

Notes to Consolidated Financial Statements

1. Basis of Presentation

The accompanying consolidated financial statements have been prepared from accounts and records maintained by TOYODA GOSEI Co., Ltd. (the "Company") and its consolidated subsidiaries in accordance with the accounting principles and practices generally accepted in Japan, which are different in certain respects from the application and disclosure requirements of International Accounting Standards.

Relevant notes have been added and certain reclassifications of the accounts in the basic financial statements published in Japan have been made to present them in a form more familiar to readers outside Japan. These reclassifications do not affect the values of total assets, shareholders' equity, net sales or net income.

The financial statements presented here are expressed in yen. Solely for the convenience of the readers, they have been translated into U.S. dollars at the rate of ¥133.2 = US\$1, the approximate exchange rate on the Tokyo foreign exchange market on March 31, 2002. These translations should not be construed as representations that the yen amounts have been or could be converted into U.S. dollars at the rate used here or at any other rate.

2. Summary of Significant Accounting Policies

(1) Consolidation

The consolidated financial statements include the accounts of the Company and its 24 significant subsidiaries (18 for 2001). Subsidiaries not included in the consolidated accounts are excluded from these accounts because they are all small in terms of total assets, net sales, net income and retained earnings. All significant intercompany transactions and accounts have been eliminated.

If the cost of an investment in a consolidated subsidiary or in an affiliate accounted for under the equity method differs from the underlying net equity, that amount is deferred and amortized on a straight-line basis over five years.

Investments in unconsolidated subsidiaries and affiliates are stated at cost, and the equity method is not applied for the valuation of such investments because they are small in terms of net income and retained earnings.

Consolidated subsidiaries as of March 31, 2002:

24 companies

Domestic consolidated subsidiaries (10 companies):

Hosan Butsuryu Co., Ltd.
Toyoda Gosei Kyusyu Co., Ltd.
Hoshin Gosei Co., Ltd.
Ichiei Kogyo Co., Ltd.
Hinode Gomu Kogyo Co., Ltd.
Meiho Service Co., Ltd.
TG Maintenance Co., Ltd.
Togo Jushi Co., Ltd.
TG Opseed Co., Ltd.
Kaiyo Gomu Co., Ltd.

Overseas consolidated subsidiaries (14 companies):

TG North America Corporation
TG Missouri Corporation
TG Kentucky LLC.
TG Automotive Sealing Kentucky LLC.
TG Fluid systems U.S.A. Corporation
TOYODA GOSEI HOLDINGS INC.
WATERVILLE TG INC.
TG Minto Corporation Inc.
Toyoda Gosei UK Ltd.
Toyoda Gosei Fluid Systems UK Ltd.
Fong Yue Co., Ltd.
Toyoda Gosei (Thailand) Co., Ltd.
Toyoda Gosei Rubber (Thailand) Co., Ltd.
Bridgestone TG Australia Pty Ltd.

(2) Inventories

Inventories are stated principally at cost, as determined by the annual average method. Inventories in some consolidated subsidiaries in nations other than Japan are stated at the lower of cost or market.

(3) Property, plant and equipment and depreciation

Property, plant and equipment are stated at cost. Depreciation of property, plant and equipment is computed principally by the declining balance method for the Company and domestic subsidiaries and by the straight-line method for foreign subsidiaries.

(4) Foreign currency translation

Accounts of overseas consolidated subsidiaries have been translated into yen as follows:

- Assets and liabilities have been translated at the prevailing year-end rate.
- Shareholders' equity has been translated at the rate prevailing when equity is acquired or when a change in equity occurred.
- Revenue and expense have been translated at the prevailing year-end rate.

Effective as of the year ended March 31, 2001, the revised accounting standard for foreign currency transactions has been applied. Under this standard, differences arising from currency translations in connection with such transactions have been shown as "Foreign currency translation adjustments" in a separate component of shareholders' equity. Until March 31, 2000, such differences were shown as "Foreign currency translation adjustments" in either assets or liabilities on the balance sheets.

(5) Cash and cash equivalents

Cash and cash equivalents include all highly liquid investments, generally with original maturities of three months or less, that are readily convertible to known amounts of cash and are so near maturity that they present insignificant risk of changes in value because of changes in interest rates.

