

Mechanical Aid Catalogue

Issued by :
Automotive Plant Section
Victoria
1982



Telecom Australia

STOLEN FROM SIMON MARRIERS

FOREWORD

To assist Engineers and Field Supervisors in the selection of Plant for their various requirements, a booklet on Mechanical Aid Plant used by **Telecom** has been produced by the Automotive Plant Section.

On each page is a picture of a Mechanical Aid followed by a brief description of capacity and basic operating characteristics. Only the latest types of each classification are shown which will result in some in service plant not being included in the booklet.

The booklet is designed so that individual pages can be either added or deleted when new plant comes into service. The method of page numbering (located at the top right hand corner) is based on the Mechanical Aid Classification prefix, so that plant of the same basic type can be grouped together.

It is the aim of Automotive Plant to supply this booklet to all Engineers and Field Supervisors involved with Mechanical Aid Plant. When new items of plant become available, additional pages will be printed, appropriately indexed and forwarded to the officers concerned.



Supervising Engineer
AUTOMOTIVE PLANT SECTION

May 1982

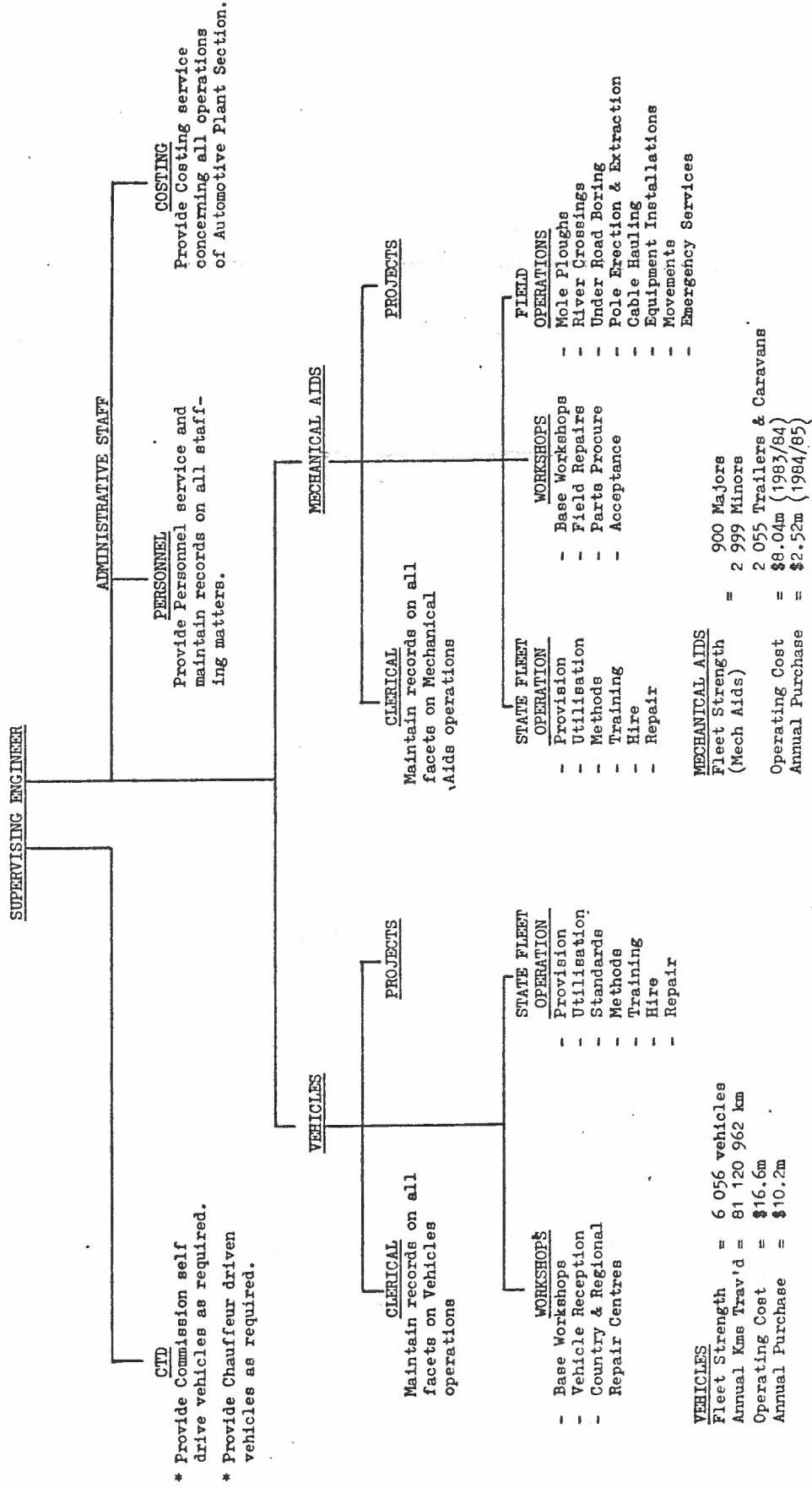
AUTOMOTIVE PLANT SECTION

AUGUST 1984

OBJECTIVE

To cater for Telecom's needs for motor vehicles, mechanical aids, trailers, caravans and allied equipment by integrating the provision, utilisation and maintenance of this equipment in a manner aimed at achieving maximum productivity at field level. Also provide self drive and chauffeur driven vehicles to Telecom.

ORGANISATION Total Staff : 366



- * Provide Commission self drive vehicles as required.
- * Provide Chauffeur driven vehicles as required.

LEGAL USE OF THE COMMISSION'S FLEET OF HEAVY VEHICLES, MECHANICAL AIDS, TRAILERS AND SEMI-TRAILERS ON STATE ROADS.

1. INTRODUCTON.

Certain State regulations apply to the legal road use of the Commission's fleet of heavy vehicles, articulated vehicles, selected mechanical aids and heavy vehicle/trailer combinations.

The following information is provided to assist in the understanding of these regulations and supplements Victorian Engineering Instruction Office Procedure, Transport L.0010(V) "Driver's Licences. Motor Transport".



Typical articulated vehicle requiring full articulated endorsement.

2. ENDORSEMENTS TO DRIVER'S LICENCES.

The Driver's Licences of staff driving heavy vehicles, selected mechanical aids and/or trailers and articulated vehicles are required to be endorsed. There are 3 types of licence endorsements which are issued by the Victorian Police and they apply as follows: —

(a) Heavy Vehicle Endorsement is required when the vehicle to be driven: —

(i) weighs more than 3 tonnes unladen (i.e. tare greater than 3 tonnes)

OR

(ii) is designed for the carriage of passengers and with a seating capacity for more than 12 persons not including the driver

OR

(iii) is fitted with any plant or apparatus which gives a combined weight of the vehicle and plant or apparatus of more than 3 tonnes.



PHOTO NO. 1 (i) INTERNATIONAL D1610 (ii) HENLEY FORKLIFT TRUCK

GROSS 6.260 t
 *TARE 3.212 t
 LOAD 3.048 t

GROSS 6.40 t
 *TARE 4.00 t
 LOAD 2.40 t

PHOTO NO. 2 DODGE 400

GROSS 6.260 t
 *TARE 3.212 t
 LOAD 3.048 t





PHOTO NO. 3. CASE BACKHOE & FRONT END LOADER

GROSS
*TARE 5.30 t
LOAD

Photos 1, 2 and 3 show typical examples of mechanical aids and vehicles which require an operator to hold at least a heavy vehicle endorsed licence. For other typical examples refer to Table 1.
*NOTE: Tare weights are greater than three tonne.

TABLE 1 — Typical Examples of Mechanical Aids and Vehicles Requiring Heavy Vehicle Endorsement.

(Note: It is the unladen weights which are considered only).

VEHICLE OR MECHANICAL AID	WEIGHT (TONNES)			HEAVY VEHICLE ENDORSEMENT REQUIRED
	Gross (Laden)	Tare (Unladen)	Load	
3 Tonne Capacity Cartage Truck — Bedford J2	5.7	2.5	3.2	No
5 Tonne Capacity Cartage Truck — Ford D Series	8.6	3.7	4.9	Yes
Workbasket on 3 Tonne Capacity Truck Chassis — Abbey SK.300 on Bedford J2	5.7	3.8	1.9	Yes
Front End Loader 0.6 cubic metre bucket — Ford 3500 Series		5.4		Yes
Fork Lift Vehicle Medium Size — Toyota FG.32		5.0		Yes
Post-Hole Borer — Telelect IPG	9.6	9.6		Yes

- (b) Large Trailer Combination Endorsement is required if the vehicle to be driven is a heavy vehicle as described in paragraph (a) which is towing a trailer weighing more than 750 kilograms (.75 tonne) unladen. Refer to table 2 for typical trailer weights.

However, if such a trailer is towed by a vehicle weighing less than 3 tonnes, it is recommended that it should be driven by a person holding a Large Trailer Combination Endorsed Licence even though this is not required by law.



PHOTO NO. 4. PARTY TRUCK
(TARE LESS THAN 3t) TOWING 250 CFM
COMPRESSOR (TARE GREATER THAN .75t)

— LARGE TRAILER COMBINATION
ENDORSEMENT IS STRONGLY RECOMMENDED
FOR THIS TYPE OF COMBINATION.

PHOTO NO. 5. WINCH TRUCK
(TARE GREATER THAN 3t) TOWING 250 CFM
COMPRESSOR (TARE GREATER THAN .75t)

— LARGE TRAILER COMBINATION
ENDORSEMENT IS REQUIRED BY LAW FOR
THIS TYPE OF COMBINATION.



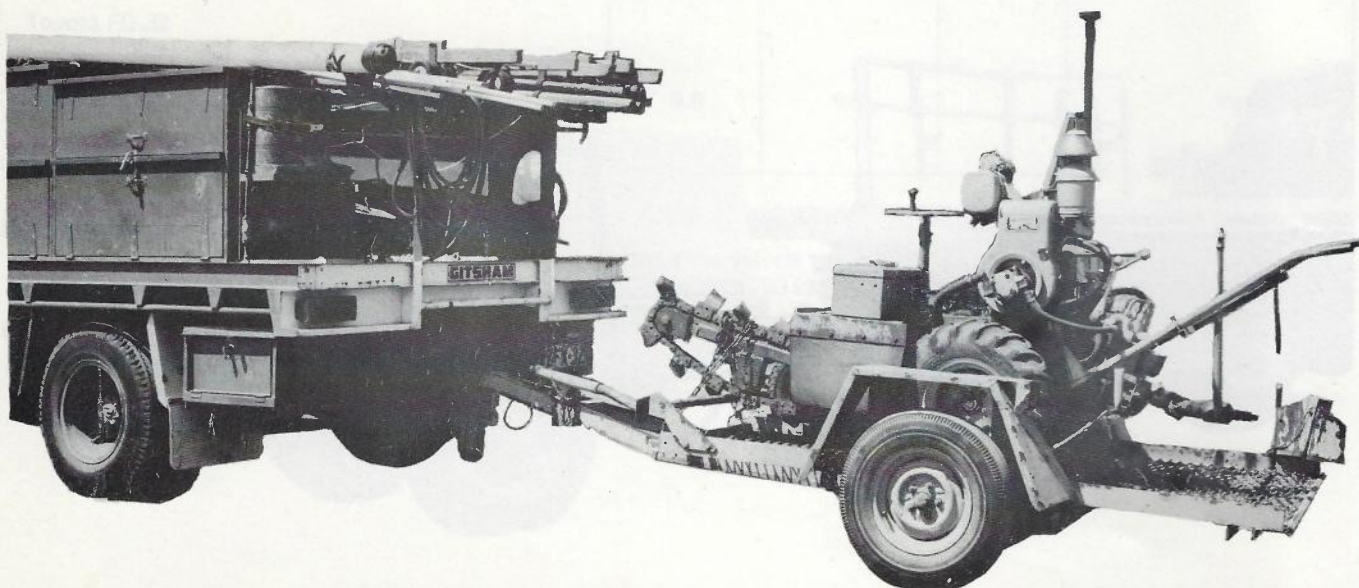


PHOTO NO. 6. WINCH TRUCK
(TARE GREATER THAN 3t) TOWING V-30 ON
TRAILER (TARE GREATER THAN 0.75t)

— LARGE TRAILER COMBINATION
ENDORSEMENT IS REQUIRED BY LAW FOR
THIS TYPE OF COMBINATION.

PHOTO NO. 7. PARTY TRUCK
(TARE LESS THAN 3t) TOWING M4 DITCHER
ON TRAILER (TARE LESS THAN 0.75t)

— NO ENDORSEMENT IS REQUIRED FOR
THIS TYPE OF COMBINATION.



Photos 4 to 7 show various types of combinations of vehicles and trailers and the type of endorsement required or recommended.

TABLE 2 — Typical Trailer Weights and Endorsement Requirements.

(Note: It is the unladen weights which are considered only)

TRAILER	WEIGHT (TONNES)			LARGE TRAILER COMBINATION ENDORSEMENT REQUIRED
	Gross (Laden)	Tare (Unladen)	Load	
Spoil Trailer 1 Tonne Capacity	1.3	0.3	1.0	No
Jointers Trailer 0.75 Tonne Capacity	1.15	0.4	0.75	No
Air Compressor Silenced 125 CFM	1.5	1.5	—	Yes
<i>CASE DAVIS 1474 + DIGZALL (slightly less)</i> Air Compressor Silenced 250 CFM	<i>1.5</i>	<i>0.6</i>	<i>0.9</i>	Yes
<i>R30 Ditcher Trailer</i> V30 Ditcher Trailer	<i>3.4</i>	<i>1.1</i>	<i>2.3</i>	<i>Yes</i>
<i>CASE DAVIS - TRAK FORCE</i> R65 Ditcher Trailer	<i>2.4</i> <i>6.2</i>	0.9	1.5	Yes
OR Fiat 505 Trailer	R65 4.1 Fiat 505 5.1	1.5	R65 2.6 Fiat 505 3.6	Yes

(c) Articulated Vehicle Endorsement is required if the vehicle is articulated i.e. pivots by means of a turntable arrangement.

EXAMPLES: All semi-trailers and low-loaders



PHOTO NO. 8. INTERNATIONAL D1610 PRIMEMOVER WITH ARTICULATED TRAY.

3. DRIVER'S LICENCE AND ENDORSEMENT REQUIREMENTS FOR MECHANICAL AIDS.

Table 3 below, lists the full range of mechanical aids operated by District Lines staff and specifies the Driver's Licence qualifications necessary for the legal operation of these units.

Staff nominated for operation of, or training on the mechanical aids listed must have as a pre-requisite the appropriate licence qualifications.

TABLE 3 – Licence Endorsement Required for Typical Mechanical Aids.

MECHANICAL AIDS	NONE	ORDINARY LICENCE	HEAVY ENDORSEMENT
Ditchers: Small – M4, Wenco, Digzall Mk18	✓		
Medium – Ditchwitch V30, R30		✓	
Large – Ditchwitch R65, Davis Roadrunner.			✓
Cranes Tractor Mounted – 3 ton, 5 ton, 8 ton capacity units	Yard Use Only	Yard Use Only	✓
Truck Mounted – Robolift, Atlas 4006, Cranvel Hydrolift			✓
V Kart	Yard Use Only	✓	
Fork Lifts: Small – Crown Pedistacker, Clarke Power Worker	✓		
Medium – Henley Hawke and Merlin, Toyota FG32	Yard Use Only	Yard Use Only	✓
Large – Henley Hercules, Hyster Challenger, Clarke C.500	Yard Use Only	Yard Use Only	✓

MECHANICAL AIDS	NONE	ORDINARY LICENCE	HEAVY ENDORSEMENT
Winch Trucks: All			✓
Travel Towers: All			✓
Front-end Loaders: Large — Ford, Massey Ferguson			✓
Small — Scatback		✓	
Combination Back-Hoe: Large — Poclair			✓
Medium — John Deere, Ford			✓
Small — Cranvel Wombat, Little Digger		✓	
V30 with back-hoe attachment		✓	
Wheeled Tractors: All — Massey Ferguson, Fiat			✓
Post Hole Borers: All — Telelect and Proline			✓
Under-Road Borers: All	✓		
Snow Vehicles: All		✓	
Crawler Tractors: All			✓

4. VEHICLE/TRAILER — WEIGHT RATIO AND COMBINED ALLOWABLE WEIGHT.

The actual weight of a trailer and its load which can be safely and legally towed behind a particular vehicle is determined by two independent factors:

- (i) The combined weight of the trailer, vehicle and total load must not exceed by more than 10% the vehicle's GROSS COMBINED WEIGHT as stated on the vehicle's compliance plate.
- (ii) The total weight of a trailer and its load must not exceed that of the towing vehicle and its load by more than 10% if the trailer is not fitted with brakes.

NOTE: If the trailer is fitted with brakes then no ratio limit is required by law, provided point (i) is adhered to.

TABLE 4 — TOWING CAPACITY OF VEHICLES

(same as CWT/20)

VEHICLE TYPE & MODEL		DOM. PREFIX	TARE	GVM	GCM	TOWING CAPACITY	
						VEHICLE LOADED (GCM-GVM)	VEHICLE EMPTY (GCM-TARE)
TC30	Ford F350	EFX	2.26	4.53	6.13	1.60	3.77
	Dodge D5N 326	EDX	2.31	3.84	6.80	2.96	4.49
	Inter D1310	EJX	2.49	4.90	7.55	2.65	5.06
TL30	Ford F250	EFX	2.04	3.44	4.46	1.02	2.42
	Ford F350	EFX	2.70	4.53	6.13	1.60	3.43
	Dodge D5N 326	EDX	2.31	3.84	6.80	2.96	4.49
	Inter D1310	EJX	2.49	4.90	7.55	2.65	5.06
TP30	Dodge D5N 356	EDX	2.76	4.40	6.80	2.40	4.04
TC60	Dodge D5N 466	FDX	2.83	6.30	9.07	2.77	6.14
	Inter D1510	FJX	2.86	6.12	11.35	5.23	8.39
	Ford D0712	FFX	3.08	6.10	9.60	3.50	6.52
TL60	Dodge D5N 466	FDX	3.17	6.58	9.07	2.49	5.90
	Ford D0712	FFX	3.28	6.10	9.60	3.50	6.32
TP60	Dodge D5N 466	FDX	3.30	6.58	9.07	2.49	5.77
	Inter D1510	FJX	3.19	6.12	11.35	5.23	8.16
TT60	Dodge D5N 466	FDX	3.70	6.66	9.07	2.41	5.37
	Ford D0712	FFX	3.34	6.10	9.60	3.50	6.26
TC100	Inter D1610	GJX	3.29	8.85	14.50	5.65	11.21
	Dodge D5N 576	GDJ	3.48	8.62	10.21	1.59	6.73
	Inter ACCO 1710A	GJX	4.38	10.10	17.50	7.40	13.12
	Bedford EFN3	GBX	3.52	9.75	14.99	5.24	11.47
TT100	Inter D1610	GJX	3.92	8.85	14.50	5.65	10.58
TC140	Inter ACCO 1810B	GJX	4.86	12.85	20.90	8.05	16.04
TT140	Ford D1211	GFX	5.04	12.90	18.80	5.90	13.76
	Inter ACCO 1810B	GJX	5.33	12.85	20.90	8.05	15.57
TL40 (4x4)	Inter D1410 (4x4)	GJX	3.10	5.66	9.10	3.44	6.00

NOTE: i. All figures are in tonnes.

ii. TC = Cartage truck, TL = Lines truck, TP = Party truck, TT = Tipper truck.

iii. TARE = Unladen weight of vehicle.

GVM = Gross vehicle mass permitted.

GCM = Gross combined mass of both vehicle and trailer permitted.

TABLE 5 — TOWING CAPACITIES OF TRUCK MOUNTED MECHANICAL AIDS

All figures are in tonnes

MECH AID TRUCK CHASSIS MODEL	TARE	GVM	GCM	TOWING CAPACITY	
				VEHICLE LOADED (GCM-GVM)	VEHICLE EMPTY (GCM-TARE)
Bedford MFR	DEPENDANT UPON THE PARTICULAR MECHANICAL AID FITTED	11.18	14.99	3.81	DEPENDANT UPON THE PARTICULAR MECHANICAL AID FITTED
" MJR		11.18	14.99	3.81	
" J5		8.84	14.99	6.15	
Ford D1211		12.90	19.05	6.15	
International Harvester C1600		8.85	14.50	5.65	
" " C1600 (4x4)		9.07	13.60	4.53	
" " D1610		8.85	14.50	5.65	
" " D1610 (4x4)		9.07	13.60	4.53	
" " ACCO 510A (4x4)		7.50	10.45	2.95	
Dodge D5N/576		8.62	10.21	1.59	
Isuzu KS21	6.07	7.10	1.03		
" JBR420	12.00	15.00	3.00		

NOTE: TARE = Unladen weight of vehicle
 GVM = Gross vehicle mass permitted
 GCM = Gross combined mass of both vehicle and trailer permitted

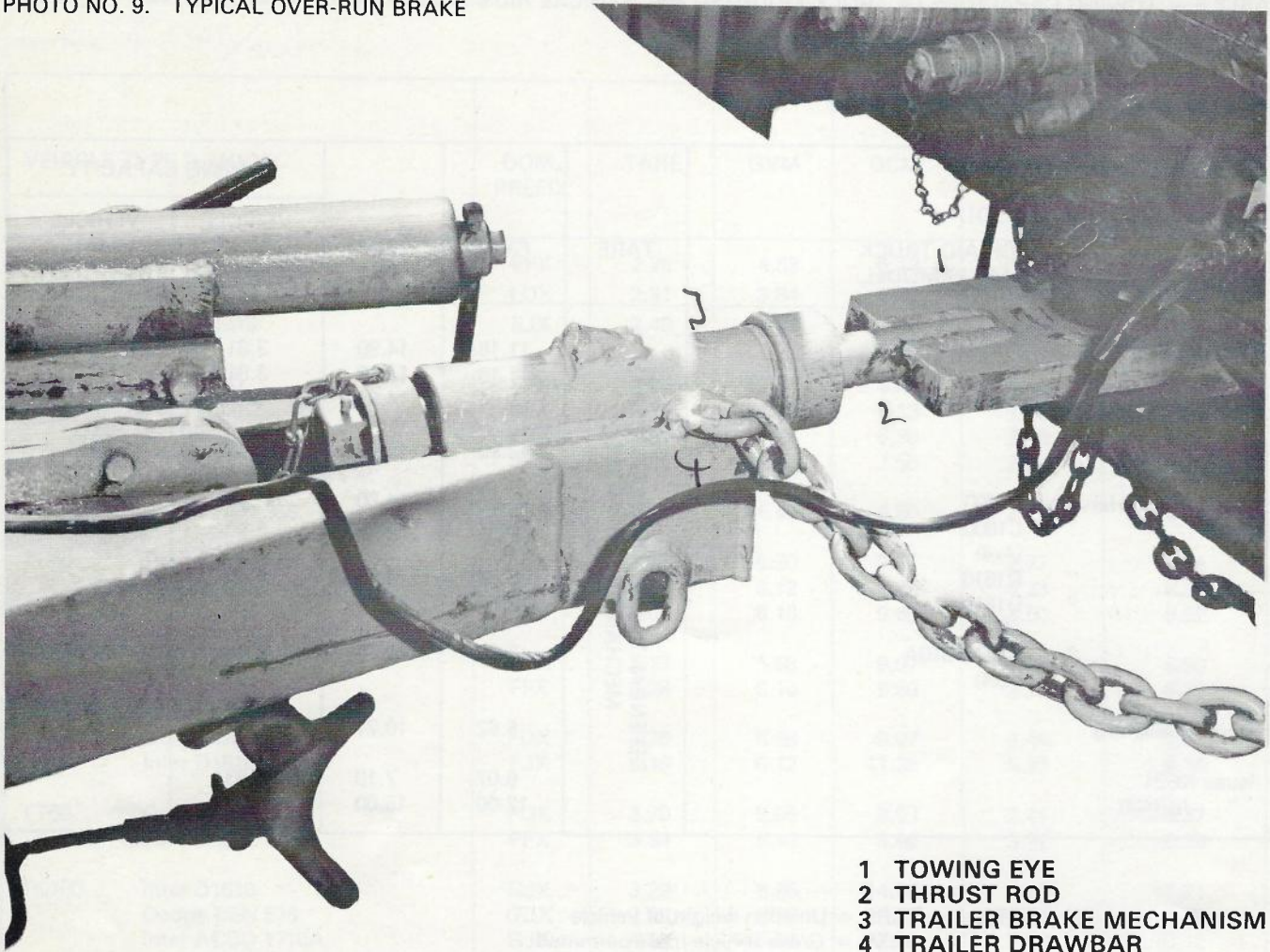
5. BRAKE REQUIREMENTS FOR TRAILERS.

