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Audit of an Automobile Manufacturing Company

BY CHARLES R. WHITWORTH

Inasmuch as transportation is one of the principal factors of economic life, and because of the tremendous development of automotive power within the past century, by which the automobile has become one of the chief means of conveyance, it is not surprising that the automobile industry has now advanced to the stage where it is considered a major industry—at least on this continent.

This paper will assume that the operations of the company herein discussed are of such character that the plants are totally utilized in the manufacture and assembling of practically all of the component parts of the completed vehicle, and not mainly in the assembling of units which have been manufactured by other factories.

It should also be borne in mind that these remarks are not intended to constitute an audit programme, but will narrate only some of the special features of the audit which are in a measure extraordinary. Furthermore, these comments contemplate a general verification of the assets and liabilities and of the results from operations (commonly known as a balance-sheet audit) and will not comprise any discussion of checking of the details of transactions.

Before proceeding further it may be of interest to note that the accounting for an automobile manufacturer is sometimes divided into three systems—head office, factory and branch houses. The head-office books, of course, control all the operations and bookkeeping transactions of the factories and the branches separately, and the monthly reports and trial balances prepared at these places are sent to headquarters periodically.

With these thoughts in mind some of the more important items contained in a balance-sheet will be explained.

SIGHT DRAFTS AND ACCOUNTS RECEIVABLE

The wholesale distribution of automobiles is conducted through dealers and agents, while the retail customers of the manufacturing company are handled exclusively by the company's branches —the dealer being a customer on an entirely different scale. The dealer's terms are settled on a cash basis, by sight draft drawn on the dealer immediately after cars are shipped from the factory. It is necessary to see that these drafts are paid on presentation, particularly those outstanding at the close of the fiscal period. In days gone by, there was a tendency to force the dealer to accept shipments for which he had already contracted at times when he was not in a position to pay cash, with the result that the sight drafts were not taken up at the proper time. It is, therefore, important to see that these drafts are paid promptly, and in cases where they are not, the items should be followed up for the purpose of ascertaining whether or not the cars were returned to the manufacturer. In such cases the cars should then be valued as unsold at the end of the fiscal year (i. e., at cost or market value). In any event, it is necessary to discover whether drafts are merely out for collection or whether they have already been discounted with the bank, and in the latter event the contingent liability thereon must be noted in the balance-sheet. The aggregate amount of such liabilities will, of course, be ascertained by direct communication with the company's bankers.

Inasmuch as these drafts will ordinarily be converted into cash in a shorter space of time than the average of accounts receivable, it is appropriate that they be separately set out in the grouping of the balance-sheet.

The other items under the caption of cash and accounts receivable do not call for any special comment that is not pertinent to every audit or investigation. It should be mentioned, however, that there is a custom of including in the accounts receivable the memorandum value of equipment consigned to manufacturers of castings or parts. Such transactions should be properly reflected in the balance-sheet and it should be remembered that these accounts are not expected to be realized in cash, but that they are value of property for which the consignee is responsible.

Inventories

As in every other business, the inventory is one of the most important items in the balance-sheet of an automobile manufacturing company, and therefore the question of inventory requires a very thorough examination, particularly in view of the vast amount of working capital required. It is interesting to note, however, that the turnover for this industry is much quicker than in many others.

The auditor will, of course, address his attentions to the verifications of quantities, prices and extensions. It is impracticable, on account of the great volume of the inventory, to do more than make a test of the quantities contained therein because of the expense entailed in this procedure. Moreover it is doubtful whether any firm of accountants would have a staff sufficient to corral and check, coincidentally with the taking of the physical inventory by the company's employees, all of the items contained in the inventory. The car record, which contains consecutive entries of the motor number, serial number, type of model, date entered on production schedule, and final inspection, as well as the disposition by reference to sales-invoice number and other memoranda of shipment, is invaluable to the auditor since it is the means of accounting for production, sales and inventory of finished cars on hand. It should be noted that the cars have been completed and inspected within a reasonable time after they are placed in production. Cars are generally finished within forty-eight hours of the commencement of the final assembly, and therefore the date on work orders of all cars in process should be inspected for the purpose of ascertaining the reason for any delay in the completion of the work. It might possibly develop that some cars were erroneously inventoried as finished, whereas further work might have been required before the cars were shipped. A comparison of the cars included in the inventory with the final inspection ticket is therefore desirable.

