

## Chapter 9i

# South African Load-Bearing Equipment

Load-bearing equipment (LBE) is the modern equivalent of the hunter-gatherer's arrow quiver or spear satchel. Traditional LBE designs relied on equipment being hanged on the soldier, often draped over one or both shoulders. This belt-and-yoke combination has in recent decades made way for LBE worn by the soldier, much like a vest or jacket.

## Pattern 1983

The current SA Army LBE set is called *Combat Webbing Pattern 1983*. Information to hand at the SA National Museum of Military History (SANMMH) is that the webbing “shows the effect of the Border War (1966-1989) and developments in other countries, especially the Israeli EPHOD LBE and the US Air Force/US Army Aviator Survival Vest.

The kit consists of a

- Ammunition carrying vest, commonly called a “Battle Jacket”
- A breast pouch, generally called “chest webbing”, and
- A field pack, colloquially called a “Grootsak” or “large pack”.

### “Battle Jacket”

The ammunition carrying vest reflects the influence of the US Air Force/US Army Aviator Survival Vest, the M79 40mm grenade carrier vest and the late-pattern M69 body armour used by the British Army in Northern Ireland. “These equipments pointed to the advantage that could be gained from using a vest-type harness,” a SANMMH information note accompanying an exhibition of the LBE adds.

Advantages include the soldiers' ability to carry more items than is possible with the standard yoke-and-belt approach, typified by the US ALICE (All-purpose Light-weight Individual Carrying Equipment) LBE. The load weight is also better distributed as the soldier is “wearing” the load rather than having it hang from him. Lastly, the vest allows for flexibility in the types of load that can be carried.

Disadvantages include the jacket trapping body heat and causing the wearer to perspire “which causes considerable problems in the southern African summer,” the museum observes. The vest must also be properly fitted so that the weight is properly distributed. When ill-fitting, the jacket hangs from the soldier, rapidly tiring him. An even greater disadvantage is that unlike later US and British LBE, the “battle jacket” cannot comfortably be worn with the Pattern 1983 Field Pack.

### 1983 Pattern Breast Pouch

The breast pouch, or “chest webbing” is based on the “Chinese Communist”-style webbing worn by apartheid South Africa’s opponents in the Border War, namely the Cuban and Angolan armed forces and Namibian, Angolan as well as South African guerrillas (PLAN, UNITA, and MK, respectively). The three central magazines carry two R4 assault rifle magazines each, while a pouch on the left and right respectively take a hand grenade. There are further pockets on the left for a compass and for pencil flares.

### 1983 Pattern Field Pack

LBE of preceding patterns to the 1983 type, being designed for mechanised soldiers, were impractical for foot-borne infantry undertaking long marches in broken terrain, thick bush and jungle. The main shortcoming was the inability to carry sufficient rations and water for patrols of extended duration. The answer was found in the frame rucksacks used by mountaineers. These were already in use with the British and US armed forces, who called them “bergens” (after the city in Norway) or “rucks” respectively. Their use had proved successful and both countries then introduced military versions for use as part of a standardised LBE. The SANMMH continues: “The Pattern 1983 field pack is a very successful design that has only two disadvantages:

- If not properly fitted; it can cause the wearer severe discomfort. This is easily solved by paying attention to proper adjustment.”
- It cannot be worn [comfortably] over the 1983 Pattern ‘battle jacket’.

This has reduced the flexibility of combat webbing Pattern 1983.” To this one may add that the field pack frame is also too heavy, although this adds to durability.

The equipment set is worn with a Kevlar Ground Troops Helmet, based on an Israeli design. As such it replaced the Pattern 1963 helmet from the mid 1980s, when the former was adjudged too heavy and hot for bush and mechanised warfare. Although only slightly lighter than the Pattern 1963 helmet, the Kevlar helmet offers better ballistic protection. The prototype was tested at the Infantry School in 1983. The helmet consists of carbon fibre sheets bonded together with epoxy resin. The helmet is meant to absorb the energy of a projectile “thereby rendering it harmless.” The paratroops are issued a similar helmet copied directly from an Israeli design.