Brakes on trailers are required as follows and the Commission's fleet of trailers is equipped with brakes in accordance with these requirements.

- (a) Trailers having an unladen weight of less than 500Kgs (0.5 tonnes) are not required to be fitted with brakes.
- (b) Trailers having an unladen weight of 500Kgs or more are required to be fitted with brakes. The brakes are of the types shown below and must operate on 2 or more wheels of any axle.
 - (i) Over-run brakes: for trailers with unladen weights of between 500Kgs and 1 tonne;
 - (ii) Vacuum or Air Brakes: for trailers with unladen weight exceeding 1 tonne.

Trailers having a gross weight exceeding 2 tonnes must have vacuum or air brakes such that if the trailer becomes detached from the towing vehicle, the trailer brakes will be applied automatically and the brakes of the towing vehicle will remain fully operative.

PHOTO NO. 9. TYPICAL OVER-RUN BRAKE



- 1 TOWING EYE
- 2 THRUST ROD
- 3 TRAILER BRAKE MECHANISM
- 4 TRAILER DRAWBAR

Typical example of over-run brake mechanism.

When the vehicle brakes, the momentum of the trailer forces a rod to plunge in the trailer brake master cylinder or, in the case of mechanical brakes, to actuate a lever and cable system.

DRAFT

APPENDIX 1(1)

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Automotive Plant & Transport Engineering Standard

CLASSIFICATION AND NUMBERING
OF MECHANICAL AIDS
(INCLUDING CARAVANS AND
TRAILERS)

Issue 1
APRIL 1985

Prepared by: General Works Branch, Automotive
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Telecom Australia

TELECOM AUSTRALIA

AUTOMOTIVE PLANT
Mechanical Aids

CLASSIFICATION AND NUMBERING OF
MECHANICAL AIDS (INCLUDING CARAVANS AND TRAILERS)

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CLASSIFICATION AND NUMBERING OF
MECHANICAL AIDS (INCLUDING CARAVANS AND TRAILERS)

1. General

The purpose of this Technical Publication is to define the system by which Telecom's mechanical aids are classified and numbered.

Classifications and standard descriptions of mechanical aids are necessary to facilitate:-

- i. The establishment of hire rates.
- ii. Correspondence concerning machines.
- iii. Selection of suitable equipment.
- iv. The keeping of accurate records.
- v. The comparison of the performance of various machines.
- vi. The study of the economics of operation and maintenance.

2. Authority

The authority for classification of mechanical aids rests with the Engineering Department, Headquarters.

Machines are classified according to the role for which they are purchased by Telecom and not necessarily according to manufacturers' claims. If a machine appears to satisfy definitions of more than one class or of no particular class, classification will be determined by Automotive Plant and Transport, Headquarters. If the classification is not in doubt, the Automotive Plant Section shall determine the class in accordance with this instruction.

3. Definitions

3.1 Mechanical Aid. A mechanical aid is an item of plant which is included in the Classification List shown in Appendix 1, which may be varied from time-to-time.

- i. Major Mechanical Aids. A major mechanical aid is a machine which is sufficiently large or complex to warrant individual costing and submission of routine maintenance returns. Generally, its engine will have a performance rating in excess of 7.5 kW.
- ii. Minor Mechanical Aids. A minor mechanical aid is one which is:-
 - a. dependent upon another unit for power, but is not permanently attached thereto, or
 - b. fitted with its own engine but is of comparatively low value and complexity and the running cost is too low to warrant the keeping of individual records.

- 3.2 i. Truck or Tractor Mounted. A unit described as being truck or tractor mounted, is a major mechanical aid which incorporates a truck or tractor. The whole unit is considered to be a major mechanical aid.
- ii. Attachment. An attachment is an item of equipment which is dependent on a motor vehicle or mechanical aid for power and is considered as a part of the motor vehicle or mechanical aid. The domestic number allocated to the parent machine also cover all attachments belonging to that machine.
- iii. Trailer Mounted. A 'Trailer Mounted' mechanical aid is one which is capable of being towed, and meets State road regulations.
- iv. Skid Mounted. A 'Skid Mounted' mechanical aid is one which is commonly mounted on a base frame and is capable of being carried intact. The unit may or may not have dolly wheels.
- v. Self-Propelled. A 'self-propelled' mechanical aid is one which is capable of moving under its own propulsion, generally with the same power plant being used for movement and for operating the mechanical aid.
- vi. Portable. A 'portable' mechanical aid is one which is capable of being carried intact - this relates to minor mechanical aids.

4. Classification Codes

4.1 Basis of Classification. Mechanical aids are grouped into functional categories, generally in accordance with Australian Standard No. A.79. These categories are sub-divided according to type of machine.

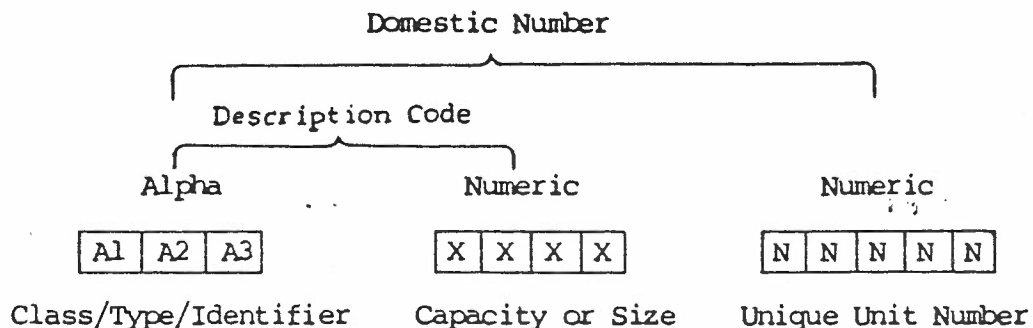
4.2 Method of Classification. The category to which each mechanical aid belongs is denoted by a Description Code, consisting of:

- i. Major Mechanical Aids: A two alphabetic character code used to determine Class and Type of machine, followed by a field of up to 4 numbers which specifies its Capacity or Size.
- ii. Minor Mechanical Aids: The prefix letter 'M' denoting a minor mechanical aid, followed by two letters as for a major mechanical aid.

Attachments and Accessories. Identification of individual attachments and accessories such as backhoe buckets, dozer blades and tynes, which are stored as pooled items, may be determined, where required by the State on a local basis. In such cases an 'X' prefix should be used in conjunction with the appropriate major mechanical aid classification. Example: Plough tyne for class 60C tractor will be designated XPC, followed by the numeric component.

4.3 Coding Structure

Domestic Number. This is a combination of the Description Code and a Unique Numeric Field which identifies the machine within the fleet.



The alphabetic character field includes:-

A1: Class Code eg. H = Excavating plant.
 A2: Type Code eg. T = Trencher, pneumatic tyred.
 A3: Used in conjunction with minor mechanical aids, caravans & trailers.

- i. Class Code. This describes the category to which the machine belongs. The class codes generally reflect the function of that group of machines. Example: Backhoes, Class Code "H" are included in Excavating and Re-instating Plant.
- ii. Type Code. This code describes the machine configuration within a particular class group. In some cases, more than one character may be used to describe an item. Example: the code to describe a caravan with laundry and toilet facilities is "CLT".
- iii. Rated Capacity or Size Code. This indicates the maximum machine performance capability or its mass. In the case of pumps, this refers to the minimum acceptable performance level which the pump must achieve.

4.4 Classification. The Description codes for major and minor mechanical aids are shown in Appendix 1.

5. Numbering

- 5.1 Basis of Numbering. The mechanical aid number consists of five (5) numeric digits which identify the particular machine. Each unit, irrespective of class or type, shall have a unique number within each State. For all States other than NSW, the numeric field for identification of mechanical aids shall range from 30,000 through to 59,999 inclusive. The range for NSW shall be from 50,000 through to 99,999 inclusive.
- 5.2 Method of Numbering. Numbers shall be allocated sequentially. When the upper range limit has been reached the early numbers will be available again and should be reallocated.
- 5.3 Allocation of Numbers. Numbers for mechanical aids shall be allotted by the State in which the machine is commissioned for service.
- 5.4 Transfer of Mechanical Aids. The number of a mechanical aid should not be changed when an Inter-State transfer takes place, unless this creates a duplication of a number. In any case, all history details of the machine must also be transferred.

6. Mechanical Aid Identification

- 6.1 The Domestic Number which consists of the Description Code and a unique number, will fully identify a mechanical aid within a State. The following examples illustrate the numbering process:
- i. The last machine number allocated was 32,750 and a trailer mounted air compressor with a capacity of 54 l/s is the next machine to be numbered. Its Domestic Number shall be BM 54 32751.
 - ii. The previous number allocated was 33,776 and a crawler tractor of 29 tonne, gross mass, which requires numbering would receive the Domestic Number PC 29 33777. The winch, angle dozer blade and support frame would all have the same number as the parent machine.

7. Marking

- 7.1 The marking of domestic numbers on mechanical aids shall be in accordance with E.I. Automotive Plant Vehicles A 2010. "Standard Colours and Marking for Mechanical Aids".

DESCRIPTION CODES FOR MAJOR AND MINOR MECHANICAL AIDS

CLASS	TYPE	RATED CAPACITY OR SIZE
A Transportable Accommodation Units.	A Hut, amenities.	Number of persons able to be accommodated.
	C Hut, change/ablution.	"
	D Hut, dining/recreation.	"
	K Hut, kitchen.	"
	L Hut, laundry.	"
	O Hut, office/work party.	"
	T Hut, toilet.	"
	Z Hut, sleeping/living.	"
	R Hut, class room	"
W Hut, ablution/toilet	"	
S Hut, stores.	Load, tonnes.	
<p>Note: A combination of secondary codes may be used to describe functions of the Unit. These codes shall be in alphabetical order. <u>Example</u>, diner, kitchen, DK; office store, OS. A maximum of 2 secondary codes are permitted.</p>		
B Compressors and Air Equipment.	M Air Compressor, trailer or skid mounted.	Air flow, l/s.
	T Air Compressor, truck mounted.	Air flow, l/s.
MB Minor.	A Air Compressor, portable.	Air flow, l/s.
	D Air Dryer, portable.	"
	V Ventilator.	"
	R Rodder unit.	Vacuum, mm HG.
C Caravans.	As for Transportable Accommodation Units. Caravan,	
D Concreting Equipment.	A Concrete Mixer, truck mounted.	Vol per batch, m3.
	B Concrete Batching Unit.	Vol per batch, m3.
	C Concrete Pump, trailer or skid mounted.	Flow Rate m3/hr.
	V Vibrator, pneumatic.	Air Volume reqd, m3/min.
MD Minor.	W Vibrator, flexdrive.	Head dia., mm.
	T Trowel Machine.	Blade dia., m.
	M Concrete Mixer, mobile.	Vol per batch, m3.
	C Concrete Pump, power Operated.	Flow rate, m3/hr.
	G Concrete pump, manual.	Flow rate, m3/hr.

DESCRIPTION CODES FOR MAJOR AND MINOR MECHANICAL AIDS

CLASS	TYPE	RATED CAPACITY OR SIZE
E Cranes, Hoists and Mechanical Handling Equipment.	A Crane, truck or chassis mounted.	Lifting moment, metre-tonne
	B Crane, tractor mounted.	"
	D Crane, slewing, crawler.	"
	E Crane, side boom.	"
	F Forklift, engine driven.	Load, tonnes.
	G Workbasket, truck mounted.	Reach, metres.
	H Forklift, electric.	Load, tonnes.
	L Loader, multi functional	Lifting moment, metre-tonne
	M Winch, trailer/skid mounted.	Force, kN.
	W Winch truck, cable hauling.	Force, kN.
ME Minor.	C Loading crane, hydraulic.	Lifting moment, metre-tonne.
	D Loading crane, electric.	"
	F Forklift, non self-propelled.	Load, tonnes.
	M Winch, trailer mounted.	Force, kN.
	S Winch, skid mounted.	Force, kN.
	W Winch, portable, poly rope pulling.	Force, kN.
	F Earth and Rock Drilling and Cutting Equipment.	A Borer, Under-road, skid mounted, incl. power unit.
B Borer, Polehole, tractor mounted.		Bore dia., mm.
C Borer, Polehole, truck mounted.		Bore dia., mm.
D Concrete Saw, self propelled.		Power, kW.
E Concrete saw, non-powered travel.		Power, kW.
F Rock splitter.		Bore dia., mm.
G Rock drill, trailer mounted.		"
H Rock Drill, crawler.		"
J Rock Drill, truck mounted.		"
MF Minor		A Breaker, pneumatic.
	B Drill, pneumatic.	"
	C Earth Borer, pneumatic.	Bore dia., mm.
	D Earth Borer, engine driven.	"
	E Concrete Saw, portable.	Power, kW.
	F Drill Breaker, engine driven.	"
	P Polehole Borer, truck mounted.	Bore Dia., mm.
	T Turf cutter.	Width of cut, mm.
G Electricity Generation.	A Generator Set, AC, over 6KVA.	Output, KVA.
MG Minor.	A Generator Set, AC, up to 6KVA.	Output, kVA.
	B Generator set, DC, up to 6kW.	Output, kW.
	W Welding set, mobile or skid mounted.	Output, kW.

DESCRIPTION CODES FOR MAJOR AND MINOR MECHANICAL AIDS

CLASS	TYPE	RATED CAPACITY OR SIZE
H Excavating and Reinstating plant.	A Backhoe, non-powered travel.	Gross Mass, tonnes.
	B Backhoe, wheeled tractor mounted.	"
	C Backhoe, crawler tractor mounted.	"
	G Excavator, crawler.	"
	P Trencher, pedestrian.	"
	T Trencher, pneumatic tyred.	"
	U Trencher, crawler.	"
MH Minor.	A Tamper, pneumatic.	Air flow, l/s.
	B Rammer, engine driven.	Shoe width, mm.
	C Rammer/breaker, hydraulic.	Pressure req'd, kPa.
J Hydraulic Plant.	A Pump, stationary or skid mounted, 25 l/s and over.	Flow, l/s at 3m suction Head
	B Pump, trailer mounted, 25 l/s and over.	"
	D Dredge.	Flow, l/s
MJ Minor.	A Pump, trailer mounted.	Flow, l/s at 3m
	B Pump, centrifugal, portable.	Suction Head
	C Pump, pneumatic, portable.	"
	D Pump, diaphragm, portable.	"
	E Pump, submersible, elec. port.	"
	F Pump, submersible, flexdrive, portable.	"
K Power Packs.	O Marine Outboard.	Power, kW.
MK Minor.	O Marine Outboard, up to 7.5kW.	Power, kW.
L Road and Site Preparation and Maintenance Plant.	G Grader.	Gross Mass, tonnes.
	R Roller, compaction.	Gross Mass, tonnes.
ML Minor.	A Sweeper, industrial, pedest.	Broom width, m.
	B Sweeper, industrial, ride-on.	"
	C Sweeper, bitumenising.	"
	D Broom, bitumenising.	"
	T Tar Spray, unit.	Purp capacity, l/s
N Vibratory Plough.	W Wheeled.	Max. Ploughing Depth, mm.

DESCRIPTION CODES FOR MAJOR AND MINOR MECHANICAL AIDS

CLASS	TYPE	RATED CAPACITY OR SIZE
P Tractors.	C Crawler.	Gross Mass, tonnes.
	W Wheeled, conventional	Gross Mass, tonnes.
	S Wheeled, Skid Steer	Gross Mass, tonnes.
Q Transportation Equipment, special.	M Miscellaneous.	Gross Mass, tonnes.
	R Rail Vehicle, powered.	Power, kW.
	S Snow vehicle, powered.	Gross Mass, tonnes.
R Floating Plant.	B Boat, powered.	Length, m.
MR Minor.	B Boat, non-powered.	Length, m.
S Vegetation Control Equipment.	C Chipper.	Power, kW.
	M Mower/Slasher, tractor mounted.	Width of cut, m.
MS Minor.	A Mower, rotary cut.	Width of cut, mm.
	B Mower, rotary cut, self-propelled.	"
	C Mower, ride-on.	"
	D Mower, cylinder cut.	"
	S Chemical Spray, motorised.	Flow, l/s
	K Chainsaw.	Bar, length, mm.
	X Brushcutter.	Engine capacity, cc.
	T Turf edger.	Engine capacity, cc.
R Rotary Hoe	Power, kW	
T Trailers.	B Boat Trailer.	Trailer load capacity, tonnes.
	C Cable Trailer.	"
	D Dog Trailer.	"
	G Cartage Trailer.	"
	P Plant Trailer.	"
	T Pole Trailer.	"
	J Jointers Trailer.	"
	X Coax Trailer.	"
W Water Tank Trailer.	Trailer, Volume capacity, kl	
V Vehicle Trailers for Road Haulage.	D Dolly Trailer.	Trailer load capacity, tonnes.
	L Low Loader.	"
	S Semi Trailer.	"

DESCRIPTION CODES FOR MAJOR AND MINOR MECHANICAL AIDS

CLASS	TYPE	RATED CAPACITY OR SIZE
Z Miscellaneous Plant & Equipment.	T Tow Motor, engine driven.	Load, tonnes.
MZ Minor.	F Fire Fighting equipment.	Tank size, l.
	B Wire baler, skid mounted.	Volume, m ³ .
	A Arm Borer.	Bore size, mm.
	C PVC Pipe, cutter/welder.	Pipe dia. mm.
	T Tow Motor, battery driven.	Load, tonnes.

MAJOR MECHANICAL AID HIRE RATES AND HIRE RATE GROUPS - 1 JULY 1985

HIRE GROUP	TYPE OF PLANT	CLASSIF'N (CLASS LIMIT) *	HIRE RATE PER DAY (\$)
B1M	Air Compressor, trailer or skid mounted - up to 75 l/s.	BM 75	17
B2M	Air Compressor, trailer or skid mounted - 76 to 120 l/s.	BM 120	25
B3M	Air Compressor, trailer or skid mounted - 121 to 200 l/s.	BM 200	33
B1T	Air Compressor, truck mounted - up to 75 l/s.	BT 75	35
D1A	Concrete Mixer, truck mounted - up to 3m ³ .	DA 3	52
D1B	Concrete Batching Unit - up to 3m ³ .	DB 3	50
D1C	Concrete Pump, trailer or skid mounted - up to 25 m/hr.	DC 25	38
E1A	Crane, truck mounted - up to 6 metre-tonne.	EA 6	40
E2A	Crane, truck mounted - over 6 to 10 metre-tonne.	EA 10	45
E3A	Crane, truck mounted - over 10 to 20 metre-tonne.	EA 20	155
E4A	Crane, truck mounted - over 20 to 40 metre-tonne.	EA 40	175
E1B	Crane, tractor mounted - up to 15 metre-tonne.	EB 15	130
E2B	Crane, tractor mounted - over 15 to 20 metre-tonne.	EB 20	155
E1D	Crane, slewing, crawler - up to 15 metre-tonne.	ED 15	165
E2D	Crane, slewing, crawler - over 15 to 20 metre-tonne.	ED 20	185
E1E	Crane, side boom - up to 15 metre-tonne.	EE 15	160
E1F	Forklift, engine driven - up to 5 tonne.	EF 5	40
E2F	Forklift, engine driven - over 5 to 10 tonne.	EF 10	60
E1G	Workbasket, truck mounted - up to 12 m.	EG 12	70
E2G	Workbasket, truck mounted - over 12 to 20 m.	EG 20	85
E1H	Forklift, electric - up to 5 tonne.	EH 5	36
E2H	Forklift, electric - over 5 to 10 tonne.	EH 10	52
E1L	Loader, Multifunctional - up to 3 metre-tonne.	EL 3	80
E1M	Winch, trailer/skid mounted - up to 10kN.	EM 10	40
E2M	Winch, trailer/skid mounted - over 10 to 45 kN.	EM 45	55
E1W	Winch truck, cable hauling - up to 10kN.	EW 10	55
E2W	Winch truck, cable hauling - over 10 to 45 kN.	EW 45	72
F1A	Borer, under-road, skid mounted - up to 200mm.	FA 200	95
F2A	Borer, under-road, skid mounted - over 200 to 600mm.	FA 600	140
F3A	Borer, under-road, skid mounted - over 600 to 1200mm.	FA 1200	165
F1B	Borer, Polehole, tractor mounted - up to 600mm.	FB 600	90
F1C	Borer, Polehole, truck mounted - up to 600mm.	FC 600	180
F1D	Concrete Saw, self propelled - up to 13kW.	FD 13	45
F2D	Concrete Saw, self propelled - over 13 to 25kW.	FD 25	60
F1E	Concrete Saw, non-powered travel - up to 15kW.	FE 15	30
F1F	Rock Splitter - up to 50mm.	FF 50	25
F1G	Rock drill, trailer mounted - up to 50mm.	FG 50	60
F1H	Rock drill, crawler - up to 50mm.	FH 50	165
F1J	Rock drill, truck mounted - up to 50mm.	FJ 50	70
G1A	Generator Set - 6 to 35kVA.	GA 35	20

* CLASS LIMIT - Refers to the UPPER LIMIT in all cases, except for pumps, in which case the LOWER LIMIT applies.

