

**U.S. International Trade Commission  
U.S. Remanufacturing Industries,  
Markets and Trade**

**Mackay  
& Company**

February 2012

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# **Mackay & Company**

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**A market research and business consulting firm headquartered in suburban Chicago, the company's focus since 1968 has been and continues to be the commercial vehicle markets including:**

- Commercial on-highway vehicles (Class 2c – 8)
- Construction equipment
- Farm field machinery
- Related parts, components and supplies; engines, transmissions, tires, lubricants, etc.

**Our client base includes most companies who supply vehicles, equipment and/or parts to the commercial vehicle industries. A list of our clients is included in the appendix.**

# How Does MacKay & Company Generate Data?

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- **Data Compilation Methodology – survey thousands of end users each year on their aftermarket parts and service purchase practices:**
  - **MacKay & Company’s philosophy: Ask the individuals that make the purchasing decisions and perform the vehicle service or buy the vehicles or equipment**
- **The survey process is supported by:**
  - **Large database of owners and maintainers of commercial trucks, farm field equipment and off-highway construction equipment**
  - **Large database of parts and service suppliers such as OE dealers, engine distributors, heavy duty parts distributors, independent garages, etc.**
- **Data Analysis based on end-user purchases and valued at current retail prices.**

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# **DataMac® Aftermarket Surveys Cover:**

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## **Questionnaires Collect Data on:**

- ⊙ **End User Vocation or Vehicles operated**
- ⊙ **Annual Usage – Miles or Hours**
- ⊙ **Replacement Frequency**
- ⊙ **Point of Service**
- ⊙ **Type of Repair**
- ⊙ **Point of Purchase**

## **Demand is Tracked By:**

- ⊙ **Vocation of Use**
- ⊙ **Type of Replacement**
- ⊙ **Channel of Distribution**
- ⊙ **Point of Service**
- ⊙ **First or Subsequent Owner(s)**
- ⊙ **Both Units and Dollars**

# Principal Commercial Vehicular Industries That Utilize Remanufactured Parts



Light Duty Trucks  
GVW: 8,500# - 19,500#

Total U.S. Population = 10,310,521



Medium Duty Trucks  
GVW: 19,501# - 33,000#

Total U.S. Population = 1,230,796



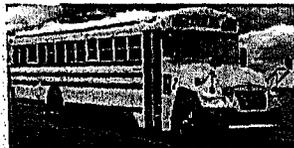
Heavy Duty Trucks  
GVW: 33,001# and greater

Total U.S. Population = 2,820,256



Trailers/Container Chassis

Total U.S. Population = 4,563,487



School Buses

Total U.S. Population = 374,585

# Principal Vehicular Industries That Utilize Remanufactured Parts

## Agriculture Equipment

Total U.S. Population = 11,750,320



Farm Tractors	4,295,549
Combines	224,614
Harvesting Equipment	2,816,683
Planting and Tillage Equipment	3,889,965
Sprayers	523,509

