

LONG RANGE TRUCK PLANS

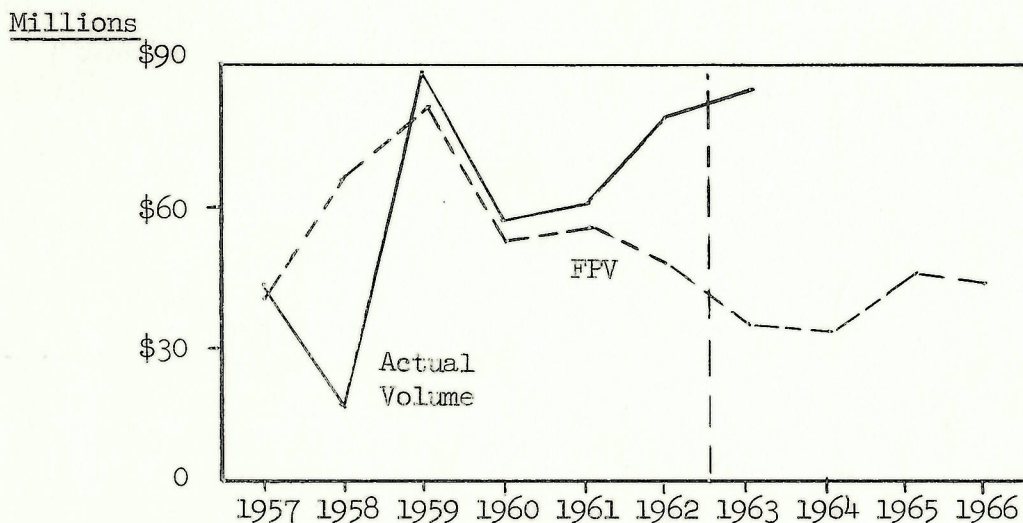
The purpose of this paper is to discuss possible acceleration of the next all-new cab and sheetmetal cycle from 1970 to 1967 and changes in 1966 program direction as a result of cycle acceleration.

Introduction

In the Division's truck forward planning cycle, there are no current plans for an all-new truck until 1970. As a result, the Division has not yet formulated a complete plan in the engineering and styling areas for the development of an all-new truck. In light of the possibility of competitive action from Chevrolet in the 1965-70 period (Chevrolet's last all-new truck was in 1960) and in view of the Division's declining share of the light truck market (excluding Econoline), we believe it prudent to undertake immediately plans to develop various concepts for an all-new truck as soon as possible. It is our objective to develop sufficient engineering and styling concepts translated into feasibility vehicles so that the Division can be in a position to bring out an all-new truck as early as 1967. It is also our objective to style and develop advanced engineering plans, including feasibility vehicles, for new concept vehicles for specialty markets.

Truck Profits

Company profits at FPV and actual volume are shown in the chart below:



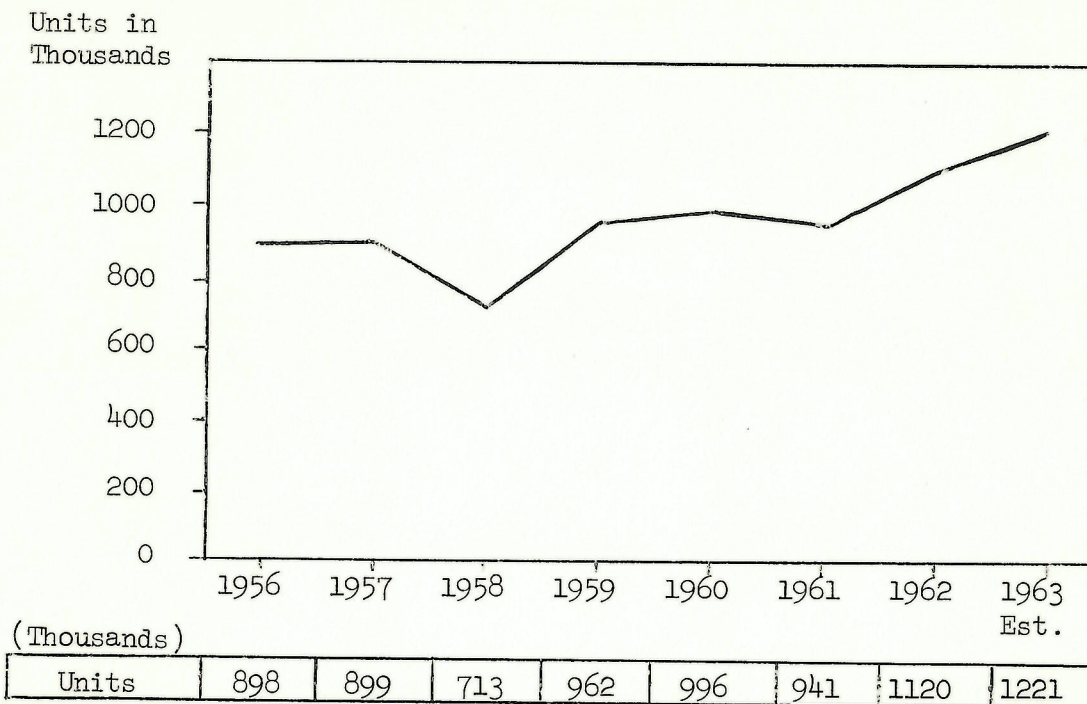
Calendar Year Profits \$(millions) at

FPV	38.8	63.7	79.9	51.8	53.7	45.3	36.9	32.4	43.9	42.7
Actual Volume	42.4	15.0	87.2	54.9	60.0	78.4	83.4			

Truck profits for 1963 calendar year are estimated at \$36.9 million at FPV and \$83.4 million at actual volume. Domestic FPV is based on estimated average industry volume of 980,000 with 30 per cent penetration. Estimated 1963 profits are in excess of profits at FPV by \$35.5 million as a result of larger industry (1.2 million) and by \$11.0 million as a result of greater penetration (31.7 per cent). Profits at FPV in 1964 calendar year are slightly lower than 1963 as a result of previously approved major product actions for 1964 and 1965.

Market Background

The chart below shows domestic truck industry factory sales plus imports from 1956 through 1963 (estimated):



With the exception of the recession years of 1958 and 1961, the industry sales trend has been upward from 898,000 units in 1956 to an estimated 1,221,000 for 1963. Average sales of 1,170,000 for the 1962-63 period are approximately 190,000 in excess of the current estimated average industry volume which was raised from 930,000 to 980,000 in January of 1963.

Exhibits I, II and III, which we will discuss in detail, show the market by weight group and mix within weight groups for the period 1956 through 1963.

Summary of Weight Group Markets

Light Trucks

(0-10,000 GVW - Estimated 1963 Sales - 919,000)

The light truck market has grown from an average of 571,000 units per year for 1956-57 period to 865,000 units for 1962 and estimated 1963. Light trucks represented 72.4 per cent of total trucks in 1962. Segments of the market which have demonstrated growth are:

1962 Sales (000)

- | | |
|--|-----|
| . Conventional trucks (mostly pickups) | 571 |
| . Econoline type trucks (mostly vans) | 105 |
| . Jeep/Scout utility vehicles | 38 |

Market Background (cont'd)

Summary of Weight Group Markets (cont'd)

Medium and Heavy Trucks

(10,001 to 26,000 GVW - Estimated 1963 Sales - 223,000)

The medium and heavy truck market has declined slightly since the 1956-57 period from 261,000 units to 229,000 units in the 1962-63 period. This market represented 21.0 per cent of total trucks in 1962. Segments of the market which have indicated growth are:

	<u>1962 Sales (000)</u>
. Tilt Cab	20
. COE and short conventional	44

Extra-Heavy Trucks

(26,001 GVW and Higher - Estimated 1963 Sales - 79,000)

The extra-heavy truck market has grown from an average of 67,000 in the 1956-57 period to 76,400 units in 1962-63. Extra-heavy truck sales in 1962 were 6.6 per cent of total truck sales.

Diesel engine trucks have made rapid gains at the expense of gasoline. The diesel highway tractor is the fastest growing segment of the total extra-heavy market, having grown from 1,025 units and 1.5 per cent in 1956 to 18,400 units and 23.0 per cent of total extra-heavy trucks in 1962. These units now represent 49 per cent of all extra-heavy diesel trucks.