HIRE GROUP	TYPE OF PLANT	CLASSIF'N (CLASS LIMIT) *	HIRE RATE PER DAY (\$)
H1A	Back-hoe, non-powered travel - up to 2 tonne.	HA 2	41
H1B	Back-hoe, wheeled tractor mounted - up to 5 tonne.	HB 5	80
H2B	Back-hoe, wheeled tractor mounted - over over 5 to 8 tonne.	HB 8	95
H3B	Back-hoe, wheeled tractor mounted - over 8 to 12 tonne.	HB 12	105
H1C	Back-hoe, crawler tractor mounted - up to 12 tonne	HC 12	105
H1G	Excavator, crawler - up to 25 tonne.	HG 25	165
H1P	Trencher, pedestrian up to 0.3 tonne.	HP 0.3	20
H2P	Trencher, pedestrian over 0.3 to 1 tonne.	HP 1	37
H1T	Trencher, pneumatic tyred - up to 1 tonne.	HT, 1	40
H2T	Trencher, pneumatic tyred - over 1 to 2 tonne.	HT 2	50
H3T	Trencher, pneumatic tyred - over 2 to 3 tonne.	HT 3	70
H4T	Trencher, pneumatic tyred - over 3 to 4 tonne.	HT 4	112
H5T	Trencher, pneumatic tyred - over 4 to 6 tonne.	HT 6	120
H1U	Trencher, crawler - up to 5 tonne.	HU 5	120
H2U	Trencher, crawler - over 5 to 10 tonne.	HU 10	150
J1A	Pump, stationary or skid mounted - 25 l/s and over.	JA 25	20
J1B	Pump, trailer mounted - 25 l/s and over.	JB 25	20
J1D	Dredge, - pump rating 25 l/s and over.	JD 25	40
K1C	Marine outboard - up to 50kW.	KO 50	15
L1G	Grader - up to 16 tonne.	LG 16	160
L1R	Roller, compaction - up to 20 tonne.	LR 20	160
N1W	Vibratory Plough, wheeled - up to 450mm.	NW 450	35
N2W	Vibratory Plough, wheeled - over 450 to 600mm.	NW 600	55
N3W	Vibratory Plough, wheeled - over 600 to 750mm.	NW 750	120
P1C	Tractor, crawler - up to 6 tonne.	PC 6	130
P2C	Tractor, crawler - over 6 to 10 tonne.	PC 10	175
P3C	Tractor, crawler - over 10 to 14 tonne.	PC 14	205
P4C	Tractor, crawler - over 14 to 20 tonne.	PC 20	245
P5C	Tractor, crawler - over 20 to 30 tonne.	PC 30	295
P6C	Tractor, crawler - over 30 to 44 tonne.	PC 44	375
P7C	Tractor, crawler - over 44 to 60 tonne.	PC 60	570
P1W	Tractor, wheeled - up to 4 tonne.	PW 4	40
P2W	Tractor, wheeled - over 4 to 7 tonne.	PW 7	80
P3W	Tractor, wheeled - over 7 to 10 tonne.	PW 10	90
P1S	Tractor, wheeled, skid steer - up to 3 tonne.	PS 3	40
P2S	Tractor, wheeled, skid steer - over 3 to 5 tonne.	PS 5	60
Q1M	Transport Equipment, Miscellaneous - up to 20 tonne.	QM 20	45
Q1R	Rail Vehicle, powered - up to 15 kW.	QR 15	25
Q1S	Snow Vehicle, powered - up to 1 tonne.	QS 1	20
Q2S	Snow Vehicle, powered - over 1 to 3 tonne.	QS 3	35
R1B	Boat powered - up to 5m.	RB 5	85
S1C	Chipper - up to 150 kW.	SC 150	30
S1M	Mower/Slasher, tractor mounted - up to 1.5 m.	SM 1.5	50
S2M	Mower/Slasher, tractor mounted - over 1.5 to 3 m.	SM 3	65
Z1T	Tow Motor, engine driven - up to 5 tonne.	ZT 5	190

APPENDIX 'F'

TABLE 1

AVERAGE REPLACEMENT AGE FOR MAJOR MECHANICAL AIDS

	<u>Classification</u>	<u>Age</u>
Air Compressors	BMA	6,000 hours
	BMC	10,000 hours
	BTB	10,000 hours
Cranes	EAA/EAB/EAC/ECC	Twice truck life - 12 years total
	EBC	5,000 hours
Fork Lift Trucks	EFA/EFB/EFC	6,000 hours
	EHA	8,000 hours
Winch Trucks	EWA/EWB/EWC	Twice truck life - 12 years total
Aerial Work Basket	EGA	Twice truck life - 12 years total
Pole Hole Borer	FBA	6,000 hours
	FBB	Twice truck life - 12 years total
Back Acters	HAA	4,000 hours
	HBA/HBB	6,000 hours
	HGE	6,000 hours
	HUD	6,000 hours
Continuous Excavators	HTA	5,000 hours
	HTB	5,000 hours
	HTC	5,000 hours
	HTD/HTE	6,000 hours
	HUD	6,000 hours
Tractors - Crawler	PCB/PCC/PCD/PCE	5,000 hours
	PCF	6,000 hours
	PCG/PCH/PCJ	8,000 hours
Tractors - Wheeled	PWA/PWB	4,000 hours
	PWC/PWD/PWE	6,000 hours
Caravans		12-15 years
Trailers - excluding pole and cable jointers		12-15 years

POINTS TO REMEMBER ON SAFETY WHEN OPERATING
MECHANICAL AIDS

The following applies to all operators of Telecom Australia Mechanical Aids. The precautions set out below have been compiled to help reduce the risk of accidents occurring.

The notes should be read frequently to ensure that they are not forgotten.

GENERAL NOTES ON SAFETY

Only certified officers are to operate Telecom Australia Mechanical Aids, and where a trainee operator is under instruction a certified operator must be present.

1. CLOTHING

The operator should avoid wearing loose clothing which can be caught in the moving parts of machines. Overalls supplied by the Commission should be worn. Suitable footwear is essential and safety footwear must be worn at all times. Be careful when wearing rubber soled footwear on wet steel or slippery surfaces.

Use leather or rubber gloves when conditions warrant their use. For example, when handling wire rope, slings, working near power conductors etc.

SAFETY HELMETS must be worn at all times when working with mechanical aids.

SAFETY GOGGLES should be worn if working in dusty conditions or when driving mechanical aids not fitted with mudguards or windscreens. Adopt the same precautions when using grinding wheels for tool sharpening. Do not work in oil soaked clothing. If petrol, diesel fuel or lubricating oil in any quantity is spilt on clothing, it should be removed to eliminate the risk of fire or skin irritation.

2. MACHINES

Keep all controls, levers, footplates and pedals etc. free from oil, grease etc. Loose articles could cause controls to jam or not operate correctly. Ensure that loose articles are not near any pedals or control levers. Never attempt to operate machine controls with greasy hands.

3. PARKING AND MOVING OFF

Before moving a machine or commencing work, walk around the machine to ensure that no tools, parts, containers etc are in the way. Make sure that no person is in a position where he can be injured if the machine is moved. Before starting the engine, see that all attachments operated by the controls are in a safe or neutral position, lowered to the ground and/or parking brake applied.

4. REVOLVING SHAFTS

All exposed revolving shafts must be treated with the utmost care to avoid clothing from becoming entangled with them. Such shafting includes p.t.o. drive shafts, boring rods and augers used with various types of boring machines. Wherever possible guards should be used for p.t.o. shafts.

Should a man become entangled with a revolving shaft, stop the machine immediately. Whenever staff are employed on boring operations or in any way in the vicinity of exposed revolving rods or shafts, the operator of the machine must be positioned at the controls of the machine and must have a clear view of the entire length of the exposed shaft at all times so that he can immediately stop the machine if necessary. Should the machine be in a deep trench (such as an under-road borer) or be otherwise located so that the operator at the controls cannot clearly see personnel in the trench, another member of the party must be positioned so that he can see the revolving rods and can alert the operator at the controls if necessary.

The operator must not leave the controls unattended while the shafts or rods are still revolving. If the controls have to be left unattended, the shafts or rods must be stopped completely and the machine rendered safe before hand.

If it is necessary to work in trenches with the larger under-road borers, staff should wear smoothsided rubber boots (not turned down) or similar, to eliminate any protrusions of clothing likely to be caught in the revolving mechanism.

5. MACHINE STARTING

The engine must not be started, or any controls operated until the operator is properly seated. Close attention must be given to mechanical attachments in motion as well as to the direction of the machine.

Do not leave any attachments raised or gears engaged whilst talking or looking away. Before travelling place the boom of backhoes or truck mounted cranes in the correct transport or travelling position, with safety chains or pins fitted.

A machine is not, under any circumstances, to be driven or operated if there is any fault present which could effect its safe operation or any person's safety, faults of this nature must be reported immediately so that necessary repairs can be carried out.

Hydraulic relief valve settings are to be adjusted only by a mechanic with skilled knowledge of their operation.

6. MACHINE CLEANING

Petrol should not be used to clean machines. If petrol is used, any spark, short circuit or hot manifold etc., could result in a fire causing serious injury and damage to the machine. The machine should be kept clean at all times (using a recognised and approved cleaning fluid) as this will assist in the detection of possible faults such as oil leaks, chassis cracks and loose bolts etc. Washing facilities are available at most service stations for this purpose.

Never attempt to clean the machine while it is going or in motion, and in certain circumstances for added safety, disconnect battery cables to prevent accidental starting or sparking.

7. REFUELLING

Store all inflammable material in a safe place and keep naked flame away from all types of fuels. Do not smoke or allow smoking during the refuelling operation. Other precautions to adopt are :-

- a. Never refuel the machine which has its engine running.
- b. Refuel, as far as possible, out of doors.
- c. Maintain contact between the nozzle or spout and the fuel tank connection to prevent any static spark discharge.
- d. Use care to prevent fuel being spilled and remove any spilled fuel before starting the engine.

8. GREASING

Greasing is to be carried out in accordance with the machine service chart provided. The machine is not to be greased or any adjustments made while the engine is running. Clean all grease nipples prior to greasing and check to make sure grease is in fact entering the nipples - lack of grease can create potential safety hazards (overheating bearings etc.).

9. JOB SITE PRECUATIONS

These are mainly common sense precautions but are often overlooked by the most competent of operators. These include such factors as :-

- a. Inspection of the site before commencing work.
- b. Being alert for possible cave-ins when working either in or near excavations.
- c. Locate services such as gas, water, electricity etc., where their exact position is not known, have them exposed prior to commencing work.
- d. Have a flagman present when working on a public road and erecting proper signs where necessary to give adequate warning to traffic.
- e. Take particular care of the extreme ends of the machine when reversing or turning.
- f. Do not allow sky-larking on or about the machine at any time.
- g. Keep unauthorised persons away from the machine on the Job Site.
- h. Never attempt to jump on or off a moving machine and do not allow others to do so.

If working at the side of a road, take care to prevent soil, rock or other debris from being pushed or rolled on to the roadway where they can become a danger to traffic. When excavations are being filled in, try to avoid obstructing traffic.

Keep soil and timber clear of gutters, drains etc., and ensure that it does not prevent access to fire hydrants and other services.

10. RELEVANT TRAFFIC CODES

Operators are obliged to comply with the relevant State Acts as amended. The Motor Traffic Act 1909. Local Government Act 1919, and the Main Roads Act as necessary for the particular machine.

11. MACHINE CONTACTING HIGH VOLTAGE

If a machine comes in contact with power lines, remain in the machine if possible.

If it is necessary to get away from the machine, jump clear with both feet. Do not leave the machine unattended for any reason in case the public come in contact with it.

Arrange for someone else to contact the appropriate authority to clear the fault.

12. FIRST AID

Always keep a first aid kit available and have all injuries treated immediately they occur. Record details of any accidents or incidents on the appropriate forms.

13. OPERATION AND SERVICING

The complete details for operating and servicing of all items of plant are given in full detail in the machine handbooks; these are available from the Automotive Plant Section on request. There should be a handbook associated with every machine.

TRENCHERS

Please note that trenchers in the Victorian Mechanical Aid fleet are equipped to dig trenches as described in the following table. Please disregard the trench dimensions specified in the description of individual trenching machines in this booklet.

DOMESTIC PREFIX	COMMON MACHINE TYPE	REMARKS (DIMENSIONS IN MM)
HTA	WENCO 4HPS	Standard trench 150 X 600 (No wider)
HTB	CASE DAVIS 14 X 4	Standard trench 150 X 600 Maximum width 200
HTC	DITCHWITCH 2300	Standard trench 150 X 900 Maximum width 250
HTC	DITCHWITCH R30/3210	Standard trench 150 X 900 Maximum width 250
HTD	DITCHWITCH R65/6510	Standard trench 200 X 1 100 Maximum width 300
HUD	CASE - TASK FORCE 1000	Standard trench 200 X 1 400 Maximum width 380
HUD	BUCKEYE 403	Standard trench 200 X 1 500 Maximum width 400

DITCHWITCH R65/6510 is also available with vibrating plough attachment. Small vibrating ploughs (Case Mini/Maxi Sneaker) are also available.

Most of the trenchers illustrated in the booklet are now available with diesel engines for improved performance.

MOLE PLOUGH OPERATIONSNOTES FOR MOLE PLOUGH TEAMS AND LOCAL SUPERVISORS

The effective performance of mole plough operations is the result of a team effort by the mole plough crew and local supervisors and staff.

The following aspects of the operations should be kept in mind by those concerned so that the cable might be laid as fast and as cheaply as possible :-

A. ROUTE SELECTION

1. The route should be chosen to allow the machines as free a passage as possible. Care should be taken to avoid whenever possible obstructions such as fences, trees, low branches, poles, stay wires, cables, other underground services, culverts, drains, creeks, steep slopes, rocky terrain, etc. The route should be selected so as to reduce to a minimum the need to carry out preliminary work such as clearing, limb lopping, etc.

Remember that effective route selection cannot be done from maps and plans in the office; you must inspect the route and mark the cable plan to indicate any problems. If you are in any doubt don't hesitate to contact the Mechanical Aids Senior Lines Officer for the region to arrange an inspection of the proposed route.

2. The following measurements of the crawler tractors are given as a guide to determining the clearances required :-

<u>Machine Characteristics</u>	<u>Komatsu</u>	<u>D7F & D7G</u>	<u>Case 1150C</u>
Machine (a) Ripper	27t or 29t with ROPS	26t	14½t
Weight (b) Blade and Winch (Approx.)	25t	24t	-
Overall (a) Ripper	3.50m	3.50m	-
Width (b) Blade and Winch (minimum) (Blade angled less with tilting)	3.89m	3.91m	-
Overall (a) Ripper	3.15m	3.15m	3.00m
Height (b) Blade and Winch	3.05m	3.05m	-
Desirable distance of centre of cable to fence -			
(a) Tandem Machines with Blades	2.30m	2.30m	-
(b) Tandem Machines without Blade	2.00m	2.00m	-
(c) Single Machines -			
Cable Depth (a) minimum	0.90m	0.90m	0.61m
(b) optional	-	-	0.90m
(Pre-ripping can be done if required)			

<u>Machine Characteristics</u>	<u>Komatsu</u>	<u>D7F & D7G</u>	<u>Case 1150C</u>
Cable size - maximum and number desirable	All sizes, all combinations	All sizes, all combinations	Subs. Service leads, single cables only.
Remarks	All purpose	All purpose	

Remember that sufficient clearance must be provided around these measurements to enable the machines to pass. The fact that the machine are bulldozers doesn't mean that they can go anywhere. In general for effective reinstatement and back rolling a clearway of approximately 6m should be allowed.

B. ROUTE PREPARATION

1. Local supervisors should ensure that all necessary work is done before the arrival of the mole plough team. This can be done by following this procedure :-
 - a. Walk along the route : observe and mark all likely obstructions, such as those referred to in paragraph A.1 above. Remember that it is the multitude of little things that cause the delays, so watch for such things as the water pipe from the farmer's tank to his house, etc. Mark everything on the cable plan.
 - b. Decide on the method to be adopted to overcome obstructions. Mark this on the cable plan. Include sections which have to be ditched, or where pipes are required, or where advanced clearing is required, etc. In some instances special work such as crossing creeks and rivers may be required in advance.
 - c. Carry out all necessary work in advance of the arrival of the mole plough team. Arrange clearing of trees and scrub, and lop lower tree branches to clear the dimensions given in paragraph A.2 above.
 - d. Peg the start of the job and each drum change position. In difficult country, indicate route of vehicle bringing cable to peg mark.
 - e. Prepare a copy of the cable plan to hand to the mole plough supervisor, unless Senior Lines Officer (Works) or another officer with the plan is to remain with the plough.
 - f. Make sure that the cable is available at a suitable location and that drum lengths are accurately known, particularly partly used drums. Arrange transport of drums to peg marks if security permits or to more suitable dumps if necessary. If not done in advance, discuss method of drum transport with mole plough supervisor.
 - g. If in any doubt any aspect of the job, consult the Mechanical Aids Senior Lines Officer for the region.

C. USE OF LOCAL PARTY

Local supervisors should determine whether members of a local party are needed to assist the mole plough crew and this should be discussed with the mole plough supervisor. Determining factors are such things as the number of fences, the type of obstructions, the sizes of cable drums, etc. If local staff are required to assist they should work the same hours as approved for the mole plough crew.

D. PERFORMANCE OF CABLE LAYING WORK

Prior to commencing work the mole plough supervisor should :-

1. Read the programme. Determine the number and sizes of cables to be laid and make sure that the correct drum carriers, trailers, etc. are available for use without loss of time.
2. Study his copy of the cable plan. Determine the type and location of obstructions and the methods proposed for overcoming them. Determine the cabling requirements. Discuss the job with local supervisor.
3. Discuss transport of cable with local supervisors, co-operate in this matter by making available the float, crane, truck and trailers as necessary. Be satisfied that adequate arrangements have been made to bring up sufficient cable with sufficient regularity to avoid any delays. Discuss also the security of the cable, if necessary.
4. Discuss with local supervisor the need for the use of local party and the hours of work; including overtime. Obtain approval if it is necessary to vary normal hours. Remember that it is essential to ensure a prompt start and that any time lost due to late breakfasts etc. must be made up before overtime can be paid.
5. Be satisfied that all preliminary work has been done sufficiently to permit free passage of the machines, and that the precise route of the cable is known, including the starting point.

On commencement of the work the mole plough supervisor should keep in mind the following points :-

6. The ground ahead of the plough should be reviewed to ensure that undulations which would effect the cable depth are properly bladed by the support machine.
7. The support machine should prepare the route far enough ahead of the plough to ensure that the plough is not delayed.
8. When nearing the drum change position, or a section or obstruction where tandem operation is required, the support machine should be brought up to the plough in time to avoid any delay to the plough. Remember that this can be a major cause of delay. If changing drums, position the crane truck and the new drum at the spot ahead of the plough.

9. When consistent tandem operation is necessary, use both machines to reinstate the rip; don't leave the plough idle whilst the support machine does the reinstatement.
10. Correct depth of cable must be maintained at all times and depth must not be sacrificed in favour of speed of output. In all cases cable must be laid at the maximum depth practical with the equipment being used, except only where unrippable rock is encountered. Particularly during summer months where very hard soil conditions exist, sufficient pre-ripping should be done to ensure the maximum practical depth of cover.
11. The transport of the machines between job is a major cause of delay. Keep in touch with Station Street Depot to secure the use of a second float when it would take more than four hours to move both machines to the next site.
12. Remember also that servicing of the machines, supply of fuel, etc. should be planned so that there is no loss of time by the supporting staff.

COMPARISON OF COSTS FOR LAYING CABLE

TA rate calculated to cover costs of 7 days/week
Vehicle travel calculated as average over 12 months period

MOLE PLOUGH/DAY (5 Man Team)

5 X Men	5 X 14.14/hr	577.62
5 X TA	5 X 67.20	336.00
2 X Tractors (PCG)	2 X 266.00	532.00
1 X Crane (EAB)	1 X 34.00	34.00
1 X Amenities Van (E)	89 X 0.32	28.48
1 X Low Loader (H2)	74 X 0.71	52.54

\$1 560.64

DIRECT LEAD/DAY (2 Man Team)

2 X Men	2 X 14.14/hr	231.05
2 X TA	2 X 67.20	134.40
1 X Tractor (PCF)	1 X 156.00	156.00
1 X Low Loader (H2)	74 X 0.71	52.54

\$573.99

PROPOSED TEAM/DAY (3 Man Team)

3 X Men	3 X 14.14/hr	346.57
3 X TA	3 X 67.20	201.60
1 X Tractor (PCG)	1 X 266.00	266.00
1 X Crane (EAB)	1 X 34.00	34.00
1 X Low Loader (H2)	74 X 0.71	52.54

\$900.71

HIRE OF MECHANICAL AIDS FROM AUTOMOTIVE PLANT AND OUTSIDE ORGANISATIONS

File : E-PH 2/2

(Issue 2, July 1961 is hereby cancelled).

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1. GENERAL

1.1 Before any approach is made to Mechanical Aids for the hire of additional plant, all areas are to thoroughly examine their utilisation of current permanently allocated machines, and ensure that relocating machines within their own area is considered.

1.2 Mechanical Aid plant shall not be hired from outside bodies unless the Senior Technical Officer Grade 2, Mechanical Aids, has certified that the required plant is not available from Telecom sources.

1.3 The Senior Technical Officer Grade 2, Mechanical Aids will arrange :

a. All Contract Hire.

b. All Non Contract Hire in excess of \$250.00 or 3 days duration.

1.4 FAE 349's for all Contract Hire and Non Contract Hire beyond \$250.00 or 3 days duration will be issued from Mechanical Aids.

