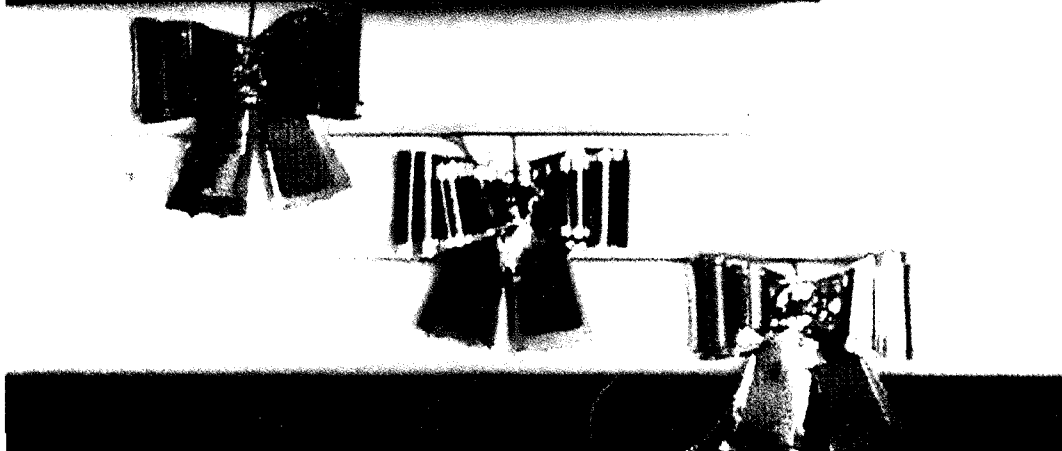


## 35<sup>th</sup> Annual Report 2005-06



IMTMA - SIEMENS

SIEMENS

[www.reportjunction.com](http://www.reportjunction.com)

## IPR Portfolio

	U S A		India		Australia/ Mexico / Iran Patents
	Patents	Trademarks	Patents	Trademarks	
Approved	1	4	15	11	2
Under Scrutiny	5	9	7	2	1
Under filing	5	2	9	4	-
<b>Total</b>	<b>11</b>	<b>15</b>	<b>31</b>	<b>17</b>	<b>3</b>

### Patents & Trade Marks GRANTED BY USPTO

#### PATENTS

Low Pedal Pressure Clutch

#### TRADE MARKS

EZ N LITE®  
INTERLOCK CLUTCH®  
ECO CLUTCH®  
PRE DAMP HIGH TORQUE®

#### UNDER CONSIDERATION WITH USPTO

Wear Indicator Assembly (Pin Type)  
Clutch Wear Adjustment Indicator  
Pre-Damp High Torque Clutch Disc  
Clutch Wear Adjustment Tool  
Improved Clutch Disc Direct/Dual Sintering  
Improved Clutch Disc with Spot Welding  
Bonded Disc  
Electronic Wear Adjustment for Clutch

WHISPER  
PDHT  
MONO  
ROAD RAIDER  
COOL CLUTCH  
PDHT PLUS  
AUTONEZ  
COOLNEZ  
ECO NAUTO

#### UNDER FILING WITH USPTO

Self-adjusting Electronic Clutch  
Angle Spring Clutch – Self Adjusting

AUTO  
ECO NAUTO

**BOARD OF DIRECTORS**

K.S. BHATNAGAR  
V.K. MEHTA  
K.K. TANEJA  
SHITAL K. JAIN  
ANUJ MEHTA  
POOJA KAPUR  
M.L. GULATI

Chairman  
Vice Chairman & Mg. Director  
Director  
Director  
Executive Director  
Director  
Executive Director

**COMPANY SECRETARY**

NAVEEN JAIN

**AUDITORS**

B. Aggarwal & Co.,  
Chartered Accountants  
16A/17, Ajmal Khan Road,  
Karol Bagh,  
New Delhi – 110005.

**BANKERS**

UTI Bank Ltd.  
Indusind Bank Ltd.  
Punjab National Bank  
Canara Bank

**REGISTERED OFFICE**

2E/14 (1<sup>ST</sup> floor)  
Jhandewalan Extn.,  
New Delhi – 110055.  
Telefax (011) 23683548.

