IN THE MATTER OF

TENNECO, INC.

FINAL ORDER, OPINION, ETC., IN REGARD TO ALLEGED VIOLATION OF SEC. 5 OF THE FEDERAL TRADE COMMISSION ACT AND SEC. 7 OF THE CLAYTON ACT

Docket 9097. Complaint, March 15, 1977—Final Order, Sept. 23, 1981

This order requires, among other things, a Houston, Texas, corporation to timely divest, in accordance with the terms of the order, all assets and properties constituting the Monroe Auto Equipment Company. The order also prohibits the company from acquiring, for a period of ten years, any enterprise engaged in the manufacture or sale of shock absorbers, without prior Commission approval; and bars any corporate officer or employee owning or controlling more than 1 per cent of Tenneco's assets from acquiring any of the divested stock or assets.

Appearances

For the Commission: *K. Keith Thurman, Layn R. Phillips,* and *Linda C. Martin.*

For the respondent: *John L. Jeffers, Alan Gover,* and *Henry Kollenberg, Baker & Botts,* Houston, Texas, and *David C. Murchison, John DeQ. Briggs III,* and *Bernard Cooney, Howrey & Simon,* Washington, D.C.

COMPLAINT

The Federal Trade Commission, having reason to believe that respondents, Tenneco Inc. (hereinafter "Tenneco") and Monroe Auto Equipment Company (hereinafter "Monroe"), corporations subject to the jurisdiction of the Commission, through taking steps to combine Tenneco and Monroe, have violated Section 5 of the Federal Trade Commission Act, as amended (15 U.S.C. 45); the proposed acquisition by Tenneco of the stock of Monroe, if consummated, would violate Section 7 of the Clayton Act, as amended (15 U.S.C. 18) and Section 5 of the Federal Trade Commission Act, as amended (15 U.S.C. 45); and t appearing that a proceeding by the Commission in respect thereof vould be in the public interest; the Commission hereby issues its 'omplaint, pursuant to Section 11 of the Clayton Act (15 U.S.C.21) nd Section 5(b) of the Federal Trade Commission Act (15 U.S.C45(b)) ıd states its charges as follows:

I. Definitions

1. For the purposes of this Complaint, the following definitions shall apply:

(a) *Exhaust system parts* (hereinafter "ESP") are all exhaust pipes, connecting pipes, tail pipes, mufflers (including "sports" mufflers), resonators and attaching parts for application on automobiles, trucks, buses and farm equipment. [2]

(b) *Shock absorbers* are McPherson strut assemblies, cartridges, and shock absorber kits; steering dampers; and direct-acting, air-adjustable, and spring-assisted shock absorbers for application on automobiles, trucks and buses.

(c) The *replacement market* includes all sales by manufacturers of automotive parts for use as replacement of original equipment parts or of previously replaced parts.

II. Tenneco

2. Tenneco is a corporation organized and doing business under the laws of Delaware, with its principal office at the Tenneco Building, Houston, Texas.

3. In 1975, Tenneco's consolidated operating revenues were $5,630,338,000 and its net income was $342,936,000. As of December 31, 1975, Tenneco had total assets of $6,584,204,000.

4. Tenneco's automotive parts operations are carried on by its Walker Manufacturing Company division (hereinafter "Walker"), which manufactures and distributes a full line of ESP, hydraulic and air jacks, steering dampers (a form of shock absorber), and other parts for passenger cars, light trucks, and heavy duty vehicles in the U.S.

5. In 1975, Walker's worldwide revenues amounted to $303 million with net operating income before taxes of $52.1 million. In 1975, Walker's domestic ESP operations had gross sales of $209.7 million, operating income before taxes of $38.6 million, and a pretax return on investment of 38.7 percent. Walker operated thirteen plants located in the U.S., eleven of which manufactured ESP, and served domestic customers from twenty-two distribution centers.

6. At all times relevant hereto, Tenneco sold and shipped products throughout the U.S. and engaged in commerce within the meaning of the Clayton Act, as amended; and engaged in or affected commerce within the meaning of the Federal Trade Commission Act, as amended. [3]

III. Monroe

7. Monroe is a corporation organized and doing business under the laws of Michigan, with its principal office at International Drive, Monroe, Michigan.

8. Through its fiscal year ended June 30, 1976 ("fiscal 1976") Monroe's business consisted mostly of the manufacture and distribution of shock absorbers, primarily for automotive use. Monroe produces and sells shock absorbers for use on virtually all domestic, and many foreign, makes and models of automobiles. Monroe offers the most complete coverage of truck (light, medium and heavy) and bus shock absorbers. Monroe operates three domestic production facilities which, along with Monroe's corporate headquarters, function as distribution points for its independent aftermarket customers.

9. For fiscal 1976 Monroe had net sales of $174,346,000 and net income of $5,411,000. As of June 30, 1976, Monroe had total assets of $185,854,000. Monroe has experienced a rate of return on its stockholder's equity averaging 21.9 percent after taxes for the ten year period 1965–74. For fiscal 1976, $123.8 million of Monroe's total sales and all of its profits derived from its domestic operations.

10. Monroe is a leading manufacturer and distributor of shock absorbers in the U.S. and worldwide, especially in the replacement markets. Eighty-one percent of its sales in the latest fiscal year were made to the replacement markets. In 1976, Monroe ranked second in the U.S. replacement shock absorber market. Monroe's sales of shock absorbers domestically are made primarily to warehouse distributors (hereinafter "WDs"), but it also sells to chain stores and other private brand accounts and various vehicle producers for resale. Monroe is the largest seller of shock absorbers to WDs. Monroe has a quality product, a known brand name, and a competent force of field salesmen.

11. At all times relevant hereto, Monroe sold and shipped its products throughout the United States, and engaged in or affected commerce within the meaning of the Federal Trade Commission Act, as amended. [4]

IV. Agreement Between Tenneco and Monroe

12. On December 20, 1976, Tenneco announced an agreement in principle to acquire Monroe. On December 22, 1976, the Boards of Directors of Tenneco and Monroe approved a proposal for the combination of the two companies to be effected by an exchange of Tenneco common stock for Monroe common stock. Under the

exchange proposal Tenneco would seek to acquire not less than 80 percent of Monroe's common stock. It is anticipated that the proposed acquisition of Monroe by Tenneco will be consummated in March 1977.

V. Nature of Trade and Commerce

A. Market Definitions

13. The relevant geographic market is the U.S. as a whole.

14. The relevant product markets are:

(a) The manufacture and sale of shock absorbers to (1) the U.S. replacement market and (2) the U.S. independent aftermarket.

(b) The manufacture and sale of ESP to (1) the U.S. replacement market and (2) the U.S. independent aftermarket.

15. No practical alternatives exist for shock absorbers and ESP in automotive use.

16. Shock absorbers are an integral part of automotive suspensions. They are responsible to a large degree for the handling characteristics, roadability, safety and comfort of the car. They help to hold a car under control, reduce sway and roll on curves, reduce bottoming, control wheel hop, and smooth the ride.

