 NORFOLK SOUTHERN <i>The Thoroughbred</i>	MW&S STANDARD PROCEDURE	SUPERSEDED DATE 09/01/1998	NUMBER 340
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ALL PREVIOUS PROCEDURES AND INSTRUCTIONS IN CONFLICT HERewith ARE SUPERSEDED TO THE EXTENT OF THE CONFLICT UPON RECEIPT OF THIS PROCEDURE.

SCOPE AND NATURE

To establish a standard for switch stands including types, use, and maintenance.

SPECIAL REFERENCES

MW&S Standard Procedure 380 - Track Inspection
MW&S Standard Procedure 385 - Turnouts
* Norfolk Southern *Operating Rules* Manual
Federal Railroad Administration's *Track Safety Standards*, Subpart D, §213.135

Norfolk Southern Standard Plan for New Century 51-A Switch Stand
Norfolk Southern Standard Plan for New Century 51-B Switch Stand
Norfolk Southern Standard Plan for Bow Handled Throwing Lever
Diagram for Bolting Switch Stands to Headblock Ties
Diagram of Safety Plate for New Century 51-A and 51-B Switch Stands
Switch Out of Service Tag, NS Form 11371
* Norfolk Southern Standard Plan for Switch Targets
Plan for Racor 36-E Switch Stand
Information Sheet for New Century 1222 Switch Stand
Plan for Racor 20-C/20-B Switch Stands
Plan for Racor 22/22-P Switch Stands

Copy attached
to procedure.

OUTLINE OF PROCEDURE

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PROCEDURE

1. TYPES AND APPLICATIONS OF SWITCH STANDS

.01 New Century 50-A and 51-A Switch Stand

The 50-A and 51-A Switch Stands are low switch stands. These stands are used for yards, industries, main track in traffic control and within 500 feet of signals in automatic block signal territories, and turnouts from siding. See exhibit pages i, iii, and iv.

.02 New Century 50-B and 51-B Switch Stand

The 50-B and 51-B switch stands are the only intermediate height stands in standard use on Norfolk Southern. These stands are used on automatic block signal main track where turnouts are more than 500 feet from a signal and on mainline non-signaled territory. See exhibit pages ii, iii, iv.

.03 Racor 36-E Switch Stand

The Racor 36-E Switch Stand is authorized for use only in spring switches. See exhibit pages ix.

.04 New Century 1222 Switch Stand

The New Century 1222 switch stand is installed only in yards except where otherwise permitted by the chief engineer Line Maintenance. The 1222 switch stand is used in connection with close clearances and may be installed in the track between the switch points. See exhibit page xi.

.05 Racor 20-B, 20-C, 22, and 22-P Switch Stands

- These switch stands are low switch stands used only in yard tracks. Should a switch on which one of these stands is installed be run through, the stand ordinarily is not damaged. The switch must be inspected and switch adjusted if conditions warrant.
- Racor 20-B, 20-C, 22, and 22-P switch stands are being phased out through attrition. They are to be replaced with New

Century 50-A or 51-A stands. New Century 50-A and 51-A stands used in yards and other designated non-mainline tracks are to be equipped with bow handles where clearances allow and where authorized. See exhibit pages xii and xiii.


- There are other types of switch stands in limited use at various locations throughout the Norfolk Southern system where other lines have been acquired. These stands have particulars of their own. They will continue to remain in track until replaced through attrition or through a program directed by proper authority. One should handle with his supervising officer for matters covering these other type non-standard stands.

- Bow Handles** – New Century 50-A and 51-A switch stands used in yards and other designated non-mainline tracks are to be equipped with bow handles where clearances allow and where authorized. See exhibit page v.

2. NEW CENTURY 50-A, 50-B, 51-A, AND 51-B SWITCH STANDS

See exhibit pages i, ii, iii, and iv for diagrams of the New Century 50-A, 50-B, 51-A, and 51-B switch stands.

- These switch stands have the following items in common:
 - The stands are interchangeable as to whether they are used right hand or left hand by removing the crank from the spindle, rotating the crank 1/2 turn and replacing on the spindle.
 - The use of the double ended cast iron break away crank is **PROHIBITED**. The only allowable crank is the single ended forged steel crank.
 - Whenever a switch using a 50-A, 50-B, 51-A, or 51-B stand is run through, the spindle is damaged. For main track applications, the entire stand must be replaced. For other than main track use, the

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spindle only may be replaced.

- d. On 51-A and 51-B, if one side of the segment gear is full of shims while the other side has very few, this is generally an indication that the switch has been run through. However, there are other causes which may result with all of the shims being on one side such as the stand being improperly installed, not securely fastened to head block ties, or simply being worn out.
- e. 50-A and 50-B stands **do not** have any adjustment in the stand. The adjustment for switches using these stands is with the adjustable connecting rod and basket adjustment. On former Conrail territory, the throw (measured at the tip of the switch point) is to be between 4-7/8" but not to exceed 5-1/4".
- f. On the Norfolk Southern territory prior to the Conrail acquisition, the throw, ideally, is to be 4-3/4 inches (measured over the number 1 switch rod) adjusted by the use of shims in the segment gear. In order to adjust a 51-A or 51-B stand, the following steps must be followed:
 - (1) The cover must be opened. On 51-A stands the set screw must be loosened. On 51-B stands the top extension which stabilizes the mast must be raised. Turn cover to one side to expose segment gear.
 - (2) With switch thrown to side adjustment is being made, loosen nut on bolt exposed in segment gear.
 - (3) Slightly cock switch. If point is open add shims to bolt in segment gear. If switch has good fit and pinch is excessive, remove shims and place outside of segment gear on bolt between gear and nut.
 - (4) Switch should be adjusted so that in both closed positions, the throw lever arm kicks back in latch.
 - (5) Tighten nuts on bolts in segment gear.
 - (6) Replace cover, and on 51-B stands replace top extension. Covers must

be fastened such that passers-by cannot readily gain access to the shims and segment gear.

- .02 The connecting rods used with these switch stands are:

a. 50-A

Rod		Rail
Length	Application	Weight
84"	All	All

b. 50-B

Rod		Rail
Length	Application	Weight
120"	All	All

c. 51-A

Rod		Rail	King Bolt
Length	Application	Weight	Hole Size
39"	Crossovers	All	1-1/32"
51"	TC	All	1-1/32"
45"	All Other	All	1-1/32"

d. 51-B

Rod		Rail	King Bolt
Length	Application	Weight	Hole Size
73-1/2"	All	All	1-1/32"

3. NEW CENTURY 1222 SWITCH STAND

To adjust the 1222, pull pivot pin connecting the stand and rod turnbuckle. Lift turn buckle off stand and either loosen or tighten the turnbuckle on the connecting rod to adjust the fit. See exhibit page ix.

4. SWITCH STAND FOR SPRING SWITCHES

Racor 36-E (See exhibit page ix.)

- .01 The throw of the stand is 5-1/4 inches with no adjustment in the stand. The switch is adjusted in the Mechanical Switchman (which is used in place of a connecting rod) and is performed by a signal maintainer. Ideally the throw measured over the number one switch rod should not exceed 4 3/4 inches.

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- .02 See MW&S Standard Procedure 385 - "Turn-outs" for further information concerning the mechanical switchman and spring switches.

