## *RESTRICTED

## ORDNANCE SUPPLY CATALOG

Group G Technical Reference TM 9-731A

## List of all Service Parts <br> for <br> TANK, MEDIUM, M4A1

## 76 mm. GUN, WET

GENERAL INFORMATION This is a list of all items of Service for the Tank, Medium, M4A1 ( 76 mm . Gun, Wet) arranged according to standardized government grouping. WARNING: Many of the parts listed herein are not stocked for issue. See ORD 7 and 8 of the appropriate major combination $S N L$ for those parts stocked for issue. In case parts not listed in ORD 8 are needed, separate requisitions for these parts should be forwarded through normal supply channels with justification therefor.

This list of all service parts is to be used for identification and storage purposes. Every individual part is not necessarily stored by iteslf; in fact, many parts are stored as authorized assemblies. Such assemblies are indicated herein. The components, however, of such assemblies that are items of service are listed alphabetically within the appropriate groups with the number of each particular part required per unit assembly.

For full information relative to the Ordnance Supply Catalog, the procedure followed and the principles employed in their compilation, together with the purposes and uses thereof, see ORD 1, Introduction; ORD 2, Index; and the (OPSR) Ordnance Provision System Regulations.

FEDERAL STOCK NUMBERS—Classifications Codes for Federal Stock Numbers listed herein will be found in ORD 5-2 "Stock List."

| QUICK REFERENCE INDEX |
| :--- |
| GENERAL information |
| ORD 9 qist of ald <br> SERVICE PARTS |


| $01^{\text {ENGINE }}$ |
| :--- |
| $02^{\text {CLUTCH }}$ |
| $03^{\text {FUEL }}$ |
| $04^{\text {EXHAUST }}$ |
| $05^{\text {COOLING }}$ |
| $0 \mathbf{6}^{\text {ELECTRICAL }}$ |
| $07^{\text {TRANSMISSION }}$ |
| 09 PROPELLER SHAFFT AND $^{\text {UNIVRSAL JOINT }}$ |

10 final drive
13 TRACK SUSPENSION
14 CONTROL
15 FRAME AND BRACKET
16 SHOCK ABSORBER
17 FENDERS
18 HULL
19 TURRET
22
ACCESSORIES
24
FIRE EXTINGUISHER SYSTEM

29
AUXILIARY GENERATOR

NOTES

## SPECIAL INFORMATION

Major Item Designation: The major item covered by this catalog is designated as a combat vehicle as defined in paragraph 3, AR 850-15, dated 28 August 1943.

## Ordnance or Manufacturer Part Number and Ordnance or Manufacturer Drawing Number:

In columns 4 and 5 manufacturers' numbers will always appear in parentheses. When more than one number applies to the same part, all except the first will be indented.

Components of Kits, Sets and Assemblies: Whenever any doubt might exist as to the components of an assembly, an explanatory statement or a complete listing of components is furnished. For all KITS and SETS a complete listing of components is given. Wherever separate items are shown which are also part of a KIT or SET that fact is stated following the nomenclature of the separate item.

Attaching Parts: Attaching parts such as bolts, nuts, rivets, screws and washers are intended immediately under the part or assembly which they attach. Whenever two similar items, such as right and left cylinder heads, optional generators, two fuel tanks, superesding spring assemblies, etc., have the same attaching parts, the attaching parts are listed only after the last of the similar parts. The quantities shown for the attaching parts are for both right and left cylinder heads, or only one of the optional generators, etc.

Illustrations: This catalog contains various illustrations to aid the user in locating and identifying parts. These are so placed as to be convenient for reference in connection with the text. For each part identified on an illustration the noun, part number and group number of the item is given. An index of illustrations by number, title and page is included with other indexes at the back of the book.

Indexes: Complete indexes, alphabetical and numerical, are furnished at the back of the book. These indexes and contents are explained in brief paragraphs at the beginning of each index.

Stock Numbers: The prefix of the SNL type stock number (i.e. G067, G502, etc.) signifies that the particular part or component was originally coded under the major item designation for that SNL and does NOT mean that the part is used only in that major item. All subsequent lists include that same part will show the identical stock number.

