper training and skills;
2. The shop layout be well-organized for efficiency of operation;
3. A well-established maintenance work plan is in operation.

Further, the Chief is responsible for maintaining an adequate spare parts shop stock and the required forms, records and maintenance catalogues to fulfill the job requirements.

Maintenance Work Layout

The actual operations of the maintenance garage are basically the same from a management view point as an industrial facility. A layout is simply the arrangement of machines and facilities that make it possible to be efficient in maintenance repair operations. The conditions required for efficient layout and operation are as follows:

1. Minimize movement of people and transporting of things from points within the garage and to the warehouse where parts are available.
2. Provide an adequate supply of spare parts, but not an overload.
3. Provide sufficient space for parts and necessary tools for the worker.
4. Provide good working conditions.
5. Make production flow efficient.
6. Facilitate supervision and control of production.

As stated previously, the maintenance garage is responsible for maintenance of all vehicles and other equipment of the Transportation System. It is necessary that management personnel plan the whole operation for maximum efficiency. When this is achieved, the cost of maintenance control will decline and at the same time vehicle serviceability will improv

OPERATION

The garage maintenance operation of the merging fleets must be developed carefully. Appropriate planning may prevent misunderstanding as to function and responsibility of workers in the combined system. It is expected, for example, that the two separate teams of DSPP and SNEM will be assisted in developing mutual understanding and cooperation quickly. To prevent problems, after the number of employees required for the Central Garage has been selected, a good training program must be developed. This should enable each individual to know the operations system and his specific duties.

The maintenance organization will be operating in three garages: the Central Garage, the Gonaives Garage serving the North, and the Cayes Garage serving the South.

The two decentralized garages are responsible to the Central Garage complex for parts supply and major repairs. The Central Garage has the largest operation, by definition, because of a larger fleet and the heavy repairs.

Goal

The operation of the maintenance organization is basically to assure preventive maintenance of all vehicles as a regular service, and on a continuing basis. This will result in keeping the vehicles in the best working condition.

Maintenance must be carried on as a basic routine at the three garages. A minimum of four vehicles daily will receive this service at the Central Garage. This number is based upon monthly (or alternative month) servicing, depending upon the mileage covered per vehicle.

The Gonaives Garage will serve the North and the Cayes Garage will serve the South.

Preventive Maintenance

This service consists of:

1. Oil and oil filter change
2. A grease job
3. A full check-up

The mechanic responsible for the check-up will function as follows:

1. Inspect all tires for: rotation; change; air; damage.
2. Inspect the radiator for leaks and damage.
3. Inspect the wheel alignment for loose screws in the direction bar.
4. Inspect the ignition system for defective parts such as points, condensers, spark plugs, spark plug wires, horn, etc.
5. Inspect all lights for malfunctioning such as burned out sealed beam or bulbs.

Breakdowns

All vehicle breakdowns will be brought to the repair shop. Since there are different causes of breakdown, the garage is divided into many sections. Each section will be marked to avoid confusion.

As each vehicle comes for repair, it will be directed to the appropriate section, according to the major trouble. The driver must bring the Work Order Request for repair in two copies. This Work Order will be coded by the Dispatcher in the following manner:

1. Enter the date
2. DSPP organization
3. The vehicle number
4. The vehicle make
5. Name of driver
6. The actual speedometer reading
7. Describe problems
8. Dispatcher's signature

The driver then brings the Work Order Request to the Chief Mechanic. He inspects the vehicle to assure that all work required which must be done by the mechanic is listed. The Chief Mechanic will then proceed to complete the Shop Work Order as follows:

1. Enter the date
2. Enter the time
3. Enter the vehicle make
4. Enter the vehicle model
5. Enter the vehicle type
6. Enter the unit number

7. Enter the time in
8. Enter the vehicle number
9. Enter the actual mileage
10. Describe the work to be done

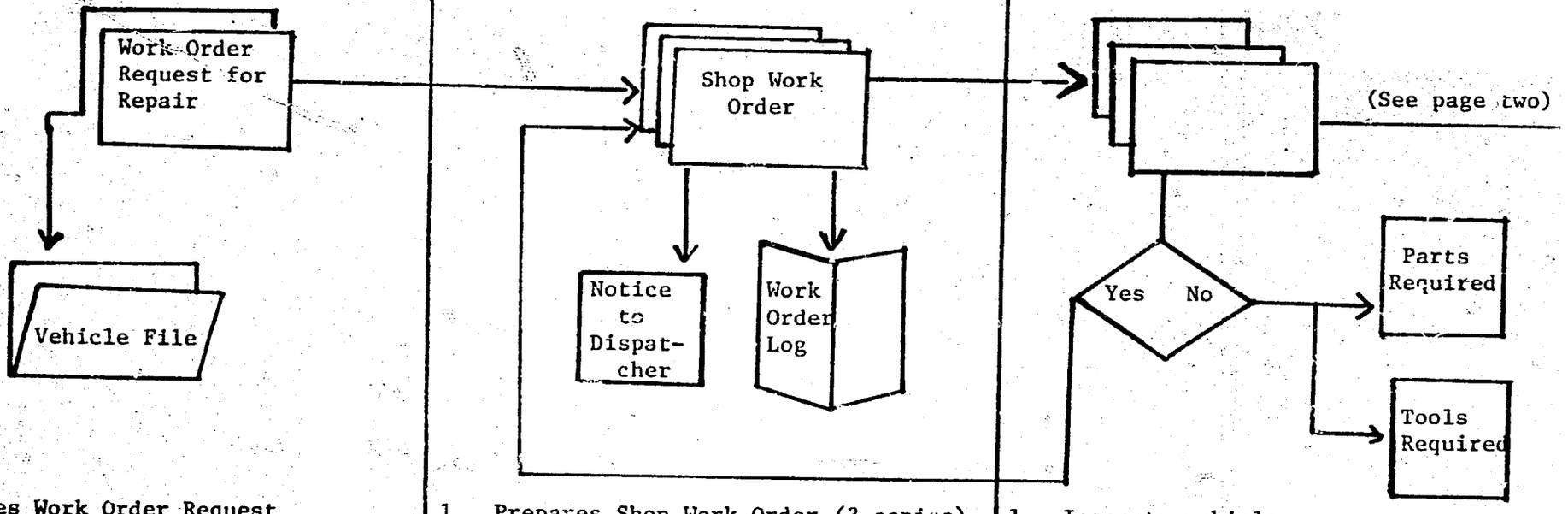
After those two forms have been filled out and the vehicle has been assigned to a mechanic, the forms follow the flow chart for Shop Work Order Procedures (See pages 81 - 83). This explains the operational steps required before the vehicle is delivered.

PROCESSING OF WORK ORDER REQUEST

INDIVIDUAL RESPONSIBLE FOR VEHICLE

CHIEF MECHANIC

MECHANIC



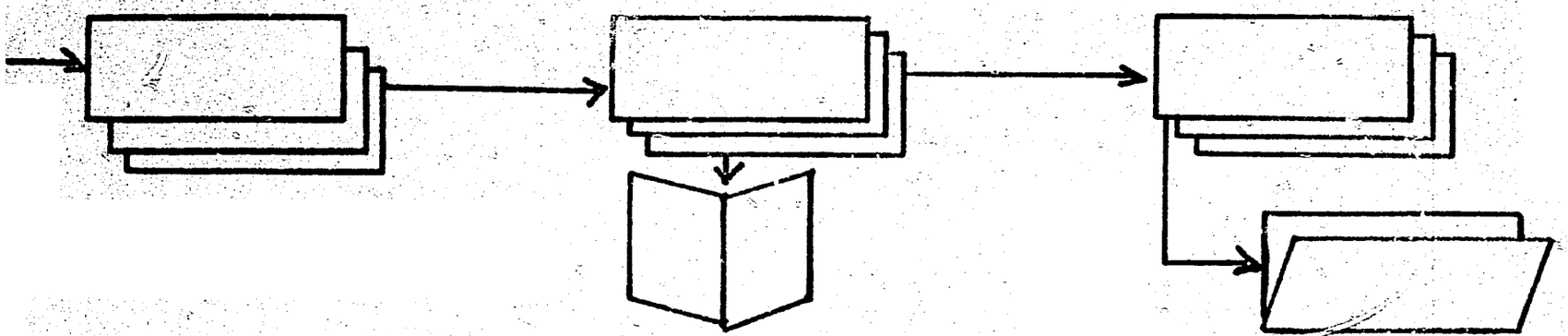
1. Prepares Work Order Request for Repair (2 copies)
2. Files second copy.

1. Prepares Shop Work Order (3 copies)
2. Estimates requirements in terms of time and cost required for maintenance.
3. Notifies dispatcher length of time vehicle will be out of service.
4. Assigns maintenance priority.
5. Assigns: personnel, work area, time.
6. Records necessary information in Work Order Log.

1. Inspects vehicle.
2. If additional problems discovered, discuss with Chief Mechanic.
3. Requisitions parts.
4. Requisitions tools.
5. Enters parts required on Vehicle Work Order.

PROCEDURE

MECHANIC	CHIEF MECHANIC	ADMINISTRATIVE ASSISTANT



1. At assigned time, carries out maintenance.

2. Records time required for maintenance on Vehicle Work Order.

3. Returns tools.

1. Inspects vehicle.

2. Completes Work Order Log.

1. Notifies individual responsible for vehicle that maintenance is complete.

2. Records that vehicle is returned to service.

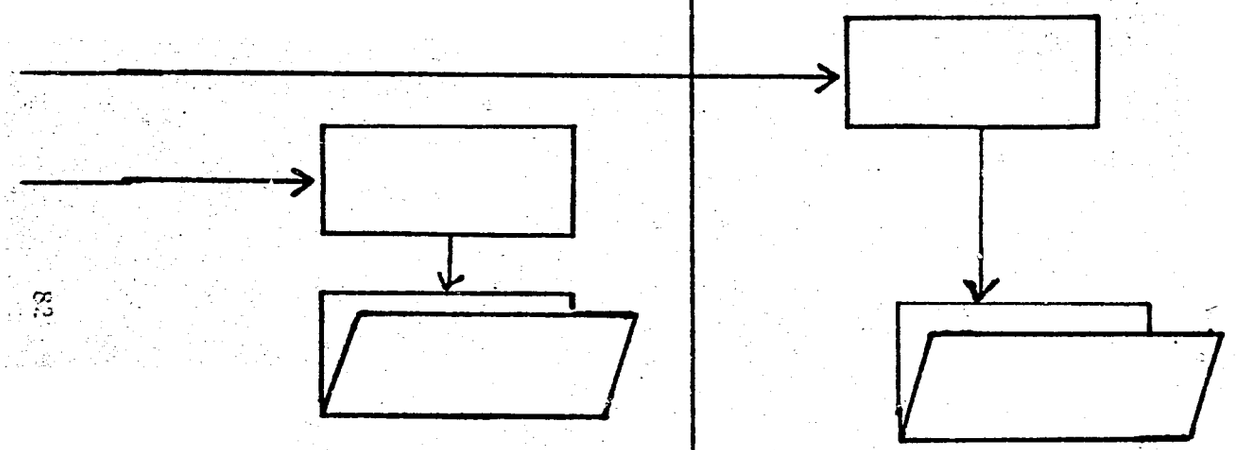
3. Enters maintenance information on Vehicle Record Form.

4. Files third copy of Vehicle Work Order.

PROCESSING OF WORK ORDER REQUEST

ACCOUNTANT

INDIVIDUAL RESPONSIBLE FOR VEHICLE



1. Charges maintenace costs to responsible unit.
2. Files original Vehicle Work Order.

1. Inspects and accepts vehicle.
2. Destroys copy of the Work Order Request and files copy of Vehicle Work Order.

DSPP

WORK ORDER

REQUEST FOR REPAIR

TO : DSPP GARAGE DATE _____

FROM : DSPP _____ SPEEDOMETER _____

PLEASE : REPAIR VEHICULE No _____ MARK _____ DRIVER _____

AS DETAILED BELOW

1) _____

2) _____

3) _____

4) _____

5) _____

6) _____

7) _____

8) _____

9) _____

10) _____

_____

AUTHORIZING OFFICER

DISPATCHER

STOCK ISSUE SLIP

FORM PREPARATION

Spare Parts

The shop stock issue slip will be prepared by the mechanic in two (2) copies for each item of supply issued from shop stock. (Flow Chart III-E-I, Page 90, "Issue Procedure from Shop Stock").

1. Mechanic

   a. Work Order No. The same Work Order Number that appears on the Work Order will be used.

   b. Date. Enter date of request.

   c. Organization. Enter the garage where work is being accomplished.

   d. Parts No. Enter parts number if known.

   e. Description. Enter description of supply item.

   f. Quantity requested. Enter quantity needed.

   g. Signature of Chief Mechanic. Obtain signature of Chief Mechanic or his representative for authorization.

2. Storekeeper

   a. Quantity issued. Enter quantity issued.

   b. Unit Price. Enter unit price of supply item.

   c. Signature of mechanic. Obtain signature of mechanic.

   d. Issued by. Sign issue slip.

When a vehicle is brought in for one of these major problems, a rebuilt unit will be installed. After the vehicle has left, the mechanic will start to rebuild the defective one. When finished, this will be stocked until needed. In case there is no rebuilt one, the vehicle must remain until the part is rebuilt.

This section by itself requires much attention from the Chief Mechanic.