5. RACOR 20-B, 20-C, 22, AND 22-P SWITCH STANDS (See exhibit pages xii & xiii.)

- .01 The standard throw for these type switch stands is 4-3/4 inches (measured over the number 1 switch rod). The throw is adjusted by turning the crank eye in the spindle inward to reduce the throw and outward to increase the throw.
- .02 These switch stands are generally used with an adjustable connecting rod. When the amount of throw is correct, by lengthening the connecting rod, fit can be moved from the near stock rail to the far rail. By shortening the connecting rod, the fit moves to the near rail and away from the far rail.
- .03 The Racor 20-B and 20-C stand are lever throw stands. The 20-B stand does not have a latch but rather has a hasp like device protruding through the horizontal lever. The 20-B stand should have either a large S hook or a switch lock through the hasp like device. The 20-C has a latching toggle. If a lock is needed, it is placed in the toggle. Racor 20-B and 20-C stands are no longer being bought. They will continue to be used until worn out. Future use of the Racor 20-B and 20-C stands should be limited to switches of less importance.
- .04 The Racor 22 and Racor 22-P stands are ball throw stands and provide more leverage than the 20-B or 20-C. Neither stand has, nor requires, a latch. The 22-P is made such that it may be locked if conditions warrant.

6. INSTALLATION

- .01 All switch stands and latches in main track use are to be secured to the headblock ties by use of a combination of spikes and double ended threaded studs with nuts. A flat washer and a lock washer is to be used at both top and bottom of the studs. For switch stands the stud is 3/4" by 11" (class-item number 640-926062) and for switch latches the stud is 5/8" by 10" (class-item number 640-926054). The Racor 36-E should be secured with four spikes and six studs. Other switch stands should be secured with two spikes and four studs. Each New Century 50-A, 50-B, 51-A, or 51-B latch should be secured with two spikes and two studs. See exhibit page vi, figure 1.
- .02 To prevent dragging equipment from throwing a switch, the throw lever ball or throwing arm must point towards the frog when the switch is lined for main track.
- .03 Switch stands are to be installed, whenever possible, such that the connecting rod is pulling the closed switch point when in the normal position.
- .04 To prevent the crank from falling off from New Century 50-A, 50-B, 51-A, and 51-B switch stands, in the event the cross pin comes out, a safety plate (class-item number 640-760676) is to be used on all new installations. (See exhibit page vi, figure 2.) On older installations where safety plates do not now exist, they must be installed at any time the switch stand or head-block ties are replaced. Until all 50-A, 50-B, 51-A, and 51-B switch stands have a safety plate underneath them, they must have a safety block placed tightly beneath the crank. No Safety plate is required for the Racor 36-E.
- .05 **Installing a Switch Stand**
- a. Connect the stand to the number 1 switch rod using the appropriate connecting rod.

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- b. Open the switch points with a bar so that each point is equal distance from its stock rail.
- c. Square the stand on the headblock ties.
- d. Have the ball or lever arm straight up and down. With the Racor 20-B and 20-C Stands, have the horizontal lever at a right angle to the stand. On the Racor 22 and 22-P and New Century 50-A and 50-B stands, make sure that the crank is at a right angle to the headblock ties. On the 51-A and 51-B have the spindle lug CENTERED in segment gear. Also on the 51-A & 51-B stands, the number of shims should initially be the same on each side of the lug in the segment gear.
- e. Tack stand to headblock ties using the middle holes.
- f. Check switch point fit. Provided the above listed steps have been properly followed, if the points are open, it should be nearly the same amount on both sides. If there is too much pinch and the handle does not go all way down it should be very nearly the same on both sides.
- g. Completely fasten stand to headblock ties.
- h. Adjust Switch. With Racor 20-C, 22, and 22-P stands, the shoulder bolt that goes through the crank eye should be such that the nut is on top. A cotter key MUST always be used to prevent the nut from working off.
- i. When an adjustable connecting rod is used, after the switch is adjusted, the jam nut must be left tight against the turnbuckle.

.06 Bethlehem "Bow Handle" Installation
The following are the steps to replace the existing lever handle of a Bethlehem New Century Model 51 Switch Stand with a Bethlehem "Bow Handle":

- a. Remove the switch stand top by removing the four hold down nuts.
- b. Remove the old handle and replace it with the Bow Handle. Note: The pinion gear must be replaced in the same notch as it was removed.

- c. Remove the old crank from the bottom of the switch stand and replace it with a 5 1/2" crank. In most cases, the switch stand will have to be reset (See instructions for resetting in section 6.05 a-i).
- d. Both switch latches must be checked for distance from the center of the switch stand. To avoid interference with the top of the bow handle each latch must be place 1 1/2" from the center of the switch stand. Do not allow the top of the bow handle to come into contact with the switch latch.

7. SWITCH TARGETS

.01 Switch Targets are the following colors:

- a. **Main Track**
 - (1) NS prior to CR White and Red
 - (2) Former Conrail Green and Red
- b. **Other Than Main Track**
 - (1) Former SOU White and Red
 - (2) Former N&W Green and Red
 - (3) Former Conrail Green and Red

See exhibit pages vii and viii.

.02 Targets are to be used with all New Century 50-B and 51-B stands and with all low type stands in yards except where special instruction dictate otherwise.

.03 Spring Switches

- a. On Norfolk Southern territory prior to the Conrail acquisition, switch targets are **not** used with spring switches.
- b. On former Conrail territory, switch targets are used with spring switches.

.03 Missouri - The State of Missouri requires red and green targets in yard tracks. The red side of the target must have at least 110 square inches of reflectorized surface area.

.04 Targets are to be installed such that the white or green side shows when the switch is lined for the main track or lead track. The red side is to show when the switch is lined for other than



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main track or lead track. Targets on crossover switches are to be placed so that they are in correspondence, i.e. when the switches are both lined for movement through the crossover, both targets should display red and when lined for straight track, should both display white or green.

Exception: At certain locations, upon request of the Transportation Department, an exception may be made to the standard installation of switch targets. In such cases, targets may be so installed. However, arrangements must be made with the proper Transportation officer to have a proper bulletin issued regarding the nonstandard installation of a switch target.

.05 On NS territory prior to the Conrail acquisition, target assemblies for 51-A and 51-B stands are to have **FOUR** angle brackets used at both the top and bottom of the target assemblies in order to provide increased strength. See exhibit page vii.

.06 The maintenance of the targets is the responsibility of Line Maintenance.

8. INSPECTION

.01 Switch stands must be inspected whenever the turnout is inspected. (See MW&S Standard Procedure 385).

.02 Switch points must fit properly with some pinch but not excessive.

.03 All fastenings must be observed for secureness.

.04 Latches, where used, must be inspected for excessive wear to insure that the switch cannot be thrown when locked. Particular attention must be given to the top pin in the New Century latches used with 50-A, 50-B, 51-A, and 51-B switch stands. Excessive wear in this pin can allow the switch to be thrown when locked.

.05 Inspect components for cracks.

.06 Inspect for excessive wear on internal components and connecting rod by putting pressure behind switch point with lining bar and observe whether there is any motion at the connecting rod when the stand is in the fully thrown position. This must be done with stand thrown both ways.

.07 Check the Racor 20-C stand by trying to throw the switch with the stand latched (Racor 20-B when locked). If the stand throws, this indicates that the stand is worn out and needs to be replaced.


.08 All New Century 50-A, 50-B, 51-A, and 51-B stands should have a throwing lever which is offset. The shaft from pinion gear must be square where it fits into the throwing lever. If the throwing lever is other than that above, it must be removed from the track.