## Publications Pertaining To This Vehicle:

Operator's Manual<br>Maintenance Manuals

TM 9-731E
TM 9-1750B Power Train (one-piece differential)
TM 9-1750C
$\left\{\begin{array}{l}\text { American Bosch Magnetos MJT7A302, }\end{array}\right.$
MJT9A304 and MJT 9A306
TM 9-1750K Tracks and Suspension and Hull
TM 9-1751 Continental Engine (model R975-C1)
TM 9-1825A Delco-Remy Electrical Equipment
TM 9-1825B Auto-Lite Electrical Equipment
TM 9-1826B Stromberg Carburetors
Interchangeability of Components: The major components of this vehicle are interchangeable with those of other vehicles on the M4 tank chassis.

The Continental radial gasoline engine ( $\mathrm{R} 975-\mathrm{C} 1$ and C 4 ) in this vehicle is similar to that used in the following and information may be had by referring to the SNL's listed:

```
Tank, Medium, M4 (75-mm. Gun, Dry)
Tank, Medium, M4A1 (75-mm. Gun, Dry)
Tank, Medium, M4 (105-mm. Howitzer)
Carrier, Cargo, M30 (T14)
Carriage, Motor, 155-mm. Gun, M12
Carriage, Motor, 76-mm. Gun, M18 (T70)
Carriage, Motor, }105-\textrm{mm}\mathrm{ . Howitzer, M7
Vehicle, Utility, Armored, T41
```

SNL G-104, Vol. 6
SNL G-104, Vol. 11
SNL G-104, Vol. 14
SNL G-158
SNL G-158
SNL G-163
SNL G-128
SNL G-163

The differential and final drives, transmission, track and volute spring suspension are the same as or similar to all vehicles mentioned above (except Carriage, Motor, 76 mm . Gun M18 (T70) and Vehicle, Utility, Armored, T41), as well as the other vehicles based on the M4 series tank chassis.

## Identification Plates For Vehicle and Principal Components:

The location of the various serial numbers is as follows:

Name of Unit
BATTERY
VOLUTE SPRING SUSPENSION CRANKING MOTOR EMERGENCY STOP SOLENOID ENGINE
FIRE EXTINGUISHER CONTROL GENERATOR
GENERATOR REGULATOR
50 CAL. MACHINE GUN
50 CAL. MACHINE GUN MOUNT
THOMPSON-SUB-MACHINE GUN
POWER TRAIN
QUADRANT, ELEVATING
TELESCOPE
VEHICLE

## Location

Cell Connector at Top of Battery
Top of Main Casting
On Motor Housing
On Housing
On Main Case Top
On Face of Housing
On Generator Housing
On Cover
Right Side of Magazine
Top of Bracket
Left Side of Magazine
Center of Top Slope on Differential Housing
Plate on Side Cover
Plate on Mounting Bracket
Left Hull Side Plate at Driver's Seat

Definition of Locational Terms: All like parts on the vehicle which are not interchangeable are designated Left and Right in respect to their position in the vehicle when it is viewed from the rear facing forward. The engine end of the vehicle is considered the rear end.

How to Find Parts: This catalog is arranged and cross-indexed so that parts can be found easily even though only one of the several identifying factors is known. The various ways in which parts can be located are as follows:

If the nomenclature (basic name) only is known, refer to the alphabetical index in the back of the book. This index will give the subgroup in which the part is listed. As the part names are arranged in alphabetical order within the subgroups, the complete listing of the part can readily be found.

If any one of the numbers-Ordnance, manufacturers' or stock-is known, refer to the appropriate numerical index in the back of the book. This index will give the subgroup. number in which the part is listed. By checking in the appropriate number column in that subgroup, the complete listing of the part can readily be found.

If the use, function or location, of the part is known, refer to the illustration index to determine on which the part in question is most likely to appear. Then turn to the proper illustration and pick the proper part from which reference to the proper nomenclature, part and stock number, etc. can be determined. Also reference to the standardized government grouping immediately following this explanation will be of help in selecting parts upon a functional basis.

Notice: of discrepancies or suggested changes should be directed to Office, Chief of OrdnanceDetroit, Maintenance Division, Military Publications Branch, SPOMM-BM, Detroit 32, Michigan.

## SPECIAL INFORMATION

Major Item Designation: The major item covered by this catalog is designated as a combat vehicle as defined in paragraph 3, AR 850-15, dated 28 August 1943.

## Ordnance or Manufacturer Part Number and Ordnance or Manufacturer Drawing Number:

In columns 4 and 5 manufacturers' numbers will always appear in parentheses. When more than one number applies to the same part, all except the first will be indented.