**WORKS & ADMN. OFFICE**

Plot No.1A, Sector 27D  
12/4, Mathura Road, (National Highway to Taj)  
Faridabad – 121003 (India)  
Near to New Delhi.  
Tel:(91-129) 2275246 (6 lines)  
Fax:(91-129) 2276039 (6 lines)  
E-mail: cal@nda.vsnl.net.in

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## NOTICE

Notice is hereby given that the **THIRTY FIFTH ANNUAL GENERAL MEETING** of the Members of Clutch Auto Limited will be held on **Friday, the 25<sup>th</sup> August, 2006 at 11.00 A.M. at Kamani Auditorium, No.1, Copernicus Marg, New Delhi - 110 001** to transact the following business:

### ORDINARY BUSINESS

1. To receive, consider and adopt the audited Balance Sheet as at 31<sup>st</sup> March, 2006 and the Profit and Loss Account of the Company for the year ended on that date, together with the Reports of the Directors and Auditors thereon.
2. To consider and, if thought fit, to pass with or without modification, the following resolution as an ordinary resolution:

RESOLVED THAT pursuant to the recommendation of the Directors, the interim dividend Rs.1/- per share absorbing a sum of Rs.1,39,93,880/- (excluding Dividend Tax of Rs.19,62,641/- paid/ payable by the Company), declared on 29.4.2006 on the 1,39,93,880 equity shares of Rs.10/-each fully paid up, to those members whose names appeared in the Register of Members of the Company on such Record Date fixed earlier be and is hereby ratified and approved as final dividend for the year ended 31<sup>st</sup> March 2006.

3. To appoint a Director in place of Shri Shital K Jain who retires by rotation and who is eligible for reappointment.
4. Reappointment of Statutory Auditors

To consider and, if thought fit, and proper, to pass, with or without modification(s), the following resolution:

"RESOLVED THAT M/s. B. Aggarwal & Co., Chartered Accountants, New Delhi, who are eligible to be so appointed and whose consent is available, be and are hereby reappointed as Statutory Auditors of the Company for the period from the conclusion of this Meeting to the conclusion of 36<sup>th</sup> Annual General Meeting on a remuneration including out of pocket expenses as may be considered fit and proper by the Board of Directors.

### SPECIAL BUSINESS

5. To consider and if thought fit, to pass with or without modification(s), the following resolution as an ORDINARY RESOLUTION:

"RESOLVED THAT Smt. Pooja Kapur who was appointed as an Additional Director on 24<sup>th</sup> February, 2006 by the Board of Directors of the Company, pursuant to Section 260 of the Companies Act, 1956 and who holds office upto the date of this Annual General Meeting, and in respect of whom the Company has received a notice in writing from a member in terms of Section 257 of the Companies Act, 1956 along with requisite deposit signifying his intention to propose the appointment of Smt. Pooja Kapur, as a Director, be and is hereby appointed as a Director of the Company, whose period of office would be liable to determine by retirement of Directors by rotation."

**Regd. Office**  
2E/14 (1<sup>st</sup> Floor)  
Jhandewalan Extn.  
New Delhi 110 055

Dated: 6<sup>th</sup> July, 2006

By Order of the Board

Naveen Jain  
Company Secretary

### NOTES:

1. A Member entitled to attend and vote at the meeting may appoint a proxy to attend and vote instead of himself/herself. A proxy need not be a member of the Company.
2. The proxy to be effective should be duly stamped and deposited at the Registered Office of the Company not less than forty eight (48) hours before the commencement of the Annual General Meeting.
3. The Explanatory Statement pursuant to Section 173(2) of the Companies Act, 1956, in respect of the Special Business as set out above is annexed hereto.
4. Documents referred to in the accompanying notice and explanatory statements are open for inspection at the Registered Office of the Company on all working days, except Holidays, between 11.00 A.M. and 1.00 P.M. upto the date of the Annual General Meeting.
5. The Register of Members and Transfer Books shall remain closed from 22.8.2006 to 25.8.2006 (both days inclusive)
6. The Company has admitted its Equity Shares in the Depository System of National Securities Depository Limited (NSDL) as well as Central Depository Services (India) Ltd. and has offered investors the facility to hold shares in demat form and to carry out scripless trading of these shares as per the prescribed procedure.



