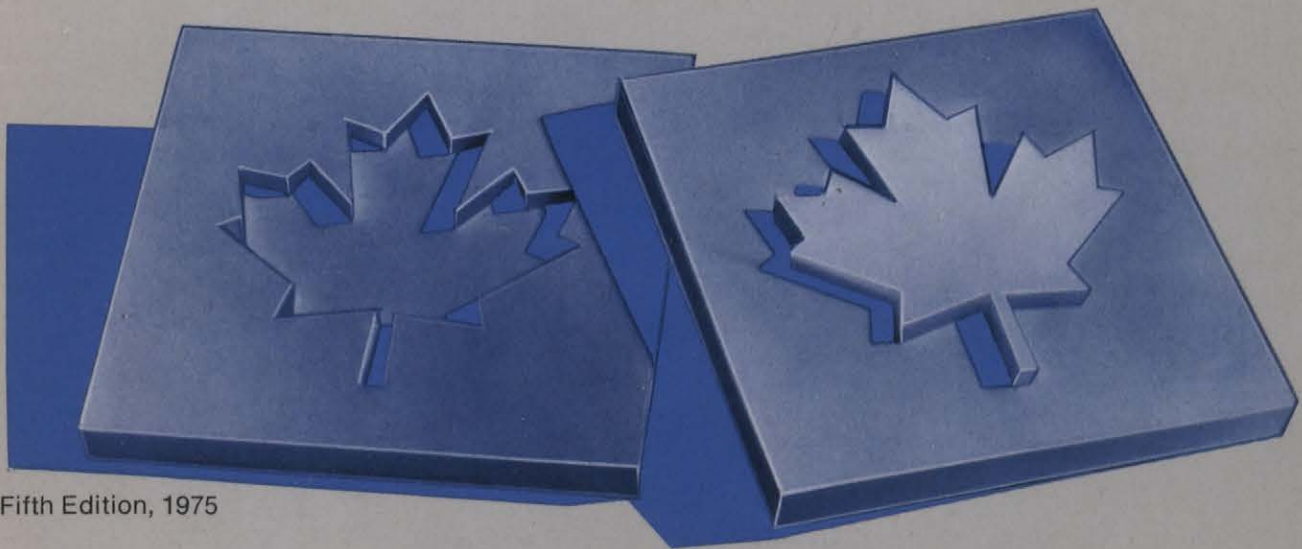


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# **DIE CASTING IN CANADA**



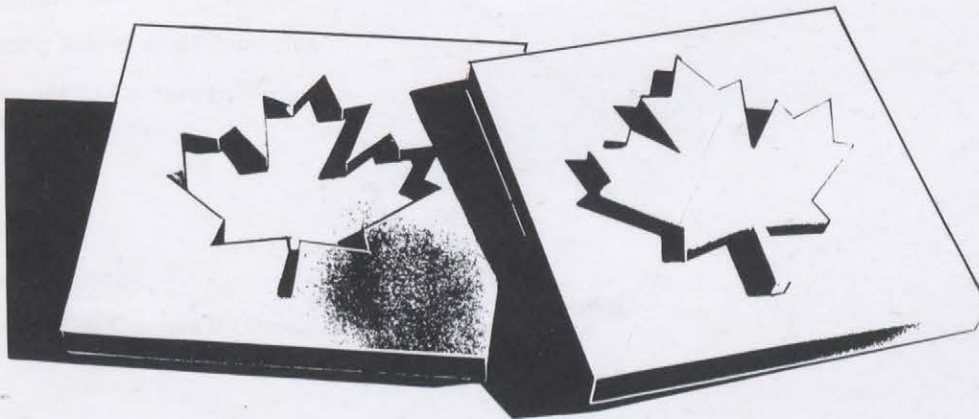
Fifth Edition, 1975



# Die Casting in Canada

MANUAL AND DIRECTORY

FIFTH EDITION, 1975



Published by the Department of Industry, Trade and Commerce, Ottawa, Canada

Information Canada, Ottawa, 1975



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Casting  
in  
Canada

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## **PREFACE**

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This publication is the revised and updated issue of the Manual and Directory of Die Casting in Canada. Besides supplying the names of new companies and their services it also includes change of addresses and capacities of firms already listed.

The publication was prepared with the assistance of the Zinc Institute and members of the Society of Die Casting Engineers which is gratefully acknowledged.

The purpose of the publication is to provide

information on Canadian die casting facilities for users of die castings in Canada and abroad.

The information it contains was compiled from questionnaires sent to Canadian die casting producers. Companies inadvertently omitted are invited to forward data on their operations to The Chief, Non-Ferrous Metals Division, Resource Industries and Construction Branch, Department of Industry, Trade and Commerce in order to be included in the next issue.

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For further information, please contact:

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K1A 0H5

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# DIE CASTING — A MODERN PRODUCTION PROCESS

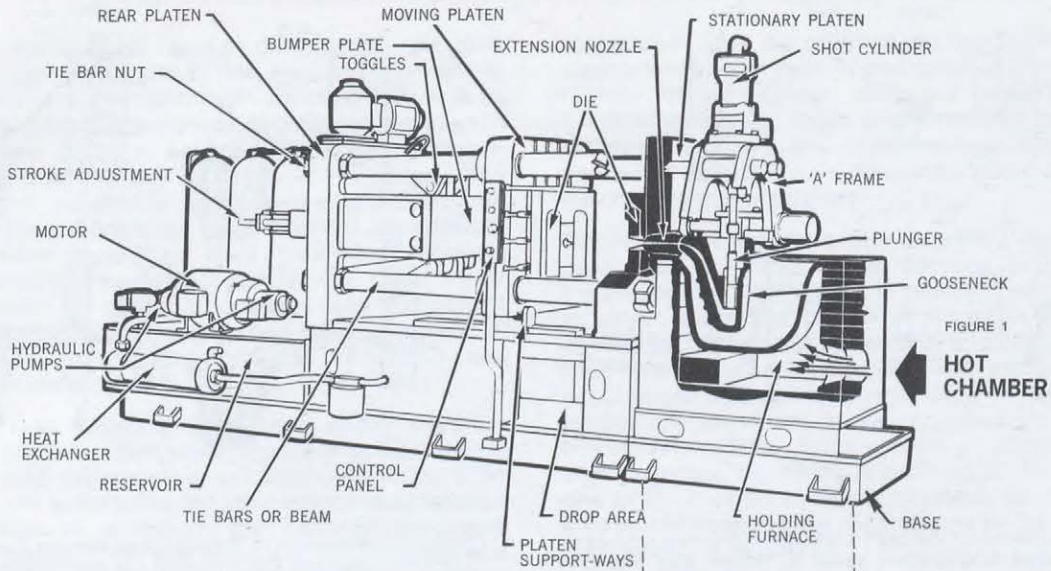


FIGURE 1  
HOT CHAMBER

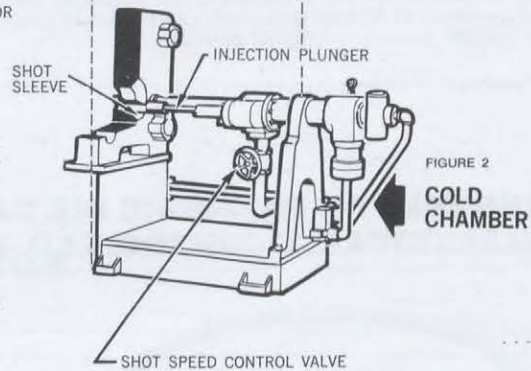
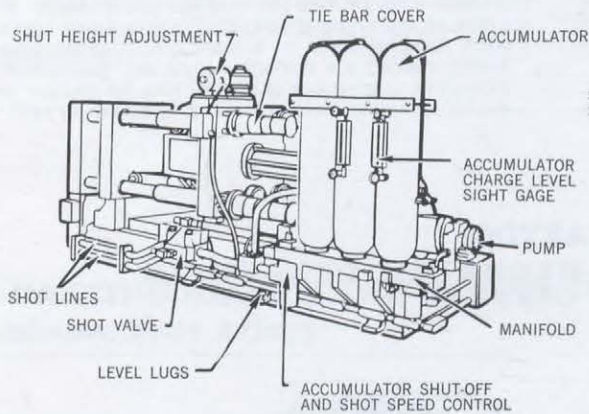


FIGURE 2  
COLD CHAMBER

Today, die casting is recognized as one of the important high-speed quantity production processes available to industry. For thousands of engineering products, die casting — which has been aptly termed “the shortest distance between raw material and finished product” — is the only practical or economical method of manufacture. It is a process which is well suited to the rapid production of simple or complex castings which are accurately dimensioned, sharply defined and smoothly surfaced. Little or no subsequent machining is required to produce a product acceptable to industry.

Due to their low melting points, tin and lead alloys were the first to be die cast. Later, shortly before World War 1, as the result of improvements in die steels and in the operation of die casting machines, zinc alloys began to be used. In 1914, the die casting of aluminum alloys commenced, followed by copper (mainly brass) and magnesium alloys. Tin and lead alloys are now rarely used except where special properties, such as high resistance to corrosion, cannot be obtained by the use of other alloys.

Essentially, the die casting machine consists of a mechanism for opening and closing a water-cooled

split steel die, and a molten-metal injection system (Fig. 3). One half of the die is fastened to a moving platen, the other to a fixed platen. With the two halves of the die clamped together under a massive locking force, molten alloy is injected under high pressure into the die cavity. When the alloy has solidified, the two halves of the die are separated and the casting is ejected.

To produce lead, tin and zinc die castings, Hot Chamber machines are used (Fig. 1). With this type of machine, the injection plunger is immersed in a holding furnace containing the molten alloy, thus permitting rapid machine cycling speeds.

To produce aluminum, magnesium or copper alloy die castings, Cold Chamber machines are used because of the considerably higher melting points of these alloys (Fig. 2). With this type of machine sufficient molten alloy for each casting is ladled into a “cold chamber” injection sleeve from a separate melting furnace located adjacent to the die casting machine. In recent years, the slower operation of Cold Chamber machines compared to Hot Chamber machines, has been partly overcome through the use of automatic ladling and metering devices.

## SEQUENCE OF OPERATIONS

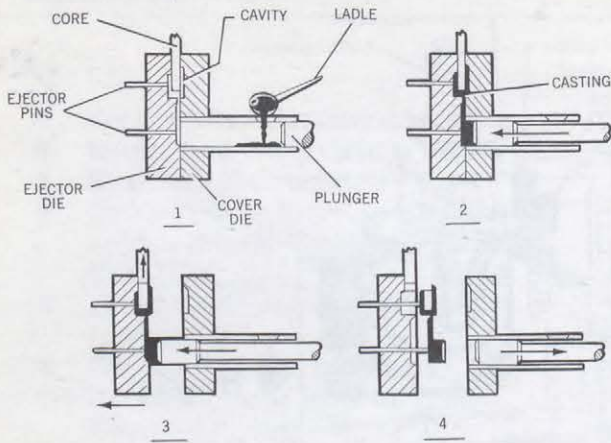


FIGURE 3A

Operating sequence of the cold chamber die casting process: 1) Die is closed and molten metal is ladled into the cold chamber; 2) Plunger pushes molten metal into die cavity. The metal is held under pressure until it solidifies; 3) Die opens and plunger advances to ensure casting stays in ejector die. Cores, if any, retract; 4) Ejector pins push casting out of ejector die and plunger returns to original position.

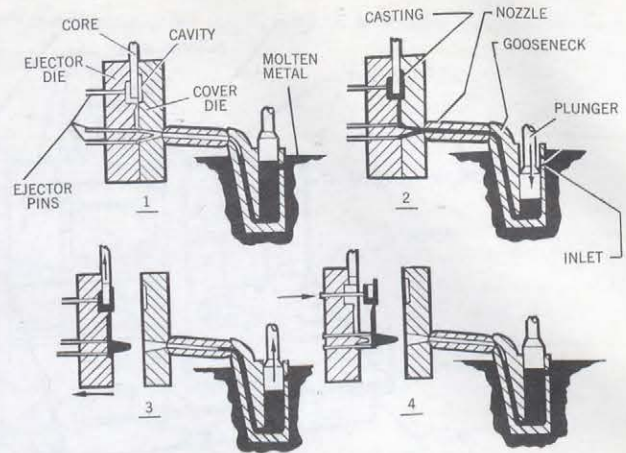


FIGURE 3B

Operating sequence of the hot chamber die casting process: 1) Die is closed and hot chamber (i.e. gooseneck) is filled with molten metal; 2) Plunger pushes molten metal through gooseneck and nozzle and into the die cavity. Metal is held under pressure until it solidifies; 3) Die opens and cores, if any, retract. Casting stays in ejector die. Plunger returns, pulling molten metal back through nozzle and gooseneck; 4) Ejector pins push casting out of ejector die. As plunger uncovers filling hole, molten metal flows through inlet to refill gooseneck.