1.5 For definition of Mechanical Aids covered by this Instruction refer to all Major and Minor Mechanical Aids listed in Engineering Instruction, Automotive Plant, Mechanical Aids, A 1050, Issue 3, 1970.

2. ORDERING OF TELECOM OWNED MECHANICAL AIDS

2.1 The procedures outlined below should be followed to obtain the services of a Mechanical Aid :

After an assessment of requirements in terms of plant, date and period of need is made, a request endorsed with a work authority number can be forwarded by telephone or in writing to the Senior Technical Officer, Mechanical Aids (Phone 03 647 4835) either directly or through the relevant field Mechanical Aids Senior Lines Officer. This advice should be sufficiently in advance of the

project commencement date to permit the appropriate plant to be reserved and made available at the desired time. Particular attention should be given to this requirement, as insufficient notice could cause uneconomic delays in availability.

- 2.2 On receipt of the request for service the Senior Technical Officer, Mechanical Aids will :
- a. Assess the availability of the type of plant required.
 - b. Make a reservation if the plant is available or arrange suitable private Contract Hire.
 - c. Arrange transport and record the booking on the advance Booking Board situated at Automotive Plant.

CONTRACT HIRE

- 3.1 Contract Hire of Mechanical Aids is arranged solely through the Senior Technical Officer Grade 2, Mechanical Aids. User Sections when ordering this service must indicate type of equipment, location of depot or job site, anticipated duration of hire, responsibility code, works authority and plant account.

Approval to hire a Mechanical Aid will not exceed 28 days. Where a machine is deployed and it is expected that the hire period will exceed 28 days the User Section must present a detailed justification to the Senior Technical Officer Grade 2, Mechanical Aids as to why the hire should continue. Where non or insufficient justification is given the hire will be terminated.

- 3.2 Lines Officers and Supervisors are responsible to ensure :
- a. The contractor supplies a Work Docket Book set out in triplicate with the delivery of the machine.
 - b. That the break-up of work, travel and stand-by times claimed on the Contractors Work Dockets are factual in their break-up. Responsibility code, work authority number, plant account, location and depot phone numbers must also be shown.
 - c. The original of the Contractors Work Docket to be forwarded to Senior Technical Officer Grade 2, Mechanical Aids, Corner Bridge and Plummer Streets, Port Melbourne 3207 weekly.
 - d. The duplicate copy should be posted to the contractor at end of each fortnightly period to enable him to submit his invoice promptly.
- 3.3 When it is desired to terminate the services of a hired Mechanical Aid, or when a hired Mechanical Aid breaks down, the Senior Technical Officer Grade 2, Mechanical Aids must be notified promptly to enable him to terminate the hire.
- 3.4 If more than one day's stand-by is envisaged guidance must be sought from the Senior Technical Officer Grade 2, Mechanical Aids with view to suspending the hire of a predetermined period.

4. NON CONTRACT HIRE

- 4.1 For all long term Non-Contract Hire all conditions as laid down for Contract Hire are applicable, additionally Automotive Plant will arrange for a copy of Conditions of Hire and rates to be confirmed by the contractor.

For all Non Contract Hire below \$250.00 or 3 days duration a sequence number for endorsement on the FAE 349 is to be obtained from the Senior Technical Officer Grade 2, Mechanical Aids.

The Lines Officer/Supervisor is to supply the following details at the time of ordering :

- a. Name of person ordering service.
 - b. FAE 349 number.
 - c. Service location, costing identity, authority and plant account.
 - d. Type of service required eg : Machine type with or without operator.
 - e. Date of service.
 - f. Estimated cost or quoted cost.
 - g. Name and address of contractor.
- 4.2 A register containing the above information (sample attached) is to be held by the Senior Technical Officer Grade 2, Mechanical Aids. A sequence number will be given for each individual service to comply with Telecom Accounts Instructions Part 6, Section 2/121 - 2/134.

The User Area will issue FAE 349 and process short term Non Contract Hire accounts through its own Drawing Account or forward to the Accounts payable Section for payment.

Any FAE 349 not endorsed with the Mechanical Aids sequence number will be referred to Mechanical Aids for further action prior to payment.

The quadruplicate (blue) copy of the FAE 349 should be sent to Mechanical Aids immediately the invoice is processed. The actual cost of service will be compared to the estimated cost, therefore the sequence number must be shown on FAE 349.

- 4.3 Should Telecom plant become available during the period of hire, the User Section will be advised and arrangements made for termination of hire.

5. GUIDELINES FOR FIELD SUPERVISORS

- 5.1 If a machine is working the Contractors Work Docket should show the number of hours that the machine actually works.
- 5.2 If the machine is available for work but is not working, its time should be shown as stand-by time on the Contractors Work Docket.

AUTOMOTIVE PLANT
General
O.2010 (V)

- 5.3 If a machine is travelling from the Contractors premises to a job site, or travelling from one job site to the next, its time should be shown as travelling time on the Contractors Work Docket.
- 5.4 If a machine has broken down, the number of hours out of service should be shown as break down time and is not a charge against Telecom.

E N D

REGISTER OF SHORT TERM HIRE
MECHANICAL AIDS

APPENDIX 1

ORDERED BY	FAE 349 NUMBER	SERVICE LOCATION	SEQUENCE NUMBER	RESP. CODE AUTHORITY & PLANT ACCOUNT	TYPE OF SERVICE	DATE OF SERVICE	QUOTED COST	ACTUAL COST	NAME AND ADDRESS OF CONTRACTOR
J. Hunter	346921	Horsham	507	7630/ 84261 XCP	Hire of Compressor	14.4.81	\$ 24		Horsham Hiring Service 56 Main Road Horsham
R. Allen	403694	Ballarat	508	7635/ 82106 XDP	V30 Ditcher and Operator	15.4.81 16.4.81	\$120		Midland Plumbing 1076 Stuart Street Ballarat
B. Kneill	307604	Benalla	509	7640/ 86012 XDP	V30 Ditcher without Operator	27.4.81 29.4.81	\$150		A. Morse Huntly Street Benalla

Compressor 23-47 l/sec.

BMA



TYPICAL UNIT : Compair CR 100S

APPLICATIONS : The above unit is capable of operating pneumatic equipment in only one of the following groups:—

- a) one large breaker
- b) one medium breaker
- c) two small breakers
- d) two clay spades
- e) two rammers
- f) one water pump
- g) one drill

SPECIFICATIONS :

Compressor	: Single stage rotary screw.
Free Air Delivery	: 47 litres/second (100 c.f.m.)
Working Pressure	: 690 KPa (100 p.s.i.)
Maximum Pressure	: 760 KPa (110 p.s.i.)
Noise Level	: 75 dBA at 7 metres

Power Unit

Engine	: 37.5 H.P. Perkins 4-108, 4 cylinder diesel.
Fuel	: Diesel
Tank Capacity	: 53 litres
Speed	: 2950 R.P.M.
Start	: Electric

TRANSPORTATION : The units can be towed behind a vehicle with a G.V.M. not less than 1280 kg.

Weight : 850 kg

Brakes : Mechanical over-ride

Compressor 23-47 l/sec

BMA



TYPICAL UNIT : Broomwade CA1 - S

APPLICATIONS : The above unit is capable of operating pneumatic equipment in only one of the following groups:-

- a) one large breaker
- b) one medium breaker
- c) two small breakers
- d) two clay spades
- e) two rammers
- f) one water pump
- g) one drill

SPECIFICATIONS :

Compressor	: Single stage rotary vane
Free Air Delivery	: 47 litres/second (100 c.f.m.)
Working Pressure	: 620 KPa (90 p.s.i.)
Maximum Pressure	: 760 KPa (110 p.s.i.)
Noise Level	: 75 dBA at 7 metres.

Power Unit

Engine	: Perkins 3 cylinder D3152 diesel
Fuel	: Diesel
Tank Capacity	: 45.5 litres
Speed	: 2350 R.P.M.
Start	: Electric

TRANSPORTATION : The units can be towed behind a vehicle with a G.V.M. of not less than 1323 Kg.

Weight	: 882 Kg.
Brakes	: Mechanical Over-ride.

Compressor 23-47 l/sec

BMA



- TYPICAL UNIT** : Holman Trailair
- APPLICATIONS** : The above unit is capable of operating pneumatic equipment in only one of the following groups:-
- a) one medium breaker
 - b) one clay spade
 - c) one rammer
- SPECIFICATIONS** : The unit is fitted with a VW 1600cc air cooled, 4 cylinder, horizontally opposed, industrial engine. Two cylinders of which are converted to act as a single stage compressor.
- Free Air Delivery : 28 litres/second (60 c.f.m.)
Working Pressure : 690 KPa (100 p.s.i.)
Maximum Pressure : 830 KPa (120 p.s.i.)
- Power Unit**
- Fuel : Petrol
Tank Capacity : 40 litres
Speed : 1500 - 3400 R.P.M.
Start : Electric
- TRANSPORTATION** : The unit can be towed behind a standard utility.
- Weight : 304 Kg.
Brakes : Not fitted.

Compressor 48-75 l/sec

BMB



TYPICAL UNIT : Broomwade CV125 S

APPLICATIONS : The above unit is capable of operating pneumatic equipment in any one of the following groups.

- a) one large breaker
- b) two medium breakers
- c) three small breakers
- d) three clay spades
- e) three rammers
- f) one water pump
- g) one drill

SPECIFICATIONS :

Compressor	: Single stage rotary vane
Free Air Delivery	: 60 litres/second (125 c.f.m.)
Working Pressure	: 690 KPa (100 p.s.i.)
Maximum Pressure	: 760 KPa (110 p.s.i.)
Noise Level	: 75 dBA at 7 metres.

Power Unit

Engine	: Ford 2712E industrial diesel
Fuel	: Diesel
Tank Capacity	: 86 litres
Fuel Consumption	: 8.9 litres/hour
Speed	: 1900 R.P.M.
Start	: Electric

TRANSPORTATION : Units can be towed behind a vehicle with a G.V.M. not less than 1982 Kg.

Weight	: 1321 Kg
Brakes	: Dual line vacuum.

Compressor 76-122 l/sec

BMC



TYPICAL UNIT : Broomwade CV250S

APPLICATIONS : The above unit is capable of operating pneumatic equipment in any one of the following groups.

- a) three large breakers
- b) four medium breakers
- c) six small breakers
- d) seven clay spades
- e) seven rammers
- f) three water pumps
- g) three drills

SPECIFICATIONS :

Compressor	: Two stage rotary vane
Free Air Delivery	: 118 litres/second (250 c.f.m.)
Working Pressure	: 690 KPa (100 p.s.i.)
Maximum Pressure:	: 760 KPa (100 p.s.i.)
Noise Level	: 75 dBA at 7 metres.

Power Unit

Engine	: Ford 2713E industrial diesel
Fuel	: Diesel
Tank Capacity	: 137 litres
Fuel Consumption	: 16.8 litres/hour
Speed	: 2210 R.P.M.
Start	: Electric

TRANSPORTATION : Units can be towed behind a vehicle with a G.V.M. not less than 2995 Kg.

Weight	: 1997 Kg.
Brakes	: Dual line vacuum.

Compressor 23-47 l/sec

BTA



TYPICAL UNIT : Broomwade CA1-S

APPLICATIONS : The above unit is capable of operating pneumatic equipment in any one of the following groups.

- a) one large breaker
- b) one medium breaker
- c) two small breakers
- d) two clay spades
- e) two rammers
- f) one water pump
- g) one drill

SPECIFICATIONS :

Compressor	: Single stage rotary vane
Free Air Delivery	: 47 litres/second (100 c.f.m.)
Working Pressure	: 620 KPa (90 p.s.i.)
Maximum Pressure	: 760 KPa (110 p.s.i.)
Noise Level	: 75 dBA at 7 metres

Power Unit

Engine	: Perkins 3 cylinder D3152 diesel
Fuel	: Diesel
Tank Capacity	: 45.5 litres
Speed	: 2350 R.P.M.
Start	: Electric

TRANSPORTATION : The units are mounted on 4 x 2 trucks and require drivers to have a Class 3 licence.



- TYPICAL UNIT** : Mayco C-30-HD
- APPLICATION** : Grouting pipes in under road boring operations.
- SPECIFICATIONS** :
- Pump : Reciprocating piston
 - Pumping Rate : 19 m³/hr.
 - Pumping Distance : 120 m.
 - Pumping Height : 30 m.
 - Aggregate Size : 10 mm MAX.
 - Hopper Capacity : 0.17m³.
- Power Unit**
- Engine : 30 H.P. VH4D Wisconsin
 - Fuel : Petrol
 - Tank Capacity : 20 litres
- TRANSPORTATION** : Units are trailer mounted and can be towed behind a vehicle with a GVM not less than 1950 Kg.
- Weight : 1300 Kg.
 - Width : 1400 mm.
 - Length : 300 mm.
 - Height : 1400 mm.
 - Brakes : Dual line vacuum.

TRUCK MOUNTED CRANES

CRANES

TYPE	SIZE (metre tone)	TYPICAL MODELS	COST @ JUNE 1985
EAB1	1.75	HIAB 230 BTY	\$4.3K
EAB2	3	HIAB 445 A	\$9.6K
EAB3	5	HIAB 650A / ATLAS AK3006	\$12K
EAB4	7.4	HIAB 865A / ATLAS AK3500	\$14.5K
	9.7	PALSINGER PK 9700	\$14K

TRUCKS

TYPE	TYPICAL MODELS	COST @ JUNE 1985	SUITABLE* CRANE TYPE	PERATED LOAD CAPACITY DUE TO CRANE FITTED
TC5 (4x2)	ISUSU SCR 480	\$18.5K	NIL	N/A
	FORD CARGO 1113	\$22.5K	EAB 1,2+3	TC4
TC7.5 (4x2)	ISUSU JCR 500	\$22.5	} EAB 1,2,3+4	TC6.5
	FORD CARGO 1313	\$24.3K		
	HINO FF 177 LWB	\$23.5K		
TC7.5 (4x4)	MERC LA911	\$42.5K	EAB 1,2,3+4	TC6.5

* WHEN MOUNTED IMMEDIATELY BEHIND THE DRIVERS CABIN

Crane – tractor mounted 5 000-10 000 Kg lifting capacity

EBC



TYPICAL UNIT : BHB Mobilift model TC48C

APPLICATION : Yard duties in divisional stores and workshops

SPECIFICATIONS :

- Crane** : The crane is fitted with a hydraulically operated extendable boom.
- Capacity** : 8000 Kg. Max 1800 mm, fixed from the front axle.
: 1750 Kg. Max 7200 mm, variable from the front axle.

Power Unit

- Engine : John Deere 4.239 Diesel engine
- Fuel : Diesel
- Tank Capacity : 84.1 litres
- Transmission : 6 speed manual transmission
- Speed : 46 kph

TRANSPORTATION : Low loader

- Weight : 11 tonne
- Length : 7000 mm.
- Width : 2438 mm.
- Height : 3000 mm.

ACCESSORIES : 1. Running Wire Rope.

Crane — slewing over 10,000 Kg lifting capacity

ECD



TYPICAL UNIT : Austin Western 410 Senior

APPLICATIONS : Yard duties in divisional stores and workshops as well as cross country duties.

SPECIFICATION : **Crane**
The unit has a hydraulically operated retractable boom with a running wire rope. 4 hydraulic outriggers are fitted and the crane can slew 360° continuous.

	360° Rotation	Off Front
Capacity — Boom retracted	: 11360 Kg	11360 Kg
— Boom extended	: 3860 Kg	4545 Kg
Pivot Post to Hook — retracted	: 4.6 m	
— extended	: 7.6 m	
Hook height MAX	: 13.4 m above ground level	
Cable	: 12 mm dia x 85 m long	

Power Unit

Engine : 4 cylinder, 2 cycle diesel, model GMC 453
Fuel : Diesel
Tank Capacity : 130 litres
Transmission : 4 wheel drive — 6 speed transmission with
2 wheel or 4 wheel steer
Turning Circle : 10.8 m.
Speed : 40 Kph.

TRANSPORTATION : The unit is registered for road use, but where road travel exceeds one hour, a Low Loader is recommended.

Weight : 14 tonne
Length : 7.6 m.
Width : 2.5 m.
Height : 3.5 m.

Fork Truck – engine driven 3000-5000 Kg lifting capacity

EFB



TYPICAL UNITS : Toyota 02-2FD-35
Toyota 02-2FG-32

APPLICATIONS : Yard and shed duties in divisional stores and workshops.

SPECIFICATIONS	02-2FD-35	02-2FG-32
Load Capacity :	3650 Kg at 600 mm	3200 Kg at 600 mm
Lift Height :	3000 mm	3000 mm
Tilt – Forward :	6°	6°
Tilt – Backward :	12°	12°
Overall Height – Lowered :	3240 mm	3240 mm
Overall Height – Raised :	4050 mm	4050 mm
Turning Circle :	5480 mm	5380 mm
Power Unit		
Engine :	6 Cylinder diesel model 2H	6 cylinder model 2F
Fuel :	Diesel	Petrol or L.P.G.
Tank Capacity :	75 litres	75 litres
Transmission :	Automatic	Automatic
Speed :	19 Kph	19 Kph

TRANSPORTATION : Units are registered for road use, but a low loader should be used where road travel exceeds 1 hour.

Weight :	5600 Kg.	5200 Kg.
Width :	1300 mm.	1300 mm.
Length – Less Forks :	2920 mm.	2860 mm.

Fork Truck – engine driven 5000-10000 Kg lifting capacity

EFC



TYPICAL UNIT : Henley Hercules 26.

APPLICATIONS : Yard duties in divisional stores and workshops.

SPECIFICATIONS :

Load Capacity	: 12000 Kg at 600 mm centre.
Lift Height	: 3130 mm
Tilt	: 6° Forward
Tilt	: 12° Backward
Overall Height	: 4380 mm Raised
Overall Height	: 2650 mm Lowered
Turning Circle	: 8740 mm
Forks	: Width controlled hydraulically.

Power Unit

Engine	: Ford 2715E
Fuel	: Diesel
Tank Capacity	: 118 litres
Transmission	: Torque Converter
Speed	: 30 Kph

TRANSPORTATION : Low Loader. The unit is registered for road use but where travel time exceeds one hour a low loader is used.

Weight	: 14 tonne
Length	: 3910 mm less forks
Width	: 2440 mm.

Work Basket 0-2500 Kg lifting capacity

EGA



- TYPICAL UNIT** : Abbey Skyworker, Model SW500/30
- APPLICATIONS** : Aerial maintenance operations. Units are equipped with 240V A.C. generators suitable for operating electrical tools and equipment.
- SPECIFICATIONS** :
- Working Height MAX : 7.81 m
 - Basket Capacity : 227 Kg.
 - Basket Dimensions : 915 m x 610 mm x 966 mm deep.
 - Slew : 360° continuous
 - Power : P.T.O./Hydraulic
 - Controls : Operated from either the basket or the back of the trucks.
- TRANSPORTATION** : Units are fitted to 5 tonne trucks and require the operator to hold a Class 3 licence. Units are available mounted on either 4 x 2 or 4 x 4 trucks.



TYPICAL UNIT : Crown 25WBTF130

APPLICATION : Yard and shed duties in divisional stores.

SPECIFICATIONS :

Controls	: Dual twist grips control direction. Two levers control lift and tilt.
Load Capacity	: 1136 kg at 600 mm centre.
Lift Height	: 3302 mm
Free Lift	: 889 mm
Tilt	: 3° forward 10° backward
Overall Height	: 4534 mm raised 2109 mm lowered
Turning Circle	: 2876 mm
Power Unit	: Batteries
Speed	: 4.8 kph

TRANSPORTATION : **Flat top truck**

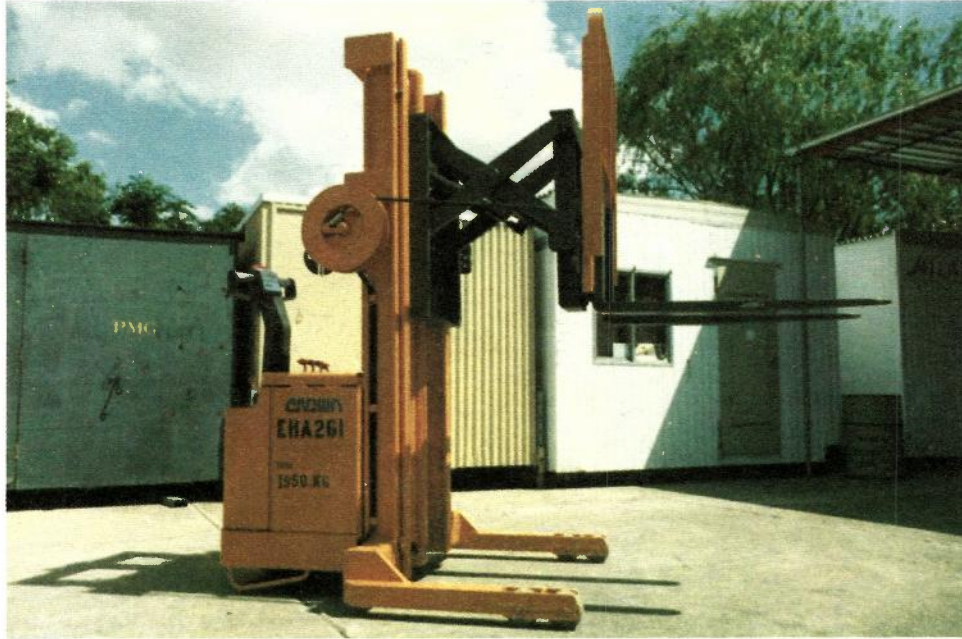
Weight : 2266 kg

Width : 915 mm

Length : 1651 mm less forks

Pedestrian Fork Truck – electric

EHA



TYPICAL UNIT : Crown 30 WRTF150

APPLICATIONS : Shed duties in divisional stores.

SPECIFICATIONS :

Controls	:	Dual twist grips control direction and speed. Three levers control lift, tilt and reach.
Load Capacity	:	1363 kg at 600 mm centre.
Lift Height	:	3810 mm
Free Lift	:	1524 mm
Tilt	:	3° Forward
Tilt	:	7° Backward
Reach	:	609 mm
Overall Height	:	4712 mm Raised
	:	2413 mm Lowered
Turning Circle	:	3089 mm
Power Unit	:	Batteries
Speed	:	5 Kph

TRANSPORTATION :

Flat top truck	:	
Weight	:	1950 kg
Width	:	1475 mm
Length	:	1758 mm

Pedestrian Fork Truck – electric 0-2500 Kg lifting capacity

EHA



TYPICAL UNIT : Crown 40 WTF-130

APPLICATION : Shed duties in divisional stores.