The inventory is classified as follows: raw material and supplies, work in process, finished parts, finished cars, and any convenient subdivisions of these captions.

The generally accepted basis of cost or market, whichever is lower, should be adopted for inventory purposes, and verification of the prices based on this principle does not present any great difficulties if the manufacturer employs an adequate accounting system. The valuation of raw materials is readily susceptible to verification by reference to stock records and current invoices on file. The work in process will include labor, material and a certain percentage for factory overhead. The values of labor and material included in work in process are based upon so-called specification costs, which are revised periodically to conform with the latest time studies and material costs.

Specifications will include part and other unit costs which require to be identified with the latest current cost on each particular item contained therein.

The specification costs are compiled in major assemblies and sub-assemblies of the component parts and the total cost of the finished car is summarized by assemblies. Cars in production are treated as work in process until the final inspection is completed. It is necessary to analyze the car-production account in order to see that the material and labor accounts are properly relieved by the specification cost of finished cars, and that the latter account is likewise credited with the cost of cars shipped, and, furthermore, to determine the relation which this cost bears to the values contained in the inventory.

The distribution of overhead is a problem which requires careful investigation. Another factor to bear in mind is that the rate of burden should not unduly raise the value of the items which are included in work in process. In the early days of the automobile industry, the fiscal year could be divided into two distinct seasons, manufacturing and selling; but now the industry has advanced at such a rate that the manufacturing and selling run hand in hand throughout the entire year. It is generally necessary for the factories to close down in order to take a physical inventory (at least once a year and possibly more frequently) and sometimes when the preparations for development of new models are extensive. A factory might also have to close on account of depression in business, or because the rate of production had been developed considerably in advance of the actual demands by the consumer, although such a state of affairs has not been common recently. These shut-downs naturally affect the rate of overhead, because they must inevitably curtail the original production schedule in a marked degree. The problem then is to determine a fair rate of overhead for valuation purposes in order that the inventories may not be over-valued. After all, if the principle of cost or market, whichever is lower, is applied consistently, it matters little if the burden at the end of the fiscal year be in excess of the so-called normal rate, provided that the inventory price leave a sufficient margin for the cost of completion of the goods, together with an allowance for distribution, selling and general expenses and a regular margin of profit. These remarks also apply to the value of finished cars. Furthermore, these inventory values should be compared with the actual net selling price, less an allowance for other expenses and profit.

The position of finished and service parts also requires special consideration. While the manufacture of a specified model may have ceased, such cars may still be in use by the consumer, the length of service in some instances being far beyond the average life. It is, therefore, incumbent upon the automobile manufacturer to maintain a supply of past-model service parts to fill the needs of his customers so long as there is a demand. Quite frequently it is necessary to manufacture another supply of service parts for old models. It will readily be perceived that the stock of parts on hand requires careful watching to ensure that the accumulation of old parts is not replete, as after production of a model has ceased the demand for parts pertaining to that model will lessen in greater proportion each succeeding year. The supply on hand of service parts should therefore be governed by the probable requirements of the future, with due regard to the length of time since the cessation of manufacture of the respective models. Any decision as to the existence of an over-stock may be reached only after a full survey of the inventory and sales, and it is a matter requiring judgment and experience.

Service parts at the factory are usually valued at cost, and a reserve sufficient to reduce the value of the obsolete and overstocked parts to scrap, or realizable value, should be provided if necessary.

The inventories at the branches are usually valued at the price at which they are invoiced by the head office. A reserve sufficient to reduce this price to the basis of cost or market, whichever is lower, is generally set up on the books at the head office. The value of used or second-hand cars is one which should be closely watched, as the market value is at all times uncertain, depending entirely on current conditions. The valuation of used cars should always be on the conservative side.

The balancing of inventories is of vital importance, and the auditor should satisfy himself that the inventory of raw material is not in excess of the requirements for current schedule of production.

