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MOBILITY PERFORMANCE OF SELECTED 1-1/4- TO 5-TON CARGO TRUCKS IN THE HIMO WEST GERMANY STUDY AREA (TACV EXCURSION)

by

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August 1978
Final Report

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20. ABSTRACT (Continued).

The HIMO methodology was used to establish mobility rating speeds for five levels of mobility (on-road, tactical support, tactical standard, tactical high, and high-high) in the West Germany HIMO study area. The study vehicles were compared with the standard military 2-1/2-ton cargo truck (M35A2, 6x6) and in terms of best vehicle for each tactical mobility level. The vehicles' mobility was graphically portrayed in terms of a "cube" in order to compare the complete mobility of the study vehicles over all mobility levels.

A method was then suggested for relating the performance of cargo vehicles in the tactical mobility levels to the mobility required for cargo vehicles operating in the brigade, division, and corps areas. Finally, a correction was suggested to indicate which of the study vehicles would contain the mobility required for the brigade, division, and corps operations.

Appendix A gives the vehicle characteristics required for the AMM and SWIMCRIT/WACROSS water-crossing model; Appendix B gives the detailed mobility performance data; and Appendix C shows the computations required for determining the vehicle rating speed for the tactical mobility levels.

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PREFACE

Personnel of the U. S. Army Engineer Waterways Experiment Station (WES) conducted the study described herein during the period from October to December 1977 for the U. S. Army Training and Doctrine Command (TRADOC) under Intra-Army Order for Reimbursable Services No. CD 5-78, dated 13 October 1977.

The study was conducted under the general supervision of Messrs. W. G. Shockley, Chief, Mobility and Environmental Systems Laboratory (MESL), now designated Geotechnical Laboratory; E. S. Rush, Chief, Mobility Systems Division (MSD); and C. J. Nuttall, Jr., Chief, Mobility Research and Methodology Branch (MRMB). Mr. D. D. Randolph, MRMB, directed the overall study and prepared this report. Messrs. R. P. Smith, R. B. Ahlvin, and B. R. Wright, Data Handling Branch (DHB), MSD, prepared the mobility predictions. Mr. R. G. Temple and Ms. E. P. Roberts, MRMB, prepared the vehicle characteristics data. Personnel of the U. S. Army Logistics Center (LOGC) and U. S. Army Tank-Automotive Research and Development Command (TARADCOM) selected the study vehicles. Mr. Ron Wummel, Tank-Automotive Systems Laboratory, Tactical Systems Division, Advanced Tactical Vehicles Function, and Mr. Lynn Martin, Tank-Automotive Concepts Laboratory, Exploratory Development Division, Analysis and Evaluation Function, TARADCOM, supported WES's efforts in collecting vehicle characteristics and performance data.

COL J. H. Cannon, CE, was Director of the WES during the conduct of the study and preparation of this report. Mr. F. R. Brown was Technical Director.

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CONVERSION FACTORS, U. S. CUSTOMARY TO METRIC (SI) AND METRIC (SI) TO U. S. CUSTOMARY UNITS OF MEASUREMENT

Units of measurement used in this report can be converted as follows:

Multiply	By	To obtain
U. S. Customary to Metric (SI)		
inches	0.0254	metres
miles (U. S. statute)	1.609344	kilometres
pounds (mass)	0.45359237	kilograms
tons (mass)	907.185	kilograms
tons (force)	8896.444	newtons
pounds per square inch	6.894757	kilopascals
miles (U. S. statute) per hour	1.609344	kilometres per hour
degrees (angular)	0.01745329	radians
horsepower per ton	83.82	watts per kilonewton
horsepower	745.6999	watts
Metric (SI) to U. S. Customary		
centimetres	0.3937	inches
metres	3.2808	feet
kilometres	0.6214	miles (U. S. statute)
square kilometres	0.3861	square miles (U. S. statute)
metres per second	3.2808	feet per second

MOBILITY ANALYSIS OF SELECTED 1-1/4- TO 5-TON CARGO TRUCKS IN THE HIMO WEST GERMANY STUDY AREA (TACV EXCURSION)

PART I: INTRODUCTION

Background

1. The U. S. Army Logistics Center (LOGC) is conducting a study of the Army's needs for tactical wheeled vehicles in the 1980-95 time frame--the TACV study. LOGC has asked WES to support the TACV study by developing mobility performance data for more than 40 vehicles, which are candidates for use in the 1980-95 Army tactical truck fleet. This WES work is scheduled for completion in March 1978. Because there is more immediate need for the same data for currently available vehicles to assist ongoing DARCOM deliberations concerning current 2-1/2-ton* truck policy, a subset (18 vehicles) of the TACV vehicle candidates was selected for preliminary analysis on a priority basis, and designated the "TACV excursion." This report gives the results of mobility performance predictions for the vehicles in the excursion.

2. Some of the questions to be addressed in LOGC's TACV excursion are:

a. Does the Army need all 2-1/2-ton body styles in the inventory?

b. Is there another vehicle in the inventory or commercially available which would satisfactorily replace the current standard 2-1/2-ton vehicle and be cost effective at the same time?

c. What advantages has the present 2-1/2-ton PIP vehicle over the rebuilt version?

To address questions b and c above, LOGC with the aid of the U. S. Army Tank-Automotive Research and Development Command (TARADCOM) selected a

---

* A table of factors for converting U. S. customary units of measurement to metric (SI) units and metric (SI) units to U. S. customary units is given on page 5.

group of cargo vehicles in the 1-1/4- to 5-ton payload range to analyze as candidates for the Army's current requirement for 2-1/2-ton trucks (Appendix A). Mobility, cost, maintainability, driver training, and other factors associated with each candidate vehicle must be considered in answering fully questions b and c above. This report deals only with the mobility performance of the candidate vehicles.

Objective

3. The objective of the WES support of the TACV excursion was to provide a mobility analysis of the 18 selected candidate vehicles in the HIMO West Germany study area.[1]

Scope

4. Principal activities necessary to achieve the WES objective were:

a. The AMC-74X mobility model (AMM) (paragraph 20) was used to predict off-road and on-road performances of the candidate vehicles in the HIMO West Germany study area. Performance predictions are included in terms of speed profiles for the dry, wet, and snow surface condition of the primary roads, secondary roads, trails, and off-road; and in terms of percent NOGO for trails and off-road (Appendix B).

b. The SWIMCRIT water-crossing model[2] was used to predict water-crossing of candidate vehicles.

c. The vehicle characteristics, terrain description, and HIMO methodology were revised for this study from those used in the HIMO study to reflect the better information available at this time.*

d. The mobility rating speed was computed for each vehicle at five tactical mobility levels for the dry, wet, and

---

* Performance data included in this study for the M35A2, 6x6, 2-1/2-ton cargo truck and M813A1, 6x6, 5-ton cargo truck cannot be compared directly with performance data in the HIMO report.

snow conditions and for all conditions combined (Part III). The levels of mobility and corresponding mobility rating speeds used were those described in the HIMO study[4] (see paragraph 29). Three of these mobility levels (tactical high, tactical standard, and tactical support) were first defined by the WHEELS[3] study.

e. The number of one-way missions completed was determined for each vehicle at five tactical mobility levels for the dry, wet, and snow conditions and for "all" conditions (Part III). Missions completed were based on the average one-way travel distance for all missions in the HIMO West Germany study area. No time was included for loading or unloading.

f. All study vehicles were compared with the M35A2, 6x6, 2-1/2-ton truck (Parts IV and V).

5. Some limitations of this mobility analysis were:

a. Only the vehicles selected by LOGC and TARADCOM were considered.

b. The vehicles were evaluated as single vehicles performing tasks or missions at each of the five tactical mobility levels. No consideration was made for differences in evaluating the vehicles.

c. Mobility performance of vehicles was established for the dry, wet, and dry snow surface condition of the HIMO West Germany study area.

d. Vehicles were assumed to be in prime condition, operating at rated load, and operated by fully competent drivers. The last assumption means that no difference in performance is shown to reflect the increased driving ease characteristics of vehicles fitted with automatic transmissions.

Composition of Report

6. This report contains a main text and three appendices. Appendix A describes the general content of the study terrain data base and the complete vehicle data used by the predictive models in this study. Appendix B gives detailed mobility data from AMM, and SWIMCRIT/WACROSS computations, and Appendix C shows computation procedures for determining mobility rating speed based on mission definition and vehicle performance statistics.

PART II: STUDY VEHICLES, TERRAIN, AND SCENARIO CONDITIONS

Study Vehicles

7. Eighteen vehicles were selected as candidate vehicles or study vehicles. They are as follows:

1-1/4-Ton Cargo Trucks

M880, 4x4

M890, 4x2

2-1/2-Ton Cargo Trucks

M35A2, 6x6

M35 PIP, 6x6

Ford LN8000, 4x2

Ford LN8000 4x4

Dodge W600, 4x4

Dodge D700, 4x2

International Harvester IH1750, 4x2

International Harvester IH1750, 4x4

5-Ton Cargo Trucks

TARADCOM HMTT, 8x8

German MAN, 4x4

M813 PIP, 6x6

M813A1, 6x6

Ford LNT8000, 6x4

Ford LNT8000, 6x6

International Harvester IH1850, 6x4

International Harvester IH1850, 6x6

The M880 and the M890, 1-1/4-ton cargo trucks, are commercial vehicles that have been purchased by the Army. The M35A2, 6x6, 2-1/2-ton cargo truck, and M813A1, 6x6, 5-ton cargo truck, are military vehicles which the Army has purchased in recent years to fulfill its 2-1/2- and 5-ton cargo truck requirements. The M35 PIP and M813 PIP are product-improved versions of the M35A2 and M813A1. The TARADCOM HMTT, 8x8, 5-ton cargo

truck was designed by TARADCOM as a high-mobility tactical truck and is still under development by TARADCOM. The German MAN, 4x4, 5-ton cargo truck is a commercial truck developed in West Germany. All the other study vehicles are U. S. commercial vehicles.

8. A list of some of the important characteristics of the study vehicles is given in Table 1. The complete list of vehicle characteristics and performance data used by the AMM to make mobility predictions is included in Appendix A.

9. TARADCOM supplied most of the vehicle characteristics used in this study except the ride dynamics data. Most of these data were established experimentally by WES for TARADCOM under a number of earlier studies (Appendix A).

Brief Description of HIMO Road and Areal Terrain Data and Linear Factor Data

Road and areal terrain data

10. The road and areal terrain data for the HIMO West Germany study area were used in this study. The HIMO study area is located between Fulda and Giessen as shown in Figure 1 and contains about 3000 sq km.[1] During the HIMO study, missions within these areas were detailed in accordance with selected portions of authorized TRADOC study scenarios.

11. The road and areal terrain data were prepared from maps at a scale of 1:50,000. The resulting maps used to describe the areal terrain units for the HIMO study were considered to be "study-quality" maps. That is, specific values for many terrain factors involved were largely inferred from available qualitative data sources interpreted in context of local climate, cultural practices, etc., but no ground truth data were used. As a result, it cannot be guaranteed that the specific set of factor values assigned to a given point on a map will, in fact, be found at that point on the ground. However, it is considered that the

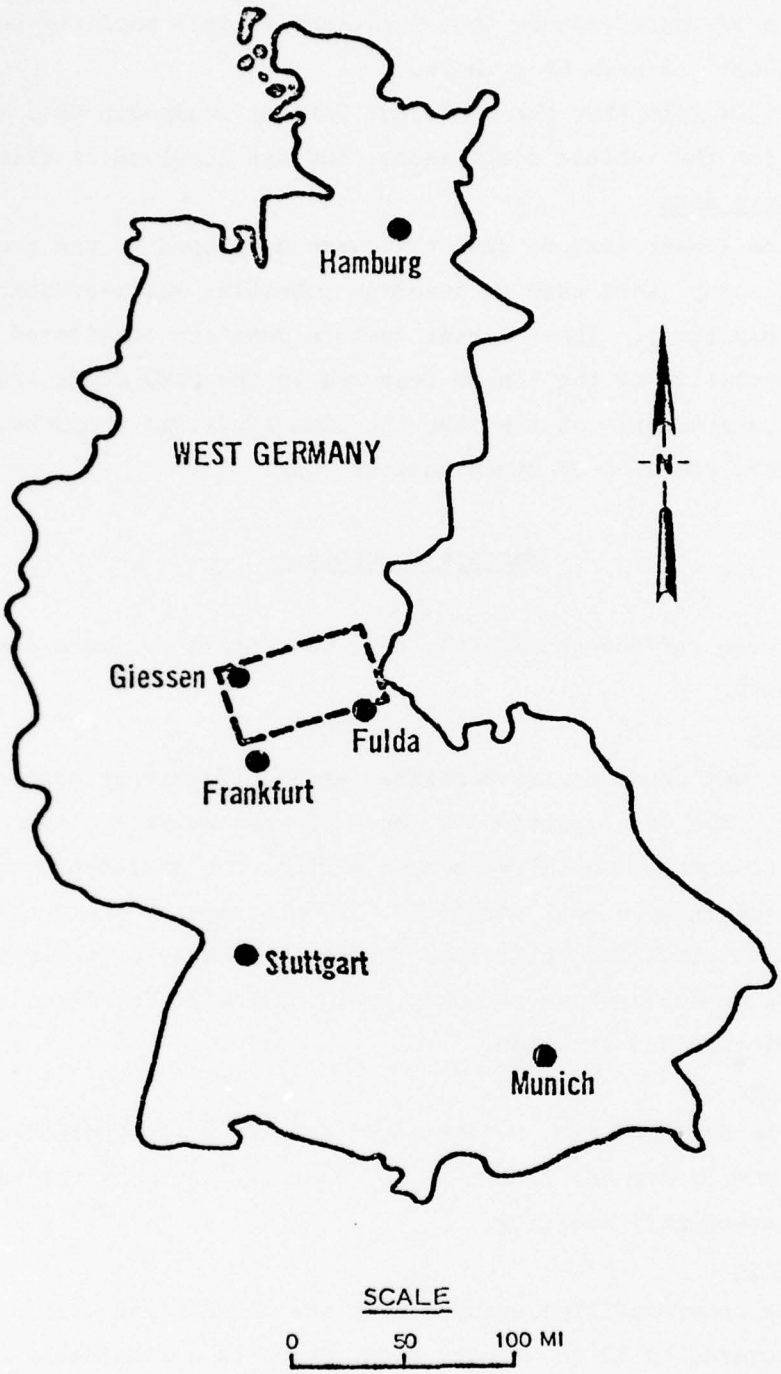


Figure 1. Location of the HIMO West Germany study area

area as mapped is generally representative of the levels and areal distribution of those factors that influence vehicle mobility performance throughout the area as a whole.

12. It is felt that the HIMO West Germany study map data are acceptable for the vehicle comparisons that are involved in this study.

Linear feature data

13. The linear feature data that were developed in the area for the WACROSS study[4] were used to describe potential water-crossing features for this study. These linear feature data are considered to be more representative of the linear features in the HIMO Study area than were the data available at the time the HIMO study was conducted. These data, however, are also of study quality only.

Surface Conditions

14. Three surface conditions, dry, wet, and snow, were considered for this study.

Wet condition

15. The wet condition is described as an excessively wet period during rain. The wet condition is generally the worst condition for vehicle cross-country mobility because of the high soil-moisture content and associated reduced soil strengths. The assumption of continuing rain makes the situation still less favorable because of potential slipperiness on soils whose strength would otherwise be adequate for vehicle flotation and traction.

Dry condition

16. The dry condition is described as a long, dry period when the surface is mostly dry and firm. It is generally the most favorable for vehicle cross-country mobility.

Snow condition

17. The snow condition assumes that the terrain and trails are uniformly covered by 10 in. of dry snow, which is a reasonable maximum average depth for the area. Differences in snow depth or characteristics in forested areas, or due to drifting snow, are not considered.

Study Scenarios

18. During the HIMO study, personnel from TRADOC schools and study agencies designated movement routes at 1:50,000 scale for portions of authorized TRADOC scenarios representing defense, attack, and delay operations within the HIMO study area. They indicated appropriate main supply routes (MSR's) and secondary supply roads between each combat unit and concurrent points of supply. Figure 2 shows an example of the supply routes for part of the West Germany study area. Similar routes were designated for a number of typical runs by combat, combat support, and combat service support units. Table 2 summarizes some of the characteristics of the composite network of routes.

19. Because of the high density of secondary roads and trails in West Germany, very little off-road operation was considered to be required except under the local impact of enemy action.

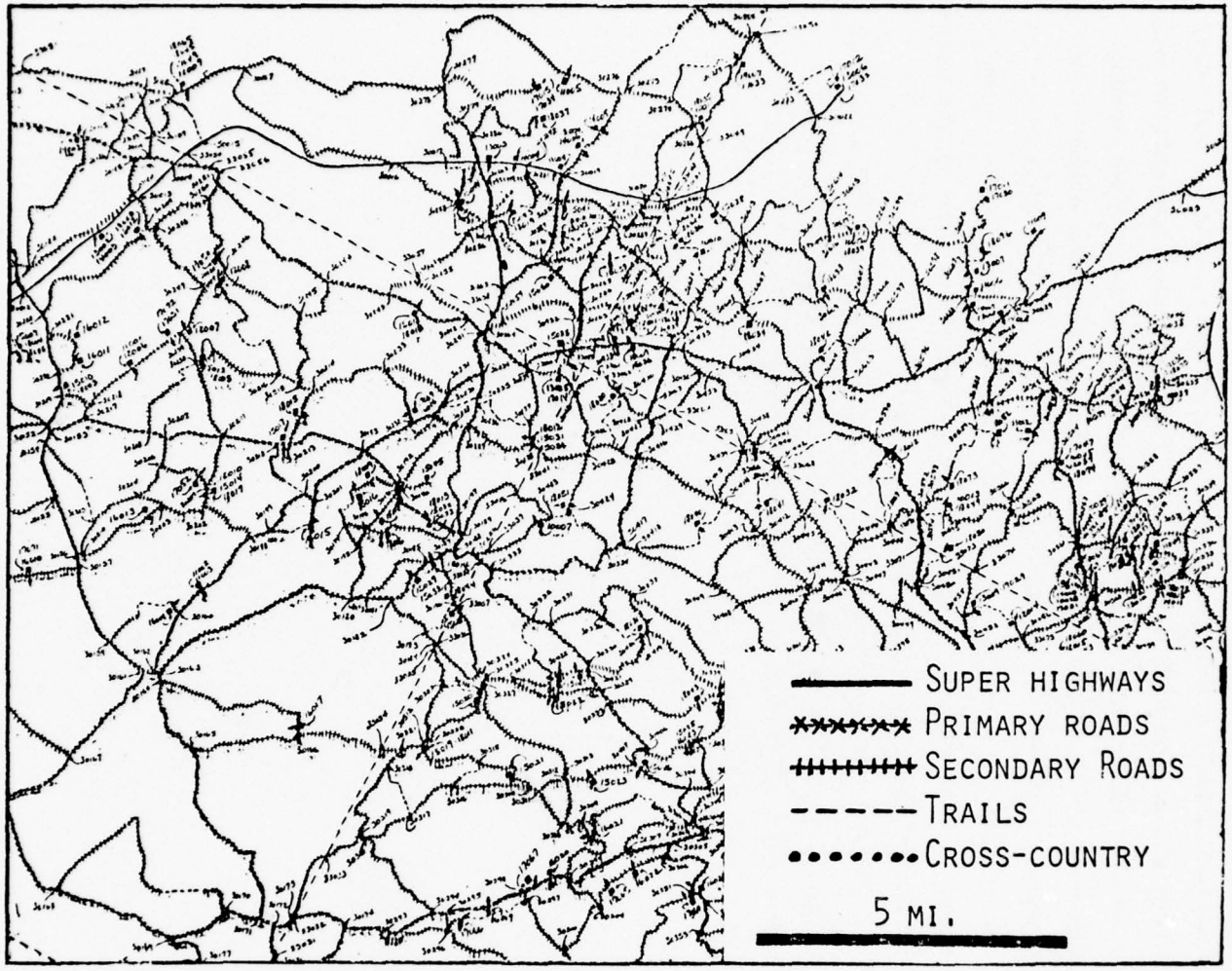


Figure 2. Partial supply route network map for West Germany study area

PART III: MOBILITY PREDICTIONS

On-Road and Off-Road Mobility Predictions

20. The Army Mobility Model (AMM)[1] was used to predict on-road and off-road speed performance for each of the study vehicles for dry, wet, and snow surface conditions in the HIMO West Germany study area. The version of the AMM (AMC-74X) used in this study was the first-generation AMC-71 with a number of significant improvements in the predictive algorithms. The inputs to this model are vehicle characteristics and a quantitative terrain description of the study area. The general content of the terrain data base is indicated, and the detailed vehicle characteristics and performance data for the study vehicles required for AMC-74X are given in Appendix A.

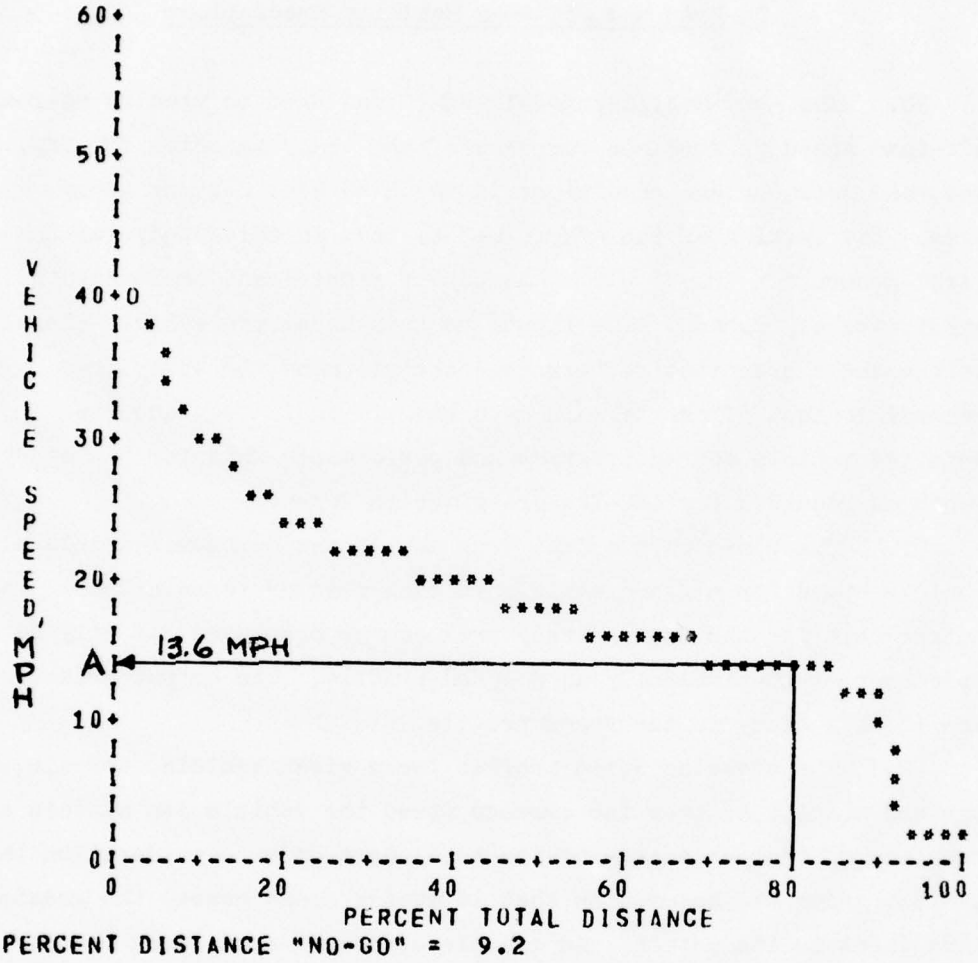
21. The basic output data from AMM is the maximum feasible single vehicle speed for a given vehicle in each road or terrain unit. The AMM output data for the entire study area can be displayed directly as a speed map or statistically as a speed profile. The output selected for use in this study is the speed profile.

22. The off-road speed profile for a given vehicle, terrain, and surface condition shows the average speed the vehicle can sustain as a function of the percentage of the total area under consideration that it avoids, under the assumption that it avoids areas posing the greatest impediment to its motion. An example of an off-road speed profile is given in Figure 3. This sample speed profile shows, at point A, that the M35A2 can average 13.6 mph while negotiating the best 80 percent of the terrain in the study area and avoiding the worst 20 percent of the terrain in the same area.

23. The on-road speed profile for a given vehicle, road (primary or secondary road or trail), and surface condition shows the average speed the vehicle can sustain as a function of the percentage of the total distance under consideration that it avoids, under the assumption that it avoids roads or trails posing the greatest impediment to its motion. An example of an on-road speed profile is given in Figure 4.

HIMO West Germany Study Area
Vehicle: M35A2, 6X6

Condition: Dry



PERCENT DISTANCE "NO-GO" = 9.2

PERCENT TOTAL DISTANCE

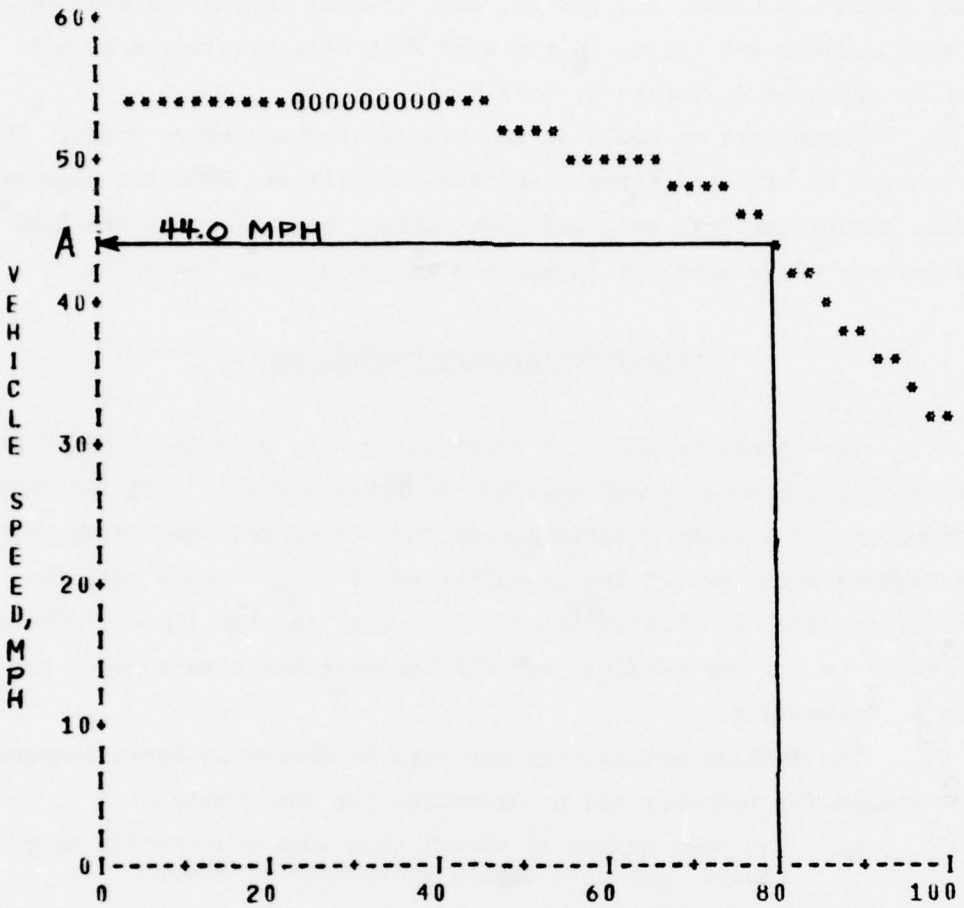
	X=0	2	4	6	8
x	50.0	39.7	37.0	35.2	32.3
1x	30.5	29.4	28.1	26.9	25.8
2x	24.9	24.2	23.6	23.0	22.5
3x	22.1	21.8	21.4	21.0	20.5
4x	20.0	19.6	19.2	18.9	18.4
5x	18.0	17.6	17.2	16.9	16.5
6x	16.2	15.9	15.6	15.3	15.0
A → 7x	14.8	14.5	14.3	14.1	13.9
8x	13.6	13.4	13.1	12.9	12.6
9x	12.2	4.8	2.4	1.6	1.2
10x	1.0				

ACCUMULATED SPEED

Figure 3. Off-road speed profile data

HIMO West Germany Study Area
Vehicle: M35A2, 6X6

Condition: Dry



THERE IS NO "NO-GO" DISTANCE

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	55.0
3X	55.0	55.0	55.0	55.0	55.0
4X	55.0	54.7	54.1	53.4	52.9
5X	52.4	51.9	51.4	50.9	50.5
6X	50.1	49.7	49.4	49.1	48.8
A 7X	48.4	47.8	47.0	46.2	45.2
8X	44.0	42.7	41.5	40.3	38.9
9X	37.6	36.4	35.3	34.2	32.8
10X	31.3				

ACCUMULATED SPEED

Figure 4. On-road speed profile data

24. The speed profiles for each study vehicle on the primary roads, secondary roads, and trails, and off-road during the dry, wet, and snow surface conditions in the HIMO West Germany study area are given in Appendix B, Tables B1 to B18.

25. There were no NOGOs on the primary and secondary roads. The percentages of off-road terrain and trails which was NOGO for each study vehicle during the dry, wet, and snow surface conditions in the HIMO West Germany study area are summarized in Appendix B, Table B19.

Linear Performance Predictions

26. The linear performance predictions were made using the SWIMCRIT water crossing model,[2] a WES Engineer Assistance Model,[5] and the WACROSS[4] methodology and terrain description of the linear features in the HIMO West Germany study area. The characteristics of the study vehicles required for the SWIMCRIT water-crossing model and the linear feature data required for the SWIMCRIT and WES Engineer Assistance Model are given in Appendix A.

27. The WACROSS methodology was used to determine three seasonal water stages for the area and to determine for each vehicle:

a. The mean number of stream crossings necessarily negotiated per mile during cross-country travel.

b. The mean time required to effect a single crossing.

The methodology, as applied, examined the WACROSS digitized linear feature data for the areas covered by eighteen 1-km by 22-km sample strips across the area depicted on the central HIMO quad sheet (L5322). Nine samples defined north-south transects; nine defined east-west transects. Moving from one end of each transect to the other, the computerized process avoids crossings where possible without going outside the transect bounds, and, where crossings are unavoidable, selects the optimum crossing site. A site, when it exists, where the given vehicle can successfully cross without assistance is chosen as the optimum site. Otherwise the site chosen is that which requires a

a minimum of critical engineer resources (dozers, bridges, Armored Vehicle Launched Bridge, etc.) to prepare the site for crossing. The corresponding construction time required is computed based upon site characteristics and added to an arbitrary waiting time of one hour. The mean time required per crossing is then given by: (total construction and waiting time for all crossings)/(total number of crossings). In the tactical support role, vehicles are rarely used on single vehicle missions. In recognition of this, the crossing time assessed to a single vehicle was taken to be 1/10 of the computed value, which is equivalent to spreading the crossing "expense" among 10 vehicles. In Appendix B, Table B20 summarizes the performance data for the study vehicles crossing linear features (water-crossing). The product of the mean time per crossing and the number of crossings per mile of off road terrain traversed gives a water-crossing coefficient with units of hours per mile. This index provides a simple comparative measure of a vehicle's water-crossing capabilities in a given area. Consequently, a vehicle's water-crossing coefficient can be expected to change from area to area. Table B20 in Appendix B presents a listing of these coefficients for each vehicle of the three surface conditions.

Tactical Mobility Levels

28. The mobility performance of a vehicle is a complex function of the vehicle characteristics, the terrain in which it is operating, and the task it is required to do. Expressing mobility performance in a reduced set of comprehensible numbers to aid in making decisions is a formidable task.

29. The WHEELS study defined three levels of tactical mobility. These are listed in Table 3 along with the definitions for two further mobility levels (high-high and on-road mobility) which were added to the HIMO study for completeness. In the HIMO study each of the resulting five levels of mobility was also quantitatively described in terms of the following statistical performance data:

a. Percentage of off-road travel expected of the vehicle.

b. The severity of expected off-road travel (in terms of percentage of the off-road terrain that should be negotiable).

c. The severity of expected travel on trails (in terms of the percentage of trails that should be negotiable).

In computing on-road speeds, separate predictions were made for primary roads, for secondary roads, and for trails in accordance with constraint c above. The percentage of travel on-road was subdivided into the same categories according to the relative mileage of each found in the road network for the area developed in the HIMO scenario play. Assignment for each vehicle of proper percents of total travel off-road, on primary roads, on secondary roads, and on trails, along with the appropriate corresponding values for mean speeds in each travel category level permitted calculation of an average mobility rating speed which the vehicle could be expected to maintain area-wide in the stated weather condition while performing missions requiring a stated level of mobility. Procedures used to calculate mobility rating speeds are described in Appendix C.

30. The mobility rating speeds for each of the study vehicles during the dry, wet, and snow condition and for "all" surface conditions, for each mobility level, are given in Table 4. The mobility rating speed for a vehicle for "all" conditions was determined simply by taking the arithmetic mean of the rating speeds for dry, wet, and snow surface conditions. This in effect gives equal weight to performance in each condition. Because the three conditions do not prevail for equal time periods during a normal year, this, in effect, assigns special emphasis to performance in bad conditions (wet and snow) which, subjectively, appears proper in the military context.

Missions Performed

31. The average one-way mission for the HIMO West Germany scenario established from the HIMO scenario play is 18.8 miles. The number of

one-way missions completed during a 10-hour day (no time allowed for loading and unloading) was computed for each study vehicle, at each tactical mobility level, and for dry, wet, snow, and "all" surface conditions as follows:

$$\text{No. of missions per day} = \left[10 \left(\frac{\text{hr}}{\text{day}}\right) \times \text{Mobility Rating Speed} \left(\frac{\text{mi}}{\text{hr}}\right)\right] \div 18.8 \left(\frac{\text{mi}}{\text{mission}}\right)$$

$$= 0.532 \times (\text{Mobility Rating Speed})$$

The number of missions is given in Table 5.

PART IV: MOBILITY ASSESSMENT OF STUDY VEHICLES

32. The study vehicles were compared based on their mobility rating speeds and number of missions completed per day without regard for differences in payload among some of the study vehicles. To establish a basis for determining what mobility performance might be acceptable, the M35A2, 6x6, was selected as a standard for comparing the other study vehicles.

33. Tables 6-20 give the mobility rating speeds; these speeds as percents of M35A2, 6x6 speeds; number of missions completed in a 10-hour day; and vehicle ranking for each study vehicle at the on-road, tactical support, tactical standard, tactical high, and high-high mobility levels during the dry, wet, and snow surface conditions of the HIMO West Germany study area.

On-Road Mobility

34. Tables 6, 7, and 8 list the performance of the study vehicles at the on-road tactical mobility level during the dry, wet, and snow surface conditions, respectively. Of the many observations which can be made from these tables, the following appear to be the most important:

a. The Dodge D700, 4x2, M880, 4x4, and the M890, 4x2, are ranked, respectively, as the top three study vehicles in terms of on-road mobility during the dry surface condition.

b. The Dodge D700, 4x2, is ranked the best study vehicle in terms of on-road mobility during the wet surface condition. The M35 PIP, 6x6, M880, 4x4, and M890, 4x2, are ranked the top three vehicles, respectively, for the snow surface condition.

c. The M880, 4x4, and the M890, 4x2, have mobility rating speeds that exceed that of the M35A2 for the dry, wet, and snow conditions.

d. The M35 PIP, 6x6, has the best mobility rating speed in the snow condition.

Tactical Support Mobility

35. Tables 9, 10, and 11 list the performance of the study vehicles at the tactical support mobility level during the dry, wet, and snow surface condition, respectively. The following appear to be the most important observations from these tables:

a. The Dodge D700, 4x2, has the best mobility rating speed in the dry and wet surface condition but the poorest in the snow surface condition.

b. The TARADCOM HMTT, 8x8, has the highest mobility rating speed and completes the most missions for the snow surface condition.

c. The M880, 4x4, M890, 4x2, and German MAN, 4x4, mobility rating speeds exceed the mobility rating speed of the M35A2, 6x6, for the dry, wet, and snow surface conditions.

d. The Dodge D700, 4x2, has the highest number of mission completions during the dry condition.

e. The Dodge D700, 4x2, M890, 4x2, M880, 4x4, Dodge W600, 4x4, German MAN, 4x4, and M35A2, 6x6, complete the maximum number of missions during the wet surface condition.

Tactical Standard Mobility

36. Tables 12, 13, and 14 list the performance of the study vehicles at the tactical standard mobility level during the dry, wet, and snow surface conditions, respectively. The following appear to be the most important observations:

a. The TARADCOM HMTT, 8x8, has the highest mobility rating speed at all three surface conditions.

b. The TARADCOM HMTT, 8x8, Dodge D700, 4x2, Dodge W600, 4x4, M35A2, 6x6, German MAN, 4x4, Ford LNT8000, 6x6, M880, 4x4, and M890, 4x2, complete the most missions during the dry surface condition.

c. The TARADCOM HMTT, 8x8, M35A2, 6x6, Dodge W600, 4x4, and M35 PIP, 6x6, complete the most missions during the wet surface condition.

d. The TARADCOM HMTT, 8x8, completes the most missions during the snow conditions.

