

## Complaint

## IN THE MATTER OF

## ALLIED CORPORATION, ET AL.

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

*Docket C-3157. Complaint, June 17, 1985—Decision, June 17, 1985*

This consent order with Allied Corporation and King Radio Corporation requires Allied to divest the King Weather Radar Line to Narco Avionics, Inc., or another Commission-approved purchaser. With certain exceptions, the order also prohibits Allied, for a period of ten (10) years, from acquiring, without the Commission's prior approval, any interest in any company that manufactures or sells general aviation weather detection systems in the United States.

*Appearances*

For the Commission: *Stephen W. Riddell, Sandra G. Wilkof, Laurie T. Baulig and John C. Weber.*

For the respondents: *Brian D. Forrow*, in-house counsel, Morris Township, N.J. and *C. Benjamin Crisman, Jr. and Peter E. Greene, Skadden, Arps, Slate, Meagher & Flom*, Washington, D.C., for respondent Allied Corporation, and *Owen M. Johnson and Paul B. Hewitt, Akin, Gump, Strauss, Hauer & Feld*, Washington, D.C., for respondent King Radio Corporation.

## COMPLAINT

The Federal Trade Commission, having reason to believe that respondent, Allied Corporation ("Allied"), has acquired respondent, King Radio Corporation ("King"), both corporations subject to the jurisdiction of the Commission, and that such acquisition constitutes a violation of 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 that a proceeding in respect thereof would be in the public interest, hereby issues its complaint, stating its charges as follows:

## I. DEFINITIONS

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

(a) *General aviation aircraft* means those aircraft predominantly

used for private purposes rather than (i) for military purposes or (ii) for the transport of people or cargo for a fee.

(b) *Airborne weather detection system* means (i) a product designed for use in aircraft consisting of a display, a sensor device and an antenna, that uses radio waves to detect and display weather conditions and is designed to enable a pilot to evaluate and avoid adverse weather conditions, or (ii) a product designed for use in aircraft, consisting of a receiver system that detects lightning and is designed to enable a pilot to evaluate and avoid adverse weather conditions. *Airborne weather detection system* shall also include any device that performs the same function in the same manner as the King products designated KGR 356 and KGR 358 for display on the products, defined in (b)(i) and (b)(ii) above.

#### II. ALLIED

2. Allied is a corporation organized under the laws of New York with its executive offices at Columbia Road and Park Avenue, Morris Township, New Jersey.

3. Allied is a major worldwide supplier of industrial chemicals, petroleum and natural gas, scientific laboratory instruments, typesetting equipment, semiconductor components, automotive parts and aviation and aerospace products.

4. The Bendix Aerospace Sector of Allied develops and manufactures products used in military and civil aircraft, spacecraft, missiles and other defense and space exploration products.

5. In 1983, Allied had sales of \$10.02 billion, assets of \$7.65 billion, and net income of \$98 million.

#### III. KING

6. King is a corporation organized under the laws of Kansas with its executive offices at 400 North Rogers Road, Olathe, Kansas.

7. King is primarily engaged in the design, manufacture and distribution of electronic communication, navigation, weather radar and flight control equipment for general aviation aircraft.

8. In 1983, King's sales amounted to approximately \$86 million, and it had about \$76 million in assets.

#### IV. JURISDICTION

9. At all times relevant herein, respondent, Allied, and respondent, King, have been and are now engaged in commerce as "commerce" is defined in Section 1 of the Clayton Act, as amended, 15 U.S.C. 12, and are corporations whose businesses are in or affecting commerce as "commerce" is defined in Section 4 of the Federal Trade Commission Act, as amended, 15 U.S.C. 44.

## V. THE ACQUISITION

10. On or about September 26, 1984, Edward King, Chairman of the Board and founder of King entered into a stock purchase agreement to sell his 47.5% share of voting stock in King to AC Acquisition Corporation, a wholly-owned subsidiary of Bendix, itself a subsidiary of Allied. In addition, a trustee for a trust which controls a 6.2% interest in King agreed to sell that interest to AC Acquisition. Pursuant to another agreement AC Acquisition would be merged into King. The total acquisition, which has been valued at \$109.8 million, was consummated on January 31, 1985.

## VI. TRADE AND COMMERCE

11. The relevant market in which to evaluate the effects of this acquisition is the manufacture and sale, in the United States and worldwide, of airborne weather detection systems designed for use in general aviation aircraft.

12. Allied and King are actual, direct competitors in the manufacture and sale, in the United States and throughout the world, of airborne weather detection systems designed for use in general aviation aircraft.

## VII. EFFECTS OF THE ACQUISITION

13. The effects of the acquisition of King by Allied may be substantially to lessen competition or to tend to create a monopoly in the relevant market in violation of 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 because, *inter alia*:

(a) Substantial direct competition between Allied and King in the relevant line of commerce will be eliminated;

(b) Already high concentration in the relevant line of commerce will be increased, thereby increasing the likelihood of successful collusive behavior among the remaining firms in the relevant line of commerce; and

(c) King will be eliminated as a significant independent competitive influence on the relevant lines of commerce.

## VIII. VIOLATION CHARGED

14. The acquisition of the stock of King by Allied violates 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.

## DECISION AND ORDER

The Federal Trade Commission, having initiated an investigation of the acquisition of King Radio Corporation ("King") by the Allied Corporation ("Allied"), and Allied and King having been furnished hereafter with a copy of a draft complaint which the Bureau of Competition proposed to present to the Commission for its consideration and which, if issued by the Commission, would charge Allied and King with violations of the Clayton Act and Federal Trade Commission Act; and

Allied, King, their attorneys, and counsel for the Commission having thereafter executed an agreement containing a consent order, an admission by Allied and King of all the jurisdictional facts set forth in the aforesaid draft of complaint, a statement that the signing of said agreement is for settlement purposes only and does not constitute an admission by Allied and King that the law has been violated as alleged in such complaint, and waivers and other provisions as required by the Commission's Rules; and

The Commission having thereafter considered the matter and having determined that it had reason to believe that Allied and King have violated the said Acts, and that complaint should issue stating its charges in that respect, and having thereupon accepted the executed consent agreement and placed such agreement on the public record for a period of sixty (60) days, now in further conformity with the procedure prescribed in Section 2.34 of its Rules, the Commission hereby issues its complaint, makes the following jurisdictional findings and enters the following Order:

1. Allied is a corporation organized, existing and doing business under and by virtue of the laws of New York with its executive offices at Columbia Road and Park Avenue, Morris Township, New Jersey.
2. King is a corporation organized, existing and doing business under and by virtue of the laws of Kansas with its executive offices at 400 North Rogers Road, Olathe, Kansas.
3. The Federal Trade Commission has jurisdiction of the subject matter of this proceeding and of Allied and King, and the proceeding is in the public interest.

## ORDER

For purposes of this order, the following definitions shall apply:

(A) *Allied* means Allied Corporation, its predecessors, divisions, subsidiaries, groups and affiliates controlled by Allied and their re-

spective directors, officers, employees, agents and representatives and their respective successors and assigns.

(B) *King Radio* means King Radio Corporation, its predecessors, divisions, subsidiaries, groups and affiliates controlled by King Radio and their respective directors, officers, employees, agents and representatives and their respective successors and assigns.

(C) *King Weather Radar Line* means all airborne weather detection systems currently manufactured, sold or owned by King Radio, including but not limited to the KWX 565 and the KWX 58 weather radar systems; all airborne weather detection systems that King Radio has under development, including but not limited to the KWX 57, the KWX 460, and improvements or modifications to the KWX 56 or KWX 58 systems; and any other plans or research related to airborne weather detection systems. The KWX 56 and the KWX 58 weather radar systems shall be construed to include, respectively, the KI 244 and the KI 248 control/indicators, the KA 126 and the KA 128 combined antenna/receiver/transmitter units and the KGR 356 and the KGR 538 graphics interface units.

(D) *Airborne weather detection system* means (1) a product, consisting of a display, a sensor device and an antenna, that uses radio waves to detect and display weather conditions and is designed to enable a pilot to evaluate and avoid adverse weather conditions and is designed for use in aircraft; or (2) a receiver system designed for use in aircraft that detects lightning and is designed to enable a pilot to evaluate and avoid adverse weather conditions. *Airborne weather detection system* shall also include any device that performs the same function in the same manner as the King Radio products designated KGR 356 and KGR 358 for display on the products, defined in D (1) and D (2) above.

(E) *Piece Parts* are components and raw materials purchased or made by King Radio for use in manufacturing, producing or repairing the King Weather Radar Line or spare parts. *Kits* are all Piece Parts required to assemble a specific quantity of the King Weather Radar Line.

#### I.

*It is ordered, That:*

(A) Within eight (8) months from the date this order becomes final, Allied shall divest, absolutely and in good faith all of the assets described below, so as to transfer the King Weather Radar Line as a viable product line such that a purchaser could compete as a manufacturer and seller of airborne weather detection systems:

(1) All inventories, including Piece Parts, Work-In-Process, finished

goods and kits solely dedicated to the King Weather Radar Line, as determined pursuant to a physical inventory to be taken approximately seven (7) days in advance of the closing of the sale, except that Allied may retain, at its discretion, sufficient quantities of Finished Goods and spare parts as to be able to service, maintain and repair its products in the field and fulfill those contracts not assignable to the purchaser.

(2) All tooling, whether or not in the custody of vendors, and test equipment, including fixtures thereof, solely dedicated to the King Weather Radar Line.

(3) All know-how, and trade secrets, if any, solely dedicated to the King Weather Radar Line, including one patent (no. 3973145) and one patent application (no. 412913).

(4) All engineering and design drawings, including but not limited to all documentation for software contained in or used in the manufacture of the King Weather Radar Line; all documentation related to a new weather radar antenna/receiver/transmitter unit that is in the early development stage; all documentation related to a design for a test adapter to enable the testing of the KGR 356 and KGR 358 graphics interface units utilizing an Apple Computer; and all other documentation, design and development studies, inventory, models and all other data related to the King Weather Radar Line.

(5) All processes, bills of material, maintenance manuals, pilots' guides, TSO reports, advertising literature and brochures solely dedicated to the King Weather Radar Line; vendor and distribution lists; and documentation related to a sales history and marketing of the King Weather Radar Line to the extent that such documentation is separable from other confidential information not related to the King Weather Radar Line.

(6) All purchase orders for Piece Parts on order to the extent that they are assignable and solely dedicated to the King Weather Radar Line, all customer lists for King Weather Radar Line products and all contracts for the sale of King Weather Radar Line to the extent that they are assignable.

(B) Divestiture of the King Weather Radar Line shall be made to Narco Avionics, Inc. pursuant to the terms of the Agreement of Purchase and Sale attached hereto as Exhibit A, or to such other purchaser or purchasers that receive(s) the prior approval of the Commission and only in a manner that receives prior approval of the Commission.

(C) For a period of ninety (90) days following the divestiture of the King Weather Radar Line, or such longer period (not to exceed six (6) months) as agreed between the purchaser and Allied, Allied shall assist the purchaser in the start-up and manufacturing process of the King Weather Radar Line by making personnel available to train and

educate employees of the purchaser selected by it in all facets of the start-up, manufacture, production and repair of the King Weather Radar Line. Allied shall name a single technical coordinator to serve as the focal point for such technical assistance. For such technical assistance, Allied may assess the purchaser an amount in accord with the terms of the Agreement of Purchase and Sale attached hereto as Exhibit A, or may charge the purchaser an amount not to exceed its cost for the time and materials (plus a reasonable material burden rate) involved, plus its reasonable travel, lodging and subsistence costs, if any.

(D) Pending the divestiture of the King Weather Radar Line required by this Order, Allied shall use its best efforts to advertise, promote, manufacture and sell the King Weather Radar Line at substantial present levels. Allied shall also continue to fund all ongoing research and development projects with regard to the King Weather Radar Line at 1984 levels. Allied shall be required to designate an appropriate King Radio employee to be responsible for managing the King Weather Radar Line pending its divestiture.

(E) Pending the divestiture of the King Weather Radar Line required by this order, Allied and King shall maintain the viability, integrity and marketability of the properties described in Paragraph I (A) and shall not use or permit the destruction, removal or impairment of any assets to be divested except in the ordinary course of business and except for ordinary wear and tear.

## II.

*It is further ordered,* That, for a period of ten (10) years from the date this order becomes final, Allied shall not, without the prior approval of the Commission, directly or indirectly, acquire any stock, share capital or equity interest in any concern engaged in, or any assets used in the manufacture and sale in or to the United States, of airborne weather detection systems designed for use in general aviation aircraft; *provided, however,* that nothing in this order shall prohibit Allied from (i) acquiring, for investment purposes only, an interest of not more than one (1) percent of the stock, share capital or equity of any such concern; or (ii) making purchases, in the ordinary course of business, of components and equipment used to manufacture airborne weather detection systems (*e.g.*, tools, test equipment and components). For the purposes of this Paragraph, the term *general aviation aircraft* means those aircraft predominantly used for private purposes rather than (i) for military purchases or (ii) for the transport of people or cargo for a fee.

## III.

*It is further ordered,* That if Allied has not accomplished the divestiture required by Paragraph I of this order within the eight-month period, Allied shall consent to the appointment of a trustee who shall have the power and authority to accomplish the divestiture at the most favorable price and terms available consistent with this order's unconditional obligation to divest. The trustee shall be a person with experience and expertise in acquisitions and divestitures and shall be selected by the Commission subject to Allied's consent, which shall not be unreasonably withheld. The trustee shall serve at the cost and expense of Allied based on reasonable and customary terms. The trustee's compensation shall be based on reasonable and customary terms. The trustee's compensation shall be based at least in significant part on a commission arrangement contingent on the trustee divesting the trust assets. The trustee shall have the cooperation of Allied in accomplishing the divestiture within a reasonable period not to exceed ten (10) months and subject to the prior approval of the Federal Trade Commission. The appointment of a trustee shall not preclude the Commission from seeking civil penalties and other relief available to it for any failure by Allied to comply with Paragraphs I through VI of this order.

## IV.

*It is further ordered,* That within sixty (60) days from the date on which this order becomes final and the first two sixty (60) day periods thereafter and every ninety (90) days thereafter until Allied has fully complied with the provisions of Paragraph I of this order, Allied shall submit in writing to the Commission a verified report setting forth in detail the manner and form in which it intends to comply, is complying or has complied with that provision of this order. All such compliance reports shall include a summary of all discussions and negotiations with any persons who are potential purchasers of the assets to be divested as specified in Paragraph I of this order, including the identity of all such persons, copies of all written communications to and from such persons, and all internal memoranda, reports and recommendations concerning divestiture.

## V.

*It is further ordered,* That for a period of ten (10) years from the date on which this order becomes final, Allied shall notify the Commission at least thirty (30) days prior to any proposed corporate changes that



may affect compliance obligations arising out of this order, such as dissolution, assignment or sale resulting in the emergency of successor corporations and the creation or dissolution of subsidiaries.

## VI.

On the first anniversary of the date this order becomes final and on every anniversary date thereafter for the following nine (9) years, Allied shall submit to the Commission a verified written report setting forth the manner and form in which it has complied or is complying with this order.

### EXHIBIT A\*

#### AGREEMENT OF PURCHASE AND SALE

THIS AGREEMENT made and entered on this 23rd day of January, 1985 (the "Agreement") by and between Narco Avionics, Inc., a Delaware corporation, with its principal offices at 270 Commerce Drive, Fort Washington, Pennsylvania 19034 ("Buyer") and King Radio Corporation, a Kansas corporation, with its principal offices at 400 North Rodgers Road, Olathe, Kansas 66062 ("Seller").

Buyer desires to purchase from Seller, and Seller desires to sell to Buyer, on the terms and conditions set forth herein, a portion of the assets used in the business and operations of Seller set forth in paragraph 1 below, which has been generally identified by Seller as its Weather Radar Product Line and Graphics Interface Product Line, more particularly described as:

(a) All Airborne Weather Detection Systems currently manufactured, sold or owned by Seller, including but not limited to:

- (1) The KWX 56 Weather Radar System consisting of the KA 126 Antenna/Receiver/Transmitter and the KI 244 Control/Indicator;
- (2) The KWX 58 Weather Radar System consisting of the KA 128 Antenna/Receiver/Transmitter and the KI 248 Control/Indicator;
- (3) The KGR 356 Graphics Interface Unit; and
- (4) The KGR 358 Graphics Interface Unit;

(b) All Airborne Weather Detection Systems that Seller has under development, including but not limited to the KWX 57 and KWX 460, and improvements or modifications to the KWX 56 or KWX 58 systems; and

(c) Any other plans or research related to Airborne Weather Detection Systems.

all of which to be sometimes hereinafter referred to individually as the "Products", and collectively (including the items set forth in paragraph 1) as the "Product Lines".

In consideration of the mutual covenants, agreements, representations and warranties hereinafter contained, the parties agree as follows:

#### 1. Purchase and Sale.

\* Material which the Commission has granted confidential treatment has been replaced in the text with the symbol [\*\*\*].

At the closing (the "Closing") as hereinafter defined in paragraph 3.1(a), Seller shall sell, transfer and convey to Buyer, and Buyer shall purchase and accept:

(a) *Inventories*. All inventories, including Piece Parts, Work-In-Process, Finished Goods and Kits solely dedicated to the Product Lines subject to the provisions of paragraph 1.1 and 1.2.

(b) *Tooling and Test Equipment*. All tooling, whether or not in the custody of vendors and test equipment including fixtures thereof, solely dedicated to the Product Lines, as set forth in *Exhibit 1(b)*.

(c) *Industrial Property Rights*. All know-how, and trade secrets, if any, solely dedicated to the Product Lines, one patent (no. 3973145), one patent application (no. 412913). Copies of the assignment of the patent and patent application are annexed to this Agreement as *Exhibit 1(c)*.

(d) *Documents, Lists and Design Data*. All engineering and design drawings including but not limited to processes, bills of material, maintenance manuals, pilots' guides, TSO reports, advertising literature and brochures solely dedicated to the Product Lines; vendor and distribution lists; all documentation for software contained in or used in the manufacture of the Products; all documentation related to a new weather radar antenna/receiver/ transmitter unit that is in the [ \*\*\* ] developmental stage; all documentation related to a design for a test adapter to enable testing of the KGR 356 and KGR 358 graphics interface units utilizing [designated equipment]; all other documentation, design and development studies, inventory, models and other data related to the Products; and documentation related to a sales history and marketing of the Product Lines to the extent that such documentation is separable from other confidential information not related to the Product Lines.

(e) *Purchase Orders and Contracts*. All purchase orders for Piece Parts on order to the extent that they are assignable and solely dedicated to the Product Lines, all customer lists for the Product Lines and all contracts for the sale of Products to the extent that they are assignable, as set forth in *Exhibit 1(e)* to be provided at the Closing.

1.1 *Limitation on Inventory*. Anything to the contrary notwithstanding, Buyer, at its election, shall not be obligated to purchase, accept and pay for Piece Parts in excess of those necessary to manufacture more than a cumulative total of [ \*\*\* ] Weather Radar Products and, in addition thereto, a cumulative total of [ \*\*\* ] Graphics Interface Products.

1.2 *Retention by Seller*.

(a) Anything to the contrary notwithstanding, Seller shall retain and not convey to Buyer all Piece Parts, purchase orders for Piece Parts not solely dedicated to the Product Lines, and purchase orders for Piece Parts solely dedicated to the Product Lines that are not assignable after efforts are made to request such vendors to permit such assignment from Seller to Buyer. Seller shall also retain and not convey to Buyer contracts for the sale of spare parts, and for Products that are not assignable after efforts are made to request such vendors to permit such assignment from Seller to Buyer. Seller shall also retain the right to continue to conduct business with vendors and distributors set forth on the vendor and distributor lists. Seller shall also retain and not convey to Buyer a sufficient quantity of Finished Goods and spare parts, in Seller's discretion, as to be able to service, maintain and repair its Products in the field and fulfill any contracts not assignable to Buyer.

(b) Buyer shall grant to Seller a nonexclusive, irrevocable, royalty free license (including the right to grant sublicenses) (i) under the patent and patent application to be conveyed herein, to make, have made, use, and sell Piece Parts and (ii) to utilize the tooling (in the custody of vendors) to be conveyed herein, only as necessary for Seller to service, maintain and repair the Products sold by Seller to third parties prior to the

Closing. Such license shall be for the duration of any patents that are in existence or may be issued that are conveyed herein, and for the life of the tooling. The license to be used is set forth as *Exhibit 1(c)*, annexed to this Agreement.

1.3 *Definitions.* As used herein the following terms apply:

- (a) "Finished Goods" shall mean each completed Product.
- (b) "Piece Parts" shall mean components and raw material purchased or made by Seller for use in manufacturing, producing, maintaining or repairing the Products or spare parts.
- (c) "Kits" shall mean all required Piece Parts to assemble a specific quantity of the Products.
- (d) "Work-In-Process" shall mean Products in various stages of manufacture or production.
- (e) The phrase "solely dedicated to the Product Lines" in connection with assets to be conveyed herein, shall mean those assets which have no use or value to Seller in connection with its business other than for the Product Lines.
- (f) "Weather Radar Products" shall mean the KWX 56 and KWX 58 weather radar systems.
- (g) "Graphics Interface Products" shall mean the KGR 356 and KGR 358 Graphics Interface units.
- (h) "Airborne Weather Detection System" shall mean (1) a product, consisting of a display, a sensor device and an antenna, that uses radio waves to detect and display weather conditions and is designed to enable a pilot to evaluate and avoid adverse weather conditions and is designed for use in aircraft; or (2) a receiver system designed for use in aircraft that detects lightning and is designed to enable a pilot to evaluate and avoid adverse weather conditions. "Airborne Weather Detection System" shall also include any device that performs the same function in the same manner as the Seller's products designated KGR 356 and KGR 358 for display on the products defined in (h)(1) and (h)(2) above.

2. *Purchase Price.* The purchase price shall consist of a payment made at the Closing as set forth in paragraph 2.1 below, payments or credits as set forth in paragraph 2.2 below, and payments made over a period of seven years as set forth in paragraph 2.3 below.

2.1 *Current Payment.* At the Closing, Buyer shall pay to Seller as part of the purchase price, [ \* \* \* ]. Such payment shall be made by certified check or wire transfer at the election of the Seller.

2.2 *Payments and Credits.*

(a) Buyer shall also pay to Seller, as part of the purchase price, a sum [ \* \* \* ] for Finished Goods on hand at the Closing (and in the production process) to be conveyed to Buyer, plus [\*\*\*] of such costs for variance factors, and a sum [ \* \* \* ] for its Kits, Piece Parts and Work-In-Process on hand at the Closing (and in the production process) to be conveyed to Buyer, plus [\*\*\*] of such costs as a material burden rate.

(b) The Buyer shall receive a credit of [ \* \* \* ] which credit shall be deducted from sums due Seller under paragraph 2.2(a). The net amount due Seller after deduction of the credit shall be payable in accordance with the terms of paragraph 2.2(c).

(c) Such sums due Seller pursuant to paragraph 2.2(b) shall be payable in principal increments of [ \* \* \* ] ninetieth (90th) day following the Closing Date, and on each ninetieth (90th) day thereafter, until fully paid, in accordance with a promissory note bearing a rate of interest of [\*\*\*] per annum in the form set forth as *Exhibit 2.2(c)* annexed to this Agreement. If less than [ \* \* \* ] is due Seller, the full sum shall be paid to Seller on the ninetieth (90th) day following the Closing Date, plus interest due. In

the event an adjustment in the cost of inventory that was in production is necessary, such an adjustment shall be made pursuant to paragraph 4.7.

### 2.3 Additional Payments.

(a) In addition, Buyer will pay, as part of the purchase price, the sum of [ \* \* \* ] with interest at [ \* \* \* ] per annum, payable in 27 equal installments of [ \* \* \* ] and a final installment of [ \* \* \* ] in accordance with an unsecured promissory note set forth in *Exhibit 2.3(a)*. Payments shall commence on the ninetieth (90th) day following the final payment due under the promissory note set forth in *Exhibit 2.2(c)*, and shall continue on each ninetieth (90th) day thereafter, until fully paid.

### 3. The Closing.

3.1 *Closing.* The purchase and sale of the Product Lines contemplated by this Agreement and the assignment, conveyance and transfer thereof by Seller to Buyer, and payment, delivery of a promissory note, execution of a license agreement, guarantees, security interests, and performance of other obligations as set forth in this Agreement, which are considered conditions of Closing, shall take place at: the offices of Allied Bendix Aerospace, 1000 Wilson Boulevard, Arlington, Virginia 22209, at such time and date to be mutually agreed upon after appropriate approvals are obtained from the FTC pursuant to the FTC investigation, or at such other time and place as the parties may agree to in writing ("Closing Date").

3.2 *Instruments of Transfer.* At the Closing, Seller will deliver to Buyer an Assignment and Bill of Sale, passing all right, title and interest in and to the Product Lines free and clear of all liens, security interests and other encumbrances in the form set forth in *Exhibit 3.2*, annexed to this Agreement.

### 4. Standard Costs, Physical Inventory Count and Transfer of Inventory.

4.1 The inventories, including Finished Goods, Kits, Piece Parts and Work-In-Process have been valued at [ \* \* \* ] in accordance with Seller's accounting practices.

4.2 Within approximately seven days prior to the Closing, Seller and Buyer together, will count the inventory on hand, not committed to production, (including test counts and sample counts, where total counting is impractical), and establish an agreed upon quantity which will be valued at Seller's cost plus [\*\*\*]. Seller and Buyer will supervise the packaging and sealing of the cartons of such inventory. The quantities as established will not be subject to adjustment, since Buyer will have partaken in the inventories count and sealing of such cartons.

4.3 Seller will continue production until approximately one day prior to Closing. An estimated amount of inventory in production will be established and valued at Seller's cost plus [\*\*\*].

4.4 At the Closing, the cost of inventory on hand (plus [\*\*\*]) and the cost of the estimated inventory in production (plus [\*\*\*]) will serve as the basis of payment pursuant to the promissory note described in paragraph 2.2(c).

4.5 As soon as practicable after the Closing Date, per agreement of the parties, the inventory on hand (not in production) will be shipped to Buyer on a carrier designated by Buyer, f.o.b. Seller's plant.

4.6 Within thirty (30) days after the Closing, as soon as practicable, Seller will gather up the inventory that was in production (possibly in three plants) and place it in a central location at Seller's plant. Seller and Buyer will count the inventory that was in production and will supervise the packaging and sealing of the cartons of such inventory, which will be valued at Seller's cost (plus [\*\*\*]). The quantities established will not be subject to adjustment.

4.7 An adjustment between the estimated quantity of inventory that was in production given at the Closing by Seller, and the actual quantity of such inventory will be

made, if required, and such adjustment in terms of costs will be reflected in a new promissory note to be executed by Buyer containing the same terms as set forth in *Exhibit 2.2(c)* (except for the adjustment in principal), which new promissory note shall bear interest at [\*\*\*] from the Closing Date, and the original note will be destroyed.

4.8 The inventory in production will be shipped to Buyer as soon as practicable after packaging it, on a common carrier designated by Buyer, f.o.b. Seller's plant.

4.9 Buyer will, in its discretion, within forty-five days from the Closing Date, examine the valuation of the inventory at Seller's cost (plus [\*\*\*]) to determine whether Seller accurately and consistently applied its standard costs to the inventory. Adjustments, if necessary, in terms of costs will be reflected in the new promissory note. The new promissory note will be substituted for the original promissory note as set forth in *Exhibit 2.2(c)* and delivered to Seller within sixty days after the Closing Date.

4.10 Seller will take reasonable steps to secure the inventory while it is in Seller's custody. The risk of loss shall pass from Seller to Buyer in accordance with the terms set forth in paragraph 11.14.

4.11 In the event Buyer and Seller do not agree on the quantity of the inventories or the consistency or accuracy of the application of the valuation of such inventories, then the issues involved in the dispute shall be referred to an auditor to be mutually agreed upon, and such auditor shall perform an independent review of the facts in order to resolve specific issues. The determination of such auditor shall be final with respect to the matters in dispute. All costs associated with such auditor shall be shared equally by Buyer and Seller.

4.12 Any payments received by Seller in error for purchases made from Buyer by Buyer's customers after the Closing Date, will be endorsed over to Buyer or remitted to Buyer.

#### 5. *Representations and Warranties of Seller.*

5.1 *Organization.* Seller is a corporation duly organized, validly existing and in good standing under the laws of the State of Kansas and has all necessary corporate power and authority to own, lease and operate its properties and to carry on its business and the business of the Product Lines as now being conducted. No party, other than Seller, has any right, title or interest, or to the knowledge of Seller, has asserted any such right, title, or interest, in and to the Product Lines.

#### 5.2 *Authority.*

(a) At the Closing Seller will have the full corporate power and authority to enter into this Agreement and to carry out the transactions contemplated hereby, and all proceedings required to be taken by Seller to authorize the execution, delivery and performance of this Agreement have been properly taken and this Agreement constitutes a valid and binding obligation of Seller enforceable in accordance with its terms. Other than an investigation of the Federal Trade Commission ("FTC") regarding the acquisition by The Bendix Corporation ("Bendix") of Seller's voting stock, which investigation may determine that Seller be required to dispose of the Product Lines that are the subject of this Agreement to a Buyer to be approved by the FTC (hereinafter referred to as the "FTC Investigation"), there is no litigation, proceeding, or investigation pending, or to the best of Seller's knowledge threatened, which questions the validity or enforceability of this Agreement or seeks to enjoin the consummation of any of the transactions contemplated hereby.

(b) Other than the FTC Investigation and agreements between the FTC, Bendix and/or Seller that may have been entered into pursuant to such investigation, neither the execution and delivery hereof, nor the consummation of the transactions contemplated hereby, nor compliance by Seller with any of the provisions hereof will conflict with or result in a breach of or default under any of the terms, conditions, or provisions of any agreement, instrument or obligation to which Seller is a party, relative

to the Product Lines, or by which it or its properties and assets may be bound or affected or (2) result in violation of any order, writ, injunction, decree, statute, rule or regulation applicable to Seller or the Product Lines.

5.3 *Inventories, etc.* The inventories of Seller regarding the Product Lines on the Closing Date will consist of items of a quality and quantity usable and salable in the ordinary course of business as it was conducted by Seller during the past year. Such inventories have been valued at [ \* \* \* ] in accordance with the normal inventory valuation practices of the Seller for the Product Lines. The market value of the tooling and test equipment, cumulatively to be conveyed herein equals or exceeds [ \* \* \* ]. The value of the inventories to be conveyed to Buyer will exceed [ \* \* \* ].

5.4 *Brokers and Finders.* Seller has not retained any broker or finder or paid or agreed to pay any broker's or finder's fee or commission for or on account of the transactions contemplated by this Agreement.

5.5 *Manufacturing Capability.* The assets of the Product Lines conveyed by Seller herein contain sufficient information, data and other assets for Seller to be able to manufacture the Products. Seller does not guarantee that Piece Parts conveyed herein (exclusive of the Kits) are sufficient to allow full assembly of individual Products.

5.6 *Gross Margin.* The Gross Margin on Weather Radar Products, in accordance with Seller's standard accounting practices over the past year, on average, has not been less than [\*\*\*], as reported in Seller's monthly Cost of Sales Reports.

5.7 *Product Values.* Except as stated in this subparagraph Seller has no knowledge of any circumstances which would make the Product Lines obsolete or diminish the market for the Product Lines taken as a whole. The parties understand, however, that the KWX 58 Product may diminish the sales of the KWX 56 Product and the KGR 358 Product may diminish the sales of the KGR 356 Product, and the parties further understand that the markets may naturally diminish by virtue of Buyer being a new entrant into the marketplace.

5.8 *Disclosure.* No representation or warranty by Seller in this Agreement, and no statement, certificate or other document furnished, or to be furnished, by or on behalf of Seller under this Agreement, and the Exhibits hereto, contains or will contain any untrue statement of material fact or intentionally omits any material fact necessary to make the statements contained herein or therein not misleading.

6. *Representations and Warranties of Buyer.* Buyer represents and warrants to Seller as follows:

6.1 *Organization.* Buyer is a corporation duly organized, validly existing, and in good standing under the laws of the State of Delaware and has all necessary corporate power and authority to conduct its business as such business is now being conducted, and to acquire its property and the Product Lines.

6.2 *Authority.* At the Closing Buyer will have full corporate power and authority to enter into this Agreement and carry out the transactions contemplated hereby; all proceedings required to be taken by it to authorize the execution, delivery and performance of this Agreement have been properly taken; and this Agreement constitutes a valid and binding obligation of Buyer enforceable in accordance with its terms.

6.3 *Brokers and Finders.* Buyer has not retained any broker or finder or paid or agreed to pay any broker's or finder's fee or commission for or on account of the transactions contemplated by this Agreement.

6.4 *Litigation or Proceedings*

Other than the FTC investigation, there is no litigation, proceedings, or investigation pending, or to the best of Buyer's knowledge threatened, which questions the validity or endorsement of this Agreement or seeks to enjoin the consummation of any transactions contemplated hereby.

(b) Neither the execution and delivery hereof, nor the consummation of the transactions contemplated hereby, nor compliance by Buyer with any of the provisions hereof, will result in violation of any order, writ, injunction, decree, statute, rule or regulation applicable to Buyer.

6.5 *Collateral.* The collateral given to secure payment of sums due under paragraph 2.2 herein is valued at approximately \$1,200,000.00, and other than Seller's lien to be placed thereon, is and will contain only one prior lien, to wit, a first mortgage held by The Crocker Bank in a sum not to exceed \$650,000.00, there being sufficient remaining equity to secure payments under paragraph 2.2 herein. Buyer will offer to Seller a second mortgage on the collateral set forth in paragraph 11.3 to secure such payments.

6.6 *Disclosure.* No representation or warranty by Buyer in this Agreement, and no statement, certificate or other document furnished or to be furnished by or on behalf of Buyer under this Agreement, and the Exhibits hereto, contains or will contain any untrue statement of material fact or intentionally omits any material fact necessary to make the statements contained herein or therein not misleading.

7. *Conditions Precedent to Buyer's Performance.* All obligations of Buyer to consummate the transactions as contemplated by this Agreement are subject to the fulfillment of each of the following conditions at or prior to Closing (unless waived in writing by Buyer):

7.1 All representations and warranties of Seller contained herein, and in any document delivered pursuant hereto, shall be true and correct in all material respects when made and as of the Closing.

7.2 All obligations required by the terms of this Agreement to be performed by Seller shall have been duly and properly performed in all material respects and Buyer shall have received a certificate, dated the Closing Date, signed by an officer of Seller to such effect.

7.3 Seller shall have delivered to Buyer a certified copy of a resolution adopted by the Board of Directors of Seller authorizing the execution, delivery and performance of this Agreement.

7.4 There shall have been no change in the Product Lines, except changes in the ordinary course of business none of which shall have been materially adverse to an Product.

7.5 There shall not have been any legal action or other proceedings brought by third parties to restrain or prohibit the consummation of the transactions contemplated by this Agreement, or to obtain other relief in connection with this Agreement, or the transactions contemplated hereby, nor shall any such actions be pending or threatened.

7.6 The FTC shall have approved this transaction in a final order of a consent decree and shall have permitted the acquisition by Bendix of Seller's voting stock, or in the alternative, the FTC shall have affirmatively indicated that no consent decree is required.

7.7 The FTC shall have approved Buyer as a party to this transaction.

7.8 Buyer shall have received from counsel for Seller a written opinion dated as of the Closing Date, addressed to Buyer, in a form and substance to be mutually agreed upon by Buyer's and Seller's counsel.

8. *Conditions Precedent to Seller's Performance.* All obligations of Seller to consummate the transactions as contemplated by this Agreement are subject to the fulfillment of each of the following conditions at or prior to the Closing (unless waived in writing by Seller):

8.1 All representations and warranties of Buyer contained herein, and in any document delivered pursuant hereto, shall be true and correct in all material respects when made and as of the Closing.

8.2 All obligations required by the terms of this Agreement to be performed by Buyer shall have been duly and properly performed in all material respects and Seller shall have received a certificate, dated the Closing Date, signed by an officer of Buyer to such effect.

8.3 Buyer shall have delivered to Seller a certified copy of the resolution adopted by the Board of Directors of Buyer authorizing the execution, delivery and performance of this Agreement.

8.4 There shall not have been any legal action or other proceedings brought by third parties to restrain or prohibit the consummation of the transactions contemplated by this Agreement, or to obtain other relief in connection with this Agreement, or the transactions contemplated hereby, nor shall any such actions be pending or threatened.

8.5 The FTC shall have approved this transaction in a final order of a consent decree and shall have permitted the acquisition by Bendix of Seller's voting stock, or in the alternative, the FTC shall have affirmatively indicated that no consent decree is required.

