JAMNA AUTO

36th Annual Report 2001-2002

JAMNA AUTO INDUSTRIES LIMITED

Corporate Information

BOARD OF DIRECTORS
Bhupinder Singh Jauhar, Chairman and Managing Director
Randeep Singh Jauhar, Whole - Time Director
H.S.Gujral
D.K.Sharma

AUDITORS
Goel Garg & Co.
Chartered Accountants

G.S Johar &Co.
Chartered Accountants

BANKERS
State Bank Of India
Canara Bank
ICICI Bank Ltd.

REGISTERED OFFICE
Jai Springs Road
Yamuna Nagar - 135001
(Haryana) India

CORPORATE OFFICE
2, Park Lane,
Kishangarh, Vasant Kunj,
New Delhi-110 070, India

WORKS
Jai Springs Road
Yamuna Nagar - 135001
(Haryana) India

U-27,29, Industrial Area,
Malanpur-477116
Distt. Bhind, M.P., India

Annual General Meeting
30th September 2002 (Monday)
at 2.00 P.M. at
Registered Office:
Jai Springs Road
Yamuna Nagar - 135001
(Haryana) India

SHARE TRANSFER AGENTS
Skyline Financial Services Pvt. Ltd.
123, Vinoba Puri,Lajpat Nagar - II
New Delhi 110024. INDIA
Phone : 6847136, 6833777.

LISTING
Stock Exchanges at
Delhi, Mumbai, Kolkatta, Ludhiana, Jaipur
Ahmedabad &Bangalore

IMPORTANT
Shareholders may please note that **No Gift or Coupons** will be distributed at the meeting.

CONTENTS

Financial Highlights

(Rs. In Lacs)

Year ending 31st March	2002	2001	2000	1999	1998
Sales & Earnings					
Sales	**7877.23**	8385.62	9772.25	8797.89	9120.97
Other Income	**190.92**	295.76	354.94	883.88[1]	34.02
	8068.15	8681.38	10127.19	9681.77	9154.99
Total Expenditure	**7621.27**	8262.14	8673.84	7576.17	7483.12
Gross Profit (PBDIT)	**446.88**	419.24	1453.35	2105.60[1]	1671.87
Interest	**1392.82**	1379.50	1260.50	1264.16	1001.21
Profit/(Loss) before Depreciation	**(945.94)**	(960.26)	192.85	841.44[1]	670.66
Depreciation	**368.70**	376.37	369.98	397.42	352.17
Profit/(Loss) before Tax	**(1314.64)**	(1336.63)	(177.13)	444.02	318.49
Tax	**0.77**	1.61	1.67	48.00	32.60
Deferred Tax Credit	**(432.73)**	NIL	NIL	NIL	NIL
Profit/ (Loss) After Tax	**(882.68)**	(1338.24)	(178.8)	396.02[1]	285.89
Cash Profit (Loss)	**(946.71)**	(961.87)	191.18	793.44[1]	638.06
What the Company Owned					
Fixed Assets- Gross Block	**8278.40**	8554.41	8538.64	8391.98	9484.29
Less: Depreciation(Cummulative)	**2465.58**	2402.25	2035.48	1684.86	1610.16
Net Block	**5812.82**	6152.16	6503.16	6707.12	7874.13
Investments	**1208.48**	1236.58	1236.58	1236.58	711.59
Current Assets	**4936.56**	5511.65	6570.81	6165.59	6166.21
Deferred Tax Assets (Net)	**371.74**	NIL	NIL	NIL	NIL
	12356.60	12900.39	14310.55	14109.29	14751.93
What the Company Owed					
Long Term Funds	**5167.48**	4130.33	3716.28	4236.70	4197.35
Medium/ Short Term Funds	**591.03**	747.53	599.98	185.73	679.92
Working Capital From Banks	**2071.39**	3143.87	3237.10	2022.57	2722.63
Current Liabilities & Provisions	**2799.30**	1878.07	2089.50	2249.45	1991.68
	10629.20	9899.80	9642.86	8694.45	9591.58
Net Worth of the Company					
Equity Share Capital	**876.11**	876.11	876.11	876.11	876.11
Reserves & Surplus	**1832.63**	3105.82	4670.33	5150.70	4778.54
Less: Intengibles (-)	**981.34**	981.34	878.75	611.97	494.30
	1727.40	3000.59	4667.69	5414.84	5160.35
Share Indices					
Cash Earnings/ (Loss) per share	**Rs.(5.87)**	Rs.(10.98)	Rs. 2.18	Rs. 9.06	Rs. 7.28
Earning Per Share	**Rs(10.08)**	Rs.(15.27)	Rs.(2.04)	Rs.4.52	Rs3.26
Dividend per share	**NIL**	NIL	NIL	NIL	NIL
Net Worth Per Share	**Rs. 19.67**	Rs. 34.25	Rs. 53.28	Rs. 61.81	Rs. 58.90