## Construction Equipment

Total U.S. Population = 1,631,139

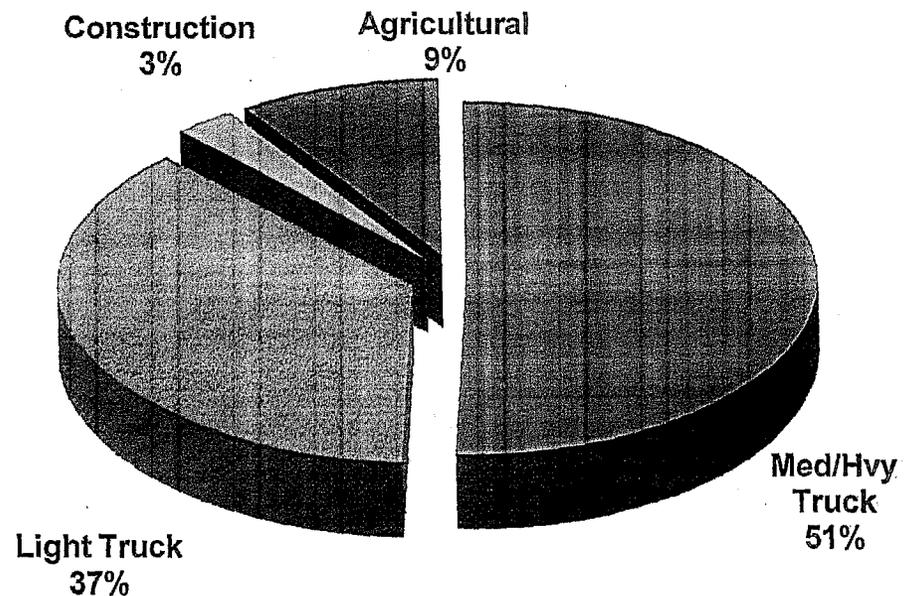
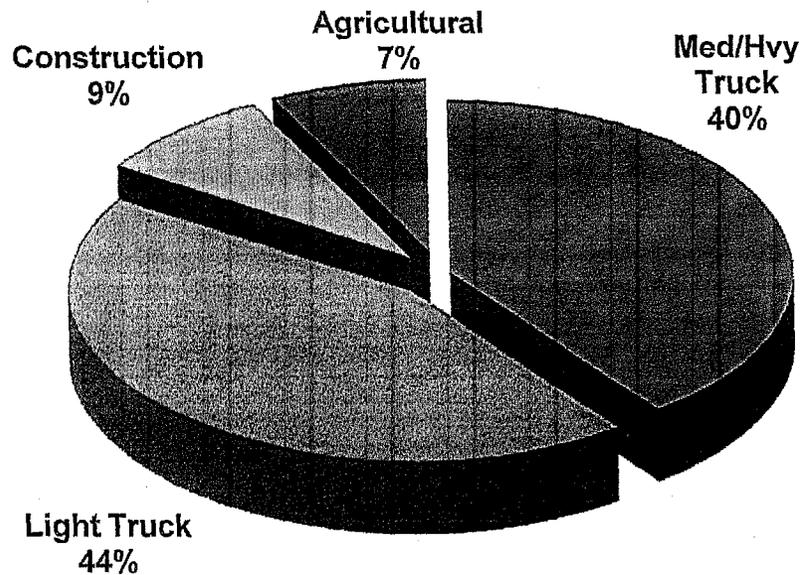


Backhoe Loaders	261,509
Excavators	388,915
Skid Steer Loaders/Compact Track Loaders	620,478
Articulated Wheel Loaders	197,269
Crawler Loaders	51,207
Crawler Dozers/Tractors	111,761