8.6 The FTC shall have approved Buyer as a party to this transaction.

8.7 Seller shall have received from counsel for Buyer a written opinion dated as of the Closing Date, addressed to Seller, in a form and substance to be mutually agreed upon by Buyer's and Seller's counsel.

#### 9. *Indemnification.*

##### 9.1 *Seller's Indemnity.*

(a) Seller shall indemnify and hold harmless Buyer, for a period of one year from the Closing Date, against any damage, loss, cost, liability or expense (including reasonable attorneys' fees), which arise out of or result from (a) the incorrectness or breach of any of the representations or warranties of Seller contained in this Agreement, or given in writing on the Closing Date, and (b) the failure on the part of Seller to perform any covenants or agreements on its part to be performed.

(b) Buyer shall give Seller prompt written notice of any matter which may give rise to Seller's right to indemnity hereunder. Such notice shall identify the nature of the matter and, if appropriate, the persons making the claim from which Buyer's rights to indemnity may arise. Prior to the settlement of any claim, or the defense of any litigation with a third party which may give rise to indemnity hereunder, Seller shall give the opportunity to participate in negotiation and settlement discussions or to assume the defense of such litigation, as the case may be. Any claim of indemnification hereunder shall include a statement specifying the nature and amount of the damages, losses, costs, liabilities and expenses incurred by Buyer, for which indemnification is claimed hereunder.

##### 9.2 *Buyer's Indemnity.*

(a) Buyer shall indemnify and hold harmless Seller, for a period of one year (except for the payments due under this Agreement, which period of indemnification shall be one year) from the Closing Date, against any damage, loss, cost, liability or expense (including reasonable attorneys' fees), which arise out of or result from (a) the incorrectness or breach of any of the representations or warranties of Buyer contained in this Agreement, or given in writing on the Closing Date, and (b) the failure on the part of Buyer to perform any covenants or agreements on its part to be performed.

(b) Seller shall give Buyer prompt written notice of any matter which may give rise to Seller's right to indemnity hereunder. Such notice shall identify the nature of the matter and, if appropriate, the persons making the claim from which Seller's rights to indemnity may arise. Prior to the settlement of any claim or the defense of any litigation with a third party which may give rise to indemnity hereunder, Buyer shall



be given the opportunity to participate in negotiation and settlement discussions or assume the defense of such litigation, as the case may be. Any claim of indemnification made hereunder shall include a statement specifying the nature and amount of the damages, losses, costs, liabilities and expenses incurred by Seller, its successors or assigns, for which indemnification is claimed hereunder.

10. *Nature and Survival of Representations and Warranties.* All statements contained in this Agreement and in any certificate, instrument, or document delivered by or on behalf of either of the parties pursuant hereto shall be deemed representations and warranties by the respective parties hereunder. All representations and warranties made hereunder shall survive the Closing for a period of one year from the Closing Date.

11. *General Provisions*

11.1 *Guarantees.* At the Closing, Buyer shall have obtained and delivered to Seller, a Guarantee by Edward M. Zimmer, Jr., in his personal capacity, and not as an officer of Narco, that Edward M. Zimmer, Jr. shall be and remain primarily liable as a guarantor of any payments due Seller under this Agreement. Such Guarantee shall be in the form annexed to the promissory notes.

11.2 *Accelerated Schedule.* On a best efforts basis, Seller, on the signing of this Agreement up to the Closing Date, shall accelerate its schedule of manufacturing Products and Kits to a reasonable rate as determined by Seller in excess of its current rate of production.

11.3 *Collateral.* Buyer shall offer the following collateral as security to secure all sums due Seller under the promissory note set forth in paragraph 2.2(c), and shall execute at the Closing all documents reasonably required by Seller to enable Seller to perfect its security interest in the collateral.

Collateral: A commercial building owned by Edward M. Zimmer, Jr., Trust, located on Monroe Avenue, Houston, Texas valued at approximately \$1.2 million, the appraisal to be supplied at Closing.

11.4 *Allocation of Payments.* Seller and Buyer agree that the purchase price shall be allocated in accordance with *Exhibit 11.4*.

11.5 *Product Support, Product Liability.*

(a) Buyer shall be responsible for supporting all Products and spare parts sold by it to Buyer's customers, including repairs to Products and spare parts, whether or not under warranty, and shall be responsible for and, upon the Closing, automatically assume the costs and expenses, including expenses affiliated with the defense of lawsuits and claims, that arise in connection with Products and spare parts sold by Buyer to its customers.

(b) Seller shall be responsible for supporting all Products and spare parts sold by it to Seller's customers, including repairs to Products and spare parts, whether or not under warranty, and shall be responsible for and, upon the Closing, automatically assume the costs and expenses, including expenses affiliated with the defense of lawsuits and claims, that arise in connection with Products and spare parts sold by Seller to its customers. Sales of Products and spare parts by Seller to Buyer, in connection with this transaction shall not be deemed a sale to Seller's "customer", and accordingly, Buyer and not Seller shall be responsible for and, upon the Closing, shall automatically assume the Product support, repairs, costs, and expenses, including the expenses affiliated with lawsuits and claims, that arise in connection with Products and spare parts, if any, sold by Seller to Buyer as part of this transaction. Sales of Products from Seller to Buyer as part of this transaction shall be serialized and identified at the Closing in *Exhibit 11.5(b)*. Anything to the contrary notwithstanding, after consumma-

tion of this transaction, in the event Seller purchases Products or spare parts from Buyer to support Seller's Products in the field, or for systems installations, Buyer shall extend to Seller the same warranty it offers to its other customers.

11.7 *Technical Assistance.* Seller shall assist Buyer in the start-up and manufacturing process of the Product Lines by making personnel available to train and educate employees of Buyer in all facets of the start-up, manufacture, production and repair of the Products and the transfer of Seller's research and development concerning the Products. The individual employees of Seller and the number of such employees made available for such technical assistance shall be determined by the Seller. A single technical coordinator shall be named by Seller to serve as the focal point for such technical assistance. Such technical assistance shall be made available, as may be required by Buyer, for a period of [ \* \* \* ] following the Closing (but may be extended by mutual consent of the parties). Such technical assistance for [ \* \* \* ] following the Closing shall be made available as part of the purchase price and is valued by the parties at [ \* \* \* ]. Any technical assistance rendered by Seller to Buyer, per agreement of the parties, after such [ \* \* \* ] period shall be paid for by Buyer on a time and material basis, for the costs incurred by Seller, [ \* \* \* ] for each labor hour expended by Seller's personnel in rendering technical assistance. In addition, for technical assistance rendered after the [ \* \* \* ] the Buyer shall pay to Seller the cost of material paid for or expended by Seller [ \* \* \* ] related to the technical assistance. Such technical assistance may be rendered at Seller's or Buyer's plant or at other places to be mutually agreed upon. Buyer shall pay all reasonable costs expended for transportation, lodging and subsistence of Buyer's and Seller's personnel involved in the technical assistance program when travel away from home is required. Seller shall invoice Buyer for such technical assistance, costs and expenses and such invoices shall be due and payable within thirty days after receipt thereof.

11.8 [ \* \* \* ]

11.9 *Sale Made "As Is, Where Is".* The sale of the Product Lines is made on an "as is, where is" basis which shall be reflected in the Assignment and Bill of Sale.

11.10 *"King" Name.*

(a) The Buyer shall not utilize the "King" name and logo in the manufacture, marketing, distribution and sale of products, except to indicate in its advertising literature and brochures, for a period not to exceed three years from the Closing Date, that the Products were "formerly manufactured by King Radio Corporation". Buyer shall have the exclusive use of the nomenclature KWX 56, KWX 58, KGR 356, KGR 358, KA 128, KI 244 and KI 248 for the Product Lines acquired hereunder. All tooling shall be modified by Buyer to remove the King name and logo, and such name and logo shall be removed by Buyer from all Products and Piece Parts manufactured by Buyer. With respect to Products manufactured by Seller and sold to Buyer, as part of this transaction for subsequent resale to Buyer's customers, Buyer shall place a permanently affixed label on such products indicating that they were sold by Buyer.

(b) The "King" name and logo shall not be placed on the front panel of Airborne Weather Detection Systems for a period of seven years from the Closing Date. Anything to the contrary notwithstanding, Seller will be permitted to advertise "Bendix" weather radar equipment together and in connection with Seller's non-weather radar equipment, provided further that Seller will not identify "King" as the source of manufacture of any weather radar except as required by law.

11.11 *Further Assurances and Cooperation.* In connection with the transactions contemplated by this Agreement, the parties agree to execute such additional documents and papers, and perform and do such additional acts and things as may be reasonably necessary or proper to effectuate and carry out all of the provisions and the intent of this Agreement.

11.12 *Notices.* All notices to be given by either party to this Agreement to the other party hereto shall be in writing and shall be given in person or by depositing such notice in the United States mail, registered or certified, postage prepaid addressed as follows (unless either party designates a different address in writing to the other party for communicating notices):

To Buyer: Narco Avionics, Inc.  
270 Commerce Drive  
Fort Washington, PA 19304  
Attention: President

With a carbon copy to:

Edward M. Zimmer, Jr.  
Post Office Box 277  
Laguna Beach, CA 92652

To Seller: King Radio Corporation  
400 North Rodgers Road  
Olathe, KS 66062  
Attention: President

With a carbon copy to:

Allied Bendix Aerospace  
1000 Wilson Boulevard  
Arlington, VA 22209  
Attention: General Counsel

11.13 *Payment of Expenses, Taxes and Closing Costs.* Each of the parties shall pay all costs and expenses incurred or to be incurred by it in negotiating and preparing this Agreement and in closing and carrying out the transactions contemplated hereby. All sales taxes and like taxes payable in connection with the sale, conveyances, assignments, transfers and deliveries to be made to Buyer hereunder, shall be borne by the Buyer.

11.14 *Deliveries and Risk of Loss.* The Product Lines to be conveyed by Seller to Buyer pursuant to the Agreement shall be delivered f.o.b. Seller's factory, 400 North Rodgers Road, Olathe, Kansas to Buyer, or to a private or common carrier acceptable to Buyer, for delivery to premises designated by Buyer, as soon after the Closing as practicable. Irrespective of the date upon which such Product Lines are delivered to Buyer, or to a private or common carrier, and notwithstanding any agreement, express or implied, that Seller and Buyer may enter into for Seller to hold or store such Product Lines on a temporary basis for Buyer after the Closing, the risk of loss, damage or destruction of such Product Lines shall pass from Seller to Buyer on the Closing Date, immediately after consummation of such Closing.

11.15 *Announcements.* No public or other announcement, including any press releases regarding this Agreement, or the transactions contemplated hereby, shall be made by either Seller or Buyer without advance notice to and prior approval by the other party which notice shall include the text of such announcement or release.

11.16 *Entire Agreement.* This writing constitutes the entire Agreement of the parties with respect to the subject matter hereof and may not be modified, amended or terminated except by a written agreement specifically referring to this Agreement and signed by the parties hereto.

11.17 *Waiver.* No waiver of any breach or default hereunder shall be considered valid unless in writing and signed by the party giving such waiver, and no such waiver shall be deemed a waiver of any subsequent breach or default of the same or similar nature.

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11.18 *Successors and Assigns.* This Agreement shall be binding upon and inure to the benefit of each of the parties hereto, and their successors and assigns.

11.19 *Severability.* If any clause or provision of this Agreement shall be held invalid or unenforceable by the final determination of a court of competent jurisdiction, and all appeals therefrom shall have failed or the time for such appeals shall have expired, such clause or provisions shall be deemed eliminated from this Agreement but the remaining provisions shall nevertheless be given full force and effect.

11.20 *Captions.* The paragraph headings contained herein are for the purpose of convenience and are not intended to define or limit the contents of said paragraphs.

11.21 *Choice of Law.* This Agreement shall be construed, interpreted and enforced in accordance with the laws of the State of Kansas.

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the day, month and year first above written.

KING RADIO CORPORATION

By: Louis J. Giuliano  
Vice President & Group Exe.  
Bendix Aerospace Sector

NARCO AVIONICS, INC.

By: Edward M. Zimmer, Jr.  
President

EXHIBIT 1(b)

*Radar Tooling*

THIS IS CONFIDENTIAL MATERIAL

EXHIBIT 1(c)

ASSIGNMENT

WHEREAS, King Radio Corporation, a Kansas corporation, located at 400 North Rodgers Road, Olathe, Kansas, hereinafter "Assignor," is sole owner of and desires to formally assign to Assignee the U.S. Letters Patent and Patent Application listed below; and having conveyed certain tooling in an Assignment and Bill of Sale dated \_\_\_\_\_, to Assignee; and

WHEREAS, Narco Avionics, Inc., a Delaware corporation located at 270 Commerce Drive, Fort Washington, Pennsylvania 19034, hereinafter "Assignee", desires to acquire the entire right, title and interest in and to said U.S. Letters Patent and Patent Application, subject to the grant to the Assignor of certain license rights therein; and desires to acquire the right, title and interest to tooling set forth in an Assignment and Bill of Sale dated \_\_\_\_\_ from Assignor to Assignee, subject to the grant, to the Assignor of certain license rights in such tooling;

UNITED STATES PATENT

<u>Patent No.</u>	<u>Issue Date</u>	<u>Title</u>	<u>Inventor</u>
3973145	August 3, 1976	Weather Radar Transistorized Pulse Modulator	Jerry C. Schmitt Terry K. Michie

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UNITED STATES PATENT APPLICATION

<u>Serial No.</u>	<u>Filing Date</u>	<u>Title</u>	<u>Inventor</u>
412913	August 30, 1982	Apparatus and Method for the Correction of Attenuation Induced Errors In a Weather Radar Receiver	James Lyall

NOW, THEREFORE, THIS DEED WITNESSETH: that for and in consideration of One Dollar (\$1.00) to Assignor in hand paid and other good and valuable consideration, the receipt of which is hereby acknowledged, that Assignor has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over unto the said Assignee, the entire right, title and interest in and to said U.S. Letters Patent and Patent Application, and any reissues or extensions thereof, together with all rights to recover for past infringements thereof, subject to the grant to the Assignor of an non-exclusive, irrevocable, royalty-free, license, with rights to sublicense, to make, have made, use and sell Piece Parts under said U.S. Letters Patent and Patent Application and any reissues or extensions thereof, for the life of the patent and any patent issued under the Patent Application listed herein, the same to be held and enjoyed by Assignee, for its own use and benefit and for the use and benefit of its successors, assigns and legal representatives, subject to the license granted herein.

Furthermore, Assignee grants to Assignor the license and right to use tooling in the custody of vendors to make, have made, use and sell for itself and its successors and assigns, certain Piece Parts from said tooling in the custody of vendors, for the life of such tooling, which tooling was conveyed to Assignee pursuant to an Assignment and Bill of Sale dated \_\_\_\_\_, from Assignor to Assignee.

IN WITNESS WHEREOF, the Assignor and Assignee hereunto set their respective hands and affixed their respective seals, this \_\_\_\_\_ day of \_\_\_\_\_, 1985, by their duly authorized representatives.

Attest: \_\_\_\_\_ KING RADIO CORPORATION, Assignor

By: \_\_\_\_\_

Title: \_\_\_\_\_  
(Seal) Title: \_\_\_\_\_

Attest: \_\_\_\_\_ Narco Avionics, Inc., Assignee

By: \_\_\_\_\_

Title: \_\_\_\_\_  
(Seal) Title: \_\_\_\_\_

ATTESTATION FOR ASSIGNOR

County of \_\_\_\_\_

State of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 1985, before me personally appeared \_\_\_\_\_, to me personally known, who being by me duly sworn, did say he is \_\_\_\_\_ of King Radio Corporation, the Assignor above-named an

knowledge that he executed the foregoing instrument on behalf of said Assignor and pursuant to authority duly received.

Notary Public
My Commission Expires:
(Seal)

ATTESTATION FOR ASSIGNEE

County of
State of

On this day of 1985, before me personally appeared, to me personally known, who being by me duly sworn, did say that he is of Narco Avionics, Inc., the Assignee above-named and acknowledged that he executed the foregoing instrument on behalf of said Assignee and pursuant to authority duly received.

Notary Public
My Commission Expires:
(Seal)

EXHIBIT 2.2(c)

PROMISSORY NOTE

Date:

For value received, the undersigned, Narco Avionics, Inc., a Delaware corporation, ("Narco") promises to pay to the order of King Radio Corporation, a Kansas corporation, ("King") the principal sum of \$ payable with interest as hereinafter provided at the offices of King Radio Corporation, 400 North Rodgers Road, Olathe, Kansas 66062, Attention: Chief Financial Officer, or at such other place as the holder may designate in writing. The principal of this Note is payable in equal installments of [ \* \* \* ] and one final installment of the principal balance due, with such installment payments commencing on the ninetieth (90th) day from the date hereof, and each following installment due ninety (90) days following the previous payment due, until fully paid. Interest on the unpaid principal balance of this Note shall accrue from the date hereof at the rate of [\*\*\*] percent per annum. Accrued interest shall be payable from time to time on the dates for payments of installments of principal as herein provided. The undersigned shall have the right to prepay all or any part of this Note without penalty. Any amounts not paid as herein provided shall bear interest at the rate of [\*\*\*] percent per annum. Default in the payment of any part of the principal or interest, when due, shall, at the option of the holder hereof, at once mature the whole of the principal and interest due under this Note, without notice to the maker, endorsers, or guarantors, if any. It is expressly agreed that if suit is brought on this Note, or if collected through bankruptcy, insolvency, or other judicial proceedings, the holder hereof shall be entitled to recover all reasonable expenses incurred in connection with such collection, suit proceedings, including reasonable attorney's fees and legal expenses. The undersigned and all endorsers and guarantors hereby waive presentation for

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payments, notice of payment extensions, protest, notice of protest, and diligence in bringing suit against any maker, endorser or guarantor, hereof. The endorsers shall also waive notice of default and nonpayment, but Narco and any guarantors shall be entitled to a notice of default and nonpayment, in writing, and shall have ten (10) days from the receipt of such notice to cure the default and nonpayment.

NARCO AVIONICS, INC.

By \_\_\_\_\_  
Authorized Officer

Seal

GUARANTEE

The undersigned, Edward M. Zimmer, Jr., in his personal capacity, and not as an officer of the maker of the above Note, shall be primarily liable for payments due under the above Note, and hereby guarantees to the holder of the above Note, prompt payment of all sums which shall become due to the holder pursuant to the foregoing Promissory Note whether or not extended by the parties to the above Note, and hereby waives, with respect to the above Note, notice of payment extensions, protest, notice of protest, and diligence in bringing any suit against any maker, endorser or guarantor of the above Note, and further agrees to remain primarily liable in the event the terms of payment of principal or interest are extended under the Note. Edward M. Zimmer, Jr. shall be entitled to notice of default and nonpayment in writing and shall have ten (10) days from receipt of such notice to cure such default and nonpayment.

\_\_\_\_\_  
Edward M. Zimmer, Jr.  
Individually

EXHIBIT 2.3(a)PROMISSORY NOTE

[ \* \* \* ]

Date: \_\_\_\_\_

For value received, the undersigned, Narco Avionics, Inc., a Delaware corporation, ("Narco") promises to pay to the order of King Radio Corporation, a Kansas corporation, ("King") the principal sum of [ \* \* \* ] payable with interest as hereinafter provided at the offices of King Radio Corporation, 400 North Rodgers Road, Olathe, Kansas 66062, Attention: Chief Financial Officer, or at such other place as the holder may designate in writing. The principal of this Note is payable in 27 equal installments of [\*\*\*] each, and one final installment of [\*\*\*] with such installment payments commencing on the ninetieth (90th) day from the date following the final payment due under a promissory note of same date as herein from Narco to King given pursuant to an Agreement of Purchase and Sale dated \_\_\_\_\_, and each following installment due ninety (90) days following the previous payment date, until fully paid.

Interest on the unpaid principal balance of this Note shall accrue from the date hereof at the rate of [\*\*\*] percent per annum. Accrued interest shall be payable from time to time on the dates for payments of installments of principal as herein provided. The undersigned shall have no right to prepay all or any part of this Note without the written consent of King.

Any amounts not paid as herein provided shall bear interest at the rate of [\*\*\*] percent per annum.

It is expressly agreed that if suit is brought on this Note, or if collected through bankruptcy, insolvency, or other judicial proceedings, the holder hereof shall be enti-

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tled to recover all reasonable expenses incurred in connection with such collection, suit or proceedings, including reasonable attorney's fees and legal expenses.

The undersigned and all endorsers and guarantors hereby waive presentation for payments, notice of payment extensions, protest, notice of protest, and diligence in bringing suit against any maker, endorser or guarantor, hereof. The endorsers shall also waive notice of default and nonpayment, but Narco and any guarantors shall be entitled to a notice of default and nonpayment, in writing, and shall have ten (10) days from the receipt of such notice to cure the default and nonpayment.

NARCO AVIONICS, INC.

By \_\_\_\_\_  
Authorized Officer

Seal

#### GUARANTEE

The undersigned, Edward M. Zimmer, Jr., in his personal capacity, and not as an officer of the maker of the above Note, shall be primarily liable for payments due under the above Note, and hereby guarantees to the holder of the above Note, prompt payment of all sums which shall become due to the holder pursuant to the foregoing Promissory Note whether or not extended by the parties to the above Note, and hereby waives, with respect to the above Note, notice of payment extensions, protest, notice of protest, and diligence in bringing any suit against any maker, endorser or guarantor of the above Note, and further agrees to remain primarily liable in the event the terms of payment of principal or interest are extended under the Note. Edward M. Zimmer, Jr. shall be entitled to notice of default and nonpayment in writing and shall have ten (10) days from receipt of such notice to cure such default and nonpayment.

\_\_\_\_\_  
Edward M. Zimmer, Jr.  
Individually

#### EXHIBIT 3.2

#### ASSIGNMENT AND BILL OF SALE

KNOW ALL MEN BY THESE PRESENTS:

That, King Radio Corporation, a Kansas corporation ("Transferor"), for good and valuable consideration paid to Transferor by Narco Avionics, Inc., a Delaware corporation ("Transferee"), receipt of which is hereby acknowledged, and in accordance with the terms of an Agreement of Purchase and Sale, dated as of \_\_\_\_\_, 1985 between Transferor and Transferee (the "Purchase Agreement"), by these presents does hereby sell, convey, transfer and assign unto Transferee, its successors and assigns, the following assets of Transferor on an "as is, where is" basis:

(a) *Inventories.* Inventories, including Piece Parts, Work-In-Process, Finished Goods and Kits set forth in an inventory list annexed hereto, subject to adjustment within thirty (30) days after the Closing Date in accordance with an Agreement of Purchase and Sale dated \_\_\_\_\_, between Transferor and Transferee.

(b) *Tooling and Test Equipment.* Tooling, and test equipment including fixtures thereof, as set forth in *Exhibit 1(b)* annexed hereto, subject to a license and right by Transferor to make, use and have made Piece Parts utilizing the tooling in the custody of vendors, for the life of such tooling.

(c) *Industrial Property Rights.* All know-how, and trade secrets, if any, solely dedicat-



412913) pursuant to an Assignment of such patent and patent application (subject to a license to Seller) set forth in *Exhibit 1(c)* annexed hereto.

(d) *Documents, Lists and Design Data.* All engineering and design drawings in reproducible form, including processes, bills of material, maintenance manuals, pilots' guides, TSO reports, advertising literature and brochures solely dedicated to the Product Lines; vendor and distribution lists; applicable documentation for software contained or related to the manufacture of the Weather Radar Products; documentation as it exists related to a new antenna/receiver/transmitter unit that is in the [\*\*\*] developmental stage; documentation related to a design for a test adapter to enable testing the Graphics Interface Products utilizing [designated equipment], other design and development studies and documentation related to the Products; studies, documentation, inventory, models and all other data related to weather radar units under development if any, including but not limited to the KWX 57 and KWX 460 projects; and documentation related to a sales history and marketing of the Product Lines to the extent that such documentation is separable from other confidential information not related to the Product Lines.

(e) *Purchase Orders and Contracts.* All purchase orders for Piece Parts and all contracts for the sale of Products as set forth in *Exhibit 1(e)* annexed hereto.

TO HAVE AND TO HOLD the same to Transferee, its successors and assigns, forever.

1. Transferor does for itself and for its successors and assigns, covenant to Transferee, its successors and assigns that Transferor is the sole owner of all of the assets which are to be sold and conveyed to Transferee hereunder and Transferor has all necessary power and authority to sell and convey such assets to Transferee, and that such assets are free and clear of all mortgages, liens, and encumbrances of any nature which are not of record.

2. Transferor agrees that, at any time and from time to time after the date hereof, it will, upon the request of Transferee, execute and deliver all such further documents and take all such further action as may be required for the better conveyance, transfer and assignment of the assets, properties and rights intended to be conveyed, transferred and assigned hereby.

3. This instrument and the covenants and agreements contained herein shall be binding upon Transferor, its successors and assigns and shall inure to the benefit of Transferee, its successors and assigns.

IN WITNESS WHEREOF, King Radio Corporation has executed this instrument in its corporate name by its duly authorized officer as of \_\_\_\_\_, 1985.

SEAL

KING RADIO CORPORATION

By \_\_\_\_\_

EXHIBIT 11.4

*Purchase Price Allocation*

THIS IS CONFIDENTIAL MATERIAL

IN THE MATTER OF  
MIDDLE ATLANTIC CONFERENCE

DISMISSAL ORDER IN REGARD TO ALLEGED VIOLATION OF SEC. 5 OF THE  
FEDERAL TRADE COMMISSION ACT

*Docket 9185. Complaint, Sept. 18, 1984—Order Dismissing Complaint, June 27, 1985*

The Federal Trade Commission has dismissed the complaint in this matter since the collective ratemaking activities of respondent are immunized by the state action doctrine. The Commission has found that "further prosecution of this matter does not appear to be in the public interest."

COMPLAINT

Pursuant to the provisions of the Federal Trade Commission Act, and by virtue of the authority vested in it by said Act, the Federal Trade Commission, having reason to believe that Middle Atlantic Conference, a corporation, hereinafter sometimes referred to as "respondent," has violated the provisions of said Act, and it appearing to the Commission that a proceeding by it in respect thereof would be in the public interest, hereby issues its complaint stating its charges as follows:

For the purposes of this complaint the use of the present tense includes the past tense and the following definitions apply:

*Carrier* means a common carrier of property by motor vehicle.

*Intrastate transportation* means the pickup or receipt, transportation and delivery of property for compensation wholly within any State of the United States by a carrier authorized by that state to engage therein.

*Tariff* means a publication and any supplements thereto stating the rates of a carrier for the intrastate transportation of property, excluding general rules and regulations.

*Member* means any carrier or other person that pays dues or belongs to Middle Atlantic Conference or to any successor corporation.

*Rate* means a charge, payment or fixed price according to a ratio, scale or standard for direct or indirect transportation service.

*Collective rate* means any rate or charge established under any contract, agreement, understanding, plan, program, combination or conspiracy between two or more competing carriers, or between any carrier and respondent.

PARAGRAPH 1. Respondent, Middle Atlantic Conference, is a corporation organized, existing and doing business under and by virtue of

the laws of the District of Columbia, with its office and principal place of business located at 6410 Kenilworth Avenue, Riverdale, Maryland. Respondent publishes and issues tariffs containing rates for the intrastate transportation of property on behalf of its member carriers.

PAR. 2. Carriers engaging in intrastate transportation of property within Pennsylvania do so under certificates of public convenience and necessity granted by the Pennsylvania Public Utilities Commission. Such carriers are subject to rate regulation by the said Commission and are required to charge just and reasonable rates. Carriers in Pennsylvania are required to charge the rates filed once they have been accepted by the said Commission.

PAR. 3. The statute which provides for regulation of carriers engaged in the intrastate transportation of property within Pennsylvania does not compel, command, authorize or otherwise provide for the establishment, operation or continuation of collective rates among carriers or others on their behalf.

PAR. 4. Except to the extent that competition has been restrained as herein alleged, respondent's members are now in competition among themselves and with other carriers.

PAR. 5. Respondent's membership consists of approximately 100 carriers engaging in intrastate transportation of property within Pennsylvania. Respondent's members are entitled to and do, among other things, vote for and elect the officers and directors of respondent. The control, direction and management of respondent are vested in the Board of Directors, which employs a general manager who acts as chief administrative officer of the corporation with direct charge of and supervision over the affairs of the corporation.

PAR. 6. The acts and practices of respondent set forth in Paragraph Eight are in or affecting commerce as "commerce" is defined in the Federal Trade Commission Act, as amended, and respondent is subject to the jurisdiction of the Federal Trade Commission. Respondent's acts and practices:

(A) Affect the flow of substantial sums of money across state lines from businesses and other private parties to respondent's members for rendering intrastate transportation services;

(B) Affect respondent's members' purchase and use of equipment and other goods and services which are shipped across state lines; and

(C) Are supported by the receipt of dues and fees which are sent across state lines.

PAR. 7. Shippers use the intrastate services of respondent's members to transport property from warehouses and distribution centers in Pennsylvania to customers in Pennsylvania, which property was originally shipped into Pennsylvania from other states. For such in-

trastate deliveries of property from warehouses and distribution centers, carriers charge shippers or shippers' customers the intrastate rates published by respondent. These intrastate shipping charges are factors which influence the prices of such property. The intrastate delivery services of these carriers are an essential and integral part of the interstate business transactions of such shippers. Thus, the activities of these carriers have a substantial and direct effect upon interstate commerce.

PAR. 8. Respondent, its members, officers, directors, and others are engaging in a combination, conspiracy, agreement, concerted action or unfair and unlawful acts, policies and practices, the purpose or effect of which is to unlawfully hinder, restrain, restrict, suppress or eliminate competition among carriers engaged in the intrastate transportation of property within Pennsylvania.

Pursuant to and in furtherance thereof, respondent, its members and others engage in the following acts, policies and practices, among others:

- (A) Initiating, preparing, developing, disseminating, and taking other actions to establish and maintain collective rates for the intrastate transportation of property within Pennsylvania;
- (B) Participating in the collective rates; and
- (C) Filing collective rates with the Pennsylvania Public Utilities Commission.

PAR. 9. The acts and practices of respondent, its members and others as alleged in Paragraph Eight have the effect of:

- (A) Fixing, stabilizing, raising, maintaining, or otherwise interfering or tampering with the rates charged by carriers for the intrastate transportation of property within Pennsylvania;
- (B) Restricting, restraining, hindering, preventing or frustrating rate competition among carriers for the intrastate transportation of property within Pennsylvania;
- (C) Depriving shippers patronizing carriers for intrastate transportation of property within Pennsylvania of the benefits of free and open competition in the provision of said services; and
- (D) Depriving consumers in Pennsylvania of the benefits of free and open competition in the intrastate transportation of property.

PAR. 10. The acts, policies and practices of respondent, its members and others, as herein alleged, are all to the prejudice and injury of the public and constitute unfair methods of competition in or affecting commerce in violation of Section 5 of the Federal Trade Commission Act, as amended. The acts and practices of respondent, as herein alleged, are continuing and will continue in the absence of the relief herein requested

## ORDER DISMISSING COMPLAINT

The Commission has considered this matter on complaint counsel's unopposed motion that the complaint be withdrawn.

In this case respondent has argued that its collective ratemaking activities are immunized by the state action doctrine. Complaint counsel now represents that all the elements of a state action defense as articulated by the Supreme Court in *Southern Motor Carriers Rate Conference v. United States*, 105 S.Ct. 1721 (1985), are available to the respondent. Accordingly, further prosecution of this matter does not appear to be in the public interest. The complaint is therefore dismissed.

Complaint

105 F.T.C.

IN THE MATTER OF  
THE ECHLIN MANUFACTURING COMPANY, ET AL.

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

*Docket 9157. Complaint, July 23, 1981—Final Order, June 28, 1985*

The Federal Trade Commission has dismissed its antitrust challenge to The Echlin Manufacturing Co.'s acquisition of Borg-Warner Corp.'s automotive-aftermarket operations. The Commission ruled that since there are no barriers to entry into the market for the assembly and sale of carburetor kits, "there can be no anticompetitive effect from the acquisition, and no violation of the antitrust laws."

*Appearances*

For the Commission: *Ann B. Malester, Karen E. Chandler and Linda Martin.*

For the respondents: *Basil J. Mezines, Glenn A. Mitchell and David U. Fierst, Stein, Mitchell & Mezines, Washington, D.C. and David H. Spiller, in-house counsel, Branford, Conn., for respondent Echlin Mfg. Co. Earl E. Pollock, Gary Senner, Louis C. Kieler and Blake Harrop, Sonnenschein, Carlin, Nath & Rosenthal, Chicago, Ill. and Cheryl Longtin, in-house counsel, Chicago, Ill., for respondent Borg-Warner Corp.*

COMPLAINT

The Federal Trade Commission, having reason to believe that the Respondents, The Echlin Manufacturing Company ("Echlin") and Borg-Warner Corporation ("Borg-Warner"), subject to the jurisdiction of the Commission, have entered into an agreement which violates Section 5 of the Federal Trade Commission Act, as amended, (15 U.S.C. 45); that Echlin has acquired those assets of Borg-Warner described in Paragraph 11 and that such acquisition constitutes a violation of Section 7 of the Clayton Act, as amended, (15 U.S.C. 18) and Section 5 of the Federal Trade Commission Act, as amended; and it appearing that a proceeding in respect thereof would be in the public interest, the Commission hereby issues its Complaint, pursuant to Section 11 of the Clayton Act (15 U.S.C. 21) and Section 5(b) of the Federal Trade Commission Act (15 U.S.C. 45(b)), stating its charges as

## I. THE ECHLIN MANUFACTURING COMPANY

1. Echlin is a corporation organized and doing business under the laws of Connecticut, with its principal office at 175 North Branford Road, Branford, Connecticut.

2. For the fiscal year ending August 31, 1980, Echlin's consolidated operating revenues were approximately \$301.4 million and its net income was approximately \$8.8 million. As of August 31, 1980, Echlin had total assets of approximately \$237 million.

3. Echlin's major area of business is the manufacture and sale of replacement automotive parts. Echlin's products include: carburetor kits; carburetor and emission control parts; ignition system parts; automotive diagnostic equipment; turbochargers; hydraulic and air brake parts and assemblies; automotive wire and cable products; clutch and electrical system components used by remanufacturers; and parts for maintaining lift trucks and small gasoline engines. [2]

4. Echlin is engaged in the sale and shipment of products, including carburetor kits, throughout the United States; and is engaged in or affects commerce within the meaning of the Clayton Act, as amended, and the Federal Trade Commission Act, as amended.

## II. BORG-WARNER CORPORATION

5. Borg-Warner is a corporation organized and doing business under the laws of Delaware, with its principal office at 200 South Michigan Avenue, Chicago, Illinois.

6. In 1980, Borg-Warner's consolidated manufacturing revenues were approximately \$2.7 billion and its net income was approximately \$126 million. As of December 31, 1980, Borg-Warner had total manufacturing assets of approximately \$1.9 billion.

7. Borg-Warner's major areas of business are the manufacture and sale of transportation equipment, chemicals and plastics, air conditioning equipment, and industrial products. Borg-Warner also has subsidiaries engaged in the business of financial and protective services.

8. In 1980, Borg-Warner's Transportation Equipment Group had sales of approximately \$903.6 million and earnings of approximately \$31.5 million. The group manufactured and/or supplied products for use in new vehicle production and for replacement use. These products included: carburetor kits; automatic and manual transmissions and transmission components; ignition system parts; individual carburetor and emission control parts; clutches and clutch components; four-wheel drive units; axles; radiators; and automatic slack adjusters. These products are used on passenger cars, trucks, off-highway vehicles, and in farm and marine applications.

9. As of July 13, 1981, all of the divisions of Borg-Warner involved in the manufacture and/or sale of replacement automotive parts were included within the Transportation Equipment Group. Included among such divisions that manufactured and/or sold replacement automotive parts were: the Automotive Parts Division ("APD"); the Ballwin-Washington Division ("Ballwin-Washington"); the Ottawa Division ("Ottawa"); APD International; and APD Borg-Warner (Canada) Limited. APD has been engaged in the sale of a variety of automotive products to the replacement channels of distribution, including: carburetor kits; carburetor and emission control parts; fuel pumps; ignition system parts; automotive wire and cable products; and new and remanufactured clutches. Ballwin-Washington's primary business has been the assembly of carburetor kits and the production of the vast majority of parts therefore. Ottawa remanufactured clutches for sale by APD to the replacement market. APD International and APD Borg-Warner (Canada) Limited exported replacement automotive parts.