Tactical High Mobility

37. Tables 15, 16, and 17 give the performance of the study vehicles at the tactical high mobility level during the dry, wet, and snow condition, respectively. The following observations are worth noting:

a. The TARADCOM HMTT, 8x8, has the highest mobility rating speed of the study vehicles at all three surface conditions.

b. The TARADCOM HMTT, 8x8, completes the most missions during the dry condition.

c. The TARADCOM HMTT, 8x8, M35A2, 6x6, and M35 PIP, 6x6, complete the most missions during the wet condition.

d. The TARADCOM, HMTT, 8x8, and M35 PIP, 6x6, complete the most missions during the snow condition.

High-High Mobility

38. Tables 18, 19, and 20 list the performance of the study vehicles at the high-high mobility level during the dry, wet, and snow condition, respectively. The more important observations are:

a. The German MAN, 4x4, has the highest mobility rating speed for the dry condition.

b. The German MAN, 4x4, and M35 PIP, 6x6, have the highest mobility rating speed during the wet and snow surface conditions.

c. The German MAN, 4x4, M35 PIP, 6x6, TARADCOM HMTT, 8x8, and M813A1, 6x6, have higher mobility rating speeds than the M35A2, 6x6, during the dry, wet, and snow surface conditions.

d. The German MAN, 4x4, has the most mission completions of the study vehicles during the dry condition.

e. The German MAN, 4x4, M35 PIP, 6x6, TARADCOM HMTT, 8x8, M813A1, 6x6, Dodge W600, 4x4, and M35A2, 6x6, have the most mission completions during the wet condition.

f. The German MAN, 4x4, M35 PIP, 6x6, TARADCOM HMTT, 8x8, M813A1, 6x6, and M35A2, 6x6, complete the most missions during the snow surface condition.

PART V: SUMMARY ASSESSMENT

39. The mobility assessment presented in Part IV compared the separate performance of the study vehicles at each of the five tactical mobility levels. However, since the military requires the same vehicle to operate at different times in missions having two or more levels of mobility, the data are summarized in a manner which aids in making more comprehensive comparisons.

Multilevel Mobility Performance

40. Table 21 shows a symbolic representation of the vehicles mobility rating speeds relative to that of the M35A2, 6x6, mobility rating speed for the same tactical mobility level and condition classed according to performance levels as follows:

a. Study vehicle mobility rating speed equal to or greater than M35A2, 6x6, mobility rating speed.

b. Study vehicle mobility rating speed equal to or greater than 90 percent of the mobility rating speed of M35A2, 6x6, but less than 100 percent of M35A2, 6x6, mobility rating speed.

c. Study vehicle mobility rating speed equal to or greater than 70 percent of M35A2, 6x6, but less than 90 percent of the mobility rating speed of the M35A2, 6x6.

d. Study vehicle mobility rating speed less than 70 percent of the mobility rating speed of the M35A2, 6x6.

41. From Table 21, it is easy to identify the study vehicles which performed relatively well or poorly at two or more mobility levels. Some of the more important observations from Table 21 are:

a. The 1-1/4-ton cargo trucks M880, 4x4, and M890, 4x2, mobility rating speeds for all surface conditions are similar to the M35A2, 6x6, for the on-road, tactical support, and tactical standard mobility levels but are significantly less than the mobility rating speeds of the M35A2 at all surface conditions for the tactical high and high-high levels of mobility.

b. The 2-1/2-ton cargo trucks M35A2, 6x6, M35 PIP, 6x6, and the 5-ton cargo trucks, TARADCOM HMTT, 8x8, and German MAN, 4x4, have the best mobility rating speeds for all conditions and levels of mobility.

c. The 2-1/2-ton cargo truck Dodge W600, 4x4, had mobility rating speeds similar to those for the M35A2, 6x6, for the dry and wet surface condition at all mobility levels but has significantly lower mobility rating speeds for the snow condition at all mobility levels.

d. The 5-ton cargo truck Ford LNT8000, 6x6, has mobility rating speeds similar to those for the M35A2, 6x6, for the dry and wet condition at the tactical support, tactical standard, and tactical high levels of mobility but somewhat lower mobility rating speeds (under 90 percent) than the M35A2, 6x6, for the snow condition.

42. The number of missions which a vehicle can complete in a day (Table 5) can also be used to compare mobility performance at several mobility levels and surface conditions, and leads to the same mobility assessments as the mobility rating speeds since it is computed from them. However, when two vehicles have similar mobility rating speeds, the missions completed per day may be used to indicate whether or not the difference in mobility is operationally significant. That is, if they have different mobility rating speeds but the same number of missions completed per day, their mobility can be considered equal for practical purposes.

Graphical Representation of Mobility Performance

43. The data in Tables 6-20 may also be displayed in a three-dimensional graphical diagram which illustrates vehicle adequacy to perform missions requiring each of the five levels of tactical mobility, in each of the three study conditions. To prepare such a consolidated graphical analysis, a criterion for adequacy must be selected. In Figures 5 through 7 the results based upon two possible criteria are presented:

a. A candidate vehicle may be considered adequate for a given tactical mobility level and condition when its

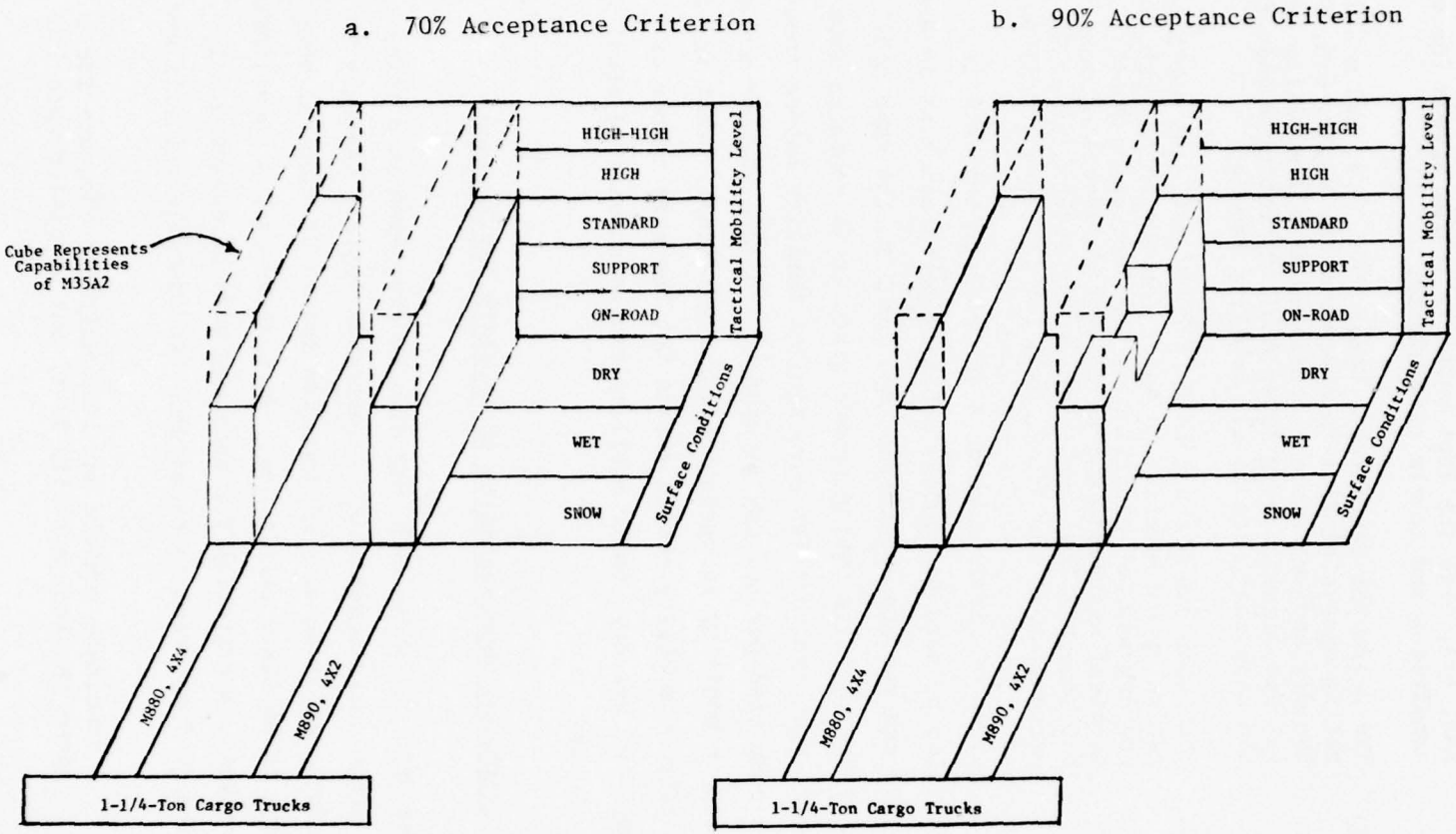


Figure 5. Tactical mobility levels based on two levels of acceptance criteria for study vehicles having 1-1/4-ton payload in HIMO West Germany study area

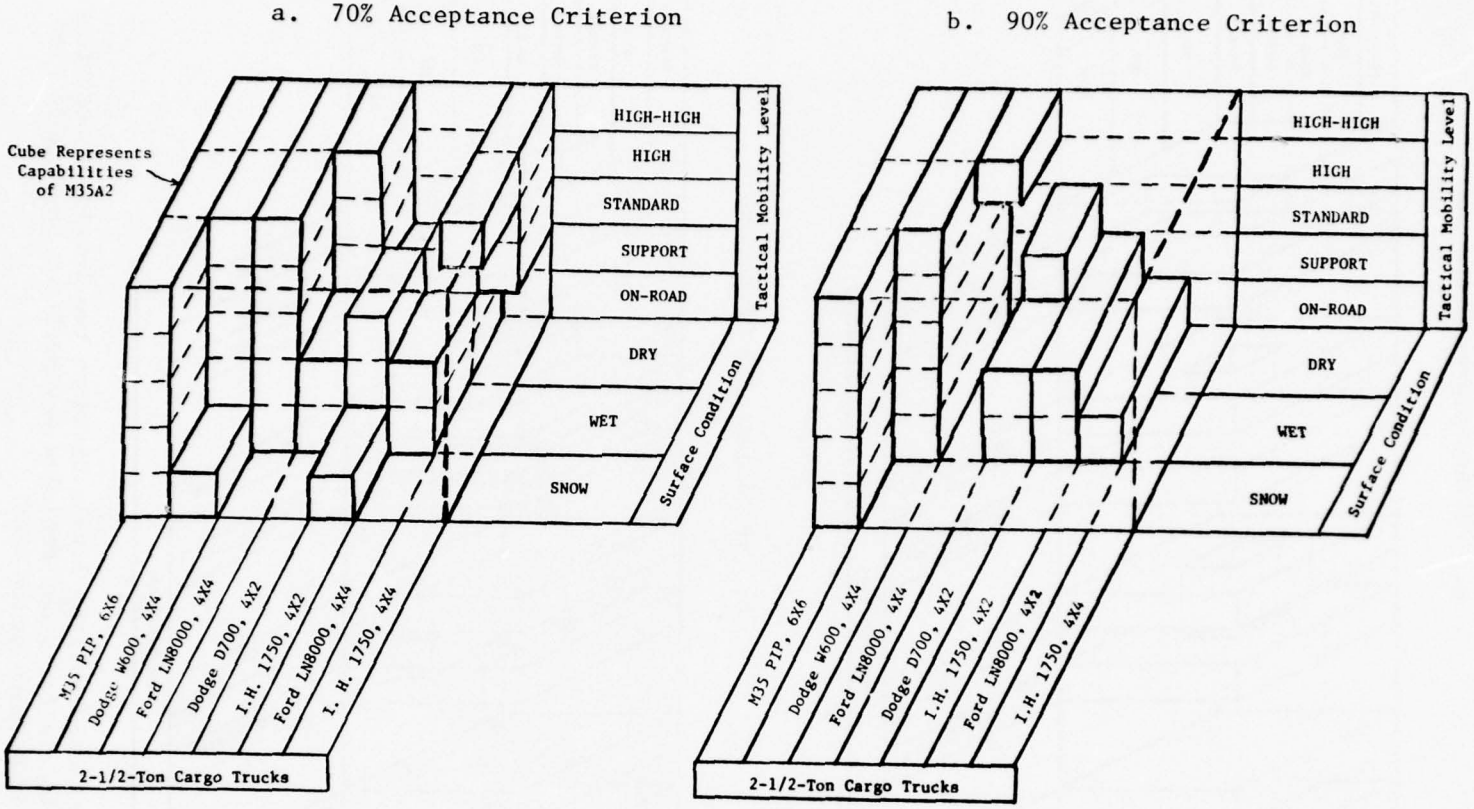
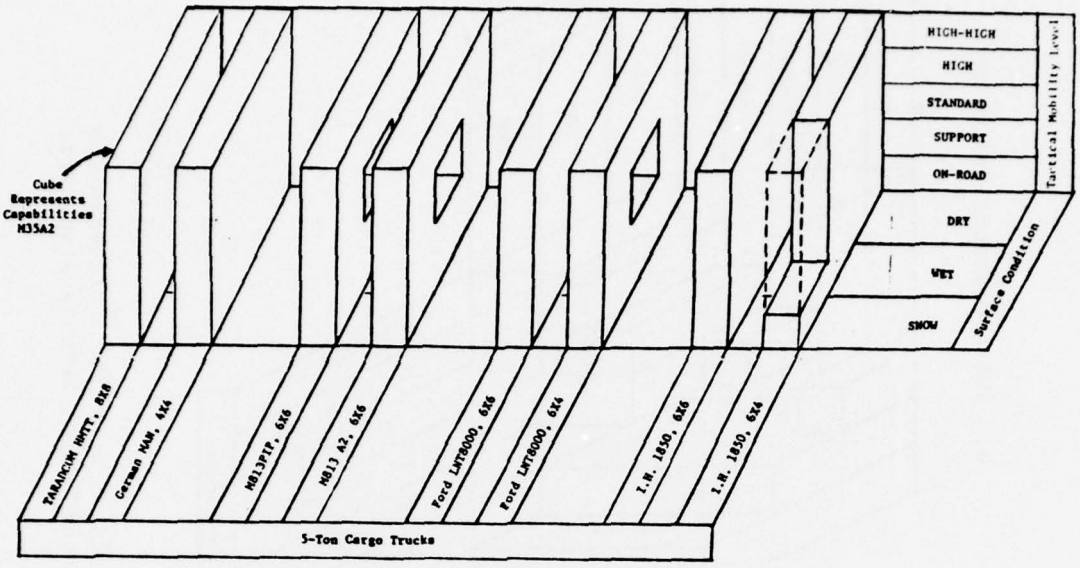


Figure 6. Tactical mobility levels based on two levels of acceptance criteria for study vehicles having 2-1/2-ton payload in HIMO West Germany study area

a. 70% Acceptance Criterion



b. 90% Acceptance Criterion

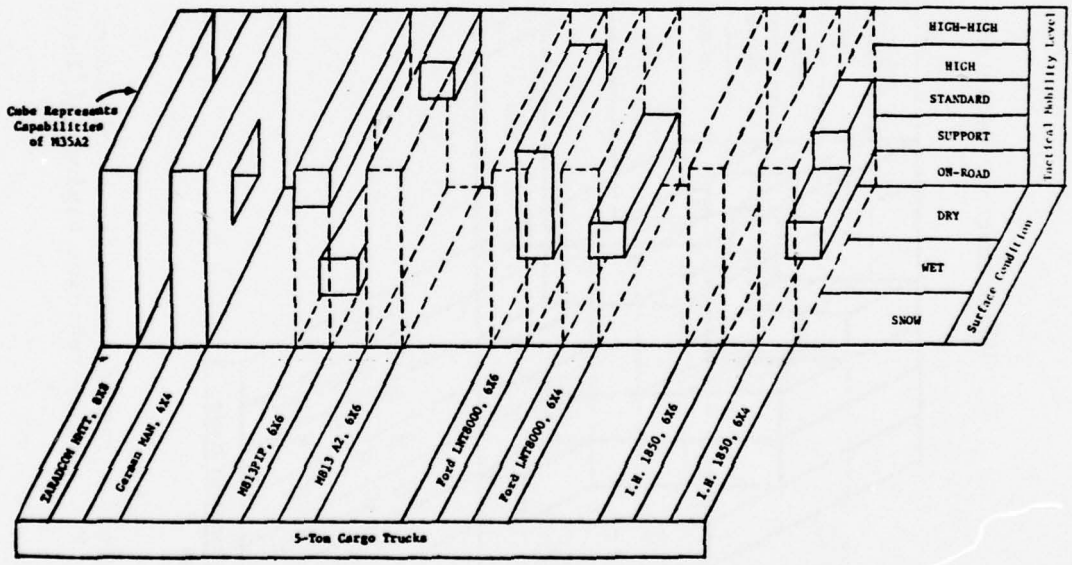


Figure 7. Tactical mobility levels based on two levels of acceptance criteria for study vehicles having 5-ton payload in HIMO West Germany study area

mobility rating speed is equal to or greater than 70 percent of the mobility rating speed for the M35A2, 6x6, in the same circumstances.

b. A candidate vehicle may be considered adequate when its mobility rating speed is equal to or greater than 90 percent of the corresponding mobility rating speed for the M35A2, 6x6.

Similar graphic diagrams may be prepared based upon other relative rating speed criteria, upon absolute rating speed criteria, or upon stated minima for acceptable mission completions per day.

44. If the M35A2, 6x6, is considered generally adequate for its role, the relative rating speed basis appears appropriate. The 90 percent criterion (b) will insure generally equal or somewhat improved mission performance within the overall accuracy of the methodology. Below the 70 percent criterion level (a), the performance losses would probably be unacceptable in wartime. Performance losses between these two adequacy criteria levels will be significant but may prove negotiable in terms of other considerations such as cost and maintainability.

45. Figures 5 through 7 take the form of "cubes" or "expanded cubes" whose elemental blocks are filled to indicate adequacy, empty to show inadequacy. Their build-up is illustrated in Figure 8. In some cases complete stacking of the individual vehicle slices obscures some of the interior details. In these cases (Figure 5 and 7), the diagrams are presented as expanded cubes.

46. The cube diagrams for 2-1/2-ton cargo trucks are given in Figures 6a and 6b for the 70 percent and the 90 percent acceptance criteria, respectively. Figure 6b shows that the M35 PIP, 6x6, is acceptable according to the 90 percent criterion for adequacy for all levels of mobility and all surface conditions. Figure 6b shows that the Dodge W600, 4x4, is acceptable by the 90 percent criterion for all levels of mobility in the dry and wet conditions. Figure 6a shows that the Dodge W600, 4x4, has acceptable mobility by the 70 percent criterion in the snow condition only at the on-road mobility level. Figure 6b shows that the Dodge D700, 4x2, is acceptable by the 90 percent criterion for the dry and wet condition of on-road and tactical support levels of

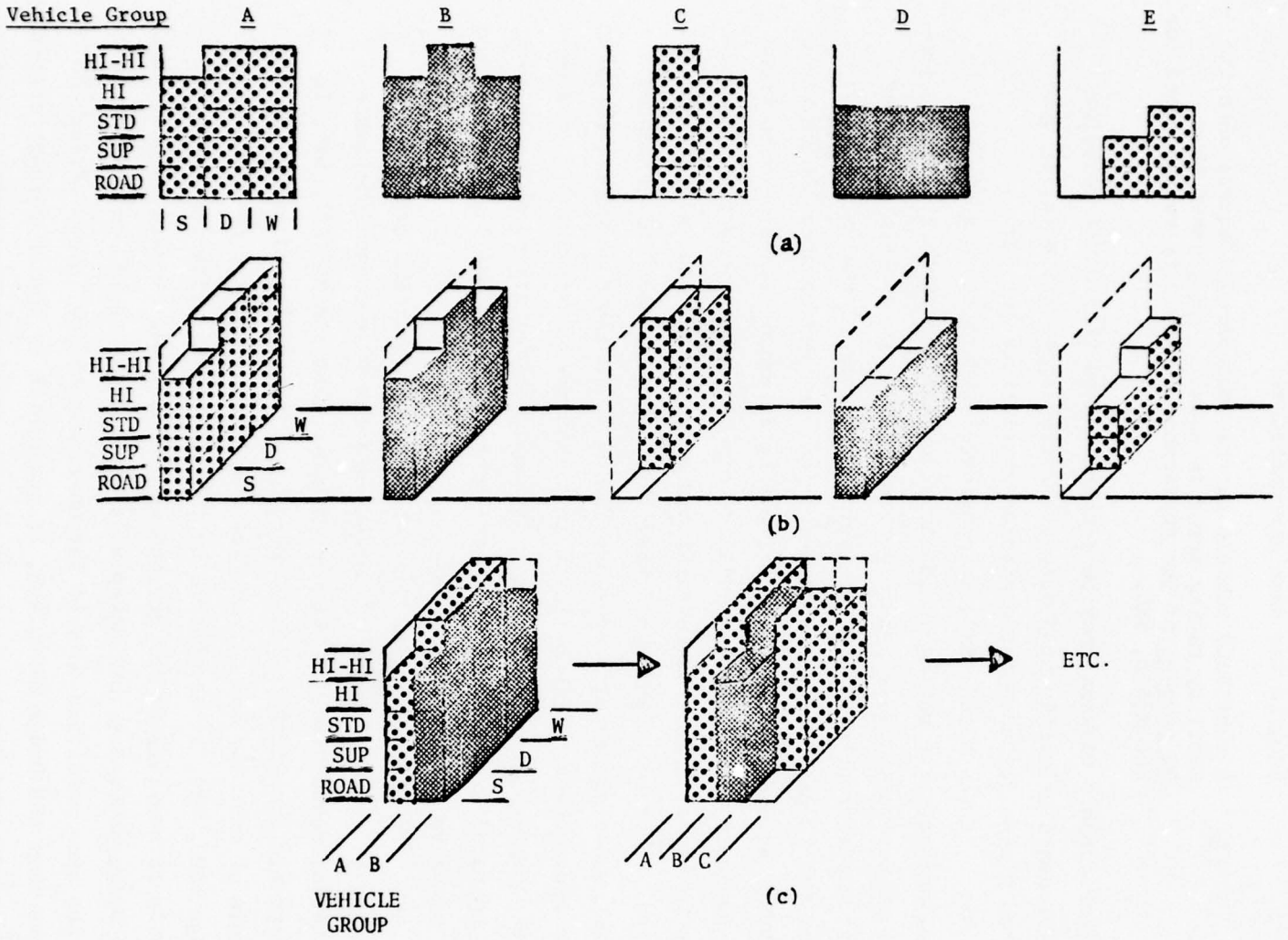


Figure 8. Schematic of three-dimensional cube representation of adequacy analysis (West Germany)

mobility and for the dry condition of the tactical standard mobility. Figure 6a shows that the Dodge D700, 4x2, is acceptable by the 70 percent criterion in the dry condition for tactical high and high-high mobility levels. Figure 6a also shows that the Dodge D700, 4x2, has unacceptable mobility performance during the snow condition at all mobility levels and unacceptable mobility during the wet condition for the tactical standard, tactical support, and high-high levels of mobility. The cube diagram in Figure 6b shows that the Ford LN8000, 4x2, is acceptable by the 90 percent criterion for on-road mobility in the dry and wet conditions but unacceptable at all other levels of mobility. Figure 6a shows that the Ford LN8000, 4x2, has acceptable mobility by the 70 percent criterion in the dry and wet conditions of missions requiring tactical support mobility and in the dry condition requiring tactical standard mobility. Figure 6b shows that the Ford LN8000, 4x4, was unacceptable by the 90 percent criterion at all mobility levels. Figure 6a shows that the Ford LN8000, 4x4, has acceptable mobility by the 70 percent criterion for all mobility levels in the dry and wet conditions but has unacceptable mobility performance in the snow condition for all mobility levels. Figure 6b shows that the International Harvester 1750, 4X2, has acceptable mobility by the 90 percent criterion for missions requiring on-road or tactical support level mobility missions in the dry and wet conditions. Figure 6a shows that the International Harvester 1750, 4x2, has acceptable mobility performance for missions requiring the on-road level of mobility by the 70 percent criterion in the snow condition and standard mobility missions in the wet condition. Figure 6b shows that the International Harvester 1750, 4x4, is unacceptable by the 90 percent criterion at all mobility levels. Figure 6a shows that the International Harvester 1750, 4x4, is acceptable for tactical standard and tactical high mobility by the 70 percent criterion for missions in the dry surface condition and for high-high mobility missions in the dry and wet surface condition.

47. The expanded cube diagrams for the two 1-1/4-ton cargo trucks (Figure 5) and for the eight 5-ton cargo trucks (Figure 7) can be interpreted in the same manner.

Selection of Mobility Levels

48. Selection of the mobility level appropriate for a cargo truck specified as operating in the brigade area, division area, and corps area, respectively, is at best somewhat subjective. It is made especially difficult because, in fact, the same trucks are required from time to time to fulfill missions at various tactical mobility levels in all of these areas. The data for the entire network of HIMO scenario missions for West Germany (Table 2) showed that due to the dense network of roads and trails the military could remain almost exclusively on roads and trails in the absence of enemy action, which interrupts the travel routes. These data show that only 0.1 percent of the total network distance outlined in the primary scenario play was off-road. (This might well be appropriate up until the last day before hostilities begin.) However, when only one link of roadway during each complete mission was denied, the percentage of off-road travel required for job completion through the division area to the delivery points was found to increase to 5 percent. Since this figure was based on the full job run, it is reasonable to assume that a vehicle operating primarily in the forward brigade area would be interrupted two or more times as often and that the portion of brigade operations requiring off-road travel might well be 10 to 20 percent.

49. Table 22 shows the network composition and severity of operation defined and accepted in the HIMO study for the five tactical mobility levels. As shown in this table, the tactical support level considers operations to be 10 percent on trails and 5 percent off-road. This network composition for tactical support matches the condition shown for the West Germany network when the portions traveled on trails and off-road are combined (terrain is often the same except for vegetation), i.e., about 15 percent. The terrain severity for tactical support also calls for avoidance of the 50 percent of least trafficable trails and off-road terrain. Avoiding this many trails and off-road terrain areas appears reasonable at a corps level but not at the division level.

Therefore, the tactical support is suggested as a reasonable principal level of mobility for vehicles operating in the corps area.

50. Tactical standard mobility as quantified in Table 22 is based on 15 percent of operations on trails and 15 percent off-road. If the total network percentage in off-road travel was considered to increase in the West Germany terrain to 10 percent in the division area (as discussed above) the percentage of on- and off-road would correspond closely to the tactical standard mobility definition. Also, the associated severity of operation requiring mobility over 100 percent of trails and 80 percent of the off-road (avoiding only the 20 percent of terrain least trafficable) might be considered reasonable. Therefore, tactical standard is suggested as a reasonable principal level of mobility for vehicles operating in the division area.

51. Tactical high mobility is based on 10 percent movement on trails and 50 percent off-road (Table 22). If the descriptive effects of enemy action are in fact greater in the brigade area, vehicles there may be forced off-road for 20 percent or more of their travel, and be forced to travel on trails for about 40 percent. This represents a combined total of 60 percent. The combined total of trails and off-road movement then would be similar to the tactical high mobility definition in Table 22 although weighted somewhat differently between trail and off-road travel. In the brigade area the vehicle movement may be much more restricted, forcing vehicles to travel while repeatedly switching between trails and off-road traverses. Therefore, the emphasis on off-road travel reflected in the tactical high mobility definition is probably desirable. In addition, the associated severity of operation, which allows the vehicles to avoid only 10 percent of the worst terrains, appears realistic. Therefore, tactical high is suggested as a reasonable principal tactical mobility level for vehicles operating in the brigade area.

52. As noted at the outset, vehicles are often required to operate across tactical mobility levels within the different tactical areas. This suggests that a vehicle for a given area assignment should be required to perform reasonably well for at least one tactical mobility

level below its primary level. Accordingly, the two levels suggested (primary and secondary) as most applicable to the three areas are as follows:

	Primary	Secondary
Brigade Area	Tactical High	Tactical Standard
Division Area	Tactical Standard	Tactical Support
Corps Area	Tactical Support	On-Road

One Possible Final Mobility Evaluation for the Given 2-1/2-Ton Candidate Vehicles

53. Primary and secondary performance might be considered to correspond to the 90 percent and 70 percent relative speed adequacy criteria discussed in the preceding section. Strict application of these as final selection criteria in relation to the 2-1/2-ton trucks leads to one of many possible sets of conclusions relative to mobility performance only, shown in the final table below. "X" indicates acceptable and "-" indicates unacceptable.

Vehicles	Brigade Area			Division Area			Corps Area		
	Dry	Wet	Snow	Dry	Wet	Snow	Dry	Wet	Snow
M35A2, 6x6	X	X	X	X	X	X	X	X	X
M35 PIP, 6x6	X	X	X	X	X	X	X	X	X
Dodge W600, 4x4	X	X	-	X	X	-	X	X	-
Dodge D700, 4x2	-	-	-	X	-	-	X	X	-
IH1750*, 4x2	-	-	-	-	-	-	X	X	-
Ford LN8000, 4x4	-	-	-	-	-	-	-	-	-
Ford LN8000, 4x2	-	-	-	-	-	-	-	-	-
IH1750*, 4x4	-	-	-	-	-	-	-	-	-

* International Harvester.

Limited Evaluation of the Effects of Tire Chains on Snow Mobility

54. The specific snow condition described in paragraph 17 represents only one of a limitless number that may exist in the HIMO West Germany study area. It was selected during the HIMO study as a reasonable single point for comparative evaluations of the snow performance of wheeled vehicles. A brief excursion was made during the present study to examine the effects on performance of using tire chains on the 2-1/2-ton study vehicles in this single study snow condition.

55. Based on the mobility rating speeds computed for the vehicles with tire chains (Table 23) and the acceptance criteria given in paragraph 52, only the Dodge W600, 4x4, would have sufficient additional capability to change the final evaluation shown in paragraph 53. It would, with chains, be considered acceptable for brigade use in the snow condition.

56. This is not to say that use of tire chains does not increase the capabilities of those vehicles for which the study snow condition was not essentially trivial. The snow performance of the M35A2, 6x6, and M35 PIP, 6x6, for example, was but little changed. On the other hand, the use of tire chains on all of the 2-1/2-ton, 4x4, study vehicles increased mobility rating speeds about 4 mph in the study snow condition for the tactical support, tactical standard, and tactical high mobility levels. Except as noted, however, this increase was not sufficient to change their acceptability in accordance with the proposed criteria. Among the 2-1/2-ton, 4x2, study vehicles, use of tire chains raised the on-road mobility rating speeds of the Dodge D700 and Ford LN8000 to respectable, still not acceptable levels, but otherwise did not significantly improve the dismal performance of any of the 4x2's at other tactical mobility levels in the snow condition.

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Table 1

Important Characteristics of Study Vehicles

Vehicles	Gross Vehicle wt lbs	Wheel Base in.	Engine	Power to Weight Ratio, hp/ton	Minimum Ground Clearance in.	Approach Angle deg	Departure Angle deg	Transmission	VCI_1 Fine Grained Soil	VCI_1 Coarse Grained Soil	Maximum Speed mph	Speeds for Obstacle Obstacle Heights at 2.5 g 4	6	10	Six-watt Speeds for Indicated rms elevations 1	2	3
M880, 4X4, 1-1/4-Ton Cargo Truck	7,748	131	318V8 Chrysler	38.8	7.8	37	28	A727 Chrysler	32	72	55	36	15.9	5.7	9.9	6.5	4.5
M890, 4X2, 1-1/4-Ton Cargo Truck	7,317	131	318V8 Chrysler	41.0	7.8	37	28	A727 Chrysler	38	88	55	36	15.9	5.7	9.9	6.5	4.7
M35A2, 6X6, 2-1/2-Ton Cargo Truck	17,980	155	LD465-1	15.6	11.0	48	40	3502 SPICER	28	48	55	100	100	7.0	10.5	9.4	8.8
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	19,450	154	CAT3208	21.6	14.0	53	43	MT640 Allison	19	23	55	100	100	7.0	10.5	9.4	8.8
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	18,200	162	CAT3208	22.3	9.2	30	38	MT640 Allison	34	62	55	100	2.0	2.0	9.1	8.2	7.4
Ford LN800, 4x4, 2-1/2-Ton Cargo Truck	19,200	163	CAT3208	22.3	11.0	46	36	MT640 Allison	29	48	53	100	9.4	4.5	8.0	7.2	6.9
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	16,820	174	CAT3208	22.0	10.5	52	47	AT540	20	22	52	100	18.0	4.0	11.4	11.2	11.0
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	15,980	174	CAT3208	23.2	10.5	42	41	AT540	25	33	52	100	18.4	2.0	13.8	12.8	12.6
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	17,860	170	DT466	21.3	7.8	49	25	MT640 Allison	32	54	55	100	2.0	2.0	10.0	9.5	9.0
International Harvester IH1750, 4X4, 2-1/2-Ton Cargo Truck	20,500	170	DT466	18.5	10.0	61	33	MT640 Allison	33	56	55	100	14.8	4.5	7.8	7.0	6.6
TARADCOM HMTT, 8X8, 5-Ton Cargo Truck	28,000	148	6V53T	21.4	15.0	50	73	M650CR Allison	19	22	55	100	42.0	18.2	18.8	13.0	10.5
German MAN, 4X4, 5-Ton Cargo Truck	27,558	169	F8L413	19.2	15.9	45	46	ZF S-690	41	64	55	100	18.0	9.0	17.2	8.9	6.2
M813 PIP, 6X6, 5-Ton Cargo Truck	34,200	178	NHL250 Cummins	14.6	10.5	34	34	MT654CR	35	58	55	100	30.2	4.4	9.1	8.0	7.7
M813A1, 6X6, 5-Ton Cargo Truck	32,080	181	NHL250 Cummins	15.6	11.5	46	33	5-Speed Manual	35	54	55	100	30.2	4.4	9.1	8.0	7.7
Ford LNT8000, 6X4, 5-Ton Cargo Truck	27,300	176	CAT3208	16.1	10.0	34	49	MT640 Allison	35	62	52	100	100	2.0	9.7	9.5	9.5
Ford LNT8000, 6X6, 5-Ton Cargo Truck	27,980	176	CAT3208	15.7	10.8	44	47	MT640 Allison	29	44	54	100	100	4.6	10.6	10.1	9.9
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	28,320	180	DT466	15.5	10.0	46	58	MT640 Allison	36	65	49	100	11	2.0	11.7	10.1	10.0
International Harvester IH1850, 6X6, 5-Ton Cargro Truck	29,380	180	DT466	15.0	10.0	62	65	MT640 Allison	30	45	54	100	7	2.0	8.0	8.0	7.8

Table 2

Characteristics of Composite Route Networks

Study Area Features	West Germany
Total distance, miles	1678
Number of links*	2184
Average link length, miles	0.77
Composition of network, percent	
Superhighways	3.1
Primary roads	21.1
Secondary roads	61.4
Tertiary roads and trails	14.3
Off-road traverse	0.1
	100.0

* A link is the route joining two route intersections or route end points.

Table 3

Preliminary Quantification of WHEELS Study Definitions of Tactical Mobility[1]

Mobility Level	Operating Distance		Severity of Operation	
	Off-Road Percent	On-Road* Percent	Off-Road* Percent of Terrain Challenged	On-Road Percent of Trails Included
High-high mobility**				
All off-road operation	100	0	100	-
Tactical high mobility				
The highest level of mobility designating the requirement for extensive cross-country maneuverability characteristic of operations in the ground-gaining and fire-support environment.	50	50	90	100
Tactical standard mobility				
The second highest level of mobility designating the requirement for occasional cross-country movement.	15	85	80	100
Tactical support mobility				
A level of mobility designating the requirement for infrequent off-road operations over selected terrain with the preponderance of movement on primary and secondary roads.	5	95	50	50
On-road mobility**				
All on superhighways, primary and secondary roads, and the best tertiary roads and trails.	0	100	-	10

* In terms of percentage of best off-road terrain to be challenged (off-road speed profile).