SPECIFICATIONS :

Controls	: Dual twist grips control direction and speed. One lever controls lift.
Load Capacity	: 1818 Kg at 600 mm centre
Lift Height	: 3300 mm
Free Lift	: 1620 mm
Tilt	: Nil
Overall Height	: 3800 mm Raised 2100 mm Lowered
Turning Circle	: 2900 mm
Power Unit	: Batteries
Speed	: 5 Kph

TRANSPORTATION : Flat top truck.

Weight	: 1623 Kg.
Width	: 1475 mm.
Length	: 1800 mm.

Pedestrian Fork Truck – electric 0-2500 Kg lifting capacity

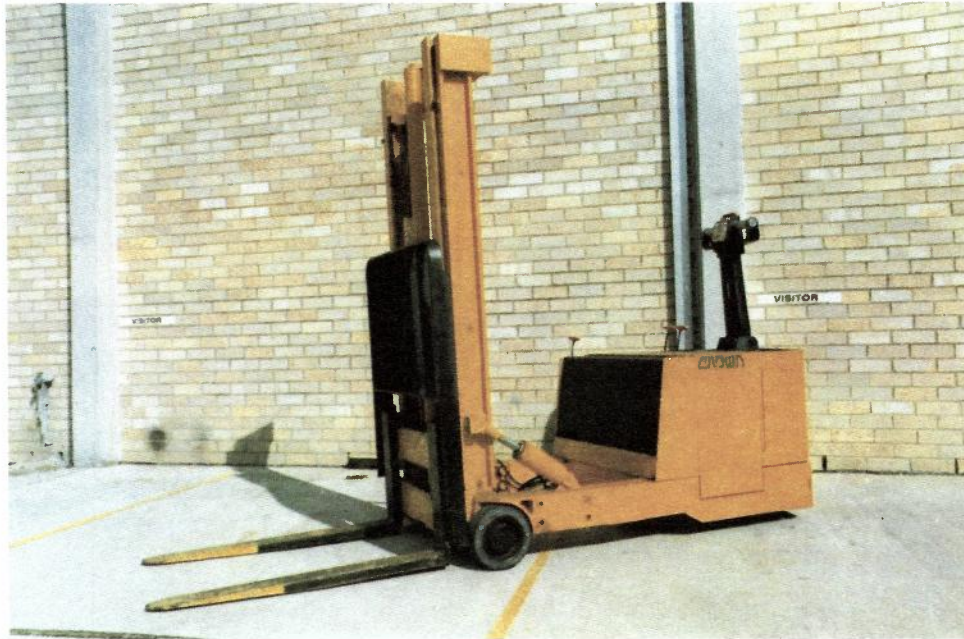
EHA



- TYPICAL UNIT** : Crown 30 WRTL-126
- APPLICATION** : Shed duties in divisional stores.
- SPECIFICATIONS** :
- | | |
|----------------|---|
| Controls | : Dual twist grips control direction and speed.
Three levers control lift, tilt and reach. |
| Load Capacity | : 1360 Kg at 600 mm centre. |
| Lift Height | : 3200 mm |
| Free Lift | : 305 mm |
| Tilt | : 3° Forward |
| Tilt | : 7° Backward |
| Reach | : 600 mm |
| Overall Height | : 4500 mm Raised
: 2200 mm Lowered |
| Turning Circle | : 3100 mm |
| Power Unit | : Batteries |
| Speed | : 5 Kph |
- TRANSPORTATION** : Flat top truck.
- | | |
|--------|------------|
| Weight | : 1850 Kg. |
| Width | : 1475 mm. |
| Length | : 2063 mm. |

Pedestrian Fork Truck – electric 0-2500 Kg lifting capacity

EHA



- TYPICAL UNIT** : Crown 40 WBTF-130.
- APPLICATIONS** : Yard and shed duties in divisional stores.
- SPECIFICATIONS** :
- | | |
|----------------|--|
| Controls | : Dual twist grips control direction and speed.
Two levers control lift and tilt. |
| Load Capacity | : 1818 Kg at 600 mm centre |
| Lift Height | : 3300 mm |
| Free Lift | : 876 mm |
| Tilt | : 3° Forward
10° Backward |
| Overall Height | : 4600 mm Raised
2100 mm Lowered |
| Turning Circle | : 3500 mm |
| Power Unit | : Batteries |
| Speed | : 4.5 Kph |
- TRANSPORTATION** : Flat top truck;
- | | |
|--------|-----------------------|
| Weight | : 2636 Kg. |
| Width | : 991 mm |
| Length | : 1969 mm less forks. |



- TYPICAL UNIT** : Tayland drum winch, model 30
- APPLICATIONS** : Cable hauling and in cases where shear legs are fitted, the unit is used for pole erection.
- SPECIFICATIONS** :
- Line Pull : 13.6 Tonne
 - Line Speed : 11.3 m/min (Bare Drum)
 - Drum Capacity : 16 mm wire rope – 240 m
 - : 20 mm wire rope – 122 m
 - : 25 mm wire rope – 92 m
- TRANSPORTATION** : Units are mounted on either 4 x 2 or 4 x 4 trucks and require a Class 3 licence

Pole Hole Borer — truck mounted

FBB



TYPICAL UNIT : Aichi D703E

APPLICATIONS : Pole hole boring and pole erection as well as general lifting duties.

SPECIFICATIONS :

- Auger**
 - Hole Diameters : 330 mm and 457 mm
 - Hole Depth MAX : 4.5 m
 - Working Radius : 6.05 m
 - Slew : 270°
 - Torque : 590 Kg-m
 - Speed : 18-32 R.P.M.
- Crane**
 - Load Capacity : 3000 Kg
 - Lift Height : 9 m
 - Working Radius : 6.9 m
 - Slew : 360°

The unit is hydraulically operated and comes equipped with outriggers, pole claw and crane which is fitted with a running wire rope.

TRANSPORTATION : Units are available mounted on either 4 x 2 or 4 x 4 trucks.



TYPICAL UNIT : Clipper C-188

APPLICATIONS : Used for making cuts in bitumen and concrete across footpaths and roadways. Capable of left or right hand cutting.

SPECIFICATIONS :

- Cutting Action : Downward
- Cutting Depth : 92 mm with a 300 mm blade
117 mm with a 350 mm blade
168 mm with a 450 mm blade
- Speed : Forward 0-200 f.p.m.
: Reverse 0-45 f.p.m.
- Water Pump : Electric

Power Unit

- Engine : Wisconsin TJD 2 cylinder air cooled
- H.P. : 13 KW.
- Fuel : Petrol
- Start : Electric

TRANSPORTATION : Carried out by staff from the concrete saw section in specially prepared PV15's.

- Weight : 850 Kg.
- Length : 1016 mm.
- Width : 686 mm.
- Height : 1067 mm.



TYPICAL UNIT : Clipper C-107

APPLICATIONS : The unit is capable of left or right hand cutting and is used for small concrete cutting operations.

SPECIFICATIONS : Cutting Depth
Max. : 75 mm with a 250 mm blade
100 mm with a 305 mm blade
125 mm with a 354 mm blade
Speed : Governed by the operator manually.

Power Unit

Engine : Briggs and Stratton 7.5 kW single cylinder
Fuel : Petrol
Start : Rope Start.

TRANSPORTATION : Carried out by staff from the concrete saw section in specially prepared PV15's.

Weight : 95 kg.
Length : 1070 mm.
Width : 585 mm.
Height : 885 mm.



TYPICAL UNIT : Atlas Copco, model Darda 'A' air driven hydraulic rock splitter.

APPLICATIONS : Used for splitting rock and concrete in situations where the use of explosives are prohibited.

SPECIFICATIONS :

- Splitting Cylinder**
- Cleaving Distance : 12 mm.
- Cleaving Force : 230 tonne
- Hole diameter : 40 – 42 mm.
- Hole depth MIN : 640 mm.
- Weight : 28 Kg.
- Length : 1270 mm.

Power Unit

Splitting cylinders are powered by a hydraulic pump which is driven by a pneumatic motor.

- Air Consumption : 50 litres/sec.
- Weight : 111 Kg.
- Length : 1180 mm.
- Width : 650 mm.
- Height : 730 mm.

TRANSPORTATION : Usually in panel vans or utilities but can be supplied with a trailer as shown above. The unit is also fitted with wheels for manoeuvrability about work sites.

A.C. Generator — over 5KVA

GAB



- TYPICAL UNIT** : Dunlite
- APPLICATIONS** : Used to supply electrical power to camp sites and emergency power to exchanges.
- SPECIFICATIONS** :
- A.C. Output : 10 KVA, 240 Volts
 - Phase : 3
 - Engine : Lister HR2
 - Fuel : Diesel
 - Start : Electric
- TRANSPORTATION** :
- Units are trailer mounted and can be towed behind vehicles with a G.V.M. not less than 2670 kg.
 - Weight : 1780 Kg.
 - Brakes : Dual Line Vacuum.



TYPICAL UNIT : Cranvel Wombat

APPLICATION : Light trench excavations

SPECIFICATIONS : **Backhoe**
Digging Depth : 2362 mm
Bucket Width : 305 mm
Reach from Rear Axle : 280 mm
Slew : 140°

Power Unit

Engine : 13.5 H.P. Wisconsin T.J.D.
Fuel : Petrol
Tank Capacity : 12 litres
Transmission : Hydro - Static
Speed Max : 6.5 Kph

TRANSPORTATION : The units are trailer mounted and can be towed behind a vehicle with a G.V.M. not less than 2250 Kg.

Weight : 1500 Kg
Height : 2413 mm
Length : 4725 mm (includes draw bar)
Width : 1829 mm
Brakes : Dual line vacuum.



TYPICAL UNIT : Case 580 B & C

APPLICATION : Trench excavations and general earth moving.

SPECIFICATIONS : **Backhoe**
Digging Depth : 4523 mm
Bucket Width : 610 mm
Reach from rear axle : 6467 mm
Swing arc : 180°

Loader

Bucket Capacity : 0.6 m³
Bucket Width : 1880 mm
Lift Capacity : 272 kg

Power Unit

Engine : Case G207D, 62 H.P. at 2100 R.P.M.
Fuel : Diesel
Tank Capacity : 83 litres
Transmission : 4 speed torque convertor.
Speed MAX : 34.4 Kph

OPTIONS : Units can be supplied with
1. Side shift backhoe.
2. Extenda Hoe allowing deeper digging depth.
Side shift is not incorporated with this option.

TRANSPORTATION : **Low Loader**
Weight : 6 tonne
Height : 3480 mm
Length : 5200 mm
Width : 2120 mm



TYPICAL UNIT : Case 780 Extindahoe

APPLICATION : Used where deep trench excavations are required and general earth moving.

SPECIFICATIONS : **Backhoe**
Digging Depth : 6566 mm
Bucket Width : 610 mm
Reach from rear axle : 9246 mm
Swing arc : 180°

Loader

Bucket Capacity : 1.15 m³
Bucket Width : 2413 mm
Lift Capacity : 2903 Kg

Power Unit

Engine : Case A336 BDT 4 cylinder.
Fuel : Diesel
Tank Capacity : 133 litres
Transmission : 2 speed power shift torque convertor.
Speed MAX : 28 Kph

TRANSPORTATION : **Low Loader**
Weight : 11 tonne
Height : 4064 mm
Length : 7544 mm
Width : 2426 mm



TYPICAL UNIT : Kato HD – 550G

APPLICATION : Used for deep trench excavations.

SPECIFICATIONS : **Backhoe**
Digging Depth : 5260 mm
Bucket Capacity : 0.55 m³
Excavating Radius : 8270 mm
Slew : 360°

Power Unit

Engine : Mitsubishi 6DS70C water cooled.
Fuel : Diesel
Tank Capacity : 160 litres
Transmission : Each track is independently driven by a hydraulic radial piston motor.
Speed MAX : 2.2 Kph

TRANSPORTATION : **Low Loader**
Weight : 13 tonne
Height : 2700 mm
Length : 8040 mm
Width : 2490 mm



TYPICAL UNIT : Wenco, model 4H with Hydraulic Steer.

APPLICATION : Digging trenches for subscriber cable distribution and minor conduit work. The unit is also fitted with a borer suitable for under driveway work.

SPECIFICATIONS : **Trench**
 Width : } STANDARD TRENCH
 Depth : } 150 x 600 mm (NO WIDER)

Borer

The unit can bore a hole 150 mm in diameter and comes equipped with the following:–

- a) 76 mm boring bit
- b) 150 mm back reamer
- c) 6 drill rods, each 3 m long

Power Unit

Engine : YANMAR T580C WATER COOLED
 Fuel : DISTILLATE
 Tank Capacity : 4 litres
 Transmission : Hydraulic motors fitted to each wheel controlled by two control valves provide forward, reverse and turning motion.
 Start : ELECTRIC start
 Speed : 5 Kph

TRANSPORTATION : Units come equipped with trailers and can be towed behind a vehicle, with a GVM not less than 1230 Kg.

Weight : 480 Kg
 Width : 1050 mm
 Length : 1160 mm
 Brakes : Not fitted



TYPICAL UNIT : Ditch Witch, model 1500

APPLICATION : Digging trenches for subscriber cable distribution and minor conduit work.

SPECIFICATIONS : **Trench**
Width mm : } STANDARD TRENCH
Depth mm : } 150 X 600 mm (NO WIDER)

Power Unit

Engine : Yanmar model TS80C
Fuel : Diesel
Tank Capacity : 9.5 litres
Start : Hand Start
Transmission : Hydrostatic drive controls forward and reverse motion. Brakes fitted to each wheel and operated by hand levers through a dog clutch control turning motion.
Speed : 90 m/min forward, 38 m/min reverse.
Crowd : 2.3 m/min

ACCESSORIES : 1. Boring attachment for under driveway work.
2. Off-set boom.

TRANSPORTATION : Units come equipped with trailers and can be towed behind a vehicle with a G.V.M. not less than 840 kg.

Weight : 560 kg
Width : 1100 mm
Length : 2440 mm
Height : 1520 mm
Brakes : Mechanical over-ride.



TYPICAL UNIT : Ditch Witch, model 2200

APPLICATION : Digging trenches for subscriber cable distribution and minor conduit work.

SPECIFICATIONS : **Trench**
 Width mm : } STANDARD TRENCH
 Depth mm : } 150x600 mm (MAXIMUM WIDTH 200 mm)

Power Unit

Engine : Wisconsin T.J.D. 13.4 kw air-cooled.
 Fuel : Petrol
 Tank Capacity : 24 litres
 Start : Electric
 Transmission : Warner T96, 3 speed.
 Speed : 7.6 kph forward, 2.1 kph reverse.
 Crowd : 0-5 m/min

Backfill Blade

Backfill Speed : 4.6 kph
 Angle : 35°
 Blade drop below ground : 150 mm

ACCESSORIES : 1. Roto-witch boring attachment.

TRANSPORTATION : Units come equipped with trailers and can be towed behind a vehicle with a G.V.M. not less than 2550 kg.

Weight : 1340 kg
 Width : 1450 mm
 Height : 2060 mm
 Length : 3710 mm
 Brakes : Dual line vacuum.



- TYPICAL UNIT** : CASE
: Davis Fleetline 14 + 4
- APPLICATION** : Digging trenches for subscriber cable distribution and minor conduit work.
: The unit is also fitted with a borer suitable for under driveway work.
- SPECIFICATIONS** : **Trench**
 Width mm : } STANDARD TRENCH
 Depth mm : } 150 x 600 mm (MAXIMUM WIDTH 200 mm)
- Power Unit**
 Engine : Kohler K3215 air cooled, 14 H.P. at 3600 R.P.M.
 Fuel : Petrol
 Tank Capacity : 3.8 litres
 Start : Electric
 Transmission : Series 15 Sundstrand hydrostatic drive.
 Speed : 3.4 Kph Forward
 Speed : 3.4 Kph Reverse
 Crowd : 0 – 4.57 m/min
- Backfill Blade** : Not fitted
- TRANSPORTATION** : Units come equipped with trailers and can be towed by a vehicle with a
 G.V.M. not less than 2200 Kg
- Weight : 700 kg
 Height : 2032 mm
 Width : 914 mm
 Length : 3185 mm
 Brakes : Dual line vacuum



- TYPICAL UNIT** : Ditch Witch Model 2300
- APPLICATIONS** : Digging trenches for subscriber cable distribution and minor conduit work.
- SPECIFICATIONS** :
- Trench**
 - Width mm : } STANDARD TRENCH
 - Depth mm : } 150x900 mm (MAXIMUM WIDTH 250 mm)
 - Power Unit**
 - Engine : Wisconsin VH4D, air cooled, 28 H.P. at 2400 R.P.M.
 - Fuel : Petrol
 - Tank Capacity : 24 litres
 - Start : Electric
 - Transmission : Warner T96, 3 speed
 - Speed : 10.6 Kph Reverse
 - Crowd : 0—6.6 m/min.
 - Backfill Blade**
 - Backfill Speed : 6.6 Kph
 - Angle : 35°
 - Blade Drop below ground : 165 mm
- ACCESSORIES** : Boring unit capable of boring a hole 150 mm in diameter, 12 m long.
Off-set boom for close alignment trenching.
- TRANSPORTATION** : Units come equipped with trailers and can be towed behind a vehicle with a G.V.M. not less than 4500 kg.
- Weight : 1480 kg
 - Width : 1447 mm
 - Height : 2108 mm
 - Length : 3784 mm
 - Brakes : Dual line vacuum



- TYPICAL UNIT** : R30 Ditch Witch
- APPLICATION** : Digging trenches for general cable laying and conduit work.
- SPECIFICATIONS** :
- Trench**
 - Width mm : } STANDARD TRENCH
 - Depth mm : } 150 x 900 mm (MAXIMUM WIDTH 250 mm)
 - Power Unit**
 - Engine : Wisconsin VH4D air cooled
 - Fuel : Petrol
 - Tank Capacity : 53 litres
 - Fuel Consumption : 11.6 litres/hour at 2600 R.P.M.
 - Start : Electric
 - Transmission : Borg-Warner T18 gearbox with 4 forward and one reverse
 - Speed : 22.5 Kph Forward
 - Speed : 3.2 Kph Reverse
 - Crowd : 0 – 10.4 m/min
 - Backfill Blade**
 - Digging Depth : 51 mm
 - Angle : 25°
 - Backfill Speed : 8 Kph
- ACCESSORIES** : 1. Boring unit capable of boring a hole 150 mm in diameter, 12 m long.
- TRANSPORTATION** : Units come equipped with trailers and can be towed behind a vehicle with a G.V.M. not less than 5600 kg.
- Weight : 2227 kg
 - Width : 1734 mm
 - Height : 2413 mm
 - Length : 4191 mm
 - Brakes : Dual line vacuum



TYPICAL UNIT : R65 Ditch Witch

APPLICATIONS : Digging trenches for cable laying and conduit work. The unit is also fitted with a borer suitable for under driveway work.

SPECIFICATIONS : **Trench**
Width mm : } STANDARD TRENCH
Depth mm : } 200 x 1100mm (MAXIMUM WIDTH 300mm)

Power Unit

Engine : Wisconsin V465D, 63 H.P. 4 cylinder air cooled
Fuel : Petrol
Tank Capacity : 51 litres
Transmission : Borg-Warner T18 gear box with 4 forward and 1 reverse speed.
Crowd : 0 – 11.3 m/min.
Backfill Speed : 4.8 kph
Speed : 15.4 kph Forward
 : 2.1 kph Reverse

Backfill Blade

Lift Height : 305 mm
Digging Depth : 152 mm
Angle : 35°

TRANSPORTATION : Units come equipped with trailers and can be towed behind a vehicle with a G.V.M. not less than 7650 kg.

Weight : 3100 kg Height : 2388 mm
Width : 1829 mm Brakes : Dual line vacuum
Length : 4140 mm

ACCESSORIES : The unit can be fitted with a back hoe capable of digging to a depth of 2200 mm with a 450 mm wide bucket.



TYPICAL UNIT : Ditch Witch, model 6510

APPLICATION : Digging trenches for cable laying and conduit work.

SPECIFICATIONS :

- Trench**
- Width mm : } STANDARD TRENCH
- Depth mm : } 200 x 1100 mm (MAXIMUM WIDTH 300mm)
- Power Unit**
- Engine : Wisconsin V465D air cooled.
- Fuel : Petrol
- Tank Capacity : 75 litres
- Start : Electric
- Transmission : Borg Warner T18, 4 speed
- Speed : 10.3 kph forward, 3.2 kph reverse
- Crowd : 0-17 m/min
- Backfill Blade**
- Backfill Speed : 6.1 kph
- Angle : 30°
- Blade drop below ground : 152 mm

ACCESSORIES : 1. Backhoe model BH140 equipped with a 450 mm wide bucket capable of digging to a depth of 2200 mm.

TRANSPORTATION : Units come equipped with trailers and can be towed behind a vehicle with a G.V.M. not less than 8300 kg.

- Weight : 3550 kg
- Width : 1900 mm
- Height : 2426 mm
- Length : 5512 mm
- Brakes : Dual line vacuum



TYPICAL UNIT : Ditch Witch model C99.

APPLICATION : Digging trenches for subscriber cable distribution and minor conduit work in confined areas.

SPECIFICATIONS : **Trench**
Width mm : 100 120 150
Depth mm : 610 610 610

Power Unit

Engine : Wisconsin AENLD 6.8 kw, single cylinder air cooled.

Fuel : Petrol

Tank Capacity : 5.7 litres

Start : Recoil

Transmission : Hand lever (master clutch) when in contact with transmission pulleys engages shift reducer which is selected for either digging or mobile mode.

Steering : Manual via handle bars.

Speed : 51.5 m/min. forward only.

Crowd : 1.2 m/min. reverse only.

TRANSPORTATION : Units come equipped with trailers and can be towed behind a vehicle with a GVM not less than 850 kg.

