For fuel, oil, low pressure hydraulic, pneumatic and other systems





Eaton's Aeroquip® 3750 Series SAF-LOC coupling is used wherever a fast, safe connection is mandatory for fuel, oil, low pressure hydraulic, pneumatic and other systems. SAF-LOC couplings are foolproof — will not allow a stable, partially connected position that will allow fluid to flow.

In addition, three check points are used to verify positive connection — SOUND (click action), VISUAL and TOUCH (SAF-LOC indicator pins). The pins do not protrude until after the nut engages the locking hex. Eaton's SAF-LOC couplings connect and disconnect with one hand in a single, easy motion. The positive thread action of the nut gives a mechanical advantage that permits connection against line pressures to 60 psi (413 kPa). Nevertheless, forces encountered in operation up to 20 G's will not inadvertently disconnect the coupling.

SAF-LOC Coupling



Coupling half, hose attaching



Coupling half, bulkhead mounting

SAF-LOC Indicator Pins



Fully tested in accordance with MIL-C-7413A







Guided poppet valves closed

"O" ring seat seal



Pressure Loss Versus Flow

Principle of Operation

To find the pressure loss (difference between inlet and outlet pressures) for a given coupling size at a given flow rate, 1) find the flow rate at bottom of chart and read up until the line intersects the pressure curve for the coupling size in question, 2) read across to find the pressure loss. Data in the chart at right is plotted for JP-4 fuel at 60°F (15.55°C).



Flow Rate (Gallons Per Minute)

Sizes	-4 thru -12	-16, -20 & -24	
Operating	1000 psi (6894.75 kPa)	600 psi (4136.85 kPa)	
Proof	1500 psi (10342.12 kPa)	900 psi (6205.28 kPa)	
Burst (min.)	3000 psi (20684.27 kPa)	1800 psi (12410.56 kPa)	

Dimensional Data





Coupling half, hose attaching



Coupling half, bulkhead mounting

End Fitting Dimensions







AS4375 (AS33514 MS flareless



AS4377 (AS33515) MS flareless bulkhead



Alternate detail dimensions L and K typical in -4, -6, -20 and -24* size adapters only. Dimension K is included in dimensions A, A₁, C and D.

Note: where couplings are to be installed in MS33649 boss or equivalent, specify the ends to AS930 * On AS4375 (AS33514) only

Coupling Styles and Part Numbers

SAF-LOC couplings for fuel, oil and hydraulic return applications are available with various end fitting combinations. Select the base part number for coupling halves or coupling assembly from the table on page 5.

Complete the part number as shown at right. Couplings for other fluids are available. Contact Eaton for further information.

Example for Ordering



Style I Style II Style III Style IV AS4395 AS4395 AS4396 AS4395 AS4375 AS4375 AS4377 AS4375 Coupling Half Hydraulic Hydraulic Fuel Application Fuel Lube Oil Fuel Lube Oil Hydraulic Fuel Lube Oil Lube Oil Hydraulic Return Return Return Return Specification Mil-C-7413 Mil-C-7413 Mil-C-25427 Mil-C-7413 Mil-C-7413 Mil-C-25427 Mil-C-7413 Mil-C-7413 Mil-C-25427 Mil-C-7413 Mil-C-7413 Mil-C-25427 Type I Type II Class 600 Type I Type II Class 600 Type 1 Type II Class 600 Type 1 Type II Class 600 Class A + B Class A + B Class A + B Class A + B Coupling Half, 3752 375204 375207 375201 375200 375208 375209 375210 375211 375212 375213 375214 Bulkhead Part Number Mounting Coupling 3750 375004 375001 375000 375008 375009 375011 375012 375007 375010 375013 375014 Assembly Coupling Half, 3755 375504 375506 3755 375504 375506 375507 375508 375503 375507 375508 375503 Hose Attaching

Coupling Styles and Part Numbers

To determine over-all length add the end fitting dimension for each end (dimensions E, G, H or J from the table below) to the base assembly length (dimension A or A1) for the desired coupling style. For coupling half length add end fitting dimensions to the basic length (dimension C or D).

Leak proof dust caps and dust plugs are available for all sizes (see page 6).