Another feature important to an automobile manufacturing company is development and experimental expenditures, which must be considered in one sense as an exigency although at certain times they may reach unusual proportions, especially during the creation of new models. It is inevitable that any large industry must expend vast sums annually in research and experimental work, and where the expenditures are current the correct method from an accounting standpoint is undoubtedly to charge such expenditures to current operations. This rule, however, may be modified when extensive changes are effected in the already existing models by the adoption of entirely new lines, such as occurred recently with practically all automobile manufacturing concerns. These changes require an extraordinary expenditure in the way of special tools, dies, jigs, and labor, and it is generally impracticable to absorb these costs in the initial stages of new production. It is, therefore, only fair that the excess over what may be considered normal expenditures should be deferred beyond the current year. The length of time over which these expenditures should be carried is a matter of judgment and differs according to conditions. In any event, they should be written off as soon as possible, and must be absorbed before another complete change of models is adopted.

Among these expenditures, there is generally a perpetual outgo for experimental cars. Such expenditures which have a useful value in the future development of the company's lines or models should be considered as prepaid production costs and carried as part of the inventory in the balance-sheet. If, however, it has been determined that the experiment is nonproductive, such expenditures must be charged off immediately to current expenses.

Capital Assets

The growth of business entails a continuous expenditure of large sums of money for capital investments representing additions to real estate, plant, machinery and equipment, and in leaseholds and improvements. Even with established concerns the expansion of business constantly requires further investments in the already existing plants, either by way of additional facilities, or perhaps replacement of some older buildings by more modern and extensive structures. The scrutiny of these expenditures is of great importance, and it does not differ from the examination required in any other line of business.

The character of the capital expenditures of an automobile manufacturing company is much the same as that of any other large manufacturing company. The investment will include some machines and machine tools, jigs, and dies which are peculiar to the industry and to the particular series of models which are in course of manufacture. All these special tools and dies will be amortized over a short period of time and in any event must be charged off when they are obsolete.

Small tools are usually carried under the caption of stores or supplies and are included as part of the inventory until they are requisitioned for use in the factory. The practice is to charge them to expenses immediately when they are so requisitioned, and it is impracticable to make an inventory of them because they are scattered in divers places in the factory. Furthermore, because of their perishable nature and of rough usage the actual length of time in which they are in use is extremely short. It is assumed that the initial investment required completely to equip the factory with the necessary tools or the cost of replacement thereof will be carried always in the investment account.

Great care should be taken to see that so far as possible all items dismantled are properly revealed in the accounts.

The rates of depreciation used by automobile concerns vary according to the use to which the machinery and equipment is subjected. To determine the adequacy of the depreciation rates, it may be necessary to enquire into the disposition of the replacements—in some instances they are properly charged against the reserve, while in others they are written off to current operations. In the latter case, the company is in effect setting aside additional depreciation.

The amortization of leaseholds does not require any particular comment.

Current Liabilities

Verification of accounts payable and other outstanding liabilities requires the same careful attention in automobile manufacturing as in any other business, and it is important that merchandise in transit at the end of the fiscal year should be taken into consideration because of its effect on the ratio of current assets to current liabilities. It will readily be understood that as automobile manufacturing companies buy in very large quantities the value of merchandise in transit is a considerable item at any time. It is possible that there may be a custom not to include in accounts payable merchandise which has been purchased at buyers' (or sellers') risk and is in transit at the close of the fiscal year but has not yet arrived at the plant before the close of the fiscal year. It is also possible that large quantities of purchases have arrived at the plant during the inventory period which have not been taken into accounts payable or in the inventory, or perhaps have been inventoried without taking into account the liability therefor. All these conditions require careful investigation and adjustment. It is also essential that all other liabilities, particularly patent infringements, damage suits and workmen's compensation claims, should be taken into account.

Dealers' Deposits and Reserve for Additional Discounts and Allowances

It is a general custom for the automobile manufacturer to demand that the dealer deposit a guarantee for performance of his contract. These contracts set forth the minimum number of cars which the dealer agrees to take during the fiscal year and outline the graduated scale of discounts showing the minimum and maximum rate to be allowed to the dealer under specified quotas. Occasionally there may also be an allowance on account of price reductions which are retroactive. The amounts due the dealers under these arrangements must be provided for in the accounts at the end of the fiscal year.