** NOT a WHEELS Study definition.

Table 4

Summary of Study Vehicles Mobility Rating Speeds for the Tactical Mobility Levels*

Vehicles	On-Road				% of M35A2 6X6	Tactical Support				% of M35A2 6X6	Tactical Standard				% of M35A2 6X6	Tactical High				% of M35A2 6X6	High-High				% of M35A2 6X6
	Dry	Wet	Snow	All		Dry	Wet	Snow	All		Dry	Wet	Snow	All		Dry	Wet	Snow	All		Dry	Wet	Snow	All	
1-1/4-Ton Cargo Trucks																								
M880, 4X4	48.9	46.8	34.4	42.3	148	20.3	19.2	16.9	18.7	115	13.4	12.7	11.8	12.6	102	2.3	2.1	2.1	2.2	30	0.6	0.6	0.6	0.6	67
M890, 4X2	48.9	46.8	34.3	42.3	148	20.3	19.2	16.8	18.6	114	13.3	9.9	11.8	11.5	93	2.3	1.9	2.1	2.1	28	0.6	0.6	0.6	0.6	67
2-1/2-Ton Cargo Trucks																								
M35A2, 6X6	47.2	45.5	16.1	28.5	100	19.8	18.8	12.4	16.3	100	14.1	13.4	10.1	12.3	100	8.2	7.7	6.6	7.4	100	0.9	0.9	0.9	0.9	100
M35 PIP, 6X6	46.4	45.1	34.6	41.3	145	19.7	18.6	16.6	18.2	112	14.1	13.3	12.5	13.3	108	8.2	7.7	7.6	7.8	105	1.0	1.0	1.0	1.0	111
Ford LN8000, 4X2	42.8	41.7	1.7	4.7	16	17.5	16.7	0.1	0.3	2	11.5	8.5	0.1	0.3	2	2.3	1.5	0.1	0.3	4	0.6	0.5	0.1	0.2	22
Ford LN8000, 4X4	40.5	39.6	11.1	21.4	75	14.8	14.3	5.1	9.0	55	10.9	10.6	4.3	7.2	59	6.6	6.4	1.4	2.9	39	0.9	0.8	0.5	0.7	78
Dodge W600, 4X4	46.9	45.5	12.7	24.6	86	20.0	18.9	5.8	10.9	67	14.3	13.4	4.8	8.5	69	8.0	7.4	1.5	3.2	43	0.9	0.9	0.5	0.7	78
Dodge D700, 4X2	50.1	47.8	1.7	4.8	17	22.0	20.4	0.1	0.3	2	14.4	4.9	0.1	0.3	2	7.0	1.2	0.1	0.3	4	0.8	0.4	0.1	0.2	22
International Harvester IH1750, 4X2	44.6	43.3	11.3	22.4	79	19.4	18.3	0.2	0.6	4	3.7	3.2	0.2	0.5	4	0.8	0.7	0.1	0.2	3	0.3	0.3	0.1	0.2	22
International Harvester IH1750, 4X4	27.9	27.9	10.6	18.1	64	13.1	12.8	2.2	4.9	30	10.0	9.8	1.4	3.3	27	5.8	5.2	0.7	1.7	23	0.8	0.8	0.3	0.5	56
5-Ton Cargo Trucks																								
TARADCOM HMTT, 8X8	36.2	36.1	33.4	35.2	124	19.5	18.4	17.0	18.2	112	14.9	13.8	13.3	14.0	114	9.4	8.2	8.3	8.6	116	0.9	0.9	0.9	0.9	100
German MAN, 4X4	40.2	40.1	23.4	32.4	114	19.8	18.8	15.3	17.8	109	14.1	10.3	11.7	11.8	96	8.5	7.1	7.5	7.7	104	1.1	1.0	1.0	1.0	111
M813 PIP, 6X6	33.9	33.7	11.4	20.4	72	15.4	14.9	8.9	12.3	75	11.4	8.8	7.6	9.0	73	6.9	5.9	5.3	6.0	81	0.9	0.8	0.8	0.8	89
M813A1, 6X6	44.0	42.8	13.4	24.8	87	16.4	15.8	10.1	13.4	82	11.9	9.0	8.4	9.6	78	7.1	6.1	5.7	6.2	84	0.9	0.9	0.9	0.9	100
Ford LNT8000, 6X4	39.5	39.2	12.7	23.2	81	18.3	17.5	10.2	14.3	88	12.9	9.6	8.3	9.9	80	5.7	4.6	4.6	4.9	66	0.8	0.7	0.7	0.7	78
Ford LNT8000, 6X6	40.2	39.6	13.4	24.0	84	19.3	18.3	10.6	14.9	91	13.7	12.9	8.8	11.4	93	7.5	7.0	5.7	6.6	89	0.8	0.8	0.8	0.8	89
International Harvester IH1850, 6X4	40.2	39.6	12.3	22.8	80	18.9	17.9	2.5	5.9	36	12.9	9.5	1.4	3.3	27	2.1	1.7	0.6	1.9	15	0.6	0.5	0.3	0.4	44
International Harvester IH1850, 6X6	33.5	39.6	12.2	21.9	77	14.9	14.4	9.5	12.4	76	10.9	10.6	7.9	9.6	78	6.3	6.0	5.2	5.8	78	0.8	0.8	0.8	0.8	89

* Mobility levels quantified in Table 3.

Table 5

Summary of Missions Completed in a 10-Hour Day by Study Vehicles at the Tactical Mobility Levels

Vehicles	On-Road				Tactical Support				Tactical Standard				Tactical High				High-High			
	Dry	Wet	Snow	All	Dry	Wet	Snow	All	Dry	Wet	Snow	All	Dry	Wet	Snow	All	Dry	Wet	Snow	All
1-1/4-Ton Cargo Trucks																				
M880, 4X4	26	24	18	23	10	10	8	9	7	6	6	6	1	1	1	1	.3	.3	.3	.3
M890, 4X2	26	24	18	23	10	10	8	9	7	5	6	6	1	1	1	1	.3	.3	.3	.3
2-1/2-Ton Cargo Trucks																				
M35A2, 6X6	25	24	8	19	10	10	6	9	7	7	5	6	4	4	3	4	.5	.5	.5	.5
M35 PIP, 6X6	24	23	18	22	10	9	8	9	7	7	6	7	4	4	4	4	.5	.5	.5	.5
Ford LN8000, 4X2	22	22	.9	15	9	8	.1	6	6	4	.1	3	1	.8	.1	6	.3	.3	.1	.2
Ford LN8000, 4X4	21	21	5	16	7	7	2	5	5	5	2	4	3	3	.7	2	.5	.4	.3	.4
Dodge W600, 4X4	24	24	6	18	10	10	3	8	7	7	2	5	4	3	.8	3	.5	.5	.3	.4
Dodge D700, 4X2	26	25	.9	17	11	10	.1	7	7	2	.1	3	3	.6	.1	1	.4	.2	.1	.2
International Harvester IH1750, 4X2	23	23	6	17	10	9	.1	6	1	1	.1	1	.4	.4	.1	3	.2	.2	.1	.2
International Harvester IH1750, 4X4	14	14	5	11	6	6	1	4	5	5	.7	3	3	2	.4	2	.4	.4	.2	.3
5-Ton Cargo Trucks																				
TARADCOM HMTT, 8X8	19	19	17	18	10	9	9	9	7	7	7	7	5	4	4	4	.5	.5	.5	.5
German MAN, 4X4	21	21	12	18	10	10	8	9	7	5	6	6	4	3	3	3	.6	.5	.5	.5
M813 PIP, 6X6	18	17	6	14	8	7	4	6	6	4	4	5	3	3	2	3	.5	.4	.4	.4
M813A1, 6x6	23	22	7	17	8	8	5	7	6	4	4	5	3	3	3	3	.5	.5	.5	.5
Ford LNT8000, 6X4	21	20	6	16	9	9	5	8	6	5	4	5	3	2	2	2	.4	.4	.4	.4
Ford LNT8000, 6X6	21	21	7	16	10	9	5	8	7	6	4	6	3	3	3	3	.4	.4	.4	.4
International Harvester IH1850, 6X4	21	21	6	16	10	9	1	7	6	5	.7	4	1	.9	.3	.7	.3	.3	.2	.3
International Harvester IH1850, 6X6	17	17	6	13	7	7	5	6	5	5	4	5	3	3	2	3	.4	.4	.4	.4

Table 6

Study Vehicles Performance at On-Road

Tactical Mobility Level* in HIMO West Germany Study Area, Dry Condition

Vehicles	Mobility Rating Speed, mph	Percent of M35A2 Rating Speed	Missions Completed in 10 Hours**	Vehicle Ranking†
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	50.1	106.1	26	1
M890, 4X2, 1-1/4-Ton Cargo Truck	48.9	103.6	26	1
M880, 4X4, 1-1/4-Ton Cargo Truck	48.9	103.6	26	1
M35A2, 6X6, 2-1/2-Ton Cargo Truck	47.2	100.0	25	2
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	46.9	99.4	24	3
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	46.4	98.3	24	3
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	44.6	94.5	23	4
M813A1, 6X6, 5-Ton Cargo Truck	44.0	93.2	23	4
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	42.8	90.7	22	5
Ford LN8000, 4X4, 2-1/2-Ton Cargo Truck	40.5	85.8	21	6
German MAN, 4X4, 5-Ton Cargo Truck	40.2	85.2	21	6
Ford LNT8000, 6X6, 5-Ton Cargo Truck	40.2	85.2	21	6
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	40.2	85.2	21	6
Ford LNT8000, 6X4, 5-Ton Cargo Truck	39.5	83.7	21	6
TARADCOM HMTT, 8X8, 5-Ton Cargo Truck	36.2	76.7	19	7
M813 PIP, 6X6, 5-Ton Cargo Truck	33.9	71.8	18	8
International Harvester IH1850, 6X6, 5-Ton Cargo Truck	33.5	71.0	17	9
International Harvester IH1750, 4X4, 2-1/2-Ton Cargo Truck	27.9	59.1	14	10

* Tactical mobility level defined in HIMO Study; shown in Table 3 .

** Missions completed based on one-way missions in West Germany of 18.8 miles as established in HIMO Study.

† Ranking based on missions completed with the study vehicle having the most full missions completed being ranked first.

Table 7

Study Vehicles Performance at On-Road

Tactical Mobility Level* in HIMO West Germany Study Area, Wet Condition

Vehicles	Mobility Rating Speed, mph	Percent of M35A2 Rating Speed	Missions Completed in 10 Hours**	Vehicle Ranking†
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	47.8	105.1	25	1
M880, 4X4, 1-1/4-Ton Cargo Truck	46.8	102.9	24	2
M890, 4X2, 1-1/4-Ton Cargo Truck	46.8	102.9	24	2
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	45.5	100.0	24	2
M35A2, 6X6, 2-1/2-Ton Cargo Truck	45.5	100.0	24	2
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	45.1	99.1	23	3
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	43.3	95.2	23	3
M813A1, 6X6, 5-Ton Cargo Truck	42.8	94.1	22	4
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	41.7	91.6	22	4
German MAN, 4X4, 5-Ton Cargo Truck	40.1	88.1	21	5
Ford LNT8000, 6X6, 5-Ton Cargo Truck	39.6	87.0	21	5
Ford LN8000, 4X4, 2-1/2-Ton Cargo Truck	39.6	87.0	21	5
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	39.6	87.0	21	5
Ford LNT8000, 6X4, 5-Ton Cargo Truck	39.2	86.2	20	6
TARADCOM HMTT, 8X8, 5-Ton Cargo Truck	36.1	79.3	19	7
M813 PIP, 6X6, 5-Ton Cargo Truck	33.7	74.1	17	8
International Harvester IH1850, 6X6, 5-Ton Cargo Truck	33.4	73.4	17	8
International Harvester IH1750, 4X4, 2-1/2-Ton Cargo Truck	27.9	61.3	14	9

* Tactical mobility level defined in HIMO Study; shown in Table 3 .

** Missions completed based on one-way missions in West Germany of 18.8 miles as established in HIMO Study.

† Ranking based on missions completed with the study vehicle having the most full missions completed being ranked first.

Table 8

Study Vehicles Performance at On-Road

Tactical Mobility Level* in HIMO West Germany Study Area, Snow Condition

Vehicles	Mobility Rating Speed, mph	Percent of M35A2 Rating Speed	Missions Completed in 10 Hours**	Vehicle Ranking†
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	34.6	214.9	18	1
M880, 4X4, 1-1/4-Ton Cargo Truck	34.4	213.7	18	1
M890, 4X2, 1-1/4-Ton Cargo Truck	34.3	213.0	18	1
TARADCOM HMTT, 8X8, 5-Ton Cargo Truck	33.4	207.5	17	2
German MAN, 4X4, 5-Ton Cargo Truck	23.4	145.3	12	3
M35A2, 6X6, 2-1/2-Ton Cargo Truck	16.1	100.0	8	4
Ford LNT8000, 6X6, 5-Ton Cargo Truck	13.4	83.2	7	5
M813A1, 6X6, 5-Ton Cargo Truck	13.4	83.2	7	5
Ford LNT8000, 6X4, 5-Ton Cargo Truck	12.7	78.9	6	6
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	12.7	78.9	6	6
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	12.3	76.4	6	6
International Harvester IH1850, 6X6, 5-Ton Cargo Truck	12.2	75.8	6	6
M813 PIP, 6X6, 5-Ton Cargo Truck	11.4	70.8	6	6
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	11.3	70.2	6	6
Ford LN8000, 4X4, 2-1/2-Ton Cargo Truck	11.1	68.9	5	7
International Harvester IH1750, 4X4, 2-1/2-Ton Cargo Truck	10.6	65.8	5	7
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	1.7	10.6	0.9	8T
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	1.7	10.6	0.9	8T

* Tactical mobility level defined in HIMO Study; shown in Table 3 .

** Missions completed based on one-way missions in West Germany of 18.8 miles as established in HIMO Study.

† Ranking based on missions completed with the study vehicle having the most full missions completed being ranked first. In order to rank vehicles when mission completions are less than one, rankings are based on 0.1 mission completions. These cases are marked by a "T".

Table 9

Study Vehicles Performance at Tactical Support

Tactical Mobility Level* in HIMO West Germany Study Area, Dry Condition

Vehicles	Mobility Rating Speed, mph	Percent of M35A2 Rating Speed	Missions Completed in 10 Hours**	Vehicle Ranking†
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	22.0	111.1	11	1
M880, 4X4, 1-1/4-Ton Cargo Truck	20.3	102.5	10	2
M890, 4X2, 1-1/4-Ton Cargo Truck	20.3	102.5	10	2
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	20.0	101.0	10	2
German MAN, 4X4, 5-Ton Cargo Truck	19.8	100.0	10	2
M35A2, 6X6, 2-1/2-Ton Cargo Truck	19.8	100.0	10	2
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	19.7	99.5	10	2
TARADCOM, HMTT, 8X8, 5-Ton Cargo Truck	19.5	98.5	10	2
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	19.4	98.0	10	2
Ford LNT8000, 6X6, 5-Ton Cargo Truck	19.3	97.5	10	2
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	18.9	95.5	10	2
Ford LNT8000, 6X4, 5-Ton Cargo Truck	18.3	92.4	9	3
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	17.5	88.4	9	3
M813A1, 6X6, 5-Ton Cargo Truck	16.4	82.8	8	4
M813 PIP, 6X6, 5-Ton Cargo Truck	15.4	77.8	8	4
International Harvester IH1850, 6X6, 5-Ton Cargo Truck	14.9	75.3	7	5
Ford LN8000, 4X4, 2-1/2-Ton Cargo Truck	14.8	74.7	7	5
International Harvester IH1750, 4X4, 2-1/2-Ton Cargo Truck	13.1	66.2	6	6

* Tactical mobility level defined in HIMO Study; shown in Table 3 .

** Missions completed based on one-way missions in West Germany of 18.8 miles as established in HIMO Study.

† Ranking based on missions completed with the study vehicle having the most full missions completed being ranked first.

Table 10

Study Vehicles Performance at Tactical Support

Tactical Mobility Level* in HIMO West Germany Study Area, Wet Condition

Vehicles	Mobility Rating Speed, mph	Percent of M35A2 Rating Speed	Missions Completed in 10 Hours**	Vehicle Ranking†
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	20.4	108.5	10	1
M890, 4X2, 1-1/4-Ton Cargo Truck	19.2	102.1	10	1
M880, 4X4, 1-1/4-Ton Cargo Truck	19.2	102.1	10	1
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	18.9	100.5	10	1
German MAN, 4X4, 5-Ton Cargo Truck	18.8	100.0	10	1
M35A2, 6X6, 2-1/2-Ton Cargo Truck	18.8	100.0	10	1
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	18.6	98.9	9	2
TARADCOM HMTT, 8X8, 5-Ton Cargo Truck	18.4	97.9	9	2
Ford LNT8000, 6X6, 5-Ton Cargo Truck	18.3	97.3	9	2
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	18.3	97.3	9	2
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	17.9	95.2	9	2
Ford LNT8000, 6X4, 5-Ton Cargo Truck	17.5	93.1	9	2
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	16.7	88.8	8	3
M813A1, 6X6, 5-Ton Cargo Truck	15.8	84.0	8	3
M813 PIP, 6X6, 5-Ton Cargo Truck	14.9	79.3	7	4
International Harvester IH1850, 6X6, 5-Ton Cargo Truck	14.4	76.6	7	4
Ford LN8000, 4X4, 2-1/2-Ton Cargo Truck	14.3	76.1	7	4
International Harvester IH1750, 4X4, 2-1/2-Ton Cargo Truck	12.8	68.1	6	5

* Tactical mobility level defined in HIMO Study; shown in Table 3.

** Missions completed based on one-way missions in West Germany of 18.8 miles as established in HIMO Study.

† Ranking based on missions completed with the study vehicle having the most full missions completed being ranked first.

Table 11

Study Vehicles Performance at Tactical Support

Tactical Mobility Level* in HIMO West Germany Study Area, Snow Condition

Vehicles	Mobility Rating Speed, mph	Percent of M35A2 Rating Speed	Missions Completed in 10 Hours**	Vehicle Ranking†
TARADCOM HMTT, 8X8, 5-Ton Cargo Truck	17.0	137.1	9	1
M880, 4X4, 1-1/4-Ton Cargo Truck	16.9	136.3	8	2
M890, 4X2, 1-1/4-Ton Cargo Truck	16.8	135.5	8	2
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	16.6	133.9	8	2
German MAN, 4X4, 5-Ton Cargo Truck	15.3	123.4	8	2
M35A2, 6X6, 2-1/2-Ton Cargo Truck	12.4	100.0	6	3
Ford LNT8000, 6X6, 5-Ton Cargo Truck	10.6	85.5	5	4
Ford LNT8000, 6X4, 5-Ton Cargo Truck	10.2	82.3	5	4
M813A1, 6X6, 5-Ton Cargo Truck	10.1	81.5	5	4
International Harvester IH1850, 6X6, 5-Ton Cargo Truck	9.5	76.6	5	4
M813 PIP, 6X6, 5-Ton Cargo Truck	8.9	71.8	4	5
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	5.8	46.8	3	6
Ford LN8000, 4X4, 2-1/2-Ton Cargo Truck	5.1	41.1	2	7
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	2.5	20.2	1	8
International Harvester IH1750, 4X4, 2-1/2-Ton Cargo Truck	2.2	17.7	1	8
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	0.2	1.6	0.1	9T
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	0.1	0.8	0.1	9T
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	0.1	0.8	0.1	9T

* Tactical mobility level defined in HIMO Study; shown in Table 3 .

** Missions completed based on one-way missions in West Germany of 18.8 miles as established in HIMO Study.

† Ranking based on missions completed with the study vehicle having the most full missions completed being ranked first. In order to rank vehicles when mission completions are less than one, rankings are based on 0.1 mission completions. These cases are marked by a "T".

Table 12

Study Vehicles Performance at Tactical Standard

Tactical Mobility Level* in HIMO West Germany Study Area, Dry Condition

Vehicles	Mobility Rating Speed, mph	Percent of M35A2 Rating Speed	Missions Completed in 10 Hours**	Vehicle Ranking†
TARADCOM HMTT, 8X8, 5-Ton Cargo Truck	14.9	105.7	7	1
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	14.4	102.1	7	1
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	14.3	101.4	7	1
M35A2, 6X6, 2-1/2-Ton Cargo Truck	14.1	100.0	7	1
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	14.1	100.0	7	1
German MAN, 4X4, 5-Ton Cargo Truck	14.1	100.0	7	1
Ford LNT8000, 6X6, 5-Ton Cargo Truck	13.7	97.2	7	1
M880, 4X4, 1-1/4-Ton Cargo Truck	13.4	95.0	7	1
M890, 4X2, 1-1/4-Ton Cargo Truck	13.3	94.3	7	1
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	12.9	91.5	6	2
Ford LNT8000, 6X4, 5-Ton Cargo Truck	12.9	91.5	6	2
M813A1, 6X6, 5-Ton Cargo Truck	11.9	84.4	6	2
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	11.5	81.6	6	2
M813 PIP, 6X6, 5-Ton Cargo Truck	11.4	80.9	6	2
Ford LN8000, 4X4, 2-1/2-Ton Cargo Truck	10.9	77.3	5	3
International Harvester, IH1850, 6X6, 5-Ton Cargo Truck	10.9	77.3	5	3
International Harvester, IH1750, 4X4, 2-1/2-Ton Cargo Truck	10.0	70.9	5	3
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	3.7	26.2	1	4

* Tactical mobility level defined in HIMO Study; shown in Table 3.

** Missions completed based on one-way missions in West Germany of 18.8 miles as established in HIMO Study.

† Ranking based on missions completed with the study vehicle having the most full missions completed being ranked first.

Table 13

Study Vehicles Performance at Tactical Standard

Tactical Mobility Level* in HIMO West Germany Study Area, Wet Condition

Vehicles	Mobility Rating Speed, mph	Percent of M35A2 Rating Speed	Missions Completed in 10 Hours**	Vehicle Ranking†
TARADCOM HMTT, 8X8, 5-Ton Cargo Truck	13.8	103.0	7	1
M35A2, 6X6, 2-1/2-Ton Cargo Truck	13.4	100.0	7	1
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	13.4	100.0	7	1
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	13.3	99.3	7	1
Ford LNT8000, 6X6, 5-Ton Cargo Truck	12.9	96.3	6	2
M880, 4X4, 1-1/4-Ton Cargo Truck	12.7	94.8	6	2
Ford LN8000, 4X4, 2-1/2-Ton Cargo Truck	10.6	79.1	5	3
International Harvester IH1850, 6X6, 5-Ton Cargo Truck	10.6	79.1	5	3
German MAN, 4X4, 5-Ton Cargo Truck	10.3	76.9	5	3
M890, 4X2, 1-1/4-Ton Cargo Truck	9.9	73.9	5	3
International Harvester IH1750, 4X4, 2-1/2-Ton Cargo Truck	9.8	73.1	5	3
Ford LNT8000, 6X4, 5-Ton Cargo Truck	9.6	71.6	5	3
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	9.5	70.9	5	3
M813A1, 6X6, 5-Ton Cargo Truck	9.0	67.2	4	4
M813 PIP, 6X6, 5-Ton Cargo Truck	8.8	65.7	4	4
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	8.5	63.4	4	4
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	4.9	36.6	2	5
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	3.2	23.9	1	6

* Tactical mobility level defined in HIMO Study; shown in Table 3 .

** Missions completed based on one-way missions in West Germany of 18.8 miles as established in HIMO Study.

† Ranking based on missions completed with the study vehicle having the most full missions completed being ranked first.

Table 14

Study Vehicles Performance at Tactical Standard

Tactical Mobility Level* in HIMO West Germany Study Area, Snow Condition

Vehicles	Mobility Rating Speed, mph	Percent of M35A2 Rating Speed	Missions Completed in 10 Hours**	Vehicle Ranking†
TARADCOM HMTT, 8X8, 5-Ton Cargo Truck	13.3	131.7	7	1
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	12.5	123.8	6	2
M880, 4X4, 1-1/4-Ton Cargo Truck	11.8	116.8	6	2
M890, 4X2, 1-1/4-Ton Cargo Truck	11.8	116.8	6	2
German MAN, 4X4, 5-Ton Cargo Truck	11.7	115.8	6	2
M35A2, 6X6, 2-1/2-Ton Cargo Truck	10.1	100.0	5	3
Ford LNT8000, 6X6, 5-Ton Cargo Truck	8.8	87.1	4	4
M813A1, 6X6, 5-Ton Cargo Truck	8.4	83.2	4	4
Ford LNT8000, 6X4, 5-Ton Cargo Truck	8.3	82.2	4	4
International Harvester IH1850, 6X6, 5-Ton Cargo Truck	7.9	78.2	4	4
M813 PIP, 6X6, 5-Ton Cargo Truck	7.6	75.2	4	4
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	4.8	47.5	2	5
Ford LN8000, 4X4, 2-1/2-Ton Cargo Truck	4.3	42.6	2	5
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	1.4	13.9	0.7	6T
International Harvester IH1750, 4X4, 2-1/2-Ton Cargo Truck	1.4	13.9	0.7	6T
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	0.2	2.0	0.1	7T
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	0.1	1.0	0.1	7T
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	0.1	1.0	0.1	7T

* Tactical mobility level defined in HIMO Study; shown in Table 3 .

** Missions completed based on-one way missions in West Germany of 18.8 miles as established in HIMO Study.

† Ranking based on missions completed with the study vehicle having the most full missions completed being ranked first. In order to rank vehicles when mission completions are less than one, rankings are based on 0.1 mission completions. These cases are marked by a "T".

Table 15

Study Vehicles Performance at Tactical High

Tactical Mobility Level* in HIMO West Germany Study Area, Dry Condition

Vehicles	Mobility Rating Speed, mph	Percent of M35A2 Rating Speed	Missions Completed in 10 Hours**	Vehicle Ranking†
TARADCOM HMTT, 8X8, 5-Ton Cargo Truck	9.4	114.6	5	1
German MAN, 4X4, 5-Ton Cargo Truck	8.5	103.7	4	2
M35A2, 6X6, 2-1/2-Ton Cargo Truck	8.2	100.0	4	2
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	8.2	100.0	4	2
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	8.0	97.6	4	2
Ford LNT8000, 6X6, 5-Ton Cargo Truck	7.5	91.5	3	3
M813A1, 6X6, 5-Ton Cargo Truck	7.1	86.6	3	3
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	7.0	85.4	3	3
M813 PIP, 6X6, 5-Ton Cargo Truck	6.9	84.1	3	3
Ford LN8000, 4X4, 2-1/2-Ton Cargo Truck	6.6	80.5	3	3
International Harvester IH1850, 6X6, 5-Ton Cargo Truck	6.3	76.8	3	3
International Harvester IH1750, 4X4, 2-1/2-Ton Cargo Truck	5.8	70.7	3	3
Ford LNT8000, 6X4, 5-Ton Cargo Truck	5.7	69.5	3	3
M880, 4X4, 1-1/4-Ton Cargo Truck	2.3	28.0	1	4
M890, 4X2, 1-1/4-Ton Cargo Truck	2.3	28.0	1	4
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	2.3	28.0	1	4
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	2.1	25.6	1	4
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	0.8	9.8	0.4	5T

* Tactical mobility level defined in HIMO Study; shown in Table 3 .

** Missions completed based on one-way missions in West Germany of 18.8 miles as established in HIMO Study.

† Ranking based on missions completed with the study vehicle having the most full missions completed being ranked first. In order to rank vehicles when mission completions are less than one, rankings are based on 0.1 mission completions. These cases are marked by a "T".

Table 16

Study Vehicles Performance at Tactical High

Tactical Mobility Level* in HIMO West Germany Study Area, Wet Condition

Vehicles	Mobility Rating Speed, mph	Percent of M35A2 Rating Speed	Missions Completed in 10 Hours**	Vehicle Ranking†
TARADCOM HMTT, 8X8, 5-Ton Cargo Truck	8.2	106.5	4	1
M35A2, 6X6, 2-1/2-Ton Cargo Truck	7.7	100.0	4	1
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	7.7	100.0	4	1
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	7.4	96.1	3	2
German MAN, 4X4, 5-Ton Cargo Truck	7.1	92.2	3	2
Ford LNT8000, 6X6, 5-Ton Cargo Truck	7.0	90.9	3	2
Ford LN8000, 4X4, 2-1/2-Ton Cargo Truck	6.4	83.1	3	2
M813A1, 6X6, 5-Ton Cargo Truck	6.1	79.2	3	2
International Harvester IH1850, 6X6, 5-Ton Cargo Truck	6.0	77.9	3	2
M813 PIP, 6X6, 5-Ton Cargo Truck	5.9	76.6	3	2
International Harvester IH1750, 4X4, 2-1/2-Ton Cargo Truck	5.2	67.5	2	3
Ford LNT8000, 6X4, 5-Ton Cargo Truck	4.6	59.7	2	3
M880, 4X4, 1-1/4-Ton Cargo Truck	2.1	27.3	1	4
M890, 4X2, 1-1/4-Ton Cargo Truck	1.9	24.7	1	4
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	1.7	22.1	0.9	5T
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	1.5	19.5	0.8	6T
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	1.2	15.6	0.6	7T
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	0.7	9.1	0.4	8T

* Tactical mobility level defined in HIMO Study; shown in Table 3.

** Missions completed based on one-way missions in West Germany of 18.8 miles as established in HIMO Study.

† Ranking based on missions completed with the study vehicle having the most full missions completed being ranked first. In order to rank vehicles when mission completions are less than one, rankings are based on 0.1 mission completions. These cases are marked by a "T".

Table 17

Study Vehicles Performance at Tactical High

Tactical Mobility Level* in HIMO West Germany Study Area, Snow Condition

Vehicles	Mobility Rating Speed, mph	Percent of M35A2 Rating Speed	Missions Completed in 10 Hours**	Vehicle Ranking†
TARADCOM HMTT, 8X8, 5-Ton Cargo Truck	8.3	125.8	4	1
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	7.6	115.2	4	1
German MAN, 4X4, 5-Ton Cargo Truck	7.5	113.6	3	2
M35A2, 6X6, 2-1/2-Ton Cargo Truck	6.6	100.0	3	2
M813A1, 6X6, 5-Ton Cargo Truck	5.7	86.4	3	2
Ford LNT8000, 6X6, 5-Ton Cargo Truck	5.7	86.4	3	2
M813 PIP, 6X6, 5-Ton Cargo Truck	5.3	80.3	2	3
International Harvester IH1850, 6X6, 5-Ton Cargo Truck	5.2	78.8	2	3
Ford LNT8000, 6X4, 5-Ton Cargo Truck	4.6	69.7	2	3
M880, 4X4, 1-1/4-Ton Cargo Truck	2.1	31.8	1	4
M890, 4X2, 1-1/4-Ton Cargo Truck	2.1	31.8	1	4
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	1.5	22.7	0.8	5T
Ford LN8000, 4X4, 2-1/2-Ton Cargo Truck	1.4	21.2	0.7	6T
International Harvester IH1750, 4X4, 2-1/2-Ton Cargo Truck	0.7	10.6	0.4	7T
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	0.6	9.1	0.3	8T
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	0.1	1.5	0.1	9T
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	0.1	1.5	0.1	9T
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	0.1	1.5	0.1	9T

* Tactical mobility level defined in HIMO Study; shown in Table 3 .

** Missions completed based on one-way missions in West Germany of 18.8 miles as established in HIMO Study.

† Ranking based on missions completed with the study vehicle having the most full missions completed being ranked first. In order to rank vehicles when mission completions are less than one, rankings are based on 0.1 mission completions. These cases are marked by a "T".

Table 18

Study Vehicles Performance at High-High

Tactical Mobility Level* in HIMO West Germany Study Area, Dry Condition

Vehicles	Mobility Rating Speed, mph	Percent of M35A2 Rating Speed	Missions Completed in 10 Hours**	Vehicle Ranking†
German MAN, 4X4, 5-ton Cargo Truck	1.1	122.2	0.6	1T
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	1.0	111.1	0.5	2T
TARADCOM HMTT, 8X8, 5-Ton Cargo Truck	0.9	100.0	0.5	2T
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	0.9	100.0	0.5	2T
M813A1, 6X6, 5-Ton Cargo Truck	0.9	100.0	0.5	2T
M813 PIP, 6X6, 5-Ton Cargo Truck	0.9	100.0	0.5	2T
Ford LN8000, 4X4, 2-1/2-Ton Cargo Truck	0.9	100.0	0.5	2T
M35A2, 6X6, 2-1/2-Ton Cargo Truck	0.9	100.0	0.5	2T
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	0.8	88.9	0.4	3T
International Harvester IH1850, 6X6, 5-Ton Cargo Truck	0.8	88.9	0.4	3T
Ford LNT8000, 6X6, 5-Ton Cargo Truck	0.8	88.9	0.4	3T
Ford LNT8000, 6X4, 5-Ton Cargo Truck	0.8	88.9	0.4	3T
International Harvester IH1750, 4X4, 2-1/2-Ton Cargo Truck	0.8	88.9	0.4	3T
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	0.6	66.7	0.3	4T
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	0.6	66.7	0.3	4T
M890, 4X2, 1-1/4-Ton Cargo Truck	0.6	66.7	0.3	4T
M880, 4X4,1-1/4-Ton Cargo Truck	0.6	66.7	0.3	4T
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	0.3	33.3	0.2	5T

* Tactical mobility level defined in HIMO Study; shown in Table 3.

** Missions completed based on one-way missions in West Germany of 18.8 miles as established in HIMO Study.

† Ranking based on missions completed with the study vehicle having the most full missions completed being ranked first. In order to rank vehicles when mission completions are less than one, rankings are based on 0.1 mission completions. These cases are marked by a "T".

Table 19

Study Vehicles Performance at High-High

Tactical Mobility Level* in HIMO West Germany Study Area, Wet Condition

Vehicles	Mobility Rating Speed, mph	Percent of M35A2 Rating Speed	Missions Completed in 10 Hours**	Vehicle Ranking†
German MAN, 4X4, 5-Ton Cargo Truck	1.0	111.1	0.5	1T
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	1.0	111.1	0.5	1T
TARADCOM HMTT, 8X8, 5-Ton Cargo Truck	0.9	100.0	0.5	1T
M813A1, 6X6, 5-Ton Cargo Truck	0.9	100.0	0.5	1T
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	0.9	100.0	0.5	1T
M35A2, 6X6, 2-1/2-Ton Cargo Truck	0.9	100.0	0.5	1T
International Harvester IH1750, 4X4, 2-1/2-Ton Cargo Truck	0.8	88.9	0.4	2T
International Harvester IH1850, 6X6, 5-Ton Cargo Truck	0.8	88.9	0.4	2T
M813 PIP, 6X6, 5-Ton Cargo Truck	0.8	88.9	0.4	2T
Ford LNT8000, 6X6, 5-Ton Cargo Truck	0.8	88.9	0.4	2T
Ford LN8000, 4X4, 2-1/2-Ton Cargo Truck	0.8	88.9	0.4	2T
Ford LNT8000, 6X4, 5-Ton Cargo Truck	0.7	77.8	0.4	2T
M880, 4X4, 1-1/4-Ton Cargo Truck	0.6	66.7	0.3	3T
M890, 4X2, 1-1/4-Ton Cargo Truck	0.6	66.7	0.3	3T
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	0.5	55.6	0.3	3T
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	0.5	55.6	0.3	3T
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	0.4	44.4	0.2	4T
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	0.3	33.3	0.2	4T

* Tactical mobility level defined in HIMO Study; shown in Table 3 .

** Missions completed based on one-way missions in West Germany of 18.8 miles as established in HIMO Study.

† Ranking based on missions completed with the study vehicle having the most full missions completed being ranked first. In order to rank vehicles when mission completions are less than one, rankings are based on 0.1 mission completions. These cases are marked by a "T".

Table 20

Study Vehicles Performance at High-High

Tactical Mobility Level* in HIMO West Germany Study Area, Snow Condition

Vehicles	Mobility Rating Speed, mph	Percent of M35A2 Rating Speed	Missions Completed in 10 Hours**	Vehicle Ranking†
German MAN, 4X4, 5-Ton Cargo Truck	1.0	111.1	0.5	1T
M35 PIP, 6X6, 2-1/2-Ton Cargo Truck	1.0	111.1	0.5	1T
TARADCOM HMTT, 8X8, 5-Ton Cargo Truck	0.9	100.0	0.5	1T
M813A1, 6X6, 5-Ton Cargo Truck	0.9	100.0	0.5	1T
M35A2, 6X6, 2-1/2-Ton Cargo Truck	0.9	100.0	0.5	1T
International Harvester IH1850, 6X6, 5-Ton Cargo Truck	0.8	88.9	0.4	2T
M813 PIP, 6X6, 5-Ton Cargo Truck	0.8	88.9	0.4	2T
Ford LNT8000, 6X6, 5-Ton Cargo Truck	0.8	88.9	0.4	2T
Ford LNT8000, 6X4, 5-Ton Cargo Truck	0.7	77.8	0.4	2T
M890, 4X2, 1-1/4-Ton Cargo Truck	0.6	66.7	0.3	3T
M880, 4X4, 1-1/4-Ton Cargo Truck	0.6	66.7	0.3	3T
Dodge W600, 4X4, 2-1/2-Ton Cargo Truck	0.5	55.6	0.3	3T
Ford LN8000, 4X4, 2-1/2-Ton Cargo Truck	0.5	55.6	0.3	3T
International Harvester IH1750, 4X4, 2-1/2-Ton Cargo Truck	0.3	33.3	0.2	4T
International Harvester IH1850, 6X4, 5-Ton Cargo Truck	0.3	33.3	0.2	4T
Dodge D700, 4X2, 2-1/2-Ton Cargo Truck	0.1	11.1	0.1	5T
Ford LN8000, 4X2, 2-1/2-Ton Cargo Truck	0.1	11.1	0.1	5T
International Harvester IH1750, 4X2, 2-1/2-Ton Cargo Truck	0.1	11.1	0.1	5T

* Tactical mobility level defined in HIMO Study; shown in Table 3 .

** Missions completed based on one-way missions in West Germany of 18.8 miles as established in HIMO Study.

† Ranking based on missions completed with the study vehicle having the most full missions completed being ranked first. In order to rank vehicles when mission completions are less than one, rankings are based on 0.1 mission completions. These cases are marked by a "T".