10. Borg-Warner has been and is engaged in the sale and shipment of products, including carburetor kits, throughout the United States; and is engaged in or affects commerce within the meaning of the Clayton Act, as amended, and the Federal Trade Commission Act, as amended. [3]

### III. THE AGREEMENT OF THE PARTIES

11. On May 12, 1981, Echlin and Borg-Warner entered into an agreement, effective February 28, 1981, whereby Echlin would acquire all of the assets of Borg-Warner's automotive aftermarket operations in exchange for 22% of Echlin's common stock. The Boards of Directors of Echlin and Borg-Warner gave their final approval to this transaction and Echlin's stockholders ratified the agreement on July 7, 1981. Pursuant to this agreement, Echlin has acquired the assets of the divisions of Borg-Warner's Transportation Equipment Group set forth specifically in Paragraph 9. In exchange therefor, Borg-Warner acquired approximately 4,500,000 shares of Echlin common stock. The agreement also provides for the election of one Borg-Warner representative to the Echlin Board of Directors so long as Borg-Warner owns at least 10% of Echlin's voting securities. Pursuant to a trademark licensing agreement, Echlin and Borg-Warner have agreed that Echlin will receive an exclusive license to use certain Borg-Warner trademarks in connection with the marketing and sale of various automotive products to the "automotive aftermarket" in the United States and Canada and a non-exclusive license for the rest of the world. In addition, Echlin and Borg-Warner have entered into a supply agreement whereby Borg-Warner will continue to supply



Echlin for at least fifteen years with the products which Borg-Warner's remaining divisions have historically supplied to the Borg-Warner divisions acquired by Echlin. The transaction was consummated on or about July 14, 1981.

#### IV. NATURE OF TRADE AND COMMERCE

12. The relevant geographic market is the United States as a whole.

13. The relevant product market is the assembly and sale of carburetor kits.

14. A carburetor kit is a prepackaged assemblage of the parts most often replaced on a carburetor. In order to facilitate the use of a carburetor kit, each carburetor kit also contains gauges and an instruction sheet. There is no practical alternative to the use of a carburetor kit.

15. Carburetor kits are used by professional mechanics and, to a limited extent, by vehicle owners themselves. These installers have found that it is easier and cheaper to buy in the form of a carburetor kit all the items which generally need to be replaced on a carburetor. By purchasing a kit, the installer can be assured of obtaining the parts that should be replaced rather than going through the process of deciding whether or not to replace each different part. The installer also saves the time and effort that would be needed to procure all the individual parts. Therefore, installers purchase carburetor kits in preference to the components thereof in the vast majority of instances.

16. Several hundred different carburetor kits are required to provide coverage for virtually all of the vehicles serviced in the United States. Wholesalers usually stock a line of carburetor kits but only limited amounts of some of the individual components included in a kit. This enables the wholesalers to avoid the extra expense of inventorying, warehousing, pulling and billing numerous items for a single repair rather than one carburetor kit.

17. An assembler of carburetor kits performs both an assembly function in creating the carburetor kit and a sales function in selling the carburetor kit directly or indirectly to the replacement channels of distribution. [4]

18. The assembly of carburetor kits consists of determining which parts should be included in each kit, obtaining a source for the thousands of individual carburetor parts, and packaging the parts together with appropriate instructions and gauges.

19. The assembler of carburetor kits must have the necessary skills to determine which items to include in each kit in order to achieve the appropriate level of consolidation that will minimize the number of

kits in a line but still not result in significantly higher per unit prices due to the inclusion of extra parts.

20. All carburetor kit assemblers, including Echlin and Borg-Warner, have supplied carburetor kits directly to the replacement channels of distribution. Prior to July 13, 1981, Borg-Warner also sold carburetor kits to firms which resell such kits to the replacement channels of distribution under their own brand names.

21. There are three channels of replacement parts distribution. Most carburetor kits are sold to warehouse distributors who in turn sell them to jobbers for their resale to installers. A second channel consists of sales to vehicle dealers. A third channel consists of sales to direct buying retailers, e.g., mass merchandisers.

22. New vehicle manufacturers do not purchase carburetor kits for incorporation in new vehicles. Carburetor remanufacturers rarely purchase carburetor kits.

#### V. MARKET STRUCTURE

23. Sales of carburetor kits by assemblers in 1980 totalled approximately 12.6 million units, having a value of approximately \$53 million at the level of sales to the replacement channels of distribution.

24. In 1980, Echlin assembled at least 1.2 million carburetor kits which it sold to the replacement channels of distribution. Echlin accounted for approximately 9.8% of all carburetor kits assembled and sold in the United States in 1980.

25. In 1980, Borg-Warner assembled approximately 4.8 million carburetor kits, making it the largest assembler of carburetor kits and accounting for approximately 38.4% of all carburetor kits assembled and sold in the United States. Borg-Warner sold approximately 1.86 million of these carburetor kits directly to the replacement channels of distribution and sold the remainder to other firms which resold these carburetor kits under their own brand names to the replacement channels of distribution.

26. Concentration in the assembly and sale of carburetor kits is extremely high. In 1980, there were only seven domestic companies that assembled carburetor kits and virtually no imports of carburetor kits. In 1980, two-firm concentration in the assembly and sale of carburetor kits was approximately 63.7% and four-firm concentration was approximately 82.6%.

#### VI. BARRIERS TO ENTRY

27. The barriers to entry into the assembly and sale of carburetor kits, including the obtaining of...

## VII. ACTUAL COMPETITION

28. Prior to July 13, 1981, Echlin and Borg-Warner were actual competitors in the assembly and sale of carburetor kits in the United States.

## VIII. EFFECTS

29. The effect of the aforesaid acquisition may be to substantially lessen competition in the relevant market in violation of 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, in the following ways, among others:

(1) it has eliminated actual competition between Echlin and Borg-Warner and between Borg-Warner and others in the assembly and sale of carburetor kits;

(2) it has created one firm accounting for approximately 48% of the relevant market, whose market power in the assembly and sale of carburetor kits vis-a-vis its competitors is greater than that formerly held by either Borg-Warner or Echlin due to the combined firm's role in the assembly of carburetor kits, its degree of vertical integration in parts production for carburetor kits, and its degree of direct sales to the replacement channels of distribution;

(3) it has significantly increased the already high levels of concentration in the relevant market, with two-firm concentration increasing from approximately 63.7% to 73.5%, *pro forma*, and four-firm concentration increasing from approximately 82.6% to 89.2%, *pro forma*, based on 1980 figures; and

(4) it may disadvantage firms supplying carburetor kits directly to the replacement channels of distribution by increasing the likelihood that such firms would be deprived of the access to carburetor kits which such firms currently enjoy.

## IX. VIOLATIONS CHARGED

30. The steps taken by Echlin and Borg-Warner to consummate the aforesaid transaction constitute a violation of Section 5 of the Federal Trade Commission Act, as amended, 15 U.S.C. 45.

31. The acquisition of assets set forth in Paragraph 11 constitutes a violation of 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.

## INITIAL DECISION BY

MONTGOMERY K. HYUN, ADMINISTRATIVE LAW JUDGE

SEPTEMBER 14, 1984

## PRELIMINARY STATEMENT

On July 23, 1981, the Federal Trade Commission ("Commission") issued a Complaint challenging the 1981 acquisition of certain automotive aftermarket assets of Borg-Warner Corporation ("Borg-Warner") by Echlin Inc. ("Echlin") as a violation of Section 5 of the Federal Trade Commission Act, as amended (15 U.S.C. 45), and of Section 7 of the Clayton Act, as amended (15 U.S.C. 18). The Complaint alleges that the relevant product market in which to assess the competitive effect of the acquisition is the "assembly and sale of carburetor kits," and that the acquisition combined two firms with 9.8% (Echlin) and 38.4% (Borg-Warner) of the market. The Complaint alleges that prior to the acquisition, Echlin and Borg-Warner were direct competitors, ranking third and first, respectively, in the relevant product market and that, as a result of the acquisition, Echlin became the dominant firm in the assembly and sale of carburetor kits.

The Complaint further charges that the effect of the acquisition may be to substantially lessen competition in the assembly and sale of carburetor kits. Through its acquisition of Borg-Warner's automotive aftermarket assets, Echlin: (1) eliminated actual competition between itself and Borg-Warner and between Borg-Warner and other carburetor kit assemblers; (2) significantly increased concentration levels in an already highly concentrated market; and (3) created a dominant firm accounting for almost 50% of the market.

Respondents filed their Answers to the Complaint on August 27, 1981, admitting in part and denying in part the various allegations of the Complaint.

Under the supervision and control of my predecessor, Administrative Law Judge John J. Mathias, the parties were allowed an extensive discovery and all pre-trial steps were concluded by June 1983.

On August 16, 1983, the instant case was reassigned to me. Echlin's August 31, 1983 motion to disqualify me pursuant to Section 3.42(g)(2) of the Commission's Rules of Practice, which I certified to the Commission with a statement of reasons for my decision not to disqualify myself, was dismissed by the Commission by Order of September 13, 1983.

Adjudicative hearings began on September 12, 1983 and concluded

on April 19, 1984, with 41 days of trial. Testimony was heard from a total of 41 witnesses. (Complaint counsel called 12 witnesses and respondents called 30 witnesses, with one witness called to testify by both complaint counsel and respondents.) Presentation of the case-in-chief began in Washington, D.C. on September 12, 1983 and continued through October 6, 1983. Respondents' defense began in St. Louis, [3] Missouri on October 17, 1983 and continued through October 21, 1983. Respondents' defense resumed on November 7, 1983 in Washington, D.C. and concluded on December 6, 1983. Complaint counsel presented a rebuttal case with hearings held on April 18, 1984 through April 19, 1984. Respondents offered several surrebuttal exhibits that were received in evidence on May 1, 1984. The record, which includes a transcript of 5,327 pages and over 750 exhibits, was closed on May 1, 1984.<sup>1</sup>

References to the record are made in parentheses and the following abbreviations are used:

CPF - Complaint Counsel's Proposed Findings;  
 CRB - Complaint Counsel's Reply to RPF and RB;  
 CX - Commission's Exhibit;  
 RPF - Respondents' Proposed Findings;  
 RB - Respondents' Memoranda of Law in Support of RPF;  
 RX - Respondents' Exhibits;  
 RRB - Respondents' Reply to CPF.  
 SB - Supplemental Brief of Borg-Warner Corporation  
 SRB - Supplemental Reply Memorandum of Borg-Warner Corporation

The transcript citation of a witness' testimony is referred to with the last name of the witness and the page number(s) upon which the testimony appears. Other transcript citations are referred to as "Tr." followed by the page number(s).

#### Definitions

For the purposes of this Initial Decision, the following definitions apply:

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

(b) The *automotive aftermarket* is used synonymously with the term *replacement market*. [4]

(c) The terms *automotive carburetor kits*, *carburetor kits* and *carburetor tune-up kits* include kits used to repair carburetors on domestic

<sup>1</sup> By order dated May 31, 1984, the Commission extended the due date of this Initial Decision to September 1, 1984.

and foreign automobiles and light trucks, industrial and agricultural equipment and inboard marine engines.

The proposed findings and conclusions submitted by the parties and their arguments in support thereof have been given careful consideration by me and to the extent not adopted by this Initial Decision, in the form proposed or in substance, are rejected as not supported by the evidence or as immaterial. Any motion appearing on the record not heretofore or hereby specifically ruled upon either directly or by the necessary effect of the conclusions in this Initial Decision are hereby denied.

Upon consideration of the entire record in this proceeding and having considered the demeanor of the witnesses, I make the following findings of fact and conclusions of law and order based on the record considered as a whole:

#### FINDINGS OF FACT

##### I. DESCRIPTION OF RESPONDENTS

###### A. Respondent Echlin Inc.

1. Echlin Inc. ("Echlin"), formerly The Echlin Manufacturing Company, is a Connecticut corporation with its headquarters in Branford, Connecticut (CX 235A). It has plants and offices in Connecticut, Illinois, Florida, California, Kansas, Michigan, Missouri and several foreign countries (CX 235G-H). For purposes of this case, the two relevant plants are Branford, Connecticut, where all design, consolidation and sourcing decisions for carburetor parts and kits are made, and Litchfield, Illinois, where the kits are assembled and warehoused (Timberlake 3080-81, 3072). The selling functions are carried out in Branford (Timberlake 3080).

2. Echlin sells numerous automotive aftermarket products, including condensers, contacts, complete distributors, distributor caps, ignition coils, rotors, control modules, pickups, sensors, electronic voltage regulators, ignition wire, automotive testing equipment, hydraulic brake master cylinders, wheel cylinders for drum brake systems, rotors and calipers for disk brake systems, brake repair kits, air brakes, turbochargers, fuel pumps, PCV valves, small engine parts, fork lift ruck [5] replacement parts, carburetor parts, and carburetor kits (CX 35B; Timberlake 3127; Schultz 3057). Echlin does not produce or sell new or rebuilt replacement carburetors (CX's 235, 534M).

3. Some of these products are manufactured by Echlin; others are sold by Echlin but manufactured by other firms. For example, Echlin does not manufacture the carburetor parts that it sells, either in-

dividually packaged or in the form of kits (Smith 3178-79). For a period of some six to eight months in 1980 and 1981, Echlin manufactured, more or less on an experimental basis, some pump plungers and diaphragms that were included in some carburetor kits but found its costs to be too high and phased out the venture sometime in late 1981 (Smith 3233-35).

4. Approximately 72% of Echlin's automotive aftermarket sales are to the traditional channel of aftermarket distribution, independent warehouse distributors ("WDs") (CX 235C). The remaining 28.2% of the aftermarket sales are to distribution center ("DCs") affiliates of the National Automotive Parts Association ("NAPA") (CX 235C).

5. All products identified with the "Echlin" trade name are sold only to NAPA DCs under the "NAPA-Echlin" name (CX 235D). Among these products are carburetor kits, which are identified as NAPA-Echlin kits and sold only to NAPA (Timberlake 3130).

6. NAPA is a program distribution group (McKenna 3904). It sells automotive parts through 79 distribution centers ("DCs"), owned by Genuine Parts (71 DCs), Quaker City Motor Parts (5 DCs), Britain Brothers (2 DCs), and NAPA-Hawaii (1 DC) (Waters 3298; McKenna 3907). A DC serves essentially the same role as does a WD in the independent aftermarket (Waters 3297).

7. The NAPA DCs distribute parts through about 6,200 jobber stores, of which about 300 are owned by NAPA member companies and about 5,900 are independently owned (McKenna 3907, 3921; Waters 3298).

8. Echlin's carburetor kits bear the dual brand name "NAPA-Echlin" (CX 238, 250; Schultz 3058). These kits are sold only to NAPA (Timberlake 3130; CX 238A). Echlin has never sold, nor tried to sell, carburetor kits to any customer other than NAPA (Waters 3302). Echlin has been the sole source of carburetor kits to NAPA at least since 1970 (McKenna 3911).

9. For the fiscal year ending August 31, 1980, Echlin's consolidated operating revenues were approximately \$301.4 million and its net income was approximately \$8.8 million. As of August 31, 1980, Echlin had total assets of approximately \$237 million (Complaint and Echlin's Answer ¶ 2; CX 231 at 16, 18). [6]

10. Echlin is one of the leading manufacturers supplying replacement parts and supplies to the automotive aftermarket in the United States (CX 235D).

11. Because of the emphasis in recent years on fuel economy, pollution control and safety, Echlin's products "are among the fastest growing lines of parts in the replacement market" (CX 231 at 10).

12. Assuming an average carburetor kit price of \$3.397 in 1979 (CX

618), Echlin's sales of kits it assembled were [\*\*\*]\* of Echlin's total sales (CX 466"O" *in camera*). Assuming an average kit price of [\*\*\*] in fiscal 1980 (CX 619B *in camera*), Echlin's sales of kits it assembled were [\*\*\*] of Echlin's total sales revenues (CX 466Z-5 *in camera*). In 1980, Echlin was the third largest domestic assembler and seller of carburetor kits and accounted for approximately 9.8% of all carburetor kits sold in the United States that year (CX 530A).

13. Echlin is engaged in the sale and shipment of products, including carburetor kits, throughout the United States. Echlin is engaged in commerce, and its acts and practices are in or affecting commerce, within the meaning of the Clayton Act, as amended, and the Federal Trade Commission Act, as amended (Complaint and Echlin's Answer ¶ 4).

#### B. Respondent Borg-Warner Corporation

14. Borg-Warner Corporation ("Borg-Warner") is a corporation organized and doing business under the laws of Delaware, with its principal office at 200 South Michigan Avenue, Chicago, Illinois. (Complaint and Borg-Warner's Answer ¶ 5).

15. In 1980, Borg-Warner and its consolidated subsidiaries had net sales and other revenues totalling approximately \$2,689 million and net income of approximately \$126 million. As of December 31, 1980, Borg-Warner had total assets of approximately \$1.9 billion (Complaint and Borg-Warner's Answer ¶ 6; CX 3Z-5 through Z-6).

16. Borg-Warner is a diversified manufacturing corporation. Its principal product lines include transportation equipment, chemicals and plastics, air conditioning equipment, and other industrial products and services. Borg-Warner's subsidiaries are engaged in the business of providing financial and protective services (Complaint and Borg-Warner's Answer ¶ 7; CX 3Z-22, 4D).

17. In 1980, the Transportation Equipment Group ("T.E.G.") was Borg-Warner's largest business group in terms of sales (CX 4I). T.E.G.'s divisions were engaged in the manufacture [7] and/or supply of automotive products to original equipment manufacturers as well as to the replacement market (Complaint and Borg-Warner's Answer ¶ 8). T.E.G. had 1980 sales of approximately \$903.6 million and earnings of approximately \$31.5 million (Complaint and Borg-Warner's Answer ¶ 8; CX 3Z-13).

18. Prior to the acquisition challenged herein, all Borg-Warner divisions involved in the manufacture and/or sale of replacement automotive parts were included within T.E.G. (Complaint and Borg-Warner's Answer ¶ 9).

19. The products manufactured and/or supplied by Borg-Warner's

\* Throughout this document, [\*\*\*] refers to *in camera* material that has been excised.



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T.E.G. in 1980 included: automatic and manual transmissions and transmission components; ignition system parts; carburetor and emission control parts; carburetor kits; clutches and clutch components; four-wheel drive units; axles; radiators; and automatic slack adjusters. These products are used on passenger cars, trucks, off-highway vehicles, and on farm and marine applications (Complaint and Borg-Warner's Answer ¶ 8; CX 4I).

20. Borg-Warner's sales and earnings by product areas for the period 1976-1980 were as follows (CX 3X):

Sales and earnings by product area (millions of dollars)	1980	1979	1978	1977	1976
<b>Sales</b>					
Air Conditioning	\$ 587.3	\$ 570.3	\$ 516.9	\$ 439.2	\$ 352.5
Chemicals & Plastics	630.9	595.4	472.1	421.8	399.1
Industrial Products	516.0	467.2	422.4	365.0	343.5
Transportation Equipment	903.6	986.6	844.5	718.5	652.4
Sales of present operations	2,637.8	2,619.5	2,255.9	1,944.5	1,747.5
Discontinued operations	35.5	97.9	70.1	87.4	114.9
	\$2,673.3	\$2,717.4	\$2,326.0	\$2,031.9	\$1,862.4
<b>Earnings</b>					
Air Conditioning	\$ 13.0	\$ 12.1	\$ 19.6	\$ 18.3	\$ 9.7
Chemicals & Plastics	28.2	27.7	18.5	6.6	13.2
Financial and Protective Services	35.8	27.3	18.0	12.8	10.6
Industrial Products	52.7	32.4	30.9	26.1	16.2
Transportation Equipment	(5.9)	46.2	42.4	32.0	26.5
Earnings of present operations	123.8	145.7	129.4	95.8	76.2
Discontinued operations	2.3	9.9	4.4	8.2	5.5
	\$ 126.1	\$ 155.6	\$ 133.8	\$ 104.0	\$ 81.7

21. [\*\*\*] (CX's 161A, 3Z-1, 24C *in camera*). T.E.G.'s automotive aftermarket operations performed better than its original equipment operations in 1980 and showed an increase in sales over 1979 (CX 3Z-2), although the sales of all [8] transportation equipment, including original equipment sales, showed a substantial decline (CX 3X).

22. In 1980, the year preceding the acquisition challenged here, Borg-Warner assembled and sold approximately 4.8 million carburetor kits, accounting for about 38.4% of all carburetor kits sold in the United States and ranked first in that market (CX 530A).

23. Borg-Warner has been and is engaged in the sale and shipment of automotive products throughout the United States, and is engaged in commerce, or its acts and practices are in or affecting commerce within the meaning of the Clayton Act, as amended, and the Federal Trade Commission Act, as amended (Complaint and Borg-Warner's Answer ¶ 10).

## II. THE CHALLENGED ACQUISITION

A. *Agreement For Sale Of Assets*

24. On May 12, 1981, Echlin and Borg-Warner entered into an "Agreement for Sale of Assets," effective February 28, 1981, whereby Echlin would acquire all of the assets of Borg-Warner's automotive aftermarket divisions of the Transportation Equipment Group ("T.E.G."). In exchange, Borg-Warner received 4.5 million shares of Echlin's common stock, representing approximately 22% of Echlin's outstanding shares. The transaction was valued at about \$62.4 million (Complaint and Echlin and Borg-Warner's Answers ¶ 11; CX's 500 at page "i", 239A through Z-66).

25. The Boards of Directors of Echlin and Borg-Warner gave their final approval to the transaction and Echlin's stockholders ratified the agreement on July 7, 1981 (Complaint and Echlin and Borg-Warner's Answers ¶ 11).

26. Subject to a hold separate agreement entered into by respondents and the Federal Trade Commission, the transaction was consummated on July 14, 1981 (Complaint and Echlin and Borg-Warner's Answers ¶ 11).

27. The "Agreement for Sale of Assets" between Echlin and Borg-Warner also contained certain additional agreements including: (1) a supply agreement wherein Borg-Warner agreed to continue to supply Echlin with various automotive parts and products which Borg-Warner's manufacturing divisions formerly supplied to the acquired divisions; (2) a trademark license agreement permitting Echlin to market products of the acquired divisions under the Borg-Warner name; and (3) an agreement to place a director designated by Borg-Warner on Echlin's Board (CX's 500 at 3, 239Z-67 through Z-87, Z-119, Z-204 through Z-208). [9]

28. During 1977, Borg-Warner's Aftermarket Task Force, an ad hoc group, compiled a study on Echlin focusing on the approaches Echlin taken in marketing its products to the aftermarket. [\*\*\*] (CX's 500 at 3, 239Z-67 through Z-87, Z-119, Z-204 through Z-208). [9]

29. Borg-Warner's interest in pursuing a transaction with Echlin was based on three factors: (1) Echlin was regarded as a "good investment"; (2) Echlin "specialized" in the automotive aftermarket business; and (3) the combination of the aftermarket businesses of Echlin and Borg-Warner would result in a "stronger replacement parts operation" (CX 240C).

30. A Borg-Warner official testified that the company agreed to the transaction, which included supply and trademark agree-

ments, because Borg-Warner was obtaining a large equity position in Echlin as well as representation on Echlin's Board of Directors (Tauscht 3894-95).

### B. The Acquired Divisions

31. Through the May 12, 1981 agreement, Echlin acquired all of Borg-Warner's so-called "Automotive Aftermarket Operations," comprising five Transportation Equipment Group ("T.E.G.") divisions. They included two manufacturing divisions (Ballwin/Washington and Ottawa Divisions) and three distribution divisions (the Automotive Parts Division "APD," APD International, and APD Borg-Warner (Canada Limited) (CX's 8A-C, 3Z-12, 239N through Z-66, 500 at 2, 25).

32. The Borg-Warner "automotive aftermarket operations" acquired by Echlin had 1980 sales of about [\*\*\*] including carburetor kit sales of about [\*\*\*] (CX's 3Z-12, 29X *in camera*).

33. The two divisions of Borg-Warner's automotive aftermarket operations involved in the production and sale of automotive carburetor kits in the United States were the Ballwin/Washington Division and APD. [10]

#### 1. Ballwin/Washington Division (Ballwin/Washington)

34. In October 1966, Borg-Warner acquired Precision Automotive Components Company ("PACCO"), a company that manufactured carburetor parts and assembled automotive carburetor kits (CX 535E-F; Carlson 2525-27), and incorporated PACCO into Borg-Warner's Marvel-Schebler Division (Merz 2713). Sometime during the 1970's, Borg-Warner's two facilities involved in the manufacture of carburetor parts and the assembly of carburetor kits became known as the "Ballwin/Washington Division" (Merz 2718; Carlson 2572). The Ballwin/Washington Division ("Ballwin/Washington") includes Borg Warner facilities located in Ballwin and Washington, Missouri (CX 500 at 26; Timberlake 3070-71).

35. [\*\*\*] (Complaint and Borg-Warner's Answer ¶ 9; CX's 21J *in camera*, 27C *in camera*, 539Z-13 through Z-14). [\*\*\*] (CX's 21J *in camera*, 24D *in camera*, 25D *in camera*, 26C *in camera*, 27C *in camera*, 39P *in camera*).

36. The Ballwin plant, located in Ballwin, Missouri, consists of two buildings, with a total of 100,500 square feet. One building is devoted to the assembly of carburetor kits and to the warehousing of products produced at both the Ballwin and the Washington plants that are ready to be shipped. This building occupies approximately 78,500 square feet. The remaining space of 22,000 square feet consists of the office building where all the administrative functions for

entire Ballwin/Washington Division are handled. Some of these functions include sales, finance, marketing and customer service (CX's 239Z-141, 500 at 28, 167E; Timberlake 3070-71).

37. The Washington facility, located about 35 miles from the Ballwin facility in Washington, Missouri, is devoted to the manufacture of carburetor parts, including those used in the assembly of carburetor kits. The facility occupies 69,300 square feet (Timberlake 3071; CX's 239Z-138, 167C, 500 at 28).

38. [\*\*\*] (CX's 5C, 21J *in camera*, 24D *in camera*, 25D *in camera*, 26C *in camera*, 27C *in camera*, 39P *in camera*, 129Z-8, 167B, F, 169Z-8, Z-29, 500 at 26, 535R). [11]

39. [\*\*\*] (CX's 162I *in camera*, 9Z-3).

40. [\*\*\*] (CX 162K-M *in camera*). [\*\*\*] (CX's 24E *in camera*, 25E *in camera*, 26D, G *in camera*, 27F *in camera*).

## 2. Automotive Parts Division (APD)

41. Prior to the transaction, APD was Borg-Warner's aftermarket distribution organization, headquartered in Franklin, Illinois (CX 500 at 25, 28). [\*\*\*] (Complaint and Borg-Warner's Answer ¶ 9; CX's 5A, 21F *in camera*, 33D, L *in camera*, 34B, G-K, N *in camera*, 35H *in camera*, 39"O" *in camera*, 500 at 26, 535S).

42. [\*\*\*] (CX's 21F *in camera*, 33D *in camera*, 34B *in camera*, 35B *n camera*). These facilities were leased and located in: (1) Pico Rivera, California; (2) Elkridge, Maryland; (3) Marietta, Georgia; (4) Mesquite, Texas; (5) Milwaukie, Oregon; (6) Philadelphia, Pennsylvania; and (7) Norfolk, Virginia (CX's 5A, 239Z-135 through Z-138, 500 at 28).

43. [\*\*\*] (CX's 21F *in camera*, 22E-F *in camera*, 33D, L, T *in camera*, N, V *in camera*, 35H, N *in camera*, 39"O" *in camera*).

44. [\*\*\*] (CX's 21F *in camera*, 33P *in camera*, 34Q *in camera*). [12]

45. APD obtained its line of carburetor kits from the Ballwin/Washington Division (Merz 2715; McCurry 3837). APD was a "nation-account" of Ballwin/Washington.

6. Immediately following the consummation of the challenged transaction, Echlin renamed APD (now a subsidiary of Echlin) BWD, ("BWD") (Merz 2707, 2747; Martin 2788-89).

7. Prior to the challenged acquisition, Borg-Warner (through its Ballwin/Washington and APD divisions) was the nation's leading manufacturer and supplier of replacement carburetor parts of all sizes to the replacement carburetor industry as well as the largest importer and seller of carburetor kits in the United States (CX's 500 at 25, 163Z-9, 165V, 167B, 169Z-8, Z-29, 171A).

C. *Trademark License Agreement*

48. As part of the Agreement for Sale of Assets, Echlin obtained an exclusive license to use certain Borg-Warner trademarks in connection with the marketing and sale of various automotive replacement products, including carburetor kits, in the United States and Canada and a nonexclusive license for the rest of the world (CX 239Z-67 through Z-86, 500 at 3).

49. The trademark license gives Echlin the right to use the Borg-Warner name and other Borg-Warner trademarks on all products sold to the automotive aftermarket, including those sold through its BWD (formerly APD) and Ballwin/Washington (CX 239Z-67 through Z-68).

50. The trademark agreement between Borg-Warner and Echlin is effective for a term of 15 years and continues thereafter unless terminated by either party upon written notice five years prior to termination (CX's 239Z-79, 500 at 3).

51. The licensing of the Borg-Warner trademarks was an important feature of the transaction. [\*\*\*] (CX 33D, H *in camera*). Echlin believed that the Borg-Warner trademark was "of importance to the financial condition and results of operations" of Borg-Warner's aftermarket operations and that the name was "identified with quality and dependability" and created "favorable consumer response" (CX 500 at 27).

52. The evidence shows that in the sale of carburetor kits today brand recognition or loyalty is no longer an important factor, primarily due to improved quality of all carburetor kits, and that as a practical matter neither WDs nor jobbers, much less installers, are brand conscious as far as carburetor kits are concerned (e.g., Nelson 1622; Jursek 826; Tehansky 861; Carlson [13] 2569; Waters 3301; Brown 3373, 3382-83; Kotcher 3558; Foley 3790; Milford 3771).

D. *Supply Agreement*

53. As part of the Agreement for Sale of Assets, Echlin and Borg-Warner also entered into a supply agreement whereby Borg-Warner agreed to supply Echlin with automotive replacement products historically supplied to its aftermarket divisions sold to Echlin by the manufacturing divisions retained by Borg-Warner (CX's 239Z-204 through Z-208, 500 at 3). Under the terms of this supply agreement, sales of automotive replacement products will be at prices at least as favorable as those offered to other purchasers that compete with Echlin (CX's 239Z-205, 240"O", 500 at 3).

54. The supply agreement also provides that Echlin's BWD will continue as an aftermarket distributor in the United States for all

Borg-Warner manufactured automotive products (CX's 239Z-206, 500 at 3). Echlin agreed to purchase from Borg-Warner its requirements of those automotive replacement products which are manufactured by Borg-Warner divisions and presently sold (but not manufactured) by the divisions acquired by Echlin, provided that Borg-Warner prices remain competitive with those offered by other manufacturers and that Borg-Warner is able to meet Echlin's delivery requirements (CX's 239Z-206 through Z-207, 500 at 3).

55. The supply agreement between Borg-Warner and Echlin is effective for an initial term of 15 years and continues thereafter unless terminated by either party upon written notice five years prior to termination (CX's 239Z-208, 240P, 500 at 3).

56. The Agreement for Sale of Assets also provides for the election of one Borg-Warner representative to the Echlin Board as long as Borg-Warner owns at least 10% of Echlin's voting securities (CX's 500 at 3, 239Z-119, 240Q). Frank E. Pilling, a Vice President of Borg-Warner, became a director of Echlin in November 1981 (CX's 240Q, 500 at 3, 536D, 569Y).

#### *E. Hold Separate Agreement*

57. On July 7, 1981, respondents and the Federal Trade Commission signed a hold separate agreement pending resolution of this proceeding. The Commission agreed not to seek to enjoin consummation of the proposed transaction. The hold separate agreement also establishes certain requirements relating to Echlin's management of its own and the acquired assets involved in the assembly and sale of carburetor kits. The agreement provides that the Borg-Warner assets will be operated by Echlin as a viable and separate business entity and will continue to use [14] the Borg-Warner trade name and trademarks in the sale of automotive replacement products (Agreement, File No. 811-0094 (July 7, 1981)).

### III. THE PRODUCT MARKET — CARBURETOR KITS

#### *A. Carburetor Kits — Their Evolution, Physical Characteristics And Uses*

58. Carburetor kits are used to tune-up or repair malfunctioning carburetors that do not require carburetor replacement.

59. An automotive carburetor is a mechanical apparatus designed to supply a specific mixture of vaporized gasoline and air to the combustion chamber of automotive engines and is a crucial component of the automotive fuel system. It usually consists of a core body and hard parts assemblies (such as needle and seat, pump plunger or diaphragm, economizer or power valve), fuel metering and airing de-

vices, gaskets and other small parts (clips, retainers, balls, plugs and springs).

60. The typical operation of a carburetor may be described as follows. *See generally*, RX's 164W-Z-3, 165"O"-T; Smith 3250-55, 3239-42. Gasoline enters the carburetor via the fuel inlet system consisting of a fuel bowl, inlet fitting, fuel inlet valve (needle and seat) and a float assembly. Gasoline flows through the seat until the level of fuel in the carburetor raises the float sufficiently to close off the needle and seat. As the level of fuel in the carburetor falls, the float is lowered, which separates the needle from the seat, thus allowing gasoline to flow into the carburetor. The fuel inlet valve (needle and seat) and the float must maintain the fuel level at the prescribed specification. The fuel then passes through a series of valves and jets, with its flow controlled by differences in air pressure, the opening and closing of mechanical valves, springs, diaphragms, pumps and check balls. During this process, both the fuel and the air pass through blend holes and the fuel-air mixture is ultimately drawn into the engine cylinder by a vacuum created by the movement of the piston. Added fuel for power operations is provided by various types of power valves actuated by a vacuum diaphragm and controlled by a power valve spring.

61. Carburetor "overhaul kits" (sometimes called "major repair kits") were introduced by Carter Carburetor Co., a carburetor parts manufacturer, during the late 1940's and became widely used during the early 1950's. Overhaul kits essentially contained all carburetor parts (excluding the core body) that may be needed for a complete overhaul of a particular carburetor model and included parts used in the fuel metering and airing [15] mechanisms, passage plugs and linkage for the outside of the carburetor (Thompson 2443; Carlson 2528-29).

62. "Consolidated kits" or carburetor "tune-up" kits were introduced in or about 1949 by Precision Automotive Components Company ("PACCO"), a carburetor components manufacturer and parts supplier to carburetor rebuilders and were designed to accommodate more than one carburetor model. Carburetor tune-up kits thus contained gaskets, float level gauge and other "high mortality rate" mechanical parts which were common to several carburetor models and an instruction sheet, but excluded metering parts and passage plugs. Thus tune-up kits contained less parts than did overhaul kits, were less expensive and more convenient to the automobile mechanic and gradually replaced overhaul kits during the 1950s (Thompson 2444, 2446; Carlson 2525-29; CX 169D).

63. The record shows that Berton Carlson of PACCO first conceived the idea of packaging carburetor parts most frequently needed for carburetor tune-ups into a kit form in or about 1949. Essentially,

Carlson (then in sales) and his partner and plant superintendent, Ernie Nieman, hired a draftsman, collected current carburetors, took measurements of component pieces to determine tolerances and introduced a line of about 20 tune-up kits (Carlson 2525-29).

64. After 1949, PACCO acquired carburetor component manufacturing facilities and, in addition to selling carburetor parts to carburetor rebuilders, gradually expanded its own line of carburetor kits and when PACCO was sold to Borg-Warner in 1966, its full carburetor kit line contained some 175 kit numbers (Carlson 2526, 2530).

65. Currently, carburetor kits generally include those carburetor parts that wear most rapidly or often ("high mortality rate parts")—needle and seat assemblies, pump plungers, and components with diaphragms—plus gaskets to replace those worn or damaged during carburetor disassembly and cleaning, and gauges for making adjustments and instruction sheets (CX's 129D, 163C). The "hard parts" in a kit, such as a needle and seat assembly, a pump plunger or pump diaphragm assembly and economizer or power valve, perform the same function they perform in a new carburetor (Thompson 297-300). Tomco kits contain a rotary disk fuel inlet valve instead of a needle and seat assembly to control the flow of fuel into the float bowl (Thompson 295, 297; *also see*, CX's 126C, 317Z-8, 436A).

66. The instruction sheet included in each carburetor kit provides illustrated, step-by-step instructions for performing a tune-up job using that kit. Detailed specifications for the adjustments required before and after the carburetor kit is installed are also included in each instruction sheet (CX's 169T-X, 431C, 129D; Sheehan 459-60).  
[16]

67. Normal wear on internal carburetor parts or deterioration of parts caused by gasoline additives may impair the proper functioning of a vehicle's carburetor resulting in poor engine performance and/or poor fuel efficiency. In such instances, a carburetor "tune-up" using the parts in a kit to replace the worn parts can return the carburetor to optimal performance (Martin 2794; Hawkins 1173; CX's 202F, 75B, 129D). Specific conditions which might indicate that a carburetor tune-up using a kit is necessary include hard starting, poor acceleration, rough idle, engine stalling, poor gas mileage, repeated flooding, or excessive gas leakage (CX's 328B, 202B-C, 122, 165Y).

