



Management consulting for the transportation service industry

SPECIAL OPERATING PROCEDURES

The Thrasher Equation

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Presented by

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Table of Contents

Section	Page
I. INDUSTRY STANDARDS FOR HOURS PER REPAIR ORDER.....	1
II. ELEMENTS OF THE THRASHER EQUATION.....	4
III. ESTABLISHING YOUR OWN BENCHMARK.....	5
IV. SPECIFIC TOOLS AND TECHNIQUES.....	6
V. ASSEMBLING THE INFORMATION.....	7
VI. PERFORMING THE THRASHER EQUATION.....	8
VII. MANAGING THE EQUATION.....	9
VIII. SUMMARY.....	11

I. Industry Standards for Hours per Repair Order

There have been repeated attempts for years to create an industry-accepted standard regarding hours per customer repair order. However, in order for a standard to be developed, there must be a series of common denominators regarding the assessment of labor time. And the necessary common denominators simply do not exist in today's retail environment. Before assessing performance in the area of hours per repair order and making comparisons, consider the following:

1. **Franchise Differences**—There is a huge difference in the failure rates of certain components between different vehicle types and different manufacturers. Obviously, the degree of frequency of labor intensive repairs has a profound effect on the ability to determine an equitable performance level regarding hours per repair order.

An example is a comparison between a Lexus and a high line domestic when Lexus vehicles were introduced a few years ago. The Lexus, being new to the market, was a maintenance vehicle. The prevailing mileage on the vehicle was very low and the failure rate of major components was exceedingly low for two reasons:

- a. The vehicles had not been tested in terms of time on the road.
- b. The superior level of engineering performed prior to introduction to the market.

Many high line domestic vehicles had been on the road for a much longer period of time. Though quality of engineering of high line domestics may have been comparable to that of a Lexus, the prevailing mileage on these vehicles made them more prone to having higher levels of repair. Customers facing high levels of repair and high repair bills often neglect their responsibility to perform the necessary preventive maintenance.

The myriad of vehicle types and different technologies used today, along with corresponding failure rates, makes establishment of an industry standard performance level in this area implausible, to say the least.

2. **Assessing Time Standards**—Labor time assessments ending in zero (0) or point-five (.5) account for 80% to 85% of total assessments in the average store. There are assertions throughout the industry that different labor time standards (e.g., Mitchell, Motors and Factory) are used religiously. Having this rate of repair operations ending in zero or point-five would be impossible if any of those documents were used as the principle document for assessing labor time allowances.

The overwhelming majority of stores in the retail environment tailor time allowances from these source documents to better fit their particular market and the capabilities of their technical staff. The fact that the industry is not blessed with a common method for assessing time, even within given franchises, strips us of the ability to make the comparative analysis of hours per repair order.

3. **Methods of Measurement**—This is another common denominator that would have to be in place for a fair assessment to be made and it too does not exist.

Many manufacturers utilize the labor rate stated on the financial statement, divided into the labor sales, then divided by the number of customer pay repair orders, to ascertain the performance level.

Rarely is the labor rate, which is printed on a manufacturer's financial statement, consistent with the effective collection rate of the agency being surveyed. It has been our experience that the labor rate on most financial statements is overstated by as much as \$8 per flat rate hour.

Many service managers, when doing independent assessments of hours per repair order, have a tendency to modify the measurement by excluding such items as oil changes and state inspections. When these items are dropped, the performance level is obviously altered significantly.

By virtue of these and many other relevant variables, an industry standard for hours per repair order does not exist in today's environment. This can be a major source of frustration as people strive toward a benchmark that is often completely unreachable.

RECORDS INDICATE THAT these standards have prevailed and the 2.5-hour benchmark was common as far back as 1974. A far higher number of stores during that time period were able to reach the 2.5-hour time standard and found themselves in what they thought was a position of equity. We must look back at that time and understand that the market was totally different than the market today.

Because of the industry's inability to price maintenance-related services in a way that was market-sensitive, hundreds of thousands of customers were driven away from our retail agencies. When maintenance work is taken from the overall work mix, the industry obviously averages higher hours per customer paid transaction.

In the early 1980s, very few stores were open on Saturday, and again a specific type of customer was alienated from doing business. A higher level of awareness about what alienates customers has caused appropriate action.