7. The shareholders may send their requests for transfer, transmission, transposition, deletion of name, demat, remat, change of address etc. at the following address of the Registrar & Transfer Agent (R & T Agent):

M/s. MAS Services Pvt. Ltd.  
AB 4, Safdarjung Enclave,  
New Delhi 110 029  
Tel. : 011-26104142

The requests received at the regd. Office of the Company will also be forwarded to the R & T Agent.

8. Pursuant to the provisions of Section 109A of the Companies Act, 1956, shareholders may file Nominations in respect of their respective shareholdings. Any shareholder willing to avail of this facility may submit to the Company the prescribed form 2B, if not already filed.
9. Members are requested to bring their copies of Annual Report to the Meeting as such copies may not be available at the Annual General Meeting.
10. Members are requested to put their signatures at the space provided in the Attendance Sheet annexed to the proxy form and hand over the same at the designated counter near the entrance of the Meeting Hall.
11. **Members may also kindly note that there will be no gifts at the Annual General Meeting.**

#### **ANNEXURE TO NOTICE**

#### **EXPLANATORY STATEMENT PURSUANT TO SECTION 173(2) OF THE COMPANIES ACT, 1956**

##### **ITEM NO.5**

Smt. Pooja Kapur was appointed as an additional Director on 24<sup>th</sup> February, 2006 by the Board of Directors. The notice under Section 257 of the Companies Act, 1956 has been received from a member signifying his intention to propose the appointment of Smt. Pooja Kapur as Director of the Company. Having regard to her vast knowledge and rich experience, the Board considers that the appointment of Smt. Pooja Kapur as a Director of the Company will prove to be beneficial for the Company.

The Brief Resume of Smt. Pooja Kapur is given in the section of Corporate Governance of the Annual Report.

None of the Directors of the Company apart from Shri V K Mehta, Vice Chairman & Mg. Director, Shri Anuj Mehta, Executive Director and, Smt. Pooja Kapur is, interested in the said resolution.

The Board of Directors recommend the resolution set out at item No.5 of the Notice for approval of the shareholders.



## MANAGEMENT DISCUSSION & ANALYSIS

### I. INDUSTRY STRUCTURE & OPPORTUNITIES

Clutch Auto is manufacturer of Clutches for Commercial Vehicles, Tractors, Passenger Cars, Off Highway Vehicles and for Defence (Indian Army).

#### (i) Defence Segment

Defence requirements covers the Original Equipment production of Heavy Vehicles at Avadi, Ordnance Factory at Muradnagar and some specialized vehicles / aggregates manufactured by Bharat Earth Movers Limited (BEML) or vehicle factory at Jabalpur. Off Highway vehicles are manufactured by BEML in addition to Heavy Tanks & Carrier Trucks which are also manufactured in the private sector. There is a regular spares requirement for Defence Vehicles either sourced through DGS&D or through other Defence establishments depending on the nature of the vehicles i.e. specialized vehicles like Tanks or Troop Carriers etc. Clutch Auto is the major supplier to all these segments and has been recognized with several National Awards from Ministry of Defence, DGTD and Ministry of Industry for indigenization of critical stores required by the Indian Army. The specialized manufacturing facilities using Powder Metallurgy technology sourced from Defence Metallurgy Research Laboratory, Hyderabad have been established as a dedicated facility for the Defence requirement. At peak times depending upon the requirement, this is giving significant contribution of Rs. 50 – 100m sales turnover.

#### (ii) Commercial Vehicles – M&HCV

2005-06 registered an all time high production of

- (a) M/HCV 207,449 Nos. (198,561 Nos.) and LCV of 143,136 Nos. (119,877 Nos.) registering a growth of 19.4%.
- (b) M&HCV Buses 28,137 Nos. (25,638 Nos.) registering a growth of 9.7%.