	Dash	size	-4	-6	-8	-10	-12	-16	-20	-24
	Tube	size	1/4 (6.35)	^{3/} 8 (9.52)	^{1/} 2 (12.7)	^{5/} 8 (.625)	3/4 (19.04)	1 (25.4)	1-1/4 (31.75)	1-1/2 (38.09)
Dimensions in inches (mm)	A		2.37 (60.19)	2.02 (51.30)	1.68 (42.67)	2.39 (60.70)	2.17 (55.11)	*2.56 (65.02)	4.06 (103.12)	*3.61 (91.69)
	A ₁		3.14 (79.75)	2.80 (71.11)	2.47 (62.73)	3.40 (86.36)	3.18 (80.77)	*3.83 (97.28)	5.66 (143.76)	*5.20 (132.07)
	В		1.53 (38.86)	1.53 (38.86)	1.53 (38.86)	1.91 (48.51)	1.91 (48.51)	2.16 (54.86)	2.70 (68.58)	2.70 (68.58)
	С		1.76 (44.70)	1.59 (40.38)	1.37 (34.79)	1.89 (48.00)	1.78 (45.21)	*2.17 (55.11)	2.97 (75.43)	*2.74 (69.59)
	D		1.38 (35.05)	1.21 (30.73)	1.10 (27.94)	1.51 (38.35)	1.40 (35.55)	*1.66 (42.16)	2.69 (68.32)	*2.46 (62.48)
	Style I		.22 (.09)	.22 (.09)	.22 (.09)	.62 (.28)	.59 (.26)	.66 (.29)	1.33 (.60)	1.26 (.57)
ght (kg)	Style II		.22 (.09)	.22 (.09)	.24 (.10)	.65 (.29)	.62 (.28)	.70 (.31)	1.39 (.63)	1.33 (.60)
Wei in Ibs	Style III		.21 (.09)	.21 (.09)	.21 (.09)	.58 (.26)	.57 (.25)	.62 (.28)	1.27 (.57)	1.25 (.56)
	Style IV	1	.22 (.09)	.22 (.09)	.23 (.10)	.60 (.27)	.60 (.27)	.66 (.29)	1.29 (.58)	1.28 (.58)
	E		.550 (13.97)	.556 (14.12)	.657 (16.68)	.758 (19.25)	.864 (21.94)	.911 (23.13)	.958 (24.33)	1.083 (27.50)
	F		.19 (4.82)	.19 (4.82)	.19 (4.82)	.26 (6.60)	.26 (6.60)	.26 (6.60)	.32 (8.12)	.32 (8.12)
	G		1.047 (26.59)	1.125 (28.57)	1.281 (32.53)	1.422 (36.11)	1.593 (40.46)	1.593 (40.46)	1.640 (41.65)	1.656 (42.06)
s (=	Н		.453 (11.50)	.469 (11.91)	.562 (14.27)	.625 (15.87)	.688 (17.47)	.688 (17.47)	.688 (17.47)	.688 (17.47)
is (mn	J		.969 (24.61)	1.015 (25.78)	1.156 (29.36)	1.297 (32.94)	1.406 (35.71)	1.406 (35.71)	1.406 (35.71)	1.406 (35.71)
inche	H. A		.40 (10.16)	.22 (5.58)		_	—		.46 (11.68)	*.23 (5.84)
⊡ .⊑	B. N	1.	.29 (7.36)	.11 (2.79)					.46 (11.68)	*.23 (5.84)
	L		.69 (17.52)	.81 (20.57)	_	_		_	1.88 (47.75)	*2.12 (53.84)
	М		.031 (0.78)	.031 (0.78)	.031 (0.78)	.031 (0.78)	.031 (0.78)	.031 (0.78)	.031 (0.78)	.031 (0.78)
	Thd	"T"	7/ ₁₆ -20	9/ ₁₆ -18	3/4 -16	7/ ₈ -14	1 1/ ₁₆ -12	1 5/ ₁₆ -12	1 5/ ₈ -12	1 7/8 -12

H.A. — Hose Attaching Half

* Dimensions for Styles I, II and IV are slightly less.

Dust Caps and Plugs

Leak proof dust caps and dust plugs are available for all sizes. Specify fluid system when ordering. Attaching cable is not included.

Description	Part Number
Cap Assembly	378000 - size
Plug Assembly	378200 - size
Ci	
Size	Use
-8	for sizes -4, -6, -8
-8 -12	for sizes -4, -6, -8 for sizes -10, -12
-8 -12 -16	for sizes -4, -6, -8 for sizes -10, -12 for size -16

Operation of Eaton's Aeroquip SAF-LOC coupling is simple. There are no sliding seals to cause valves to stick open. Threaded coupling action permits manual connection, even against line pressure.

Couplings can be furnished with special packings and body materials for a variety of fluids or gases. Other end fittings or connection variations may be designed for special coupling situations such as remote operation. Contact your Eaton representative or send details of your application for engineering assistance.

Operating Temperatures

	Continuous	Intermittent
Fuel	-65°F to +160°F (-53.88°C to +71.1°C	-
Synthetic oil	-65°F to +325°F (-53.88°C to +162.77°C)	-65°F to +375°F (-53.88°C to +190.5°C)
Petroleum oil	-65°F to +250°F (-53.8°C to +121.1°C)	-65°F to +325°F (-53.88°C to +162.7°C)
Hydraulic return	-65°F to +275°F (-53.8°C to +135°C)	+



Material and Finish

Coupling Body and Valves*	Anodized aluminum alloy, Type 2024 (AMS 4120)
Springs	Stainless steel, Type 304 (AMS 5697)
Packings*	
Fuel Couplings	Synthetic Rubber (Spec. Mil-P-5315)
Oil Couplings	Viton A compound

*Other materials and packings can be furnished on request

NOTES:

Eaton Aerospace Group Fluid & Electrical Distribution Division 300 South East Avenue Jackson, Michigan 49203-1972 Phone: (517) 787 8121 Fax: (517) 787 5758



Eaton Aerospace Group 9650 Jeronimo Road Irvine, California 92618 Ph (949) 452 9500 Fax (949) 452 9555 www.eaton.com/aerospace

Copyright © 2013 Eaton All Rights Reserved Printed in USA Form No. TF100-46B March 2013