

(Form 1645 Standard)

**The  
Atchison, Topeka and Santa Fe  
Railway System**

**Rules Governing Time Service  
For Employes in  
Train, Engine, Yard,  
Roadway and Station Service**

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**Effective February 1, 1929.  
Revised October 1, 1938.**



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## TIME SIGNALS

Time signals will be sent daily at 11:00 a.m., CENTRAL TIME, 10:00 a.m., MOUNTAIN TIME and 9:00 a.m., PACIFIC TIME, from the Master Clock of the Washington, D. C., U. S. Naval Observatory, to all telegraph stations. These signals are automatic clock beats, repeated over the wires by the Master Clock. All repeater switches should be thrown. The following program will be observed:

### H. M. S.

- 10 57 00 a.m., Second beats commence and continue until the 28th second inclusive, when circuit opens until
- 10 57 30 a.m., When second beats commence again, continuing to the 54th second, inclusive, when circuit opens until
- 10 58 00 a.m., When second beats commence again, continuing until the 28th second, inclusive, when circuit opens until
- 10 58 30 a.m., When second beats commence again, continuing to the 54th second, inclusive, when circuit opens until
- 10 59 00 a.m., When second beats commence and continue until the 28th second, inclusive, when circuit opens until
- 10 59 30 a.m., When second beats commence again, continuing to the 49th second, inclusive, when circuit opens until
- 11 00 00 a.m., When the circuit closes one dot, and then opens again, when all repeater switches should be thrown back to original position.

This program affords ample opportunity to identify the minute and second. If from interruption of wires, or other causes, the time should fail to be transmitted from the Master Clock at Washington, the time will be struck by the Precision Clock in the General Watch Inspector's office at Topeka, as per above program, or should there be a failure from any cause in receiving time each day, Operators will get time from the Dispatcher's office.

It is important that every station shall have correct time, and Operators receiving time will, if necessary, correct the Station Clock to agree with time signals as received.

### RULES

**Rule 1.** Watches rated to position and certified by General Watch Inspector, with Time Service Approval

Card, Form 1641, and Watch Certificate, Form 1601, must be used by the employes designated in Rule 2-A, Rules and Regulations, Operating Department.

**Rule 2. (a)** The regulation watch designated as standard, is described as follows:

16 size, American, lever-setting, 19-jewels, or more, open face, winding at "12," double-roller escapement, steel escape wheel, adjusted to 5 positions, temperature and isochronism, which will rate within a variation not exceeding 6 seconds in 72-hour tests, pendant up, dial up and dial down, and be regulated to run within a variation not exceeding 30 seconds per week.

(b) The following listed makes and grades meet the requirements and comprise a complete list of watches acceptable. Watches bearing the name of jewelers, or other names not standard trade marks, or trade numbers, will not be accepted:

#### **Elgin Watches**

16 size...23-J "Veritas"  
23-J "B. W. Raymond"  
21-J "Veritas"  
21-J "B. W. Raymond"  
21-J "Father Time"  
21-J "No. 270"  
19-J "B. W. Raymond"

#### **Hamilton Watches**

16 size...23-J "No. 950"  
21-J "No. 990"  
21-J "No. 992"  
19-J "No. 952"  
19-J "No. 996"

#### **Hampden Watches**

16 size...23-J "Special Railway"  
21-J "New Railway"  
19-J "Railway"

#### **Howard Watches**

16 size...All 23-J  
All 21-J  
All 19-J

#### **Illinois Watches**

16 size...23-J "Sangamo Special"  
23-J "Sangamo"  
23-J "Bunn Special"  
21-J "Bunn Special"  
21-J "Sangamo"  
21-J "A. Lincoln"  
19-J "Bunn"

#### **South Bend Watches**

16 size...21-J "No. 227"  
21-J "No. 229"  
21-J "No. 295"  
19-J "No. 293"

#### **Waltham Watches**

16 size...23-J "Premier Maximus"  
23-J "Riverside Maximus"  
23-J "Vanguard" 6 position winding indicator  
23-J "Vanguard" 6 position  
21-J "Crescent Street"  
21-J "No. 645"  
19-J "Vanguard"  
19-J "Riverside"

#### **Ball Watches**

16 size...23-J "Official R. R. Standard"  
21-J "Official R. R. Standard"  
19-J "Official R. R. Standard"

**Rule 3. (a)** Watches must be protected with suitable guard or chain.

(b) All watches must be equipped with white enameled dials with black ARABIC numerals in upright position. Roman, fancy, luminous, silver or gold finished and all other forms of metal dials, also radiating and 24-hour dials are prohibited.