#### Growing Segment

Though the Commercial Vehicle Industry registered a Combined Annual Growth Rate (CAGR) of around 30% between 2001-02 and 2004-05 after the deceleration from 1996-97 the slow down has started emerging in the 1st quarter of this year which continued in the 2nd quarter with the trend moving upward from 3<sup>rd</sup> quarter — the highest spurt registering over 16% growth in the last quarter. The most significant development during this period have been restriction of overloading pronounced by Supreme Court and limiting the age of vehicles in some of the States. This decision if pursued and extended all over the country are likely to maintain steady growth for the Commercial Vehicles segment in the foreseeable future despite improvement in efficiency of freight and aggressive pursuit of late by the Indian Railways.

The first quarter of the current year indicated an overall growth in the CV segment of around 47% , 66%, 26% and 6% respectively being contributed by the 3 leading players. Month on month June, 2006 has been registered a growth of over 25%.

#### Strategy – Long Term

Clutch Auto has traditionally been concentrating Lo-Volume, Lo-Variety & High Value Added Commercial Vehicles and Tractor Clutch markets both in the domestic and international markets as the scales of production in India are comparable to the leading old markets and the spares requirements are invariably more than the Original Equipments catering to around 60-70% of the

Company's turnover. Besides sustained requirement of entry into the Replacement Market in different countries is comparatively easy obsolescence ensuring long term supply chains and also with opportunities for an innovative and development oriented Company like Clutch Auto to introduce new modified upgraded user friendly products.

#### Focus

We realized the need for separate design of clutches required for long distance Commercial Vehicles / Goods Transport vehicles and Trucks vs. City Service and or mofussil / Long Distance Buses specially to suit Indian operating conditions after realizing that the clutch of class 7 & 8 Trucks in US gives the service life in excess of 300,000 miles vs. Heavy Truck in Europe in the vicinity of 250,000 KM, life observed in India for similar products were around 50,000 – 100,000 KM. This segment has given focus to Clutch Auto 's activities ever since it decided to be a stand alone company in 1999 after close interaction and negotiations with the old majors in-depth. Strategy for testing of clutches designed to meet Indian requirements with 2 leading most vehicle manufacturers backed with simulation studies overseas and vehicle instrumentation have culminated in a proud moment of success for Clutch Auto.

Tata Motors is going for 100% expansion from 0.45 to 0.9m vehicles and

Ashok Leyland from 72,000 to 100,000 vehicles by 2008 offer increasing opportunities besides enhanced market shares.

#### Initiatives by Govt.

With increase in GDP, improvement in road networks and introduction of luxury buses carving out new market demand , this segment is likely to experience an accelerated growth route and the new proven products developed specially for this segment by the Company can open up bigger opportunities in the domestic market now and soon in the export market in future.

#### (iii) LCVs

The LCV segment registered highest growth of 19.4% last year contributing to 37.6% of the total sales i.e. almost the same level of last year. Buses have contributed around 15-20% of the overall sales in the M&HCV and LCV segments respectively.

There have been significant development in the LCV business opportunities after nomination by a leading vehicle manufacturer as a strategic source and assigned development of special LCV applications by another with nomination for service, manufacture infrastructure in incentive oriented backward hilly regions with promise to improve volumes and profitability. We are actively partnering with technology manufacturers in development activities for new models under development of introduction with benefits to new proven technologies.

#### (iv) Passenger Cars

The Passenger Car segment has registered a growth of around 24% in the first quarter to 89,283 (June 2006) from 64,470 (June 2005). The Passenger Car models which we have been ale sofar have not only sustained their volumes of late have also improved in numbers. The Company is introducing more Value Engineered products and is penetrating deeper into the automotive Aftermarket segment across the board with few value added products.



Nomination by the Passenger Car Industry leader and the Engineering experts to work with the Company to improve the floor decisions is a step which will go a long way in building up Company's plans for the international markets.

