

UK Distributor:

Staytite Ltd, High Wycombe, Bucks. HP12 3RP

Issue: 3

Valid From: 11/01/2021

Hardlock Lock-Nut

Product Description

Various Hardlock locking nuts; see user requirements and product configuration list.

Product Image



Scope of Acceptance

Full Acceptance

For use on track and track / signals asset interfaces as shown on relevant RE/PW or BRS-SM drawings or Network Rail Standards.

Fishplate M24 & M27 fastening kits and various Grade 8.8 bolt lengths and Grade 8 Hardlock nuts. The M24 fastening kit can be used to replace 15/16" round and pear hole bolts and 1" round bolts; headlock washers are not required to hold the head of the bolt.

Network Rail Acceptance Panel (NRAP) hereby authorises the product above for use and trial use on railway infrastructure for which Network Rail is the Infrastructure Manager under the ROGS regulations.

Reviewed by:

Authorised by:



Steven Rennolds
Product Acceptance Specialist



Gareth Evans
Network Technical Head, Track

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Specific Conditions

The following Conditions are specific to the approved product/s contained within this Certificate. These conditions must be adhered to in addition to the Network Rail General Conditions contained within the "General Terms and Conditions" section.

Failure to adhere to these conditions may result in the withdrawal or suspension of Acceptance of some, or all of the items contained within the accepted configuration.

Manufacturer

1. The latest relevant standards/drawings are available and worked to, and that the product is compliant.
2. Notify Network Rail Acceptance Services:
 - Within 48 hours, of any deficiencies affecting the product quality, functionality and safety integrity of the product (including corrective action undertaken or proposed).
 - Of any intended change to the accepted product. Changes include:
 - a) a change to the product configuration (to the actual product or its application);
 - b) a variation to or addition of manufacturing locations or processes; and
 - c) a change in the name or ownership of the manufacturing company.
3. Provide all documentation in the English (UK) language.
4. Provide operating and maintenance manuals to purchasers/users of the product.
5. Provide training manuals and an appropriate level of training to purchasers/users of the product.

User

1. For tightening torques, refer to the drawings or standards relevant to the application of the fastening
2. For use as an alternative lock nut on signalling equipment except where the two part nature of the component may cause confusion during regular adjustment, e.g. Clamp Lock adjustable cams and Clamp Lock and 998 Detector Tappet Followers.
3. 0086/011546 - 1.1/4" BSW Thread Nuts Hardlock system sets (2 nuts per system)
For use on Primary and Supplementary drive connections on Switches and Crossings as an alternative to pairs of plain nuts.
4. 0086/011546 - 1.1/4" BSW Thread Nuts Hardlock system sets (2 nuts per system)
For use on Primary and Supplementary drive connections on Switches and Crossings as an alternative to pairs of plain nuts.
5. 0086/063903 - 1.1/4" BSW Nut Turret Hardlock Sleeve, for Connection Rod.
For use as a replacement for the sleeve nut to BRS-SM 344 and its backing nut.
6. 0003/035016 - For use on adjustable stretcher bars
7. Fishplate M24 & M27 fastening kits and various Grade 8.8 bolt lengths and Grade 8 Hardlock nuts.
For M24 use 36 mm deep socket. For M27 use 41 mm deep socket.
8. Users of the product are responsible for compliance with the certificate conditions. If a condition is not understood guidance shall be sought from Network Rail Acceptance Services.
9. Users are responsible that the product is fit for purpose and that the application of use complies with the scope of acceptance. Any product defect should be taken up immediately with the supplier. If the defect is a design or manufacturing fault likely to affect performance and/or the safe operation of the railway this shall be reported in writing to Network Rail Acceptance Services.
10. Anyone becoming aware of a change to the product configuration (to the actual product or its application) should inform Network Rail Acceptance Services in writing.
11. All staff required to use the equipment shall be suitably trained and, where appropriate, qualified as competent to use it.
12. Products shall be installed in accordance with the manufacturer's instructions.