Components of Kits, Sets and Assemblies: Whenever any doubt might exist as to the components of an assembly, an explanatory statement or a complete listing of components is furnished. For all KITS and SETS a complete listing of components is given. Wherever separate items are shown which are also part of a KIT or SET that fact is stated following the nomenclature of the separate item.

Attaching Parts: Attaching parts such as bolts, nuts, rivets, screws and washers are intended immediately under the part or assembly which they attach. Whenever two similar items, such as right and left cylinder heads, optional generators, two fuel tanks, superesding spring assemblies, etc., have the same attaching parts, the attaching parts are listed only after the last of the similar parts. The quantities shown for the attaching parts are for both right and left cylinder heads, or only one of the optional generators, etc.

Illustrations: This catalog contains various illustrations to aid the user in locating and identifying parts. These are so placed as to be convenient for reference in connection with the text. For each part identified on an illustration the noun, part number and group number of the item is given. An index of illustrations by number, title and page is included with other indexes at the back of the book.

Indexes: Complete indexes, alphabetical and numerical, are furnished at the back of the book. These indexes and contents are explained in brief paragraphs at the beginning of each index.

Stock Numbers: The prefix of the SNL type stock number (i.e. G067, G502, etc.) signifies that the particular part or component was originally coded under the major item designation for that SNL and does NOT mean that the part is used only in that major item. All subsequent lists include that same part will show the identical stock number.

## Publications Pertaining To This Vehicle:

Operator's Manual TM 9-731E

Maintenance Manuals
TM 9-1750B Power Train (one-piece differential)
TM 9-1750C $\left\{\begin{array}{l}\text { American Bosch Magnetos MJT7A302, } \\ \text { MJT9A304 }\end{array}\right.$
TM 9-1750K Tracks and Suspension and Hull
TM 9-1751 Continental Engine (model R975-C1)
TM 9-1825A Delco-Remy Electrical Equipment
TM 9-1825B Auto-Lite Electrical Equipment
TM 9-1826B Stromberg Carburetors
Interchangeability of Components: The major components of this vehicle are interchangeable with those of other vehicles on the M4 tank chassis.

The Continental radial gasoline engine ( $\mathrm{R} 975-\mathrm{C} 1$ and C 4 ) in this vehicle is similar to that used in the following and information may be had by referring to the SNL's listed:

```
Tank, Medium, M4 (75-mm. Gun, Dry)
Tank, Medium, M4A1 (75-mm. Gun, Dry)
Tank, Medium, M4 (105-mm. Howitzer)
Carrier, Cargo, M30 (T14)
Carriage, Motor, 155-mm. Gun, M12
Carriage, Motor, 76-mm. Gun, M18 (T70)
Carriage, Motor, 105-mm. Howitzer, M7
Vehicle, Utility, Armored, T41
```

SNL G-104, Vol. 6
SNL G-104, Vol. 11
SNL G-104, Vol. 14
SNL G-158
SNL G-158
SNL G-163
SNL G-128
SNL G-163

The differential and final drives, transmission, track and volute spring suspension are the same as or similar to all vehicles mentioned above (except Carriage, Motor, 76 mm . Gun M18 (T70) and Vehicle, Utility, Armored, T41), as well as the other vehicles based on the M4 series tank chassis.

## Identification Plates For Vehicle and Principal Components:

The location of the various serial numbers is as follows:
Name of Unit
BATTERY
VOLUTE SPRING SUSPENSION
CRANKING MOTOR
EMERGENCY STOP SOLENOID
ENGINE
FIRE EXTINGUISHER CONTROL
GENERATOR
GENERATOR REGULATOR
50 CAL. MACHINE GUN
50 CAL. MACHINE GUN MOUNT
THOMPSON-SUB-MACHINE GUN
POWER TRAIN
QUADRANT, ELEVATING
TELESCOPE
VEHICLE

## Location

Cell Connector at Top of Battery
Top of Main Casting
On Motor Housing
On Housing
On Main Case Top
On Face of Housing
On Generator Housing
On Cover
Right Side of Magazine
Top of Bracket
Left Side of Magazine
Center of Top Slope on Differential Housing
Plate on Side Cover
Plate on Mounting Bracket
Left Hull Side Plate at Driver's Seat

Definition of Locational Terms: All like parts on the vehicle which are not interchangeable are designated Left and Right in respect to their position in the vehicle when it is viewed from the rear facing forward. The engine end of the vehicle is considered the rear end.

