

Mr. D. S. Neuhart's speech
at the Annual Meeting of the
LOCOMOTIVE MAINTENANCE OFFICERS' ASSN.
Chicago, Illinois on September 15, 1969

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WHAT DID YOU DO FOR ME TODAY?

Mr. Chairman, Distinguished Guests, Officers and
Members of the L.M.O.A., Ladies and Gentlemen:

Some time ago I received a letter from President Bellhouse stating that I had been awarded an Honorary Life Membership in the Locomotive Maintenance Officer's Association. Now I know that any honorary position is conferred only as a matter of esteem and without the usual duties of the position. So, as an Honorary Life Member of this distinguished organization, I was all set to bask in the glory of the honor, and to be divested of any duties.

However, as I read further in the small print in Mr. Bellhouse's letter, he said that my first job as Honorary Life Member would be to make the opening address at this Annual Meeting.

It looks like they have changed the rules, and it is hard to say what other duties Mr. Bellhouse has lined up for me.

I suppose that depends on how well I do on this first assignment.

Seriously, though, it is a real pleasure to speak to this gathering of mechanical officers and to express my appreciation of the honor accorded to me. It is my belief that the Mechanical Department is the key factor in the successful operation of any railroad. Unless the equipment is properly maintained, the Operating Department cannot efficiently operate the trains, the Marketing Department has nothing to sell to prospective customers, and the end result is obvious.

In a recent editorial comment by Mr. Tom Shedd of Modern Railroads regarding a talk prepared by Mr. L. K. Sillcox for an A.R.E.A. Meeting wherein he recalled the days when passengers on the 20th Century and Broadway Limited received a partial refund of fare when the trains were late, and the President would telephone the Superintendent of Motive Power and request an immediate explanation. Mr. Shedd made the observation that now we suppose it wouldn't be considered

good management for the President to take the SMP to task directly. Let me assure you that the President of the Union Pacific has no qualms about taking me to task directly. And any questions that he may have omitted are sure to be resurrected by our Executive Vice President. That is how it should be, and they are not interested in explanations except to validate my proposal to avoid recurrence.

Adherence to freight schedules today is just as important as it ever was to our highest class passenger trains. Missed connections and late deliveries caused by avoidable mechanical failures can nullify the best efforts of our Sales and Operating Departments.

Full recognition of the problem and complete cooperation, not only among the various departments of individual roads, but between railroads, are top priority if we are to eliminate the adverse image that has been allowed to develop in some areas, and to demonstrate to the public that railroad service is the best investment of the

transportation dollar.

As mechanical officers, our prime responsibility is to maintain the equipment so that our operating and sales departments are given the tools with which they can effectively do their job." Now I know that the natural reaction is to say that better maintenance means greater maintenance expense. To some degree that may be true, but analysis will show that the majority of locomotive road failures are due to some difficulty which could and should have been detected and corrected at minor expense before the locomotive was dispatched. Furthermore, by keeping abreast of and taking advantage of modern technology, we can generally improve the service and dependability of the equipment with an actual reduction in repair expense.

Utilization of modern technology means more than acquisition of equipment embodying the most advanced improvements. It means application of the knowledge and skills of our trade to every phase of our operations. It

means a critical examination of each facility, each maintenance and servicing procedure, and each work assignment, followed by unhesitating action in making the changes dictated by our knowledge. This is our job and whether we do it by more efficient use of forces and materials, by more intensive employe training programs, or by revolutionary changes in our inspection and maintenance practices, I am sure that we will not be found wanting.

We cannot meet the challenges of progress by adhering to the norms of yesterday. Our customers are not interested in any nostalgic appeal of the joining of the east and west by rail 100 years ago, nor the great role played by the railroads in developing our country. What they are interested in is what the railroads can do for them today, and more importantly, what we will do for them tomorrow.

Never was the old cliché about, "What did you do for me today?" more meaningful than when the customer asks

himself how to best spend his transportation dollar.

We have long ago reached the pivotal point where we can either be satisfied with the commonplace and stand idly by while our air and highway competitors lap the field with revolutionary innovations; or we can change the generation gap to a generation lap of our own by full use of the inherent advantage of a steel wheel on a steel rail in the economical and reliable movement of mass commodities.

As mechanical officers we must do our part in translating the words into actions. We must not only erase our resistance to change, we must utilize our ingenuity and know-how to initiate transformations in every aspect of the Mechanical Department. No railroad can successfully operate today under the accepted standards of yesterday, and no railroad can successfully operate tomorrow with the accepted standards of today. There is no room for complacency in our competitive situation, but with recognition of the

problems and with creative thinking and boldness in action, we can assure that the services offered by our railroads will continue to be effectively competitive in handling the prospective increase in gross national product.

There is one subject that I would like to place particular emphasis on. That is the need to "Design Out As Much Maintenance As Possible," in both our motive power and rolling stock equipment. To do this, a much greater effort must be made by all railroads to systematically classify the many items that affect locomotive reliability and cost of maintenance.

There must be closer cooperation on the engineering level with the locomotive builders. The designers must be made acutely aware of the problems that so severely plague the diesel electric locomotive. These problems must be specifically documented and presented by the railroads as a group. There has been too much generalized complaining by the individual railroads which lends itself to the time-worn

retort from the builder that, "It must be a problem peculiar to your operation."

If we all search out our problems diligently and systematically, document them carefully, and present them to the locomotive builders, then I am certain that the locomotive builders will do their very best to make the diesel electric locomotive more reliable and less costly to maintain.

As a typical example of what can and has been accomplished, early in 1968 after a very detailed study of our operating requirements for a locomotive that would best suit the handling of high speed heavy trains in through service and with the cooperation of the builder, we were able to complete the design, place the order and receive the first DDA4OX locomotive on the property in thirteen months. New "Design Out Maintenance" features incorporated in the new 6600 horsepower EMD DDA4OX and 5000 horsepower GE U-50-C units include the following:

(1) Ability to load test units through their own grids without the need of a wayside load box. A single switch accomplishes this. It enables maintenance forces anywhere to load check a unit immediately. This was first developed and tested out on one of Union Pacific's diesel units.

(2) Elimination of all traction motor transition. Motors are connected permanently in parallel with the AR-12 alternators. No traction motor field shunting is used. Troubles associated with power contactors required for transition and field shunting are eliminated.

(3) New EMD designed circuit interrupter to protect traction motors. This device reduces traction motor flashover damage by sensing any rapid rise in traction motor current before extensive damage occurs.

(4) Motor temperature simulator. This is a new EMD thermal device that simulates motor temperature and forestalls power reduction until motor temperature dictates. This, in effect, provides lower continuous rating if motors are at

normal temperatures.

(5) Rocker type design wrist pin that greatly improves oiling and loading on a two-cycle engine.

(6) Improved turbocharger clutch for two-cycle engine.

(7) Integral underframe and fuel tank. Fuel tank is structurally capable of supporting unit in the event of a derailment, thereby reducing the chance of fuel tank breakage and possible fire. The DDA4OX with a fuel capacity of 8,230 gallons can operate approximately 1500 miles without refueling.

(8) Heavy duty pilot designed to provide additional protection for crossing accidents and capable of supporting locomotive in the event of derailment. It is also a good pilot snow plow.

(9) Aircraft type electrically heated windshield rated one watt per square inch with automatic thermal control.

(10) Improved annunciator system keeps visual record of any warning or protective device that may operate en route

so maintenance forces can trouble shoot on arrival at terminal.

(11) Module type electric locker components to facilitate rapid change out and simplify trouble shooting.

(12) Hand brake located in engineer's cab for greater safety and convenience. Hand brake is equipped with safety interlock that prevents locomotive from loading when hand brake is set. This is indicated by a red light on control stand.

(13) Unitized air brake equipment with all components mounted on a single rack. Easy removal of air brake equipment speeds inspection.

(14) Automatic cooling system dump valves to protect engine and air compressor from freezing.

The above items represent only the beginning. There are many more improvements to consider in building a future locomotive; for example, a system to utilize the BTU's which are now escaping through the stack.

The first of the 6600 horsepower DDA40X locomotives

was delivered April 19, 1969. As of the close of July, this initial locomotive had averaged 23,000 miles per month. We are shooting for a target to obtain 1,000 miles per day.

Our ultimate goal is to have a locomotive with engine alternator and traction motor horsepower capacity to provide 8,000 horsepower at the rail or 1,000 horsepower per traction motor. We feel that this can be accomplished in the near future with the close cooperation of locomotive builders. This will reduce the number of locomotives required in the ownership which, in turn, will reduce the operation and maintenance expense.

In closing, I want to thank each and every one of you for the honor bestowed upon me on this occasion, as life membership in this splendid organization is indeed a great honor and truly appreciated.