



भारत सरकार-रेल मंत्रालय  
अनुसंधान अभिकल्प औरमानक संगठन  
लखनऊ- 226011

E-mail: [dse4group@gmail.com](mailto:dse4group@gmail.com)  
Telephone : 2465754 & 42226(Rly)

Government of India - Ministry of Railways  
Research, Designs & Standards Organization,  
LUCKNOW - 226011



**No. EL/3.1.10/1(WLU)**

**Dated: As signed**

**Principal Chief Electrical Engineer,**

1. Central Railway, Mumbai, CST-400 001.
2. East Central Railway, Hazipur-844101.
3. East Coast Railway, Chandrashekharapur, Bhubaneswar-751016.
4. Eastern Railway, Fairlie Place, Calcutta-700001.
5. North Central Railway, Block-A, Subedarganj, Allahabad- 211033.
6. Northern Railway, Baroda House, New Delhi-110001.
7. North Eastern Railway, Gorakhpur-273001.
8. South Central Railway, Secunderabad-500 071.
9. South East Central Railway, Bilaspur-495004.
10. South Eastern Railway, Garden Reach, Calcutta-700 043.
11. Southern Railway, Park Town, Chennai-600 003.
12. South Western Railway, Hubli-580020.
13. West Central Railway, Jabalpur-482001.
14. Western Railway, Churchgate, Mumbai-400 020
15. North East Frontier Railway, Maligaon, Guwahati-781011
16. North Western Railway, Jaipur- 302 006
17. Chittaranjan Locomotive Works, Chittaranjan - 713 331
18. Banaras Locomotive Works, Varanasi- 221004
19. Patiala locomotive Works, Patiyala- 147 003

**Sub:** Modification Sheet No. RDSO/2025/EL/MS/0507, Rev. '0' Dated 25.02.2025

A Modification Sheet (MS) for provision of Waterless Urinal in WAG-9/9H/9HC 3-phase electric locomotives has been issued.

Copy of above MS can be downloaded from RDSO's website through the following path.

[www.rdsolndianrailways.gov.in](http://www.rdsolndianrailways.gov.in)---->Specifications/drawings---->Loco, EMU & Power supply---->other important links for Loco---->SMI/MS/TC---->serial number wise---->MASTER LIST OF MODIFICATION SHEET.

This is for your reference and record please.

**Encl:** As above

*Nirdosh*  
25.02.25  
(Nirdosh Kumar Gupta)  
for Director General/Electrica



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**Modification Sheet No. RDSO/2025/EL/MS/0507, Rev. '0' Dated 25.02.2025**

**1. TITLE:**

Provision of Waterless Urinal in WAG-9/9H/9HC 3-phase electric locomotives.

**2. Object:**

Indian Railway has always endeavor to provide best in class facilities to the passengers and crews. Provision of superior toilets in trains has been one of the key focus areas of Indian Railway. In the same pursuit, it becomes imminent for Indian Railway to provide safe and hygienic urinal facility to its Loco Pilots, which can be used by both men & women.

**3. History**

Waterless urinals require a free space of 600Wx1050Lx1830H, which is available in machine room near Cab-1 behind the rear wall of ALP side. However, the working of equipment like CO2 cylinder, maintenance hand brake etc. may get affected after installation of WLU.

The proposed installation schemes of PUs for waterless urinal have been discussed in the meeting held at RDSO on 10.01.2025 with BLW, PLW and

*Winds*

CLW in detail including issue of ease of maintenance of hand brake, operation of CO2 cylinder, ballast modification, standardization of mounting frame, modification of ventilation inspection cover, hole in loco shell for exhaust fan, shifting of hand brake etc. Shifting of hand brake Assembly from Cab-1 to Cab-2 has been ruled-out for operational issues and standardization. This modification sheet has been prepared on the basis of discussion of above points.

#### **4. Existing arrangement for WAG-9/9H/9HC:**

Presently CO2 cylinder and a part of hand brake assembly is located in the machine room near Cab-1 behind the rear wall of ALP side. There is some space available between Hand brake / CO2 cylinder and Ballast. However, after fitment of WLU in this space, the Hand brake regular inspection and maintenances need taking out the CO2 cylinder.