.09 All New Century 50-A, 50-B, 51-A, and 51-B switch stands should have a safety plate under the stand to prevent the crank from falling off in the event the cross pin comes out. In the absence of a safety plate, a safety block must be placed tightly beneath the crank.

.10 Upon completion of inspection, switch stand must be left such that switch is in its normal position. If the switch stand has latches, it must be known that the stand is latched or if no latches, that the stand is fully thrown before departing. If the inspection is made from on-track equipment a facing point movement must be made with the on-track equipment.

9. SWITCH OUT OF SERVICE

Norfolk Southern Territory Prior to Conrail Acquisition – Anytime that a switch is out of service for any reason, the switch stand must be tagged with a "Switch Out of Service" tag, NS Form 11371, see exhibit page v, and the Transportation Department must be notified.

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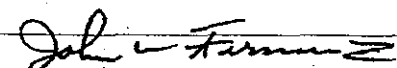
10. MAINTENANCE

- .01 All fastenings must be kept tight and in place.
- .02 Lubrication. Use a good grade of engine oil.
 - a. The following points need lubrication in all types of stands.
 - (1) Pivot at crank and connecting rod.
 - (2) All oil cups and oil holes on top of stand.
 - (3) Top of stand where spindle protrudes.
 - (4) At junction of throw lever and stand.
 - (5) Latches.
 - b. In addition, the following items dependent on the type stand:
 - (1) 51-A, 51-B - Remove cover and lubricate internal mechanism.
 - (2) 1222 - Lubricate all bearings to include sliding block.
 - (3) 20-C - Lubricate horizontal lever so that hand lever can slide freely.
 - (4) 51-B - Lubricate top of Top Extension where mast protrudes.
 - (5) 36-E - Lubricate the three grease fittings
- .03 All defective switch stands are to be shipped to Roanoke Roadway Material Yard for rebuilding.

11. TRACK RETIREMENTS

Under no circumstances is a switch stand to be removed from a retired track until the switch itself is removed.

APPROVED:



Assistant Vice President - MW&S

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As the Engineer

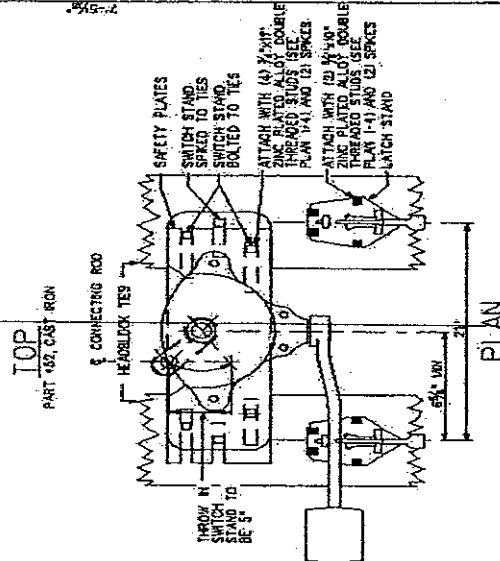
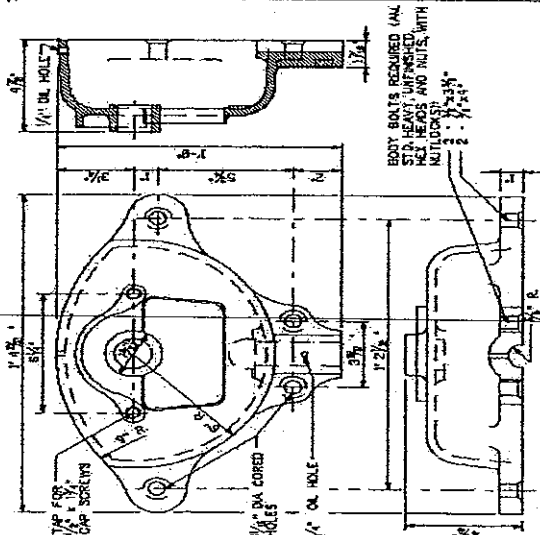
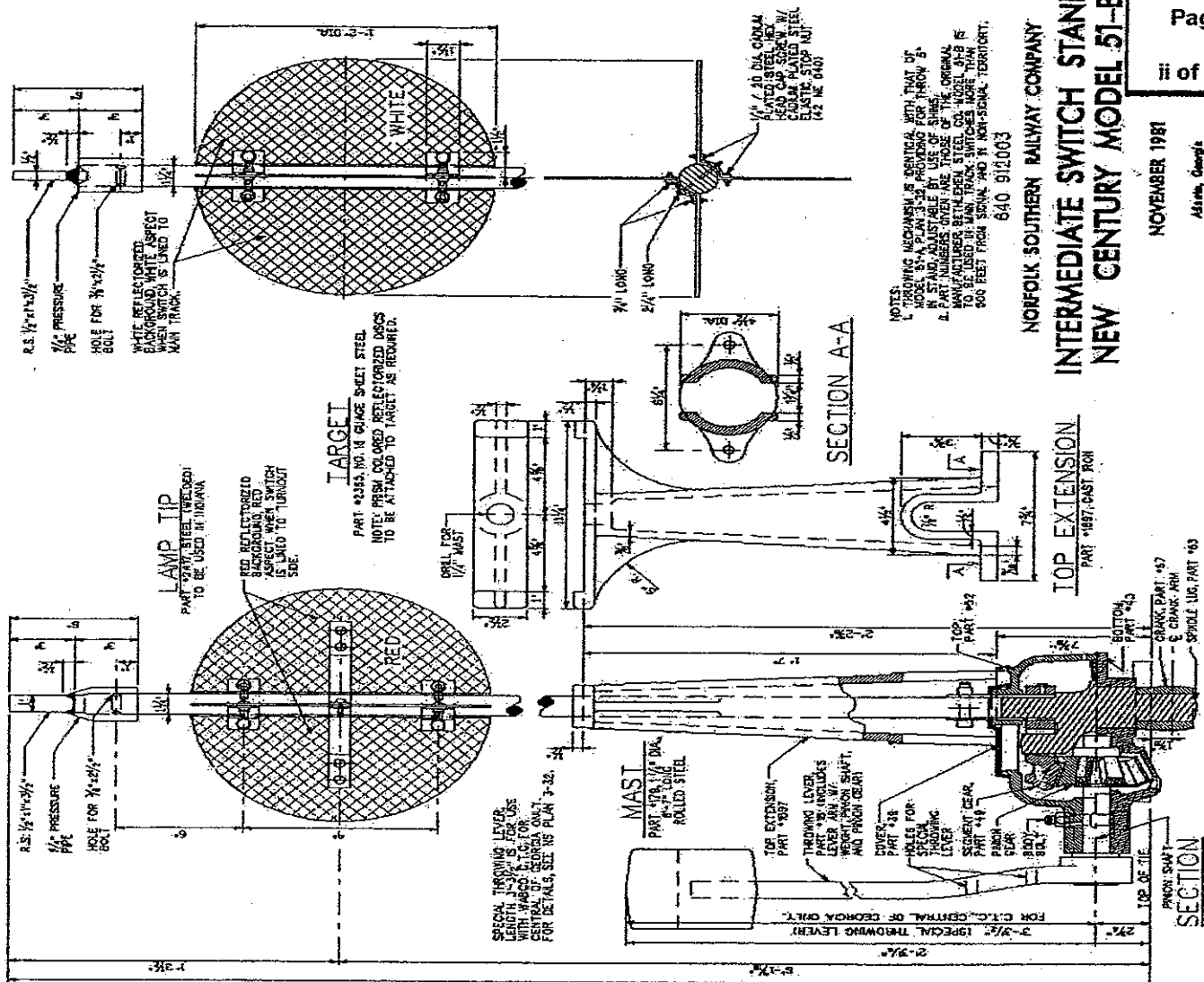
NOFOLK SOUTHERN RAILWAY COMPANY INTERMEDIATE SWITCH STAND NEW CENTURY MODEL 51-B