1. Including Rs. 610.38 Lacs profit on sale of Stabilizer Bar Business 1998-99.

Notice

NOTICE is here by given that the 36th Annual General Meeting of the members of Jamna Auto Industries Limited will be held on Monday the 30th Day of September, 2002 at 2.00 P.M at the Registered office of the Company at Jai Springs Road, Yamuna Nagar - 135001, Haryana to transact the following business.

AS ORDINARY BUSINESS

1. To receive, consider and adopt the Audited Balance Sheet of the Company as at 31st March 2002 and Profit & Loss Account of the Company for the year ended on that date and the Report of the Board of Directors and Auditors thereon.
2. To appoint a director in place of Mr. D. K. Sharma, who retires by rotation and being eligible, offers himself for re- appointment.
3. To consider and if thought fit, to pass with or without modification, the following resolution as an Ordinary Resolution:

   "RESOLVED THAT M/s. Goel Garg & Co. Chartered Accountants, be and are hereby re-appointed as Joint Statutory Auditors of the Company to hold office from the conclusion of this meeting until the conclusion of the next Annual General Meeting on remuneration as may be decided by the Board of Directors or Committee thereof exclusive of travelling and other out-of-pocket expenses."
4. To consider and, if thought fit, to pass with or without modification, the following resolution as an Ordinary Resolution:

   "RESOLVED THAT M/s. G. S Johar & Co. Chartered Accountants, be and are hereby re-appointed as Joint Statutory Auditors of the Company to hold office from the conclusion of this meeting until the conclusion of the next Annual General Meeting on remuneration as may be decided by the Board of Directors or Committee thereof exclusive of travelling and other out-of-pocket expenses."

NOTES

1. A MEMBER ENTITLED TO ATTEND AND VOTE IS ENTITLED TO APPOINT A PROXY TO ATTEND AND VOTE INSTEAD OF HIMSELF AND A PROXY NEED NOT BE A MEMBER OF THE COMPANY. THE PROXY IN ORDER TO BE EFFECTIVE MUST BE DELIVERED AT THE REGISTERED OFFICE OF THE COMPANY NOT LATER THAN 48 HOURS BEFORE THE MEETING. A BLANK PROXY FORM IS ENCLOSED.
2. The register of Members of the Company and Share Transfer Books shall remain closed from 10th September 2002 to 16th September 2002 (both days inclusive).
3. Shareholders seeking information with regard to accounts are requested to write to the Company at least ten days in advance as to enable the Company to keep the information ready.
4. Members/Proxies are requested to bring their copy of the Annual Report to the meeting, as copies of the Report will not be distributed at the meeting.
5. Members are requested to advise the Company immediately of any change in their address.
6. The unclaimed dividend which is due for transfer to the Investor Education and Protection Fund:

Financial Year Ended	Due for transfer on
31.03.1995	02.11.2002
31.03.1996	08.11.2003
31.03.1997	06.11.2004

   Members who have not en-cashed their dividend warrants for the aforesaid financial years are requested to approach the Company for revalidation of their dividend warrants.