## CASTING DIE FOR PRESSURE DIE CASTING C/W ELECTRICALLY CONTROLLED, HYDRAULIC CORE PULLS

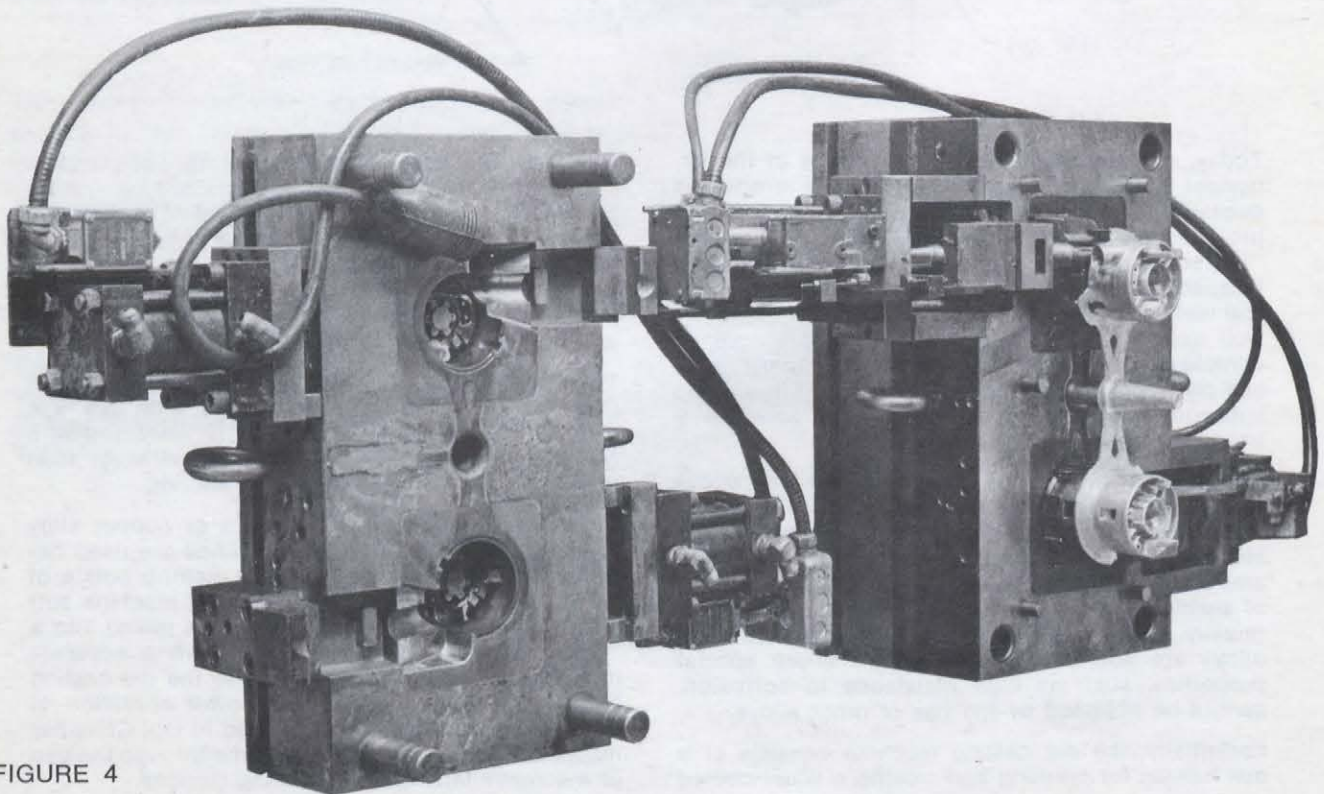


FIGURE 4

## APPLICATION

Of the various alloys used in die casting, zinc alloy is the most widely used. The major reason for its popularity, in comparison with the other alloys, is its desirable physical, mechanical and casting properties and its ability to be readily finished with commercial electroplated or organic coatings. The automotive industry is the largest single consumer of zinc die castings, for which typical applications are window regulators, door handles, decorative trim, carburetor parts, fuel pumps, etc. Other major applications of zinc die castings are component parts for household appliances, various types of machinery, photographic, optical, recording and office equipment, etc.

Next to zinc, aluminum is the most widely used die casting alloy. Its chief advantages are its light weight and its high resistance to corrosion. As in the case of zinc, the automotive industry accounts for a large percentage of aluminum die castings produced. Typical applications are transmission housings and other functional automotive components. A large volume of aluminum die cast parts is also used for household appliances, portable tools, electric motors and generators.

Magnesium alloy die castings are used where a high strength-to-weight ratio is desirable as in the manufacture of typewriters, outboard motors, photographic equipment, chain saws and lawn mowers. In the United States and in West Germany a large amount of magnesium is consumed in die casting by automotive manufacturers.

Copper alloys are not nearly as widely used for die casting as the other alloys because of their high melting points, which result in relatively short die life. However, there are certain applications where the special properties of copper-alloy die castings more than offset their higher cost. For example, their exceptional strength and high wear resistance are particularly important in the manufacture of gears, transmission forks, clutch and shock absorber parts and bearings. Excellent resistance to corrosion is one of the properties which accounts for the extensive use of copper-alloy die castings in the plumbing and hardware industries.

## DIE CASTING ALLOYS AND PROPERTIES

### Aluminum-Base Alloys

**ASTM Designation**  
**B85-73**  
**Aluminum**  
**Die Castings**

Designation	Standard Alloys*			
	Commercial ASTM (former) ASTM (new)	13 S12B 413.0	380 SC84B 380.0	
Composition — per cent				
Copper		1.0	3.0-4.0	
Iron		2.0	2.0	
Silicon		11.0-13.0	7.5-9.5	
Manganese		0.35	0.50	
Magnesium		0.10	0.10	
Zinc		0.50	3.0	
Nickel		0.50	0.50	
Tin		0.15	0.35	
Other elements, max.		0.25	0.50	
Aluminum		Remainder	Remainder	
Properties and Constants		<b>Customary Units</b>	<b>SI** Metric</b>	<b>Customary Units</b>
Tensile Strength, psi (MPa)		43,000	(300)	46,000
Yield Strength (0.2% offset) psi (MPa)		21,000	(145)	23,000
Elongation, Percentage in 2 in. (in 50.8mm)		2.5	(2.5)	2.5
Shear Strength, psi (MPa)		25,000	(172)	28,000
Fatigue Strength, psi (MPa)		19,000	(130)	20,000
Relative Density		2.65	(2.65)	2.71
Mass per in. <sup>3</sup> -lb (per cm <sup>3</sup> -kg)		0.096	(0.0027)	0.098
Melting Point (Liquidus) °F (°C)		1080	(582)	1,100
Thermal Conductivity, CGS (w/m.K)		0.29	(120)	0.23
Linear Expansion, in/in/°F (cm/cm/°C)		11.9x10 <sup>-6</sup>	(21.4x10 <sup>-6</sup> )	12.1x10 <sup>-6</sup>
Electrical Conductivity, Percentage of Copper Standard		31	(31)	23
				(23)

\*These standard alloys are also available with 1.3 per cent maximum iron content (designated A13 and A380) having a higher elongation. They are most commonly used and represent more than 90 per cent by weight of all aluminum alloy castings produced. Other alloys are also available but these are usually specified for applications requiring certain specific properties.

\*\*Système International d'Unités (International System of Units).



**ASTM Designation B85-73  
Aluminum Alloy Die Castings**

Designation	Special Alloys							
	360* SG100B* 360.0		384 SC114A 384.0		218 G8A 518.0		43 S5C C443.0	
Composition — per cent								
Copper	0.6		3.0-4.5		0.25		0.6	
Iron	2.0		1.3		1.8		2.0	
Silicon	9.0-10.0		10.5-12.0		0.35		4.5-6.0	
Manganese	0.35		0.50		0.35		0.35	
Magnesium	0.4-0.6		0.10		7.5-8.5		0.10	
Zinc	0.50		3.0		0.15		0.50	
Nickel	0.50		0.50		0.15		0.50	
Tin	0.15		0.35		0.15		0.15	
Other elements, max.	0.25		0.50		0.25		0.25	
Aluminum	Remainder		Remainder		Remainder		Remainder	
	<b>Customary Units</b>	<b>SI** Metric</b>	<b>Customary Units</b>	<b>SI** Metric</b>	<b>Customary Units</b>	<b>SI** Metric</b>	<b>Customary Units</b>	<b>SI** Metric</b>
Properties and Constants								
Tensile Strength, psi (MPa)	44,000	(300)	48,000	(330)	45,000	(310)	33,000	(230)
Yield Strength (0.2 per cent offset), psi (MPa)	25,000	(170)	24,000	(170)	28,000	(190)	14,000	(100)
Elongation, Percentage in 2 in. (in 50.8 cm)	2.5	(2.5)	2.5	(2.5)	5.0	(5.0)	9.0	(9.0)
Shear Strength, psi (MPa)	28,000	(190)	29,000	(200)	29,000	(200)	19,000	(130)
Fatigue Strength, psi (MPa)	20,000	(140)	20,000	(140)	20,000	(140)	17,000	(120)
Relative Density	2.63	(2.63)	2.70	(2.70)	2.57	(2.57)	2.65	(2.65)
Mass per in. <sup>3</sup> -lb. (per cm <sup>3</sup> -kg)	0.095	(0.0026)	0.098	(0.0027)	0.093	(0.0026)	0.096	(0.0027)
Melting Point (liquidus), °F (°C)	1105	(596)	1080	(582)	1150	(621)	1170	(632)
Thermal Conductivity, CGS (w/m.K)	0.27	(110)	0.23	(96)	0.23	(96)	0.34	(140)
Linear Expansion, in./ in./°F (m/m/k)	12.2x10 <sup>-6</sup>	(22.0x10 <sup>-6</sup> )	11.7x10 <sup>-6</sup>	(21.1x10 <sup>-6</sup> )	13.9x10 <sup>-6</sup>	(25.0x10 <sup>-6</sup> )	12.9x10 <sup>-6</sup>	(23.2x10 <sup>-6</sup> )
Electrical Conductivity, Percentage of Copper Standard	29	(29)	23	(23)	24	(24)	37	(37)

\*This alloy is also available in lower iron composition (designated A360) having higher ductility.

\*\*Système International d'Unités (International System of Units).

For Canadian buyers of aluminum die castings the following table will be useful.

Relevant Specifications for Aluminum Alloy Die Casting Alloys			
Commercial U.S. Alloy No.	ASTM Alloy No. (B85-60)	CSA Alloy No. (HA. 3)	Alcan Alloy No.
A13	S12A	S12P	160X
13	S12B	—	B160
A380	SC84A	SC84	143
380	SC84B	—	C143
A360	SG100A	—	B150
360	SG100B	—	B150
384	SC114A	—	6369
218	G8A	G8	340
43	S5C	S5	123

Note: The values indicated for typical properties and constants are for separately die cast test bars and do not represent values for specimens cut from die castings.

## Copper-Base Alloys

The chemical compositions, physical properties and constants for the copper-base alloys most generally used for die casting are shown in the following table.

ASTM Designation B176-70 Brass Die Castings							
Designation	Standard Copper-Base Alloys						
	Commercial and ASTM	858		879		878	
Composition — per cent							
Copper		57.0 min.		63.0 to 67.0		80.0 to 83.0	
Silicon		.25 max.		0.75 to 1.25		3.75 to 4.25	
Lead, max.		1.50		0.25		0.15	
Tin, max.		1.50		0.25		0.25	
Manganese, max.		0.25		0.15		0.15	
Aluminum, max.		0.25		0.15		0.15	
Iron, max.		0.50		0.15		0.15	
Magnesium, max.		—		—		0.01	
Other elements, max.		0.50		0.50		0.25	
Zinc		30.0 min.		Remainder		Remainder	
		<b>Customary Units</b>	<b>SI* Metric</b>	<b>Customary Units</b>	<b>SI* Metric</b>	<b>Customary Units</b>	<b>SI* Metric</b>
Properties and Constants							
Tensile Strength, psi (MPa)		55,000	(380)	70,000	(485)	85,000	(585)
Yield Strength (0.2 per cent offset), psi (MPa)		30,000	(205)	35,000	(240)	50,000	(345)
Elongation, Percentage in 2 in. (in 50.8mm)		15	(15)	25	(25)	25	(25)
Impact Strength, Charpy, ft. lb. (J)		40	(54)	50	(68)	70	(95)
Hardness, Rockwell B Scale		55-60	(55-60)	68-72	(68-72)	85-90	(85-90)
Modulus of Elasticity		15x10 <sup>-6</sup>		15x10 <sup>-6</sup>		20x10 <sup>-6</sup>	
Linear Expansion, in./in./°F (m/m/k)		11.3x10 <sup>-6</sup>	(20.3x10 <sup>-6</sup> )	12.0x10 <sup>-6</sup>	(21.5x10 <sup>-6</sup> )		
Relative Density		8.3	(8.3)	8.4	(8.4)	8.3	(8.3)
Mass per in. <sup>3</sup> -lb. (per cm <sup>3</sup> -kg)		0.30	(0.0083)	0.30	(0.0084)	0.30	(0.0083)
Electrical Conductivity Percentage of Copper Standard		22	(22)	22	(22)	6	(6)
Melting Point (liquidus) °F (°C)		1635	(890)	1650	(900)	1615	(880)

\*Système International d'Unités (International System of Units).