#### **5. Modified arrangement for WAG-9/9H/9HC:**

##### **5.1 Scheme-1:**

Waterless urinal (WLU) shall be mounted in the available space between ballast and CO2 cylinder on WLU assembly mounting frame. (Annexure -I).

The TM plenum ventilation inspection cover shall be modified as per BLW drawing no. ELSK- 164 (Annexure-II) to enable the inspection of ventilation duct after installation of waterless urinal.

Rear wall of hand brake assembly shall be cut and covered with openable plate with bolted arrangement from the cab side as per BLW drawing no. ELSK- 158 (Annexure -III) to enable the maintenance of hand brake assembly.

Two support bracket of suitable size shall be welded/riveted to the shell and WLU to support the WLU.

The drain arrangement of waterless urinal shall be as per BLW drawing no. ELSK- 164 (Annexure -II). PUs may incorporate this hole to the part of shell drawing to avoid making hole during fitment of WLU.

The Waterless urinal MS mounting stand shall be as per BLW drawing no. ELSK 161 (Annexure -IV).

The wiring scheme for Waterless urinal shall be as per BLW wiring scheme (Annexure -V).

##### **5.2 Scheme-2:**

A reshaped modified ballast reduced weight of 1650 kg (by reducing it to 200kg i.e. equivalent to the weight of WLU) may provide an extra space around 510 mm between Cab-1 rear wall and WLU assembly as per BLW drawing no. ELSK-159 (Annexure-VI). This scheme shall be applicable to the newly produced locomotives from the production units.

PUs may follow the scheme-I till the development of modified ballast.



## **6. Material required:**

### **6.1 Scheme-1**

- i. 01 no. waterless urinal.
- ii. Modified ventilation inspection cover.
- iii. 02 no. mounting bracket of suitable size.
- iv. Wiring as per annexure-V.

### **6.2 Scheme-2**

- i. Modified Ballast having weight of 1650 kg as per BLW drawing no. ELSK- 101 (Annexure-VII).
- ii. 01 no. waterless urinal along with mounting frame.
- iii. Modified ventilation inspection cover
- iv. 02 no. mounting bracket of suitable size.

## **7. Reference:**

- (i) Railway Board letter no. 2013/Elect(TRS)/441/5 dated: 22.07.2024.
- (ii) PLW letter no. PLW/E/DRG/Loco/EL-106 (WLU) dated: 24.08.2024.
- (iii) CLW letter no. ELDD/3608/Superstructure dated: 04.10.2024.
- (iv) BLW letter no. BLW/DnD/ELM/Waterless Urinal/Pt-1 dated: 29.11.2024.


## **8. Applicable to class of Locomotives:**

WAG-9/9H/9HC

## **9. Agency of Implementation:**

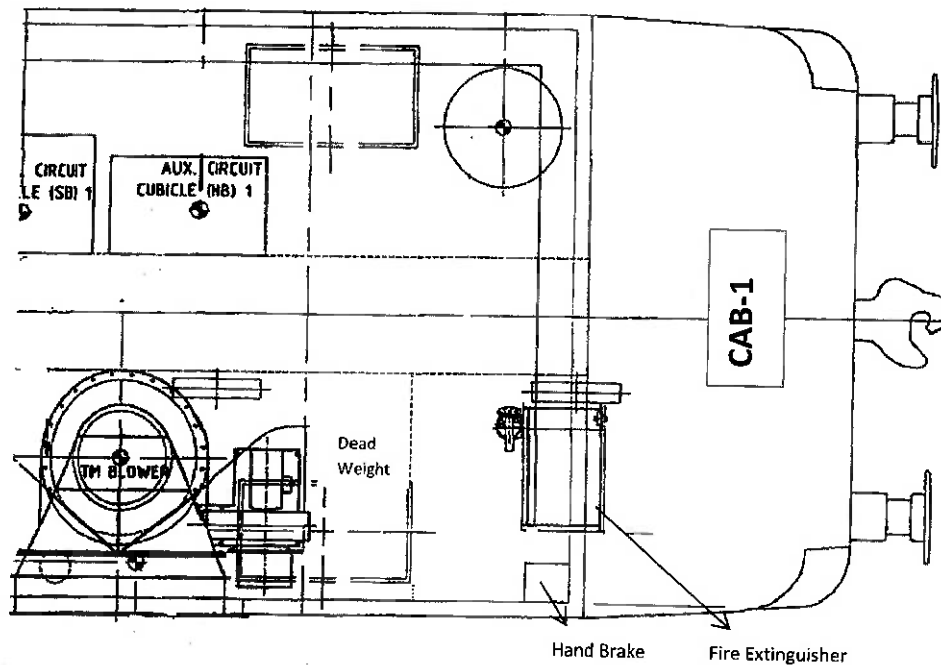
All POH workshop/Electric Loco Sheds/PUs