68. A carburetor tune-up job using a carburetor kit involves the following steps:

- (1) the carburetor is removed from the vehicle and disassembled;
- (2) the core, or major body of the carburetor, and other re-usable (generally nonmoving) parts are cleaned by soaking in a cleaning solution and dried to insure that all internal passages are clear.



(3) the carburetor is reassembled and adjusted using the parts contained in the carburetor kit to replace worn parts and gaskets; and

(4) the carburetor is reinstalled on the vehicle using the flange gasket (the major gasket included in a carburetor kit) to insure proper sealing between the base of the carburetor and the engine, and final adjustments are made (Schultz 3020-24; Smith 3168; CX 202C-E).

69. The time required for a carburetor tune-up job using a kit varies according to the complexity of the specific carburetor involved. Based on the six examples of carburetor repair jobs using a kit that Ballwin/Washington considered "typical" (see Secrest 1087-88), the labor time varies between two and three hours, with an average of 2.3 hours (CX 170J-O). The labor time used in the Ballwin/Washington sales presentations are derived from the *Mitchell Parts and Labor Estimating Guide*, a standard industry manual (e.g., CS's 170I, 164H). An automotive mechanic testified that the labor times shown in this manual provided a ceiling for the amount of labor time he charged the vehicle owner. On occasion, he charged for less time than provided for by the standard manual (Milford 3776-77). The evidence shows that the time required for a carburetor tune-up varies from 1.5 to 3.5 hours depending on the nature and complexity of the [17] carburetor and the skill of the mechanic (Smith 3169; Milford 3376).

70. A proper carburetor tune-up and installation of a kit will "improve mileage, give steadier, smoother performance, and allow easier starting" by restoring the carburetor performance closer to its OE specifications (CX 129D).

71. Carburetor kits used on industrial and agricultural equipment and inboard marine engines are substantially different from those used on automobiles but are often included in suppliers' line of carburetor kits as a convenience to their customers, especially in coastal industrial and agricultural areas where a demand for these specialized applications exists (Fife 622; Sheehan 468-69; Thompson 31C CX's 195-96, 198). [\*\*\*] (CX's 465A *in camera*, 541R-S; Sheehan 468 Thompson 309-10). For example, sales of kits for these specialized applications represented less than half of 1% of Standard's total k sales.

72. Various types of aircraft are also equipped with carburetor. However, kits for the repair of aircraft carburetors are distinct from automotive carburetor kits and have never been included in the line of automotive carburetor kits (Fife 623; Sheehan 470; Thompson 31C Waters 3314; CX 541Y).

73. Motorcycles are also equipped with carburetors but kits for motorcycle applications are not currently included in any line of automotive carburetor kits (Fife 623; Sheehan 470; Thompson 313-

Waters 3314). Borg-Warner's Ballwin/Washington Division offered motorcycle carburetor kits until 1976 but they were not included in Borg-Warner's line of automotive carburetor kits and were discontinued (CX 541W-X).

74. [\*\*\*] (Thompson 313-14; Sheehan 469-70; Fife 622-23; CX's 471B, 468E *in camera*). Small engine carburetor kits are generally sold through specialized distributors and repair outlets. Although Borg-Warner and Echlin both offered small engine carburetor kits, those kits were sold under a different brand name and by a different corporate division than their respective automotive carburetor kit lines (CX's 534T-U, 238A, 538W-X, 541U-V).

75. During the 1980's, a throttle body fuel injection system ("TBI") was introduced in several vehicle models in order to deliver higher air-to-fuel ratio mixture necessary to insure higher fuel efficiency and lower air pollution. Simply put, a TBI system electronically controls the carburetion process by the use of a high pressure fuel pump, with a pressure regulator, [18] which forces the fuel through an injection nozzle. A TBI system is an electronically controlled fuel metering system, and as such, it does not include the mechanical parts found in a conventional carburetor, such as seat and needle, float, pump plunger or piston, accelerator pump and economizer valve. Thus, a TBI is substantially different physically from a carburetor, although they both perform the carburetion function in a vehicle's fuel system (Fife 699-700; Smith 3256-59).

76. In response to the introduction of the TBI system on a number of late model automobiles, Borg-Warner introduced TBI repair kits and included them in its July 1980 Supplement to Automotive and Carburetor Tune-Up Kit Catalog (CX 40 at 12; see CX's 189A, F, 29Z-3 through Z-4, 537Z-27). TBI repair kits are or will be offered by most major carburetor kit suppliers as a demand therefor materializes (Fife 698-700; Smith 3284; Thompson 381; Jursek 797-98; CX's 1A, 189A, F).

77. The evidence indicates the conventional carburetor and the TBI will both be used in new automobiles for several years, that carburetors will continue to play the dominant role through the 1980's until TBI is cost-refined to be competitive or give superior mileage and their present capabilities, and that this evolution will happen when the demand for conventional carburetors will diminish (Fife 699-700; Smith 3281-83; CX's 129Z-3 through Z-4, 163Z-4).

#### B. The Production Of Carburetor Kits

The carburetor kit production process is essentially an assembly operation and does not encompass the fabrication or manufacture of carburetor components that are included in carburetor kits.

79. The physical carburetor kit assembly operation is a simple and largely manual process and is typically performed on short, moving packaging lines or at rotating tables, generally by semi-skilled female employees. When a line is used, it is first "set up" with bins or boxes each containing different parts that had been pulled from inventory using the "bill of materials" (F. 138, *infra*) for the specific kit being assembled. Many assembly operation begins with a "Kliklok" machine which forms a cardboard tray to hold the different parts that go into the kit. As the trays move down the conveyer belt, workers place parts (or plastic bags containing several small parts) out of the bins into each tray. At the end of the line, the trays are wrapped with plastic, heat-sealed and placed into shelf cartons.

80. The number of lines operated varies from one to four. [\*\*\*] (Hawkins 1179; Thompson 337-38, 2499; Fife 647; Sheehan 574; CX's 533K, 542Z). [19]

81. When only a small quantity of a given kit is needed, the assembly operation is performed at a rotating table with a large lazy-Susan-like tray at the center bearing different parts. Workers sit around the table and place the needed parts into a bag or tray (Timberlake 3116, 3136).

82. In mid-October 1983, the administrative law judge had occasion to view both the line and table type carburetor kit assembly operations of Tomco at its St. Louis plant and was impressed by the simplicity of the process which appeared neither elaborate nor complex (see RX's 398-404 (photographs showing a packaging line at Echlin's Ballwin/Washington plant)).

#### C. Substitute Products And Price Sensitivity — Replacement Carburetors And Carburetor Kit Components

83. The parties agree that new and rebuilt replacement carburetors are functional substitutes of carburetor kits in the sense that any carburetor malfunction can be resolved by replacing the carburetor rather than by repairing it. However, the two product groups are not true substitutes for each other to the extent that a carburetor failure or malfunction which is due to structural damages to the carburetor casing or core, or to worn linkage or throttle shaft, cannot be "repaired" by installing a kit and requires replacement of the entire carburetor (Thompson 2494-95; Martin 2795; Nelson 1400-04; CX's 328B, 202G; F. 88-91, *infra*).

84. New and rebuilt replacement carburetors are substantially more expensive than carburetor kits. Common sense and daily experience show that automobile mechanics and vehicle owners will not use replacement carburetors for carburetor malfunctions which can be resolved by a carburetor tune-up using a kit. In this sense, replace-

ment carburetors do not offer an economically reasonable alternative to carburetor kits and are not practical substitutes for carburetor kits. This holds true when the total cost to the consumer, including labor cost, is considered (F. 92-98, *infra*).

85. The record shows that replacement carburetors and carburetor kits are intended and employed for different uses, that there is no price sensitivity between the two product groups, and that replacement carburetors do not offer an economically reasonable alternative to carburetor kits. Therefore, replacement carburetors are not close-enough substitutes to be included in the same market with carburetor kits.

86. The parties also agree that individually packaged carburetor parts which are generally included in carburetor kits [20] today can be used interchangeably with kits. However, the record is clear that the availability of each of the numerous kit parts, individually packaged or in bulk form, to the automobile mechanic or vehicle owner, is rather limited and that, in any event, the sales of such individual parts are *de minimis* (F. 108-09, *infra*). This comports with reason and common sense. The *raison d'être* of kits is economy and convenience. Thus, individual carburetor parts included in carburetor kits, either separately or collectively, are not practical substitutes for carburetor kits. Therefore, they are not close-enough substitutes to be included in the same product market with carburetor kits.

87. However, the record also shows that replacement carburetors, carburetor kits and kit parts are competitive products in a broad sense and this important fact will be duly taken into account in evaluating the competitive effects of the challenged acquisition.

88. A carburetor tune-up using a carburetor kit is appropriate when cleaning and installing the parts included in a kit can return a carburetor to optimal performance. In contrast, when wear or damage is so extensive that it cannot be repaired by using the parts included in a kit, it is necessary to replace the carburetor with a new or rebuilt carburetor. Conditions which require replacement include a cracked or warped carburetor casing, a broken core, worn linkage or a worn throttle shaft (Martin 2794; Thompson 2494-95; Nelson 1400-04; CX's 328B, 202G).

89. Documents generated by both respondents reflect their clear understanding of the different uses for which carburetor kits and replacement carburetors are intended. For example, counter literature prepared by Borg-Warner to explain the use of carburetor kits to vehicle owners states as follows: "If your mechanic has decided not to overhaul your carburetor, it is probably because it was missing parts or crash-damaged—in which case the necessary parts would not be in a standard tune-up kit or repair of the carburetor is inadvisable."

In this case, we advise you follow your mechanic's recommendation for a new or rebuilt carburetor—because he is in the best position to judge the quality of rebuilt carbs available in your area" (Nelson 1403-04; CX 202G). A similar document prepared by Echlin explains the different purposes and uses for carburetor kits and replacement carburetors: "Carburetors should be replaced whenever there is wear or damage to parts that will not be replaced in overhauling" (*i.e.*, repair with a kit) (Nelson 1400-02; CX 328B).

90. Mr. Milford, an automobile mechanic called as a witness by respondents, testified that he always used a carburetor kit to perform a carburetor repair so long as repair with the kit was sufficient to remedy the problem and the carburetor kit was available, which it virtually always was (Milford 3777). As a general rule, Mr. Milford would replace the carburetor when repair with a kit was not possible (Milford 3777-78). [21]

91. While either a new or a rebuilt replacement carburetor may be used when repair with a kit is impossible, some aftermarket suppliers and mechanics prefer the new to the rebuilt because of quality considerations (Milford 3780-82; Foley 3801-02). Echlin also discouraged the use of rebuilt carburetors because of their poor quality (CX 328A).

92. A replacement carburetor can always be used when repair with a carburetor kit would be sufficient. However, for functional substitutes to be included in the same product market, it is essential that they be economically reasonable alternatives (Glassman 4370-71; Nelson 1399-400). The large price differentials prevailing at every level of distribution, including prices charged the ultimate consumer (the vehicle owner), between replacement of the carburetor and repair using a kit suggest that these products are not economically reasonable alternatives. In letters written to its carburetor kit customers, Ballwin/Washington showed illustrations of the large price differentials involved in the use of a kit as compared to replacement of the entire carburetor. In 1976, the vehicle owner's total cost, including labor, for replacement of a "typical" carburetor was about \$110 if a rebuilt carburetor was used, and about \$170 if a new replacement carburetor was installed. Barring a structural damage or worn linkage or shaft, that carburetor could be "tuned-up" using a kit for only \$60 (CX 128C). In 1980, these costs had increased to about \$154, \$206 and \$65, respectively (CX 128C). New replacement carburetors for larger and more complicated engines cost as much as \$400 to \$600 by early 1982 (CX 180A). As a Ballwin/Washington official stated: "Consumers with carburetor malfunction cannot and will not choose new carburetors as a solution to their problems" (CX 180A).

93. Sales presentations prepared by Ballwin/Washington for its national account (private label) kit customers also include cost com-

parisons between using a replacement carburetor and a kit (see CX's 129E-M, 163D-L, 164I-N, 165D-K, 166J-Q, 168H-O, 170H-O). In preparing these sales presentations, Ballwin/Washington selected typical, popular applications for various types of carburetors (Secret 1087-88). An analysis of the costs to the vehicle owner reflected in these documents reveals that the cost of repair with a carburetor kit is significantly lower than replacement of the carburetor (see, e.g., Nelson 1406-07; CX's 165D-K, 170H-O, 128C, 129Z-12). For example, in a 1981 sales presentation, Ballwin/Washington compared the costs of repair with a kit versus replacement of the carburetor for six common applications (CX 164I-N). While the total cost to the customer for repair with a carburetor kit averaged \$91.57, the customer's cost to have the carburetor replaced averaged \$162.14 for replacement with a rebuilt carburetor, and \$198.77 with a new replacement carburetor (CX 164I-N). The average list price that the customer would be charged for the carburetor kit itself was \$19.12 (CX 164I-N). For these applications, the price of the [22] carburetor kit would have to increase between 280 and 700% before the cost of repair to the consumer would equal that of replacement with a rebuilt carburetor (Nelson 1420). The comparison to new replacement carburetors is more striking: the price of the carburetor kit would have to increase 415 to 1,000% before the repair bill to the consumer would equal replacement with a new carburetor (Nelson 1421).

94. Mr. Milford provided additional examples from his business experience of the price differential to his customer (the vehicle owner) between repair with a carburetor kit and replacement of the carburetor. For a standard carburetor model that has been available for many years, replacement of the carburetor would cost the vehicle owner between \$156 and \$176. Repair with a carburetor kit for the same application would cost \$60-\$65 (Milford 3783-84). The price differential on newer vehicles is much larger. On certain GM Citations, for example, replacement of the carburetor would cost the vehicle owner between \$620 and \$760, while tuning-up the carburetor with the use of a kit would cost the consumer \$130-\$140 (Milford 3778-79).

95. The disparity between the profit potential to the mechanic of repair versus replacement is also large (Brown 3409-10; Tehansky 862; CX's 121, 129Z-12). For example, a 1981 sales presentation by Ballwin-Washington reveals that an installer retained an average of 88.2% of each repair dollar when a carburetor kit was used as compared to 37.9% or 39.8%, respectively, for replacement with a new or rebuilt carburetor (CX 168H-I; see also, CX's 164H, 170H-I, 166J-K, 128C, G).

96. In early 1984, the average price a mechanic paid a jobber for a carburetor kit was approximately \$20.00 (Milford

3779-80). Even a 10% increase in that price would not have any effect on the mechanic's decision whether to use a carburetor kit or replace the carburetor since the price differential between these products would remain large (Milford 3780).

97. Mr. Carlson, a witness called by respondents, whose company sells private label carburetor kits produced by Ballwin/Washington, agreed that a 5% increase in the prices his company charged for carburetor kits "would not affect our business in any way" and would not cause a loss in sales due to any shift in demand towards replacement carburetors (Carlson 2645-46).

98. Carburetor repair using a kit has always been significantly less expensive than replacement of the carburetor (Carlson 2639; CX 537Z-68). The price differential between repair using a kit and replacement of the carburetor has widened in recent years, making replacement in lieu of repair even more uneconomical to the vehicle owner (Merz 2776, 2780; Thompson 419; Hawkins 1200; CX 128C). [23]

99. Thus, the record evidence shows that kit assemblers can raise kit prices by 5% without causing a substantial shift towards replacement carburetor and suggests that these two products do not belong in the same product market. See *U.S. Department of Justice Merger Guidelines* Section 2.11 (June 14, 1984); *Statement of Federal Trade Commission Concerning Horizontal Mergers* at 12 (June 14, 1982).

100. Respondents argue that an increase in the price of replacement carburetors has caused an increase in the demand for kits and that, therefore, the opposite must be true (see RPFs 107-18). However, respondents' evidence linking the increase in replacement carburetor prices to an increased demand for carburetor kits is unpersuasive.

101. Respondents' own documents list some half a dozen factors that might be responsible for any increase in the demand for carburetor kits (e.g., CX's 164D, 166F, 168D, 169E; see also Fife 695-96). It would be difficult, if not impossible, to determine the significance of any one particular factor. Moreover, the Hunter Service Job Analysis ("SJA") statistics relied on by respondents' experts in asserting that increased carburetor prices have resulted in an increased demand for carburetor kits (RPFs 113-16) arguably demonstrate just the opposite.

102. Between 1978 and 1981, during the period when testimony by respondents' own employees and evidence from respondents' documents show that the prices of replacement carburetors increased the most (see, e.g., Merz 2776; CX's 537Z-66 through Z-68, 128C, 168D; compare CX 129F-M, which contains 1979 replacement carburetor prices, to CX 168I-O, which contains August 1981 replacement carburetor prices), the SJA statistics show a *decrease* in the demand for carburetor kits as compared to the demand for replacement carburet-

ors (Willig 4922-23; CX 567). Furthermore, the data base for RXs 407-08 relied on by respondents is so mixed that their reliability for the proposition that there is a statistically significant relationship between increased prices for replacement carburetors and increased demands for kits is questionable (see Glassman 4397-472; Willig 4917-26).

103. Although there is evidence which suggests that extremely large increases in the prices of replacement carburetors (see, e.g., Hawkins 1200; CX's 128C, 180A) caused some increase in the demand for carburetor kits, this evidence would not support the proposition that a 5% increase in the prices of carburetor kits, which would amount to an increase of approximately \$1.00 (see F. 93-94), would bring about a significant increase in the demand for replacement carburetors. Indeed, the weight of record evidence is to the contrary.

104. On the other hand, the record is clear that the prices of carburetor kits are not raised or lowered in response to a [24] movement in the prices of replacement carburetors (Sheehan 559-60; Hawkins 1198-99; Jursek 787; Thompson 378; Fife 675-76; Carlson 2608-09; Baumann 1028-29). Conversely, movements in the prices of carburetor kits have no effect on the prices of replacement carburetors (Cardone 3624; Sheehan 560; Hawkins 1199; Baumann 1029).

105. The primary factors considered by carburetor kit assemblers in establishing the prices of carburetor kits are: (1) cost; (2) desired profit margin; and (3) competitors' prices for comparable kits (Carlson 2581; Eaton 2942-43; Fife 674-75; Hawkins 1193; Jursek 786; Secrest 1112; Smith 3230; Thompson 377; CX's 533Q, 535Z-39 through Z-40, 539Z-31, 80). Also, respondents analyzed and compared prices and return on investment only with reference to other lines of carburetor kits (Carlson 2582; Secrest 1105; Sheehan 557; Timberlake 3093-94; CX's 80, 107-08, 113, 129Z, 209A, 211, 570C, 541Z-39). Testimony relied on by respondents in RPFs 130-40 primarily reflects kit suppliers' recognition that carburetor kits and replacement carburetors are competitive products and, to the extent it can be said to suggest that replacement carburetor prices are among the determining factors for kit prices, it is contrary to the weight of record evidence and, in any event, is insufficient to establish price sensitivity between kits and replacement carburetors.

106. Price sensitivity is determined by the presence or absence of price changes in one product in response to movements in the prices of another product. See, e.g., *Avnet, Inc. v. FTC*, 511 F.2d 70, 77 (7th Cir.), cert. denied, 423 U.S. 833 (1975). While carburetor kit assemblers may be generally aware of the prices of replacement carburetors, the evidence clearly shows that there is no price sensitivity between carburetor kits and replacement carburetors. Prices of car-



buretor kits are not raised or lowered in response to a movement in the prices of replacement carburetors or vice-versa.

107. There is also some evidence tending to show that replacement carburetors are viewed as a distinct product market. Neither Holley nor Carter considered their respective sales of replacement carburetors as in any way affecting their sales of carburetor kits (Jursek 785; Sheehan 559). Similarly, [\*\*\*] (Thompson 379). [\*\*\*] (Nelson 1379-82; CX's 24C *in camera*, 25C *in camera*, 140C, 162Z-26 *in camera*, 169Z-17 through Z-18, 20Z-2 through Z-3, Z-18 through Z-19 *in camera*, 136A, 331A).

108. The record evidence regarding the availability of carburetor parts generally included in kits as individually packaged parts is somewhat mixed. It appears that Echlin offered in late 1970's a number of kit components, including some diaphragms, needle and seat assemblers, power valves, pump [25] plungers and some small parts, to NAPA (CX's 249, 250 at 139-40, 145, 148, 254 at 31-35). There are other kit suppliers which offer some individual kit components for sale (Thompson 269, 2471; Martin 2804-05; Timberlake 3138). Some kit suppliers which once offered kit components for sale no longer do so (Sheehan 495, 516-18; Fife 616-17). After the challenged acquisition, both Ballwin/Washington and APD began to sell individual parts (Timberlake 3125-27, 3138; Eaton 2981-82; Martin 2804-05). The record also shows service guides containing instructions for the use of parts for various makes of carburetors are available (RX's 162-65). The record as a whole is clear that at the time of the challenged acquisition, the availability of each of the parts included in kits, either individually or together, was rather limited (see CPF 188-89).

109. In any event, there is no dispute about the fact that sales of carburetor parts generally included in kits as individually packaged parts are *de minimis* (Glassman 4491; Fife 672-73; Thompson 369; Castagna 3751-52; CX's 148, 570B). This fact underscores the *raison d'etre* of kits, namely, economy and convenience. Since a kit includes those parts of a carburetor most subject to wear or deteriorate, when one of the parts needs to be replaced, it is likely that the other parts included in a kit also need to be replaced. And the cost of handling, inventorying and billing the thousands of different parts included in a line of kits is prohibitive at the WD, jobber and installer levels of aftermarket distribution (Martin 2793; Fife 673; Insalaco 948-49; Eaton 2982-83; Sheehan 495, 516-18, Castagna 3752; Nelson 1391-94).

110. The record is also clear that carburetor parts and emission control parts that are not included in kits, such as floats, dashpots and choke pull-offs, are not functional substitutes for kits and do not

belong in the same product market with carburetor kits (Fife 674; Sheehan 523-24; Insalaco 949-50; Glassman 4396; CX 106B).

111. From the foregoing findings, it is determined that a preponderance of credible evidence in the record as a whole supports complaint counsel's position that the assembly and sale of carburetor kits constitutes an appropriate product market for the purposes of this case.

#### IV. THE GEOGRAPHIC MARKET

112. The parties agree that the relevant geographic market in which to assess the effect of the challenged acquisition is the United States as a whole (Complaint and Answer ¶ 12). [26]

#### V. THE NATURE OF COMPETITION IN THE CARBURETOR KIT MARKET

##### A. Sourcing

113. The term "sourcing" in the automotive aftermarket means purchasing various components or other sundry parts used in producing or assembling a finished product, including replacement carburetors and carburetor kits. The term "make-or-buy decision" is related to "sourcing" and means a decision either to make or to buy from an outside supplier a needed component part.

114. A make-or-buy decision is based on such factors as the comparative costs of manufacturing versus purchasing, the anticipated volume of usage of a given part, in-house manufacturing capabilities, and the availability of outside suppliers (Schultz 3045; Fife 643; Sheehan 494; Thompson 321; CX's 331A, 537Z-46, Z-49). An initial "buy" decision regarding a part may later be changed to "make" decision if there is an increase in usage of the part beyond the original projection (Fife 643-44; CX 533Z).

115. If a buy decision is made, suppliers must be located. It is generally preferable to have two sources for a part or component of a part to assure better quality, price and availability (Schultz 3043; Timberlake 3081-82; CX's 538Z-66, 539Z-9). The criteria in selecting a parts or component supplier include price, quality and reliability (Bush 2908-09, 2868; Thompson 328-32; CX's 537Z-38, 539Z-8). In soliciting bids, the assembler sometimes provides design and material specifications to potential suppliers (Bush 2868, 2909-10, 2912; Timberlake 3082). [\*\*\*] (Bush 2909; Thompson 403-04; Fife 646; CX's 544V-Y *in camera*, 457B). In some cases, parts are rejected because the configuration or material is unacceptable (CX's 378B-E, 492A).

116. [\*\*\*] (Thompson 331; CX's 497A-B, 366-67, 377B-C, 372B, 382A, 544Z-63 through Z-96 *in camera*, 56A-P, 201). Assemblers may not be able to take full advantage of available volume discounts on the  
the low level of sales of a given kit the costs

of increased parts inventory, and the required inventory space (Thompson 334; Fife 646-47).

117. Whether made or bought, all parts undergo visual or other tests on a sampling basis before they are used in kit assembly (Thompson 333, 405-07; Sheehan 495; Timberlake 3083-84; CX's 539Z-20 through Z-21, 384B-X, 412A-Q, 408A-K, 410A-F, 167D). [27]

118. Most carburetor kit assemblers purchase some kits from other kit assemblers. Kits most often purchased are generally those needed to fill out a line or those with lower demand and include kits for foreign car applications, tractor or industrial applications (Thompson 335-36; Sheehan 473; CX 538Z-42 through Z-43). Borg-Warner did not purchase any carburetor kits for resale (CX 16). Although self-sufficiency is desired by all kit assemblers (Jursek 729; Sheehan 527-28), the number and availability of new parts required for a kit are often important factors in making a buy-or-assemble decision (Fife 626; Jursek 728).

119. In-house production of parts has important advantages over purchases. Most importantly, necessary parts may be unavailable or in short supply from outside suppliers (Fife 644, 669; Nelson 1561; see Jursek 728-29). For example, Echlin's preacquisition decision to begin manufacturing certain pump plungers and pump diaphragms for inclusion in its carburetor kit was necessitated by the fact that no supplier would manufacture these parts with the type of material Echlin specified (CX 331A-B; also see CX 456). [\*\*\*] (Nelson 1562-65; Jursek 729; CX's 455, 26I *in camera*; see CX's 33T *in camera*, 232 at 3, 233 at 4, 20E *in camera*). In a pre-acquisition letter to Sherman, one of its leading parts suppliers, Echlin exhibited a keen awareness of these advantages. After stating that it was willing to continue to purchase parts from Sherman as long as Sherman was supplying top quality products, meeting its delivery performance and pricing the parts in a way that enabled Echlin to meet its profit goals, Echlin went on to state: "If we deviate from this sound business principle, then Echlin would have to tool products that it would prefer to buy from Sherman" (CX 455; see Nelson 1563).

120. That dependence on outside suppliers for carburetor kit components can create a serious problem for an assembler was driven home to Echlin in 1979 when, because of problems with its parts suppliers, it faced a serious "back order" problem with a number of carburetor kits and feared the loss of its NAPA carburetor kit business (Echlin's premier account) to a competitor (CX 456).

121. The evidence shows that all of the leading assembler-sellers of carburetor kits, with the notable exception of Echlin, were integrated backward to a significant degree and fabricate ("make"), either in-house or through contracts, many of the more important components

used in carburetor kit assembly (Borg-Warner, F. 35-37, *supra*; Standard, F. 178, *infra*; Echlin, F. 3, *supra*; GM, F. 182, *infra*; ACF, F. 184, *infra*; Tomco, F. 186, *infra*; Holley, F. 188, *infra*). The evidence also shows that carburetor parts production of GM and Carter were limited to parts with application on carburetors of their own make and that Borg-Warner and Sherman Carburetor Company were the two primary [28] sources of carburetor and kit components for the kit assemblers. However, the record shows that there are a large number of suppliers for the various components that make up carburetor kits (e.g., Bush 2861-921; Thompson 326-28, 2454-55; Sherman 585; Jursek 732-35, 811-12, 823-26; Insalaco 910-14, 983-84; Lehman 5046; Schultz 3040-41, 3043; Timberlake 3081, 3096; Smith 3179-80; RX 276; CX 535).

122. [\*\*\*] (CX 39P *in camera*).

123. In sales presentations to its carburetor kit "national accounts" (private brand sellers) customers, Borg-Warner emphasized its carburetor components manufacturing capabilities as an important element and touted itself as a "basic manufacturer of carburetor components of all makes" (e.g., CX's 129Z-8, 169Z-29, 163Z-9, 190A; *also see*, CX's 145A, 127E).

124. Prior to the challenged acquisition, Echlin was the only leading assembler of carburetor kits which did not make any carburetor parts it sold or used in kit assembly, except on an experimental basis during 1980 and 1981 (Schultz 3057; Timberlake 3127; Smith 3178-79, 3233-35; CX 235B). The importance of carburetor parts or carburetor kit components manufacturing capabilities (via backward integration) was driven home to Echlin more than once through problems with some parts suppliers (*see* F. 120, *supra*).

125. By reason of the July 14, 1981 consummation of its acquisition of Borg-Warner aftermarket divisions (including Ballwin/Washington), Echlin has become a leading supplier of carburetor parts of all makes and carburetor kits as well as the largest assembler of carburetor kits in the United States.

#### B. *The Development And Maintenance Of Carburetor Kit Lines — Consolidation And Full Line*

126. The automotive repair industry is a service industry and time is an important factor in the success of an automotive service station or mechanic. Therefore, it is essential throughout the channels of distribution in the aftermarket that replacement parts be readily available to service the vast majority of vehicles on the road (Fife 622, 625; CX 233 at 8). [\*\*\*] (CX 33S *in camera*). [29]

127. In 1981, there were well over 15,000 distinct automotive carburetor models. In order to meet the potentially diverse demand for

specific carburetor tune-up applications, Borg-Warner's Ballwin/Washington Division offered a line of 429 carburetor kits which could service 15,099 different carburetor models; the Carter Automotive Division of ACF Industries, Inc. ("Carter") offered a line of 526 kits to service 12,000 carburetor models; Echlin offered 623 kits to service 13,098 carburetors; General Motors Corporation ("GM") (under the AC-Delco name) offered 533 kits for 12,923 carburetors; and Standard Motor Products, Inc. ("Standard") (under the Hygrade name) offered 462 kits for 11,535 carburetors (CX's 168P, 170P).

128. Because of the wholesale (warehouse) distributors' demand for broad coverage, a kit supplier must be able to offer a full line of carburetor kits in order to compete effectively (Fife 625; Sheehan 471-72; Hawkins 1177-78; Tehansky 853; Eaton 2978; Thompson 314; Willis 3450; Lingle 3516-17, 3527; CX's 541Z-23, 129Z-12, 546B). A supplier offering a "short-line," comprised of only the most popular kits cannot compete effectively against a full-line seller (Eaton 2978; Sheehan 471, 582; CX's 535Z-47, 541Z-23, 546B). For this reason, most kit assemblers, with the exception of Borg-Warner, purchase various amounts of kits (mostly from Borg-Warner) in order to fill out their lines (see F. 150-51, 176 *infra*). The coverage or breadth of carburetor applications included in each supplier's kit line is stressed in trade journal advertising and other sales material and is an important aspect of competition among suppliers (Jursek 780; CX's 120-21, 123C, 125 at 8, 126B, 138B, 129N, 236). For example, Borg-Warner advertised that its kit line provided the "[m]ost recent and broadest vehicle application coverage available" (CX's 120, 169I).

129. Tune-up kits used to repair automobile and light truck carburetors account for the vast majority of kits being offered today (Nelson 1346; Fife 621-22).

130. A supplier of carburetor kits must initially determine which kits to include in order to provide the broad coverage required in the aftermarket. Since new carburetors are introduced each year, kit assemblers must review their kit line annually (Fife 638-40; Hawkins 1181; CX 537Z-40 through Z-41). The number of new kits that must be added each year has increased dramatically in recent years in response to the proliferation of new carburetor models and the increased demand for carburetor kits with application on foreign vehicles (Hawkins 1180-81; Thompson 301-03; Fife 624; Sheehan 48 Nelson 1557-59). For example, in 1977, Standard's kit line provided coverage for 6,540 different carburetors whereas in 1981, Standard's kit line covered 11,535 distinct carburetors (Compare CX 165P with CX 166R; Nelson 1558-59). A certain number of kits are also dropped from the line annually when decreased demand, consolidation with other kits or replacement by a kit containing [30] slightly different

improved parts occurs (Fife 640; Hawkins 1184; Thompson 320; Schultz 3036; Sheehan 458-59).

131. The annual review of the line generally entails an analysis of: (1) all new carburetor models for the current year; (2) the potential demand for a carburetor kit for a given application, which includes consideration of projections of new vehicle sales; and (3) the applications included in competitive kit lines (Fife 626-27; Sheehan 474-75; Smith 3174; CX 539Z). [\*\*\*] (Thompson 2453; Rivet 2824-26; Schultz 3035; Smith 3176; CX's 570C, 215B, 162Z-27 through Z-28 *in camera*, 115B, 538Z-48 through Z-50).

132. The degree of consolidation is another way in which the various kit lines may be promoted (*e.g.*, CX's 84A, 546B). Consolidation is accomplished by including in a single kit more parts than are needed for the repair of one carburetor so that the kit can be used to repair a number of similar models of carburetors. By consolidation, the kit assembler can reduce the number of different kits included in its line without reducing the coverage offered (Hawkins 1181; Thompson 302; CX's 537U-V, 538Z-4, 539Z-2, 105C, 129Z-11). On the other hand, kit assemblers must avoid over-consolidation which leads to unacceptably high costs per kit and requires the kit user to discard too many unused parts (Rivet 2833-34; Fife 636-38; Jursek 737; CX 216C-F).

133. Kit assemblers review annually the consolidation of the kits which they sell (Rivet 2833; Hawkins 1182; Sheehan 488; Thompson 319, 2479-80; CX's 533S, 539Z-2). The focus of this review is a comparison by the assembler of the consolidation of its kit line with that of its competitors (CX 541Z-12 through Z-13).

134. The degree of consolidation of carburetor kit lines is a major selling tool which is emphasized in advertising, promotional activities and sales calls (Tehansky 850-51; Secrest 1092-94; Fife 637; CX's 69, 15A, 116A, 127G). For example, Ballwin/Washington includes, in its national account sales presentations, detailed consolidation comparisons of its kit line with that of other kit suppliers, including an analysis of inventory cost, inventory turnover and return on investment (CX's 163N through Z-1; 168Q through Z-2, 170Q through Z-2, 129"-Z; see Secrest 1089-94).

135. As an integral part of the decision as to which kits to include in its line, an assembler also must decide which specific parts to include in each kit (CX 539W-X; see also, Thompson 316-17, 397-98; s 537Z-40 through Z-41, 538I). [31]

136. Changes in the material used in existing model carburetors require a review and a determination of the parts to include in existing kits (Sheehan 458-59, 476-77; Hawkins 1185). Carburetor kit assemblers also emphasize the development of new materials and parts for the carburetor parts included in their kits as a way to gain

market advantage (CX's 128D, 162Z-30, 98P, S, T, X; 99U, X, 101B, C, 105D, F, N, Q, S, 129Z-5 through Z-6, 187G-H). In addition, the quality of those parts included in kits is emphasized in promotional activities (CX's 98-105, 426 at 86, 431B).

137. The instruction sheet contained in every carburetor kit is prepared from service manuals available from vehicle and carburetor manufacturers. The leading kit assemblers, however, design some of their instruction sheets and Borg-Warner and Carter obtained copyrights for their instruction sheets (Thompson 339; Sheehan 459-63, 579-80; Fife 648; Hawkins 1188; Rivet 2834-35; CX's 126C, 169T, 218A, 434, 431C, 537Z-51 through Z-53).

138. [\*\*\*] (Rivet 2851; CX's 402-03, 220, 421A-K *in camera*). These bills of materials are considered proprietary by the kit assemblers (Sheehan 481-83; CX 220).

139. The kit coverage offered for carburetors on domestic vehicles is generally broader than that for import vehicle carburetors (*i.e.*, 95 to 100% coverage for domestic vehicles and 75 to 95% coverage for foreign applications) (Fife 624-25; Jursek 716-17; Sheehan 463-64; CX's 126B, 167B, 538Z-9 through Z-10). Carburetor kits are being produced for carburetors first installed as original equipment 20 to 30 years ago as well as for more recent carburetor models (Hawkins 1177; Jursek 716-17; Thompson 308; CX 538Z-9 through Z-10). Although kits can be obtained for the current model year's carburetors through vehicle dealers (Sheehan 464-65; Baumann 1012-13; Hawkins 1180; Thompson 398), there is a "lag time" of about 12 months between the introduction of a new carburetor on a new model vehicle and inclusion of a corresponding kit in a kit supplier's line (Merz 2723-24; Rivet 2824; CX's 541Z, 538Z-10).

140. [\*\*\*] (Fife 640-41; CX's 30U *in camera*, 24D *in camera*). [\*\*\*] (CX 169I). [\*\*\*] (CX 21J *in camera*; see CX's 24D *in camera*, 25D *in camera*, 26C *in camera*). [\*\*\*] [32] (CX's 24D *in camera*, 25D *in camera*, 26C *in camera*).