How to Find Parts: This catalog is arranged and cross-indexed so that parts can be found easily even though only one of the several identifying factors is known. The various ways in which parts can be located are as follows:

If the nomenclature (basic name) only is known, refer to the alphabetical index in the back of the book. This index will give the subgroup in which the part is listed. As the part names are arranged in alphabetical order within the subgroups, the complete listing of the part can readily be found.

If any one of the numbers-Ordnance, manufacturers' or stock-is known, refer to the appropriate numerical index in the back of the book. This index will give the subgroup. number in which the part is listed. By checking in the appropriate number column in that subgroup, the complete listing of the part can readily be found.

If the use, function or location, of the part is known, refer to the illustration index to determine on which the part in question is most likely to appear. Then turn to the proper illustration and pick the proper part from which reference to the proper nomenclature, part and stock number, etc. can be determined. Also reference to the standardized government grouping immediately following this explanation will be of help in selecting parts upon a functional basis.

Notice: of discrepancies or suggested changes should be directed to Office, Chief of OrdnanceDetroit, Maintenance Division, Military Publications Branch, SPOMM-BM, Detroit 32, Michigan.

Standardized Government Grouping: The parts listed in this catalog are arranged by groups and subgroups and alphabetically within these groups. Parts are grouped primarily on the basis of their function. This arrangement facilitates location and selection of parts. See "How To Find Parts" in General Information.

01 ENGINE GROUP
0100 Engine Assembly
0101.1 Front Crankcase Section
0101.2 Main Crankcase Section
0101.3 Rear Crankcase Section
0101. 4 Diffuser Section
0101.5 Cylinder

0102 Crankshaft
0103 Flywheel
0104 Pistons, Rings, Pins, Connecting Rods and Bearings
0105.1 Valves, Guides, Seats and Springs
0105.2 Valve Lifts, Push Rods, Rockers and Tappets
0105.3 Cam Ring and Bearings
0106.11 Oil Pumps
0106.15 Scavenger Pump
0106.2 Oil Filter
0106.3 Oil Cooler
0106.5 Oil Breather
0106.6 Oil Lubrication System and Tanks
0106.8 Oil Temperature Regulator

0108 Intake and Exhaust Manifolds
0109.1 Supercharger Impeller and Drive
0109.2 Three-Way Accessory and Fuel Pump Drive
0109.3 Cam and Cranking Motor Drive
0109.4 Magneto Accessory Drive
0109.5 Generator Drive
0109.6 Tachometer Drive

02 CLUTCH GROUP
0200 Clutch Assembly and Housing
0201 Clutch Disc, Facing, Hub, Driven Plates, Pressure Plate, Springs, Pilot Bearing and Spindle
Clutch Release Sleeve and Bearing

03 FUEL GROUP
0301 Carburetor
0302.1 Romec Fuel Pump
0302.2 AC Fuel Pump

0304 Air Cleaner, Parts, Tubes, Hose and Clamps
0306 Fuel Tanks and Lines
0308 Engine Speed Governor
0309 Fuel Filter
0311 Engine Priming System

## 04 EXHAUST GROUP

0401 Exhaust and Tail Pipe

## 05 COOLING GROUP

0502 Engine Cowling and Deflectors
0505 Fan

## 06 ELECTRICAL GROUP

0601.1 Auto-Lite Generator
0601.5 Delco-Remy Generator
0601.8 Eclipse Generator
0602.1 Auto-Lite Generator Regulator
0603.5 Delco-Remy Cranking Motor
0603.8 Eclipse Cranking Motor
0604.1I Scintilla Magneto
0604.15 Bosch Magneto
0604.51 Eclipse Booster Coil
0604.55 Auto-Lite Booster Coil
0604.58 Delco-Remy Booster Coil

0605 Ignition Wiring
0607 Instrument Panel and Carrier
0608 Switches, Breakers and Terminal Boxes
0609.1 Head Lamps, Tail and Marker Lamps and Lamp-Units
0609.2 Auxiliary Lights