Note: The values indicated for typical properties and constants are for separately die cast test bars and do not represent values for specimens cut from die castings.

## Lead and Tin — Base Alloys

Below are listed a few typical lead and tin alloys which are still used for special applications where high corrosion resistance is required or where high density or unit weight is an important factor.

	Copper per cent	Antimony per cent	Lead per cent	Tin per cent
Lead alloy	—	10	90	—
" "	—	15	80	5
Tin alloy	4.5	4.5	—	91
" "	3	10.5	25.0	61.5

## Magnesium — Base Alloys

Two alloys — AZ90X and AZ91X — are generally used for die castings. The difference between the two alloys is in the zinc content. In alloy AZ90X the zinc content is 0.2 per cent max. whereas in alloy AZ91X the zinc content is 0.4 per cent minimum up to 1.0 per cent maximum.

Alloy AZ91X is quite suitable for the general range of die castings, but it has been shown that the lower content of zinc in AZ90X facilitates the high speed production of thin wall die castings and substantially reduces hot cracking.

## Magnesium-Base Alloys (Continued)

### CSA Standard HG.11 Magnesium Alloy Die Castings

Alloy Number	HG. 11.AM90	HG. 11.AZ91
Composition — per cent		
Aluminum	8.5 to 9.5	8.3 to 9.3
Zinc	0.2 max.	0.40 to 1.0
Manganese	0.15 to 0.40	0.15 to 0.40
Silicon, max.	0.20	0.20
Copper, max.	0.02	0.02
Nickel, max.	0.005	0.005
Iron, max.	0.015	0.015
Others	0.07	0.07
Other elements, max.	0.30	0.30
Magnesium	Remainder	Remainder
	<b>Customary Units</b>	<b>SI* Metric</b>
Properties and Constants		
Tensile Strength, psi (MPa)	34,000	(235)
Tensile Yield Strength (0.2 per cent offset), psi (MPa)	23,000	(160)
Elongation, Percentage in 2 in. (in 50.8mm)	3	(3)
Shear Strength, psi (MPa)	20,000	(140)
Compressive Yield Strength, psi (MPa)	22,000	(150)
Ultimate Compressive Strength, psi (MPa)	58,000	(400)
Fatigue Strength, psi (MPa)	14,000	(95)
Relative Density	1.81	(1.81)
Mass per in. <sup>3</sup> -lb. (cm <sup>3</sup> -kg)	0.065	(0.00183)
Thermal Conductivity, CGS (w/m.K)	0.17	(71)
Linear Expansion, in./in./°F (m/m/K)	15.2x10 <sup>-6</sup>	(27.3x10 <sup>-6</sup> )
Electrical Conductivity, Percentage of Copper Standard	10	(10)

Note: The values indicated for typical properties and constants are for separately die cast test bars and do not represent values for specimens cut from die castings.

\*Système International d'Unités (International System of Units).

## Zinc-Base Alloys

The die casting alloys in the following tables are commonly referred to by the industry as Alloy No. 3 and 5 respectively. However, it is recommended that the appropriate formal ASTM designation be employed when zinc alloy die castings are being purchased.

### ASTM Designation B.86-71 Zinc Alloy Die Castings

Designations	Chemical Composition (a)	
ASTM (present)	AG40A	AC41A
ASTM (previous)	(XXIII)	(XXV)
SAE	903	905
Trade or Common	Alloy No. 3	Alloy No. 5
Percentage Copper	0.25 max. (b)	0.75 to 1.25
Percentage Aluminum	3.5 to 4.3	3.5 to 4.3
Percentage Magnesium	0.020 to 0.05	0.03 to 0.08
Percentage Iron	0.100 max.	0.100 max.
Percentage Lead	0.005 max.	0.005 max.
Percentage Cadmium	0.004 max.	0.004 max.
Percentage Tin	0.003 max.	0.003 max.
Percentage Zinc	Remainder	Remainder

(a) Zinc alloy die castings may contain nickel, chromium, silicon and manganese in amounts of 0.02, 0.02, 0.035 and 0.5 per cent respectively. No harmful effects have ever been noted due to the presence of these elements in these concentrations and, therefore, analyses are not required for them.

(b) For the majority of commercial applications, a copper content in the range of 0.25 to 0.75 per cent will not adversely affect the serviceability of die castings and should not serve as a basis of rejection.

# Zinc-Base Alloys (Continued)

	Customary Units	SI* Metric	Customary Units	SI* Metric
Properties and Constants (c)				
Tensile Strength, psi (MPa)	41,000	(285)	47,000	(325)
Elongation, percentage in 2 in. (in 50.8mm)	10	(10)	7	(7)
Impact Strength, Charpy, ft. lb. (J)	43	(58)	48	(65)
Shear Strength, psi (MPa)	81,000	(560)	38,000	(260)
Relative Density	6.6	(6.6)	6.6	(6.6)
Mass per in. <sup>3</sup> -lb. (cm <sup>3</sup> -kg)	0.24	(0.0066)	0.24	(0.0066)
Melting Point (liquidus) °F (°C)	727.9	(386.6)	727.9	(386.6)
Linear Expansion, in./in./°F (m/m/K)	15.2x10 <sup>-6</sup>	(27.4x10 <sup>-6</sup> )	15.2x10 <sup>-6</sup>	(27.4x10 <sup>-6</sup> )
Electrical Conductivity, Percentage of Copper Standard	26	(26)	26	(26)

(c) Values are typical and where double figures are shown they represent the properties for copper content at minimum and maximum of composition. They are for separately die cast test bars and do not represent values for specimens cut from die castings.

\*Système International d'Unités (International System of Units).

## PRODUCT REQUIREMENTS INFORMATION

The transmission of concise and complete information between the buyers and vendors of die castings is essential to the preparation and submission of sound die casting quotations. In an effort to eliminate the inconsistencies and misunderstandings which may arise when the cost of die castings is being estimated, the American Die Casting Institute has compiled and issued the following Product Standards for Die Castings.

The standards provide buyers with a check list of product requirements and enable die casting suppliers to establish a common basis of quotation. Use of these standards should contribute towards satisfaction by both buyer and vendor when a die casting goes into actual production. Copies may be obtained from Die Casters' Section of the Automotive Parts Manufacturers Association (Canada), Toronto.

PRODUCT STANDARDS FOR DIE CASTINGS		PRODUCT REQUIREMENTS INFORMATION
Customer's Name _____ Individual _____		Supplemental data to Product Requirements Information LADC Standard C91 for use in establishing basis of quotation. (Reference—ADCI Standard C-91)
Address _____ (Street) _____ (City) _____ (Zone) _____ (State) _____		
Prints attached — <input type="checkbox"/> yes, <input type="checkbox"/> no. Part name and number _____		
Is part in present production? — <input type="checkbox"/> yes, <input type="checkbox"/> no. Sample available? — <input type="checkbox"/> yes, <input type="checkbox"/> no. If not, _____		
Anticipated total order _____ Quantity per release _____		
Anticipated annual requirement _____ Daily _____ or weekly _____ requirements		
Alloy to be used _____ Estimate due date _____		
IN INDICATING YOUR PART REQUIREMENTS BELOW NOTE THAT, THE LOWER THE NUMBER, THE LOWER THE PRODUCTION COST. (THIS INFORMATION MAY ALSO BE INDICATED ON YOUR PRINTS BY CODING WITH THE APPLICABLE REQUIREMENT NUMBERS SUCH AS A1, B2, C1, ETC.)		
A. SURFACE CONDITION	<input type="checkbox"/> 1. Some residue and chips not objectionable.	
	<input type="checkbox"/> 2. Shop run — leaves reasonable free of chips but not degraded.	
	<input type="checkbox"/> 3. Clean, dry and free of chips.	
B. CAST SURFACE FINISH	<input type="checkbox"/> 1. Mechanical Grade — finish is not significant.	
	<input type="checkbox"/> 2. Painting Grade — some streaks and chill areas that can be covered with paint.	
	<input type="checkbox"/> 3. High Quality — for electroplating, anodizing or other decorative finishing.	
C. FLASH REMOVAL	<input type="checkbox"/> 1. No die trimming — break off gates and overflows and remove flash within 1/8".	
	<input type="checkbox"/> 2. Die trimmed — to within approx. .015" of die casting surface (See ADCI Standard E-10).	
	<input type="checkbox"/> 3. Hand filed or polished — flash with die casting surface.	
D. FLASH REMOVAL Cored Holes	<input type="checkbox"/> 1. Flash not removed.	
	<input type="checkbox"/> 2. Flash trimmed to within .010" of die casting surface.	
	<input type="checkbox"/> 3. Flash to be machined.	
E. FLASH REMOVAL Slinger Pins	<input type="checkbox"/> 1. Not removed. (See ADCI Standard E-9).	
	<input type="checkbox"/> 2. Cracked or flattened. (See ADCI Standard E-9).	
	<input type="checkbox"/> 3. Removed from specific locations.	
F. PRESSURE TIGHTNESS	<input type="checkbox"/> 1. No requirement.	
	<input type="checkbox"/> 2. Pressure tight to agreed upon psi. Testing medium _____	
	<input type="checkbox"/> 3. Other arrangements to be agreed upon.	
G. FLATNESS	<input type="checkbox"/> 1. No requirement.	
	<input type="checkbox"/> 2. To tolerance shown in ADCI Standard E-4.	
	<input type="checkbox"/> 3. Critical — to special requirement.	
H. DIMENSIONS	<input type="checkbox"/> 1. Normal — (As per ADCI Standards).	
	<input type="checkbox"/> 2. Semi-Critical — must hold certain specified dimensions. Others as per ADCI Standards.	
	<input type="checkbox"/> 3. Critical — must hold all specified dimensions.	
I. CYCLOSTOMER'S BURNING INSPECTION	<input type="checkbox"/> 1. No Statistical Quality Control — no unusual inspection requirements.	
	<input type="checkbox"/> 2. Statistical Quality Control — AQL's over 2.5%.	
	<input type="checkbox"/> 3. Statistical Quality Control — shipment acceptable at AQL of _____ %.	
	(1 and 2 above, require details of inspection procedure, with major and minor defects agreed upon)	
J. PACKAGING	<input type="checkbox"/> 1. Not critical — bulk packed.	
	<input type="checkbox"/> 2. Layer packed — with separators.	
	<input type="checkbox"/> 3. Packed in cell type separators or individually wrapped.	
K. SPECIAL REQUIREMENTS		

THIS SHEET PREPARED BY THE AMERICAN DIE CASTING INSTITUTE AS A SERVICE TO THE CUSTOMERS OF ITS MEMBER COMPANIES.