(6) Employees' retirement benefit liabilities

Effective as of the year ended March 31, 2001, the Company and its consolidated subsidiaries adopted a new accounting standard for retirement benefits for employees. The Company and its subsidiaries accrue an amount which is considered to be incurred in the period based on the estimated benefit obligations and estimated pension assets at the end of the year. As a result, operating income decreased ¥45 million (\$339 thousand), and income before income taxes and minority interests decreased ¥303 million (\$2,275 thousand).

(7) Investments and marketable securities

Effective as of the year ended March 31, 2001, the Company and its consolidated subsidiaries adopted a new accounting standard for financial instruments. Under this standard, debt securities for which the Company and its consolidated subsidiaries have both positive intent and the ability to hold to maturity are classified as held-to-maturity securities and are stated at amortized cost. Marketable and non-marketable securities, other than those classified as trading or held-to-maturity securities, are classified as available-for-sale securities and are stated at moving average cost.

Effective as of the year ended March 31, 2002, marketable securities classified as available-for-sale securities are carried at fair value, with net unrealized gain or loss reported in a separate component of stockholders' equity, net of applicable income taxes. Gains and losses on the disposition of investment securities are computed based on the moving average method. That has resulted in a valuation gain of ¥3,103 million (\$23 million) in investment in securities and an increase of ¥2,212 million (\$17 million) in deferred tax liabilities.

(8) Income taxes

Income taxes are principally provided in amounts currently payable for each year. Until the year ended March 31, 1999, deferred income taxes arising from differences between reporting for accounting purposes and for tax

purposes were not required to be accounted for under Japanese accounting principles and therefore were not recorded in the financial statements by the Company and its domestic subsidiaries. (For most overseas subsidiaries, deferred income taxes have been recorded and reflected in their respective financial statements.) However, effective as of the year ended March 31, 2000, tax effect accounting has been adopted. The provision for income taxes is computed based on the pretax income included in the consolidated statements of income. The assets and liability approach is used to recognize deferred tax liabilities and assets for the expected future tax consequence of temporary differences between the carrying amounts and the tax bases of assets and liabilities. Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not that a tax benefit will be realized.

(9) Net income and cash dividends per share

Net income and cash dividends per share of common stock are computed based on the average number of shares outstanding during the year.

Cash dividends per share are the amounts applicable to the respective periods.

(10) Leases

Finance lease transactions other than those where ownership is considered to be transferred to the lessee are accounted for as operating leases.

(11) Appropriation of retained earnings

In the accompanying consolidated statements of shareholders' equity, the approved amount during the relevant fiscal year is reflected for the appropriation of retained earnings of consolidated subsidiaries. In Japan, the payment of bonuses to directors and corporate auditors is made out of retained earnings through an appropriation, instead of being charged to income for the year.

3. Inventories

Inventories as of March 31, 2002 and 2001, are as follows:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Finished goods	¥ 6,939	¥ 6,257	\$ 52,096
Raw materials	2,608	2,164	19,582
Work in process	7,887	6,129	59,215
Supplies	1,885	932	14,148
Total	¥19,319	¥15,482	\$145,041

4. Long-Term Debt

(1) Long-term debt as of March 31, 2002 and 2001, is as follows:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
The Company:			
0.75% convertible bonds due 2004	¥ 5,823	¥5,826	\$ 43,716
1.10% bonds due 2007	10,000	—	75,075
Consolidated subsidiaries:			
Loans from banks and others	4,468	2,969	33,547
Less current portion of long-term debt	(113)	(1,056)	(850)
Total	¥20,178	¥7,739	\$151,488

(2) The aggregate annual maturities of long-term debt at March 31, 2002, are as follows:

	Millions of yen	Thousands of U.S. dollars
Years ending March 31		
2003	¥ 113	\$ 850
2004	1,500	11,264
2005	1,817	13,640
2006	128	958
2007	122	920
2008 and thereafter	788	5,915
Total	¥4,468	\$33,547

5. Shareholders' Equity

Under the Japanese Commercial Code, amounts equal to at least 10% of the sum of the cash dividends and other external appropriations paid by the Company and its domestic subsidiaries must be set aside as a legal reserve until it equals 25% of common stock and capital surplus. The legal reserve may be used to reduce a deficit or may be transferred to common stock by taking appropriate corporate action. In consolidation, the legal reserves of the Company and its domestic subsidiaries are accounted for as retained earnings.

