



**GOVERNMENT OF INDIA
TARIFF COMMISSION**

REPORT

ON

The Continuance of Protection to the Diesel Fuel Injection Equipment Industry

**BOMBAY
1959**

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सत्यमेव जयते

GOVERNMENT OF INDIA
MINISTRY OF COMMERCE AND INDUSTRY
NOTIFICATION

Tariffs

New Delhi, the 18th November, 1959.

No. 21(4)-T.R./59.—Whereas the Central Government is satisfied, after due inquiry, that the duties chargeable under the First Schedule to the Indian Tariff Act, 1934 (32 of 1934), in respect of the articles falling under Items Nos. 75(18)(a) and 75(18)(b) of the said Schedule and characterised as protective in the third column thereof, have become excessive for the purpose of securing the protection intended to be afforded by them to similar articles manufactured in India ;

Now, therefore, in exercise of the powers conferred by sub-section (1) of section 4 of the said Act, as in force in India and as applied to the State of Pondicherry, the Central Government hereby reduces with effect from the 18th November, 1959 the duties of customs on the said articles so that the duties chargeable shall from the said date be as specified in column 3 of the table annexed hereto.

THE TABLE

Item No. of Tariff	Name of Article	Rate of duty
1	2	3
75(18) (a)	Single cylinder fuel injection pumps for stationary diesel engines and component parts of such pumps.	25 per cent <i>ad valorem</i>
75(18) (b)	Nozzleholders with a clamping capacity up to one inch clamping diameter for nozzles (atomisers) for use on stationary or automobile diesel engines and nozzles therefor, and component parts of such nozzles and nozzleholders.	25 per cent <i>ad valorem</i>

S. RANGANATHAN,
Secretary to the Government of India.

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REPORT ON THE CONTINUANCE OF PROTECTION TO THE DIESEL FUEL INJECTION EQUIPMENT INDUSTRY

1. In its Report on the automobile industry (1953) the Commission reached the conclusion that the case for protection of automobile ancillary industries should be examined separately. In pursuance of this decision an inquiry was held in 1954 into the claim of the diesel fuel injection equipment industry to protection and/or assistance. In its Report (1955) the Commission recommended and Government granted protection to single cylinder fuel injection pumps for stationary diesel engines and nozzle-holders with a clamping capacity up to 1" clamping diameter for nozzles (atomisers) by levying a protective duty of 60 per cent *ad valorem* standard on these two items and their component parts excluding elements and delivery valves when imported separately and nozzles. As a sequel to the Commission's second Report on the industry (1957), the then existing protection was continued but its scope was enlarged to include elements, delivery valves and nozzles.

Previous tariff inquiries.

2. Protection granted to the industry is due to expire at the end of 1959 and the present inquiry is therefore undertaken by us under section 11(e) read with section 13 of the Tariff Commission Act, 1951, to inquire into the working of protection till now and to make suitable recommendations with a view to its increase, decrease, modification or abolition according to the circumstances of the case.

Present inquiry.

3.1. On 25th May 1959 questionnaires were issued to producers, importers and consumers. Memoranda covering the various aspects of the inquiry were called for from Automobile Manufacturers' Association of India, Calcutta and Association of Diesel Engine Manufacturers of India, Poona. The Development Wing was requested to forward a detailed memorandum on the progress made by the industry since the last inquiry and its present position. Letters were issued to Collectors of Customs, Bombay, Calcutta, Madras and Cochin for information regarding c.i.f. prices and landed costs of different types of imported diesel fuel injection equipment, comparable to those manufactured in the country. Inquiries were made about the ruling prices of comparable products in U. K. and West Germany through the High Commission of India and the Indian Embassy in those countries respectively. The Director General of Supplies & Disposals was addressed for information regarding Government's purchases of diesel fuel injection equipment during the last two years. Similar letters were also issued to the Ministries of Defence and Irrigation and Power, the Railway Board and the various Zonal Railway Administrations. The Indian Standards Institution was addressed regarding the progress made by it in formulating standard specifications for fuel injection pumps and its principal components viz. nozzle-holders, nozzles, elements and delivery valves. The

Method of inquiry.

Directors of the National Physical Laboratory and the National Metallurgical Laboratory were requested to send a note on the available facilities for research and other allied matters. A press note was issued on 9th June 1959 inviting firms, associations and others interested in the inquiry to obtain copies of the relevant questionnaires and send their replies. A list of those to whom questionnaires and letters were issued and from whom replies or memoranda were received is given in Appendix I.

3.2. Shri R. S. Bhatt, Member, visited the factory of Motor Industries Co. Ltd., Bangalore on 6th July 1959. Dr. S. K. Muranjan and Shri J. N. Dutta, Members, also visited the factory on 22nd July 1959.

3.3. Shri P. M. Menon, Cost Accounts Officer examined the cost of production of single cylinder diesel fuel injection pumps and nozzle-holders at the factory of Motor Industries Co. Ltd. from 25th May to 10th June 1959.

3.4. A public inquiry was held on 30th July 1959 at the office of the Commission. A list of persons who attended the inquiry is given in Appendix II.

4. The existing scheme of protection covers single cylinder fuel injection pumps of stationary diesel engines and component parts thereof and nozzle-holders (with clamping capacity up to 1" clamping diameter for nozzles) and nozzles of stationary and automobile diesel engines and component parts thereof. Since our last inquiry, Motor Industries Co. Ltd., has made further progress with the manufacture of multi-cylinder fuel injection equipment but as the volume of production is small and its indigenous content has yet to attain sizeable proportions, both the Development Wing and the producer agreed that it is premature to include multi-cylinder pumps in the scope of our inquiry. Greaves Cotton & Co., Ltd., who manufacture stationary diesel engines of certain types represented that protection should be limited to those types and sizes of fuel injection equipment only the domestic manufacture of which is well-established, but this suggestion was not accepted as it is not administratively feasible. The scope of the present inquiry, therefore, remains as at the last inquiry.

Scope of the inquiry.

5.1. In its Report (1957) the Commission made certain recommendations on matters other than tariff protection.

Implementation of the Commission's recommendations made in the last Report. The recommendations and the extent to which they have been implemented are given below.

5.2. "The validity of import licences issued to the manufacturers of diesel fuel injection equipment for iron and steel should be extended to one year if there is no serious administrative difficulty."

The Ministry of Commerce and Industry has informed us that the Ministry of Steel, Mines and Fuel has no objection to extend the validity of import licences to one year.

- 5.3. "Government may render such assistance as is possible to Motor Industries Co. Ltd., to obtain its entire requirements of castings and forgings within the country."

The Ministry of Commerce and Industry has stated that the existing sources of supply have been brought to the attention of Motor Industries Co. This matter is discussed at a later stage in the Report (*vide* paragraph 9.3).

- 5.4. "The Company has also brought to our notice that the hot rolled case hardening mild steel bars which it obtains from Tata Iron & Steel Co. Ltd., are often found to be bent as they are despatched without proper casing . . . The attention of the Tata Iron & Steel Co. may be drawn to this complaint of the Motor Industries."

The representative of the Development Wing has informed us that the attention of Tata Iron & Steel Co. was drawn to our observation quoted above. However, no action has been taken on this suggestion. The matter is again referred to in paragraph 9.2 of this Report.

- 6.1. As in 1957, there are only three units engaged in the manufacture of diesel fuel injection equipment in the country, namely Motor Industries Co. Ltd., Bangalore (hereinafter referred to as MICO), Fuel Injections Ltd., Bombay and Kulko Engineering Works Ltd., Kolhapur. Of these, Kulko Engineering Works manufactures pumps and nozzle-holders for its own use.

**Present position
of the industry.**

6.2. *Motor Industries Co. Ltd., Bangalore.*

6.2.1. Since our last inquiry the company has completed its programme of manufacturing elements, delivery valves and nozzles from raw materials instead of from imported semi-finished components. Except for proprietary items like springs and washers which are still imported, the company is manufacturing all components of single cylinder pumps. It has no plans for diversification of production but has obtained sanction of Government to raise its capital from Rs. 1.25 crores to Rs. 1.50 crores to enable it to increase its capacity to a substantial extent for manufacture of elements, delivery valves, nozzles and repair of elements and nozzles. The whole of this additional capital is allotted to M/s. Robert Bosch, Stuttgart, as payment for supply of the necessary capital equipment which is expected to be installed within a year and a half. With this addition to its holdings, the share of the German collaborator in the total capital of MICO has risen from 49 per cent to 58 per cent.