17. Shock absorbers take three basic forms: McPherson units; steering dampers; and heavy duty, air-adjustable and spring-assisted shock absorbers. Monroe and its principal competitors offer all three forms as a complete shock absorber line. All forms of shock absorbers (1) involve the same basic design and manufacturing technologies; (2) are sold through the same channels of distribution to the same customers; (3) are manufactured by the leading producers of shock absorbers; (4) are installed by the same people; (5) are priced within the same range; and (6) perform the same basic function, to aid in stabilizing the vehicle. [5]

18. ESP serve to dissipate engine exhaust fumes and to provide an acceptable noise level.

19. Both shock absorbers and ESP are sold for incorporation into new vehicles during their assembly (original equipment installation, hereinafter "OE") and for replacement of worn out or damaged units on existing vehicles. The replacement market is distinct from the OE market. Prices of parts sold to the OE market are significantly lower than those sold to the replacement market. There is no cross elasticity of demand between the OE and replacement markets. Demand for OE parts is a function of vehicle production; demand for

replacement parts varies with a number of factors, including wear, failure, and desired upkeep by users.

20. The replacement markets for shock absorbers and ESP are divisible into two submarkets: the service market; and the independent aftermarket. The service market consists of sales made to vehicle producers for resale to their dealers, plus sales by vehicle producers of parts of their own manufacture to their dealers. The independent aftermarket encompasses all other replacement sales, but excludes those sales made to other manufacturers of the same product.

21. Manufacturers of shock absorbers and ESP recognize that the service market and the independent aftermarket are distinct submarkets, utilizing separate sales forces and distinct sales programs. To serve the independent aftermarket for shock absorbers and ESP, it is necessary to have a stock of parts at various distribution points around the country. Such distribution facilities are not necessary to supply the service market inasmuch as the customers themselves already possess a distribution system for parts.

B. Market Structure

(i) Shock Absorbers

22. Sales of shock absorbers to the replacement market in 1975 totalled approximately 51.6 million units, having a value of $312 million. Sales of shock absorbers to the independent aftermarket in 1975 were 47.5 million units, with an approximate value of $288 million. **[6]**

23. Monroe's total sales of shock absorbers to the replacement market during fiscal 1976 exceeded 18.3 million units with a value in excess of $102 million, and accounted for 33 percent of total industry shipments to that market. Monroe's fiscal 1976 shipments of 17.5 million units represented 34 percent of the 51.7 million units (valued at approximately $301 million) shipped to the independent aftermarket.

24. In calendar 1976 Walker sold $2.5 million or approximately 0.8 percent of total industry sales of shock absorbers to the replacement market.

25. Concentration in the sale of shock absorbers to the replacement market and the independent aftermarket is extremely high.

(ii) Exhaust System Parts

26. In 1975, gross sales of ESP totalled approximately $525

million to the replacement market and $473 million to the independent aftermarket.

27. Walker's sales of ESP to the replacement market in 1975 were approximately $188 million, which represented 36 percent of industry sales. Walker's sales of ESP to the independent aftermarket in 1975 were approximately $184.4 million, which represented a 39 percent share of such sales.

28. Concentration in the sale of ESP to the replacement market and the independent aftermarket is extremely high.

(iii) Barriers to Entry

29. The barriers to entry into the sale of shock absorbers and ESP to the replacement market and the independent aftermarket are very high.

30. To enter into the sale of shock absorbers or ESP to the replacement market, a firm must make a substantial investment in plant and equipment. To enter the independent aftermarket portion of the replacement market, a firm also needs warehousing facilities and inventory; sufficient financial resources to meet seasonal requirements; a substantial marketing organization, including a large national sales force; and the ability to grant a variety of extended payment terms to customers. [7]

31. There are large economies of scale in the production both of shock absorbers and of ESP.

32. Holdings of U.S. and foreign patents provide current producers of shock absorbers and ESP with an absolute cost advantage over potential entrants. Monroe, in particular, benefits from its patent rights in shock absorbers. As of December 29, 1976, Tenneco held 194 unexpired patents including design patents on exhaust system items or their manufacture.

33. The leading sellers of shock absorbers and ESP to the replacement market and the independent aftermarket have developed a high degree of product differentiation. This differentiation has resulted from the use of extensive field sales forces to promote the products at all levels of distribution and substantial advertising and promotional expenditures.

34. To compete successfully in the independent aftermarkets, it is necessary to offer a full line of shock absorbers or of ESP, fitting most vehicles sold in the U.S. A firm must distribute nationally, and be able to fill orders in a relatively short period of time. As of 1974, it took more than 5,000 shock absorber part numbers and a like number of ESP part numbers to fulfill the needs of the replacement market for most vehicles made or sold in the U.S.

C. Compatibility of Shock Absorbers With Walker Product Lines

35. The sale of shock absorbers in conjunction with ESP offers advantages from marketing and manufacturing viewpoints. Such advantages arise from an identity of marketing channels and methods, and from common manufacturing methods. Tenneco and Walker have recognized shock absorbers to be the product line most compatible with ESP.

36. Shock absorbers are distributed through the same channels as ESP, from manufacturer to consumer. Shock absorbers are typically installed in exhaust system repair shops. The two products represent "under-the-car" service items, subject to the same environmental and repair conditions. Both ESP and shock absorbers are sold to the same customers by utilizing similar selling programs, discount structures, and financing arrangements. [8]

37. Shock absorbers and ESP can be combined in one distribution and delivery system. They have been marketed together by Walker, Maremont, and Questor to retail and mass merchandiser marketing channels. Both products are stored jointly by their manufacturers, including Walker, in regional warehouses. If the acquisition of Monroe is consummated, Walker proposes a unified distribution system for both shock absorbers and ESP.

38. Technological similarities exist in the manufacture of shock absorbers, and ESP and jacks. Most shock absorber components could be made by Walker's jack and exhaust system manufacturing equipment.

39. The manufacture of shock absorbers requires a knowledge of hydraulics. Walker possesses a knowledge of hydraulics, both fluid and air, from its experience in manufacturing jacks. There are also similarities in research and development technology between shock absorbers, and ESP and jacks.

VI. Walker's Entry Into Shock Absorbers

40. Starting as early as 1967, Walker has sought toehold acquisition entry into the manufacture and sale of shock absorbers to the replacement market. At that time, Walker had acquisition talks with Armstrong Equipment Ltd. (hereinafter "Armstrong"), a British manufacturer of shock absorbers for both the OE and replacement markets. Armstrong had shock absorber manufacturing subsidiaries in Australia, Canada, and South Africa, and a marketing organization for shock absorbers in the U.S.

41. Early in 1973, Walker considered acquiring Tropic Industries, a company which produced a self-adjusting shock absorber.

42. In May 1974 Walker commenced acquisition talks with Triple S Industries (hereinafter "Triple S"), a manufacturer of steering dampers. [9]

43. In May 1974 Triple S was experimenting with the Terramatic principle, which allows consolidation and reduction of the number of different shock absorbers required to serve the replacement market. Major automakers and Walker believed the Terramatic principle had great potential.

44. On October 15, 1974, Walker acquired Triple S and rights to use the Terramatic principle. Throughout their consideration of the Triple S purchase, Walker and Tenneco anticipated that this acquisition would provide a significant entry into the replacement shock absorber market. Subsequent to its acquisition of Triple S, Walker has continued to expand in the replacement shock absorber market.

45. Additional toehold acquisitions to assist Walker's expansion in the shock absorber replacement market have been and are available. Even subsequent to the purchase of Triple S, Walker has had discussions regarding the possible acquisition of leading European shock absorber manufacturers, including Armstrong and De Carbon.