0611 Horn, Horn Cable and Switch
0612 Batteries
0613.1 Hull Wiring
0613.2 Turret Wiring Electrical Equipment
0614 Turret Collector Ring Box
0616 Ventilating Equipment
07 TRANSMISSION
0701 Transmission Case, Caps, Covers, Fillerand Oil Seals
0702.1 Input Shaft Bearings, Gears, Snap Rings, Spacer and Synchronizer
0702.2 Output Shaft Gears, Bearings, MainDrive Pinion, Spacers, Synchronizerand Snap Ring
0702.3 Countershaft Bearings, Gears and First Speed Idler
0704 Forks, Gear Shift Levers, Rods and Yokes
0706.1 Transmission Oil Pump
0706.3 Transmission Oil Cooler and Relief Valve
0706.5 Transmission Breather
0706.6 Transmission Oil Lines09 PROPELLER SHAFT and UNIVERSALJOINT GROUP
0900 Propeller Shaft and Universal JointAssembly and Parts
10 FINAL DRIVE GROUP
1000 Differential and Final Drive Assembly
1001 Differential Housing
1002 Differential Bearings, Carrier, Gears,Pinions and Balancing Units1004 Differential Steering Brakes
1005.5 Differential Breather
1005.6 Differential Fittings, Line and Oil Sump
1008.1 Final Drive Assembly
1008.2 Final Drive Bearings, Cover, Gears,Pinions and Shafts
13 TRACK SUSPENSION GROUP
Vertical Volute Spring Suspension Assem-bly and PartsVertical Track Support Rollers andBrackets
1303Narrow Track Idlers and Brackets

1304 Narrow Track Drive Sprockets
I 305.I Narrow Track, Rubber, Non-Reversible T-5I
I 305.3 Narrow Track, Rubber-Chevron T-48
1305.5 Narrow Track, Steel-Chevron T-49

I 305.7 Narrow Track, Steel-Chevron T-54EI
I305.8 Narrow Track, Steel—Chevron T-56
1301 Horizontal Volute Spring Suspension Assembly and Parts
Horizontal Suspension Track Support Roller
1303 Wide Track Rear Idler
1304 Wide Track Drive Sprockets
1305 Wide Tracks, T-66, T-80, and Connections

## 14 CONTROL GROUP

1401 Steering Controls
1402 Accelerator and Throttle Controls
1403 Clutch Controls

## 15 FRAME and BRACKET GROUP

1503 Pintles and Towing Attachments

## 16 SHOCK ABSORBER

1604 Shock Absorber

## 17 FENDERS

I701 Fenders and Sand Shields

## HULL GROUP

1801 Hull Mounting and Attaching Parts
1803.1I Hull Floor Escape Door, AssemblyE4162A
1803.12 Hull Floor Escape Door, Assembly7069430
1803.2 Stationary Periscope Holder and Periscope Housing, Drivers and Assistant Driver's Door
1803.3 Driver's and Assistant Driver's Door

1804 Gun Barrel Traveling Lock
1805 Hull Drain Valve
1806 Driver's and Assistant Driver's Seat
1808 Stowage Boxes, Racks and Straps
1901.1 Turret Race Assembly
1901.21 Turret Traversing Lock
1901.25 Turret 76 mm . Gun Traveling Lock, Assembly-7053894
1901.26 Turret 76 mm . Gun Traveling Lock, Assembly-7069718
1901.31 Gunner's Seat
1901.35 Loader's and Commander's Seat
1903.11 Commander's Cupola
1903.15 Turret Escape Hatch, AssemblyD94598
1903.16 Turret Escape Hatch, Assembly7054011
1903.18 Pistol Port
1903.21 Turret Periscope. Housing
1903.25 Turret Sighting Device
1905.1 Turret Hand Traversing Mechanism
1905.2 Turret Power Traversing Mechanism Bearings, Cases and Gears
1905.3 Turret Power Traversing Mechanism Hydraulic Motor
1905.5 Turret Power Traversing Mechanism Hydraulic Pump
1905.61 Turret Power Traversing Mechanism Hydraulic Pump Control and Gun Firing Handle
1905.65 Turret Power Traversing Mechanism Hydraulic Pump Pilot Valve and Dual Control Assembly-Cl00603
1905.68 Turret Power Traversing Mechanism Hydraulic Pump Pilot Valve and Dual Control Assembly-7068143
1905.7 Turret Power Traversing Mechanism Reservoir and Lines
1905.9 Turret Power Traversing Mechanism Electric Motor

1906 Turret Stowage and Ammunition Boxes

## 22 ACCESSORIES GROUP

2208.1 Speedometer, Adapters and Drive Shaft
2208.2 Tachometer, Adapters and Drive Shaft
2209.1 Azimuth Indicator and Parts
2209.2 Compass