7. As per the provision of the amended Companies Act 1956, facility for nomination is available to individuals holding shares in the Company. The nomination form prescribed by the Government of India can be obtained from the share department of the Company.
8. The Companies scrips are now being traded in Dematerialised form. The Shareholders may approach their respective Depository Participants for getting their shares dematerialised.

By order of the Board of Director
for Jamna Auto Industries Limited

Place : New Delhi
Date : 04.09.2002

R.S. Jauhar
Whole Time Director

Management Discussion and Analysis

OVERVIEW

Jamna Auto Industries Limited is the flagship Company of Jai Spring Group. The Group is India's largest manufacturer and exporter of automobile suspension system. The Company is the Original Equipment Supplier to the major automobile manufacturers in country i.e. Telco, Eicher Motors, Mahindra & Mahindra, Maruti, on the export front the major export by the Company is General Motors of U.S.A. The Company also made supplies in replacement market through its Distributors and commands a market share of more than 31%. The Company has two manufacturing stations situated at Yamuna Nagar (Haryana) and Malanpur (Madhya Pradesh).

The recession in the automobile industry particularly the HCV sector to which the Company is a major supplier has affected the Company. Until recently the HCV sector was reeling at lowest demand in last 10 years ; the total demand of HCVs and LCVs in the year 2001-2002 was 141000 vehicles which is less than the total production of 145000 vehicles in the year 1990-1991. In anticipation of an assured and substantial take off from OE manufacturers to whom the Company is a major supplier and due to liberalisation of automobile sector, the Company had undertaken expansion program for increasing its capacity in the earlier years. Unfortunately though ,recession set in soon thereafter and the working of the Company suffered a downturn. The total production of Car however have increased from 408000 vehicles in year 1996-1997 to 585000 vehicles in the year 2001-2002. But the steep fall in the production of HCVs and LCVs affected the spring manufacture particularly those engaged in the manufacture of springs for Commercial Vehicles. This reduction in productions resulted in unutilized capacities and consequent non absorption of finance cost incurred on loans availed for expansion by the Company.

The Company proposes to undertake financial restructuring, it has already submitted a proposal/ restructuring plan before the financial institutions/ banks for their approval, an approval of the same is expected in due course.

INDUSTRY STRUCTURE AND DEVELOPMENTS

Production of vehicles during last 5 years:

Year	HCVs & LCVs	Growth over previous year %	Cars
1996-97	300000	15.83%	408000
1997-98	161000	(46.33%)	411000
1998-99	136000	(15.52%)	414000
1999-00	174000	27.94%	578000
2000-01	152000	(12.64%)	583000
2001-02 (estimate)	141000	(7.23%)	585000

Note : Production during 2001-02 was less than the production of 145000 HCVc/LCVs in 1990-91

As is evident from the above the automobile industry had been reeling under recession where the all time high production of HCVs and LCVs of 300000 vehicle of year 1996-1997 came down to less than half of 141000 vehicle in year 2001-2002. The production of Car however have shown constant increase from 408000 vehicle in year 1996-1997 to 585000 vehicle in the year 2001-2002. A study of the above data reveals that there was a steep fall in the production of HCVs & LCVs (Commercial Vehicle Production) which affected the spring manufacturers particularly those mainly engaged in the manufacturer of springs of commercial vehicles like JAI.

To counter such problem the Company vigorously launched efforts to broad base its client base and also explore exports market . The Company was able to protect its volume to an extent by successfully tapping the export market. On an average, the Company has been able to achieve an export turnover of Rs. 180 million per annum in the last there years. The recession in the automobile sector is showing signs of abatement and volume demand from OEM has picked up. The Company has also been able to enlarge it's market base by meeting the requirements of new entrants in the HCV/MUV/LCV market. The Company has taken cost reduction measures and has prepared a financial restructuring plan and IDBI-CASD has been mandated to vet the restructuring proposal.

The JAI Group also has a very strong presence in the replacement market in India through its distributors having presence in 34 locations all over India. There are 3.5 million Commercial Vehicles in India in After Market out of which 6,50,000 are buses, presence of JAI Group in replacement market will help the Company in tapping additional demand created in replacement market.