Profit-sharing Plans

Some of the larger automobile concerns have stimulated the efforts of their employees by profit-sharing contracts, which require the setting aside of a certain proportion of the annual profits to be distributed among the officers and employees. The amount to be provided can, generally speaking, be readily ascertained although there may be some complication if the contracts stipulate that the federal income taxes shall be taken into account as an expense before ascertaining the net profits available for the officers and employees, since these bonuses are properly deductible as an expense in the income-tax return.

Contingent Liabilities

The contingent liabilities by which the automobile manufacturer may be affected are substantially the following:

1. Notes, trade acceptances and drafts discounted,
2. Guarantee of principal and interest of loans to other companies,
3. Guarantees of dealers' notes discounted with bankers and automobile finance companies,

4. Guarantees on contracts to make good the defects on work done or goods supplied,
5. On contracts for purchases or sales for future delivery.

Regarding the first item, it is necessary to show on the face of the balance-sheet the par value of the notes discounted, for on the one hand the company will have to pay the bankers in full if these notes are not met at maturity, while on the other hand it is possible that they may not recover any or all of the par value of the notes.

The financing of the sales of automobile concerns has assumed such proportions that the matter is of paramount importance to manufacturers, bankers and general public. It has been stated by economists that as many as 75 per cent. of the cars retailed are sold by the so-called instalment plan. The reader will readily understand that the structure of the finance company must be substantial in order to carry the load required under these conditions.

The financing is divided into two classes, wholesale and retail; the wholesale being carried on between manufacturer, finance company and dealer, and the retail between the dealer, finance company and the consumer. In some instances, the manufacturer may conduct both the wholesale and the retail business.

The credit terms usually require that a certain proportion of the sales price be paid in cash and the balance is settled by notes which mature at specified intervals. The notes are in turn discounted with a finance company.

The time allowed for payment to the manufacturer by the dealer covers a much shorter period than the time required by the consumer. In the first instance the acceptances cover a period of about three months, while the customers' notes may run over a period of eighteen months.

It is generally incumbent on the manufacturer and the dealer, in the case of wholesale and retail business, respectively, to repurchase the cars in the event that full payment of the notes is not made to the finance company. It is not uncommon, however, for the finance company to repossess the car and to find a new purchaser for it. Cars sold by retailers may be subject to chattel mortgage or to a conditional sales contract. In the latter event the purchaser does not become the owner of the car until the last instalment has been paid. The dealer may thus be liable as endorser of the notes, unless the endorsement is without recourse, or by his agreement to repurchase the car where the finance company has failed to collect all the unpaid instalments. In this event, the dealer is generally liable only to the extent of the unpaid instalments plus stipulated collection charges. The manufacturer's liability in these conditions generally arises through the discounting of the dealers' notes on the wholesale plan. It may be necessary for him to guarantee his dealers' paper on the retail plan. It is also possible that it may be necessary to discount the notes taken by the retail branches of the selling corporation of the automobile manufacturer, and in such cases the automobile concern has two classes of liability.

The extent of the liabilities under such arrangements can not be definitely stated at any time. From past experience, however, it is usually possible to measure the probable amount of losses arising therefrom, although unforeseen circumstances may be a cause of creating a much greater liability than would be normally expected. It is the writer's belief, however, that so long as a reserve sufficient to take care of these losses is provided on the books, it is unnecessary to make any other reference to these contingent liabilities in the balance-sheet, unless by endorsement of guarantee there is a further direct obligation on the part of the manufacturer.

The remaining items included under contingent liabilities can be provided for in like manner. In passing, however, it should be mentioned that whether or not the manufacturer guarantees his products directly in writing or through his agents, there is always the moral obligation to make good any defective workmanship in manufacture. The demands of a customer in this respect are generally met immediately, so long as the complaint is justified or perhaps merely on the basis of good policy. It is possible, of course, that a defect might be so extensive in the company's output that it would be necessary to provide a reserve at the end of the year in order to relieve the future years' operations of an expense which belongs to the year in which the product was manufactured.

In conclusion, the writer believes that he has dealt with the more important matters contained in the balance-sheet of an automobile manufacturing company. It is hoped that these remarks may be of interest to the general reader and that from them the student may derive some benefit.