6.2.2. The output and financial results of the company disclose great improvement. Against a loss of Rs. 5.47 lakhs and contingent liability of Rs. 4.98 lakhs in 1954, the net profit of the company was Rs. 60,784 in 1955, Rs. 10.30 lakhs in 1956 and Rs. 19.23 lakhs in 1957.

6.3. Fuel Injections Ltd., Bombay.

6.3.1. Since our last inquiry the Company has implemented only part of the programme relating to manufacture of nozzles and elements. The manufacture of nozzle-holders and single cylinder pumps entirely from raw materials is in its initial stages and the company expects to achieve complete manufacture of these as well as delivery valves before the end of the current year.

6.3.2. In 1958 production of nozzles and elements by this company reached only about 33 per cent and 60 per cent of its respective capacity but during the first half of 1959, the output of both has reached full single-shift capacity. The nett profit of the company for the year ending December 1958 was Rs. 1,02,097 which discloses some improvement in the working of the company but was insufficient to cover previous losses.

7.1. In our last Report we estimated the demand for various components of diesel fuel injection equipment for 1957 as follows :

Items	Original equipment	Replace- ment purposes	Total
	Nos.	Nos.	Nos.
1. Single cylinder pumps	12,000	6,900	18,900
2. Multi-cylinder pumps	16,300	3,100	19,400
3. Nozzle-holders	109,500	16,500	126,000
4. Nozzles	109,500	474,400	583,900
5. Elements	109,500	311,300	420,800
6. Delivery valves	109,500	311,300	420,800

We had estimated that the demand for the next three years was likely to expand by 15 per cent.

7.2. In connection with the present inquiry, we have received estimates of demand from the Development Wing, MICO and Fuel Injections Ltd., which are given below. The estimates of MICO relate exclusively to its own products while those of Fuel Injections Ltd., cover only replacement requirements.

Statement showing the estimates of current demand for diesel fuel injection equipment as furnished by the Development Wing and producers

(Figures in Nos.)

Item	Development Wing.			MICO			Fuel injections Ltd.	
	Original equip-ment	Replace-ment	Total	Original equip-ment	Replace-ment	Total	Original equip-ment	Replace-ment
1. Single cylinder pumps.	30,000	9,000	39,000	40,000	3,000	43,000	Not furnished.	7,500
2. Multi-cylinder pumps.	22,000	3,000	25,000	19,000	600	19,600	Not furnished.	
3. Nozzle-holders	156,000	29,000	185,000	139,100	7,000	146,100	Not furnished.	17,000
4. Nozzles . .	156,000	354,000	510,000	139,100	275,000	414,100	Do.	425,000
5. Elements . .	Not furnished.			149,900	170,000	319,900	Do.	280,000
6. Delivery valves.	Not furnished.			149,900	150,000	299,900	Do.	425,000

7.3. Diesel fuel injection equipment is fitted to single cylinder stationary engines, diesel automobiles newly manufactured, petrol automobiles which are converted from year to year into diesel vehicles and industrial engines including tractors. The demand may be for original equipment or in the case of existing machines, for replacement purposes.

7.4. The Development Wing's class-wise estimates of engines which are in use and which will be added during 1959 were discussed in detail at the public inquiry. The estimates were examined in the light of current production of stationary diesel engines, MICO's estimated sales of pumps for original equipment for 1959 and sales and imports of single cylinder pumps for the previous two years. The following figures were agreed to.

	Estimates of new engines	Estimates of existing diesel engines
	Nos.	Nos.
Single cylinder stationary engines	40,000	300,000
Diesel vehicles (six cylinders)	17,000	95,000
Petrol vehicles converted into diesel vehicles (six cylinders)	3,000	..
Industrial engines (four cylinders)	1,500	37,500

7.5. As for replacement, the normal life of various components of fuel injection equipment was discussed at the public inquiry and the consensus of opinion was that the following rates of replacement represented more or less correctly actual working conditions in this country.

Items	Rate of replacement
Single cylinder pumps	3 per cent.
Multi-cylinder pumps	3 per cent.
Nozzle-holders	2 per cent.
Nozzles	Once in 2 years.
Elements	Once in 3 years for stationary and industrial engines; and once in 2½ years for diesel vehicles.
Delivery valves	90 per cent of elements replaced.

7.6. On the above basis, the demand for various components for the current year works out as follows:

(In Nos.)			
	Original Equip-ment.	Replace-ment purpose	Total
1. Single cylinder pumps	40,000	9,000	49,000
2. Multi-cylinder pumps	21,500	3,975	25,475
3. Nozzle-holders	166,000	20,400	186,400
4. Nozzles	166,000	510,000	676,000
5. Elements	166,000	378,000	544,000
6. Delivery valves	166,000	340,200	506,200

The details are given in Appendix III.

7.7. As for the future, we expect the demand to increase by about 30 per cent over the next three years.

8.1. The annual installed capacity on single shift of individual manufacturers is given below. The capacity of Kulko Engineering Works is not taken into account as its production is meant exclusively for its own use.

(In Nos.)			
Product	MICO	Fuel Injections Ltd.	Total
1. Single cylinder pumps	12,000	..	12,000
2. Multi-cylinder pumps	6,600	..	6,600
3. Nozzle-holders	48,000	..	48,000
4. Nozzles	72,000	36,000	108,000
5. Elements	66,000	14,400*	80,400
6. Delivery valves	66,000	..	66,000

*Fuel Injections Ltd. reported that to raise its output above 12,000 to its licensed capacity, additional ancillary equipment is necessary.

8.2. As indicated in paragraph 6.2.1., MICO has arranged to raise its capacity on two-shift basis for elements, delivery valves and nozzles within the next year and a half as follows:—

Items	Nos.
Elements	165,000
Delivery valves	165,000
Nozzles	220,000

8.3. According to its phased programme approved by Government, Fuel Injections Ltd. expects by the end of the current year to manufacture at a monthly rate 2,000 nozzle-holders having a clamping capacity of 17 mm. and 1,500 single cylinder pumps, A and B types.

8.4. Comparing existing capacity and its projected expansion in the near future with our estimates of demand given above, it is clear that domestic production will fall short of demand for some time to come.

8.5. The production of MICO and Fuel Injections Ltd. from 1957 is given below:

Products	(Figures in Nos.)					
	MICO			Fuel Injections Ltd.		
	1957	1958	1959 (Jan-Jun.)	1957	1958	1959 (Jan.-June)
1. Single cylinder pumps.	17,947	31,755	21,631	..	..	..
2. Multi-cylinder pumps	2,487	4,589	3,895	..	..	..
3. Nozzle-holders .	42,000	62,724	45,857	..	..	..
4. *Elements . . .	50,042	94,778	75,989	127	11,676	6,016
5. *Delivery valves .	78,061	74,658	67,896	..	..	..
6. *Nozzles	32,486	85,943	29,826	8,325	12,494	18,079

*Production given in the table is for replacement only.

It will be observed that since our last inquiry in 1957, the output of the industry has recorded striking expansion.

9.1. The main raw materials required by the industry are given below:

Raw materials.

- (i) Bright drawn free cutting mild steel round and hexagonal bars;
- (ii) Case hardening bright drawn mild steel bars;
- (iii) Bright drawn hardening alloy steel bars (including H. S. S.);

- (iv) Case hardening hot-rolled mild steel bars;
- (v) Low carbon steel forgings;
- (vi) Free cutting bright drawn brass bars;
- (vii) Cast iron castings of special alloy.

Of these items, the first three are not manufactured in India and continue to be imported as before. MICO is free to obtain its supplies of imported raw materials from any source but prefers to make its purchases from its collaborators in Germany for two reasons. In the first place, the arrangement ensures supply of material already tested for its quality and composition and secondly, it offers all advantages of bulk purchase.

9.2. In paragraph 5 we have referred to MICO's complaint regarding despatch of hot rolled case hardening mild steel bars from Tata Iron & Steel Co., without proper casing. In spite of our suggestion in the last Report Tata Iron & Steel Co. still continues to send these bars without casing. It is reported to us that the wastage caused by cutting off the bent portions of these bars is sometimes as high as 20 per cent. As MICO has expressed its willingness to bear the extra expenditure to be incurred in casing the bars, we suggest that Tata Iron & Steel Co., may re-examine the position or arrive at alternative arrangements in mutual consultation, such as supply from its local stockists or distributors.