### C. Marketing And Distribution Of Carburetor Kits

141. [\*\*\*] (Nelson 1424-26; CX 15N *in camera*). The same holds with respect to private brand carburetor kits sold by the so-called "resellers," which do not package kits they sell.

142. The vast majority of carburetor kits are sold through the traditional warehouse dealer/jobber channel (Fife 655; Jursek 778; Sheehan 537-39; CX's 570A, 535Z-17 through Z-18, 26G). [\*\*\*] (Fife 655 Tehansky 841, Bull 3648-50; CX 14Z-3 through Z-4 *in camera*, 404D)

143. There are [\*\*\*] to [\*\*\*] WDs throughout the United States which warehouse numerous aftermarket product lines in order to assure quick delivery of specific replacement parts ordered by thei

jobber customers (Tehansky 836; Merz 2785; Bull 3693; Castagna 3754-55; CX's 33L, V *in camera*, 34N *in camera*). They may carry in stock [\*\*\*] to [\*\*\*] different replacement parts, including a full line of [\*\*\*] to [\*\*\*] carburetor kits (Bull 3642; Brown 3369; Waters 3314; Kotcher 3571; Castagna 3759; CX 15J, X *in camera*).

144. About [\*\*\*] jobbers stock automotive replacement parts for sale to over [\*\*\*] installers (CX 33L *in camera*). Jobbers generally stock 95 to 120 different carburetor kits and rely on their WDs for other kits not in stock (Bull 3654, 3692-93). Jobbers expect the WDs to carry a full line of carburetor kits at all times (Foley 3799) and try to give immediate delivery of parts to installers since installers do not generally inventory replacement parts (Tehansky 842-43).

145. Many WDs and jobbers are members of program [\*\*\*] distribution groups. (CX 33Q *in camera* [\*\*\*].) Program distribution groups may be "controlled" by common ownership of WD and jobber members (such as NAPA, APS, Republic and ITT) or "noncontrolled" (such as Bumper-To-Bumper, Carquest and Pronto) (Brown 3383-84, 3407-08; Bull 3635-A, 3642-43; Fife 657-58; Secret 1065; Waters 3294, 3297; CX's 535Z-20 through Z-22, 26F- [33] G, 13P, 15J, 534Z-8). Program distribution groups are formed to enhance the ability of their members to compete with direct-buying retailers as well as other WDs and jobbers, to tie jobbers to their WDs and to undertake advertising and promotional programs which individual WDs or jobbers cannot afford on their own (Fife 657; Baumann 999-1000; Bull 3639; CX's 535Z-20 through Z-21, 566). [\*\*\*] (Jursek 789; CX's 33Q *in camera*, X, 566).

146. [\*\*\*] (Sheehan 537-39; CX's 14Z-4 *in camera*, 15N *in camera*). For example, American Motors Corporation ("AMC") purchases carburetor kits from Ballwin/Washington which it sells to its dealerships for use by mechanics in the dealers' service facilities (Merz 2756, 2766-67). Similarly, GM distributes carburetor kits it assembles to its car dealerships through the service channel in addition to selling kits through the traditional WD/jobber channel of distribution (Hawkins 1192).

147. [\*\*\*] (CX's 163Z-9, 464A-B *in camera*, 537Z-33 through Z-34).

148. Foreign vehicle producers' sales of carburetor kits in the United States are limited to sales through their car dealerships and are generally limited to kits with application on the vehicles they manufacture (Secret 1098-99; CX 535Z-11 through Z-12).

149. [\*\*\*] (CX's 14Z-4, 15N *in camera*, 26G *in camera*, 27F *in camera*, 33L *in camera*). [\*\*\*] (CX's 535Z-17 through Z-18, 541Z-36, 162Y *in camera*, 26G *in camera*, 27F *in camera*). Tomco is now the only major carburetor kit assembler selling through this channel (Thompson 343-44).



150. [\*\*\*] [34] (Secret 1060-61, 1065-70; McCurry 3836-38; CX 464A-E *in camera*).

151. Ballwin/Washington's national account customers included virtually all of the domestic and foreign automobile manufacturers, kit assemblers, and numerous private brand aftermarket product sellers. National account sales to private brand sellers accounted for about [\*\*\*] of Ballwin/Washington's total kit sales in 1979 and for about [\*\*\*] in 1980. National account sales to other kit assemblers accounted for about [\*\*\*] of Ballwin/Washington's total kit sales in 1979 and for about [\*\*\*] in 1980. National account sales to carburetor rebuilders accounted for less than [\*\*\*] in both years (Merz 2749-58; McCurry 3837-40; CX's 464A-E *in camera*, 404A-D, 169H, 129Z-8, 165V, 163Z-9; RX's 292-305, 307, 309-30).

152. Although only GM assembles and sells kits in the aftermarket at the present time, other automobile manufacturers are potential assemblers of kits. For example, Ford manufactures Ford carburetors and, until about 1972, assembled and sold kits to the aftermarket. In 1972, although Ford had the capabilities to assemble and offer a full-line of kits, it made a management decision to purchase all kits from outside and cease kit assembly of its own, because buying kits was less expensive than assembling them (*see* Lingle 3511-18; Baumann 1001-12).

153. In 1967, Borg-Warner shifted responsibility for carburetor kit sales to WDs under the Borg-Warner name from Ballwin/Washington to APD (Merz 2715). APD, as a national account of Ballwin/Washington, served as Borg-Warner's primary distribution arm to the automotive aftermarket (Secret 1066). [\*\*\*] (CX's 24C *in camera*, 143B). In 1979, APD accounted for [\*\*\*] of Ballwin/Washington's total carburetor kit sales and in 1980, for [\*\*\*] (CX 464E *in camera*).

154. Borg-Warner began selling carburetor components and kits to national accounts mainly for two reasons. First, "the economies of scale at the manufacturing plant in Washington were such that the more parts you could sell, the more profits you could make" and it did not matter whether the carburetor components were sold in bulk form or in kit form (McCurry 3840-41). Second, [\*\*\*] (CX 33E *in camera*) [\*\*\*] [35] [\*\*\*] (Merz 2785, 2787; CX's 26G *in camera*, 27F *in camera*, 169G). In computing its share of the carburetor kit market, Borg-Warner included its sales through APD under the Borg-Warner name as well as Ballwin/Washington's national account sales of private-branded carburetor kits to resellers (CX's 140C, 169Z-17 through Z-18). Borg-Warner viewed its kit sales to reseller customers as part of its "base market share of carburetor tune-up kits" (emphasis in original) (CX 140C).

155. In recent years, Carter was the only other carburetor kit assembler that sold carburetor kits to reseller national accounts (Se-

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crest 1068-69; Fife 656-57; Jursek 743). However, Carter lost its last carburetor kit reseller customer, Guaranteed Parts, to Ballwin/Washington in 1981 (Sheehan 538; Eaton 2979-80; CX's 142, 184-85).

*D. Some Important Marketing Aids Provided By Kit Assemblers*

156. The major carburetor kit assemblers provide important services to their customers, including a full line of well-consolidated carburetor kits offering broad coverage for the vehicles on the road, and certain marketing and sales support services.

157. Among the marketing and sales support services provided by assemblers are cataloging service and inventory guidance, sales personnel work with the customers' sales forces, warranty, obsolescence and stock adjustment programs, training clinics, advertising and other promotional materials and programs, and a fast delivery.

158. Carburetor kit catalogs are used throughout the distribution channel to locate the appropriate kit for a specific carburetor repair job (Sheehan 465; Fife 620-21; Thompson 304-05). Accurate, complete and up-to-date catalogs are, therefore, important in the sale of carburetor kits (Brown 3397-99; Jursek 780; Thompson 349-50; CX's 217, 125 at 2, 182A, 419, 169I, 170Z-5, 168Z-5 546B). Carburetor kit catalogs (or supplements) are prepared annually by all of the major assemblers and distributed to their WD customers (Schultz 3056; Sheehan 466-67; Thompson 351-52; CX's 40-41, 249-53, 416-17, 426, 429-30, 439-41, 445). Ballwin/Washington also annually provides catalogs, supplements and other cataloging information to its national account kit customers (Secret 1102-03; Kruse 2922-23, 2926, 2929; CX's 169K, 141, 187N, 217).

159. Carburetor kit catalogs generally contain sections cross-referencing the carburetor kit part numbers to vehicle models and to carburetor model numbers and a numerical listing of [36] the assembler's kits (CX's 40-41, 125 at 2, 416-17, 439-40, 445, 537Z-60). Some catalogs also cross-reference the assembler's carburetor kits to competitors' carburetor kits (CX's 429-30). Cataloging information is developed primarily from vehicle and carburetor manufacturers' manuals (Fife 621; CX 537Z-60). Comparisons to competitors' kit catalogs are also undertaken to improve the format and contents of an assembler's catalog (Sheehan 466; Thompson 306).

160. Carburetor kit assemblers also prepare and distribute interchange lists which cross-reference their kit numbers to competitors' kit numbers (CX's 169M, 170Z-5, 168Z-5, 177A-B, 267, 427A through Z-11, 419, 535Z-49, 82, 85-86, 88-97). [\*\*\*] (Waters 3316-17; Bull 3656-57; CX's 535Z-28, 182A, 245I *in camera*).

419, 442A-B, 452, 535Z-31). Each kit in the assembler's line is given a "popularity designation" or "popularity code" based on its sales history or projected sales potential. [\*\*\*] (Jursek 784; Tehansky 846-47; Thompson 347; Fife 659; CX's 44, 442A-B *in camera*, 13P *in camera*). Inventory guidance is also provided to Ballwin/Washington's national account customers (Secrest 1101, 1105-06).

162. Suggested carburetor kit price lists are provided by the assemblers usually on an annual basis, to both WD and national account reseller customers (Eaton 2942; Timberlake 3093; Secrest 1101, 1104-05; Sheehan 548; Thompson 346; Merz 2772-73; CX's 188A, 192). These suggested price lists generally include suggested prices at the jobber, mechanic ("dealer" or "trade") and consumer ("list") resale levels (CX's 257-58, 45-55, 192, 449-51, 420A-I; RX's 173-75).

163. In addition, [\*\*\*] (Kotcher 3575-76; Merz 2782; Waters 3317-19; CX's 33S *in camera*, 13P *in camera*, 15J *in camera*, 34U *in camera*, 534Z-5).

164. [\*\*\*] [37] [\*\*\*] (Sheehan 545, 548; Tehansky 839-40, 843-44; Nelson 1618-19; Hawkins 1170, 1192; Brown 3377; CX's 117A *in camera*, 534Z-5, 244S-T *in camera*, 419). To provide assistance to its WD customers, Borg-Warner employed a sales force of approximately 105 salesmen (CX 535Z-25); Standard employed approximately 350 salesmen (Fife 661-62); Echlin's Branford division employed approximately [\*\*\*] salesmen (CX's 244Z *in camera*, 245V *in camera*, 534I, N-O; Waters 3303, 3313); Holley employed approximately 65 salesmen (Jursek 778); and Carter employed approximately 60 salesmen (Sheehan 544; Tehansky 834).

165. Of the major assemblers, Tomco is the only one that does not employ its own direct sales force. In an effort to control its distribution costs, Tomco has elected to use manufacturers' agents, which in turn employ approximately [\*\*\*] commission salesmen, to distribute its carburetor kits (Thompson 288, 362; CX 570D; *see* CX 117C *in camera*). [\*\*\*] (Thompson 361-62; CX's 535Z-25, 33T, V *in camera*).

166. Carburetor kit assemblers provide a limited warranty on the kits which they sell as is customary in the automotive aftermarket (Fife 666-67; Waters 3320-21; CX 541Z-25 through Z-26).

167. Carburetor kit assemblers' sales forces attempt to "change-over" WDs from competitive carburetor kit lines to their kit line (Jursek 783-84; Tehansky 840; CX's 125 at 26, 270-77). Changeovers, however, occur more frequently at the jobber level than at the WD level (Tehansky 840; CX 535Z-30). [\*\*\*] (Waters 3320; Tehansky 843-45; CX's 244S *in camera*, 125 at 26, 245B *in camera*, 262A-B, 263A-C, 301-03). Once the assembler's sales force convinces a jobber to change-over kit lines, the salesman will inventory the jobber's existing kit supply, lift those kits and replace them with the assembler's kit line

(Fife 665-66; Tehansky 844-45; Waters 3320; CX's 65-67, 125 at 26, 263A, 284-87, 535Z-29 through Z-33). [\*\*\*] (CX's 534Z-9 through Z-10, 73, 244Z through Z-1 *in camera*, 261A, 263A). In lieu of the "changeover" program, Ballwin/Washington provides its full-line kit customers with a stock adjustment program to offset some of the costs inherent in such changeovers (Secret 1108-09; CX's 183, 185, 188B, 225C, 541Z-27).

168. Carburetor kit assemblers also provide their WD customers with obsolescence protection programs to facilitate the [38] return of slow-moving, obsolete or superseded carburetor kits (Thompson 351-54; Tehansky 847; Fife 666-67; Jursek 783; Merz 2768-69; CX's 535Z-32, 541Z-26 through Z-27). This obsolescence protection is passed down through the channels of distribution to allow inventory adjustments at the jobber level (Waters 3320-21). Ballwin/Washington provides a similar obsolescence program to its reseller national accounts (Secret 1106-07; CX 193B-C).

169. [\*\*\*] (Brown 3377; Tehansky 850, 858; Jursek 784-85; Hawkins 1193-95; CX's 429, 419, 314, 534N, 307, 309A, 313, 570D, 15J *in camera*).

170. [\*\*\*] (Fife 639, 660; CX's 169M, 244Z-8 *in camera*). For example, Echlin periodically prepares comparisons of its kit prices to those of the other major assemblers for use by its customers' sales forces in selling kits at the jobber and installer level (CX's 259A, 260A-P). Similarly, Ballwin/Washington has prepared detailed comparisons of its kit line with the other major assemblers' kit lines for use by its national accounts in their kit sales efforts (CX's 105A through Z-4, 537Z-64 through Z-65, 83, 84A, 99A through Z-2, 129Z-1).

171. [\*\*\*] (Thompson 347-48; Sheehan 551-52; Jursek 780; CX's 119A-C, 432-34, 244Z-8 *in camera*, 245J-K *in camera*, 117A *in camera*, 121, 123C, 125 at 2, 431A-D, 419). The purpose of such advertising is to build brand name recognition, thereby making it easier for the assembler's customers to sell that brand of carburetor kits (Fife 660-61; CX's 570D, 123C).

172. [\*\*\*] (CX's 190F, 167D, 184, 232 at 3, 164Z-4, Z-10, 167D, 182A, 170Z-5, 168Z-5, 14C, N *in camera*, 26G, J *in camera*). For example, Borg-Warner used displays to compare its kits to those of Standard (Hygrade), stressing those items "which markedly show a quality difference" (CX 83). Borg-Warner also supplied its national accounts with detailed, kit by kit comparisons of the contents of competing kits (CX's 98-99, 101-02, 105A through Z-4). An assembler's reputation for providing high quality kits is, in fact, one of the critical factors WDs and resellers evaluate in selecting their carburetor kit supplier (Thompson 349-51).

173. [\*\*\*] (Tehansky 848-49; Baumann 1023; Eaton 2980; Secret

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1101; CX's 535Z-33, 541Z-35, 33S *in camera*, 34W *in camera*, 133A). Thus, a carburetor kit assembler's ability [39] to supply products quickly after receiving an order (*i.e.*, a high "order fill rate") is important (Thompson 349-50; Timberlake 3105-06; CX's 133A-B, 76B-C). The carburetor kit order fill rates of leading assemblers are very high and range between high 80% and high 90% (Thompson 354; Sheehan 546-47; Fife 667; Jursek 781; CX's 539Z-27, 534Z-12 through Z-13, 535Z-33). Also, in order to insure prompt delivery, leading carburetor kit assemblers maintain at considerable cost a large inventory of kits they offer.

## VI. THE EFFECTS OF THE CHALLENGED ACQUISITION

A. *The Market Structure Evidence*

174. At the time of the acquisition, there were seven carburetor kit assemblers or packagers offering a full line of carburetor kits and three small specialized kit assemblers that operated only in a segment of the market. And a limited number of carburetor kits were imported for foreign vehicle applications. Total sales of carburetor kits amounted to approximately 13,321,390 units in 1980 and 13,562,030 in 1979 (CX 530A). In 1980, the dollar sales of carburetor kits were about \$53 million at the level of sales to WDs (Nelson 1487; Jursek 816). This would represent some \$200 million spent on carburetor kits by the ultimate consumers (*i.e.*, vehicle owners) (Glassman 4386-94).

## 1. Firms Which Assemble And Sell Carburetor Kits

a. *Borg-Warner Corporation*

175. Prior to the acquisition Borg-Warner was the nation's largest carburetor kit assembler (CX's 81C, 530A). In 1979, Borg-Warner assembled and sold 5,106,564 carburetor kits which accounted for 37.7% of all carburetor kits sold in the United States. Its 1980 sales amounted to 4,846,396 kits or 36.4% of the market (CX's 530A-C). Borg-Warner entered into the assembly and sale of carburetor kits through its acquisition of Precision Automotive Components Company (PACCO) in 1966 (Carlson 2525-26; CX 535H). Borg-Warner sold its kits into the aftermarket both under the Borg-Warner brand name through APD and on a private label basis through sales by Ballwin/Washington to its national accounts (F. 150-51, *supra*).

176. Borg-Warner assembled carburetor kits at the Ballwin facility in Ballwin, Missouri. Carburetor parts used in its kit assembly operation were manufactured at its Washington, Missouri [40] plant (F. 37, *supra*; CX 539Z-14 through Z-15; Bush 2908). Borg-Warner manufactured the majority of the carburetor hard parts included in its kit line while purchasing various small parts and subcomponents such as

rings, rubber cups and clips from outside suppliers (CX's 126B, 9Z-14 through Z-16, 533Z through Z-2, Z-15 through Z-16; Bush 09, 2915-17). At the time of the acquisition, Borg-Warner assembled a full line of carburetor kits consisting of 429 kits (CX's 164"O", 37R, 168P, 170P). Borg-Warner advertised that its kit line offered "the broadest coverage available" in the industry (CX's 120, 169I). Borg-Warner did not purchase any kits from other suppliers (CX 41R; Bush 2908). Most of its competitors purchased some kits from Borg-Warner's Ballwin/Washington Division in order to fill out their lines (McCurry 3836; Fife 648; Hawkins 1188-89; Thompson 334-35). In addition, Borg-Warner, through its Ballwin/Washington Division, also supplied carburetor parts to other carburetor kit assemblers (Thompson 326-27; Sheehan 496-98; Insalaco 919; McCurry 3836) and was considered the major full line carburetor parts supplier in the industry (Insalaco 974-76).

b. *Standard Motor Products, Inc.*

177. Standard Motor Products, Inc. ("Standard") is the nation's second largest assembler of carburetor kits. In 1979 and 1980, Standard had sales of approximately 2,889,600 and 3,169,664 kits, respectively, and accounted for about 21.3% and 23.8% of the market (CX 530A-C). Standard also offers four other products to the automotive replacement market: ignition parts, wire and cable, general service parts, and automotive air conditioning parts (Fife 610). Standard entered into the assembly and sale of carburetor kits in 1947 when it purchased Hygrade Motor Products, an assembler of major overhaul kits (Fife 615-16). During the late 1950s and early 1960's, major overhaul kits were replaced by carburetor tune-up kits (Fife 616).

178. Standard assembles carburetor kits at a plant in Edwardsville, Kansas and distributes them nationally under the "Hygrade" brand name (Fife 612-13; CX 440). Standard offers a full line of 400 to 500 carburetor kits which provide coverage for approximately 95% of all the vehicles on the road, including domestic and imported passenger cars, light and medium trucks, some heavy trucks, light tractors and other farm equipment (Fife 621-22). Standard manufactures almost all of the hard parts included in its line of kits (Fife 641-43), but generally does not offer any carburetor parts or components for sale to other kit assemblers (Fife 645). [\*\*\*] (Fife 648-49; CX's 465A *in camera*, 464B *in camera*). [41]

c. *Echlin Inc.*

179. Before acquiring the carburetor kit business of Borg-Warner, Echlin was the third largest kit assembler. In 1979, Echlin assembled and sold 1,365,598 carburetor kits accounting for 10.1% of the mar-

ket. In 1980, its share of the market was 1,390,121 kits or 10.4% (CX's 530A-C). Echlin entered into the assembly of carburetor kits in the early 1960's (CX 538X; Schultz 3026, 3033-34). Echlin's kit line is marketed to the distribution centers ("DCs") (WD members) of the NAPA program distribution group by its Automotive Controls Corporation ("ACC") division located in Branford, Connecticut. Research and development work for Echlin's carburetor kits is also handled by ACC at Branford (CX 538F, I).

180. Echlin's carburetor kits are assembled at and shipped from the Litchfield, Illinois facility of its Brake Parts Company division (Schultz 3047-48; Timberlake 3129-30). Parts for its kit assembly operation are also purchased and inventoried by Brake Parts Company (CX 538N). Historically, Echlin purchased its requirements of carburetor parts for inclusion in kits from outside suppliers (Schultz 3040-42; Sheehan 496). At the time of the acquisition, Echlin was in the process of developing manufacturing capability for some pump plungers and diaphragms to be used in its kit assembly operation. Echlin's plan was to offer 30-40 premium carburetor kits as part of its line featuring parts made with a premium grade of fluorocarbon rubber (CX 538Z-75 through Z-77). This project was placed "on hold" in late 1981, after Echlin purchased Ballwin/Washington (CX 538Z-76 through Z-77; Smith 3235-37). [\*\*\*] (Schultz 3039; CX's 538Z-9 through Z-10, 464A-E *in camera*, 467A-K *in camera*). Historically, Ballwin/Washington has been Echlin's major source of purchased kits, supplying a majority of Echlin's kits for import applications (Secrest 1070; Schultz 3061). Echlin's purchased kits accounted for less than 10% of its kit sales (Schultz 3036).

#### d. General Motors Corporation

181. General Motors Corporation (GM), through its Rochester Division, was the fourth largest producer of carburetor kits in the United States (CX 530A-C). GM's sales of kits it assembled were approximately 1,240,616 in 1979 or 9.1% of the market, and 1,072,538 kits or 8% in 1980 (CX 530A-C). GM, which is also an original equipment carburetor manufacturer, has been assembling carburetor tune-up kits since at least the early 1960's (Hawkins 1174-76). GM currently assembles kits for application on all of its own Rochester-manufactured carburetors. [\*\*\*][42][\*\*\*] (Hawkins 1175-78; CX 468B *in camera*).

182. GM assembles carburetor kits at a plant in Tuscaloosa, Alabama (Hawkins 1178). In its kit assembly operation, GM uses parts manufactured for its OE carburetor production but does not sell any kit components to other kit assemblers (Hawkins 1187). GM purchases kits for non-Rochester carburetor applications from Ballwin/Washington (Hawkins 1188-89). Its purchases from Ballwin/Wash-

ngton accounted for approximately [\*\*\*] of its kit sales for the period 1979-1980 (CX's 464A *in camera*, 468E *in camera*).

e. *ACF Industries, Inc.*

183. ACF Industries, Inc. ("ACF"), through its Carter Automotive Division ("Carter"), was the fifth largest assembler of carburetor kits in the United States (CX 530A-C). In 1979, Carter's sales of kits it assembled represented 7.7% of the market and its 1980 share was 7% (CX 530A-C). Carter is a supplier of OE carburetors to the automobile industry (Sheehan 464-65). Carter began assembling tune-up or "zip-kits" in the late 1950's or early 1960's (Sheehan 449, 452). Carter offers a full line of carburetor kits for sale in the aftermarket (CX's 416-18, 469B; Sheehan 463-64, 468-72).

184. Carter assembled its carburetor kits at a facility in Corning, Arkansas (Sheehan 443, 452-53), for both Carter and non-Carter carburetor applications and purchased about [\*\*\*] of its annual kit sales from others, including Ballwin/Washington (Sheehan 473-75; CX 469A *in camera*). In its kit assembly operation, Carter used carburetor parts it manufactured in-house, parts manufactured by outside suppliers on a contract basis using tooling owned by Carter, and parts offered for sale by carburetor parts manufacturers such as Ballwin/Washington (Sheehan 491-94, 496-97). Carter sold carburetor parts only for Carter carburetor applications to other kit assemblers (Sheehan 496; Insalaco 985).

f. *Tomco, Inc.*

185. Tomco was the sixth largest carburetor kit assembler at the time of the acquisition. Its share of the market was approximately 6.4% in both 1979 and 1980 (CX 530A-C). Tomco is a privately-owned supplier of fuel system products to the automotive aftermarket. Its products include: carburetor kits, choke thermostats, choke pull-offs, chokes, fittings and adaptors (Thompson 285, 296). Tomco began packaging carburetor tune-up kits in 1963 (Thompson 297) and offers a full line of some 300 to 400 carburetor kits (Thompson 314; CX's 445, 447).  
[43]

186. Tomco is located in St. Louis, Missouri (Thompson 284). Its kits differ slightly from others in that they include a rotary disc fuel inlet valve, a proprietary product of Tomco, rather than a needle and seat assembly (Thompson 295-96). Tomco has its fuel inlet valve manufactured on a contract basis by an outside supplier using Tomco owned tooling (Thompson 324-25). Other carburetor parts are purchased by Tomco from carburetor parts manufacturers such as Ballwin/Washington (Thompson 326-27). Tomco also purchases certain slow-moving parts from Ballwin/Washington to fill out its line



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(Thompson 334-35). Purchases of such kits account for less than 10% of Tomco's total kit sales (Thompson 2457-58).

*g. Holley Replacement Parts Division Of  
Colt Industries Operating Corporation*

187. At the time of the acquisition, the Holley Replacement Parts Division of Colt Industries Operating Corporation ("Holley") ranked seventh in the carburetor kit market in the United States, accounting for 3.3% of the market in 1979 and 3.4% in 1980 (CX 530A). A sister division, Holley Carburetor Company, manufactures, *inter alia*, OE and replacement carburetors for the automotive industry (Jursek 707). Holley Carburetor Company's aftermarket products are distributed by the Holley Replacement Parts Division (Jursek 708-09). Holley first began to offer carburetor tune-up kits in the late 1950's (Jursek 739). Holley offers a full line of some 600 kits under the Renew Kit name as well as two other specialized lines of carburetor kits (Jursek 715-20).

188. Holley assembles carburetor kits in Goodlettsville, Tennessee (Jursek 714). Parts for inclusion in kits for both Holley and non-Holley carburetor applications are supplied to the Replacement Parts Division by its sister division, Holley Carburetor Company (Jursek 733-34), as well as by other suppliers (Jursek 731). Holley Carburetor Company also sells carburetor parts for Holley carburetor applications to other assemblers (Insalaco 985; Secrest 1116). Holley has always assembled a majority of its carburetor kits (Jursek 738) and in recent years instituted a program designed to increase the percentage of its line that it assembles (Jursek 741-43; CX's 546B, 547A, 548A). Holley purchases kits for low-volume applications, primarily from Ballwin/Washington (Jursek 727-30). Holley's kit purchases accounted for approximately [\*\*\*] of its kit sales in 1979 and 1980 (CX's 471C-D, 464A-E *in camera*). [44]

*h. Other Carburetor Kit Assemblers*

189. At the time of the acquisition, there were three other smaller kit assemblers operating in two market segments (CX's 475A-C, 476A-D, 477A-C). Royze, located in southern California, assembled and sold kits for import vehicle applications only (Merz 2733-34). Royze's kit sales accounted for about 2% of the kit market in 1979 and 2.1% in 1980 (CX 530A-C). Royze also purchases some kits from Ballwin/Washington to fill out its import car kit line (Merz 2734).

190. Facet Enterprises, Inc. ("Facet") and Tru-Part Manufacturing Inc. ("Tru-Part") both assemble and sell kits for application on off-the-road vehicles, such as tractors and earth-moving machinery (CX's 476A, 477A). Facet also assembles a very few kits for inboard marine

applications (CX 476A). Neither company assembles any carburetor kits for passenger cars (CX's 476A, 477A). In 1979 and 1980, Facet and Fru-Part together accounted for less than 1.5% of the carburetor kit market (CX 530A-C). Due to the increasing displacement of gasoline engines by diesel engines in agricultural machinery, this "agricultural and industrial" segment of the carburetor kit market has been declining steadily (Nelson 1462-63).

#### i. Foreign Kit Competition

191. Despite the growing popularity of imported cars in the United States, carburetor kits imported in 1979 and 1980 accounted for only about 1.2% of the carburetor kit market (Nelson 1482-83; CX 530A-C). This is due to the fact that demand for carburetor kits for imported cars is largely met by domestic kit assemblers (Nelson 1463-66, 1483-86). Ballwin/Washington is the primary supplier of import car kits to other domestic suppliers (Sheehan 473; Jursek 727-28; Hawkins 1188-90; Secret 1078; see CX 115A), [\*\*\*] (Merz 2762; Secret 1078-80; Nelson 1464-65, 1483-86; CX 464A-E *in camera*), [\*\*\*] (Nelson 1484; Secret 1075-76; CX's 115A, 537Z-34 through Z-35, 464A-E *in camera*).

192. The small number of imported kits brought into the country primarily by foreign car manufacturers, such as Nissan, Toyota, and Honda, are sold through their dealer networks for use on their cars (Secret 1081, 1098-99; CX's 461A-B, 478A-E, 479A-E, 480A-C, 535Z-11 through Z-12). In addition, some of the import kit resellers import a small volume of import car carburetor kits (Nelson 1464-65; CX's 461A-B, 535Z-12 through Z-14). Royze also imports a limited number of import car carburetor kits (CX's 474A-C, 461A-B). However, the record shows [45] that no company imports carburetor kits for use on cars of domestic manufacture at the present time (Nelson 1466).

193. It may be expected that, as imported cars continue to gain an increasing share of the U.S. car market, carburetor kit imports for foreign car applications will gradually increase. However, the record does not indicate that imported carburetor kits will capture a significant share of the U.S. carburetor kit market in the near future (Nelson 1482-84; CX 212A). [\*\*\*] (CX's 24Z-3 *in camera*, 180A).

#### 2. The Measurement Of Market Shares

194. The measurement of market shares in the carburetor kit market is complicated by the presence of some [\*\*\*] so-called resellers, those firms which do not assemble kits but buy them from Ballwin/Washington (Merz 2749-59; Timberlake 3108; RX's 292-307, 309-30), and sell them under their own private labels to the wholesale channels of distribution.

195. It is settled that, once the product market is determined, as is the case here, it is appropriate to include a firm's sales to resellers (private branders) in the firm's market share for the purposes of market share analysis. See *United States v. Black & Decker Mfg. Co.*, 430 F.Supp. 729, 737-38 (D. Md. 1976); *Beatrice Foods Co.*, 3 Trade Reg. Rep. (CCH) ¶ 22,035 at 22,624 (May 26, 1983); *Champion Spark Plug Co.*, Docket No. 9141, Initial Decision at 90 n. 10, adopted by the Commission (Final Order dated June 20, 1984) [103 F.T.C. at 623]. In the instant case, although the assemblers do not "manufacture" or "process" kits, they are in a real sense "producers" of kits and the relationship between a kit assembler and a kit reseller is similar to the relationship existing between a manufacturer/processor and a reseller involved in the cases cited hereinabove.

196. Furthermore, in computing its kit market share in internal marketing documents, Borg-Warner itself included its kit sales of both APD and Ballwin/Washington (private label sales) (CX's 140C, 169Z-17 through Z-18) and viewed its kit sales to "reseller" customers as a part of its "base market share of carburetor tune-up kits" (emphasis in original) (CX 140C).

197. Also, unit sales are more realistic as well as more meaningful because of the distortions in dollar sales that would be introduced by the sales to and by the resellers.

198. The MEMA, an industry trade association, also collects and publishes carburetor kit sales data on a unit basis (CX 436A-B). [46]

### 3. Market Shares And Concentration Ratios

199. Prior to the acquisition, Borg-Warner's sales of carburetor kits it assembled accounted for about 37.7% of the market in 1979 and 36.4% in 1980. Standard, the second ranked assembler, accounted for about 21.3% in 1979 and 23.8% in 1980 (CX 530A-C). Echlin, the third ranked firm, accounted for about 10.1% in 1979 and 10.4% of the market in 1980 (CX 530A-C). General Motors, the fourth ranked firm, accounted for about 9.1% in 1979 and for 8% in 1980. The pre-acquisition four-firm concentration ratio in the kit market was about 78.2% in 1979 and 78.6% in 1980 (CX 530A). The pre-acquisition two-firm concentration ratio in 1980 was about 60.2% (CX 530A). Thus, the kit market was an advanced oligopoly prior to the acquisition.

200. As a result of the acquisition, Echlin increased its share of the market to 46.8%, on a 1980 *pro forma* basis, thus becoming the nation's leading kit assembler. Echlin's post-acquisition share was almost twice that of its closest rival, Standard, and almost six times that of the third ranked assembler, GM (CX 530A-C). The resulting two-firm concentration ratio was 70.6% and the four-firm concentration ratio rose to 85.6%, on a 1980 *pro forma* basis (CX 530A-C).

201. The pre-acquisition Herfindahl-Hirschman Index ("HHI") measured approximately 2,172 in 1980 (CX 530A), in the range generally considered to be "highly concentrated." As a result of the acquisition, the HHI in the kit market increased by 757 points to about 2,929, on a *pro forma* basis (CX 530A).

202. The acquisition also eliminated competition between the merging firms. In 1980, prior to the challenged transaction, Borg-Warner and Echlin were the first and third largest assemblers of carburetor kits, with 36.4% and 10.4% of the market, respectively (CX 530A). By acquiring Borg-Warner's automotive aftermarket assets, Echlin has eliminated this competition.

*B. The Challenged Acquisition Constitutes A Probable Violation Of Section 7 On The Basis Of Market Structure Evidence*

203. Under established judicial and enforcement criteria, the resulting market shares of the acquisition and the degree of market concentration in the kit market are so high that the acquisition will be a presumptive violation of the merger law and be prohibited unless it is shown that the market shares are not reliable indicia of the true competitive significance of the acquisition or that the market is likely to perform competitively regardless of the acquisition. See IV Areeda & Turner, Antitrust [47] Law ¶¶ 909-12 at 29-68 (1980); Sullivan, Antitrust, Sections 204a and 204b at 613-21 (1977); BASF Wyandotte Corp., 100 F.T.C. 261, 392 (Initial Decision dated May 14, 1982). In the instant case, the administrative law judge will be guided by the 1982 *Statement of Federal Trade Commission Concerning Horizontal Mergers*, dated June 14, 1982 ("FTC Guidelines") and will also take into consideration the recently revised *Department of Justice Merger Guidelines* (June 14, 1984) ("DOJ Guidelines"). Also see Clanton, *Focusing the Inquiry: Specificity In The Merger Guidelines and Elsewhere*, 71 Calif. L. Rev. 430, 433-36 (1983); Greenfield, *Beyond Herfindahl: Non-Structural Elements of Merger Analysis*, 53 Antitrust Law J. 299 (1984).

204. The FTC Guidelines indicated the Commission's view that, while market share data remain "an important indicium of the likely competitive effects of a merger," it will employ "a more refined treatment" of such data in light of "more recent empirical economic research and well over a decade of practical experience in analyzing and evaluating horizontal mergers" and take into account "non-market share considerations," the most important of which being entry barriers. *FTC Guidelines* at 2-3.

VII. CERTAIN NON-MARKET STRUCTURE FACTORS WHICH BEAR ON THE  
COMPETITIVE EFFECT OF THE ACQUISITION

205. The FTC Guidelines thus mandate a further inquiry into "those additional factors relevant to the assessment of market power effects" and suggests an examination of "whether any market power conferred by the merger is likely to persist over time" (market power duration factors) and "whether market conditions are conducive either to the exercise of individual firm market power or to collusive-type behavior." *FTC Guidelines* at 3-4.

206. Such additional factors relevant to the assessment of market power effects of the challenged merger include two marketwide conditions in the carburetor kit market, namely, the restraining influence of substitute products and the limited power of kit assemblers to control competition by resellers.

*A. Substitute Products Compete With Carburetor Kits*

207. Although new and rebuilt carburetors are not close-enough substitutes for carburetor kits to be included in the same product market, rebuilt carburetors will have a significant restraining influence upon the market power of the merging firms.

208. The record is clear that the firms in the carburetor kit market regard rebuilt carburetors as competitive products, that they are generally aware of the price range of rebuilt [48] carburetors, that there is a general relationship between the prices of the two product groups and that there is a general perception that the price movements of rebuilt carburetors may affect the sale of kits to some degree.

*B. Kit Assemblers' Power To Control Competition In  
The Kit Market Is Limited*

209. In measuring market shares, the private brand sales of Ballwin/Washington to some 40 resellers were included in Borg-Warner's market share. However, the record shows that Borg-Warner's power to control competition in the kit market is limited in important respects. And this fact serves to diminish the significance of the merging firms' market shares as a surrogate measure of their market power.