640 912003

NOTES:
1. THROWING MECHANISM IS SWITCH WITH THAT OF MODEL 51-A, PLAN 3-32 PROVIDING FOR THROW 5" IN STAND, ADJUSTABLE BY USE OF SHIMS.
2. PART NUMBERS GIVEN ARE THOSE OF THE ORIGINAL MANUFACTURED BETWEEN STEEL CO. MODEL 51-B IS TO BE USED IN ANY TRACK SWITCHES MORE THAN 500 FEET FROM SIGNAL AND R. NON-SIGNAL TERRITORY.

TOP EXTENSION PART #1877, PART RCH

SECTION



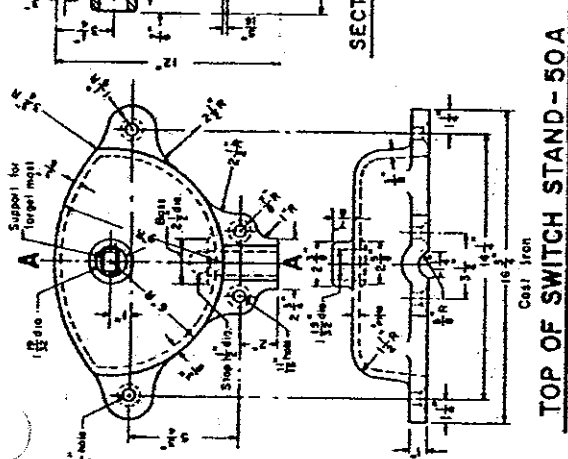
PART	MATERIAL	QTY	REMARKS
10	CAST IRON	1	SWITCH STAND
11	CAST IRON	1	SWITCH STAND
12	CAST IRON	1	SWITCH STAND
13	CAST IRON	1	SWITCH STAND
14	CAST IRON	1	SWITCH STAND
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98	CAST IRON	1	SWITCH STAND
99	CAST IRON	1	SWITCH STAND
100	CAST IRON	1	SWITCH STAND

1. DETAILS OF THESE PARTS SHOWN ON PLAN 3-32, LOW SWITCH STAND, NEW CENTURY MODEL 51-A.

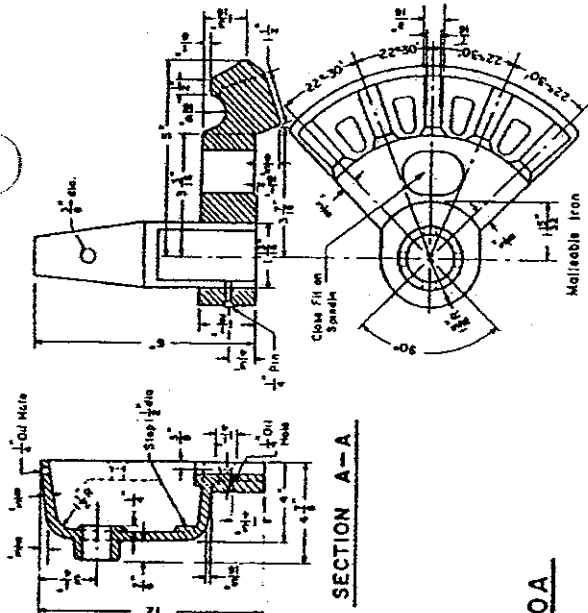
2. DETAIL OF CONNECTING ROD SHOWN ON PLAN 3-32, EXCEPT THAT LENGTH OF ROD BETWEEN HOLES SHALL BE 8-1/2".

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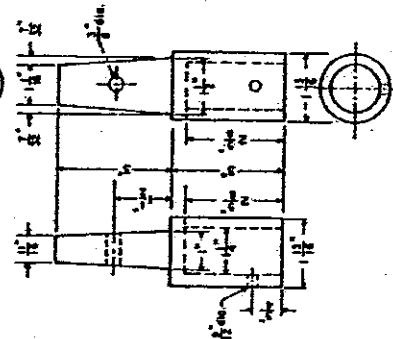
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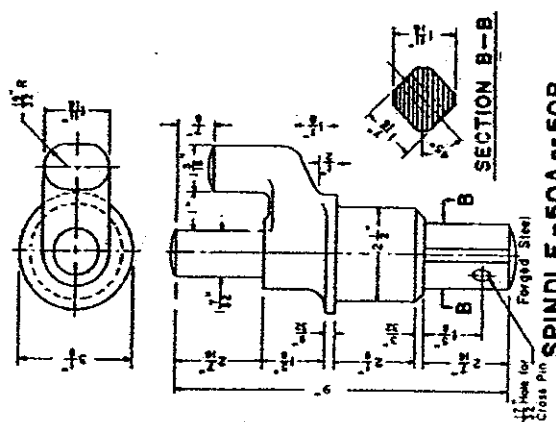
TOP OF SWITCH STAND-50A