9.3. *Castings and forgings.*

9.3.1. Castings and forgings account for a small fraction of the total costs of the finished products. MICO reports that all its requirements of castings are being met at present by Mysore Kirloskar Ltd., Harihar. It reports further that among other sources of supply, Hindustan Aircraft Ltd. and Cooper Engineering Works are in a position to supply castings of the required standard but deliveries are uncertain in the case of the former and the capacity of the latter is limited by prior commitments. As for forgings, the only source of supply at present is Praga Tools Corporation, Hyderabad which is in a position to meet the current requirements of MICO. Of the other three possible sources of supply, the Rifle Factory, Ishapore, Kumar Engineering Works, Bombay, and Sudsons Private Ltd., Calcutta, the first is unable to specify any delivery time, the second has only recently received a small supply of steel for a trial order and the third is still awaiting supply of raw material.

9.3.2. Fuel Injections Ltd. claims to obtain its castings and forgings from indigenous sources.

9.4. According to data furnished by MICO the share of indigenous raw material in the total costs of raw materials is 35·9 per cent in the case of single cylinder pumps including elements and delivery valves, 62·9 per cent in the case of nozzle-holders and 8 per cent in the case of nozzles.

9.5. MICO represented during the course of the inquiry that the present practice of basing import licences for raw materials on past consumption limits its capacity to meet the needs of customers like Telco, Ashok Leyland and Automobile Products of India, who wish to change over from imported equipment to the domestically manufactured products or those like Simpsons which are increasing their capacity. The situation could be met by the issue, during one licensing period of licences for raw materials to MICO and also for the required equipment to its prospective customers. Since the allotment of increased foreign exchange for a single period offers substantial prospects of future economy in foreign exchange, we recommend that MICO's representation in this behalf may be considered favourably.

9.6. MICO also represented that under existing import restrictions, it is not able to maintain current stocks of imported raw materials beyond three to four months' requirements. According to the Company, this is not sufficient to assure uninterrupted flow of, and involves considerable risk to, production. We feel that there is some force in MICO's representation which may be considered sympathetically.

10.1. At the last inquiry the quality of MICO's products was reported to be satisfactory while Fuel Injections Ltd. complained of persistence of some prejudice against its products.

10.2. In connection with the present inquiry, the producers claimed that they have further improved arrangements for inspection and quality control. The Development Wing reports that it has received no complaints. The Indian Institute of Science, Bangalore, has expressed the opinion that the domestic product is functionally good, although there is scope for further improvements. Most of the consumers who replied to our questionnaire have expressed satisfaction with the domestic product. Two or three transport authorities, however, alleged certain defects which were brought to the attention of the manufacturers. It was pointed out that some of these difficulties are caused by the conditions under which the products are tested are not always identical with those under which they are intended to operate. During the public inquiry the representative of Bombay State Road Transport Corporation stated that a large number of nozzles supplied by Fuel Injections Ltd. were found to be defective and were subsequently replaced by the manufacturer. The representative of the producer claimed it to be the only instance where his product was found defective and that in no other case did he receive any complaint against the quality of his product. As nozzles are vital components of a nozzle-holder, we recommend that Fuel Injections Ltd., should further strengthen its inspection arrangements and carry out adequate tests before delivery of its products to customers.

10.3. *Standardisation.*—The question of standardisation in relation to diesel fuel injection equipment was discussed at length at the public inquiry. It is understood that the Indian Standards Institution has circulated a draft of specifications relating mainly to sizes and dimensions

connected with the fixing of injection equipment to the engine. We are informed that the B. S. I. has no standards for either sizes or designs and for this reason parts of diesel engines are not interchangeable. Nevertheless the general view expressed was that while latitude in regard to designs was desirable to ensure progress, a good deal could be done to standardise sizes and dimensions. MICO has stated that all dimensions and designs should be standardised which are connected with

- (a) drive of the fuel pump;
- (b) fitting of the fuel pump to the engine;
- (c) carriers of the injection nozzles, namely nozzle-holders;
- (d) outside dimensions of nozzles;
- (e) all threads for carrying pipe connections between engine, fuel tank and fuel injection pump; and
- (f) the sizes of all pipes connected with fuel injection equipment.

In regard to automobile diesel engines, it has pointed out that it is desirable that there should be only a few types varying from each other from a fitting point of view in the height between base of pump and centre line of camshaft drive. At the public inquiry it was mentioned that difficulties regarding quality were due to the fact that conditions under which fuel injection equipment were tested were not uniform. It was, therefore, suggested that tests of these products should be standardised. We have given the whole matter our careful consideration. We are impressed with the view that there should be sufficient latitude in regard to dimensions and features of fuel injection equipment which influence the performance of any individual diesel engine. In regard to the other suggestions referred to above, we recommend that the Indian Standards Institution should examine them in consultation with the interests concerned.

11.1. *Import control policy.*

11.1.1. For the licensing of imports, diesel fuel injection equipment and its components are included in Serial No. 30 (f), Part II of the Import Trade Control Schedule. The import policy pursued since January 1957 is given below :—

During January-June 1957, a quota of 66-2/3 per cent general and soft for all types of fuel injection equipments and their components was fixed for the established importers. But imports of single cylinder pumps and nozzle-holders were restricted to 12½ per cent of the face value of the licences. Imports of elements and delivery valves also were restricted to 10 per cent of quota licences. These quota licences could not be utilised for import of bodies and racks of single cylinder pumps and bodies of nozzle-holders of non-integral type. However, applications from actual users for these spare parts were considered *ad hoc* in consultation with the Development Wing. Past imports of fuel injection equipment of diesel engines of all types, including the road

vehicular type, were taken into account for calculation of quota. During July-September 1957, validity of the licences granted during the previous licensing period was extended by three months. During the next licensing period, i.e., October 1957-March 1958, the quota for established importers was reduced to 40 per cent general and soft. The face value restrictions on imports of single cylinder pumps, nozzle-holders, elements, delivery valves, bodies and racks of single cylinder pumps and bodies of nozzle-holders of non-integral type were continued during this period. Further, during this period, imports of nozzles and parts thereof were allowed to the extent of 50 per cent of the face value of quota licences. The same policy was continued during the subsequent half year April-September 1958, except that the quota for established importers was raised to 50 per cent general and soft. Applications from actual users like private fleet owners were also considered *ad hoc*. Project authorities, nationalised transport companies, Port Trusts, etc. were also allowed to import fuel injection equipment against their licences for spare parts of earth moving equipment and motor vehicle parts to meet their *bona fide* requirements. The same policy was continued during the next licensing period, viz., October 1958-March 1959. In addition, applications from actual users and established importers having firm orders from actual users were considered for the following items on an *ad hoc* basis in consultation with the Development Wing:—

- (a) fuel injection equipment, where pump, nozzle and nozzle-holder is one unit and always of single cylinder type (similar to Cumins or G.M.C. type) and parts thereof,
- (b) distributor type of pump and parts thereof with the exception of nozzle-holders and nozzles,
- (c) all single cylinder pumps with a plunger diameter of 20 mm. and above or a fuel injection capacity of more than 1.75 cc (m) (cubic centimetre) per stroke. Parts of pumps, nozzles and nozzle-holders were not permitted on these additional licences.

During the current licensing period, April-September 1959, the same policy has been continued. Besides, spare parts of tractor diesel engines will be allowed clearance only against licences issued under S. Nos. 30(f)/II and not under S. No. 74(iii)/V of the Import Trade Control Schedule. Quota licences, under "Spare Parts for Agricultural tractors and or tractor-drawn agricultural implements" i.e. Serial No. 74(iii)/V of the Import Trade Control Schedule will also be valid for import of fuel injection equipments and spare parts thereof other than bodies and racks of single cylinder pumps and bodies of nozzle-holders of non-integral type up to a ceiling of Rs. 1,000 per licence.

11.1.2. The import control policy came in for a considerable amount of criticism by the representatives of consumers and importers present at the public inquiry. The representatives of the Bombay Road Transport Corporation and the Bombay Electric Supply & Transport Undertaking alleged that while the import policy provided for the issue

of actual users' licences they have been finding it difficult to obtain licences in time due to delay in obtaining the required certificates from the manufacturers to the effect that the items applied for are not manufactured by them. On the other hand, importers complained that the present face value restrictions on quota licences in respect of imports of single cylinder fuel injection pumps and nozzle-holders and their component parts are very severe and that licences issued are very inadequate to meet the requirements of small scale consumers. They, therefore, pleaded that those items which are not indigenously manufactured should be allowed to be imported without any restriction up to the full value of quota licences. For this purpose and to facilitate the issue of import licences to actual users without delay, it was suggested that a complete list of all components and parts of diesel fuel injection equipment which are produced in the country should be appended to the import control policy. We have examined this issue very carefully and are of the opinion that as the domestic industry manufactures a large number of component parts of fuel injection equipment for different types of diesel engines, it would be very difficult to list in the import policy all the items which are being produced indigenously. We are also convinced that transport organisations like Bombay State Road Transport Corporation would be hard put to if licences for import of parts required by them are not issued quickly. Further, it is difficult for them to foresee their requirements of various parts. For these reasons we recommend that the Development Wing should furnish to the domestic manufacturers of fuel injection equipment a list of fleet owners to whom actual users' licences for component parts of fuel injection equipment are being issued and the manufacturers should furnish to the fleet owners once in six months a complete list of all the items which they manufacture. As regards the contention of importers that licences for such items as are not indigenously manufactured should be issued liberally, we suggest that they should take up the matter with import control authorities.