210. For example, Borg-Warner had no control over the terms of sale of private brand kits by its reseller customers (Eaton 2959; McCurry 3847; Secrest 1133). The assemblers also have only a limited control over the design and quality of private brand kits. And in many cases, the design, quality and consolidation of a kit is determined by the reseller alone or in consultation with the assembler (see RPF 658-68). The evidence also shows that the contents of kits for each vehicle are more or less standard regardless of the seller (Sheehan

477; Hawkins 1185). The consolidation decisions, once critical to competition, are no longer a difficult task and most firms appear to have similar consolidation patterns today (Merz 2786; Tehansky 872). There also appears to be a great deal of design copying among competitors (Fife 690; Tehansky 853; Eaton 2975; Smith 3172).

211. The resellers sold kits not only in competition with APD but also with other kit assemblers. Most kit assemblers regarded resellers as their competitors. The buyers (WDs, jobbers and installers) made no distinction between assemblers and resellers (e.g., Thompson 413, 2482; Carlson 2648-49; Merz 2740).

212. The evidence shows that most of the national accounts follow Ballwin/Washington-suggested price lists (CX 225B). However, this evidence does not prove that the resellers do not have the freedom to set their own prices. In fact, there is testimony that the national accounts are able to exert some influence on Ballwin/Washington's pricing decisions (Eaton 2946-47).

213. Analysis of price changes of some kit resellers, although based on selective and incomplete data, suggests that these resellers appeared to have enjoyed significant freedom to pursue their own pricing strategies, indicating a significant limitation on Borg-Warner's power to control kit prices (see RX's 348-54; Glassman 4067-75, 4088-97, 4114-17, 4142-43). This [49] is not surprising in view of the fact that Ballwin/Washington sells kits to resellers at the same prices it charges APD and that resellers enjoy about the same gross margins (from 33% to 40%) as APD (McCurry 3855-56) in the pricing of purchased kits.

214. The power of kit assemblers over kit prices is also significantly limited by competition from substitute products, especially replacement carburetors, which places a significant constraint on the market power of the merging firms. See *FTC Guidelines* at 12.

### C. Entry Barriers Are Very Low

215. In the Commission's view, entry barriers "is perhaps the most important qualitative factor" in determining the probable impact of a merger "for if entry barriers are very low it is unlikely that market power, whether individually or collectively exercised, will persist for long." *FTC Guidelines* at 3-4.

216. The record is clear that entry into the assembly and sale of carburetor kits is rather easy and that entry barriers are very low.

217. Complaint counsel assert that economies of scale (CPF 286-93), parts production or procurement barrier (CPF 295-308), sunk costs (CPF 308-14), and product differentiation (CPF 314-19) constitute substantial entry barriers into the carburetor kit market, relying

218. The record, however, does not show the presence of such commonly recognized entry barriers as legal license, patents and other secret processes, control over scarce resources, entrenched buyer preferences or product differentiation and high capital costs (Glassman 4215-38). See generally, II Areeda & Turner, *Antitrust Law*, ¶ 409 at 298-306 (1978).

219. The record does not show the presence of any significant technological barriers to entry into the assembly of carburetor kits. Although some assemblers use patented components, patents and secret processes do not hinder anyone from starting a kit assembling operation.

220. The record does not show that kit assembly requires a high degree of technological know-how. Although the development and maintenance of a kit line requires a degree of knowledge about automotive carburetors and some expertise is involved in kit consolidation and component procurement ("sourcing"), there is no evidence to show that such knowledge or skill is scarce or prohibitively expensive. Indeed, the kit industry was started by automobile mechanics and automotive products salesmen with [50] entrepreneurial vision. And, the kit assembly itself is performed by semi-skilled workers and requires minimal training.

221. The record does not show any significant production barriers such as control of scarce resources. Although the record is clear that the kit component manufacturing capability, achieved through backward integration, is a distinct competitive advantage in kit assembly and that the leading kit assemblers (now including Echlin) do make most of the major kit components, the record also shows that there are sufficient numbers of alternative sources of supply for kit components (see RPF 42-47, 404-22). At any rate, the record does not show, and complaint counsel do not suggest, that entry is possible only with kit component manufacturing capability.

222. The record fails to show that a new entrant must bear heavy promotional costs and overcome deeply entrenched buyer preferences. Brand loyalty appears to be no longer an important factor in the sale of carburetor kits, whatever its importance may be now in the marketing of other aftermarket products. Although kit suppliers (both assemblers and resellers) use brand names, kit installers seldom specify brands when ordering. It is also true that customers at all levels of distribution want to carry quality products and that a reputation for quality products is a valuable marketing tool. However, the record is clear that product quality in the kit market is taken for granted today and that this fact is largely responsible for the diminishing brand loyalty in the kit market (see F. 51-52, *supra*).

223. Although there is some evidence showing that a new entrant

will face some buyer resistance until its products become known in the aftermarket channels of distribution (CPF 319), the record also shows that "changeovers" are common occurrences both at the WD and jobber levels (F. 167, *supra*; CPF 142-43).

224. The only distributional barrier in the kit market appears to be the need to develop and maintain a full line of kits not only for the multitude of old model carburetors but also for numerous new model carburetors as they appear each year (F. 127-30, *supra*). It is reasonable to conclude from the evidence that a new entrant would be unable to compete effectively until it attains a full-line or near-full-line capability. However, the record also shows that a would-be entrant can enter the kit market with a limited line of conventional or modified kits and gradually expand its line.

225. However, with respect to the so-called national accounts or resellers (of private brand kits) which historically have purchased their kit requirements from Borg-Warner's Ballwin/Washington Division, a considerable degree of buyer preference for Ballwin/Washington appears to exist. This is not surprising in view of the fact that for some years Ballwin/Washington has been the sole source of private brand kits for resellers until November 1981, when Sherman Carburetor [51] Company, an established basic manufacturer of carburetor and carburetor kit components, began soliciting the national account business in competition with Ballwin/Washington (*see* F. 243, *infra*). The record shows that Sherman has made only a modest gain in this venture in spite of substantial price concessions it offered. Sherman's lack of success, however, may be due largely to its failure to offer a full-line of kits to the national accounts or private brand sellers who offer a full-line to WDs and would rather buy their kit requirements from a single source until Sherman becomes a full-fledged second source of a full line of private brand kits (*see* F. 244, 252, 254 *infra*).

226. Capital costs in the sense that entry requires a large absolute expenditure of funds do not constitute a "barrier to entry" unless they are so high as to be prohibitive. A new entrant may of course have to pay higher interests than established firms, but this will likely be the case in all industries. *See* II Areeda & Turner, ¶ 409e. Capital costs for starting a kit assembly operation are rather modest (e.g., Carlson 2545-49, 2558-64).

227. Complaint counsel's "economies of scale" argument, simply stated, is that (1) since each of the leading firms either accounted for 10% or more of the total market sales in 1980 or possessed the capacity to assemble that many kits, the minimum efficient scale operation in the kit market is about 10% of the market or 1.3 million units, and (2) since the minimum efficient scale operation is 10% of the market



sales, scale economies are substantial and will seriously impede entry (see CPF 281-94).

228. At the outset, the evidence relied on by Dr. Nelson, the government's expert witness, for his conclusion that the minimum efficient scale for entry into the kit market is 10% of total sales is insufficient to establish Dr. Nelson's sweeping conclusion and is not persuasive (see CPF 293-94).

229. Not surprisingly, the record shows that some of the familiar elements contributing to scale economies, such as higher volume efficiency realizable in machinery and plant cost (Nelson 1592; 1596-97), labor cost (Nelson 1586-87, 1593-95) and materials cost (Nelson 1597-98, 2164, 2245-46, 2261), are also present in the kit assembly operation. Thus, it is safe to conclude that scale economies do exist in the kit market. However, there is evidence indicating that scale economies in the kit assembling operation are "inconsequential" and less significant than those present in the manufacture of carburetor and carburetor kit components (see McCurry 3840-45).

230. As Areeda and Turner put it succinctly, however, to the extent that scale economies impede entry, it is not because new entrant is unable to produce at the same cost as incumbents (as it would be usually the case in most industries), but because entry at minimum-cost scale (or minimum efficient scale) would so expand the supply as to depress the price and profit that entry [52] would not be attractive. This may very well be the case in many small markets such as the kit market (1980 sales of about \$55 million). From an antitrust policy point of view, to call this a "barrier to entry" would be somewhat incongruous. See Areeda & Turner, II Antitrust Law, ¶ 409.

231. Also, there is a school of thought which holds that economies of scale do not deter entry, especially in cases where capital costs associated with entry are low (Glassman 4273-77). The carburetor kit market is such an industry.

232. In terms of market power assessment, it has been suggested that even where the minimum efficient scale or economies of scale severely limit the number of firms that can operate profitably in the market, the incumbents will have no "meaningful market power" if sunk costs associated with entry are low. See Wentz, "Mobility Factors in Antitrust Cases: Assessing Market Power in Light of Conditions Affecting Entry and Fringe Expansion," 80 Mich. L. Rev. 1545, 1591 (1982), cited in RPF at 214 n. 43.

233. "Sunk costs" is that portion of capital costs associated with entry which cannot be recovered if a would-be entrant decides to exit from the market. High sunk costs can impede entry into a market (see Nelson 1575-77, 2011-12; Glassman 4240-44; Willig 4776-78).

234. Dr. Nelson testified essentially that, although the absolute

capital necessary to enter the kit market is not sufficiently large as to impede entry, the portion of initial entry costs that constitutes sunk costs is sufficiently high to deter entry (CPF 309). Dr. Nelson then enumerated and elaborated on the main components of sunk costs, such as "development expenditures," inventory costs and promotional costs (CPF 310-13).

235. However, the record shows that entry costs in terms of capital costs are rather modest to begin with. "The development expenditures" and promotional costs associated with entry would largely be unrecoverable in most industries. According to Dr. Nelson, as a rule of thumb, 50% of inventory costs may be unrecoverable (Nelson 2026-27). From the foregoing, it is fair to conclude that there are sunk costs associated with entry into the kit market, but the evidence does not show that the sunk costs are sufficiently high to deter entry whether considered alone or in conjunction with the economies of scale discussed hereinabove.

236. From the foregoing discussions, it is concluded that barriers to entry into the carburetor kit market are very low and are not likely to impede entry that may otherwise be expected to occur in response to noncompetitive performance in the carburetor kit market. [53]

237. The evidence relating to the recent history of new entries is somewhat mixed in that the record shows only one substantial entry during the last decade in addition to a number of small-scale entries during the same period.

238. Former president of Borg-Warner's APD division testified that Nissan and Toyota of Japan began marketing carburetor kits in this country sometime during 1974 through their dealer organizations and Japanese trading companies. However, they have not yet achieved significant sales volume (Merz 2727-32).

239. Tru-Part Manufacturing Company, a reseller of industrial and agricultural kits, began to assemble a line of kits sometime during the last ten years, but its sales are believed to be small (RPF 928).

240. Sherman Carburetor Company ("Sherman") is an old manufacturer of carburetor parts which began its business in 1939 (Insalaco 887). As of 1982, Sherman made pump plungers, pump diaphragms and economizer valves, assembled needle and seat using purchased parts and also purchased gaskets and other miscellaneous small parts to complete its line of carburetor parts, which were sold to carburetor rebuilders and kit assemblers (Insalaco 886, 904-05).

241. When PACCO began to offer carburetor kits in the 1950's, one of the firms selling carburetor overhaul kits was Sherman Carburetor Company (Carlson 2535). In the mid 1960's, Sherman stopped selling kits (Carlson 2539). The record does not disclose the reason for Sherman's discontinuation of kit sales until the late 1970's. Sherman nei-

ther packaged nor sold carburetor kits. It was, however, a leading manufacturer of carburetor parts for sale in bulk to carburetor rebuilders and kit packagers.

242. In 1978 or 1979, Sherman was bought by John Roberts (Carlson 2539; Insalaco 887). Mr. Roberts had no prior experience with carburetors (Insalaco 888-89).

243. In early 1981, Sherman made a decision to enter the kit market (Insalaco 920). Sherman had been assembling a small number of kits for export into Mexico since at least 1979 (Insalaco 919; CX 457C) and hired additional personnel to assist with its carburetor kit program (Insalaco 974). As a well-established manufacturer of replacement carburetor parts, it was in a good position to enter the kit market (Nelson 1649). In November of 1981, Sherman began soliciting kit sales (Insalaco 888). Angelo Insalaco, a sales representative for Sherman with many years of experience in the automotive aftermarket, was placed in charge of Sherman's kit sales (Insalaco 895). Sherman first approached national account customers hoping to be a second source of carburetor kits to the private brand sellers (Insalaco 928-30). [54]

244. The original line assembled by Sherman was a short line of some 120 kits limited to fast moving kits (Insalaco 929). The kits were exact copies of the Ballwin/Washington kits, and were priced about 20% lower (Insalaco 929). Sherman did not offer a catalog (Insalaco 930). The line was intended to be used as a free-standing short line or as a second source to fill out a line from another kit supplier (Insalaco 930). Sherman intended to expand to a full line in a few years (Insalaco 932).

245. The Sherman kits are sold only as a private label brand offered to national accounts (Insalaco 932). One reason for this decision was that Sherman decided it was possible to sell to national accounts without offering a catalog or other services, because they could provide their own catalogs and services, but sales to individual WDs would require such services (Insalaco 939-40).

246. Sherman's first sale of kits was in February 1982, three months after the decision was made to begin assembling kits and two months after Insalaco began soliciting sales (Insalaco 935). The sale was to Sorensen, which purchased 3,000 to 8,000 kits per month (Insalaco 935-36).

247. In the next few months, Sherman obtained the Cantire account which purchased about 1,000 kits per month (Insalaco 935). American Parts System also purchased about \$26,000 of kits (Castagna 3748-49). Sherman also made a sale of unspecified size to Niehoff (Eaton 2951-53). In fact, within two years of the decision to assemble kits,

Sherman had made some sales of kits to most of Ballwin/Washington's national accounts (Timberlake 3131).

248. Sometime in 1981, around the time that Sherman first decided to assemble kits, it assembled on contract 50,000 Easy Way kits for Allparts (Carlson 2553).

249. Sherman also began soliciting sales to Bumper-to-Bumper ("BTB") and Pronto, two program distribution groups in June or July 1982 (Insalaco 937). At least one sale was made to Pronto, but the record does not disclose the amount of Pronto's purchases.

250. The BTB program distribution group is ten years old, and has 15 domestic WDs and one Canadian WD member (Brown 3384; Bull 3635-A). BTB contracted with Sherman to buy a short line of 50-60 kits bearing the Rockhill brand name. The 50-60 kits will provide 80% coverage, domestic and import (Brown 3391-92). It is expected that for the present the BTB members will carry the Rockhill (*i.e.*, Sherman) short line of fast moving kits, plus a full line of kits with a different brand name (Bull 3683-85). Sherman has not included catalogs or a return privilege in its sales to BTB, though catalogs will be provided when Sherman expands to a full line (Bull 3686-87). [55]

251. BTB has annual kit sales of about \$1.2 or \$1.3 million (Bull 3675). Mr. Bull, its Vice President and General Manager, estimates an average cost of slightly less than \$5/kit, which would produce his WD an annual kit volume of 30,000 to 35,000 kits (Bull 3665). Using \$5/kit as an average, BTB WDs have sales of 240,000 or 260,000 kits. BTB, as a whole, will probably purchase 10% to 15% of its kits from Sherman (24,000 to 39,000 kits per year) (Bull 3697-98).

252. However, two years after it entered the kit market, Sherman's total monthly sales of carburetor kits amounted to no more than \$16,000 and the company was losing money (Nelson 2266; Willig 4899-900).

253. During the summer of 1983, ACF Industries ("Carter"), a kit assembler which ranked fifth in the kit market in 1980, decided to cease its kit assembling operation and become a reseller (Sheehan 528-29). After Sherman and Ballwin/Washington made sales presentations, Carter chose Sherman as its supplier of private label kit requirements. A former Carter employee testified that Carter chose Sherman over Ballwin/Washington mainly because Sherman quoted a significantly lower price [9% lower] (Lehman 5016). Carter was expected to complete the transition from a kit assembler to a reseller sometime in 1984 (Sheehan 536-37).

254. There is testimony in the record that Sherman was at one time threatened with parts cut-off by Ballwin/Washington (Insalaco 975-76) and that both Sherman and Carter entertained some doubt as to whether Ballwin/Washington would continue to supply Sherman

with carburetor parts needed to fill out the kit line (Lehman 5032-33). There is also testimony that at the time Sherman was buying about 20% of its carburetor parts requirements from Ballwin/Washington (Lehman 5033) and that it would take Sherman "a couple of years" to be able to offer a full line of kits on its own (Insalaco 932). The record shows that Sherman's dependence on Ballwin/Washington parts has been reduced to about 10% (Lehman 5034).

255. Ballwin/Washington became aware of Sherman's entry almost immediately (Eaton 2954). Throughout 1982 Ballwin/Washington monitored Sherman's prices. When a new price list came out in late 1982, Ballwin/Washington held down its price increases on a number of kits to remain competitive with Sherman's lower prices (Eaton 2954-56). As Sherman became more successful, Ballwin/Washington reduced prices on some kits. In August 1983 (shortly after Carter decided to buy its kits from Sherman), Ballwin/Washington lowered the prices on 19 of its fastest moving kits, ranging from 5% to 30% for each kit (Timberlake 3098-99; Lehman 5040-41).

256. From the foregoing, it appears that Sherman has made a good start towards becoming an alternative source of supply of carburetor kits to the private brand sellers and that its [56] position will become more secure as it attains greater degree of self-sufficiency with respect to carburetor parts.

257. Sherman's attempts to sell carburetor kits to program distributors have also made impressive gains. However, it has not been able to compete with the leading firms across the board mainly due to its lack of a full line and its inability to offer marketing services, such as catalogs and promotional aids, to WDs at the present time.

258. Allparts, Inc. ("Allparts") was formed in 1969 by Merton Carlson, who had founded Precision Automotive Components Company ("PACCO") and conceived what is known today as carburetor tune-up kits (Carlson 2525, 2527-28). PACCO was sold to Borg-Warner in 1966 (Carlson 2526).

259. In 1973, Allparts became a reseller of carburetor kits assembled by the Ballwin/Washington Division of Borg-Warner (Carlson 2546). For the past ten years, Allparts has sold Ballwin/Washington's line of carburetor kits under the "Auto-Mech" trade name, which was owned by Borg-Warner until the challenged transaction and is now owned by Echlin (Carlson 2602). Allparts' continued use of the "Auto-Mech" trade name is contingent on Echlin's willingness to renew its annual contract with Allparts (Carlson 2603-04).

260. Allparts has never assembled carburetor tune-up kits similar to what it has been buying from Ballwin/Washington since 1973 (Carlson 2573). Mr. Carlson testified that Allparts has never considered assembling a line of kits similar to the one it currently resells,

in part because Allparts does not have a sufficient volume of sales of the Auto-Mech kits (Carlson 2575-76). In 1980, Allparts resold approximately [\*\*\*] carburetor kits purchased from Borg-Warner (CX 464A *in camera*). These sales represented approximately 1.16% of all carburetor kits sold in the United States in 1980 (CX 530A).

261. In 1980 or 1981, Al Stefan, a former car mechanic, designed a new kit line called Easy Way (Carlson 2549, 2551). The Easy Way line has 108 kits in it (Carlson 2551). Because the line is highly consolidated, it has the same coverage as the 380-kit Auto-Mech line purchased from Ballwin/Washington (Carlson 2551).

262. The Easy Way line was originally purchased from Ballwin/Washington and Sherman (Carlson 2552-53). The Easy Way line was fully designed and consolidated by the reseller, and the assemblers merely carried out the packaging function (Carlson 2549, 2552). The first order was for 50,000 kits from each of Sherman and Ballwin/Washington (Carlson 2553).

263. After the first order, Allparts purchased the Easy Way line kits from Sherman for about one year (Carlson 2555). In late 1982, Allparts decided to assemble the line itself (Carlson [57] 2555). One of the factors which induced this decision was that Sherman increased its packaging fee (Carlson 2556).

264. The Easy Way kits are assembled in the basement and first floor of Mr. Carlson's home (Carlson 2558-59). Mr. Carlson's description of the facilities used in this packaging is indicative of the ease, low cost and short time span involved in beginning a modest kit assembling operation (Carlson 2562-63). Using rudimentary facilities, two employees earning \$4/hour are able to package 4,000 kits per week, or an annual rate of about 200,000 kits (Carlson 2562, 2564).

265. Allparts has no sales employees but relies on independent manufacturer representatives (Carlson 2564) as does Tomco. This is a satisfactory arrangement for Allparts and helps to reduce costs (Carlson 2564).

266. The market acceptance of Easy Way kits appears to have been limited. Easy Way kits contain fewer parts than standard carburetor tune-up kits (Carlson 2551). They contain fewer gaskets and small parts, no economizer or power valves, no flange gaskets, and in some instances, only a replacement rubber cup rather than an entire pump plunger assembly (Carlson 2589-90). There are only 108 Easy Way kits as compared to 350-380 kits in the standard carburetor tune-up kit line that Allparts resells (Carlson 2551). Allparts has attempted to market Easy Way kits primarily to mass merchandisers, chain stores and discount houses (Carlson 2552, 2563).

267. [\*\*\*] (CX 162Y *in camera*).

268. In 1988, [\*\*\*] a reseller of the standard line of carburetor

tune-up kits assembled by Ballwin/Washington, inquired whether Ballwin/Washington would be interested in producing kits similar to the Easy Way kits for resale by Sorensen (Eaton 2977). Mr. Eaton, Ballwin/Washington's Director of Sales and Marketing, informed Sorensen that it would not be economical for Sorensen to sell this type of kit or for Ballwin/Washington to assemble it (Eaton 2977). Mr. Eaton also testified that in his opinion, the Easy Way kit concept was not a proper marketing approach and that the traditional channel of distribution, through WDs, would not be interested in this type of kit (Eaton 2977-78).

269. In March of 1983, Mr. Merz, then President of the BWD subsidiary of Echlin, testified that BWD had no intention of marketing an Easy Way-type kit because the concept had not been successful and demand for these kits was extremely limited (CX 535Z-15 through Z-17). Mr. Merz explained that the Easy Way [58] kits were directed at mass merchandisers, rather than WDs. Mr. Carlson testified that many mass merchandisers (such as Montgomery Ward, K-Mart, Woolco, Sears and J.C. Penney) did not carry carburetor kits and that, in fact, a number of these companies had carried carburetor kits in the past but had discontinued carrying them (Carlson 2586-87).

270. Allparts began selling Easy Way kits in 1981 but its volume of sales in both 1981 and 1982 was far lower than the company's projections (Carlson 2592). Mr. Carlson agreed that the sales of Easy Way kits were "very bad, compared to what they should have been" (Carlson 2605). In fact, sales of Easy Way kits in 1982 amounted to only 40,660 kits. Allparts' most hopeful projections for sales in 1983 and 1984 were 42,000 and 44,000 kits, respectively (S. fan 2689). Thus, even assuming that total U.S. sales of carburetor kits remained steady between 1980 and 1984, Allparts' projected 1984 sales of Easy Way kits, four years after development of the Easy Way kit line began, would account for no more than one-third of 1% of all carburetor kits sold in the United States (Glassman 4498).

271. The Allparts/Easy Way experience shows that a small firm on a modest budget can design a line of kits, have another firm package it or take over the packaging function itself and become a viable business, albeit not as a full-fledged competitor.

272. Many of the witnesses who testified in this proceeding have been involved with the packaging and sale of carburetor kits since the inception of the consolidated kit in the 1950's and 1960's. The majority of these witnesses testified that entry in the carburetor kit business in the early days was simple. They also expressed their view that entry at the present time would be no more difficult, and in some ways easier, than it was 25 years ago (see RPF 974-1001). A manufacturer

of gaskets used in carburetor kits expressed a contrary opinion (Secret 1119-20).

273. Thus, the evidence shows that entry barriers to the assembly and sale of kits are very low. Although the recent entry history is somewhat mixed, the relative paucity of substantial entries does not necessarily imply high entry barriers. See *The Grand Union Co.*, Docket 9121 (July 18, 1983) at slip op. 46 [102 F.T.C. at 1063]. Rather, the record as a whole is consistent with the view that the mixed history of recent entries at the assembly level may be due to the relatively small size of the kit market (\$53 million) and the presence of some ten assemblers in the market as well as to sufficiently attractive profit opportunities enjoyed by the private brand sellers of purchased kits (see F. 152, 213; Sheehan 529-31). [59]

*D. The Evidence Does Not Show A Trend To Increasing Concentration Or Undue Reduction In The Number Of Sellers*

274. From the small number of industry members discussed in VI.A. hereinabove, and the market share table in evidence (CX 530A-C), one might conclude that the number of sellers in the kit market is small and that the challenged acquisition brought about a further reduction in the number of sellers, approaching the critical threshold of 10 to 12 (see *Areeda & Turner IV Antitrust Law*, ¶ 911a and b at 60-62).

275. However, because of the existence of some 40 to 50 resellers, the carburetor kit market has not experienced an undue reduction in the number of sellers (see RX's 292-307, 310-15, 317-30, 282).

276. In addition, the evidence fails to show a tendency towards increasing concentration. The record is bare of any direct evidence showing the direction of concentration over time one way or the other. However, it is fair to say that over the last decade, the number of carburetor kit assemblers has remained more or less constant, while the ranks of resellers (or private brand sellers) expanded. Also during the late 1970's and early 1980's, a number of firms have entered, either as assemblers or resellers. The market penetration attained by these entrants, however, appears to be rather modest.

277. The market share evidence in the record is limited to two years and does not permit an informed determination of the market-share stability issue.

*E. Competition From Imports*

278. The evidence shows that imports of carburetor kits are small and that the demand for carburetor kits for import cars are largely met by domestic kit assemblers (see F. 191, *supra*).

279. However, the evidence also shows that import cars have ac-



counted for an increasing portion of new cars in recent years and that some Japanese car manufacturers have begun to bring into this country carburetor kits to be sold through their dealer organizations and Japanese trading companies (see F. 192-93, *supra*). Therefore, it is reasonable to conclude that import competition will increase with respect to kits for import car application. [60]

*F. The Carburetor Kit Market Is Undergoing A Radical Technological Transformation*

280. A rapid technological change is another market factor relevant to the assessment of market power effects of a merger for market power may be harder to exercise or less likely to endure in the face of such a change. *FTC Guidelines* at 4-5.

281. Due to adoption and installation of the so-called TBI in the place of conventional carburetors in increasing number of new vehicles in recent years, the carburetor kit market is faced with a gradual diminution and transformation during the coming decades. Although the evidence indicates that the kit assemblers would be able to make the necessary adjustment and remain viable factors in the TBI tune-up kit business, this prospect is unsettling to kit assemblers and provides significant market dynamics (see F. 75-77, *supra*). To that extent, market power in the kit market is less likely to endure and may be harder to exercise.

VIII. EVIDENCE RELATING TO MARKET PERFORMANCE

*A. Product Innovation And Improvement*

282. The evidence shows that the record of product improvement and innovation in the carburetor kit market has been satisfactory.

283. The evidence shows that the time lag between the appearance of a new carburetor model on new vehicles and the introduction of carburetor tune-up kits for that model in the aftermarket is about 12 months (Merz 2723-24; Rivet 2824).

284. The evidence also shows a series of significant product improvements over the years, including incorporation of viton parts in the needle and seat subassembly and introduction of highly fuel resistant elastomer components in pump plungers and diaphragms (see F. 119, 136, *supra*). In recent years, a few kit assemblers have also introduced TBI tune-up products in response to incorporation of TBIs in some new vehicles.

285. The evidence also shows that the record of kit consolidation which increases distribution efficiency as well as user convenience has been rather remarkable in the assembly and sale of carburetor kits since its inception. [61]

### B. Price Competition

286. Ballwin/Washington did not publish "list prices" to WDs as such, although it published suggested jobber net prices, from which WD prices could be derived. Other assemblers published price lists which they seldom discounted (Sheehan 601-03; Tehansky 856-57). The record is silent as to price competition among the numerous private brand sellers. However, the record as a whole does not reflect vigorous price competition among competing sellers, and competition is rather waged in non-price terms, such as completeness of the kit line and various marketing aids generally provided by kit assemblers (see F. 156-73, *supra*).

287. [\*\*\*] (Nelson 1503-04; CX's 28Z-12 *in camera*, 29Y *in camera*, 30Z-9 *in camera*, 162W *in camera*).

### C. The Evidence Fails To Show Supra-Competitive Profits In The Kit Market

288. Complaint counsel assert that "profitability" in the assembly and sale of carburetor kits is "high" and "well above competitive benchmarks" (see CPF 243-65). However, the record is devoid of any empirical data directly addressing the long-run profit levels of the carburetor kit assembly market that will permit a determination of whether the relevant product market has enjoyed supra-competitive profits over time, which may be indicative of noncompetitive market performance.

289. Complaint counsel largely rely on the opinion testimony of Dr. Nelson who used CX's 543 and 544 for the purpose of reconstructing the accounting profits of a hypothetical kit assembler at the 1.5 million unit level and concluded that the profits likely to be realized by "leading firms" in the assembly and sale of carburetor kits are substantially higher than the QFR figures for "all manufacturing" for any year during the 1978-1982 period. However, Dr. Nelson's analysis of a hypothetical profit model and conclusions derived therefrom essentially lack that degree of probity which will support a finding on such a key issue as the market's long-run profit levels.

290. [\*\*\*] (e.g., Secrest 1114; Nelson 1511-12, 2303-05, 5143-46, 5286-87; CX's 162Z-4 *in camera*, 618-22 *in camera*). However, such evidence, while suggestive, is fragmentary and falls far short of what would be required for an informed determination of whether the profit levels of the kit assembly market over time have been [62] consistent with a competitive performance or the contrary is the case.

291. The record also contains testimony of some knowledgeable industry witnesses that carburetor kit assemblers

profitable venture compared to some other product lines in the aftermarket (see RPF 860-63).

*D. The Smaller Firms Are Profitable And  
Appear To Be Able To Grow*

292. The evidence shows that the smaller firms in the kit market, such as Carter, Tomco and Holley, have been profitable and able to grow (see Thompson 310, 369; Sheehan 557; Jursek 738, 777-78; CX 530). And the recent exit of Carter from kit assembly is not related to any adverse market conditions Carter faced in the kit market (Sheehan 527-31). Thus, the record is consistent with competitive performance of the kit market as a whole.

IX. THE EVIDENCE RELATING TO FACTORS OTHER THAN  
MARKET SHARES IS SUFFICIENT TO OVERCOME THE SUBSTANTIAL  
ANTICOMPETITIVE POTENTIAL OF THE ACQUISITION INFERRED  
FROM MARKET SHARE EVIDENCE

293. The anticompetitive potential of the challenged acquisition is substantial as predicted by the combined market shares of Echlin and Borg-Warner in the carburetor kit market. In such a case, other non-market share factors may be given less weight. See *FTC Guidelines* at 6.

294. In the instant case, however, the administrative law judge is persuaded that the nature and quantum of the record evidence related to market factors other than seller concentration, including low entry barriers (F. 215-73, *supra*), to factors affecting the significance of market shares (F. 207-14, *supra*) and to the radical technological change brought on by the throttle body injection system (TBI) which promises to make carburetors and carburetor kits obsolete in a decade (F. 75-77, *supra*), collectively and cumulatively, are sufficient to overcome the adverse inference based on market share evidence. Cf., *United States v. General Dynamics Corp.*, 415 U.S. 486, 501-02 (1974).

295. Of the evidence generally recited in the preceding finding, some merits particular emphasis. First, over [\*\*\*] of Borg-Warner's 1979 kit market share and almost [\*\*\*] of its 1980 share were "national account" sales to resellers, Borg-Warner's kit sales under the Borg-Warner name accounting for the remainder in both years. As for Echlin, it was the only one, among the top seven kit assemblers, which lacked any parts manufacturing [63] capability; all the others manufactured some or most of the components that made up the carburetor kits they sold. By acquiring the aftermarket divisions from Borg-Warner, Echlin, among other things, acquired that capability. In this perspective, the substantial anticompetitive potential predicted by

the combined market shares of the merging parties must be discounted accordingly.

296. The second important factor which merits particular emphasis is the condition of entry. The record is clear that entry barriers into the assembly and sale of carburetor kits are virtually nonexistent or very low.

297. The third factor which merits some emphasis is that direct competition between Borg-Warner and Echlin was not as large as the *pro forma* market shares of the merging firms may suggest. Echlin has never sold, nor tried to sell, any carburetor kits to any customer other than NAPA, a large program distributor group (F. 6-8, *supra*). While APD sold to the traditional channels of aftermarket distribution of which NAPA is a part, Ballwin/Washington did not sell directly to the WD/jobber channel but only to national accounts (which sold to the WD/jobber channel).

298. From the foregoing, it is safe to conclude that the long-term anticompetitive effect of the challenged acquisition is not likely to be substantial. With respect to short-term effects, the question is a closer one. However, the non-market share factors discussed hereinabove, including the significant restraining force emanating from rebuilt carburetors, together with ease of entry coupled with the presence of numerous potential entrants, including Ford, Chrysler, AMC and other large resellers of kits (F. 150-51, *supra*), are sufficient to check any adverse short-term effect which may be inferred from the market share evidence.

299. Accordingly, on the basis of the record as a whole, it is found that the effect of the challenged acquisition is not likely to lessen competition substantially in the assembly and sale of carburetor kits. [64]

#### DISCUSSION

This case involves the 1981 acquisition by Echlin, a manufacturer and marketer of a wide range of automotive aftermarket products, of the assets and business of Borg-Warner's five aftermarket divisions, including Automotive Parts Division ("APD") and Ballwin/Washington Division ("Ballwin/Washington"). Echlin also obtained from Borg-Warner a license to sell aftermarket products of the acquired divisions under the Borg-Warner name and a supply agreement covering certain Borg-Warner products Echlin may need for the continued operation of the acquired divisions.

The complaint challenges the acquisition because of its alleged anticompetitive effect in the carburetor kit segment of the automotive aftermarket and seeks the divestiture of the acquired divisions by

Echlin or, in the alternative, rescission of the entire transaction. The domestic sales of carburetor kits of the acquired divisions (through APD and Ballwin/Washington) amounted to about 13% of the total sales of the five aftermarket divisions acquired by Echlin from Borg-Warner.

#### A. The Product Market

A carburetor kit is a kit or package containing those carburetor components which are most subject to wear and need replacement most often, plus some gaskets and gauges and an instruction sheet. Carburetor kits are used by automotive mechanics to repair or tune-up malfunctioning automotive carburetors which do not require carburetor replacement.

The 1980 total sales of carburetor kits in the United States were about \$53 million at the wholesale level (to warehouse distributors). Ballwin/Washington, one of the acquired Borg-Warner divisions, manufactured carburetor parts and assembled and sold carburetor kits to about [\*\*\*] national account customers, which sold the kits under their own brand names to the traditional warehouse dealer/jobber distribution channel. Ballwin/Washington also sold kits to APD, its sister division serving as Borg-Warner's principal aftermarket product marketing arm. APD sold kits to the warehouse-jobber channel in competition with other national account customers of Ballwin/Washington and kit assemblers.

Echlin purchased carburetor parts and assembled and sold carburetor kits to NAPA distribution centers. Echlin's kit sales accounted for less than 2% of Echlin's total U.S. sales of aftermarket products.

The complaint defines the relevant product market as "the assembly and sale of carburetor kits" (Comp. ¶ 3). Respondents' [65] attack on the alleged product market is twofold. First, respondents argue that carburetor parts and new and rebuilt carburetors are competitive products and belong in the same product market with carburetor kits. Second, they argue that carburetor kit "assembly" is a euphemism for a packaging function which lacks any economic significance and results in excluding from the product market competitive sources of kit supply, namely, some [\*\*\*] private brand sellers of kits which do not "assemble" kits but sell purchased kits in competition with "assemblers." In my view, the evidence shows that the "assembly and sale of carburetor kits" is a valid product market in which to assess the competitive effect of the challenged acquisition.

Individually packaged carburetor parts can of course be used to tune-up a carburetor instead of using a kit containing these parts. They are functional substitutes and, in theory, they are interchangeable products. However, trade realities show that separately package

parts are not practical substitutes for kits. The evidence shows that the availability of individually packaged carburetor parts are limited and their sales are *de minimis*. This is not surprising because carburetor kits came into their own by offering a convenient package which can be used to tune-up carburetors of different makes and models. Thus, individual parts do not belong in the same product market with kits. Also, sales of carburetor parts to warehouse dealers are *de minimis* and their inclusion or exclusion will not make any significant difference to the outcome of this case.