Table 21

Comparison of Study Vehicle Performance Based on Selected Levels*

of Mobility Rating Speed for the Tactical Mobility Levels

Vehicles	On-Road				Tactical Support				Tactical Standard				Tactical High				High-High			
	Dry	Wet	Snow	All	Dry	Wet	Snow	All	Dry	Wet	Snow	All	Dry	Wet	Snow	All	Dry	Wet	Snow	All
1-1/4-Ton Cargo Trucks																				
M880, 4X4	■	■	■	■	■	■	■	■	◆	◆	■	■	0	0	0	0	0	0	0	0
M890, 4X2	■	■	■	■	■	■	■	■	◆	X	■	◆	0	0	0	0	0	0	0	0
2-1/2-Ton Cargo Trucks																				
M35A2, 6X6	47**	46	16	28	20	19	12	16	14	13	10	12	8	8	7	7	1	1	1	.9
M35 PIP, 6X6	◆	◆	■	■	◆	◆	■	◆	■	◆	■	■	■	■	■	■	■	■	■	■
Ford LN8000, 4X2	◆	◆	0	0	X	X	0	0	X	0	0	0	0	0	0	0	0	0	0	0
Ford LN8000, 4X4	X	X	0	X	X	X	0	0	X	X	0	0	X	X	0	0	■	X	0	X
Dodge W600, 4X4	◆	■	X	X	■	■	0	0	■	■	0	0	◆	◆	0	0	■	■	0	X
Dodge D700, 4X2	■	■	0	0	■	■	0	0	■	0	0	0	X	0	0	0	X	0	0	0
International Harvester IH1750, 4X2	◆	◆	X	X	◆	◆	0	0	0	X	0	0	0	0	0	0	0	0	0	0
International Harvester IH1750, 4X4	0	0	0	0	0	0	0	0	X	0	0	0	X	0	0	0	X	X	0	0
5-Ton Cargo Trucks																				
TARADCOM HMTT, 8X8	X	X	■	■	◆	◆	■	■	■	■	■	■	■	■	■	■	■	■	■	■
German MAN, 4X4	X	X	■	■	■	■	■	■	■	X	■	◆	■	◆	■	■	■	■	■	■
M813 PIP, 6X6	X	X	X	X	X	X	X	X	X	0	X	X	X	X	X	X	■	X	X	X
M813A1, 6X6	◆	◆	X	X	X	X	X	X	X	0	X	X	X	X	X	X	■	■	■	■
Ford LNT8000, 6X4	X	X	X	X	◆	◆	X	X	X	X	X	X	X	0	X	0	X	X	X	X
Ford LNT8000, 6X6	X	X	X	X	◆	◆	X	X	◆	◆	X	◆	◆	◆	X	X	X	X	X	X
International Harvester IH1850, 6X4	X	X	X	X	◆	◆	0	0	◆	X	0	0	0	0	0	0	0	0	0	0
International Harvester IH1850, 6X6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

* 0 = Mobility rating speed less than 70% of the M35A2 mobility rating speed.
X = Mobility rating speed between 70 and 90% of the M35A2 mobility rating speed.
■ = Mobility rating speed equals or exceeds M35A2 mobility rating speed.
◆ = Mobility rating speed between 90 and 100% of M35A2 mobility rating speed.

** M35A2 mobility rating speed.

Table 22

Network Composition and Severity at Tactical Mobility Levels

For HIMO West Germany Study Area

Tactical Mobility Levels	Composition of Network in Percent				Severity of Operation in Terms of Percent of Terrain and Roads Challenged			
	Primary Roads (P_P)	Secondary Roads (P_S)	Trails (P_T)	Off-Road (P)	Primary Roads (V_{PP})	Secondary Roads (V_{SP})	Trails (V_{TP})	Off-Road (V_C)
High-High	0	0	0	100	-	-	-	V_{100}
Tactical High	10	30	10	50	V_{100}	V_{100}	V_{100}	V_{90}
Tactical Standard	20	50	15	15	V_{100}	V_{100}	V_{100}	V_{80}
Tactical Support	30	55	10	5	V_{100}	V_{100}	V_{50}	V_{50}
On-Road	35	60	5	0	V_{100}	V_{100}	V_{10}	-

Table 23

Effects of Tire Chains on Snow Mobility at Tactical Mobility Levels

Vehicle	On-Road				Tactical Support				Tactical Standard				Tactical High				High-High			
	Mobility Rating Speed*				Mobility Rating Speed*				Mobility Rating Speed*				Mobility Rating Speed*				Mobility Rating Speed*			
	Without tire chains	With tire chains	Increase	% of M35 with chains	Without tire chains	With tire chains	Increase	% of M35 with chains	Without tire chains	With tire chains	Increase	% of M35 with chains	Without tire chains	With tire chains	Increase	% of M35 with chains	Without tire chains	With tire chains	Increase	% of M35 with chains
M35A2, 6X6	16.1	16.1	0	66	12.4	12.4	0	100	10.1	10.2	0.1	100	6.6	6.8	0.2	100	0.9	0.9	0	100
M35 PIP, 6X6	34.6	34.6	0	215	16.6	16.7	0.1	135	12.5	12.6	0.1	81	7.6	7.7	0.1	113	1.0	1.0	0	111
Dodge W600, 4X4	12.7	12.7	0	79	5.8	10.5	4.7	85	4.8	8.9	4.1	87	1.5	6.1	4.6	90	.5	0.8	0.3	89
Ford LN8000, 4X4	11.1	11.1	0	69	5.1	8.5	3.4	68	4.3	7.3	3.0	72	1.4	5.2	3.8	77	.5	0.8	0.3	89
IH 1750, 4X4**	10.6	10.6	0	66	2.2	7.0	4.8	57	1.4	6.1	4.7	60	0.7	4.2	3.5	62	.3	0.7	0.4	78
Dodge D700, 4X2	1.7	12.7	11.0	79	0.1	0.3	0.2	2	0.1	0.2	0.1	2	0.1	0.1	0	1	0.1	0.1	0	11
Ford LN8000, 4X2	1.7	11.1	9.4	69	0.1	0.4	0.3	3	0.1	0.2	0.1	2	0.1	0.1	0	1	0.1	0.1	0	11
IH 1750, 4X2**	11.3	11.4	0.1	71	0.2	1.1	0.9	9	0.2	0.6	0.4	6	0.1	0.3	0.2	1	0.1	0.2	0.1	22

* miles per hour
** International Harvester

APPENDIX A: DATA USED TO CHARACTERIZE STUDY VEHICLES AND A BRIEF DESCRIPTION OF FACTORS USED IN DESCRIPTION OF HIMO WEST GERMANY STUDY AREA

Vehicle Characteristics and Performance Data

1. Extensive data are required to characterize a vehicle in order to predict its performance with the Army Mobility Model (AMM) and SWIMCRIT/WACROSS water-crossing model. These data for the 18 study vehicles are given in Table A1-A8. All vehicles were described as carrying their rated payload, with tires at recommended inflation pressures and corresponding deflections.

2. Tractive force-speed relations were available from Aberdeen Proving Ground engineering test data for the M35A2, 6x6, 2-1/2-ton cargo truck and the M813A1, 6x6, 5-ton cargo truck. Tractive force-speed relations were not available for the other study vehicles; therefore, engine torque-engine speed, transmission, and torque data were used.

3. Ride dynamics data for all the vehicles except the TARADCOM HMTT, 8x8, 5-ton cargo truck and German MAN, 4x4, 5-ton cargo truck were obtained from experimental field test data from previous studies. TARADCOM personnel furnished ride data for the TARADCOM HMTT, 8x8. Ride dynamics data for the German MAN, 4x4, 5-ton cargo truck were assumed to be the same as obtained by experimental field testing of the 7- and 10-ton German MAN trucks in previous studies.

4. The ride data for the M35A2, 6x6, 2-1/2-ton cargo truck and M813A1, 6x6, 5-ton cargo truck have been changed from that used during the HIMO study because additional test data were obtained for those vehicles.[6] The changes involve slight decreases in the ride speed between the surface roughness range of 0.5 and 1.5 rms.

Terrain Data

5. A detailed description of the procedures used to describe the HIMO West Germany study area for use with AMM is given in the HIMO report.[1]

Table A1

Vehicle Characteristics Use in Army Mobility Mode

No.	Identification	Dimensions	1-1/4-Ton Cargo Trucks M880 4X4	1-1/4-Ton Cargo Trucks M890 4X2	2-1/2-Ton Cargo T M35A2 6X6	2-1/2-Ton Cargo T M35PIP 6X6	2-1/2-Ton Cargo T Ford LN8000 4x2	2-1/2-Ton Cargo T Ford LN8000 4x4	2-1/2-Ton Cargo T Dod W60 4X
1	Vehicle type (NVEH = 0 for tracked and 1 for wheeled		1	1	1	1	1	1	1
2	Gross vehicle weight	lbs	7,748	7,317	17,980	19,450	18,200	19,200	16,820
3	Track types (NFL = 0 for flexible and 1 for girderized		NA**	NA	NA	NA	NA	NA	NA
4	Grouser height for tracks; number of tires for wheeled		4	4	10	6	6	6	6
5	Tire ply rating	--	8	8	8	18	16	16	14
6	Gross rated horsepower	bhp	150	150	140	210	203	220	185
7	Number of tracks or tires	--	4	4	6	6	6	6	6
8	Number of axles	-	2	2	3	3	2	2	2
9	Vehicle width	in.	79.5	79.5	96.0	96.0	96.0	96.0	96.
10	Vehicle length	in.	210.0	219.0	267.5	267.5	252.0	252.0	259.
11	Track width or nominal tire width	in.	8.0	8.0	9.0	15.0	11.0	11.0	15.
12	Wheel rim diameter	--	16.5	16.5	20.0	21.5	22.5	22.5	
13	Recommended tire pressure (cross-country)	psi	27.5	27.5	40.0	50.0	55.0	55.0	30.
14	Recommended tire pressure (sand) coarse grained	psi	15.0	15.0	15.0	30.0	22.5	30.0	30.
15	Area of one-track shoe (tracked) or number of wheels (wheeled) (duals as one)	--	4	4	6	6	4	4	4
16	Number of bogies (tracked) or chain indicator wheeled (0 = no chains; 1 = chains)	--	0	0	0	0	0	0	0
17	Vehicle ground clearance at the center of greatest wheel span	in.	11.5	11.5	19.0	19.0	10.2	17.3	16.
18	Minimum vehicle ground clearance	in.	7.8	7.8	11.0	14.0	9.2	11.0	10.
19	Rear end clearance (vertical clearance of vehicle's trailing edge)	in.	12.0	12.0	32.0	32.0	29.8	27.5	31.
20	Vehicle departure angle	deg	28.0	28.0	40.0	43.0	38.0	36.0	47.
21	Vertical clearance of vehicle's leading edge	in.	19.8	19.8	29.0	39.0	13.2	24.0	30.
22	Vehicle approach angle	deg	37.0	37.0	48.0	53.0	30.0	46.0	52.
23	Length of track on ground or wheel diameter	in.	32.5	32.5	38.0	53.0	44.5	44.5	49.
24	Height of vehicle pushbar, bumper or leading edge	in.	19.8	19.8	29.0	39.0	13.2	24.0	30.
25	Distance between first and last wheel center lines	in.	131.0	131.0	178.0	178.0	162.0	163.0	174.
26	Horizontal distance from the center of gravity to the front wheel conter line	in.	83.1	83.1	102.3	101.4	96.5	96.3	92.
27	Vertical distance from the center of gravity to the road wheel center line	in.	15.3	15.3	22.3	23.0	23.0	23.0	23.0
28	Maximum span between adjacent wheel center lines	in.	131.0	131.0	130.8	130.0	162.0	163.0	174.
29	Vertical distance from the ground to the center of the rear wheel (road wheel or idler	in.	14.8	14.8	19.0	25.5	19.4	19.6	18.4
30	Track thickness plus the radius of the rear wheel (road wheel or idler). The wheel is the one used to determine departure angle. (wheeled = RW) RW = rolling radius	in.	NA	NA	NA	NA	NA	NA	NA
31	Loaded rolling radius of the tire (cross-country tire pressure) or sprocket pitch radius	in.	14.8	19.0	14.8	25.5	19.4	19.6	18.4
32	Height of rigid point used to determine approach angle	in.	19.8	29.0	19.8	39.0	13.2	24.0	30.0
33	Maximum braking force the vehicle develops	--	0.8	0.8	0.8	0.8	0.8	0.8	0.8
34	Loaded wheel radius (at sand-tire pressure)	in.	14.0	17.6	14.0	24.5	18.4	18.6	17.4
35	Total ground-contact area	in.	NA	NA	NA	NA	NA	NA	NA
36	Distance vehicle spans before significant motion begins	in.	16.2	19.0	16.2	25.5	19.4	19.6	18.4
37	Maximum force the pushbar can withstand	lbs.	7,317	17,980	7,748	19,450	18,200	19,200	16,820
38	Maximum axle load/gross vehicle weight	--	0.50	0.34	0.50	0.33	0.59	0.59	0.5
39	Vehicle rated horsepower per ton	hp/ton	41.0	15.6	38.8	21.6	22.3	22.3	22.0
40	Transmission type (0 = automatic, 1 = manual)	--	0	0	0	0	0	0	0
41	Final drive gear ratio	--	4.10	6.27	4.10	5.83	5.83	5.83	5.2
42	Final drive gear efficiency	--	0.96	0.90	0.96	0.90	0.90	0.90	0.9

(Continued)

* IH = International Harvester
** NA = Not Applicable.

Table A1

bility Model (AMM) and SWIMCRIT Water-Crossing Model

Ton Cargo Trucks				5-Ton Cargo Trucks								
rd 000 s	Dodge W600 4X4	Dodge D700 4X2	IH1750* 4X2	IH1750* 4X4	TARADCOM HMTT 8X8	German MAN 4X4	M813PIP 6X6	M813A1 6X6	Ford LNT8000 6x4	Ford LNT8000 6x6	IH1850* 6x4	IH1850* 6x6
1	1	1	1	1	1	1	1	1	1	1	1	1
00	16,820 NA	15,980 NA	17,860 NA	20,500 NA	28,000 NA	27,558 NA	34,200 NA	32,080 NA	27,300 NA	27,980 NA	28,320 NA	29,380 NA
6	6	6	6	6	8	4	6	10	10	10	10	10
16	14	14	14	14	10	18	16	12	14	14	14	14
20	185	185	190	190	300	265	250	250	220	220	220	220
6	6	6	6	6	8	4	6	10	10	10	10	10
2	2	2	2	2	4	2	3	3	3	3	3	3
96.0	96.0	96.0	96.5	96.0	98.0	98.0	96.0	96.0	16.0	96.0	96.0	96.0
52.0	259.0	259.0	272.0	27.0	282.0	291.3	326.0	300.0	279.0	281.0	272.0	272.0
11.0	15.0	15.0	11.0	11.0	16.7	13.0	11.0	11.0	11.0	11.0	11.0	11.0
22.5		19.5	22.5	22.5	11.2	21.5	30.0	20.0	22.5	22.5	22.5	22.5
35.0	30.0	30.0	60.0	57.5	15.0	51.0	55.0	45.0	67.5	67.5	57.5	57.5
30.0	30.0	30.0	30.0	30.0	15.0	30.0	15.0	25.0	30.0	30.0	30.0	30.0
4	4	4	4	4	8	4	6	6	6	6	6	6
0	0	0	0	0	0	0	0	0	0	0	0	0
17.3	16.0	16.0	7.8	14.8	18.0	25.2	19.5	20.0	11.8	16.2	10.5	16.5
11.0	10.5	10.5	7.8	10.0	15.0	15.9	10.5	11.5	10.0	10.8	10.0	10.0
17.5	31.0	31.0	26.0	36.8	35.0	36.0	28.0	34.5	31.0	31.0	37.0	37.0
46.0	47.0	41.0	25.0	33.0	73.0	46.0	34.0	32.5	49.0	47.0	58.0	65.0
14.0	30.0	30.0	19.0	28.5	35.0	47.2	34.2	34.5	16.0	16.0	28.0	28.0
16.0	52.0	42.0	49.0	61.0	50.0	45.0	34.0	46.0	34.0	44.0	46.0	62.0
14.5	49.5	49.5	44.5	41.0	51.0	49.0	42.0	42.0	44.5	44.5	44.5	44.5
14.0	30.0	30.0	19.0	28.5	35.0	47.2	34.2	34.5	16.0	16.0	28.0	28.0
03.0	174.0	174.0	170.0	170.0	206.0	169.3	205.0	208.0	202.0	202.0	205.5	205.5
16.3	92.5	92.5	108.2	101.0	100.1	92.5	118.2	126.2	123.2	117.6	123.4	123.4
33.0	23.0	23.0	21.0	30.6	34.0	30.0	30.6	30.6	30.0	31.0	30.0	30.6
03.0	174.0	174.0	170.0	170.0	206.0	169.3	151.5	154.0	151.0	151.0	154.5	154.5
19.6	18.4	18.4	19.5	19.8	20.0	23.7	20.0	20.5	19.6	19.6	19.5	19.5
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
19.6	18.4	18.4	19.5	19.75	20.0	23.7	20.0	20.5	19.6	19.6	19.5	19.5
16.0	30.0	30.0	19.0	28.5	35.0	26.7	34.2	34.5	16.0	16.0	28.0	28.0
0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
13.6	17.4	17.4	18.5	18.8	18.6	22.7	17.5	19.5	18.6	18.6	18.5	18.5
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
19.6	18.4	18.4	19.5	19.8	26.0	23.7	20.0	20.5	19.6	19.6	19.5	19.5
0	16,820	15,980	17,860	20,500	28,000	27,558	34,200	32,080	27,300	27,980	29,380	29,380
0.59	0.53	0.56	0.64	0.59	0.25	0.50	0.34	0.35	0.33	0.33	0.33	0.34
21.3	22.0	23.2	21.3	18.5	21.4	19.2	14.6	15.6	16.1	15.7	15.5	15.0
0	0	0	0	0	0	0	0	1	0	0	0	0
5.83	5.29	5.29	5.38	5.38	6.40	6.73	6.44	6.44	5.83	5.83	6.14	6.14
0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.90	0.90	0.90

(tinued)

Table

(Concl

No.	Identification	Dimen-sions	1-1/4-Ton Cargo Trucks M880 4X4	M890 4X2	2-1/2-Ton Cargo Tr M35A2 6X6	M35PIP 6X6	Ford LN8000 4x2	Ford LN8000 4x4	Dodg W600 4X4
43	Number of gears in transmission	--	6	3	10	8	5	8	8
44	Gear ratio for transmission (descending order) See Table A2								
45	Transmission efficiency	--	0.96	0.96	0.90	0.90	0.90	0.90	0.9
46	Array containing vehicle speed vs tractive force curve [Speed mph - tractive force (lbs)]. See Table A3								
47	Array containing engine speed vs torque. See Table A4								
48	Array containing torque converter speed ratio vs engine speed. See Table A5								
49	Array containing converter speed ratio vs torque multiplier. See Table A6								
50	Array containing vehicle velocity versus obstacle height of 2.5-g vertical acceleration (speed, mph vs obstacle height, inches) See Table A7								
51	Torque input value	ft/lb	200	200	--	400	400	400	350
52	Array containing the ride dynamic speed versus surface roughness, rms, elevation, in. See Table A8								

* International Harvester

Table A1

(Concluded)

-Ton Cargo Trucks					5-Ton Cargo Trucks							
ord 000 4	Dodge W600 4X4	Dodge D700 4X2	IH1750* 4X2	IH1750* 4X4	TARADCOM HMTT 8X8	German MAN 4X4	M813PIP 6X6	M813A1 6X6	Ford LNT8000 6x4	Ford LNT8000 6x6	IH1850* 6x4	IH1850* 6x6
8	8	4	5	8	5	6	10	10	5	8	5	8
0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.90	9.90	0.90	0.90	0.90	0.90
00	350	350	400	400	400	555	550	--	400	400	400	400

Table A2

Gear Ratios for Study Vehicles

Vehicle	Gear Ratios for Transmission									
1-1/4-Ton Cargo Trucks										
M880, 4X4	5.145	3.135	2.45	2.01	1.45	1.00				
M890, 4X2	2.45	1.45	1.0							
2-1/2-Ton Cargo Trucks										
M35A2, 6X6	9.94	5.50	5.02	3.21	2.78	1.98	1.62	1.56	1.00	0.79
M35 PIP, 6X6	7.09	4.14	3.58	2.75	2.09	1.98	1.39	1.00		
Ford LN8000, 4X2	8.04	3.58	2.09	1.39	1.00					
Ford LN8000, 4X4	7.09	4.14	3.58	2.75	2.09	1.98	1.39	1.00		
Dodge W600, 4X4	6.69	4.37	3.45	2.75	2.25	1.94	1.41	1.00		
Dodge W700, 4X2	3.45	2.25	1.41	1.00						
International Harvester IH1750, 4x2	8.04	3.58	2.09	1.39	1.00					
International Harvester IH1750, 4X4	8.56	5.00	3.58	3.32	2.39	2.09	1.39	1.00		
5-Ton Cargo Trucks										
TARADCOM HMTT, 8X8	8.04	3.58	2.09	1.39	1.00					
German MAN, 4X4	6.528	3.774	2.499	1.693	1.295	1.02				
M813 PIP, 6X6	7.46	4.17	3.96	3.05	2.92	2.27	1.79	1.22	0.93	0.73
M813A1, 6X6	12.29	6.88	6.07	3.62	3.40	2.02	1.79	1.58	1.00	0.78
Ford LNT8000, 6X4	8.04	3.58	2.09	1.39	1.00					
Ford LNT8000, 6X6	7.09	4.14	3.58	2.75	2.09	1.98	1.39	1.00		
International Harvester IH1850, 6X4	8.04	3.58	2.09	1.39	1.00					
International Harvester IH1850, 6X6	8.55	5.00	3.58	3.32	2.39	2.09	1.39	1.00		

Table A3

Tractive Force-Vehicle Speed Relations

M35A2		M813A1	
Vehicle Speed mph	Tractive Force lb	Vehicle Speed mph	Tractive Force lb
0	14,013	0	25,540
2.2	13,899	2.0	25,440
3.2	12,991	2.4	25,190
4.3	11,174	2.6	24,440
4.4	7,824	3.1	21,440
5.4	7,484	3.2	14,590
6.6	6,973	4.0	14,540
8.0	6,325	4.9	13,540
8.1	6,098	5.5	12,750
8.6	5,769	5.6	11,750
8.7	4,633	6.3	10,860
10.6	4,486	6.4	7,860
12.2	4,168	7.6	7,830
13.8	3,736	9.0	7,500
13.9	3,566	11.0	6,730
15.9	3,248	11.1	6,630
16.0	2,850	11.6	6,340
18.4	2,714	11.7	4,690
21.1	2,520	13.7	4,670
23.1	2,351	16.0	4,560
23.2	2,181	19.7	4,060
25.0	2,124	19.8	3,960
28.2	1.840	22.5	3,600
28.3	1,781	22.6	3,500
29.1	1,726	25.4	3,220
29.2	1,385	25.5	2,420
36.0	1,374	28.6	2,410
42.0	1,272	35.4	2,210
45.0	1,102	40.3	2,010
45.1	1,090	40.4	1,860
51.1	1,034	45.4	1,730
53.0	1,011	50.0	1,610
58.0	919		
58.0	0		

Table A4

Engine Speed versus Torque

M880, 4X4		M890, 4X2		M35 PIP, 6X6		Ford LN8000, 4X2	
Engine Speed rpm	Torque ft/lb	Engine Speed rpm	Torque ft/lb	Engine Speed rpm	Torque ft/lb	Engine Speed rpm	Torque ft/lb
600	210	600	210	1200	480	1200	398
1000	226	1000	226	1400	485	1400	400
1400	259	1400	259	1600	478	1600	395
1800	258	1800	258	1000	467	1800	388
2200	259	2200	259	2000	455	2000	380
2600	254	2600	254	2200	440	2200	370
3000	243	3000	243	2400	427	2400	360
3400	223	3400	223	2600	412	2600	345
3800	202	3800	202	2800	376	2800	325
4000	192	4000	192				

(Continued)

Table A4 (Continued)

Ford LN8000, 4X4		Dodge W600, 4X4		Dodge D700, 4X2		IH1750*, 4X2	
Engine Speed rpm	Torque ft/lb	Engine Speed rpm	Torque ft/lb	Engine Speed rpm	Torque ft/lb	Engine Speed rpm	Torque ft/lb
1200	398	1200	398	1200	398	1200	359
1400	400	1400	400	1400	400	1400	404
1600	395	1600	395	1600	395	1600	420
1800	388	1800	388	1800	388	1800	418
2000	380	2000	380	2000	380	2000	405
2200	370	2200	370	2200	384	2200	384
2400	360	2400	360	2400	360	2400	360
2600	345	2600	345	2600	333	2600	333
2800	325	2800	325				

(Continued)

* International Harvester.

Table A4 (Continued)

IH1750*, 4X4		TARADCOM HMTT, 8X8		German MAN, 4X4		M813 PIP, 6X6	
Engine Speed rpm	Torque ft/lb	Engine Speed rpm	Torque ft/lb	Engine Speed rpm	Torque ft/lb	Engine Speed rpm	Torque ft/lb
1200	359	1500	475	1500	560	1000	595
1400	404	1600	490	1800	566	1100	603
1600	420	1700	505	2000	557	1200	610
1800	418	1800	515	2150	545	1300	615
2000	405	1900	520	2300	534	1400	615
2200	384	2000	520	2500	519	1500	615
2400	360	2100	520	2650	507	1600	610
2600	333	2200	515			1700	600
		2300	505			1800	587
		2400	495			1900	570
		2500	480			2000	545
		2600	470			2100	525
		2700	455			2200	487
		2800	440			2300	466

(Continued)

* International Harvester.

Table A4 (Concluded)

Ford LNT8000, 6X4		Ford LNT8000, 6X6		IH1850*, 6X4		IH1850,* 6X6	
Engine Speed rpm	Torque ft/lb	Engine Speed rpm	Torque ft/lb	Engine Speed rpm	Torque ft/lb	Engine Speed rpm	Torque ft/lb
1200	480	1200	480	1600	457	1600	457
1400	485	1700	485	1700	466	1700	466
1600	478	1800	478	1800	470	1800	470
1800	467	1900	467	1900	466	1900	466
2000	455	2000	455	2000	459	2000	459
2200	440	2100	440	2100	451	2100	451
2400	427	2200	427	2200	442	2200	442
2600	412	2300	412	2300	432	2300	432
2800	376	2400	376	2400	420	2400	420
		2500		2500	410	2500	410
		2600		2600	398	2600	398
						2800	370

* International Harvester.

Table A5

Torque Converter Speed Ratio versus Engine Speed

M880, 4X4		M890, 4X2		M35 PIP, 6X6		Ford LN8000, 4X2	
Speed Ratio	Engine Speed rpm	Speed Ratio	Engine Speed rpm	Speed Ratio	Engine Speed rpm	Speed Ratio	Engine Speed rpm
0	2110	0	2110	0	1850	0	1850
0.1	2090	0.1	2090	0.1	1820	0.1	1820
0.2	2080	0.2	2080	0.2	1820	0.2	1820
0.3	2080	0.3	2080	0.3	1850	0.3	1850
0.4	2100	0.4	2100	0.4	1910	0.4	1910
0.5	2160	0.5	2160	0.5	1990	0.5	1990
0.6	2250	0.6	2250	0.6	2090	0.6	2090
0.7	2390	0.7	2390	0.7	2205	0.7	2205
0.8	2570	0.8	2570	0.8	2345	0.8	2345
0.9	2950	0.9	2950	0.9	2600	0.9	2600
0.95	3600	0.95	3600	0.95	3200	0.95	3200
0.97	4000	0.97	4000	0.97	4000	0.97	4000
1.0	5000	1.0	5000	1.00	8000	1.00	8000

(Continued)

Table A5 (Continued)

Ford LN8000, 4X4		Dodge W600, 4X4		Dodge D700, 4X2		IH1750*, 4X2	
Speed Ratio	Engine Speed rpm	Speed Ratio	Engine Speed rpm	Speed Ratio	Engine Speed rpm	Speed Ratio	Engine Speed rpm
0	1850	0	2150	0	2150	0	1850
0.1	1820	0.1	2120	0.1	2120	0.1	1820
0.2	1820	0.2	2100	0.2	2100	0.2	1820
0.3	1850	0.3	2120	0.3	2120	0.3	1850
0.4	1910	0.4	2150	0.4	2150	0.4	1910
0.5	1990	0.5	2180	0.5	2180	0.5	1990
0.5	2090	0.6	2260	0.6	2260	0.6	2090
0.7	2205	0.7	2380	0.7	2380	0.7	2225
0.8	2345	0.8	2440	0.8	2440	0.8	2345
0.9	2600	0.9	2880	0.9	2880	0.9	2600
0.95	3200	0.95	3580	0.95	3580	0.95	3200
0.97	4000	0.97	4300	0.97	4300	0.97	4000
1.00	8000	0.99	6000	0.99	6000	1.00	8000
		1.00	8000	1.00	8000		

(Continued)

* International Harvester.

Table A5 (Continued)

IH1750*, 4X4		TARADCOM HMMT, 8X8		German MAN, 4X4		M813 PIP, 6X6	
Speed Ratio	Engine Speed rpm	Speed Ratio	Engine Speed rpm	Speed Ratio	Engine Speed rpm	Speed Ratio	Engine Speed rpm
0	1850	0	1850	0	1850	0	1460
0.1	1820	0.1	1820	0.22	1820	0.1	1460
0.2	1820	0.2	1820	0.44	1830	0.2	1460
0.3	1850	0.3	1850	0.54	1870	0.4	1470
0.4	1910	0.4	1910	0.62	1930	0.45	1480
0.5	1990	0.42	1930	0.70	2010	0.5	1500
0.6	2090	0.5	1990	0.73	2100	0.545	1510
0.7	2225	0.552	2050			0.6	1560
0.8	2345	0.6	2090			0.65	1605
0.9	2600	0.65	2150			0.7	1660
0.95	3200	0.7	2205			0.75	1730
0.97	4000	0.75	2270			0.8	1800
1.00	8000	0.6	2345			0.85	1910
		0.63	2405			0.885	2020
		0.665	2500			0.925	2345
		0.9	2705			0.950	2775
		0.925	2990				
		0.99	3530				
		0.975	4900				

(Continued)

* International Harvester.

Table A5 (Concluded)

Ford LNT8000, 6X4		Ford LNT8000, 6X6		IH1850, 6X4*		IH1850*, 6X6	
Speed Ratio	Engine Speed rpm	Speed Ratio	Engine Speed rpm	Speed Ratio	Engine Speed rpm	Speed Ratio	Engine Speed rpm
0	1850	0	1850	0	1850	0	1850
0.1	1820	0.1	1820	0.1	1820	0.1	1820
0.2	1820	0.2	1820	0.2	1820	0.2	1820
0.3	1850	0.3	1850	0.3	1850	0.3	1850
0.4	1910	0.4	1910	0.4	1910	0.4	1910
0.5	1990	0.5	1990	0.5	1990	0.5	1990
0.6	2090	0.6	2090	0.6	2090	0.6	2090
0.7	2205	0.7	2205	0.7	2225	0.7	2225
0.8	2345	0.8	2345	0.8	2345	0.8	2345
0.9	2600	0.9	2600	0.9	2600	0.9	2600
0.95	3200	0.95	3200	0.95	3200	0.95	3200
0.97	4000	0.97	4000	0.97	4000	0.97	4000
1.00	8000	1.00	8000	1.00	8000	1.00	8000

* International Harvester.

Table A6

Torque Converter Speed Ratio versus Torque Multiplier

M880, 4X4		M890, 4X2		M35 PIP, 6X6		Ford LN8000, 4X2		Ford LN8000, 4X4	
Speed Ratio	Torque Multiplier	Speed Ratio	Torque Multiplier	Speed Ratio	Torque Multiplier	Speed Ratio	Torque Multiplier	Speed Ratio	Torque Multiplier
0	2.23	0	2.23	0	2.43	0	2.43	0	2.43
0.1	2.1	0.1	2.1	0.1	2.25	0.1	2.25	0.1	2.25
0.2	1.97	0.2	1.97	0.2	2.07	0.2	2.07	0.2	2.07
0.3	1.84	0.3	1.84	0.3	1.88	0.3	1.88	0.3	1.88
0.4	1.69	0.4	1.69	0.4	1.7	0.4	1.7	0.4	1.7
0.5	1.45	0.5	1.45	0.5	1.53	0.5	1.53	0.5	1.53
0.6	1.38	0.6	1.38	0.6	1.37	0.6	1.37	0.6	1.37
0.7	1.24	0.7	1.24	0.7	1.23	0.7	1.23	0.7	1.23
0.8	1.1	0.8	1.1	0.8	1.09	0.8	1.09	0.8	1.09
0.85	1.05	0.85	1.05	0.85	0.97	0.85	0.97	0.85	0.97
0.89	0.97	0.89	0.97			1.00	0.97	1.00	0.97
0.90	0.97	0.9	0.97						
0.97	0.97	0.97	0.97						
1.0	0.97	1.0	0.97						

(Continued)

Table A6

(Continued)

Dodge W600, 4X4		Dodge D700, 4X2		IH1750*, 4X2		IH1750*, 4X4	
Speed Ratio	Torque Multi-plier-	Speed Ratio	Torque Multi-plier	Speed Ratio	Torque Multi-plier	Speed Ratio	Torque Multi-plier
0	2.00	0	2.00	0	2.43	0	2.43
0.1	1.90	0.1	1.90	0.1	2.25	0.1	2.25
0.2	1.81	0.2	1.81	0.2	2.07	0.2	2.07
0.3	1.71	0.3	1.71	0.3	1.88	0.3	1.88
0.4	1.60	0.4	1.60	0.4	1.70	0.4	1.70
0.5	1.48	0.5	1.48	0.5	1.53	0.5	1.53
0.6	1.36	0.6	1.36	0.6	1.37	0.6	1.37
0.7	1.29	0.7	1.29	0.7	1.23	0.7	1.23
0.8	1.11	0.8	1.11	0.8	1.09	0.8	1.09
0.85	1.06	0.85	1.06	0.85	0.97	0.85	0.97
1.0	0.99	1.00	0.99	1.00	0.97	1.00	0.97

(Continued)

* International Harvester.

Table A6

(Continued)

TARADCOM HMTT, 8X8		German MAN, 4X4		M813 PIP, 6X6		Ford LNT8000, 6X4	
Speed Ratio	Torque Multi-plier-	Speed Ratio	Torque Multi-plier	Speed Ratio	Torque Multi-plier	Speed Ratio	Torque Multi-plier
0	2.43	0	2.6	0	2.21	0	2.43
0.1	2.25	0.22	1.93	0.10	2.14	0.1	2.25
0.2	2.07	0.44	1.52	0.20	2.02	0.2	2.07
0.3	1.88	0.54	1.2	0.30	1.88	0.3	1.83
0.4	1.70	0.62	1.17	0.35	1.81	0.4	1.70
0.42	1.67	0.7	1.03	0.40	1.73	0.5	1.53
0.5	1.53	0.73	0.98	0.1	1.72	0.6	1.37
0.552	1.45			0.5	1.65	0.7	1.23
0.8	1.37			0.5	1.57	0.8	1.09
0.85	1.3			0.54	1.54	0.85	0.97
0.7	1.23			0.6	1.42	1.0	0.97
0.75	1.16			0.65	1.34		
0.8	1.09			0.70	1.27		
0.63	1.05			0.75	1.19		
0.665	1.0			0.80	1.12		
0.9	0.99			0.85	1.05		
0.925	0.99			0.88	1.00		
0.95	0.98			0.92	1.00		
0.975	0.98			0.95	0.97		

(Continued)

Table A6

(Concluded)

Ford LNT8000, 6X6		IH1850*, 6X4		IH1850*, 6X6	
Speed Ratio	Torque Multiplier	Speed Ratio	Torque Multiplier	Speed Ratio	Torque Multiplier
0	2.43	0	2.43	0	2.43
0.1	2.25	0.1	2.25	0.1	2.25
0.2	2.07	0.2	2.07	0.2	2.07
0.3	1.88	0.3	1.88	0.3	1.88
0.4	1.70	0.4	1.70	0.4	1.70
0.5	1.53	0.5	1.53	0.5	1.53
0.6	1.37	0.6	1.37	0.6	1.37
0.7	1.23	0.7	1.23	0.7	1.23
0.8	1.09	0.8	1.09	0.8	1.09
0.85	0.97	0.85	0.97	0.85	0.97
1.0	0.97	1.0	0.97	1.0	0.97

* International Harvester.