11.2. Imports.

Imports of single cylinder fuel injection pumps for diesel engines and nozzle-holders, etc. for diesel engines are recorded separately in the Monthly Statistics of the Foreign Trade of India from January 1957. A statement showing country-wise imports of these items during 1957, 1958 and the first four months of 1959 is given in Appendix IV. The aggregate imports of pumps and nozzle-holders, etc. during the periods mentioned above amounted to:—

Year	Single cylinder fuel injection pumps for diesel engines		Nozzle-holders etc. for diesel engines.	
	Quantity (Nos.)	Value (Rs.)	Quantity (Nos.)	Value (Rs.)
1957	7,398	4,93,640	2,15,756	8,09,746
1958	6,770	1,47,763	28,183	3,15,175
1959 (Up to April)	2,532	76,671	15,404	1,81,035

The bulk of imports of pumps and nozzle-holders etc., during 1958 and the first four months of 1959 came from the U.K.

12. The components of diesel fuel injection equipment which are in the protected list are assessed to import duty under item Nos. 75(18) (a) and 75(18)(b) of the First Schedule to the Indian Tariff Act, 1934, the relevant extract from which is reproduced below:—

Item No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rates of duty
				The U.K.	A British Colony	Burma	
75(18) (a)	Single cylinder fuel injection pumps for stationary diesel engines and component parts of such pumps.	Protective	60 per cent <i>ad valorem</i>	..	..	..	December 31st, 1959.
(b)	Nozzle-holders with a clamping capacity up to 1 inch clamping diameter for nozzles (atomisers) for use on stationary or automobile diesel engines and nozzles therefor; and component part of such nozzles and nozzle-holders.	Protective	60 per cent <i>ad valorem</i>	..	..	..	December 31st, 1959.

Under Government of India, Ministry of Finance (Revenue Division) Notification No. 146-Customs, dated 7th September 1955 as subsequently amended by Notification No. 194-Customs, dated 24th December 1955, and Ministry of Finance (Department of Revenue) Notification No. 320-Customs, dated 27th December 1957, nozzle-holders with a clamping capacity up to one inch clamping diameter for nozzles (atomisers) and nozzles therefor and component parts of such nozzles and nozzle-holders, falling under this [i.e., 75(18) (b)] item, if of the United Kingdom manufacture, are exempt from the payment of so much of the customs duty leviable thereon as is in excess of 52½ per cent *ad valorem* :

Provided that the said articles are not also adapted for use as parts and accessories of motor cars including taxi cabs.

13. We have obtained information from the Collector of Customs, Bombay and certain importers about c.i.f. prices, clearing charges etc. and from the High Commissioner of India in the United Kingdom about export prices for single cylinder pumps and nozzle-holders of different types and specifications as given in Appendix V. These data were discussed at the public inquiry and we have decided in the light of the discussion to adopt the c.i.f. prices and landed costs of single cylinder pumps and nozzle-holders (of U.K. origin) of the type and specifications indicated in the table below for comparison with the fair selling prices of corresponding fuel injection equipments which are manufactured by MICO and form the bulk of its production.

Item	Single cylinder pumps.		Nozzle-holders	
	Bryce-AIAA 70/5S 99K(indigenous A-pumps Kirloskar HPFIA 70BS 185)	CAV-BPFIB 60BS 64 (Indigenous B-Pump Coopers HPFIB 60CS 131)	Bryce-AL67SD 249(Indigenous Kirloskar HKBL67 S13)	CAVBKB 35S87 (Indigenous Perkins HKB35) SA369
	Rs.	Rs.	Rs.	Rs.
1. C. i. f. price	40.00	58.16	19.00	15.33
2. Customs duty	24.00	34.90	11.40	9.20
3. Clearing charges	0.40	0.58	0.19	0.15
4. Landed cost	64.40	93.64	30.59	24.68

14.1. Our Cost Accounts Officer has examined the costs of production of single cylinder fuel injection pumps and nozzle-holders produced by MICO. As observed in paragraph 6.2.1. the Company is now manufacturing pumps and nozzle-holders including elements, delivery valves and nozzles but excluding only proprietary parts like springs and washers which are imported. The costs of production were discussed with representatives of the Company. As the Company desires that details of costs should be kept confidential, we are forwarding the report of the Cost Accounts Officer as a confidential enclosure to this Report.

14.2. We give below actual costs of production of single cylinder pumps and nozzle-holders manufactured by MICO as worked out at each stage of manufacture attained by the Company at the time of the three inquiries held till now.

Statement showing analysis of actual cost of production of pumps and nozzle-holders at MICO during the period 1954-58

(Cost per 100 Nos.)

Sl. No.	Items	Oct. 1954 (one month only)				1956				1958			
		Raw material cost	Conversion charges	Packing expenses	Total cost	Raw material cost	Conversion charges	Packing expenses	Total cost	Raw material cost	Conversion charges	Packing expenses	Total cost
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<i>Pumps single cylinder</i>													
1	H-PFIA 70BS-185/175.	1531.62	2955.68	27.48	4514.78	1317.8	2027.1	30.9	3375.8	785.77	2032.05	18.34	2836.16
2	H-PFIB 60CS-131	1960.45	3829.55	35.18	5825.16	1806.4	2433.3	38.1	4267.8	1102.73	2327.42	30.76	3460.91
<i>Nozzle-Holder</i>													
1	H-KBL 67S13	425.18	4973.27	15.99	5414.44	422.9	2804.2	19.3	3246.4	546.61	2118.55	17.79	2682.95
2	H-KB 35 SA 369/359.	341.89	4202.25	15.99	4560.13	357.8	2366.2	10.5	2734.5	598.43	1805.28	9.62	2413.33

It will be seen from the statement that during the period 1954-58, the Company has shown a reduction of 37 to 41 per cent in the cost of production of pumps and 47 to 50 per cent in that of nozzle-holders. These reductions are accounted for by the following factors. The net material cost in respect of pumps shows a reduction of 44 to 49 per cent mainly due to the fact that certain components such as element, barrel, plunger, delivery valve, etc., which were hitherto imported in semi-finished condition and priced as such in 1954 and 1956, are now manufactured in the factory. The conversion charges for pumps are also lowered by 31 to 39 per cent. As regards nozzle-holders, although the net material cost increased by 29 to 75 per cent since 1954, the conversion charges show a reduction of about 57 per cent which more than compensate for the increase in material cost. The increase in the material cost of nozzle-holders is mainly accounted for by steel forgings and springs, the prices of which have increased substantially since 1956. Packing charges also show considerable reduction in 1958 but its incidence on the cost of production is negligible.

14.3. The following statement gives the 1958 actual costs and our estimates for the future for single cylinder pumps and nozzle-holders :—



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Statement showing the fair ex-works price of diesel fuel injection equipment (pumps and nozzle-holders) for 1958 and for future.

(Cost per 100 Nos.)

Type	A-Pump Kirlskar	B-Pump Cooper	KBL Nozzle-holder Kirlskar	KB Nozzle-holder Perkins
Reference No.	HPF IA 70 BS 185	HPF IB 60 CS 131	HKBL 67S 13	HKB 35 SA 369
	Actuals for 1958	Actuals for 1958	Actuals for 1958	Actuals for 1958
	Estimates for future	Estimates for future	Estimates for future	Estimates for future
	Rs.	Rs.	Rs.	Rs.
(a) Raw materials (including Customs Duty)	426.58	646.72	444.87	496.20
(b) Imported components (including customs duty)	333.10	163.48	95.44	95.41
(c) Locally purchased materials	18.31	18.29	0.89	0.89
TOTAL	777.99	649.38	541.20	592.50
Add wastage in assembly	7.78	6.49	5.41	5.93
1. Total material cost	785.77	655.87	546.61	598.43
2. Manufacturing charges	2032.05	1761.91	2118.55	1805.28
3. Total cost	2817.82	2417.78	2665.16	2403.71
4. Packing charges	18.34	18.34	17.79	9.62
5. Add for contingencies @ 5%	..	121.81	..	..
6. Return on capital employed	446.61	342.57	502.77	435.92
7. Royalty for Bosch	256.50	243.00	151.88	124.20
8. Fair ex-works price per 100 Nos.	3539.27	3143.50	3337.60	2973.45
8a. Fair ex-works price per piece	35.39	31.43	33.38	29.73

14.4. Our estimates of costs for the future are based on the following production expected on the basis of existing equipment and the trend of production obtained during January-April 1959.