The year-end cash dividend is approved at the Ordinary General Meeting of Shareholders of the

Company held after the close of the fiscal year to which the dividend is applicable. In addition, interim cash dividends may be paid upon resolution of the Board of Directors, subject to limitations imposed by the Japanese Commercial Code.

Proceeds from the conversion of convertible bonds have been accounted for in approximately equal amounts as common stock and capital surplus. At least 50% of the proceeds have been accounted for as common stock, in accordance with the provisions of the Japanese Commercial Code.

6. Retirement Benefits

(1) Outline of retirement benefits plan:

The Company and its domestic consolidated subsidiaries have welfare annuity fund pension plans, tax-qualified pension plans and lump-sum severance payment plans as a part of their defined benefit scheme.

(2) Benefit obligations as of March 31, 2002 and 2001, are as follows:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
(a) Benefit obligations	¥(82,812)	¥(78,892)	\$(621,715)
(b) Fair value of projected pension assets	55,844	55,802	419,248
(c) Subtotal (a) + (b)	(26,968)	(23,090)	(202,467)
(d) Unrecognized actuarial difference	8,805	6,588	66,106
(e) Amount shown on balance sheet (c) + (d)	¥(18,163)	¥(16,502)	\$(136,361)

1. The consolidated subsidiaries have adopted the simplified method for calculating the projected benefit obligations.

2. The above table includes the amounts related to the portion subject to the Japanese Welfare Pension Insurance Law.

(3) Retirement benefit costs for the years ended March 31, 2002 and 2001, are as follows:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
(a) Service cost	¥2,881	¥2,858	\$21,626
(b) Interest cost	2,103	1,959	15,792
(c) Expected return on plan assets	(28)	(68)	(207)
(d) Recognized actuarial loss	659	—	4,946
(e) Retirement benefit cost (a) + (b) + (c) + (d)	¥5,615	¥4,749	\$42,157

1. The retirement expenses of subsidiaries that have adopted the simplified method are included in (a) Service cost.

2. The figures presented above do not reflect employee contributions to the welfare annuity fund.

(4) The assumptions used for the calculation of retirement benefits for the years ended March 31, 2002 and 2001, are as follows:

	2002	2001
	Period allocation method for estimated retirement benefits	Straight-line method
Discount rate	2.7%	2.7%
Expected return on plan assets	0.05%	0.12%
Period of amortizing actuarial difference	10 years	10 years
Period of amortizing transitional obligation	—	1 year

7. Income Taxes

(1) The significant components of deferred tax assets and liabilities as of March 31, 2002 and 2001, are as follows:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Deferred tax assets:			
Employees' retirement benefit liabilities	¥5,674	¥4,687	\$42,599
Depreciation and amortization	1,620	1,273	12,167
Accrued expense for employees' bonuses	1,396	1,144	10,480
Net operating loss carry-forwards for tax purposes	751	50	5,637
Accrued enterprise taxes	227	381	1,705
Others	1,377	1,145	10,339
Subtotal	11,045	8,680	82,927
Less valuation allowance	(1,090)	(366)	(8,183)
Total deferred tax assets	9,955	8,314	74,744
Deferred tax liabilities:			
Net unrealized gain on available-for-sale securities	¥2,220	¥ —	\$16,664
Depreciation and amortization	1,048	870	7,865
Others	139	320	1,049
Total deferred tax liabilities	3,407	1,190	25,578
Net deferred tax assets	¥6,548	¥7,124	\$49,166

(2) Reconciliation items for the difference between the Japanese statutory tax rate and the effective income tax rate on pretax income for the year ended March 31, 2002, are as follows:

Japanese statutory tax rate	41.62%
Permanently nondeductible expense	1.57
Tax exempt income	(0.49)
Others	6.58
Effective income tax rate	49.28%

The difference for the year ended March 31, 2001, was not material.