1962 Truck Industry Sales Mix

The chart below shows the weight group mix of 1962 truck industry domestic factory sales plus imports compared to weight group mix of dollar sales for 1962:

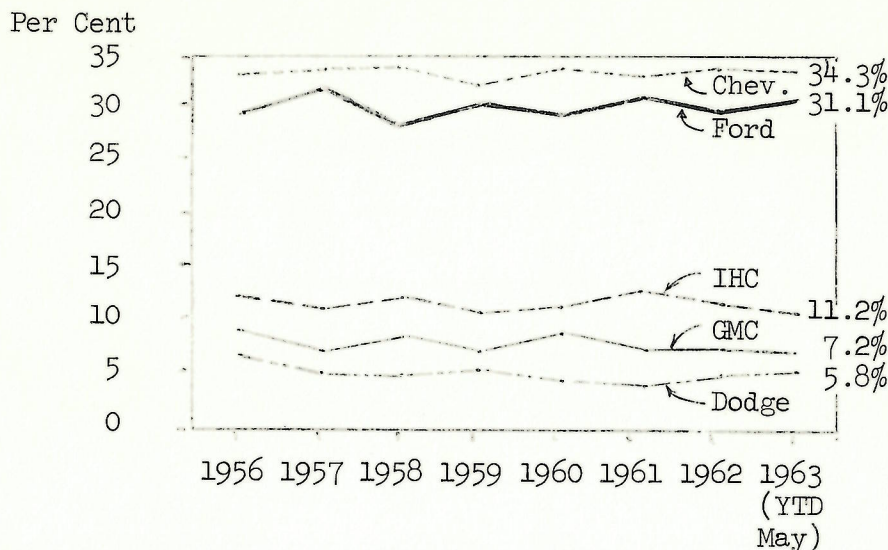
Per Cent	Units		Dollars ^{a/}	Per Cent
6.6		Extra-Heavy		
21.0		Hvy. & Medium		24
				27
72.4		Light		49

^{a/} At Ford average wholesale price to dealer

While extra-heavy unit sales are only 6.6 per cent of total sales, they represent 24 per cent of dollar sales. Conversely, light trucks represent 72.4 per cent of unit sales, but only 49 per cent of dollar sales.

Market Background (cont'd)

Penetration of total domestic truck registrations is shown below:



All major makes have generally maintained relative position in the total market; however, there have been changes within individual markets. In light trucks, Ford has gained rapidly with the Econoline van while declining somewhat in the pickup market. In the heavy truck market, Chevrolet since 1961, with the introduction of new engines, has made major gains at the expense of GMC and IHC. In the extra-heavy market, Ford, through broadening its product line, has gained at the expense of Mack and GMC.

Product Discussion

In the next several subsections, our current product position versus competition and our 1965 product position versus current competition in various segments of the truck market will be discussed based on approved product programs and recommended additions to the 1965 program. Discussion will be limited to the most salient and important product advantages and disadvantages.

Econoline

In 1961, both Ford and Chevrolet introduced an economy series of trucks and buses patterned after European vehicles such as the Volkswagen, Thames, and Taunus. Although the Corvair 95 line offers superior ride and NVH levels accompanied by a broader range of options, the intrinsically superior product price value found in the Econoline has resulted in outstandingly successful Ford sales. In 1962, Econoline sales were 321 per cent of Corvair in vans, 202 per cent in pickups, and 129 per cent in buses.

We anticipate in 1964 increased competitive sales pressure from the introduction of new economy vehicles by both the Chrysler and General Motors corporations. It has recently been reported that the General Motors vehicle will be a direct copy of the Econoline with the exception of a larger (194 versus 170 CID) engine option, a flat, one-piece windshield, and metal inner roof.

The major advantages of the Econoline forward control configuration are long, flat load floor, compactness, maneuverability, visibility, simplicity, low cost and, consequently, low price. The major disadvantages are difficulty of ingress and egress and the potential risk associated with sitting forward in the event of a head-on collision.

Product Discussion (cont'd)

Econoline (cont'd)

Engineering package studies of an all-new Econoline utilizing the current configuration have indicated that the improvements are so marginal that little would be gained from an all-new vehicle.

Engineering has also completed package studies of an all-new semiforward control van utilizing the current Falcon engines. This type vehicle overcomes the disadvantages of the current Econoline in ingress, egress and safety, but results in a considerably longer wheelbase and less compact vehicle. It is believed that its advantages would not offset the inherent disadvantages of a less compact and maneuverable vehicle for city delivery operation, the most popular van usage.