46. Tenneco and Walker have made a significant commitment at their decisional levels to effect entry, either *de novo* or by toehold acquisition, to the manufacture and sale of shock absorbers for the domestic replacement market and the domestic independent aftermarket. Walker is one of the few firms likely to become a major factor in the U.S. replacement shock absorber market either by internal development or by additional toehold acquisitions. It is probable that such expansion by Walker would have a procompetitive effect and would result in deconcentration of the shock absorber replacement market and independent aftermarket.

47. Tenneco and Walker have been perceived as potential entrants into the shock absorber replacement market and independent aftermarket. It is probable that this perception has prompted a procompetitive effect in that market.

VII. Monroe Is One Of Few Likely Entrants Into ESP

48. Monroe has sought to expand into other automotive products sold in the replacement market to capitalize on its distribution channels and experience. ESP met or exceeded all of Monroe's developed criteria for diversification. [10]

49. One means Monroe considered for diversification into ESP

was through acquisition. In 1974 Monroe sought to acquire Arvin Industries, Inc. (hereinafter "Arvin"), a small producer of replacement ESP.

50. Monroe has the ability to expand a toehold ESP producer into a significant factor in the ESP replacement market and the independent aftermarket.

51. Of the major shock absorber sellers to the replacement market only Monroe does not currently manufacture or sell ESP. Common manufacturing and distribution of shock absorbers and ESP, make shock absorber producers the most likely entrants into the replacement ESP market.

52. It is probable that entry by Monroe into the production and sale of ESP would result in deconcentration of the ESP replacement market and independent aftermarket.

VIII. Effects

53. The effects of the steps taken by Tenneco to acquire Monroe constitute an unfair method of competition in or affecting commerce in violation of Section 5 of the Federal Trade Commission Act, as amended; and the proposed acquisition by Tenneco of Monroe, if consummated, may be substantially to lessen competition or tend to create a monopoly in violation of Section 7 of the Clayton Act, as amended, and constitute an unfair act and practice in or affecting commerce, in violation of Section 5 of the Federal Trade Commission Act, as amended, in the following ways, among others:

(a) Actual competition between Tenneco and Monroe and between Tenneco and other producers of shock absorbers for domestic sale to the replacement market and the independent aftermarket will be eliminated.

(b) Potential competition between Tenneco and Monroe and between Tenneco and other producers of shock absorbers for domestic sale to the replacement market and the independent aftermarket will be eliminated; furthermore, the potential for substantial deconcentration as a result of Tenneco's independent expansion into those markets will be eliminated. [11]

(c) Potential competition between Monroe and Tenneco and between Monroe and other producers of ESP for domestic sale to the replacement market and the independent aftermarket will be eliminated; furthermore, the potential for substantial deconcentration as a result of Monroe's independent or toehold entry into those markets will be eliminated.

(d) The dominant position of Monroe in the domestic sale of shock

absorbers to the replacement market and the independent aftermarket will be strengthened.

(e) The dominant position of Tenneco in the domestic sale of ESP to the replacement market and the independent aftermarket will be strengthened.

IX. Violations Charged

54. The steps taken by Tenneco and Monroe to combine the two companies constitute a violation of Section 5 of the Federal Trade Commission Act, as amended (15 U.S.C. 45).

55. The proposed acquisition by Tenneco of Monroe, if consummated, would constitute a violation of Section 7 of the Clayton Act, as amended (15 U.S.C. 18) and of Section 5 of the Federal Trade Commission Act, as amended (15 U.S.C. 45).

Initial Decision by

Thomas F. Howder, Administrative Law Judge

May 27, 1980

Preliminary Statement

The Commission's complaint in this case, issued March 15, 1977, charges respondent Tenneco Inc. ("Tenneco") with violating Section 7 of the Clayton Act by acquiring Monroe Auto [2]Equipment Company ("Monroe").[1] Specifically, it was alleged that by virtue of the merger:

(1) Actual competition between Tenneco and Monroe and between Tenneco and other producers of shock absorbers for domestic sale to the replacement market and the independent aftermarket has been eliminated;

(2) Potential competition between Tenneco and Monroe and between Tenneco and other producers of shock absorbers for domestic sale to the replacement market and the independent aftermarket has been eliminated; furthermore, the potential for substantial deconcentration as a result of Tenneco's independent expansion into those markets has been eliminated;

(3) Potential competition between Monroe and Tenneco and between Monroe and other producers of exhaust system parts ["ESP"] for domestic sale to the replacement market and the

[1] Violation of Section 5 of the FTC Act was also alleged.

independent aftermarket has been eliminated; furthermore, the potential for substantial deconcentration as a result of Monroe's independent or toehold entry into those markets has been eliminated;

(4) The dominant position of Monroe in the domestic sale of shock absorbers to the replacement market and the independent aftermarket will be strengthened; and

(5) The dominant position of Tenneco in the domestic sale of ESP to the replacement market and the independent aftermarket will be strengthened.

The complaint was issued prior to the actual merger. Upon its issuance, the Commission initiated an action for injunctive relief in the U.S. District Court for the District of Columbia. Based on its consideration of the parties' papers, various depositions and oral arguments of counsel, the court denied the Commission's application. 433 F.Supp. 105 (D.D.C. 1977) (18-page opinion). The merger was thereafter consummated in July 1977 (*See* Finding 24, *infra*). Later, by order of February 7, 1978, issued by then-assigned ALJ Needelman, the complaint was amended to reflect the fact of the merger.[2] [3]

Prehearing conferences were held in Washington, D. C. on May 18, 1977, January 4, 1978 and April 25, 1978. Following the completion of discovery and exchange of trial briefs, hearings were commenced in Washington, D. C., on June 12, 1978. Trial of this case lasted from June 12, 1978, until August 29, 1979, and consumed almost 120 hearing days. A transcript of over 13,300 pages was created, and several hundred exhibits were received in evidence. In their case-in-chief, presented from June 12 through June 23, 1978, complaint counsel called 10 witnesses; respondent's defense presented from July 10, 1978, through February 2, 1979, included 36 witnesses; the rebuttal case of complaint counsel lasted from February 12 through April 30, 1979, and included the testimony of 11 witnesses; and respondent's surrebuttal was presented from April 30 through August 9, 1979, and included the testimony of six witnesses.[3]

The record was closed on November 23, 1979, following the resolution of a number of problems regarding exhibits, *in camera* materials and extensive transcript corrections. Proposed findings were simultaneously filed by the parties on December 21, 1979, and reply findings on January 31, 1980.

Any motions not heretofore or herein specifically ruled upon,

[2] The amended complaint does not include Monroe as a named respondent.

[3] Appendix A to respondent's proposed findings contains a list of the witnesses and indicates the location of their testimony in the transcript.

either directly or by the necessary effect of the conclusions in this decision, are hereby denied.

This proceeding is before me upon the complaint, answer, testimony and other evidence, and the proposed findings of fact and conclusions of law filed by counsel supporting the complaint and by counsel for respondent. The proposed findings of fact, conclusions and arguments of the parties have been considered, and those findings not adopted either in the form proposed or in substance are rejected as not supported by the evidence or as involving immaterial issues not necessary for this decision.