	Nos.
Single cylinder pumps	33,000
Nozzle-holders.	80,000
Elements	160,000
Delivery Valves	150,000
Nozzles	125,000
Filters	6,500

The quantities of materials required for each product and wastages etc. have been kept at the same level as in 1958. An increase in price of 8 per cent for raw materials and 10 per cent for components which has been effected by the foreign collaborator for supplies from 1st July 1959 has been provided. The effective royalty in conformity with the terms of agreement with Robert Bosch GmbH worked out to 3.6 per cent on the net sale price. The capital employed has been assessed at the net value of fixed assets and working capital equivalent to seven months' cost of production and a return of 10 per cent has been allowed on it. An allowance for contingency at 5 per cent has also been added.

15. The following statement compares fair ex-works prices of indigenous products of the types and specifications indicated therein with the c.i.f. prices and landed costs without duty, of the corresponding imported articles.

Comparison of fair ex-works prices with landed costs without duty

Indigenous Ref. No.	Pumps		Nozzle-holders	
	A-Pump-Kirloskar HPF 1A 70 BS 185	B-Pump-Coopers HPF 1B 60 CS 131	Kirloskar HKBL 67S 13	Perkins HKB 35 SA 369
Imported Ref. No.	Bryce-AIAA 70/SS99K	CAV-BPF 1B 60 BS64	Bryce-AL 67 SD 249	CAV-BKB 35 S 87
	Rs.	Rs.	Rs.	Rs.
1. Fair ex-works price	31.43	38.75	29.69	25.71
2. C. i. f.	40.00	58.16	19.00	15.33
3. Clearing charges at 1 per cent on (2)	0.40	0.58	0.19	0.15
4. Landed cost without duty (2 plus 3)	40.40	58.74	19.19	15.48
5. Difference between fair ex-works price and landed cost without duty (4-1)	(+)8.97	(+)19.99	(-)10.50	(-)10.23
6. Difference as a percentage on c.i.f.	(+)22.43	(+)34.37	(-)55.26	(-)66.73
Existing rate of duty	60 per cent	60 per cent	60 per cent	60 per cent

(+) Advantage.
(-) Disadvantage.

16.1. The comparison of landed costs ex-duty with costs of manufacture of indigenous products in question indicates that domestic pumps are actually at a substantial advantage as compared with the foreign article and need no protection, while nozzle-holders require protection of about 55 to 67 per cent according to type and specifications. As pointed out in our previous Report, it is neither administratively feasible nor fair to the consumer that finished articles and their components should be treated differently in regard to protection. The object of protection is to develop the industry as a whole. As in the previous two Reports therefore we determine the quantum of protection by taking the weighted average of the advantage enjoyed or disadvantage suffered by the producer in undertaking the manufacture of the two products. The calculations are set forth in the following table :—

	Rs.
1. *Ex-works cost for producing 16,000 A-Pumps at Rs. 31·43 each	5,02,880
2. Ex-works cost for producing 17,000 B-pumps at Rs. 38·75 each	6,58,750
3. Ex-works cost for producing 17,000 KBL nozzle-holders at Rs. 29·69 each	5,04,730
4. Ex-works cost for producing 60,000 KB nozzle-holders at Rs. 25·71 each	15,42,600
5. Total works cost	32,08,960
6. Landed cost without duty for importing 16,000 A-pumps at Rs. 40·40	6,46,400
7. Landed cost without duty for importing 17,000 B-pumps at Rs. 58·74	9,98,580
8. Landed cost without duty for importing 17,000 KBL nozzle-holders at Rs. 19·19	3,26,230
9. Landed cost without duty for importing 60,000 KB nozzle-holders at Rs. 15·48	9,28,800
10. Total landed cost without duty	29,00,010
11. Total disadvantage (5—10)	3,08,950
12. Total c.i.f. for 16,000 A-pumps at Rs. 40·00 each,	6,40,000
17,000 B-pumps at Rs. 58·16 each.	9,88,720
17,000 KBL nozzle-holders at Rs. 19·00 each	3,23,000
60,000 KB nozzle-holders at Rs. 15·33 each	9,19,800
	28,71,520
13. Disadvantage as percentage of c.i.f. (11 as a % of 12)	10·76%

16.2. From our computations given above, it would appear that a duty of only 11 per cent should be adequate to protect the diesel fuel injection equipment industry. But there are strong reasons why protection should be continued and the rate of protection should be higher than the duty indicated above. In the first place, the demand for this

equipment is expanding rapidly and Fuel Injections Ltd. which must supply a portion of this demand is still in the initial stages of manufacture of pumps and nozzle-holders. Secondly, pumps and nozzle-holders are vital components of automobile engines. Since the lowest standard rate of duty on protected components of automobile engines is 25 per cent *ad valorem* [vide I.C.T. item Nos. 75(11) and 75(12)], it would be hardly desirable to allow components of fuel injection equipment at a still lower rate of duty. It must also not be overlooked that MICO is at present engaged in developing the manufacture of multi-cylinder pumps which are vital to the growth of automobile and other diesel engine manufacturing industries and that multi-cylinder pumps have been excluded from the scope of our inquiry only because the indigenous manufacture of their content has not progressed beyond 55 per cent. For these reasons, we recommended that protection to the industry should be continued for a further period of four years ending 31st December 1963 and that the rate of protective duty should be reduced from the existing level of 60 per cent *ad valorem* (standard) to 25 per cent *ad valorem*.

17. While recommending continuance of protection, we would like to impress on Motor Industries Co. the need to bring its selling prices into reasonable relationship with fair ex-works prices as estimated by us. Even allowing for the fact that our fair ex-works prices exclude selling expenses, the existing margins between MICO's list prices and our fair ex-works prices are excessively wide. We have taken note of the fact that MICO has reduced its list prices by 5 per cent since January 1959 but this reduction hardly alters the situation. Our study of the profits made by the Company for the years 1956, 1957 and 1958 reinforces our conclusion that the Company must take steps to pass on to the consumer and the country in general a substantial portion of the benefit conferred on it by protection.

18. Our conclusions and recommendations are summarised below:

Summary of conclusions and recommendations. (i) The domestic demand for the current year both for original equipment and replacement is estimated at 49,000 single cylinder pumps; 25,475 multi-cylinder pumps; 186,400 nozzle-holders; 676,000 nozzles; 544,000 elements; and 506,200 delivery valves. The demand is likely to increase by about 30 per cent over the next three years.

[Paragraphs 7.6 & 7.7.]

(ii) The representation of Motor Industries Co. Ltd. regarding issue of import licences for raw materials may be considered favourably.

[Paragraph 9.5.]

(iii) Fuel Injections Ltd. should further strengthen its inspection arrangements and carry out adequate tests before delivery of its products to customers.

[Paragraph 10.2.]

(iv) The Indian Standards Institution should examine the various suggestions for standardisation referred to in paragraph 10.3, in consultation with the interests concerned.

[Paragraph 10.3.]

(v) The Development Wing should furnish to the domestic manufacturers of fuel injection equipment a list of fleet owners to whom actual users' licences for component parts of fuel injection equipment are being issued and the manufacturers should furnish to the fleet owners once in six months a complete list of all the items which they manufacture.

[Paragraph 11.1.2.]

(vi) Protection granted to the diesel fuel injection equipment industry should be continued for a further period of four years ending 31st December 1963 and the rate of protective duty should be reduced from the existing level of 60 per cent *ad valorem* (standard) to 25 per cent *ad valorem*.

[Paragraph 16.2.]

(vii) Motor Industries Co. Ltd. must take steps to pass on to the consumer and the country in general a substantial portion of the benefit conferred on it by protection.

[Paragraph 17.]

19. We wish to thank the manufacturers, importers and consumers for furnishing us with valuable information in connection with this inquiry.

Acknowledgments

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C. RAMASUBBAN,
Chairman.

S. K. MURANJAN,
Member.

J. N. DUTTA,
Member.

R. S. BHATT,
Member.

RAMA VARMA,
Secretary.

