

CONSEIL DE L'ATLANTIQUE NORD
NORTH ATLANTIC COUNCIL

EXEMPLAIRE N° 219
COPY

ORIGINAL: ENGLISH
25th April, 1955

NATO CONFIDENTIAL
DOCUMENT
AC/23(CD)D/105

CIVIL DEFENCE COMMITTEE

RESCUE OF TRAPPED PERSONS AND REMOVAL OF INJURED PERSONS

MAN-PACK EQUIPMENT

Note by Senior Civil Defence Advisor

Introduction

1. In addition to the replies from the United Kingdom and United States, to which reference is made in Section I of AC/23(CD)D/103, replies have now been received from the Netherlands and Canada, though the former is still somewhat tentative.

2. It is clear from these replies that there is a considerable divergence of opinion on the scope of the operations which a rescue team equipped with man-packs or pack-boards can, or should be expected to, carry out and in consequence of the equipment with which they should be provided.

3. Broadly speaking, the United Kingdom's conception is for the members of the rescue team (8 in all) each to carry, with the exception of the leader and driver, a weight averaging 42 lbs with some equipment carried by hand; those members of the team carrying the heaviest hand loads having the lightest man-pack. Belgium, Luxembourg and Greece agree with these proposals. The United States do not seem to have finalised their ideas, though they suggest certain additions to the United Kingdom's equipment.

4. The Netherlands suggestions for a team of 10 men are more comprehensive in some respects, as regards the equipment to be carried, than those of the United Kingdom, though they have not finally decided on the complete equipment for the team.

5. Canada, on the other hand, proposes to adopt a pack-board carrying technique for 6 members of a team of 8 men, (the leader and storekeeper-driver being left free of all loads). The average weight per person would be 84½ lbs.

The Problem

6. Because of these divergent conceptions, it is thought that a short note on the problem might be of value and lead to further thought on this most important question. It is even suggested that countries might like to experiment with the different types of equipment themselves, with a view to recording for NATO their views, especially in relation to their own problems. Although conditions in different countries vary to some extent, there might be some advantages in all NATO countries working on the same broad lines.

7. The problem is clear. The type of rescue vehicle which was used in the last war, and which is still required to carry

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all the equipment which experience has shown may be needed for full rescue operations cannot with existing designs traverse any streets which are covered with debris, even if this debris is only of minimum depth, unless some clearing operations have taken place. Such operations may be possible, but in any event a depth of debris will be reached which no vehicle can possibly hope to traverse in any circumstances.

8. There will almost certainly be large areas where rescue operations are required, and which can only be crossed or reached by personnel on foot, and the main problem therefore divides itself into a number of parts or stages:-

- (a) Areas where rescue vehicles can move, with or without some prior clearance, and in which rescue parties can operate if required, using all the equipment available in the rescue truck. The depth of penetration will vary greatly with local conditions, and it is probably unwise to attempt to be specific as to distance
- (b) Areas into which penetration is only possible on foot and rescue operations must be carried out with such equipment as can be carried by the rescue teams.
- (c) Areas into which penetration may only be possible by water and with such equipment as can be water-borne and perhaps can be carried by the rescue teams.
- (d) Areas into which penetration may only be possible by means of a helicopter, which could lower members of a rescue team carrying the minimum of equipment, though this would not preclude the bringing of heavier equipment if it was needed and could be used.
- (e) Areas into which penetration is impossible and in which rescue operations would, in any case, be useless.

9. So far as man-pack or pack-board methods of conveyance of equipment are concerned, there will clearly arise situations where only a light carry can be expected of rescue personnel; and others where a heavier carry is not only possible but desirable. In fact, from the point of view of rescue operations, a rough and ready guide might be that the greater the debris and the obstacles to be overcome, the lighter the equipment which should be carried because major rescue operations, in the time available for life-saving purposes, will probably be out of the question. This is, however, a question on which further practical experimental work may well be desirable, in view of the great importance of planning and training on the most up-to-date and best methods available.

10. If these assumptions are valid, therefore, there would seem to be a case for developing, as Canada has done, a maximum rescue team carrying capacity such as would enable light/medium rescue operations to be carried out, and at the same time, within this maximum, to have a standardised lighter version which could be used where the heavier team loads were impossible or unnecessary. The team loads would in this way be composite and could be varied as circumstances demanded, though it would probably be important that the light load should be standardised as has been done with the heavy load.

11. In all cases, the need will certainly arise, on occasions, for heavy equipment such as is normally carried in the rescue

vehicle - which may be a special vehicle or an ordinary requisitioned covered truck. There should therefore be a number of these vehicles available and, in the case of teams carrying their own equipment, one or more vehicles could act as a temporary mobile base for these teams, being driven in as near to the scene of operations as possible. It would seem to be important to develop techniques, such as are suggested by the Netherlands, by which heavy equipment might be transported by personnel if it should be needed, who would not of course normally be encumbered by a man-pack or pack-board load.

12. There will also be situations where rescue teams can work direct from the trucks in the ordinary way.

Training

13. Rescue personnel must, obviously, be trained in the use of the equipment they carry or may be required to use, and this must be on a team basis where a composite load is carried.

14. The United Kingdom, in revised rescue training proposals recently issued, have laid it down that, apart from certain general subjects, 26 hours' pure rescue training is to be the minimum standard for an ordinary member of a rescue team, this rescue training being limited to work with the equipment carried in the man-packs. Additionally there will be advanced training comprising a further 26 hours, which will deal mainly with the specialised techniques of rescue, using equipment normally carried in vehicles. Further selected members will be given an extra 6 hours' training in oxy-acetylene flame cutting and/or 2 hours' training in the use of portable flood-lighting units. Some members will be given driving instruction, and party leaders 7 hours' further training though these selected must have completed both the standard and advanced training syllabuses.

15. It is obviously a sound principle that the minimum standard rescue training, leaving out of account any general training that may be deemed desirable, should cover the use of the equipment carried by each rescue team. The actual number of hours which this standard rescue training will take will vary, naturally, with the composition of the loads, e.g. Canada may require more than the United Kingdom.

16. It is equally sound, in principle, to give team leaders the best and most comprehensive training possible, e.g. the United Kingdom require 33 hours' rescue training over and above the standard course. The actual amount prescribed must again be adjusted to suit local conditions and ideas.

17. The United Kingdom have prescribed an additional 26 hours to the standard course, which appears to be on a voluntary basis, and also to have a small pool of personnel trained in oxy-acetylene cutting and flood-lighting apparatus, which would be available to the rescue service generally.

18. So far as training is concerned, then, the problem which member countries have to face may be stated briefly as follows:

- (a) Is it better to aim at training every member of the rescue service up to a minimum standard, e.g. the use of the equipment which a team can carry, and then, with the exception of the team leaders who must clearly have the best training possible, to rely on personnel

volunteering to take additional training to bring their knowledge and skill up to a higher level?

- (b). Or is it better to start with the higher requirement and expect all personnel to have the full rescue training, which would include not only the equipment carried by a team, but also that carried in the rescue vehicle?

19. Method (a) should ensure that the maximum numbers will get the minimum training in the shortest time. But in view of the nature of the problems to be faced, it is equally desirable that as many members of the rescue service should have the full training as far as possible, and this would apply with special force to members of mobile columns.

20. Member countries must, naturally, work out their own salvation. But it would seem to be important that there is a generally agreed minimum standard of training, and it is suggested that this might be a useful subject for discussion, together with that of the pack equipment and the suggestions made in paragraphs 11 and 12.

(Signed) J. HODSOLL.

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