Certain abbreviations, including the following, are used in this decision:

Tr.	–	Transcript of testimony.
CX	–	Commission's exhibit.
CPX	–	Commission's physical exhibit.[4]
CPF	–	Complaint counsel's proposed finding.
CRPF	–	Complaint counsel's reply proposed finding.
RX	–	Respondent's exhibit.
RPX	–	Respondent's physical exhibit.
RPF	–	Respondent's proposed finding.
RRPF	–	Respondent's reply proposed finding.

The transcript of testimony is usually referred to with the last name of the witness and the page number or numbers upon which the testimony appears.

Having heard and observed the witnesses, and after having reviewed the entire record in this proceeding, I make the following findings:

Findings of Fact

I. Tenneco

1. Respondent Tenneco Inc. ["Tenneco"] is a corporation organized and doing business under the laws of Delaware. Its principal office is The Tenneco Building, Houston, Texas (Complaint and Answer, ¶2; CX 106).

2. Tenneco is a conglomerate company with diversified manufacturing and distributing operations in farm and construction equipment, shipbuilding, petroleum, chemicals, packaging and automotive parts. Tenneco also has interests in agriculture and in land development (CX 2A–C; CX 2 pp.8–9, 12–20).

3. In 1975, Tenneco was the 15th largest industrial corporation in the United States with total assets of $6,584,204,000.[4] Tenneco's 1975 net income of $342,936,000 was 18th largest and its consolidated operating revenues of $5,630,330,000 were 22nd largest among industrial corporations in the United States (Complaint and Answer ¶3, CX 192B).

4. Until 1977, Tenneco's automotive parts operations [5]were carried on by its Walker Manufacturing Division ["Walker"], which manufactured and distributed a full line of exhaust system parts[5] for passenger cars, light trucks, and heavy-duty vehicles in the United States. The production and sale of ESP accounted for and still accounts for a majority of Walker's revenues (Complaint and Answer, ¶4; Cook 1570–72, 1646; RPF 9).

5. The Mechanex Corporation ["Mechanex"] was part of Walker and a Tenneco subsidiary before the Monroe acquisition. Mechanex distributed steering stabilizers or dampers under the brand name of Steerline, as well as other automotive products for application on passenger cars, light trucks and heavy-duty vehicles (CX 43A–H; CX 44A–F; CX 173A; CX 208K, Admission No. 24; CX 339A–B; Prescott 11,281).

6. Walker began business as a jack and lifting device manufacturer in approximately 1912 and currently manufactures a wide variety of jack products including jack stands, hydraulic and air jacks, mechanical scissors jacks and various other associated accessories and components (Complaint and Answer, ¶4; CX 27R; CX 140; Uhen 1866). In recent years Walker has also manufactured and distributed a line of automotive filters, including air, oil and gasoline filters (CX 106B).

7. In 1975, Walker's worldwide revenues were $303 million, with net operating income before taxes of $52.1 million (Complaint and Answer ¶5).

8. In 1975, Walker's domestic ESP operations had gross sales of $209.7 million, operating income before taxes of $38.6 million, and a pretax return on investment of 38.7%. Walker documents project similar rates of return through 1981 (CX 26B).

9. In 1975, Walker operated 13 manufacturing and/or distribution facilities in the United States (Complaint and Answer, ¶5; CX 208I, Admission No. 19; RX 233; Schultz 1791–92). Of these, ten were ESP facilities:

[4] This ranking is measured in terms of total assets as of December 31, 1975.

[5] ESP is defined in Finding 55, *infra*.

Location of Walker ESP Manufacturing Facilities

(1) Walker Mississippi Division Aberdeen, Mississippi
(2) Walker North Carolina Division Arden, North Carolina [6]
(3) Walker Texas Division Greenville, Texas
(4) Walker Virginia Division Harrisonburg, Virginia
(5) Walker Michigan Division Jackson, Michigan
(6) Walker Ohio Division Hebron, Ohio
(7) Walker Wisconsin Division (manufacturing only) Racine, Wisconsin
(8) Walker Nebraska Division Seward, Nebraska

(CX 208I, Admission No. 19; RX 233).

Location of Walker ESP Distribution Centers (no manufacturing)

(1) Walker Mid-West Distribution Center Batavia, Illinois
(2) Walker Western Distribution Center Salt Lake City, Utah

(CX 208J–K, Admission No. 21).

10. At the time of Monroe's acquisition by Tenneco, Walker also distributed ESP from 22 field warehouses located throughout the U.S.

(1) Atlanta, Georgia
(2) Baltimore, Maryland
(3) Buffalo, New York
(4) Chicago, Illinois
(5) Dallas, Texas
(6) Denver, Colorado
(7) Elizabeth, New Jersey
(8) Hayward, California
(9) Indianapolis, Indiana
(10) Los Angeles, California
(11) Medford, Massachusetts
(12) Minneapolis, Minnesota
(13) Monroeville, Pennsylvania
(14) Omaha, Nebraska
(15) Philadelphia, Pennsylvania
(16) Phoenix, Arizona
(17) Portland, Oregon
(18) Riverside, Missouri
(19) St. Louis, Missouri [7]
(20) Seattle, Washington
(21) Springfield, Massachusetts
(22) Warren, Michigan.

(CX 208I–J, Admission No. 20).

11. During 1975, in addition to ESP, Walker stocked shock absorbers in the Buffalo, New York; Chicago, Illinois; and Indianapolis, Indiana field warehouses and certain distribution centers in the U.S. for resale to muffler installation shops (CX 208K, Admission Nos. 22–23).

12. Before it purchased Monroe, Tenneco acquired and presently operates various muffler shops which install ESP and sometimes shock absorbers in Canada and in Europe (CX 4I; CX 27P; Cook 1698–99; Fleuelling 5815–17; Ashford 11,511). In 1962, Walker acquired Speedy Muffler King, Inc., a chain of four or five muffler installation shops in Canada (Putman 1140, 1211; Cook 1654). By 1975, Walker had expanded Speedy Muffler King's market area from Montreal and Toronto west to Vancouver, British Columbia (CX 2C; Putman 1211). By 1978 there were 70–75 Speedy Muffler King outlets operating in Canada[6] (CX 2; CX 25K; Putman 1140, 1145; Cook 1653–54). Walker plans substantial expansion in the number of

[6] By December 31, 1978, there were six Speedy Muffler King outlets in the northeastern United States (CX 349 p.16).

its muffler shops, particularly in the U.S. market (Nelson 9861–65 *in camera*, 9866; Cook 1651–52 *in camera*).

II. Monroe

13. Prior to being acquired by Tenneco, Monroe was a corporation organized and doing business under the laws of Michigan with its principal office at International Drive, Monroe, Michigan 48161 (Complaint and Answer ¶7).

14. In fiscal 1976 (July 1, 1975—June 30, 1976) Monroe had net sales of $174,346,000, net income of $5,411,000, and total assets of $185,854,000 (Complaint and Answer ¶9).[7] [8]

15. In fiscal 1976, $128.8 million of Monroe's total sales and virtually all of its profits were derived from its domestic operations; the company's foreign shock absorber operations taken as a whole were not profitable (CX 141C–D; CX 151E; *see* CX 3K; CX 4S; CX 21B; CX 22).[8]

16. Monroe, which has traditionally been a one product company,[9] began to manufacture shock absorbers before World War II (RPF 13). It became and presently remains a leading manufacturer and distributor of shock absorbers in the United States and worldwide. Monroe is considered to have a high quality product, a known brand name, and a competent force of salesmen.