## Before Pattern 1983 LBE

Pattern 1983 LBE was the fourth generation of South African LBE, or more accurately, the fourth generation inspired by overseas developments. The first South African attempt at standard LBE was made in 1963 when a replacement for the British Pattern 1937 web

equipment, in use since World War Two was sought. Inventive South Africans had previously made and worn non-standard, or homemade, LBE, most notably during the South African War (Anglo Boer War, 1899-1902). Some Boer commandos wore homemade ammunition waistcoats with multiple pouches for rifle ammunition instead of or together with the more standard bandolier. The normal Boer bandolier carried 60 rounds and a Burger usually carried two, one characteristically slung over each shoulder. A waistcoat from this period on display at the SANMMH could carry 180 rounds. British soldiers, by contrast carried standardised LBE that came in three types: a design for officers, a design for the infantry and a design for supporting troops. The accuracy of Boer musketry convinced many British officers to adopt the dress of their soldiers, the rubric being that anyone distinctive on the battlefield is likely to attract fire. This is one of the reasons post-World War Two LBE no longer comes with an officers' only variant. One can comment on the fact that it took 40 years and three major conflicts for officers to learn not to draw fatal attention to themselves.

### LBE during and after the Great War

The Union Defence Force was established in 1912 and in 1913 adopted the then standard British LBE, Pattern 1908, the first complete infantry personal equipment made from web. The rifle was the main weapon of the infantry going into the Great War (1914-1918/9), and the Pattern 1908 LBE reflected this. Officers would normally wear the "Sam Browne" belt instead, and in fact wore it as part of their Field Service Dress until 1940. Many SA Army Reserve Regiments still wear the "Sam Browne" today with their ceremonial dress, essentially the pre-1940 field service dress.

Pattern 1908 web equipment cartridge carriers came in a left and right set, each of five pockets capable of taking 15 rounds. The left set was modified during the war in light of experience: the ammunition tended to get lost when the soldier leant against the trench parapet and contact opened the pouch flaps. A strap and stud fastening was added to prevent this. Non-infantry other ranks assigned as military police, signallers, drivers, tank crew and machine gun crew were generally armed with a Webley .455 revolver. They were issued with a Pistol set that consisted of the usual web belt but without the usual cartridge carriers, braces (shoulder straps) and brace attachments. Instead a pistol case and ammunition pouch was provided.

The outbreak of war in 1914 found the two manufacturers of web equipment incapable of upping production sufficiently – production was geared to 10,000 sets a year. Attempts to boost this were hampered by a shortage of specialised machinery required to make the belts and braces. For this reason, the British reverted to leather equipment, issuing the Pattern 1914 leather infantry equipment in short order. The kit included two web items, the large pack and haversack, but the straps were of leather. There were small differences between this LBE and the Pattern 1980s, mostly in the design of the ammunition pouches. The equipment was originally intended for training use only, but the exigencies of war and supply difficulties meant the equipment was also used on the front line,

including the regiments of 1 SA Brigade (part of the 9<sup>th</sup> [Scottish] Division) at Delville Wood in July 1916. Officers in this period often wore a modified version of the standard infantry pattern equipment in order to escape the attention of snipers. At Delville Wood, for example, 3 SA Infantry (Transvaal) officer commanding, Colonel EF Thackeray, modified a kit to carry his binoculars and revolver. The kit, on display at the SANMMH, included belt and braces, ammunition pouches, a haversack and water bottle with carrier.

The UDF turned in its Pattern 1908 equipment in 1936 when under pro-Nazi defence minister Oswald Pirow it underwent a series of modernisations. The old LBE was seen as unsuitable for mechanised warfare. It was thought mechanised warfare would result in a reduced demand for small arms ammunition and that no items should be carried below the waistline. Braithwaite No3 Pattern Web Equipment was worn until 1940 when it was replaced with the British Pattern 1937, a variation on the Braithwaite kit that allowed for the carriage of several Bren (Brno Enfield) light machine gun (LMG) magazines. The Braithwaite LBE allowed a soldier to carry 60 rounds of .303 (7.7mm) ammunition.

The SANMMH notes that the dominant influence on the design of the Pattern 1937 LBE was the experience of World War One, weighed against the perceived needs of mechanisation, which for the British and UDF meant lorry-borne infantry, rather than infantry transported in armoured halftracks, as was the case with their German peers.

World War One, as the Great War came to be known after the outbreak of World War Two, saw the widespread use of grenades, mortars and LMG in addition to antitank rifles, submachine guns (SMG) and flamethrowers, which were used in limited numbers. Much of this was used at the platoon level and below, meaning individual soldiers had to carry these weapons, or at the very least help carry ammunition for these weapons in addition to bullets for his own weapon and some grenades.