(c) Glasses must be replaced when badly scratched or when cracked or chipped at edge, for protection of movements from dirt and to insure correct reading of time. "Non-breakable glasses" are prohibited.

(d) Luminous hands, gold or fancy hands or those of improper length, not properly matched (too light or too thin) will not be accepted due both to danger of catching and inability of employes to readily see them with poor light.

(e) Employes are cautioned NOT to place photographs or any other obstruction of whatever character in or on watch cases, dials or glasses regardless of kind or style of case in which watches are carried. Inspectors are instructed to refuse to certify any watch presented in violation of this rule and will promptly report the circumstances to General Watch Inspector.

(f) Extra hour hands, painted or enameled RED, may be used on watches carried by TRAINMEN, ENGINEMEN OR FIREMEN on Western, 1st District of Colorado, Plains, Pecos, Albuquerque and Arizona divisions, but only where employes are on runs where both Central and Mountain, or Mountain and Pacific Standard Time is used.



(g) Where winding crowns are worn enough to make winding of watches uncertain, Inspectors will report to General Watch Inspector. New crowns must be fitted in all such cases because of inability of employes to be certain watches are completely wound.

(h) Snap back and snap bezel watch cases are not acceptable account not sufficiently tight to protect railroad watches.

(i) Chromium and chromium plated cases are not suitable for railroad service and will not be accepted.

**Rule 4. (a)** An applicant for service in which possession of a certified standard watch is a requirement, will be provided by Trainmaster or other employing officer with Form 1654, to be presented to Local Watch Inspector.

(b) If watch presented by applicant conforms fully to standard requirements as per Rules 2 and 3, and apparently is in first-class condition (and definite cleaning record is presented with it) or the applicant authorizes Inspector to make necessary repairs, clean movement, or make alterations or replacements so as to bring the watch within specifications, before or immediately after position rate test, Inspector will accept applicant's watch, provide Loaner and Loaner Certificate, and send watch to General Watch Inspector for rating.

(c) When Loaner and Loaner Certificate is issued to an applicant as provided in Rule 4-(b), Inspector will complete bottom portion of Form 1654 and furnish to applicant for return to Trainmaster or other employing officer, as an indication that watch inspection requirements have been complied with.

Form 1654

### AUTHORITY FOR WATCH INSPECTION

\_\_\_\_\_, 19\_\_\_\_  
Mr. \_\_\_\_\_, Local Watch Inspector,

The bearer \_\_\_\_\_ has made application for employment as \_\_\_\_\_ and you will accept his watch for shipment to General Watch Inspector for inspection and test, provided it meets standard requirements as per Rules 2 and 3, Form 1645, issuing Loaner and Loaner Certificate.

When Loaner is issued, complete the bottom portion of this form and hand it to applicant to be returned by him to my office.

\_\_\_\_\_  
Trainmaster or other employing officer.

\_\_\_\_\_, 19\_\_\_\_  
Mr. \_\_\_\_\_

I have this date accepted for shipment to General Watch Inspector for inspection and test, watch presented by \_\_\_\_\_ applicant for position of \_\_\_\_\_ and have issued him Loaner and Loaner Certificate on same as follows:

Make \_\_\_\_\_ Jewels \_\_\_\_\_ Grade \_\_\_\_\_ Number \_\_\_\_\_

\_\_\_\_\_  
Local Watch Inspector.

**Rule 5.** Employes must have Time Service Approval Card, Form 1641, and Watch Certificate, Form 1601, in their possession at all times while on duty (except while using Loaners) and obtain renewal of Certificate each quarter, delivering completed Certificates for the expired quarter to Local Watch Inspector who will file with Trainmaster. Completed Certificates must be delivered to Inspectors before new Certificates will be issued.

**Rule 6. (a)** Employes must have with them at all times while on duty, Certificate (Form 1601 or 1601-B) for watch in their possession and use. Employes will obtain Loaner Certificate, Form 1601-B, for relief watches BEFORE using them in service, regardless of how short a time the Loaners are to be used.

(b) Inspectors will provide employes with Loaner Certificates on Loaner watches furnished them by watchmakers not connected with this department, when such watches conform in every way to the standard requirements, and are in first-class condition, capable, in Inspector's judgment, of performing within the prescribed limit of error.