PRODUCT STANDARDS FOR DIE CASTINGS		FINISHING REQUIREMENTS INFORMATION
Customer's Name _____ Individual _____		Supplemental data to Product Requirements Information LADC Standard C91 for use in establishing basis of quotation. (Reference—ADCI Standard C91)
Address _____ (Street) _____ (City) _____ (Zone) _____ (State) _____		
Prints attached — <input type="checkbox"/> yes, <input type="checkbox"/> no. Part name and number _____		
Is part in present production? — <input type="checkbox"/> yes, <input type="checkbox"/> no. Sample available? — <input type="checkbox"/> yes, <input type="checkbox"/> no. If not, _____		
Anticipated total order _____ Quantity per release _____		
Anticipated annual requirement _____ Daily _____ or weekly _____ requirements		
Alloy to be used _____ Estimate due date _____		
IN INDICATING YOUR PART REQUIREMENTS BELOW NOTE THAT, THE LOWER THE NUMBER, THE LOWER THE PRODUCTION COST. (THIS INFORMATION MAY ALSO BE INDICATED ON YOUR PRINTS BY CODING WITH THE APPLICABLE REQUIREMENT NUMBERS SUCH AS L1, M2, N1, ETC.)		
L. PARTING LINES	<input type="checkbox"/> 1. Polishing not required.	
	<input type="checkbox"/> 2. Polish only where marked on drawing.	
	<input type="checkbox"/> 3. Polish all parting lines (except as noted).	
M. SURFACE PREPARATION	<input type="checkbox"/> 1. No buffing required.	
	<input type="checkbox"/> 2. Mechanical (burnishing, tumbling, etc.).	
	<input type="checkbox"/> 3. Buff as indicated on drawing.	
N. PLATING, ANODIZING etc.	<input type="checkbox"/> 1. Protective Only _____	
	<input type="checkbox"/> 2. Decorative _____	
	<input type="checkbox"/> 3. Severe exposure _____ Spec. _____	
O. PAINTING	<input type="checkbox"/> 1. Protective Only _____	
	<input type="checkbox"/> 2. Decorative: Spec. _____	
	<input type="checkbox"/> 3. Application requires heat treat or special treatment (as noted).	
P. EXPOSURE	<input type="checkbox"/> 1. Normal interior.	
	<input type="checkbox"/> 2. Exposure to weather: Spec. _____	
	<input type="checkbox"/> 3. Exposure to unusual chemistry: Spec. _____	
Q. APPEARANCE	<input type="checkbox"/> 1. Utility Grade.	
	<input type="checkbox"/> 2. Commercial Grade.	
	<input type="checkbox"/> 3. Superior Grade.	
R. SPECIAL REQUIREMENTS		

THIS SHEET PREPARED BY THE AMERICAN DIE CASTING INSTITUTE AS A SERVICE TO THE CUSTOMERS OF ITS MEMBER COMPANIES.

# DIRECTORY OF DIE CASTERS BY PROVINCE

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Note: Under "Die Casting Machines Installed" the following coding system has been employed:

1. Al = Aluminum; Cu = Copper; Pb = Lead; Zn = Zinc; Mg = Magnesium.
2. The figures following the chemical symbol indicate number of machines (in brackets) and locking pressure.

Example: Al (2) 400 = Aluminum alloy die casting machines of which there are two with a locking pressure of 400 tons.

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## British Columbia

### **ACCURATE DIE CASTING LTD.**

694 Derwent Way  
New Westminster V3M 5P8  
Tel: (604) 522-0741

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing and assembly. Arrangements can be made to provide painted coatings in outside facilities.

DIE CASTING ALLOYS USED: Zinc and Aluminum

DIE CASTING MACHINES INSTALLED: Al (1) 400 Zn (3) 10  
(1) 150

### **SIMALEX MANUFACTURING CO. LTD.**

19622 Telegraph Trail  
Langley  
Tel: (604) 576-8274

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing, painted coatings and assembly. Arrangements can be made to provide electroplated, electrolytic, painted or chemical coatings in outside facilities.

DIE CASTING ALLOYS USED: Aluminum and Zinc

DIE CASTING MACHINES INSTALLED: Al (1) 200 Zn (1) 80  
(1) 400 (1) 300  
(1) 600

### **STUART DIE CASTING COMPANY**

1270 Boundary Road  
Vancouver V5K 4T6  
Tel: (604) 299-7551

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, various types of coatings including electroplated, electrolytic, painted or chemical, finishing and assembly.

DIE CASTING ALLOYS USED: Aluminum, Zinc and Copper

DIE CASTING MACHINES INSTALLED: Al (1) 250 Zn (1) 50 Cu (1) 250  
(2) 400 (1) 150  
(1) 400

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## Alberta

### **UNIVERSAL PLASTIC PRODUCERS LTD.**

1351 Hastings Crescent Southeast  
Calgary T2G 4C8  
Tel: (403) 243-2414

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing and assembly. Arrangements can be made to provide electroplated or chemical coatings in outside facilities.

DIE CASTING ALLOYS USED: Aluminum and Zinc

DIE CASTING MACHINES INSTALLED: Al (1) 350 Zn (1) 50  
(1) 350

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## Manitoba

### **AUTOMOTIVE ACCESSORY CO. LTD.**

771 Main Street  
Winnipeg R2W 3R6  
Tel: (204) 942-2514  
Telex: Tor — 06-967609  
Wpg — 07-571340

SERVICES AVAILABLE: Custom die casting, toolmaking, machining, finishing and assembly. Arrangements can be made to provide electroplated coatings in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (2) 400

**BAYCAST PRODUCTS LTD.**

2200 Logan Avenue  
Winnipeg R2R 0J2  
Tel: (204) 775-0441  
Telex: 07-587811

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining and assembly. Arrangements can be made to provide coatings such as electroplated, painted or chemical in outside facilities.

DIE CASTING ALLOYS USED: Aluminum  
DIE CASTING MACHINES INSTALLED: Al (1) 75

**DIECAST PRODUCTS LTD.**

1085 Winnipeg Avenue  
Winnipeg R3E 0S2  
Tel: (204) 774-5541

EASTERN SALES OFFICE: Suite 8, 145 Sheppard Avenue East  
Willowdale, Ontario  
M2N 3A7  
Tel: (416) 225-7132

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing, electroplated or painted coatings and assembly.

DIE CASTING ALLOYS USED: Zinc  
DIE CASTING MACHINES INSTALLED: Zn (1) 150

**MARWEST ELECTRIC MANUFACTURING LTD.**

125 Pacific Avenue  
Winnipeg R3B 0M1  
Tel: (204) 943-7681

SERVICES AVAILABLE: Captive at present. It has facilities for die casting, simple product design, machining, some finishing, electroplated coatings and assembly.

DIE CASTING ALLOYS USED: Aluminum and Zinc  
DIE CASTING MACHINES INSTALLED: Al (1) 400 Zn (2) 50  
(4) 400

**Ontario**

**ACCURCAST DIE CASTING LIMITED**

333 Arnold Street  
Wallaceburg  
(P.O. Box 117, Wallaceburg N8A 4L5)  
Tel: (519) 627-1441

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing, chemical coating and assembly. Arrangements can be made to provide painted coatings in outside facilities.

DIE CASTING ALLOYS USED: Aluminum  
DIE CASTING MACHINES INSTALLED: Al (3) 600  
(2) 800

**ACF CANADA LIMITED**

Carter Carburetor Division  
109 East Drive  
Bramalea L6T 1B6  
Tel: (416) 459-6540

SERVICES AVAILABLE: Custom die casting, finishing and assembly.

DIE CASTING ALLOYS USED: Aluminum  
DIE CASTING MACHINES INSTALLED: Al (2) 400  
(4) 600

**AMEROCK LIMITED**

278 Cook Street  
Meaford  
(P.O. Box 1000, Meaford)  
Tel: (519) 538-2200  
Telex: 0687-5543

SERVICES AVAILABLE: Captive die casting, toolmaking, machining, finishing, electroplated, electrolytic and painted coatings, and assembly.

DIE CASTING ALLOYS USED: Zinc  
DIE CASTING MACHINES INSTALLED: Zn (2) 200  
(2) 400  
(1) 600

**BURLINGTON DIE CASTINGS LTD.**

3267 Mainway  
Burlington L7M 1A6  
Tel: (416) 632-2742

SERVICES AVAILABLE: Custom die casting, machining and finishing.

DIE CASTING ALLOYS USED: Aluminum

DIE CASTING MACHINES INSTALLED: Al (1) 200  
(1) 400  
(2) 600  
(2) 800

**CANADIAN GENERAL ELECTRIC COMPANY LIMITED**

107 Park Street North  
Peterborough K9J 7B5  
Tel: (705) 742-7711

SERVICES AVAILABLE: None. The company's facilities are captive. It has facilities for die casting, toolmaking, machining and assembly.

DIE CASTING ALLOYS USED: Aluminum

DIE CASTING MACHINES INSTALLED: Al (1) 10  
(1) 88  
(1) 100  
(1) 250  
(3) 400  
(1) 600

**CARPENTER DIE CASTING CO. LTD.**

540 Queen Elizabeth Highway  
Stoney Creek L8E 2R3  
Tel: (416) 664-4474

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing and assembly. Arrangements can be made to provide electroplated or painted coatings in outside facilities.

DIE CASTING ALLOYS USED: Aluminum and Zinc

DIE CASTING MACHINES INSTALLED: Al (3) 400 Zn (1) 200  
(1) 500 (1) 250  
(1) 600  
(1) 625

**CASTINGS UNLIMITED**

65 Court Street North  
Milton  
(P.O. Box 95, Milton)  
Tel: (416) 878-2746

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing, painted coatings and assembly. Arrangements can be made to provide electroplated coatings in other facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (1) 100  
(1) 300

**CHRYSLER CANADA LIMITED**

(Etobicoke Casting Plant)  
15 Brown's Line  
Toronto M8W 3S3  
Tel: (416) 259-2341

SERVICES AVAILABLE: The company's facilities are captive. It has facilities for die casting, machining and finishing.

DIE CASTING ALLOYS USED: Aluminum

DIE CASTING MACHINES INSTALLED: Al (5) 600  
(2) 750  
(5) 800  
(4) 1000

**COTTAM DIECASTING LIMITED**

P.O. Box 94  
Cottam N0R 1B0  
Tel: (519) 839-4892

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing and assembly. Arrangements can be made to provide electroplated, electrolytic, painted and chemical coatings in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (1) 80  
(1) 100  
(2) 250  
(1) 600

**CTS OF CANADA LIMITED**

80 Thomas Street  
Streetsville L5M 1Y9  
Tel: (416) 826-1141  
Telex: 06-97508

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing, electroplated and painted coatings and assembly.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (2) 2

**DOEHLER CANADA LIMITED**

(Guelph Plant)  
39 Royal Road  
Guelph  
(P.O. Box 1055, Guelph N1H 6N1)  
Tel: (519) 821-3630

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing and assembly. Arrangements can be made to provide electroplated, electrolytic, painted and chemical coatings in outside facilities.

DIE CASTING ALLOYS USED: Aluminum and Zinc

DIE CASTING MACHINES INSTALLED: Al (2) 250 Zn (2) 300  
(3) 500 (2) 500  
(3) 600  
(1) 650  
(2) 800

**DOEHLER CANADA LIMITED**

(Hamilton Plant)  
Hillyard Street  
Hamilton  
(P.O. Box 446, Station B, Hamilton L8L 7X3)  
Tel: (416) 527-9178

SERVICES AVAILABLE: Custom die casting, product design, machining and chemical coating.

Toolmaking, finishing and assembly are done in both the company plant and as sub-contracts to reputable firms. Arrangements can be made to provide electroplated, electrolytic, painted and vacuum coatings in outside facilities. A full range of machine tools is available for drilling, tapping and lathe finishing operations. The company also has its own wheelabrator, airblast and chemical surface finishing equipment.

DIE CASTING ALLOYS USED: Aluminum, Zinc and Magnesium

DIE CASTING MACHINES INSTALLED: Al (3) 450 Zn (2) 250 Mg (2) 250  
(2) 600 (1) 400  
(2) 750 (2) 450  
(5) 1400 (3) 600

**ELECTROHOME LIMITED**

505 Conestoga Boulevard  
Cambridge N1R 5X9  
Tel: (519) 623-6130  
Telex: 069-5449

SERVICES AVAILABLE: The company's facilities are captive. It has facilities for die casting, machining, finishing, painted and chemical coating and assembly. Electroplated coatings are provided in outside facilities.

DIE CASTING ALLOYS USED: Aluminum

DIE CASTING MACHINES INSTALLED: Al (2) 250



**FISHER GAUGE LIMITED**

194 Sophia Street  
Peterborough  
(P.O. Box 179, Peterborough K9J 6Y9)  
Tel: (705) 745-0567  
Telex: 029-838

**SERVICES AVAILABLE:** Custom die casting, toolmaking, machining, finishing, some chemical coating and assembly. Arrangements can be made to provide electroplated, electrolytic and painted coatings in outside facilities.

**DIE CASTING ALLOYS USED:** Zinc

**DIE CASTING MACHINES INSTALLED:** Fifteen zinc machines that are specially designed to produce close-tolerance small die cast components.

**GANRICK CORPORATION LIMITED**

655 Morton Drive  
Windsor  
(P.O. Box 5009, Windsor N9J 2L3)  
Tel: (519) 734-7842

**SERVICES AVAILABLE:** Custom die casting, toolmaking, machining, finishing and assembly. Arrangements can be made to provide various types of coatings such as electroplated, electrolytic and painted in outside facilities.