Since the current Econoline appears to have an excellent package, we will recommend that the all-new Econoline in 1967 in the existing cycle plan be dropped and improvements made to the 1965 and 1966 models in the following areas:

1965

- . Improvements in seating package and relocated heater will provide slightly improved ingress and egress
- . 240 CID I-6 engine with 3-speed transmission (1965 program recommended addition) would provide superior performance

1966 (Tentative)

- . Automatic transmission with 240 CID I-6 engine
- . Improved suspension for better ride and control
- . R.P.O. longer load space
- . Improved appearance of safety
- . More car-like steering column

Our plans for the Econoline are based on current knowledge of the expected new General Motors vehicle. As soon as possible after its introduction (estimated to be March 1964), we will re-evaluate our plans based on study of the actual vehicle.

While recommending that the currently scheduled Econoline change for 1967 be dropped because of lack of potential product advantages, advanced styling and engineering studies will be continued for a new concept semiforward control van and omnibus possibly incorporating a 208 CID version of the Ford of Britain V-6 engine. With this engine, it may be possible to combine the compactness of the Econoline with the semiforward control ease of entrance and safety to provide the advantages of each. This vehicle might incorporate either front or rear wheel drive with 12, 18 or 21 inch load height. Consideration of this vehicle as a program would be contingent upon mechanical and financial feasibility, and would be considered for 1968 or later.

Product Discussion (cont'd)

Conventional Light Truck

The current 1963 Ford F-100 truck is superior to Chevrolet in more durable fully synchronized transmission and general cab visibility both front and rear. However, it is deficient to Chevrolet in 6 and 8 cylinder performance and fuel economy, pickup box style and construction, ride and handling, front end sheetmetal stability, cab seating package, sheetmetal and cab exterior appearance and cab interior finish. With the introduction of the new pickup box and increased headroom in 1964, 240/300 CID I-6 engines, 352 CID V-8 engine (recommended 1965 program addition), the "Twin I-Beam" suspension, and improved cab seating package and steering column angle, the Ford light truck in 1965 will be competitive to or superior to the 1963 Chevrolet in comfort, ride and handling, performance, economy and durability.

The 1965 Ford truck, because of sloping front end character line on the side, higher rocker panel, and narrower cab above the belt line, will not have as substantial an appearance as Chevrolet. It will continue to be deficient to Chevrolet in interior finish appearance and front end sheetmetal stability (possible improvement in stability is being investigated for 1965).

Chevrolet has historically made major sheetmetal changes on a five-year cycle basis. It has been reported that Chevrolet is changing to a rearward sloping "A" pillar eliminating the dogleg in the door in 1964, having earlier in the cycle changed the hood to improve the front end appearance. This would indicate that Chevrolet has extended the historical period for a complete new cab beyond the five-year cycle, but it is highly unlikely that Chevrolet will continue for another seven years to 1970 (current Ford cycle plan) without an all-new truck. In addition, it has been reported that General Motors has set an objective to obtain 50 per cent of the truck business through Chevrolet and GMC combined (up eight percentage points from 1962 levels).

Research available at the time of the decision not to accelerate from 1966 to 1965 the front end sheetmetal change, which would have removed the downward sloping character line from the side of the front end, indicated that styling was of secondary importance in the light truck buying decision. This was based largely on the first light truck buyer motivation study conducted by Nowland and Company in 1956 which reflected motivation at the time of purchase.

The latest light truck buyer motivation study (depth interviews with 1,700 nonfleet owners on a national probability sample, completed November 1962) indicated that the truck buyer goes through two distinct phases in making up his mind as to what make of truck he will shop and purchase.

There is a lengthy predecision period, roughly four to five years, which may be referred to as the "image-building" period where the most important motivations are general concepts of:

- . Economy of operation
- . Styling
- . Riding comfort, and
- . Ease of handling

This period lasts from the time he purchases a truck until he decides that he will purchase another.