**Rule 7.** Employes will present to Inspector, watches on which they hold Form 1601 or 1601-B, between the 1st and 7th and between the 15th and 21st days of each month, for inspection and suitable record on Watch Certificate, Form 1601 or 1601-B, and must obtain new Watch Certificate between the 1st and 7th days of JANUARY, APRIL, JULY and OCTOBER. When employe fails for any reason, to have watch inspected within the seven day periods, it will be necessary to obtain Order from Trainmaster before Inspector will sign Watch Certificate or accept registration on Form 1601-A. Trainmaster, when issuing such Order for Inspection, will limit it to time in which it will be accepted. All such Orders to be attached to carbon copies of Sheets and carefully filed by Inspector.

## Sample of Order

Any Local Watch Inspector:

This Order when presented by John Doe, Conductor, on or before close of business June 10th, will authorize you to inspect his watch, and allow him to register on special sheet, Form 1601-A.

W. A. Adams,  
Trainmaster.

Issued June 8th, 9:10 a.m.

Void after June 10th, 19.....

**Rule 8.** Employes will sign Registration Sheets, Form 1601-A, BEFORE Inspector will sign Watch Certificate, Form 1601 or 1601-B. This applies where employes are using Loaners, the same as when using their own watches. Employes will write in "REMARKS" column the word "Loaner" when obtaining Certificate, Form 1601-B, for relief watch.

**Rule 9. (a)** Inspectors will forward Registration Sheets to Trainmaster on the 7th and 21st days of each month, retaining carbon copies of all such sheets, and will send sheets daily to Trainmaster for all special registrations made upon Order from Trainmaster, outside regular inspection periods.

**(b)** All completed Watch Certificates which have been collected will be sent with such sheets. Inspectors will note the letters "CR" on Registration Sheets, opposite signatures of employes, at the time of taking up completed Certificates. Such letters to signify "Certificate Received" and thus make record of acceptance.

**(c)** At points where Inspectors are required to maintain separate sheets for more than one division EMPLOYEES ARE RESPONSIBLE for registering on the proper sheet; those addressed to Trainmaster under whom they are working. Inspectors will, at all times, have Registration Sheets properly addressed to Trainmaster and also have them correctly dated.

**Rule 10.** Inspectors will not enter record on Form 1601 unless watch is presented with Time Service Approval Card, nor enter record in any spaces on Certificate for dates watches were not presented for inspection. Such spaces are to be LEFT BLANK. Watches should be presented by owners, whenever possible, as it is important that Inspectors know definitely what the variation has been, since last inspection. Employes should likewise personally present their watches when leaving them for cleaning or for repairs.

**Rule 11.** Form 1638 is to be issued in each instance where the employe is denied privilege of registering. Original to Trainmaster and carbon copy to General Watch Inspector.

**Rule 12. (a)** Watches must be cleaned and freshly oiled WITHIN fifteen months from date purchased (as new watches) or from date last cleaned.

**(b)** Inspectors are required to deliver Cleaning Statements to employes, showing thereon dates watches are cleaned (not date of acceptance nor date of delivery).

**(c)** Employes assume responsibility of obtaining Cleaning Statements when having watches cleaned by watchmakers not employed as Inspectors.

**(d)** It is the employe's duty in each instance to see that the Inspector or watchmaker who has cleaned the watch, endorses date watch was cleaned, and signs his name thereto, in space provided on back of Time Service Approval Card, Form 1641.

**(e)** Inspectors will not certify watches and will deny privilege of registering on Form 1601-A, when owner is unable to present conclusive evidence his watch has been cleaned within fifteen months preceding the date watch is presented.

**(f)** After his watch has been cleaned, it is the employe's duty to see that the Cleaning Statement reaches the Trainmaster on or before the close of the last day of the fifteen months period.

**(g)** When leaving watch for cleaning, employe must secure Loaner and Loaner Certificate, Form 1601-B. As it may be necessary for Inspector or watchmaker to hold for regulation or other work, a watch that has been cleaned, it is not necessary that employe have watch again in his possession after being cleaned, within the fifteen months limit, PROVIDED the watch is actually cleaned and Cleaning Statement is on file with Trainmaster within the fifteen months time limit.

**(h)** Under no circumstances will Cleaning Statement, Form 1628 or 1628-A, be delivered BEFORE watches have been cleaned.

**NOTE:** It is in order, and a good practice and it greatly prolongs the life of a watch, to have it cleaned at any time after twelve months, but the last day of grace allowed an employe to have his watch cleaned within the prescribed limit, is fifteen months from exact date last cleaned. Time Service Approval Cards show not only last date cleaned but also date cleaning limit expires.