17. Monroe sells shock absorbers for use on virtually all domestic and many foreign makes of automobiles. (CX 4Q; CX 143K). Monroe's domestic sales of shock absorbers are made primarily to warehouse distributors ["WDs"], but it also sells to chain stores, other private brand accounts and various vehicle producers for resale (Complaint and Answer ¶10). In fiscal 1976, 81% of Monroe's sales worldwide were to the replacement market (Complaint and Answer ¶10).

18. Overseas, Monroe and its affiliates operated shock absorber plants in Belgium, Brazil, Argentina, Spain and Canada (CX 208F, Admission No. 14; Barbeau 4695). Domestically, the company operated three shock absorber plants, which also functioned as distribution facilities:

1. Hartwell, Georgia

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[7] In fiscal 1972 (July 1, 1971—June 30, 1972), Monroe was the 683rd largest industrial corporation in the United States in terms of net sales, with consolidated net sales of $127,521,954 (CX 144 p.6 *citing* Fortune Magazine Directory of the 1,000 largest U.S. industrial companies; CX 145 p.8). It ranked 255th largest in terms of net income with only six industrial corporations surpassing Monroe in net income as a percent of sales (CX 144 p.6 *citing* Fortune Magazine Directory of the 1,000 largest U.S. industrial companies).

[8] Monroe experienced a rate of return on its stockholder's equity averaging 21.9% after taxes for the ten year period 1965–74 (Complaint and Answer ¶9). In 1976, Monroe's earnings had dropped from the 1973 levels of 12.4% of revenues and 15.3% of equity to 3.1% of revenues and 4.3% of equity (CX 4D).

[9] Monroe introduced an oil filter in 1975 to diversify its product line (CX 141 p.9; CX 141F; CX 142E).

2. Cozad, Nebraska
3. Paragould, Arkansas

(Complaint and Answer, ¶8; CX 208E, Admission No. 8; Hegel 1975).

19. Monroe distributed shock absorber products, including steering dampers, from its Reno, Nevada, Hartwell, Georgia and Cozad, Nebraska facilities. Automotive oil filters were distributed from all of the above except the Reno, Nevada facility (CX 171A–B). **[9]**

III. Jurisdiction

20. It is not disputed that, since at least 1975, both Monroe and Tenneco sold and shipped products throughout the United States and engaged in commerce within the meaning of the Clayton Act, as amended; and engaged in or affected commerce within the meaning of the Federal Trade Commission Act, as amended (Complaint and Answer, ¶¶6, 11).

IV. Acquisition of Monroe

21. On December 20, 1976, following negotiations, Tenneco announced an agreement in principle to acquire Monroe.[10] On December 22, 1976, The Board of Directors of Tenneco approved a proposal for the combination of the two companies to be effected by an exchange of Tenneco common stock for Monroe common stock. Under the exchange proposal, Tenneco sought to acquire not less than 80% of Monroe's common stock (Complaint and Answer ¶12).

22. The merger was consummated on July 29, 1977 through an exchange of one share of Tenneco common stock for each 2.6 shares of Monroe[11] (CX 106A; CX 202 p.2).

23. Following the merger, Monroe Auto Equipment and Walker Manufacturing became operating units of Tenneco Automotive, which now oversees the activities of Walker, Monroe and the Speedy Muffler King unit for U.S. operations (CX 202, p.2; CX 349 p.16).

V. Relevant Geographic Markets

24. There is no dispute that the relevant geographic market for both ESP and shock absorbers is the United States as a whole[12] (Complaint ¶13; RPF n.6; *See* Nelson 9663, 10,716). **[10]**

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[10] Tenneco's prior interest in Monroe is discussed in Findings 385–87, *infra.*

[11] On July 29, 1977, Monroe was merged into the wholly owned subsidiary of Tenneco which held the shares of Monroe stock acquired pursuant to the offer (Respondent's Trial Brief p.5).

[12] There are no regional variations in the prices of replacement shock absorbers or ESP (CX 208N, Admission No. 43; Kalupa 3654, 4190, 4196; Robison 3691; Luyckx 3746; Fleuelling 4115, 5159–60; Foster 5105–06 *in camera,* 7233–35 *in camera; see* Nelson 9633, 10,561, 10,716–17).

VI. Relevant Product Markets

A. Shock Absorbers

25. Shock absorbers are products that have virtually no substitutes for use on motorized vehicles (CX 208"O", Admission No. 44).

26. Shock absorbers are an integral part of automotive suspension systems and are responsible to a large degree for the handling characteristics, roadability, safety and comfort of vehicles (Complaint and Answer ¶16; CX 15A; CX 309B). The specific function of a shock absorber is ". . . to diminish or hopefully, eliminate any of the subsequent movements of the [vehicle's] body after the tire or tires have negotiated the bump in the road" (Hegel 1931). Shock absorbers fulfill their function by converting mechanical energy to thermal energy and then releasing it to the atmosphere (Hegel 1932; *see* CX 220Z–8). Thus, shock absorbers help hold a car under control at all times by keeping the wheels on the road, reducing sway and roll on curves, reducing bottoming, dampening vibrations, controlling wheel hop, as well as smoothing the ride (CX 15A, CX 208 "O", Admission No. 47; CX 220Z–8–10; Hegel 1931; Tompkins 2316).

27. In order to meet specific requirements, shock absorbers take various forms, including direct-acting or conventional shocks,[13] air-adjustable, spring-assisted, steering dampers and MacPherson struts[14] (CX 15A–C; CX 99; CX 168A–B; CX 169A–G; CX 175; CX 189; Hegel 1943–44; Diggelman 2525; Fleuelling 4104, 4118; Nelson 9665, 9729).

28. Shock absorbers have been recognized as distinct products by the Census of Manufacturers (CX 190G–H). The Motor Equipment Manufacturers' Association ["M.E.M.A."] *Quarterly Product Trend Report* breaks down unit replacement sales of shock absorber manufacturers into the following categories; direct acting, air-adjustable, spring-assisted and MacPherson struts and cartridges (CX 162A; Fleuelling 1404–05). Employees or agents of Monroe participated in the formation of M.E.M.A. shock absorber reporting categories and Monroe relies on M.E.M.A. data (CX 208Z–13, Admission No. 173; Kalupa 3560–61; Fleuelling 4098–5105). [11]

29. A MacPherson strut[15] is considered as and referred to as a form of shock absorber by members of the industry (Givens 429–30; Hegel 1943–44, 1950–51; Diggelman 2525, 2555; Robison 3761; Fleuelling 4104, 4118; Joines 9115; Garfinkel 9105; Stewart 9243–44).

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[13] Shock absorbers come in a range of sizes including the most common 1" and 1 3/16". *See, e.g.*, RX 52 A–D.

[14] MacPherson struts and steering dampers are discussed in greater detail in Findings 29–41 and 42–47 *infra*.

[15] Named after a certain Mr. Earl S. MacPherson, a former employee of GM and Ford in the 1940's and 1950's, who first conceived the idea of and obtained a patent "on a suspension arrangement similar to what we now call a MacPherson strut" (Hegel 1960).