Machine

Weight : 275 kg

Width : 900 mm

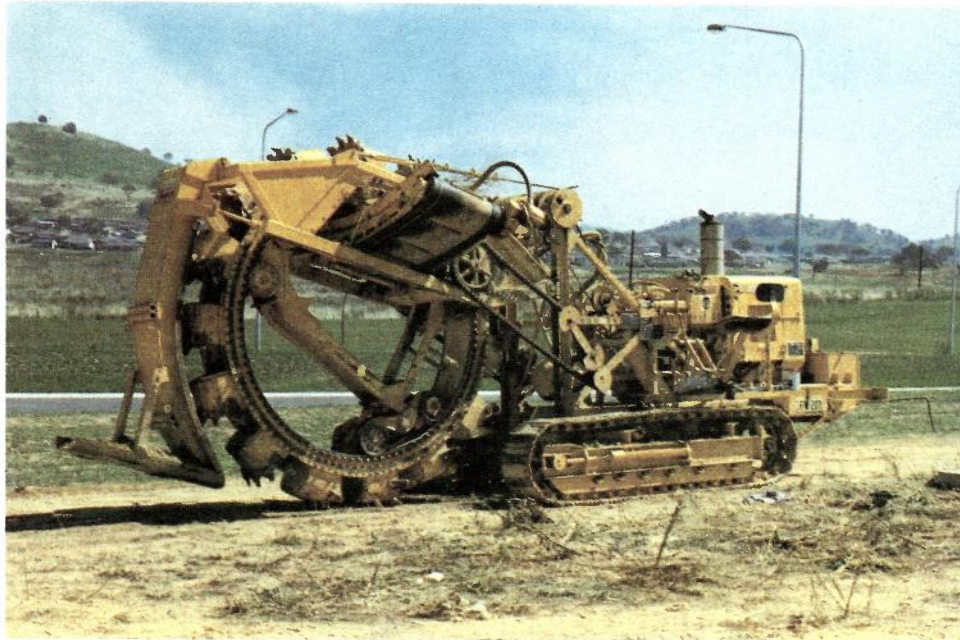
Length : 2400 mm

Height : 1000 mm

Trailer

Weight : 290 kg

Brakes : Mechanical Over-Ride



TYPICAL UNIT : Buckeye Super G300

APPLICATIONS : Digging trenches for large conduit work. The unit can also be used to trench for co-axial cable.

SPECIFICATIONS : **Trench**
Width : 610 mm
Depth : 0 – 1820 mm

Power Unit

Engine : G.M. 3 – 53 Diesel
Fuel : Diesel
Tank Capacity : 106 litres
Transmission : Standard transmission with 8 forward and 2 reverse digging crowd speeds,
4 forward and one reverse road speed.
Crowd : 0.58 – 5.59 m/min. forward
1.39 – 2.64 m/min reverse
Speed : 4.7 kph forward
2.2 kph reverse

TRANSPORTATION : Low Loader
Weight : 8200 kg



TYPICAL UNIT : 4" Spate, diaphragm type

APPLICATIONS : Used for removing water and sludge encountered in excavations.

SPECIFICATIONS : **Pump Ratings Max.**

Output : 20,000 g.p.h.
Combined Head : 30 m
Delivery Head : 21 m
Suction Lift : 9 m
Priming : Self priming to 8.5 m

Power Unit

Engine : 10 H.P. Lister ST1
Fuel : Diesel
Tank Capacity : 45 litres

TRANSPORTATION : The unit is trailer mounted for transportation while at work sites, however, a flat top truck is required for transportation between depots and work sites.

Weight : 420 kg
Length : 1370 mm
Height : 1170 mm
Width : 1140 mm



TYPICAL UNIT : Case 1150C

APPLICATION : Light cable ploughing and clearing operations.

SPECIFICATIONS : **Dozer**

Width : 3328 mm
Digging Depth : 521 mm
Tilt : 381 mm
Angle : 0°–25° both directions

Ripper

Capable of laying 2 small cables at the one time.

Digging Depth : 610 mm

Power Unit

Engine : Case A451BD, 6 cylinder
Power : 76 KW at 2100 R.P.M.
Fuel : Diesel
Tank Capacity : 197 litres
Transmission : Power shift which permits speed and direction changes under full load.
Steering : Controlled by hand levers and or foot pedals.
Speed : 10 kph forward, 12 kph reverse.

TRANSPORTATION : **Low Loader**

Weight : 11 tonne
Length : 5400 mm
Width : 1981 mm
Height : 2890 mm

ACCESSORIES : The unit is available with a winch but is suitable for clearing operations only when fitted.



TYPICAL UNIT : Caterpillar D7G

APPLICATION : Medium cable ploughing and clearing operations.

SPECIFICATIONS : **Dozer**

Width : 3660 mm
Digging Depth : 447 mm
Tilt : 720 mm

Ripper

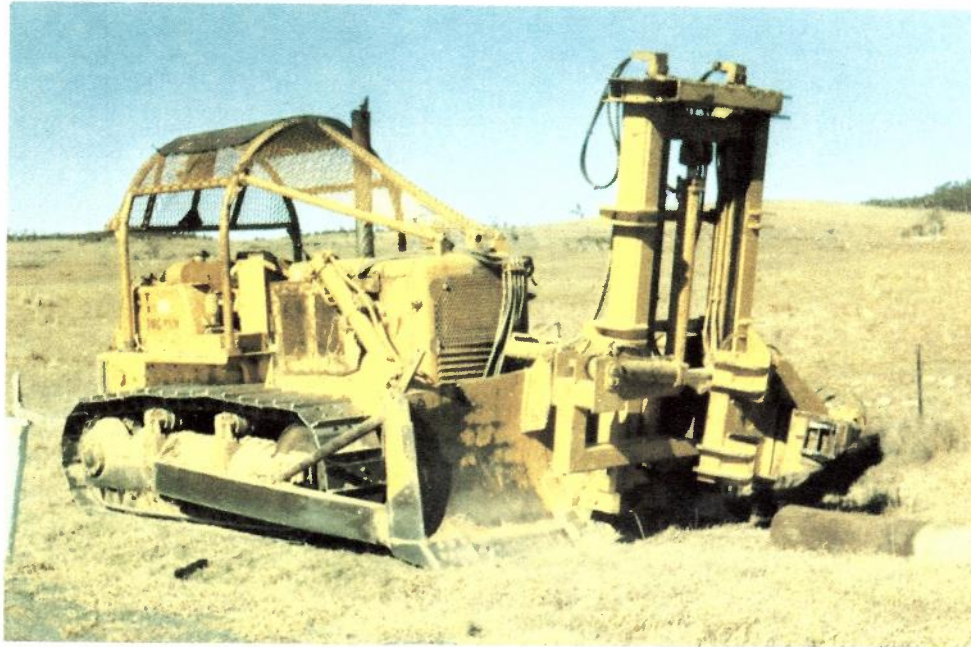
Capable of laying 3 small cables at the one time. Larger size cables can be laid when a cable box is fitted to the Tine.

Power Unit

Engine : Six cylinder diesel model 3306.
Power : 200 H.P. at 2000 R.P.M. (149 kW)
Fuel : Diesel
Tank Capacity : 435 litres.
Transmission : 3 speed power shift
Steering : Controlled by hand levers and or foot pedals.
Speed : 9.9 kph forward
11.9 kph reverse

TRANSPORTATION : **Low Loader**

Weight : 28 tonnes
Length : 6900 mm
Width : 3660 mm
Height : 3360 mm



- TYPICAL UNIT** : Caterpillar D7G.
- APPLICATION** : Medium cable ploughing and clearing operations.
- SPECIFICATIONS** :
- Dozer**
 - Width : 3660 mm
 - Digging Depth : 447 mm
 - Tilt : 720 mm
 - Ripper**
 - Capable of laying 3 small cables at the one time.
 - Digging Depth : 1000 mm
 - Power Unit**
 - Engine : Caterpillar 3306 six cylinder.
 - Power : 149 kw at 2000 R.P.M.
 - Fuel : Diesel
 - Tank Capacity : 435 litres
 - Transmission : Power shift which permits speed and direction changes under full load.
 - Steering : Controlled by hand levers and or foot pedals.
 - Speed : 10 kph forward, 12 kph reverse.
- TRANSPORTATION** : **Low Loader**
- Weight : 27 tonne
 - Length : 6930 mm
 - Width : 2620 mm
 - Height : 3350 mm
- ACCESSORIES** :
1. Winch, but suitable for clearing operations only, when fitted.
 2. Winch and pole extractor, as shown above.



TYPICAL UNIT : Komatsu D85A-12

APPLICATION : Medium Cable Ploughing and Clearing Operation.

SPECIFICATIONS : **Dozer**

Width : 3620 mm
Digging Depth : 540 mm
Tilt : 735 mm
Angle : 0–52°

Ripper

Capable of laying 3 small cables at the one time.

Digging Depth : 1220 mm

Power Unit

Engine : 6 cylinder Cummins diesel
Power : 180 H.P. at 1850 R.P.M.
Fuel : Diesel
Tank Capacity
Transmission : Three speed torque convertor
Steering : Controlled by hand levers and or foot pedals.
Speed : 10.1 kph forward.
Speed : 12 kph reverse

TRANSPORTATION : **Low Loader**

Weight : 29 tonne
Length : 5765 mm
Width : 3620 mm
Height : 3235 mm



TYPICAL UNIT : Owatona 1700 Mustang

APPLICATION : Earth moving in confined areas of work sites and depots.

SPECIFICATIONS : **Loader**

Bucket Capacity : 0.24 m³
Bucket Width : 1660 mm
Lift Capacity : 773 kg

Power Unit

Engine : Perkins 42 H.P. water cooled
Fuel : Diesel
Tank Capacity : 95 litres
Transmission : Hydro-static
Speed Max : 11 kph

TRANSPORTATION : The unit is trailer mounted and can be towed behind a vehicle with a GVM not less than 6000 kg.

Weight : 2000 kg
Height : 1575 mm
Length : 2286 mm (less bucket)
Width : 1645 mm



TYPICAL UNIT : Ford 420

APPLICATION : Used for towing and general earth moving operations.

SPECIFICATIONS :

- Loader**
 - Bucket Capacity : 0.54 m³
 - Bucket Width : 1.714 m
 - Lift Capacity : 1386 kg
- Power Unit**
 - Engine : Ford 3 cylinder
 - Fuel : Diesel
 - Tank Capacity : 60 litres
 - Transmission : Torque convertor with 4 forward and 4 reverse speeds.
 - Speed MAX : 35 kph

TRANSPORTATION : **Low Loader**

- Weight : 4000 kg
- Height : 2.06 m
- Length : 4.88 m
- Width : 2.39 m



TYPICAL UNIT : Mercedes Benz MB trac 1300

APPLICATION : Light cable ploughing and clearing operations.
*NOTE: Cable drum not to exceed 1000 kg.
Unit not to be operated on slopes greater than 35°.*

SPECIFICATIONS : **Dozer**
Width : 2750 mm
Digging Depth : 100 mm
Tilt : 305 mm
Angle : 25°

Ripper

Capable of laying one small cable only.

Digging Depth : 610 mm

Power Unit

Engine : Daimler Benz OM 352 A

Power : 92 Kw (125 H.P.)

Fuel : Diesel

Tank Capacity : 170 litres

Transmission : Synchronized 6 speed combination,
14 forward, 14 reverse.

Steering : Hydrostatic power steering with separate
hydraulic system.

Speed : 35 kph forward and reverse.

TRANSPORTATION : Low loader where travel time exceeds 1 hour.

Weight : 9250 kg

Length : 6630 mm

Width : 2890 mm

Height : 2950 mm



- TYPICAL UNIT** : Yamaha EX440.
- APPLICATION** : Two man transport in snow fields.
- SPECIFICATIONS** :
- Seating Capacity : 2
 - Engine : 2 stroke, fan cooled, parrallel twin.
 - Fuel : 2 stroke. Unit is fitted with an oil tank that meters the correct fuel/oil ratio to the engine.
 - Horsepower : 48 B.H.P. at 7,000 R.P.M.
 - Tank Capacity : 36 litres.
 - Drive System : Internal drive with 15" wide rubber track.
 - Transmission : Automatic.
 - Lighting : Headlights, taillights and stop lights.
 - Speed : 100 Kph plus.
- TRANSPORTATION** : Units come equipped with a trailer and can be towed behind a standard utility.
- Length : 2520 mm.
 - Width : 980 mm.
 - Height : 995 mm.
 - Weight : 140 Kg.



TYPICAL UNIT : Wayne Model 866

APPLICATION : Used for yard and shed duties in divisional stores and workshops.

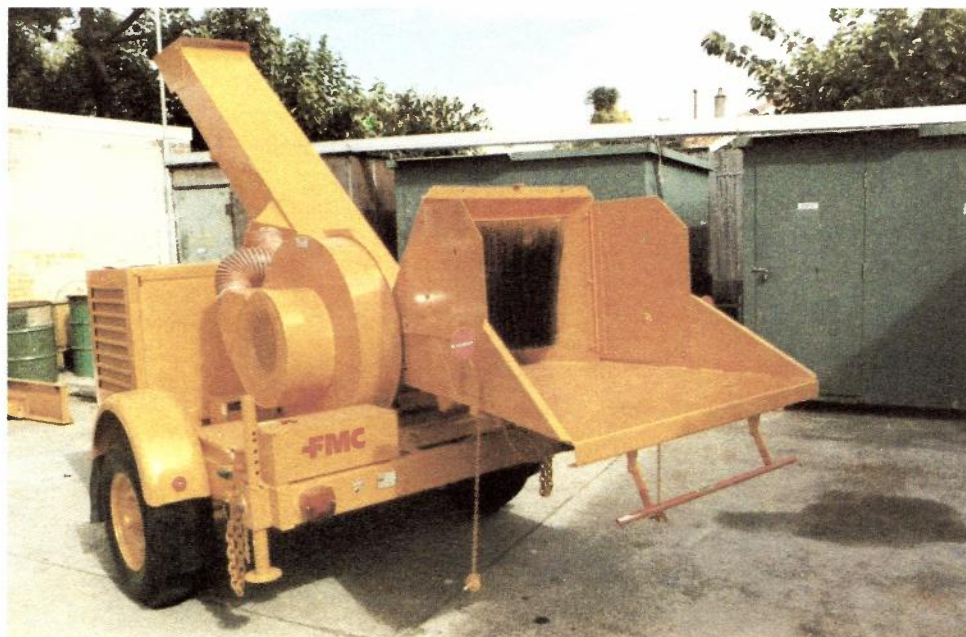
SPECIFICATIONS : Hopper Capacity : 0.4 m³
Load Capacity : 450 kg
Coverage : 17590 m³/hr

Power Unit

Engine : 4 cylinder industrial
Fuel : L.P.G. or Petrol
Tank Capacity : 40 litres
Speed : 13 kph

TRANSPORTATION : A trailer can be supplied if the unit is required to work at more than one depot.

Weight : 1390 kg
Length : 2210 mm
Width : 1473 mm
Height : 1245 mm



TYPICAL UNIT : Wayne C16

APPLICATION : Used to reduce tree branches and similar garden refuse to a manageable size.

SPECIFICATIONS :

- Chipping Unit**
 - Rotor Speed : 1700 R.P.M.
 - Feed Opening : 413 mm x 254 mm
 - Cutting Knives : 4,406 mm long
 - Blower : Centrifugal with 113 m³/min at 1700 R.P.M.
 - Discharge Chute : 2499 mm long with adjustable height.
 - Rotor Brake : Brake instantly shuts off engine and stops the rotor in emergencies.
The chipper cannot be restarted until the brake is reset. The brake is operated from the sides and front of the feed table.

Power Unit

- Engine : 5.2 litre V8 industrial
- Fuel : Petrol
- Tank Capacity : 75 litres
- Start : Electric

TRANSPORTATION : Units are trailer mounted and can be towed behind a vehicle with a G.V.M. not less than 3000 kg.

- Weight : 2000 kg
- Brakes : Dual line vacuum.



TYPICAL UNIT : Mikasa MTR-55

APPLICATION : Consolidating spoil in trenches and small excavation.

SPECIFICATIONS : Shoe : 285 mm x 330 mm
Impact Force : 6 – 7 tonnes (roller equivalent)
Percussion Rate : 550 – 600 blows/min.

Power Unit

Engine : Robin EC – 07, 3.3 H.P.
Fuel : Two stroke
Tank Capacity : 1.5 litres

TRANSPORTATION : The units come equipped with trolleys for manoeuvrability about depots and work sites. Transportation is carried out in utilities, panel vans or flat top trucks.

Weight : 60 kg
Height : 1000 mm
Width : 400 mm



TYPICAL UNIT : Wacker BS20

APPLICATION : For the compaction of small trench excavations.

SPECIFICATIONS : Shoe : 200 mm x 100 mm
Impact Force : 4 – 6 tonne (roller equivalent)
Percussion Rate : 850 – 900 blows/min.

Power Unit

Engine : 2.24 H.P. single cylinder, air cooled
Fuel : Two stroke
Tank Capacity : 1.7 litres
Fuel Consumption : 1.2 litres/hr

TRANSPORTATION : Utilities, panel vans and flat top trucks.

Weight : 26 kg
Length : 420 mm
Width : 330 mm
Height : 1020 mm



TYPICAL UNIT : Lightburn

APPLICATIONS : Used on work sites where concrete repair work is required and the larger 0.1 m³ mixer is unsuitable.

SPECIFICATIONS :

Capacity	: 0.05 m ³
Engine	: 3.5 H.P. Mitsubishi G350P-80 air cooled.
Fuel	: Petrol
Tank Capacity	: 2.3 litres
Start	: Recoil

TRANSPORTATION :

The unit can be towed behind a standard utility.	
Weight	: 100 kg
Brakes	: Not fitted



TYPICAL UNIT : Lightburn

APPLICATION : Mixing sand, aggregate and cement at work sites and depots.

SPECIFICATIONS :

Capacity	: 0.1m ³
Engine	: Single cylinder Robin
Fuel	: Two stroke
Tank Capacity	: 4.5 litres
Start	: Pull Start

TRANSPORTATION : The unit can be towed behind a standard utility.

Weight : 500 kg
Brakes : not fitted

Drainers Winch – pneumatic

MEW



TYPICAL UNIT : Gridland and Allan pneumatic drainers winch.

APPLICATION : Removing spoil from deep trench and hole excavations.

SPECIFICATIONS :

Bucket Capacity	: 0.11m ³
Load Capacity	: 250 kg
Working Radius	: 1500 mm
Slew	: 360° (manual)
Lifting Speed	: 18 m/min.
Fall	: 12 m
Wire Rope Dia.	: 17 mm
Bucket Height above ground	: 2.2 mm

Power Unit

The unit is pneumatic and requires a compressor for operation.

Air Consumption	: 30 litres/sec
Pressure	: 550 Kpa

TRANSPORTATION : Table top trucks

Weight : 250 kg



TYPICAL UNIT : Partner Model M100.

APPLICATION : Used in area where a compressor is not available, and light rock breaking is required.

SPECIFICATIONS : Impact Energy : 0.9 — 1.0 Kgm.
Operating Speed : 4000 impacts/min.

Power Unit

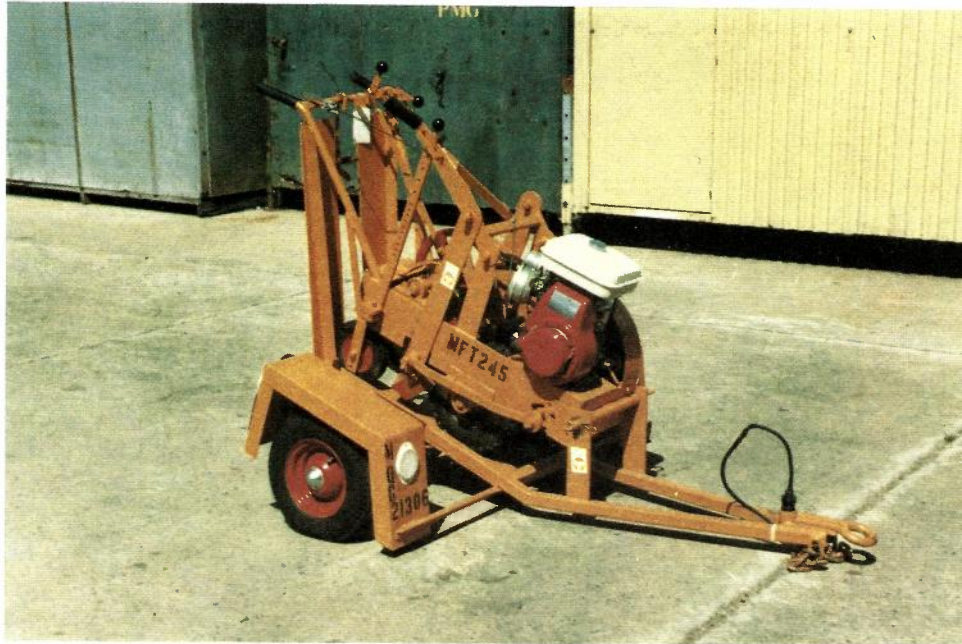
Engine : 55 cc single cylinder.
Fuel : Two stroke.
Tank Capacity : 1 litre.
Fuel Consumption : 50 min/litre.

ACCESSORIES : 1. Tool Kit.
2. 25 x 108 mm steel.
3. Tool Box

TRANSPORTATION : Station wagons and utilities.

Weight (Breaker) : 9 Kg.

Tool Box — Length : 730 mm.
Height : 337 mm.
Width : 381 mm.



TYPICAL UNIT : Ings

APPLICATION : Used to remove turf in sods prior to trench excavations.
Sods are then reinstated after completion of work.

SPECIFICATIONS

Cutting Width	: 305 mm
Cutting Depth	: 0-100 mm

Power Unit

Engine	: Honda G200, 5 H.P.
Fuel	: Petrol
Tank Capacity	: 3.5 litres
Start	: Recoil

TRANSPORTATION : The units are trailer mounted and can be towed behind a standard utility.

Weight	: 120 kg
Brakes	: Not fitted

A.C. Generator — less than 2.5 KVA

MGA



- TYPICAL UNIT** : Honda EM500
- APPLICATION** : Used to power small electric tools and lights.
The unit can also be used as a battery charger.
- SPECIFICATIONS** :
- | | |
|------------------|-----------------------|
| A.C. Output | : 0.33 KVA, 240 Volts |
| D.C. Output | : 12V – 100 W |
| Engine | : Honda 4 stroke |
| Fuel | : Petrol |
| Tank Capacity | : 2 litres |
| Fuel Consumption | : 0.48 litres/hour |
| Start | : Recoil |
- TRANSPORTATION** : The units small size and weight allows transportation in any type of Commission vehicle.
- | | |
|--------|----------|
| Weight | : 18 kg |
| Length | : 355 mm |
| Width | : 250 mm |
| Height | : 325 mm |



TYPICAL UNIT : Powamac MK1

APPLICATION : Removing water and sludge in excavations.