**(v) MUVs/SUVs**

The Industry registered a growth of 7.5% with production of 1.32 m vehicles. Till last year we had a miniscule role in this segment but after nomination by LCV / SUV manufacturer as a strategic source and assigns by the leading multi-product manufacturer, we are embarking on this segment both in domestic and international front, negotiations for OE and Aftermarket segments are in advance stages with the leading international Car manufacturers. Prospects of co-manufacturing with the leading clutch manufacturer for their North American and Asian Vehicle requirements and acquisition of Pioneer Automotive Products Inc.'s Clutch Division by an Associate Company have opened up a \$2m Automotive Aftermarket in USA with ready inventories, sales force, warehouse distribution network, vendor base and wide customer base besides tools and world wide industry data base which are going to be handy for make or buy or sourcing decisions in our favour as the product range can be expanded. The Company feels confident of carving out a place for itself in this here to for ignored automotive segment where the specialized in-house development capabilities including any software, best spares, traceability till death and identification to every Indian customers bar coded clutches insynse with their engines and transmissions.

Clutch Industry (Automotive / MUV / SUV segment) being in the hands of 5 majors all over the world, the competition is with high cost production bases. With the ongoing management structure of 60 year of establishment Pioneer Inc. Clutch division and with widely exposed product management expertise, we have prospects of early entry into this competitive sophisticated market currently in the hands of either Multinational majors or high return Chinese source Distributors.

With golden quadrilateral and North South, East West corridors picking up momentum, not only there will be increasing demand for long distance nature HCVs but with the opening up of Rural economy and increasing emphasize from the Govt. to develop Rural Infrastructure is likely to multiply requirement of LCVs in all segments from 1 Ton to 4 Tons for both medium and HCV segments.

**(vi) Tractors**

The share of Tractor / Trailers in the M&HCV segment is well over 30% in the overall production with increasing trend which augurs well for our production mix.

The Industry production close to 300,000 marked around 10% being contributed by exports and after consolidation of the infrastructure and test capabilities, we are capturing some of the lost volumes and making inroads into the sophisticated Multinationals with performance proven NVH solution Clutches. First OE orders received by us are happen to be from Tractor manufacturers in Europe which is likely to contribute approx. 20 – 25% of the current year's exports. The existing customer base for Tractor clutches in Europe has been supplemented by the biggest 3300 outlets of Tractor component distribution network with a long term agreement for which development work on Hi-Volume application has already been initiated. We are in the process of formulating a long term understanding with a Multinational Clutch major for supplementing their product range with a series of Tractor clutches. Our product range for the domestic market gives us opportunity to meet at least 25-30% of the requirements of these new customers which will at least constitute 4-5% of current year's export.

**(vii) Formula One Racing Car Clutches**

We have been selected by the leading most distributor of Racing Car Replacement Parts including Hi-value, Hi-volume Racing Car Clutch Samples and specifications are under evaluation with our potential Partners. This prestigious market segment is likely to make a beginning during the current year.

**(viii) 3-Wheelers**

In this segment we are currently catering Bajaj Auto Ltd. and looking into higher demand in the market, Company is in the process of negotiations with other players in this segment.

**(ix) 2-Wheelers**

We are not currently catering to the 2-wheeler segment but keeping the demand pattern in the Indian market and new technology under development will have opportunities to enter into this segment goes effective value for money as well as locally developed solution, dialogue for which has already been initiated with leading 2-wheeler manufacturers. The prospects in this high volume segment look bright both for OE as well as in the Aftermarket with possibilities of long term commitments.

**II. FINANCIAL PERFORMANCE OF THE COMPANY**

The Company's financial performance continued to improve in this Financial Year owing to a good volume growth of 59% and continued efforts by the Company to maintain its margins, driven mainly by cost reduction efforts. The following table sets forth the breakup of the Company's expenses as part of the net revenue.

	Percentage of turnover Year ended March 31	
	2006	2005
<b>Turnover net of excise duty</b>	<b>100</b>	<b>100</b>
<b>Expenditure :</b>		
Material Cost	57.60	54.58
Employee Cost	8.18	10.90
Manufacturing & other expenses (Net)	84.39	84.07
Profit Before Depreciation, interest,		
Exceptional items and Tax	16.77	16.76
Depreciation (including product		
development expenditure)	3.11	4.59
Interest (Net)	4.11	5.31
Profit before Exceptional items and tax	8.59	6.64
Profit After Tax	8.35	6.03

**Turnover, net of excise duties**, increased by 59% to another record high of Rs. 150.24 Cr. from Rs. 94.52 Cr. in 2004-05. The Net domestic sales increased by 43.80% to Rs. 102.00 Cr. from Rs. 70.93 Cr. in 2004-05 while export volumes increased by a massive 104.50% to Rs. 48.24 Cr. in 2005-06 from Rs. 23.59 Cr. in 2004-05.