Table A7

Speed versus Obstacle Height

M880, 4X4		M890, 4X2		M35A2, 6X6		M35 PIP, 6X6	
Obstacle Height in.	Vehicle Speed mph	Obstacle Height in.	Vehicle Speed mph	Obstacle Height in.	Vehicle Speed mph	Obstacle Height in.	Vehicle Speed mph
0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0
1.0	100.0	1.0	100.0	1.0	100.0	1.0	100.0
2.0	100.0	2.0	100.0	2.0	100.0	2.0	100.0
3.0	64.0	3.0	64.0	3.0	100.0	3.0	100.0
4.0	36.0	4.0	36.0	4.0	100.0	4.0	100.0
5.0	23.0	5.0	23.0	5.0	100.0	5.0	100.0
6.0	15.9	6.0	15.9	6.0	100.0	6.0	100.0
7.0	11.7	7.0	11.7	7.0	19.0	7.0	19.0
8.0	9.0	8.0	9.0	8.0	12.0	8.0	12.0
9.0	7.0	9.0	7.0	9.0	9.0	9.0	9.0
10.0	5.7	10.0	5.7	10.0	7.0	10.0	7.0
11.0	4.7	11.0	4.7	11.0	6.1	11.0	6.1
12.0	4.0	12.0	4.0	12.0	5.6	12.0	5.6
13.0	3.4	13.0	3.4	13.0	5.0	13.0	5.0
14.0	2.9	14.0	2.9	14.0	4.5	14.0	4.5
15.0	2.6	15.0	2.6	15.0	4.0	15.0	4.0
16.0	2.2	16.0	2.2	16.0	2.8	16.0	2.8
60.0	2.0	60.0	2.0	60.0	2.0	60.0	2.0

(Continued)

Table A7 (Continued)

Ford LN8000, 4X2		Ford LN8000, 4X4		Dodge W600, 4X4		Ford D700, 4X2	
Obstacle Height in.	Vehicle Speed mph	Obstacle Height in.	Vehicle Speed mph	Obstacle Height in.	Vehicle Speed mph	Obstacle Height in.	Vehicle Speed mph
0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0
1.0	100.0	1.0	100.0	1.0	100.0	1.0	100.0
2.0	100.0	2.0	100.0	2.0	100.0	2.0	100.0
3.0	100.0	3.0	100.0	3.0	100.0	3.0	100.0
4.0	100.0	4.0	100.0	4.0	100.0	4.0	100.0
5.0	4.6	5.0	13.5	5.0	33.0	5.0	34.0
6.0	2.0	6.0	9.4	6.0	18.0	6.0	18.4
7.0	2.0	7.0	7.5	7.0	10.0	7.0	8.2
8.0	2.0	8.0	6.4	8.0	5.4	8.0	2.0
9.0	2.0	9.0	5.2	9.0	5.0	9.0	2.0
10.0	2.0	10.0	4.5	10.0	4.8	10.0	2.0
11.0	2.0	11.0	3.6	11.0	4.2	11.0	2.0
12.0	2.0	12.0	3.1	12.0	4.0	12.0	2.0
13.0	2.0	13.0	2.8	13.0	3.4	13.0	2.0
14.0	2.0	14.0	2.2	14.0	3.0	14.0	2.0
15.0	2.0	15.0	2.0	15.0	2.6	15.0	2.0
16.0	2.0	16.0	2.0	16.0	2.2	16.0	2.0
60.0	2.0	60.0	2.0	60.0	2.0	60.0	2.0

(Continued)

Table A7 (Continued)

IH1750*, 4X2		IH1750*, 4X4		TARADCOM HMTT, 8X8		German MAN, 4X4		M813 PIP, 6X6	
Obstacle Height in.	Vehicle Speed mph	Obstacle Height in.	Vehicle Speed mph	Obstacle Height in.	Vehicle Speed mph	Obstacle Height in.	Vehicle Speed mph	Obstacle Height in.	Vehicle Speed mph
0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0
1.0	100.0	1.0	100.0	1.0	100.0	1.0	100.0	1.0	100.0
2.0	100.0	2.0	100.0	2.0	100.0	2.0	100.0	2.0	100.0
3.0	100.0	3.0	100.0	3.0	100.0	3.0	100.0	3.0	100.0
4.0	100.0	4.0	100.0	4.0	100.0	4.0	100.0	4.0	100.0
5.0	5.5	5.0	24.0	5.0	63.0	5.0	100.0	5.0	100.0
6.0	2.0	6.0	14.8	6.0	42.0	6.0	18.0	6.0	30.2
7.0	2.0	7.0	9.0	7.0	32.2	7.0	14.6	7.0	14.0
8.0	2.0	8.0	5.7	8.0	25.6	8.0	12.2	8.0	5.0
9.0	2.0	9.0	5.0	9.0	21.6	9.0	10.5	9.0	4.8
10.0	2.0	10.0	4.5	10.0	18.2	10.0	9.0	10.0	4.4
11.0	2.0	11.0	3.9	11.0	16.5	11.0	18.0	11.0	4.3
12.0	2.0	12.0	3.0	12.0	15.2	12.0	7.2	12.0	4.2
13.0	2.0	13.0	2.8	13.0	14.0	13.0	6.4	13.0	4.1
14.0	2.0	14.0	2.5	14.0	12.8	14.0	5.8	14.0	4.0
15.0	2.0	15.0	2.2	15.0	11.6	15.0	5.2	15.0	3.9
16.0	2.0	16.0	2.0	16.0	10.0	16.0	4.8	16.0	3.8
60.0	2.0	60.0	2.0	60.0	2.0	60.0	2.0	60.0	2.0

(Continued)

* International Harvester.

Table A7 (Concluded)

M813A1, 6X6		Ford LNT8000, 6X4		Ford LNT8000, 6X6		IH1850*, 6X4		IH1850*, 6X6	
Obstacle Height in.	Vehicle Speed mph	Obstacle Height in.	Vehicle Speed mph	Obstacle Height in.	Vehicle Speed mph	Obstacle Height in.	Vehicle Speed mph	Obstacle Height in.	Vehicle Speed mph
0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0
1.0	100.0	1.0	100.0	1.0	100.0	1.0	100.0	1.0	100.0
2.0	100.0	2.0	100.0	2.0	100.0	2.0	100.0	2.0	100.0
3.0	100.0	3.0	100.0	3.0	100.0	3.0	100.0	3.0	100.0
4.0	100.0	4.0	100.0	4.0	100.0	4.0	100.0	4.0	100.0
5.0	100.0	5.0	100.0	5.0	100.0	5.0	16.0	5.0	10.0
6.0	30.2	6.0	100.0	6.0	100.0	6.0	11.0	6.0	7.0
7.0	14.0	7.0	15.8	7.0	14.0	7.0	6.6	7.0	5.8
8.0	5.0	8.0	6.0	8.0	5.5	8.0	3.5	8.0	5.2
9.0	4.8	9.0	2.8	9.0	4.8	9.0	2.0	9.0	3.5
10.0	4.4	10.0	2.0	10.0	4.6	10.0	2.0	10.0	2.0
11.0	4.3	11.0	2.0	11.0	3.8	11.0	2.0	11.0	2.0
12.0	4.2	12.0	2.0	12.0	2.8	12.0	2.0	12.0	2.0
13.0	4.1	13.0	2.0	13.0	2.0	13.0	2.0	13.0	2.0
14.0	4.0	14.0	2.0	14.0	2.0	14.0	2.0	14.0	2.0
15.0	3.9	15.0	2.0	15.0	2.0	15.0	2.0	15.0	2.0
16.0	3.8	16.0	2.0	16.0	2.0	16.0	2.0	16.0	2.0
60.0	2.0	60.0	2.0	60.0	2.0	60.0	2.0	60.0	2.0

* International Harvester.

Table A8

Ride Dynamics versus Speed

M880, 4X4		M890, 4X2		M35A2, 6X6		M35 PIP, 6X6	
Elevation rms, in.	Speed mph	Elevation rms, in.	Speed mph	Elevation rms, in.	Speed mph	Elevation rms, in.	Speed mph
0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0
0.1	100.0	0.1	100.0	0.1	100.0	0.1	100.0
0.2	100.0	0.2	100.0	0.2	100.0	0.2	100.0
0.3	100.0	0.3	100.0	0.3	100.0	0.3	100.0
0.4	100.0	0.4	100.0	0.4	100.0	0.4	100.0
0.5	100.0	0.5	100.0	0.5	100.0	0.5	100.0
0.6	100.0	0.6	100.0	0.6	25.0	0.6	25.0
0.8	100.0	0.8	100.0	0.8	13.7	0.8	13.7
1.0	9.9	1.0	9.9	1.0	10.5	1.0	10.5
1.2	8.0	1.2	8.0	1.2	10.2	1.2	10.2
1.4	7.3	1.4	7.3	1.4	10.0	1.4	10.0
1.6	6.8	1.6	6.8	1.6	9.8	1.6	9.8
1.8	6.6	1.8	6.6	1.8	9.6	1.8	9.6
2.0	6.5	2.0	6.5	2.0	9.4	2.0	9.4
2.2		2.2	6.0	2.2	9.3	2.2	9.3
		2.4	5.7	2.4	9.2	2.4	9.2
		2.6	5.3	2.6	9.0	2.6	9.0
		2.8	5.0	2.8	9.0	2.8	9.0
		3.0	4.7	3.0	8.8	3.0	8.8
		3.5	3.8	3.5	8.4	3.5	8.4
		4.0	3.0	4.0	8.0	4.0	8.0
		4.5	2.4	4.5	7.5	4.5	7.5
		5.0	2.1	5.0	7.0	5.0	7.0

(Continued)

Table A8 (Continued)

Ford LN8000, 4X2		Ford LN8000, 4X4		Dodge W600, 4X4		Dodge D700, 4X2	
Elevation rms, in.	Speed mph	Elevation rms, in.	Speed mph	Elevation rms, in.	Speed mph	Elevation rms, in.	Speed mph
0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0
0.1	100.0	0.1	100.0	0.1	100.0	0.1	100.0
0.2	100.0	0.2	100.0	0.2	100.0	0.2	100.0
0.3	100.0	0.3	55.0	0.3	100.0	0.3	100.0
0.4	100.0	0.4	30.5	0.4	100.0	0.4	100.0
0.5	100.0	0.5	15.5	0.5	100.0	0.5	100.0
0.6	19.9	0.6	11.3	0.6	24.0	0.6	45.0
0.8	10.2	0.8	8.4	0.8	13.7	0.8	20.9
1.0	9.1	1.0	8.0	1.0	11.4	1.0	13.8
1.2	8.9	1.2	7.7	1.2	11.3	1.2	13.0
1.4	8.8	1.4	7.5	1.4	11.2	1.4	12.8
1.6	8.7	1.6	7.4	1.6	11.2	1.6	12.8
1.8	8.4	1.8	7.3	1.8	11.2	1.8	12.8
2.0	8.2	2.0	7.2	2.0	11.2	2.0	12.8
2.2	8.1	2.2	7.2	2.2	11.1	2.2	12.8
2.4	8.0	2.4	7.1	2.4	11.1	2.4	12.7
2.6	7.8	2.6	7.0	2.6	11.0	2.6	12.7
2.8	7.6	2.8	7.0	2.8	11.0	2.8	12.7
3.0	7.4	3.0	6.9	3.0	11.0	3.0	12.6
3.5	7.0	3.5	6.5	3.5	10.9	3.5	12.5
4.0	6.7	4.0	6.3	4.0	10.8	4.0	12.4
4.5	6.2	4.5	6.0	4.5	10.8	4.5	12.3
5.0	5.8	5.0	5.8	5.0	10.7	5.0	12.2

(Continued)

Table A8 (Continued)

IH1750*, 4X2		IH1750*, 4X4		TARADCOM HMTT, 8X8		German MAN, 4X4		M813 PIP, 6X6	
Elevation rms, in.	Speed mph	Elevation rms, in.	Speed mph	Elevation rms, in.	Speed mph	Elevation rms, in.	Speed mph	Elevation rms, in.	Speed mph
0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0
0.1	100.0	0.1	100.0	0.1	59.2	0.1	100.0	0.1	100.0
0.2	100.0	0.2	100.0	0.2	41.0	0.2	47.3	0.2	100.0
0.3	100.0	0.3	26.0	0.3	31.9	0.3	37.5	0.3	100.0
0.4	100.0	0.4	16.5	0.4	28.1	0.4	32.5	0.4	100.0
0.5	100.0	0.5	12.4	0.5	25.9	0.5	28.7	0.5	19.8
0.6	36.0	0.6	9.8	0.6	24.0	0.6	25.8	0.6	14.1
0.8	12.5	0.8	7.8	0.8	21.0	0.8	20.6	0.8	10.6
1.0	10.0	1.0	7.8	1.0	18.8	1.0	17.2	1.0	9.1
1.2	9.9	1.2	7.7	1.2	16.5	1.2	15.0	1.2	8.4
1.4	9.8	1.4	7.6	1.4	15.5	1.4	12.4	1.4	8.0
1.6	9.6	1.6	7.3	1.6	14.5	1.6	11.5	1.6	8.0
1.8	9.5	1.8	7.2	1.8	13.5	1.8	10.2	1.8	8.0
2.0	9.5	2.0	7.0	2.0	13.0	2.0	8.9	2.0	8.0
2.2	9.3	2.2	6.9	2.2	12.2	2.2	8.2	2.2	7.9
2.4	9.3	2.4	6.8	2.4	11.6	2.4	7.5	2.4	7.9
2.6	9.2	2.6	6.8	2.6	11.1	2.6	7.0	2.6	7.8
2.8	9.1	2.8	6.7	2.8	10.8	2.8	6.6	2.8	7.8
3.0	9.0	3.0	6.6	3.0	10.5	3.0	6.2	3.0	7.7
3.5	8.9	3.5	6.4	3.5	9.6	3.5	5.5	3.5	7.6
4.0	8.8	4.0	6.0	4.0	9.4	4.0	5.1	4.0	7.5
4.5	8.6	4.5	5.8	4.5	9.1	4.5	5.0	4.5	7.3
5.0	8.2	5.0	5.5	5.0	9.0	5.0	5.0	5.0	7.2

(Continued)

* International Harvester.

Table A8 (Concluded)

M813A1, 6X6		Ford LNT8000, 6X4		Ford LNT8000, 6X6		IH1850*, 6X4		IH1850*, 6X6	
Elevation rms, in.	Speed mph	Elevation rms, in.	Speed mph	Elevation rms, in.	Speed mph	Elevation rms, in.	Speed mph	Elevation rms, in.	Speed mph
0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0
0.1	100.0	0.1	100.0	0.1	100.0	0.1	100.0	0.1	100.0
0.2	100.0	0.2	100.0	0.2	100.0	0.2	100.0	0.2	100.0
0.3	100.0	0.3	53.0	0.3	100.0	0.3	100.0	0.3	38.5
0.4	100.0	0.4	43.5	0.4	100.0	0.4	100.0	0.4	24.5
0.5	19.8	0.5	34.5	0.5	57.0	0.5	100.0	0.5	18.3
0.6	14.1	0.6	26.3	0.6	35.0	0.6	30.9	0.6	13.2
0.8	10.6	0.8	13.0	0.8	14.3	0.8	15.4	0.8	9.0
1.0	9.1	1.0	9.7	1.0	10.6	1.0	11.7	1.0	8.0
1.2	8.4	1.2	9.6	1.2	10.2	1.2	10.8	1.2	8.0
1.4	8.0	1.4	9.6	1.4	10.2	1.4	10.5	1.4	8.0
1.6	8.0	1.6	9.6	1.6	10.2	1.6	10.3	1.6	8.0
1.8	8.0	1.8	9.6	1.8	10.1	1.8	10.1	1.8	8.0
2.0	8.0	2.0	9.5	2.0	10.1	2.0	10.1	2.0	8.0
2.2	7.9	2.2	9.5	2.2	10.0	2.2	10.1	2.2	8.0
2.4	7.9	2.4	9.5	2.4	10.0	2.4	10.0	2.4	7.9
2.6	7.8	2.6	9.5	2.6	10.0	2.6	10.0	2.6	7.9
2.8	7.8	2.8	9.5	2.8	9.9	2.8	10.0	2.8	7.8
3.0	7.7	3.0	9.5	3.0	9.9	3.0	10.0	3.0	7.8
3.5	7.6	3.5	9.5	3.5	9.8	3.5	9.9	3.5	7.7
4.0	7.5	4.0	9.5	4.0	9.7	4.0	9.8	4.0	7.7
4.5	7.3	4.5	9.4	4.5	9.6	4.5	9.7	4.5	7.6
5.0	7.2	5.0	9.4	5.0	9.5	5.0	9.6	5.0	7.5

* International Harvester.

Table A9

Terrain Data Required for AMC-74X and SWIMCRIT Water-Crossing Prediction Models

Terrain or Road Factor	Range
Off-Road	
Surface material	
Type, USCS or other	NA
Mass strength, CI or RCI	0 - >280
Slope, percent	0 - >70
Obstacle	
Approach angle, deg	90 - 270
Vertical magnitude, cm	0 - >85
Length, m	0 - >150
Width, cm	0 - >1200
Spacing, m	0 - >60
Spacing, type	NA
Surface roughness, rms elevations	0 - 10
Stem diameter, cm (8 pairs)	0 - >25
Stem spacing, m (8 pairs)	0 - >100
Visibility distance, m	0 - >50
Water depth, m	0 - >5
Water velocity, mps	0 - >3.5
Water width, m	0 - >70
Linear feature top width, m	0 - >70
Left approach angle, deg	90 - 270
Right approach angle, deg	90 - 270
Differential bank height or differential vertical magnitude, m	0 - >4
Low bank height or least vertical magnitude, m	0 - >6
On-Road	
Road type	NA
Surface material	NA
Type, USCS or other	
Surface strength	
Trails, CI or RCI	0 - >280
Other, traction coefficients	0.01 - >0.80
Slope, percent	0 - >70
Surface roughness, rms elevation	0 - >7.6
Curvature, deg	0 - 90
Roadside visibility distance (trails only), m	0 - >50

APPENDIX B: DETAILED MOBILITY PERFORMANCE DATA

1. Appendix B contains the speed profiles, percent NOGO on trails and off-road, and performance data for study vehicles crossing linear features (water-crossing).

2. The speed profile data (see paragraphs 22 and 23, main text) for the study vehicles over primary roads, secondary roads, trails, and off-road terrain for three conditions are given in Tables B1-B18.

Table	Speed Profile for Study Vehicle
B1	M880, 4x4, 1-1/4-ton cargo truck
B2	M890, 4x2, 1-1/4-ton cargo truck
B3	M35A2, 6x6, 2-1/2-ton cargo truck
B4	M35 PIP, 6x6, 2-1/2-ton cargo truck
B5	Ford LN8000, 4x2, 2-1/2-ton cargo truck
B6	Ford LN8000, 4x4, 2-1/2-ton cargo truck
B7	Dodge W600, 4x4, 2-1/2-ton cargo truck
B8	Dodge D700, 4x2, 2-1/2-ton cargo truck
B9	International Harvester IH1750, 4x2, 2-1/2-ton cargo truck
B10	International Harvester IH1750, 4x4, 2-1/2-ton cargo truck
B11	TARADCOM HMTT, 8x8, 5-ton cargo truck
B12	German MAN, 4x4, 5-ton cargo truck
B13	M813 PIP, 6x6, 5-ton cargo truck
B14	M813A1, 6x6, 5-ton cargo truck
B15	Ford LNT8000, 6x4, 5-ton cargo truck
B16	Ford LNT8000, 6x6, 5-ton cargo truck
B17	International Harvester IH1850, 6x4, 5-ton cargo truck
B18	International Harvester IH1850, 6x6, 5-ton cargo truck

3. The percent NOGO on trails and off-road (paragraph 25, main text) is given in Table B19.

4. The performance data for study vehicles crossing linear features (water-crossing) (paragraph 27, main text) is given in Table B20.

Table B1

Speed Profile for M880, 4x4, Cargo Truck

Dry Condition

Primary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	55.0
3X	55.0	55.0	55.0	55.0	55.0
4X	55.0	55.0	55.0	55.0	55.0
5X	55.0	55.0	55.0	55.0	55.0
6X	55.0	55.0	55.0	55.0	54.8
7X	54.2	53.3	52.2	51.1	49.7
8X	48.1	46.5	45.0	43.5	41.8
9X	40.2	38.8	37.5	36.3	34.4
10X	33.0				

Secondary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	54.9	54.5	54.1	53.7	53.4
3X	52.8	51.9	50.2	47.9	45.4
4X	43.2	41.4	39.9	38.6	37.5
5X	36.5	35.6	34.9	34.2	33.6
6X	33.1	32.6	32.1	31.7	31.3
7X	31.0	30.7	30.4	30.1	29.8
8X	29.5	29.2	28.7	28.2	27.7
9X	27.1	26.5	26.0	25.3	24.5
10X	23.7				

Trails

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.0	16.0	16.0	16.0	16.0
1X	15.7	15.4	15.2	15.0	14.9
2X	14.8	14.7	14.7	14.6	14.4
3X	14.0	13.6	13.3	13.1	12.9
4X	12.7	12.5	12.1	11.7	11.4
5X	11.2	11.0	10.8	10.6	10.4
6X	10.3	10.1	10.0	9.9	9.8
7X	9.7	9.6	9.5	9.3	9.1
8X	8.9	8.7	8.5	8.3	8.2
9X	8.0	7.9	7.7	7.6	7.5
10X	7.4				

Off-Road

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	54.8	41.7	37.8	35.5	32.8
1X	30.3	28.6	27.5	26.6	25.5
2X	24.7	24.1	23.4	22.8	22.2
3X	21.8	21.4	21.1	20.7	20.4
4X	20.1	19.7	19.4	19.1	18.8
5X	18.5	18.2	17.9	17.6	17.3
6X	17.0	16.6	16.3	15.9	15.6
7X	15.2	14.9	14.4	14.1	13.7
8X	13.3	12.9	12.4	3.3	1.9
9X	1.4	1.1	0.9	0.8	0.7
10X	0.6				

Wet Condition

Primary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	55.0
3X	55.0	55.0	55.0	55.0	55.0
4X	55.0	55.0	55.0	55.0	55.0
5X	55.0	55.0	55.0	55.0	55.0
6X	55.0	55.0	55.0	54.8	54.4
7X	53.6	52.5	51.1	49.8	48.1
8X	46.4	44.6	43.0	41.4	39.6
9X	37.9	36.4	35.1	33.8	32.2
10X	30.6				

Secondary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	50.7	50.7	50.7	50.7	50.7
1X	50.7	50.7	50.7	50.7	50.7
2X	50.7	50.5	50.2	50.0	49.7
3X	49.2	48.4	46.8	44.6	42.4
4X	40.6	39.1	37.8	36.7	35.8
5X	35.0	34.2	33.6	33.0	32.5
6X	32.0	31.6	31.2	30.8	30.5
7X	30.2	29.9	29.6	29.4	29.1
8X	28.7	28.3	27.7	27.2	26.6
9X	26.0	25.4	24.9	24.2	23.3
10X	22.5				

Trails

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.0	16.0	16.0	16.0	16.0
1X	15.7	15.4	15.2	15.0	14.9
2X	14.8	14.7	14.7	14.6	14.4
3X	14.0	13.6	13.3	13.1	12.9
4X	12.7	12.5	12.1	11.7	11.4
5X	11.2	11.0	10.8	10.6	10.4
6X	10.3	10.1	10.0	9.9	9.8
7X	9.7	9.6	9.5	9.3	9.1
8X	8.9	8.7	8.5	8.3	8.2
9X	8.0	7.9	7.7	7.6	7.5
10X	7.4				

Off-Road

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	44.9	32.8	28.2	25.5	23.8
1X	22.5	21.4	20.4	19.7	19.1
2X	18.6	18.2	17.8	17.6	17.3
3X	17.1	16.9	16.7	16.5	16.3
4X	16.1	15.9	15.8	15.6	15.4
5X	15.2	15.0	14.8	14.6	14.4
6X	14.2	14.0	13.7	13.5	13.3
7X	13.0	12.8	12.5	12.2	12.0
8X	11.7	11.4	9.8	3.0	1.8
9X	1.3	1.0	0.9	0.7	0.7
10X	0.6				

Snow Condition

Primary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	36.9	36.9	36.9	36.9	36.9
1X	36.9	36.9	36.9	36.9	36.9
2X	36.9	36.9	36.9	36.9	36.9
3X	36.9	36.9	36.8	36.8	36.8
4X	36.8	36.8	36.7	36.7	36.7
5X	36.6	36.5	36.4	36.4	36.3
6X	36.2	36.1	36.0	36.0	35.9
7X	35.8	35.6	35.2	34.8	34.1
8X	33.4	32.6	31.9	31.1	30.2
9X	29.3	28.5	27.7	27.0	25.9
10X	24.9				

Secondary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	36.9	36.8	36.7	36.7	36.7
1X	36.6	36.5	36.4	36.1	35.9
2X	35.6	35.2	35.0	34.6	34.4
3X	34.1	33.5	32.7	31.9	31.2
4X	30.6	30.1	29.6	29.2	28.9
5X	28.5	28.3	28.0	27.7	27.5
6X	27.3	27.1	27.0	26.8	26.6
7X	26.4	26.2	25.9	25.5	25.2
8X	24.8	24.3	23.7	23.2	22.6
9X	21.9	21.4	20.8	20.2	19.3
10X	18.6				

Trails

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.0	16.0	16.0	16.0	16.0
1X	15.7	15.4	15.2	15.0	14.9
2X	14.8	14.7	14.7	14.6	14.4
3X	14.0	13.6	13.3	13.1	12.9
4X	12.7	12.5	12.1	11.7	11.4
5X	11.2	11.0	10.8	10.6	10.4
6X	10.3	10.1	10.0	9.9	9.8
7X	9.7	9.6	9.5	9.3	9.1
8X	8.9	8.7	8.5	8.3	8.1
9X	8.0	7.9	7.7	7.6	7.5
10X	7.4				

Off-Road

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	30.1	27.8	26.1	25.0	24.3
1X	23.6	22.7	22.1	21.3	20.7
2X	20.1	19.6	19.2	18.7	18.3
3X	18.0	17.6	17.3	17.0	16.7
4X	16.5	16.3	16.1	15.9	15.7
5X	15.5	15.3	15.1	14.8	14.6
6X	14.4	14.2	13.9	13.7	13.4
7X	13.2	12.9	12.6	12.4	12.0
8X	11.7	11.4	11.0	3.2	1.9
9X	1.3	1.1	0.9	0.8	0.7
10X	0.6				

Table B2

Speed Profile for M890, 4x2, Cargo Truck

Primary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	55.0
3X	55.0	55.0	55.0	55.0	55.0
4X	55.0	55.0	55.0	55.0	55.0
5X	55.0	55.0	55.0	55.0	55.0
6X	55.0	55.0	55.0	55.0	54.8
7X	54.2	53.3	52.2	51.1	49.7
8X	48.1	46.5	45.0	43.5	41.8
9X	40.2	38.8	37.5	36.3	34.6
10X	33.0				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	55.0
3X	55.0	55.0	55.0	55.0	55.0
4X	55.0	55.0	55.0	55.0	55.0
5X	55.0	55.0	55.0	55.0	55.0
6X	55.0	55.0	55.0	54.8	54.4
7X	53.6	52.5	51.1	49.8	48.1
8X	46.4	44.6	43.0	41.4	39.6
9X	37.9	36.4	35.1	33.8	32.2
10X	30.6				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	37.9	37.9	37.6	37.4	37.3
1X	37.2	37.0	36.9	36.8	36.8
2X	36.7	36.7	36.6	36.5	36.5
3X	36.4	36.4	36.4	36.3	36.3
4X	36.3	36.3	36.2	36.2	36.2
5X	36.2	36.1	36.0	35.9	35.8
6X	35.7	35.6	35.6	35.5	35.4
7X	35.3	35.1	34.7	34.3	33.7
8X	33.0	32.3	31.6	30.8	29.9
9X	29.0	28.2	27.5	26.8	25.8
10X	24.7				

Secondary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	54.8	54.5	54.2	53.8
3X	53.2	52.3	50.6	48.2	45.7
4X	43.5	41.6	40.1	38.7	37.6
5X	36.6	35.8	35.0	34.3	33.7
6X	33.2	32.7	32.2	31.8	31.4
7X	31.1	30.7	30.4	30.2	29.9
8X	29.6	29.2	28.7	28.3	27.7
9X	27.1	26.6	26.0	25.4	24.5
10X	23.7				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	50.7	50.7	50.7	50.7	50.7
1X	50.7	50.7	50.7	50.7	50.7
2X	50.7	50.6	50.5	50.3	50.0
3X	49.5	48.7	47.8	44.8	42.6
4X	40.8	39.2	38.0	36.9	35.9
5X	35.1	34.3	33.7	33.1	32.6
6X	32.1	31.6	31.3	30.9	30.6
7X	30.2	30.0	29.7	29.4	29.1
8X	28.7	28.3	27.8	27.3	26.7
9X	26.0	25.4	24.9	24.2	23.3
10X	22.5				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	36.4	36.4	36.3	36.3	36.3
1X	36.3	36.3	36.2	36.1	35.9
2X	35.6	35.2	34.8	34.5	34.2
3X	33.9	33.2	32.4	31.6	31.0
4X	30.4	29.9	29.5	29.1	28.7
5X	28.4	28.1	27.9	27.6	27.4
6X	27.2	27.0	26.9	26.7	26.5
7X	26.3	26.1	25.8	25.4	25.1
8X	24.7	24.2	23.6	23.1	22.5
9X	21.9	21.3	20.8	20.1	19.3
10X	18.6				

Trails

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.0	16.0	16.0	16.0	16.0
1X	15.7	15.4	15.2	15.0	14.9
2X	14.8	14.7	14.7	14.6	14.4
3X	14.0	13.6	13.3	13.1	12.9
4X	12.7	12.5	12.1	11.7	11.4
5X	11.2	11.0	10.8	10.6	10.4
6X	10.3	10.1	10.0	9.9	9.8
7X	9.7	9.6	9.5	9.3	9.1
8X	8.9	8.7	8.5	8.3	8.2
9X	8.0	7.9	7.7	7.6	7.5
10X	7.4				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.0	16.0	16.0	16.0	16.0
1X	15.7	15.4	15.2	15.0	14.9
2X	14.8	14.7	14.7	14.6	14.3
3X	13.9	13.6	13.3	13.1	12.9
4X	12.7	12.4	12.0	11.7	11.4
5X	11.2	10.9	10.7	10.6	10.4
6X	10.3	10.1	10.0	9.9	9.8
7X	9.7	9.6	9.5	9.2	9.0
8X	8.8	8.6	8.4	8.3	8.1
9X	8.0	7.8	7.7	7.6	7.5
10X	3.5				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.0	16.0	16.0	16.0	16.0
1X	15.7	15.4	15.2	15.0	14.9
2X	14.8	14.7	14.7	14.6	14.4
3X	14.0	13.6	13.3	13.1	12.9
4X	12.7	12.5	12.1	11.7	11.4
5X	11.2	11.0	10.8	10.6	10.4
6X	10.3	10.1	10.0	9.9	9.8
7X	9.7	9.6	9.5	9.3	9.1
8X	8.9	8.7	8.5	8.3	8.1
9X	8.0	7.9	7.7	7.6	7.5
10X	7.4				

Off-Road

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	54.8	41.7	37.9	35.4	32.7
1X	30.2	28.6	27.5	26.4	25.4
2X	24.6	24.0	23.4	22.7	22.1
3X	21.7	21.3	21.0	20.6	20.3
4X	20.0	19.7	19.3	19.0	18.7
5X	18.4	18.1	17.8	17.5	17.2
6X	16.8	16.5	16.1	15.8	15.5
7X	15.1	14.7	14.3	13.9	13.6
8X	13.2	12.8	12.3	3.3	1.9
9X	1.4	1.1	0.9	0.8	0.7
10X	0.6				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	44.3	33.2	28.6	25.9	24.2
1X	22.9	21.8	20.9	20.1	19.4
2X	18.9	18.5	18.2	18.0	17.7
3X	17.5	17.3	17.1	16.9	16.7
4X	16.5	16.3	16.1	15.9	15.7
5X	15.5	15.3	15.1	14.9	14.6
6X	14.4	14.2	13.9	13.7	13.5
7X	13.2	12.9	12.6	12.4	12.1
8X	11.8	11.4	6.8	2.5	1.6
9X	1.2	1.0	0.8	0.7	0.6
10X	0.6				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	31.0	27.6	25.9	24.8	24.1
1X	23.4	22.6	21.9	21.2	20.6
2X	20.0	19.5	19.1	18.6	18.2
3X	17.9	17.5	17.2	16.9	16.7
4X	16.5	16.3	16.0	15.8	15.6
5X	15.4	15.2	15.0	14.8	14.5
6X	14.3	14.1	13.9	13.6	13.4
7X	13.1	12.8	12.6	12.3	12.0
8X	11.7	11.4	11.0	3.2	1.9
9X	1.3	1.1	0.9	0.8	0.7
10X	0.6				

AD-A060 324 ARMY ENGINEER WATERWAYS EXPERIMENT STATION VICKSBURG MISS F/G 13/6
MOBILITY PERFORMANCE OF SELECTED 1-1/4- TO 5-TON CARGO TRUCKS I--ETC(U)
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Table B3

Speed Profile for M35A2, 6x6, Cargo Truck

Dry Condition

Primary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	55.0
3X	55.0	55.0	55.0	55.0	55.0
4X	55.0	54.7	54.1	53.4	52.9
5X	52.4	51.9	51.4	50.9	50.5
6X	50.1	49.7	49.4	49.1	48.8
7X	48.4	47.8	47.8	46.2	45.2
8X	44.0	42.7	41.5	40.3	38.9
9X	37.6	36.4	35.3	34.2	32.8
10X	31.3				

Secondary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	54.8	54.7	54.6	54.6
1X	54.2	53.2	52.3	51.0	49.9
2X	48.9	47.8	46.7	45.8	45.0
3X	44.1	43.0	41.7	40.3	39.0
4X	38.0	37.0	36.3	35.6	34.9
5X	34.4	33.9	33.5	33.1	32.7
6X	32.4	32.1	31.8	31.5	31.2
7X	30.9	30.7	30.4	30.1	29.7
8X	29.4	29.0	28.5	28.0	27.5
9X	26.9	26.4	25.9	25.2	24.4
10X	23.6				

Trails

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.7	13.7	13.7	13.7	13.7
1X	13.4	12.8	12.4	12.2	12.0
2X	11.8	11.7	11.6	11.5	11.4
3X	11.3	11.2	11.1	11.0	11.0
4X	10.9	10.8	10.8	10.7	10.6
5X	10.6	10.5	10.5	10.4	10.4
6X	10.4	10.3	10.3	10.3	10.2
7X	10.2	10.2	10.2	10.1	10.1
8X	10.1	10.0	10.0	10.0	10.0
9X	9.9	9.9	9.9	9.8	9.6
10X	9.4				

Off-Road

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	50.0	39.7	37.0	35.2	32.3
1X	30.5	29.4	28.1	26.9	25.8
2X	24.9	24.2	23.6	23.0	22.5
3X	22.1	21.8	21.4	21.0	20.5
4X	20.0	19.6	19.2	18.9	18.4
5X	18.0	17.6	17.2	16.9	16.5
6X	16.2	15.9	15.6	15.3	15.0
7X	14.8	14.5	14.3	14.1	13.9
8X	13.6	13.4	13.1	12.9	12.6
9X	12.2	4.8	2.4	1.6	1.2
10X	1.0				

Wet Condition

Primary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	55.0
3X	55.0	55.0	55.0	55.0	55.0
4X	54.7	54.4	53.8	53.2	52.6
5X	52.1	51.6	51.1	50.7	50.3
6X	49.9	49.6	49.2	48.9	48.5
7X	48.0	47.2	46.2	45.2	44.0
8X	42.6	41.2	39.8	38.5	37.0
9X	35.6	34.4	33.2	32.1	30.6
10X	29.2				

Secondary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	50.7	50.7	50.7	50.7	50.7
1X	50.4	49.8	49.1	47.9	46.9
2X	46.1	45.1	44.2	43.4	42.7
3X	41.9	40.8	39.6	38.4	37.3
4X	36.4	35.6	35.0	34.4	33.8
5X	33.4	32.9	32.6	32.2	31.9
6X	31.6	31.3	31.1	30.8	30.5
7X	30.3	29.9	29.6	29.3	28.9
8X	28.6	28.1	27.6	27.1	26.5
9X	25.9	25.3	24.8	24.1	23.2
10X	22.5				

Trails

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.7	13.7	13.7	13.7	13.7
1X	13.4	12.8	12.4	12.2	11.9
2X	11.8	11.7	11.6	11.5	11.4
3X	11.3	11.2	11.1	11.0	11.0
4X	10.9	10.8	10.8	10.7	10.6
5X	10.6	10.5	10.5	10.4	10.4
6X	10.4	10.3	10.3	10.3	10.2
7X	10.2	10.2	10.2	10.1	10.1
8X	10.1	10.0	10.0	10.0	10.0
9X	9.9	9.9	9.9	9.8	9.6
10X	9.4				

Off-Road

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	31.5	26.7	24.6	22.8	21.6
1X	20.4	19.6	18.8	18.1	17.6
2X	17.2	16.9	16.6	16.4	16.2
3X	15.9	15.7	15.5	15.4	15.2
4X	15.0	14.8	14.6	14.4	14.2
5X	14.0	13.8	13.6	13.5	13.3
6X	13.2	13.0	12.8	12.7	12.5
7X	12.4	12.3	12.1	12.0	11.8
8X	11.6	11.5	11.3	11.1	10.9
9X	10.6	4.5	2.3	1.6	1.2
10X	1.0				