By the end of the First World War it was obvious the major part of the infantry's firepower was generated by the LMG. This led to the reorganisation of the infantry platoon into three sections, each armed with a LMG, a model that replicated the WW1 Lewis Gun section. This consisted of a machine gunner with a Lewis LMG and a number of riflemen to provide local security and carry Lewis gun magazines. The adoption of the Bren required individual LBE to allow for the carriage of extra Bren magazines.

## LBE in WW2

The UDF adopted Pattern 1937 LBE in 1940 and would wear it for 24 years. IT was the first British web equipment set designed as a "universal pattern" LBE. Even so, it came in four issues:

- Infantry set with basic pouches
- Cartridge carrier set for non-infantry
- Pistol set

- Officers' set

In use it was supplemented with special items such as pouches that could accommodate extra Bren ammunition and Boyes antitank rifle ammunition. There was also a pouch for the Thompson SMG drum magazine and another to carry a spare Bren barrel. In battle this would be supplemented with 50-round cotton bandoliers.

The basic Pattern 1937 equipment set consisted of a

- Waist belt
- Pair of braces
- Pair of basic pouches
- Bayonet frog
- Haversack
- Water bottle and carrier
- Entrenching tool (not used in Italy, where a normal spade and pick was carried)
- Pattern 1908 large pack (not carried in the battle zone)

The basic pouches could carry

- 2 Bren magazines, or
- 4 Thompson or Sten SMG magazines, or
- 15 5-round .303 clips (75 rounds).

WW2 soldiers were also outfitted with the Steel Helmet MkII, a development of the WW1 Steel Helmet MkI, which included better ballistic protection, a flatter rim and better liner. The helmet was replaced in South African service from 1964 with the French-inspired Pattern 1963 Ground Troops Helmet. The SANMMH records that the Pattern 1937 LBE was replaced in January 1964 when that years' crop of National Service ballotees were issued the South African Pattern 1961/64 LBE. The last time it was worn was by some troops, likely from Reserve units, during Operation Savannah in 1976.

### The 1960s

The immediate aftermath of WW2 saw soldiers carrying the same weapons as during the conflict and the same LBE. Gradually, the introduction of a new generation of infantry weapons, namely the assault rifle and the general-purpose machine gun (GPMG) forced a review of the issue LBE. Britain in 1958 adopted the Pattern 1958 LBE that catered for its variant of the 7.62x51mm NATO-calibre FN FAL assault rifle, the SLR (self-loading rifle). It also adopted the FN MAG GPMG as a replacement for the Bren LMG and the Vickers medium machine gun. The Pattern 1958 therefore had to cater for the belt-fed GPMG and the magazine-loaded SLR.

South Africa in 1964 also adopted a variant of the FN FAL, calling it the R1, and the FN MAG. The Bren was phased out, says the SANMMH because local industry could not

satisfactorily convert the weapon from .303 (7.7mm) to 7.62x51mm NATO. The Vickers was replaced because the MAG was less complex and less prone to stoppages, making training easier.

As a result, it adopted a variant of the Pattern 1958, calling it the Pattern 1961. Politics also entered the equation. The Pattern 1937 was designed for mechanised conventional warfare. By the 1960s colonial powers everywhere were facing the perils of guerrilla warfare, for which WW2-type LBE were unsuitable. Guerrilla warfare made different demands on the soldier, principally the requirement that they undertake long patrols in rugged or jungle terrain away from mechanised transport. At the same time, however, the colonial powers had to remain ready to engage the Warsaw Pact in conventional combat. These conflicting demands would cause the designers of LBE considerable difficulties in finding a universal design that would cater for both. The SANMMH notes that in most cases the equipment available in the 1950s was sufficiently flexible to meet most of the demands made on them.

The adoption of the R1 and the GPMG forced the SA Army to cast about for a replacement for the Pattern 1937. They obtained sample sets of the British Pattern 1958 LBE in 1960 and subjected them to a series of tests. A modified version was deemed suitable for South Africa and put into production. “Unfortunately a standardised example was not produced and sets produced to the 1961 specification were found unsatisfactory,” the SANMMH says. This led to a 1962 specification that solved some of the problems. A final attempt at standardisation led to a 1964 specification. “The existence of three separate patterns, the components of which were interchangeable, led the SA Army to designate the result the 1961/64 Pattern Web Equipment. This equipment set also proved unsatisfactory, and the Council for Scientific and Industrial Research (CSIR) was contracted to help develop a new LBE set, standardised as the Pattern 1970. This was introduced into service that same year.