**Raw Material consumption** increased to Rs. 86.54 Cr. in 2005-06 from Rs. 51.59 Cr. in 2004-05. This was largely a result of high steel prices during the first quarter of the year. However, the Company managed to maintain its ratio of raw material consumption to net turnover at 57.60% in 2005-06 (54.58%) on account of the ongoing cost reduction programme. As part of the cost reduction programme, the Company initiated global sourcing, vendor



rationalization and value engineering during 2005-06.

**Employee Cost** increased to Rs. 12.29 Cr. from Rs. 10.30 Cr. registered in the previous year. However, increase in productivity helped the Company reduce its employee cost as a percentage of net turnover to 8.18%, as compared to 10.90% in 2004-05.

**Profit Before Depreciation, Interest, Exceptional items and Tax** increased by 59% to Rs. 25.20 Cr. from Rs. 15.84 Cr. in 2004-05. There is marginal increase in operating margin of the Company.

**Depreciation** for the year 2005-06 increased by 7.60% to Rs. 4.67 Cr. from Rs. 4.34 Cr. in 2004-05 on account of increase in Fixed Assets.

**Interest Cost** decreased to 4.11% of turnover in 2005-06 from 5.31% in 2004-05. The decrease in interest cost was on account of financial restructuring by way of replacement of high interest bearing term loans & working capital loans with low interest loans & working capital.

**Profit Before Tax (PBT)** of the Company increased by 105.41% to Rs. 12.90 Cr. from Rs. 6.28 Cr. in 2004-05. The tax provision for current year was at Rs. 1.23 Cr. as compared to Rs. 0.79 Cr. in 2004-05.

**Profit After Tax (PAT)** increased by 120% to Rs. 12.55 Cr. from Rs. 5.70 Cr. in 2004-05. Earning Per Share (EPS) increased by 38.63% to Rs. 8.97 as compared to Rs. 6.47 last year.

#### Balance Sheet size of the Company

As on March 31, 2006, the Ordinary Share Capital of the Company stood at Rs. 14 Cr. as compared to Rs. 8.82 Cr. as on March 31, 2005. This was due to allotment of Shares to some Corporate Bodies and Individuals (Public) as well as relatives of promoters on Preferential basis.

Gross Secured Debt stood at Rs. 59.44 Cr. as on March 31, 2006 as compared to Rs. 45.59 Cr. as on March 31, 2005.

**Current Assets** of the Company increased to Rs. 119.72 Cr. in 2005-06 from Rs. 80.17 in 2004-05. This increase is mainly on account of Debtors increasing to Rs. 74.78 Cr. in 2005-06 from Rs. 48.42 Cr. in 2004-05 and increase in Inventories to Rs. 32.00 Cr. in 2005-06 from Rs. 26.69 Cr. in 2004-05. Consequently, Inventory Turnover Ratio reduced to 2.56 M in 2005-06 from 3.4 M in 2004-05 and Sundry Debtors Turnover Ratio was sustained at same level.

**Current Liabilities** of the Company decreased to Rs. 25.93 Cr. in 2005-06 from Rs. 29.89 Cr. in 2004-05.

### III. SWOT ANALYSIS

1. Even though we have taken adequate care to develop an independent IPR Portfolio, risk of encroachment by look alike products from some of the countries may have to be dealt with as and when such occasion arise.
2. Though so far the OE segment in HDCVs is not being addressed in North America, the market is accustomed to buying complete transmission including the clutch may not offer direct opportunities for expansion of company's products in the OE segment unless some linkages are built with a leading transmission manufacturer.
3. With the increasing trend on electrical content on vehicles and integration of transmissions and controls, we have deliberately tried to avoid dust and humid prone electrical solutions for clutch actuation we have given more rugged and reliable scaled mechanical solution oriented to the Indian market. However, introduction need to be tested and approved in the North American

market, integration into the Electronic Control Module (ECM) notwithstanding. The outcome of this development will affect the future progress under OES and OE business and can work both in favour or as a hindrance for entry.