Snow Condition

Primary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.9	16.9	16.9	16.7	16.6
1X	16.6	16.5	16.5	16.4	16.4
2X	16.3	16.3	16.3	16.2	16.2
3X	16.2	16.2	16.2	16.1	16.1
4X	16.1	16.1	16.1	16.1	16.1
5X	16.1	16.1	16.0	16.0	16.0
6X	16.0	16.0	16.0	16.0	16.0
7X	16.0	16.0	16.0	15.9	15.9
8X	15.9	15.9	15.9	15.9	15.8
9X	15.7	15.6	15.6	15.4	15.2
10X	15.0				

Secondary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.3	16.3	16.3	16.3	16.3
1X	16.3	16.2	16.2	16.2	16.2
2X	16.2	16.1	16.1	16.1	16.1
3X	16.0	16.0	16.0	16.0	16.0
4X	15.9	15.9	15.9	15.9	15.9
5X	15.9	15.8	15.8	15.8	15.7
6X	15.7	15.7	15.6	15.5	15.5
7X	15.5	15.4	15.4	15.3	15.3
8X	15.2	15.1	15.0	14.9	14.7
9X	14.6	14.4	14.3	14.1	13.7
10X	13.4				

Trails

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.7	13.4	13.3	13.0	12.4
1X	12.0	11.8	11.6	11.4	11.3
2X	11.2	11.0	10.9	10.9	10.8
3X	10.7	10.6	10.6	10.5	10.4
4X	10.4	10.3	10.3	10.2	10.2
5X	10.2	10.1	10.1	10.1	10.0
6X	10.0	10.0	9.9	9.9	9.9
7X	9.8	9.8	9.8	9.8	9.7
8X	9.7	9.7	9.7	9.6	9.6
9X	9.6	9.5	9.5	9.4	9.2
10X	9.1				

Off-Road

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	14.8	14.7	14.3	14.1	13.8
1X	13.6	13.4	13.2	13.1	12.9
2X	12.8	12.6	12.5	12.3	12.2
3X	12.1	11.9	11.8	11.7	11.6
4X	11.6	11.5	11.4	11.3	11.2
5X	11.2	11.1	11.0	10.9	10.8
6X	10.7	10.7	10.6	10.5	10.4
7X	10.3	10.2	10.1	10.0	9.9
8X	9.8	9.7	9.6	9.5	9.3
9X	9.1	4.2	2.3	1.6	1.2
10X	1.0				

Table B4

Speed Profile for M35 PIP, 6x6, Cargo Truck

Dry Condition

Primary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	55.0
3X	54.9	54.9	54.9	54.8	54.8
4X	54.7	54.3	53.9	53.5	53.2
5X	52.7	52.1	51.5	50.9	50.4
6X	49.9	49.4	49.0	48.6	48.3
7X	47.9	47.3	46.5	45.7	44.7
8X	43.5	42.3	41.2	40.0	38.6
9X	37.3	36.1	35.1	34.0	32.6
10X	31.2				

Secondary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	54.2	53.3	53.1	52.9
1X	52.4	51.5	50.8	49.9	49.0
2X	47.9	46.6	45.3	44.2	43.2
3X	42.4	41.4	40.1	38.8	37.7
4X	36.8	36.0	35.3	34.6	34.1
5X	33.6	33.2	32.8	32.4	32.1
6X	31.8	31.5	31.2	30.9	30.6
7X	30.3	30.0	29.7	29.4	29.1
8X	28.8	28.4	27.9	27.5	27.0
9X	26.4	25.9	25.4	24.8	24.0
10X	23.3				

Trails

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.7	13.7	13.7	13.7	13.7
1X	13.4	12.8	12.4	12.2	12.0
2X	11.8	11.7	11.6	11.5	11.4
3X	11.3	11.2	11.1	11.0	11.0
4X	10.9	10.8	10.8	10.7	10.6
5X	10.6	10.5	10.5	10.4	10.4
6X	10.4	10.3	10.3	10.3	10.2
7X	10.2	10.2	10.2	10.1	10.1
8X	10.1	10.0	10.0	10.0	10.0
9X	9.9	9.9	9.9	9.8	9.6
10X	9.4				

Off-Road

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	47.4	38.8	35.6	33.9	31.4
1X	29.8	28.7	27.6	26.4	25.3
2X	24.6	23.9	23.3	22.8	22.3
3X	22.8	21.6	21.3	20.9	20.4
4X	19.9	19.5	19.1	18.8	18.3
5X	18.0	17.5	17.1	16.8	16.4
6X	16.1	15.8	15.5	15.2	15.0
7X	14.7	14.5	14.3	14.0	13.8
8X	13.6	13.3	13.1	12.8	12.5
9X	12.2	7.1	2.8	1.8	1.3
10X	1.1				

Wet Condition

Primary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	54.9
3X	54.9	54.9	54.9	54.8	54.8
4X	54.4	54.1	53.7	53.3	52.9
5X	52.4	51.8	51.2	50.6	50.1
6X	49.6	49.2	48.8	48.4	48.0
7X	47.4	46.7	45.7	44.8	43.5
8X	42.2	40.8	39.5	38.2	36.7
9X	35.4	34.1	33.0	31.9	30.5
10X	29.1				

Secondary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	50.7	50.4	50.1	50.0	50.0
1X	49.6	48.8	48.1	47.3	46.5
2X	45.5	44.4	43.2	42.2	41.3
3X	40.5	39.5	38.3	37.2	36.3
4X	35.5	34.8	34.2	33.6	33.2
5X	32.7	32.3	32.0	31.7	31.4
6X	31.1	30.8	30.5	30.2	29.9
7X	29.6	29.3	29.1	28.8	28.4
8X	28.1	27.6	27.1	26.6	26.1
9X	25.5	24.9	24.4	23.8	22.9
10X	22.2				

Trails

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.7	13.7	13.7	13.7	13.7
1X	13.4	12.8	12.4	12.2	11.9
2X	11.8	11.7	11.5	11.5	11.4
3X	11.3	11.2	11.1	11.0	11.0
4X	10.9	10.8	10.8	10.7	10.6
5X	10.6	10.5	10.5	10.4	10.4
6X	10.4	10.3	10.3	10.3	10.2
7X	10.2	10.2	10.1	10.1	10.1
8X	10.1	10.0	10.0	10.0	9.9
9X	9.9	9.9	9.9	9.8	9.6
10X	9.4				

Off-Road

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	30.7	25.9	23.9	22.2	20.9
1X	19.8	19.0	18.3	17.6	17.1
2X	16.7	16.4	16.1	15.9	15.7
3X	15.5	15.3	15.2	15.0	14.8
4X	14.6	14.5	14.3	14.1	13.9
5X	13.7	13.5	13.4	13.2	13.1
6X	12.9	12.8	12.6	12.5	12.3
7X	12.2	12.1	11.9	11.8	11.6
8X	11.4	11.3	11.1	10.9	10.7
9X	10.4	6.4	2.7	1.8	1.3
10X	1.1				

Snow Condition

Primary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	39.0	39.0	39.0	39.0	39.0
1X	39.0	39.0	38.8	38.7	38.6
2X	38.5	38.4	38.3	38.3	38.2
3X	38.2	38.1	38.1	38.1	38.0
4X	38.0	37.8	37.6	37.5	37.3
5X	37.1	36.9	36.6	36.3	36.0
6X	35.7	35.5	35.3	35.0	34.8
7X	34.7	34.4	34.0	33.6	33.1
8X	32.4	31.7	31.0	30.3	29.4
9X	28.6	27.8	27.1	26.4	25.4
10X	24.5				

Secondary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	37.6	37.4	37.3	37.2	37.2
1X	37.0	36.5	36.0	35.5	35.0
2X	34.4	33.7	33.2	32.7	32.2
3X	31.7	31.2	30.7	30.3	30.0
4X	29.7	29.4	29.2	29.0	28.8
5X	28.5	28.3	28.0	27.8	27.6
6X	27.4	27.2	26.9	26.7	26.5
7X	26.2	25.9	25.6	25.2	24.9
8X	24.5	24.0	23.4	22.9	22.3
9X	21.7	21.2	20.6	20.0	19.2
10X	18.5				

Trails

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.7	13.7	13.7	13.7	13.7
1X	13.4	12.8	12.4	12.1	11.9
2X	11.8	11.6	11.5	11.4	11.4
3X	11.3	11.2	11.1	11.0	11.0
4X	10.9	10.8	10.8	10.7	10.6
5X	10.6	10.5	10.5	10.4	10.4
6X	10.4	10.3	10.3	10.3	10.2
7X	10.2	10.2	10.1	10.1	10.1
8X	10.0	10.0	10.0	10.0	9.9
9X	9.9	9.9	9.9	9.8	9.6
10X	9.4				

Off-Road

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	30.6	26.8	24.9	24.0	23.4
1X	22.7	22.8	21.3	20.6	20.0
2X	19.4	18.9	18.3	17.9	17.5
3X	17.1	16.9	16.6	16.4	16.1
4X	15.9	15.6	15.4	15.2	15.0
5X	14.8	14.6	14.3	14.1	13.9
6X	13.7	13.6	13.4	13.2	13.1
7X	12.9	12.7	12.6	12.4	12.3
8X	12.1	11.9	11.7	11.5	11.3
9X	10.9	6.6	2.8	1.8	1.3
10X	1.1				

Table B5

Speed Profile for Ford LN8000, 4x2, Cargo Truck

Primary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	55.0
3X	54.9	54.9	54.8	54.8	54.7
4X	54.6	54.2	53.5	52.8	52.3
5X	51.7	51.1	50.6	49.8	49.0
6X	48.4	47.8	47.2	46.7	46.3
7X	45.8	45.3	44.6	43.8	42.9
8X	41.9	40.8	39.7	38.6	37.4
9X	36.2	35.1	34.1	33.1	31.8
10X	30.5				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	54.9
3X	54.9	54.8	54.8	54.7	54.6
4X	54.3	53.9	53.2	52.6	52.0
5X	51.5	50.9	50.1	49.3	48.6
6X	48.0	47.4	46.9	46.4	45.9
7X	45.4	44.7	43.8	43.0	41.9
8X	40.7	39.4	38.2	37.0	35.7
9X	34.4	33.2	32.2	31.2	29.8
10X	28.5				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.9	16.9	16.9	15.6	14.8
1X	14.3	14.0	13.4	12.7	12.2
2X	11.8	11.5	11.3	11.1	10.9
3X	10.8	10.7	10.6	10.5	10.4
4X	10.3	10.3	10.2	10.2	10.1
5X	4.7	1.7	1.1	0.8	0.6
6X	0.5	0.5	0.4	0.4	0.4
7X	0.3	0.3	0.3	0.3	0.3
8X	0.3	0.2	0.2	0.2	0.2
9X	0.2	0.2	0.2	0.2	0.2
10X	0.2				

Secondary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	53.1	51.1	50.5	50.2
1X	49.9	49.1	48.0	47.1	46.3
2X	45.2	43.8	42.5	41.3	40.3
3X	39.4	38.6	37.4	36.1	34.8
4X	33.6	32.5	31.6	30.8	30.1
5X	29.5	29.0	28.5	28.1	27.7
6X	27.3	27.0	26.7	26.4	26.1
7X	25.9	25.6	25.4	25.1	24.9
8X	24.7	24.4	24.1	23.9	23.5
9X	23.1	22.8	22.5	22.0	21.4
10X	20.9				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	50.7	49.5	48.2	47.8	47.6
1X	47.4	46.6	45.6	44.8	44.1
2X	43.1	41.8	40.6	39.5	38.6
3X	37.8	36.9	35.7	34.5	33.3
4X	32.2	31.3	30.5	29.8	29.2
5X	28.6	28.2	27.7	27.4	27.0
6X	26.7	26.4	26.1	25.9	25.6
7X	25.4	25.1	24.9	24.7	24.4
8X	24.2	23.9	23.6	23.3	22.9
9X	22.5	22.1	21.7	21.3	20.7
10X	20.1				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.1	12.5	11.0	10.6	10.4
1X	10.1	10.0	9.3	0.7	0.4
2X	0.3	0.3	0.2	0.2	0.2
3X	0.2	0.2	0.2	0.2	0.2
4X	0.2	0.1	0.1	0.1	0.1
5X	0.1	0.1	0.1	0.1	0.1
6X	0.1	0.1	0.1	0.1	0.1
7X	0.1	0.1	0.1	0.1	0.1
8X	0.1	0.1	0.1	0.1	0.1
9X	0.1	0.1	0.1	0.1	0.1
10X	0.1				

Trails

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	10.2	10.2	10.2	10.2	10.2
1X	10.1	9.9	9.8	9.7	9.6
2X	9.6	9.5	9.5	9.5	9.4
3X	9.4	9.4	9.3	9.3	9.3
4X	9.2	9.2	9.2	9.1	9.1
5X	9.0	9.0	9.0	8.9	8.9
6X	8.9	8.9	8.8	8.8	8.8
7X	8.8	8.8	8.7	8.7	8.7
8X	8.6	8.6	8.6	8.6	8.5
9X	8.5	8.5	8.5	8.4	8.3
10X	8.2				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	10.2	10.2	10.2	10.2	10.2
1X	10.1	9.9	9.8	9.7	9.6
2X	9.6	9.5	9.5	9.5	9.4
3X	9.4	9.3	9.3	9.3	9.3
4X	9.2	9.2	9.1	9.1	9.0
5X	9.0	9.0	8.9	8.9	8.9
6X	8.9	8.8	8.8	8.8	8.8
7X	8.8	8.7	8.7	8.7	8.6
8X	8.6	8.6	8.6	8.5	8.5
9X	8.5	8.5	8.3	8.2	8.1
10X	3.5				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	7.0	0.2	0.1	0.1	0.1
1X	0.1	0.1	0.1	0.1	0.1
2X	0.1	0.1	0.1	0.1	0.1
3X	0.1	0.1	0.1	0.1	0.1
4X	0.1	0.1	0.1	0.1	0.1
5X	0.1	0.1	0.1	0.1	0.1
6X	0.1	0.1	0.1	0.1	0.1
7X	0.1	0.1	0.1	0.1	0.1
8X	0.1	0.1	0.1	0.1	0.1
9X	0.1	0.1	0.1	0.1	0.1
10X	0.1				

Off-Road

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	43.3	33.6	30.6	28.1	25.6
1X	24.2	23.1	21.7	20.6	19.7
2X	19.1	18.3	17.5	16.7	15.9
3X	15.2	14.6	14.1	13.6	13.2
4X	12.8	12.4	12.0	11.6	11.3
5X	10.9	10.5	10.1	9.7	9.4
6X	9.1	8.8	8.6	8.3	8.1
7X	7.9	7.7	7.5	7.2	7.0
8X	6.8	6.6	6.3	3.5	2.0
9X	1.4	1.1	0.9	0.8	0.7
10X	0.6				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	25.1	21.3	19.7	18.3	17.3
1X	16.5	15.7	15.0	14.4	13.8
2X	13.4	12.9	12.6	12.2	11.9
3X	11.7	11.4	11.2	11.0	10.7
4X	10.5	10.2	10.0	9.7	9.4
5X	9.0	8.7	8.4	8.1	7.9
6X	7.7	7.5	7.3	7.1	6.9
7X	6.8	6.6	6.4	6.2	6.0
8X	5.8	3.8	2.0	1.4	1.1
9X	0.9	0.8	0.7	0.6	0.5
10X	0.5				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	0.1	0.1	0.1	0.1	0.1
1X	0.1	0.1	0.1	0.1	0.1
2X	0.1	0.1	0.1	0.1	0.1
3X	0.1	0.1	0.1	0.1	0.1
4X	0.1	0.4	0.1	0.1	0.1
5X	0.1	0.1	0.1	0.1	0.1
6X	0.1	0.1	0.1	0.1	0.1
7X	0.1	0.1	0.1	0.1	0.1
8X	0.1	0.1	0.1	0.1	0.1
9X	0.1	0.1	0.1	0.1	0.1
10X	0.1				

Table B6

Speed Profile for Ford LN8000, 4x4, Cargo Truck

Primary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	54.9
3X	54.8	54.7	54.7	54.6	54.5
4X	54.3	53.9	53.2	52.5	51.9
5X	51.3	50.7	50.1	49.3	48.6
6X	47.9	47.3	46.7	46.2	45.8
7X	45.3	44.8	44.1	43.4	42.5
8X	41.5	40.4	39.4	38.3	37.1
9X	35.9	34.9	33.9	32.9	31.6
10X	30.3				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	54.9
3X	54.8	54.7	54.6	54.5	54.4
4X	54.1	53.6	52.9	52.2	51.6
5X	51.1	50.4	49.7	48.9	48.2
6X	47.5	46.9	46.4	45.9	45.4
7X	44.9	44.2	43.4	42.5	41.5
8X	40.3	39.1	37.9	36.7	35.4
9X	34.2	33.0	32.0	31.0	29.6
10X	28.3				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.9	16.9	16.9	15.6	14.8
1X	14.3	14.0	13.4	12.7	12.2
2X	11.8	11.6	11.3	11.1	11.0
3X	10.9	10.7	10.6	10.6	10.5
4X	10.4	10.3	10.3	10.2	10.2
5X	10.1	10.1	10.0	10.0	9.9
6X	9.9	9.9	9.9	9.8	9.8
7X	9.8	9.7	9.7	9.7	9.7
8X	9.7	9.7	9.6	9.6	9.6
9X	9.6	9.6	9.6	9.6	9.5
10X	9.5				

Secondary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	54.2	52.1	49.9	49.2	48.9
1X	48.6	47.8	46.8	45.9	45.2
2X	44.2	43.8	42.8	41.1	40.2
3X	39.3	38.4	37.3	36.0	34.7
4X	33.3	31.9	30.3	28.8	27.6
5X	26.4	25.2	24.1	23.2	22.3
6X	21.6	21.0	20.5	20.0	19.5
7X	19.1	18.8	18.4	18.1	17.9
8X	17.6	17.4	17.2	16.9	16.8
9X	16.6	16.4	16.3	16.1	15.8
10X	15.6				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	50.7	49.1	47.4	46.8	46.6
1X	46.4	45.6	44.7	43.9	43.3
2X	42.3	41.2	40.3	39.4	38.6
3X	37.8	36.9	35.8	34.5	33.2
4X	31.8	30.3	28.7	27.2	25.9
5X	24.8	23.7	22.8	22.0	21.3
6X	20.7	20.2	19.7	19.2	18.9
7X	18.5	18.2	17.9	17.6	17.4
8X	17.1	16.9	16.7	16.5	16.4
9X	16.2	16.1	15.9	15.7	15.5
10X	15.2				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.1	12.5	11.0	10.6	10.4
1X	10.2	10.1	10.0	9.9	9.8
2X	9.8	9.7	9.7	9.7	9.6
3X	9.6	9.6	9.6	9.5	9.5
4X	9.5	9.5	9.4	9.4	9.4
5X	9.4	9.4	9.4	9.3	9.3
6X	9.3	9.3	9.3	9.3	9.3
7X	9.3	9.3	9.2	9.2	9.2
8X	9.2	9.2	9.2	9.2	9.2
9X	9.2	9.1	9.1	9.0	8.7
10X	4.0				

Trails

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	8.4	8.4	8.4	8.4	8.4
1X	8.4	8.3	8.3	8.2	8.2
2X	8.2	8.2	8.2	8.1	8.1
3X	8.1	8.1	8.0	8.0	8.0
4X	7.9	7.9	7.9	7.8	7.8
5X	7.8	7.8	7.7	7.7	7.7
6X	7.7	7.7	7.7	7.6	7.6
7X	7.6	7.6	7.6	7.6	7.6
8X	7.5	7.5	7.5	7.5	7.5
9X	7.5	7.5	7.5	7.4	7.3
10X	7.3				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	8.4	8.4	8.4	8.4	8.4
1X	8.4	8.3	8.3	8.2	8.2
2X	8.2	8.2	8.2	8.1	8.1
3X	8.1	8.1	8.0	8.0	8.0
4X	7.9	7.9	7.9	7.8	7.8
5X	7.8	7.8	7.7	7.7	7.7
6X	7.7	7.7	7.7	7.6	7.6
7X	7.6	7.6	7.6	7.6	7.6
8X	7.5	7.5	7.5	7.5	7.5
9X	7.5	7.5	7.5	7.4	7.3
10X	7.3				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	8.0	7.9	7.9	7.8	7.7
1X	7.7	7.7	7.6	7.6	7.6
2X	7.6	7.5	7.5	7.5	7.5
3X	7.5	7.4	7.4	7.4	7.4
4X	7.4	7.4	7.4	7.3	7.3
5X	7.3	7.3	7.3	7.3	7.3
6X	7.2	7.2	7.2	7.2	7.2
7X	7.2	7.2	7.1	7.1	7.1
8X	7.1	7.1	7.1	7.1	7.1
9X	7.1	7.0	6.9	6.8	6.5
10X	3.2				

Off-Road

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	41.9	34.9	31.3	27.9	25.8
1X	22.8	21.1	20.0	19.1	18.2
2X	17.4	16.8	16.4	15.8	15.4
3X	15.0	14.6	14.2	13.9	13.6
4X	13.3	12.9	12.6	12.3	12.1
5X	11.9	11.6	11.4	11.2	11.0
6X	10.9	10.7	10.5	10.4	10.2
7X	10.1	9.9	9.8	9.6	9.4
8X	9.3	9.1	8.9	8.7	8.5
9X	8.3	3.7	2.1	1.5	1.2
10X	1.0				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	27.8	22.5	19.4	17.6	16.4
1X	15.7	15.2	14.7	14.3	13.9
2X	13.7	13.4	13.2	13.0	12.8
3X	12.6	12.4	12.2	11.9	11.7
4X	11.5	11.3	11.1	10.9	10.7
5X	10.6	10.4	10.3	10.2	10.0
6X	9.9	9.8	9.7	9.5	9.4
7X	9.3	9.2	9.1	8.9	8.8
8X	8.6	8.5	8.3	8.2	8.0
9X	7.7	3.6	2.1	1.5	1.1
10X	0.9				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	8.3	8.2	8.2	8.2	8.1
1X	8.1	8.1	8.0	8.0	7.9
2X	7.8	7.8	7.8	7.7	7.7
3X	7.6	7.6	7.6	7.5	7.5
4X	7.5	7.4	7.4	7.4	7.3
5X	7.3	7.3	7.2	7.2	7.1
6X	7.1	7.0	7.0	6.9	6.8
7X	6.8	6.7	6.6	6.5	6.3
8X	6.1	4.7	2.2	1.5	1.1
9X	0.9	0.8	0.7	0.6	0.6
10X	0.5				

Table B7

Speed Profile for Dodge W600, 4x4, Cargo Truck

Primary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	55.0
3X	55.0	55.0	55.0	55.0	55.0
4X	54.9	54.6	54.2	53.8	53.5
5X	53.0	52.4	51.8	51.3	50.8
6X	50.4	50.0	49.6	49.3	48.9
7X	48.5	47.9	47.1	46.3	45.3
8X	44.0	42.8	41.6	40.4	39.0
9X	37.6	36.4	35.4	34.3	32.8
10X	31.4				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	55.0
3X	55.0	55.0	55.0	55.0	55.0
4X	54.6	54.3	53.9	53.6	53.2
5X	52.7	52.2	51.6	51.1	50.6
6X	50.2	49.8	49.4	49.1	48.6
7X	48.1	47.3	46.3	45.3	44.0
8X	42.7	41.2	39.9	38.6	37.1
9X	35.7	34.4	33.3	32.1	30.7
10X	29.2				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.9	16.9	16.9	15.6	14.8
1X	14.3	14.0	13.7	13.5	13.3
2X	13.1	13.0	12.9	12.8	12.7
3X	12.7	12.6	12.6	12.6	12.5
4X	12.5	12.5	12.4	12.4	12.4
5X	12.4	12.3	12.3	12.3	12.3
6X	12.3	12.3	12.2	12.2	12.2
7X	12.2	12.2	12.2	12.2	12.1
8X	12.1	12.1	12.1	12.1	12.1
9X	12.1	12.1	12.0	12.0	11.9
10X	11.8				

Secondary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	54.6	54.1	53.9	53.8
1X	53.3	52.4	51.6	50.5	49.6
2X	48.6	47.3	46.2	45.2	44.3
3X	43.4	42.3	41.0	39.6	38.3
4X	37.2	36.2	35.4	34.7	34.1
5X	33.5	33.0	32.5	32.1	31.8
6X	31.4	31.1	30.8	30.5	30.3
7X	30.0	29.7	29.5	29.2	28.9
8X	28.6	28.2	27.7	27.3	26.8
9X	26.3	25.8	25.3	24.7	23.9
10X	23.2				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	50.7	50.7	50.7	50.7	50.7
1X	50.3	49.5	48.8	47.9	47.0
2X	46.1	44.9	43.9	43.0	42.2
3X	41.4	40.3	39.1	37.8	36.7
4X	35.7	34.9	34.2	33.6	33.0
5X	32.6	32.1	31.7	31.4	31.0
6X	30.7	30.4	30.2	29.9	29.6
7X	29.3	29.1	28.8	28.5	28.2
8X	27.8	27.4	26.9	26.5	25.9
9X	25.3	24.8	24.3	23.6	22.8
10X	22.1				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.1	12.9	12.4	12.2	12.1
1X	12.1	12.1	12.0	12.0	12.0
2X	12.0	12.0	12.0	12.0	12.0
3X	11.9	11.9	11.9	11.9	11.9
4X	11.9	11.9	11.9	11.9	11.9
5X	11.9	11.9	11.8	11.8	11.8
6X	11.8	11.8	11.8	11.8	11.8
7X	11.8	11.8	11.8	11.8	11.8
8X	11.8	11.7	11.7	11.7	11.6
9X	11.6	11.5	11.4	11.2	11.0
10X	4.4				

Trails

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.7	13.7	13.7	13.7	13.7
1X	13.5	13.1	12.8	12.6	12.5
2X	12.4	12.3	12.2	12.1	12.1
3X	12.0	12.0	11.9	11.9	11.8
4X	11.8	11.8	11.7	11.7	11.7
5X	11.7	11.7	11.6	11.6	11.6
6X	11.6	11.6	11.6	11.6	11.5
7X	11.5	11.5	11.5	11.5	11.5
8X	11.5	11.5	11.4	11.4	11.4
9X	11.4	11.4	11.3	11.2	10.9
10X	10.6				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.7	13.7	13.7	13.7	13.7
1X	13.5	13.1	12.8	12.6	12.5
2X	12.4	12.3	12.2	12.1	12.1
3X	12.0	12.0	11.9	11.9	11.8
4X	11.8	11.8	11.7	11.7	11.7
5X	11.7	11.7	11.6	11.6	11.6
6X	11.6	11.6	11.6	11.6	11.5
7X	11.5	11.5	11.5	11.5	11.5
8X	11.5	11.5	11.4	11.4	11.4
9X	11.4	11.4	11.3	11.1	10.9
10X	10.6				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	10.7	10.6	10.6	10.6	10.6
1X	10.6	10.5	10.5	10.5	10.5
2X	10.5	10.5	10.5	10.4	10.4
3X	10.4	10.4	10.4	10.4	10.3
4X	10.3	10.3	10.3	10.2	10.2
5X	10.2	10.2	10.1	10.1	10.1
6X	10.1	10.0	10.0	10.0	10.0
7X	10.0	9.9	9.9	9.9	9.9
8X	9.8	9.8	9.8	9.8	9.8
9X	9.7	9.6	9.4	9.2	8.9
10X	3.8				

Off-Road

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	48.8	38.6	35.6	33.9	31.3
1X	29.5	28.4	27.3	26.8	24.9
2X	24.1	23.4	22.8	22.3	21.9
3X	21.6	21.2	20.7	20.2	19.7
4X	19.1	18.6	18.1	17.7	17.3
5X	16.9	16.6	16.3	16.0	15.7
6X	15.4	15.1	14.8	14.5	14.2
7X	13.9	13.6	13.3	13.0	12.7
8X	12.3	12.0	11.7	11.4	11.1
9X	10.8	3.9	2.2	1.5	1.2
10X	1.0				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	30.8	26.1	24.1	22.2	21.0
1X	19.9	19.0	18.2	17.5	17.0
2X	16.6	16.3	16.1	15.8	15.6
3X	15.4	15.2	15.0	14.8	14.6
4X	14.4	14.2	14.0	13.9	13.7
5X	13.5	13.4	13.2	13.0	12.7
6X	12.5	12.3	12.1	11.9	11.7
7X	11.5	11.3	11.1	10.9	10.6
8X	10.4	10.2	10.0	9.7	9.5
9X	9.2	3.7	2.1	1.5	1.2
10X	1.0				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	10.5	10.4	10.3	10.2	10.2
1X	10.1	10.1	10.1	10.0	10.0
2X	10.0	9.9	9.9	9.8	9.8
3X	9.7	9.6	9.6	9.5	9.5
4X	9.4	9.4	9.3	9.2	9.2
5X	9.1	9.0	8.9	8.8	8.7
6X	8.7	8.6	8.5	8.4	8.3
7X	8.2	8.1	7.9	7.8	7.6
8X	7.4	6.7	3.0	1.8	1.3
9X	1.0	0.8	0.7	0.6	0.6
10X	0.5				

Table B8

Speed Profile for Dodge D700, 4x2, Cargo Truck

Primary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	55.0
3X	55.0	55.0	55.0	55.0	55.0
4X	54.9	54.6	54.3	54.0	53.7
5X	53.3	52.7	52.1	51.5	51.0
6X	50.5	50.0	49.6	49.2	48.9
7X	48.5	47.9	47.1	46.3	45.2
8X	44.0	42.7	41.5	40.3	38.9
9X	37.6	36.4	35.3	34.2	32.8
10X	31.4				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	55.0
3X	55.0	55.0	55.0	55.0	55.0
4X	54.7	54.4	54.0	53.7	53.5
5X	53.0	52.5	51.8	51.3	50.7
6X	50.3	49.8	49.4	49.0	48.6
7X	48.0	47.2	46.2	45.3	44.0
8X	42.6	41.2	39.9	38.5	37.0
9X	35.6	34.4	33.2	32.1	30.6
10X	29.2				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.9	16.9	16.9	15.6	14.8
1X	14.3	14.0	13.3	1.0	0.5
2X	0.4	0.3	0.2	0.2	0.2
3X	0.2	0.2	0.2	0.2	0.2
4X	0.2	0.2	0.1	0.1	0.1
5X	0.1	0.1	0.1	0.1	0.1
6X	0.1	0.1	0.1	0.1	0.1
7X	0.1	0.1	0.1	0.1	0.1
8X	0.1	0.1	0.1	0.1	0.1
9X	0.1	0.1	0.1	0.1	0.1
10X	0.1				

Secondary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	54.5	53.5	52.7	51.7	50.9
2X	50.2	49.7	49.3	48.9	48.6
3X	48.2	47.8	47.3	46.9	46.4
4X	45.8	45.4	44.9	44.5	44.1
5X	43.7	43.2	42.8	42.5	42.1
6X	41.7	41.3	40.9	40.4	40.0
7X	39.5	38.9	38.3	37.7	37.0
8X	36.3	35.5	34.6	33.8	32.8
9X	31.9	31.0	30.2	29.2	28.0
10X	26.9				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	50.7	50.7	50.7	50.7	50.7
1X	50.4	49.7	49.2	48.6	48.2
2X	47.8	47.6	47.3	47.0	46.8
3X	46.4	46.0	45.7	45.3	44.8
4X	44.4	43.9	43.5	43.1	42.7
5X	42.4	42.0	41.6	41.3	41.0
6X	40.6	40.2	39.8	39.3	38.8
7X	38.3	37.7	37.0	36.4	35.7
8X	34.9	34.1	33.2	32.3	31.3
9X	30.3	29.4	28.6	27.6	26.4
10X	25.3				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.1	12.5	11.0	10.6	10.4
1X	9.4	0.6	0.4	0.3	0.2
2X	0.2	0.2	0.2	0.2	0.2
3X	0.2	0.1	0.1	0.1	0.1
4X	0.1	0.1	0.1	0.1	0.1
5X	0.1	0.1	0.1	0.1	0.1
6X	0.1	0.1	0.1	0.1	0.1
7X	0.1	0.1	0.1	0.1	0.1
8X	0.1	0.1	0.1	0.1	0.1
9X	0.1	0.1	0.1	0.1	0.1
10X	0.1				

Trails

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	20.9	20.9	20.9	20.9	20.8
1X	19.4	18.2	17.4	16.8	16.4
2X	16.1	15.9	15.7	15.5	15.3
3X	15.1	15.0	14.8	14.7	14.6
4X	14.5	14.4	14.3	14.2	14.2
5X	14.1	14.1	14.0	14.0	13.9
6X	13.9	13.8	13.8	13.8	13.7
7X	13.7	13.7	13.7	13.6	13.6
8X	13.6	13.6	13.5	13.5	13.5
9X	13.5	13.5	13.3	13.0	12.6
10X	12.2				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	20.9	20.9	20.9	20.9	20.6
1X	18.9	17.8	17.1	16.6	16.2
2X	15.9	15.7	15.5	15.4	15.2
3X	15.0	14.8	14.7	14.6	14.5
4X	14.4	14.3	14.2	14.2	14.1
5X	14.0	14.0	13.9	13.9	13.9
6X	13.8	13.8	13.7	13.7	13.7
7X	13.7	13.6	13.6	13.6	13.6
8X	13.5	13.5	13.5	13.5	13.4
9X	13.2	12.7	12.3	4.5	2.4
10X	1.6				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	0.1	0.1	0.1	0.1	0.1
1X	0.1	0.1	0.1	0.1	0.1
2X	0.1	0.1	0.1	0.1	0.1
3X	0.1	0.1	0.1	0.1	0.1
4X	0.1	0.1	0.1	0.1	0.1
5X	0.1	0.1	0.1	0.1	0.1
6X	0.1	0.1	0.1	0.1	0.1
7X	0.1	0.1	0.1	0.1	0.1
8X	0.1	0.1	0.1	0.1	0.1
9X	0.1	0.1	0.1	0.1	0.1
10X	0.1				

Off-Road

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	44.7	36.5	34.3	32.7	31.7
1X	30.8	29.6	28.0	26.8	25.7
2X	24.8	23.9	23.0	22.1	21.2
3X	20.5	19.8	19.3	18.8	18.3
4X	17.9	17.6	17.3	17.0	16.7
5X	16.4	16.1	15.8	15.5	15.2
6X	14.5	13.7	13.0	12.4	11.8
7X	11.3	10.8	10.4	10.0	9.7
8X	9.3	8.9	8.6	8.2	7.8
9X	7.4	3.3	2.8	1.4	1.1
10X	0.9				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	27.8	24.8	22.6	21.0	19.9
1X	18.9	18.0	17.3	16.7	16.2
2X	15.7	15.3	14.9	14.6	14.2
3X	13.9	13.6	13.4	13.2	13.0
4X	12.8	12.6	12.3	12.1	11.9
5X	11.7	11.5	11.0	10.5	10.0
6X	9.6	9.2	8.8	8.5	8.2
7X	7.9	7.6	7.3	6.9	5.0
8X	2.2	1.5	1.1	0.9	0.8
9X	0.7	0.6	0.5	0.5	0.5
10X	0.4				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	0.1	0.1	0.1	0.1	0.1
1X	0.1	0.1	0.1	0.1	0.1
2X	0.1	0.1	0.1	0.1	0.1
3X	0.1	0.1	0.1	0.1	0.1
4X	0.1	0.1	0.1	0.1	0.1
5X	0.1	0.1	0.1	0.1	0.1
6X	0.1	0.1	0.1	0.1	0.1
7X	0.1	0.1	0.1	0.1	0.1
8X	0.1	0.1	0.1	0.1	0.1
9X	0.1	0.1	0.1	0.1	0.1
10X	0.1				

Table B9

Speed Profile for International Harvester1750, 4x2,Cargo Truck

Dry Condition

Primary Roads

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 55.0	55.0	55.0	55.0	55.0
1X 55.0	55.0	55.0	55.0	55.0
2X 55.0	55.0	55.0	55.0	54.9
3X 54.9	54.8	54.7	54.7	54.6
4X 54.5	54.0	53.4	52.8	52.3
5X 51.7	51.2	50.6	49.9	49.3
6X 48.7	48.2	47.7	47.2	46.8
7X 46.4	45.9	45.2	44.4	43.5
8X 42.4	41.3	40.2	39.0	37.8
9X 36.5	35.4	34.4	33.4	32.8
10X 30.7				

Secondary Roads

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 55.0	53.2	51.3	50.8	50.5
1X 50.1	49.2	48.3	47.3	46.5
2X 45.5	44.4	43.6	42.9	42.3
3X 41.8	41.4	40.9	40.4	40.0
4X 39.5	39.1	38.7	38.4	38.0
5X 37.7	37.3	37.0	36.7	36.3
6X 35.9	35.6	35.2	34.8	34.5
7X 34.1	33.7	33.3	32.8	32.4
8X 31.9	31.3	30.7	30.1	29.4
9X 28.7	28.0	27.4	26.7	25.7
10X 24.8				

Trails

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 12.5	12.5	12.5	12.5	12.5
1X 12.3	11.9	11.5	11.3	11.2
2X 11.0	10.9	10.8	10.8	10.7
3X 10.6	10.6	10.5	10.5	10.5
4X 10.4	10.4	10.3	10.3	10.3
5X 10.2	10.2	10.2	10.1	10.1
6X 10.1	10.1	10.1	10.0	10.0
7X 10.0	10.0	10.0	9.9	9.9
8X 9.9	9.9	9.9	9.8	9.8
9X 9.8	9.8	9.6	9.6	9.5
10X 9.3				