Increasing share of road transport:

JM Morgan Stanley report on India Automobiles : Commercial Vehicles estimates that share of road transport in freight movement will increase from 52% in FY 1999 to 65% in FY 2006 (against 38% in FY 1992) and grow at 11% year to year. This will be due to the market share which the railways would lose.

Increasing Share of Road Transportation (Source: JM Morgan Stanley report)

Freight (billion tonne km)	FY 1951	FY 1985	FY1992	FY 1999	FY2006
Roads	6	121	197	449	935
Railways	55	182	257	284	315
Pipeline & Waterways	0	40	70	136	191
Total	61	343	524	869	1442
Roads share of total (%)	**10%**	**35%**	**38%**	**52%**	**65%**
Passengers (billion passenger km)					
Roads	23	739	1162	2046	3598
Railways	59	227	315	404	467
Total	82	966	1477	2450	4065
Roads share of total (%)	**28%**	**77%**	**79%**	**84%**	**89%**

Management Discussion and Analysis

The increasing share of Road Transportation in freight movement will also lead to increase in demand & production of the Commercial Vehicles since Truck and Bus growth have not kept pace with growth in freight and passenger movements, resulting in increased capacity utilization of CV's with surplus vehicles being absorbed into the system.

Restriction of age of CV:

With the increasing concerns on emissions norms of Vehicle for checking pollution the Government is likely to put cap on the age of Commercial Vehicles. Delhi & Mumbai have already imposed age restrictions on Commercial Vehicles. Nearly 50% of all vehicles on India's roads are more than 10 years old, with nearly 33% estimated to be over 15 years old. With the application of age restrictions in other cities the demand & production of the Commercial Vehicles will grow.

Constructions of new roads:

Roads are the lifelines of the Commercial Vehicle sector. With good roads in place trucks and buses will cover a greater distance every day . Which means that cargo will take less time to reach its destination and trucks buses can complete many more round of trips every year. Government of India is investing US $ 12 billion alone on Golden Quadrilateral and North- South-East -West corridor schemes of the National Highway Authority of India . Nearly 13,000 Km of roads are to be constructed under this project. As on 1st June 2002 contracts up to 5403 Km of roads have been awarded out of which approximately 1800 km of roads have already been completed as on that date. We believe that this would be instrumental in pushing up the demand of Commercial Vehicles. With the so high expenditure on road infrastructure it is also expected that Government will put strict restrictions on truck overloading . In India trucks are often loaded 30-70% over their rated capacity. Restriction on truck overloading could be positive for demand for Commercial Vehicles.

Growth of Multi Axle Vehicle:

Multi Axle Vehicle not only have higher load-carrying capacity, they also have lower operating cost and total cost. Multi Axle Vehicle also reduce damages to roads. In fact Multi Axle Vehicles lower operating costs are making transportation by road more economical than by railway. We expect that goods transportation could shift significantly from railway to road over the next 3-4 years, coinciding with the completion of 15000 km of roads currently being constructed. Transport Development Council has recommended to provide 25% concession in taxes for Multi Axle Vehicle, as these enable carriage of heavier loads and reduce damages to roads. In a significant move the Government has asked the States to provide 25% concessions in taxes to multi axle vehicles as per the recommendation of Transport Development Council. Growth of Multi Axle Vehicles would also be instrumental in demand growth in the industry.

SWOT ANALYSIS OF JAI

Strenghts

- *Original equipment supplier to major automobile manufacturers in India.*
- *India's largest original equipment supplier to GM corporation , USA.*
- *High standard technology from world leader NHK Japan.*
- *Highly skilled and educated workforce.*
- *Stringent quality systems conforming QS 9000 and ISO 9001 standards.*
- *Benchmark Costing.*
- *Low cost manufacturing base.*
- *Value engineering from to reduce spring weight leading to less cost.*

Weakness

- *Underutilsation of capacities at Malanpur plant (created in anticipation of demand growth from Ashok Leyland Limited and Telco).*
- *Dependence on Telco.*
- *High debt and at a high cost.*