8. Pledged Assets

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Pledged assets	¥ 860	¥1,686	\$6,460
Secured loans			
Short-term bank loan	615	863	4,617
Long-term debt	420	—	3,154
Total	¥1,035	¥ 863	\$7,771

9. Commitments and Contingent Liabilities

As of March 31, 2002, the Company was responsible as guarantor for loans to other companies as follows:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Daicel Safety Systems America, LLC	¥227	—	\$1,701
Metzeler Automotive India Private Limited	72	—	545
Total	¥299	—	\$2,246

The Company is a defendant in seven patent infringement lawsuits brought by Nichia Corporation (“Nichia”) in regard to light-emitting diodes (LEDs), and it is the plaintiff in four patent infringement lawsuits against Nichia, also in regard to LEDs. In two of the lawsuits brought by Nichia, Tokyo District Court ruled against the Company in August 2000 and November 2000 and ordered the Company to pay ¥204 million in damages. The Company immediately appealed both of those judgments in Tokyo High Court, and its appeals are presently pending. Nichia filed an additional lawsuit against the Company in Tokyo District Court in November 2000 in which it seeks an additional ¥10.5 billion in damages in connection with the August 2000 judgment.

Nichia’s other four lawsuits against the Company seek a total of ¥600 million in damages. In February 2002,

Tokyo District Court dismissed two of those lawsuits, which seek a total of ¥350 million, and Nichia appealed that ruling in Tokyo High Court in March 2002.

In two of the Company’s lawsuits against Nichia, Tokyo High Court issued rulings in March 2001 and October 2001 that reversed decisions by the Japan Patent Office that had voided the Company’s patent claims. Backed by those rulings, the Company filed for an additional ¥15.5 billion in damages in a lawsuit already in litigation in Osaka District Court.

The outcome of the lawsuits under litigation is impossible to predict. Management is confident, however, that the outcome of the lawsuits will not have a significant adverse effect on the Company’s earnings or financial position.

10. Marketable Securities

Gross unrealized gains and losses for marketable securities held to maturity and available for sale as of March 31, 2002, are as follows:

	Millions of yen			
	Cost	Gross unrealized gains	Gross unrealized losses	Fair and carrying value
Available-for-sale securities with fair value:				
Stocks	¥4,939	¥5,401	¥(49)	¥10,291
Bonds	759	33	(1)	791
Others	235	14	(1)	248
Total	¥5,933	¥5,448	¥(51)	¥11,330

	Thousands of U.S. dollars			
	Cost	Gross unrealized gains	Gross unrealized losses	Fair and carrying value
Available-for-sale securities with fair value:				
Stocks	\$37,076	\$40,547	\$(366)	\$77,257
Bonds	5,699	247	(8)	5,938
Others	1,764	107	(11)	1,860
Total	\$44,539	\$40,901	\$(385)	\$85,055

The redemption schedule of marketable securities held to maturity as of March 31, 2002, is as follows:

	Millions of yen						Thousands of U.S. dollars
	Within 1 year	More than 1 year, within 5 years	More than 5 years	Within 1 year	More than 1 year, within 5 years	More than 5 years	
Bonds							
Government bonds	—	¥ 69	¥180	—	\$ 521	\$1,349	
Corporate bonds		510	—		3,829	—	
Others	¥160	25	60	\$1,201	187	450	
Total	¥160	¥604	¥240	\$1,201	\$4,537	\$1,799	

11. Derivatives

Foreign consolidated subsidiaries have foreign exchange forward contracts to hedge foreign exchange risk associated with certain assets and liabilities denominated in foreign currencies.

The basic policies for derivatives are approved by the Board of Directors and executed and controlled by the

accounting division. The Company and its consolidated subsidiaries do not hold and have not issued any derivatives for the purpose of speculation. There is no balance of contract amount as of March 31, 2002.

12. Lease Transactions

Finance leases that do not transfer ownership of leased properties to lessees are treated as operating leases.