Off-Road

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 44.3	36.2	33.7	32.2	30.8
1X 29.1	27.3	26.0	24.8	23.4
2X 22.1	20.8	19.7	18.8	17.9
3X 17.1	16.3	15.7	15.1	14.6
4X 14.1	13.6	13.2	12.7	12.1
5X 11.4	10.8	10.3	9.9	9.5
6X 9.1	8.7	8.4	8.0	7.6
7X 4.1	1.9	1.3	1.0	0.8
8X 0.7	0.6	0.5	0.5	0.4
9X 0.4	0.4	0.4	0.3	0.3
10X 0.3				

Wet Condition

Primary Roads

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 55.0	55.0	55.0	55.0	55.0
1X 55.0	55.0	55.0	55.0	55.0
2X 55.0	55.0	55.0	55.0	54.9
3X 54.8	54.7	54.7	54.6	54.5
4X 54.2	53.8	53.2	52.6	52.1
5X 51.5	50.9	50.2	49.5	48.9
6X 48.3	47.8	47.4	46.9	46.5
7X 46.0	45.3	44.4	43.5	42.4
8X 41.1	39.8	38.6	37.4	36.0
9X 34.7	33.5	32.5	31.4	30.0
10X 28.6				

Secondary Roads

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 50.7	49.6	48.4	48.0	47.8
1X 47.5	46.7	45.9	45.0	44.3
2X 43.4	42.6	41.9	41.4	41.0
3X 40.6	40.3	39.8	39.4	38.9
4X 38.5	38.2	37.8	37.4	37.1
5X 36.7	36.4	36.1	35.8	35.4
6X 35.1	34.7	34.4	34.1	33.7
7X 33.3	32.8	32.4	31.9	31.4
8X 30.9	30.3	29.6	29.0	28.3
9X 27.5	26.8	26.2	25.4	24.4
10X 23.5				

Trails

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 12.5	12.5	12.5	12.5	12.5
1X 12.2	11.8	11.5	11.3	11.1
2X 11.8	10.9	10.8	10.7	10.7
3X 10.6	10.6	10.5	10.5	10.4
4X 10.4	10.3	10.3	10.3	10.2
5X 10.2	10.2	10.1	10.1	10.1
6X 10.1	10.1	10.0	10.0	10.0
7X 10.0	10.0	9.9	9.9	9.9
8X 9.9	9.8	9.8	9.8	9.8
9X 9.8	9.8	9.7	9.5	9.4
10X 8.1				

Off-Road

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 26.4	23.3	21.6	19.9	18.5
1X 17.5	16.5	15.7	15.2	14.6
2X 14.1	13.7	13.3	13.0	12.7
3X 12.4	12.2	11.9	11.6	11.4
4X 11.1	10.8	10.5	10.1	9.7
5X 9.2	8.8	8.5	8.2	8.0
6X 7.7	7.4	7.1	6.7	4.2
7X 1.9	1.3	1.0	0.8	0.7
8X 0.6	0.5	0.5	0.4	0.4
9X 0.4	0.4	0.3	0.3	0.3
10X 0.3				

Snow Condition

Primary Roads

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 16.9	16.9	16.9	15.6	14.8
1X 14.3	14.0	13.5	12.9	12.5
2X 12.2	12.0	11.8	11.6	11.5
3X 11.4	11.3	11.2	11.1	11.1
4X 11.0	10.9	10.9	10.9	10.8
5X 10.8	10.8	10.7	10.7	10.7
6X 10.6	10.6	10.6	5.1	2.1
7X 1.3	1.0	0.8	0.7	0.6
8X 0.5	0.5	0.4	0.4	0.4
9X 0.4	0.3	0.3	0.3	0.3
10X 0.3				

Secondary Roads

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 13.1	12.5	11.1	10.7	10.5
1X 10.4	10.3	10.3	10.3	10.2
2X 10.2	10.2	10.2	10.2	10.1
3X 10.1	10.1	10.1	10.1	10.1
4X 9.9	9.7	2.9	1.1	0.8
5X 0.6	0.5	0.4	0.4	0.4
6X 0.3	0.3	0.3	0.3	0.3
7X 0.2	0.2	0.2	0.2	0.2
8X 0.2	0.2	0.2	0.2	0.2
9X 0.2	0.2	0.2	0.2	0.2
10X 0.2				

Trails

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 8.0	8.0	8.0	8.0	8.0
1X 8.0	7.9	7.9	7.9	7.9
2X 7.9	1.6	0.7	0.5	0.4
3X 0.3	0.3	0.3	0.2	0.2
4X 0.2	0.2	0.2	0.2	0.2
5X 0.2	0.2	0.2	0.2	0.2
6X 0.2	0.1	0.1	0.1	0.1
7X 0.1	0.1	0.1	0.1	0.1
8X 0.1	0.1	0.1	0.1	0.1
9X 0.1	0.1	0.1	0.1	0.1
10X 0.1				

Off-Road

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 7.9	0.2	0.1	0.1	0.1
1X 0.1	0.1	0.1	0.1	0.1
2X 0.1	0.1	0.1	0.1	0.1
3X 0.1	0.1	0.1	0.1	0.1
4X 0.1	0.1	0.1	0.1	0.1
5X 0.1	0.1	0.1	0.1	0.1
6X 0.1	0.1	0.1	0.1	0.1
7X 0.1	0.1	0.1	0.1	0.1
8X 0.1	0.1	0.1	0.1	0.1
9X 0.1	0.1	0.1	0.1	0.1
10X 0.1				

Table B10

Speed Profile for International Harvester1750, 4x4,Cargo Truck

Primary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	54.0	53.9	53.3	52.8	52.5
2X	51.2	50.1	49.3	48.1	46.7
3X	45.5	44.5	43.7	42.5	41.2
4X	40.0	39.0	38.1	37.4	36.7
5X	36.1	35.6	35.1	34.7	34.3
6X	33.9	33.6	33.3	33.0	32.6
7X	32.3	31.9	31.6	31.3	31.0
8X	30.6	30.3	29.9	29.4	28.8
9X	28.3	27.7	27.2	26.7	25.9
10X	25.1				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	54.6	53.7	53.1	52.7	52.3
2X	51.8	50.8	49.8	47.8	46.4
3X	45.3	44.3	43.4	41.9	40.6
4X	39.5	38.5	37.7	37.0	36.3
5X	35.8	35.3	34.8	34.4	34.0
6X	33.7	33.3	33.0	32.7	32.4
7X	32.0	31.7	31.3	31.0	30.7
8X	30.2	29.7	29.2	28.6	28.0
9X	27.3	26.7	26.1	25.5	24.7
10X	23.8				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.9	16.9	16.9	15.6	14.8
1X	14.3	14.0	13.3	12.1	11.3
2X	10.7	10.3	9.9	9.7	9.5
3X	9.3	9.1	9.0	8.9	8.8
4X	8.7	8.6	8.5	8.4	8.4
5X	8.3	8.3	8.2	8.2	8.1
6X	8.1	8.1	8.0	8.0	8.0
7X	7.9	7.9	7.9	7.9	7.8
8X	7.8	7.8	7.8	7.8	7.8
9X	7.7	7.7	7.7	7.7	7.7
10X	7.7				

Secondary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	26.0	26.0	26.0	26.0	26.0
1X	26.0	26.0	26.0	26.0	26.0
2X	25.9	25.7	25.5	25.2	25.0
3X	24.7	24.5	24.3	24.1	23.7
4X	23.3	22.9	22.3	21.7	21.2
5X	20.7	20.0	19.2	18.6	18.0
6X	17.5	17.1	16.7	16.4	16.0
7X	15.8	15.5	15.3	15.0	14.8
8X	14.6	14.5	14.3	14.2	14.0
9X	13.9	13.8	13.6	13.5	13.4
10X	13.3				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	26.0	26.0	26.0	26.0	26.0
1X	26.0	26.0	26.0	26.0	26.0
2X	25.9	25.7	25.4	25.1	24.8
3X	24.6	24.4	24.2	23.9	23.5
4X	23.0	22.5	21.8	21.1	20.6
5X	20.0	19.3	18.6	18.1	17.5
6X	17.1	16.7	16.3	16.0	15.7
7X	15.5	15.2	15.0	14.8	14.6
8X	14.4	14.2	14.1	14.0	13.8
9X	13.7	13.6	13.5	13.4	13.2
10X	13.1				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.1	12.5	11.0	10.6	10.4
1X	9.7	9.2	8.9	8.6	8.5
2X	8.3	8.2	8.1	8.1	8.0
3X	8.0	7.9	7.9	7.8	7.8
4X	7.8	7.7	7.7	7.7	7.7
5X	7.6	7.6	7.6	7.6	7.6
6X	7.6	7.5	7.5	7.5	7.5
7X	7.5	7.5	7.5	7.5	7.4
8X	7.4	7.4	7.4	7.4	7.4
9X	7.4	7.4	6.7	2.8	1.8
10X	1.4				

Trails

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	7.8	7.8	7.8	7.8	7.8
1X	7.8	7.8	7.8	7.8	7.8
2X	7.8	7.8	7.8	7.8	7.8
3X	7.8	7.8	7.8	7.8	7.7
4X	7.7	7.7	7.7	7.7	7.6
5X	7.6	7.6	7.6	7.5	7.5
6X	7.5	7.5	7.5	7.4	7.4
7X	7.4	7.4	7.4	7.4	7.4
8X	7.3	7.3	7.3	7.3	7.3
9X	7.3	7.2	7.2	7.2	7.1
10X	7.1				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	7.8	7.8	7.8	7.8	7.8
1X	7.8	7.8	7.8	7.8	7.8
2X	7.8	7.8	7.8	7.8	7.8
3X	7.8	7.8	7.8	7.8	7.7
4X	7.7	7.7	7.7	7.7	7.6
5X	7.6	7.6	7.5	7.5	7.5
6X	7.5	7.5	7.5	7.4	7.4
7X	7.4	7.4	7.4	7.4	7.3
8X	7.3	7.3	7.3	7.3	7.3
9X	7.3	7.2	7.2	7.2	7.1
10X	7.1				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	6.2	6.2	6.2	6.2	6.2
1X	6.2	6.2	6.2	6.2	6.2
2X	6.2	6.2	6.2	6.2	6.2
3X	6.2	6.2	6.2	6.2	6.2
4X	6.2	6.2	6.2	6.2	6.2
5X	6.2	6.1	6.1	6.1	6.1
6X	6.1	6.1	6.1	6.1	6.1
7X	6.1	6.0	6.0	6.0	6.0
8X	6.0	6.0	6.0	6.0	5.9
9X	5.9	5.9	4.5	2.3	1.6
10X	1.2				

Off-Road

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	35.5	27.5	25.2	23.1	21.5
1X	20.2	18.3	17.2	16.4	15.8
2X	15.4	15.1	14.7	14.2	13.8
3X	13.4	13.1	12.8	12.4	12.2
4X	11.9	11.7	11.4	11.2	11.0
5X	10.8	10.6	10.5	10.3	10.2
6X	10.1	9.9	9.8	9.6	9.5
7X	9.4	9.2	9.1	9.0	8.8
8X	8.7	8.5	8.4	8.2	8.0
9X	6.5	2.7	1.7	1.3	1.0
10X	0.9				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	22.6	19.4	17.5	16.0	15.1
1X	14.4	14.0	13.6	13.4	13.2
2X	13.0	12.8	12.5	12.2	12.0
3X	11.8	11.5	11.3	11.1	10.9
4X	10.7	10.5	10.3	10.2	10.1
5X	9.9	9.8	9.7	9.6	9.5
6X	9.4	9.3	9.2	9.1	8.9
7X	8.8	8.7	8.6	8.5	8.3
8X	8.2	8.1	7.9	7.8	7.6
9X	5.3	2.5	1.7	1.2	1.0
10X	0.9				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	6.2	6.2	6.1	6.1	6.1
1X	6.1	6.1	6.1	6.0	6.0
2X	6.0	6.0	6.0	5.9	5.9
3X	5.9	5.9	5.8	5.8	5.8
4X	5.8	5.7	5.7	5.7	5.7
5X	5.6	5.6	5.6	5.5	5.5
6X	5.5	5.4	5.4	5.3	5.3
7X	5.1	4.0	1.9	1.3	1.0
8X	0.8	0.7	0.6	0.5	0.5
9X	0.5	0.4	0.4	0.4	0.4
10X	0.3				

Table B11

HMTT, 8x8, Cargo Truck

Primary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	54.9	54.6	54.4	54.2	54.1
2X	52.6	51.3	50.3	49.1	47.7
3X	46.6	45.6	44.8	43.8	43.0
4X	42.2	41.6	41.0	40.5	40.1
5X	39.7	39.3	39.0	38.7	38.4
6X	38.1	37.8	37.4	37.1	36.7
7X	36.3	35.9	35.6	35.3	34.9
8X	34.3	33.7	33.1	32.5	31.7
9X	31.0	30.3	29.6	28.9	28.0
10X	27.0				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	54.8	54.5	54.3	54.1	53.9
2X	52.4	51.1	50.0	48.7	47.4
3X	46.3	45.4	44.5	43.5	42.7
4X	42.0	41.4	40.8	40.3	39.9
5X	39.5	39.1	38.8	38.5	38.2
6X	37.9	37.6	37.2	36.7	36.3
7X	36.0	35.6	35.3	34.9	34.3
8X	33.6	32.9	32.2	31.5	30.6
9X	29.7	28.9	28.2	27.5	26.5
10X	25.5				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	40.9	40.9	40.9	40.9	40.9
1X	40.9	40.8	40.8	40.7	40.7
2X	40.0	39.3	38.8	38.2	37.7
3X	37.2	36.9	36.5	36.2	36.0
4X	35.7	35.5	35.4	35.2	35.0
5X	34.8	34.5	34.3	34.0	33.8
6X	33.6	33.4	33.1	32.7	32.4
7X	32.2	31.9	31.7	31.3	30.9
8X	30.4	29.8	29.2	28.6	27.9
9X	27.1	26.5	25.9	25.3	24.4
10X	23.5				

Secondary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	31.9	31.9	31.9	31.9	31.9
1X	31.9	31.9	31.7	31.5	31.2
2X	30.9	30.6	30.0	29.5	29.1
3X	28.7	28.3	28.0	27.8	27.5
4X	27.3	27.2	27.0	26.9	26.7
5X	26.6	26.4	26.3	26.2	26.0
6X	25.9	25.7	25.6	25.5	25.3
7X	25.1	25.0	24.8	24.6	24.4
8X	24.2	24.0	23.7	23.5	23.2
9X	22.8	22.5	22.2	21.8	21.2
10X	20.7				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	31.9	31.9	31.9	31.9	31.9
1X	31.9	31.8	31.7	31.4	31.1
2X	30.8	30.4	29.9	29.4	28.9
3X	28.6	28.2	27.9	27.7	27.5
4X	27.3	27.1	26.9	26.8	26.6
5X	26.5	26.3	26.2	26.0	25.9
6X	25.7	25.6	25.4	25.3	25.1
7X	24.9	24.7	24.6	24.4	24.2
8X	23.9	23.7	23.4	23.1	22.7
9X	22.3	22.0	21.6	21.1	20.5
10X	20.0				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	31.9	31.9	31.9	31.9	31.9
1X	31.8	31.6	31.3	31.0	30.7
2X	30.2	29.6	29.0	28.6	28.2
3X	27.9	27.6	27.3	27.1	26.9
4X	26.7	26.6	26.4	26.2	26.1
5X	25.9	25.7	25.6	25.4	25.2
6X	25.0	24.9	24.7	24.5	24.3
7X	24.1	23.8	23.5	23.3	23.0
8X	22.7	22.3	21.9	21.4	20.9
9X	20.4	20.0	19.5	19.0	18.2
10X	17.6				

Trails

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	21.0	21.0	21.0	21.0	20.9
1X	20.4	20.1	19.9	19.8	19.7
2X	19.6	19.5	19.4	19.2	18.9
3X	18.6	18.4	18.2	18.0	17.8
4X	17.5	17.2	17.0	16.8	16.6
5X	16.4	16.2	16.1	15.9	15.8
6X	15.7	15.6	15.5	15.4	15.3
7X	15.2	15.1	15.0	14.8	14.7
8X	14.6	14.4	14.3	14.2	14.1
9X	14.0	13.9	13.8	13.4	13.0
10X	12.6				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	21.0	21.0	21.0	20.5	20.0
1X	19.8	19.6	19.5	19.3	19.2
2X	19.0	18.8	18.6	18.4	18.1
3X	17.9	17.7	17.6	17.4	17.2
4X	16.9	16.7	16.5	16.3	16.1
5X	16.0	15.8	15.7	15.6	15.5
6X	15.4	15.3	15.2	15.1	15.1
7X	14.9	14.8	14.6	14.5	14.4
8X	14.3	14.2	14.1	14.0	13.9
9X	13.8	13.7	13.5	13.2	12.8
10X	12.4				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	21.0	21.0	20.9	20.4	20.0
1X	19.7	19.5	19.4	19.2	19.0
2X	18.8	18.6	18.4	18.2	18.0
3X	17.8	17.6	17.5	17.3	17.1
4X	16.8	16.6	16.4	16.2	16.0
5X	15.9	15.8	15.6	15.5	15.4
6X	15.3	15.2	15.2	15.1	15.0
7X	14.9	14.7	14.6	14.5	14.3
8X	14.2	14.1	14.0	13.9	13.8
9X	13.7	13.7	13.5	13.2	12.8
10X	12.4				

Off-Road

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	32.4	29.7	28.2	27.1	26.2
1X	25.7	25.3	24.9	24.5	24.2
2X	24.8	23.7	23.4	23.2	22.9
3X	22.7	22.5	22.2	22.0	21.7
4X	21.5	21.3	21.1	20.9	20.8
5X	20.6	20.5	20.3	20.2	20.0
6X	19.9	19.7	19.5	19.4	19.2
7X	19.0	18.9	18.7	18.5	18.3
8X	18.1	17.9	17.8	17.5	17.3
9X	16.8	4.7	2.4	1.6	1.2
10X	1.0				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	26.6	23.3	22.1	21.2	20.6
1X	20.2	19.8	19.5	19.2	18.9
2X	18.6	18.3	18.0	17.8	17.5
3X	17.3	17.1	16.9	16.7	16.4
4X	16.3	16.1	15.9	15.8	15.7
5X	15.5	15.4	15.3	15.2	15.1
6X	15.0	14.9	14.8	14.7	14.6
7X	14.5	14.4	14.3	14.1	14.0
8X	13.9	13.7	13.5	13.3	13.1
9X	12.7	4.3	2.3	1.6	1.2
10X	1.0				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	26.9	24.0	23.3	22.6	22.0
1X	21.7	21.4	21.1	20.8	20.6
2X	20.3	20.1	19.8	19.6	19.4
3X	19.1	18.9	18.7	18.5	18.3
4X	18.1	17.9	17.7	17.5	17.4
5X	17.2	17.0	16.9	16.7	16.6
6X	16.4	16.3	16.2	16.0	15.9
7X	15.8	15.7	15.6	15.4	15.3
8X	15.1	15.0	14.8	14.7	14.5
9X	14.0	4.5	2.3	1.6	1.2
10X	1.0				

Table B12

Speed Profile for G MAN, 4x4, Cargo Truck

Primary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	53.9	52.9	52.1	50.9	49.7
3X	48.6	47.8	47.1	46.4	45.8
4X	45.3	44.9	44.5	44.1	43.8
5X	43.5	43.2	43.0	42.8	42.6
6X	42.3	42.0	41.5	41.1	40.8
7X	40.4	40.1	39.7	39.2	38.6
8X	37.8	37.0	36.3	35.4	34.4
9X	33.5	32.6	31.8	31.0	29.8
10X	28.7				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	54.8
2X	53.7	52.7	51.9	50.6	49.4
3X	48.4	47.6	46.9	46.2	45.7
4X	45.2	44.7	44.3	44.0	43.7
5X	43.4	43.1	42.9	42.7	42.4
6X	42.1	41.7	41.2	40.8	40.5
7X	40.1	39.7	39.2	38.6	37.8
8X	36.9	36.0	35.1	34.1	33.0
9X	32.0	31.0	30.2	29.3	28.1
10X	26.9				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	24.9	24.0	23.9	23.7	23.7
1X	23.6	23.6	23.6	23.6	23.6
2X	23.6	23.5	23.5	23.5	23.5
3X	23.5	23.5	23.5	23.5	23.5
4X	23.5	23.5	23.5	23.5	23.5
5X	23.4	23.4	23.4	23.3	23.3
6X	23.3	23.2	23.2	23.2	23.1
7X	23.1	23.0	23.0	22.9	22.8
8X	22.7	22.5	22.3	22.0	21.7
9X	21.4	21.1	20.8	20.4	19.9
10X	19.4				

Secondary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	37.5	37.5	37.5	37.5	37.5
1X	37.5	37.4	37.2	36.9	36.7
2X	36.2	35.6	35.1	34.7	34.2
3X	33.8	33.2	32.7	32.2	31.8
4X	31.4	31.1	30.8	30.5	30.3
5X	30.1	29.9	29.7	29.5	29.3
6X	29.1	28.9	28.8	28.6	28.4
7X	28.3	28.0	27.8	27.5	27.3
8X	27.0	26.7	26.3	25.9	25.5
9X	25.0	24.6	24.2	23.6	22.9
10X	22.3				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	37.5	37.5	37.5	37.5	37.5
1X	37.5	37.4	37.2	36.9	36.6
2X	36.1	35.5	35.0	34.6	34.1
3X	33.6	33.0	32.5	32.0	31.6
4X	31.3	30.9	30.7	30.4	30.2
5X	30.0	29.8	29.6	29.4	29.2
6X	29.0	28.8	28.7	28.5	28.2
7X	28.0	27.7	27.5	27.2	26.9
8X	26.6	26.2	25.8	25.4	24.9
9X	24.4	23.9	23.4	22.9	22.1
10X	21.4				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	24.9	24.9	24.4	24.2	24.0
1X	23.9	23.9	23.8	23.8	23.7
2X	23.7	23.7	23.7	23.7	23.6
3X	23.5	23.4	23.3	23.3	23.2
4X	23.1	23.0	22.9	22.8	22.7
5X	22.6	22.4	22.4	22.3	22.2
6X	22.1	22.0	21.9	21.8	21.7
7X	21.5	21.3	21.1	20.9	20.7
8X	20.5	20.2	19.9	19.6	19.2
9X	18.8	18.4	18.1	17.6	17.1
10X	16.5				

Trails

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	20.6	20.6	20.6	20.6	20.5
1X	19.8	19.3	19.0	18.7	18.6
2X	18.4	18.3	18.2	18.1	17.6
3X	17.1	16.7	16.4	16.1	15.9
4X	15.6	15.2	14.7	14.3	13.9
5X	13.6	13.4	13.1	12.9	12.7
6X	12.5	12.4	12.2	12.1	12.0
7X	11.8	11.7	11.6	11.4	11.2
8X	11.0	10.8	10.7	10.5	10.4
9X	10.2	10.1	10.0	9.8	9.6
10X	9.5				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	20.6	20.6	20.6	20.2	19.7
1X	19.2	18.8	18.6	18.4	18.2
2X	18.1	17.9	17.7	17.5	17.1
3X	16.6	16.3	16.0	15.7	15.5
4X	15.1	14.7	14.3	13.9	13.6
5X	13.3	13.0	12.8	12.6	12.4
6X	12.3	12.1	12.0	11.9	11.8
7X	11.7	11.6	11.4	11.2	11.0
8X	10.8	10.6	10.5	10.3	10.2
9X	10.1	10.0	9.8	9.6	9.5
10X	3.9				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	20.6	20.6	19.1	18.6	18.3
1X	18.1	17.9	17.8	17.5	17.3
2X	17.1	17.0	16.8	16.6	16.3
3X	15.9	15.6	15.4	15.2	15.4
4X	14.6	14.2	13.9	13.5	13.2
5X	13.0	12.8	12.6	12.4	12.2
6X	12.1	11.9	11.8	11.7	11.6
7X	11.5	11.4	11.3	11.1	10.9
8X	10.7	10.5	10.4	10.3	10.1
9X	10.0	9.9	9.8	9.6	9.5
10X	9.3				

Off-Road

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	37.5	32.2	30.9	29.2	28.3
1X	27.6	27.0	26.3	25.8	25.3
2X	24.8	24.2	23.6	23.2	22.8
3X	22.4	22.0	21.7	21.4	21.2
4X	20.9	20.6	20.3	20.1	19.8
5X	19.5	19.3	19.0	18.8	18.5
6X	18.2	18.0	17.7	17.4	17.2
7X	16.9	16.6	16.3	16.0	15.7
8X	15.5	15.2	14.9	14.6	14.2
9X	13.8	13.3	3.7	2.1	1.5
10X	1.2				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	28.4	23.6	22.2	21.4	20.6
1X	19.9	19.4	19.0	18.5	18.1
2X	17.8	17.6	17.3	17.1	17.0
3X	16.8	16.6	16.5	16.3	16.1
4X	16.0	15.8	15.7	15.5	15.4
5X	15.3	15.1	15.0	14.8	14.7
6X	14.5	14.4	14.2	14.1	13.9
7X	13.7	13.6	13.4	13.2	13.0
8X	12.8	12.6	12.4	12.2	12.0
9X	11.6	6.5	2.8	1.8	1.3
10X	1.1				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	22.1	20.5	19.9	19.6	19.4
1X	19.2	18.9	18.6	18.3	17.9
2X	17.6	17.3	17.0	16.7	16.5
3X	16.2	16.0	15.8	15.6	15.4
4X	15.3	15.1	15.0	14.8	14.7
5X	14.6	14.4	14.3	14.2	14.0
6X	13.9	13.7	13.6	13.4	13.3
7X	13.1	13.0	12.9	12.7	12.5
8X	12.4	12.2	12.0	11.9	11.7
9X	11.4	11.0	3.5	2.0	1.5
10X	1.1				

Table B13

Speed Profile for M813 PIP, 6x6, Cargo Truck

Dry Condition

Primary Roads

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 42.9	42.9	42.9	42.9	42.9
1X 42.9	42.9	42.9	42.9	42.9
2X 42.9	42.9	42.9	42.9	42.9
3X 42.8	42.8	42.8	42.8	42.8
4X 42.7	42.4	42.1	41.6	41.3
5X 40.9	40.6	40.1	39.6	39.1
6X 38.6	38.1	37.7	37.3	37.0
7X 36.6	36.3	36.0	35.6	35.1
8X 34.5	33.9	33.3	32.6	31.8
9X 31.1	30.4	29.7	29.0	28.1
10X 27.1				

Secondary Roads

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 36.3	36.3	36.3	36.3	36.3
1X 36.1	35.7	35.2	34.7	34.1
2X 33.5	32.8	31.9	31.2	30.6
3X 30.8	29.4	28.8	28.2	27.4
4X 26.6	25.8	24.9	24.1	23.4
5X 22.8	22.3	21.8	21.4	21.0
6X 20.7	20.4	20.1	19.8	19.6
7X 19.4	19.2	19.0	18.8	18.6
8X 18.5	18.3	18.2	18.1	17.9
9X 17.8	17.6	17.4	17.2	16.9
10X 16.6				

Trails

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 10.6	10.6	10.6	10.6	10.6
1X 10.5	10.2	10.0	9.9	9.8
2X 9.7	9.7	9.6	9.6	9.5
3X 9.4	9.3	9.2	9.2	9.1
4X 9.0	9.0	8.9	8.9	8.8
5X 8.8	8.8	8.7	8.7	8.7
6X 8.7	8.6	8.6	8.6	8.6
7X 8.6	8.5	8.5	8.5	8.5
8X 8.5	8.4	8.4	8.4	8.4
9X 8.4	8.4	8.4	8.3	8.2
10X 8.1				

Off-Road

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 35.0	29.1	26.8	24.1	22.4
1X 21.1	20.2	19.7	19.3	18.9
2X 18.6	18.3	17.9	17.5	17.2
3X 16.8	16.4	16.1	15.7	15.3
4X 14.9	14.5	14.2	13.8	13.5
5X 13.2	12.9	12.6	12.3	12.1
6X 11.9	11.7	11.5	11.3	11.1
7X 10.9	10.7	10.5	10.3	10.1
8X 9.9	9.7	9.5	9.3	9.1
9X 8.9	4.2	2.2	1.6	1.2
10X 1.8				

Wet Condition

Primary Roads

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 42.9	42.9	42.9	42.9	42.9
1X 42.9	42.9	42.9	42.9	42.9
2X 42.9	42.9	42.9	42.9	42.9
3X 42.8	42.8	42.8	42.8	42.8
4X 42.6	42.2	41.9	41.4	41.1
5X 40.7	40.2	39.7	39.2	38.7
6X 38.2	37.8	37.4	37.0	36.7
7X 36.4	36.0	35.6	35.1	34.5
8X 33.7	33.0	32.3	31.5	30.7
9X 29.8	29.0	28.3	27.6	26.5
10X 25.5				

Secondary Roads

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 36.3	36.3	36.3	36.3	36.3
1X 36.0	35.5	34.9	34.3	33.8
2X 33.1	32.3	31.5	30.8	30.1
3X 29.5	28.9	28.3	27.6	26.7
4X 25.9	25.1	24.2	23.5	22.9
5X 22.3	21.8	21.4	21.0	20.6
6X 20.3	20.0	19.8	19.5	19.3
7X 19.1	18.9	18.8	18.6	18.4
8X 18.3	18.1	17.9	17.7	17.6
9X 17.4	17.3	17.1	16.9	16.5
10X 16.2				

Trails

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 10.6	10.6	10.6	10.6	10.6
1X 10.4	10.1	10.0	9.9	9.8
2X 9.7	9.6	9.6	9.6	9.5
3X 9.4	9.3	9.2	9.1	9.1
4X 9.0	8.9	8.9	8.9	8.8
5X 8.8	8.8	8.7	8.7	8.7
6X 8.6	8.6	8.6	8.6	8.6
7X 8.5	8.5	8.5	8.5	8.5
8X 8.4	8.4	8.4	8.4	8.4
9X 8.4	8.3	8.3	8.2	8.1
10X 3.6				

Off-Road

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 28.9	17.2	16.1	15.4	14.9
1X 14.5	14.1	13.8	13.6	13.5
2X 13.3	13.2	13.1	13.0	12.9
3X 12.7	12.5	12.4	12.2	12.1
4X 11.9	11.7	11.5	11.3	11.2
5X 11.0	10.8	10.7	10.5	10.3
6X 10.2	10.0	9.9	9.7	9.6
7X 9.4	9.3	9.2	9.0	8.9
8X 8.7	8.6	8.4	8.3	8.1
9X 7.9	3.2	1.9	1.4	1.1
10X 0.9				

Snow Condition

Primary Roads

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 16.9	16.9	16.9	15.6	14.8
1X 14.3	14.0	13.5	12.9	12.5
2X 12.2	12.0	11.8	11.6	11.5
3X 11.4	11.3	11.2	11.1	11.1
4X 11.0	10.9	10.9	10.9	10.8
5X 10.8	10.7	10.7	10.7	10.6
6X 10.6	10.6	10.6	10.6	10.5
7X 10.5	10.5	10.5	10.4	10.4
8X 10.4	10.4	10.4	10.3	10.3
9X 10.3	10.3	10.3	10.3	10.2
10X 10.2				

Secondary Roads

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 13.1	12.5	11.1	10.7	10.5
1X 10.4	10.3	10.2	10.2	10.2
2X 10.1	10.1	10.1	10.1	10.1
3X 10.1	10.0	10.0	10.0	10.0
4X 10.0	10.0	10.0	10.0	10.0
5X 10.0	9.9	9.9	9.9	9.9
6X 9.9	9.9	9.9	9.9	9.9
7X 9.8	9.8	9.8	9.8	9.8
8X 9.8	9.8	9.7	9.7	9.7
9X 9.7	9.6	9.6	9.5	9.5
10X 9.4				

Trails

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 9.3	9.1	9.1	8.9	8.8
1X 8.7	8.7	8.6	8.5	8.4
2X 8.4	8.4	8.3	8.3	8.3
3X 8.2	8.2	8.2	8.2	8.1
4X 8.1	8.1	8.1	8.0	8.0
5X 8.0	8.0	8.0	7.9	7.9
6X 7.9	7.9	7.8	7.8	7.8
7X 7.8	7.7	7.7	7.7	7.7
8X 7.7	7.6	7.6	7.6	7.6
9X 7.5	7.5	7.5	7.4	7.3
10X 7.3				

Off-Road

PERCENT TOTAL DISTANCE

X=0	2	4	6	8
X 9.1	9.0	8.8	8.7	8.7
1X 8.6	8.5	8.5	8.4	8.4
2X 8.3	8.3	8.2	8.2	8.1
3X 8.1	8.1	8.0	8.0	7.9
4X 7.9	7.8	7.8	7.7	7.7
5X 7.6	7.6	7.5	7.4	7.4
6X 7.3	7.3	7.2	7.1	7.1
7X 7.0	7.0	6.9	6.9	6.8
8X 6.7	6.7	6.6	6.5	6.5
9X 6.4	3.5	2.0	1.5	1.1
10X 0.9				

Table B14

Speed Profile for M813A1, 6x6, Cargo Truck

Primary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	55.0
3X	55.0	54.9	54.9	54.9	54.9
4X	54.8	54.3	53.5	52.7	52.0
5X	51.4	50.8	50.3	49.7	49.1
6X	48.6	48.2	47.8	47.4	47.0
7X	46.6	46.1	45.4	44.6	43.7
8X	42.6	41.4	40.3	39.2	37.9
9X	36.7	35.5	34.5	33.5	32.1
10X	30.8				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	55.0	55.0	55.0	55.0
1X	55.0	55.0	55.0	55.0	55.0
2X	55.0	55.0	55.0	55.0	55.0
3X	54.9	54.9	54.9	54.9	54.8
4X	54.5	54.1	53.3	52.5	51.8
5X	51.2	50.6	49.9	49.4	48.8
6X	48.4	47.9	47.5	47.1	46.7
7X	46.2	45.5	44.6	43.7	42.6
8X	41.3	40.0	38.8	37.5	36.1
9X	34.8	33.6	32.6	31.5	30.1
10X	28.7				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.9	16.9	16.9	15.8	15.1
1X	14.6	14.4	14.2	14.0	13.9
2X	13.7	13.6	13.6	13.5	13.4
3X	13.3	13.3	13.2	13.1	13.1
4X	13.1	13.0	13.0	12.9	12.9
5X	12.8	12.8	12.7	12.7	12.7
6X	12.6	12.6	12.6	12.5	12.5
7X	12.5	12.5	12.4	12.4	12.4
8X	12.4	12.4	12.3	12.3	12.3
9X	12.3	12.3	12.3	12.2	12.2
10X	12.1				

Secondary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	55.0	53.9	52.8	52.4	52.2
1X	51.8	50.5	49.2	47.9	46.8
2X	45.8	44.6	43.6	42.5	41.6
3X	40.6	39.5	38.1	36.8	35.5
4X	34.8	32.4	30.8	29.3	28.0
5X	27.0	26.0	25.3	24.6	23.9
6X	23.4	22.9	22.5	22.1	21.7
7X	21.4	21.1	20.8	20.5	20.3
8X	20.1	19.9	19.7	19.5	19.3
9X	19.2	19.0	18.8	18.5	18.2
10X	17.8				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	50.7	50.2	49.6	49.5	49.4
1X	49.0	47.8	46.6	45.4	44.5
2X	43.6	42.6	41.6	40.6	39.8
3X	38.8	37.7	36.4	35.2	33.8
4X	32.3	30.7	29.2	27.9	26.8
5X	25.9	25.1	24.4	23.8	23.2
6X	22.7	22.3	21.9	21.5	21.2
7X	20.9	20.6	20.4	20.1	19.9
8X	19.7	19.5	19.3	19.1	18.9
9X	18.7	18.5	18.3	18.0	17.6
10X	17.3				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.2	13.2	13.2	13.1	13.1
1X	13.1	13.0	12.9	12.8	12.7
2X	12.6	12.6	12.5	12.4	12.4
3X	12.3	12.3	12.2	12.2	12.2
4X	12.2	12.1	12.1	12.1	12.1
5X	12.1	12.0	12.0	12.0	12.0
6X	11.9	11.9	11.9	11.8	11.8
7X	11.8	11.7	11.7	11.6	11.6
8X	11.5	11.5	11.4	11.4	11.3
9X	11.3	11.2	11.2	11.1	10.9
10X	10.8				