# Remanufactured Parts Market Size in Dollars and Units - 2011

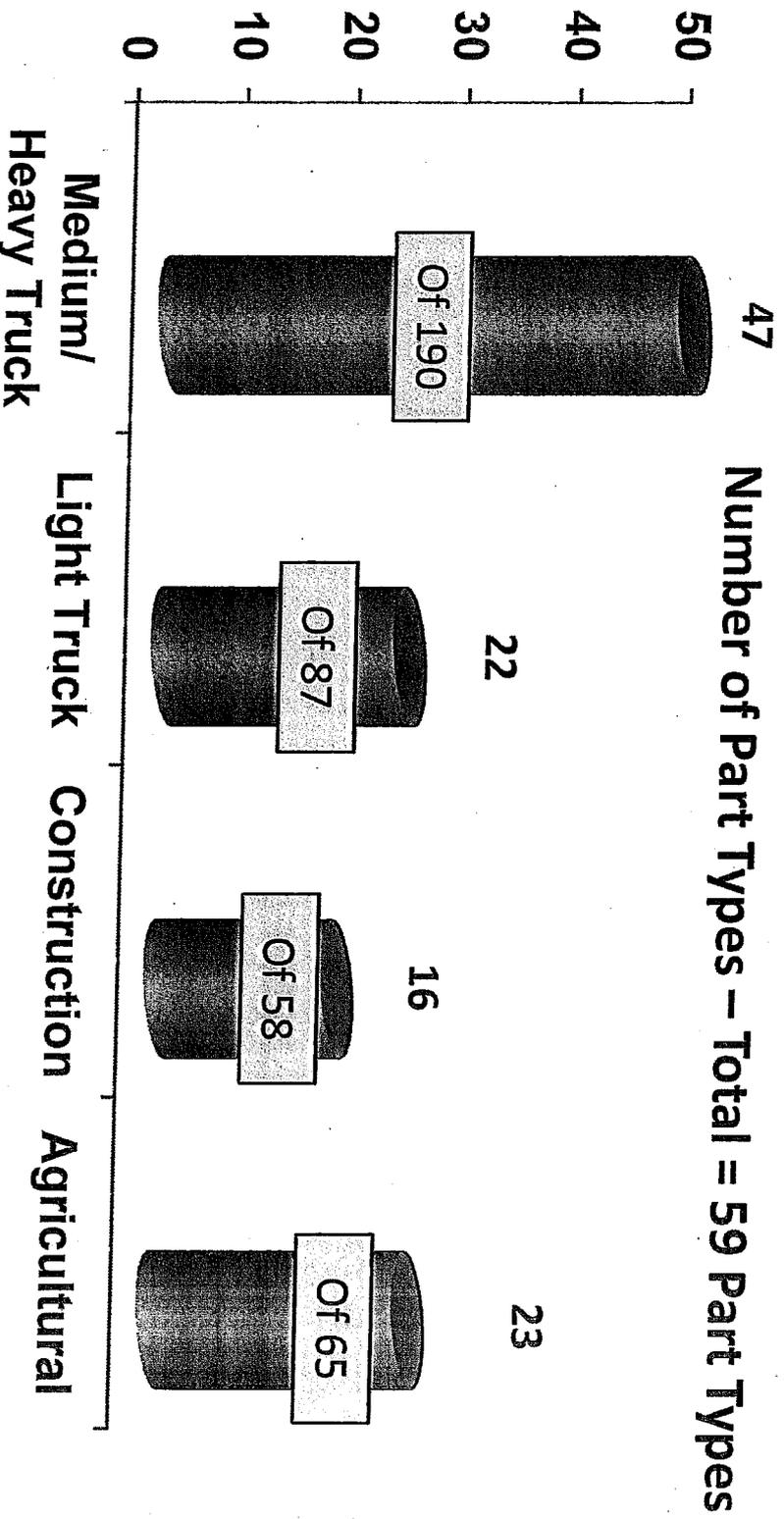
Dollars - \$15.2 Billion

Units - 43.8 Million

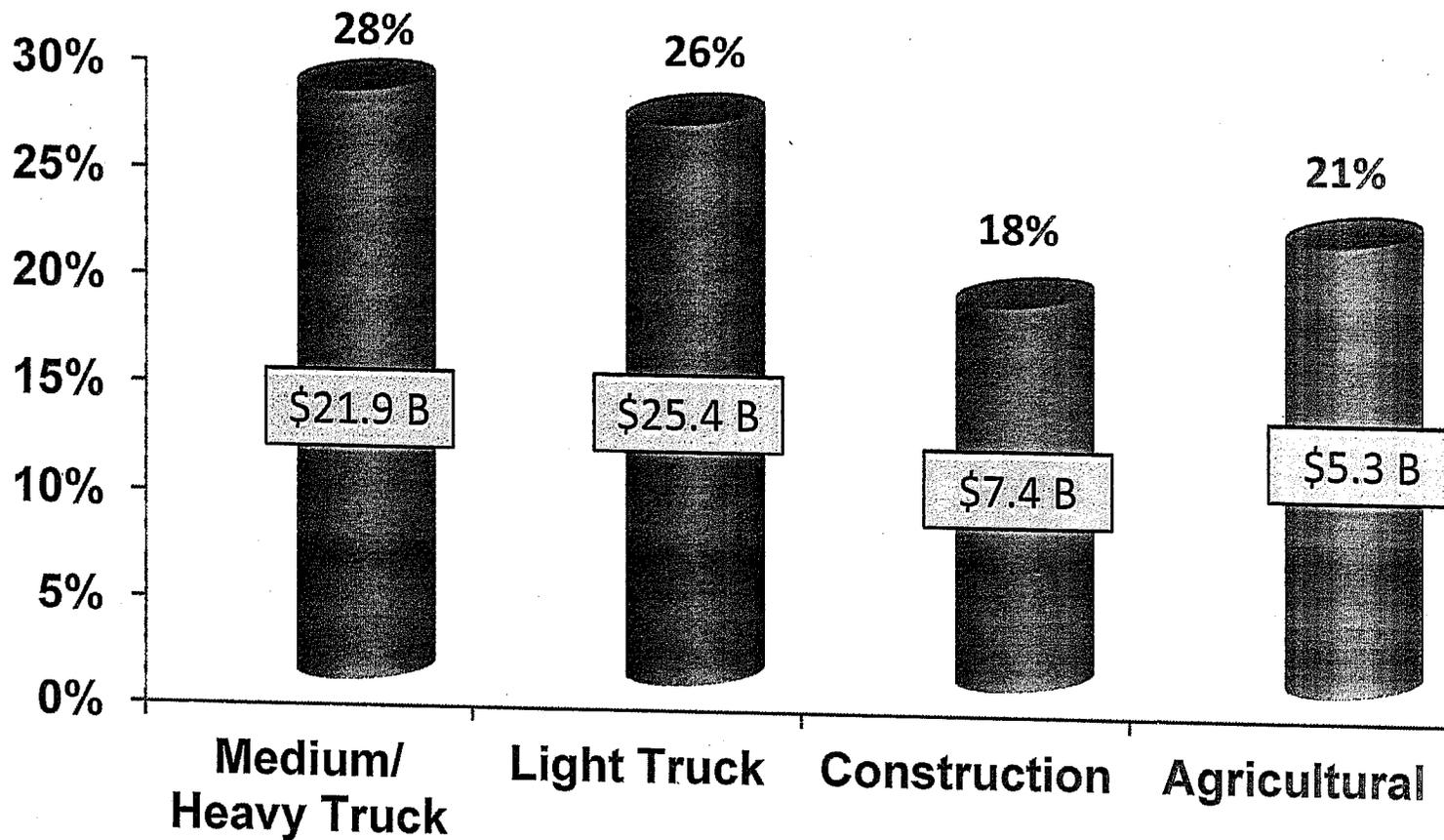


# Remanufactured Parts Market

## Number of Types of Parts by Industry

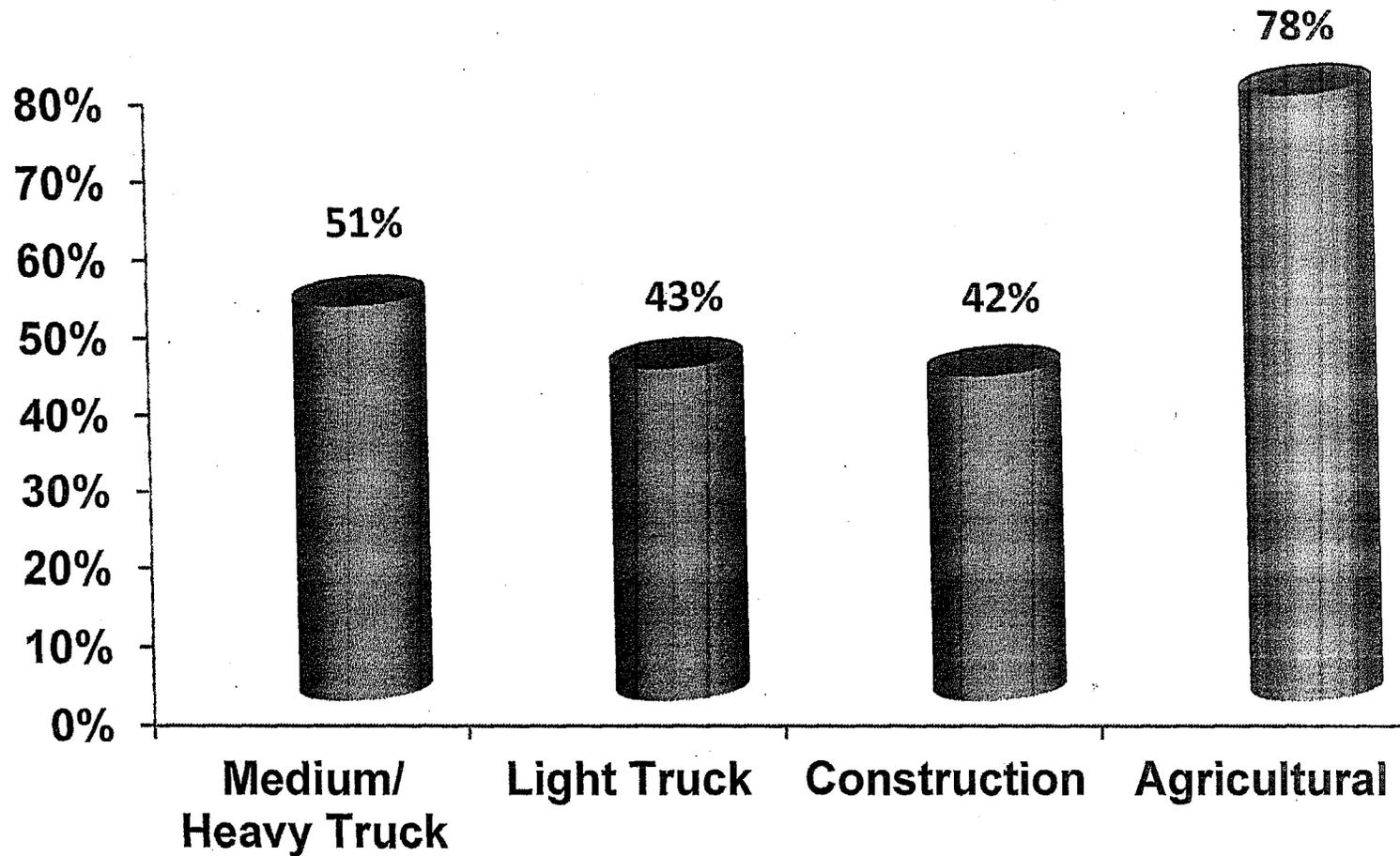


# Remanufactured Parts Market Percent of Each Total Aftermarket



# Remanufactured Parts Market

## Percent of Units Replaced with Reman Parts



# Components Included

Component	MH Truck	CE	Ag	Light Truck
AC: Blower Motors/Assemblies	X		X	
AC: Compressors	X		X	
AC: Condensers	X			
AC: Evaporator Cores	X			
AC: Heater Cores	X			
Air Dryers: Complete Units	X			
Air Dryers: Dessicant Cartridges	X			