**DIE CASTING ALLOYS USED:** Zinc

**DIE CASTING MACHINES INSTALLED:** Zn (1) 150  
(1) 250  
(1) 350  
(1) 400

**GENERAL MOTORS OF CANADA LIMITED**

570 Glendale Avenue  
St. Catharines L2R 7B3  
Tel: (416) 685-2011

**SERVICES AVAILABLE:** None. The company's facilities are captive. It has facilities for die casting, toolmaking, machining, tumbling and assembly.

**DIE CASTING ALLOYS USED:** Aluminum

**DIE CASTING MACHINES INSTALLED:** Al (1) 500  
(1) 800  
(1) 1000

**HAHN BRASS LIMITED**

367 Victoria Street  
New Hamburg  
(P.O. Box 400, New Hamburg N0B 2G0)  
Tel: (519) 662-1620  
Telex: 069-5298

**SERVICES AVAILABLE:** Although the company does captive work, it has facilities available to undertake custom die casting, toolmaking, machining, finishing, electroplating, painting, chemical coating and assembly.

**DIE CASTING ALLOYS USED:** Zinc

**DIE CASTING MACHINES INSTALLED:** Zn (1) 50  
(1) 200  
(1) 300  
(1) 450

**HUDSON BAY DIECASTINGS LIMITED**

230 Orenda Road  
Bramalea  
(P.O. Box 1050, Brampton L6V 2L8)  
Tel: (416) 453-5010

**SERVICES AVAILABLE:** Custom die casting, product design, toolmaking, machining, finishing, electroplated coating and assembly. Arrangements can be made to provide painted, chemical and vacuum coatings in outside facilities.

**DIE CASTING ALLOYS USED:** Zinc

**DIE CASTING MACHINES INSTALLED:** Zn (1) 100  
(6) 500  
(1) 600  
(5) 800

**J & K DIE CASTING LIMITED**

18 Golden Gate Court  
 Scarborough M1P 3A5  
 Tel: (416) 293-8229

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing and assembly. Arrangements can be made to provide electroplated or painted coatings in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (1) 100  
 (1) 250  
 (3) 400

**JUTRAS DIE CASTING LTD.**

Passmore Avenue  
 R.R. 1  
 Agincourt M1S 3B2  
 Tel: (416) 293-2471

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining and finishing. Various types of coatings including electroplated, painted, chemical or vacuum can be provided in outside facilities.

DIE CASTING ALLOYS USED: Aluminum and Zinc

DIE CASTING MACHINES INSTALLED: Al (3) 400 Zn (3) 100  
 (1) 600 (3) 250  
 (1) 400

**KELCO TOOLS**

45 Knoll Street  
 Port Colborne L3K 5A4  
 Tel: (416) 834-6862

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing and assembly. Arrangements can be made to provide various types of coatings such as electroplated, electrolytic and painted in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (2) 25  
 (1) 400

**KROMET HANDLES LTD.**

500 Collier Macmillan Drive  
 Cambridge  
 (P.O. Box 663, Cambridge "G" N1R 5W6)  
 Tel: (519) 623-2511

SERVICES AVAILABLE: The company's facilities are captive. They include die casting, some machining and finishing and assembly. Electroplated and painted coatings are done in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (2) 250

**LAMCO DIE CAST LIMITED**

100 Wellington Street North  
 Thorold  
 (P.O. Box 37, Thorold L2V 3Y7)  
 Tel: (416) 227-3763

SERVICES AVAILABLE: Custom die casting, toolmaking, machining, finishing and assembly. Coatings such as electroplated, painted and chemical can be provided in outside facilities.

DIE CASTING ALLOYS USED: Aluminum and Zinc

DIE CASTING MACHINES INSTALLED: Al (1) 200 Zn (2) 250  
 (1) 400 (3) 400  
 (3) 500

**LIGHTNING FASTENER**

Lightning Division of Textron Canada Ltd.  
 50 Niagara Street  
 St. Catharines L2R 7B2  
 Tel: (416) 685-7321  
 Telex: 0215122

SERVICES AVAILABLE: The company's facilities are captive. They include die casting, product design, toolmaking, machining, finishing and electroplated, electrolytic, painted and chemical coating.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (17) 0.75

**MONARCH FABRICATING AND DIE CASTERS LIMITED**

45 Colville Road  
Toronto M6M 2Y2  
Tel: (416) 249-8254

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, some machining and assembly. Arrangements can be made to provide various types of coatings such as electroplated, painted and chemical in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (1) 100  
(1) 150  
(2) 400

**NATIONAL HARDWARE SPECIALTIES LIMITED**

Dresden  
(P.O. Box 250, Dresden N0P 1M0)  
Tel: (519) 683-4451  
Telex: 024-78559

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing, electroplating and assembly. Arrangements can be made to provide painted and electrolytic coatings in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (3) 250  
(5) 400  
(1) 650  
(1) 800

**NATIONAL HARDWARE SPECIALTIES LIMITED**

Schultz Division  
77 St. David Street  
Lindsay  
Administrative Offices:  
P.O. Box 250  
Dresden, N0P 1M0  
Tel: (519) 683-4451 (Dresden)  
(705) 324-6161 (Lindsay)  
Telex: 029-833 (Lindsay)

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing, electroplated coatings and assembly. Arrangements can be made to provide painted and vacuum coatings in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (2) 100  
(3) 200  
(6) 400  
(2) 800

**NOBLE TROPHIES LIMITED**

21 Ossington Street  
Toronto M6J 2Y8  
Tel: (416) 531-3944

SERVICES AVAILABLE: The company's facilities are at present used for captive work. They include die casting, toolmaking, drilling and tapping, some finishing and assembly. Electroplated and vacuum coatings are obtained in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Two automatic machines capable of producing castings weighing up to ten ounces.

**NORTHEAST TOOL & DIE CO. LTD.**

1263 McDougall Road  
Windsor N8X 3M6  
Tel: (519) 258-5942

SERVICES AVAILABLE: Although the company does captive work, it has facilities available to undertake custom die casting, product design, toolmaking, machining, some finishing and assembly.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (3) 400  
(1) 500

**NORTHERN ELECTRIC COMPANY LIMITED**

Sise Road  
London  
(P.O. Box 5155, London N6A 4H3)  
Tel: (519) 686-2000

SERVICES AVAILABLE: None. The company's facilities are captive. It has facilities for die casting, toolmaking, machining, finishing, electroplated, painted or chemical coating and assembly.

DIE CASTING ALLOYS USED: Zinc and Lead

DIE CASTING MACHINES INSTALLED: Zn (1) 15 Pb (1) Special Fisher Assembly  
(1) 18  
(1) 250  
(1) 500

**OUTBOARD MARINE CORPORATION OF CANADA LTD.**

910 Monaghan Road  
Peterborough K9J 7B6  
Tel: (705) 743-2261

SERVICES AVAILABLE: None. The company's facilities are captive. It has facilities for die casting, toolmaking, machining, various types of coatings including electroplated, painted and chemical, finishing and assembly.

DIE CASTING ALLOYS USED: Aluminum and Magnesium

DIE CASTING MACHINES INSTALLED: Al (2) 450 Mg (6) 650  
(4) 600 (2) 800

**PARAMOUNT INDUSTRIES**

Division of Donlee Mfg. Industries Ltd.  
137 Wendell Avenue  
Weston M9N 3K9  
Tel: (416) 248-0261

SERVICES AVAILABLE: Although the company does captive work, it has facilities available to undertake die casting, product design, some toolmaking, machining, finishing, electroplating, painting and assembly.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (1) 125  
(1) 150  
(1) 200

**PRECISION CASTINGS LIMITED**

156 St. Helen's Avenue  
Toronto M6H 4A1  
Tel: (416) 537-3146

SERVICES AVAILABLE: Custom die casting, toolmaking, some machining and finishing. Arrangements can be made to provide electroplated coatings in outside facilities.

DIE CASTING ALLOYS USED: Aluminum

DIE CASTING MACHINES INSTALLED: Al (3) 500  
(1) 600  
(1) 1000

**QUICK CABLE CANADA LIMITED**

42 Six Point Road  
Toronto M8Z 2X2  
Tel: (416) 239-5100  
Telex: 06-961358

SERVICES AVAILABLE: Captive and custom die casting, product design, some toolmaking and machining and assembly. Electroplated coatings can be provided in outside facilities.

DIE CASTING ALLOYS USED: Lead

DIE CASTING MACHINES INSTALLED: Pb (2) 25

**RAMSDEN MANUFACTURING LIMITED**

Dunbar Aluminum Foundry Division  
130 Oakland Avenue  
London  
(P.O. Box 4003, Station C, London N5W 5G9)  
Tel: (519) 451-6720

SERVICES AVAILABLE: Custom die casting, product design, machining and assembly.

DIE CASTING ALLOYS USED: Aluminum

DIE CASTING MACHINES INSTALLED: Al (1) 400

**RAPIER TROPHY MANUFACTURING COMPANY**

1736 Mattawa Avenue  
Mississauga L4X 1K1  
Tel: (416) 277-2322

SERVICES AVAILABLE: Custom die casting, product design, machining, finishing and assembly. Arrangements can be made to provide electroplated and vacuum coatings in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (1) 25

**REGIONAL DIE CASTING LIMITED**

425 Lake Avenue North  
Hamilton L8E 3C1  
Tel: (416) 561-6943

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing and assembly. Arrangements can be made to provide electroplated and painted coatings in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (2) 400

**RICHMOND DIE CASTING COMPANY LIMITED**

Summerstown  
(P.O. Box 397, Cornwall K6H 5T1)  
Tel: (613) 931-1480  
Telex: 05-24651

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing and assembly. Painted coatings can be provided in outside facilities.

DIE CASTING ALLOYS USED: Aluminum

DIE CASTING MACHINES INSTALLED: Al (1) 400  
(1) 500  
(2) 600  
(3) 650

**THE ROBBINS & MYERS COMPANY OF CANADA LIMITED**

58 Morrell Street  
Brantford  
(P.O. Box 280, Brantford N3T 5N6)  
Tel: (519) 752-5447  
Telex: 021-811-31

SERVICES AVAILABLE: The company's facilities, which are captive, include die casting, toolmaking, machining and electroplated or painted coating.

DIE CASTING ALLOYS USED: Aluminum

DIE CASTING MACHINES INSTALLED: Al (1) 125  
(1) 250

**SANGAMO CO. LTD.**

215 Laird Drive  
Toronto M4G 3X1  
Tel: (416) 425-3330

SERVICES AVAILABLE: The company's facilities, which are captive, include product design, toolmaking, machining, finishing, electroplated, painted or chemical coating and assembly.

DIE CASTING ALLOYS USED: Aluminum

DIE CASTING MACHINES INSTALLED: Al (2) 400

**SOLUS MANUFACTURING & SALES**

Division of H. E. Vannatter Ltd.  
102 Arnold Street  
Wallaceburg  
(P.O. Box 36, Wallaceburg N8A 4L5)  
Tel: (519) 627-6021

SERVICES AVAILABLE: Although the company does captive work, it has facilities available to undertake custom die casting, toolmaking, machining, finishing, powder coating and assembly.

DIE CASTING ALLOYS USED: Aluminum

DIE CASTING MACHINES INSTALLED: Al (1) 400  
(1) 600

**VICTOR RECREATION PRODUCTS LIMITED**

866 Langs Drive  
Cambridge (P) N3H 2N7  
Tel: (519) 653-2131

SERVICES AVAILABLE: Custom die casting, finishing and painted coating. Arrangements can be made to provide electroplated coating in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (1) 300  
(1) 400

**WEBSTER MFG. (LONDON) LIMITED**

1161 King Street  
London  
(P.O. Box 4580, London N5W 5K4)  
Tel: (519) 455-1220

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing, electroplated and painted coatings and assembly.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (1) 150 Zn (3) 600  
(2) 400 (1) 650  
(3) 500 (1) 800

**WHITE DIE CASTING CO. LTD.**

354 McNab Street  
Dundas L9H 2L2  
Tel: (416) 627-3509

SERVICES AVAILABLE: Custom die casting, toolmaking, machining, finishing and assembly. Electroplated, painted and chemical coatings can be provided in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (2) 250  
(2) 400

**WILCON PRODUCTS**

31 Milford Avenue  
Toronto M6M 2W1  
Tel: (416) 248-1842

SERVICES AVAILABLE: The company's facilities, which are captive, include die casting, product design, toolmaking, machining, abrasive belt sanding and assembly.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (1) 150

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**Quebec****ABACO TOOL & DIE INC.**

10746 Salk Avenue  
Montreal H1G 4Y1  
Tel: (514) 322-7003

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing and chemical coating. Arrangements can be made to provide painted coatings in outside facilities.