SPECIFICATIONS : **Pump Ratings MAX.**

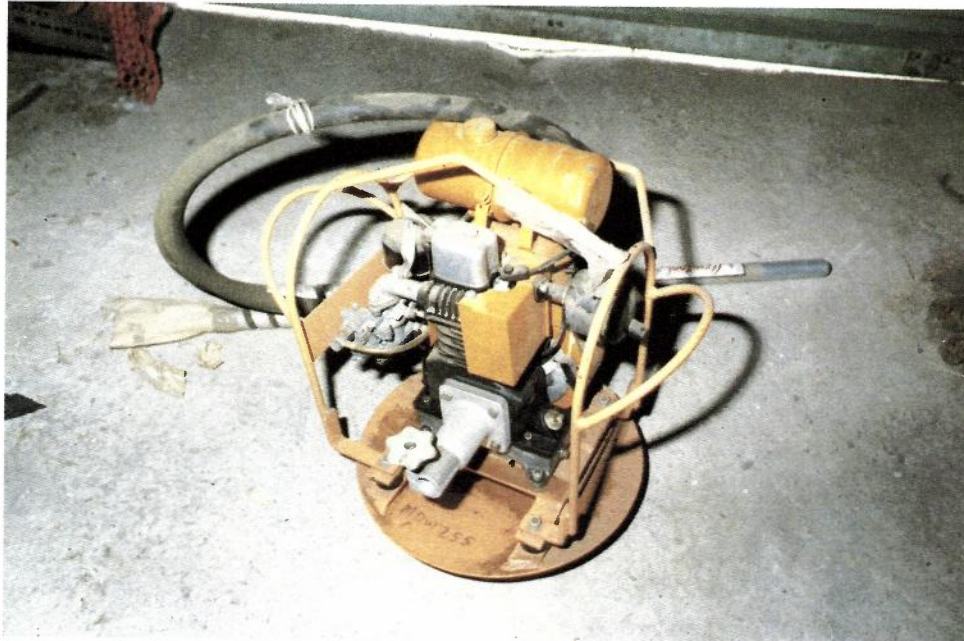
Output : 9000 litres/hr
Combined Head : 15 m
Priming : Self priming to 7.6 m
Delivery Head : 12 m
Suction Lift : 7.6 m

Power Unit

Engine : Villiers C12
Fuel : Petrol
Tank Capacity : 1.5 litres

TRANSPORTATION : Units are trailer mounted for manoeuvrability around the work site but panel vans, utilities or flat top trucks are used between depots and work sites.

Weight : 85 kg
Length : 762 mm
Height : 762 mm
Width : 610 mm



TYPICAL UNIT : Flextool model 525

APPLICATION : Removing water and sludge from excavations.

SPECIFICATIONS : **Pump**
Submersible centrifugal water pump.
Capacity : 20,000 litres/hr at 3 m delivery head.

Power Unit

The power unit model P3, is connected to the pump by a 4.5 m flexible drive shaft.

Engine : Villiers C15A – 01 single cylinder
Fuel : Petrol
Tank Capacity : 2.27 litres
Start : Pull Start

TRANSPORTATION : Utilities and Panel Vans

Weight : 30 kg

N.B. The power unit can be fitted with a vibrator as shown above which is used for settling concrete. The unit is then classified as an MDW.



TYPICAL UNIT : Warren Rupp model SPA 1½-E

APPLICATION : The unit is light and compact and used for minor de-watering applications as encountered in man-holes and pits, where a minimum of suspended solids are present.

SPECIFICATIONS: : General : The unit will provide 1 hours continuous pumping on an average 12 volt truck battery without running the engine. The unit is equipped with 9 m power cables which operate the on-off pull switch. Under no circumstance should the unit be lowered to the work site with the power cables.

Pump Rating's MAX

Capacity : 9100 litres/hr at a 3 m delivery head.
Priming : Self priming.
Delivery Head : 7.6 m.
Suction Lift : No suction hose supplied.

Power Unit

Motor : 1/3 H.P., 12 volt D.C.
Current Draw : 30 Amps.

TRANSPORTATION : Sedans

Weight : 15 Kg.
Height : 477 mm.
Diameter : Fits 255 mm openings.



TYPICAL UNIT : Big Joe model 21R54

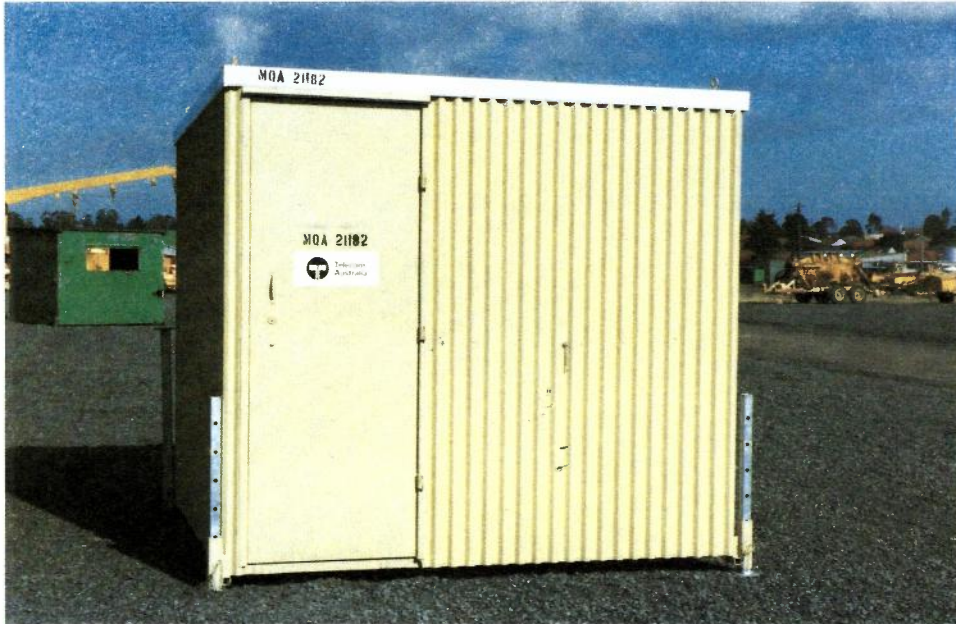
APPLICATION : Used in depots and workshops where load capacities do not exceed 454 kg. This machine is classified as a mechanical handling device and therefore running returns are not required.

SPECIFICATIONS :

Controls	:	Transit motion is applied manually and lift is controlled by a manually operated hydraulic pump. Unit comes equipped with a parking brake.
Load Capacity	:	454 kg at 380 mm
Lift Height	:	1370 mm
Turning Circle	:	2440 mm
Overall Height – Raised	:	1727 mm
Overall Height – Lowered	:	1638 mm

TRANSPORTATION : Flat top truck.

Weight	:	142 kg
Length	:	1080 mm
Width	:	660 mm



- TYPICAL UNIT** : Manufactured to Telecom drawing NB 11485.
- APPLICATION** : Used in Depots and Worksites where outdoor storage is required for tools and equipment. The unit is equipped with a lockable door and window.
- SPECIFICATIONS** : Length : 2540 mm.
Width : 2300 mm.
Height : 2200 mm.
Weight : 900 Kg.
- ACCESSORIES** : 1. Four stabilizer legs.
2. Jack for positioning hut.
3. Four roof mounted lifting lugs.
- TRANSPORTATION** : Units are usually transported on specially built trailers, but when not available, can be transported on flat top trucks.
- NOTE: Huts should be empty when transporting from site to site.*



TYPICAL UNIT : Manufactured to Telecom specifications and drawing NB12299.

APPLICATION : Used for transporting light cable drums where truck mounted units and large cable trailers are unsuitable.

SPECIFICATIONS : **Drum Capacity**
Weight : 360 kg
Diameter : 1100 mm
Width : 920 mm
N.B. It is not recommended that cable drums exceeding 300 kg are loaded onto the trailer manually.

Trailer (excluding Cable Drum)

Width : 1780 mm
Height : 950 mm (to centre of cable drum spindle)
Length : 2550 mm
Weight : 140 kg
Brakes : Not fitted

ACCESSORIES : 1. Cable drum spindle (60 mm dia.)
2. Chocks — 4 off
3. Spindle collars — 2 off

TRANSPORTATION : Units can be towed behind a standard utility.



APPLICATION : Used for transporting, C99, Wenco and 1500 trenchers.

SPECIFICATIONS : Overall Length & Drawbar : 3635 mm
Overall Width : 1800 mm
Tray Length : 2285 mm
Tray Width : 1285 mm

FEATURES : Decking : Tilt deck fitted with gridmesh.
Brakes : Mechanical over-ride.
Parking Brake : Ratchet type on over-ride.
Towing Eye : Small type.
Tyres : 6.95 x 14 x 4 ply.

WEIGHTS : Gross : 850 kg
Load : 560 kg
Tare : 290 kg



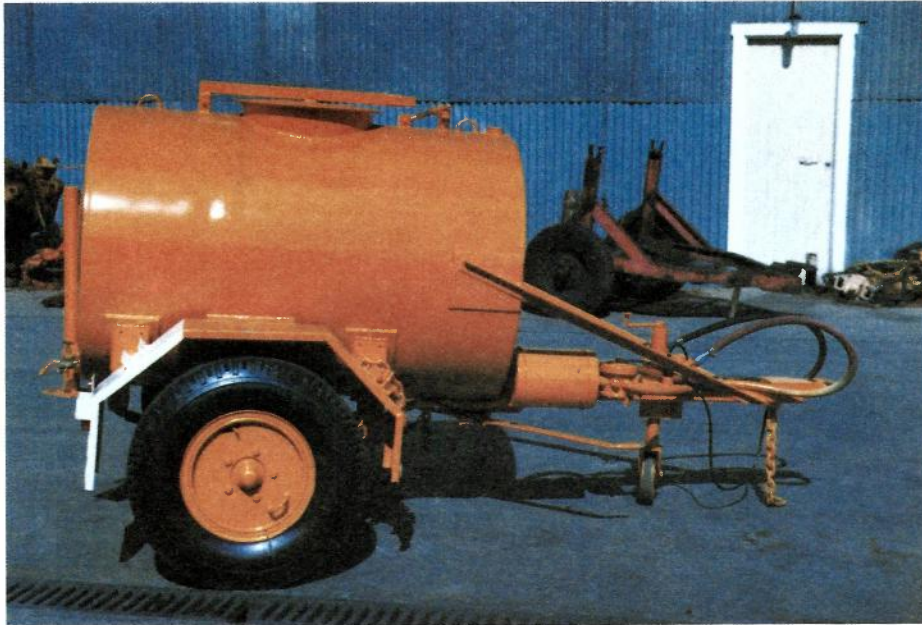
- APPLICATION** : Used for transporting 6510 Ditch Witch Trenchers.
- DIMENSIONS** :
- Tray Length : 5570 mm total, 4400 mm level, 1170 mm angled.
 - Overall Length : 7080 mm.
 - Tray Width : 1780 mm.
 - Overall Width : 2500 mm.
 - Tray Height : 700 mm.
- FEATURES** :
- The units are mounted on tandem axles with brakes on all four wheels.
 - Ramps : GR300 Gridmesh with coil spring balancing.
 - Decking : GR300 Gridmesh.
 - Brakes : Dual line vacuum/hydraulic.
 - Parking Brake : Manually operated ratchet — PBR T50.
 - Towing Eye : Large Type.
 - Tyres : 8.25 x 15" x 12 ply.
- WEIGHTS** :
- Gross : 5800 Kg.
 - Load : 4000 Kg.
 - Tare : 1800 Kg.

Units can be towed fully laden behind a vehicle with a G.V.M. not less than 8700 Kg.

NOTE: A class 5 driver's licence is needed when towing this unit.

Water Tanker 1200 litre capacity

MQT



- TYPICAL UNIT** : Manufactured by Freighter Industries Ltd.
- APPLICATION** : Two types are available, one for drinking and one for cleaning and wetting operations. Where units should not be used for drinking, they are marked accordingly.
- SPECIFICATIONS** :
- Capacity : 1200 litres.
 - Overall length + Drawbar : 3000 mm.
 - Overall Width : 1450 mm.
 - Height : 1750 mm.
- FEATURES** :
- Outlets : Two faucet type outlets located at rear of tank.
 - Manhole : 457 mm dia.
 - Ladder : Welded to tank for access to manhole.
 - Baffles : Two.
 - Brakes : Dual line vacuum.
 - Parking Brake : Manually operated ratchet type.
 - Towing Eye : Small Type.
 - Tyres : 7.50 x 16 x 6 ply.
- TRANSPORTATION** :
- Units can be towed behind a vehicle with a G.V.M. not less than 4050 Kg.
 - Gross : 2700 Kg.
 - Load : 1200 Kg.
 - Tare : 1500 Kg.



- TYPICAL UNIT** : 5.5 Clark aluminium half cabin.
- APPLICATION** : Used for the service and maintaining of subscriber cables where only means of access is by water.
- SPECIFICATIONS** : Overall Length : 5500 mm.
Beam : 2000 mm.
Depth : 750 mm.
Seating Capacity : 8.
- Power Unit**
Main Motor : 70 H.P.
Auxillary Motor : 20 H.P.
- ACCESSORIES** : 1. Spot Light.
2. Lockable cabinets.
3. Ladder Racks.
- TRANSPORTATION** : The unit can be towed behind a vehicle with a G.V.M. not less than 1505 Kg.
Weight (Boat) : 703 Kg.

String Trimmer

~~MSC~~

MSX



TYPICAL UNIT : Homelite ST100

APPLICATION : Removing grass and light garden foliage from pathways, gutters and fences.

SPECIFICATIONS :

Cutting Patch	: 508 mm
Line Size	: 2.41 mm
Line Storage Capacity	: 22.86 m
Weight	: 3.3 kg

Power Unit

Engine	: 1.3 H.P. single cylinder air cooled, 26.2cc
Fuel	: Two stroke
Tank Capacity	: 0.47 litres (35 – 45 min running time)
Start	: Recoil

String Trimmer — medium

MSC
MSX



TYPICAL UNIT : Tas model TBC-23R.

APPLICATION : Used to trim grass and heavy foliage from pathways, gutters and fences.

SPECIFICATIONS : Cutting Path : 508 mm.
Line Size : 2.5 mm.
Weight : 6 Kg.

Power Unit

Engine : 23 cc single cylinder model T-233
Fuel : Two stroke.
Tank Capacity : 0.6 litres
Start : Recoil

ACCESSORIES : 1. Tool Kit.
2. 230 mm steel slasher blade.
3. 230 mm circular saw.

The above accessories come as standard equipment.

TRANSPORTATION : Station wagons or panel vans.

String Trimmer – large



TYPICAL UNIT : Tas model TBC-37R

APPLICATION : Used to trim grass and heavy foliage from pathways, gutters and fences.

SPECIFICATIONS : Cutting Path : 508 mm
Line Size : 2.5 mm
Weight : 7.5 kg

Power Unit

Engine : 37 cc single cylinder model Ec-11
Fuel : Two stroke
Tank Capacity : 1.2 litres
Start : Recoil

ACCESSORIES : 1. Tool Kit
2. 300 mm steel slasher blade.
3. 300 mm circular saw.
The above accessories come as standard equipment with the machine.

TRANSPORTATION : Station wagons or panel vans.

Mower — utility

MSC
MSA



TYPICAL UNIT : Victa Professional 460.

APPLICATION : Used to maintain small grassed areas where it is not necessary to remove lawn clippings.

SPECIFICATIONS : Cutting Width : 460 mm.
Height Adjustment : 8 positions.

Power Unit

Engine : Victa Super 160 cc power boosted.
Fuel : Two stroke.
Tank Capacity : 2.25 litres.
Start : Recoil.

TRANSPORTATION : Utilities and Station Wagons.
Weight : 24.5 Kg.



TYPICAL UNIT : Rover Range 5144

APPLICATION : Used for cutting large grass areas.

SPECIFICATIONS :

Transmission	: Ferrado friction disc and V-belt drive, 3 speeds forward, 1 reverse.
Speed	: 0.8 – 9.6 kph
Cutting Width	: 686 mm
Height Adjustment	: 25 – 76 mm

Power Unit

Engine	: Briggs and Stratton model 191702 single cylinder air cooled, 8 H.P. engine
Fuel	: Petrol
Tank Capacity	: 3.5 litres
Start	: Recoil

TRANSPORTATION : Utilities and station wagons

Weight : 128 kg

Mower — heavy duty, self-propelled

MSC



TYPICAL UNIT : Rover Model 4148

APPLICATIONS : Used for cutting heavily grassed areas where a conventional push along mower is unsuitable

SPECIFICATIONS :

- Transmission : Self propelled through a V-belt drive.
- Cutting Width : 635 mm
- Height Adjustment : 25 – 76 mm
- Speed : 2.5 – 8 kph

Power Unit

- Engine : Briggs and Stratton model 190402 single cylinder, air cooled 8 H.P. engine.
- Fuel : Petrol
- Tank Capacity : 4.5 litres
- Start : Recoil

TRANSPORTATION : Utilities and Station Wagons
Weight : 116 kg



TYPICAL UNIT : Skid mounted Wire Winder.

APPLICATION : Used to recover and coil aerial wire.

SPECIFICATIONS : **Drum**
Inside Diameter : 419 mm
Outside Diameter : 915 mm
Width : 254 mm
Speed : 36 R.P.M.
Torque : 2350 Nm

Power Unit

Engine : Wisconsin S12D, 12 H.P. at 2800 R.P.M.
Fuel : Petrol
Tank Capacity : 7 litres
Start : Pull Start

TRANSPORTATION : **Flat Top Trucks**
Weight : 760 kg
Length : 1400 mm
Width : 1830 mm
Height : 1245 mm

Chain Saw

MTC
MSK



TYPICAL UNIT : Stihl model 031 AVEQ

APPLICATION : Used for clearing and maintenance operations in wooded areas as well as tree felling.

SPECIFICATIONS :

Cutter Bar	: 406 mm
Pitch	: 9.32 mm
Chain Brake	: Fitted

Power Unit

Engine : 49 cm³ single cylinder fitted with (breakerless) magneto ignition.

Fuel : Two Stroke

Tank Capacity : 0.54 litres

Start : Recoil

TRANSPORTATION : Utilities and panel vans.
Weight : 6.6 kg

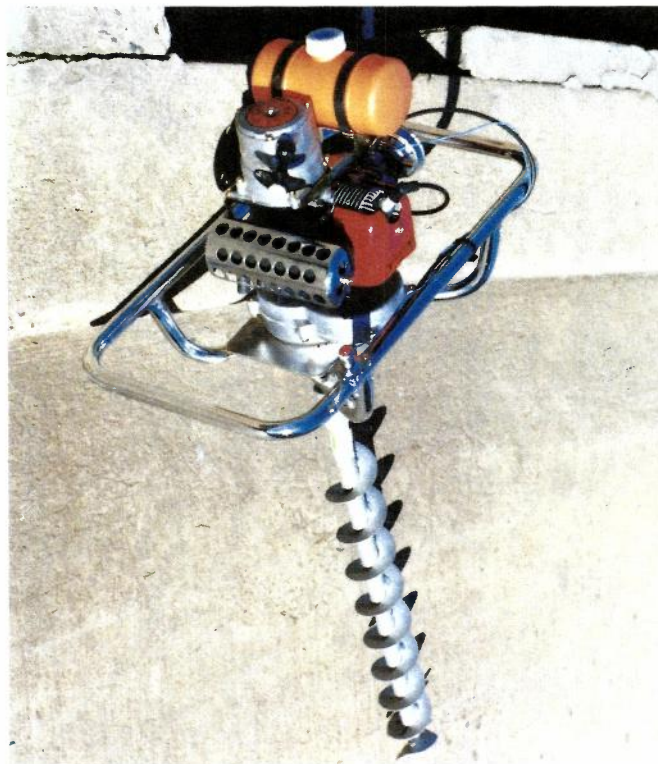


TYPICAL UNIT : Stihl model TS 510 AV electronic

APPLICATION : Used to cut manholes, pits and small driveways.
NOTE: The unit should not be used to replace the concrete cutting service provided by automotive plant.

SPECIFICATIONS : Cutting Depth : 100 mm
Power Unit
Engine : 89cc single cylinder, two-stroke.
Fuel : Two-stroke
Tank Capacity : 0.9 litres
Start : Recoil start

TRANSPORTATION : Utilities and panel vans.
Weight : 14 kg (Not including trolley)



TYPICAL UNIT : Tas model JEA-37.

APPLICATION : Used for small post hole drilling.

SPECIFICATIONS : **Auger**
Digging depth : 600 mm.
Digging diameter : 100 mm.

Power Unit

Engine : Tas model J-15, single cylinder.
Fuel : Two stroke.
Tank Capacity : 2 litres.
Shaft Speed : 150 R.P.M.
Gear Ratio : 1:33

TRANSPORTATION : Station Wagons and Utilities.

Power head only.
Length : 600 mm.
Width : 350 mm.
Height : 500 mm.
Weight : 10.8 Kg.