Alternators	X	X	X	X
Automatic Slack Adjusters	X			
Automatic Trans: Complete	X		X	X
Brake Chamber	X	X		
Brake Valves	X			
Calipers Brakes	X			X
Camshafts	X			
Carburetors-Gas	X			
Charged Air Coolers	X	X		X
Clutches	X		X	X
Combine Concaves			X	
Combine Rasp Bars			X	
Differential Carriers Rear	X	X	X	X
Differential Carriers Front			X	X
Compressors - Air Brakes	X			
Cylinder Heads	X		X	X
Diesel Fuel Feed Pumps	X			
Diesel Particulate Filter Cartridge	X			
Disc Brake Pads	X			
Electronic Injectors	X	X	X	X
Engine Assembly Diesel	X	X	X	X
Engine Assembly Gas	X			X

# Components Included

Component	MH Truck	CE	Ag	Light Truck
Fan Clutches	X			
Fifth Wheel: Complete Wheel	X			
Fuel Pumps - Diesel	X	X	X	X
Fuel Pumps-Gas	X			X
Hydraulic Cylinders		X	X	
Hydraulic Motors		X	X	
Hydraulic Pumps		X	X	
Hydraulic Valves		X	X	
Lined Air Brake Shoes	X			
Manual Slack Adjusters	X			
Manual Trans: Complete-New & Rebuilt	X	X	X	X
Master Cylinders	X			X
Mechanical Injectors	X			X
Mower Conditioner Rollers			X	
Oil Cooler		X		
PTO			X	
Propshaft Assembly	X			
Radiator Shell, Shutter, Prts	X			
Radiators	X			X
Spring Brakes	X			
Starter Motors	X	X	X	X
Steering Gears: Complete Units	X			
Steering Knuckles	X			
Steering Pumps: Complete Units	X			
Torque Rods	X			
Transfer Case				
Turbochargers	X	X	X	X
Unitized Wheel Hubs	X			
Water Pumps	X	X	X	X
Wheel Cylinders	X			X

# Thank You.

Questions Now?  
Questions Later?