30. A MacPherson strut[16] may be characterized as a shock absorber which also incorporates some structural components of the suspension system (RX 555A–C, *in camera;* Givens 429–30; Hegel 1953–54; H. Wright 3815, 3838; Cox 4408–09; *but see* N. Wright 11,805).

31. MacPherson strut units perform the same damping[17] function for automotive suspensions as does a conventional shock absorber (RX 555A *in camera;* Givens 429–30; Hegel 1950–53; H. Wright 3815; Cox 4408–09; Garfinkel 9205).

32. The strut assembly consists of a hydraulic cartridge plus attaching and positioning parts (Givens 439–40; Hegel 1950–52). The hydraulic cartridge of a MacPherson strut is similar in its design, basic parts, and function to other types of shock absorbers (CX 189; Hegel 1952–53, 1955, 1961–62, 2104; H. Wright 3779, 3815; Cox 4408–09).

33. Both conventional shock absorbers and MacPherson struts use pressure chambers and piston rods (CX 189; Hegel 1950–52). In the case of Monroe and Woodhead, for example, the same sized pressure chamber and piston rod are used in the MacPherson strut cartridges these companies produce as in the $1\frac{3}{16}$" conventional shock absorber. MacPherson strut units involve much of the same manufacturing technology as is used in producing shock absorbers (CX 208P, Admission No. 51).

34. There was testimony that a firm which manufactures hydraulic cartridges for MacPherson struts would not find it [12] technically difficult to produce the remainder of the strut components (Cox 4409–10).

35. MacPherson units are designed for use on smaller automobiles, and have become original equipment on such makes as Volkswagen, Toyota, Datsun, Capri, Colt, Mazda, Honda, Porsche, BMW as well as certain GM, Ford and Chrysler cars (CX 172A–B, L; CX 280"O"–P, Admission No. 48; RX 555B–C *in camera;* Hegel 1947, 1961; H. Wright 3779). While conventional direct-acting shocks are still standard or original equipment on most American cars, there was evidence that vehicle manufacturers may use MacPherson assemblies on the smaller new cars of the future, where space is a prime consideration (CX 98F; RX 555A–C *in camera;* H. Wright 3779, 3842; Bracken 4312; Garfinkel 9205).

36. Consequently, there is a trend toward increased use of MacPherson struts in cars manufactured in the United States (Pond

[16] *See* CX 243, which is a marked copy of RX 381, for a diagram of a MacPherson strut. See CX 242, which is a marked copy of RX 380, for a diagram of Ford's Hybrid strut. For purposes of this case the Hybrid will be considered a type of MacPherson strut.

[17] *See* Finding 26, *supra.*

862; Hegel 7270; *Compare* Hegel 2120, 2122–23 *with* Freeman 8863 *in camera* and H. Wright 3823 *in camera*).

37. The same engineers at Monroe, GM, Bilstein and Woodhead are responsible for both MacPherson strut and shock absorber design (RX 555B *in camera;* Hegel 2104; Petzsch 2466; Cox 4416). Some U.S. shock absorber manufacturers have developed the in-house ability to design and produce MacPherson strut assemblies, or at least prototypes.[18]

38. MacPherson units can be serviced in one of three ways: using MacPherson shock absorber repair kits, inserting MacPherson cartridges or replacing entire strut assemblies (CX 44D; CX 169C; CX 172A; CX 223Z–55; Hegel 1961–63).

39. Firms which manufacture both conventional shock absorbers and MacPherson units or cartridges include: Monroe, Maremont, Delco Division of General Motors, Questor, Ford, Armstrong, Kayaba, Tokiko, ITT, Boge, Woodhead, Fichtel & Sachs, [13]Cofab and Bilstein.[19]

40. Manufacturers that sell MacPherson struts or replacement cartridges to the U.S. replacement market generally also sell at least one other type of shock absorber.[20]

41. Monroe began marketing MacPherson strut cartridges to the U.S. replacement market in approximately 1973 (CX 145E; CX 144D; Hegel 1961).

42. A steering damper,[21] like a shock absorber, is a hydraulic device (CX 282A; CX 294B–C). Steering dampers are, however, installed in a horizontal position while shock absorbers are generally installed vertically.

43. A steering damper is considered and referred to as a form of shock absorber by members of the industry.[22]

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[18] For example, GM designed and produces its MacPherson strut in-house (RX 555B *in camera*). Monroe has designed, and made prototypes of MacPherson struts and recently won a contract to supply strut assemblies without the spring on the top to Chrysler (DeLisle 11,267–68; Ashford 11,540). Maremont has produced MacPherson struts in the United States since 1975 (Stewart 9264). Ford has more than ten years of experience with MacPherson struts in their German made cars and presently manufactures Hybrid strut assemblies in the U.S. (Tompkins 2319; H. Wright 3807, 3836).

[19] CX 84C; CX 143G; CX 144D; CX 151A–B; CX 154A–C; CX 172B–E; CX 175; CX 189; CX 208R, Admission Nos. 58–59; RX 555A–B *in camera;* Givens 429; Pond 745, 862–63; Putman 1149, 1174; Moore 1243; Hegel 1947–48, 1961, 2122, 7259; Petzsch 2446; Diggelman 2503, 2515, 2525, 2532, 2586–87; Hooper 2613; Bekin 2867; Robison 3671; H. Wright 3778–79; Cox 4389–90, 4407–08; Freeman 8856 *in camera;* Stewart 9264, 9274–75; Nelson 9822–23; DeLisle 11,267; *see* CX 208R, Admission No. 61.

[20] *E.g.,* Maremont (Givens 429); Questor (Putman 1149); KYB (Moore 1243); Monroe (Hegel 1947); Delco Division of General Motors (Hegel 1961); Bilstein (Petzsch 2446, 2452).

[21] *See* RX 643 p.30 for a diagram of a steering damper, and RX 643, for diagrams of various types of shock absorbers. One witness described a steering damper as a standard shock absorber with specially tailored valving (Kody 9296). Only one steering damper is installed in each vehicle while four vertically mounted shock absorbers are required per vehicle (Pond 1491). Monroe's 1976 catalog lists steering damper applications for Volkswagens (CX 175). Other present applications for steering dampers include off-the-road, and recreational vehicles, Oldsmobile Toronado, and Cadillac Eldorado (CX 239, CX 338C; Nelson 9741).

[22] CX 239; Givens 404–05; Petzsch 2446; Robison 3686–3689; Kody 9296, 9309, 9317–18, 9338.

44. Walker and Monroe officials categorize steering [14]dampers as horizontal shock absorbers.[23]

45. The steering damper functions as a stabilizing and ride control device that acts to absorb and dampen lateral shocks, vibrations and oscillations to the steering system (CX 43B; CX 44D–E; CX 54A; Kody 9334). The function of the steering damper complements and is similar to the function of a vertically applied shock absorber which dampens the vertical oscillations of the vehicle after it has negotiated a bump in the road (CX 220Z8–10; Hegel 1931).

46. The engineering, technology and design requirements of steering dampers are similar to those of other forms of shock absorbers (Pond 768; Hegel 1938, 1941–42, 2114–15). Monroe and Maremont use the same engineers to develop specifications for both steering dampers and vertical applications (Givens 403–04; Hegel 1938, 1941–42). The testing parts and procedures for steering dampers and shock absorbers are likewise similar (Prescott 11,317–19; Bethell 11,354–55, 11,375; *See, e.g.,* RXs 635–639, RX 642).