Oppourtunities

- *Entry of new auto manufacturers in the domestic market.*
- *Acceptance of the product in the foreign market.*
- *Signs of revival in the Commercial Vehicle Segment of the Automobile Industry.*

Threats

- *Entry of new players though very insignificant.*
- *Demand slump in the automobile sector particularly in the HCV/LCV/MUV segment.*
- *Unchecked/ Unrestructured finance cost, a proposal in respect of which is under consideration of lenders*

RISK & CONCERNS

Increased finance cost and unrestructured debt is a major concern area and the management endeavors to resolve the same at the earliest. Changing government policies are the main area of concern.

INTERNAL CONTROL SYSTEMS AND THEIR ADEQUACY

Internal control measures and systems are established to ensure the correctness of the transactions and safeguarding of the assets. The Company has also appointed outside agency as Internal Auditors to check the correctness of the transactions and adherence of the established procedure in transactions. Internal Audit includes system audit , management audit and financial audit. The control systems set on place are checked & further supplemented by budgeting and MIS which provide for planned expenditure and information on disposal and acquisition of assets.

DEVELOPMENTS IN HR

In consultation with JIPM Consultant, Japan the Group has identified TPM activities for achieving the goal of being World class manufacturer producing lowest cost automotive suspension products . TPM activities has already been implemented in group company, Jai Parabolic Springs Limited successfully. The Company also focuses on providing employee motivation and good conducive working environment through increased productivity and better quality. The Company also conducts various training programs from time to time as a part of employee motivation, quality improvement and cost reduction techniques. Total strength of the company was 375 excluding contractual staff as on 31.03.2002.

DISCLAIMER

Statements in this Management Discussion and Analysis describing objectives projections, estimates and expectations may be forward looking statements within the meaning of applicable laws and regulation. Actual results may differ or vary from those expressed or implied depending upon prevailing economic conditions, government policies and other factors.

Directors' Report

TO THE MEMBERS OF
JAMNA AUTO INDUSTRIES LIMITED

Your Directors present their Report & Accounts for the financial year ended 31st March 2002

FINANCIAL PERFORMANCE **(Rs.in lacs)**

Particulars	Years Ended March 31 2002	March 31 2001
Sales & Other Income	8068.15	8681.38
Gross Operating Profit/(loss)	446.88	419.24
Financial Expenses	1392.82	1379.50
Cash Profit before tax	(945.94)	(960.26)
Depreciation & Write Offs	368.70	376.37
Profit/(Loss) before taxation	(1314.64)	(1336.62)
Provision for taxation	0.77	1.61
Deffered Tax Credit	(432.73)	-
Profit/(Loss) after taxation	(882.68)	(1338.23)
Add: Profit brought forward from previous year	(1564.51)	0.00
	(2447.19)	(1338.23)
Less: Previous year Expenses	(329.50)	(226.27)
	(2776.69)	(1564.51)
Less: Taxation Adjustment for previous years	0.00	0.00
Available Surplus/(deficit)	(2776.69)	(1564.51)

The Company has suffered a turn over drop of 6.06% from net sales of Rs. 8385.62 lacs in the previous year to net sales of Rs. 8068.15 lacs during the year under review. However despite the turnover drop the company has improved gross operating profit not only as a percentage margin but also in absolute terms .Thus the absolute increase in gross operating profits from Rs 419.24 lacs in the previous year to Rs 444.88 lacs in the year under review represents an improvement in operating margins to 5.52% in the year 2002 as compared to 4.82% in the previous year. This is due to your company's continued efforts in cost reduction and quality improvement.

The peak net worth of the Company during the preceeding four financial year of Rs. 5414.84 lacs in year 1998-1999 stood eroded by more then 50% by the net worth of Rs. 1727.40 as on 31st March 2002. Consequently the provisions of Section 23 of SICA becomes applicable to the Company to make reporting to BIFR of such erosion.