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13. Where the product is to be used in areas where Network Rail is not the Duty Holder (e.g. Leased Stations), the sponsor shall obtain formal consent from the Duty Holder for the locality where the equipment is to be installed in compliance with Railway Group Standard GE/RT8270 to deploy that equipment on, or about, or as part of that party's on or about their infrastructure. The decision of that party is absolute, and cannot be overridden except through the escalation processes established in the ROGS regulations.

Product Configuration

Part No.	Description	Catalogue No.
KIT-0086/011321	KIT M20 X 110 MM AND 120 MM LONG BOLT FOR RCPL (BRACKET TO RAIL) AT TOE.	086/011321
BM20X110HXHCW	BOLT M20 X 110 MM LONG BOLT FOR RCPL (BRACKET TO RAIL) AT TOE.	086/011322
BM20X120HXHCW	BOLT M20 X 120 MM LONG BOLT FOR RCPL (BRACKET TO RAIL) AT TOE.	086/011323
HL-1.1/4BSW-LCW	NUTS HARDLOCK SYSTEM SETS (2 NUTS PER SYSTEM), 1.1/4" BSW THREAD, EZP & PASSIVATED.	086/011546
HL-M20-FLRW	NUTS PAIR OF M20 X 2.5 P HL-R HARDLOCK FLANGE NUTS GRADE 8 ZINC, FOR USE ON TRACK AND TRACK / SIGNALS ASSET INTERFACES AS SHOWN ON RELEVANT RE/PW OR BRS-SM DRAWINGS OR NETWORK RAIL STANDARDS.	057/073717
KIT-0086/032078	FASTENER KIT FOR USE WITH DRIVE LUG (BRS/SM/522) AND FIXED STRETCHER BAR FOR FULL DEPTH SWITCHES COMPRISING: 1 NO. M20 x 90 MM LONG BOLT GRADE 8.8 ZINC, 1 NO. M20 HARDENED STEEL WASHER GRADE 8 ZINC.	086/032078
HL-1-1/4W-LC-TURRET	1.1/4" BSW NUT TURRET HARDLOCK SLEEVE, FOR CONNECTION ROD,	086/063903
HL-M6-FLRHWCW	NUT M6, HARD-LOCK, GRADE 8, EZP.	003/035001
HL-M8-FLRHWCW	NUT M8, HARD-LOCK, GRADE 8, EZP.	003/035002
HL-M10-FLRHWCW	NUT M10, HARD-LOCK, GRADE 8, EZP.	003/035003
HL-M12-FLRHWCW	NUT M12, HARD-LOCK, GRADE 8, EZP.	003/035004
HL-M14-FLRHWCW	NUT M14, HARD-LOCK, GRADE 8, EZP.	003/035005
HL-M16-FLRHWCW	NUT M16, HARD-LOCK, GRADE 8, EZP.	003/035006
HL-M18-FLRHWCW	NUT M18, HARD-LOCK, GRADE 8, EZP.	003/035007
HL-M20-FLRHWCW	NUT M20, HARD-LOCK, GRADE 8, EZP. NOT FOR USE WITH STRETCHER BARS	003/035008
HL-M22-FLRHWCW	NUT M22, HARD-LOCK, GRADE 8, EZP.	003/035009
HL-M24-FLRHWCW	NUT M24, HARD-LOCK, GRADE 8, EZP.	003/035010
HL-M27-FLRHWCW	NUT M27, HARD-LOCK, GRADE 8, EZP.	003/035011
HL-M30-FLRHWCW	NUT M30, HARD-LOCK, GRADE 8, EZP.. FOR ADJUSTABLE STRETCHER BAR HARD-LOCK USE 003/035016	003/035012
HL-M33-HCW	NUT M33, HARD-LOCK, GRADE 8, EZP.	003/035013
HL-M36-HCW	NUT M36, HARD-LOCK, GRADE 8, EZP.	003/035014

