NEW EQUIPMENT & SYSTEM APPROVAL PROFORMA

Ref: *10/3527*

Note: the prompts given below are only a guide to the information required for approval. Dependent on the type of equipment or system that requires approval delete any section that is not applicable or include additional information if necessary. Mandatory fields are marked with an asterisk (*).

1 **Equipment or System to be approved** *

M19 X 125 Dog Screw with shoulder
M19 X 125 Dog Screw without shoulder
M16 X 105 Lock Screw

Updated February 2010. Supersedes approval 09/10687.

2 **Originator** *

Name: Clayton George Company: Cold Forged Products (CFP)

3 **Introduction** *

Cold Forge Dog and Lock Screws are for the use in timber sleepers new and reused.
Advantages are:
>Aggressive thread design with cutting point to help eliminate splitting of timber.
>Able to self insert with a 14mm pilot hole for M16 and 16mm pilot hole for M19.
>Genuine Torx drive E20 for M16, E24 for M19.

4 **Determination of Need** *

Cold Forge Dog and Lock Screws are an alternative supplier for fastening rail and rail plates to timber sleepers.

5 **Significant Change or Not** *there is little change from the existing product* *

This change in equipment or system is assessed as MINOR.

6 **Review Panel** *

- John Furness - Manager Standards
- Tim Calver – Standards and Technical Services Engineer
- Ron Hampson – Project Manager

7 **Safety**

- The CFP Screw Dog and Lock Screws are screwed into the sleeper.
- No sledge hammers or dog knockers are required.
- Can be screwed in using Melvelle screw machine there is no operator strain.
- Can be installed using air or pneumatic rattle gun.

8 **Performance and Suitability**

The following is an excerpt from the approval report for QR:
The CFP Screw Dog and Lock Screws are very suitable in timber sleepers or composite sleepers.
The screws have a galvanised finish which protects the screws from the elements stops premature rust therefore extending the life of the sleeper.

(i) **Use in other rail networks**

Currently the CFP Screw dog M16 and the Lock Screw M16 are approved for use throughout QR and WNR
The M19 Screw Dog with shoulder is being manufactured with orders from WNR and QR.

(ii) **Use in the ARTC network**

The CFP Screw Dog and Lock Screws are suitable for use in all timber sleepers in the ARTC network.

(iii) **Issues arising from usage of the equipment/system**

There have been no issues recorded from the use of the CFP Screws.

(iv)	**Changes required to infrastructure or systems for use of the equipment** The CFP Screw Dog and Lock Screws can be installed using the existing Melvelle equipment.
9	**Reliability** See reports from UNSW. The tests carried out include: >Repeat load test 3,000,000 cycles >Head and flange bend test >Tensile Test All tests have been carried out in accordance with AS 1085.18.
10	**Maintainability** The screws need no further maintenance after installation.
11	**Approval** * **M19 X 125 Dog Screw with shoulder, M19 X 125 Dog Screw without shoulder and M16 X 105 Lock Screw** as supplied by Cold Forge Products is approved fro use across the ARTC Network.
12	**Conditions of Approval** * • All Dog and Lock Screws are to be inserted in accordance with the manufacturer's procedures. • Cold Forge Products is to remain accredited to ISO 9001 for the manufacture of these products.

13	**Does the Originator accept the additional Conditions of Approval as set by the Review Panel:**	Yes	☒	No	☐	N/A	☐

14	**Sign off**		***ARTC office use only***
	Review Panel:		
	John Furness		Date: 2/2/2010
	Tim Calver		Date: 1/2/10
	Ron Hampson		Date: 2/2/10