The finance cost to the Company also increased as the debt size mounted since the Company was unable to service the debt. Total finance cost during the year under review is Rs. 1392.82 lacs which works out to 17.68% to sales. This finance cost ate into the improved operating margins to cause a net loss of Rs. 882.68 lacs. Clearly the company's debts need to be restructured to reduce the finance cost and thus make it compatible to the improving operating margins .The Company has already submitted a proposal of debt restructuring to its lenders in this regard. The scheme is under advance stages of consideration of the lenders and will be implemented after getting their approval. On implementation, the restructuring scheme shall bring the much needed reduction in the finance cost of the Company.

DIVIDEND

In view of the ongoing losses your directors do not recommend any dividend.

BUSINESS PROSPECTS

The automobile sector in India is presently improving.The HCV/MCV segment indicates buoyancy and the growth signals though presently weak are already coming in.The National Highway Construction Project of the Honourable Prime Minister has also taken off in right earnest and brings cheer to the transport and infrastructure sectors, both significant contributors to demand growth in the industry.

With debt restructuring on the cards and the company trimming costs ,your directors are optimistic of the company's turn around in the short to medium term.

TOTAL QUALITY MANAGEMENT

Yours Directors are pleased to report that during the year under review Malanpur unit of your company continued to maintain QS 9000 certification for manufacture of leaf springs for the Automotive Industry. The Company is also contemplating to procure ISO 14000 certification by the end of year 2002.

Directors' Report

DIRECTORS

In accordance with the applicable provisions, Mr. D. K. Sharma retires by rotation at the ensuing Annual General Meeting and being eligible offers himself for re-appointment. During the year under review Mr. Prem Sehgal, Mr. Ashok Kumar and Mr. K. Sasaki NHK Nominee resigned from the Board due to their preoccupations. The Board would like to place it's utmost appreciation for the invaluable services rendered by them during their tenure as directors of the company.

ENERGY, TECHNOLOGY ABSORPTION & FOREIGN EXCHANGE

The particulars as prescribed under section 217 (1) (e) of the Companies Act, 1956, read with Companies (Disclosures of particulars in the Report of the Board of Directors) Rules, 1988 are set out in the Annexure 'A' and form an integral part of this report.

FIXED DEPOSITS

The Company has not accepted or renewed any Fixed Deposit during the year under review. However there are un-claimed matured deposit of Rs. 13.95 lacs as on 31st March 2002.

PERSONNEL

There is no employee drawing remuneration in excess of limits prescribed under section 217 (2A) of the Companies Act, 1956 read with the Companies (Particulars of Employees) Rule, 1975.

AUDITORS:

M/s Goel Garg & Co., Chartered Accountants and M/s G. S. Johar & Co., Chartered Accountants retire at the conclusion of the forthcoming Annual General Meeting and have confirmed their eligibility and willingness to accept the office, if re-appointed. The report of the Auditors read with the notes on accounts being self explanatory needs no further clarification.

REPORT ON CORPORATE GOVERNANCE

Pursuant to clause 49 of the Listing Agreement, a report on Corporate Governance is given in Annexure 'B' and forms part of this report.

DIRECTOR'S RESPONSIBILITY STATEMENT

The Directors confirm that:

(a) In the preparation of the Annual Accounts, the applicable accounting standards have been followed and that no material departure from the same have been made;

(b) They have selected such accounting policies and applied them consistently and made judgements and estimates that are reasonable and prudent so as to give a true and fair view of the state of affairs of the Company at the end of the financial year and of the profit or loss of the Company for that period;

(c) They have taken proper and sufficient care for the maintenance of adequate accounting records in accordance with the provisions of the Companies Act, 1956 for safeguarding the assets of the Company and for preventing and detecting fraud and other irregularities.

(d) They have prepared the Accounts on a going concern basis.

APPRECIATION

Your Directors wish to place on record their sincere gratitude for the confidence reposed and the continued support lent by the company's lenders and Bankers but for which the company's operations in it's troubled times would have got adversely affected.

Your Directors place on record their appreciation for the efforts put in by the Company's employees across the organisation, who, through their competence, hard work, solidarity and cooperation have sincerely stood by the Company.