**Rule 13. (a)** Watches are to be set to correct time by Inspectors when thirty (30) seconds in error and the In-

spectors are charged with the responsibility of changing regulators, when necessary, to insure all watches running within the prescribed limit of error.

(b) Employees are cautioned NOT to set their watches, or Loaners, or to change the regulators. This must be done by Inspectors.

(c) Employees may set watches to correct time only in emergency and will have watches inspected, and reset if necessary, by nearest Inspector, as quickly as possible after emergency.

**Rule 14. (a)** Watches which will not rate as the rules require in position, but which are in every other way up to our standard, will be condemned for repairs. Notice of such condemnation will be given by General Watch Inspector on Form 1642. When so notified employes will promptly place watches for readjustment, obtain standard grade Loaners and Certificates therefor and notify General Watch Inspector on form provided for the purpose (bottom portion of Form 1642).

(b) Reason for condemnation of watches submitted, which are NOT up to standard, will be given in special notice from General Watch Inspector.

(c) Watches left for repairs with watchmakers who are not employed as Local Watch Inspectors must, when they have been readjusted, be shipped to General Watch Inspector for rating, by the watchmakers who do the work. Loaners will be provided by those making the repairs, and when thus obtained must be presented at once to Local Watch Inspector for Loaner Certificate.

(d) Statement of Repairs (middle portion of Form 1642) should be sent in the package with any watch which has been condemned for repairs, when repairs have been completed. Space is provided on this form for cleaning record.

(e) Condemnation Notice, Form 1642, should always be delivered to watchmaker, with the watch. This because position performance (or rate) of watch, is recorded thereon and that record will materially assist the watchmaker in readjusting the movement.

**Rule 15. (a)** Inspectors are required to maintain supply of standard grade Loaners for use of employes whose watches are left with them for cleaning and/or repairs. Inspectors will forward watches to Topeka for rating when repairs are completed, after fitting balance staff, vibrating hairsprings, or upon completion of any work interfering with former position performance.

(b) Inspectors will promptly notify General Watch Inspector when accepting watches for repairs, in order that proper record of all watches temporarily out of

service, may be maintained; additional report to be made when Inspector finds it necessary to send an employe's watch to factory for readjustment.

(c) Reports will likewise be made when Loaner Certificates are furnished for watches borrowed from watchmakers who are not Inspectors, showing name of watchmaker furnishing such Loaners.

(d) Inspectors will take up Time Service Approval Cards when accepting watches for repairs, sending such cards to General Watch Inspector, with reports of acceptance, when re-rating will be necessary. Approval Cards shall be returned to employes, with their watches, in all other cases, after repairs have been completed.

(e) Inspectors will instruct factory in all cases where watches are sent to factory for repairs, to send watches to General Watch Inspector at Topeka for rating, when completed and ready for shipment.

**Rule 16.** When Loaners owned by the Company are returned in damaged condition by employes, bills for repairs necessitated by the damage will be rendered through Superintendent's office, against the employes. Where Loaners owned by Local Watch Inspectors are damaged, employes will arrange settlement with the Inspectors direct.

**Rule 17. (a)** Watch Register, Form 1633 Standard, will be provided for registering watches as instructed in Rule 3, Rules and Regulations—Operating Department.

(b) In registering watches on Form 1633 all information called for thereon should be furnished. The use of "OK" is prohibited.

(c) Agents, Operators and others will see that Watch Register Sheets are mailed daily to Trainmaster.

**Rule 18.** In comparing watches as provided in second paragraph of Rule 3, Rules and Regulations of Operating Department, if any doubt exists as to the watches of either having been wound at a time which will insure their running at least 16 hours, each will wind his watch in the presence of the other.

**Rule 19.** If an employe loses his watch through theft or otherwise, he must promptly report same to Trainmaster or General Watch Inspector and obtain a standard grade Loaner which may be used under conditions herein governing use of Loaners, for a period not in excess of thirty days, during which period he must provide himself with a watch meeting the requirements of these rules.

**Rule 20.** When employes in train, engine and yard service desire for any reason to trade or exchange watches, they must immediately apply to Trainmaster for an order

on an Inspector, to insure proper change in records and transfer of cleaning records, and to avoid conflict with current rules.

**Rule 21.** Inspectors will not ship watches to Topeka for rating when it is known they are not up to standard. Where non-standard watches are offered, Rules 2 and 3 should be explained and time saved for all concerned. Inspectors will make detailed reports to General Watch Inspector of such rejections, furnishing complete description of watches.