As the flow system is studied, one sees that every Work Order follows a described series of steps. If the mechanic is working under good supervision and does not have to wait for spare parts, this means that the vehicle will be delivered quickly with the least delay possible. The maintenance system will then be a successful operation.

Mobile Team

The vehicles that are unable to come to the Central Garage (or the regional garages) for regular service will be served by the mobile team. This will assure the maximum service possible for the outside or field vehicles. Every mobile team should be well-equipped. The head mechanic of each mobile team must have a good deal of experience and also be a good troubleshooter or diagnostician.

For a large fleet such as the Metropolitan region, two mobile teams will be assigned. For the northern field garage, one mobile team is required and will be stationed at Gonaives. For the southern field garage, two mobile teams are required, one in Cayes and the other one in Jeremie. The latter will serve towns like Corail, Pestel, Anse-d'Hainault, Tiburon, Dame-Marie. In this area the road conditions do not permit the mobile team from Cayes to serve these towns.

Chief Mechanic Functions

The operational function of the garage is under the supervision of Chief Mechanic. He in turn is responsible to the Chief of Garage and Transportation Section.

The Chief Mechanic will have the following functions:

1. Make sure each vehicle is parked in the correct section for the repair requested.
2. Make sure every mechanic and his helper are working in their assigned section.
3. Fill out the Shop Work Order, in and out.
4. Assist and discuss technical problems with the mechanics.
5. Make suggestions for improving operational services.
6. Make a monthly report to the Chief, Garage and Transportation Section. This report will include the following types of information:

   a. Spare parts requisitions and other materials coming from the warehouse.

   b. The number of vehicles repaired monthly.

   c. The major types of repairs completed and the number of vehicles involved.

   d. Problems and difficulties with vehicles due to negligent drivers.

Assistant Chief Mechanic Functions

The Assistant Chief Mechanic is responsible to the Chief Mechanic. The operational functioning of the garage will be based to a great extent on his knowledge and skills. He has the following functions:

1. Make sure that all repair work is done by successive work order number.
2. Assure that unused or repaired vehicles are removed from the shop and not occupying a repair stall.
3. Assist and discuss the technical problems with the mechanics.
4. Report every vehicle estimated to be not economical to repair to the Chief Mechanic.
5. Assure that regular maintenance service and repair wor will be accomplished at the time required in order to prevent accumulation of uncompleted work.
6. Make sure that mechanics perform satisfactory repair work on vehicles.

ASSIGNMENT OF MECHANICS

Mechanics for Central Garage

Mechanics are distributed according to the section that they are assigned to, as follows:

SECTION	NUMBER OF MECHANICS	MECHANICS' AIDES
Lubrication and Grease	2	1
Wheel Alignment	1	1
Tune-up	2	1
Regular Repair	4	1
Electricity	2	1
Battery	1	
Transmission-Differential & Motor Replacement	4	1
Tires	1	
Body repair	4	1
Paint	2	1
Diesel section	1	1
Motor repair	1	1
Two Mobile Teams	4	1
	29	11

Mechanics for Garage - Gonaives

	MECHANICS	MECHANICS' AIDES
One Mobile Team	2	
Garage	4	2
	6	2

Mechanics for Garage - Cayes

	MECHANICS	MECHANICS' AIDES
Two Mobile Teams	4	
Garage	3	1
	7	1

GARAGE EQUIPMENT

The efficient operation of the garage depends in part upon the mechanics and the quality of their work performance. Therefore they must be provided with all the necessary tools and equipment. For this purpose, the following list is provided:

Central Garage

1 Buster Cable
1 Tune up Set
1 Tach./Dwell Meter
1 Timing Light
1 Voltage Tester
1 Battery Charger
1 Battery Filler and Hydrometer
1 Air Grease Gun
1 Regular Grease Gun
1 Hydraulic Hand Lift Jack
1 Portable Jack (15 tons)
1 Liftjack with Drive-on Ramp Set
1 Valve Lifter
1 Allen Wrench Set
1 Bench Grinder
1 Portable Grinder
1 Air Compressor (max.pressure 100 lbs.)
1 Sledge Hammer
1 Heavy Drill (1/2")
1 Regular Drill (3/8")
1 Drill Bit Set
1 Tap and Die Set
1 Pipe Wrench 24
1 Pipe Wrench 18
1 Socket Set (3/4")
1 Heavy Duty Box Wrench
1 Heavy Duty Open Wrench
1 Screw Driver Set
1 Screw Driver Set (Phillips type)
1 4-10 Ton Complete Body Jackset

Field Garage: Gonaives/Cayes

1 Buster Cable
1 Tune up Set
1 Tach/Dwell Meter
1 Voltage Tester
1 Timing Light
1 Battery Charger
1 Battery Filler and Hydrometer
1 Grease Gun
1 Hydraulic Hand Lift Sack
1 Hub Puller
1 Valve Lifter
1 Allen Wrench Set
1 Bench Grinder
1 Air Compressor (100 lbs.)
1 Sledge Hammer
1 Electric Drill (3/8")
1 Tape and Diet Set
1 Pipe Wrench 24
1 Pipe Wrench 18
1 Socket Wrench (3/4 drive)
1 Heavy Duty Box Wrench

Equipment Required for Each Mobile Team

1 Voltage Tester
1 Tune up Set
1 Checks Point Well
1 Grease Gun
1 Portable Jack (15 tons)
1 Hub Puller
1 Portable Air Compressor
1 Portable Light Plant
1 Electric Drill
1 Drill Bit Set
1 Timing Light
1 Portable Grinder

Number of mobile teams - 5

Mechanic's Tool Box

Each tool box will contain the following:

1 Feeler Gauge
1 Interlocking Joint Plier
1 Slip Joint Plier
1 Plier Crips
1 Set of Chisels
1 Hammer
1 Brake Tool
1 Box Socket Wrench Set
1 Open Wrench Set
1 Socket Wrench Set 1/2 Drive

Number of tool boxes required:
30 - American measure
5 - English measure (metric)

STOCK ISSUE SLIP

Form Preparation

Assigned Tools

The shop stock issue slip will be prepared in two copies for tools assigned to mechanic from shop stock. The Chief Mechanic will prepare it for each mechanic (Flow Chart, III-E-2, "Tool Issue Procedure").

1. Chief Mechanic

   a. Date. Enter date of request.
   b. Organization. Enter the garage or mobile team where tools will be used.
   c. Description. Enter description of tool.
   d. Quantity Requested. Enter quantity that the Chief Mechanic authorizes the mechanic to have.
   e. Chief Mechanic. The Chief Mechanic will sign as authorizing tools.

2. Storekeeper

   a. Quantity issued. Enter quantity issued.
   b. Unit price. Enter price of tools if known.
   c. Mechanic. Obtain signature of mechanic.
   d. Issued By. Sign issue slip.

Tool Issue Procedure

The repair mechanic needs to use special tools, such as a timing light or electrical tester. For this reason, the mechanic will have to obtain those tools from the tool room following the Flow Chart III-E2, Tool Issue Procedure.

LOW CHART III-E-2

TOOL ISSUE PROCEDURE

TOOLS ASSIGNED

TOOLS GENERAL

CHIEF MECHANIC	TOOLKEEPER	MECHANIC	CHIEF MECHANIC
Issue Slip			
	File		File
. Prepares Issue Slip in ! copies when tools are ssigned to mechanic. '. Signs request block of ssue Slip, and forwards o Toolkeeper.	3. Receives 2 copies of Issue Slip. 4. Has a responsible mechanic sign for tools. 5. Issues tools and signs Issue Slip indicating issue was made. 6. Records on stock card. 7. Copy 2 to Mechanic. 8. Files Copy 1.	9. Return copy 2 of Issue Slip to Chief Mechanic.	10. Maintains copy 2 of Issue Slip in a file folder as a record of tools assigned and to whom they are assigned.
Disk			
.. Each mechanic is assigned . numbered disk by the Chief lechanic. !. Presents disk to Tool- keeper when general use tool .s requested.	3. Toolkeeper accepts disk. 4. Issues tool from tool board. 5. Places disk in place of tool on board.	6. Mechanic returns tool and takes his disk back.	

Shop Stock Issue Procedure

Some repair work will need only a simple adjustment. Others will need some parts. The mechanic must fill out a Shop Stock Issue Slip to take to the warehouse. The procedure to follow is as contained in Flow Chart III-E1, Issue Procedure From Shop Stock.

Repair Shop

The repair shop is divided into many sections, as follows:

1. Lubrication
2. Tune up
3. Regular Repair
4. Electricity
5. Battery
6. Transmission, Differential and Motor Replacement
7. Tire Repair
8. Body Repair

The transmission and motor replacement section requires special discussion. This section requires at least four experienced mechanics. Their work will include the following:

1. Removal of the transmission, the differential or the engine
2. Rebuilding of these units
3. Replacement and proper adjustment

INSTITUTIONAL TRAINING

Institutional training for garage maintenance personnel is available in Port-au-Prince. Such training experience could be very effective, using either of the two schools now functioning. These schools are described as follows:

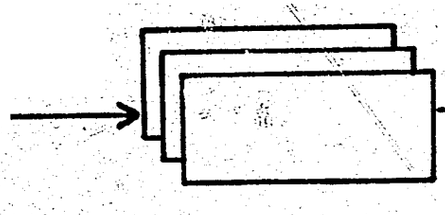
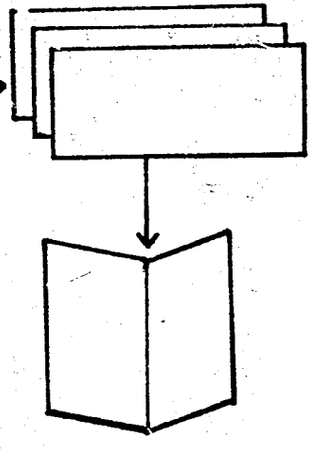
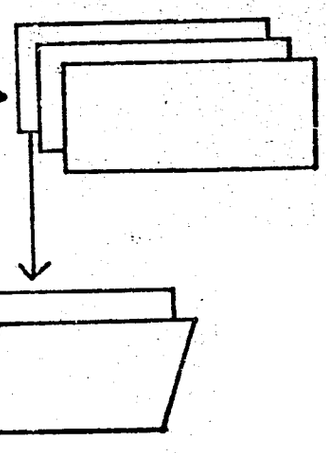
The Institut National and Centre Pilote de Formation Professionnel

The Institut is a very well organized school sponsored by many private enterprises, such as the Mercedes dealer, Peugeot dealer, etc. These enterprises send their employees to secure special training that is offered at the school. After an appropriate period of required training these employees return to the referring enterprise, frequently as leaders to train others. For this reason it is suggested that DSPP develop a working relationship with this institute program. DSPP then will be able to send mechanics who may be selected for short time, specific training. The next training period will take place in June 1979.

The J. B. Damien Vocational School

This school is a governmental school that provides technical training for students in many technical areas. This school does not have a special training time for students who are already employed. According to the principal of the school, DSPP may be provided with a qualified teacher who would provide technical training. This could be carried out either at the school or at the DSPP garage, after appropriate arrangements are made.

PROCEDURES

MECHANIC	CHIEF MECHANIC	ADMINISTRATIVE ASSISTANT
		
1. At assigned time, carries out maintenance. 2. Records time required for maintenance on Vehicle Work Order. 3. Returns tools	1. Inspects vehicle. 2. Completes Work Order Log.	1. Notifies individual responsible for vehicle that maintenance is completed. 2. Records that vehicle is returned to service. 3. Enters maintenance information on Vehicle Record Form. 4. Files third copy of Vehicle Work Order.

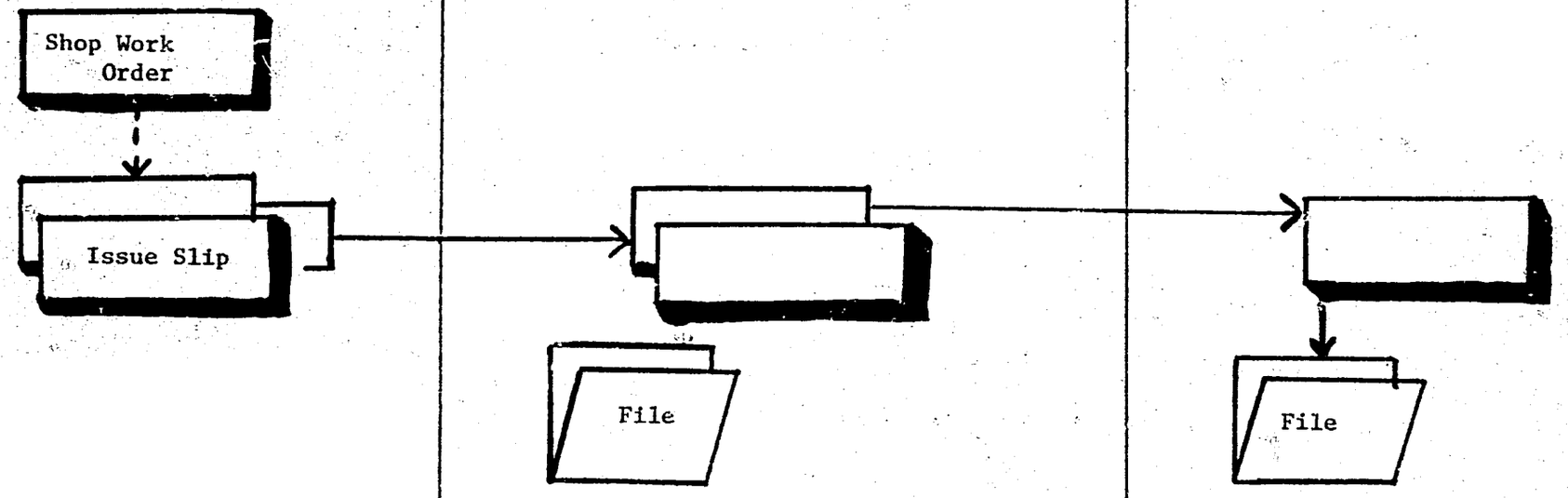
FLOW CHART III-E-1

SHOP STOCK ISSUE PROCEDURE

MECHANIC

STOREKEEPER

MECHANIC



1. Mechanic using Shop Work Order prepares 2 copies of Issue Slip and assigns Work Order number from W.O.

2. Obtains signature of Chief Mechanic on the Issue Slip.

3. Takes issue slip to Storekeeper.

4. Checks Issue Slip to make sure that all information is correct.

5. Assigns Issue Slip number, using next assigned number, keeping in numerical sequence.

6. Fills in the quantity of supplies issued.

7. Obtains signature of mechanic receiving supplies.

8. Gives mechanic copy 2 for W.O. File.

9. Records issue on stock card, then files.

10. Maintains folder for record, and for requisitioning purposes.

11. Retains copy of Issue Slip in Shop Work Order File for a record of cost and parts required.

Imp. Le NATAL S.A.