Replacement carburetors are functional substitutes for kits in the sense that a sluggish carburetor can always be replaced with a new or rebuilt carburetor instead of tuning up the old carburetor using a kit. However, kits are designed for use in carburetor tune-ups only and cannot be used when the carburetor malfunction is due to structural damages and requires carburetor replacement. Also, to the extent that replacement carburetors can be said to be functional substitutes of carburetor kits, replacement carburetors are much more expensive than kits and do not offer an economically reasonable alternative to kits, even when labor costs to the car owner are taken into consideration.

Most importantly, the evidence shows that there is no price sensitivity between replacement carburetors and carburetor kits, although the two product groups are generally regarded as competitive products. Therefore, new and rebuilt replacement carburetors are not close-enough substitutes for kits to be included in the same product market with carburetor kits.

Finally, whether it is called "assembly" or "packaging," the economic function that an assembler performs in creating a kit out of bulk components is essentially a production function, however simple. Furthermore, to suggest that a kit assembler does no more than package selected carburetor parts into a kit is to grossly mislead. A kit assembler's roles in developing and maintaining a line of kits from year to year and in providing the [66] many important marketing services to private brand customers (resellers) and to warehouse dealer/jobber customers are economically significant. These functions collectively set an assembler apart from a mere reseller and confer upon the assembler a degree of market power to which a reseller cannot aspire.

The evidence also shows that all of the leading kit assemblers, with the notable exception of Echlin (the third-ranking firm), fabricated in-house or on contract many of the key kit components, such as afloats, valves and needle-and-seat subassembly. However, all of the leading kit producers "sourced" other parts needed to make up kits and no firm, including the OE carburetor manufacturers were

completely self-sufficient. Rather, the economic significance of backward integration in the kit market appears to be that the more self-sufficient a firm is in parts, the greater is its control over kit production and product quality. In this sense, parts production capability is an important competitive advantage for a kit assembler. In sum, parts-fabrication is not an essential firm function in the production and sale of kits but assembly is. Therefore, the "assembly and sale of carburetor kits" is an appropriate product market for the purposes of this case.

### B. Market Share And Concentration Evidence

In the measurement of market shares and market structure analysis, the administrative law judge adopted complaint counsel's methodology and included in Borg-Warner's kit sales the unit sales of both APD and Ballwin/Washington divisions.

It is true that Borg-Warner sold about [\*\*\*] of kits it assembled (at Ballwin/Washington) to private brand sellers and other kit assemblers and sold the remaining [\*\*\*] under the Borg-Warner name to the warehouse dealer/jobber channel of distribution through APD. However, it is settled that, once the product market is determined, as is the case here, it is appropriate for purposes of market share analysis to include in a firm's market share its sales to private brand sellers (or resellers). See *United States v. Black & Decker Mfg. Co.*, 430 F.Supp. 729, 737-38 (D. Md. 1976); *Beatrice Foods Co.*, 3 Trade Reg. Rep. (CCH) ¶ 22,035 at 22,624 (May 26, 1983); *Champion Spark Plug Co.*, D.9141, Initial Decision at 90 n. 10, adopted by the Commission (Final Order dated June 20, 1984) [103 F.T.C. at 623]. In the instant case, Borg-Warner's kit market share includes all kits it assembled and sold regardless of whether they are sold under the Borg-Warner label or not as long as the kits were marketed, either directly or through middlemen, to the same channels of aftermarket distribution. Borg-Warner likewise regarded its kit sales to resellers as a part of its "base market share" in the kit market. [67]

Prior to the acquisition, Borg-Warner was the top-ranking assembler and seller of carburetor kits and accounted for about 37.7% of the kit market in 1979 and 36.4% in 1980. Echlin was the third largest firm, accounting for about 10.1% in 1979 and 10.4% in 1980. As a result of the acquisition, Echlin became the top-ranking firm, with a *pro forma* 1980 share of about 46.8%.

The pre-acquisition four-firm concentration ratio of about 78.2% in 1979 increased to about 85.6% in 1980 on a *pro forma* basis. The Herfindahl-Hirschman Index ("HHI") increased from about 2,172 in 1980 to about 2,929 after the acquisition on a *pro forma* basis.

Thus, as a result of the acquisition, Echlin became by far the largest

assembler and seller of kits and the acquisition further exacerbated the already high concentration in the carburetor kit market.

### C. *The Effects Of The Acquisition*

Under established judicial and enforcement criteria, the resulting market shares of the acquisition and the degree of market concentration are so high that the acquisition will be a presumptive violation of the merger law and be prohibited unless it is shown that the market shares are not reliable indicia of the true competitive significance of the acquisition or that the market is likely to perform competitively regardless of the acquisition. See IV Areeda & Turner, *Antitrust Law* ¶¶ 909-912 at 29-68 (1980); Sullivan, *Antitrust*, Sections 204a and 204b at 613-21 (1977); *BASF Wyandotte Corp.*, 100 F.T.C. 261, 392 (Initial Decision dated May 14, 1982).

In the instant case, the administrative law judge will be guided by the 1982 *Statement of Federal Trade Commission Concerning Horizontal Mergers*, dated June 14, 1982 ("FTC Guidelines") and will also take into consideration the recently revised *Department of Justice Merger Guidelines* (June 14, 1984) ("DOJ Guidelines"). Also see Clanton, *Focusing the Inquiry: Specificity In The Merger Guidelines and Elsewhere*, 71 Calif. L. Rev. 430, 433-36 (1983); Greenfield, *Beyond Herfindahl: Non-Structural Elements of Merger Analysis*, 53 *Antitrust Law J.* 299 (1984).

The 1982 FTC Guidelines indicated the Commission's view that, while market share data remain "an important indicium of the likely competitive effects of a merger," it will employ "a more refined treatment" of such data in light of "more recent empirical economic research and well over a decade of practical experience in analyzing and evaluating horizontal mergers" and give greater consideration to non-market share evidence, the most important of which being that of entry barriers. See *FTC Guidelines* at 2-3. [68]

In the instant case, several important factors diminish the significance of market shares as a surrogate measure of the merging firms' market power. *First*, although new and rebuilt carburetors are not close-enough substitutes for carburetor kits to be included in the same market with kits, they are generally competitive products and rebuilt carburetors will have a significant restraining influence upon the market power of the resulting firm (Echlin). See Greenfield, *Beyond Herfindahl: Non-Structural Elements of Merger Analysis*, 53 *Antitrust Law J.* 299 (1984).

*Secondly*, the power of kit assemblers to control the product quality, rice or output in the kit market is limited. Although the kit sales of an assembler to private brand sellers (or resellers) were included in the assembler's sales for the purpose of market share analysis, the



evidence is clear that the resellers, [\*\*\*] are generally able to pursue substantially independent competitive strategies with respect to product quality and price in competition with kit assemblers.

*Thirdly*, and perhaps most importantly, entry barriers are virtually non-existent or very low. Although there has been only one substantial entry during the past decade, there has been other smaller entries. In any event, the paucity of new entrants do not necessarily show high entry barriers. *Grand Union Co.*, D. 9121 (July 18, 1983) at slip op. 46 [102 F.T.C. at 1063]. Rather, when viewed against the evidence showing low entry barriers, the record is consistent with the view that paucity of new entry into the assembly of kits may be due to the relatively small size of the market (1980 sales of about \$53 million) and the presence of some ten assemblers in the market, as well as to the sufficiently attractive profit opportunities enjoyed by private brand sellers of purchased kits.

In my view, these factors clearly show that there are important factors at work to limit the exercise and the duration of the market power by the leading firms in the kit market and that the market shares are not reliable indicators of the true competitive significance of the acquisition.

Furthermore, several elements in the non-market share phase of the kit market suggest that the industry has performed in a fashion consistent with competition and is likely to do so in the future.

Although the evidence does not show a vigorous price competition, a lively competition is waged in terms of product innovation and improvement as well as in a wide range of customer services. Also, there is no credible evidence to conclude that the leading firms have enjoyed supra-competitive profits in recent years. And the record shows that smaller firms, albeit small in number, are profitable and able to grow. [69]

Finally, due to recent incorporation of the throttle body injection ("TBI") system (in the place of conventional carburetors) in increasing numbers of new cars, the carburetor kit market is undergoing a radical technological change and faces a gradual decline in the next few years. In the meantime, there is reason to believe that as the number of imported cars increases so will competition from imported carburetor kits.

Therefore, it is concluded that complaint counsel have failed to show by a preponderance of credible evidence that the effect of challenged acquisition is likely to lessen competition substantially and sale of carburetor kits.

## CONCLUSIONS OF LAW

1. The Federal Trade Commission has jurisdiction over the respondents and the subject matter of this proceeding.

2. Respondent Echlin Inc. ("Echlin") is a Connecticut corporation with its headquarters in Branford, Connecticut.

3. Respondent Borg-Warner Corporation ("Borg-Warner") is a Delaware corporation with its principal office in Chicago, Illinois.

4. At all times relevant to this proceeding, respondents were engaged in commerce, or their acts and practices were in or affecting commerce, as "commerce" is defined in the Clayton Act, as amended, and in the Federal Trade Commission Act, as amended.

5. The appropriate product market within which to evaluate the competitive effects of the acquisition of Borg-Warner's automotive aftermarket assets by Echlin is the assembly and sale of carburetor kits (carburetor kit market).

6. The appropriate geographic market within which to evaluate the competitive effects of that acquisition is the United States as a whole.

7. The carburetor kit market is highly concentrated.

8. In 1980, Borg-Warner accounted for about 36.4% and Echlin, for 10.4%, of the carburetor kit market.

9. The acquisition produced a top-ranking firm with a combined 1980 share of 46.8% on a *pro forma* basis, and the anticompetitive potential of the acquisition is substantial.

10. The acquisition eliminated the direct competition between Echlin and Borg-Warner. [70]

11. The record evidence concerning various non-market share factors and market performance is sufficient to overcome the substantial anticompetitive potential of the acquisition inferred from market evidence alone. Such factors include the following, among others:

a) Substitute products, such as new and rebuilt replacement carburetors, compete with carburetor kits;

b) A large number (\*\*\*) of resellers of kits (private brand sellers purchased kits) compete with kit assemblers;

The power of kit assemblers to control competition in the kit market is significantly limited;

Entry barriers into the assembly and sale of kits are very low;

The kit market is undergoing a radical technological change;

The kit market is likely to face increasing import competition.

There is lively competition in terms of product innovation and

replacement as well as a wide range of customer services.

by the kit assemblers, although a vigorous price competition is not evident.

(h) The evidence does not show that the market is characterized by supra-competitive profit levels over time;

(i) The smaller kit assemblers are profitable and appear to be able to grow.

12. Complaint counsel have failed to establish, by a preponderance of credible evidence, that the acquisition by Echlin of Borg-Warner's automotive aftermarket assets is a violation of Section 7 of the Clayton Act or Section 5 of the Federal Trade Commission Act, as amended, as alleged in the complaint.

Accordingly, the following order will be entered. [71]

#### ORDER

*It is ordered*, That the complaint be, and the same hereby is, dismissed.

#### OPINION OF THE COMMISSION

By DOUGLAS, *Commissioner*:

The complaint in this matter alleges that respondents The Echlin Manufacturing Company and Borg-Warner Corporation have violated Section 7 of the Clayton Act, 15 U.S.C. 18 (1982), and Section 5 of the Federal Trade Commission Act, 15 U.S.C. 45 (1982).<sup>1</sup> The alleged offense is Echlin's acquisition of Borg-Warner's automotive aftermarket operations, which manufacture, assemble, and sell automotive parts that are used to replace original equipment on automobiles. This acquisition is said to have posed a likelihood of substantially lessening competition in the assembly and sale of carburetor kits.

ALJ Montgomery K. Hyun issued his initial decision on September 14, 1984. He found that the allegations of the complaint had not been proved and therefore ordered that the complaint be dismissed. Complaint counsel appeals that decision; [2] respondent Echlin also appeals and urges the Commission to "correct" several of the ALJ'

<sup>1</sup> In the remainder of this opinion, the following short forms and abbreviations will be used:

I.D.F.	- Initial Decision Finding of Fact No.
CX	- Complaint Counsel's Exhibit No.
ALJ	- The Administrative Law Judge
Echlin	- The Echlin Manufacturing Company
Borg-Warner	- Borg-Warner Corporation
Sherman	- Sherman Carburetor Company
Carter	- Carter Automotive Division of ACF Industries, Inc.
FTC Statement	- FTC Statement on Horizontal Mergers (June 14, 1982)
DOJ Guidelines	- Justice Department Merger Guidelines (June 14, 1984)

findings. No appeal was filed by or with regard to respondent Borg-Warner.

We affirm. The ALJ conducted an exhaustive analysis of the relevant product market, various quantitative measures of concentration, and a number of qualitative considerations bearing on the likelihood of anticompetitive effects caused by the acquisition. We will not address all the issues resolved in the initial decision or raised by the parties on appeal because we have determined that there are no barriers to entry into the assembly and sale of carburetor kits. In the absence of entry barriers, there can be no anticompetitive effect from the acquisition, and no violation of the antitrust laws.

This Opinion begins with a brief summary of the relevant facts. We will then outline the analytical framework within which these facts must be viewed, including the significance of barriers to entry and a description of those industry characteristics that can constitute entry barriers. Finally, we will apply that framework to the facts of this case to determine whether the assembly and sale of carburetor kits is characterized by significant barriers to entry that could permit the exercise of market power.

#### I. THE ASSEMBLY AND SALE OF CARBURETOR KITS

A carburetor kit is a collection of parts that can be used to "tune up" a defective carburetor and return it to optimal performance. It consists of those parts that are most likely to be in need of replacement. I.D.F. 58-68. A given kit may be [3] designed for only a single carburetor model, or it may contain alternative parts that enable it to be used for any one of several models. I.D.F. 127, 130-36.

The carburetor kit industry includes manufacturers of the parts that are used in the kits, assemblers of the kits themselves, and resellers who purchase kits from some assemblers. These functions, while theoretically distinct, frequently overlap in practice. The individual carburetor parts that are contained in kits are manufactured by many companies and can be obtained with relative ease. I.D.F. 121, 21; Sheehan 585; Jursek 732-36, 810-11; Thompson 2454-55; Carlson 2554-55; Bush 2863-77; Schultz 3040-45; Timberlake 3080-83; Smith 3178-82.<sup>2</sup> Most assemblers of carburetor kits manufacture at least some of the parts used in their kits; before its acquisition of Borg-Warner, Echlin was the only major exception to this rule. I.D.F. 121, 124. Nonetheless, no major assembler manufactures all the parts used in its kits. See I.D.F. 118, 175-88. Most assemblers also buy the kits from other assemblers to fill out their lines. I.D.F. 118,

<sup>2</sup> The only arguably contrary testimony was given by a witness who admittedly was never involved in the process of acquiring parts, but who nonetheless was able to identify several alternative sources for various carburetor parts. *Insalaco* 910-15, 974-88.

175-90. At the extreme end of this continuum are about forty resellers of carburetor kits, who buy all their kits from assemblers, but sell them under their own labels. I.D.F. 150-55, 195. [4]

Assembled carburetor kits are generally sold to wholesaler-distributors, who sell them to jobbers, who in turn sell them to the ultimate users, automobile mechanics. I.D.F. 142-45. Some kits are sold to automobile dealerships for use in their service facilities. I.D.F. 146-48. A very few kits are sold to the public through mass merchandisers. I.D.F. 149. In 1980 approximately 13 million carburetor kits were sold to wholesaler-distributors for about \$53 million. I.D.F. 174, 230. The parties are in agreement that the market for carburetor kits is likely to remain stable or to decline through the 1980s. See I.D.F. 77.

At the time of Echlin's acquisition of Borg-Warner, Borg-Warner was easily the nation's largest assembler of carburetor kits. Through its Ballwin/Washington Division, it manufactured carburetor parts, some of which were sold to carburetor rebuilders and other kit assemblers, and assembled carburetor kits, which were sold to resellers, to other assemblers, and through its Automotive Parts Division, to wholesaler-distributors. I.D.F. 14-23, 31-47, 175-76. Other large kit assemblers included Echlin, Standard Motor Products, Inc., General Motors Corporation (through its Rochester Division and AC-Delco marketing organization), ACF Industries, Inc. (through its Carter Automotive Division), Tomco, Inc., and Colt Industries Operating Corporation (through its Holley Replacement Parts Division). I.D.F. 1-13, 177-88. Finally, there were a few very small domestic and foreign assemblers. I.D.F. 189-93. [5]

Two former assemblers, Ford Motor Company and Carter, have stopped assembling carburetor kits and now function solely as resellers. I.D.F. 152, 253; Lingle 3511-18, 3521, 3525-26. In 1980 Ford accounted for about six percent of kit sales to wholesaler-distributors, while Carter, which had not yet ceased assembling kits, assembled about seven percent of all kits; no other reseller sold more than three percent of all kits. I.D.F. 183; CX 464 [in camera]; CX 530. About seventy percent of Borg-Warner's sales of carburetor kits were to resellers or other assemblers. I.D.F. 151, 295. Resellers of carburetor kits include Carter, Ford Motor Company, Chrysler Corporation, American Motors Corporation, Volkswagen of North America, Subaru, Wells, and divisions of TRW and Gulf & Western. Merz 2749-61; CX 464 [in camera]. Many resellers participate in the design of their line of carburetor kits. See Baumann 1013-23, 1033-36, 1041-44; Secret 1127-28; Carlson 2552-53; Merz 2724-26; Rivet 2836-39; Eaton 2946-49; Lingle 3518-21; Lehman 5016-19. Many also have established distribution systems. Nelson 1963-65. And at least some resell-

ers already possess the physical facilities needed to assemble carburetor kits. See *Baumann* 1037-39. Others who do not presently assemble kits perceive little difficulty in entering the market. I.D.F. 272; *Brown* 3387-90; *Bull* 3675-77; see *Willig* 4737-44.

The physical assembly of carburetor kits is a simple manual process. In essence, it involves placing the right carburetor parts into the right boxes. I.D.F. 78-79, 220. This can be facilitated by the use of a conveyor belt or a "lazy-Susan-like" [6] tray. I.D.F. 79-81. The ALJ visited the production facilities of one assembler and "was impressed by the simplicity of the process which appeared neither elaborate nor complex." I.D.F. 82. The capital investment required to begin assembling kits is not large, *Nelson* 2323, and consists mainly of equipment that could be used for other purposes, *Willig* 4778-85. One recent small-scale entrant started by assembling kits in his home. His out-of-pocket cost was about five hundred dollars, which paid for "a local carpenter [to] come in and put up tables, hang new lights so they could see better. I would say that plus buying shelving from a local hardware store that went out of business." Although his company's market share remains very low, he testified that it was successful. *Carlson* 2558-63.

In recent years, at least two foreign and two domestic firms have made small-scale entries into the assembly of carburetor kits for sale in the United States. The two foreign firms are Japanese automobile manufacturers; the two domestic firms began as resellers and expanded into kit assembly. I.D.F. 237-39, 258-71. The ALJ found that the small kit assemblers "are profitable and appear to be able to grow." I.D.F. 292.

In early 1981 *Sherman Carburetor Company*, a manufacturer of carburetor parts, began to consider assembling kits. *Insalaco* 920, 926-28, 965-66. *Sherman* made the decision to enter the kit market in November 1981, *Insalaco* 888, and first solicited sales the following month, *Insalaco* 929. Its first sale came in February 1982, only three months after it made the decision to enter the market. I.D.F. 246. Within two years, *Sherman* had [7] made sales to most of the resellers, although its market share continued to be small. I.D.F. 247, 252. There is no evidence that *Sherman's* relatively low level of sales resulted from anything other than its potential customers' preference for *Echlin* at prevailing prices.<sup>3</sup> When *Carter* stopped assembling kits,

<sup>3</sup> The ALJ found that *Sherman* was handicapped by its lack of a full line and its "inability" to offer marketing services, such as catalogs and promotional aids. I.D.F. 257; see I.D.F. 128, 224. The need to offer a full line only applies, if at all, to sales to wholesaler-distributors; the evidence is clear that resellers and other assemblers could, and often did, buy less than a full line. See I.D.F. 118, 128, 177-89, 247-51, 253. Moreover, the need to offer a full line is not the same as the need to assemble a full line. Like most assemblers, *Sherman* could have purchased additional kits to fill out its line. The need to offer marketing aids would also not apply to resellers, who are already in the business of marketing carburetor kits, and many of whom prepare their own catalogs. I.D.F. 245; *Baumann* 1020-21, 1036; *Stefan* 2672; *Kruse* 2926; *Castagna* 3744-46. *Sherman* was fully capable of preparing catalogs and

it chose Sherman as its supplier. Sherman was able to expand its operations to supply the additional kits to Carter. Insalaco 983-84, 987-88. It was expected that Carter would be buying all its kits from Sherman within six to nine months; the delay was designed in part to allow Carter to exhaust its existing inventories. I.D.F. 253; Sheehan 536-37; Eaton 2957; Lehman 5023-24, 5037-38. [8]

Complaint counsel maintains that Echlin, which had already acquired Borg-Warner's production facilities for carburetor parts and kits, took various actions in retaliation for Sherman's entry into kit assembling. One witness testified that Echlin threatened to cut off the supply of parts to Sherman. I.D.F. 254; Insalaco 932-34, 975-76. Another witness claimed that Echlin threatened to withhold its catalog from Carter and stated that Echlin would address its supplying of parts to Sherman at a later date. Lehman 5027-43. Nonetheless, Sherman continued to buy parts from Echlin, and Carter continued to receive catalogs. I.D.F. 254; Insalaco 966-67; Lehman 5033-36, 5042-43. Finally, when Sherman tried to attract Echlin's customers with lower prices, Echlin reduced some of its prices. I.D.F. 255.

## II. THE ANALYTICAL FRAMEWORK

### A. *The Significance of Barriers to Entry*

Section 7 of the Clayton Act prohibits acquisitions that may have the effect of substantially lessening competition or tending to create a monopoly. Because Section 7 applies to "incipient" violations, actual anticompetitive effects need not be shown; an acquisition is unlawful if such an effect is reasonably probable. *E.g., American Medical International, Inc.*, No. 9158, slip op. at 17-18 (July 2, 1984) [104 F.T.C. 1].

Traditionally, an analysis under Section 7 begins with the definition of a relevant market and measurement of the concentration in that market. *See generally* FTC Statement Sections III, VI; DOJ Guidelines Sections 2, 3.11. This approach by itself is unsatisfactory, however, because it fails to reflect many factors [9] that can determine whether a merger is likely to lessen competition substantially by enabling one or more sellers to impose higher prices than would prevail under competitive conditions. *See Grand Union Co.*, 102 F.T.C. 812, 1038-41 (1983). Therefore, the Commission also looks to other considerations that bear on the likelihood of anticompetitive effects. *See generally* FTC Statement Section III; DOJ Guidelines Sections 3.21 to 3.45. These additional considerations often do not lend them

other promotional aids if it so desired. *See* Insalaco 965; Carlson 2560-61; Stefan 2669-72; Merz 2737; Krus 2922-29. Rather, Sherman made a conscious decision to offer a short line without promotional assistance, at a low price, as a competitive gambit. *See* I.D.F. 243-44. If this strategy failed, it was only because potential buyers preferred Echlin's product, price, and mix of services to those offered by Sherman. *See* I.D.F. 225; *cf. United States v. Waste Management, Inc.*, 743 F.2d 976, 984 (2d Cir. 1984) (goodwill earned by incumbent firm is not barrier entry).

selves to precise mathematical expression, but they can be more important than quantitative measures of concentration. See *American Medical International, Inc.*, No. 9158, slip op. at 27 (July 2, 1984) [104 F.T.C. 1].

The most important of these considerations is the existence of barriers to entry. See *Grand Union Co.*, 102 F.T.C. 812, 1063 (1983); FTC Statement Section III (A)(1). On the one hand, an absolute barrier to entry, such as a governmental prohibition or an essential but unobtainable natural resource, supports the original market definition by confirming that no new supply would enter the market even if prices were increased significantly above the competitive level. On the other hand, if there are literally no barriers to entry, the original market definition loses any economic significance. An attempt to exercise market power in an industry without entry barriers would cause new competitors to enter the market. This additional supply would drive prices back to the competitive level. Indeed, the threat of new entry can be as potent a procompetitive force as its realization. As the Supreme Court has recognized, the presence [10] of potential entrants on the fringe of a market can prevent the exercise of market power by the incumbent firms even if the potential entrants never actually enter the market. See *United States v. Falstaff Brewing Corp.*, 410 U.S. 526, 533 (1973); *Ford Motor Co. v. United States*, 405 U.S. 562, 567-68 (1972); *FTC v. Procter & Gamble Co.*, 386 U.S. 568, 580-81 (1967); *United States v. Penn-Olin Chemical Co.*, 378 U.S. 158, 173-74 (1964); see also *B.A.T Industries, Ltd.*, No. 9135, slip op. at 6-7 (Dec. 17, 1984) [104 F.T.C. 1154]. Thus, in the absence of barriers to entry, incumbent firms cannot exercise market power, regardless of the concentration in the nominal "market," and indeed even if that "market" has been "monopolized" by a single firm. See *United States v. Waste Management, Inc.*, 743 F.2d 976, 981-84 (2d Cir. 1984); *Grand Union Co.*, 102 F.T.C. 812, 1063 (1983); FTC Statement Section III-(A)(1); DOJ Guidelines Section 3.3; W. Baumol, J. Panzar & R. Willig, *Contestable Markets and the Theory of Industry Structure* 12, 350 (1982); F. Scherer, *Industrial Market Structure and Economic Performance* 11 (2d ed. 1980); 2 P. Areeda & D. Turner, *Antitrust Law* ¶ 05 (1978); J. Bain, *Barriers to New Competition* 3-4 (1956); Ordovery Willig, *The 1982 Department of Justice Merger Guidelines: An Economic Assessment*, 71 Calif. L. [11] Rev. 535, 555, 563 (1983); Baumol Willig, *Fixed Costs, Sunk Costs, Entry Barriers and the Sustainability of Monopoly*, 96 Q.J. Econ. 405, 411 (1981); Landes & Posner, *Market Power in Antitrust Cases*, 94 Harv. L. Rev. 937, 950 (1980).<sup>4</sup>

<sup>4</sup>In *American Brake Shoe Co.*, 73 F.T.C. 610 (1968), the Commission stated that "the finding that entry into a market is difficult is not indispensable to the finding of illegality under § 7." *Id.* at 684. In that case, however, the Commission also noted several industry characteristics that could delay entry for several years. *Id.* at 683; see also *Products Co.*, 65 F.T.C. 1163, 1208 (1964) (explaining that ease of entry could not overcome Section 7 illegality

(footnote cont'd)



### B. *The Nature of Barriers to Entry*

This conclusion requires us to address the nature of barriers to entry. Under Section 7 of the Clayton Act, the focus must be on industry characteristics that would allow incumbent firms to reap monopoly profits for a significant period of time.

Complaint counsel suggests that entry barriers are high whenever it is unlikely that new firms will decide to enter the market. We cannot agree. Although high barriers indicate that entry is unlikely, reversing that statement goes too far. For example, entry would be most unlikely if all the incumbent firms were losing money, yet this is clearly not the kind of barrier that facilitates the extraction of monopoly profits. See 2 P. Areeda & D. Turner, *Antitrust Law* ¶ 409b (1978). The likelihood of entry may be influenced by general business conditions, the [12] potential return on alternative uses of capital, or the inherent riskiness of the industry. But although these factors may be relevant to an estimate of the competitive price level in an industry and thus to the likelihood of entry at any given time, they do not make it more or less likely that incumbent firms will be able to exceed the competitive price level and charge monopoly prices. Regardless of the exact price level that competition should dictate in an industry, which will depend in part on the factors cited above, prices above that level will create a strong inducement to potential entrants and make new entry more likely. Cf. DOJ Guidelines Section 3.3 (referring to "likelihood" of entry in response to price increase).

Respondents propose that an entry barrier be defined as additional long-run costs that must be incurred by an entrant relative to the long-run costs faced by incumbent firms. This definition is now widely accepted in the legal and economic communities. See G. Stigler, *The Organization of Industry* 67 (1968); see also Nelson 1531-32, 1654-58, 1935; Glassman 4214; Willig 4746-47; 4 E. Kintner, *Federal Antitrust Law* § 37.4 (1984); 2 P. Areeda & D. Turner, *Antitrust Law* ¶ 409a (1978); R. Posner, *Antitrust Law: An Economic Perspective* 59 (1976); Baumol & Willig, *Fixed Costs, Sunk Costs, Entry Barriers and the Sustainability of Monopoly*, 96 Q.J. Econ. 405, 408 (1981). The rationale underlying this definition is that low-cost incumbent firms can keep prices above the competitive level as long as those prices remain below the level that would provide an incentive to higher-cost potential entrants. Thus, a long-run [13] cost differential could erect

because new entry "is likely to be at best a long-term affair"), *aff'd*, 347 F.2d 745 (7th Cir. 1965). Because our understanding of barriers to entry, set forth below, encompasses significant delays encountered by entrants, it does not depart from these earlier cases. To the extent that these cases may be read as implying that a violation of Section 7 can be found in the absence even of a significant delay in entry, they are inconsistent with more recent legal and economic developments, which are reflected in the materials cited above.

a permanent barrier to new entry that would allow the maintenance of supracompetitive profits for an indefinite period of time.

This definition offers a good framework for our analysis of the likelihood that an acquisition will substantially lessen competition. If, for example, potential entrants face an absolute governmental prohibition on entry, their costs would obviously exceed the costs of the incumbent firms. On a less extreme level, an entry barrier might exist if the incumbent firms possess patents that enable them to operate with substantially lower costs than an entrant who could not duplicate the patents or achieve the same results by any other means.

It should be noted, however, that a definition of entry barriers in terms of costs can be misleading. The relevant costs are economic costs measured at the time of entry. No barrier to entry is created, for example, if inflation increases the cost of a factor of production so that entrants must pay a higher nominal price than was paid by incumbents when they acquired their productive capacity. The economic cost to incumbents is the opportunity cost of retaining a factor of production, not the original price that was paid for it. Likewise, costs must be viewed from the same temporal vantage point for all firms. For example, the act of entering a market may involve a high risk that declines sharply after the successful entry has been made. If one were to compare the risk faced by a potential entrant with the current risk confronting an incumbent firm, it would appear that the incumbent has a decided risk advantage and thus a lower [14] cost of capital. This is not a proper comparison. The incumbent firm's apparently lower costs merely reflect compensation for the risk it incurred in entering the market. The potential entrant's apparently higher costs will decline to that of the incumbent firm if its attempted entry is successful. The only meaningful way to compare the risks and costs incurred by the two firms is to apply the same yardstick to each by viewing each of them at the time of its own entry.

Unless there is a barrier to entry, as defined above, market power cannot be exercised indefinitely. Sooner or later, new firms will enter the market and drive prices back down to competitive levels. From the standpoint of the public, however, it makes a great deal of difference whether this occurs sooner or later. There may be little practical difference between an absolute barrier to entry and conditions of entry that delay the restoration of competitive prices for decades.

Therefore, we will also consider a second type of barrier to entry, which might more accurately be called an impediment to entry. An impediment to entry is any condition that necessarily delays entry into a market for a significant period of time and thus allows market power to be exercised in the interim. "To be sure, merger analysis properly focuses primarily on long-term competitive implications but

short-term effects should not be ignored, particularly if they are substantial." FTC Statement Section III(A)(1); see also 2 P. Areeda & D. Turner, *Antitrust Law* §§ 409a, 505 (1978); R. Bork, *The Antitrust Paradox* 311 (1978); R. Posner, *Antitrust Law: An Economic Perspective* 58-59 (1976); cf. DOJ Guidelines Section 3.3 (two-year test); Easterbrook, *Limits of [15] Antitrust*, 63 Texas L. Rev. 1, 32-33 (1984) (five-year test). For example, if entry into an industry is only possible by constructing a physical plant that cannot be completed in less than a decade, that industry would appear to be characterized by a high barrier to entry for purposes of our analysis under Section 7. Once again, the inquiry must focus on industry characteristics that permit incumbent firms to earn monopoly profits, not on characteristics that increase risk or decrease profitability for all firms and thus affect the competitive rate of return for the industry as a whole.

### III. THE EFFECT ON COMPETITION

As explained above, an acquisition is not likely to have substantial anticompetitive effects if the evidence shows that there are no barriers to entry, regardless of the level of concentration that is present in the relevant market. For purposes of discussion, therefore, we will assume that the ALJ was correct in adopting the relevant product market advanced by complaint counsel, which is the assembly and sale of carburetor kits.<sup>5</sup> [16]

Complaint counsel identifies four alleged market characteristics as potential barriers to entry: Sunk costs, economies of scale, recent history, and predatory practices. We reject each of these arguments and agree with the ALJ's conclusion that entry into this industry is "rather easy" and that entry barriers are "virtually nonexistent" or "very low." I.D.F. 216, 273, 296. The evidence shows that there are no barriers to entry into the assembly and sale of carburetor kits and no impediments to entry that would delay entry for a significant time. Because this finding eliminates any possibility that the acquisition may have a substantial anticompetitive effect, we affirm the ALJ initial decision dismissing the complaint.

Complaint counsel first maintains that entry into the assembly and sale of carburetor kits requires a significant investment to design line of kits, purchase equipment, build an inventory of kits and part and introduce the new line. These costs, according to complaint counsel, are sunk costs because they would be unrecovered or only partially recovered if entry were unsuccessful. The presence of sunk co

<sup>5</sup> We also assume without deciding that complaint counsel has satisfied the initial burden of offering evidence sufficient to make out a prima facie case of liability. When resolution of one issue may make it unnecessary to undertake a complex and time-consuming analysis of other issues, the Commission will often consider that first. See *International Telephone & Telegraph Corp.*, No. 9000, slip op. at 29-30 (July 25, 1984) [104 F.T.C. In this case, the absence of barriers to entry is just such an issue.

thus imposes an additional risk on a potential entrant and requires it to demand a higher-than-normal rate of return before making the investment. Because the required rate of return is an economic costs, potential entrants would face higher costs than the incumbent firms.

This argument fails for several reasons. First, as the ALJ concluded, the evidence shows that these costs are insignificant. See I.D.F. 226, 233-35. Second, we note that one [17] class of potential entrants, resellers, would not incur many of these costs because they already have kit designs, an inventory of kits, and a distribution system. Moreover, as complaint counsel concedes, an investment in equipment to facilitate the assembly of kits would not be a sunk cost because the same equipment can be used for other purposes. Third, there is some doubt whether sunk costs, standing alone, should be viewed as a barrier to entry at all. See Glassman 4240-41; Willig 4785. If sunk costs are considered an entry barrier, it must be because they create a difference in the risk confronting the incumbent firms who have already committed their resources and potential entrants who have yet to make that decision. See Nelson 1575-81; Willig 4775-78; Baumol & Willig, *Fixed Costs, Sunk Costs, Entry Barriers and the Sustainability of Monopoly*, 96 Q.J. Econ. 405, 418-19 (1981). This, however, is a false comparison, because the returns earned by the incumbent firms reflect in part the risks they faced at the time they made the decision to enter the market. In any event, the evidence indicates that a potential assembler of carburetor kits would run risks that are no higher than those faced by past entrants, who are the present incumbents. I.D.F. 272; Glassman 4240-49.

Complaint counsel next argues that economies of scale create a barrier to entry. This is especially true, complaint counsel maintains, because the market for carburetor kits is small and may decline in the future. Under this theory, a potential entrant will recognize that its entry is only feasible on a scale that would create excess capacity in the industry and thus [18] depress prices. This potential for excess capacity and falling prices increases the risk of entry and the required rate of return.