**Encl:** As above

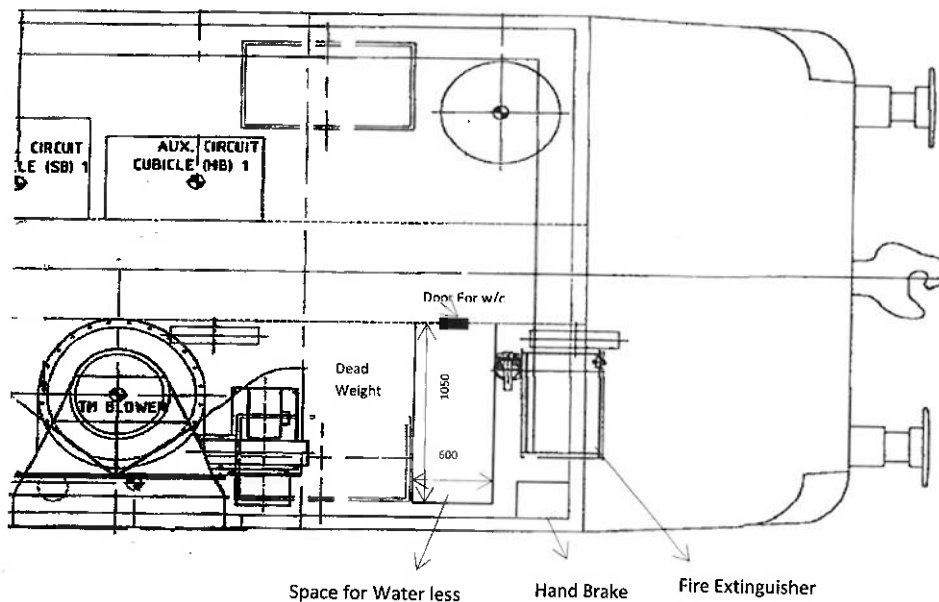
  
(Nirdosh Kumar Gupta)  
for Director General/Electrical

**Copy to:** As per standard mailing list.

**WAG-9/9H/9HC**



**Existing Arrangement**



**Proposed Location of Water-less Urinal**

Note: All Dimensions in mm



ITEM NO. 2

INSPECTION COVER SMALLER

[illegible]