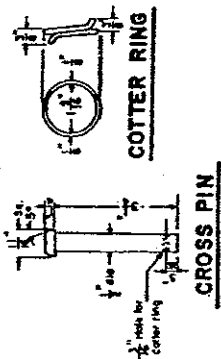
SEGMENT GEAR-50A or 50B



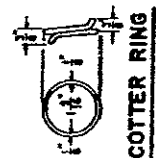
TARGET SUPPORT-50A



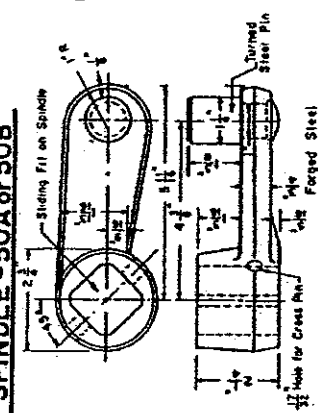
SPINDLE-50A or 50B



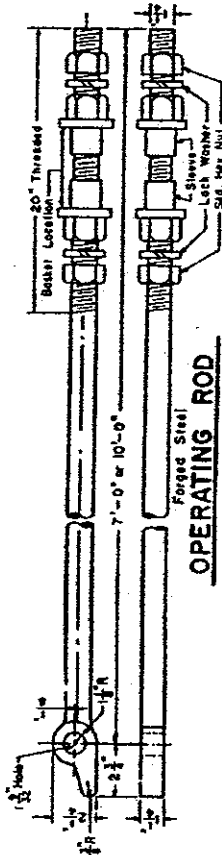
CROSS PIN



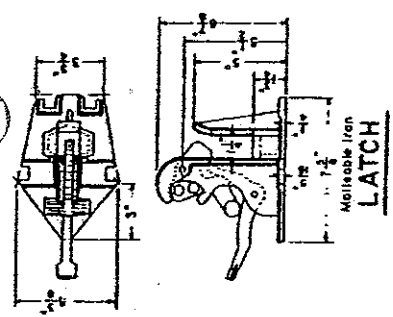
COTTER RING



CRANK



OPERATING ROD



LATCH

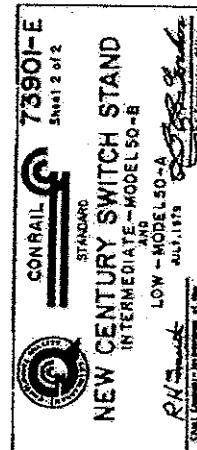
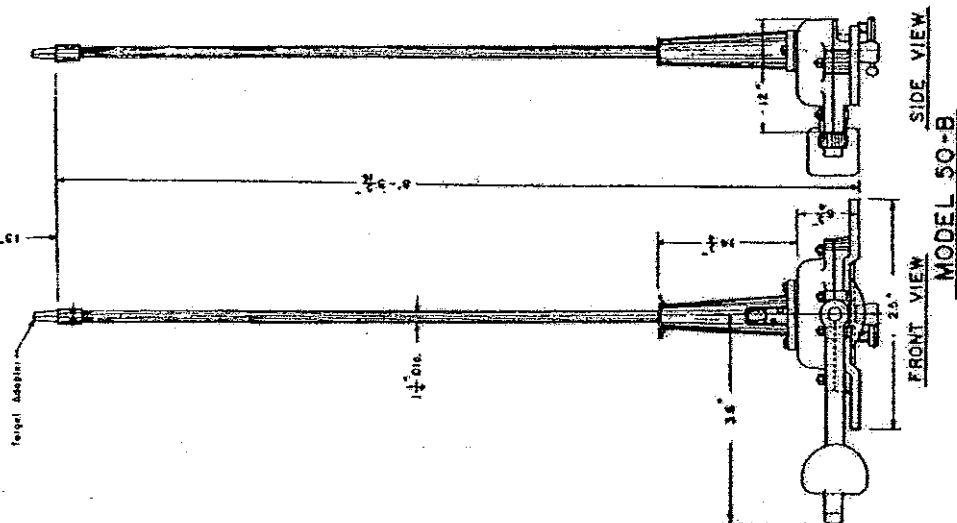
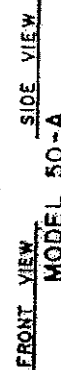
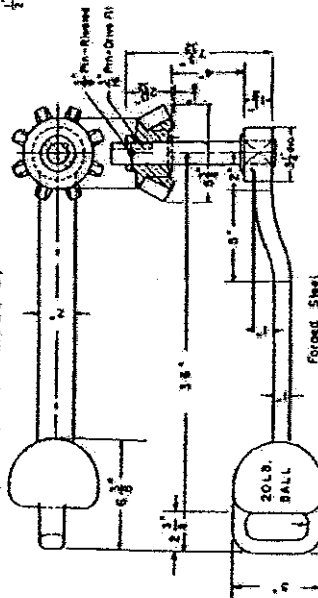
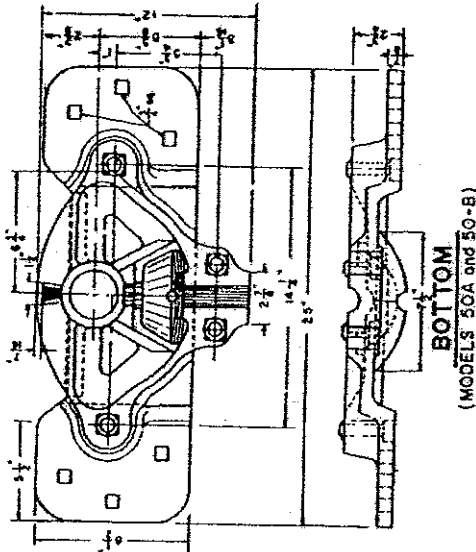
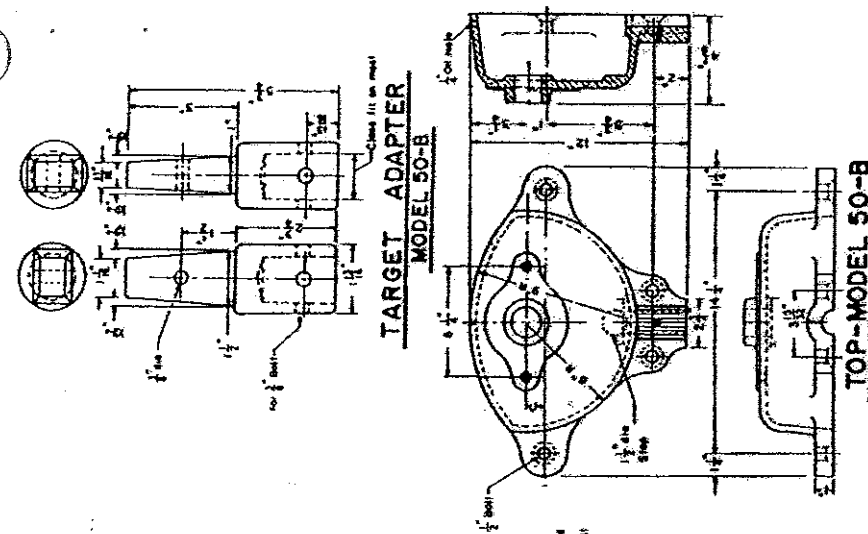
NOTE

For location of switch stands see M.W.4, Section 201.4, Paragraphs 01 and 02.

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CONRAIL 73901-B
Sheet 1 of 2
STANDARD
NEW CENTURY SWITCH STAND
INTERMEDIATE-MODELS 50-B
LOW-MODELS 50-A
JULY 1979
RHS
CONRAIL ENGINEERING & TEST

Conrail Standard Plan for
New Century 50-A and 50-B
Switch Stands



THROW LEVER FOR MODELS 50-A & 50-B

**Conrail Standard Plan for
New Century 50-A and 50-B
Switch Stands**

* Denotes Revision to procedure last issued 09/01/1998.

**MW&S
STANDARD PROCEDURE**

SUPERSEDED DATE

09/01/1998

NUMBER

340

ISSUE DATE

05/25/2004

FILE NUMBER

167-2

167-10

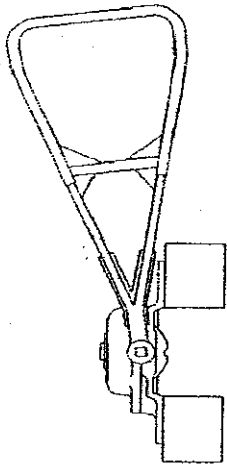
167-11

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TITLE:

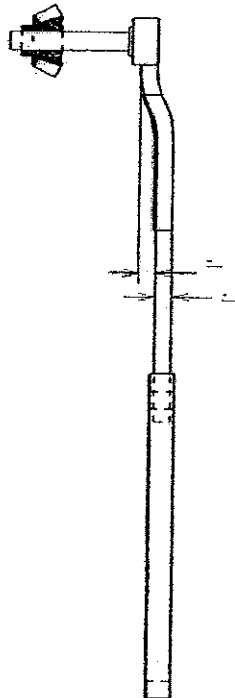
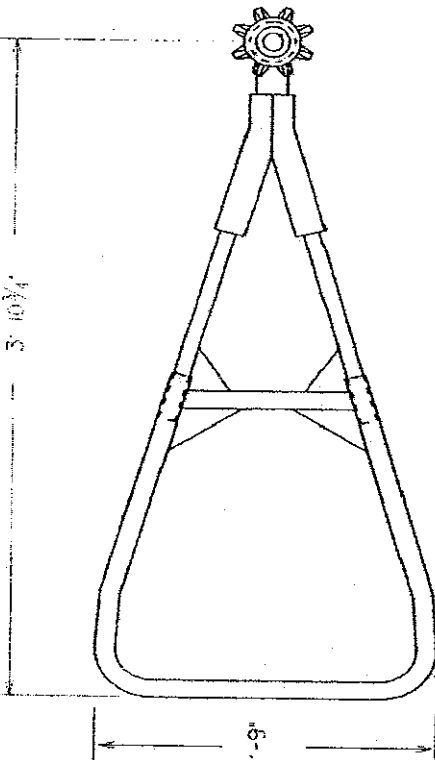
SWITCH STANDS



FRONT VIEW

NORFOLK SOUTHERN CORPORATION
BOW HANDLED
THROWING LEVER
FOR
BETHLEHEM 51-A & B
SWITCH STAND
MAY 1993
Atlanta, Georgia

REVISED AUGUST 1993



WARNING

**DO NOT
OPERATE**

**SWITCH
OUT OF
SERVICE**

FORM 11371
ITEM # 634884

NS Form 11371
Switch Out of Service Tag
This Form Printed on Orange Vinyl
Class Item Number 420-634884

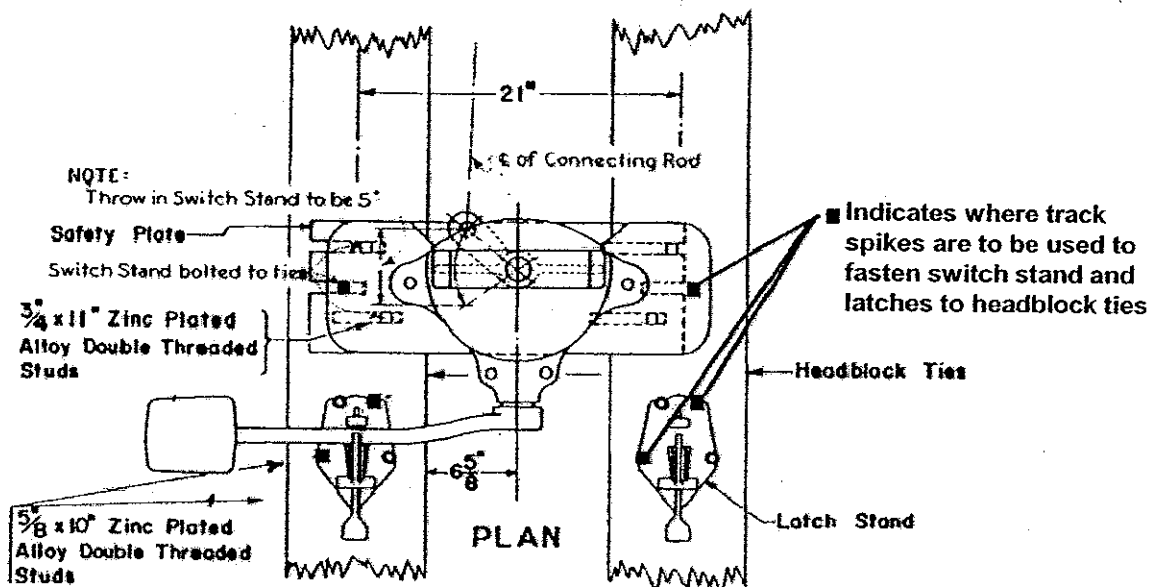


Figure 1

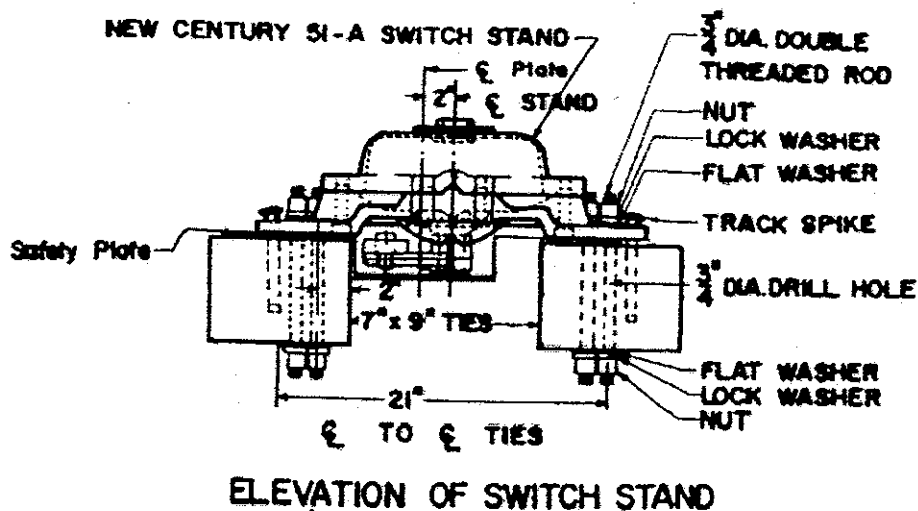
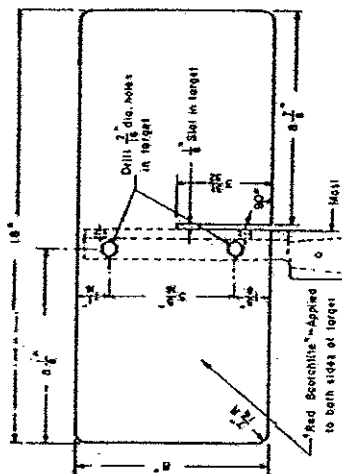
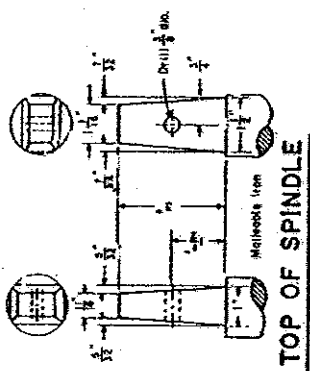


Figure 2

- 1- Perforated (optional). Swiss Target shall be made in accordance with CONRUL Specifications for Construction and Maintenance of Trench, M-W, and where not prohibited by Public Authorities having jurisdiction.
- 2- All corners and edges of mast and target, shall have a smooth finish.
- 3- The aluminum surface of the targets shall be thoroughly cleaned with Galfin 33 before the application of sealant by the use of heat to activate the adhesive and vacuum.
- 4- Care should be exercised when sliding target into slots and fastening them in the mast to reduce the possibility of damaging the scientific material.
- 5- Targets shall be of Q OR1-6061-T6 aluminum sheet.



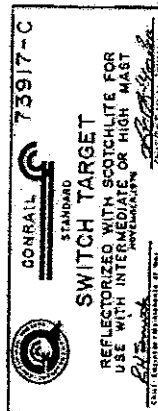
DETAILS FOR RED TARGET
INDICATION - REVERSE

402072 Red Min Intensity
Scale 1000

TOP OF SPINDLE

Upward point shall always point away from track when switch is set normal for this movement.