The same timeframe saw the replacement of the Steel Homet MkII with the Pattern 1963 Ground Troops Steel Helmet, which was based on a French design. Introduced in 1964, this consisted of magnesium steel outer with a plastic inner. These were quickly nicknamed the “staaldak” and “doiby”/“mosdop” by the troops. These were worn by successive generations of national servicemen during all phases of “conventional warfare” training and became synonymous with battle training in the combat arms of the SA Army. The helmet remained in service into the 1980s, when replaced with a Kevlar helmet.

### The 1970s

The Pattern 1970 LBE replaced three separate magazine pouches with a single type. Four of these were worn in the standard configuration. Each was designed to carry two R1 or five Uzi SMG magazines. Alternatively, it could carry one GPMG belt (50 rounds) or two PRB108 hand grenades. The pouches could be attached to the waist belt or the waist

band of the kidney pouch assembly. This assembly itself replaced the separate kidney pouches typical of the British Pattern 1958 and South African Pattern 1961/64. At the joint between the two kidney pouches is a “D” ring to which a water bottle can be attached. The kidney pouches normally carried a soldier’s mess kit and rations as well as some toiletries, spare clothing and loose rounds. On the sides are integral magazine pouches and on the left kidney pouch an integrated bayonet frog. The plastic water bottle was a copy of the US Army’s Model 1980 canteen with a new-style water bottle carrier and metal cup, popularly known as a “fire bucket”, used by soldiers in field conditions as a kettle, shaving and toothbrush bowl, a skillet, a coffee cup and much more beside. In place of the separate pistol and compass cases of the 1961/64 kit was a combined case. The new LBE also introduced a general purpose haversack, known as a “patrol bag” and a gasmask carrier. A separate bayonet frog was introduced for wear on the waist belt.

The Pattern 1970 LBE also provided for a frame for the large pack, the idea being to achieve a better distribution of load as well as to provide the soldier a more flexible LBE. Field testing was, however, inconclusive and the frame was not introduced into service.

### The 1980s

The early 1980s saw a third South African attempt at designing a LBE set suitable to the conditions of the Bush War as well as conventional campaigning. This would lead to the introduction of the Pattern 1980 LBE, which the SANMMH notes was a way-station to the general purpose Pattern 1983 LBE from the mechanised-orientated Pattern 1970. The design incorporated the standard slide-keepers for fastening individual equipment items to the waist belt and patrol jacket which had been a feature of US LBE since 1956.

Pattern 1980 was based on the US ALICE gear that allowed much greater flexibility in load than the existing South African LBE. It allowed a soldier to modify his LBE to carry a variety of loads and the various components of the kit could be fitted or deleted according to the mission to hand or the individual soldiers’ requirement. However, the design was overtaken by the development of new materials for LBE. In addition, the trend towards load-bearing vests had rendered yoke-and-belt designs obsolescent.

Nevertheless, the equipment had two main configurations:

- A patrol jacket/load-bearing vest: This was designed so that the soldier wears rather than carries the combat load. The web loops on the vest are designed so that various types of pouches can be attached to the vest, as determined by the mission or individual preference. This system allowed a considerable amount of load flexibly. The jacket showed the continuing need for a LBE set optimised for motorised and mechanised infantry. It was also the SA Army’s first attempt at a load-bearing combat vest. It was meant for short-range patrol work and had a collar strap to facilitate the extraction of wounded or dead soldiers from a vehicle. The main objection to the vest was that it was too hot for bush conditions. As more modern material was available, the Pattern 1980 Patrol Jacket was not mass produced.

- The yoke and waist belt: This was closely configured on ALICE and allowed a greater degree of flexibility in load carrying than Pattern 1970 and its modifications allowed. It was particularly useful in situations where marching infantry had to carry heavy combat loads. There were two types of ammunition pouches: that for the 20-round R1 and 35-round R4 magazines or for the 50-round R4 assault magazine. Extracting a 35-round magazine from a 50-round pouch was said to be “a considerable problem”.

The kit included an entrenching tool carrier and a radio bag as well as two types of water bottle: a one litre kidney bottle with “fire bucket” and a two-litre bottle. The kit also included a multi-purpose carrying pouch or “rear pack”. This was principally used to carry rations and mess kit. It was later also used as part of the personalised LBE of soldiers assigned to the Reconnaissance Regiments and the Reconnaissance Wing of 32 Battalion.