We agree with the ALJ's conclusion that there are no substantial economies of scale in this industry. See I.D.F. 227-32. In fact, all but 10 percent of the firms operating after the merger are doing so at a level that is lower than the "minimum efficient scale" urged by complaint counsel, which is ten percent of the market; several firms operate with two percent of the market or less. I.D.F. 189-92.<sup>6</sup> Thus, if the smaller firms

<sup>6</sup>Complaint counsel's expert witness testified that these companies are able to survive only because the existing price level is above the competitive level and thus creates a "price umbrella" sheltering the smaller competitors from their alleged cost disadvantage. Nelson 2242-44, 2255-56. This position was properly rejected by the ALJ and we find that there is no credible evidence that kit assemblers have earned supracompetitive profits. I.D.F. 272. Complaint counsel's argument is also inconsistent with the decisions by Ford Motor Company and Carter

(footnote omitted)

do suffer a cost disadvantage, it does not reach a level that would raise substantial competitive concerns. Moreover, a reseller intending to enter the market would have a significant head start on the necessary market share, even assuming that such a thing exists, because it could begin by assembling kits for its own use. Finally, we cannot agree that economies of scale and declining markets necessarily create barriers to entry. They may increase the risk of participating in this industry and thus the competitive rate of return required by all participants, but they [19] do not impose a risk or cost on potential entrants that was not borne equally by the incumbent firms. See 2 P. Areeda & D. Turner, *Antitrust Law* ¶ 409b (1978); R. Bork, *The Antitrust Paradox* 311 (1978); R. Posner, *Antitrust Law: An Economic Perspective* 92 (1976); G. Stigler, *The Organization of Industry* 67 (1968). But see Nelson 1581-83, 1657-60; DOJ Guidelines Section 3.3 n.21.<sup>7</sup>

Complaint counsel also looks to the historical record, which is characterized as devoid of successful entry into the market. The paucity of past entry is claimed to evidence high barriers. See FTC Statement Section III(A)(1). The absence of past entry, however, does not prove the existence of entry barriers because it is equally consistent with alternative explanations, such as a declining industry or competitive prices. I.D.F. 273; *United States v. Waste Management, Inc.*, 743 F.2d 976, 983 (2d Cir. 1984); *Grand Union Co.*, 102 F.T.C. 812, 1064 (1983); Baumol, *Contestable Markets: An Uprising in the Theory of Industry Structure*, 72 Am. Econ. Rev. 1, 14 (1982). Obviously, it would be absurd to infer the presence of entry barriers and a potential for supracompetitive profits from evidence that is equally consistent with competitive or subcompetitive profits.

In fact, the historical record refutes the allegations of barriers to entry in this industry. The critical facts do not concern the frequency of entry so much as the manner, ease, and rapidity of the entry that has occurred. Five companies have [20] entered the market in the last decade. All five companies continue to operate despite the fact that four of them have market shares that are extremely small. One company began operations with an out-of-pocket investment of only five hundred dollars. The largest recent entrant, Sherman, sold its first kit only three months after making the decision to begin assembling kits. When Carter later decided to buy its kits from Sherman instead of assembling them, Sherman was able to expand within six to nine months to meet the substantial new demand, and part of this delay was due to Carter's decision to exhaust its inventories before purchas-

to cease assembling carburetor kits. If price levels were so far above the competitive norm that even very small firms were profitable despite the allegedly high economies of scale, it is difficult to see why these two relatively large assemblers found it more profitable to buy their kits from others. See I.D.F. 152.

<sup>7</sup> In particular, the risk of excess capacity is borne by all firms, whether they entered the market recently or long ago, because any firm could lose market share in the event of excess supply or insufficient demand.

ing all its kits from Sherman.<sup>8</sup> Thus, the experience of Sherman demonstrates that if prices were ever raised above competitive levels, a future entrant could become a major assembler of carburetor kits in less than a year, even if it is assumed that Sherman's entry and expansion were delayed solely by conditions of entry. Moreover, Sherman was in no better position to enter the market, and in many ways was in a worse position, than many resellers of carburetor kits, who are poised at the edge of the market in a position to begin assembling kits on short notice with only a minor investment. We [21] conclude that nothing in this record suggests that entry barriers would allow the incumbent firms to maintain supracompetitive prices for any meaningful period of time.

Finally, complaint counsel argues that the risk of retaliatory actions by the incumbent firms against entrants is a substantial deterrent to new entry. This theory postulates that potential entrants, unlike the incumbent firms, risk arousing the wrath of the present assemblers, who can undermine an entrant's profits through below-cost pricing and other predatory devices. Recognizing this additional risk, the entrant would require expected profits that exceed the competitive level before committing itself to entry. The existence of this margin between competitive prices and prices sufficient to trigger entry would allow the incumbent firms to exercise market power.

This argument fails for two reasons. Retaliatory price-cutting and other predatory practices are unlikely to deter entry unless there is a significant barrier to entry in addition to the mere threat of retaliation. If there is not such entry barrier, the incumbent firms will never be able to raise prices above the competitive level without attracting entry, and therefore they will never be able to recoup the losses they suffered by selling their products below costs. 3 P. Areeda & D. Turner, *Antitrust Law* ¶ 711b (1978); see *International Telephone & Telegraph Corp.*, No. 9000, slip op. at 37, 43-44 (July 25, 1984) [104 F.T.C. 359]. We have found no such additional barrier, so any threat of retaliation in this industry would be unlikely to be effective and hence would not be credible. [22]

Moreover, the evidence does not reveal that retaliatory actions have taken place in the past or will take place in the future. The first alleged retaliatory act was a threatened refusal by Echlin to sell parts to Sherman after Sherman began assembling kits. The only evidence of such a threat is the hearsay testimony of an independent sales

<sup>8</sup> Complaint counsel asserts that the presence of barriers to entry is demonstrated by Sherman's low market share after two years of assembling kits. The evidence, however, reveals that Sherman's low market share was attributable to its difficulty in selling kits in competition with other assemblers, and not to any impediment that prevented it from producing kits. See n.3 *supra*. Of course, if other assemblers were charging supracompetitive prices, demand for competitively priced kits would increase, and a company like Sherman would be limited in its effect on the market only to the extent that entry barriers hindered its efforts to assemble enough kits to meet that demand.

representative of Sherman, who said that Sherman's owner told him that an unidentified person associated with Echlin threatened to stop selling parts to Sherman. No party offered testimony from anyone with first-hand knowledge of the conversation in question. Unlike a federal court, an administrative agency may receive hearsay into evidence, but hearsay is not thereby entitled to the same evidentiary force as testimony based on the first-hand knowledge of the witness. Under the circumstances of this case, we believe it is entitled to no weight at all. In fact, notwithstanding the alleged threat, Sherman did enter the market and continued to buy parts from Echlin. And even if the alleged threat had materialized, the record is clear that Sherman had access to many other potential suppliers. We cannot conclude from this record that there was a threat, that it would have been credible, or that it had or could have had any effect on competition.

The second allegation of retaliation is that an Echlin employee threatened to stop providing Carter with catalogs after Carter decided to buy its kits from Sherman and told Carter that Echlin would address its sales of parts to Sherman at a later date. Withholding a catalog is hardly a threat sufficient to deter entry, since catalogs were widely distributed and readily [23] available from other sources. Lehman 5046-47; see Fife 626; Nelson 1980; Thompson 2452. The statement regarding the supplying of parts is not even an explicit threat, and even if it were, a threat to withhold parts would not be credible because of the presence of alternative suppliers. Since Echlin continued to supply catalogs to Carter and parts to Sherman, and since Sherman was not deterred from entering the market, we will not infer the existence of a barrier to entry from this weak and ambiguous evidence.

Complaint counsel also calls attention to price cuts initiated by Echlin after Sherman entered the market with kits priced at a discount. There is no evidence that these prices were below Echlin's average variable cost or that they met any of the other criteria for predatory pricing. See generally *International Telephone & Telegraph Corp.*, No. 9000, slip op. at 17-24 (July 25, 1984)[104 F.T.C. 359]. Vigorous price competition is encouraged by the antitrust laws, and an increase in competition can be the expected and desirable result of entry by a new competitor. See W. Baumol, J. Panzar & R. Willig, *Contestable Markets and the Theory of Industry Structure* 481 (1982). A price war is evidence of competition, not the absence of competition.

Therefore, we find that there is no barrier to entry into the assembly and sale of carburetor kits. The evidence demonstrates that entry into this market is extraordinarily easy and can be quite rapid. There is thus no possibility that supracompetitive prices for carburetor kits

could be maintained and no likelihood that competition will be lessened substantially by the acquisition. [24]

#### IV. CONCLUSION

Because we conclude that Echlin's acquisition of Borg-Warner's automotive aftermarket division does not violate Section 7 of the Clayton Act or Section 5 of the Federal Trade Commission Act, we affirm the decision of the ALJ dismissing the complaint in all respects.

#### DISSENTING OPINION OF COMMISSIONER PATRICIA P. BAILEY

This is a merger between competing firms with 36% and 10% of a small and declining market so highly concentrated that six firms account for 95% of sales. The Herfindahl-Hirschman index as a result of this acquisition rises by over 750 points to just under 3000. These figures would suggest that this market is susceptible to collusion. There are few sellers in the market for assembly and sale of carburetor kits, and their market shares have remained stable over the past 15 years. There are large numbers of buyers most of which make relatively small purchases, limiting the ability of buyers to disrupt collusion. Because of the similarity of these buyers' businesses in reselling what are fairly standardized, noncustomized products, there are relatively few issues over which sellers need collude. Substitute products (new and rebuilt carburetors) are considerably more expensive, and demand is alleged to be inelastic, since car repairs create necessity. Industry members use price lists, which facilitates price policing, and discounts off these lists are uncommon. There has been relatively little price competition, according to the ALJ, although he found that non-price competition did exist. There is evidence that the largest respondent exercised price leadership. The question of supracompetitive profits is disputed (the ALJ considered the evidence "fragmentary" and the Commission rejects it without discussion), but industry leaders testified that their operations were profitable. [2]

Under the 1984 Justice Department Merger Guidelines—the most recent government pronouncement on merger analysis—a merger that looks like this one is so likely to be anticompetitive and therefore unlawful that only the "extraordinary" case will avoid legal sanction. The Commission has dismissed this case on the sole ground that it finds no barriers to entry into the market, holding that this conclusion renders the otherwise strong structural case for illegality irrelevant.<sup>1</sup>

<sup>1</sup> In fact, acknowledgment of complaint counsel's prima facie case is relegated to a footnote in the majority



I have three primary concerns about the Commission's decision and its implications for future FTC merger policy. First, I believe the Commission has embraced a particularly narrow definition of barriers to entry that may be ill-suited to merger analysis, and which is, moreover, a source of much dispute among industrial economists. Second, I disagree with the conclusion drawn by the Commission, that entry into this market is "extraordinarily easy and can be quite rapid." Finally, as a matter of legal policy, I am concerned over the Commission's single-minded focus on the hotly disputed barriers to entry issue as dispositive of legal liability in a horizontal merger case where the prima facie case for antitrust concern about collusion is as strong as it is here. [3]

### I.

Barriers to entry are clearly of increasing importance to antitrust analysis. From a conceptual point of view, this is not hard to understand. Former Director of the FTC's Bureau of Economics, F. M. Scherer, has stated that "significant entry barriers are the *sine qua non* of monopoly and oligopoly, for . . . sellers have little or no enduring power over price when entry barriers are nonexistent."<sup>2</sup> The Commission has recognized the role of barriers as a supplement to consideration of quantitative factors such as market shares and concentration. "The issue of entry barriers is perhaps the most important qualitative factor, for if entry barriers are very low it is unlikely that market power, whether individually or collectively exercised, will persist for long."<sup>3</sup> The Department of Justice has gone even further in stating, "If entry into a market is so easy that existing competitors could not succeed in raising price for any significant period of time, the Department is unlikely to challenge mergers in that market."<sup>4</sup> Two recent federal court decisions have hoisted the Justice Department on its own petard [4] by denying government merger challenges on the basis of low barriers to entry.<sup>5</sup>

But to say that barriers to entry are important in antitrust thinking does not lead me to the necessary conclusion that barriers analysis has yet reached the point where it should resolve antitrust disputes as easily as it is being used to do in this and in possible future cases.<sup>6</sup> For one, there is such lack of clear consensus about the nature or

<sup>2</sup> Scherer, *Industrial Market Structure and Economic Performance* 11 (2d ed. 1980).

<sup>3</sup> Statement of Federal Trade Commission Concerning Horizontal Mergers, Section III A(1), p. 5 (1982) (hereafter, "FTC Merger Statement").

<sup>4</sup> U.S. Department of Justice Merger Guidelines, Section 3.3 (1984) (hereafter, "DOJ Merger Guides").

<sup>5</sup> *U.S. v. Waste Management, Inc.*, 743 F. 2d 976 (2d Cir. 1984); *U.S. v. Calmar*, 1985-1 Trade Cas. (CCH) ¶66,588 (D.N.J. 1985).

<sup>6</sup> No matter how appropriate it may be to take entry barriers into account in determining whether or not it is worthwhile to bring divestiture actions against dominant firms in concentrated industries, the case for mode-

(footnote cont'd)

effect of barriers to entry<sup>7</sup> that some suggest this issue is elusive, and can confound the resolution of complex antitrust questions.<sup>8</sup> One scholar has observed that barriers to entry is "the single most misunderstood topic in the analysis of competition and monopoly," exceeding [5] even the issue of market definition in this regard.<sup>9</sup>

The majority cements its agreement with respondent's definition of entry barriers ("additional long run costs that may be incurred by an entrant relative to the long-run costs faced by incumbent firms"), by a citation to Professor George Stigler, among others. The majority declares this position is "now widely accepted in the legal and economic communities." Stigler's formulation (1968) defines barriers to entry "as a cost of producing (at some or every rate of output) which must be borne by a firm which seeks to enter an industry but is not borne by firms already in the industry."<sup>10</sup> This view, as carried forward in the majority's analysis, is that entry barriers block new competition from the market; access to the market is closed to outsiders on account of the barrier. Examples of such barriers given by the majority are governmental entry restrictions and patents. Other examples might be control of scarce resources, such as essential raw materials, or unique management or labor resources. Conversely, under a "Stiglerian" approach, if some factor simply imposes risks and costs on new entrants resulting in possible delay or deferral of entry, that factor is not really a barrier to entry, because access to the market imposes or has already imposed the same costs or risks on all firms, at one time or another. All firms have equal access to the market, even [6] given the need to undertake certain prescribed steps to accomplish entry.

Perhaps at the other end of the scale from Stigler's view is the "neo-classical" view of Joe S. Bain (1956), which would measure the prospect of entry by the "extent to which, in the long run, established firms can elevate their selling prices above the minimal average costs of production and distribution (those costs associated with operation at optimal scales) without inducing potential entrants to enter the industry."<sup>11</sup> The condition of entry is thus defined "as the 'disadvantage' of potential entrant firms as compared to established firms or

rating presumptive merger rules where entry barriers are low is much more tenuous. IV Areeda and Turner, *Antitrust Law* §917(b) at 86 (1980).

<sup>7</sup> Demsetz, "Barriers to Entry" 72 *Am. Econ. Rev.* 47 (1982).

<sup>8</sup> "Determining the existence, 'height,' and effects of entry barriers is beset with some theoretical difficulties and with empirical problems of seemingly formidable proportions." IV Areeda and Turner, *supra*, §917(b) at 87. See also: Rowe, "The Decline of Antitrust and the Delusions of Models: The Faustian Pact of Law and Economics," 72 *Geo. L. J.* 1511 (1984). (Barriers to entry an "elusive" concept.) "Wherever the market, some enterprising rivals, unless kept out by legal fiat, can in time climb in. So, barriers to entry stand only as high as time waxes long and rivals grow tall." *Id.* at 1543.

<sup>9</sup> Fisher, "Diagnosing Monopoly," *Q. Rev. Econ. & Bus.* 23 (Summer, 1979).

<sup>10</sup> Stigler, *The Organization of Industry* 67 (1968).

<sup>11</sup> Bain, *Dynamic Theory of Economic Growth* 100 (1956).

conversely, the 'advantage' of established over potential entrant firms."<sup>12</sup> In essence, an entry barrier is whatever allows incumbent firms to charge supra-competitive prices yet not attract new entry. The Bain view, while subject to almost thirty years of criticism by its opponents and revisionism by its friends, remains an alternative approach which provides a different perspective on entry questions.

The Commission distinguishes between "absolute" barriers to entry—which are barriers touched by the Commission's Stiglerian Philosopher's Stone—and mere "impediments" to entry, evidence of which are taken up by the record in this case. (Some of these resemble Bain's barriers to entry sent to the back of the classroom). The Commission finds no absolute [7] barriers to entry in this case at all, but it insists on an extended treatment of the subject, perhaps to accomplish the result of fixing in the caselaw its particular entry barrier definition. As to entry-delaying "impediments," the Commission rules that none of these would permit any exercise of market power by incumbent firms because of the ease with which the impediments could be kicked aside.

The Commission, then, in this opinion embraces the current "Chicago School" economic "State Religion" approach to barriers to entry, a view which simply is *not* generally "accepted"<sup>13</sup> in the legal and economic communities." In both communities, though this view has gained some ground recently in a few cases,<sup>14</sup> the battle rages fiercely, and is as empirically unresolved as ever.<sup>15</sup> [8]

## II.

But is this point important, or do I belabor an all-too technical issue? It seems to me the point is important if barriers to entry, particularly defined, become the easy way to resolve complex antitrust cases. Section 7 of the Clayton Act makes illegal mergers that have the probability of substantially lessening competition. The statute does not add the word "forever". A merger can lessen competition and therefore violate the statute, in my view, if market conditions, structural features, or behavioral patterns make entry an unattractive investment risk for a significant period of time. If such a situation exists so as to permit supracompetitive pricing within an industry

<sup>12</sup> *Id.*

<sup>13</sup> The Commission uses the term "widely accepted." Alas, that may be so, depending however on the circuit which one travels.

<sup>14</sup> Those cases include the Commission's decision in *General Foods Corp.*, 103 F.T.C. 204, 354 n. 54 (1984). I expressly disassociated myself from the Commission's notational embrace of this Stiglerian view. (103 F.T.C. 372).

<sup>15</sup> See for example, Demsetz, *supra.*; Waterson, "On the Definition and Meaning of Barriers to Entry," *Antitrust Bulletin* 521 (1981), and Wentz, "Mobility Factors in Antitrust Cases: Assessing Market Power of Conditions Affecting Entry and Fringe Expansion," 80 Mich. L. Rev. 1545 (1982).

yet prevent for a substantial period new entry or the expansion of marginal fringe competitors, then it is possible that a barrier to entry exists. The defect in the Stiglerian alternative is that it does not account for the time, scale and cost necessary for a successful entry that is a meaningful threat to incumbent firms.

This situation, as I understand it, is essentially what complaint counsel is arguing. They do not claim that there are any of Stigler's barriers to entry into this market, but rather they assert that entry is unlikely due to the fundamental unattractiveness of the market. New entrants are deterred from making investments in entry because they cannot expect to make acceptable profits. At the very minimum, the argument seems to be, entry would be delayed for a significant period of time [9] during which there would be injury to competition, constituting a violation of Section 7.

The majority admits complaint counsel's pragmatic point about conditions that delay or impede entry. The Commission states: "There may be little practical difference between an absolute barrier to entry and conditions of entry that delay the restoration of competitive prices for decades." Delayed entry "for decades" fits an almost-Stiglerian scenario of an industry where potential entrants must await the expiration of patents or overcome similar dramatic entry problems. However, decade-long delays should not be and are not, the only circumstance of concern under the antitrust law.<sup>16</sup> Most temporal easures of new entry speak of difficulty of entry in terms of two to five years.

In the end, the majority concludes that where entry is not blocked (its analysis), it is easy and can also be rapid—with citation to the entry over the past ten years of about five firms at the fringe of the market. The majority assumes that any of these firms could expand operations virtually at will. [10]

Complaint counsel buttress their statistical case by descriptions of market conditions that permit the exercise of market power without resulting in the expansion of fringe entrants or the entry of new competitors. They view the market as conducive to collusion and highly profitable, but shielded by barriers that deter entry at a significant scale.

The murky issue of profits cannot be finally resolved on this record. Complaint counsel argue that this market enjoys supracompetitive profits and therefore is attractive to entrants, neither the ALJ nor the Commission accepted this analysis.<sup>17</sup> The Commission consid-

<sup>16</sup>Merger Statement Section III(A)(1) (1982). ("To be sure, merger analysis properly focuses primarily on competitive implications, but short term effects should not be ignored, particularly if they are substan-

<sup>17</sup>Administrative law judge found that the evidence on profitability was fragmentary and hypothetical, since no long run profitability data on carburetor kits was available for individual firms. In addition to testimony

ers it possible that the [11] industry may be unattractive to entrants because prices are competitive or simply because the market is declining.<sup>18</sup> It is noteworthy that the ALJ, while finding some non-price competition, concluded that "the record as a whole does not reflect vigorous price competition."<sup>19</sup> And, if the declining market simply does not interest outsiders in and of itself, there would seem to be at least modest room for collusion, which this merger might facilitate.

Accepting for the moment that the market is at least somewhat attractive for entry from the initial profitability assessment standpoint, there are alleged to be four factors that complaint counsel say mitigate against entry, but which the Commission rejects even as "impediments."

First, complaint counsel assert there are sunk costs associated with entry that cannot be recovered if a firm decides to exit the market. These sunk costs are not large in terms of dollars, but they are large relative to the expected return in this small (\$53 million) and declining market, thereby increasing [12] the risk and decreasing the likelihood of entry given alternative investment opportunities.

Second, complaint counsel contend that entry is deterred by the need to achieve an economy of scale that is quite high. Like the arguments surrounding supracompetitive profits in this record, arguments about economies of scale are a subject of bitter dispute. Complaint counsel's expert witness, using exhibits prepared by respondents, estimated that about 10% of the market represented minimum efficient scale.<sup>20</sup> The ALJ rejected the 10% calculation; he

by witnesses for four of the leading members of this industry that their companies were profitable, and planning documents of respondent stating its operations are profitable, complaint counsel made use of two *in camera* exhibits prepared by respondents' employees and economic expert. These exhibits are based on data from Echlin's own books and records, originally prepared to establish an economic model of relative costs of production at three different hypothetical levels of output. Complaint counsel, over the vigorous objection of respondents, asserted that this model enabled complaint counsel to establish the profitability of a firm that operated at about 10% of the market, or sales of 1.5 million kits. Comparing these data with 1978-1982 Census Bureau Quarterly Financial Reports (QFR) five-year averages for 1) return on assets for all manufacturing, 2) average return on stockholder equity, and even 3) return on assets for wholesaling, complaint counsel argues that all of these QFR "benchmark" are very substantially exceeded by the profit data derived from respondents' economic exhibits. The degree which these calculated "profits" exceeded the benchmarks (50%) was well above the level agreed by both sides economic experts to indicate supracompetitive profitability. (Complaint counsel's profit calculations yielded "counting" rates of return. Such accounting profits are potentially unreliable because they do not take into account certain of a firm's costs; however, complaint counsel explain that in this industry, accounting rates of return closely approximate economic rates of return, considered more reliable evidence of profitability by some economists' addition, although inferences to be drawn are limited, there is evidence that respondent was able to retaliate against one new market entrant by offering discounts on selected kits ranging from 5-30%. The Commission expressly rules that these sales were not below variable cost. There is the suggestion that respondents' usual prices are normally above a competitive level.

<sup>18</sup> I should note here that the DOJ guides and caselaw do not provide for *per se* legality for mergers in declining industries.

<sup>19</sup> I.D.F. 286, p. 61.

<sup>20</sup> To assess the level of scale economies, complaint counsel again relied on CX 543 and 544, an analysis market at three hypothetical levels of output, prepared by respondent's employees from respondents' book records. These *in camera* exhibits explain certain characteristics of three different sized firms—a firm produces 1.5 million carburetor kits annually, representing just over 10% of the market, a firm producing 150,000 kits annually or about 2% of the market, and a firm with about 1% of the market, or about 100,000 kits. The exhibits showed, according to complaint counsel, substantially different unit costs associated with each size of output

(footnote)

agreed that there were some scale economies in this industry but considered them insignificant. However, if new entrants were faced with economies of scale of 10%, achievement of this reduction of unit costs would give a decided cost advantage to the larger incumbent firms, and saddle [13] entrants with a major competitive burden to attain these same advantages without prospect of doing so simply from capture of any market growth. Incumbent firms capable of output at these scales could also deliberately flood the market to deter entry with lower prices. Because potential entrants perceive this to be the case, the need to achieve scale economies deters entry.

Third and fourth, complaint counsel also argue that the recent record of new entrants is especially poor in this industry, and that the record shows at least one case of targeted market retaliation by the market leader against a new firm.

Areeda and Turner endorse a shorthand test for barriers to entry by assessing the historical record of entry over the past few years in the market.<sup>21</sup> The 1984 DOJ Guidelines propose a two-year period in which to assess new entry in response to a "small but significant non-transitory increase in price" (about 5% lasting one year).<sup>22</sup> The 1982 FTC statement emphasizes the importance of the historical record on entry.<sup>23</sup> So does the body of traditional caselaw. I believe that judging the historical record on entry has always been, and remains today, the simplest and most practical way to deal with most barrier to entry analysis situations. [14]

While these historical tests emphasize the importance of the traditional study of the simple record of entry, they also emphasize the importance of the size and scope of such entry. The 1984 DOJ Guides would take into account the "magnitude" of entry.<sup>24</sup> The 1982 FTC statement declares: "Evidence of *substantial* expansion by firms already in an industry, especially non-dominant firms, may persuasively indicate that barriers to larger scale are not high. Conversely, evidence of frequent entry by fringe firms on a small scale *without significant expansion*, may also suggest the existence of barriers to larger scale".<sup>25</sup> (Emphasis added).

The record in this case shows that over more than a decade only

<sup>21</sup> The "firm" the more decided the cost advantage. There is additional evidence that this upper range of output proximate the optimum in the business expansion plans of another competitor (Holley), allowing it the cost of automated packaging. Respondent is scornful of the economies of scale argument on methodological grounds, on the grounds that the numbers are purely hypothetical, on the fact that only two of the six market segments would meet the 10% criteria (although the smaller firms have the existing capability to expand on to 10%, according to complaint counsel's industry expert), and on the fact that the numerous smaller appear to be profitable.

<sup>22</sup> Areeda and Turner, *supra*, ¶917c, at 88 (1980).

<sup>23</sup> Merger Guides, Section 3.3 (1984).

<sup>24</sup> Merger Statement Section III A(1) (1982).

<sup>25</sup> Merger Guides Section 3.3 (1984).

Merger Statement Section III A(1) (1982).

fringe competitors have entered and only to the extent of a total combined market share of about 2%. Moreover, expansion or increased profitability has not occurred over a ten year period for some of these firms, and three years or more for others. The majority conclusion that expansion is "easy and rapid," is not supported by the historical record.<sup>26</sup>

There are serious questions in my mind that these struggling fringe competitors represent any disciplining threat on the prices of the market leaders, and unless they do, their entry is not "significant," quite apart from the question of their size. [15] The ALJ acknowledged only one firm, Sherman, to be a "significant" competitive entry. The record shows that Sherman's 1981 efforts at assembly and sale of a line of 120 kits at low prices continued for two years with little success. Sherman's survival, with about one-third of one percent of the market may be owed mostly to an agreement to supply kits to another firm for resale, after that firm (Carter) gave up on the assembly and sale of kits on its own (for corporate reasons apparently not related to the kit market). Sherman obtained this account in 1983 by underbidding Borg-Warner's carburetor kits subsidiary. About the time that the Carter/Sherman agreement was implemented, respondent targeted Sherman with special and unusual discounts on 19 lines of fast-moving kits. The Commission's observation about the targeted response to Sherman's entry and Sherman's capture of the lifesaving Carter business after two years of struggle, is that "A price war is evidence of competition, not the absence of competition." That is, Sherman's presence tempered the market leader's prices overall. This is simply not consistent with the selectivity of the response, or the fact that two years passed before it even began. A prospective entrant might take the following view: that a recent entrant, Sherman, was targeted for selective price cuts by a leading firm that almost certainly possessed a cost advantage in calculating the degree of its retaliatory discounting (5-30% off list price, according to the record).<sup>27</sup> How might such a prospect affect the next firm's [16] decision to enter the market? To me, this is a relevant question bearing on the likelihood of any further new entry, even at the margin. Of course, it can be said that Borg-Warner's superior efficiency (scale economies) is technically available to all. But, even taking this into account, is the risk worth taking in terms of anticipated post-entry return?

The most obvious pool of potential new entrants are the numerous firms that are private label resellers of kits assembled by the firms that populate the assembly market. Some of these were form

<sup>26</sup> In contrast, in the recent *Calmer* case, the judge found numerous entrants, some of which had attained substantial market shares. *U.S. v. Calmer*, *supra*, at 65, 927-28 (D.N.J. 1985).

<sup>27</sup> The fact that the Commission found none of these retaliatory discounts to be predatory suggests that predatory pricing is higher than in a competitive environment.

ly assemblers, and all possess some access to distribution systems and the advantage of some name recognition and familiarity with customers. However, the same factors that operate to discourage new entrants, or expansion by fringe entrants, operate to deter resellers, particularly since resellers may be even more knowledgeable and alert than others about the dismal record of entry in this market. Most kit resellers handle small percentages of kit resales, and all but one (Ford) have 3% of such resales or less. Therefore, even firms with established distribution will be forced to capture "changeover" customers if they are to achieve scale economies. But the most significant factor about potential reseller entry is that no reseller has ever successfully entered into kit assembly. The market is clearly unattractive to the new entrants best poised to make the effort, and some factor must account for this fact. [17]

In these circumstances one could predict that further entry is likely to be judged very risky indeed, and given the unlikelihood of any market growth, doomed. With such a poor record on *significant* new entry, the presumption of market power that attends high market shares, high concentration and Herfindahl levels should remain standing, somewhat battered to be sure, but unbowed. If expansion is not occurring, the Commission opines, it simply must be attributable to some factor other than incumbent firms' market power—power normally inferred from the enormous "numbers" in complaint counsel's prima facie case. To suggest that the failure to expand can be based on the invisible evidence of some invisible hand is such a special conclusion that it is less credible to me than the anticompetitive inferences to be drawn from the traditional market tests so recently confirmed in the 1982 FTC and 1982 and 1984 Justice Department merger frameworks. There are no additional arguments to add to this balance, since there are no credible arguments that this merger enhances efficiency, or that it is likely to promote competition in some other fashion.<sup>28</sup>

In summary, the likelihood of any firm entering this market does not depend simply on the existence or absence of Stigler's [18] entry barriers. The presence of supracompetitive prices may normally be an inducement to entry, but, depending on the record on entry, it may also suggest the historical lesson that entry is risky, and therefore deterred.<sup>29</sup> A firm's decision to take the investment risk depends on

<sup>28</sup> A claim that social costs of a merger would be small is a much weaker defense than a claim, as in an economies defense, that a merger would yield social gains. The social interest in attempting to isolate and immunize the former is plainly less than the social interest in protecting the latter. It may be sensible to absolve the low-loss cases, but whether it is or not depends heavily on the facility with which they can be identified. IV Areeda and Turner, *supra*, §917b at 87.

<sup>29</sup> tonebreaker, "Corporate Profits and the Risk of Entry," 58 Rev. of Econ. and Stats. 33, 39 (1976). (High profit associated with high risks of entry, deter entry, and enable established firms to earn supranormal profits. d of small firms at the edge of the market an important factor in assessing risk).



its anticipated post-entry rate of return. Initially, a small market that is stable or declining and promises no new growth for an entrant to capture may not be attractive for entry.<sup>30</sup> It might, however, be the sort of market conducive to collusion. Unrecoverable sunk costs are not lightly to be regarded when the ten-year record of entry shows five firms holding two percent, and two of the three largest firms recently merged into a single firm with almost half the market. The few incumbent firms may have the scale economy advantage of lower unit costs, which may permit selective retaliatory pricing that is not, strictly speaking, predatory, but is, generally speaking, entry deterring. And, if there is excess capacity, as there is alleged to be in the two or three incumbent firms that operate at 5-7% of the market, expansion of product "runs" on individual lines of kits could deter entry by easily increasing supply and flooding the market with cheaper [19] kits.<sup>31</sup> Finally, assessing once again the historical record of entry, the potential entrant/expander may well be aware that it faces no Stiglerian barriers, and no necessarily enormous capital investment costs in getting a toehold in the market, yet it may anticipate a post entry rate of return that does not justify the effort, given other investment alternatives.<sup>32</sup>

### III.

Unlike the majority I regard this as a close case, and, on balance, I come out the other way. The major weaknesses arguing against this outcome are the absence of stronger evidence as to supracompetitive profits of incumbent firms, and on economies of scale that may operate to create cost disadvantages. But it is precisely because of the typical—perhaps inherent—[20]difficulty and potential ambiguity of such evidence in merger cases that the history of merger law shows a struggle to find simplifying assumptions that can proxy for economic proof positive. Examples of these assumptions to which I am willing to give credence, based on my reading of the law, the 1982 and 1984 DOJ Guides, and the 1982 FTC Statement on Horizontal Mergers, are that high market shares and Herfindahls indicate the prospect for

<sup>30</sup> DOJ Merger Guides, Section 3.3 n. 21 (1984); Webbink, Entry, Price-Cost Margins and Barriers to Entry in 280 4-Digit Industries, 1967-1972, Federal Trade Commission Bureau of Economics Working Paper No. 19, 5, 14 (1979).

<sup>31</sup> Spence, "Entry, Capacity, Investment and Oligopolistic Pricing," 8 Bell J. Econ. 534 (1978); Dixit, "A Model of Duopoly Suggesting a Theory of Entry Barriers," 10 Bell J. Econ. 20, 21 (1979) ("The threat of a large enough post-entry output will make entry seem unprofitable, and then it need never be implemented"); Wenders, "Excess Capacity as a Barrier to Entry," 20 J. of Ind. Econ. 14 (1971).

<sup>32</sup> The entrant should ignore preentry price and profit levels, but attempt to infer the postentry equilibrium price and profit levels. If the entrant's expected profits are negative, he is deterred; the no-entry profits accrue to the already established firm rather than the equally efficient entrant. Even a more efficient entrant may be deterred by an established firm who has sunk sufficient costs to make his own exit uneconomical, and hence, entry mutually destructive. Salop, "Strategic Entry Deterrence," 69 Am. Econ. Rev. 335 (1979).

collusion and that a long record of failed or marginal entry raises and inference of high entry barriers.

The sun has probably set on the rule of presumptive illegality in horizontal merger cases, such as outlined in *U.S. v. Philadelphia National Bank*, 374 U.S. 321, 364-66 (1963).<sup>33</sup> Yet have we not gone all the way in the other direction if we say that the *only* relevant question is whether particularly defined barriers to entry are high or low, irrespective of the traditional indicia of antitrust concerns about enhanced potential for collusion? I seriously question, based on the facts of this case, whether any true advance in our knowledge of how this market really works is promoted by a rigid economic theory of "absolute" barriers to entry, or a notion of "delayed" entry in terms of decades. Certainly such an economic theory is outcome determinative, just as was the old rule of presumptive [21] illegality. The analysis contained in this opinion of the Commission denies us the latitude to consider whether market structure, performance or conduct in a given case leads rational potential entrants to walk away, on the basis of their assessment of risks they face and the sorry record of the firms the Commission here would call "new entrants." One wonders why the FTC and the Department of Justice have spilled so much ink over how to analyze mergers, if it is all as easy as this. The clear implication of the writing and then rewriting of the DOJ Guides was that merger analysis was complicated stuff, and that fair enforcers should take into account relatively sophisticated analysis of all aspects of the market. I suggest that the majority has turned the old Section 7 "numbers" game on its head in favor of a "quick look" approach for Stigler's barriers to entry, the new *primus inter pares* of merger law. One result of such an approach would be to sanction any and all mergers in this market, right up to the point where a pure monopoly results. If there are no barriers to entry, after all, what would be wrong with that?<sup>34</sup> The entry barriers "quick look" test leads to a rule of *per se* legality for many mergers.

It is, of course, always possible that the distinguished and expert majority is dead right with their election of the economic theory to drive the result in this case. But my own brief [22] assessment of the literature on this issue shows it long on words and short on empirical findings. There is no surfeit of discussions of the issues, but no agreement on them, either.

What is emerging in Commission merger decisions is by and large

<sup>33</sup> However, Judge Winter in *Waste Management* observed that the Supreme Court has never expressly stated that ease of entry is one of the circumstances that fits the Court's approving assessment of market conditions to supplement the statistical market share and concentration data of the prima facie case, such as occurred in *U.S. v. General Dynamics Corp.*, 415 U.S. 486 (1974). 743 F. 2d at 982 (1984).

<sup>34</sup> Or, as the Commission opinion puts it, "In the absence of barriers to entry, incumbent firms cannot exercise market power, regardless of the concentration in the nominal 'market,' and even if that 'market' has been

the rule that, according to the "new" economic learning, a merger is almost always legal. The Commission has charted a new course away from the great body of the traditional caselaw, and indeed abandoned the assumptions that have attended merger enforcement policy of both old and recent vintage, substituting a well-nigh theological—and surely theoretical—economic *deus ex machina*.

#### FINAL ORDER

This matter has been heard by the Commission upon the appeals of complaint counsel and respondent The Echlin Manufacturing Company from the initial decision and upon briefs and oral argument in support of and in opposition to the appeals. For the reasons stated in the accompanying Opinion, the Commission has determined to affirm the initial decision. Accordingly,

*It is ordered,* That the complaint is dismissed.  
Commissioner Bailey dissented.