DIE CASTING ALLOYS USED: Aluminum and Magnesium

DIE CASTING MACHINES INSTALLED: Al (2) 700 Mg (2) 700

**ACME SLIDE FASTENER CO. LTD.**

225 Liege Street West  
Montreal  
Tel: (514) 382-2517

SERVICES AVAILABLE: None. The company's facilities are captive. It has facilities for die casting, toolmaking, machining, finishing, painting and assembly. Electroplating is done in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (11) .35

**LES ATELIERS DE MÉCANIQUE TREMBLAY & FILS LIMITÉE**

Coté Street  
St. Cyprien  
Rivière-Du-Loup  
Tel: (418) 963-2606

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing, painting and assembly.

DIE CASTING ALLOYS USED: Aluminum and Zinc

DIE CASTING MACHINES INSTALLED: Al (2) 300 Zn (1) 400

**BARSHEL AND COMPANY LTD.**

234 - 26th Avenue  
Lachine H8S 3Y4  
Tel: (514) 637-8181

SERVICES AVAILABLE: Although the company's facilities are mainly used for captive work, it is able to undertake some custom work. It has facilities for die casting, product design, toolmaking, machining and assembly.

DIE CASTING ALLOYS USED: Zinc and Lead

DIE CASTING MACHINES INSTALLED: Zn (1) 50 Pb (1) 10 automatic  
(1) 50

**CAPITOL INDUSTRIES LTD.**

5795 de Gaspe Street  
Montreal H2S 2X3  
Tel: (514) 273-0451

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing, electroplated and painted coatings and assembly. Chemical coatings can be provided in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (5) 150  
(5) 200  
(1) 400  
(2) 600

**CENTURY PRODUCTS LTD.**

Division of F. Ronci Co. Inc.  
505 Louvain Street West  
Montreal H2N 1C1  
Tel: (514) 387-3761  
387-3762

Telex: 05-268829

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing and electroplated, electrolytic or painted coatings.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (1) 150

**CLIX FASTENER CORPORATION**

3540 St. Patrick Street  
Montreal H4E 1A3  
Tel: (514) 934-0331

SERVICES AVAILABLE: Although the company's facilities are mainly used for captive work, it is able to undertake some custom work. It has facilities for die casting, product design, toolmaking, machining, finishing, electroplating and assembly.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (12) 2  
(4) 10

**W. R. CUTHBERT LIMITED**

47 Duke Street  
Montreal H3C 2L9  
Tel: (514) 866-3071

SERVICES AVAILABLE: The company's facilities are captive. They include die casting, toolmaking, machining, finishing, electroplating and assembly.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (1) 100

**DARONA DIE CASTING INC.**

1141 - 2nd Avenue  
Grand'Mère G9T 2X9  
Tel: (819) 538-1195

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing and assembly. Arrangements can be made to provide various types of coatings such as electroplated, painted and chemical in outside facilities.

DIE CASTING ALLOYS USED: Aluminum and Zinc

DIE CASTING MACHINES INSTALLED: Al (1) 300 Zn (1) 300  
(1) 400 (1) 400  
(1) 600  
(1) 800

**DYNACAST LIMITED**

2275 - 43rd Avenue  
Lachine H8T 2K1  
Tel: (514) 636-4734  
Telex: 05-821754

SERVICES AVAILABLE: Custom die casting, product design, toolmaking and machining. Arrangements can be made to provide electroplated coatings in outside facilities.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (10) 2

**EASTERN DIE CASTING INC.**

2020 Thimens Street  
St. Laurent H4R 1L1  
Tel: (514) 331-7510  
Telex: 05-826778

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing and assembly. Arrangements can be made to provide electroplated and painted coatings in outside facilities.

DIE CASTING ALLOYS USED: Aluminum and Zinc

DIE CASTING MACHINES INSTALLED: Al (3) 200 Zn (1) 100  
(2) 400 (1) 150  
(2) 600 (2) 200  
(1) 1200

**ELECTROLUX (CANADA) LIMITED**

2751 Trans-Canada Highway  
Point Claire  
Tel: (514) 695-1470  
Telex: 05821-640

SERVICES AVAILABLE: None. The company's facilities are captive. It has facilities for die casting, toolmaking, machining, finishing and electroplated and chemical coating.

DIE CASTING ALLOYS USED: Aluminum

DIE CASTING MACHINES INSTALLED: Al (1) 400  
(1) 550  
(1) 600  
(1) 800

**IBERVILLE FITTING LTD.**

100 Longtin Street  
St. Jean J3B 3G5  
Tel: (514) 347-2304  
Telex: 05-831522

SERVICES AVAILABLE: Although the company does captive work, it has facilities available to undertake some custom die casting, product design, toolmaking, machining, finishing and assembly.

DIE CASTING ALLOYS USED: Aluminum

DIE CASTING MACHINES INSTALLED: Al (1) 400

**IDEAL BUILDERS HARDWARE CORP.**

860 - 90th Avenue  
La Salle  
Tel: (514) 363-1030

SERVICES AVAILABLE: Custom die casting, machining, finishing, electroplating, painting and assembly.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (2) 400

**KOMO FASTENERS LTD.**

5570 Cartier Street  
Montreal H2H 1X9  
Tel: (514) 527-1301

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing, electroplated and painted coatings and assembly.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (14) 1



**LYSTER DIE CASTING LTD.**

145 des Bouleaux  
Lyster G0S 1V0  
Tel: (819) 389-5751  
Telex: 011-3766

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing, electroplated, electrolytic and painted coatings and assembly.

DIE CASTING ALLOYS USED: Aluminum, Zinc, Magnesium and Copper

DIE CASTING MACHINES INSTALLED: Al (2) 300 Zn (2) 50 Mg (2) 300 Cu (2) 300  
(3) 600 (2) 200 (3) 600 (3) 600  
(1) 400

**MONTREAL MATERIAL PROCESSING CO. LIMITED**

7301 Decarie Boulevard  
Montreal H4P 2G7  
Tel: (514) 735-5411  
Telex: 01-20127

SERVICES AVAILABLE: The company's facilities are captive. They include die casting, toolmaking, machining, finishing, painted or chemical coating and assembly. Electroplating is done in outside facilities.

DIE CASTING ALLOYS USED: Aluminum and Zinc

DIE CASTING MACHINES INSTALLED: Al (1) 100 Zn (1) 125  
(1) 200  
(1) 400

**LA COMPAGNIE SINGER DU CANADA LTÉE**

200 St. Louis Street  
St. Jean J3B 1X9  
Tel: (514) 348-4921

SERVICES AVAILABLE: None. The company's facilities are captive. It has facilities for die casting, toolmaking, machining, finishing, electroplating, painting and assembly.

DIE CASTING ALLOYS USED: Zinc

DIE CASTING MACHINES INSTALLED: Zn (1) 100

**TERRY BURNERS INC.**

5015 Buchan Street  
Montreal H4P 1S6  
Tel: (514) 739-1971  
Telex: 01-20873

SERVICES AVAILABLE: The company's facilities are captive. It has facilities for die casting, toolmaking, machining, finishing, painting and assembly. Electroplated coating is done in outside facilities.

DIE CASTING ALLOYS USED: Aluminum and Zinc

DIE CASTING MACHINES INSTALLED: Al (2) 150 Zn (1) 10  
(1) 200 (1) 20

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**New Brunswick**

**FEDERAL PRODUCTS LIMITED**

Leonard Drive  
Sussex  
(P.O. Box 1460, Sussex E0E 1P0)  
Tel: (506) 433-4900

SERVICES AVAILABLE: Custom die casting, product design, toolmaking, machining, finishing and assembly.

DIE CASTING ALLOYS USED: Aluminum and Zinc

DIE CASTING MACHINES INSTALLED: Al (3) 600 Zn (2) 600  
(3) 1500

# DIRECTORY OF DIE CASTERS BY PRODUCT

COMPANY AND PROVINCE	PRODUCT										
	Automotive Parts	Business Equipment	Electrical and Electronic Equipment	Hardware Items	Household Appliances	Industrial Equipment	Music and/or Communication Items	Photographic Equipment	Small Precision Die Castings	Tools	Toys
<b>BRITISH COLUMBIA</b>											
Accurate Die Casting Ltd. New Westminster	x		x	x			x				
Simalex Manufacturing Co. Ltd. Langley	x		x	x		x					
Stuart Die Casting Company Vancouver			x	x		x					
<b>ALBERTA</b>											
Universal Plastic Producers Ltd. Calgary			x	x		x					
<b>MANITOBA</b>											
Automotive Accessory Co. Ltd. Winnipeg	x					x					
Baycast Products Ltd. Winnipeg	x			x		x					
Diecast Products Ltd. Winnipeg					x Name Plates						
Marwest Electric Manufacturing Ltd. Winnipeg			x								
<b>ONTARIO</b>											
Accurcast Die Casting Limited Wallaceburg	x	x	x	x	x	x	x			x	
ACF Canada Limited Carter Carburetor Division Bramalea	x					x					
Amerock Limited Meaford				x							
Burlington Die Castings Ltd. Burlington	x		x		x	x					
Canadian General Electric Company Limited Peterborough			x		x	x				x	
Carpenter Die Casting Co. Ltd. Stoney Creek	x	x	x	x	x					x	
Castings Unlimited Milton	x	x	x	x	x	x					
Chrysler Canada Limited Toronto	x										
Cottam Diecasting Limited Cottam	x		x	x	x	x	x				x
CTS of Canada Limited Streetsville			x								

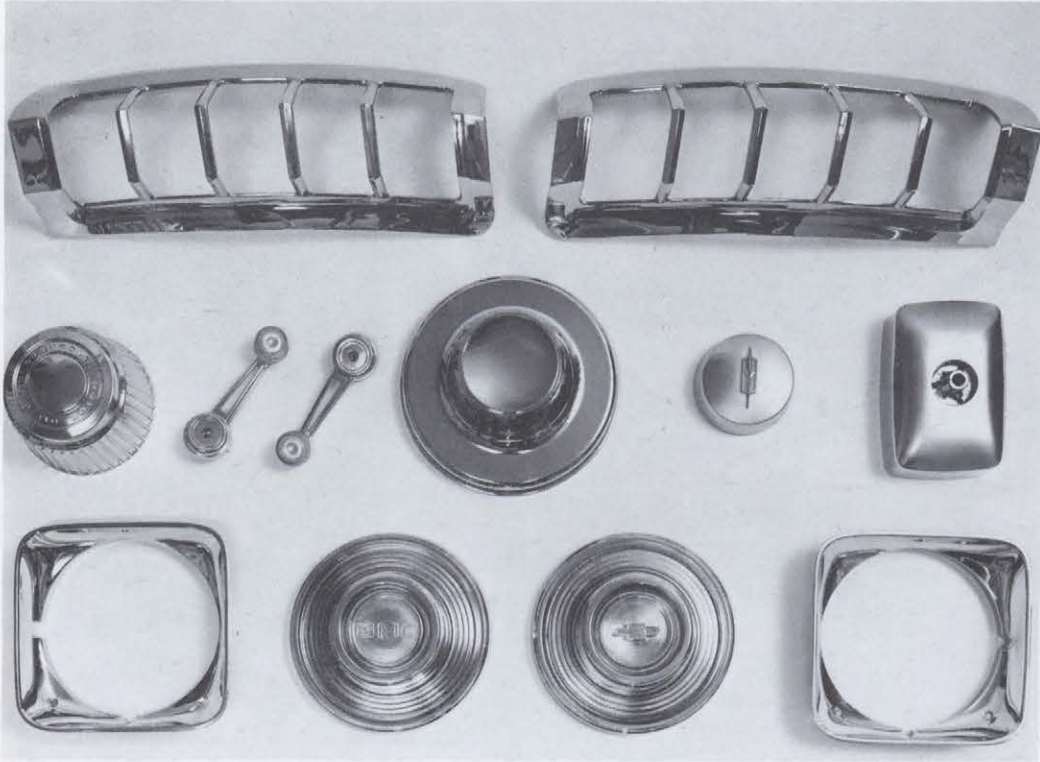
COMPANY AND PROVINCE	PRODUCT											
	Automotive Parts	Business Equipment	Electrical and Electronic Equipment	Hardware Items	Household Appliances	Industrial Equipment	Music and/or Communication Items	Photographic Equipment	Small Precision Die Castings	Tools	Toys	
Doehler Canada Limited Guelph	x	x		x	x		x			x		
Doehler Canada Limited Hamilton	x	x	x	x	x	x	x			x		
Electrohome Limited Cambridge	x	x	x		x	x				x		
Fisher Gauge Limited Peterborough	x	x	x	x	x	x	x	x	x	x	x	
Ganrick Corporation Limited Windsor	x		x	x	x	x				x		
General Motors of Canada Limited St. Catharines	x											
Hahn Brass Limited New Hamburg		x		x	x	x						
Hudson Bay Diecastings Limited Bramalea	x			x	x						x	
J & K Die Casting Limited Scarborough	x	x	x	x	x	x				x	x	
Jutras Die Casting Ltd. Agincourt	x	x	x	x	x	x	x				x	
Kelco Tools Port Colborne		x	x	x	x	x					x	
Kromet Handles Ltd. Cambridge					x							
Lamco Die Cast Limited Thorold	x	x	x	x	x	x	x	x		x	x	
Lightning Fastener St. Catharines			x									
Monarch Fabricating and Die Casters Limited Toronto	x	x		x	x	x				x		
National Hardware Specialties Limited Dresden	x	x	x	x	x	x				x		
National Hardware Specialties Limited Shultz Division Lindsay	x	x	x	x	x	x	x			x		
Noble Trophies Limited Toronto				Figurines for Trophies								
Northeast Tool & Die Co. Ltd. Windsor	x		x	x	x							
Northern Electric Company Limited London			x				x					