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Part No.	Description	Catalogue No.
HL-M30-FLRHCV	NUT M30, HARD-LOCK. GRADE 8, BRIGHT ZINC PLATED (BZP) WITH YELLOW FINISH.	003/035016
KIT-0057/073722	KIT STRETCHER BAR FASTENING KIT, COMPRISING: 1 X M20 X 80 MM LONG THIN HEAD BOLT GRADE 8.8 ZINC, 1 X WASHER AND 1 PAIR OF HARD-LOCK NUTS GRADE 8 ZINC, FOR PLAIN LEAD, FULL DEPTH SWITCHES.	057/073722
KIT-0057/073723	KIT STRETCHER BAR FASTENING KIT, COMPRISING: 1 X M20 X 100 MM LONG BOLT GRADE 8.8 ZINC, 1 X WASHER AND 1 PAIR OF HARD-LOCK NUTS GRADE 8 ZINC, FOR PLAIN LEAD, FULL DEPTH SWITCHES.	057/073723
KIT-HL-M24CONW-B8.8X130-N8	FISHBOLT KIT – M24 X 130 MM LONG BOLT GRADE 8.8 BO, M24 HARDLOCK NUTS GRADE 8 ZINC, M24 CONICAL WASHER GRADE 8.	057/052112
KIT-HL-M24CONW-B8.8X140-N8	FISHBOLT KIT – M24 X 140 MM LONG BOLT GRADE 8.8 BO, M24 HARDLOCK NUTS GRADE 8 ZINC, M24 CONICAL WASHER GRADE 8.	057/052113
KIT-HL-M24CONW-B8.8X150-N8	FISHBOLT KIT – M24 X 150 MM LONG BOLT GRADE 8.8 BO, M24 HARDLOCK NUTS GRADE 8 ZINC, M24 CONICAL WASHER GRADE 8.	057/052114
KIT-HL-M24CONW-B8.8X160-N8	FISHBOLT KIT – M24 X 160 MM LONG BOLT GRADE 8.8 BO, M24 HARDLOCK NUTS GRADE 8 ZINC, M24 CONICAL WASHER GRADE 8.	057/052115
KIT-HL-M24CONW-B8.8X170-N8	FISHBOLT KIT – M24 X 170 MM LONG BOLT GRADE 8.8 BO, M24 HARDLOCK NUTS GRADE 8 ZINC, M24 CONICAL WASHER GRADE 8.	057/052116
KIT-HL-M24CONW-B8.8X180-N8	FISHBOLT KIT – M24 X 180 MM LONG BOLT GRADE 8.8 BO, M24 HARDLOCK NUTS GRADE 8 ZINC, M24 CONICAL WASHER GRADE 8.	057/052117
KIT-HL-M24CONW-B8.8X300-N8	FISHBOLT KIT – M24 X 300 MM LONG BOLT GRADE 8.8 BO, M24 HARDLOCK NUTS GRADE 8 ZINC, M24 CONICAL WASHER GRADE 8.	057/052118
KIT-HL-M27CONW-B8.8X150-N8	FISHBOLT KIT – M27 X 150 MM LONG BOLT GRADE 8.8 BO, M27 HARDLOCK NUTS GRADE 8 ZINC, M27 CONICAL WASHER GRADE 8.	057/052119
KIT-HL-M27CONW-B8.8X160-N8	FISHBOLT KIT – M27 X 160 MM LONG BOLT GRADE 8.8 BO, M27 HARDLOCK NUTS GRADE 8 ZINC, M27 CONICAL WASHER GRADE 8.	057/052120
KIT-HL-M27CONW-B8.8X170-N8	FISHBOLT KIT – M27 X 170 MM LONG BOLT GRADE 8.8 BO, M27 HARDLOCK NUTS GRADE 8 ZINC, M27 CONICAL WASHER GRADE 8.	057/052121
KIT-HL-M27CONW-B10.9X170-N10	FISHBOLT KIT – M27 X 170 MM LONG BOLT GRADE 10.9 BO, M27 HARDLOCK NUT ZINC GRADE 10, M27 CONICAL WASHER, MACHINED ACCORDING TO RE/PW/853.	057/052127
KIT-HL-M27CONW-B8.8X180-N8	FISHBOLT KIT – M27 X 180 MM LONG BOLT GRADE 8.8 BO, M27 HARDLOCK NUTS GRADE 8 ZINC, M27 CONICAL WASHER GRADE 8.	057/052122