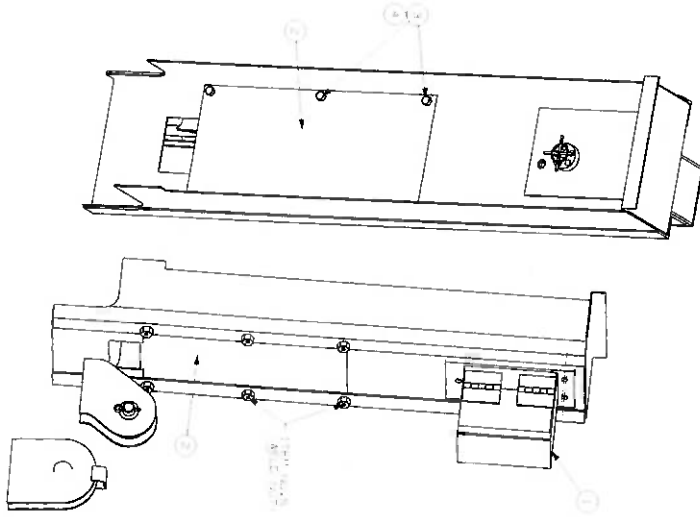
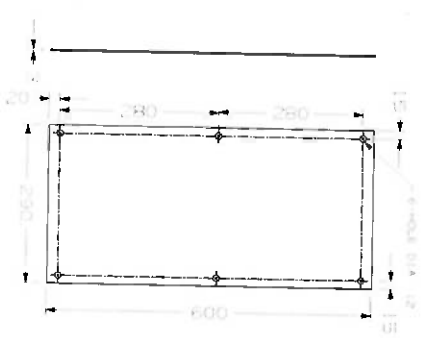
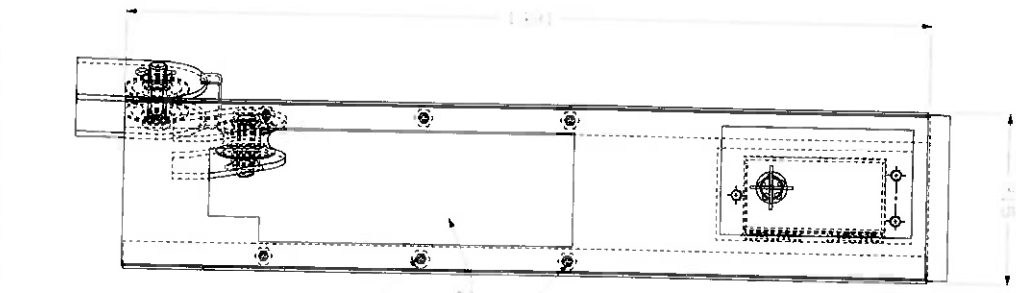
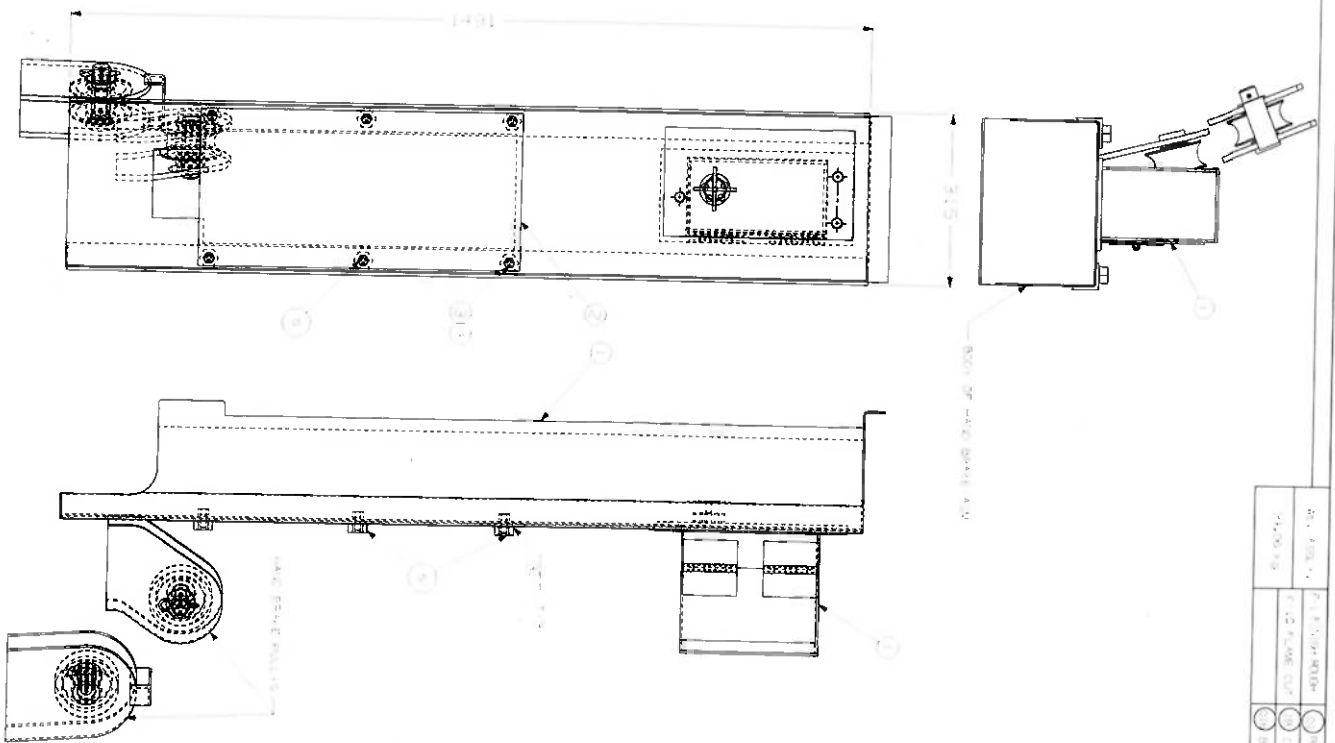
LAYOUT OF WLU DRAIN WITH  
MODIFIED INSPECTION COVER