COMPANY AND PROVINCE	PRODUCT											
	Automotive Parts	Business Equipment	Electrical and Electronic Equipment	Hardware Items	Household Appliances	Industrial Equipment	Music and/or Communication Items	Photographic Equipment	Small Precision Die Castings	Tools	Toys	
Outboard Marine Corporation of Canada Ltd.* Peterborough						x						
Paramount Industries Division of Donlee Mfg. Industries Ltd. Weston	x			x	x	x						
Precision Castings Limited Toronto			x	x	x					x		
Quick Cable Canada Limited Toronto	x		x	x								
Ramsden Manufacturing Limited Dunbar Aluminum Foundry Division London	x					x						
Rapier Trophy Manufacturing Company Mississauga												
Regional Die Casting Limited Hamilton	x	x		x	x							
Richmond Die Casting Company Limited Summerstown		x		x	x	x	x			x		
The Robbins & Myers Company of Canada Limited Brantford		x	x		x	x	x	x				
Sangamo Co. Ltd. Toronto			x									
Solus Manufacturing & Sales Division of H. E. Vannatter Ltd. Wallaceburg												
Victor Recreation Products Limited Cambridge											x	
Webster Mfg. (London) Limited London	x			x	x		x					
White Die Casting Co. Ltd. Dundas	x	x	x	x	x	x	x			x		
Wilcon Products Toronto					x							
<b>QUEBEC</b>												
Abaco Tool & Die Inc. Montreal	x	x	x	x	x						x	
Acme Slide Fastener Co. Ltd. Montreal												
Les Ateliers de Mécanique Tremblay & Fils Limitée Rivière-du-Loup				x						x	x	
Barschel and Company Ltd. Lachine	x			x	Anchor Devices for Masonry							

\*Specializes in producing die castings for outboard motors, chain saws and power lawnmowers.

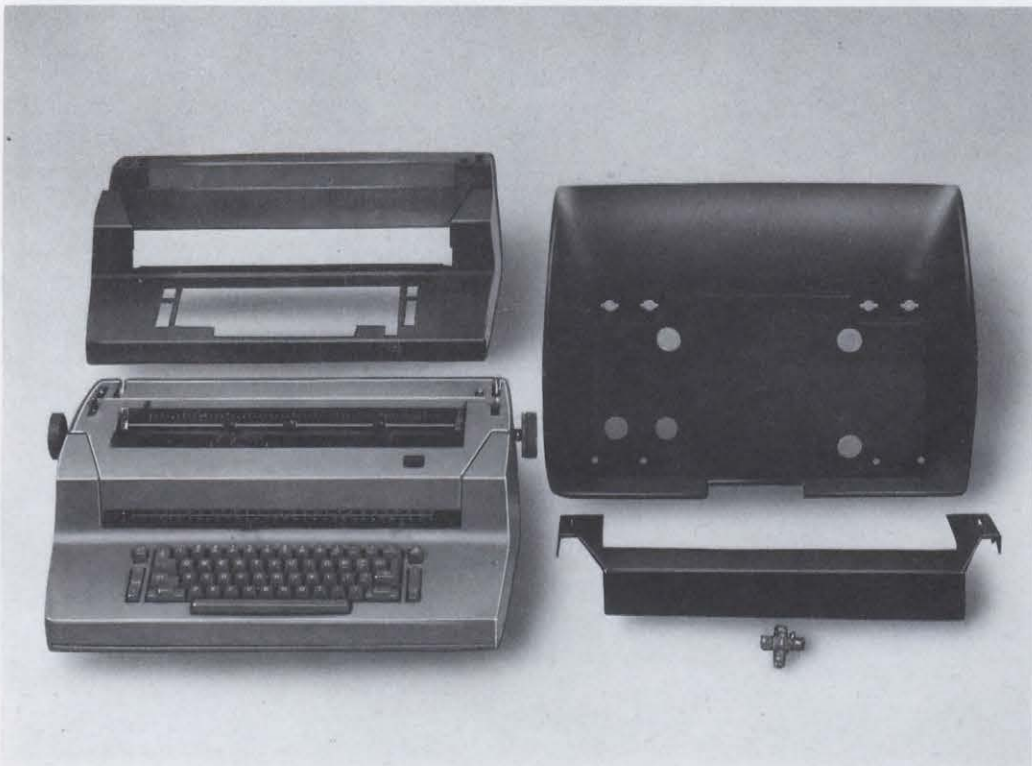
COMPANY AND PROVINCE	PRODUCT										
	Automotive Parts	Business Equipment	Electrical and Electronic Equipment	Hardware Items	Household Appliances	Industrial Equipment	Music and/or Communication Items	Photographic Equipment	Small Precision Die Castings	Tools	Toys
Capitol Industries Ltd. Montreal	x	x	x	x	x	x				x	
Century Products Ltd. Division of F. Ronci Co Inc. Montreal	Buckles & Findings for Wearing Apparel										
Clix Fastener Corporation Montreal			x	x	Zipper Parts						
W. R. Cuthbert Limited Montreal				x							
Darona Die Casting Inc. Grand'Mère	x	x	x	x	x	x	x			x	
Dynacast Limited Lachine	x	x	x	x	x		x	x	x		
Eastern Die Casting Inc. Montreal	x	x	x	x	x	x	x	x		x	x
Electrolux (Canada) Limited Pointe Claire					x						
Iberville Fitting Ltd. St. Jean			x								
Ideal Builders Hardware Corp. La Salle				x							
Komo Fasteners Ltd. Montreal				x	Zipper Parts						
Lyster Die Casting Ltd. Lyster	x	x	x	x	x	x		x		x	x
Montreal Materials Processing Co. Limited Montreal				x							
La Compagnie Singer du Canada Ltée St. Jean					x						
Terry Burners Inc. Montreal				x	x	x					
<b>NEW BRUNSWICK</b> Federal Products Limited Sussex		x	x	x		x	x			x	

FIGURE 5



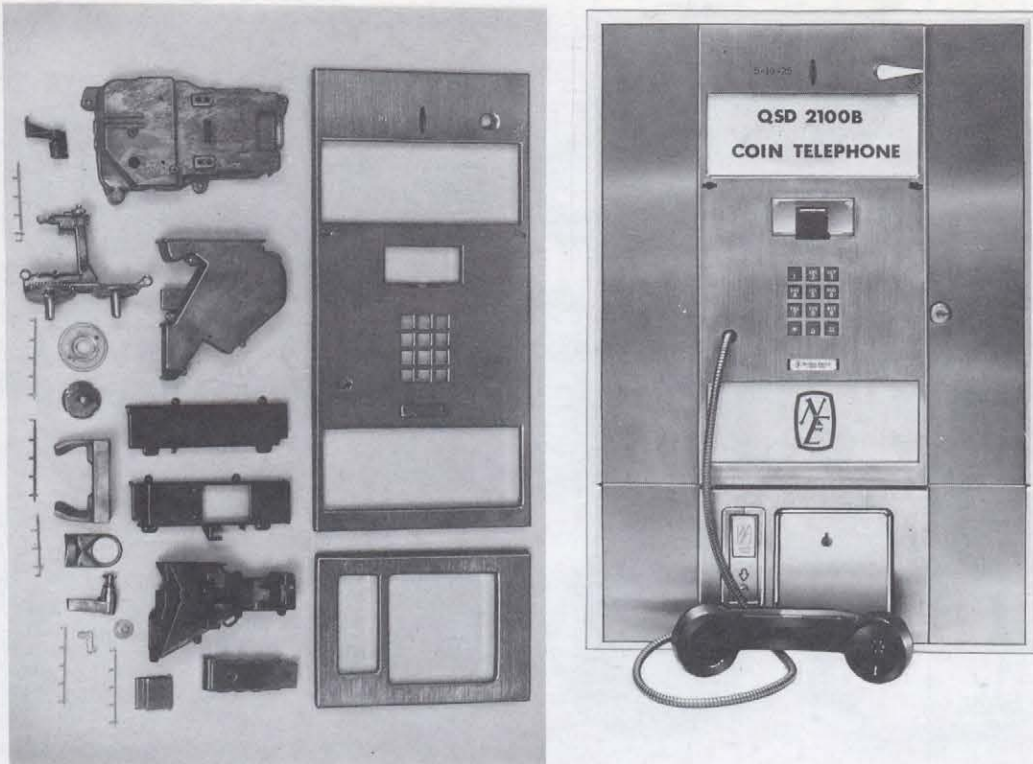
Chromium Plated Automotive Die Castings

FIGURE 6



Die Castings for Typewriters

FIGURE 7-8



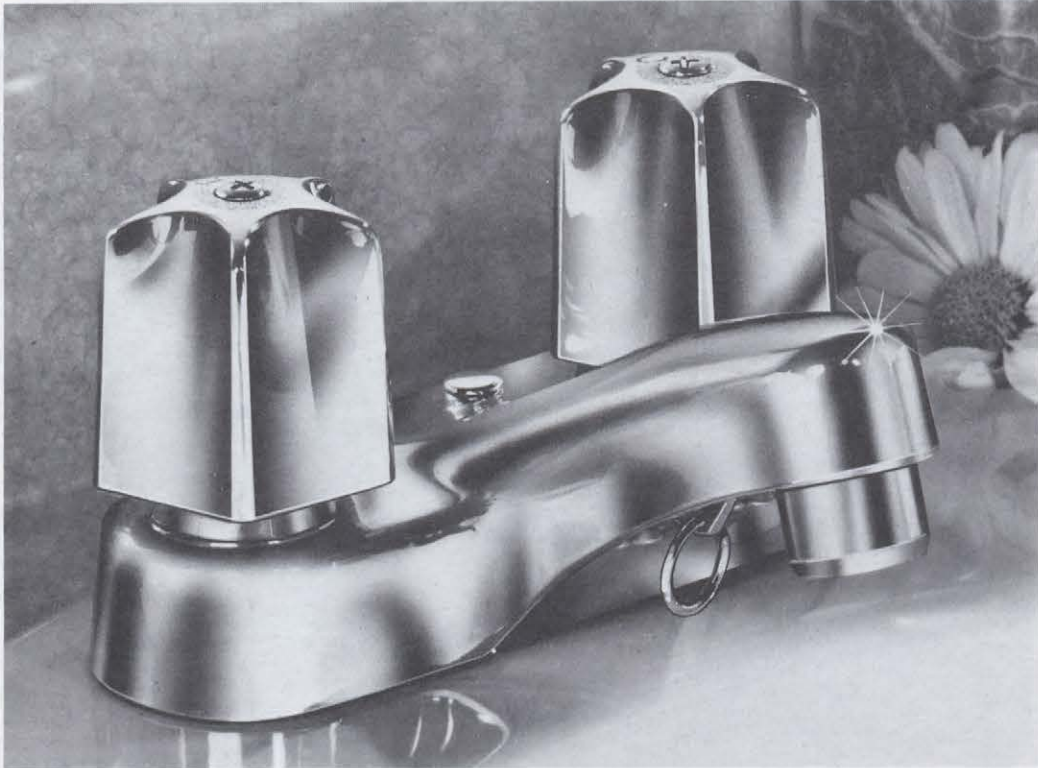
Die Casting Components for Coin Operated Phone