(1) A summary of property held under finance leases, including acquisition cost and accumulated depreciation, as of March 31, 2002 and 2001, is as follows:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Buildings:			
Acquisition cost equivalents	¥ 499	¥ 133	\$ 3,748
Accumulated depreciation equivalents	123	43	927
Building year-end balance equivalents	376	90	2,821
Machinery and vehicles:			
Acquisition cost equivalents	6,423	7,483	48,224
Accumulated depreciation equivalents	3,720	3,672	27,927
Machinery and vehicle year-end balance equivalents	2,703	3,811	20,297
Tools and furnishings:			
Acquisition cost equivalents	3,071	3,329	23,059
Accumulated depreciation equivalents	1,562	1,431	11,730
Tool and furnishing year-end balance equivalents	1,509	1,898	11,329
Total leased properties, net	¥4,588	¥5,799	\$34,447

Acquisition cost equivalents include the imputed interest expense portion because the percentage that is computed by dividing future minimum lease payments by the total balance of property, plant and equipment at the year-ends is not material.

(2) Future minimum lease payments as of March 31, 2002 and 2001, are as follows:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Buildings			
Due within 1 year	¥1,500	¥1,781	\$11,262
Due after 1 year	3,088	4,017	23,186
Total	¥4,588	¥5,798	\$34,448

Future minimum lease payments under finance leases include the interest expense portion because the percentage that is computed by dividing future minimum lease payments by the total balance of property, plant and equipment at the year-ends is not material.

(3) Total lease payments for the years ended March 31, 2002 and 2001, are as follows:

	Millions of yen	Thousands of U.S. dollars
2002	¥2,046	\$15,362
2001	1,744	—

Depreciation expenses, which are not reflected in the accompanying consolidated statements of income, are computed mainly by the straight-line method, which assumes that the terms of the lease contracts are equal to the useful lives of the items leased and that the residual value of the items at the ends of the lease contracts is zero.

13. Segment Information

(1) Business segments

The Company's primary business activities comprise (1) automotive parts and (2) nonautomotive parts.

A summary of net sales and operating income (loss), assets, depreciation and capital expenditures by segment of business activities for the years ended March 31, 2002 and 2001, is as follows:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Net sales:			
Automotive parts	¥280,550	¥267,705	\$2,106,235
Nonautomotive parts	22,563	25,197	169,396
Elimination of intersegment transactions	(20)	(19)	(153)
Consolidated	¥303,093	¥292,883	\$2,275,478
Operating income (loss):			
Automotive parts	¥ 9,375	¥ 14,427	\$ 70,380
Nonautomotive parts	1,253	6,268	9,411
Elimination of intersegment transactions	—	—	—
Consolidated	¥ 10,628	¥ 20,695	\$ 79,791
Assets:			
Automotive parts	¥244,641	¥221,934	\$1,836,647
Nonautomotive parts	21,367	23,069	160,411
Corporate or elimination	(12,570)	(9,751)	(94,372)
Consolidated	¥253,438	¥235,252	\$1,902,686
Depreciation and amortization:			
Automotive parts	¥ 18,916	¥ 18,212	\$ 142,014
Nonautomotive parts	2,907	2,619	21,825
Consolidated	¥ 21,823	¥ 20,831	\$ 163,839
Capital expenditures:			
Automotive parts	¥ 30,311	¥ 21,889	\$ 227,564
Nonautomotive parts	3,190	6,531	23,947
Consolidated	¥ 33,501	¥ 28,420	\$ 251,511

Corporate assets under corporate or elimination primarily consist of cash and time deposit and marketable securities.

(2) Geographical segments

Information by geographical segment for the years ended March 31, 2002 and 2001, is as follows.

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
Net sales:			
Japan	¥229,017	¥229,010	\$1,719,348
North America	67,986	61,534	510,410
Others	15,440	8,037	115,914
Elimination of intersegment transactions	(9,350)	(5,698)	(70,194)
Consolidated	¥303,093	¥292,883	\$2,275,478
Operating income (loss):			
Japan	¥ 8,790	¥ 16,587	\$ 65,994
North America	3,046	4,401	22,866
Others	(1,005)	(283)	(7,548)
Elimination of intersegment transactions	(203)	(10)	(1,521)
Consolidated	¥ 10,628	¥ 20,695	\$ 79,791
Assets:			
Japan	¥200,257	¥188,176	\$1,503,431
North America	48,020	45,582	360,507
Others	17,731	11,245	133,119
Corporate or elimination	(12,570)	(9,751)	(94,371)
Consolidated	¥253,438	¥235,252	\$1,902,686

Corporate assets under corporate or elimination primarily consist of cash and time deposit and marketable securities.