BOMBAY;
Dated 4th September, 1959. }

APPENDIX I

[Vide PARAGRAPH 3·1]

List of firms, bodies and Government Departments to whom the Commission's questionnaires and letters were issued and from whom replies or memoranda were received

*Indicates those who have replied or sent memoranda.

A. PRODUCERS :

- *1. Motor Industries, Co. Ltd., Post Box. No. 93, Bangalore-1.
- *2. Fuel Injections Ltd., 43, Forbes Street, Fort, Bombay-1.
- *3. Kulko Engineering Works Ltd., Ichalkaranji, Kolhapur (Distt.).

B. IMPORTERS :

- *1. Associated Exports Imports Corporation, 8-B, Lall Bazar Street, Calcutta-1.
- *2. Eruch D. Engineer & Co. Crossley House, Apollo Street, Bombay.
- *3. Greaves Cotton & Co. Ltd., 1, Forbes Street, Fort, Bombay-1.
- 4. Honesty Trading Corporation, Beaumon Chambers, Meadows Street, Fort, Bombay-1.
- *5. Industrial & Agricultural Engineering Co., (Bombay) Ltd., 43, Forbes Street, Bombay-1.
- *6. Indo-Universal Engineering Co. Private Ltd., Chateau Windsor, Churchgate Extension, Bombay-1.
- *7. Ingersoll Rand (India) Private Ltd., Dena Bank Building 17-B, Horniman Circle, Bombay.
- 8. J. N. Marshall & Co., Savoy Chambers, 5, Wallace Street, Fort, Bombay.
- 9. K. B. Thaker & Co., P. B. No. 1136, 140, Meadows Street, Fort, Bombay.
- *10. Larsen & Toubro Ltd., I. C. House, Dougall Road, Ballard Estate, Bombay.
- *11. Lucas Indian Service Ltd., 15, Queen's Road, Bombay-1.
- *12. Motor Industries Ltd., 41, Queen's Road, Bombay.
- *13. Martin Burn Ltd., 12, Mission Row, Calcutta.
- *14. Parry & Co. Ltd., Dare House, 1st Line Beach, Madras-1.
- 15. Sundaram Motors Private Ltd., Mount Road, Madras-6.
- *16. Voltas Limited, Chinchpokli Road, Bombay-12.
- 17. William Jacks & Co., Ltd., Hamilton House, Ballard Estate, Fort, Bombay-1.
- 18. W. H. Brady & Co. Ltd., Brady House, 12-14 Veer Nariman Road, Bombay.
- *19. Rameshchandra Jeshingbhai, 216, Commerce House, 140, Meadows Street, Fort, Bombay.
- *20. M. B. Maghanlal & Co., Garedia Kuva Road, P. O. Box 102, Rajkot.
- 21. Premier Auto Electric Private Ltd., 69, Tardeo Road, Bombay-7.
- *22. Madras Auto Service Private Ltd., 37, Mount Road, Madras-6.

CONSUMERS :

(i) Manufacturers of Diesel Engines :

- *1. Cooper Engineering Ltd., Satara Road, Bombay State.
- 2. Dandayuthapani Foundry Ltd., Pappanaickenpalayam, Coimbatore.
- *3. Indian Commercial Co. Ltd., 41, Apollo Bunder, Bombay-1.
- *4. Indian National Diesel Engine Co. Ltd., P-61, Circular Garden Reach Road, Kidderpore, Calcutta-23.

- *5. Kulko Engineering Works Ltd., Ichalkaranji, Kolhapur (Dist.).
- *6. Mazagon Docks Ltd., Dockyard Road, Bombay-10.
- *7. Oriental Engineering Works Ltd., Industrial Area, Yamunanagar, P. O. Jagadhri (Ambala Dt.).
- *8. Pakco Engineering Private Ltd., P. O. Box No. 14, Kolhapur.
- *9. Ruston & Hornsby India (Private) Ltd., 1, Forbes Street, P. O. Box 91, Fort, Bombay-1.
- *10. Textool Co. Ltd., Post Box. No. 221, Ganapathy P. O., Coimbatore-6.
- 11. Premier Auto Electric Private Ltd., 69, Tardeo Road, Bombay-7.
- 12. Rambir Engineering & Mill Store Co., G. T. Road, Ludhiana.
- 13. The Zamindara Engineering Co., P. O. Box No. 7, Fazilka.
- 14. Rameshchandra Jeshingbhai, 216, Commerce House, 140, Medows Street, Fort, Bombay-1.
- 15. M. B. Maganlal & Co., Gardeia Kuva Road, Post Box No. 102, Rajkot (India).
- 16. Grand Motor Works & Co., Gondal Road, Rajkot.
- 17. K. Trivedi & Co., Bombay Mutual Chambers, 19-21, Hamam Street, Bombay-1.
- 18. Joshi Transport Co., Porbandar, D&D' Engineering Private Ltd., Dee Buildings Avanasahi Road, Coimbatore.
- 19. Machinery Sales Corporation, 5, Tamarind House, Tamarind Land, Fort, Bombay-1.
- 20. Jayems Engineering Co., Warden House, Sir Phiroze Shah Mehta Road, Bombay-1.

(ii) *Manufacturers of Automobile Diesel Engines :*

- *21. Automobile Products of India Ltd., Bhandup, Bombay.
- *22. Simpson & Co. Ltd., Mount Road, Madras-2.

(iii) *Manufacturers of Automobiles Diesel Vehicles :*

- *23. Ashok-Leyland Ltd., 38, Mount Road, Madras-2.
- 24. Hindustan Motors Ltd., 8, Royal Exchange Place, Calcutta.
- *25. Premier Automobiles Ltd., Agra Road, Kurla, Bombay.
- *26. The Tata Locomotive & Engineering Co., Ltd., Bombay House, Bruce Street, Bombay-1.

(iv) *Dealers of Automobiles :*

- *27. The Standard Motor Products of India Ltd., 29, Mount Road, Madras-2.
- 28. Mahindra & Mahindra Ltd., Gateway Building, Apollo Street, Fort, Bombay.

(v) *Fleet Owners :*

- 29. Bangalore Transport Services. Wilson Gardens, Bangalore-2.
- *30. Indra Motors, Kurali, Ambala Dt. (Punjab).
- 31. P. S. N. Motors Private Ltd., Trichur.
- 32. T. N. Venkatasubba Reddy & Co., Madanapalle.
- *33. Southern Roadways Ltd., West Veli Street, Madurai.
- 34. Dy. Commissioner, Board of Revenue, Hirakud Land Organisation, Sambalpur.
- *35. B. E. S. T. Undertaking, Electric House, Colaba, Bombay-5.
- *36. The Commissioner, Bombay Municipal Corporation, Bombay.
- 37. The Secretary, Bombay Port Trust, Ballard Estate, Bombay.
- *38. The Commissioners for the Port of Calcutta, 15, Strand Road, Calcutta.

(vi) *State Transport Services :*

- *39. Director, State Transport, Assam, Shillong.
- *40. Chairman, Bombay State Road Transport Corporation, Central Office, 80-81, Dr. Annie Beasant Road, Bombay-18.
- 41. Director, Kerala State Transport, Trivandrum.

- *42. General Manager, Andhra Pradesh Road Transport, Murshirabad, Hyderabad (Dn.)
- *43. Chief Administrative Officer, Directorate of Transportation, Govt. of West Bengal, Nilgunge Road, 24-Parganas, West Bengal.
- 44. Honorary Director, Madras State Transport Department, Mount Road, Madras
- 45. General Manager, Punjab Roadways, Amritsar.
- *46. General Manager, Mysore Government Road Transport Department, Bangalore
- *47. Manager, Rajya Transport, Patna-2.
- *48. Transport Manager, Poona Municipal Transport, Poona-2.

(vii) *Railways :*

- *49. Controller of Stores, North-Eastern Railways, Gorakhpur.
- *50. Controller of Stores, Central Railway, Bombay.
- 51. General Manager, Southern Railway, Perambur, Madras-23.
- 52. General Manager, Eastern Railway, Calcutta.
- *53. General Manager, Northern Railway, New Delhi.
- 54. General Manager, South Eastern Railway, Calcutta.
- 55. Controller of Stores, Western Railway, Churchgate, Bombay.
- 56. Chief Administrative Officer, Integral Coach Factory, Perambur, Madras.
- *57. General Manager, Chittaranjan Locomotive Works, Chittaranjan.