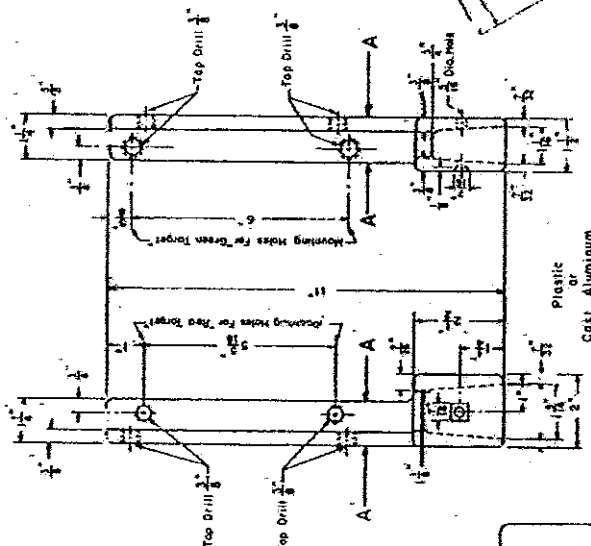
GENERAL APPLICATION



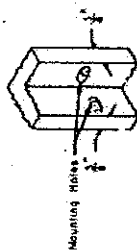
DETAILS FOR GREEN TARGET
INDICATION-NORMAL

No. 2877 Green Hill Intensity
Scotchite

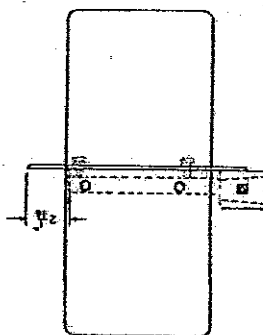
TOP VIEWS



MAST



VIEW AT MOUNTING HOLES



WIDE SIDE VIEW

* Denotes Revision to procedure last issued 09/01/1998.

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Standard Plan for Switch Targets on Former Contrall Territory

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09/01/1998

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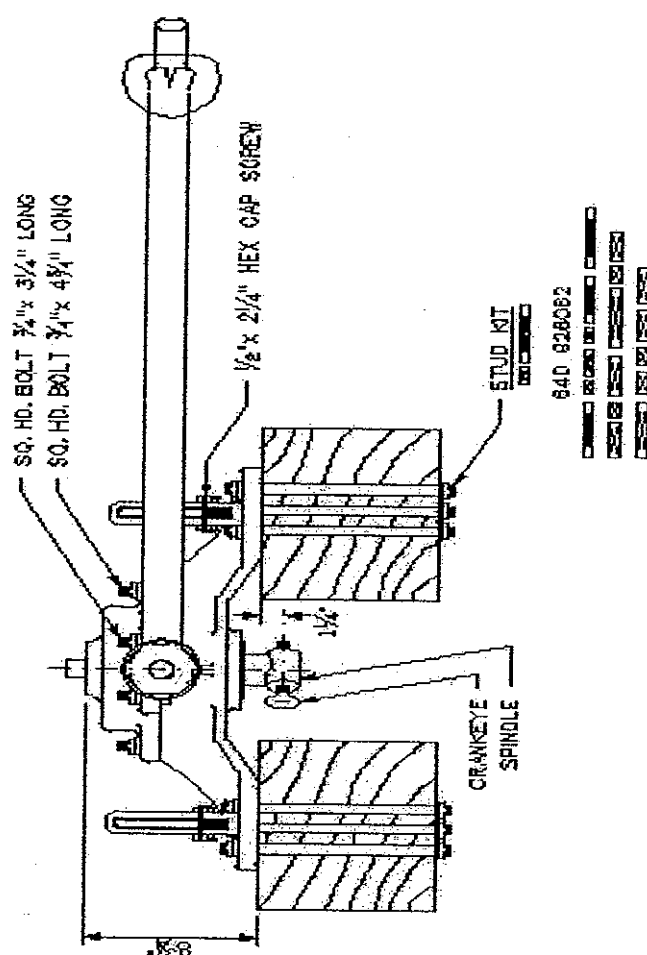
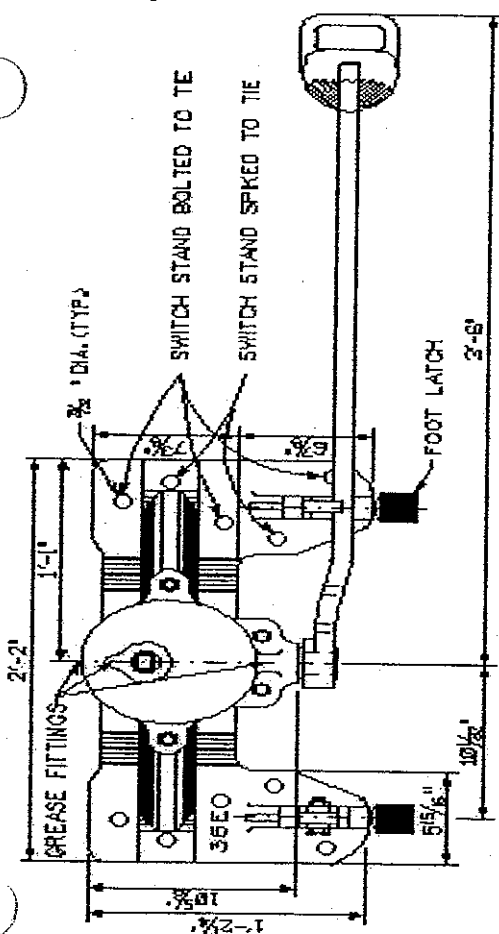
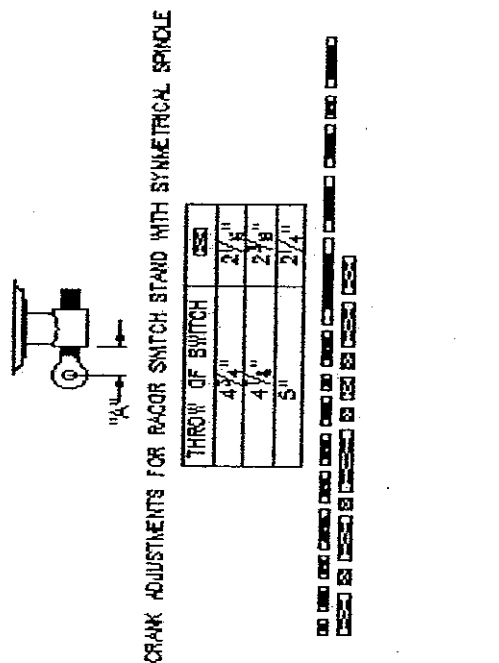
840-748307

NEWARK SOUTHERN RAILWAY COMPANY
LOW SWITCH STAND
RACOR MODEL 36-E

HOVMEIER 3400
CROSSING

NOTES:

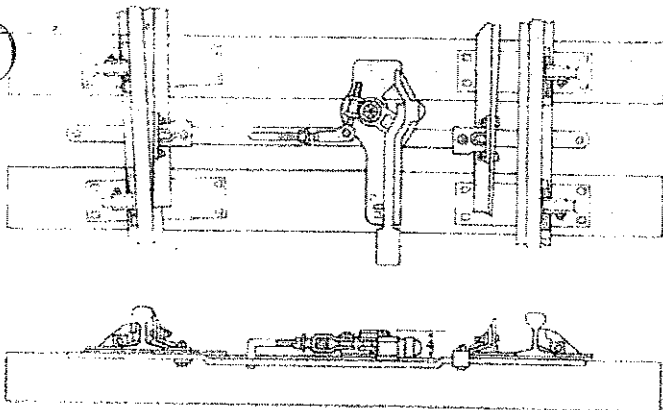
LOW SWITCH STAND, RACOR MODEL 36-E,
IS FOR USE IN SPRING SWITCH ONLY.
SIGNAL PROTECTION TO BE DETERMINED
BY C&S DEPARTMENT.
NO SAFETY PLATE IS REQUIRED.
EACH SWITCH STAND SHOULD BE SECURED
WITH FOUR SPKES AND SIX STUDS.