ब.रे.का.

LOCOMOTIVE WORKS  
VARANASI

DRG NO. ELSK-164



COVER PLATE FOR  
MODIFIED HAND  
BRAKE

REF: CLW DRG NO. CDD-HL-P71-024

ब.ने.का.

BNARAS LOCOMOTIVE WORKS  
VARANASI

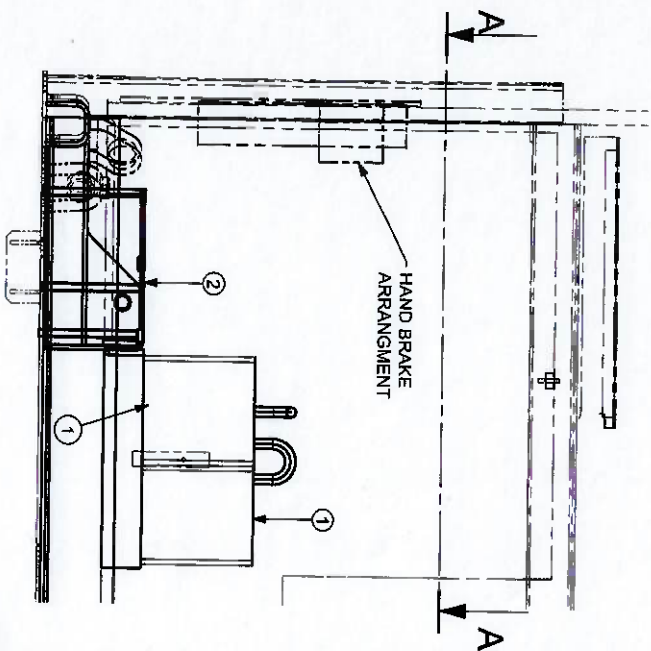
DRG NO. ELSK-158

| Sl. No. | Part Name   | Qty | Material | Remarks |
|---------|-------------|-----|----------|---------|
| 1       | Cover Plate | 1   | MS       |         |
| 2       | Hand Brake  | 1   | MS       |         |
| 3       | Pin         | 4   | MS       |         |
| 4       | Washer      | 4   | MS       |         |
| 5       | Nut         | 4   | MS       |         |
| 6       | Pin         | 4   | MS       |         |
| 7       | Washer      | 4   | MS       |         |
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| 95      | Nut         | 4   | MS       |         |
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| 98      | Nut         | 4   | MS       |         |
| 99      | Pin         | 4   | MS       |         |
| 100     | Washer      | 4   | MS       |         |