The industry is working hard to incorporate methods that offer higher levels of convenience to satisfy today's consumer. The incorporation of express lane service, and especially efforts to respond to consumer demand for Saturday or weekend service, will undeniably decrease hours per repair order. Consumers who respond to Saturday service have a natural tendency to wait for their vehicles. The profile of this customer is simply not conducive to selling 2.0-plus hours per repair order and maintaining any reasonable satisfaction level.

ALL STORES DO not utilize the same labor time assessments. Also, a multitude of franchises and market approaches are totally inconsistent with those which fostered the original standards. Therefore, a series of questions must be proposed:

Do hours per repair order indicate the service advisor's sales ability?

Not necessarily. With high mileage cars, there is an inherent need for more work and customers ask for it at point of sale. The majorities of "after-the-fact" sales are a result of customer request and require virtually no selling effort. It is not uncommon for an agency to average in excess of 2.5 hours per repair order where the service advisor's selling skills are primitive at best.

If you assess hours per repair order, should you include first service oil changes or state inspections in your survey?

It is our opinion that you should include all, operations to establish your current benchmark. How this benchmark relates to other agencies is virtually of no value. Establishing a benchmark within a given store will allow the service manager to determine if he has been able to impact the performance in his own environment.

Emphasis here needs to be directed more toward a relative improvement as opposed to the establishment and assessment of a performance standard from an industry perspective.

Would a performance level from 2.5 to 3.0 indicate a high level of performance by the advisory staff and the technicians?

Due to the lack of a single way to assess customer pay hours, this is not a credible or acceptable guideline. Performance levels from 2.5 to 3.0 often occur in high repair environments that have little or no sales effort.

In many cases, high hours per repair order indicate that there are very serious customer retention problems coupled with little to no maintenance sales.

How should I measure?

The only sure way to know is to perform a comprehensive customer pay repair order survey. Use of the financial statement to calculate the performance level is seldom, if ever, accurate. Many service managers don't perform these types of surveys because they are so time-consuming.

There are several effective ways to gain the information, both in computerized or manual fashion, with high levels of management economy, which can yield the information necessary to manage on a daily basis.

As stated earlier, the only true way to assess overall performance in this area is on a store-by-store basis. Before this can be established, each manager must study their own store, their own environment and identify and quantify specific areas that cause hours per repair order to exist.

II. Elements of The Thrasher Equation

Studying each of these areas and reducing them to quantifiable elements of an equation can pinpoint specific areas for improvement. There is such an equation known as The Thrasher Equation. This equation is named for Mr. Greg Thrasher, who is considered the nation's preeminent authority in this area.

Mr. Thrasher contends that there are four casual factors that yield the actual hours per repair order in a given store:

1. **Point of Sale**—Hours sold to a consumer while in face-to-face contact with the service advisor and all hours associated with that conversation. If a customer says at the point of sale (P.O.S.) that his engine is running rough and the advisor assesses a fee for diagnosis, or shall we say 0.5 hour for diagnostic time, this would be considered P.O.S. As well, if the advisor contacts the customer and secures additional time and money to rectify the rough running condition, these additional hours would also contribute to P.O.S. value. The additional hours would not be considered additional request or additional sales as they all relate to the initial conversation.
2. **Additional Service Request**—For the purpose of examining the equation, an additional service request (ASR) is defined as the total number of hours asked for on a repair order after diagnostic procedures have been performed and prior to the attempt of the service advisor to sell it. To qualify, these hours must be totally unrelated to those mentioned at P.O.S.

For example, if the technician recommends that 2.0 hours of brake work be performed after isolating the cause for the rough running condition (P.O.S.), this is considered a pure additional service sales request with a relative value of 2.0 hours.

3. **Closing Ratio**—The closing ratio is the percentage of hours sold that were represented by an ASR. If a technician asks for 2.0 hours worth of brake work and 1.0 hour is sold, the closing ratio is 50%.
4. **Percent Representation**—Each vehicle that enters an automotive Service Department does not require additional work. As mentioned earlier, the prevailing mileage on a vehicle is a major factor.

Stores where customer retention is low or that simply don't do a good job of managing their customers to buy services from them have a tendency to have a low relative mileage on the cars. When low mileage cars come in to a store, the ASR values run extremely low. Closing ratios often run reasonably high on those cars—however, owe a very small percentage of the vehicles will be represented by an ASR at all.