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## MACKAY & COMPANY CLIENTS

Accuride Corporation	Baldwin Filters
AEA Investors	Bandag, Incorporated
Adcock & Morrison, PLLC	Bank of America Capital Investors
Affinia Group Inc.	Behr Hella Service North America LLC
Aftermarket Technologies	Bendix/Knorr Bremse
AGCO	Berkshire Partners
Massey-Ferguson	Betts Spring Company
Corporate Parts Marketing	Bingham McCutchen LLP
AGCO Europe	Blackstone Group L.P. (The)
Agility Fleet Services, LLC	Bobcat Company
Airtex	Borg-Warner Corporation
Aktas North America Corp.	BP Lubricants
Allied Capital Corporation	Bridgestone/Firestone North American Tire, LLC
AM General Corporation	Bruckner Truck Sales, Inc.
Ambest Service Centers	Bundy Corporation
American Standard, Inc.	Burroughs Diesel, Inc.
American Truck Dealers	Business Information Services
American Trucking Associations, Inc.	Cahner Business Information
Ameriforge	Capital Partners
Associates Commercial Corporation	Carlyle Group
ArvinMeritor, Inc.	Carquest
Corporate Planning	
Commercial Vehicle Aftermarket	
B. F. Goodrich	
BAE Systems	

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Caterpillar Inc. Earthmoving Group Engine Division Research & Development Group	Cummins Filtration Corporate Parts Marketing Engine Marketing
Center City International	Daimler Trucks North America LLC Freightliner Corporation Sterling Trucks Western Star Trucks Corporate Research and Development (Germany)
Champion Laboratories, Inc.	
Champion Parts, Inc.	
Chevron Global Lubricants	Daimler Mexico
Chrysler Corporation Dodge Trucks	Dana Corporation Echlin Corporation
Clayton, Dubilier & Rice, Inc. (CDR)	Dayton Parts, Inc.
Cleveland Brothers Equipment Co., Inc.	Deere & Company Commercial Golf & Turf Products Corporate Parts Marketing Power Systems Group John Deere Europe
CNH Global Case Corporation New Holland Corporation CNH Europe	
Code Hennessy & Simmons LLC	Delphi Automotive Systems
Cognis Corporation	Denso International America, Inc.
Coleman Research Group	Detroit Diesel Corporation
Commercial Vehicle Group, Inc.	Donaldson Company, Inc.
Continental Tire – N.A., Inc. Cooper Tire & Rubber Company Oliver Rubber Company	Dorsey Trailers
Corning, Inc.	E. M. Tharp, Inc.
Crane Carrier Company	Eaton Corporation Automotive Controls Group Truck Component Group Corporate R & D Vickers, Inc.
CSTK, Inc.	Emery Industries, Inc.
Cummins Engine Company Onan Corporation	EnCana Corporation

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Energy Efficient & Climate Change	Genuine Parts/Napa
ExxonMobil Corporation	GKN Walterscheid, Inc.
Federal-Mogul Corporation A E Clevite Sealed Power	Graham Partners/TransAxle
Ferodo America	Goodyear Tire & Rubber Company
Firestone Industrial Products Company	Great Dane Trailers
First National Leasing Corporation	Greenbriar Equity Group
FJAT Consulting (Brazil)	Grote Manufacturing Company
FLEETPRIDE	Grupo Dina SA
Flight Systems Electronic Group	Gunite Corporation
Florida Trucking Association	Haldex Corporation Haldex Brake Systems Haldex Commercial Vehicle Systems Haldex Services Corporation
Foley * Lardner LLP	Hendrickson International
Ford Motor Company Corporate Parts Marketing Ford Remarketing Ford Truck	Tower Automotive
Frank Foundries Corporation	Hino Diesel Trucks USA, Inc.
Freightliner Group	Holt Cat
Fruehauf Corporation	Honeywell International Fram Automotive Division Garrett/AiResearch
Gas Research Institute	Horton Industries Inc.
Gates Corporation	HSH Nordbank AG
General Electric Capital	ICF International Idealease
General Motors Corporation GM Truck & Bus AC Delco Corporate Planning	Illinois Auto Electric Illinois Tool Works, Inc.