Your Directors thank the Central Government, State Government , customers, vendors and investors, for their continued support. The Directors particularly acknowledge with thanks the guidance and support extended by M/s NHK Spring Co. Limited Japan.

For and on behalf of the Board

New Delhi
04.09.2002

(B.S.JAUHAR)
Chairman

Annexure 'A' To Director' Report

Disclosure of Particulars with respect to conservation of energy, technology absorption and foreign exchange outgo and earning as required under Companies {Disclosure of Particulars in the Report of Board of Director(s)} Rules, 1988.

A. CONSERVATION OF ENERGY

1. **Measures taken for conservation of Energy.**

1.1 The Company initiated a massive drive last year to switch over to alternative fuel (RFO) in place of LDO to bring down the fuel cost by approximately 40% which is successfully implemented.

Directors' Report

1.2 Cost awareness and training on productivity concepts R.O.R. (Run Of Rate), APQP and PPAP brought in immense enthusiasm at worker level to save energy and reduce variation in product quality.

1.3 At Heat Treatment and Cambering process modifications were made in the hydraulic design to ensure better process capability (CPK).

1.4 Quality Circles and TPM at parabolic machine aimed for reducing the cycle time thereby improving productivity and savings in per MT of fuel cost.

1.5 Productivity and OEE (Overall Equipment Efficiency) concept introduced at all stages of shop floor for improving productivity and saving of power cost.

1.6 Company is working on ZERO set up time, SMED (Single Minute Exchange of Die) concept to reduce wastage and increase productivity.

2. Additional Investments and proposal for energy conservation

2.1 Company's belief in saving energy on continued basis remains still on the agenda of the top management.

2.2 As a QS 9000 objective of wastage elimination and defect prevention, mistake, proofing at process like riveting have helped in reducing waste & rework. Additional opportunities for remake mistake proofing are being identified.

2.3 Roles of cross functional teams on inventory optimisation and relay - outing to have straight material flow will further reduce the use of forklift in plant.

2.4 Emphasis is being shifted from batch production method to single piece production method in pre & post heat treatment processes.

2.5 After the successful experimentation of "t+2, 1W, 2D concept" company plans to relayout heat treatment cambering process and support it 100% on both the hardening furnaces.

3. Impact of above measures at 1 above for reduction of energy conservation and consequent impact on the cost of goods.

3.1 By improving the solid die design, company has been able to eliminate the defect of distortion on Maruti Parts, Scorpio Parts and General Motors parts and improving process capability (CPK) more than 1.33%

3.2 As a part of QS 9000 activity, more & more parameters (full span, half span, eye twist etc.) of various part numbers are being covered under SPC.

RESEARCH & DEVELOPMENT

1. Specific Areas in which R&D is carried out by the Company.

1.1 Set up for in-house test faculties for Telco leaf springs.

1.2 Change over from Conventional springs to parabolic springs.

1.3 Redesign (VE) of Toyota Springs.

2. Benefits derived as a result of R&D.

2.1 Parabolic Springs lead to weight/ fuel saving.

2.2 Increase in realization with implementation of parabolic & VE designs.

2.3 Stronger customer base as a result of introduction of parabolic /VE springs.

3. Future Plan of Action.

3.1 Installation of Solid Modelling & Analysis Software.

3.2 Installation of Servo Actuator for endurance testing.

3.3 Design of long parabolic springs for buses.

4.	**Expenditure on R&D**	**(Rs in Lacs)**
i)	Capital/DeferredRevenue	Nil (364.77)
ii)	Recurring	Nil (Nil)
iii)	Total	Nil (364.77)
iv)	TotalR&DexpenditureaspercentageofTotal Turnover	Nil (3.60%)

TECHNOLOGY ABSORBTION & CONTINUOUS IMPROVEMENT

1. Technology absorption, adaptation and innovation.

1.1 Technology imported from NHK for manufacture of springs has already been absorbed.

1.2 NHK's engineering team support on heat treatment in the year 1998 has resulted into application of similar actions for other part numbers thereby improving the straight pass.

1.3 SMED has been implemented at most of the processes.