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| 99      | Pin         | 4   | MS       |         |
| 100     | Washer      | 4   | MS       |         |

| Sl. No. | Part Name            | Qty | Material | Remarks | Drawn | Checked | Approved |
|---------|----------------------|-----|----------|---------|-------|---------|----------|
| 1       | WLU STAND            | 1   | MS       |         |       |         |          |
| 2       | WLU LEG              | 1   | MS       |         |       |         |          |
| 3       | WLU MOUNTING         | 1   | MS       |         |       |         |          |
| 4       | WLU SPRING POCKET    | 1   | MS       |         |       |         |          |
| 5       | WLU HAND BRAKE PULLY | 1   | MS       |         |       |         |          |
| 6       | WLU SPRING           | 1   | MS       |         |       |         |          |
| 7       | WLU SPRING NUT       | 1   | MS       |         |       |         |          |
| 8       | WLU SPRING WASHER    | 1   | MS       |         |       |         |          |
| 9       | WLU SPRING BUSH      | 1   | MS       |         |       |         |          |
| 10      | WLU SPRING ROLLER    | 1   | MS       |         |       |         |          |
| 11      | WLU SPRING PIN       | 1   | MS       |         |       |         |          |
| 12      | WLU SPRING CLIP      | 1   | MS       |         |       |         |          |
| 13      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 14      | WLU SPRING WIRE      | 1   | MS       |         |       |         |          |
| 15      | WLU SPRING COIL      | 1   | MS       |         |       |         |          |
| 16      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 17      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 18      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 19      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 20      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 21      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 22      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 23      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 24      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 25      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 26      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 27      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 28      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 29      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 30      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 31      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 32      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 33      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 34      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 35      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 36      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
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| 38      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 39      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 40      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 41      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 42      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 43      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 44      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 45      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 46      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 47      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 48      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 49      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 50      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 51      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 52      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 53      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 54      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 55      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 56      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 57      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 58      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 59      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 60      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 61      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 62      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 63      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 64      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 65      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 66      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 67      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 68      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 69      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 70      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 71      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 72      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 73      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 74      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 75      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 76      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 77      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 78      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 79      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 80      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 81      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 82      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 83      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 84      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 85      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 86      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 87      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 88      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 89      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 90      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 91      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 92      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 93      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 94      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 95      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 96      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 97      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 98      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 99      | WLU SPRING RING      | 1   | MS       |         |       |         |          |
| 100     | WLU SPRING RING      | 1   | MS       |         |       |         |          |

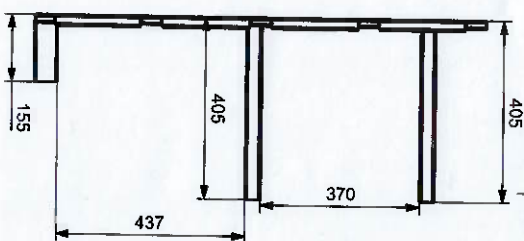
CAB #1 END



6 HOLES DIA 14 MM FOR WLU MOUNTING

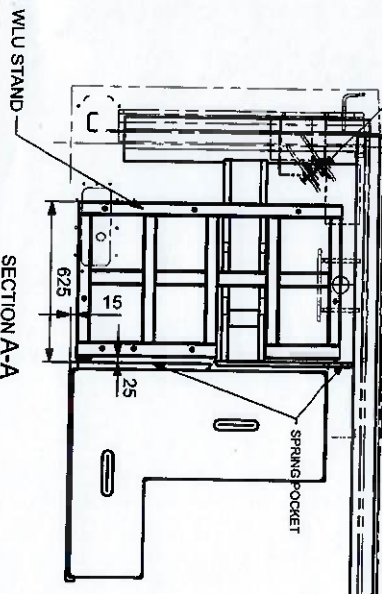
WLU LEG IS TO BE WELDED WITH SPRING POCKET.

SECTION H-H



- NOTE: 1) WLU STAND IS MADE FROM HOLLOW TUBE OF SIZE (25 X 50 X 3 THK),  
 2) SUITABLE WELD NUT IS TO BE WELDED IN WLU STRUCTURE FOR BOLTING WITH WLU STAND (MATCHING WITH 06 NOS. MOUNTING HOLES OF WLU),  
 3) 02 NOS DOWEL SHOULD BE FITTED IN WLU SO THAT WLU SIT IN ITS LOCATION.

HAND BRAKE PULLY ARRANGMENT



SECTION A-A

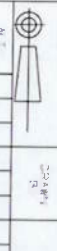
WLU STAND IS TO BE WELDED WITH SPRING POCKET.