47. The component parts[24] as well as the manufacturing and assembly processes for steering dampers and shock absorbers are similar (CX 69D; Givens 405; Tompkins 2409; Kody 9309; Nelson 11,046; *see* Pond 1942–43).

48. The various forms of shock absorbers, including MacPherson struts and steering dampers, are distributed by suppliers through the same channels to the same customers (CX 208Q, Admission No. 54; *see, e.g.,* CX 54A; CX 62B; CX 69N; CX 337C; CX 338B; Kody 9325; Nelson 9737–39).

49. Shock absorbers, including MacPherson cartridges and steering dampers, are basically hydraulic dampening mechanisms which reduce the transmission of road imperfections into the vehicle's passenger compartment by converting mechanical energy to heat (Finding 26, *supra*).

50. Monroe and its competitors manufacture and sell a full line of shock absorbers consisting of direct acting, air-[15]adjustable, spring assisted, steering dampers and MacPherson struts and cartridges.[25]

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[23] CX 15B; CX 51D; CX 282A; Diggelman 2555, 2590; Kody 9354; Prescott 11,319; Bethell 11,354–55, 11,375; Ashford 11,494.

[24] The basic component of a steering damper is often a shock absorber cylinder (CX 69D). Walker and Heckethorne use a shock absorber unit purchased from the Gabriel division of Maremont as the basic component of its steering dampers (Pond 770, 798; Schultz 1746, 1831; Nelson 11,071; Prescott 11,295).

[25] CX 99; CX 151A–E; CX 154A–E; CX 173A; CX 208T–U, Admission Nos. 71, 72, 74; Givens 429; Pond 767; Moore 1243; Cook 1715; Hegel 1938, 1941, 1947 2118–20; Petzsch 2446; Diggelman 2503, 2515, 2525, 2532, 2555, 2587, 2590; Robinson 3670–71, 3686, 3689–90, 3703, 3705; Cox 4389; Barbeau 4638–39; DeLisle 11,243; Hohman 4905; Nelson 9729–30, 9736–37, 9743–44, 11,060–61, 11,063; *see, e.g.,* CX 172H.

51. A full line[26] of shock absorbers is included in manufacturers' current shock absorber catalogues.[27] Warehouse distributors and many nontraditional accounts, such as mass merchants and muffler installation shops, purchase a full line of shock absorbers.[28]

52. From the manufacturing standpoint, shock absorbers, including steering dampers and MacPherson struts, constitute a relevant shock absorber product market. The basic engineering, design and manufacturing technologies pertaining to all of these products are substantially similar or the same.[29]

53. From the marketing or distributing perspective, shock absorbers including steering dampers and MacPherson struts constitute a relevant shock absorber product market. Manufacturers distribute shock absorbers, including MacPherson struts and steering dampers through the same channels of distribution to the same customers.[30] Retailers consider their shock absorber line to include steering dampers and MacPherson struts along with the other forms of shock absorbers.[31]

54. Accordingly, it is found that the shock absorber **[16]**product market consists of conventional direct-acting, air-adjustable, spring-assisted, steering dampers and MacPherson struts and cartridges.

B. Exhaust System Parts

55. Exhaust system parts ["ESP"] are products installed on motorized vehicles which have no substitutes. ESP consists of mufflers (including "sports" mufflers), resonators, and all exhaust pipes, connecting pipes, tail pipes, clamps and attaching parts for use on automobiles, trucks, buses, farm equipment and other vehicles (Complaint and Answer ¶1(a); Schultz 1753). As Walker's engineering vice president testified:

> The function of an exhaust system is to conduct exhaust gases from the engine to some exit point at the rear of the vehicle. It also is—performs a function of quieting engine noises and on vehicles where catalytic converters are part of the exhaust system, it also converts hydrocarbons and carbon monoxide to water vapor and carbon dioxide.

(Schultz 1742)

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[26] *See* Finding 50, *supra*.

[27] *E.g.*, Monroe CX 175; Gabriel CX 189; Bilstein CX 220A–Z–18; CX 221C–F; Armstrong CX 224A–Z–62; CX 225; Delco CX 239; DeCarbon CX 314I, Q.

[28] CX 151A–E; CX 154A–E; CX 337B–C; CX 338B–C; Glasman 1062; Moore 1243; Robison 3691; Garfinkel 9204–05; Nelson 9737–39, 9972; *see* Nelson 9850–51.

[29] Finding 46, *supra*.

[30] Findings 19, 40, *supra*.

[31] *See, e.g.*, CX 338C.

VII. Original Equipment and Replacement Submarkets for Shock Absorbers and Exhaust System Parts

56. Automotive parts manufactured and sold for incorporation into new vehicles during assembly are regarded and referred to as being original equipment installation ["OE"] parts (Pond 730).

57. Replacement or aftermarket parts are produced as replacements for damaged or worn out parts on vehicles already in use. The replacement portion of the automotive parts market includes the OE service segment, which consists of "those parts sold to the original equipment manufacturer that, instead of being placed on the vehicle as it's originally produced, go through the warehousing operation to the car dealer and become installed as either service warranty parts or as replacement parts" (Pond 739–40; *see, e.g.,* CX 15E; CX 39B–F; *but see* N. Wright 6343–44).

58. The market for replacement parts includes the traditional aftermarket, which consists of WDs and jobbers who resell to customers such as garages and service stations, as well as the non-traditional channel containing such customers as mass merchandisers and muffler installation shops which resell directly to consumers (Pond 739).

A. Shock Absorbers

59. Shock absorber manufacturers, including Monroe, report shipments of shock absorbers to the Bureau of Census separately for replacement and OE installation (CX 190G–H). [17]

60. The shock absorber industry[32] and its trade association report and analyze sales and competitive conditions separately for the OE and replacement shock absorber markets (CX 51K; CX 25D, H; CX 191B; Baker 537; Pond 744, 828; Putman 1192; Fleuelling 4098–99, 4100–02).

61. Before the merger, both Walker and Monroe separately analyzed Monroe's market share in the U.S. replacement market and in the U.S. original equipment market (CX 7; CX 20A, C–E; CX 51K, Z–6; CX 141B).

62. Monroe has separate engineering and sales departments for its OE and replacement sales (Hegel 2096–97; Hohman 4811; Bethell 11,333).

1. OE Shock Absorbers

63. The parties agree that there is a lack of cross-elasticity of

[32] Concerning the OE and replacement segments of the shock absorber industry, *e.g.,* Mr. Freeman of ITT testified that "yes, we see them as different businesses" (Freeman 8875).

demand between the OE and replacement markets for shock absorbers. That is, a shock absorber produced for the original equipment segment would not be sold as a replacement shock absorber (N. Wright 6465; Nelson 9666, 10,647).

64. Demand for shock absorbers for original equipment use is primarily a function of new vehicle production (CX 208W, Admission No. 87).

65. Shock absorbers made for OE installation are of primarily a single grade (Bracken 4362). Generally, 1" shock absorbers[33] are the standard size used in new car production (RX 423A–D; RX 424A–F; Hegel 2127, 2130; H. Wright 3804–05; Fleuelling 3907; Nelson 10,433–34).