24 FIRE EXTINGUISHER SYSTEM GROUP
2401 Portable and Stationary Fire Extinguisher Systems

## 29 AUXILIARY GENERATOR GROUP

2900 Auxiliary Generator and Engine Assembly
2911 Auxiliary Engine Crankcase, Barrel, Cylinder Block and Head

2912 Auxiliary Engine Crankshaft and Bearings
2913 Auxiliary Engine Flywheel
2914 Auxiliary Engine Pistons, Bearings, Connecting Rods, Pins and Rings

2918 Auxiliary Engine Intake and Exhaust Manifolds and Heat Controls

2931 Auxiliary Engine Carburetor
2933
2935

2961 Auxiliary Engine Generator
2964.1 Auxiliary Engine Distributor or Magneto

Auxiliary Engine Ignition Coil, Wiring, Spark Plugs and Switches

Auxiliary Engine and/or Generator In- struments, Panel Wiring, Control Panel and Mountings

Manufacturers' Identification Symbols: Listed below are the symbols used as prefixes to the manufacturers' numbers appearing in this book. This symbol indicates the manufacturer whose number is used for each item.

| AC | AC SPARK PLUG DIVISION (G.M.C.) . . . . . . . . . . . . . . . . . . . . . . . . . . . . Flint, Michigan |
| :---: | :---: |
| ACC | AMERICAN CABLE DIVISION (AMERICAN CHAIN AND CABLE CO.). 230 Park Ave., New York 17, N. Y. |
| AD | ALEMITE DIVISION (STEWART-WARNER CORP.) . . . . . . . . . . . . . . . . 1826 Diversey Pkwy., Chicago, Ill. |
| AIR | AIR CORPS STANDARD |
| AL | ELECTRIC AUTO LITE CORP. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Mulberry and Champ St., Toledo, Ohio |
| AN | ARMY NAVY STANDARD |
| BN | BANTAM BEARING CORP. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . South Bend 21, Ind. |
| BO | AMERICAN BOSCH CORP. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 3664 Main St., Springfield, Mass. |
| BS | BENDIX-STROMBERG CARBURETOR CO. . . . . . . . . . . . . . . . . . . . . . . . . . South Bend, Ind. |
| BZ | BREEZE CORP., INC. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 24 S. Sixth St., Newark, N. J. |
| CC | CHRYSLER CORP. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Detroit 31, Mich. |
| CM | CHICAGO RAWHIDE MANUFACTURING CO. . . . . . . . . . . . . . . . . . . . . . . 1303 Elston Ave., Chicago, Ill. |
| CP | CHAMPION SPARK PLUG CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Toledo, Ohio |
| CU | CUNO ENGINEERING CORP. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 80 S. Vine St., Meriden, Conn. |
| CWR | CONTINENTAL-BUILT WRIGHT ENGINES <br> (CONTINENTAL MOTORS CORP.). 205 Market St., Muskegon, Mich. |
| DN | DONALDSON CO., INC. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 666 Pelham St., St. Paul, Minn. |
| DR | DELCO-REMY DIVISION (G.M.C.) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 901 S. Main St., Delphos, Ohio |
| DV | DOLE VALVE CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1901 Carroll Ave., Chicago, Ill. |
| EC | ECLIPSE-PIONEER DIV. (BENDIX AVIATION CORP.) . . . . . . . . . . . . . . Teterboro, N. J. |
| FE | FEDERAL ELECTRIC CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8700 S. State St., Chicago, Ill. |
| FL | FULTON CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1912 S. 82nd St., Milwaukee 14, Wis. |
| GM | GENERAL MOTORS CORP. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 3044 W. Grand Blvd., Detroit, Mich. |
| HC | COLE-HERSEE CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 54 Old Colony Ave., So. Boston 27, Mass. |
| HL | HOMELITE CORP. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Port Chester, N. Y. |
| HR | HARRISON RADIATOR CORP.. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Washburn and Walnut Sts., Lockport, N. Y. |
| HY | HYATT BEARINGS DIV. (G.M.C.) . ${ }^{\text {a }}$. . . . . . . . . . . . . . . . . . . . . . . . . . . . . P. O. Box 71, Harrison, N. J. |
| LI | LISLE CORP. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 807 E. Main St., Clarinda, Iowa |
| LPC | LA PLANTE-CHOATE MFG. CO., INC. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2920 First Ave. E., Cedar Rapids, Iowa |
| LPE | LIPE-ROLLAWAY CORP. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 208 S. Geddes St., Syracuse 1, N. Y. |