SHOP WORK ORDER

MAKE	MODEL	TYPE	LICENCE No.	UNIT. No.	WORK ORDER No.

ORGANIZATION	AUTHORIZED BY	PRIORITY	RECEIVED BY

SPEEDOMETER READING WHEN RECEIVED	TIME IN :	DATE IN :
SPEEDOMETER READING WHEN RELEASED	TIME OUT :	DATE OUT :

DESCRIPTION OF WORK TO BE PERFORMED

95

PARTS

QUANT.	PART No.	DESCRIPTION OF PART	PRICE	AMOUNT
		PARTS TOTAL		

LABOR

No. HRS.	MECHANIC	HELPER	RATE	AMT

FINAL INSPECTION AND ROAD TEST

INSPECTOR'S SIGNATURE

PARTS

LABOR

ISSUE SLIP

WORK ORDER NO._____ DATE:_____

PARTS NO.	DESCRIPTION	QUANTITY Req.	QUANTITY Issued	UNIT PRICE

Chief Mechanic_____

Issued by:_____ Mechanic_____

SECTION 5

GASOLINE STORAGE AND MAINTENANCE

V. GASOLINE STORAGE AND DISTRIBUTION

DAILY CONTROL OF GASOLINE DISTRIBUTION AT THE CENTRAL PUMP

The receipt and delivery of gasoline operates from the underground tanks. In order to compute the regular amount of gasoline received and issued daily, the readings of the tanks should be made twice a day, morning and afternoon. This is done by "gauging." The result of every gauging will be written on the form below, Daily Control of Gasoline Distribution at the Central Pump.

Completion Procedure (Refer to Gasoline/Oil Form No. 1)

1. Date: Enter the date.
2. Readings: 1st reading, 7 A.M. Enter readings in inches and gallons for each tank.
3. Total: Enter the total gasoline in all the tanks.
4. Gasoline received: Enter the amount of gasoline received if any.
5. Total available: Add the total of no. 3 + 4.
6. Total distributed: Enter the amount of gasoline distributed for the day.
7. Balance: Enter the balance.

Second Reading - 2 P.M.

8. For the afternoon reading, repeat the same exercise as in the morning.
9. Enter the total amount after the afternoon reading.
10. Enter reading following morning.
11. Enter the difference if there is any.
12. Sign your name.

Gasoline Distribution

Gasoline distribution is the next important step. This consists of an adequate supply to all vehicles, maintaining the best control possible. The SNEM distribution system is satisfactory and may be retained.

CONTROLE JOURNALIER DE LA DISTRIBUTION DE LA GASOLINE A LA POMPE CENTRALE

Date _____

Lecture des citernes à 7 h. a.m.				Lecture des Pompes à 7 h. a.m.
Citerne No. 1	Pouces _____	Gals _____		Pompe No. 1 _____
" No. 2	" _____	" _____		" No. 2 _____
" No. 3	" _____	" _____		
" No. 4	" _____	" _____		

TOTAL . . . . . Gals. _____

Réception de la Sinclair au cours de la Journée (Fact. No. ....) Gals. _____

TOTAL DISPONIBLE . . . . . Gals _____

Distribution au cours de la Journée . . . . . Gals _____

BALANCE . . . . . Gals _____

Lecture des citernes à 4 h. p.m.				Lecture des Pompes à 4 h. p.m.
Citerne No. 1	Pouces _____	Gals _____		Pompe No. 1 _____
" No. 2	" _____	" _____		" No. 2 _____
" No. 3	" _____	" _____		
" No. 4	" _____	" _____		

TOTAL . . . . . Gals _____

Différence en moins . . . . . Gals _____

Certifié sincère et correct

Préparé par : _____

Gasoline/Oil Form No. 1

Since we are working toward a merging fleet, in the future, all vehicles will be marked with a control number to be used on gasoline and oil distribution forms. The monthly report of gasoline distribution should be made separately for each of the separate fleets. The following form will be used for each delivery of gasoline for every vehcile. (Refer to Gasoline/Oil Form No. 2).

Gas and Oil Slip

a. Driver's name
b. Number of the vehicle
c. Date
d. Amount of gasoline delivered
e. Amount of oil delivered
f. Speedometer reading, when the vehicle is issued any petroleum product
g. Gas attendant will obtain the signature of the driver

The gasoline requisition forms bear part of the information needed above. (Refer to Gasoline/Oil Form No. 3.)

Gas Distribution Daily Report

We proceed to the Gas Distribution Daily Report. (This will be used also in making out the monthly report.) This form must be filled out as explained below. (Refer to Gasoline/Oil Figure No. 4.)

Gas Coupon - Daily and Monthly Report

A similar form is used for the "Gas Distribution Daily Delivered Report", and also for the Gas Coupon Daily and Monthly Report. Preparation of the Gas Coupon Daily and Monthly Report is as follows: (Refer to Gasoline/Oil Form No. 5.)

a. Enter the base of operation
b. Enter the time period
c. Enter the unit number
d. Enter the name of person requesting the gas coupons
e. Enter the unused balance from last month in Column A.
f. Enter the amount of gasoline requested daily.
g. Enter the quantity available for the month in Column C.
h. Enter the amount of gasoline used for the month in Column D.

BUREAU CENTRAL
PORT-AU PRINCE

GASOLINE et OIL SLIP

Nom du Chauffeur.....

Voiture No. .....Date.....

Gasoline.....

Huile.....

SPeedomètre .....

Nº

Signature

Gasoline/Oil Form No. 2

REQUISITION DE TICKETS DE GAZOLINE

Réquisition No. _____

Veuillez fournir à _____ pour le véhicule No. _____ Unité No. _____

des tickets de gazoline pour un total de _____ ( ) gallons

_____ _____

Usage du véhicule Milléage actuel

Demandé par : _____ Approuvé par : _____

Autorisé par : _____

Administrat. Officer

Gasoline/Oil Form No. 102

TABLEAU DE CONTROLE DE DISTRIBUTION DE LA GASOLINE A LA POMPE CENTRALE

BASE D'OPERATION- - - - - -

PERIODE- - - - - - - - - -

N° VEHICULE	QUOTA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOTAL	BALANCE

DATE- - - - - - - - - -

PREPARE PAR- - - - - - - - - -

Gasoline/Oil Form No. 4

A . Balance non utilisée le mois précédent
B : Distribution au cours du mois
C : Quantité disponible pour le mois
D : Consommation du mois
E : Balance non utilisée à la fin du mois
A+B= C ; C-D= E

TABLEAU DE DISTRIBUTION & CONSOMMATION DES TICKETS DE GAZOLINE

Base d'Opération _____

Période du: _____ au: _____

Unité #	Utilisateur	A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	C	D	E

Préparé par: _____

Date: _____

Approuvé par: _____

Date: _____

i. Enter the amount of gasoline left at the end of the month in Column E.

j. Enter the signature of the responsible person on duty who has prepared the form.

k. Enter the signature of the supervisor responsible.

l. Enter the date of the monthly report.

In gasoline distribution, vehicles that are unable to come to the gas station for petroleum products must be considered. These include vehicles operating too far from the central garage and those vehicles operating in the regions. For these vehicles, gas coupons will be used.

Responsibility of the Dispatcher Concerning the Gasoline Station

1. Maintain the records on fuel, storage and distribution
2. Maintain the control of gas coupons, requisitions and distributions throughout the whole system.
3. Control tools and equipment used in the gasoline station.
4. Assure the inventory control of all equipment.
5. Prepare and submit requisitions for required parts, equipment, etc. as required to keep the organization's rolling stock operational, and keep a record of all such requisitions.
6. Perform other services as the staff may require or find advisable to promote the fleet's interests.
7. Responsible to the Chief of Garage and Transportation Section.
8. Responsible for the gasoline station attendants.

Gasoline Station Attendants

The gasoline station attendants of the DSPP Motor Pool are responsible to the dispatcher. In general, they are responsible for the maintenance of equipment, receiving, storage and issue of petroleum products, the completeness and accuracy of all records. In order to carry out these duties they will perform as follows:

General Duties

1. Receive, store and issue all petroleum products.
2. Account for all records applicable, record all issues or other changes regarding petroleum products.
3. Responsible for maintaining record control of all petroleum products by conducting daily inventory.
4. Responsible for forwarding requests for petroleum products in a timely manner to assure that there will be no shortages.

Specific Duties

1. Be present and check all items of petroleum being received in order to make sure that records and quantity are the same.
2. Inventory all tanks and other containers by gauging before petroleum products are placed in tanks or the containers. Then make an inventory afterward to determine that the quantity received is as recorded on received documents.
3. Inspect all petroleum products, especially gasoline, for contamination. If contamination is present, do not place in storage tank, but advise the dispatcher.
4. Maintain the Monthly Bulk Petroleum Accounting Summary (Refer to Gasoline/Oil Form No. 6).
5. Make twice daily control to detect leakage or spillage.
6. Make sure that no product will be issued without proper authority.
7. Make sure that all issues are signed for at the time of issue.
8. After all issues during the day, record the total issued. The tanks or other containers will be gauged. The difference between the first inventory and the last one should be what has been issued according to the record.
9. Make sure that all shortages are reported to the dispatcher without delay so that an immediate investigation can be conducted in order to determine fault or neglect.

MONTHLY BULK PETROLEUM ACCOUNTING SUMMARY

PETROLEUM FACILITY LOCATION _____

FOR PERIOD OF _____

DATE OF REPORT _____

TYPE OF PRODUCT				
OPENING INVENTORY				
RECEIPTS				
ISSUES				
CLOSING BOOM BALANCE (Lines a + b - c)				
MONTHLY LOSE (Line d - e)				
MAXIMUM allowable lose (Line a + b x .01 for gazoline. Other products standards must be set.)				

REMARKS :

Gasoline/Oil Form No. 6

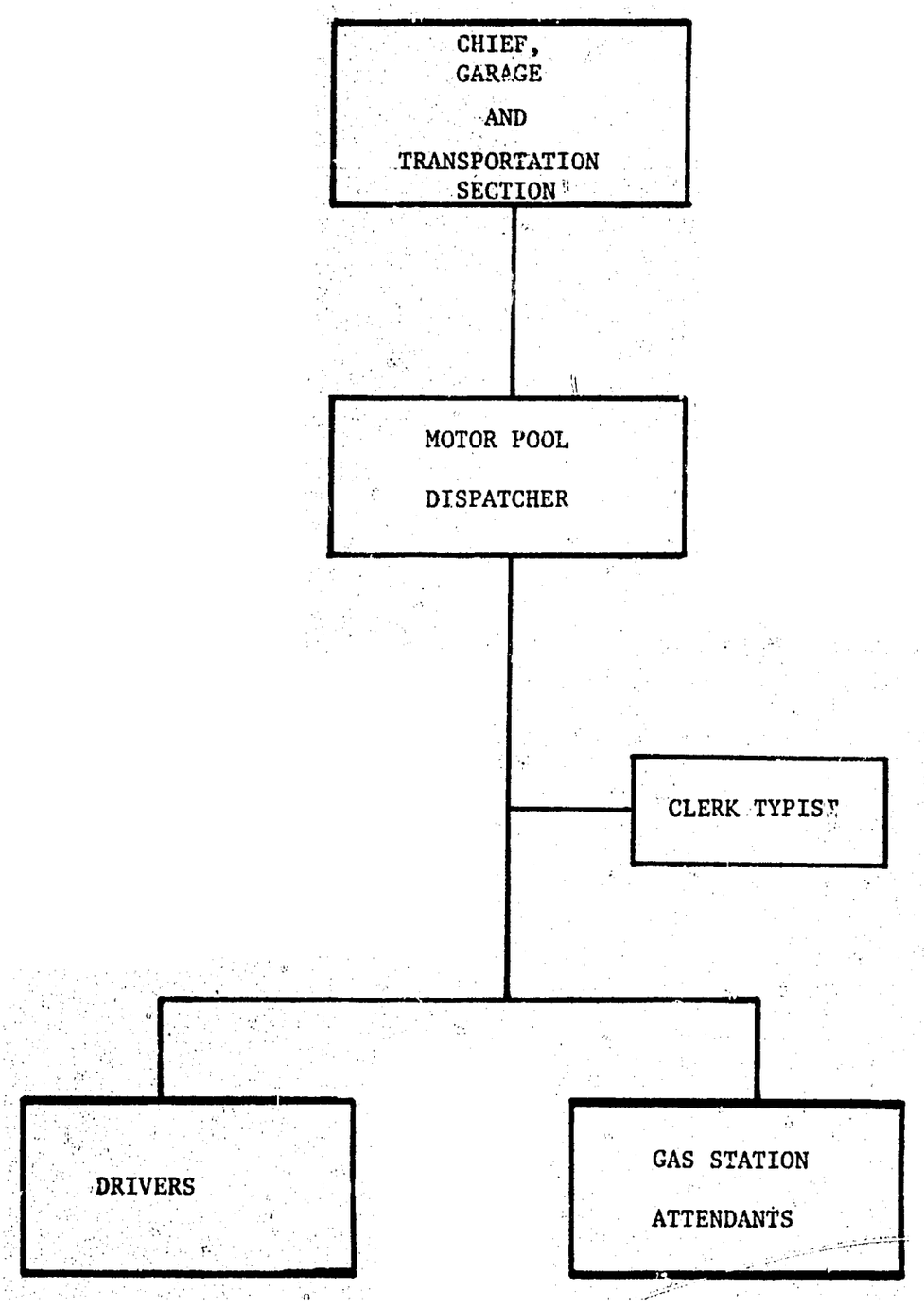
Maintenance of Equipment at the Gasoline Station

1. Check all dispensing equipment daily to make sure that there are no leaks. Minor repairs such as tightening bolts, screens, flanges, couplings, etc. will be performed by the gasoline attendants.