Technically, the percent representation (% Rep) element of the equation is the number of cars that were represented by an ASR compared to the total number of cars that came in

for customer pay work. If a dealership saw 150 cars and 50 of them had a request for additional work attached, then the % Rep would be 33%.

These four elements combined constitute The Thrasher Equation. The point of sale values + [the additional service requests x the closing ratio x the percent representation] = the hours per repair order:

$$\text{P.O.S.} + [\text{ASR} \times \text{CR} \times \% \text{Rep}] = \text{hours}$$

When assessing hours per repair order and low hours per repair order, there is a natural tendency to run right to the service advisors. Realize that the advisors control P.O.S. and closing ratio, but the technicians control ASRs and % Rep. Therefore, hours per repair order is a joint effort between the advisory and technical staffs.

Each of these four elements must be managed and assessed independently to determine the performance viability of a particular agency.

III. Establishing Your Own Benchmark

Several years ago when The Thrasher Equation was developed, it became obvious that the established norms of the time were highly suspect, if valid at all. A secondary set of issues presented themselves—if the old benchmarks and old standards are not valid, how would one go about determining their performance and establishing their own standards?

While working in client agencies, we found that assessing elements of The Thrasher Equation was an extremely time-consuming process. Even though the information we gained was extremely valuable, administering the equation was of little practical value in a day-to-day operation because of the time required to make the assessments.

The bottom line is that the typical service manager did not have the time to take 3 or 4 hours to make these kinds of assessments. If you think about it, what would be required to manage this equation?

TO DETERMINE POINT of sale (P.O.S.) hours, the service manager has to perform what we call a carbon ink assessment. This assessment consists of taking hard copies of finished repair orders and studying all of the items that appeared on the hard copy in carbon. A carbon entry on a hard copy indicates an item that was discussed at P.O.S. and it came through on the hard copy by virtue of carbon transfer.

As well, the manager has to look at all of the ink entries written following P.O.S. and find all of the ink entries related to the P.O.S. conversation. Adding the ink-related issues to the carbon initial issues provides a P.O.S. value for that particular document. The manager must do this on 30 or 40 repair orders to obtain a reasonable indication of a service advisor's true performance level.

When reviewing the second element in the equation, the additional service request (ASR), the manager must go back to the hard copy and determine all of the items asked for in terms of additional sales, minus any of the items asked for related to the original conversation. This becomes the ASR value prior to any selling effort taking place.

The third element of the equation, the closing ratio, can only be determined by looking at the hard copy and making a determination of how many non-related hours were asked for from the ASR compared to those that were actually sold and documented on the front of the hard copy.

Lastly, to determine the closing ratio element, the manager must look at a series of repair order hard copies and determine what percentage of those hard copies had unrelated additional work requested. After reducing that to a percentage, the manager has the key elements necessary to run the equation.

Obviously, this indicates that it is not practical for a manager to utilize these methods to gain data within a reasonable time frame. Many managers and consultants attempting to utilize the equation compensated by running the equation once a month, once every three months, etc., because they didn't have sufficient time to perform the equation on a more frequent basis. Although this helped in offering direction, it was generally not sufficient.

IV. Specific Tools and Techniques

Over time, service managers have learned how to use a series of specific tools and techniques to manage the equation more expediently. These tools and techniques allow the manager to invest less time and not have to look at repair orders to come up with the critical data.

1. **Additional Service Request Book**—Each technician has an individual book of Additional Service Request (ASR) forms. Each time the technician looks at a car; the technician is required to attach the white copy from his book to the repair order whether or not he finds anything on the car. If the technician finds nothing on the car, he writes only the mileage of the vehicle, the technician's identification and the repair order number on the form.

If the technician does find additional work required on the vehicle that is totally unrelated to what was discussed at point of sale (P.O.S.), he provides a brief description of work to be done on the face of the ASR form. The technician includes the mileage, his identification and the repair order number.

The books are not used consistently in stores for two principal reasons:

- a. Managers impose upon the technician that they must rewrite every request they have made on the back of the hard copy. That is not the way the book is designed to be used—the ASR form or book is no more than a summary of the items requested on the back. For instance, a technician finds that a head gasket needs to be replaced along with two valve cover gaskets. He writes this information on the

back of the hard copy as he has always done—all he writes on the ASR form is engine repair and the number of hours required.