| MRC | MARLIN-ROCKWELL CORP. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 402 Chandler St., Jamestown, N. Y. |
| MTM | MILLER MANUFACTURING CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1725 Sixteenth St., Detroit 16, Mich. |
| MZ | "MAZDA"-GENERAL ELECTRIC CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Schenectady 5, N. Y. |
| ND | NEW DEPARTURE DIVISION (G.M.C.) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Bristol, Conn. |
| NMB | NATIONAL MOTOR BEARING CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Redwood City, Calif. |
| NMB | NATIONAL MOTOR BEARING CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1100 78th Ave., Oakland, Calif. |
| NP | NEW PROCESS GEAR CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 500 Plum St., Syracuse, N. Y. |
| OG | OIL GEAR CO. (THE) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1403 W. Bruce St., Milwaukee, Wis. |
| PG | PIERCE GOVERNOR . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1605 Ohio St., Anderson, Ind. |
| QMC | QUARTERMASTER DEPARTMENT |
| RB | ROLLER BEARING CO. OF AMERICA. . . . . . . . . . . . . . . . . . . . . . . . . . . . 4880 Whitehead Rd., Trenton, N. J. |
| RE | ROMEC PUMP CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Alsbe Rd. and Taylor St., Elyria, Ohio |
| SC | SIGNAL CORPS |
| SCI | SCINTILLA MAGNETO DIV. (BENDIX AVIATION CORP.) . . . . . . . . . . Sidney, N. Y. |
| SK | SHAKEPROOF LOCK WASHER CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 2501 N. Keeler Ave., Chicago, Ill. |
| SKF | S.K.F. INDUSTRIES, INC. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Front St. and Erie Ave., Philadelphia, Pa. |
| SLR | SEAMLESS RUBBER CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 253 Hallock Ave., New Haven 3, Conn. |
| SN | SNAP-ON TOOLS CORP. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4441 Central Ave., Newark, N. J. |
| SP | SPICER MANUFACTURING CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4100 Bennett Rd., Toledo, Ohio |
| STY | STALEY MANUFACTURING CORP.. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 14th and Union Sts., Columbus, Ind. |
| SW | STEWART-WARNER CORP. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1828 Diversey Pkwy., Chicago, Illinois |
| TD | TIMKEN DETROIT AXLE CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Clark Ave., Detroit, Mich. |
| TI | TITEFLEX METAL HOSE CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 501 Frelinghuysen Ave., Newark, N. J. |
| TIM | TIMKEN ROLLER BEARING CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1935 Kelley Ave., Canton, Ohio |
| TL | TILLOTSON MFG. CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Walcott Blvd., Toledo, Ohio |
| TRU | TRU-STOP (AMERICAN CHAIN \& CABLE CO.) . . . . . . . . . . . . . . . . . . . . . . Bridgeport 2, Conn. |
| VG | VICTOR MANUFACTURING \& GASKET CO.. . . . . . . . . . . . . . . . . . . . . . . 5750 Roosevelt Rd., Chicago, Ill. |
| VR | VORTOX MANUFACTURING CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 121 S . Alexander Ave., Claremont 7, Calif. |
| WCE | WICO ELECTRIC CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . Phelon Ave., Providence, R. I. |
| WE | WESTINGHOUSE ELECTRIC \& MFG. CO. . . . . . . . . . . . . . . . . . . . . . . . . . East Pittsburgh, Pa. |
| WH | WEATHERHEAD CO. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 300 E. 131st St., Cleveland, Ohio |
| WIL | WILCOX RICH (DIVISION OF EATON MANUFACTURING CO.). . . . . 9771 French Rd., Detroit, Mich. |
| WK | KIDDE \& CO., INC., WALTER . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 675 Main St., Belleville 9, N. J. |
| WL | WELLMAN CO. (THE), S. K. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1374 E. 51st St., Cleveland 3, Ohio |
| WR | WRIGHT AERONAUTICAL CORP.. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 132 Beckwith Ave., Paterson, N. J. |

List of Abbreviations: The following is a list of the standard abbreviations appearing in this catalog.



RA PD $24603 \%$
FIGURE A - TANK, MEDIUM M4AI ( 76 mm . GUN, WET) - FRONT VIEW