2. Make sure that all major repairs required are reported without delay to the dispatcher, for necessary action. The dispatcher will contact the Chief Mechanic to have necessary repairs made.

3. Repairs will not be made, either minor or major, on gasoline tanks unless non-sparking tools are used.

GASOLINE DISTRIBUTION ORGANIZATION



SECTION 6

SPARE PARTS

VI. SPARE PARTS

STOREKEEPER

The Chief Storekeeper, Spare Parts Supply, is responsible to the Chief Garage and Transportation Section. He will provide for an efficient and economical management system to ensure the effective receipt, storage, accounting and distribution of commodities required to maintain the Transportation System.

To achieve this objective the Chief Storekeeper has the following function: assures the functioning of all elements within the spare parts supply system; monitors to assure adequacy and effectiveness of approved procedures that are used; requests instructions for the disposal of excess parts and components that are no longer needed within the maintenance program, determines, computes and consolidates requirements for all items of supply; establishes documents for the control of all spare parts and other maintenance supply items; assures the timely receipt of supplies, their proper storage, handling and issue; and assists in performing the inventory of supplies.

Specific Responsibilities

The Chief Storekeeper is:

1. Responsible for the actions of his personnel within the spare parts supply organization.
2. Responsible to assure that the spare parts supply is operating in an efficient and productive manner.
3. Responsible to keep the Chief, Garage and Transportation advised of all problems that require additional help.
4. Responsible for computing spare parts supply requirements based on a six month stock objective.

Stock Control Procedure

The Stock Control Clerk has the responsibility of maintaining accurate records of all supplies stored in the spare warehouse. In order to maintain these records many different stock accounting actions must be made. As long as these actions follow a definite sequence the possibility of errors in

recording will be minimized. The first action will be the receipt of the requisition in six copies (Form no. 1). Once received, the procedure required to process this requisition and to maintain adequate control will consist of several actions as follows:

Editing

The purpose of editing is to assure that all requisitions or other types of documents received which affect the quantity of supplies in the warehouse will contain all necessary information prior to processing.

1. The stock control clerk will make a complete administrative edit of the requisition for completeness, adequate number of copies, accuracy of data, quantity to be issued and the verification of signatures.

2. In the event that the requisition is not complete, the clerk will then pass the requisition to the Chief Storekeeper for his action. If the data required is of a minor nature, then the Chief will correct and give back to the clerk for vouchering and processing. If the data required is of major importance then the Chief will advise the requisitioner to correct and submit. The requisition will not be processed until corrections have been made.

3. When the stock control clerk is satisfied that the requisition is complete, then the next action will be to log the requisition in the voucher register, using the next unused voucher number.

4. The stock control clerk will maintain a voucher register of all requisitions edited and accepted. The voucher register will be kept in numerical sequence starting with the first number to be assigned in the fiscal year, through the last number assigned at the end of the fiscal year. In addition

REQUISITION

FROM:

REQ. NO.

DATE

SUPPLY ORGANIZATION

To:

VOUCHER NO.

DATE:

Item No.	Part No.	Description	Unit Issue	Qty.	Unit Cost	Total Cost

REQUESTING DATE

APPROVAL DATE

I hereby Acknowledge Receipt of Items listed above.

TRANSPORTATION DATE

REQUISITIONER DATE

SPARE PARTS FORM NO. 1

to the assigned voucher number the register will also show all other data on the requisition that is necessary to maintain adequate control (Form No. 2).

5. After vouchering, the requisition will then be ready for stock accounting action.

Stock Accounting

The purpose of stock accounting is to maintain current and correct balances on the stock record cards for all spare parts and other maintenance supply items stored in the warehouse. In order to accomplish and maintain this data, the stock control clerk will:

1. Maintain all stock accounting data on forms that have been prescribed by regulations, or other authority.
   This is necessary because an unauthorized stock record form may not provide sufficient information for adequate stock control measures.

2. Immediately after editing, vouchering, and checking the stock record for adequacy of supplies on hand, the clerk will file the suspense copy of the requisition in the suspense voucher file in voucher numbered sequence. This suspense file is to be maintained for all requisitions until action copies have been returned from the storage activity.

3. All other copies of the requisition, copies 1 through 5, will then be forwarded to the storage activity for necessary supply action.

4. When the completed requisition copy 1 has been returned from the storage activity with annotations as to what supply action has been taken, (quantity issued), the stock control clerk will indicate in the voucher register the date returned, and under "remarks column" on the register will indicate, "Received from storage."

VOUCHER REGISTER

VOUCHER NO. OUT (1)	VOUCHER NO. IN (1)	REQ. NO. (2)	DATE NO. ASSIGNED (3)	TO OR FROM (4)	DESCRIPTION (5)	SUSPENSE DATE (6)	ACTION DATE (7)	(V) ISSUE (S) SHIP (8)	REMARKS (9)

5. The stock control clerk will pull the stock record card from the file. He will then post the quantity issued on the stock record card in the same amount that is shown as having been issued on the requisition. Posting will be in black or blue ink. If all items of supply have been issued then this completes the action.

6. In the event that the total amount requested was not available for issue, the stock control clerk will indicate the amount short in the Due-Out section of the stock record card for computing requirements at a later date.

7. The action copy of the requisition will then be filed in the voucher file in voucher number sequence. This voucher file will be maintained in a folder by month. This is a permanent record and will not be destroyed.

8. The stock control clerk will maintain on the stock record card a record of all total monthly issues for each item of supply. This will require that at the end of each month the clerk will check each card and total the month's entry in the "By Month" section of the card. This information will be provided by the Chief Storekeeper, so that he may compute the requisitioning objective. The procedure of how to accomplish this will be explained under the responsibilities of the Chief Storekeeper.

9. The stock control clerk will assist the Inventory Control Section in preparing for an annual or special inventory. The clerk will prepare the count slips (Form No. 3) from the stock record cards, then assign a single voucher number from the voucher register. The voucher register will indicate under remarks "Inventory", "date", etc. This single number will be an "A" (indicates inventory voucher action). All count slips will then be turned over to the Inventory Section. It is important that all count slips be maintained in the same sequence as the stock record cards, otherwise they will be difficult to reassemble and reconcile. When the slips are prepared, numbering will be in sequence, starting with number one.

DATE	COUNT SLIP No	INV. VOU No.

WHSE	ROW	SEC.	LEVEL	BIN

PART No.	U/I	UNIT PRICE

DESCRIPTION

NOTE: Record corrected nomenclature and/or location on reverse side.

RECEIPTS	ISSUES	INVENTORY BALANCE

QUANTITY		STK REC BAL	FINAL INV. BAL
OVER	SHORT		

VALUE		IAR. REQ
OVERAGE	SHORTAGE	REMARKS

COUNTED BY	RECOUNTED BY	
POSTED TO STK REC BY	INV. CHIEF	REV BY

INVENTORY COUNT SLIP

SPARE PARTS FORM NO. 3

10. Upon completion of the inventory, the clerk will then assist the Inventory Section in reconciling the count slips to the stock record cards. The clerk will assist by posting all balances that agree, using red ink. If balances are still incorrect between the stock record card and the inventory count slip, then the Inventory Section will prepare an Inventory Adjustment Report (IAR) (Form No. 4). The Chief, Garage and Transportation will then determine if the quantity short can be adjusted of if an investigation has to be made. If it can be adjusted, then he signs the IAR and it is posted to the Voucher Register in red ink using the one voucher number suffixed with an "A". Once the inventory is completed the Inventory count slips will be filed in a special folder marked "Inventory", and retained as any other voucher filed document.

Storage Procedure

The Storage Warehouseman, Spare Parts Supply, is responsible for the stockage of parts and other maintenance supply items from the time of receipt until issued. In order to accomplish the requirements for the proper handling and storage of these items, the following actions will be taken:

Receiving Section

The purpose of a receiving section in a storage operation is to assure that:

1. All items of supply received are properly identified prior to warehousing and that proper documentation exists for verification and control.
2. When the Purchase Order (P.O.) and vendors invoices are received with the supplies, the warehouseman will tally all items of supply using the P.O. and invoice to verify quantities. He will then annotate this information on the P.O.
3. A Receipts and Issues Register will be maintained in storage (Form No. 5). The warehouseman will then post the receipt to the Register as a matter of record.

INVENTORY ADJUSTMENT REPORT

SUPPLY ACTIVITY STOCK RECORD ACCOUNT	LOCATION	DATE PREPARED	CONDITION SERVICEABLE ☐ UNSERVICEABLE ☑	Page No.1 Number of 1 Pages

ITEM No.	PART NUMBER	DESCRIPTION	U/L	RECORDED QTY.	INV. QTY.	ADJUSTMENT QTY OVER	ADJUSTMENT QTY SHORT	UNIT STANDARD PRICE	ADJUSTMENT AMOUNT DEBIT	ADJUSTMENT AMOUNT CREDIT

I certify that the above inventory adjustments are necessitated by differences between the balances as recorded on the stock cards and the b balances counted on the Physical inventory made on	Accountable Person (Signature)	Voucher Number
Activity and location of account slips disclosing above discrepancies	Approving Authority: MOH	Date Approved

SPARE PARTS FORM NO. 4

RECEIVING / ISSUING

REGISTER

Voucher Number	Req. or P.6. Number	Date Received	Date Issued	Description of First Item	Organization Requesting	Remarks

4. The warehouseman will obtain the proper location from the stock locator card, or will obtain the location off the stock record card. He then will place the item of supply in the proper storage location. If the item received is a new item, he will then find a location in which to place the item of supply. At the same time, if locator cards are used he will prepare one citing the item and location. If the stock record is used for locations he will advise the stock record clerk to post the new location to the stock record card. Regardless of a locator card or not, he will advise stock control of the new location, so that it can be entered on the stock record card.

5. The warehouseman will register and retain one copy of the P.O. for file. Then he will annotate all other copies of the P.O. and vendor's invoices as "Received". This will indicate receiving action was taken, e.g., completed, partially filled, etc. He then forwards the P.O. and vendor's invoices back to the stock control clerk. The stock control clerk will annotate this return in the Voucher Register and will post the quantities issued to the stock record card. Necessary documents will be distributed and copies to be filed will be placed in voucher file.

Warehousing

The purpose of warehousing is to make sure that all items of supply received, will be stored and available for issue. In order to assure proper storage, it will be necessary that:

1. The actual layout of the storage area should be on a planograph. Whether the warehouse is new or an established storage operation, the warehouse should have a planograph or chart designating each general area as to the type of items that will be stored therein. If the warehouse is well planned, it will minimize confusion of storage operations (See warehousing of spare parts).

2. The placing of supplies in the warehouse will be the responsibility of the warehouseman. It will also be his responsibility to remove supplies from their locations for issue. In addition, he must make sure that the oldest item of supply will be issued first.

3. It is the warehouseman's responsibility to make sure that the correct item and quantity are removed from stock so that errors will not be made when issuing.

4. The warehouseman is responsible for maintaining a well organized and clean warehouse at all times.

5. He is responsible for maintaining materials for packing and shipping.

6. He is responsible for fire and pilferage protection of the warehouse.

7. The warehouseman is responsible for all other duties assigned by the Chief Storekeeper.

Issuing

The purpose of the issuing activity in a storage operation is to assure that when proper documentation is presented for the issuing of supplies, the quantities issued from the storage area are correct as to both count and type. In order to accomplish this, the following actions are required of the warehouseman:

1. Log copies 1 thru 5 in the Receiving and Issuing Register (Form No. 5).

2. Check the locator file, or stock record card for proper location for each item of supply.

3. Pick supplies from the proper location.

4. Enter quantities of each item being issued on the requisition.

5. Obtain the signature of the transport driver or supervisor if transportation shipment is required, or if issue is local he will obtain the signature of the mechanic or other personnel of the requisitioner.

