

Subject: Material change

Product: PEFS C6, PEFS F3 and PEFS F3N

Parts: Hydraulic adaptors and hose couplings.

Alternative hydraulic fittings are now available for use in Chubb's PEFS systems. The new fittings are a combination of brass, stainless steel, and plated steel.

They were developed to reduce the risk of rust particles causing blockages or impairments to discharge nozzles. Refer to Technical Bulletin No: [TB201904](#) for more information.

Examples of new fittings and where they are being used;






Image	New material	Description
	Brass	Tube nuts, nozzle assemblies (Nozzles already brass)
	Brass / Stainless Steel	All discharge system fittings (Tee's, Elbows, adaptors, etc) Some of the larger Elbows maybe supplied in Stainless Steel.
	Brass / Plated Steel	The insert used in the discharge system field attachable couplings. (Exterior ferrule remains plated steel)
	Brass	All actuation system fittings (Tee's, Elbows, adaptors, etc)
	Stainless-steel	The field attachable couplings used in the actuation system

Table 1 – New PEFS Fittings

The new fittings have passed the relevant component compliance assessments detailed in AS5062-2016 and are approved for use in the following systems.



In Field Actions:

- All new PEFS systems should be installed with the new fittings and hose couplings.
- For existing PEFS systems.
 - The new fittings and couplings can be installed anytime at the owner's discretion
 - If multiple nozzles are found to be impaired during the annual discharge test, Service technicians must recommend either increasing the frequency of the relevant routine maintenance task (cleaning and/or discharge testing), or the replacement of all plated steel fittings in the discharge system.
- There have been a number of reported cases where fittings and hose couplings were found to have been assembled incorrectly. Please refer to Appendix A for correct assembly of hose couplings used with the RYCO T1F Hose.

Installation Assembly Torque:

Brass has a lower yield strength than steel, therefore, the assembly torque is lower than similar steel fittings. Table 2 below lists the maximum assembly torque values for the JIC connections to be used when installing to its intended equipment. When assembling fittings together of different material please use the lower torque value in the following table.

Hose Size	JIC Thread Size	Maximum Termination Torque (Nm)	
		Steel	Brass
1/4"	7/16"	16	10
1/2"	3/4"	53	25
3/4"	1-1/16"	119	60

Table 1 – Maximum Torque for Fittings

NOTES:

1. JIC fittings are designed to be a metal-to-metal seal. DO NOT use lubricants or thread sealants on the threads or sealing surfaces of these fittings otherwise the fittings may be over-torqued or may cause blockages.
2. When connecting to threaded adaptors that use Loctite for sealing, such as adaptors on valves, actuators and manifold blocks, care must be taken to not provide too much torque that it will rotate these adaptors and break the Loctite seal. If this happens you will need to remove the adaptors, clean the threads and apply new Loctite to the adaptors.

Effective Date: Immediately

First Issue Date: 3 June 2021

Latest Update: 12 August 2021

Appendix A:



WORK INSTRUCTION	Document No.	RH-WI-204
T1F HOSE WITH BRASS FIELD ATTACHABLE COUPLINGS ASSEMBLY INSTRUCTIONS FOR CHUBB FIRE & SECURITY AUSTRALASIA	Issue No.	1-3
	Date:	15/03/2021
	Written By:	T. Bretherton
	Reviewed By:	George Trainor
	Approved By:	A. Radhakrishnan

1.0 PURPOSE & SCOPE

To show the correct method of cutting and assembling T1F hose when using RYCO 6000B Series brass field attachable inserts with standard steel ferrules.

Matched Hose and Couplings:

Ferrule (steel)	Insert (brass)	Hose
K000-08	6030B-0812	T18F
K000-08	6048B-0812	T18F
K000-12	6048B-1217	T112F

2.0 ACCESSORIES REQUIRED

- Silicone based lubricant (FUCHS Cassida Silicone Spray, Molykote 111 or equivalent recommended)
- Bench vice (recommended)
- Torque wrench (for JIC connection assembly)

3.0 INSTALLATION ASSEMBLY TORQUE

Brass has lower yield strength than steel, therefore, the end termination assembly torque is lower than similar steel couplings.

Below table lists assembly torque range for the brass JIC end termination connections to be used when installing the completed hose assembly to its intended equipment:

JIC Thread Size	Termination Torque (Nm)
-12	23-25
-17	56-60



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4.0 HOSE & COUPLING ASSEMBLY INSTRUCTIONS

RYCO 6000B SERIES BRASS FIELD ATTACHABLE COUPLINGS WITH MATCHED SIZES OF RYCO T1F NON-SKIVE HOSE.

<p>STEP ONE</p> <ul style="list-style-type: none"> - Cut hose to length required using a cut-off saw. - Ensure hose is cut squarely. - Clean hose bore. 	<p>STEP TWO</p> <ul style="list-style-type: none"> - Lubricate outer cover using silicone-based lubricant. 	<p>STEP THREE</p> <ul style="list-style-type: none"> - Screw hose into ferrule anti-clockwise until hose bottoms in ferrule. - Ease back between 1/2 and 3/4 of a turn.
<p>STEP FOUR</p> <ul style="list-style-type: none"> - Lubricate full length of insert hose tail and inside of hose with silicone-based lubricant. - Note: Do not use lubricant on hose to be used with volatile gases. 	<p>STEP FIVE</p> <ul style="list-style-type: none"> - Screw insert clockwise right into ferrule using a continuous motion until insert bottoms out on ferrule. - Do not allow hose to turn during operation. 	<p>SPECIAL INSTRUCTIONS</p> <ul style="list-style-type: none"> - FIELD ATTACHABLE COUPLINGS should not be used at maximum working pressure of hose when temperature exceeds 121°C (250°F). Field Attachable Couplings may be used on suitable hose at over 121°C (250°F) but at reduced working pressure. Contact RYCO Technical Department for more information.