Product Discussion (cont'd)

Conventional Light Truck (cont'd)

The second phase is a short decision period, roughly one week to one month, which may be called the "information-seeking" period. Here, the most important motives are specific practical details:

- . Low repair and maintenance cost
- . Gas mileage
- . Trade-in and resale value
- . Low initial cost, and
- . Dependability

While this research cannot quantify the importance of styling in exact terms of the number of trucks that are purchased solely for styling reasons, it did indicate that 54 per cent of Ford and 60 per cent of Chevrolet nonfleet light truck purchasers shop only one make of truck. The decision to shop only one make of truck is obviously made during the lengthy "image-building" period and is influenced by experience, hearsay, advertising and other factors. It is during this period in which styling is indicated as one of the important differentiating factors between makes.

In this study, it was also found that the characteristics of Ford and Chevrolet trucks most mentioned in the "image-building" period were as follows:

	<u>Chev.</u>	<u>Ford</u>
General economy of operation	25%	15%
Good styling	22	14
Smooth or comfortable ride	16	3
Ease of handling	13	8

In summary, this study indicates that:

- . Styling is an important differentiating factor between makes, especially in the image-building period prior to the actual decision period in shopping for a truck.

Other recent research reveals that:

- . Ford is at a competitive disadvantage in a side-by-side comparison on most of the exterior and interior styling features tested but the differences are not statistically significant in most cases.
- . Ford is also at a competitive disadvantage in the image truck owners have of its styling in relation to Chevrolet.

For light conventional trucks, there are two basically different styling concepts which the Division believes should be explored thoroughly before determining the styling direction for the next major truck cycle in order to obtain styling that will be acceptable to the public and provide a definite edge over Chevrolet. These are: (1) a vehicle with approximately the current height but with more contemporary lines, a wider appearance and huskier greenhouse with less tumblehome; and (2) same as (1) but lower. We recommend that styling themes and full-size clay models be made following both concepts and that adequate research be conducted which will provide firm direction as to the better path to follow.

We will recommend as a portion of the long range cycle plan, which will be presented later in this paper, all-new cab and sheetmetal for the 1967 model conventional light trucks.

Product Discussion (cont'd)

Medium and Heavy Trucks

The most important recent competitive actions in these weight groups have been the introduction of larger, more efficient engines by Chevrolet in the medium and heavy trucks and the introduction by IHC of the Loadstar short conventional (92" BBC) models in medium and heavy trucks. IHC and Chevrolet have also introduced new medium and heavy tilt cab models.

Conventional and COE Medium and Heavy Trucks

Since 1961, Ford conventional medium and heavy trucks have been generally competitive with IHC and Chevrolet with the exception of performance and economy and cab package. Program objectives for the 330/361/389 CID FT engines, to be introduced during 1964, provide for competitive performance and economy levels. Currently the cab package improvements that are to be introduced in F-100 and F-250 trucks in 1965 are scheduled for introduction in medium and heavy conventional trucks in 1966. The cab package would be entirely satisfactory from a dimensional and comfort standpoint, although not completely competitive in all dimensions.

In 1963, Ford introduced the COE "N" series with an 89" BBC dimension versus 105" for conventional trucks on a relatively low investment basis by modifying the conventional cab, raising it 14 inches and moving it forward 13 inches. This resulted in a planned compromise in certain product features which minimized investment but provided an entry into an additional segment of the market at the earliest possible date. The shorter BBC dimension is required to handle 40-foot trailers within the legal over-all length restrictions in most states. It also provides better maneuverability than conventional trucks (especially important for city delivery work). The short BBC and better maneuverability can also be obtained with tilt cab models but at a considerably higher price.

The Ford "N" series COE was designed to be generally competitive with Chevrolet LCF and IHC BC models with the exception of package size and performance and economy. Performance deficiencies will be corrected with the FT engine program but, because of major structural revisions required, the improved cab package is not scheduled for the "N" series. Ford "N" series and competitive models all have had major compromises in service accessibility compared to conventional models. The sales rate of "N" series trucks has achieved the anticipated level.

Shortly before the introduction of the Ford "N" series, IHC introduced new short conventional Loadstar models (92" BBC) which combined the advantages of maneuverability and compactness of COE models with the service accessibility of conventional models. The Loadstar replaced both their conventional and COE models. IHC has thus combined the benefits of conventional and the COE models, eliminating the disadvantages of each. (Exhibit IV).