6. Prior to issuing, he accepts old parts to rebuild or re air.

7. Record the issue to the Receiving and Issuing Register.

8. Retain copy 5 in file.

9. Forward copy 1 to stock control.

10. Forward copies 2 and 3 to Transportation for field requisitioner.

11. Give copy 2 to mechanics or other personnel if the requisitioner is a local one. The mechanics or other personnel will give it to the requisitioner for filing.

12. In the latter case, the warehouseman destroys copy 3.

13. Return old parts received to maintenance for rebuilding or repair.

CHIEF STOREKEEPER, OPERATIONAL RESPONSIBILITIES

The Chief Storekeeper, Spare Parts Supply, is responsible for all actions carried out by his subordinate personnel in stock control and storage activities of his organization. He will give assistance and advice when needed. He will be able to carry out the duties of his personnel when so required. It is his duty to resolve all problems that occur or take them to higher authority for solution. Specifically the Chief will be responsible for:

Stock Control

1. Review incoming requisitions from time to time to assure completeness and proper signatures.

2. Review the Voucher Register file for completeness and proper posting.

3. Review the stock record cards for completeness and accuracy of posting.

4. Check records and files to assure that the receipt of P.O.'s and vendors' invoices have been posted to the voucher register file.

5. Make sure that the P.O. quantities have been debited to the stock record card.

6. Make sure that file copies of P.O.'s and any supporting documents are filed.

7. Check to see that the P.O. and supporting documents have been forwarded to procurement so that procurement section can be assured that payment is authorized.

8. Review with the Inventory Control Section for the purpose of assuring that the inventory count slips are in agreement with the active stock cards.

9. Review the results of the inventory count, and assist with recounts if necessary.

10. Check the postings of the inventory count to the stock record card to assure that postings are accurate.

11. Compute the requirements for procurement of spare parts and other maintenance supply items by conducting a monthly review with the stock records clerk to determine what the procurement requirements will be. The Chief will use the following criteria.

    a. A review of each previous month's issue in order to obtain a definite pattern of what has been issued. He must also review Due-Out requirements so that when he forwards requirements to procurement the actual estimated needs will be known.

    b. In order to provide all factors in computing his needs he must know what his requisitioning objective is for each item of supply.

    c. In making his estimate of needs for his requisitions objective, he should take the issues per month for the past 12 months and divide by 12. This will tell what the average quantity issued for a 30-day period would be. He then divides by 30 and this would indicate a day of supply. The total computation is as follows:

        1) Requisitioning objective. The maximum quantities of supplies authorized to be on hand and on order to sustain current operations. The requisitioning objective consists of the sum of the stocks represented by:

Operating Level

The quantity of supplies required to sustain operations in the interval between requisitioning and arrival of supplies.

Safety Level

The quantity of supply in addition to the operating level, required to assure continuance of supply action when there is an interruption in receiving shipments.

Order and Shipping Time

The time it takes between the placing of the order and the receipt of the supplies.

2) Stockage Objective. The maximum quantities of supplies authorized to be on hand to sustain current operations and to meet unforseen requirements. The stockage objective consists of the sum of supplies represented by the operating level.

3) Reorder Point. The point in time at which a supply replacement requisition should be submitted to procurement to maintain the stockage objective. The sum of the safety level of supply plus the level for order and ship time equals the reorder point. In other words, each time a quantity of material equal to the authorized operating level is consumed, then this is the reorder point, and a replenishment requisition is placed on procurement.

12. The Chief will have to receive each stock card and requisition that pertains to high mortality supply items and compute his requirements based on the experience factors generated on each stock card by issues and requisition by demands.

13. The Chief should review each issue and demand factor. He then figures his safety level of stock which is 1/2 the operating

level in days of supply. Then he figures the average order and ship time into the amount that he will requisition.

14. The Chief will then requisition supplies based on a six (6) months stockage objective. See the Requisitioning Objective Concept below for method used to compute requirement.

15. The Chief will request that requisitions be submitted to the Spare Parts Supply from maintenance activities outside of Port-Au-Prince, based on a 30-day supply requirement.

Storage

1. Review Purchase Orders and Vendor's Invoices with the warehouseman to make sure that all necessary action has been taken so that the P.O. and invoice can be forwarded to stock control for vouchering and posting to stock record cards.

2. Review the stock locator card file (if used) or stock record cards to assure that all locations are current. This normally will be a spot check.

3. Review all other documents in storage warehouse, such as issue and receiving documents to assure that all documentation is being processed.

4. Make sure that all copies of requisitions are either in suspense file or have been forwarded to stock control.

5. Assist where needed and when the physical inventory is conducted.

6. Make sure that all safety and fire regulations are being observed by all subordinate personnel.

REQUISITIONING OBJECTIVE CONCEPT

The Requisitioning Objective Concept is based upon the assumption that certain spare parts and other maintenance supply items have a relatively stable rate of consumption and can be predicted over a period of time. The concept works in the following manner:

Assuming that the operating level of supply is 30 days, the safety level is 15 days, and the order and ship time is 15 days, then the computation is as follows:

1.	Operating Level (30 days)	+	Safety Level (15 days)		Stockage Objective (45 days)
2.	Stockage Objective (45 days)	+	Order and Ship Time (15 days)	=	Requisitioning Objective (60 days)
3.	Safety Level (15 days)	+	Order and Ship Time (15 days)	=	Reorder Point (30 days)

For example, using 1 gasket as a day of supply, let us go through the cycle. Since a day of supply equals 1, the operating level for 30 days would be 30 gaskets, plus the safety level of 15 gaskets, which equals the stockage objective 45 gaskets. The stockage objective, 45 gaskets plus the order and ship time of 15 gaskets would equal the Requisitioning Objective, 60 gaskets.

For example, the spare parts supply would initially requisition 60 gaskets. Upon receipt, the 60 gaskets would be picked up on the stock card. Issues would be made to mechanics. Upon reaching the reorder point, the safety level 15 gaskets is added to the order and ship time 15 gaskets which equals the reorder point 30 gaskets. A requisition then is submitted for 30 gaskets.

SUMMARY

The need for a well-organized and well-run spare parts supply organization in the DSPP is unquestioned.

Spare parts support is the basis for a sound maintenance program. Without parts and other items of supply, the program cannot survive very long. The system for control of spare parts and for the required forms and records as indicated in above material, will make possible the provision of this support.

One of the additional factors that must be considered in a successful supply operation is the knowledge of the personnel involved. Without dedicated, well-trained personnel the kind of support required would not be possible to give.

The procedure described above blends together all the facets required for an effective supply system. Each of these facets is essential to create a responsive support system for the maintenance program.

REQUISITION

The Requisition will be prepared in seven (7) copies and will be used for all spare parts or other maintenance supply items to be issued. Preparation will be done by the requisitioner as follows:

Requisitioner

1. FROM: Enter the requisitioner's organization
2. REQUISITION NO.: The requisitioner will enter the requisition control number.
3. DATE: Enter date requisition prepared.
4. TO: Enter DSPP, spare parts supply.
5. ITEM NO.: Enter the number of each item requested, e.g., 1. gasket, 2. hose, 3. spark plug, etc.
6. PART NO.: Enter the number assigned to the item, e.g., the manufacturer's number.
7. DESCRIPTION: Enter sufficient description to identify item.
8. UNIT ISSUE: Enter unit issue, e.g., each, pair, etc.
9. QUANTITY: Enter quantity requested.
10. REQUESTING AND DATE: Enter signature of requesting person and date.
11. APPROVAL AND DATE: Enter signature of approving authority and date.

Supply Organization

1. VOUCHER NO.: The supply organization will voucher requisition and enter voucher number.
2. DATE: The date received will be entered here.
3. QUANTITY ISSUED: The actual quantity issued will be entered here.
4. TOTAL COST: The total cost of each item will be entered here.
5. TRANSPORTATION: If the requisitioner is in the field region or other distant areas, the transportation driver or supervisor will sign and date.
6. REQUISITIONER: The requisitioner will sign and date when quantities are received.

REGISTER OF VOUCHERS

The register of vouchers will be used for all requisitions or other accounting documents that enter or leave the Spare Parts supply. Preparation will be as follows:

1. VOUCHER: In. All requisitions or other accounting documents that enter stock control will be vouchered in numbered sequence, starting with the first voucher number at the beginning of each F/Y.

   Out. All requisitions or other accounting documents that leave stock control will be vouchered out, in numbered sequence, starting with the first voucher number at the beginning of each F/Y.

2. REQUISITION NO.: The stock control clerk will enter the Requisition Number that had been assigned by the requisitioner.

3. DATE NO. ASSIGNED: The stock control clerk will enter the date the requisition was received and accepted.

4. TO OR FROM: The stock control clerk will enter the name of the organization where the document is going, or will enter where it is from. This entry will depend on whether the document is being received, or issued.

5. DESCRIPTION: Enter the description of the first supply item for future reference.

6. SUSPENSE DATE: If the document is held in suspense, the date of suspense will be entered here.

7. ACTION DATE: The date that all final actions have taken on the document will be entered here.

8. ISSUE SLIP: a. If the item is issued to the requisitioner directly place a "U".

   b. If the item is transported to the requisitioner, place an "S".

9. REMARKS: This blank is reserved for comments, e.g., "Received from storage", "Inventory", or any other comment that will explain the purpose of the action registered to the voucher.

STOCK RECORD CARD

A stock record card will be prepared for each different item of supply (spare part, maintenance item) stored in the Spare Parts warehouse. Preparation will be as follows:

Item Identification

1. MODELS: Enter the model number of the item being stored. If a spare part, enter the model number of the piece of equipment that the part belongs to.
2. DESCRIPTION: Enter the description of the item from either the P.C., or other reliable source.
3. PART NO.: Enter the part number assigned to the spare part's P.O. for information, or manufacturer's catalogue, etc.
4. COST: Enter current cost from P.C. or other reliable source.
5. LOCATION: Enter the location of current stockage item, or if new, as assigned by the warehouseman.
6. MINIMUM STOCK: The Chief Storekeeper will enter the necessary information in the block when computing the requisitioning objective.
7. REPLACED BY: Enter new part number, or additional information if item is to be replaced by new spare parts. If no change, or minor change, do not use.

Record of Issues

1. DATE: Enter date of issue of spare part from storage.
2. P.O. OR REQUISITION NO.: Enter number assigned to the incoming P.O. or requisition for control purposes.
3. RECEIVED: Enter quantity received from vendor.
4. ISSUED: Enter quantity issued to requisitioner.
5. BALANCE: Enter quantity remaining.
6. COST: Cost of total quantity received or issued.
7. COST OF MONTHLY OPERATIONS: Receipt. Cost of all receipts for month. Delivery. Cost of all deliveries for month.

8. BALANCE: Enter the balance of funds remaining after all receipts and deliveries have been entered.

Record of Due-Out

In the event the item of supply is not available to be issued, then use this section of the stock record card. The purpose is to provide data when computing the "Requisitioning Objective".

1. REQUISITION NO.: Enter the requisition number for ease of location of the requisition if additional information is required.
2. DATE: Enter the date requisition was posted to the stock record card.
3. QUANTITY: Enter only the quantity that could not be issued, e.g, total was 6, issued 3, quantity would be 3.

Record of Orders Placed

When an order (requisition) is prepared for requesting supplies then this section of the stock record card will be used.

1. DATE: Enter the date the requisition was prepared.
2. REQUISITION NO.: Enter number assigned to requisition for control purposes.
3. QUANTITY REQUISITIONED: Enter quantity requisitioned.
4. QUANTITY RECEIVED: Enter the quantity received.
5. BACK ORDER: In the event not all of the requisitioned quantity was received, enter in the balance.

Once received and issued, line out the applicable quantity listed under Due-Out section.

Monthly Record of Issues

This section will indicate the total of all issues for a given month. Its purpose is to summarize each month to assist in computing the Requisitioning Objective.

1. YEAR: Place the current fiscal year in this block.
2. MONTH: Total up all issues for the month from the "Record of Receipts and Issues" and post in the applicable month block.

THIS SECTION MUST BE KEPT CURRENT FOR COMPUTING REQUIREMENTS FOR REQUISITIONING PURPOSES.

INVENTORY COUNT SLIP

The inventory count slip will be used for recording inventory count data. It will be used for both annual and special inventories. It will be maintained as a permanent record by Inventory Control Section. Preparation of stock number and description will be from stock record card.

Preparation

1. DATE: Enter actual date inventory is to be taken.
2. COUNT SLIP NO.: Enter count slip number. Beginning with number 1 as they are prepared, i.e., the first count slip prepared in the same sequence as stock record card will be number 1, the second count slip prepared will be number 2, etc.
3. INVENTORY VOUCHER NUMBER: Enter voucher number assigned to this inventory. It will be fixed with the letter "A" to indicate an inventory adjustment voucher.
4. LOCATION: Enter actual location of item in storage.
5. STOCK OR PART NUMBER: Enter the identifying stock number, manufacturer's part number or assigned National Medical Depot Number.
6. UNIT OF ISSUE: Enter the standard measure in which the item is normally issued.
7. PRICE: Enter current price listed on stock record card.
8. DESCRIPTION: Enter complete description as shown on stock record card.
9. RECEIPTS: Enter all receipts to show quantity and voucher number received during period of inventory.
10. ISSUES: Enter all issues made during period of inventory.
11. INVENTORY BALANCE: Enter inventory balance for each location.
12. FINAL INVENTORY BALANCE: Enter total quantity of all locations.
13. STOCK RECORD BALANCE: Enter balance from stock record card.
14. QUANTITY OVER/SHORT: Enter as either over or short, the difference between the actual inventory count and balance from the stock record card.