WATERLESS URINAL MOUNTING STAND

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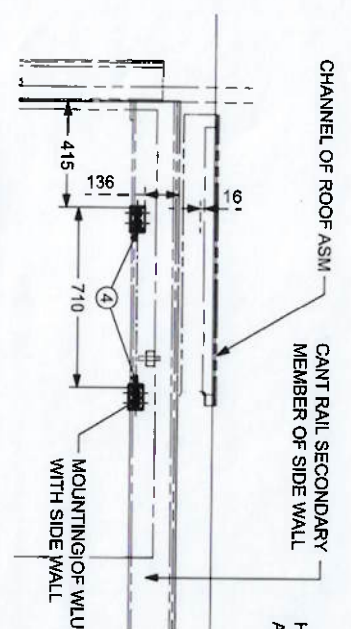
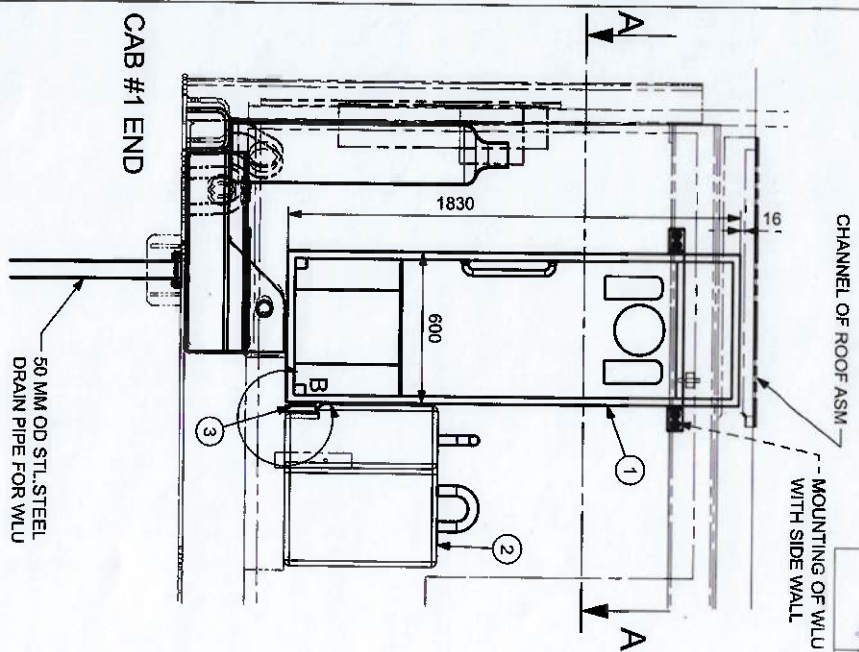
BANARAS LOCOMOTIVE WORKS  
VARANASI

