

Introduction:

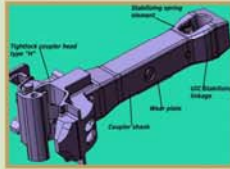
This pamphlet explains, in brief, "Centre Buffer Coupler", its main parts, procedure for coupling, uncoupling and general instruction for shunting & examination staff.

The coupler provides a means of mechanically connecting individual adjacent vehicles in order to make a train.

1. Tight lock Coupler head Type "H":

Coupler head is a standard AAR type "H" tight lock coupler head with uncoupling device that can be operated from outside of track. The coupler head has a shank/Draw bar cast together with the head.

Parts like Knuckle, lock etc. are assembled in the coupler head to enable coupling and uncoupling. Tail end of the draw bar is provided with the UIC stabilizing link and connects to the draft gear through the central pin. A backlash compensation device is assembled in the shank at tail end of the coupler head. This device is



held in position by two side bolts that are to be removed only after installation on the coach.

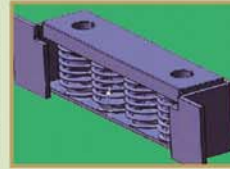
2. Draft Gear:

The Draft Gear is a double acting device for energy absorption during coupling and services. The device is designed to fit into the draft gear pocket of the Coach and absorb the dynamic energy in both i.e. draw and buff modes. The stroke in tensile (draw) direction is limited to 58.5^{+10} mm while that in the compressive (buff) direction is 80 mm (max.).



3. Supporting Device:

Supporting device comprises of four preloaded springs. The device is placed on a platform and bolted to the car structure. The coupler head rests on the top wear plate of the

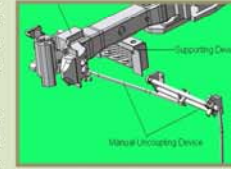


supporting device and this device supports the coupler weight. Its main parts are – Wear plate, Frame, Compression springs, Nut & Bolts.

4. Manual Uncoupling Device:

The manual uncoupling device is mounted on one side near end wall of coach connecting the uncoupling mechanism on coupler head through the sliding rod.

Handle of device is unlocked, lifted and then rotated in the clockwise direction for uncoupling. After coupling, locking of the handle has to be ensured to prevent unauthorized uncoupling.



5. Mounting/Supporting Plate:

Base plate and support plate are fastened to the under frame after mounting draft gear in the UIC pocket of coach. Base plate has a hole for inserting the central pin. A locking plate is fitted by sliding in between the central pin and base plate to prevent central pin from falling off. This arrangement facilitates fitment and removal of coupler head without removing base plate.

6. Anti Creep:

Inspection for Anti creep protection is made through the front of the coupler and it prevents the opening of locks.

7. Knuckle Thrower:

Knuckle thrower basically pushes the knuckle during uncoupling when toggle fitted in anti creep device hits on its one end.



8. Gathering range of Coupler:

The position of couplers in which two coaches can be joined is called gathering range of coupler. It is of two types -

a. Horizontal Gathering Range:

This is ± 110 mm on rest plate's centre, mean to say coupler can be coupled if they are ± 110 mm away from rest plate's centre.

b. Vertical Gathering Range:

This is ± 90 mm i.e. if the knuckle of couplers are ± 90 mm upward or downward from each other, they can be coupled.

9. Buffer Height:

In empty condition:

Buffer Height is kept between 1090 mm to 1105 mm in workshop.

In loaded condition:

Buffer Height is 1030 mm. (Minimum) in loaded condition.

10. Instructions for examination /shunting Staff:

1. Don't disturb the uncoupling device without any reason.
2. Ensure proper tightening of the nut bolt of support plate of draft gear & headless pin.
3. Don't apply grease/oil on Knuckle, coupler head, lock and anti creep etc.
4. Always keep open, the knuckles of both the power cars/SLRs or spare coaches if any.
5. Always check rest plate, loosening of bolts and breakage of springs etc.
6. Always check the position of draft gear, trough flooring and the gap on upper portion of draft gear (there should not be any gap).

11. Coupling Procedure:

1. Bring the vehicle near to each other at a slow speed (approx. 3 to 5 kmph) and stop the vehicle at approx 1 meter distance of each other.
2. Check alignment of coupler centre. Coupler must stand within the gathering range as already given.
3. If required, pull the couplers manually and make sure that they are in gathering range of coupler geometry.
4. Push the vehicles together slowly (approx 3 kmph) for coupling the two coaches.
5. Check position of tell tale device for proper coupling.
6. Tie the rotary lock with wire and ensure that there should not be any possibility for opening of lock.
7. Ensure proper seating of uncoupling device in its bracket groove so that unauthorized person can not operate it.
8. In spite of fitment of lock bolt if operating handle is in upward position, secure it with wire.

9. If there is any doubt on a particular lock, ensure position of V groove for transparency after making adjustment of rotor and tell tale towards the coach.
10. Only after ensuring complete locking of couplers, shunting engine should be released.
11. After coupling, reverse the power to pull (snatch) the rake. This is a typical pull test to reconfirm a positive coupling.

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It is clarified that information given in this pamphlet does not supersede any existing provision laid down in RDSO & Railway Board publications. This document is not statutory and instructions given in it are for the purpose of guidance only.

If you have any suggestion or comment, please write to:
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GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS

भारत सरकार
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PAMPHLET on
"H" Type Centre Buffer Coupler
“एच” टाइप सेन्टर बफर कपलर पर पैमप्लेट



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