15. VALUE: The total dollar value, either over or short.

16. INVENTORY ADJUSTMENT REPORT: If shortage can be adjusted by I.A.R., use form provided. Check this block.

17. EXPLANATION TO In the event that discrepancy is too large to prepare I.A.R., then letter to Chief, Garage and Transportation should be prepared explaining circumstances.

18. REMARKS: Enter any remarks required that would explain the inventory of this item at a later date.

19. COUNTED BY: Enter signature of counter.

20. RECOUNTED BY: Enter signature of recount is made.

21. POSTED TO STOCK CARD: Enter signature of person who posts count to stock card.

22. INVENTORY CHIEF: Enter signature of Chief Inventory Control Section.

23. MAINTAIN AS PERMANENT RECORD: File inventory count slip in numerical sequence. Maintained by the Chief, Inventory Control Section as one of his permanent records.

INVENTORY ADJUSTMENT REPORT

The Inventory Adjustment Report (IAR) will be prepared whenever there is a requirement to bring the recorded balance into agreement with the quantity physically on hand. This may be caused by overage or shortages discovered thru inventories or when items are found to be recorded under the wrong stock number or nomenclature.

Preparation

1. SUPPLY ACTIVITY: Enter the official designation of activity preparing the Inventory Adjustment Report.

2. LOCATION: Enter geographical location of activity preparing the Inventory Adjustment Report.

3. DATE PREPARED: Enter the date of preparation of the Inventory Adjustment Report.

4. CONDITION: Place an "X" in applicable block to denote that adjustment is to be made on "serviceable" stock record card.

5. PAGE NUMBER AND NUMBER OF PAGES: Pages will be numbered serially. Number of pages will be total number of this (IAR), e.g., 1 of 3, 2 of 3, 3 of 3, etc.

6. ITEM NUMBER: Enter a line Item number for each line item listed on the Inventory Adjustment Report.

7. PART NUMBER: Enter Stock Number of manufacturer's part number, if known.

8. DESCRIPTION: Enter description of item as shown on stock record card and count slip.

9. UNIT OF ISSUE: Enter the standard measure in which the item is normally issued.

10. RECORDED QUANTITY: Enter quantity shown as balance-on-hand on stock record card.

11. INVENTORY QUANTITY: Enter quantity of item shown on inventory count slip as being physically on hand.

12. ADJUSTMENT: Enter quantity over or short, based on difference between recorded balance and inventory balance.

13. UNIT STANDARD PRICE: Enter the current established price for this item.

14. ADJUSTMENT AMOUNTS: Enter total adjustment amounts based on unit price times overage or shortage. NOTE: If this is a shortage, the amount will be entered in the (Credit) column. If this is an overage, the amount will be entered in the (Debit) column.

15. CERTIFICATE: Enter inclusive dates of inventory.

16. ACCOUNTABLE PERSON SIGNATURE: The accountable individual will sign here after checking Inventory Adjustment for correctness.

17. VOUCHER NUMBER: Enter the Voucher Number assigned the Inventory Adjustment Report. Voucher number will be taken from next unused number in the Voucher Register and an (A) will be prefixed to the number to indicate an Adjustment Voucher.

8. ACTIVITY AND LOCATION OF COUNT SLIPS DISCLOSING ABOVE DISCREPANCIES: Enter physical location where count slips are filed if not attached to this document.

9. APPROVING AUTHORITY MOH: Approving Authority will enter his signature over his Official signature block, to include title. If the Approving Authority is satisfied with the explanation surrou ing each discrepancy as noted in remarks, he will complete action by signing the IAR. If is not satisfied with the remarks, he will circle each line item and place the letters (INV). This would indicate that an investigation should be made.

20. DATE APPROVED: Enter the date Inventory Adjustment Report is signed by approving authority.

21. REMARKS: Immediately below the stock number of the last item, enter all remarks pertinent to the discrepancy for each line item using cross references by line item number. If investigation or research discloses the cause for the loss or overage, state briefly the facts and circumstances in order that the reviewing authority may determine whether this report is to be approved (as is) (Without further action) or will require that an investigation should be made.

RECEIVING/ISSUING REGISTER

The Receiving/Issuing Register will be used for all requisitions received or when issues are made. The purpose is to assure that storage has a record of all incoming and outgoing activity for record purposes. Preparation will be as follows:

Storage

1. VOUCHER NO.: Place voucher number assigned by stock control.

2. REQUISITION OR P.O. NO.: Place requisition number assigned by requisitioner.

3. DATE RECEIVED: Date requisition received from stock control.

4. DESCRIPTION: Description of the first item on requisition for identification purposes.

5. REMARKS: Any remarks that would provide additional information to warehousemen, or others seeking data, at a later date.

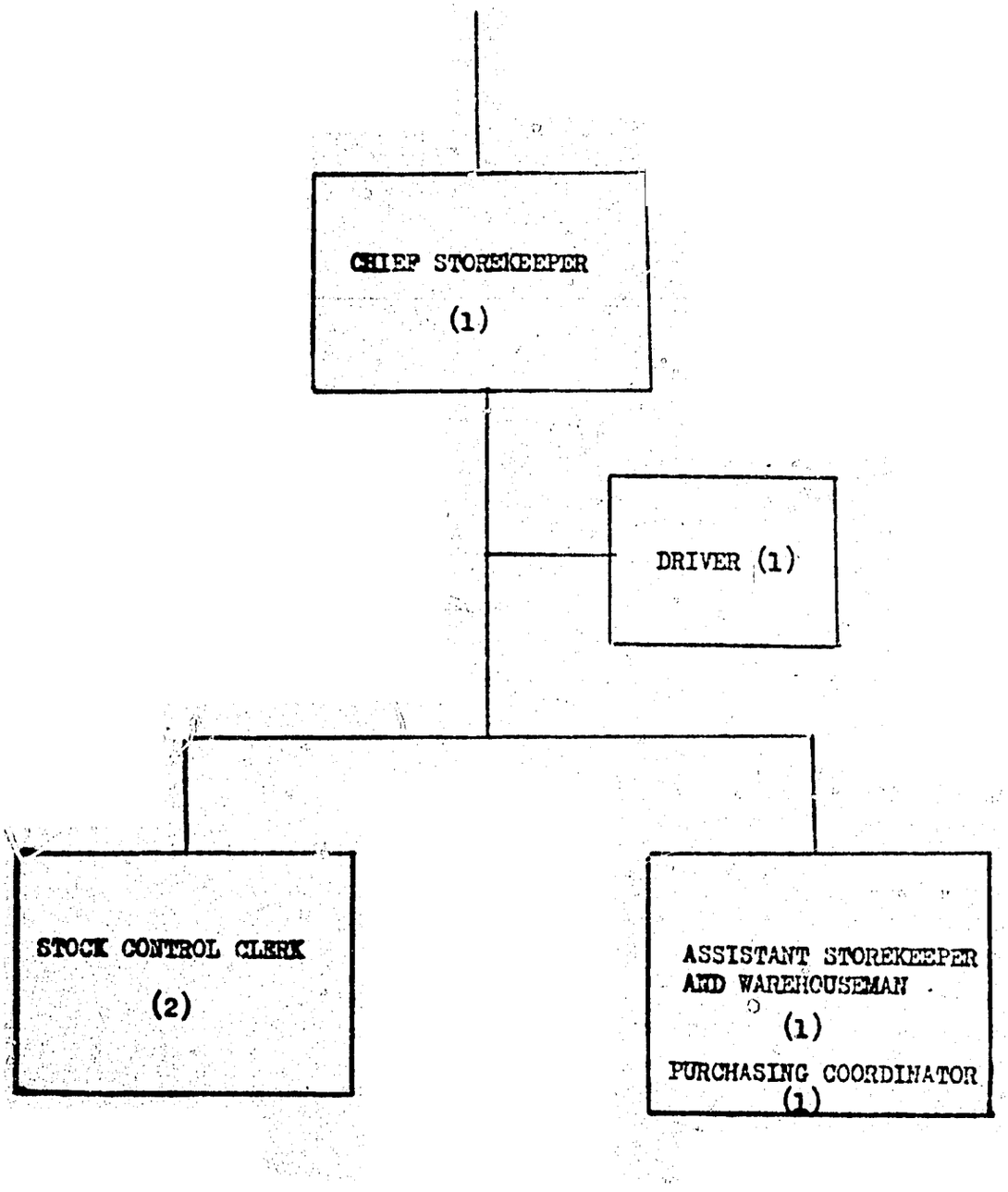
Issuing

1. DATE ISSUED: Date that the requisition was processed and documents and supplies issued.

2. ORGANIZATION REQUESTING: The organization that signed for supplies, e.g., requisitions for local issues, requisitions or transportation for regional issues.

SPARE PARTS SUPPLY

ORGANIZATIONAL CHART



SECTION 7

ACQUISITION AND COST OF EQUIPMENT

VII. ACQUISITION AND COST OF EQUIPMENT

INTRODUCTION

Background information and other data are provided below. It is intended to support the listing of the total costs (capital and operating) required to assure that the new DSPP fleet will be able to serve the needs of the Transportation System. Detailed information on background, equipment and support required, as well as costs, are provided below:

The initial "Transportation System" report to USAID, Port-Au-Prince, dated 22 April '77, indicates the problems in a divided system such as the existing multi-part system within MOH. The Ministry is aware of these problems and is in accord with the concept of placing the DSPP, SNEM, Nutrition and Family Hygiene Fleets, as well as all contributed vehicles from donor agencies, within a one-fleet concept. That previous report points out the necessity of combining all fleet vehicles for maintenance and spare parts support. Also, they should operate from a combined DSPP/SNEM complex.

The SNEM garage complex now supports approximately 119 vehicles. When this operation is combined with DSPP, the total support requirements will be for approximately 290 vehicles. This number results from the phase-out of old vehicles of DSPP (prior to 1971), and the phasing-in of new ones, as well as the addition of the Family Hygiene and Nutrition.

Under the new concept, field maintenance and vehicle support activities will be organized in Gonaives and Cayes. Gonaives will take care of preventive maintenance and services for 63 vehicles. Cayes will take care of preventive maintenance and services for 50 vehicles. Therefore, the actual increase of vehicles to be supported at the central maintenance garage will be 177 vehicles. Combined, these total 290.

In addition to the above, 5 mobile maintenance teams will become part of the system. The purpose of each team is to provide preventive maintenance support to assigned vehicles in the field. Assignment to these teams will be as follows:

2 mobile teams to the Metropolitan Region garage.

2 mobile teams to Cayes maintenance garage (one to Jeremie).

1 mobile team to Gonaives maintenance garage.

One of the important considerations in the acquisition of new equipment (vehicles) is to program in as few different manufacturers as possible The more manufacturers involved, the more difficult it is to provide spare parts and maintenance support. With that concept in mind, it is essential to consider what American-manufactured vehicles are presently on hand and what is being programmed in. A recent survey of the total combined fleet of 290 indicates that the 1971 and later vehicles include approximately 90 that are jeep products. This high percentage of a given manufacturer should be considered by AID when new vehicles are purchased. By doing so, it would be possible to order fewer different makes of spare parts, and at the same time reduce the warehouse requirements.

To provide a basis for updating and expanding the DSPP, the following information is provided:

1. One-half of the present DSPP fleet of 84 vehicles is from the 1950 to 1970 period. In most cases these vehicles are in need of repair and spare parts due to age. This makes it extremely difficult to provide reliable transportation service when so required.

2. The MOH has an urgent need for supervisory medical personnel to play a more active role in the rural health delivery system. To make this possible additional vehicles are required. This need of vehicles for supervision applies also at each level of the organization.

3. Additional clinics are projected for the MOH rural health operations. At present about 125 dispensaries are in place. It is anticipated that by the year 1982, 275 dispensaries will be operating. This added responsibility increases the scope that must be provided.

4. At the present time it is nearly impossible to provide sufficient vehicles to assist in patient evacuation to a higher echelon of health service. Once the fleet has been expanded, it becomes possible to offer such transportation when essential.

FLEET INFORMATION AND COSTS

The MOH Transportation System projected for the 5-year period of 1979-1983, is presented herein. Information is given on the number and type of vehicles required, specific uses, location and costs. Further, costs are shown for fuel, maintenance and repair, garage equipment, garage facility, spare parts facility, and gasoline storage facilities. Finally, costs of recommended technical assistance are enumerated, as well as of on-the-job training and for recommended motorcycles, and coastal motor boats. A summary chart showing the total of all costs appears at the end.