66. Shock absorbers produced for the OE market are supplied to OE manufacturers in bulk without mountings (Hegel 2133–34; Fleuelling 3908, 4170; Buck 9401; Nelson 9797–98; DeLisle 11,256–58). [18]

67. A shock absorber manufacturer can successfully complete in the OE market with a limited line[34] of shock absorbers because OE sales are geared to one or a few specific shock absorber applications (CX 208X, Admission No. 95; Pond 757–58; *see* Nelson 9685–87, 9692–94, 10, 414).

68. Shock absorbers produced for the OE installation market may have different performance and durability specifications than those produced for replacement use on the same model because the new vehicle manufacturers establish their own OE specifications (CX 208W, Admission Nos. 91, 93–94; Pond 871; Hegel 1983–84; Tompkins 2237; Fleuelling 4171; DeLisle 4868; Freeman 8877 *in camera*).

69. In the OE market shock absorbers are sold in an engineering competition where the emphasis is on the product and whether the product meets certain engineering specifications, as well as meeting subjective and objective ride requirements for a given application (Pond 757; Tompkins 2237; Petzsch 2467; H. Wright 3836; Cox 4415 Hegel 7256–60; Freeman 8876; Buck 9425).

70. Buyers of shock absorbers for OE use are generally professional, technically qualified persons who are responsible for seeing that the product they select meets the vehicle manufacturer's technical specifications (Tompkins 2237; Hegel 7256–57; Buck 9425; Nelson 10,675). The OE buyer is basically an analyst, interested in

[33] There was testimony that the somewhat larger 1-⅜" size shock absorbers are installed by vehicle manufacturers on police cars and cars designated to be equipped with a handling option package (Hegel 2131).

[34] At the time of trial both Questor and ITT were selling only a single part number to the domestic OE market (Putman 1120–21; *see* Nelson 9692, 10,414–15). In contrast, Monroe supplied approximately 100 OE part numbers for the 1978 model year passenger car production (Hegel 2132–33).

product specification compliance, delivery ability and costs, including freight costs (Pond 794).

71. An OE shock absorber manufacturer must have an OE sales staff which can competently service OE buyer needs in purchasing, engineering and product planning (Freeman 8876–77).

72. OE customers receive few services other than the actual production and delivery of shock absorbers (Pond 793). A shock absorber manufacturer producing for the OE market does not incur costs to provide other services, such as promotional efforts, advertising or catalog service to the OE buyer (Pond 764–65; Cox 4405–07; Freeman 8875; Nelson 9716, 11,680–81). The OE market buyer assumes a significant portion of the production **[19]**risks including those incurred for raw materials, components and finished goods inventory (Pond 793).

73. The OE shock absorber market "is very cost oriented, relatively short margin, and fairly fixed anticipation of business" (Pond 758, 792–93; *see* Barna 1368–69; Nelson 10,625–26; DeLisle 11,275).

74. Sales of shock absorbers to the OE market have a lower profit margin than sales to the aftermarket (Barna 1369; N. Wright 8694 *in camera;* Nelson 9725–26; *see* Freeman 4173–74).

75. Production of shock absorbers for the OE market generally requires a high volume assembly line designed to produce the size and type of shock absorber for which a firm has an OE contract (Pond 800–01; DeLisle 4866; Nelson 9691–98, 9700–03; *see* H. Wright 3803–04).

76. A shock absorber manufacturer selling only in the OE market would have very limited requirements for low volume production facilities (Pond 801; Barbeau 4650).

77. The production run[35] for an OE shock absorber contract is fairly high, from 1,000 to 20,000 units (Hegel 1978; H. Wright 3805; DeLisle 4865; Stewart 9259–60; *see* Freeman 8845 *in camera*).

78. The location of a given shock absorber plant is a competitive consideration in the OE market because location affects freight costs to the OE vehicle manufacturer (*See* Pond 794; Nelson 9708–09, 10,711, 10,714–15, 10,749–50).

79. OE shock absorber supply does not require extensive warehousing facilities or inventory investment, because OE demand is anticipated several weeks in advance and shipment is made in bulk from the factory directly to the OE vehicle assembly lines (Pond 755–57; Freeman 8889 *in camera; see* Freeman 8875; Nelson 11,126).

[35] A "run" is defined as "[t]he number of identical parts that would be made on a particular assembly line without changing to any other part numbers in the meantime" (Hegel 1979).

80. OE shock absorber contracts extend from one to five years at a set price established by bid (Fleuelling 4013; Hegel 7270–71 Freeman 8842–43 *in camera,* 8891–92 *in camera;* Stewart 9260; Nelson 9678–80, 9724–25, 10,424–25; DeLisle 11,267). The set price can vary only if certain events occur, such as significant increases in costs for labor or material, or [20]large changes in the quantity of shocks needed (Fleuelling 3908–14; Hegel 7261, 7270–71; Freeman 8891–92 *in camera;* Nelson 10,424–26).

81. A lead time of from nine to twelve months is generally required to seek and obtain an OE contract for shock absorbers (Freeman 8855 *in camera;* Nelson 9678–79; *see* Stewart 9260).

82. Prices obtained by producers of shock absorbers sold in the OE market tend to be lower than for those sold in the replacement market (Fleuelling 4173–74; Buck 9416; *see* Nelson 9725, 10,0585 *in camera*).

83. In 1975, Monroe adopted a price cutting strategy to increase its share of the OE market.[36]

2. Replacement Shock Absorbers

84. Demand for shock absorbers sold for replacement purposes depends upon the number of cars on the road, miles traveled, and overall economic conditions (CX 5G). It is affected by incidences of failure of a vehicle's shock absorbers, vehicle owner upkeep and wear on the vehicle's shock absorbers.[37]

85. Shock absorber manufacturers determine the specifications for shock absorbers manufactured for sale in the replacement market (CX 208X, Admission No. 94).

86. Shock absorbers made for the replacement market are generally of three grades, *i.e.,* good, better and best (Bracken 4362; *see* Kalupa 4208, 4210–12).

87. Replacement market customers require a broad range [21]of types,[38] sizes[39] and grades[40] of shock absorbers for full coverage.[41]

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[36] "Corporate wide use will capture increased share of the OE market by *selective price decreases* relative to the market price at that time" (CX 181B, emphasis added).

[37] Replacement frequency for various types of shock absorbers is summarized in Dr. Nelson's testimony (Nelson 9794–9821). There were estimates that struts lasted longer than conventional shock absorbers, and also that they lasted about as long as conventional shocks (Moore 1237, 1404–05; Bush 3288; H. Wright 3841–42 *in camera;* N. Wright 8703–06; Nelson 9794–9821; *see* CX 337, CX 338).

[38] The leading producers and sellers of shock absorbers for the replacement market offer a full line of air and spring-assisted shock absorbers. These shocks are not standard equipment on new cars but may be ordered as optional equipment (Putman 1123, 1168; Hegel 2092, 2137; Robison 3670, 3703; Barbeau 4638–39; Borick 4740; Buck 9377; Nelson 9691–94).

[39] Different diameters of shock absorbers, *e.g.,* the 1⅜" or 1⅜₁₆" may be offered for application on the same car.

[40] *See* Finding 84, *supra.*

[41] "It [coverage] goes to whether or not you have a specialty large bore shock absorber for an off-the-road vehicle, whether or not you have a spring assisted shock absorber for older cars, whether or not you have an air shock absorber for station wagons or performance vehicles" (Pond 759; Robison 3691).