(3) Overseas sales

Information by customer location for the years ended March 31, 2002 and 2001, is as follows:

	2002		2001		U.S. dollars	
	Millions of yen	%	Millions of yen	%	Thousands of yen	%
Japan	¥216,321	71.4%	¥220,058	75.1%	\$1,624,036	71.4%
North America	66,756	22.0%	60,045	20.5%	501,182	22.0%
Others	20,016	6.6%	12,780	4.4%	150,260	6.6%
Net Sales	¥303,093	100.0%	¥292,883	100.0%	\$2,275,478	100.0%

14. Related Party Transactions

During the years ended March 31, 2002 and 2001, the Company and its subsidiaries had operational transactions with Toyota Motor Corporation (“TMC”), a 42.0% shareholder of the Company. A summary of the significant transactions with TMC for the years ended March 31, 2002 and 2001, is as follows:

	Millions of yen		Thousands of U.S. dollars
	2002	2001	2002
For the year:			
Sales of finished goods	¥115,224	¥121,432	\$865,045
Purchase of raw material	12,670	13,882	95,125
At year-end:			
Accounts receivable	¥ 14,251	¥ 15,363	\$106,987
Accounts payable	1,249	1,475	9,380

15. Subsequent Event

On June 26, 2002, the shareholders of the Company authorized the payment of year-end cash dividends to shareholders of record as of March 31, 2002, of ¥5.5 (\$0.041) per share, or a total of ¥680 million (\$5,102 thousand), and bonuses to directors and corporate auditors of ¥123 million (\$924 thousand).

Cash dividends for the year thus totaled ¥11 (\$0.082) per share, including a semiannual dividend of ¥5.5 (\$0.041).

The introduction for the first time of an incentive plan involving the granting of stock options was approved at the Ordinary General Meeting of Shareholders in June 2001. Consequently, options on a total of 250,000 shares, the maximum allowable, were granted at a predetermined exercise price to all directors and certain employees.

The purpose of this plan is to further sharpen the motivation of senior management in enhancing shareholder value. The grant price is the higher of the closing price on the Tokyo Stock Exchange on the date of the grant and 1.05 times the average closing price in the full calendar month prior to the month of the grant date.

Recipients may not exercise the option within the first two years. Subsequent to that initial period, the option must be exercised or waived within the next four years. To finance this plan, the Company purchased 201,000 shares of common stock as treasury stock in fiscal 2001 at a total price of approximately ¥342 million.

In June 2002, the Ordinary General Meeting of Shareholders approved a warrant, which earmarks a

maximum of 300,000 shares of common stock to be further distributed among directors and certain employees.

Based on a decision by the Board of Directors on January 22, 2002, the Company concluded a contract with Toyo Tire and Rubber Co., Ltd. (Toyo), on February 5, 2002, that provided for the purchase by the Company of Toyo's airbag operations effective April 1, 2002, and for the sale by the Company of its vibration isolating parts operations to Toyo, also effective April 1, 2002. Below is a summary of the purchase and the divestiture.

(1) Purchase of airbag operations

- a. The Company acquired from Toyo the tangible and intangible fixed assets employed in Toyo's airbag operations as of March 31, 2002. The purchase price for those assets was ¥941 million (\$7,065 thousand).
- b. The Company made a payment of ¥417 million (\$3,131 thousand) to Toyo for the marketing rights associated with airbag products.

(2) Divestiture of vibration isolating parts operations

- a. The Company transferred to Toyo the tangible and intangible fixed assets employed in its vibration isolating parts operations as of March 31, 2002. The purchase price for those assets was ¥811 million (\$6,089 thousand). The book value of the assets was ¥611 million (\$4,587 thousand).
- b. The Company received a payment of ¥389 million (\$2,920 thousand) from Toyo for the marketing rights associated with vibration isolating parts.