PROJECTED VEHICLE REQUIREMENTS

1979 - 1983

A = Supervisor
B = Patient Transportation
C = Supply Transportation
D = Maintenance Transportation
E = All Purposes
F = Student Transportation

SANITATION DISTRICT	NUMBER AND TYPE OF VEHICLE	ASSIGNMENT
	1 Wagoneer with movable rear seat	Hopital District
	1 Jeep 4WD " " (Long wh. base)	" "
	1 Jeep 4WD " " (Short wh. base)	" "
	1 Pick-Up 4WD	
Saint Marc	1 Jeep 4WD " " (Long wh. base)	Hopital Verrettes
	1 Jeep 4WD " " (Long wh. base)	C. S. Dessalines
	1 Jeep 4WD " " (Long wh. base)	C. S. Pte Riv. Artibonite
	1 Jeep 4WD " " (Long wh. base)	Hopital District
	1 Jeep 4WD " " (Long wh. base)	" "
Hinche	1 Jeep 4WD " " (Short wh. base)	" "
	1 Pick-Up	Hopital District
	1 Wagoneer with movable rear seat	Hopital District
	1 Jeep 4WD " " (Long wh. base)	" "
Jacmel	1 Jeep 4WD " " (Short wh. base)	" "
	1 Pick-Up	" "
	1 Jeep 4WD " " (Long wh. base)	Hopital Bainet
	1 Wagoneer with movable rear seat	Hopital District
	1 Jeep 4WD " " (Long wh. base)	" "
Petit Goave	1 Jeep 4WD " " (Short wh. base)	" "
	1 Pick-Up 4WD	" "
	1 Jeep 4WD " " (Long wh. base)	C. S. Miragoane
	1 Wagoneer with movable rear seat	Hopital District
	1 Jeep 4WD " " (Long wh. base)	" "
	1 Jeep 4WD " " (Short wh. base)	" "
Gonaives	1 Pick-Up 4WD " "	" "
	1 Jeep 4WD " " (Long wh. base)	S. C. Gros Morne
	1 Pick-Up	Garage
	1 Pick-Up " "	Garage
Sub Total	28	

SANITATION DISTRICT	NUMBER AND TYPE OF VEHICLE		ASSIGNMENT	PURPOSE
	1 Jeep 4WD with movable rear seat	(Long wh. base)	Hopital District	A-B
	1 Jeep 4WD " "	(Long wh. base)	" "	B-C
	1 Jeep 4WD	(Short wh. base)	" "	A
Belladere	1 Pick-Up 4WD		" "	C
	1 Jeep 4WD " "	(Long wh. base)	C. S. Mirebalais	A-B
	1 Jeep 4WD " "	(Long wh. base)	C. S. Ville Bonheur	A-B
	1 Wagoneer with movable rear seat		Hopital District	A-B
	1 Jeep 4WD " "	(Long wh. base)	" "	B-C
	1 Jeep 4WD	(Short wh. base)	" "	A
Port-de-Paix	1 Pick-Up 4WD		" "	C
	1 Jeep 4WD " "	(Long wh. base)	C. S. Jean Rabel	A-B
	1 Jeep 4WD " "	(Long wh. base)	C. S. Anse a Foleur	A-B
	1 Jeep 4WD " "	(Long wh. base)	C. S. Terre Neuve	A-B
	1 Jeep 4WD " "	(Long wh. base)	Hospital District	A-B
	1 Jeep 4WD " "	(Long wh. base)	" "	B-C
Jeremie	1 Jeep 4WD	(Short wh. base)	" "	A
	1 Pick-Up 4WD		" "	C
Sub Total	17			

ASILES	NUMBER AND TYPE OF VEHICLE	ASSIGNMENT	PURPOSE
Sanatorium	1 Pick-Up	Cayes	E
Signeau	1 "	Leogane	E
Beudet	1 "	Croix des Bouquets	E
"Asile Stenio Vincent"	1 "	Cap Haitien	E
Asile Bayonnais	1 "	Cap Haitien	E
Asile Bruneau	1 "	Port de Paix	E
Aire Metropole	2 Wagoneers	Sanatorium	E
	1 "	C. S. Carrefour	E
	1 "	Jeanty	E
	1 "	Croix des Bouquets	E
	1 " and 1 Pick-Up	Petion Ville	(*)
	1 " and 1 "	C. S. Cathedrale	(*)
	1 " and 1 "	C. S. La Saline	E
	1 " and 1 "	C. S. Portail Laogane	E
	1 " and 1 "	C. S. St Martin	E
Region Nord	3 Wagoneers	Bureau Regional	A-B
	1 Pick-Up	Bureau Regional	C
	2 Jeep L.W.B.	Hopital	A-B
	7 Jeep	Trou du Nord	A-B
		Mont Organise	A-B
		Fort Liberte	A-B
		Nombin Crochu	A-B
		Borgne	A-B
		Bondon	A-B
		St Raphael	A-B
Region Sud	3 Wagoneers	Bureau Regional	A-B
	2 Pick-Up	Bureau Regional	A-B
	2 Jeep L.W.B.	Hopital Regional	A-B
	3 Jeep	Camp Perrin	A-B
		Aquin	A-B
		Les Anglair	A-B
	2 Pick-Up	Garage	C-D
Sub Total	46		

(*) = Activites equipes infirmieres hygienistes et officiers sanitaries.

	NBRE ET TYPE DE VEHICULE	AFFECTATION	PURPOSE
Region Sud	5 Jeep LWB	Corail	A-B
		Anse d'Hainault	A-B
		Anse a Veau	A-B
		Baraderes	A-B
		Dame Marie	A-B
	2 Wagoneers	S.d'Ed. & Dir. Gn	E
	7 (2 Wagoneer, 1 Jeep LWB, 1 Jeep SWB, 3 P/U).	Div. Administ.	E
	3 Truck Van Large	Div. Administ.	E
	2 Wagoneer	Div. Ass. Pub.	E
	2 Wagoneer	Div. Ontologie	E
	7 (3 Wagoneer, 2 Jeep LWB, 2 Pick-Up)	Div. Hyg. Pub.	E
Port au Prince			
	3 Wagoneer	Bur. Plan. & Ev.	E
	1 Wagoneer	Bur. Ass. Ext.	E
	1 Wagoneer	Bur. Nursing	E
	5 (1 Wagoneer, 3 Jeep LWB, 1 Pick-Up)	H.U.E.H. ***	E
	1 Tow Truck	Garage	C-D
	2 Pick-Up	Garage	C-D
	4 Bus	Student Transportation	F
	2 Pick-Up	Garage	C-D
Sub Total	47		

SUMMARY

	WAGONEER	JEEP LWB	JEEP SWB	PICK-UP	TRUCK VAN LARGE	PICK UN Unite Mobile	TOW TRUCK	BUS	TOTAL
Saint Marc	1	4	1	1					7
Jinche		2	1	1					4
Jacmel	1	2	1	1					5
Petit Goave	1	2	1	1					5
Gonaives	1	2	1	3					7
Belladere		4	1	1					6
Port de Paix	1	4	1	1					7
Jeremie		2	1	1					4
Aire Metropole	10			5					15
S.d'ED. & Dir. Gen. 8	2								2
Div. Administ.	2	1	1	3	3*				10
Div. Ass. Pub.	2								2
Div. Ontologie	2								2
Div. Hyg. Pub.	3	2		2					7
Asiles				6					6
Bur. Plan. & Ev.	3								3
Bur. Ass. Ext.	1								1
Bur. Nursing	1								1
H.U.E.H. **	1	3		1					5
Region Nord	3	9		1					13
Region Sud	3	10		4					17
Garage Central						4	1		5
Nursing/Aux. school								4	4
									138

* 5 large Vans are required, of which some have already been purchased by AID in 1978.

** Transport malades et approvisionments

DSPP

VEHICLE PHASE-OUT, AND REPLACEMENT OF FLEET, 1978 - 1983

	1978	1979	1980	1981	1982	1983	TOTAL
New Vehicles To Replace Existing Fleet	42*	4	3	3	4	9	23
New Vehicles To augment Fleet		16	9	9	9	8	51
Total Purchase By AID		20	12	12	13	17	74
TOTAL		40	24	24	26	34	148

* To be replaced by BID (15), UNICEF (10), DSPP (17). The 42 very old vehicles will be phased out, being too costly to repair.

FUEL REQUIREMENTS

The MOH purchases gasoline at one-half the market price in Port au Prince. It is anticipated that the approximately $.05 per year increase per gallon of gasoline will continue.

Computation are based upon an average of 15 miles per gallon for MOH vehicles (due to 4WD type vehicles) and an average of 15,000 miles per year per vehicle. Oil and lubricants are part of the maintenance costs.

The total gasoline needed to fuel the DSPP portion of the combined garage is:

	No. VEHICLES	Per Year	Total Gas Used	Price	Year	$ Est
Year 1	138	1000 gal.	138,000	$.54/gal	1	$ 74,520
" 2	138	1000 gal.		.59 "	2	81,420
" 3	138	1000 gal.		.64 "	3	88,320
" 4	138	1000 gal		.69 "	4	95,220
" 5	138	1000 gal		.74 "	5	102,120
						$441,600
Combined Fleet DSPP-SNEM - BON DHF						
	290	1000 gal.	290,000	$.54 "	1	156,600
	290	1000 gal.		.59 "	2	171,100
	290	1000 gal.		.64 "	3	185,600
	290	1000 gal.		.69 "	4	200,100
	290	1000 gal.		.74 "	5	214,600
						$928,000

MAINTENANCE AND REPAIR

An average cost of maintenance and repair according to SNEM experience figures out to $80 per month, or rounded off to $1000 per year per vehicle. This includes all spare parts support, lubricants, tires, overhaul and accident repairs.

	Vehicles	Cost per Vehicle	Year	Cost per Year
DSPP	138	$ 1000	1	$ 138,000
			2	138,000
			3	138,000
			4	138,000
			5	138,000
			Total:	$ 690,000

GARAGE EQUIPMENT

Major new equipment will be needed to supplement that currently at SNEM. Equipment should be programmed in years 1, 3 and 5 to take care of the fleet increase to 290 vehicles.

A breakout as to the total equipment requirements, location and cost, in order to maintain the expanded fleet of vehicles is contained in Section 4, Part I, "Garage Maintenance Operation". A summary of locations where equipment will be placed, and the cost for the equipment is listed below:

Location	Cost
Central Garage	$ 9,535.56
Gonaives	4,103.46
Cayes	4,103.46
Mobile Team (5 each)	13,476.60
Mechanics Tool Sets (35 each)	15,997.45
	$47,216.53
Years 3 and 5	15,000.00
	$62,216.53

GARAGE FACILITY

Using the combined fleet of 290 vehicles for workload calculation, the Central Metropolitan Garage and 2 mobile maintenance teams will provide preventive maintenance support for 177 vehicles. Gonaives Garage and 1 mobile maintenance team will support 63 vehicles. Cayes Garage and 1 mobile maintenance team will support 50 vehicles.

Central	177
Cayes	50
Gonaives	63
	290

The plans and cost of the Central Garage Complex including Gonaives and Cayes garages for building and renovation to provide for the expanded fleet is contained in Section 4, Part II, "Garage Maintenance Operation". A list of locations and costs of construction and renovation is given below:

Location	Cost
Central Garage Complex	$ 137,148.00
Gonaives Garage	54,868.00
Cayes Garage	54,868.00
	$ 246,884.00

SPARE PARTS FACILITY - INTERIOR RENOVATION

A building is available to handle spare parts support for the combined fleets at the SNEM garage complex.

The cost of renovating the interior of the building to make it possible for spare parts personnel to operate efficiently is as follows:

Frame and Wall (Wood) Office, 192 sq.	$ 1,000
A/C For Office, 12,000 BTU	600
Electric Lights in Office and Outlets (3 lights, 1-220 V. outlet, 1-110 outlet)	200
Electric Lights in Warehouse (10 lights, 1-110 V. outlet)	100
BIN Section Required 144" - 3	600
Pallet Racks 144" 3ea x 100	300
Pallet Support Set 10 x 50	500
Two wheel Hand Truck - 1	75
Pallets 10 x 25	250
Handlift Truck - 1	1,000
	$ 4,625
25% Overall Costs (rounded)	1,156
	$ 5,781

GASOLINE STORAGE FACILITIES

The gasoline storage and pumps must be at the same place as the garage. The SNEM location has been selected for these. Since it is planned to build a new garage or expand the existing one, the present gas station will have to be moved.

The solution to the problem is to build a new one in front of the existing parking area. This location will make it possible to improve traffic circulation. In this position, all the vehicles will come STRAIGHT by the entrance for gas supply and continue to the exit gate.

A total of 3 pumps will be necessary (two for gasoline and one for gas-oil). One working pump exists at the present SNEM gas-station, leaving two to be purchased. Three underground storage tanks will be required.

Estimated cost of new gas pumps and storage tanks:

2 pumps @ 2,500.00 ea.		=	$ 5,000.00
3 storage tanks @ 2,500.00 ea.		=	7,500.00
Construction (including labor)		=	8,750.00
Contingencies		=	2,150.00
	Total		$ 23,400.00

COASTAL MOTOR BOATS

Five (5) coastal motor boats appear in the budget. These are to be used for the coastal areas, difficult or impossible to reach by over-the-road vehicles.

The uses of these motor boats will include: evacuation of patients to a District Hospital and return, especially for convalescing patients; supplies and other health-related materials such as drugs, and vaccines; and transportation of medical personnel on a programmed basis.

It is practically impossible to reach certain areas of Haiti with ground vehicles. As a result, use of water transportation is the most reliable and efficient method of bringing health care to Haitians in these areas.

The coastal motor boats will be placed into operation at the locations listed below:

1. One (1) motor boat at the District Hospital, Port-de-Paix, to serve Ile de la Tortue.
2. One (1) motor boat at the District Hospital, Port-au-Prince, to serve Ile de la Gonave.
3. One (1) motor boat at the District Hospital, Jeremie, to serve Baraderes, Corail, Anse-d'Hainault, Dame-Marie, and Tiburon.
4. Two (2) motor boats at the District Hospital, Cayes, to serve Ile a Vache, Chardinniere, Port-a-Piment, and Coteaux.

Under this arrangement, the District Hospital is responsible for programming and scheduling the trips, distributing medicines and supplies, etc. The boat operators will be supervised by the Administrator of the District Hospital. Operators will be responsible for maintenance and repairs. When necessary, the assistance of the mobile teams for vehicle repair will be utilized.