FIGURE 9



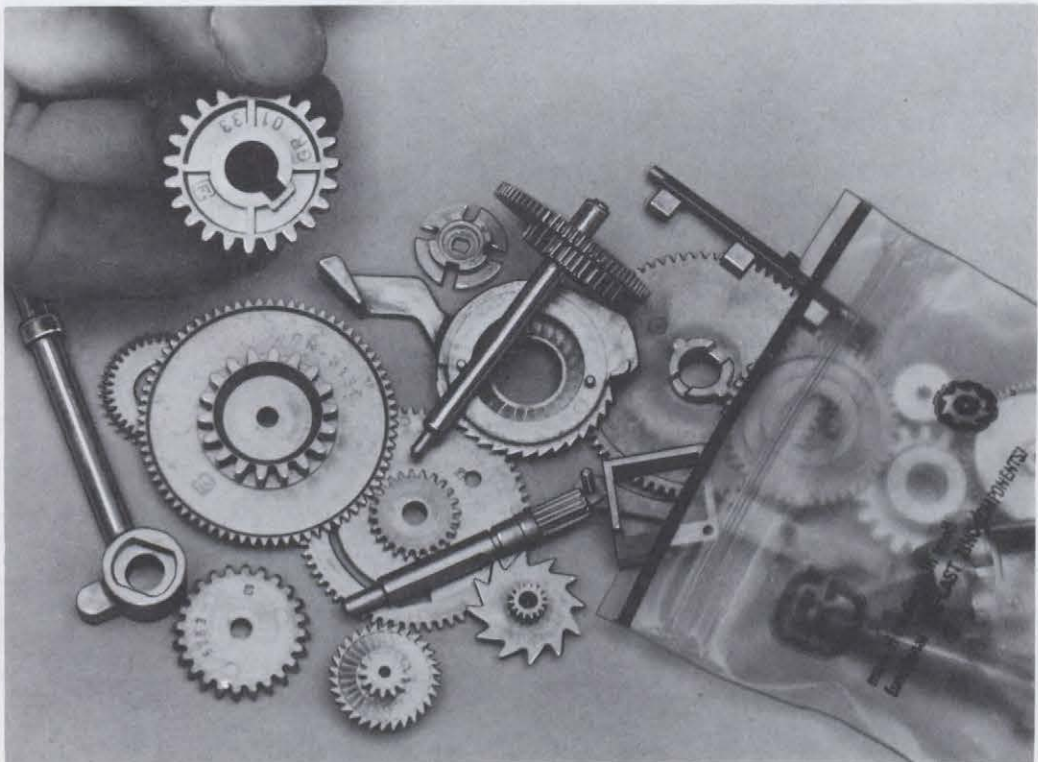
Die Cast Home Hardware

FIGURE 10



Die Cast Faucet

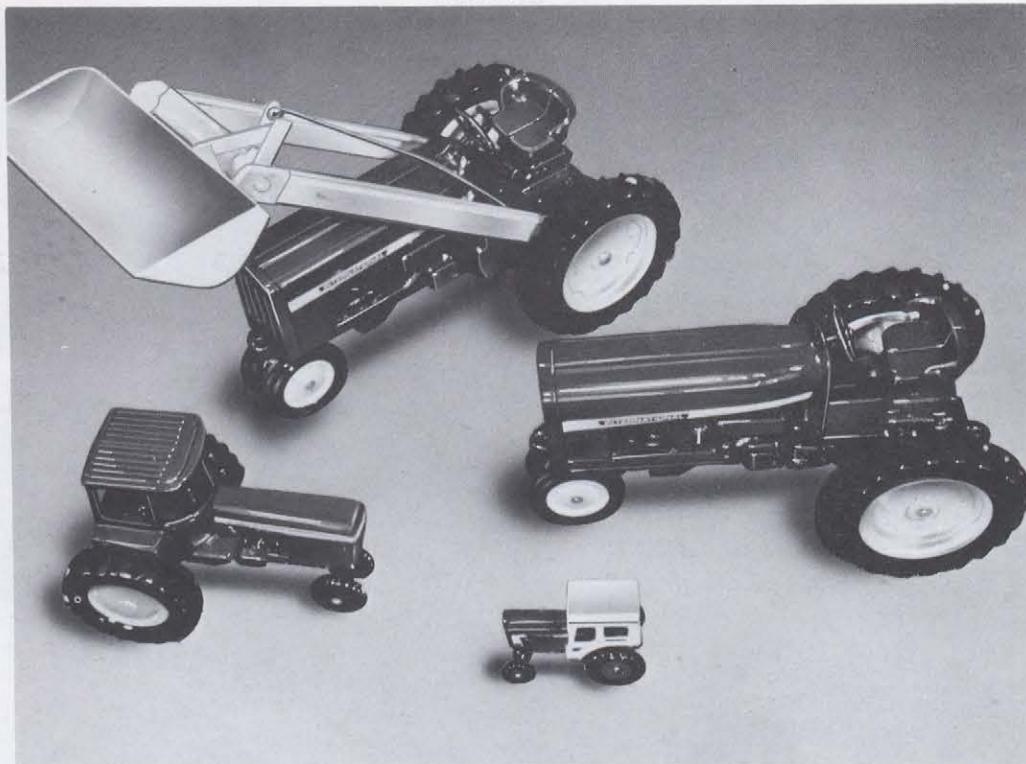
FIGURE 11



Miniature Precision Die Castings

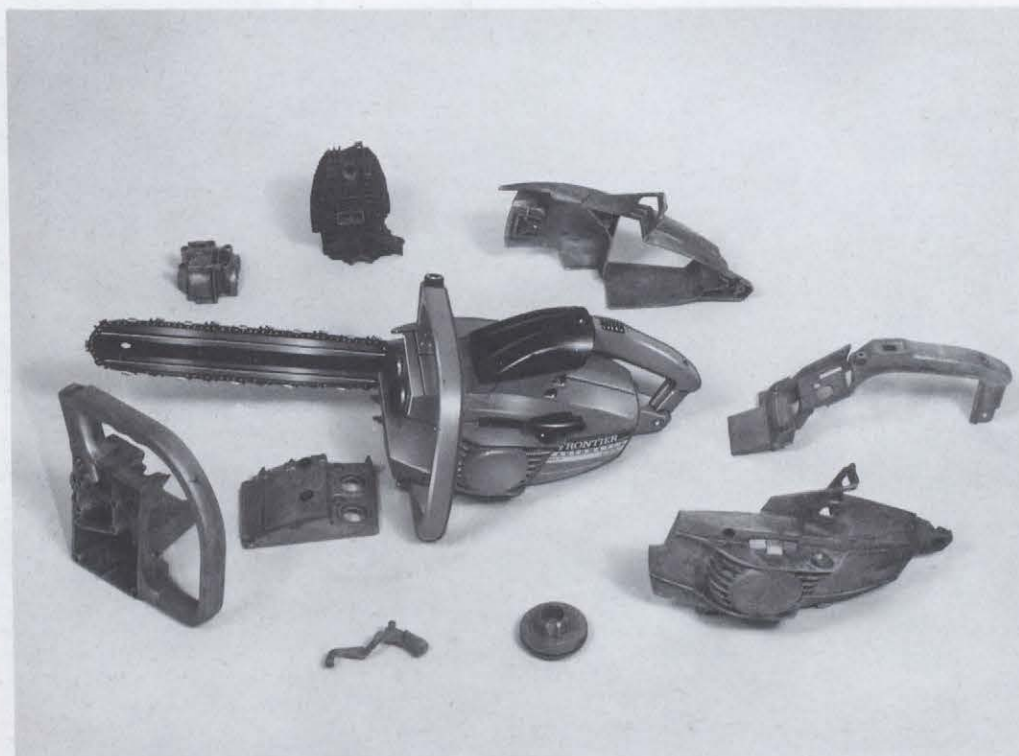


FIGURE 12



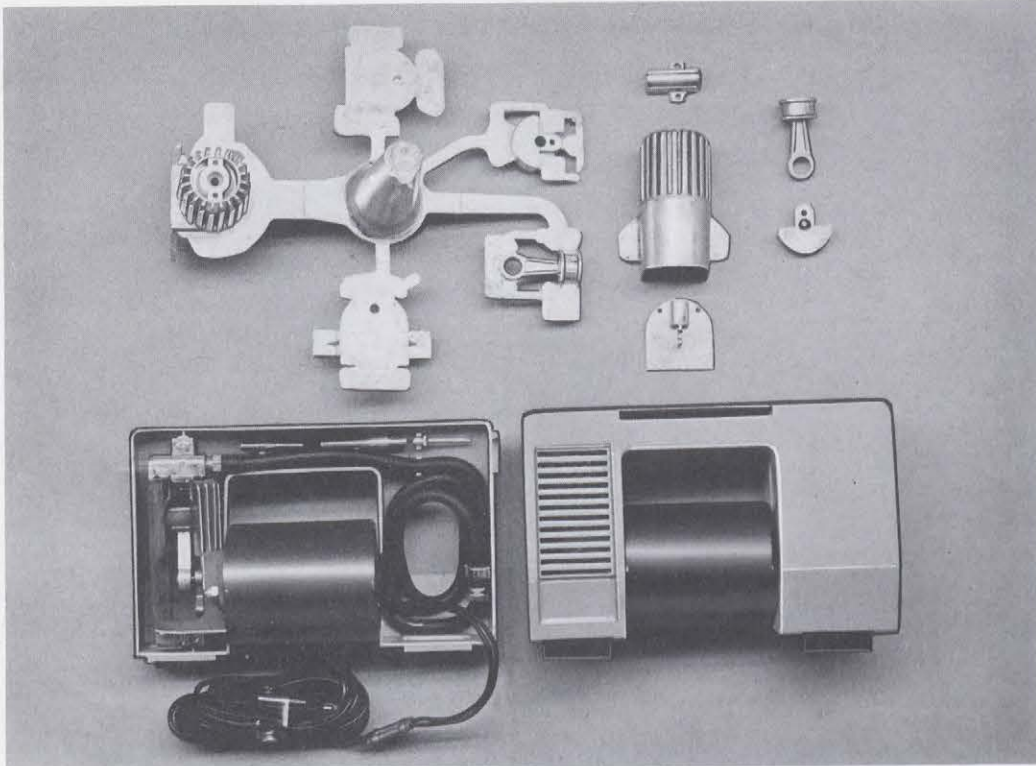
Die Cast Model Tractors

FIGURE 13



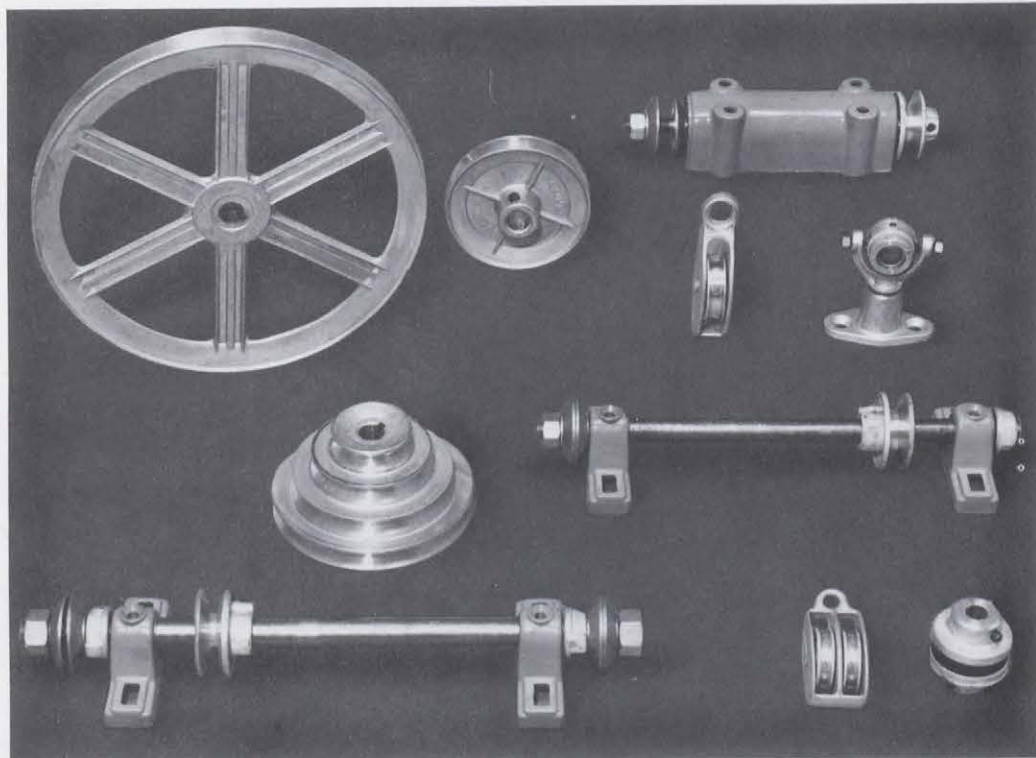
Die Cast Components for Power Saws

FIGURE 14



Die Castings as Cast to Completed Part (Cylinder Cutaway for View of Part) Miniature Air Compressor

FIGURE 15



Die Cast Pulleys and Workshop Tools