### ROADWAY AND STATION SERVICE

**Rule 22.** The following classes will be required to carry standard watches of the grades designated in Rules 2 and 3, Watch Certificate, Form 1637, and have watches inspected quarterly by Time Service Inspectors. (See Rule 23.)

Track Inspectors and Inspectors of Track and Roadway.

Section Foremen and Assistant Section Foremen.

Extra Gang Foremen and Assistant Extra Gang Foremen.

Bridge and Building Foremen and Assistant Bridge and Building Foremen.

Water Service Foremen and Assistant Water Service Foremen.

Traveling Motor Car Repairmen.

Telegraph Foremen.

Division Linemen.

Signal Foremen.

Signalmen and Signal Maintainers.

Operators, telegraph and telephone.

Agent-Operators, telegraph and telephone Towermen.

All others operating motor cars and all those handling train orders not heretofore under time service regulations.

**Rule 23.** Time Service Inspectors will, each quarter, cover all divisions of the system on gasoline track cars, for the purpose of inspecting watches of employes covered by Rule 22. Superintendents and other officials, will notify employes in the different departments, by bulletin or otherwise, what dates Inspectors will arrive.

**Rule 24.** Time Service Inspectors will not inspect watches of train, engine and yard service employes and will not be permitted to sign Watch Certificates, Form 1601.

**Rule 25.** Employes who will not be on duty at the time of scheduled arrival of Time Service Inspectors, may arrange to leave their watches, as well as Watch

Certificates, Form 1637, with employes who will be on duty, to insure proper record and inspection of all watches.

**Rule 26.** Employes will sign Comparison Sheets, Form 1704 or 1704-A, when presenting watches to Time Service Inspectors for inspection.

**Rule 27. (a)** Employes must have with them at all times while on duty, Watch Certificate, Form 1637, for watch in their possession and use, and present such Certificate to Time Service Inspectors at each inspection period, or at any time when called for by an Official or an Inspector.

**(b)** In case Watch Certificate, Form 1637, is lost, employe will promptly report such loss to Assistant General Watch Inspector, Kansas City, Missouri, requesting duplicate.

**Rule 28.** When having watches cleaned and oiled, employes will obtain statement from watchmaker, on his printed stationery, or on Notice of Cleaning, Form 1628-B, and retain such statement to be presented to Time Service Inspector.

**Rule 29.** When purchasing new watch, employe will obtain statement from dealer bearing date of sale, to be presented to Time Service Inspector for the establishment of cleaning record.

**Rule 30.** Watches traded for must be cleaned and freshly oiled, as soon as acquired, in all cases where definite cleaning record cannot be furnished. Time Service Inspectors will issue Delinquent Cleaning Notice, Form 1699, where the foregoing is not complied with.

**Rule 31.** If an employe for any reason fails to comply with Rule 25, Time Service Inspector will issue Notice of Inspection Missed, Form 1694, (also when watch presented for inspection is found to be in bad order) which requires employe to present watch to nearest Local Watch Inspector for inspection or, in the latter event, to most conveniently located watchmaker for repairs.

**Rule 32.** Roadway and Station employes must have their watches cleaned and freshly oiled WITHIN fifteen months from date last cleaned, under conditions specified in Rule 12, except that Rule 28 will apply in so far as it affects securing Notice of Cleaning, Form 1628-B.

**Rule 33.** Employes entering any of the positions designated in Rule 22, should consult Time Service Inspectors in regard to watches they may have, to get official and definite information as to whether they conform to standard.



**Rule 34.** Employes not having access to Standard Clock must compare their watches as frequently as possible with Agents or Operators who have compared with time signals, or with Enginemen, Conductors, or others required to carry standard watch and who have made recent comparisons with Standard Clock. When necessary, correct time may also be obtained from Train Dispatcher.

**R. D. MONTGOMERY,**  
General Watch Inspector.

Approved:

**The Atchison, Topeka and Santa Fe Railway  
Company:**

F. A. LEHMAN,  
*General Manager, Eastern Lines.*

H. B. LAUTZ,  
*General Manager, Western Lines.*

J. R. HITCHCOCK,  
*General Manager, Coast Lines.*

**Gulf, Colorado and Santa Fe Railway Company:**

W. E. MAXSON,  
*Vice-President and General Manager.*

**Panhandle and Santa Fe Railway Company:**

H. B. LAUTZ,  
*Vice-President and General Manager.*