4. The R & D support from Govt. of India and policy initiatives to support IPR related disputes under overseas markets could be a comfort factor in our penetration in the markets dominated by monopolies typically by Heavy Duty market segments in North America. In the absence of clear directive from Gol and increasing penetration for our products, we may have to fend for related issues on our own unless there is an adequate insurance coverage.
5. MRP related announcements by the Finance Ministry requires restructuring of the distribution networks and emergence at different levels of the supply chain. The precautions on this front, being fluid situation are difficult to spell out at this stage, which if the abatement rates are structured in tune with the market requirements can be a win win situation for all players or may result in restructuring the distribution networks particularly at a time when there is increasing emphasis to penetrate deep into the semi-urban and rural markets.
6. Being the only off-shore Company to enter into the HD Clutch market in US dominated by 1 clutch manufacturer and 2 quasi manufacturers in the Aftermarket, we wish to enter into the single tier distribution network for a long term competitive position. This exercise may take 2/3 years to settle down as this will be a new experiment undertaken by an overseas manufacturer in this traditionally single co-dominated marketing segment.

### IV. TECHNOLOGY

#### (i) MEOST

The development activities have been backed with in-house Test Certification, Simulation, Demonstration and Multiple Environment Over Stressed Testing (MEOST) capabilities duly correlated with the customers test facilities, certification and procedures so that not only we are in a position to satisfy ourselves for suitability of our products in most unusual / unreplicated Indian operating conditions but the customers also have an opportunity to see and verify the same by witness / conformance testing. This has led us to the confidence that once the products are proven to lead Indian requirements, they will not only perform better in similar applications in developing countries but will also have an edge on the products in usage in the developed markets. With 50-60% of the added value in this Lo-Volume applications have contributed by minor inputs, the low cost base already available in the Company backed with new productivity improvement initiatives give an edge to the Company to be a long term competitive supplier in this high value added market segment.

#### (ii) Upgraded Upsized Retrofittable Clutches

Care has been taken that all the new developments serve the ultimate users' needs and concepts in different market environment with interchangeability and for the first time in the industry Retrofittable clutches unit to unit and even component to component with better cost effective engineering solutions for a long term presence in the market., concentrating on the basic need of an extended service life supported with updated need based value for technological inputs.

#### (iii) NVH Solution

NVH Solution capabilities through design of clutches exclusively established by the Company in the country is going to be an opportunity for increasing the share of business in light of pressure on tightening of the emission norms and emphasize on cost cutting by introduction of more and more Value Engineered products in



this segment especially the Light Commercial Vehicle segment.

#### (iv) Ceramic Clutches

The Ceramic clutch portfolio essentially developed for the American market has been extended for domestic applications with innovative Add-ons are opening up Hi-value, Hi-volume demand for us in India and after trials in the last 3-4 years open up new supply channels in North America and soon in Europe. Complimentary American and European designs dominating rest of the world are already extending the reach and penetration for our products. The in-house infrastructure is handy for quick customer response and orientation to customer needs and launch programmes which is strengthening the mutual interdependence and customer relationships. Some of the specially developed products may give exclusive manufacturing rights with joint / co-marketing or branding at the hands of the CV manufacturers i.e. we are likely to have an opportunity to grow both in the OE and the Aftermarket pie.

#### (v) Clutch to meet Vehicle Manufacturers requirements in wake of tight Emission Norms

Bharat Stage III have been implemented in 11 Metros and Bharat Stage II in entire country from April, 2005 and Bharat III in 11 Metros from April, 2010 and Bharat Stage IV in the entire country from the same date. We are equipped to service clutches to meet these stringent requirements of vehicle manufacturers.

