

Decoupling of 101224 NR LWACCW in 02421

03.08.2021

INCIDENT DETAILS

- Date: 02.08.2021
- Train number: 02421 (Pooja SF SPL)
- Coach number 1: 163066 NR LWACCW
- Coach number 2: 101224 NR LWACCW
- Location: DWNA - PNP Km no. 86/17
- Time of decoupling: 23:23 Hrs
- Action taken: 101224 NR LWACCW marked DVS at 00:25 Hrs
- Time of departure: 02:29 Hrs 03.08.2021
- Prima facie cause: Knuckle and Coupling defective

OBSERVATIONS

- DLI end CBC was the culprit end
- Make: M/s Dellner Couplers
- Built year 2018 (under warranty)
- Sr. No. 2030
- In accordance with RDSO SPEC/2011/CG-03 Rev-01.

Dellner Coupler

- The manual operating handle is completely locked.
- Now, if the rotary is lifted manually, toggle goes backward, freeing the knuckle lock.
- If the knuckle lock is free, the knuckle can come out due to excessive vibration, resulting in decoupling.



Rotary lock lifter with double rib

- Rib slot distance was measured as 54mm
- The diameter of the operating handle eye was found to be 22mm between the ribs



Rotary lock lifter with double rib

- The clearance between the operating handle eye and the rib measured were:
 - 18mm on the front side
 - 14mm on the rear side



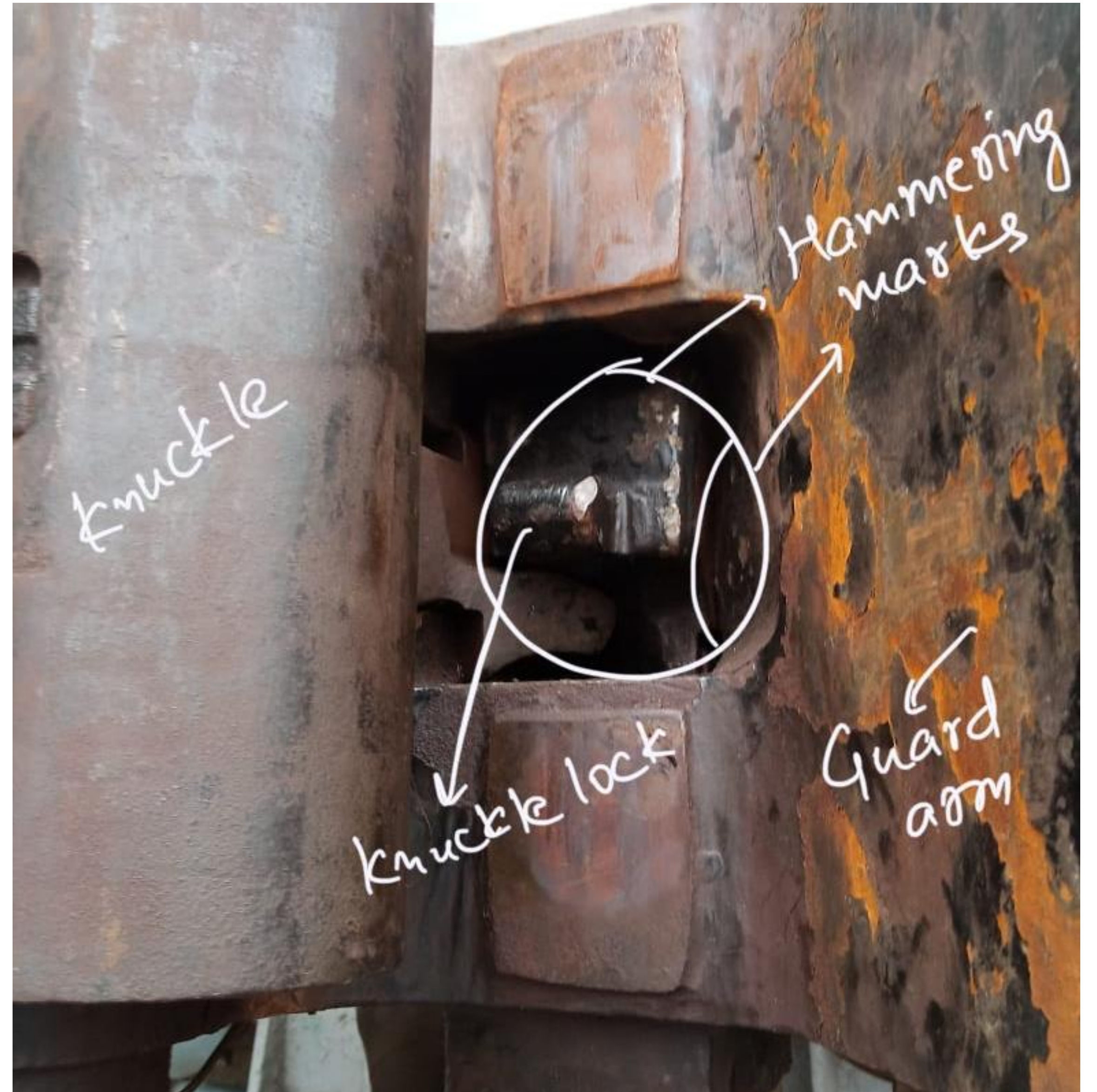
CBC Parts

- CBC parts (knuckle, knuckle lock, lock lifter rotary and toggle) were found in oiled condition.



CBC Parts

- There were marks of hammering on the knuckle lock and adjoining parts.



CBC Parts

- CBC parts were checked with APTA gauges and results were found OK.
- When manual uncoupling handle was in locked condition, it couldn't rotate, keeping the coupling locked.
- CBC housing was found rusty.
- Anti-creep mechanism was checked and found OK.
- Operating handle was properly greased for smooth operation.
- Telltale V-groove was found clear.
- No cracks or broken parts were observed.

101224 NR LWACCW

- Last SS-II date: 20.02.2021 JUDW
- Return date: 31.03.2024
- Maintenance depot: JAT/FZR
- No D2 schedule date stamp on either of the end panels
- Electric coupler of DLI end was broken

Location of the incident

- Between DWNA - PNP at Km no. 86/13
- No curvature in track was found on the site



CONCLUSIONS

- All other things were in their limits except the clearance between rotary lock lifter rib and the operating handle eye, which should be between 1/8" and 1/4".
- The oil on the surface of the CBC parts could've assisted the decoupling phenomenon.

OEM's COMMENTS

- According to the firm's statement, the operating eye clearance is not a point of check in the CBC coupling parts.
- Firm's representative stated the cause of decoupling is the oil which was found on the surfaces of CBC parts.

MODIFICATIONS

- Installation of lock pin arrangement by M/s Dellner make AAR H type coupler. (Ref: Director/Carriage/RDSO Letter no. MC/BLB/CBC/DELLNER dtd 22.10.2020)
- STR for improved high tensile tight lock CBC. (Ref: RDSO Specification no. RDSO/2011/CG03 (Rev. 3) dtd 30.04.2019)

Thank you