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Part No.	Description	Catalogue No.
KIT-HL-M27CONW-B8.8X250-N8	FISHBOLT KIT – M27 X 250 MM LONG BOLT GRADE 8.8 BO, M27 HARDLOCK NUTS GRADE 8 ZINC, M27 CONICAL WASHER GRADE 8.	057/052123
KIT-HL-M27CONW-B8.8X260-N8	FISHBOLT KIT – M27 X 260 MM LONG BOLT GRADE 8.8 BO, M27 HARDLOCK NUTS GRADE 8 ZINC, M27 CONICAL WASHER GRADE 8.	057/052124
KIT-HL-M27CONW-B8.8X280-N8	FISHBOLT KIT – M27 X 280 MM LONG BOLT GRADE 8.8 BO, M27 HARDLOCK NUTS GRADE 8 ZINC, M27 CONICAL WASHER GRADE 8.	057/052125
KIT-HL-M27CONW-B8.8X290-N8	FISHBOLT KIT – M27 X 290 MM LONG BOLT GRADE 8.8 BO, M27 HARDLOCK NUTS GRADE 8 ZINC, M27 CONICAL WASHER GRADE 8.	057/052126

Assessed Documentation

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
-	BRSSM 344			1
-	RE/PW/721			1
-	Staytite Ltd letter	15.11.02		1
-	Staytite Ltd literature	Undated		1
-	Manufacturers recommended installation seated and tightening torques	14.02.03		1
-	Installation to be carried out in accordance with the “Adjustable Stretcher Bars – Good Practice Guide” to a minimum torque of 300 NM			1
-	Email from G South to P Anderson requesting change of scope to certification.	21/10/2008		1
-	Notice Board 029	1	04/09/2017	2
-	Technical Instruction - TI 007	1	04/09/2017	2
-	Hardlock Nuts (HL) Standard size list and torque table	1	04/09/2017	2

Certificate History

Issue	Date	Issue History
1	09/08/2000	First accepted for use
2	04/09/2017	Combined certificates 485, 865, 866, 867, to PA05/02077. Added fishbolt kits in M24 & M27 nut and bolt and included torque settings for all products
3	11/01/2021	Addition of KIT-HL-M27CONW-B10.9X170-N10 item. Removal of tightening torques and addition of user condition to refer to drawings/standards for torques.

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Contact Details

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General Terms & Conditions

1) General

- 1) This certificate can only be amended by Network Rail Technology Introduction Group. Any alterations made by a different person will invalidate the entire certificate.
- 2) Failure to abide by the requirements in this Certificate of Acceptance may invalidate the certificate, thereby restricting the right to operate the product and / or limiting the future supply and deployment of the product on the infrastructure.
- 3) Upon the review date this certificate and the product it relates to is invalid and not accepted for use. Manufacturers are to make an application for a review prior to the review date.

2) Manufacturer

The Manufacturer shall:

- 1) Ensure that all products supplied comply with the standards defined in the Acceptance Requirements or otherwise documented as part of the assessment, including meeting the reliability requirements included in the Acceptance Requirements and in any deed of warranty for the relevant certificate number.
- 2) Notify Network Rail Technology Introduction Group:
 - a. Within 48 hours, of any deficiencies affecting the quality, functionality or safety integrity of the product (including corrective action undertaken or proposed).
 - b. Of any intended change to the accepted product; changes include:
 - i. a change to the product configuration (to the actual product or its application);
 - ii. a variation to or addition of manufacturing locations or processes;
 - iii. a change in the name or ownership of the manufacturing company;
 - iv. any changes to the ability or intention to support with technical services, spares or repairs.
- 3) The Manufacturer shall provide Network Rail Technology Introduction Group at least 12 (twelve) months notice of its intention to discontinue supply or to provide such notice as is reasonable if such discontinuance is outside its control and will offer the opportunity of a Last Time Buy to Network Rail together with date for last order placement and supply of the parts affected. The introduction of proposed alternative products shall be communicated to the Network Rail Technology Introduction Group.
- 4) Provide further copies of operating and maintenance manuals to purchasers / users of the product as necessary (including certificates of conformance, calibration etc).
- 5) Provide further copies of training manuals and an appropriate level of training to purchasers or users of the product as necessary.
- 6) Where applicable, specialist technical support, repairs and servicing of the product shall be carried out by the Original Equipment Manufacturer (OEM) or authorised agent only.
- 7) Network Rail may request information from the manufacturer to prove product compliance with clauses 1 and 2 above and reserve the right to suspend and/or withdraw any application where information is not forthcoming within a reasonable timeframe.
- 8) In accordance with Network Rail's Quality Assurance Policy Statement 2011, where the specification and/or Product Acceptance Certificates specify quality assurance classifications (QA1 to QA5) for the products, the manufacturer shall comply with the specified level of quality assurance for each product and allow Network Rail access to carry out its quality assurance checks.
- 9) The manufacturer shall give Network Rail's representatives access at all reasonable times to its premises and allow them to inspect its quality systems and production methods and, if requested, to inspect, examine and test the products both during and after their manufacture and the materials being used in their manufacture.

3) Conditions of Use

Specifiers, installers, operators, maintainers, etc. using the product shall:

- 1) Comply with the certificate conditions. If a condition is not understood guidance must be sought from Network Rail Technology Introduction Group.
- 2) Check that the application of use complies with the relevant certificate's scope of acceptance.
- 3) Report any defect if it is a design or manufacturing fault likely to affect performance and/or the safe operation of the railway in writing to Network Rail Technology Introduction Group.
- 4) Inform Network Rail Technology Introduction Group in writing of a change to the product configuration (or to the actual product or its application).
- 5) Operate, maintain and service the product in accordance with Network Rail standards and Operation and Maintenance manuals as appropriate.
- 6) Be appropriately trained and authorised for the installation, maintenance and use of the product.

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7) Only send products for repair or reconditioning to the Original Equipment Manufacturer (OEM) or authorised agent.

8) Users are to be aware that Product Acceptance is not a substitute for design approval.**4) Compliance**

Railways and Other Guided Systems (ROGS) Regulations

1) Where the product is to be used in areas where Network Rail is not the Infrastructure Manager (e.g. leased stations), the sponsor shall additionally obtain formal consent from the Infrastructure Manager for the locality where the equipment is to be installed. This may include a requirement for additional safety verification. The decision of that Infrastructure Manager is binding, and cannot be overridden by Network Rail except by the escalation processes established in the ROGS regulations

2) As required in Railway Group Standard GE/RT8270, at each use of this product the project or group responsible for installation and commissioning shall be required to demonstrate compatibility with:

a. All rail vehicle types that have access rights over the area affected by the change

b. Infrastructure managed by others

c. Neighbours.

Railway Interoperability Regulations

3) For interoperable constituents of systems the project or group responsible for installation and commissioning shall be required to demonstrate compliance with the relevant Technical Specifications for Interoperability (TSI) where appropriate.

4) An authorisation from the national safety authority (i.e. the Railway Safety Directorate of the Office of Rail Regulation) is required before the equipment is to be used in revenue earning service.

5) Supply Chain Arrangements

1) Certificates of acceptance do not imply any particular quantity of supply nor any exclusivity of supply.

2) Products may be purchased by Network Rail or its agents, suppliers or contractors.

3) Manufacturers should note that it is not necessary to enter into any exclusive supply arrangements with resellers or other suppliers.