* Plan for New Racor 36-E Switch
Stand for use in Spring Switches only.

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This page reserved for later use



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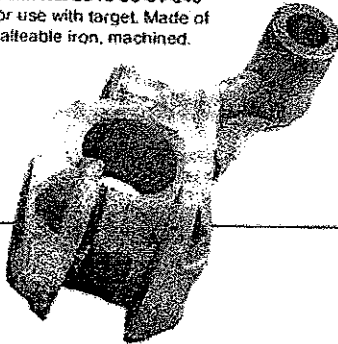
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COMPONENT PARTS FOR MODEL 1222

Crank No. 5540-00-01-640
For use with target. Made of
malleable iron, machined.



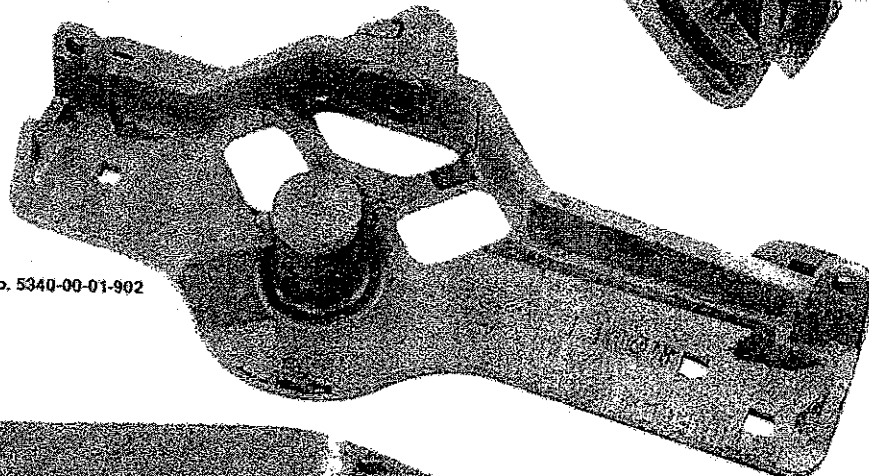
Sliding Block
No. 5520-00-01-642
For use with either Crank No.
1640, or Crank No. 1641. Made of
forged special-analysis steel,
heat-treated, machined.



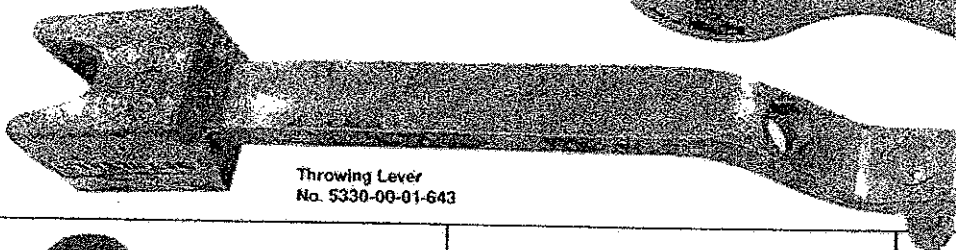
Crank No. 5540-00-01-641
For use without target. Made of
malleable iron, machined.



Base No. 5340-00-01-902



Throwing Lever
No. 5330-00-01-643



Adjustable Screw-Eye No. 5700-00-01-471
Made of forged special-analysis steel,
heat-treated. Range of adjustment from
3½ to 6 in.



Cotter Pin
No. 9700-380-0301



Oil Cup
No. 6000-00-01-903



Washer No. 6990-00-01-438
For use on base.
Washer No. 6990-00-02-578
For use on lever.

Information for New Century 1222
Switch Stand

* Denotes Revision to procedure last issued 09/01/1998.

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CRANK ADJUSTMENTS FOR RACOR SWITCH STANDS WITH SYMMETRICAL SPINDLE			
Throw of Switch	A	Throw of	A
4 1/2"	2 1/8"	5 1/2"	2 7/8"
4 5/8"	2 3/8"	5 3/4"	2 7/8"
4 3/4"	2 1/4"	5 1/4"	2 3/8"
4 7/8"	2 1/8"	5 3/8"	2 1/4"
5 1/2"	2 7/8"	5 1/2"	2 3/8"

* Do not set crank less than 2 1/8" to avoid interference between clevis and spindle. 5" Throw is standard.

NOTE:

Style 22 is for use in Yard Tracks only.

Style 22P is for conditions requiring stand to be locked.

Use good grade of engine oil, with graphite content preferred. SAE 60 FOR SUMMER, SAE 40 FOR WINTER.

Thrust Bearing
Thrust Bolt
Pivot Link
Link Pin
Holding Pin
Slide Block
Intermediate Link
Spring Cap

Assembled Height of Spring = 5 1/2" Normal
Adjust This Height after assembly in
completed stand so that Spindle Rests
against Stop "A" on Base on each side.

Round Drive Spikes Drain Hole
or 5/8" Out Spikes

PLAN
WITH TOP CASTING REMOVED
Rear Link
Spring
Bolt for Linkage
Washer
Nut for Linkage Bolt
Spring
Hand Lever Bolts, Spacers & Lock Washers

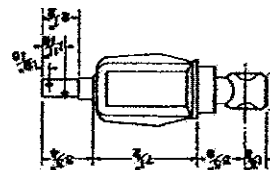
Drill 1.132 Dia. 7
6 1/2"

5/8" Dia. 7
1 1/2" Dia. 7
1 1/2" Dia. 7

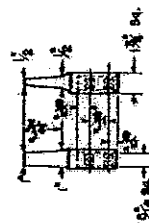
CRANK EYE

HT. SHOULDER BOLT

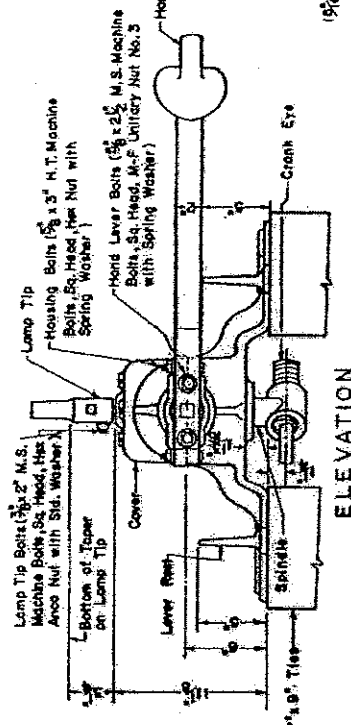
1/2" TURNED
STD. 3/4" HEX NUT
CUTTER 1/2" x 1/4"



SPINDLE



LAMP TIP



ELEVATION

Plan for Racor 22 and 22-P
Switch Stands