Plant Trailer — 2.5 tonne capacity

MQG

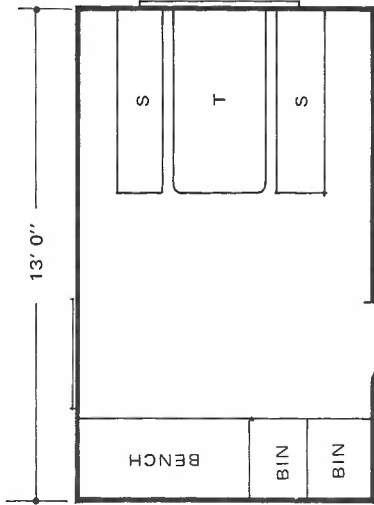


- APPLICATION** : Used for transporting R30 & 2300 Ditch Witch Trenchers.
- DIMENSIONS** : Overall Length : 3800 mm
Overall Length & Drawbar : 5300 mm
Internal Width : 1900 mm
- FEATURES** : Ramps : GR300 Gridmesh with coil spring balancing.
Decking : GR300 Gridmesh
Brakes : Dual line vacuum
Parking Brake : Manually operated ratchet type.
Towing Eye : Large type.
Tyres : 7.50 x 16'' x 8 ply.
- WEIGHTS** : Gross : 4000 kg
Load : 2500 kg
Tare : 1500 kg

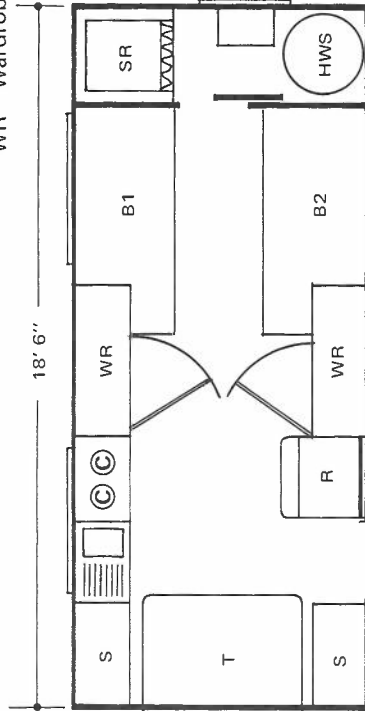
Caravans

MQG

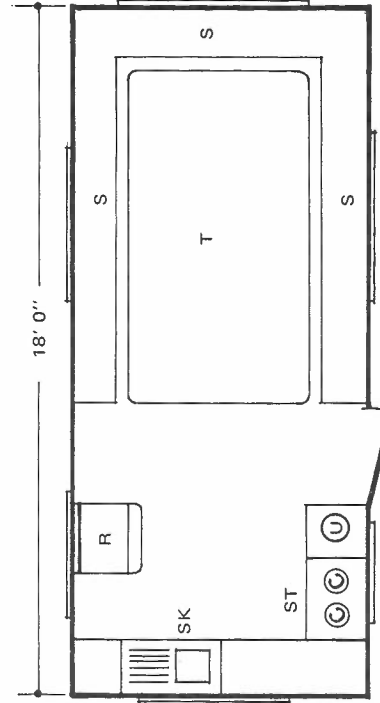
- B Wire Bunks
- C Cupboards
- G Griller
- HWS Hot Water Service
- R Refrigerator
- SK Sink
- SR Shower Recess
- ST Stove
- TC Toilet
- U Urn
- WB Wash Basin
- WT Wash Trough
- WR Wardrobe



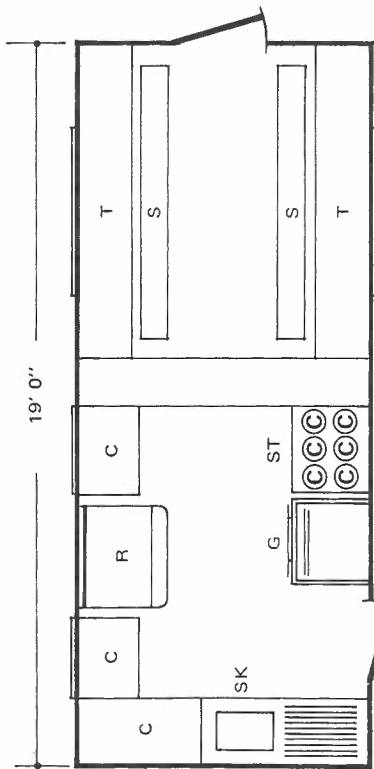
WORK PARTY



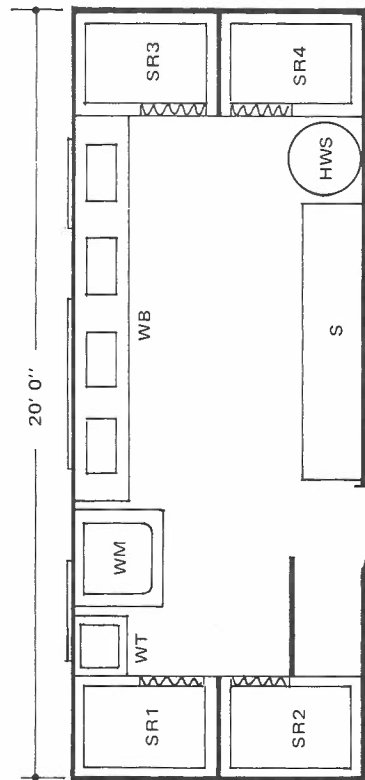
2 BERTH LIVING WITH SHOWER



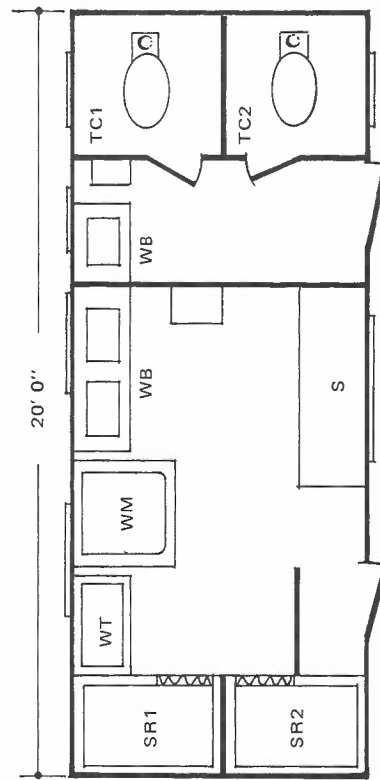
MESS



KITCHEN/DINING



ABLUTION/LAUNDRY

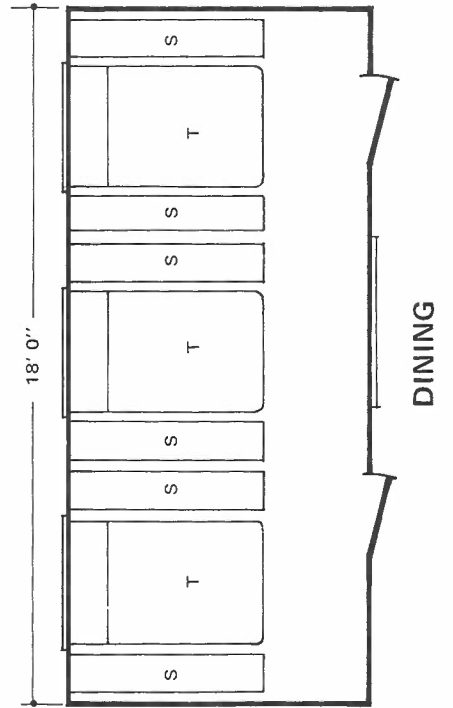
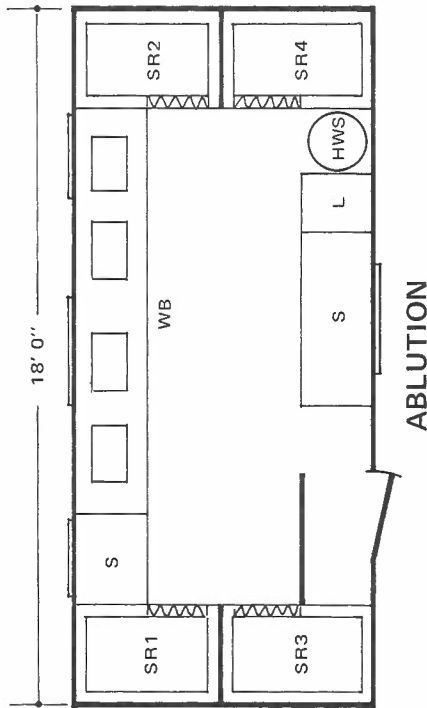
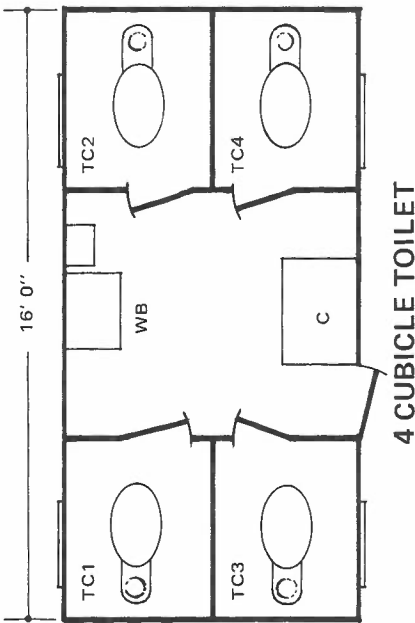
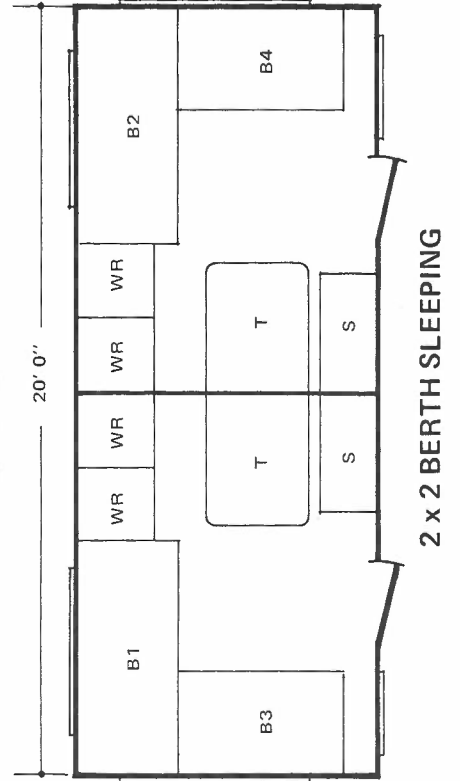
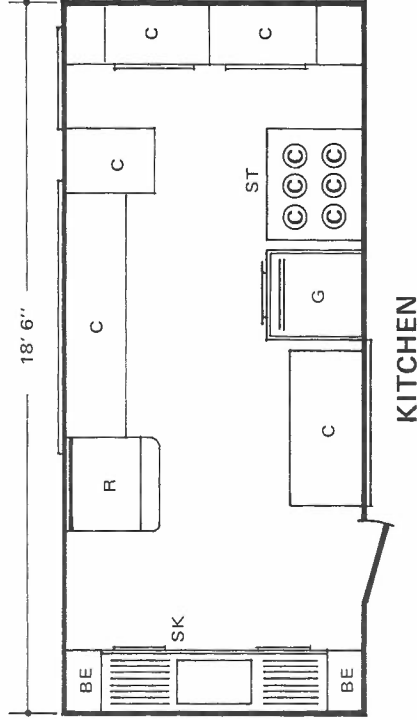
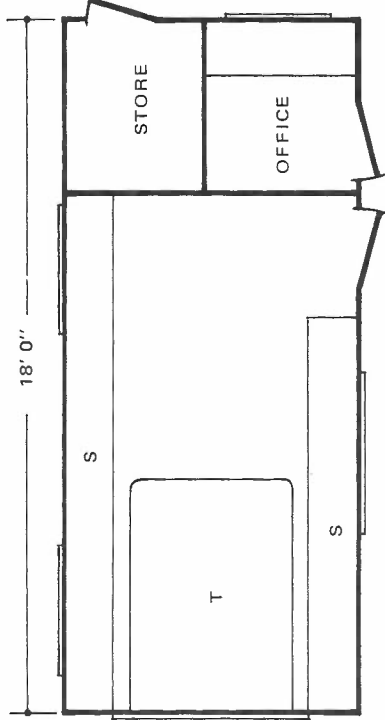


ABLUTION/TOILET/LAUNDRY

Caravans

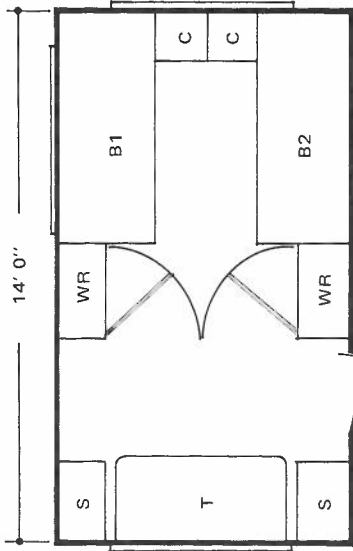
MQG

- B Wire Bunks
- BE Bench Ends
- C Cupboards
- G Griller
- HWS Hot Water Service
- L Locker
- S Seat
- SR Shower
- ST Stove
- SK Sink
- WR Wardrobe
- WB Wash Basin

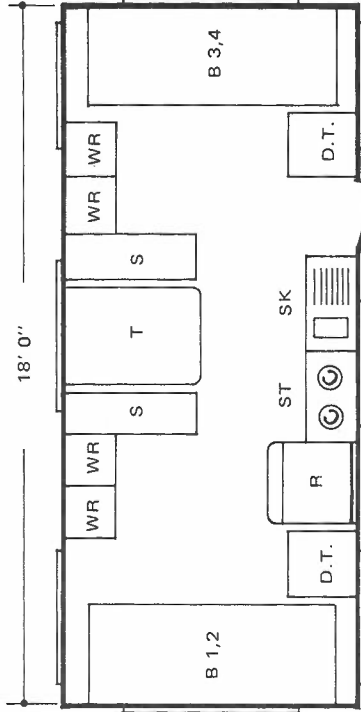


Caravans

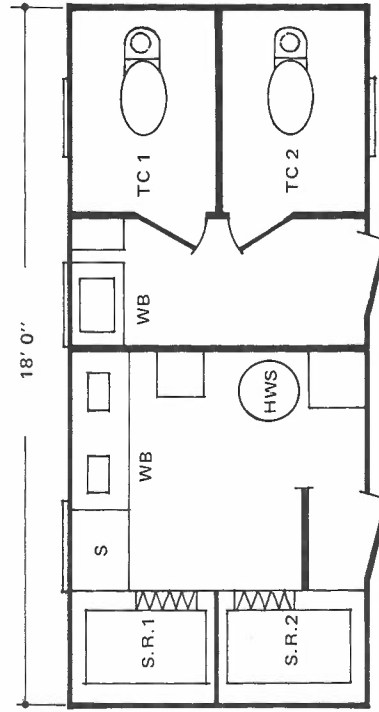
MQG



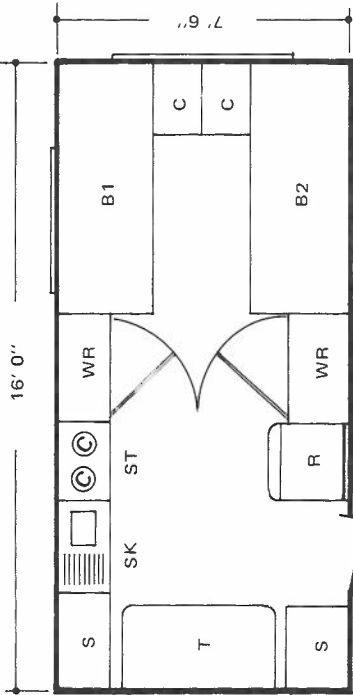
2 BERTH SLEEPING



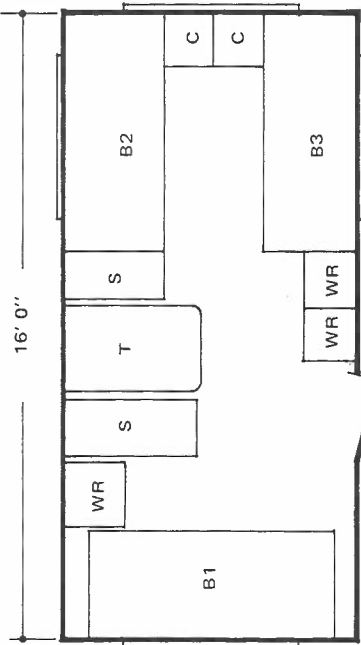
4 BERTH LIVING



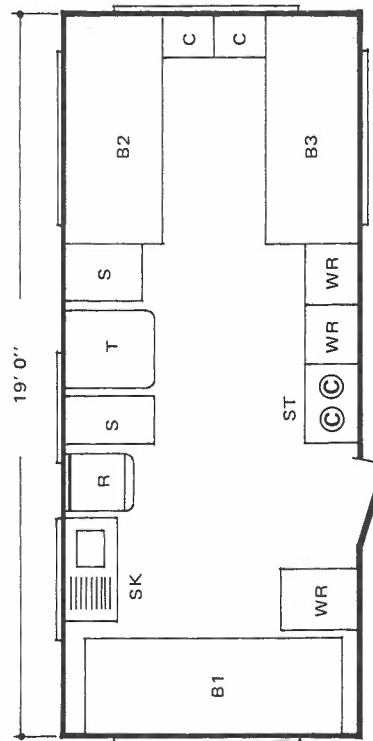
ABLUTION/TOILET



2 BERTH LIVING

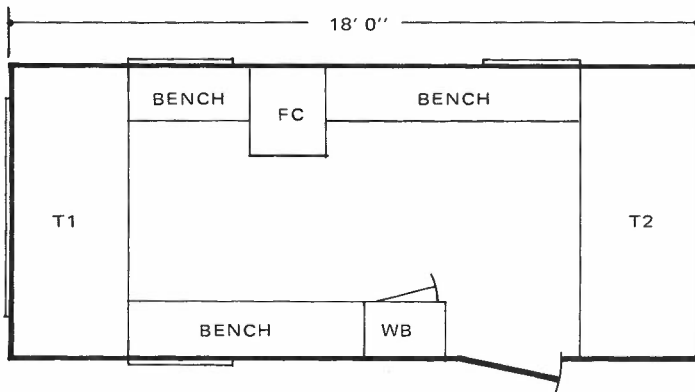


3 BERTH SLEEPING



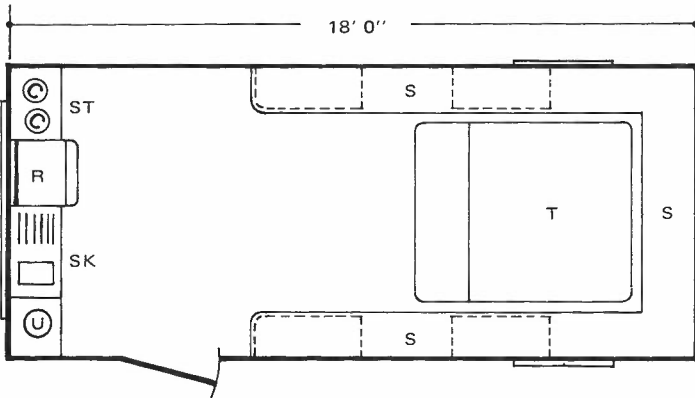
3 BERTH LIVING

- B Wire Bunks
- C Cupboards
- DT Dressing Table
- R Refrigerator
- S Seat
- SK Sink
- ST Stove
- SR Shower
- TC Toilet
- WB Wash Basin
- WR Wardrobe
- HWS Hot Water Service
- U Urn
- WM Washing Machine

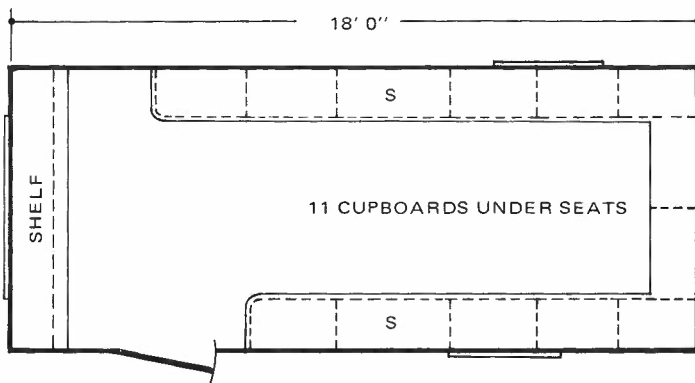


- R Refrigerator
- SK Sink
- ST Stove
- S Seat
- T Table
- FC Filing Cabinet
- WB Wash Basin
- U Urn

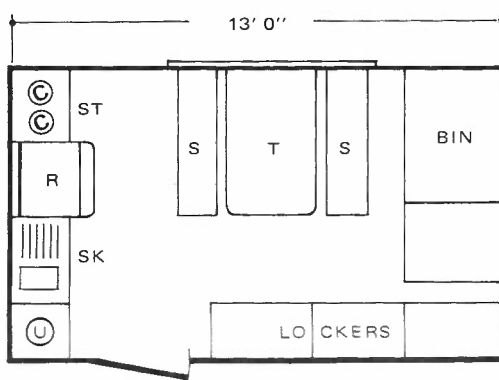
OFFICE



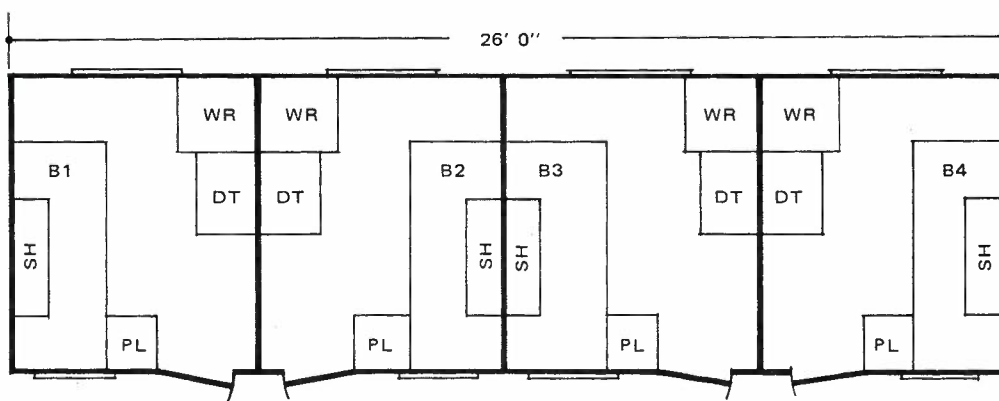
MESS/CHANGE
(For 5 to 9 man Metro. team)



CHANGE
(For 10 to 18 man Metro. team)

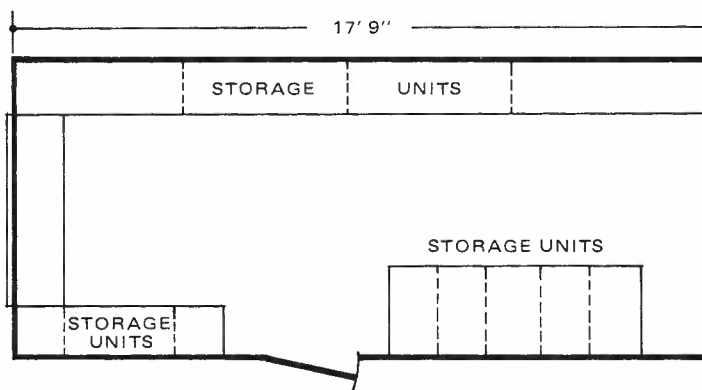


WORK PARTY
(With Appliances)

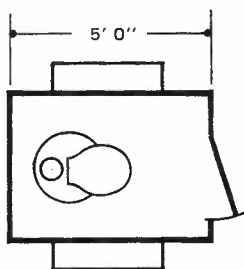


4 x 1 BERTH SLEEPING

- B Wire Bunks
- PL Personal Locker
- WR Wardrobe
- DT Dressing Table
- SH Shelves



STORES HEAVY DUTY 3 TON



SINGLE CUBICLE TOILET