Trails

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	10.6	10.6	10.6	10.6	10.6
1X	10.5	10.2	10.1	9.9	9.8
2X	9.7	9.7	9.6	9.6	9.5
3X	9.4	9.3	9.2	9.2	9.1
4X	9.0	9.0	8.9	8.9	8.8
5X	8.8	8.8	8.7	8.7	8.7
6X	8.7	8.6	8.6	8.6	8.6
7X	8.6	8.5	8.5	8.5	8.5
8X	8.5	8.4	8.4	8.4	8.4
9X	8.4	8.4	8.4	8.3	8.2
10X	8.1				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	10.6	10.6	10.6	10.6	10.6
1X	10.5	10.2	10.0	9.9	9.8
2X	9.7	9.7	9.6	9.6	9.5
3X	9.4	9.3	9.2	9.1	9.1
4X	9.0	9.0	8.9	8.9	8.8
5X	8.8	8.8	8.7	8.7	8.7
6X	8.6	8.6	8.6	8.6	8.6
7X	8.5	8.5	8.5	8.5	8.5
8X	8.5	8.4	8.4	8.4	8.4
9X	8.4	8.4	8.3	8.2	8.1
10X	3.6				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	10.6	10.6	10.5	10.2	9.9
1X	9.8	9.6	9.5	9.4	9.3
2X	9.1	9.0	8.9	8.9	8.8
3X	8.7	8.7	8.6	8.6	8.6
4X	8.5	8.5	8.5	8.5	8.4
5X	8.4	8.4	8.4	8.3	8.3
6X	8.3	8.3	8.3	8.2	8.2
7X	8.2	8.2	8.2	8.1	8.1
8X	8.1	8.0	8.0	8.0	8.0
9X	7.9	7.9	7.9	7.8	7.7
10X	7.6				

Off-Road

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	43.0	35.7	32.5	28.7	26.0
1X	24.4	23.3	22.4	21.7	21.2
2X	20.7	20.3	19.7	19.1	18.7
3X	18.2	17.6	17.2	16.7	16.2
4X	15.8	15.3	14.9	14.5	14.1
5X	13.8	13.5	13.2	12.9	12.6
6X	12.4	12.1	11.9	11.7	11.5
7X	11.3	11.1	10.8	10.6	10.4
8X	10.2	10.0	9.8	9.7	9.4
9X	9.2	5.8	2.6	1.7	1.3
10X	1.0				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	29.0	28.7	18.9	17.5	16.6
1X	16.0	15.5	15.2	14.9	14.7
2X	14.6	14.4	14.3	14.1	13.9
3X	13.8	13.6	13.4	13.2	12.9
4X	12.7	12.5	12.3	12.1	11.8
5X	11.6	11.4	11.2	11.1	10.9
6X	10.7	10.5	10.4	10.2	10.1
7X	9.9	9.8	9.6	9.5	9.3
8X	9.1	9.0	8.8	8.7	8.5
9X	8.3	4.1	2.2	1.5	1.2
10X	1.0				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	12.0	11.5	11.2	10.9	10.7
1X	10.5	10.3	10.2	10.1	10.0
2X	9.9	9.9	9.8	9.7	9.6
3X	9.6	9.5	9.4	9.4	9.3
4X	9.2	9.2	9.1	9.0	8.9
5X	8.8	8.7	8.6	8.5	8.5
6X	8.4	8.3	8.2	8.1	8.0
7X	8.0	7.9	7.8	7.7	7.6
8X	7.6	7.5	7.4	7.3	7.2
9X	7.1	4.8	2.4	1.6	1.2
10X	1.0				

Table B15

Speed Profile for Ford LNT8000, 6x4, Cargo Truck

Primary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	52.2	52.2	52.2	52.2	52.2
1X	52.2	52.2	52.2	52.2	52.2
2X	52.2	52.2	52.2	52.2	52.0
3X	51.7	51.4	51.1	50.9	50.7
4X	50.4	49.8	49.2	48.6	48.1
5X	47.6	47.0	46.3	45.6	44.8
6X	44.2	43.6	43.0	42.5	42.0
7X	41.6	41.1	40.7	40.0	39.3
8X	38.5	37.6	36.8	35.9	34.9
9X	33.9	33.0	32.2	31.3	30.1
10X	29.0				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	52.2	52.2	52.2	52.2	52.2
1X	52.2	52.2	52.2	52.2	52.2
2X	52.2	52.2	52.2	52.1	51.8
3X	51.5	51.3	51.0	50.8	50.6
4X	50.3	49.6	49.0	48.5	47.9
5X	47.3	46.6	45.9	45.1	44.4
6X	43.7	43.2	42.6	42.1	41.7
7X	41.2	40.7	40.0	39.3	38.5
8X	37.5	36.5	35.5	34.6	33.4
9X	32.3	31.4	30.5	29.6	28.4
10X	27.2				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.9	16.9	16.9	15.6	14.8
1X	14.3	14.0	13.7	13.5	13.3
2X	13.2	13.1	13.0	12.9	12.8
3X	12.7	12.7	12.6	12.6	12.5
4X	12.5	12.5	12.4	12.4	12.4
5X	12.3	12.3	12.3	12.3	12.3
6X	12.3	12.2	12.2	12.2	12.2
7X	12.2	12.2	12.1	12.1	12.1
8X	12.1	12.1	12.0	12.0	12.0
9X	12.0	12.0	12.0	11.9	11.8
10X	11.7				

Secondary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	41.4	41.4	41.4	41.4	41.3
1X	40.9	40.3	39.6	38.8	38.1
2X	37.2	36.3	35.3	34.4	33.7
3X	33.1	32.6	32.1	31.7	31.4
4X	31.1	30.8	30.6	30.3	30.0
5X	29.7	29.5	29.2	28.9	28.6
6X	28.4	28.1	27.8	27.5	27.3
7X	27.0	26.8	26.5	26.3	26.0
8X	25.7	25.3	25.0	24.7	24.2
9X	23.8	23.5	23.1	22.6	22.0
10X	21.4				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	40.9	40.9	40.9	40.9	40.9
1X	40.5	39.8	39.1	38.4	37.7
2X	36.7	35.7	34.7	34.0	33.3
3X	32.7	32.2	31.8	31.4	31.1
4X	30.8	30.6	30.3	30.0	29.8
5X	29.5	29.2	28.9	28.6	28.3
6X	28.0	27.8	27.5	27.2	27.0
7X	26.7	26.4	26.2	25.9	25.6
8X	25.2	24.9	24.5	24.1	23.7
9X	23.2	22.8	22.4	21.9	21.2
10X	20.6				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.1	12.9	12.4	12.3	12.2
1X	12.2	12.1	12.1	12.1	12.1
2X	12.1	12.1	12.1	12.1	12.1
3X	12.0	12.0	12.0	12.0	12.0
4X	12.0	11.9	11.9	11.9	11.9
5X	11.9	11.9	11.8	11.8	11.8
6X	11.8	11.8	11.7	11.7	11.7
7X	11.7	11.6	11.6	11.6	11.6
8X	11.5	11.5	11.5	11.4	11.4
9X	11.3	11.3	11.2	11.1	11.0
10X	10.8				

Trails

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.0	13.0	13.0	13.0	13.0
1X	12.7	12.1	11.7	11.4	11.2
2X	11.0	10.9	10.8	10.7	10.6
3X	10.5	10.5	10.4	10.3	10.3
4X	10.3	10.2	10.2	10.2	10.1
5X	10.1	10.1	10.1	10.0	10.0
6X	10.0	10.0	10.0	10.0	9.9
7X	9.9	9.9	9.9	9.9	9.9
8X	9.9	9.9	9.9	9.8	9.8
9X	9.8	9.8	9.8	9.7	9.5
10X	9.3				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.0	13.0	13.0	13.0	13.0
1X	12.5	11.9	11.5	11.3	11.1
2X	10.9	10.8	10.7	10.6	10.5
3X	10.5	10.4	10.4	10.3	10.3
4X	10.2	10.2	10.2	10.1	10.1
5X	10.1	10.0	10.0	10.0	10.0
6X	10.0	10.0	9.9	9.9	9.9
7X	9.9	9.9	9.9	9.9	9.9
8X	9.8	9.8	9.8	9.8	9.8
9X	9.8	9.7	9.6	9.5	9.3
10X	3.9				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	11.1	11.1	10.8	10.5	10.2
1X	10.1	10.0	9.9	9.9	9.8
2X	9.8	9.8	9.8	9.7	9.7
3X	9.7	9.7	9.6	9.6	9.6
4X	9.5	9.5	9.5	9.4	9.4
5X	9.4	9.3	9.3	9.3	9.2
6X	9.2	9.2	9.1	9.1	9.1
7X	9.1	9.0	9.0	9.0	8.9
8X	8.9	8.9	8.8	8.8	8.8
9X	8.7	8.7	8.7	8.6	8.5
10X	8.3				

Off-Road

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	37.3	31.5	29.3	28.1	27.0
1X	26.1	25.3	24.4	23.7	23.0
2X	22.3	21.7	21.3	20.9	20.6
3X	20.4	20.1	19.7	19.2	18.8
4X	18.2	17.7	17.2	16.7	16.2
5X	15.7	15.4	15.0	14.7	14.4
6X	14.1	13.8	13.4	13.0	12.6
7X	12.2	11.7	11.2	10.8	10.4
8X	10.0	9.6	9.2	8.8	8.4
9X	5.4	2.5	1.7	1.3	1.0
10X	0.9				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	23.3	20.9	19.4	18.7	18.0
1X	17.5	17.0	16.5	16.0	15.6
2X	15.3	15.0	14.9	14.7	14.5
3X	14.3	14.2	14.0	13.8	13.6
4X	13.4	13.1	12.9	12.7	12.6
5X	12.4	12.2	12.0	11.8	11.6
6X	11.4	11.2	11.0	10.7	10.4
7X	10.1	9.8	9.4	9.1	8.8
8X	8.5	8.2	7.9	7.6	7.3
9X	4.2	2.2	1.5	1.2	1.0
10X	0.8				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	11.0	10.7	10.5	10.3	10.2
1X	10.1	10.0	9.9	9.9	9.8
2X	9.7	9.6	9.6	9.5	9.5
3X	9.4	9.4	9.3	9.2	9.2
4X	9.1	9.0	9.0	8.9	8.9
5X	8.8	8.7	8.7	8.6	8.5
6X	8.5	8.4	8.3	8.1	8.0
7X	7.8	7.6	7.4	7.3	7.1
8X	6.9	6.7	6.5	6.3	6.2
9X	4.4	2.3	1.6	1.2	1.0
10X	0.8				

Table B16

Speed Profile for Ford LNT8000, 6x6, Cargo Truck

Dry Condition

Primary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	52.0	52.0	52.0	52.0	52.0
1X	52.0	52.0	52.0	52.0	52.0
2X	52.0	52.0	52.0	52.0	51.8
3X	51.5	51.3	51.0	50.8	50.7
4X	50.4	49.8	49.3	48.7	48.3
5X	47.8	47.2	46.5	45.9	45.3
6X	44.7	44.2	43.7	43.3	42.9
7X	42.5	42.1	41.6	40.9	40.2
8X	39.3	38.4	37.5	36.6	35.5
9X	34.5	33.5	32.7	31.8	30.6
10X	29.3				

Secondary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	42.0	42.0	42.0	42.0	41.9
1X	41.2	40.5	39.9	39.3	38.8
2X	38.4	38.0	37.8	37.5	37.1
3X	36.7	36.4	36.1	35.7	35.3
4X	34.9	34.5	34.1	33.8	33.5
5X	33.2	32.9	32.6	32.3	32.0
6X	31.7	31.4	31.1	30.9	30.6
7X	30.3	30.0	29.6	29.3	28.8
8X	28.4	27.9	27.5	27.0	26.5
9X	26.0	25.5	25.0	24.4	23.6
10X	22.9				

Trails

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	14.3	14.3	14.3	14.3	14.3
1X	13.9	13.2	12.8	12.5	12.2
2X	12.8	11.9	11.8	11.7	11.6
3X	11.5	11.4	11.3	11.2	11.2
4X	11.1	11.1	11.0	11.0	10.9
5X	10.9	10.9	10.8	10.8	10.8
6X	10.8	10.7	10.7	10.7	10.7
7X	10.7	10.6	10.6	10.6	10.6
8X	10.6	10.5	10.5	10.5	10.5
9X	10.5	10.4	10.4	10.3	10.0
10X	9.8				

Off-Road

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	40.9	34.6	33.0	31.6	30.6
1X	29.5	28.5	27.4	26.4	25.5
2X	24.7	23.9	23.2	22.6	22.1
3X	21.7	21.4	20.9	20.4	19.9
4X	19.4	18.8	18.2	17.7	17.2
5X	16.7	16.3	15.9	15.6	15.2
6X	14.9	14.5	14.3	14.0	13.7
7X	13.4	13.0	12.7	12.3	12.0
8X	11.6	11.2	10.9	10.5	10.1
9X	9.5	3.6	2.1	1.5	1.1
10X	0.9				

Wet Condition

Primary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	52.0	52.0	52.0	52.0	52.0
1X	52.0	52.0	52.0	52.0	52.0
2X	52.0	52.0	52.0	52.0	51.7
3X	51.4	51.1	50.9	50.7	50.6
4X	50.3	49.7	49.1	48.6	48.1
5X	47.5	46.8	46.2	45.5	44.9
6X	44.4	43.9	43.4	43.0	42.6
7X	42.2	41.6	40.9	40.2	39.3
8X	38.3	37.2	36.2	35.2	34.0
9X	32.9	31.8	30.9	30.0	28.7
10X	27.5				

Secondary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	41.1	41.1	41.1	41.1	41.0
1X	40.5	39.8	39.2	38.7	38.2
2X	37.9	37.4	37.3	37.0	36.7
3X	36.3	36.0	35.6	35.2	34.9
4X	34.5	34.1	33.7	33.4	33.0
5X	32.8	32.5	32.2	31.9	31.6
6X	31.3	31.0	30.8	30.5	30.1
7X	29.8	29.5	29.1	28.7	28.2
8X	27.8	27.3	26.8	26.3	25.7
9X	25.1	24.6	24.1	23.5	22.7
10X	21.9				

Trails

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	14.3	14.3	14.3	14.3	14.3
1X	13.6	13.0	12.6	12.3	12.1
2X	11.9	11.8	11.7	11.6	11.5
3X	11.4	11.3	11.2	11.2	11.1
4X	11.1	11.0	11.0	10.9	10.9
5X	10.8	10.8	10.8	10.8	10.7
6X	10.7	10.7	10.7	10.7	10.6
7X	10.6	10.6	10.6	10.6	10.5
8X	10.5	10.5	10.5	10.5	10.4
9X	10.4	10.3	10.3	10.1	9.9
10X	9.7				

Off-Road

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	25.2	22.5	21.5	20.3	19.3
1X	18.4	17.7	17.2	16.7	16.3
2X	16.0	15.8	15.5	15.3	15.1
3X	14.9	14.8	14.6	14.4	14.2
4X	14.0	13.7	13.5	13.3	13.1
5X	13.0	12.8	12.6	12.4	12.1
6X	11.9	11.7	11.5	11.3	11.1
7X	10.9	10.7	10.5	10.3	10.0
8X	9.7	9.5	9.2	9.0	8.6
9X	8.2	3.4	2.0	1.4	1.1
10X	0.9				

Snow Condition

Primary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.9	16.9	16.9	15.8	15.0
1X	14.6	14.3	14.1	14.0	13.9
2X	13.8	13.7	13.7	13.6	13.6
3X	13.6	13.5	13.5	13.5	13.5
4X	13.4	13.4	13.4	13.4	13.3
5X	13.3	13.3	13.3	13.3	13.2
6X	13.2	13.2	13.2	13.1	13.1
7X	13.1	13.0	13.0	13.0	12.9
8X	12.9	12.9	12.8	12.8	12.8
9X	12.7	12.7	12.7	12.6	12.5
10X	12.4				

Secondary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.1	13.1	13.1	13.1	13.0
1X	13.0	13.0	13.0	13.0	13.0
2X	13.0	12.9	12.9	12.9	12.9
3X	12.9	12.9	12.8	12.8	12.8
4X	12.7	12.7	12.7	12.7	12.6
5X	12.6	12.6	12.5	12.5	12.5
6X	12.5	12.4	12.4	12.4	12.4
7X	12.3	12.3	12.3	12.2	12.2
8X	12.2	12.1	12.1	12.0	12.0
9X	11.9	11.8	11.7	11.6	11.4
10X	11.3				

Trails

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	12.3	11.9	11.2	10.9	10.7
1X	10.6	10.5	10.4	10.4	10.3
2X	10.3	10.2	10.2	10.2	10.1
3X	10.1	10.0	10.0	9.9	9.9
4X	9.8	9.8	9.7	9.7	9.7
5X	9.6	9.6	9.6	9.5	9.5
6X	9.5	9.5	9.4	9.4	9.4
7X	9.4	9.3	9.3	9.3	9.3
8X	9.3	9.2	9.2	9.2	9.2
9X	9.2	9.1	9.0	8.9	8.8
10X	8.6				

Off-Road

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	11.9	11.2	11.1	11.0	10.9
1X	10.8	10.7	10.6	10.5	10.4
2X	10.4	10.3	10.2	10.1	10.0
3X	10.0	9.9	9.9	9.8	9.7
4X	9.7	9.6	9.6	9.5	9.4
5X	9.4	9.3	9.2	9.1	9.0
6X	8.9	8.8	8.7	8.6	8.5
7X	8.4	8.3	8.2	8.0	7.9
8X	7.8	7.6	7.4	7.3	7.1
9X	6.8	3.1	1.9	1.4	1.1
10X	0.9				

Table B17

Speed Profile for International Harvester 1850, 6x4, Cargo Truck

Dry Condition

Primary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	53.8	53.8	53.8	53.8	53.8
1X	53.8	53.8	53.8	53.8	53.8
2X	53.8	53.8	53.8	53.8	53.5
3X	53.0	52.5	52.1	51.8	51.5
4X	51.1	50.4	49.8	49.1	48.5
5X	47.9	47.2	46.4	45.7	44.9
6X	44.2	43.5	42.9	42.4	41.9
7X	41.5	41.0	40.5	39.9	39.2
8X	38.3	37.5	36.6	35.8	34.7
9X	33.8	32.9	32.1	31.2	30.0
10X	28.9				

Secondary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	40.7	40.7	40.7	40.7	40.6
1X	39.9	39.2	38.4	37.7	37.1
2X	36.3	35.8	35.3	34.9	34.6
3X	34.2	33.8	33.5	33.1	32.7
4X	32.4	32.0	31.7	31.3	31.0
5X	30.7	30.4	30.1	29.8	29.6
6X	29.3	29.0	28.7	28.5	28.2
7X	27.9	27.7	27.4	27.1	26.7
8X	26.4	26.0	25.7	25.3	24.8
9X	24.4	24.0	23.6	23.1	22.4
10X	21.8				

Trails

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	15.4	15.4	15.4	15.4	15.4
1X	14.9	14.2	13.8	13.5	13.3
2X	13.1	13.0	12.8	12.7	12.6
3X	12.4	12.3	12.2	12.1	12.0
4X	11.9	11.8	11.7	11.6	11.5
5X	11.5	11.4	11.4	11.3	11.3
6X	11.2	11.2	11.1	11.1	11.1
7X	11.0	11.0	11.0	10.9	10.9
8X	10.9	10.9	10.9	10.8	10.8
9X	10.8	10.8	10.7	10.6	10.3
10X	10.1				

Off-Road

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	30.5	30.7	28.8	27.4	26.3
1X	25.5	24.3	23.3	22.5	21.8
2X	21.2	20.6	20.0	19.6	19.2
3X	18.7	18.3	17.9	17.5	17.2
4X	16.9	16.6	16.2	15.9	15.6
5X	15.3	15.0	14.7	14.3	14.0
6X	13.6	13.2	12.7	12.2	11.6
7X	11.1	10.7	10.2	9.9	9.5
8X	9.0	8.6	7.2	2.7	1.7
9X	1.3	1.0	0.8	0.7	0.6
10X	0.6				

Wet Condition

Primary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	53.8	53.8	53.8	53.8	53.8
1X	53.8	53.8	53.8	53.8	53.8
2X	53.8	53.8	53.8	53.7	53.2
3X	52.7	52.3	51.9	51.6	51.3
4X	50.9	50.2	49.5	48.8	48.2
5X	47.5	46.7	45.9	45.1	44.4
6X	43.7	43.1	42.5	42.0	41.5
7X	41.1	40.5	39.9	39.1	38.3
8X	37.3	36.3	35.4	34.4	33.3
9X	32.2	31.3	30.4	29.5	28.3
10X	27.1				

Secondary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	39.9	39.9	39.9	39.9	39.8
1X	39.3	38.5	37.7	37.0	36.3
2X	35.7	35.2	34.8	34.5	34.2
3X	33.8	33.5	33.1	32.7	32.3
4X	32.0	31.6	31.3	30.9	30.6
5X	30.3	30.0	29.8	29.5	29.2
6X	28.9	28.6	28.3	28.1	27.8
7X	27.5	27.2	26.9	26.6	26.2
8X	25.9	25.5	25.1	24.7	24.2
9X	23.7	23.3	22.8	22.3	21.6
10X	20.9				

Trails

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	15.4	15.4	15.4	15.1	14.9
1X	14.3	13.8	13.4	13.2	13.0
2X	12.9	12.7	12.6	12.6	12.4
3X	12.3	12.1	12.0	11.9	11.8
4X	11.7	11.6	11.6	11.5	11.4
5X	11.4	11.3	11.3	11.2	11.2
6X	11.1	11.1	11.1	11.0	11.0
7X	11.0	10.9	10.9	10.9	10.9
8X	10.8	10.8	10.8	10.8	10.7
9X	10.7	10.6	10.5	10.2	10.0
10X	4.0				

Off-Road

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	21.3	19.3	18.1	17.2	16.5
1X	16.8	15.6	15.2	14.9	14.5
2X	14.2	13.9	13.6	13.4	13.3
3X	13.1	13.0	12.9	12.7	12.6
4X	12.5	12.3	12.2	12.1	11.9
5X	11.8	11.6	11.4	11.2	10.9
6X	10.6	10.3	10.0	9.6	9.3
7X	8.9	8.6	8.4	8.1	7.7
8X	7.4	7.0	2.8	1.7	1.3
9X	1.0	0.8	0.7	0.6	0.6
10X	0.5				

Snow Condition

Primary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.9	16.9	16.9	15.6	14.8
1X	14.3	14.0	13.7	13.3	13.1
2X	12.9	12.7	12.6	12.5	12.4
3X	12.3	12.2	12.1	12.1	12.0
4X	11.9	11.9	11.8	11.8	11.8
5X	11.7	11.7	11.7	11.6	11.6
6X	11.6	11.5	11.5	11.5	11.5
7X	11.5	11.5	11.4	11.4	11.4
8X	11.4	11.4	11.4	11.3	11.3
9X	11.3	11.3	11.3	11.3	11.2
10X	11.1				

Secondary Roads

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.1	12.8	12.0	11.8	11.6
1X	11.6	11.5	11.5	11.5	11.4
2X	11.4	11.4	11.4	11.4	11.4
3X	11.4	11.4	11.3	11.3	11.3
4X	11.3	11.3	11.3	11.2	11.2
5X	11.2	11.2	11.2	11.2	11.2
6X	11.1	11.1	11.1	11.1	11.1
7X	11.0	11.0	10.9	10.9	10.9
8X	10.8	10.8	10.7	10.6	10.5
9X	10.4	10.3	10.1	4.4	2.3
10X	1.6				

Trails

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	10.2	10.2	10.1	10.0	9.9
1X	9.9	9.9	9.8	9.8	9.8
2X	9.8	9.8	9.7	9.7	9.7
3X	9.7	9.6	9.6	9.6	9.6
4X	9.5	9.5	9.4	9.4	9.4
5X	9.3	9.3	9.2	9.2	9.2
6X	9.2	9.1	9.1	9.0	9.0
7X	9.0	8.9	8.9	8.8	8.7
8X	8.7	8.6	8.6	8.5	8.4
9X	8.3	8.2	7.6	3.0	1.9
10X	1.4				

Off-Road

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	10.1	9.8	9.6	9.4	9.3
1X	9.2	9.2	9.1	9.0	8.9
2X	8.8	8.7	8.6	8.5	8.5
3X	8.4	8.2	8.1	8.0	7.9
4X	7.7	7.6	7.5	7.4	7.3
5X	7.1	7.0	6.9	6.7	6.5
6X	6.4	6.2	6.0	5.8	5.6
7X	3.0	1.7	1.2	0.9	0.8
8X	0.6	0.6	0.5	0.5	0.4
9X	0.4	0.4	0.4	0.3	0.3
10X	0.3				

Table B18

Speed Profile for International Harvester 1850, 6x6, Cargo Truck

Primary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	46.9	46.9	46.9	46.9	46.9
1X	46.8	46.6	46.5	46.3	46.2
2X	45.5	44.7	44.1	43.6	43.2
3X	42.9	42.6	42.3	42.1	41.9
4X	41.7	41.4	41.2	40.9	40.6
5X	40.3	39.9	39.5	39.0	38.6
6X	38.2	37.8	37.5	37.1	36.6
7X	36.2	35.9	35.5	35.1	34.7
8X	34.1	33.5	33.0	32.3	31.6
9X	30.8	30.1	29.5	28.8	27.9
10X	26.9				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	46.9	46.9	46.9	46.9	46.9
1X	46.8	46.6	46.5	46.3	46.2
2X	45.4	44.7	44.1	43.6	43.2
3X	42.8	42.5	42.3	42.0	41.8
4X	41.6	41.3	41.0	40.8	40.4
5X	40.1	39.6	39.2	38.7	38.3
6X	37.9	37.6	37.1	36.7	36.2
7X	35.9	35.5	35.1	34.6	34.1
8X	33.4	32.7	32.0	31.3	30.4
9X	29.6	28.8	28.1	27.4	26.4
10X	25.4				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	16.9	16.9	16.9	15.6	14.8
1X	14.3	14.0	13.7	13.3	13.1
2X	12.9	12.7	12.6	12.5	12.4
3X	12.3	12.2	12.1	12.1	12.0
4X	12.0	11.9	11.9	11.8	11.8
5X	11.8	11.7	11.7	11.7	11.7
6X	11.6	11.6	11.6	11.6	11.5
7X	11.5	11.5	11.5	11.5	11.5
8X	11.4	11.4	11.4	11.4	11.4
9X	11.4	11.4	11.4	11.3	11.3
10X	11.2				

Secondary Roads

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	38.5	37.6	36.5	36.1	35.9
1X	35.7	35.2	34.7	34.2	33.7
2X	33.1	32.4	31.6	31.0	30.3
3X	29.7	29.2	28.6	28.0	27.3
4X	26.5	25.8	24.8	24.0	23.3
5X	22.7	22.1	21.5	21.1	20.6
6X	20.3	19.9	19.6	19.3	19.1
7X	18.8	18.6	18.4	18.2	18.0
8X	17.9	17.7	17.6	17.4	17.3
9X	17.2	17.0	16.9	16.7	16.4
10X	16.1				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	38.5	37.6	36.5	36.1	35.9
1X	35.7	35.2	34.7	34.2	33.7
2X	33.0	32.2	31.5	30.8	30.2
3X	29.6	29.0	28.4	27.7	26.8
4X	26.0	25.2	24.2	23.4	22.7
5X	22.0	21.5	21.0	20.6	20.2
6X	19.8	19.5	19.2	19.0	18.7
7X	18.5	18.3	18.1	17.9	17.8
8X	17.6	17.4	17.3	17.2	17.0
9X	16.9	16.7	16.6	16.4	16.1
10X	15.8				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	13.1	12.8	12.1	11.8	11.7
1X	11.7	11.6	11.6	11.5	11.5
2X	11.5	11.4	11.4	11.4	11.4
3X	11.4	11.4	11.4	11.3	11.3
4X	11.3	11.3	11.3	11.3	11.2
5X	11.2	11.2	11.2	11.2	11.2
6X	11.1	11.1	11.1	11.0	11.0
7X	11.0	10.9	10.9	10.9	10.9
8X	10.8	10.8	10.8	10.7	10.7
9X	10.7	10.6	10.6	10.5	10.4
10X	10.2				

Trails

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	9.0	9.0	9.0	9.0	9.0
1X	9.0	8.8	8.7	8.6	8.5
2X	8.5	8.4	8.4	8.3	8.3
3X	8.3	8.3	8.3	8.2	8.2
4X	8.2	8.2	8.2	8.2	8.2
5X	8.2	8.2	8.2	8.2	8.2
6X	8.1	8.1	8.1	8.1	8.1
7X	8.1	8.1	8.1	8.1	8.1
8X	8.1	8.1	8.1	8.1	8.1
9X	8.1	8.1	8.0	8.0	7.9
10X	7.8				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	9.0	9.0	9.0	9.0	9.0
1X	8.9	8.8	8.6	8.6	8.5
2X	8.4	8.4	8.4	8.3	8.3
3X	8.3	8.3	8.3	8.2	8.2
4X	8.2	8.2	8.2	8.2	8.2
5X	8.2	8.2	8.2	8.2	8.1
6X	8.1	8.1	8.1	8.1	8.1
7X	8.1	8.1	8.1	8.1	8.1
8X	8.1	8.1	8.1	8.1	8.0
9X	8.0	8.0	8.0	7.9	7.9
10X	7.8				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	9.0	9.0	8.9	8.7	8.5
1X	8.4	8.3	8.3	8.2	8.2
2X	8.2	8.2	8.2	8.1	8.1
3X	8.1	8.1	8.1	8.1	8.1
4X	8.0	8.0	8.0	8.0	8.0
5X	8.0	7.9	7.9	7.9	7.9
6X	7.9	7.9	7.9	7.8	7.8
7X	7.8	7.8	7.8	7.8	7.8
8X	7.7	7.7	7.7	7.7	7.7
9X	7.7	7.6	7.6	7.5	7.5
10X	7.4				

Off-Road

Dry Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	33.3	27.8	25.9	23.7	21.9
1X	20.8	19.9	19.3	18.3	17.6
2X	17.0	16.4	15.8	15.3	14.9
3X	14.6	14.3	14.0	13.7	13.3
4X	12.9	12.6	12.3	12.0	11.8
5X	11.6	11.4	11.2	11.0	10.8
6X	10.6	10.5	10.3	10.1	9.9
7X	9.7	9.5	9.3	9.0	8.7
8X	8.5	8.2	8.0	7.7	7.5
9X	7.2	3.3	2.0	1.4	1.1
10X	0.9				

Wet Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	22.7	18.7	17.2	16.0	15.2
1X	14.6	14.3	14.0	13.7	13.4
2X	13.1	12.9	12.6	12.4	12.1
3X	11.9	11.7	11.5	11.4	11.2
4X	11.0	10.8	10.6	10.5	10.3
5X	10.2	10.1	9.9	9.8	9.7
6X	9.5	9.4	9.3	9.1	9.0
7X	8.8	8.6	8.4	8.2	7.9
8X	7.7	7.5	7.3	7.1	6.9
9X	6.6	3.2	1.9	1.4	1.1
10X	0.9				

Snow Condition

PERCENT TOTAL DISTANCE

	X=0	2	4	6	8
X	10.4	10.1	10.0	9.9	9.7
1X	9.6	9.5	9.4	9.3	9.2
2X	9.1	9.0	8.9	8.8	8.6
3X	8.7	8.6	8.5	8.5	8.4
4X	8.4	8.3	8.2	8.2	8.1
5X	8.0	8.0	7.9	7.8	7.8
6X	7.7	7.6	7.5	7.5	7.4
7X	7.3	7.1	7.0	6.8	6.7
8X	6.6	6.4	6.3	6.1	6.0
9X	5.8	3.0	1.8	1.4	1.1
10X	0.9				

Table B19

Percent of Distance NOGO on Trails and
Percent of Area NOGO Off-Road for the Study Vehicles

Vehicle	Percent of Trails NOGO			Percent of Off-Road Terrain NOGO		
	Dry	Wet	Snow	Dry	Wet	Snow
1-1/4-Ton Cargo Trucks						
M880, 4X4	0	0	0	15.9	16.1	15.9
M890, 4X2	0	1.5	0	15.9	16.6	15.9
2-1/2-Ton Cargo Trucks						
M35A2, 6X6	0	0	0	9.2	9.2	9.2
M35 PIP, 6X6	0	0	0	8.5	8.5	8.5
Ford LN8000, 4X2	0	1.6	99	15.1	18.7	100
Ford LN8000, 4X4	0	0.	1.5	9.4	9.4	18.3
Dodge W600, 4X4	0	0	1.5	9.5	9.5	17.3
Dodge D700, 4X2	0	5.4	100	9.5	22.4	100
*IH1750, 4X2	0	0	79.1	30.8	32.6	99.1
*IH1750, 4X4	0	0	6.5	10.2	10.5	28.3
5-Ton Cargo Trucks						
TARADCOM HMTT, 8X8	0	0	0	9.4	9.4	9.4
German MAN, 4X4	0	1.5	0	7.9	8.6	7.9
M813 PIP, 6X6	0	1.5	0	9.2	9.7	9.2
M813A1	0	1.5	0	8.6	9.1	8.6
Ford LNT8000, 6X4	0	1.5	0	10.5	10.9	10.5
Ford LNT8000, 6X6	0	0	0	9.6	9.6	9.6
*IH1850, 6X4	0	1.5	6.1	16.1	17.8	31
*IH1850, 6X6	0	0	0	9.5	9.5	9.5

* International Harvester

Table B20

Performance Data for the Study Vehicles Crossing Linear Features (Water-Crossing) in the HIMO West Germany Study Area

Vehicle	Hours per Mile		
	Dry	Wet	Snow
1-1/4-Ton Cargo Trucks			
M880, 4X4	.108	.112	.111
M890, 4X2	.108	.112	.111
2-1/2-Ton Cargo Trucks			
M35A2, 6X6	.108	.110	.111
M35 PIP, 6X6	.108	.110	.111
Ford LN8000, 4X2	.108	.110	.111
Ford LN8000, 4X4	.108	.110	.111
Dodge W600, 4X4	.106	.110	.110
Dodge D700, 4X2	.106	.110	.110
International Harvester IH1750, 4X2	.108	.110	.111
International Harvester IH1750, 4X4	.108	.110	.111
5-Ton Cargo Trucks			
TARADCOM HMTT, 8X8	.101	.110	.110
German MAN, 4X4	.108	.110	.111
M813 PIP, 6X6	.108	.110	.111
M813A1	.108	.110	.111
Ford LNT8000, 6X4	.108	.110	.111
Ford LNT8000, 6X6	.108	.110	.111
International Harvester IH1850, 6X4	.108	.110	.111
International Harvester IH1850, 6X6	.108	.110	.111

APPENDIX C: COMPUTATION OF MOBILITY RATING SPEED FOR TACTICAL MOBILITY LEVELS

1. The equation for computing mobility rating speed is given as follows:

$$V_w = \frac{100}{\frac{P}{V_C} + PT_X + \frac{100 - P}{V_R}} \quad (1)$$

where:

V_w = mobility rating speed, mph, for a vehicle performing a mission for a specific area and condition

P = the percentage of expected off-road operating distance

V_C = the speed from the off-road profile, mph, corresponding to C

C = the percentage of the off-road terrain that should be negotiable

T_X = the time spent crossing linear features for each mile of off-road terrain traversed, hr/mi

V_R = the speed from the on-road speed profile, mph, corresponding to R

R = the percentage of the road and trail network that should be negotiable

2. The speed from the on-road profile, V_R, is not directly available from this study, but can be computed using the speeds from the profiles of the primary and secondary roads and trails as follows:

$$V_R = \frac{100 - P}{\frac{P_P}{V_{PP}} + \frac{P_S}{V_{SP}} + \frac{P_T}{V_{TP}}} \quad (2)$$

where:

P_P, P_S, P_T = percentage of the composite on-road and off-road network that are primary roads, secondary roads, and trails, respectively

V_{PP}, V_{SP}, V_{TP} = the speeds from the primary road, secondary road, and trail speed profiles, respectively, mph, that correspond to R

3. Equations 1 and 2 can be combined to yield the following:

$$V_W = \frac{100}{\frac{P}{V_C} + PT_X + \frac{P_P}{V_{PP}} + \frac{P_S}{V_{SP}} + \frac{P_T}{V_{TP}}} \qquad (3)$$

4. For this report, values for P , P_P , P_S , and P_T in the HIMO West Germany study area can be found for each tactical mobility level in Table 22, main text. Values for V_C , V_{PP} , V_{SP} , and V_{TP} are available from the speed profiles for the study vehicles given in Tables B1-B18. Values for T_X for each vehicle are available in Table B20.

In accordance with letter from DAEN-RDC, DAEN-ASI dated 22 July 1977, Subject: Facsimile Catalog Cards for Laboratory Technical Publications, a facsimile catalog card in Library of Congress MARC format is reproduced below.

Randolph, Donald D
Mobility performance of selected 1-1/4- to 5-ton cargo trucks in the HIMO West Germany Study Area (TACV excursion) / by Donald D. Randolph. Vicksburg, Miss. : U. S. Waterways Experiment Station ; Springfield, Va. : available from National Technical Information Service, 1978.
38, [73] p. : ill. ; 27 cm. (Miscellaneous paper - U. S. Army Engineer Waterways Experiment Station ; M-78-9)
Prepared for U. S. Army Training and Doctrine Command, Fort Monroe, Va., under Reimbursable Services No. CD 5-78.
References: p. 38.

1. Military vehicles. 2. Mission performance. 3. Off-road mobility. 4. On-road mobility. 5. Vehicle performance. I. United States. Army Training and Doctrine Command. II. Series: United States. Waterways Experiment Station, Vicksburg, Miss. Miscellaneous paper ; M-78-9.
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