DRG NO. ELSK - 161

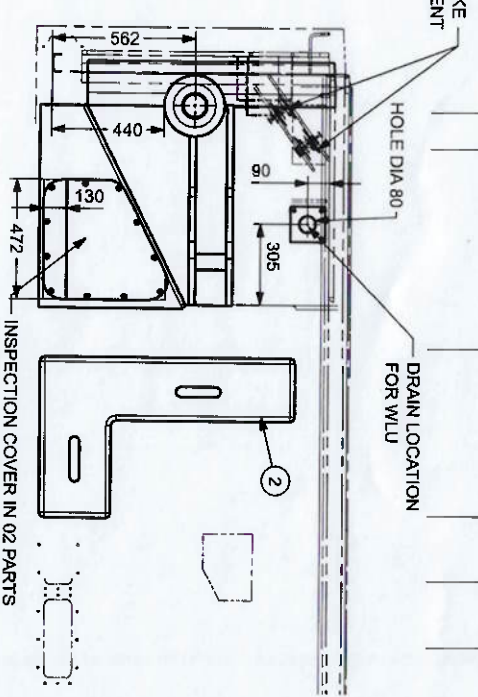


## Wiring Scheme for Waterless Urinal in SB-1 Panel for WAG-9 Loco.

| SN | Cable size<br>(Sq. mm) | Cable no.                     | From        | To               | Remarks  |
|----|------------------------|-------------------------------|-------------|------------------|--|
| 1. | 1.5                    | 2050-WC                       | XB22S-11    | WLU(-110V<br>DC) | In the scope of<br>Waterless Urinal  |
| 2. | 1.5                    | 2801-A                        | XF22S:03-14 | WLU(+110V<br>DC) | In the scope of<br>Waterless Urinal  |
| 3. | 1.5                    | i/p sig. from<br>VCU (Toilet) | XF22S:01-49 | WLU              | In the scope of<br>Waterless Urinal  |
| 4. | 1.5                    | 4205                          | XF22S:01-50 | WLU              | In the scope of<br>Waterless Urinal  |
| 5. | 2.5                    | 2801A                         | XF22S:03-14 | XF22S:01-<br>48  | New jumper<br>wire   |
| 6. | 0.5                    | o/p sig. From<br>VCU (Toilet) | 411.JG-12   | XF22S:01-<br>48  | In scope of<br>propulsion<br>system  |
| 7. | 0.5                    | i/p sig. from<br>VCU(Toilet)  | 411.JG-24   | XF22S:01-<br>49  | In scope of<br>propulsion<br>system  |
| 8. | 2.5                    | 4205                          | 161-14      | XF22S:01-<br>50  | New wire   |
| 9. | 0.5                    | 4205                          | 411.LD-01   | XF22S:01-<br>50  | Connection<br>from 411.LD-01<br>shifted to<br>XF22S:01-50<br>instead of 161-<br>14 |



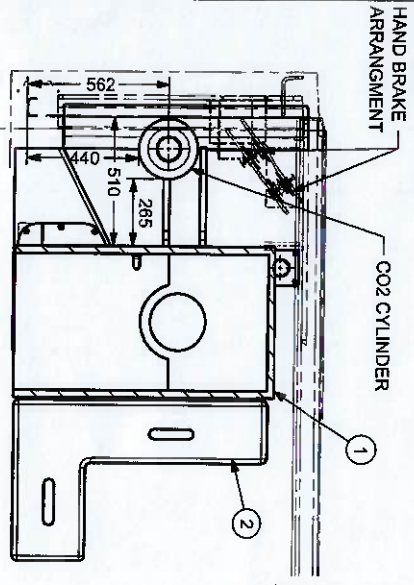
SCHEME - II  
POSITION OF TAPPING PLATE FOR  
MOUNTING OF WLU WITH SIDE WALL.



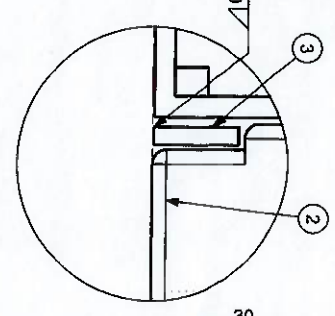
DETAIL D



INSPECTION COVER LARGER



SECTION A-A



ITEM NO. 4

LAYOUT OF WLU FOR MAGSIC  
WITH MODIFIED BALLAST  
(SCHEME - I)

| Sl. No. | Part Name               | Qty | Material | Remarks |
|---------|-------------------------|-----|----------|---------|
| 1       | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 2       | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 3       | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 4       | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 5       | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 6       | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 7       | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 8       | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 9       | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 10      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 11      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 12      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 13      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 14      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 15      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 16      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 17      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 18      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 19      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 20      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 21      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 22      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 23      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 24      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 25      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 26      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 27      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 28      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 29      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 30      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 31      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 32      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 33      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 34      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
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| 41      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 42      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 43      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 44      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 45      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
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| 63      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 64      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 65      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 66      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 67      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 68      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 69      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 70      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 71      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 72      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 73      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 74      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 75      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 76      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 77      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 78      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 79      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 80      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 81      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 82      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 83      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 84      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 85      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 86      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 87      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 88      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 89      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 90      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 91      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 92      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 93      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 94      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 95      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 96      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 97      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 98      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 99      | INSPECTION COVER LARGER | 1   | EL-6-102 |         |
| 100     | INSPECTION COVER LARGER | 1   | EL-6-102 |         |