Medium and Heavy Tilt Cab Trucks

In 1960, Chevrolet introduced a tilt cab model to compete with Ford in the medium and heavy truck markets. In 1963, IHC introduced a compact tilt cab model priced slightly over Ford models in these markets, also.

The Ford tilt cab, first introduced in 1957, has established an excellent reputation for durability and reliability, ride and handling, visibility and appearance. It is deficient, however, in the areas of maneuverability and load space as compared to compact tilts. In addition, because of the width at the front corners, it is more susceptible to damage. The same conditions discussed in medium and heavy conventional trucks with reference to performance and its correction apply to tilt cabs as well. (Exhibit V).

Product Discussion (cont'd)

Extra-Heavy Trucks

This portion of the truck market is small in volume but unit profits are generally high (Ford economic profit per unit from \$1,500 to \$3,500). Product function is the most important consideration and change without major functional improvement is undesirable. IHC has retained key models in this weight group for many years.

Extra-Heavy Conventional Trucks

Since 1961, Ford extra-heavy conventional models have been superior to IHC in engine durability but deficient in fuel economy and cab package. Super Duty engine fuel economy improvements, including fuel injection and possible dieselization, will be studied in advanced engineering. Improvements in cab package, as in conventional medium and heavy trucks, are scheduled for 1966 making Ford generally competitive in comfort although slightly deficient in certain dimensions.

In addition to being deficient to IHC V-8 engines in fuel economy, Ford has no 6-cylinder engines to compete with IHC 6-cylinder engines which are generally superior in economy to V-8's, but lack equivalent performance. Six-cylinder engines represent 52 per cent of IHC gasoline model sales in this weight group.

Extra-Heavy COE Trucks

As in medium and heavy trucks, Ford introduced the "N" series extra-heavy COE trucks Job #1, 1963. In February of 1963, IHC introduced the 92" BBC Fleetstar model in extra-heavy trucks. This model with a hinged one-piece fiberglass hood provides service accessibility superior to conventional models with all its advantages of compactness. IHC has retained its conventional extra-heavy trucks. The Ford "N" series is deficient to this model in seating package, service accessibility, and weight. (Exhibit VI).

High Tilt Cab Highway Tractors

In 1961, Ford introduced the "H" series high tilt cab with 82" BBC to compete in the highway diesel market. The use of the tilt cab and a modified conventional "F" series chassis resulted in a low investment program but in certain design compromises. As a result, we are and will continue to be deficient in weight, BBC, availability of short wheelbases, and in cab package where a Bostrom comfort seat is required. We are, however, generally competitive in a large segment of this market.

The diesel engine share of total extra-heavy market has been increasing and now represents approximately one half of the total. The highway tractor share of total extra-heavy diesels has increased from 5.0 per cent in 1956 to 46.4 per cent in 1962 and it is estimated that it will be between 50 and 60 per cent by 1966. Industry highway tractor sales at 1963 EAIV are 14,630 units and at 1963 estimated actual are 18,400. Ford highway diesel tractor 1963 FPV is 988 and estimated 1963 actual is 1,350, representing 7.3 per cent penetration of this market.

IHC has been the leader for many years in this market, introducing its 54" BBC model in 1957. GMC entered this market in 1959 with a 48" BBC and maintained second place in 1962. In 1959, White introduced a 50" BBC model with a fiberglass cab and in 1962, an additional 63" BBC vehicle with aluminum cab. In 1962, Mack introduced a 50" BBC steel cab replacing two previous models. Mack attained third place in 1962 with this vehicle and virtually tied for leadership with IHC in the first quarter of 1963. In addition, it has been reported that IHC will introduce an all-new highway tractor in 1964 or 1965 to replace its current model. (Exhibit VII).

Product Discussion (cont'd)

Light Utility Vehicles

In 1961, IHC introduced the Scout 80 utility vehicle with a 100 inch wheelbase compared to the IHC 1000 series conventional pickup with a 115 inch wheelbase. The base Scout is a pickup model with a 152 CID 4-cylinder engine, 5 foot box, and a short removable steel top. A full length steel top is available as an option. Approximately 90 per cent of Scout sales are 4x4 models.

Willys produces Jeep Universal and Dispatcher utility vehicles with 81 and 101 inch wheelbases. The high volume model is the 4x4 Universal CJ-5 with an 81 inch wheelbase. The base Jeep CJ-5 vehicle has an open cab, a 40 inch long loadspace, and a 134 CID 4-cylinder engine. A full length hard top, a full length canvas top, and a short canvas top are available as options.