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Indianhead Industries/MGM Brakes	Kysor Industrial Corporation
Ingersoll-Rand Company Thermo King Corporation	Lehman Brothers, Inc.
Inland Truck Parts Company	Lord Corporation
International Truck and Engine Corporation/Navistar Inc. Corporate Parts Dealer Development Truck Group – New Products	Lubrizol Corporation
International Truck Mexico	Lucas Industries, Inc.
Interstate Batteries	LuK Automotive Systems
Intertractor America Corporation	Mack Trucks, Inc.
Investcorp International, Inc.	MacLean-Fogg Company
Isuzu Motors Ltd. American Isuzu Motors, Inc. Isuzu Trucks	Mahle Inc.
ITPA	Mann+Hummel USA, Inc.
ITW – Dahti Seating	Maremont Corporation
JCB, Inc.	Marmon Highway Technologies Corporate Fontaine International Triangle Suspension Systems, Inc. Webb Wheel Products, Inc.
Jefferies	Mercedes-Benz AG
Johnson Power Systems JWT USA, Inc.	Meritor Wabco Vehicle Control Systems Miami Valley International Group
Kansas Jack, Inc.	Michelin Tire Corporation
Kelsey-Hayes Company Knight Transportation	Midas International Corporation
Komatsu America Corporation	Modern Group
Korody-Colyer	Modine Manufacturing Company
Kubota Tractor Corporation	Moog Automotive, Inc.
	Morgan Corporation
	Morgan Stanley

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Motion Control Industries	Penn DDA
Motor Wheel Corporation	Phillips & Temro Industries, Inc.
NAPA	Piper Jaffray & Company
National Automobile Dealers Association	PPG Industries, Inc.
National Private Transportation Assoc.	Prudential Capital, Inc.
National Rubber Company Ltd.	Pullman Trailmobile
National Trailer Dealer Association	Purolator Products Inc.
Navistar, Inc.	Quinn Company
NCM	Raymark Corporation
NCPower Systems	Reed Publishing Company
Neway Anchorlok, Inc.	Reliance Parts Corporation
New Mountain Capital	Remy Inc.
Newport Communications	Reviva, Inc.
NMC, Inc.	Robert Bosch Corporation
Nuturn Corporation	Rolim Consulting (Brazil)
Oak Tree Capital Management	Rush Enterprises
Onex Capital	Ryder Systems, Inc.
PACCAR Inc	SAF Holland
Peterbilt Motors Company	Schaeffler Group USA, Inc.
Kenworth Trucks	Schwitzer Engineering Company
PACCAR Parts	Service Specialists Association
PacLease	Shape Energy Resources
PACCAR Mexico	
Patten Power Systems	
Payhauler Corporation	

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Shell Oil Company Equilon Lubricants Company – Shell & Texaco	Thermo King Northwest, Inc.
Sheller-Globe Corporation	Thermo King of Houston
Shiloh Industries	Thermo King of Montgomery
SKF Automotive Division/Chicago Rawhide	Thermo King of Orlando
Snap-On Incorporated	Thermo King West
Springfield Remanufacturing Corporation	ThyssenKrupp Budd Company
Spring Rebuilders, Inc.	Timken Company
Stanadyne Automotive Corporation	TMD Friction
Stemco, Inc.	Toromont Power Systems
Stewart-Warner Corporation	Transport Specialists, Inc.
Sun Electric Corporation	Transportation Resource Partners
Summit Partners	Triangle Suspension Systems, Inc.
Swedish Industrial Development Corporation	Trivellato Informacoes & Estrategias
T. K. Services, Inc.	Truck Centers, Inc.
TEC Equipment, Inc.	Truck Rental and Leasing Association
Tenneco Automotive	Truck-Lite Company
Terex Corporation	TruckPro
The Keystone Group	TRW Inc.
The Modern Group, LTD.	UAP/Traction
The Triangle Group	Uniroyal, Inc.
Thermo King Central Carolinas, LLC	USA Truck, Inc.
Thermo King Christensen	Utility Trailer
	Variety Corporation

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Vista Research

Volvo Truck Corporation  
Volvo Trucks North America, Inc.  
Volvo Construction Equipment North  
America, Inc.  
Corporate Parts Marketing

Wade & Partners

Webb Wheel Products, Inc.

Western States Equipment

Westport Innovations

WheelTime Network LLC.

Wind Point Partners

Wix Filtration Products

Worldwide Equipment Enterprises, Inc.

Worthington Tractor Parts, Inc.

W.W. Williams

Yancy Power Systems

Yokohama Tire Corporation

ZF Industries, Inc.

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