- b. The second most common fault of using the ASR book is that managers allow technicians to list items on the ASR that were related to P.O.S. conversation. If a customer comes in and says that his engine is running rough, as stated earlier in this perspective, then nowhere on the ASR should items relative to that issue be listed. The ASR must be limited only to items totally unrelated to P.O.S. activity.
2. **Differentiation on Technician Flag Sheets**—You will understand later why differentiation on the technician's flag sheets between customer and warranty repairs is so important as we administer the program.
 3. **Individual Effective Rate Surveys**—The cashier keeps individual effective rate surveys on a daily basis. This is simply a listing of what customer pay repair orders are processed through the cashier, the number of hours that were charged to each customer on those repair orders and the dollar amounts that were charged for those hours. It is a very simple tool. Some computer systems have reports that make this information readily available. (Refer to the workshop materials on effective rate study and surveys for additional information.)
 4. **Writer Responsibility**—When a service advisor receives an ASR form and attempts to sell the customer, after the attempt has been made, the advisor records on the ASR how many hours were actually sold, circles the hours and initials. For example, if 5.0 hours worth of engine work was requested and the advisor sold all 5.0 hours, the only requirement would be for the advisor to circle the 5.0 hours on the ASR form and initial. However, if the customer bought less than the 5.0 hours, the advisor would write down the number of hours actually purchased, circle and initial. This information becomes the foundation from which we will assess closing ratios.

V. Assembling the Information

With the tools discussed in the previous section in place, we can now discuss how to put in a program that will allow you to gain the information you need and better manage the service advisor's selling effort.

When a customer arrives at your service department, the service advisor writes up the original concerns and the ticket is transferred to the technician. A copy of the Additional Service Request (ASR) form must be attached to every repair order that goes to a technician.

The technician fills out the ASR as described in the previous section. When the advisor receives the document with its attached ASR form, they should attempt to sell it. Once an attempt has been made to sell, the advisor writes down the number of hours that were actually sold, circles and initials.

The ticket is now ready to close and send to the service cashier. The cashier keeps the copy of the ASR, by service advisor, each day. When the ticket clears, the cashier records the total amount of customer pay labor and the hours that were charged.

VI. Performing The Thrasher Equation

The service manager is now ready to assess the performance levels of each area within The Thrasher Equation. Performing the equation backwards allows management to make this assessment with a high degree of efficiency:

1. Obtain the effective rate survey from the cashier. Calculate, over the time frame being surveyed, the hours per repair order that the service advisor has averaged and enter the number in the equation under “hours” (hours per repair order).

$$\text{P.O.S.} + [\text{ASR} \times \text{CR} \times \% \text{ Rep}] = \text{hours}$$

2. Take the effective rate survey and calculate the exact number of customer pay repair orders that cleared the cashier in the time frame being surveyed. Once that number is determined, take the total number of white copy Additional Service Request (ASR) forms that the cashier has saved by service advisor and divide them by the number of repair orders that cleared. If you have followed the program, the result should be 100%. You should have the same number of white copies from the ASR books as repair orders. This is the first checkpoint to make sure the program is being adhered to.
3. To determine closing ratio, the service manager adds all of the circled hours (hours actually sold by the advisor) on the ASR form and all of the hours on the ASR that are not circled. The closing ratio is a percentage stated by dividing the circled hours by the non-circled hours. Be cautious—when a service advisor sells the entire service request, he just circles the hours instead of writing them down again. These hours must be added into the overall hours that were available. Do not dismiss them.
4. The ASR value is simply determined by taking all of the non-circled hours (or the hours that were on the request prior to any selling effort) and dividing them by the number of requests that were submitted. If you have 40 hours submitted on the request for that particular service advisor and he wrote 20 tickets, his ASR value would have been 2 hours prior to the time that he tried to sell it.

Now we are at a stopping point. If we take an example of the equation

$$\text{P.O.S.} + [\text{ASR} \times \text{CR} \times \% \text{ Rep}] = \text{hours}$$

and input some hypothetical numbers based on data that we would have gained from our store; here is what we would see:

From the effective rate survey, we have performed at 2.1 hours per repair order. Our percentage representation is 60%. Our closing ratio is 50% and the ASR value, by definition, is 2.0 hours.

The only missing element at this point is the point of sale (P.O.S.) number. This number is obtained by working the balance of the equation.

$$\begin{array}{rcl}
 \text{P.O.S.} + [\text{ASR} \times \text{CR} \times \% \text{ Rep}] & = & \text{hours} \\
 \text{_____} + [2.0 \times 50\% \times 60\%] & = & 2.1 \\
 ? + 0.6 & = & 2.1
 \end{array}$$

Calculating this part of the equation will show that these elements contribute 0.6 to your overall repair order value. Subtracting this answer from hours per repair of 2.1 indicates that, in order for this to be true, P.O.S. must be 1.5.

2.1	hours
<u>- 0.6</u>	sales contribution
1.5	P.O.S. hours

As you can see, elements of this equation can be managed with a high degree of efficiency without ever looking at repair orders. Management now has the information that will direct training efforts. In a typical shop, this equation can be run in approximately 15 minutes if the tools are in place to obtain the key data.

VII. Managing the Equation

It is impossible to determine a standard of equitable performance for the variables described in Section II. above. In this section we examine ways for the service manager to offer direction and increase performance in each of these areas.

1. **Point of Sale**—When looking at point of sale (P.O.S.), one of the first elements to review is what is your menu-closing ratio. The ratio should be measured against the known menu opportunities. Management should establish a range of mileages or times associated with a repair order and make a determination of what percentage of the customers are being sold a menu at P.O.S. versus bonafide opportunities. More emphasis placed on menu sales will often increase the P.O.S. values.

Several excellent computerized customer management techniques are available today. These computer programs track customers from the time they buy the car and indicate when they should be sent service reminders indicating when they should have services performed. The purpose of these systems is to increase the number of menu sales opportunities.

2. **Additional Service Request**—What should the average Additional Service Request (ASR) value be? There is really no way to ascertain what this number should be from an industry viewpoint. On an individual store basis, a manager may sit with a group of technicians for a given day, and after each car is finished, review each car with the technicians to determine what else the cars needed. The resulting ASR hours can be used as the beginning benchmark for technician performance assessment. We suggest that the

manager spend more than a day establishing the original benchmark so that a representative number of cars can be seen. Coming to an agreement with the technicians as to what is reasonable will often lead to higher levels of performance in this most important category.

3. **Closing Ratio**—A service advisor's closing ratio versus the amount of work requested by the technician can often go to one extreme or the other. When service managers see closing ratios in the high 80 and 90 percentiles, what is often happening is that the advisor is contacting customers to sell jobs and then fills out an ASR form with the technician. When this happens, the store is going to have an inordinately high closing ratio per request rendered.

The opposite is true when closing ratios plummet. The No. 1 cause for extremely low closing ratios is lack of confidence between the service advisor and their assigned technicians. Some technicians have a tendency to have a pattern of what they recommend. If the advisor ever perceives that there is a breach of professional ethic, he is less inclined to represent those items to consumers. Management must exercise caution when dealing with this situation to ensure that there is a pattern that is questionable.

If managers will spend more time on the service lane working with their advisory staff and listening to them while they make phone calls to customers, they are able in many cases to help reshape their presentations in such a way that they will earn higher levels of consideration.

Special techniques have been identified that have much higher closing ratios than those traditionally used in most stores. One, The Moulder Approach, is described in detail in ATcon SOP *The Moulder Approach*.

4. **Percentage Representation**—Two types of measurement are really used here: Discretionary Representation and 100% Representation. The Discretionary Representation method is used when a service manager allows the technicians to attach an Additional Service Request (ASR) document to repair orders only if they need unrelated work. When this happens, the manager only sees ASRs that have a value attached and doesn't really get a measurement of how many tickets came through with an ASR lacking requests for additional work.

The Discretionary Representation measurement is much more difficult to manage than the latter technique. 100% Representation gives management a totally different viewpoint of performance. The manager simply stipulates that each ticket that comes through the department have an ASR attached. When assessing the performance, there will be a larger stack of ASRs, and in that stack there will be a very large number of ASRs that have no work requested. To increase performance in this area, a manager can often take the ASRs with no work requested, go back to the cars before they are delivered to the customer and look over the car with the technician. Many times the manager will find obvious out-of-line conditions that the technician overlooked.

VIII. Summary

In summary, it is our belief that the standard methods of measurement used today are suspect, if at all viable. It is the responsibility of management to offer a more valid direction to the service advisory staff as it relates to selling. Overselling or underselling can be a major cause of customer dissatisfaction.

We feel it very important that service managers employ these types of techniques to establish their own benchmarks, their own performance levels and their own elements of direction in order to take sales performance to a level that we know is reasonable within a specific environment.