D. ASSOCIATIONS :

- 1. Automobile Manufacturers Association of India, India Exchange, Calcutta.
- *2. Secretary, Engineering Association of India, India Exchange, Calcutta-1.
- 3. The Secretary, Association of Engine Manufacturers of India, C/o. Kirloskar Oil Engines Ltd., Kirkee Poona-3.
- *4. Bombay Motor Merchant's Association, Sukhsagar, Sandhurst Bridge, Bombay-7.
- 5. Automobile Ancillary Industries Association, Victoria Mills Estate, Gamdevi Bombay-7.
- 6. Calcutta Motor Dealer's Association, P-6 Mission Row Extension, Calcutta.
- 7. All India Automobile & Ancillary Industries Association, Brabourne Stadium, 87, Veer Nariman Road, Bombay-1.

E. GOVERNMENT DEPARTMENTS :

- *1. Senior Industrial Advisor (Engineering), Ministry of Commerce & Industry, Development Wing, Udyog Bhavan, King Edward Road, New Delhi.
- *2. Director, Indian Standards Institution, Manak Bhavan, 9, Mathura Road, New Delhi.
- 3. Director General of Supplies and Disposals, Government of India, New Delhi.
- 4. Secretary to the Government of India, Ministry of Defence, Government of India, New Delhi.
- 5. Secretary to the Government of India, Ministry of Irrigation and Power, New Delhi.
- 6. Secretary, Railway Board, New Delhi.
- *7. Director, National Physical Laboratory, Hillside Road, New Delhi-12.
- *8. Director, National Metallurgical Laboratory, Jamshedpur.
- *9. Director, Indian Institute of Science, Bangalore.
- *10. The High Commission of India, Commerce Department, India House, Aldwych, London W.C.-2.
- *11. Collector of Customs, Bombay.
- 12. Collector of Customs, Calcutta.
- 13. Collector of Customs, Cochin.
- *14. Collector of Customs, Madras.

APPENDIX II

[Vide PARAGRAPH 3.4]

List of persons who attended the public inquiry on 30th July, 1959

A. PRODUCERS :

1. Mr. E. Lang	}	. . .	Representing	Motor, Industries Co. Ltd.
2. Shri D. N. Vatcha				
3. Shri R. D. Char	}	. . .	"	Fuel Injections Ltd., 43, Forbes Street, Fort, Bombay-1.
4. Shri L. D. Char				
5. Shri M. L. Bhagwat		. . .	"	Kulko Engineering Works, Ltd., Ichalkaranji, Kolhapur (Dist.).

B. IMPORTERS :

1. Shri K. R. Patel	}	. . .	"	Associated Exports Imports Corporation, 8-B, Lall Bazar Street, Calcutta-1.
2. Shri N. K. Patel				
3. Mr. W. H. Thurgur	}	. . .	"	Greaves Cotton & Co. Ltd., 1, Forbes Street Fort, Bombay-1.
4. N. K. Patel				
5. Shri B. K. Garudachar	}	. . .	"	Industrial & Agricultural Engineering Co. Ltd., 43, Forbes Street, Bombay.
6. Shri V. Ramaswamy				
7. Mr. A. Gahtan	}	. . .	"	Larsen & Toubro Ltd., I. C. House, Dougall Road, Ballard Estate, Bombay-1.
8. Shri M. V. Mahajan				
9. Shri N. T. H. Ghaswalla	}	. . .	"	Lucas Indian Service Ltd., 15, Queens Road, Bombay-1.
10. Mr. R. E. Smith				
11. Mr. P. B. Pain	}	. . .	"	Martin Burn Ltd., 12, Mission Row, Calcutta.
12. Shri R. N. Kapur				
13. Shri K. B. Setna				
14. Shri B. M. Jathady		. . .	"	Parry & Co. Ltd., Dare House, 1st Line Beach, Madras.-1.
15. Mr. W. N. Newnes		. . .	"	Voltas Limited, Chinchpokli Road, Bombay-12.
16. Shri L. Suchde		. . .	"	K. Suchde Bros., P. B. No. 1026, Bombay-1.
17. Shri K. B. Thakar		. . .	"	K. B. Thakar & Co. P. B. No. 1136, Bombay-1.
18. Shri P. D. Patel		. . .	"	Sigil (India) Services Ltd., P. B. No. 852, Bombay-1.

C. CONSUMERS :*(i) Manufacturers of Automobile Diesel Engines:*

- | | | | | | | |
|---------------------------|---|---|---|---|--------------|---|
| 1. Shri J. Watsa | } | . | . | . | Representing | Automobile Products of India, Bhandup, Bombay 40. |
| 2. Mr. N. Singleton | | | | | | |
| 3. Shri S. Krishnamoorthy | . | . | . | . | " | Simpson & Co., Ltd., Mount Road, Madras-2. |

(ii) Manufacturers of Automobile Diesel Vehicles:

- | | | | | | | |
|-----------------------|---|---|---|---|---|---|
| 4. Shri N. Ramamurthi | . | . | . | . | " | Ashok-Leyland Ltd., 38, Mount Road, Madras-2. |
| 5. Shri S. K. Shah | . | . | . | . | " | Premier Automobiles Ltd., Agra Road, Kurla, Bombay. |
| 6. Shri A. B. Parakh | } | . | . | . | " | Tata Locomotive & Engineering Co. Ltd., Bruce Street, Bombay-1. |
| 7. Shri A. Natarajan | | | | | | |

(iii) Manufacturers of Stationary Diesel Engines.

- | | | | | | | |
|------------------------|---|---|---|---|---|--|
| 8. Mr. J. Morton Brown | } | . | . | . | " | Mazagon Docks Ltd., Dockyard Road, Bombay-10. |
| 9. Mr. J. Shaw | | | | | | |
| 10. Shri N. R. Powar | } | . | . | . | " | Pakco Engineering Ltd., P. O. Box No. 14, Kolhapur. |
| 11. Shri C. F. Mehta | | | | | | |
| 12. Mr. J. A. Rangel | . | . | . | . | " | Ruston & Hornsby India (Private) Ltd., P. O. Box No. 91, Bombay-1. |

(iv) Dealers in Automobiles:

- | | | | | | | |
|----------------------|---|---|---|---|---|---|
| 13. Shri N. Kureishi | . | . | . | . | " | Mahindra & Mahindra Ltd., Gateway Buildings, Apollo Street, Fort, Bombay-1. |
|----------------------|---|---|---|---|---|---|

(v) Automobile Fleet Owners:

- | | | | | | | |
|--------------------------|---|---|---|---|---|---|
| 14. Shri M. G. Bhat | . | . | . | . | " | B. E. S. T. Undertaking Electric House, Colaba, Bombay. |
| 15. Shri S. N. Shirodkar | } | . | . | . | " | Bombay State Road, Transport Corporation, Central Office, 80-81, Dr. Annie Beasant Road, Bombay-18. |
| 16. Shri M. K. Mantri | | | | | | |
| 17. Mr. S. Johns | | | | | | |

D. ASSOCIATIONS:

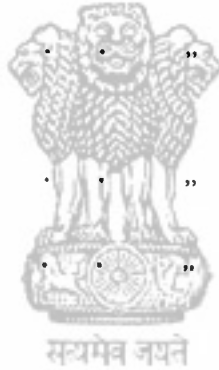
- | | | | | | | |
|------------------------|---|---|---|---|---|---|
| 1. Mr. H. R. Aslot | } | . | . | . | " | Automobile Ancillary Industries Association, Brabourne Stadium 87, Veer Nariman Road, Bombay-1. |
| 2. Shri V. S. Nair | | | | | | |
| 3. Shri S. B. Anand | } | . | . | . | " | Motor Merchants' Association, Sukhsagar, Sandhurst Bridge, Bombay-7. |
| 4. Shri K. N. Sanghani | | | | | | |

E. OTHERS :

1. Shri N. Balakrishna,
Honorary Secretary, (Technical),
Indian Institute of Road Transport,
BEST House, P. B. No. 192, Bom-
bay-1.
2. Shri K. Gidwancy } . Representing "Automobile News" Ama
3. Mr. H. Canaran (Observers) } House. 1, Arthur Bunder,
Coloba Bombay-5.
4. Shri M. B. Tamhankar } . " " "Auto-Spark" 457, Val-
5. Shri R. M. Kotch (Observers) } labhai Patel Road Bom-
bay-4.