#### V. IPR PORTFOLIO

We have a strong independent IPR Portfolio in India, USA, Australia, Mexico and Iran. Current status is as under :

	USA		India		Aus/ Mexico/Iran
	Patents	Trademarks	Patents	Trademarks	Patents
Approved	1	4	15	11	2
Under Scrutiny	5	9	7	2	1
Under filing	5	2	9	4	-
<b>Total</b>	<b>11</b>	<b>15</b>	<b>31</b>	<b>17</b>	<b>3</b>

We have signed an IPR sharing agreement with a leading domestic vehicle manufacturer on products which if proven their mettle and are under full-fledged introduction.

The current status of IPR Portfolio is as under :

#### GRANTED BY USPTO

##### Patents

Low Pedal Pressure Clutch

##### Trade Marks

EZNLITE  
INTERLOCK CLUTCH  
ECOCLUTCH  
PRE DAMP HIGH TORQUE

#### UNDER CONSIDERATION BY USPTO

Wear Indicator Assembly (Pin Type)  
Clutch Wear Adjustment Indicator  
Pre-Damp High Torque Clutch Disc  
Clutch Wear Adjustment Tool  
Improved Clutch Disc Direct/Dual Sintering  
Improved Clutch Disc with Spot Welding  
Bonded Disc  
Electronic Wear Adjustment for Clutch

WHISPER  
PDHT  
MONO  
ROAD RAIDER  
COOLCLUTCH  
PHDT PLUS  
AUTONEZ  
COOLNEZ  
ECONAUTO

For the International markets besides developing self alienating clutch the new products oriented to the long distance fatigue prone

markets and increasing number of lady drivers on North American and European roads, we have developed new products which are gaining increasing acceptance.

#### VI. RESEARCH & DEVELOPMENT

We have enlisted 2 of the leading most Research and Defence establishments for support in Company's drive for futuristic products with increasing service life by almost 100% in all segments of clutch applications spanning Passenger Cars, Tractors, CVs and 2-wheelers alike. In-house capabilities for design and development of the overall clutch system being complimentary for orienting the products with the vehicle system and the mating parts. We continue to have support from the accomplished experts from Europe in the field of clutch designing and development, test capabilities and NVH fine technologies and require training in-house and the customers' staff. The integrated developments and NVH facilities have helped us to give solution to Multinational Tractor manufacturers against stiff international follow sources both in domestic and export segments. This pace is likely to expand in the coming years.

In the process of development exercise to build an in-house infrastructure, we have

- Rewrote the Design formulae.
- Developed New Software in-house.
- Redefined Test Criteria to sustain world's worst operating conditions.
- Established total in-house capability to Test, Certify, Simulate and Demonstrate with Driveline NVH Solutions and with an Exclusive MEOST facility.
- Introduced upgraded upsized Clutches with Retrofittability On vehicles of 20-25 years vintage.
- Concluded IPR sharing, Co-Branding, Joint Marketing and Joint Research Agreements with leading Truck Manufacturers.
- Physically achieved and Demonstrated Improvement in service life on Trucks & Buses in adverse climate overloading and Indian Driving and Maintenance conditions.

#### Initiatives for increased Service life of Clutches in Indian Operating condition

During the last Financial Year wherein its position has been vindicated in achieving increased service life by 200 - 300% with direction to further increase it by about 100% with well structured plan backed with in-house technology development and support from leading most Research Institutions and Defence establishments engaged in allied / similar inputs. We are not only pursuing avowed Goal of reaching the European Service levels in the first instance in the difficult and varying terrains, high temperature with poorly maintained vehicles and roads, to top of it all, heavily congested and indisciplined driving habits, besides overloading in all segments of the industry. The same principle is being extended to the international markets especially USA where the products under development or under testing are likely to run their target of one change of clutch in a million miles instead of current two change.

#### VII. INTERNAL CONTROL SYSTEM AND THEIR ADEQUACY

Clutch Auto has a proper and adequate system of internal controls to ensure that all assets are safeguarded and protected against loss from unauthorized use or disposition and that transaction are authorized, recorded and reported quickly.

The Company's internal controls are supplemented by an extensive programme of a strong and independent internal audits, review by management and documented policies, guidelines and procedures.

Based on the nature of business and size of operations, the Company's internal control system has been designed to provide for: