OPERATING PRACTICES SPECIALISTS WORKSHOP
OPERATIONAL TESTING ASSESSMENTS

PURPOSE

The purpose of the assessment is to determine whether or not the Carrier's program of operational tests and inspections is both in compliance with Federal Regulations, and effectively implemented.

PREPARATION

Prior to beginning the assessment, carrier accident/incident records should be carefully reviewed to identify accident trends where non-compliance with a specific rule or group of rules is a causal factor. The Carrier's program of operational tests and inspections should also be thoroughly reviewed to determine whether or not it meets Federal requirements.

ASSESSMENT

Assessment activities are focused in three basic areas. Those areas as well as some of the items to consider in each of them are shown below.

A. A detailed review of the Carrier's records of operational testing and inspections.

1. What time periods of the day are the tests conducted ?
2. On what days are tests conducted, i.e.: weekends, etc. ?
3. Types of tests conducted, i.e.: safety critical vs non-safety critical ?
4. Where are the tests conducted ?
5. Are employees from all departments tested, i.e.: Trans., Engr., MofE ?
6. Do test records differentiate between surprise and observation type test ?
7. What percent of surprise vs observation tests are conducted ?
8. Are the crews of foreign line carriers tested, and is that testing adequate ?
9. Is the testing on carrier rules that are covered by Federal regulation adequate, i.e.: Parts 218, 219, 220, 221, 240, etc. ? This applies to all crafts.
10. Are the appropriate employees receiving credit for rules tests, i.e.: trainmen credited with tests applicable to engineers and vice versa ?

11. How many trains are actually tested ?

12. Is more than one supervisor taking credit for the same test, i.e. multiple counting ?

13. Are test records properly imputed into the data base?

14. Are departmental test quotas achieved?

15. What type of exceptions are taken, i.e. safety critical vs non safety critical rules, and what is that percentage of the total number of checks made ?

16. Are the summary printouts of operational testing activity data adequate and useable ?

17. How does the carrier manage and staff the program ?

18. Does the computer program contain hard edits and input controls to prevent the wrong data from being entered into the program ?

B. <u>Observation of Carrier officials conducting operational testing.</u>

1. Determine supervisor's understanding as to the number and types of tests that are required each month.

2. Do supervisors know and understand the guidelines (if any) relative to their operational testing activities, i.e., specific rules, times, locations, etc. ?

3. Are supervisors provided with copies of their previous months testing activities ?

4. How does the supervisor plan his testing activities ?

5. Are supervisors responsible for the testing of foreign line trains operating in their territory ?

6. Determine the quality of the test.
   a. Location of test.
   b. Element of surprise.
   c. Type test (safety sensitive vs non-safety sensitive).
   d. Test set-up (pre-planning).

7. Can the supervisor implement an operational testing plan that provides for adequate testing given the size of the territory, the number of employees and the other responsibilities that must be dealt with ?

8. Does the supervisor typically conduct more surprise or on board type tests to satisfy monthly quotas ?

C. Observation of employees (T&E, OTE, MofW, MofE, etc.)

1. Identify specific inspection areas for observation i.e. speed, radio procedures, slow orders, conditional stop orders, issuing of train orders, providing protection for MofW, etc..

2. Identify specific special instructions etc. for observation.

3. Discuss specific rules with the employees i.e. restricted speed, blue signals, etc. in order to determine their understanding of them. The specific rules can be determined based on carrier accident /incident records, efficiency test failures, etc..

OPERATIONAL TESTS AND INSPECTIONS

PASS

OR

FAIL

217.9 PROGRAM OF OPERATIONAL TESTS AND INSPECTIONS

1. It is required that railroads conduct operational tests and inspections to determine the extent of compliance with the railroad's operating rules, safety rules, etc... **in accordance with a program filed with the FRA.**

2. It is required that the program provide for testing and inspecting under the various operating conditions on the railroad.

3. It is **difficult but not impossible** to recommend prosecution of a railroad under 217.9 because:

   (A) FRA does not specify the content of these programs.

   (B) FRA cannot require a railroad to change their program.

To recommend prosecution against a railroad, it would be necessary to thoroughly evaluate the program and demonstrate that the program did not:

(A) Provide for operational testing under the various operating conditions of the railroad.

(B) Did not comply with other provisions of 217.9 (b) (2 through 6)

(C) File any amendments as required by 217.9 (c)

(D) Did not keep a record of the date and place of each operational test..... Remember the regulations do not state where these records must be kept.

EFFICIENCY TESTING PROGRAMS
AS REQUIRED BY TITLE 49 CFR PART 217.9

I. **FIELD INSPECTIONS**

A. One of the few times when you will notify the carrier prior to the inspection

B. 1 to 2 week notice is not uncommon.

C. Assure that employees are not aware testing is taking place.

D. Is officer equipped to perform testing.

II. **INSPECTION OF CARRIER RECORDS**

A. Knowledge of program is essential.

B. Location of records.

C. Awareness of railroad operating rules.

III. **INSPECTOR'S REQUIREMENTS**

A. Copy of carrier's efficiency testing program.

B. Copy of carrier's instructions to officials that specify how test is to be handled.

C. Knowledge of carrier operating rules and **DRUG AND ALCOHOL REASONABLE CAUSE TESTING.**

IV. **TYPE OF TESTS CONDUCTED**

A. Efficiency tests are as varied as rules books, more so in that even though several railroads operate under one rule book, each has its own efficiency testing program.

B. Test and observations are different.

SECTION I

FIELD INSPECTION OF EFFICIENCY TESTS

Actual field testing is done with the aid of a railroad official. This is usually planned in advance. Co-ordination with the railroad is required for this. Keys to good testing are:

1. Insure that the employees being tested are unaware of the test being performed. The accuracy of the actual testing is acutely dependent on this. Employees that are aware of testing will behave in patterns to assure compliance with carrier operating rules.

2. Watch that the carrier officer does not inadvertently reveal that testing is being done. This can be done via radio or phone. When checking for a lineup of trains, see if the railroad officer tells the train dispatcher why the lineup is needed.

3. Listen carefully to radio conversation, once you have been seen testing, the word will spread. If this happens future testing at this time will be negated.

When accompanying a railroad official during field testing, regard any train dispatcher reactions and the railroad officials actions toward testing the train dispatcher. Often train dispatchers are overlooked during routine field tests.

Awareness of railroads drug and alcohol testing plans is essential to your knowledge when accompanying officials during these tests. Certain test failures may result in drug testing, the inspector should be aware of this possibility and be able to react accordingly. The other possibility is the railroad official may order a drug test due to an efficiency test failure, that is not warranted by the drug testing plan in use.

SECTION II

INSPECTIONS OF EFFICIENCY TEST RECORDS

The second inspection is of carrier records of operational testing performed. During this inspection the following items are of importance to ensure compliance:

1. Is there a quota system, if so are the carrier officers meeting required quotas.

2. When are the tests being performed, are they all done Monday through Friday during normal working hours, or are the scattered over weekends, nights and holidays.

3. Are only train crews being tested, why aren't train dispatchers, engineering department and other employees that are covered under the operating rules and efficiency testing program being tested ?

4. What is the quality of the tests performed ? Are the majority of tests listed really tests or are they observations. Numbers impress carrier officials, do not be impressed by the number of tests performed, but insure that the quality of tests will insure compliance with carrier operating rules.

The purpose of efficiency testing programs is to insure employee compliance with carrier operating rules. There should be evidence of a failure ratio. A railroad official that shows no failures may be the official that you need to accompany during an inspection for efficiency testing.

SECTION III

INSPECTORS REQUIREMENTS

To properly insure that either testing or records inspection is being done properly, the inspector must have a thorough knowledge of both the railroad operating rules and railroad efficiency testing program.

1. Knowledge of the operating rules should be respectable enough so as to be able to justify if a failure has or has not occurred.

2. Knowledge of the testing program should be complete. This is needed to know if the test being performed is being handled properly.

3. At times test failures will result in drug and alcohol testing. The knowledge of the railroad's reasonable cause testing program is helpful in this situation. A drug a nd alcohol test may be required but may not be performed.

If the inspector is aware of the type of testing that will be preformed, a review of the rules involved can be helpful. Also review the testing program prior to performing the inspection to assure the railroad's compliance with their own program.

DO NOT GET INVOLVED, often a question will arise from the employee being tested as to the fairness of the test. You are an observer at this point, do not comment on the fairness of the test.

Check data compiled by the railroad officer performing the test, see if the results are properly recorded and not falsified to procure a better test result.

Often railroad's will hold special classes or seminars for their officers in efficiency testing programs. These classes can be extremely useful in assessing a railroads efficiency testing program. The knowledge gained from these programs can readily be applied for inspection purposes.

SECTION IV

OBSERVATIONS AND TESTS

Most railroads will differentiate between a test and an observation. This difference can show up in the number totals submitted to the FRA at the end of the year. Some railroad's plans do not differentiate between a test and an observation.

The main differences are:

1. Tests are a planned scenario and usually require forethought and the manufacturing of a set of circumstances.

2. Observations are an "out the window checks". These mostly fall in the category of hand signals, on time for duty and etc. and are not a manufactured or setup test.

Field testing by manufacturing a set of circumstance is one of the most effective ways to ensure compliance with operating rules. Rules that are not frequently used, but have a major bearing on railroad safety are often used.

STOP

TOP TESTS REQUIRE CONTROLLING MEMBERS OF REW TO BRING MOVEMENT TO A STOP IN OMPLIANCE WITH APPLICABLE RULE.

est No.	Applicable Rule	Employees to be Tested	Maximum Employees Per Test
S7C	GCOR 7(C)	Controlling crew members	5
S8a	GCOR 8(a)	Controlling crew members	5
S10A	GCOR 10(A)	Controlling crew members	5
S10B	GCOR 10(B)	Controlling crew members	5
S11	GCOR 11	Controlling crew members	5
S25	GCOR 25	Controlling crew members	5
S26	GCOR 26	Controlling crew members	5
S27	GCOR 27	Controlling crew members	5
S	GCOR 98	Controlling crew members	5
S	GCOR 103(R)	Controlling crew members	5
S103T	GCOR 103(T)	Controlling crew members	5
S242	GCOR 242	Controlling crew members	5
S302	GCOR 302	Controlling Crew members	5
S303	GCOR 303	Controlling crew members	5
S3121	GCOR 312(1)	Controlling crew members	5
S3122	GCOR 312(2)	Controlling crew members	5
S3123	GCOR 312(3)	Controlling crew members	5
S3124	GCOR 312(4)	Controlling crew members	5
GS401	GCOR 401	Controlling crew members	5
GS408	GCOR 408	Controlling crew members	5
GS455	GCOR 455	Controlling crew members	5

G refers to General Code of Operating Rules)
S refers to **STOP** Qualifying Test)

RESTRICTION OF MOVEMENT

RESTRICTION OF MOVEMENT TESTS REQUIRE CRE MEMBERS TO RESTRICT MOVEMENT AS SPECIFIED E APPLICABLE RULE.

Test No.	Applicable Rule	Employees to be Tested	Maximu Employe Per Test
GR4C	GCOR 4(C)	Controlling crew members	5
GR10 10	GCOR 10	Controlling crew members	5
GR10D	GCOR 10(D)	Controlling crew members	5
GR10E	GCOR 10(E)	Controlling crew members	5
GR11	GCOR 11	Controlling crew members	5
GR12	GCOR 12	Controlling crew members	5
GR82	GCOR 82	Controlling crew members	5
GR93	GCOR 93	Controlling crew members	5
GR101C	GCOR 101(C)	Controlling crew members	5
GR102	GCOR 102	Controlling crew members	5
GR106A	GCOR 106(A)	Controlling crew members	2
GR232	GCOR 232	Controlling crew members	5
GR233	GCOR 233	Controlling crew members	5
GR234	GCOR 234	Controlling crew members	5
GR235	GCOR 235	Controlling crew members	5
GR236	GCOR 236	Controlling crew members	5
GR237	GCOR 237	Controlling crew members	5
GR238	GCOR 238	Controlling crew members	5
GR239	GCOR 239	Controlling crew members	5
GR241	GCOR 241	Controlling crew members	5
GR305	GCOR 305	Controlling crew members	5
GR305A	GCOR 305(A)	Controlling crew members	5
GR450	GCOR 450	Controlling crew members	5
GR455	GCOR 455	Controlling crew members	5

(G refers to General Code of Operating Rules)
(R refers to **RESTRICTION OF MOVEMENT** Qualifying Test)

or to the end of the block system. (314)

a) Exception: Rule 371

4) Flag protection must be provided when required. (99)

c. STOP — MANUAL INTERLOCKING:

Interlocking signal will display Stop indication. An Approach indication and, when possible, an Approach Limited or Approach Medium indication will be displayed in advance of that signal.

REQUIREMENTS:

1) Stop must be made before any part of train or engine has passed the signal. (245-Q, 303)

2) After proceed signal (Rule 8-b) given with yellow flag or yellow light is received, or when verbal authority from control operator is received in words "(Train) at (location) has permission to pass signal displaying Stop indication," train or engine may proceed at restricted speed to the next signal or, if there is no other signal, through the interlocking limits. 312(2)

Train or engine must proceed at restricted speed until leading wheels have passed the next governing signal or to the end of the block system. (314)

3) When manual interlocking is operated by crew member and signal cannot be cleared, train may proceed after flagman has preceded the train, examined the track for defects, determined that the route is properly lined and that protection is afforded on conflicting routes. If signals or derails

are not known to be in position to provide protection on conflicting routes, flag protection must be provided on such routes. 312(2)

4) Flag protection must be provided when required. (99)

5) When interlocking signal is located in ABS or CTC territory, requirements of Tests Nos. 6-a or 6-b must also be complied with.

6) Where special instructions provide additional requirements at an interlocking, such special instructions must be complied with.

d. STOP — AUTOMATIC INTERLOCKING:

Absolute signal of an automatic interlocking will display Stop indication. An Approach indication and, when possible, and Approach Limited or Approach Medium indication will be displayed in advance of that signal.

REQUIREMENTS:

1) Stop must be made before any part of train or engine has passed the signal. (245-Q, 303)

2) After stopping, if no conflicting movement is evident, crew member must be governed by instructions in the release box. 312(3)

3) If there is known to be a conflicting movement, train must not proceed until such movement has passed or has stopped and an understanding has been reached between crews. 312(3)

EMP	RULE	METHOD OF MAKING SCOPE CHECK	HOW COMPLIANCE IS ACHIEVED OR FAILURE DONE	PASSING SCOPE NO.	FAILED SCOPE NO.
E-CT	284	Approach Slow	Movement begins reduction to Medium Speed as engine passes signal and approaches next signal at Slow Speed. Movement fails to reduce to Medium Speed. Movement exceeds Slow Speed approaching next signal.	284	284.1 284.2
E-CT	285	Approach	Movement begins reduction to Medium Speed as engine passes signal and is prepared to stop at next signal. Movement does not reduce to Medium Speed. Movement is not prepared to stop at next signal.	285	285.1 285.2
E-CT	285a	Approach Restricting	Movement begins reduction to Medium Speed as engine passes signal and is prepared to stop at hand operated switches and next signal. Movement fails to reduce speed as required. Movement not prepared to stop at hand operated switch. Movement not prepared to stop at next signal.	285a	285.3 285.4 285.5
E-CT	286	Medium Approach	Movement begins reduction to Medium Speed as soon as signal is visible and is prepared to stop at next signal. Movement does not commence reduction on sight of signal Movement is not prepared to stop at next signal.	286	286.1 286.2