F. GOVERNMENT DEPARTMENTS :

1. Shri N. T. Gopala Iyengar . . . " Ministry of Commerce
& Industry, (Development
Wing), Government of
India, New Delhi.
2. Lt. Col. P. Sharma } . . . " Ministry of Defence, Govt.
3. Major C. Sundaram } of India, New Delhi.
4. Shri J. K. Kadri . . . " Director General of Sup-
plies & Disposals, Mi-
nistry of Works, Housing
and Supply, Govt. of
India, New Delhi.
5. Shri N. K. Ramaswamy . . . " Indian Standards Insti-
tution, 9, Manak Bhavan,
Mathura Road, New Delhi.
6. Shri P. Ramabrahmam . . . " Collector of Customs, New
Custom House, Ballard
Estate, Bombay-1.



APPENDIX III

[Vide PARAGRAPH 7.6]

Statement showing details of estimates of domestic demand for various components of Diesel Fuel Injection Equipment

Components of Diesel Fuel Injection Equipment	Demand for Original Equipment				Demand for Replacement Purposes					Total demand for Original Equipment & Replacement purposes Col. (4+8)
	Estimated current demand for Diesel Engines				Estimated number of Diesel Engines in the country					
	40,000 Stationary Engines of 1 Cylinder each	21,500 Diesel Vehicles of Multi-Cylinder	Total demand		300,000 Stationary Engines of 1 Cylinder each	37,500 Diesel Engines of 4 Cylinders each	95,000 Diesel Vehicles of 6 cylinders each	Total demand		
	2	3	4	5	6	7	8	9		
1 Single Cylinder Pumps	40,000	..	40,000	9,000 (3%)	..	..	9,000	49,000
2 Multi-Cylinder Pumps	..	21,500	21,500	..	1,125 (3%)	2,850 (3%)	3,975	25,475		
3 Nozzle-holders	40,000	1,26,000	1,66,000	6,000 (2%)	3,000 (2%)	11,400 (2%)	2,0400	1,86,400		
4 Nozzles	40,000	1,26,000	1,66,000	1,50,000 (2 years)	75,000 (2 years)	2,85,000 (2 years)	5,10,000	6,76,000		
5 Elements	40,000	1,26,000	1,66,000	1,00,000 (3 years)	50,000 (3 years)	2,28,000 (2½ years)	3,78,000	5,44,000		
6 Delivery Valves	40,000	1,26,000	1,66,000	*90,000	*45,000	*2,05,200	3,40,000	5,06,200		

NOTE.—1. Out of 21,500 diesel vehicles shown in col. (3), 17,000 are diesel vehicles, 3,000 are conversions into diesel vehicles and 1,500 are diesel operated industrial engines inclusive of tractors.

2. The figures in brackets indicate the rate of replacement or the life of components.

* At 90% of elements.

APPENDIX IV

[Vide PARAGRAPH 11.2]

Statement showing imports of single cylinder fuel injection pumps for diesel engines, nozzle-holders, etc. during 1957, 1958 and 1959 (January-April)

Article and countries from which imported	1957		1958		1959 (January to April)	
	Quantity (Nos.)	Value (Rs.)	Quantity (Nos.)	Value (Rs.)	Quantity (Nos.)	Value (Rs.)
<i>Single Cylinder Fuel Injection Pumps for Diesel Engine :</i>						
U. K.	6,238	3,54,885	6,068	1,11,895	2,502	55,558
Sweden	1	120	..	..	..	..
Germany (West)	470	92,721	289	19,200	1	18,245
Switzerland	N.A.	9,869	..	..	..	..
Italy	N.A.	7,076	130	962	..	..
Austria	1	704	..	..	..	..
Czechoslovakia	650	5,039	..	..	..	..
Hong Kong	N.A.	17,828	..	..	..	..
Japan	29	5,254	225	3,247	..	..
U. S. A.	9	144	58	12,459	29	2,868
TOTAL	7,398	4,93,640	6,770	1,47,763	2,532	76,671

Nozzle-Holders, etc. for Diesel Engines:

U. K.	.	.	.	.	.	.	.	10,772	1,96,787	18,624	1,95,609	6,241	61,256
Denmark	.	.	.	.	.	.	.	1	68,544	..	..	..	..
Germany (West)	.	.	.	.	.	.	.	2,01,360	5,02,062	7,487	79,477	4,836	79,555
Italy	.	.	.	.	.	.	.	450	9,475	1,429	14,483	3,000	18,830
Czechoslovakia	.	.	.	.	.	.	.	1	159	351	3,945	780	4,481
Japan	.	.	.	.	.	.	.	2,946	21,256	93	601	371	2,315
U. S. A.	.	.	.	.	.	.	.	226	11,463	113	13,405	176	14,598
U. S. S. R.	.	.	.	.	.	.	.	..	..	32	1,084	..	..
Austria	.	.	.	.	.	.	.	..	..	20	2,451	..	..
Australia	.	.	.	.	.	.	.	..	..	34	4,110	..	..
TOTAL										28,183	3,15,175	15,404	1,81,035

APPENDIX V

[Vide PARAGRAPH 13]

Statement showing the c.i.f. prices and landed costs of latest imports of single cylinder pumps and nozzle-holders

Sl. No.	Source of information	Origin of import	Date of import	Type and specification	Unit	C.i.f. price	Customs duty 60%	Clearing charges	Landed cost	Remarks
1	2	3	4	5	6	7	8	9	10	11
I. Single cylinder pumps										
1	Collector of Customs, Bombay.	U.K.	2-4-59	For 9H Diesel Engine (Fuel pump)	Each	778.17	466.90	23.35	1268.42	
			4-7-58	DPF IB 61 70BS	"	775.45	465.25	11.60	1252.35	
			..	BPF 1A 60-00 ; 65-00 ; 70-00	"					
2	Lucas Indian Service Private Limited, Bombay	U. K.	12-6-57	BPF 1A 65AS 6062 use 65S- 6310	"	53.83	32.30	0.82	86.95	
			16-9-58	BPF 1A 60-05	"	53.83	32.30	0.82	86.95	
			4-7-58	BPF IB 60B-03. 60C-00 70B-03. 70B-00/90B-00 100B-00. 60C-03. 70B-03 80B-03. 90B-03. 100B-03 80B-04. 100B-104. 60BS-64 60BS-6031. 70BS-64 80C-03. 100BS-6044 100BS-6255 CS 6309						
			..	BPF IB 90CS 570 } BPF IB 100CS 570 }	"	124.63	90.61	3.12	218.36	
3	Greaves Cotton & Co., Bombay.	U.K.	..	BPF IB 70B 03 } BPF IB 80B 03 }	"	112.74	81.96	2.82	197.52	

4	Industrial & Agricultural Engg. Co., Bombay.	U.K.	May '57 to June '59.	AI AA 60/45 15 AI AA 60/55 15 AV AI AA 70/55 11 H AI AA 70-IS 99K AI AB 80/7 AI AB 100/8 AI AB 80/8 AI CB 90/7S 60 AI CB 90/7S 60 AI CB 100/7S 60	43-00 40-00 47-00 53-00	25-80 24-00 28-20 31-80	3-64 .. 4-99 7-26	72-44 64-00 80-19 92-06	F.o.b. quota tion. Catalogue price inclusive of freight, insurance and duty.	
II. Nozzle-holders										
1	Collector of Customs, Bombay.	U.K.	14-4-59 22-4-59	BKB-508-24 BKB-508-507B	222-13 306-67	133-33 184-00	3-20 4-40	358-66 495-07		
2	Madras Auto Service Private Ltd., Madras.	West Ger. many.	13-5-58	KDL 87S 6/10	16-50	9-90	5-28	31-68		
3	Lucas Indian Private Limited, Bombay.	U.K.	..	BKS 35S 24 & 50S-501	16-66	10-00	0-24	26-90		
4	Industrial & Agricultural Engg. Co., Bombay.	U.K.	14-4-59 22-4-59	BKB 50S-24 BKB 803-24	16-66 18-66	10-00 11-20	0-24 0-28	26-90 30-14		
			22-4-59	BKB 50S-507B	23-00	13-80	0-33	37-13		
			9-10-58	BKB 35S-535	20-16	12-09	0-29	32-54		
			9-10-58	BKB 35S-87 use	15-33	9-20	0-22	24-74		
			22-5-57	BKBL 97S-577	18-50	11-09	0-28	29-87		
			May '57 to June '59	A 35 SD 101 A 50 SD 101 A 80 SD 101 AL 67 SD 249	15-50 16-00 16-30 19-00	9-30 9-60 9-78 11-40	0-50 0-50 1-62 0-60	25-30 26-12 27-70 31-00		
			Current	CAVBKB 35S-87	30-67					
			Do.	BOSCHKB 35 SA 369	54-00					
5	High Commission of India, U.K., London.									



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