Small coastal motor boats are capable of providing continuous service throughout the year in coastal areas of Haiti. By means of this method of transportation, the extension of health coverage to the unreached coastal areas becomes possible.

Cost (Haiti made)		
5 motor boats	$ 6,000.00	
Gasoline	700.00	
Maintenance & Repair	500.00	
	$ 7,200.00 x 5 =	$ 36,000.00
Cost (U.S. made)		
5 motor boats	$ 12,000.00	
Gasoline	700.00	
Maintenance & Repair	500.00	
	$ 13,200.00 x 5 =	$ 65,000.00

Number of round trips for each boat per year	50
Number of nautical miles per boat per year	5,000
Cost per trip	$ 30.00

MOTORCYCLES

Three (3) motorcycles will be purchased in year 1 of the project to operate North-West of Saint-Marc, in the Bocozell area. Road conditions are such that the only means of traveling within this region is by using a means of transportation other than a 4-wheel type vehicle.

The cost for the three motorcycles including maintenance, repair and fuel, is negligible in comparison to their value in providing health services to a part of Haiti that is is dire need of such services.

3 Motorcycles	$ 4,500.00
Gasoline per year	75.00
Maintenance and Repair	150.00
Total	$ 4,725.00

INSTITUTIONAL TRAINING

Institutional training for garage maintenance personnel is available in Port-au-Prince. Such training experience could be very effective, using either of the two schools now functioning. These schools are described as follows:

The Institut National and Centre Pilote de Formation Professionnelle

The Institut is a very well organized school sponsored by many private enterprises, such as the Mercedes dealer, Peugot dealer, etc. These enterprises sent their employees to secure special training that is offered at the school. After an appropriate period of required training, these employees return to the referring enterprise, frequently as leaders to train others. For this reason, it is suggested that DSPP then will be able to send mechanics who may be selected for short time, specific training. The next training period will take place in June 1979.

The J. B. Damien Vocational Scho

This school is a governmental school that provides technical training for students in many technical areas. This school does not have a special training time for students who are already employed. According to the principal of the school, DSPP may be provided with a qualified teacher who would provide technical training. This could be carried out either at the school or at the DSPP garage, after appropriate arrangements are made.

Cost of Institutional Training

On the Job Training (OJT) (For 29 maintenance personnel)

yrs.	Consultants:	1 Mechanical (6 mo.)	$ 1,200.00
1 & 2		1 Electrical (6 mo.)	1,200.00
		1 Body/Ptg. (6 mo.)	1,200.00
			$ 3,600.00

The Institut National and Centre Pilote de Formation Professionnel.
The J. B. Damien Vocational School.

yrs.	3 persons (3 mo. ea.) @ $3,000.00	$ 9,000.00
1 & 2	3 persons (3 mo. ea.) @ $3,000.00	$ 9,000.00
		$ 18,000.00
	Grand Total	$ 21,600.00

TECHNICAL ASSISTANCE TRANSPORTATION SYSTEM

Year 1 thru Year 5 - Technician Specialist No. of Man-months 60

Purpose

To assist MOH, and Division of Administration to implement the technical aspects of the newly designed Transportation System.

Qualifications

Person with experience in auto mechanics, vehicle repair, preventive maintenance, garage operations, directing a vehicle system, employee supervision and fleet control. Must have first hand knowledge, including minimum of 10 years practical experience with light and heavy equipment. Must be fluent in French; Creole desirable.

Plan of Work

Understand the Transportation System.

Work under direction of Chief, Division of General Administration.

Teach, assist and advise employees at first hand on technical matters of repair, prevention, problem analysis, vehicle check-up and inspection, replacement, quality performance and completion of forms.

Work in all phases of operations including gasoline control and distribution, spare parts control and usage, accountability, major overhaul, etc.

Perform above functions in central garage, and field garages.

Periodic analysis of problems, progress, methods and needs directed toward establishing an efficient, operational transportation system.

Development of training programs involving on-the-job training, proposing needed types of training courses, planning for use of existing training opportunities in Haiti and outside the country.

Cost

$ 350,000 - $ 400,000

Years 1, 3 & 5 Organization/Administration Specialist No. of Man-months

1st Yr - 3 mos.
3rd Yr - 2 mos.
5th Yr - 2 mos.

Purpose

To provide T.A. to MOH in the implementation of the transportation system at 3 different stages of development, (1st, 3rd & 5th years), particularly in the organizational and administrative aspects. Propose courses of action, as indicated, to assure movement toward a clearly defined, well-operated system.

Qualifications Required

Person with training and experience in organization and management of transportation systems. Must be able to advise on organizational problems, business administration methods and processes of evaluation. Must be fluent in French.

Plan of Work

Study of existing operational systems of transportation within MOH and SNEM.

Analysis of norms, and methods of effective implementation.

Review of organizational structure and administrative methods.

Evaluation of progress, problems and intraministerial relationships.

Proposals for strengthening of system.

Cost

$56,000.00

Years 1, 2, 3, & 5 — Systems Analyst — No. of Man-Months 8

1st Yr - 2 mos.
2nd Yr - 2 mos.
3rd Yr - 2 mos.
5th Yr - 2 mos.

Purpose

To assist the MOH in developing methods of evaluation of the entire DSPP Transportation System, at 4 stages of development (Yrs. 1, 2, 3 and 5). To assist also in conducting an in-depth analysis of the cost, efficiency and effectiveness, both in operational and economic terms.

Qualifications Required

Person with training and experience in management systems and systems analysis. Must be capable of applying special technical knowledge in analyzing the components of a transportation system, the interacting facets and the actual effectiveness of expenditures, preventive maintenance techniques, training programs and the plans of decentralization as well as of unification of the 4 separate systems.

Work Plan

Analysis of Transportation budget and budget trends.

Review of functional components in each of the 4 fleets, as to cost, efficiency, and results.

Study of management decisions and their effect.

Study of effect and cost of training programs on performance.

Analysis of plan for unification of entire system.

Cost

$ 64,000.00

SUMMARY OF TECHNICAL ASSISTANCE COSTS (ESTIMATE)

Technician Specialist	$ 350,000 - 400,000
Organization/Administration Specialist	56,000
Systems Analyst	64,000
TOTAL	$ 520,000

TECHNICAL ASSISTANCE TRAINING

On-the-Job Training

When maintenance personnel of DSPP and SNEM are merged into a single program, the total of existing personnel will be 179. In certain areas of work, combining of staff results in duplication of personnel beyond the need for efficiency of operation. To alleviate this problem, therefore, it will be necessary to develop a program of on-the-job training. This will be centered about the general mechanics, electrical repair technicians and the body/paint specialists.

The retraining program will be adapted to the specific needs of the entire system of vehicle repair, preventive maintenance, garage operation, gasoline distribution, specialized services and individual accountability. 29 mechanics of the estimated 179 will be selected for training.

Years 1 & 2

This will be provided through the use of technician consultation. These will include persons with training and experience in automotive work and repairs. 29 of the maintenance personnel will receive training during years One and Two.

	No. of Man-Mos.
1 Mechanic Technician	2
1 Electrical Technician	2
1 Body/painting	2

Qualifications

Technicians who have had training and experience in one or more of the 3 technical areas above, vehicle mechanics, electrical work and/or body work and painting of vehicles. Minimum of 10 years of experience required.

Plan of Work

In conjunction with the Chief of Garage: Technicians will be scheduled to serve for 3 months each, in each of the first 2 years of the project. Each technician will work with designated mechanics. Each will observe, teach, guide and train, in their respective fields of experience. Each will work in the central garage and the 2 regional garages, according to a mutually agreeable schedule.

	YR. 1	YR. 2	YR. 3	YR. 4	YR. 5	TOTAL
ANNUAL TOTALS--$	880.2	402.2	423.3	398.2	498.1	2,604.1
VEHICLES **Replacement and additional (Purchasing Schedule)**	173.0	76.0	79.0	85.0	139.0	552.0
FUEL **Vehicles**	74.5	81.4	88.3	95.2	102.1	441.6
MAINTENANCE AND REPAIR **Vehicles**	138.0	138.0	138.0	138.0	138.0	690.0
GARAGE EQUIPMENT Central Gonaives Cayes	47.2	--	8.0	--	7.0	62.2
GARAGE FACILITIES PORT-AU-PRINCE, GONAIVES, CAYES - including cost of maintenance and repair of garage	246.8	--	--	--	--	246.8
SPARE PARTS - WAREHOUSE - RENOVATION	5.7	--	--	--	--	5.7
GASOLINE STORAGE FACILITIES	23.4	--	--	--	--	23.4
TECHNICAL ASSISTANCE	120.0	96.0	112.0	80.0	112.0	520.0
TRAINING (OJT and INSTITUTIONAL)	10.8	10.8	--	--	--	216.0
MOTORCYCLES	4.8	--	--	--	--	4.8
COASTAL MOTOR BOATS	36.0	--	--	--	--	36.0

PURCHASING SCHEDULE

AND COSTS

VEHICLE TYPE	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
	II	$	II	$	II	$	II	$	II	$
Tow Truck	1	15,000								
Bus (12 passengers)							1	8,000		
Pickup	10	60,000	3	18,000	5	30,000	6	36,000	8	48,000
Wagoneer	2	14,000	1	7,000	7	49,000	3	21,000	5	35,000
Jeep LWB*	6	42,000	3	21,000			2	14,000	4	28,000
Jeep SWB			5	30,000			1	6,000		
Truck Van**	3	42,000								
	22	173,000	12	76,000	12	79,000	13	85,000	17	111,000

*To be used as an ambulance and all-purpose vehicle.

**Logistics Van - Ford F 600, 6-Ton or equal.

[illegible] by location and Usage (Expressed in percent)

	WAGONEER	JEEP		PICK-UP	BUS	TOW TRUCK	TRUCK VAN
		LWB	SWB				
Where used and number of vehicles	Central 27 Region/District 11	Central 6 Region/District 14 Health Centers (with & without beds) 27	3 8	Central Adminis. 3 Div. P. Hyg. 2 Garage 4 HUEH 1 Metrop. area Health Centers 5 Region/District 11 Asilos 5 Sanatorium 1 Field garages (Gonaives/Cayes) 4	Central 4	Central 1	Central 5
Purpose & types of use	Supervision Supply Patient transp.	LWB Supply Patient transp.	SWB Supervision	Supply Maintenance All purpose	Student transp.	Tow disabled vehicles	Distribution of drugs & medical supplies
Percentage of time vehicle used by a) level and b) purpose	Central % Supervis. 85 Supply 10 Patient transp. 5	Central % Patient transp. 20 Supply 80	Dist. % Super. 100	Central adm. % Supplies 100 Public Hyg. Supplies 50 All purpose 50 Garage Maintenance 100	Central % Student transp. 100	Central % Towing 100	Central % Supply* 100
	Reg/Dist. % Superv. 65 Supply 20 Patient transp. 15	District % Patient transp. 65 Supply 35 Health C. Patient transp. 40 Supply 60		HUEH % Supply 90 All purpose 10 Metrop. area Health Centers All purpose 100 Reg/Dist. Supply 90 Maintenance 5 All purpose 5 Asiles & Sanit. All purpose 100 Field Garages Maintenance 100			

* Transport of supplies throughout the nation, of large volume and weight.

From : Jean Veillard
WIN :
Date : 25 April 1977
Subject: SNEM Salary Supplement

To: USAID, Port-au-Prince

In as much as changes should occured at the DSP/P Garage we have worked out a plan under which no additional hands are needed under the merger with /SNEM. The number of employees remain the same. Only a salary adjustment mainly for those actuelly with the DSP/P is required.

Chef de la section de transport	1	287.50
Mouvement des Vehicules	1	230
Asst. Chef de Transport	1	220
Emplo.du mouvement des vehicules	2 (@ 127.50)	255
Operateur de Pompe a essence	3 (@ 56.50)	169.50
Chauffeur d'Autobus	4 (@ 100)	440
Chayffeur Sr.	4 (@ 95)	380
Chauffeur Mecanicien	60 (@ 91)	5460
Chauffdur Jr	12 (@ 85)	1020
Assistant Addinistratif	1 (@	185
Mecanicien en Chef	1	220
Clerc de Garage	1	122,50
Inspecteur Mecanicien	2 (@ 157.50)	315
Mecanicien Gr.	16 (@ 137.50)	2200
Aide Mecanicien	15 (@ 89)	1335
Inspecteur de Vehicules	2 (@ 127.50)	255
Soudeur Gr.	1	127.50
Apprenti	14 (@ 45)	630
Soudeur	5 (@ 110)	550
Reparateur Cavosserie	2 (@ 110)	220
Responsable des outils	2 (@ 93)	186
Graisseur	1	103
Peintre	3 (@127.50)	382.50
Magasinier	1	167.50
Aide Maganinier	3 (@ 120)	360
Depanneur	8 (@ 60)	480

Surveillants	2 (@ 50)	100
Travailleurs	10 (@ 45)	450
Electricien	2 (@ 100)	200
Menuisier	1	60
Charpentier	1	60
Technicien	3 (@ 60)	180
		500
Total	185	$ 19.645.50 Monthly
SNEH	52	
DSP/P	133	

Annual Total under the merger	$ 255.391
Current :	
DSP/P	$ 94.572
SNEH	$ 83.876
Sub-Total	$ 178.448
Total amount needed from USAID for Salary Supplement	$ 76.943

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