Both Scout and Jeep lack adequate performance and have poor comfort, ride, noise and vibration qualities. The majority of the Scout and Jeep owners questioned in small group research discussions indicated that 4-wheel drive conventional trucks are too large to suit their needs for, generally, a combination business and pleasure vehicle. (Exhibit VIII).

Prices of Scout, Jeep, and Ford F-100 pickup models are:

	Wholesale Delivered Price	
	4 x 2	4 x 4
Jeep CJ-5 - Base Vehicle	\$1161*	\$1363
- With Hard Top & Passenger Seat	\$1402*	\$1970
Ford F-100 Styleside Pickup	\$1522	\$2030
Scout 80 Pickup	\$1367	\$1760
Memo:		
Ford F-100 Over Scout 80	\$ 155	\$ 270

* Model DJ-3A

Jeep and Scout combined domestic sales have averaged approximately 38,000 per year for 1961 and 1962. The introduction of the Scout with IHC's broader distribution system had relatively little effect on Jeep sales thus expanding the domestic market. Jeep sales represented 1.9 per cent of domestic industry light truck sales in 1959-60 and 1.7 per cent in 1961-62. Scout sales were 4.0 per cent in 1961-62, bringing the total Jeep/Scout sales to 5.7 per cent of industry light truck sales in the 1961-62 period.

Current and Proposed Cycle Plans

Revisions to the Econoline and light conventional truck cycle plans have been discussed. Many plans have been studied to determine the optimum coverage of the balance of the market. The current cycle plan, the recommended proposal and an alternate proposal are shown on Exhibits IX through XIV, which will now be discussed.

Summary of Proposed Advanced Engineering and Styling Studies

The Ford Division believes that the following advanced studies should be completed to determine final program direction:

- . All-new interchangeable cab and sheet-metal for conventional trucks and short conventional trucks with unique front end 1967
- . All-new interchangeable cab and sheet-metal conventional light, medium and heavy only 1967
- . Utility vehicle 1966-66 $\frac{1}{2}$
- . Short highway tractor 1966-67
- . New concept low cost tilt cab 1967-68
- . Ford of Britain "D" series 1967-68
- . Semiforward control van and omnibus 1968-69
- . Super Duty fuel economy 1967-68

Financial Program

As has been discussed, the Division's current forward profit projections do not provide for an all-new truck until 1970. A new light and medium conventional truck cab and sheetmetal in 1967, together with the other program items contained in the recommended proposal would therefore reduce profits at constant volume in the short run but not, based on our present estimates, over the total period 1964-1971. The following table compares model year accounted profits for the period 1964 through 1971 for the current program and proposal:

<u>Model Year</u>	<u>Accounted Profits</u>		
	<u>Current Plan</u>	<u>Effect of Proposal</u>	<u>Proposal</u>
1964	\$36.6	\$(0.7)	\$35.9
1965	38.2	(2.2)	36.0
1966	44.8	(1.8)	43.0
1967	46.1	(7.6)	38.5
1968	44.7	0.1	44.8
1964-1968 Average	\$42.1	\$(2.5)	\$39.6
1964-1971 Average	44.2	0.8	45.0

Profits at FPV for the period 1964-1968 would be reduced by an average of \$2.5 million if the proposal were implemented. Over the longer period 1964-1971, average annual profits would be approximately the same as under the current plan. While profits during the 1964-1968 period average approximately \$40.0 million at FPV, an industry of only 1,050,000 is required to raise profits to a \$50.0 million level which we anticipate to be the minimum expected over the next several years. Fixed investment, variable cost and price assumptions inherent in this estimate (and also for the alternate proposal) are detailed in Exhibits XXIV, XXV and XXVI. Styling and advanced engineering in the 1963 calendar year for the 1966 and 1967 programs would be increased by \$0.4 and \$0.1 million, respectively.

Financial Program (cont'd)

The estimated 1965 design cost on a company variable cost basis of an F-100 6-cylinder truck is estimated to be from four to six dollars over the 1963 Chevrolet when equated for the more durable Ford transmission with synchronized low gear and the larger displacement potential of the 240/300 CID I-6 engine. The design cost objective for the 1967 model is to equal Chevrolet.

The estimated increase in company variable cost of \$5 in cab and sheet-metal to provide competitive levels of width, rocker panel depth and interior finish (Ford currently \$10 favorable in total sheetmetal areas) is also to be offset by cost reductions in other areas where Ford is currently over Chevrolet.

The above profit projections include fixed investment provisions of \$10.0 million for a new utility vehicle and \$3.5 million for a new highway tractor. Preliminary investigations indicate that neither program is financially attractive at FPV. We are, however, recommending that both be included tentatively in forward programs for reasons outlined below.

New Utility Vehicle
Estimated FPV - 10,000 - Estimated Actual - 17,000

Preliminary research has indicated most of the owners of Jeeps and Scouts are not at all interested in a truck as large as either our 4x2 or 4x4. Since this is a market in which we have no product offering, we believe the possible incremental sales should be considered for decision-making purposes. While our preliminary study shows a \$2.0 million average annual loss at a constant volume over a five-year cycle, only 4,000 incremental sales per year are required to break even. Incremental sales of 7,000 per year would recover the fixed investment in approximately three years and increase profits \$7.5 million over the five-year cycle. An extended cycle similar to the tilt cab, introduced in 1957, would be expected.

A more detailed study of possible incremental volume in both the domestic and export markets will be made before firm recommendation is made to include this vehicle in a firm product program.

New Highway Tractor
Estimated FPV - 1,300 - Estimated Actual - 2,000

The situation is somewhat different with respect to highway tractors. We do have an entry in this field and are making progress. While current "H" series FPV is extremely low (988), we have great opportunity to improve our position in the highway diesel market as we have done in the gasoline market and eventually increase our extra-heavy FPV market penetration and consequently unit volume. Major competitors have or will have in the near future new models. We stand to lose the gains already made if we fail to keep up to competition. (Exhibit XVIII).

We believe that the requirements for which we are now noncompetitive, lighter weight, shorter BBC and availability of short tandem wheelbases, which we estimate to be one third of the market, will become a larger share of the total highway tractor market.

Preliminary studies indicate that the new highway tractor would result in an annual loss at FPV of \$1.3 million over a five-year cycle. Incremental sales of 700 units per year are required for a breakeven program. We believe this investment would be justified to enable continued growth and to protect the long range future of Ford in the extra-heavy truck market.

Summary of Tentative 1966 Program Changes as a Result
of Acceleration from 1970 to 1967 of New Truck Cycle

	<u>Current 1966 Program</u>	<u>Invest- ment (Millions)</u>	<u>Revised 1966 Program</u>	<u>Invest- ment (Millions)</u>
Ranchero	All new from light car	\$ <u>a/</u>	Same	\$ <u>a/</u>
Econoline	Appearance change	0.5	Mechanical changes	3.3
Light Truck	Front end sheetmetal	6.3	Grille change only	0.5
Medium Truck and) Heavy Truck)	(Cab package change and) (front end sheetmetal)	3.7	Grille change only	0.0
Extra-Heavy Truck	Cab package change		Cab package change	1.5
Tilt Cab	Possible reduction in BBC	2.7	Improve maneuverability	0.1
Utility Vehicle	4x4 Ranchero derivative	4.6	Jeep/Scout type (provision)	10.0
Highway Tractor	New unique	1.9	New unique (provision)	3.5
Other	Durability and relia- bility, cost reduction, new options, mainte- nance engineering, etc.	4.4	Same	4.4
		<u>\$24.1</u>		<u>\$23.3</u>

a/ Investment included in light car program

Summary

It is planned:

- . To develop in detail the 1966 program as outlined above. The utility vehicle and highway tractor are considered tentative proposals pending further development of more detailed financial information.
- . To develop alternate styling themes for the next model new truck line through full-size clay models. Alternate styles are to be researched thoroughly for customer reaction.
- . To continue advanced engineering package studies on an accelerated basis to determine feasibility of alternate interchangeability of all-new truck study proposals and these studies be developed into feasibility vehicles.
- . To accelerate the next truck cycle from 1970 to 1967.
- . To complete advanced studies for the semiforward control van and omnibus and new concept low cost tilt cab.
- . To delete the front end sheetmetal change currently scheduled for 1966.